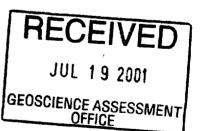
REPORT ON ALLUVIAL SAMPLING IN THE LORRAIN/SOUTH LORRAIN AREA COBALT PROJECT, ONTARIO for Cabo Mining Corp.

July 20, 2001

Seymour M. Sears

6





31M05SE2037 2.21796

LORRAIN

010

SUMMARY

Fourteen alluvial samples were collected from selected areas in the southern part of Lorrain Township and the northern part of South Lorrain Township in the Larder Lake mining Division of Ontario. The area inverstigated is part of a large claim group in the Cobalt area held by Cabo Mining Corp. The target of the sampling is kimberlite indicator minerals (KIM's). Several samples in the Pan Lake to Latour Lake area of southern Lorrain Township (D-1, D-2, D-20, D-21, D-22 and D-23) were found to contain anomalous quantities of KIM's. Follow up work is highly recommended.

Wawa, Ontario July 20, 2001

Respectfully submitted,

Seymour M. Sears, B.A., B.Sc. Geologist

TABLE OF CONTENTS

	PAGE
SUMMARY	i
INTRODUCTION	
OVERVIEW	
PROPERTY LOCATION AND ACCESS	
TOPOGRAPHY AND VEGETATION	
EXPLORATION HISTORY	
REGIONAL AND PROPERTY GEOLOGY	
SAMPLING PROGRAM	5
CONCLUSIONS AND RECOMMENDATION	13
REFERENCES	. 14
TABLE OF FIGURES	
Fig. 1. REGIONAL LOCATION MAP	2
Fig. 2. CLAIM LOCATION MAP	3
Fig. 3. PROPERTY SCALE SAMPLE LOCATIONS	6
Fig. 4. SAMPLE LOCATION MAP D-1, D-23	7
Fig. 5. SAMPLE LOCATION MAP D-17, D-20, 21, 22	8
Fig. 6. SAMPLE LOCATION MAP D-2, D-7	9
Fig. 7. SAMPLE LOCATION MAP D-3, D-6	10
Fig. 8. SAMPLE LOCATION MAP D-4, D-5	11
Fig. 9. SAMPLE LOCATION MAP D-13, D-15	12
APPENDIX	
SAMDLE DOCESSING DESLICTS	nnandiy I



31M05SE2037 2.21796

LORRATN

INTRODUCTION

This work report on mining claims in the Cobalt area of northeastern Ontario, Canada (Figures 1, 2), has been prepared on behalf of Cabo Mining Corp. (Cabo) of Vancouver, British Columbia. The contents of the report is based on involvement in the project by Sears, Barry and Associates personnel and as supervisor of the project.

OVERVIEW

The Cobalt project was acquired by Cabo early in 1999 under an agreement with Branchwater Resources Ltd. of Calgary, Alberta. Currently the lands total approximately 9087 hectares under option agreements with three separate holders. These include Outcrop Explorations Limited (Outcrop) - a Cobalt based private company, Consolidated Professor Mines Ltd. (Professor) - a public company controlled by local individuals and a local prospecting partnership consisting of Murray Simpson and Simon Wareing (Simpson & Wareing).

The project encompasses a relatively large land position in a mining camp that dates to the early 1900's. Traditionally, the camp is known for it's deposits of silver and base metals (past production - 450 million oz of silver, 24.8 million lbs of cobalt, 3.2 million lbs of copper, 3.1 million lbs of nickel and 1.2 million lbs of lead). More recently, kimberlite pipes have been identified a short distance north of the project area (Sage, 2000) near New Liskeard. The pipes are reported to be associated with 070 degree trending structures that cut major northwest trending regional scale faults. One such structure passes through the Pan Lake - Anderson Lake area. Several exposures of xenolith bearing lamprophyre dykes have been observed in this area. Rocks similar to these in the Wawa, Ontario area have been found to contain diamonds.

PROPERTY LOCATION AND ACCESS

The Cabo properties consist of 580 claim units covering parts of five townships - Gillies Limit North, Lorrain, South Lorrain, Coleman and Bucke. For discussion purposes, these can be grouped together in three separate areas - North Cobalt Group (Bucke Twp. and the north part of Lorrain Twp.), Gillies Limit Group (Gillies Limit North and Coleman Twp's) and South Group (south part of Lorrain and north part of South Lorrain Townships). All are located within the Larder Lake Mining Division, Ontario. The 14 alluvial samples discussed in this report were collected from two claims:

Claim	L 1227319
Claim	L 1230444
Claim	L 1230446
Claim	L 1230447
Claim	L 1230448
Claim	L 1230449
Claim	L 1230454

The property is southeast of the town of Cobalt on the west side of Lake Temiskaming (Figure 1). Because of the area being part of an old mining camp, gravelled roads and old trails are relatively common. Some of these have been maintained to provide access to forests and hydroelectric resources. Many are in bad condition and can be used with ATV's or on foot. Access to area sampled is via several routes: 1) an old mine access road to the Giroux Mine (recently upgraded as a forest access road) that departs from the Houndchutes Road near the Lorrain - South Lorrain Township line; 2) A Power Line & Mine access trail (to the old Laing-Caswell Mine) from Highway 567; a new forest access road that departs the Houndchutes Road north of the old town of Silver Center in South Lorrain Twp.

TOPOGRAPHY AND VEGETATION

Topography is generally rolling with local steep ledges and cliffs. Relief varies from 300 to 390 metres in the immediate area. Overburden is complex, consisting of boulder till in some areas to sand and gravel sheets in others. Bedrock ridges are abundant. Drainage is towards the southwest into the Montreal River and towards the east into Lake Timiskaming.

Vegetation consists mainly of poplar, birch, maple and dense underbrush in the higher ground with spruce and cedar swamps in the lower ground.

EXPLORATION HISTORY

The Cobalt mining camp dates back to 1903 when silver was first discovered in the area. Literally thousands of prospectors and hundreds of small companies have carried out work in the area. Numerous old pits, trenches and shafts have been completed in the survey area in search of silver and base metals. Included among these are three areas that have reached the underground exploration stage. These include the Laing-Caswell shaft on the southeast side of Latour Lake, the Giroux shafts east of Pan Lake and Paul's Shaft, south of Pan Lake (all are in southern Lorrain Township). At the time of sampling, there was no previous record of exploration for kimberlite in this area. ODM Map 2194 by W.H McIlwaine (South Lorrain Township) and OGS Map P.1559 (South part of Lorrain Twp.) present the geology of the area.

REGIONAL AND PROPERTY GEOLOGY

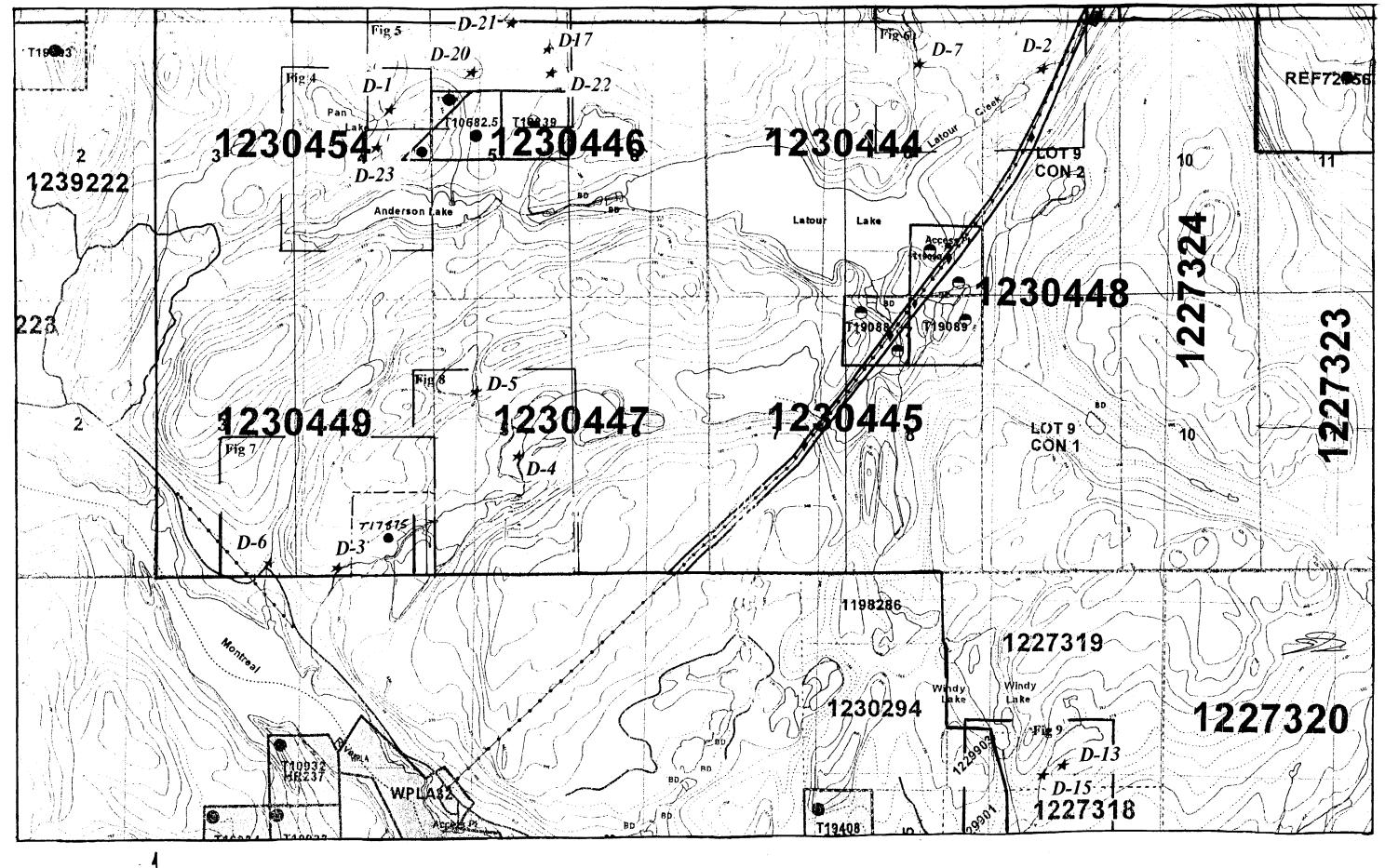
The Cobalt property is located within a geological area known as the Cobalt embayment. The rocks that underlie the project area include basement forming Keewatin mafic to felsic metavolcanics and Algoman granitic rocks overlain by relatively flat lying Huronian metasediments. A Nipissing aged diabase unit, in the form of sills and dykes, intrudes all of these rock types. Younger diabase dykes locally cross cut all of these rocks. Lmprophyre dykes of various ages intrude the Keewatin and Algoman rocks. Very young kimberlite dykes and pipes have also been discovered immediately north of the project area.

