1081

REPORT ON

SAN JOSE AND ALAMO CLAIM GROUPS

SAN JOSE MINES LTD. (N.P.L.)

FRACTURE DENSITY ANALYSIS AND RECONNAISSANCE GEOCHEM SURVEY

BY

D.A. CHAPMAN & ASSOCIATES LIMITED

#2 - 515 Granville Street,
Vancouver 2, British Columbia.

APRIL, 1967

STATEMENT OF QUALIFICATIONS

The following report covers geochemical and photogeological studies carried out under my direction and approval on the San Jose and Alamo Group by J. Ashton and D.A. Chapman.

J. Ashton is a graduate engineer who has taken a great interest in the development of mining properties. He supervised the soil sampling for Nicola Mines and in my opinion is fully capable of doing an intelligent job of sampling.

D.A. Chapman is a technical school graduate who has devoted fifteen years to photogrammetry and photogeological studies as follows:

5 years in photogrammetry with Photographic Surveys

4 years with a consulting photogeology firm in Alberta

3 years with a firm of geological and mining consultants in Vancouver

3 years prospecting and on air photo interpretation in a consulting capacity.

His work speaks for itself and the writer is happy to submit it for acceptance as credit for assessment work. The current results of trenching on which a report is not yet available are reported as encouraging.

J. A. Mitchell
Professional Engineer.

Twenty-first April, 1967, Vancouver, B.C.

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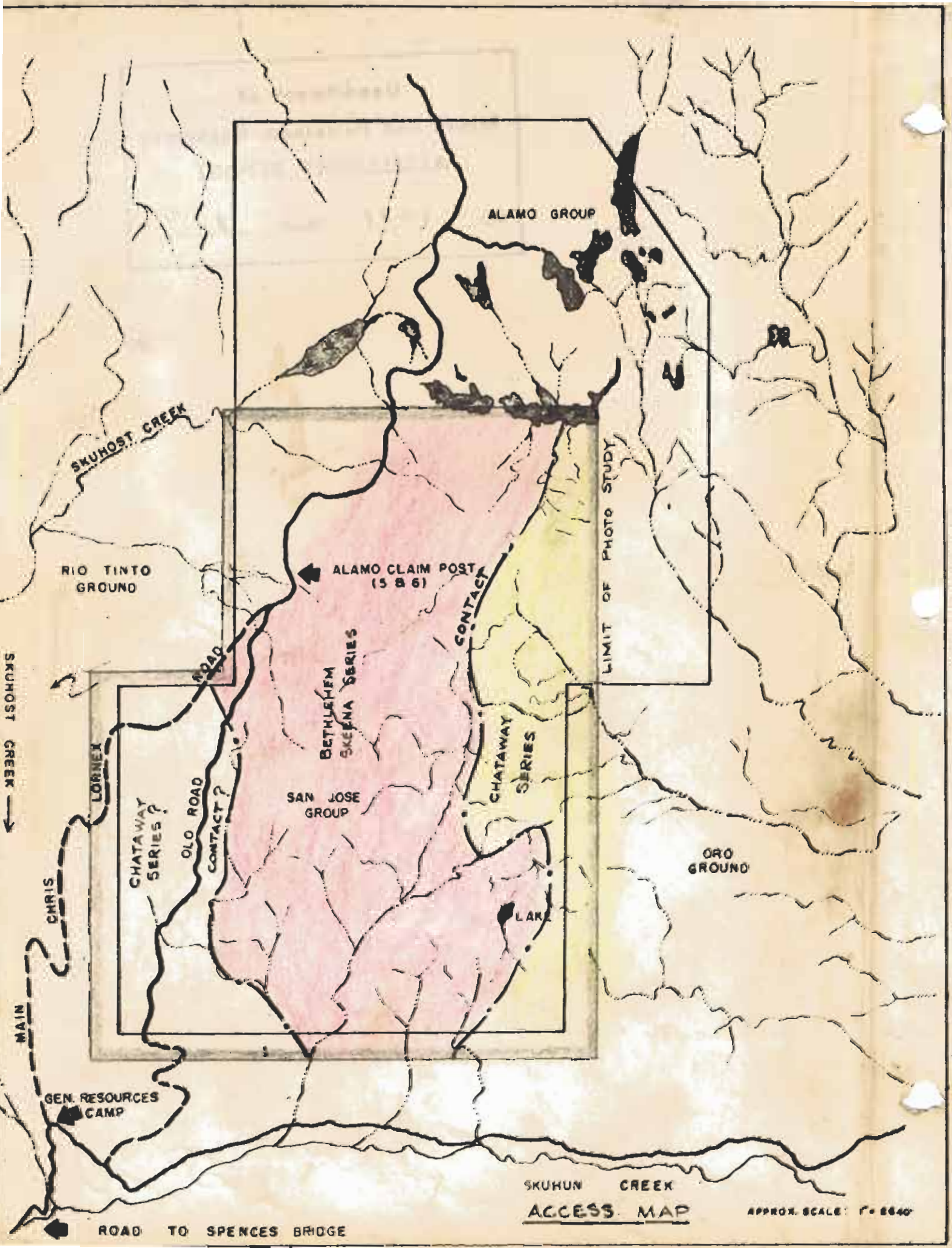
MAPS IN FOLDER

NOTE: See Page 6A for Geochem Procedure.

Access MAP #1


ALAMO GROUP
SKUHOST CREEK
RIO TINTO GROUND
ALAMO CLAIM POST (5 & 6)
CONTACT
LIMIT OF PHOTO STUDY
ROAD
BETHLEHEM SKEENA SERIES
SKUHOST CREEK
LORNEX
CHATAWAY SERIES?
OLO ROAD
CONTACT?
SAN JOSE GROUP
CHATAWAY SERIES
ORO GROUND
CHRIS
LAKE
MAIN
GEN. RESOURCES CAMP
SKUHUN CREEK
ACCESS MAP
APPROX. SCALE: 1" = 8640'
ROAD TO SPENCES BRIDGE

GEOCHEM COMMENTS

The geochem survey of the San Jose claims is a reconnaissance standard only. The lines were cut on 500-foot spacings and samples along these lines were taken at intervals of 200 feet.

The soils were collected under the supervision of Mr. J. Ashton during late September and early October of 1966.

The sampled horizon was below the podsol, at a depth of three to four inches. The soils covering the area are for the most part young and do not appear to have been excessively leached. e.g. The podsol layer varies from one-half inch to zero. This would indicate good drainage of the soil layer as well as a light rainfall.

From the samples taken, where organic material was combined values rose accordingly. Where this occurs has been marked on the map. I suspect that a botanical approach to the geochemical surveys in the future for this area might be rewarding because the metallic content in the organic material has not been leached into the soil. The results here would indicate that the vegetation has a high tolerance for copper and may well be the medium for geochemical tests.

A possible anomalous zone of wide extent in the northwest corner of the area is indicated. A second anomaly at Line 7 near the Base Line (check sample area) warrants investigation.

The lower order of values along Line 10 and 11 in association with copper stains found in the quartz monzonite and associated rock alterations indicate a detailed geochem survey should be made of the area.

All the samples were treated for moly. The background was less than .5 ppm, a few samples were above 1 ppm and no more than 2½ ppm. However, a series above 1 ppm orient and appear associated in the anomalous zone previously mentioned.

In the areas where copper stain was found in the rock, sample values were normal or below normal, suggesting a suppressed pH factor.

The information from the field books has been tabled, copies of which are attached to this report.

All samples were treated at T.S.L. Laboratories Limited.
Mo. determined by dithiol method, hot HCl acid extraction.
Cu. determined by Atomic Absorption Spectrophotometer, hot HCl acid extraction.

