Cabo Mining Corp.

Cobalt Area Project Pan Lake Grid - Lorrain Township

Drill Hole Logs

Holes CC-19, 20, 21, 22 & 23



LORRAIN

31M05SE2050 2.24740

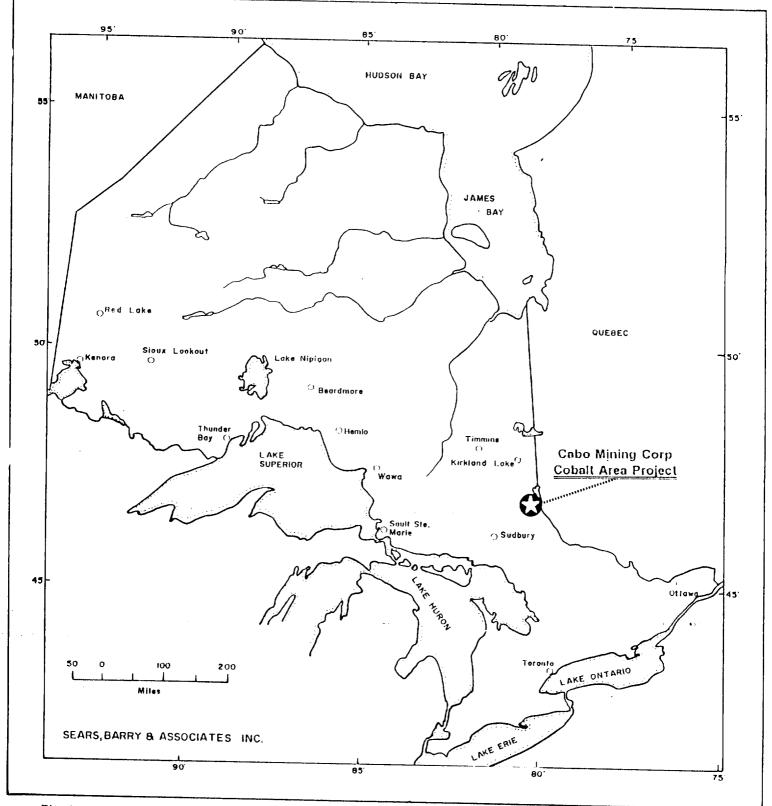


Fig. I: Regional Location Map of Ontario.

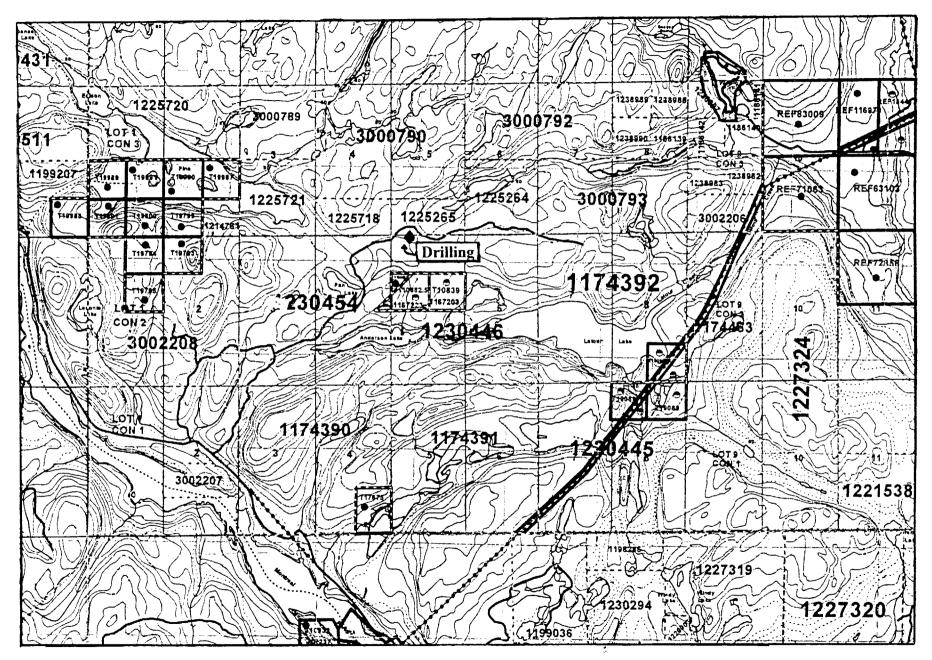
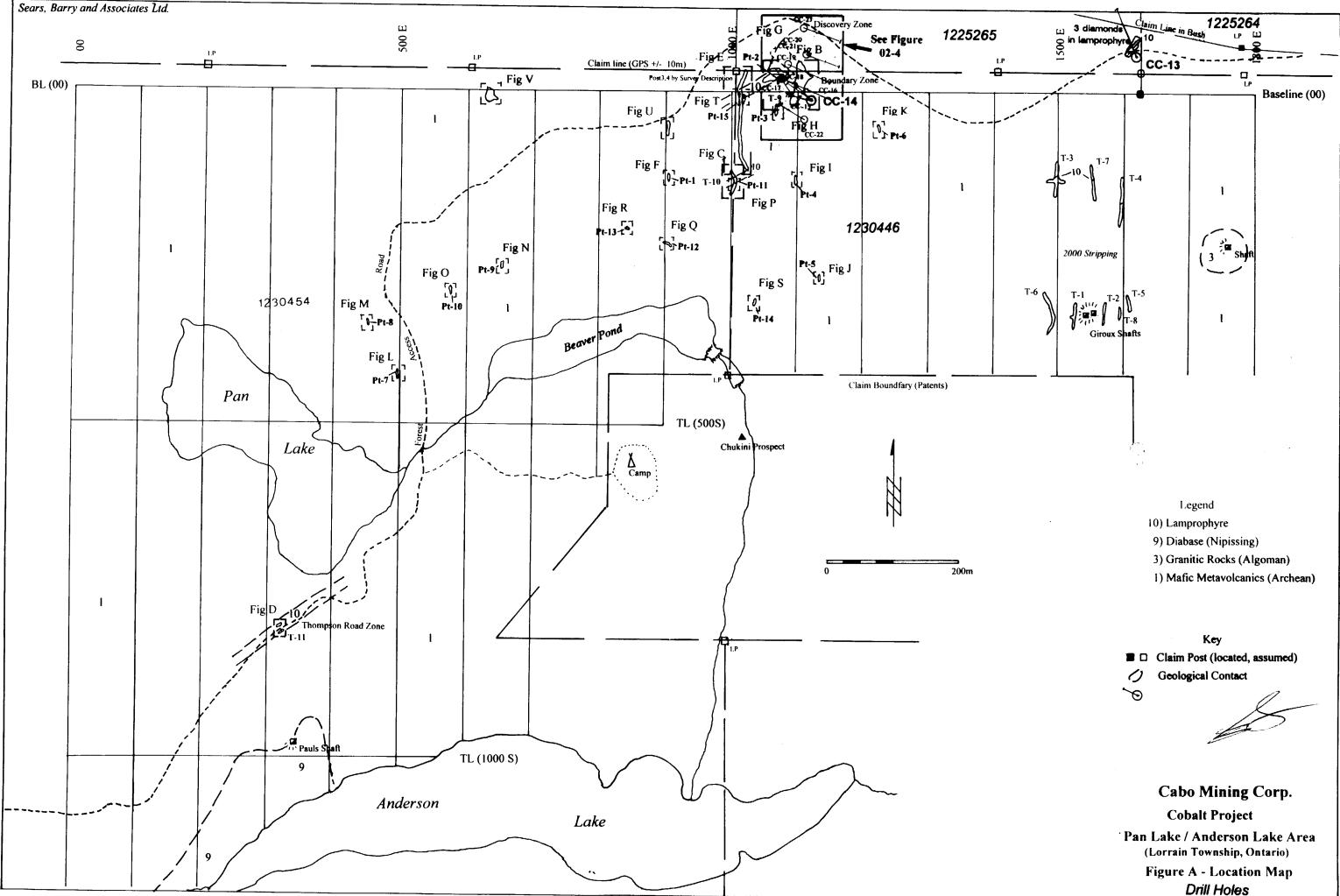
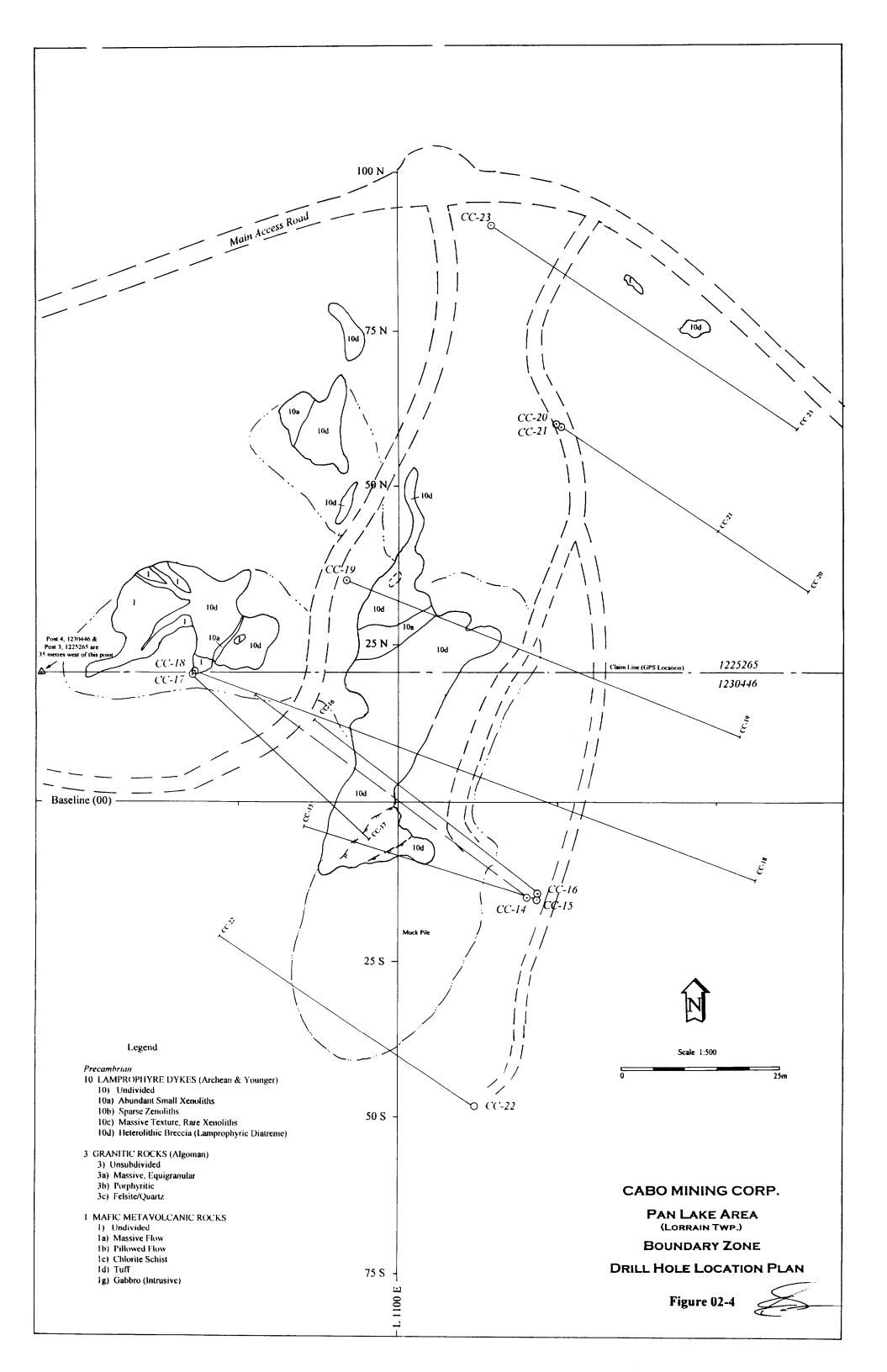


