

1997

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1997 MAP.....

**LEAD AND SILVER GEOCHEMICAL SOIL SURVEY
MINERAL CLAIMS**

Ole 1	Ole 5	Ole 10	Ole 14
Ole 2	Ole 6	Ole 11	Ole 15
Ole 3	Ole 7	Ole 12	Ole 16
Ole 4	Ole 8	Ole 13	Ole 21
	Ole 9		Ole 22

Ole Group of Claims, Jardine Mountains, Slocan, B.C.
117° 3' W., 50° 2' N.
Mineral Claims Ole 1-16, Ole 21-22.

by: Alfred A. Burgoyne, M.Sc.

OWNER: Senate Mining & Exploration Company Limited (N.F.L.)
WORK BY: Crest Laboratories (B.C.) Limited
WORK DATES: Lead and Silver Geochemical Survey, July 25 - 29, 1969
Analytical Work, August 1, 1969

**REPORT ON LEAD AND SILVER
GEOCHEMICAL SOIL SURVEY
OLE GROUP OF CLAIMS (OLE 1-16, OLE 21-22)
JARDINE MOUNTAIN
SLOCAN MINING DIVISION, B.C.**

117° 3' W, 50° 2' N

**by:
ALFRED A. HURGOYNE
CREST LABORATORIES (B.C.) LTD.
1069 - HOMER STREET
VANCOUVER, 3, B.C.
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August 18, 1969

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CREST LABORATORIES (B.C.) LTD.

B.C. REGISTERED ASSAYERS
INDUSTRIAL and RESEARCH CHEMISTS

1068 HOMER STREET
VANCOUVER 3, B.C.
August 18, 1969

SUMMARY:

A soil geochemical survey for lead and silver on part of the Ole Group of mineral claims (Ole 1-16, 21-22) was completed from July 25-29, 1969. The analytical laboratory work was completed on August 1, 1969. A sample grid was placed on the group by utilization of a north-south baseline; cross lines were placed every 300 or 600 feet in an east-west direction by chain and compass. Soil samples were taken at 100 foot spacings in part and at 200 foot spacings. Approximately three line miles or 93 soil samples were collected and analysed for lead and silver. The soil samples were dried, sieved, weighed, and digested by a hot concentrated perchloric-nitric acid mixture and subsequently analysed by atomic absorption. The lead and silver values were plotted and statistical calculations completed. A cumulative percent-concentration graph was constructed for the lead data and it is evident that for B soils two distinct populations are present. One population (background) which varies from 18 to 69 ppm (parts per million) and a second population (anomalous) varies from 50 to 105 ppm. This second population, the anomalous one, is considered to be caused by lead mineralization. A lead anomaly is defined statistically by the 70 ppm contour and it is seen (Note Figure 1) that these anomalies trend in a north by northwest - south by southeast direction. It is believed that these anomalies represent the extension of vein #5 which was uncovered on the west edge of the claim group last season.

SOIL COLLECTION AND CLASSIFICATION:

A sample grid was placed on the claim group by Senate Mining and Exploration Co. Ltd. prior to the geochemical soil survey. They spent 13 man days of labour in placing this grid. A north-south base line was placed by chain and compass and blazed and flagged. At 300 foot intervals, east-west cross lines were run by compass, chained, blazed, and flagged. Numbered wooden stakes were placed at 100 foot spacings on these cross-lines. Lines 6N, and all other lines east of 4E were placed by chain and compass and flagged by Crest Laboratories (B.C.) Ltd.

About 3 line miles or 93 soil samples were collected. At each soil sample site a hole or pit was dug to a depth of 6-12 inches depending on the soil development and the depth of bedrock. At every sample site the topography, vegetation, soil horizon development, and soil horizon sampled, was noted. In every case 4-6 cores of a B soil was taken with a clean trowel and any large rock fragments were rejected. The soil was placed in a kraft soil sample bag and its location marked on the exterior of the bag.

The soil development in the area is residual developed from Siocan Sediments consisting of slate, some schists and tuffs. The soil thickness is generally less than 1 foot and much rock outcrop is present.

The B soil horizon is generally well developed in the forested parts of the survey and less well developed above tree line. The soil development for the area is:

- A₀. Organic litter, undecayed leaves, twigs, 1-3 inches thick.
- A₁. Partially decomposed organic debris, organic rich humus horizon, black in colour, 1-6 inches thick.
- A₂. Grey to white colour, horizon of maximum eluviation, loose structure, 0-2 inches thick.
- B. Brown to orange in colour, loose structure, accumulation of clay and iron minerals and of organic matter, 0-12 inches thick.
- c. Weathered bedrock.

