

Report on Drilling of Two Holes On the Waldman Property (Claims 1247791 & 1212231) Gillies Limit North Township, Ontario

Assessment Report for Cabo Mining Enterprises Corp

S. Sears May, 2005

2.30054

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INTRODUCTION

Two drill holes totalling 322 metres were completed on claims 1247791 and 1212231 as part of a larger drill program being carried out in the area. The holes were drilled to test for Cobalt Type Ag-Co-BM mineralization hosted by calcite-quartz veins. The holes were located near an old shaft (the Wallingford Shaft) located approximately 500 metres south of the past producing Waldman #1 Shaft. The drilling was contracted out to Norex Drilling of Timmins, Ontario. Logging and drill supervision was completed by personnel of Cabo Mining Enterprises Corp under the supervision of Seymour Sears, P.Geo. (Sears, Barry & Associates Ltd.). The drilling was completed between May 9th and 13th, 2005 with logging completed by May 31st, 2005. The Waldman area is located approximately two (2) km south of the town of Cobalt (Figures 1 & 2).

PROPERTY DESCRIPTION & ACCESS

Hole COB-18 was collared on Claim # 1247791 and passed into Claim # 1212231 at approximately 56 metres. Hole COB-19 was completely within Claim # 1247791. These claims are located in the extreme north part of Gillies Limit North Township, Larder Lake Mining Division (Fig 2).

Access is via the Coleman Road that departs eastwards from Highway 11A at the south western end of the town of Cobalt for 1.5 km and for 1.4 km south along the Houndchutes Road (a Hydro Dam access road) to an old railbed that once was a street car line that serviced mines in the local area. COB-18 is located near the railbed approximately 250 metres west of the Houndchutes Road.

GEOGRAPHY

Maximum relief in the area is approximately 20 metres. Topography is generally rolling with local steep ledges and cliffs and occasional swamp. The eastern side of the property drains into Giroux Lake while the western side drains westwards into a small creek, both of which drain into Giroux Creek. This creek flows southward and westward through the Waldman Grid area and into the Montreal River.

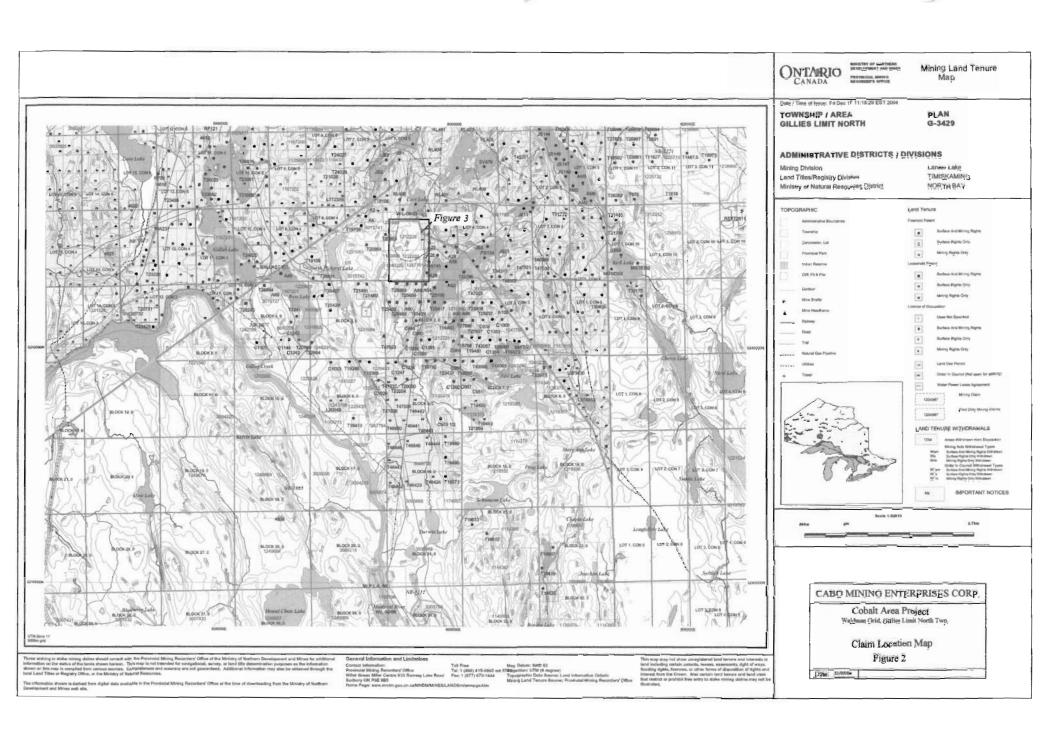
Overburden is relatively shallow over much of the area except for local swamps. Vegetation consists mainly of mature mixed forest with abundant dense underbrush.

EXPLORATION HISTORY

The northern part of the grid area was first explored in 1909 by Waldman Silver Mines Ltd. who sunk a shaft (85') and commenced production in 1910. Additional production was attained in 1918, 1919 and 1930. This deposit is reported to have produced 33,525 oz of silver and 2066



Figure 1: Regional Location Map of Ontario



pounds of Cobalt (Sergiades, 1968). Two other shafts (110' & 105') and a total of 4000 feet of underground drifting and x-cutting was completed on this prospect, including work in 1948 and 1955. In 1944 and 1949, Waldag Mining Co. Ltd. are reported to have completed 33 drill holes (in excess of 10,000 feet) although not all logs are available. No assay results were reported. In 1978, Teck Corp completed a ground Mag and VLF-EM survey over part of the claims.

In the southern part of the Waldman Grid grid area, one shaft was completed on an old prospect. This is referred to as the "Wallingford" (70 ft & a X-cut at 70 ft) and completed from 1909-1913. In 1963, Canadian Asteria Minerals Ltd. completed 11 drill holes totalling 2214 feet in the southern part of the grid area.

Cabo Mining Corp. (the predecessor of Cabo Mining Enterprises Corp.) completed two drill holes for 237.2 metres, beneath the Waldman shaft in 1999 (Sears, 2000). During 2004, a grid was established over the Waldman area and geological mapping (Douville & Sears, 2004), a ground magnetometer survey (Clearview Geophysics Inc., 2004), prospecting and a small stripping program stripping program completed (Sears, 2004). In late 2004, 3 drill holes were completed to test a new vein system located 100 metres south of the Waldman #1 Shaft (Sears, January, 2005).

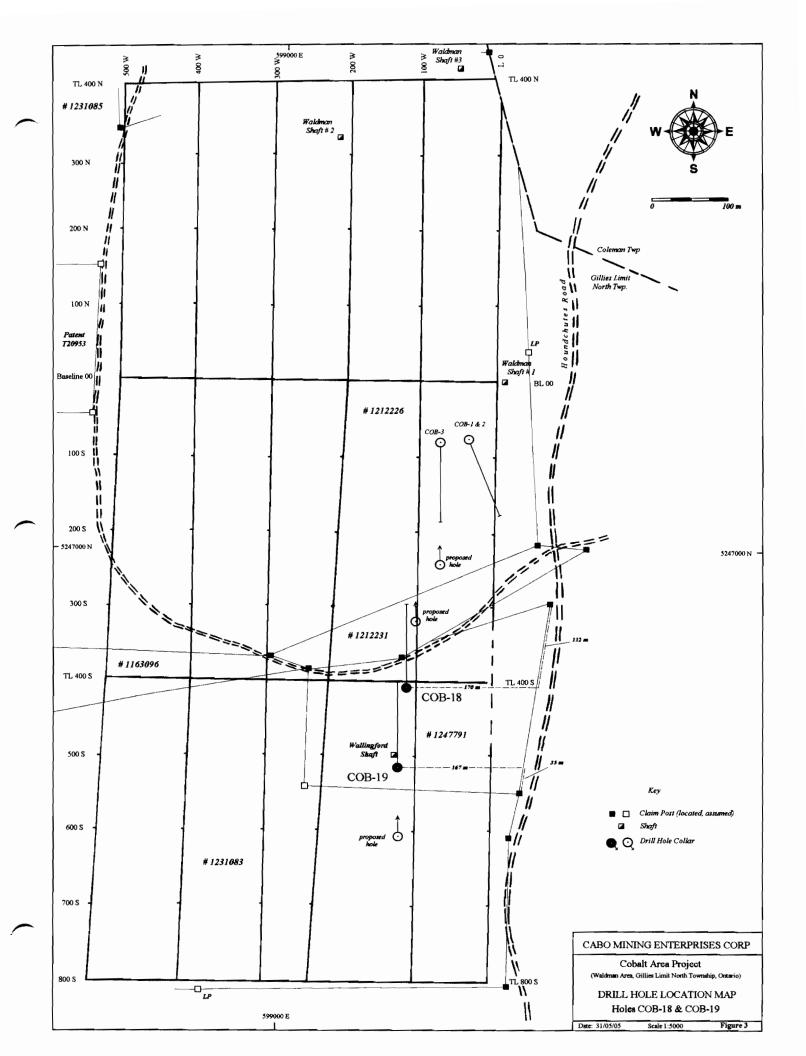
REGIONAL AND PROPERTY GEOLOGY

The area is located in the southern part of the main Cobalt mining camp. In the immediate area of the drill holes is located the contact between an inlier of Archean Mafic volcanic rocks, and Huronian aged Coleman Group conglomerate (Gowganda Formation). Previous geological mapping (Thompson, 1963) indicates that a Nipissing diabase sill is exposed approximately 200 metres to the east of the holes. This sill may have once overlain the local area, a geological setting that is similar to that in the immediate Cobalt Lake area two kilometres to the north.

The holes lie approximately 400 to 500 metres south of the Waldman #1 shaft. The mineralization at the Waldman Mine was hosted by calcite and quartz breccia veins hosted by the Archean volcanic rocks.

WORK PROGRAM AND RESULTS

The hole locations are shown on Figure 3 and logs and X-sections included as Appendix I. Hole COB-18 was drilled from a collar location of 428 S and 18 W on the Waldman Grid at -45 degrees. The hole was oriented at a bearing of 0 degrees and was designed to test for east-west veining thought to be associated with a deep pit or raise in this area. Hole COB-19 was collared approximately 20 metres south of the Wallingford Shaft and oriented at a bearing of 0 degrees at an angle of -45 degrees. Numerous very narrow fractures were encountered throughout both of the holes. Hole COB-19 appears to have intersected the Wallingford vein structure between 18 and 22 metres. This zone includes carbonate veins and sulphides including chalcopyrite, sphalerite, pyrite and grey minerals assumed to be arsenides. No sampling has been completed at the time of this report.



CONCLUSIONS AND RECOMMENDATIONS

The two drill holes that are included in this report encountered numerous narrow, sulphide bearing calcite veinlets and veins. These include a 2 metre wide zone of calcite veining from 18 to 22 metres in Hole COB-19 that appears to be the vein system explored by the Wallingford Shaft. Extensive sampling and assaying is required to determine the significance of the veining. This work was in progress at the time of this report. Four additional holes are planned for this area. Additional work will be dependent upon the results from the additional holes and the assay results. A comprehensive report on this area, along with recommendations for further exploration, will be prepared and filed once all of the data is received.

Respectfully submitted,

Seymour Sears, P.Geo.

May 31, 2005

REFERENCES

Clearview Geophysics Inc.

2004: Report on Magnetics Surveys at the Waldman prospect, Cobalt Area, NE Ontario Assessment Report for Cabo Mining Enterprises Corp.

Douville, D., and Sears, S. M.

2004: Report on Geological Mapping in Gillies Limit North Area (Waldman Grid Area), for Cabo Mining Enterprises Corp.

Ontario Geological Survey

2000: Airborne magnetic and electromagnetic surveys, Temagami area; Ontario Geological Survey, Map 82 066, scale 1:20 000.

Sears, S.M.

2000: Report on a 1999 Drill Program in the Cobalt Area, for Cabo Mining Corp. (Includes 2 holes under the Waldman Prospect and 2 in the Cummings Pits area).

2000: Geological Mapping of a stripped area on the Waldman Property in Gillies Limit North Area; Assessment Report for Cabo Mining Enterprises Corp.

2005: Report on Drilling of Three Holes on the Waldman Property (Claim 1212226), Gillies Limit North Township, Ontario; Assessment Report for Cabo Mining Enterprises Corp.

Sergiades, A.O.