Figure 2: Claim sketch of south part of Lorrain Township, Cobalt Area, Ontario, showing drill hole locations Cabo Mining Corp.



Drill Holes



DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC19 Collar Eastings: 1092.00 Collar Northings: 35.00 Collar Elevation: 350.00 Grid: Pan-Anderson Claim# 1225265 & 1230446

Collar Inclination: -45.00 Grid Bearing: 112.00 Final Depth: 94.00 metres NQ Core

Logged by: S. Sears (22-29 Nov) Date: 21 - 28 Nov 2002 Down-hole Survey: acid Drilled by Heath & Sherwood

TROM				ASSAYS	
FROM	TO	LITHOLOGICAL DESCRIPTION	FROM	TO	WIDTH
0	2.0	OVERBURDEN (Casing to 4.0 m)	0.00	0.00	0.00
2.0	5.5	DIATREME BRECCIA: Biotite lamprophyre makes up from 30 - 90% of zone, primarily as matrix; zone has hypabyssal appearance locally when lamprophyre dominates; xenoliths and fragments are generally granitic although often nearly digested in the lower part; a 10 cm lamprophyre? boulder occurs at 4.7 m; dark grey-greenish black, with orange to grey granite fragments, layering (stretching lineation) at 35 - 38 degrees to the C/A			
5.5	7.0	MAFIC DYKE: Fine grained, generally equigranular with variable amount of biotite porphyrocrysts and 1 - 2% feldspar phenocrysts; dark grey, unfoliated, upper and lower contacts at 133 degrees to the C/A, oblique to the layering; a 1 - 3 cm orange felsic dykelet at 6.6m			
7.0	36.1	DIATREME BRECCIA: Biotite lamprophyre making up from 20 - 80% of zone; primarily as matrix; dark grey - green black with mainly grey to faint orange fragments and xenoliths;			

DIAMOND DRILL LOG

PROPE	ERTY:	Cobalt
HOLE	No.:	CC19

Page 2

FROM TO LITHOLOGICAL DESCRIPTION

fragments rounded to sub angular, consisting mostly of granitic material but including mafic volcanic and lamprophyre; local clasts contain coarse patches and stringers of pyrrhotite/pyrite; lower 3 meters contains scattered ultramafic fragments or unusual green lamprophyre lenses and includes occasional patches of pyrrhotite, pyrite and trace chalcopyrite; lower contact is gradational.

7.0 - 15.0: fragments in this section are generally quite small and are often faintly defined (metasomatized).

15.0 - 26.0: zone contains abundant massive lenses of relatively black lamprophyre and coarse biotite phenocrysts.

30.5 - 36.1 zone contains scattered large (up to 8 cm) rounded to sub angular fragments of coarse black granite, i.e. coarse white equigranular feldspar phenocrysts in a fine grained black matrix.

36.1 56.0 DIATREME BRECCIA:

Biotite lamprophyre is fine grained and from 20 - 80% of rock, while fragments are dominated by brick orange - red granitic material, but include mafic to ultramafic fragments including lamprophyre; rare massive sulphide (Po/Py) fragments; pyrite and pyrrhotite also occur in epidotized mafic and granitic fragments; fragments range from a few millimetres to in excess of 10 cm, but are generally small, rounded and

ASSAYS

FROM TO WIDTH

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC19

Page 3

FROM то LITHOLOGICAL DESCRIPTION

FROM	TO	WIDTH

ASSAYS

lineation from 40 - 50 degrees to the C/A, generally 45 degrees; locally deformed; local narrow granitic dykes oblique to the stretching lineation; scattered calcite +/epidote veinlets; overall zone has a dark grey-greenblack colour with brick orange fragments. 37.7 - 38.1: fault zone, badly broken rock, healed by epidote and calcite veinlets. 38.3 - 38.5: coarse biotite lamprophyre, unusual appearance, contacts broken. 39.5 - 40.0: fault zone, badly broken with calcareous gouge. 43.7 - 44.5: granite dyke, fine grained equigranular, contacts oblique to layering at 115 degrees to the C/A; dark coloured. 44.76 - 45.6: granite dyke as above (43.7 - 44.5). 45.6: Below this point zone has a silky sheen and pale 47.4 - 47.55: deformed zone, with 5% epidote and minor 47.55 - 49.1: deformed zone, stretching lineation is

sub angular, often having ragged edges; stretching

green colour possibly due to chlorite alteration or due to the composition of the matrix and some fragments in this area.

calcite veinlets.

missing except weakly apparent near bottom.

49.1 - 49.35: mafic dyke (possibly intermediate) fine grained equigranular, dark coloured, similar in appearance to the granite dyke above, but no obvious

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC19 Page 4 ASSAYS FROM TO LITHOLOGICAL DESCRIPTION FROM то WIDTH feldspar in hand specimen; contacts 120 degrees to C/A, oblique to layering, upper contact is irregular. 50.0: Sulphides occur more commonly below this point as stringers and patches within fragments (Py/Po). 56.0 66.5 DIATREME BRECCIA: Heterolithic; similar to above (36.1 - 56.0) except fragments are dominantly grey and larger in size; rock remains dark coloured, but lamprophyre becomes green in colour. 56.6 - 57.0: mafic dyke as above (49.1 - 49.35), contacts at 130 degrees to the C/A, oblique to layering and somewhat irregular. 66.5 70.2 GRANITE DYKE ZONE: Diatreme breccia as above (56.0 - 66.5) except contains greater than 50% granite dykes; granite dykes are medium to coarse grained, brick orange in colour; equigranular to porphyritic; dykes have irregular to very sharp contracts but generally are oblique to the layering (stretching lineation) at 40 - 135 degrees to the C/A; the breccia is at least 80% green coloured biotite lamprophyre. 66.5 - 67.08: granite, upper contact at 135 degrees, lower at 100 degrees to C/A. 68.0 - 68.2: granite, upper contact irregular at 40 degrees to C/A, lower sharp at 115 degrees to C/A. 68.4 - 69.5: granite, upper contact irregular at

.....

