

LOG NO: <i>May 21/91</i> RD.
ACTION:
FILE NO:

LOG NO: <i>911105</i> RD.
ACTION: <i>Date report returned from amendments</i>
FILE NO:

GEOLOGICAL AND GEOCHEMICAL
ASSESSMENT REPORT
ARC RESOURCE GROUP LTD.
LAVA PROJECT

LIARD MINING DIVISION
NTS 104 B/10
NW BRITISH COLUMBIA

Latitude: 56°44'N
Longitude: 130°39'W

GEOLOGICAL BRANCH
ASSESSMENT REPORT

SUB-RECORDER
RECEIVED
MAY 14 1991
M.R. # _____ \$ _____
VANCOUVER, B.C.

21,319

Brett R. LaPeare, B.Sc.

November 30, 1990

OREQUEST



SUMMARY

A limited reconnaissance mapping, prospecting and sampling program was carried out on the Lava 1 and 2 mineral claims on October 2, 1990. The property, under option to Arc Resource Group Ltd., is situated within the Liard Mining Division in northwestern British Columbia. The claims lie immediately south of the confluence of Forrest Kerr Creek with the Iskut River, 100 km northwest of Stewart, B.C.

The Lava claims are underlain by Upper Triassic Stuhini Group basaltic flows in the northwest half and Recent flows in the southeast half. The latter mask the contact between the Stuhini Group rocks and Upper Triassic to Middle Jurassic Hazelton Group formations mapped to the south. Much of the exploration activity in the area has focused on the Hazelton rocks in view of discoveries such as the nearby Snip, Johnny Mountain and Eskay Creek deposits.

A total of 31 soil and 9 rock grab samples were collected. Four soil samples produced gold values above the 5 ppb detection limit, ranging from 10 to 90 ppb, all of which were collected from areas underlain by the Recent volcanics. The ICP results for soils show no significant values. The rock samples failed to produce any detectable gold values or significant values in the ICP data. These were collected from Stuhini Group rocks, as well as from outcrops thought to be Recent lavas.

Four old drillhole collars were noted, located in the Recent flows on the east side of the river. These holes were drilled by B.C. Hydro in the 1980's to determine structural features as part of a damsite study and are unlikely to provide useful exploration data.

This cursory examination of the Lava claims has not revealed any exploration targets however much of the area northwest of the Iskut River has not been prospected. The geology traversed to date has provided little indication of economic potential but if any further work is contemplated it should be to complete prospecting coverage of the area northwest of the Iskut River.

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B. LaPeare, B.Sc.	
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INTRODUCTION

This report, prepared by OreQuest Consultants Ltd. on behalf of Arc Resource Group Ltd., presents the results of reconnaissance mapping, prospecting and sampling carried out on October 2, 1990 on the Lava 1 and 2 claims.

PROPERTY DESCRIPTION

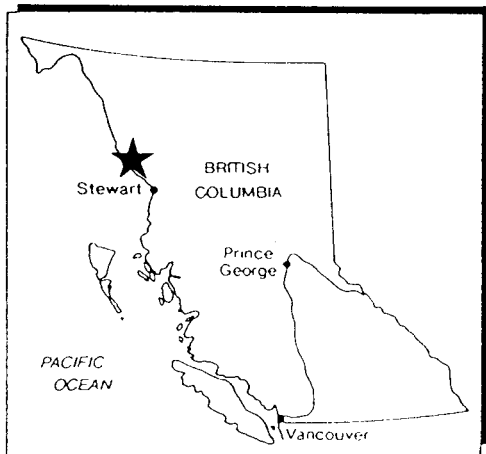
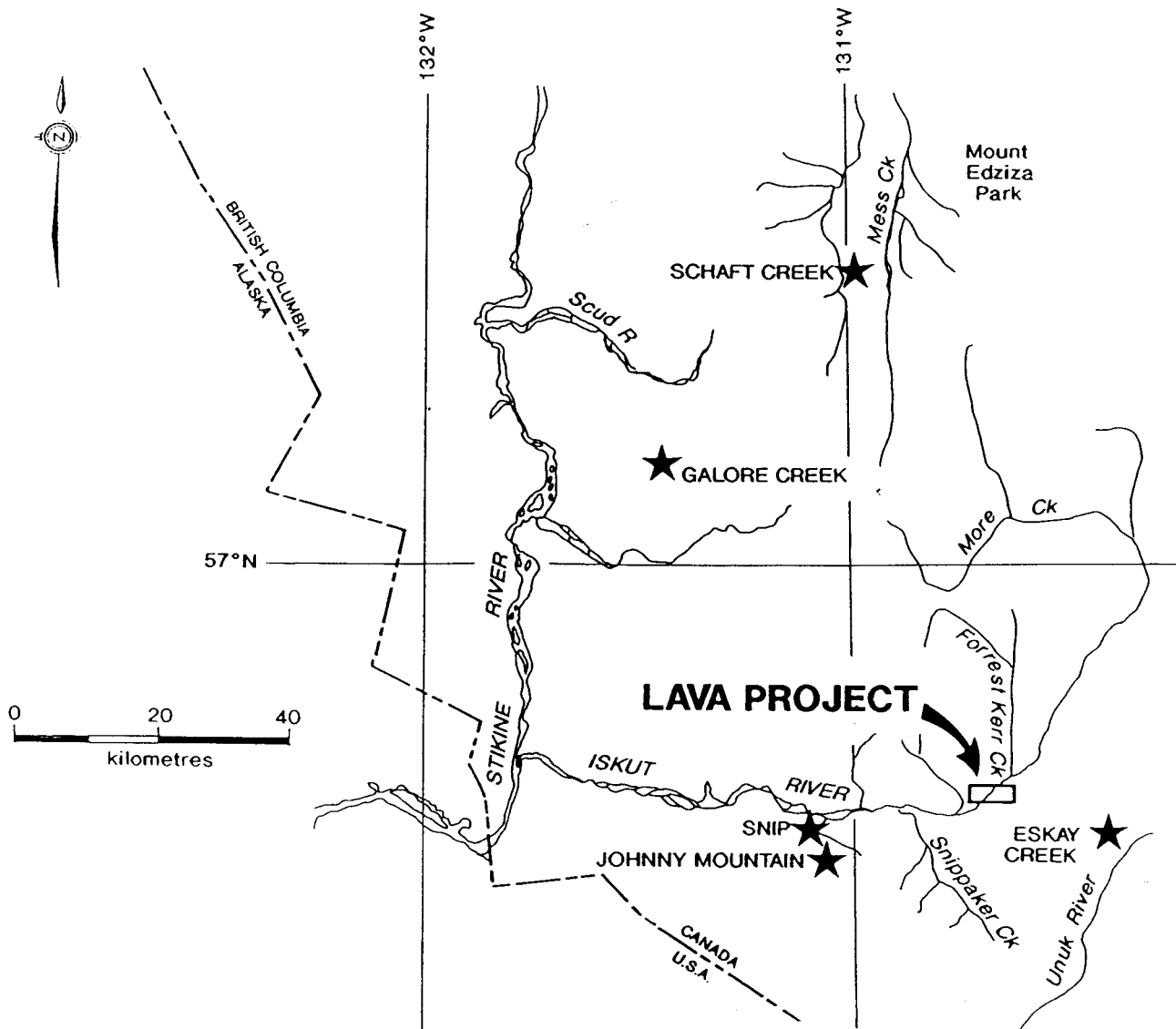
Location and Access

