82-#874

# GEOLOGICAL BRANCH ASSESSMENT REPORT

MineQuest Report #27a

# 10,868

COQUIHALLA PROJECT GEOCHEMICAL SOIL SAMPLING

N.T.S. 92-H-7

Similkameen Mining Division, New Westminster Mining Division

> Latitude 49<sup>0</sup>32' Longitude 121<sup>0</sup>03'

> > by

R.V. Longe

of

### MINEQUEST EXPLORATION ASSOCIATES LIMITED

for

CLIFTON RESOURCES LIMITED (owner of the claims)

Claims

Nan	ne	Record	No.
Aura	1	1604	
	2	1605	
	3	1606	
	4	1607	
Fine	2	1613	

December 1982

MineQuest Exploration Associates Ltd. -

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## 1. INTRODUCTION

After recognizing a potential for gold among the Tertiary volcanic rocks in the vicinity of Coquihalla Mountain, MineQuest Exploration Associates staked thirteen claims during the period November 1981 to February 1982 on behalf of Clifton Resources Limited.

This report describes the first year's work, a program of reconnaissance soil sampling and prospecting.

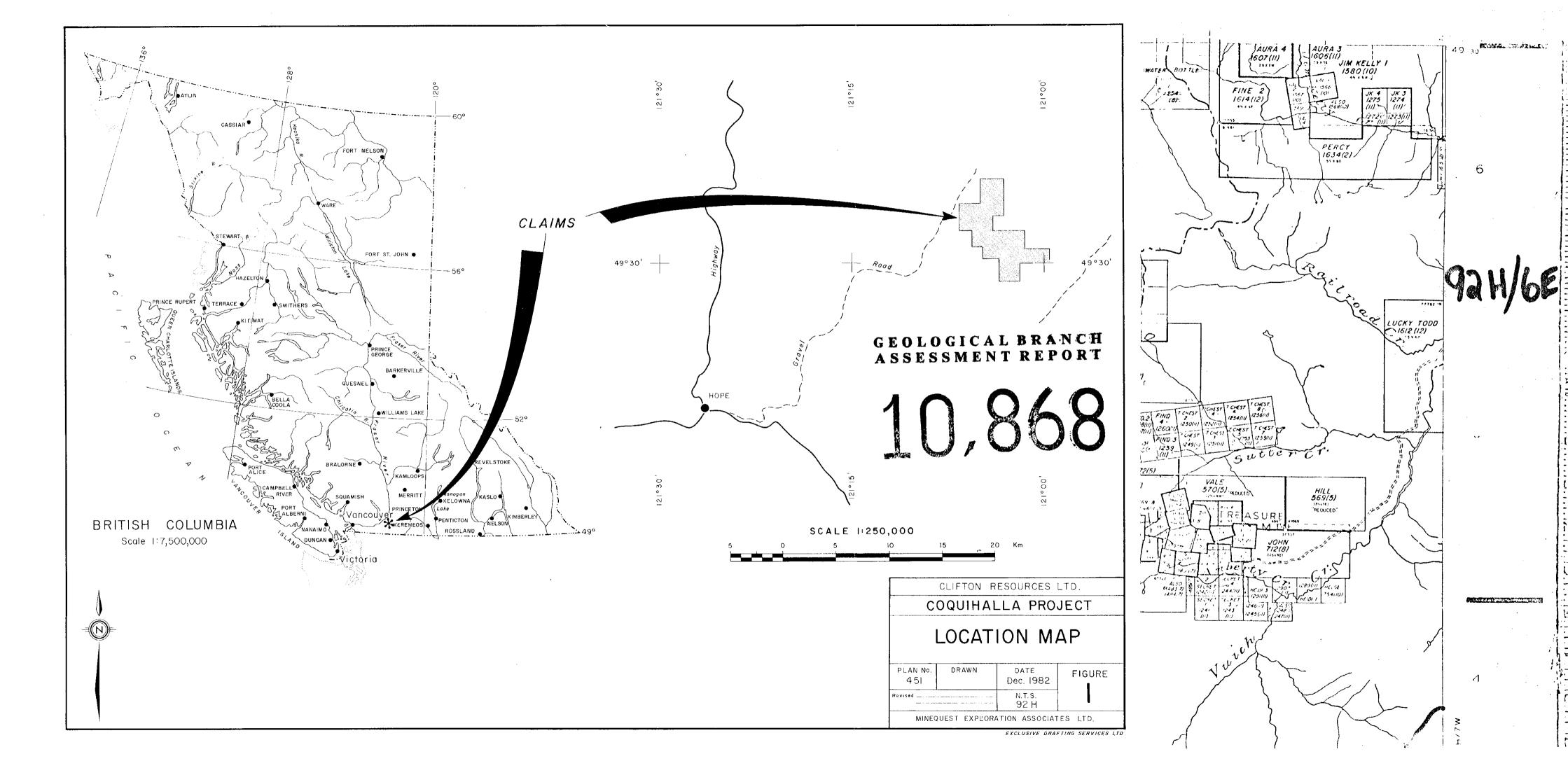
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## 2. LOCATION AND ACCESS

Coquihalla Mountain lies 30km east of Hope in southern British Columbia. Access is by helicopter from Hope or Aggassiz.

The claims cover the west and southwest flanks of Coquihalla Mountain and the south side of Jim Kelly Creek. The terrain which is steep, locally mountainous, lies between 4000 and 6000 feet above sea level.

In previous years there existed a road along Jim Kelly Creek connecting with a logging road between Tulameen and Treasure Mountain. At present the Jim Kelly Creek road is overgrown and impassable. A gravel road along the Coquihalla River to the northwest of Coquihalla Mountain comes close enough to the property to facilitate helicopter access.



## 3. CLAIM STATUS

The claims, listed in Table I, are held by MineQuest Exploration Associates Limited and Clifton Resources Limited all on behalf of the latter.

## TABLE I

## CLAIMS

CLAIM NAME	NO. OF UNITS	RECORD NUMBER	DATE RECORDED	DUE DATE (before submission of this report)
Aura I II III IV	20 12 6 4	1604 1605 1606 1607	1981 Nov. 30 "	1982 November 30 " "
Bold I II	18 18	1407 1408	1982 Feb. 24 "	1983 February 24 "
Fine I II	8 16	1613 1614	1981 Dec. 29 "	1982 December 29 "
Low I II	10 3	1615 1616	1981 Dec. 29 "	1982 December 29 "
Percy I	16	1634	1982 Feb. 24	1983 February 24
Sofa I II III	15 12 6	1369 1370 1371	1981 Nov. 30 "	1982 November 30 "

#### 4. HISTORY AND PREVIOUS WORK

Earliest reports on the area are of gold-bearing quartz veins in the upper reaches of Jim Kelly Creek southwest of Coquihalla Mountain being worked for gold in 1914 (BCDMAR 1914 p K232).

The area experienced a second period of activity in 1937 when gold and silver-bearing quartz veins were worked with open cuts and short adits (BCDMAR 1937 p D21). The exact locations of these quartz veins and of those worked in 1914 are not apparent from contemporary descriptions.

In 1966 a considerable amount of work was done on the south side of Jim Kelly Creek by Bethex Exploration Limited which excavated thirty two trenches totalling over 18,000 feet in length and drilled 2832 feet in five holes (BCDMAR 1966 p 174). The objective at the time appears to have been copper in a porphyry-type situation. Samples were assayed for copper and molybdenum but not for gold or silver.

### 5. WORK CARRIED OUT IN 1982

The 1982 exploration program consisted of reconnaissance geochemistry, prospecting, and a geological examination.

A crew of eight, lifted by helicopter to a camp site at the head of Jim Kelly Creek, spent the period July 17th to 24st on the claims. A crew of four completed further sampling by helicopter on September 18th and 19th. Sampling in July was supervised by P.D. McCarthy, sampling in September by R. Siemens.

Seven hundred and twenty eight samples were collected at 10m intervals in five soil lines following as near as possible the same elevation.

Prospecting by R. Bilquist consisted mainly of attempts to find the gold-bearing locations described in the 1914 and 1937 reports. Concurrent with the above a geological examination was made of the claims by R.V. Longe who also directed the program.

#### 6. GEOLOGY

The claims fall on both sides of a major fault that separates Jurassic-Cretaceous intrusives and Cretaceous sediments on the southwest from Tertiary rocks on the northeast. The fault, the Jim Kelly Creek Fault, which trends northwest-southeast along Unknown and Jim Kelly Creeks, appears to have been active at the time of Tertiary volcanism and may have been partly responsible for locating the volcanic centre.

The Jurassic-Cretaceous intrusive rocks, known as the Eagle Granodiorite, form part of a large body extending well beyond the map area. These intrusives range in composition from coarse grained granodiorite to diorite which often exhibit a weak northwest foliation. In the southeast part of the claims the Eagle Granodiorite extends to the northeast side of the fault.

The Cretaceous rocks on the southwest side of the fault are sediments (non marine conglomerates sandstone and argillites, Cairnes 1924) of the Pasayten group which rests unconformably on the Eagle Granodiorite.

