82-#734-10692
9

RECONNAISSANCE GEOPHYSICAL AND GEOCHEMICAL SURVEYS

BINE #1-10 CLAIMS
(BINE GROUP)
SOUTH SALMO RIVER AREA
NEAR NELWAY, BRITISH COLUMBIA
NELSON MINING DIVISION
82 F/3E and 3W
Lat: 49°02'N Long: 117°14'W

OWNED BY
W. ARTHUR HALL
AND E. R. ROCKEL

OPERATOR AND CONSULTANT
INTERPRETEX RESOURCES LTD.
CALGARY, ALBERTA

REPORT PREPARED BY
E. R. ROCKEL, B.Sc., P. Geoph. (Alberta)

NOVEMBER 1982

Respectfully Submitted

INTERPRETEX RESOURCES LTD.

EDWIN R. ROCKEL, B.Sc., P. Geoph.
Consulting Geophysicist

THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF ALBERTA
PERMIT NUMBER
P 3100
INTERPRETEX
RESOURCES LTD.

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1. SUMMARY

Relatively high conductance VLF-EM anomalies have been located on the Bine Group.

Follow-up of the conductors is warranted to establish the strength and validity of the anomalies. A further orientation VLF-EM survey and magnetic survey is recommended to establish the anomaly trend. Detailed electromagnetic surveys and geological and geochemical investigations are recommended to follow.

2. INTRODUCTION

The Bine Group of claims are situated approximately 1 km south of the South Salmo River, and approximately 2 km southeast of the Nelway junction of the Salmo-Creston Highway.

A road to Rosebud Lake provides access to the claims.

The claims are situated on moderately sloping to steep ground.

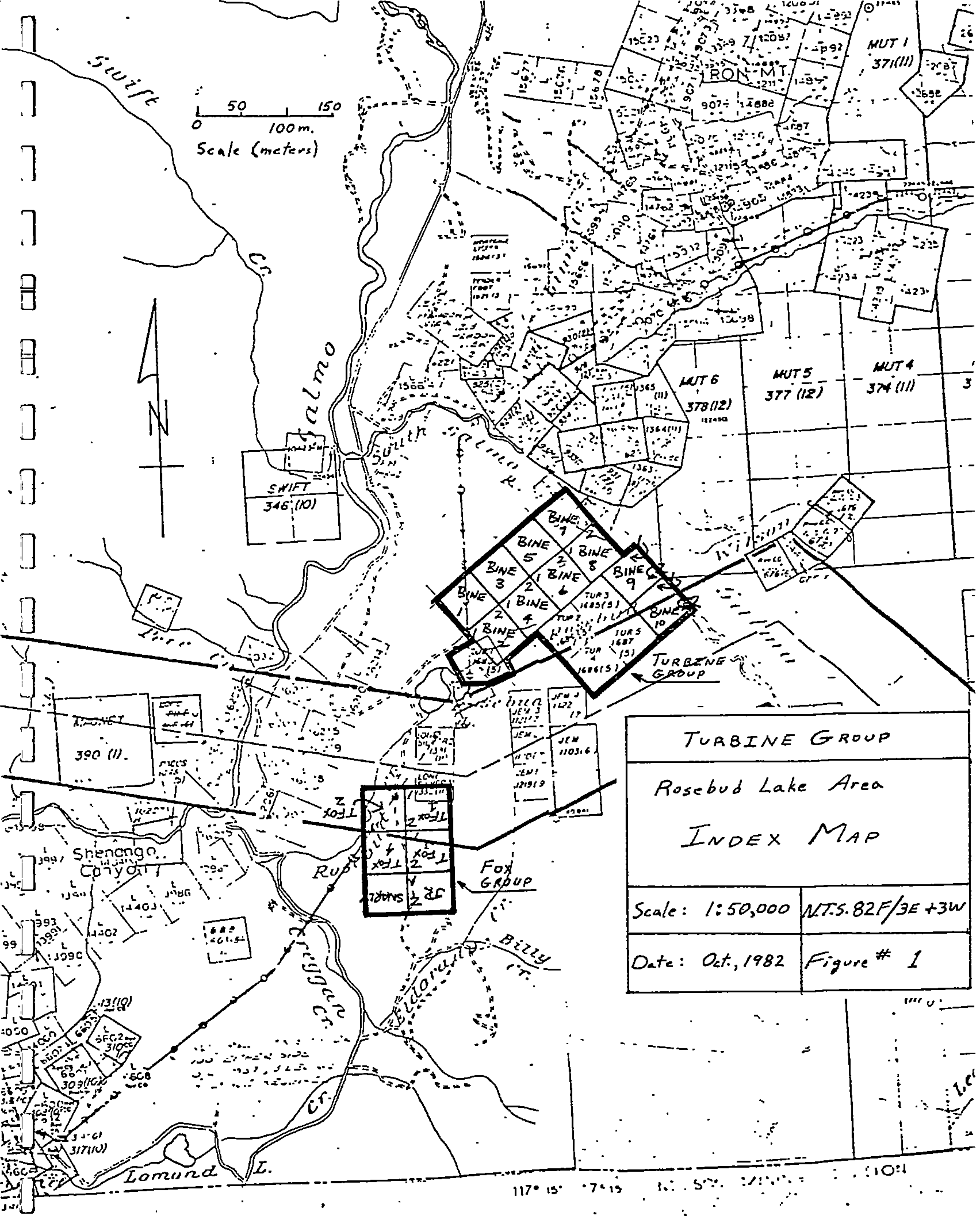
Only small areas of outcrop exposure were observed during the surveys. Small, isolated patches of glacial outwash are prevalent throughout the claims. Cover is thin in most areas.

