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F	Ne VANCOUVER, B.C.

# ASSESSMENT REPORT

on

# 1999 GEOLOGY and ROCK SAMPLING PROGRAM

Mac Property

### NTS 82L/2 E

Lat: 50° 04' 20" N Long: 118° 32' 30" W

by: Linda Caron. P. Eng. Box 2493 Grand Forks, B.C.



UCAL SURVEY BRANCH

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### 1.0 SUMMARY

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The Mac property is located about 55 kilometres southeast of Vernon, B.C. There is excellent road access to the claims, with the main area of work situated immediately adjacent to Highway 6, some 85 km east from Vernon. The property consists of six 2-post mineral claims owned by John Kemp and Linda Caron. This report summarizes the results of prospecting, rock sampling, compilation and petrographic work completed on the claims during 1999.

The Mac Property was staked to cover a known gold occurrence near McIntyre Lake (Minfile 082LSE017). A shallow dipping mineralized shear zone occurs on the property, ranging up to about 15 metres in width. Mineralization occurs in a complex zone of faulting and dyking hosted within fresh granodiorite of probable Cretaceous age. The zone has been tested by trenching on surface, where it has returned up to an average of 0.124 oz/t Au over a 12 metre wide zone. Down dip from this, drilling has returned a number of good intersections, including:

ddh 83-6 10.2 m@ 0.3 oz/t Au ddh 88-30 13 m @ 0.47 oz/t Au

The mineralized zone has a strike length of perhaps 50-75 metres, before being truncated by steep north trending faults on both the east (at surface) and west (at depth). There has been essentially no effort to attempt to find the faulted extension of the mineralized zone to the northeast or southwest.

Mineralization consists of pyrite, arsenopyrite and quartz-carbonate veinlets in an intensely altered (clay + gouge) shear zone in a possible pendant of older volcanics (or younger dyke material?) within fresh granodiorite. The shear trends northeast and dips to the west at about 30-45°. Both the granodiorite and the altered shear zone are cut by trachyte and biotite lamprophyre dykes. The dykes and the granodiorite may be altered within the mineralized shear. The extent of alteration and abundance of syn- and post-mineral faulting within the mineralized zone makes identification of the mineralized host difficult, and previous workers have widely differing descriptions of both the host to the mineralization and the timing of the mineralization.

Rock sampling was done of a variety of rock and alteration types to better understand the nature of known mineralized shear zone on the Mac property. Samples from the shear zone returned a maximum of 27.9 g/t Au and 37.2 g/t Ag. Gold shows a strong geochemical association with silver, arsenic, antimony and mercury.

A program of detailed surface mapping, in conjunction with re-logging the drill holes (with an emphasis on structure and on understanding the dykes and volcanic? units within the granodiorite) is recommended. Mapping should attempt to determine the offset on the bounding faults, with the goal of identifying drill or trench targets to test for the offset mineralized zone to the east and west of the area of known mineralization.

### 2.0 INTRODUCTION

### 2.1 Location, Access and Terrain

Work described in this report was done on the Mac property, located about 55 kilometres southeast of Vernon, B.C. (see Figure 1). Access to the property is east from Vernon on Highway 6 for 85 km, to the McIntyre Lake. The main area of mineralization is situated immediately west of the highway, about 750 south of the south end of the lake.

The claims straddle the northeast trending McIntyre Creek valley. Elevations range from about 1200 metres in the valley bottom, in the southeastern portion of the property, to about 1400 metres in the northwestern portion of the property. The known area of mineralization and essentially all the previous work on the property has been on the northwest side of the McIntyre Creek valley (northwest of the highway). The topography in this area is moderate to steeply southeast sloping, with numerous steep southeast flowing drainages, in deeply incised gullies. Generally the area is heavily forested. Minor patchy logged areas are present.

The climate is moderately wet, although generally quite mild. Snowfall is heavy, typically in the order of 2 - 3 metres. There is abundant water on the property for drilling, from the decline (now flooded) or from numerous creeks or ponds.

### 2.2 Property and Ownership

The Mac property consists of six 2-post mineral claims, as shown in Figure 2 and summarized below. The claims are owned 50% by John Kemp and 50% by Linda Caron.

Claim N	lame	Tenure Number	Units	Expiry Date
Mac	¥1	370527	1	July 29, 2002
Maci	¥2	370528	1	July 29, 2002
Maci	¥3	370529	1	July 29, 2002
Mac	¥4	370530	1	July 29, 2002
Mac	¥5	370531	1	July 29, 2002
Mac	¥6	370532	1	July 29, 2002

Expiry dates listed are after acceptance of this report.





### 2.3 History

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Mineralization on the Mac property was discovered in the late 1960's, and the property was optioned to New Cinch Uranium in 1973. New Cinch Uranium completed a program of backhoe trenching and drilled 6 holes before dropping the option in 1974.

Brican Resources optioned the property in 1980, and during the period 1980-83 completed soil and rock sampling, ground geophysics (mag), trenching and drilling (6 holes). One drill hole (83-6) returned 10.2 m averaging 0.3 oz/t Au. The property was then optioned by Brican to Kerr Addision who drilled 13 holes in 1984, before returning the claims to Brican. Brican drilled a further 8 holes in 1986, before relinquishing the option on the property.

In 1988 the claims were optioned by Commonwealth Gold Corp who completed additional ground geophysics (VLF, IP), and drilled 13 holes. Highlights of the drill program were:

ddh 88-28	2.8 m	@ 0.23 oz/t Au
ddh 88-29	11.7 m	@ 0.13 oz/t Au
ddh 88-30	13 m	@ 0.47 oz/t Au

Commonwealth Gold then undertook to drive a decline into the mineralized zone, aiming to hit the zone in the vicinity of the 88-30 drill hole intercept. At the base of the decline, the mineralized zone averaged 10 metres in width and returned an average grade of about 0.42 oz/t Au.

