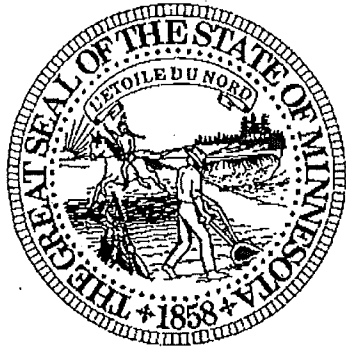


RECONNAISSANCE MINERAL POTENTIAL
EVALUATION, CENTRAL MINNESOTA,
OPEN FILE REPORT

By B.A. Frey and T.L. Lawler
Minnesota Department of Natural Resources,
Division of Minerals, Report 295, 1993
A Minerals Diversification Project

VOLUME 1



Minnesota Department of Natural Resources
Division of Minerals
William C. Brice, Director

Report 295

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ERRATA/ADDENDUM SHEET
for
RECONNAISSANCE MINERAL POTENTIAL EVALUATION,
CENTRAL MINNESOTA, OPEN FILE REPORT

1. **UNIQUE drill hole numbers.** Regarding these report references, they refer to a unique **DNR INVENTORY NUMBER** concerned with materials maintained at the DNR Drill Core Library. This is an internally used designation, and does **NOT** refer to the **UNIQUE** number given to drill holes by the Minnesota Department of Health. DNR publications after this report will use **DNR INVENTORY NUMBER** to prevent confusion.

2. **SAMPLING AND ANALYSES (page 11).** The DNR Assessment File chemistry data for at least a portion of Region 3 has been compiled (digital spreadsheet) by Larry Zanko and Linda Lindberg of the Natural Resource Research Institute in Duluth. This reference is given below, and should be included with the other references.

Zanko, L., Lindberg, L., in progress, Compilation and Location of Penokean Geochemistry, East-Central Minnesota: Natural Resources Research Institute, University of Minnesota, Duluth, Technical Report.

3. **Tourmaline and Tourmalinites (page 45).** Another reference from the Minnesota Geological Survey with spatial and stratigraphic relevance to this report follows and should be included. Other identified minerals in the reference include rhodonite, rhodochrosite, hyalophane, barite, and aegerine.

Cleland, J.M., Morey, G.B., McSwiggen, P.L., Implications of Tourmaline-Rich Rocks in the North Range Group of the Cuyuna Range, East-Central Minnesota, (abst.); Institute on Lake Superior Geology Proceedings, 39th Annual Meeting, Eveleth, MN, 1993; v. 39, part 1, p. 25-26.

4. **Mn Oxides (page 46).** The U.S. Bureau of Mines continues to also work on the Cuyuna Range manganese resource. The reference below should be included.

Brink, S. E., 1992, Textural and Compositional Study of a Manganiferous Iron-Formation, Emily District, Cuyuna Range, with implications for Original Deposition and In Situ Leaching of Manganese, (abst.); Institute on Lake Superior Geology Proceedings, 38th Annual Meeting, Hurley, WI, 1992; v. 38, part 1, p. 15.

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RECONNAISSANCE MINERAL POTENTIAL EVALUATION, CENTRAL MINNESOTA, OPEN FILE REPORT

ABSTRACT:

The Minnesota Department of Natural Resources, Minerals Division, has completed a program using contemporary methods to begin to evaluate the mineral potential of a large part of Central Minnesota, (see index map in pocket). This project is oriented toward identifying nonferrous metallic mineralization, associated alteration or lithologic units and structures permissive of such mineralization. The purposes are: 1. To serve land use planning within the D.N.R.; 2. To encourage private exploration through better data access, and; 3. To serve government agency planning of future programs.

The goal of creating an improved regional mineral potential evaluation was approached by seeking: 1. Mineral occurrences, or lithologic units and structures permissive of mineral deposits. 2. Defining basic bedrock lithologic locations from existing drill core. 3. Creating 1:62,500 scale inferred geologic maps, which display interpreted mineral potential, using available geophysical and geologic data supplemented by some field work. 3. Re-evaluating existing geochemical surveys using contemporaneous statistical analytical methods. Both the inferred geologic mapping and re-evaluation of geochemical data required assemblage of available data in digital formats, which enhanced the geologic database in this region of few outcrops. This improved the availability of data for use by all our clients in the public and private sectors. The process of converting the geological data for this area into a digital format is continuing (see Index to Minerals Resource Information in Central Minnesota, in progress).

Data used in this project are from several sources which are divided into two groups: The major part of the data base which existed prior to this project, and; new data acquired as a part of this project. Existing data sources were: 1. Exploration data and drilling done by private industry or government agencies which is available to the public at the D.N.R. Minerals Library in Hibbing; 2. Geologic maps, airborne magnetic surveys, and gravity surveys, funded by the Legislative Commission on Minnesota Resources, and done by the Minnesota Geological Survey; 3. Geochemical surveys done by the United States Department of Energy and the Minnesota Department of Natural Resources; 4. Data from Mineral Division files.

The new sampling and analysis of this project has been done to hopefully complement previous work. Data acquired are: 1. Samples from a total of 451 drill holes, nineteen outcrops and twelve rock dumps logged by Barry Frey which had 640 samples analyzed;¹ 2. Over 100 thin

¹ In the D.N.R. Core Library there are samples from 3,200 drill holes in the study area. Most of these samples were originally obtained in the search for iron and manganese in the Cuyuna Iron Range. Prior to this project many of these drill holes were not included in the D.N.R. Drill Core Library Index because of missing data needed for location, drill hole angle, etc. Most of the missing data was found using available historical information and these holes will be included in future Drill Core Library Indexes.

sections from the first core materials logged, these sections were selected by Barry and described under contract by Dr. James Welsh of Gustavus Adolphus College in St. Peter, Minnesota; 3. Density and magnetic susceptibility measurements were made on most of the logged drill cores, outcrops, rock dumps and some boulders; 4. Over 170 miles of magnetic total field traverses were completed along roads; 5. Six new drill holes.

The drill sample logging, assay samples, thin section data, and geophysical attribute measurements provide a digital database allowing computer access to, and a uniform presentation of, this newly generated data. Logging was done in a digital database format to allow easy searching and management of the information. All logs are printed in this report with no abbreviated codes. Of the lithologies logged, the iron formation related rocks are typically deformed (typically brittle and brittle-ductile deformation), metamorphosed (typically low grade), altered, and recrystallized. Other rocks include gneiss, Keweenaw rift material, and schists that may represent the continuation of the Wisconsin Volcanic Massive Sulfide Belt. Possible black schist (and metamorphic derivatives?) related to Volcanic Massive Sulfide (VMS) alteration has been observed in DDH's 16 (UNIQUE 10037), S208 (UNIQUE 15503), DRP-1 (UNIQUE 12759), BM-4 (UNIQUE 10014), and ML-50C (UNIQUE 12772). Please note that the "UNIQUE" numbers are numbers used internally by the MnDNR, and not the "UNIQUE" numbers used for drill holes by the Minnesota Department of Health. Several of these are within a group of logged samples from 59 drill holes containing stratiform sulfide iron formation or chemical sediment (pyrrhotite with lesser pyrite and trace amounts of base-metal sulfides). Tourmalinites and possible tourmaline bearing rocks occurred in samples from 12 drill holes, predominantly within the Glen Township Formation. Whether these can be linked on a reconnaissance scale to the association of tourmalinites with VMS and sedimentary exhalative (SEDEX) base metal deposits is unknown. In samples from 34 iron formation drill holes, goethite or hematite replaced other rock types either through hydrothermal processes, surficial weathering, or both. The rocks of the area have apparently undergone several periods of weathering before being glacially scoured. These effects were superimposed on the original rock types, and include argillic, limonitic, red hematitic, goethitic alteration, and leaching. Relationships of weathering intervals are preserved beneath younger sediments. Some goethitic alteration, however, does appear to be hydrothermal in nature, along with associated frequent carbonate, and rare pyrite or kaolin. Observed kaolin having a blebby nature and associated elevated Au and Pd values, is reminiscent of the "jacutinga" itabirite in Brazil which is associated with gold-palladium mineralization. Local kaolinitic claystone "saproelite" from weathering also occurs.

Results for the 640 analyzed samples have been received from Bondar-Clegg & Company Ltd. of Ottawa, Ontario. Of these, 541 samples were analyzed using a 19 element package including gold, and 99 samples were analyzed using a 52 element package. Samples were mostly taken from drill core, with a few from rock dumps and outcrops. The data indicates that hydrothermal processes were active within the area. Besides being (as expected) anomalously high in Mn and Fe, samples also are regionally anomalous in B, Ba, As, Hg, F, Li, Nb, Zr, and rare earths. In general samples with higher TiO₂ also had higher K₂O and Al₂O₃. There were four samples with Cu values over 1000 ppm. DDH 310 (UNIQUE 15468) had the highest Cu value (1622 ppm), it also had an adjacent sample analyzed with the highest Li value (1145 ppm), along with anomalous Ba and Mn. There were five samples with Zn values over 600 ppm, with the highest Zn value (831 ppm) in DDH 18132 (UNIQUE 10752). The highest As value was 1362 ppm,

in DDH 280 (see tourmaline bearing rocks). There is a high probability for undiscovered economic mineralization.

A contract was completed by Dr. Don L. Shettel Jr. and Dr. Patrick O'Hara to interpret three existing ground water and lake sediment geochemical data sets using state of the art statistical and geochemical modeling methods. From these models Drs. Shettel and O'Hara constructed mineral potential anomaly maps for gold, base metals, iron and uranium. This report is not included here, but can be obtained from the Minerals Division Library at Hibbing.

Contracts were completed by Dr. Allan Spector to make an inferred geologic map of the twenty township Shephard Area at a scale of 1:62,500 and a second twelve township map extending this area to the northeast. Dr. Spector's maps display structurally deformed, folded and faulted, greenstones with associated metasedimentary units and intrusives. An important aspect of this contract was construction of 1:62,500 scale maps displaying several high mineral potential areas as modeled from geophysical characteristics of known mines located in similar Precambrian terrains. These models are primarily based on the Dr. Spector's experience with such features. Some of these areas of high mineral potential are coincident with anomalous geochemical results defined by Drs. Shettel and O'Hara.

Geophysical measurements of density and magnetic susceptibility were made on selected logged samples for computer modeling of geologic features. Detailed magnetic ground traverses were completed along roads using an A.T.V. or golf cart for transportation. An index map of all geophysical data from D.N.R. files in this area will be available soon. This will facilitate rapid reviews of available data by our clients.

In summary significant results include: Improved definition of geologic features; Lithologic units and features permissive of economic ore deposits; Detailed inferred geologic maps with definition of areas having high mineral potential; Multi element geochemical anomalies with significant pathfinder element anomalies coincident with favorable inferred geologic features. To test these results six vertical holes were drilled through glacial overburden and into bedrock far enough to obtain hard bedrock samples. Hand lens examination of the core generally confirms inferred geologic bedrock maps and provides encouraging indications of mineral potential.

INTRODUCTION

Report Structure:

This report is a compilation of information produced by numerous people over the last two years. Data is provided in the Appendices in the back, with the main text portion of this report devoted to the framework associated with this data. After an overview each section will further elucidate the new data developed. Sections are divided into; the drill hole database, digital logging, sampling and analyses, thin section work, geophysical measurements, and geophysical inferred geologic interpretative mapping. Sections on the results and summary will complete the report. Reports written by contractors are not included in this report, but are available on an open file basis at the Department of Natural Resources, Mineral Division, library at Hibbing, Minnesota.

The first four appendices contain sheets with summary information on the first 32 logged drill hole samples (Appendix 295-A), visited outcrops (Appendix 295-B), visited Cuyuna Range rock dumps (Appendix 295-C), and gravel pit boulder samples (Appendix 295-D).

Drill Hole Database:

The DNR Core Library maintains samples from over 6,000 drill holes for a total footage of over 1,700,000 feet. There have been problems relating to efficient and accurate use of donated core samples which are described in the DRILL HOLE DATA BASE section, page 7. These problems have been particularly onerous with drill samples from the Cuyuna Range. The problems were resolved by acquisition of more data from Hanna Mining Company and forming a digital data base for the information.

Digital Logging:

In order to more efficiently use new logging information, a digital database was set up. Information was added as coded data. The main purposes of the logging are to; provide basic rock information, identify mineralized or altered drill core, and to improve the aeromagnetic interpretation. The listing of logged drill samples is provided in Appendix 295-E. The logs themselves are available in Appendices 295-F and 295-G. The first part (Appendix 295-F) contains the digital logs with the codes replaced. The second part (Appendix 295-G) contains the corresponding "Comments" for each drill sample log.

Sampling and Analyses:

Rock and cuttings samples were analyzed to provide data on possible base and precious metal mineralization and related alteration. The information concerning the received analyses are shown in Appendices 295-H and 295-I.

Thin Sections:

Over 100 thin sections were made early in the project to help identify questionable rock features observed while core logging. This includes textures, mineralogy, and alteration. The data is presented in Appendices 295-J, 295-K and 295-L.

Inferred Geologic Mapping:

Conventional geologic maps are a reflection of the quantity and quality of available geologic information. A paucity of geologic data results in simple maps showing only major lithologic units and structural features. Obtaining more geologic data with traditional drilling methods is expensive, particularly in areas of deep overburden. Geophysical interpretations using high quality geophysical surveys and sophisticated computer enhancement techniques, combined with known geology, can result in more detailed geologic maps. Maps made with these methods which infer geology, are called here inferred geologic maps.

Under contract with the Department of Natural Resources the Shephard Area (twenty townships) north and west of Mille Lacs Lake; and the Shephard Area Extension (twelve townships) east of Aitkin were mapped by Dr. Allan Spector from Toronto, Canada, who has a broad background in Archean granite-greenstone terranes having gold or base metal mineral potential. For these maps Dr. Spector was provided with all available drill hole and geophysical information in the area. For much of the Shephard Area Extension airborne electro-magnetic data flown by United States Steel Corporation was available and was also used in making the inferred geologic maps.

Geophysical Measurements:

When gravity or magnetic surveys are used for interpretation of geology, data from geologic features within the survey area enhances the quality of the interpretation and that is the objective of collecting new data in this work. Inferred geologic maps are based on models of the measured response at ground surface to physical properties of deeply buried geologic features. For interpretation the models require bedrock magnetic susceptibilities and densities. These can be estimated from the amplitude of observations or obtained from published tables listing the magnetic susceptibility and density of known lithologies. However, the density and magnetic susceptibility can vary from published data because of original composition and alteration produced by local conditions. Published magnetic susceptibilities do not account for local remanent magnetization which can also change from that observed in the nearest outcrops. Deep Cretaceous weathering, for example, is known from past iron mining in this area, and may affect the interpretation. The most accurate estimates of these physical properties are obtained from direct measurements on lithologic units to be mapped. These estimates are extrapolated into areas where no local rock samples are available. Recently developed, user friendly, magnetic susceptibility measuring equipment has become available and density measurements are now more accurate than those taken in the past. The most accurate magnetic susceptibility measurements are made on outcrops, or on rock samples which have been oriented to their position in the earth. These measurements reflect the effect of remanent magnetization as it will be observed by ground surface survey instruments. However, from a practical viewpoint, the

average of multiple measurements taken on unoriented rock and drill core samples provide a reasonable magnetic susceptibility for modeling the survey response which is more accurate than those taken from a published source. For this study measurements were made on outcrops, rock dumps and drill core, (see tables Appendix 295-M).

DRILL HOLE DATA BASE

The DNR Minerals Division receives drill products and information for permanent storage and use by exploration companies, and other public consumers of geologic information. The materials and information received by the DNR vary greatly in their amounts and quality. It is the intent of the DNR Minerals Management Information Services to make this information available and useable to the consumer. Currently received information and materials are efficiently handled towards these ends. The DNR Core Library maintains samples from over 6,000 drill holes for a total footage of over 1,700,000 feet.

There have been problems relating to efficient and accurate use of donated core samples. These problems have been particularly onerous with drill samples from the Cuyuna Range: 1. There was confusion in hole numbering and location. Most of this problem related to the way the Cuyuna Range was developed. Compared with the Mesabi and Vermilion Iron Ranges, many smaller companies were involved in the exploitation of the Cuyuna iron ores. As a result, mines (mine names) and land ownerships changed more often, creating a paper trail that is sometimes difficult to follow. Another outgrowth of this were drill hole numbering systems that often repeated numbers between different companies, and even between different properties managed by a given company. 2. Upon drilling, many of the older drill hole samples were split up and given to different people, which included analytical companies, government agencies, different fee owners, etc. These splits of samples have slowly trickled to the DNR over the years (along with related information). 3. In the past information from non-economic and mined out iron properties has been received in large quantities. Because of perceptions of relatively low value, and limited logistical resources, the DNR considered these samples to have a low priority, especially since location information was generally of minimal quantity. Samples from hundreds of drill holes were never included on the Drill Core List due to these reasons. "Interesting" drill hole information loses its value when a drill hole can't be geographically located. The priority of this information and samples has been raised in recent years because of increased exploration interest for base and precious metals. 4. The DNR Minerals Management Information Services solution to the numbering problem has always involved the assigning of UNIQUE Drill Hole numbers to materials as they have been received. While being essential, this procedure, however, has also given materials from the same drill hole more than one unique number (for a number of drill holes). This has also been accentuated by relatively minimal supplied drilling information. 5. Most drill hole information on Region 3 predates computers. The efficient use of an ever increasing amount of information demands the use of digital data where computers can quickly search, organize, manipulate, and relate this information in ways no longer possible manually.

The problems listed above were solved as follows: 1. Many of the drill holes in question were from Hanna Mining, and the timely reception of additional Hanna data and maps with drill hole locations in February, 1993 was particularly helpful. 2. To effectively use this data the DNR

Minerals Management Information Services found it necessary to examine and compile useful related information in a digital format. Digital data handling allowed the available information to be clarified and simplified. Care should be taken in using drill hole numbers. Also note that more than one set of samples per drill hole may still exist. One portion may be reduced to only a quarter core (at first glance meaning no more additional sampling allowed), however other core from the same footage interval may never have been sampled and may be intact. Any sampling card left in a core box may not be represented in the other set of core samples, and may consequently be overlooked. 3. After uncovering and adding information to the database, the misnumbered "UNIQUE"s have largely been eliminated. 4. The data exhumation also allowed for better location information to be placed with most drill holes, even for a number of holes that were previously on the list that only had locations to the nearest section.

Materials from holes drilled for base metals, precious metals, or uranium tend to have better information, analyses and quality of samples. Little additional information on these drill holes has been added to the existing database.

The digital data handling finally allows for the unravelling of the available drill hole information. Currently missing information may still turn up as the map collection is more thoroughly cross-referenced. All resulting improved data will be incorporated into the next Drill Core Library Index, scheduled for printing later this year.

DIGITAL LOGGING

One important aspect of this project was the relogging of existing drill hole samples or materials at the Mn DNR Core library in Hibbing, Minnesota. The purpose of the core logging was to provide basic lithologic information to constrain the inferred geologic map and to complement the new analytical work done for this project. The emphasis was one of economic geology, so special attention was paid to mineralization and alteration. When an exploration hole is drilled for a particular commodity (such as iron or uranium), the core is logged with that mineralization in mind. Consequently, there may be a tendency to "overlook" features that are important to other commodities. Also, since many of these holes in the Cuyuna Range were drilled 50 or more years ago, they were logged without the current knowledge base on mineralization and alteration, including seafloor hydrothermal processes. The relogging of drill core is essential to current and future mineral potential evaluation and marketing work.

In order to make better use of the newly generated logging information, logging was done in a digital database format to allow for easy searching, management and manipulation of the information. Information was added as coded data directly as the core was logged. Because of constraints, the database was kept rather simple, and a certain amount of "lumping" was used up to the point that the codes would allow.

The database is actually composed of two separate parts. The first part (Appendix 295-F) is a separate database (**DRILL LOGS**) with each record being a different footage interval. The second part (Appendix 295-G) is a separate database (**COMMENT FIELD**) with each record being a separate drill hole. Both of these databases have fields with the "DDH" (drill hole) number and "UNIQUE" (unique drill hole) number. Since the **DRILL LOG** database uses intervals for each record, this database may have multiple records per drill hole, while the **COMMENT FIELD** database will only have just one. The fields for each one and a brief explanation follows below in Table's 1 and 2. The UNIQUE drill hole number is the only definite way to separate drill hole data since more than one hole can have the same name otherwise.

In **Table 2**, the only field beside the "UNIQUE" and "DDH" fields is the "COMMENTS" field. This can contain anything unusual or descriptive that doesn't fit into the pigeon-holing of the **DRILL LOGS** database. This can also include short lithology summaries, unusual things, information on the sample materials available, and colors of crushed core (this is sometimes the only discernible information from logging).

TABLE 1: DRILL LOGS DATABASE FIELDS²		
FIELD NAME	MAXIMUM # OF CODE ENTRIES IN FIELD	DESCRIPTION OF FIELDS
UNIQUE	ONE	DNR's UNIQUE DDH number
DDH	ONE	DDH number (as usually written on boxes)
TOP_INT	ONE	Top footage of record interval
BOT_INT	ONE	Bottom footage of record interval
LITHOLOGY	ONE	Code for lithology type
LITHOLOGY DESCRIPTOR	EIGHT	Codes that further describe lithology
ALTERATION TYPE	ONE	Code for alteration type (mineralogies)
MINERALZATN DESCRIPT	FIVE	Codes that describe mineralization mineralogy
MINERALIZATION TYPE	NINE	Codes that describe the mineralization type

TABLE 2: DRILL LOG COMMENT FIELD		
FIELD NAME	MAXIMUM # OF CODE ENTRIES IN FIELD	DESCRIPTION OF FIELDS
UNIQUE	ONE	DNR's UNIQUE DDH number
DDH	ONE	DDH number (as usually written on boxes)
COMMENTS	TEXT: NO CODES	Can contain anything- miscellaneous information

² NOTE: For those people currently using the database with these codes (including previous Open File updates), it should be noted that the final Open File data set will have a completely new set of codes for the purpose of once again representing lithology and alteration types in a more useful format. At the core of this will be some of the old codes. The new code numbering system will contain four digits instead of three. The new coding system will be used in future work.

Logging involved the division of the drill hole materials into footage intervals based on common lithology, with each footage interval forming a separate database record. Unless extremely significant, mineralization and alteration was noted but did not form a basis for creating new database records or entries. The alterations or mineralizations noted within an interval, may only have these features over a portion of the interval noted. The usual spotty nature of observed alteration and veining also made this a necessity. If significant, more detailed information would be stored in the **COMMENTS** database. Also, the **ALTERATION TYPE** mineralogy listed may not be the result of a single alteration assemblage within an interval. This limitation should be kept in mind when using this data for matching with known ore deposit assemblages. Most such assemblages have unusual enough mineralogies that this data can still be used for this purpose. If nothing else, this data will help the explorationist to narrow his/her search.

For some drill holes there was no core, crushed material was the only material available to log and sample. Some drill holes had cuttings or crushed core with recognizable lithologic fragments several cms in size, while others had apparently pulverized material, where only a color change could be logged. The intent was to log the best available material, and in some cases that was pulverized core.

SAMPLING AND ANALYSES

This project is oriented toward identifying nonferrous metallic mineralization or associated alteration. The sampling and analysis of this project has been done to complement previous work. The drill samples came from holes drilled for iron and manganese exploration, uranium exploration, gold exploration, base metal exploration, and non-exploration purposes.

As a course of those efforts, previous work consisted of analyses for related elements. The biggest existing data set comes from the iron exploration and mining, which typically generated analyses for iron and manganese, and less often for silica, phosphate and alumina. Other explorations have typically analyzed for a mixture of base and precious metals and associated indicator elements. Minor whole rock and other analytical work has also been done.

With the emphasis of this project on economic mineralization and related indicators such as alteration, sampling was done to directly test such features. Sampling and analyses also provided considerable information on characterizing the larger regional geochemistry environment(s). Because of limits to funding, altered and mineralized rock were preferentially sampled over unmineralized and unaltered rock.

Much of the iron ore drilling left combinations of core and crushed core or cuttings. Where possible, the crushed core or cuttings were preferentially used in order to preserve the remaining core. In some cases where distinctive lithology or alteration changes fell within a cuttings sample, the core might be preferentially sampled for analysis. It should also be noted in some drill holes with both remaining crushed core and core, that the remaining drill core was obviously more cherty than the iron rich crushed core (high grading when the core was originally crushed and analyzed?). It may thus be possible that something of interest observed in drill core, may not be represented in the cuttings or crushed core. Sample footages varied also with the amount of materials remaining. Sample intervals ranged from 2 to 20 feet, confined primarily on alteration, lithology and available materials. Sample selection, sawing, and compositing was supervised by B. Frey. During sample selection, considerable judgement was required due to the variable quality of available sample materials.

The samples were analyzed by Bondar-Clegg & Company, Ltd. of Ottawa, Ontario, Canada. Samples requiring crushing and pulverizing were first prepared at their facility in Hibbing, Minnesota (Lerch Brothers Inc.).

Two different sets of analyses were performed on samples. Most samples were analyzed for 19 elements including gold and common base metals. These elements and detection limits are listed in Table 3. A limited number of samples were analyzed with a 52 element package. These analyses and their detection limits are listed in Table 4. The samples that were analyzed are listed in Appendix 295-H. The analytical results are listed in Appendix 295-I.

TABLE 3: 19 ELEMENT ANALYTICAL PACKAGE & Pd, Pt

ELEMENT NAME	METHOD	UNITS	LOWER DETECTION LIMIT	UPPER DETECTION LIMIT
✓ Au ✓	FA-30	PPB	5	10000
✓ Ag ✓	ICP	PPM	0.2	50
✓ Pb ✓	ICP	PPM	2	10000
✓ Zn ✓	ICP	PPM	1	20000
✓ Fe ✓	ICP	PCT	0.01	10
→ ✓ Ba ✓	ICP	PPM	1	2000
✓ Al ✓	ICP	PCT	0.01	10
→ ✓ Ti ✓	ICP	PCT	0.001	99.999
✓ Mn ✓	ICP	PPM	1	20000
✓ V ✓	ICP	PPM	1	20000
✓ Cr ✓	ICP	PPM	1	20000
✓ Ni ✓	ICP	PPM	1	20000
✓ Cd ✓	ICP	PPM	0.2	1000
✓ Cu ✓	ICP	PPM	1	20000
✓ Co ✓	ICP	PPM	1	20000
✓ As ✓	ICP	PPM	5	2000
→ ✓ Zr	XRF	PPM	1	20000
✓ Y ✓	XRF	PPM	1	20000
→ ✓ Nb	XRF	PPM	5	10000
✓ Pd	FADCP	PPB	1	10000
✓ Pt	FADCP	PPB	5	10000

TABLE 4: 52 ELEMENT ANALYTICAL PACKAGE				
ELEMENT NAME	ANALYTICAL METHOD	UNITS	LOWER DETECTION LIMIT	UPPER DETECTION LIMIT
Cl	TITRA	PCT	0.01	300
SiO2	ICP	PCT	0.01	100
TiO2	ICP	PCT	0.01	100
Al2O3	ICP	PCT	0.01	100
Fe2O3	ICP	PCT	0.01	100
MnO	ICP	PCT	0.01	100
MgO	ICP	PCT	0.01	100
CaO	ICP	PCT	0.01	100
Na2O	ICP	PCT	0.01	100
K2O	ICP	PCT	0.01	100
P2O5	ICP	PCT	0.01	100
LOI	GRAV	PCT	0.05	100
Total		PCT	0.01	999.99
Li	ICP	PPM	1	20000
C Tot	LECO	PCT	0.02	100
Be	ICP	PPM	0.5	1000
Sc	ICP	PPM	5	2000
V	ICP	PPM	1	20000
Cr	ICP	PPM	1	20000
Co	ICP	PPM	1	20000
Ni	ICP	PPM	1	20000
Cu	ICP	PPM	1	20000
Zn	ICP	PPM	1	20000
Ga	ICP	PPM	2	10000
As	ICP	PPM	5	2000
Rb	INAA	PPM	5	10000
Sr	ICP	PPM	1	2000
Y	ICP	PPM	1	2000
Zr	ICP	PPM	1	20000

TABLE 4: 52 ELEMENT ANALYTICAL PACKAGE				
ELEMENT NAME	ANALYTICAL METHOD	UNITS	LOWER DETECTION LIMIT	UPPER DETECTION LIMIT
Nb	ICP	PPM	1	10000
Mo	ICP	PPM	1	10000
Ag	ICP	PPM	0.2	50
Cd	ICP	PPM	0	1000
Sn	ICP	PPM	20	2000
Sb	ICP	PPM	5	1000
Te	ICP	PPM	10	2000
Ba	ICP	PPM	1	2000
La	ICP	PPM	1	2000
Ce	INAA	PPM	1	9000
Ta	ICP	PPM	10	1000
W	ICP	PPM	20	2000
Pb	ICP	PPM	2	10000
Bi	ICP	PPM	5	2000
B	DCP	PPM	1	20000
F	SPION	PPM	20	20000
As	AAHY	PPM	1	1000
Sb	AAHY	PPM	0.1	2000
Hg	CV AA	PPB	5	5000
Cr	ICP	PPM	10	10000
Se	XRF	PPM	1	1000
Ta	XRF	PPM	3	20000
Pd	FADCP	PPB	1	10000
Pt	FADCP	PPB	5	10000
Au	FADCP	PPB	1	10000
S Tot	LECO	PCT	0.02	100

THIN SECTION WORK

As logging and sampling proceeded, samples were selected by B. Frey for thin section work. Thin sections were made from a variety of rock types for the purpose of providing information that visual logging cannot produce, and for answering questions generated from visual logging. A total of 117 thin and polished thin sections were examined. These consisted of samples collected during project logging, and also of existing thin sections in the DNR thin section collection. A listing of the thin sections and their locations is included in Appendix 295-J. Dr. James Welsh of Gustavus Adolphus College performed the petrographic work. Results are included in Appendices 295-K and 295-L.

Appendix 295-K contains a Thin Section Summary and two tables. The first table summarizes rock type, protolith, metamorphic grade, primary texture, grain size, foliation, and alteration. The second table summarizes mineralogy. Appendix 295-L contains the individual thin section description.

GEOPHYSICAL MEASUREMENTS

Geophysical surveys of natural fields such as gravity or magnetic susceptibility produce the most effective data for geologic interpretations. As explained in the introduction data from geologic features within the survey area enhance the quality of geophysical models used in the interpretation procedure. In this section we will describe; instruments used, methods, and inherent errors for each of the different sample types. The results are presented in Appendix 295-M, with separate tables for outcrops, rock dumps and drill core samples.

Ground surface gravity surveys respond to the density and depth of burial or distance from the gravity meter to the feature. To model the results of these surveys the density of expected lithologic units is obtained from outcrop, rock dump or core samples. These are extrapolated into the survey area or estimated from published data lists. For bulk density measurements a Mettler 33360 210260 density determination kit was used with a Mettler H43 balance. Distilled water was used for the sample weight in water and the water temperature measured for determination of a water temperature constant. Density measurements then followed the standard procedure of weighing the sample in air and then in water and the calculation made using the formula: Density of a solid body equals (weight in air), divided by (weight in air minus weight in water), times the (water temperature constant). Density measurements have some problems because sample conditions in the ground cannot be duplicated in the laboratory. The density or volume of pore fluids is unknown, thus there is an error in measurements of samples which have dried. There were a few porous samples that kept taking on water and you could see small bubbles rising from the sample. In three or four minutes of soaking sample weight changes would be several hundreds of a gram. We tried to soak these samples until the weight stopped varying, but the results are questionable. These measurements are shown with a question mark in the tables. Sample orientation has no bearing on the results of density measurements. The largest size sample that the equipment can conveniently contain provides the most representative sample of the lithologic unit.

For magnetic susceptibility, the ground level survey response is dependent on magnetic susceptibility of the geologic features surveyed and the depth of burial of those features. Magnetic susceptibility is dependent on: The original mineral composition of the feature, (mostly the magnetite content); Alteration from surficial weathering and orogenic events; Location and orientation in respect to the pole positions of the earth's magnetic field; Mass of the feature, and; Remanent magnetization. Like density, measurements of magnetic susceptibility from within the survey area are the most accurate available for computer modeling. For this work an Exploranium model KT-5 magnetic susceptibility meter was used. Individual readings can be taken with a maximum sensitivity of 1×10^{-5} SI units. The manufacturer recommends the instrument should not be used to measure samples less than 50 mm thick with a surface smaller than the KT-5 face, 60 mm. The instrument has a data memory of twelve samples and in auto scan mode measurements are repeated automatically at one-second intervals as the instrument is moved across the rock face. This provides micro information on the distribution of susceptibility within a lithologic unit and therefore, a good estimate of the accuracy of recorded observations for large samples or outcrops. For outcrop and rock dump samples this feature was used extensively. On core samples the flat or split face of the core was placed against the instrument face, with as much of the face as possible being covered. Usually ninety percent or more of the instrument face was covered. It was not possible to scan drill core

samples because two or three sections of core were needed to reasonably cover the instrument face. For all sampled intervals several measurements were made for each measurement recorded to make sure a high or low reading which represents a very small part of the sample was not used in a way which would bias results.

Magnetic susceptibility results from measured samples provide a reasonable and with caution a useful measure of those lithologies which can be differentiated by magnetic surveys, (measurements taken on different lithologies and different samples types are comparable and also compare with expected susceptibilities from published tables considering that no sophisticated measurements of magnetite content were made), however, we must recognize that they are an imperfect measure as explained in the introduction. The most accurate measurements are made on outcrops or on rock samples which have been oriented to their in situ position in the earth. These measurements reflect the effect of remanent magnetization as it will be observed by survey instruments. A flat surface and infinite sample depth provide optimum physical condition for accurate measurements. In the field a large area is rapidly scanned to determine if there is a uniform response. However, the depth of weathering is unknown and also the error this might impose on the near surface magnetic field particularly where ferromagnetic minerals are present. Within the Shephard Area and nearby locations, nineteen outcrops were located and sampled. Note in the outcrop data section (Appendix 295-M), some outcrop sites have more than one lithologic unit which was sampled. There are many more available outcrops within Region Three.

Next to outcrop or other in situ oriented samples, rock dumps provide the second best source of magnetic susceptibility information. Because the in situ orientation of these samples is unknown, magnetic susceptibility measurements are not as accurate as those taken on outcrops. Samples have a large flat surface and depth for maximum response, considering manufacturers recommendation's. They have fracture or cleavage faces which uniformly cover the whole meter face. Samples are also locally derived and measurements represent a suite of samples from well defined lithologic units. The average of multiple measurements taken on unoriented rock is more accurate than those taken from a published list. Twelve rock dump areas were sampled. Rock dumps were found near mining or quarry sites, none of which were in operation at the time the samples were measured. Mine and quarry pits were water filled with rock faces under water.

Drill core should be the third best source of accurate information, like rock dump samples the in situ orientation is unknown. Manufacturer's recommendations on depth and size of samples reduce the accuracy of most core samples; NQ size core, which is the most common size core now drilled is about 48 mm in diameter. AX core which was the most common core drilled prior to the use of wire line core barrels is about 28 mm. Split core would be half of these diameters. However, using the correction tables supplied with the instrument the average of multiple measurements taken on unoriented rock or drill core samples provide a reasonable magnetic susceptibility.

Working with the KT-5 on core samples has shown considerable measurement variation, with measurements on core having an expected high magnetic susceptibility also having high measurements, while those on core with an expected low magnetic susceptibility having low measurements. Fortunately, the contrast in magnetic susceptibility between rocks types

measured by this method is large in comparison to these error problems. Hence, they are useable. Therefore, the observations help define lithology, provide a reasonable measure of magnetic susceptibility and can be used with caution to modify published lists of magnetic susceptibility for different lithologies. On the table (Appendix 295-M) the section for drill core magnetic susceptibilities and densities, there is an estimate of the percentage of meter face covered by core. This will give the reader a further idea of how these observations can be used. With more comparison testing on core samples we believe a correction factor can be determined to make these readings more useful.

Each outcrop, rock dump, drill hole, and boulder sample is given an unique project 295 file number, (Appendix 295-M). Some of the holes done early in the program had many measurements taken for intersected lithologies. Later this was reduced because of time restraints and many of the later holes had only three magnetic susceptibility measurements and two density measurements. Project 295 magnetic susceptibility and density observations are presented in table 295-M.

On the magnetic susceptibility observations tables, and density tables for outcrops, rock dumps and boulders the average measurements for magnetic susceptibilities and densities were calculated with a hand calculator and entered on the table after checking for mathematical and typographic errors. For drill core, magnetic susceptibility and density the readings were put into a Word Perfect table, checked for typographic errors, and then calculated using table math. The high, low and average measurements were then transferred along with other data to the tables. The table for drill core measurements is divided into two tables with the same format. This was done to speed up computer response time to table edit commands. It would be interesting to do a statistical analysis of this data for comparison between different lithologic units.

INFERRED GEOLOGIC MAPPING

Conventional geologic maps are a reflection of the quantity and quality of available geologic information. A paucity of geologic data results in simple maps showing only major lithologic units and structural features. Obtaining more geologic data with traditional drilling methods is expensive, particularly in areas of deep overburden. Geophysical interpretations using high quality geophysical surveys and sophisticated computer enhancement techniques, combined with known geology, can result in more detailed geologic maps. Maps made with these methods which infer geology, are called here inferred geologic maps. High resolution aeromagnetic data and gravity surveys are the basic framework of these maps, whatever geologic data is available enhances the accuracy and quality of the inferred geologic map.

The inferred geologic maps display more detailed (1:62,500 scale) geologic information than was previously available. This information is divided into two parts: 1. Geologic information which includes lithologic units, structural features, and depths to magnetic source which is not available on conventional geologic maps. 2. Geophysical responses from magnetic and electromagnetic surveys which are typical of reconnaissance prospects. These details help reveal areas of economic mineral potential. Accurate, detailed, geologic maps are a valuable resource for making good land management decisions and encouraging exploration by private industry. Inferred geologic maps are a relatively inexpensive way of providing substitutes for these maps particularly in areas with deep overburden and few outcrops.

For magnetic surveys the instruments response is determined by: The magnetic susceptibility of the lithologic unit being surveyed, (which is largely dependent on the quantity of magnetite in the rock); The depth of burial of the lithologic unit, and; The remanent magnetization that was fixed when an igneous rock cooled or a sedimentary rock was consolidated. Gravity surveys respond to the density of the lithologic unit surveyed and depth of burial or distance from the gravity meter. Geophysical profiles and various kinds of maps are used to interpret the response to changes in these fields and model geologic features or lithologic units. Depths to the causative feature are estimated using the shape of the geophysical profile.

Under contract with the Department of Natural Resources, the Shephard Area (twenty townships) and Shephard Area Extension (twelve townships) were mapped by Dr. Allan Spector from Toronto, Canada. He has a broad background in Precambrian granite-greenstone terranes having gold or base metal mineral potential. Dr. Spector has the knowledge and experience necessary to create inferred geologic maps. He is also experienced in selecting areas with good economic mineral potential and did so on these maps. For these maps Dr. Spector was provided with all available drill hole and geophysical information in the area. The logged drill cores within the Shephard Area and the Shephard Area Extension are indicated in Appendix 295-E. The geophysical information included detailed total field magnetic ground profiles run by the D.N.R. in the Shephard Area. For much of the Shephard Area Extension airborne electro-magnetic data given to the State by United States Steel Corporation was available.

To select areas for making the inferred geologic maps, airborne magnetic surveys, gravity data, geochemical surveys and contemporary geologic maps were used. Published models of known mineral deposits were compared with characteristics displaying mineral potential. Current mining practice, ore grades and environmental concerns were also considered. Table 5, shows

ore deposit models and mines used for this study. References for models are listed on the table and in the bibliography.

TABLE 5: ORE DEPOSIT MODELS USED IN SELECTING AREAS FOR MAKING INFERRED GEOLOGIC MAPS		
ORE DEPOSIT MODELS	MINES USED AS MODELS	REFERENCES
Volcanic Massive Sulfides	Crandon Deposit, Lynn Deposit	Cox and Singer, 1986 Roberts & Sheahan, 1988
Archean Lode Gold Deposits	Cochonour-Williams, Campbell Red Lake, Homestake, Madsen	Cox & Singer, 1986 Roberts & Sheahan, 1988
Sedimentary-Type Base Metal, Stratiform Ore Deposits	Sullivan, Mt. Isa, Meggen, Mufulira, Red Dog	Little, et. al., 1981 Roberts & Sheahan, 1988
Sedimentary Manganese	Cuyuna Range	Cox and Singer, 1986

After the Shephard Area was chosen detailed total field magnetic surveys were run along roads in the area. Inferred geologic maps utilize profiles that are oriented perpendicular to the strike of geologic features being studied. If the geologic feature is oriented parallel to the flight line the sample interval is the flight line spacing, about one-quarter mile for this survey. Only relatively large features will be defined. Ground profiles oriented perpendicular to the strike of geologic features provide much more detailed sample intervals and better spacial location of anomalies than those obtained from airborne surveys where flight lines are parallel to the strike of the feature. On the Geologic map of the Penokean Orogen, east-central Minnesota, Southwick, et. al. 1988, the strike of geologic features in the Shephard Area is northeast-southwest, with some features striking to the north. Here east-west profiles would be helpful. In the Shephard Area Extension the geologic strike of geologic features is east-west, perpendicular to flight line direction with little gain from running ground traverses.

The ground magnetic surveys were run using a Scintrex IGS-2 system with an MP-4 magnetometer and a second MP-3 magnetometer as a base station which measured the magnetic field at two minute intervals. Total field and some gradiometer profiles were surveyed at fifty foot station spacing. At first the surveys were run on foot with the station spacing measured using a measured fifty foot length of rope. Stationing was also tied to recognizable features on 1:24,000 scale topographic maps. Time and budget allocations for this work severally limited the coverage if the survey was to be done by walking and surveying in this manner. We modified the method by pacing the station spacing, and then some trials were made using an all terrain vehicle with the magnetometer sensor mounted at the top of a twelve foot p.v.c. pipe. Profiles run with this method showed good repeatability with those run by walking and using the rope measure. In the past this type of survey has been run using a truck for transportation, but this was usually done where there wasn't much traffic that would influence the magnetic field, and a slow moving vehicle would not be a hazard. Using the a.t.v. with continuous manual reading and recording magnetic observations we found that recorded magnetic field

readings were twenty to thirty feet apart and averaged about twenty-five feet when plotted against recognizable map features at quarter mile intervals or when station spacing was measured with a surveyor's distance measuring wheel. The measuring wheel was clumsy for the driver to use, the instrument man needed both hands and total concentration to run the magnetometer. As a survey method prorating station spacing between recognized topographic map features worked well in most areas where these could be found at intervals of a quarter mile or less. This was not always possible and that problem was solved by using a Magellan, NAV 1000 PRO, ground position system to supplement location by map features. Passing motor vehicles would sometimes influence the magnetic field, but these would create easily recognized spurious anomalies lasting one or at the most two stations. We were required to change to a rented golf cart for safety and legal reasons. A slow moving vehicle sign was attached to the rear of the cart and a truck followed at about 300 foot spacing with another slow moving vehicle sign on it's rear door.

For most profiles base station corrections were made nightly before dumping the data onto a disk and making a hard copy. For a few profiles we repeated field station readings at the beginning and completion of the profile to check for magnetic storms as indicated by a diurnal correction of greater than thirty nanoteslas. These profiles are apparent because there is a star after the reading signifying uncorrected data. Data was dumped and profiles made using a Compaq computer, Scintrex IGSDUMP software and an Okidata printer. Printer profiles and digital data files were named for the date the profile was run. On some profiles location data is written on the hard copy, for most it was entered on the computer file using MSDOS, edit software. Photocopies of 1;24,000 topographic maps were used to plot traverse locations and stationing. All profiles are available on disks or as hard copies.

In the Shephard Inferred Geologic Map Area seventy miles of road traverses were completed. This is where most of the survey method design work was done. These were submitted to Dr. Spector for use in making his inferred geologic map. One hundred seventy-six miles of road traverse were completed in an area to the west, but further work here has been postponed. After Dr. Spector completed the Shephard Area map, we re-evaluated the mineral potential of the entire region. Based on his results the priority for further mapping shifted to follow volcanic and metasedimentary rocks to the northeast and east. Time, budget and orientation of geologic features did not allow running magnetic traverses in the Shephard Area Extension.

The contractor was provided with the information shown on Table 6:

TABLE 6: INFORMATION PROVIDED CONTRACTOR TO MAKE INFERRED GEOLOGIC MAPS		
DESCRIPTION	AUTHOR	DATE
Aeromagnetic Digital Tapes and Maps	Chandler, V.W.	1983
Gravity Digital Tapes and Maps	Chandler, V.W. & Schaap, B.D.	1991
Project 295, DDH Data Summary Sheets Available May 26, 1992 Appendices 295-A, 295-B, 295-C, 295-D	Frey, B.F. & Lawler, T.L.	1992
Geologic Map Penokean Orogen, East Central Minnesota	Southwick, D.L., et. al.	1988
Bedrock Geol. of the South-Cent. Part of the North Range, Cuyuna Dist., MN	Schmidt, R.G. & Dutton, C.E.	1957
Bedrock Geol. of the Southwestern Part of the North Range, Cuyuna District Minnesota	Schmidt, R.G.	1958

Six holes were drilled in June, 1993, to test lithology, structure and depth to bedrock on some of the features mapped by Dr. Spector, and to learn more about regional geologic features. Site selection was done by D.N.R. personnel and Dr. Southwick of the Minnesota Geological Survey. The new drill hole data is summarized in Table 7.

TABLE 7: COMPARISON DR. SPECTOR'S INFERRED GEOLOGIC MAP AND NEW DRILL HOLE DATA FROM SIX HOLES DRILLED AFTER THE MAP WAS CREATED					
HOLE NUMBER	LOCATION	EST. DEPTH TO MAGNETIC BASEMENT	DRILL DEPTH TO LEDGE	SPECTOR LITH.	HOLE LITH. ³
P295-1	NE,NW, S.28 T47N, R22W	<200 Ft.	127 Ft.	Greenstone	Calcareous Amphibolite
P295-2	NW,SW, S.21 T48N, R24W	<200 Ft.	144 Ft.	Greenstone	Iron Stained Siltstone
P295-3	NW,SE, S.18 T47N, R24W	<200 Ft.	94 Ft.	Quartzite	Sericitic Quartz Schist.
P295-4	SW,SE, S.36 T44N, R30W	>500 Ft.	311 Ft.	Non-Mag. Sediments	Siltstone
P295-5	SE,SE, S.22 T44N, R28W	<100 Ft.	240 Ft.	Greenstone	Volcanics & Sediments
P295-6	SE,NE, S.30 T45N, R27W	+250 Ft.	285 Ft.	Gneissic Dome	Qtz. Pebble Cong.

³ Hole lithologies are tentative pending thin section studies, assay data and further cooperative evaluation by the Minnesota Geological Survey.

RESULTS

Digital Logging and Chemical Analysis Results:

The relationships indicated in the results section do not constitute a complete information synthesis due to the volume of data. The results shown in this section are organized in the context of the geologic setting of samples, and relevant information concerning economic geology. The latter includes such features as brecciation, hydrothermal alteration including "black schist" chloritic alteration, tourmalinites, base metal mineralization, manganese oxides, and kaolinitic rocks. An unusual Au/Pd analysis may be indicative of this kind of mineralization in iron formation.

The majority of the logged 451 drill holes with Core Library materials were from Cuyuna Range iron drilling, with the remaining holes drilled for other commodities or purposes. The actual physical logging of this project may have encountered some problems beyond the location problems discussed earlier. Since many of the Cuyuna iron cores had been divided into different portions (which originally went to different entities), the net effect on any one portion is that the core is "skeletonized". Consequently, core pieces usually do not fit together, and that the exact core footage between run blocks may be relatively poorly known. Since rock contacts also tend to be broken, otherwise good contact relationships are poor or missing. Another result is that it may be difficult to recognize if the core has been scrambled.

Quality control for analyses (outside of Bondar-Clegg's internal checks) was performed with three samples per batch of twenty. This included one duplicate sample (prepped and analyzed twice) with a "DUP" designation after the sample number, and two standard samples with a "STD" designation. Analytical results for the duplicate pairs are shown in Table 8, with the standards shown in Table 9.

Besides being (as expected) anomalously high in Mn and Fe, analyzed samples also are regionally anomalous in B, Ba, As, Hg, F, Li, Nb, Zr, and rare earths. Elevated rare earths may in part be associated with phosphate (monazite?) rich rocks (McSwiggen et al, 1986). In general, samples with higher TiO₂ also had higher K₂O and Al₂O₃. Two samples from the Rice River District DDH S14 (UNIQUE 10189) had unusual analyses. The first sample had a Ba content >2000 ppm and Y content of 966 ppm. The second sample had an As value of 926 ppm. Samples from this hole had chemical sediments and sinter looking textures.

The five highest analytical values for elements with interesting results are shown in Table 10. Iron (Fe), manganese (Mn), and barium (Ba) were not included in Table 10 because they had more than five samples above the detection overlimit value. Note that for chromium, the 52 element package analyzed it twice (same method, but two different detection limits). The chromium values used in Table 10 are those with the better detection limit which was the same as the 19 element package.

TABLE 8: DUPLICATE SAMPLE ANALYSES (19 ELEMENT PACKAGE)

DNR Sample #	Au ppb	Ag ppm	Pb ppm	Zn ppm	Fe pct	Ba ppm	Al pct
2951000209	< 5	0.7	22	61	> 10	82	0.6
2951000209DUP	5	0.8	24	58	> 10	83	0.6
2951000297	< 5	0.7	35	39	> 10	9	0.46
2951000297 DUP	< 5	0.9	34	37	> 10	8	0.43
2951000325	< 5	1.8	< 2	20	> 10	42	0.57
2951000325 DUP	< 5	1.6	< 2	21	> 10	44	0.61
2951000347	9	5.7	< 2	51	> 10	207	0.64
2951000347 DUP	12	6.1	< 2	51	> 10	199	0.62
2951000407	< 5	0.6	11	122	8.74	153	3.05
2951000407DUP	< 5	0.7	12	125	9.11	159	3.13
2951000435	< 5	0.6	11	47	5.14	39	0.98
2951000435DUP	6	0.4	8	47	5.24	39	0.94
2951000455	< 5	0.7	5	118	> 10	13	0.14
2951000455 DUP	< 5	0.6	3	113	> 10	12	0.12
2951000479	< 5	< 0.2	7	116	6.94	54	2.88
2951000479 DUP	< 5	0.3	7	111	6.93	54	2.88
2951000499	7	1.2	< 2	75	> 10	193	1.32
2951000499 DUP	6	1.2	< 2	82	> 10	205	1.42
2951000519	9	0.7	< 2	32	> 10	157	0.86
2951000519 DUP	8	0.7	< 2	32	> 10	167	0.93
2951000546	< 5	< 0.2	< 2	109	4.34	179	2.63
2951000546 DUP	< 5	< 0.2	< 2	111	4.44	179	2.7
2951000567	10	< 0.2	< 2	93	4.43	132	2.61
2951000567 DUP	8	< 0.2	< 2	92	4.35	129	2.56
2951000587	7	< 0.2	< 2	46	1.1	23	2.26
2951000587 DUP	< 5	< 0.2	< 2	48	1.15	24	2.39
2951000607	< 5	1.6	< 2	27	> 10	41	0.54
2951000607 DUP	< 5	1.6	< 2	28	> 10	40	0.53
2951000627	< 5	< 0.2	< 2	7	7.06	32	0.25
2951000627 DUP	< 5	< 0.2	< 2	7	7.01	32	0.25
2951000647	12	0.9	< 2	163	> 10	9	2.86
2951000647 DUP	11	0.7	< 2	161	> 10	8	2.81
2951000667	9	0.2	< 2	177	> 10	43	1.09
2951000667 DUP	9	0.2	< 2	170	> 10	40	1.06
2951000701	< 5	0.3	13	43	3.24	183	2
2951000701 DUP	< 5	0.4	14	45	3.33	187	2.06
2951000721	< 5	0.4	27	105	5.62	28	3.04
2951000721 DUP	< 5	0.2	29	108	5.61	32	3.05
2951000741	8	0.6	28	153	5.24	65	2.84
2951000741 DUP	6	0.5	29	154	5.24	61	2.79
2951000761	4	0.3	19	38	2.14	52	1.65
2951000761 DUP	6	< 0.2	17	34	2.03	56	1.57

TABLE 8: DUPLICATE SAMPLE ANALYSES (19 ELEMENT PACKAGE)

2951000781	<	5	0.5	31	246	5.28	44	3.01
2951000781 DUP	<	5	0.4	35	239	5.29	45	3.05
2951000801	<	5	0.5	35	152	5.11	41	2.74
2951000801 DUP	<	5	0.6	35	166	5.69	48	3.07
2951000821	<	5	0.6	25	81	5.22	22	2.69
2951000821 DUP	<	5	0.5	25	82	5.3	25	2.76
2951000841	<	6	0.6	41	49	5.9	13	1.54
2951000841 DUP	<	5	0.7	38	51	6.09	14	1.64

DNR Sample #	Ti pct	Mn ppm	V ppm	Cr ppm	Ni ppm	Zr ppm
2951000209	0.021	1903	28	182	28	219
2951000209DUP	0.022	1914	28	158	29	221
2951000297	0.011	19931	29	62	7	16
2951000297 DUP	0.011	18680	28	64	6	18
2951000325	0.076	267	183	73	77	128
2951000325 DUP	0.08	277	191	76	79	126
2951000347	0.043	439	113	53	94	42
2951000347 DUP	0.041	436	113	50	101	48
2951000407	0.251	877	241	50	39	152
2951000407DUP	0.26	916	252	49	39	111
2951000435	0.004	80	15	47	39	113
2951000435DUP	0.004	75	14	47	39	121
2951000455	0.002	749	10	156	51	19
2951000455 DUP	0.002	749	10	171	52	28
2951000479	0.116	1170	92	25	23	318
2951000479 DUP	0.12	1154	93	26	24	337
2951000499	0.031	565	60	76	66	40
2951000499 DUP	0.033	621	65	81	68	43
2951000519	0.017	93	68	33	22	157
2951000519 DUP	0.017	94	70	32	21	147
2951000546	0.181	210	85	139	83	159
2951000546 DUP	0.187	201	87	127	83	175
2951000567	0.122	169	80	125	70	193
2951000567 DUP	0.121	159	79	119	68	217
2951000587	0.015	301	38	49	18	451
2951000587 DUP	0.015	314	40	56	21	446
2951000607	0.009	11278	40	66	33	12
2951000607 DUP	0.009	10680	39	66	30	18
2951000627	0.004	6352	12	79	7	12
2951000627 DUP	0.004	6308	12	76	7	15
2951000647	0.036	9085	203	90	50	47
2951000647 DUP	0.036	8916	196	90	48	42
2951000687	0.037	13279	93	80	28	25

TABLE 8: DUPLICATE SAMPLE ANALYSES (19 ELEMENT PACKAGE)

2951000667 DUP	0.034	13670	89	87	25	37
2951000701	0.446	630	85	66	40	76
2951000701 DUP	0.487	648	90	68	40	87
2951000721	0.019	858	130	151	70	193
2951000721 DUP	0.02	885	129	154	69	186
2951000741	0.068	516	55	122	72	174
2951000741 DUP	0.067	513	53	116	70	173
2951000761	0.022	458	17	70	9	196
2951000761 DUP	0.023	450	17	71	8	224
2951000781	0.006	370	43	106	151	164
2951000781 DUP	0.005	371	44	106	152	150
2951000801	0.005	390	44	102	90	151
2951000801 DUP	0.004	433	49	115	100	146
2951000821	0.003	452	37	72	95	183
2951000821 DUP	0.003	458	37	80	97	177
2951000841	0.003	95	17	79	84	129
2951000841 DUP	0.003	100	18	84	87	130

DNR Sample #	Cd ppm	Y ppm	Cu ppm	Co ppm	As ppm	Nb ppm
2951000209	< 0.2	36	112	6	22	71
2951000209DUP	< 0.2	33	103	7	21	69
2951000297	2.3	6	8	12	12	< 5
2951000297 DUP	1.4	6	8	11	11	5
2951000325	0.9	24	32	33	110	21
2951000325 DUP	1.3	24	33	33	103	20
2951000347	8.6	45	126	41	291	14
2951000347 DUP	7.9	42	108	47	323	8
2951000407	< 0.2	28	53	45	21	23
2951000407DUP	< 0.2	29	48	46	26	20
2951000435	0.6	15	13	10	7	13
2951000435DUP	0.8	14	10	11	8	13
2951000455	0.4	2	136	12	20	< 5
2951000455 DUP	1.5	2	129	11	21	< 5
2951000479	< 0.2	34	23	32	15	67
2951000479 DUP	< 0.2	37	27	31	20	56
2951000499	2.5	17	46	22	22	5
2951000499 DUP	2.8	17	50	24	33	8
2951000519	1.1	25	20	5	78	26
2951000519 DUP	0.3	23	15	6	90	20
2951000546	1.1	18	30	25	6	12
2951000546 DUP	0.8	16	30	26	< 5	9
2951000567	0.3	25	40	23	7	7
2951000567 DUP	< 0.2	26	40	23	< 5	8

TABLE 8: DUPLICATE SAMPLE ANALYSES (19 ELEMENT PACKAGE)

2951000587	< 0.2	40	7	11	< 5	17
2951000587 DUP	0.4	37	8	11	6	13
2951000607	3.1	13	8	26	90	10
2951000607 DUP	2.8	10	7	25	80	< 5
2951000627	0.7	1	2	4	9	< 5
2951000627 DUP	0.3	1	2	4	11	< 5
2951000647	1.8	16	46	22	18	< 5
2951000647 DUP	1.9	12	47	22	10	< 5
2951000687	2.5	17	45	12	16	< 5
2951000687 DUP	1.7	14	43	12	18	5
2951000701	< 0.2	15	162	25	12	26
2951000701 DUP	< 0.2	13	157	27	13	27
2951000721	< 0.2	25	54	26	21	17
2951000721 DUP	< 0.2	28	55	25	28	15
2951000741	< 0.2	23	100	26	15	21
2951000741 DUP	< 0.2	23	99	25	20	20
2951000761	< 0.2	14	9	5	17	10
2951000761 DUP	< 0.2	16	10	5	12	8
2951000781	< 0.2	37	87	35	21	15
2951000781 DUP	< 0.2	36	89	34	29	16
2951000801	0.6	26	70	26	29	12
2951000801 DUP	0.3	25	75	29	29	6
2951000821	< 0.2	23	26	29	19	13
2951000821 DUP	< 0.2	26	20	30	22	10
2951000841	< 0.2	15	98	28	23	15
2951000841 DUP	0.2	15	102	27	27	14

TABLE 8: DUPLICATE SAMPLE ANALYSES (52 ELEMENT PACKAGE)

DNR Sample #	Cl %	SiO2 %	TiO2 %	Al2O3 %	Fe2O3 %	MnO %	MgO %
295100059	< 0.01	42.76	0.11	3.53	44.51	0.7	0.13
295100059DUP	< 0.01	43.56	0.12	3.56	44.61	0.74	0.15
2951000100	0.02	50.75	1.29	23.84	6.9	0.05	2.59
2951000100DUP	0.02	50.26	1.27	23.64	6.83	0.05	2.55
2951000149	< 0.01	35.57	0.17	2.98	38.95	14.72	0.16
2951000149DUP	0.02	34.94	0.17	2.91	38.06	14.37	0.16
2951000216	< 0.01	6.89	0.06	1.62	71.63	1.1	1.63
2951000216DUP	< 0.01	6.31	0.05	1.46	71.97	1.07	1.56
2951000310	0.02	26.87	0.12	4.63	54.99	0.57	1.74
2951000310 DUP	0.02	26.36	0.11	4.41	55.2	0.6	1.62

DNR Sample #	CaO %	Na2O %	K2O %	P2O5 %	LOI %	Total %	S Tot %
295100059	0.22	< 0.01	0.02	0.19	7.1	99.3	< 0.02
295100059DUP	0.25	0.01	< 0.01	0.22	7.17	100.38	< 0.02
2951000100	0.16	0.15	11.25	0.12	3.84	100.94	< 0.02
2951000100DUP	0.17	0.16	10.95	0.18	3.88	99.95	< 0.02
2951000149	0.87	0.02	0.39	0.04	6.82	100.69	< 0.02
2951000149DUP	0.85	0.03	0.36	0.07	6.82	98.75	< 0.02
2951000216	1.57	0.09	0.03	< 0.01	16.07	100.7	0.17
2951000216DUP	1.47	0.04	0.15	< 0.01	15.82	99.92	0.16
2951000310	0.48	0.08	1.86	0.34	8.11	99.81	0.03
2951000310 DUP	0.46	0.06	1.91	0.36	8.18	99.27	0.03

DNR Sample #	Li ppm	C Tot %	Be ppm	Sc ppm	V ppm	Cr ppm	Co ppm
295100059	7	0.16	< 0.5	< 5	51	32	42
295100059DUP	7	0.16	< 0.5	< 5	47	28	41
2951000100	53	0.11	1.1	< 5	34	13	15
2951000100DUP	56	0.11	1.2	< 5	36	13	14
2951000149	13	0.38	< 0.5	< 5	54	63	50
2951000149DUP	12	0.39	< 0.5	< 5	52	65	52
2951000216	4	2.58	< 0.5	13	63	14	14
2951000216DUP	3	2.65	< 0.5	13	64	13	14
2951000310	2	0.83	13.5	< 5	44	27	40
2951000310 DUP	2	0.83	10.6	< 5	44	29	35

DNR Sample #	Ni ppm	Cu ppm	Zn ppm	Ga ppm	As ppm	Rb ppm	Sr ppm
295100059	31	12	46	7	41	< 5	8
295100059DUP	27	12	41	5	38	< 5	8
2951000100	16	15	48	6	< 5	519	48
2951000100DUP	16	13	52	6	< 5	525	51
2951000149	29	55	77	< 2	25	< 5	171
2951000149DUP	31	50	70	< 2	29	< 5	171

TABLE 8: DUPLICATE SAMPLE ANALYSES (52 ELEMENT PACKAGE)

2951000216	28	26	54	< 2	< 5	12	14
2951000216DUP	28	23	54	< 2	< 5	11	14
2951000310	12	25	75	< 2	38	95	66
2951000310 DUP	13	21	71	< 2	30	130	61

DNR Sample #	Y ppm	Zr ppm	Nb ppm	Ag ppm	Cd ppm	Ba ppm	La ppm
2951000059	4	7	16	2	< 1	16	< 1
2951000059DUP	4	5	14	3.9	< 1	16	< 1
2951000100	17	147	19	< 0.2	< 1	91	276
2951000100DUP	18	155	20	0.3	< 1	96	291
2951000149	8	15	11	< 0.2	< 1	> 2000	< 1
2951000149DUP	8	14	8	< 0.2	< 1	> 2000	< 1
2951000216	4	13	6	2.3	< 1	16	< 1
2951000216DUP	4	13	6	2.3	< 1	16	< 1
2951000310	4	< 1	2	1.7	1	47	5
2951000310 DUP	4	< 1	< 1	1.9	2	42	6

DNR Sample #	Ce ppm	Pb ppm	B ppm	F ppm	As ppm	Sb ppm	Hg ppb
2951000059	16	17	36	33	19	0.2	6
2951000059DUP	18	19	33	35	18	0.1	6
2951000100	600	13	57	1320	1	0.1	12
2951000100DUP	612	13	64	1417	1	0.1	15
2951000149	< 5	< 2	46	36	38	0.4	9
2951000149DUP	26	< 2	53	39	37	0.3	9
2951000216	< 5	24	44	75	3	0.2	43
2951000216DUP	< 5	26	48	74	3	0.2	43
2951000310	50	41	62	84	14	0.4	48
2951000310 DUP	56	33	66	135	14	0.4	29

DNR Sample #	Cr ppm	Ta ppm	Pd ppb	Pt ppb	Au ppb
2951000059	98	12	< 1	< 5	< 1
2951000059DUP	108	< 3	< 1	< 5	< 1
2951000100	27	< 3	< 1	< 5	2
2951000100DUP	50	12	< 1	< 5	4
2951000149	94	< 3	1	6	12
2951000149DUP	122	25	7	< 5	8
2951000216	86	< 3			
2951000216DUP	75	< 3			
2951000310	88	10	2	< 5	10
2951000310 DUP	77	< 3	1	< 5	4

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (19 ELEMENT PACKAGE)

DNR Sample #	Standard Name	Au ppb	Ag ppm	Pb ppm	Zn ppm	Fe pct	Be ppm	Al pct	Ti pct	Mn ppm	V ppm	Cr ppm	Ni ppm	Zr ppm
2951000228STD	FER-3 CANMET **	6	1.4	14	22	> 10	7	0.04	< 0.001	616	7	< 1	7	8
2951000318STD	FER-3 CANMET	24	2.2	33	18	> 10	8	0.04	< 0.001	676	13	2	6	12
PUBLISHED ANALYSIS	FER-3 CANMET			9	36	31?	11	0.05	0.006	619	87	6	10	2
2951000227STD	DNR GREENSTONE ***	< 5	0.6	27	104	6.6	18	2.97	0.585	1174	115	94	21	112
2951000319STD	DNR GREENSTONE	< 5	0.6	30	106	6.86	18	3.17	0.754	1225	129	92	21	125
2951000413 STD	DNR GREENSTONE	< 5	0.5	< 2	98	6.33	15	2.98	0.734	1115	128	104	23	132
2951000415 STD	DNR GREENSTONE	< 5	1	< 2	101	6.66	16	3.15	0.787	1166	137	109	25	114
2951000419 STD	DNR GREENSTONE	< 5	0.3	24	110	7.44	15	3.23	0.671	1297	129	98	27	108
2951000417 STD	DNR GREENSTONE	6	0.3	20	103	6.94	14	3	0.646	1225	120	92	24	132
2951000464 STD	DNR GREENSTONE	< 5	0.5	5	117	6.74	20	3.15	0.674	1288	131	95	24	126
2951000462STD	DNR GREENSTONE	< 5	0.5	8	126	7.19	23	3.31	0.643	1380	132	101	25	123
2951000531 STD	DNR GREENSTONE	< 5	0.4	7	117	7.02	14	3.06	0.697	1317	131	98	26	132
PUBLISHED ANALYSIS	DNR GREENSTONE	1	0.3	5	103	6.63	17	7.21	0.86	1703	141	91	19	20
2951000414 STD	B-7 AUSTRALIAN ****	67	< 0.2	4	66	7.43	22	3.57	0.052	1671	163	166	126	81
2951000418 STD	B-7 AUSTRALIAN	77	0.4	19	67	7.74	23	2.97	0.041	1618	169	132	135	75
2951000483 STD	B-7 AUSTRALIAN	73	0.5	5	88	6.26	26	3.98	0.054	1987	186	152	143	108
2951000533 STD	B-7 AUSTRALIAN	64	< 0.2	2	77	7.8	22	3.42	0.034	1924	176	142	136	79
2951000535 STD	B-7 AUSTRALIAN	66	0.2	3	79	7.86	23	3.33	0.03	1969	182	144	141	86
2951000537STD	B-7 AUSTRALIAN	67	0.3	< 2	81	8.11	24	3.81	0.037	1977	183	148	141	89
2951000673 STD	B-7 AUSTRALIAN	62	0.3	< 2	75	7.83	22	3.74	0.055	1774	174	138	140	75
2951000675 STD	B-7 AUSTRALIAN	64	0.2	< 2	73	7.52	21	3.42	0.047	1730	166	129	137	78
2951000677 STD	B-7 AUSTRALIAN	67	0.3	< 2	75	7.86	22	3.87	0.05	1698	169	133	139	90
2951000679 STD	B-7 AUSTRALIAN	70	0.3	< 2	71	7.26	21	3.37	0.044	1629	162	127	133	96
2951000681 STD	B-7 AUSTRALIAN	67	0.4	< 2	71	7.22	21	3.51	0.047	1608	160	126	132	104
2951000683 STD	B-7 AUSTRALIAN	66	0.2	< 2	70	7.12	21	3.19	0.041	1617	160	123	129	90
2951000685 STD	B-7 AUSTRALIAN	66	< 0.2	< 2	71	7.15	21	3.2	0.041	1616	160	123	130	92
2951000843 STD	B-7 AUSTRALIAN	60	0.5	25	73	7.84	23	3.73	0.055	1780	166	160	133	80
2951000845 STD	B-7 AUSTRALIAN	57	0.5	30	81	8.41	24	4.36	0.058	1932	161	180	146	66
2951000847 STD	B-7 AUSTRALIAN	64	0.6	26	69	7.41	22	3.82	0.054	1716	162	157	128	75
2951000849 STD	B-7 AUSTRALIAN	65	0.5	25	68	7.09	21	3.31	0.048	1671	156	150	126	75
2951000851 STD	B-7 AUSTRALIAN	55	0.6	29	75	7.81	22	3.9	0.054	1785	168	168	138	76
2951000853 STD	B-7 AUSTRALIAN	58	0.5	22	69	7.08	21	3.32	0.047	1664	156	150	126	73

* Recommended Values

Other values are approximate.

** CANMET (1986)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (19 ELEMENT PACKAGE)

DNR Sample #	Standard Name	Au ppb	Ag ppm	Pb ppm	Zn ppm	Fe pct	Ba ppm	Al pct	Ti pct	Mn ppm	V ppm	Cr ppm	Ni ppm	Zr ppm
2951000855 STD	B-7 AUSTRALIAN	80	0.5	25	89	7.2	21	3.57	0.052	1682	158	153	127	31
2951000857 STD	B-7 AUSTRALIAN	83	0.5	29	89	7.28	21	3.48	0.048	1702	159	154	128	80
PUBLISHED ANALYSIS	B-7 AUSTRALIAN	88*	< 5	< 200	98	8.8	58	8.48	0.52	2000	244	159	131	58
2951000416 STD	A-9 AUSTRALIAN ****	8	3.2	< 2	19	> 10	98	0.08	0.044	208	72	82	39	8
2951000420 STD	A-9 AUSTRALIAN	10	3	< 2	< 1	> 10	103	0.08	0.048	238	87	86	36	10
2951000485 STD	A-9 AUSTRALIAN	8	2.8	2	30	> 10	101	0.1	0.048	233	86	84	41	30
2951000532 STD	A-9 AUSTRALIAN	9	2.4	< 2	20	> 10	102	0.08	0.048	228	70	82	32	14
2951000534 STD	A-9 AUSTRALIAN	10	1.8	< 2	18	> 10	99	0.08	0.048	223	86	80	30	32
2951000536 STD	A-9 AUSTRALIAN	15	1.8	< 2	20	> 10	101	0.08	0.048	234	89	84	32	18
2951000549 STD	A-9 AUSTRALIAN	11	1.4	< 2	26	> 10	87	0.08	0.048	222	87	80	35	30
2951000872 STD	A-9 AUSTRALIAN	14	2.7	< 2	17	> 10	98	0.08	0.048	212	78	77	35	23
2951000874 STD	A-9 AUSTRALIAN	14	3.3	< 2	18	> 10	95	0.08	0.045	208	78	75	36	23
2951000878 STD	A-9 AUSTRALIAN	10	3.5	< 2	18	> 10	97	0.08	0.045	208	83	77	33	27
2951000878 STD	A-9 AUSTRALIAN	10	3.2	< 2	18	> 10	95	0.08	0.044	218	80	73	33	18
2951000880 STD	A-9 AUSTRALIAN	11	2.8	< 2	18	> 10	97	0.08	0.045	213	78	74	33	30
2951000882 STD	A-9 AUSTRALIAN	12	2.5	< 2	18	> 10	83	0.08	0.043	204	74	71	33	25
2951000884 STD	A-9 AUSTRALIAN	11	2.1	< 2	22	> 10	86	0.08	0.044	212	75	73	32	28
2951000842 STD	A-9 AUSTRALIAN	8	3.2	18	21	> 10	97	0.08	0.047	208	75	78	30	15
2951000844 STD	A-9 AUSTRALIAN	9	3.7	18	23	> 10	104	0.1	0.048	218	82	86	33	20
2951000846 STD	A-9 AUSTRALIAN	7	3.3	22	20	> 10	94	0.08	0.043	188	74	78	32	16
2951000848 STD	A-9 AUSTRALIAN	8	3.5	17	22	> 10	102	0.08	0.047	214	80	85	32	18
2951000850 STD	A-9 AUSTRALIAN	8	3.3	15	23	> 10	103	0.08	0.047	218	78	85	36	56
2951000852 STD	A-9 AUSTRALIAN	8	3.4	12	24	> 10	105	0.08	0.048	217	83	87	35	17
2951000854 STD	A-9 AUSTRALIAN	7	2.8	15	18	> 10	82	0.08	0.042	183	70	77	30	15
2951000856 STD	A-9 AUSTRALIAN	7	2.8	18	20	> 10	95	0.08	0.043	196	71	78	30	18
PUBLISHED ANALYSIS	A-9 AUSTRALIAN	12*	< 1	21	11	80.5	88	0.18	0.054	232	89	< 10	< 10	17

* Recommended Values

Other values are approximate.

** CANMET (1986)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (19 ELEMENT PACKAGE)

DNR Sample #	Standard Name	Cd ppm	Y ppm	Cu ppm	Co ppm	As ppm	Nb ppm
2851000226STD	FER-3 CANMET **	< 0.2	< 1	3	< 1	8	< 5
2851000318STD	FER-3 CANMET	2.4	27	4	< 1	8	< 5
PUBLISHED ANALYSIS	FER-3 CANMET		8?	8?	2?	1?	
2851000227STD	DNR GREENSTONE ***	< 0.2	38	78	32	14	< 5
2851000318STD	DNR GREENSTONE	0.4	38	84	31	< 5	6
2851000413 STD	DNR GREENSTONE	< 0.2	35	81	32	19	8
2851000415 STD	DNR GREENSTONE	0.5	38	85	35	88	13
2851000418 STD	DNR GREENSTONE	< 0.2	35	95	35	< 5	< 5
2851000417 STD	DNR GREENSTONE	0.8	37	88	33	< 5	< 5
2851000484 STD	DNR GREENSTONE	0.4	38	88	35	18	6
2851000482STD	DNR GREENSTONE	< 0.2	36	82	37	11	10
2851000531 STD	DNR GREENSTONE	< 0.2	34	84	36	14	< 5
PUBLISHED ANALYSIS	DNR GREENSTONE	0.8	24	87	25	3	2
2851000414 STD	B-7 AUSTRALIAN ****	< 0.2	38	126	83	188	< 5
2851000418 STD	B-7 AUSTRALIAN	< 0.2	39	123	87	83	< 5
2851000483 STD	B-7 AUSTRALIAN	0.8	32	139	73	107	< 5
2851000533 STD	B-7 AUSTRALIAN	0.8	32	126	88	95	< 5
2851000535 STD	B-7 AUSTRALIAN	0.4	31	129	70	102	< 5
2851000537STD	B-7 AUSTRALIAN	0.4	38	133	71	98	< 5
2851000873 STD	B-7 AUSTRALIAN	< 0.2	30	127	87	101	< 5
2851000875 STD	B-7 AUSTRALIAN	0.3	32	121	85	94	< 5
2851000877 STD	B-7 AUSTRALIAN	0.3	33	124	85	102	< 5
2851000878 STD	B-7 AUSTRALIAN	0.3	32	118	82	95	< 5
2851000881 STD	B-7 AUSTRALIAN	< 0.2	28	118	81	85	< 5
2851000883 STD	B-7 AUSTRALIAN	1.2	38	118	81	81	< 5
2851000885 STD	B-7 AUSTRALIAN	1.2	27	118	81	83	5
2851000843 STD	B-7 AUSTRALIAN	< 0.2	35	125	83	84	5
2851000845 STD	B-7 AUSTRALIAN	< 0.2	31	136	88	92	10
2851000847 STD	B-7 AUSTRALIAN	< 0.2	28	119	81	83	9
2851000848 STD	B-7 AUSTRALIAN	< 0.2	31	115	58	80	< 5
2851000851 STD	B-7 AUSTRALIAN	< 0.2	38	125	83	85	8
2851000853 STD	B-7 AUSTRALIAN	< 0.2	34	115	58	80	< 5

* Recommended Values

Other values are approximate.