Claims in the Bine Group are owned by W. Arthur Hall and E. R. Rockel, both of Calgary, Alberta.

The operator of the 1982 program was Interpretex Resources Ltd., Calgary, Alberta, a firm specializing in geophysical and geological consulting and contracting for mineral exploration.

The Bine claim group was acquired to cover a possible projection on strike of occurrences on the Lone Silver claims to the south.

A location/index map is included in this report as Figure 1.


TURBINE GROUP
Rosebud Lake Area
INDEX MAP
Scale: 1:50,000
N.T.S. 82F/3E +3W
Date: Oct., 1982
Figure # 1
0
50
100m.
150
Scale (meters)
N
Swift
Cr.
Salmo
South Salmo R.
SWIFT
346 (10)
IRON MT
MUT 1
371(11)
MUT 6
378(12)
MUT 5
377 (12)
MUT 4
374 (11)
BINE 1
BINE 2
BINE 3
BINE 5
BINE 6
BINE 8
BINE 9
BINE 10
BINE 4
TUR 3
1685(5)
TUR 5
1687
(5)
1686(5)
TURBINE
GROUP
FOX 1
FOX 2
FOX 3
FOX 4
JR SHARLY
FOX
GROUP
390 (1).
Shenango
Canyon
Rosebud
Erie
Billy Cr.
Eldorado
Cr.
Lomond L.
317(10)
309(10)
117° 15'

3. MINERAL CLAIMS

Claim	Record Number	Month of Record	Owner
Bine #1	2467	Sept.	E. R. Rockel
Bine #2	2468	Sept.	E. R. Rockel
Bine #3	2469	Sept.	E. R. Rockel
Bine #4	2470	Sept.	E. R. Rockel
Bine #5	2471	Sept.	E. R. Rockel
Bine #6	2472	Sept.	E. R. Rockel
Bine #7	2473	Sept.	E. R. Rockel
Bine #8	2474	Sept.	E. R. Rockel
Bine #9	2475	Sept.	W. A. Hall
Bine #10	2476	Sept.	W. A. Hall

4. GEOLOGY AND MINERALIZATION

Although no geological evidence of economic mineralization has been found to date, it is expected that Ag, Pb, Zn mineralization may occur in relation to mineral occurrences to the south.

5. GEOPHYSICAL SURVEYS

5.1 Survey Parameters

Survey lines were chained and flagged during the survey. Survey stations were located at 50 metre intervals for reconnaissance. The following coverage was obtained during the survey:

Magnetometer survey - 1.30 km
VLF-EM survey - 1.30 km
Total coverage - 2.60 km

5.2 Equipment Parameters

G-816 Total Field Magnetometer:

(i) measured total magnetic field
(ii) magnetic variations controlled using "tie-back" method and linear diurnal curves
(iii) instrument accuracy ±1 gamma
(iv) station repeatability ±3 gammas

EM-16, VLF-EM:

(i) stations used - NAA, Cutler, Maine
- NPG, Seattle, Washington
(ii) directions operator faced - southeast
- northeast
as per map Figure 2.