The claims were allowed to lapse in the late 1990's. The current claims were acquired by staking by the present owners in the summer of 1999.

### 2.4 Summary of Work Done, August - November, 1999

Several days were spent prospecting, sampling and compiling previous data on the Mac property during the period Aug 1, 1999 to Nov 15, 1999. Prospecting and rock sampling was done by Linda Caron and John Kemp, as well as by several industry geologists examining the property with the property owners. For the purposes of this report, only one day of work each by L. Caron and J. Kemp has been included in the Cost Statement and filed with the Notice of Work. The balance of the expenditure filed is analytical costs related to the samples collected.

A total of thirteen rock samples were collected and sent either to Chemex Labs in Vancouver or to EcoTech Labs in Kamloops for preparation and analysis. Analysis was for 31 element ICP plus gold by 30 gram Fire Geochem, AA finish. One sample was submitted for whole rock analysis, and two samples were sent to the Cominco Research Lab for petrographic examination.

### 3.0 GEOLOGY, MINERALIZATION AND STRUCTURE

The geology of the area east of Vernon is described by Jones (1959) and is shown on Figure 3. In the vicinity of the Mac property, the area is underlain by a large body of granodiorite belonging to the Jurassic/Cretaceous Nelson plutonic complex. North of the claims, the granodiorite has intruded sediments and volcanics of the Paleozoic Cache Creek and Upper Triassic Nicola Groups. Pendants of these rocks are also seen within the granodiorite. The Paleozoic and Mesozoic rocks rest unconformably on intensely deformed metamorphic rocks (gneisses, schists and amphibolites) which comprise the Monashee Group basement complex.

To the west and east of the claims, the Nelson intrusive rocks are bounded by the Monashee Group rocks. Locally, the above units are unconformably overlain by Eocene to Oligocene Kamloops Group volcanics and volcaniclastics.

The Mac Property covers a known gold occurrence near McIntyre Lake (Minfile 082LSE017). A shallow dipping mineralized shear zone occurs on the property, ranging up to about 15 metres in width. Mineralization occurs in a complex zone of faulting and dyking hosted within fresh granodiorite as shown on Figures 4 and 5.

Mineralization consists of pyrite, arsenopyrite and quartz-carbonate veinlets in an intensely altered (clay + gouge) shear zone in a possible pendant of older volcanics (or younger dyke material?) within fresh granodiorite. The shear trends northeast and dips to the west at about 30-45°. Both the granodiorite and the altered shear zone are cut by trachyte and biotite lamprophyre dykes. The dykes and the granodiorite may be altered within the mineralized shear. The extent of alteration and abundance of syn- and post-mineral faulting within the mineralized zone makes identification of the mineralized host difficult, and previous workers have widely differing descriptions of both the host to the mineralization and the timing of the mineralization. Some workers feel mineralization is hosted in dykes, others in volcanics. Some suggest that mineralization is Tertiary, post-dating the intrusion of biotite lamprophyre dykes. Alternately, alteration of these dykes may be a late event, distinct from an earlier mineralizing event.

The zone has been tested by trenching on surface, where it has returned up to an average of 0.124 oz/t Au over a 12 metre wide zone. Down dip from this, drilling has returned a number of good intersections, including:

ddh 83-6	10.2 m @ 0.3 oz/t A	۱u

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ddh 88-30 13 m @ 0.47 oz/t Au

The mineralized zone has a strike length of perhaps 50-75 metres, before being truncated by steep north trending faults (left lateral movement?) on both the east (at surface) and west (at depth). Essentially all previous work has been in the central block, labeled as Block B on Figures 4 and 5. There has been essentially no effort to attempt to find the faulted extension of the mineralized zone to the northeast (Block C) or southwest (Block A). The zone should surface in Block C, while in Block A it will be a buried target.

A total of 46 holes have been drilled on the property, as shown on Figure 4. Note that all 46 drill holes are within an area of less than 225 x 125 metres in size (ie. essentially all test the mineralization within Block B, shown on the accompanying map (Figure 4) and section (Figure

4



# Legend to Accompany Figure 3





OLD DAVE INTRUSIONS serpentinized, ultrainatic dykes

from: GSC Map 1059A Jones (1959)

5). Furthermore, 34 of the 46 holes are within an area that measures less than 100 x 50 metres in size. The decline tests the mineralized zone within this same small area.

There has been little attempt to determine the extent of offset on these faults. This may be possible by careful mapping, paying particular attention to dykes, which are also in some cases offset by the faults. A number of relatively flat structures have been observed both on surface and underground. The timing of these and their effect on the mineralized zone is unknown.

A program of detailed surface mapping, in conjunction with re-logging the drill holes (with an emphasis on structure) would be a good first step at understanding the offsets to the mineralized zone, and identifying drill or trench targets within Blocks A and C. The exploration target is a zone in the order of 10-15 metres in width, with an average grade of 0.3-0.5 oz/t Au. To the west, in Block A, the zone will be buried and hence geophysical or geochemical methods will be of little use in identifying targets. In Block C, the zone should surface. Two anomalous gold-in-soil sites (100 ppb Au and 370 ppb Au) may be a further indication of mineralization in Block C, and should be followed up.

Mapping and core logging should also attempt to better understand the nature of the mineralized zone. Questions exist regarding both the host rock to the mineralization, and the timing of the mineralization.

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### 4.0 ROCK SAMPLING

Thirteen rock samples were collected from the Mac property, as shown on Figure 4. Rock sample descriptions are contained in Appendix 1.