A Tertiary volcanic centre, well described by Berman and Armstrong (1980) forms an equidemensional patch some 6km across surrounded on all sides by Jurassic and Cretaceous rocks. The Tertiary rocks range in composition from diorites through

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to rhyolites and in manner of emplacement from hypbabyssal to pyroclastic.

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The Tertiary volcanics appears to have been laid down next to the Jim Kelly Creek fault. Early in the stage of basin formation, proceeding most of the volcanics, an avalanche breccia was deposited. The basin was then filled with lithic-crystal tuff some 1500 metres thick. This pile was intruded by stocks and dykes first of pyroxene andesite and then of pyroxene diorite. Rhyolite domes and intrusive rocks are reported locally.

Some ring-like features visible on air photographs are tentatively interpreted as indicative of caldera-type subsidence during volcanism.

No geological mapping was undertaken in the 1982 exploration program. However, the lithic-crystal tuff was examined and found to contain a considerable proportion of pyrite, locally up to 10%. Much of the lithic-crystal tuff exhibits a moderate to strong argillic alteration. Whether this is an hydrothermal affect or whether it is due to acid leaching by the pyrite needs to be determined. No silicification was observed.

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#### 7. GEOCHEMISTRY

Heavy mineral samples from the streams around Coquihalla Mountain, collected before the claims were staked and not therefore reported herein, indicated the presence of gold in Jim Kelly Creek.

The objective of the 1982 sampling program was to determine the approximate part of the catchment area which was contributing the gold. With the source roughly outlined a suitable area could then be covered by a soil sampling grid in subsequent exploration seasons.

In the belief that the transportation of gold into the creek in this terrain would be directly down hill by mainly eluvial processes, samples were collected at close intervals along contour lines. An altimeter was used to maintain as near as possible, a constant elevation. Samples were taken at 10 metre intervals.

At the laboratory all samples were dried and sieved to -80 mesh. In the first three lines (Al, A2, A3) composites were made of ten adjacent samples by taking 1 gram scoop from each sample. The succeeding composite sample was taken so has to have a 50% overlap with the previous sample. In this manner the

first composite sample was taken on soil samples 1-10, the next from soil samples 6-15 and the third from soil samples 11-20. In line B1 and S1 composites were made from five consecutive samples with no overlap.

Results are tabulated by soil line in Tables 2, 3, 4, 5, 6 and are shown as geochemical profiles in Figure 2 to 7 inclusive.

Thresholds are taken as follows Gold 40 ppb Silver 1.4 ppm Arsenic 10 ppm Antimony 20 ppm

Soil Line Al Soil Line Al yielded no anomalous results although the samples at the west end of the line approached threshold value in gold.

Soil Line A2 The end of this line, south of Jim Kelly Creek, is weakly anomalous for silver and antimony. The line should be extended if topography permits.

Near the centre of the line between the two forks of Jim Kelly Creek arsenic is anomalous in three samples, gold in one and silver in one. Steep topography in the vicinity of these samples precludes follow-up.

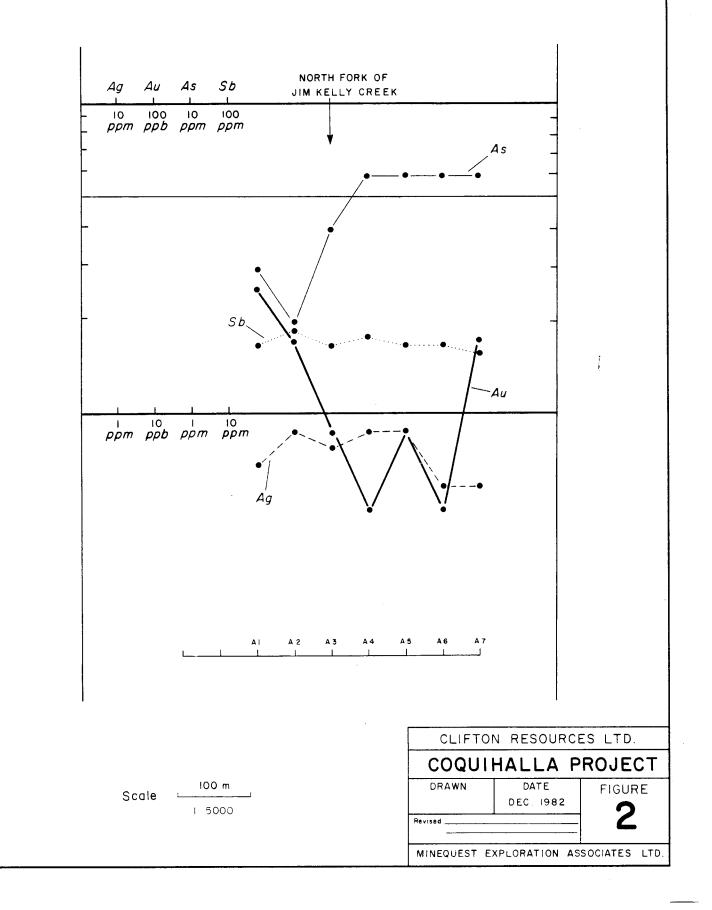
Near the east end of the line on the north side of Jim Kelly Creek a stretch of 250m is anomalous in arsenic (4 samples), gold (1 sample), antimony (4 samples) and silver (2 samples). This should be followed-up with sampling further up hill.

Soil Line A3 At the west end of soil line A3 near Jim Kelly Creek there is one anomalous gold sample, one anomalous arsenic sample and six samples anomalous in antimony. As this anomaly is probably related to the anomaly at the west end of soil line A2 it should be first investigated by sampling above soil line A2.

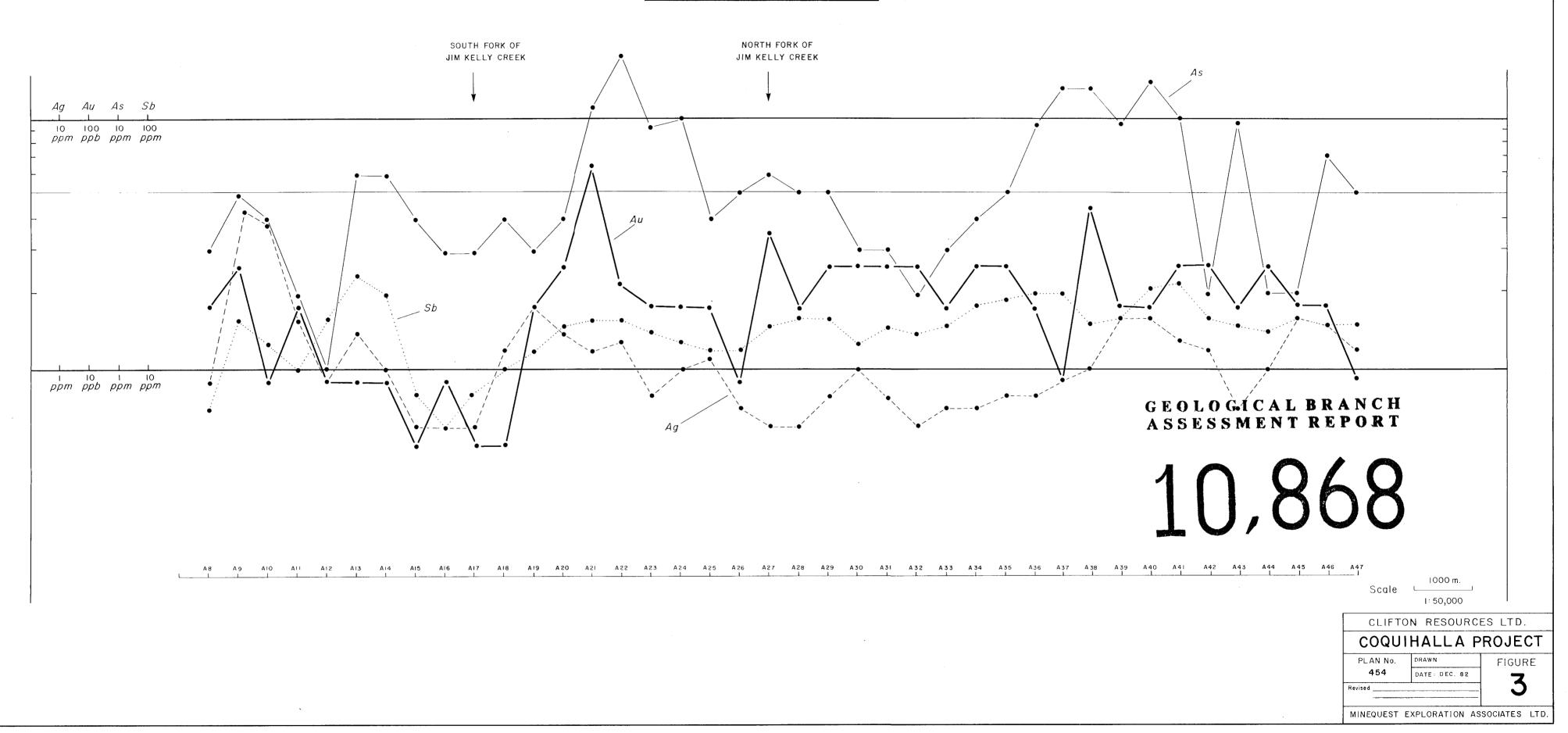
From the centre of soil line A3 to the east end there exists a stretch anomalous in arsenic followed by a stretch anomalous in gold. Antimony is weakly anomalous in correlation with arsenic. The peak gold value is 158ppb which is an encouraging value especially in the light of each composite sample representing 10 soil samples. At the time of writing the individual samples have not themselves been analysed.

