

# 5804

A Geochemical and Prospecting Report

on the

JO ANN MINERAL CLAIMS

35 Miles Northwest of

Germansen Landing, B.C.

OMINECA MINING DIVISION

British Columbia

Mineral Claim Map 93N/13E, 14W

Latitude: 55° 57'  
Longitude: 125° 28'

by

Douglas Stelling, Prospector  
February 28, 1976

Phase II of a two phase prospecting report for  
the Jo Ann Mineral Claims, 1975

Submitting Recorder RECEIVED
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M.R. # _____ \$ _____ Germansen Landing, B. C.

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5804 MAP X

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- #1 LOCATION MAP
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- #3 COPPER SOIL GEOCHEMISTRY MAP
- #4 MOLYBDENUM SOIL GEOCHEMISTRY MAP
- #5 SILVER SOIL GEOCHEMISTRY MAP

The 10 mineral claims on which assessment credits are requested are the Jo Ann #39 - 48, record numbers 133613 - 133622. A total of 10 claim-years are being requested on the 10 mineral claims.

A soil sampling and prospecting program was conducted on the Jo Ann #29, 30, 39 - 44 mineral claims in October 1975. The assay work was completed in December 1975 at Min-En Laboratories Ltd. and under the supervision of Mr. J. J. Barakso. Total expenditures on the Jo Ann Group amount to \$2,115.70 of which assessment credits of \$2,000.00 or 10 claim-years are requested.

### Introduction

This report describes the results of a soil and prospecting survey which was conducted from October 21, 1975 to October 25, 1975. This survey was conducted over the Jo Ann ~~#27-30~~<sup>29-30</sup> and ~~#33-38~~<sup>39-44</sup> mineral claims. This report represents Phase II of that report. The field work was completed by the writer, Doug Stelling, prospector from Germansen Landing, B.C.

### Property and Ownership

The Jo Ann Group consists of the following 40 mineral claims, recorded in the name of Douglas Stelling of Germansen Landing, B.C:

<u>Name of Claims</u>	<u>Record Numbers</u>
Jo Ann #1	111062
Jo Ann 3# - 10	111064 - 111071
Jo Ann #18	111079
Jo Ann #20 - 26	111081 - 111087
Jo Ann #27 - 38	130972 - 130 983
Jo Ann #1 Fraction	130984
Jo Ann #39 - 48	133613 - 133622

## Location and Access

Latitude: 55° 57'

Longitude: 125° 28'

Elevation: 4000' - 5000'

Mining Division: Omineca

N.T.S. 93 N/13E, 14W

The Jo Ann Group is located about 35 miles northwest of Germansen Landing and 10 miles due north of Old Hogen. The topography is relatively moderate for this generally rugged area. There is little outcrop except on the ridge to the extreme southeast of the property. The rest of the property is heavily timbered with various varieties of Spruce and Balsam Fir. Access is by helicopter from Germansen Landing or by 50 miles of 4-wheel drive road from Germansen Landing.

## Previous Work

The new Jo Ann Claims staked in the summer and winter of 1974 cover the former PIK Group and surrounding area. The PIK was owned by Noranda Exploration and an assessment report is available from the B.C. Department of Mines covering a soil sampling program conducted in 1972 by A. Pearse.

## Geology

The ridge to the southeast of the property seems to be the only outcrop on the property. The intrusive rocks all appear to be quartz deficient intrusive rocks of the Hogen Batholith. They range in composition from syenite to diorite. In places, the syenite is heavily altered by potassium feldspar alteration, with the presence of abundant rust in places. In places numerous quartz veins cut these altered zones, some with chalcopyrite and galena mineralization. Copper mineralization has been found in important quantities on the neighboring properties to the northwest and southeast which are respect-

