

GEOCHEMICAL REPORT ON THE CB Nos 1 - 9 AND  
REB Nos 1 - 4 CLAIMS, PART OF THE WEST GROUP

IZMAN CREEK AREA

LOCATED: 14 miles north of Lytton, B.C.  
(49° 27'N, 121° 37'W) KAMLOOPS M.D.

BY: H.M. Jones, P.Eng. Geologist  
EL PASO MINING AND MILLING COMPANY

AUGUST 24 - OCTOBER 5, 1972

3938

# 3938

GEOCHEMICAL REPORT ON THE CB Nos. 1 - 9

AND

REB Nos. 1 - 4 CLAIMS, PART OF THE WEST GROUP

LOCATED - 14 miles North of Lytton, B.C.  
(49° 27' N, 121° 37' W.)

KAMLOOPS MINING DIVISION, B.C.

BY



HAROLD M. JONES - (P. Eng.) Geologist

EL PASO MINING AND MILLING COMPANY

AUGUST 24 - OCTOBER 5, 1972

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. <b>3938</b>	MAP .....

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SUMMARY

A geochemical soil survey was conducted between August 24th and October 5th, 1972 on the CB Nos 1 - 9 and REB Nos 1 - 4 Claims by El Paso Mining and Milling Company, who have optioned the ground from Santana International Resources Ltd. These claims are located approximately 14 miles north of Lytton, B.C.

The claims are underlain by a pendant of altered sediments and volcanics enclosed within the Lytton batholith. Narrow quartz veins mineralized with chalcopyrite and molybdenite follow fractures and faults in the altered rocks. Copper and molybdenum soil anomalies approximately outline this mineralized zone. Weak silver anomalies also coincide with the above anomalies.

Geological mapping of the area is necessary to assess the anomalous area.

*H. J.*

INTRODUCTION

Between August 24th and October 5th, 1972 a geochemical soil survey was completed on the Izman Creek copper prospect by a field crew of two to three men, working for El Paso Mining and Milling Company. The work was done on the CB Nos 1 - 9 and REB Nos 1 - 4 Claims, which are owned by Santana International Resources Ltd., and are part of a larger block of claims owned by that company. The claims upon which the work was done are a part of those included in grouping notice for the West Group.

The claims are located 14 miles north of Lytton, B.C., and 3 miles east of the Fraser River. They cover the top and north and south slopes of a mountain which is bounded on the north, west and south by Izman Creek and one of its tributaries. Topography in the claims area is steep, except at the top where the land surface is rolling.

Vegetation consists of thick jack pine on the north slopes and mixed open grassy meadows and thinner pine stands on the southern slopes.

Outcrop is fairly abundant at the higher elevations, especially on the south slope. Lower areas are either talus or alluvial covered.

Access to the property is by highway 12, north of Lytton for 14 miles, then by Izman Creek forestry access road for 3 miles.

*H.M.G.*



EL PASO MINING AND MILLING COMPANY  
DEL NORTE MINING GROUP

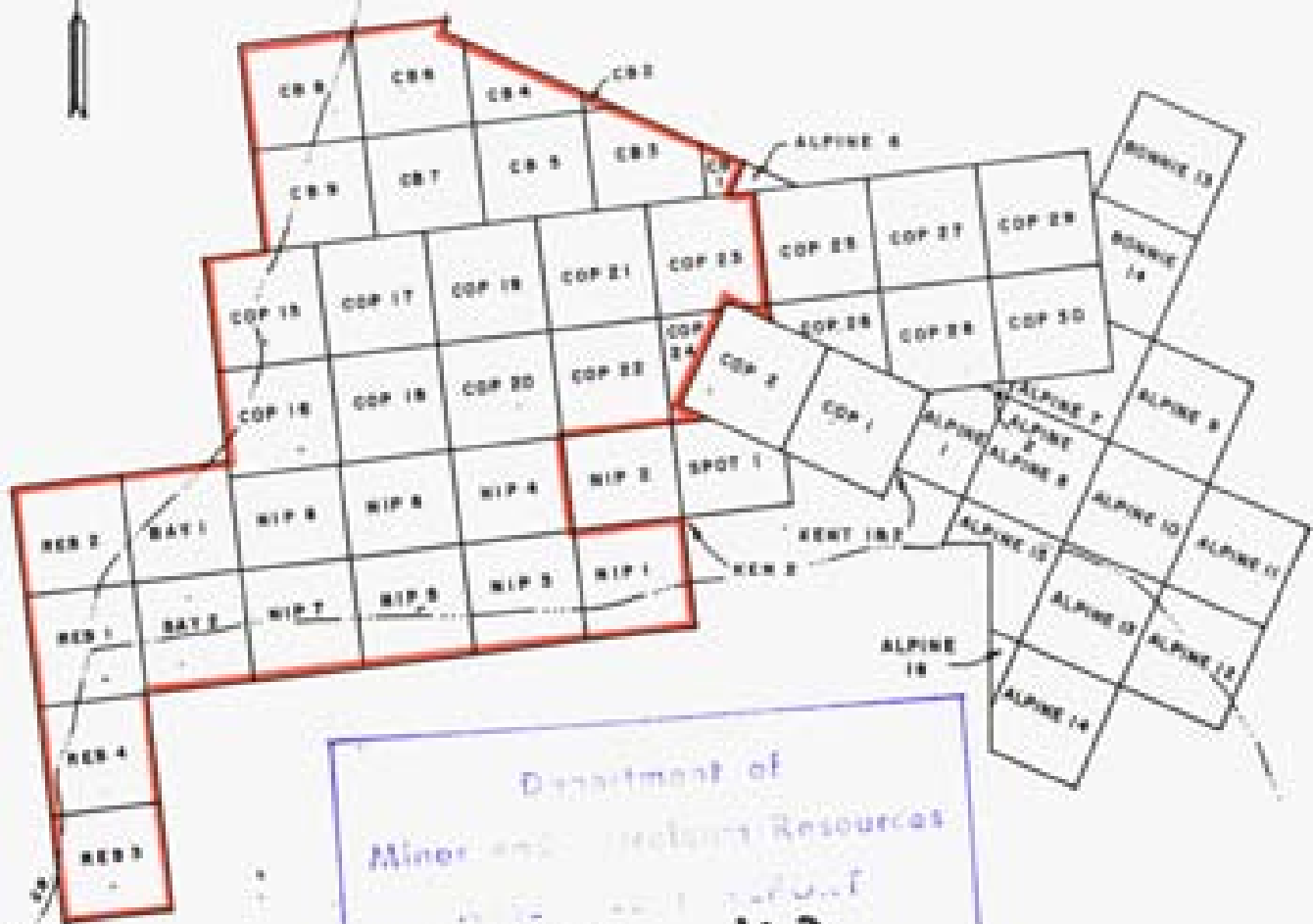
**FIGURE 1**  
**LOCATION MAP**  
**IZMAN CREEK PROPERTY**  
**LYTTON AREA, B.C.**

DRAWN BY: K.L.J.	DATE: NOV. 1972	SCALE: 1 inch = 4 Miles
TRACED BY:	DATE:	
REVISED: DATE	REVISED: DATE	DRAWING No:

**M-1**  
**3938**

Department of  
Mines and Geotechnical Resources  
ASSESSMENT REPORT  
NO. 3938 #1

8500.