1968: Silver Cobalt Calcite Vein Deposits of Ontario; Ontario Department of Mines, Mineral Resources Circular No. 10.

Thompson, R.

1961: Preliminary Report on parts of Coleman Township, Concession IV, Lots 1 to 5 and Gillies Limit, the Eastern "A" Claims, District of Timiskaming; Ontario Department of Mines, P.R. 1961-6.

1963: Cobalt Silver Area, Southwestern Sheet; Ontario Department of Mines Map 2051, Scale 1:12,000.

Assessment Files of the Ontario Geological Survey, Larder Lake Office.

APPENDIX I

(Drill Hole Logs)

Property Name:

COBALT AREA PROJECT

Hole #:

COB-18

Grid Bearing:

00 Easting -118

2.00

29.79

Northing:

-428

Elevation:

315 m

Claim #:

GRID NAME: Waldman

1247791 / 1212231

BEARING: 00

INCLINATION: -45 degrees

TOTAL DEPTH: 158 m

CORE STORED AT: R.Nobes

LOGGED BY:

H. Pintson

DRILLED BY: Norex Drilling SURVEY TYPE: Acid Test

START:

FINISH:

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From 0.00

2.00

To Lithological Description

Sample # From To Width

PILLOWED MAFIC VOLCANICS:

Overburden; casing left in ground.

Massive, heterogeneous; pale to medium green/gray; aphanitic to very fine-grained, locally finegrained; abundant pillow selvages - very fine-grained, pale gray and/or pale yellow-green (silicifiedepidotized), chloritized, minor to abundant carbonatization, usually with minor PO, locally abundant PO, local CPY/SPH; local 1-7 cm-sized very fine-grained quartz-epidote/calcite aggregates/irregular masses; minor to moderate insitu breccia/fracturing - matrix composed of very fine-grained pale gray/green (quartz-epidote) hairline fractures-stringers, local veinlets-veins-irregular aggregates, minor to moderate PO; local 10-15 cm long zones of abundant insitu breccia; 0-3 serpentine/chlorite, with or without thin calcite cores-platy PY or PO, coated joints/fractures per metre at 10-25 degrees and 35-60 degrees to C/A; limonite staining of joints/fractures until 6.0; rare cross cutting calcite gash veins at 25-45 degrees to C/A.

- 2.0 7.0: Insitu pillow breccia; highly fractured pillow selvages with essentially chloritic matrix; most of rock is medium gray; fragments have a bleached appearance; minor calcite-SPH-PY-PO, trace CPY
- 5.9 6.2: Discontinuous veinlets-irregular aggregates of calcite; minor to moderate PO, trace CPY; mostly at 40-45 degrees to C/A.
- 6.65 7.1: Several en echelon calcite gash veinlets/stringers at 20-50 degrees to C/A; barren.
- 7.03 7.08: Irregular calcite-rich aggregate; moderate pale red-brown quartz/feldspar-PO-CPY; surrounding interpillow material with minor aggregates of calcite-PO-SPH-trace GN(?).
- 8.17 10.45: Pillow selvages/interpillow material and irregular aggregates; epidote and/or quartz-rich, minor to moderate calcite-PO, trace-minor CPY-SPH, trace GN

HOLE #:		COB-18				
From	To	Lithological Description	Sample #	From	То	Width
-	-	11.05 - 11.8: Interpillow material-pillow selvages; abundant epidote-quartz, minor calcite; trace-moderate PO-CPY; locally SPH(?) intermixed with epidote-quartz (aggregates have reddish tint).	-	-		-
		12.22 - 12.44: Interpillow material-pillow selvages; abundant epidote-quartz, minor-moderate calcite-pink feldspar; minor PO, trace CPY.				
		12.41: Calcite stringer with moderate semi-massive PO, minor CPY, trace GN; at 62 degrees to C/A; a few mm of displacement along fracture.				
		12.77 - 13.58: Several irregular epidote-quartz-variable calcite aggregates; most have a reddish tint probably caused by very fine intermixed SPH(?), minor-moderate PO, trace-minor CPY.				
		13.9 - 15.0: Several pillow selvages and abundant interpillow material; trace-moderate calcite-PO-CPY.				
		14.71: Quartz-epidote-calcite-minor PO stringer at 66 degrees to C/A; a few mm of displacement along fracture.				
		16.18: Pinch and swell calcite stringer-veinlet at 26 degrees to C/A; minor PO, trace CPY; a few <1 cm-sized calcite-minor SPH-PO aggregates in wall rock.				
		16.45 - 16.65: Badly broken core; a few fragments of pale gray, fine-grained, probable calcite vein material; barren; vein probably at least 1 cm in width.				
		16.72 - 17.25: Scattered irregular <1.5 cm-sized calcite aggregates; minor-moderate PO, trace-minor CPY; a few calcite gash veinlets at ~35 degrees to C/A.				
		18.85 - 19.1: Irregular up to 5 cm-sized epidote-quartz aggregates, essentially barren (minor PO); locally calcite-rich with moderate PO, trace CPY; a few calcite gash veinlets at 28 degrees to C/A, may contain minor quartz-PO, trace CPY				
		19.61 - 29.79: Numerous pillow selvages; silicified-epidotized-carbonatized; almost one at least every 20 cm, may have 3-4 over 15 cm; most contain minor to abundant PO, occasional CPY.				
		19.73 - 20.3: Probable flow-top pillow breccia; very abundant silicification, lesser epidotization-carbonatization-chloritization; minor to abundant PO (including one 1x2 cm-sized aggregate), minor to moderate CPY; one 10 cm-sized pillow and cm-sized mafic volcanic rock fragments "float" in above alteration material, pillow selvages are silicified-epidotized-feldspathized (orange coloured); gradational upper contact over ~1 cm at ~65 degrees to C/A; gradational lower contact over ~10 cm into "normal" pillowed mafic volcanics.				

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HOLE #: COB-18 From То Lithological Description Sample # From To Width 20.73 - 20.93: Irregular up to 1 cm wide very fine-grained guartz-epidote vein varying from 5-35 degrees to C/A; minor to moderate PO, minor CPY; vein is cross cut/partially cored by a pinch and swell (up to 4 mm wide) coarse calcite veinlet at 16 degrees to C/A; minor to abundant PO-CPY. 26.0 - 29.79: Relatively more brecciated pillowed mafic volcanics; networks of epidote-quartz-lesser calcite fractures-stringers-veinlets; many fractures cross cut drill core completely and are at 30-40 degrees to C/A; usually with minor PO, occasional CPY; may be some displacement along certain fractures. 29.79 30.50 COMPOSITE MAFIC INTRUSIVE DYKE: Massive, fairly homogeneous, fine-grained, medium gray, chloritized, <1 mm-sized PX; two 1-2 cm wide paler gray more feldspathic(?) layers, diffuse contacts, trace CPY-SPH, no calcite, at 39 degrees to C/A; sharp upper contact at 35 degrees to C/A. 30.21 - 30.5: Fine-grained PX-phyric mafic intrusive; medium gray, chloritized, dark green PX phenocrysts up to 3 mm long; contains a 4 cm wide layer with an orbicular texture (1-2 mm-sized dark green round cores with ~0.5 mm wide pale gray rims), diffuse contacts, PX phenocrysts still present, at 40 degrees to C/A; sharp upper contact with overlying mafic intrusive at 39 degrees to C/A; sharp lower contact marked by a pillow selvage(?) at 39 degrees to C/A. PILLOWED MAFIC VOLCANICS: 30.50 44.86 Similar to above pillowed mafic volcanics (2.0 - 29.79) but with less pillow selvages than at (19.61 -29.79); isolated cm-dm-sized angular fragments of differing colour bound by fractures indicating some displacement; pillow selvages, although usually fractured, show no evidence of displacement; relatively less PO in pillow selvages-interpillow material compared to previous pillowed mafic volcanics, still trace to minor CPY, rare GN; scattered semi-massive PO, with or without trace-minor CPY, stringers; abundant pale gray-medium green-pale green mottling. 32.23 - 33.0: Mostly broken core; numerous serpentine coated fractures at a low angle to C/A; also

cm-sized quartz-minor epidote-chlorite aggregates and fractures, minor-moderate PO, minor CPY.

33.0 - 35.59: Mostly pale-medium gray pillowed volcanics (silicified?).

HOLE#:		COB-18						Page # 4
From	То	Lithological Description	Sample	#	From	То	Width	
-	-	33.33 - 34.07: Most of rock is spotted; 1-2 mm-sized medium green spots in pale gray groundmass; also 1-4 cm wide silicified-epidotized layers/aggregates with abundant PO, minor CPY-GN, trace SPH; layers at ~48 degrees to C/A and occur between pillow selvages; 33.50: 6 mm wide remnant of a coarse calcite vein at 153 (27) degrees to C/A, serpentine margins with minor coarse PY; 34.03: similar coarse calcite stringer.	-		-		-	
		34.75 - 34.8: Irregular quartz aggregates/veinlets; intermixed fine SPH-PO, minor CPY, trace GN.						
		36.66: Irregular up to 1 cm wide very fine-grained quartz-rich matrix vein, moderate PO-CPY, minor SPH; at 26 degrees to C/A. 36.82 - 37.11: Three calcite, minor PO-CPY, trace GN, stringers at 45-55 degrees to C/A. 40.73: 2 mm wide calcite, minor quartz, minor PO, trace CPY, veinlet at 52 degrees to C/A. 40.99: Essentially massive PO, trace CPY, minor calcite, stringer at 35 degrees to C/A. 41.6 - 43.3: Broken core; about twelve serpentine coated fractures at 0-35 degrees to C/A; one cored with a thin layer of calcite, minor platy PY. 43.17: Fracture coated with thin layer of semi-massive PO, trace CPY, at 36 degrees to C/A. 43.8 - 45.0: Broken core; about eight serpentine coated fractures at 5-35 degrees to C/A. 43.86 - 44.12: A few PO-rich fracture coatings and stringers, trace-minor GN and calcite.						
44.86	46.58	PILLOWED INTERMEDIATE VOLCANICS: Massive, fairly homogeneous, fairly uniform dark gray, very fine-grained; moderate insitu breccia; matrix composed of pale gray, very fine-grained, quartz (feldspar?) fractures-stringers-veinlets-irregular aggregates; minor to moderate PO, trace-minor CPY, throughout matrix; local disseminated 1-3 mm-sized very fine-grained quartz, minor PO, aggregates; upper contact marked by an irregular 2-3 cm wide epidote-quartz aggregate at 10-45 degrees to C/A; very irregular lower contact (colour change). 45.14 - 45.38: Set of three pillow selvages (the only ones in interval); silicified-epidotized-chloritized-feldspathized; abundant PO, minor CPY-PY; cross cut by a calcite, abundant PO-CPY-SPH, veinlet at 24 degrees to C/A.						
46.48	51.15	PILLOWED MAFIC VOLCANICS: Continuation of above pillowed mafic volcanics (30.5 - 44.86). 46.71: Serpentine and ~50% platy PY coated fracture at 54 degrees to C/A.						

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HOLE # : **COB-18** From To Lithological Description Sample # From To Width 47.18: Up to 1 cm wide silicified-epidotized pillow selvage/matrix vein at 22 degrees to C/A; abundant PO, minor CPY; other PO-rich matrix/matrix veinlets in wall rock. 48.0 - 51.15: Irregular weakly magnetic mm-cm scale diffuse dark gray patches and bands in medium green host rock. 48.41: 1-2 mm wide serpentine-quartz-calcite coated fracture at 46 degrees to C/A; abundant PY, minor CPY-PO. 48.9 - 50.18: Broken core; several serpentine coated fractures at 0-15 degrees to C/A; often with minor to abundant platy PY, occasionally with calcite. 51.15 54.73 FELDSPATHIC MAFIC INTRUSIVE DYKE: Massive, homogeneous, medium gray, fine-grained, very fine-grained chill margins; chloritized; local disseminated up to 8 mm-sized feldspar aggregates/1-3 mm-sized round aggregates of PO/needles of AMPH/PX; 8 cm-sized mafic volcanic xenolith at 54.43; 5-6 serpentine, with or without platy PY or PO, coated joints/fractures per metre at 35-85 degrees to C/A, occasionally at 5-10 degrees to C/A; occasional calcite, trace PO-SPH, stringers at 30-50 degrees to C/A; sharp upper contact at 44 degrees to C/A; sharp lower contact at 32 degrees to C/A. 54.73 PILLOWED MAFIC VOLCANICS: 65.10 Essentially a continuation of above pillowed mafic volcanics (46.48 - 51.15); most volcanics are palemedium green and aphanitic; local dark gray mottling - locally weakly magnetic; abundant PO, occasional CPY, in pillow selvages-interpillow material, also local up to 40 cm long intervals with disseminated 1-3 mm-sized aggregates of PO. 55.3 - 55.45: Badly broken core; serpentine, minor platy PY, coated fractures; larger core fragments very fractured. 55.73 - 56.61: Several discontinuous chloritic stringers with PO cores, occasional CPY. 57.2 - 59.1: Abundant PO in discontinuous stringers, as semi-massive up to 2 cm wide bands in pillow selvages and in interpillow material, and as disseminations; some PY, trace CPY; most volcanics have bleached appearance. 59.75 - 65.10: Style of mineralization has changed; most PO associated with irregular very finegrained guartz aggregates; also minor CPY, occasional intermixed SPH, occasional calcite, may have

some epidote-rich aggregates as well.

