

Sample #	Type	Width	Cu %	Ozs. Au	Ag	Zn%	Pb%
I	Goss.	5'	.48	Tr.	.48		
II	Goss.	? Random Crops	1.48	.01		1.0	
III	Goss	8' hi-grd chal zone	1.16	Tr.	.30	.2	
IV	Goss	5'	.72	Tr.	.3	.1	
V	Goss	3'	.68	.005	.2	.2	
VI	Goss	2½'	2.08	.01	-	1.2	
VII	Goss	6'	1.32	.005	.30	.2	
VIII	Goss	4'	.78	.005	.14	Tr.	
IX	Goss	20'?scat. Crops	.20	.02	-	-	
X	Goss	2.5'	1.16	.005	-	-	
XI	Goss	6'	.56	.08	-	-	
AVE.		?	.84				
47634	Chal. fr. III Zone	Grab	44.43	.005	.2	.15	
47633	Cu Goss.	Grab up Cr. from Cabin	4.36	Tr.	1.26	.15	
47635	Goss fr Chal Pit	Grab	2.48	.14	.50	.15	
47636	F.C. Goss # 2 IX	Scat. Grab	.32	.01	-	-	
47637	Chip Cpy Chal Pyrr	Grab	20.52	.005	.1	.1	
USBM, Terry Close Ave. of 7 samp. fr. 3 zones			1.8	Tr.	Tr.		

MEMORANDUM

Page 2.

Tim K. Smith

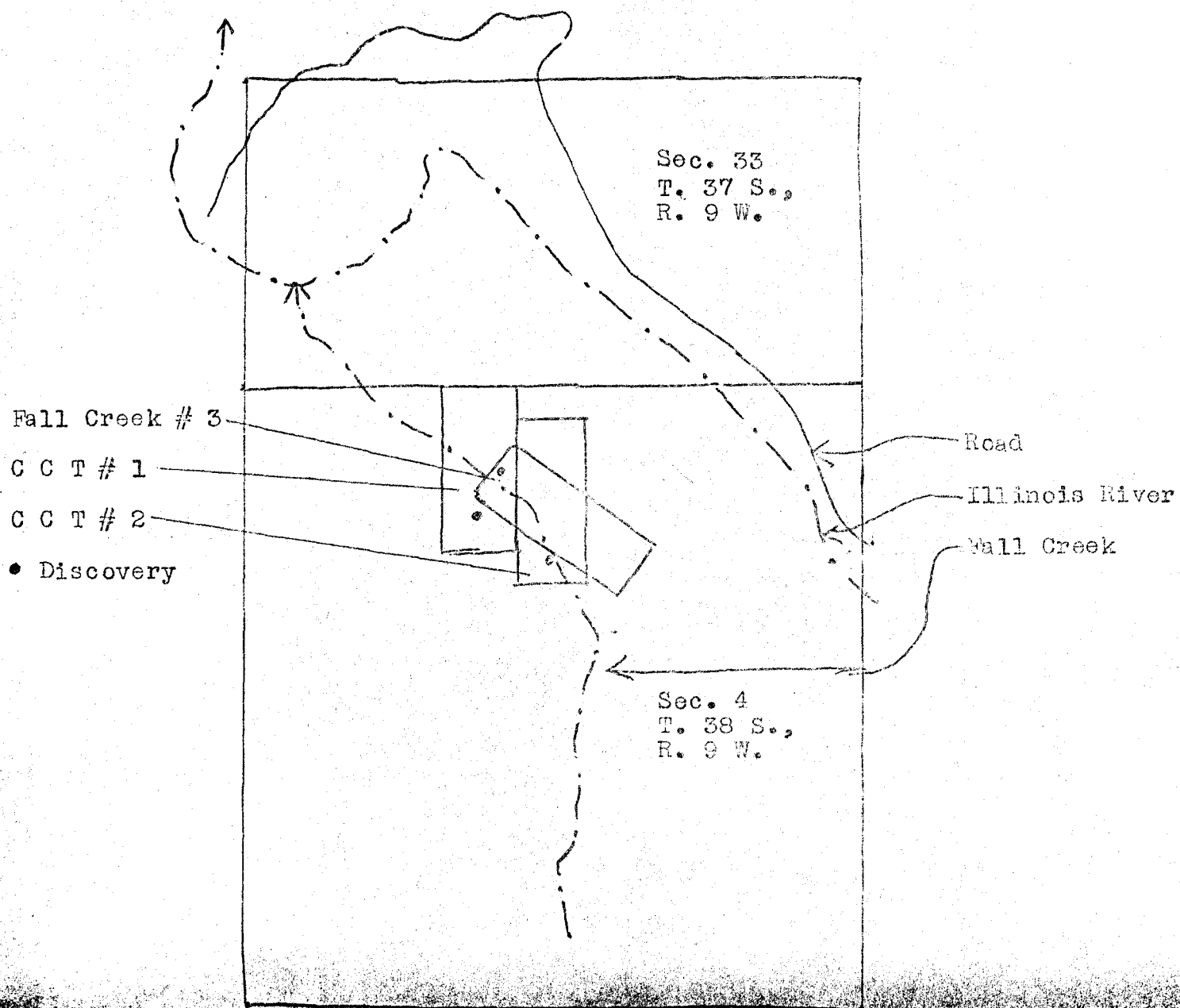
In addition to this, high grade zones sampled in underground workings in 1952 ran 23% Cu, .16 Au, .25 Ag, .8 Zn, and .31 Ni (USBM 1970). In 1899 400 tons of ore was shipped to Tacoma and was said to smelt at a profit. In 1956 25 tons of ore @ 18% Cu was shipped.

This type of deposit has a history of being poddy and discontinuous. The Fall Creek property looks as though it might be large enough and high grade enough that, should a market become available, a serious look should be given the prospect.

Tim K. Smith

c1

Plat of claims



# EXPLANATION

USBM



Serpentine



Shear Zone

1

Sample Location

Map Ref. No.	Description	Analysis data		
		Copper (percent)	Gold (ounce per ton)	Silver (ounce per ton)
1	20 foot chip across shear zone	2.22	trace	0.1
2	5 foot chip across shear zone	5.69	trace	0
3	Grab from stockpile	50.70	trace	trace
4	6 foot chip across shear zone	0.67	trace	0
5	6 foot chip across shear zone	1.44	0.09	trace
6	0.3 foot chip across shear zone	3.12	trace	0
7	6 foot chip across shear zone	0.63	trace	0.2
8	5 foot chip across shear zone	0.04	trace	0
9	8 foot chip across shear zone	3.62	0.02	0

FIGURE\_\_.-Map of Fall Creek Copper Prospect



FALL CREEK COPPER

Illinois River

Josephine

See: United Copper-Gold Mines Company; also S.I.R. sheets immediately following.

STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
ASSAY LABORATORY

REQUEST FOR SAMPLE INFORMATION

The State law governing free analysis of samples sent to State Assay Laboratories requires that certain information be furnished the Laboratory regarding samples sent for assay or identification. A copy of the law will be found on the back of this blank. Please fill in the information called for as completely as possible, and submit it along with your sample. Keep a copy of the information on each sample for your own reference.

