

- 1 Geological, Geochemical, Geophysical Report
- 2 Joanne MC's, 5 miles SW of Sicamous
Lat. 50°47' N Long., 119°04' W
- 3 J. M. Black, P.Eng. 82L/14E
- 4 Sicamous Resources Ltd.
- 5 May 7 to June 1, 1973

4453

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INTRODUCTION

The Annis property (Joanne and Mouse claims) was found about twenty years ago. An adit was started about fifteen years ago. The property is about five miles southwest of Sicamous and is readily accessible by about a mile of road from a point about four miles southwest of Sicamous on the Trans-Canada Highway. (See Figure 1)

The property is on the ridge between Shuswap and Mara Lakes, near the north end of the Larch Hills. The adit is at about 2,675' altitude and showings have been found between about 2,450' and 2,800' altitude.

The property has been explored by many trenches, mostly made by bulldozer (now partly sloughed), and some diamond drill holes.

At the beginning of the work described in this report, a base line was laid out and from it lateral lines 200' apart were laid out with compass and chain.

The four Joanne claims, 1-4, on which most of the work has been done, were surveyed to learn more about the geology, geochemistry and the conductivity. Barometer readings were taken at many points along the lines as the geology was mapped, in order to prepare the topographic map on which the geology is shown. (See Figure 2)

TOPOGRAPHY

The claims are on a gentle to steep slope northwestwards. In the south central and southeast part of the claims, the slope is gentle. Towards the west, north and northeast it steepens markedly.

A northward striking scarp crosses the claims. The ground slopes steeply to the east of it and, generally, gently west of it. Water in the creek that supplied the camp appears to start at this scarp and a spring was seen farther north along the scarp. It may mark the trace of a fault and has been mapped as such.

GEOLOGY

Many of the lateral lines were traversed and outcrops near them examined.

In the south central part of the claims the slope is very gentle and natural outcrops are scarce. However, this is an area in which mineralization has been sought and numerous trenches have been cut. Elsewhere, outcrops are common and, in the east and to a lesser extent in the west, rocky bluffs are common.

The claims are underlain by the Mara series of late pre-Cambrian age.

The rocks comprise interbedded quartzites, micaceous quartzites and schists.

Quartzite is the most abundant and is found in all parts of the claims. It is white or near white and is in beds that range from about an inch to many feet in thickness. It is completely recrystallized. In places, mica is common and the rock grades into a micaceous quartzite. In places, feldspar is abundant and, where dark mica is also present, the beds look granitic.

The schist beds are generally thin, from a fraction of an inch up to 1" or 2" thick. In a few places, thicknesses of a few feet were seen. The color ranges from silvery to grey to brown and, in a few places, greenish. These schist beds are interbedded with quartzite. Schist beds predominate in the south central part of the area. They are poorly exposed except in cuts and trenches and it would appear that this schistose section has been easily eroded.

Elsewhere, especially in the east, micaceous quartzites with thin-bedded quartzites and minor schists are common.

Quartzites with very little schist and micaceous quartzite occur in the east, southeast of the fault.

The bedding which is easily discernible in many outcrops, generally strikes north, northwestward and dips northeastward. Some beds strike south of west. Some exceptions were noted as shown on Figure 2. Generally mica crystals are oriented parallel to the bedding, though in a few places the schistosity strikes slightly to the north of the bedding.

It would appear that the oldest rocks in the east comprise sandstone and some dirty sandstone and minor argillites. These were overlain by an argillaceous sequence with minor sandstones. Finally, on top were deposited sandstone beds and a few thin argillaceous beds. A boundary between the predominantly argillaceous (schist) and predominantly sandstone (quartzite) sequence, is indicated.

This boundary was not found west of the postulated Camp fault, which suggests that along it there was a substantial movement. Near this fault some different bedding attitudes were noted which may be caused by subsidiary faults or by large drag folds. The Camp fault has an almost straight trace and, presumably, is dipping steeply.

MINERAL OCCURRENCES

Mineralization comprises occurrences about an inch across and of unknown length and depth exposed in the walls of trenches. Some of these occurrences are closely spaced and, in a width of a few feet, several may be seen. They are closely associated with mica beds and these are generally brown and composed largely of biotite.