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HOLE #: **COB-18** From To Lithological Description Sample # From To Width 62.84 - 62.96: Irregular mass/vein of fine-grained quartz-epidote, minor calcite, moderate CPY including a 2x3.5 cm-sized mass, minor CPY; sharp upper contact at 50 degrees to C/A; fairly sharp lower contact at 62 degrees to C/A. 64.37 - 64.43: Pillow selvage and up to 2 cm wide layers of fine-grained quartz; abundant, almost semi-massive PO, minor CPY; at 34 degrees to C/A. 65.10 67.90 SPOTTED MAFIC INTRUSIVE: Massive, fairly homogeneous, mottled medium green-pale gray, fine- medium-grained; 1-2 mm-sized medium green spots (appear to be aggregates as opposed to single mineral grains) floating in a pale gray groundmass; ~65% spots - 35% groundmass; minor brecciation with very fine-grained quartz filled fractures, some veinlets-veins-aggregates, intermixed PO-SPH-minor CPY; a few serpentine, with or without minor to moderate platy PY-rare calcite, coated joints/fractures at 25-55 degrees to C/A; fairly sharp upper contact at 34 degrees to C/A; fairly sharp lower contact at 20 degrees to C/A (because of the brecciation this unit may be some type of coarse mafic flow?). 66.5 - 67.1: At least six cm-sized/wide quartz-rich aggregates, moderate PO, minor SPH, trace CPY, 67.90 PILLOWED MAFIC VOLCANICS: 72.10 Essentially similar to previous pillowed mafic volcanics except that there is more brecciation and up to 20 cm long intervals with abundant mm-cm-sized rounded volcanic fragments; matrix is whitish to pale gray-green; occasional quartz-rich aggregates-irregular veins, minor PO-CPY, most veins at 30-65 degrees to C/A; pillow selvages are epidotized-silicified and usually have little or no PO; occasional calcite gash stringers-veinlets at 30-40 degrees to C/A; 2-7 serpentine, occasional calcite/platy PY, coated joints/fractures at 10-75 degrees to C/A, most at 25-50 degrees to C/A. 68.18: 2 cm wide mottled pale pink-pale yellow-green feldspar-quartz-epidote, minor calcite, vein at 58 degrees to C/A; trace GN-CPY. 68.31: Irregular discontinuous nearly massive PO veinlet at 48 degrees to C/A. 68.79 - 69.04: Irregular epidote-quartz vein-like aggregate and vein offshoots; minor PO, trace GN, intermixed SPH(?); at ~34 degrees to C/A. 70.52 - 70.6: Mafic intrusive dykelet; medium green-gray, fine-grained; very sharp contacts at 33 degrees to C/A.

71.06: 1 mm wide cross cutting quartz/feldspar-calcite veinlet at 29 degrees to C/A; barren.

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HOLE # : **COB-18** From Lithological Description То Sample # From To Width 71.5 - 71.9: Irregular quartz-rich aggregates-veins, minor to moderate PO; one epidotized layer/pillow selvage; 7 serpentine, rare platy PY, coated fractures at 30-40 degrees to C/A; wall rock is intensely brecciated - rounded flattened fragments are aligned at ~ 145 (35) degrees to C/A. 72.10 MAFIC INTRUSIVE DYKE: 75.50 Massive, homogeneous, medium gray; essentially fine- medium-grained, margins are finer grained; chloritized; occasional 1-2 mm-sized aggregates of feldspar/quartz; cross cut by about 10 serpentine coated, with or without calcite, joints/fractures at 30-75 degrees to C/A, one at 5 degrees to C/A; sharp slightly irregular upper contact at 43 degrees to C/A; sharp lower contact at 43 degrees to C/A. 75.50 96.06 PILLOWED MAFIC VOLCANICS: Essentially similar to previous pillowed mafic volcanics; very heterogeneous although mostly mediumdark green-gray; more abundant in situ breccia, occasional slip planes truncating variably brecciated volcanics, intact fractured pillow selvages; abundant epidotization, lesser silicification, of pillow selvages, matrix material in breccia matrices and interpillow material; scarce quartz-rich aggregatesmatrix-veins; only trace to minor PO-CPY; 5-7 serpentine, with or without calcite-platy PY, coated ioints/fractures per metre at 30-70 degrees to C/A, occasionally at 10-20 degrees to C/A; scarce cross cutting calcite, minor PO, stringers-veinlets. 76.35 - 76.52: Set of three quartz, minor calcite-PO-CPY, veinlets at ~30 degrees to C/A. 77.38: Calcite, serpentine margins, minor PY, stringer at 69 degrees to C/A. 78.36: About 1 mm wide calcite, serpentine margins, minor PY, veinlet at 60 degrees to C/A. 79.23: Calcite, serpentine margins, minor CPY-PY, stringer at 51 degrees to C/A. 79.46 - 79.56: Broken core; a few fragments of an at least 3 mm wide calcite veinlet; barren. 80.08: Calcite, minor CPY-PY, stringer at 45 degrees to C/A. 80.21: 2 mm wide calcite-quartz, minor PO, trace CPY, veinlet at 46 degrees to C/A. 80.59 - 80.63: Two calcite, minor PO, trace CPY, stringers at 54 and 34 degrees to C/A. 81.42: Calcite, minor PO, trace CPY, stringer at 39 degrees to C/A. 81.44 - 82.25: Epidotized-silicified-chloritized pillow selvages-interpillow material roughly parallel to C/A: trace calcite-PO, scarce CPY. 82.7 - 82.75: Irregular fine-grained epidote-quartz aggregate; minor calcite-CPY-PO.

83.98: Calcite, abundant PO, moderate CPY, stringer at 66 degrees to C/A.

HOLE #:		COB-18				i
From	То	Lithological Description	Sample #	From	Γο Widtl	ל
-	-	85.84: 4-5 mm wide quartz-chlorite, minor PO-CPY, veinlet at 30 degrees to C/A.	-	-		
		86.34 - 87.13: Several epidotized pillow selvages, minor carbonatization, minor PO.				
		87.43: Irregular 1-1.5 cm wide quartz-chlorite-epidote, moderate intermixed PO-CPY, matrix vein at 41 degrees to C/A.				
		89.29 - 89.39: Irregular up to 3.5 cm wide quartz-chlorite-epidote, minor calcite-SPH, trace CPY-PO, vein-like aggregate at ~31 degrees to C/A.				
		89.43 - 89.47: Up to 2 cm wide wedge shaped quartz-epidote-calcite, minor SPH-CPY-PO, aggregate.				
		89.77: 1 mm wide quartz-calcite, moderate PO-CPY, veinlet at 44 degrees to C/A.				
		89.89: Discontinuous quartz-chlorite, moderate CPY-PO, matrix veinlet at 31 degrees to C/A.				
		90.89: 5 mm wide quartz-chlorite, minor PO-CPY, matrix veinlet at 41 degrees to C/A.				
		91.39: 3 mm wide quartz-chlorite, minor calcite, minor PO-CPY, veinlet at 34 degrees to C/A.				
		92.72 - 92.76: 3 cm wide quartz-calcite-chlorite, abundant semi-massive PO-PY, minor CPY, vein at 45 degrees to C/A.				
		92.95 - 93.85: Broken core; serpentine coated fractures at 25-55 degrees to C/A; may have minor platy PY and calcite.				
		93.95 - 94.11: 5-6 mm wide quartz-calcite-chlorite, minor PO-SPH-CPY, vein at 22 degrees to C/A; truncates a similar discontinuous vein at 155 (25) degrees to C/A.				
		94.22: 5 mm wide quartz-epidote-chlorite, minor calcite, minor CPY-PO, veinlet at 49 degrees to C/A.				
		94.95: 3-6 mm wide quarz-chlorite-calcite, minor PO-CPY, vein at 39 degrees to C/A; minor displacement along a cross cutting fracture.				
		95.07: 8 mm wide quartz-chlorite, minor calcite, minor PO-CPY, vein at 40 degrees to C/A.				
		95.36 - 95.61: Pillow breccia; silicified-chloritized matrix; minor PO-CPY.				
		95.60 - 95.87: Six quartz-chlorite-epidote, minor PO-CPY, stringers-veinlets at 30-60 degrees to C/A.				
96.06	99.92	MAFIC INTRUSIVE DYKE:				
00.00	00.02	Massive, fairly homogeneous, medium gray, fine- medium-grained; chloritized; minor felty				
		appearance on broken surface; local diffuse up to 3 cm wide silicified-carbonatized-feldspathized,				
		rare CPY, bands and aggregates; occasional 1-3 mm-sized feldspar-quartz, minor calcite,				
		aggregates; cross cut by a few quartz, rare CPY-SPH(?), stringers at 135-150 (30-45) degrees to				
		C/A; sharp upper contact at 34 degrees to C/A, contact is cross cut and slightly				

HOLE#:

COB-18

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From

To Lithological Description

Sample # From To Width

(cont...) 96.06-99.2 displaced by a quartz-chlorite, minor PO, veinlet at 136 (44) degrees to C/A; sharp lower contact at 46 degrees to C/A, minor quartz-PO along contact surface.

97.34 - 97.71: Interlayer of strongly brecciated mafic volcanics; contains a 2.2 cm wide calcite-quartz-epidote-orange feldspar, trace PO-CPY, vein at 58 degrees to C/A, diffuse margins; also several quartz-chlorite-calcite, minor PO-CPY, stringers-veinlets at 115-155 (25-65) degrees to C/A; two serpentine, moderate plety PY, coated joints/fractures at ~15 degrees to C/A; sharp upper contact at 57 degrees to C/A, contact is cross cut and slightly displaced by one of the veinlets; sharp lower contact at 60 degrees to C/A, also cross cut and slightly displaced by a stringer.

98.34 - 98.85: Interlayer of brecciated mafic volcanics; cross cut by a few calcite stringers at 35-40 degrees to C/A; cross cut by 5 serpentine, minor platy PY, one with minor PO-CPY, coated joints/fractures at 5-60 degrees to C/A; sharp upper contact at 57 degrees to C/A; sharp lower contact at 60 degrees to C/A.

99.92 106.98

PILLOWED MAFIC VOLCANICS:

Similar to previous pillowed mafic volcanics (75.5 - 96.06); 2-5 serpentine, with or without calcite-PY-platy PY, coated joints/fractures per metre at 30-70 degrees, a few at 5-10 degrees, to C/A.

100.25: Irregular up to 4 mm wide calcite-quartz-chlorite, trace CPY, veinlet at 50 degrees to C/A.

100.42: Calcite, minor CPY-PO, stringer at 38 degrees to C/A.

101.36: Up to 3 mm wide calcite, minor quartz-orange feldspar, trace CPY, veinlet at 46 degrees to C/A; adjacent to a serpentine, minor platy PY, coated joint/fracture at 42 degrees to C/A.

101.64: Minor broken core; remnant of a calcite, minor quartz-orange feldspar, trace CPY, veinlet, probably at ~40 degrees to C/A.

101.94: 1.5 cm wide discontinuous calcite-quartz-orange feldspar-epidote, moderate CPY-PO, vein at 61 degrees to C/A; adjacent to a serpentine, minor calcite-platy PY, joint/fracture at 21 degrees to C/A.