5.3 Data

(i) Calculations:

No corrections were made to VLF-EM data. During the magnetic survey the tie-back method was used to control magnetic variations. The data was corrected for diurnal variations of the earth's magnetic field using linear diurnal curves.

(ii) Presentation:

All geophysical data are presented in profile form at a scale of 1:5,000 on plan map Figure 2 containing claim boundaries.

5.4 Interpretation

Electromagnetic survey results show two apparent conductors on line 1+00N and a conductive zone on line 8+00E. A disturbance of the profile at and near 8+00E on line 0+50S may be caused by response to the feature on line 8+00E. All conductors are believed to be moderate to low conductance and relatively shallow.

Magnetic survey results indicate a level change coincident with the strong EM anomaly at 4+45E on line 1+00N. A slight level change can also be observed at the EM anomaly position 6+70E. No other significant magnetic features were evident in these data.

6. GEOCHEMICAL SURVEY

Nine soil samples and three rock samples were collected at selected intervals along line 1+00N (Figure 3).

B horizon material was collected at approximately 20 cm depth.

Rock chip samples were collected at selected outcrops. The observed rock type was primarily limey laminated argillite.

Zinc in soil values generally exceeded 200 ppm and may reflect high background levels in argillites.

7. CONCLUSIONS

(a) The two EM anomalies found on line 1+00N at 4+45E and 6+70E may represent two distinct conductors, or by type curve interpretation they may be construed as the edges of one wide conductive zone such as a fault. When considering EM topographic effects and the terrain in the area the writer believes that two distinct conductors is the correct interpretation from these profiles.

Moderate to low conductance plus a magnetic level change at the 4+45E anomaly indicates a fault conductor. When looking closely at the magnetic profile a similar level change appears coincident with the EM anomaly at 6+70E. This suggests another, probably parallel, fault as the cause of conductivity.

(b) Conductivity seen on line 8+00E plus the disturbance on the line 0+50S profile near 8+00E suggests additional conductivity in this area. Since the strike of this conductor appears to be different from that of the previous two conductors a complex conductive and structural situation may exist. Although there is insufficient data here to speculate much further, the writer suggests that some form of cross faulting with structural traps should not be excluded from consideration. More data is required to test this hypothesis before any further interpretation is warranted.

(c) Lead and silver values in soil show no demonstrable anomalies or enrichments. Geochemically anomalous levels of zinc are believed to reflect high background in argillites. However, zinc levels in three rock samples collected from the Bine property average only 35 ppm, and zinc in soil enrichments may reflect nearby sulphide mineralization.

8. RECOMMENDATIONS

(a) Reconnaissance and detailed prospecting is recommended to follow-up survey results and establish ground control.

(b) Additional VLF-EM and magnetic surveys are recommended to establish structural and mineralogical trends, especially in the areas of EM anomalies found by the present survey.

(c) Further soil sampling should be carried out on parallel traverses to establish potential bedrock sources of zinc mineralization.

CERTIFICATE

I, Edwin R. Rockel, hereby certify that:

1. I am a Consulting Geophysicist and owner of Interpretex Resources Ltd. of P.O. Box 6107 Station A, in the City of Calgary, in the Province of Alberta.

2. I currently reside at #4, 12625 - 24th Street S.W., in the City of Calgary, in the Province of Alberta.

3. I obtained a Bachelor of Science degree in Geophysics and Geology in 1966 from the University of British Columbia.

4. I have been practising my profession as an Exploration Geophysicist since 1967.

5. I am a Professional Geophysicist registered in the Province of Alberta.

Nov. 9 /82
Date

Edwin R. Rockel, B.Sc., P. Geoph.
Interpretex Resources Ltd.

APPENDIX I

GEOPHYSICAL DATA SHEETS

LINE NO. 0+00 L Facing 17 W

TIME	STATION	READING In 8th.	Out CORRECTION	Scintrex FINAL VALUE	Station REMARKS
1+00	N	0	+5		
0+50	N	+28	+1	118840	0+50 N
0+00		-2	+6		
0+50	S	-18	+5	118839	0+35 S
1+00	S	-25	+4		

JOB NO. Cutler AREA DATE June 25/82
INST. TYPE Facing Southerly SERIAL NO.
OPERATOR PAGE NO
~~MAGNETICS~~ PROTON FLUXGATE VLF EM

CAN-LAKE EXPLORATIONS LTD.