Department of  
 Mineral and Geotechnical Resources  
 British Columbia  
 NO. **3938** **#2**

EL PASO MINING AND MILLING COMPANY					
DEL NORTE MINING GROUP					
<b>FIGURE 2</b>					
<b>CLAIM MAP</b>					
<b>IZMAN CREEK PROPERTY</b>					
<b>LYTTON AREA, B. C.</b>					
DRAWN BY:	G.L.J.	DATE:	NOV. 1975	SCALE:	1" = 2640'
TRACED BY:		DATE:			
REVISED:		DATE:			
					DRAW NO. 10

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FIELDWORK

A geochemical soil survey was completed over a part of the West Group during the period August 4 to October 5, 1972 by El Paso Mining and Milling Company. For grid control, several roads on the property were surveyed using Brunton Compass and nylon rope chain, marking each station with a wood peg at every corner in the road or each 200 foot interval, whichever was the shorter distance. A gate on the road was designated 100,000 North and 100,000 East. North-south grid lines were run at 400 foot spacings from approximately 9,200N to 16,300N between 6,800E and 10,800E. These lines are of varying lengths due to the location of the roads and/or claim boundaries. All grid lines were tied to the control survey along the roads.

Soil samples were taken at 200 foot intervals along each grid line using a mattock. They were taken from the "B" horizon wherever possible but in areas of talus and swampy ground, the favourable horizon either could not be found or no soil was available for sampling. Some of these samples included appreciable organic material. Each sample was placed in a kraft envelope upon which was marked the sample number, co-ordinates and description of the character of the sample. A total of 193 samples were collected and analyzed for total copper, molybdenum and silver by Min-En Laboratories Ltd., 705 West 15th Avenue, North Vancouver, B.C. Frequency curves were plotted for copper, molybdenum and silver and from these plots and some statistical analysis, the background and anomalous values were established. The copper, molybdenum and silver values in parts per million were plotted on base maps on a scale of one inch equals 200 feet and contoured to indicate the anomalous results for each metal. These contour maps are included in the pocket at the back of this report. *WJQ*

### GENERAL GEOLOGY

The Izman Creek area is underlain by lower Cretaceous granodiorite of the Mount Lytton batholith. It is in fault contact to both the east and the west of the property with rocks of lower Cretaceous age. To the east are volcanics and sediments of the Spences Bridge Group and to the west by sediments of the Jackass Mountain and Lillooet Groups.

A small pendant of permian or earlier Cache Creek rocks outcrops within the claims area. This pendant, which includes garnet-epidote skarn, limestone, andesite, and dioritized andesite is enclosed within the granodiorite of the batholith. A swarm of narrow quartz veins, mineralized with chalcopyrite, malachite and minor molybdenite crosscut the skarn zone.

### GEOCHEMICAL RESULTS

The field work for this report also covered an adjacent block of contiguous claims which are grouped as the East Group. The latter claims are part of the Santana International Resources Ltd., property and are underlain by similar geology to the claims to the West Group. For this report all geochemical data was combined in determining the arithmetic means and plotting the frequency distribution curves.

#### 1. COPPER

The arithmetic means of all the copper analyses is 161 ppm, but from the frequency curve for copper (Figure 3) the norm or background value is about 50 ppm. The wide variation between the two values is due to the smaller number of very high copper assays. The possible anomalous copper range is taken as two to four times background or 100 to 200 ppm. Probably anomalous values range from four to eight times background or 200 to 400 ppm. Definitely anomalous values are those above 400 ppm.

*H.M.J.*

All copper analyses are plotted on Map No: 92-I-5-A4, which shows a significant anomaly developing on the central part of the sample grid. This anomalous area trends northwesterly and extends from 12,000N, 10,000E to 13,200N, 8000E. It appears to coincide with the mineralized skarn zone and to extend down slope from it.

## 2. SILVER

The arithmetic mean of all silver values is 0.85 ppm., and from the frequency curve for silver (Figure 4) the norm or background is about 0.80 ppm. Possibly anomalous silver range is taken as two to three times background or 1.6 to 2.4 ppm; probably anomalous range as three to four times background or 2.4 to 3.2 ppm; and definitely anomalous as all values greater than 3.2 ppm.

All silver results are plotted on Map No: 92-I-5-A6, which shows two weak anomalies centered at 12,800N, 8,800E and 12,700N, 9,600E. These also trend northwesterly, and appear to be related to the skarn zone.

## 3. MOLYBDENUM

The arithmetic mean of all molybdenum analyses is 4.5 ppm. From the frequency curve for molybdenum (Figure 5) the norm or background is approximately 3.0 ppm. Possibly anomalous molybdenum values are 6 to 9 ppm; probably anomalous 9 to 12 ppm and definitely anomalous are values greater than 12 ppm.