The rocks in the project area are strongly influenced by at least four major northwest trending regional scale fault structures (Figure 3). These include the Timiskaming Fault, the Crosswise Lake Fault, the Montreal River Fault and the Latchford Fault. Numerous crossfaults and other lineaments connect these major structures, including several in southern Lorrain and northern South Lorrain Townships.

SAMPLING PROGRAM

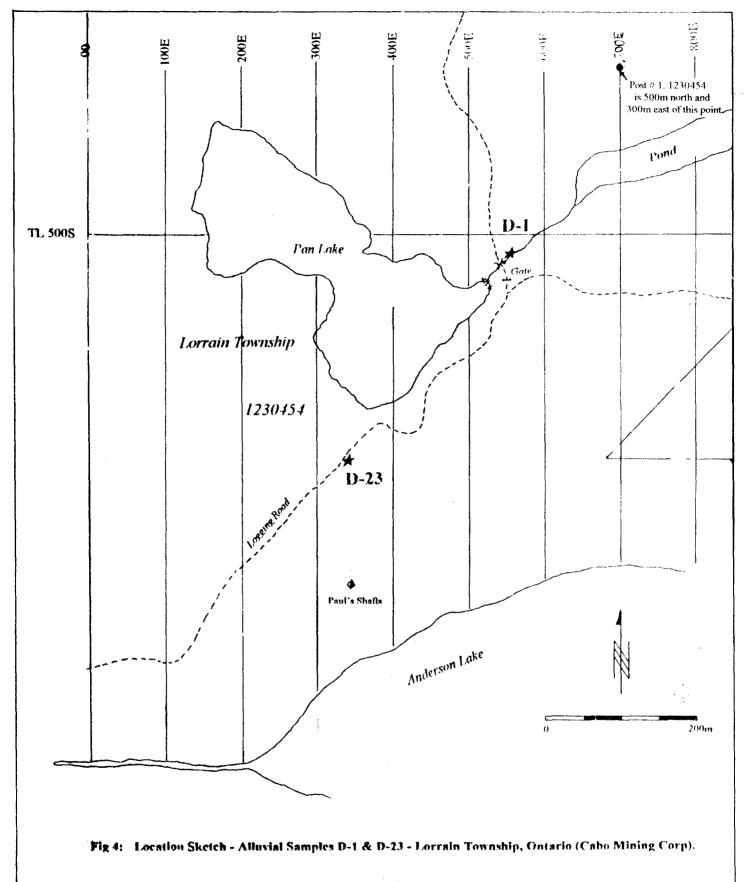
The samples collected ranged from 5.2 to 15.5 kilograms. Five man-days were required to complete the field sampling. The locations of the fourteen alluvial samples are shown on Figure 3 (1:20,000) and on Figures 4 to 9 (1:5000) accompanying this report. They are located relative to claim posts in the following table.

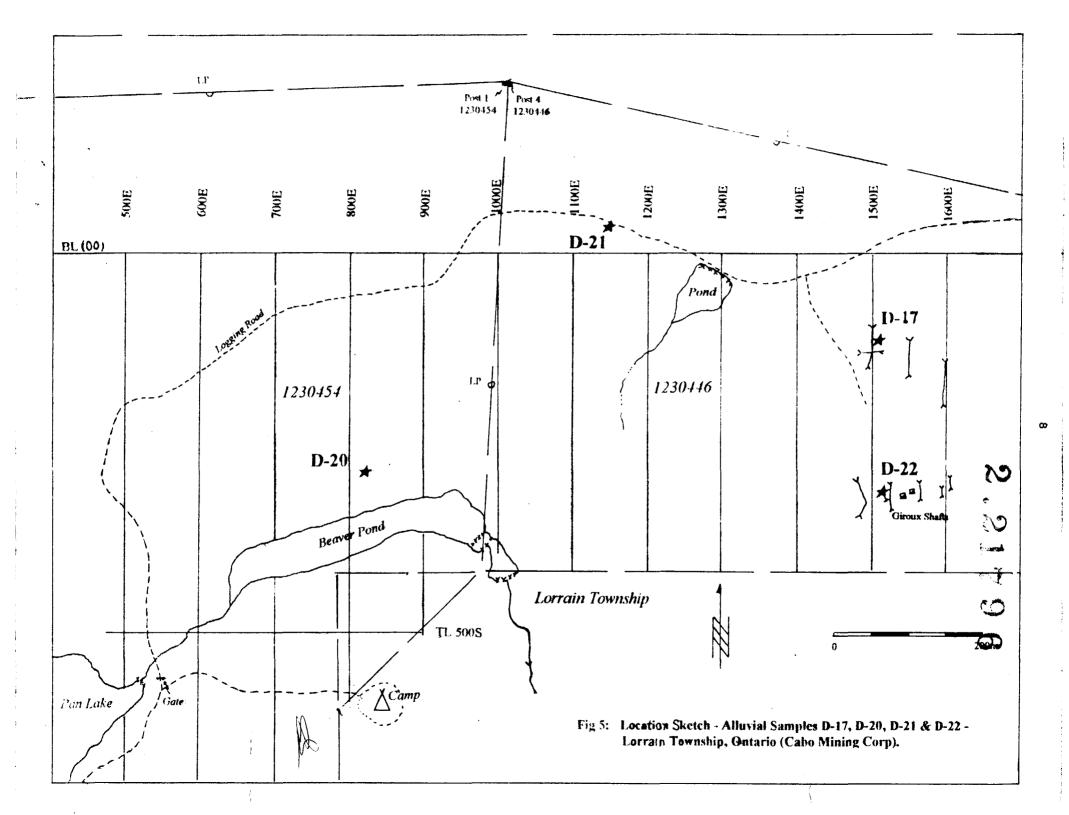
Sample #	Reference to Claim #
D-1	750 m south and 343 metres west of # 1 Post, Claim L 1230454.
D-2	285 m south and 440 metres west of # 4 Post, Claim L 1230448.
D-3	10 m north and 1135 m east of # 3 Post, Claim L 1230449.
D-4	630 m north and 500 m east of # 3 Post, Claim L 1230447.
D-5	1035 m north and 240 m east of #3 Post, Claim L 1230447.
D-6	85 m north and 630 m east of # 3 Post, Claim L 1230449.
D-7	50 m south and 410 m west of # 1 Post, Claim L 1230444.
D-13	90 m north and 360 metres east of LP (S. Bdry), Claim L 1227319.
D-15	55 m north and 280 metres east of LP (S. Bdry), Claim L 1227319.
D-17	345m south and 490 m east of # 4 Post, Claim L 1230446.
D-20	515 m south and 180 m west of # 1 Post, Claim L 1230454.
D-21	190 m south and 130 m east of # 4 Post, Claim L 1230446.
D-22	540 m south and 510 m east of # 4 Post, Claim L 1230446.
D-23	1030 m south and 670 m west of # 1 Post, Claim L 1230454.