** CANMET (1986)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (19 ELEMENT PACKAGE)

DNR Sample #	Standard Name	Cd ppm	Y ppm	Cu ppm	Co ppm	As ppm	Nb ppm
2851000855 STD	B-7 AUSTRALIAN	< 0.2	38	116	59	84	< 5
2851000857 STD	B-7 AUSTRALIAN	< 0.2	31	117	59	78	< 5
PUBLISHED ANALYSIS	B-7 AUSTRALIAN		33	153	58		< 10
2851000416 STD	A-8 AUSTRALIAN ****	4.7	< 1	27	12	28	5
2851000420 STD	A-8 AUSTRALIAN	3.7	< 1	30	11	17	7
2851000465STD	A-8 AUSTRALIAN	1.2	< 1	23	16	25	15
2851000532 STD	A-8 AUSTRALIAN	2.7	< 1	28	13	< 5	< 5
2851000534 STD	A-8 AUSTRALIAN	3.7	1	27	12	< 5	5
2851000536 STD	A-8 AUSTRALIAN	3.4	1	28	13	< 5	< 5
2851000549STD	A-8 AUSTRALIAN	3	2	27	13	< 5	12
2851000872 STD	A-8 AUSTRALIAN	3.8	< 1	27	13	40	< 5
2851000874 STD	A-8 AUSTRALIAN	4.2	< 1	27	12	57	< 5
2851000876 STD	A-8 AUSTRALIAN	1.8	< 1	27	12	67	< 5
2851000878 STD	A-8 AUSTRALIAN	4.2	< 1	26	12	60	< 5
2851000880 STD	A-8 AUSTRALIAN	3.7	< 1	26	12	53	8
2851000882 STD	A-8 AUSTRALIAN	1.8	< 1	25	12	43	8
2851000884 STD	A-8 AUSTRALIAN	3.3	< 1	26	12	41	< 5
2851000842 STD	A-8 AUSTRALIAN	3.7	< 1	28	10	28	8
2851000844 STD	A-8 AUSTRALIAN	2.5	< 1	29	11	28	11
2851000846 STD	A-8 AUSTRALIAN	3	< 1	26	12	31	< 5
2851000848 STD	A-8 AUSTRALIAN	3.4	< 1	28	10	27	< 5
2851000850 STD	A-8 AUSTRALIAN	4.5	< 1	28	11	27	< 5
2851000852 STD	A-8 AUSTRALIAN	2.1	< 1	28	11	34	< 5
2851000854 STD	A-8 AUSTRALIAN	2.4	< 1	25	11	34	7
2851000858 STD	A-8 AUSTRALIAN	0.3	< 1	26	10	27	< 5
PUBLISHED ANALYSIS	A-8 AUSTRALIAN		1	24	10	< 2	< 10

* Recommended Values

Other values are approximate.

** CANMET (1986)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (52 ELEMENT PACKAGE)

DNR Sample #	Standard Name	Cl %	SiO2 %	TiO2 %	Al2O3 %	Fe2O3 %	MnO %	MgO %	CaO %	Na2O %	K2O %	P2O5 %	LOI %	Total %
2951000218STD	MA-2A CANMET **	0.02	60.35	0.45	14.91	4.43	0.09	2.73	3.89	4.48	3.72	0.26	5.1	100.39
2951000318 STD	MA-2A CANMET	0.01	61.25	0.43	14.24	4.28	0.08	2.52	3.81	4.02	4.07	0.29	4.31	99.32
PUBLISHED ANALYSIS	MA-2A CANMET		55.12		14.15	4.7			4.08	3.91	3.4		5.08	
2951000219STD	DNR GREENSTONE ***	0.02	50.1	1.54	14.06	13.84	0.22	7.07	6.05	2.59	1.8	0.19	2.98	100.45
2951000221STD	DNR GREENSTONE	< 0.01	50.1	1.5	14.22	13.86	0.21	7.14	5.84	2.49	1.85	0.21	2.85	100.16
2951000223STD	DNR GREENSTONE	0.02	50.37	1.48	14.13	13.87	0.21	7.08	5.8	2.48	1.85	0.16	3.02	100.27
2951000225STD	DNR GREENSTONE	< 0.01	50.18	1.48	14.1	13.87	0.21	7.07	5.78	2.48	1.83	0.24	3.05	100.1
2951000317 STD	DNR GREENSTONE	< 0.01	51.47	1.51	13.89	14.13	0.21	6.89	6.11	2.38	1.86	0.2	2.82	101.4
PUBLISHED ANALYSIS	DNR GREENSTONE		50.17	1.44	13.83	13.77	0.22	6.66	5.87	2.54	1.84	0.25	2.78	99.09
2951000222STD	FER-1 CANMET **	0.02	17.14	0.02	0.57	78.37	0.24	0.31	3.11	< 0.01	< 0.01	2.05	< 0.05	99.82
PUBLISHED ANALYSIS	FER-1 CANMET		16.95	0.03	0.52	75.81?	0.22	0.3	3.28	0.03	0.02	2.39		
2951000224STD	FER-2 CANMET **	< 0.01	48.53	0.19	5.59	38.94	0.13	2.29	2.14	0.48	1.18	0.09	< 0.05	99.56
PUBLISHED ANALYSIS	FER-2 CANMET	0.001	49.21	0.16	5.16	39.43	0.12	2.1	2.17	0.51	1.33	0.27		
2951000220STD	FER-3 CANMET **	< 0.01	53.99	< 0.01	0.1	44.47	0.08	1.08	0.8	< 0.01	< 0.01	< 0.01	< 0.05	100.51
PUBLISHED ANALYSIS	FER-3 CANMET		53.61	0.01	0.1	44.54?	0.08	1.02	0.8	0.03	0.03	0.07		

* Recommended Values

Other standard values are approximate.

** CANMET (1986)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (52 ELEMENT PACKAGE)

DNR Sample #	Standard Name	S Tot %	Li ppm	C Tot %	Ba ppm	Sc ppm	V ppm	Cr ppm	Co ppm	Ni ppm	Cu ppm	Zn ppm	Ga ppm
2851000219STD	MA-2A CANMET **	0.18	12	1.27	< 0.5	< 5	33	54	13	38	32	51	10
2851000318 STD	MA-2A CANMET	0.2	13	1.4	2.8	< 5	35	57	13	41	38	57	16
PUBLISHED ANALYSIS	MA-2A CANMET	0.26		0.85									
2851000219STD	DNR GREENSTONE ***	0.05	13	0.09	< 0.5	< 5	118	80	32	19	81	82	15
2851000221STD	DNR GREENSTONE	0.05	12	0.1	< 0.5	< 5	111	86	30	20	77	87	15
2851000223STD	DNR GREENSTONE	0.08	13	0.08	< 0.5	< 5	123	96	34	22	83	103	18
2851000225STD	DNR GREENSTONE	0.05	13	0.11	< 0.5	< 5	126	80	32	19	79	85	19
2851000317 STD	DNR GREENSTONE	0.11	13	0.08	1.3	5	135	88	30	21	82	102	21
PUBLISHED ANALYSIS	DNR GREENSTONE	0.11	12	0.3	8	141	81	25	19	87	103	16	
2851000222STD	FER-1 CANMET **	0.28	4	0.48	< 0.5	< 5	82	< 1	9	8	86	2850	< 2
PUBLISHED ANALYSIS	FER-1 CANMET	0.28	5	1.57	17	1007	7	12	8	100	3500		
2851000224STD	FER-2 CANMET **	0.17	22	0.13	< 0.5	< 5	39	31	6	20	41	21	< 2
PUBLISHED ANALYSIS	FER-2 CANMET	0.17	22	37	67	377	47	7	21	45	43		
2851000220STD	FER-3 CANMET **	0.08	< 1	0.4	< 0.5	< 5	18	1	< 1	10	3	17	< 2
PUBLISHED ANALYSIS	FER-3 CANMET	0.037				87	8	27	10	87	36		

* Recommended Values

Other standard values are approximate.

** CANMET (1988)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (52 ELEMENT PACKAGE)

DNR Sample #	Standard Name	As ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm	Nb ppm	Mo ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm
2851000218STD	MA-2A CANMET **	< 5	170	1138	9	48	4	9	0.8	< 1	< 20	11
2851000318 STD	MA-2A CANMET	< 5	180	1191	9	52	6	11	0.5	0	< 20	10
PUBLISHED ANALYSIS	MA-2A CANMET								0.8			
2851000219STD	DNR GREENSTONE ***	< 5	27	99	18	16	2	8	0.5	< 1	< 20	< 5
2851000221STD	DNR GREENSTONE	< 5	15	28	15	14	2	8	0.6	< 1	< 20	< 5
2851000223STD	DNR GREENSTONE	< 5	22	32	17	16	2	9	0.6	< 1	< 20	< 5
2851000225STD	DNR GREENSTONE	< 5	32	35	17	19	5	7	0.4	< 1	< 20	< 5
2851000317 STD	DNR GREENSTONE	< 5	17	46	18	17	3	8	0.4	0	< 20	18
PUBLISHED ANALYSIS	DNR GREENSTONE	3	26	52	24	20	2	6	0.3	0.8	12	1
2851000222STD	FER-1 CANMET **	< 5	< 5	80	12	< 1	3	< 1	7.3	< 1	< 20	< 5
PUBLISHED ANALYSIS	FER-1 CANMET	67		80		137						57
2851000224STD	FER-2 CANMET **	< 5	89	8	4	3	5	< 1	1.5	< 1	< 20	< 5
PUBLISHED ANALYSIS	FER-2 CANMET	27	667	58	157	38		37		37	17	17
2851000220STD	FER-3 CANMET **	< 5	< 5	32	1	< 1	3	< 1	2	< 1	< 20	< 5
PUBLISHED ANALYSIS	FER-3 CANMET	17		31	67	2						17

* Recommended Values

Other standard values are approximate.

** CANMET (1986)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (52 ELEMENT PACKAGE)

DNR Sample #	Standard Name	Te ppm	Ba ppm	La ppm	Ce ppm	Ta ppm	W ppm	Pb ppm	Bi ppm	B ppm	F ppm	As ppm	Sb ppm
2851000218STD	MA-2A CANMET **	< 10	1198	30	100	< 10	< 20	31	< 5	30	600	3	0.7
2851000318 STD	MA-2A CANMET	< 10	1244	34	150	< 10	< 20	35	< 5	29	633	3	0.7
PUBLISHED ANALYSIS	MA-2A CANMET												
2851000218STD	DNR GREENSTONE ***	< 10	18	3	17	< 10	< 20	24	< 5	29	251	< 1	0.1
2851000221STD	DNR GREENSTONE	< 10	13	2	< 5	< 10	< 20	23	< 5	22	237	< 1	0.2
2851000223STD	DNR GREENSTONE	< 10	18	2	16	< 10	< 20	33	< 5	15	295	< 1	0.2
2851000225STD	DNR GREENSTONE	< 10	20	< 1	17	< 10	< 20	40	< 5	17	286	< 1	0.1
2851000317 STD	DNR GREENSTONE	< 10	20	8	33	< 10	< 20	30	8	16	300	< 1	< 0.2
PUBLISHED ANALYSIS	DNR GREENSTONE	7	17	13	23	8	8	7	3	22	283	3	1.1
2851000222STD	FER-1 CANMET **	< 10	807	< 1	< 5	< 10	< 20	3583	< 5	4	473	3	2.8
PUBLISHED ANALYSIS	FER-1 CANMET		1000	12				5200	6		600?	6?	5?
2851000224STD	FER-2 CANMET **	< 10	190	< 1	< 5	< 10	< 20	28	< 5	87	304	1	0.2
PUBLISHED ANALYSIS	FER-2 CANMET		240	14?				11?		81?	400?	2?	0.7?
2851000220STD	FER-3 CANMET **	< 10	8	< 1	< 5	< 10	< 20	21	< 5	41	85	< 1	0.5
PUBLISHED ANALYSIS	FER-3 CANMET		11	2?				8?			100?	1?	1?

* Recommended Values

Other standard values are approximate.

** CANMET (1986)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 9: ANALYTICAL RESULTS OF STANDARDS (52 ELEMENT PACKAGE)

DNR Sample #	Standard Name	Hg ppb	Cr ppm	Se ppm	Te ppm	Pd ppb	Pt ppb	Au ppb
2951000218STD	MA-2A CANMET **	80	124	< 1	6	< 1	30	1333
2951000318 STD	MA-2A CANMET	117	117	< 1	< 3	2	< 5	1379
PUBLISHED ANALYSIS	MA-2A CANMET							1390*
2951000219STD	DNR GREENSTONE ***	9	140	< 1	4	8	14	5
2951000221STD	DNR GREENSTONE	9	161	< 1	< 3	10	11	3
2951000223STD	DNR GREENSTONE	9	134	< 1	23	8	9	6
2951000225STD	DNR GREENSTONE	9	149	< 1	13	7	< 5	2
2951000317 STD	DNR GREENSTONE	9	193	< 1	< 3	6	10	10
PUBLISHED ANALYSIS	DNR GREENSTONE	11	104	1	9	7	10	1
2951000222STD	FER-1 CANMET **	99	56	< 1	29	< 1	< 5	25
PUBLISHED ANALYSIS	FER-1 CANMET		7					
2951000224STD	FER-2 CANMET **	9	88	1	< 3	6	< 5	4
PUBLISHED ANALYSIS	FER-2 CANMET	207	47					
2951000220STD	FER-3 CANMET **	9	34	< 1	6	1	< 5	5
PUBLISHED ANALYSIS	FER-3 CANMET		6					

* Recommended Values

Other standard values are approximate.

** CANMET (1986)

*** Average from Frey and Venzke (1991)

**** AUSTRALIAN GEOSTANDARDS PTY LTD

TABLE 10: FIVE HIGHEST ANALYTICAL VALUES FOR SELECTED ELEMENTS

Analysis	Au ppb*	Ag ppm*	Pd ppb**	Pt ppb*	As ppm*	B ppm*	Zn ppm*	Cu ppm*	Pb ppm*	Cd ppm*
Highest Value	112	6.8	31	15	1362	659	831	1622	209	36.5
Sample #	2951000161	2951000200	2951000161	2951000066	2951000353	2951000301	2951000296	2951000130	2951000582	2951000711
Unique DDH#	15468	15470	15468	Rock Dump	15490	10749	10752	15468	10137	10203
Next Highest Value	69	5.9****	17	15	926	537	793	1468	147	34.1
Sample #	2951000213	2951000347	2951000132	2951000132	2951000493	2951000302	2951000729	2951000639	2951000729	2951000710
Unique DDH#	15471	15489	15468	15468	10189	10749	10557	10143	10557	10203
Next Highest Value	44	5.3	14	10	307****	238	719	1328	143	11.2
Sample #	2951000702	2951000492	2951000199	2951000068	2951000347	2951000205	2951000666	2951000428	2951000705	2951000611
Unique DDH#	10556	10189	15470	Rock Dump	15489	10963	10030	15503	10285	10215
Next Highest Value	39	5.0	13	10	278	215	694	1084	133	8.9
Sample #	2951000302	2951000071	2951000205	2951000124	2951000511	2951000123	2951000661	2951000230	2951000237	2951000609
Unique DDH#	10749	Rock Dump	10963	15468	10263	15468	10012	15472	15474	10214
Next Highest Value	37	4.4	12	8	273	209	608	893	97	8.5
Sample #	2951000737	2951000620	2951000066	2951000010	2951000600	2951000259	2951000659	2951000616	2951000710	2951000323
Unique DDH#	10559	10136	Rock Dump	Rock Dump	10154	15475	10012	10135	10203	15485

TABLE 10: FIVE HIGHEST ANALYTICAL VALUES FOR SELECTED ELEMENTS (CONTINUED)

Analysis	Co ppm*	Y ppm*	V ppm*	Ti pct*	Cr ppm*	Ni ppm*	Al pct	Nb ppm*	Zr ppm*	F ppm*
Highest Value	523	966	481	2.67	524	685	7.25	172	503	2488
Sample #	2951000132	2951000492	2951000290	2951000066	2951000574	2951000544	2951000066	2951000261	2951000405	2951000248
Unique DDH#	15468	10189	10752	Rock Dump	10513	12618	Rock Dump	15476	10118	10761
Next Highest Value	500	322	444	2.54	522	381	6.32	169	497	1798
Sample #	2951000459	2951000786	2951000043	2951000265	2951000544	2951000574	2951000361	2951000251	2951000833	2951000066
Unique DDH#	10264	11909	Rock Dump	15476	12618	10513	12626	15475	12773	Rock Dump
Next Highest Value	389	204	354	2.41	415	244	6.29	165	495	1369****
Sample #	2951000134	2951000248	2951000292	2951000082	2951000194	2951000092	2951000082	2951000689	2951000810	2951000100
Unique DDH#	15468	10761	10752	Outcrop	15470	Outcrop	Outcrop	15511	12771	Outcrop
Next Highest Value	249	87	350	2.18	395	225	6.28****	155	493	1347
Sample #	2951000236	2951000776	2951000492	2951000047	2951000195	2951000459	2951000100	2951000252	2951000588	2951000035
Unique DDH#	15473	10637	10189	Rock Dump	15470	10264	Outcrop	15475	12763	Gravel Pit
Next Highest Value	169	80	349	2.07	325	207*****	6.07	154	486	1330
Sample #	2951000092	2951000584	2951000068	2951000041	2951000196	2951000509	2951000047	2951000260	2951000529	2951000039
Unique DDH#	Outcrop	10142	Rock Dump	Rock Dump	15470	15502	Rock Dump	15476	12752	Outcrop

* From 640 analyses.
 ** From 110 analyses.
 *** From 99 analyses.
 **** Average of duplicate samples.
 ***** See also Sample #2951000555.

Geologic Setting

The understanding of the regional geologic setting continues to evolve and improve (Southwick et al, 1988, McSwiggen, 1987, Morey et al, 1981). This is largely the product of the Minnesota Geologic Survey's work including the Minnesota's aeromagnetic survey (Chandler, 1983), gravity work (Chandler and Schapp, 1991) and associated test drilling (Southwick et al, 1986, Southwick et al, 1990). This report will hopefully add to this framework.

Glacial Deposits and Cretaceous

Glacial materials were generally absent from the examined materials except for cuttings from non-iron drilling. An exception is DDH 18972 (UNIQUE 10635) which had over 90 feet of overburden (till) core. The rocks of the area also underwent a period(s) of pre-Pleistocene weathering before being glacially scoured. These effects have been superimposed on the original rock types. Weathering effects include argillitic, limonitic, red hematitic, and goethitic alteration (with secondary magnetite), although some goethitic alteration may be hydrothermal in nature. Local kaolinitic claystones from weathering may also occur such as DDH 18226 (UNIQUE 10761). A sample from this drill hole directly beneath the kaolin had the highest fluorine value (2488 ppm). From weathering, bauxitic textures (DDH 18400, UNIQUE 11661) and solution collapse (karst filling?) breccia (S1042, UNIQUE 15472; 18218, UNIQUE 10758; 18230, UNIQUE 10763) textures are locally developed. Cretaceous deposits (argillite) may occur in DDH 18972 (UNIQUE 10635), some of the TL series of DDH's (UNIQUE #'s 10628-10631), DDH 682 (UNIQUE 10764), and DDH 686 (UNIQUE 10765).

Pre-Cretaceous Weathering

Some pre-Pleistocene weathering effects noted above may also be pre-Cretaceous. Such time determinations of weathering(?) effects, however, may only(?) be indicated where observed below Keweenawan rift sediment. The schists in some of the ML-40's and 50's series of DDH's may be so weathered.

Keweenawan Rift Sediment

Nineteen drill holes had samples with undeformed, variably ferruginous siltstones, sandstones, and sedimentary breccias-conglomerates. Many of these unconformably overlie schist, gneiss or siliceous marble.

Cuyuna Range Early Proterozoic

Most drill hole materials logged were from this geologic setting. These holes were drilled to generally shallow depths and encountered phyllites, siliceous clastic rocks, tuffaceous and other igneous rocks, and chemical sediments including chert, tourmalinites, graphitic rocks, and carbonate, silicate, oxide, and sulfide iron formation. Of the lithologies encountered, the iron formation related rocks are typically deformed (typically brittle and brittle-ductile deformation), metamorphosed (typically low grade), altered, and recrystallized. Regarding the iron formation, the "most" primary appearing is the typically laminated carbonate, silicate, magnetite, \pm chert, \pm sulfide iron formation. In general, other oxide facies (hematite, goethite, limonite) appear to be superimposed (surficial weathering and hydrothermal alteration) on these. Beside a volcanic rock association (example DDH 18146), elevated As, Hg, Bi, Ba, Mn, Sb, base and precious metals indicate that the iron formation is an exhalative, Algoma-type iron formation (Goodwin, 1973). Gradations between Algoma-type and Lake Superior-type iron formations probably are represented.

Materials from 70 of the logged drill holes, primarily in Crow Wing and Aitkin Counties, contained carbonate-magnetite-silicate iron formation (some with chert) including DDH's 306 (UNIQUE 15464), 307 (UNIQUE 15465) (calcareous), 308 (UNIQUE 15466) (calcareous), 18138, 18226, 18132, 18427, 18435, 18146, S1060, 18218, 18230 (no magnetite), 18223 (no magnetite), S1006, S12, S22 and S1060; with DDH's S1060, 18138, 18132, 18218, 18427, 18435, 18146(?), 18230, 18223, S1060 and S1006 having veining with pyrite.

Materials from 59 Drill holes contain possible exhalative sulfides including DDH's 18138, 18132, 18427, 18435, 18600, 101, S140, S146, DRP-1, DRP-2, ML-42C, 16, G-4, G-1, 43, BM-10, 85, 58, BM-1, 86, 84, 208, 292 and 18223. These are primarily within the Glen Township Formation (Southwick et al, 1988) of Aitkin County, although sulfide exhalatives also occur in Pine, Crow Wing, and Carlton Counties, with lesser amounts in Cass and Morrison Counties.

These iron formations have other drill holes with less ferruginous samples consisting of siltstones or phyllites included DDH's 309, 18146, 18223, S1, S8, S1045, S1047, S1050, 18400, and S1053. These iron rich sediments also have anomalous amounts of exhalative related elements, and may be mechanical reworkings of stratigraphic(?) underlying carbonate-magnetite-silicate iron formation as found in some of the DDH's listed above.

Other Early Proterozoic

Other logged metamorphosed rocks within the same tectono-stratigraphic setting (Southwick et al, 1988) as the iron formation include 15 drill holes with materials that are probable metabasalts (some pillowed); 17 with probable intermediate volcanics (mostly tuffaceous?); 8 with probable felsic metavolcanics (all tuffaceous?); and 15 with probable metagabbros. The metagabbros may be subvolcanic. They have variable grain size distributions, and locally look fragmental(?). Note that these are also characterized by higher fluorine and rare earth values (DDH's 18228, 18145, 18144).

Rocks with a possible tuffaceous component may include DDH's 18226, 18427, 18146, 18230, S8, 18600, S1045(?), 101, 102, 193, 280, 52, G-2, 83, SL-1, T-5, AB-10, DL-1, DL-2, DL-3 and 18221. Those DDH's with thin sections verify volcanic affinities, although the tuffaceous character is less certain.

One under-represented greenstone "component" (perhaps due to drilling bias?) in these Proterozoic rocks is komatiites. Samples from one drill hole, PS-2 (UNIQUE 12617) had a typical package of metamorphosed volcano-sedimentary rocks and chemical sediments. Within this were several intrusives, which previous exploration company analyses indicated were komatiitic in composition with MgO contents over 18% and anomalously high Ni and Cr. These may indeed belong to the same package of rocks as the remainder of the samples from this hole, although they could also be Keweenawan, since megascopic examination could not verify their metamorphism.

Carbonate is relatively common in this package of rocks such as the carbonate portions of iron formation and as an alteration component of volcanics. There were also samples from 24 drill holes that contained marble, including DDH's DRP-1, ML-22, and ML-43C. The Mille Lacs group (Southwick et al, 1988) of Carlton and Pine Counties contained most of the drill holes

with marble samples. These were probably calcitic or dolomitic chemical sediment or intensely carbonatized rocks. Chemically, these were analyzed with the 19 element package. Other than occasionally elevated Mn (to 5085 ppm for sample 2951000558), they did not have any particularly anomalous elements.

Phyllites are one of the more common clastic metasediments. These are typically sericitic and are without anomalous chemical signatures. Occasional elevated values such as for Y, Nb, and Zr occur (sample 2951000405). These are locally coarser and grade into sericite schists. These are locally graphitic (McSwiggen and Morey, 1989), and are then often associated with sulfide chemical sediments and iron formation. As these become more graphitic and sulfide bearing, their metal contents increase as expected.

Metamorphism and recrystallization made the distinction between quartzites, siliceous siltstones, some cherts, and siliceous volcanics difficult at times. DDH's with quartzite included UNIQUE numbers 10637, 10639, and 15468 through 15473. The siliceous component of the marbles discussed earlier may be quartzitic in some DDH's.

A wide variety of other rock types were observed and logged (see also Table 11). There are two instances of micaceous mafic or ultramafic rock (lamprophyric or lamproitic). The better known one is DDH 286-6/1 (UNIQUE 10513), and the other is DDH 52 (UNIQUE 10072). The latter occurs as a small interval within otherwise non-micaceous mafic(?) rock. Examples of quartzite and siliceous siltstone occur in DDH's S118, S124, S126, and S346. Examples of graphitic argillite-phyllite include DDH 306 (10963)(pyritic), S1045, S1047, and 18230(pyritic). A feldspathic porphyry occurs in DDH 18221. Gneiss was also encountered in samples from 11 drill holes, predominantly in Aitkin, Pine, and Morrison Counties. At least some of these are probable Archean (Southwick et al, 1988).

Economic Geology

Iron Formation

The majority of drill holes in Region 3 resulted from iron ore exploration and development. While this has little current interest, the same exhalative processes and associated alteration creating the iron formation may have produced concentrations of other metals. The most "primary" appearing or "chemical sediment" iron formation was laminated oxide silicate carbonate iron formation discussed earlier. Oxide is typically magnetite (and is magnetic), but may also include grey hematite or manganese oxides. This iron formation often has chert layers, and less often stratiform sulfide (predominantly pyrrhotite), and rare tourmalinite. Samples from 117 of the logged holes contained this type of iron formation. This was typically not mined on the Cuyuna Range, but probably was the "protore" that other processes concentrated to form the mineable ores.

Other iron formation types resulted from later "secondary" processes. These include red hematite, goethite, limonitic, and manganiferous "natural" ores. In the drill hole samples, these are typically found 'above' the oxide silicate carbonate iron formation, or along later structures. Much of these are believed to have resulted from deep surficial weathering (Marsden, 1972), but not exclusively.

Hydrothermal Alteration

Beside alteration associated with surficial weathering, hydrothermal alteration may also be present. "Hydrothermal" goethitic alteration is associated with carbonate alteration (vein controlled). Beside carbonate, these veins may also have associated quartz, grey hematite, magnetite or pyrite (UNIQUE 15504). Vuggy (typically goethitic-cherty) portions may be sinter or hydrothermal related (UNIQUE DDH's 15474, 10751, 10758, 15483, 15489, 10399, 10189, 10304, 12759, and 10136, although the textures (and mineralogy?) could also result from surficial weathering. This alteration is cross-cutting and not apparently surface dependent. It is also associated with chert breccia, and sulfide-chert-graphite chemical sediment (UNIQUE 15498). Samples analyzing this alteration includes 2951000607, 2951000458, 2951000457, 2951000521, 2951000412, 2951000365, 2951000632, 2951000325, 2951000612, 2951000177, and 2951000179. Most of these samples had elevated As (to 140ppm), with a lesser number having elevated Au (to 20 ppb), Hg (to 20 ppb), Mn and other elements. It should also be noted that samples with white sulphate specks (from oxidizing sulfides??) and/or kaolin tended to be found in goethite-limonite colored samples and not red hematitic samples. The sometimes blebby nature of the kaolin associated with goethite may be reminiscent of the "jacutinga" itabirite associated with gold-palladium mineralization in Brazil (Olivo, 1992; Olivo, 1993). The highest Au and Pd analyses came from DDH 310 (UNIQUE 15468), and may be indicative of this. This drill hole also had samples with the highest Cu (1622 ppm) and Li (1145 ppm). The "jacutinga" mineralization has a known association(?) with tourmaline and monazite.

Both limonitic and red hematitic portions occasionally had associated pyrite occurring in minor veinlets or disseminations. The time relationships between the pyrite and the oxidized iron in the remainder of the rock is uncertain.

Chloritic Hydrothermal Alteration

Chlorite alteration, which is sometimes associated with volcanic massive sulfide (VMS) deposits (Hutchinson, 1973), occurred in samples from a number of holes. This was usually minor amounts in veins, but occasionally its amounts and relationships to chemical sediments and associated sulfide veinlets draws more interest. Examples of this are DDH 16 (UNIQUE 10037), 208 (UNIQUE 15503), 247 (UNIQUE 10303), DRP-1 (UNIQUE 12759), KRCH-8 (UNIQUE 12755), 10 (UNIQUE 11605), 79 (UNIQUE 10031), SR-2 (UNIQUE 15512), SL-1 (UNIQUE 10556), and ML-50C (UNIQUE 12772). Other VMS alteration types may occur, but may not be recognized.

Tourmaline and Tourmalinites

Tourmalinites in Minnesota have previously been documented in the Proterozoic (Boerboom, 1989), and the Archean (Frey and Venzke, 1991). This report further expands their known distribution with samples of twelve drill holes (UNIQUE DDH's 15493, 10005, 15490, 10037, 15494, 10285, 10004, 15503, 11065, 10003, 10030, 10637) containing possible tourmaline or tourmalinites. Crushed grain mounts of limited samples were used to make identifications, so others may exist. Analytical results confirm the presence of anomalous boron. These tourmalinites are typically associated with chert and other iron formation facies, and tuffaceous rocks. The significance of tourmalinites have been noted in Slack et al, 1984, and Slack and Coad, 1989.

Brecciation

Of the drill hole samples logged, there were 117 holes with one kind of "breccia" or another. These ranged from Keweenawan Rift fill sedimentary breccia; to obvious tectonic, fault and folding related breccias; to what appears to be solution collapse breccia at the weathered top of drill cores, and possible hydrothermal alteration. Brecciation is notable in UNIQUE DDH's 15472, 10752, 10749, 10751, 10757, 10763, 10758, 15477, 15483, 11639, 10346, 11444, 10202, 10136, 10180 and 15481; with hydrothermal brecciation possibly occurring in UNIQUE DDH's 15479, 10752, 10749, 10751, 10758, 15488, 15483, 12759, 12760, 12763, 10078, 10368, 10757 and 16623. Many of these have fragmental chert, and have interstitial goethite (with carbonate usually) or other minerals. Many current breccia textures may have resulted from a combination of processes. Thin sections of "breccia" in DDH 10752 indicated that the rock was intraformational conglomerate.

Mineralization

Regarding mineralization, there were samples from 189 logged drill holes with iron sulfides, and samples from 40 drill holes with chalcopyrite (amounts small). Veinlets with minor **pyrite** and **iron oxides** replacing **pyrite(?)** cubes occur in many drill core samples. There were also samples from four drill holes with **pale sulfides** that looked like **arsenopyrite**. While these particular samples were not verified by arsenic analyses, other analyses did have elevated arsenic contents. The highest As value was 1362 ppm in DDH 280 (see tourmaline bearing rocks). There were numerous analyses with anomalous arsenic.

There was a total of four samples with Cu values over 1000 ppm. DDH 310 (UNIQUE 15468) had the highest Cu value (1622 ppm) which had an adjacent sample analyzed with the highest Li value (1145 ppm) along with anomalous Ba and Mn. DDH S1037 (UNIQUE 16406) had a trace of **malachite**. DDH H18 (UNIQUE 15984) had a trace of **native copper**, as did the

recently DNR drilled core P295-6 (Unique 15852). There were samples from five drill holes which had trace amounts of **bornite**, and one similarly with **covellite**.

Samples from one drill hole (ML42-C, UNIQUE 12762) had a possible grain of **molybdenite** within quartz, however it is too small to easily liberate for identification (it could also have been **graphite** which was present elsewhere in the same materials or **galena**). DDH's 16 (UNIQUE 10037) and 280 (UNIQUE 15490) had possible visible **gold** grains, however surface oxidation of **pyrite** and **chalcopyrite** makes for easy misidentification.

Regarding **zinc**, possible sphalerite was observed in samples from DDH's ML-50C (UNIQUE 12772), BM-10 (UNIQUE 10011), 16 (UNIQUE 10037), S14 (UNIQUE 10189), S130 (UNIQUE 10263), and TL-4 (UNIQUE 10632), although dark iron carbonate is difficult to distinguish from **sphalerite**. DDH ML-50C and S14 analyses did not verify the presence of sphalerite. Regarding DDH's BM-10 and 16, results from nearby drill sample analyses (from previous exploration company work) had elevated **Zn** (> 1000 ppm) which indicates the probable presence of **sphalerite**. DDH's S130 and TL-4 had slightly elevated **Zn** values (to 215 ppm). While being anomalous, any amount of sphalerite would be small. Of these six drill holes, the most interesting was DDH TL-4 (UNIQUE 10632), which is found in the Virginia Formation north of the Cuyuna Range. This drill core also had a quartz, carbonate, chlorite, K-feldspar (granite??) vein, yet is spatially removed(?) from known Penokean granites. This and the other drill core in the TL series had bedding at various angles and apparent soft sediment deformation (unstable depositional environment?). Of the current analyses, there were five with **Zn** values over 600 ppm with the highest **Zn** value (831 ppm) in DDH 18132 (UNIQUE 10752). This sample also had elevated **Pb** and **Cd** as one might expect.

Mn Oxides

While no mining is currently being done, geologic work on Minnesota's known manganese resource continues (Beltrame et al, 1981, Morey and Southwick, 1993). **Manganese** oxide mineralization was recognized in samples from 21 drill holes, although it is similar to iron oxides, and analyses indicate a larger distribution. There were 37 analyses with greater **Mn** than the detection overlimit (20,000 ppm). This includes some of the carbonate silicate oxide iron formation.

Kaolinite

Local kaolinitic claystone "saprolite" from weathering also occurs. Samples from drill holes with the best (surficially) developed **kaolin** include DDH 18226 (UNIQUE 10761), DDH BM-7 (UNIQUE 10017), DDH 18972 (UNIQUE 10635), the TL hole series, DDH 18971 (UNIQUE 10633), and H12 (UNIQUE 15981).

Miscellaneous Notes

Other drill materials with interesting observations are summarized below and in Table 11. These are examples, and not a complete listing of the features shown.

TABLE 11: MISCELLANEOUS NOTES

DRILL HOLE NO.	UNIQUE NO.	COMMENTS
PS-2	12617	Intrusive(s) with komatiitic composition.
286-6/1	10513	Lamprophyric or lamproitic rocks.
52	10072	Lamprophyric or lamproitic rocks.
S1037	16406	Malachite.
H18	15984	Trace of native copper
ML42-C	12762	Possible grain of molybdenite.
16	10037	Possible visible gold grain.
18221	10759	Feldspathic porphyry.
S1045	15484	Contains several feet of siliceous-calcareous clastic-volcaniclastic(?) rock, below which is a dark brown to black dense graphitic-hematitic(?) argillite.
S1047	15486	Contains several feet of siliceous-calcareous clastic-volcaniclastic(?) rock, below which is a dark brown to black dense graphitic-hematitic(?) argillite.
S1050	15488	Variably brecciated, to folded to mylonitic red hematitic-argillitic "paint rock" (w/very fine-grained black tourmaline or iron, Mn oxides?), chert-goethite, and chert magnetite iron formation.
S361	15634	Grey hematite alteration-replacement of chert.
18400	11661	Well developed bauxitic textures and secondary euhedral magnetite in the surficially weathered material.
1020	15489	Oxide-graphite (and MnO?) chemical sediments; goethitic material is vuggy with minor carbonate and may be some type of sinter material.
280	15490	Contains complex and variable vein and alteration mineralogy. Disseminated grains may be gold. Some chemical sediment laminae contain tourmaline, magnetite, and minor sulfides. A large felsic-intermediate lapillus occurs at 231'.
DL series	10118-10122	Tuffs and/or mylonites that are difficult to differentiate.
S211	10399	Vuggy to sinter-like except for (later?) quartz veins.
S261	10325	Magnetite-silicate iron formation with quartz chlorite carbonate pyrite veinlets.
S241	10176	Magnetite-silicate iron formation with quartz chlorite carbonate pyrite veinlets.
S242	10177	Magnetite-silicate iron formation with quartz chlorite carbonate pyrite veinlets.
S256	10179	Sericitic phyllite that is "talcy" locally.
292	10345	Silicate magnetite iron with minor stratiform sulfides and siderite.

TABLE 11: MISCELLANEOUS NOTES

DRILL HOLE NO.	UNIQUE NO.	COMMENTS
S128	10382	Contained a quartz vein with medium-grained muscovite (granite affiliated?).
S39	10265	Oxidized pyrite cubes.
S25	10206	Oxidized pyrite cubes.
S21	10202	Oxidized pyrite cubes.
S41	10266	Grey hematite chert iron formation with pyrite and quartz, oxide, calcite veins.
BM-2	11444	Brecciated to mylonitic iron formation and argillite with quartz calcite pyrite veins.
101	15505	Altered basalt or andesite and graphite sulfide iron formation.
S14	10189	Fractured dark grey chert with sulfides and graphite(?) or tourmaline(?) over an altered clayey zone. Unit is sintery looking locally. Veins of siderite or sphalerite also occur.
DRP-1	12759	Metamorphosed volcanoclastic rocks and chemical sediment (marble, and minor graphite chert, and sulfides). Continuation of the Wisconsin volcanic massive sulfide belt(???)
DRP-2	12760	Metamorphosed volcanoclastic rocks and chemical sediment (marble, and minor graphite chert, and sulfides). Continuation of the Wisconsin volcanic massive sulfide belt(???)
186	10168	Quartz calcite, goethite pyrite veins.
193	10395	Contain sheared clayey altered dacite tuff(?) or argillitic iron formation.
S331	10133	Contain sheared clayey altered dacite tuff(?) or argillitic iron formation.
S166	10304	Sinter-like textures locally.
DRP-1	12759	Sinter-like textures locally.
RS-2	12752	Carbonate veined unconformity of Keweenawan sediments overlying McGrath Gneiss.
S151	10388	Muscovite rich layers (alteration or metamorphosed tuff? or sediment?).
BM-4	10014	Possible black schist alteration associated with the sulfide iron formation.
ML-42C	12762	Chalcopyrite and grey sulfide (galena? moly??).
ML-45C	12770	Covellite and bornite, with industry assays over 1000 ppm Cu.
208	15503	Chlorite (VMS blackschist?) alteration.

Geophysical Measurements

Tables of density and magnetic susceptibility for outcrop areas sampled, rock dumps sampled, boulders sampled and drill core logged, have been prepared (Appendix 295-M).

The brief lithology presented for drill hole samples makes it apparent that most of the drilling was done in a search for iron deposits. The D.N.R. General Exploration Files show that most of these drill holes were located based on the results of dip needle surveys with minor use of gravity methods. It would be expected that holes drilled to test a magnetic anomaly would invariably intersect magnetite bearing lithologic units yet there are many intersections described as being hematitic or goethitic which have a relatively low magnetic susceptibility response. Some of this is no doubt the result of a search for secondary enriched ores where holes were drilled in an area of low magnetic response within a linear trend of strong magnetic anomalies. However, this corroborates the conclusion reached in the core logging part of Project 295 that there has been surficial weathering and hydrothermal alteration of bedrock units which survived glaciation. There is further corroboration in the Inferred Geologic Maps. On the comparison chart of Dr. Spector's estimated depths to magnetic bedrock and drilled bedrock depths, (Table 6), the predominance of errors are deeper estimates to bedrock than were found in drill holes, indicating near bedrock surface alteration of magnetite to hematite or goethite. Also some holes intersected saprolite above bedrock. In a personal communication with Dr. Val Chandler he observed that a number of Robert Ferderer's depth estimates in this area had similar problems. This suggests the possibility of secondary enrichment of near surface ores such as that found at the Flambeau Deposit, Ladysmith, Wisconsin, May, E.R., 1977.

In general, lithologic units which are described as iron formation have densities greater than three grams per cubic centimeter, such as drill hole U.S.S. 18138, P295 FILE NUMBER DH2951-041, 230-340 feet. Lithologic units which are described as having magnetite, oxide-silicate iron formation, mafic igneous rocks and some sulfide iron formations have magnetic susceptibilities greater than one times ten to the minus three in the SI, or meter-kilogram-second system while other lithologic units have less than one.

Inferred Geologic Maps

With background information from the Geologic map of the Penokean Orogen, east-central Minnesota, Southwick, et. al., 1988, general observations of Dr. Spector's inferred geologic maps show a structurally complicated Archean-Proterozoic granite-greenstone terrain with volcanics and metasediments wrapping around an Archean mixture of migmatitic gneiss and amphibolite with units of younger Archean granite, as well as units of early Proterozoic gneiss and granite. Lithologic units are dominated by a mixture of strongly magnetic mafic metavolcanics to metavolcanics with a moderated magnetic susceptibility. These are intercalated with metasediments including Algoma-type iron-formations.

There are several distinctive differences between Dr. Spector's relatively detailed map, scale 1:62,500, and previous geologic maps of the area: 1. Previous maps show thrust fault panels, while Dr. Spector's interpretation shows steeply dipping lithologic units and structural features. 2. The inferred geologic maps place the Malmo Discontinuity six to ten miles north of where

it was previously mapped. 3. At the northwest end of Mille Lacs Lake Dr. Spector displays an intrusive feature which he calls the Mille Lacs Feature. This was not previously mapped. 4. West of Mille Lacs Lake Dr. Spector maps an area characterized by very deep non-magnetic rocks which he calls the Central Basin. This could reflect the 1988 Penokean Orogen Map, East-Central Minnesota, Pgs unit, which is an Early Proterozoic unnamed graphitic schist and slate. However, on Dr. Spector's map it has a shape and character more like the Animikie, Nimrod or Long Prairie Basins, not a thrust fault panel. 5. In the south half of the Shephard Area Extension Dr. Spector maps a distinctive sedimentary unit which he calls a quartzite. At the southwest side of the map it correlates with outcrops of the Dam Lake Quartzite. In the east central part of the map it is coincident with a gold and base metal geochemical anomaly. Hole P295-3 intersected this unit and it has been tentatively identified by Dr. D. Southwick as a quartz sericite tuff. In addition to the inferred map geology Dr. Spector's maps have contours showing estimates to magnetic basement which are usually depth to bedrock although they can indicate a non-magnetic lithologic unit. Finally Dr. Spector has interpreted the inferred geology and discreet geophysical responses in terms of models of economic ore deposits. These are described in detail within his report.

Comparing Dr. Spector's maps with data from the six holes drilled to test his results (Table 5) we see very good correlation. The expected error for depth estimates would be between eighty and 120 feet. Only two holes have significantly more error. Hole P295-4 is near the center of Dr. Spector's Central Basin where there is a long distance to a lithologic contact having contrasting density and magnetic characteristics upon which to make a depth determination. The error is no doubt the result of extrapolating depths to the hole site. At hole P295-5 there should be a good contrast of magnetic susceptibilities, but complex geologic relations might have resulted in a complex preglacial topographic pattern with rapid bedrock topographic changes which were difficult to resolve. An alternative explanation for the problem is rapid changes in local surface topography near the drill site which was not entirely resolved by drape flying or elevation corrections. Because of a heron rookery we shifted the drill site location to the top of a glacial ridge which was about seventy feet above the elevation of the preferred site. At the lower elevation bedrock depth would have been close to the expected depth. Comparing lithologies there would be little or no geophysical contrast between greenstone and a calcareous amphibolite in P295-1. Most of the greenstone belts in this part of the State contain Algoma type iron formations and we hit one by chance in hole P295-2. The only other discrepancy worth mentioning is the gneissic dome and the quartz pebble conglomerate, hole P295-6. These lithologies would also have very similar geophysical responses.

SUMMARY OPEN FILE REPORT

There is good potential for economic mineral deposits. Within these areas existing geologic, geophysical and geochemical data bases were enhanced with additions of new data. This revised data base was put into formats compatible with current computer technology. Contemporary evaluation methods were used to display mineral potential possibilities with detail and scale previously not available on the inferred geologic maps. The inferred geologic maps display lithologic units permissive of mineral deposits and discreet geophysical indications of such deposits at a reconnaissance level. In some places multi-element geochemical anomalies with significant pathfinder elements are coincident with favorable inferred geologic features. Drill core logging and evaluation defines structural features, alteration and minerals commonly found in areas containing economic mineral potential. This work will be valuable for making land management decisions and should encourage private industry to investigate mineral potential possibilities.

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Appendix 295-A. Drill Hole Summary Information

Data Sheet For Drill Hole 306
(DNR Unique Number 15464)

IDENTIFICATION

DNR Project 295 File Number: DH2951-035
Samples: Obtained and assayed by Hanna Mining
Co., relogged and sampled by DNR.
DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing

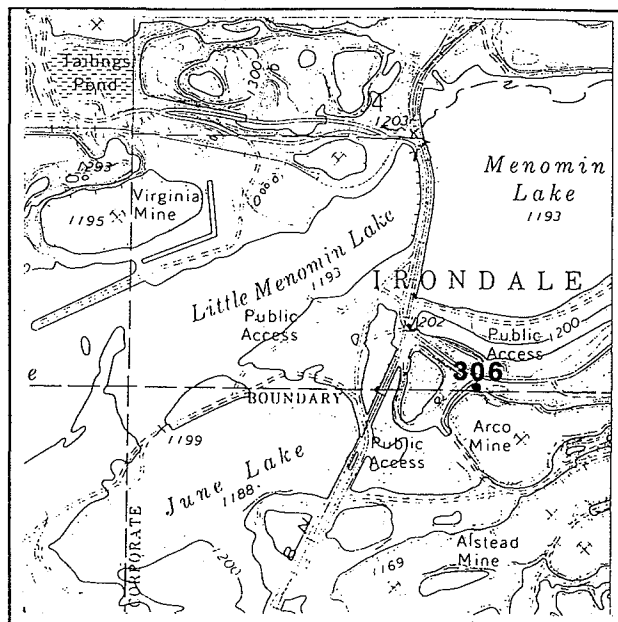
S-T-R: Lot 1, S9, T46N, R29W, taken from
information on
core. On map it
looks like it could
be on section line
or Lot 10 of
Section 4.

Quadrangle: Riverton, 7.5'.

Reg. Survey Area: North edge survey area.

UTM Coordinates: 422,840m E.
5,148,680m N.

Note: For geology see map page A-3.



Drill Hole 306 Location Map.

DRILL HOLE PARAMETERS

Access: Hole 306 is one hundred feet south of a good road. Size of Drill Core: EX.

Topography: North edge Arco Mine, steep slope of rock dump to north. Collar Elevation: About 1200 feet -
as estimated from the topographic map.

Vegetation: Mixed hardwoods and aspen. Sample Method: Saw drill core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: A fifteen cm., solid piece of EX sized core and one jar of core fragments, from the
interval 44 to 50 feet.

Lithology: Dark green, magnetic, very fine-grained, laminated, oxide-silicate, banded iron formation.

Structure and Alteration: Schistosity very weakly developed, no observed weathering effects noted.

Assay Sample Intervals and (DNR Sample Number): Label indicates Hanna assay interval from 44-50 ft. DNR
sample (2951000110).

Highlights of Sample Assays: Hanna assay 44 to 50 ft., Fe, 23.47% and Mn, 7.70%.

Thin Section Descriptions, Depths and (Sample Numbers): 44-50' (2951000111)

Highlights of Drill Core Geophysical Measurements: Two magnetic susceptibility measurements with sawed
core faces covering about 70% of the meter face range from 111.0 to 117.0, 10^{-3} SI units and average 114.0,
 10^{-3} SI units. One density measurement was 3.12 g/cm³.

*Data Sheet For Drill Hole 307
(DNR Unique Number 15465)*

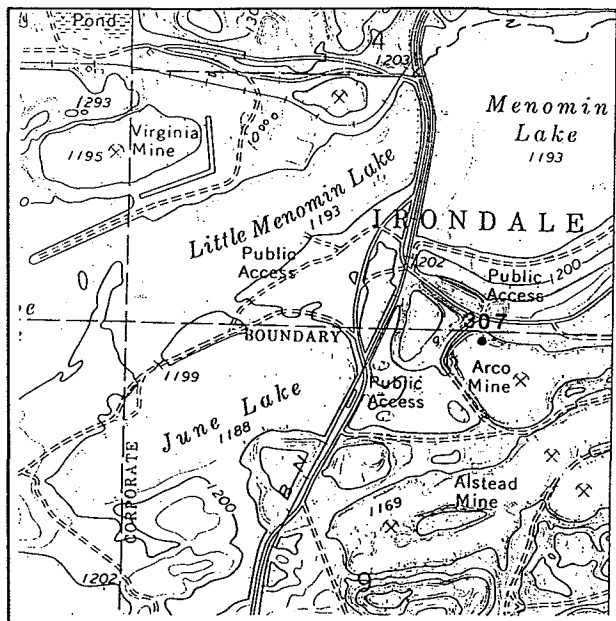
IDENTIFICATION

DNR Project 295 File Number: DH2951-036
Samples: Obtained and assayed by Hanna Mining Co., relogged and sampled by the DNR.
DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing
S-T-R: Lot 1, S9, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 422,850m E.
5,148,669m N.

Note: For geology see map page A-3.



Drill Hole 307 Location Map.

DRILL HOLE PARAMETERS

Access: Now in the Arco Mine pit near the north edge probably under water.

Size of Drill Core: EX

Topography: North of the mine is a steep slope of a rock dump. Collar Elevation: About 1170 feet as estimated from topographic sheet. Vegetation: Mixed hardwoods and aspen. Sample Method: Saw drill core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: Twenty-five cm., (several pieces) of EX sized core, from the intervals 55-60 ft. and 60-65 ft.; and 5 jars of crushed core for the intervals 48-55 ft., 55-60 ft., and 60-65 ft.

Lithology: Dark green, magnetic, very fine-grained, laminated, oxide-silicate, banded iron formation.

Structure and Alteration: Schistosity very weakly developed. No observed weathering effects noted for core, but crushed core to 55 feet may be weathered.

Assay Sample Intervals and (DNR Sample Numbers): Label indicates Hanna assay intervals from 55-60, and 60-65 ft. DNR sample (2951000112). 48-55' (2951000118).

Highlights of Sample Assays: Hanna assays 48-55 ft. 21.01% Fe and 7.57% Mn; 55-60 ft., 22.63% Fe and 9.02% Mn; 60-65 ft., 22.15% Fe and 6.50% Mn.

Thin Section Descriptions, Depths and (Sample Number): 55-65' (2951000113), 55-60' (2951000119).

Highlights of Drill Core Geophysical Measurements: Two magnetic susceptibility measurements with 90% of the meter face covered by flat core faces were 46.9 and 56.5, 10^{-3} SI units, average 51.7, 10^{-3} SI units. Two density measurements were 3.02 and 3.06 g/cm³, average 3.04 g/cm³.

Data Sheet For Drill Hole 308
(DNR Unique Number 15466)

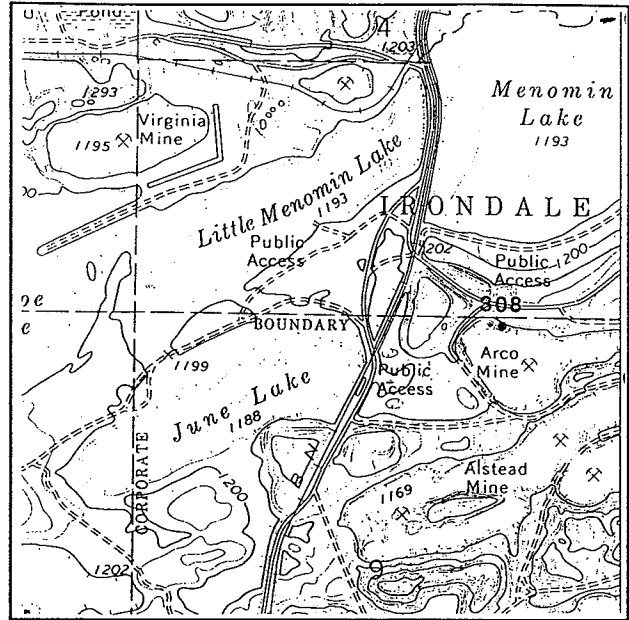
IDENTIFICATION

DNR Project 295 File Number: DH2951-037
Samples: Obtained and sampled by Hanna Mining Co., relogged and sampled by the DNR.
DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing
S-T-R: Lot 1, S9, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 422,885m E.
5,148,680m N.

Note: For geology see map page A-3.



Drill Hole 308 Location Map.

DRILL HOLE PARAMETERS

Access: Now at the north edge of the Arco Mine pit.
Size of Drill Core: EX
Topography: Mine pit to south, steep slope of a rock dump to the north.
Collar Elevation: About 1195 feet as estimated from the topographic map. Vegetation: Mixed hardwoods and aspen. Sample Method: Saw drill core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: Six cm., solid piece of EX sized drill core from the interval 55-60 ft., and two jars of core fragments from 49-60 ft.

Lithology: Dark green, very fine-grained, magnetic, laminated, oxide-silicate, banded iron formation.

Structure and Alteration: Schistosity is weakly to moderately developed. No observed weathering effects.

Assay Sample Intervals and (Sample Number): Label indicates Hanna assay interval from 55-60 ft. 49-55' (2951000120)

Highlights of Sample Assays: Hanna assays 49-55 ft., 26.58% Fe and 6.38% Mn; 55-60 ft., 23.61% Fe, and 4.13% Mn.

Thin Section Descriptions, Depths and (Sample Number): 55-60' DNR sample number (2951000114).

Highlights of Drill Core Geophysical Measurements: Two magnetic susceptibility measurements were 35.3 and 37.3, 10^{-3} SI units, average 36.3, 10^{-3} SI units with 45% of the meter face covered by flat core faces. One density measurement was 3.25 g/cm³.

*Data Sheet For Drill Hole 309
(DNR Unique Number 15467)*

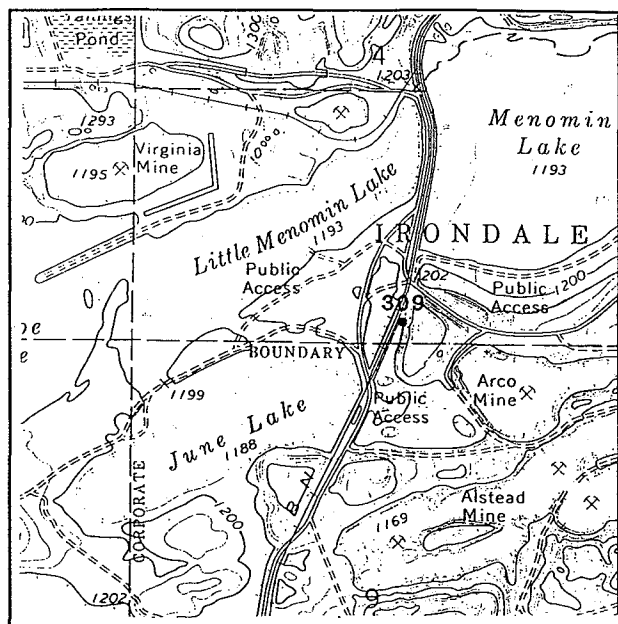
IDENTIFICATION

DNR Project 295 File Number: DH2951-038
Samples: Obtained and sampled by Hanna Mining
Co., relogged and sampled by the DNR.
DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing
S-T-R: Lot 10, S4, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 422,490m E.
5,148,765m N.

Note: For geology see map page A-3.



Drill Hole 309 Location Map.

DRILL HOLE PARAMETERS

Access: At toe of dump alongside a good road
Size of Drill Core: EX.
Topography: Steep slope of rock dump to east.
Collar Elevation: About 1200 feet as estimated from topographic map. Vegetation: Mixed hardwoods and aspen. Sample Method: Saw drill core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: Thirteen cm., solid piece of EX sized drill core from the interval 65-70 ft., and one jar of crushed core from 58-60 ft.

Lithology: Dark reddish brown, very fine-grained, laminated, phyllitic, ferruginous siltstone.

Structure and Alteration: Schistosity is moderately to well developed. Weathering effects are indeterminate.

Assay Sample Intervals and (DNR Sample Number): Label indicates Hanna sample from 65-70 ft. DNR sample (2951000115). 58-60' (2951000121).

Highlights of Sample Assays: Hanna assay 65-70 ft. 9.04% Fe and 0.43% Mn.

Thin Section Descriptions, Depths and (Sample Number): 65-70' DNR sample number (2951000116).

Highlights of Drill Core Geophysical Measurements: There wasn't enough core for a magnetic susceptibility measurement. One density measurement was 2.66 g/cm³.

Data Sheet For Drill Hole 310
(DNR Unique Number 15468)

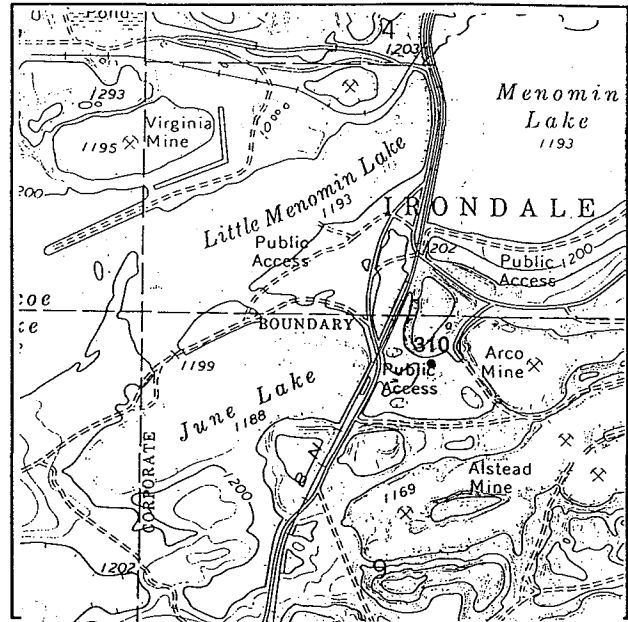
IDENTIFICATION

DNR Project 295 File Number: DH2951-039
Samples: Obtained and sampled by Hanna Mining Co., relogged and sampled by DNR.
DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing
S-T-R: Lot 1, S9, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 422,650m E.
5,148,555m N.

Note: For geology see map page A-3.



Drill Hole 310 Location Map.

DRILL HOLE PARAMETERS

Access: Ninety five meters from road southwest side Arco Mine.

Size of Drill Core: EX

Topography: Toe of rock dump, steep slope to north. Collar Elevation: About 1208 feet as estimated from topographic map. Vegetation: Mixed hardwoods and aspen. Sample Method: Saw drill core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: One cm. solid piece of EX sized drill core from 185 ft. depth, and 42 jars of crushed core from the interval 45-185 ft.

Lithology: Laminated, variably ferruginous, recrystallized chert.

Structure and Alteration: Recrystallized, fabric poorly developed. Weathering effects may include oxidation and hydration of iron formation to about 125 feet.

Assay Sample Intervals and (Sample Number): 45-50' (2951000122), 58-65' (2951000123), 65-70' (2951000124), 70-75' (2951000126), 75-80' (2951000128), 80-85' (2951000130), 85-90' (2951000132), 90-95' (2951000134), 95-100' (2951000135), 100-105' (2951000138), 105-110' (2951000140), 110-115' (2951000141), 115-120' (2951000142), 120-125' (2951000144), 125-130' (2951000146), 130-135' (2951000147), 135-140' (2951000149), 140-145' (2951000151), 145-150' (2951000153), 150-155' (2951000155), 155-160' (2951000157), 160-165' (2951000159), 165-170' (2951000161), 170-175' (2951000163), 175-180' (2951000165), 180-185' (2951000167).

Highlights of Sample Assays: See table page A-8 for Hanna Mining Co. assays.

Thin Section Descriptions, Depths and (Sample Number): 185' (2951000117), 65-70' (2951000125), 70-75' (2951000127), 75-80' (2951000129), 80-85' (2951000131), 85-90' (2951000133), 90-95' (2951000135), 95-100' (2951000137), 100-105' (2951000139), 115-120' (2951000143), 120-125' (2951000145), 130-135' (2951000148), 135-140' (2951000150), 140-145' (2951000152), 145-150' (2951000154), 150-155' (2951000156), 155-160' (2951000158), 160-165' (2951000160), 165-170' (2951000162), 170-175' (2951000164), 175-180' (2951000166), 180-185' (2951000168).

Highlights of Drill Core Geophysical Measurements: There wasn't enough core for magnetic susceptibility measurements. One density measurement was 2.55 g/cm³.

**Project 295 Hanna Mining Co. Assay Data Drill Hole 310, File Number DH2951-039,
Core Interval and Assays From Labels on Jars:**

INTERVAL IN FEET	PERCENT IRON	PERCENT MANGANESE	INTERVAL IN FEET	PERCENT IRON	PERCENT MANGANESE
58-65	22.18	2.40	125-130	31.76	10.13
65-70	28.50	0.63	130-135	29.14	8.83
70-75	48.21	0.47	135-140	26.90	10.76
75-80	25.87	0.82	140-145	28.21	13.63
80-85	27.49	4.53	145-150	23.18	9.02
85-90	27.66	10.68	150-155	35.00	10.84
90-95	35.13	12.10	155-160	34.03	13.63
95-100	23.34	6.11	160-165	39.85	6.66
100-105	36.47	10.56	165-170	49.55	2.09
105-110	31.59	8.59	170-175	42.08	3.70
110-115	33.97	7.33	175-180	37.53	4.61
115-120	30.14	14.26	180-185	36.07	2.84
120-125	38.34	9.38			

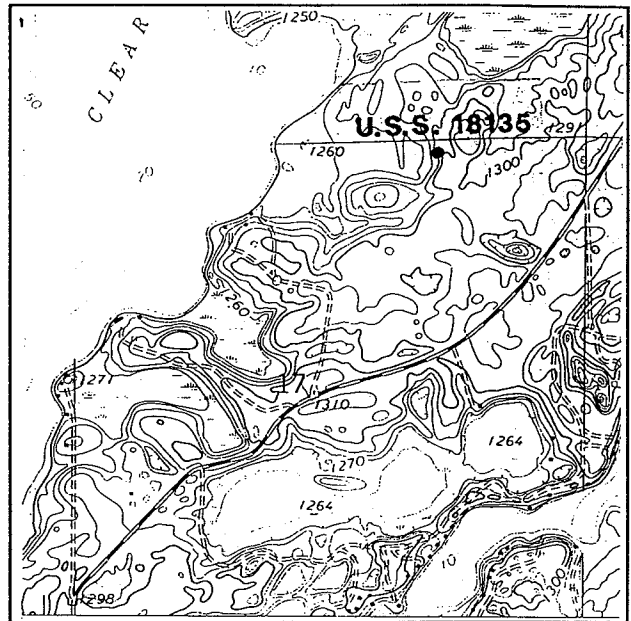
Data Sheet For Drill Hole U.S.S. 18135
(DNR Unique Number 10753)

IDENTIFICATION

DNR Project 295 File Number: DH2951-040
Samples: Drilled by U.S.S., Logged for U.S.S.
by Richard Strong, relogged and sampled by
DNR.
DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing
S-T-R: (1529'W, 242'S of the NE Sec. Cor.) NW,
NE, S17, T45N,
R28W, from drill
log.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: North central part of survey
area.
UTM Coordinates: 430,785m E.
5,137,345m N.



Drill Hole U.S.S. 18135 Location Map.

DRILL HOLE PARAMETERS

Access: Hole 18135 is 1800 feet west of a paved road.
Topography: On west flank of a modest north trending ridge. Vegetation: Unknown.
Collar Elevation: 1302 ft. from drill log.
Angle: Vertical. Surface Depth: 230 feet. Total Depth: 275 feet. Size of Drill Core: AX. Drilled: Feb. 1952.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: AX sized drill core, laid out in book fashion with about 75% of the core footage remaining. Core is broken in scattered places, but this generally decreases downhole.

Lithology: Dark green, fine- to coarse-grained, altered amphibolitic metagabbro. Unit contains trace disseminated pyrite.

Structure and Alteration: Alteration (weathering?) to clays, hematite, and limonite is fracture controlled leaving less altered islands. Plagioclase is also locally diseased. Some alteration may be deuteric.

Assay Sample Intervals and (Sample Numbers): DNR interval and sample number; 245-255', (2951000171).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): DNR sample depths and sample numbers 252' (2951000169), 258.5' (2951000170).

Highlights of Drill Core Geophysical Measurements: The average of thirty magnetic susceptibility measurements from the interval 230-275 ft. is 0.53, 10^{-3} SI units with 90% of the meter face covered. The average of twenty density measurements is 2.87 g/cm³.

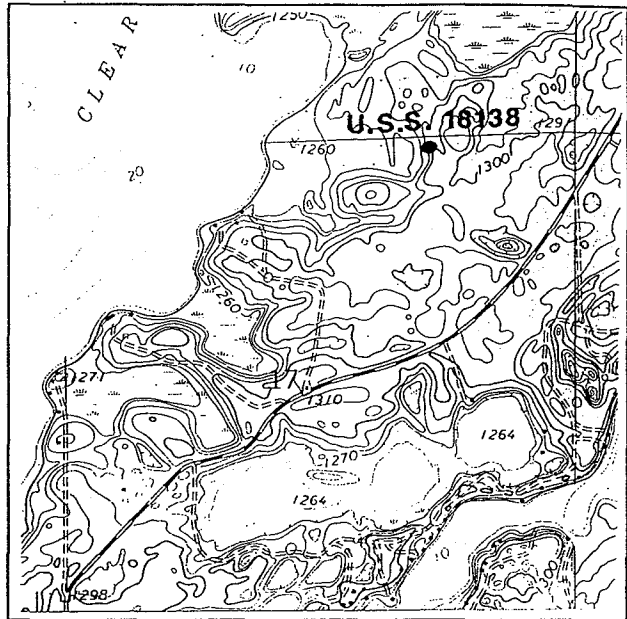
Data Sheet For Drill Hole U.S.S. 18138
(DNR Unique Number 10754)

IDENTIFICATION

DNR Project 295 File Number: DH2951-041
Samples: Drilled by U.S.S., Logged by Richard
Strong, relogged and sampled by DNR.
DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing
S-T-R: (1595'W, 175'S of the NE Sec. Cor.) NW, NE,
S17, T45N, R28W, from drill log.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: North central part of survey
area.
UTM Coordinates: 430,770m E.
5,137,360m N.



Drill Hole U.S.S. 18138 Location Map.

DRILL HOLE PARAMETERS

Access: Hole 18138 is 1910 feet west of
paved road.

Topography: West flank of modest ridge.

Collar Elevation: 1292 ft. from drill log. Angle: Vertical. Surface Depth: 210 feet. Total Depth: 345 feet. Size of Drill Core: AX Drilled: Feb. 1952. Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: AX sized drill core, laid out in book fashion with about 38% of the core footage remaining. Run blocks in first box disagree and may be out of place. Core is broken in scattered places, but this generally decreases downward. Core was split and partially analyzed by U.S.S. Corp. Footages are approximate in log.

Lithology: Deformed, locally graphitic, limonitic, and hematitic goethite and magnetite oxide and silicate iron formation with mafic fragments or alteration. Core may be deeply weathered, but it's difficult to separate from other alteration.

Structure and Alteration: Greenish patches may be mafic materials or alteration with local sulfide-quartz veining. Bedding is oriented 0 to 35° to the core axis, with local fold closures and cataclasis(?). Core may be deeply weathered, but it's difficult to separate from other alteration.

Assay Sample Intervals and (Sample Numbers): DNR sample intervals and numbers; 270-290' (2951000177), 300-310' (2951000178), 330-345' (2951000179).

Highlights of Sample Assays: .

Thin Section Descriptions, Depths and (Sample Numbers): DNR sample depths and numbers; 214.5' (2951000172), 274' (2951000173), 277' (2951000174), 284' (2951000180), 301' (2951000175), 302' (2951000181), 313' (2951000176).

Highlights of Drill Core Geophysical Measurements: The average of sixty-three magnetic susceptibility measurements from the interval 216-340 ft. is 65.02, 10⁻³ SI units with 60 to 95% of the meter face covered. The average of 42 density measurements from the same interval is 3.12 g/cm³.

*Data Sheet For Drill Hole U.S.S. 18144
(DNR Unique Number 10755)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-042

Samples: Drilled by U.S.S., Logged by Henry Bakila, relogged and sampled by DNR.

DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing

S-T-R: (1995'W, 628'S of the NE Sec. Cor.) NW, NE, S17, T45N, R28W.

Quadrangle: Crosby, 7.5'.

Reg. Survey Area: North central part of survey area.

UTM Coordinates: 430,645m E.
5,137,205m N.



Drill Hole U.S.S. 18144 Location Map.

DRILL-HOLE PARAMETERS

Access: Hole 18144 is 1200 feet northeast of road.

Topography: Moderate sized circular hill, moderate to steep slope, hole near crest on east side.

Vegetation: Unknown.

Collar Elevation: 1293 ft. from drill log.

Angle: Vertical. Surface Depth: 234 feet. Total Depth: 300 feet. Size of Drill Core: AX

Drilled: April 1952. Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: AX sized drill core, laid out in book fashion with about 95% of the core footage remaining. Core is broken in the upper 8' and locally below this interval.

Lithology: Dark green, fine- to coarse-grained, altered amphibolitic metagabbro.

Structure and Alteration: Limonite and clays along fractures in upper 15' is probably weathering related. Hairline fractures-shears containing minor black oxide, pyrite, carbonate(?), quartz and related limonitic alteration become more common with depth. Core is vuggy and leached locally (deuteric?).

Assay Sample Intervals and (Sample Numbers): DNR sample intervals and numbers; 250-260' (2951000185), 290-300' (2951000186).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): DNR sample depths and numbers; 251.4' (2951000182), 256' (2951000183), 293.5' (2951000184).

Highlights of Drill Core Geophysical Measurements: The average of forty-two magnetic susceptibility measurements from the interval 234-300 ft. is 0.51, 10^{-3} SI units with 90% of the meter face covered. The average of 28 density measurements from the same interval is 2.90 g/cm³.

Data Sheet For Drill Hole S-118
(DNR Unique Number 15469)

IDENTIFICATION

DNR Project 295 File Number: DH2951-043

Samples: Obtained by Hanna Mining Co., relogged
and sampled by DNR.

DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing

S-T-R: NE-SW, S33, T47N, R29W.

Quadrangle: Trommald, 7.5'.

Reg. Survey Area: North edge survey area.

UTM Coordinates: 422,398m E.
5,150,720m N.

DRILL HOLE PARAMETERS

Access: Mine road 100 feet to north.

Topography: Nearly flat topography.

Vegetation: Aspen and mixed hardwoods.

Collar Elevation: 1240 feet as taken from the
topographic map.

Angle: Presumed vertical, uncertain. Surface Depth: 77 (?) feet. Total Depth: 124 (?) feet. Size of Drill Core:
AX Drilled: . Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: AX sized drill core for the interval 110-124', laid out in book fashion with about 29%
of the core footage remaining. For the interval 77-124', 10 boxes of crushed core also exist.

Lithology: Core: Tan to white, fine- to medium-grained quartzite.

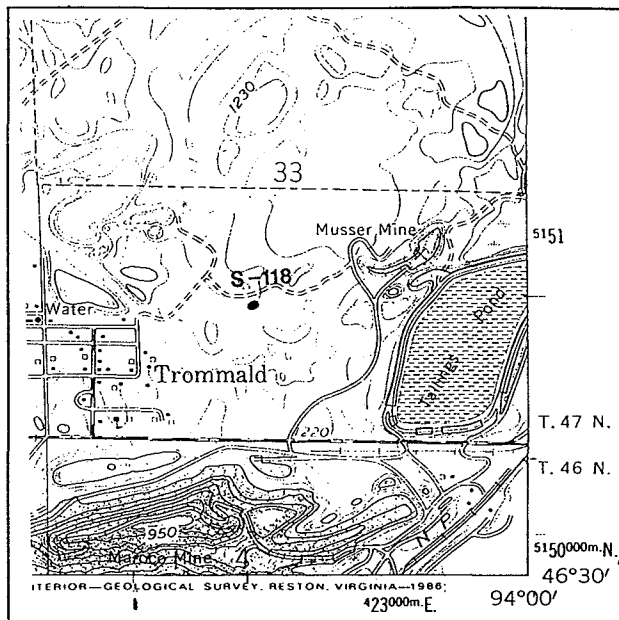
Structure and Alteration: Fracture associated muscovite, minor hematite, Mn oxide, limonite, and Liesegang
banding may be weathering related.

Assay Sample Intervals and (Sample Numbers): DNR sample interval and number; 114-124' (2951000188).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): DNR sample depth and number; 121' (2951000187).

Highlights of Drill Core Geophysical Measurements: Six magnetic susceptibility measurements ranged from
0.02 to 0.04, 10^{-3} SI units and averaged 0.03, 10^{-3} SI units, with 100% of the meter face covered. Six density
measurements ranged from 2.59 to 2.63 g/cm³ and averaged 2.62 g/cm³.



Drill Hole S-118 Location Map.

Data Sheet For Drill Hole S-124
(DNR Unique Number 15470)

IDENTIFICATION

DNR Project 295 File Number: DH2951-044
Samples: Obtained by Hanna Mining Co.,
relogged and sampled by DNR.
DNR Geologists: B. Frey, T. Lawler, D. Cartwright

LOCATION (see map at right)

County: Crow Wing
S-T-R: NE-SW, S33, T47N, R29W.
Quadrangle: Trommald, 7.5'.
Reg. Survey Area: North edge of survey area.
UTM Coordinates: 422,185m E.
5,151,070m N.

DRILL HOLE PARAMETERS

Access: 150 feet northeast of road.
Topography: Sloping westerly to a pond.
Vegetation: Mixed aspen and hardwoods.
Collar Elevation: 1240 feet as taken from topographic map. Angle: Presumed vertical, uncertain. Surface
Depth: 97 (?) feet. Total Depth: 260 (?) feet. Size of Drill Core: AX Drilled: . Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

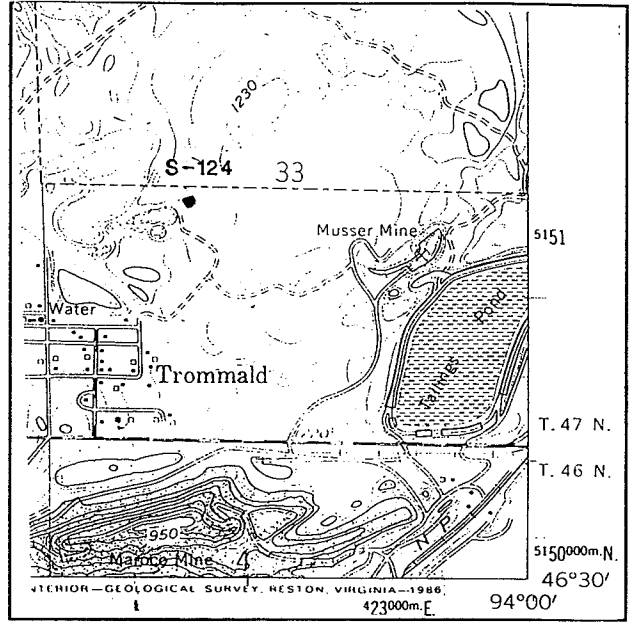
Drill Core Description: AX sized drill core for the interval 198-260', laid out in book fashion with about 44% of the core footage remaining. Core is locally broken, and small intervals may have been split and analyzed. The interval 97-222' has 26 bottles of crushed core.

Lithology: Interbedded quartzite (and recrystallized chert?) and goethitic hematitic iron formation.

Structure and Alteration: Secondary oxide and silica movement-veining is common. Deformation has affected most quartz veins.

Assay Sample Intervals and (Sample Numbers): 120-125' (2951000194), 125-130' (2951000195), 130-135' (2951000196), 135-140' (2951000197), 155-160' (2951000198), 170-175' (2951000199), 175-180' (2951000200), 227-237' (2951000203), 245-255 (2951000204).

Highlights of Sample Assays:



Drill Hole S-124 Location Map.

Data Sheet For Drill Hole S-126
(DNR Unique Number 15471)

IDENTIFICATION

DNR Project 295 File Number: DH2951-045
Samples: Obtained from Hanna Mining Co.
DNR Geologists: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: SE-SW, S33, T47N, R29W.
Quadrangle: Trommald, 7.5'.
Reg. Survey Area: North edge of survey area.
UTM Coordinates: 422,175m E.
5,150,695m N.