ANALYTICAL TREATMENT OF SOIL SAMPLES:

The samples were analysed by Crest Laboratories (B.C.) Ltd. and the analyst was chemist, Edwin Andrew, supervised by this writer. The samples were dried in their respective sample bags at a temperature of 150° F. and then sieved to -80 mesh through a stainless steel screen. One gram portions of these screened soils were placed in 25 x 200 mm culture tubes and then digested in a mixture of perchloric and nitric acids at 425° F. for a period of three hours. The resulting digested residues were then made up to 50 milliliters volume in 10 percent perchloric acid. The respective sample solutions were aspirated into a Techtron Atomic Absorption Spectrophotometer Model 5 and absorption readings were recorded first for lead and then for silver on all samples. Calibration of the atomic absorption spectrophotometer is effected by preparation and analyses

of lead and silver standards each day.

RESULTS:

I. Statistical Treatment of Data:

A cumulative frequency-concentration graph was constructed for the lead data for B soils (Figure 2), and from this it was decided that values above 70 ppm (parts per million) are distinctly anomalous; values from 60 to 50 ppm are possible anomalous - this being the zone of overlap where high background values mix with low anomalous values. Values below 50 ppm are distinctly non anomalous and are of background concentration. Simply, the cumulative frequency-concentration graph expresses two distinct log normally distributed populations - the background and the anomalous population.

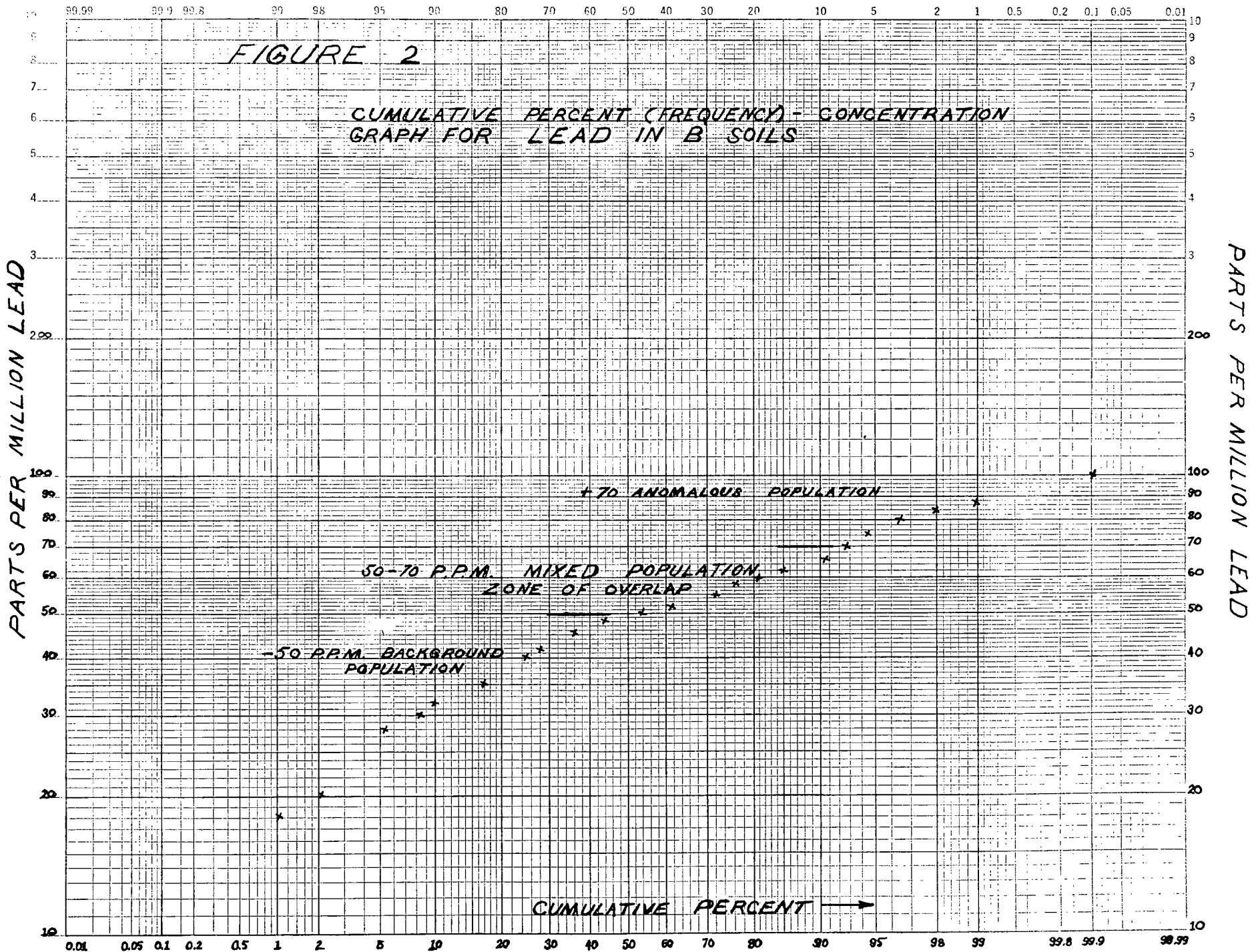
The silver results do not amend themselves to a simple statistical explanation. A cumulative frequency-concentration diagram was constructed and it appears that there are two distinct populations - background and an anomalous one. It cannot be stated with certainty that the silver results are distributed log normally. A distinct silver anomaly would appear to be equal or greater than 1.5 ppm. A possible anomaly would vary from 1.2 to 1.4 ppm. Values less than 1.2 ppm are of background concentration.