The mineralization comprises pyrite, sphalerite and galena and minor chalcopyrite and some quartz. The surface is commonly coated with a white oxide.

The fact that the mineralization is closely associated with the schist and absent from the quartzites, suggests that it may have originated at the time of the deposition of the argillite beds that subsequently were metamorphosed to form schists.

The mineralization appears to be restricted to the central schistose part of the Mara series on these claims and most of the workings appear to be near the upper part of this sequence.

GEOCHEMISTRY

An area was outlined that included all the known trenches and this outlined area, with a few exceptions, was not sampled. It was considered that the disturbance of the soil in the vicinity of the trenches, some of which are deep and wide, would distort the geochemical results.

Samples were taken every 200' along the lines 200' apart. They were taken with a pick from below the upper soil layer, generally from a depth between 4" and 12". The samples comprised the subsoil and, in places near outcrops, small rock fragments. Most of the samples are brown. A few, mainly in the north central part of the area, are reddish.

The samples were put in moisture-proof sample bags and dried and screened in the Kamloops Research Laboratory. They were analyzed by hot acid extraction by Edward Andrews and were reported on May 25, 1973.

The results are shown on Figure 3. The threshold for anomalies is taken as 25, 50, 500 and 1.1 parts per million for copper, lead, zinc and silver respectively. Of the 179 samples taken, 34, 51, 57 and 48 of the samples for copper, lead, zinc and silver are equal to or greater than the threshold figure, which is about one quarter of the samples.

The anomalous areas are close to the trenched area and are largely in the western two thirds of the claims. Very few anomalous results are found in the eastern quartzites. Generally, the anomalies appear to have an apex in the central southern part and to widen northwestward down the slope.

Silver differs slightly from the other elements and occurs generally somewhat to the east of the other anomalies.

The distribution of the anomalies is seen to be related to the central schistose belt and the centre of concentration appears to be in the schists in the southern part of the claims. This is the area in which most of the exploration has been done and it would appear that, elsewhere on the claims, mineralization is scantier.

ELECTROMAGNETICS

A Ronka EM 16 was used. The station selected was the one near Seattle. The direction to it is almost normal to the strike of the country rock and of the mineralization, as shown on Figure 4. The lateral lines were traversed and readings were taken every 50'. The central three quarters of the claims was covered. This covered area extends beyond all the known mineralization. The readings were taken by Bruce Woodsworth, P.Eng. The readings were taken as percentages and most of them are between +20 and +60.

Only two crossovers were obtained. One of these is on Line 5, 150 north. This was not confirmed by any other negative readings nearby and it is not taken as evidence of a conductor at this point.

The only other negative readings are on Line 6, about 1,700 south. This is beside the old camp and close to metallic scrap. These negative readings were not confirmed by any negative readings on nearby traverses so these crossovers may be caused by the metallic scrap.

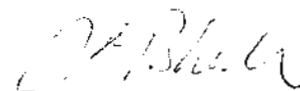
From the EM readings, it appears that there are no strongly conductive mineral occurrences in the area surveyed.

The filtering technique described by Fraser* was used and the results are shown on Figure 5. As is shown, this procedure permits numerous anomalies to be outlined. Their strike corresponds to the general strike of the beds of the country rock, which suggests that conductive mineralization is controlled by or is related to the bedding. However, because of the lack of crossovers in the direct readings, it is believed that the anomalies outlined are caused by only weakly-conductive material. These anomalies correspond with mineralization exposed by numerous trenches. No other areas with stronger anomalies are known, so it is concluded that the exposed mineralization is representative of the mineralization on the claims.

Minor changes in the anomalies at the postulated Camp fault suggest that some real change occurs at the fault.

* D. C. Fraser. Contouring of V L F EM data. Geophysics, Vol. 34, No. 6, December, 1969, pp. 958-967.