# GEOCHEMICAL PROFILE

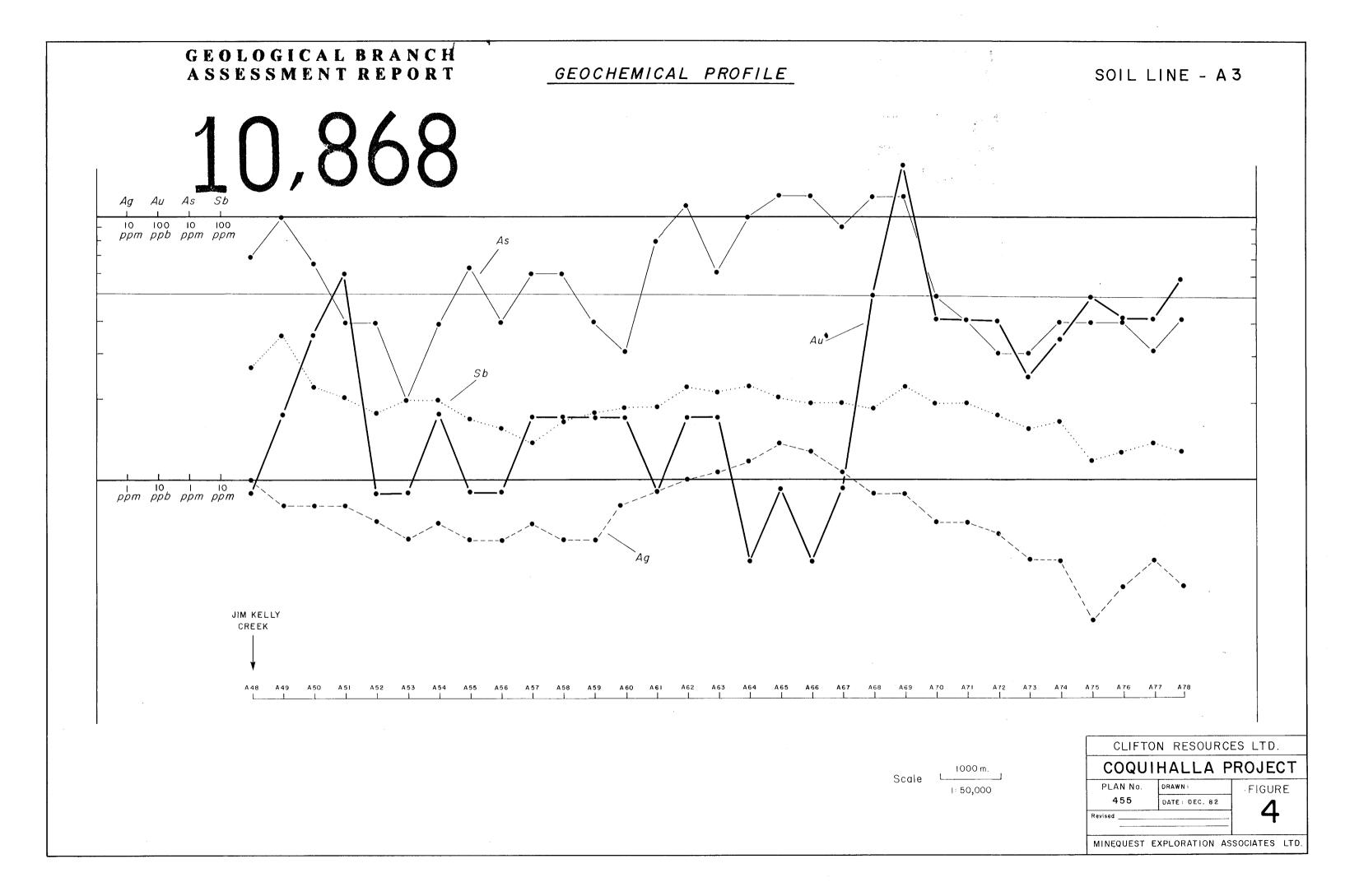
# SOIL LINE - AI

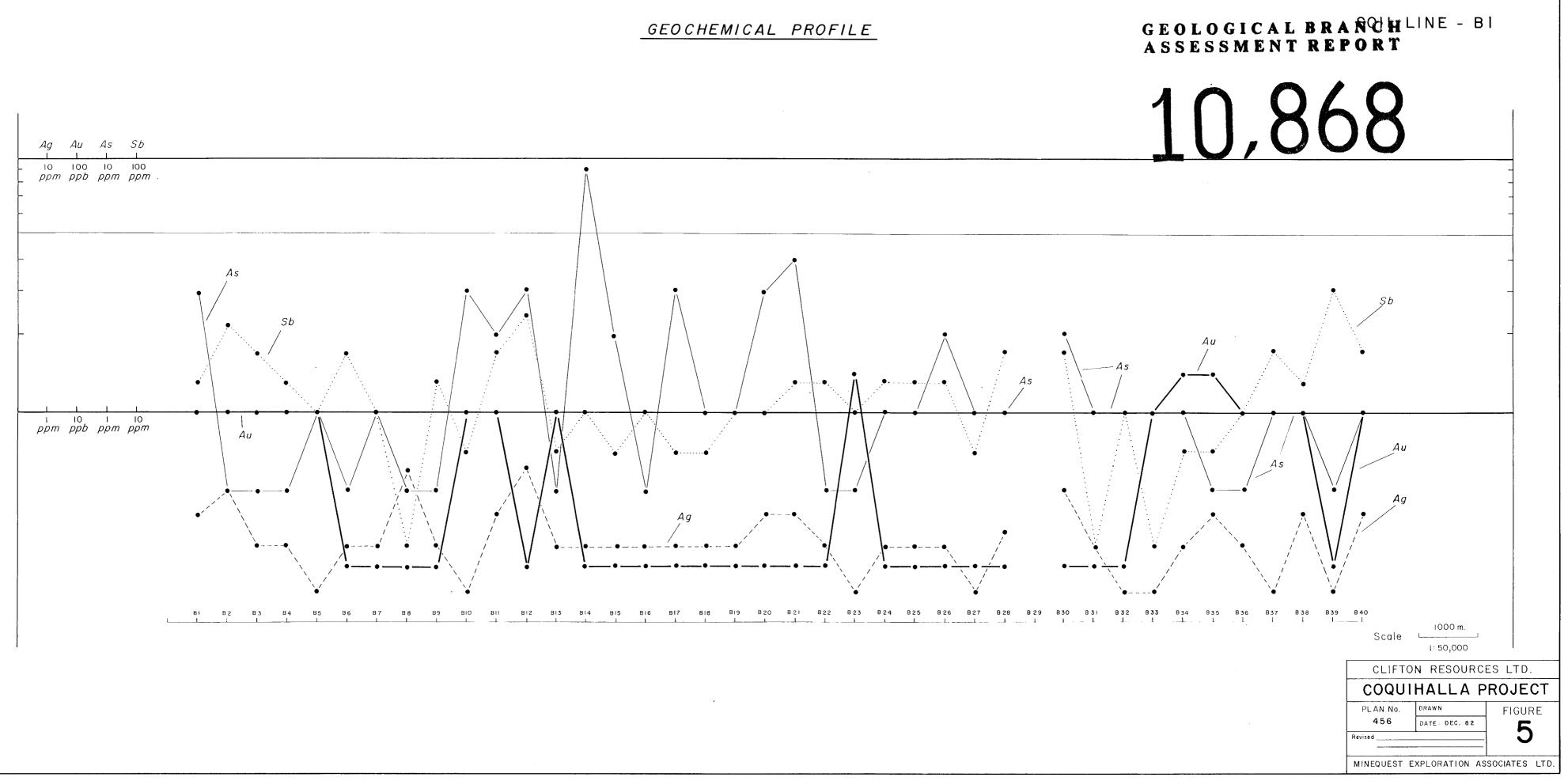


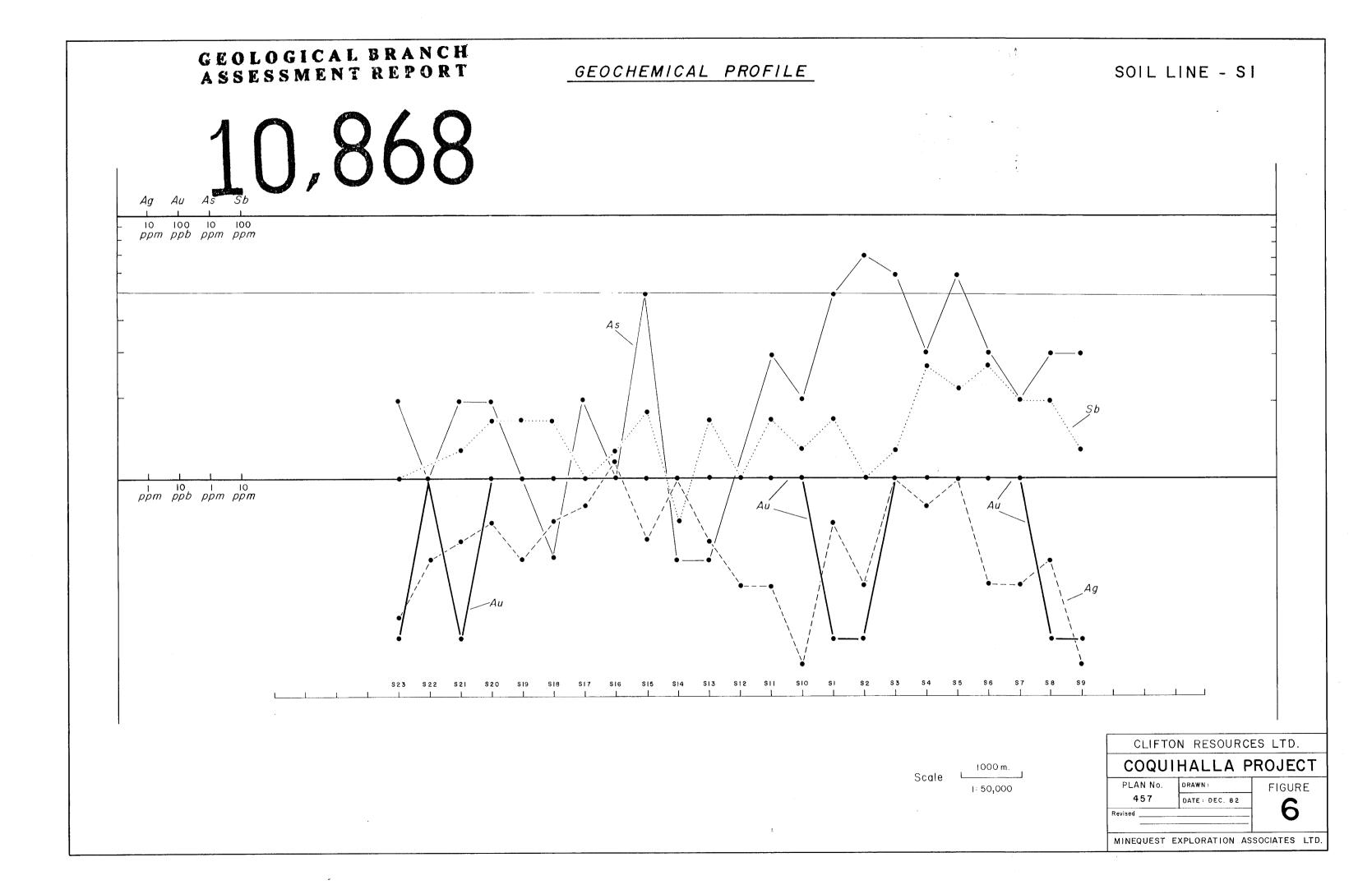
# GEOCHEMICAL PROFILE



SOIL LINE - A2







## TABLE II

# GEOCHEMICAL RESULTS FROM SOIL LINE AL

oil Sample	Composite	Sample	Ag ppm	Au ppb	As ppm	s: p
362						
360						
358 356						
354	Al		0.7	26	3	17
352			0.7	20	5	11
350 348						
346						
344 342		A2	0.9	18	2	19
340						
338						
336 334	A3		0.8	9	4	17
332			••••	-		
330 280						
282						
284		A4	0.9	5	6	18
286 288						
290						
292 294	A5		0.9	9	6	17
294	AJ		0.9	9	0	т,
298						
300 302						
304		A6	0.6	< 5	6	17
306 305		110	0.0		0	
310						
312			0 6	10	6	1.0
314 316	A7		0.6	18	6	16
318						
320 322						
324						
326						
328						

TABLE	III

Soil Sample	Composite	Sample	Ag ppm	Au ppb	As ppm	s P
100						
99						
98						
97 96	A8		0.9	18	3	
95	AU		0.5	ΤŪ	5	
94						
93						
92			A A	26	5	1
91 90		A9	4.4	20	5	T
89						
88						
87						-
86	A10		3.9	9	4	1
85 84						
83						
82						
81		All	1.6	18	2	1
80						
79 78						
77						
76	A12		0.9	9	1	1
75						
74						
73 72						
71		A13	1.4	9	6	2
70						
69						
68						
67 66	Al4		1.0	9	6	2
65	177-1		1.0	2	U	_
64						
63						
62		<b>7</b> 1 C	0 0	E	4	
61 60		A15	0.6	5	4	
59						

GEOCH	EMICAL RESUL	TS FROM S	OIL LIN	NE A2		
Soil Sample	Composite	Sample	Ag ppm	Au ppb	As ppm	Sb ppm
58 57 56	Al6		0.6	9	3	6
55 54 53						
52 51 50 49		A17	0.6	5	3	8
48 47 46	A18		1.2	5	4	10
45 44 43						
42 41 40 39		A19	1.8	18	3	12
38 37 36	A20		1.4	26	4	16
35 34 33						
32 31 30 29		A21	1.2	67	11	17
28 27 26	A22		1.3	26	18	17
25 24 23	•					
22 21 20 19		A23	0.8	18	9	14
18 17						

# TABLE III (Cont'd)

GEOCHEMICAL RESULTS FROM SOIL LINE A2

Soil Sample	Composite	Sample	Ag ppm	Au ppb	As ppm	Sb ppm
15 14 13						
12 11 10		A25	1.1	18	4	12
9 8 7 6 5	A26		0.7	9	5	12
4 3 2 1		A27	0.6	35	6	16
150 152 154 156						
158 160 162 164	A28		0.6	18	5	17
166 168 170		A29	0.8	26	5	17
172 174 176 178 180 182	A30		1.0	26	3	13
184 186 188 190 192		A31	0.8	26	3	15
192 194 196 198 200 202	A32		0.6	26	2	14