DRILL HOLE PARAMETERS

Access: Mine road 70 feet to northwest.
Topography: Nearly flat.
Vegetation: Mixed aspen and hardwoods.
Collar Elevation: 1,240 feet taken from topographic map.
Angle: Presumed vertical, uncertain.
Surface Depth: 72 (?) feet.
Total Depth: 135 (?) feet.
Size of Drill Core: AX
Drilled:
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

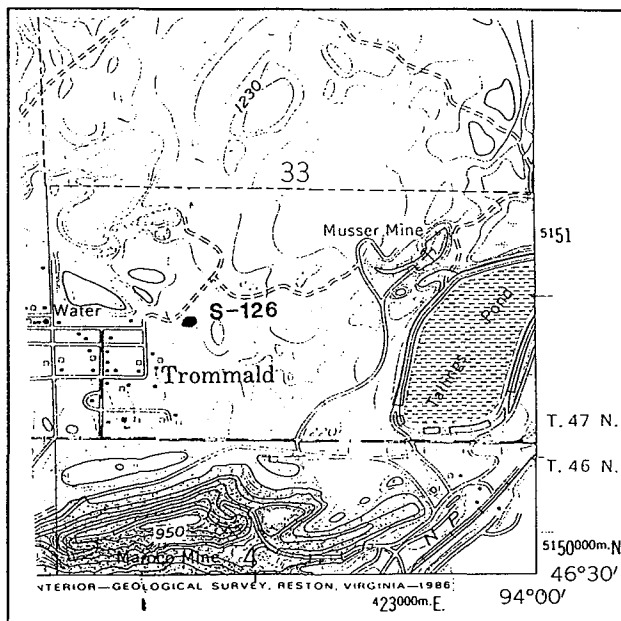
Drill Core Description: AX sized drill core for the interval 79-115', laid out in book fashion with about 33% of the core footage remaining. The interval 72-135 has 13 bottles of crushed drill core.

Lithology: White to tan, fine- to medium-grained quartzite to 98', with goethitic hematitic iron formation below.

Structure and Alteration: Minor limonite along hairline fractures in quartzite, and secondary oxides in iron formation.

Assay Sample Intervals and (Sample Numbers):

Highlights of Sample Assays: Five magnetic susceptibility measurements ranged from 0.04 to 0.05 nanoteslas and averaged 0.04 nanoteslas. Four density measurements ranged from 2.55 to 2.6 g/cm³ and averaged 2.58 g/cm³.



Drill Hole S-124 Location Map.

*Data Sheet For Drill Hole S-1042
(DNR Unique Number 15472)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-046
Samples: Obtained from Hanna Mining Company.
DNR Geologists: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: SW-NW, S10, T46N, R29W.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 423,690m E.
5,147,955m N.

DRILL HOLE PARAMETERS

Access: Now in Feigh Mine pit.
Topography: Steep slopes around pit.
Vegetation: Mixed aspen and hardwood.
Collar Elevation: 609 feet taken from mine map.
Angle: 60° at an azimuth of S65° W.
Surface Depth: Sixty-five feet, vertical.
Total Depth: 435 feet down hole at 60°.
Size of Drill Core:
Drilled: .
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

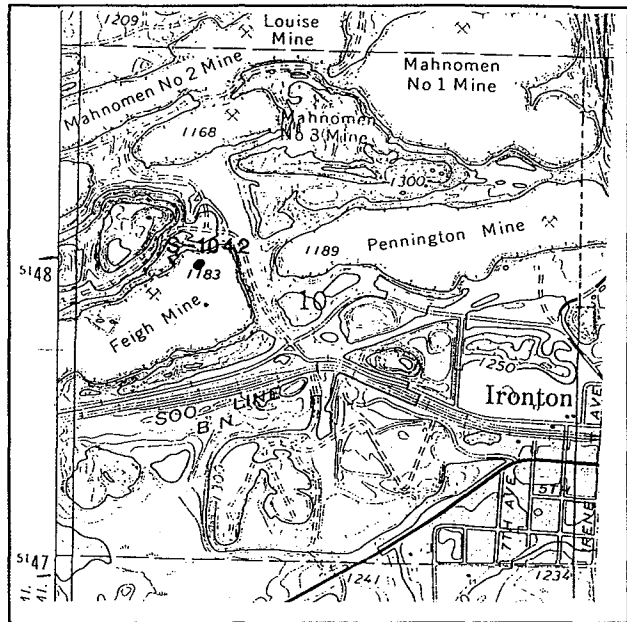
Drill Core Description:

Lithology:

Structure and Alteration:

Assay Sample Intervals and (Sample Numbers):

Highlights of Sample Assays: Forty-five magnetic susceptibility measurements range from 0.06 to 1.89 nanoteslas, with 80 to 95% of the meter face covered and average 0.34 nanoteslas. Thirty density measurements range from 2.62 to 4.04 gm/cm³ and average 3.15 gm/cm³.



Drill Hole S-124 Location Map.

Data Sheet For Drill Hole S-1043
(DNR Unique Number 15473)

IDENTIFICATION

DNR Project 295 File Number: DH2951-047
Samples: From Hanna Mining Company.
DNR Geologists: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: SW-NW, S10, T46N, R29W.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 423,695m E.
5,147,890m N.

DRILL HOLE PARAMETERS

Access: In Feigh Mine pit.
Topography: Steep mine slopes.
Vegetation: Mixed aspen and hardwood.
Collar Elevation: 562.7 from mine map.
Angle: Angle unknown, azimuth N32°W.
Surface Depth: Probably collared in bedrock.
Total Depth: Unknown.
Size of Drill Core:
Drilled:
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

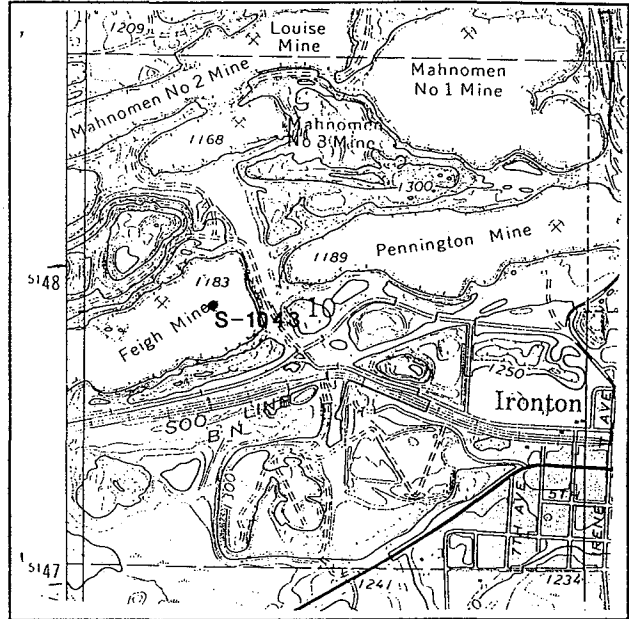
Drill Core Description:

Lithology:

Structure and Alteration:

Assay Sample Intervals and (Sample Numbers):

Highlights of Sample Assays: Two magnetic susceptibility readings were 0.19 nanoteslas with 80% of the meter face covered. Two density measurements were 3.03 and 3.23 g/cm³, the average is 3.13 g/cm³.



Drill Hole S-124 Location Map.

*Data Sheet For Drill Hole S-1044
(DNR Unique Number 15474)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-048
Samples: From Hanna Mining Company.
DNR Geologists: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: SE-NW, S10, T46N, R29W.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: North edge of survey area.
UTM Coordinates: 423,710-424,120m E.
5,147,825-5,148,260m N.

DRILL HOLE PARAMETERS

Access: Unknown, but probably within Feigh Mine pit.
Topography: Steep slopes around pit.
Vegetation: Mixed aspen and hardwood.
Collar Elevation: Unknown.
Angle: .
Surface Depth: .
Total Depth: feet.
Size of Drill Core:
Drilled:
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

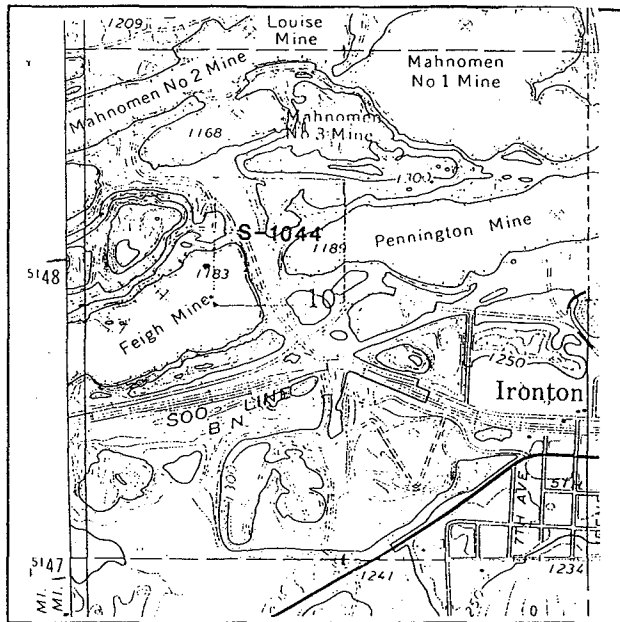
Drill Core Description:

Lithology:

Structure and Alteration:

Assay Sample Intervals and (Sample Numbers):

Highlights of Sample Assays: Nine magnetic susceptibility measurements ranged from 0.04 to 0.35 nanoteslas and average 0.19 nanoteslas, 90 to 100% of the meter face covered. Five density measurements ranged from 2.45 to 3.55 g/cm³ and averaged 3.02 g/cm³.



Drill Hole S-124 Location Map.

Data Sheet For Drill Hole 306
(DNR Unique Number 10963)

IDENTIFICATION

DNR Project 295 File Number: **DH2951-049**
Samples: **From Crosby Exploration**
Geologist: **B. Frey & T. Lawler**

LOCATION (see map at right)

County: **Crow Wing**
S-T-R: **9-46-29**
Quadrangle: **Riverton, 7.5'**
Reg. Survey Area: .
UTM Coordinates: **m E.**
m N.

DRILL HOLE PARAMETERS

Access: .
Topography:
Vegetation: **Unknown.**
Collar Elevation: .
Angle: .
Surface Depth: **49(?) feet. Assessment File indicates that overburden depth was 70'.**
Total Depth: **54(?) feet. Assessment File indicates that the total depth was 175'.**
Size of Drill Core: **Unknown, currently crushed.**
Drilled: **04/24/1912.**
Sample Method: **Saw core.**

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: **Core is crushed, with fragments several mm in size.**

Lithology: **Graphitic phyllite.**

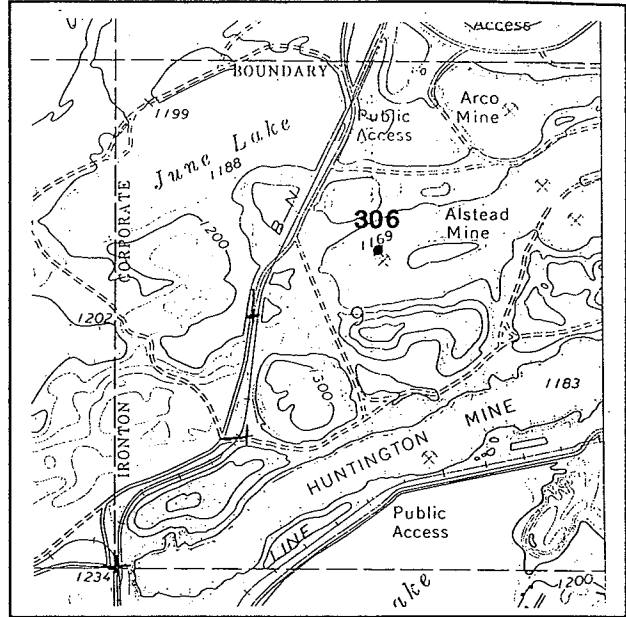
Structure and Alteration: **Rock is slightly phyllitic, and contains 1-5% disseminated pyrite.**

Assay Sample Intervals and (DNR Sample Numbers): **49-54' (2951000205).**

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers): **49-54' (2951000206).**

Highlights of Drill Core Geophysical Measurements: .



Drill Hole Location Map.

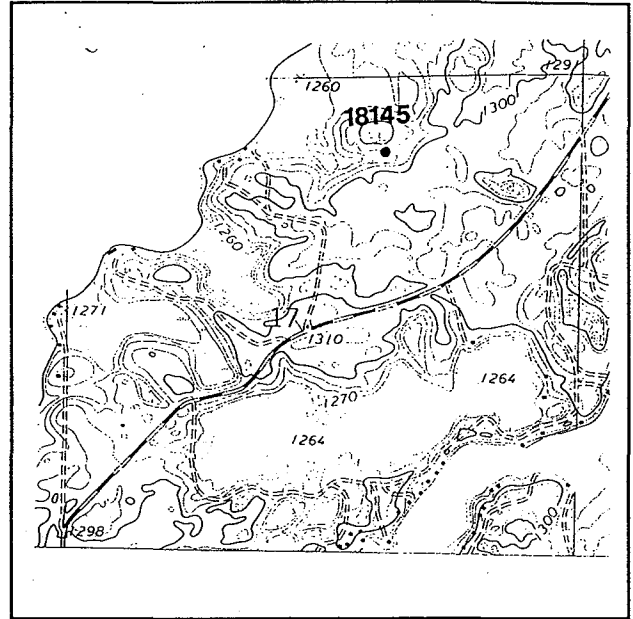
*Data Sheet For Drill Hole 18145
(DNR Unique Number 10756)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-050
Samples: From U.S.S., Logged by
Bakkila.
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 17-45-28
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.



Drill Hole Location Map.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: Unknown.
Collar Elevation: 1288 feet.
Angle: -90.
Surface Depth: 310 feet.
Total Depth: 364 feet.
Size of Drill Core: AX
Drilled: 04/30/1952.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: AX drill core laid out in book fashion with about 70% recovery.

Lithology: Medium-grained altered metagabbro.

Structure and Alteration: Majority of unit is weathered with alteration to clays and chlorite with minor hematite-limonite staining. Weathering effects are fracture controlled. Core contains scattered limonitic vugs and calcite-quartz(?) veins.

Assay Sample Intervals and (DNR Sample Numbers): 345-350' (2951000228).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers): 363' (2951000240).

Highlights of Drill Core Geophysical Measurements: .

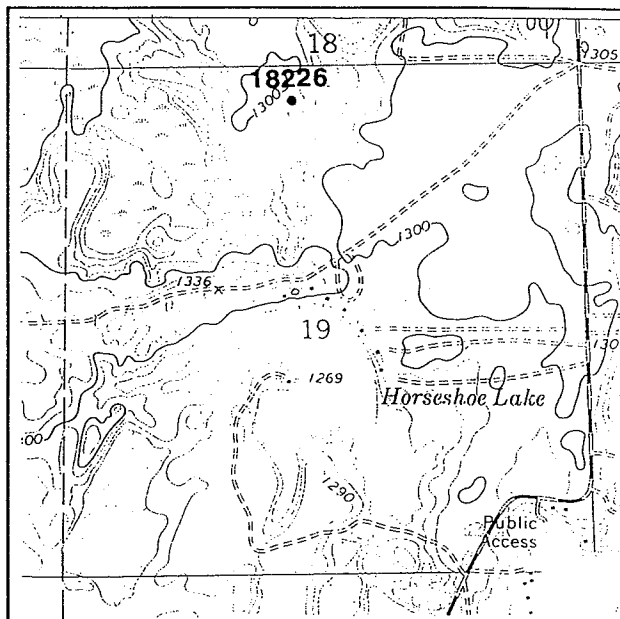
Data Sheet For Drill Hole 18226
(DNR Unique Number 10761)

IDENTIFICATION

DNR Project 295 File Number: DH2951-051
Samples: Obtained from U.S.S., logged by
Richard Riordan.
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 19-45-28
Quadrangle: Grave Lake, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.



Drill Hole Location Map.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: Unknown.
Collar Elevation: 1291 feet.
Angle: -90.
Surface Depth: 200 feet.
Total Depth: 310 feet.
Size of Drill Core: NX (200-220'), BX (220-245'), AX (245-310').
Drilled: 07/31/1952.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: NX through AX drill core laid out in book fashion with about 24% recovery overall. Core was split and partially analyzed by U.S.S. Corp. Footages are approximate in the log.

Lithology: Magnetite-silicate-carbonate(?) iron formation with porphyritic basalt(?).

Structure and Alteration: Unit contains siderite and calcite veins, with a very weak metamorphic fabric. Upper 35' is a strongly weathered, hematitic, kaolinitic cap grading into limonitic clay with magnetite directly above the iron formation.

Assay Sample Intervals and (DNR Sample Numbers): 200-225' (2951000247), 230-235' (2951000248), 275-290' (2951000249), 290-295' (2951000250).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers): 292' (2951000245), 297' (2951000246).

Highlights of Drill Core Geophysical Measurements: .

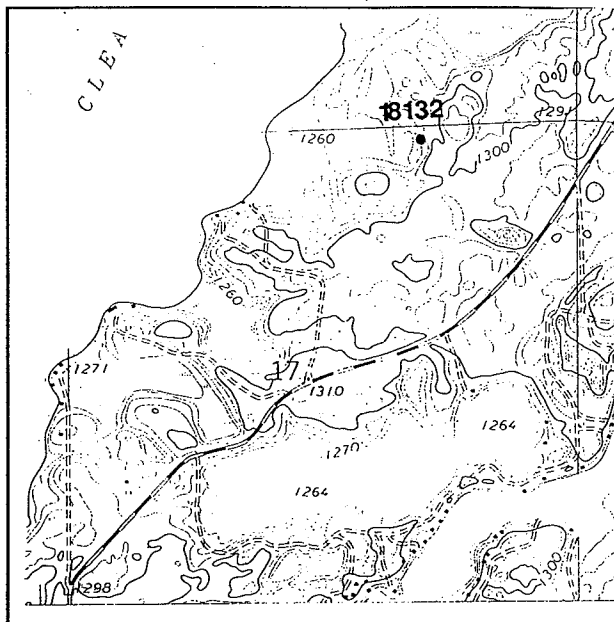
*Data Sheet For Drill Hole 18132
(DNR Unique Number 10752)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-052
Samples: Obtained from U.S.S., logged
by Richard Strong.
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 17-45-28
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.



Drill Hole Location Map.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: Unknown.
Collar Elevation: 1285 feet.
Angle: -90°.
Surface Depth: 177 feet.
Total Depth: 324 feet.
Size of Drill Core: NX (177-185'), AX (185-324')
Drilled: 01/17/1952.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description:

Lithology:

Structure and Alteration:

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .

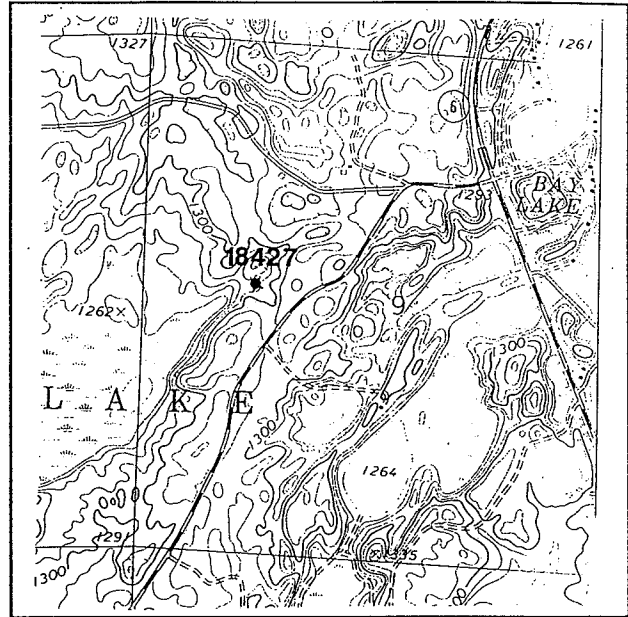
Data Sheet For Drill Hole 18427
(DNR Unique Number 10749)

IDENTIFICATION

DNR Project 295 File Number: DH2951-053
Samples: Obtained from U.S.S., logged by
Richard Strong.
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 9-45-28
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.



Drill Hole Location Map.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: Unknown.
Collar Elevation: 1285 feet.
Angle: -90°.
Surface Depth: 210 feet.
Total Depth: 319 feet.
Size of Drill Core: BX (210-310'), AX (310-319')
Drilled: 08/28/1953.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description:

Lithology:

Structure and Alteration:

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .

Data Sheet For Drill Hole 18228
(DNR Unique Number 10762)

IDENTIFICATION

DNR Project 295 File Number: DH2951-055
Samples: Obtained from U.S.S., logged by
Berman, Bakkila
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 19-45-28
Quadrangle: Grave Lake, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: Unknown.
Collar Elevation: 1285 feet.
Angle: -90°.
Surface Depth: 236 feet.
Total Depth: 295 feet.
Size of Drill Core: NX (236-240'), BX (240-295')
Drilled: 08/09/1952.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description:

Lithology:

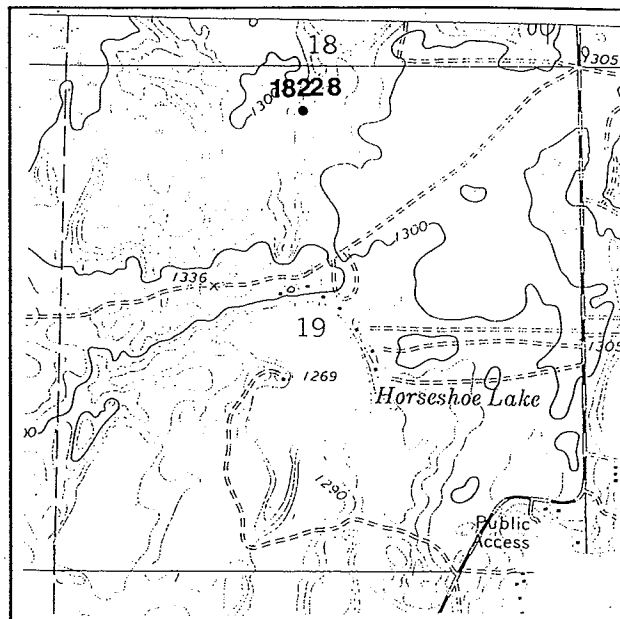
Structure and Alteration:

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .



Drill Hole Location Map.

Data Sheet For Drill Hole 18146
(DNR Unique Number 10757)

IDENTIFICATION

DNR Project 295 File Number: DH2951-057

Samples: Obtained from U.S.S., logged by
Richard Riordan.

Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

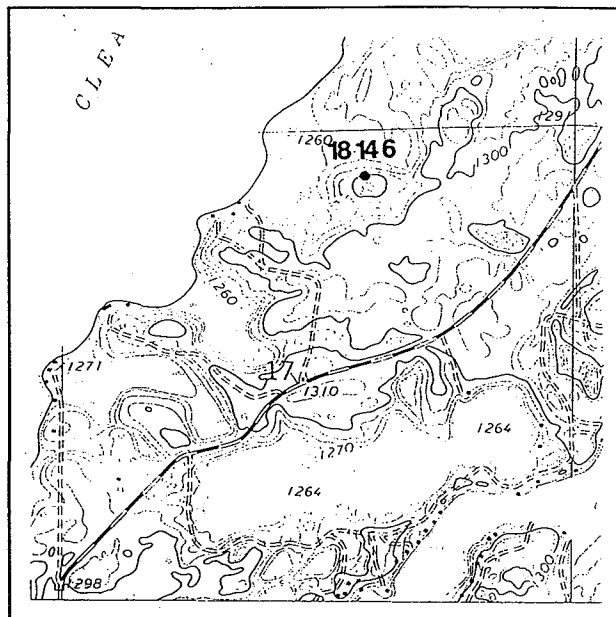
County: Crow Wing

S-T-R: 17-45-28

Quadrangle: Crosby, 7.5'

Reg. Survey Area: .

UTM Coordinates: m E.
m N.



Drill Hole Location Map.

DRILL HOLE PARAMETERS

Access: .

Topography: .

Vegetation: Unknown.

Collar Elevation: 1305 feet.

Angle: -90°.

Surface Depth: 210 feet.

Total Depth: 587 feet.

Size of Drill Core:

Drilled: 05/19/1952.

Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description:

Lithology:

Structure and Alteration:

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .

*Data Sheet For Drill Hole 18218
(DNR Unique Number 10758)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-058

Samples: Obtained from U.S.S., logged by
Richard Riordan

Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing

S-T-R: 17-45-28

Quadrangle: Crosby, 7.5'

Reg. Survey Area: .

UTM Coordinates: m E.
m N.

DRILL HOLE PARAMETERS

Access: .

Topography: .

Vegetation: Unknown.

Collar Elevation: 1265 feet.

Angle: -90°.

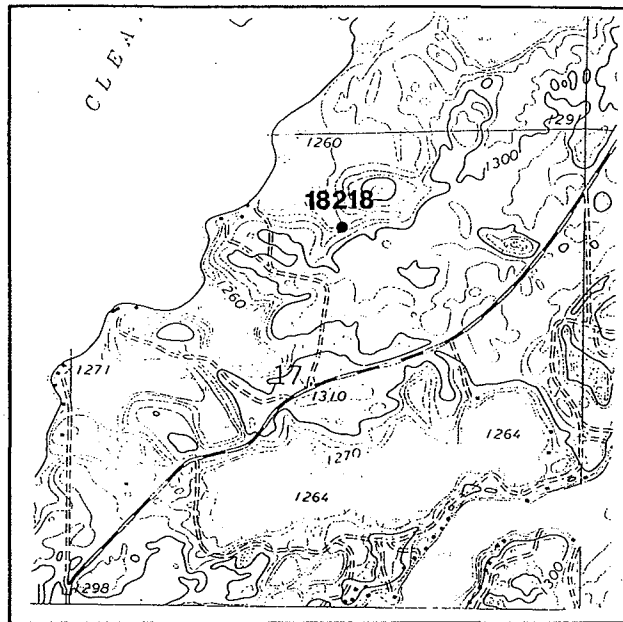
Surface Depth: 171 feet.

Total Depth: 360 feet.

Size of Drill Core: AX

Drilled: 06/27/1952.

Sample Method: Saw core.



Drill Hole Location Map.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description:

Lithology:

Structure and Alteration:

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .

*Data Sheet For Drill Hole 18221
(DNR Unique Number 10759)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-059
Samples: Obtained from U.S.S., logged by
Bakkila
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 17-45-28
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: Unknown.
Collar Elevation: 1281 feet.
Angle: -90°.
Surface Depth: 232 feet.
Total Depth: 285 feet.
Size of Drill Core: NX (232-240'), BX (240-285')
Drilled: 07/09/1952.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description:

Lithology:

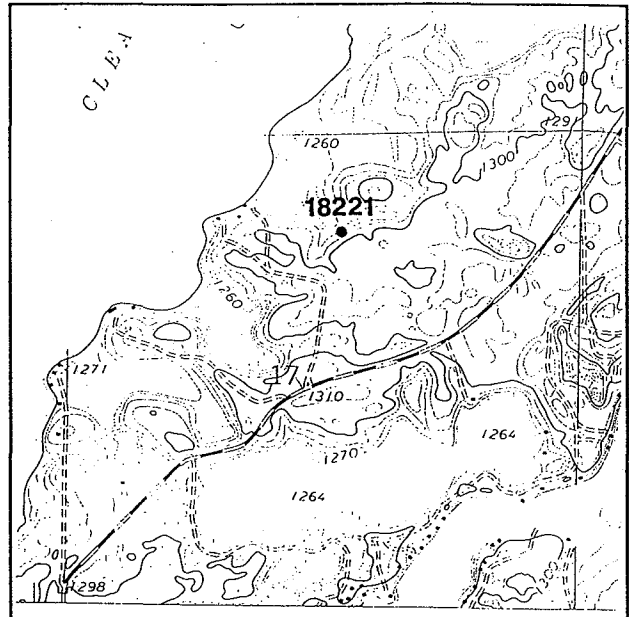
Structure and Alteration:

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .



Drill Hole Location Map.

Data Sheet For Drill Hole 18230
(DNR Unique Number 10763)

IDENTIFICATION

DNR Project 295 File Number: DH2951-060
Samples: Obtained from U.S.S., logged by
Richard Strong.
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 19-45-28
Quadrangle: Grave Lake, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: Unknown.
Collar Elevation: 1294 feet.
Angle: -90°.
Surface Depth: 185 feet.
Total Depth: 405 feet.
Size of Drill Core: BX (185-270?), AX (270?-405')
Drilled: 08/25/1952.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description:

Lithology:

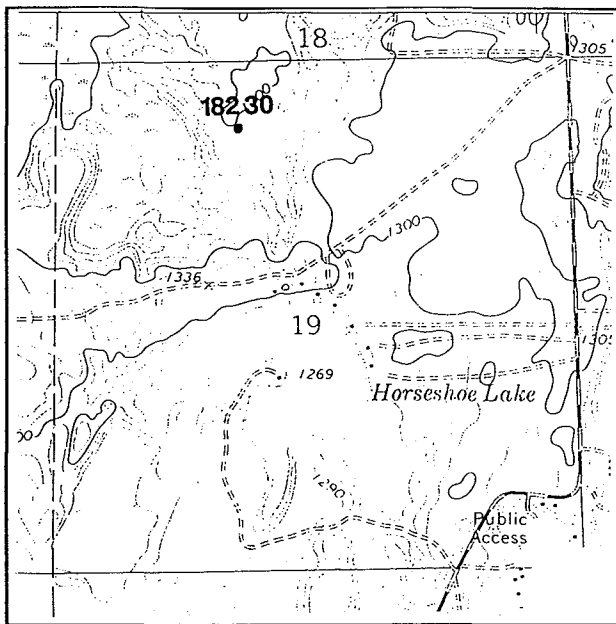
Structure and Alteration:

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .



Drill Hole Location Map.

Data Sheet For Drill Hole 18223
(DNR Unique Number 10760)

IDENTIFICATION

DNR Project 295 File Number: DH2951-061
Samples: Obtained from U.S.S., logged by
Richard Riordan.
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 19-45-28
Quadrangle: Grave Lake, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: Unknown.
Collar Elevation: 1294 feet.
Angle: -90°.
Surface Depth: 180 feet.
Total Depth: 300 feet.
Size of Drill Core: NX (180-190'), BX (190-260'), AX (260-300')
Drilled: 07/21/1952.
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description:

Lithology:

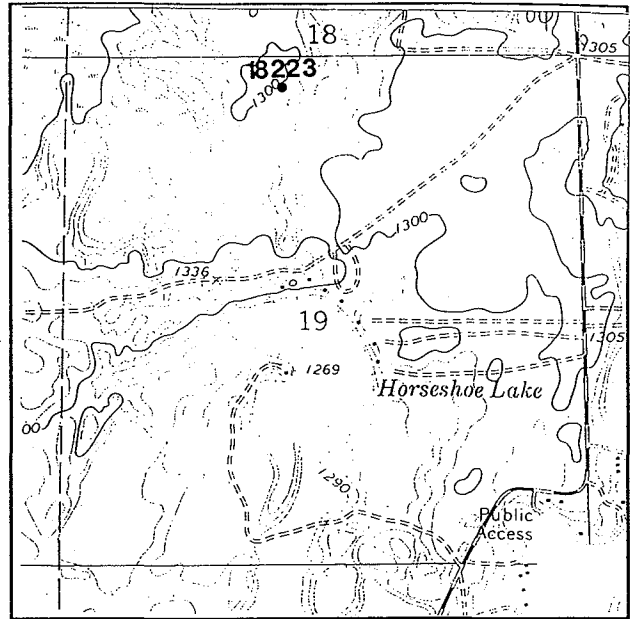
Structure and Alteration:

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .



Drill Hole Location Map.

*Data Sheet For Drill Hole S-1
(DNR Unique Number 15475)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-062
Samples: Obtained from Hanna Mining
Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

County: Crow Wing
S-T-R: 5-46-29
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: .
UTM Coordinates: m E.
m N.

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: .
Collar Elevation: .
Angle: .
Surface Depth: .
Total Depth: feet.
Size of Drill Core: Unknown.
Drilled: .
Sample Method: Saw core.

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: Only remaining samples are 9 boxes of crushed core for the interval 62-105'.

Lithology: Locally laminated tuffaceous (?) argillitic and siliceous siltstone and minor dark oxide (hematite?), all very fine-grained.

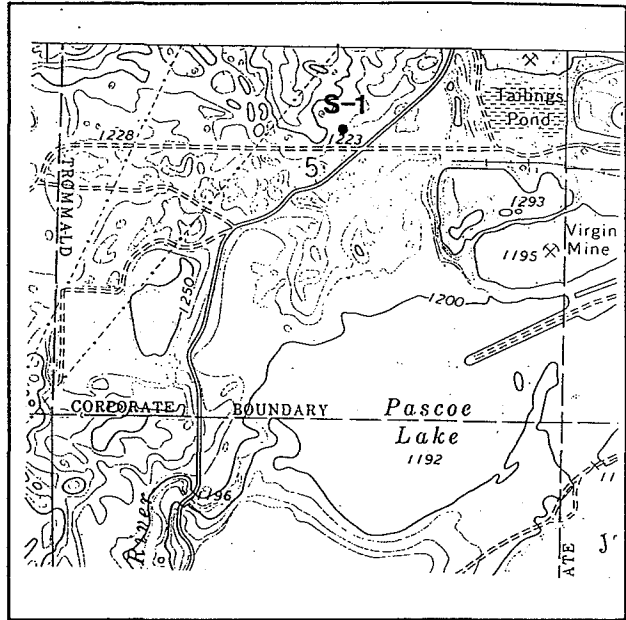
Structure and Alteration: Local quartz veins and alteration along fractures. Fabric moderately developed. Some secondary black oxides weathering effects indeterminate.

Assay Sample Intervals and (DNR Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (DNR Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .



Drill Hole Location Map.

*Data Sheet For Drill Hole S-8
(DNR Unique Number 15476)*

IDENTIFICATION

DNR Project 295 File Number: DH2951-063
Samples: **From Hanna Mining.**
Geologist: **T. Lawler, D. Cartwright,
& B. Frey**

LOCATION (see map at right)

County: **Crow Wing**
S-T-R: **5-46-29**
Quadrangle: **Riverton, 7.5'.**
Reg. Survey Area: .
UTM Coordinates: **421,240m E.
5,149,670m N.**

DRILL HOLE PARAMETERS

Access: .
Topography: .
Vegetation: .
Collar Elevation: **1220 feet.**
Angle: **75 degrees, NNW.**
Surface Depth: **56 feet.**
Total Depth: **85 feet.**
Size of Drill Core: **Unknown.**
Drilled: **3/11/52.**
Sample Method: **Saw core.**

INFORMATION SUMMARY AND HIGHLIGHTS

Drill Core Description: Only remaining samples are 6 boxes of crushed core for the interval 56-85'.

Lithology: Very fine-grained, tuffaceous (?) argillitic and siliceous siltstone with local minor iron oxides.

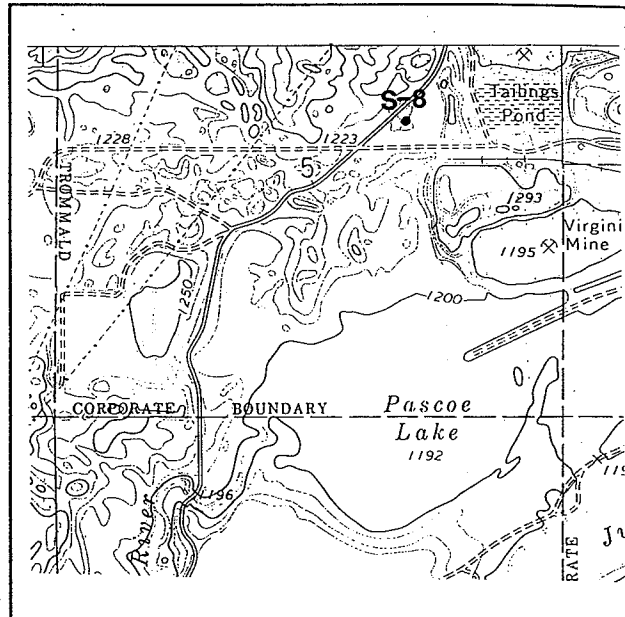
Structure and Alteration: Fabric moderately developed. Some secondary black oxide weathering effects indeterminate.

Assay Sample Intervals and (Sample Numbers): 56-60' (2951000260), 60-65' (2951000261), 65-70' (2951000262), 70-75' (2951000263), 75-80' (2951000264), 80-85' (2951000265).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers):

Highlights of Drill Core Geophysical Measurements: .



Drill Hole Location Map.

Appendix 295-B. Outcrop Summary Information

Data Sheet For Outcrop Area 1

IDENTIFICATION

DNR Project 295 File Number: OTC2951-001

Sampled: 8/27/91

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

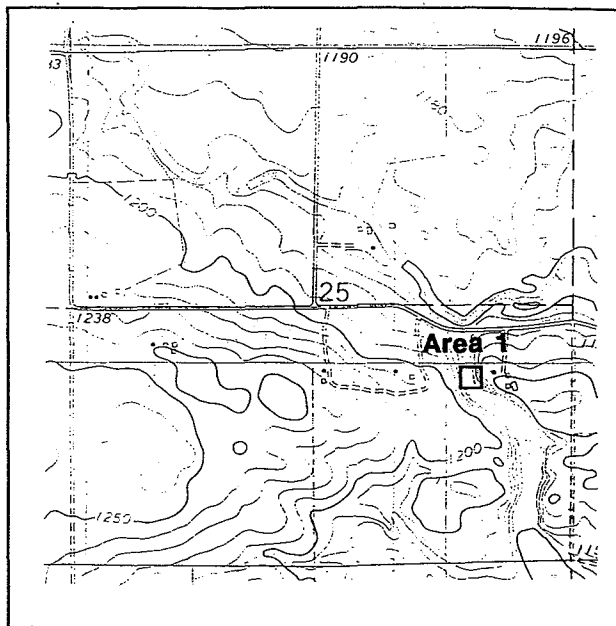
County: Pine.

S-T-R: SW-NE-SE, S25, T45N, R21W.

Quadrangle: Denham, 7.5'.

Reg. Survey Area: 33 miles east of
Project 295 area.

UTM Coordinates: 505,205m E.
5,132,900m N.



Outcrop Area OTC2951.001 Location Map.

OUTCROP PARAMETERS

Access: In open field 120m south of
County Road 52.

Size: 150m long, 50m wide.

Topography: Steep slopes along drainage to north toward Birch Creek.

Bedrock Elevation: 1,140 ft. to 1,170 ft.

Vegetation: Pasture land for cattle.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Scattered exposures along dry river valley.

Glacial Features: Till covered outcrops until exposed in river valley formed by glacial meltwater.

Lithology: Variably siliceous amphibole and biotite schists with local marble layers.

Structure and Alteration: Schistosity well developed, with a more linear fabric associated with more amphibolitic portions. The marble-siliceous portions have relatively little structure. Minor iron staining usually associated with the carbonate. Minor carbonate veinlets may have resulted from remobilization of carbonate beds. Rock locally has thin surficial weathering rinds.

Assay Sample Intervals and (Sample Numbers): None

Highlights of Sample Assays: None

Thin Section Descriptions, Depths and (Sample Numbers): (2951000001) and (2951000002).

Highlights of Outcrop Geophysical Measurements: Nine magnetic susceptibility measurements were made on planar rock face which varied between 0.36 and 0.52, 10^{-3} SI units, with an average of 0.44, 10^{-3} SI units. Two density measurements are 2.84 and 2.96 g/cm^3 , which average 2.90 g/cm^3 .

Data Sheet For Outcrop Area 2

IDENTIFICATION

DNR Project 295 File Number: OTC2951-002

Sampled: 8/27/91

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

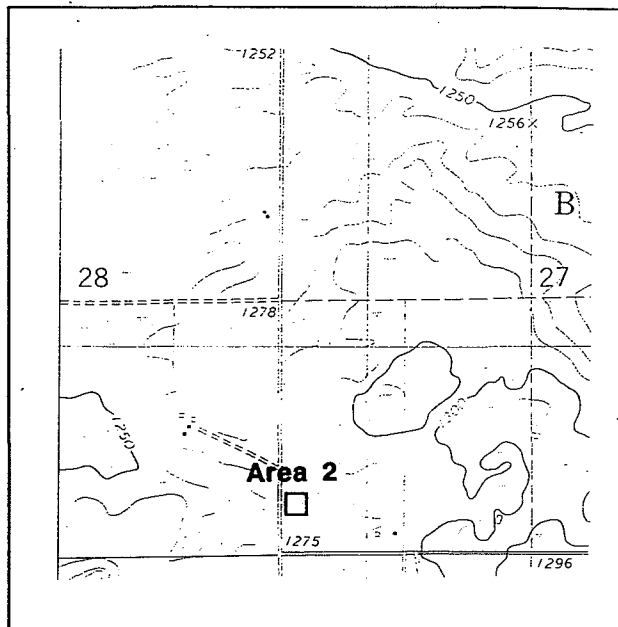
County: Pine.

S-T-R: SW-SW-SW, S27, T45N, R21W.

Quadrangle: Denham, 7.5'.

Reg. Survey Area: 30 miles east of
Project 295 area.

UTM Coordinates: 500,709m E.
5,132,511m N.



Outcrop OTC2951-002 Location Map.

OUTCROP PARAMETERS

Access: In right of way, east side
County Road 156.

Size: 10m long, 3m wide.

Topography: Low swampy drainage on moderate slope to west.

Bedrock Elevation: 1,274 ft.

Vegetation: Mixed aspen, maple, ash, balsam.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Low rounded knobs rising above poorly drained ground.

Glacial Features: No polishing or striations.

Lithology: Quartz, K-feldspar, plagioclase, biotite, muscovite gneiss with microcline megacrysts.

Structure and Alteration: Biotite-muscovite folia parallel local cataclasis. Local iron staining. Alteration of biotite to muscovite. Weathering effects negligible except for staining.

Assay Sample Intervals and (Sample Numbers): None

Highlights of Sample Assays: None

Thin Section Descriptions, Depths and (Sample Numbers): (2951000003).

Highlights of Outcrop Geophysical Measurements: Scintillometer 130 c.p.s. Two magnetic susceptibility observations made on planar outcrop were 0.32 and 0.18, 10^{-3} SI units, which average of 0.25, 10^{-3} SI units. Two density measurements 2.56 and 2.61 g/cm³, average 2.59 g/cm³.

Data Sheet For Outcrop Area 295 3

IDENTIFICATION

DNR Project 295 File Number: OTC2951-003

Sampled: 8/27/91

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

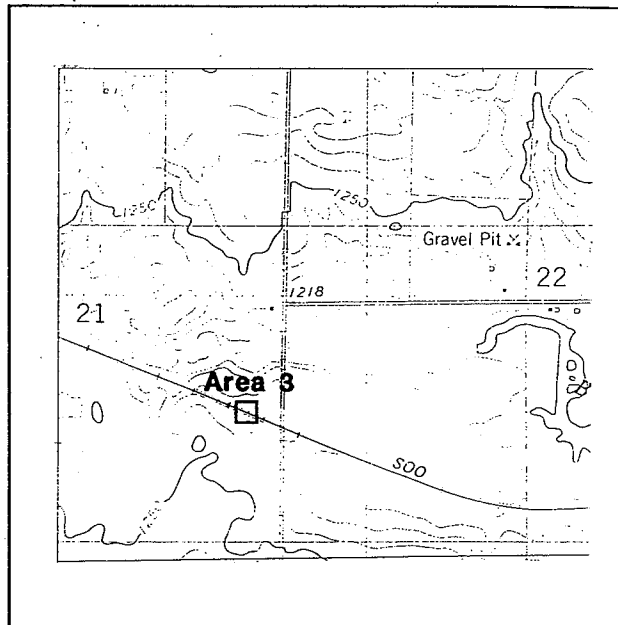
County: Pine.

S-T-R: SE-NE-SE, S21, T45N, R21W.

Quadrangle: Denham, 7.5'.

Reg. Survey Area: 30 miles east of
Project 295 area.

UTM Coordinates: 500,651m E.
5,134,405m N.



Outcrop OTC2951-003 Location Map.

OUTCROP PARAMETERS

Access: In railroad cut, now a
snowmobile trail.

Size: 15m long, 4m wide.

Topography: Gentle slope to north.

Bedrock Elevation: 1,238 ft.

Vegetation: Mixed upland, aspen, maple.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Abandoned railroad cut through a rock knob.

Glacial Features: Some polishing (?) of rock surfaces, but no observed striations.

Lithology: Blastomylonitic, quartz, feldspar, biotite, hornblende, gneiss and well foliated biotite schist.

Structure and Alteration: Quartz and feldspar rich portions have a more linear fabric, while biotite rich portions have a more pronounced planar fabric. Feldspathic-siliceous portions contain local magnetite (to 5%). Sulfides are associated with late cross-cutting fractures. Pyrite oxidized to cuprite-bornite colors. Rock has strong magnetic susceptibility locally. Negligible observed weathering effects.

Assay Sample Intervals and (Sample Numbers): None

Highlights of Sample Assays: None

Thin Section Descriptions, Depths and (Sample Numbers): (2951000004) and (2951000005).

Highlights of Outcrop Geophysical Measurements: Scintillometer reading 110 c.p.s. Eight magnetic susceptibility observations were made on planar outcrop which varied from 0.10 to 1.12, 10^{-3} SI units averaging 0.55, 10^{-3} SI units. One anomalous reading 15.80, 10^{-3} SI units. Four density measurements range from 2.69 to 2.83 g/cm^3 , average 2.75 g/cm^3 .

Data Sheet For Outcrop Area 4

IDENTIFICATION

DNR Project 295 File Number: OTC2951-007

Sampled: 8/28/91

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

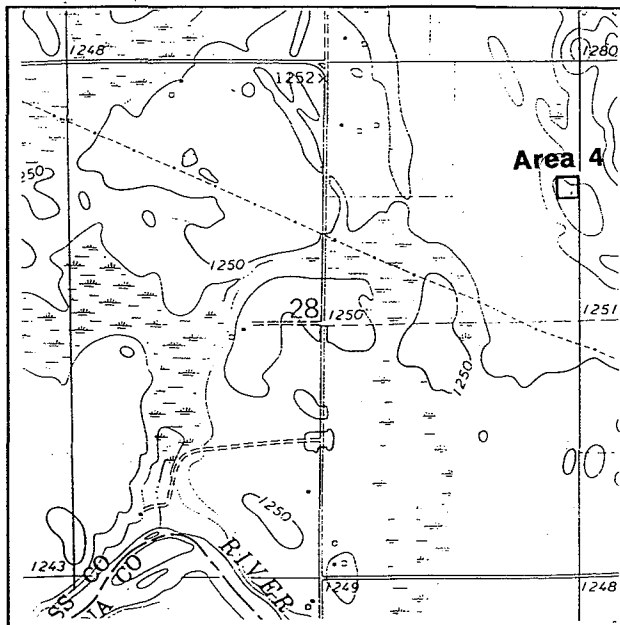
County: Cass.

S-T-R: E1/16 COR. NE1/4, S28, T134N, R32W.

Quadrangle: Motley NW, 7.5'.

Reg. Survey Area: 27 miles west of
Project 295 area.

UTM Coordinates: 368,050m E.
5,139,075m N.



Outcrop OTC2951-007 Location Map.

OUTCROP PARAMETERS

Access: Farm road to outcrops.

Size: Scattered over five acres.

Topography: Moderately rolling.

Bedrock Elevation: 1,270 ft. to 1,275 ft.

Vegetation: Upland mixed species, aspen, maple and oak.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Scattered, flat exposures on broad, low, rounded hill.

Glacial Features: Surface without polish or striations.

Lithology: Medium grained, variably amphibolitic (color index 30-40), hornblende, epidote, biotite, gneissic tonalite and medium grained altered gabbro (dike, xenolith, or mafic portion of tonalite?).

Structure and Alteration: Gneissic fabric weakly developed. Epidote associated with local K-feldspar alteration of plagioclase (along late fractures?). Gabbro has diseased plagioclase, disseminated oxides and minor sulfides. Weathering effects are negligible.

Assay Sample Intervals and (Sample Numbers): None

Highlights of Sample Assays: None

Thin Section Descriptions, Depths and (Sample Numbers): (2951000022) and (2951000023).

Highlights of Outcrop Geophysical Measurements: Fifteen magnetic susceptibility measurements taken on planar rock surfaces varied between 0.17 and 8.07, 10^{-3} SI units, with an average of 1.50, 10^{-3} SI units. Three density measurements 2.81 to 2.97 g/cm^3 , average 2.87 g/cm^3 .

Data Sheet For Outcrop Area 5

IDENTIFICATION

DNR Project 295 File Number: OTC2951-010

Sampled: 10/24/91

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Aitkin

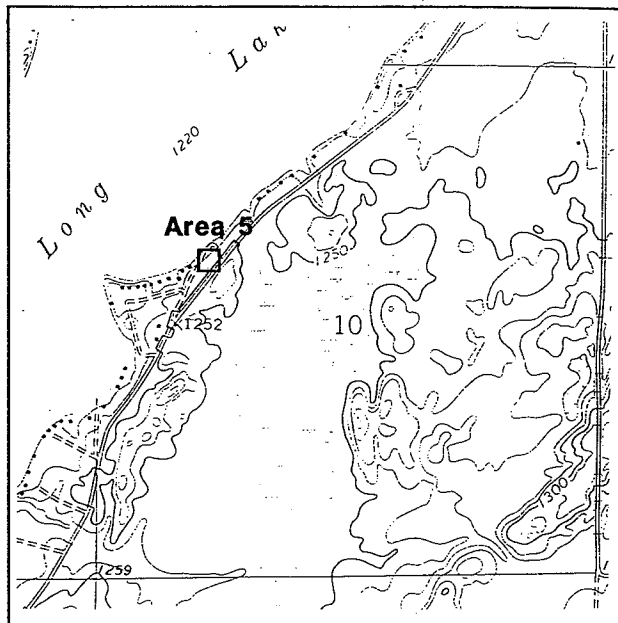
S-T-R: SE-SW-NW, S10, T46N, R25W.

Quadrangle: Thor, 7.5'.

Reg. Survey Area: 6.5 miles east of the north part of the survey area.

UTM Coordinates: 462,292m E.

5,147,855m N.



Outcrop OTC2951-010 Location Map.

OUTCROP PARAMETERS

Access: West side of road partially in r.o.w.

Size: 30m long, 10m wide.

Topography: Moderate slope to northwest.

Bedrock Elevation: 1,245 to 1,249 feet.

Vegetation: Aspen and mixed hardwoods; birch, maple, oak.

Sample Method: Picked up some broken pieces.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Low lying, small exposure.

Glacial Features: No polish or striations noted.

Lithology: Medium grained, metagabbro or metadiorite.

Structure and Alteration: Contains 1 cm cross-fiber veins (epidote?, pale zeolite?) with minor pyrite, partially oxidized. Plagioclase is sodic, and mafic minerals are largely amphiboles (alteration?). Rock is massive. Weathering effect is negligible.

Assay Sample Intervals and (Sample Numbers): (2951000031).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000032).

Highlights of Outcrop Geophysical Measurements: Ten magnetic susceptibility observations on relatively planar rock faces range from 0.82 to 1.03, 10^{-3} SI units and averaging 0.92, 10^{-3} SI units. Three density measurements 2.97 to 3.19 g/cm^3 , average 3.06 g/cm^3 .

Data Sheet For Outcrop Area 6

IDENTIFICATION

DNR Project 295 File Number: OTC2951-011

Sampled: 10/24/91

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Aitkin

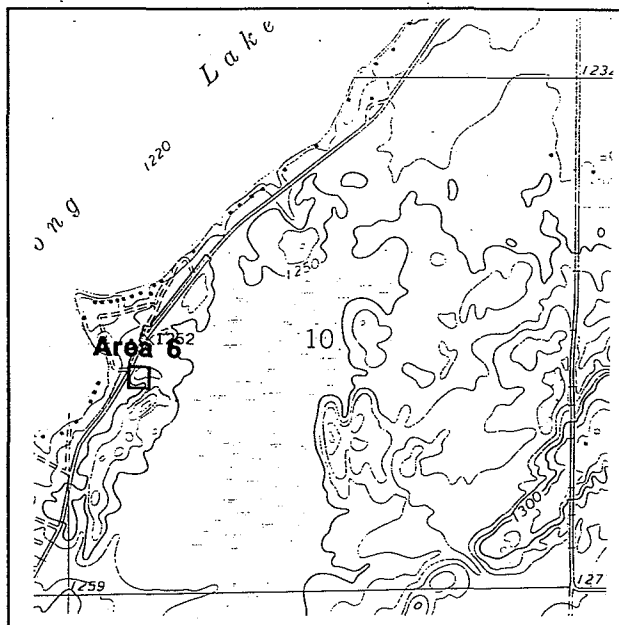
S-T-R: NE-NW-SW, S10, T46N, R25W.

Quadrangle: Thor, 7.5'.

Reg. Survey Area: 6.4 miles east of north
part of survey area.

UTM Coordinates: 462,440m E.

5,147,550m N.



Outcrop OTC2951-011 Location Map.

OUTCROP PARAMETERS

Access: In road r.o.w., east side of road.

Size: 3m long, 1m wide.

Topography: On moderate slope to west at west end of small well defined hill.

Bedrock Elevation: 1,250 feet.

Vegetation: Mixed hardwood; oak, maple, birch.

Sample Method: Picked up broken fragments.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Low, scattered exposures.

Glacial Features: No striations or polishing observed.

Lithology: Medium grained, metagabbro or metadiorite.

Structure and Alteration: Largely sodic plagioclase and actinolite-hornblende (altered?). Minor disseminated sulfides which are largely oxidized. Rock is massive. Weathering effect is negligible.

Assay Sample Intervals and (Sample Numbers): None

Highlights of Sample Assays: None

Thin Section Descriptions, Depths and (Sample Numbers): (2951000033).

Highlights of Outcrop Geophysical Measurements: Ten magnetic susceptibility measurements ranged from 0.62 to 0.96, 10^{-3} SI units and averaged 0.74, 10^{-3} SI units. Four density measurements 2.96 to 3.00 g/cm³, average 2.98 g/cm³.

Data Sheet For Outcrop Area 7

IDENTIFICATION

DNR Project 295 File Number: OTC2951-014

Sampled: 10/24/91

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Morrison

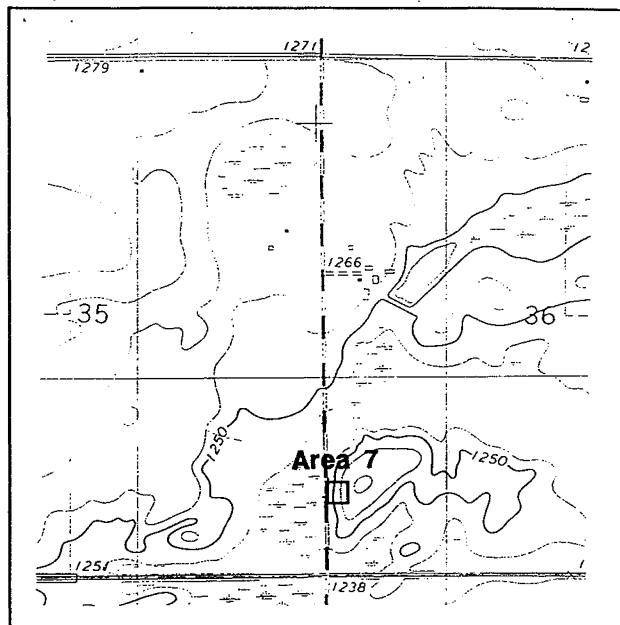
S-T-R: NW-SW-SW, S36, T41N, R31W.

Quadrangle: Freedhem 7.5'

Reg. Survey Area: Southwest corner of survey area.

UTM Coordinates: 406,627m E.

5,102,614m N.



Outcrop OTC2951-014 Location Map.

OUTCROP PARAMETERS

Access: On r.o.w. County Highway 45, east side of road.

Size: 50m long, 15m wide.

Topography: Near toe of slope, broad hill with northeast trend, almost certainly controlled by bedrock.

Bedrock Elevation: 1,245 feet.

Vegetation: Mixed hardwood mostly oak.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Low lying, flat outcrop.

Glacial Features: No polishing or striations noted.

Lithology: Medium grained, magnetite bearing amphibolitic, biotitic gneissic tonalite with local granite pegmatite veins.

Structure and Alteration: Local potassic alteration of feldspar near pegmatite veins, minor iron staining, and a trace of sulfides. Near vertical layering, strike approximately 100° to 120°. Weathering effect is negligible except for iron staining(?).

Assay Sample Intervals and (Sample Numbers): (2951000039).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000040).

Highlights of Outcrop Geophysical Measurements: Fourteen magnetic susceptibility measurements on planar rock surfaces range from 3.0 to 102.0, 10⁻³ SI units and average 43.3, 10⁻³ SI units. Four density measurements 2.55 to 2.89 g/cm³, average 2.76 g/cm³.

Data Sheet For Outcrop Area 8

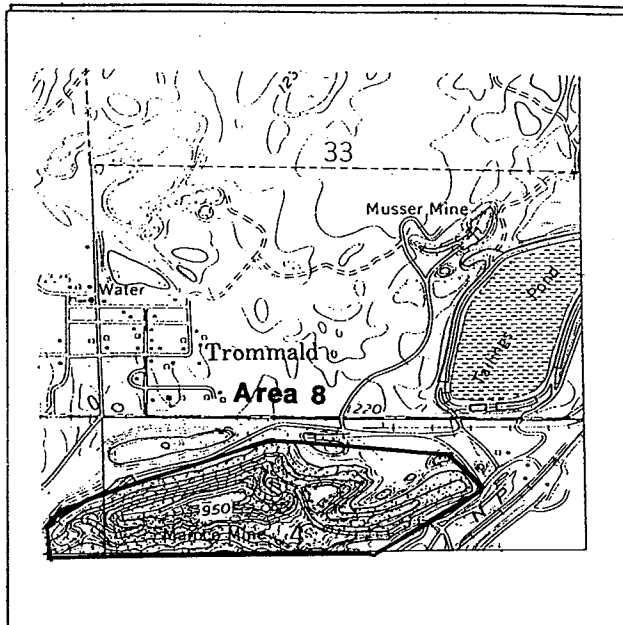
IDENTIFICATION

DNR Project 295 File Number: OTC2951-023
Sampled: by Hanna Mining Co., DNR re-logged, assayed and studied sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: N1/2, S4, T46N, R29W.
Quadrangle: Trommald, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 421,475m E.- 422,920m E.
5,149,825m N.- 5,150,230m N.

Note: For geology see map page B-10.



Outcrop OTC2951-023 Location Map.

OUTCROP PARAMETERS

Access: Flooded Maroco mine pit, no access.
Size: Mine pit 1,440m long, 420m wide.
Topography: Steep rock slopes, dumps around pit.
Bedrock Elevation: Pit bottom 900 feet, ledge 1,154 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Hanging wall schist/slate, (six specimens).

Glacial Features: N/A

Lithology: Three lithologies. Poorly sorted, fine to coarse-grained, semi-schistose to crenelated, siltstone intraclast lithic wacke-breccia?; Laminated, variably ferruginous, lithic wacke; and tan to dark brown, laminated, silty, claystone.

Structure and Alteration: Schistosity-slaty cleavage is weakly-moderately developed. Thin claystone veinlets along cleavage in claystone. Fragmentation is poorly sorted lithic wacke-breccia may be tectonic or result from tectonically induced sedimentation. Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000082) and (2951000086).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000083), (2951000084), (2951000085) and (2951000087).

Highlights of Outcrop Geophysical Measurements: Seven magnetic susceptibility measurements on relatively planar rock face range from 0.04 to 0.18, 10^{-3} SI units and average 0.10, 10^{-3} SI units. Six density measurements range from 2.49 to 2.90 g/cm^3 and average 2.71 g/cm^3 .

Data Sheet For Outcrop Area 9

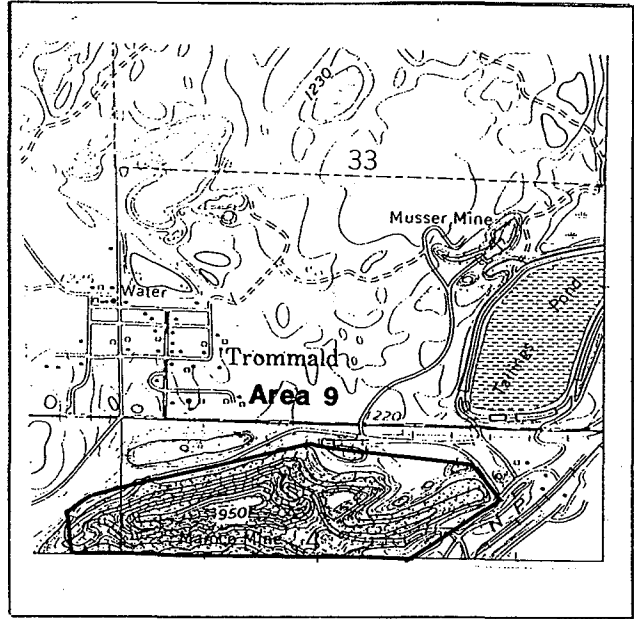
IDENTIFICATION

DNR Project 295 File Number: OTC2951-024
Sampled: by Hanna Mining Co. DNR relogged,
studied and assayed sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: N1/2, S4, T46N, R29W.
Quadrangle: Trommald, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 421,475m E.- 422,920m E.
5,149,825m N.- 5,150,230m N.

Note: For geology see map page B-10.



Outcrop OTC2951-024 Location Map.

OUTCROP PARAMETERS

Access: Flooded Maroco mine pit, no access.
Size: Mine pit 1,440m long, 420m wide.
Topography: Steep rock slopes, dumps around pit.
Bedrock Elevation: Pit bottom 900 feet, ledge 1,154 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Quartz and slate above quartzite.

Glacial Features: N/A

Lithology: Phyllitic siltstone with quartz arenitic laminae.

Structure and Alteration: Cleavage moderately-well developed with local refraction associated with lithology variation. Minor iron content is oxidized except along hairline veins. Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000088).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (295000089).

Highlights of Outcrop Geophysical Measurements: Four magnetic susceptibility measurements on relatively planar rock surfaces range from 0.02 to 0.07, 10^{-3} SI units and average 0.06, 10^{-3} SI units. Two density measurements range from 2.55 to 2.59 g/cm^3 and average 2.57 g/cm^3 .

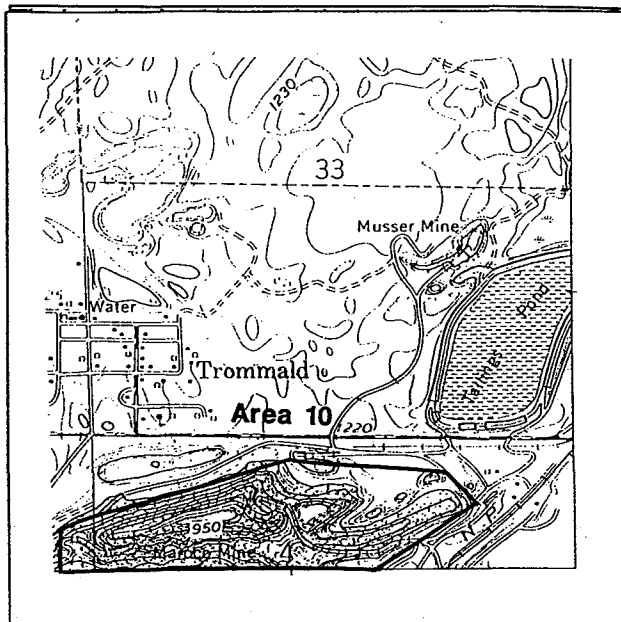
Data Sheet For Outcrop Area 10

IDENTIFICATION

DNR Project 295 File Number: OTC2951-025
Sampled: by Hanna Mining Co., DNR relogged,
assayed and studied sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: N1/2, S4, T46N, R29W.
Quadrangle: Trommald, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 421,475m E.- 422,920m E.
5,149,825m N.- 5,150,230m N.
Note: For geology see map page B-10.



Outcrop OTC2951-025 Location Map.

OUTCROP PARAMETERS

Access: Flooded Maroco mine pit no access.
Size: Mine pit 1,440m long, 420m wide.
Topography: Steep rock slopes, dumps around pit.
Bedrock Elevation: Pit bottom 900 feet, ledge 1,154 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Quartzite footwall.

Glacial Features: N/A

Lithology: Pink, slightly ferruginous quartzite.

Structure and Alteration: Schistosity weakly developed. Much pressure solution and silicification(?).
Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000090).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000091).

Highlights of Outcrop Geophysical Measurements: Four magnetic susceptibility measurements range from 0.000 to 0.010, 10^{-3} SI units and average 0.001, 10^{-3} SI units. Two density measurements range from 2.58 to 2.61 g/cm³ and average 2.59 g/cm³.

Data Sheet For Outcrop Area 11

IDENTIFICATION

DNR Project 295 File Number: OTC2951-026

Sampled: by Hanna Mining Co., DNR relogged, assayed and studied sample.

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing

S-T-R: W1/2, S10, T46N, R29W.

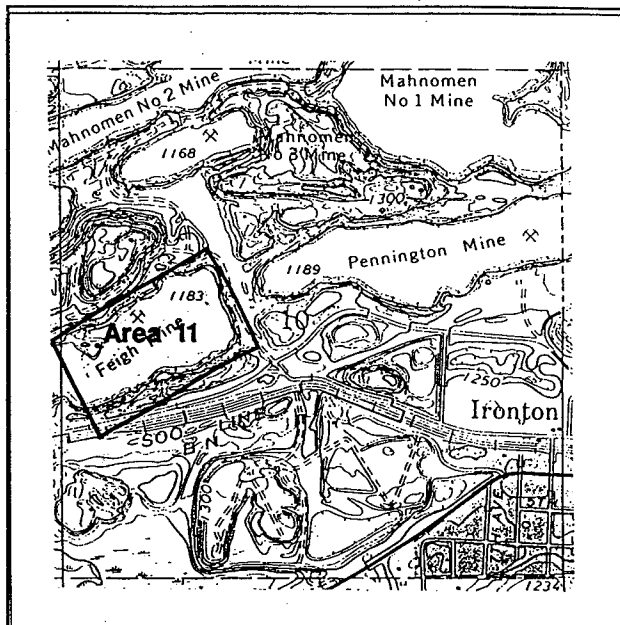
Quadrangle: Crosby, 7.5'.

Reg. Survey Area: North edge survey area.

UTM Coordinates: 423,300m E.- 423,865m E.

5,147,615m N.- 5,148,055m N.

Note: For geology see map page B-14.



Outcrop OTC2951-026 Location Map.

OUTCROP PARAMETERS

Access: Flooded Feigh mine pit, no access.

Size: Mine pit 3,029ft. long, 710ft. wide.

Topography: Steep rock slopes, dumps around pit.

Bedrock Elevation: Pit bottom 1,092 feet, ledge 1,145 feet.

Vegetation: Mixed hardwoods and aspen.

Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Described in Hanna's notes as red schist.

Glacial Features: N/A

Lithology: Very hematitic siltstone-phyllite.

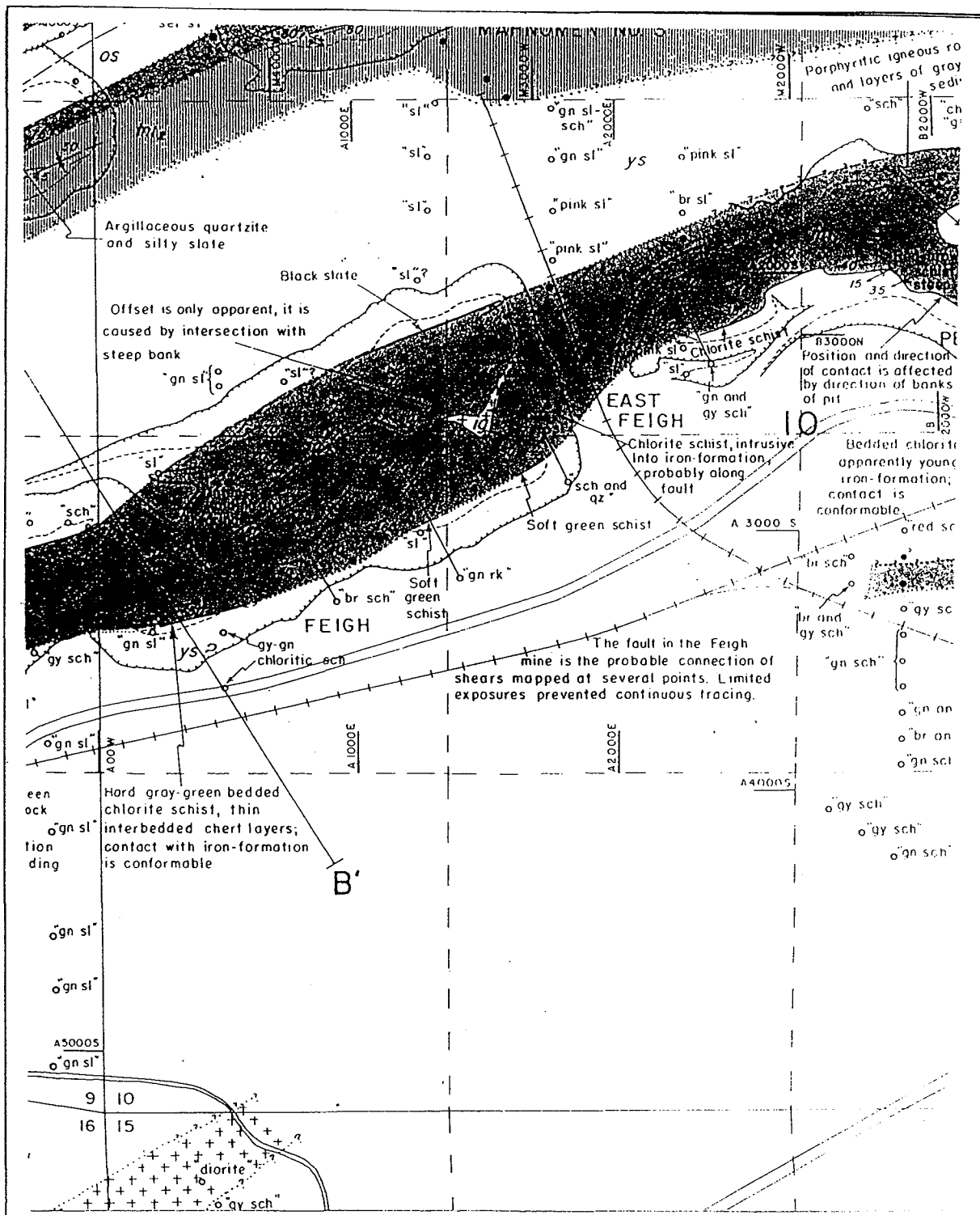
Structure and Alteration: Schistosity weakly to moderately developed. Hematite may be primary, although irregular 1-2mm grey hematite-magnetite(?) porphyroblasts(?) occur locally. Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000092).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000093).

Highlights of Outcrop Geophysical Measurements: Four magnetic susceptibility measurements on relatively planar rock faces range from 0.24 to 0.38, 10^{-3} SI units and average 0.32, 10^{-3} SI units. Two density measurements range from 2.61 to 2.99 g/cm³ and average 2.80 g/cm³.



Outcrop Location Map.

From Schmidt, R.G. and Dutton, C.E., 1957, "BEDROCK GEOLOGY OF THE SOUTH-CENTRAL PART OF THE NORTH RANGE, CUYUNA DISTRICT, MINNESOTA", U.S.G.S. MINERAL INVESTIGATIONS FIELD STUDIES MAP MR 99, Sheet 2 of 3.

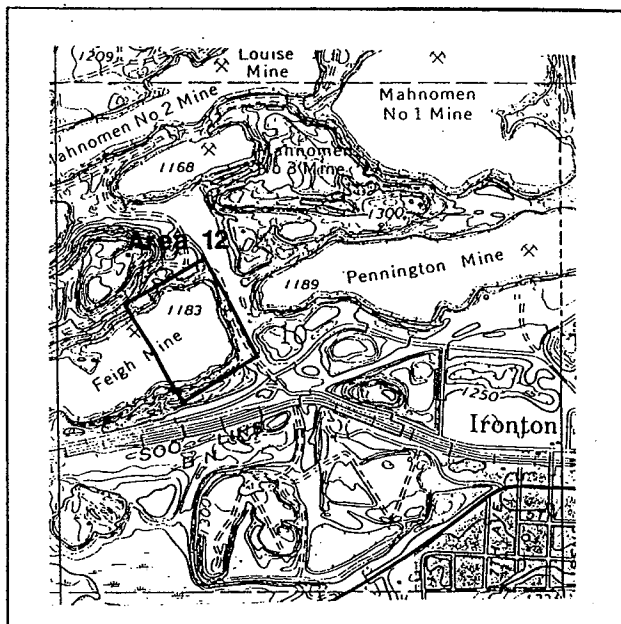
Data Sheet For Outcrop Area 12

IDENTIFICATION

DNR Project 295 File Number: OTC2951-027
Sampled: by Hanna Mining Co., DNR relogged,
assayed and studied sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: W1/2, S10, T46N, R29W.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 423,300m E.- 423,865m E.
5,147,615m N.- 5,148,055m N.
Note: For geology see map page B-14.



Outcrop OTC2951-027 Location Map.

OUTCROP PARAMETERS

Access: Flooded East Feigh mine pit, no access.
Size: Mine pit 3,029ft. long, 710ft. wide.
Topography: Steep rock slopes, dumps around pit.
Bedrock Elevation: Pit bottom 1,092 feet, ledge 1,145 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Described in Hanna's notes as gray schist.

Glacial Features: N/A

Lithology: Phyllitic chlorite schist, with flattened mafic volcanic fragments(?).

Structure and Alteration: Schistosity moderately developed. Contains scattered small veinlets(?) and grains of carbonate(?). Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000094).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000095).

Highlights of Outcrop Geophysical Measurements: Three magnetic susceptibility measurements on relatively planar surfaces range from 0.69 to 0.84, 10^{-3} SI units and average 0.75, 10^{-3} SI units. One density measurement was 2.83 g/cm³.

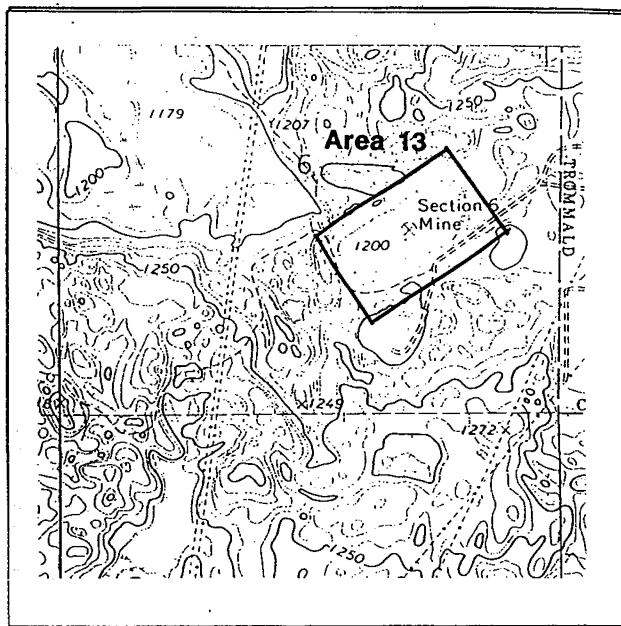
Data Sheet For Outcrop Area 13

IDENTIFICATION

DNR Project 295 File Number: OTC2951-028
Sampled: By Hanna Mining Co., DNR relogged,
assayed and studied sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: N1/2, SE1/4, S6, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 419,390m E. - 419,810m E.
5,149,130m N. - 5,149,490m N.
Note: For geology see map page B-17.



Outcrop OTC2951-028 Location Map.

OUTCROP PARAMETERS

Access: Flooded Section Six mine pit, no access.
Size: Mine pit 470m long by 205m wide.
Topography: Steep rock slopes, rock dumps around pit.
Bedrock Elevation: Bottom of pit 1,077 feet, ledge 1,154 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Quartzite.

Glacial Features: N/A

Lithology: Moderately-well sorted, weakly cemented, laminated, porous, ferruginous, sandstone.