Your name in full A. W. Johns, c/o J. A. Phillips

Post office address 312 East "I" Street, Grants Pass, Oregon

Are you a citizen of Oregon yes Date on which sample is sent February 21, 1949

Name (or names) of owners of the property A. W. Johns

Name of claim sample obtained from Fall Creek Copper Mine

Location of property or source of sample (describe as accurately as possible below):  
(If legal description is not known, give location with reference to known geographical point)

County Josephine Mining district Illinois

Township 38s Range 9w Section 4 Quarter section

How far from passable road 1 mile from Oak Flat--Selma Road

For what minerals or elements do you wish the sample(s) analyzed Cu, Au, Zn

Channel (length) Grab Pipe Description

Sample no. 1 x chalcopyrite

Sample no. 2   
(Samples for assay should be at least 1 pound in weight; clay samples for ceramic testing, at least 5 pounds.)

**IMPORTANT:** A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) A. W. Johns

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description Sample of chalcopyrite

Sample number	GOLD		SILVER		Copper	Zinc	
	oz./T.	Value	oz./T	Value			
P-8266	0.12				20.70%	0.20%	

Report issued  Card filed  Report mailed  Called for   
SIR-5

STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
ASSAY LABORATORIES

REQUEST FOR SAMPLE INFORMATION

The State law governing free analysis of samples sent to State Assay Laboratories requires that certain information be furnished the Laboratory regarding samples sent for assay or identification. A copy of the law will be found on the back of this blank. Please fill in the information called for as completely as possible, and submit it along with your sample. Keep a copy of the information on each sample for your own reference.

Your name in full H. D. Wolfe

Post-office address P. O. Box 417 Grants Pass, Oregon

Are you a citizen of Oregon yes Date on which sample is sent 3-9-48  
E. White

Name (or names) of owners of the property R. Ferguson Selma, Oregon

Name of claim sample obtained from Fall Cr. Cu. Mine Jan. 1943

Location of property or source of sample (describe as accurately as possible below):

County Josephine Mining district Illinois

Township 38S Range 9W Section 4 Quarter section

How far from passable road 1 mile

For what minerals or elements do you wish the sample(s) analyzed Au, Ag, Cu

	<u>Channel (length)</u>	<u>Grab</u>	<u>Pipe</u>	<u>Description</u>
Sample No. 1	<u></u>	<u>x</u>	<u></u>	<u></u>
Sample No. 2	<u></u>	<u></u>	<u></u>	<u></u>

**IMPORTANT:** A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) H. D. Wolfe

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description

Sample Number	GOLD		SILVER		COPPER			
	oz./T.	Value	oz./T.	Value				
IG-55	0.10	\$3.50	0.50	\$.45	19.90%			

Report issued  Card filed  Report mailed  Called for

EM-16 ELECTROMAGNETIC SURVEY

OF THE

COPPER LODE PROPERTY

JOSEPHINE COUNTY, OREGON

WHITNEY & WHITNEY, INC.

MANAGEMENT CONSULTANTS

P. O. BOX 11647

RENO, NEVADA 89510

TELEPHONE: (702) 323-3050

EM-16 ELECTROMAGNETIC SURVEY OF THE COPPER LODE PROPERTY

JOSEPHINE COUNTY, OREGON

Field Survey By: Mining Enterprises,  
Mr. A. R. Cornelius, Coordinator  
P. O. Box 914  
Arnold, California 95223

Interpretation By: Whitney & Whitney, Inc.  
John W. Motter, Geophysicist  
1755 East Plumb Lane, Suite 135  
Reno, Nevada 89510

July, 1981

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DESCRIPTION OF EM-16 METHOD . . . . .	3
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## SUMMARY AND CONCLUSIONS

Nine (9) lines of very low frequency (VLF) EM-16 electromagnetics totalling approximately 6,300 feet were surveyed by Mining Enterprises at the Copper Lode property in Josephine County, Oregon. Five moderate to weak EM conductors were located. Recommendations for three or more angle diamond drill holes have been included with the report. Subsequent drilling would be dependent on results of the initial drilling program. Definitive location of the drill holes should be based on the EM data in conjunction with topographic and geologic data.

A broad conductive zone was located during the survey which was designated Zone A. Four of the five identified conductors (anomalies 1A through 4A) lie within this north-south striking zone. The fifth anomaly (1B) lies near the northeast corner of the survey area.

Interpretation would be facilitated if a base map were available showing topography, known mineralization, and any geology (if the property has been mapped). Conductors or anomalies located during this survey can be upgraded if any portion of them is spatially related to known mineralization.

Additional EM-16 could be undertaken to the north of the current survey boundary, subject to land status considerations. Anomaly 1A, a moderate strength conductor,



extends northwest from the present north boundary (Line N4)  
and should be investigated as time permits.

## DESCRIPTION OF EM-16 METHOD

The EM-16 system is a very low frequency (VLF) electromagnetic receiver useful for detecting conductive zones such as many types of orebodies. In the case of massive sulfides or heavily disseminated orebodies containing metallic minerals we would expect the orebody to respond directly. Veins not containing a fairly large percentage of metallic minerals (such as pyrite, chalcopyrite, galena, etc.) may give an indirect indication of their location and still respond to EM-16 by virtue of being located in a structure such as a fault zone or shear which is more electrically conductive than the surrounding host rocks. This indirect indication would be, in general, the expected response made for a gold-quartz vein which might contain a very small percentage of metallic minerals, but might be located in a fault zone which would be more conductive than the surrounding host rocks.

While radio frequency EM prospecting is not new (for example, see Eve and Keys, 1956; or Heiland, 1940.), it is only fairly recently that easily operated, light, one man units were made commercially available. The Geonics EM-16 or the RONKA EM-16 used by Mining Enterprises are examples of this type of EM receiver. These units make use of VLF (very low frequency) radio stations of the U.S. Navy communications network- thus the necessity of a field transmitter is eliminated. Radio-frequency E.M. methods using ground-transportable transmitters were employed in the 1930's and, to a lesser extent, as recently as 1960, for both prospecting and geological mapping. Because of the relatively high frequencies employed, the method suffered from poor penetration and difficulty in discriminating between bodies of different conductivities. In

North America the method was abandoned in favour of low-frequency E.M. for nearly all prospecting applications.

In Europe, the use of radio-frequency methods continued underground, for mapping coal-seams and for exploring in the vicinity of base-metal orebodies. The Russians (3) have been successful in applying radio shadow techniques in drill-holes for routine exploration and mapping of sulphide overburden layer, attenuation in most rocks, even at these frequencies, is quite low.

Despite these and other activities, radio-frequency methods were not accepted for routine surface or airborne exploration until Canadian Exploration Companies introduced "passive" instruments working in the VLF range (15-25kHz) in 1964. The EM-16 is the instrument most frequently used. Powerful military radio transmitters situated at numerous locations around the globe provided the primary E.M. signal.

Successful surveys were carried out with this instrument in 1965. By the end of 1966 the method was in widespread use, and in 1967 several similar systems were introduced or under development. At least two airborne versions were tested in 1968. By 1969 airborne and/or ground instruments were being manufactured by more than five North American firms. Currently the instruments are used in a wide variety of prospecting applications.

