## GEOCHEMICAL ASSESSMENT REPORT

	on the	
SUB-RECORDER RECEIVED	OSI, TAM-OSI, and OSI 3	LOG NO: SEP 09 1991 RD.
AUG 2 6 1991	Claim Groups	ACTION.
M.R.#\$ 	• •	FILE NO:
SUB-RECORDER		[
AUG 2 0 1991		ACTION: CONTROL
M.R.#		transcares
	Omineca Mining Division	.FILE NO:
SUB-RECORDER	NTS 94C/4E	
AUE 2 5 1991	56 05'N, 126 35'W	
M.R. # *	for	

MAJOR GENERAL RESOURCES LTD.

and

VARITECH RESOURCES LTD.

Ed McCrossan

August 14, 100 E O L O G I C A L BRANCH ASSESSMENT REPORT

21,621

### **SUMMARY**

The assessment program was successful in identifying several anomalous locations, drainages and outcrops within the OSI, TAM-OSI & OSI 3 claim groups. These geochemical anomalies are coincident with airborne magnetometer anomalies that are centred above the OSI 1 and 5 claims.

The properties are well located 200 km north of Fort St. James close to the Omineca Mining road and established logging camps and airstrips, as well as, lakes that can be utilized for float plane access.

The properties lie within the Hogem Batholith of the Omineca Belt which was initially explored for porphyry copper-gold deposits in the 1960's and 1970's, when the Major General - Varitech Tam deposit and the nearby Lorraine deposit of Kennecott Canada were discovered. In the last two years, the belt has seen a renewed level of exploration activity due to the success of Continental Gold in outlining a large, low grade, copper-gold porphyry deposit at Mt. Milligan, which dramatically improved the reward/risk ratio for porphyry exploration in the Omineca camp.

The Lorraine and Tam deposits occur within mafic rich, foliated syenitic migmatites of the Duckling Creek Syenite Complex in the Hogem Batholith. The syenite complex trends northwesterly from the deposits and field data suggests that it continues to the OSI and TAM-OSI claims.

Hence, the properties have significant precious metal and/or porphyry copper-goldsilver potential and a detailed program of geological, geochemical, and geophysical surveys is recommended for the claim groups.

## TABLE of CONTENTS

Summary	2
Introduction	5
Location and Access	5
Claim Data	6
Physiography	6
History	7
Regional Geology & Mineralization	7
Property Geology & Mineralization	8
Property Geochemistry	9
Conclusions and Recommendations	10
Certificate of Qualifications	11
Bibliography	12
Cost Statement	13

.

# LIST of FIGURES

Figure 1	Location Map	after page 5
Figure 2	Claim Map	after page 6
Figure 3	Regional Geology	after page 7 /
Figure 4	Sample Location Map	after page 9 🕢
Figure 5	Soil Anomaly Map	after page 9
Figure 6	Anomaly Compilation Map	after page 9
Figure 7	Sample Location and Assay Value Map <u>LIST of TABLES</u>	attached

Table 1Claim Informationpage 6

.

# LIST of APPENDICES

Appendix I	Rock Sample Descriptions	page 14	/
Appendix II	Analytical Results	page 15	

### **INTRODUCTION**

The OSI, TAM-OSI, and OSI 3 claims are located 24 km. northwest of the Kennecott Canada Inc. Lorraine deposit and 12 km northwest of the Major General Resources Ltd. and Varitech Resources Ltd. Tam deposit.

The Lorraine deposit contains published reserves of 10 million tons with 0.67% Cu and 0.006 oz/t Au.

The Tam deposit consists of 7.2 million tons grading 0.55% Cu and 0.12 oz/t Ag.

This assessment report is based upon samples obtained from the claim groups during the first week of June, 1991 by CJL Enterprises of Smithers, B.C.

A total of 177 samples were collected and included 147 soils, 11 heavy mineral concentrates, 10 silts, and 9 rocks.

## LOCATION AND ACCESS

The OSI, TAM-OSI, and OSI 3 claims are situated within the Omineca Mountains approximately 200 km northwest of Prince George, B.C. (Figure 1).

The properties can be accessed by the Omineca Mining Road which continues north from Ft. St. James to the Cheni, Shasta, and Kemess deposits in the Toodogone Mining Camp.

The road passes through the Osilinka River Valley and along the western shoreline of Uslika Lake. From there, a helicopter lift is necessary to reach the claims which are located approximately 25 km west of the lake.



### **PHYSIOGRAPHY**

Physiographically, the claims extend from relatively mature valley bottoms, with an approximate elevation of 1050 m, to sparsely vegetated alpine ridges exceeding 2,000 m in height.

Above the treeline (1500 m) coarse, blocky talus and ridgecrests are encountered.

## CLAIM DATA

n an Albana

Claim outlines are included in Figure 2 and claim details are listed below.

