

31M05SE2043 2.24017 LORRAIN

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LAMPROPHYRES IN THE PAN LAKE AREA LORRAIN TOWNSHIP

For Cabo Mining Corp

Seymour Sears

2.24017



OVERVIEW

The Pan Lake - Anderson Lake Property of Cabo Mining Corp. is located within the Cobalt Silver mining camp in northeastern Ontario (Figure 1). The property, located in Lorrain Township (Figure 2), is part of a large Cabo Mining land holding scattered through five Townships in the Cobalt area. The property contains numerous pits, trenches and shallow shafts dating back to the early 1900's in search of cobalt and silver. Recent work programs have located numerous xenolith bearing lamprophyre dykes. These resemble, in appearance, the diamond bearing lamprophyre dykes recently reported in the Wawa area. In the summer of 2001, two prospectors - Simon Wareing and Murray Simpson - announced the discovery of three diamond fragments from a 22.5 kg sample of a xenolith bearing lamprophyre dyke (Press Release, June 13, 2001). The location of the samples was approximately 60 metres north of the Cabo claim boundary. In early 2002, the Simpson & Wareing claims were optioned and a drilling program

initiated. The first hole was directed under the stripped area from which the diamonds were reported. Hole CC-13 intersected a 6.7 m wide xenolith bearing lamprophyre (Sears, 2002) but no diamonds were found in the relatively small samples (8 kgs). A second hole (CC-14) was drilled approximately 500 metres west of Hole CC-13 along the boundary between the Cabo property and the Simpson-Wareing option. The target in this area was a lamprophyre breccia zone exposed in another stripped area completed earlier by Simpson & Wareing. This -45 degree hole was abandoned at a depth of 74.8 metres due to drill problems. However, a 4.15 metre intersection from this hole was found to contain 95 diamonds (Sears, 2002).

This work report is designed to present, in preliminary form, the spacial distribution of the lamprophyres and lamprophyre breccia's discovered to date in this area and discuss their geological setting.

Respectfully submitted.

Sudbury, Ontario Aug 1, 2002 Seymour M. Sears, B.A., B.Sc. Geologist

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APPENDIX

List of Claims - Cobalt Project Appendix I

INTRODUCTION AND LOGISTICS

The work was carried out on parts of 5 claims. These claims are part of a much larger claim group held under option agreements by Cabo Mining Corp. The report has been prepared on behalf of Cabo Mining Corp. of Vancouver, British Columbia. The content of the report is based on work carried out by the author with assistance from J. Partington and S. Wareing from July 1st to 27th, 2002. Work was based from a trailer camp located at Bucke Park campgrounds.

PROPERTY LOCATION AND ACCESS

The work was completed entirely on the following claims, all located in the southern part of Lorrain Township, Larder Lake Mining Division, Ontario. The claims are shown on Figure 2, a portion of claim Index Map G - 3438. A complete listing of claims in the Cobalt project is included as Appendix I.

L1225264	L 1225265	L 1225718
L 1230446	L 1230454	

The claims are accessed by a gravelled logging road that departs from the Houndchutes road, an Ontario Hydro access road, approximately 20 kms south of the town of Cobalt, on the eastern side of the Montreal River. Numerous overgrown logging trails provide local access.

TOPOGRAPHY AND VEGETATION

Maxium relief in the area is apporximately 30 meters. Topography is generally rolling with local steep ledges and cliffs. A large part of the area of interest is overlain by overburden in excess of 5 metres. Approximately half of the favourable area has been logged over within the last 10 years. It is rapidly growing up with thick underbrush.

EXPLORATION HISTORY

Work in the immediate area has been, until recently, mainly in search of silver. It dates back to the 1920's and has included the following:

Early 1920's - Fred Giroux - two old shallow shafts (6 to 8 metres deep) and numerous pits on Claim 1230446.



Fig. I: Regional Location Map of Ontario.

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Figure 2 Location Sketch Showing July, 2002 Stripping of Cabo Mining Corp.