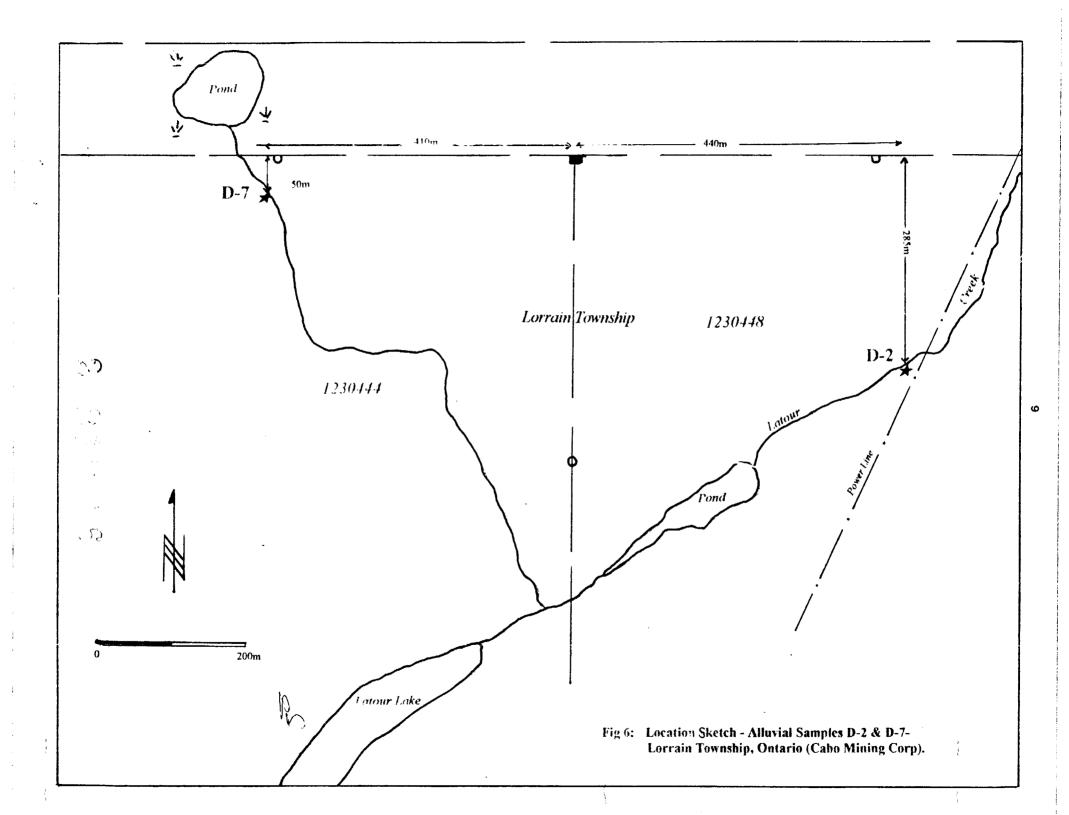


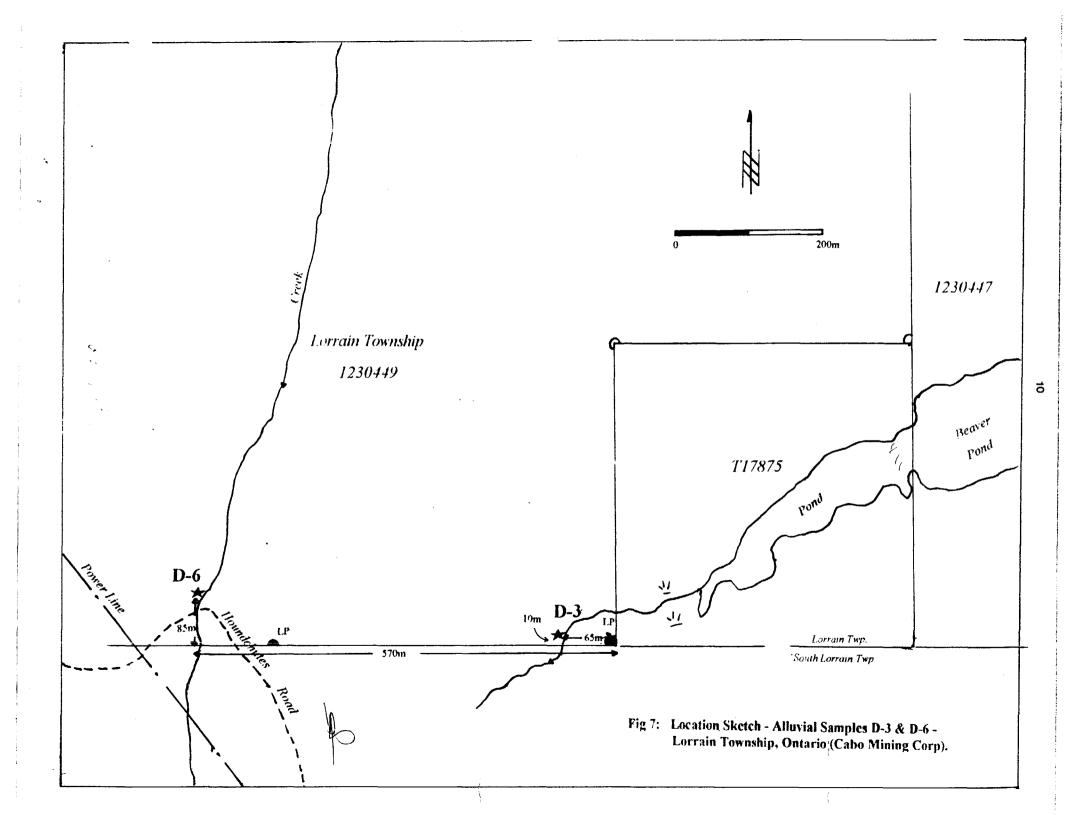
* Sample

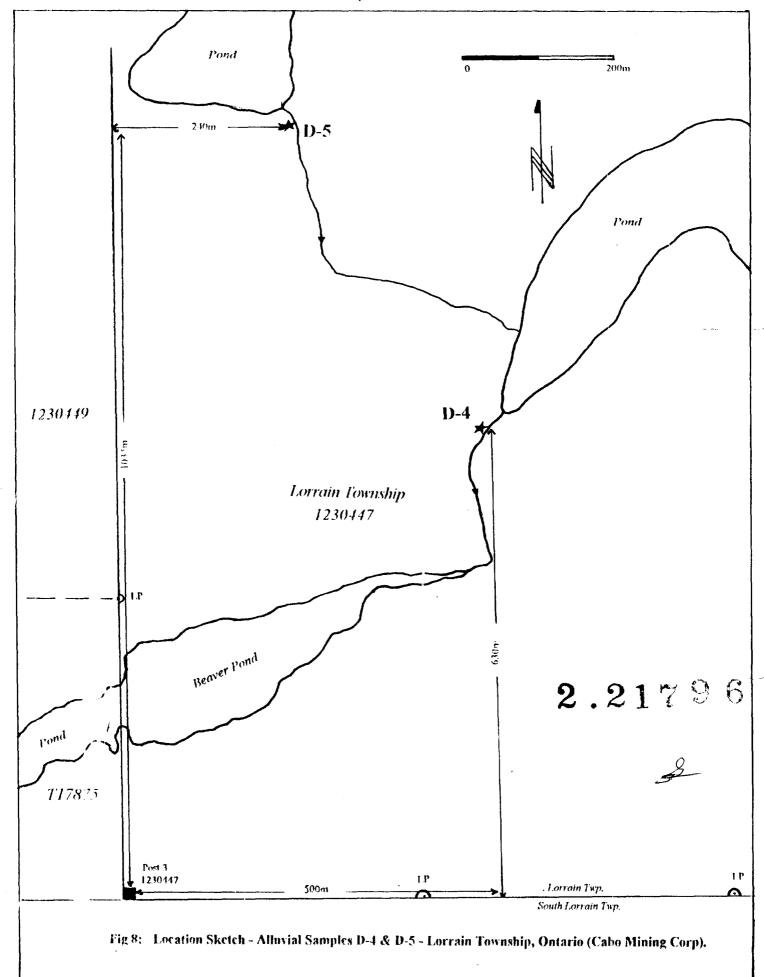
Figure 3: Location Sketch (Property Scale) Showing Locations of 14 Alluvial Samples Collected for Kimberlite Indicator Mineral Processing; Lorrain and South Lorrain Townships, Ontario; a Part of the Cobalt Area Property of Cabo Mining Corp.











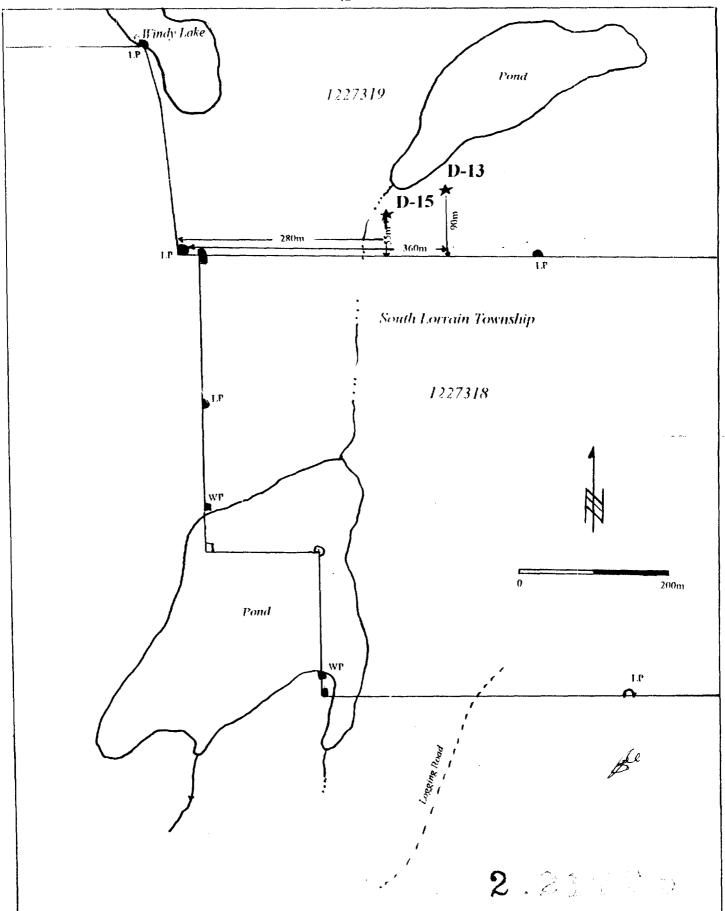


Fig 9: Location Sketch - Alluvial Samples D-13 & D-15 - Lorrain Township, Ontario (Cabo Mining Corp).