## Table 1

Claim Record No. of		Staking Date	*Expiry Date		
		0/////			
OSI 3	12028	20	June 14/90	June 14/92	
OSI 4	12029	20	June 14/90	June 14/92	
OSI 5	12030	20	June 14/90	June 14/92	
OSI 6	12353	20	Aug. 01/90	Aug. 01/92	
OSI 7	12354	12	Aug. 01/90	Aug. 01/92	
OSI 10	12357	6	Aug. 01/90	Aug. 01/92	
OSI 1	12026	20	June 14/90	June 14/92	
OSI 2	12027	20	June 14/90	June 14/92	
OSI 8	12355	12	July 28/90	July 28/92	
OSI 9	12356	18	July 28/90	July 28/92	
TAM 90-12	12042	18	June 14/90	June 14/92	
OSI 11	300601	12	May 30/91	May 30/93	

\* expiry dates include this assessment application.



## **HISTORY**

During the late 1960's and 1970's the Hogem Batholith was explored for copper and molybdenum mineralization by Union Miniere Explorations and Mining Corp. Ltd. (UMEX) and their joint venture parnter Wenner Gren.

The work consisted of reconnaissance soil and silt sampling and geological mapping. Some detailed soil grids, silt surveys, and geological maps were compiled in anomalous areas.

In 1972, airborne magnetometer data was collected over the Hogem Batholith by the G.S.C.

During 1990, Major General Resources Ltd. and Varitech Resources Ltd. formed the Hogem Joint Venture to acquire properties encompassing the most prospective areas indicated by the UMEX data.

## **REGIONAL GEOLOGY & MINERALIZATION**

The claim groups are located in the Quesnel Trough which consists of Mesozoic volcanics and related intrusions and hosts several producing copper-gold alkaline porphyry deposits (Figure 3).

In the study area, the Quesnel Trough is bordered by highly deformed Proterozoic and Paleozoic strata east of the Manson fault zone and by deformed upper Paleozoic strata west of the Pinchi fault.

More specifically, the claims lie within the Hogem Batholith which is a composite plutonic complex of Upper Triassic to Lower Cretaceous age. Intrusive compositions range from the oldest diorites (which include minor gabbro, pyroxenite and hornblendite phases) to the youngest leucocratic syenites and quartz syenites. The more acidic members occur axially and the basic lithologies are located peripherally within the batholithic complex. For a more detailed discussion of the Hogem Batholith see Garnett (1978).



The Takla Group, consisting of andesitic to basaltic volcanics of late Triassic age, was intruded by the batholith and occurs as slivers within the Pinchi fault zone and in contact with the intrusion along its eastern margin.

Copper mineralization within the Hogem Batholith consisting of chalcopyrite, bornite, chalcocite, covellite and malachite is associated with the syenitic phases and their related potash feldspar alteration zones. Gold and silver are commonly present with the sulphides which occur as disseminations and fracture fillings in hybrid rocks, that are also described as migmatites and/or foliates, within the Duckling Creek and Chuchi syenites.

The Duckling Creek Syenite Complex contains the Kennecott Lorraine and Major General - Varitech Tam deposits.

The Lorraine deposit consists of 10 million tons grading 0.67% Cu and 0.006 oz/t Au that occurs predominantly as disseminated chalcopyrite and bornite within the mafic rich portions of foliated syenitic migmatites that are spatially associated with lenses of biotite pyroxenite and faults. Potash feldspathization and sericitization is pervasive and secondary biotite, chlorite, and epidote is widespread. Magnetite is a common accessory.

The Tam deposit contains reserves of 7.2 million tons with 0.55% Cu and 0.12 oz/t Ag that occurs as disseminations and fracture fillings of chalcopyrite, pyrite, and magnetite within foliated syenites. Potash feldspathization, sericitization, and secondary biotite are all associated with the mineralization.

### **PROPERTY GEOLOGY & MINERALIZATION**

Detailed geological mapping of the OSI, TAM-OSI, and OSI 3 claim groups has not been done to date, however, government maps indicate that most of the area is underlain by undifferentiated granitic rocks of the Hogem Batholith. Umex reconnaissance geology maps show outcrops of basic rocks on the OSI 6 claim and the government airborne magnetometer maps have anomalous highs over the OSI 1 and OSI 5 claims which may be related to mafic rich syenites or pendants of ultramafic material. A copper showing is also associated with the mag high on OSI 5.

Hence, the northwesterly trending Duckling Creek Syenite Complex, which hosts the Lorraine and Tam deposits, may extend onto the claim groups.

#### PROPERTY GEOCHEMISTRY

A total of 147 soil, 11 heavy mineral concentrate, 10 silt, and 9 rock samples were collected from the OSI, TAM-OSI, and OSI 3 claims by CJL Enterprises during the first week of June, 1991 (Figure 4). They were analysed by Min-En Laboratories for Au and 10 element ICP using standard rapid geochemical methods. A few samples were also assayed for platinum and palladium. The assay results are listed in Appendix I.