ively, the Tam Group owned by Union Miniere and the Lorraine Group owned by Kenco and Grandby. The mineralization is genetically related to a syenite phase of the Hogem Intrusives and occurs as true disseminations in foliated syenite and in fractures of potash-feldspathized units adjacent to syenite intrusions (4)(5). The outcropping rock types and float include monzenite, syenite and migmatitic, foliated diorite. Potassium feldspar alteration is abundant on the lower portions of PIK Ridge. A quartz vein cutting altered syenite contained chalcopyrite and galena and the location of this vein can be observed on the accompanying maps. In the anomolous copper zones, little or no outcrop has been found and float is rather sparsely represented. No mineralization of significance has been observed in outcrop, but the geochemistry could be indicative of a copper rich zone on the western slopes of the PIK Ridge. Coincident molybdenum and silver anomolies also occur. The occurance of abundant magnetite, the presence of quartz deficient intrusives and the occurance of coincident silver results with the copper anomoly and the typical alteration types associated with this property and surrounding properties seem to fit the "dioritic type" of porphyry copper deposits described by V. F. Hollister and others (8) in Alaska.

## Geochemistry

### Soil Development

The soil in the sampled area was very similar to that sampled during phase I of this program and was in most places well developed and deep. Float was quite sparse and often not encountered for long distances. A relatively deep "A" soil horizon from 6" to 36" deep overlays a well developed "B" soil horizon. On PIK Ridge, however, there is some

outcrop and abundant float in places, some bearing K feldspar and malachite and chalcopyrite. Wet areas with deep "A" soil horizons were encountered in places, though, a well developed "B" soil horizon normally was attainable at deeper depths. The copper anomalies do not coincide with these wet areas.

### Soil Sampling

The soil samples were collected on lines 400 feet apart using the claim lines for controlled base lines. The samples were collected at 200 foot intervals from the well developed "B" soil horizon. The control lines were 8N and 30S, as indicated on the maps. The sample sites were all marked with red flagging tape and the appropriate station numbers were marked on the ribbon. Chain and compass provided the means of control.

The samples were initially placed in high wet strength Kraft paper envelopes and taken to the Stellac Laboratory. Here the samples were dried out at room temperature for several days and then sifted through a minus 80 mesh screen. The samples were then transferred to Min-En Laboratories Ltd. of North Vancouver. The analytical work was done under the supervision of Mr. J. J. Barakso. Standard methods of perchloric acid extraction and atomic absorption detection were used on all samples.

### Results

The samples completed are shown on the maps accompanying the report, along with the results from 1972, 1973, and 1974. There are 3 separate geochemical maps, one

for each element tested for and showing the results of all surveys to date. After an anomaly was initially discovered in the Stellac Laboratory, commercial laboratories were then used to verify the results and to assay the expanded soil grid work. The result of all this work has defined two large copper anomalies.

The anomaly to the southwest trends southeasterly and is at least one mile long and open to the southeast. The stronger second order anomaly on Jo Ann #27 - 30 has had its boundaries defined by this survey and appears to be about 1200 feet long and 200 to 400 feet wide. This southern anomaly, which seems to be the most important at this stage, has a large coincident silver anomaly and a small coincident molybdenum anomaly. The silver is anomalous for over one mile and the molybdenum is anomalous over only portions of this. The samples to the west have not been analyzed for molybdenum. All these anomalies are open to the southeast.

The anomaly to the north is about  $\frac{1}{2}$  mile long and  $\frac{1}{4}$  mile wide. It is not as intensive and the molybdenum and silver anomalies are much smaller and less coherent. A second order anomaly is present here and is about 1200 feet long and 200 feet wide. The following are the values taken for background, threshold and anomalous:

#### Copper

Background	less than 125 PPM
Threshold	125 - 150 PPM
1 <sup>st</sup> Order Anomaly	150 - 350 PPM
2 <sup>nd</sup> Order Anomaly	greater than 350 PPM

Silver

Background	less than 1.3 PPM
Threshold	1.3 - 1.5 PPM
Anomolous	greater than 1.5 PPM

Molybdenum

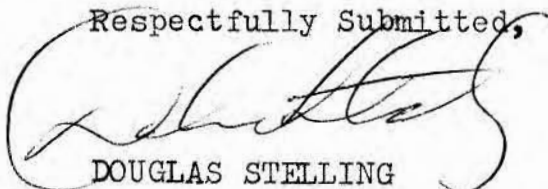
Background	less than 10 PPM
Threshold	10 - 13 PPM
Anomolous	greater than 13 PPM