E.M. prospecting methods rely on the measurement of secondary fields generated by conducting bodies in the ground. When subjected to a primary E.M. signal "Active" methods employ transportable transmitters, generally working in the frequency range 400 to 5,000 Hz. AFMAG is a "passive" method, relying on electrical discharges generated by thunderstorms which produce measurable



signals in the 50 to 500 Hz. range.

The VLF method is also "passive"; in this case employing the radiation from powerful military radio transmitters as the primary signals. Frequencies and power outputs of these stations are listed in Table 1.

The radiation from these transmitters contains both electric and magnetic components and travels in three modes: skywave, space-wave, and groundwave. At the large distance we are concerned with, we receive mainly the skywave waveguided by the ionosphere and earth surface. The magnetic component is the one of main interest to us, as beneath the ground surface it carries the bulk of the signal energy, and it offers certain advantages in practical field measurement.

Basically the radio frequency units measure the angle of tilt (from the horizontal) or the dip of radio frequency magnetic fields produced by the VLF stations. Two components of the electromagnetic field are measured; the in-phase component (roughly equivalent to the "tilt angle" discussed above), and the out of phase, or "quadrature" component which is generally rather small for a very good conductor, and larger for a poorer conductor. This magnetic field part of the radio wave is transmitted in a horizontal orientation, but can be modified in at least two ways: by a SECONDARY (S)-Field from a conducting mineral body "excited" by the PRIMARY or (P)-Field transmitted by the VLF station; or by a (S)-Field produced by currents induced in rocks and soils.

As discussed earlier, conductors detectable with the EM-16 include, both wanted and unwanted sources. Desirable conductors would include orebodies such as massive sulfide deposits, or veins

containing heavily disseminated sulfides or within a conductive fault. Undesireable conductors ("noise") may be attributable to "culture" (powerlines, pipelines, grounded fences, etc) or to geologic sources such as conductive overburden of uneven thickness, intraformational conductors such as graphitic interbeds, or a number of other possibilities.

Table 1 illustrates the main features of measuring the effect of a conducting mineral body. It is conventional to plot the "tilt angle profile" -e.g. the angle of tilt of the EM unit when the instrument is aligned parallel to the net field ( $S + P$ ). This alignment is checked by obtaining a null in the measuring coil (the vertical or long coil of the unit shown in table 1(a)). These features are discussed in the operating manuals and case histories, put out by Geonics and Crone (see the references), and need not be pursued further here.

RESULTS AND INTERPRETATION  
(Including EM-16 Profiles and First Derivative Profiles)

GENERAL

A total of nine (9) lines of very low frequency (VLF) EM-16 were surveyed at the Copper Lode property in Josephine County, Oregon. Lines were laid out East-West and averaged approximately 700 feet; measurements were made every 50 feet. For purposes of this report, EM profiles, first derivative profiles and plan maps and data sheets have been segregated and analyzed separately.

Figure 2 illustrates the detailed location of the 9 survey lines for the area. Electromagnetic data collection and data reduction by the survey crew of Mining Enterprises appears to be of excellent quality.

For each survey line, the following data is included with this report:

1. The data sheet with both raw and computed values and survey notes.
2. The EM-16 profiles of In-Phase and Quadrature components.
3. The first horizontal derivative profiles, corrected for topographic effects.

On each EM-16 profile, the in-phase component of the vertical electromagnetic field is illustrated with a solid line. The quadrature (or "out-of-phase") component of the vertical field is shown by the dashed line.



## RESULTS AND INTERPRETATION, COPPER LODGE SURVEY AREA

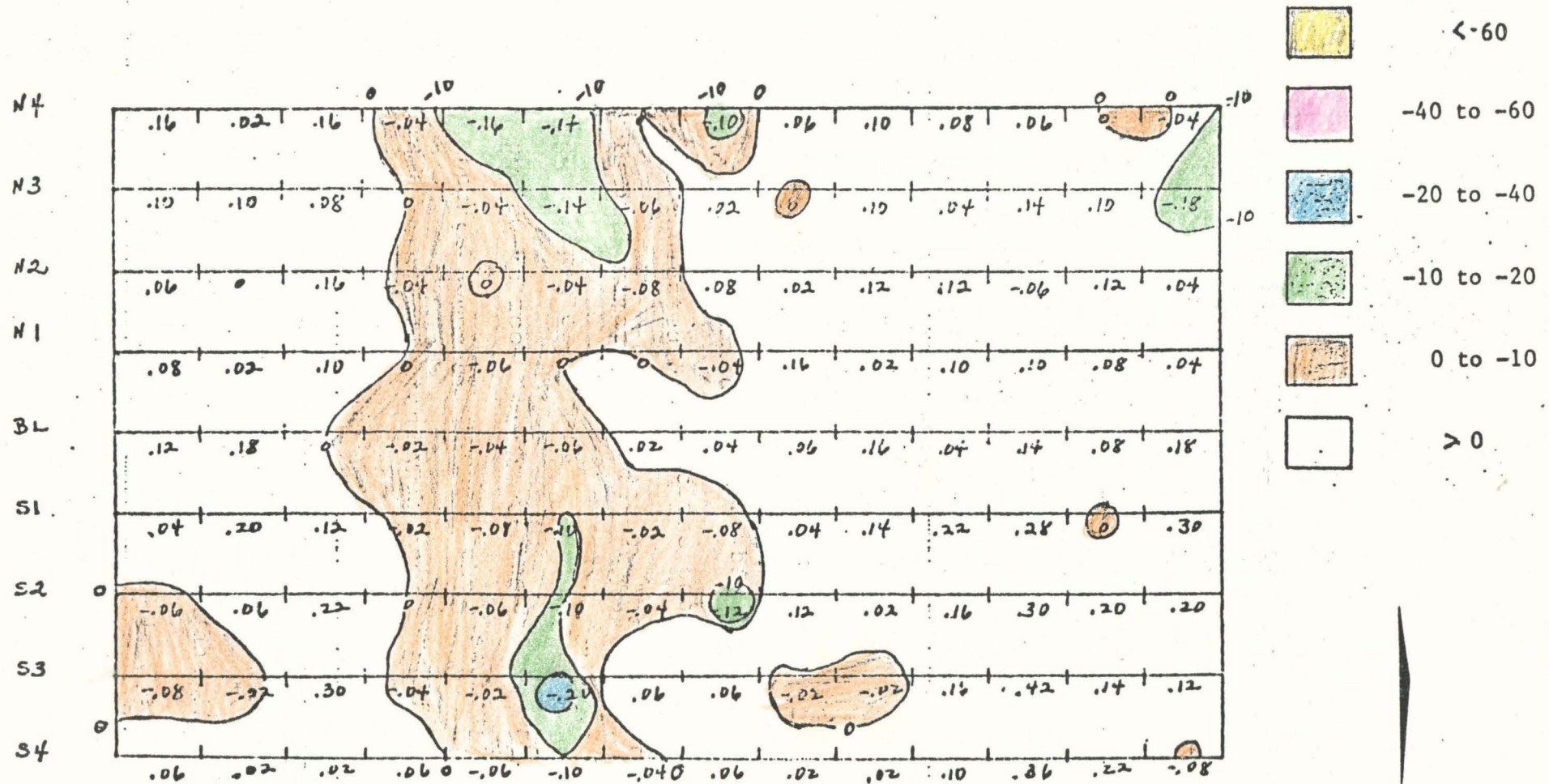
In the Copper Lode survey area, a total of nine (9) lines of very low frequency (VLF) EM-16 electromagnetics was surveyed. Each of these nine lines was approximately 700 feet long, thus a total of 6,300' of EM-16 survey was performed in this area.