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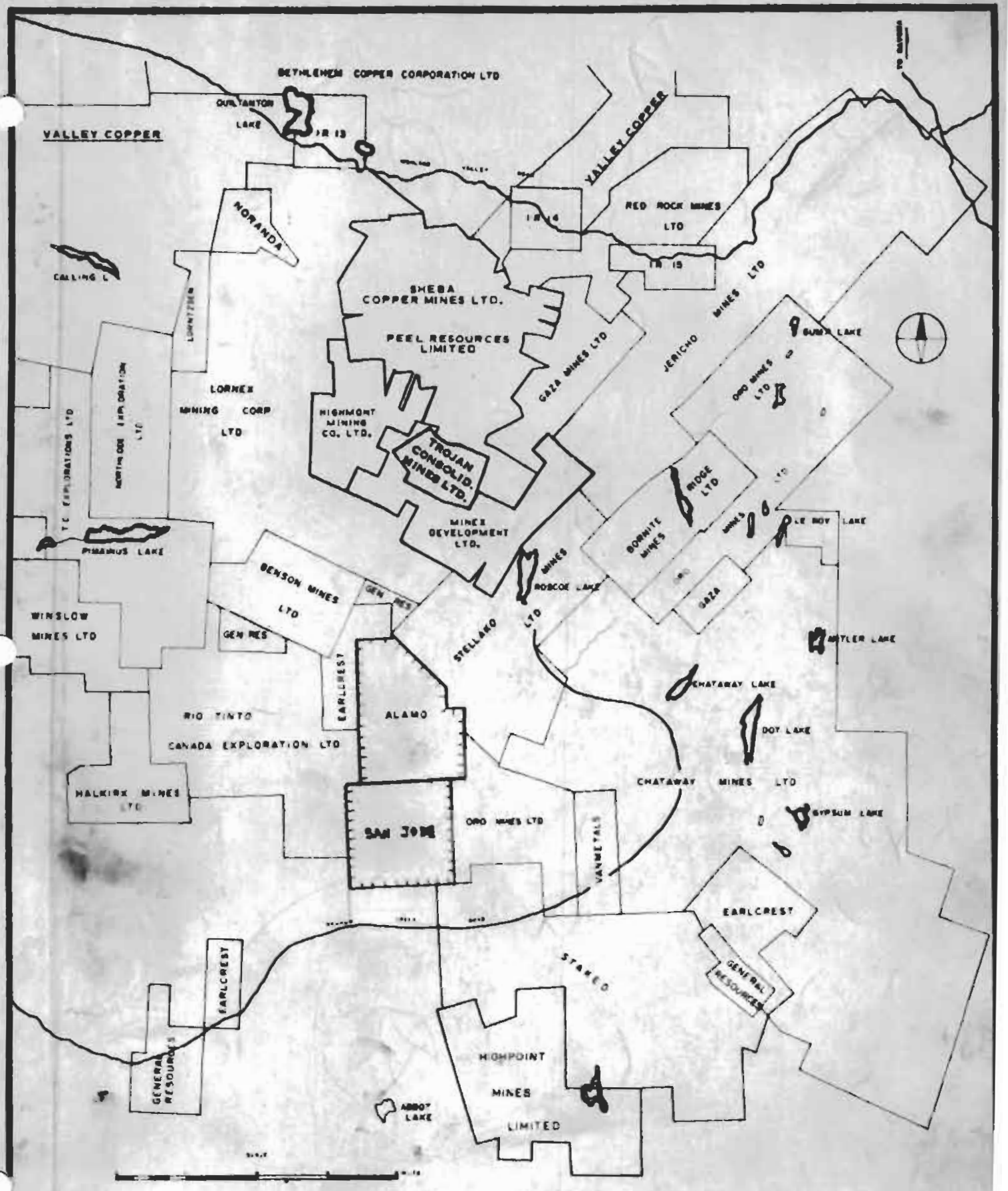
BETHLEHEM COPPER CORPORATION LTD
VALLEY COPPER
VALLEY COPPER
NORANDA
SHEBA COPPER MINES LTD.
PEEL RESOURCES LIMITED
HIGHMONT MINING CO. LTD.
TROJAN CONSOLID. MINES LTD.
GAZA MINES LTD
RED ROCK MINES LTD
JERICHO MINES LTD
LORNEX MINING CORP LTD
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CHATAWAY MINES LTD
EARLCREST
HIGHPOINT MINES LIMITED
STAKED
HALKIRK MINES LTD
GENERAL RESOURCES
ABBOT LAKE
HIGHLAND VALLEY PROPERTIES

B.A. Chapman & Associates Limited
#2 - 515 Granville St.,
Vancouver 2, B.C.

Attention: Mr. J.A. Mitchell, P.Eng., April 3, 1967.
Consulting Engineer,
San Jose Mines Ltd.

I respectfully submit this report on the San Jose and Alamo claim groups for your approval.

The claims are approximately 16 miles east-southeast of Spences Bridge, in the Kamloops Mining Division, Highland Valley area of British Columbia. They lie at an elevation of approximately 4,500 feet, with drainage provided by Skuhost Creek on the west and Skuhun Creek on the east and south.

Attached is an index map showing access to the claims.

A brief explanation of the analytical methods would help in your evaluation of the results of the Fracture Density Analysis.

Tectofacies units as opposed to lithologic units are zones where the tectonic aspect of the rock are similar but not necessarily the lithologic facies. In general, these units will be identical when the stress across a similar rock facies is uniformly applied. Locally, a sharp differential in stress will produce a variable tectonic unit within the same rock type. This tectonic unit will express the characteristics of the rock as well as the reaction induced by the local stress.

Tectofacies analysis of fracture density patterns attempts to relate quantitatively the relation of lateral varying tectonic aspects of the surface patterns to the reaction to stress within the area by

(a) Bulk modulus - change in volume by hydrostatic pressures

(b) Shear modulus - change in shape by resultant force directions.

The hypothesis assumes that a change of hydrostatic pressure relative to a rupture by shear stress is a continuous and relative process that effects thermo dynamically the chemical and mechanical disequilibria within the earth's crust.

The permeability map is based on fracture density analyzed for the relative effects of alteration. The anomalous zones are assumed to be those areas that carry a trending average indicating the apparent fractures are less visible and that this phenomena is due to the effect of the zone's susceptibility to erosion and blanketing by clay minerals dominant in the argillic facies of alteration.

The apparent shear map is essentially a measured effect related to the frequency of coarse fracturing as a result of strain. An observed value is measured against the values surrounding it. A ratio is determined and considered to be a measurement of the visual coarse fractures.

The overlay that accompanies the map is based on probability. The total area is related to a measured stress reaction throughout the

area with the hypothesis that the central tendency of diffusion relative to the role of water in a rock melt and the free energy gradients created by differences of stress probably will occur through the zones of medium stress. That is to say the process of granitization, plutonism, etc., is toward homogenization and chemical equilibrium. The equi-potential of water dictates the diffusion processes related to stress within the magma chamber. Thus water diffuses and distributes itself and tends to concentrate in regions of lowest pressures and temperatures.

A brief history of this property, with relation to its selection as a prospect, should be noted.

The San Jose group was specifically selected following a reconnaissance air photo study of a portion of the Highland Valley. The structures in the area appeared similar to those structures observed in air photos of the Bethlehem porphyry situation. Prior to any field investigation by the writer, a fracture density study of 1320 photography resulted in delineating a target area centered in the San Jose group. When the ground became available, the property was staked and a reconnaissance geochem survey was initiated.

A field crew sampled only part of the target area but the results appeared encouraging. Rock types brought back indicated favourable geology and structures that deserved a detailed analysis from photography at a scale of 500 feet to the inch.

CONCLUSIONS

1. The total probability map appears to focus at the intersection of a conjugate linear system striking northeast and southwest. This coincides with a deviation anomaly in the permeability map and is supported by anomalous copper values which generally trend southwest and due north. It also coincides with anomalous moly values that strike in a northeast direction.

I would interpret the tectonic enclave within the probability zone as a young stock, a segregation or breccia. The contact zones are indicative of the argillic-K silicate facies of Creasey and are the most probable to host possible ore.

Two important facts relative to what has been found to date in the Highland Valley should be noted. Little of the exposed outcrop at Bethlehem showed high copper values and to my knowledge were not indicated by a colour anomaly. The ore bodies essentially were found by stripping areas of overburden in topographically depressed structures indicating the probable susceptibility to erosion of the K-feldspar and kaolinized zone.

Secondly, the known ore situations at both Lornex and Highmont are structurally controlled.

2. A second target on the western limit of the claims has strong supporting geochem copper values. To the east of this zone, and indicated on the geochem map, copper stain in the form of malachite was found. The geochem value at this location is not impressive.

3. The third target appears at the southernmost portion of the claims where copper stain was found and is not supported by good geochem values at the immediate location. (See geochem comments.)

It would appear from the rock types found and from air photo interpretation, that two ages of intrusive are definitely involved and a possible third age indicated by the tectonic enclaves.

An apparent north-striking shear pattern is indicated by the shear modulus map.

The southwest corner of the Alamo group has anomalously high density fracture patterns. This area is overlain by increasing overburden from depths of zero feet at Line 0 to fifty feet at Line 45 of the Alamo group. The increased density is in part due to a change in the consistency of the interpreter relative to this photo or a possible magnification of the jointing pattern related to the depth of overburden. This would not affect the permeability map based on relative frequency or the shear modulus map, but would affect to a degree the total probability isograde. The change of facies east of the contact and the suspected change previously mentioned were compensated for in the calculations of the probabilities.

RECOMMENDATIONS

1. In order to facilitate assessment work on the Alamo group, I feel a road cut from Station 20, Line 0 to the Base Line at Station 45 is warranted. Trenches across this line at Stations 24 and 28 and from Stations 36 to 40 would test the geochem values and indicated contact zone but would be dependent upon the depth of overburden found.

The second trench from Line 1, Stations 34 to 40 should encounter less overburden and again cut through this contact zone.

The third trench from Line 2, Stations 34 to 45 and a fourth trench from Line 3, Stations 34 to 45 would validate the structure trending northwest which appears to terminate at Station 45, Line 3.

2. I would recommend completion of a mag survey on the Alamo group and the San Jose group. From work previously done and from information that should be found in the trenches, this survey would be invaluable in determining pertinent structures.

3. Completion of the geochem survey - The southwest corner of the Alamo group on reconnaissance standards (at 200-foot intervals along the previous grid lines), completion of the grid in the San Jose group sampling at 200-foot intervals where anomalous values indicate the area should be detailed at 100-foot intervals on 250-foot line spacing.

4. A Seismic Survey of the Alamo claim group would establish the depth of overburden for use in trenching and/or drilling.

T.S.L. LABORATORY TREATMENT OF SOIL SAMPLES

The samples were dried at a temperature of 200° F. and then screened through a -80 mesh. The screen used is nylon and contained by an aluminum holder.

Cu

A one gram sample from the screened portion is treated with 50% HCl acid and digested for one hour at 212° F. and then made up to a final volume of 10 mm.

The results are compared with fresh standards in the same media which are prepared daily and Cu ppm are determined by Atomic Absorption Spectrophotometer.

Mo

5 cc of sample solution are reduced by stannous chloride mixed with ascorbic acid and citric acid. The colour is extracted from a solution of zinc dithiol with chloroform and is then compared with fresh standards prepared daily.