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# TABLE III (Cont'd)

# GEOCHEMICAL RESULTS FROM SOIL LINE A2

Soil Sample	Composite	Sample	Ag ppm	Au ppb	As ppm	Sb ppm
204 206 208 210 212		A33	0.7	18	3	15
214 216 218 220 222	A34		0.7	26	4	18
224 226 228 230 232 234		A35	0.8	26	5	19
234 236 238 240 242 244	A36		0.8	18	9	20
246 248 250 252 254		A37	0.9	9	13	20
256 258 260 262	A38		1.0	44	13	15
264 266 268 270 272		A39	1.6	18	9	16
274 276 278 280 101	A40		1.6	18	14	21
102 103 104		A41	1.3	26	10	22
NT O I F desetter A						

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# TABLE III (Cont'd)

GEOCHEMICAL RESULTS FROM SOIL LINE A2

Soil Sample	Composite	Sample	Ag ppm	Au ppb	As ppm	Sb ppm
105 106						
107 108 109	A42		1.2	26	2	16
110 111 112		<del></del>			-	
113 114		A43	0.7	18	9	15
115 116 117						
118 119 120	A44		1.0	26	2	14
121 122 123						
124 125 126		A45	1.6	18	2	16
127 128 129	A46		1.5	18	7	15
130 131 132						
133 134 135		A47	1.2	9	5	15
136 137 138						
139 140						

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# TABLE IV

Soil Sample	Composite S	Sample	Ag ppm	Au ppb	As ppm	Sb ppm
363 364 365 366						
367 368 369 370 371	A48 _		1.0	9	7	27
372 373 374 375 376	2	A49	0.8	18	10	36
377 378 379 380 381	A50 _		0.8	35	7	23
382 383 384 385 386	Z	A51	0.8	62	4	21
387 388 389 390 391	A52 _		0.7	9	4	18
392 393 394 395 396	i	A53	0.6	9	2	14
397 398 399 400 401	A54		0.7	18	4	20
402 403 404		A55	0.6	9	6	20

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GEOCI	HEMICAL RESU	LTS FROM S	SOIL L	INE A3		
Soil Sample	Composit	e Sample	Ag ppm	Au ppb	As ppm	Sb PP
405 406						
407						
408				_		
409	A56		0.6	9	4	17
410						
411 412						
413						
414		A57	0.7	18	6	16
415						
416						
417						
418	A58		0.6	18	6	14
419 420	ADO		0.0	TO	0	
421						
422						
423						
424		A59	0.6	18	4	10
425						
426						
427 428						
428	A60		0.8	18	3	18
430						
431						
432						
433		761	0.9	9	8	19
434 435		A61	0.9	9	U	Т.
435						
437						
438						
439	A62		1.0	18	11	19
440		-				
441						
442						
443 444		A63	1.1	18	6	2
551		1100	<u>→</u> ₹ +		-	_
552						