LINE NO. 0+50 N 11 70 L

TIME	STATION	READING In 8th.	Out CORRECTION	FINAL VALUE	REMARKS
8+00	E	+20	0	Seattle	
8+50	E	+9	-4		
9+00	E	+26	-4		
9+50	E	+22	-6		
10+00	E	+22	-8	Facing N	
10+50	E	+18	-7		
11+00	E	+25	0		
11+50	E	+36	-7	Crest of hill fold	
				road ⊥ to L	
11+50	E	-37	-4	Cutler	
				Facing S	
0+50	S				
11+50	E			Sea	
0+00					
0+50	N				
1+00	N				

JOB NO. Seattle AREA DATE
INST TYPE Facing N SERIAL NO.
OPERATOR PAGE NO.
~~MAGNETICS~~ PROTON FLUXGATE VLF

CAN-LAKE EXPLORATIONS LTD

LINE NO. 1N   Facing NE   Seattle

TIME	STATION	READING/ In %/Tr.	O+T CORRECTION Tr.	FINAL VALUE γ	REMARKS
	0+50E	+35	-26	Sample	
@ 50°E	100	+23	-15	#	chainage
	1+50	+23	-7	118842	230 E
	2+00	+26	+1		
	2+50	+29	+5	118846	2+70 E
@ 2+70E	change bearing to	N-86°E			
	3+00E	+36	+6		
@ 3+20E			N-58°E		
	3+50E	+31	+5	118845	3+50 E
@ 4+00E			N-10°E		
	4+00E	+36	+1		
	4+50E	+13	+2	118844	4+45 E
@ 4+50E			350° Az.		
	5+00E	+5	-2		
@ 5+00			N 33° E		
	5+50E	+2	0	118843	5+60 E
	6+00E	+4	-1		
	6+50E	+1	0	118842	6+80 E
	7+00E	-16	+3		
	7+50E	-2	+3	118841	7+80 E
	8+00E	+4	0		
end at					
line					

JOB NO. ______ AREA ______ DATE June 25/82

INST. TYPE ______ SERIAL NO. ______

OPERATOR ______ PAGE NO ______

~~MAGNETICS~~ ☐ PROTON ☐ FLUXGATE VLF

CAN-LAKE EXPLORATIONS LTD.

FIELD BASE READING ______ γ

LINE NO. 8E   OPERATOR ADJUST ______ γ

TIME	STATION	READING γ	BASE STN READING	TOTAL CORR.	FINAL VALUE γ	REMARKS
1202	1+00N	57789				
12:10	0+50N	57822				
12:15	0+00	57785				
12:20	0+50S	57768				
12:26	1+00S	57749				

DATUM LEVELS BASE STN ______ γ FIELD BASE ______ γ

JOB NO. ______ AREA ______ DATE ______

INST. TYPE ______ SERIAL NO. ______

OPERATOR ______ PAGE NO. ______

MAGNETICS ☐ PROTON ☐ FLUXGATE

CAN-LAKE EXPLORATIONS LTD.

FIELD BASE READING _____ δ

LINE NO. 0+50S OPERATOR ADJUST _____ δ

TIME	STATION	READING δ	BASE STN READING	TOTAL CORR	FINAL VALUE δ	REMARKS
1:38	8+50N	57772				
12:42	9+00E	57768				
12:46	9+50E	57765				
12:51	10+00E	57759				
12:59	10+50E	57764				
1:03	11+00E	57759				
1:06	11+50E	57769				
1:34	0+50	~~57782~~				
1:35	1+00	~~57768~~				
1:37	1+50	57729				
1:39	2+00	57778				
	Line 1N Base Stn.					
3:46 PM	0+50E	57821	57825	+4	Negligable Drift.	

DATUM LEVELS. BASE STN. _____ δ FIELD BASE _____ δ

JOB NO. _____ AREA _____ DATE _____

INST. TYPE _____ SERIAL NO _____

OPERATOR _____ PAGE NO _____

MAGNETICS ☐ PROTON ☐ FLUXGATE

CAN-LAKE EXPLORATIONS LTD.