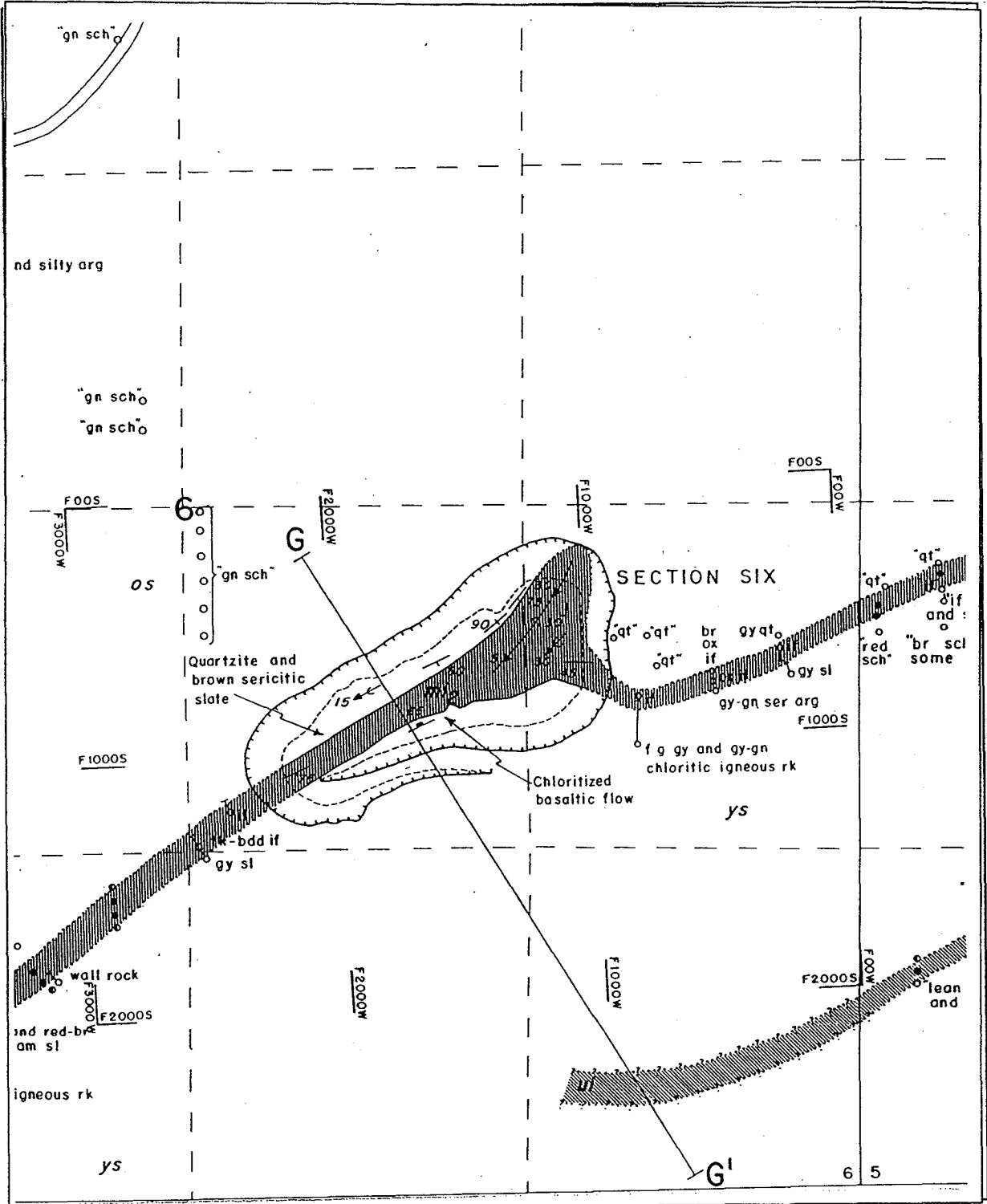
Structure and Alteration: Joints may be schistosity related. Local case hardening may occur along these joints. Minor hematite coloration may be secondary. Other weathering related effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000096).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000097).

Highlights of Outcrop Geophysical Measurements: Four magnetic susceptibility measurements on relatively planar surfaces range from 0.09 to 0.11, 10^{-3} SI units and average 0.10, 10^{-3} SI units. One density measurement was 2.38 g/cm³.



Outcrop Location Map.

From Schmidt, R.G., 1958, "BEDROCK GEOLOGY OF THE SOUTHWESTERN PART OF THE NORTH RANGE, CUYUNA DISTRICT, MINNESOTA", U.S.G.S. MINERAL INVESTIGATIONS FIELD STUDIES MAP MF 181, Sheet 3 of 3.

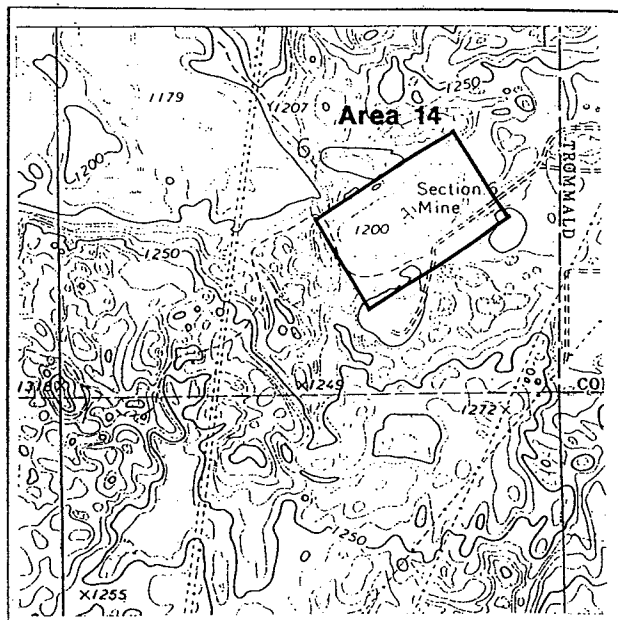
Data Sheet For Outcrop Area 14

IDENTIFICATION

DNR Project 295 File Number: OTC2951-029
Sampled: By Hanna Mining Co., DNR relogged,
assayed and studied sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: N1/2, SE1/4, S6, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 419,390m E. - 419,810m E.
5,149,130m N. - 5,149,490m N.
Note: For geology see map page B-17.



Outcrop OTC2951-029 Location Map.

OUTCROP PARAMETERS

Access: Flooded Section Six mine pit, no access.
Size: Mine pit 470m long by 205m wide.
Topography: Steep rock slopes, rock dumps around pit.
Bedrock Elevation: Bottom of pit 1,077 feet, ledge 1,154 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Quartzite slate footwall.

Glacial Features: N/A

Lithology: Ferruginous, slightly phyllitic siltstone with arenaceous laminae.

Structure and Alteration: Fabric is weakly-moderately developed. Hematite may be primary(?) or secondary(?).
Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000098).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000099).

Highlights of Outcrop Geophysical Measurements: Three magnetic susceptibility measurements on relatively planar rock surfaces range from 0.09 to 0.15, 10^{-3} SI units and average 0.12, 10^{-3} SI units. One density measurement was 2.52 g/cm³.

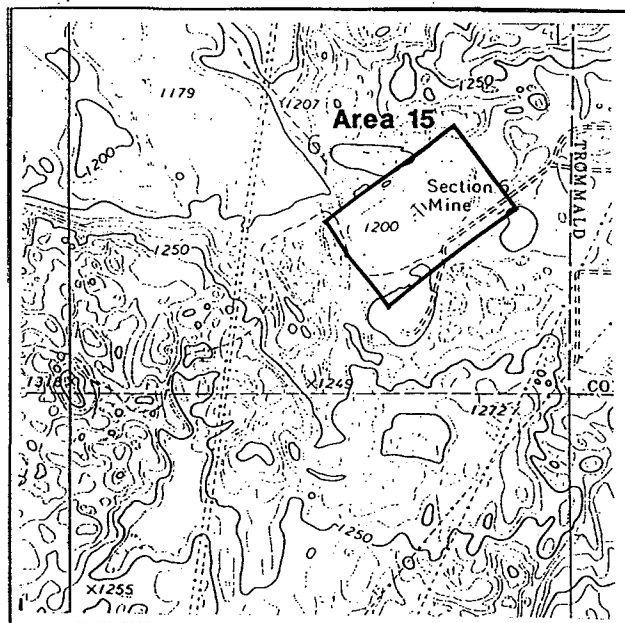
Data Sheet For Outcrop Area 15

IDENTIFICATION

DNR Project 295 File Number: OTC2951-030
Sampled: By Hanna Mining Co., DNR relogged,
assayed and studied sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: N1/2, SE1/4, S6, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 419,390m E. - 419,810m E.
5,149,130m N. - 5,149,490m N.
Note: For geology see map page B-17.



Outcrop OTC2951-030 Location Map.

OUTCROP PARAMETERS

Access: Flooded Section Six mine pit, no access.
Size: Mine pit 470m long by 205m wide.
Topography: Steep rock slopes, rock dumps around pit.
Bedrock Elevation: Bottom of pit 1,077 feet, ledge 1,154 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Medium grained weathered volcanics.

Glacial Features: N/A

Lithology: Somewhat phyllitic-schistose, fine to coarse-grained, siltstone intraclast lithic wacke or breccia.
Most fragments are soft, clay bearing. Some are ferruginous.

Structure and Alteration: Whether fragmentation was fully tectonic or primary with later tectonism is uncertain. Fabric is moderately developed, with fragments showing variable ductility during deformation. Weathering probably altered some fragments to clays, some of which are now voids.

Assay Sample Intervals and (Sample Numbers): (2951000100).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000101).

Highlights of Outcrop Geophysical Measurements: Three magnetic susceptibility measurements on relatively planar rock faces range from 0.13 to 0.31, 10^{-3} SI units and average 0.24, 10^{-3} SI units. One density measurement was 2.45 g/cm³.

Data Sheet For Outcrop Area 16

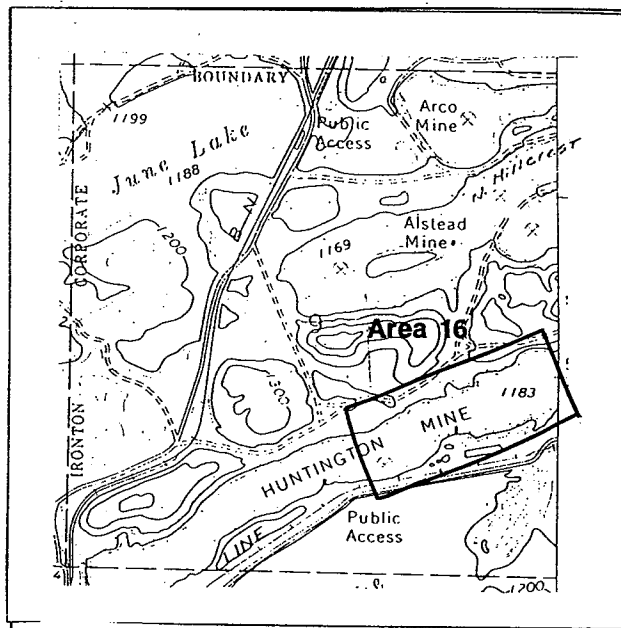
IDENTIFICATION

DNR Project 295 File Number: OTC2951-031
Sampled: By Hanna Mining Co., DNR relogged,
assayed and studied sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: NE, SE, S9, T46N, R29W.
Quadrangles: Riverton & Crosby, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 422,910m E. - 423,298m E.
5,147,535m N. - 5,147,805m N.

Note: For geology see map page B-21. On the topographic sheet the South Hillcrest is shown as the Huntington Mine



Outcrop OTC2951-031 Location Map.

OUTCROP PARAMETERS

Access: Flooded South Hillcrest mine pit, no access.
Size: Mine pit 420m long by 210m wide.
Topography: Steep rock slopes, rock dumps around pit.
Bedrock Elevation: Elevation pit bottom 1,083 feet, elevation ledge 1,138 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Hanna's description is green schist

Glacial Features: N/A

Lithology: Fine-grained chlorite, sericite(?), quartz, carbonate(?), schist. Protolith was probably intermediate tuff or tuffaceous sediment.

Structure and Alteration: Schistosity is moderately developed and is locally crenelated. Rock is soft, clayey(?). Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000102).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000103).

Highlights of Outcrop Geophysical Measurements: Five magnetic susceptibility measurements on relatively planar rock faces range from 0.26 to 0.34, 10^{-3} SI units and average 0.31, 10^{-3} SI units. Two density measurements were 1.59 and 1.60 g/cm³. Note air bubbles from sample which stopped after long soaking, weight in water uniform, air pockets?

Data Sheet For Outcrop Area 17

IDENTIFICATION

DNR Project 295 File Number: OTC2951-032

Sampled: By Hanna Mining Co., DNR relogged,
assayed and studied sample.

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing

S-T-R: E1/2, NE, S9, T46N, R29W.

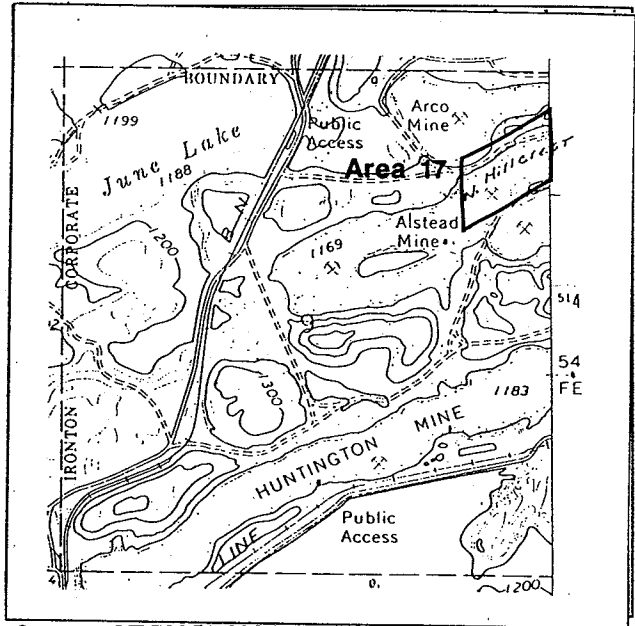
Quadrangles: Riverton & Crosby, 7.5'.

Reg. Survey Area: North edge survey area.

UTM Coordinates: 422,950m E. - 423,302m E.

5,148,120m N. - 5,148,305m N.

Note: For geology see map page B-21. On the
topographic sheet the North Hillcrest is
shown as the Alstead Mine



Outcrop OTC2951-032 Location Map.

OUTCROP PARAMETERS

Access: Flooded North Hillcrest mine pit, no access.

Size: Mine pit 460m long by 180m wide.

Topography: Steep rock slopes, rock dumps around pit.

Bedrock Elevation: Elevation pit bottom 1,025 feet, ledge elevation 1,138 feet.

Vegetation: Mixed hardwoods and aspen.

Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Hanna's sample label indicates tin oxide.

Glacial Features: N/A

Lithology: Very fine-grained, laminated, chloritic, clayey, siltstone with minor oxides and carbonate.

Structure and Alteration: Fabric is weakly developed. Rock is soft, clayey (altered or weathered?). Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000104).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000105).

Highlights of Outcrop Geophysical Measurements: Five magnetic susceptibility measurements on relatively planar rock faces range from 1.13 to 1.26, 10^{-3} SI units and average 1.18, 10^{-3} SI units. Two density measurements were 2.63 and 2.77 g/cm^3 , which average 2.70 g/cm^3 .

Data Sheet For Outcrop Area 18

IDENTIFICATION

DNR Project 295 File Number: OTC2951-033

Sampled: By Hanna Mining Co., DNR logged, assayed and studied sample.

DNR Geologists: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing

S-T-R: SW, NE, & SE,NW, S9, T46N, R29W.

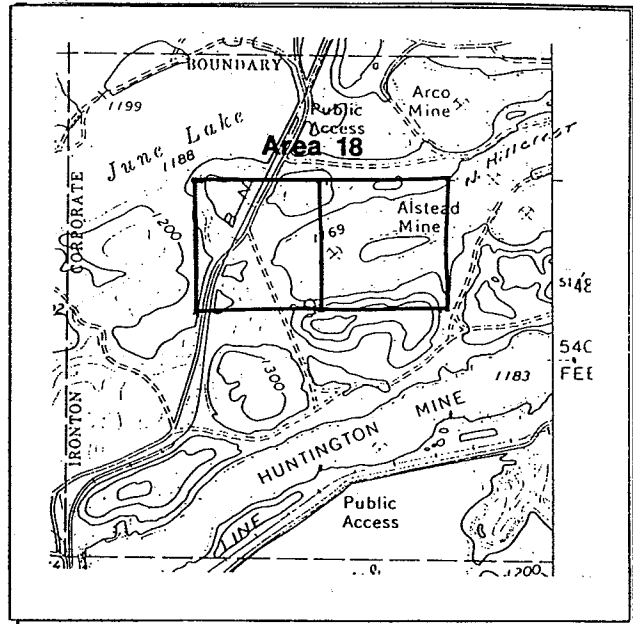
Quadrangles: Riverton, 7.5'.

Reg. Survey Area: North edge survey area.

UTM Coordinates: 422,375m E. - 422,930m E.

5,147,910m N. - 5,148,270m N.

Note: For geology see map page B-24.



Outcrop OTC2951-033 Location Map.

OUTCROP PARAMETERS

Access: Flooded Alstead Mine pit, no access.

Size: Mine pit 570m long by 220m wide.

Topography: Steep rock slopes, rock dumps around pit.

Bedrock Elevation: No section, ledge elevation about 1,140 feet.

Vegetation: Mixed hardwoods and aspen.

Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Hanna's sample description schist.

Glacial Features: N/A

Lithology: Very fine-grained, laminated phyllitic mudstone with scattered 1/2mm hematite grains.

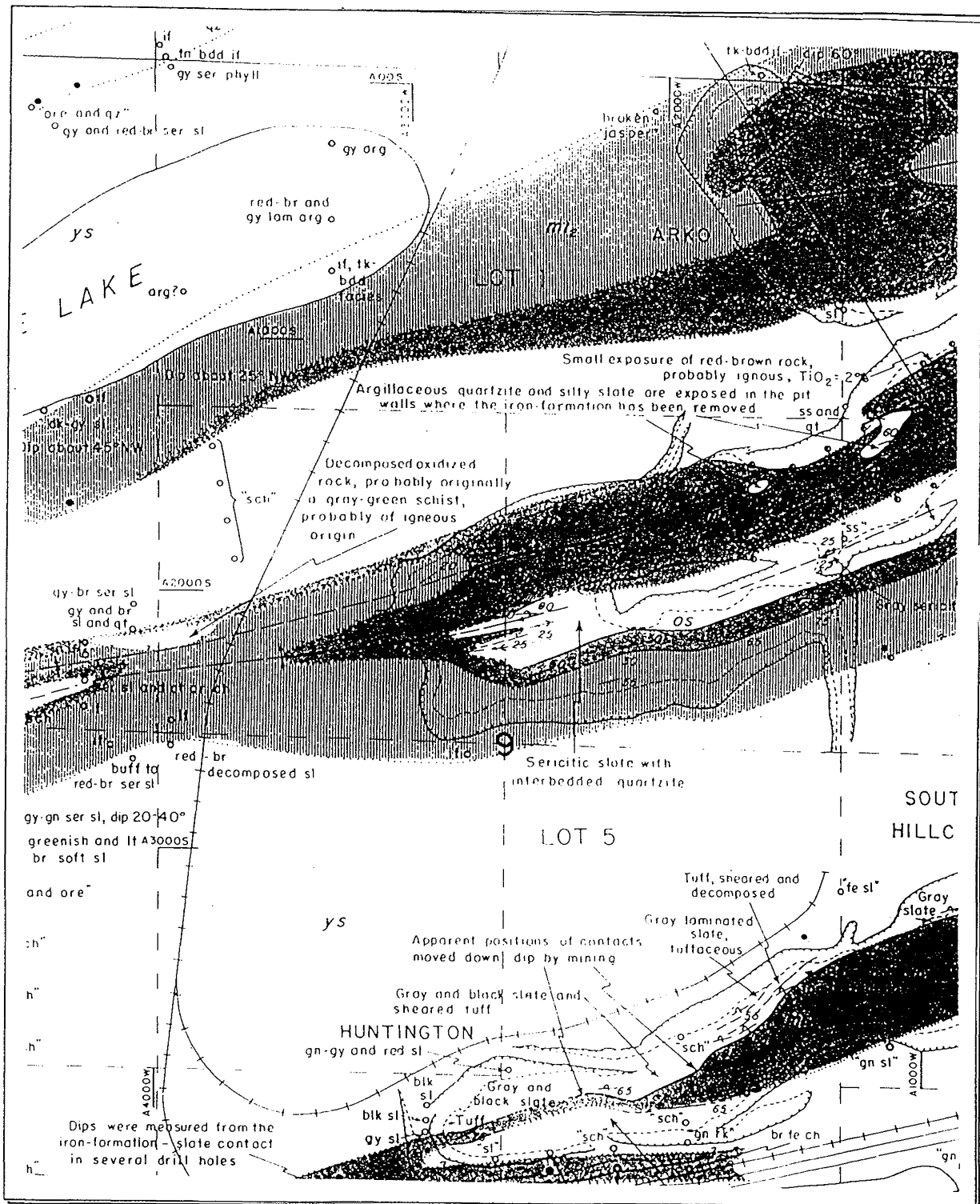
Structure and Alteration: Fabric is moderately-well developed. Rock is soft, clayey(?). Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000106).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000107).

Highlights of Outcrop Geophysical Measurements: Four magnetic susceptibility measurements on relatively planar rock faces range from 0.10 to 1.11, 10^{-3} SI units and average 1.11, 10^{-3} SI units. One density measurement was 2.62 g/cm³.



Outcrop Location Map.

From Schmidt, R.G. and Dutton, C.E., 1957, "BEDROCK GEOLOGY OF THE SOUTH-CENTRAL PART OF THE NORTH RANGE, CUYUNA DISTRICT, MINNESOTA", U.S.G.S. MINERAL INVESTIGATIONS FIELD STUDIES MAP MF 99, Sheet 2 of 3.

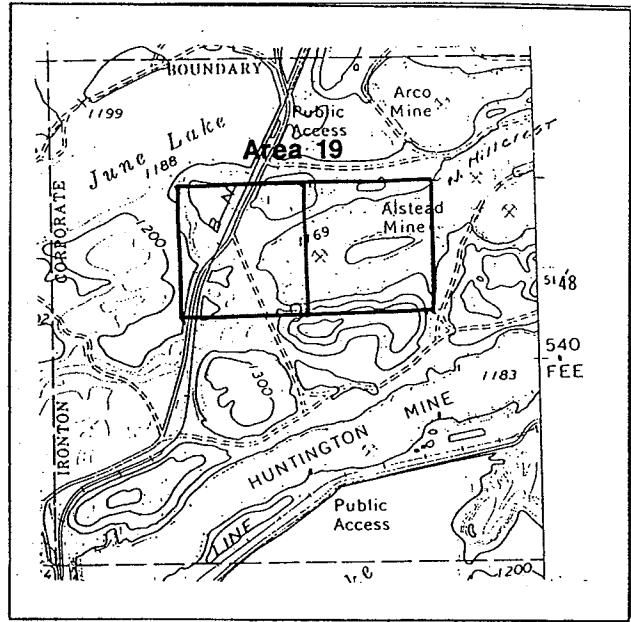
Data Sheet For Outcrop Area 19

IDENTIFICATION

DNR Project 295 File Number: OTC2951-034
Sampled: By Hanna Mining Co., DNR relogged,
assayed and studied the sample.
DNR Geologists: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: SW, NE, & SE, NW, S9, T46N, R29W.
Quadrangles: Riverton, 7.5'.
Reg. Survey Area: North edge survey area.
UTM Coordinates: 422,375m E. - 422,930m E.
5,147,910m N. - 5,148,270m N.
Note: For geology see map page B-24.



Outcrop OTC2951-034 Location Map.

OUTCROP PARAMETERS

Access: Flooded Alstead Mine pit, no access.
Size: Mine pit 570m long by 220m wide.
Topography: Steep rock slopes, rock dumps around pit.
Bedrock Elevation: No section, ledge elevation about 1,140 feet.
Vegetation: Mixed hardwoods and aspen.
Sample Method: Unknown.

INFORMATION SUMMARY AND HIGHLIGHTS

Outcrop Description: Hanna's sample description conglomerate(?).

Glacial Features: N/A

Lithology: Poorly sorted, goethite cemented, quartz and intraclast sandstone. Intraclasts include iron oxides, phyllite, and chlorite schist, (mafic volcanics?).

Structure and Alteration: Rock is locally limonitic and may be a product of Cretaceous (and recent?) weathering and sedimentation.

Assay Sample Intervals and (Sample Numbers): (2951000108).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000109).

Highlights of Outcrop Geophysical Measurements: Four magnetic susceptibility measurements on relatively planar rock faces range from 0.55 to 0.69, 10^{-3} SI units and average 0.63, 10^{-3} SI units. One density measurement was 2.78 g/cm³.



Appendix 295-C. Rock Dump Summary Information

Data Sheet For Mine Rock Dump Area 1

IDENTIFICATION

DNR Project 295 File Number: RD2951-004
Sampled: by DNR 8/27/91
Geologist: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing.
S-T-R: SE-NE-SW, S2, T46N, R29W.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: North edge of
Project 295 area.
UTM Coordinates: 425,748m E.
5,149,104m N.

ROCK DUMP PARAMETERS

Access: One-hundred meters north
of woods road.
Size of Rock Dump: 310m long, 100m wide.
Topography: Steep slope on dump.
Sample Elevation: 1,250 to 1,300 ft.
Vegetation: Mixed upland species, aspen, maple and oak.
Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: With broken rock of all sizes including large blocks to several feet on large dump.

Glacial Features: Not applicable.

Lithology: Laminated magnetite-chert iron formation (high magnetic susceptibility), and secondary iron oxides (hematite, martite, goethite). Waste rock is phyllitic.

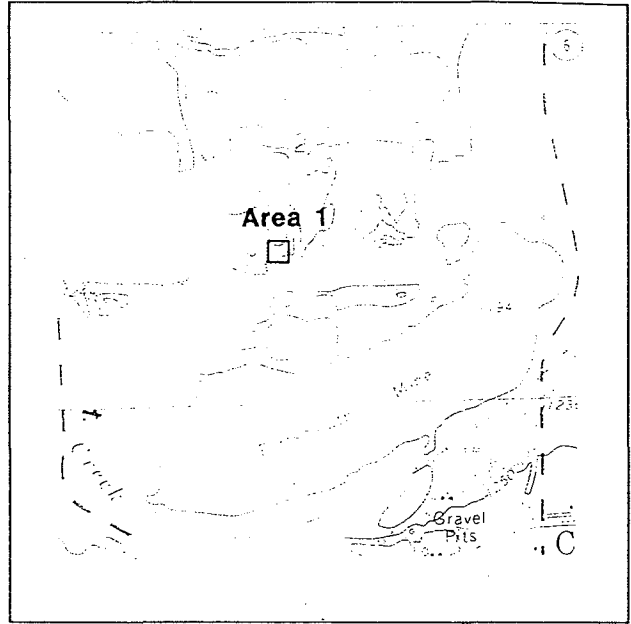
Structure and Alteration: Sample contains secondary sulfides along cross-cutting veinlets. Magnetite is converting to martite. Separate veinlets contain drusy quartz. Schistosity is generally subparallel to bedding. Weathering effects on dump fragments are negligible.

Assay Sample Intervals and (Sample Numbers): (2951000006).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000007), (2951000008) and (2951000009).

Highlights of Rock Dump Geophysical Measurements: Nine magnetic susceptibility observations on planar rock surfaces covering 100% of meter face, range from 2 to 506, 10^{-3} SI units, which average 220, 10^{-3} SI units. Three density measurements from 3.52 to 4.05 g/cm^3 , average 3.68 g/cm^3 .



Rock Dump RD2951-004 Location Map.

Data Sheet For Mine Rock Dump Area 2

IDENTIFICATION

DNR Project 295 File Number: RD2951-005
Sampled: by DNR 8/27/91
Geologist: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing.
S-T-R: NE-NE-SW, S3, T46N, R29W.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: North edge of
Project 295 area.
UTM Coordinates: 424,075m E.
5,149,405m N.

ROCK DUMP PARAMETERS

Access: Good road a few meters from dump.
Size of Rock Dump: 200m long, 100m wide.
Topography: Steep slope on dump.
Sample Elevation: 1,240 to 1,320 ft.
Vegetation: Mixed upland species, aspen, maple and oak.
Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Most rock smaller than boulder size.

Glacial Features: Not applicable.

Lithology: Oxides are very dark and appear to be manganiferous (pyrolusite) with lesser hematite and magnetite. Waste rock is siliceous and arenitic.

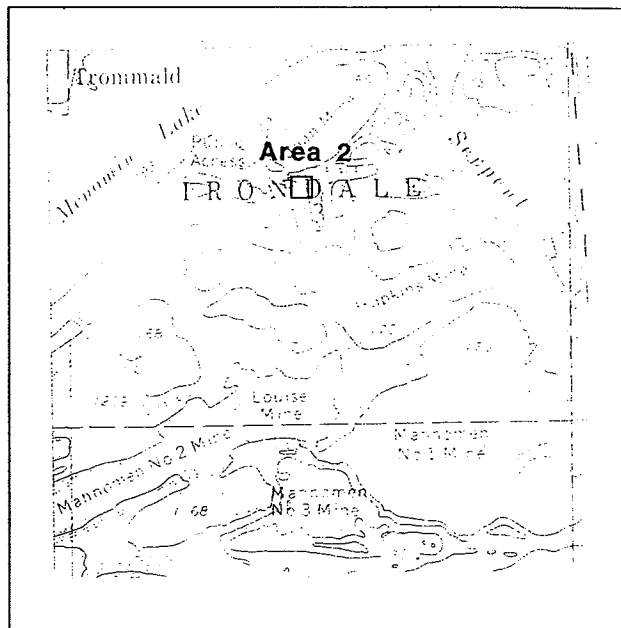
Structure and Alteration: Schistosity cuts bedding obliquely (60°). Some arenitic rock appears bleached. Local quartz veins occur to 10 cm; with calcite or vugs containing pyrolusite. Most oxides are secondary. Weathering effects on dump fragments are indeterminate otherwise.

Assay Sample Intervals and (Sample Numbers): (2951000010) and (2951000015).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000011), (2951000012), (2951000013) and (2952000014).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility observations on planar rock surfaces covering 100% of meter face, range from 0.6 to 39.2, 10^{-3} SI units, which average 14.7, 10^{-3} SI units. Five density measurements range from 2.52 to 4.21 g/cm³, average 3.42 g/cm³.



Rock Dump RD2951-005 Location Map.

Data Sheet For Mine Rock Dump 3

IDENTIFICATION

DNR Project 295 File Number: RD2951-006

Sampled: by DNR 8/27/91

Geologist: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

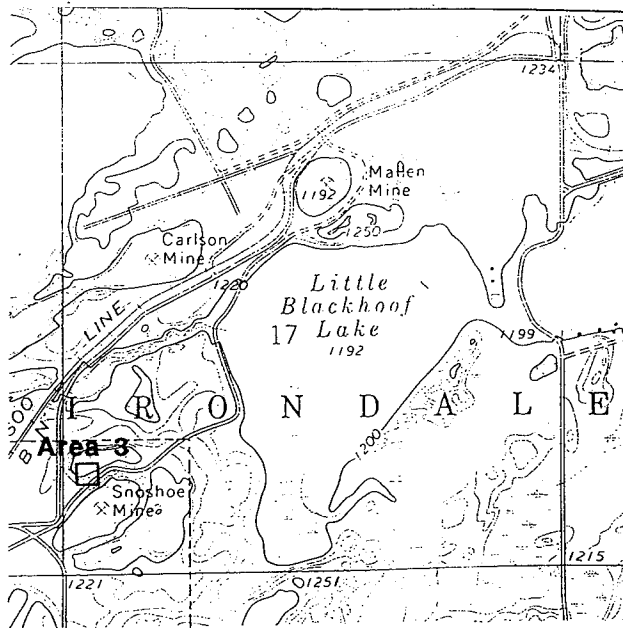
County: Crow Wing.

S-T-R: NW-SW-SW, S17, T46N, R29W.

Quadrangle: Riverton, 7.5'.

Reg. Survey Area: North edge of
Project 295 area.

UTM Coordinates: 420,170m E.
5,145,830m N.



Rock Dump RD2951-006 Location Map.

ROCK DUMP PARAMETERS

Access: Ten meters west of good gravel road.

Size of Rock Dump: Scattered rock on overgrown
dump.

Topography: Moderate slope east to mine pit.

Sample Elevation: 1,240 to 1,270 ft.

Vegetation: Mixed upland species, aspen, maple and oak.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Mine dump on northwest side of Snoshoe Mine with cobble and boulder sized materials.

Glacial Features: Not applicable.

Lithology: Oxides (iron ore?) are largely locally brecciated hematite. Waste rock is arenaceous to phyllitic, with variable hematite. Some arenitic rock may be tuffaceous.

Structure and Alteration: Samples may have two schistositities, with one oblique to bedding. At least one lineation is locally well developed. All rock is hematitic. Some clear quartz veins with minor hematite occurring. Weathering effects on dump fragments are otherwise indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000016), (2951000018) and (2951000021).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000017), (2951000019) and (2951000020).

Highlights of Mine Dump Geophysical Measurements: Ten magnetic susceptibility observations on planar rock surfaces covering 100% of meter face, 0.06 to 0.94, 10^{-3} SI units, which average 0.37, 10^{-3} SI units. Six density measurements from 2.50 to 3.98 g/cm^3 , average 2.86 g/cm^3 .

Data Sheet For Quarry Rock Dump Area 4

IDENTIFICATION

DNR Project 295 File Number: RD2951-013

Sampled: by DNR 10/24/91

Geologist: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Morrison

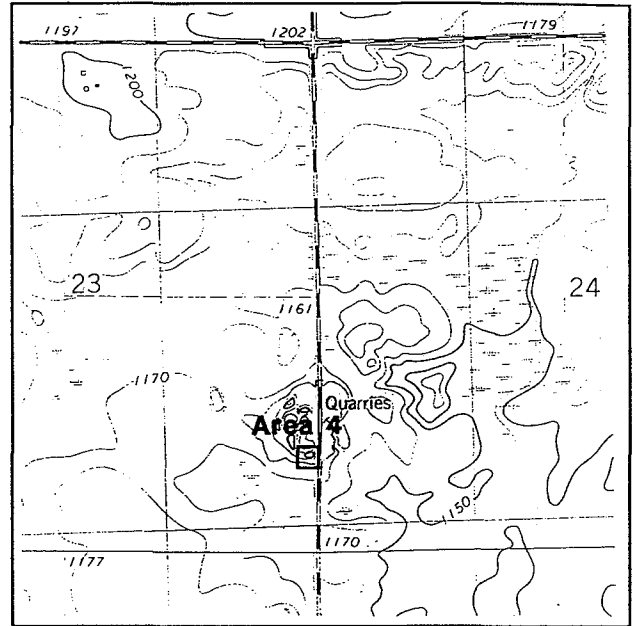
S-T-R: NE-SE-SE, S20, T41N, R31W.

Quadrangle: Freedhem, 7.5'.

Reg. Survey Area: Southwest corner of survey area.

UTM Coordinates: 406,480m E.

5,096,235m N.



Rock Dump RD2951-013 Location Map.

ROCK DUMP PARAMETERS

Access: On r.o.w. west side county highway 45.

Size of Rock Dump: 150m long, 100 m wide.

Topography: Crest of broad circular hill forty feet above local topography.

Sample Elevation: 2,000 feet.

Vegetation: Dominantly oak some aspen.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Quarry and waste rock.

Glacial Features: Not applicable.

Lithology: Medium grained, amphibolitic, biotitic, gneissic, tonalite.

Structure and Alteration: Some local variations of mafic and quartz-feldspar content. Minimal weathering effects (?) along some joints.

Assay Sample Intervals and (Sample Numbers): (2951000037).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000038).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility measurements on planar rock surfaces covering 100% of meter face, range from 0.24 to 1.71, 10^{-3} SI units and average 0.65, 10^{-3} SI units. Two density measurements 2.81 to 2.82 g/cm^3 , average 2.82 g/cm^3 .

Data Sheet For Mine Rock Dump Area 5

IDENTIFICATION

DNR Project 295 File Number: RD2951-015

Sampled: by DNR 10/25/91

Geologist: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing

S-T-R: SW-SW-SW, S9, T46N, R29W.

Quadrangle: Riverton, 7.5'.

Reg. Survey Area: Northwest corner of survey area.

UTM Coordinates: 421,715m E.

5,147,260m N.

ROCK DUMP PARAMETERS

Access: Three meters east of good road.

Size of Rock Dump: Most of this dump is overgrown, there is an exposed area of several acres.

Topography: Sampled at toe of steep slope to east.

Sample Elevation: 1,295 feet.

Vegetation: Birch, some jackpine.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Coarse broken waste rock, most likely from the Huntington Mine.

Glacial Features: Not applicable.

Lithology: Ore is red to dark grey hematite. Waste rock is sericitic, calcareous phyllite.

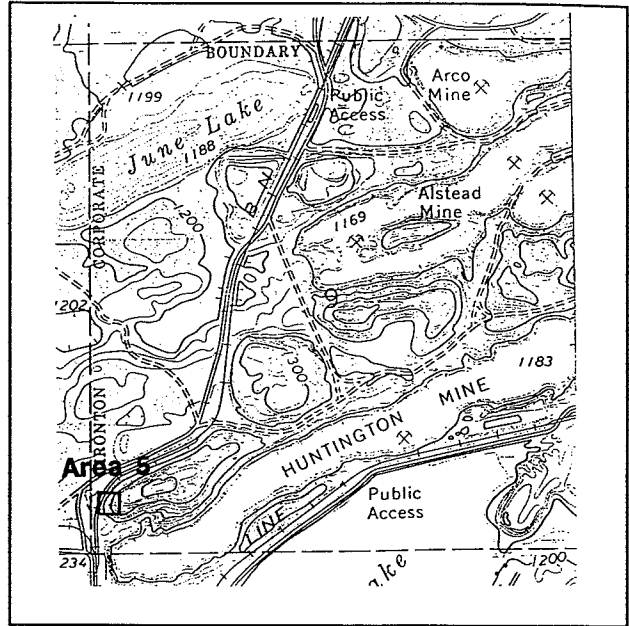
Structure and Alteration: Contains local quartz veins that are sometimes broken-brecciated with calcite, hematite, muscovite and kaolinite(?) infilling. Hematite is stratiform, but locally is cross cutting (replacement?). Weathering effects are otherwise indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000041), (2951000043) and (2951000045).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000042), (2951000044) and (2951000046).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility measurements on planar rock surfaces covering 100% of meter face, range from 0.07 to 0.28, 10^{-3} SI units, average 0.14, 10^{-3} SI units. Five density measurements 2.52 to 3.23 g/cm^3 , average 2.85 g/cm^3 .



Rock Dump RD2951-015 Location Map.

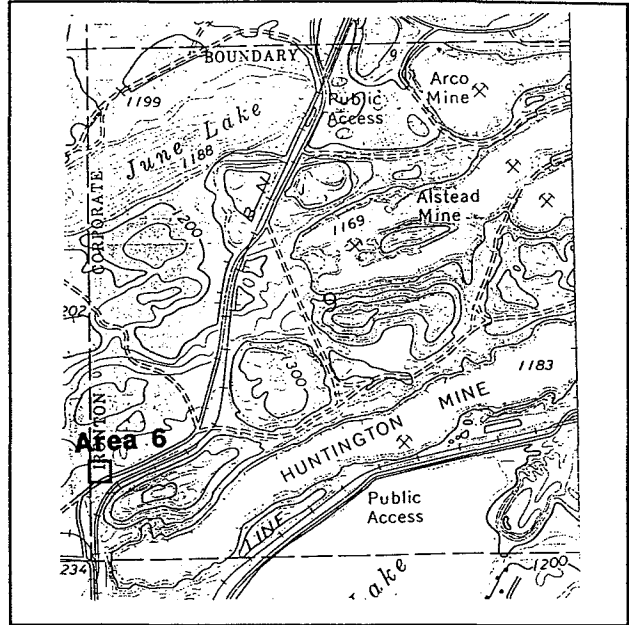
Data Sheet For Mine Rock Dump Area 6

IDENTIFICATION

DNR Project 295 File Number: RD2951-016
Sampled: by DNR 10/25/91
Geologist: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: NW-SW-SW, S9, T46N, R29W.
Quadrangle: Riverton 7.5'
Reg. Survey Area: Northwest corner of survey area.
UTM Coordinates: 421,700m E.
5,147,350m N.



Rock Dump RD2951-016 Location Map.

ROCK DUMP PARAMETERS

Access: Sample site ten meters northwest of good road.
Size of Rock Dump: Dump mostly overgrown, small area of visible rock.
Topography: Sample toe of dump sloping up to west.
Sample Elevation: 1,275 feet.
Vegetation: Mixed hardwood, birch, maple, oak.
Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Small overgrown dump, waste rock and lean ore, probably from the Huntington Mine.

Glacial Features: Not applicable.

Lithology: Ore is goethite, red and dark blue hematite (manganiferous). Waste rock is siliceous siltstone and sericitic, dolomitic marble.

Structure and Alteration: Schistosity moderately developed in some rocks. Much fracturing locally with secondary replacement by iron (and manganese?) oxides and kaolinite. Weathering effects are otherwise indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000047), (2951000049) and (2951000053).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000048), (2951000050), (2951000051) and (2951000052).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility measurements on planar rock surfaces covering 100% of meter face, range from 0.10 to 0.97, 10^{-3} SI units and average 0.68, 10^{-3} SI units. Seven density measurements 2.47 to 3.79 g/cm³, average 3.20 g/cm³.

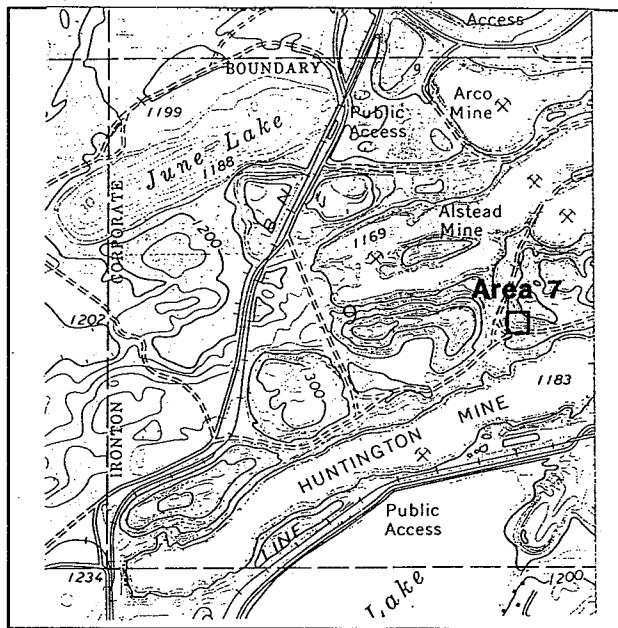
Data Sheet For Mine Rock Dump Area 7

IDENTIFICATION

DNR Project 295 File Number: RD2951-017
Sampled: by DNR 10/25/91
Geologist: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: NW-NE-SE, S9, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: Northwest corner of survey area.
UTM Coordinates: 423,001m E.
5,147,855m N.



Rock Dump RD2951-017 Location Map.

ROCK DUMP PARAMETERS

Access: Good road ten meters south of sample site.
Size of Rock Dump: Broken rock covers several acres.
Topography: Toe of steep slope to north.
Sample Elevation: 1,265 feet.
Vegetation: Birch, aspen, oak.
Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Large mostly overgrown dump of waste rock and lean ore, probably from the Alstead and Huntington Mines.

Glacial Features: Not applicable.

Lithology: Ore is laminated "primary" dark magnetite and hematite with secondary dark, blue-black, manganiferous hematite and brown-red goethite and hematite. Waste rock is siliceous siltstone.

Structure and Alteration: Quartz veins are broken-brecciated, with manganiferous hematite infilling and minor carbonate-kaolinite in vugs locally. Goethite-red hematite locally replaces the siliceous siltstone. Siliceous siltstone has a moderately well developed fracture cleavage. Weathering effects are otherwise indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000054), (2951000058) and (2951000059).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000055), (2951000056) and (2951000057).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility measurements on planar rock surfaces covering 100% of meter face, range from 0.3 to 16.1, 10^3 SI units, averaging 7.4, 10^3 SI units. Six density measurements range from 2.62 to 3.76 g/cm³, average 3.25 g/cm³.

Data Sheet For Mine Rock Dump Area 295-8

IDENTIFICATION

DNR Project 295 File Number: RD2951-018
Sampled: by DNR 10/25/91
Geologist: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: NW-NE-SE, S9, T46N, R29W.
Quadrangle: Riverton, 7.5'.
Reg. Survey Area: Northwest corner survey area.
UTM Coordinates: 423,050m E.
5,147,805m N.

ROCK DUMP PARAMETERS

Access: Three meters south of good road.
Size of Rock Dump: Apron of large dump described in sample 295-17.
Topography: Piles of broken rock on flatter part of dump.
Sample Elevation: 1,215 feet.
Vegetation: Birch, aspen and oak.
Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Large angular blocks of mine waste with quartz veins sampled.

Glacial Features: Not applicable.

Lithology: Milky to clear quartz veins (clear quartz is later). Possibly recrystallized.

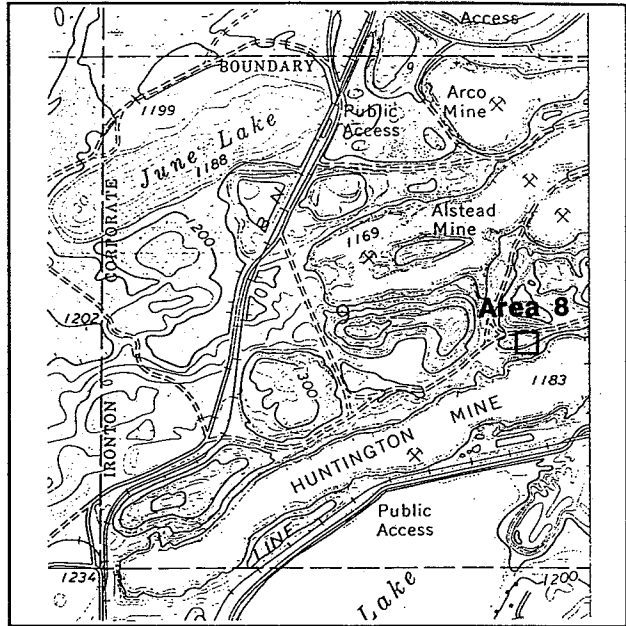
Structure and Alteration: Hematite and goethite occurs along some fracture surfaces within vein. Cleavage planes of crystals are bent (deformed?). Weathering effects are otherwise indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000060).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000061).

Highlights of Rock Dump Geophysical Measurements: Nine magnetic susceptibility measurements taken on planar rock surfaces which cover 100% of meter face, range from 0.01 to 0.07, 10^{-3} SI units averaging 0.03, 10^{-3} SI units. Two density measurements were 2.01 and 2.62 g/cm^3 , which average 2.32 g/cm^3 .



Rock Dump RD2951-018 Location Map.

Data Sheet For Mine Rock Dump Area 9

IDENTIFICATION

DNR Project 295 File Number: RD2951-019

Sampled: by DNR 10/25/91

Geologist: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing

S-T-R: NW-SE-NE, S9, T46N, R29W.

Quadrangle: Riverton, 7.5'.

Reg. Survey Area: Northwest corner of survey area.

UTM Coordinates: 423,045m E.

5,148,175m N.

ROCK DUMP PARAMETERS

Access: Just off road on northwest side.

Size of Rock Dump: A few broken, angular boulders.

Topography: Flat area just above steep slope to Alstead Mine.

Sample Elevation: 1,190 feet.

Vegetation: Maple, aspen, birch, grass and weeds.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Several large, angular blocks.

Glacial Features: Not applicable.

Lithology: Iron formation, goethitic, botryoidal, hematitic. Dark grey-black laminae may be manganiferous, although it does not effervesce in hydrochloric acid.

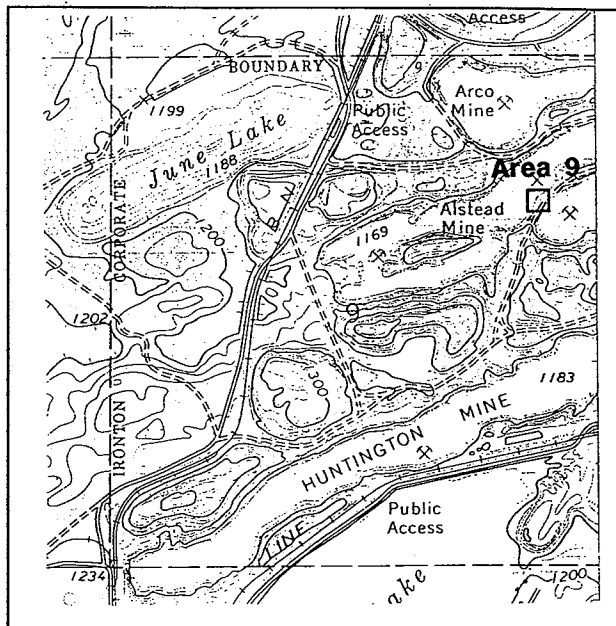
Structure and Alteration: Local thin clear quartz veins. Most oxides appear to be secondary, and may result from deep weathering.

Assay Sample Intervals and (Sample Numbers): (2951000062) and (2951000065).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000063) and (2951000064).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility measurements on planar rock surfaces which cover 100% of meter face, range from 0.36 to 21.20, 10^{-3} SI units, averaging 3.49, 10^{-3} SI units. Three density measurements range from 3.32 to 3.65 g/cm³, average 3.52 g/cm³.



Rock Dump RD2951-019 Location Map.

Data Sheet For Mine Rock Dump Area 10

IDENTIFICATION

DNR Project 295 File Number: RD2951-020

Sampled: by DNR 10/25/91

Geologist: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing

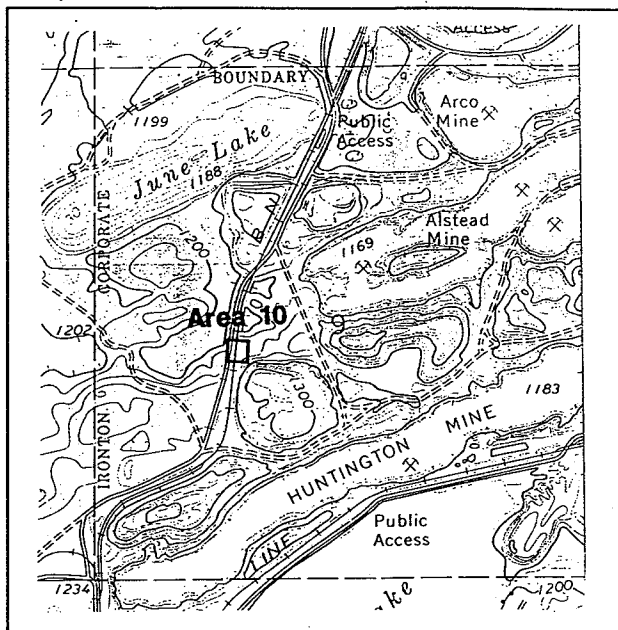
S-T-R: NW-NE-SW, S9, T46N, R29W.

Quadrangle: Riverton, 7.5',

Reg. Survey Area: Northwest corner of survey area.

UTM Coordinates: 422,145m E.

5,147,700m N.



Rock Dump RD2951-020 Location Map.

ROCK DUMP PARAMETERS

Access: East side of good road.

Size of Rock Dump: Large dump with much broken rock.

Topography: Toe of steep slope to west.

Sample Elevation: 1,255 feet.

Vegetation: Aspen, birch, some oak and maple.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Large rock dump of waste rock which probably came from the Huntington Mine.

Glacial Features: Not applicable.

Lithology: Ore is dark grey-brown hematite-goethite breccia with quartz. Waste rock is phyllite which can be graphitic or hematitic.

Structure and Alteration: Quartz veins common (brecciated in oxide rock, boudinaged in phyllite. Graphite in phyllite is probably primary, but red hematite appears to be replacing phyllite locally. Quartz in oxide breccia was probably vein quartz. Some of these materials may result from deep weathering.

Assay Sample Intervals and (Sample Numbers): (2951000066), (2951000068) and (2951000070).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000067) and (2951000069).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility measurements on planar rock surfaces which cover 100% of meter face, range from 0.08 to 0.90, 10^{-3} SI units which average 0.43, 10^{-3} SI units. One density measurement made, 2.94 g/cm³.

Data Sheet For Mine Rock Dump Area 11

IDENTIFICATION

DNR Project 295 File Number: RD2951-021

Sampled: by DNR 10/25/91

Geologist: B. Frey & T. Lawler

Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing

S-T-R: SW-NW-NE, S9, T46N, R29W.

Quadrangle: Riverton, 7.5'.

Reg. Survey Area: Northwest corner of survey area.

UTM Coordinates: 422,725m E.
5,148,300m N.

ROCK DUMP PARAMETERS

Access: On r.o.w. south side of good road.

Size of Rock Dump: Toe of large dump.

Topography: Moderate slope north from dump.

Sample Elevation: 1,230 feet.

Vegetation: Aspen, some birch and sumac.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Large dump with a lot of broken rock probably from the Arco Mine or possibly the Alstead Mine.

Glacial Features: Not applicable.

Lithology: Ore is dark, red, hematite. Waste rock is laminated, siliceous, siltstone.

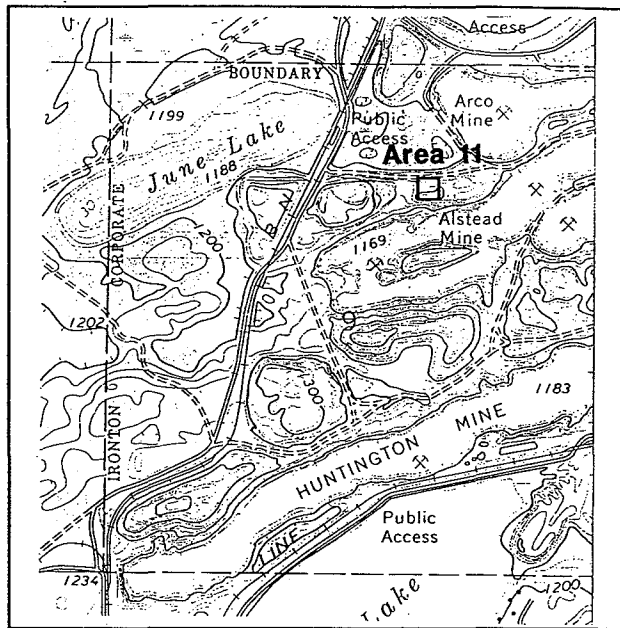
Structure and Alteration: Dark red hematite appears to be replacing the siliceous siltstone. Minor thin milky quartz veins and late fractures with offset occur locally. Siltstone may have been silicified, or a chert. Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers): (2951000071) and (2951000073).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000072) and (2951000074).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility measurements on planar rock surfaces which cover 100% of meter face, range from 0.44 to 7.54, 10^{-3} SI units with an average of 3.08, 10^{-3} SI units. Two density measurements are 2.62 and 3.35 g/cm^3 , they average 2.99 g/cm^3 .



Rock Dump RD2951-021 Location Map.

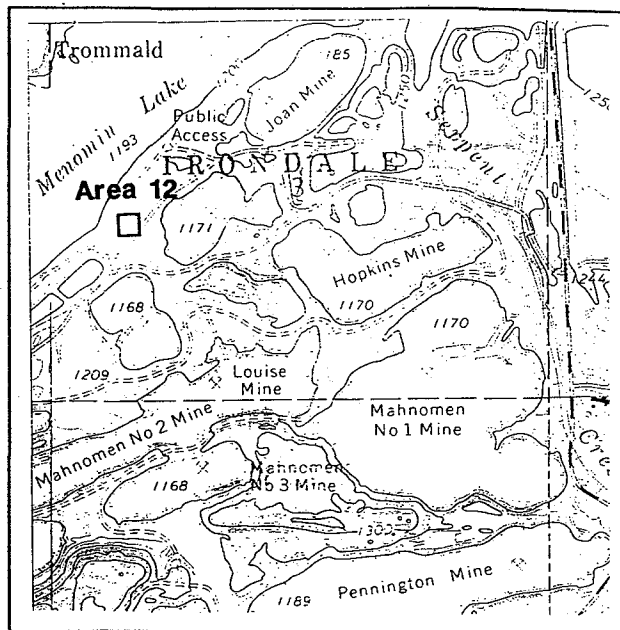
Data Sheet For Mine Rock Dump Area 12

IDENTIFICATION

DNR Project 295 File Number: RD2951-022
Sampled: by DNR 10/25/91
Geologist: B. Frey & T. Lawler
Land Owner Permission Form Number:

LOCATION (see map at right)

County: Crow Wing
S-T-R: SE-NW-SW, S3, T46N, R29W.
Quadrangle: Crosby, 7.5'.
Reg. Survey Area: Northwest corner of survey area.
UTM Coordinates: 423,590m E.
5,149,230m N.



Rock Dump RD2951-022 Location Map.

ROCK DUMP PARAMETERS

Access: Good road twenty meters southeast of sample site.
Size of Rock Dump: Several acres of broken rock.
Topography: Flat area between Menomin Lake and two small unnamed mines on topographic sheet.
Sample Elevation: 1,214 feet.
Vegetation: Small aspen, birch, hardwood.
Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Rock Dump Description: Large blasted blocks of rock in flat, open, area.

Glacial Features: Not applicable.

Lithology: Iron formation. Dark blue hematite and coarser recrystallized magnetite and hematite. Siliceous, sideritic sediment may be part of the country rock.

Structure and Alteration: Quartz-carbonate alteration. Recrystallized magnetite and hematite are associated with milky quartz veins and orange-red siderite (magnetite associated spatially with siderite, hematite with quartz). Vugs and soft zeolites(?) or clays also occur. Quartz veins are broken-deformed. Siderite alteration is not as restricted to veins as the quartz. Veining and alteration is extensive over this area. Weathering effects appear to be minimal.

Assay Sample Intervals and (Sample Numbers): (2951000075), (2951000077), (2951000079), (2951000080) and (2951000081).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000076) and (2951000078).

Highlights of Rock Dump Geophysical Measurements: Ten magnetic susceptibility measurements on planar rock surfaces covering 100% of meter face, range from 4.61 to 26.20, 10^{-3} SI units which average 15.33, 10^{-3} SI units. Six density measurements range from 2.73 to 3.92 g/cm^3 , average 3.32 g/cm^3 .



Appendix 295-D. Gravel Pit Boulder Sample Summary Information

Data Sheet For Boulders From Gravel Pit 1

IDENTIFICATION

DNR Project 295 File Number: GP2951-008

Sampled: by DNR 10/18/91

Geologist: B. Frey & T. Lawler

Land Owner Permission Form Number: 1

LOCATION (see map at right)

County: Cass. Description: Gravel pit.

S-T-R: N1/2, S13, T133N, R30W.

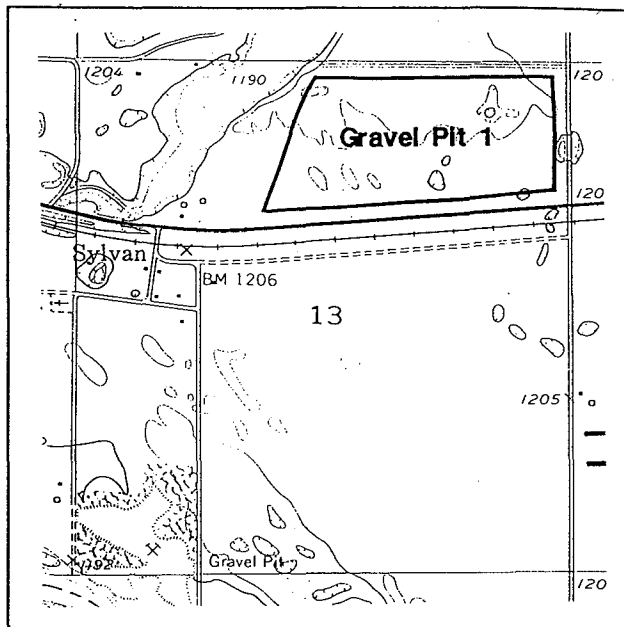
Quadrangle: Pillager, 7.5'.

Reg. Survey Area: Six miles west of
Project 295 area.

UTM Coordinates: 392,000 - 392,970m E.

5,132,100 - 5,132,590m N.

Note: This sample actually came from rip-rap
used for fill at the boat landing just east
of Motley, SW-SE-SW, S7, T133N, R31W.
D.O.T. records show the rip-rap came
from this pit.



Boulder Sample GP2951-008 Location Map.

GRAVEL PIT PARAMETERS

Access: Haul roads in gravel pit.

Size: Boulders scattered in gravel over 300 acres.

Topography: Man made pit.

Sample Elevation: 1,200 ft. to 1,225 ft.

Vegetation: None.

Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Sample Description: Goethitic iron formation. Brecciated quartz, limonite, goethite and phyllite.

Glacial Features Observed in Gravel Pit: Locally crossbedded outwash, (sand to boulders).

Lithology: Goethite-quartz breccia, and limonitic, goethitic fractured quartz veins in phyllite.

Structure and Alteration: Minor secondary sulfides and oxides in brecciated quartz vein or brecciated iron formation. All iron (limonite, sulfides goethite) was probably introduced. Goethite and sulfides infilled fractures in brecciated quartz vein. Phyllite (original country rock?) remnants are contorted. White mica is also a portion of the infilling material. Weathering effects are indeterminate.

Assay Sample Intervals and (Sample Numbers):

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000024), (2951000025).

Highlights of Boulder Geophysical Measurements: Nine magnetic susceptibility measurements on relatively planar rock surfaces, which covered 100% of meter face, varied between 0.02 and 0.18, 10^{-3} SI units, with an average of 0.10+, 10^{-3} SI units. Four density measurements 2.57 to 2.66 g/cm^3 , average 2.62 g/cm^3 .

Data Sheet For Boulders From Gravel Pit 2

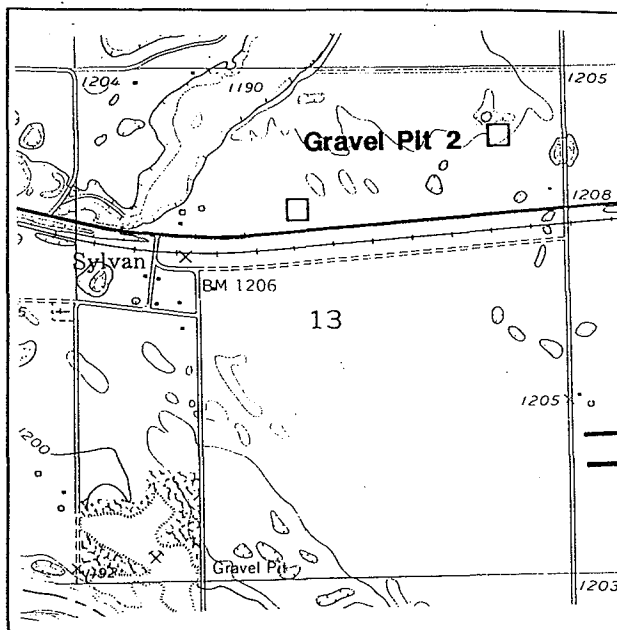
IDENTIFICATION

DNR Project 295 File Number: GP2951-009
Sampled: by DNR 10/18/91
Geologist: B. Frey & T. Lawler
Land Owner Permission Form Number: 1

LOCATION (see map at right)

County: Cass Description: Gravel pit.
S-T-R: N1/2, S13, T133N, R30W.
Quadrangle: Pillager 7.5'.
Reg. Survey Area: Six miles west of
Project 295 area.
UTM Coordinates: 392,105m E. 5,132,190m N.
392,750m E. 5,132,395m N.

Note: two samples from locations marked by X
are similar to the samples from the boat
landing (8) except they don't contain
secondary sulfides and quartz.



Boulder Sample GP2951-009 Location Map.

GRAVEL PIT PARAMETERS

Access: Haul roads in gravel pit. Size: Boulders to six inch diameter from marked sample sites. Topography: Man made pit. Sample Elevation: 1,200 to 1,225 feet. Vegetation: None. Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Sample Description: Goethitic iron formation. Brecciated quartz and goethite. Other rocks sampled include coarse amphibolite, dacite porphyry, syenite and metabasalt.

Glacial Features Observed in Gravel Pit: Locally crossbedded outwash (sand to boulders).

Lithology: Quartz fragments in goethitic matrix. Amphibolites are probably metamafic to meta-ultramafic rocks. Syenite contains 50% hornblende and magnetite. Metabasalt contains several percent pyrrhotite (primary?). Other common lithologies include iron formation, quartz feldspar schist and gneiss, porphyritic volcanics (mostly intermediate with lesser felsic rock containing quartz eyes).

Structure and Alteration: Quartz breccia has had goethite matrix added with minor sericite. Mafics are variably deformed, some with minor secondary sulfides and oxides. Some boulders are more deeply weathered than others.

Thin Section Descriptions, Depths and (Sample Numbers): (2951000026), (2951000027), (2951000028), (2951000029), (2951000030).

Highlights of Boulder Geophysical Measurements: Six magnetic susceptibility measurements on relatively planar rock surfaces which covered 100% of meter face varied as follows: On brecciated iron formation measurements ranged between 0.10 and 0.25, 10^{-3} SI units. Nine magnetic measurements on mixed lithologies varied between 0.07 and 60.0, 10^{-3} SI units. Four density measurements from 2.47 to 3.19 g/cm^3 , average 2.82 g/cm^3 .

Data Sheet For Boulders From Gravel Pit 3

IDENTIFICATION

DNR Project 295 File Number: GP2951-012

Sampled: by DNR 10/24/91

Geologist: B. Frey & T. Lawler

LOCATION (see map at right)

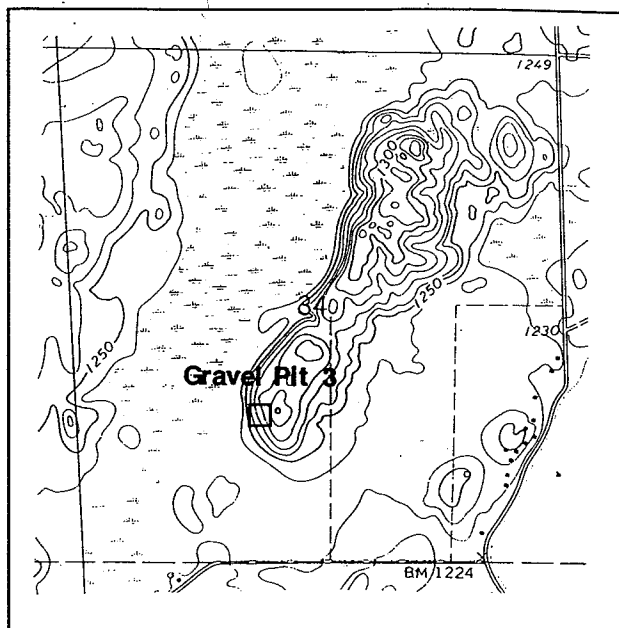
County: Aitkin Description: Small gravel pit southwest end distinct ridge which might be controlled by bedrock.

S-T-R: SE-NE-SW, S34, T47N, R25W.

Quadrangle: Kimberly, 7.5'.

Reg. Survey Area: 3.4 miles east of northeast corner of survey area.

UTM Coordinates: 462,627m E.
5,150,586m N.



Boulder Sample GP2951-012 Location Map.

GRAVEL PIT PARAMETERS

Access: Gravel road into pit.

Size: Pit 20m long, 18m wide.

Topography: Moderately steep slope to west.

Sample Elevation: 1,275 feet. Vegetation: Mixed hardwoods, small aspen, birch. Sample Method: Rock hammer.

INFORMATION SUMMARY AND HIGHLIGHTS

Sample Description: Cobbles from gravel pit.

Glacial Features Observed in Gravel Pit: Boulders angular to subrounded. Probably sandy, bouldery, poorly sorted till or outwash.

Lithology: Felsic volcanics look like North Shore Volcanics. Biotitic amphibolite is probably of lamprophyric affinity. Other significant rock types include green meta-siltstone, phyllite, granite-quartz monzonites and metagabbro.

Structure and Alteration: Limonite-quartz vein may contain some Mn oxides. Metabasalt has trace sulfides, and may be silicified. Some boulders are more deeply weathered than others, (some mafic-ultramafic?).

Assay Sample Intervals and (Sample Numbers): (2951000035).

Highlights of Sample Assays:

Thin Section Descriptions, Depths and (Sample Numbers): (2951000034), (2951000036).

Highlights of Boulder Geophysical Measurements: Magnetic susceptibilities in 10^{-3} SI units. Seven observations on relatively planar surfaces which covered 100% of meter face were as follows: For felsic volcanics, 0.18 to 20.3, with an average of 8.14; mafic volcanics and sediments, four measurements, 0.69 to 27.5 with an average of 4.52; amphibolite, five measurements, 0.37 to 16.4 with an average of 4.42, 10^{-3} SI units. Five density measurements 2.32 to 2.93 g/cm³, average 2.69 g/cm³.



