GEOCHEMICAL REPORT

ON THE

RUBARB CLAIMS

AND

BUBAR CLAIMS

Rubart 1 - 13

Bubar 1 - 15

2 miles Northeast of Kettle Valley, B. C. Latitude  $49^{\circ}$  05' Longitude 118° 54' West



By

Dr. Peter J. Haman, P. Eng., STEREOGRAMMETRY LTD., P. O. Box 997, Calgary, Alberta

# For

DeKalb Mining Corporation, Calgary, Alberta

Work done between: June 10th to Sept. 24, 1970.

# TABLE OF CONTENTS

INTRODUC	TION	
Chapter	I	THE RUBARB CLAIMS
Chapter	II	THE BUBAR CLAIMS .
		History
Chapter	III	PREPARATION OF THE BASE MAPS
Chapter	IV	GEOCHEMICAL ANALYSIS
		Soil Sampling
		Chemical Analysis of the Samples
Chapter	۷	RESULTS OF THE GEOCHEMICAL ANALYSIS
		Lead
·		Zinc
		Nickel
		Molybdenum
		Copper
		Silver
		Composite Geochemical Map
		Detailed Soil Sampling
		North Bubar Anomaly
		Lead
		Nickel
		Cobalt
		Copper
		South Bubar Anomaly
		Nickel
		Cobalt

- 1

Chapter	VI	SUMMARY AND RECOMMENDATIONS
		Salaries and Expenses
		Rubarb Claims Crew Salaries and Expenses Report . 16
		Bubar Claims Crew Salaries and Expenses Report . 17
		REFERENCES
		MAPS IN POCKET NO. 1
		Mineral Map, Scale: 2 inches = 1 Mile
		Photo Mosaic, Scale: 1 inch = 1000 feet
		Microtopography Maps
		1 Map Rubarb-Bubar claims, Scale 1 inch = 500 feet
		2 Maps_Bubar claims, Scale 1 inch = 100 feet
		MAPS IN POCKET NO. 2
		Geochemical Maps, Scale 1 inch = 500 feet
		Lead
		Zinc
		Nickel
		Copper
		Composite Geochemical Map
		Geochemical Maps, Scale 1 inch = 100 feet
		1. Lead
		Nickel
		Cobalt
		2. Nickel
		Cobalt

#### INTRODUCTION

On the 2nd day of April, 1970, Mr. Koit Jurgens located the Bubar No. 1 - 10 claims on behalf of Mr. Ronald A. Buckley, Calgary, Alberta.

The Rubarb No. 1 - 13 claims were located by Mr. Koit Jurgens on the 30th day of June 1970, on behalf of Mr. Ronald A. Buckley, Calgary, Alberta.

The ownership of the Rubarb No. 1 - 13 and Bubar No. 1 - 10 claims were transferred by Bill of Sale recorded at Greenwood, B.C. on September 14th, 1970, from Mr. Ronald A. Buckley to DeKalb Mining Corporation.

The Bubar No. 11 - 16 claims were located by Mr. Roland E. Burke on August 28, 1970, on behalf of DeKalb Mining Corporation, Calgary, Alberta.

This report is submitted to file the Affidavit on Application for Certificate of Work on the Bubar No. 1 - 16 claims.

#### THE RUBARB CLAIMS

The Rubarb claims comprise a block of thirteen mineral claims, situated two miles northeast of Kettle Valley. The outline of the claims is shown on the accompanying mineral map (in Pocket No. 1). The Rubarb No. 1 - 13 claims (Record Nos. 33053 - 33065) were recorded at Grand Forks, B. C. on the 2nd day of July, 1970. The claims overlap at the northeast corner with the southwest corner of the Bar claims, previously staked on behalf of Mr. Ronald A. Buckley, DeKalb Mining Corporation. The Rubarb claims join towards south with the Bubar claims, previously staked for Mr. Ronald A. Buckley, DeKalb Mining Corporation.

#### THE BUBAR CLAIMS

The Bubar claims comprise a block of sixteen mineral claims, situated one mile northeast of Kettle Valley, B. C. (Mineral Map in Pocket No. 1). The Bubar No. 1 - 10 claims (Record Nos. 31814 - 31823) were recorded at Grand Forks, B. C. on the 6th day of April, 1970.

The Bubar No. 11 - 16 claims (Record Nos. 34194 - 34199) were recorded at Grand Forks, B. C., on the 5th day of September 1970.

### History

Prospecting in this general area started when gold deposits were discovered in sand and gravels of Rock Creek, immediately southwest of the townsite of Rock Creek. Following the first gold rush, prospectors scoured the ground in the late 80's to the turn of the century.

