

GEOCHEMICAL REPORT

ON THE

JAS #1 MINERAL CLAIM

VANCOUVER ISLAND, B.C.

N.T.S. MAP SHEET 92C/15

Victoria N.A.

48° 51      124° 35

for

MALABAR MINES LTD.

by

R.R. Culbert, PhD., P.Eng.

May 15, 1982

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Follows Page 2

GEOCHEMISTRY

In Pocket

JAS MINERAL CLAIM  
VANCOUVER ISLAND, B.C.

INTRODUCTION

In the spring of 1981 prospector R.J. Bilquist was employed by Malabar Mines Ltd. to explore the region between Nitinat and Cowichan Lakes in southern Vancouver Island. This resulted in the discovery of mineralization exposed by the building of new logging roads. The JAS-1 mineral claim was staked to cover the area of interest, which was subsequently prospected in more detail. Further, the immediate area of the newly discovered mineralization was covered by a small grid to control geochemical soil sampling. This report summarizes results to date.

LOCATION, ACCESS AND HISTORY

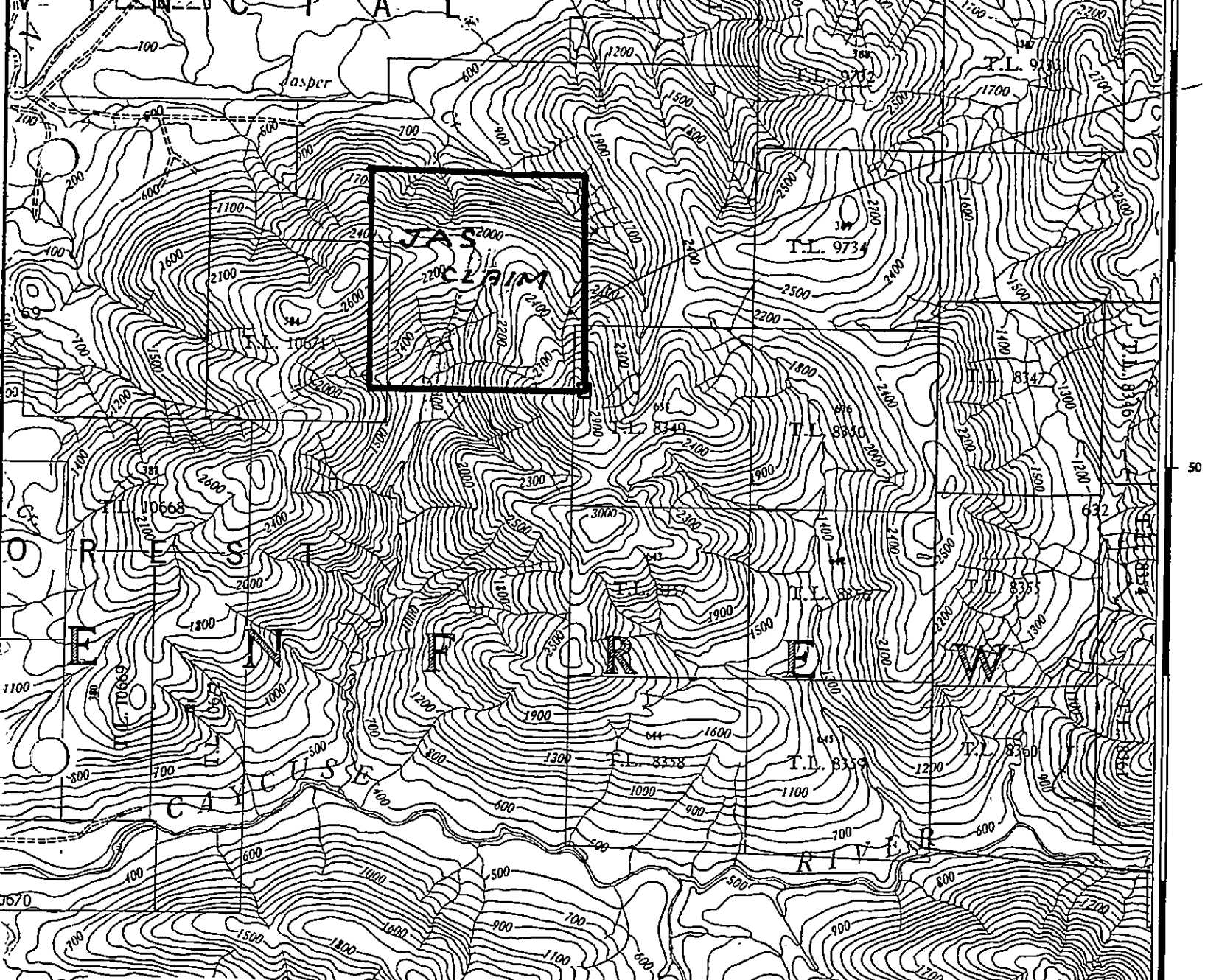
The JAS mineral claim is located near the headwaters of Jasper Creek approximately 6 km (4.3 miles) E.N.E. of the north end of Nitinat Lake on southern Vancouver Island. Geodetic coordinates are 48°51' North; 124°35' West.