The Lava property is located in northwestern B.C. (Figure 1), 100 km northwest of Stewart. The NTS map reference is 104 B/10 and the centre of the property is at latitude $56^{\circ}44'N$, longitude $130^{\circ}39'W$. It is less than 20 km northwest of the gold-silver-base metal discovery at Eskay Creek. The Iskut River runs through the property with the north boundary of the claims 450 metres south of the confluence of Forest Kerr Creek and the Iskut River.

Access to the property is by helicopter from either the Bronson Creek airstrip 27 km to the west or from Bell II on the Stewart-Cassiar Highway 51 km to the east. The work described herein was carried out by helicopter from the camp at Eskay Creek.

Claim Status

The Lava property consists of 2 contiguous claims comprising 24 units, owned by John Robins, located within the Liard Mining Division (Figure 2). Claim information is summarized in the following table:



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Figure 1
LAVA PROJECT

LOCATION MAP

British Columbia

November 1990

XY3

TABLE #1

<u>Claim Name</u>	<u>Record No.</u>	<u>No of Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
Lava 1	7330	18	May 22/90	May 22/91
Lava 2	7331	6	May 22/90	May 22/91

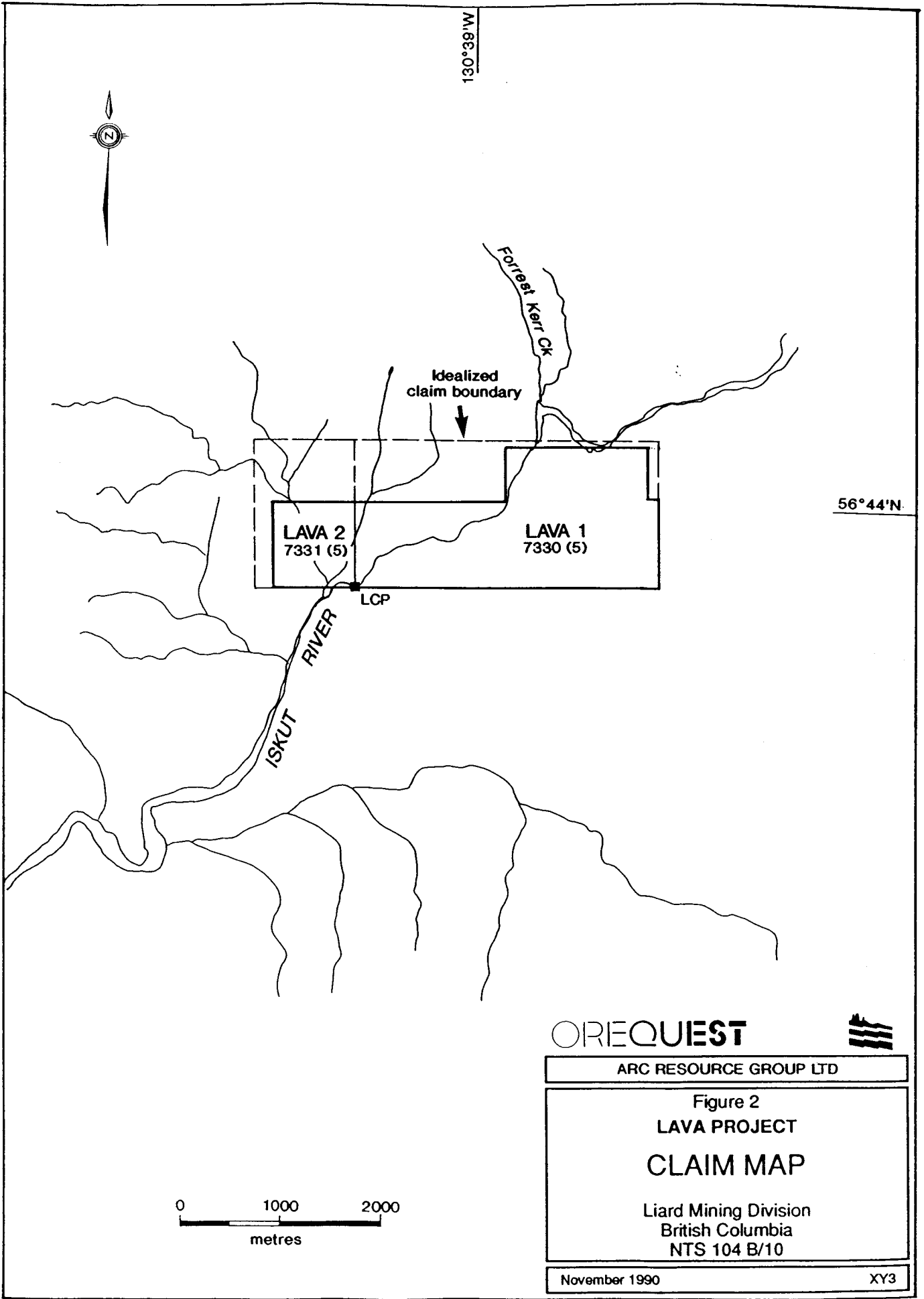
The work described in this report, when filed for assessment, would extend the expiry date to May 22, 1992.