Some of the early claims were staked approximately three miles to the west (Big Eddy, Riverside, Badger). The Texas and Grenada mineral claims are located approximately three miles to the southeast. No previous old mineral claims are known from within the Rubarb and Bubar claims.

White settlers first entered the area during the gold rush at Rock Creek, in 1859. Numerous settlements were established, mainly in the Kettle River valley. The Bubar family arrived at the turn of the century and have occupied their farm at the mouth of Bubar Creek for three generations.



View of the Bubar Farm towards Northwest. The mouth of Bubar Creek is at the center.

#### PREPARATION OF THE BASE MAPS

A photomosaic was constructed at an approximate scale: 1 inch = 1000 feet. The soil survey lines are plotted onto the mosaic. The soil sample lines on the Rubarb claims are numbered from west to east, starting at 0 E towards 525 E. The stations start with 0 S at the north, up to 600 S in the south. The distance between lines and stations is approximately 250 feet. The soil sampling lines on the Bubar claims start with 0 E near the 100 E line of the Rubarb claims and are numbered towards east up to 275 E. The 0 S stations are in the vicinity of the 450 S stations of the Rubarb claims and are numbered consecutively towards south up to 750 S. The lines and stations are approximately 250 feet apart.

The writer has plotted the exact location of several stations in the field by marking the station on aerial photographs with the aid of a pocket stereoscope. The position of other stations was reported by the crew. All other unsurveyed stations were interpolated from the known locations, with the aid of the microtopography map (in Pocket No. 1).

The position of claim posts is shown on the photomosaic as square boxes.

The geochemical data were plotted on the base map at a scale: 1 inch = 500 feet and shows the approximate outline of the overlapping soil sampling survey in the northeast corner with the Hop claim group. A more precise outline of the relative positions of both Hop and Rubarb soil survey lines will be supplied on Mosaic and Base Maps in the report for the Hop claim group. The base map also shows the areas of detailed

soil sampling in 50 foot intervals and the area coverage of the Induced Polarization survey. The Base Map for the detailed soil sampling survey shows the 50 foot distance between stations at a scale: 1 inch = 100 feet

#### GEOCHEMICAL ANALYSIS

### Soil Sampling

The soil sampling program commenced on June 10th, 1970, locating the lines by compass and chain. The samples were recovered by an auger, three feet long with a one inch wide thread. Due to the very rocky soil, many samples were taken by a specially constructed shovel, approximately three feet long, with a pointed end. Samples were obtained down to a maximum depth of three feet from the "B" horizon (brown soil) and the "C" horizon. The samples were packaged in brown paper envelopes supplied by T.S.L. Laboratories Ltd.

#### Chemical Analysis of the Samples

The samples were sent to T.S.L. Laboratories Ltd., Vancouver, B. C. and analysed for lead, zinc, nickel, molybdenum, copper and silver. Several samples were also analysed for cobalt. The samples were treated by hot aqua regia extraction and the metals determined by atomic absorption. The analysis was supervised by Mr. R. B. Fletcher, T.S.L. Laboratories Ltd.

#### RESULTS OF THE GEOCHEMICAL ANALYSIS

#### Lead

The background values of lead are approximately 5 ppm in most parts of the area. In the western part of the Rubarb claims the background appears to have increased to approximately 10 ppm. A number of

isolated small lead anomalies occur in the western half of the Rubarb and Bubar claims. The Rubarb claims show a northerly trend of moderately high lead anomalies, running N - S along the line 275 E. The lead anomalies run along a N - S running creek, and abruptly terminate at the border between the Rubarb and Bubar claims. It is not immediately apparent whether the termination of this lead anomaly at the border between the two claim blocks was caused by a technical failure, or whether it was due to different groundwater conditions, when the two sets of samples were taken. The termination of the lead anomaly may also have a geological reason, since the N - S running valley swings to an easterly course near the boundary between the Rubarb and Bubar claims. The photogeological study suggested the presence of a major N - S lineament, running along Bubar Creek and extending to the southern part of the lead anomaly. It is not apparent on the aerial photographs whether this lineament can extend even further north for the entire length of the lead anomaly. Outcroppings in the vicinity consist mostly of greenstones, with some ultrabasic rocks.

Another more prominent lead anomaly occurs in the Bubar claims, in the vicinity of 225 E, 200 S. The values of the lead anomaly (up to 100 ppm) are relatively high, and occur in the immediate vicinity of a major E - W trending lineament.

