

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

August 24, 1975

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 5649	M.P.

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

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MAPS

- # 2 Jo Ann Claim Block Map.
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The 13 mineral claims on which assessment credits are requested are the Jo Ann #27-38 and Jo Ann #1 fraction inclusive, record numbers 130972-130984. A total of 13 years are being requested on the 13 mineral claims.

A soil sampling and prospecting program was conducted on the Jo Ann #27-30, 33-38 mineral claims in October 1974. The assay work was completed on December 6, 1974 and August 7, 1975 at Min-En Laboratories Ltd. and under the supervision of Mr. J.J. Barakso. Total expenditures on the Jo Ann Group amount to \$2,604.04 of which assessment credits of \$2,600.00 on 13 claim years are requested.

Introduction

This report describes the results of a soil and prospecting survey which was conducted from October 11, 1974 to October 16, 1974 and a prospecting survey conducted June 27 and June 28, 1975.

This survey was conducted over the Jo Ann #27-30, and 33-38 and is a continuation of a survey conducted in 1972-1973. The work completed in 1974 and 1975 connects onto the same grid system as the work which was completed in 1972 and 1973. The samples were dried and sieved to minus 80 mesh at the Stellac Laboratory in Germansen Landing, B.C. The samples were then analyzed for copper in the Stellac Laboratory. In December of 1974 and August of 1975 these samples were reanalyzed for copper and analyzed for molybdenum and silver. This later work was completed by Min-En Laboratories Ltd. The work by Stellac Laboratory was completed by the writer, Mr. Stelling and J. Paul Stevenson of Manson Creek, B.C. The field work was completed

by the writer, Mr. Stelling.

Property and Ownership

The Jo Ann Group consists of the following 41 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 #1-10 inclusive	111062-111071
Jo Ann #18	111079
Jo Ann 20-26	111081-111087
Jo Ann #27-38 inclusive	130972-130983
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 Hogem. 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 abundant 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 covers 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 sample 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 Hogem 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 respectively, the TAM group owned by Union Miniere and the Lorraine owned by Kenco and Granby. 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 monzonite, 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 anomalous 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 indicating a copper rich zone on the western slopes of the PIK ridge. Coincident molybdenum^{um} and silver anomalies also occur. The occurrence of abundant magnetite, the presence of quartz deficient intrusives and the occurrence of a coincident silver anomaly with the copper anomaly 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 in most places well developed and deep. Float was quite sparse and often not encountered for distances up to and greater than 1000 feet. 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. None of this outcrop area has been within the grid reported here. 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, though they do, in part, intersect them.

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 0N and 30N, as indicated on the maps.

The sample sites were all marked with red flagging tape with the appropriate station number marked on the ribbon. Chain and compass was the means of control.

The samples were initially placed in high wet strength Kraft paper bags and taken to the Stellac Laboratory. Here the samples were dried out at room temperature for a number of days and then sifted through a minus 80 mesh screen. The samples were then analyzed for copper at the Stellac Laboratory under the direction of Mr. D. Stelling, the writer. Bisulfate fusion and hydrochloric acid extraction with biquinoline in iso-amyl alcohol detection was used for the determinations. After anomolous results were detected, a commercial laboratory was then used to redefine the copper anomaly and to run the samples for silver and molybdenum. The laboratory which performed this work was Min-En Laboratories Ltd. of North Vancouver. The 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 and 1973. There are 3 separate geochemical maps, one for each element tested for and showing both the results of this survey and of the previous survey, to the west, reported on by Dr. D.L. Cooke (3). After an anomaly was initially discovered by Stellac Laboratory, Union Miniere Mining Company retested these samples in the laboratory of Bondar and Clegg in Vancouver, where the results proved to be comparable and the anomalies coincident with the work performed in the Stellac Laboratory. The results of the work done by Min-En Laboratory to the east, likewise, proved to be quite comparable, with identical anomalies being outlined. It seems that perchloric acid extraction and bisulfate fusion with HCl extraction produces analogous results with nearly total extraction. These results may all be observed on the accompanying map of the copper geochemistry. The silver and molybdenum seems to have indicated smaller but significantly coincidental anomalies with the copper. The results can be observed on the appropriate, accompanying maps. The dispersion of values are represented on the frequency distribution diagrams. The following are the values taken for background, threshold and anomalous values.