The property is serviced by logging roads and accessible from the town of Duncan in approximately one hour. The locality is steep with surface elevations up to about 3,000 feet above sea level. It is heavily forested but has been partly logged recently with more road development and timber clearance expected in the near future.

The area covered by the JAS mineral claim has been held by Hudson Bay Exploration and Development Company Ltd. (TAM mineral claims) for the last ten years. Hudson Bay did geological, geochemical, and geophysical programs, results of which are available in various assessment reports.

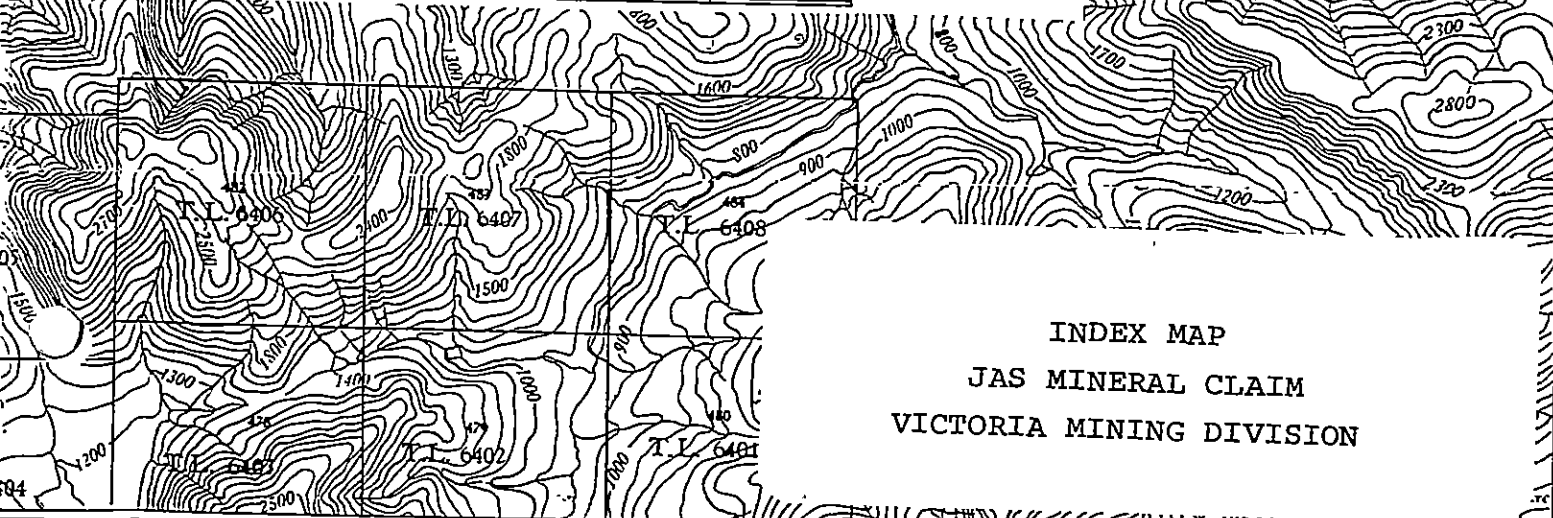
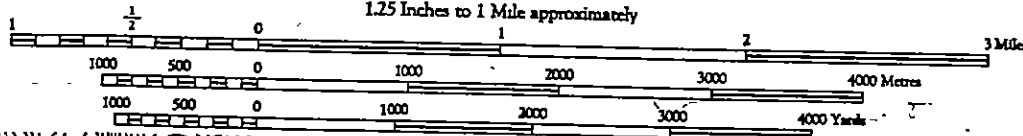
CLAIMS

The JAS mineral claim, owned by Malabar Mines Ltd., is located in the Victoria Mining Division.