A total of five (5) moderate to weak electromagnetic conductors was located in this survey area. Four of these anomalies are located within a larger broad conductive zone which is trending north and south. This zone has been designated Zone A. Four of the five anomalies located in the Copper Lode survey block are located within Zone A. These anomalies have been designated Numbers 1A through 4A. A fifth anomaly, which is designated 1B, is located near the northeastern portion of the survey block.

Figure #2 serves two functions. The first of these is to indicate the location of all readings taken. Lines are numbered N1 through N4 moving north from the baseline and S1 through S4 moving south from the baseline. The lines are located 50 feet apart and readings have been taken every 50 feet with the stations being numbered 1 on the eastern edge of the block to station 15 on the western edge of the block. Figure 2 is a contour map showing the contours of the in-phase component of the EM-16 field. The plotted values are contours of the first horizontal derivative of the in-phase component of the EM-16 data. Included in this section are profile maps

FIGURE 2

MINING ENTERPRISES, INC.  
EM-16 Survey  
Copper Lode Property



Scale: 1" = 100'



showing plotted values of both the in-phase and the out-of-phase, or quadrature, component of the EM-16; the data sheets containing both raw and calculated values are included in the subsequent section.

Anomaly interpretation would be facilitated by having a base map showing the location of known mineralization plus any information on geology which is available. Lacking this information, the interpretation contained in this report should be considered an indication which should be used in conjunction with other geologic, geochemical and geophysical information.

Anomaly 1A and anomaly 2A are two moderate strength conductors located within the broad conductive Zone A. Both of these conductors are indicated to be steeply dipping or vertical. The indicated depth to the conductor axis in anomaly 1A is approximately 100 feet. The indicated depth to the conductor axis of anomaly 2A is somewhat shallower, perhaps in the 50-75 foot range. Of these two anomalies, anomaly 2A appears somewhat stronger than anomaly 1A. Notes on the field sheets collected by Mining Enterprises suggest that anomaly 1A may be spatially related to the known mineralization in the adit. Anomaly 2A, which is located approximately 250 feet south of anomaly 1A, may well be part of the same structure. Anomalies 3A and 4A are weak anomalies located along the eastern edge of the broad conductive Zone A and should be followed up subsequent to anomalies 1A and 2A if work on these generates favorable

information.

Anomaly 1B is located near the eastern edge of Line N3. It is a near-vertical, northeasterly (?) dipping conductor which may be considered a secondary target to anomalies 1A and 2A, which have been previously discussed.

Overall, the EM-16 readings appear quite "clean" with only very small changes in background. Because of the absence of much background noise it is possible to resolve the conductors noted which are of moderate to weak intensity. It should be noted herein that the strength of the conductor as shown in Figure 2A may have only superficial relationship to the grade of copper mineralization encountered at depth. The EM-16 works on the principle of resolving inhomogeneities in lateral conductivity. Thus, massive sulfides typically show up as quite good conductors. However, in an area such as Grant's Pass, where weathering has been somewhat deeper, the near surface ore minerals which could generate a conductor may be secondary minerals (such as oxides and carbonates) which are not nearly as conductive as the primary sulfide mineral. Examples of copper minerals which are relatively non-conductive would include cuprite, malachite, azurite, etc.

My first recommendation on this property would be to attempt to integrate the EM-16 geophysical survey results presented herein with the other data available. That is, the relationship of the known conductors discovered by



this survey should be determined with relationship to known mineralization and other geologic aspects of the property. For instance, as an exploration target, any of the anomalies discussed would be upgraded if they can be demonstrated to be spatially co-located with known mineralization.

Diamond core drilling would appear to be warranted on anomalies 1A and 2A, and possibly on anomaly 1B. The drill holes should be planned so as to intercept the anomalies at an approximate depth of 150 feet to 175 feet below the surface. The exact location of the drill holes should be deferred until a topographic map of the area is available to use for planning. If land status permits, additional EM-16 survey work should be accomplished north of the northernmost line (N4) where anomaly 1A strikes northwest out of the current survey area.

Following are the profiles of the in-phase and quadrature components of the EM-16 survey. The scale of these maps is 1" = 50', not 1" = 100', as shown. Thus two sheets are required for each line.

# MINING ENTERPRISES EM-16 SURVEY

STA  
L7N4

STA  
L6N4

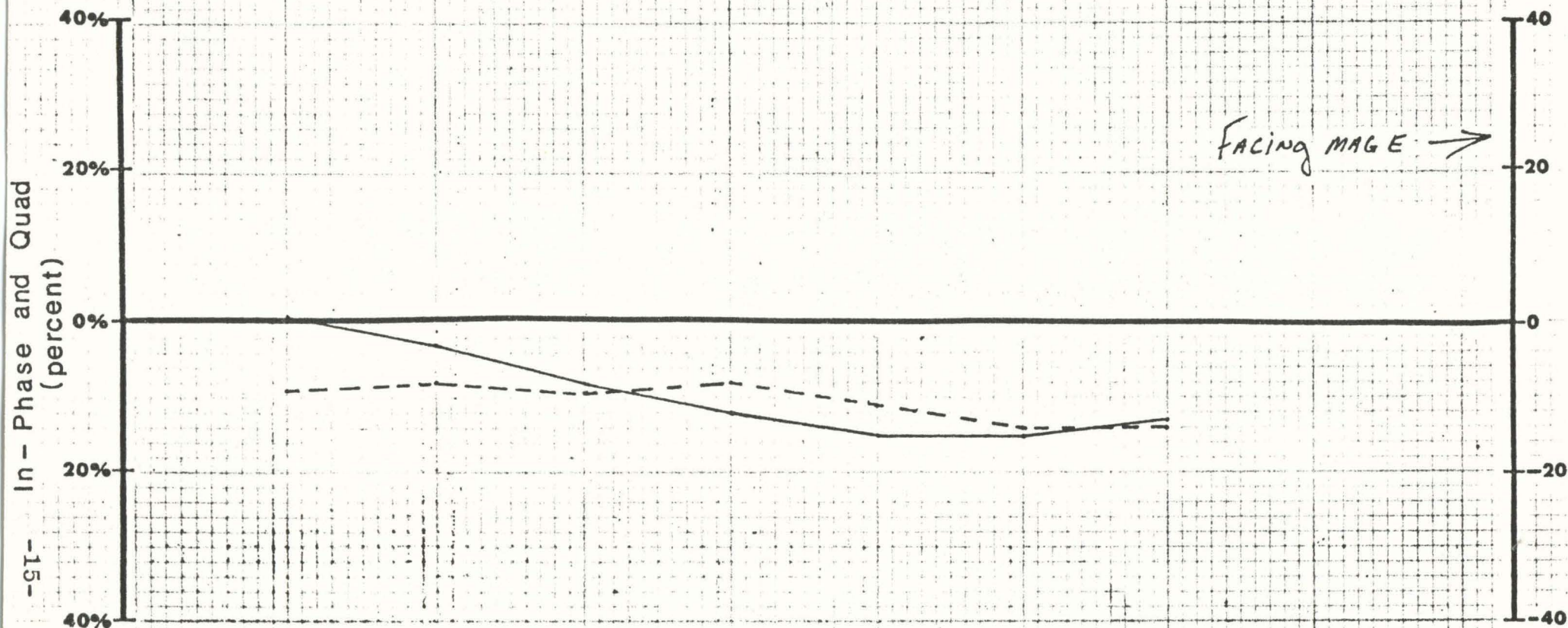
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L5N4