The samples, along with 9 others from different locations (not reported here), were delivered to Overburden Drilling Management in Nepean, Ontario where they were processed for Kimberlite Indicator Minerals, gold grains and other heavy metals. The results accompany this report in Appendix I.

The total KIM count in the fourteen samples ranged from 1 to 18 grains. Of particular interest is a cluster of till samples collected east of Pan Lake in Lorrain Township (D-20, D-21, D-22 and D-23). These samples had KIM's ranging from 11 to 18 and were especially anomalous in pyrope garnets (4 to 8). These garnets are considered to be one of the best indicators of kimberlite (Morris, 1994). Another sample (D-2) draining Latour Lake on the east side of the Pan lake area contained 11 pyrope garnets and a total of 13 KIM's. Sample D-1, a stream sediment from a creek at the mouth of Pan Lake also contained elevated pyrope garnets (7).

CONCLUSIONS AND RECOMMENDATIONS

Alluvial samples collected from the Pan Lake area in the south part of Lorrain Township contain elevated numbers of Kimberlite Indicator Minerals. These indicator minerals should be investigated chemically to determine if they are favourable indicators of diamond bearing kimberlite. Further work including till sampling, prospecting, re-interpretation of geophysical data and extensive stripping is recommended in the Pan Lake - Latour Lake area.

Wawa, Ontario July 20, 2000 Respectfully submitted,

Seymour M. Sears, B.A., B.Sc. Geologist

REFERENCES

Born, P and Hitch, M.W.

1990: Precambrian Geology of the Bay Lake Area; O.G.S Report 276, Accompanied by Maps 2551 and 2552; Scale 1:20,000.

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, 95 p.

Morris, TF, Murray, C. and Crabtree, D. 1994, Results of Overburden Sampling for Kimberlite Heavy Mineral Indicators and Gold Grains, Michipicoten River - Wawa Area; Ontario Geological Survey Open File Report 5908, 69 p.

Nicholson, J

1999: Report of Prospecting and Geochemical Surveys on the North Cobalt Property; an Assessment Report for Cabo Mining Corp.

Ontario Geological Survey

2000: Airborne magnetic and electromagnetic surveys, Temagami Area; O.G.S. Maps 82065,82066, 82067, 82068 and 82069; Scale 1:20,000.

Sage, R.P.

1996a Kimberlites of the Lake Timiskaming Structural Zone; Ontario Geological Survey Open File Report 5937.

1996b Kimberlites of Ontario; in Summary of Fieldwork and Other Activities, Ontario Geological Survey Miscellaneous Report 166, p23-24.

2000 Kimberlites of the Lake Timiskaming Structural Zone: Supplement; Ontario Geological Survey Open File Report 6018.

Sears, S.M.

2001: Report on Alluvial Sampling in the Schuman Lake Area, Cobalt Project, Ontario for Cabo Mining Corp.

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

Appendix I

Cabo Mining Corp. - Cobalt Area Project Lorrain & South Lorrain Townships

Alluvial Sample Processing Results

OVERBURDEN DRILLING MANAGEMENT LIMITED

107-15 CAPELLA CCURT, NEPEAN, ONTARIO, K2E 7X1 TELEPHONE: (613) 226-1771/1774

FAX NO.: (613) 226-8753 EMAIL: odm@storm.ca

DATA TRANSMITTAL REPORT

	DATE.	OT-Wal-OT,
-	ATTENTION:	Mr. Seymour Sears
	CLIENT:	SEARS, BARRY & ASSOCIATES LTD. 22 Caverhill Street P.O. Box 2058 Wawa, ON POS 1K0
	PHONE / FAX NO.:	(705) 856-2018 / 1147
	NO. OF PAGES:	13+2-page letter
	PROJECT:	COBALT
	SAMPLE SERIES:	D001 to D023
	TOTAL SAMPLES:	23
	FILE NO:	SEYMOUR SEARS FEBRUARY 2001.wb3
	THESE SAMPLES V	VERE PROCESSED FOR: KIMBERLITE INDICATORS MMSIMs GOLD
	Heavy liquid separat All samples picked for	5 to 16 kg bulk sand, gravel and till samples in one to four bags. ion specific gravity: 3.20. or indicator minerals. stions are presently stored.
	REMARKS:	
	Remy Huneault	·

Laboratory Manager



OVERBURDEN DRILLING MANAGEMENT LIMITED LABORATORY SAMPLE LOG

Project: COBALT
Total of 23 samples
name: SEYMOUR SEARS FEBRUARY 2001.wb3

		Weigh	t (kg)			Clas	sts >2	.0 mm				Matr	ix <2.0) mm			
						1	Perce	entage			Distri	ibution					
Sample Number	Bulk Rec'∈	Table Split	+2 mm Clasts	Table Feed	S - z e	V/S	GR	LS	от	S/U	SD	ST	CY	Sand	Clay	O r g	Class
COBALT			- 11115	,													
D001	15.0	14.5	1.2	13.3	G	95	5	0	0	S	MC	-	Ν	GΥ	NA		SAND + GRAVEL
D002	14.9	14.4	4.0	10.4	G	60	40	0	0	S	MC	-	Ν	OC	NA -		SAND + GRAVEL
D003	16.5	16.0	10.5	5.5	Р	70	30	0	0	S	С	N	Ν	OC	NA		GRAVEL
D004	5.5	5.0	0.9	4.1	G	95	5	0	0	S	MC	+	-	GΥ	GY		SAND + SILT
D005	10.2	9.7	2.5	7.2	G	15	85	0	0	S	MC	Ν	Ν	GB	NA		SAND + GRAVEL
D006	15.5	14.9	8.4	6.5	Р	45	55	Tr	0	S	MC	Υ	Ν	GB	NA		SAND + GRAVEL
D007	8.6	8.1	3.3	4.8	Р	25	75	0	0	S	MC	-	Ν	OC	NA		SAND + GRAVEL
D008	8.2	7.7	3.6	4.1	G	80	20	0	0	S	MC	-	N	OC	NA		SAND + GRAVEL
D009	12.1	11.6	7.9	3.7	Р	90	10	0	0	S	MC	Ν	N	GΥ	NA		GRAVEL
D010	7.3	6.8	0.1	6.7	Р	100	0	0	0	S	MC	-	Ν	GB	NA		SAND
D011	12.7	12.1	6.0	6.1	P	90	10	0	0	S	С	-	Ν	DBN	NA		SAND + GRAVEL
D012	10.9	10.4	4.0	6.4	P	95	5	0	0	S	FM	N	Ν	GB	NA		SAND + GRAVEL
D013	6.4	5.9	1.5	4.4	P	90	10	0	0	U	Υ	Υ	Υ	OC	OC	+	TILL + SOIL
D014	8.5	8.0	6.2	1.8	Р	80	20	0	0	S	MC	Ν	Ν	DOC	NA		GRAVEL
D015	5.2	4.7	0.5	4.2	Р	90	10	0	0	U	Υ	Υ	Υ	BN	BN	+	TILL + SOIL
D016	8.5	8.0	3.7	4.3	Р	90	10	0	0	S	С	-	N	DOC	NA		SAND + GRAVEL
D017	15.5	14.9	3.1	11.8	Р	50	10	40	0	U	Υ	Υ	Υ	LOC	LOC		TILL
D018	10.2	9.7	2.0	7.7	Р	90	10	0	0	U	Υ	Υ	Υ	OC	OC		TILL
019	11.6	11.0	1.7	9.3	Р	60	40	Tr	0	U	Y	Υ	Υ	LOC	LOC		TILL
020د	13.3	12.8	3.4	9.4	₽	90	10	0	0	U	Υ	Υ	Υ	LOC	LOC		TILL
D021	12.3	11.7	2.7	9.0	Р	40	20	40	0	ļυ	Υ	Υ	Υ	LOC	LOC		TILL
D022	9.8	9.2	1.0	8.2	Р	95	5	0	0	U	Υ	Υ	Υ	LOC	LOC		TILL
D023	14.7	14.2	3.1	11.1	F	80	20	0	0	U	Υ	Υ	Υ	LOC	LOC		TILL -