Appendix 295-E: DDH List

15468

APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN SPECTOR AREAS	TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
306	15464	DH2951-035	CROW WING	X	46	29	W	9	LOT 1	HANNA MINING
307	15465	DH2951-036	CROW WING	X	46	29	W	9	LOT 1	HANNA MINING
308	15466	DH2951-037	CROW WING	X	46	29	W	9	LOT 1	HANNA MINING
309	15467	DH2951-038	CROW WING	X	46	29	W	4	LOT 10	HANNA MINING
310	15468	DH2951-039	CROW WING	X	46	29	W	9	LOT 1	HANNA MINING
18135	10753	DH2951-040	CROW WING	X	45	28	W	17	NW-NE	U.S. STEEL CORP.
18138	10754	DH2951-041	CROW WING	X	45	28	W	17	NW-NE	U.S. STEEL CORP.
18144	10755	DH2951-042	CROW WING	X	45	28	W	17	NW-NE	U.S. STEEL CORP.
S118	15469	DH2951-043	CROW WING		47	29	W	33	NE-SW	HANNA MINING
S124	15470	DH2951-044	CROW WING		47	29	W	33	NE-SW	HANNA MINING
S126	15471	DH2951-045	CROW WING		47	29	W	33	NE-SW	HANNA MINING
S1042	15472	DH2951-046	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
S1043	15473	DH2951-047	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
S1044	15474	DH2951-048	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
306	10963	DH2951-049	CROW WING	X	46	29	W	9		CROSBY EXPL.
18145	10756	DH2951-050	CROW WING	X	45	28	W	17	NW-NE	U.S. STEEL CORP.
18226	10761	DH2951-051	CROW WING	X	45	28	W	19	NE-NW	U.S. STEEL CORP.
18132	10752	DH2951-052	CROW WING	X	45	28	W	17	NW-NE	U.S. STEEL CORP.
18427	10749	DH2951-053	CROW WING	X	45	28	W	9	SW-NW	U.S. STEEL CORP.
18430	10750	DH2951-054	CROW WING	X	45	28	W	9	SW-NW	U.S. STEEL CORP.
18228	10762	DH2951-055	CROW WING	X	45	28	W	19	NE-NW	U.S. STEEL CORP.
18435	10751	DH2951-056	CROW WING	X	45	28	W	9	SW-NW	U.S. STEEL CORP.
18146	10757	DH2951-057	CROW WING	X	45	28	W	17	NW-NE	U.S. STEEL CORP.
18218	10758	DH2951-058	CROW WING	X	45	28	W	17	NW-NE	U.S. STEEL CORP.
18221	10759	DH2951-059	CROW WING	X	45	28	W	17	NW-NE	U.S. STEEL CORP.
18230	10763	DH2951-060	CROW WING	X	45	28	W	19	NE-NW	U.S. STEEL CORP.
18223	10760	DH2951-061	CROW WING	X	45	28	W	19	NE-NW	U.S. STEEL CORP.
S1	15475	DH2951-062	CROW WING	X	46	29	W	5	SW-NE	HANNA MINING
S8	15476	DH2951-063	CROW WING	X	46	29	W	5	SW-NE	HANNA MINING
S1131	15477	DH2951-064	CROW WING	X	46	29	W	2	NE-NE	HANNA MINING
S1006	15478	DH2951-065	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S364	15479	DH2951-066	CROW WING	X	46	29	W	1	NW-SW	HANNA MINING
S346	15480	DH2951-067	CROW WING	X	46	29	W	1	NW-SE	HANNA MINING
S1060	15481	DH2951-068	CROW WING	X	46	29	W	2	SW-SE	HANNA MINING
S1054	15482	DH2951-069	CROW WING	X	46	29	W			HANNA MINING
S1053	15483	DH2951-070	CROW WING	X	46	29	W	2	SE-SE	HANNA MINING
S1045	15484	DH2951-071	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
S1046	15485	DH2951-072	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
S1047	15486	DH2951-073	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
S1048	15487	DH2951-074	CROW WING	X	46	29	W	2	SE-SE	HANNA MINING
S1050	15488	DH2951-075	CROW WING	X	46	29	W	11	NW-NE	HANNA MINING
S361	15634	DH2951-076	CROW WING	X	46	29	W	1	NW-SW	HANNA MINING
18600	11639	DH2951-077	CROW WING		136	26	W	30	SW-NW	U.S. STEEL CORP.
18400	11661	DH2951-078	CROW WING		137	25	W	20	NW-NW	U.S. STEEL CORP.
MR-5	11641	DH2951-079	CROW WING		136	26	W	35	LOT 3	W. S. MOORE CO.
S1020	15489	DH2951-080	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
280	15490	DH2951-081	CROW WING	X	46	29	W	2	SE-SE	HANNA MINING

W of Ironton

E-2

APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN SPECTOR AREAS	TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
107	12626	DH2951-082	MORRISON		130	30	W	6		USBM
BM-11	10007	DH2951-083	AITKIN	X	46	25	W	14	NW-SW	USBM
18131	14380	DH2951-084	AITKIN	X	46	25	W	19	SW-SE	U.S. STEEL CORP.
S360	15491	DH2951-085	CROW WING	X	46	29	W	1	NW-SW	HANNA MINING
BM-3	10013	DH2951-086	AITKIN	X	46	25	W	15	SW-NE	USBM
18133	14381	DH2951-087	AITKIN	X	46	25	W	19	SE-SW	U.S. STEEL CORP.
52	10072	DH2951-088	AITKIN	X	46	25	W	28	NE-NE	HANNA MINING
G-9	10006	DH2951-089	AITKIN	X	46	25	W	11	SW-SW	HANNA MINING
AB-9	14496	DH2951-090	AITKIN	X	46	23	W	2	SE-SE-SE	MGS
PA-4B-3	14660	DH2951-091	AITKIN	X	46	24	W	13	NE-NW-NE	WASTE MANAGE BOARD
G-3	15492	DH2951-092	AITKIN	X	46	25	W	18	SE-SW	HANNA MINING
G-2	15493	DH2951-093	AITKIN	X	46	25	W	1	SW-NE	HANNA MINING
61	15494	DH2951-094	AITKIN	X	46	25	W	27	NW-NW	HANNA MINING
16	10037	DH2951-095	AITKIN	X	46	25	W	28	NE-NE	IRRRRC
G-4	10002	DH2951-096	AITKIN	X	46	25	W	11	NW-NW	HANNA MINING
G-1	10020	DH2951-097	AITKIN	X	46	25	W	16	SW-NE	HANNA MINING
43	10063	DH2951-098	AITKIN	X	46	25	W	28	NE-NE	HANNA MINING
BM-12	10008	DH2951-099	AITKIN	X	46	25	W	14	SW-NW	USBM
BM-10	10011	DH2951-100	AITKIN	X	46	25	W	15	SE-NE	USBM
85	10023	DH2951-101	AITKIN	X	46	25	W	22	SW-SW	HANNA MINING
58	10078	DH2951-102	AITKIN	X	46	25	W	28	NE-NE	HANNA MINING
BM-1	10010	DH2951-103	AITKIN	X	46	25	W	15	NE-NW	USBM
86	10096	DH2951-104	AITKIN	X	46	25	W	22	SE-NE	HANNA MINING
BM-6	10016	DH2951-105	AITKIN	X	46	25	W	15	SE-NW	USBM
N-1	15495	DH2951-106	AITKIN	X	46	26	W	24	NE-NW	HANNA MINING
N-3	15496	DH2951-107	AITKIN	X	46	26	W	35	SE-SW	HANNA MINING
N-2	15497	DH2951-108	AITKIN	X	46	26	W	25	NW-NW	HANNA MINING
84	15498	DH2951-109	AITKIN	X	46	25	W	29	NW-SE	HANNA MINING
83	15499	DH2951-110	AITKIN	X	46	25	W	29	NW-SE	HANNA MINING
S129	10251	DH2951-111	AITKIN	X	47	26	W	4	NW-SE	HANNA MINING
18134	14382	DH2951-112	AITKIN	X	46	25	W	30	SW-NE	U.S. STEEL CORP.
18137	14383	DH2951-113	AITKIN	X	46	25	W	30	SE-NW	U.S. STEEL CORP.
18129	14379	DH2951-114	AITKIN	X	46	25	W	30	NW-NE	U.S. STEEL CORP.
DL-1	10121	DH2951-115	AITKIN	X	47	25	W	34	SE-NE	USBM
DL-2	10122	DH2951-116	AITKIN	X	47	25	W	34	SE-NE	USBM
DL-3	10118	DH2951-117	AITKIN	X	47	25	W	34	SE-NE	USBM
DL-4	10119	DH2951-118	AITKIN	X	47	25	W	34	NE-NE	USBM
DL-5	10120	DH2951-119	AITKIN	X	47	25	W	26	NW-SE	USBM
236	15501	DH2951-120	AITKIN	X	48	25	W	31	NW-NW	HANNA MINING
S238	10318	DH2951-121	AITKIN	X	48	25	W	31	NW-NW	HANNA MINING
240	10302	DH2951-122	AITKIN	X	47	26	W	18	SW-NE	HANNA MINING
S138	10218	DH2951-123	AITKIN	X	47	26	W	4	LOT 11	HANNA MINING
S30	10291	DH2951-124	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S45	10268	DH2951-125	AITKIN	X	47	26	W	4	NW-SE	HANNA MINING
S46	10347	DH2951-126	AITKIN	X	48	26	W	35	SE-SW	HANNA MINING
S47	10269	DH2951-127	AITKIN	X	47	26	W	4	NW-SE	HANNA MINING
48	10348	DH2951-128	AITKIN	X	48	26	W	35	SW-SE	HANNA MINING

APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN SPECTOR		TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
				AREAS							
S49	10293	DH2951-129	AITKIN	X		47	26	W	4	NE-SW	HANNA MINING
S50	10213	DH2951-130	AITKIN	X		47	26	W	3	LOT 2	HANNA MINING
AB-28	14497	DH2951-131	AITKIN	X		46	26	W	9	SW-SE-SE	MGS
AB-27	14500	DH2951-132	AITKIN	X		47	26	W	19	SE-SE-SE	MGS
S204	10397	DH2951-133	AITKIN	X		48	26	W	36	SW-NE	HANNA MINING
206	10172	DH2951-134	AITKIN	X		47	26	W	3	LOT 2	HANNA MINING
207	10398	DH2951-135	AITKIN	X		48	26	W	36	SW-NE	HANNA MINING
S208	15503	DH2951-136	AITKIN	X		47	26	W	17	NW-NW	HANNA MINING
210	10173	DH2951-137	AITKIN	X		47	26	W	3	LOT 2	HANNA MINING
S211	10399	DH2951-138	AITKIN	X		48	26	W	36	SW-NE	HANNA MINING
215	10174	DH2951-139	AITKIN	X		47	26	W	3	SW-NE	HANNA MINING
S225	10300	DH2951-140	AITKIN	X		47	26	W	17	NE-NW	HANNA MINING
S228	10314	DH2951-141	AITKIN	X		48	25	W	31	SW-NW	HANNA MINING
S232	10315	DH2951-142	AITKIN	X		48	25	W	31	SW-NW	HANNA MINING
234	10175	DH2951-143	AITKIN	X		47	26	W	3	SW-NE	HANNA MINING
S241	10176	DH2951-144	AITKIN	X		47	26	W	3	LOT 1	HANNA MINING
S242	10177	DH2951-145	AITKIN	X		47	26	W	3	LOT 1	HANNA MINING
S244	10320	DH2951-146	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
246	10123	DH2951-147	AITKIN	X		47	26	W	2	LOT 4	HANNA MINING
247	10303	DH2951-148	AITKIN	X		47	26	W	18	SE-NW	HANNA MINING
S248	10321	DH2951-149	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
S250	10178	DH2951-150	AITKIN	X		47	26	W	3	LOT 1	HANNA MINING
S251	10322	DH2951-151	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
S254	10323	DH2951-152	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
S256	10179	DH2951-153	AITKIN	X		47	26	W	3	LOT 1	HANNA MINING
S257	10301	DH2951-154	AITKIN	X		47	26	W	18	NE-SW	HANNA MINING
260	10180	DH2951-155	AITKIN	X		47	26	W	3	NW-NE	HANNA MINING
S261	10325	DH2951-156	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
S264	10326	DH2951-157	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
265	10181	DH2951-158	AITKIN	X		47	26	W	3	NW-NW	HANNA MINING
S268	10327	DH2951-159	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
270	10182	DH2951-160	AITKIN	X		47	26	W	3	NW-NW	HANNA MINING
S271	10233	DH2951-161	AITKIN	X		47	26	W	4	NE-SW	HANNA MINING
S274	10329	DH2951-162	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
S275	10234	DH2951-163	AITKIN	X		47	26	W	4	NE-SW	HANNA MINING
276	10124	DH2951-164	AITKIN	X		47	26	W	2	LOT 4	HANNA MINING
S279	10331	DH2951-165	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
281	10183	DH2951-166	AITKIN	X		47	26	W	3	LOT 2	HANNA MINING
S15	10190	DH2951-167	AITKIN	X		47	26	W	3	NW-NE	HANNA MINING
S295	10184	DH2951-168	AITKIN	X		47	26	W	3	LOT 2	HANNA MINING
S296	10336	DH2951-169	AITKIN	X		48	25	W	31	NW-NW	HANNA MINING
292	10345	DH2951-170	AITKIN	X		48	26	W	35	SW-SE	HANNA MINING
S118	10379	DH2951-171	AITKIN	X		48	26	W	36	SW-NE	HANNA MINING
121	10380	DH2951-172	AITKIN	X		48	26	W	36	SW-NE	HANNA MINING
S127	10381	DH2951-173	AITKIN	X		48	26	W	36	SW-NE	HANNA MINING
S128	10382	DH2951-174	AITKIN	X		48	26	W	36	SW-NE	HANNA MINING
S316	10253	DH2951-175	AITKIN	X		47	26	W	4	NE-SE	HANNA MINING

APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN			RDIR	SECTION	FORTY	LESSEE
				SPECTOR	TOWNSHIP	RANGE				
				AREAS						
S317	10254	DH2951-176	AITKIN	X	47	26	W	4	NE-SE	HANNA MINING
S318	10255	DH2951-177	AITKIN	X	47	26	W	4	NE-SE	HANNA MINING
S324	10217	DH2951-178	AITKIN	X	47	26	W	4	SE-SW	HANNA MINING
S325	10257	DH2951-179	AITKIN	X	47	26	W	4	SE-SW	HANNA MINING
S326	10258	DH2951-180	AITKIN	X	47	26	W	4	SE-SW	HANNA MINING
S327	10259	DH2951-181	AITKIN	X	47	26	W	4	SE-SW	HANNA MINING
S29	10289	DH2951-182	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S33	10210	DH2951-183	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S31	10359	DH2951-184	AITKIN	X	48	26	W	35	SW-SW	HANNA MINING
S330	15504	DH2951-185	AITKIN	X	47	26	W	4	SE-SW	HANNA MINING
S36	10361	DH2951-186	AITKIN	X	48	26	W	35	SW-SW	HANNA MINING
S37	10211	DH2951-187	AITKIN	X	47	26	W	3	LOT 2	HANNA MINING
S38	10264	DH2951-188	AITKIN	X	47	26	W	4	NE-SE	HANNA MINING
S39	10265	DH2951-189	AITKIN	X	47	26	W	4	NW-SE	HANNA MINING
S40	10185	DH2951-190	AITKIN	X	47	26	W	3	LOT 2	HANNA MINING
S41	10266	DH2951-191	AITKIN	X	47	26	W	4	NW-SE	HANNA MINING
S42	10267	DH2951-192	AITKIN	X	47	26	W	4	NW-SE	HANNA MINING
S5	10195	DH2951-193	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S6	10294	DH2951-194	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S7	10196	DH2951-195	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S43	10346	DH2951-196	AITKIN	X	48	26	W	35	SE-SW	HANNA MINING
BM-2	11444	DH2951-197	CROW WING		47	29	W	20	SE-SE	USBM
101	15505	DH2951-198	CROW WING		43	32	W	1	SE-SE	HANNA MINING
102	15506	DH2951-199	CROW WING		43	32	W	1	SW-SE	HANNA MINING
103	15507	DH2951-200	CROW WING		43	32	W	1	SE-SE	HANNA MINING
104	15508	DH2951-201	CROW WING		43	32	W	1	SE-SE	HANNA MINING
S3	10290	DH2951-202	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S4	10292	DH2951-203	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S8	10295	DH2951-204	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S9	10197	DH2951-205	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S10	10275	DH2951-206	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S11	10278	DH2951-207	AITKIN	X	47	26	W	4	LOT 11	HANNA MINING
S12	10188	DH2951-208	AITKIN	X	47	26	W	3	NW-NE	HANNA MINING
S13	10282	DH2951-209	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S14	10189	DH2951-210	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S21	10202	DH2951-211	AITKIN	X	47	26	W	3	LOT 3	HANNA MINING
S22	10192	DH2951-212	AITKIN	X	47	26	W	3	LOT 2	HANNA MINING
S20	10288	DH2951-213	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
S23	10204	DH2951-214	AITKIN	X	47	26	W	3	LOT 3	HANNA MINING
S24	10193	DH2951-215	AITKIN	X	47	26	W	3	LOT 2	HANNA MINING
S25	10206	DH2951-216	AITKIN	X	47	26	W	3	LOT 3	HANNA MINING
S27	10194	DH2951-217	AITKIN	X	47	26	W	3	LOT 2	HANNA MINING
MO-1	12019	DH2951-218	KANABEC		40	23	W	26	NW-NW	ROCKY MT. ENERGY
MO-2	12018	DH2951-219	KANABEC		40	23	W	22	SW-SW	ROCKY MT. ENERGY
MO-3	12017	DH2951-220	KANABEC		40	23	W	21	NW-NW	ROCKY MT. ENERGY
R-1	12617	DH2951-221	MORRISON		40	28	W	36	SE-SW	MDNR
PR-1	12750	DH2951-222	PINE		44	21	W	1	SE-SW	MARTIN-TROST

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APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN SPECTOR AREAS	TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
201	15502	DH2951-223	CROW WING		43	32	W	12	NE-SW	HANNA MINING
S253	10148	DH2951-224	AITKIN	X	47	26	W	3	LOT 1	HANNA MINING
S130	10263	DH2951-225	AITKIN	X	47	26	W	4	NE-SE	HANNA MINING
S131	10383	DH2951-226	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
S133	10384	DH2951-227	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
S134	10160	DH2951-228	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S140	10219	DH2951-229	AITKIN	X	47	26	W	4	LOT 11	HANNA MINING
S142	10385	DH2951-230	AITKIN	X	48	26	W	36	SE-NE	HANNA MINING
S143	15500	DH2951-231	AITKIN	X	48	26	W	36	SE-NE	HANNA MINING
S144	10220	DH2951-232	AITKIN	X	47	26	W	4	LOT 11	HANNA MINING
S146	10405	DH2951-233	AITKIN	X	48	26	W	36	SE-NE	HANNA MINING
S148	10222	DH2951-234	AITKIN	X	47	26	W	4	LOT 11	HANNA MINING
S149	10386	DH2951-235	AITKIN	X	48	26	W	36	SE-NE	HANNA MINING
S150	10387	DH2951-236	AITKIN	X	48	26	W	36	SE-NE	HANNA MINING
S151	10388	DH2951-237	AITKIN	X	48	26	W	36	SE-NE	HANNA MINING
S152	10223	DH2951-238	AITKIN	X	47	26	W	4	LOT 11	HANNA MINING
S154	10389	DH2951-239	AITKIN	X	48	26	W	36	SE-NE	HANNA MINING
S155	10390	DH2951-240	AITKIN	X	48	26	W	36	SE-NE	HANNA MINING
S156	10161	DH2951-241	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
158	10162	DH2951-242	AITKIN	X	47	26	W	3	NW-SW	HANNA MINING
S160	10163	DH2951-243	AITKIN	X	47	26	W	3	NW-SW	HANNA MINING
163	10164	DH2951-244	AITKIN	X	47	26	W	3	NW-SW	HANNA MINING
S166	10304	DH2951-245	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
168	10165	DH2951-246	AITKIN	X	47	26	W	3	LOT 12	HANNA MINING
172	10166	DH2951-247	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S173	10391	DH2951-248	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
179	10392	DH2951-249	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
182	10167	DH2951-250	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S183	10393	DH2951-251	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
186	10168	DH2951-252	AITKIN	X	47	26	W	3	SW-NE	HANNA MINING
S187	10394	DH2951-253	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
192	10169	DH2951-254	AITKIN	X	47	26	W	3	LOT 2	HANNA MINING
193	10395	DH2951-255	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
S195	10170	DH2951-256	AITKIN	X	47	26	W	3	SW-NW	HANNA MINING
S201	10396	DH2951-257	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
RS-2	12752	DH2951-258	PINE		44	21	W	10	SW-SW	MARTIN-TROST
S331	10133	DH2951-259	AITKIN	X	47	26	W	4	SE-SW	HANNA MINING
265-1/1	12618	DH2951-260	MORRISON		40	31	W	8	SW-SW	EXMIN
LS-10	10511	DH2951-261	BENTON		37	28	W	26	NW-SW	URANGESELLSCHAFT
LS-11	10512	DH2951-262	BENTON		37	28	W	34	NW-NW	URANGESELLSCHAFT
DRP-1	12759	DH2951-263	PINE		45	20	W	19	SW-SW	MARTIN-TROST
DRP-2	12760	DH2951-264	PINE		45	20	W	19	SW-SW	MARTIN-TROST
JW-1	12758	DH2951-265	PINE		45	20	W	10	NW-NW	MARTIN-TROST
RS-1	12751	DH2951-266	PINE		44	21	W	10	NE-SW	MARTIN-TROST
1016	10171	DH2951-267	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
1018	10135	DH2951-268	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
1019	10136	DH2951-269	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING

APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN SPECTOR AREAS	TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
53	10186	DH2951-270	AITKIN	X	47	26	W	3	LOT 2	HANNA MINING
S1	10274	DH2951-271	AITKIN	X	47	26	W	4	SE-NE	HANNA MINING
MLCH-13	12753	DH2951-272	PINE		45	19	W	11	NW-NW	ROCKY MT. ENERGY
KRCH-8	12755	DH2951-273	PINE		45	20	W	4	SW-SE	ENERGY RESERVE MINING
286-6/1	10513	DH2951-274	BENTON		37	29	W	17	NE-SE	EXMIN
ML-42C	12762	DH2951-275	PINE		45	20	W	20	SE-SW-SW	ROCKY MT. ENERGY
203	10137	DH2951-276	CROW WING		43	32	W	12	NE-SW	HANNA MINING
208	10142	DH2951-277	CROW WING		43	32	W	12	NW-SW	HANNA MINING
ML-22	12761	DH2951-278	PINE		45	20	W	20	SW-SE-SE	ROCKY MT. ENERGY
ML-55CA	12763	DH2951-279	PINE		45	20	W	28	SW-NW-NW	ROCKY MT. ENERGY
BM-3	11445	DH2951-280	CROW WING		47	29	W	20	SE-SW	USBM
KR-2	12754	DH2951-281	PINE		45	20	W	3	NW-NW	ENERGY RESERVE MINING
207	10152	DH2951-282	CROW WING		43	32	W	12	NW-SW	HANNA MINING
S1033	10154	DH2951-283	CROW WING	X	46	29	W	10	NW-SW	HANNA MINING
S1034	10157	DH2951-284	CROW WING	X	46	29	W	10	SW-NW	HANNA MINING
S15	10159	DH2951-285	CROW WING	X	46	29	W	4	LOT 9	HANNA MINING
S20	15509	DH2951-286	CROW WING	X	46	29	W	4	LOT 1	HANNA MINING
S21	10337	DH2951-287	CROW WING	X	46	29	W	4	LOT 9	HANNA MINING
S1022	10130	DH2951-288	CROW WING	X	46	29	W	10	SW-NW	HANNA MINING
S1031	10212	DH2951-289	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
S1029	10363	DH2951-290	CROW WING	X	46	29	W	10	NW-SW	HANNA MINING
S1030	10357	DH2951-291	CROW WING	X	46	29	W	10	SE-NW	HANNA MINING
S222	10214	DH2951-292	CROW WING	X	46	29	W	9	NE-SE	HANNA MINING
S223	10215	DH2951-293	CROW WING	X	46	29	W	9	NE-SE	HANNA MINING
S224	10368	DH2951-294	CROW WING	X	46	29	W	9	NE-SE	HANNA MINING
S1036	10370	DH2951-295	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1040	10034	DH2951-296	CROW WING	X	46	29	W	11	NW-NE	HANNA MINING
S1046	10198	DH2951-297	CROW WING	X	46	29	W	11	NW-NE	HANNA MINING
S1033	10199	DH2951-298	CROW WING	X	46	29	W	11		HANNA MINING
276	10285	DH2951-299	CROW WING	X	46	29	W	2	SE-SE	HANNA MINING
S720	10203	DH2951-300	CROW WING	X	46	29	W	3	LOT 6	HANNA MINING
S-2-55	10317	DH2951-301	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
10	11065	DH2951-302	CROW WING	X	46	29	W	11	NE-NW	CROSBY EXPL.
204	10205	DH2951-303	CROW WING		43	32	W	12	NE-SW	HANNA MINING
206	10143	DH2951-304	CROW WING		43	32	W	12	SE-NW	HANNA MINING
205	10144	DH2951-305	CROW WING		43	32	W	12	NE-SW	HANNA MINING
202	10146	DH2951-306	CROW WING		43	32	W	12	NE-SW	HANNA MINING
BM-5	10015	DH2951-307	AITKIN	X	46	25	W	15	SE-NW	USBM
G-6	10004	DH2951-308	AITKIN	X	46	25	W	11	NW-NW	HANNA MINING
G-5	10003	DH2951-309	AITKIN	X	46	25	W	11	NW-NW	HANNA MINING
G-8	10005	DH2951-310	AITKIN	X	46	25	W	11	SW-SW	HANNA MINING
BM-12F	10009	DH2951-311	AITKIN	X	46	25	W	14	SW-NW	USBM
BM-4	10014	DH2951-312	AITKIN	X	46	25	W	15	SE-NW	USBM
BM-2	10012	DH2951-313	AITKIN	X	46	25	W	15	SW-NW	USBM
87	10097	DH2951-314	AITKIN	X	46	25	W	29	NE-SE	HANNA MINING
79	10031	DH2951-315	AITKIN	X	46	25	W	28	SW-NW	HANNA MINING
78	10030	DH2951-316	AITKIN	X	46	25	W	28	SW-NW	HANNA MINING

APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN SPECTOR AREAS	TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
73	10029	DH2951-317	AITKIN	X	46	25	W	28	SW-NW	HANNA MINING
82	10033	DH2951-318	AITKIN	X	46	25	W	28	SW-NW	HANNA MINING
BM-7	10017	DH2951-319	AITKIN	X	46	25	W	15	SE-NW	USBM
SR-1	15510	DH2951-320	CARLTON		46	21	W	19	SW-SE	HANNA MINING
SR-3	15511	DH2951-321	CARLTON		46	21	W	19	NW-SE	HANNA MINING
SR-2	15512	DH2951-322	CARLTON		46	21	W	19	SW-SE	HANNA MINING
SL-1	10556	DH2951-323	CARLTON		46	21	W	6	NE-NW	MARTIN-TROST
CK-1	10560	DH2951-324	CARLTON		46	21	W	22	SW-SW	RUSC, INC.
CK-2	10561	DH2951-325	CARLTON		46	21	W	22	SW-SW	RUSC, INC.
CK-3	10562	DH2951-326	CARLTON		46	21	W	22	SW-SW	RUSC, INC.
CK-4	10563	DH2951-327	CARLTON		46	21	W	22	SW-SW	RUSC, INC.
CK-5	10564	DH2951-328	CARLTON		46	21	W	22	SW-SW	RUSC, INC.
HM-1	10565	DH2951-329	CARLTON		46	21	W	26	SW-NE-NW	RUSC, INC.
MM-1	10544	DH2951-330	CARLTON		46	20	W	18	NW-SE-SE	RUSC, INC.
MM-2	10545	DH2951-331	CARLTON		46	20	W	18	NW-SE-SE	RUSC, INC.
EF-1	10553	DH2951-332	CARLTON		46	20	W	33	NE-NW	RUSC, INC.
MG-2	10558	DH2951-333	CARLTON		46	21	W	22	SW-SW	ANACONDA
MG-1	10557	DH2951-334	CARLTON		46	21	W	22	SE-SW	ANACONDA
MG-4	10559	DH2951-335	CARLTON		46	21	W	22	SW-SW	ANACONDA
MG-3	10566	DH2951-336	CARLTON		46	21	W	28	NE-NW	ANACONDA
ML-27	12757	DH2951-337	PINE		45	20	W	8	NW-NW	ROCKY MT. ENERGY
KRCH-6	10554	DH2951-338	CARLTON		46	21	W	4	SW-SE	ENERGY RESERVE MINING
KRCH-7	10555	DH2951-339	CARLTON		46	21	W	4	SW-NE	ENERGY RESERVE MINING
P-11	14524	DH2951-340	MORRISON	X	42	29	W	3	SE-SW-SE	MGS
P-12	14523	DH2951-341	MORRISON	X	42	29	W	2	SW-SE-SE	MGS
PX-1	14734	DH2951-342	PINE		44	21	W	32	NW-NW	AMERICAN SHIELD
P-9	14525	DH2951-343	MORRISON	X	42	30	W	1	NE-NE-NE	MGS
264-7/2 R1	14492	DH2951-344	MORRISON	X	41	30	W	26	NE-NW-NW	EXMIN
285-25/2 R1	15049	DH2951-345	MILLE LACS		42	25	W	26	NE-SW	EXMIN
18974	10636	DH2951-346	CASS		141	25	W	17	NW-SW	U.S. STEEL CORP.
3796	10638	DH2951-347	CASS		142	25	W	13	S1/2-SE	U.S. STEEL CORP.
4072	10640	DH2951-348	CASS		142	25	W	13	NE-SW	U.S. STEEL CORP.
3795	10637	DH2951-349	CASS		142	25	W	13	NE-NE	U.S. STEEL CORP.
3987	10639	DH2951-350	CASS		142	25	W	13	W1/2	U.S. STEEL CORP.
18972	10635	DH2951-351	CASS		141	27	W	35	SE-SE	U.S. STEEL CORP.
LV-2A	14563	DH2951-352	CASS		140	27	W	14	NW-NE-NE	MGS
LV-1	14562	DH2951-353	CASS		139	29	W	1	NW-NE-NW	MGS
18695	11909	DH2951-354	CASS		140	26	W	14	NE-SW	U.S. STEEL CORP.
TL-5	10631	DH2951-355	CASS		140	26	W	23	SE-SW	USBM-THUNDER LAKE
TL-1	10628	DH2951-356	CASS		140	25	W	10	SW-SW	USBM-THUNDER LAKE
TL-2	10629	DH2951-357	CASS		140	25	W	10	NW-SW	USBM-THUNDER LAKE
TL-3	10630	DH2951-358	CASS		140	25	W	9	SE-SW	USBM-THUNDER LAKE
TL-4	10632	DH2951-359	CASS		140	26	W	26	SW-NE	USBM-THUNDER LAKE
18971	10633	DH2951-360	CASS		140	27	W	1	NE-SW	U.S. STEEL CORP.
18973	10634	DH2951-361	CASS		140	27	W	11	SW-SE	U.S. STEEL CORP.
MLCH-8	12756	DH2951-362	PINE		45	20	W	7	SE-NE	ROCKY MT. ENERGY
ML-49C	12771	DH2951-363	PINE		45	20	W	29	NE-NE	ROCKY MT. ENERGY

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APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	WITHIN SPECTOR		TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
			COUNTY	AREAS						
ML-43C	12768	DH2951-364	PINE		45	20	W	29	NE-NE-NE	ROCKY MT. ENERGY
ML-50C	12772	DH2951-365	PINE		45	20	W	29	NE-NE	ROCKY MT. ENERGY
ML-51C	12773	DH2951-366	PINE		45	20	W	29	NE-NE	ROCKY MT. ENERGY
T-4	12749	DH2951-367	PINE		43	20	W	11		MDOT
T-5	10517	DH2951-368	PINE		45	17	W	20		MDOT
T-6	10518	DH2951-369	PINE		45	17	W	20		MDOT
T-3	10614	DH2951-370	CARLTON		49	16	W	30		MDOT
AB-10	14495	DH2951-371	AITKIN		44	22	W	5	SE-SW-NE	MGS
AB-24A	14597	DH2951-372	CROW WING	X	45	28	W	2	NW-SE-SW	MGS
ML-54C	12776	DH2951-373	PINE		45	20	W	29	NE-NE	ROCKY MT. ENERGY
ML-45C	12770	DH2951-374	PINE		45	20	W	29	NE-NE-NE	ROCKY MT. ENERGY
ML-53C	12775	DH2951-375	PINE		45	20	W	29	NE-NE	ROCKY MT. ENERGY
ML-44C	12769	DH2951-376	PINE		45	20	W	29	NE-NE-NE	ROCKY MT. ENERGY
ML-56C	12777	DH2951-377	PINE		45	20	W	29	NE-NE-NE	ROCKY MT. ENERGY
MLCH-10	12778	DH2951-378	PINE		45	20	W	29	NE-NE-NE	ROCKY MT. ENERGY
ML-52C	12774	DH2951-379	PINE		45	20	W	29	SE-NE	ROCKY MT. ENERGY
KRCH-1	12780	DH2951-380	PINE		45	21	W	1	NE-NW	ENERGY RESERVE MINING
MLCH-6	12779	DH2951-381	PINE		45	20	W	29	NE-NE-NE	ROCKY MT. ENERGY
D-1	12781	DH2951-382	PINE		45	21	W	9	NE-NW	MARTIN-TROST
D-2	12782	DH2951-383	PINE		45	21	W	9	SE-NW	MARTIN-TROST
682	10764	DH2951-384	CROW WING		45	30	W	11		CROSBY EXPL.
686	10765	DH2951-385	CROW WING		45	30	W	11		CROSBY EXPL.
S-1-55	15513	DH2951-386	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
S503	15514	DH2951-387	CROW WING	X	46	29	W	4	LOT 3	HANNA MINING
S505	15864	DH2951-388	CROW WING	X	46	29	W	4	LOT 4	HANNA MINING
S506	15865	DH2951-389	CROW WING	X	46	29	W	4	LOT 4	HANNA MINING
S507	15866	DH2951-390	CROW WING	X	46	29	W	4	LOT 3	HANNA MINING
S509	15867	DH2951-391	CROW WING	X	46	29	W	4	LOT 4	HANNA MINING
S511	15868	DH2951-392	CROW WING	X	46	29	W	4	LOT 3	HANNA MINING
S501	15905	DH2951-393	CROW WING	X	46	29	W	4	LOT 3	HANNA MINING
S502	15906	DH2951-394	CROW WING	X	46	29	W	4	LOT 4	HANNA MINING
H2	15976	DH2951-395	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H3	15977	DH2951-396	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H4	15978	DH2951-397	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H5	15979	DH2951-398	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H6	15980	DH2951-399	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H12	15981	DH2951-400	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H15	15982	DH2951-401	CROW WING	X	46	29	W	4	LOT 4	HANNA MINING
H17	15983	DH2951-402	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H18	15984	DH2951-403	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H19	15985	DH2951-404	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H20	15986	DH2951-405	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
H21	15987	DH2951-406	CROW WING	X	46	29	W	4	LOT 6	HANNA MINING
PS-2	10150	DH2951-407	CARLTON		46	19	W	19	SW-SE	MARTIN-TROST
56	10187	DH2951-408	AITKIN	X	47	26	W	3	LOT 2	HANNA MINING
60	10351	DH2951-409	AITKIN	X	48	26	W	35	NE-SE	HANNA MINING
61	10352	DH2951-410	AITKIN	X	48	26	W	35		HANNA MINING

APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN SPECTOR AREAS	TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
62	10401	DH2951-411	AITKIN	X	48	26	W	36	NW-SW	HANNA MINING
AB-22	14513	DH2951-412	CROW WING	X	46	28	W	13	NE-SW-SW	MGS
AB-23A	14514	DH2951-413	CROW WING	X	46	28	W	26	SE-SE-NE	MGS
S1020	16271	DH2951-414	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1021	16272	DH2951-415	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1022	16273	DH2951-416	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1023	16274	DH2951-417	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1024	16275	DH2951-418	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1025	16276	DH2951-419	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1026	16277	DH2951-420	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1027	16278	DH2951-421	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1028	16279	DH2951-422	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1030	16280	DH2951-423	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1031	16281	DH2951-424	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1032	16282	DH2951-425	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S213	10400	DH2951-426	AITKIN	X	48	26	W	36	SW-NE	HANNA MINING
E1001	16114	DH2951-427	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
E1002	16115	DH2951-428	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
E1003	16116	DH2951-429	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
E1000	16113	DH2951-430	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
E1004	16117	DH2951-431	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
S256	16585	DH2951-432	CROW WING	X	46	29	W	6	NE-SW	HANNA MINING
S257	16586	DH2951-433	CROW WING	X	46	29	W	6	SW-SW	HANNA MINING
S258	16587	DH2951-434	CROW WING	X	46	29	W	6	SW-SW	HANNA MINING
S260	16588	DH2951-435	CROW WING	X	46	29	W	6	SE-SW	HANNA MINING
S261	16589	DH2951-436	CROW WING	X	46	29	W	6	SE-SW	HANNA MINING
S263	16590	DH2951-437	CROW WING	X	46	29	W	6	NW-SE	HANNA MINING
S266	16591	DH2951-438	CROW WING	X	46	29	W	6	NW-SE	HANNA MINING
S327	16634	DH2951-439	CROW WING	X	46	29	W	1	NW-SW	HANNA MINING
S328	16635	DH2951-440	CROW WING	X	46	29	W	1	NE-SW	HANNA MINING
S331	16641	DH2951-441	CROW WING	X	46	29	W	1	SE-NW	HANNA MINING
S332	16643	DH2951-442	CROW WING	X	46	29	W	1	SE-NW	HANNA MINING
S333	16645	DH2951-443	CROW WING	X	46	29	W	1	NE-SW	HANNA MINING
S334	16647	DH2951-444	CROW WING	X	46	29	W	1	SE-NW	HANNA MINING
E1006	15648	DH2951-445	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
E1005	15644	DH2951-446	CROW WING	X	46	29	W	3	SE-SW	HANNA MINING
S313	16621	DH2951-447	CROW WING	X	46	29	W	1	NW-SW	HANNA MINING
S315	16622	DH2951-448	CROW WING	X	46	29	W	2	NE-SE	HANNA MINING
S316	16623	DH2951-449	CROW WING	X	46	29	W	1	NW-SW	HANNA MINING
S317	16624	DH2951-450	CROW WING	X	46	29	W	2	NE-SE	HANNA MINING
S318	16625	DH2951-451	CROW WING	X	46	29	W	1	NW-SW	HANNA MINING
S368	16702	DH2951-452	CROW WING	X	46	29	W	1	NE-SW	HANNA MINING
S369	16703	DH2951-453	CROW WING	X	46	29	W	1	NE-SW	HANNA MINING
S370	16706	DH2951-454	CROW WING	X	46	29	W	1	NE-SW	HANNA MINING
S371	16707	DH2951-455	CROW WING	X	46	29	W	1	NE-SW	HANNA MINING
S372	16708	DH2951-456	CROW WING	X	46	29	W	1	NE-SW	HANNA MINING
S374	16709	DH2951-457	CROW WING	X	46	29	W	1	SE-NW	HANNA MINING

APPENDIX 295-E: DRILL HOLE LIST WITH LOCATIONS

DRILL HOLE NUMBER	UNIQUE DRILL NUMBER	P295 FILE NUMBER	COUNTY	WITHIN SPECTOR AREAS	TOWNSHIP	RANGE	RDIR	SECTION	FORTY	LESSEE
S1000	16343	DH2951-458	CROW WING	X	46	29	W	2	SE-SW	HANNA MINING
S1001	16344	DH2951-459	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1002	16346	DH2951-460	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1003	16348	DH2951-461	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1004	16350	DH2951-462	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1005	16351	DH2951-463	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1007	15653	DH2951-464	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1008	15656	DH2951-465	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1009	15659	DH2951-466	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1011	16357	DH2951-467	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1013	15669	DH2951-468	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1014	15673	DH2951-469	CROW WING	X	46	29	W	2	SE-SE	HANNA MINING
S1012	16359	DH2951-470	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1015	16361	DH2951-471	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1016	16363	DH2951-472	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1017	16365	DH2951-473	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
S1019	16368	DH2951-474	CROW WING	X	46	29	W	11	NE-NW	HANNA MINING
AB-25	14499	DH2951-475	AITKIN	X	47	26	W	5	NW-SE-SW	MGS
AB-8	14498	DH2951-476	AITKIN	X	47	23	W	12	SW-SW-NW	MGS
AB-2	14504	DH2951-477	CARLTON		47	19	W	7	NW-NW-SW	MGS
S1036	16404	DH2951-478	CROW WING		47	28	W	29	NW-SW	HANNA MINING
S1037	16406	DH2951-479	CROW WING		47	28	W	30	SE-NE	HANNA MINING
S1038	16408	DH2951-480	CROW WING		47	28	W	29	NW-SW	HANNA MINING
S1039	16410	DH2951-481	CROW WING		47	28	W	29	SW-NW	HANNA MINING
S1041	16417	DH2951-482	CROW WING		47	28	W	29	SW-NW	HANNA MINING
S1042	16418	DH2951-483	CROW WING		47	28	W	29	SW-NW	HANNA MINING
S1043	16419	DH2951-484	CROW WING		47	28	W	30	LOT 5	HANNA MINING
S1044	16109	DH2951-485	CROW WING		47	28	W	29	NW-SW	HANNA MINING

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Appendix 295-F: Drill Logs

DDH: 306 UNIQUE: 15464 P295 FILE: DH2951-035 TOP_INT: 44.0 BOT_INT: 50.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, PHYLLITIC, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, STRATIFORM

DDH: 307 UNIQUE: 15465 P295 FILE: DH2951-036 TOP_INT: 48.0 BOT_INT: 55.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, PHYLLITIC?, BRITTLE DEFORMATION FEATURES?

ALTERATION: CARBONATE, CLAY, GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: 307 UNIQUE: 15465 P295 FILE: DH2951-036 TOP_INT: 55.0 BOT_INT: 65.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, PHYLLITIC, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, STRATIFORM

DDH: 308 UNIQUE: 15466 P295 FILE: DH2951-037 TOP_INT: 49.0 BOT_INT: 60.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, PHYLLITIC, BRITTLE DEFORMATION FEATURES, SCHISTOSE

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, STRATIFORM

DDH: 309 UNIQUE: 15467 P295 FILE: DH2951-038 TOP_INT: 58.0 BOT_INT: 60.0

LITHOLOGY:
GOETHITIC PHYLLITIC SILTSTONE

LITH DESCRIPTION:
LAMINATED, CLASTIC ROCK?, PHYLLITIC

ALTERATION: GOETHITE, HEMATITE
MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 309 UNIQUE: 15467 P295 FILE: DH2951-038 TOP_INT: 65.0 BOT_INT: 70.0

LITHOLOGY:
GOETHITIC PHYLLITIC SILTSTONE

LITH DESCRIPTION:
LAMINATED, CLASTIC ROCK?, PHYLLITIC

ALTERATION: GOETHITE, HEMATITE
MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 310 UNIQUE: 15468 P295 FILE: DH2951-039 TOP_INT: 45.0 BOT_INT: 50.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED?

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ
MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 310 UNIQUE: 15468 P295 FILE: DH2951-039 TOP_INT: 58.0 BOT_INT: 65.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED?

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ
MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 310 UNIQUE: 15468 P295 FILE: DH2951-039 TOP_INT: 65.0 BOT_INT: 70.0

LITHOLOGY:

CHERT(?), GOETHITE IRON FORMATION AND QUARTZITE(?)

LITH DESCRIPTION:

LAMINATED?, BEDDED?, CLASTIC ROCK?

ALTERATION: GOETHITE

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 310 UNIQUE: 15468 P295 FILE: DH2951-039 TOP_INT: 70.0 BOT_INT: 85.0

LITHOLOGY:

CHERT(?), HEMATITE IRON FORMATION, AND QUARTZITE(?)

LITH DESCRIPTION:

LAMINATED?, BEDDED?, CLASTIC ROCK?

ALTERATION: HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 310 UNIQUE: 15468 P295 FILE: DH2951-039 TOP_INT: 85.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, GOETHITE, HEMATITE, Mn OXIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, BEDDED?

ALTERATION: GOETHITE, HEMATITE, LIMONITE, Mn OXIDES, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, LIMONITE, RED HEMATITE, MANGANESE OXIDES

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 310 UNIQUE: 15468 P295 FILE: DH2951-039 TOP_INT: 115.0 BOT_INT: 125.0

LITHOLOGY:

CHERT, GOETHITE, HEMATITE, Mn OXIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, BEDDED?

ALTERATION: CARBONATE, GOETHITE, HEMATITE, LIMONITE, Mn OXIDES, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, LIMONITE, RED HEMATITE, MANGANESE OXIDES

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: 310 UNIQUE: 15468 P295 FILE: DH2951-039 TOP_INT: 125.0 BOT_INT: 175.0

LITHOLOGY:
CHERT, GOETHITE, MAGNETITE, Mn OXIDE IRON FORMATIONLITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, BEDDED?LITERATION: CARBONATE, GOETHITE, LIMONITE, MAGNETITE, Mn OXIDES, QUARTZ
MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE?, MANGANESE OXIDES
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: 310 UNIQUE: 15468 P295 FILE: DH2951-039 TOP_INT: 175.0 BOT_INT: 185.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATIONLITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, BEDDED?LITERATION: CARBONATE, HEMATITE, QUARTZ
MINERALIZATION: GREY HEMATITE, MAGNETITE, RED HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DH: 18135 UNIQUE: 10753 P295 FILE: DH2951-040 TOP_INT: 230.0 BOT_INT: 275.0

LITHOLOGY:
ALTERED METAGABBROLITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?LITERATION: AMPHIBOLE, CHLORITE, CLAY, LIMONITE, HEMATITE, PYRITE
MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED, SELECTIVELY PERVASIVE?

DH: 18138 UNIQUE: 10754 P295 FILE: DH2951-041 TOP_INT: 214.0 BOT_INT: 244.0

LITHOLOGY:
CARBONATE(?), GOETHITE, HEMATITE, LIMONITE, MAGNETITE, SILICATE IRON FORMATIONLITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LAMINATEDLITERATION: CARBONATE, GOETHITE, LIMONITE, MAGNETITE, Mn OXIDES, QUARTZ
MINERALIZATION: MAGNETITE, GOETHITE, LIMONITE, MANGANESE OXIDES
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18138 UNIQUE: 10754 P295 FILE: DH2951-041 TOP_INT: 244.0 BOT_INT: 283.0

LITHOLOGY:

CARBONATE(?), GOETHITE, HEMATITE, LIMONITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LAMINATED

ALTERATION: CARBONATE, GOETHITE, LIMONITE, MAGNETITE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, GOETHITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18138 UNIQUE: 10754 P295 FILE: DH2951-041 TOP_INT: 283.0 BOT_INT: 300.0

LITHOLOGY:

CARBONATE(?), GRAPHITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LAMINATED

ALTERATION: CARBONATE, CHLORITE?, GOETHITE, MAGNETITE, PYRITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18138 UNIQUE: 10754 P295 FILE: DH2951-041 TOP_INT: 300.0 BOT_INT: 315.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION, "METABASALT", AND "FELSITE"

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, GOETHITE?, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18138 UNIQUE: 10754 P295 FILE: DH2951-041 TOP_INT: 315.0 BOT_INT: 345.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, PYRITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18144 UNIQUE: 10755 P295 FILE: DH2951-042 TOP_INT: 234.0 BOT_INT: 300.0

LITHOLOGY:
ALTERED METAGABBRO

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: AMPHIBOLE, CARBONATE, CHLORITE, CLAY, LIMONITE, HEMATITE, Mn OXIDES, PYRITE
MINERALIZATION: LIMONITE, RED HEMATITE, MANGANESE OXIDES?, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING

DDH: S118 UNIQUE: 15469 P295 FILE: DH2951-043 TOP_INT: 77.0 BOT_INT: 124.0

LITHOLOGY:
QUARTZITE, ARENITE, SILICEOUS SILTSTONE W/IRON STAINING

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, KAOLINITE, HEMATITE, MICA, MN OXIDES
MINERALIZATION: RED HEMATITE, LIMONITE, MANGANESE OXIDES?
MINERALIZATION TYPE:
DISSEMINATED, VEIN, CROSS-CUTTING

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 97.0 BOT_INT: 110.0

LITHOLOGY:
GLACIAL SAND AND GRAVEL

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 110.0 BOT_INT: 125.0

LITHOLOGY:
IGNEOUS (OR SILICEOUS TUFF? OR CLASTIC ROCK?)

LITH DESCRIPTION:
CRYSTALLIZED/HORNFELSED

ALTERATION: GOETHITE, QUARTZ
MINERALIZATION: GOETHITE?
MINERALIZATION TYPE:
DISSEMINATED?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 125.0 BOT_INT: 135.0

LITHOLOGY:
CHERT (OR SILICEOUS TUFF? OR CLASTIC ROCK?)

LITH DESCRIPTION:
CRYSTALLIZED/HORNFELSE

ALTERATION: MN OXIDES, Mn OXIDES
MINERALIZATION: MANGANESE OXIDES?
MINERALIZATION TYPE:
VEIN?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 135.0 BOT_INT: 145.0

LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: GOETHITE, RED HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 145.0 BOT_INT: 155.0

LITHOLOGY:
GOETHITE, HEMATITE, Mn OXIDE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES ?

ALTERATION: HEMATITE, GOETHITE, MN OXIDES
MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, MANGANESE OXIDES
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 155.0 BOT_INT: 165.0

LITHOLOGY:
CHERT, LIMONITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES ?

ALTERATION: LIMONITE, RED HEMATITE
MINERALIZATION: LIMONITE, RED HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 165.0 BOT_INT: 170.0

LITHOLOGY:
LIMONITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: LIMONITE, GREY HEMATITE, RED HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 170.0 BOT_INT: 175.0

LITHOLOGY:
CHERT, LIMONITE, MnOX IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES ?

ALTERATION: HEMATITE, GOETHITE, MN OXIDES
MINERALIZATION: LIMONITE, MANGANESE OXIDES, GOETHITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 175.0 BOT_INT: 195.0

LITHOLOGY:
HEMATITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: HEMATITE, QUARTZ
MINERALIZATION: GREY AND RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 195.0 BOT_INT: 198.0

LITHOLOGY:
GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES ?

ALTERATION: GOETHITE, HEMATITE
MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 198.0 BOT_INT: 227.0

LITHOLOGY:

CHERT, GOETHITE, HEMATITE IRON FORMATION; QUARTZITE, ARENITE, SILICEOUS SILTSTONE W/IRON STAINING

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, LIMONITE, Mn OXIDES, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE, MANGANESE OXIDES

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 227.0 BOT_INT: 247.0

LITHOLOGY:

GOETHITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, Mn OXIDES, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE, MANGANESE OXIDES

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S124 UNIQUE: 15470 P295 FILE: DH2951-044 TOP_INT: 247.0 BOT_INT: 260.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S126 UNIQUE: 15471 P295 FILE: DH2951-045 TOP_INT: 72.0 BOT_INT: 98.0

LITHOLOGY:

QUARTZITE W/GREEN PHYLLITE

LITH DESCRIPTION:

PHYLLITIC, RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN SELVAGE?

DDH: S126 UNIQUE: 15471 P295 FILE: DH2951-045 TOP_INT: 98.0 BOT_INT: 115.0

LITHOLOGY:
 GOETHITE, HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
 LITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
 MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S126 UNIQUE: 15471 P295 FILE: DH2951-045 TOP_INT: 115.0 BOT_INT: 125.0

LITHOLOGY:
 GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE, WITH CLAY(?), SULFATE(?)
 MINERALIZATION: GREY HEMATITE, GOETHITE?
 MINERALIZATION TYPE:

DDH: S126 UNIQUE: 15471 P295 FILE: DH2951-045 TOP_INT: 125.0 BOT_INT: 135.0

LITHOLOGY:
 GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE, WITH CLAY(?), SULFATE(?)
 MINERALIZATION: GREY HEMATITE, GOETHITE
 MINERALIZATION TYPE:

DDH: S1042 UNIQUE: 15472 P295 FILE: DH2951-046 TOP_INT: 110.0 BOT_INT: 301.0

LITHOLOGY:
 GOETHITE, HEMATITE, HEMATITE IRON FORMATION; QUARTZITE, ARENITE, SILICEOUS SILTSTONE W/IRON STAINING

LITH DESCRIPTION:
 LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY & RED HEMATITE, LIMONITE, QUARTZ, SULFATES
 MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1043 UNIQUE: 15473 P295 FILE: DH2951-047 TOP_INT: 0.0 BOT_INT: 100.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

BEDDED, LAMINATED, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: GOETHITE, HEMATITE, WITH CLAY(?), SULFATE(?)

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE?, MAGNETITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1044 UNIQUE: 15474 P295 FILE: DH2951-048 TOP_INT: 0.0 BOT_INT: 95.0

LITHOLOGY:

CHERT, GOETHITE, HEMATITE IRON FORMATION; QUARTZITE, ARENITE, SILICEOUS SILTSTONE W/IRON STAINING

LITH DESCRIPTION:

LAMINATED, BEDDED, SCHISTOSE, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 306 UNIQUE: 10963 P295 FILE: DH2951-049 TOP_INT: 49.0 BOT_INT: 54.0

LITHOLOGY:

GRAPHITE, SULFIDE ARGILLITE

LITH DESCRIPTION:

PHYLLITIC?

ALTERATION: SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE?, STRATIFORM?

DDH: 18145 UNIQUE: 10756 P295 FILE: DH2951-050 TOP_INT: 310.0 BOT_INT: 364.0

LITHOLOGY:

ALTERED METAGABBRO

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: AMPHIBOLE, CHLORITE, CLAY, LIMONITE, HEMATITE

MINERALIZATION: MAGNETITE, GOETHITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, CROSS-CUTTING, SELECTIVELY PERVASIVE

DDH: 18226 UNIQUE: 10761 P295 FILE: DH2951-051 TOP_INT: 200.0 BOT_INT: 230.0

LITHOLOGY:
MAGNETITIC, KAOLINITIC REGOLITH

LITH DESCRIPTION:

ALTERATION: CLAY, KAOLINITE, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 18226 UNIQUE: 10761 P295 FILE: DH2951-051 TOP_INT: 230.0 BOT_INT: 235.0

LITHOLOGY:
CLAYEY LIMONITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: CLAY, LIMONITE, MAGNETITE

MINERALIZATION: LIMONITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 18226 UNIQUE: 10761 P295 FILE: DH2951-051 TOP_INT: 235.0 BOT_INT: 310.0

LITHOLOGY:
EFFACEOUS CARBONATE, MAGNETITE, SILICATE IRON FORMATION AND METABASALT

LITH DESCRIPTION:

MINERALIZED, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFEISED?

ALTERATION: CARBONATE, CHLORITE, CLAY, LIMONITE

MINERALIZATION: MAGNETITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18132 UNIQUE: 10752 P295 FILE: DH2951-052 TOP_INT: 177.0 BOT_INT: 220.0

LITHOLOGY:
PALE YELLOW, GREEN, RED CLAYEY SAPROLITE

LITH DESCRIPTION:

MINERALIZED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, CLAY, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 18132 UNIQUE: 10752 P295 FILE: DH2951-052 TOP_INT: 220.0 BOT_INT: 255.0

LITHOLOGY:

PALE YELLOW, GREEN, RED CLAYEY SAPROLITE AND CHERT PYRITE BRECCIA

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, CLAY, PYRITE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE?, CROSS-CUTTING

DDH: 18132 UNIQUE: 10752 P295 FILE: DH2951-052 TOP_INT: 255.0 BOT_INT: 295.0

LITHOLOGY:

CHERT PYRITE BRECCIA

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, CLAY, GOETHITE, RED HEMATITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM?

DDH: 18132 UNIQUE: 10752 P295 FILE: DH2951-052 TOP_INT: 295.0 BOT_INT: 324.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18427 UNIQUE: 10749 P295 FILE: DH2951-053 TOP_INT: 210.0 BOT_INT: 225.0

LITHOLOGY:

SAPROLITIC MICACEOUS SILTSTONE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES ?

ALTERATION: CLAY, LIMONITE

MINERALIZATION: LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, VEIN SELVAGE?, SELECTIVELY PERVASIVE

DDH: 18427 UNIQUE: 10749 P295 FILE: DH2951-053 TOP_INT: 225.0 BOT_INT: 240.0

LITHOLOGY:
 GOETHITIC, HEMATITIC, LIMONITIC TUFFACEOUS SILTSTONE W/ CHERT, SULFIDES

LITH DESCRIPTION:
 LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, Mn OXIDES, PYRITE, QUARTZ
 MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE, PYRITE, MANGANESE OXIDES
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18427 UNIQUE: 10749 P295 FILE: DH2951-053 TOP_INT: 240.0 BOT_INT: 269.0

LITHOLOGY:
 CHERT, GRAPHITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:
 LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, QUARTZ, SULFATES, SULFIDE
 MINERALIZATION: PYRITE
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN?, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18427 UNIQUE: 10749 P295 FILE: DH2951-053 TOP_INT: 269.0 BOT_INT: 309.0

LITHOLOGY:
 CARBONATE(?), CHERT, GOETHITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
 LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED?

ALTERATION: GOETHITE, MAGNETITE, QUARTZ
 MINERALIZATION: GOETHITE, MAGNETITE
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 18427 UNIQUE: 10749 P295 FILE: DH2951-053 TOP_INT: 309.0 BOT_INT: 319.0

LITHOLOGY:
 GOETHITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
 LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, CLAY, GOETHITE, MAGNETITE
 MINERALIZATION: GOETHITE, MAGNETITE
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18430 UNIQUE: 10750 P295 FILE: DH2951-054 TOP_INT: 186.0 BOT_INT: 210.0

LITHOLOGY:

HEMATITIC SAPROLITIC BRECCIA

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CLAY, HEMATITE, KAOLINITE?

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18430 UNIQUE: 10750 P295 FILE: DH2951-054 TOP_INT: 210.0 BOT_INT: 215.0

LITHOLOGY:

LIMONITIC SAPROLITIC SILTSTONE BRECCIA

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: CLAY, KAOLINITE?, LIMONITE

MINERALIZATION: LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18430 UNIQUE: 10750 P295 FILE: DH2951-054 TOP_INT: 215.0 BOT_INT: 226.0

LITHOLOGY:

GOETHITIC SILTSTONE AND IRON FORMATION BRECCIA

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: CLAY, GOETHITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18430 UNIQUE: 10750 P295 FILE: DH2951-054 TOP_INT: 226.0 BOT_INT: 230.0

LITHOLOGY:

SILTSTONE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES ?, LOCAL BRECCIA ?

ALTERATION: PYRITE, MELANITERITE SURFACE OXIDATION

MINERALIZATION: PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: 18430 UNIQUE: 10750 P295 FILE: DH2951-054 TOP_INT: 230.0 BOT_INT: 250.0

LITHOLOGY:
SLTSTONE W/ GRAPHITE, PYRITE

LITH DESCRIPTION:
LITTLE DEFORMATION FEATURES ?, LOCAL BRECCIA ?

ALTERATION: MELANITERITE (SURFACE OXIDATION), QUARTZ, SULFIDE
MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 18430 UNIQUE: 10750 P295 FILE: DH2951-054 TOP_INT: 250.0 BOT_INT: 315.0

LITHOLOGY:
CARBONATE(?), CHERT, GRAPHITE, MAGNETITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, SCHISTOSE?

ALTERATION: AMPHIBOLE, GOETHITE, MAGNETITE, PYRITE, QUARTZ
MINERALIZATION: MAGNETITE, GOETHITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18430 UNIQUE: 10750 P295 FILE: DH2951-054 TOP_INT: 315.0 BOT_INT: 336.0

LITHOLOGY:
EUFIC-INTERMEDIATE TUFF OR INTRUSIVE

LITH DESCRIPTION:
LITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: CHLORITE
MINERALIZATION:
MINERALIZATION TYPE:

DDH: 18228 UNIQUE: 10762 P295 FILE: DH2951-055 TOP_INT: 235.0 BOT_INT: 236.0

LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: CLAY, QUARTZ, GOETHITE, HEMATITE
MINERALIZATION: GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18228 UNIQUE: 10762 P295 FILE: DH2951-055 TOP_INT: 236.0 BOT_INT: 296.0

LITHOLOGY:

ALTERED METAGABBRO

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: AMPHIBOLE, CHLORITE, CLAY, LIMONITE, HEMATITE

MINERALIZATION: RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: 18435 UNIQUE: 10751 P295 FILE: DH2951-056 TOP_INT: 226.0 BOT_INT: 275.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, LIMONITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, LIMONITE, MAGNETITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: GOETHITE, RED HEMATITE, MAGNETITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18435 UNIQUE: 10751 P295 FILE: DH2951-056 TOP_INT: 275.0 BOT_INT: 285.0

LITHOLOGY:

CHERT, GOETHITE, GRAPHITE, GREY AND RED HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CLAY, GOETHITE, LIMONITE, MAGNETITE, PYRITE, QUARTZ, RED HEMATITE W/ VUGS

MINERALIZATION: GOETHITE, RED HEMATITE, MAGNETITE, LIMONITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18435 UNIQUE: 10751 P295 FILE: DH2951-056 TOP_INT: 285.0 BOT_INT: 312.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, LIMONITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, LIMONITE, MAGNETITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: GOETHITE, RED HEMATITE, MAGNETITE, LIMONITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18435 UNIQUE: 10751 P295 FILE: DH2951-056 TOP_INT: 312.0 BOT_INT: 400.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: CARBONATE, CHLORITE, MAGNETITE, PYRITE, QUARTZ

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18146 UNIQUE: 10757 P295 FILE: DH2951-057 TOP_INT: 210.0 BOT_INT: 239.0

LITHOLOGY:

HEMATITIC AND HEMATITIC SILTSTONE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, SLICKENSIDES

ALTERATION: CLAY?, GOETHITE, HEMATITE, LIMONITE, MAGNETITE

MINERALIZATION: RED HEMATITE, LIMONITE, GOETHITE?, MAGNETITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18146 UNIQUE: 10757 P295 FILE: DH2951-057 TOP_INT: 239.0 BOT_INT: 260.0

LITHOLOGY:

HEMATITIC AND HEMATITIC SILTSTONE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, SLICKENSIDES

ALTERATION: CLAY?, GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: RED HEMATITE, LIMONITE, GOETHITE, MAGNETITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18146 UNIQUE: 10757 P295 FILE: DH2951-057 TOP_INT: 260.0 BOT_INT: 388.0

LITHOLOGY:

CARBONATE, CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC?

ALTERATION: CHLORITE, CLAY, GOETHITE, MAGNETITE

MINERALIZATION: MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18146 UNIQUE: 10757 P295 FILE: DH2951-057 TOP_INT: 388.0 BOT_INT: 452.0

LITHOLOGY:
INTERMEDIATE METATUFF

LITH DESCRIPTION:
CLASTIC ROCK, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: BIOTITE, CARBONATE, CHLORITE, QUARTZ, SULFIDE
MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED

DDH: 18218 UNIQUE: 10758 P295 FILE: DH2951-058 TOP_INT: 171.0 BOT_INT: 285.0

LITHOLOGY:
ARGILLITE; CARBONATE(?), CHERT, GOETHITE, HEMATITE, LIMONITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, CLAY, GOETHITE, MAGNETITE, QUARTZ, RED HEMATITE, W/ VUGS
MINERALIZATION: GOETHITE, MAGNETITE, RED HEMATITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18218 UNIQUE: 10758 P295 FILE: DH2951-058 TOP_INT: 285.0 BOT_INT: 360.0

LITHOLOGY:
CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC?

ALTERATION: CARBONATE, CHLORITE, CLAY, GOETHITE, RED HEMATITE, QUARTZ, SULFIDE
MINERALIZATION: MAGNETITE, PYRITE, GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18221 UNIQUE: 10759 P295 FILE: DH2951-059 TOP_INT: 235.0 BOT_INT: 261.0

LITHOLOGY:
FELDSPATHIC PORPHYRY OR TUFF

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, MYLONITIC ?, SCHISTOSE

ALTERATION: CLAY, LIMONITE, GOETHITE
MINERALIZATION: LIMONITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DDH: 18221 UNIQUE: 10759 P295 FILE: DH2951-059 TOP_INT: 261.0 BOT_INT: 285.0

LITHOLOGY:
FELDSPATHIC PORPHYRY OR TUFF

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: CLAY, LIMONITE, GOETHITE
MINERALIZATION: LIMONITE, GOETHITE
MINERALIZATION TYPE:
EIN, CROSS-CUTTING

DDH: 18230 UNIQUE: 10763 P295 FILE: DH2951-060 TOP_INT: 185.0 BOT_INT: 248.0

LITHOLOGY:
ARGILLITIC CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: CLAY, LIMONITE, GOETHITE
MINERALIZATION: LIMONITE, GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18230 UNIQUE: 10763 P295 FILE: DH2951-060 TOP_INT: 248.0 BOT_INT: 270.0

LITHOLOGY:
ARGILLITIC CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: CLAY, HEMATITE
MINERALIZATION: RED HEMATITE, GOETHITE, LIMONITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18230 UNIQUE: 10763 P295 FILE: DH2951-060 TOP_INT: 270.0 BOT_INT: 340.0

LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, QUARTZ
MINERALIZATION: GOETHITE, RED HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 18230 UNIQUE: 10763 P295 FILE: DH2951-060 TOP_INT: 340.0 BOT_INT: 361.0

LITHOLOGY:
INTERMEDIATE-MAFIC TUFF

LITH DESCRIPTION:
LOCAL BRECCIA ?, LOCALLY MYLONITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ

MINERALIZATION:
MINERALIZATION TYPE:

DDH: 18230 UNIQUE: 10763 P295 FILE: DH2951-060 TOP_INT: 361.0 BOT_INT: 386.0

LITHOLOGY:
SILTSTONE W/ GRAPHITE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, QUARTZ(?), SERICITE

MINERALIZATION:
MINERALIZATION TYPE:

DDH: 18230 UNIQUE: 10763 P295 FILE: DH2951-060 TOP_INT: 386.0 BOT_INT: 405.0

LITHOLOGY:
PORPHYROBLASTIC SILICATE IRON FORMATION OR MAFIC DERIVED CLASTIC ROCK

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC?, SLICKENSIDES

ALTERATION: CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, CROSS-CUTTING

DDH: 18223 UNIQUE: 10760 P295 FILE: DH2951-061 TOP_INT: 180.0 BOT_INT: 250.0

LITHOLOGY:
RED HEMATITE PHYLLITE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC?, LOCAL BRECCIA?

ALTERATION: CLAY, HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DH: 18223 UNIQUE: 10760 P295 FILE: DH2951-061 TOP_INT: 250.0 BOT_INT: 300.0

LITHOLOGY:
CARBONATE, CHERT, SILICATE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC

ALTERATION: CARBONATE, CHLORITE, GOETHITE, QUARTZ, SULFIDE
MINERALIZATION: PYRITE, GOETHITE, MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1 UNIQUE: 15475 P295 FILE: DH2951-062 TOP_INT: 62.0 BOT_INT: 105.0

LITHOLOGY:
QUARTZITE (ORTHO?) W/MINOR PYRITE

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: QUARTZ, RED HEMATITE
MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE?, MANGANESE OXIDES?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: S8 UNIQUE: 15476 P295 FILE: DH2951-063 TOP_INT: 56.0 BOT_INT: 85.0

LITHOLOGY:
QUARTZITE (ORTHO?) W/MINOR PYRITE

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: QUARTZ, RED HEMATITE
MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE?, MANGANESE OXIDES?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1131 UNIQUE: 15477 P295 FILE: DH2951-064 TOP_INT: 97.0 BOT_INT: 103.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: GOETHITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1006 UNIQUE: 15478 P295 FILE: DH2951-065 TOP_INT: 27.0 BOT_INT: 37.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: LIMONITE, GOETHITE, MAGNETITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1006 UNIQUE: 15478 P295 FILE: DH2951-065 TOP_INT: 37.0 BOT_INT: 79.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, GOETHITE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, GOETHITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S364 UNIQUE: 15479 P295 FILE: DH2951-066 TOP_INT: 138.0 BOT_INT: 223.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S346 UNIQUE: 15480 P295 FILE: DH2951-067 TOP_INT: 165.0 BOT_INT: 200.0

LITHOLOGY:

SILICEOUS SILTY ARENITE

LITH DESCRIPTION:

CRYSTALLIZED/HORNFELSED, SCHISTOSE?

ALTERATION: QUARTZ, RED HEMATITE

MINERALIZATION: MAGNETITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: S1060 UNIQUE: 15481 P295 FILE: DH2951-068 TOP_INT: 10.0 BOT_INT: 65.0

LITHOLOGY:

CARBONATE, CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, PHYLLITIC?

ALTERATION: CHLORITE, GOETHITE, LIMONITE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE, GOETHITE, RED HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1054 UNIQUE: 15482 P295 FILE: DH2951-069 TOP_INT: 65.0 BOT_INT: 70.0

LITHOLOGY:

GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

CHISTOSE?

ALTERATION: GOETHITE

MINERALIZATION: RED HEMATITE, MAGNETITE, GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DH: S1053 UNIQUE: 15483 P295 FILE: DH2951-070 TOP_INT: 84.0 BOT_INT: 90.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: S1053 UNIQUE: 15483 P295 FILE: DH2951-070 TOP_INT: 90.0 BOT_INT: 94.0

LITHOLOGY:

RED HEMATITE ARGILLITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: S1045 UNIQUE: 15484 P295 FILE: DH2951-071 TOP_INT: 20.0 BOT_INT: 23.0

LITHOLOGY:

GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S1045 UNIQUE: 15484 P295 FILE: DH2951-071 TOP_INT: 23.0 BOT_INT: 29.0

LITHOLOGY:

RED HEMATITE PHYLLITE

LITH DESCRIPTION:

PHYLLITIC, SCHISTOSE, LAMINATED

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S1045 UNIQUE: 15484 P295 FILE: DH2951-071 TOP_INT: 29.0 BOT_INT: 31.0

LITHOLOGY:

INTERMEDIATE-MAFIC TUFF

LITH DESCRIPTION:

CLASTIC ROCK, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, QUARTZ

MINERALIZATION:

MINERALIZATION TYPE:

DDH: S1045 UNIQUE: 15484 P295 FILE: DH2951-071 TOP_INT: 31.0 BOT_INT: 50.0

LITHOLOGY:

QUARTZITE (ORTHO)

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE, SULFATE, WITH VUGS

MINERALIZATION: GOETHITE, RED HEMATITE, MANGANESE OXIDES?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DH: S1046 UNIQUE: 15485 P295 FILE: DH2951-072 TOP_INT: 0.0 BOT_INT: 35.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1047 UNIQUE: 15486 P295 FILE: DH2951-073 TOP_INT: 6.0 BOT_INT: 7.0

LITHOLOGY:

RED HEMATITE PHYLLITE

LITH DESCRIPTION:

PHYLLITIC

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DH: S1047 UNIQUE: 15486 P295 FILE: DH2951-073 TOP_INT: 7.0 BOT_INT: 17.5

LITHOLOGY:

TAN AND RED PHYLLITE

LITH DESCRIPTION:

LAMINATED, PHYLLITIC

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S1047 UNIQUE: 15486 P295 FILE: DH2951-073 TOP_INT: 17.5 BOT_INT: 27.0

LITHOLOGY:

MARGILLITIC GOETHITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:

CHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: S1047 UNIQUE: 15486 P295 FILE: DH2951-073 TOP_INT: 27.0 BOT_INT: 29.0
LITHOLOGY:
QUARTZITE (ORTHO)

LITH DESCRIPTION:
PHYLLITIC

ALTERATION: RED HEMATITE
MINERALIZATION: RED HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1048 UNIQUE: 15487 P295 FILE: DH2951-074 TOP_INT: 25.0 BOT_INT: 30.0
LITHOLOGY:
GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED

ALTERATION: GOETHITE, HEMATITE
MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1048 UNIQUE: 15487 P295 FILE: DH2951-074 TOP_INT: 30.0 BOT_INT: 36.0
LITHOLOGY:
CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, CRYSTALLIZED/HORNFEISED?, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ
MINERALIZATION: GREY HEMATITE, MAGNETITE, GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1048 UNIQUE: 15487 P295 FILE: DH2951-074 TOP_INT: 36.0 BOT_INT: 41.0
LITHOLOGY:
MAGNETITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, MAGNETITE, QUARTZ
MINERALIZATION: MAGNETITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DH: S1050 UNIQUE: 15488 P295 FILE: DH2951-075 TOP_INT: 20.0 BOT_INT: 46.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, PERVASIVE, CROSS-CUTTING?, STRATIFORM?

 DDH: S1050 UNIQUE: 15488 P295 FILE: DH2951-075 TOP_INT: 46.0 BOT_INT: 50.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, QUARTZ

MINERALIZATION: GOETHITE, MANGANESE OXIDES

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

 DH: S1050 UNIQUE: 15488 P295 FILE: DH2951-075 TOP_INT: 50.0 BOT_INT: 56.0

LITHOLOGY:

RED HEMATITE PHYLLITE

LITH DESCRIPTION:

PHYLLITIC, LOCALLY MYLONITIC

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, PERVASIVE, CROSS-CUTTING, STRATIFORM?

 DDH: S1050 UNIQUE: 15488 P295 FILE: DH2951-075 TOP_INT: 56.0 BOT_INT: 60.0

LITHOLOGY:

CHERT, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

DISSEMINATED, CRYSTALLIZED/HORNFELSED?

ALTERATION: MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE?, RED HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, PERVASIVE, CROSS-CUTTING?, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S361 UNIQUE: 15634 P295 FILE: DH2951-076 TOP_INT: 79.0 BOT_INT: 180.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 18600 UNIQUE: 11639 P295 FILE: DH2951-077 TOP_INT: 75.0 BOT_INT: 160.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CLAY, GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 18600 UNIQUE: 11639 P295 FILE: DH2951-077 TOP_INT: 160.0 BOT_INT: 191.0

LITHOLOGY:

TUFFACEOUS CHERT, GRAPHITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, LOCALLY MYLONITIC, SCHISTOSE, SLICKENSIDES, BRITTLE DEFORMATION FEATURES, LAMINATED, BEDDED

ALTERATION: CARBONATE, GOETHITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 18600 UNIQUE: 11639 P295 FILE: DH2951-077 TOP_INT: 191.0 BOT_INT: 193.5

LITHOLOGY:

INTERMEDIATE-FELSIC TUFF WITH SULFIDES, CHERT

LITH DESCRIPTION:

LAMINATED, BEDDED, LOCAL BRECCIA?, LOCALLY MYLONITIC?, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, PYRITE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DH: 18600 UNIQUE: 11639 P295 FILE: DH2951-077 TOP_INT: 193.5 BOT_INT: 216.0

LITHOLOGY:
TUFFACEOUS CHERT, GRAPHITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:
SLICKENSIDES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, BEDDED, LAMINATED

ALTERATION: CARBONATE, CHLORITE, GOETHITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 194.0 BOT_INT: 205.0

LITHOLOGY:
BRECCIA

LITH DESCRIPTION:
LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 230.0 BOT_INT: 245.0

LITHOLOGY:
HEMATITIC ARGILLITE, CHERT

LITH DESCRIPTION:
LOCALLY MYLONITIC, LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES?

ALTERATION: QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 245.0 BOT_INT: 275.0

LITHOLOGY:
CHERT, RED HEMATITE IRON FORMATION AND SILICEOUS SILTSTONE

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES?, DUCTILE DEFORMATION FEATURES?

ALTERATION: QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 285.0 BOT_INT: 310.0

LITHOLOGY:

SILICEOUS INTRACLASTIC CONGLOMERATE, SILTSTONE

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED

ALTERATION: HEMATITE, QUARTZ

MINERALIZATION: GREY AND RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 320.0 BOT_INT: 415.0

LITHOLOGY:

CHERT, RED HEMATITE IRON FORMATION AND SILICEOUS SILTSTONE

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BEDDED, CLASTIC ROCK

ALTERATION: QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 445.0 BOT_INT: 455.0

LITHOLOGY:

SILICEOUS INTRACLASTIC CONGLOMERATE, SILTSTONE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, CLASTIC ROCK

ALTERATION: GREY HEMATITE

MINERALIZATION: GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 480.0 BOT_INT: 495.0

LITHOLOGY:

SILICEOUS SILTSTONE, INTERMEDIATE FELSIC TUFF

LITH DESCRIPTION:

RECRYSTALLIZED/HORNFELSED, LAMINATED, BRITTLE DEFORMATION FEATURES, SCHISTOSE, BEDDED

ALTERATION: GOETHITE

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 495.0 BOT_INT: 500.0

LITHOLOGY:
CHERT, GREY HEMATITE IRON FORMATION AND ARENITIC GREYWACKE

LITH DESCRIPTION:
SCHISTOSE, LAMINATED, CLASTIC ROCK, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: GOETHITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 510.0 BOT_INT: 515.0

LITHOLOGY:
CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE
MINERALIZATION: GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 525.0 BOT_INT: 530.0

LITHOLOGY:
CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE
MINERALIZATION: GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18400 UNIQUE: 11661 P295 FILE: DH2951-078 TOP_INT: 540.0 BOT_INT: 545.0

LITHOLOGY:
CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
BEDDED

ALTERATION: GOETHITE
MINERALIZATION: GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DDH: MR-5 UNIQUE: 11641 P295 FILE: DH2951-079 TOP_INT: 170.0 BOT_INT: 200.0

LITHOLOGY:
DOLOMITIC ARGILLACEOUS ARENITE

LITH DESCRIPTION:
SCHISTOSE, BEDDED, CLASTIC ROCK, LAMINATED

ALTERATION: LIMONITE, MAGNETITE, RED HEMATITE
MINERALIZATION: MAGNETITE, LIMONITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 27.0 BOT_INT: 32.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, CRYSTALLIZED/HORNFELSE

ALTERATION: CARBONATE
MINERALIZATION: GOETHITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 32.0 BOT_INT: 42.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, RECRYSTALLIZED/HORNFELSE ?, LOCALLY MYLONITIC ?

ALTERATION: CARBONATE, GOETHITE, LIMONITE
MINERALIZATION: GOETHITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 45.0 BOT_INT: 50.0

LITHOLOGY:
RED HEMATITE SILICEOUS SILTSTONE AND RED HEMATITE PHYLLITE

LITH DESCRIPTION:
LAMINATED, CLASTIC ROCK, DUCTILE DEFORMATION FEATURES?, SLICKENSIDES?

ALTERATION: RED HEMATITE
MINERALIZATION: RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

 DH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 58.0 BOT_INT: 63.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 83.0 BOT_INT: 93.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, CRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 93.0 BOT_INT: 103.0

LITHOLOGY:

GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, CLASTIC ROCK?, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, LIMONITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 108.0 BOT_INT: 118.0

LITHOLOGY:

GOETHITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 130.0 BOT_INT: 133.0
LITHOLOGY:
GOETHITE IRON FORMATION

LITH DESCRIPTION:
LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, PYRITE, QUARTZ
MINERALIZATION: GOETHITE, GREY HEMATITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 133.0 BOT_INT: 140.0
LITHOLOGY:
CHERT, GOETHITE, LIMONITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
PHYLLITIC, LOCALLY MYLONITIC?, LAMINATED, CLASTIC ROCK?, BRITTLE DEFORMATION FEATURES?

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 140.0 BOT_INT: 145.0
LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, BEDDED

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ
MINERALIZATION: GOETHITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 150.0 BOT_INT: 180.0
LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES?, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 185.0 BOT_INT: 200.0

LITHOLOGY:
CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED, DUCTILE DEFORMATION FEATURES?

ALTERATION: GOETHITE, LIMONITE
MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 225.0 BOT_INT: 240.0

LITHOLOGY:
GOETHITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, CRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, GOETHITE
MINERALIZATION: GOETHITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 245.0 BOT_INT: 255.0

LITHOLOGY:
GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
BEDDED, RECRYSTALLIZED/HORNFELSED, PHYLLITIC ?

ALTERATION: GOETHITE
MINERALIZATION: GREY AND RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE?, STRATIFORM

DDH: S1020 UNIQUE: 15489 P295 FILE: DH2951-080 TOP_INT: 255.0 BOT_INT: 265.0

LITHOLOGY:
GRAPHITE, GOETHITE, HEMATITE PHYLLITE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CARBONATE, GOETHITE, HEMATITE
MINERALIZATION: GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE?, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 280 UNIQUE: 15490 P295 FILE: DH2951-081 TOP_INT: 45.0 BOT_INT: 69.0

LITHOLOGY:

TUFFACEOUS CARBONATE, MAGNETITE, SILICATE, SULFIDE IRON FORMATION WITH TOURMALINITE LAMINAE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED, PHYLLITIC, SLICKENSIDES

ALTERATION: GOETHITE, GREY HEMATITE, QUARTZ, TOURMALINE

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

DDH: 280 UNIQUE: 15490 P295 FILE: DH2951-081 TOP_INT: 69.0 BOT_INT: 85.0

LITHOLOGY:

TUFFACEOUS CARBONATE, MAGNETITE, SILICATE, SULFIDE IRON FORMATION WITH TOURMALINITE LAMINAE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED, PHYLLITIC, SLICKENSIDES, BEDDED

ALTERATION: GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM?

DDH: 280 UNIQUE: 15490 P295 FILE: DH2951-081 TOP_INT: 90.0 BOT_INT: 110.0

LITHOLOGY:

TUFFACEOUS CARBONATE, CHERT, GOETHITE, MAGNETITE, RED HEMATITE, SILICATE, SULFIDE IRON FORMATION W/ TOURMALINITE LAMINAE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED, PHYLLITIC, SLICKENSIDES, BEDDED

ALTERATION: GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

DDH: 280 UNIQUE: 15490 P295 FILE: DH2951-081 TOP_INT: 118.0 BOT_INT: 124.0

LITHOLOGY:

GOETHITE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED, PHYLLITIC, SLICKENSIDES

ALTERATION: CHALCEDONY, GOETHITE, QUARTZ

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM?