Copper

background	less than 150 ppm
threshold	150 ppm
1st order Anomaly	150-350 ppm
2nd order Anomaly	greater than 350 ppm

Silver

background	less than 1.5 ppm
threshold	1.5 ppm
Anomalous	greater than 1.5 ppm

Molybdenum

background	less than 13 ppm
threshold	13 ppm
Anomalous	greater than 13 ppm

Conclusions and Recommendations

Three large copper anomalies with coincident, but smaller silver anomalies are present on the property. In addition, the eastern part of the soil sampled area, which resulted in two major anomalies were also coincidentally anomalous in molybdenum. These anomalies may be connected, but the soil lines have not yet been extended far enough to the east in the vicinity of claims Jo Ann # 29 and # 30 to determine this. The large copper and silver anomaly to the west, on claims # 7 and # 9 has not yet been tested for molybdenum and may quite possibly also be anomalous for this metal. The metal of main interest is copper. It is hoped that also significant quantities of silver and molybdenum may also be associated with copper. The extent of the copper anomalies are as follows:

Anomaly Number One - On claims Jo Ann # 7,9,18,20 and 24 an anomaly

approximately 2400 feet long and 600 to 1600 feet wide is connected with anomaly number two to the east by a narrower neck about 200' wide.

Anomaly Number Two - On claims Jo Ann # 27 to 30 an anomaly at least 2000 feet long and at least 1000 feet wide and open to both the east and south has been detected. A second high order anomaly with copper values up to 1700 ppm lies within this anomaly and measures 1200 feet long by 200 to 500 feet in width.

Anomaly Number Three - On claims Jo Ann # 35-38 an anomaly lies north - east of Anomaly Number Two and may be connected. This anomaly measures 2800 feet long and averages well over 1000 feet wide. A smaller second order anomaly of highly anomalous soils about 800 feet long is within this anomaly.

Other Anomalies - Four smaller and weaker anomalies also are present and range up to 1600 feet in length and represent 3 or more samples.

It is recommended that soil sampling and prospecting be continued onto claims Jo Ann # 29, 30, and 39-48, as most of the anomalies are open in these directions. This work would precede more sophisticated geophysical work recommended by a geologist. Prospecting in the vicinity of PIK Ridge leads the writer to believe there may be a continuation of anomalous results from Anomaly Number Two to Anomaly Number three. This conclusion has been reached because of the presence of potassic feldspar alteration and the presence of some copper mineralization found in the vicinity. It is felt that the copper anomaly may be displaced down slope or by glacial action and geophysical work should be completed to define future drilling targets.

Respectfully Submitted,


Douglas Stelling.

REFERENCES

- 1) Armstrong, J.E., 1949. Ft. St. James Map Area, Cassiar and Coast Districts, B.C., G.S.C. Memoir 252.
- 2) Burgoyne, A.A. and Pauwels, A.M., 1973. Ground magnetic, Induced Polarization, and Resistivity Surveys, Jo Ann Mineral Claims, Omineca Mining Division; Assessment Report filed with the B.C. Dept. of Mines, Victoria, B.C.
- 3) Cooke, D.L., 1973. Geochemical Report on the Jo Ann Claims, Fifteen Miles North of Old Hogem, Omineca Mining Division. An assessment report filed with B.C. Dept. of Mines, Victoria, B.C.
- 4) Garnett, J.A., 1972. Preliminary Geological Map of Part of the Hogem Batholith, Duckling Creek Area, B.C. D.M. Prel. 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.

- 8) Hollister, V.F.; Anazalone, S.A.; Richter, D.H. 1975. Porphyry Copper belts of Southern Alaska and Contiguous Yukon Territory, CIM, Bull., Vol. 68, No. 756.

- 9) Pearse, Anthony, 1973; Assessment Report on the PIK Claim Group. B.C. Dept. of Mines, Victoria, B.C.

STATEMENT OF EXPENSES

The following is a breakdown of expenses incurred in carrying out the field work on the Jo Ann Group: (6 days)

Helicopter (Bell 206 B)	\$	832.54
Sample Collection and Prospecting (6 days)		450.00
Assaying and Preparation of Samples		481.50
Prospecting (2 days)		150.00
Camp (8 days) @ \$ 20/day		160.00
Assaying (Cu Only) Stellac Lab		180.00
Report		<u>350.00</u>
	\$	<u><u>2604.04</u></u>

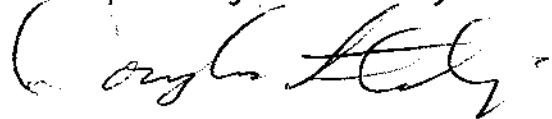
Donk [Signature]