Samples were shipped either to Chemex Labs in Vancouver or to EcoTech Labs in Kamloops for preparation and analysis (31 element ICP plus gold by 30 gram Fire Geochem, AA finish). Four samples had Au and Ag assay only, while one had whole rock analysis in addition to Au + 31 element ICP. Analytical results are contained in Appendix 1. Two samples were submitted for petrographic examination at Cominco's Research Lab in Vancouver. The thin section description for these samples are also contained in Appendix 1.

Sample #	Au	Au	Ag	As	Sb
	<u>(ppb)</u>	<u>(g/t)</u>	<u>(ppm)</u>	<u>(ppm)</u>	(ppm)
Top 99-01	-	10.24	5.8	>10,000	74
Top 99-02	15	-	<0.2	32	<2
Тор 99-03	25	-	<0.2	25	<5
Top 99-04	-	27.9	37.2	>10,000	100
Top 99-05	30	-	<0.2	40	10
Top 99-06	10	-	0.6	15	<5
Top 99-07	-	22.55	12	>10,000	225
Top 99-08	340	-	0.8	455	5
7701	-	3.06	18.6	>10,000	-
R9912034	-	5.02	10.3	-	-
R9912035	-	2.58	17.3	-	-
R9912036	-	21.33	32.6	-	-
R9912037	66	-	0.6		-

Analytical results for select elements are listed in the following table, and shown in Figure 4.

Rock sampling was done of a variety of rock and alteration types to better understand the nature of the known mineralized shear zone on the Mac property. Samples Top99-7, 7701 and 12035 were collected from fine grained, pyritic rock from the shear zone at surface, from Trench 2, and returned up to 22.55 g/t Au and 18.6 g/t Ag. The shear zone also showed anomalous arsenic (>10,000 ppm As) and antimony (225 ppm Sb).

A number of samples were collected from the zone at depth, from material from the decline dump (Top99-01, 12034), or from drill core (Top99-04, 12036). Again, gold content was high, to a maximum of 27.9 g/t Au. As with samples from surface, silver, arsenic and antimony were also anomalous from the zone (to 37.2 g/t Ag, >10,000 ppm As, 100 ppm Sb). Mercury was also elevated (120 ppm Hg in sample Top99-01).

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Several samples were collected from variably altered granodiorite and from quartz vein material (+/- pyrite) both in the vicinity of the mineralized shear, and elsewhere on the property. Elevated gold (to 340 ppb Au) and arsenic (455 ppm) was returned from sample Top99-8, collected from strongly clay altered granodiorite near the mineralized shear (decline dump). No other samples showed anomalous results.

Gold shows a strong geochemical association with silver, arsenic, antimony and mercury. All samples which showed significantly elevated gold were fine grained pyritic material, similar to 12034, which seems to have a volcanic protolith. The nature of this rock type is not well understood. It may represent a pendant of older volcanics within the granodiorite, or alternately may represent a fine grained dyke cutting the intrusive rocks. Further detailed mapping and petrographic work are recommended to better understand the host rock to the mineralization.

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### 6.0 RECOMMENDATIONS

A program of detailed surface mapping, in conjunction with re-logging drill core, is recommended. The mapping and core logging program should focus on understanding the structural geology in the vicinity of the mineralized zone, as well as providing a better understanding of the nature of the various dykes and possible volcanic units within the granodiorite.

The mineralized zone has been well tested within the main mineralized block (Block B). It is truncated by steep north trending faults on both the west and east, and there has been little attempt to locate the offset mineralized zone either east or west of the main zone. Mapping should attempt to determine the offset on the bounding faults, with the goal of identifying drill or trench targets within Blocks A and C. To the west, in Block A, the zone will be buried and hence geophysical or geochemical methods will be of little use in identifying targets. In Block C, the zone should surface. Two anomalous gold-in-soil sites (100 ppb Au and 370 ppb Au) may be a further indication of mineralization in Block C, and should be followed up.

### 7.0 REFERENCES

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**APPENDIX 1** 

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Rock Sample Descriptions and Analytical Results

# SAMPLE LOCATIONS AND DESCRIPTIONS

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Sample #	UTM Coordinates	Sample Description
Top 99-01	~ 389500 E ~ 5547500 N	Decline dump. Grab of dark grey, fine grained, strongly clay alt'd py rich boulder from minz'd zone. 5-10% fine diss py, minor 2-5 mm qtz vnlts.
Top 99-02	~ 389500 E ~ 5547500 N	Decline dump. Grab of unalt'd granodiorite intrusive for whole rock assay and trace element suite. Med grained massive granodiorite, qtz + 2 fsp, mafics chl-py ait'd. Rel fresh.
Тор 99-03	389836 E 55474050 N	Qtz vn in granodiorite in Highway roadcut. Vn trends 315/40 SW, 10- 20 cm wide, par to jointing in intrusive, minor diss py, particularly on vn selvages. Minor parallel qtz vnlts.
Top 99-04	~ 389500 E ~ 5547500 N	Resample first row ~8.5 – 9.75m, Box 2 ddh 88-30 (1.06 oz/t Au in drill logs), part of 13 m @ 0.47 oz/t Au intercept. Fine grained, grey pyritic diorite? dyke – not trachyte. Finer grained, more mafic phase than granodiorite.
Top 99-05	~ 390500 E ~ 5548500 N	On old skid trail ~ 1 km NW of old camp. Rusty fine grained limey float with qtz vnlts and 5% fine py flood.
Тор 99-06	~ 389500 E ~ 5547500 N	Chip across shear zone at portal to decline. Shear on NE side of portal, 3 m wide, trends 030/75 E, clay alt'd coarse grained granodiorite. Shear looks unmineralized. This is shear that terminates mineralized zone on west side.
Тор 99-07	~ 389500 E ~ 5547500 N	Sample of minz'd zone from Trench 2 area. Trench is filled and zone is not exposed, but several mineralized boulders are still on surface. Fine grained, grey, pyritic material.
Тор 99-08	~ 389500 E ~ 5547500 N	Sample of clay alt'd granular granodiorite with diss py from decline dump.