STA  
L4N4

STA  
L3N4

STA  
L2N4

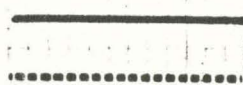
STA  
L1N4



Station: NGP (18.6 Khz)

IN - PHASE

QUADRATURE



PROPERTY: Copper Lode

LINE : N4

DATE 6-9-81

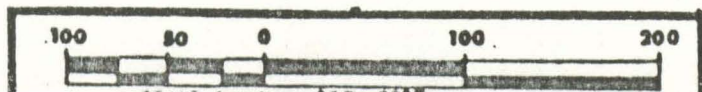
MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

DATA BY C. MARTZ

DRAWN BY C. MARTZ





# MINING ENTERPRISES EM-16 SURVEY

STA  
L15N4

STA  
L14N4

STA  
L13N4

STA  
L12N4

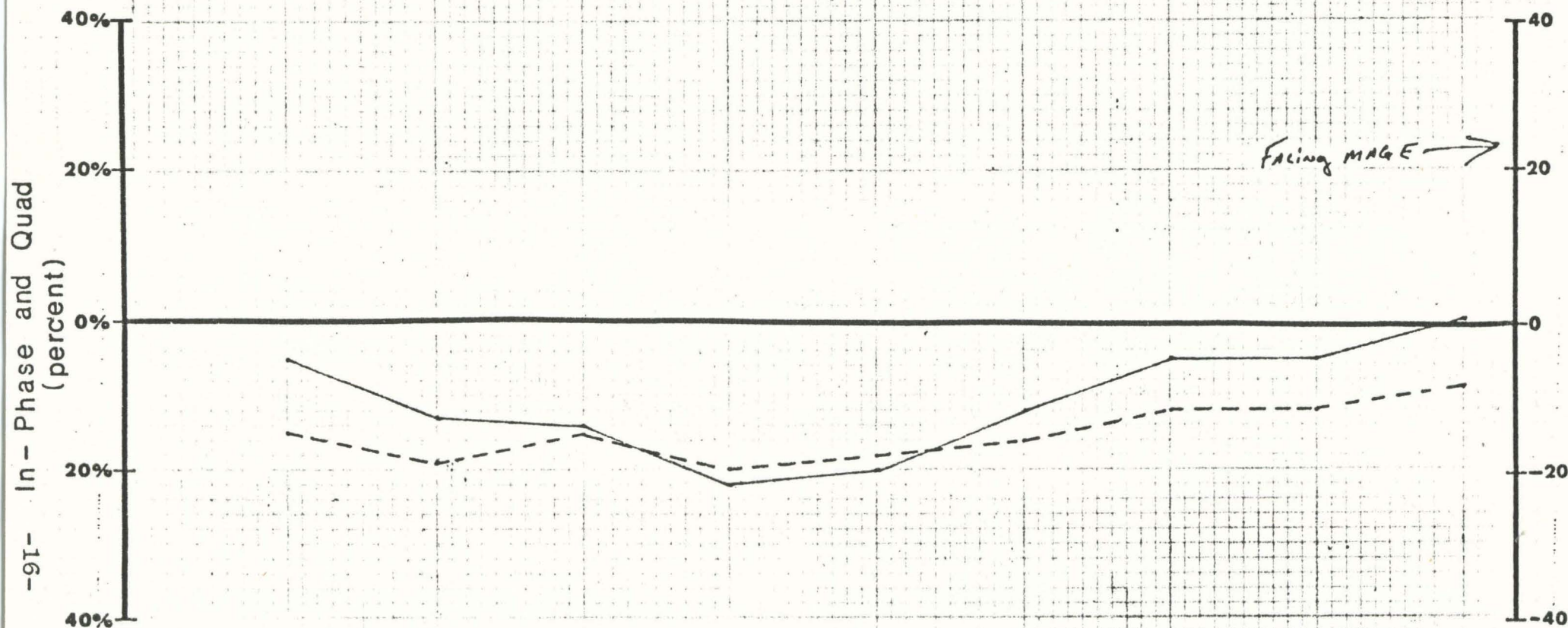
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L11N4

STA  
L10N4

STA  
L9N4

STA  
L8N4

STA  
L7N4



Station: NGP (18.6 Khz)