The procedure used is prescribed in a technical communication of the Geochemical Prospecting Research Centre, Department of Mining and Geology, Royal School of Mines, Imperial College of Science and Technology, London, SW7, England.

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

TO WIT:

In the Matter of THE RECONNAISSANCE REPORT - GEOCHEM - FRACTURE DENSITY STUDY FOR SAN JOSE MINES LTD. (N.P.L.)

I, DOUGLAS A. CHAPMAN

of #2 - 515 GRANVILLE STREET,

in the Province of British Columbia, do solemnly declare that

(1) The cost of the Fracture Density Analysis - Geochem Correlation was as follows:

Stereo-photo examination and interpretation 50 hours @ $20.00/hr.	$ 1,000.00
Compilation and analysis of fracture density result 50 hours @ $20.00/hr.	1,000.00
Cash Disbursements -photography, drafting, typing, reproduction	500.00
	$ 2,500.00

(2) The Geochem survey cost was as follows:

Labour - line cutting, blazing, flagging, chaining, bagging soils, etc.	600.00
Expenses - food, transportation, accommodation, etc.	258.20
Soil preparation and assays (T.S.L. Laboratories)	779.85
Total	$ 4,138.05

(The above costs are indicated on Page 9 of the filed report.)

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the VICTORIA of JUN 22 1967, in the Province of British Columbia, this day of A.D.

D. C. Chapman

A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.

Mining Recorder

★o The following people were employed:

D. Williams	- $ 50.00	D. Sleigh	- $ 50.00
B. Halsted	- $100.00	E. Peterson	- $ 50.00
L. Forrest	- $100.00	D. Chapman	- $ 50.00
J.M. Ashton	- $200.00		

Basic rate - $25.00/day - Supervision - $50.00/day

GEOCHEM SURVEY COSTS

Line Cutting and Soil Collection - approximately 18 line miles

Labour	$ 600.00	
Expenses	258.20	
Total		$ 858.20

Soil Preparation and Assay

T.S.L. Laboratories	$ 779.85	
Total		$ 779.85

Fracture Density Analysis - Geochem compilation and Report

	$2,500.00	
		$2,500.00

NET TOTAL	$4,138.05

D.A. Chapman & Associates Limited

#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
0	1 S	3"	Flat, glacial debris	20	Below .5
0	2 S	4"	Flat, begins to dip to S.	11	" .5
0	3 S	4"	Flat, clay like, slight dip S.	13	" .5
0	4 S	4"	Coarse sand, flat	44	" .5
0	5 S	4"	Light, fine, flat before dip S.	16	" .5
0	20	3"	No gravel, flat	19	" .5
0	22	3"	Grey - sand and gravel, flat	12	" .5
0	24	3"	No gravel, flat	115	" .5
0	26	3"	Brown, rocky soil, Slope 3° West	20	" .5
0	28	3"	Organics, silt sand below, Slope 3° West	90	" .5
0	30	3"	Silt and fine sand, 1/8" gravel 5° slope west	33	" .5
0	32	3"	Organics, silt below, flat, damp swampy area	38	" .5
0	34	3"	Organics, silty and gravel, flat, marshy	70	" .5
0	36	4"	Silt sand, gravelly, slope 2° E., rock o/c	29	" .5
0	38	4"	Silt sand, gravelly, slope 2° E., rock o/c	42	" .5
0	40	3"	Silt sand, gravelly, slope 5° W.	25	" .5
0	42	3"	Silty soil, flat	13	" .5
0	44	3"	Silt, fine sand, 15° down west	20	" .5
0	45	3"		21	" .5
0	46	3"	Sand, silt, fine, slope 10° up E.	16	" .5
0	48	3"	Sand, silt, fine knoll top	16	" .5
0	50	3"	Silt, organic, fine, slope 10° down - east	20	.5
0	52	3"	Fine sand, silt, knoll top	19	Below .5
0	54	3"	Fine sand, silt, hill 5° down - east	20	.5
0	56	3"	Fine sand, silt, flat	25	Below .5
0	58	3"	Fine sand, silt, flat	24	" .5
0	60	3"	Fine, semi organic, flat	13	2 "

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#2 - 515 Granville St.,
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Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
0	62	3"	Fine sand, silt, flat	9	Below .5
0	64	3"	Sandier & silt, flat	15	" .5
0	66	3"	Sandier & silt, flat	26	" .5
0	68	3"	Sandier & silt, flat	10	" .5
0	70	3"	Silt, fine sand, flat	11	" .5
1	20			27	" .5
1	22			13	" .5
1	24	3"		40	" .5
1	26	3"	Brown, dry, slight dip west	25	" .5
1	28	3"	Brown, dry, flat	15	" .5
1	30	3"	Grey brown, dry, flat	17	" .5
1	32	4"	Dry, grey brown, slight dip west	10	" .5
1	34	4"	Light brown silt, flat	11	" .5
1	36	4"	Light brown silt, flat	26	" .5
1	38	4"	Light brown silt, dips west, flat 50'	20	-
1	40	1"	Rock o/c, dips to west	13	-
1	42	4"	Light brown silt, flat	16	-
1	44	2"	Rock o/c, fault N-S 60' west	27	-
1	46	2"	Light, fine, hill slopes south	15	-
1	48	6"	Light, fine, flat, mogul like	30	1
1	50	6"	Light, fine, flat, slight dip S.	15	Below .5
1	52	3"	Light, fine, flat, very shallow, bedrock	11	2.5 *
1	54	4"	Light, fine, flat, bedrock, glaciated	13	Below .5
1	56	4"	Light, fine, heavy wooded, slight dip south	50	-
1	58	4"	Coarse, gravelly, flat, dense	20	-
1	60	4"	Light, fine, flat, slight dip W.	7	-
1	62	6"	Light, fine, flat, slight dip S.W.	26	-
1	64	4"	Light, fine, flat, dense 4" trees	13	-

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#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
1	66	3"	Light, fine, brown, flat, opening	15	-
1	68	4"	Light, fine, coarse brown, slopes south 5°	16	-
1	70	3"	Coarse, dips S/E 5°	26	-
2	1 N	3"	Silt, sand, gravel, slope 20° S.	19	-
2	2 N	3"	Fine brown grey silt, slope up 8° north	15	.5
2	3 N	3"	Silt, sand, gravelly, slope 5° S.	13	Below .5
2	4 N	3"	Fine brown silt, slope up 8° N.	7	-
2	20	3"	Peaty, organic, flat	175	-
2	22	3"	Silts, rock, gravelly, slope 3° west, down	31	-
2	24	3"	Silt, pebbles, slope 3° west	27	-
2	26	3"	Silt, pebbles, slope 3° W. down	65	-
2	28	3"	Silt, rocky, flat	14	-
2	30	3"	Silt, mole hole, slope 3° S.W.	15	-
2	32	3"	Silt, top of hill	9	-
2	34	3"	Brown silt, sand, flat	72	-
2	34.5	3"		57	-
2	36	3"	Silts, fine sand, gravels, 3° slope down west	11	-
2	38	3"	Silt, sand, gravel, flat, rock o/c	12	.5
2	40	3"	Silt, fine sand, slope west 3° down, top of knoll, outcropping	14	Below .5
2	42	3"	Silt, rocks, slope 5° south	27	-
2	44	3"	Silt, rock o/c, slope 3° down E.	20	-
2	45	3"	Silt, rocky, down 10° west	9	-
2	46	3"	Silt, sand, with gravel, slope south 5°, swampy	10	-
2	48	3"	Silt, some gravels, gritty, flat edge of swampy area	9	-
2	50	3"	Silt, some gravels, flat, 6" trees, more sparse	7	-

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#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
2	52	3"	Silt, fine sand, flat	46	Below .5
2	54	3"	Silt, fine sand, slope down west 5°, rock o/c nearby	9	.5
2	56	3"	Sandy & some silt, orange, flat	8	.5
2	58	6"	Black organic, swampy, flat, heavy timber	150	Below .5
2	60	3"	Silt, fine sand, brown, flat	22	.5
2	62	3"	Fine sand, silt (brown) flat	15	Below .5
2	64	3"	Fine sand, silt (brown) flat	7	-
2	66	3"	Fine sand, silt (brown) flat	16	-
2	68	3"	Fine sand, silt	14	-
2	70	3"	Flat	10	.5
2+100	45	3"	Silt, sand fine, 3° slope south	42	-
2+200	45	3"	Organic & silt, 1° slope south	63	-
2+300	45	3"	Peat, organic, flat	81	-
2+400	45	3"	Organic, some silt, down 5° S.W.	24	-
3	1 S	4"	Silt, fine sand, flat (hill top)	13	.5
3	2 S	4"	Light Brown, dense small trees, slope +5° south	11	.5
3	3 S	4"	Silt, fine sand, brown, flat	8	.5
3	4 S	3"	Brown & grey, Fine, flat	10	2.5 *
3	5 S	6"	Dark brown, wet, coarse, flat, dry swamp	45	Below .5
3	20	5"	Coarse brown, light silt, flat	18	-
3	22	3"	Coarse brown, light silt, steep slope + east	7	-
3	24	5"	Brown coarse, sandy, slope 5° +E	22	-
3	26	5"	Brown, fine silt, flat	10	-
3	28	5"	Brown, fine silt, flat	17	-
3	30	3"	Brown, darker than 3-28, flat, opens	13	-
3	34	4"	Coarse, brown, outcrops, flat, open	27	.5