CERTIFICATION:



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### d. Chemex Labs L

Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

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Page Number :1-B Total Pages :1 Certificate Date: 09-AUG-1999 Invoice No. :19924106 P.O. Number : PVL Account

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# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

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29	TOPOGRE	10	~0.2	1 78	40	90	<5	3.46	<1	24	70	243	3.54	<10	1.42	782	<1	0.10	49	1260	26	10	<20	97	0.10	<10	116	<10	17	49	
20			0.0	1.30	15	6U	15	0.11	<1	14	173	19	3.16	<10	0.69	377	11	<0.01	12	500	18	~5	<20	<1	<0.01	<10	58	<10	<1	31	
20			0.0			10					<u> </u>		-4.07	20	0.46	770	2	0.02	3	-200			-00	60	-0.01	-40	- 20	-40	- 28	- 53	
21	0100-1410		40.L	2.30	10 -	105	20		<b>N</b> 1	37	40	19-	-0.04	~10	2.96	980	~ ~ 1	0.09	· · · · · ·	040	20	20	×20	31	0.30	< 10	210	< 10	42	01	
	ATA:																														
Resp	ilt:																														
1	CV99-1R	<5	<0.2	0.77	<5	65	5	0.20	<1	5	83	9	1.45	10	0.23	566	3	0.02	8	290	20	<5	<20	20	0.02	<10	21	<10	16	36	
Repe	at	•																													
1	CV99-1R	5	<0.2	0.73	5	65	5	0.19	<1	5	69	8	1.42	10	0.22	538	3	0.02	8	290	22	<5	<20	20	0.02	<10	20	<del>c</del> 10	14	40	
10	CV99-10R	20	0.8	0.13	55	15	<5	0.03	3	2	224	4	0.77	<10	< 0.01	90	4	<0.01	6	160	22	<5	<20	1	<0.02	<18	20	<10	-1 1	82	
19	CV99-20R	5	<0.2	0.37	<5	20	5	2.13	<1	11	81	33	2.40	<10	0.24	255	1	0.03	16	820	10	15	<20	15	0.10	<10	25	<10	32	25	
Stand	dard:																														
GEO'	99	120	1.4	1.73	65	170	15	1.88	1	21	64	86	3.86	<10	0.98	716	<1	0.02	22	760	22	5	<20	58	0.11	<10	77	<10	8	76	

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ECD-TECH LABORATORIES LTD. Frank J. Pezzotti, A.Sc.T. B.C. Certified Assayer pr

Page 2

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	16-Sep-99																												·
ECO 1004 KAM V2C	-TECH LABC 1 East Trans 1LOOPS, B.C. 6T4	ORATORIE Canada Hi	S LTD ighway	,							ICP CE	RTIFI	CATE (	OF ANAL'	YSIS /	AK 99-	473						LINDA BOX 2 GRAN VOH 1	A CARO 2493 ID FOR H0	ON KS, BO	C			
Phon Fax	e: 250-573-5 : 250-573-45	700 557																					ATTE	NTION:	LIND.	A CA	RON		
Value	əs in ppm un	less other	Wise r	eporte	đ																		No. of Sampi PROJi SHIPN Sampi	sample le type: ECT #: IENT # les subi	is recei Rock CV None nitted l	ived: Give by: L	11 'n Caroi	7	
Et#	. Tag#	Au(ppb)	Ag	<u>Al %</u>	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La N	lg %	Mn	Mo Na	% N	i I	P Pb	Sb	Ѕп	Sr	TI %	u	v	w	v	7
	CV99-24 CV99-26 CV99-26 CV99-27 CV99-27 CV99-23 CV99-30 CV99-31	5 <5 15 10 55 20 <5 45	2. 0.6 8.4 0.4 1.6 0.2 <0.2 <0.2	0.10 0.07 0.68 37 0.83 0.43 0.39 0.47	√5 15 25 10 25 75	<5 60 25 2 2 30 35 85 40	<5 <5 <5 10 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5	0.02 0.35 0.13 0.92 0.48 0.03 3.13 18	3 <1 3 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	10 <1 25 3 5 12 1 2	203 102 293 67 190 70 85 87	5466 10 5 14 2 4 9	0.36 8.41 1.22 1.62 2.38 1.83 1.86 1.91	<ul> <li>10</li> &lt;</ul>	0.01 0.26 0.16 0.45 0.72 0.01 0.10 0.01	50 123 244 102 209 526 34 955 119	4 <0.0 7 0.0 22 <0.1 10 3 8 <0.0 4 <0.0 6 0.0 8 <0.0	01 02 01 01 01 01 01 01 02 01 01	<ul> <li>&lt;110</li> <li>&lt;110<td>10000           832           130           2094           132           134           144  &lt;</td><td>5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</td><td>20 &lt;20 &lt;20 &lt;20 &lt;20 &lt;20 &lt;20 &lt;20 &lt;20 &lt;20 &lt;</td><td>30 &lt;1 9 3 29 9 &lt;1 135 &lt;1</td><td>&lt;0.0 0.04 &lt;0.01 &lt;0.01 &lt;0.01 &lt;0.01 &lt;0.01 &lt;0.01</td><td>&lt;10 &lt;10 &lt;10 &lt;10 &lt;10 &lt;10 &lt;10 &lt;10 &lt;10</td><td>&lt;1 51 7 12 31 2 10 5</td><td>&lt;10 &lt;10 &lt;10 &lt;10 &lt;10 &lt;10 &lt;10 &lt;10 &lt;10</td><td>- - - - - - - - - - - - - -</td><td>2000 440 78 369 71 37 51</td></li></ul>	10000           832           130           2094           132           134           144  <	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	20 <20 <20 <20 <20 <20 <20 <20 <20 <20 <	30 <1 9 3 29 9 <1 135 <1	<0.0 0.04 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01	<10 <10 <10 <10 <10 <10 <10 <10 <10	<1 51 7 12 31 2 10 5	<10 <10 <10 <10 <10 <10 <10 <10 <10	- - - - - - - - - - - - - -	2000 440 78 369 71 37 51
11	TOP99-7	>1000	12.0	0.13	>10000	30	5	1.99	228	19	141	33	2.70 4.89	<10 I	0.01 0.45	+52 573	9 <0.0	01 56	600	36	225	-20		-0.01	10		~10 	<u> </u>	1200
<u>OC D</u> / Respl	ATA: lit:																				220	-20		~0.01	10	0	<10	<1	88
1 Repea	CV99-23	35	>30	0.11	7 <b>4</b> 0	45	<5	0.66	933	16	90	315	>10	<10 <(	0.01	512	<1 <0.0	01 2	<10	>10000	270	<20	33	<0.01	<10	1	<10	<1 >	10000
1 Stand	CV99-23 ard:	45	>30	0.09	710	40	<5	0.63	953	15	76	324	>10	<10 <(	0.01	492	<1 <0.0	01 2	<10	>10000	305	<20	32	<0.01	<10	1	<10	-1	10000
GEO'9	99	120	1.0	1.76	65	145	<5	1.86	1	20	64	77	3.82	<10 (	). <b>97</b>	680	1 0.0	)2 24	660	24	5	<20	54	0.07	<10	76	<10	8	74