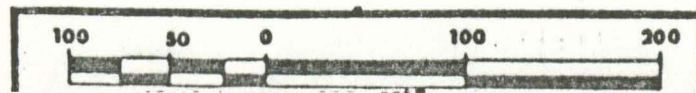
IN - PHASE

QUADRATURE

PROPERTY: Copper Lode

LINE : N4

DATE	6-9-81
MAP NUMBER	
COUNTY	JOSEPHINE
STATE	ORE
DATA BY	C. MARTZ
DRAWN BY	C. MARTZ





# MINING ENTERPRISES EM-16 SURVEY

Sta  
L15N3

Sta  
L14N3

Sta  
L13N3

Sta  
L12N3

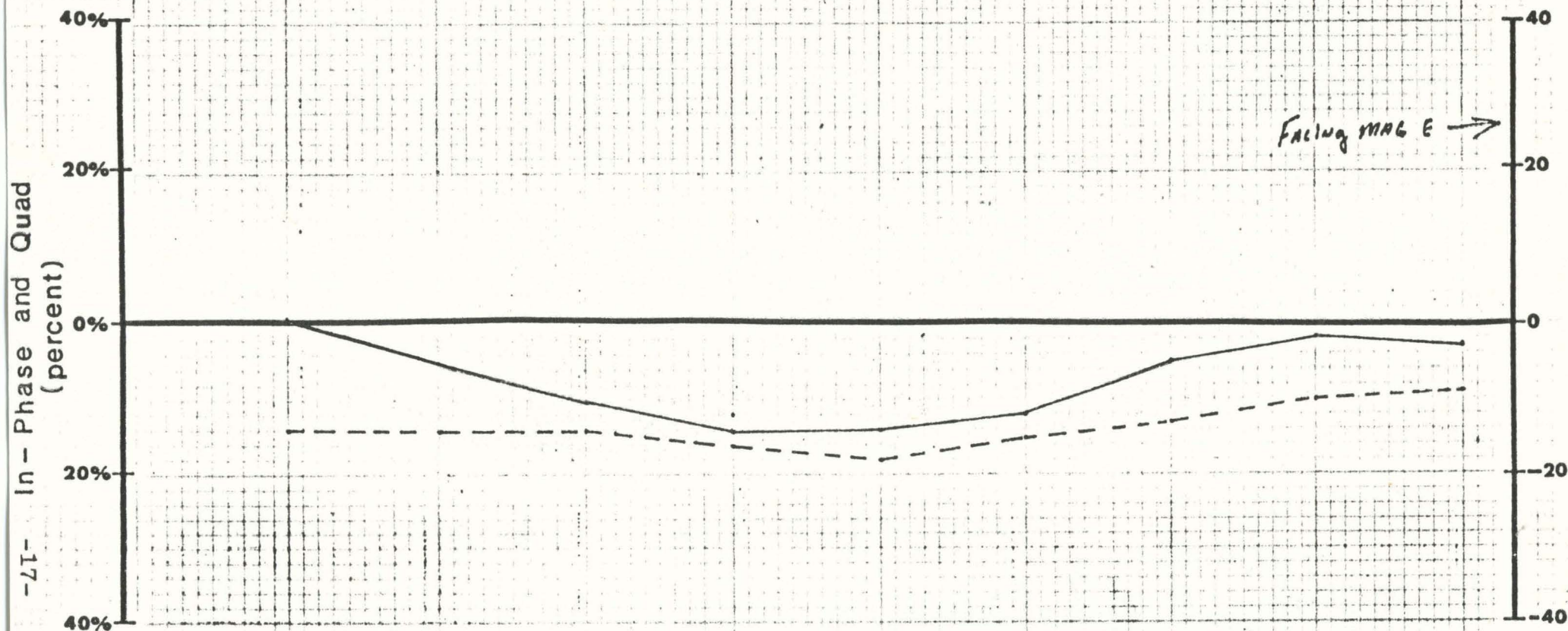
Sta  
L11N3

Sta  
L10N3

Sta  
L9N3

Sta  
L8N3

Sta  
L7N3



Station: NGP (18.6 Khz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lode

LINE : N3

DATE 6-9-81

MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

DATA BY C. MARTZ

DRAWN BY C. MARTZ

100 50 0 100 200



# MINING ENTERPRISES EM-16 SURVEY

STA  
L7N3

STA  
L6N3

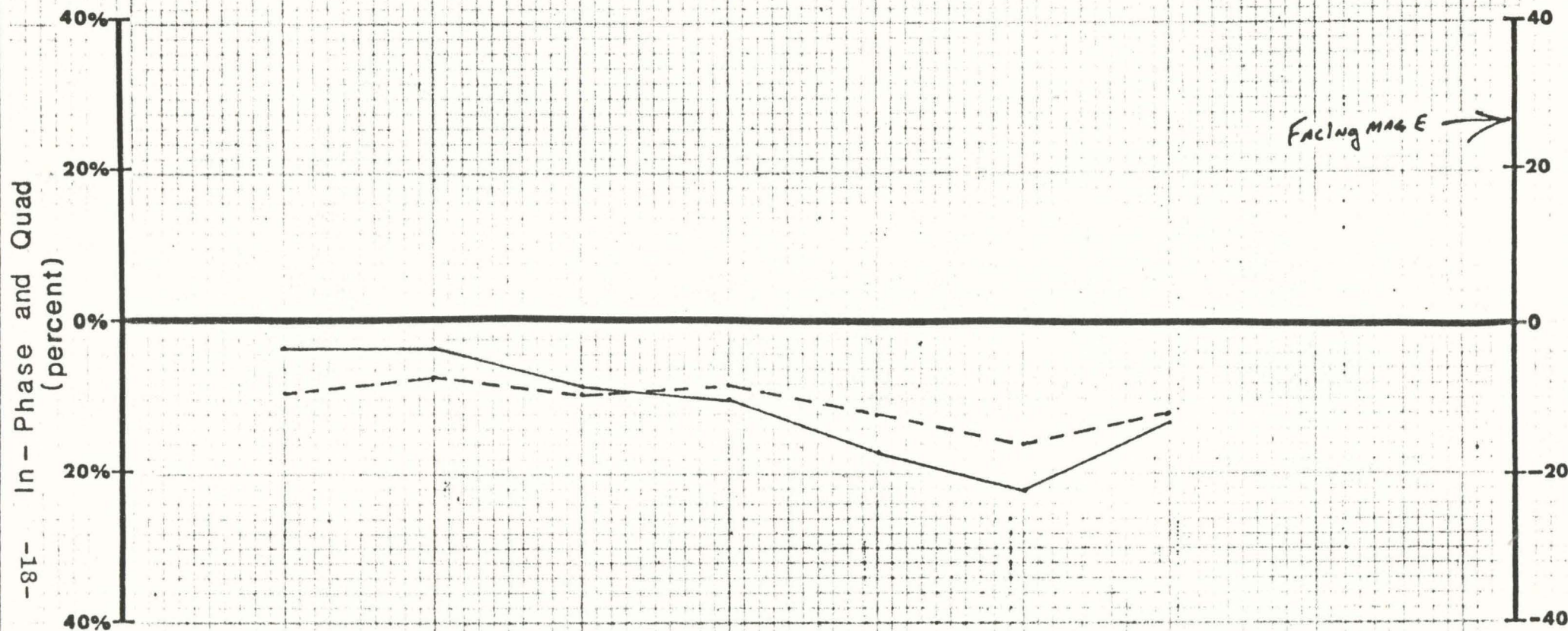
STA  
L5N3

STA  
L4N3

STA  
L3N3

STA  
L2N3

STA  
L1N3



Station: NGP (18.6 Khz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lodge

LINE : N3

DATE 6-9-81

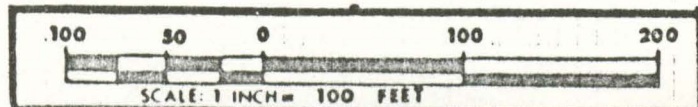
MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