The other more isolated lead anomalies are of less interest and will not be discussed in detail.

#### Zinc

The regional background of zinc is near 30 ppm, with anomalies widely spread in the central and eastern part of the Rubarb and Bubar claims.

The background appears to be slightly higher on the Rubarb claims. One of the better anomalies occurs within the Rubarb claim at 500 E - 300 S. The anomaly is located on a relatively steep west slope along with outcroppings of greenstones. The greenstones have a sandy and conglomeratic texture. This anomaly is not considered to be of economic interest.

Another more prominent zinc anomaly occurs on the Bubar claims in the vicinity of 175 E - 425 S. The zinc anomaly is adjacent to abundant outcroppings of conglomerates of the Anarchist group and does not indicate an economic mineral occurrence.

#### Nickel

The regional background of nickel is approximately 3 ppm on the Rubarb claims and 5 - 10 ppm on the Bubar claims. Two outstanding nickel anomalies were discovered on the Bubar claims.

The first nickel anomaly is in the vicinity of 200 E - 225 S, with readings up to 196 ppm. The nickel occurs in the vicinity of rock outcroppings showing greenstone-tuff, some serpentine, chert, clastic quartzites and conglomerates.

A very prominent nickel anomaly was discovered on the Bubar claims near the station 150 E - 500 S on both banks of Bubar Creek. Values are up to 1100 ppm nickel and coincide with rock outcroppings of red, brown and orange to buff quartzites, possibly also dolomites, with more or less large residues of ultrabasic (fine-grained volcanic?) rocks, serpentine, and talc. The nickel anomaly is derived from serpentinized ultrabasic intrusives (?) and volcanic rocks which were weathered to a fossil laterite within the Anarchist group.

#### Molybdenum

The background of molybdenum was found to be less than .5 ppm. An anomaly of 4 ppm occurs at 0 S - 225 E, and another anomaly of 3 to 4 ppm were found at 125 E, 275 S and 300 S. The data were not plotted on a map.

The soil samples on the Rubarb claims were not analysed for molybdenum.

#### Copper

The regional background of copper is approximately 10 ppm. A number of copper anomalies are scattered in the central and eastern part of the claim group. The copper anomalies on the Rubarb claims occur in the vicinity of outcroppings of the Anarchist group, consisting of ultrabasics, greenstone-tuff (partly conglomeratic), chert, jasperoid, and some limestone. The limestone sometimes showed very thin algal (?) laminations. There appeared to be gradations from limestone to greenstone-tuff. The copper anomalies in the eastern part of the Rubarb claims are interpreted as isolated small copper showings within the Anarchist group. The anomalies near the 300 and 400 E line of the Rubarb claims occur in valleys, and are probably due to copper being washed in.

A pronounced copper anomaly at station 350 E - 175 S covers a large area with values up to 81 ppm. Rock outcroppings in the vicinity are composed of chert, clastic quartzites, schists, and conglomerates belonging to the Anarchist group. A prominent E - W trending lineament runs through the central portions of the anomaly.

A small copper anomaly with relatively high readings of up to 136 ppm copper was outlined near 200 E - 450 S. The eastern wing of the anomaly is located on a gently west dipping shoulder, whereas the western part runs into a steep cliff with rock outcroppings consisting mainly of conglomerates. The anomaly is considered to indicate copper in place.

#### Si<u>lve</u>r

The samples on the Rubarb claims were analysed for silver. All samples showed less than .5 ppm. and the data were not plotted on the map. Composite Geochemical Map

The contours for lead, zinc, nickel and copper were printed together on the composite geochemical map. This map shows that the concentration of metals occurs in the central and eastern part of the Rubarb and Bubar claims. The very low values of the metals analysed in the western part roughly coincide with the extent of the Tertiary Phoenix volcanics. The Rubarb claims show relatively widely scattered anomalies, whereas the Bubar claims show two prominent concentrations. One anomalous area is located at 200 E - 200 S, the other extends from 125 E to 225 E, 400 S to 550 S. These are the two most prominent metal concentrations in the soil samples and are, therefore, discussed later in more detail. Both areas have been sampled in 50 foot intervals

#### Detailed Soil Sampling

#### North Bubar Anomaly (150 E to 250 E, 175 S to 275 S)

The composite geochemical map shows concentrations of lead, zinc, nickel, and copper, between the lines 150 S - 250 S, 150 E and 250 E. The anomaly was considered to be essentially a nickel prospect, similar to the

south Bubar anomaly. Samples, therefore, were analysed for nickel and cobalt, and also for lead because of some very high lead readings in the regional soil sampling program.