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EQO-TECH LABORATORIES LTD. Frank J. Pezzotti, A.Sc.T. B.C. Certified Assayer

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Page 1



10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4 Phone (250) 573-5700 Fax (250) 573-4557 email: ecotech@mail.wkpowerlink.com

# **CERTIFICATE OF ASSAY AK 99-359**

- **LINDA CARON** BOX 2493
- **GRAND FORKS**
- V0H 1H0

### ATTENTION: LINDA CARON

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LABORATORIES LTD.

- No. of samples received: 27
- Sample type: Rock
- PROJECT #: CV
- SHIPMENT #: None Given Samples submitted by: L. Caron

ET#. Tag	#	Au (q/t)	Au (oz/t)	Ag (q/t)	Ag (oz/t)	As (%)	Cd (%)	РБ (%)	Zn (%)
3- 0789	<u></u>	63.25	1 552		4.50			1.66	2.10
9 0799-	al.	8.10		150.6	4.49				<del>3.1</del> 2
1 <del>0 - 01/33-</del>	1712	4.24	0.036			-	-	-	-
23 TOP99	9-4R	27.90	0.814	37.2	1.09	2.64	-	-	-
QC/DATA:									
Standard:									
STD-M		1.45	0.042	-	-	-	-	-	-
Mp-IA		-	-	70.0	2.04	0.84	-	4.32	-

MD-IA

XLS/99

-Rrank J. Pezzotti, A.Sc.T. ₿**r** 

B.C. Certified Assayer

19-Aug-99

### ASSAYING GEOCHEMISTRY ANALYTICAL CHEMISTRY ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy, R.R. #2, Kamloops, B.C. V2C 6T4 Phone (250) 573-5700 Fax (250) 573-4557 email: ecotech@mail.wkpowerlink.com

# CERTIFICATE OF ASSAY AK 99-473

	LINDA CARON
•	BOX 2493
	GRAND FORKS, BC
	V0H 1H0

17-Sep-99

### ATTENTION: LINDA CARON

LABORATORIES LTD.

- No. of samples received: 11
- Sample type: Rock
- PROJECT #: CV
- SHIPMENT #: None Given
- . Samples submitted by: L. Caron

	ET #. Tag #	Au (g/t)	Au ( <u>oz</u> /t)	Ag (g/t)	Ag (oz/t)	As ( <u>%)</u>	Pb (%)	Zn (%)
	CV95-23			1000.0	31.70		34 45	9.50
	11 TOP99-7	22.55	0.658	-	-	3.50	-	-
-								
	QC/DATA:							
	Repeat:							
~	11 TOP99-7	22.90	0.668	-	-	-	-	-
	Standard:							
•	STD-M	1.40	0.041	-	-	-	-	-

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XLS/99

ÉCO-TECH LABORATORIES LTD. Frank J. Pezzotti, A.Sc.T.  $\rho \alpha$ B.C. Certified Assayer

ICP CERTIFICATE OF ANALYSIS AK 99-642

ECO-TECH LABORATORIES LTD. 10041 East Trans Canada Highway KAMLOOPS, B.C. V2C 6T4

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Phone: 250-573-5700 Fax : 250-573-4557 LINDA CARON BOX 2493 GRAND FORKS V0H 1H0

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ATTENTION: LINDA CARON

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No. of samples received: 8 Sample type: Rock PROJECT #: CV SHIPMENT #: 1 Samples submitted by: L. Caron