Conclusions and Recommendations

Two large anomolies have been outlined which would consist of 1) the combination of Anomoly Number One and Anomoly Number Two and 2) Anomoly Number Three (10). It is felt that the anomolies may overlay ore grade bearing copper ore, which is concealed by a persistant layer of overburden. The adjacent properties to the southeast and northwest have important quantities of copper and similar lithological settings. Mr. J. A. Garnett of the B. C. Department of Mines feels that "the potential for further occurences of this type within the Duckling Creek Syenite Complex is high".

It is recommended that soil sampling be continued on the rest of the claims and more detailed soil sampling to be completed in the anomolous areas. This should be followed up with an induced polorization survey and detailed ground magnetometer survey. Targets outlined by the preceding should be drilled, if the targets outlined are of sufficient merit.

Respectfully Submitted,



DOUGLAS STELLING



## REFERENCES

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- 3) Cooke, D. L., 1973. Geochemical Report on the Jo Ann Claims, Fifteen Miles North of Old Hogem, Omineca Mining Division. Assessment Report filed with the B.C. Department of Mines, Victoria, B.C.
- 4) Garnett, J. A., 1972. Preliminary Geological Map of Part of the Hogem Batholith, Duckling Creek Area, B.C., Department of Mines Preliminary Map No. 9, and Geology, Exploration and Mining in B.C., 1971, pp. 203 - 210.
- 5) Garnett, J. A., 1974. Geology and Copper-Molybdenum Mineralization in the Southern Hogem Batholith, North-central British Columbia, CIM, Bull., Vol. 67, No. 749.
- 6) Garnett, J. A., 1974. Geological Field Work, a Summary of Field Activities of the Geological Division, Mineral Resources Branch. B.C. Department of Mines and Petroleum Resources.
- 7) Koo, Ja Hak, 1968. Geology and Mineralization in the Lorraine Property Area, Omineca Mining Division, B.C., U.B.C. Unpublished M. SC. Thesis.

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- 9) Pearse, A. 1973. Assessment Report on the PIK Claim Group,  
B.C. Department of Mines, Victoria, B.C.
- 10) Stelling, D., 1975. A Geochemical and Prospecting Report  
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filed with the B. C. Department of Mines, Victoria, B.C.

STATEMENT OF EXPENSES

The following is a breakdown of expenses incurred on the Jo Ann Group for the October 1975 Soil Sampling Program:

Sample Collection and Prospecting (5 days)	\$ 375.00
Assaying (157 samples)	353.25
Sample Preparation (157 samples)	54.95
Helicopter (Bell 206B, Jet Ranger)	882.50
Camp (5 days)	100.00
Report	<u>350.00</u>
	<u>\$ 2115.70</u>

A handwritten signature in cursive script, appearing to read "R. L. Smith", is located at the bottom right of the page.

STATEMENT OF QUALIFICATIONS

I, DOUGLAS STELLING, with business address in Germansen Landing, B. C., hereby certify that:

- 1) I have  $3\frac{1}{2}$  years school from the University of Arizona, majoring in Geological Engineering.
- 2) I have worked as a prospector and exploration consultant in the Omineca part of British Columbia since 1969.
- 3) I am the manager of Stellac Syndicate.
- 4) I am the President and a director of Susie Gold Mines Ltd.
- 5) I am a member of the Canadian Institute of Mining and Metallurgy.
- 6) I am an affiliate member of the Association of Exploration Geochemists.
- 7) I have conducted the work listed in this report.
- 8) To the best of my knowledge, the interpretation of this data and expenditures claimed for the performance of work are correct.