Physiography and Vegetation

Elevations on the property range from 750 m (2500 ft) in the northwest corner of the property to less than 250 m (800 ft) at the Iskut River. The property is characterized by mature timber stand and evil's club undergrowth near the Iskut River which flows through a steeply walled gorge incised in flat lying Recent lava flows.

REGIONAL GEOLOGY

The Lava claims lie on the northern edge of the Stewart Complex as first described by Grove (1986). The Complex comprises the Upper Triassic Stuhini Group, Upper Triassic to Middle Jurassic Hazelton Group and Middle Jurassic Salmon River Formation, an assemblage of volcanic and sedimentary rocks intruded by plutonic rocks of varied compositions in both Jurassic and Tertiary times. The Hazelton Group is the principal host of significant mineral deposits in this region, most notably the Snip, Johnny Mountain and Eskay Creek deposits in the immediate area of the subject property.



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Figure 2
LAVA PROJECT
CLAIM MAP

Liard Mining Division
British Columbia
NTS 104 B/10

November 1990

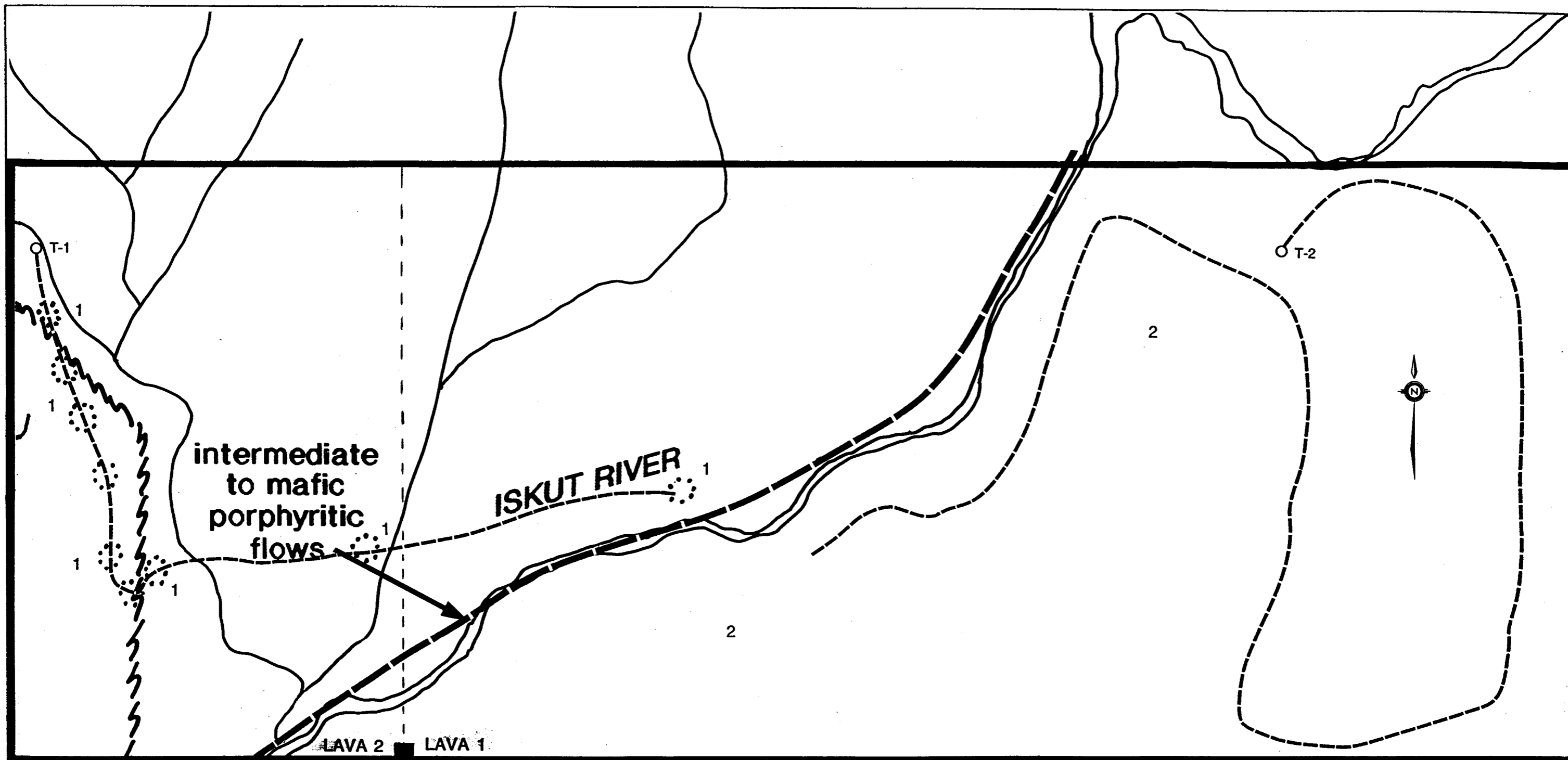
XY3

Regional mapping by both Grove (1986) and Logan et al (1990) fails to cover the claim area in any detail however both indicate extensive Recent lava flow cover in the southeast portion. Grove's map also indicates the presence of a Cenozoic monzonite plug in the southwest part of the Lava 1 claim however this has not been confirmed. According to Logan et al, the northwest portion of the property is mapped as Stuhini Group volcanics and sediments (undivided) and features a north-south fault paralleling the western claim boundary.