102.44 - 103.27: Probable intermediate volcanics; uniform dark gray, abundant (~40%) <1 mm-sized pale gray spots (quartz?); extremely brecciated - mm-cm-sized fragments; very irregular upper contact; lower contact marked by a semi-massive PO-quartz-chlorite, minor calcite, trace CPY, veinlet at 27 degrees to C/A..

HOLE #: COB-18

Τo

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Sample # From To Width

From

Lithological Description

103.27 - 106.98: Mafic pillow breccia; pale yellow-green to yellow-brown epidotized-feldspathized(?) pillow selvages and pillow fragments; scarce PO-CPY in matrix; rebrecciated - mainly chloritic fractures-stringers.

105.23: ~2 mm wide epidote-orange feldspar, trace CPY, veinlet at 22 degrees to C/A; two ~1 cmsized PO, minor CPY, aggregates in adjacent wall rock.

106.73: 1.1 cm wide calcite-chlorite, minor reddish brown feldspar, abundant CPY, minor PO, vein at 34 degrees to C/A; also a discontinuous calcite-chlorite, moderate CPY-PO, veinlet at ~5 degrees to C/A and a 3x3 cm-sized calcite-chlorite, moderate CPY-PO, aggregate.

106.98

143.21 LAMPROPHYRE DYKE:

Massive, moderately heterogeneous, medium green-gray, fine- to medium-grained; chloritized; locally carbonatized; variable biotite (locally up to 10-15%) and PX content; local disseminated PY; occasional xenoliths; 0-5 cross cutting calcite, often with epidote, occasional trace CPY, stringers per metre, generally at 40-50 degrees to C/A; 2-4 hematitized serpentine, generally with calcite, minor PY, coated joints/fractures per metre at 35-80 degrees to C/A; slightly irregular upper contact at 63 degrees to C/A, 2 cm-sized angular gabbroic xenolith right below contact; slightly irregular, slightly brecciated, lower contact at 70 degrees to C/A.

- 107.13: 2 cm long angular epidotized mafic volcanic xenolith.
- 107.38: 2 cm-sized angular gabbroic xenolith.
- 107.56: 1 mm wide calcite-quartz-chlorite, trace CPY, stringer at 51 degrees to C/A.
- 107.68: 3 mm wide quartz-pale orange-feldspar-calcite, trace CPY, veinlet at 35 degrees to C/A.
- 108.43: 3 mm wide calcite-orange quartz/feldspar, serpentine margins, trace PY, veinlet at 30 degrees to C/A; disseminated PY in wall rock.
- 109.45 109.58: ~2 cm wide band of moderate disseminated PY.
- 109.6 114.44: Minor to moderate carbonatization; mottled pale gray-medium green; numerous thin pale green-gray diffuse stringers at ~60 degrees and 20-25 degrees to C/A; gradational contacts with surrounding rock.
- 110.24: Discontinuous irregular calcite, orange quartz-feldspar, veinlet at ~27 degrees to C/A; barren.
- 112.77 113.02: Cm-sized groupings of disseminated PY.
- 113.16: 2x3 cm-sized aggregate of PY with epidote-quartz; probably a xenolith.

HOLE #: COB-18 Lithological Description From То 113.39: 1.5 cm wide calcite vein at 30 degrees to C/A; quartz-orange feldspar-minor CPY-PY margins; only half the vein is present - truncated by a calcite filled fracture/slip plane at 53 degrees to C/A. 114.5 - 114.6: Badly broken core; probably a couple of at least 2 mm wide calcite veinlets, barren; serpentine coated fracture surfaces as well. 114.69: 6 mm wide calcite vein at 41 degrees to C/A; abundant serpentine-minor orange feldspar along margins, rare PY. 115.80: 1.5 cm-sized angular quartz-feldspar (alteration material?) xenolith. 116.23 - 116.34: ~3 cm wide pale gray-green shear/deformation zone at 39 degrees to C/A; silicified; moderate disseminated PY. 117.0 - 117.6: Abundant irregularly distributed disseminated PY; locally up to ~30% PY. 117.01: ~1 mm wide calcite, minor quartz, trace CPY, veinlet at 19 degrees to C/A. 117.55; Hematitized, minor calcite, joint/fracture at 45 degrees to C/A; includes a 5x5 mm-sized very thin layer of GN with some CPY. 117.72 - 117.74: Two 1-2 mm wide calcite, minor quartz-epidote, trace CPY, veinlets at 56 degrees and 49 degrees to C/A. 117.94 - 118.24: ~4 cm wide pale gray-green shear/deformation zone at 24 degrees to C/A; silicifiedfeldspathized-epidotized, minor PY, trace calcite; inludes a parallel hematitized serpentine coated joint/fracture. 118.24 - 130.0: Numerous, up to 20 per metre, pale gray-green very fine-grained quartz-feldsparchlorite/serpentine, occasional calcite, stringers-veinlets-veins, at 20-50 degrees to C/A; trace to abundant PY; occasional CPY; PY may also be disseminated around certain veinlets and randomly distributed throughout rock; only the major veinlets-veins are logged below. 118.76 - 118.86: Bifurcating 3-5 mm wide veinlets at 35 degrees to C/A; moderate, up to 3mm-sized, PY grains/aggregates. 119.07 - 119.35: Three irregular 4-10 mm wide, minor calcite-PY, veinlets-veins at 50-70 degrees to C/A. 120.01 - 120.12: Three coalescing veinlets at 30-50 degrees to C/A; almost semi-massive PY in veinlets and at intersection of veinlets. 120.27 - 120.44: Two coalescing, up to ~1 cm wide, veins at 15 and 45 degrees to C/A; abundant PY

120.5 - 120.65: ~10% finely disseminated SPH(?); rock has brownish hue.

in veins and wall rock; minor CPY in veins.

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Sample # From To Width

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HOLE #: **COB-18** From То Lithological Description Sample # From To Width 121.75: 6 mm wide vein at 35 degrees to C/A; moderate coarse calcite, abundant PY in vein and wall rock. 120.95 - 121.14: Pinch and swell, <1-8 mm wide, vein at 10 degrees to C/A; minor calcite-PY-CPY. 121.71: 6 mm wide vein at 61 degrees to C/A; calcite-orange feldspar-minor PY core. 122.0: 2x4.5 mm-sized nearly massive aggregate of fine-grained PY. 122.6 - 123.0: About 10 stringers-up to 8 mm wide veins at 20-60 to C/A; abundant semi-massive PY aggregates in stringers-veins and disseminations in wall rock. 123.29 - 123.56; Minor breccia; criss-crossing veinlets and up to 1 cm wide veins at 0-65 degrees to C/A; abundant calcite, moderate PY including one up to 7 cm long semi-massive veinlet, minor CPY. 126.06: 7 mm wide vein at 55 degrees to C/A; trace calcite; barren. 127.8: 5 mm wide vein at 38 degrees to C/A; two parallel calcite stringers; trace CPY-PY. 127.97 - 128.15: Several irregular veinlets and up to 8 mm wide veins at ~35 degrees to C/A; abundant calcite, minor PY, trace CPY. 128.45 - 128.8: Minor breccia; veinlets and up to 2 cm wide veins; abundant quartz-calcitechlorite/serpentine-orange feldspar, trace PY-CPY, rare SPH; up to 5 mm-sized PY aggregates in wall rock. 129.0: 2 mm wide veinlet at 30 degrees to C/A; trace calcite-PY. 130.7: 1-2 mm wide calcite-quartz-serpentine, trace PY, veinlet at 36 degrees to C/A. 131.45: 1 mm wide calcite, minor quartz-epidote, serpentine margins, veinlet at 61 degrees to C/A; barren. 131.86: 3 mm wide calcite, trace GN, veinlet at 50 degrees to C/A. 131.98 - 132.52: Set of seven 1-2 mm wide calcite, serpentine margins, occasional epidote, veinlets at ~60 degrees to C/A; veinlet at 131.98 has trace GN, others may have trace CPY. 132.88: 1-2 mm wide calcite, minor orange feldspar-epidote, serpentine, veinlet at 28 degrees to C/A; barren. 133.05 - 133.56: Set of eleven stringers and up to 3 mm wide veinlets all at ~45 degrees to C/A; vary from essentially calcite only to mixed calcite-epidote; rare CPY. 133.77 - 133.92: Minor hematitized quartz/feldspar aggregates-short fractures...

133.92; 4 mm wide serpentine-calcite-epidote-quartz/feldspar veinlet at 44 degrees to C/A; barren.

HOLE #: **COB-18** Page # 13 From To Lithological Description Sample # From To Width 134.0 - 135.0: Set of about twelve stringers and up to 2 mm wide veinlets at 25-45 degrees (occasionally at ~135 degrees) to C/A; vary from calcite only to mixed calcite-epidote; rare PY/CPY. 135.39: Two up to 2 cm-sized subrounded xenoliths; altered quartz porphyry, gabbro. 135.51: Two 1-2 mm wide hematitized calcite, minor quartz, serpentine margins, trace PY, veinlets at 26 and 64 degrees to C/A. 135.84: 3 mm wide calcite, rare GN, veinlet at 65 degrees to C/A; hematitized serpentine margins, trace PY. 135.95: Semi-massive PY with calcite, trace CPY, stringer at 28 degrees to C/A. 136.59 - 138.21: Mafic volcanic interlayer or xenolith; strongly brecciated - may be pillow breccia; matrix of dark green chloritic fractures-stringers-veinlets; very irregular contacts; about nine serpentine coated joints/fractures at 30-65 degrees to C/A. 136.59 - 136.85: Fractured pale yellow-green mass of very fine-grained epidote, also some pale orange feldspar, minor quartz; one grain of CPY; irregular lower contact at ~52 degrees to C/A. 136.9 - 136.96: Two calcite, orange quartz/feldspar, gash veins at 25 and 43 degrees to C/A; barren 138.62 - 138.94: Mafic volcanic xenolith; very irregular contacts. 139.0: Two fractures coated with minor to moderate GN-SPH at 10 and 42 degrees to C/A; some calcite; core is broken and some fragments missing. 139.31 - 139.76: Mafic volcanic xenolith; very irregular contacts. 139.39: Calcite-quartz-orange feldspar, moderate CPY-SPH, gash veinlet at 26 degrees to C/A. 139.93 - 140.0: Mafic volcanic xenolith; partially disaggregated; arbitrary contact placed at 140.0 since some core missing. 140.5 - 142.75: About 20 calcite stringers-up to 3 mm wide veinlets at 25-65 to C/A; trace PY-CPY-GN. 140.53: Hematitized calcite-serpentine, moderate CPY-minor GN, stringer at 80 degrees to C/A. 142.26: 3 mm wide calcite, trace GN, veinlet at 48 degrees to C/A. 142.45: 2 mm wide calcite, trace GN, veinlet at 64 degrees to C/A. 142.75 - 143.12: Irregular 2-10 mm wide pinch and swell calcite-quartz-epidote-orange feldspar veinlet-vein at ~10 degrees to C/A; minor up to 7 mm long SPH, trace CPY, aggregates; cross cuts about six calcite veinlets at 40-50 degrees to C/A.