#### Lead

A number of several isolated lead anomalies became apparent during the detailed soil sampling program, with the highest reading being 112 ppm. The anomalies in the central part occur on a west slope and on the top of a southwest trending ridge. (Consult Microtopography Map) Rock outcroppings in the vicinity consist of limestone grading to greenstone-tuff, quartzites and chert. A major lineament was observed on the aerial photographs to run approximately parallel to 195 S line. It is presently not apparent whether this lineament is related to concentrations of lead. The occurrence of limestone in the vicinity of the lead anomalies suggests fracturing in the vicinity of the lineament and some lead mineralization in limestones.

#### Nickel

A nickel anomaly is mapped in the central portion of the area with values up to 198 ppm. Rock outcroppings in the vicinity show greenstone-tuff, partly conglomeratic. Some of the greenstones, or ultrabasic rocks are serpentinized. The nickel is probably present as a nickel silicate in serpentinized ultrabasic rocks.

#### Cobalt

The regional background of cobalt lies near 5 ppm. Some cobalt anomalies with up to 48 ppm occur over or adjacent to the nickel anomalies. The cobalt is apparently concentrated together with the nickel in serpentinized ultrabasic rocks.

#### Copper

The samples of the detailed soil sampling program were not analysed for copper but the regional soil sampling survey indicated some moderately high values of copper mainly in the northeastern part of the north Bubar anomaly. The copper is probably present within the serpentinized ultrabasic rocks, and within the greenstone tuffs. There is a possibility of some copper concentrations near the E - W lineament, in fractured limestones.

#### South Bubar Anomaly (125 E to 200 E, 350 S to 600 S)

<u>Nickel</u> - The regional soil sampling survey showed some very high nickel readings, and it was attempted to outline the extent of the anomaly by detailed soil sampling. As a result we recognized that high nickel readings occur on either side of Bubar Creek. The Bubar Creek valley itself has generally very low readings. Since some of the high nickel readings extend down to the valley proper, it is assumed that the anomaly is actually continuous across Bubar Creek, but does not show up because of relatively thick alluvial overburden. The soil cover on the relatively steep slopes on either side of Bubar Creek is usually thin. It can be assumed that the extent of the nickel anomaly reflects the actual extent of nickel

concentration. Rock outcroppings within the nickel anomaly consist of greenstones, partly conglomeratic, very fine-grained dark ultrabasics, which are partly serpentinized and red, red-brown to buff quartzites, very fine grained. These vari-coloured clastic rocks are interpreted as fossil laterites within the Anarchist group, overlying greenstones and ultrabasic rocks.



out the section that the

Outcroppings of fossil laterites near station 170 E - 540 S.

The limit of the nickel bearing rocks appears to be given by quartzitic conglomerates, apparently discordantly overlying the fossil laterite. A major N - S lineament was observed along Bubar Creek, but is not believed to have any effect upon the concentration of nickel. It may possibly control the regional structure. The nickel is thought to occur in the form of nickel silicates.

#### Cobalt

The regional background of cobalt lies near 5 ppm and some moderate cobalt anomalies with up to 47 ppm were observed. The high cobalt readings coincide with the highest nickel readings. The cobalt is thought to be enriched together with the nickel in fossil laterites.

### SUMMARY AND RECOMMENDATIONS

A regional soil sampling survey was carried out on the Rubarb and Bubar claims. The stations are 250 feet apart and are plotted on geochemical maps at a scale: 1 inch = 500 feet. A detailed soil sampling program was carried out over two areas in the Bubar claims, the north Bubar, and the south Bubar anomaly. The samples were taken in 50 foot intervals and are plotted on base maps at a scale: 1 inch = 100 feet.

One lead anomaly with moderate readings runs north-south along the line 275 E on Rubarb. The anomaly, at least in its southern part, coincides with a major lineament. No silver readings were obtained that coincide with the lead readings. Though some lead may occur in a relatively long zone, the low readings do not suggest any further work.

The north Bubar anomaly near the stations 200 E - 200 S is a prospect for lead, nickel and copper. Lead and copper may occur in greenstone-tuffs and ultrabasic rocks and may be concentrated in limestones in the vicinity of a major E - W trending lineament. The nickel probably occurs as nickel silicate in association with ultrabasic rocks of the Anarchist group. The Bubar south anomaly is a nickel prospect approximately 750 feet long in N - S direction, and approximately 600 feet wide on either side of Bubar Creek. The south Bubar anomaly is interpreted to represent a low-grade nickel deposit in fossil laterites overlying ultrabasic, serpentinized rocks.