PROPERTY GEOLOGY AND GEOCHEMISTRY

Two traverses were completed over the Lava claims, one on each side of the Iskut River. On the northwest side only minimal outcrop exposure was encountered, much of which was noted to be massive basaltic flows with few distinguishing features. The fault shown on Logan's regional map was identified on the ground as a linear topographic depression. No evidence of structural deformation or associated mineralization and alteration was encountered. The traverse on the west side of the Iskut River followed this fault trace south to the river then proceeded eastward along the base of the slope.





Toward the east a vesicular basalt with plagioclase and carbonate-filled vesicles was observed and a marked increase in quartz-carbonate stringers locally containing up to 2% disseminated pyrite was observed near the Iskut River. The stringers constitute





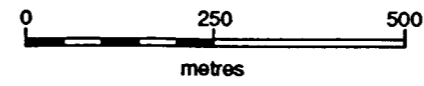
intermediate
to mafic
porphyritic
flows


ISKUT RIVER

LAVA 2 LAVA 1

-  Geological contact (approximate)
-  Fault
-  T-1 Traverse
-  Outcrop

-  2 Recent volcanic flows
-  1 Upper Triassic Stuhini Group Basalt flows



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Figure 3
LAVA PROJECT
PROPERTY
GEOLOGY
British Columbia
NTS 104 B/10

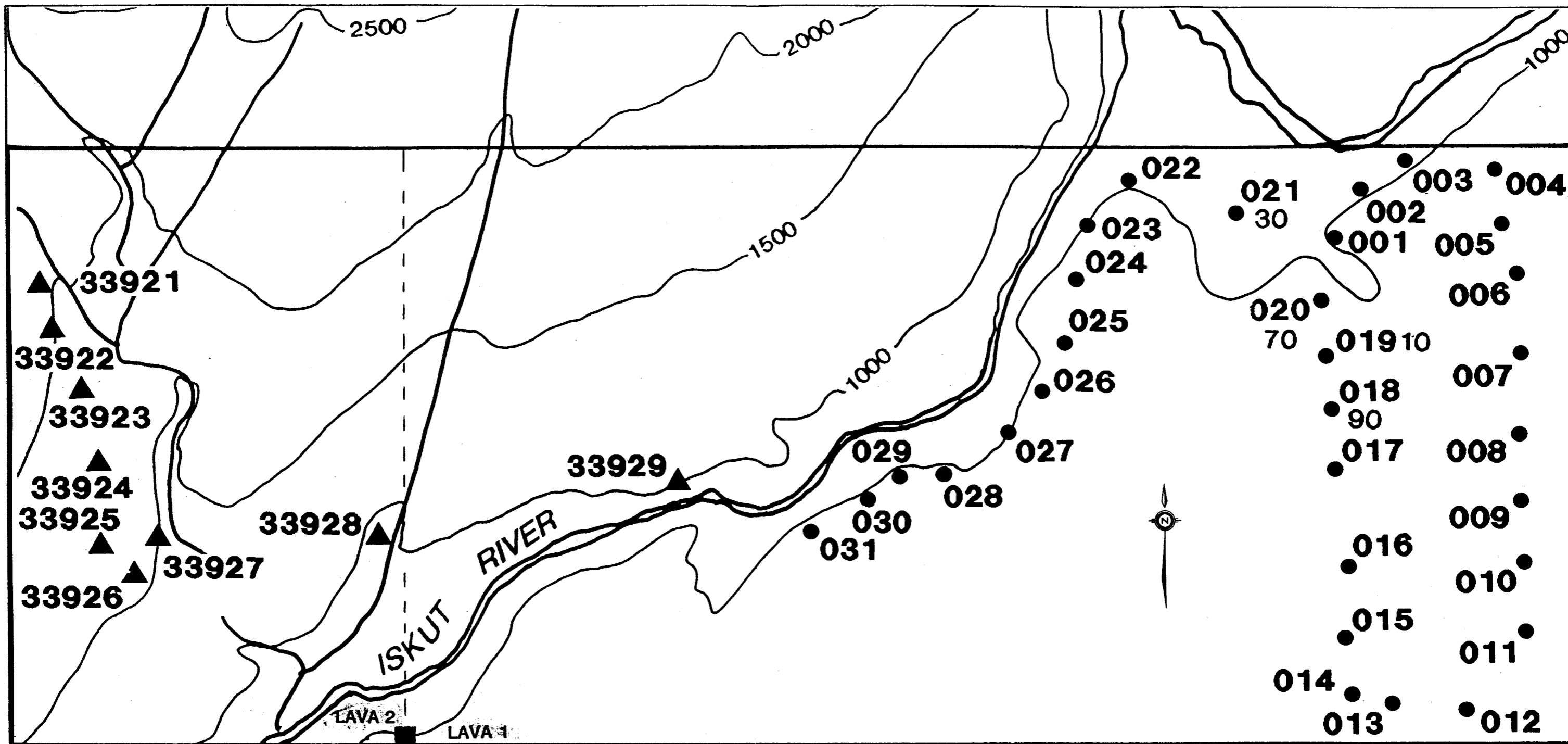
November 1990 XY3

up to 20% of the outcrop in some instances. This unit may in fact be the margin of the large Recent lava flow underlying the area east of the river. A second traverse on the east side of the river encountered no outcrops, however soil samples were collected.

A total of 31 soil and 9 rock grab samples were collected along the traverse lines (Figure 4) and sent to Vangeochem Labs in Vancouver for analysis for gold by atomic absorption plus 25 elements by inductively coupled plasma (ICP) spectrophotometry. Soils were collected from the B horizon at a depth of 10 to 30 cm and stored in kraft paper bags. Rocks were collected in plastic bags.