Scale 1:50,000

1.25 Inches to 1 Mile approximately



INDEX MAP  
 JAS MINERAL CLAIM  
 VICTORIA MINING DIVISION

92 C/15 East

35'

124°30'

48°45'

Claim data is as follows:

<u>Claim</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Expiry Date</u>
JAS #1	515	13 April, 1981	13 April, 1982

This claim is currently held in the name of R.J. Bilquist.

#### GEOLOGY AND MINERALIZATION

The claim appears to be underlain almost entirely by volcanic rock of the Bonanza Formation. These are largely andesites and basalts, but locally involve more acid eruptives including dacites, ashflows, and a variety of breccias.

Recent extensions of the logging road systems have revealed three styles of mineralization, namely -

- 1) Irregular bands and zones of massive sulphide as much as as one meter in width. These consist of pyrite and chalcopyrite with frequent concentrations of sphalerite locally with galena. A list of assays from some grab samples is included as Appendix "A". The gangue is in part quartzose, and in part a soft, black alteration product. Although the massive sulphide has been exposed by road building in only one location, mineralized float boulders have been found for considerable distances (over a kilometer) along the topographic depression which appears to mark the trace of the mineralized zone.

- 2) A patchy stockwork of copper and zinc associated with quartz stringers exists to north of the massive sulphide depression, at least in the area where this crosses a divide. The extent of this mineralized zone is not yet known.
- 3) On the west side of the area examined, a road-cut has revealed a zone of intense pyritization and bleaching. This takes the form of alteration of volcanic rocks to little more than a clay-pyrite mixture, but there are also a number of pyrite-matrix breccias and ferruginous cemented soils (pre-glacial?) here. The breccias are multilithic and kaolinized, and may represent a form of diatreme activity, although they may also result from hot spring alteration and cementation of a pre-glacial erosion surface.

#### GEOCHEMISTRY

Seventy three grid-controlled soil samples were collected in the vicinity of exposures of the first two mineralization types in the vicinity of the ridge. The samples were shipped to Chemex Labs. Ltd., North Vancouver, where they were dried, pulverized to -80 mesh, and tested for copper, lead, zinc, gold, and silver.

The results, see Fig. 2 and Appendix "B", showed strong anomalies in Cu, Pb, and Zn., dominately along the depression thought to

mark the massive sulphide zones. For the most part the exposed mineralization lies at the north edge of the geochemical grid.

In addition to this, two samples from the quartz veins or silicification zones spatially associated with the depression ran 0.400 and 0.144 oz./ton gold. These zones are irregular and poorly exposed, but appear to be of sufficient size to be worth further investigation.

### RECOMMENDATIONS AND CONCLUSIONS

#### Stage I

- 1) The geochemical grid should be extended to include the topographic depression and the western pyritic zone. This would be accompanied by detailed prospecting.
- 2) The massive sulphide bands ought to be easily detectable by E.M., and a survey of the area is recommended. Pyritization and silicification zones involve destruction of magnetite in the basalt, and might be traced by magnetometer.
- 3) Bulk-sampling of the exposed quartz veins and of the western pyritic zone for gold should be given priority.

#### Stage II

Contingent upon the results of Stage I above, a diamond drill program should be carried out. This would likely involve drilling a series of angled holes across any target defined.



Estimated Cost

Stage I

Geochemical survey, prospecting,  
E.M. survey, and bulk sampling \$ 25,000-

Stage II

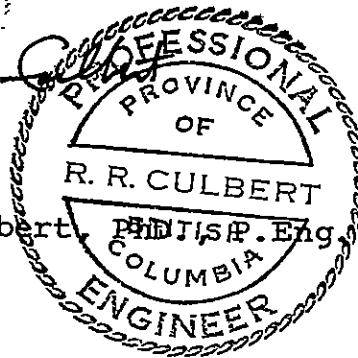
Diamond drilling  
2,000 feet @ \$30.00 per foot 60,000

Total I and II \$ 85,000  
=====

Respectfully submitted,

*Dick*

R.R. Culbert



August 17, 1981

CERTIFICATION

I, R.R. Culbert, do hereby certify that:

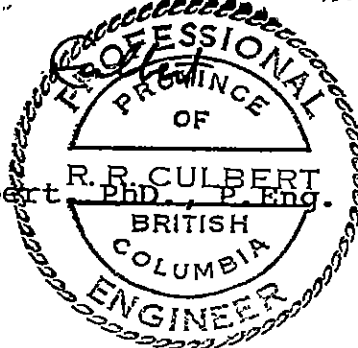
1. I am a practicing Professional Geological Engineer with offices at 3155 West 12th Avenue, Vancouver, B.C.
2. I am a graduate of the University of British Columbia, B.Sc. (1964), Ph.D. (1971).
3. I have practiced mining exploration for sixteen years, most of which were based in British Columbia.
4. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
5. I have personally visited the JAS property and supervised exploration work carried out there.