PROPERTY: C	obalt	DIAMOND DRILL LOG					
HOLE No.: C	C19				Page		
FROM TO	LITHOLOGICAL DESCRIPTION	FROM	ASSAYS TO	WIDTH			
	105 degrees to C/A, lower sharp at 110 degrees to C/A. 70.1 - 70.2: granite, upper and lower contacts at 125 degrees to C/A.						
70.2 94.0	<pre>DIATREME BRECCIA: 50 - 80% biotite lamprophyre with a greenish colour; heterolithic (granite, mafic volcanic, ultramafic (including lamprophyre); scattered calcite veinlets and deformed zones with calcite breccia matrix and hairline fracture fillings. 70.4 - 70.5: mafic dyke, fine grained equigranular, upper and lower contacts at 115 degrees to the C/A. 76.0: A 0.5 cm calcite veinlet, 112 degrees to C/A, at right angles to layering. 76.55: A 3 cm calcite veinlet, 115 degrees to C/A, oblique to layering. 76.95: A 1 cm calcite veinlet at 40 degrees to the C/A, oblique to layering. 78.35: A 0.5 cm calcite veinlet at 55 degrees to the C/A, sub parallel to layering. 79.5: Calcite veinlet, less than 0.5 cm at 52 degrees to C/A, sub parallel to layering. 82.6: A 1 cm calcite and quartz veinlet at 47 degrees to C/A, sub parallel to layering. 84.0 - 87.5: Abundant calcite veinlets through this zone at various orientations to the core axis. 85.5 - 91.0: Zone contains abundant brick orange granitic clasts.</pre>						

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC19

.

FROM

Page 6

то

LITHOLOGICAL DESCRIPTION

86.0 - 86.3: Deformed zone with 10% calcite filled fractures.

87.0 - 86.3: Greenish lamprophyre with coarse biotite porphyroblasts.

87.2 - 87.55: Deformed zone with 10% calcite filled fractures.

88.15 - 88.3: Pyroxenite boulder.

88.3 - 88.5: Greenish lamprophyre with coarse biotite porphyroblasts.

89.4 - 89.5: Deformed zone with 10% calcite veinlets at 40 degrees to C/A.

90.2: A 3 cm calcite and quartz veinlet at 40 degrees to C/A, sub parallel to the layering.

90.6 - 90.7: Deformed zone with 20% calcite.

90.7 - 94.0: Abundant calcite veinlets through this zone at various orientations to the core axis.

94.0 END OF HOLE

ASSAYS FROM то WIDTH

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC20 Collar Eastings: 1126.00 Collar Northings: 60.00 Collar Elevation: 344.00 Grid: Pan-Anderson Claim# 1225265

Collar Inclination: -45.00 Grid Bearing: 123.00 Final Depth: 66.00 metres NQ Core

Logged by: S. Sears (30 Nov) Date: 28 - 29 Nov 2002 Down-hole Survey: acid Drilled by Heath & Sherwood

ASSAYS FROM TO LITHOLOGICAL DESCRIPTION FROM TO WIDTH

- 0 4.3 OVERBURDEN
- 4.3 9.9 DIATREME BRECCIA:

Heterolithic, including granite (brick orange and grey felsite to coarse grained), mafic volcanic, lamprophyre; lamprophyre makes up 30 - 80% of zone as fragments, lenses and matrix; fragments generally small, rounded to sub-angular and highly stretched; stretching lineation from 35 - 45 degrees to the C/A, averaging 40 degrees; quantity of brick red fragments increase with increasing depth.

9.9 11.6 INTERMEDIATE DYKE:

Intermediate to mafic margins with a brick orange pegmatitic granite dyke in the middle; equigranular, fine grained, reddish feldspar phenocrysts; upper and lower contacts at 130 degrees to C/A, oblique to layering; 10.3 - 10.6: Brick orange pegmatite dyke with a lamprophyre inclusion (5 cm X 3 cm); upper contact irregular from 115 - 130 degrees to C/A; lower at 140 degrees to C/A.

FROM	TO	WIDTH
0.00	0.00	0.00

DIAMOND DRILL LOG

OLE .	No.: C(Page
FROM	то	LITHOLOGICAL DESCRIPTION	 FROM	ASSAYS TO	WIDTH	
L.6	14.0	FAULT ZONE: Highly deformed, fractured at low angle to the C/A; includes lamprophyre, diatreme breccia, narrow brick orange granite dykelets (one up to 7 cm wide) and calcite veinlets and breccia cement.				
. 0	39.5	<pre>DIATREME BRECCIA: As above (4.3 - 9.9) Fragments have distinct reaction rims and many are partially digested (assimilated); local sulphides including Py, Po and trace Cpy; generally dark coloured; scattered very narrow calcite veinlets; lamprophyre has a greenish colour although it is biotite porphyritic. 26.6: Calcite + felsite veinlet with pyrite; 41 degrees to C/A, sub-parallel to layering. 28.0: A 3 cm brick orange granite dykelet at 115 degrees to C/A, oblique to layering. 29.6: A 2 cm brick orange granite dykelet at 123 degrees to C/A, oblique to layering. 35.9 - 36.6: Granite, brick orange, medium to coarse grained, equigranular to</pre>				

DIAMOND DRILL LOG

PROPI	ERTY:	Cobalt	
HOLE	No.:	CC20	

Page 3

				ASSAYS	
FROM	TO	LITHOLOGICAL DESCRIPTION	FROM	TO	WIDTH
		porphyritic; upper and lower contacts at			
		102 degrees to the C/A. oblique to layering.			
		36.3 - 36.9: Badly broken core; possibly			
		a fault, more likely drill induced.			
		36.9 - 38.2: Intermediate dyke, dark			
		coloured, feldspar is brick orange; fine			
		grained, equigranular, upper contact broken, lower contact at 117 degrees to			
		the C/A, oblique to layering.			
9.5	42.0	INTERMEDIATE DYKE:			
		Fine grained, equigranular; dark coloured			
		massive texture, badly jointed			
		(7 - 8 per metre); upper contact irregular from 50 - 90 degrees to the			
		C/A; lower sharp at 52 degrees to the			
		C/A, sub-parallel to layering;			
		moderately magnetic (disseminated			
		pyrrhotite).			
2.0	52.4	DIATREME BRECCIA:			
		Same as above (14.0 - 39.5) except			
		very few brick red fragments.			
		43.2 - 43.5: An orange granite dyke; coarse grained to porphyritic; upper			
		contact irregular from 90 - 110 degrees			
		to the C/A; lower contact chilled,			

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC20

Page 4

FROM	T O			1	ASSAYS		
FROM	TO	LITHOLOGICAL DESCRIPTION	FROM		то	WIDTH	
		sharp at 145 degrees to the C/A, both					
		oblique to layering.					
		45.8 - 46.3: Mafic to intermediate dyke,					
		contacts broken but appear 100 - 120					
		degrees to the C/A oblique to layering;					
		upper contact vague; fine grained,					
		equigranular; dark coloured.					
		51.5 - 52.4: Orange granite dyke,					
		coarse grained, quartz porphyritic to					
		equigranular; upper contact broken, lower at 100 degrees to the C/A;					
		includes an inclusion of diatreme					
		breccia from 52.1 - 52.3.					
52.4	63.0	MAFIC TO INTERMEDIATE DYKE:					
		Fine grained equigranular, badly					
		jointed; dark coloured; 1 - 2%					
		disseminated pyrite as patches and					
		grains; massive texture.					
		63.0 E.O.H.					