OVERBURDEN DRILLING MANAGEMENT LIMITED GOLD GRAIN SUMMARY SHEET

Project: COBALT Total of 23 samples

Filename: SEYMOUR SEARS FEBRUARY 2001.wb3

Sample Number	Nun	nber of Visit	ole Gold Gra	ains	Nonmag HMC Weight	Calcula	ited PPB Vi	sible Gold i	n HMC
	Total	Reshaped	ped Modified Pristine		(g)	Total	Reshaped	Modified	Pristine
COBALT			•		*				
D001	0	0	0	0	53.2	0	0	0	0
D002	0	0	0	0	41.6	0	0	0	0
D003	1	1	0	0	22.0	4	4	0	0
D001	0	0	0	0	16.4	0	0	0	0
D00	0	0	0	0	28.8	0	0	0	0
D00	5	4	1	0	26.0	65	57	7	0
D007	1	1	0	0	19.2	19	19	0	0
D008	1	0	1	0	16.4	5	0	5	0
D00°	0	0	0	0	14.8	0	0	0	0
D010	0	0	0	0	26.8	0	0	0	0
D011	1	1	0	0	24.4	41	41	0	0
D012	3	2	1	0	25.6	48	47	1	0
D013	0	0	0	0	17.6	0	0	0	0
D014	0	0	0	0	7.2	0	0	0	0
D015	0	0	0	0	16.8	0	0	0	0
D01€	. 0	-	0	0	17.2	0	0	0	0
D017	2		0	0	47.2	10		0	0
D018	0	-	0	0	30.8	0	0	0	0
D019	24	5	3	16	37.2	49		8	29
D020	15		2	4	37.6	12		1	1
D021	9	9	0	0	36.0	88		0	0
D022	9		1	0	32.8	49		0	0
D023	17	16	1	0.	44.4	68	67	0	0

^{*} Calculated ppb Au based on assumed nonmagnertic HMC weight equivalent to 1/250th of the table feed.

OVERBURDEN DRILLING MANAGEMENT LIMITED DETAILED GOLD GRAIN SHEET

Project: COBALT
Total of 23 samples
name: SEYMOUR SEARS FEBRUARY 2001.wb3

Sample	Panned	Dimensi	ons (mic	rons)	Nun	nber of Visit	ole Gold G	ains	Nonmag HMC	Calculated V.G. Assay	Remarks
Number	Yes/No	Thickness	Width	Length	Reshaped	Modified	Pristine	Total	Weight (g)	in HMC (ppb)	
COBALT D001	No	NO VISIBL	E GOLD								
D002	No	NO VISIBL	E GOLD								
D003	No	8 C	25	50	1			1		4	·
D004	No	NO VISIBL	E GOLD								
D005	No	NO VISIBL	E GOLD								
D006	No	10 C 13 C	50 50	50 75	4	1			1	65	-
D007	No	13 C	50	75	1			1	!		
D008	No	8 C	25	50		1		1	!		
D009	No	NO VISIBL	E GOLD								
D010	No	NO VISIBL	E GOLD								
℃11	No	18 C	75	100	1			1		41	-
D012	No	5 C 10 C 18 C	25 50 75	25 50 100	1	1				48	-
D013	No	NO VISIBL	E GOLD				-				
D014	No	NO VISIBL	E GOLD			•					
D015	No	NO VISIBL	E GOLD								
D016	No	NO VISIBL	E GOLD)							5 beads mercury contamination 25µ.
D017	No	8 C 13 C	25 50	50 75	1				1 1 2 47.2	10	2 beads mercury contamination 25µ.
D018	No	NO VISIBL	E GOLD	,				•	2 47.2	. 10	
D019	Yes	3 C 4 C 7 C 5 C 8 C 10 C 10 C 13 C	15 15 15 25 25 25 25 50	15 25 50 25 50 75 50	1 1 2 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	3	3	2 3 4 5 6 6 2 1 1 4 37.2	. 49	No Sulphides.
つ 020	Yes	3 C 4 C 7 C 5 C 8 C	15 15 15 25 25	15 25 50 25 50	5 3) 3 5 1	ı	1		2 6 3 2 2 5 37.6	5 12	No Sulphides.

OVERBURDEN DRILLING MANAGEMENT LIMITED DETAILED GOLD GRAIN SHEET

Project: COBALT
Total of 23 samples
Total of SEYMOUT SEARS FEBRUARY 2001.wb3

Sample Number	Panned Yes/No	Dimensi	ons (mic	crons)	Num	ber of Visit	ole Gold Gr	ains	Nonmag HMC Weight	Calculated V.G. Assay in HMC	Remarks
		Thickness	Width	Length	Reshaped	Modified	Pristine	Total	(g)	(ppb)	
COBALT											
D021	Yes	8 C	25	50	4			4			No Sulphides.
		10 C	25	75	1			1			•
		13 C	50	75	1			1			
		15 C	50	100	1			1			
		18 C	50	125	1	•		1			
		15 C	75	75	1			1			
								9	36.0	88	•
D022	Yes	4 C	15	25		1		1			No Sulphides.
		5 C	25	25	2			2			•
		8 C	25	50	2 2			2			
		10 C	50	50	2			2			
		13 C	50	75	1			1			
		15 C	75	75	1			1			_
								9	32.8	49	
D023	Yes	3 C	15	15	2	1		3			No Sulphides.
		7 C	15	50	4			4			
		5 C	25	25	2			2			
		8 C	25	50	4			4			
		13 C	25	100	1			1			
		13 C	50	75	1			1			
		15 C	50	100	1			1			
		18 C	50	125	1			1			_
								17	44.4	68	-

OVERBURDEN DRILLING MANAGEMENT LIMITED LABORATORY SAMPLE LOG KIMBERLITE INDICATOR MINERAL COUNTS

Project: COBALT

Total of 23 samples
Filename: SEYMOUR SEARS FEBRUARY 2001.wb3

			<2.0	mm Ta	able Co	ncentrate				Select	ed Pseud	doKIMs			Κiλ	/i ČO	unt (spe	cies	not r	igoro	usiy	Picke	₃u, e	xclud	ed fr	om to	total)					
¥			0.25	-2.0 m	m Heav	y Liquid S	Separatio	on S.G	3.20	1.0-2.0 mm	0.5-1.0 mm	0.25-0.5 mm	1.0 to 2.0 mm					0.5 to 1.0 mm						0.25 to 0.5 mm									
						Nonferro	magnetic f	raction											1														
Sample Number	Total	-0.25 mm	Heavy Liquid Lights	Total Mag	Total	<0.25 mm (wash)	0.25 to 0.5 mm	0.5 to 1.0 mm	1.0 to 2.0 mm	Low-Cr diopside	Low-Cr diopside	Low-Cr diopside	GP	GO	DC	lM	CR	FO*	GP	GO	DC	IM	CR	FO*	GP	GO*	DC	IM*	CR	FO'	Total KIMs		
COBALT				**					**										П														
D001	950.7	599.3	320.6	2.00	28.8	11.8	15.0	1.5	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	1	0	8		
D002	728.0	452.0	249.3	2.90	23.8	5.2	13.4	3.3	1.90	0	0	3	0	0	0	0	0	0	1	0	0	0	0	1	11	2	0	2	1	1	13		
D003	438.6	107.1	320.6	1.20	9.7	2.0	4.2	2.0	1.50	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	2	0	0	3		
D004	281.6	156.4	124.0	0.01	1.2	0.3	0.8	0.1	0.04	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2		
D005	826.4	597.3	211.3	0.30	17.5	3.7	8.2	3.5	2.10	0	0	7	0	0	0	1	0	0	0	0	0	0	0	0	4	2	1	6	3	3	9		
D006	590.2	308.4	253.3	4.30	24.2	3.7	13.1	5.1	2.30	0	0	12	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	3	1	5		
D007	452.1	252.1	183.5	3.30	13.2	3.9	7.4	1.5	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	į 1		
D008	362.9	237.6	113.1	0.80	11.4	1.9	4.7	2.1	2.70	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	5	0	8		
D009	329.7	39.9	281.2	0.10	8.5	0.6	4.9	2.2	0.80	0	0	4	0	0	0	2	0	0	1	1	0	5	0	0	3	ĺ	1	57	18	1	31		
D010	358.6	278.1	73.8	0.20	6.5	1.3	4.2	0.8	0.20	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	2		
D011	454.3	198.0	241.2	1.10	14.0	3.3	7.0	2.7	1.00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	7	4	0	4		
D012	542.1	326.3	187.9	2.30	25.6	4.8	14.2	3.8	2.80	. 0	0	13	0	0	0	0	0	1	1	1	0	7	0	1	6	3	2	18	31	8	48		
D013	376.0	216.4	157.5	0.50	1.6	0.5	0.8	0.2	0.10	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	1	0	2		
D014	265.3	58.8	199.6	0.60	6.3	0.9	2.5	1.6	1.30	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	2		
D015	312.6	172.5		0.50	2.1	0.8	1.0	0.2	0.10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	0	0	2		
D016	487.2	191.9		1.70	14.2	3.0	6.8	3.2	1.20	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	5	1	9		
D017	1039.1	525.1	494.8	3.20	16.0	5.0	7.0	2.7	1.30	0	1	16	0	0	0	0	0	0	1	0	0	0	0	8	4	0	1	2	2	10	8		
D018	728.3	392.4	325.9	1.50	8.5	2.0	4.2	1.5	0.80	0	0	3	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	5	3	0	6		
D019	891.7	367.8		2.70	22.9	11.0	7.4	3.2	1.30	0	1	4	0	0	0	0	0	0	0	0	0	2	0	0	8	1	2	10	6	3	18		
D020	1196.8	729.5	420.8	4.20	42.3	11.4	18.1	8.2	4.60	0	0 .	10	0	0	0	2	0	0	0	0	0	5	0	4	8	2	0	4	3	11	18		
D021	879.8	458.6		5.10	48.2	16.3	18.5	8.2	5.20	0	0	12	0	0	0	0	0	0	0	0	0	0	0	7	8	1	1	8	3	16	12		
D022	850.0	478.2	339.3	4.20	28.3	8.3	11.5	6.0	2.50	0	0	8	0	0	0	0	0	0	0	0	0	2	0	2	5	0	1	4	3	1	11		
D023	938.7	501.6	412.4	3.80	20.9	5.0	10.0	4.1	1.80	0	0	/	0	0	0	0	0	0	1	0	0	8	0	1	4	1	0	22	5	1]	18		

^{**} Values greater than 0.1 g were weighed only to one decimal place; the zero was added in the second decimal position to facilitate column alignment.