From To Lithological Description Sample (cont) 143.16: 2.5 cm long rounded gabbroic xenolith. 143.21 149.00 PILLOWED MAFIC VOLCANICS: Heterogeneous, pale to medium green or gray, very fine-grained; moderate to intense in situ breccia; intense brecciation restricted to 20-40 cm long intervals; despite brecciation pillow selvages are generally intact; matrix composed of pale yellow green (epidotized) or dark green (chloritized)	#	From -	То	Width -
143.21 149.00 PILLOWED MAFIC VOLCANICS: Heterogeneous, pale to medium green or gray, very fine-grained; moderate to intense in situ breccia; intense brecciation restricted to 20-40 cm long intervals; despite brecciation pillow selvages are		-		-
Heterogeneous, pale to medium green or gray, very fine-grained; moderate to intense in situ breccia; intense brecciation restricted to 20-40 cm long intervals; despite brecciation pillow selvages are				
fractures-stringers, rare veinlets; epidotized-silicified-chloritized pillow selvages and/or interpillow material usually with variable PY/CPY/SPH; occasional quartz-epidote-chlorite, minor-moderate SPH-PY, trace CPY, matrix veinlets; 3-4 serpentine, with or without calcite, joints/fractures per metre at 20-75 degrees to C/A.				
143.26: 1 mm wide hematitized calcite-serpentine, abundant SPH, moderate PY, trace CPY, rare GN, veinlet at 46 degrees to C/A; moderate amount of actinolite needles in bundles and radial aggregates as well. 143.35 - 143.45: Minor pillow breccia; silicified matrix with intermixed fine SPH, minor PY, trace CPY.				
144.53 - 144.72: Irregular 6 mm wide epidote-quartz-feldspar-chlorite, minor calcite, trace CPY-PY, vein at 20 degrees to C/A; also a serpentine coated fracture at 5 degrees to C/A with a few grains of GN. 144.75: 5 mm wide calcite gash vein at 46 degrees to C/A; margins composed of quartz-epidote-PY.				
144.75 - 145.1: Two roughly parallel 5-7 mm wide quartz-epidote, minor orange feldspar, minor calcite, minor SPH-PY-CPY, trace GN, wall rock fragments, veins at 20 degrees to C/A.				
144.96: Discontinuous 1 mm wide semi-massive SPH, moderate GN, minor CPY, calcite, veinlet at 41 degrees to C/A. 145.89: 1 mm wide serpentine-calcite, moderate PY, veinlet at 38 degrees to C/A 146.63: 1 mm wide calcite-quartz-epidote, serpentine margins, moderate SPH-PY, trace CPY-GN, veinlet at 57 degrees to C/A. 147.04: 9 mm wide pale pink quartz/feldspar, minor calcite-epidote, vein at 53 degrees to C/A; one 3 cm long PY aggregate, also minor SPH, trace GN. 147.88 - 148.27: Set of five 1-3 mm wide veinlets at 40-50 degrees to C/A; composed of calcite-quartz-epidote, minor-moderate PY; one-third of one veinlet composed of semi-massive PY.				

HOLE#:		COB-18					,	Page # 15
From	То	Lithological Description	Sample	#	From	То	Width	
-	(cont)	148.76 - 148.8: One 4 mm wide pale orange quartz-calcite-serpentine, minor epidote, veinlet at 55 degrees to C/A; barren; one 4 mm wide semi-massive PY-quartz veinlet at 41 degrees to C/A.	-		-		-	
149.00	149.44	MAFIC INTRUSIVE DYKELET: Massive, homogeneous, dark brownish gray; fine-grained; local minor disseminated SPH; abundant <1 mm-sized pale gray angular spots; cross cut by two ~1 mm wide calcite-quartz, trace to moderate SPH, trace GN-CPY, veinlets at 32 and 55 degrees to C/A; sharp upper contact at 40 degrees to C/A; sharp lower contact at 40 degrees to C/A.						
149.44	157.95	PILLOWED MAFIC VOLCANICS: Continuation of above pillowed mafic volcanics (143.21 - 149.0); essentially only PO in pillow selvages-interpillow material. 149.74: 3 mm wide calcite-chlorite/serpentine-quartz, trace CPY, veinlet at 36 degrees to C/A; veinlet also acted as a slip plane. 150.04 - 150.41: Set of three ~1 mm wide calcite-quartz, trace CPY, veinlets at 55-70 degrees to C/A. 151.69 - 152.0: Irregular epidote-quartz, minor calcite, moderate SPH-PY, trace CPY, matrix vein at 3-5 degrees to C/A; also up to 3.5 cm wide silicified-chloritized interpillow material, minor PY-SPH, trace CPY 151.69 - 151.92: Three up to 1 mm wide calcite, minor-moderate chlorite, moderate SPH, trace CPY-GN, gash veinlets at 42-50 degrees to C/A; cross cut preceding veinlet. 152.21: 1 mm wide calcite, serpentine margins, veinlet at 58 degrees to C/A; barren. 152.86: Calcite, serpentine-epidote margins, minor SPH, stringer at 48 degrees to C/A. 153.73: <1 mm wide serpentine coated, calcite cored, minor PY-CPY, trace GN, joint/fracture at 43 degrees to C/A. 153.79: 5x (up to) 2 cm wide massive calcite interpillow aggregate; rimmed by PO, trace CPY. 153.93: 2 mm wide calcite, serpentine margins, trace PO-CPY, veinlet at 43 degrees to C/A; cross cuts and cross cut by a 3 cm long PO-CPY-calcite aggregate. 154.22 - 155.0: Eight, up to 3 mm wide, calcite gash veinlets at 45-55 degrees to C/A; trace-moderate PO, occasional CPY; also five pillow margins roughly parallel to C/A, minor-moderate PO.						

HOLE #:		COB-18			
From	То	Lithological Description	Sample #	From To	Width
-	(cont)	156.0 - 156.19: Irregular up to 3 mm wide orange feldspar-quartz-epidote-chlorite-calcite, minor PO-CPY, veinlet at 18 degrees to C/A. 156.61 - 156.58: ~5 cm wide quartz-epidote-calcite vein/interpillow material; minor PO, trace CPY; at ~39 degrees to C/A. 156.95 - 157.17: Essentially massive epidote aggregate. 157.13 - 157.36: Irregular 1-4 mm wide chlorite-quartz, trace calcite, moderate PO, trace CPY, at ~7 degrees to C/A.	-		-
157.95		E. O. H.			

Property Name: COBALT AREA PROJECT GRID NAME: Waldman LOGGED BY H. Pintson Hole #: **COB-19** Claim #: 1247791 DRILLED BY: Norex Drilling Grid Bearing: 00 BEARING: SURVEY TYPE: Acid Test 00 Easting -134 INCLINATION: -45 degrees START: Northing: -521 TOTAL DEPTH: 164 m FINISH:

Elevation: 312 m CORE STORED AT: R.Nobes

STORED AT: R.Nobes Page # 1 of 17

From To Lithological Description Sample # From To Width

0.00 2.33 Overburden; casing left in ground.

2.33 11.06 PILLOWED MAFIC VOLCANICS:

Massive, heterogeneous; pale to medium green/gray; aphanitic to very fine-grained, locally fine-grained; abundant pillow selvages/interpillow material - very fine-grained, mostly pale gray (silicified), also pale yellow-green (epidotized), chloritized, minor feldspathization, minor-moderate PO, often trace-minor CPY-SPH-GN; abundant up to 15 cm-sized pale gray very fine-grained quartz, +/- epidote-chlorite, intermixed PO-+/-SPH/CPY, aggregates; minor to intense mostly in situ brecciation - matrix composed of quartz, +/- epidote, stringers-veinlets or chloritic fractures; matrix often has a preferred orientation at 20-35 degrees to C/A; 2-3 serpentine, +/- calcite, rare platy PY, coated joints/fractures per metre at 20-30 degrees and 40-60 degrees to C/A.

- 2.33 3.34: Very dark green; very strongly brecciated; cross cut by numerous nearly black chloritic fractures; intact pillow selvages; abundant epidotization; minor carbonatization; minor-moderate PO, trace CPY; gradational lower contact over a few cm.
- 6.67: ~1 mm wide serpentine-calcite-epidote, moderate PO, minor CPY, veinlet at 63 degrees to C/A.
- 7.09 7.62: Two quartz-epidote aggregates; ~6 and ~16 cm long, comprise 30-50% of core thickness; minor PO aggregates, trace CPY; one cross cutting semi-massive PO, quartz-chlorite, trace calcite, stringer at 37 degrees to C/A
- 7.65: ~1 mm wide serpentine, thin calcite core, minor platy PY, joint/fracture at 24 degrees to C/A.
- 7.74 7.89: Partially vein-like quartz-epidote-chlorite, minor orange feldspar, minor PO-CPY, trace GN, aggregate; partial upper cross cutting contact at 25 degrees to C/A.
- 8.05 9.15: ~20% of core consists of criss-crossing up to 1.5 cm wide irregular quartz-epidote, minor chlorite, veinlets-veins; minor-moderate PO-CPY, locally semi-massive PO veinlets-veins, trace SPH; includes one mostly cross cutting chlorite-quartz-epidote, moderate PO, minor CPY, veinlet at 0-5 degrees to C/A over 65 cm.

HOLE #:		COB-19				
From	То	Lithological Description	Sample #	From	То	Width
-	-	8.88 - 9.38: Majority of stringers-veinlets at 22 degrees to C/A; one cross cutting and cross cut veinlet at 170-175 degrees to C/A 10.79: ~1 mm wide quartz-chlorite, moderate PO, trace CPY, veinlet at 78 degrees to C/A. 10.93: <1 mm wide serpentine, calcite core, abundant PO-CPY, joint/fracture at 30 degrees to C/A.	-	-		-
11.06	12.57	COMPOSITE MAFIC INTRUSIVE DYKE: 11.06 - 11.39: Massive, homogeneous, medium gray; fine-grained; minor disseminated up to 4 mm long pale orange-gray feldspar-quartz aggregates; minor brecciation - matrix composed of quartz-epidote-chlorite stringers-veinlets and cm-sized triangular open space fillings, trace PO-CPY-SPH; three quartz-epidote stringers containing semi-massive SPH-CPY, moderate PO-GN, at 55 and 110 (70) degrees to C/A; sharp slightly foliated upper contact at 53 degrees to C/A. 11.39 - 12 57: Massive, homogeneous, medium green-gray; fine- medium-grained; minor disseminated up to 2 mm-sized pale gray spots (feldspar?); chloritized; sharp upper contact at 59 degrees to C/A; sharp lower contact at 46 degrees to C/A; finer grained at lower contact. 11.4: Quartz-SPH-PO-CPY, trace GN, stringer at 59 degrees to C/A 11.41 - 11.85: Pinch and swell quartz-chlorite-calcite, trace SPH-PO-CPY, stringer-veinlet at 6 degrees to C/A; cross cut by a pair of 1 mm wide calcite, minor serpentine-epidote, trace PO, veinlets at 122 (58) degrees to C/A. 12.06 - 12.14: Irregular quartz-calcite-chlorite aggregate/xenolith; sharp and gradational contacts.				
12.57	14.58	PILLOWED MAFIC VOLCANICS: Continuation of above pillowed mafic volcanics (2.33 - 11.06). 12.85 - 12.92: Mafic intrusive dykelet: medium green-gray, fine-grained; sharp upper contact at 83 degrees to C/A; sharp lower contact at 80 degrees to C/A. 13.11: 4 mm wide quartz, minor PO, trace CPY, veinlet at 48 degrees to C/A; veinlet margins are very irregular.				

Page #3

HOLE #: **COB-19** From To Lithological Description Sample # From To Width 13.31 - 13.36: ~4.5 cm wide fine-grained quartz-epidote-chlorite, minor PO, vein; sharp fairly regular upper contact at 61 degrees to C/A; sharp fairly regular lower contact at 67 degrees to C/A. 13.39 - 14.07: 15-20% quartz-epidote aggregates; minor PO, trace intermixed SPH, rare CPY. 14.9 - 14.31: Mafic intrusive dykelet: medium gray, fine-grained; sharp upper contact at 66 degrees to C/A, includes a 2 cm long quartz aggregate adjacent to contact; irregular lower contact along a quartzepidote veinlet at 55-60 degrees to C/A. 14.58 MAFIC VOLCANICS: 15.40 Massive, heterogeneous, pale to medium green-gray; very fine-grained; locally fine-grained; minor to intense brecciation - matrix composed of pale gray-green hairline fractures-stringers or dark green chloritic fractures; upper contact placed arbitrarily; quartz-epidote aggregates essentially no longer present below 14.79; 2-4 serpentine, minor-moderate calcite, coated joints/fractures per metre at 25-60 degrees, rarely at 10-15 degrees, to C/A. 14.58 - 17.53: Most of rock has a spotted texture; <1 mm-sized medium green spots (appear to be very fine-grained aggregates) in a pale gray groundmass, ~50% spots; granulated-silicified mafic volcanics (?); no apparent upper or lower contacts. 15.36 - 15.41: Two irregular up to 5 mm wide guartz-epidote-chlorite, minor calcite, abundant SPH, minor CPY-PO, trace GN, veinlets at 65 and 130 (50) degrees to C/A. MAFIC INTRUSIVE DYKELET: 15.40 16.01 Massive, heterogeneous; medium green-gray fine-grained margins; core is diffusely mottled pale gray medium green and moderately carbonatized; core contains disseminated <1 mm-sized pale gray spots (feldspar, do not react with HCI); cross cut by two serpentine, one with and one without calcite, coated joints/fractures at 21 and 13 degrees to C/A; sharp upper contact at 31 degrees to C/A; sharp lower contact at 14 degrees to C/A. 16.03 - 16.12: ~1 cm wide part of above dykelet parallel to C/A along edge of core. MAFIC VOLCANICS: 22.96 16.01 Continuation of above mafic volcanics (14.58 - 15.40) 16.15: 3 mm wide serpentine-calcite-quartz, minor PY-SPH, veinlet at 26 degrees to C/A; truncated

by above dykelet sliver.