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	AI %	As_	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La M	Ag %	Mn	Mo Na	%	Ni	P	Pb	Sb	Sn	Sr	Tì %	U	v	W	Y	Zn
1 2 3 4 5 6	CV99-33 CV99-34 CV99-35 CV99-36 CV99-37	75 ≻1000 5 10	2.4 >30 0.8 2.2	0.00 0.09 0.02 0.08 0.13	<5 <5 <5 <5 <5	55 <5 15 10	-0 10 85 <5 10	1.00 0.01 0.27 <0.01 0.00 0.01	र र र र र र	3 21 <1 3 2	57 137 119 200 175 214	4 23 2 4 3	1.59 ≥10 0.44 1.26 0.99	20 <10 <10 <10 <10 <10	043 <0.01 0.02 <0.01 0.01 0.03	104 27 314 75 231 88	13 - 6. 6 <0. 14 <0 6 <0. 6 <0. 7 <0.	01 01 01 01 01 01 01	135 3 4 4 5	270 <10 <10 100 90	16 230 <2 0 52	<5<5<5<5<5	<20 <20 <20 <20 -20 -20 <20	13 7 <1 <1 <1	0.04 -0.01 <0.01 <0.01 <0.01 <0.01	<10 <10 <10 <10 <10 <10	20 2 1 <1 2 3	<10 <10 <10 <10 <10	<1 <1 <1 <1 <1 22	
7 8	TOP99-8	340	0.8	0.23	455	25	<5	0.24	3	3	110	6	1.35	<10	<0.01	38	- 0 -0. 7 <0.	01	2	550	16	5	<20	42	<0.01	<10	2	<10	<1	-54
QC_D/	TA:																													
Respl. 1	it: BC99-01	<5	<0.2	0.54	<5	10	<5	1.54	<1	31	36	185	4.24	20	0.42	175	15 0.	.01	128	3740	4	<5	<20	68	0.02	<10	23	<10	30	52
Repea 1	it: BC99-01	<5	0.4	0.52	<5	10	<5	1.52	<1	30	30	183	4.10	20	0.38	176	15 0.	.01	127	3760	2	<5	<20	70	0.02	<10	23	<10	30	48
Stand GEO 9	ard: 19	115	1.0	1.80	65	160	10	1.86	<1	18	64	80	3.86	<10	0.94	684	30.	.02	24	760	20	10	<20	56	0.10	<10	71	<10	8	67

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John Kemp

ECO-TECH LABORATORIES LTD. pr Frank J. Pezzotti, A.Sc.T. B.C. Certified Assayer

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Page 1



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# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

### PO BOX 2493 GRAND FORKS,BC VoH 1H0

Concolly, LINCO

ro:

A9924108

### Comments: ATTN: LINDA CARON FAX: JOHN KEMP

#### ANALYTICAL PROCEDURES A9924108 CERTIFICATE UPPER DETECTION CHEMEX NUMBER LIMIT (PVL) - CARON, LINDA LIMIT METHOD DESCRIPTION SAMPLES CODE Project: P.O. # : 100.00 0.01 XRF A1203 %: XRF 902 1 100.00 0.01 XRF Samples submitted to our lab in Vancouver, BC. CaO %: XRF 906 1 100.00 0.01 XRF This report was printed on 16-AUG-1999. Cr203 %: XRF 2590 1 100.00 0.01 XRF Fe203 %: XRF 903 1 100.00 0.01 XRF 908 K20 %; XRF 1 100.00 0.01 XRF MgO %: XRF 905 1 100.00 0.01 XRF 1989 MnO %: XRF 1 100.00 0.01 XRF Na20 %: XRF 907 1 100.00 0.01 XRF P205 %: XRF 909 1 100.00 0.01 SAMPLE PREPARATION XRF SiO2 %: XRF 1 901 0.01 100.00 XRE T102 %: XRF 904 1 100.00 0.01 XRF LOI %: XRF 910 1 105.00 0.01 CALCULATION Total 🔧 2540 1 CHEMEX NUMBER CODE SAMPLES 50000 5 XRF 2891 1 Ba ppm: XRF DESCRIPTION 50000 2 XRF 2067 1 Rb ppm: XRF 50000 2 XRF Sr ppm: XRF 2898 1 50000 XRF 2 2973 1 Nb ppm: XRF Pulp; prepped on other workorder з 50000 299 XRF 1 2978 1 Zr ppm: XRF 50000 2 XRF Y ppm: XRF 2974 1 100.0 0.01 Fe %: HC104-HN03-HF digestion AAS 327 1 100.0 TITRATION 0.01 FeO %: Acid decomposition 451 1 100.0 calculation 0.01 Fe203% : By calculation from Fe 1896 1



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Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave. North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX; 604-984-0218

, To: UnRON, LINDA

PO BOX 2493 GRAND FORKS,BC V0H 1H0

1 rage Number <sup>1</sup>:1-A<sup>1</sup> Total Pages :1 Certificate Date: 16-AUG-1999 Invoice No. :19924108 P.O. Number : Account PVL

Project : Comments: ATTN: LINDA CARON FAX: JOHN KEMP

PLEASE NOTE		-			·			CERTI	FICATE	OF AN	ALYSIS	3 /	499241	08	
SAMPLE	PREP CODE	A1203 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	MgO % XRF	MnO % XRF	Na20 % XRF	P205 % XRF	SiO2 % XRF	TiO2 % XRF	LOI % XRF	TOTAL	Ba ppm
TOP 99-02	299	16.12	3.33	< 0.01	3.44	3.24	0.89	0.12	3.87	0.17	56.70	0.39	1.50	99.77	740
														1 n T	

\* Fe203 CALC 1% IS CALCULATED FROM TOTAL Fe MINUS Fe++.