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC21 Collar Eastings: 1127.00 Collar Northings: 60.00 Collar Elevation: 344.00 Grid: Pan-Anderson Claim# 1225265

Collar Inclination: -71.00 Grid Bearing: 123.00 Final Depth: 93.00 metres NQ Core Logged by: S. Sears (1 Dec) Date: 29 - 30 Nov 2002 Down-hole Survey: acid Drilled by Heath & Sherwood

				ASSAYS	
FROM	TO	LITHOLOGICAL DESCRIPTION	FROM	то	WIDTH
0	4.3	OVERBURDEN (Casing left in place)	0.00	0.00	0.00

4.3 93.0 DIATREME BRECCIA:

Brick orange-red granitic fragments dominate; others include mafic volcanic, grey felsite & coarse grained granite and lamprophyre. Lamprophyre makes up from 30 - 80% of zone as fragments, matrix, lenses and massive bands; fragments are relatively small with a large percentage less than 1 cm; coarser fragments are cemented by a stream of lamprophyre and small fragments; lamprophyre is biotite porphyritic and dark grey-green-black in upper part becoming notably green coloured with increasing depth; strong fabric (stretching lineation) from 18 - 24 degrees to the C/A, locally deformed; scattered calcite +/- epidote stringers; occasional granitic and intermediate dykes; local zones have sulphide patches, usually within fragments but

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC21

_ _ _ _ _ _ _ _ _ _

FROM

Page 2

ASSAYS то LITHOLOGICAL DESCRIPTION FROM то WIDTH sometimes as disseminated patches; includes Py, Po, and Cpy. 8.3 - 9.9: Intermediate dyke, fine grained equigranular, light grey feldspar; chloritized, massive texture, contacts 95 - 100 degrees to the C/A. 9.9 - 10.0: Brick orange granite dykelet, coarse grained, 95 degrees to the C/A. 11.5: A 6 cm wide coarse grained lamprophyre with calcite veinlet developed sub-parallel to layering, 15 degrees to the C/A. 14.8 - 15.0: Intermediate dyke, fine grained, equigranular, red coloured feldspar phenocrysts; upper contact 112 degrees to the C/A, lower contact vague. 15.5: Several small lenses of massive sulphide (Cpy, Po) in this area (<1% of rock). 23.3 - 27.0: Zone is greater than 80% lamprophyre; xenoliths are highly assimilated; upper contact relatively sharp, lower gradational. 28.2: A 3 cm orange granite dykelet, 85 degrees to C/A, oblique to layering; coarse grained.

ASSAYS

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC21

FROM

1	то	LITHOLOGICAL DESCRIPTION	FROM	то	WIDTH
		29.15 - 29.5: Orange granite dyke, coarse			
		grained, equigranular to quartz			
		porphyritic; upper contact irregular and			
		jagged, lower at 95 degrees to the C/A,			
		oblique to layering.			
		31.4 - 32.0: Intermediate dyke, fine			
		grained equigranular; reddish orange			
		feldspar phenocrysts, dirty brown			
		appearance; upper contact at 63 degrees			
		to C/A, oblique to layering, lower			
		contact irregular and 45 degrees to C/A			
		oblique to layering.			
		34.6 - 35.3: Intermediate dyke badly			
		"rotted" (altered), fine grained			
		equigranular, with a 10 cm orange granite			
		dyke in the upper middle (34.8 - 34.9);			
		upper contact at 60 degrees to C/A, lower			
		at 68 degrees to C/A; medium to light			
		grey.			
		37.05 - 37.4: Intermediate dyke as			
		above (31.4 - 32.0), fine grained			
		equigranular, faintly orange feldspar			
		phenocrysts; upper contact at 68 degrees			
		to the C/A, lower at 90 degrees,			
		irregular.			
		37.6 - 37.7: Intermediate dyke as above			

37.6 - 37.7: Intermediate dyke as above (37.05 - 37.4), uper contact subparallel to layering 20 - 35 degrees to C/A;

Page 3

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC21

Page 4

FROM TO

LITHOLOGICAL DESCRIPTION

ASSAYS FROM TO WIDTH

lower at 85 degrees to C/A. 37.7 - 39.0: Deformed zone, layering disrupted. 39.0 - 40.0: Dark coloured (greenish black) overall with orange fragments. 40.0 - 40.7: Intermediate dyke, as above (37.6 - 37.7); fine grained, equigranular, upper contact at 75 degrees to C/A, lower very irregular, both oblique to the layering. 42.0 - 45.2: Biotite lamprophyre makes up 80 - 90% of zone, very tough to break, contact vague. 45.2 - 50.0: Matrix of breccia is a fine grained mafic material but very rare to no biotite phenocrysts. 48.7 - 48.82: Orange granite dyke, coarse grained, upper contact irregular but clearly defined, lower vague, and invading into fracture. 48.95: Narrow irregular orange granite dykelet. 49.3 - 49.4: Orange granite dyke, same as above and probably related (48.7 - 48.82). 49.5 - 51.3: Intermediate dyke; fine grained, equigranular, dark coloured;

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC21

Page 5

FROM TO LITHOLOGICAL DESCRIPTION

faint orange to grey feldspar; upper contact broken, lower at 80 - 85 degrees to C/A oblique to layering. 52.8: A 3 cm mafic dyke, vague contacts 95 - 100 degrees to C/A. 52.95: A 3 cm mafic dyke as above, fine grained, 92 - 95 degrees to the C/A. 53.3 - 57.0: Mafic to intermediate dyke, fine grained equigranular, includes abundant xenoliths of the diatreme breccia in local zones; possibly a fine grained phase of lamprophyre, no obvious biotite phenocrysts, contacts somewhat vague 50 - 60 degrees to C/A, oblique to layering. 72.5 - 76.0: 70 - 80% of this zone is

mafic volcanic or fine grained mafic intrusive with scattered lamprophyre layers (probably fracture fillings). 77.2 - 77.65: Orange felsite dyke; possible contact or fault metamorphic phenomenon; includes 25% fault gouge and calcite veining; upper and lower contacts vague.

77.65 - 78.2: Intermediate dyke, fine grained equigranular, orange feldspar phenocrysts, dark coloured, massive appearance, lower contact vague ASSAYS

FROM TO WIDTH

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC21

Page 6

FROM TO LITHOLOGICAL DESCRIPTION

85 - 95 degrees to C/A, dark grey. 81.45 - 82.25: Intermediate dyke as above (77.65 - 78.2) except slightly brown in colour; upper and lower contacts at 30 degrees to C/A, subparallel and gradational into surrounding breccia; includes an irregular quartz-calcite veinlet with massive pyrite at 81.5. 82.45 - 82.85: Intermediate to mafic dyke, fine grained, equigranular; upper and lower contacts sharp at 84 - 85 degrees to the C/A; brown colour. 82.98: A 4 cm brown, mafic to intermediate dyke as above (82.45 - 82.85), 85 - 95 degrees to C/A, sharp contacts. 84.25 - 84.55: Mafic to intermediate dyke, as above (82.45 - 82.85), brown coloured; 85 degrees to C/A. 85.0 - 87.15: Mafic to inmtermediate dyke, similar to above (84.25 - 84.55); upper contact 80 degres to C/A, lower marked by an orange felsite dykelet, 3 - 4 cm wide, broken. 86.65 - 87.15: Brown mafic to intermediate dyke as above (85.0 - 87.15); upper contact irregular

ASSAYS

FROM TO WIDTH

_ _ _

FROM

ASSAYS

WIDTH

то

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC21

Page 7

FROM TO LITHOLOGICAL DESCRIPTION

from 70 - 85 degrees to C/A, lower at 75 - 80 degrees to C/A, oblique to layering. 91.1 - 91.5: Mafic to intermediate dyke as above (86.65 - 87.15): slightly greyish in colour; upper contacts at 65 degrees to C/A, lower at 85 degrees to C/A.

93.0 E.O.H.



DIAMOND DRILL LOG

\$

PROPERTY: Cobalt HOLE No.: CC22 Collar Eastings: 1112.00 Collar Northings: -48.00 Collar Elevation: 340.00 Grid: Pan-Anderson Claim# 1230446

Collar Inclination: -45.00 Grid Bearing: 304.00 Final Depth: 68.00 metres NQ Core Logged by: S. Sears (3 Dec) Date: 1 - 2 Dec 2002 Down-hole Survey: acid Drilled by Heath & Sherwood

					ASSAYS	
FROM	то	LITHOLOGICAL DESCRIPTION	FF	NOM	то	WIDTH
			-			
0	6.7	OVERBURDEN	0.	00	0.00	0.00
6.7	7.2	MAFIC TO ULTRAMAFIC DYKE: Very little orange feldspar; dark grey green colour; 5% calcite veinlets and fracture filling; lower contact vague; rock is soft and badly weathered.				
7.2	9.9	DIATREME BRECCIA: Dark grey green with orange granitic fragments; badly deformed and fractured with 3% calcite filled fractures and veinlets; lower contact broken; 30 - 50% biotite lamprophyre. 8.1 - 8.3: Orange granite dyke, coarse grained, upper contact at 123 degrees to C/A, lower at 85 - 90 degrees to C/A. 8.4 - 8.5: Two orange granite dykelets with inclusion of diatreme breccia; contacts irregular, upper at 110 degrees, lower at 130 degrees to C/A.				
9.9	11.2	MAFIC DYKE: Similar to above (6.7 - 7.2) except				

DIAMOND DRILL LOG

.

.