- 1923 McKinley-Darragh A 15 metre shaft (Paul's Shaft) and numerous pits and Trenches on Claim 1230454.
- 1951 Siscoe Metals Small drill program near the Giroux Shafts
- 1950-1972 R. Thompson (ODM) numerous notes and sketches completed while working in the area from the 1950's to 1972.
- 1998 to Present Cabo Mining Corp. airborne geophysical survey (High Sense Geophysics, June 1999), linecutting, ground UTEM, Magnetometer & VLF-EM surveys (partial coverage) (S.J Geophysics Ltd, 2000), geological mapping of part of the gridded area, stripping and till sampling (Sears, 2000, 2001, 2002).
 2000 to present - Simpson & Wareing - stripping and prospecting.

REGIONAL AND PROPERTY GEOLOGY

The area is located in the southern part of the Cobalt mining camp and north of the Silver City mining camp and thus has not been well studied. It was mapped by the Ontario Geological Survey in 1978 (Lovell et al). The stripped area is within an inlier of Archean volcanic rocks. This inlier is bounded on the northeast side by the Lorrain Granite Batholith and on the southwest and south by a Nippissing Diabase sill. Several types of Lamprophyre crosscut the Archean rocks in the area.

WORK PROGRAM AND RESULTS

Six man-days were spent locating and mapping known exposures of lamprophyre. In general, the lamprophyre is exposed within a 500 metre wide northeast trending corridor that has been traced on the property for in excess of 2500 metres. Lamprophyre occurs in two major forms - massive to xenolith bearing, relatively narrow dykes and as the major constituent in a much larger, breccia complex interpreted as a lamprophyric diatreme. Both units intrude Archean Volcanic rocks as well as Algoman Granitic rocks. The xenoliths in the lamprophyre dylkes as well as most of the lamprophyre component of the diatreme range from felsic (including Algoman granite) to ultramafic. The xenoliths are angular to well rounded and variably assimilated. They range in size from millimetre scale to ten's of centimetres. The lamprophyre, in a typical hand specimen, consists mainly of biotite and amphibole phenocrysts up to 2 cm in diameter within a fine mafic groundmass. The dykes range in width from a few centimetres to 15 metres. They generally strike at 050 to 055 degrees and dip steep to vertical, but occasionally are nearly flat lying and strike in variable directions. The diatreme has a width in excess of 75 metres where exposed at surface and has been traced in excess of 200 metres. It appears to have a near vertical attitude.

The work involved examining all of the known lamprophyre dykes in the immediate area and locating these accurately on a 1:5000 scale map (Figure 02-1). In addition, two stripped areas were mapped in detail and tied in to the existing grid (Figures 02-2, 02-3). The following rock types were observed during the mapping program:

Table of Lithologies

10) LAMPROPHYRE - Dark green to black; biotite-pyroxene-amphibole phenocrysts in a fine grained matrix (amphibole-feldspar); Locally chloritized; occur as dykes ranging from a few centimetres to 15 metres wide and as the major component in a diatreme breccia of unknown shape and size.

- 10) Undivided
- 10a) Biotite lamprophyre with abundant small, rounded xenoliths.
- 10b) Biotite lamprophyre with sparse rounded to angular xenoliths.
- 10c) Biotite lamprophyre, very rare xenoliths.
- 10d) Lamprophyric Diatreme; lamprophyre from 10 to 90% of unit; lamprophyre varies from massive textured to abundant xenolith bearing; breccia fragments variable from ultramafic to granite, angular to rounded, millimetre to 50 cm sized.
- DIABASE (Nipissing) Dark grey-green to black; fine to medium grained; equigranular; occurs as dyke or sill in the northwest side of the lamprophyre corridor.
- 3) GRANITIC ROCKS (Algoman) Locally known as Lorrain granite; pink to orange; equigranular to porphyritic; syenitic phase common in the local area.
 - 3) Undivided
 - 3a) Massive, equigranular.
 - 3b) Porphyritic; feldspar porphyritic, rare quartz.