II. Expression of Lead Anomalies:

A north by northwest - south by southeast trending series of lead anomalies extend through mineral claims Ols 6, 5, and 6 (Figure 1). Above (north) line 36 an apparent offset of the anomalies of about 200 - 400 feet to the east occurs. This apparent offset may be explained by:

- a) Actual physical faulting of a vein or system of parallel vein-faults.
- b) The geometric expression of a westerly dipping vein on a curved surface, i.e. the apparent offset is on the north side of Jardine Creek Valley.
- c) Mechanical and gravity processes have tended to disperse the lead anomalies down hill and laterally away from the source. This is a very real possibility as many of the slopes average 35 degrees.

The lead anomalies although quite discrete in expression are of low order in magnitude. This can be explained by at least two possibilities, assuming the lead values are indicative of underlying lead mineralization.



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- a) The anomalies are expressing low grade lead mineralization, close to bedrock surface.
- b) The anomalies are expressing lead mineralization located at depth.

The lead anomalies may in fact be the southerly continuation of vein #5 which is referred to by Egil Livgard in his 1968 report on the Ole Claim Group. This vein occurs on the west edge of the Ole Claim Group and strikes in a north-south direction and apparently dips vertical. The vein as traced on surface and from old edits extends into the northerly half of the Ole 5 mineral claim.

III. Expression of Silver Anomalies:

The anomalous silver values appear to generally coincide with the anomalous lead values, however, there are a few instances where there are discrete silver anomalies and no corresponding lead anomalies. It would be expected that lead and silver anomalies would occur together because of their common mineralogical environment, i.e. the silver occurs in galena. Upon weathering of galena, the mobility and dispersion of silver by chemical means is slightly greater than lead, and this may explain some of the erratic distribution of the silver values.

CONCLUSIONS AND RECOMMENDATIONS:

The southerly extension of vein #5 which occurs on the west edge of the claim group appears to be expressed by a series of lead anomalies extending over mineral claims Ole 8, 5 and 6, in a north by northwest - south by southeast trend. The lead anomalies are of low order magnitude but quite discrete. Anomalous silver values generally coincide with anomalous lead values but in several instances appear erratic in distribution.

Before any further geochemistry is done, the following is recommended.

- 1) One or two of the higher lead anomalies should be investigated by pitting or trenching to determine the grade of lead in the bedrock causing these anomalies.
- 2) If the results from (1) are positive, then further soil geochemistry is recommended where adequate soil development is present.
- 3) On the upper parts of the claim group (Ole mineral claims 1 to 4) there is a great predominance of bedrock over soil and rock geochemistry would

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appear to be quite useful, although the sampling interval would have to be small because of the small vein widths. It is recommended that a pilot study be completed on this area to determine if rock geochemistry is feasible.

Respectfully submitted,
CREST LABORATORIES (B.C.) LTD.