HOLE#:		COB-19						Page # 4
From	То	Lithological Description	Sample	#	From	То	Width	
-	-	16.82: 5 mm wide quartz-chlorite, minor brown feldspar, moderate semi-massive PY, minor CPY, vein at 29 degrees to C/A.	-		-		-	
		17.08 - 17.19: Set of three quartz/feldspar-chlorite/serpentine, minor PY, stringers-veinlets at 22-50 degrees to C/A.						
		17.31: 3x3 cm-sized quartz/feldspar, minor PY (semi-massive in part), aggregate on edge of core.						
		17.61 - 17.87: Irregular up to 8 cm wide pale gray-off white quartz/feldspar-chlorite, trace calcite, abundant PY, minor PO-CPY, minor intermixed SPH, aggregates/matrix material.						
		18.0 - 19.23: About 20 stringers-veinlets-up to 1.5 cm wide veins/matrix material at 15-80 degrees to C/A; composed of quartz-chlorite, minor dark orange feldspar, minor-moderate PY, trace-minor CPY, trace-abundant PO, trace-moderate intermixed SPH; minor calcite only in veinlet at 19.22.						
		19.35 - 20.9: Mostly broken core: essentially all fragments have serpentine coated surfaces, occasionally with thin coating of calcite, rare breccia fragments with calcite matrix, rare calcite blebs with minor SPH, one 4 mm wide calcite veinlet fragment with minor CPY.						
		20.71 - 20.77: 11 cm long piece of intact core; remnant 4.5 cm wide calcite-quartz, wall rock fragments, moderate disseminated SPH, minor PY, vein; fairly sharp contact at 60 degrees to C/A; adjacent wall rock contains moderate amount of aggregates of unidentified pale gray, metallic, hard, non-magnetic, up to 1 mm long, bladed mineral, also minor CPY.						
		20.8 - 22.0: At least 18 calcite, minor serpentine, stringers-up to 3 mm wide veinlets at 40-65 degrees (later) and 125-135 (45-55) degrees (earlier) to C/A; two at 80-85 degrees to C/A; often with minor to abundant (semi-massive) PY, minor CPY-SPH; wall rock contains fine disseminated SPH-PY, trace PO, and is usually strongly carbonatized.						
		21.5 - 22.96: Irregularly distributed up to 1 cm-sized very fine-grained quartz aggregates with minor-abundant PY/PO, trace-minor CPY; disseminated PY-PO aggregates as well; a few quartz-calcite-chlorite, minor-abundant PY, trace-minor CPY, veinlets; one 60 cm long quartz-calcite, semi-massive PY, minor CPY, veinlet roughly parallel to C/A; three serpentine coated joints/fractures with 10-20% platy PY.						
22.96	26.87	MAFIC INTRUSIVE DYKE:						

Massive, homogeneous, medium gray, essentially medium-grained; chloritized; abundant ~2 mm-

sized PX (distinct spots on core surface); three serpentine-calcite coated joints/fractures

HOLE#:		COB-19				
From	То	Lithological Description	Sample #	From	То	Width
-	(cont)	at 15, 35 and 63 degrees to C/A; two calcite stringers at 22 and 38 degrees to C/A; coarse calcite aggregate in centre of core at 26.3; barely perceptible sharp upper contact at 53 degrees to C/A; sharp lower contact at 76 degrees to C/A.	-	-		-
26.87	29.80	MAFIC VOLCANICS:				
		Continuation of above mafic volcanics (16.01 - 22.96). Minor to intense brecciation persists; locally matrix fractures-stringers have a preferred orientation at ~35-40 degrees to C/A; essentially very little sulphides; rare discontinuous calcite stringers; 3-5 serpentine-calcite, rare platy PY, coated joints/fractures per metre at 40-70 degrees, occasionally at 5-10 degrees, to C/A.				
		27.0: 2x3 cm-sized very fine-grained quartz aggregate; minor intermixed SPH, trace CPY. 27.84: Slip plane at 49 degrees to C/A.				
		28.67 - 30.25: Most of rock has a spotted texture as at (14.58 - 17.53); gradational upper and lower contacts; a few scattered cm-sized quartz aggregates with minor intermixed SPH, trace CPY.				
		29.0 - 29.31: About five quartz-calcite-chlorite, abundant SPH, stringers-up to 2 mm wide veinlets at 43-60 degrees and 145-155 (25-35) degrees to C/A.				
		30.0 - 30.58: Three irregular up to 1 cm wide dark green chlorite, minor quartz, minor-moderate PO, trace CPY, veins at 20-40 degrees to C/A.				
29.80	31.32	PILLOWED MAFIC VOLCANICS:				
		Similar to pillowed mafic volcanics at (2.33 - 11.06); aphanitic to very fine-grained; minor amount of pillow selvages/interpillow material - silicified, epidotized, chloritized, minor feldspathization, traceminor PO, rare CPY; abundant up to 15 cm sized pale gray very fine-grained quartz, +/- epidote-				
		chlorite, may have minor intermixed SPH/PO-CPY, aggregates; occasional dark green chlorite-rich, quartz, minor calcite, minor to abundant PO, veinlets-veins at 30-40 degrees to C/A; minor to intense				
		mostly in situ brecciation - matrix composed of quartz, +/- epidote, stringers-veinlets or chloritic fractures; 1-3 serpentine, +/- calcite, rare platy PY, coated joints/fractures per metre at 30-60 degrees, occasionally at ~15 degrees, to C/A; clear upper contact/slip plane at 75 degrees to C/A.				
		29.82 - 31.32: A few dark green chlorite-quartz-minor calcite, veinlets-up to 6 mm wide veins-				

abundant matrix material, minor-moderate PO; veins at ~30 degrees to C/A; two up to 11 cm long

quartz aggregates, minor intermixed PO and coarser PO, trace CPY.

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HOLE # :		COB-19					Page # 6
From -	To -	Lithological Description	Sample #	From -	То	Width -	
31.32	31.74	MAFIC INTRUSIVE DYKELET: Massive, dark green-gray, fine-grained; chloritized; sharp upper contact at 38 degrees to C/A; sharp lower contact at 39 degrees to C/A. 31.7: Quartz, moderate PO, trace CPY, stringer at 77 degrees to C/A.					
31.32	32.51	PILLOWED MAFIC VOLCANICS: Continuation of preceding pillowed mafic volcanics (29.8 - 31.32). 31.87 - 31.98: Interpillow material: quartz-chlorite-epidote, moderate calcite, abundant disseminated PO-SPH-CPY. 32.21: Serpentine, moderate calcite, moderate platy PY, joint/fracture at 139 (41) degrees to C/A. 32.26 - 32.38: Serpentine, moderate calcite, minor platy PY, joint/fracture at 18 degrees to C/A. 32.41 - 32.52: Two up to 5 mm wide calcite, quartz margins, minor PO-trace CPY, gash veins at 20 degrees to C/A; one vein pinches out towards bottom of drill hole; the other vein pinches out towards top of drill hole; cross cut quartz aggregates.					
32.51	32.87	MAFIC INTRUSIVE DYKELET: Massive, medium gray, fine-grained; chloritized; numerous disseminated up to 3 mm-sized pale gray spots - very fine-grained quartz aggregates, occasional PO; cross cut by several quartz stringers at 40 degrees to C/A and one calcite-quartz, trace PO-CPY stringer at 32 degrees to C/A; sharp upper contact at 61 degrees to C/A, truncates one of the preceding calcite veins; sharp lower contact marked by a quartz stringer and minor silicification at 50 degrees to C/A.					
32.87	36.76	PILLOWED MAFIC VOLCANICS: Continuation of preceding pillowed mafic volcanics (31.32 - 32.51). 34.07 - 34.21: Interpillow material; epidote-quartz-chlorite, minor calcite, minor PO, trace CPY. 34.29 - 34.47: Very fine-grained quartz-chlorite aggregate, 50% of core; barren.					

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HOLE #: COB-19 From To Lithological Description Sample # From To Width 34.55 - 34.66: Mafic intrusive dykelet; 2.5 cm wide; medium gray, fine-grained; sharp parallel contacts at 34 degrees to C/A. 34.77 - 34.92; Mafic intrusive dykelet; 6.5 cm wide; medium gray, fine-grained; sharp upper contact at 41 degrees to C/A; sharp lower contact at 33 degrees to C/A. 35.05 - 35.07: Two calcite, trace PO, stringers at 48 and 55 degrees to C/A. 36.61: Serpentine-calcite, minor PO, trace CPY, coated joint/fracture at 51 degrees to C/A. 36.76 SPOTTED MAFIC VOLCANICS: 45.71 Similar to spotted textured mafic volcanics at (14.58 - 17.53); <1 mm-sized medium green spots (appear to be very fine-grained aggregates) in a pale gray (silicified) to pale yellow-green (epidotized) groundmass, ~50% spots; no apparent upper or lower contacts - mixture of spotted textured volcanics with aphanitic-very fine-grained volcanics over ~50 cm; only minor brecciation - matrix composed of dark green chloritic fractures-stringers; scarce quartz-rich aggregates-veinlets-veins with intermixed SPH, trace PO/CPY, rare calcite; rare calcite, trace PO/CPY, stringers; 3-5 serpentine, +/-calcite-platy PY joints/fractures per metre at 20-30 degrees and 65-80 degrees to C/A. 37.0 - 37.27: Very brecciated "ground-up" mafic volcanics; matrix composed of network of epidotequartz-minor chlorite stringers; stringers-fragments oriented at ~60 degrees to C/A.

38.36: Serpentine-calcite, minor PO-CPY, coated joint/fracture at 54 degrees to C/A.

38.47 - 38.73: Mafic intrusive dykelet; ~6 cm wide; medium green-gray; fine-grained; sharp upper contact at 28 degrees to C/A; sharp lower contact at 17 degrees to C/A; cross cuts well developed spotted textured mafic volcanics.

37.81: Serpentine-calcite, moderate PO, minor CPY, coated joint/fracture at 80 degrees to C/A.

38.82: 1 cm wide epidote-calcite-quartz vein at 46 degrees to C/A; up to 4 mm long prismatic epidote crystals; barren.

39.82: Joint/fracture at 30 degrees to C/A; no serpentine; minor calcite-platy PY.

39.95 - 40.25: 4-5 irregular discontinuous quartz-chlorite, minor calcite, minor-moderate SPH-PO-CPY, veinlets-aggregates at 0 degrees and 70-80 degrees to C/A; one calcite gash veinlet at 49 degrees to C/A.

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HOLE#:		COB-19				
From	То	Lithological Description	Sample #	From	То	Width
-	-	40.94 - 41.1: One 2 mm wide quartz, minor calcite, trace PO, veinlet at 39 degrees to C/A; one 7 mm wide epidote-quartz-serpentine, minor calcite, minor PO, trace CPY, vein at 55 degrees to C/A; one 2 cm wide poorly developed/laminated epidote-quartz, minor SPH, trace CPY-PO, vein at ~54 degrees to C/A; abundant epidote-quartz in wall rock.	-	-		-
		42.13 - 42.23: Mafic intrusive dykelet: 3 cm wide; medium green-gray; fine-grained; partially encloses some wall rock; sharp upper contact at 38 degrees to C/A; sharp lower contact at 45 degrees to C/A.				
		43.2 - 43.64: Three up to 4 mm wide quartz, moderate chlorite-calcite, minor SPH, rare CPY-GN, veinlets at 34, 22 and 140 (40) degrees to C/A.				
		43.6: Minor serpentine-calcite, trace GN, coated joint/fracture at 56 degrees to C/A.				
		43.84: Fracture surface with a 1.5x1.5 cm-sized coating of calcite-CPY-PO; fracture at 70 degrees to C/A.				
		44.18: Serpentine-quartz, minor calcite, trace GN-CPY, coated joint/fracture at 56 degrees to C/A.				
		44.95 - 45.5: Moderate amount of quartz, with or without intermixed SPH, trace PO-CPY, stringers-veinlets-aggregates.				
45.71	84.90	PILLOWED MAFIC VOLCANICS:				
		Similar to above pillowed mafic volcanics (29.8 - 31.32); quartz aggregates are usually pale gray, sometimes pale yellow gray (more abundant epidote) and occasionally pale reddish gray (intermixed SPH/PO), often bound by sharp irregular contacts; 1-2 serpentine, with or without calcite-platy PY, joints/fractures per metre at 30-55 degrees, rarely at 10-20 degrees, to C/A.				
		45.72 - 45.91: One 4 cm long quartz-epidote-calcite-SPH-PO, trace CPY, aggregate; two discontinuous quartz-epidote-minor orange feldspar, trace calcite, moderate PO, trace CPY, veinlets at 20-30 degrees to C/A.				
		46.2 - 49.5: Several very fine-grained quartz/epidote aggregates-stringers-veins; trace-moderate PO, trace-minor CPY; occasional PO stringers.				
		46.9: 12 mm wide calcite-chlorite-quartz, moderate PO, trace CPY, vein at 39 degrees to C/A.				