OVERBURDEN DRILLING MANAGEMENT LIMITED KIMBERLITE INDICATOR MINERAL PICKING FOOTNOTES

PROJECT: COBALT TOTAL OF 23 SAMPLES

FILENAME: SEYMOUR SEARS FEBRUARY 2001.wb3

ample No.	REMARKS:
D001	SEM check from 0.25-0.5 mm fraction: 1 GP versus almandine candidate = 1 GP.
D002	SEM checks from 0.25-0.5 mm fraction: 4 GO versus almandine candidates = 2 GO (Cr-poor pyrope) and 2 almandine; 2 CR versus crustal ilmenite candidates = 1 crustal ilmenite and 1 Ti-andradite; and 2 IM versus crustal ilmenite candidates = 2 IM.
D003	No KIM remarks.
D004	No KIM remarks.
D005	SEM check from 1.0-2.0 mm fraction: 1 IM versus crustal ilmenite candidate = 1 IM. SEM checks from 0.25-0.5 mm fraction: 3 GO versus grossular candidates = 2 GO (Cr-poor pyrope) and 1 staurolite; and 10 IM versus crustal ilmenite candidates = 6 IM, 3 crustal ilmenite and 1 CR.
D006	SEM check from 0.25-0.5 mm fraction: 1 GO versus almandine candidates = 1 almandine.
D007	No KIM remarks.
D008	SEM checks from 0.5-1.0 mm fraction: 3 IM versus crustal ilmenite candidates = 3 crustal ilmenite. SEM checks from 0.25-0.5 mm fraction: 1 pale GP versus almandine candidate = 1 GP; and 6 CR versus crustal ilmenite candidates = 5 CR and 1 IM.
D000	SEM check from 1.0-2.0 mm fraction: 1 IM versus crustal ilmenite candidate = 1 IM. SEM checks from 0.5-1.0 mm fraction: 4 IM versus crustal ilmenite candidates = 3 IM and 1 Ti-andradite. SEM checks from 0.25-0.5 mm fraction: 12 IM versus crustal ilmenite candidates = 2 IM, 6 crustal ilmenite, 2 CR and 2 Ti-andradite; and 1 forsterite versus diopside candidate = 1 forsterite.
D01 0	SEM checks from 0.25-0.5 mm fraction: 4 IM versus crustal ilmenite candidates = 2 IM and crustal ilmenite.
DC1	SEM check from 0.25-0.5 mm fraction: 1 GO versus grossular candidate = 1 GO (Cr-poor pyrope).
D012	SEM checks from 0.5-1.0 mm fraction: 2 IM versus CR candidates = 1 crustal ilmenite and 1 Ti-andradite. SEM checks from 0.25-0.5 mm fraction: 3 GO versus grossular candidates = 2 GO (Cr-poor pyrope) and 1 grossular; and 2 CR versus Ti-andradite candidates = 1 CR and 1 Ti-andradite.
D013	No KIM remarks.
D014	No KIM remarks.
D015	No KIM remarks.
D016	No KIM remarks.
D017	SEM check from 1.0-2.0 mm fraction: 1 GO versus almandine candidate = 1 almandine.
D018	No KIM remarks.

OVERBURDEN DRILLING MANAGEMENT LIMITED KIMBERLITE INDICATOR MINERAL PICKING FOOTNOTES

PROJECT: COBALT

TOTAL OF 23 SAMPLES

FILENAME: SEYMOUR SEARS FEBRUARY 2001.wb3

Sample No.	REMARKS:
D019	SEM checks from 0.25-0.5 mm fraction: 2 GO versus grossular candidates = 1 GO (Cr-poor pyrope) and 1 staurolite; and 3 DC versus Cr-grossular candidate = 2 DC and 1 Cr-grossular.
D020	SEM checks from 0.25-0.5 mm fraction: 3 IM versus crustal ilmenite candidates = 2 crustal ilmenite and 1 CR; and 1 GO versus almandine candidate = 1 almandine.
D021	SEM checks from 0.25-0.5 mm fraction: 2 GO versus almandine candidates = 1 GO (Cr-poor pyrope) and 1 almandine; and 1 DC versus Cr-grossular candidate = 1 DC.
D022	No KIM remarks.
D023	No KIM remarks.

OVERBURDEN DRILLING MANAGEMENT LIMITED MMS INDICATOR MINERAL DATA

PROJECT: COBALT TOTAL OF 23 SAMPLES

FILENAME: SEYMOUR SEARS FEBRUARY 2001.wb3

Sulphide/Arsenide + Related

Mg/Mn/Al/Cr Minerals

		Sulphide/Arsen Minerals 0.2						/AI/Cr 25-0.5	Mineral mm	-						
v.		>1.0 amp		<1.0 amp		>1 amp				>0.8 amp		<0	.8 amp)	_	
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Misc. Prime MMSIMs	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr	Remarks	Picked Grains
COBALT D001	Tr (40 gr)	0	Tr (1 gr)	0	0	0	0	0	0	2	0	0	0	Tr (1 gr; see KIM data)	Homblende-augite-almandine/epidote assemblage.	1.0-2.0 mm fraction: 3 chalcopyrite 0.5-1.0 mm fraction: 8 chalcopyrite 0.25-0.5 mm fraction: 40 chalcopyrite 1 chromite (picked as KIM)
D002	Tr (1gr)		Tr (5 gr)	Tr	1 pale purpie	Tr low-Cr diopside (3 gr)	0	0	0	5	0	0	0	Tr (1 gr; see KiM data)	Almandine-augite-homblende/epidote- diopside assemblage. SEM check from 0.25-0.5 mm fraction: 1 pale purple spinel versus almandine candidate = 1 spinel.	0.5-1.0 mm fraction: 1 forsterite (see KIM data; picked as KIM) 0.25-0.5 mm fraction: 1 chalcopyrite 1 spinel 3 low-Cr diopside 1 chromite (picked as KIM) 1 forsterite (see KIM data; picked as KIM)
D003	Tr (6 gr)	0	Tr (3 gr)	Tr	0	0	0	0	0	8	0	0	Tr	0	Augite/epidote assemblage.	0.25-0.5 mm fraction: 6 chalcopyrite
D004	0	0	Tr (~10 gr)	0	0	Tr low-Cr diopside (2 gr)	0	Tr	0 -	1	0	0	0	0	Almandine-augite/epidote assemblage.	0.25-0.5 mm fraction: 2 low-Cr diopside
D005	Tr (3 gr)	0	0	0	0	Tr low-Cr diopside (7 gr)	0	0	0	1	Tr	0	0	Tr (3 gr; see KIM data)	Almandine-homblende-augite/epidote assemblage.	0.25-0.5 mm fraction: 3 chalcopyrite 7 low-Cr diopside 3 chromite (picked as KIMs) 3 forsterite (see KIM data; picked as KIMs)
D006	0	0	0	Tr	0	0	0	0	0	3	Tr	0	0	Tr (3 gr; see KIM data)	Augite-almandine-homblende/epidote assemblage.	0.5-1.0 mm fraction: 1 forsterite (see KIM data; picked as KIM) 0.25-0.5 mm fraction: 3 chromite (picked as KIMs) 1 forsterite (see KIM data; picked as KIM)
D007	0	0	Tr (2 gr)	0	0	0	0	0	0	2	0	0	0	0	Augite-homblende/epidote-diopside assemblage.	