Alfred A. Burgoyne

Alfred A. Burgoyne, M.Sc.
Geologist-Geochemist

SOIL SAMPLES

COLLECTOR: G. B. Blakey
 AREA: Kaslo
 FIELD MAP: _____
 DATE: July 26/69

RESULTS PLOTTED BY: _____
 MAP: _____
 DATE: _____

ANALYST: _____
 METHOD: H.M.: _____
 CU.: _____
 DATE: _____

SAMPLE NUMBER	SAMPLE LOCATION	NOTES	TOPOGRAPHY					VEGETATION					SOIL DATA					FIELD SCREENED	VALUES						
			VALLEY BOTTOM	SLOPE UP	SLOPE DOWN	HILL TOP	LEVEL GROUND	HEAVILY WOODED	SPARSELY WOODED	BURNT	LOGGED	GRASSLAND	HORIZON SAMPLED	THICKNESS OF HORIZON	GOOD	POOR	DRIFT		BEDROCK	Mo	Cu	Pb	Zn		
L35	8 W	samples taken		✓								B	3	✓			✓								
	7 W	going east		✓								B	1		✓		✓								
	6 W			✓								B	2		✓		✓								
	5 W			✓								B	1		✓		✓								
	4 W			✓								B	2	✓			✓								
	3 W			✓								B	1		✓		✓								
	2 W						✓					B	3	✓			✓								
	1 W						✓					B	1		✓		✓								
	00						✓					B	3	✓			✓								
*	1 E						✓					B	2	✓			✓								
*	2 E						✓					A	4		✓		✓								swamp bedrock, no sample

SOIL SAMPLES

COLLECTOR: B. E. Nelson
 AREA: Hubla
 FIELD MAP: _____
 DATE: July 26/69

RESULTS PLOTTED BY: _____
 MAP: _____
 DATE: _____

ANALYST: _____
 METHOD: H.M.
 CU: _____
 DATE: _____

SAMPLE NUMBER	SAMPLE LOCATION	NOTES	TOPOGRAPHY					VEGETATION					SOIL DATA						FIELD SCREENED	VALUES			
			VALLEY BOTTOM	SLOPE UP	SLOPE DOWN	HILL TOP	LEVEL GROUND	HEAVILY WOODED	SPARSELY WOODED	BURNT	LOGGED	GRASSLAND	HORIZON SAMPLED	THICKNESS OF HORIZON	HORIZON DEVELOPMENT		PARENT MATERIAL			Mo	Cu	Pb	Zn
L65	8 W	<i>samples taken going east</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				B 8		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	7 W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			B 3		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	6 W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			C B 4		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	5 W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			B 1		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	4 W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			B 4		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	3 W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			B 6		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	2 W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			B 6		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	1 W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			B 3		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
	00		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			C B 1		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

4. The winner
 regulation game
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 terminated. A

score of a fo

5. One run sha
1. third bases
6. A run shall

batter being
 aserunner bei
 aserunner lea

preceding base
 d was one to v

7. A baserunn
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 the batter wi
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 is position mu
 onds before t
 e pitcher sha
 in position to
 e pitcher may
 out having the

2. The pitch
 ng the ball, th
 rward, toward
 batter.

3. A legal de
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 e release of t
 rward past th
 e hand shall
 the elbow.

SOIL SAMPLES

COLLECTOR: *C. Blahy* RESULTS PLOTTED BY: _____ ANALYST: _____
 AREA: *Karla* MAP: _____ METHOD: H.M: _____
 FIELD MAP: _____ DATE: _____ CU: _____
 DATE: *July 26/69* DATE: _____

SAMPLE NUMBER	SAMPLE LOCATION	NOTES	TOPOGRAPHY					VEGETATION					SOIL DATA				FIELD SCREENED	VALUES					
			VALLEY BOTTOM	SLOPE UP	SLOPE DOWN	HILL TOP	LEVEL GROUND	HEAVILY WOODED	SPARSELY WOODED	BURNT	LOGGED	GRASSLAND	HORIZON SAMPLED	THICKNESS OF HORIZON	HORIZON DEVELOP. MENT	PARENT MATERIAL		Mo	CU	Pb	Zn		
<i>L95</i>																							
	<i>4 E</i>	<i>samples taken</i>		<input checked="" type="checkbox"/>							<i>B</i>	<i>3</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>								
	<i>3 E</i>	<i>going east</i>									<i>B</i>	<i>4</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>								
	<i>2 E</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>4</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>								
	<i>1 E</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>4</i>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>								
	<i>oo</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>1</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
	<i>1 W</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>2</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>							
	<i>2 W</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>1</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>							
	<i>3 W</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>1</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>							
	<i>4 W</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>3</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>							
	<i>5 W</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>3</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>							
	<i>6 W</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>4</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>							
	<i>7 W</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>3</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>							
	<i>8 W</i>				<input checked="" type="checkbox"/>						<i>B</i>	<i>1</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>							