49.71: Serpentine-calcite, abundant PO-CPY, coated joint/fracture at 50 degrees to C/A.

HOLE#:		COB-19					
From	То	Lithological Description	Sample #	From	То	Width	
-	-	50.22 - 51.07: Abundant silicification-epidotization, moderate feldspathization-carbonatization; one fractured mass ~35 cm long; minor PO, trace CPY; cross cut by one irregular calcite-quartz-orange feldspar, abundant PO, trace CPY, veinlet-slip plane at ~32 degrees to C/A; one serpentine-calcite, moderate PO, minor CPY, coated joint/fracture at 43 degrees to C/A.	-	-		-	
		51.63 - 52.19: Interval bound by up to 1.5 cm wide strongly silicified-epidotized, abundant PO, trace CPY, vein-like bands (pillow selvages?) at 33 and 43 degrees to C/A; one 16 cm long calcite-quartz, moderate PO, intermixed SPH, aggregate; one 5 mm wide chlorite-calcite, abundant PY, veinlet at 34 degrees to C/A.					
		52.38: 5 mm wide shear zone; serpentine-quartz-epidote-calcite, thin quartz core, minor PY; at 28 degrees to C/A.					
		52.98 - 53.89: At least seven discontinuous calcite stringers-veinlets at 45-55 degrees to C/A; occasional trace-minor PO-CPY.					
		53.34: 1 mm wide calcite, minor PO-CPY, veinlet at 68 degree to C/A.					
		53.71: Chlorite-calcite-orange feldspar, moderate PO, stringer at 150 (30) degrees to C/A.					
		53.93 - 54.08: Semi-massive reddish quartz, minor calcite, aggregate; intermixed PO-SPH(?).					
		54.7: 1 cm wide shear zone; abundant <1 cm wide flattened fragments in an epidote-quartz matrix; trace calcite-PO, rare CPY; very sharp lower contact at 24 degrees to C/A.					
		55.83: Serpentine, minor calcite, coated joint/fracture at 49 degrees to C/A; 1x1.5 cm-sized, <1 mm wide, remnant of a massive PY stringer.					
		56.0 - 56.27: Several small quartz aggregates; minor PO-CPY; one arcuate 5 cm long semi-massive PO aggregate with minor CPY on surface of core.					
		56.54: Calcite, trace PO, stringer at 61 degrees to C/A.					
		57.28: Calcite-serpentine, minor SPH, trace CPY-PO, coated joint/fracture at 56 degrees to C/A.					
		57.69 - 58.05: Three calcite, trace-minor PO, stringers at 55-65 degrees to C/A.					
		59.24 - 59.64: About seven quartz, trace-minor PO, stringers at 50-55 degrees to C/A; one semi-massive PO-calcite, trace CPY, stringer at 123 (57) degrees to C/A.					
		59.77 - 61.4: Four up to 45 cm long strongly silicified-epidotized-chloritized zones; trace-moderate calcite, rare orange feldspar, trace-minor PO, rare CPY.					
		61.4: 2 mm wide calcite, abundant platy PY-PO, minor CPY, veinlet at 55 degrees to C/A.					

HOLE #:		COB-19					Page # 10
From	To	Lithological Description	Sample #	From	То	Width	
		61.9: 12 mm wide irregular bifurcating calcite vein at 42 degrees to C/A; minor quartz-epidote, minor SPH-PO-CPY; adjacent calcite, semi-massive PO, stringer at 47 degrees to C/A.					
		62.81: 1 cm wide zone with three serpentine coated fractures at 29 degrees to C/A; broken up; contains a few remaining mm-sized 2 mm wide fragments of massive PY.					
		63.31 - 63.84: Five up to 3 mm wide calcite, minor-moderate serpentine-quartz-epidote, minor to semi-massive PO, trace CPY, stringers-veinlets at 45-53 degrees to C/A.					
		64.04: Epidote, moderate PO, minor CPY, coated joint/fracture at 41 degrees to C/A. 65.0 - 65.35: Four quartz-chlorite-calcite, minor to semi-massive PO, stringers at 43-51 degrees to					
		C/A.					
		65.39: 4 mm wide quartz-epidote-orange feldspar-calcite, minor PO-CPY, veinlet at 45 degrees to C/A.					
		65.94: 1 mm wide calcite, abundant PO, minor CPY, veinlet at 54 degrees to C/A.					
		68.08: 3 mm wide calcite-quartz margins-epidote, minor PY-PO, trace CPY, veinlet at 69 degrees to C/A.					
		69.44: Joint/fracture, moderate PO, trace CPY, at 54 degrees to C/A.					
		69.84: Quartz-epidote-calcite, abundant PO-PY, coated fracture at 29 degrees to C/A; moderate PO-					
		trace CPY in surrounding quartz-epidote aggregates. 70.12: ~1 cm wide shear zone at 40 degrees to C/A; epidotized-silicified, one serpentine coated fracture with moderate PY.					
		70.38 - 71.0: Badly broken core; most fragments have serpentine/calcite, minor-moderate platy PY, coated fracture surfaces; some fractures at 10-15 degrees to C/A					
		71.31 - 71.68: Epidotized-silicified-chloritized moderately developed shear/deformation zone at 28 degrees to C/A; minor calcite, minor-abundant PO-PY, trace CPY.					
		71.85: Calcite, semi-massive PO, minor CPY, coated joint/fracture at 60 degrees to C/A.					
		72.0 - 73.55: Several, up to 40 cm long, quartz-epidote aggregates, also irregular veinlets; occasional calcite; minor to semi-massive PO, trace CPY, rare intermixed SPH; occasional joints/fractures with platy PY or abundant PO-minor CPY.					
		72.17: Semi-massive PO, moderate CPY, coated joint/fracture at 64 degrees to C/A.					
		74.14: 1 mm wide calcite, minor PO, trace SPH, veinlet at 34 degrees to C/A.					
		74.17 - 76.0: Six, up to 11 cm long, quartz-epidote aggregates-interpillow material; minor-moderate calcite; minor-abundant PO, trace CPY, occasional intermixed SPH.					
		74.74: 1 mm wide calcite, trace PO-CPY, veinlet at 54 degrees to C/A.					

HOLE #: COB-19

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Sample # From To Width

From To Lithological Description

76.46 - 77.56: Numerous pillow selvages-abundant interpillow material; quartz-epidote-minor to moderate calcite; minor to abundant PO (including a 1x3 cm-sized semi-massive aggregate), trace-minor CPY, trace-minor intermixed SPH; a few serpentine, minor-moderate platy PY-trace CPY, coated joints/fractures at 35-45 degrees to C/A..

78.32: Calcite, trace PO-CPY-SPH, stringer at 33 degrees to C/A.

78.95 - 79.30: Broken core; serpentine, minor-moderate calcite-platy PY, coated fragments; fractures at 5-75 degrees, mostly at 25-45 degrees and 130-150 degrees, to C/A.

79.92 - 80.76: Interpillow material; quartz-chlorite-minor epidote-carbonatized zones; trace-moderate SPH-PO-CPY, trace GN; a few joints/fractures with moderate platy PY-trace GN.

81.36 - 83.6: Majority of quartz aggregates have a reddish tinge (intermixed SPH) and are surrounded by pale green chlorite-rich rock - appear as fragments with relatively sharp contacts in wall rock of dark green mafic volcanics; quartz aggregates also contain minor epidote-calcite, minor-moderate PO-SPH, trace-minor CPY; wall rock contains scarce weakly magnetic dark blue-gray patches (very fine intermixed MT).

82.26 - 82.51: Chlorite-rich cross cutting vein-like alteration zone (or interpillow material); some quartz aggregates; disseminated minor to abundant <1 mm-sized pale reddish gray, weakly magnetic, mineral (cobaltite) with perfect square cross-sections; some of this mineral in surrounding wall rock as well.

83.6 - 84.9: Mottled pale gray-pale green, murky; gradational upper contact; very little sulphides; rock has probably been affected by underlying mafic intrusive.

84.90 107.84 MAFIC INTRUSIVE DYKE:

Massive, fairly homogeneous, medium gray to mottled medium gray-dark green; chloritized; essentially medium-grained, aphanitic-very fine-grained chill margins; 1-2 mm-sized dark green PX; occasionally trace disseminated PO; most of medium-grained rock is moderately magnetic - disseminated MT; 3-7 serpentine (occasionally up to almost 1 mm wide), with or without calcite/platy PY, rare SPH, coated joints/fractures per metre at 25-60 degrees to C/A, occasionally at 15-20 degrees to C/A; about 10 calcite-chlorite/serpentine-epidote, rare SPH/CPY, stringers-veinlets at 30-50 degrees to C/A in interval; scarce up to 2 mm-sized calcite-chlorite/serpentine spots/aggregates; sharp barely perceptible upper contact at 59 degrees to C/A; fairly sharp slightly brecciated lower contact at 55 degrees to C/A.

91.56: 3 mm wide calcite-serpentine, abundant SPH, trace GN, veinlet at 45 degrees to C/A. 93.66 - 93.98: ~5 mm wide serpentine-calcite veinlet curving from 170 degrees to 10 degrees to C/A; trace SPH in veinlet and adjacent wall rock.

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HOLE #: **COB-19** Sample # From To Width From To Lithological Description 94.22: 4 mm wide serpentine veinlet at 32 degrees to C/A. 95.9 - 96.7: Badly broken core: serpentine coated fracture surfaces, minor calcite stringers, minor hematitization; fractures at 0-35 degrees to C/A; wall rock is moderately serpentinized. 96.77 - 97.01: Minor breccia; matrix stringers-veinlets composed of calcite, minor quartz; minor hematitization; several fine fractures; wall rock is strongly carbonatized and serpentinized. 97.39 - 98.25: Six 1-3 mm wide serpentine, calcite margins, rare PY, veinlets at 17-52 degrees to C/A; set of three calcite, minor epidote, gash veinlets at 132-143 (37-48) degrees to C/A; wall rock is locally carbonatized-serpentinized, local minor disseminated PY. 102.78 - 104.05: Set of eight, up to 1 mm wide, serpentine, trace PY, coated joints/fractures at ~30-35 degrees to C/A. 106.04 - 107.0: Nine, up to 2 mm wide, serpentine coated joints/fractures at 55-65 degrees and ~20 degrees to C/A; most have minor-moderate platy PY. 106.96 - 107.08: Broken core; includes one 2 mm wide calcite, minor epidote, moderate SPH, trace GN, veinlet at 46 degrees to C/A; veinlet is trunated by an at least 4 mm wide serpentine veinlet. 107.08 - 107.84: Fracture zone; numerous serpentine coated fractures at 40-55 degrees and 120-145 (35-60) degrees to C/A. 107.79 - 107.93: At least 2 mm wide serpentine, minor calcite, coated joint/fracture at 17 degrees to C/A; includes a remnant of an at least 2 mm wide semi-massive PY veinlet. PILLOWED MAFIC VOLCANICS: 107.93 149.84 Continuation of preceding pillowed mafic volcanics (45.71 - 84.9); although quartz-epidote aggregates-pillow selvages-interpillow material are just as abundant there is much less PO-CPY, rareminor SPH; occasional calcite or PO-rich stringers; 2-5 serpentine, occasional calcite/platy PY,

coated joints/fractures per metre at 45-70 degrees and 15-35 degrees to C/A.