OVERBURDEN DRILLING MANAGEMENT LIMITED MMS INDICATOR MINERAL DATA

PROJECT: COBALT TOTAL OF 23 SAMPLES

FILENAME: SEYMOUR SEARS FEBRUARY 2001.wb3

Sulphide/Arsenide + Related

Mg/Mn/Al/Cr Minerals

Minerals 0.25-0.5 mm ∵′~ 5 mm <1.0 ~0.8 >1 amp >1.0 amp <0.ວ່ ລໍກຳວັ amp amp % % Red % Misc. Prime # Grains + Misc. Prime Sample Number Cpy MMSIMs Pv Gth Colour Spinel **MMSIMs** Rutile Κv % Sil St Sps Fay Opx Cr Remarks **Picked Grains** " COBALT Augite/epidote assemblage. D008 Tr 0 0 0 0 Tr low-Cr Tr 0 10 Tr 0.25-0.5 mm fraction: (8 gr) diopside (5 gr; 8 chalcopyrite see KIM (2 gr) 2 low-Cr diopside data) 5 chromite (picked as KIMs) D009 0 0 Ω Tr 0 Tr low-Cr Tr 0 10 Tr Augite-homblende/epidote assemblage. 0.5-1.0 mm fraction: diopside (18 gr; 1 chalcopyrite see KIM (4 gr) 0.25-0.5 mm fraction: data) 4 low-Cr diopside 18 chromite (picked as KIMs) 1 forsterite (see KIM data; picked as KIM) D010 Tr 0 0 Tr low-Cr 0 0 15 Augite-orthopyroxene/epidote-diopside Tr 0.25-0.5 mm fraction: diopside (2 gr) assemblage. 2 low-Cr diopside (2 gr) Tr low-Cr D011 Tr 0 0 0 0 0 15 Augite-almandine-orthopyroxene/epidote 0.5-1.0 mm fraction: diopside assemblage. SEM checks from 0.25-0.5 (3 gr) 1 chalcopyrite (2 gr) see KIM mm fraction: 5 representative favalite 0.25-0.5 mm fraction: versus crthopyroxene candidates = 5 data) 3 chalcopyrite bronzite. 2 low-Cr diopside 5 representative bronzite 4 chromite (picked as KIMs) D012 0 0 1 blue gahnite Tr low-Cr Tr 0 0 Almandine-homblende-augite/diopside 1.0-2.0 mm fraction: diopside (31 gr; assemblage. 1 forsterite (see KIM (13 gr) see KIM data; picked as KIM) data) 0.5-1.0 mm fraction: 1 forsterite (see KIM data; picked as KIM) 0.25-0.5 mm fraction: 1 gahnite 13 low-Cr diopside 31 chromite (picked as KIMs) 8 forsterite (see KIM data; picked as KIMs) D013 Tr 1 colourless Tr low-Cr Tr Tr Almandine-augite/epidote-diopside 0.25-0.5 mm fraction: diopside (1 gr; assemblage. 1 spinel (2 gr) see KIM 2 low-Cr diopside data) 1 chromite (picked as KIM)

OVERBURDEN DRILLING MANAGEMENT LIMITED MMS INDICATOR MINERAL DATA

PROJECT: COBALT TOTAL OF 23 SAMPLES

FILENAME: SEYMOUR SEARS FEBRUARY 2001.wb3

Sulphide/Arsenide + Related Minerals 0.03-1 mm Mg/Mn/Al/Cr Minerals 0.25-0.5 mm

		Minerals 0.0	<		0.25-0.5 mm									_		
•		>1.0 amp		<1.0 amp		>1 amp				>0.8 amp		<0	.8 amp)	-	
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Misc. Prime MMSIMs	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr	Remarks	Picked Grains
COBALT D014	0	O	Tr (2 gr)	Tr	0	Tr low-Cr diopside (2 gr)	0	0	0	5	0	0	15	Tr (1 gr; see KIM data)	Augite-orthopyroxene/epidote-diopside assemblage.	0.25-0.5 mm fraction: 2 low-Cr diopside 1 chromite (picked as KIM)
D015	0	0	Tr (2 gr)	Tr	0	0	0	Tr	0	2	0	0	1	0	Actinolite/epidote assemblage. SEM checks from 0.25-0.5 mm fraction: 3 representative brown and 3 representative green silicate mineral grains versuslithic fragments = 6 actinolite.	0.25-0.5 mm fraction: 6 representative actinolite
D016	0	. 0	0	0	0	Tr low-Cr diopside (3 gr)		0	0	1	0	0	10	Tr (5 gr; see KIM data)	Augite-almandine/diopside-epidote assemblage.	0.25-0.5 mm fraction: 3 low-Cr diopside 5 chromite (picked as KIMs) 1 forsterite (see KIM data; picked as KIM)
D017	Tr (1 gr)	-0	0	Tr	0	Tr Mn-epidote (1 gr) Tr low-Cr diopside (16 gr)	0	0		5	0	0	5	Tr (2 gr; see KIM data)	Augite-hornblende-almandine/epidote assemblage.	9.5-1.0 mm fraction: 1 low-Cr diopside 8 forsterite (see KIM data; picked as KIMs) 0.25-0.5 mm fraction: 1 chalcopyrite 1 Mn-epidote 16 low-Cr diopside 2 chromite (picked as KIMs) 10 forsterite (see KIM data; picked as KIMs)
D018	Tr (1 gr)	0	0	Tr	0	Tr low-Cr diopside (3 gr)	Tr (1 gr)	0	0	1	0	0	5	Tr (3 gr; see KIM data)	Augite/epidote-diopside assemblage. .	0.5-1.0 mm fraction: 1 chromite (see KIM data; picked as KIM) 0.25-0.5 mm fraction: 1 chalcopyrite 3 low-Cr diopside 1 red rutile 3 chromite (picked as KIM)

OVERBURDEN DRILLING MANAGEM. LIMITED MMS INDICATOR MINERAL DATA

PROJECT: COBALT TOTAL OF 23 SAMPLES

FILENAME: SEYMOUR SEARS FEBRUARY 2001.wb3

Sulphide/Arsenide + Related

Mg/Mn/Al/Cr Minerals

		Minerals 0.2		J 	0.25-0.5 mm										_	
		>1.0 amp		<1.0 amp		>1 amp				>0.8 amp		<0.	.8 amp			
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Misc. Prime MMSIMs	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr	Remarks	Picked Grains
COBALT D019	0	0	Tr (~15 gr)	Tr	0	Tr Cr-grossular (1 gr) Tr low-Cr diopside (4 gr)	0	0	Tr	2	0	0	Tr	Tr (6 gr; see KIM data)	Augite-almandine/epidote-diopside assemblage.	0.5-1.0 mm fraction: 1 low-Cr diopside 0.25-0.5 mm fraction: 1 Cr-grossular (see KIM notes) 4 low-Cr diopside 6 chromite (picked as KIMs) 3 forsterite (see KIM data; picked as KIMs)
D020	0	0	0	Tr	0	Tr Cr-grossuia: (1 gr) Tr low-Cr diopside (10 gr)	0	0	0	3	0	0	2	Tr (3 gr; see KIM data)	Augite-homblende/epidote assemblage.	0.5-1.0 mm fraction: 4 forsterite (see KIM data; picked as KIMs) 0.25-0.5 mm fraction: 1 Cr-grossular 10 low-Cr diopside 3 chromite (picked as KIMs) 11 forsterite (see KIM data; picked as KIMs)
D021	Tr (1 gr)	0	0	Tr	0	Tr low-Cr diopside (12 gr)	0	0	0	8	0	0	Tr	Tr (3 gr; see KIM data)	Augite-homblende-almandine/epidote assemblage.	0.5-1.0 mm fraction: 1 chalcopyrite 7 forsterite (see KIM data; picked as KIMs) 0.25-0.5 mm fraction: 1 chalcopyrite 12 low-Cr diopside 3 chromite (picked as KIMs) 16 forsterite (see KIM data; picked as KIMs)
D022	0	0	0	Tr	0	Tr low-Cr diopside (6 gr)	0	0	0	Tr	Tr	0	Tr	Tr (3 gr; see KIM data)	Augite/epidote assemblage.	0.5-1.0 mm fraction: 2 forsterite (see KIM data: picked as KIM) 0.25-0.5 mm fraction: 6 low-Cr diopside 3 chromite (picked as KIMs) 1 forsterite (see KIM data; picked as KIM)