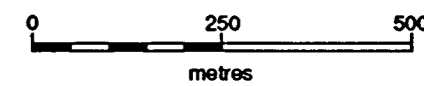
None of the rocks, all collected on the northwest side of the property, returned detectable gold values or significant values for elements in the ICP package. Four soil samples produced detectable gold values, ranging from 10 to 90 ppb, however no elevated values of any kind are evident in the ICP data for all soil samples, collected from an area underlain by Recent volcanic flows.

Four old drillhole collars were found on the east side of the river. These were drilled by B.C. Hydro in the 1980's for structural information as part of a damsite study and it is unlikely they would provide useful exploration data.



Sample No.	Type	Au (ppb)	Ag (ppm)	Cu (ppm)	Zn (ppm)	Pb (ppm)	Sample No.	Type	Au (ppb)	Ag (ppm)	Cu (ppm)	Zn (ppm)	Pb (ppm)	Sample No.	Type	Au (ppb)	Ag (ppm)	Cu (ppm)	Zn (ppm)	Pb (ppm)
33921	rock grab	nd	1.0	177	93	<2	FK001	soil	nd	0.5	55	111	<2	FK016	soil	nd	2.3	30	139	<2
33922	rock grab	nd	0.5	196	58	<2	FK002	soil	nd	3.1	52	132	<2	FK017	soil	nd	3.3	27	144	<2
33923	rock grab	nd	0.3	222	99	<2	FK003	soil	nd	1.5	57	116	<2	FK018	soil	90	1.6	70	189	<2
33924	rock grab	nd	0.6	20	96	<2	FK004	soil	nd	1.1	58	166	<2	FK019	soil	70	2.8	44	184	<2
33925	rock grab	nd	0.5	168	61	<2	FK005	soil	nd	1.5	39	153	<2	FK020	soil	10	2.5	43	171	<2
33926	rock grab	nd	0.5	9	79	<2	FK006	soil	nd	1.8	34	136	<2	FK021	soil	30	1.1	43	139	<2
33927	rock grab	nd	0.2	129	76	3	FK007	soil	nd	1.4	49	174	<2	FK022	soil	nd	1.2	43	134	<2
33928	rock grab	nd	0.2	124	59	<2	FK008	soil	nd	1.7	48	166	<2	FK023	soil	nd	0.1	62	131	<2
33929	rock grab	nd	0.2	57	25	<2	FK009	soil	nd	1.4	60	204	<2	FK024	soil	nd	0.5	57	124	<2
							FK010	soil	nd	0.8	59	181	<2	FK025	soil	nd	0.8	39	179	<2
							FK011	soil	nd	1.2	35	135	<2	FK026	soil	nd	0.5	51	207	<2
							FK012	soil	nd	1.1	40	146	<2	FK027	soil	nd	1.1	20	140	<2
							FK013	soil	nd	0.7	65	183	<2	FK028	soil	nd	3.0	24	92	<2
							FK014	soil	nd	2.1	33	119	<2	FK029	soil	nd	1.4	30	109	<2
							FK015	soil	nd	3.2	35	164	<2	FK030	soil	nd	1.7	25	93	<2
														FK031	soil	nd	1.8	21	62	<2

33921 ▲ Rock sample location and number
 001 ● Soil sample location and number
 20 Results in ppb Au
 (values <5 ppb not shown)



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Figure 4
LAVA PROJECT
**ROCK and SOIL SAMPLE
LOCATION MAP**
British Columbia
NTS 104B/10

November 1990 | XY3

CONCLUSIONS AND RECOMMENDATIONS

The Lava claims are underlain by two principal rock units - massive basalt flows of the Upper Triassic Stuhini Group on the west side of the Iskut River and Recent intermediate to mafic flows on the east side. The Recent flows mask the contact between Stuhini rocks and units of the Upper Triassic to Middle Jurassic Hazelton Group which have been the focus of most of the recent exploration activity in the region.

Both geological and geochemical results from the cursory examination conducted give little indication of economic potential. The minimal outcrop exposure of the Stuhini rocks revealed only nondescript massive basalts with no alteration, mineralization or geochemical anomalies. Samples of vesicular lavas containing pyrite-bearing quartz carbonate veining, possibly outcrops on the margin of Recent flows, also failed to produce anomalous results. Gold values in 4 of 31 soil samples ranged from 10 to 90 ppb however no other significant values for other elements were recorded in any of the samples. They were all collected from an area underlain by Recent volcanics. The significance, if any, of the gold values recorded is impossible to determine given the limited and somewhat random coverage of the sampling.

If further work is contemplated it would be to complete prospecting coverage of the area northwest of the Iskut River, however the potential for the property in general is considered quite low.

STATEMENT OF EXPENDITURES

Mobilization/Demobilization		\$ 744.71
Wages:		
B. LaPeare (geologist)	4.5 days @ \$225/day	637.50
C. Churchill (field assistant)	3 days @ \$190/day	190.00
Camp Costs		62.93
Communications		4.31
Helicopter		966.26
Analyses		670.40
Report Costs		475.00
Administration Costs (15% on disbursements)		<u>301.29</u>
Total Expenditures		\$4,052.40

CERTIFICATE of QUALIFICATIONS

I, Brett R. LaPeare, of 640 Crystal Court, North Vancouver, British Columbia hereby certify:

1. I am a graduate of the Lakehead University (1990) and hold a BSc. degree in Geology.
2. I am presently employed as a geologist with OreQuest Consultants Ltd. of 306-595 Howe Street, Vancouver, British Columbia.
3. I have been employed in my profession by various companies and have worked on projects in Canada and the United States.
4. The information contained in this report was obtained by direct onsite supervision of the work done on the Lava property by OreQuest Consultants Ltd. in 1990 and a review of all data listed in the Bibliography.
5. Neither OreQuest Consultants Ltd. nor myself have or expect to receive direct or indirect interest in the property or in ARC Resource Group Ltd.
6. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statement of Material Facts or other public document.

Brett LaPeare

Brett R. LaPeare, B.Sc.