STATEMENT OF QUALIFICATIONS

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

- 1) I have 3½ 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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MAP 1



TAM GROUP

NW GROUP

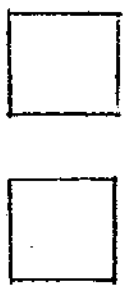
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COL GROUP

BELL GROUP

LORRAINE GROUP

GROUP
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Map 2



Claims Being Recorded
Claims in Good Standing

Jo Ann Mineral Claims

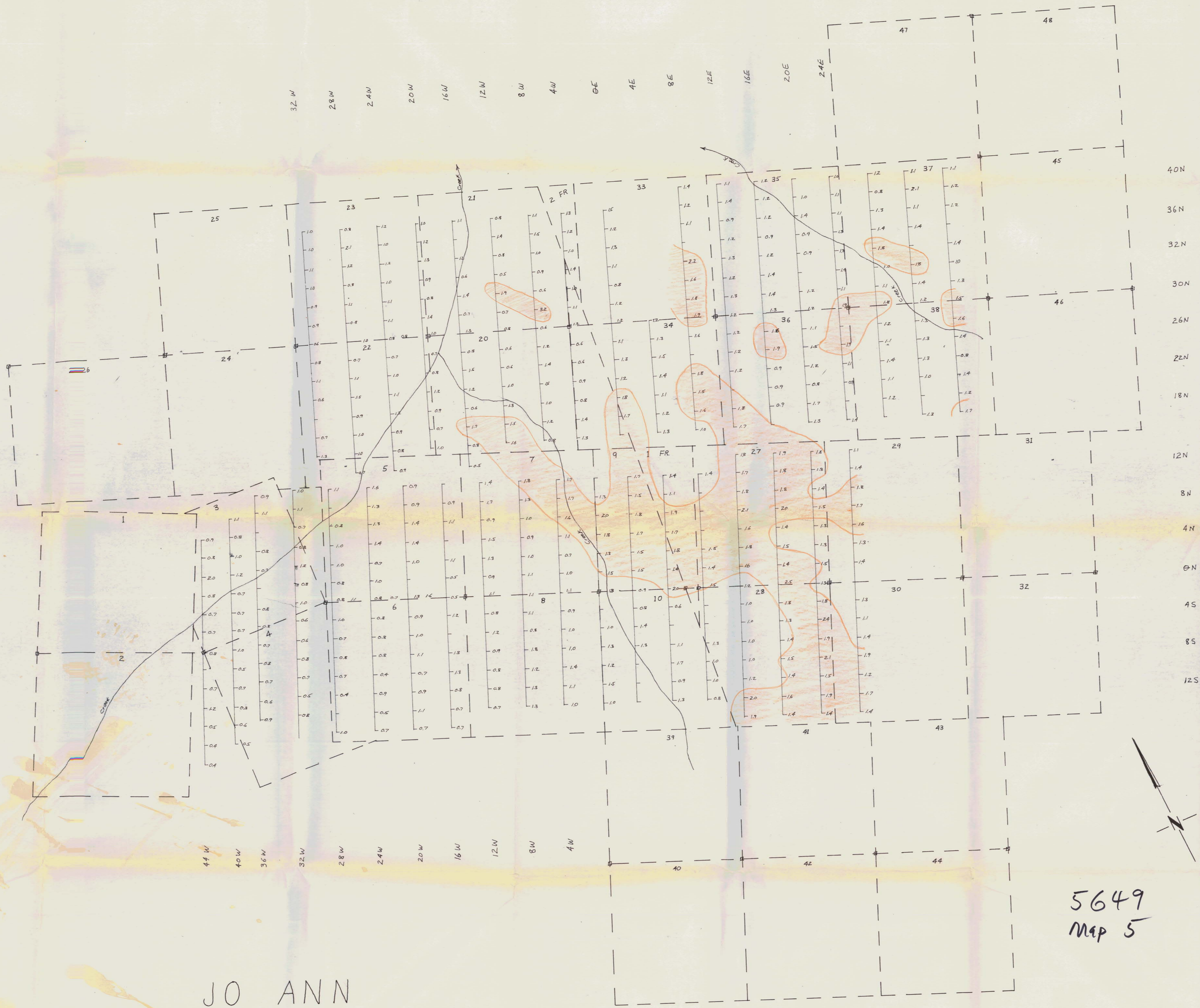
NTS 93 N/13E
93 N/14W

Scale

3 WPS
① FP #45, 46
② IF #47, 48
③ TF #43, 48

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GK

Jo Ann #25
Jo Ann #26
Jo Ann #27
Jo Ann #28
Jo Ann #29
Jo Ann #30
Jo Ann #31
Jo Ann #32
Jo Ann #33
Jo Ann #34
Jo Ann #35
Jo Ann #36
Jo Ann #37
Jo Ann #38
Jo Ann #39
Jo Ann #40
Jo Ann #41
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Jo Ann #100