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#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
3	36	4"	Coarse outcrop, flat, open	11	-
3	38	4"	Coarse, outcrops, flat, mogul like	128	-
3	40	4"	Coarse, outcrops, flat, open	110	-
3	42	4"	Coarse, brown, wet, flat, open	15	-
3	44	5"	Coarse, brown, wet, flat, open	158	-
3	46 A	5"	Coarse, brown, dry, slope +5° E.	20	-
3	46 B	4"	Fine silt, slope S.S.W. 6°	27	-
3	48	4"	Fine silt, slight slope west	13	-
3	50	4"	Fine silt, top of rock o/c	20	-
3	52	7"	Brownish-grey coarse silt, hill rises W. 6°	19	-
3	54	8"	Brown, coarse, dry silt, slight rise 3° west	15	.5
3	56	6"	Dry coarse silt, flat, med. timber 5"	15	.5
3	58	6"	Wet swamp mud, flat	260	-
3	60	2"	Coarse silt, very shallow, flat	16	-
3	62	3"	Coarse silt, flat	21	-
3	64	2"	Coarse silt, flat	14	-
3	66	2"	Coarse silt, flat, S. hill north	40	-
3	68	3"	Coarse silt, flat, draw	27	-
3	70	3"	Fine silt, dips S.S.E.	12	-
4	1 S	4"	Silt, sand, pebbles, slope down north 10°	15	-
4	2 S	4"	Sand, silt, pebbles, slope down west 5°	39	-
4	3 S	4"	Silt, coarse sand, slope down west 10°, hilltop, outcrop	14	-
4	4 S	4"	Sand/silt, coarse, slope 5° S.W. hillside, outcrop	11	.5
4	46	4"	Fine silt, flat, small 50' rise E.	20	.5
4	48	4"	Fine silt, flat, +3° up E.	12	-
4	50	4"	Fine silt, flat, sparse growth	11	-
4	52	4"	Fine silt, top of small slope	15	-
4	54	4"	Fine silt, slopes east -5°	7	-
4	56	4"	Fine silt, on west edge of gulley	15	-

D. A. Chapman & Associates Limited

#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
4	58	2"	Fine to coarse, flat, rocky o/c	16	-
4	60	2"	Fine to coarse, flat, rocky, glacial debris	21	-
4	62	3"	Fine to coarse, flat to slight slope E.	16	-
4	64	4"	Coarse, slight slope E. 5°	14	-
4	66	3"	Coarse, flat, heavy growth	20	-
4	68	3"	Coarse, flat	21	-
4	70	3"	Coarse, flat	15	.5
5	45	4"	Silt, pebbles, slope 5° N.W.	8	-
5	46	4"	Silt, sand, rock o/c, slope 15° west, swampy	12	-
5	48	4"	Silt, sand, slope 10° E., outcrop	12	-
5	50	4"	Coarse sand, slope 8° S., eroded hillside	15	-
5	52	4"	Sand, 8° slope down west, top of rock o/c	7	-
5	54	4"	Silt/sand, o/c, slope N.W. 10° dn.	21	1
5	56	4"	Silt/sand, dip 8° n.w., rock o/c	12	-
5	58	4"	Sand, coarse sand, 20° dip N.E.	14	-
5	60	4"	Coarse sand, rocky, flat, swampy nearby	14	-
5	62	4"	Silt, sand (fine), dip 3° S.W., rock o/c	11	.5
5	64	4"	Fine silt, grey, flat	5	-
5	66	4"	Fine sand/silt, flat, boulder o/c	2	.5
5	68	4"	Silt, sand, slope dip W. 2° boulder o/c	13	-
5	70	4"	Silt/sand, flat, boulder o/c	12	-
6	1 N	4"	Silt, sand, 3° dips	10	-
6	2 N	2"	Brown, on west slope of ravine	20	-
6	3 N	4"	Silt, coarse sand, dip 3° S.W. top of rock hill	10	-
6	4 N	2"	Brown, rock o/c	9	-

D.A. Chapman & Associates Limited

#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
6	45	4"	Silt, sand, flat	14	-
6	46	4"	Silt, sand, pebbles, dip 5° W.	7	-
6	48	4"	Silt, dense packed pebbles, dip 5° E., top of ravine (50' deep)	11	-
6	50 or 48	4"		11	-
6	50	4"	Silt, sand, dip 10° W on side of rock cliff & slide area	4	-
6	52	4"	Silt with sand, fine & coarse, flat, top of knoll - outcrop	11	.5
6	54	4"	Sand coarse, dip 10° N.W., hill top, rock o/c	14	-
6	56	4"	Sand coarse, dip 25° S., rock o/c	5	.5
6	58	4"	Sand, rock o/c, dip 3° S.	14	-
6	60	4"	Silt, pebbles, dip 3° S.E.	28	-
6	62	4"	Sand/pebbles, dip 20° S. rock o/c	15	-
6	64	4"	Silt/sand/pebbles, dip 30° West, outcrop ravine 50' front	30	-
6	66	4"	Silt, fine sand, brown, flat, boulder o/c	16	-
6	68	4"	Silt, fine sand, flat	8	.5
6	70	4"	Silty/sand, dip 5° W.	5	-
7	1 N	4"	Brown, gravelly, flat	7	-
7	2 N	4"	Brown, gravelly, flat	14	-
7	3 N	4"	Brown, gravelly, W. slope of shallow gulley	10	.5
7	4 N (A)	3"	Brown, gravelly, W. of gulley, tending to middle	27	-
7	4 N (B)			31	-
7	45	3"	Gravelly, dips S. 5° Mod. open	21	-
7	46	3"	Coarse, brownish, flat, dense	10	.5
7	48	4"	Brownish, flat, open	225	-
7	50	4"	Brownish, flat, mod. open	26	-
7	52	3"	Brownish, slope S. 10°, loose boulders	11	-

D.A. Chapman & Associates Limited

#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
7	54	1"	Brownish, slope W. 8°, slope south 4°	45	-
7	56	1"	Brownish, slopes S. 5°	31	-
7	58	3"	Light brownish, dips 10° S.	11	.5
7	60	3"	Light brownish, flat, slight rise W.	11	-
7	62	3"	Light brownish, slopes south	12	-
7	64	3"	Brownish, flat, north on crest, gulley south	10	.5
7	66	3"	Fine greyish, slopes south into gulley	6	-
7	68	4"	Fine greyish, slopes south	8	-
7	70	6"	Brown to dark, flat, glaciated outcrop to north	40	-
7	46	3"	Coarse, brownish, flat, dense	14	1
7	1 S	3"	Flat, outcrop 100' E.	14	Below .5
7	2 S	4"	Fine, silty, 3° slope S., o/c on west	10	" .5
7	3 S	3"	Slope 7° S., fine brown silt	18	" .5
7	4 S	4"	Fine silt, 10° slope S.	27	" .5
7	9	4"	Brown, fine, flat, grassy, small outcrop	280	" .5
7	10	4"	Grey, fine, flat, very grassy	68	" .5
7	11	4"	Organic, slope east, very grassy	750	" .5
7	12	4"	Organic, flat, foot of slope very grassy	1300	" .5
7	13	3"	Grey, fine, slope down to E. 30°	18	" .5
7	14	4"	Grey, fine, flat, boulders	23	" .5
7	15	3"	Grey, fine, foot of rocky slope	12	" .5
7	16	3"	Grey, fine, down slope S.E. o/c	45	" .5
7	17	4"	Grey, fine, down slope S. o/c	20	" .5
7	18	4"	Grey, fine, down slope S.	5	" .5
7	19	4"	Grey, fine, down slope 20° S.	5	" .5
7	20	4"	Coarse, weathered, down slope 20° outcrop	11	" .5
7	20 Rock			13	" .5

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#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
8	1 S	3"	Grey	38	Below .5
8	2 S	4"	Brown, gravelly, slopes S. 15°	29	" .5
8	3 S	4"	Brown, fine, flat, moderate	14	" .5
8	4 S	4"	Brown, fine, flat, vegetation	17	" .5
8	45			37	" .5
8	46	4"	Fine grey silt, south slope	24	" .5
8	48	4"	Fine grey silt, south slope	6	" .5
8	50	4"	Fine grey silt, 20° slope down to west, thin & stoney gravel	9	1
8	52	4"	Fine grey silt, flat, thin & large boulders in ground	11	.5
8	54	4"	Fine grey silt, flat o/c, pink rock	11	Below .5
8	56	4"	Fine grey silt, down 5° slope S.	7	1.5 *
8	58	4"	5° down slope south	15	2 *
8	60	4"	Fine silt, 5° down slope S., o/c trace of pink	20	1
8	62	4"	Fine silt, flat, stoney ground	43	.5
8	64	4"	Fine silt, swampy	28	Below .5
8	66	4"	Fine silty, flat, o/c trace of pink	18	" .5
8	68	4"	Fine, silty, 40' deep ravine(N.S.) boulder o/c	29	" .5
8	70	4"	Fine, silty, slope down W. 20°	20	" .5
8	76			16	" .5
9	20	4"	Sandy, Brown, rock o/c, boulders	27	" .5
9	20+6N+120'			16	" .5
9	22	4"	Fine, grey, rock o/c, glacial boulders	11	" .5
9	24	4"	Fine, brown, rock o/c, mod. dense	16	" .5
9	26	4"	Coarse to fine, dark brown, flat, mod. open	6	1.5 *
9	28	4"	Coarse, sandy brown, flat, open	14	1
9	30	4"	Fine, grey, sample taken 30' N. of bog	11	Below .5
9	32	4"	Coarse to fine, brown, sample taken on east of bog	12	" .5