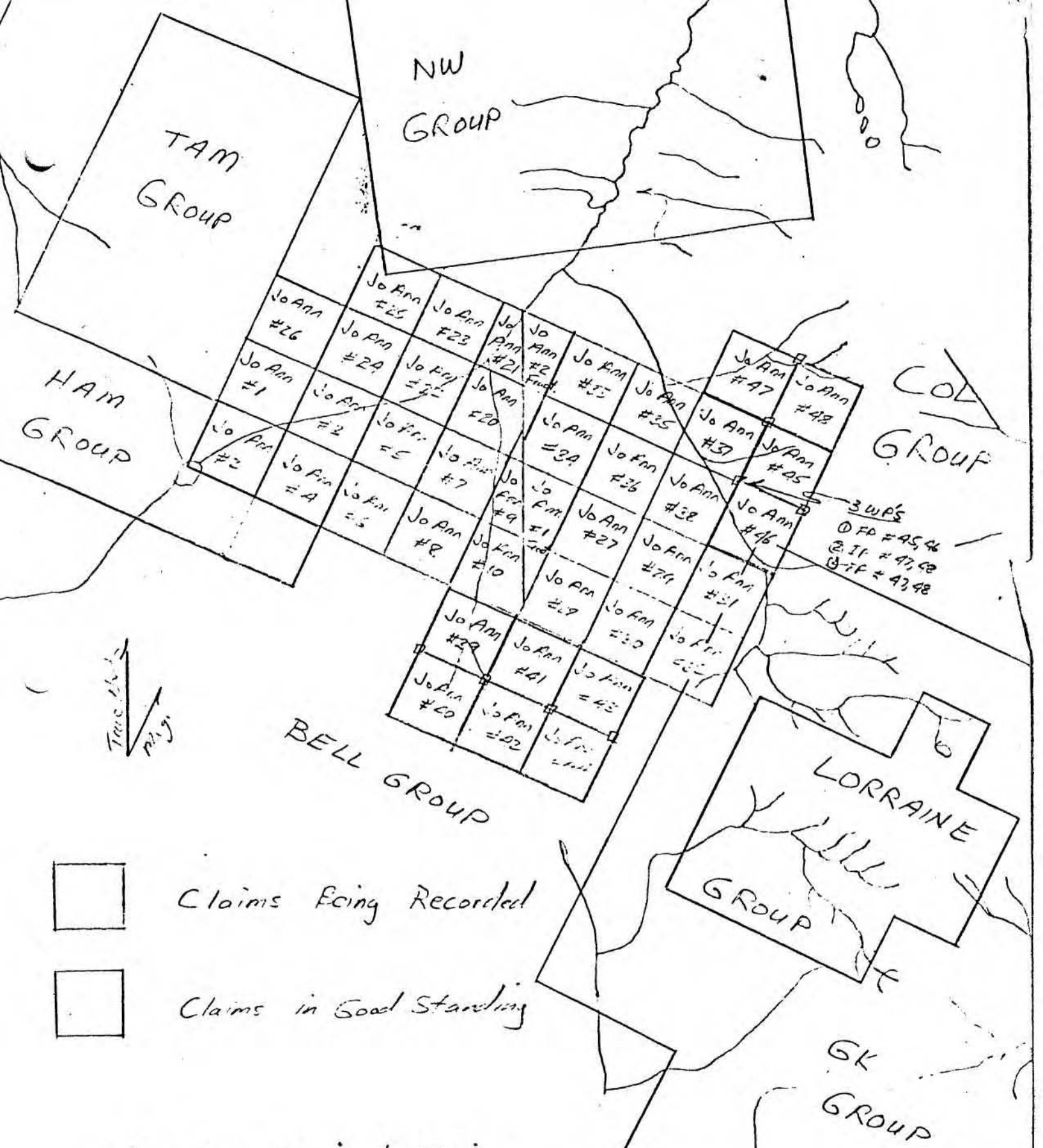
Respectfully Submitted,



DOUGLAS STELLING