JO ANN
MINERAL CLAIMS

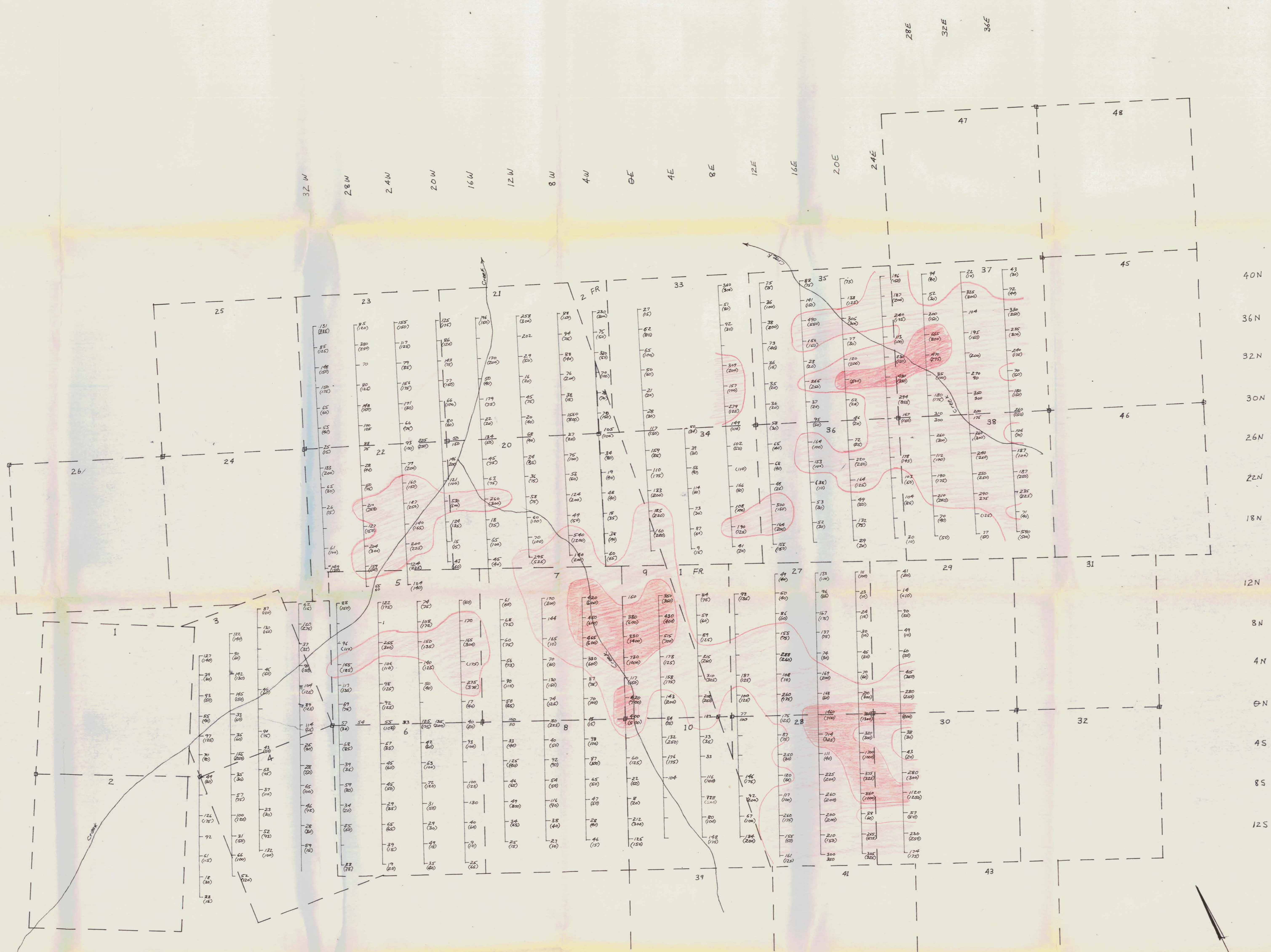
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Date: Aug. 23, 1975
Scale: 1" = 100'
Map Area: 93N/3E, 14W