Respectfully submitted,

*Ride*

R.R. Culbert

R. R. CULBERT  
Ph.D., P. Eng.



August 17, 1981

BREAKDOWN OF COSTS (for assessment purposes)

Accommodation	\$ 132.32
Truck rental	911.25
Assay (Chemex Labs.)	633.25
Groceries and meals	375.72
Office overhead - secretarial, accounting, etc.	225.00
Wages and salaries*	<u>1,710.00</u>
	\$ <u>3,987.54</u> =====

\* See payroll record following this page.



APPENDIX A

Certificate of Assay

To: LEIGHTON, D.G. & Associates Ltd.	Cert.# :	A8111228-001-A
3155 West 12th Ave.	Invoice	18111228
Vancouver, B.C.	Date	15 - June - 81
V6K 2R6	P.O. #	None
	Malabar Silver	- JAS

Sample Description	Prep Code	Cu percent	Zn percent	Ag (FA) oz/t	Au (FA) oz/t	Pb ppm
JAS 1 R	207	0.61	0.01	0.18	0.003	75
JAS 2	207	1.07	0.03	0.01	0.003	48
JAS 3	207	9.75	0.01	1.56	0.003	18
JAS 4	207	5.10	0.02	3.68	0.005	14
JAS 5 A	207	1.51	2.70	0.20	0.003	2250
JAS 5 B	207	0.07	1.89	0.24	0.003	77
JAS 6	207	0.32	0.08	0.01	0.003	43
JAS 7	207	1.71	0.59	0.42	0.003	300
JAS 8	207	0.52	1.20	0.18	0.408	1450
JAS 8 A	207	0.02	0.03	0.01	0.003	36
JAS 9	207	0.03	0.03	0.05	0.003	31
JAS 10	207	0.08	0.69	0.02	0.003	37
JAS 11	207	0.11	4.85	0.03	0.144	38
JAS 12	207	0.05	0.19	0.01	0.003	6
JAS 13 R	207	4.12	0.07	0.52	0.003	6

NITINAT ROCKS  
Grab Samples

APPENDIX "B"

GEOCHEMICAL DATA JAS CLAIM

SOIL SAMPLE RESULTS



# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1

TELEPHONE: (604)984-0221  
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

## CERTIFICATE OF ANALYSIS

TO : LEIGHTON, D.G. & ASSOC. LTD.  
3155 WEST 12TH AVE;  
VANCOUVER, B.C.  
V6K 2R6

CERT. # : A811229-001-1  
INVOICE # : 1811229  
DATE : 08-JUN-81  
P.O. # : NONE  
MALABAR SILVER-JAS

CC: RON BILQUIST

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au -(AA) ppb	
JAS 1	201	36	6	30	0.6	<10	---
JAS 2	201	76	32	100	0.2	<10	---
JAS 3	201	330	14	340	0.2	<10	---
JAS 4	201	40	4	50	0.2	<10	---
JAS 5	201	32	7	74	0.5	<10	---
JAS 6	201	32	5	44	0.1	10	---
JAS 7	201	56	3	120	0.1	<10	---
JAS 8	201	26	6	44	0.1	<10	---
JAS 9	201	80	46	90	0.4	10	---
JAS 10	201	230	54	144	0.7	<10	---
JAS 11	201	190	330	300	1.0	10	---
JAS 12	201	120	26	200	0.6	10	---
JAS 13	201	180	17	150	0.8	20	---
JAS 14	201	46	15	70	0.2	<10	---
JAS 15	201	74	15	134	0.1	<10	---
JAS 16	201	40	8	40	0.1	<10	---
JAS 17	201	42	14	58	0.3	<10	---
JAS 18	201	32	2	50	0.2	<10	---
JAS 19	201	22	5	64	0.1	<10	---
JAS 20	201	56	11	120	0.4	<10	---
JAS 21	201	30	10	60	0.1	<10	---
JAS 22	201	46	6	58	0.1	<10	---
JAS 23	201	132	13	122	0.3	<10	---
JAS 24	201	30	17	66	0.1	<10	---
JAS 25	201	128	26	70	1.4	<10	---
JAS 26	201	70	28	106	0.3	10	---
JAS 27	201	114	64	160	1.3	<10	---
JAS 28	201	158	18	94	0.2	<10	---
JAS 29	201	68	13	68	0.6	<10	---
JAS 30	201	24	25	66	0.2	<10	---
JAS 31	201	70	55	66	0.3	<10	---
JAS 32	201	24	14	40	0.1	<10	---
JAS 33	201	26	18	60	0.1	<10	---
JAS 34	201	38	94	150	0.4	<10	---
JAS 35	201	22	13	38	0.1	<10	---
JAS 36	201	38	20	64	0.1	<10	---
JAS 37	201	34	5	60	0.1	<10	---
JAS 38	201	50	6	50	0.1	<10	---
JAS 39	201	66	5	62	0.2	10	---
JAS 40	201	86	8	80	0.2	<10	---