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Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

\* DI EASE NOTE

۳ ٦. To: CARON, LINDA

PO BOX 2493 GRAND FORKS,BC V0H 1H0

Page Number :1-B Total Pages :1 Certificate Date: 16-AUG-1999 Invoice No. : 19924108 P.O. Number : PVL Account

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Project

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Comments: ATTN: LINDA CARON FAX: JOHN KEMP

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		7	<u> </u>			· · · · · ·		CERTI	FICATE O	F ANALYSIS	A99241(	)8
SAMPLE	PREP CODE	Rb ppm	Sr ppm	ND ppm	Zr ppm	Y ppm	Fe % tot.dig	FeO %	Fe2O3 % calc.			
99-02	299	94	602	14	120	24	2.35	1.46	1.74	····		
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						<u></u> _l	•					
203 CALC 1% IS CAL				0 <b>F</b>						CERTIFICATION:_		110
				⊐ Г₩++								Fred

# LEICESTER DIAMOND MINES LTD.

#1300 - 409 Granville Street Vancouver, British Columbia, V6C 1T2 Telephone: (604) 685-5015 • Facsimile: (604) 684-9877

### MEMORANDUM

To: Linda Caron

Date: November 15, 1999

From: Ken Carter

h. .

# Re: Hand Sample Descriptions - Vernon Gold Properties

MAC 1	<ul> <li>Boulder of mineralized zone from portal, described variously as altered trachyte, andesite - shear zone, clay altered</li> <li>needs petrography</li> <li>assay Au, Ag + petrographic description</li> </ul>
MAC 2	Rubble from Trench 2 in an area 50 m north and downslope of portal, same description as MAC 1 - assay Au, Ag
MAC 3	Core from "ore zone" of hole 30, same description as MAC 1 - assay Au, Ag
MAC 4	Core from granodiorite host, hole 31 - petrographic description needed - Au, Ag assay

· NOV.	15.1999	11:55AM	BMTS MAN	AGEMENT	INC		N0.280	P.4/4
	LEICESTE Job	R DIAMONDS	S-X99	V990785F	<b>2</b>			
	KETTLE/L	AV/MAC		Date			991110	
	┍┐╾┍╼┑╼╧ <sub>╋</sub> ╸╘╛┍┾╵╾┾╘╺┹							
	LAB NO			FIELD NU	MBER		Au(3)	Ag(2)
							g/t	g/t

19912020	- KCTTLC+1	0.311	J20.2
N9912021		J2.371	- <u>52 1.4</u>
100 12020	KETTER		
N9012020		0.050	
13312000	NETTLE-U	0.044	0.0
R0012001			
N0012002			
N9912005		0:1	0.5
R9912034	MAC-1	5.025	10.3
R9912035	MAC-2	2.577	17.3
R9912036	MAC-3	21,326	32.6
R9912037	MAC-4	0.066	0.6

ANALYTICAL METHODS

Au(3) Fire Assay

Lead Collection / AA Finish (low level) 1/2 A.T.

Ag(2) Acid decomposition / AAS



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# MEMORANDUM

DATE: November 15 1999

TO: LINDA CARON

CC:

FROM: GREG THOMSON

### RE: Hottle Property

Hi Linda,

Here are the sample results of the rock material I sampled at the <del>Kettle property</del> on October 26, 1999.

7701 grab from caved trench on Mac property, fine grain altered intrusive/dyke, greenish with pervasive fine grain arsenopyrite

						<b></b>				CE	RTIF	CATE	OF A	NAL	'SIS		19932	616		
Supli	PBEP CODS	ан орр Занаа	λι 7λ 02/ton	Ag PPQ	31 ¥	às Ppu	B PPn	B4 PPa	3e ppn	Ri ppa	Ca 1	b) <b>n</b> qq	Co ppn	Cr Apa	co Pipel	Fe 1	ea Ppa	Ky ppa	1	La. ppm
701	205 226	3060 1		18.6	0.90 >	10000	< 10	30	(0.5	K 2 ( )	1.38	< 0.5	31	13	38 284	5.72	( 10 14	3	0.40	10
											0.30	300 3.0		143	1000		1. 	· · ·	0.30	
						_	-	1		54-	1.89			111	j i v j		10		0130	
20	203 220	1,					1				4,64	÷ • • •		195						
			·																	

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LAB	X	212 Brook British Col PHONE; 0	(bank Av umbia, C 04-034-0	na., enada 1221 FA	North Va	ncouver V7J 2C1 64-0216			Projac Comn	V2C 1ZC	004100 NTTN: FL	FARME	a cc:	greg t	HCMSO	N		nvuice No. P.O. Number Account	:1¥¥≦ : HPQ
	- /	·								CE	RTIF	CATE	OF A	NAL	(915		49932	2616	
SAMPLE	PRAP CODE	Xg A	ND MD	hte Xo	Na Z	Jí Fyd	P PP#	Pb p <b>pa</b>	5 2	s) pçe	Sc PPR	Sr ppa	Ti ł	Tl VD9	U Dia	V D <b>EG</b>	א מכור	<u>511</u> 6000	
701	205 226	0.05	110	5	( 0.01	133	2930	50	4.22	196	3	109 <	0.0i	< 10	30	16	< 10	122	
				_														10000	
			<u></u>				300						0.01	10		,	<u>, 10</u>	TZU	
	and a second s		1150				14.34			_							10		
													0701	10			· 10	20	
·11	107 220			<u>-</u>	0.01		450		0.51		<u> </u>	12 -	U. UL		1 20		10	16	

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:.. TECH EXPLORATION IN 12/37 FAX NO.: 604 640 5382 15-11-99 14:14 F.03

Cominco Ltd. / Exploration Research Laboratory / 1486 East Pender Street / Yancouver, B.C. / Canada YSL IV8 Phone: (604) 685-3032 / Fax: (604) 844-2486



Mr. Ken Carter Leicester Diamond Mines Ltd. #1300 - 409 Granville Street Vancouver, B.C. V6C 1T2

1 December, 1999

Dear Ken:

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### RE: Vernon Area Microscopy / E.R.L. Job V990785R

Three samples were submitted as part of a larger suite for preparation into thin sections and petrographic study. The samples are numbered as follows:

LAB NO. FIELD NO.