Soil samples were taken at 100 m intervals along the 1200 m contour from the 'B' horizon where ever possible. Some snow cover impeded sampling. Soil anomalies (Au > 10 ppb, Ag > 1.0 ppm, Cu > 100 ppm) are plotted on Figure 5.

Heavy mineral and silt samples were taken from all of the main drainages on the properties.

Outcrops and secondary drainages encountered by the contour soil lines were also sampled.

Assay results for the assessment program are excellent and all sampling methods revealed anomalous locations. The anomalies are widespread, but spatially associated with the airborne magnetometer highs centered over the OSI 1 and OSI 5 claims (Figure 6).

Anomalous heavy mineral concentrates (non-magnetic, -80 mesh fraction) ranged between 0.16 and 26.10 g/t gold. Platinum assays for these samples were as high as 128 ppb.



# <u>l e g e n d</u>

- O Heavy mineral concentrate sample (HML0891)
- Soil sample (TA 10+00E)
- × Silt " (TA60+60 X)
- ▲ Rock " (OSI8+85R)



	and the second
MAJOR GENERA	L RESOURCES LTD.
VARITECH RE	SOURCES LTD.
OSI, TAM-OSI &	BOSI-3 CLAIMS
SAMPLE LO	OCATION MAP
N.T.S. 94C-4E	OMINECA M.D., B.C.
	2 3 KM.
Scale 1: 50,000	Date : August 1991
Drawn by E.M.	Figure Nº.: 4



## LEGEND

- O Heavy mineral concentrate sample
- Soil sample
- × Silt "
- A Rock "



MAJOR VARI	GENERA	L RESOURC	ES LTD. LTD.		
OSI, TAM-OSI & OSI-3 CLAIMS					
SOII	_ ANO	MALY N	IAP		
N.T.S. 94	C-4E	OMINECA I	M.D. , B. C.		
0 	l 	2	3 KM.		
Scale (: )	50,000	Date Aug	ist 1991		
Drawn by	E.M.	Figure Nº.	: 5		



Coincident rock sample anomalies, in the creek draining the OSI 6 claim and containing 26.10 g/t gold, assayed up to 0.14% Cu. Other rock sample anomalies from OSI 7 assayed 400 ppm Cu and 80 ppm Mo.

Soil and silt anomalies of gold, silver, and copper are scattered throughout the claim groups.

### CONCLUSIONS AND RECOMMENDATIONS

The assessment program was successful in identifying several anomalous locations, drainages and outcrops within the OSI, TAM-OSI & OSI 3 claim groups. These geochemical anomalies are coincident with airborne magnetometer anomalies of up to 2,000 gammas that are centred above the OSI 1 and 5 claims.

The properties are well located 200 km north of Fort St. James close to the Omineca Mining road and established logging camps and airstrips, as well as, lakes that can be utilized for float plane access.

The properties lie within the Hogem Batholith of the Omenica Belt which was initially explored for porphyry copper-gold deposits in the 1960's and 1970's, when the Major General - Varitech Tam deposit and the nearby Lorraine deposit of Kennecott Canada were discovered. In the last two years, the belt has seen a renewed level of exploration activity due to the success of Continental Gold in outlining a large, low grade, copper-gold porphyry deposit at Mt. Milligan, which dramatically improved the reward/risk ratio for porphyry exploration in the Omineca camp.

The Lorraine and Tam deposits occur within mafic rich, foliated syenitic migmatites of the Duckling Creek Syenite Complex in the Hogem Batholith. The syenite complex trends northwesterly from the deposits and field data suggests that it continues to the OSI and TAM-OSI claims.

Hence, the properties have significant precious metal and/or porphyry copper-goldsilver potential and a detailed program of geological, geochemical, and geophysical surveys is recommended for the claim groups.

## STATEMENT OF QUALIFICATIONS

I, Ed McCrossan, of 3328 W. 2nd Avenue, Vancouver, British Columbia hereby certify:

- 1. I am a graduate of the University of British Columbia (1984) and hold a B.Sc. degree in geology.
- 2. I am presently employed as a consulting geologist with the ARC Resource Group of 401, 325 Howe Street, Vancouver, British Columbia.
- 3. I have been employed in my profession by various mining companies since graduation and have worked on projects in Canada, Hungary, Thailand, China, Australia, and Chile.
- 4. I am a member of the Canadian Institute of Mining and Metallurgy, and the Geological Association of Canada.
- 5. The recent data described in this report was collected by CJL Enterprises Ltd., of Smithers, B.C., during the first week of June, 1991.
- 6. I do not own or expect to receive any interest (direct, indirect, or contingent) in the properties described herein nor in the securities of Varitech Resources Ltd. or Major General Resources Ltd., in respect of services rendered in the preparation of this report.
- 7. I consent to and authorize the use of the attached report and my name in Company's Prospectus, statement of Material Facts or other public documents.