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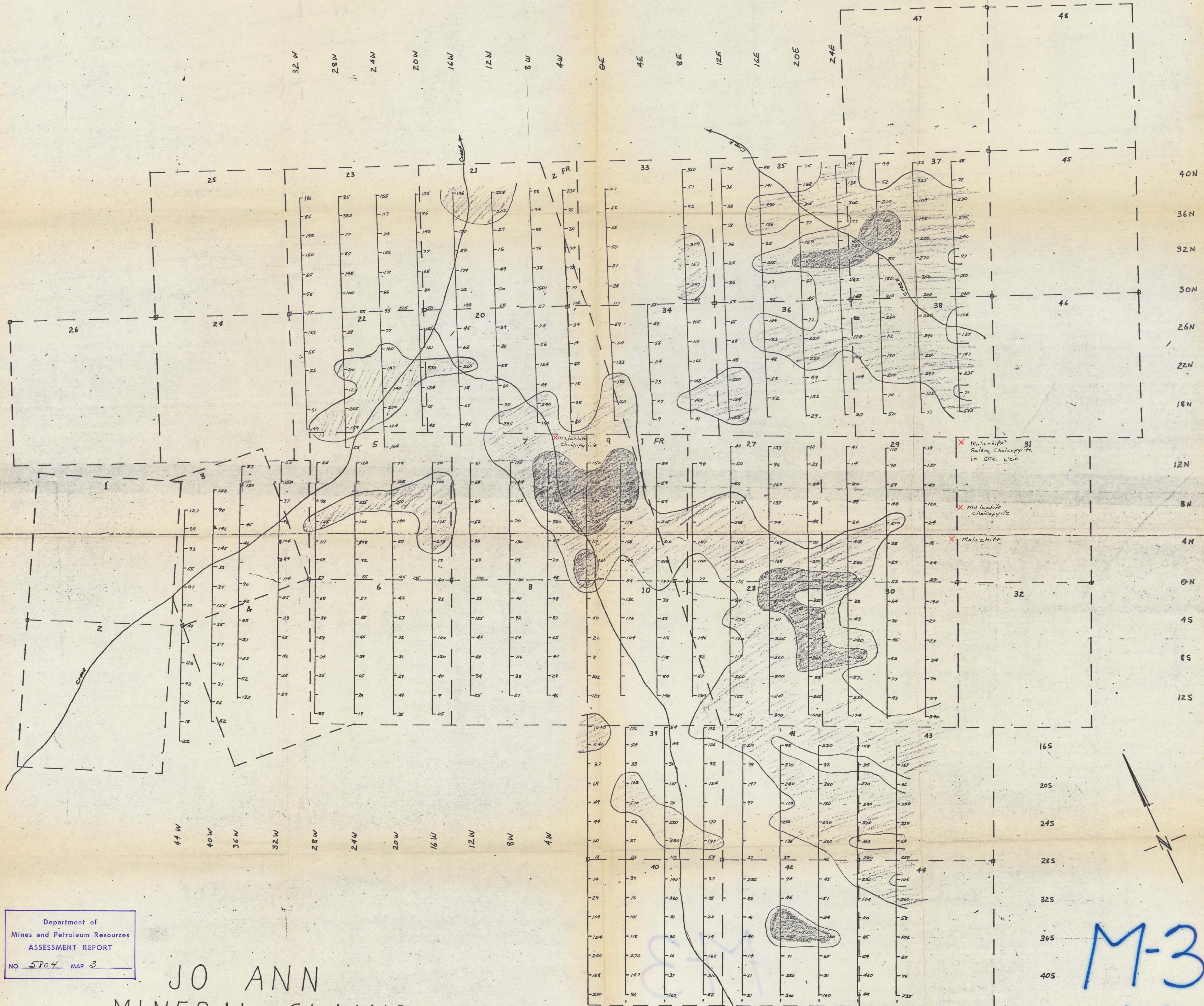