DATED at Vancouver, British Columbia, this 30th day of November, 1990.

BIBLIOGRAPHY

ALLDRICK, D.J., BRITTON, J.M., WEBSTER, I.C.L., RUSSELL, C.W.P.
1989: Geology and Mineral Deposits of the Unuk Area, BCMEMPR Open
File Map 1989-10.

ALLDRICK, D.J.
1989: Volcanic Centres in the Stewart Complex in Geological
Fieldwork, 1988, Paper 1989-1, British Columbia Ministry of Energy,
Mines and Petroleum Resources.

GROVE, E.W.
1971: Geology and Mineral Deposits of the Stewart Area, B.C., British
Columbia Department of Mines and Petroleum Resources, Bulletin No. 58.

1986: Geology and Mineral Deposits of the Unuk River - Salmon River -
Anyox Area, B.C., Ministry of Energy, Mines and Petroleum Resources,
Bulletin 63.

LOGAN, J.M., KOYANAGI, V.M., DROBE, J.R.
1990: Geology, Geochemistry and Mineral Occurrences of the Forrest
Kerr-Iskut River Area, Northwestern British Columbia, BCMEMPR Open
File 1990-2.

APPENDIX I
ROCK SAMPLE DESCRIPTIONS

LAVA PROJECT

Sample	Date	Location	Lithology	Remarks/Alteration/Structure	Mineralization
33921			Basalt	Weakly chloritized, one quartz stringer	
33922			Basalt	Massive, weakly carbonitized	
33923			Basalt	Weakly chloritized	
33924			Basalt	Massive, thin quartz stringer	
33925			Basalt	Massive, thin rusty quartz stringers	
33926			Basalt	Amygdaloidal, plagioclase and carbonate	
33927			Basalt	Oxidized, silicified, numerous quartz-carbonate stringers	≤ 2% diss py
33928			Basalt	20% stringers of quartz+carbonate	
33929			Andesite	Porphyritic flow, K-feldspar phenocrysts	

APPENDIX II
ASSAY CERTIFICATES

GEOCHEMICAL ANALYTICAL REPORT
=====

CLIENT: OREQUEST CONSULTANTS LTD.
ADDRESS: 306 - 595 Howe St.
: Vancouver, BC
: V6C 2T5

DATE: OCT 11 1990

REPORT#: 900656 GA
JOB#: 900656

PROJECT#: LAVA
SAMPLES ARRIVED: OCT 09 1990
REPORT COMPLETED: OCT 11 1990
ANALYSED FOR: Au (FA/AAS) ICP

INVOICE#: 900656 NA
TOTAL SAMPLES: 9
SAMPLE TYPE: 9 ROCK
REJECTS: SAVED

SAMPLES FROM: B.R. LaPEARE - OREQUEST
COPY SENT TO: OREQUEST CONSULTANTS LTD.

PREPARED FOR: MR. LARRY LeBEL

ANALYSED BY: VGC Staff

SIGNED: _____

[Handwritten Signature]

GENERAL REMARK: None

REPORT NUMBER: 900656 GA

JOB NUMBER: 900656

ORREQUEST CONSULTANTS LTD.

PAGE 1 OF 1

SAMPLE #	Au
33921	ppb
33922	nd
33923	nd
33924	nd
33925	nd
33926	nd
33927	nd
33928	nd
33929	nd

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample

1630 Pandora Street, Vancouver, B.C. V5L 1L6
 Ph: (604)251-5656 Fax: (604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO₃ to H₂O at 95 °C for 90 minutes and is diluted to 10 ml with water.
 This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST: *Ryall*

REPORT #: 900656 PA

OREQUEST CONSULTANTS LTD.

PROJECT: LAVA

DATE IN: OCT 09 1990

DATE OUT: NOV 07 1990

ATTENTION: MR. LARRY LeBEL

PAGE 1 OF 1

Sample Name	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sn ppm	Sr ppm	U ppm	W ppm	Zn ppm
33921	1.0	3.30	<3	668	11	1.25	1.6	56	105	177	5.20	0.20	1.91	891	14	0.09	73	<0.01	<2	<2	<2	71	<5	<3	93
33922	0.5	2.42	<3	>1000	<3	2.03	0.7	48	92	196	3.69	0.19	1.16	725	10	0.08	46	0.02	<2	<2	<2	98	<5	<3	58
33923	0.3	4.24	<3	44	<3	1.69	1.1	71	80	222	6.65	0.27	2.10	1212	12	0.12	55	<0.01	<2	<2	<2	52	<5	<3	99
33924	0.6	4.91	<3	53	<3	1.49	1.2	39	146	20	4.81	0.21	2.84	932	15	0.21	69	<0.01	<2	<2	<2	36	<5	<3	96
33925	0.5	2.59	<3	27	<3	1.51	0.3	53	128	168	4.01	0.16	1.29	637	9	0.09	53	0.01	<2	<2	<2	52	<5	<3	61
33926	0.5	2.37	<3	74	4	4.74	0.9	21	20	9	4.21	0.24	2.06	964	12	0.07	1	0.06	<2	<2	<2	79	<5	<3	79
33927	0.2	0.96	<3	63	<3	3.89	0.2	17	13	129	3.68	0.22	1.21	1164	7	0.08	<1	0.17	3	5	<2	285	<5	<3	76
33928	0.2	1.54	<3	132	<3	8.52	0.2	13	15	124	4.21	0.13	0.99	1847	8	0.08	<1	0.15	<2	<2	<2	379	<5	<3	59
33929	0.2	1.17	<3	413	<3	4.71	<0.1	6	8	57	3.95	0.24	0.30	740	5	0.07	<1	0.18	<2	3	<2	161	<5	<3	25
Minimum Detection	0.1	0.01	3	1	3	0.01	0.1	1	1	1	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1
Maximum Detection	50.0	10.00	2000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000

< - Less Than Minimum > - Greater Than Maximum is - insufficient Sample ns - No Sample ANOMALOUS RESULTS - Further Analyses By Alternate Methods Suggested.