~~1+50E~~ 0+50E FIELD BASE READING 57825 δ

LINE NO. 1N OPERATOR ADJUST _____ δ

TIME	STATION	READING δ	BASE STN READING	TOTAL CORR.	FINAL VALUE δ	REMARKS
13:41	0+50E	57825				
10:49	0+50E	57823				
10:51	1+00E	57811				
10:55	1+50E	57784				
11:00	2+00E	57775				
11:05	2+50E	57789				
11:11	3+00E	57778				
11:15	3+50E	57764				
11:18	4+00E	57754				
11:22	4+50E	57758				
11:26	5+00E	57797				
11:30	5+50E	57797				
11:33	6+00E	57780				
11:37	6+50E	57782				
11:49	7+00E	57798				
11:52	7+50E	57796				
	8+00	57785				

DATUM LEVELS BASE STN _____ δ FIELD BASE _____ δ

JOB NO. _____ AREA _____ DATE _____

INST. TYPE _____ SERIAL NO _____

OPERATOR _____ PAGE NO. _____

MAGNETICS ☐ PROTON ☐ FLUXGATE

CAN-LAKE EXPLORATIONS LTD.

APPENDIX II

INSTRUMENT SPECIFICATIONS

GEONICS LIMITED
VLF EM 16

Source of Primary Field:	VLF transmitting stations
Transmitting Stations Used:	Any desired station frequency can be supplied with the instrument in the form of plug-in tuning units. Two tuning units can be plugged in at one time. A switch selects either station.
Operating Frequency Range:	About 15-25 Hz
Parameters Measured:	(1) The vertical in-phase component (tangent of the tilt angle of the polarization ellipsoid). (2) The vertical out-of-phase (quadrature) component (the short axis of the polarization ellipsoid compared to the long axis).
Method of Reading:	In-phase from a mechanical inclinometer and quadrature from a calibrated dial. Nulling by audio tone.
Scale Range:	In-phase ±150%; quadrature ±40%
Readability:	±1%
Reading Time:	10-40 seconds depending on signal strength
Operating Temperature Range:	-40 to 50° C.
Operating controls:	ON-OFF switch, battery testing push button, station selector, switch, volume control, quadrature, dial ±40%, inclinometer dial ±150%
Power Supply:	6 size AA (penlight) alkaline cells. Life about 200 hours
Dimensions:	42 x 14 x 9 cm (16 x 5.5 x 3.5 in)
Weight:	1.6 kg (3.5 lbs)
Instrument Supplied With:	Monotonic speaker, carrying case, manual of operation, 3 station selector plug-in tuning units (additional frequencies are optional), set of batteries
Shipping Weight:	4.5 kg (10 lbs.)
Name and Address of Manufacturer:	Geonics Limited 1745 Meyerside Drive/Unit 8 Mississauga, Ontario L5T 1C5

MODEL G-816

PORTABLE PROTON MAGNETOMETER

Sensitivity:	±1 gamma throughout range
Range:	20,000 to 90,000 gammas (worldwide)
Tuning:	Multi-position switch with signal amplitude indicator light on display
Gradient Tolerance:	Exceeds 800 gammas/ft
Sampling Rate:	Manual pushbutton, one reading each 6 seconds
Output:	5 digit numeric display with readout directly in gammas
Power Requirements:	Twelve self-contained 1.5 volt "D" cell universally available flashlight-type batteries. Charge state or replacemnt signified by flashing indicator light on display.
Temperature Range:	Console and sensor: -40° to +85°C
	Battery pack: 0° to +50°C (limited use to -15°C; lower temperature battery belt operation - optional)
Accuracy (Total Field):	±1 gamma through 0° to ±50°C temperature range
Sensor:	High signal, noise cancelling, interchangeably mounted on separate staff or attached to back back
Size:	Console: 3.5 x 7 x 11 inches (9 x 18 x 28 cm) Sensor: 3.5 x 5 inches (9 x 13 cm) Staff: 1 inch diameter x 8 ft. length (3 cm x 2.5 m)

Weight:

	Lbs.	Kgs.
Console (w/batteries)	5.5	2.8
Sensor and signal cable:	4	1.8
Aluminum staff:	2	.9
	11.5	5.2

APPENDIX III

GEOCHEMICAL DATA SHEET

Laboratory:	Terramin Research Labs Ltd., Calgary, Alberta
Mesh Size:	Sample disaggregation to -80 mesh, rocks crushed and ground to -200 mesh
Extraction:	Hot $HNO_3/HClO_4$ to dryness, taken up in dilute HCl
Analysis:	Atomic absorption

TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Job # 82-079

Date July 12, 1982

GEOSTRATEGIC CONSULTANTS Ltd.