3c) Felsite / Quartz; pinkish, fine grained felsite grading into pinkish to white guartz veins and lenses

- 1) MAFIC METAVOLCANIC ROCKS; greenish grey to black; fine grained; massive to sheared; highly deformed; epidotized locally.
 - 1) Undivided
 - 1a) Massive flows.
 - 1b) Pillowed flows.
 - 1c) Gabbro (intrusive); fine to coarse grained; generally massive textured; part of Archean volcanic sequence; may sometimes be confused with massive flows; generally less deformed than the latter.

CONCLUSIONS & RECOMMENDATIONS

Numerous lamprophyre units are exposed on the property of Cabo Mining Corp. in the Pan Lake area in the south part of Lorrain Township. These include massive textured to xenolith bearing dykes and lamprophyric diatreme breccia. The zones have a general trend of 050 to 060 degrees and are steep to vertically dipping. They occur within a 500 metre wide corridor and have been traced in excess of 2500 metres within the Cabo property. Diamonds have been found within the dykes in two locations.

All of the known lamprophyre dykes should be mapped in detail and sampled for diamond content. An exhaustive prospecting program should be carried out along the trend of the corridor in search of additional lamprophyre zones.

Respectfully Submitted,

Seymour M. Sears Aug 1, 2002

REFERENCES

Lovell, H.L., and de Grijs, J.

1978: Lorrain Township, Southern Part, Concessions I to VI, District of Timiskaming; Ontario Geological Survey Preliminary Map, P1559; Scale 1:15,840.

McIlwaine, W.H.

1970: Geology of South Lorrain Township, District of Timiskaming; ODM Geological Report 83; Accompanied by Map 2194; Scale 1:31,680, and Charts A and B.

Ontario Geological Survey

- 2000: Airborne magnetic and Electromagnetic Survey; Temagami area; Ontario Geological Survey; Maps 82 065,82 066,82 067,82 068, and 82 069; Scale 1:20,000
- 2000: Airborne magnetic and electromagnetic surveys, Temagami Area; O.G.S. Maps 82065,82066, 82067, 82068 and 82069; Scale 1:20,000.

Pezzot E. Trent (SJ Geophysics Ltd.)

1999: Airborne magnetic and electromagnetic survey - Cobalt Area memorandum.

2000: UTEM-3 Electromagnetic and Magnetic Surveys; New Lake and Pan Lake - Anderson Lake, Timiskaming District, Ontario Logistics and Interpretation report for Cabo Mining Corp.

Sage R. P.

- 2000: The Sandor Diamond Occurrence, Michipicoten Greenstone Belt, Wawa, Ontario: A Preliminary Study; Ontario Geological Survey Open File Report 6016 49p.
- 2000: Kimberlites of the Lake Timiskaming structural zone: supplement; Ontario Geological Survey, Open File Report 6018 123p.

Sears S. M. (Sears, Barry & Associates)

- 2000: Report on a Work Program on the Pan Lake Anderson Lake Property Lorrain Township for Cabo Mining Corp. (July 2000)
 - 2001: Report on Till Sampling, Pan Lake Anderson Lake Area (Assessment Report for Cabo Mining Corp.)
 - 2002: Drill Hole Logs CC-13 & CC-14 Assessment Report for Cabo Mining Corp.

Simpson M. and Wareing S.

1998: Prospecting Report for the 1998 Exploration Season; Gillies Limit and Lorrain Townships; District of Timiskaming.

Simpson M. and Wareing S. (Prairie C) 2001: Press Release June 13, 2001

Thompson R. and Savage W. S.

1965: Haileybury Sheet, District of Timiskaming & Nipissing, Ontario; ODM Map P. 321; Scale: 1" = 126,720'.

Appendix I

(List of Claims)

AMENDED CLAIM LIST - OUTCROP EXPLORATIONS LTD.