Certified by *Hart Bickler*



MEMBER  
CANADIAN TESTING  
ASSOCIATION



# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
 NORTH VANCOUVER, B.C.  
 CANADA V7J 2C1  
 TELEPHONE: (604)984-0221  
 TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

## CERTIFICATE OF ANALYSIS

TO : LEIGHTON, D.G. & ASSOC. LTD.  
 3155 WEST 12TH AVE:  
 VANCOUVER, B.C.  
 V6K 2R6

CERT. # : A8111229-002-  
 INVOICE # : I8111229  
 DATE : 08-JUN-81  
 P.O. # : NONE  
 MALABAR SILVER-JAS

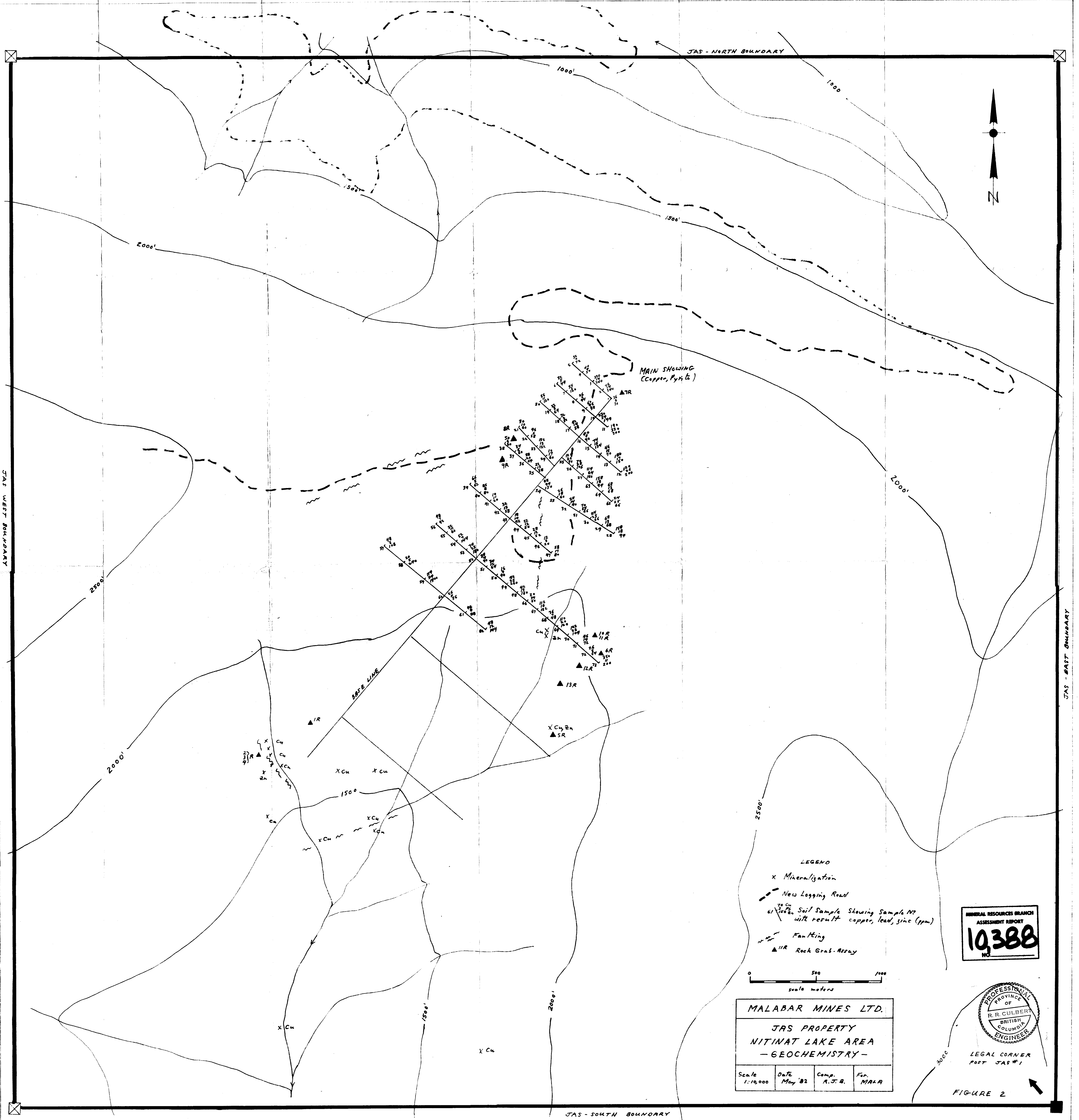
CC: RDN.BILQUIST

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au (AA) ppb	
JAS 41	201	10	11	20	0.1	<10	--
JAS 42	201	32	13	58	0.2	<10	--
JAS 43	201	18	14	42	0.3	<10	--
JAS 44	201	22	12	50	0.2	<10	--
JAS 45	201	28	12	52	0.1	<10	--
JAS 46	201	12	3	20	0.1	<10	--
JAS 47	201	58	17	80	0.1	<10	--
JAS 48	201	42	13	160	0.1	<10	--
JAS 49	201	42	25	260	0.2	<10	--
JAS 50	201	16	9	40	0.1	<10	--
JAS 51	201	34	12	64	0.1	<10	--
JAS 52	201	34	4	90	0.1	<10	--
JAS 53	201	74	25	180	0.2	<10	--
JAS 54	201	52	7	144	0.1	10	--
JAS 55	201	32	17	60	0.1	<10	--
JAS 56	201	48	7	42	0.1	<10	--
JAS 57	201	48	3	108	0.1	10	--