DATA BY C. MARTZ

DRAWN BY C. MARTZ





# MINING ENTERPRISES EM-16 SURVEY

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L7N2

Sta  
L6N2

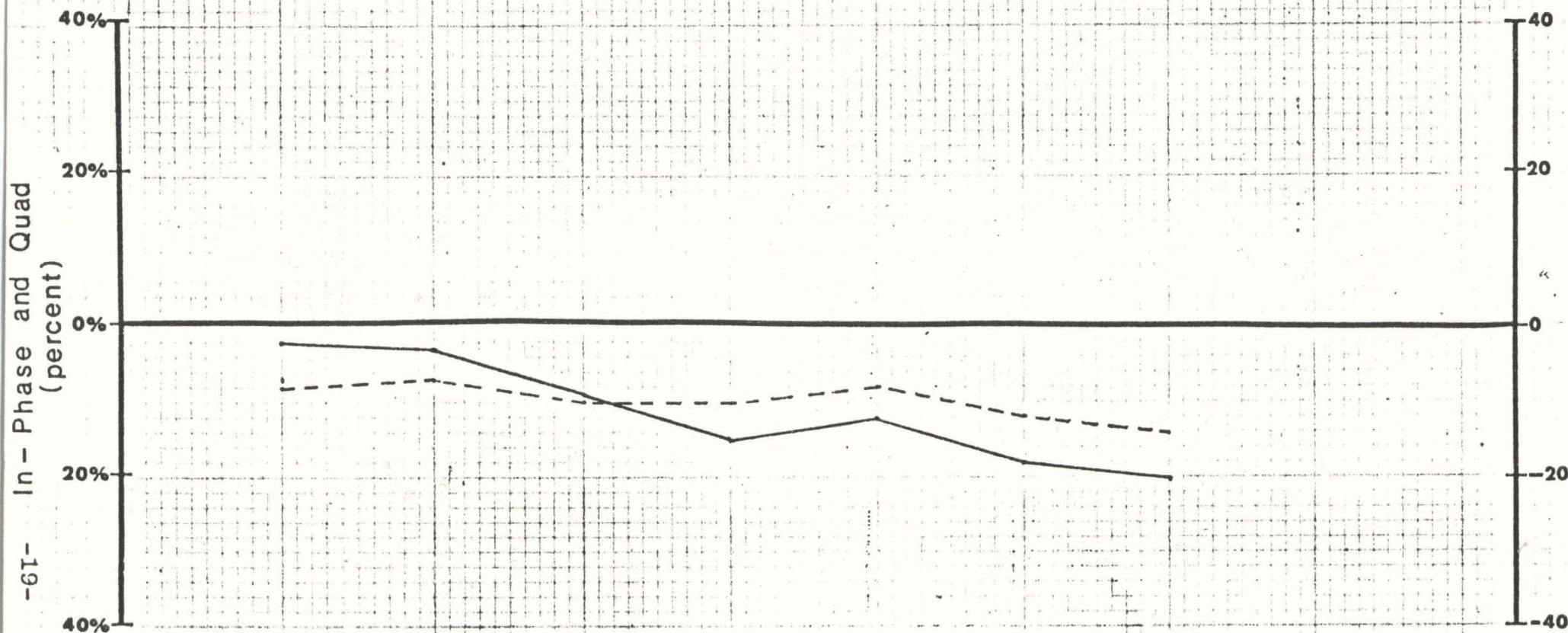
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L5N2

Sta  
L4N2

Sta  
L3N2

Sta  
L2N2

Sta  
L1N2



Station: NGP (18.6 KHz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lode

LINE : N 2

DATE 6-9-81

MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

DATA BY C. MARTZ

DRAWN BY C. MARTZ





# MINING ENTERPRISES EM-16 SURVEY

STA  
L15N2

STA  
L14N2

STA  
L13N2

STA  
L12N2

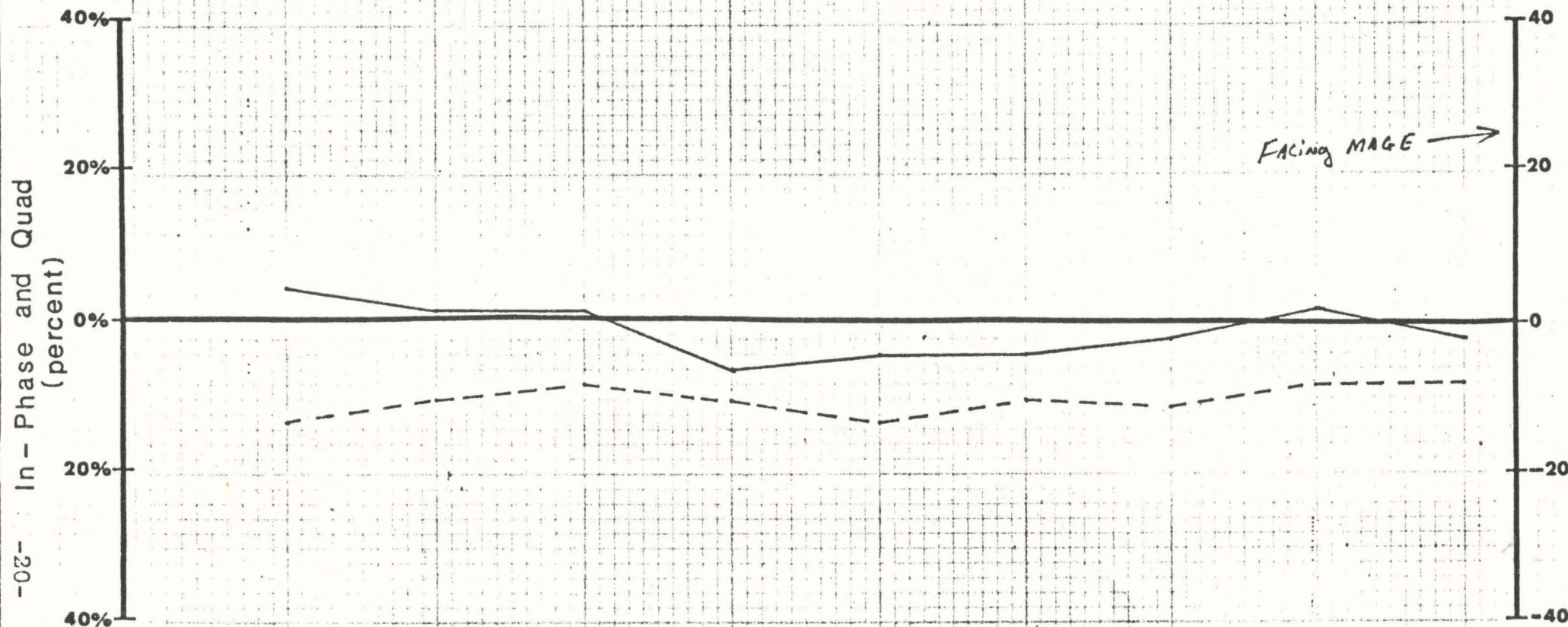
STA  
L11N2

STA  
L10N2

STA  
L9N2

STA  
L8N2

STA  
L7N2



Station: NGP (18.6 Khz)

IN-PHASE

QUADRATURE

PROPERTY: Copper Lode

LINE : N2

DATE 6-9-81

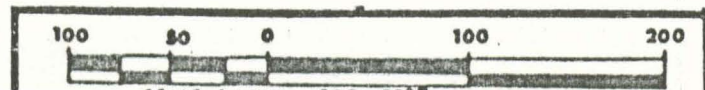
MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