SOIL SAMPLES

COLLECTOR: B. E. Medham
 AREA: Lasio
 FIELD MAP:
 DATE: July 29/69

RESULTS PLOTTED BY:
 MAP:
 DATE:

ANALYST:
 METHOD: H.M.
 CU:
 DATE:

SAMPLE NUMBER	SAMPLE LOCATION	NOTES	TOPOGRAPHY					VEGETATION					SOIL DATA					FIELD SCREENED	VALUES				
			VALLEY BOTTOM	SLOPE UP	SLOPE DOWN	HILL TOP	LEVEL GROUND	HEAVILY WOODED	SPARSELY WOODED	BURNT	LOGGED	GRASSLAND	HORIZON SAMPLED	THICKNESS OF HORIZON	HORIZON DEVELOPMENT		PARENT MATERIAL		Mo	Cu	Pb	Zn	
															GOOD	POOR	DRIFT						BEDROCK
L125	8W	samples taken going west	✓								B	2	✓										
	7W		✓									B	3	✓									
	6W		✓									C	4		✓								
	5W		✓									B	6	✓									
	4W		✓									B	2		✓								
	3W		✓									B	2	✓									
	2W		✓									B	1		✓		✓						
L125	1W		✓								B	1		✓		✓							

SOIL SAMPLES

COLLECTOR: *B. C. Medham*

RESULTS PLOTTED BY:

ANALYST:

AREA: *Lehto*

MAP:

METHOD: H.M:

FIELD MAP:

DATE:

CU:

DATE: *July 27/69*

DATE:

SAMPLE NUMBER	SAMPLE LOCATION	NOTES	TOPOGRAPHY					VEGETATION					SOIL DATA					FIELD SCREENED	VALUES				
			VALLEY BOTTOM	SLOPE UP	SLOPE DOWN	HILL TOP	LEVEL GROUND	HEAVILY WOODED	SPARSELY WOODED	BURNT	LOGGED	GRASSLAND	HORIZON SAMPLED	THICKNESS OF HORIZON	HORIZON DEVELOPMENT		PARENT MATERIAL		Mo	Cu	Pb	Zn	
															GOOD	POOR	DRIFT						BEDROCK
<i>L65</i>	<i>4 E</i>	<i>samples taken</i>			<input checked="" type="checkbox"/>							<i>B</i>	<i>2</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	<i>6 E</i>	<i>going east</i>			<input checked="" type="checkbox"/>							<i>B</i>	<i>4</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	<i>8 E</i>								<input checked="" type="checkbox"/>			<i>A</i>	<i>1</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
	<i>10 E</i>			<input checked="" type="checkbox"/>								<i>B</i>	<i>6</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	<i>12 E</i>			<input checked="" type="checkbox"/>								<i>B</i>	<i>3</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	<i>14 E</i>								<input checked="" type="checkbox"/>			<i>B</i>	<i>1</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
<i>*</i>	<i>16 E</i>								<input checked="" type="checkbox"/>			<i>A</i>	<i>4</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<i>possible silt con?</i>
	<i>18 E</i>			<input checked="" type="checkbox"/>								<i>B</i>	<i>2</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	<i>20 E</i>			<input checked="" type="checkbox"/>								<i>B</i>	<i>3</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						
	<i>22 E</i>			<input checked="" type="checkbox"/>								<i>B</i>	<i>1</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						
	<i>24 E</i>				<input checked="" type="checkbox"/>							<i>B</i>	<i>2</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						

SOIL SAMPLES

COLLECTOR: *B. G. Meadham*

RESULTS PLOTTED BY:

ANALYST:

AREA: *Karla*

MAP:

METHOD: H.M.:

FIELD MAP:

DATE:

CU:

DATE: *July 26/69*

DATE:

SAMPLE NUMBER	SAMPLE LOCATION	NOTES	TOPOGRAPHY					VEGETATION					SOIL DATA					FIELD SCREENED	VALUES				
			VALLEY BOTTOM	SLOPE UP	SLOPE DOWN	HILL TOP	LEVEL GROUND	HEAVILY WOODED	SPARSELY WOODED	BURNT	LOGGED	GRASSLAND	HORIZON SAMPLED	THICKNESS OF HORIZON	HORIZON DEVELOPMENT		PARENT MATERIAL		Mo	Cu	Pb	Zn	
															GOOD	POOR	DRIFT						BEDROCK
<i>LO</i>	<i>6E</i>	<i>samples taken</i>			✓							<i>B</i>	<i>2</i>	✓			✓						
	<i>5E</i>	<i>going west</i>			✓							<i>B</i>	<i>2</i>		✓		✓						
	<i>4E</i>				✓							<i>B</i>	<i>1</i>	✓			✓						
	<i>3E</i>				✓							<i>B</i>	<i>6</i>	✓			✓						
	<i>2E</i>				✓							<i>B</i>	<i>6</i>	✓			✓						
	<i>1E</i>				✓							<i>B</i>	<i>2</i>	✓			✓						
	<i>00</i>				✓							<i>B</i>	<i>2</i>		✓		✓						
	<i>1W</i>					<i>W</i>	✓					<i>B</i>	<i>2</i>	✓			✓						
	<i>2W</i>						✓					<i>B</i>	<i>2</i>		✓		✓						
	<i>3W</i>						✓					<i>B</i>	<i>1</i>		✓		✓						
	<i>4W</i>						✓					<i>B</i>	<i>2</i>		✓		✓						
	<i>5W</i>						✓					<i>B</i>	<i>4</i>	✓			✓						
	<i>6W</i>							✓				<i>2+B</i>	<i>1</i>		✓		✓						
	<i>7W</i>							✓				<i>B</i>	<i>3</i>	✓			✓						
	<i>8W</i>							✓				<i>B</i>	<i>2</i>		✓		✓						

CREST LABORATORIES (B.C.) LTD.B.C. REGISTERED ASSAYERS
GEOCHEMISTS1068 HOMER STREET,
VANCOUVER 3, B.C.

July 30, 1969

Senate Mining Co. Ltd.
355 - Burrard Street
VANCOUVER, B.C.Attention: Mr. Liverd:Cost of Geochemical Soil Survey for Senate Mining Co. Ltd., Old Claim Group,
Slocan Mining Division, B.C., performed by Crest Laboratories (B.C.) Ltd.,
July 25 - 29, 1969.Time Costs:

2 man soil sampling crew for 5 days @ \$50.00 per crew man day.	500.00
Burgoyne for 2 days @ \$120.00 per day.	240.00

Analytical Costs:

for 92 soil samples for lead & silver (3 line miles)		
Analytical costs @ \$1.50 per sample:	138.00	
Preparation Charges	<u>18.40</u>	156.40

Disbursement Fees:

Airline Tickets return for 3 men	159.00
Equipment transportation charges	18.90
Expenses incurred for L. Hamill (Hotel at Nelson, July 25, 2 meals, Limousine).	12.00
Expenses incurred by Crest Laboratories for 3 men meals, limousine, hotel - July 25)	<u>65.05</u>
Sub Total	254.95
10% Disbursement Fee	<u>25.49</u>

Total

280.44

Total Costs:

\$1,176.84

280

CREST LABORATORIES (B.C.) LTD.

2456.84*Alfred A. Burgoyne*Alfred A. Burgoyne, F.S.G.
Geologist-Geochemist

AAB/seb

CREST LABORATORIES (B.C.) LTD.B.C. REGISTERED ASSAYERS
INDUSTRIAL and RESEARCH CHEMISTS1068 HOMER STREET
VANCOUVER 3, B.C.
August 19, 1965

Cost of Preparing Geochemical Report for Ole Group, Sleean Mining
Division, B.C.

Draftsman 2 days @ \$50.00 per day.	100.00
Burgoynes 1½ days writing report, statistical calculations @ \$120.00 per day.	<u>180.00</u>
	<u>\$280.00</u>

CREST LABORATORIES (B.C.) LTD.