Jo Ann Mineral Claims

NTS 93 N/13E  
93 N/14W

**5804 M-2**

Scale



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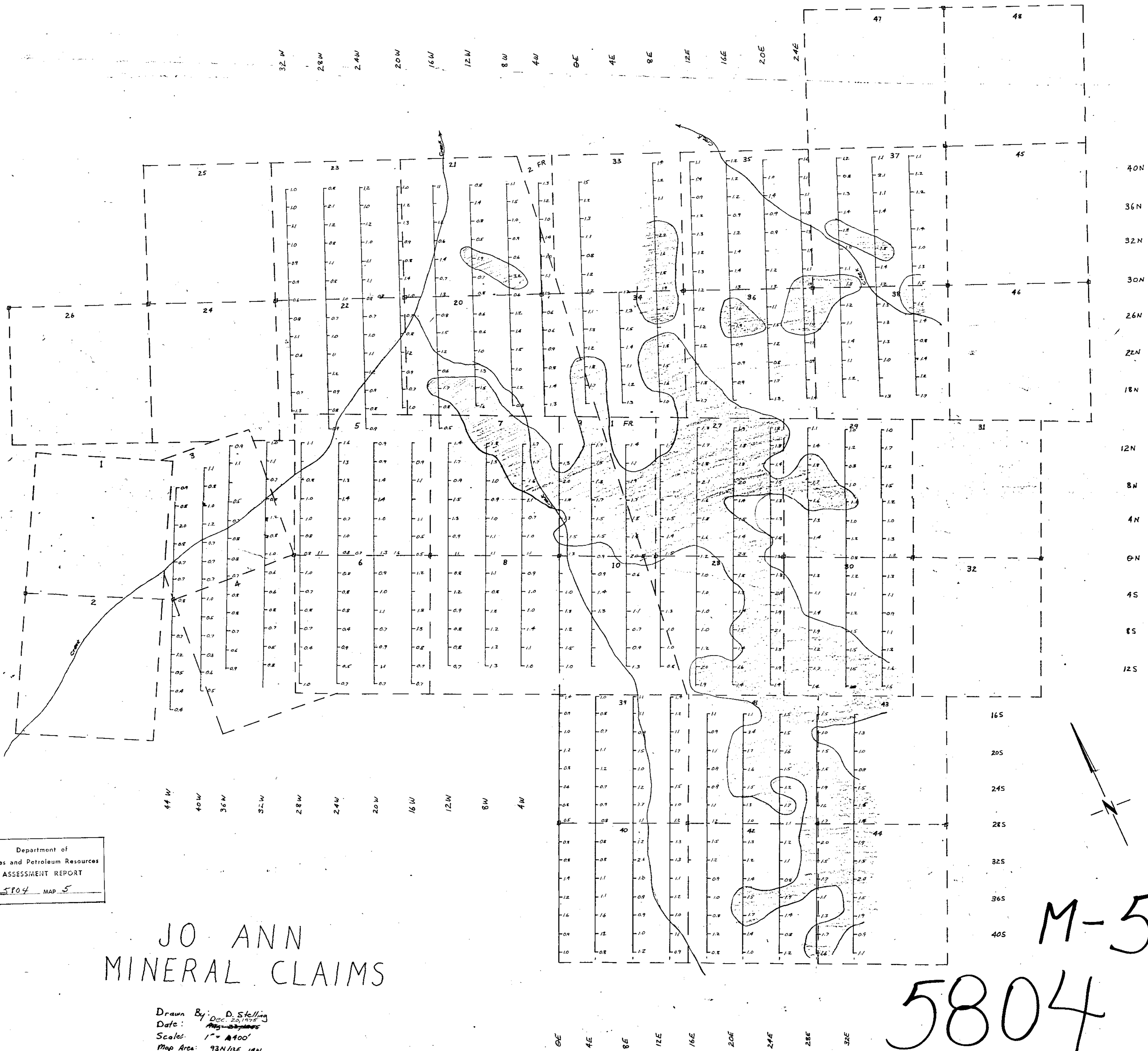
# JO ANN MINERAL CLAIMS

Drawn By: D. Stelling  
Date: Dec. 20, 1975  
Scale: 1" = 2400'  
Map Area: 93N/3E, 14W