*M.S.G.*

FIGURE 3  
FREQUENCY DISTRIBUTION CURVE  
COPPER IN SOILS  
IZMAN CREEK PROPERTY  
LYTTON AREA, B.C.  
OCTOBER 31st 1972

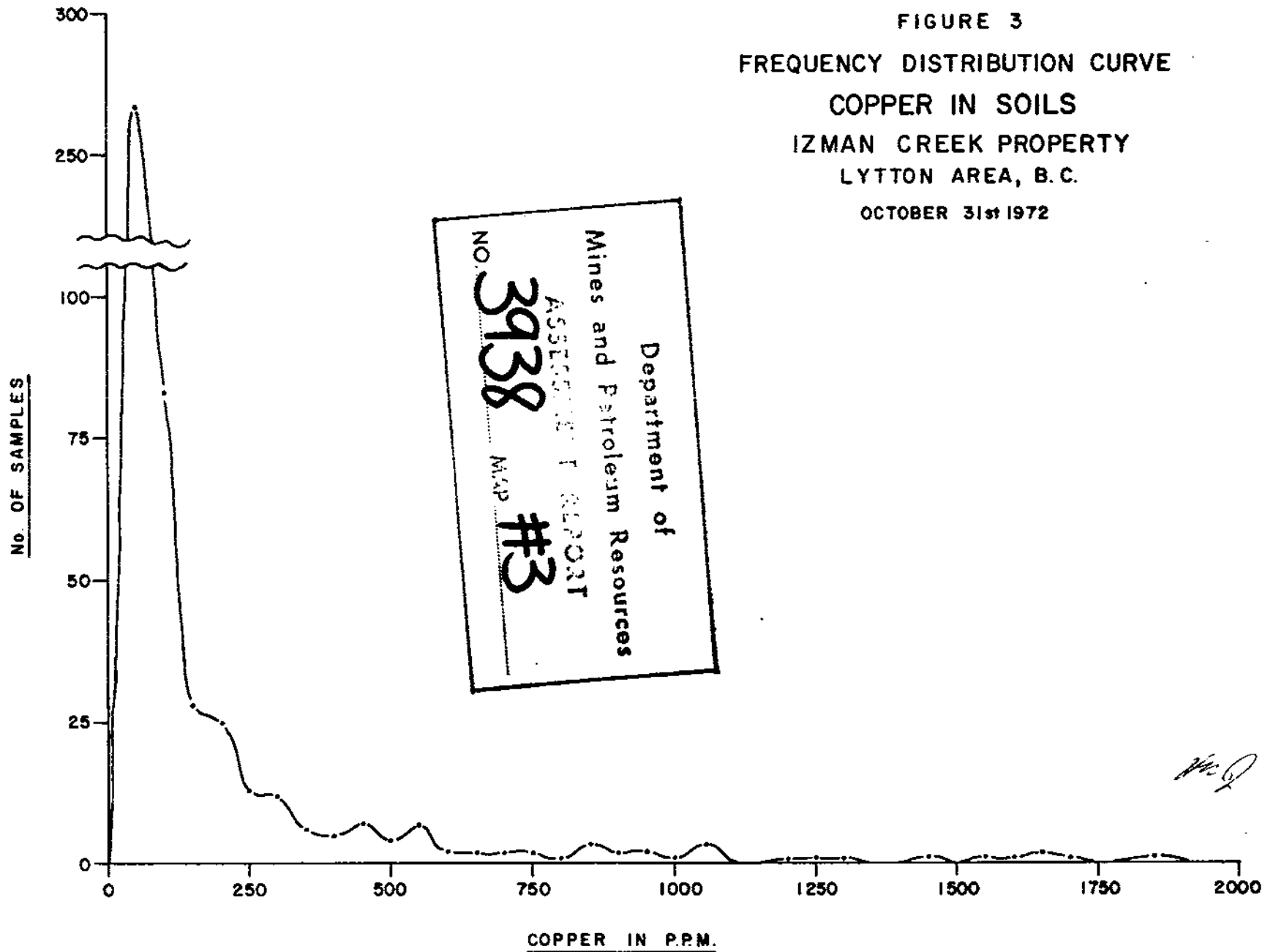
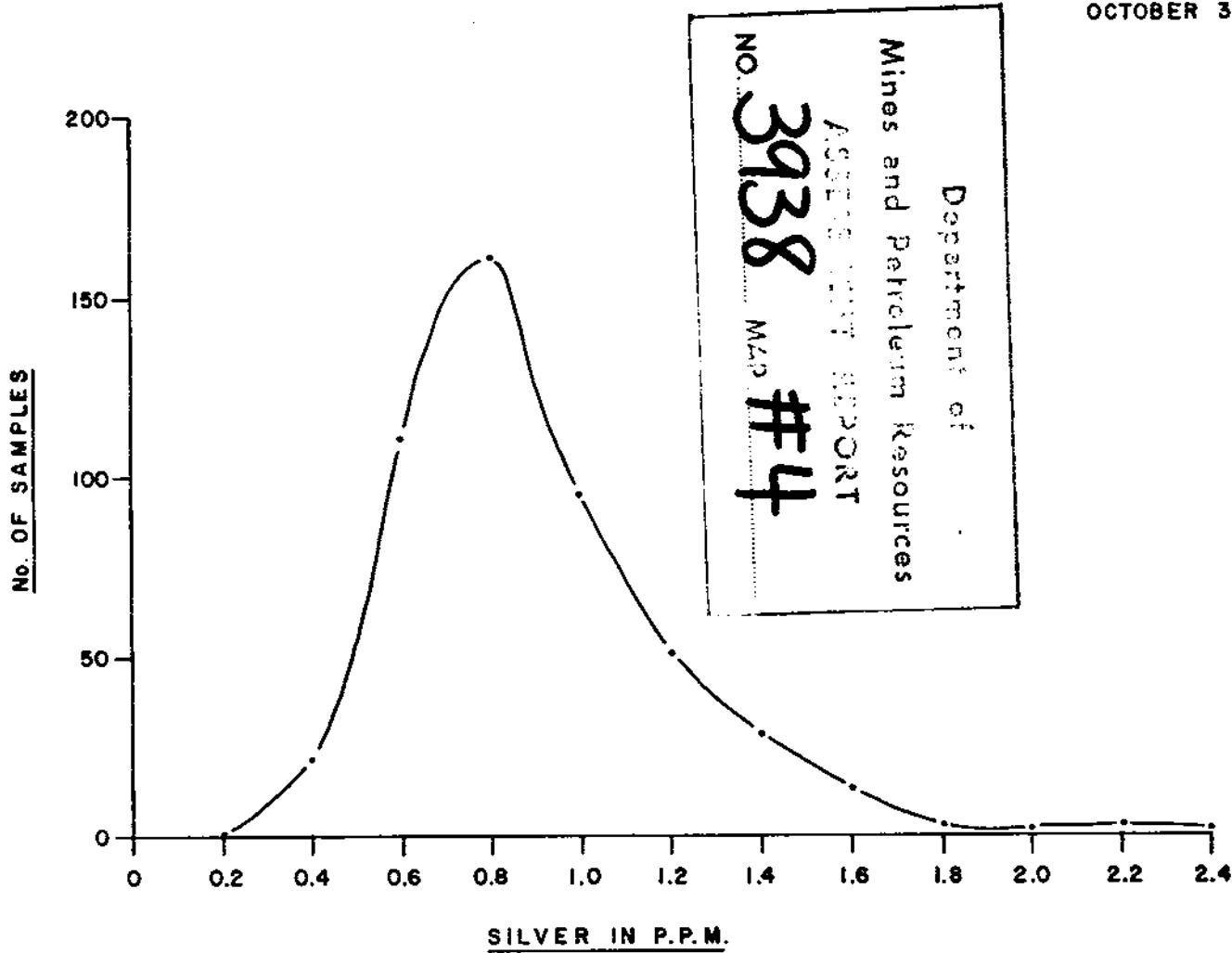


FIGURE 4  
FREQUENCY DISTRIBUTION CURVE  
SILVER IN SOILS  
IZMAN CREEK PROPERTY  
LYTTON AREA, B. C.

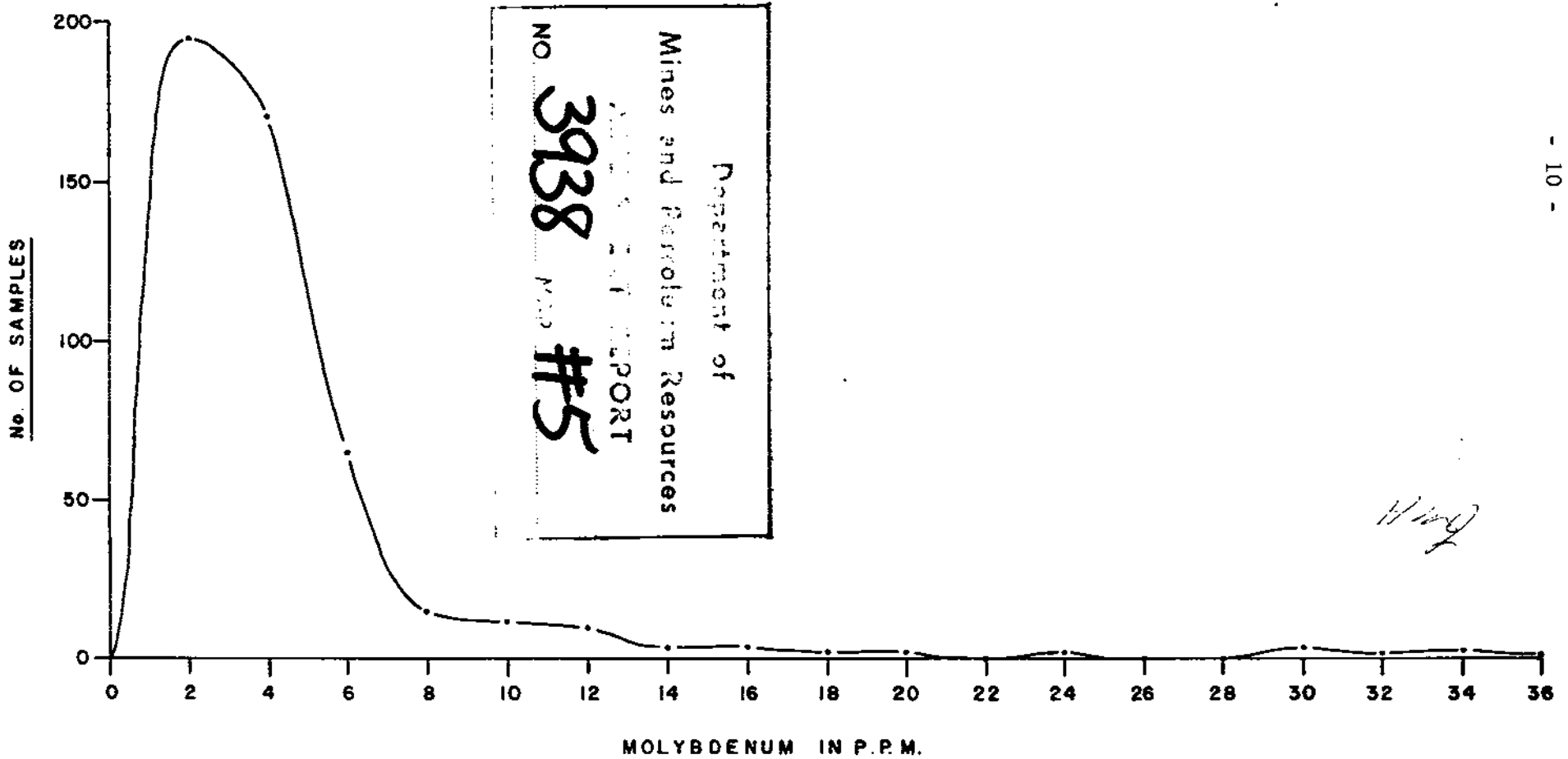
OCTOBER 31st 1972



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FIGURE 5  
FREQUENCY DISTRIBUTION CURVE  
MOLYBDENUM IN SOILS  
IZMAN CREEK PROPERTY  
LYTTON AREA, B. C.

