

Date: 3-13-2011 AZ: 315° DIP: -45°  
 DDH: LNG-011-2011 ME: 572301 MN: 5268272 Logged by: CRW

CARDERO IRON ORE

Site P8

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 Total feet: 1053

Interval		Depth		Lithology	Texture		Silicate Mineralogy					Comments	Total Sulfides	Total Oxide	Alteration		
Maj	Sub	From	To		Bulk	Type	Plag	Cpx	Ol	Bt	Other				Type	Int	Style
X		0	37	OVB	—	—	—	—	—	—	—	OVERBURDEN - GLACIAL TILL - COMPOSED OF BOULDERS, COBBLES + PEBBLES, CONSISTING OF TROCTOLITE, MELATROCTOLITE, + GRANITIC ROCKS - - MOSTLY MISSING	—	—	—	—	—
X		37	237	AT	HOM	IG	72	3	24	tr	—	HOMOGENEOUS; CS-GR; ANORTHOCLASTIC TROCTOLITE, NON-MAGNETIC; CONTAINS LOCALIZED ZONES OF OXIDE FELDSPATHIC PERIDOTITE + OXIDE MELA- TROCTOLITE AS DESCRIBED BELOW (SUB-INTERVALS) ↓ CONTACT GRADATIONAL - HETEROGENEOUS OVER ~14 FEET	—	1% MAG	IDG SERP	WK WK	PERV PERV
X		63	71	OXFPR	HET	IG	20	10	55	tr	—	HETEROGENEOUS; CS-GR to PERMUTITIC OXIDE FELDSPATHIC (WK-MAG) PERIDOTITE; WITH ST PERVASIVE IDINGSITE ALT'N + ST LOCAL SAUS ALT'N ↑ + ↓ CONTACTS SHARP IRREGULAR	—	15% ILM + MAG	IDG SAUS	ST ST	PERV LOCAL
X		99	112	OXMT	HET	IG	40	10	46	tr	—	HETEROGENEOUS; PERMUTITIC to CS-GR; OXIDE MELATROCTOLITE; WK-MAGNETIC ↑ CONTACT GRADATION OVER 1 foot, ↓ CONTACT SHARP ~75° to CORE AXIS.	—	~100% MAG ILM	IDG SERP SAUS	ST ST MOD	PERV PERV PERV



Date: 3-14-2011  
 DDH: LN6-011-2011

CARDERO IRON ORE  
 Logged by: CRW

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 Total feet: 1053'

Interval		Depth		Lithology	Texture		Silicate Mineralogy					Comments	Total Sulfides	Total Oxide	Alteration		
Maj	Sub	From	To		Bulk	Type	Plag	Cpx	Ol	Bt	Other				Type	Int	Style
X		237	337	OXMT	WK HET	IG	40	3	47	TR	—	WEAKLY HETEROGENEOUS; CS-GR; OXIDE VENEER (fracture), MODERATELY MAGNETIC; PERVASIVE, VERY-ST, SERPENTINE ALTERATION, LOCAL RANDOMLY ORIENTED SERPENTINE VEINING, GIVES ROCK A BRECCIATED APPEARANCE (SERPENTINE HAS A LARGER VOLUME THAN OLIVINE, SO THE SERPENTINIZATION PROCESS DOES INHERENTLY FRACTURE THE ROCK - MEANING THAT THIS IS ESSENTIALLY AN "IN SITU" BRECCIA) ↓ contact GRADATIONAL over ~14 feet	TRACE CP	5-15% WAG+ILM	SERP V. ST IND ST	PERV ST LOCAL & PATCHY PERVASIVE	
X		337	400	SOX	WK HET	IG	4	2	49	TR	—	WEAKLY HETEROGENEOUS; CS-GR; SEMI-MASSIVE OXIDE w/ LOCAL MASSIVE OXIDE; ST- MAGNETIC; ↓ contact ABRUPT over ~6 INCHES	TRACE CP+PO	~45% ILM+MAG	SERP ST IND ST	PERVASIVE ST PERVASIVE	
X		400	419.5	OXPR	HOM	IG	15	3	57	—	—	HOMOGENEOUS; CS-GR to PEGMATITE; OXIDE PERIDOTITE & OXIDE FELDSPATHIC PERIDOTITE; MOD-MAGNETIC  ↓ contact GRADATIONAL over 4-5 feet	TRACE CP+PO	20-30% ILM+MAG	SERP ST IND ST	PERVASIVE ST PATCHY	











Date: 3-17-2011  
 DDH: LNS-011-2011

CARDERO IRON ORE  
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 Total feet: 1053'

Interval		Depth		Lithology	Texture		Silicate Mineralogy					Comments	Total Sulfides	Total Oxide	Alteration		
Maj	Sub	From	To		Bulk	Type	Plag	Cpx	Ol	Bt	Other				Type	Int	Style
X		997	1021	MOX	HET	IG	1	32	2			HETEROGENEOUS; CS-SR; MASSIVE 'OXIDE' VERY ST. MAGNETIC CONSISTS OF RANDOMLY ALTERNATING PATCHES OF MASSIVE OXIDE (>95% OXIDE) + OXIDE PYROXENE (~40% OXIDE)  ↓ contact ABRUPT	—	65%	IDS	st	PERV
															SAUS	st	PERV
X		1021	1031	OXRX	HET	IG	1	56	30	12		HOMOGENEOUS; PERMITTIC to CS-SR; OXIDE PYROXENE → SOMEWHAT BANDED APPEARANCE CONSISTING OF PASSED BANDS OF SERPENTINIZED OLIVE ALTERNATING w/ CPX (~1-2cm THICK) OLIVINE INCREASE DOWN SECTION  ↓ contact SHARP @ ~75° to core AXIS	—	10-15% MAG + ILM	SERP	st	PERV
															IDS	st	LOCAL
X		1031	1053	MT	HET	IG	49	3	47	12		HOMOGENEOUS; MED-SR, MFLA TROCTOLITE; WK-MAGNETIC DENSE SERPENTINIZATION SERPENTINE VEINING GIVES A FOLIATED APPEARANCE ~ 50° TO CORE AXIS (SAME AS AT 996'-997')  EOH @ 1053'	—	1-20% MAG + ILM	SERP	st	PERVASIVE
															SAUS	st	PERV