DH: 280 UNIQUE: 15490 P295 FILE: DH2951-081 TOP_INT: 124.0 BOT_INT: 250.0

LITHOLOGY:

TUFFACEOUS CARBONATE, CHERT, GOETHITE, MAGNETITE, RED HEMATITE, SILICATE, SULFIDE IRON FORMATION W/ TOURMALINITE LAMINAE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED, PHYLLITIC, SLICKENSIDES, BEDDED

ALTERATION: AMPHIBOLE, CARBONATE, CLAY, GOETHITE, LIMONITE, MAGNETITE, QUARTZ, RED HEMATITE, SERPENTINE, SULFIDE, TOURMALINE
MINERALIZATION: MAGNETITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 57.0 BOT_INT: 70.0

LITHOLOGY:

CARBONATE(?), GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: CLAY, HEMATITE, CARBONATE

MINERALIZATION: GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, CROSS-CUTTING, STRATIFORM

DH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 70.0 BOT_INT: 80.0

LITHOLOGY:

INTERMEDIATE-FELSIC TUFF

LITH DESCRIPTION:

ALTERATION: PROPYLITIC-CLAY

MINERALIZATION:

MINERALIZATION TYPE:

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 80.0 BOT_INT: 95.0

LITHOLOGY:

SILICEOUS SILTSTONE

LITH DESCRIPTION:

SLICKENSIDES, BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY(?), GOETHITE, HEMATITE, LIMONITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE, LIMONITE?, GOETHITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 95.0 BOT_INT: 100.0
LITHOLOGY:
SILICEOUS SILTSTONE

LITH DESCRIPTION:
SLICKENSIDES, BRITTLE DEFORMATION FEATURES

ALTERATION: GREY HEMATITE, CLAY, CHLORITE
MINERALIZATION: GREY HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, STRATIFORM

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 100.0 BOT_INT: 110.0
LITHOLOGY:
CARBONATE(?), GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: CLAY, GREY AND RED HEMATITE
MINERALIZATION: GREY HEMATITE, GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, STRATIFORM

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 110.0 BOT_INT: 115.0
LITHOLOGY:
GREY HEMATITIC SILTSTONE

LITH DESCRIPTION:

ALTERATION: PROPYLITIC-CLAY
MINERALIZATION:
MINERALIZATION TYPE:

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 115.0 BOT_INT: 155.0
LITHOLOGY:
CARBONATE(?), GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED

ALTERATION: HEMATITE, QUARTZ
MINERALIZATION: GREY AND RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, CROSS-CUTTING?, STRATIFORM

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 155.0 BOT_INT: 195.0

LITHOLOGY:

GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 195.0 BOT_INT: 200.0

LITHOLOGY:

GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: 107 UNIQUE: 12626 P295 FILE: DH2951-082 TOP_INT: 200.0 BOT_INT: 220.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION WITH MINOR SULFIDES

LITH DESCRIPTION:

LAMINATED

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, STRATIFORM

DDH: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 23.0 BOT_INT: 33.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, PHYLLITIC, SLICKENSIDES

ALTERATION:

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 33.0 BOT_INT: 43.0

LITHOLOGY:

BIOTITE, CHLORITE, GRAPHITE, QUARTZ, SULFIDE SCHIST

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM

DDH: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 43.0 BOT_INT: 55.0

LITHOLOGY:

BIOTITE, CHLORITE, GRAPHITE, QUARTZ, SULFIDE SCHIST, WITH CHERT AND REKLIZED MAGNETITE LAMINAE

LITH DESCRIPTION:

SCHISTOSE, LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES

ALTERATION:

MINERALIZATION: MAGNETITE, PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM

DDH: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 55.0 BOT_INT: 70.0

LITHOLOGY:

PHYLLITE

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, CLASTIC ROCK

ALTERATION:

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM

DDH: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 70.0 BOT_INT: 91.0

LITHOLOGY:

BIOTITE, CHLORITE, GRAPHITE, QUARTZ, SULFIDE SCHIST, WITH CHERT AND REKLIZED MAGNETITE LAMINAE

LITH DESCRIPTION:

SCHISTOSE, LAMINATED, DUCTILE DEFORMATION FEATURES, DEDDED

ALTERATION: SULFIDE

MINERALIZATION: MAGNETITE, PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

H: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 91.0 BOT_INT: 133.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE, WITH MINOR CHERT

LITH DESCRIPTION:

LOCALLY MYLONITIC, PHYLLITIC, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: PYRITE, MELANITERITE SURFACE OXIDATION

MINERALIZATION: PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, STRATIFORM, CROSS-CUTTING, VEIN

DDH: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 133.0 BOT_INT: 155.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE, WITH MINOR CHERT

LITH DESCRIPTION:

LOCALLY MYLONITIC, PHYLLITIC, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: PYRITE, LIMONITE OXIDATION

MINERALIZATION: PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, STRATIFORM, CROSS-CUTTING, VEIN

H: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 155.0 BOT_INT: 192.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE, WITH MINOR CHERT

LITH DESCRIPTION:

LOCALLY MYLONITIC, PHYLLITIC, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM

DDH: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 192.0 BOT_INT: 242.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE BRECCIA, WITH MINOR CHERT, GOETHITE, MAGNETITE

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LAMINATED, SLICKENSIDES, PHYLLITIC

ALTERATION: GOETHITE, PYRITE

MINERALIZATION: PYRITE, CHALCOPYRITE, GOETHITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: BM-11 UNIQUE: 10007 P295 FILE: DH2951-083 TOP_INT: 242.0 BOT_INT: 253.7
LITHOLOGY:
GRAPHITE, MAGNETITE, SULFIDE PHYLLITE

LITH DESCRIPTION:
LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES

ALTERATION: SULFIDE
MINERALIZATION: PYRITE, MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, STRATIFORM

DDH: 18131 UNIQUE: 14380 P295 FILE: DH2951-084 TOP_INT: 91.0 BOT_INT: 101.0
LITHOLOGY:
CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
CRYSTALLIZED/HORNFELSE

ALTERATION: CARBONATE, GOETHITE, QUARTZ
MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE
MINERALIZATION TYPE:
MASSIVE, STRATIFORM

DDH: 18131 UNIQUE: 14380 P295 FILE: DH2951-084 TOP_INT: 101.0 BOT_INT: 326.0
LITHOLOGY:
CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION WITH MINOR CHERT, SULFIDES

LITH DESCRIPTION:
LAMINATED, SCHISTOSE, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION:
MINERALIZATION: MAGNETITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN?, STRATIFORM

DDH: 18131 UNIQUE: 14380 P295 FILE: DH2951-084 TOP_INT: 326.0 BOT_INT: 355.0
LITHOLOGY:
ALTERED, BRECCIATED TONALITE(?), DIORITE(?), OR GNEISS(?)

LITH DESCRIPTION:
LOCAL BRECCIA, LOCALLY MYLONITIC, RECRYSTALLIZED/HORNFELSE

ALTERATION: CHLORITE, MUSCOVITE
MINERALIZATION: PYRITE, CHALCOPYRITE
MINERALIZATION TYPE:
DISSEMINATED, VEIN, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

H: 18131 UNIQUE: 14380 P295 FILE: DH2951-084 TOP_INT: 355.0 BOT_INT: 356.0

LITHOLOGY:

MYLONITE

LITH DESCRIPTION:

LOCAL BRECCIA, LOCALLY MYLONITIC, SCHISTOSE, SLICKENSIDES, DUCTILE DEFORMATION FEATURES

ALTERATION: CHLORITE, EPIDOTE, SERICITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED

DDH: S360 UNIQUE: 15491 P295 FILE: DH2951-085 TOP_INT: 105.0 BOT_INT: 122.0

LITHOLOGY:

GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, LIMONITE

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE

H: S360 UNIQUE: 15491 P295 FILE: DH2951-085 TOP_INT: 122.0 BOT_INT: 128.0

LITHOLOGY:

ARGILLITIC GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCAL MYLONITE

ALTERATION: GOETHITE, HEMATITE, WITH CLAY(?), SULFATE(?)

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE

DDH: S360 UNIQUE: 15491 P295 FILE: DH2951-085 TOP_INT: 128.0 BOT_INT: 135.0

LITHOLOGY:

GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE

Appendix 295-F: DRILL LOGS

DDH: S360 UNIQUE: 15491 P295 FILE: DH2951-085 TOP_INT: 135.0 BOT_INT: 140.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE

DDH: S360 UNIQUE: 15491 P295 FILE: DH2951-085 TOP_INT: 140.0 BOT_INT: 172.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LAMINATED

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE

DDH: S360 UNIQUE: 15491 P295 FILE: DH2951-085 TOP_INT: 172.0 BOT_INT: 216.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LAMINATED

ALTERATION: LEACHING, LIMONITE

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-3 UNIQUE: 10013 P295 FILE: DH2951-086 TOP_INT: 39.0 BOT_INT: 76.0

LITHOLOGY:

ALTERED METAGABBRO

LITH DESCRIPTION:

LOCAL BRECCIA, SLICKENSIDES, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CALCITE, CHLORITE, EPIDOTE, LIMONITE, RED HEMATITE, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE

Appendix 295-F: DRILL LOGS

DDH: BM-3 UNIQUE: 10013 P295 FILE: DH2951-086 TOP_INT: 76.0 BOT_INT: 79.0

LITHOLOGY:
MYLONITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE, LOCALLY MYLONITIC

ALTERATION: CALCITE, CHLORITE, EPIDOTE, LIMONITE, RED HEMATITE, SULFIDE

MINERALIZATION: PYRITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING

DDH: BM-3 UNIQUE: 10013 P295 FILE: DH2951-086 TOP_INT: 79.0 BOT_INT: 121.0

LITHOLOGY:

CHERT, GRAPHITE, MAGNETITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: SULFIDE

MINERALIZATION: PYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-3 UNIQUE: 10013 P295 FILE: DH2951-086 TOP_INT: 121.0 BOT_INT: 126.0

LITHOLOGY:

INTERMEDIATE-FELSIC TUFF

LITH DESCRIPTION:

SCHISTOSE, LAMINATED, CLASTIC ROCK, PHYLLITIC

ALTERATION: SERICITE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: BM-3 UNIQUE: 10013 P295 FILE: DH2951-086 TOP_INT: 126.0 BOT_INT: 217.1

LITHOLOGY:

GRAPHITE PHYLLITE, WITH MINOR CHERT, MAGNETITE, SULFIDE, CHEMICAL SEDIMENTS

LITH DESCRIPTION:

LAMINATED, SLICKENSIDES, DUCTILE DEFORMATION FEATURES, PHYLLITIC, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, PYRITE, QUARTZ

MINERALIZATION: PYRITE, CHALCOPYRITE, ARSENOPYRITE, MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: 18133 UNIQUE: 14381 P295 FILE: DH2951-087 TOP_INT: 109.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

CRYSTALLIZED/HORNFELSE, BEDDED, LAMINATED

ALTERATION:

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM

DDH: 18133 UNIQUE: 14381 P295 FILE: DH2951-087 TOP_INT: 115.0 BOT_INT: 240.0

LITHOLOGY:

INTERBEDDED INTRAFORMATIONAL CONGLOMERATIC QUARTZITE, GREEN AND RED PHYLLITE

LITH DESCRIPTION:

BEDDED, LAMINATED, RECRYSTALLIZED/HORNFELSE, PHYLLITIC, LOCAL BRECCIA

ALTERATION: CHLORITE(?), LIMONITE, QUARTZ, RED HEMATITE.

MINERALIZATION: PYRITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: 18133 UNIQUE: 14381 P295 FILE: DH2951-087 TOP_INT: 240.0 BOT_INT: 261.0

LITHOLOGY:

PHYLLITE

LITH DESCRIPTION:

LAMINATED, LOCAL BRECCIA, PHYLLITIC, DUCTILE DEFORMATION FEATURES

ALTERATION: CLAY, LIMONITE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM, PERVASIVE?

DDH: 52 UNIQUE: 10072 P295 FILE: DH2951-088 TOP_INT: 88.0 BOT_INT: 117.0

LITHOLOGY:

ALTERED METAGABBRO OR TUFF, WITH MINOR LAMPROPHYRE

LITH DESCRIPTION:

CRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CALCITE, CHLORITE, EPIDOTE, LIMONITE, RED HEMATITE, SULFIDE

MINERALIZATION: PYRITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE

Appendix 295-F: DRILL LOGS

DH: 52 UNIQUE: 10072 P295 FILE: DH2951-088 TOP_INT: 117.0 BOT_INT: 387.5

LITHOLOGY:

CHERT, GRAPHITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC, RECRYSTALLIZED/HORNFELSED, LOCAL B
ECCIA, BEDDED

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 52 UNIQUE: 10072 P295 FILE: DH2951-088 TOP_INT: 387.5 BOT_INT: 396.0

LITHOLOGY:

ALTERED METAGABBRO

LITH DESCRIPTION:

CHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, WITH MINOR SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE

DH: G-9 UNIQUE: 10006 P295 FILE: DH2951-089 TOP_INT: 76.0 BOT_INT: 96.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION WITH MINOR CHERT, SULFIDES

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION:

MINERALIZATION: PYRITE, PYRRHOTITE, MAGNETITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, STRATIFORM

DDH: G-9 UNIQUE: 10006 P295 FILE: DH2951-089 TOP_INT: 96.0 BOT_INT: 128.0

LITHOLOGY:

GRAPHITE PHYLLITE, WITH MINOR CARBONATE(?), CHERT, MAGNETITE, SILICATE, SULFIDE, CHEMICAL SEDIMENTS

LITH DESCRIPTION:

CHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION:

MINERALIZATION: PYRITE, PYRRHOTITE, MAGNETITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: G-9 UNIQUE: 10006 P295 FILE: DH2951-089 TOP_INT: 128.0 BOT_INT: 150.0

LITHOLOGY:

GRAPHITE PHYLLITE, WITH MINOR CARBONATE(?), CHERT, MAGNETITE, SILICATE, SULFIDE, CHEMICAL SEDIMENTS

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, MAGNETITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: AB-9 UNIQUE: 14496 P295 FILE: DH2951-090 TOP_INT: 67.0 BOT_INT: 77.0

LITHOLOGY:

METAGABBRO

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC

ALTERATION: CALCITE, CHLORITE, EPIDOTE, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: PA-4B-3 UNIQUE: 14660 P295 FILE: DH2951-091 TOP_INT: 44.0 BOT_INT: 49.0

LITHOLOGY:

AMPHIBOLITE

LITH DESCRIPTION:

SCHISTOSE, BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, K-FELDSPAR

MINERALIZATION:

MINERALIZATION TYPE:

DDH: G-3 UNIQUE: 15492 P295 FILE: DH2951-092 TOP_INT: 58.0 BOT_INT: 119.0

LITHOLOGY:

ALTERED METAGABBRO

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE

Appendix 295-F: DRILL LOGS

DDH: G-2 UNIQUE: 15493 P295 FILE: DH2951-093 TOP_INT: 94.0 BOT_INT: 113.0

LITHOLOGY:

INTERMEDIATE-MAFIC TUFF

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES

ALTERATION: CHLORITE, EPIDOTE, SERICITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED

DDH: G-2 UNIQUE: 15493 P295 FILE: DH2951-093 TOP_INT: 113.0 BOT_INT: 134.0

LITHOLOGY:

CHERT AND INTERMEDIATE-FELSIC TUFF, WITH TOURMALINITE AND SULFIDE CHEMICAL SEDIMENTS

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES

ALTERATION: CALCITE, CHLORITE, EPIDOTE, SULFIDE

MINERALIZATION: PYRITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM, SELECTIVELY PERVASIVE, CROSS-CUTTING

DDH: G-2 UNIQUE: 15493 P295 FILE: DH2951-093 TOP_INT: 134.0 BOT_INT: 168.0

LITHOLOGY:

INTERMEDIATE-MAFIC TUFF

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES

ALTERATION: CHLORITE, EPIDOTE, SERICITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE?, STRATIFORM?

DDH: 61 UNIQUE: 15494 P295 FILE: DH2951-094 TOP_INT: 70.0 BOT_INT: 107.5

LITHOLOGY:

ALTERED METAGABBRO

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, EPIDOTE, RED HEMATITE, HORNBLende, SULFIDE

MINERALIZATION: PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE

Appendix 295-F: DRILL LOGS

DDH: 61 UNIQUE: 15494 P295 FILE: DH2951-094 TOP_INT: 107.5 BOT_INT: 112.5

LITHOLOGY:
ALTERED METAGABBRO OR TUFF

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: AMPHIBOLE, CALCITE, CHLORITE, SULFIDE
MINERALIZATION: PYRITE, CHALCOPYRITE
MINERALIZATION TYPE:
DISSEMINATED, PERVASIVE

DDH: 61 UNIQUE: 15494 P295 FILE: DH2951-094 TOP_INT: 112.5 BOT_INT: 219.0

LITHOLOGY:
TUFFACEOUS MAGNETITE, SILICATE, SULFIDE IRON FORMATION WITH CHERT, GRAPHITIC PHYLLITE AND TOURMALINITE LAMINAE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, PHYLLITIC

ALTERATION: QUARTZ, SULFIDE
MINERALIZATION: PYRRHOTITE, PYRITE, MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 61 UNIQUE: 15494 P295 FILE: DH2951-094 TOP_INT: 219.0 BOT_INT: 425.0

LITHOLOGY:
GRAPHITE PHYLLITE, WITH MINOR SULFIDE CHEMICAL SEDIMENTS

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, PHYLLITIC

ALTERATION: QUARTZ, SULFIDE
MINERALIZATION: PYRRHOTITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 61 UNIQUE: 15494 P295 FILE: DH2951-094 TOP_INT: 425.0 BOT_INT: 465.0

LITHOLOGY:
TUFFACEOUS QUARTZ PEBBLE CONGLOMERATE or ALTERED CHERT, AND GRAPHITE SULFIDE PHYLLITE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, PHYLLITIC

ALTERATION: QUARTZ, SULFIDE
MINERALIZATION: PYRRHOTITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 61 UNIQUE: 15494 P295 FILE: DH2951-094 TOP_INT: 465.0 BOT_INT: 493.0

LITHOLOGY:

CHERT, MAGNETITE IRON FORMATION WITH LESSER SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

RECRYSTALLIZED/HORNFELSED, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: 16 UNIQUE: 10037 P295 FILE: DH2951-095 TOP_INT: 35.0 BOT_INT: 50.0

LITHOLOGY:

GRAPHITE, SULFIDE IRON FORMATION WITH CARBONATE, CHERT, SILICATE CHEMICAL SEDIMENT AND SILICEOUS TUFF

LITH DESCRIPTION:

LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 16 UNIQUE: 10037 P295 FILE: DH2951-095 TOP_INT: 50.0 BOT_INT: 69.0

LITHOLOGY:

GRAPHITE, SULFIDE IRON FORMATION WITH CARBONATE, CHERT, SILICATE CHEMICAL SEDIMENT AND SILICEOUS TUFF

LITH DESCRIPTION:

LOCAL BRECCIA, SCHISTOSE, BRITTLE DEFORMATION FEATURES, LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CALCITE, CHLORITE, EPIDOTE, QUARTZ, SERICITE, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 16 UNIQUE: 10037 P295 FILE: DH2951-095 TOP_INT: 69.0 BOT_INT: 144.0

LITHOLOGY:

GRAPHITE, SULFIDE IRON FORMATION WITH MINOR CHERT

LITH DESCRIPTION:

LAMINATED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 16 UNIQUE: 10037 P295 FILE: DH2951-095 TOP_INT: 144.0 BOT_INT: 201.0

LITHOLOGY:

TUFFACEOUS CHERT, MAGNETITE, SULFIDE IRON FORMATION WITH CARBONATE AND SCHISTOSE CHLORITE

LITH DESCRIPTION:

LAMINATED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CALCITE, CHLORITE, EPIDOTE, QUARTZ, SERICITE, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 16 UNIQUE: 10037 P295 FILE: DH2951-095 TOP_INT: 201.0 BOT_INT: 223.0

LITHOLOGY:

TUFFACEOUS MAGNETITE, SILICATE, SULFIDE IRON FORMATION WITH CHERT, GRAPHITIC PHYLLITE AND TOURMALINITE LAMINAE

LITH DESCRIPTION:

LAMINATED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CALCITE, CHLORITE, EPIDOTE, QUARTZ, SERICITE, SULFIDE

MINERALIZATION: PYRRHOTITE, MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 16 UNIQUE: 10037 P295 FILE: DH2951-095 TOP_INT: 223.0 BOT_INT: 233.0

LITHOLOGY:

TUFFACEOUS MAGNETITE, SILICATE, SULFIDE IRON FORMATION WITH CHERT, GRAPHITIC PHYLLITE AND TOURMALINITE LAMINAE

LITH DESCRIPTION:

LAMINATED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CHLORITE, WITH MINOR CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, SPHALERITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, PERVASIVE, CROSS-CUTTING

DDH: 16 UNIQUE: 10037 P295 FILE: DH2951-095 TOP_INT: 233.0 BOT_INT: 253.0

LITHOLOGY:

INTERMEDIATE TUFF

LITH DESCRIPTION:

BEDDED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC ?

ALTERATION: CALCITE, CHLORITE, EPIDOTE, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE

DDH: 16 UNIQUE: 10037 P295 FILE: DH2951-095 TOP_INT: 253.0 BOT_INT: 264.0

LITHOLOGY:

ALTERED MAFIC METATUFF-PILLOWED METABASALT

LITH DESCRIPTION:

BEDDED, BRITTLE DEFORMATION FEATURES

ALTERATION: CALCITE, CHLORITE, EPIDOTE, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, CHALCOPYRITE, VISIBLE GOLD??

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, CROSS-CUTTING, SELECTIVELY PERVASIVE

DDH: G-4 UNIQUE: 10002 P295 FILE: DH2951-096 TOP_INT: 47.0 BOT_INT: 50.0

LITHOLOGY:

CHERT, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE, STRATIFORM

DDH: G-4 UNIQUE: 10002 P295 FILE: DH2951-096 TOP_INT: 50.0 BOT_INT: 164.0

LITHOLOGY:

GRAPHITE, SULFIDE IRON FORMATION WITH CARBONATE, CHERT, SILICATE CHEMICAL SEDIMENT AND SILICEOUS TUFF

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC

ALTERATION: SULFIDE, WITH MINOR CARBONATE

MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: G-1 UNIQUE: 10020 P295 FILE: DH2951-097 TOP_INT: 35.0 BOT_INT: 105.0

LITHOLOGY:

CARBONATE, CHERT, GRAPHITE, MAGNETITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LAMINATED, SLICKENSIDES

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: G-1 UNIQUE: 10020 P295 FILE: DH2951-097 TOP_INT: 110.0 BOT_INT: 135.0

LITHOLOGY:

CARBONATE, CHERT, GRAPHITE, MAGNETITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LAMINATED, SLICKENSIDES

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 43 UNIQUE: 10063 P295 FILE: DH2951-098 TOP_INT: 254.7 BOT_INT: 328.5

LITHOLOGY:

GRAPHITE, SULFIDE IRON FORMATION WITH MINOR CARBONATE, CHERT

LITH DESCRIPTION:

LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LAMINATED, SLICKENSIDES

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 43 UNIQUE: 10063 P295 FILE: DH2951-098 TOP_INT: 328.5 BOT_INT: 373.0

LITHOLOGY:

GRAPHITE, MAGNETITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LAMINATED, SLICKENSIDES

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 43 UNIQUE: 10063 P295 FILE: DH2951-098 TOP_INT: 373.0 BOT_INT: 381.0

LITHOLOGY:

TUFFACEOUS CHERT, MAGNETITE, SULFIDE IRON FORMATION WITH CARBONATE AND SCHISTOSE CHLORITE

LITH DESCRIPTION:

LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LAMINATED, SLICKENSIDES

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, MAGNETITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: BM-12 UNIQUE: 10008 P295 FILE: DH2951-099 TOP_INT: 25.5 BOT_INT: 95.0

LITHOLOGY:
CALCAREOUS INTERMEDIATE-FELSIC TUFF WITH GRAPHITE AND SULFIDES

LITH DESCRIPTION:
LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, SCHISTOSE, BEDDED, SLICKENSIDES, CLASTIC ROCK, LOCALLY MYLONITIC ?

ALTERATION: CARBONATE, WITH MINOR PYRITE, QUARTZ, LEACHING
MINERALIZATION: PYRRHOTITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-12 UNIQUE: 10008 P295 FILE: DH2951-099 TOP_INT: 95.0 BOT_INT: 106.0

LITHOLOGY:
GRAPHITE, SULFIDE PHYLLITE, WITH MINOR CHERT

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SLICKENSIDES, LOCALLY MYLONITIC

ALTERATION: QUARTZ, SULFIDE
MINERALIZATION: PYRITE, PYRRHOTITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DH: BM-12 UNIQUE: 10008 P295 FILE: DH2951-099 TOP_INT: 106.0 BOT_INT: 174.0

LITHOLOGY:
GRAPHITE, MAGNETITE, PYRITE/PYRRHOTITE PHYLLITE, WITH MINOR CHERT/TUFF(?)

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SLICKENSIDES, LOCALLY MYLONITIC,
SCHISTOSE

ALTERATION: CARBONATE, WITH MINOR PYRITE, QUARTZ, LEACHING
MINERALIZATION: MAGNETITE, PYRRHOTITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-10 UNIQUE: 10011 P295 FILE: DH2951-100 TOP_INT: 23.0 BOT_INT: 133.0

LITHOLOGY:
ALTERED METAGABBRO

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, SCHISTOSE, DUCTILE DEFORMATION FEATUTES

ALTERATION: AMPHIBOLE, CALCITE, CHLORITE, QUARTZ, SULFIDE
MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE
MINERALIZATION TYPE:
DISSEMINATED, SELECTIVELY PERVASIVE

Appendix 295-F: DRILL LOGS

DDH: BM-10 UNIQUE: 10011 P295 FILE: DH2951-100 TOP_INT: 133.0 BOT_INT: 135.5

LITHOLOGY:

ACTINOLITE, CHLORITE, EPIDOTE, MAGNETITE, PYRITE, QUARTZ SCHIST

LITH DESCRIPTION:

SCHISTOSE, BRITTLE DEFORMATION FEATURES

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: BM-10 UNIQUE: 10011 P295 FILE: DH2951-100 TOP_INT: 135.5 BOT_INT: 146.0

LITHOLOGY:

SILICATE, SULFIDE IRON FORMATION WITH CHERT, GRAPHITE, CARBONATE

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE, PYRRHOTITE, BORNITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-10 UNIQUE: 10011 P295 FILE: DH2951-100 TOP_INT: 146.0 BOT_INT: 166.0

LITHOLOGY:

GRAPHITE, MAGNETITE, PYRITE/PYRRHOTITE PHYLLITE, WITH MINOR CHERT/TUFF(?)

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC, PHYLLITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, STRATIFORM

DDH: BM-10 UNIQUE: 10011 P295 FILE: DH2951-100 TOP_INT: 166.0 BOT_INT: 190.0

LITHOLOGY:

GRAPHITE, MAGNETITE, PYRITE/PYRRHOTITE PHYLLITE, WITH MINOR CHERT/TUFF(?)

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC, PHYLLITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE, BORNITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: BM-10 UNIQUE: 10011 P295 FILE: DH2951-100 TOP_INT: 190.0 BOT_INT: 243.1

LITHOLOGY:

TUFFACEOUS CHERT, GRAPHITE, MAGNETITE, SILICATE (AND CARBONATE?), SULFIDE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC, PHYLLITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE, BORNITE, SPHALERITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 85 UNIQUE: 10023 P295 FILE: DH2951-101 TOP_INT: 26.0 BOT_INT: 136.0

LITHOLOGY:

ALCALINE TUFFACEOUS GREY HEMATITE, SILICATE IRON FORMATION WITH GRAPHITE, SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: AMPHIBOLE, CALCITE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, GREY HEMATITE, CHALCOPYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DH: 58 UNIQUE: 10078 P295 FILE: DH2951-102 TOP_INT: 77.0 BOT_INT: 105.0

LITHOLOGY:

ALTERED TUFF(?)

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, GOETHITE, QUARTZ, MICA, WITH LEACHING

MINERALIZATION: PYRITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE

DDH: 58 UNIQUE: 10078 P295 FILE: DH2951-102 TOP_INT: 105.0 BOT_INT: 119.0

LITHOLOGY:

ALTERED, BRECCIATED TONALITE(?), DIORITE(?), OR GNEISS(?)

LITH DESCRIPTION:

RECRYSTALLIZED/HORNFELSED, SCHISTOSE

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, PERVASIVE

DDH: 58 UNIQUE: 10078 P295 FILE: DH2951-102 TOP_INT: 119.0 BOT_INT: 152.0
 LITHOLOGY:
 ALTERED TUFF(?)

LITH DESCRIPTION:
 CRYSTALLIZED/HORNFELSE, SCHISTOSE, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, MICA, WITH LEACHING
 MINERALIZATION: PYRITE, GOETHITE
 MINERALIZATION TYPE:
 DISSEMINATED, STRATIFORM, SELECTIVELY PERVASIVE, PERVASIVE

DDH: 58 UNIQUE: 10078 P295 FILE: DH2951-102 TOP_INT: 152.0 BOT_INT: 171.0
 LITHOLOGY:
 CALCAREOUS, ALTERED MAFIC-INTERMEDIATE TUFF

LITH DESCRIPTION:
 SCHISTOSE, LAMINATED, RECRYSTALLIZED/HORNFELSE, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, MICA, QUARTZ, SULFIDE
 MINERALIZATION: GOETHITE, PYRITE
 MINERALIZATION TYPE:
 DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 58 UNIQUE: 10078 P295 FILE: DH2951-102 TOP_INT: 171.0 BOT_INT: 240.0
 LITHOLOGY:
 CARBONATE, CHERT, GOETHITE, MAGNETITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:
 DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSE, LAMINATED

ALTERATION: CARBONATE, QUARTZ, SULFIDE, WITH MINOR GOETHITE, LIMONITE
 MINERALIZATION: PYRRHOTITE, PYRITE, GOETHITE, LIMONITE
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 58 UNIQUE: 10078 P295 FILE: DH2951-102 TOP_INT: 240.0 BOT_INT: 470.0
 LITHOLOGY:
 GRAPHITE, SULFIDE IRON FORMATION WITH MINOR CHERT

LITH DESCRIPTION:
 DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LAMINATED, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE
 MINERALIZATION: PYRRHOTITE, PYRITE, MAGNETITE?
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DH: 58 UNIQUE: 10078 P295 FILE: DH2951-102 TOP_INT: 470.0 BOT_INT: 491.0

LITHOLOGY:

CALCAREOUS, ALTERED MAFIC-INTERMEDIATE TUFF; AND GRAPHITE, SULFIDE CHEMICAL SEDIMENTS

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, BEDDED, PHYLLITIC, SLICKENSIDES

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: 58 UNIQUE: 10078 P295 FILE: DH2951-102 TOP_INT: 491.0 BOT_INT: 498.0

LITHOLOGY:

ALTERED, BRECCIATED TONALITE(?), DIORITE(?), OR GNEISS(?)

LITH DESCRIPTION:

CRYSTALLIZED/HORNFELSED, SCHISTOSE, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED

DH: BM-1 UNIQUE: 10010 P295 FILE: DH2951-103 TOP_INT: 34.5 BOT_INT: 170.0

LITHOLOGY:

SILICATE, SULFIDE IRON FORMATION WITH CHERT, GRAPHITE, CARBONATE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LAMINATED, PHYLLITIC

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: BM-1 UNIQUE: 10010 P295 FILE: DH2951-103 TOP_INT: 170.0 BOT_INT: 186.0

LITHOLOGY:

CARBONATE(?), GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION WITH MINOR SULFIDES

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LAMINATED, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 86 UNIQUE: 10096 P295 FILE: DH2951-104 TOP_INT: 46.0 BOT_INT: 110.0

LITHOLOGY:

ALTERED METAGABBRO OR PORPHYRITIC METABASALT

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, SCHISTOSE, RECRYSTALLIZED/HORNFELSE

ALTERATION: AMPHIBOLE, CALCITE, CHLORITE, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM?, SELECTIVELY PERVASIVE

DDH: 86 UNIQUE: 10096 P295 FILE: DH2951-104 TOP_INT: 110.0 BOT_INT: 143.0

LITHOLOGY:

TUFFACEOUS CHERT, GRAPHITE, GREY HEMATITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, SCHISTOSE, RECRYSTALLIZED/HORNFELSE, DUCTILE DEFORMATION FEATURES

ALTERATION: AMPHIBOLE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-6 UNIQUE: 10016 P295 FILE: DH2951-105 TOP_INT: 55.0 BOT_INT: 78.5

LITHOLOGY:

ALTERED CLAYEY, ACTINOLITE, CHLORITE, EPIDOTE, PYRITE, SERICITE SCHIST

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: ACTINOLITE, CHLORITE, CLAYS, GOETHITE, SERICITE, SULFIDE

MINERALIZATION: PYRITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE

DDH: BM-6 UNIQUE: 10016 P295 FILE: DH2951-105 TOP_INT: 78.5 BOT_INT: 112.2

LITHOLOGY:

CARBONATE(?), CHERT, GRAPHITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, PHYLLITIC, SLICKENSIDES, LAMINATED, BEDDED

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: BM-6 UNIQUE: 10016 P295 FILE: DH2951-105 TOP_INT: 112.2 BOT_INT: 123.0

LITHOLOGY:

CALCAREOUS TUFFACEOUS PHYLLITE WITH SULFIDE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING?

DDH: BM-6 UNIQUE: 10016 P295 FILE: DH2951-105 TOP_INT: 123.0 BOT_INT: 136.0

LITHOLOGY:

CARBONATE(?), CHERT, GRAPHITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, PHYLLITIC, SLICKENSIDES, LAMINATED

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: BM-6 UNIQUE: 10016 P295 FILE: DH2951-105 TOP_INT: 136.0 BOT_INT: 141.0

LITHOLOGY:

SILICATE, SULFIDE IRON FORMATION WITH CHERT, GRAPHITE, CARBONATE

LITH DESCRIPTION:

SCHISTOSE, LAMINATED, RECRYSTALLIZED/HORNFELSED, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-6 UNIQUE: 10016 P295 FILE: DH2951-105 TOP_INT: 141.0 BOT_INT: 230.0

LITHOLOGY:

GRAPHITE, SULFIDE IRON FORMATION WITH MINOR CARBONATE, CHERT

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED, PHYLLITIC, SLICKENSIDES

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: N-1 UNIQUE: 15495 P295 FILE: DH2951-106 TOP_INT: 95.0 BOT_INT: 101.0

LITHOLOGY:
ARENITE

LITH DESCRIPTION:
CRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, CLASTIC ROCK

ALTERATION: CLAY, LIMONITE, QUARTZ
MINERALIZATION: LIMONITE
MINERALIZATION TYPE:
PERVASIVE

DDH: N-1 UNIQUE: 15495 P295 FILE: DH2951-106 TOP_INT: 101.0 BOT_INT: 114.0

LITHOLOGY:
TUFFACEOUS PHYLLITE

LITH DESCRIPTION:
DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC ?, CLASTIC ROCK

ALTERATION: LIMONITE, MAGNETITE, SERICITE
MINERALIZATION: LIMONITE, MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM

DDH: N-1 UNIQUE: 15495 P295 FILE: DH2951-106 TOP_INT: 114.0 BOT_INT: 125.0

LITHOLOGY:
TUFFACEOUS PHYLLITE

LITH DESCRIPTION:
DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC ?, CLASTIC ROCK

ALTERATION: MAGNETITE, SERICITE, WITH MINOR RED HEMATITE
MINERALIZATION: MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, SELECTIVELY PERVASIVE, STRATIFORM

DDH: N-3 UNIQUE: 15496 P295 FILE: DH2951-107 TOP_INT: 140.0 BOT_INT: 175.0

LITHOLOGY:
TUFFACEOUS PHYLLITE AND CHERT

LITH DESCRIPTION:
BEDDED, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, RECRYSTALLIZED/HORNFELSED, PHYLLITIC
ALTERATION: QUARTZ, SERICITE, WITH MINOR LIMONITE
MINERALIZATION: LIMONITE
MINERALIZATION TYPE:
SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING?

DDH: N-2 UNIQUE: 15497 P295 FILE: DH2951-108 TOP_INT: 132.0 BOT_INT: 162.0

LITHOLOGY:

ALTERED GABBRO

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE

DDH: 84 UNIQUE: 15498 P295 FILE: DH2951-109 TOP_INT: 35.0 BOT_INT: 140.0

LITHOLOGY:

GRAPHRITE, SULFIDE PHYLLITE, WITH MINOR CHERT

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LAMINATED, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 84 UNIQUE: 15498 P295 FILE: DH2951-109 TOP_INT: 140.0 BOT_INT: 145.0

LITHOLOGY:

TUFFACEOUS CHERT, GRAPHITE, MAGNETITE, SILICATE (AND CARBONATE?), SULFIDE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LAMINATED, RECRYSTALLIZED/HORNFELSED

ALTERATION: CHLORITE, EPIDOTE, WITH MINOR CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, CHALCOPYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE, CROSS-CUTTING, STRATIFORM, VEIN

DDH: 83 UNIQUE: 15499 P295 FILE: DH2951-110 TOP_INT: 40.0 BOT_INT: 108.0

LITHOLOGY:

TUFFACEOUS CALCITE, QUARTZ, SERICITE SCHIST

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED, SCHISTOSE

ALTERATION: CALCITE, QUARTZ, SERICITE, WITH LEACHING, MINOR LIMONITE

MINERALIZATION: LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

VEIN, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DDH: 83 UNIQUE: 15499 P295 FILE: DH2951-110 TOP_INT: 108.0 BOT_INT: 125.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE, WITH MINOR CHERT

LITH DESCRIPTION:

PHYLLITIC, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION:

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM

DDH: S129 UNIQUE: 10251 P295 FILE: DH2951-111 TOP_INT: 159.5 BOT_INT: 227.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, BEDDED

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE?

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S129 UNIQUE: 10251 P295 FILE: DH2951-111 TOP_INT: 227.0 BOT_INT: 239.0

LITHOLOGY:

RED HEMATITE PHYLLITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, PHYLLITIC

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18134 UNIQUE: 14382 P295 FILE: DH2951-112 TOP_INT: 128.0 BOT_INT: 133.0

LITHOLOGY:

CARBONATE(?), RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, SCHISTOSE, SLICKENSIDES, LAMINATED

ALTERATION: CHLORITE, WITH RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 18134 UNIQUE: 14382 P295 FILE: DH2951-112 TOP_INT: 166.0 BOT_INT: 259.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, LIMONITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, BEDDED

ALTERATION: CHLORITE, GOETHITE, LIMONITE, QUARTZ, SERICITE, SULFIDE

MINERALIZATION: LIMONITE, GOETHITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM, SELECTIVELY PERVASIVE, CROSS-CUTTING

DDH: 18134 UNIQUE: 14382 P295 FILE: DH2951-112 TOP_INT: 259.0 BOT_INT: 292.0

LITHOLOGY:

ALTERED MAFIC METATUFF-PILLOWED METABASALT

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE, LOCALLY MYLONITIC

ALTERATION: CHLORITE, GOETHITE, LIMONITE

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE

DDH: 18137 UNIQUE: 14383 P295 FILE: DH2951-113 TOP_INT: 143.0 BOT_INT: 180.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE, WITH MINOR CHERT

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, PHYLLITIC, LOCALLY MYLONITIC ?

ALTERATION: SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 18137 UNIQUE: 14383 P295 FILE: DH2951-113 TOP_INT: 180.0 BOT_INT: 220.0

LITHOLOGY:

ALTERED MAFIC METATUFF-PILLOWED METABASALT

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, SCHISTOSE, PHYLLITIC, LOCALLY MYLONITIC

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE

Appendix 295-F: DRILL LOGS

DDH: 18129 UNIQUE: 14379 P295 FILE: DH2951-114 TOP_INT: 188.0 BOT_INT: 190.0
LITHOLOGY:
GOETHITE IRON FORMATION

LITH DESCRIPTION:
CRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE
MINERALIZATION: GOETHITE
MINERALIZATION TYPE:
MASSIVE, PERVASIVE, STRATIFORM?

DDH: 18129 UNIQUE: 14379 P295 FILE: DH2951-114 TOP_INT: 190.0 BOT_INT: 283.0
LITHOLOGY:
CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION WITH MINOR CHERT, SULFIDES

LITH DESCRIPTION:
LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION: CARBONATE, QUARTZ, SULFIDE
MINERALIZATION: MAGNETITE, PYRITE, CHALCOPYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: DL-1 UNIQUE: 10121 P295 FILE: DH2951-115 TOP_INT: 55.0 BOT_INT: 80.0
LITHOLOGY:
INTERMEDIATE-FELSIC TUFF WITH SULFIDES

LITH DESCRIPTION:
LOCALLY MYLONITIC, RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, MAGNETITE, QUARTZ, SERICITE
MINERALIZATION: PYRITE, MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED

DDH: DL-2 UNIQUE: 10122 P295 FILE: DH2951-116 TOP_INT: 28.0 BOT_INT: 30.0
LITHOLOGY:
GLACIAL SAND AND GRAVEL

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

Appendix 295-F: DRILL LOGS

DL-2 UNIQUE: 10122 P295 FILE: DH2951-116 TOP_INT: 30.0 BOT_INT: 90.0

LITHOLOGY:
GRANITE

LITH DESCRIPTION:

LOCALLY MYLONITIC, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, SCHISTOSE

ALTERATION: MAGNETITE, QUARTZ, SERICITE
MINERALIZATION: MAGNETITE, GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, SELECTIVELY PERVASIVE, CROSS-CUTTING

DL-3 UNIQUE: 10118 P295 FILE: DH2951-117 TOP_INT: 29.0 BOT_INT: 50.0

LITHOLOGY:
SERICITIC PHYLLITE WITH MAGNETITE

LITH DESCRIPTION:

PHYLLITIC, LOCALLY MYLONITIC, DUCTILE DEFORMATION FEATURES

ALTERATION: MAGNETITE, QUARTZ, SERICITE
MINERALIZATION: MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, SELECTIVELY PERVASIVE, CROSS-CUTTING

DL-3 UNIQUE: 10118 P295 FILE: DH2951-117 TOP_INT: 50.0 BOT_INT: 80.0

LITHOLOGY:
TUFFACEOUS PHYLLITE

LITH DESCRIPTION:

PHYLLITIC, LAMINATED, DUCTILE DEFORMATION FEATURES, BEDDED, LOCALLY MYLONITIC?

ALTERATION: MAGNETITE, QUARTZ, RED HEMATITE, SERICITE
MINERALIZATION: MAGNETITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, VEIN, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DL-4 UNIQUE: 10119 P295 FILE: DH2951-118 TOP_INT: 40.0 BOT_INT: 65.0

LITHOLOGY:
CHLORITE, SERICITE PHYLLITE, WITH MAGNETITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC

ALTERATION: CHLORITE, MAGNETITE, PYRITE, SERICITE
MINERALIZATION: MAGNETITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, SELECTIVELY PERVASIVE, PERVASIVE

Appendix 295-F: DRILL LOGS

DDH: DL-4 UNIQUE: 10119 P295 FILE: DH2951-118 TOP_INT: 65.0 BOT_INT: 80.0

LITHOLOGY:

MYLONITIC CHLORITE, SERICITE PHYLLITIC WITH MAGNETITE

LITH DESCRIPTION:

LOCALLY MYLONITIC, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CHLORITE, MAGNETITE, SERICITE

MINERALIZATION: MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE

DDH: DL-5 UNIQUE: 10120 P295 FILE: DH2951-119 TOP_INT: 81.0 BOT_INT: 122.0

LITHOLOGY:

ALTERED MAFIC METATUFF-PILLOWED METABASALT

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFEISED ?

ALTERATION: AMPHIBOLE, CALCITE, CHLORITE, CLAYS, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE

DDH: 236 UNIQUE: 15501 P295 FILE: DH2951-120 TOP_INT: 109.0 BOT_INT: 130.0

LITHOLOGY:

TUFFACEOUS CHERT, GOETHITE, RED HEMATITE, SILICATE (AND CARBONATE?) IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LAMINATED, BEDDED

ALTERATION: CHLORITE, CLAY, GOETHITE, RED HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S238 UNIQUE: 10318 P295 FILE: DH2951-121 TOP_INT: 137.0 BOT_INT: 150.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, BEDDED, RECRYSTALLIZED/HORNFEISED ?

ALTERATION: GREY AND RED HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: 240 UNIQUE: 10302 P295 FILE: DH2951-122 TOP_INT: 232.0 BOT_INT: 247.0

LITHOLOGY:

ALTERED METABASALT

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: ACTINOLITE, CALCITE, CHLORITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, CROSS-CUTTING

DDH: S138 UNIQUE: 10218 P295 FILE: DH2951-123 TOP_INT: 104.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, BEDDED, RECRYSTALLIZED/HORNFELSED

ALTERATION: GOETHITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: S138 UNIQUE: 10218 P295 FILE: DH2951-123 TOP_INT: 115.0 BOT_INT: 135.0

LITHOLOGY:

TUFFACEOUS CARBONATE, CHERT, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: CHLORITE, CLAY, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S30 UNIQUE: 10291 P295 FILE: DH2951-124 TOP_INT: 101.0 BOT_INT: 127.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S30 UNIQUE: 10291 P295 FILE: DH2951-124 TOP_INT: 127.0 BOT_INT: 154.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED

ALTERATION: CARBONATE, GOETHITE, QUARTZ, WITH VUGS

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S45 UNIQUE: 10268 P295 FILE: DH2951-125 TOP_INT: 117.0 BOT_INT: 125.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, SLICKENSIDES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S45 UNIQUE: 10268 P295 FILE: DH2951-125 TOP_INT: 225.0 BOT_INT: 255.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, SLICKENSIDES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION: HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S46 UNIQUE: 10347 P295 FILE: DH2951-126 TOP_INT: 115.0 BOT_INT: 145.0

LITHOLOGY:

LEACHED CHERT, GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, LIMONITE, MAGNETITE

MINERALIZATION: GOETHITE, MAGNETITE, LIMONITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S46 UNIQUE: 10347 P295 FILE: DH2951-126 TOP_INT: 155.0 BOT_INT: 190.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: HEMATITE, WITH CLAY(?), SULFATES(?)

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

MASSIVE, PERVASIVE, STRATIFORM

DDH: S46 UNIQUE: 10347 P295 FILE: DH2951-126 TOP_INT: 190.0 BOT_INT: 257.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, SLICKENSIDES, MYLONITIC ?

ALTERATION: GREY AND RED HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S47 UNIQUE: 10269 P295 FILE: DH2951-127 TOP_INT: 230.0 BOT_INT: 240.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 48 UNIQUE: 10348 P295 FILE: DH2951-128 TOP_INT: 108.0 BOT_INT: 223.0

LITHOLOGY:

CARBONATE(?), GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION WITH MINOR SULFIDES

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, SCHISTOSE

ALTERATION: CARBONATE, QUARTZ, SULFIDE, WITH MINOR GOETHITE, LIMONITE

MINERALIZATION: MAGNETITE, GREY HEMATITE, PYRITE, MANGANESE OXIDES

MINERALIZATION TYPE:

MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 48 UNIQUE: 10348 P295 FILE: DH2951-128 TOP_INT: 223.0 BOT_INT: 253.0
LITHOLOGY:
CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SLICKENSIDES

ALTERATION: CARBONATE, CHLORITE, CLAY, GOETHITE, RED HEMATITE, QUARTZ, SULFIDE

MINERALIZATION: GREY HEMATITE, MAGNETITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 48 UNIQUE: 10348 P295 FILE: DH2951-128 TOP_INT: 253.0 BOT_INT: 271.0
LITHOLOGY:
GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE, PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 48 UNIQUE: 10348 P295 FILE: DH2951-128 TOP_INT: 271.0 BOT_INT: 273.0
LITHOLOGY:
ALTERED CHLORITE TUFFACEOUS(?) PHYLLITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, PHYLLITIC, LAMINATED

ALTERATION: CHLORITE, CLAY, GOETHITE, RED HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: 48 UNIQUE: 10348 P295 FILE: DH2951-128 TOP_INT: 273.0 BOT_INT: 288.0
LITHOLOGY:
PHYLLITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, PHYLLITIC, SLICKENSIDES

ALTERATION:

MINERALIZATION: GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

H: S49 UNIQUE: 10293 P295 FILE: DH2951-129 TOP_INT: 170.0 BOT_INT: 195.0

LITHOLOGY:
TUFACEOUS(?) CARBONATE(?), CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ
MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE
MINERALIZATION TYPE:
BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S50 UNIQUE: 10213 P295 FILE: DH2951-130 TOP_INT: 90.0 BOT_INT: 180.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LAMINATED, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, QUARTZ
MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE
MINERALIZATION TYPE:
MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

H: AB-28 UNIQUE: 14497 P295 FILE: DH2951-131 TOP_INT: 141.0 BOT_INT: 154.5

LITHOLOGY:
ALTERED, AMYGDALOIDAL MAFIC-INTERMEDIATE METAVOLCANICS

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, EPIDOTE, SERICITE, SULFIDE
MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED, VEIN, CROSS-CUTTING, SELECTIVELY PERVASIVE

DDH: AB-27 UNIQUE: 14500 P295 FILE: DH2951-132 TOP_INT: 209.0 BOT_INT: 218.5

LITHOLOGY:
GRAPHITE ARGILLITE

LITH DESCRIPTION:
ARGILLITIC?, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: QUARTZ, SULFIDE
MINERALIZATION: PYRITE, PYRRHOTITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: S204 UNIQUE: 10397 P295 FILE: DH2951-133 TOP_INT: 113.0 BOT_INT: 175.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 206 UNIQUE: 10172 P295 FILE: DH2951-134 TOP_INT: 112.0 BOT_INT: 122.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION AND TUFFACEOUS ARGILLITE-PHYLLITE

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 206 UNIQUE: 10172 P295 FILE: DH2951-134 TOP_INT: 122.0 BOT_INT: 147.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 207 UNIQUE: 10398 P295 FILE: DH2951-135 TOP_INT: 110.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

CRYSTALLIZED/HORNFELSE, BEDDED?

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

H: 207 UNIQUE: 10398 P295 FILE: DH2951-135 TOP_INT: 138.0 BOT_INT: 143.0

LITHOLOGY:

DOLOMITIC ARGILLACEOUS SILTSTONE

WITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, LAMINATED, RECRYSTALLIZED/HORNFELED

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM

DDH: S208 UNIQUE: 15503 P295 FILE: DH2951-136 TOP_INT: 247.0 BOT_INT: 282.0

LITHOLOGY:

CHERT (GRAPHITIC, LIGHT TO DARK), GRAPHITE, LIMONITE, MAGNETITE, SILICATE, SULFIDE IRON FORMATION

WITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELED, LAMINATED, BEDDED, LOCALLY METACRYSTALLIC ?

ALTERATION: CHLORITE, MAGNETITE; LIMONITE; QUARTZ, SULFIDE

MINERALIZATION: LIMONITE, PYRITE, MAGNETITE, GOETHITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

H: 210 UNIQUE: 10173 P295 FILE: DH2951-137 TOP_INT: 96.0 BOT_INT: 121.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION; GREEN AND RED FERRUGINOUS PHYLLITE

WITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC, RECRYSTALLIZED/HORNFELED, LOCAL BRECCIA, BEDDED

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S211 UNIQUE: 10399 P295 FILE: DH2951-138 TOP_INT: 103.0 BOT_INT: 110.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

WITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 215 UNIQUE: 10174 P295 FILE: DH2951-139 TOP_INT: 97.0 BOT_INT: 112.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, CRYSTALLIZED/HORNFELSED

ALTERATION: GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, MASSIVE, PERVASIVE, STRATIFORM

DDH: S225 UNIQUE: 10300 P295 FILE: DH2951-140 TOP_INT: 272.0 BOT_INT: 277.0

LITHOLOGY:

RED HEMATITE ARGILLITE

LITH DESCRIPTION:

PHYLLITIC?, CLASTIC ROCK, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: QUARTZ

MINERALIZATION: HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S228 UNIQUE: 10314 P295 FILE: DH2951-141 TOP_INT: 129.0 BOT_INT: 140.0

LITHOLOGY:

GREY AND RED FERRUGINOUS PHYLLITE, WITH MINOR HEMATITE, GOETHITE, IRON FORMATION

LITH DESCRIPTION:

PHYLLITIC, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: S232 UNIQUE: 10315 P295 FILE: DH2951-142 TOP_INT: 113.0 BOT_INT: 118.0

LITHOLOGY:

CHERT, MAGNETITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: GREY AND RED HEMATITE, MAGNETITE

MINERALIZATION: MAGNETITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, STRATIFORM

Appendix 295-F: DRILL LOGS

H: 234 UNIQUE: 10175 P295 FILE: DH2951-143 TOP_INT: 141.0 BOT_INT: 146.0

LITHOLOGY:

BUFFACEOUS CHERT, GOETHITE, MAGNETITE, SILICATE (AND CARBONATE?) IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING?

DDH: S241 UNIQUE: 10176 P295 FILE: DH2951-144 TOP_INT: 93.0 BOT_INT: 98.0

LITHOLOGY:

CHERT, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, CRYSTALLIZED/HORNFELSED

ALTERATION: GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, PERVASIVE, CROSS-CUTTING?, STRATIFORM

H: S241 UNIQUE: 10176 P295 FILE: DH2951-144 TOP_INT: 98.0 BOT_INT: 104.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES

ALTERATION: CHLORITE, WITH MINOR CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, MASSIVE, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: S242 UNIQUE: 10177 P295 FILE: DH2951-145 TOP_INT: 103.0 BOT_INT: 108.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE

ALTERATION: CHLORITE, WITH MINOR CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, MASSIVE, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DDH: 244 UNIQUE: 10320 P295 FILE: DH2951-146 TOP_INT: 117.0 BOT_INT: 132.0
LITHOLOGY:
CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE, WITH VUGS
MINERALIZATION: RED HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S246 UNIQUE: 10123 P295 FILE: DH2951-147 TOP_INT: 107.0 BOT_INT: 117.0
LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, CRYSTALLIZED/HORNFELSE

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE, WITH VUGS
MINERALIZATION: RED HEMATITE, GOETHITE, MAGNETITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 247 UNIQUE: 10303 P295 FILE: DH2951-148 TOP_INT: 180.0 BOT_INT: 194.0
LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, CRYSTALLIZED/HORNFELSE

ALTERATION: CARBONATE, GOETHITE, QUARTZ, WITH VUGS
MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 247 UNIQUE: 10303 P295 FILE: DH2951-148 TOP_INT: 194.0 BOT_INT: 200.0
LITHOLOGY:
GREEN CHLORITE, CLAY, EPIDOTE(?) ROCK, WITH RED HEMATITIC FRAGMENTS

LITH DESCRIPTION:
LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE ?

ALTERATION: CHLORITE, CLAY, EPIDOTE, LIMONITE, RED HEMATITE
MINERALIZATION: RED HEMATITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE

Appendix 295-F: DRILL LOGS

H: S248 UNIQUE: 10321 P295 FILE: DH2951-149 TOP_INT: 113.0 BOT_INT: 123.0

LITHOLOGY:
TUFFACEOUS(?) CARBONATE(?), CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

TH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, CLASTIC ROCK?

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ
MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S250 UNIQUE: 10178 P295 FILE: DH2951-150 TOP_INT: 116.0 BOT_INT: 126.0

LITHOLOGY:
GREY AND RED PHYLLITE, WITH MINOR SULFIDE

TH DESCRIPTION:
PHYLLITIC, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, CLASTIC ROCK, LAMINATED, SLICKENSIDES

ALTERATION: QUARTZ, SULFIDE
MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, VEIN?, STRATIFORM

H: S251 UNIQUE: 10322 P295 FILE: DH2951-151 TOP_INT: 110.0 BOT_INT: 125.0

LITHOLOGY:
TUFFACEOUS(?) CARBONATE(?), CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

TH DESCRIPTION:
DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE
MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S254 UNIQUE: 10323 P295 FILE: DH2951-152 TOP_INT: 112.0 BOT_INT: 127.0

LITHOLOGY:
TUFFACEOUS(?) CARBONATE(?), CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

TH DESCRIPTION:
DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE
MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S256 UNIQUE: 10179 P295 FILE: DH2951-153 TOP_INT: 123.0 BOT_INT: 188.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S256 UNIQUE: 10179 P295 FILE: DH2951-153 TOP_INT: 188.0 BOT_INT: 238.0

LITHOLOGY:

GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

CRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN?, PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S256 UNIQUE: 10179 P295 FILE: DH2951-153 TOP_INT: 261.0 BOT_INT: 273.0

LITHOLOGY:

GREY AND RED PHYLLITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, PHYLLITIC, LAMINATED, BEDDED

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

STRATIFORM

DDH: S257 UNIQUE: 10301 P295 FILE: DH2951-154 TOP_INT: 236.0 BOT_INT: 251.0

LITHOLOGY:

ALTERED GABBRO

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, EPIDOTE, WITH MINOR CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE?

DDH: 260 UNIQUE: 10180 P295 FILE: DH2951-155 TOP_INT: 100.0 BOT_INT: 103.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LAMINATED

ALTERATION: HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 260 UNIQUE: 10180 P295 FILE: DH2951-155 TOP_INT: 103.0 BOT_INT: 110.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 260 UNIQUE: 10180 P295 FILE: DH2951-155 TOP_INT: 110.0 BOT_INT: 119.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED

ALTERATION: CARBONATE, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S261 UNIQUE: 10325 P295 FILE: DH2951-156 TOP_INT: 113.0 BOT_INT: 118.0

LITHOLOGY:

CARBONATE(?), GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

CHISTOSE

ALTERATION: ALTERED, BUT TYPE UNCERTAIN

MINERALIZATION: GOETHITE, MAGNETITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE

Appendix 295-F: DRILL LOGS

DDH: S264 UNIQUE: 10326 P295 FILE: DH2951-157 TOP_INT: 111.0 BOT_INT: 117.0

LITHOLOGY:

CHERT, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 265 UNIQUE: 10181 P295 FILE: DH2951-158 TOP_INT: 88.0 BOT_INT: 103.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, GREY HEMATITE, LIMONITE, PYRITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S268 UNIQUE: 10327 P295 FILE: DH2951-159 TOP_INT: 110.0 BOT_INT: 120.0

LITHOLOGY:

TUFFACEOUS(?) CARBONATE(?), CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 270 UNIQUE: 10182 P295 FILE: DH2951-160 TOP_INT: 97.0 BOT_INT: 107.0

LITHOLOGY:

VEIN QUARTZ WITH CARBONATE, GOETHITE, GREY HEMATITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN

DDH: S271 UNIQUE: 10233 P295 FILE: DH2951-161 TOP_INT: 97.0 BOT_INT: 112.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION; GREEN AND RED FERRUGINOUS PHYLLITE

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: S274 UNIQUE: 10329 P295 FILE: DH2951-162 TOP_INT: 107.0 BOT_INT: 110.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, MASSIVE, PERVASIVE, STRATIFORM?

DDH: S275 UNIQUE: 10234 P295 FILE: DH2951-163 TOP_INT: 112.0 BOT_INT: 132.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 276 UNIQUE: 10124 P295 FILE: DH2951-164 TOP_INT: 110.0 BOT_INT: 125.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S279 UNIQUE: 10331 P295 FILE: DH2951-165 TOP_INT: 101.0 BOT_INT: 121.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LAMINATED

ALTERATION: RED HEMATITE, QUARTZ, SULFIDE

MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: 281 UNIQUE: 10183 P295 FILE: DH2951-166 TOP_INT: 130.0 BOT_INT: 165.0

LITHOLOGY:

CHERT, GOETHITE, MAGNETITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, GOETHITE, LIMONITE, MAGNETITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: RED HEMATITE, GOETHITE, MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 281 UNIQUE: 10183 P295 FILE: DH2951-166 TOP_INT: 165.0 BOT_INT: 175.0

LITHOLOGY:

RED HEMATITIC ARGILLITE; AND CARBONATE(?), RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, MYLONITIC ?

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 281 UNIQUE: 10183 P295 FILE: DH2951-166 TOP_INT: 175.0 BOT_INT: 210.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES; LAMINATED, SCHISTOSE ?

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, PERVASIVE, CROSS-CUTTING?, STRATIFORM

DH: 281 UNIQUE: 10183 P295 FILE: DH2951-166 TOP_INT: 210.0 BOT_INT: 245.0

LITHOLOGY:

GREY AND RED FERRUGINOUS PHYLLITE, WITH MINOR HEMATITE, GOETHITE, IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, PHYLLITIC, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE, MAGNETITE?

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S15 UNIQUE: 10190 P295 FILE: DH2951-167 TOP_INT: 140.0 BOT_INT: 160.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: MAGNETITE, LIMONITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: S295 UNIQUE: 10184 P295 FILE: DH2951-168 TOP_INT: 115.0 BOT_INT: 230.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: MAGNETITE, GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S296 UNIQUE: 10336 P295 FILE: DH2951-169 TOP_INT: 99.0 BOT_INT: 100.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: QUARTZ

MINERALIZATION: MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 292 UNIQUE: 10345 P295 FILE: DH2951-170 TOP_INT: 114.0 BOT_INT: 122.0
LITHOLOGY:
CARBONATE(?), GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GREY AND RED HEMATITE, MAGNETITE
MINERALIZATION: GREY HEMATITE, RED HEMATITE, MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 292 UNIQUE: 10345 P295 FILE: DH2951-170 TOP_INT: 122.0 BOT_INT: 144.0
LITHOLOGY:
CARBONATE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION WITH MINOR SULFIDES

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: RED HEMATITE, QUARTZ, SULFIDE
MINERALIZATION: MAGNETITE, PYRITE, RED HEMATITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S118 UNIQUE: 10379 P295 FILE: DH2951-171 TOP_INT: 107.0 BOT_INT: 117.0
LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LOCAL BRECCIA, LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ, RED HEMATITE
MINERALIZATION: RED HEMATITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: 121 UNIQUE: 10380 P295 FILE: DH2951-172 TOP_INT: 113.0 BOT_INT: 123.0
LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE, WITH VUGS
MINERALIZATION: RED HEMATITE, GREY HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DH: S127 UNIQUE: 10381 P295 FILE: DH2951-173 TOP_INT: 119.0 BOT_INT: 123.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE, WITH VUGS
MINERALIZATION: RED HEMATITE, GREY HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: S128 UNIQUE: 10382 P295 FILE: DH2951-174 TOP_INT: 110.0 BOT_INT: 115.0

LITHOLOGY:
CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: HEMATITE, QUARTZ
MINERALIZATION: RED HEMATITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DH: S128 UNIQUE: 10382 P295 FILE: DH2951-174 TOP_INT: 125.0 BOT_INT: 130.0

LITHOLOGY:
VEIN QUARTZ WITH MUSCOVITE, HEMATITE

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: RED HEMATITE
MINERALIZATION: RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING

DDH: S316 UNIQUE: 10253 P295 FILE: DH2951-175 TOP_INT: 119.0 BOT_INT: 124.0

LITHOLOGY:
EFFACEOUS PHYLLITE, CHERT AND SILICEOUS SILTSTONE

LITH DESCRIPTION:
DUCTILE DEFORMATION FEATURES, LAMINATED, BEDDED, CLASTIC ROCK

ALTERATION: HEMATITE, QUARTZ, SERICITE
MINERALIZATION: RED HEMATITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S317 UNIQUE: 10254 P295 FILE: DH2951-176 TOP_INT: 126.0 BOT_INT: 160.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S318 UNIQUE: 10255 P295 FILE: DH2951-177 TOP_INT: 97.0 BOT_INT: 113.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE

DDH: S324 UNIQUE: 10217 P295 FILE: DH2951-178 TOP_INT: 137.0 BOT_INT: 152.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, CRYSTALLIZED/HORNFEISED

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, RED HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: S324 UNIQUE: 10217 P295 FILE: DH2951-178 TOP_INT: 196.0 BOT_INT: 206.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, CRYSTALLIZED/HORNFEISED

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DH: S325 UNIQUE: 10257 P295 FILE: DH2951-179 TOP_INT: 113.0 BOT_INT: 118.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, CRYSTALLIZED/HORNFELSED

ALTERATION: CHLORITE, MAGNETITE; GOETHITE; LIMONITE; QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, GREY HEMATITE, PYRITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S326 UNIQUE: 10258 P295 FILE: DH2951-180 TOP_INT: 126.0 BOT_INT: 131.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED

ALTERATION: GOETHITE

MINERALIZATION: GOETHITE, GREY HEMATITE?

MINERALIZATION TYPE:

MASSIVE, PERVASIVE, STRATIFORM

DDH: S326 UNIQUE: 10258 P295 FILE: DH2951-180 TOP_INT: 151.0 BOT_INT: 156.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S326 UNIQUE: 10258 P295 FILE: DH2951-180 TOP_INT: 174.0 BOT_INT: 194.0

LITHOLOGY:

CHERT, TUFFACEOUS RED AND TAN FERRUGINOUS PHYLLITE, AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CLAY(?), RED HEMATITE, SERICITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S327 UNIQUE: 10259 P295 FILE: DH2951-181 TOP_INT: 135.0 BOT_INT: 140.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S327 UNIQUE: 10259 P295 FILE: DH2951-181 TOP_INT: 192.0 BOT_INT: 207.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GREY AND RED HEMATITE, MAGNETITE

MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S29 UNIQUE: 10289 P295 FILE: DH2951-182 TOP_INT: 147.0 BOT_INT: 165.0

LITHOLOGY:

CHERT, ARGILLITIC GOETHITE, HEMATITE IRON FORMATION WITH MINOR SULFIDE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S29 UNIQUE: 10289 P295 FILE: DH2951-182 TOP_INT: 165.0 BOT_INT: 175.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION, AND CHLORITE, GRAPHITE, SIDERITE PHYLLITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC

ALTERATION: CARBONATE, CHLORITE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S33 UNIQUE: 10210 P295 FILE: DH2951-183 TOP_INT: 110.0 BOT_INT: 140.0

LITHOLOGY:
TUFFACEOUS(?) CARBONATE(?), CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S31 UNIQUE: 10359 P295 FILE: DH2951-184 TOP_INT: 220.0 BOT_INT: 228.0

LITHOLOGY:
GREY AND RED SILTSTONE, WITH CARBONATE

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, CLASTIC ROCK, PHYLLITIC

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:
BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S330 UNIQUE: 15504 P295 FILE: DH2951-185 TOP_INT: 112.0 BOT_INT: 115.0

LITHOLOGY:
GOETHITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED

ALTERATION: CARBONATE, GOETHITE, PYRITE

MINERALIZATION: GOETHITE, PYRITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S36 UNIQUE: 10361 P295 FILE: DH2951-186 TOP_INT: 105.0 BOT_INT: 200.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, WITH VUGS

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:
BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S36 UNIQUE: 10361 P295 FILE: DH2951-186 TOP_INT: 200.0 BOT_INT: 330.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, BEDDED

ALTERATION: CARBONATE, GOETHITE, QUARTZ, WITH VUGS

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S36 UNIQUE: 10361 P295 FILE: DH2951-186 TOP_INT: 330.0 BOT_INT: 340.0

LITHOLOGY:

GREY AND RED ARGILLITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S37 UNIQUE: 10211 P295 FILE: DH2951-187 TOP_INT: 182.0 BOT_INT: 187.0

LITHOLOGY:

ALTERED CHLORITE TUFFACEOUS(?) PHYLLITE

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, CLASTIC ROCK, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: S38 UNIQUE: 10264 P295 FILE: DH2951-188 TOP_INT: 145.0 BOT_INT: 175.0

LITHOLOGY:

ARGILLITIC GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, CLASTIC ROCK?

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S39 UNIQUE: 10265 P295 FILE: DH2951-189 TOP_INT: 130.0 BOT_INT: 142.0

LITHOLOGY:
TUFFACEOUS PHYLLITE AND CHERT

LITH DESCRIPTION:
LAMINATED, CLASTIC ROCK?, PHYLLITIC

ALTERATION: QUARTZ, RED HEMATITE
MINERALIZATION: RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, STRATIFORM?, SELECTIVELY PERVASIVE

DDH: S40 UNIQUE: 10185 P295 FILE: DH2951-190 TOP_INT: 109.0 BOT_INT: 235.0

LITHOLOGY:
CARBONATE(?), GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION WITH MINOR CHERT

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE?

ALTERATION: CARBONATE, CHLORITE(?), CLAY, GOETHITE, HEMATITE, PYRITE, QUARTZ
MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE, GOETHITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S40 UNIQUE: 10185 P295 FILE: DH2951-190 TOP_INT: 295.0 BOT_INT: 300.0

LITHOLOGY:
GREY AND RED ARGILLITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: RED HEMATITE
MINERALIZATION: RED HEMATITE
MINERALIZATION TYPE:
BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: S41 UNIQUE: 10266 P295 FILE: DH2951-191 TOP_INT: 148.0 BOT_INT: 160.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE
MINERALIZATION TYPE:
BLEBBY, MASSIVE, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S41 UNIQUE: 10266 P295 FILE: DH2951-191 TOP_INT: 218.0 BOT_INT: 230.0

LITHOLOGY:

CARBONATE(?), CHERT, GREY HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S42 UNIQUE: 10267 P295 FILE: DH2951-192 TOP_INT: 185.0 BOT_INT: 210.0

LITHOLOGY:

CARBONATE(?), CHERT, GREY HEMATITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S5 UNIQUE: 10195 P295 FILE: DH2951-193 TOP_INT: 156.0 BOT_INT: 211.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: GREY HEMATITE, GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S6 UNIQUE: 10294 P295 FILE: DH2951-194 TOP_INT: 115.0 BOT_INT: 145.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, LIMONITE, SILICATE IRON FORMATION AND GREY PHYLLITE

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: S7 UNIQUE: 10196 P295 FILE: DH2951-195 TOP_INT: 160.0 BOT_INT: 165.0

LITHOLOGY:

CARBONATE(?), GOETHITE, GREY HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES?, BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, GOETHITE, GREY HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S43 UNIQUE: 10346 P295 FILE: DH2951-196 TOP_INT: 105.0 BOT_INT: 150.0

LITHOLOGY:

GREY AND RED HEMATITE, MAGNETITE, SILICATE IRON FORMATION, SILICEOUS SILTSTONE, AND MINOR CHERT

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, RED HEMATITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: S43 UNIQUE: 10346 P295 FILE: DH2951-196 TOP_INT: 150.0 BOT_INT: 225.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S43 UNIQUE: 10346 P295 FILE: DH2951-196 TOP_INT: 225.0 BOT_INT: 250.0

LITHOLOGY:

SURFACEOUS(?) FRAGMENTAL SERICITIC PHYLLITE AND FERRUGINOUS SILICEOUS PHYLLITE

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, CLASTIC ROCK, LOCALLY MYLONITIC?

ALTERATION: RED HEMATITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, RED HEMATITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: BM-2 UNIQUE: 11444 P295 FILE: DH2951-197 TOP_INT: 157.0 BOT_INT: 350.0

LITHOLOGY:

ARGILLITIC CARBONATE(?), CHERT, MAGNETITE, RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC

ALTERATION: CARBONATE, MAGNETITE, PYRITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: BM-2 UNIQUE: 11444 P295 FILE: DH2951-197 TOP_INT: 350.0 BOT_INT: 355.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITIC PHYLLITE

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC, CLASTIC ROCK

ALTERATION: CARBONATE, GREY AND RED HEMATITE, PYRITE(?), QUARTZ

MINERALIZATION: RED HEMATITE, MAGNETITE, GREY HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 101 UNIQUE: 15505 P295 FILE: DH2951-198 TOP_INT: 140.0 BOT_INT: 160.0

LITHOLOGY:

ALTERED PORPHYRITIC BASALT OR ANDESITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, CLAY, EPIDOTE, GREY HEMATITE(?), GOETHITE, SULFIDE(?)

MINERALIZATION: GOETHITE, GREY HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, PERVASIVE

DDH: 101 UNIQUE: 15505 P295 FILE: DH2951-198 TOP_INT: 185.0 BOT_INT: 195.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: PYRITE, QUARTZ, MELANITERITE SURFACE OXIDATION

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: 101 UNIQUE: 15505 P295 FILE: DH2951-198 TOP_INT: 240.0 BOT_INT: 250.0

LITHOLOGY:
GRAPHITE, SULFIDE PHYLLITE

LITH DESCRIPTION:
DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC

ALTERATION: CALCITE, CHLORITE, GOETHITE, QUARTZ
MINERALIZATION: GOETHITE, PYRITE, GREY HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED, VEIN, CROSS-CUTTING

DDH: 101 UNIQUE: 15505 P295 FILE: DH2951-198 TOP_INT: 260.0 BOT_INT: 275.0

LITHOLOGY:
CARBONATE(?), CHERT, GOETHITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
DISSEMINATED, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: GOETHITE, QUARTZ
MINERALIZATION: GOETHITE, GREY HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: 102 UNIQUE: 15506 P295 FILE: DH2951-199 TOP_INT: 250.0 BOT_INT: 327.0

LITHOLOGY:
EFFUSIVE METAGREYWACKE AND PHYLLITE

LITH DESCRIPTION:
DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, BEDDED, PHYLLITIC, LOCALLY MYLONITIC ?, SCHISTOSE

ALTERATION: CARBONATE, GOETHITE, HEMATITE, PYRITE(?), SERICITE
MINERALIZATION: PYRITE, GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 103 UNIQUE: 15507 P295 FILE: DH2951-200 TOP_INT: 124.0 BOT_INT: 128.0

LITHOLOGY:
GRAPHITE PHYLLITE, WITH MINOR SULFIDE CHEMICAL SEDIMENTS

LITH DESCRIPTION:
PHYLLITIC, SLICKENSIDES

ALTERATION: GOETHITE, PYRITE
MINERALIZATION: PYRITE, GOETHITE
MINERALIZATION TYPE:
VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: 103 UNIQUE: 15507 P295 FILE: DH2951-200 TOP_INT: 140.0 BOT_INT: 160.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 103 UNIQUE: 15507 P295 FILE: DH2951-200 TOP_INT: 160.0 BOT_INT: 170.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 103 UNIQUE: 15507 P295 FILE: DH2951-200 TOP_INT: 210.0 BOT_INT: 220.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 104 UNIQUE: 15508 P295 FILE: DH2951-201 TOP_INT: 209.0 BOT_INT: 230.0

LITHOLOGY:

CHERT, LIMONITE, MAGNETITE PHYLLITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE, LOCALLY MYLONITIC ?

ALTERATION: GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM?

DDH: 104 UNIQUE: 15508 P295 FILE: DH2951-201 TOP_INT: 250.0 BOT_INT: 280.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, QUARTZ, SULFIDE(?)

MINERALIZATION: GOETHITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S3 UNIQUE: 10290 P295 FILE: DH2951-202 TOP_INT: 191.0 BOT_INT: 208.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, BEDDED, RECRYSTALLIZED/HORNFELSED?

ALTERATION: GOETHITE, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S4 UNIQUE: 10292 P295 FILE: DH2951-203 TOP_INT: 122.0 BOT_INT: 129.5

LITHOLOGY:

CARBONATE, CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: S4 UNIQUE: 10292 P295 FILE: DH2951-203 TOP_INT: 129.5 BOT_INT: 135.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, CROSS-CUTTING, STRATIFORM

DDH: S8 UNIQUE: 10295 P295 FILE: DH2951-204 TOP_INT: 111.0 BOT_INT: 126.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S9 UNIQUE: 10197 P295 FILE: DH2951-205 TOP_INT: 135.0 BOT_INT: 140.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S10 UNIQUE: 10275 P295 FILE: DH2951-206 TOP_INT: 192.0 BOT_INT: 197.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

VEIN, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: S11 UNIQUE: 10278 P295 FILE: DH2951-207 TOP_INT: 164.0 BOT_INT: 174.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

H: S12 UNIQUE: 10188 P295 FILE: DH2951-208 TOP_INT: 126.0 BOT_INT: 143.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GREY HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, LIMONITE, GREY HEMATITE?

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S13 UNIQUE: 10282 P295 FILE: DH2951-209 TOP_INT: 110.0 BOT_INT: 120.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

H: S14 UNIQUE: 10189 P295 FILE: DH2951-210 TOP_INT: 130.0 BOT_INT: 138.0

LITHOLOGY:

CHERT (GRAPHITIC, LIGHT TO DARK GREY)

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, SPHALERITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S14 UNIQUE: 10189 P295 FILE: DH2951-210 TOP_INT: 138.0 BOT_INT: 142.0

LITHOLOGY:

ALTERED CLAYEY, GOETHITE, LIMONITE, RED HEMATITE ROCK

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LOCAL BRECCIA

ALTERATION: CARBONATE, CLAY, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: LIMONITE, GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: S14 UNIQUE: 10189 P295 FILE: DH2951-210 TOP_INT: 190.0 BOT_INT: 200.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES?, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, CHLORITE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: S21 UNIQUE: 10202 P295 FILE: DH2951-211 TOP_INT: 155.0 BOT_INT: 185.0

LITHOLOGY:

CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S21 UNIQUE: 10202 P295 FILE: DH2951-211 TOP_INT: 237.0 BOT_INT: 250.0

LITHOLOGY:

CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S21 UNIQUE: 10202 P295 FILE: DH2951-211 TOP_INT: 293.0 BOT_INT: 305.0

LITHOLOGY:

CHERT, TUFFACEOUS RED AND TAN FERRUGINOUS PHYLLITE, AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, MYLONITIC ?, PHYLLITIC ?

ALTERATION: CARBONATE, CLAY(?), RED HEMATITE, SERICITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE?

MINERALIZATION TYPE:

BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM ?

DH: S22 UNIQUE: 10192 P295 FILE: DH2951-212 TOP_INT: 106.0 BOT_INT: 155.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S20 UNIQUE: 10288 P295 FILE: DH2951-213 TOP_INT: 125.0 BOT_INT: 190.0

LITHOLOGY:

CHERT, TUFFACEOUS RED AND TAN FERRUGINOUS PHYLLITE, AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC?, LOCALLY MYLONITIC

ALTERATION: CLAY, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE, SULFIDE

MINERALIZATION: RED HEMATITE, GOETHITE, LIMONITE, PYRITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: S23 UNIQUE: 10204 P295 FILE: DH2951-214 TOP_INT: 170.0 BOT_INT: 215.0

LITHOLOGY:

CARBONATE, CHERT, GREY AND RED HEMATITE, MAGNETITE, SILICATE, IRON FORMATION

LITH DESCRIPTION:

LAMINATED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: RED HEMATITE, MAGNETITE, GOETHITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S24 UNIQUE: 10193 P295 FILE: DH2951-215 TOP_INT: 115.0 BOT_INT: 125.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S25 UNIQUE: 10206 P295 FILE: DH2951-216 TOP_INT: 193.0 BOT_INT: 205.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION AND MINOR PHYLLITE

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: GREY AND RED HEMATITE

MINERALIZATION: GREY AND RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S25 UNIQUE: 10206 P295 FILE: DH2951-216 TOP_INT: 205.0 BOT_INT: 225.0

LITHOLOGY:

CHERT, TUFFACEOUS GREEN AND RED PHYLLITE

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC, LOCAL BRECCIA?