Ed McCrossan Geologist, F.G.A.C.

DATED at Vancouver, British Columbia, this 26 day of august, 1991.

11

### **BIBLIOGRAPHY**

- Barr, D., Fox, P., Northcote, K., and Preto, V. (1976): The Alkaline Suite Porphyry Deposits, CIM Special Vol. 15, pp 359-367.
- Burgoyne, A. and Pauwels, A. (1974): Summary Report 1974 Exploration Program, UMEX Ltd.
- Chapman, J. (1990): Summary Report on the TAM Project, Orequest Consultants Ltd.
- Chow, F., Kahlert, B., H. (1990): TAM-OSI Property; Compilation of Geological, Geochemical, Geophysical and other data on the TAM OSI Group of Mineral Claims.
  - (1990): OSI Property; Compilation of Geological, Geochemical, Geophysical and other data on the OSI Group of Mineral Claims.
- Dyson, C. (1974): Report on a Prelimanary Feasibility and Financial Analyses of the Boundary Deposit, TAM Property, B.C., UMEX.
- Garnett, J. (1972): Preliminary Geological Map of Part of the Hogem Batholith, Duckling Creek Area, B.C. Department of Mines and Petroleum Resources, Map #9.

(1978): Geology and Mineral Occurrences of the Southern Hogem Batholith, B.C. Department of Mines and Petroleum Resources, Bull 70.

- Pauwels, A. and Burgoyne, A. (1975): Assessment Report on Drilling and Mapping, UMEX.
- Peto, P. (1991): Geological, Geochemical, and Geophysical Assessment Report on the TAM Claim Group.

## COST STATEMENT

Professional Fees:	
Ed McCrossan 2.5 days @ \$350/day	\$ 875.00
Field Personnel Fees:	
L.B. Warren 6.5 days @ \$250/day	1.625.00
D. Ethier 6.5 days @ \$210/day	1,365.00
R. Reding 6.5 days @ \$210/day	1,365.00
R. B. Anderson 6.5 days @ \$210/day	1,365.00
Field Equipment & Rental:	663.00
Truck Rentals 12 days @ \$70/day	840.00
Room and Board 24 man days @ \$50/day	1,200.00
Transportation:	
Scheduled Flight	578.00
Helicopter 12.2 hrs. @ \$650/hr.	7,930.00
Travel Expenses:	84.00
Analyses:	
11 heavy mineral concentrates @ \$48/sample	528.00
147 soil @ \$14.25/sample	2,095.00
10 silt @ \$14.25/ sample	143.00
9 rock @ \$16.75/sample	151.00
Drafting:	425.00
Reproductions:	40.00
GST	1,391.00
Management, Office Supplies & Miscellaneous @ 5%	1,133.00
TOTAL	<u>\$23,796.00</u>

.

# <u>APPENDIX I</u>

# Rock Sample Descriptions

OSI 2+72 R	Granitic outcrop; grab
OSI 3+00 RA	Granite; grab
OSI 3+00 RB	Granitic rock; grab
OSI 3+40 RA	Granitic rock; grab
OSI 3+40 RB	Granitic rock; grab
OSI 8+85R	Granitic rock; grab
OSI MAG 1	Chip sample across 2 m; altered pyroxenite, strongly magnetic.
OSI MAG 2	Altered pyroxenite, magnetic; grab
OSI MAG 3	Altered pyroxenite, magnetic; grab

.

,

APPENDIX II

.

,

ASSAY

RESULTS

ATTN: ED MCCROSSAN/B.K.	AHLERT		(604 <b>)980</b>	-5814 OR (604)988-4524		* NON-MAG HM *	(ACT:F31) PAGE 1 OF 2
SAMPLE NUMBER	AG AL PPM PPM	AS B BA BE BI PPM PPM PPM PPM	CA CD CO CU F PPM PPM PPM PPM PP	E K LI MG MN MC M PPM PPM PPM PPM	O NA NI P PB SB SI 1 PPM PPM PPM PPM PPM PP	R TH U V ZN M PPM PPM PPM PPM	GA SN W CR AU-FIRE PPM PPM PPM PPM PPB
HML 01/91 -80MESH HML 02/91 -80MESH HML 03/91 -80MESH HML 04/91 -80MESH HML 05/91 -80MESH	1.9 14870 1.1 6070 2.0 10300 1.6 9890 2.2 9500	1 11 49 .1 12 1 6 37 .1 5 1 5 92 .1 8 1 3 69 .1 8 1 3 42 .1 16	23220 .1 10 35 2339 26480 .1 8 33 1455 27950 .1 15 53 2595 26400 .1 14 49 2530 27100 .1 15 28 3569	0 650 7 5850 454 1 0 620 3 5290 270 1 0 1610 2 8570 437 1 0 1310 2 7100 469 1 0 680 2 3400 687 1	230 1 5600 43 1 14 450 1 11990 24 1 13 1070 4 11320 44 1 13 930 1 9150 43 1 11 500 1 8660 43 1 9	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
HML 06/91 -80MESH HML 07/91 -80MESH HML 08/91 -80MESH HML 09/91 -80MESH HML 10/91 -80MESH	1.2 4520 2.3 7770 2.4 6920 2.4 4460 1.2 12480	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	29850 .1 9 19 1266 20240 .1 14 54 2420 28170 .1 12 24 2833 34410 .1 11 <u>.107</u> 1372 24590 .1 15 <u>63</u> 2660	0         540         1         5870         230         1           10         810         4         5120         433         1           0         380         3         4140         584         1           0         680         1         7820         268         1           0         1120         2         5730         425         2	430         3         16100         25         2         144           490         1         5300         31         1         44           330         1         13940         35         1         6           530         1         17770         22         1         16           2         240         1         8030         29         1         11	8 1 1 48.1 19 8 4 1 82.6 28 7 17 1 73.0 27 6 1 1 57.8 20 5 1 1 95.3 34	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
HML 11/91 -80MESH	1.7 4050	5 4 34 .1 4 5	56190 .1 9 24 1150	0 380 1 8750 242 1	440 4 26150 18 2 22	3 1 1 49.4 15	4 1 1 10 7400
						T T	050
							TA
							hren
							a