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#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
9	34	4"	Coarse to fine, brown, middle of mogul-like structure, wet	27	Below .5
9	36	4"	Fine, brown, dense, jack pine in front and to N., o/c S. 50'	31	.5
9	38	4"	Fine, light brown, hill o/c 100' S. + 30'	16	.5
9	40	3"	Coarse, brown, gulley	13	Below .5
9	42	3"	Coarse, brown, mod. open, o/c	6	" .5
9	44	4"	Coarse, dark brown, rel. open	18	.5
9	45	4"	Brown, fine, dips 30° S., mod. open	25	Below .5
9	46	4"	W.E. of gulley, fine, brown	20	1.5
9	48	4"	Coarse, gravelly, more pink feldspar	21	Below .5
9	50	4"	Coarse, brown, slopes S. 5°, mod. open	13	" .5
9	52	4"	Dark brown, sandy, slope 10° S., mod. open	6	1.5
9	54	4"	Coarse, sandy, slope 10° S., mod. open	9	.5
9	57	4"	Edge of swamp, windfalls & dead-falls	18	Below .5
9	58	4"	Brown, fine, slope 10° W., mod. dense	20	" .5
9	60	4"	Brown, fine, slope 5° W., glaciated outcrops	17	.5
9	62	4"	Brown, fine, flat, mod. open, wet	14	Below .5
9	64	4"	Brown, slope 8° S.	10	" .5
9	66	4"	Brown, slope ESE 30°, gulley	14	" .5
9	68	4"	Brown, taken on side of hill west 100' in bottom of collapsed gulley	13	" .5
9	70	4"	Sample taken 100' south	13	" .5
10	1 N	4"	Grey, sandy, slope down to swamp	9	.5
10	2 N	4"	Black, organic, slope down to swamp	180	Below .5

D.A. Chapman & Associates Limited

#2 - 515 Granville St.,
Vancouver 2, B.C.

Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
10	3 N	4"	Grey, gravelly, slope to swamp	25	Below .5
10	4 N	4"	Gravelly, south slope down	28	" .5
10	1 S	4"	Sandy, light brown, swampy west, flat	24	2.5
10	2 S	4"	Sandy, fine, brown, swampy west, flat	65	Below .5
10	3 S	4"	Sandy, fine, brown, 100' wide fault 200' E.	16	" .5
10	4 S	4"	Sandy, fine, brown, 100' wide fault	10	1
10	20			5	.5
10	22			11	Below .5
10	24			10	1.5
10	26			14	Below .5
10	28			71	" .5
10	30			14	" .5
10	32			60	" .5
10	34			55	" .5
10	36			15	" .5
10	38			15	" .5
10	40			24	" .5
10	42			14	" .5
10	44			7	1.5
10	48	4"	Fine, grey, silty, flat, developed soil	10	1.5
10	50	4"	Grey, silty, flat, developed soil	13	Below .5
10	52	4"	Brown, silty, 5° slope W., thin soil, some o/c, pine needles	14	1
10	54	4"	Grey, silty, slope W., grass under trees, some o/c	29	Below .5
10	56	4"	Grey, silty, slope W., grass under trees	21	" .5
10	58	4"	Grey, silty, slope W., grass, trees	43	" .5
10	60	4"	Brown, silty, flat, light grass, trees	40	" .5

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#2 - 515 Granville St.,
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Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
10	62	4"	Brown, silty, top N.S. ridge, o/c pine needle, pines	16	Below .5
10	64	4"	Grey, silty, flat, swampy, pines	34	" .5
10	66	4"	Brown, silty, o/c pine needle, small pines	13	" .5
10	68	4"	Grey, silty, top of o/c - trace of ortho, pine needles, pines	10	" .5
10	70	4"	Grey, silty, o/c, thin grass, pines	14	2
10	71	4"	Brown, silty, o/c, thin grass, pines	15	Below .5
11	45	3"	Fine to coarse, Cu. stain on West wall of chasm	8	.5
11	46	3"	Light brown, on E. wall of chasm	8	Below .5
11	48	4"	Light brown, fine, flat, o/c 100'N.	27	" .5
11	50	4"	Light brown, flat N., slight rise S., mod. open	20	" .5
11	52	4"	Flat, rock o/c	42	.5
11	54	3"	Brown, fine, taken on top of E. side of fault	23	.5
11	56	4"	Light brown, fine, +20° E. rock outcrop	11	.5
11	58	3"	Brown, coarse, flat, o/c, mod. dense, 4" trees	21	Below .5
11	60	3"	Coarse, brown, large slough 56' east	10	" .5
11	62	3"	Brown, top of outcrop	13	" .5
11	64	4"	Fine, light brown, slope -7½° S., mod. open, outcrop	14	" .5
11	66	4"	Coarse, brown, slope -15° ESE., mod. open	13	.5
11	68	4"	Brown, coarse, flat, open	24	Below .5
11	70	4"	Coarse, brown, dips 5° ESE, open, pines	16	1

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#2 - 515 Granville St.,
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Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
12	1 N	4"	Fine, light grey, flat, west side of canyon mod. wooded	25	Below .5
12	2 N	4"	Fine, light grey, flat, west side of canyon, mod. wooded	14	.5
12	3 N	4"	Fine, brown, flat, west side of canyon, mod. wooded	24	Below .5
12	4 N	4"	Fine, light grey, flat, west side of canyon, mod. wooded	26	" .5
12	1 S	3"	Grey, fine, boulders, grass, pines, undulating, gulley 200' east	15	.5
12	2 S	3"	Brown, fine, boulders, grass, pines, undulating	14	.5
12	3 S	3"	Brown, organic, small o/c, grass, pines, undulating	170	Below .5
12	43			14	" .5
12	45			17	2
12	46	4"	Coarse, grey, flat, open, canyon span 105' 50' D.	25	Below .5
12	48	4"	Coarse, light brown, -20° W. +86' W. Canyon wall	26	" .5
12	50	4"	Coarse, brown, flat, glacial till and outcrops	11	" .5
12	52	4"	Coarse, brown, flat, outcrops	11	" .5
12	54		Bottom of canyon - 60-80' deep	11	" .5
12	56	2"	Coarse, brown, -50° steep, near bottom of canyon wall	14	" .5
12	57		Canyon side, exposed quartz, feldspar	11	" .5
12	58	2"	Coarse, dark brown, flat, top of hill	15	" .5
12	60	4"	Coarse, brown, -10° ESE, open	12	" .5
12	62	4"	Coarse, brown, -10° ESE, mod. open	9	" .5
12	64	4"	Coarse, brown, -5° S., mod. open	8	" .5
12	66	4"	Coarse, brown, -5° S., glacial debris	57	" .5

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#2 - 515 Granville St.,
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Line No.	Station	Depth	Remarks	ASSAY VALUE Cu. ppm	Mo. ppm
12	68	4"	Coarse, brown, -10° S., mod. sparse	14	Below .5
12	70	4"	Coarse, brown, -10° S., small jack pine	11	" .5
13	44	4"	Brown, fine, grass, pines	11	.5
13	46	4"	Brown, fine, slope down 5° E., pines	21	Below .5
13	48	4"	Grey, fine, top edge of gulley, flat, rocky, pine, spruce	69	" .5
13	50	3"	Brown, fine, top of ridge, o/c, open, dry, fire	50	" .5
13	52	4"	Brown, fine, N.S. ridge, pines, fire, open, o/c	2	" .5
13	54	4"	Coarse, weathered, N-S gulley, fault 80' deep, o/c, large boulders	80	" .5
13	56	4"	Coarse, weathered, large o/c, N-S ridge, slope down 10° S.	12	" .5
13	58	3"	Grey, silty, grass, pine, fir, open, south slope down 20°	7	.5
13	60	3"	Brown, gravelly, stoney, grass, pine, fir, south slope 20°	12	.5
13	62	3"	Grey, silty, stoney, pine, south slope 10°, little soil	5	Below .5
13	64	3"	Coarse, sandy, grassy, fir, pine, south slope 10°, stoney ground	65	" .5
13	66	3"	Grey, fine, grassy, pine, south slope 10°, old burn	10	" .5
13	68	3"	Grey, silty, grassy, pine, old burn	6	.5
13	70	3"	Brown, gravelly, down slope to south 10°, boulders, weathered	13	1

D. A. Chapman & Associates Limited
#2 - 515 Granville Street,
Vancouver 2, B.C.

CHECK AREA SAMPLES

Line No.	Station	ASSAY VALUE Cu. ppm
7	49	110
7	49 N	28
7	49 S	31
7	50 N	19
7	50 S	40
7	51	43
7	51 N	15
7	51 S	17

** Cu. by HNO_3 - acid extraction.

Determined by Atomic Absorption Spectrophotometer.

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CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM D. A. Chapmann, Associates.
305 - 509 Richard St.
Vancouver 2, B.C.

SAMPLE(S) OF

REPORT NO. V0995 - 1A

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo
1	Line 0 1 S	20					4.5
2	2 S	11					<
3	3 S	13					<
4	4 S	44					<
5	5 S	16					<
6	Line 5 Sta. - 20	19					<
7	22	12					<
8	24	115					<
9	26	20					<
10	28	90					<
11	30	33					<
12	32	50					<
13	34	70					<
14	36	29					<
15	38	92					<
16	40	25					<
17	42	13					<
18	44	20					<
19	45	21					<
20	46	16					<
21							
22							
23							
24							

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SAMPLE(S) FROM D. A Chapmann + Ass.