# SALARIES AND EXPENSES

,

1.	Salaries and expenses for soil sampling crew \$30.00 for each man per day	\$ 4,430.00
2.	Professional services by Dr. Peter J. Haman, geological supervision, field mapping, report writing, 20 days at \$140.00 per day	2,800.00
3.	Sample analysis by T.S.L. Laboratories Ltd.	3,245.68
4.	Expenses for Field Office accommodation at \$40.00 per day for 20 days	800.00
5.	Rental of 1 Dune Buggy and one Toyota 4-wheel drive, gas	678.75
	Total	\$ 11,954.43

Respectfully submitted, Dr. ſ Het Hanan, N HAM 7/ Date 1300

Expiry Date Marsh 26, 1971

# THE RUBARB CLAIMS

# CREW SALARIES AND EXPENSES REPORT

Date	Names	No. of <u>Men</u>	Total Salary <u>&amp; Expenses</u>
July 2/70	D. Iwasiuk, R. Snell	2	\$ 60.00
July 4/70	D. Iwasiuk, R. Snell	2	60.00
July 5/70	D. Iwasiuk, R. Snell	2	60.00
July 6/70	D. Iwasiuk, R. Snell	2	60.00
July 7/70	D. Iwasiuk, R. Snell	2	60.00
July 8/70	D. Iwasiuk, R. Snell	2	60.00
July 9/70	D. Iwasiuk, R. Snell	2	60.00
" 10/70	D. Iwasiuk, R. Snell, D. Hammond G. Mayne	4	120.00
" 11/70	D. Iwasiuk, R. Snell	2	60.00
" 12/70	D. Iwasiuk, R. Snell	2	60.00
" 13/70	D. Iwasiuk, R. Snell	2	60.00
" 14/70	D. Iwasiuk, R. Snell, G. Shaw	3	90.00
" 15/70	D. Iwasiuk, R. Snell, G. Shaw	3	90.00
" 16/70	D. Iwasiuk, R. Snell, G. Shaw	3	90.00

Total Salaries and Expenses: 14 days

\$1,990.00

(The total salary and expenses is calculated by number of men times \$30.00)

# THE BUBAR CLAIMS

# CREW SALARIES AND EXPENSES REPORT

Date	Names	No. of <u>Men_</u>	Total Salary <u>&amp; Expenses</u>
June 10/70	K. Jurgens, D. Iwasiuk, R. Snell	3	\$ 90.00
11/70	K. Jurgens, D. Iwasiuk, R. Snell, R. Burke	4	120.00
· 12/70	D. Iwasiuk, R. Snell, R. Burke	3	90.00
13/70	D. Iwasiuk, R. Snell	2	60.00
14/70	D. Iwasiuk, R. Snell	2	60.00
15/70	D. Iwasiuk, R. Snell	2	60.00
16/70	D. Iwasiuk, R. Snell	2	60.00
July 1/70	D. Iwasiuk, R. Snell	2	60.00
24/70	J. McLeod, G. Shaw	2	60.00
26/70	J. McLeod, G. Shaw	2	60.00
27/70	J. McLeod, G. Shaw	2	60.00
28/70	J. McLeod, G. Shaw	2	60.00
29/70	G. Shaw	1	30.00
Aug. 18/70	J. McLeod, G. Shaw, R. Engel	3	90.00
19/70	J. McLeod, G. Shaw	2	60.00
20/70	J. McLeod, R. Engel, G. Shaw	3	90.00
30/70	D. Ward, G. Shaw	2	60.00
31/70	D. Ward	1	30.00
Sept 22/70	G. Mayne, T. Morris	2	60.00
23/70	T. Morris, G. Rella	2	60.00
24/70	T. Morris, G. Rella	2	60.00
÷	Total Salaries and E 21 days	xpenses:	\$ 2,440.00

(The total salary and expenses is calculated by number of men times \$30.00) 17

### REFERENCES

		Year	Page
B. C. Minister of Mines Ann	ual Reports:	1900 - 01 1926 1928 1936 1947 1962 1966	1146 A211 C251 D 55 A155 68 195
		R	4 (L- <b>1 //)</b>

Little, H. W. (1957) Geological Map 6 - 1957, Kettle River (East Half) Scale: 1 inch to 4 miles

Monger, J. W. H. (1968) Paper 67-42 Early Tertiary Stratified Rocks, Greenwood Map area (82E/2 ) B. C. Geol. Surv. Canada.