J. M. Black, P.Eng.
June 25, 1973



Declaration re costs of work done on Joanne Claims 1-4, May and June, 1973

May 7-12	Versatile Mining Company: running line and taking geochemical samples. Contract includes room and board.	\$ 850.00
May 7	J. M. Black, $\frac{1}{2}$ day	
May 14-19	J. M. Black, 6 days	
May 28-June 1	J. M. Black, 5 days (total $11\frac{1}{2}$ days @ \$80)	920.00
May 14-19	Bruce Woodsworth (6 days @ \$50)	300.00
May 25	Kamloops research and assay laboratory: analyses of geochemical samples	548.00
	Rental of Ronka EM 16	60.00
	Transport 6 days @ \$10	60.00
	Board and room 6 days (May 14-19, 2 men @ \$10)	120.00
May 7	Meals and transportation	<u>6.80</u>
		\$2,864.80

W. Black
June 25/73

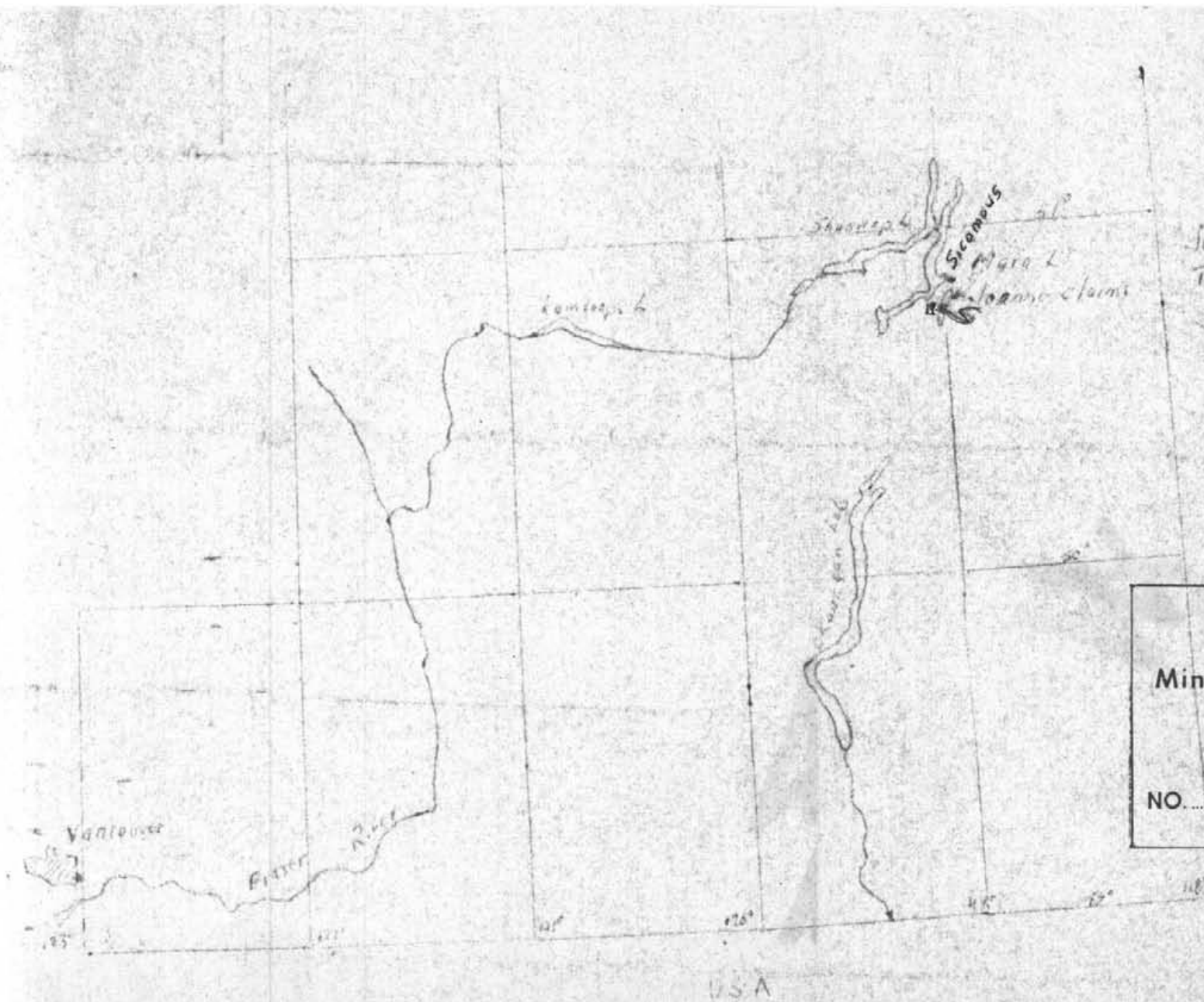


Figure 1
 Index Map
 Joanne 1-9 Mile Vancouver Area
 To accompany report by
 J.M. Black P. Eng. June 25 1973
 Scale 1" = 30 miles