REPORT NO. V 66 5-2A

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	0 - 48	16 -					1.5 -		
2	50	20 -					.5 -		
3	52	19 -					<		
4	54	20 -					.5 -		
5	56	25 -					<		
6	58	24					<		
7	60	13 -					2		
8	62	9 -					<		
9	64	15 -					<		
10	66	16					<		
11	68	10 -					<		
12	70	11 -					<		
13	1 - 20	27					<		
14	22	13					<		
15	24	40					<		
16	26	25 -					<		
17	28	15 -					<		
18	30	17					<		
19	32	10					<		
20	34	11					<		
21									
22									
23									
24									

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SAMPLE(S) FROM D.A Chapman - Ass.

REPORT NO. V0995-3N

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	1-36	26					<		
2	38	20							
3	40	13							
4	42	16							
5	44	27							
6	46	15							
7	48	30					1		
8	50	15					<		
9	52	11					2.5		
10	54	13					<		
11	56	50							
12	58	20							
13	60	7							
14	62	26							
15	64	13							
16	66	15							
17	68	16							
18	70	26							
19	2+1N	19							
20	2N	15					.5		
21									
22									
23									
24									

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SAMPLE(S) FROM D. A. Chapmann + Ass.

REPORT NO. V0995-4A

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	2 + 3N	13					<.5		
2	4N	7							
3	2 - 20	175							
4	22	31							
5	24	27							
6	26	65							
7	28	14							
8	30	15							
9	32	9							
10	34	72							
11	34 S	57							
12	36	11							
13	38	12					.5		
14	40	14					<		
15	42	27							
16	44	20							
17	45	9							
18	46	10							
19	48	9							
20	50	7							
21									
22									
23									
24									

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SAMPLE(S) FROM D. A. Chapmann + Ass.

REPORT NO. Vogg-51

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

		SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
	1	2 - 52		46				< .5		
	2	54		9				.5		
	3	56		8				.5		
	4	58		150				<		
	5	60		22				.5		
	6	62		15				<		
	7	64		7						
	8	66		16						
	9	68		14						
	10	70		10				.5		
X	11	2 + 100' - 45		42						
	12	200'		63						
	13	300'		81						
	14	400'		24						
	15	3 + 15'		13				.5		
	16	25'		11				.5		
	17	35'		8				.5		
	18	45'		10				2.5		
	19	4 - 65		45				<		
	20	3 - 20		18						
	21									
	22									
	23									
	24									

DATE Oct 13 66

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SAMPLE(S) FROM D.A. Chapmann + Ass.

REPORT NO. V0991-6A

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	3-22	7							
2	24	22							
3	26	10							
4	28	17							
5	30	13							
6	34	27					.5		
7	36	11							
8	38	120							
9	40	110							
10	42	15							
11	44	150							
12	45	13							
13	46 A	20							
14	46 B	27							
15	47	13							
16	50	20							
17	52	19							
18	54	15					.5		
19	56	15					.5		
20	58	260							
21									
22									
23									
24									

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CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM D. A. Chapmann + Ass.

REPORT NO. V0995-7A

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	3-60	16							
2	62	21							
3	64	14							
4	66	40							
5	68	27							
6	70	12							
7	4+15	15							
8	25	39							
9	35	14							
10	45	11					-5		
11	4-46	20					.5		
12	48	12							
13	50	11							
14	52	15							
15	54	7							
16	56	15							
17	58	16							
18	60	21							
19	62	16							
20	64	14							
21									
22									
23									
24									

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TELEPHONE 684-1374

ASSAYERS
CHEMISTS
GEOCHEMISTS

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM D.A. Chapman + Ass.

REPORT NO. Vogy-8A

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	4-66	20							
2	68	21							
3	70	15					.5		
4	5-45	8							
5	46	12							
6	48	12							
7	50	15							
8	52	7							
9	54	21					1		
10	56	12							
11	58	14							
12	60	11							
13	62	11					.5		
14	64	5							
15	66	2					.5		
16	68	13							
17	70	12							
18	6+ 1N	10							
19	2N	20							
20	3N	10							
21									
22									
23									
24									

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SAMPLE(S) FROM D. A Chapman + ass.

REPORT NO. V0995-9A

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	6+4N	9							
2	6-4S	14							
3	46	7							
4	48	11							
5	50 on 48	11	2						
6	50	4							
7	52	11					.5		
8	54	14							
9	56	5					.5		
10	58	14							
11	60	28							
12	62	15							
13	64	30							
14	66	16							
15	68	8					.5		
16	70	5							
17	7-1N	7							
18	2N	14							
19	3N	10					.5		
20	4N(A)	27							
21									
22									
23									
24									

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SAMPLE(S) FROM D. A. Chapmann + Ass.

REPORT NO. V0995-MA

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	744NB	31							
2	45	21							
3	46	10					.5		
4	48	225							
5	50	26							
6	52	11							
7	54	45							
8	56	31							
9	58	11					.5		
10	60	11							
11	62	12							
12	64	10					.5		
13	66	6							
14	68	8							
15	70	40							
16									
17									
18									
19									
20									
21									
22									
23									
24									

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CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM D. A. CHAPMAN AND ASSOCIATES
905 - 509 RICHARD STREET
VANCOUVER 2 B. C.

REPORT NO. V 1012 - 1

SAMPLE(S) OF Soil

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo		
1	46	14					1		
2	7-15	14					< .5		
3	25	10					<		
4	35	18					<		
5	45	27					<		
6	7-9	280					<		
7	10	68					<		
8	11	750					<		
9	12	1300					<		
10	13	16					<		
11	14	23					<		
12	15	12					<		
13	16	45					<		
14	17	20					<		
15	18	5					<		
16	19	5					<		
17	7-20	11					<		
18	7-20 ROCK	13					<		
19	8-15	36					<		
20	25	29					< .5		
21									
22									
23									
24									

< = less than .5 ppm.

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SAMPLE(S) FROM D. A. CHAPMAN AND ASSOCIATES

REPORT NO. V1012-2

SAMPLE(S) OF Soil

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	
1	8-35	14					< .5	
2	45	17					<	
3	8-45	37					<	
4	46	24					<	
5	48	6					< .5	
6	50	9					1	
7	52	11					.5	
8	54	11					< .5	
9	56	7					1.5	
10	58	15					2	
11	60	20					1	
12	62	43					.5	
13	64	28					< .5	
14	66	16					<	
15	68	29					<	
16	70	20					<	
17	8-76	16					<	
18	9-20	27					<	
19	9-20+6N+120'	16					<	
20	9-22	11					< .5	
21								
22								
23								
24								

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SAMPLE(S) FROM D. A. CHAPMAN AND ASSOCIATES

REPORT NO. V1012-3

SAMPLE(S) OF Soil

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo
1	9-24	16					< .5
2	26	6					1.5
3	28	14					1
4	30	11					< .5
5	32	12					< .5
6	34	27					< .5
7	36	31					.5
8	38	16					.5
9	40	13					< .5
10	42	6					< .5
11	44	18					.5
12	45	25					< .5
13	46	20					1.5
14	48	21					< .5
15	50	13					< .5
16	52	6					1.5
17	54	9					.5
18	57	18					< .5
19	58	20					< .5
20	9-60	17					.5
21							
22							
23							
24							

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CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM D. A. CHAPMAN AND Associates

REPORT NO. V1012-4

SAMPLE(S) OF Soil

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo
1	9-62	141					< .5
2	64	10					<
3	66	14					<
4	68	13					<
5	70	13					< .5
6	10+1N	9					.5
7	2N	180					< .5
8	3N	25					<
9	4N	28					< .5
10	1S	84					2.5
11	2S	65					< .5
12	3S	16					< .5
13	4S	10					1
14	10-20	5					.5
15	22	11					< .5
16	24	10					1.5
17	26	14					< .5
18	28	71					<
19	30	14					<
20	10-32	60					< .5
21							
22							
23							
24							

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SAMPLE(S) FROM D. N. Chapman and Ass.

REPORT NO. V1012-S

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo
1	10-34	55					<.5
2	36	15					<
3	38	15					<
4	40	24					<
5	42	14					<
6	44	7					1.5
7	48	10					1.5
8	50	13					<.5
9	52	14					1
10	54	29					<.5
11	56	21					<
12	58	43					<
13	60	40					<
14	62	16					<
15	64	34					<
16	66	13					<
17	~~68~~	10					<
18	10-70	14					2
19	10-71	15					<
20	11-45	8					.5
21							
22							
23							
24							

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SAMPLE(S) FROM D.A Chapman and Ass.

REPORT NO. V1012-6

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo
1	11-46	8					<.5
2	48	27					<
3	50	20					<
4	52	42					.5
5	54	23					.5
6	56	11					.5
7	58	21					<
8	60	10					<
9	62	13					<
10	64	14					<
11	66	13					.5
12	68	24					<
13	11-70	16					1
14	12+1N	25					<
15	2N	14					.5
16	3N	24					<
17	4N	26					<
18	12-15'	15					.5
19	25'	14					.5
20	35'	170					<
21							
22							
23							
24							

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SAMPLE(S) FROM D.A. Chapman & Ass.