#### COMP: ARC RESOURCES PR0J:

#### MIN-EN LABS - ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 1S-0040-HJ1

DATE: 91/06/28

. \*



SPECIALISTS IN MINERAL ENVIRONMENTS CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS VANCOUVER OFFICE:

705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2 TELEPHONE (604) 980-5814 OR (604) 988-4524 FAX (604) 980-9621

SMITHERS LAB.:

3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2N0 TELEPHONE (604) 847-3004 FAX (604) 847-3005

#### <u>Geochemical Analysis Certificate</u>

Date: JUN-28-91

1S-0040-PG1

Company: ARC RESOURCES Project: Atta: ED MCCROSSAN/B.KAHLERT

Copy 1. ARC RESOURCES, VANCOUVER, B.C. 2. B.KAHLERT, VANCOUVER, B.C.

He hereby certify the following Geochemical Analysis of 5 HEAVY MINERAL samples submitted JUN-18-91 by ED MCCROSSAN.

HML         07-91         -60MESH         120         13         26.14           HML         08-91         -60MESH         128         15         7.96			PPB	PPB	imber	Numb
HML     09-91     -60MESH     61     13     80.53       HML     10-91     -60MESH     604     12     21.54       HML     11-91     -60MESH     48     13     83.64	L 07-91 -60MESH L 08-91 -60MESH L 09-91 -60MESH L 10-91 -60MESH L 11-91 -60MESH	26.14 7.96 80.53 21.54 83.64	13 15 13 12 13	120 128 61 604 48	IL 07-91 -60MESH IL 08-91 -60MESH IL 09-91 -60MESH IL 10-91 -60MESH IL 11-91 -60MESH	HML HML HML HML HML

Certified by\_ MIN-EN LABORATORIES

o

COMP: ARC RESOURCES LTD. • PROJ:

ATTN: ED MC CROSSAN

#### MIN-EN LABS - ICP REPORT

MIN-EN LABS - ICP REPORT 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0041-RJ1 DATE: 91/06/13 \* ROCK \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BI PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	SN PPM	W PPM	AU PPB
OSI 2+72R OSI 3+00RA OSI 3+00RB OSI 3+40RA OSI 3+40RB	1.9 .5 .6 .7 .4	1 19 1 1 10	5 1 2 3 1	43 12 18 94 26	1 80 1 1 2	3 20 6 1 3	1 1 1 1 1	55 10 43 85 8	1 1 1 1 1	2 6 2 2 2	2 1 1 3 2
OSI 8+85R OSI MAG 1 OSI MAG 2 OSI MAG 3	1.5 .2 .5 1.1	1 1 1 1	3 3 3 4	400 801 1359 91	1 2 1 1	1 1 1 1	1 1 1 1	75 36 38 62	1 1 1 1	2 2 1 2	2 1 1 1
										÷	

•

;

SILT. DSI & TAM-OSI

COMP: ARC RESOURCES LTD. PROJ: TAM OSI ATTN: ED MC CROSSAN

٦

÷,

.