Soil Sample	Composit	e Sample	Ag ppm	Au ppb	As ppm	Sb ppi
596	- <u></u>					
597						
598						
599					-	
600		A73	0.5	25	3	16
601						
602						
603 604						
605	A74		0.5	34	4	17
606	11/4		0.5	54	1	Ξ,
607						
608						
609						
610		A75	0.3	50	4	12
611						
612						
613						
614	A76		0.4	42	4	13
615 616	A70		0.4	42	4	τJ
617						
618						
619						
620		A77	0.5	42	3	14
621						
622						
623						
624			0 4	<b>F A</b>		
625	A78		0.4	59	4	13
626						
627 628						
629						
630						
•••• <u> </u>						

GEOCHEMICAL RESULTS FROM SOIL LINE A3

Soil Sample	Composite Sample	Ag ppm	Au ppb	As ppm	Sb ppm
553 554 555 556 557	A64	1.2	5	10	22
558 559 560 561 562	A65	1.4	9	12	23
563 564 565 566 567	A66	1.3	5	12	21
568 569 570 571 572 573	A67	1.1	9	9	20
574 575 576 577	A68	0.9	50	12	19
578 579 580 581 582 583	A69	0.9	158	12	23
584 585 586 587	A70	0.7	42	5	20
588 589 590 591 592 593	A71	0.7	42	4	20
593 594 595	A72	0.6	42	3	18

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# TABLE V

GEOCHEMICAL RESULTS FROM SOIL LINE B

Soil Sample	Composite	Sample	Ag ppm	Au ppb	As ppm	Sb ppi
1200						
1200						
1202						
1203						
1204				1.0	2	1 2
1205	Bl	<u> </u>	0.4	10	3	13
1206 1207						
1207						
1209						
1210		в2	0.5	10	1	22
1211						
1212						
1213						
1214					-	
1215	B3	<u> </u>	0.3	10	1	17
1216						
1217						
1218 1219						
1220		В4	0.3	10	1	13
1221		<b>D</b> 4	0.0	10	-	
1222						
1223						
1224						
1225	В5		0.2	10	1	10
1226						
1227						
1228						
1229 1230		В6	0.3	5	1	17
1230		bu	0.5	5	-	± '
1232						
1232						
1234						
1235	в7		0.3	5	1	10
1236						
1237						
1238						
1239		ЪQ	0.6	5	1	З
1240 1241		в8	0.0	J	Ŧ	L.
1241						
1242						
+						

GEOCHEMICAL RESULTS FROM SOIL LINE B

Soil Sample	Composite Samp	Ag ppm	Au ppb	As ppm	Sb ppm
1244 1245 1246	В9	0.3	5	1	13
1247 1248 1249 1250 1251 1252	B10	0.2	10	3	7
1253 1254 1255 1256 1257	B11	0.4	10	2	17
1258 1259 1260 1261 1262	B12	2 0.6	5	3	24
1263 1264 1265 1266 1267	B13	0.3	10	1	7
1268 1269 1270 1271 1272	B14	4 0.3	5	9	10
1273 1274 1275 1276 1277	B15	0.3	5	2	7
1278 1279 1280 1281 1282	B1	6 0.3	5	1	10
1283 1284 1285 1286 1287	в17	0.3	5	3	7
1288 MineQuest Exploration A:	ssociates Ltd.				

GEOCHEMICAL RESULTS FROM SOIL LINE B

Soil Sample	Composite Sample	Ag ppm	Au ppb	As ppm	Sb ppm
1289 1290	Bl8	0.3	5	. 1	7
1290	D10	0.5	5	· <b>±</b>	,
1292					
1293					
1294	-10	0 0	-	-	1.0
1295 1296	B19	0.3	5	1	10
1296					
1298					
1299					
1300	B20	0.4	5	3	10
1301					
1302					
1303 1304					
1305	B21	0.4	5	4	13
1306					
1307					
1308					
1309	В22	0.3	5	1	13
1310 1311	B22	0.5	J	Ŧ	тJ
1312					
1313					
1314					
1315	B23	0.2	14	1	10
1316					
1317 1318					
1319					
1320	B24	0.3	5	1	13
1321					
1322					
1323					
1324 1325	B25	0.3	5	1	13
1325		0.5	5	-	10
1327					
1328					
1329			_		
1330	B26	0.3	5	2	13
1331					
1332 1333					
TJJJ					
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GEOCHEMICAL RESULTS FROM SOIL LINE B

		C10	Ag	Au	As	Sb
Soil Sample	Composite	Sampie	ppm	ppb	ppm	ppm
1334 1335 1336 1337	B27		0.2	5	1	7
1338 1339 1340 1341 1342		B28	0.4	5	1	17
1343 1344 1345 1346 1347	B29		no sa	mple		
1348 1349 1350 1351 1352		в30	0.5	5	2	17
1353 1354 1355 1356 1357	B31		0.3	5	1	3
1358 1359 1360 1361 1362		B32	0.2	5	l	10
1363 1364 1365 1366 1367	B33		0.2	10	l	3
1368 1369 1370 1371 1372		B34	0.3	14	l	7
1373 1374 1375 1376 1377	B35		0.4	14	1	7

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GEOCHEMICAL RESULTS FROM SOIL LINE BI

Soil Sample	Composite Sample	Ag ppm	Au ppb	As ppm	Sb ppm
1378 1379 1380 1381 1382	B36	0.3	10	1	10
1383 1384 1385 1386 1387	в37	0.2	10	1	17
1388 1389 1390 1391 1392	ВЗ8	0.4	10	1	13
1393 1394 1395 1396 1397	B39	0.2	5	l	30
1398 1399 1400	B40	0.4	10	1	17

	TAD	<u>le VI</u>				
GEOCH	HEMICAL RESU	LTS FROM	SOIL LI	NE Sl		
Soil Sample		e Sample	Ag ppm	Au ppb	As ppm	Sb ppm
1045						
1044 1043						
1042	60		0.2	5	3	13
1041 1040	S9	······	0.2	J	5	τJ
1039						
1038 1037						
1036		S8	0.5	5	3	20
1035 1034						
1033						
1032	S7		0.4	10	2	20
1031 1030	37		0.1	ŦŬ	-	
1029						
1028 1027						
1026		S6	0.4	10	3	27
1025 1024						
1023						
1022	<b>S</b> 5		1.0	10	6	23
1021 1020	33		T.0	ΞŪ		
1019						
1018 1017						
1016		S4	0.8	10	3	27
1015 1014						
1013						
1012 1011	S3		1.0	10	6	13
1010	65				-	
1009						
1008 1007						_
1006		S2	0.4	5	7	10
1005 1004						
1003						
1002 1001	Sl		0.7	5	5	17

GEOCH	IEMICAL RESU	LTS FROM S	SOIL LI	INE Sl		
<u>_</u>			Ag	Au	As	Sb
Soil Sample	Composit	e Sample	ppm	ppb	ppm	pp
1000						
1046 1047						
1048						
1049 1050		S10	0.2	10	2	13
1050		310	0.2	TO	2	<b>T</b> -
1052						
1053 1054						
1055	S11		0.4	10	3	17
1056 1057						
1058						
1059 1060		S12	0.4	10	1	10
1061						
1062 1063						
1064					_	
1065 1066	S13		0.6	10	1	17
1067				•		
1068 1069						
1070		S14	1.0	10	1	
1071						
1072 1073						
1074	<b>C1 F</b>		0.6	10	5	18
1075 1076	S15		0.0	τu	,	т
1077						
1078 1079						
1080		<b>S</b> 16	1.2	10	1	13
1081 1082						
1083						
1084 1085	S17		0.8	10	2	10
1009	011					

	TAB	<u>LE VI</u> (Cor	nt'd)			
GEOCHEI	MICAL RESU	LTS FROM S	SOIL LI	INE S1		
Soil Sample	Composit	e Sample	Ag ppm	Au ppb	As ppm	Sb ppm
1086 1087 1088 1089 1090 1091 1092 1093		S18	0.7	10	1	17
1094 1095 1096 1097	S19		0.5	10	1	17
1098 1099 1100 1101 1102		S20	0.7	10	2	17
1103 1104 1105 1106 1107	S21		0.6	5	2	13
1108 1109 1110 1111 1112		S22	0.5	10	1	10
1113 1114 1115	S23		0.3	5	2	10

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#### 8. ROCK SAMPLING

Certain rock samples collected in the course of prospecting or geological examination were sampled and sent for assay.

Results of the analyses together with rock type and type of sample are listed in Table VII. No encouraging values were obtained.

Except for two samples taken in the approximate vicinity, the area thought likely to be the source of geochemical anomalies on soil line A2 and A3 was not sampled.