J.M. Black

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USA

Figure 3

Joanne Mc 1-9 Kamloops Min. Div.
Geochemical results and contours
To accompany report by J.M. Black
P. Eng. dated June 25 1973
Scale 1" = 250 feet

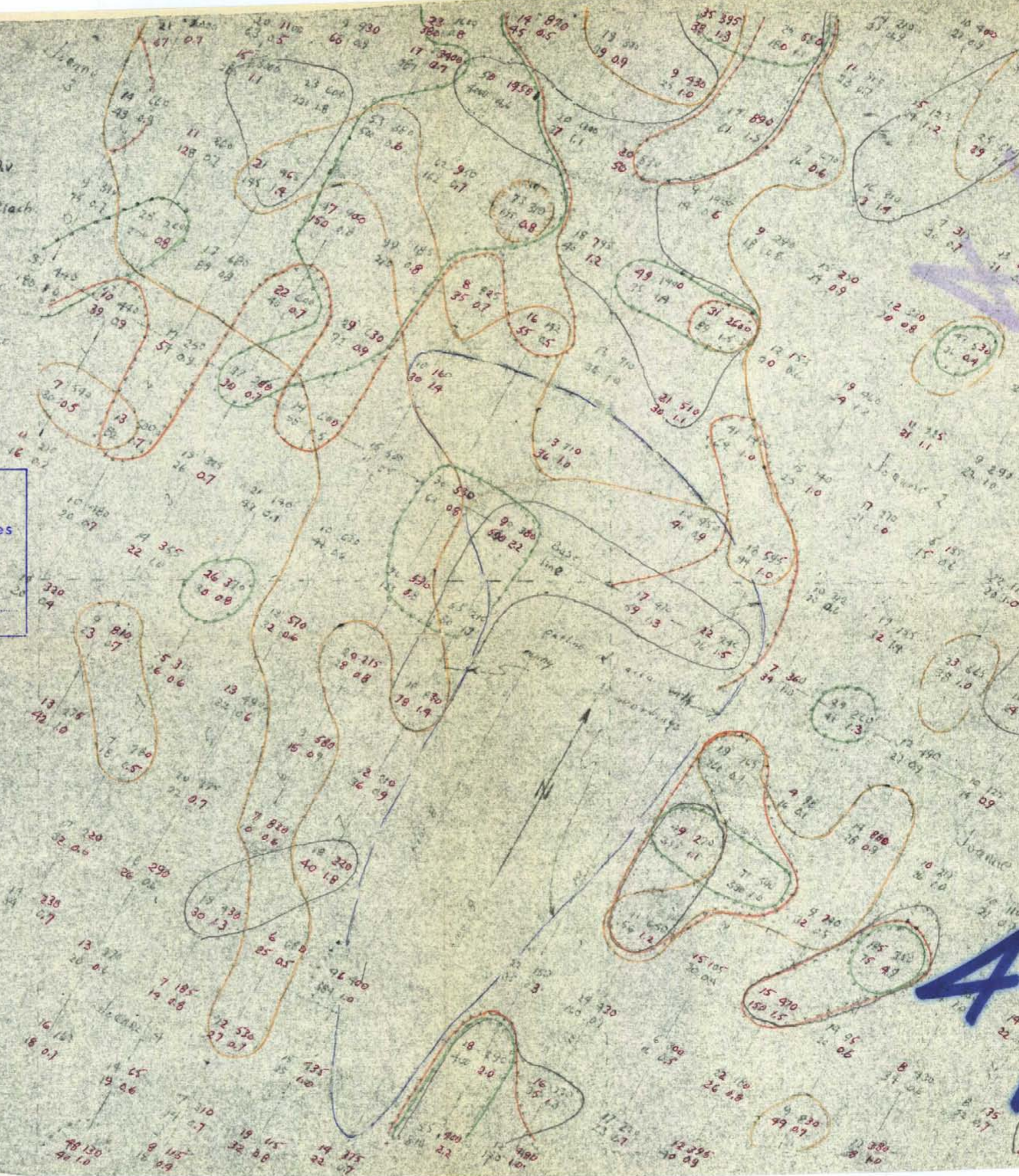
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Pb 42.10 Ag
parts per
million