ALTERATION: CHLORITE, CLAY, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S27 UNIQUE: 10194 P295 FILE: DH2951-217 TOP_INT: 105.0 BOT_INT: 122.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CALCITE, GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, LIMONITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S27 UNIQUE: 10194 P295 FILE: DH2951-217 TOP_INT: 122.0 BOT_INT: 123.0

LITHOLOGY:

PHYLLITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC ?

ALTERATION: GOETHITE

MINERALIZATION: GOETHITE?

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

H: S27 UNIQUE: 10194 P295 FILE: DH2951-217 TOP_INT: 123.0 BOT_INT: 225.0

LITHOLOGY:

CARBONATE, CHERT, GREY AND RED HEMATITE, MAGNETITE, SILICATE, IRON FORMATION

TEXT DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: MO-1 UNIQUE: 12019 P295 FILE: DH2951-218 TOP_INT: 0.0 BOT_INT: 80.0

LITHOLOGY:

CLASTIC SAND AND GRAVEL (LOCALLY CLAYEY)

TEXT DESCRIPTION:

CLASTIC ROCK

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

H: MO-1 UNIQUE: 12019 P295 FILE: DH2951-218 TOP_INT: 80.0 BOT_INT: 307.0

LITHOLOGY:

SAND, POORLY CEMENTED, FINE TO MEDIUM-GRAINED, POOR TO MODERATE SORTED, WITH IRON STAINING

TEXT DESCRIPTION:

CLASTIC ROCK

ALTERATION: GOETHITE, HEMATITE, LIMONITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED

DDH: MO-2 UNIQUE: 12018 P295 FILE: DH2951-219 TOP_INT: 0.0 BOT_INT: 60.0

LITHOLOGY:

CLASTIC SAND AND GRAVEL (LOCALLY CLAYEY)

TEXT DESCRIPTION:

CLASTIC ROCK

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: MO-2 UNIQUE: 12018 P295 FILE: DH2951-219 TOP_INT: 60.0 BOT_INT: 307.0

LITHOLOGY:

SAND, POORLY CEMENTED, FINE TO MEDIUM-GRAINED, POOR TO MODERATE SORTED, WITH IRON STAINING

LITH DESCRIPTION:

CLASTIC ROCK

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED

DDH: MO-3 UNIQUE: 12017 P295 FILE: DH2951-220 TOP_INT: 0.0 BOT_INT: 85.0

LITHOLOGY:

GLACIAL SAND AND GRAVEL (LOCALLY CLAYEY)

LITH DESCRIPTION:

CLASTIC ROCK

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: MO-3 UNIQUE: 12017 P295 FILE: DH2951-220 TOP_INT: 85.0 BOT_INT: 270.0

LITHOLOGY:

GLACIAL SILTY SAND AND GRAVEL

LITH DESCRIPTION:

CLASTIC ROCK

ALTERATION: CLAY, LIMONITE, QUARTZ

MINERALIZATION: LIMONITE

MINERALIZATION TYPE:

DISSEMINATED?, SELECTIVELY PERVASIVE?

DDH: R-1 UNIQUE: 12617 P295 FILE: DH2951-221 TOP_INT: 69.0 BOT_INT: 207.3

LITHOLOGY:

BIOTITE, HORNBLende, MAGNETITE, PLAGIOCLASE, QUARTZ SCHIST WITH BASALT AND GRANITE DIKES

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED, SLICKENSIDES

ALTERATION: BIOTITE(?), CARBONATE, K-FELDSPAR, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, PERVASIVE, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DH: PR-1 UNIQUE: 12750 P295 FILE: DH2951-222 TOP_INT: 41.0 BOT_INT: 179.0

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE AND SILTSTONE

LITH DESCRIPTION:

CLASTIC ROCK, BEDDED, LAMINATED

ALTERATION: CARBONATE, CLAY, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, STRATIFORM

DDH: PR-1 UNIQUE: 12750 P295 FILE: DH2951-222 TOP_INT: 179.0 BOT_INT: 397.9

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

CLASTIC ROCK, BEDDED, LAMINATED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC ?

ALTERATION: CARBONATE, CLAY, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, STRATIFORM

DH: PR-1 UNIQUE: 12750 P295 FILE: DH2951-222 TOP_INT: 397.9 BOT_INT: 434.0

LITHOLOGY:

BIOTITE, K-FELDSPAR, PLAGIOCLASE, QUARTZ GNEISS

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LOCALLY MYLONITIC, BEDDED ?

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE

DDH: 201 UNIQUE: 15502 P295 FILE: DH2951-223 TOP_INT: 0.0 BOT_INT: 97.0

LITHOLOGY:

FLUVIAL SAND AND GRAVEL

LITH DESCRIPTION:

CLASTIC ROCK

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: 201 UNIQUE: 15502 P295 FILE: DH2951-223 TOP_INT: 97.0 BOT_INT: 180.0

LITHOLOGY:

CARBONATE(?), GOETHITE, LIMONITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, BEDDED?, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 201 UNIQUE: 15502 P295 FILE: DH2951-223 TOP_INT: 180.0 BOT_INT: 200.0

LITHOLOGY:

ALTERED METAGABBRO

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, SCHISTOSE

ALTERATION: CALCITE, CHLORITE, CLAY, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S253 UNIQUE: 10148 P295 FILE: DH2951-224 TOP_INT: 91.0 BOT_INT: 108.0

LITHOLOGY:

GRAPHITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CARBONATE, WITH MINOR SULFIDE

MINERALIZATION: PYRITE, MAGNETITE?, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: S130 UNIQUE: 10263 P295 FILE: DH2951-225 TOP_INT: 204.0 BOT_INT: 230.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE, GREY HEMATITE?, SPHALERITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S131 UNIQUE: 10383 P295 FILE: DH2951-226 TOP_INT: 137.0 BOT_INT: 147.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED?

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S133 UNIQUE: 10384 P295 FILE: DH2951-227 TOP_INT: 114.0 BOT_INT: 119.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED?

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S134 UNIQUE: 10160 P295 FILE: DH2951-228 TOP_INT: 155.0 BOT_INT: 165.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S140 UNIQUE: 10219 P295 FILE: DH2951-229 TOP_INT: 93.0 BOT_INT: 123.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, QUARTZ, SULFIDE, WITH MINOR GOETHITE, LIMONITE

MINERALIZATION: MAGNETITE, PYRITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S142 UNIQUE: 10385 P295 FILE: DH2951-230 TOP_INT: 105.0 BOT_INT: 110.0

LITHOLOGY:

GREY AND RED FERRUGINOUS PHYLLITE, WITH MINOR HEMATITE, GOETHITE, IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

VEIN SELVAGE, SELECTIVELY PERVASIVE, STRATIFORM

DDH: S143 UNIQUE: 15500 P295 FILE: DH2951-231 TOP_INT: 100.0 BOT_INT: 110.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, MAGNETITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S144 UNIQUE: 10220 P295 FILE: DH2951-232 TOP_INT: 144.0 BOT_INT: 160.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION AND TUFFACEOUS ARGILLITE-PHYLLITE

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S146 UNIQUE: 10405 P295 FILE: DH2951-233 TOP_INT: 102.0 BOT_INT: 104.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE, SILICATE (AND CARBONATE?) IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: RED HEMATITE, QUARTZ, SULFIDE

MINERALIZATION: RED HEMATITE, GREY HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S148 UNIQUE: 10222 P295 FILE: DH2951-234 TOP_INT: 153.0 BOT_INT: 170.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED?

ALTERATION: CARBONATE, GOETHITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: S149 UNIQUE: 10386 P295 FILE: DH2951-235 TOP_INT: 111.0 BOT_INT: 118.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S150 UNIQUE: 10387 P295 FILE: DH2951-236 TOP_INT: 108.0 BOT_INT: 118.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: HEMATITE, QUARTZ

MINERALIZATION: GREY AND RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S151 UNIQUE: 10388 P295 FILE: DH2951-237 TOP_INT: 116.0 BOT_INT: 121.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: HEMATITE, QUARTZ, SERICITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S152 UNIQUE: 10223 P295 FILE: DH2951-238 TOP_INT: 119.0 BOT_INT: 134.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE, MAGNETITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S154 UNIQUE: 10389 P295 FILE: DH2951-239 TOP_INT: 108.0 BOT_INT: 118.0

LITHOLOGY:

CHERT, TUFFACEOUS RED AND TAN FERRUGINOUS PHYLLITE, AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC

ALTERATION: CARBONATE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S155 UNIQUE: 10390 P295 FILE: DH2951-240 TOP_INT: 110.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S156 UNIQUE: 10161 P295 FILE: DH2951-241 TOP_INT: 101.0 BOT_INT: 116.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, BEDDED

ALTERATION: GOETHITE, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 158 UNIQUE: 10162 P295 FILE: DH2951-242 TOP_INT: 121.0 BOT_INT: 125.0

LITHOLOGY:

ARGILLITIC GOETHITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, BEDDED, PHYLLITIC, SLICKENSIDES

ALTERATION: GOETHITE, HEMATITE, PYRITE

MINERALIZATION: GREY HEMATITE, GOETHITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S160 UNIQUE: 10163 P295 FILE: DH2951-243 TOP_INT: 125.0 BOT_INT: 135.0

LITHOLOGY:

ARGILLITIC HEMATITE IRON FORMATION AND HEMATITIC PHYLLITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE?, GOETHITE?, PYRITE?

MINERALIZATION TYPE:

MASSIVE, PERVASIVE, STRATIFORM

DDH: 163 UNIQUE: 10164 P295 FILE: DH2951-244 TOP_INT: 147.0 BOT_INT: 152.0

LITHOLOGY:

ARGILLITIC HEMATITE IRON FORMATION AND HEMATITIC PHYLLITE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: GREY AND RED HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

MASSIVE, PERVASIVE, STRATIFORM

DDH: S166 UNIQUE: 10304 P295 FILE: DH2951-245 TOP_INT: 123.0 BOT_INT: 128.0

LITHOLOGY:

GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GREY HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 168 UNIQUE: 10165 P295 FILE: DH2951-246 TOP_INT: 104.0 BOT_INT: 119.0

LITHOLOGY:

ARGILLITIC CARBONATE, GOETHITE, MAGNETITE, RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 172 UNIQUE: 10166 P295 FILE: DH2951-247 TOP_INT: 119.0 BOT_INT: 127.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, LIMONITE, GREY HEMATITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: S173 UNIQUE: 10391 P295 FILE: DH2951-248 TOP_INT: 123.0 BOT_INT: 133.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 179 UNIQUE: 10392 P295 FILE: DH2951-249 TOP_INT: 125.0 BOT_INT: 130.0

LITHOLOGY:

CHERT, GOETHITIC IRON FORMATION; AND RED AND TAN TUFFACEOUS PHYLLITE

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 182 UNIQUE: 10167 P295 FILE: DH2951-250 TOP_INT: 92.0 BOT_INT: 113.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE

MINERALIZATION: MAGNETITE, RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S183 UNIQUE: 10393 P295 FILE: DH2951-251 TOP_INT: 101.0 BOT_INT: 111.0

LITHOLOGY:

ARGILLITIC CHERT, RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 186 UNIQUE: 10168 P295 FILE: DH2951-252 TOP_INT: 97.0 BOT_INT: 106.0

LITHOLOGY:

VEIN QUARTZ WITH GOETHITE, HEMATITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, QUARTZ, PYRITE, RED HEMATITE, WITH VUGS

MINERALIZATION: GOETHITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S187 UNIQUE: 10394 P295 FILE: DH2951-253 TOP_INT: 110.0 BOT_INT: 115.0

LITHOLOGY:

GOETHITE, RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: CARBONATE, LIMONITE, GOETHITE, RHEM

MINERALIZATION: RED HEMATITE, LIMONITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, PERVASIVE, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: 192 UNIQUE: 10169 P295 FILE: DH2951-254 TOP_INT: 99.0 BOT_INT: 119.0

LITHOLOGY:

CHERT, GOETHITE, MAGNETITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, SLICKENSIDES

ALTERATION: CLAY, GOETHITE, HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 192 UNIQUE: 10169 P295 FILE: DH2951-254 TOP_INT: 124.0 BOT_INT: 154.0

LITHOLOGY:

CHERT, GOETHITE, HEMATITE IRON FORMATION AND MINOR CHERTY TUFF

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC ?

ALTERATION: CHLORITE, GOETHITE, GREY HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 192 UNIQUE: 10169 P295 FILE: DH2951-254 TOP_INT: 154.0 BOT_INT: 169.0

LITHOLOGY:

GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE?

MINERALIZATION TYPE:

MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 192 UNIQUE: 10169 P295 FILE: DH2951-254 TOP_INT: 179.0 BOT_INT: 184.0

LITHOLOGY:

CARBONATE(?), GOETHITE, GREY HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, MAGNETITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DH: 193 UNIQUE: 10395 P295 FILE: DH2951-255 TOP_INT: 115.0 BOT_INT: 120.0

LITHOLOGY:
ALTERED TUFF(?)

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LOCAL BRECCIA ?, LOCALLY MYLONITIC ?, CLASTIC ROCK, SCHISTOSE

ALTERATION: CHLORITE, CLAY, LIMONITE
MINERALIZATION: LIMONITE, RED HEMATITE
MINERALIZATION TYPE:
VEIN, VEIN SELVAGE, STRATIFORM

DDH: S195 UNIQUE: 10170 P295 FILE: DH2951-256 TOP_INT: 99.0 BOT_INT: 114.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LAMINATED

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, QUARTZ
MINERALIZATION: GREY HEMATITE, GOETHITE, MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S201 UNIQUE: 10396 P295 FILE: DH2951-257 TOP_INT: 110.0 BOT_INT: 140.0

LITHOLOGY:
CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LAMINATED, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ, RED HEMATITE, WITH VUGS
MINERALIZATION: RED HEMATITE, MAGNETITE, GOETHITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: RS-2 UNIQUE: 12752 P295 FILE: DH2951-258 TOP_INT: 203.0 BOT_INT: 245.0

LITHOLOGY:
FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

BEDDED, LAMINATED, PHYLLITIC ?

ALTERATION: CARBONATE, CLAY, HEMATITE, PYRITE, QUARTZ
MINERALIZATION: RED HEMATITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: RS-2 UNIQUE: 12752 P295 FILE: DH2951-258 TOP_INT: 245.0 BOT_INT: 258.0

LITHOLOGY:

BIOTITE, K-FELDSPAR, PLAGIOCLASE, QUARTZ GNEISS

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, BEDDED ?, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: S331 UNIQUE: 10133 P295 FILE: DH2951-259 TOP_INT: 103.0 BOT_INT: 158.0

LITHOLOGY:

VEIN QUARTZ WITH GOETHITE, HEMATITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, MYLONITIC ?

ALTERATION: GOETHITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, PYRITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 265-1/1 UNIQUE: 12618 P295 FILE: DH2951-260 TOP_INT: 0.0 BOT_INT: 142.5

LITHOLOGY:

GLACIAL SAND AND GRAVEL

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: 265-1/1 UNIQUE: 12618 P295 FILE: DH2951-260 TOP_INT: 142.5 BOT_INT: 173.0

LITHOLOGY:

DARK GREEN, FINE-GRAINED ALTERED MAFIC OR ULTRAMAFIC ROCK

LITH DESCRIPTION:

ALTERATION: CALCITE, CHLORITE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: LS-10 UNIQUE: 10511 P295 FILE: DH2951-261 TOP_INT: 95.0 BOT_INT: 110.0

LITHOLOGY:

GLACIAL SAND, GRAVEL AND GRANITE FRAGMENTS

LITH DESCRIPTION:

ALTERATION: CHLORITE, CLAY, DOLOMITE, EPIDOTE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE

DDH: LS-10 UNIQUE: 10511 P295 FILE: DH2951-261 TOP_INT: 110.0 BOT_INT: 120.0

LITHOLOGY:

GRANITE

LITH DESCRIPTION:

ALTERATION: CHLORITE, CLAY, DOLOMITE, EPIDOTE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE

DDH: LS-11 UNIQUE: 10512 P295 FILE: DH2951-262 TOP_INT: 80.0 BOT_INT: 95.0

LITHOLOGY:

CLAYEY, WEATHERED GRANITE WITH GLACIAL SAND AND GRAVEL(?)

LITH DESCRIPTION:

ALTERATION: ALBITE(?), CLAY, SERICITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED

DDH: LS-11 UNIQUE: 10512 P295 FILE: DH2951-262 TOP_INT: 95.0 BOT_INT: 103.0

LITHOLOGY:

GRANITE

LITH DESCRIPTION:

ALTERATION: ALBITE(?), CLAY, SERICITE

MINERALIZATION:

MINERALIZATION TYPE:

Appendix 295-F: DRILL LOGS

DDH: DRP-1 UNIQUE: 12759 P295 FILE: DH2951-263 TOP_INT: 55.0 BOT_INT: 170.0

LITHOLOGY:

BIOTITE, FELDSPAR, MUSCOVITE, QUARTZ SCHIST WITH SHEARS, CORDIERITE(?), GARNET, CHLORITE, PYRITE, QUARTZ VEINS

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, SCHISTOSE

ALTERATION: CHLORITE(?), K-FELDSPAR, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: DRP-1 UNIQUE: 12759 P295 FILE: DH2951-263 TOP_INT: 170.0 BOT_INT: 383.0

LITHOLOGY:

BIOTITE, FELDSPAR, MUSCOVITE, QUARTZ SCHIST WITH SHEARS, CORDIERITE(?), GARNET, CHLORITE, PYRITE, QUARTZ VEINS; W/ COARSE PRIMARY FRAGMENTS

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, SCHISTOSE

ALTERATION: CHLORITE(?), K-FELDSPAR, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: DRP-1 UNIQUE: 12759 P295 FILE: DH2951-263 TOP_INT: 383.0 BOT_INT: 410.0

LITHOLOGY:

CHLORITE(?), SERICITE PHYLLITE WITH MINOR GRAPHITE, SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, PHYLLITIC, SCHISTOSE

ALTERATION: QUARTZ, SERICITE, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: DRP-1 UNIQUE: 12759 P295 FILE: DH2951-263 TOP_INT: 410.0 BOT_INT: 470.0

LITHOLOGY:

RECRYSTALLIZED CHERT(?) AND DOLOMITIC MARBLE (CHEMICAL SEDIMENTS? OR ALTERATION?)

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: LIMONITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, CROSS-CUTTING?

Appendix 295-F: DRILL LOGS

DRP-1 UNIQUE: 12759 P295 FILE: DH2951-263 TOP_INT: 470.0 BOT_INT: 506.0

LITHOLOGY:

ALTERED CHLORITE, SERICITE, GRAPHITE, CHERT, K-FELDSPAR BRECCIA

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, BEDDED

ALTERATION: CARBONATE, CHLORITE, CLAY, GOETHITE, HEMATITE, QUARTZ, SERICITE, SULFIDE

MINERALIZATION: PYRITE, GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: DRP-2 UNIQUE: 12760 P295 FILE: DH2951-264 TOP_INT: 62.0 BOT_INT: 384.0

LITHOLOGY:

CHLORITE, FELDSPAR, MUSCOVITE, QUARTZ SCHIST WITH SHEARS, CORDIERITE(?), GARNET, CHLORITE, PYRITE, QUARTZ VEINS; W/ COARSE PRIMARY FRAGMENTS

LITH DESCRIPTION:

DISSEMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC, SCHISTOSE

ALTERATION: CHLORITE(?), CLAY, K-FELDSPAR, LIMONITE, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

DRP-2 UNIQUE: 12760 P295 FILE: DH2951-264 TOP_INT: 384.0 BOT_INT: 606.0

LITHOLOGY:

CHERT AND MARBLE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SCHISTOSE

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: JW-1 UNIQUE: 12758 P295 FILE: DH2951-265 TOP_INT: 124.0 BOT_INT: 150.0

LITHOLOGY:

CHLORITE, GARNET, HORNBLENDE, MUSCOVITE, QUARTZ SCHIST

LITH DESCRIPTION:

DISSEMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE

ALTERATION: CARBONATE, CHLORITE(?), EPIDOTE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: RS-1 UNIQUE: 12751 P295 FILE: DH2951-266 TOP_INT: 79.0 BOT_INT: 162.0

LITHOLOGY:

GLACIAL SAND, GRAVEL AND COBBLES (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: RS-1 UNIQUE: 12751 P295 FILE: DH2951-266 TOP_INT: 162.0 BOT_INT: 178.5

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

CLASTIC ROCK, BEDDED, LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, CLAY(?), RED HEMATITE, SERICITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM

DDH: RS-1 UNIQUE: 12751 P295 FILE: DH2951-266 TOP_INT: 178.5 BOT_INT: 214.0

LITHOLOGY:

BIOTITE, K-FELDSPAR, PLAGIOCLASE, QUARTZ GNEISS; AND AMPHIBOLE, EPIDOTE, MAGNETITE SCHIST

LITH DESCRIPTION:

BEDDED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, SCHISTOSE, SLICKENSIDES

ALTERATION: CLAY, CARBONATE, EPIDOTE, HEMATITE, MAGNETITE, MICA, QUARTZ

MINERALIZATION: RED HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING

DDH: RS-1 UNIQUE: 12751 P295 FILE: DH2951-266 TOP_INT: 214.0 BOT_INT: 324.0

LITHOLOGY:

BIOTITE, K-FELDSPAR, PLAGIOCLASE, QUARTZ GNEISS; AND AMPHIBOLE, EPIDOTE, MAGNETITE SCHIST

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE

ALTERATION: CARBONATE, CHLORITE, EPIDOTE, HEMATITE, MAGNETITE, MICA, PYRITE, QUARTZ

MINERALIZATION: MAGNETITE, PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: 1016 UNIQUE: 10171 P295 FILE: DH2951-267 TOP_INT: 65.0 BOT_INT: 70.0

LITHOLOGY:

CHERT, GOETHITIC IRON FORMATION; AND RED AND TAN TUFFACEOUS PHYLLITE

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, CLASTIC ROCK

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1018 UNIQUE: 10135 P295 FILE: DH2951-268 TOP_INT: 115.0 BOT_INT: 130.0

LITHOLOGY:

GOETHITIC GRAPHITIC PHYLLITE

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 20.0 BOT_INT: 25.0

LITHOLOGY:

CHERT, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED

ALTERATION: RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING?

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 30.0 BOT_INT: 35.0

LITHOLOGY:

GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED

ALTERATION: GOETHITE

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING?

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 35.0 BOT_INT: 45.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 50.0 BOT_INT: 55.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 67.0 BOT_INT: 70.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 72.0 BOT_INT: 90.0

LITHOLOGY:

CHERT, GOETHITE, MAGNETITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LAMINATED, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 95.0 BOT_INT: 105.0

LITHOLOGY:

GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 108.0 BOT_INT: 133.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED?

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 138.0 BOT_INT: 148.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 188.0 BOT_INT: 223.0

LITHOLOGY:

GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 233.0 BOT_INT: 263.0

LITHOLOGY:
GOETHITIC GRAPHITIC PHYLLITE

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, BEDDED, LAMINATED, PHYLLITIC

ALTERATION: GOETHITE, HEMATITE, PYRITE, QUARTZ
MINERALIZATION: GOETHITE, PYRITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 1019 UNIQUE: 10136 P295 FILE: DH2951-269 TOP_INT: 268.0 BOT_INT: 292.0

LITHOLOGY:
GOETHITIC GRAPHITIC PHYLLITE

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, BEDDED, LAMINATED, PHYLLITIC

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: RED HEMATITE, GOETHITE
MINERALIZATION TYPE:
SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING?

DDH: 53 UNIQUE: 10186 P295 FILE: DH2951-270 TOP_INT: 105.0 BOT_INT: 125.0

LITHOLOGY:
CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: RED HEMATITE, LIMONITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 53 UNIQUE: 10186 P295 FILE: DH2951-270 TOP_INT: 125.0 BOT_INT: 181.0

LITHOLOGY:
CHERT, GOETHITE, LIMONITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, LIMONITE, QUARTZ
MINERALIZATION: GOETHITE, LIMONITE
MINERALIZATION TYPE:
VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1 UNIQUE: 10274 P295 FILE: DH2951-271 TOP_INT: 152.0 BOT_INT: 170.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1 UNIQUE: 10274 P295 FILE: DH2951-271 TOP_INT: 185.0 BOT_INT: 187.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM

DDH: MLCH-13 UNIQUE: 12753 P295 FILE: DH2951-272 TOP_INT: 32.0 BOT_INT: 309.0

LITHOLOGY:

GLACIAL SAND, GRAVEL AND COBBLES (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: MLCH-13 UNIQUE: 12753 P295 FILE: DH2951-272 TOP_INT: 309.0 BOT_INT: 2461.0

LITHOLOGY:

IRON OXIDIZED (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

BEDDED, LAMINATED, CLASTIC ROCK

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: MLCH-13 UNIQUE: 12753 P295 FILE: DH2951-272 TOP_INT: 2461.0 BOT_INT: 2504.0

LITHOLOGY:
AMPHIBOLE(?), CHLORITE, PLAGIOCLASE, QUARTZ, SERICITE, TALC(?) SCHIST

LITH DESCRIPTION:
SCHISTOSE, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, K-FELDSPAR, QUARTZ, SERICITE(?), TALC(?)
MINERALIZATION:
MINERALIZATION TYPE:

DDH: KRCH-8 UNIQUE: 12755 P295 FILE: DH2951-273 TOP_INT: 112.0 BOT_INT: 151.0

LITHOLOGY:
GLACIAL SAND, GRAVEL, COBBLES AND BOULDERS (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: KRCH-8 UNIQUE: 12755 P295 FILE: DH2951-273 TOP_INT: 151.0 BOT_INT: 500.0

LITHOLOGY:
AMPHIBOLE, CHLORITE, GARNET, MUSCOVITE, QUARTZ SCHIST AND MINOR MARBLE

LITH DESCRIPTION:
LAMINATED, BEDDED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, PYRITE, QUARTZ
MINERALIZATION: PYRITE, CHALCOPYRITE?
MINERALIZATION TYPE:
DISSEMINATED, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

DDH: 286-6/1 UNIQUE: 10513 P295 FILE: DH2951-274 TOP_INT: 0.0 BOT_INT: 108.0

LITHOLOGY:
GLACIAL SAND AND GRAVEL

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: 286-6/1 UNIQUE: 10513 P295 FILE: DH2951-274 TOP_INT: 108.0 BOT_INT: 288.0

LITHOLOGY:

MICACEOUS GABBRO OR ULTRAMAFIC ROCK

LITH DESCRIPTION:

ALTERATION: CARBONATE(?), CHLORITE, CLAY, SULFIDE(?)

MINERALIZATION: PYRITE?

MINERALIZATION TYPE:

DISSEMINATED

DDH: ML-42C UNIQUE: 12762 P295 FILE: DH2951-275 TOP_INT: 20.0 BOT_INT: 167.0

LITHOLOGY:

LACIAL SAND, GRAVEL, COBBLES AND BOULDERS (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: ML-42C UNIQUE: 12762 P295 FILE: DH2951-275 TOP_INT: 167.0 BOT_INT: 210.0

LITHOLOGY:

CARBONATE(?), CHERT, GRAPHITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC, RECRYSTALLIZED/HORNFELSED, LOCAL BRECCIA, BEDDED

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: ML-42C UNIQUE: 12762 P295 FILE: DH2951-275 TOP_INT: 210.0 BOT_INT: 316.0

LITHOLOGY:

RECRYSTALLIZED CHERT(?) AND DOLOMITIC MARBLE (CHEMICAL SEDIMENTS? OR ALTERATION?)

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, LAMINATED, BEDDED

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRITE?, MOLYBDENITE?

MINERALIZATION TYPE:

DISSEMINATED

Appendix 295-F: DRILL LOGS

DDH: 203 UNIQUE: 10137 P295 FILE: DH2951-276 TOP_INT: 195.0 BOT_INT: 280.0

LITHOLOGY:

CHERT AND ALTERED CLAYEY, GOETHITE, LIMONITE, RED HEMATITE ROCK

LITH DESCRIPTION:

LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 203 UNIQUE: 10137 P295 FILE: DH2951-276 TOP_INT: 280.0 BOT_INT: 315.0

LITHOLOGY:

CHERT, GOETHITE, GRAPHITE, GREY AND RED HEMATITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, LIMONITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 208 UNIQUE: 10142 P295 FILE: DH2951-277 TOP_INT: 110.0 BOT_INT: 165.0

LITHOLOGY:

CARBONATE, CHERT, GREY AND RED HEMATITE, MAGNETITE, SILICATE, IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, BEDDED?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 208 UNIQUE: 10142 P295 FILE: DH2951-277 TOP_INT: 165.0 BOT_INT: 210.0

LITHOLOGY:

CARBONATE(?), SILICATE IRON FORMATION

LITH DESCRIPTION:

BEDDED

ALTERATION: CLAY, LIMONITE, MICA

MINERALIZATION: LIMONITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 208 UNIQUE: 10142 P295 FILE: DH2951-277 TOP_INT: 210.0 BOT_INT: 235.0

LITHOLOGY:

CARBONATE, CHERT, GREY AND RED HEMATITE, MAGNETITE, SILICATE, IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, BEDDED

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: ML-22 UNIQUE: 12761 P295 FILE: DH2951-278 TOP_INT: 0.0 BOT_INT: 327.0

LITHOLOGY:

FLUVIAL SAND AND GRAVEL (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: ML-22 UNIQUE: 12761 P295 FILE: DH2951-278 TOP_INT: 327.0 BOT_INT: 335.0

LITHOLOGY:

CARBONATE, MICA, PLAGIOCLASE, QUARTZ SCHIST AND PHYLLITE

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES

ALTERATION: HEMATITE, QUARTZ, SERICITE

MINERALIZATION: MAGNETITE?, RED HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED

DDH: ML-22 UNIQUE: 12761 P295 FILE: DH2951-278 TOP_INT: 385.0 BOT_INT: 500.0

LITHOLOGY:

RECRYSTALLIZED CHERT(?) AND DOLOMITIC MARBLE (CHEMICAL SEDIMENTS? OR ALTERATION?)

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE

ALTERATION: CARBONATE, EPIDOTE, QUARTZ

MINERALIZATION: RED HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED

Appendix 295-F: DRILL LOGS

DDH: ML-55CA UNIQUE: 12763 P295 FILE: DH2951-279 TOP_INT: 199.0 BOT_INT: 349.8

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

LAMINATED, BEDDED, CLASTIC ROCK

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE

DDH: ML-55CA UNIQUE: 12763 P295 FILE: DH2951-279 TOP_INT: 349.0 BOT_INT: 464.0

LITHOLOGY:

RECRYSTALLIZED CHERT(?) AND DOLOMITIC MARBLE (CHEMICAL SEDIMENTS? OR ALTERATION?)

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SCHISTOSE

ALTERATION: CARBONATE, EPIDOTE, PYRITE, RED HEMATITE, QUARTZ

MINERALIZATION: PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING

DDH: BM-3 UNIQUE: 11445 P295 FILE: DH2951-280 TOP_INT: 162.0 BOT_INT: 433.5

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION; PHYLLITE AND MINOR CHERT

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC, LOCAL BRECCIA, SCHISTOSE

ALTERATION: CARBONATE, GREY HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, RED HEMATITE, GOETHITE, PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: KR-2 UNIQUE: 12754 P295 FILE: DH2951-281 TOP_INT: 35.0 BOT_INT: 500.0

LITHOLOGY:

BIOTITE, CALCITE, MUSCOVITE, QUARTZ SCHIST

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONIC

ALTERATION: CARBONATE, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DDH: 207 UNIQUE: 10152 P295 FILE: DH2951-282 TOP_INT: 118.0 BOT_INT: 315.0

LITHOLOGY:

ARGILLITIC CARBONATE(?), CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC, SLICKENSIDES, BEDDED, LAMINATED

ALTERATION: CLAY, CHLORITE, EPIDOTE, GOETHITE, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, LIMONITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1033 UNIQUE: 10154 P295 FILE: DH2951-283 TOP_INT: 32.0 BOT_INT: 42.0

LITHOLOGY:

CARBONATE(?), GOETHITE, LIMONITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1033 UNIQUE: 10154 P295 FILE: DH2951-283 TOP_INT: 50.0 BOT_INT: 55.0

LITHOLOGY:

CARBONATE(?), GOETHITE, HEMATITE, LIMONITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, RED HEMATITE, GOETHITE, LIMONITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1033 UNIQUE: 10154 P295 FILE: DH2951-283 TOP_INT: 55.0 BOT_INT: 108.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, CHLORITE, QUARTZ, RED HEMATITE

MINERALIZATION: MAGNETITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1033 UNIQUE: 10154 P295 FILE: DH2951-283 TOP_INT: 108.0 BOT_INT: 112.0

LITHOLOGY:

CARBONATE(?), GOETHITE, LIMONITE, MAGNETITE, RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CLAY, CHLORITE, GOETHITE, HEMATITE, LIMONITE

MINERALIZATION: MAGNETITE, RED HEMATITE, LIMONITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1034 UNIQUE: 10157 P295 FILE: DH2951-284 TOP_INT: 20.0 BOT_INT: 140.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S15 UNIQUE: 10159 P295 FILE: DH2951-285 TOP_INT: 48.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S20 UNIQUE: 15509 P295 FILE: DH2951-286 TOP_INT: 35.0 BOT_INT: 45.0

LITHOLOGY:

GREY AND RED PHYLLITE, WITH MINOR SULFIDE

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES

ALTERATION: RED HEMATITE WITH MINOR PYRITE

MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

H: S21 UNIQUE: 10337 P295 FILE: DH2951-287 TOP_INT: 22.0 BOT_INT: 89.0

LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: GOETHITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1022 UNIQUE: 10130 P295 FILE: DH2951-288 TOP_INT: 185.0 BOT_INT: 200.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES?, LOCAL BRECCIA?, CLASTIC ROCK?

ALTERATION: GOETHITE, HEMATITE
MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

H: S1031 UNIQUE: 10212 P295 FILE: DH2951-289 TOP_INT: 125.0 BOT_INT: 130.0

LITHOLOGY:
CHERT (GRAPHITIC, LIGHT TO DARK GREY) WITH MINOR SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:
LAMINATED, PHYLLITIC?

ALTERATION: RED HEMATITE, QUARTZ, SULFIDE
MINERALIZATION: RED HEMATITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, VEIN, CROSS-CUTTING?, STRATIFORM?

DDH: S1029 UNIQUE: 10363 P295 FILE: DH2951-290 TOP_INT: 88.0 BOT_INT: 100.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ
MINERALIZATION: GREY HEMATITE, GOETHITE, MAGNETITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1030 UNIQUE: 10357 P295 FILE: DH2951-291 TOP_INT: 100.0 BOT_INT: 105.0
LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, QUARTZ
MINERALIZATION: GOETHITE
MINERALIZATION TYPE:
MASSIVE, VEIN, VEIN SELVAGE?, PERVASIVE

DDH: S1030 UNIQUE: 10357 P295 FILE: DH2951-291 TOP_INT: 120.0 BOT_INT: 130.0
LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, QUARTZ
MINERALIZATION: GOETHITE
MINERALIZATION TYPE:
MASSIVE, VEIN, VEIN SELVAGE?, PERVASIVE

DDH: S1030 UNIQUE: 10357 P295 FILE: DH2951-291 TOP_INT: 135.0 BOT_INT: 140.0
LITHOLOGY:
GOETHITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE
MINERALIZATION: GOETHITE
MINERALIZATION TYPE:
PERVASIVE?

DDH: S1030 UNIQUE: 10357 P295 FILE: DH2951-291 TOP_INT: 160.0 BOT_INT: 170.0
LITHOLOGY:
ARGILLITIC CHERT, GOETHITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1030 UNIQUE: 10357 P295 FILE: DH2951-291 TOP_INT: 190.0 BOT_INT: 195.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED

ALTERATION: GOETHITE, QUARTZ

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE?

DDH: S222 UNIQUE: 10214 P295 FILE: DH2951-292 TOP_INT: 40.0 BOT_INT: 55.0

LITHOLOGY:

MARGILLITIC HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: MAGNETITE, RED HEMATITE

MINERALIZATION: RED HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, PERVASIVE?

DDH: S222 UNIQUE: 10214 P295 FILE: DH2951-292 TOP_INT: 55.0 BOT_INT: 185.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, VEIN SELVAGE

DDH: S223 UNIQUE: 10215 P295 FILE: DH2951-293 TOP_INT: 27.0 BOT_INT: 150.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, MAGNETITE, PYRITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, VEIN SELVAGE

Appendix 295-F: DRILL LOGS

DDH: S224 UNIQUE: 10368 P295 FILE: DH2951-294 TOP_INT: 50.0 BOT_INT: 200.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, VEIN SELVAGE

DDH: S1036 UNIQUE: 10370 P295 FILE: DH2951-295 TOP_INT: 44.0 BOT_INT: 94.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, LIMONITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1036 UNIQUE: 10370 P295 FILE: DH2951-295 TOP_INT: 130.0 BOT_INT: 140.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1040 UNIQUE: 10034 P295 FILE: DH2951-296 TOP_INT: 28.0 BOT_INT: 63.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

PHYLLITIC, LAMINATED, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, GOETHITE, MICA, QUARTZ, SULFIDE

MINERALIZATION: MAGNETITE, PYRITE, GOETHITE, ARSENOPIRYTE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1046 UNIQUE: 10198 P295 FILE: DH2951-297 TOP_INT: 61.0 BOT_INT: 62.0

LITHOLOGY:

CHERT, OXIDE(?), SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: RED HEMATITE, LIMONITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: S1033 UNIQUE: 10199 P295 FILE: DH2951-298 TOP_INT: 15.0 BOT_INT: 30.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, MAGNETITE

MINERALIZATION TYPE:

BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 276 UNIQUE: 10285 P295 FILE: DH2951-299 TOP_INT: 70.0 BOT_INT: 85.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION WITH MINOR TOURMALINITE(?)

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC, SLICKENSIDES?

ALTERATION: BIOTITE, CARBONATE, CHLORITE(?), EPIDOTE(?), QUARTZ, TOURMALINE

MINERALIZATION: MAGNETITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM

DDH: 276 UNIQUE: 10285 P295 FILE: DH2951-299 TOP_INT: 85.0 BOT_INT: 93.0

LITHOLOGY:

GOETHITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 276 UNIQUE: 10285 P295 FILE: DH2951-299 TOP_INT: 100.0 BOT_INT: 120.0

LITHOLOGY:

CHERT, GOETHITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE RECRYSTALLIZED FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, MAGNETITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, PYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 276 UNIQUE: 10285 P295 FILE: DH2951-299 TOP_INT: 120.0 BOT_INT: 150.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, PHYLLITIC

ALTERATION: CHLORITE, EPIDOTE, GOETHITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 276 UNIQUE: 10285 P295 FILE: DH2951-299 TOP_INT: 160.0 BOT_INT: 165.0

LITHOLOGY:

GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE

MINERALIZATION: GOETHITE, RED HEMATITE?, LIMONITE?

MINERALIZATION TYPE:

MASSIVE, VEIN, VEIN SELVAGE, PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 276 UNIQUE: 10285 P295 FILE: DH2951-299 TOP_INT: 170.0 BOT_INT: 175.0

LITHOLOGY:

BIOTITE, CHLORITE, GARNET, MUSCOVITE, QUARTZ SCHIST; QUARTZ HORNBLLENDE (DIORITE?) SCHIST AND MINOR MARBLE

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 276 UNIQUE: 10285 P295 FILE: DH2951-299 TOP_INT: 196.0 BOT_INT: 210.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 276 UNIQUE: 10285 P295 FILE: DH2951-299 TOP_INT: 220.0 BOT_INT: 222.0

LITHOLOGY:

CHERT (OR SILICEOUS TUFF? OR CLASTIC ROCK?)

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, CRYSTALLIZED/HORNFELSED

ALTERATION: QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, LIMONITE?

MINERALIZATION TYPE:

VEIN, STRATIFORM?, CROSS-CUTTING

DDH: S720 UNIQUE: 10203 P295 FILE: DH2951-300 TOP_INT: 5.0 BOT_INT: 50.0

LITHOLOGY:

TUFFACEOUS CHERT, GOETHITE, GRAPHITE(?), MAGNETITE, Mn OXIDE(?) IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE, PHYLLITIC

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE, MANGANESE OXIDES?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S720 UNIQUE: 10203 P295 FILE: DH2951-300 TOP_INT: 20.0 BOT_INT: 25.0

LITHOLOGY:

TUFFACEOUS CHERT

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GREY HEMATITE, LIMONITE, MAGNETITE, PYRITE, QUARTZ

MINERALIZATION: GREY HEMATITE, MAGNETITE, LIMONITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S720 UNIQUE: 10203 P295 FILE: DH2951-300 TOP_INT: 28.0 BOT_INT: 35.0

LITHOLOGY:

TUFFACEOUS CHERT, GOETHITE, GRAPHITE(?), MAGNETITE, Mn OXIDE(?) IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?, PHYLLITIC, SCHISTOSE

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, MANGANESE OXIDES, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S720 UNIQUE: 10203 P295 FILE: DH2951-300 TOP_INT: 40.0 BOT_INT: 45.0

LITHOLOGY:

TUFFACEOUS GOETHITE, GRAPHITE(?), MAGNETITE, Mn OXIDE(?) IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: GOETHITE, GREY HEMATITE, MAGNETITE, Mn OXIDES(?)

MINERALIZATION: MAGNETITE, GOETHITE, MANGANESE OXIDES, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: S-2-55 UNIQUE: 10317 P295 FILE: DH2951-301 TOP_INT: 25.0 BOT_INT: 60.0

LITHOLOGY:

CHERT, GOETHITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, MnOXIDES(?), QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE, MANGANESE OXIDES

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 10 UNIQUE: 11065 P295 FILE: DH2951-302 TOP_INT: 150.0 BOT_INT: 200.0

LITHOLOGY:

CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION WITH MINOR SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 10 UNIQUE: 11065 P295 FILE: DH2951-302 TOP_INT: 200.0 BOT_INT: 275.0

LITHOLOGY:
CARBONATE, CHERT, MAGNETITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, CHLORITE, EPIDOTE(?), HEMATITE, QUARTZ, SULFIDE, TOURMALINE

MINERALIZATION: MAGNETITE, GREY HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 204 UNIQUE: 10205 P295 FILE: DH2951-303 TOP_INT: 235.0 BOT_INT: 278.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 204 UNIQUE: 10205 P295 FILE: DH2951-303 TOP_INT: 278.0 BOT_INT: 295.0

LITHOLOGY:
CARBONATE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, CARBONATE, GREY HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: 206 UNIQUE: 10143 P295 FILE: DH2951-304 TOP_INT: 230.0 BOT_INT: 320.0

LITHOLOGY:
ALTERED METAGABBRO OR PORPHYRITIC METABASALT

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: AMPHIBOLE, CALCITE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, CROSS-CUTTING.

Appendix 295-F: DRILL LOGS

DDH: 205 UNIQUE: 10144 P295 FILE: DH2951-305 TOP_INT: 205.0 BOT_INT: 215.0

LITHOLOGY:
GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: CARBONATE, GOETHITE, KAOLINITE(?)
MINERALIZATION: GOETHITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: 202 UNIQUE: 10146 P295 FILE: DH2951-306 TOP_INT: 55.0 BOT_INT: 105.0

LITHOLOGY:
GLACIAL SAND AND GRAVEL (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: 202 UNIQUE: 10146 P295 FILE: DH2951-306 TOP_INT: 170.0 BOT_INT: 175.0

LITHOLOGY:
TUFFACEOUS PHYLLITE

LITH DESCRIPTION:
LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES

ALTERATION: LIMONITE, RED HEMATITE
MINERALIZATION: LIMONITE, RED HEMATITE
MINERALIZATION TYPE:
SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 202 UNIQUE: 10146 P295 FILE: DH2951-306 TOP_INT: 180.0 BOT_INT: 185.0

LITHOLOGY:
GOETHITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, MAGNETITE
MINERALIZATION: MAGNETITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DH: 202 UNIQUE: 10146 P295 FILE: DH2951-306 TOP_INT: 185.0 BOT_INT: 195.0

LITHOLOGY:
TUFACEOUS PHYLLITE

LITH DESCRIPTION:
LAMINATED, PHYLLITIC, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: LIMONITE, PYRITE, RED HEMATITE
MINERALIZATION: LIMONITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: BM-5 UNIQUE: 10015 P295 FILE: DH2951-307 TOP_INT: 41.0 BOT_INT: 93.0

LITHOLOGY:
CHERT, GRAPHITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE
MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: BM-5 UNIQUE: 10015 P295 FILE: DH2951-307 TOP_INT: 93.0 BOT_INT: 223.2

LITHOLOGY:
CHERT, GRAPHITE, SULFIDE IRON FORMATION; AND SILICEOUS TUFF

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE
MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: G-6 UNIQUE: 10004 P295 FILE: DH2951-308 TOP_INT: 60.0 BOT_INT: 110.0

LITHOLOGY:
GRAPHITE PHYLLITE, WITH SILICEOUS TUFF, CHERT, SULFIDE, SILICATE, TOURMALINE CHEMICAL SEDIMENTS

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC, SCHISTOSE

ALTERATION: CARBONATE, HORNBLende(?), QUARTZ, SULFIDE, TOURMALINE(?)
MINERALIZATION: PYRITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: G-5 UNIQUE: 10003 P295 FILE: DH2951-309 TOP_INT: 47.0 BOT_INT: 100.0

LITHOLOGY:

GRAPHITE PHYLLITE, WITH MINOR CHERT, MAGNETITE, SULFIDE, CHEMICAL SEDIMENTS

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, MAGNETITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: G-8 UNIQUE: 10005 P295 FILE: DH2951-310 TOP_INT: 31.0 BOT_INT: 113.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE, WITH MINOR CHERT, CARBONATE, AMPHIBOLE AND TOURMALINE CHEMICAL SEDIMENT

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, PHYLLITIC, LOCAL BRECCIA, SCHISTOSE

ALTERATION: CARBONATE, HORNBLENDE(?), QUARTZ, SULFIDE, TOURMALINE(?)

MINERALIZATION: PYRITE, PYRRHOTITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-12F UNIQUE: 10009 P295 FILE: DH2951-311 TOP_INT: 31.7 BOT_INT: 78.9

LITHOLOGY:

ALTERED INTERMEDIATE, PORPHYRITIC, AMYGDALOIDAL METAVOLCANICS

LITH DESCRIPTION:

BEDDED, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC ?

ALTERATION:

MINERALIZATION: PYRITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: BM-4 UNIQUE: 10014 P295 FILE: DH2951-312 TOP_INT: 28.0 BOT_INT: 29.5

LITHOLOGY:

ALTERED PORPHYRITIC BASALT OR ANDESITE

LITH DESCRIPTION:

SCHISTOSE, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE(?), MUSCOVITE(?), SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED

Appendix 295-F: DRILL LOGS

DH: BM-4 UNIQUE: 10014 P295 FILE: DH2951-312 TOP_INT: 29.5 BOT_INT: 184.7

LITHOLOGY:

CARBONATE(?), CHERT, GRAPHITE, SILICATE, SULFIDE IRON FORMATION; AND SILICEOUS CARBONATE TUFF

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: BM-2 UNIQUE: 10012 P295 FILE: DH2951-313 TOP_INT: 11.5 BOT_INT: 35.8

LITHOLOGY:

ALLUVIAL SAND, GRAVEL AND COBBLES (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DH: BM-2 UNIQUE: 10012 P295 FILE: DH2951-313 TOP_INT: 42.0 BOT_INT: 149.3

LITHOLOGY:

CARBONATE(?), CHERT, GRAPHITE, SILICATE, SULFIDE IRON FORMATION; AND SILICEOUS CARBONATE TUFF

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 87 UNIQUE: 10097 P295 FILE: DH2951-314 TOP_INT: 75.0 BOT_INT: 92.0

LITHOLOGY:

CARBONATE(?), CHERT, GRAPHITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED, SCHISTOSE

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, ARSENOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 87 UNIQUE: 10097 P295 FILE: DH2951-314 TOP_INT: 92.0 BOT_INT: 112.0

LITHOLOGY:

TUFFACEOUS CARBONATE, CHERT, SILICATE IRON FORMATION AND CHERT CONGLOMERATE

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, SCHISTOSE, DUCTILE DEFORMATION FEATURES, CLASTIC ROCK

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, ARSENOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: 79 UNIQUE: 10031 P295 FILE: DH2951-315 TOP_INT: 40.0 BOT_INT: 82.0

LITHOLOGY:

CARBONATE(?), CHERT, GRAPHITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM.

DDH: 79 UNIQUE: 10031 P295 FILE: DH2951-315 TOP_INT: 82.0 BOT_INT: 156.0

LITHOLOGY:

TUFFACEOUS BIOTITE, CARBONATE, CHLORITE, QUARTZ, SULFIDE(?) SEMISCHIST, AND CHERT CONGLOMERATE/BRECCIA

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SCHISTOSE, LOCALLY MYLONITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING

DDH: 78 UNIQUE: 10030 P295 FILE: DH2951-316 TOP_INT: 41.0 BOT_INT: 64.0

LITHOLOGY:

CARBONATE(?), CHERT, GRAPHITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC, SCHISTOSE

ALTERATION: CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 78 UNIQUE: 10030 P295 FILE: DH2951-316 TOP_INT: 64.0 BOT_INT: 95.0

LITHOLOGY:

TUFFACEOUS CARBONATE, CHERT, SILICATE IRON FORMATION AND CHERT CONGLOMERATE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SCHISTOSE

ALTERATION: AMPHIBOLE, BIOTITE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: 73 UNIQUE: 10029 P295 FILE: DH2951-317 TOP_INT: 41.0 BOT_INT: 135.0

LITHOLOGY:

CHERT, GRAPHITE, SULFIDE IRON FORMATION; AND SILICEOUS TUFF

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC ?, PHYLLITIC

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 73 UNIQUE: 10029 P295 FILE: DH2951-317 TOP_INT: 135.0 BOT_INT: 166.0

LITHOLOGY:

TUFFACEOUS CARBONATE, CHERT, SILICATE IRON FORMATION AND CHERT CONGLOMERATE

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SCHISTOSE

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: 82 UNIQUE: 10033 P295 FILE: DH2951-318 TOP_INT: 48.0 BOT_INT: 173.0

LITHOLOGY:

CHERT, GRAPHITE, SULFIDE IRON FORMATION; AND SILICEOUS TUFF

LITH DESCRIPTION:

DISSEMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC

ALTERATION: CLAY, CHLORITE, EPIDOTE, GOETHITE, HEMATITE, PYRITE, QUARTZ

MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 82 UNIQUE: 10033 P295 FILE: DH2951-318 TOP_INT: 173.0 BOT_INT: 196.0

LITHOLOGY:

TUFFACEOUS CARBONATE, CHERT, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: AMPHIBOLE, CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: BM-7 UNIQUE: 10017 P295 FILE: DH2951-319 TOP_INT: 42.0 BOT_INT: 49.7

LITHOLOGY:

GLACIAL SAND, GRAVEL AND COBBLES (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: BM-7 UNIQUE: 10017 P295 FILE: DH2951-319 TOP_INT: 49.7 BOT_INT: 70.0

LITHOLOGY:

KAOLINITIC REGOLITH

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: BM-7 UNIQUE: 10017 P295 FILE: DH2951-319 TOP_INT: 70.0 BOT_INT: 85.0

LITHOLOGY:

GRAPHITIC KAOLINITIC REGOLITH

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

Appendix 295-F: DRILL LOGS

DDH: BM-7 UNIQUE: 10017 P295 FILE: DH2951-319 TOP_INT: 85.0 BOT_INT: 145.7

LITHOLOGY:

CHERT, GRAPHITE, SULFIDE IRON FORMATION; AND SILICEOUS TUFF

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: GOETHITE, LIMONITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: SR-1 UNIQUE: 15510 P295 FILE: DH2951-320 TOP_INT: 40.0 BOT_INT: 116.0

LITHOLOGY:

ACTINOLITE, BIOTITE, CARBONATE, CHLORITE, QUARTZ SCHIST

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LOCALLY MYLONITIC ?, SCHISTOSE

ALTERATION: BIOTITE, CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM?

DDH: SR-3 UNIQUE: 15511 P295 FILE: DH2951-321 TOP_INT: 38.0 BOT_INT: 53.7

LITHOLOGY:

ALTERED METABASALT

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LOCALLY MYLONITIC ?, SCHISTOSE

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING, STRATIFORM?

DDH: SR-3 UNIQUE: 15511 P295 FILE: DH2951-321 TOP_INT: 53.7 BOT_INT: 74.0

LITHOLOGY:

GABBRO

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN?, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: SR-3 UNIQUE: 15511 P295 FILE: DH2951-321 TOP_INT: 74.0 BOT_INT: 93.0

LITHOLOGY:

CARBONATE, CHLORITE, QUARTZ, SERICITE SCHIST

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE, SLICKENSIDES, LOCALLY MYLONITIC ?

ALTERATION: CARBONATE, MICA, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN?, CROSS-CUTTING?, STRATIFORM?

DDH: SR-2 UNIQUE: 15512 P295 FILE: DH2951-322 TOP_INT: 37.0 BOT_INT: 39.5

LITHOLOGY:

GRAPHITE PHYLLITE, WITH MINOR SULFIDE CHEMICAL SEDIMENTS

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LAMINATED, PHYLLITIC, SLICKENSIDES, LOCALLY MYLONITIC ?

ALTERATION: MUSCOVITE, PYRITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM

DDH: SR-2 UNIQUE: 15512 P295 FILE: DH2951-322 TOP_INT: 39.5 BOT_INT: 67.0

LITHOLOGY:

ACTINOLITE, BIOTITE, CARBONATE, CHLORITE, QUARTZ SCHIST

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE, SLICKENSIDES, LOCALLY MYLONITIC ?

ALTERATION: BIOTITE, CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: SL-1 UNIQUE: 10556 P295 FILE: DH2951-323 TOP_INT: 60.0 BOT_INT: 127.0

LITHOLOGY:

ACTINOLITE, CARBONATE, CHLORITE, SERICITE SCHIST

LITH DESCRIPTION:

BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SCHISTOSE, LOCALLY MYLONITIC, LOCAL BRECCIA ?

ALTERATION: CARBONATE, CHLORITE, CLAY, HEMATITE, KAOLIN, PYRITE, QUARTZ, SERICITE

MINERALIZATION: PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: SL-1 UNIQUE: 10556 P295 FILE: DH2951-323 TOP_INT: 127.0 BOT_INT: 188.0

LITHOLOGY:

GRAPHITE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC ?, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

 DDH: SL-1 UNIQUE: 10556 P295 FILE: DH2951-323 TOP_INT: 188.0 BOT_INT: 203.0

LITHOLOGY:

DIFFUSE CHERT, GRAPHITE, SULFIDE IF AND CHLORITE, GARNET, MAGNETITE, SILLIMANITE?, TREMOLITE? SCHIST

LITH DESCRIPTION:

LAMINATED, BEDDED, SCHISTOSE, LOCALLY MYLONITIC?, PHYLLITIC

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

 DH: CK-1 UNIQUE: 10560 P295 FILE: DH2951-324 TOP_INT: 21.0 BOT_INT: 475.0

LITHOLOGY:

SERICITIC PHYLLITE

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION:

MINERALIZATION TYPE:

 DDH: CK-1 UNIQUE: 10560 P295 FILE: DH2951-324 TOP_INT: 475.0 BOT_INT: 599.0

LITHOLOGY:

SERICITIC PHYLLITIC SCHIST WITH SULFIDE CHEMICAL SEDIMENT, QUARTZ MUSCOVITE SCHIST, AND MINOR GRANITE

LITH DESCRIPTION:

LAMINATED? BEDDED, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: K-FELDSPAR(?), MUSCOVITE(?), PYRITE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: CK-2 UNIQUE: 10561 P295 FILE: DH2951-325 TOP_INT: 7.0 BOT_INT: 400.0
LITHOLOGY:
SERICITIC PHYLLITE

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: QUARTZ
MINERALIZATION:
MINERALIZATION TYPE:

DDH: CK-2 UNIQUE: 10561 P295 FILE: DH2951-325 TOP_INT: 400.0 BOT_INT: 568.0
LITHOLOGY:
SERICITIC PHYLLITIC SCHIST AND MINOR GRANITE

LITH DESCRIPTION:
LAMINATED? BEDDED, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: K-FELDSPAR(?), MUSCOVITE(?), PYRITE, QUARTZ
MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: CK-3 UNIQUE: 10562 P295 FILE: DH2951-326 TOP_INT: 95.0 BOT_INT: 189.0
LITHOLOGY:
SERICITIC PHYLLITE AND DOLOMITIC MARBLE

LITH DESCRIPTION:
LAMINATED?, BEDDED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, QUARTZ(?), SERICITE
MINERALIZATION:
MINERALIZATION TYPE:

DDH: CK-3 UNIQUE: 10562 P295 FILE: DH2951-326 TOP_INT: 189.0 BOT_INT: 269.0
LITHOLOGY:
SERICITIC PHYLLITE

LITH DESCRIPTION:
LAMINATED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, QUARTZ(?), SERICITE
MINERALIZATION:
MINERALIZATION TYPE:

DDH: CK-3 UNIQUE: 10562 P295 FILE: DH2951-326 TOP_INT: 37.0 BOT_INT: 95.0

LITHOLOGY:

SERICITIC PHYLLITIC SCHIST AND MINOR GRANITE

LITH DESCRIPTION:

LAMINATED?, BEDDED, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, K-FELDSPAR(?), MUSCOVITE(?), QUARTZ

MINERALIZATION:

MINERALIZATION TYPE:

DDH: CK-4 UNIQUE: 10563 P295 FILE: DH2951-327 TOP_INT: 45.0 BOT_INT: 100.0

LITHOLOGY:

SERICITIC PHYLLITE

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: CK-4 UNIQUE: 10563 P295 FILE: DH2951-327 TOP_INT: 100.0 BOT_INT: 270.0

LITHOLOGY:

SERICITIC PHYLLITIC SCHIST AND MINOR GRANITE

LITH DESCRIPTION:

LAMINATED?, BEDDED, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: K-FELDSPAR(?), MUSCOVITE(?), QUARTZ

MINERALIZATION:

MINERALIZATION TYPE:

DDH: CK-5 UNIQUE: 10564 P295 FILE: DH2951-328 TOP_INT: 40.0 BOT_INT: 100.0

LITHOLOGY:

SERICITIC PHYLLITIC SCHIST WITH SULFIDE CHEMICAL SEDIMENT, QUARTZ MUSCOVITE SCHIST, AND MINOR GRANITE

LITH DESCRIPTION:

LAMINATED?, BEDDED, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: K-FELDSPAR(?), MUSCOVITE(?), QUARTZ

MINERALIZATION:

MINERALIZATION TYPE:

DDH: CK-5 UNIQUE: 10564 P295 FILE: DH2951-328 TOP_INT: 100.0 BOT_INT: 200.0

LITHOLOGY:

SERICITIC PHYLLITIC SCHIST AND MINOR GRANITE

LITH DESCRIPTION:

LAMINATED?, BEDDED, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: K-FELDSPAR(?), MUSCOVITE(?), QUARTZ

MINERALIZATION:

MINERALIZATION TYPE:

DDH: CK-5 UNIQUE: 10564 P295 FILE: DH2951-328 TOP_INT: 200.0 BOT_INT: 270.0

LITHOLOGY:

SERICITIC PHYLLITE WITH SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: PYRITE, QUARTZ, SERICITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: HM-1 UNIQUE: 10565 P295 FILE: DH2951-329 TOP_INT: 40.0 BOT_INT: 120.0

LITHOLOGY:

SERICITIC PHYLLITE

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: QUARTZ

MINERALIZATION:

MINERALIZATION TYPE:

DDH: HM-1 UNIQUE: 10565 P295 FILE: DH2951-329 TOP_INT: 120.0 BOT_INT: 130.0

LITHOLOGY:

SERICITIC PHYLLITE AND DOLOMITIC MARBLE

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, SCHISTOSE, LOCALLY MYLONITIC?, PHYLLITIC

ALTERATION: QUARTZ

MINERALIZATION:

MINERALIZATION TYPE:

Appendix 295-F: DRILL LOGS

DH: HM-1 UNIQUE: 10565 P295 FILE: DH2951-329 TOP_INT: 130.0 BOT_INT: 170.0

LITHOLOGY:

SERICITIC CALCAREOUS PHYLLITE

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, QUARTZ(?), SERICITE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: HM-1 UNIQUE: 10565 P295 FILE: DH2951-329 TOP_INT: 170.0 BOT_INT: 190.0

LITHOLOGY:

PHYLLITIC MARBLE

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: QUARTZ, SERICITE

MINERALIZATION:

MINERALIZATION TYPE:

DH: HM-1 UNIQUE: 10565 P295 FILE: DH2951-329 TOP_INT: 190.0 BOT_INT: 200.0

LITHOLOGY:

SERICITIC CALCAREOUS PHYLLITE WITH SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, PYRITE, QUARTZ(?), SERICITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, CROSS-CUTTING?, STRATIFORM

DDH: HM-1 UNIQUE: 10565 P295 FILE: DH2951-329 TOP_INT: 200.0 BOT_INT: 220.0

LITHOLOGY:

PHYLLITIC MARBLE

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: QUARTZ, SERICITE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: MM-1 UNIQUE: 10544 P295 FILE: DH2951-330 TOP_INT: 103.0 BOT_INT: 173.0
LITHOLOGY:
AMPHIBOLITE, AMPHIBOLITIC GRANITE, AND CHLORITE SCHIST

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: CHLORITE, CLAY, DOLOMITE, EPIDOTE
MINERALIZATION:
MINERALIZATION TYPE:

DDH: MM-2 UNIQUE: 10545 P295 FILE: DH2951-331 TOP_INT: 100.0 BOT_INT: 145.0
LITHOLOGY:
AMPHIBOLITE

LITH DESCRIPTION:

ALTERATION: CHLORITE, EPIDOTE, QUARTZ, RED HEMATITE
MINERALIZATION: RED HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED

DDH: EF-1 UNIQUE: 10553 P295 FILE: DH2951-332 TOP_INT: 0.0 BOT_INT: 300.0
LITHOLOGY:
SERICITIC PHYLLITIC SCHIST AND MINOR GRANITE

LITH DESCRIPTION:
LAMINATED, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, K-FELDSPAR(?), MUSCOVITE(?), QUARTZ
MINERALIZATION:
MINERALIZATION TYPE:

DDH: EF-1 UNIQUE: 10553 P295 FILE: DH2951-332 TOP_INT: 300.0 BOT_INT: 332.0
LITHOLOGY:
SERICITIC PHYLLITIC SCHIST WITH SULFIDE CHEMICAL SEDIMENT, QUARTZ MUSCOVITE SCHIST, AND MINOR GRANITE

LITH DESCRIPTION:
LAMINATED, PHYLLITIC, SCHISTOSE, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, K-FELDSPAR?, MUSCOVITE?, PYRITE, QUARTZ
MINERALIZATION: PYRITE, CHALCOPYRITE?
MINERALIZATION TYPE:
DISSEMINATED, VEIN?, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: MG-2 UNIQUE: 10558 P295 FILE: DH2951-333 TOP_INT: 49.0 BOT_INT: 224.0

LITHOLOGY:

SERICITIC PHYLLITE, PHYLLITIC SCHIST (VARIABLY GRAPHITIC) AND ARGILLITIC MARBLE

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES ?, SLICKENSIDES, LOCALLY MYLONITIC, PHYLLITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, K-FELDSPAR(?), MUSCOVITE(?), QUARTZ

MINERALIZATION: PYRITE?

MINERALIZATION TYPE:

DISSEMINATED

DDH: MG-2 UNIQUE: 10558 P295 FILE: DH2951-333 TOP_INT: 224.0 BOT_INT: 391.0

LITHOLOGY:

ALCALINE, CHLORITIC, DOLOMITIC TUFFACEOUS PHYLLITE; PHYLLITIC SCHIST (VARIABLY GRAPHITIC); ARGILLITIC MARBLE AND SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES ?, SLICKENSIDES, LOCALLY MYLONITIC, PHYLLITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, K-FELDSPAR, PYRITE, QUARTZ, SERICITE?

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING, STRATIFORM?

DDH: MG-1 UNIQUE: 10557 P295 FILE: DH2951-334 TOP_INT: 63.0 BOT_INT: 210.0

LITHOLOGY:

SERICITIC PHYLLITE AND DOLOMITIC MARBLE

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES ?, SLICKENSIDES, LOCALLY MYLONITIC, PHYLLITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, K-FELDSPAR, PYRITE, QUARTZ, SERICITE?

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: MG-1 UNIQUE: 10557 P295 FILE: DH2951-334 TOP_INT: 210.0 BOT_INT: 220.0

LITHOLOGY:

CARBONATE, MUSCOVITE, QUARTZ PHYLLITIC SCHIST, DOLOMITIC MARBLE, AND SERICITIC QUARTZITE OR RECRYSTALLIZED QUARTZ VEIN

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES ?, SLICKENSIDES, LOCALLY MYLONITIC, PHYLLITIC, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: MG-1 UNIQUE: 10557 P295 FILE: DH2951-334 TOP_INT: 220.0 BOT_INT: 449.0

LITHOLOGY:
 CALCAREOUS, CHLORITIC, DOLOMITIC TUFFACEOUS PHYLLITE; PHYLLITIC SCHIST (VARIABLY GRAPHITIC); ARGILLITIC MARBLE AND SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:
 LAMINATED, PHYLLITIC, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, SLICKENSIDES

ALTERATION: CARBONATE, CHLORITE, PYRITE, QUARTZ, SERICITE?
 MINERALIZATION: PYRITE, PYRRHOTITE, CHALCOPYRITE?, ARSENOPYRITE?
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: MG-4 UNIQUE: 10559 P295 FILE: DH2951-335 TOP_INT: 29.0 BOT_INT: 320.0

LITHOLOGY:
 CHLORITIC, VARIABLY GRAPHITIC SERICITIC PHYLLITIC SCHIST WITH SULFIDE CHEMICAL SEDIMENT, QUARTZ MUSCOVITE SCHIST, MINOR TUFFACEOUS CARBONATE, GRANITE

LITH DESCRIPTION:
 LAMINATED, PHYLLITIC, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, SLICKENSIDES

ALTERATION: CARBONATE, K-FELDSPAR?, MUSCOVITE?, PYRITE, QUARTZ
 MINERALIZATION: PYRITE, PYRRHOTITE?
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: MG-4 UNIQUE: 10559 P295 FILE: DH2951-335 TOP_INT: 320.0 BOT_INT: 464.0

LITHOLOGY:
 CALCAREOUS, CHLORITIC, DOLOMITIC TUFFACEOUS PHYLLITE; PHYLLITIC SCHIST (VARIABLY GRAPHITIC); ARGILLITIC MARBLE AND SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:
 LAMINATED, PHYLLITIC, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, SLICKENSIDES

ALTERATION: CARBONATE, CHLORITE, K-FELDSPAR, PYRITE, QUARTZ, SERICITE?
 MINERALIZATION: PYRITE, PYRRHOTITE?, CHALCOPYRITE?
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: MG-3 UNIQUE: 10566 P295 FILE: DH2951-336 TOP_INT: 39.0 BOT_INT: 184.0

LITHOLOGY:
 BIOTITE, CHLORITE, SERICITE (MUSCOVITE) PHYLLITE SCHIST W/CHERT AND SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:
 LAMINATED, PHYLLITIC, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, SLICKENSIDES

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, PYRITE, QUARTZ
 MINERALIZATION: PYRITE, PYRRHOTITE?
 MINERALIZATION TYPE:
 DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: MG-3 UNIQUE: 10566 P295 FILE: DH2951-336 TOP_INT: 184.0 BOT_INT: 454.0

LITHOLOGY:

CHLORITIC, VARIABLY GRAPHITIC SERICITIC PHYLLITIC SCHIST WITH SULFIDE CHEMICAL SEDIMENT, QUARTZ MUSCOVITE SCHIST, MINOR TUFFACEOUS CARBONATE, GRANITE

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES ?, SLICKENSIDES, LOCALLY MYLONITIC, PHYLLITIC, LOCAL BRECCIA

ALTERATION: BIOTITE?, CARBONATE, CHLORITE, K-FELDSPAR?, MUSCOVITE?, PYRITE, QUARTZ

MINERALIZATION: PYRITE, PYRRHOTITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: ML-27 UNIQUE: 12757 P295 FILE: DH2951-337 TOP_INT: 0.0 BOT_INT: 25.0

LITHOLOGY:

GLACIAL SAND AND GRAVEL (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: ML-27 UNIQUE: 12757 P295 FILE: DH2951-337 TOP_INT: 25.0 BOT_INT: 140.0

LITHOLOGY:

SERICITIC PHYLLITE AND DOLOMITIC MARBLE, MINOR AMPHIBOLITIC MICACEOUS MARBLE, OR AMPHIBOLE QUARTZ DIORITE

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, PHYLLITIC

ALTERATION: AMPHIBOLE, CARBONATE, MAGNETITE, QUARTZ, SERICITE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: ML-27 UNIQUE: 12757 P295 FILE: DH2951-337 TOP_INT: 140.0 BOT_INT: 410.0

LITHOLOGY:

SERICITIC PHYLLITE, AMPHIBOLE QUARTZ DIORITE, QUARTZ MUSCOVITE SCHIST

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, PHYLLITIC

ALTERATION: AMPHIBOLE?, CARBONATE, GOETHITE, QUARTZ, SERICITE, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED

Appendix 295-F: DRILL LOGS

DDH: ML-27 UNIQUE: 12757 P295 FILE: DH2951-337 TOP_INT: 410.0 BOT_INT: 500.0

LITHOLOGY:

SERICITIC SCHIST WITH LOCAL K-FELDSPAR AND GRANITE AND MUSCOVITE QUARTZ SCHIST

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, PHYLLITIC

ALTERATION: CARBONATE, K-FELDSPAR, QUARTZ, SERICITE?

MINERALIZATION:

MINERALIZATION TYPE:

DDH: KRCH-6 UNIQUE: 10554 P295 FILE: DH2951-338 TOP_INT: 67.0 BOT_INT: 500.0

LITHOLOGY:

CALCAREOUS, ALTERED MAFIC INTERMEDIATE VOLCANICS W/MINOR INTRUSIVE DACITE

LITH DESCRIPTION:

BEDDED ?, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, CONTAINS BRECCIA ?

ALTERATION: BIOTITE, CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE, BORNITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE?, CROSS-CUTTING, STRATIFORM?

DDH: KRCH-7 UNIQUE: 10555 P295 FILE: DH2951-339 TOP_INT: 42.0 BOT_INT: 775.0

LITHOLOGY:

CALCAREOUS, ALTERED MAFIC-INTERMEDIATE VOLCANICS, ALTERED METAGABBRO OR PORPHYRITIC METABASALT W/LESSER INTERMEDIATE-FELSIC VOLCANICS

LITH DESCRIPTION:

BEDDED ?, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, CONTAINS BRECCIA ?

ALTERATION: BIOTITE, CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRRHOTITE, PYRITE, CHALCOPYRITE, BORNITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, VEIN SELVAGE?, CROSS-CUTTING, STRATIFORM

DDH: P-11 UNIQUE: 14524 P295 FILE: DH2951-340 TOP_INT: 138.5 BOT_INT: 148.5

LITHOLOGY:

AMPHIBOLITE SCHIST; BIOTITE, HORNBLENDE, K-FELDSPAR, PLAGIOCLASE, QUARTZ GNEISS AND TONALITE(?)

LITH DESCRIPTION:

BEDDED, SCHISTOSE, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN?, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: P-12 UNIQUE: 14523 P295 FILE: DH2951-341 TOP_INT: 78.0 BOT_INT: 84.0

LITHOLOGY:

GLACIAL SAND, GRAVEL AND COBBLES (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: P-12 UNIQUE: 14523 P295 FILE: DH2951-341 TOP_INT: 225.0 BOT_INT: 226.7

LITHOLOGY:

BIOTITE, K-FELDSPAR, MUSCOVITE, PLAGIOCLASE, QUARTZ GNEISS AND SCHIST

LITH DESCRIPTION:

LAMINATED, BEDDED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC?, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, CLAY, KAOLINITE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: PX-1 UNIQUE: 14734 P295 FILE: DH2951-342 TOP_INT: 64.0 BOT_INT: 193.4

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

BEDDED, LAMINATED, CLASTIC ROCK, LOCAL BRECCIA

ALTERATION: CARBONATE, HEMATITE, MICA, QUARTZ, SULFIDE

MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: PX-1 UNIQUE: 14734 P295 FILE: DH2951-342 TOP_INT: 193.4 BOT_INT: 277.0

LITHOLOGY:

MIXED AMPHIBOLE, FELDSPAR, MICA, QUARTZ SCHIST AND GNEISS

LITH DESCRIPTION:

LAMINATED, BEDDED, LOCAL BRECCIA?, MYLONITIC, SCHISTOSE

ALTERATION: CARBONATE, CHLORITE, CLAY, HEMATITE, KAOLIN, PYRITE, QUARTZ, SERICITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: P-9 UNIQUE: 14525 P295 FILE: DH2951-343 TOP_INT: 229.0 BOT_INT: 239.2
LITHOLOGY:
BIOTITE, FELDSPAR, MUSCOVITE, QUARTZ SCHIST WITH SHEARS, CORDIERITE(?), GARNET, CHLORITE, PYRITE, QUARTZ VEINS

LITH DESCRIPTION:
SCHISTOSE, LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, BRITTLE DEFORMATION FEATURES?

ALTERATION: CARBONATE, CHLORITE, GARNET?, K-FELDSPAR, PYRITE, QUARTZ, SERICITE?
MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED, CROSS-CUTTING?, STRATIFORM?

DDH: 264-7/2 R1 UNIQUE: 14492 P295 FILE: DH2951-344 TOP_INT: 167.0 BOT_INT: 203.0
LITHOLOGY:
MYLONITIC BIOTITE, K-FELDSPAR, MAGNETITE, MUSCOVITE, PLAGIOCLASE, QUARTZ GNEISS AND SCHIST

LITH DESCRIPTION:
SCHISTOSE, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, SLICKENSIDES

ALTERATION: CARBONATE, CHLORITE, EPIDOTE, K-FELDSPAR, MAGNETITE, MUSCOVITE, QUARTZ, SERICITE?
MINERALIZATION: MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, CROSS-CUTTING?, STRATIFORM?

DDH: 285-25/2 R1 UNIQUE: 15049 P295 FILE: DH2951-345 TOP_INT: 30.0 BOT_INT: 75.0
LITHOLOGY:
BIOTITE, HORNBLLENDE, MAGNETITE, PYROXENE(?) GRANITE

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, EPIDOTE, K-FELDSPAR, PLAGIOCLASE, PYRITE, RED HEMATITE, QUARTZ
MINERALIZATION: MAGNETITE, PYRITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING, STRATIFORM?

DDH: 18974 UNIQUE: 10636 P295 FILE: DH2951-346 TOP_INT: 451.0 BOT_INT: 457.5
LITHOLOGY:
GREEN ARGILLITE

LITH DESCRIPTION:
LAMINATED, CLASTIC ROCK

ALTERATION: CARBONATE(?), PYRITE(?)
MINERALIZATION: PYRITE?
MINERALIZATION TYPE:
DISSEMINATED

Appendix 295-F: DRILL LOGS

DDH: 18974 UNIQUE: 10636 P295 FILE: DH2951-346 TOP_INT: 457.5 BOT_INT: 569.0

LITHOLOGY:

GRAPHITIC (VARIABLE) ARGILLITE W/CARBONATE

LITH DESCRIPTION:

LAMINATED, CLASTIC ROCK, BEDDED

ALTERATION: CARBONATE(?), PYRITE(?)

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, STRATIFORM, CROSS-CUTTING?

DDH: 3796 UNIQUE: 10638 P295 FILE: DH2951-347 TOP_INT: 273.0 BOT_INT: 405.0

LITHOLOGY:

GRAPHITIC (VARIABLE) ARGILLITE W/CARBONATE, CHERT

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, CLASTIC ROCK?