OCTOBER 31st 1972



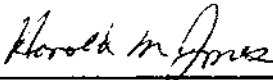
All molybdenum results are plotted on Map No: 92-I-5-A5, which shows a large anomalous area extending from 12000N to 13,500N and 8,000E to 10,000E. This anomaly encompasses all of the skarn area as well as some of the surrounding volcanics.

CONCLUSION

The results of the geochemical survey show coincident copper, molybdenum and to a lesser degree silver anomalies over the skarn section of the pendant. These anomalies are significant because several areas of interesting copper mineralization are known within the anomalous areas.

Geological mapping must be done in the survey area to assess these geochemical anomalies.

Vancouver, B.C.

  
\_\_\_\_\_  
Harold M. Jones,  
Senior Geologist,  
El Paso Mining and Milling Company.

HMJ:dr

November 3, 1972

APPENDIX A

SOIL ASSAYS



COMPAN Y El Paso

PROJECT No.: 186 Cu 26

### GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

FILE No.

DATE: Sept 6,  
1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
230001	8	410					10								
02	1	104					08					.			
03	5	530					12					.			
04	5	260					06					.			
05	4	410					09					.			
06	29	1250					12					.			
07	6	250					10					.			
08	30	190					14					.			
09	2	600					14					.			
10	10	880					10					.			
11	6	1700					12					.			
12	3	130					15					.			
13	5	140					08					.			
14	4	150					07					.			
130015	5	260					08					.			
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**R E C E I V E D**  
 SEP. - 7 1972  
 El Paso Mining & Milling Co.

COMPAN: El Paso

GEOCHEMICAL ANALYSIS DATA SHEET

FILE No. \_\_\_\_\_

PROJECT No.: 186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Sept 6, 1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
6 86	10 90	15 95	20 100	25 105	30 110	35 115	40 120	45 125	50 130	55 135	60 140	65 145	70 150	75 155	80 160
230017	6	44.0					0.8					.			
18	4	19.0					0.6					.			
19	3	18.0					0.8					.			
20	4	35.0					0.9					.			
21	15	30.0					0.8					.			
22	5	18.0					0.8					.			
23	8	18.0					1.0					.			
24	4	28.0					0.8					.			
25	6	49.0					0.7					.			
26	4	40.0					0.9					.			
27	5	15.00					1.6					.			
28	8	18.00					1.9					.			
230029	5	8.30					1.2					.			
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CERTIFIED BY Robert V. Herrionella

6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm				
86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
031	2	135					06					?			
32	1	57					07					?			
33	6	360					09					?			
34	2	60					08					?			
35	1	65					08					?			
36	2	62					06					?			
37	2	20					06					?			
38	3	35					04					?			
39	1	12					04					?			
40	1	35					06					?			
41	2	19					06					?			
42	3	40					07					?			
043	1	22					08					?			
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COMPANY: El Paso

## GEOCHEMICAL ANALYSIS DATA SHEET

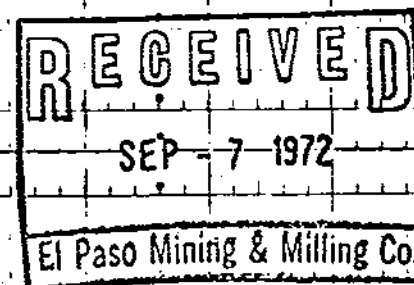
FILE No. \_\_\_\_\_

PROJECT No.: 186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Sept 6,  
1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230045	2	30					08					•			
46	2	37					12					•			
47	1	50					08					•			
48	1	28					07					•			
49	1	20					07					•			
50	1	71					08					•			
51	2	90					08					•			
52	3	95					06					•			
53	2	110					07					•			
54	2	42					05					•			
55	1	48					05					•			
56	2	89					06					•			
57	5	210					06					•			
58	3	122					09					•			
59	3	81					08					•			
60	2	73					08					•			
61	3	190					09					•			
62	8	200					10					•			
63	2	230					15					•			
64	4	275					10					•			
65	2	240					08					•			
66	4	420					09					•			
67	3	370					09					•			
68	2	54					07					•			
69	2	87					07					•			
70	4	185					08					•			
71	2	220					09					•			
72	3	190					10					•			
73	1	54					06					•			
230074	3	21					06					•			

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- 16 -

COMPANY:

El Paso

GEOCHEMICAL ANALYSIS DATA SHEET

File No. \_\_\_\_\_

PROJECT No.:

186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Sept 6, 1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
6 86	10 90	15 95	20 100	25 105	30 110	35 115	40 120	45 125	50 130	55 135	60 140	65 145	70 150	75 155	80 160
230075	3	490					1.3								
76	3	50					0.6								
77	1	81					1.2								
78	1	72					1.0								
79	2	75					1.0								
230080	3	42					0.7								

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File No.

PROJECT No.:

186-Cu 26

MIN - EN Laboratories Ltd.

DATE: Sept 22  
1972.

Sample Number	Mo ppm 84	Cu ppm 90	Pb ppm 95	Zn ppm 100	Ni ppm 105	Co ppm 110	Ag ppm 115	Fe ppm 120	Hg ppb 125	As ppm 130	Mn ppm 135	Au ppm 140				
230081	4	30					1.3					?				
82	5	12					0.4					?				
83	2	25					0.7					?				
84	2	43					0.8					?				
85	4	47					0.8					?				
86	4	22					0.8					?				
87	4	63					0.9					?				
88	4	37					0.7					?				
89	6	45					0.8					?				
90	3	84					1.3					?				
91	3	37					0.4					?				
92	3	27					1.0					?				
93	4	58					1.2					?				
94	3	66					1.0					?				
95	3	22					0.9					?				
96	4	24					0.7					?				
97	3	28					0.8					?				
98	3	25					0.9					?				
99	3	33					1.2					?				
100	4	38					0.8					?				
01	4	24					1.0					?				
02	3	24					0.8					?				
03	4	40					1.2					?				
04	3	47					1.2					?				
05	3	18					0.8					?				
06	4	45					1.2					?				
07	3	8					0.3					?				
08	4	52					1.3					?				
09	4	33					0.9					?				
230110																

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## GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

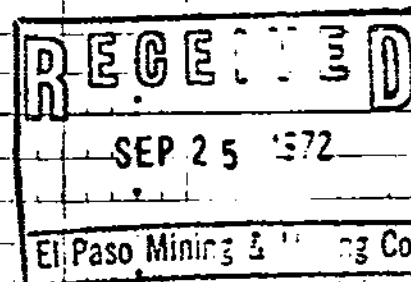
File No.