OVERBURDEN DRILLING MANAGEMENT LIMITED MMS INDICATOR MINERAL DATA

PROJECT: COBALT TOTAL OF 23 SAMPLES

FILENAME: SEYMOUR SEARS FEBRUARY 2001.wb3

Sulphide/Arsenide + Related

Mg/Mn/Al/Cr Minerals

		Minerals 0.25			0.25-0.5 mm										_	
````		>1.0 amp		<1.0 amp		>1 amp		<del></del>		>0.8 amp		<0	.8 amp	)	-	
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Misc. Prime MMSIMs	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr	Remarks	Picked Grains
COBALT																
D023		0	0	0	0	Tr low-Cr diopside (7 gr)	0	0	0	1	Tr	0	Tr	Tr (5 gr; see KIM data)	Augite-almandine/diopside-epidote assemblage.	0.5-1.0 mm fraction: 1 forsterite (see KIM data; picked as KIM) 0.25-0.5 mm fraction: 7 low-Cr diopside 5 chromite (picked as KIMs) 1 forsterite (see KIM data; picked as KIM)



## **Work Report Summary**

Transaction No:

W0180.30473

Status: APPROVED

Recording Date:

2001-JUL-19

Work Done from: 2000-SEP-05

Approval Date:

2001-SEP-12

to: 2001-JUL-19

Client(s):

178510

**OUTCROP EXPLORATIONS LIMITED** 

302234

SIMPSON, MURRAY D

Survey Type(s):

**BENEF** 

Work Report D	<u>etails:</u>								
Claim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
L 1227319	\$717	\$717	\$0	\$0	\$717	717	\$0	\$0	2001-NOV-06
L 1230444	\$358	\$358	\$0	\$0	\$358	358	\$0	\$0	2002-JAN-21 E
L 1230446	\$1,076	\$1,076	\$0	\$0	\$1,076	1,076	\$0	\$0	2001-JUL-21
L 1230447	\$717	\$717	\$0	\$0	\$717	717	\$0	\$0	2002-JAN-21 E
L 1230448	\$359	\$359	\$0	\$0	\$359	359	\$0	\$0	2002-JAN-21 E
L 1230449	\$717	\$717	\$0	\$0	\$717	717	\$0	\$0	2002-JAN-21 E
L 1230454	\$1,076	\$1,076	\$5,020	\$5,020	\$0	0	\$0	\$0	2001-JUL-21
	\$5,020	\$5,020	\$5,020	\$5,020	\$3,944	\$3,944	\$0	\$0	<del>-</del>

Status of claim is based on information currently on record.



31M05SR2037

2.21796

LORRAIN

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Date: 2001-SEP-14



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

Tel: (888) 415-9845

**Submission Number: 2.21796** Transaction Number(s): W0180.30473

Fax:(877) 670-1555

47 HILLVIEW, BOX 54 LATCHFORD, ONTARIO P0J 1N0 CANADA

MURRAY D SIMPSON

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 BRUCE GATES by email at bruce.gates@ndm.gov.on.ca or by phone at (705) 670-5856.

Yours Sincerely,

Roy Spooner

Supervisor, Geoscience Assessment Office

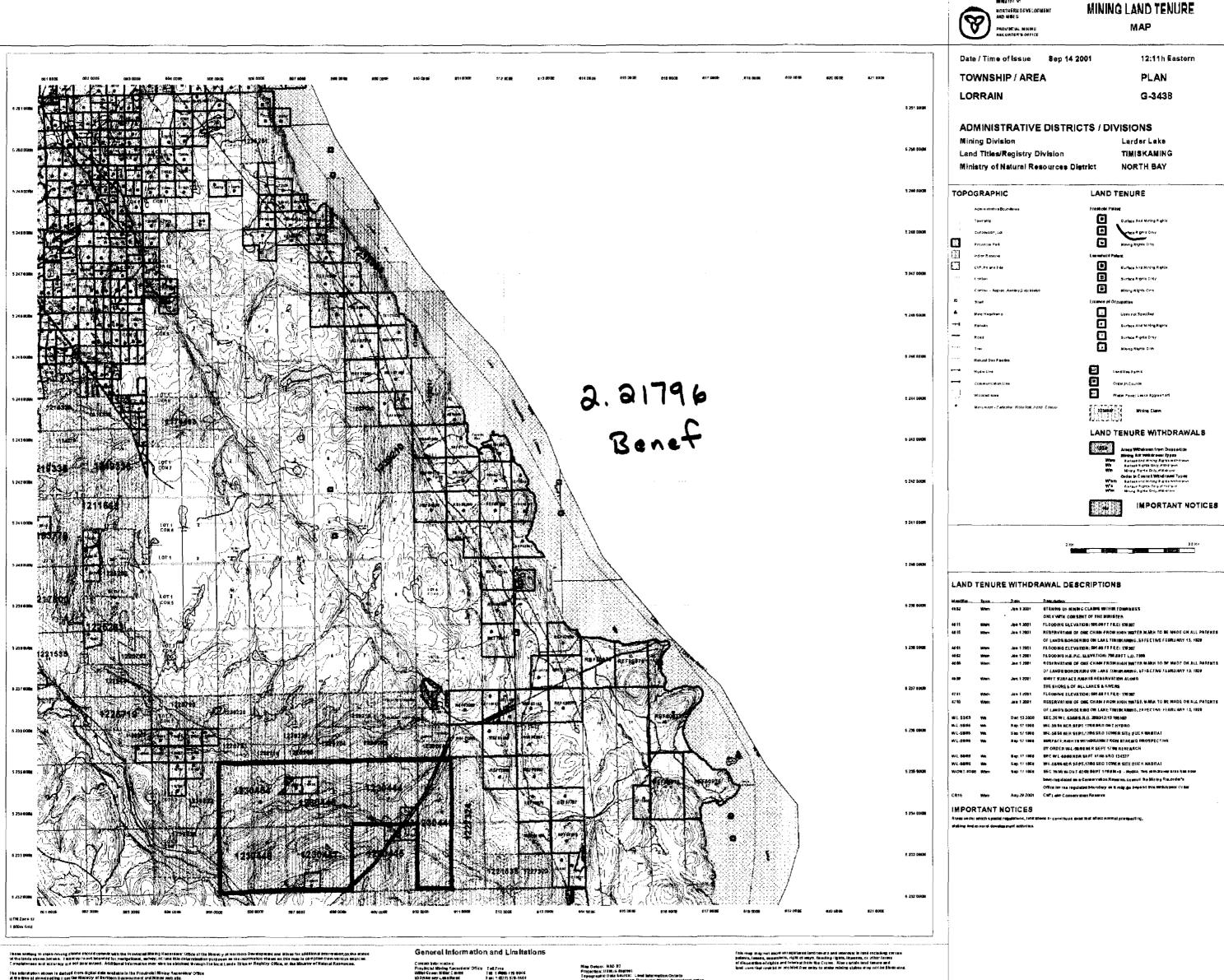
Cc: Resident Geologist

Outcrop Explorations Limited

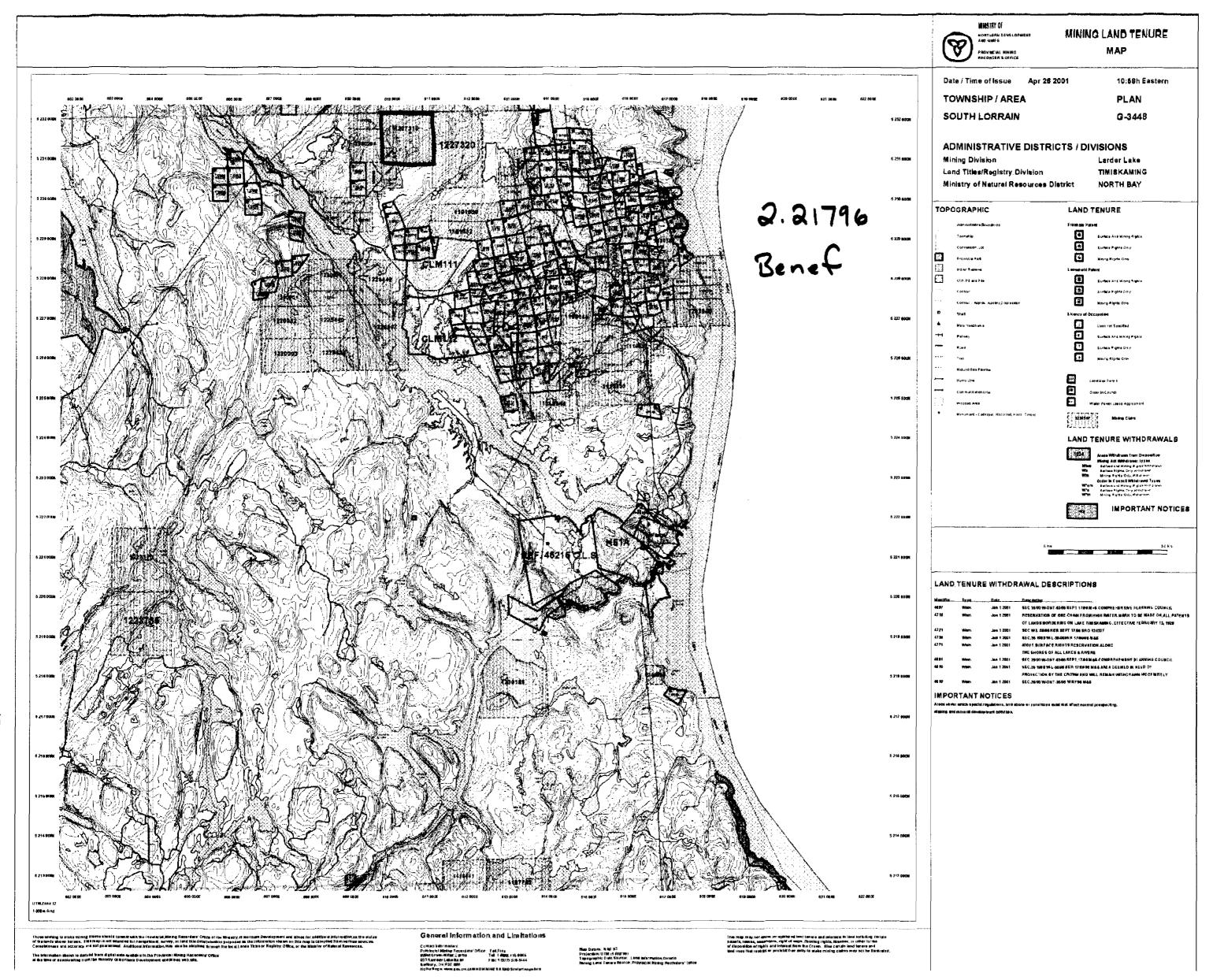
(Claim Holder)

Murray D Simpson (Assessment Office) Assessment File Library

Murray D Simpson (Claim Holder)



MANISTRY OF



5SE2037 2.21796