107.93 - 108.75: Mottled pale gray-pale green, murky; gradational lower contact; rock has probably been affected by overlying mafic intrusive.

108.84: 14 mm wide pale pink to yellow-green feldspar-epidote-quartz, minor intermixed SPH(?), vein at 32 degrees to C/A; truncated by a 15 mm wide poorly developed shear/deformation zone at 149 (31) degrees to C/A.

HOLE #: **COB-19** Sample # From To Width From Τo Lithological Description 110.62: Serpentine, trace GN, coated fracture at 15 degrees to C/A. 112.03 - 112.9: Set of at least seven, up to 1 mm wide, calcite, minor SPH-GN-PY, trace CPY, stringers at 45-70 degrees to C/A. 113.16 - 114.15: Irregular, up to 10 cm-sized, guartz-epidote-chlorite-minor calcite, minor-abundant PO-SPH, minor CPY, aggregates-veinlets-veins. 116.85 - 117.1: 2 mm wide guartz-minor serpentine-epidote, trace calcite, minor CPY-PO, veinlet at 8 degrees to C/A. 117.7: 1 mm wide calcite-quartz-serpentine, moderate PY, veinlet at 46 degrees to C/A. 118.12 - 118.62: Four pillow selvages-interpillow material; quartz-epidote-chlorite-minor calcite, minor PO-CPY. 119.91 - 120.2: Up to 4 cm wide quartz-epidote vein-like aggregate at ~25 degrees to C/A; cross cut by a few calcite-rich gash veins also at ~25 degrees to C/A; trace PO; underlying rock is moderately foliated at ~32 degrees to C/A. 121.17: Serpentine-calcite, abundant PY, coated joint/fracture at 74 degrees to C/A. 121.75: 2 mm wide calcite, rare SPH, veinlet at 50 degrees to C/A. 123.42 - 123.76: Set of four, up to 3 mm wide, serpentine, minor calcite-trace CPY, coated fractures at 25-40 degrees to C/A. 126.71: End of core piece; irregular epidote matrix stringer with minor GN, trace CPY; no GN on surface of core. 126.96: Up to 1 cm wide zone along margin of a quartz-epidote-minor calcite aggregate; moderate PY-CPY. 126.96 - 127.11: 4 mm wide serpentine-calcite, minor platy PY, trace CPY, veinlet at 18 degrees to 128.0: A few cm of broken core; fragments of an at least 4 mm wide calcite-quartz-serpentine veinlet; probably at 41 degrees to C/A; barren. 128.99: Slip plane at 76 degrees to C/A; serpentinized, minor CPY-PO-SPH. 129.28: Slip plane at 73 degrees to C/A; trace PO. 129.43 - 129.5: Two, almost 1 mm wide, calcite-serpentine margins, minor SPH-PO-CPY, stringers at 43 and 46 degrees to C/A. 131.33: Serpentine-calcite, abundant PO-moderate CPY, coated fracture at 34 degrees to C/A; marks the upper contact of a 10 cm long epidote-quartz, minor calcite, trace PO, aggregate; gradational lower contact.

HOLE #:		COB-19					į
From	То	Lithological Description	Sample #	From	То	Width	
-	-	131.58 - 131.71: Epidote-quartz-minor calcite, trace CPY-PO, aggregate; gradational upper contact; sharp lower contact marked by a serpentine stringer at 37 degrees to C/A; aggregate cross cut by a serpentine, minor almost 1 mm wide PY aggregate, coated fracture at 58 degrees to C/A.	-	-		-	
		131.72 - 132.49: Essentially matrix supported breccia - very fine-grained epidote-quartz matrix; cross cut by about 12 serpentine, occasional platy PY, coated joints/fractures at 45-70 degrees to C/A.					
		132.5 - 164.0: 2-5 calcite stringers-veinlets-veins per metre; most at 30-60 degrees to C/A; majority are barren or have minor PO.					
		134.06 - 134.16: ~2.5 cm wide calcite, minor quartz-serpentine, vein at 33 degrees to C/A; barren; cored by a 1 mm wide serpentine stringer also at 33 degrees to C/A.					
		134.76 - 135.4: Abundant quartz-epidote-moderate calcite aggregates with occasional up to 2 cm long semi-massive PO-CPY aggregates, minor SPH; also discontinuous quartz-epidote stringers-veinlets with trace-moderate PO-CPY-SPH.					
		135.75: 5 mm wide calcite-quartz-minor serpentine, minor PO-CPY, vein at 48 degrees to C/A.					
		136.0 - 164.0: Only minor very fine-grained quartz, quartz-epidote, aggregates - occur as irregular discontinuous stringers-veins, still with variable PO-CPY-SPH; fairly abundant calcite veining - local minor breccia with calcite stringers-veins as matrix, occasional trace to minor PO-CPY-SPH.					
		136.0: 1 mm wide calcite, minor CPY-SPH-GN, veinlet at 52 degrees to C/A.					
		137.8 - 138.2: Serpentine, minor platy PY, coated joint/fracture at 0-20 degrees to C/A.					
		138.25 - 138.68: ~20 cm long breccia; angular fragments up to 2 cm long, calcite matrix - minor SPH-PO; 22 cm long calcite-quartz-epidote, minor intermixed SPH, vein-like aggregate/interpillow material; 3x4 cm-sized calcite, minor quartz-epidote, trace PO-SPH aggregate.					
		139.11: Calcite-serpentine, moderate PY, trace PO, stringer at 66 degrees to C/A.					
		139.32 - 139.4: 6 mm wide dissagregated calcite-quartz-epidote-minor orange feldspar, trace PO-CPY, vein at 15 degrees to C/A.					
		140.0 - 142.4: Fracture-fault zone: moderately to intensely fractured rock; numerous					
		serpentine/calcite coated fractures and calcite, minor quartz-feldspar, stringers-veins (up to 1 cm wide veins); trace-minor PO-CPY-SPH; most calcite veins parallel or at a low angle to C/A; local					
		abundant pale brown silicification with numerous calcite filled fractures; gradational contacts.					

HOLE#:		COB-19				
From	То	Lithological Description	Sample #	From	То	Width
-	•	141.86 - 142.11: 1.5 cm wide mud seam at ~15 degrees to C/A. 142.11 - 142.75: Mafic lapilli tuff; up to 4 cm-sized angular-sub-angular dark green fragments in a slightly paler green matrix; fragments are matrix supported; lower contact marked by a serpentine coated fracture at ~15 degrees to C/A. 142.4 - 144.25: Serpentine coated factures every 10-15 cm (or less) at 0-30 degrees and 50-60 degrees to C/A. 147.48 - 147.9: Abundant calcite - in part breccia with cm wide calcite matrix; trace-minor PO, trace	-	-		-
		CPY; local pale brown-green weakly carbonatized wall rock. 148.04 - 148.47: Irregular quartz/feldspar-epidote-chlorite-calcite matrix veinlet roughly parallel to C/A, abundant PO; calcite-rich matrix material with 2 cm-sized aggregate of semi-massive PO-trace CPY.				
		148.5 - 149.31: Pale green carbonatized patches; no more calcite veining than elsewhere.				
149.84	150.00	149.84 - 150.0: MAFIC INTRUSIVE DYKELET: Massive, medium gray; fine-grained; sharp upper contact at 59 degrees to C/A; sharp lower contact at 56 degrees to C/A.				
150.00	164.00	PILLOWED MAFIC VOLCANICS: Continuation of preceding pillowed mafic volcanics (107.93 - 149.84) 149.94 - 150.63: Set of four major, up to 1 cm wide, calcite veins at 10-25 degrees to C/A; also several stringers-veinlets and breccia with calcite matrix; trace PO-CPY; a few 1-3 mm-sized GN grains at 150.14; one vein cross cuts contact between volcanics and above dykelet; wall rock is pale green (appears to be bleached) and carbonatized. 151.01: Serpentine, abundant PO-moderate CPY, coated fracture at 71 degrees to C/A. 151.23 - 151.33: ~1 cm wide calcite, minor quartz-chlorite, abundant PO, minor CPY, vein at 22 degrees to C/A; minor disseminated PO in wall rock. 151.69: 3 mm wide calcite-serpentine, minor PO-CPY, veinlet at 56 degrees to C/A. 152.52 - 153.28: Abundant calcite, minor quartz-orange feldspar, stringers-veins; ~35 cm long section of breccia with calcite matrix and up to 5 cm-sized fragments; trace PO-CPY-SPH; pale brown-green strongly carbonatized wall rock. 154.26: ~2 mm wide calcite, moderate PO-CPY, veinlet at 63 degrees to C/A.				

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Τo

Lithological Description

154.43 - 154.76: Serpentine, minor quartz-calcite, abundant PO-trace CPY, coated fracture over 23 cm at 10 degrees to C/A; ~25 cm long section with several quartz-epidote-calcite, minor PO-trace CPY, stringers-veinlets cross cut by and cross cutting calcite, minor PO, veinlets.

155.24: 1 cm wide deformation/breccia band; mm-sized fragments in epidote matrix; at 25 degrees to C/A.

155.91 - 158.5: Abundant, up to 15 cm long, pale brown-green "patches" of strongly carbonatized wall rock; not necessarily related to any calcite stringers-veins.

156.98 - 157.64: Pillow breccia - chlorite-rich matrix, cross cut by a few calcite, minor PO, veinlets; includes a 23 cm long section of pale reddish brown completely silicified-carbonatized rock with gradational contacts; contains tiny, slender needles/prisms of a bright shiny metallic silver-gray unidentified mineral, also minor-moderate PO-SPH-CPY; cross cut by a few calcite-rich, minor-moderate SPH-PO-CPY, trace GN, veinlets at 50-60 degrees to C/A; at 157.62 have ~2 cm wide epidotized pillow margin cross cut by several fractures-calcite stringers with abundant SPH-PO and very fine medium gray metallic unidentified mineral; fractures-stringers at 45 degrees to C/A.

158.34: 2 cm wide wedge shaped calcite, minor chlorite/serpentine, abundant PO-minor CPY, gash vein/aggregate; fairly abundant set of calcite, trace PO-CPY, gash veins in overlying rock.

158.74: 1 cm wide pillow selvage; moderate calcite-PO, minor CPY.

158.96 - 159.12: Minor breccia; discontinuous calcite, trace PO-CPY, matrix veinlets.

159.76 - 160.41: Partial breccia with epidote matrix, minor up to 1 cm wide calcite, trace PO-CPY, aggregates; one 1 mm wide calcite-serpentine, abundant PY, veinlet at 34 degrees to C/A; one at least 3 cm wide epidotized pillow selvage, abundant nearly semi-massive PO, trace CPY; one irregular 5 mm wide quartz-chlorite-minor calcite, moderate intermixed SPH, minor PO-CPY, vein at 12 degrees to C/A.

160.71 - 162.0: Seven pillow selvages; epidotized, minor-moderate calcite-PO, trace-minor CPY, local minor SPH.

MAFIC INTRUSIVE DYKELET:

Massive, medium gray, fine-grained; strongly carbonatized; cross cut by four calcite stringers; sharp upper contact at 52 degrees to C/A; sharp lower contact at 42 degrees to C/A.

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PILLOWED MAFIC VOLCANICS:

Continuation of preceding pillowed mafic volcanics.

162.56 - 162.84: 3 mm wide calcite, minor SPH, trace CPY, veinlet at 20 degrees to C/A; also a few other discontinuous calcite-quartz/feldspar-epidote, minor PO-CPY-SPH, stringers-veinlets.

163.04: 2 mm wide calcite, trace PO-SPH, veinlet at 42 degrees to C/A.

163.78 - 163.97: One irregular discontinuous bifurcating, up to 1.5 cm wide, coarse calcite, minor quartz/feldspar-epidote, trace PO-CPY, vein/aggregate at ~62 degrees to C/A; one up to 4 cm wide coarse calcite, minor quartz-epidote-orange feldspar-wall rock fragments, minor PO-CPY-SPH, vein at 65 degrees to C/A; gradational contacts over a few mm; vein also contains minor amount of a shiny 1-2 mm-sized metallic gray unidentified mineral - good cleavage, non-magnetic.

To

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APPENDIX II

(Drill Hole X-Sections)