NOBUS.	nonez.	more than 2 lanes	2 lanes		
hard surface, all weather	. pavée, toute saison	plus de 2 voies	2 voies		
hard surface, all weather	pavée, toute saison	lass than 2 lanes	moins de 2 yeurs		
to see as the billing of a section of the section	armian anglomfet touts calcan	2 lanes or more	less than 2 lanes		
loose of stabilized surface, all weather	. gravier aggiomere, toute salson	2 voies ou plus	moins de 2 voies		
loose surface, dry weather	. de gravier, période sèche				
cart track	. de terre				
trail or portage	sentier ou portage				



Prepared by:

STEREOGRAMMETRY LTD.

Dr. Peter J. Haman, P.Eng.

P.O. Box 997

Photo-Mosaic to accompany geochemical report by Dr. P.J. Haman, P. Eng., on the Bubar and Rubarb claims, Kettle Valley area, B. C., Greenwood Mining Division.

Dated TI





# LEGEND

١

- Direction of steep slope -7
- -Direction of gentle slope

750

Citt's

E

- No slope, flat  $\oplus$
- Small fidge ++++++++
- -----Creek, gully
- Road -
- Outcrop Its and a second . X
- Tree struck by lightning (conductive ground?) Lightning Tree

# RUBARB CLAIMS

4

chiff.

1000

¥

200E

in

K.

14.72

275 E .

# BUBAR CLAIMS

+ + + + 75% .

17

31

14

1 1

17.5%

4

100 E

1104

MICROTOPOGRAPHY MAP Scale: 1 inch = 500 feet

Microtopography Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Rubarb and Bubar claims, Kettle Valley are Greenwood Mining Division. ROVINC

Dated

Signed

MAD N 3

OF

ETER J. HAMAN BRITISH

CLUMBER

GINE

Expiry Data March 26, 1971

NO 2950







1255

No. and



TRAIN. and justice a

×

0	E			100	E			2	OOE				30	DOE			40	OE			50	DOE	
OS T	9	8	1 2	1	1	2	17	4	2	1	2		5	12	1	1 1		9	6	5	3		os
	9	3	1 2		1	1	22	1	1	1	3	3	8	4	1	¢ 1		5	8	2	4		
	5	6	1 1	1	1	1	14	2	1	2	1		3		3	1		11	8	4	3		
	9	6	1 1		1	1	26	1	1	1	4		2	3	1 1	2 1		5	10	3	7		
						2					0			7	126			12	2	7	5	6	71000
100 S -	10	.4	L1		2	2	- 22		1	-	- 0		4	1		••••••	27	14	<b>6</b>	3	2	0	-100 \$
	9	6	2 2		1	1	20.	2	1	2	2		3	5	15	15	5	12	4	2	3	2	5
	7	7	1 1		1	3	9	3	1	1	1		3	9	4			5	3	4	4	5	9
	7	5	1 1		1	7	8	1	3	2	1		4	2	1			13	5	12	4	4	17
	ĺ.	9				1. A.C.													_				
200 S -	8	8	1 1		12	1	2	2	1	1	1	1	3	2	1	i			3	0	-7		- 200 S
	3	3	1 2		1	2	11	1	2	1	5		3	5	16	1 20	0	8	6	7	1	3	12
	6	3	1 1		1	1	31	3	2	2	6		2	2	32	2 1	8	14	5	4	g	6	16
							**						0	12	0	2 11	0	15	4	2	į	13	13
	6	4	2 2		1	3	2	1	1	1	5		9	12	5			10		-	1		
300 S -	5		3 1	-	1	1	1	1	1	_1	7	-	2	6	2	2 3	1	9	4	3	1	5	-10 300 S
	9		1 1		2	1	(50)	2	3	2	4		2	4	1	1	9	4	7	2	6	4	
	5		1 2	,	1	2	1	1	1	1	3	5	3	7	12	1 1	5	6	11	4	3	2	8
																				-	-	2	7
	3		2 1		1	1	1	1	2	1		5	4	2	1	2 . 2	6	25	8	7	5	2	3
400 S -	4		1 1	-	3	1	1	3	1	2	5	-	15	3	2	3 5	1	23	6	5	2	4	5 400 S
	4	3	2 1		1	1	1	1	1	2	1	10	8	2	1	4 . 3	8	12	4	3	2	6	3
										1		非					1	0	11	7	1		5
450 S	3	2	2 3	2	2 OE	= 1	2	85	3	OE1	4	25	2	9 1	5 16	1 50	15E						
	l –				1	5		62	3	3	11	15	3	8	19 . 44		27	4	3	5	7	3	5
												1	-7		14 . 23	32	a	3	10	4	6	5	4 500 S
						5	14	41	9	4	13	1 51	1		14 23			3	5	10		5	4
					0	S	7	35	7	17	10	6	1	6	31 20	)-' 1 <u>1</u>	10						
				100	19		20	26	6	3	8	24	1	6	9 19	15	14	4	5	8		4	2
				ioc				22	,	5	21	147		7	63 39	21	3	3	3	4		7	4
					ľ	10	24	~~	, 		-	(	1	1	2.1			2	6	3		5	5 600 S
					1	14	17	11	6	6	32	14	5 1 1	5	22 30	13	15	5					
						7	21	5	9	7	(47	/ 30	5 3	6 60	51 30	39	12						
				-		5	9	3	7		21	2	4	03	60 43	27	7						
				20	USF				0	2	(13)	2		2	100			9					
						14	10			3	42			1		5	1	-					
						15	11	3	12	5	25	3	0	160	20. 2	25	2	1					
						8	13	3	5	4	24	1	1. 1	32	11 21	10	17	,					
						11	18	4	18	3	32	2	0	0	41 15	11	4						
				30	OS				234				-		24	12							
						12	14	9	55	3	20	4	5	20	51 20	12	1						
						20	12	4	9	4	19	ľ	14	20	14 1	5 7	4	6					
						17	16	4	8	11	21	13	6	23	40 1	3	5						
					2	19	9	5	3	A	15	-	14	37	12 1	1 8	5						
				40	OS	13				0					· · ·								
						20	18	5	9	4	17	1	12	12	35 . 1	0 10	8	3					
						9	17	9	4	12	1	<u> </u>	a	25	80 1	2 5	9	•					
						16	7	4	9	9	C	ani	200	41	14	70		25					
										1	14	200	334 480	1									
				50	os	13	14	5	12	8		2	2	36	2 1	0 19	3	53					
						4	10	7	9	3	1	00	5	29	20 3	29 13		21					
						5	6	4	3	3	C		THON IN	<u></u>	17 1	9 2	5	9					
								2		-		1	51	21	5	3 10		23					
						11	4	3	3	1	3	-	1				-	-					
	•			60	bos	16	3	5	5	5	9		14	2	57	21 2	2	4					
						5	7	2	2	2	1	9	5	9		2 7		6	3				
						4	3	3	2		C	8	2	5	23	5 2	7	2	4				
											6			1000	1. 1.								
						2	4	2		4	3		3	11	1.	44 4		11	()				
						2	. 21	21	2	2	2		2	40,	11	14 1	0	21	7				