11

#### TABLE VII

ROCK SAMPLES

SAMPLE NO.	TYPE OF SAMPLE	ROCK TYPE	GOLD,ppb	GOLD,oz/t
QRL 02 QRL 03 QRL 08 QRL 09 QRL 10	Grab Grab Chip "	Lithic tuff Lithic tuff Diorite Diorite "	14 14	<0.005 "
QRL 11 QRL 12 QRL 13 QRL 14 QRL 15	Chip Chip "	Diorite Diorite " "		<0.005 " " "
QRL 16 QRL 18 QRL 19 QRL 20 QRL 21	Chip Grab Grab Grab Grab	Metasediment Lithic tuff Lithic tuff Lithic tuff Lithic tuff	14 14 14	
QRL 23 QRL 24	Grab Grab	Lithic tuff altered Lithic tuff altered	14 10	
QRL 26 RB 82 Q 00 RJ 006 Q	" 4 Grab Chip	" Lithic tuff Quartz vein	14	<0.002
RJ 010 Q RJ 011 Q RJ 012 Q RJ 013 Q RJ 014 Q	Chip Chip "	Quartz vein Lithic tuff " "		0.006 <0.002 "

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#### 9. PROSPECTING

Locations of the gold occurrences explored in 1914 and 1937 were not found although, contrary to initial expectations, most of the occurrences are now thought to lie to the south of Jim Kelly Creek in pre-Tertiary rocks.

A rusty zone on the south side of the cirque at the head waters of Jim Jelly Creek is thought likely to be the location of the Spokane and Vancouver showings. This requires prospecting and sampling. 12

#### 10. CONCLUSIONS

- The regional setting: a major, probably transcurrent fault that may have been active during volcanism, a volcanic-sedimentary basin, and ring-like fracture systems suggestive of a caldera, are favourable features.
- The pyrite rich, altered tuffaceous rocks are a prospective host for gold.
- 3. This very preliminary geochemical work provides encouragement in the form of coincident anomalies for gold, silver, arsenic and antimony on two of the five lines sampled (A2 and A3).

13

#### 11. RECOMMENDATIONS

- That the ground topographically above the anomalies at the east ends of Lines
   A2 and A3 be explored by geochemical soil sampling on a close-spaced grid.
- 2. That efforts to locate the Spokane and Vancouver showings worked in 1914 be continued and that in particular the rusty zone in the cirque at the head waters of Jim Kelly Creek be explored by prospecting and sampling.

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Berman, R.G., and Armstrong, R.L., 1980 Geology of the Coquihalla Volcanics Complex, southwestern British Columbia Can. J. Earth Sci 17, pp 985-995

Cairnes, C.E., 1924 Coquihalla Area, British Columbia G.S.C. Memoir 139

-MineQuest Exploration Associates Ltd.-

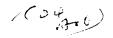
### APPENDIX I

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Laboratory Reports

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-MineQuest Exploration Associates Ltd.-



ENVIRONMENTAL TESTING GEOCHEMISTRY ANALYTICAL CHEMISTRY ASSAYING

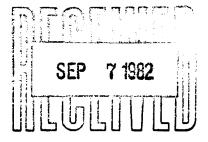


LABORATORIES LTD. 783 Notre Dame Drive, Kamloops, B.C. V2C 5N8 - Telephone (604) 372-9700 Telex: 048-8393

September 2, 1982

GEOCHEMICAL ANALYSIS

<u>CLIENT</u>: Mine Ouest Exploration Associates Ltd. 311 Water Street VANCOUVER, B. C. V6B 1B6



ATTENTION: R. V. Longe

RE: "Project Account COO"

SAMPLE IDENTIFICATION: 377 soil samples received August 6, 1982

ASSAY CERTIFICATE NUMBER: ET139

Description	<u>Ag (ppm)</u>	Au (ppb)	<u>As (ppm)</u>	<u>Sb (ppm)</u>
A1	0.7	26	3	17
A2	0.9	18	2	19
A3	0.8	9	4	17
A4	0.9	5	6	18
A5	0.9	9	6	17
A6	0.6	<u>/</u> 5	6	17
- A7	0.6	18	6	16
A8	0.9	18	3	7
A9	4.4	26	5	16
A10	3.9	9	4	13
A11	1.6	18	2	10
A12	0.9	9	1	16
A13	1.4	9	6	24
A14	1.0	9	6	20
A15	0.6	5	4	8

Mine Quest Exploration

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- 2 -

September 2, 1982

Description	<u>Ag (ppm)</u>	<u>Au (ppb)</u>	<u>As (ppm)</u>	<u>Sb (ppm)</u>
A16	0.6	9	3	6
A17	0.6	. 5	3	8
A18	1.2	5	4	10
A19	1.8	18	3	12
A20	1.4	26	4	16
A21	1.2	67	11	17
A22	1.3	26	18	17
A23	0.8	18	9	14
A24	1.0	18	10	13
A25	1.1	18	4	12
A26	0.7	9	5	12
A27	0.6	35	6	16
A28	0.6	18	5	17
A29	0.8	26	5	17
A30	1.0	26	3	13
A31	0.8	26	3	15
A32	0.6	26	2	14
A33	0.7	18	3	15
A34	0.7	26	4	18
A35	0.8	26	5	19
A36	0.8	18	9	20
A37	0.9	9	13	20
A38	1.0	44	13	15
A39	1.6	18	9	16
A40	1.6	18	14	21
A41	1.3	26	10	22
A42	1.2	26	2	16
A43	0.7	18	9	15
A44	1.0	26	2	14
A45	1.6	18	2	16

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September 2, 1982

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Description	<u>Ag (ppm)</u>	<del>Ag</del> (ppb)	<u>As (ppm)</u>	<u>Sb (ppm)</u>
A46	1.5	18	7	15
A47	1.2	9	5	15
A48	1.0	9	7	27
A49	0.8	18	10	36
A50	0.8	35	7	23
A51	0.8	62	4	21
<sup>· /</sup> A52	0.7	9	4	18
A53	0.6	9	2	14
A54	0.7	18	4	20
A55	0.6	9	6	20
A56	0.6	9	4	17
A57	0.7	18	6	16
A58	0.6	18	6	14
A59	0.6	18	4	16
A60	0.8	18	3	18
A61	0.9	9	8	19
A62	1.0	18	11	19
A63	1.1	18	6	23
A64	1.2	5	10	22
A65	1.4	9	12	23
A66	1.3	5	12	21
A67	1.1	9	9	20
A68	0.9	50	12	19
A69	0.9	158	12	23
A70	0.7	42	5	20
A71	0.7	42	4	20
A72	0.6	42	3	18
A73	0.5	25	3	16
A74	0.5	34	4	17
A75	0.3	50	4	12

Mine Quest Exploration

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- 4 -

September 2, 1982

<u>Description</u>	Ag (ppm)	Au (ppb)	<u>As (ppm)</u>	<u>Sb (ppm)</u>
A76	0.4	42	4	13
A77	0.5	42	3	14
A78	0.4	59	4	13
Comp. 135-139	1.1	50	3	15

NOTES: No samples received for the following numbers: 5, 25, 26, 65-67, 92, 106-110, 150, 238, 330, 362, 365, 370-373, 388, 396, 398, 443, 568, 584, 624

> Insufficient sample for the following numbers: 51(A-17), 92(A-8 & A-9)

 ${\cal N}$  ECO-TECH LABORATORIES LTD. Ken Swanson, Chief Assayer

KS/CK/mil

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تن ن **ENVIRONMENTAL TESTING** GEOCHEMISTRY ANALYTICAL CHEMISTRY ASSAYING LABORATORIES LTD. 783 Notre Dame Drive, Kamloops, B.C. V2C 5N8 - Telephone (604) 372-9700 Telex: 048-8393 November 2, 1982

#### GEOCHEMICAL ANALYSES

CLIENT: MineQuest Exploration Associates Ltd. 311 Water Street VANCOUVER, B. C. V6B 1B8

ATTENTION: R. V. Longe

SAMPLE IDENTIFICIATION: 306 soil samples and 10 rock samples received October 19, 1982

CERTIFICATE OF ANALYSES NUMBER: ET155

Description	<u>Ag (ppm)</u>	<u>Au (ppb)</u>	<u>As (ppm)</u>	<u>Sb (ppm)</u>
Comp. S1	0.7	<u>/</u> 5.	5.	17.
S2	0.4	<u>/</u> 5.	7.	10.
S3	1.0	10.	6.	13.
S4	0.8	10.	3.	27.
\$5	1.0	10.	6.	23.
S6	0.4	10.	3.	27.
S7	0.4	10.	2.	20.
S8	0.5	<u>/</u> 5.	3.	20.
S9	0.2	<u>/</u> 5.	3.	13.
S10	0.2	10.	2.	13.
S11	0.4	10.	3.	17.
S12	0.4	10.	1.	10.
S13	0.6	10.	<u>/</u> 1.	17.
S14	1.0	10.	<u>/</u> 1.	7.
S15	0.6	10.	5.	18.