PROPER HOLE N			Page
FROM	то	LITHOLOGICAL DESCRIPTION	ASSAYS FROM TO WIDTH
		<pre>grained mafic rock from 23.5 to 23.9 metres; locally contain up to 5% calcite stringers and veinlets. 24.2 - 25.35: Ultramafic dyke, possibly an unusual lamprophyre; fine to medium grained matrix with scattered ultramafic xenoliths, often nearly completely assimilated; contacts sub-parallel but low angle to layering; some small invasive lenses of this material in the overlying 0.3 metres. 25.35 - 36.0: Diatreme Breccia; 50 - 90% lamprophyre; lamprophyre is biotite porphyritic and contains abundant small, rounded, highly assimilated xenoliths; xenoliths range from ultramafic to felsic; occasionally xenoliths contain pyrite and/or chalcopyrite; fragments are mafic to felsic; greenish grey colour. 33.05 - 33.4: Calcite vein zone; includes about 20 cm of calcite cemented breccia; calcite contains up to 2% galena as well as trace of pyrite and chalcopyrite. 36.0 - 38.4: Diatreme breccia as above (25.35 - 36.0) except contains 80% fragments including mafic volcanic, granite; lamprophyre material and lenses is similar to above, i.e. bearing abundant small xenoliths; greenish grey colour.</pre>	:

-

*

DIAMOND	DRILL	LOG

PROPERTY: Cobalt HOLE No.: CC22			Pa	age 4
FROM	то	LITHOLOGICAL DESCRIPTION	ASSAYS FROM TO WIDTH	
		38.4 - 45.9: Diatreme breccia as above (25.35 - 36.0); abundant xenoliths coarse fragments make up less than 10% of zone; many of the xenoliths within the biotite lamprophyre are now chlorite; abundant calcite as hairline fracture filling and narrow veinlets; lower contact at 25 degrees to the C/A. 43.2: A 4 cm X 2 cm fragment with massive magnetite bands (< 1 cm), possible chert-mag I.F. 44.3 - 45.0: Intermediate dyke; fine grained, equigranular, chloritized; low angle to C/A, contacts from 160 - 170 degrees to the C/A, oblique to layering; layering 40 - 50 degrees to C/A.	i.	
45.9	53.4	MAFIC METAVOLCANIC: Massive to pillowed flows, fine grained dark grey green, locally epidotized; amygdaloidal (quartz and feldspar filled amygdules); usually epidotized; amygdules from millimetre scale to 1.5 cm; local zones contain lenses and fracture fillings of biotite lamprophyre; scattered hairline veinlets and fracture fillings of calcite +/- epidote +/- chlorite; faint layering from 45 - 55 degrees to the C/A.		

.

÷.

- 4

DIAMOND DRILL LOG

•

PROPE	ERTY:	Cobalt
HOLE	No.:	CC22

Page 2

FROM TO LITHOLOGICAL DESCRIPTION

less than 1% calcite veinlets; includes
a 5 cm rounded orange granite xenolith
at 10.1 metre; both contacts broken.

11.2 45.9 DIATREME BRECCIA:

Small fragment breccia with most fragments rounded, highly stretched and often relatively assimilated; fragments often contain sulphides; fragments made up of felsic material (felsite to coarse granite), mafic volcanic to ultramafic including lamprophyre; biotite lamprophyre makes up from 20 - 50% of matrix, remainder being a fine grained mafic that may be at least partially lamprophyre; scattered narrow zones contain brick red felsic fragments; overall appearance is generally a dark colour; layering from 40 - 50 degrees to C/A, locally deformed.

18.2 - 20.8: Hypabyssal Biotite Lamprophyre Zone; 60% of zone consists of lamprophyre with very small round, partially assimilated xenoliths (ultramafic to felsic); remainder is made up of blocks of diatreme breccia, as above; contacts are gradational. 20.8 - 24.2: Diatreme Breccia; as above with fine grained matrix, partially assimilated

fragments; large boulder (or dyke) of fine

ASSAYS FROM TO WIDTH

DIAMOND DRILL LOG

				ASSAYS		
ROM	TO	LITHOLOGICAL DESCRIPTION	FROM	TO	WIDTH	
		52.6 - 52.9: A biotite lamprophyre dyke				
		at 160 - 170 degrees to the C/A (biotite				
		porphyritic with feldspar).				
		53.3: A 3.5 cm intermediate dyke with 2 - 3% Po, Py; 145 degrees to the C/A.				
		2 3. 10 , ry , 145 degrees to the C/M.				
.4	54.8	LAMPROPHYRE ZONE:				
		About 60% biotite lamprophyre dyke with small				
		mafic xenoliths as well as coarse fragments;				
		greenish coloured.				
. 8	68.0	DIATREME BRECCIA:	(
		Zone dominated by a fine grained mafic matrix				
		with breccia fragments including reddish orange				
		granite, mafic volcanic; biotite lamprophyre				
		makes up 10 - 20% of zone as local matrix				
		material and as lenses and layers; fragments				
		are generally small, rounded to subangular; layering from 50 - 55 degrees to the C/A;				
		very dark coloured matrix to most of this				
		zone; the quantity of lamprophyre increases				
		with increasing depth.				
		68.0 END OF HOLE				

-

<u>,</u>

DIAMOND DRILL LOG

PROPERTY: Cobalt HOLE No.: CC23 Collar Eastings: 1115.00 Collar Northings: 91.00 Collar Elevation: 344.00 Grid: Pan-Anderson Claim# 1225265

Collar Inclination: -45.00 Grid Bearing: 123.00 Final Depth: 81.00 metres NQ Core Logged by: S. Sears (4 Dec) Date: 2 - 3 Dec 2002 Down-hole Survey: acid Drilled by Heath & Sherwood

Ţ

FROM	то	LITHOLOGICAL DESCRIPTION	FROM	ASSAYS TO	WIDTH
0	5.9	OVERBURDEN	0.00	0.00	0.00
5.9	20.6	MAFIC VOLCANIC (Or INTRUSIVE ROCK):			

5.9 20.6 MAFIC VOLCANIC (Or INTRUSIVE ROCK): Fine grained mafic rock (approaching intermediate); dark grey green; massive appearance overall; local weak foliation (faint micaceous layering and local rare stretching lineation) scattered randomly oriented fracturing with epidote +/- calcite +/- quartz; occasional chlorite +/- epidote defining what appear to be pillow salvages. 9.3: A 0.5 cm. orange granite dykelet @ 75 degrees to C/A.

20.6 22.1 MAFIC TO INTERMEDIATE DYKE: Fine grained equigranular with scattered rounded xenoliths of ultramafic to felsic composition; some of these xenoliths are very highly assimilated and as such are difficult to distinguish; upper and lower contacts at 70 degrees to C/A.

DIAMOND DRILL LOG

DIAMOND DRILL LOG PROPERTY: Cobalt HOLE No.: CC23						 Page	2
FROM	TO	LITHOLOGICAL DESCRIPTION	FROM	ASSAYS TO	WIDTH		
22.1	34.1	MAFIC METAVOLCANICS OR INTRUSIVE ROCK: Same as above (5.9 - 20.6).					
34.1	35.3	GRANITE DYKE: Orange, coarse grained, equigranular to quartz porphyritic, upper contact along fracture at 127 degrees to the C/A, lower contact irregular at 105 degrees to the C/A.					
35.3	36.2	MAFIC METAVOLCANIC: (as above 5.9 - 20.6) Includes a narrow, orange granite dyke. 35.8 - 35.95: Orange granite dyke, same as above (34.1 - 35.3); contacts irregular from 140 - 90 degrees to the C/A.					
36.2	38.4	LAMPROPHYRE: Biotite porphyritic, with abundant xenoliths ranging from felsic to ultramafic; xenoliths are very assimilated and often vaguely defined; upper contact relatively sharp at 53 degrees to C/A, lower ambiguous, grading into the underlying breccia.					
38.4	61.0	DIATREME BRECCIA: Generally fine grained lamprophyre to mafic matrix (dark coloured) with small red orange					

:

DIAMOND DRILL LOG

PROPERTY: Cobalt

HOLE No.: CC23 Page 3 ASSAYS FROM то LITHOLOGICAL DESCRIPTION FROM то WIDTH fragments of granite, as well as grey felsic and large mafic fragments; stretching schistosity and layering from 40 - 50 degrees to the C/A; lamprophyre makes up from 20 - 60% of the zone as matrix, fragments and lenses. 45.7 - 46.5: Lamprophyre dyke; fine to medium grained dark coloured, small biotite porphyrocrysts; massive texture; upper contact at 120 degrees to C/A, oblique to layering, lower contact broken. 49.9 - 55.4: Intermediate dyke; fine to medium grained equigranular, locally deformed; local fine grained epidote filled fractures, including lower contact, upper contact at 110 degrees to the C/A, lower at 105 degrees; fault gouge zone from 50.0 to 50.3. 52.4: A 3 - 6 cm orange granite dyke, very irregular upper contact from 10 - 90 degrees to C/A, lower contact at 75 degrees to C/A; coarse grained. 53.6: Two orange granite fracture fillings, irregular contacts, 3 cm and 3 - 5 cm wide; coarse grained. 55.4 - 59.7: Zone of abundant reddish orange fragment in very fine grained mafic matrix, possibly fine grained lamprophyre. 57.3 - 57.6: Mafic volcanic block or wallrock