Alfred A. Burgoynes
Alfred A. Burgoynes, M.Sc.
Geologist-Geochemist

AAB/seb

CERTIFICATE

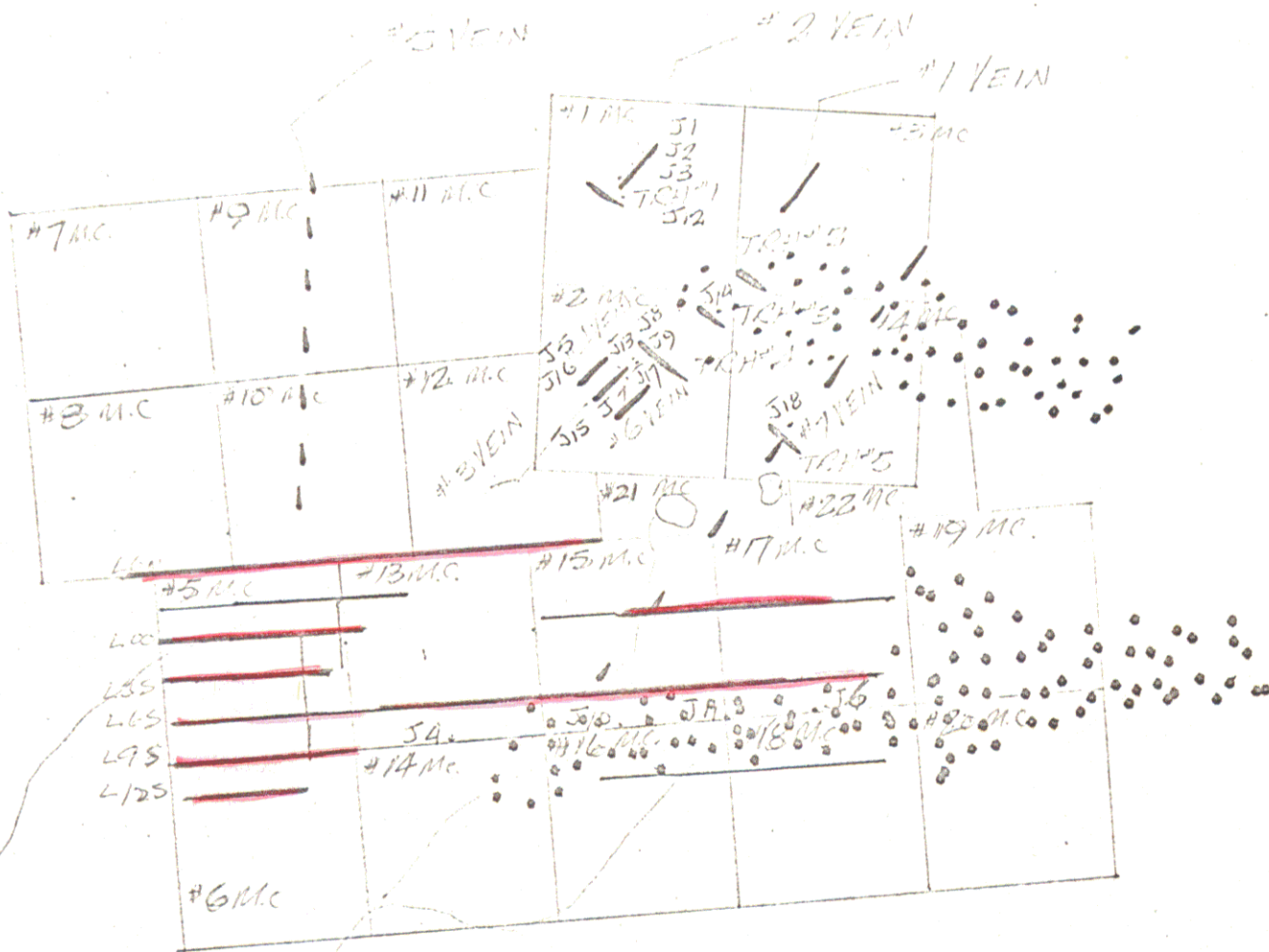
I, Alfred A. Burgoyne, of Burnaby, British Columbia, do hereby certify that:

- 1) I am a geologist-geochemist employed by Crest Laboratories (B.C.) Ltd., 1068 - Homer Street, Vancouver 3, B.C.
- 2) I am a graduate of the University of British Columbia (B.Sc., Geology and Chemistry, 1962), and of the University of New Mexico, (M.Sc., Geology, 1967).
- 3) I have practiced my profession as a geologist-geochemist since 1992.
- 4) I personally have examined the property as described in this report.

Alfred A. Burgoyne

Alfred A. Burgoyne, M.Sc.
Geologist-Geochemist

Dated: August 19, 1969



SENATE MINING & EXPLORATION
 MTX. JARDINE
 OLE CLAIMS

1" = 1500'

AUG 1969

— GEO-CHEM

— VEINS (M1000)

••••• SERPENTINE

— TRENCHES

1997

[Signature]

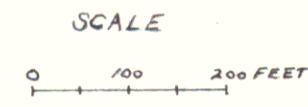
Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 1997 MAP #1

FIGURE 1

SENATE MINING AND EXPLORATION CO. LTD.
OLE GROUP, MT. JARDINE, SLOCAN MINING DIVISION, B.C.