R99:12032LAV 1-R99:12034MAC-1R99:12037MAC-4

Following are brief microscopic descriptions:

### SAMPLE R99:12034 (MAC-1).

In transmitted light quartz crystal fragments/phenocrysts are noted up to 2 mm in size. Circular features to 2 - 3 mm consist of crystalline and fine grained "fresh" sericite. As well, a 5 mm diameter feature consisting of lath shaped features, now altered to very fine turbid sericite and fresh quartz is present.

The host or matrix to these minerals and alteration minerals is a mixture of quartz, sericite and laths of a turbid to opaque phase, possibly a Fe-Ti oxide rich sericite.

The rock appears to be an altered (quartz-sericite) volcanic of indeterminate composition.

### SAMPLE R99:12037 (MAC-4).

In transmitted light the mode is approximately as follows:

Potash feldspar:	35%
Plagioclase:	30%
Biotite:	5%
Quartz:	25%
Epidote:	1%
Carbonate:	1%
Chlorite:	1.5%
Opaques:	1.5%

Subhedral grains of orthoclase (microcline) are seen up to 10 mm in maximum dimensions and are tabular in form. They are seen to engulf some grains of plagioclase. Plagioclase grains as tabular, subhedral grains are typically in the 1 - 3 mm size range. They are often seen to be altered (albitized) and some are replaced by carbonate, epidote and sericite/clay (saussurite). Irregular, anhedral grains of quartz are developed interstitial to the feldspars. These grains may be up to 3 mm in size and are sometimes sutured, forming aggregates. Biotite, generally anhedral and ragged is interstitial to be associated with granular epidote, carbonate and opaques. Some biotite is altered to chlorite.

The rock is a medium to coarse grained igneous material. Compositionally it is a granite.



**R99:12034.** Quartz fragments, quartz-sericite replacement in a quartz-feldspar-Ti(Fe) oxide. Transmitted light, magnification 25x.



R99:12034. As previous photomicrograph but crossed nicols.

280 µm



280 µm

**R99:12037.** Orthoclase, altered plagioclase, biotite, quartz. Transmitted light, crossed nicols, magnification 25x.



**R99:12037.** Large microcline engulfs altered plagioclase, also present is quartz and biotite. Transmitted light, crossed nicols, magnification 25x.

280 µm

**APPENDIX 2** 

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**Cost Statement** 

# COST STATEMENT

Labour		
L. Caron	1 day @ \$350/day	\$ 350.00
J. Kemp	1 day @ \$200/day	200.00
		\$ 550.00
Geochemical Analyse	20	
9 rock sample	e @ \$25.00 including shinning	
o rock sample.	/31 element ICP + Au)	\$ 225.00
1 rook comple	(3) element for (Au)	¥ 220.00
1 TOUR Sample	40.00	
4 fock sample:	40.00	
z min section	descriptions @ \$100.00 each	<u>200.00</u>
		a 400.00
Transnortation		
Vehicle rental	1 day @ \$50/day	\$ 50.00
Fuel	r day @ toorday	\$ 50.00
		\$ 80.00
		φ 00.00
Miscellaneous		
Report (convin	a map and text)	\$ 15.00
Moale	2 man dave @ \$35/day	\$ 70.00
NICEIS	2 man daya @ coorday	\$ 85.00
		ψ 00.00

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TOTAL: \$1,200.00

# **APPENDIX 3**

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# Statement of Qualifications

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### STATEMENT OF QUALIFICATIONS

I, Linda J. Caron, certify that:

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<u>.</u>

- 1. I am an independent exploration geologist residing at 717 75th Ave (Box 2493), Grand Forks, B.C.
- 2. I obtained a B.A.Sc. in Geological Engineering (Honours) in the Mineral Exploration Option, from the University of British Columbia (1985).
- 3. I graduated with a M.Sc. in Geology and Geophysics from the University of Calgary (1988).
- I have practised my profession since 1987 and have worked in the mineral exploration industry since 1980.
- 5. I am a member in good standing with the Association of Professional Engineers and Geoscientists of B.C. with professional engineer status.
- 6. I jointly own the claims described in this report, with partner John Kemp. I have personally completed or supervised the work described in this report.

Linda Caron, P. Eng.

*Dut 13/00* Date



N OSI	125 W	30	MSL	3	
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Rock Sample Results							
Sample #	Au	Au	Ag	As	Sb		
	(ppb)	<u>(g/t)</u>	(ppm)	<u>(ppm)</u>	<u>(ppm)</u>		
Top 99-01		10.24	5.8	>10,000	74		
Top 99-02	15	-	<0.2	32	<2		
Top 99-03	25	-	<0.2	25	<5		
Top 99-04	-	27.9	37.2	>10,000	100		
Top 99-05	30	-	<0.2	40	10		
Top 99-06	10	-	0.6	15	<5		
Top 99-07	-	22.55	12	>10,000	225		
Top 99-08	340		0.8	455	5		
7701	-	3.06	18.6	>10,000	43		
R9912034	-	5.02	10.3	-			
R9912035	-	2.58	17.3	-			
R9912036	-	21.33	32.6	-			
R9912037	66	-	0.6	-	-		

GEOLOGICAL SURVEY BRANCH ASSESSMENTED DEPODT

4:00

26, 340