PROJECT No.:

DATE: Sept 22

1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm		
6	10	15	20	25	30	35	40	45	50	55	60	65	75	80
81	90	95	100	105	110	115	120	125	130	135	140	145	155	160
230111	3	36					09					.		
12	3	22					06					.		
13	4	26					08					.		
14	6	26					09					.		
15	6	40					10					.		
16	6	39					14					.		
17	5	14					05					.		
18	6	45					08					.		
19	4	118					10					.		
20	4	44					06					.		
21	3	29					05					.		
22	5	21					06					.		
23	4	77					10					.		
24	6	54					06					.		
25	2	58					06					.		
26	3	31					05					.		
27	3	33					05					.		
28	3	13					05					.		
29	2	17					07					.		
30	6	30					06					.		
31	2	36					06					.		
32	2	30					04					.		
33	2	26					06					.		
34	1	23					03					.		
35	1	19					03					.		
36	1	31					05					.		
37	1	28					03					.		
38	1	25					06					.		
39	1	24					06					.		
230140	1	20					04					.		



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GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

File No.

DATE: Sept 22 1972.

PROJECT No.:

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm				
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230141	2	70					09					?				
42	1	22					06					?				
43	1	19					05					?				
44	2	27					05					?				
45	1	55					07					?				
46	2	41					05					?				
47	1	28					05					?				
48	2	49					07					?				
49	1	52					09					?				
50	1	18					05					?				
51	1	44					06					?				
52	2	69					06					?				
53	1	32					06					?				
54	1	26					04					?				
55	2	56					06					?				
56	1	18					05					?				
57	2	26					05					?				
58	2	17					09					?				
59	2	26					08					?				
60	3	16					06					?				
61	2	30					06					?				
62	2	23					04					?				
63	2	42					06					?				
64	3	19					05					?				
65	3	36					06					?				
66	2	24					06					?				
67	1	23					08					?				
68	2	21					06					?				
69	2	16					04					?				
230170	2	21					0.5					?				

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## GEOCHEMICAL ANALYSIS DATA SHEET

File No. \_\_\_\_\_

PROJECT No.: \_\_\_\_\_

MIN - EN Laboratories Ltd.

DATE: Sept 22  
1972.

6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
Sample. Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm				
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230171	3	22					05					?				
72	3	37					04					?				
73	3	19					05					?				
74	3	22					06					?				
75	2	13					03					?				
76	2	28					06					?				
77	2	25					05					?				
78	2	17					06					?				
79	2	18					04					?				
80	2	14					05					?				
81	2	17					04					?				
82	4	51					05					?				
83	4	68					06					?				
84	12	310					10					?				
85	20	215					08					?				
86	16	195					08					?				
87	11	160					07					?				
88	6	102					06					?				
89	12	100					07					?				
90	11	150					07					?				
91	4	81					08					?				
92	4	69					09					?				
93	4	44					08					?				
94	3	26					08					?				
95	4	24					07					?				
96	2	45					07					?				
97	2	34					07					?				
98	3	33					05					?				
99	2	40					06					?				
230200	2	33					04					?				

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**GEOCHEMICAL ANALYSIS DATA SHEET**

MIN - EN Laboratories Ltd.

File No.

DATE: Sept 2 1972.

PROJECT No.: \_\_\_\_\_

Sample Number	Mo ppm 81 86 90	Cu ppm 15 95	Pb ppm 20 100	Zn ppm 25 105	Ni ppm 30 110	Co ppm 35 115	Ag ppm 40 120	Fe ppm 45 125	Hg ppb 50 130	As ppm 55 135	Mn ppm 60 140	Au ppm 65 145	70 150	75 155	80 160
230201	2	14					03					.			
.02	2	20					06					.			
.03	2	19					03					.			
.04	2	21					05					.			
05	2	33					07					.			
230206	2	29					06					.			
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## GEOCHEMICAL ANALYSIS DATA SHEET

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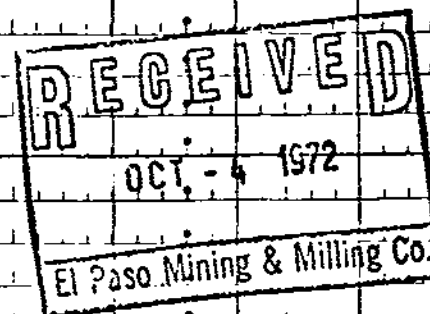
PROJECT NO.

186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 3,  
1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230207	12	500					1.8					?			
08	8	400					1.5					?			
09	6	230					1.4					?			
10	6	16.8					1.4					?			
11	24	200					1.3					?			
12	4	6.3					1.0					?			
13	2	6.2					1.1					?			
14	5	5.0					1.2					?			
15	4	5.4					1.1					?			
16	3	4.3					1.2					?			
17	3	7.8					1.3					?			
18	2	5.0					1.3					?			
19	3	3.8					1.3					?			
20	4	5.8					1.4					?			
21	3	3.8					1.2					?			
22	5	3.4					1.0					?			
23	2	2.4					1.0					?			
24	4	4.1					1.3					?			
25	2	3.1					1.2					?			
26	3	2.0					1.0					?			
27	2	1.6					0.8					?			
28	3	1.7					1.0					?			
29	3	1.9					0.9					?			
30	3	2.6					1.0					?			
31	2	4.4					1.1					?			
32	2	2.8					1.2					?			
33	2	3.6					1.5					?			
34	2	2.0					0.9					?			
35	3	3.4					1.2					?			
230236	2	3.6					1.3					?			



115-310-26 Iron Creek Property

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Albert V. Hennonville

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GEOCHEMICAL ANALYSIS DATA SHEET

File No. 108

PROJECT No.: 186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 3, 1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm				
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230237	2	2.2					1.1					?				
38	2	3.0					1.1					?				
39	4	2.8					1.0					?				
40	1	1.8					0.8					?				
41	2	2.8					0.9					?				
42	2	2.6					1.0					?				
43	2	2.0					0.9					?				
44	3	1.8					0.9					?				
45	3	4.5					1.1					?				
46	2	3.3					1.2					?				
47	3	3.3					1.0					?				
48	2	2.0					1.0					?				
49	2	2.2					1.0					?				
50	3	4.8					1.2					?				
51	2	2.1					0.9					?				
52	2	2.3					0.9					?				
53	2	1.6					0.9					?				
54	2	2.2					0.8					?				
55	3	3.8					1.2					?				
56	3	2.8					1.0					?				
57	4	2.4					0.7					?				
58	2	2.5					0.9					?				
59	3	2.2					0.9					?				
60	2	2.6					0.9					?				
61	66	7.30					2.2					?				
62	33	4.80					1.8					?				
63	7	2.85					1.4					?				
64	9	5.00					1.5					?				
65	6	2.35					1.4					?				
230266	6	4.05					1.5					?				

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## GEOCHEMICAL ANALYSIS DATA SHEET

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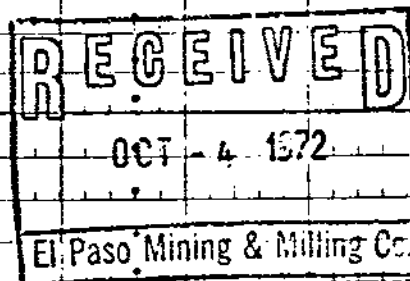
186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 3,

1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm				
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230267	5	300					16					?				
68	3	98					09					?				
69	2	60					08					?				
70	6	54					12					?				
71	5	88					15					?				
72	3	74					14					?				
73	4	86					15					?				
74	3	44					12					?				
75	3	42					13					?				
76	3	44					12					?				
77	3	50					13					?				
78	5	45					13					?				
79	2	45					10					?				
80	2	32					08					?				
81	2	33					11					?				
82	2	25					08					?				
83	3	34					11					?				
84	3	41					08					?				
85	2	32					11					?				
86	2	22					06					?				
87	2	26					06					?				
88	2	31					06					?				
89	2	37					09					?				
90	3	43					08					?				
91	3	36					08					?				
92	3	21					06					?				
93	10	475					11					?				
94	14	1640					14					?				
95	8	550					11					?				
230296	10	900					12					?				