JAS 58	201	20	5	240	0.1	<10	--
JAS 59	201	114	37	1400	0.1	<10	--
JAS 60	201	26	11	56	0.2	<10	--
JAS 61	201	42	8	88	0.1	<10	--
JAS 62	201	48	12	144	0.3	<10	--
JAS 63	201	38	13	52	0.2	<10	--
JAS 64	201	24	24	34	0.1	<10	--
JAS 65	201	54	14	100	0.2	<10	--
JAS 66	201	20	34	50	0.1	<10	--
JAS 67	201	112	16	122	0.1	10	--
JAS 68	201	36	7	48	0.1	<10	--
JAS 69	201	110	20	120	1.04	<10	--
JAS 70	201	132	23	104	0.1	<10	--
JAS 71	201	46	14	72	0.1	<10	--
JAS 72	201	26	5	64	0.1	10	--
JAS 73	201	350	11	200	0.1	<10	--

Certified by *Hart Bickler*





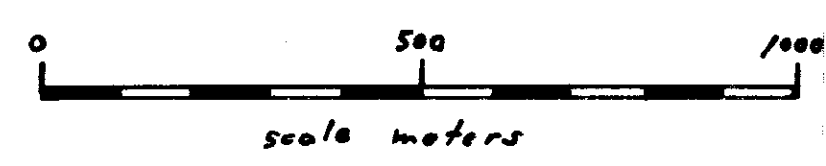


MAIN SHOWING  
(Copper, Pyrite)

SAFE LINE

LEGEND

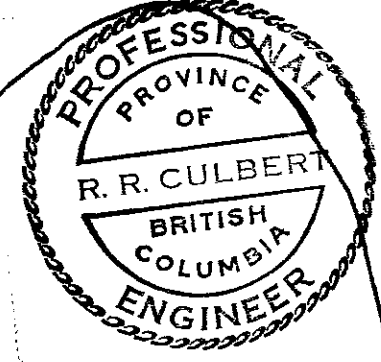
- x Mineralization
- - - New Logging Road
- 70 Cu  
61 100 Zn Soil Sample Showing Sample No  
with result copper, lead, zinc (ppm)
- ~ ~ ~ Fanning
- ▲ 11R Rock Grab Array



MALABAR MINES LTD.  
JAS PROPERTY  
NITINAT LAKE AREA  
- GEOCHEMISTRY -

Scale 1:10,000	Date May '82	Comp. A. J. B.	For. MALA
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MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**10388**  
NO



LEGAL CORNER  
POST JAS #1

FIGURE 2