GEOCHEMICAL ANALYTICAL REPORT
=====

CLIENT: OREQUEST CONSULTANTS LTD.
ADDRESS: 306 - 595 Howe St.
: Vancouver, BC
: V6C 2T5

DATE: OCT 11 1990

REPORT#: 900657 GA
JOB#: 900657

PROJECT#: LAVA
SAMPLES ARRIVED: OCT 09 1990
REPORT COMPLETED: OCT 11 1990
ANALYSED FOR: Au (FA/AAS) ICP

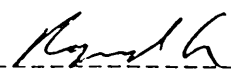
INVOICE#: 900657 NA
TOTAL SAMPLES: 31
SAMPLE TYPE: 31 SOIL
REJECTS: DISCARDED

SAMPLES FROM: B.R. LaPEARE - OREQUEST
COPY SENT TO: OREQUEST CONSULTANTS LTD.

PREPARED FOR: MR. LARRY LeBEL

ANALYSED BY: VGC Staff

SIGNED: _____



GENERAL REMARK: None

REPORT NUMBER: 900657 GA

JOB NUMBER: 900657

OREQUEST CONSULTANTS LTD.

PAGE 1 OF 1

SAMPLE #	Au ppb
FK 001	nd
FK 002	nd
FK 003	nd
FK 004	nd
FK 005	nd
FK 006	nd
FK 007	nd
FK 008	nd
FK 009	nd
FK 010	nd
FK 011	nd
FK 012	nd
FK 013	nd
FK 014	nd
FK 015	nd
FK 016	nd
FK 017	nd
FK 018	90
FK 019	70
FK 020	10
FK 021	30
FK 022	nd
FK 023	nd
FK 024	nd
FK 025	nd
FK 026	nd
FK 027	nd
FK 028	nd
FK 029	nd
FK 030	nd
FK 031	nd

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO₃ to H₂O at 95 °C for 90 minutes and is diluted to 10 ml with water.
 This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST: *[Signature]*

REPORT #: 900657 PA

OREQUEST CONSULTANTS LTD.

PROJECT: LAVA

DATE IN: OCT 09 1990

DATE OUT: NOV 07 1990

ATTENTION: MR. LARRY LeBEL

PAGE 1 OF 1

Sample Name	Ag	Al	As	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sn	Sr	U	W	Zn	
	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
FK 001	0.5	2.46	<3	307	<3	0.32	1.5	19	54	55	3.81	0.09	0.96	836	10	0.05	60	0.03	<2	<2	<2	26	<5	<3	111	
FK 002	3.1	3.32	<3	191	4	0.23	2.5	20	52	52	4.10	0.12	0.74	1139	14	0.07	35	0.16	<2	<2	<2	20	<5	<3	132	
FK 003	1.5	2.59	<3	346	6	0.28	4.0	15	51	57	3.51	0.09	0.55	1153	10	0.05	30	0.26	<2	<2	<2	29	<5	<3	116	
FK 004	1.1	3.18	<3	217	<3	0.25	2.7	22	65	58	4.59	0.13	1.05	1083	14	0.06	65	0.11	<2	<2	<2	23	<5	<3	166	
FK 005	1.5	3.45	<3	208	<3	0.26	2.9	20	62	39	4.38	0.12	0.87	888	13	0.06	52	0.15	<2	<2	<2	23	<5	<3	153	
FK 006	1.8	3.18	<3	252	9	0.30	3.7	18	57	34	3.98	0.12	0.77	1111	14	0.07	39	0.21	<2	<2	<2	29	<5	<3	136	
FK 007	1.4	3.69	<3	217	<3	0.25	2.5	23	70	49	4.88	0.14	1.06	1046	15	0.06	73	0.09	<2	<2	<2	24	<5	<3	174	
FK 008	1.7	3.22	<3	211	5	0.25	2.7	22	66	48	4.61	0.13	1.01	1127	14	0.06	63	0.13	<2	<2	<2	22	<5	<3	166	
FK 009	1.4	3.87	<3	228	<3	0.25	3.5	25	78	60	5.29	0.13	1.11	1001	15	0.06	68	0.12	<2	<2	<2	22	<5	<3	204	
FK 010	0.8	3.35	<3	219	<3	0.26	1.8	26	75	59	5.22	0.12	1.21	1238	17	0.06	84	0.10	<2	<2	<2	23	<5	<3	181	
FK 011	1.2	3.05	<3	196	<3	0.25	2.6	19	54	35	3.89	0.10	0.77	1061	11	0.06	39	0.22	<2	<2	<2	23	<5	<3	135	
FK 012	1.1	3.12	<3	190	<3	0.24	3.1	18	58	40	4.04	0.11	0.85	879	14	0.05	47	0.21	<2	<2	<2	21	<5	<3	146	
FK 013	0.7	3.54	<3	186	<3	0.21	2.3	32	77	65	5.29	0.13	1.24	1491	16	0.06	89	0.04	<2	<2	<2	19	<5	<3	183	
FK 014	2.1	3.33	<3	263	<3	0.39	4.8	11	60	33	3.99	0.11	0.57	1335	13	0.06	22	0.43	<2	<2	<2	30	<5	<3	119	
FK 015	3.2	3.50	<3	233	6	0.21	2.1	19	69	35	4.54	0.11	0.86	860	15	0.06	51	0.28	<2	<2	<2	18	<5	<3	164	
FK 016	2.3	3.44	<3	163	<3	0.20	2.3	16	68	30	4.39	0.09	0.85	586	13	0.05	50	0.28	<2	<2	<2	19	<5	<3	139	
FK 017	3.3	3.18	<3	280	<3	0.30	9.6	37	47	27	4.71	0.12	0.50	2260	14	0.10	20	0.48	<2	<2	<2	29	<5	<3	144	
FK 018	1.6	3.03	<3	230	<3	0.33	2.3	30	77	70	5.36	0.13	1.23	1311	17	0.06	91	0.06	<2	<2	<2	29	<5	<3	189	
FK 019	2.8	3.30	<3	198	<3	0.22	1.3	25	79	44	5.05	0.11	1.06	921	16	0.06	74	0.06	<2	<2	<2	20	<5	<3	184	
FK 020	2.5	3.34	<3	180	<3	0.21	2.1	22	73	43	4.82	0.10	1.00	851	13	0.05	64	0.08	<2	<2	<2	19	<5	<3	171	
FK 021	1.1	2.92	<3	226	5	0.25	1.7	21	67	43	4.44	0.10	0.95	826	15	0.06	60	0.03	<2	<2	<2	21	<5	<3	139	
FK 022	1.2	2.84	<3	214	<3	0.22	2.5	19	60	43	4.08	0.09	0.90	718	12	0.05	58	0.02	<2	<2	<2	19	<5	<3	134	
FK 023	0.1	2.68	<3	243	<3	0.26	2.4	25	64	62	4.41	0.10	1.10	1173	12	0.06	76	0.02	<2	<2	<2	22	<5	<3	131	
FK 024	0.5	2.70	<3	225	<3	0.26	2.3	22	65	57	4.40	0.11	1.07	1023	15	0.06	72	0.05	<2	<2	<2	21	<5	<3	124	
FK 025	0.8	3.71	<3	200	<3	0.21	2.4	24	76	39	5.17	0.13	1.03	829	15	0.06	65	0.03	<2	<2	<2	19	<5	<3	179	
FK 026	0.5	3.50	<3	201	<3	0.22	1.2	33	71	51	5.23	0.12	1.11	1162	16	0.07	79	<0.01	<2	<2	<2	19	<5	<3	207	
FK 027	1.1	3.22	<3	175	7	0.20	3.0	15	55	20	4.14	0.07	0.64	501	13	0.05	34	0.16	<2	<2	<2	17	<5	<3	140	
FK 028	3.0	3.44	<3	152	<3	0.23	1.3	15	61	24	5.20	0.08	0.60	419	13	0.06	28	0.29	<2	<2	<2	19	<5	<3	92	
FK 029	1.4	3.50	<3	131	<3	0.17	1.7	12	64	30	4.64	0.10	0.65	392	17	0.06	31	0.10	<2	<2	<2	15	<5	<3	109	
FK 030	1.7	3.82	<3	211	<3	0.29	1.7	24	54	25	4.99	0.13	0.52	949	15	0.08	26	0.33	<2	<2	<2	24	<5	<3	93	
FK 031	1.8	2.52	<3	155	<3	0.15	1.5	11	46	21	3.08	0.05	0.36	216	14	0.04	19	0.14	<2	<2	<2	14	<5	<3	62	
Minimum Detection	0.1	0.01	3	1	3	0.01	0.1	1	1	1	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1	
Maximum Detection	50.0	10.00	2000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000	
< - Less Than Minimum) - Greater Than Maximum is - Insufficient Sample ns - No Sample ANOMALOUS RESULTS - Further Analyses By Alternate Methods Suggested.																									