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## GEOCHEMICAL ANALYSIS DATA SHEET

File No. 108

PROJECT No.:

186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 3,  
1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230297	10	920					1.1					.			
98	6	500					1.1					.			
99	14	1030					1.2					.			
300	3	230					0.8					.			
01	7	545					1.0					.			
02	5	1030					1.5					.			
03	3	850					2.2					.			
04	5	1420					2.1					.			
05	6	2350					2.3					.			
06	11	1180					1.4					.			
07	16	255					1.4					.			
08	7	210					1.2					.			
09	6	85					0.8					.			
10	4	81					1.0					.			
11	2	156					1.0					.			
12	3	135					0.7					.			
13	4	130					0.9					.			
14	2	250					1.0					.			
15	2	101					0.6					.			
16	4	520					0.9					.			
17	2	660					1.1					.			
18	1	22					0.7					.			
19	1	19					0.6					.			
20	2	22					0.7					.			
21	2	15					0.6					.			
22	1	19					0.6					.			
23	2	60					0.9					.			
24	2	93					0.8					.			
25	2	14					0.7					.			
230326	1	72					0.7					.			

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FILE NO.

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PROJECT No.:

186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 3,  
1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm	70	75	80
230327	1	59					09					?			
28	2	40					09					?			
29	5	270					08					?			
30	4	325					08					?			
31	5	110					08					?			
32	29	825					11					?			
230333	2	70					06					?			
							:					?			
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GEOCHEMICAL ANALYSIS DATA SHEET

FILE NO. 126

PROJECT NO.: 186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 16, 1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230334	9	390					10					.			
35	10	150					08					.			
36	30	525					08					.			
37	12	182					08					.			
38	10	151					07					.			
39	5	132					08					.			
40	4	54					08					.			
41	4	67					06					.			
42	4	54					08					.			
43	2	30					07					.			
44	4	38					08					.			
45	2	24					06					.			
46	2	40					06					.			
47	2	49					08					.			
48	2	35					07					.			
49	2	31					07					.			
50	2	54					08					.			
51	1	34					06					.			
52	1	26					05					.			
53	2	78					08					.			
54	2	50					06					.			
55	1	28					06					.			
56	2	40					07					.			
57	2	24					07					.			
58	3	36					08					.			
59	12	720					08					.			
60	42	3875					17					.			
61	32	1590					08					.			
62	16	2125					16					.			
230363	5	3150					1.5					.			

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## GEOCHEMICAL ANALYSIS DATA SHEET

FILE NO. 126

PROJECT NO. 186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 16,  
1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
80	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
230364	14	980					12					.			
65	4	315					0.8					.			
66	8	205					0.9					.			
67	5	118					0.7					.			
68	8	72					0.8					.			
69	4	61					0.6					.			
70	8	102					0.8					.			
71	6	162					0.7					.			
72	10	300					1.0					.			
73	2	108					0.5					.			
74	23	1240					1.0					.			
75	17	1640					1.5					.			
76	10	600					1.0					.			
77	12	1040					1.1					.			
78	5	165					1.1					.			
79	3	178					0.7					.			
80	6	157					1.0					.			
81	3	42					0.8					.			
82	7	57					0.9					.			
83	6	120					0.8					.			
84	12	84					0.8					.			
85	20	830					1.2					.			
86	9	240					1.0					.			
87	35	770					1.1					.			
88	5	350					1.3					.			
89	10	290					1.0					.			
90	6	260					1.1					.			
91	4	151					0.9					.			
92	4	108					0.7					.			
230393	5	128					0.7					.			

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## GEOCHEMICAL ANALYSIS DATA SHEET

File No. 126

PROJECT No. 186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 16,  
1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165
230394	6	150					08					.			
95	4	124					07					.			
96	4	45					06					.			
97	6	84					07					.			
98	4	82					08					.			
99	4	44					06					.			
400	4	84					07					.			
01	3	40					06					.			
02	3	54					07					.			
03	4	33					07					.			
04	5	58					10					.			
05	3	46					09					.			
06	2	49					10					.			
07	5	67					09					.			
08	2	37					10					.			
09	1	24					08					.			
10	3	38					09					.			
11	3	34					08					.			
12	3	112					09					.			
13	3	32					07					.			
14	18	124					07					.			
15	3	55					08					.			
16	3	61					07					.			
17	5	83					08					.			
18	2	28					05					.			
19	4	16					05					.			
20	6	34					07					.			
21	5	143					07					.			
22	3	28					07					.			
230423	3	22					05					.			

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G. L. + R. H. ... 11.6.

COMPANY El Paso  
 PROJECT NO. 186 Cu 26

**GEOCHEMICAL ANALYSIS DATA SHEET**  
 MIN - EN Laboratories Ltd.

File No. 126  
 DATE: Oct 16, 1972.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165
230424	2	16					05					•			
25	3	25					06					•			
26	3	49					08					•			
27	4	27					06					•			
28	4	20					07					•			
29	3	28					08					•			
30	3	34					06					•			
31	5	21					04					•			
32	1	24					06					•			
33	2	68					07					•			
34	1	25					07					•			
35	2	25					06					•			
36	2	32					08					•			
37	2	71					06					•			
38	3	28					07					•			
39	4	56					11					•			
40	2	34					07					•			
41	2	49					06					•			
42	4	83					08					•			
43	3	38					08					•			
44	3	34					08					•			
45	1	41					07					•			
46	3	38					08					•			
47	2	43					08					•			
48	2	34					07					•			
49	2	35					07					•			
50	2	19					06					•			
51	3	69					08					•			
52	2	29					05					•			
230453	2	20					06					•			

111 + 111 = 111

Sample Number	Mo	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm			
230454	3	32					0.7								
55	2	50					0.8								
56	2	26					0.6								
57	2	34					0.6								
58	3	8					0.5								
59	2	17					0.5								
60	2	25					0.5								
61	3	21					0.4								
62	2	30					0.6								
63	4	30					0.6								
64	2	28					0.6								
65	2	36					0.7								
66	1	24					0.9								
67	5	158					1.4								
68	6	270					1.4								
69	8	183					1.0								
70	6	134					1.1								
71	7	136					1.0								
72	34	570					1.2								
73	2	36					0.9								
74	2	24					0.9								
75	2	29					0.8								
76	2	38					0.7								
77	3	22					0.7								
78	3	38					0.8								
79	2	32					0.8								
80	3	26					0.8								
81	4	34					0.9								
82	3	50					0.9								
230483	3	38					0.9								

El Paso

### GEOCHEMICAL ANALYSIS DATA SHEET

FILE NO. 126

186 Cu 26

MIN - EN Laboratories Ltd.

DATE: Oct 16, 1972.

Sample No.	Grain No.	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppm	Other	Other	Other	
		95	100	105	110	115	120	125	130	135	140	145	150	155	160	
230484	3	28					0.7					.				
85	4	100					1.4					.				
86	3	54					0.6					.				
87	2	28					0.8					.				
88	4	34					0.8					.				
89	2	26					0.8					.				
90	5	94					0.9					.				
91	2	50					0.8					.				
92	14	670					1.2					.				
93	4	48					0.8					.				
230494	6	105					0.7					.				
							.					.				
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APPENDIX C

STATEMENT OF COSTS

STATEMENT OF QUALIFICATIONS

The fieldwork for this report was done under the supervision of H. M. Jones, whose qualifications are listed below:

H. M. Jones: - P. Eng. (Geol. Eng.) - Senior Geologist  
El Paso Mining and Milling Company  
Vancouver, B.C.

Completed B.A. Sc. (Geological Engineering) at University of British Columbia in 1956; employed by - Bethlehem Copper Corporation - from May, 1956 to September, 1956 as junior geologist under the supervision of C. S. Coveney. Employed by Utah Construction and Mining Company - from October, 1956 to September, 1963 in British Columbia and Alaska as a field geologist, under the supervision of L. C. Clark and G. A. Noel. Employed by Noranda Exploration from January, 1964 to July, 1966 in Australia as supervisor of Queensland field office, under the supervision of B. O. Brynelsen and E. B. Bell. Employed by the Brenda Group from August, 1966 to December, 1969 in British Columbia and the United States as project engineer, under the supervision of B. O. Brynelsen and L. S. Trenholme. Employed from January, 1970 to present in British Columbia and Yukon as Senior Geologist for El Paso Mining and Milling Company, under the supervision of G. A. Noel.