•

#### MIN-EN LABS - ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0039-SJ1 DATE: 91/06/13 \* SILT \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BI PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	SN PPM	W PPM	AU PPB
OSI 3+40X SILT OSI 4+50X SILT OSI 13+30X SILT OSI 15+30X SILT OSI 29+50X SILT	.7 .7 .8 .6 .1	1 1 1 1 1	2 2 3 3 1	717 109 99 122 128	1 1 1 1 1	6 4 3 1 1	1 1 1 1 1	109 56 89 57 23	1 1 1 1 1	1 1 1 2	5 8 2 2 2 2
OSI 53+90X SILT OS2 47+90X SILT OS3 0+00SX SILT OS3 2+00SX SILT OS3 6+40X SILT	.5 .1 .1 .1 .2	1 1 1 1 1	1 1 1 1	131 23 87 61 63	1 1 1 1 1	12 1 2 17 27	1 1 1 1 1	90 12 60 69 45	1 1 1 1 1	1 4 3 1 1	2 1 6 4 1
OS3 7+60X SILT OS3 9+05X SILT OS3 13+45X SILT	.1 .3 .1	1 1 1	1 1 1	76 67 131	1 2 1	31 18 55	1 1 1	48 62 60	1 1 1	1 1 1	1 6 2

SOLL

TAM-OSI OSI Q)

COMP: ARC RESOURCES LTD. PROJ: ATTN: ED MC CROSSAN

#### MIN-EN LABS - ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0042-SJ1+2 DATE: 91/06/13 \* SOIL \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BI PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	SN PPM	W PPM	AU PPB
OS1 0+00S	.1	1	1	69	5	8	1	43	1	2	1
0S1 1+00S	.7	1	4	52	3	2	1	58	2	2	2
-0.51 2+005	.6	1	5	323	10	8	1	37 20	1	2	1
OS1 4+00S	.3	1	1	30	1	4	1	30	1	1	1
0S1 5+00S	.1	1	1	22	1	1	1	24	1	1	3
OS1 6+00S -40	.1	1	1	13	1	3	1	25	1	1	3
051 7+005		1	5	52	1	1	1	62 77	1	2	1
0\$1 9+50\$	.1	1	1	22	3	4	1	65	1	1	5
0S2 10+00S	.2	1	2	41	3	3	1	38	1	1	1
os1 11+00s -40	.1	1	1	36	1	4	1	34	1	1	2
0S1 12+00S -40	.1	1	1	87	1	7	1	26	1	1	1
OS1 14+00S	.3	1	23	34	1	1	1	51	1	2	23
0S1 15+00S	.5	1	3	76	1	4	1	62	2	2	1
0S1 16+00S	.4	1	3	18	1	3	1	36	1	2	1
0S1 17+00S -40	.5	1	2	17	1	5	1	31	1	1	2
0\$1 18+00\$	./ z	1	5 7	572	1	1 3	1	81 69	2	2	4
0\$1 20+005 -40	1	1		75	· <u>·</u>	<u>ر</u> ع	1	68	'	2	
OS1 21+005 -40	.1	1	1	40	1	8	1	51	1	1	1
0S1 22+00S -40	.1	1	1	77	1	10	1	41	1	1	2
0S1 23+00S -40	.1	1	1	28	6	4	1	42	1	1	2
051 25+005	.4 5	I	2		1			10		<u>_</u>	1
051 26+005	.7	1	1	13	1	3	3	9	1	1	3
OS1 27+00S	.4	1	3	26	1	4	1	48	1	3	2
OS1 28+00S	.5	1	3	21	1	6	1	36	1	2	1
051 29+005	.1	1	2	24	1	1	1	28	1		
051 30+005 -40	.1	1	2	15 85	6	12	1	10 58	1	5 1	2 1
0S1 32+00S	.2	1	2	63	2	4	1	46	1	2	1
0s1 33+00s -40	1	1	2	15	7	2	1	32	1	2	1
051 34+005	.5	1	2	63	1	6	1		1	2	2
051 35+005 -40	.1	1	1 z	12	1	4	1	31 52	1	2	1
0s1 37+00s	.1	1	3	12	4	1	1	39	1	2	1
0S1 38+00S	.3	1	2	15	2	1	1	25	1	1	1
0S1 39+00S	.1	1	1	70	15	8	1	19	1	1	3
	.1	1	2	106	13	3	1	47	1	2	1
	./	1	1	118	15	14	1	40	1	2	1
-0\$1 43+00\$ -40	.6	1	2	118	6	9	1	39	1	1	4
0S1 44+00S -40	_4	1	3	25	4	3	1	45	1	2	1
0S1 45+00S -40	.6	1	3	18	4	6	1	36	1	2	4
-+ 0\$1 46+00\$	1.0	1	3	25	1	4	1	50	1	2	1
051 47+005	.6	1	2	19 17	2	1	1	31 27	1	1	2
0\$1 49+00s	.5	1	2	67	8	7	1	46	1	2	1
0S1 50+00S	.1	1	2	55	2	1	1	31	1	2	1
0S1 51+00S	.3	1	2	40	1	2	1	46	1	1	2
051 52+00S	.5	1	2	33	1	5	1	51 2	1	} 1	1
0\$1 54+00s	.3	1	2	47	1	2	1	34	1	2	1
0S2 27+00S	.2	1	3	89	1	24	1	59	1	3	1
0\$2 28+00\$	.5	1	3	15	1	38	1	30	1	2	1
052 29+005	.6	1	2	97 77	1	34	1	54	1	2	1
0\$2 31+005	.1	1	з 1	33 34	1	45	1	49	1	2	2
L	L	· · ·			·		•				