More than 20 "



Geochemical Map to accompany Geochemical Report by Dr. P. J. Haman, P. Eng., on the Bubar and Rubarb claims, Kettle Valley area, B.C., Greenwood Mining Division.

OFESSIO Dated PETER J. HAMAN BRITISHEEGE Signed 01 GINEE 222 Expiry Date March 26, 1971



RUBARB CLAIMS BUBAR CLAIMS

Scale: 1 inch to 500 feet

- - Hop group soil survey ---- Induced polarization survey ..... Detailed soil sampling

LEGEND

![](_page_29_Figure_4.jpeg)

211

More than 50, 100, 250 ppm More than 40 ppm More than 30 " More than 20 "

More than 10 "

GEOCHEMICAL MAP

- ppm Copper

NO.. Geochemical Map to accompany Geochemical Report by Dr. P. J. Haman, P. Eng., on the Bubar and Rubarb claims, Kettle Valley area, B. C., Greenwood Mining Division.

![](_page_29_Figure_9.jpeg)

![](_page_30_Figure_0.jpeg)

station of the second second

Expiry Date March 25, 1975

![](_page_31_Figure_0.jpeg)

Scale : 1 inch to 100 feet

Detailed Soil Sampling

ppm Lead

More than 50, 100, 250 ppm More than 40 ppm More than 30 " More than 20 " More than 10 "

THE AT ATTACK T

Dated

Signed

ASSESSMENT REPORT

PETER J. HAMAN

GINE 2232: Expiry Date March 26, 1971

BRITISHULL OLUM

2950 MAD # 11 NO

Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Bubar and Rubarb claims, Kettle Valley area, B.C., Greenwood Mining Division. OFESSIO

IO5E	125E	ISOE	145	150E	155	160E	175	2001
350 5			20	3				
			15	1	2 .			
			18	2	4			
			10	1	9			
		3.	7	4	5			
775.0			,	4	2			
3755			•	T	3			
			12	2	3			
			8	5	4			
			"	6	5			
H-8- 8-55			7	5	7			
100.0			8	2				
400 5			-					
			9	2	2			
			/5	5	22			
			10	1	7			
			5	4	10			
425.5			2	P	9			1 2 24 7
423 3								1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1208			10	6	8			
			18	3	6		1	2
		2	8	5	4		MA	
		14 7	10	7	6	P		
450.8	12 8 19 12	3 4	8	3	2	3	II	15 12 25 111
450 5					6		3 11	12 12 30 41
	20 3 22 10	36 1	7	9	4	3 6	10 5	12 5 20 (51) 25

![](_page_32_Figure_1.jpeg)

1. 1.2

![](_page_33_Figure_0.jpeg)

.