APPENDIX B

STATEMENT OF QUALIFICATIONS



STATEMENT OF COSTS

1972 SOIL SURVEY

SALARIES


T. Samoil	3 days @ \$900/month	\$ 90.00
P. Brandley	3 days @ \$600/month	60.00
D. Patterson	7 days @ \$575/month	129.50
R. Warner	7 days @ \$525/month	118.50
R. Ney	7 days @ \$400/month	90.00
J. Ruza	1 day @ \$600/month	<u>20.00</u>
	<u>TOTAL SALARIES</u>	\$ <u>508.00</u>

Analysis of Soil Samples for Cu, Mo, Ag  
193 samples @ \$2.00 = \$ 386.00

Room and Board - 28 man days @ \$15.00/man/day = 420.00

Vehicle Rental 82.00

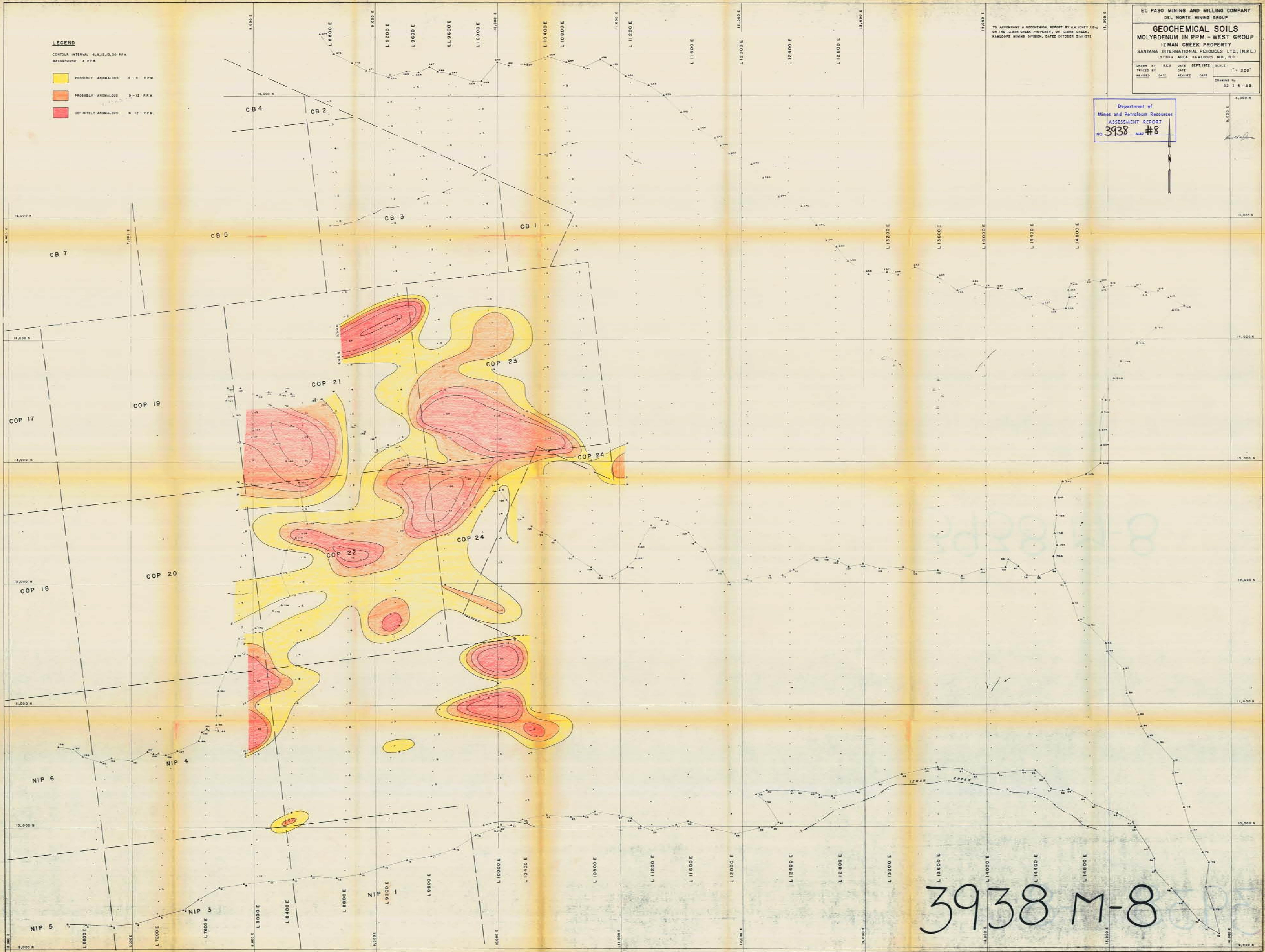
TOTAL \$ 1,396.00

  
H. M. Jones

**LEGEND**  
 CONTOUR INTERVAL 6, 8, 12, 15, 20 PPM  
 BACKGROUND 3 PPM

<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	POSSIBLY ANOMALOUS	6 - 9 PPM
<span style="background-color: orange; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	PROBABLY ANOMALOUS	9 - 12 PPM
<span style="background-color: red; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	DEFINITELY ANOMALOUS	> 12 PPM

Department of  
 Mines and Petroleum Resources  
**ASSESSMENT REPORT**  
 NO. 3938 MAP #8