D. Stelling

SILVER SOIL GEOCHEMISTRY IN PPM

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5649
Map 5



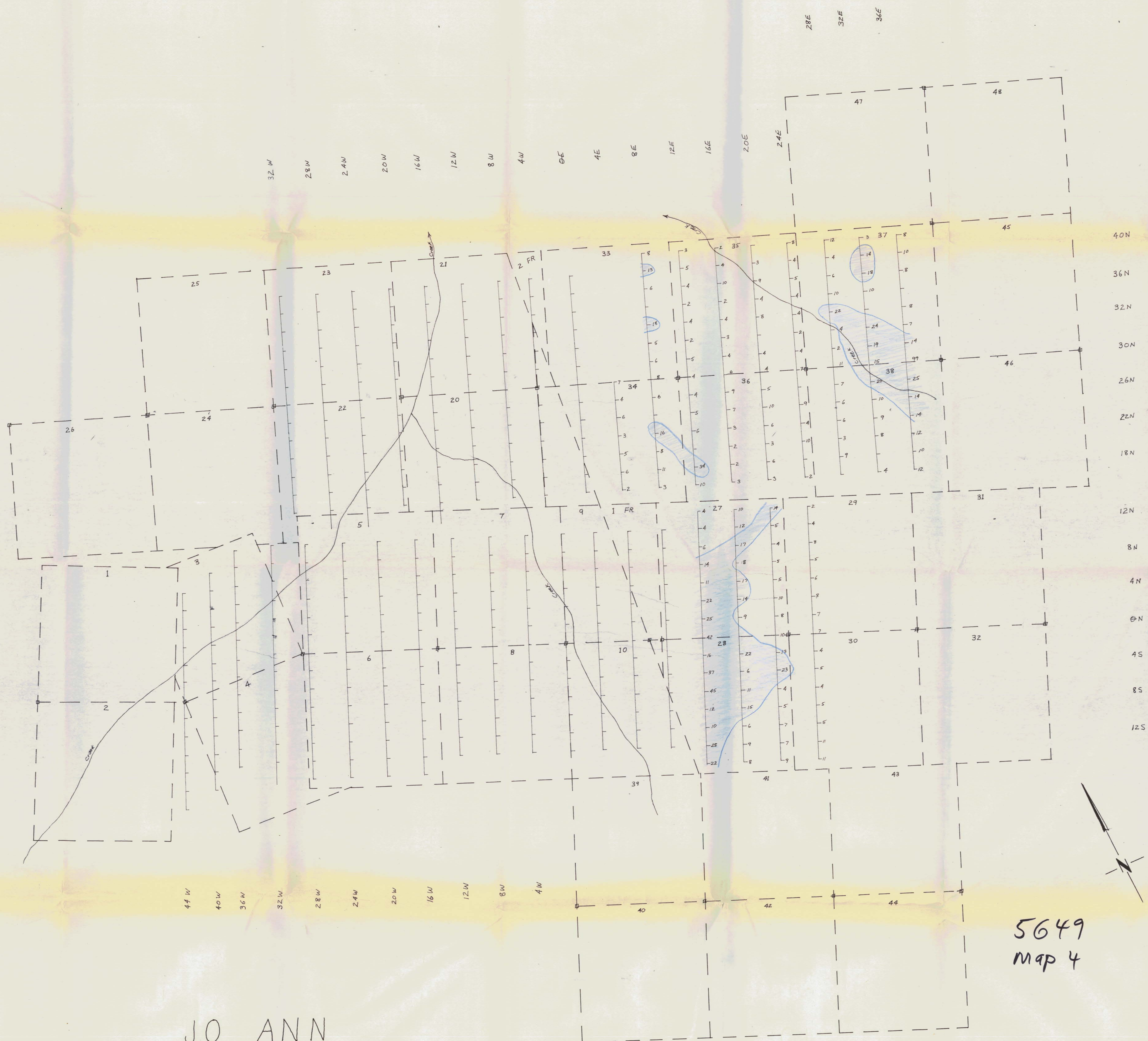
JO ANN
MINERAL CLAIMS

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Map Area: 93N/3E, 14W

D. Stelling

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Map 3



JO ANN
MINERAL CLAIMS

Drawn By: D. Stelling
Date: Aug. 23, 1925
Scale: 1" = 400'
Map Area: 93N/13E, 14W

D. Stelling

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ASSESSMENT REPORT
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MAP 4