APPENDIX III
ANALYTICAL PROCEDURES

October 19, 1990

TO: Mr. Bernie Dewonck
OREQUEST CONSULTANTS LTD.
306 - 595 Howe Street
Vancouver, BC V6C 2T5

FROM: VANGEOCHEM LAB LIMITED
1630 Pandora Street
Vancouver, BC V5L 1L6

SUBJECT: Analytical procedure used to determine gold by fire assay method and detect by atomic absorption spectrophotometry in geological samples.

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" x 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

2. Method of Extraction

- (a) 20.0 to 30.0 grams of the pulp samples were used. Samples were weighed out using a top-loading balance and deposited into individual fusion pots.
- (b) A flux of litharge, soda ash, silica, borax, and, either flour or potassium nitrite is added. The samples are then fused at 1900 degrees Farenhiet to form a lead "button".

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- (c) The gold is extracted by cupellation and parted with diluted nitric acid.
- (d) The gold beads are retained for subsequent measurement.

3. Method of Detection

- (a) The gold beads are dissolved by boiling with concentrated aqua regia solution in hot water bath.
- (b) The detection of gold was performed with a Techtron model AA5 Atomic Absorption Spectrophotometer with a gold hollow cathode lamp. The results were read out on a strip chart recorder. The gold values, in parts per billion, were calculated by comparing them with a set of known gold standards.

4. Analysts

The analyses were supervised or determined by Mr. Raymond Chan or Mr. Conway Chun and his laboratory staff.



Raymond Chan
VANGEOCHEM LAB LIMITED

October 19, 1990

TO: Mr. Bernie Dewonck
OREQUEST CONSULTANTS LTD.
306 - 595 Howe Street
Vancouver, BC V6C 2T5

FROM: VANGEOCHEM LAB LIMITED
1630 Pandora Street
Vancouver, BC V5L 1L6

SUBJECT: Analytical procedure used to determine hot acid soluble
for 25 element scan by Inductively Coupled Plasma
Spectrophotometry in geochemical silt and soil samples.

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" X 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

2. Method of Digestion

- (a) 0.50 gram portions of the minus 80-mesh samples were used. Samples were weighed out using an electronic balance.
- (b) Samples were digested with a 5 ml solution of HCl:HNO₃:H₂O in the ratio of 3:1:2 in a 95 degree Celsius water bath for 90 minutes.
- (c) The digested samples are then removed from the bath and bulked up to 10 ml total volume with demineralized water and thoroughly mixed.

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3. Method of Analyses

The ICP analyses elements were determined by using a Jarrell-Ash ICAP model 9000 directly reading the spectrophotometric emissions. All major matrix and trace elements are interelement corrected. All data are subsequently stored onto disketts.

4. Analysts

The analyses were supervised or determined by Mr. Conway Chun or Mr. Raymond Chan and his laboratory staff.



Raymond Chan
VANGEOCHEM LAB LIMITED