X mineralization

Copper Soil Geochemistry in PPM

M-3  
5804



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# JO ANN MINERAL CLAIMS

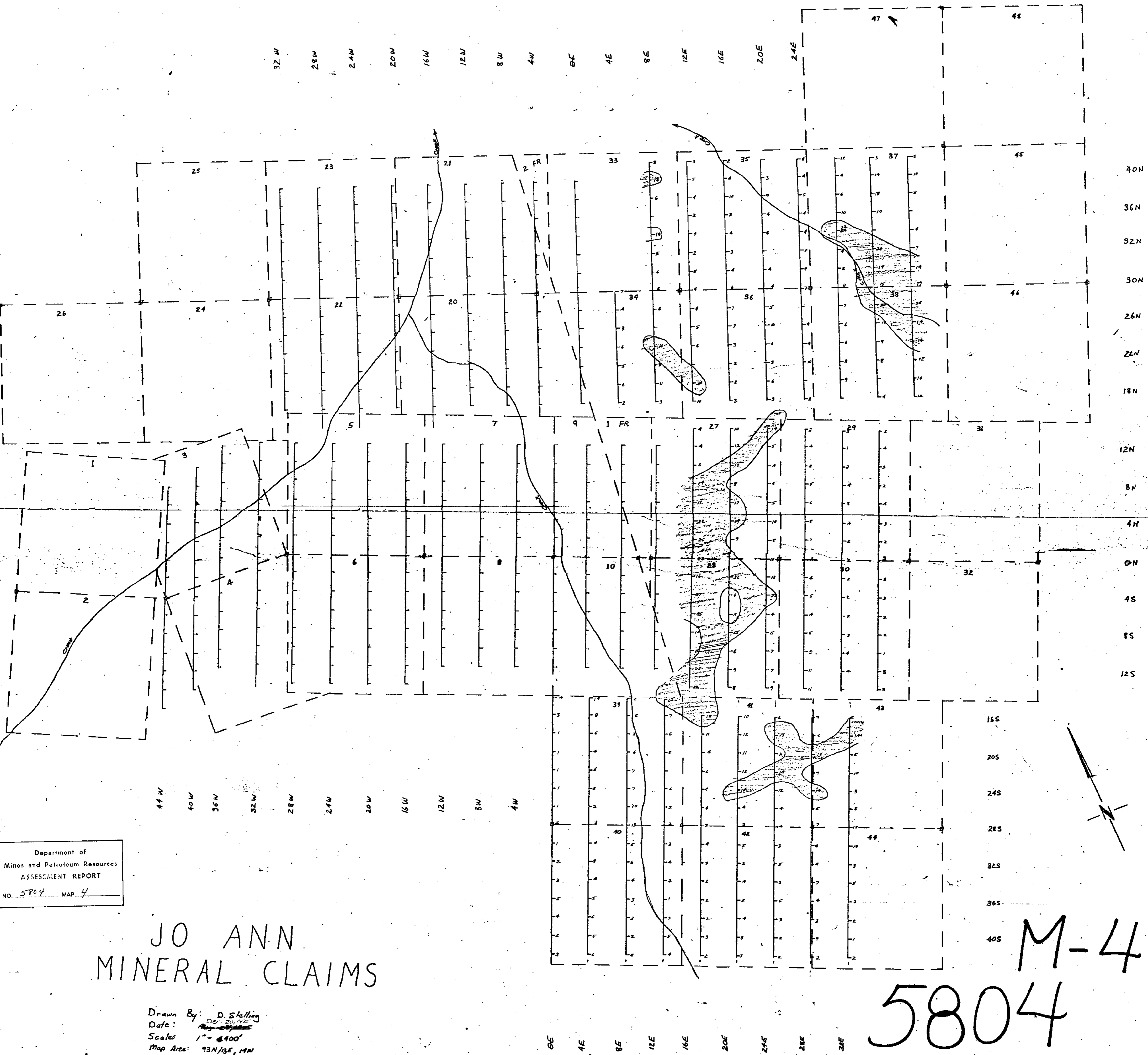
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Date: Dec 20, 1985  
Scale: 1" = 400'  
Map Area: 93N/3E, 14W

Silver Soil Geochemistry in PPM

M-5  
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28E 32E 36E



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# JO ANN MINERAL CLAIMS

Drawn By: D. Stelling  
Date: Dec. 20, 1975  
Scale: 1" = 400'  
Map Area: 93N/13E, 14N

Molybdenum Soil Geochemistry in PPM

M-4

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