Contours
Copper
Lead
Zinc
Silver

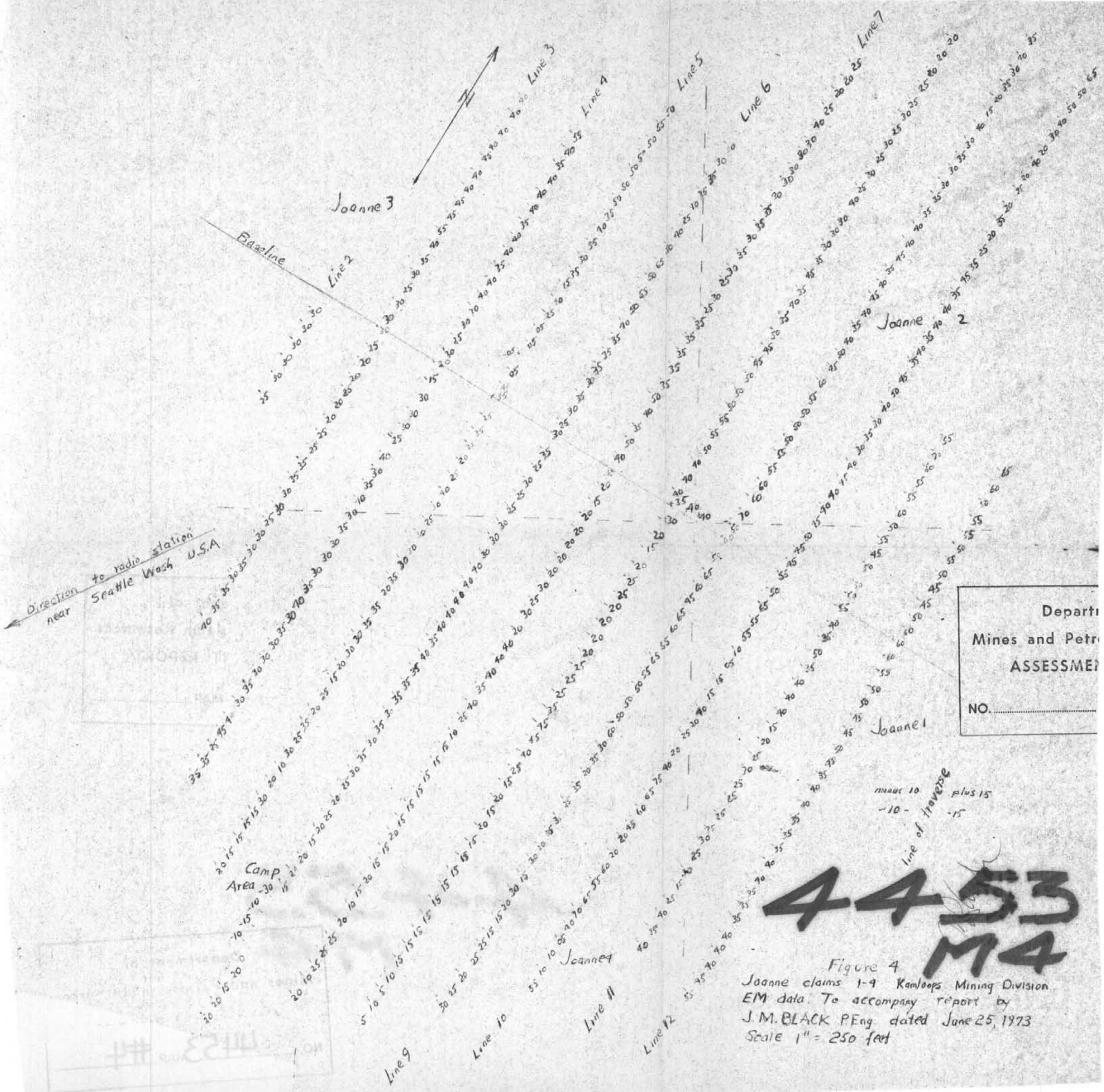
J.M. Black

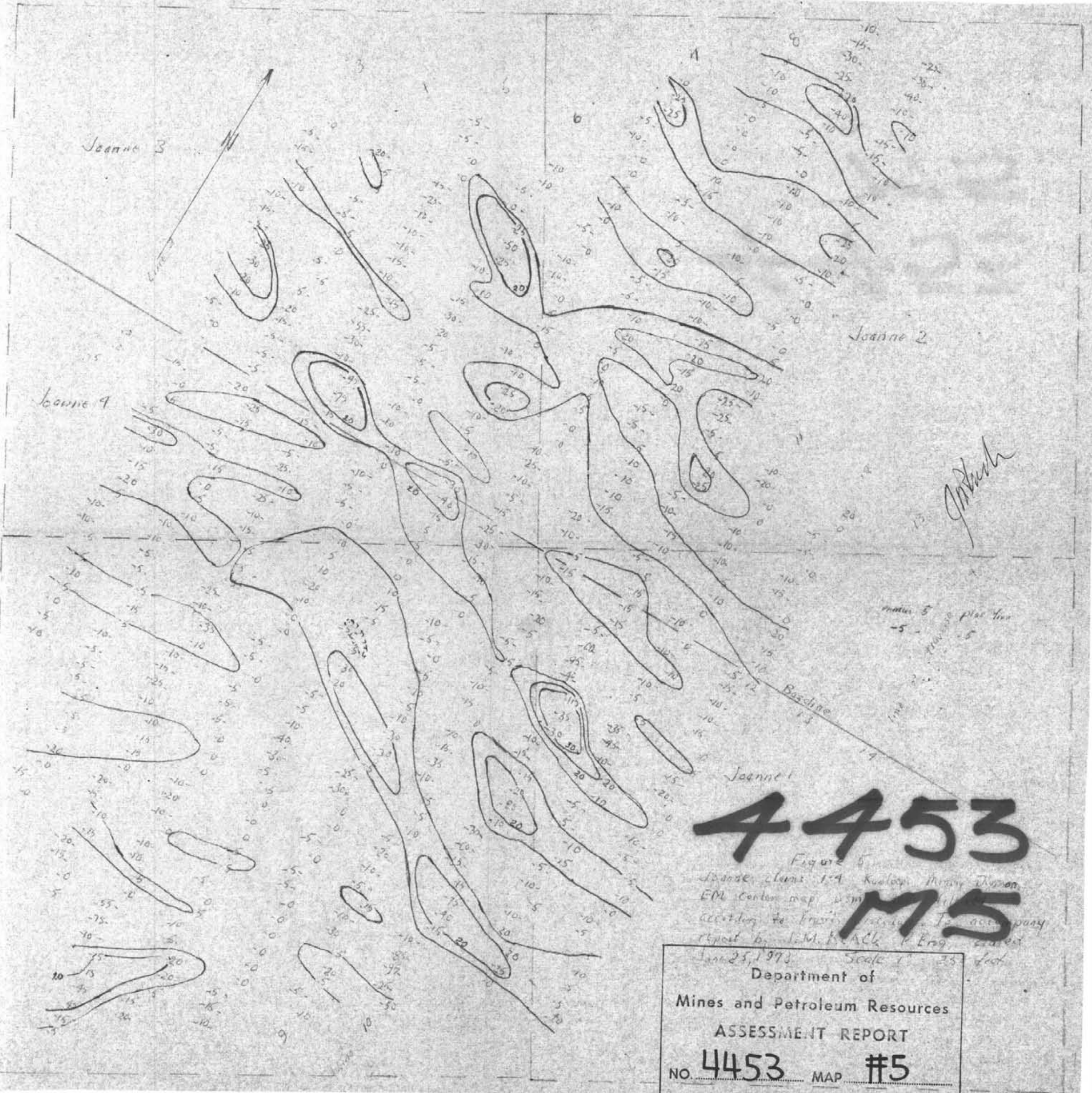
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Figure 5
 Joanne, Zones 1-4, Koolon Mining Division
 EM contour map with
 according to Emory's notes. To accompany
 report by J. M. Keach, Eng., dated
 Jan 25, 1973. Scale 1" = 25 feet

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