MineQuest Exploration Associates - 2 -

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November 2, 1982

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Description	Ag (ppm)	<u>Au (ppb)</u>	<u>As (ppm)</u>	<u>Sb (ppm)</u>
Comp. S16	1.2	10.	1.	13.
S17	0.8	10.	2.	10.
S18	0.7	10.	<u>/</u> 1.	17.
S19	0.5	10.	1.	17.
S20	0.7	10.	2.	17.
S21	0.6	<u>/</u> 5.	2.	13.
S22	0.5	10.	1.	10.
S23	0.3	<u>/</u> 5.	2.	10.
B1	0.4	10.	3.	13.
<b>B2</b> .	0.5	, <u>1</u> 0.	<u>/</u> 1.	22.
83	0.3	10.	<u>/</u> 1.	17.
B4	0.3	10.	<u>/</u> 1.	13.
B5	0.2	10.	1.	10.
B6	0.3	<u>/</u> 5.	<u>/</u> 1.	17.
87	0.3	<u>/</u> 5.	1.	10.
B8	0.6	<u>/</u> 5.	<u>/</u> 1.	3.
B9	0.3	<u>/</u> 5.	<u>/</u> 1.	13.
B10	0.2	10.	3.	7.
B11	0.4	10.	2.	17.
B12	0.6	<u>/</u> 5.	3.	24.
B13	0.3	10.	<u>/</u> 1.	7.
B14	0.3	<u>/</u> 5.	9.	10.
B15	0.3	<u>/</u> 5.	2.	7.
B16	0.3	<u>/</u> 5.	<u>/</u> 1.	10.
B17	0.3	<u>/</u> 5.	3.	7.
B18	0.3	<u>/</u> 5.	1.	7.
B19	0.3	<u>/</u> 5.	1.	10.
B20	0.4	<u>/</u> 5.	3.	10.
B21	0.4	<u>/</u> 5.	4.	13.
B22	0.3	<u>/</u> 5.	<u>/</u> 1.	13.

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MineQuest Exploration Associates - 3 -

November 2, 1982

Desc	ription	<u>Ag (ppm)</u>	<u>Au (ppb)</u>	As (ppm)	<u>Sb (ppm)</u>
Comp	. B23	0.2	14.	<u>/</u> 1.	10.
	B <b>24</b>	0.3	<u>/</u> 5.	1.	13.
	B25	0.3	<u>/</u> 5.	1.	13.
	B26	0.3	<u>/</u> 5.	2.	13.
	B27	0.2	<u>/</u> 5.	1.	7.
	B28	0.4	<u>/</u> 5.	1.	17.
	B29 No Sam	ple			
	B30	0.5	<u>/</u> 5.	2.	17.
	B31	0.3	<u>/</u> 5.	1.	3.
	B32	0.2	<u>/</u> 5.	1.	10.
	B33	0.2	10.	1.	3.
	B34	0.3	14.	1.	7.
	B35	0.4	14.	<u>/</u> 1.	7.
	B3 <b>6</b>	0.3	10.	<u>/</u> 1.	10.
	B37	0.2	10.	1.	17.
	B38	0.4	10.	1.	13.
	B39	0.2	<u>/</u> 5.	<u>/</u> 1.	30.
	B40	0.4	10.	1.	17.
QRL	02	_	14.		-
•	03	-	14.	-	-
	16	. –	10.	-	-
	18	-	14.	-	-
	19		14.	-	-
	20		10.	-	-
	21	-	10.	<b>-</b> .	-
	23	-	14.	-	-
	24	-	10.	-	-
	26		14.	-	-

NOTE: <u>/</u> = less than

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ECO-TECH LABORATORIES LTD Sandra M. Taylor, M.Sc. Chief Chemist

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-IN ACCOUNT WITH- Minequest Explor 311 Water St. Vancouver, B.C. Attention:		e. Ltd.	Sa Re Fo Ar	mples Arrived port Complete r Project:	: ed: Augus ayer: D.C.	
		FIRE A				
Sample Marking	Au oz_/st					
820718 RL 08	<.005					
09	< .005					•
10	< .005					
11	< .005					
12	< .005					
13	< .005					
14	< .005					
820718 RL 15	<.005		<u> </u>			
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VANGEOCHEM LAB LTD. 1521 PEMBERTON AVE., NORTH VANCOUVER, B.C., CANADA V7P 2S3

#### TELEPHONE: 988-2172 AREA CODE: 604

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#### -IN ACCOUNT WITH-

Minequest Exploration Assoc. Ltd. 311 Water St. Vancouver, B.C. V6B 1B8 Attention:

Report No: 82 - 58 - 001 Samples Arrived:	Page 1 of <b>1</b>
Report Completed: August	5, 1982
Analyst: Assayer: D.C.	Joh# 82 - 121

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		FIRE A	SSAY	•		
Sample Marking	Au oz/st					
820718 RL 08	oz /st <.005					
09	< .005					
10	<.005					·
11	< .005					
12	<.005					
13	< .005					
14	<.005					
820718 RL 15	< .005					
1						
					UG 6 1	
						c
REMARKS:					Signed:	Det C.
% Mo x 1.6683 = % MoS <sub>2</sub> 1 Tr	oy oz./ton = 34.28	3 ppm	1 ppm = 0.00	01%	Register	ed Provincial Assayer

All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.



VANGEOCHEM LAB LTD. 1521 PEMBERTON AVE., NORTH VANCOUVER, B.C., CANADA V7P 2S3

#### TELEPHONE: 988-2172 AREA CODE: 604

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# Certificate of Analyses

#### -IN ACCOUNT WITH-

Minequest Exploration Assoc. Ltd. 311 Water St. Attention:couver, B.C. V6B 1E8

Report No: 82 - Samples Arrived:	58 - 001	Page 1	of 1
Report Completed: For Project:	August	5, 1982	
Analyst: Assau	r: D.C.		

6360	1
0.30 1	
	6360

		FIRE	ASSAY		1
Sample Marking	Au 92./st				
830718 RL 03	< .005				
09	< .005				
	87/+ <sup>-</sup> - 1				
10	<.005				
11	< .005			C	
12	<.005			1.1	
1. <b>1</b> .	1.000				
13	< .005				
14	- 005				
14	<.005				
820718 RL 15	<.005				
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All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

Bondar-Clegg & Company Ltd. 130 Pemberton Ave. North Vancouver, B.C. Canada V7P 2R5 Phone: (604) 985-0681 Telex: 04-352667	BOND	AB-CLEC	Certificate of Analysis
WURRURDER: 422-1991 CLIENT: MINE QUEST HALL COPIES TO:	.)a ./		
NINE QUEST EXPLORATION ASSOCIATES LTD. c/o R V LONGE 311, WATER STREET VANCOUVER B.C. VAB 186			
FILE COPY			
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Bondar-Clegg & Company Ltd. 130 Pemberton Ave. North Vancouver, B.C. Canada V7P 2R5 Phone: (604) 985-0681 Telex: 04-352667

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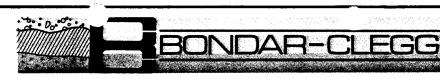
REPORT: 422-1991	
FROM: MINE QUEST EXPLORATION ASSOCIATES LTD. DATE: 27-00-82 PROJECT: COQ	SUBMITTED BY: R V LONGE
LOWER ELEMENT DETECTION LIMIT EXTRACTION METHOD AU .002 OPT	SIZE FRACTION SAMPLE TYPE SAMPLE PREPARATION -100 ROCKS CRUSH,PULVERIZE -1
REPORT COPIES TO: R V LONGE	INVOICE TO: R V LONGE
	l

Bondar-Clegg & Company Ltd. 130 Pemberton Ave. North Vancouver, B.C. Canada V7P 2R5 Phone: (604) 985-0681 Telex: 04-352667

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Certificate of Analysis

REPORT: 422-1991	PROJECT: COQ	PAGE 1
SAMPLE ELEMENT	Au Opt	NOTES
R 5529004 R 0.90060 R 0.90100 R 0.90110 R 0.90110 R 0.90120	<0.002 <0.002 0.006 <0.002 <0.002 <0.002	
R 830130 R 930140	<0.002 <0.002	
	-	1
		Registered Assauer, Province of British Columbia

#### APPENDIX II

Laboratory Methods

-MineQuest Exploration Associates Ltd.-



#### GEOCHEMICAL LABORATORY METHODS

#### SAMPLE PREPARATION

1. Soil or sediment samples are dried at 60<sup>0</sup>C\*, the lumps of soil are broken up on a bucking board and the entire sample is seived through an 80 mesh screen.

2. Rock samples are crushed and pulverized to -100 mesh.

#### GEOCHEMICAL ANALYSIS FOR Cu, Pb, Zn, Ag, Sb, Ni, Co, Cd

1.0 gram of sample is leached in 3 ml  $HNO_3$  overnight at room temperature. The sample is brought up to  $90^{\circ}$ C in a water bath, 1.5 ml HCl is added, and the leaching is continued for a further 90 minutes. The sample is then cooled, diluted to 20 ml with distilled water and the above elements are determined on a Perkin-Elmer Model 303 Atomic Absorption Spectrophotometer.