COMP: ARC RESOURCES LTD. PROJ:

ATTN: ED MC CROSSAN

•

#### MIN-EN LABS - ICP REPORT

#### 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 (604)980-5814 OR (604)988-4524

FILE NO: 1S-0042-SJ3+4 DATE: 91/06/13 \* SOIL \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BI PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	SN PPM	W PPM	AU PPB
0s2 32+00s -40	.8	1	1	11	1	28	1	33	1	1	2
0\$2 33+00\$	.3	1	1	26	1	41	1	41	1	1	1
0S2 34+00S	.4	1	1	28	1	25	1	27	1	1	5
0S2 35+00S	.3	1	1	48	1	37	1	33	1	1	3
0S2 36+00S -40	.2	1	1	16	1	11	1	26	1	1	2
0S2 37+00S	1	1	1	10	1	1	1	17	1	1	2
0S2 38+00S -40	.1	1	1	6	1	1	1	14	1	1	1
0S2 39+00S	.2	1	1	25	1	5	1	18	1	1	6
0S2 40+00S	.2	1	1	14	1	4	1	20	1	1	2
0S2 41+00S	.1	1	1	11	1	5	1	14	1	1	3
0S2 42+00S	.1	1	2	11	1	2	1	27	1	1	1
052 43+005 -40		1	1	18	1	6	1	27	1	1	3
052 44+005	.2	1	1	15	1	5	1	21	1	1	2
0S2 45+00S	.1	1	1	28	1	4 3	1	24 17	1	1	3
0\$2 47+00\$	1	1	1	34	1	13	1	4.6	1	2	2
0\$2 48+00\$	.1	1	, 1	17	1	8	1	40	1	4	7
10S2 49+00S	1	1	1	24	1	1	1	22	1	ż	2
0S2 50+00S	.1	1	1	32	1	6	1	28	1	4	4
0S2 51+00S -40	1	1	3	23	1	5	1	35	1	5	6
0S2 52+00S	.1	1	3	51	1	1	1	37	1	2	1
0S2 53+00S	.1	1	2	16	1	4	1	27	1	2	2
0S2 54+00S	.1	1	1	56	1	3	1	26	1	2	2
0\$2 55+00\$	.4	1	2	20	1	4	1	22	1	1	1
0S2 56+00S	.1		1	10	1	3	1	16	1	1	2
052 57+005	.1	1	1	10	1	4	1	11	1	1	5
052 58+005	.1	1	1	15	1	4	1	16	1	1	6
052 59+005		1	1	14	1	4	1	18	1	1	10
	.1	1	1	191	1	10	1	14	1	1	2
						10					
US2 62+005	.2	1	1	(	1	14	1	25	1	1	1
052 05+005 -40		1	1	21	1	0	1	33 77	1	1	2
052 84+005	.2	1	1	21 57	2	4	1	55 51	1	1	ر /
052 65+005	1	1	1	14	1	6	1	31	1	1	2
052 67+005	1	····· 1	1	25	' 1		······································	70	1	1	1
052 67+005		1	1	22	1	4	1	20	1	1	z
	1.3	1	2	109	1	17	1	03	1	1	2
0\$2 70+005 -40	4	i	1	6	i		i	18	1	1	L L
0\$3 0+00\$	.1	1	1	47	i	9	1	35	1	ź	2
0\$3 1+00\$	1	1	٦	30	1	6	1	33	1	2	1
0\$3 2+00\$ -40	1	1	2	54	2	11	1	41	1	2	3
- 0S3 3+00S -40	.6	1	1	112	5	11	i	44	1	1	2
-+ os3 4+00s	.1	1	2	101	4	15	1	41	1	2	1
	.2	1	3	39	2	25	1	36	1	2	10 -
0S3 6+00S	.4	1	1	17	1	6	1	29	1	1	5
0S3 7+00S	.1	1	3	34	1	11	1	30	1	2	2
OS3 8+00S	.5	1	4	9	1	4	1	17	1	1	4
0\$3 9+00\$	.1	1	3	16	1	6	1	19	1	2	2
0S3 10+00S	.1	1	2	25	1	3	1	32	1	2	3
0S3 11+00S	.5	1	3	86	3	61	1	30	1	2	4
053 12+005	.2	1	2	62	4	22	1	33	1	2	2
	.5	1	3	50	10	24	1	30	1	2	10 -
	.4	1	1	152	26	97	1	25	1	1	2
	1.2		<u>_</u>	220	<u> </u>						د
TA 10+00E -40	.1	1	1	21	4	11	1	26	1	1	
	.2	1	1 7	20 27	1	1	1	50	1	ן כ	15
TA 13+00E -40	.0	י 1	2	<u>د</u> ے ۸	1	1	1	10	1	ے 1	2
- TA 14+00F	1	1	2	12	1	2	1	22	1	1	36
	L - '	'	<u>د</u>	16	1	<u>د</u>	1	<u> </u>		'	