REPORT NO. V1012-7

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	
1	12-43	14					<.5	
2	45	17					2	
3	46	25					<.5	
4	48	26					<	
5	50	11					<	
6	52	11					<	
7	54	11					<	
8	56	14					<	
9	57	11					<	
10	58	15					<	
11	60	12					<	
12	62	9					<	
13	64	8					<	
14	66	57					<	
15	68	14					<	
16	12-70	11					<	
17	13-44	11					.5	
18	46	21					<	
19	48	69					<	
20	50	50					<	
21								
22								
23								
24								

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CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM D.A. Chapman and Ass.

REPORT NO. V1012-S

SAMPLE(S) OF

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo
1	13-52	2					<.5
2	54	80					<
3	56	12					<
4	58	7					.5
5	60	12					.5
6	62	5					<
7	64	65					<
8	66	10					<
9	68	6					.5
10	13-70	13					1
11							
12							
13		Hot HCl - acid extraction					
14							
15		Cu determined by A.A.					
16							
17		Mo determined by dithiol method					
18							
19							
20							
21							
22							
23							
24							

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TELEPHONE 684-1374

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM D. A. CHAPMAN & ASSOCIATION
305 - 509 RICHARDS STREET
VANCOUVER 2, B.C.

REPORT NO. V1030

SAMPLE(S) OF Soil

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo
1	7-49	110					
2	7-49N	28					
3	7-49S	31					
4	7-50N	19					
5	7-50S	40					
6	7-51	43					
7	7-51N	15					
8	7-51S	17					
9							
10							
11							
12							
13							
14	Cu by hot HNO_3 acid extraction.						
15							
16	determined by A.A.						
17							
18							
19							
20							
21							
22							
23							
24							

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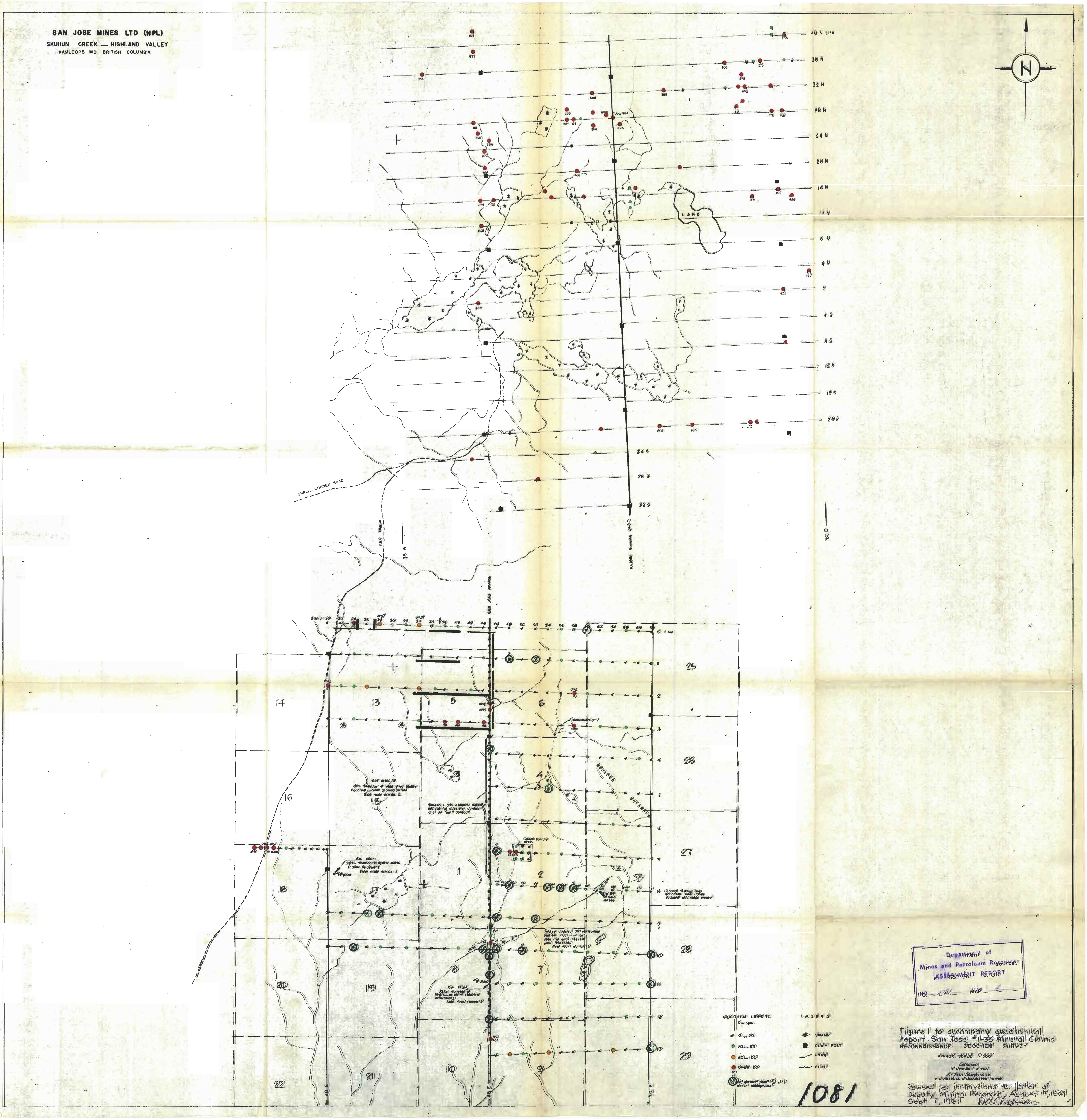

SAN JOSE MINES LTD (NPL)
SKUHUN CREEK — HIGHLAND VALLEY
KAMLOOPS MD. BRITISH COLUMBIA
N
40 N Line
36 N
32 N
28 N
24 N
20 N
16 N
12 N
8 N
4 N
0
4 S
8 S
12 S
16 S
20 S
24 S
28 S
32 S
LAKE
CHRIS — LORNEX ROAD
CAT TRACK
35 W
ALAMO Baseline 0+00
SAN JOSE Baseline
30 E
BOULDER OUTCROPS
GEOCHEM LEGEND
Cu ppm.
0 — 20
20 — 60
60 — 100
OVER 100
Mo greater than 2½ stds above background.
LEGEND
SWAMP
CLAIM POST
DRAW
ROAD
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1081 MAP 2
Figure 1 to accompany geochemical report San Jose #1-33 Mineral Claims
RECONNAISSANCE GEOCHEM SURVEY
APPROX. SCALE 1"=500'
Consultant:
J.A. MITCHELL P. ENG.
Air-Photo Interpretation:
D.A. CHAPMAN & ASSOCIATES LIMITED
Revised per instructions re: letter of Deputy Mining Recorder, August 17, 1967
Sept. 7, 1967 DAChapman
1081

SAN JOSE MINES LTD (NPL)

SKUHUN CREEK — HIGHLAND VALLEY
KAMLOOPS M D BRITISH COLUMBIA

Deviation Anomaly
indicated target area

GEOCHEM LEGEND
Cu ppm

- 0 – 20
- 20 – 60
- 60 – 100
- OVER 100

LEGEND

- SWAMP
- CLAIM POST
- DRAW
- ROAD

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 1081 MAP 18

PERMEABILITY MAP
(based on fracture density/ alteration effects)

SAN JOSE and ALAMO CLAIMS

FRACTURE DENSITY ANALYSIS and
RECONNAISSANCE GEOCHEM SURVEY

APPROX. SCALE 1" = 500'

Consultants:
R.A. MITCHELL P. ENG
Air-Photo Interpretation:
G.A. CHAPMAN & ASSOCIATES LIMITED

FEB 1967

1081

TOTAL PROBABILITY ISOGRADS

Based on measured stress reaction (resultant strain) and the central tendency of diffusion relative to the role of water in the rock melt.

ZONE OF INCREASED GEOCHEM BACKGROUND SUGGESTING POSSIBLE GEOCHEM ANOMALY ASSOCIATED WITH INDICATED GRANITIC FACIES

Order of probability
(Apparent fracture density equivalent of hypothesis)

Resultant
Sheared Breecias ?

Probable Strain

Baseline Sta 45

Sta 20

Line 0
Line 1
Line 2
Line 3
Line 4
Line 5
Line 6
Line 7
Line 8
Line 9
Line 10
Line 11
Line 12
Line 13