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: GREY HEMATITE?, MAGNETITE?, MANGANESE OXIDES?

MINERALIZATION TYPE:

DISSEMINATED, STRATIFORM, SELECTIVELY PERVASIVE?

DDH: 4072 UNIQUE: 10640 P295 FILE: DH2951-348 TOP_INT: 265.0 BOT_INT: 595.0

LITHOLOGY:

GRAPHITIC (VARIABLE) ARGILLITE W/CARBONATE, CHERT, SULFIDE, MINOR GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, CLASTIC ROCK?

ALTERATION: CARBONATE, GOETHITE, MELANTERITE (SURFACE OXIDATION), PYRITE

MINERALIZATION: PYRITE, GOETHITE, MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: 3795 UNIQUE: 10637 P295 FILE: DH2951-349 TOP_INT: 298.0 BOT_INT: 507.0

LITHOLOGY:

GRAPHITIC (VARIABLE) ARGILLITE W/CARBONATE, CHERT, SULFIDE

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, CLASTIC ROCK?

ALTERATION: CARBONATE, GOETHITE, MELANTERITE (SURFACE OXIDATION), PYRITE

MINERALIZATION: PYRITE, MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: 3795 UNIQUE: 10637 P295 FILE: DH2951-349 TOP_INT: 507.0 BOT_INT: 547.0

LITHOLOGY:

ARGILLITIC CARBONATE IRON FORMATION W/MINOR CHERT, SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, CLASTIC ROCK?, RECRYSTALLIZED/HORNFELSE?

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 3795 UNIQUE: 10637 P295 FILE: DH2951-349 TOP_INT: 547.0 BOT_INT: 585.0

LITHOLOGY:

QUARTZITE (ORTHO?) W/MINOR PYRITE

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?, CLASTIC ROCK, RECRYSTALLIZED/HORNFELSE?

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 3987 UNIQUE: 10639 P295 FILE: DH2951-350 TOP_INT: 240.0 BOT_INT: 260.0

LITHOLOGY:

QUARTZITE (ORTHO)

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, CLASTIC ROCK, RECRYSTALLIZED/HORNFELSE ?

ALTERATION: LIMONITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: 18972 UNIQUE: 10635 P295 FILE: DH2951-351 TOP_INT: 329.0 BOT_INT: 432.0

LITHOLOGY:

GLACIAL SAND, GRAVEL, COBBLES AND BOULDERS (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

Appendix 295-F: DRILL LOGS

DH: 18972 UNIQUE: 10635 P295 FILE: DH2951-351 TOP_INT: 432.0 BOT_INT: 444.0

LITHOLOGY:

FISSILE ARGILLITE-SHALE

LITH DESCRIPTION:

LAMINATED, CLASTIC ROCK, BEDDED

ALTERATION: CARBONATE, CLAY, KAOLINITE

MINERALIZATION:

MINERALIZATION TYPE:

DDH: 18972 UNIQUE: 10635 P295 FILE: DH2951-351 TOP_INT: 444.0 BOT_INT: 513.0

LITHOLOGY:

GRAPHITIC (VARIABLE) FISSILE ARGILLITE-SHALE

LITH DESCRIPTION:

LAMINATED, CLASTIC ROCK, BEDDED, DUCTILE DEFORMATION FEATURES?, PHYLLITIC?

ALTERATION: CARBONATE, CLAY, KAOLINITE

MINERALIZATION: PYRITE?

MINERALIZATION TYPE:

DISSEMINATED

DH: LV-2A UNIQUE: 14563 P295 FILE: DH2951-352 TOP_INT: 675.3 BOT_INT: 685.7

LITHOLOGY:

CARBONATE, CHERT, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION AND QUARTZ ARENITE

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, CLASTIC ROCK?, LOCAL BRECCIA?

ALTERATION: CARBONATE, QUARTZ

MINERALIZATION: GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE, STRATIFORM

DDH: LV-1 UNIQUE: 14562 P295 FILE: DH2951-353 TOP_INT: 362.0 BOT_INT: 372.3

LITHOLOGY:

EPIDOTE, HORNBLende, MUSCOVITE GRANITE AND TONALITE GNEISS

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CHLORITE, EPIDOTE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

VEIN, CROSS-CUTTING

DDH: 18695 UNIQUE: 11909 P295 FILE: DH2951-354 TOP_INT: 341.0 BOT_INT: 371.0
LITHOLOGY:
GRAPHITIC (VARIABLE) ARGILLITE W/CARBONATE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, CLASTIC ROCK

ALTERATION: CARBONATE(?), PYRITE(?)
MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED, CROSS-CUTTING?, STRATIFORM?

DDH: TL-5 UNIQUE: 10631 P295 FILE: DH2951-355 TOP_INT: 360.0 BOT_INT: 400.0
LITHOLOGY:
GRAPHITIC (VARIABLE) ARGILLITE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC?

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: TL-1 UNIQUE: 10628 P295 FILE: DH2951-356 TOP_INT: 287.0 BOT_INT: 295.0
LITHOLOGY:
GRAPHITIC KAOLINITIC REGOLITH

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: TL-1 UNIQUE: 10628 P295 FILE: DH2951-356 TOP_INT: 295.0 BOT_INT: 310.0
LITHOLOGY:
KAOLINITIC REGOLITH

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION: RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED

DLH: TL-1 UNIQUE: 10628 P295 FILE: DH2951-356 TOP_INT: 310.0 BOT_INT: 320.0
LITHOLOGY:
KAOLINITIC REGOLITH

DLH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: TL-1 UNIQUE: 10628 P295 FILE: DH2951-356 TOP_INT: 320.0 BOT_INT: 385.0
LITHOLOGY:
SMAPHITIC (VARIABLE) ARGILLITE

LITH DESCRIPTION:
MINERIALIZED, DUCTILE DEFORMATION FEATURES, CLASTIC ROCK, PHYLLITIC?

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DLH: TL-2 UNIQUE: 10629 P295 FILE: DH2951-357 TOP_INT: 285.0 BOT_INT: 305.0
LITHOLOGY:
CRETACEOUS(?) ARGILLITE

DLH DESCRIPTION:

ALTERATION: CARBONATE, HEMATITE
MINERALIZATION: RED HEMATITE
MINERALIZATION TYPE:
MINERIALIZED

DDH: TL-2 UNIQUE: 10629 P295 FILE: DH2951-357 TOP_INT: 305.0 BOT_INT: 375.0
LITHOLOGY:
KAOLINITIC REGOLITH

DLH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

Appendix 295-F: DRILL LOGS

DDH: TL-2 UNIQUE: 10629 P295 FILE: DH2951-357 TOP_INT: 375.0 BOT_INT: 573.0
LITHOLOGY:
GRAPHITIC (VARIABLE) ARGILLITE W/CARBONATE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, CLASTIC ROCK

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: TL-3 UNIQUE: 10630 P295 FILE: DH2951-358 TOP_INT: 275.0 BOT_INT: 305.0
LITHOLOGY:
CRETACEOUS(?) ARGILLITE

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: TL-3 UNIQUE: 10630 P295 FILE: DH2951-358 TOP_INT: 305.0 BOT_INT: 385.0
LITHOLOGY:
KAOLINITIC REGOLITH

LITH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: TL-3 UNIQUE: 10630 P295 FILE: DH2951-358 TOP_INT: 385.0 BOT_INT: 433.0
LITHOLOGY:
GRAPHITIC (VARIABLE) ARGILLITE

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, CLASTIC ROCK

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

Appendix 295-F: DRILL LOGS

H: TL-4 UNIQUE: 10632 P295 FILE: DH2951-359 TOP_INT: 341.0 BOT_INT: 400.0

LITHOLOGY:
GRAPHITIC (VARIABLE) ARGILLITE W/MINOR CHERT, IRON SILICATE CHEMICAL SEDIEMNT

TH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, CLASTIC ROCK?, PHYLLITIC?

ALTERATION: CARBONATE, CHLORITE, K-FELDSPAR, PYRITE, QUARTZ, SERICITE?
MINERALIZATION: PYRITE, SPHALERITE?

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING?, STRATIFORM?

DDH: 18971 UNIQUE: 10633 P295 FILE: DH2951-360 TOP_INT: 344.0 BOT_INT: 348.0

LITHOLOGY:
GRAPHITIC KAOLINITIC REGOLITH

TH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

H: 18971 UNIQUE: 10633 P295 FILE: DH2951-360 TOP_INT: 348.0 BOT_INT: 352.0

LITHOLOGY:
KAOLINITIC REGOLITH

TH DESCRIPTION:

ALTERATION:
MINERALIZATION:
MINERALIZATION TYPE:

DDH: 18971 UNIQUE: 10633 P295 FILE: DH2951-360 TOP_INT: 352.0 BOT_INT: 459.0

LITHOLOGY:
GRAPHITIC (VARIABLE) ARGILLITE W/CARBONATE

TH DESCRIPTION:
DISSEMINATED, CLASTIC ROCK

ALTERATION: CARBONATE, WITH MINOR SULFIDE
MINERALIZATION: PYRITE

MINERALIZATION TYPE:
DISSEMINATED, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: 18973 UNIQUE: 10634 P295 FILE: DH2951-361 TOP_INT: 285.0 BOT_INT: 524.0

LITHOLOGY:

GRAPHITIC (VARIABLE) ARGILLITE W/MINOR CHERT, IRON SILICATE CHEMICAL SEDIEMNT

LITH DESCRIPTION:

LAMINATED, CLASTIC ROCK, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC?

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: RED HEMATITE, GOETHITE?

MINERALIZATION TYPE:

DISSEMINATED, SELECTIVELY PERVASIVE?, STRATIFORM, CROSS-CUTTING

DDH: 18973 UNIQUE: 10634 P295 FILE: DH2951-361 TOP_INT: 524.0 BOT_INT: 580.0

LITHOLOGY:

GRAPHITIC (VARIABLE) FISSILE ARGILLITE-SHALE

LITH DESCRIPTION:

LAMINATED, CLASTIC ROCK, BRITTLE DEFORMATION FEATURES, PHYLLITIC?

ALTERATION: CARBONATE(?), PYRITE(?)

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, STRATIFORM, CROSS-CUTTING?

DDH: MLCH-8 UNIQUE: 12756 P295 FILE: DH2951-362 TOP_INT: 5.0 BOT_INT: 20.0

LITHOLOGY:

GLACIAL SAND AND GRAVEL (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: MLCH-8 UNIQUE: 12756 P295 FILE: DH2951-362 TOP_INT: 20.0 BOT_INT: 384.0

LITHOLOGY:

BIOTITE, CHLORITE, GARNET, MUSCOVITE, QUARTZ SCHIST; QUARTZ HORNBLENDE (DIORITE?) SCHIST AND MINOR MARBLE

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING?, STRATIFORM?

H: ML-49C UNIQUE: 12771 P295 FILE: DH2951-363 TOP_INT: 244.0 BOT_INT: 335.2

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

LAMINATED, BEDDED, CLASTIC ROCK

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: ML-49C UNIQUE: 12771 P295 FILE: DH2951-363 TOP_INT: 335.2 BOT_INT: 375.0

LITHOLOGY:

ALTERED GARNET(?), MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST

LITH DESCRIPTION:

HISTOSE, SLICKENSIDES, LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: CARBONATE(?), CLAY, KAOLINITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

H: ML-49C UNIQUE: 12771 P295 FILE: DH2951-363 TOP_INT: 375.0 BOT_INT: 406.5

LITHOLOGY:

ALTERED GRAPHITIC (VARIABLE), BIOTITE, CHLORITE, GARNET, MUSCOVITE QUARTZ SCHIST

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LOCALLY MYLONITIC

ALTERATION: CARBONATE, CHLORITE, CLAY, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE?, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: ML-49C UNIQUE: 12771 P295 FILE: DH2951-363 TOP_INT: 406.5 BOT_INT: 464.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE AND SILICEOUS DOLOMITIC MARBLE

LITH DESCRIPTION:

BEDDED, SCHISTOSE, RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: CARBONATE, HEMATITE, QUARTZ, SERICITE

MINERALIZATION: RED HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: ML-43C UNIQUE: 12768 P295 FILE: DH2951-364 TOP_INT: 10.0 BOT_INT: 258.0

LITHOLOGY:

GLACIAL SAND AND GRAVEL (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: ML-43C UNIQUE: 12768 P295 FILE: DH2951-364 TOP_INT: 258.0 BOT_INT: 321.5

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

LAMINATED, BEDDED, CLASTIC ROCK

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: ML-43C UNIQUE: 12768 P295 FILE: DH2951-364 TOP_INT: 321.5 BOT_INT: 376.0

LITHOLOGY:

ALTERED GARNET(?), MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, SLICKENSIDES, LOCALLY MYLONITIC ?, SCHISTOSE

ALTERATION: CARBONATE(?), CLAY, KAOLINITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: ML-43C UNIQUE: 12768 P295 FILE: DH2951-364 TOP_INT: 376.0 BOT_INT: 414.5

LITHOLOGY:

ALTERED GRAPHITIC (VARIABLE), BIOTITE, CHLORITE, GARNET, MUSCOVITE QUARTZ SCHIST

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, CLAY, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

H: ML-43C UNIQUE: 12768 P295 FILE: DH2951-364 TOP_INT: 414.5 BOT_INT: 446.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE AND SILICEOUS DOLOMITIC MARBLE

TH DESCRIPTION:

LAMINATED, SCHISTOSE?, CRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: ML-50C UNIQUE: 12772 P295 FILE: DH2951-365 TOP_INT: 239.0 BOT_INT: 337.0

LITHOLOGY:

IRREGULAR (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

TH DESCRIPTION:

LAMINATED, BEDDED, CLASTIC ROCK

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING? STRATIFORM

H: ML-50C UNIQUE: 12772 P295 FILE: DH2951-365 TOP_INT: 337.0 BOT_INT: 372.0

LITHOLOGY:

ALTERED GARNET(?), MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST

TH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, SLICKENSIDES, LOCALLY MYLONITIC ?, PHYLLITIC, SCHISTOSE

ALTERATION: CARBONATE(?), CLAY, KAOLINITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VIEW SELVAGE, CROSS-CUTTING?, STRATIFORM?

DDH: ML-50C UNIQUE: 12772 P295 FILE: DH2951-365 TOP_INT: 372.0 BOT_INT: 401.3

LITHOLOGY:

ALTERED CORDIERITE(?), GRAPHITIC (VARIABLE), BIOTITE, CHLORITE, GARNET, MUSCOVITE QUARTZ SCHIST

TH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, CLAY, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: ML-50C UNIQUE: 12772 P295 FILE: DH2951-365 TOP_INT: 401.3 BOT_INT: 454.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE, SILICEOUS DOLOMITIC MARBLE, AND MINOR MICA SCHIST

LITH DESCRIPTION:

LAMINATED, BEDDED, SCHISTOSE, RECRYSTALLIZED/HORNFELSE? LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES?

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: PYRITE, CHALCOPYRITE?, SPHALERITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: ML-51C UNIQUE: 12773 P295 FILE: DH2951-366 TOP_INT: 269.0 BOT_INT: 331.3

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

LAMINATED, CLASTIC ROCK, BEDDED

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: ML-51C UNIQUE: 12773 P295 FILE: DH2951-366 TOP_INT: 331.3 BOT_INT: 414.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE AND SILICEOUS DOLOMITIC MARBLE

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LOCALLY MYLONITIC?, RECRYSTALLIZED/HORNFELSE

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: T-4 UNIQUE: 12749 P295 FILE: DH2951-367 TOP_INT: 46.5 BOT_INT: 58.0

LITHOLOGY:

X-BEDDED ARENITIC SANDSTONE

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, BEDDED

ALTERATION: LIMONITE, RED HEMATITE

MINERALIZATION: LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

PERVASIVE, CROSS-CUTTING?, STRATIFORM?

H: T-5 UNIQUE: 10517 P295 FILE: DH2951-368 TOP_INT: 34.0 BOT_INT: 44.0

LITHOLOGY:

CHLORITE TUFFACEOUS CARBONATE PHYLLITIC SCHIST

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING?, STRATIFORM?

DDH: T-6 UNIQUE: 10518 P295 FILE: DH2951-369 TOP_INT: 25.0 BOT_INT: 33.2

LITHOLOGY:

CARBONATE CHLORITE GRAPHITIC PHYLLITIC SCHIST

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, PHYLLITIC, SCHISTOSE

ALTERATION: CARBONATE, CHLORITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

H: T-3 UNIQUE: 10614 P295 FILE: DH2951-370 TOP_INT: 9.0 BOT_INT: 20.0

LITHOLOGY:

CHLORITIC GRAPHITIC TUFFACEOUS PHYLLITE W/SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

LAMINATED, BEDDED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, CLASTIC ROCK

ALTERATION: CARBONATE, CHLORITE, LIMONITE, PYRITE, QUARTZ

MINERALIZATION: PYRITE?, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: AB-10 UNIQUE: 14495 P295 FILE: DH2951-371 TOP_INT: 80.0 BOT_INT: 94.5

LITHOLOGY:

MYLONITIC BIOTITE, CHLORITE, K-FELDSPAR, MUSCOVITE, PLAGIOCLASE, QUARTZ GNEISS AND SCHIST

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES ?, SLICKENSIDES, LOCAL BRECCIA ?, LOCALLY MYLONITIC, BEDDED

ALTERATION: CHLORITE?, CLAY, K-FELDSPAR, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ, RED HEMATITE

MINERALIZATION: PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: AB-24A UNIQUE: 14597 P295 FILE: DH2951-372 TOP_INT: 413.0 BOT_INT: 423.0

LITHOLOGY:
GRAPHITE, SULFIDE PHYLLITE

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CARBONATE, QUARTZ, SULFIDE, WITH MINOR GOETHITE, LIMONITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: ML-54C UNIQUE: 12776 P295 FILE: DH2951-373 TOP_INT: 209.0 BOT_INT: 343.3

LITHOLOGY:
FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, BEDDED

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: ML-54C UNIQUE: 12776 P295 FILE: DH2951-373 TOP_INT: 343.3 BOT_INT: 359.5

LITHOLOGY:
ALTERED TUFFACEOUS(?), CHLORITE, MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST AND BRECCIATED PILLOWED METABASALT

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: ML-54C UNIQUE: 12776 P295 FILE: DH2951-373 TOP_INT: 359.5 BOT_INT: 414.0

LITHOLOGY:
RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE, SILICEOUS DOLOMITIC MARBLE, AND MINOR MICA SCHIST

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED ?, LOCALLY MYLONITIC?, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFEL
SED

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: ML-45C UNIQUE: 12770 P295 FILE: DH2951-374 TOP_INT: 10.0 BOT_INT: 250.0

LITHOLOGY:

GLACIAL SAND AND GRAVEL (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: ML-45C UNIQUE: 12770 P295 FILE: DH2951-374 TOP_INT: 250.0 BOT_INT: 333.5

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

ELASTIC ROCK, LAMINATED, BEDDED

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: ML-45C UNIQUE: 12770 P295 FILE: DH2951-374 TOP_INT: 333.5 BOT_INT: 378.0

LITHOLOGY:

ALTERED GARNET(?), MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, SLICKENSIDES, LOCALLY MYLONITIC ?, SCHISTOSE

ALTERATION: CARBONATE(?), CLAY, KAOLINITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING?, STRATIFORM?

DDH: ML-45C UNIQUE: 12770 P295 FILE: DH2951-374 TOP_INT: 378.0 BOT_INT: 385.0

LITHOLOGY:

CHLORITIC GRAPHITIC TUFFACEOUS PHYLLITE W/SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, CLAY, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: RED HEMATITE, PYRITE, CHALCOPYRITE, COVELLITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: ML-45C UNIQUE: 12770 P295 FILE: DH2951-374 TOP_INT: 385.0 BOT_INT: 571.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE, SILICEOUS DOLOMITIC MARBLE, AND GRAPHITIC PHYLLITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LAMINATED ?, LOCALLY MYLONITIC?, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFEL SED

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: PYRITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: ML-53C UNIQUE: 12775 P295 FILE: DH2951-375 TOP_INT: 219.0 BOT_INT: 341.6

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES ?

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: ML-53C UNIQUE: 12775 P295 FILE: DH2951-375 TOP_INT: 341.6 BOT_INT: 382.0

LITHOLOGY:

ALTERED GARNET(?), MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, LOCALLY MYLONITIC

ALTERATION: CARBONATE(?), CLAY, KAOLINITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING?, STRATIFORM?

DDH: ML-53C UNIQUE: 12775 P295 FILE: DH2951-375 TOP_INT: 382.0 BOT_INT: 424.2

LITHOLOGY:

CHLORITIC GRAPHITIC TUFFACEOUS PHYLLITE W/SULFIDE CHEMICAL SEDIMENT, RECRYSTALLIZED SILICEOUS TUFF

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, CLAY, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE, BORNITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: ML-53C UNIQUE: 12775 P295 FILE: DH2951-375 TOP_INT: 424.2 BOT_INT: 464.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE AND SILICEOUS DOLOMITIC MARBLE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, LOCALLY MYLONITIC ?, LAMINATED, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFE
SED

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: ML-44C UNIQUE: 12769 P295 FILE: DH2951-376 TOP_INT: 10.0 BOT_INT: 250.0

LITHOLOGY:

FLUVIACIAL SAND AND GRAVEL (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

DDH: ML-44C UNIQUE: 12769 P295 FILE: DH2951-376 TOP_INT: 250.0 BOT_INT: 335.0

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, BEDDED

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: ML-44C UNIQUE: 12769 P295 FILE: DH2951-376 TOP_INT: 335.0 BOT_INT: 376.0

LITHOLOGY:

ALTERED GARNET(?), MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?, MYLONITIC

ALTERATION: CARBONATE(?), CLAY, KAOLINITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: ML-44C UNIQUE: 12769 P295 FILE: DH2951-376 TOP_INT: 376.0 BOT_INT: 408.0

LITHOLOGY:

CHLORITIC GRAPHITIC TUFFACEOUS PHYLLITE W/SULFIDE CHEMICAL SEDIMENT, RECRYSTALLIZED SILICEOUS TUFF, MARBLE LAYERS

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, MYLONITIC

ALTERATION: CARBONATE, CHLORITE, CLAY, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, PYRRHOTITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, CROSS-CUTTING, STRATIFORM

DDH: ML-44C UNIQUE: 12769 P295 FILE: DH2951-376 TOP_INT: 408.0 BOT_INT: 436.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE AND SILICEOUS DOLOMITIC MARBLE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, LOCALLY MYLONITIC ?, LAMINATED, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFE LSED

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: ML-56C UNIQUE: 12777 P295 FILE: DH2951-377 TOP_INT: 249.0 BOT_INT: 329.4

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, BEDDED

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: ML-56C UNIQUE: 12777 P295 FILE: DH2951-377 TOP_INT: 329.4 BOT_INT: 364.0

LITHOLOGY:

ALTERED GARNET(?), MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, MYLONITIC

ALTERATION: CARBONATE(?), CLAY, KAOLINITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, PYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN SELVAGE?, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DH: ML-56C UNIQUE: 12777 P295 FILE: DH2951-377 TOP_INT: 364.0 BOT_INT: 380.0

LITHOLOGY:

CHLORITIC GRAPHITIC TUFFACEOUS PHYLLITE W/SULFIDE CHEMICAL SEDIMENT, RECRYSTALLIZED SILICEOUS TUFF, MARBLE LAYERS

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, MYLONITIC

ALTERATION: CARBONATE, CHLORITE, CLAY, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: ML-56C UNIQUE: 12777 P295 FILE: DH2951-377 TOP_INT: 380.0 BOT_INT: 412.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE, SILICEOUS DOLOMITIC MARBLE, AND GRAPHITIC PHYLLITE

LITH DESCRIPTION:

LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LOCALLY MYLONITIC, LAMINATED, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, CHLORITE, CLAY, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE, BORNITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DH: ML-56C UNIQUE: 12777 P295 FILE: DH2951-377 TOP_INT: 412.0 BOT_INT: 454.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE AND SILICEOUS DOLOMITIC MARBLE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, LOCALLY MYLONITIC ?, LAMINATED, DUCTILE DEFORMATION FEATURES ?, RECRYSTALLIZED/HORNELSELSED

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: MLCH-10 UNIQUE: 12778 P295 FILE: DH2951-378 TOP_INT: 20.0 BOT_INT: 198.0

LITHOLOGY:

LACIAL SAND, GRAVEL, COBBLES AND BOULDERS (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION:

MINERALIZATION TYPE:

Appendix 295-F: DRILL LOGS

DDH: MLCH-10 UNIQUE: 12778 P295 FILE: DH2951-378 TOP_INT: 198.0 BOT_INT: 299.0

LITHOLOGY:

FERRUGINOUS (VARIABLE) SANDSTONE, SILTSTONE, CONGLOMERATE AND SEDIMENTARY BRECCIA

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, BEDDED

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: MLCH-10 UNIQUE: 12778 P295 FILE: DH2951-378 TOP_INT: 299.0 BOT_INT: 336.0

LITHOLOGY:

RECRYSTALLIZED CHERTY QUARTZ PEBBLE CONGLOMERATE AND SILICEOUS DOLOMITIC MARBLE

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: ML-52C UNIQUE: 12774 P295 FILE: DH2951-379 TOP_INT: 279.0 BOT_INT: 324.0

LITHOLOGY:

GLACIAL SAND, GRAVEL, COBBLES AND BOULDERS (LOCALLY CLAYEY)

LITH DESCRIPTION:

ALTERATION:

MINERALIZATION: LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DDH: KRCH-1 UNIQUE: 12780 P295 FILE: DH2951-380 TOP_INT: 16.0 BOT_INT: 285.0

LITHOLOGY:

ACTINOLITE, BIOTITE, CARBONATE, CHLORITE, GARNET, PLAGIOCLASE, SERICITE SCHIST AND HORNBLENDE, PLAGIOCLASE, QUARTZ SEGREGATIONS

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: MLCH-6 UNIQUE: 12779 P295 FILE: DH2951-381 TOP_INT: 338.0 BOT_INT: 357.0

LITHOLOGY:

ALTERED TUFFACEOUS(?), CHLORITE, MUSCOVITE, PLAGIOCLASE(?), QUARTZ SCHIST AND BRECCIATED PILLOWED METABASALT

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, SCHISTOSE, PHYLITIC, LOCALLY MYLONITIC, LOCAL BRECCIA

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, QUARTZ, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM?

DDH: MLCH-6 UNIQUE: 12779 P295 FILE: DH2951-381 TOP_INT: 357.0 BOT_INT: 524.0

LITHOLOGY:

CRYSTALLIZED CHERY QUARTZ PEBBLE CONGLOMERATE AND SILICEOUS DOLOMITIC MARBLE

LITH DESCRIPTION:

CRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC?, LAMINATED? DUCTILE DEFORMATION FEATURE

ALTERATION: CARBONATE, HEMATITE, QUARTZ, PYRITE, SERICITE

MINERALIZATION: RED HEMATITE, PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING, STRATIFORM?

DDH: D-1 UNIQUE: 12781 P295 FILE: DH2951-382 TOP_INT: 40.0 BOT_INT: 438.0

LITHOLOGY:

ACTINOLITE, BIOTITE, CARBONATE, CHLORITE, GARNET, PLAGIOCLASE, SERICITE SCHIST AND HORNBLENDE, PLAGIOCLASE, QUARTZ SEGREGATIONS

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: D-2 UNIQUE: 12782 P295 FILE: DH2951-383 TOP_INT: 40.0 BOT_INT: 203.3

LITHOLOGY:

ACTINOLITE, BIOTITE, CARBONATE, CHLORITE, GARNET, PLAGIOCLASE, SERICITE SCHIST AND HORNBLENDE, PLAGIOCLASE, QUARTZ SEGREGATIONS

LITH DESCRIPTION:

LAMINATED, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: D-2 UNIQUE: 12782 P295 FILE: DH2951-383 TOP_INT: 203.3 BOT_INT: 251.5
LITHOLOGY:
BASALT

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: CARBONATE, CHLORITE
MINERALIZATION: MAGNETITE, PYRITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: D-2 UNIQUE: 12782 P295 FILE: DH2951-383 TOP_INT: 251.5 BOT_INT: 450.0
LITHOLOGY:
ACTINOLITE, BIOTITE, CARBONATE, CHLORITE, GARNET, PLAGIOCLASE, SERICITE SCHIST AND HORNBLende, PLAGIOCLASE, QUARTZ SEGREGATIONS

LITH DESCRIPTION:
LAMINATED, SCHISTOSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, PLAGIOCLASE, PYRITE, QUARTZ
MINERALIZATION: PYRITE
MINERALIZATION TYPE:
DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: 682 UNIQUE: 10764 P295 FILE: DH2951-384 TOP_INT: 72.0 BOT_INT: 90.0
LITHOLOGY:
PHYLLITE

LITH DESCRIPTION:
PHYLLITIC, LAMINATED

ALTERATION: CLAY, HEMATITE, QUARTZ(?)
MINERALIZATION: RED HEMATITE
MINERALIZATION TYPE:
BLEBBY, STRATIFORM?

DDH: 686 UNIQUE: 10765 P295 FILE: DH2951-385 TOP_INT: 85.0 BOT_INT: 120.0
LITHOLOGY:
PHYLLITE W/MINOR CHERT

LITH DESCRIPTION:
PHYLLITIC, LAMINATED

ALTERATION: CLAY, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: RED HEMATITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DH: S-1-55 UNIQUE: 15513 P295 FILE: DH2951-386 TOP_INT: 12.0 BOT_INT: 45.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES?

ALTERATION: MAGNETITE, RED HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S503 UNIQUE: 15514 P295 FILE: DH2951-387 TOP_INT: 269.0 BOT_INT: 305.0

LITHOLOGY:

TUFFACEOUS PHYLLITE

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: QUARTZ, SERICITE

MINERALIZATION: RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, CROSS-CUTTING?, STRATIFORM?

DH: S503 UNIQUE: 15514 P295 FILE: DH2951-387 TOP_INT: 305.0 BOT_INT: 360.0

LITHOLOGY:

TUFFACEOUS PHYLLITE

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: RED HEMATITE, QUARTZ, SERICITE

MINERALIZATION: RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S503 UNIQUE: 15514 P295 FILE: DH2951-387 TOP_INT: 365.0 BOT_INT: 375.0

LITHOLOGY:

TUFFACEOUS PHYLLITE

LITH DESCRIPTION:

CLASTIC ROCK, LAMINATED, DUCTILE DEFORMATION FEATURES, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: RED HEMATITE, QUARTZ, SERICITE

MINERALIZATION: RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S503 UNIQUE: 15514 P295 FILE: DH2951-387 TOP_INT: 375.0 BOT_INT: 380.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED?, LOCAL BRECCIA?, RECRYSTALLIZED/HORNFELSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES?

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S503 UNIQUE: 15514 P295 FILE: DH2951-387 TOP_INT: 385.0 BOT_INT: 390.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED?, LOCAL BRECCIA?, RECRYSTALLIZED/HORNFELSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES?

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S503 UNIQUE: 15514 P295 FILE: DH2951-387 TOP_INT: 405.0 BOT_INT: 448.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

BEDDED ?, RECRYSTALLIZED/HORNFELSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES ?

ALTERATION: GOETHITE, HEMATITE

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S505 UNIQUE: 15864 P295 FILE: DH2951-388 TOP_INT: 446.0 BOT_INT: 451.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, CRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: S506 UNIQUE: 15865 P295 FILE: DH2951-389 TOP_INT: 325.0 BOT_INT: 355.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, QUARTZ

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S506 UNIQUE: 15865 P295 FILE: DH2951-389 TOP_INT: 355.0 BOT_INT: 370.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S507 UNIQUE: 15866 P295 FILE: DH2951-390 TOP_INT: 383.0 BOT_INT: 398.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S509 UNIQUE: 15867 P295 FILE: DH2951-391 TOP_INT: 205.0 BOT_INT: 280.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, QUARTZ

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S509 UNIQUE: 15867 P295 FILE: DH2951-391 TOP_INT: 280.0 BOT_INT: 305.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, MAGNETITE, QUARTZ, RED HEMATITE, WITH VUGS

MINERALIZATION: GOETHITE, MAGNETITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S511 UNIQUE: 15868 P295 FILE: DH2951-392 TOP_INT: 87.0 BOT_INT: 105.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, MUSCOVITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, MANGANESE OXIDES, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S501 UNIQUE: 15905 P295 FILE: DH2951-393 TOP_INT: 235.0 BOT_INT: 250.0

LITHOLOGY:

TUFFACEOUS PHYLLITE

LITH DESCRIPTION:

LAMINATED, PHYLLITIC, CLASTIC ROCK, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: RED HEMATITE, QUARTZ, SERICITE, LIMONITE

MINERALIZATION: RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: S501 UNIQUE: 15905 P295 FILE: DH2951-393 TOP_INT: 250.0 BOT_INT: 265.0

LITHOLOGY:

TUFFACEOUS PHYLLITE

LITH DESCRIPTION:

LAMINATED, PHYLLITIC, CLASTIC ROCK, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: RED HEMATITE, QUARTZ, SERICITE, MN OXIDES(?)

MINERALIZATION: RED HEMATITE, MANGANESE OXIDES?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S502 UNIQUE: 15906 P295 FILE: DH2951-394 TOP_INT: 302.0 BOT_INT: 310.0

LITHOLOGY:

CHERT (OR SILICEOUS TUFF? OR CLASTIC ROCK?)

LITH DESCRIPTION:

RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES, BEDDED?

ALTERATION: HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: H2 UNIQUE: 15976 P295 FILE: DH2951-395 TOP_INT: 63.0 BOT_INT: 70.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, CRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H2 UNIQUE: 15976 P295 FILE: DH2951-395 TOP_INT: 74.0 BOT_INT: 101.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, QUARTZ

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H2 UNIQUE: 15976 P295 FILE: DH2951-395 TOP_INT: 105.0 BOT_INT: 130.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFELSE, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: H2 UNIQUE: 15976 P295 FILE: DH2951-395 TOP_INT: 130.0 BOT_INT: 135.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: LIMONITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H3 UNIQUE: 15977 P295 FILE: DH2951-396 TOP_INT: 145.0 BOT_INT: 165.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H4 UNIQUE: 15978 P295 FILE: DH2951-397 TOP_INT: 125.0 BOT_INT: 130.0

LITHOLOGY:

PHYLLITE AND CHERT, GOETHITE, HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H4 UNIQUE: 15978 P295 FILE: DH2951-397 TOP_INT: 130.0 BOT_INT: 150.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFELSED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: H5 UNIQUE: 15979 P295 FILE: DH2951-398 TOP_INT: 88.0 BOT_INT: 95.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFEISED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H6 UNIQUE: 15980 P295 FILE: DH2951-399 TOP_INT: 110.0 BOT_INT: 125.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, LIMONITE IRON FORMATION AND PHYLLITE

LITH DESCRIPTION:

LAMINATED, RECRYSTALLIZED/HORNFEISED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H12 UNIQUE: 15981 P295 FILE: DH2951-400 TOP_INT: 72.0 BOT_INT: 90.0

LITHOLOGY:

SERICITIC PHYLLITE

LITH DESCRIPTION:

PHYLLITIC, LAMINATED, LOCALLY MYLONITIC?

ALTERATION: CLAY, HEMATITE, KAOLINITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, STRATIFORM

DDH: H12 UNIQUE: 15981 P295 FILE: DH2951-400 TOP_INT: 90.0 BOT_INT: 182.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION AND MINOR PHYLLITE, GOETHITIC PHYLLITE AND SILICEOUS SILTSTONE

LITH DESCRIPTION:

PHYLLITIC, LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, MN OXIDES?, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, LIMONITE, GOETHITE, MANGANESE OXIDES

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H12 UNIQUE: 15981 P295 FILE: DH2951-400 TOP_INT: 190.0 BOT_INT: 195.0

LITHOLOGY:

CALCAREOUS TUFFACEOUS PHYLLITE WITH SULFIDE

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, PHYLLITIC

ALTERATION: CLAY, GOETHITE, LIMONITE, SERICITE

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: H15 UNIQUE: 15982 P295 FILE: DH2951-401 TOP_INT: 77.0 BOT_INT: 85.0

LITHOLOGY:

SERICITIC PHYLLITE

LITH DESCRIPTION:

PHYLLITIC, LAMINATED, LOCALLY MYLONITIC?

ALTERATION: CLAY, HEMATITE, KAOLINITE

MINERALIZATION: RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, STRATIFORM

DDH: H15 UNIQUE: 15982 P295 FILE: DH2951-401 TOP_INT: 85.0 BOT_INT: 120.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION AND MINOR PHYLLITE, GOETHITIC PHYLLITE AND SILICEOUS SILTSTONE

LITH DESCRIPTION:

PHYLLITIC, LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, MN OXIDES?, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H15 UNIQUE: 15982 P295 FILE: DH2951-401 TOP_INT: 120.0 BOT_INT: 130.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, HEMATITE, QUARTZ

MINERALIZATION: GREY AND RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: H15 UNIQUE: 15982 P295 FILE: DH2951-401 TOP_INT: 130.0 BOT_INT: 170.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION AND MINOR PHYLLITE, GOETHITIC PHYLLITE AND SILICEOUS SILTSTONE

LITH DESCRIPTION:

PHYLLITIC, LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, MN OXIDES?, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H15 UNIQUE: 15982 P295 FILE: DH2951-401 TOP_INT: 170.0 BOT_INT: 175.0

LITHOLOGY:

SILICEOUS SILTSTONE OR LEACHED CHERT; AND MINOR GREY HEMATITE-GOETHITE

LITH DESCRIPTION:

LAMINATED

ALTERATION: GOETHITE, HEMATITE, LEACHING?

MINERALIZATION: GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM

DDH: H15 UNIQUE: 15982 P295 FILE: DH2951-401 TOP_INT: 175.0 BOT_INT: 190.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION AND MINOR PHYLLITE, GOETHITIC PHYLLITE AND SILICEOUS SILTSTONE

LITH DESCRIPTION:

LAMINATED, BEDDED?, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, MN OXIDES?, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H15 UNIQUE: 15982 P295 FILE: DH2951-401 TOP_INT: 190.0 BOT_INT: 210.0

LITHOLOGY:

CHERT, SILICEOUS SILTSTONE AND MINOR PHYLLITE, GOETHITIC PHYLLITE

LITH DESCRIPTION:

LAMINATED?, BEDDED?, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, CLAY, GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: H17 UNIQUE: 15983 P295 FILE: DH2951-402 TOP_INT: 84.0 BOT_INT: 130.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H17 UNIQUE: 15983 P295 FILE: DH2951-402 TOP_INT: 135.0 BOT_INT: 155.0

LITHOLOGY:

GRAPHITIC TO HEMATITIC PHYLLITE AND CHERT, GOETHITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: CLAY, GOETHITE, LIMONITE, SERICITE, RED HEMATITE

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H18 UNIQUE: 15984 P295 FILE: DH2951-403 TOP_INT: 127.0 BOT_INT: 155.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CHLORITE, COPPER (NATIVE), GOETHITE, GREY HEMATITE, QUARTZ, SULFIDE?

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, NATIVE COPPER

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING?, STRATIFORM?

DDH: H19 UNIQUE: 15985 P295 FILE: DH2951-404 TOP_INT: 56.0 BOT_INT: 89.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES?

ALTERATION: CARBONATE, GOETHITE, QUARTZ

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: H19 UNIQUE: 15985 P295 FILE: DH2951-404 TOP_INT: 89.0 BOT_INT: 90.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES?

ALTERATION: CARBONATE, CLAY, GOETHITE, RED HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H20 UNIQUE: 15986 P295 FILE: DH2951-405 TOP_INT: 75.0 BOT_INT: 82.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, PYRITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H20 UNIQUE: 15986 P295 FILE: DH2951-405 TOP_INT: 110.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GREY AND RED HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GREY HEMATITE, MAGNETITE?, RED HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: H20 UNIQUE: 15986 P295 FILE: DH2951-405 TOP_INT: 154.0 BOT_INT: 160.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H21 UNIQUE: 15987 P295 FILE: DH2951-406 TOP_INT: 70.0 BOT_INT: 97.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H21 UNIQUE: 15987 P295 FILE: DH2951-406 TOP_INT: 100.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H21 UNIQUE: 15987 P295 FILE: DH2951-406 TOP_INT: 138.0 BOT_INT: 145.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: RED HEMATITE, GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: H21 UNIQUE: 15987 P295 FILE: DH2951-406 TOP_INT: 145.0 BOT_INT: 150.0

LITHOLOGY:

PHYLLITE

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES?

ALTERATION: CLAY, HEMATITE, QUARTZ(?)

MINERALIZATION: RED HEMATITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM, CROSS-CUTTING?

Appendix 295-F: DRILL LOGS

DDH: PS-2 UNIQUE: 10150 P295 FILE: DH2951-407 TOP_INT: 41.0 BOT_INT: 144.0

LITHOLOGY:
CARBONATE, CHLORITE, QUARTZ, SERICITE SCHIST, AND BIOTITIC PHYLLITE SCHIST

LITH DESCRIPTION:
SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, PHYLLITIC

ALTERATION: BIOTITE, CARBONATE, CHLORITE, K-FELDSPAR, MUSCOVITE, QUARTZ, SULFIDE
MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:
DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: PS-2 UNIQUE: 10150 P295 FILE: DH2951-407 TOP_INT: 144.0 BOT_INT: 203.4

LITHOLOGY:
CARBONATE, CHLORITE, QUARTZ, SERICITE SCHIST, BIOTITE PHYLLITE SCHIST, MINOR GRAPHITE, SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:
SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, PHYLLITIC

ALTERATION: BIOTITE, CARBONATE, CHLORITE, K-FELDSPAR, MUSCOVITE, QUARTZ, SULFIDE
MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:
DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM

DDH: PS-2 UNIQUE: 10150 P295 FILE: DH2951-407 TOP_INT: 203.2 BOT_INT: 207.0

LITHOLOGY:
ALTERED METAGABBRO OR PORPHYRITIC METABASALT

LITH DESCRIPTION:
DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES ?

ALTERATION: CARBONATE, CHLORITE, SULFIDE
MINERALIZATION: PYRITE

MINERALIZATION TYPE:
DISSEMINATED, MASSIVE, CROSS-CUTTING

DDH: PS-2 UNIQUE: 10150 P295 FILE: DH2951-407 TOP_INT: 207.0 BOT_INT: 293.2

LITHOLOGY:
CARBONATE, CHLORITE, QUARTZ, SERICITE SCHIST, BIOTITE PHYLLITE SCHIST, MINOR GRAPHITE, SULFIDE CHEMICAL SEDIMENT

LITH DESCRIPTION:
LAMINATED, PHYLLITIC, SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCAL BRECCIA, LOCALLY MYLONITIC ?

ALTERATION: BIOTITE, CARBONATE, CHLORITE, K-FELDSPAR, MUSCOVITE, QUARTZ, SULFIDE
MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:
DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: PS-2 UNIQUE: 10150 P295 FILE: DH2951-407 TOP_INT: 293.2 BOT_INT: 310.3

LITHOLOGY:

DARK GREEN, FINE-GRAINED ALTERED MAFIC OR ULTRAMAFIC ROCK

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, MYLONITIC ?

ALTERATION: CARBONATE, CHLORITE, CLAY, SERPENTINE, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, CROSS-CUTTING

DDH: PS-2 UNIQUE: 10150 P295 FILE: DH2951-407 TOP_INT: 310.3 BOT_INT: 572.0

LITHOLOGY:

CARBONATE, CHLORITE, QUARTZ, SERICITE SCHIST, AND BIOTITIC PHYLLITE SCHIST

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC, PHYLLITIC

ALTERATION: BIOTITE, CARBONATE, CHLORITE, K-FELDSPAR, MUSCOVITE, QUARTZ, SULFIDE

MINERALIZATION: PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, VEIN, STRATIFORM? CROSS-CUTTING

DDH: 56 UNIQUE: 10187 P295 FILE: DH2951-408 TOP_INT: 120.0 BOT_INT: 130.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE

LITH DESCRIPTION:

PHYLLITIC, LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: SULFIDE

MINERALIZATION: PYRITE, MARCASITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

DDH: 60 UNIQUE: 10351 P295 FILE: DH2951-409 TOP_INT: 96.0 BOT_INT: 99.0

LITHOLOGY:

GRANITE AND QUARTZ MONZONITE

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: MINOR CHLORITE; LIMONITIC AND RED HEMATITIC STAINING

MINERALIZATION: MAGNETITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING

DDH: 60 UNIQUE: 10351 P295 FILE: DH2951-409 TOP_INT: 99.0 BOT_INT: 115.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: CHLORITE, CLAY, EPIDOTE, FELDSPAR?, GOETHITE, LIMONITE, MAGNETITE?, RED HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, RED HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN?, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 61 UNIQUE: 10352 P295 FILE: DH2951-410 TOP_INT: 98.0 BOT_INT: 113.0

LITHOLOGY:

CARBONATE(?), GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: CARBONATE, CHLORITE, EPIDOTE?, GOETHITE, GREY & RED HEMATITE, MAGNETITE?, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN?, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: 62 UNIQUE: 10401 P295 FILE: DH2951-411 TOP_INT: 109.0 BOT_INT: 116.0

LITHOLOGY:

CARBONATE(?), GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, CHLORITE, EPIDOTE?, GOETHITE, GREY & RED HEMATITE, KAOLINITE, MAGNETITE?, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN?, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: AB-22 UNIQUE: 14513 P295 FILE: DH2951-412 TOP_INT: 208.0 BOT_INT: 217.7

LITHOLOGY:

METABASALT

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, SCHISTOSE ?, PHYLLITIC ?, LOCALLY MYLONITIC, SLICKENSIDES

ALTERATION: CARBONATE, CHLORITE, GOETHITE, LIMONITE, QUARTZ, SULFIDE

MINERALIZATION: GREY HEMATITE, MAGNETITE?, LIMONITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING

Appendix 295-F: DRILL LOGS

DDH: AB-23A UNIQUE: 14514 P295 FILE: DH2951-413 TOP_INT: 488.0 BOT_INT: 500.0

LITHOLOGY:

QUARTZ, RED HEMATITE, SERICITE MYLONITIC SCHIST

LITH DESCRIPTION:

SCHISTOSE, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC, SLICKENSIDES?, DUCTILE DEFORMATION FEATURES

ALTERATION: CLAY?, LIMONITE, QUARTZ, RED HEMATITE, SERICITE

MINERALIZATION: RED HEMATITE, LIMONITE, GOETHITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1020 UNIQUE: 16271 P295 FILE: DH2951-414 TOP_INT: 55.0 BOT_INT: 60.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1021 UNIQUE: 16272 P295 FILE: DH2951-415 TOP_INT: 28.0 BOT_INT: 33.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, PYRITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1022 UNIQUE: 16273 P295 FILE: DH2951-416 TOP_INT: 37.0 BOT_INT: 56.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED?

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1023 UNIQUE: 16274 P295 FILE: DH2951-417 TOP_INT: 52.0 BOT_INT: 82.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LOCALLY MYLONITIC?

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ
MINERALIZATION: MAGNETITE, GOETHITE, GREY HEMATITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1024 UNIQUE: 16275 P295 FILE: DH2951-418 TOP_INT: 70.0 BOT_INT: 83.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LOCALLY MYLONITIC?

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ
MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM.

DDH: S1025 UNIQUE: 16276 P295 FILE: DH2951-419 TOP_INT: 79.0 BOT_INT: 84.0

LITHOLOGY:
CHERT, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: HEMATITE, QUARTZ
MINERALIZATION: GREY AND RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1026 UNIQUE: 16277 P295 FILE: DH2951-420 TOP_INT: 60.0 BOT_INT: 70.0

LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1027 UNIQUE: 16278 P295 FILE: DH2951-421 TOP_INT: 25.0 BOT_INT: 35.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ
MINERALIZATION: GOETHITE, MAGNETITE, LIMONITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1027 UNIQUE: 16278 P295 FILE: DH2951-421 TOP_INT: 85.0 BOT_INT: 95.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, LIMONITE, MAGNETITE, QUARTZ
MINERALIZATION: GOETHITE, MAGNETITE, LIMONITE, GREY HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1028 UNIQUE: 16279 P295 FILE: DH2951-422 TOP_INT: 30.0 BOT_INT: 70.0

LITHOLOGY:
ARGILLITIC CHERT, GOETHITE, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, MAGNETITE, QUARTZ
MINERALIZATION: GOETHITE, LIMONITE, GREY HEMATITE, RED HEMATITE, MAGNETITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1028 UNIQUE: 16279 P295 FILE: DH2951-422 TOP_INT: 70.0 BOT_INT: 75.0

LITHOLOGY:
PHYLLITIC SILTSTONE

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: LEACHING, HEMATITE, CLAY, SERICITE
MINERALIZATION: GREY AND RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING?, STRATIFORM

DDH: S1030 UNIQUE: 16280 P295 FILE: DH2951-423 TOP_INT: 17.0 BOT_INT: 22.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: S1030 UNIQUE: 16280 P295 FILE: DH2951-423 TOP_INT: 50.0 BOT_INT: 60.0

LITHOLOGY:

ARGILLITIC CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, CLAY, HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE, MANGANESE OXIDES?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1030 UNIQUE: 16280 P295 FILE: DH2951-423 TOP_INT: 63.0 BOT_INT: 65.5

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, HEMATITE, MAGNETITE, Mn OXIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, CLAY, HEMATITE, MAGNETITE, QUARTZ, Mn OXIDES

MINERALIZATION: RED HEMATITE, MANGANESE OXIDES, LIMONITE, MAGNETITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1030 UNIQUE: 16280 P295 FILE: DH2951-423 TOP_INT: 65.5 BOT_INT: 70.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1030 UNIQUE: 16280 P295 FILE: DH2951-423 TOP_INT: 94.0 BOT_INT: 106.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, HEMATITE, MAGNETITE, Mn OXIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, CLAY, HEMATITE, MAGNETITE, QUARTZ, Mn OXIDES

MINERALIZATION: GOETHITE, MAGNETITE, RED HEMATITE, GREY HEMATITE, MANGANESE OXIDES

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1031 UNIQUE: 16281 P295 FILE: DH2951-424 TOP_INT: 100.0 BOT_INT: 105.0

LITHOLOGY:

CHERT, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: GREY HEMATITE, GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1032 UNIQUE: 16282 P295 FILE: DH2951-425 TOP_INT: 30.0 BOT_INT: 40.0

LITHOLOGY:

CARBONATE(?), CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?, PHYLLITIC?, SLICKENSIDES

ALTERATION: CHLORITE, CLAY, LIMONITE, MAGNETITE

MINERALIZATION: MAGNETITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: S1032 UNIQUE: 16282 P295 FILE: DH2951-425 TOP_INT: 45.0 BOT_INT: 65.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?, PHYLLITIC?, SLICKENSIDES

ALTERATION: CHLORITE, CLAY, GOETHITE, LIMONITE, MAGNETITE, RED HEMATITE

MINERALIZATION: MAGNETITE, LIMONITE, RED HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: S213 UNIQUE: 10400 P295 FILE: DH2951-426 TOP_INT: 119.0 BOT_INT: 125.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: RED HEMATITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: E1001 UNIQUE: 16114 P295 FILE: DH2951-427 TOP_INT: 3.0 BOT_INT: 80.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: E1002 UNIQUE: 16115 P295 FILE: DH2951-428 TOP_INT: 62.0 BOT_INT: 95.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

PHYLLITIC, BRITTLE DEFORMATION FEATURES?

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM

DDH: E1002 UNIQUE: 16115 P295 FILE: DH2951-428 TOP_INT: 95.0 BOT_INT: 200.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GREY HEMATITE, RED HEMATITE, GOETHITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM, CROSS-CUTTING

DDH: E1003 UNIQUE: 16116 P295 FILE: DH2951-429 TOP_INT: 6.0 BOT_INT: 125.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: E1003 UNIQUE: 16116 P295 FILE: DH2951-429 TOP_INT: 125.0 BOT_INT: 180.0

LITHOLOGY:

CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GREY AND RED HEMATITE, MAGNETITE

MINERALIZATION: GREY HEMATITE, RED HEMATITE, MAGNETITE, LIMONITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: E1000 UNIQUE: 16113 P295 FILE: DH2951-430 TOP_INT: 62.0 BOT_INT: 160.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, SLICKENSIDES

ALTERATION: CARBONATE, CLAY, GOETHITE, GREY AND RED HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, MAGNETITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: E1004 UNIQUE: 16117 P295 FILE: DH2951-431 TOP_INT: 90.0 BOT_INT: 140.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: S256 UNIQUE: 16585 P295 FILE: DH2951-432 TOP_INT: 54.0 BOT_INT: 65.0

LITHOLOGY:

RED HEMATITIC ARGILLITE; AND CARBONATE(?), RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

PHYLLITIC?, SCHISTOSE?, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CHLORITE, GOETHITE, GREY & RED HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S256 UNIQUE: 16585 P295 FILE: DH2951-432 TOP_INT: 75.0 BOT_INT: 135.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES ?, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: CARBONATE, CHLORITE, GOETHITE, GREY & RED HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S256 UNIQUE: 16585 P295 FILE: DH2951-432 TOP_INT: 144.0 BOT_INT: 163.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE, GREY AND RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES ?, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: CARBONATE, CHLORITE, GOETHITE, GREY & RED HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE, LIMONITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S257 UNIQUE: 16586 P295 FILE: DH2951-433 TOP_INT: 138.0 BOT_INT: 165.0

LITHOLOGY:

GOETHITE SILICATE(?) IRON FORMATION AND FINE SANDSTONE

LITH DESCRIPTION:

PHYLLITIC, SCHISTOSE, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, CHLORITE, MAGNETITE, QUARTZ, SERICITE

MINERALIZATION: MAGNETITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S258 UNIQUE: 16587 P295 FILE: DH2951-434 TOP_INT: 160.0 BOT_INT: 180.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, RECRYSTALLIZED/HORNFELSE

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S260 UNIQUE: 16588 P295 FILE: DH2951-435 TOP_INT: 105.0 BOT_INT: 110.0

LITHOLOGY:

ACTINOLITE, BIOTITE, CARBONATE, CHLORITE, GARNET, PLAGIOCLASE, SERICITE SCHIST AND HORNBLENDE, PLAGIOCLASE, QUARTZ SEGREGATIONS

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC?

ALTERATION: GOETHITE, LIMONITE, QUARTZ, SERICITE, SULFIDE

MINERALIZATION: RED HEMATITE, GOETHITE, PYRITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: S260 UNIQUE: 16588 P295 FILE: DH2951-435 TOP_INT: 110.0 BOT_INT: 156.5

LITHOLOGY:

SILICIFIED GREYWACKE OR ARENITE W/OXIDE GRAINS

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

DDH: S261 UNIQUE: 16589 P295 FILE: DH2951-436 TOP_INT: 159.0 BOT_INT: 164.0

LITHOLOGY:

CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSE

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM?

DDH: S261 UNIQUE: 16589 P295 FILE: DH2951-436 TOP_INT: 205.0 BOT_INT: 210.0

LITHOLOGY:

SILICIFIED GREYWACKE OR ARENITE W/OXIDE GRAINS

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: CARBONATE, GOETHITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S263 UNIQUE: 16590 P295 FILE: DH2951-437 TOP_INT: 182.0 BOT_INT: 208.0

LITHOLOGY:

SILICIFIED GREYWACKE OR ARENITE W/OXIDE GRAINS

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED, LOCAL BRECCIA ?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S266 UNIQUE: 16591 P295 FILE: DH2951-438 TOP_INT: 135.0 BOT_INT: 160.0

LITHOLOGY:

TUFFACEOUS BIOTITE, CARBONATE, GOETHITE, PLAGIOCLASE, QUARTZ SCHIST

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CLAY, GOETHITE

MINERALIZATION: GOETHITE, RED HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, PERVASIVE

DDH: S327 UNIQUE: 16634 P295 FILE: DH2951-439 TOP_INT: 106.0 BOT_INT: 130.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION WITH MINOR CHERT, SULFIDES

LITH DESCRIPTION:

DISSEMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, CHLORITE, CLAY, EPIDOTE, HEMATITE, MAGNETITE, PYRITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, PYRITE, CHALCOPYRITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE?, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S328 UNIQUE: 16635 P295 FILE: DH2951-440 TOP_INT: 107.0 BOT_INT: 128.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA, RECRYSTALLIZED/HORNFELSED?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, MAGNETITE, QUARTZ, RED HEMATITE, WITH VUGS
MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, MAGNETITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S328 UNIQUE: 16635 P295 FILE: DH2951-440 TOP_INT: 142.0 BOT_INT: 164.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LAMINATED, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, MAGNETITE, QUARTZ, RED HEMATITE, WITH VUGS
MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, MAGNETITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S331 UNIQUE: 16641 P295 FILE: DH2951-441 TOP_INT: 165.0 BOT_INT: 170.0

LITHOLOGY:
CHERT, GOETHITE, LIMONITE, RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE, GREY HEMATITE?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S332 UNIQUE: 16643 P295 FILE: DH2951-442 TOP_INT: 126.0 BOT_INT: 165.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ
MINERALIZATION: GOETHITE, LIMONITE, GREY HEMATITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: S333 UNIQUE: 16645 P295 FILE: DH2951-443 TOP_INT: 116.0 BOT_INT: 144.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, RED HEMATITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, CHLORITE, CLAY, GOETHITE, GREY & RED HEMATITE, LIMONITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, RED HEMATITE, GREY HEMATITE, LIMONITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S334 UNIQUE: 16647 P295 FILE: DH2951-444 TOP_INT: 246.0 BOT_INT: 251.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: S334 UNIQUE: 16647 P295 FILE: DH2951-444 TOP_INT: 287.0 BOT_INT: 290.0

LITHOLOGY:

CARBONATE(?), CHERT, GOETHITE, GREY HEMATITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, SLICKENSIDES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: E1006 UNIQUE: 15648 P295 FILE: DH2951-445 TOP_INT: 2.0 BOT_INT: 200.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: E1005 UNIQUE: 15644 P295 FILE: DH2951-446 TOP_INT: 3.0 BOT_INT: 150.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE?, CROSS-CUTTING?, STRATIFORM?

DDH: S313 UNIQUE: 16621 P295 FILE: DH2951-447 TOP_INT: 178.0 BOT_INT: 180.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S315 UNIQUE: 16622 P295 FILE: DH2951-448 TOP_INT: 115.0 BOT_INT: 120.0

LITHOLOGY:

GOETHITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES ?, LOCAL BRECCIA ?

ALTERATION: GOETHITE

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

MASSIVE

DDH: S315 UNIQUE: 16622 P295 FILE: DH2951-448 TOP_INT: 120.0 BOT_INT: 165.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE?, CLAY, MAGNETITE, MELANITERITE (SURFACE OXIDATION), PYRITE

MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S316 UNIQUE: 16623 P295 FILE: DH2951-449 TOP_INT: 129.0 BOT_INT: 173.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED?

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S317 UNIQUE: 16624 P295 FILE: DH2951-450 TOP_INT: 105.0 BOT_INT: 125.0

LITHOLOGY:

GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, MAGNETITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, MASSIVE, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S317 UNIQUE: 16624 P295 FILE: DH2951-450 TOP_INT: 135.0 BOT_INT: 150.0

LITHOLOGY:

CARBONATE, CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CHLORITE, CLAY, EPIDOTE?, GOETHITE, GREY AND RED HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE, GOETHITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S318 UNIQUE: 16625 P295 FILE: DH2951-451 TOP_INT: 117.0 BOT_INT: 137.0

LITHOLOGY:

CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S318 UNIQUE: 16625 P295 FILE: DH2951-451 TOP_INT: 137.0 BOT_INT: 157.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, LIMONITE

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S318 UNIQUE: 16625 P295 FILE: DH2951-451 TOP_INT: 161.0 BOT_INT: 166.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, CHLORITE, GOETHITE(?), GREY HEMATITE, EPIDOTE, PYRITE, QUARTZ

MINERALIZATION: MAGNETITE, PYRITE, GREY HEMATITE, GOETHITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: S368 UNIQUE: 16702 P295 FILE: DH2951-452 TOP_INT: 93.0 BOT_INT: 115.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED?, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S368 UNIQUE: 16702 P295 FILE: DH2951-452 TOP_INT: 115.0 BOT_INT: 120.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:

PHYLLITIC?, LAMINATED?, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CLAY, GOETHITE, HEMATITE

MINERALIZATION: RED HEMATITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DH: S368 UNIQUE: 16702 P295 FILE: DH2951-452 TOP_INT: 120.0 BOT_INT: 125.0

LITHOLOGY:

CHERT (OR SILICEOUS TUFF? OR CLASTIC ROCK?)

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, HEMATITE, PYRITE(?), SERICITE

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, VEIN, CROSS-CUTTING, STRATIFORM?

DDH: S368 UNIQUE: 16702 P295 FILE: DH2951-452 TOP_INT: 149.0 BOT_INT: 170.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, DUCTILE DEFORMATION FEATURES ?, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERSVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S369 UNIQUE: 16703 P295 FILE: DH2951-453 TOP_INT: 155.0 BOT_INT: 167.0

LITHOLOGY:

CHERT, GOETHITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERSVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S369 UNIQUE: 16703 P295 FILE: DH2951-453 TOP_INT: 167.0 BOT_INT: 185.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERSVASIVE, CROSS-CUTTING, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: S370 UNIQUE: 16706 P295 FILE: DH2951-454 TOP_INT: 134.0 BOT_INT: 140.0

LITHOLOGY:
GOETHITE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES ?, LOCAL BRECCIA ?

ALTERATION: CARBONATE, GOETHITE, QUARTZ
MINERALIZATION: GOETHITE, LIMONITE
MINERALIZATION TYPE:
MASSIVE, VEIN?, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S370 UNIQUE: 16706 P295 FILE: DH2951-454 TOP_INT: 155.0 BOT_INT: 183.0

LITHOLOGY:
CARBONATE, GOETHITE, GRAPHITE, GREY HEMATITE, Mn OXIDE, SILICATE IRON FORMATION

LITH DESCRIPTION:
BEDDED, LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, Mn OXIDES, QUARTZ
MINERALIZATION: GREY HEMATITE, MANGANESE OXIDES, GOETHITE, LIMONITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S370 UNIQUE: 16706 P295 FILE: DH2951-454 TOP_INT: 145.0 BOT_INT: 150.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, PHYLLITIC?

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S371 UNIQUE: 16707 P295 FILE: DH2951-455 TOP_INT: 89.0 BOT_INT: 160.0

LITHOLOGY:
CHERT, GOETHITE, GREY AND RED HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, QUARTZ
MINERALIZATION: MAGNETITE, GOETHITE, GREY HEMATITE, RED HEMATITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S372 UNIQUE: 16708 P295 FILE: DH2951-456 TOP_INT: 145.0 BOT_INT: 190.0

LITHOLOGY:

ARGILLITIC CHERT, GOETHITE, HEMATITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BEDDED, LOCAL BRECCIA, BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S374 UNIQUE: 16709 P295 FILE: DH2951-457 TOP_INT: 129.0 BOT_INT: 140.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, LIMONITE, QUARTZ, RED HEMATITE

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1000 UNIQUE: 16343 P295 FILE: DH2951-458 TOP_INT: 33.0 BOT_INT: 45.0

LITHOLOGY:

CARBONATE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC?

ALTERATION: CARBONATE, GOETHITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

DDH: S1001 UNIQUE: 16344 P295 FILE: DH2951-459 TOP_INT: 17.0 BOT_INT: 70.0

LITHOLOGY:

CHERT, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1002 UNIQUE: 16346 P295 FILE: DH2951-460 TOP_INT: 2.0 BOT_INT: 81.0

LITHOLOGY:

CHERT, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1003 UNIQUE: 16348 P295 FILE: DH2951-461 TOP_INT: 35.0 BOT_INT: 51.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1003 UNIQUE: 16348 P295 FILE: DH2951-461 TOP_INT: 66.0 BOT_INT: 95.0

LITHOLOGY:

CHERT, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY AND RED HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, RED HEMATITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1004 UNIQUE: 16350 P295 FILE: DH2951-462 TOP_INT: 45.0 BOT_INT: 82.0

LITHOLOGY:

CARBONATE, CHERT, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, PHYLLITIC, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CHLORITE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DH: S1005 UNIQUE: 16351 P295 FILE: DH2951-463 TOP_INT: 40.0 BOT_INT: 45.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1007 UNIQUE: 15653 P295 FILE: DH2951-464 TOP_INT: 71.0 BOT_INT: 80.0

LITHOLOGY:

CHERT, GOETHITE, GREY HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, MAGNETITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, MAGNETITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DH: S1008 UNIQUE: 15656 P295 FILE: DH2951-465 TOP_INT: 40.0 BOT_INT: 57.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, HEMATITE, KAOLINITE(?), QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1008 UNIQUE: 15656 P295 FILE: DH2951-465 TOP_INT: 81.0 BOT_INT: 84.0

LITHOLOGY:

ARGILLITIC HEMATITE IRON FORMATION AND HEMATITIC PHYLLITE

LITH DESCRIPTION:

ARGILLITIC, LOCALLY MYLONITIC?

ALTERATION: SERICITE, RED HEMATITE

MINERALIZATION: RED HEMATITE

MINERALIZATION TYPE:

SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

Appendix 295-F: DRILL LOGS

DDH: S1008 UNIQUE: 15656 P295 FILE: DH2951-465 TOP_INT: 84.0 BOT_INT: 86.0

LITHOLOGY:

CHERT (OR SILICEOUS TUFF? OR CLASTIC ROCK?)

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFELSED

ALTERATION: GREY HEMATITE

MINERALIZATION: GREY HEMATITE, RED HEMATITE?

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, CROSS-CUTTING

DDH: S1009 UNIQUE: 15659 P295 FILE: DH2951-466 TOP_INT: 80.0 BOT_INT: 87.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, LIMONITE, GOETHITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM?

DDH: S1011 UNIQUE: 16357 P295 FILE: DH2951-467 TOP_INT: 11.0 BOT_INT: 60.0

LITHOLOGY:

CHERT, GOETHITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1013 UNIQUE: 15669 P295 FILE: DH2951-468 TOP_INT: 20.0 BOT_INT: 70.0

LITHOLOGY:

CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1014 UNIQUE: 15673 P295 FILE: DH2951-469 TOP_INT: 78.0 BOT_INT: 100.0

LITHOLOGY:
CARBONATE(?), MAGNETITE, SILICATE, SULFIDE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, CHLORITE, MAGNETITE, QUARTZ, MAGNETITE, SULFIDE
MINERALIZATION: MAGNETITE, PYRITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN?, CROSS-CUTTING, STRATIFORM

DDH: S1012 UNIQUE: 16359 P295 FILE: DH2951-470 TOP_INT: 62.0 BOT_INT: 65.0

LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, DUCTILE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: GOETHITE, QUARTZ
MINERALIZATION: GOETHITE, RED HEMATITE?

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1012 UNIQUE: 16359 P295 FILE: DH2951-470 TOP_INT: 79.0 BOT_INT: 84.0

LITHOLOGY:
CHERT, GOETHITE, LIMONITE, SILICATE IRON FORMATION

LITH DESCRIPTION:
PHYLLITIC, LOCALLY MYLONITIC?, LOCAL BRECCIA?

ALTERATION: CLAY, CHLORITE, GOETHITE, HEMATITE, LIMONITE
MINERALIZATION: GOETHITE, RED HEMATITE, LIMONITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, CROSS-CUTTING?, STRATIFORM?

DDH: S1015 UNIQUE: 16361 P295 FILE: DH2951-471 TOP_INT: 50.0 BOT_INT: 61.0

LITHOLOGY:
CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: S1016 UNIQUE: 16363 P295 FILE: DH2951-472 TOP_INT: 3.0 BOT_INT: 38.0

LITHOLOGY:

CHERT, HEMATITE, MAGNETITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CLAY, HEMATITE

MINERALIZATION: MAGNETITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1016 UNIQUE: 16363 P295 FILE: DH2951-472 TOP_INT: 51.0 BOT_INT: 61.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, KAOLINITE(?)

MINERALIZATION: GOETHITE

MINERALIZATION TYPE:

MASSIVE, VEIN?, PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S1017 UNIQUE: 16365 P295 FILE: DH2951-473 TOP_INT: 23.0 BOT_INT: 80.0

LITHOLOGY:

CHERT, GOETHITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, GOETHITE, QUARTZ, PYRITE, RED HEMATITE, WITH VUGS

MINERALIZATION: GOETHITE, RED HEMATITE, PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, SELECTIVELY PERVASIVE, CROSS-CUTTING, STRATIFORM

DDH: S1019 UNIQUE: 16368 P295 FILE: DH2951-474 TOP_INT: 62.0 BOT_INT: 75.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES?

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: S1019 UNIQUE: 16368 P295 FILE: DH2951-474 TOP_INT: 99.0 BOT_INT: 101.0

LITHOLOGY:

CHERT, GOETHITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES?

ALTERATION: GOETHITE, HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, LIMONITE, RED HEMATITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: AB-25 UNIQUE: 14499 P295 FILE: DH2951-475 TOP_INT: 418.0 BOT_INT: 427.0

LITHOLOGY:

PHYLLITE

LITH DESCRIPTION:

PHYLLITIC, BRITTLE DEFORMATION FEATURES

ALTERATION: CLAY, LIMONITE

MINERALIZATION: CHALCOPYRITE

MINERALIZATION TYPE:

DISSEMINATED, CROSS-CUTTING?, STRATIFORM?

DDH: AB-8 UNIQUE: 14498 P295 FILE: DH2951-476 TOP_INT: 192.0 BOT_INT: 202.0

LITHOLOGY:

CHLORITE, FELDSPAR(?), QUARTZ, SERICITE PHYLLITIC SCHIST

LITH DESCRIPTION:

SCHISTOSE, SLICKENSIDES, LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LOCAL BRECCIA, LOCALLY MYLONITIC ?

ALTERATION: CHLORITE, PYRITE, QUARTZ, SERICITE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN?, CROSS-CUTTING?, STRATIFORM?

DDH: AB-2 UNIQUE: 14504 P295 FILE: DH2951-477 TOP_INT: 93.0 BOT_INT: 103.0

LITHOLOGY:

GRAPHITE, SULFIDE PHYLLITE

LITH DESCRIPTION:

SCHISTOSE, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, PHYLLITIC, LOCAL BRECCIA, LOCALLY MYLONITIC ?

ALTERATION: QUARTZ, SULFIDE

MINERALIZATION: PYRITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, SELECTIVELY PERSVASIVE?, CROSS-CUTTING, STRATIFORM

DDH: S1036 UNIQUE: 16404 P295 FILE: DH2951-478 TOP_INT: 180.0 BOT_INT: 185.0

LITHOLOGY:
MAGNETITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED?, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?, LOCALLY MYLONITIC?

ALTERATION: CARBONATE, QUARTZ
MINERALIZATION: MAGNETITE, GREY HEMATITE?
MINERALIZATION TYPE:
MASSIVE, VEIN, VEIN SELVAGE?, SELECTIVELY PERVASIVE, CROSS-CUTTING?, STRATIFORM?

DDH: S1037 UNIQUE: 16406 P295 FILE: DH2951-479 TOP_INT: 187.0 BOT_INT: 192.0

LITHOLOGY:
CHERT, GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:
BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?, RECRYSTALLIZED/HORNFELSED ?

ALTERATION: GOETHITE, HEMATITE, QUARTZ
MINERALIZATION: GREY HEMATITE, GOETHITE
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING, STRATIFORM?

DDH: S1037 UNIQUE: 16406 P295 FILE: DH2951-479 TOP_INT: 192.0 BOT_INT: 197.0

LITHOLOGY:
GOETHITE, GREY HEMATITE, LIMONITE IRON FORMATION

LITH DESCRIPTION:
LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES

ALTERATION: GOETHITE, GREY HEMATITE, LIMONITE
MINERALIZATION: LIMONITE, GREY HEMATITE, MANGANESE OXIDES?
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, CROSS-CUTTING, STRATIFORM

DDH: S1037 UNIQUE: 16406 P295 FILE: DH2951-479 TOP_INT: 197.0 BOT_INT: 200.0

LITHOLOGY:
GOETHITE, GREY HEMATITE, Mn OXIDE IRON FORMATION

LITH DESCRIPTION:
BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, MN OXIDES(?)
MINERALIZATION: GOETHITE, GREY HEMATITE, MALACHITE, MANGANESE OXIDES
MINERALIZATION TYPE:
DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE? CROSS-CUTTING, STRATIFORM?

DDH: S1037 UNIQUE: 16406 P295 FILE: DH2951-479 TOP_INT: 212.0 BOT_INT: 225.0

LITHOLOGY:

GOETHITE, GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA ?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

DDH: S1037 UNIQUE: 16406 P295 FILE: DH2951-479 TOP_INT: 243.0 BOT_INT: 245.0

LITHOLOGY:

GOETHITE SILICATE(?) IRON FORMATION AND FINE SANDSTONE

LITH DESCRIPTION:

LAMINATED, BEDDED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: S1038 UNIQUE: 16408 P295 FILE: DH2951-480 TOP_INT: 94.0 BOT_INT: 98.0

LITHOLOGY:

CHERT, GOETHITE, MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, RECRYSTALLIZED/HORNFEISED, LOCAL BRECCIA?

ALTERATION: ACTINOLITE, CHLORITE, GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: S1039 UNIQUE: 16410 P295 FILE: DH2951-481 TOP_INT: 192.0 BOT_INT: 200.0

LITHOLOGY:

CARBONATE(?), MAGNETITE, SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, DUCTILE DEFORMATION FEATURES, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA?

ALTERATION: ACTINOLITE, CHLORITE, GOETHITE, MAGNETITE, QUARTZ

MINERALIZATION: MAGNETITE, GOETHITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

Appendix 295-F: DRILL LOGS

DDH: S1041 UNIQUE: 16417 P295 FILE: DH2951-482 TOP_INT: 136.0 BOT_INT: 141.0

LITHOLOGY:

CARBONATE, GOETHITE, GREY HEMATITE(?), SILICATE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, GOETHITE, GREY HEMATITE, LIMONITE, QUARTZ

MINERALIZATION: GOETHITE, GREY HEMATITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE?, CROSS-CUTTING, STRATIFORM

DDH: S1042 UNIQUE: 16418 P295 FILE: DH2951-483 TOP_INT: 204.0 BOT_INT: 210.0

LITHOLOGY:

CARBONATE(?), SILICATE IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, SLICKENSIDES, LOCALLY MYLONITIC

ALTERATION: ACTINOLITE, CARBONATE, CHLORITE, GOETHITE, LIMONITE, QUARTZ, SULFIDE

MINERALIZATION: GOETHITE, PYRITE, LIMONITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

DDH: S1043 UNIQUE: 16419 P295 FILE: DH2951-484 TOP_INT: 200.0 BOT_INT: 205.0

LITHOLOGY:

GREY HEMATITE IRON FORMATION

LITH DESCRIPTION:

BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA

ALTERATION: CARBONATE, HEMATITE

MINERALIZATION: GREY HEMATITE, RED HEMATITE?

MINERALIZATION TYPE:

MASSIVE, VEIN, VEIN SELVAGE, CROSS-CUTTING ?, STRATIFORM ?

DDH: S1043 UNIQUE: 16419 P295 FILE: DH2951-484 TOP_INT: 226.0 BOT_INT: 231.0

LITHOLOGY:

CHERT, GREY AND RED HEMATITE IRON FORMATION

LITH DESCRIPTION:

BEDDED, LAMINATED, BRITTLE DEFORMATION FEATURES

ALTERATION: CARBONATE, HEMATITE, MN OXIDES

MINERALIZATION: GREY HEMATITE, MANGANESE OXIDES, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM

JH: S1044

UNIQUE: 16109

P295 FILE: DH2951-485

TOP_INT: 151.0 BOT_INT: 200.0

LITHOLOGY:

CARBONATE, CHERT, GREY AND RED HEMATITE, MAGNETITE, SILICATE, IRON FORMATION

LITH DESCRIPTION:

LAMINATED, BRITTLE DEFORMATION FEATURES, LOCAL BRECCIA, DUCTILE DEFORMATION FEATURES, LOCALLY MYLONITIC?

LITERATION: CARBONATE, CHLORITE, GREY AND RED HEMATITE, MAGNETITE?, QUARTZ

MINERALIZATION: MAGNETITE, GREY HEMATITE, RED HEMATITE

MINERALIZATION TYPE:

DISSEMINATED, BLEBBY, VEIN, VEIN SELVAGE, CROSS-CUTTING, STRATIFORM?

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