5

DIAMOND DRILL LOG

÷

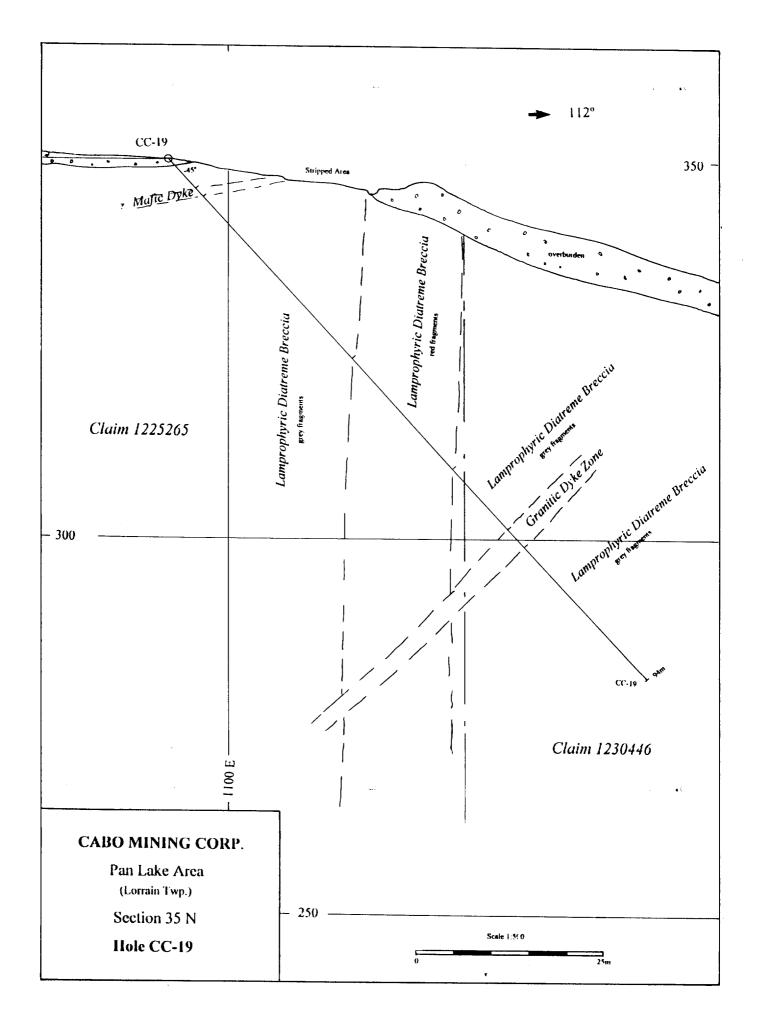
					ASSAYS		 	-
FROM	TO	LITHOLOGICAL DESCRIPTION	FRC	MC	TO	WIDTH		
		xenoliths; fine grained, dark greenish black						
		with 25% pale grey green epidotized patches.						
		59.3 - 59.55: Mafic volcanic block or						
		wallrock, as above (57.3 - 57.6).						
		59.7 - 60.15: Lamprophyre, biotite						
		porphyritic, massive, no obvious xenoliths,						
		upper contact 42 degrees to C/A, subparallel						
		to layering, lower at 55 degrees to C/A at						
		younger dyke; dark green. 60.15 - 61.0: Intermediate dyke;						
		fine grained, equigranular, grey coloured,						
		scattered calcite veinlets; minor pyrite,						
		lower contact irregular at 62 degrees to C/A.						
61.0 6	66.1	MAFIC METAVOLCANIC ROCK:						
		Massive flow or intrusive; fine grained;						
		dark grey green; scattered calcite						
		stringers (rare), lower contact at 42 degrees						
		to the C/A; hematite staining (brick orange)						
		in lower 1/2 metre.						
66.1 6	66.9	LAMPROPHYRE :						
		Biotite porphyritic; sparse highly						
		assimilated xenoliths (felsic to mafic);						
		pale to dark green; lower contact at						
		43 degrees to the C/A; calcite veinlets in upper 20 cm.						