(Outcrop Explorations Limited Claims in which Cabo Mining Corp. have an interest under an agreement dated March 24, 1998 (Branchwater Resources Ltd. and Outcrop Resources Ltd.) and various addendums)

Township	Claim #	Units	(approx) Hectares
Coleman	1247797	1	16
Gillies Limit (N)	1167221 1174378 1174379 1174462 1174507	1 2 1 1	16 32 32 16 16
	1210893	1	16
	1212225	2	32
	1212226	3	48
	1212231	1	16
	1212233	6	96
	1217456	1	16
	1221540	14	224
	1229425	6	96
	1229652	5	80
	1229653	1	16
	1229654 1229655 1229657 1231081 1231082	1 1 1 2	16 16 16 16 32
	1231083	8	128
	1231084	13	208
	1231085	1	16
	1240227	3	48
	1240228	5	80
	1240229	2	32
	1240230	12	192
	1240231	1	16
	1240235	1	16
	1240236	1	16

Page 1 of 2

(Outcrop Claim List, Cont....)

Lorrain

1242199	2	32
1242200	9	144
1247788	1	16
1247789	1	16
1247790	1	16
1247791	1	16
1247794	3	48
1249666	14	224
1249667	16	256
1249668	16	256
1249669	12	192
1249670	16	256
3002205	2	32
1167203	1	16
1167223	1	16
1174390	15	240
1174391	16	256
1230446	14	224
1230454	16	256

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Work Report Summary

Transaction No	: W0280.	01277		Sta	tus: APf	PROVED	
Recording Date	: 2002-Al	JG-06		Work Done fr	om: 200	2-JUL-01	
Approval Date:	2002-AU	JG-20			to: 200	2-JUL-31	
Client(s):							
178	510 O	UTCROP EX	PLORATION	IS LIMITED			
302	234 S	IMPSON, MU	RRAY D				
302	:646 W	AREING, SIN	ION KEITH				
Survey Type(s)	:						
	-	GEOL					
Work Report D	etails:						
Claim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserv
L 1225264	\$508	\$508	\$0	\$0	\$0	0	\$50
L 1225265	\$1,269	\$1,269	\$0	\$0	\$0	0	\$1,26
L 1225718	\$127	\$127	\$0	\$0	\$0	0	\$12
1 1020446	\$509	\$508	\$0	\$0	\$0	0	\$50

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-AUG-19
-AUG-19
-AUG-19
-JUL-21
-SEP-20 E

External Credits:

Reserve:

\$2,412 Reserve of Work Report#: W0280.01277

\$2,412 **Total Remaining**

\$0

Status of claim is based on information currently on record.



31M05SE2043 2.24017 LORRAIN

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

Date: 2002-SEP-03

12 MARTIN DRIVE COBALT, ONTARIO

P0J 1C0



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

Tel: (888) 415-9845 Fax:(877) 670-1555

Submission Number: 2.24017 Transaction Number(s): W0280.01277

Dear Sir or Madam

Subject: Approval of Assessment Work

OUTCROP EXPLORATIONS LIMITED

CANADA

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 STEVEN BENETEAU by email at steve.beneteau@ndm.gov.on.ca or by phone at (705) 670-5855.

Yours Sincerely,

Roy Spooner Acting 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)



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Legend

- 10 LAMPROPHYRE DYKES (Archean & Younger) 10) Undivided 10a) Abundent Small Xenoliths 10b) Sparse Xenoliths 10c) Massive Testure, Rare Xenoliths 10d) Bressis (Lemprophyric Distreme)
- 9 DIABASE (Nipissing)
- 3 GRANITIC ROCKS (Algoman) 3) Undivided 3a) Messive, Equigranular 3b) Porphyritic 3c) Felsite / Quartz
- 1 MAFIC METAVOLCANIC ROCKS 1) Undivided 1a) Massive Flows 1b) Pillowed Flows 1c) Galabtro (Intrusive)



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