		2	2	2	2	1	1	4-	6	4		5	9	5	4	8	5	io	16	14
		3	1	1	3	7	2	12	5	5		12	6	4	7	7	10	/5	15	11
		1	4	,	16	,	1	7	9	6		9	7	5	6	10	6	9	7	3
475 S -		2	1	2	7	8	2	19	7	2	,	7	4	6	5	4	5	3	6	0
5 005		1	,	1	35	40	1	9	5	ł	4	5	5	7	30	3	7	8	6	7
		1	2	1	10 -	27	8	9 2	6		4 3	3	5	6	7		9	6	5	5
		2	1	2	1	19	36	16	4		4	4	14	10	20	6	.10	11	3	7
		,	1	3	20	21	35)	25	3		4	1	9	9 !	25	22)	10	4	6	4
5000	90	1	2	9	121	27	10	8	4		3	5	25	21	23	10	95	10	5	5
500 S -								2	5			n	8	26	251	16	26	10	10	T
		2			'			2			6	DI	25	10	19	/5	30/	9	5	-
		2	'	'	5	'	ľ	7 1	P										5	Ĺ
		1	2	2	6	3	2	10	54		12	3	9	",'	22	6	5	10	5	8
		1	1	1	7	2	1	32	7		20	10	6	(a)	29	28	46	5	9	Б
525 S -		2	1	15	19	3	1	21/	5 5		15 (	25)	10	20	30-	30	16	7	8	5
		1	2	(22)	6	6	1	5	14	5	*****	8	6	17)	38,	'n.	10	3	7	6
		5	(29)	9	8	10	2	(22)	12.7	6	ān	7	7	122	23	5	6	6	8	10
		4	2	2	6	5	8	6	21	9	12	23)	/5	20	Ð	4	4	7	5	6
		1	1	1	6	1	15	6	1	2 4	8	19	3		20'	3	3	7	9	6
550 S -		8	2	,	,	,	1	7	4	4 2	ju	17	4	6	11	23	6		-13	7
									9		1	10	7	10	6	9	6	6	5	9
									5		11 :	7	3	9	5	7	5	8	5	5
									F		9	7	9	in:	3	8	5	5	6	7
		-							4		9	4	3	6	ы	5	7	6	5	7
575 5									10		6	6	3	10	6	6	5	4	5	10
0100									4		3	10	9	9						

# BUBAR CLAIMS

Scale: I inch to 100 feet

Detailed Soil Sampling

![](_page_33_Figure_5.jpeg)

M. Halland

No them -

600 S +

ppm Cobalt

Mines and Petroleum Resources ASSESSMENT REPORT MAP # 13 NO. 2950 Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Bubar and Rubarb claims, Kettle Valley area, B.C., Greenwood Prining Division. te Dated PETER J. HAMAN Signed BRITISHEL ec OLUM GIN Expiry Date March 26, 1971

Department of

7

8

: 11

9

5

7

11

13

![](_page_34_Figure_0.jpeg)

Scale : 1 inch to 100 feet

Detailed Soil Sampling

More than 100, 500, 1000 etc. ppm More than 80 ppm < More than 60 " More than 40 " More than 20 " dia traine State of Works and the 2 -

HE BOST

and the second second and the second se

ppm Nickel

NO. 2950 MAP # 14

Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Bubar and Rubarb claims, Kettle Valley area, B.C., Greenwood Mining Division.

![](_page_34_Figure_7.jpeg)

![](_page_35_Figure_0.jpeg)

Scale : I inch to 100 feet

# Detailed Soil Sampling

![](_page_35_Picture_3.jpeg)

More than 50, 100, 250 ppm More than 40 ppm More than 30 " More than 20 " More than 10

ppm Cobalt

.

![](_page_35_Picture_6.jpeg)

Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Bubar and Rubarb claims, Kettle Valley area, B.C., Greenwood Mining Division.

![](_page_35_Figure_8.jpeg)