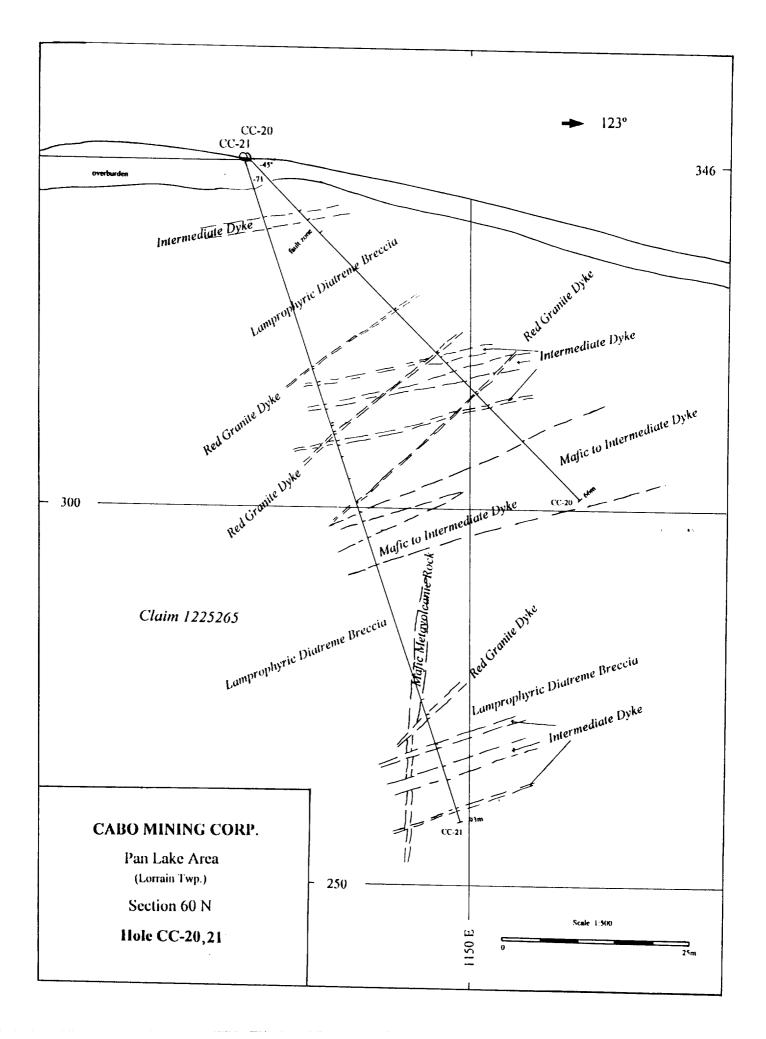
5

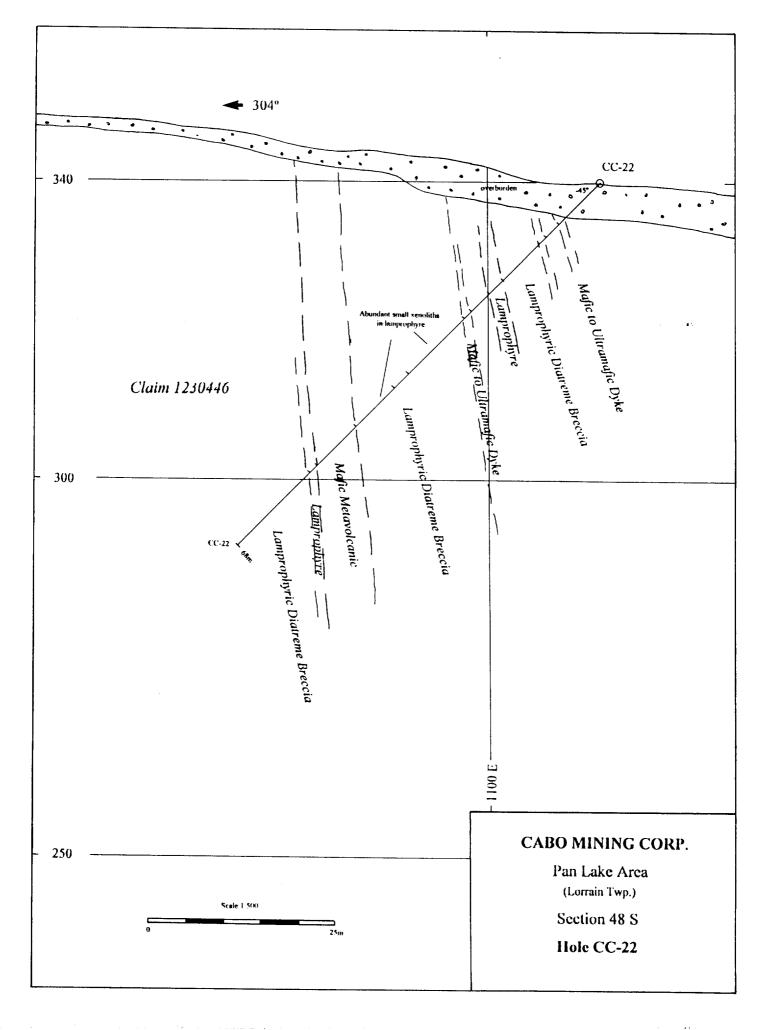
DIAMOND DRILL LOG

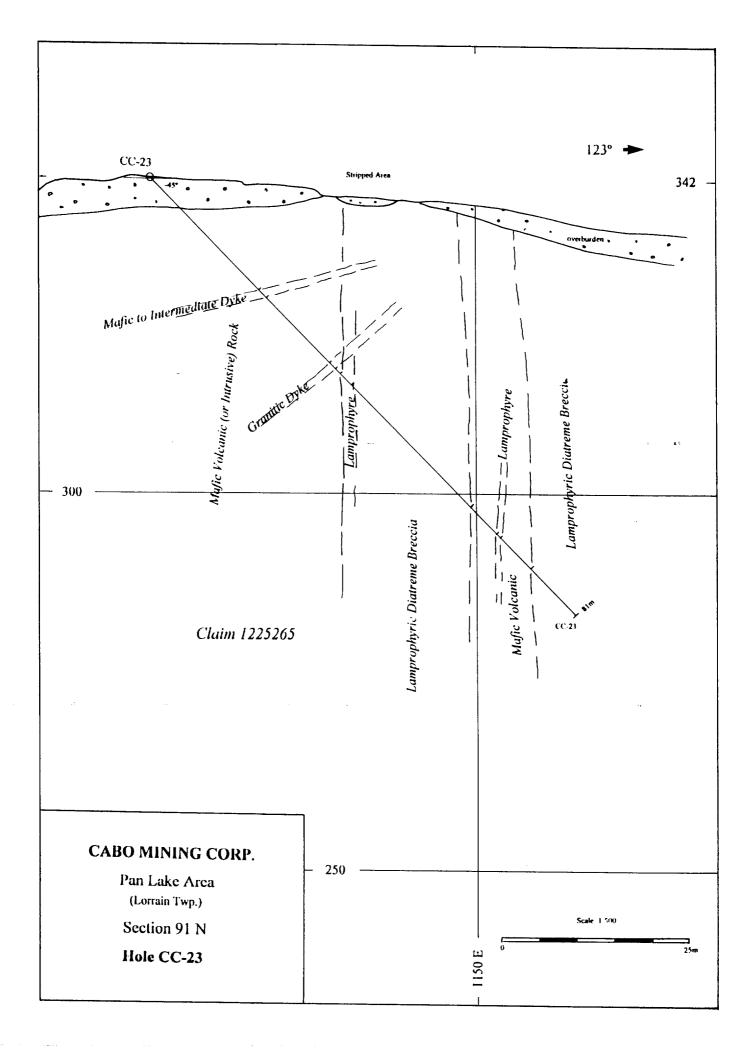
				ASSAYS		
FROM	TO	LITHOLOGICAL DESCRIPTION	FROM	TO	WIDTH	
66.9	72.7	MAFIC VOLCANIC ROCKS: Similar to above (61.0 - 66.1) Badly jointed between 70.0 - 72.5; Lower metre deformed.				
72.7	81.0	DIATREME BRECCIA: Poorly developed, about 50% of zone is mafic volcanic with remainder consisting of more exotic fragments including brick orange granitic (felcite to coarse grained) (10 - 15%) and lamprophyre (20 - 40%); local lamprophyre lenses and layers; lamprophyre is biotite porphyritic and green coloured; layering from 40 - 50 degrees to the C/A. 75.1 - 75.4: Intermediate Dyke; fine grained, equigranular; dark grey upper contact at 95 degrees to C/A, lower at 110 degrees to C/A, oblique to layering. 81.0 END OF HOLE	·			

•











Work Report Summary

Transaction No:		W0380.00011	Status:	APPROVED	
Recording [Date:	2003-JAN-06	Work Done from:	2002-NOV-21	
Approval Date:		2003-JAN-27	to:	2002-DEC-31	
Client(s):					
	170510				

178510	OUTCROP EXPLORATIONS LIMITED
302234	SIMPSON, MURRAY D
302646	WAREING, SIMON KEITH

Survey Type(s):

PDRILL

w	ork Report D	etails:								
CI	aim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
L	1212231	\$0	\$0	\$400	\$400	\$0	0	\$0	\$0	2003-NOV-21
L	1225265	\$22,875	\$22,875	\$0	\$0	\$20,549	20,549	\$2,326	\$2,326	2003-AUG-19
L	1227324	\$0	\$0	\$6,400	\$6,400	\$0	0	\$0	\$0	2003-NOV-06
L	1230446	\$8,037	\$8,037	\$0	\$0	\$8,037	8,037	\$0	\$0	2003-JUL-21
L	1231082	\$0	\$0	\$800	\$800	\$0	0	\$0	\$ 0	2004-FEB-25
L	1231083	\$0	\$0	\$3,200	\$3,200	\$0	0	\$0	\$0	2004-FEB-25
L	1231084	\$0	\$0	\$5,200	\$5,200	\$0	0	\$0	\$0	2004-FEB-25
L	1231085	\$0	\$0	\$400	\$400	\$0	0	\$0	\$0	2003-NOV-12
L	1240227	\$0	\$0	\$986	\$986	\$0	0	\$0	\$0	2003-OCT-15
L	1240228	\$0	\$0	\$2,000	\$2,000	\$0	0	\$0	\$0	2003-OCT-15
L	1240230	\$0	\$0	\$4,800	\$4,800	\$0	0	\$0	\$0	2003-OCT-15
L	1242199	\$0	\$0	\$800	\$800	\$0	0	\$0	\$0	2004-MAR-30
L	1242200	\$0	\$0	\$3,600	\$3,600	\$ 0	0	\$0	\$0	2004-MAR-30
		\$30,912	\$30,912	\$28,586	\$28,586	\$28,586	\$28,586	\$2,326	\$2,326	-

External Credits:

Reserve:

\$2,326 Reserve of Work Report#: W0380.00011

\$0

\$2,326 Total Remaining

Status of claim is based on information currently on record.



31M05SE2050 2.24740 I

LORRAIN

900

Ministry of Northern Development and Mines Ministère du Développement du Nord et des Mines

Date: 2003-JAN-30



GEOSCIENCE ASSESSMENT OFFICE 933 RAMSEY LAKE ROAD, 6th FLOOR SUDBURY, ONTARIO P3E 6B5

OUTCROP EXPLORATIONS LIMITED 12 MARTIN DRIVE COBALT, ONTARIO P0J 1C0 CANADA Tel: (888) 415-9845 Fax:(877) 670-1555

Submission Number: 2.24740 Transaction Number(s): W0380.00011

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact LUCILLE JEROME by email at lucille.jerome@ndm.gov.on.ca or by phone at (705) 670-5858.

Yours Sincerely,

2mcchil.