Client Project

Page 1/1

Sample No.		Pb ppm	Zn ppm	Ag ppm
Soil	118839	18	240	0.4
	118840	11	400	0.4
	118841	14	340	0.4
	118842	18	207	0.5
	118843	17	240	0.4
	118844	19	280	0.3
	118845	32	340	0.5
	118846	18	172	0.2
	118847	29	320	0.2
Rock	Hole	10	20	0.2
	Pit	116	39	2.1
	Chopper Pad	21	27	0.8
	Goat Farm	10	36	0.1
	R-50-M	7	44	0
	R-125-M	7	34	0

14, 2235 - 30th Avenue N.E., Calgary, Alberta T2E 7C7
(403) 276-8668 Telex 03-821172 CGY

APPENDIX IV

STATEMENT OF EXPENDITURES

Labour Costs	
Geophysicist (E.R. Rockel)	
1.5 days @ $350.00/day	$525.00
Geochemist (D.S. Evans)	
1 day @ $300.00/day	$300.00
Junior Assistant (W.A. Hall)	
1 day @ $125.00/day	$125.00
Junior Geophysicist (H.M. Rockel)	
1 day @ $160.00/day	$160.00
Other Costs	
Mobilization/Demobilization/Vehicles	$170.00
Travel, Field Support @ $25.00/day/man	$100.00
Instrument Rental	$120.00
Geochemical Analyses	$30.00
Report, Materials, Maps	$80.00
TOTAL	$1,610.00

Dates

June 25 - Soil survey, VLF and EM survey

Oct. 20 - Report

Legend:

- Claim Boundary
- Claim Post
- Survey Line
- Power Line

Survey by Hip-chain, Compass + Flagging

- In-Phase % VLF-E.M. } 1 cm. = 10%
- Out-of-Phase % VLF-E.M. }
- Total Field Magnetic Profile (gammas)
- VLF-EM Conductor (Strong, Medium)

1 cm. = 100 gammas

N

0 50 100 m. 150
(meters)

Bine 1 2467
Bine 2 2468
Bine 3 2469
Bine 4 2470
Bine 5 2471
Bine 6 2472
Bine 7 2473
Bine 8 2474
Bine 9 2475

L-1+00N
VLF Station-Seattle
VLF facing N.E.
Mag base level 57,600 Y

L-8+00E
VLF Station-Cutler
VLF facing S.E.
Mag base level 57,600 Y

L-0+50S
VLF Station-Seattle
VLF facing N.E.
Mag base level 57,600 Y

1E 2E 3E 4E 5E 6E 7E 8E 9E 10E 11E 1W 2W

Rosebud Creek

TUR 3 1685
1684
TUR 2

THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS and GEOPHYSICISTS OF ALBERTA
PERMIT NUMBER
P 3100
INTERPRETEX RESOURCES LTD.

TURBINE GROUP

Rosebud Lake Area
Bine # 1 to 10 Claims
VLF-EM. and Magnetic Survey
EM-16 and G-816

Scale: 1:5,000	N.T.S. 82F/3E+3W
Date: Oct., 1982	Figure # 2

Legend:

- Claim Boundary
- Claim Post
- Survey Line
- Power Line

Survey by Hip-chain, Compass + Flagging

- X — Soil Sample Location
- 118843 — Soil Sample Number
- • — Rock Sample
- 21, 16, 0.4 — Pb, Zn, Ag (ppm)

0 50 100m. 150 (meters)

N

Bine 1 2467
Bine 2 2468
Bine 3 2469
Bine 4 2470
Bine 5 2471
Bine 6 2472
Bine 7 2473
Bine 8 2474
Bine 9 2475

Rosebud Creek

L- 1+00 N

L- 8+00 E

21, 27, 0.8 C.P.
7, 34, 0 R125m
7, 44, 0 R50m

18, 240, 0.4 — 118839
11, 400, 0.4 — 118840
14, 340, 0.4 — 118841
18, 207, 05 — 118842
17 240, 0.4 — 11843
19, 280, 0.3 — 11844
32 340, 0.5 — 11845
18, 172, 0.2 — 11846
29, 240, 0.2 — 11847

Tur 3 1685
Tur 2 1684

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TURBINE GROUP

Rosebud Lake Area
Bine # 1 to 10 Claims
Soil Sample Geochemical Survey

Scale : 1 : 5,000	N.T.S. 82 F/3E+3W
Date : Oct., 1982	Figure # 3