COMP: ARC RESOURCES LTD. PROJ:

\_

### ATTN: ED MC CROSSAN

#### MIN-EN LABS - ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 (604)980-5814 OR (604)988-4524 FILE NO: 1S-0042-SJ5+6 DATE: 91/06/13 \* SOIL \* (ACT:F31)

	SAMPLE NUMBER	AG PPM	AS PPM	BI PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	SN PPM	W PPM	AU PPB
	TA 15+00E TA 16+00E TA 17+00E -40 TA 18+00E	.7 .6 .5 .9	1 1 1 1	1 1 2 3	35 9 15 134	1 1 1 1	15 5 7 10	1 1 1 1	40 17 29 59	1 1 1 1	1 1 1 2	1 2 1 3
+	TA         19+00E           TA         20+00E         -40           TA         21+00E         -40           TA         22+00E         -40           TA         22+00E         -40	1.1 .7 .3 .4	1 1 1 1 1	3 3 1 1	51 26 78 34	1 1 5 1	13 4 5 4	1 1 1 1	40 28 47 14	1 1 1 1	2 1 2 1	2 4 1 5
	TA 23+00E TA 24+00E	.3 .1	1	1	11 8 17	1	3	1	19 12	1	1	2 2
	TA 25+00E TA 26+00E TA 27+00E TA 28+00E TA 29+00E	.4 .4 .1 .1 .2	1 1 1 1	2 3 1 2 2	13 20 21 28 17	1 1 1 1	1 1 2 3	1 1 1 1	19 28 17 34 15	1 1 1 1	1 1 1 1	10 4 8 4
	TA 30+00E TA 31+00E TA 32+00E TA 33+00E TA 33+00E	.4 .4 .3 .5	1 1 1 1 1	2 1 1 2 3	19 58 21 12 105	1 2 1 1	3 8 2 5 7	1 1 1 1	23 26 17 13 44	1 1 1 1 1	1 1 1 1 2	5 2 1 2 8
	TA 35+00E TA 36+00E TA 37+00E TA 38+00E TA 39+00E -40	.5 .7 .1 .8 .5	1 1 1 1 1	2 3 2 3 2 3 2	19 71 21 14 13	1 1 4 1 1	3 4 1 1 2	1 1 1 1 1 1	22 19 17 15 16	1 1 1 1 1 1 1	1 2 1 1 2	2 4 2 5 2
	TA 40+00E TA 41+00E -40 TA 42+00E TA 43+00E -40 TA 44+00E	.5 .5 .4 .2 .1	1 1 1 1 1	3 2 1 1 2	12 5 17 40 38	1 1 1 1 1	3 1 2 5 5	1 1 1 1 1	15 11 18 29 30	1 1 1 1 1	1 1 1 2 1	1 6 2 1 7
	TA 45+00E -40 TA 46+00E TA 47+00E TA 48+00E -40 TA 49+00E -40	.3 .2 .5 .7 .2	1 1 1 1 1	1 1 2 2 1	10 23 27 10 6	1 1 1 1 1	2 4 4 1 2	1 1 1 1 1	16 21 24 15 11	1 1 1 1 1	1 1 2 1 1	2 1 2 1 3
	TA 50+00E TA 51+00E TA 52+00E TA 53+00E TA 54+00E	.7 .1 .1 .4 .6	1 1 1 1 1	2 3 2 3 3	23 16 3 22 18	1 1 1 1 1	2 1 1 3	1 1 1 1 1	25 16 7 22 19	1 1 1 1 1	1 2 1 2 2	1 1 2 3 1
	TA 55+00E TA 56+00E -40 TA 57+00E TA 58+00E TA 59+00E	.4 .7 .5 .4 .5	1 1 1 1 1	3 2 3 3 2	18 141 84 48 74	1 6 3 1 3	1 6 5 1 5	1 1 1 1	24 41 38 36 30	1 1 1 1 1	2 2 2 2 2	1 2 2 4 1
	TA 60+00E -TA 60+00E TA 61+00E TA 62+00E TA 63+00E	.4 .3 .1 .3 1.0	1 1 1 1	2 2 1 2 3	32 157 37 101 8	2 7 4 12 1	1 6 1 5 2	1 1 1 1	23 45 44 33 11	1 1 1 1	1 2 1 2 1	2 3 7 1 3
	TA 64+00E TA 65+00E -40 TA 66+00E TA 67+00E TA 68+00E	1.0 1.0 .1 .5 .8	1 1 1 1	3 2 3 5	17 21 21 16 21	2 1 1 1	2 10 3 1 2	1 1 1 1	22 42 22 22 20	1 1 1 2	1 2 2 3	4 1 2 4 3