Ron Gashinski Senior Manager, Mining Lands Section

Cc: Resident Geologist

Outcrop Explorations Limited (Claim Holder)

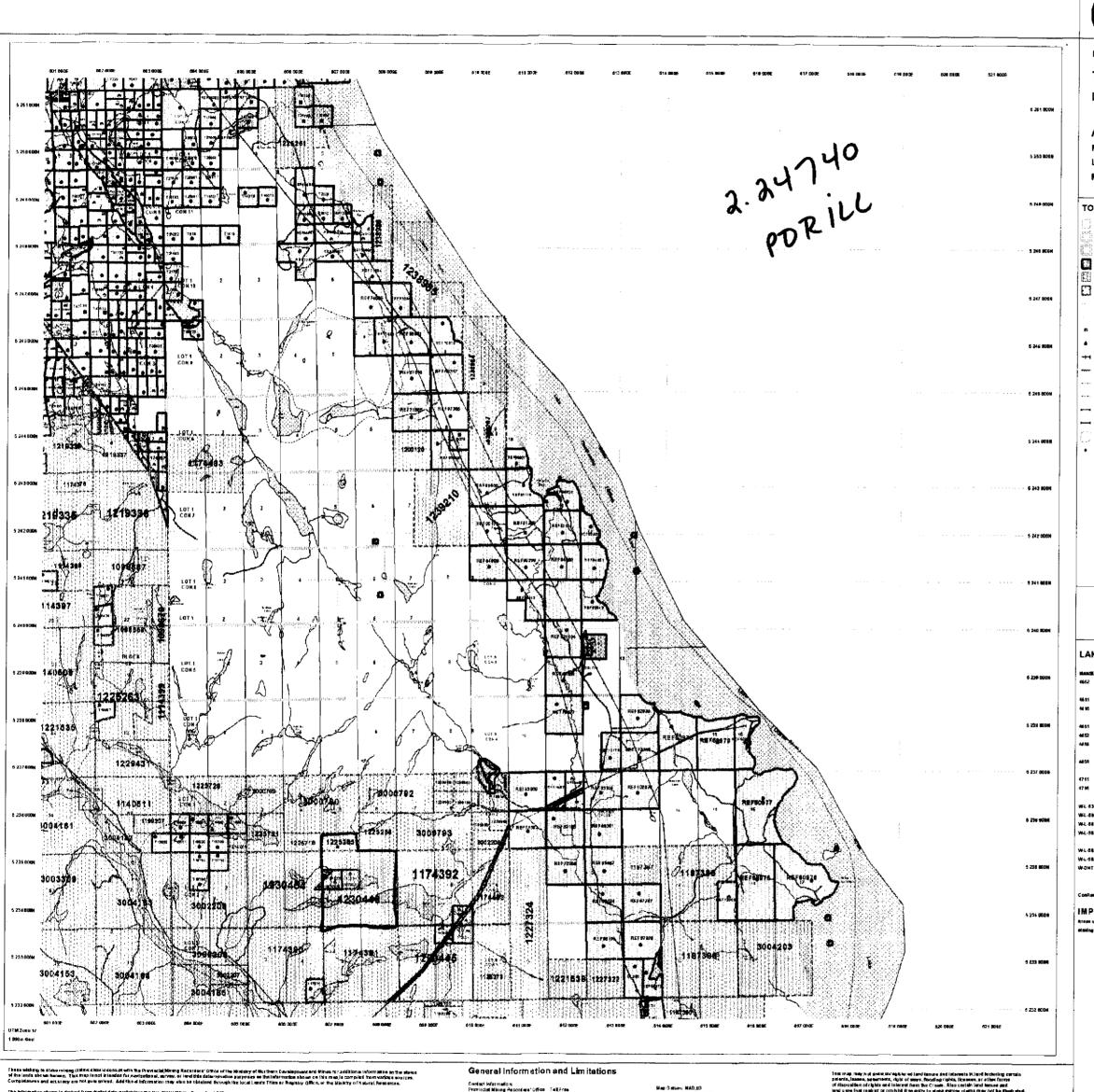
Seymour M Sears (Agent)

Simon Keith Wareing (Claim Holder)

Assessment File Library

Outcrop Explorations Limited (Assessment Office)

Murray D Simpson (Claim Holder)



The information, shown, is derived from digital date scattering non-prioring at Mining Ascenders' Other at the time of the waterding from the Mining of Marthen Gawalepmont and Minee web stills.

Map Batum: MAD,83 Prejection: UTM (6 degree Topographic Data Scence: Mining Land Tenure Source:

Lauri Information, Colario

NINISINY OF NORTHERN DEVELOPMENT AND KINES		MINING LAND TENURE		
	PROVINCIAL AMING ALECADER'S OFFICE		MAP	
Date / Time of Issue Sep 20 2002			12:27h Eastern	
TOWNSHIP / AREA			PLAN	
L	ORRAIN		G-3438	
A		CTS / DI	VISIONS	
Mi	ining Division		Larder Lake	
Land Titles/Registry Division			TIMISKAMING	
Mi	nistry of Natural Resources DI	strict	NORTH BAY	
P	OGRAPHIC	LAND	TENURE	
	Administrative Balandades	Freehold Par	larj	
	Formation	Q	Surface And Mining Prights	
	Concession (199	•	Surface Rights Chiry	
	Provincie, Blan	2	Milling Siginta Cinty	
	-hdien it exerve	L ex sen bid P	in eit	
	Civi, Patoler ci Plus	Q	Surface and Mining 9 ghts	
	Contaur	9	Budeop Hipfeld On y	
	Conjour - Approx Aux Bay Depression	8	kimita Rights Only	
	Shat	Licence of Q	istaj polite n	
	Mana Handing g		Uses not 5 pacified	
	fi ∉ li≫n γ		Surface And Vining Rights	
	Read		Butface Rights Only	
	Trail		Mining Rights Crity	
	Natural Cap Pipeline Hydro Line	Line .		
	nyaro Leve Communicipitan, Line		. and Use Perry (Onter (n. 4 ovno)	
	Yy oo ded Eres	8		
	er de vez a real el de um anti - Ciedinetrel, Plistorices, Horiz "Ciettral		Nistat Perer Leaze Aggraan ert	
	та национали – създанита и сторов кото поста (се задила)	1 12 540 \$2 6	i S Mining Claive 2 2 2 4	
		LAND	TENURE WITHDRAWALS	
			Ar see Withdrawn from Diepestern	
		Wen	Mining Act Webstramp, types Surjans and Mining RegisterWindrawn	
		-	durinon Alghen De y Wensenen Minisy Alghen Coly Webgenso	
		W M		
		10.0	Nining AlgNia Only, Wilhelmon	
			IMPORTANT NOTICES	
-	G NR		36Ka	

LAND TENURE WITHDRAWAL DESCRIPTIONS

đ	Тура	8.4 1	Base cipina
•	Wem	Jan 9 2001	STAKING OF MINING CLAIMS WITHIN TOWNSITES
			ONLY WITH CONTINUE OF THE MINISTER
	Weth	Jen il 2001	FLOODING ELEVATION: 606.00 FT FILE: 196387
	West.	Jan 1 2001	REVERVATION OF CHAIN FROM HIM WATER WANN, 10 BE MADE CH, ALL, PATENTA
			OF LANDS BORDERING ON LANE THURNAINING, EFFECTIVE FERRUARY 13, 1924
	MAX IN	Jan 1 2001	FLOODING ELEWATION: APAUM FT, FILE: 104:587
	Wart	Jen (2001	FLOODING HELP.C. ELEVATION: 105.50 FT.L.O. 7558
	Weigeren	Jan 1 2001	REBÉRIVATION, OF, ONE CHAIN FROM HIGH WATER, MARK TO BE MADE ON ALL PATENTS
			OF LANDS BORDER ING ON LAKE, INCIDE ANY IO, EFFECTIVE FERRUARY 53, 1928
	Wom .	404 ¥ 2061	ADUFT SURFACE.FIGHTS RESERVATION ALONG
			THE SHORES OF ALL LAKES & RIVERS
	Wam	Jan 1 2061	FLOOD W & ELEVATION: 505.00 F1 FILE: 19538?
	Went	Jan 1 2041	REGERVATION, DF, OHE, CHAIN, FROM, NIGH, WATER, MARN, TO DE, MADE, ON, ALL, PATENTS
			OF LAND'S MORDERING OR LAKE INNER AN ING, EFFECTIVE FEBRUARY 13, 1926
63-00	We:	6-ac 13 2000	SEC. 35 W-L-53/01 S.R.D. 2010/12/13 106160
88'96	We	5 mp 17 1994	W-LSANS HER BEPT 1795 SRO ON LHYDRO
Ser95	w	Sep 17,4208	WALSONG MER SEPTITION SHOTOWER SITE DUCK HABITAT
58/00	We l	\$A9 17.188章	SURFACE RIGHTS WITH DRAWN FROM STAILING PROSPECTING
			AY ORDER, WILL MARKINER, SEPT 1740 REBEARCH
59/00	***	5 ap 17 1968	SEC WL-56GANER SEFT. 17.96 SRC 134327
58,96	÷.	6 ip 17 1964	W-LEWAR MER SEPT 1705 SHO TOWER SITE DUCK NABINAT
1 45.04	Wen	3 ap 17 1998	SEE 35/90 WJON Flat ## SEPT 178 killes. In withdrawal area has now
			been regulated as a Cantervation Reserve, obtauit the Mining Raterdaria
			Office for the regulated beautient as K may go beyond this Webberged Order
	Wen	Apr. 6 2001	C IR L ske Conservation Reporte

IMPORTANT NOTICES

en under which special radjuis

ing and minaral develop th

200



Contect informations Provincial Minneg Pacento Willet Groen Miller Contro 935 Rambery, CM P36 085 Sombery, CM P36 085 761: 1 (000) 416-9945 Fac: 1 (077) 470-1444