CHAIN AND COMPASS GEOCHEMICAL SOIL SURVEY FOR SILVER AND LEAD
To accompany report on lead and silver geochemical soil survey, Ole Group of Claims

Alfred A. Burgoyne
Map completed August 18, 1969



M.C. OLE 8

M.C. OLE 10

M.C. OLE 12

8W 7W 6W 5W 4W 3W 2W 1W 00 1E 2E 3E 4E 5E 6E 7E 8E 10E 12E 14E 16E 18E 20E 22E 24E 26E 28E
L 6 N $\frac{1.5}{35}$ $\frac{.50}{60}$ $\frac{.80}{40}$ $\frac{1.0}{25}$ $\frac{1.1}{62}$ $\frac{1.1}{65}$ $\frac{1.0}{35}$ $\frac{1.2}{65}$ $\frac{1.1}{52}$ $\frac{1.6}{50}$ $\frac{1.1}{55}$ $\frac{1.7}{92}$ $\frac{1.4}{35}$ $\frac{1.2}{35}$ $\frac{1.2}{52}$ $\frac{.90}{45}$ $\frac{1.7}{32}$ $\frac{1.1}{62}$ $\frac{1.4}{48}$

L 00 $\frac{0.9}{35}$ $\frac{1.1}{40}$ $\frac{0.5}{28}$ $\frac{1.2}{52}$ $\frac{0.6}{30}$ $\frac{1.0}{40}$ $\frac{1.0}{42}$ $\frac{.90}{25}$ $\frac{1.0}{28}$ $\frac{1.2}{58}$ $\frac{1.6}{65}$ $\frac{2.0}{75}$ $\frac{1.0}{48}$ $\frac{1.5}{65}$ $\frac{.80}{30}$ $\frac{1.0}{42}$ $\frac{1.5}{32}$ $\frac{.60}{35}$ $\frac{.50}{18}$ $\frac{1.6}{52}$ $\frac{1.0}{30}$ $\frac{1.8}{40}$

L 3 S $\frac{1.5}{50}$ $\frac{1.3}{30}$ $\frac{1.5}{80}$ $\frac{1.6}{55}$ $\frac{1.4}{52}$ $\frac{1.0}{100}$ $\frac{1.9}{52}$ $\frac{1.6}{55}$ $\frac{2.2}{48}$ $\frac{1.0}{48}$

L 6 S $\frac{1.4}{55}$ $\frac{1.0}{28}$ $\frac{1.5}{50}$ $\frac{1.0}{60}$ $\frac{1.1}{55}$ $\frac{1.5}{70}$ $\frac{1.0}{50}$ $\frac{.90}{75}$ $\frac{.90}{90}$ $\frac{1.0}{90}$ $\frac{1.2}{45}$ $\frac{.70}{28}$ $\frac{1.2}{40}$ $\frac{1.1}{53}$ $\frac{.50}{50}$ $\frac{1.1}{50}$ $\frac{1.0}{35}$ $\frac{.80}{28}$ $\frac{1.5}{48}$ $\frac{1.1}{48}$

L 9 S $\frac{1.0}{40}$ $\frac{1.2}{38}$ $\frac{.90}{60}$ $\frac{.80}{40}$ $\frac{1.0}{48}$ $\frac{.80}{45}$ $\frac{.60}{35}$ $\frac{.90}{38}$ $\frac{1.2}{85}$ $\frac{1.4}{70}$ $\frac{2.0}{62}$ $\frac{1.5}{55}$ $\frac{1.1}{62}$

L 12 S $\frac{1.0}{35}$ $\frac{1.1}{50}$ $\frac{1.1}{52}$ $\frac{.80}{50}$ $\frac{1.1}{60}$ $\frac{.80}{55}$ $\frac{.80}{58}$

M.C. OLE 6

M.C. OLE 14

M.C. OLE 16



LEGEND

$\frac{1.5}{48}$ B SOIL SAMPLE LOCATION UNLESS NOTED OTHERWISE.
TOP NUMBER IS SILVER IN PARTS PER MILLION WHILE
BOTTOM IS LEAD IN PARTS PER MILLION.

P.P.M. PARTS PER MILLION

M.C. MINERAL CLAIM A ORGANIC SOIL

L LINE C WEATHERED BEDROCK

N NORTH

S SOUTH

E EAST

W WEST

70 P.P.M. CONTOUR FOR LEAD

LINES CUT AND MEASURED BY SENATE MINING AND EXPL. CO.

1997

1001

#5

M.C. OLE 5

M.C. OLE 13

M.C. OLE 15