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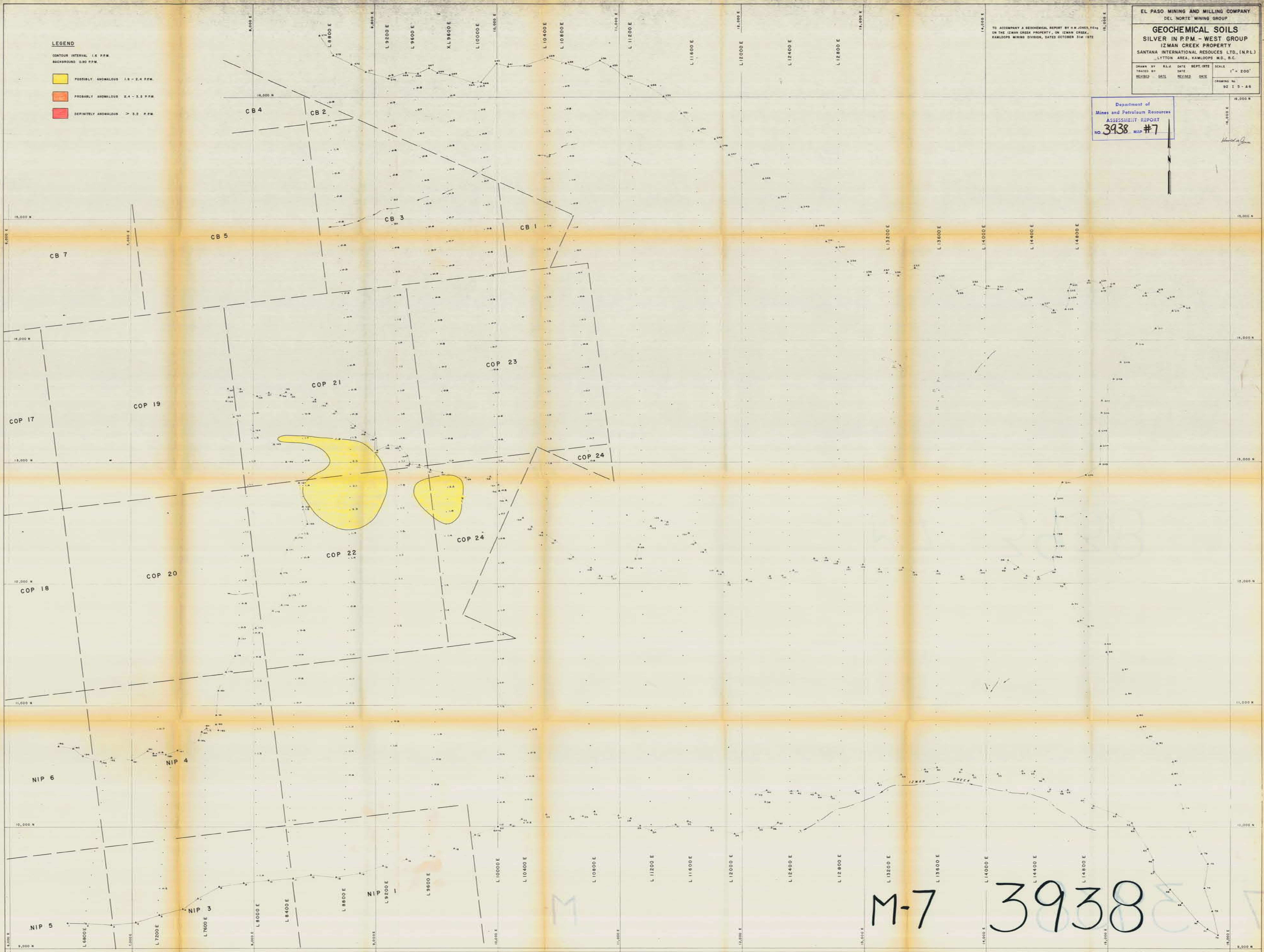
TO ACCOMPANY A GEOCHEMICAL REPORT BY R.W. JONES, P.E.  
 ON THE IZMAN CREEK PROPERTY, ON IZMAN CREEK,  
 KAMLOOPS MINING DIVISION, DATED OCTOBER 31st 1972

DRAWN BY	R.L.J.	DATE	SEPT. 1972	SCALE	1" = 200'
TRACED BY		DATE			
REVISED		DATE			
				DRAWING NO.	92 I 5 - A6

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 3938 MAP #7

**LEGEND**  
 CONTOUR INTERVAL 1.6 P.P.M.  
 BACKGROUND 0.80 P.P.M.

- POSSIBLY ANOMALOUS 1.6 - 2.4 P.P.M.
- PROBABLY ANOMALOUS 2.4 - 3.2 P.P.M.
- DEFINITELY ANOMALOUS > 3.2 P.P.M.



**GEOCHEMICAL SOILS  
COPPER IN P.P.M. - WEST GROUP**  
IZMAN CREEK PROPERTY  
SANTANA INTERNATIONAL RESOURCES LTD. (IN.P.L.)  
LYTTON AREA, KAMLOOPS M.D., B.C.

DRAWN BY: K.L.J. DATE: SEPT. 1972 SCALE: 1" = 200'  
TRACES BY: DATE: REVISER: DATE: DRAWING NO.: 92 T 3 - A4

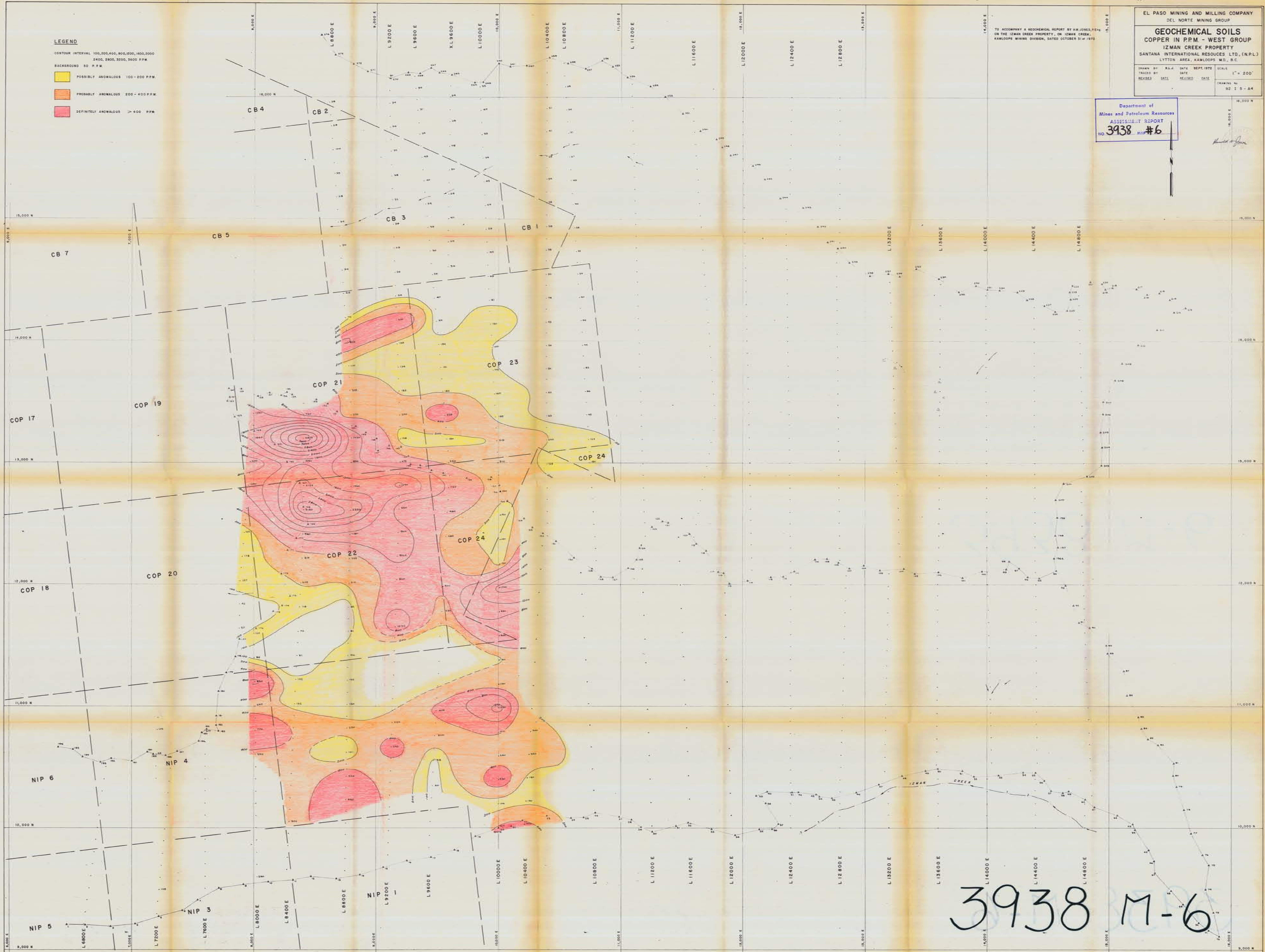
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ON THE IZMAN CREEK PROPERTY, ON IZMAN CREEK,  
KAMLOOPS MINING DIVISION, DATED OCTOBER 31, 1972

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3938 MAP #6

**LEGEND**

CONTOUR INTERVAL 100, 200, 400, 800, 1600, 3200  
BACKGROUND SO P.P.M.

- POSSIBLY ANOMALOUS 100-200 P.P.M.
- PROBABLY ANOMALOUS 200-400 P.P.M.
- DEFINITELY ANOMALOUS > 400 P.P.M.



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