Minimum	Reportable	Concentrations
Element		ppm
Cu		1.
Pb		2.
Zn		1.
Ag		0.2
Sb		1.
Ni		2.
Со		2.
Cd		0.02

<sup>\*</sup> Samples to be analyzed for mercury are air dried to prevent losses.

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#### GEOCHEMICAL ANALYSIS FOR Au

The gold is collected in a silver bead through inquartation and conventional fire assaying of 10 grams of material. The bead is digested in aqua regia in a water bath at  $90^{\circ}$ C, the gold is then extracted into MIBK and determined by atomic absorption.

Minimum Reportable Concentration 5 ppb

#### GEOCHEMCIAL ANALYSIS FOR As

.25 gram of sample are taken to dryness in a mixture of  $HNO_3$  and  $HCIO_4$ . Excess  $HNO_3$  is expelled with HCl and the arsenic is scrubbed into a solution of pyridine and SDDC to be determined colorimetrically on a spectrophotometer.

Minimum Reportable Concentration 1 ppm

#### APPENDIX III

Statement of Qualifications

-MineQuest Exploration Associates Ltd.

#### Statement of Qualifications

I, R.V. Longe, hereby certify that:

- I am a consulting geologist with a business office at 311 Water Street, Vancouver, B.C. V6B 1B8.
- I am President of MineQuest Exploration Associates Ltd., a company performing geological consulting and contract exploration services for the mineral exploration industry.
- 3. I am a graduate of Cambridge University, (B.A. Hons., 1961 Natural Sciences Tripos, Parts 1 & 2, Geology) and of McGill University (M.Sc. 1965).
- I am a Fellow of the Geological Association of Canada, and a member on the Canadian Institute of Mining and Metallurgy.
- 5. I have practiced my profession as geologist for 16 years.
- The information, opinions and recommendations in this report are based on personal familiarity with the property and direction of the programme described.

Signed \_\_\_\_\_\_/ /

(R.V. Longe)

dated at Vancouver, B.C. this 20th Day of December 1982

#### APPENDIX IV

Cost Statement

-MineQuest Exploration Associates Ltd.

# Cost Statement

# COQUIHALLA - 1982

FEES, SALARIES, WAGES (See Schedule	I)	
MQ Personnel Temporary Staff	9,651.00 3,967.00	13,618.00
TRAVEL, TRANSPORT		
Rent. Veh. Cas. Rent. Veh. MQ	338.00 445.00	
Cas. Chart. Air. Helicopter	1,877.00	
Taxis Meals, Accom., Exp. Acct.	23.00 266.00	
Other	27.00	2,976.00
RENTALS		
Radio	178.00	
MQ Field Chrgs. MQ Camp Equip. Chrgs.	189.00 462.00	
Other Equipment	325.00	1,154.00
MATERIAL AND SUPPLIES		
Fuels, Lubri., Camp Fuels, Lubri., Veh.	89.00 30.00	
Groc., Kit. Sup., Camp	995.00	
Food, Accom., Field General Supplies	310.00 1,015.00	
Other	73.00	2,512.00
ANALYSES		
Geochemical	2,235.00	2,235.00
DEPOSITS, OPTION, FIN		
Claims, Record & Renewal Fees	880.00	
Licence Fees	26.00	906.00
COMMUNICATIONS		
Tel./Telex/Telegr. Courier/Postage	88.00 27.00	
Data/Map/Samp. Storage	15.00	130.00
	c/fwd.	23,531.00
		/2

DRAFTING, REPROGRAPHICS, REPORTING		
Drafting	500.00	
Reprographics	133.00	
Xerox - in house	19.00	
Maps/Reports/Publications Purchased	25.00	
Report Prep., MQ Staff/Sup.	20.00	697.00
MISCELLANEOUS	•	
Stationery - Field	50.00	
Casual Staff	25.00	75 00
	23.00	75.00
		24,303.00
		<u> </u>

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Balance Forward

23,531.00

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# SCHEDULE I TO COST STATEMENT

# COQUIHALLA 1982

MQ Personnel

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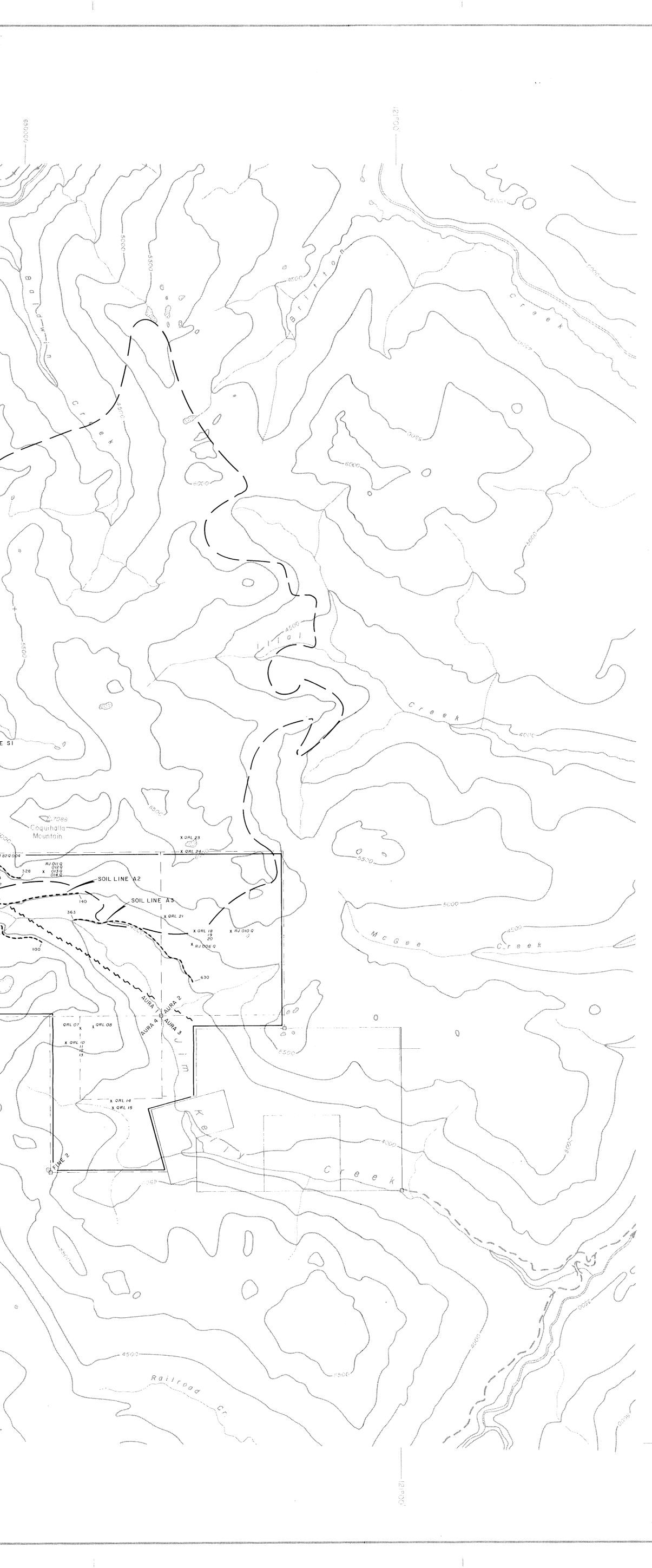
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	96 days - 8.04 days 04 days - 1.29 days	
November 1982		
December 1982		
	15.82 days @ \$425.00	6723.50
	70 days - 7.63 days	
	11.71 days @ \$250.00	2927.50 9,651.00
Temporary Staff		

R. Needham	- July 6.0 days at \$62.50	375.00
S. Siemens	<ul> <li>July 7.0 days at \$63.75</li> </ul>	446.25
	Sept. 3.5 days at \$63.75	223.14
R. Bilquist	- July 7.0 days @ \$110.57	774.00
P. Philion	- July 7.0 days at \$62.50	437.50
B. Sinclair	- July 6.0 days at \$87.50	525.00
D. Turner	- July 9.0 days at \$62.50	562.50
J. Walsh	- Sept. 2.5 days at \$62.50	156.25
E. Alionis	- Sept. 2.5 days at \$62.50	156.25
M. Hislop	- Sept. 2.5 days at \$62.50	156.25
M. Hislop	- Sept25 Hrs. at \$ 8.92	2.23
R. Siemens	- Sept.16.75 Hrs. at \$ 9.11	152.63 3,967.00

13,618.00

• 5490000 -----ØIL LINE S SOIL LINE À 49° 30<sup>°</sup> -----r e e k All Constanting and the second s .....  $\sim$   $\sim$ O L 5480000 ------0 .



\_\_\_\_\_ 49°30'

LEGEND

------ ------ Outline of Tertiary volcanic complex

~~~~~~~~~ Fault

\_\_\_\_\_Geochemical soil line and numbers of terminal samples

·····Rock Sample Location XQRL 20

·····Outline of claims to which work was applied

·····Claims on which work was done

· ·Boundary of Other Claim ( Location Approximate )

··· Legal Corner Post

5480-06C

PLAN No. 452 VISEQ .....