PROBABLE CONTACT ZONE

#3 TECTONIC ENCLAVE
Syn tectonic structure

*2 — Skeena Bethlehem Series

*1 — Chateway Series

*2 Skeena Bethlehem Series

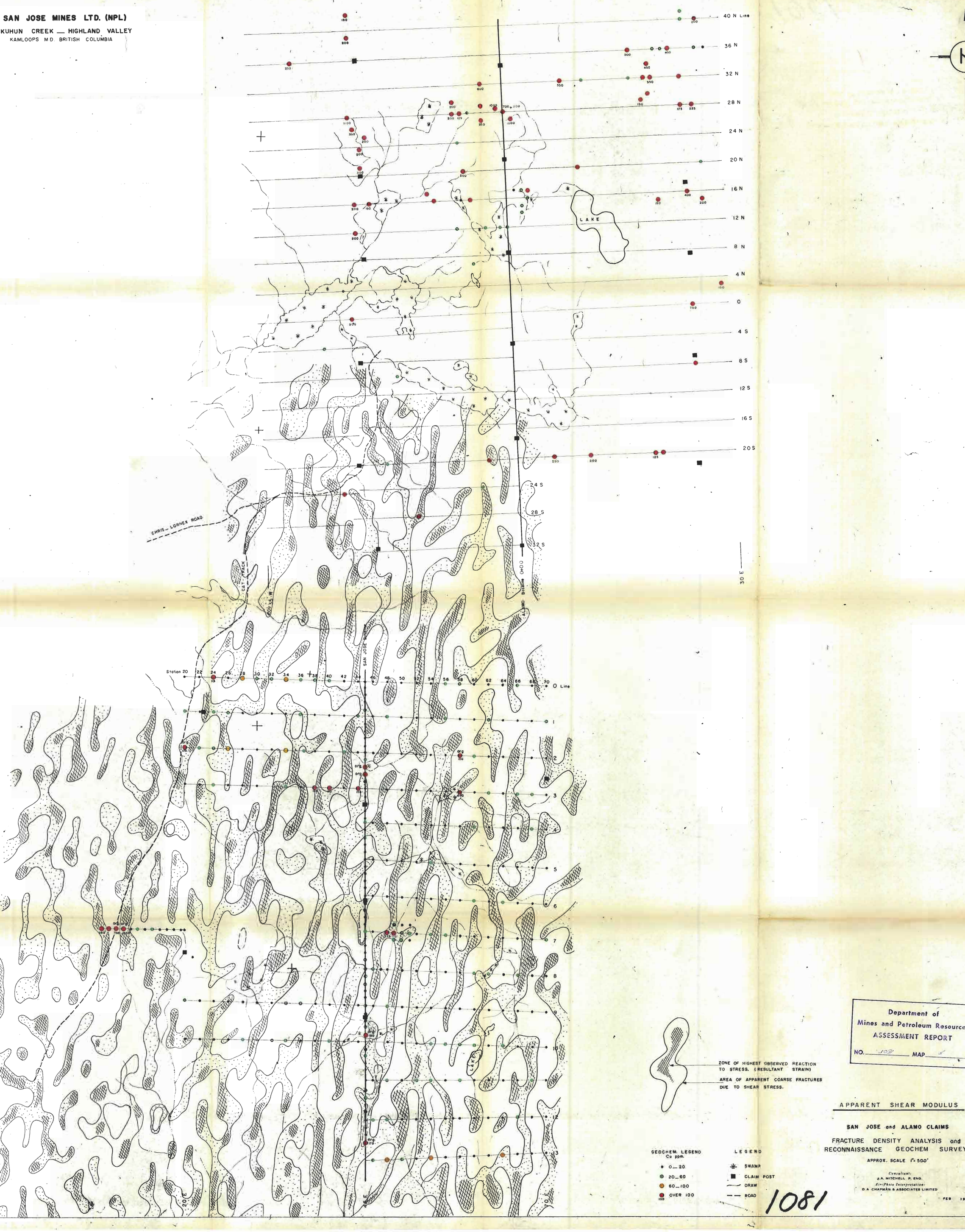
*1 Chateway Series

1081

SAN JOSE MINES LTD. (NPL)

SKUHUN CREEK — HIGHLAND VALLEY

KAMLOOPS M.D. BRITISH COLUMBIA



ZONE OF HIGHEST OBSERVED REACTION TO STRESS. (RESULTANT STRAIN)

AREA OF APPARENT COARSE FRACTURES DUE TO SHEAR STRESS.

GEOCHEM. LEGEND Cu ppm.

- 0 – 20
- 20 – 60
- 60 – 100
- OVER 100 (150)

LEGEND

- SWAMP
- CLAIM POST
- DRAW
- ROAD

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1081 MAP

APPARENT SHEAR MODULUS

SAN JOSE and ALAMO CLAIMS

FRACTURE DENSITY ANALYSIS and RECONNAISSANCE GEOCHEM SURVEY

APPROX. SCALE 1"= 500'

Consultant:
J.A. MITCHELL P. ENG.
Air-Photo Interpretation:
D.A. CHAPMAN & ASSOCIATES LIMITED

FEB 1967

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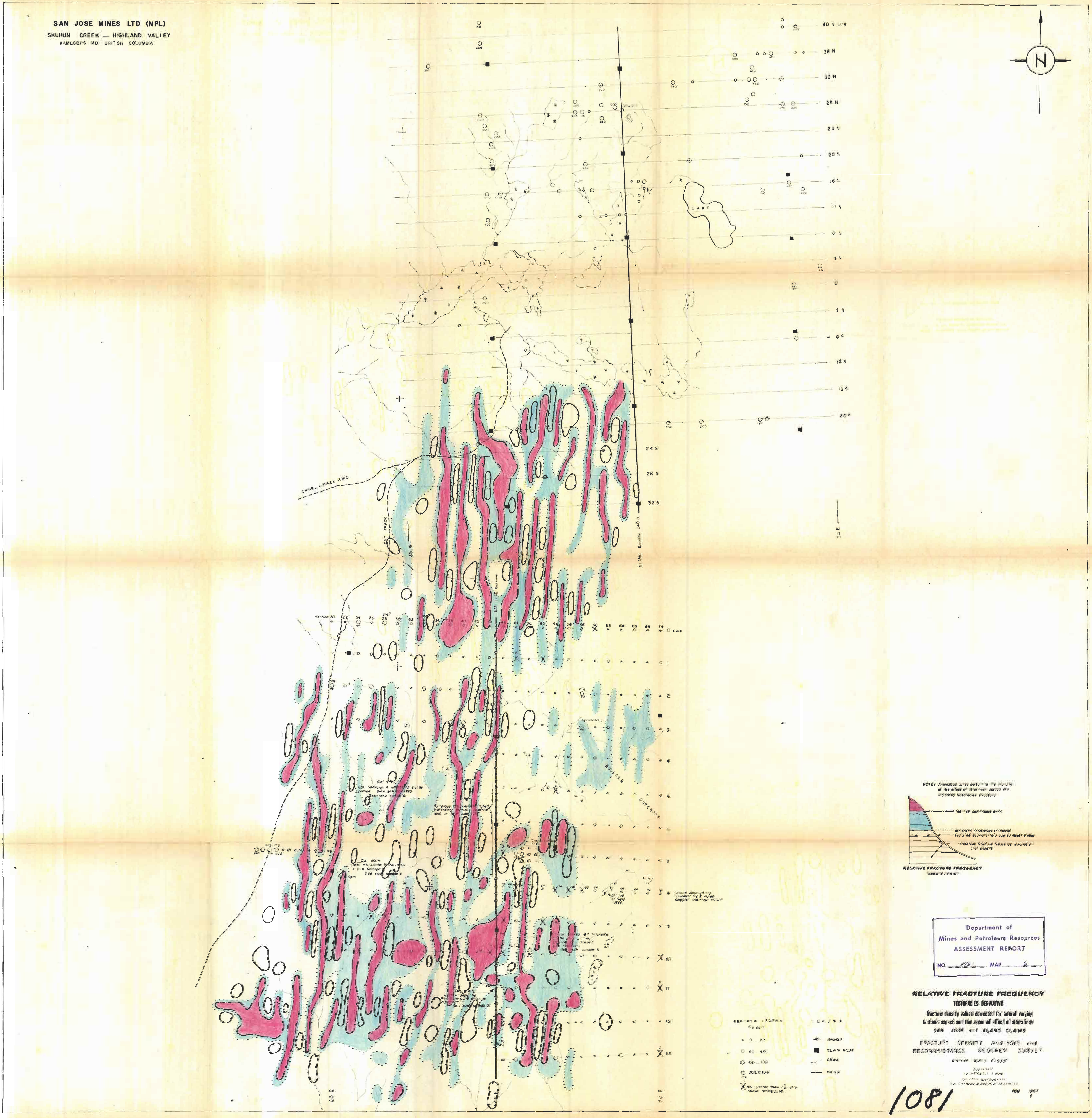
SAN JOSE MINES LTD (NPL)
SKUHUN CREEK — HIGHLAND VALLEY
KAMLOOPS MD BRITISH COLUMBIA
40 N Line
36 N
32 N
28 N
24 N
20 N
16 N
12 N
8 N
4 N
0
4 S
8 S
12 S
16 S
20 S
24 S
28 S
32 S
LAKE
CHRIS — LORNEX ROAD
CAT TRACK
35 W
30 E
ALAMO Baseline 0+00
SAN JOSE Baseline
Station 20
0 Line
Accumulation?
BOULDER
OUTCROPS
Cut area
Qtz. feldspar + weathered biotite (coarse — pink granodiorite)
See rock sample A.
Numerous qtz. veinlets noted indicating possible contact and or fault contact
Cu stain
Qtz. monzonite hydro mica + pink feldspar
See rock sample 1
See rock sample 2
See rock sample 3
Ground descriptions in chem field notes suggest chainage error?
20 E
70 E
NOTE: Anomalous zones pertain to the intensity of the effect of alteration across the indicated tectofacies structure
Definite anomalous trend
Indicated anomalous threshold
Isolated sub-anomaly due to shear stress
Relative fracture frequency isogradient (not shown)
RELATIVE FRACTURE FREQUENCY
TECTOFACIES DERIVATIVE
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1081 MAP 6
RELATIVE FRACTURE FREQUENCY
TECTOFACIES DERIVATIVE
(fracture density values corrected for lateral varying tectonic aspect and the assumed effect of alteration)
SAN JOSE and ALAMO CLAIMS
FRACTURE DENSITY ANALYSIS and
RECONNAISSANCE GEOCHEM SURVEY
APPROX. SCALE 1" = 500'
GEOCHEM LEGEND
Cu ppm
0 — 20
20 — 60
60 — 100
OVER 100
No greater than 2½ units above background
LEGEND
SWAMP
CLAIM POST
DRAW
ROAD
FEB 1967
1081