DATA BY C. MARTZ

DRAWN BY C. MARTZ





# MINING ENTERPRISES EM-16 SURVEY

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L7NI

Sta  
L6NI

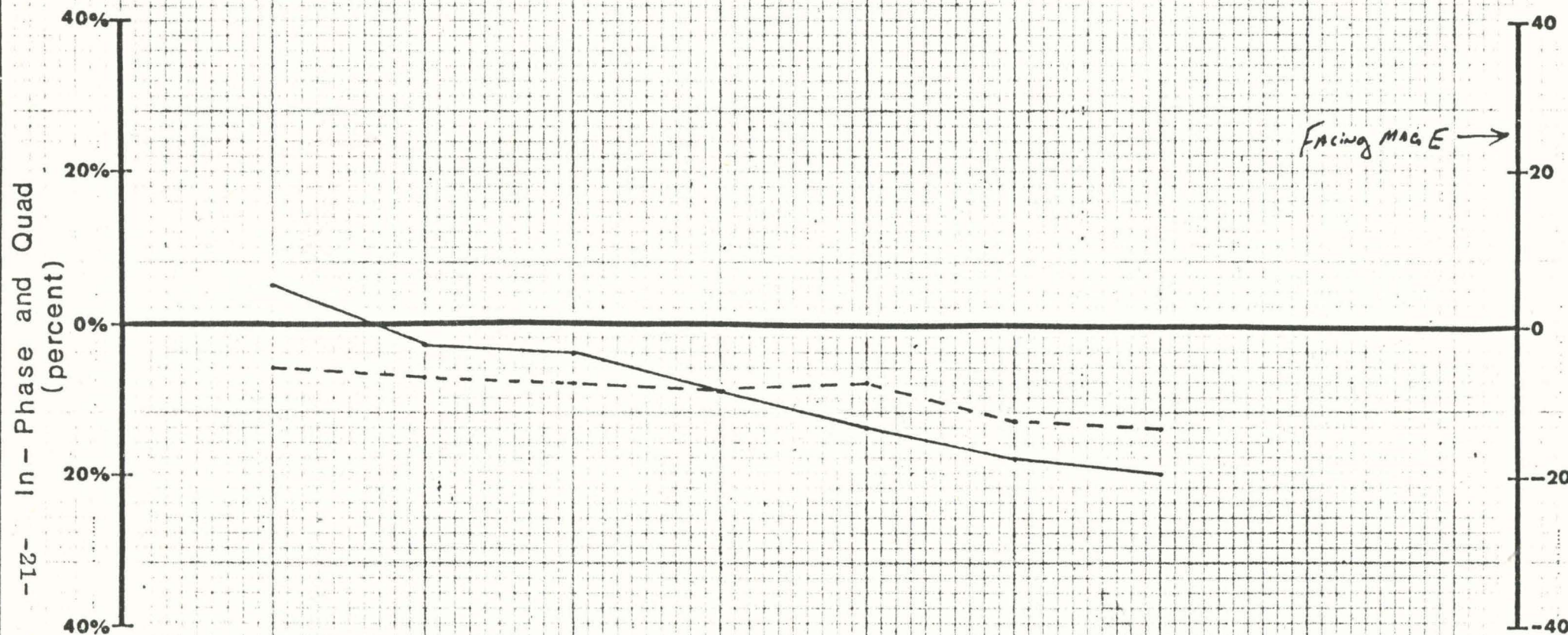
Sta  
L5NI

Sta  
L4NI

Sta  
L3NI

Sta  
L2NI

Sta  
L1NI



Station: NGP (18.6 Khz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lode

LINE : NI

DATE 6-9-81

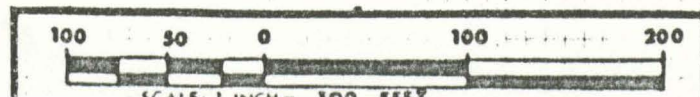
MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

DATA BY C. MARTZ

DRAWN BY C. MARTZ





# MINING ENTERPRISES EM-16 SURVEY

Sta  
L15NI

Sta  
L14NI

Sta  
L13NI

Sta  
L12NI

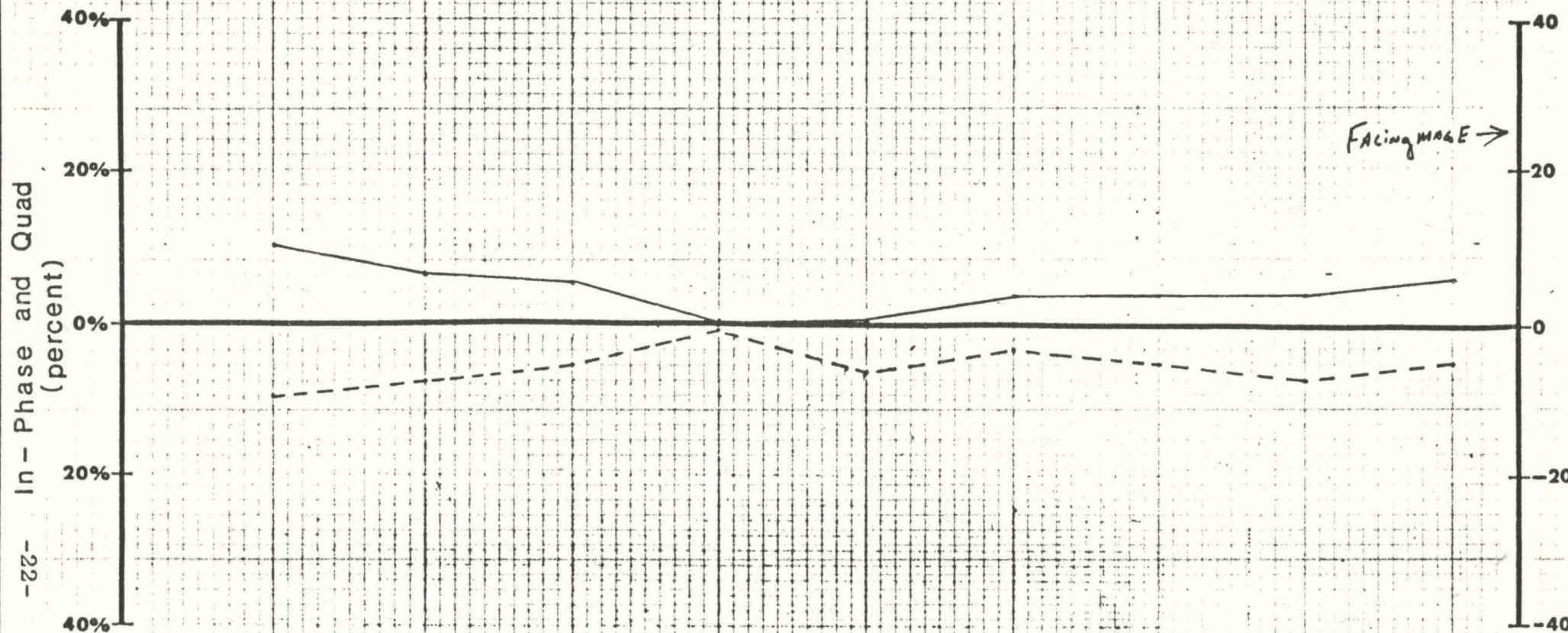
Sta  
L11NI

Sta  
L10NI

Sta  
L9NI

Sta  
L8NI

Sta  
L7NI



Station: NGP (18.6 KHz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lode

LINE: N1

DATE 6-9-81

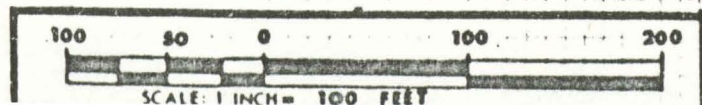
MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

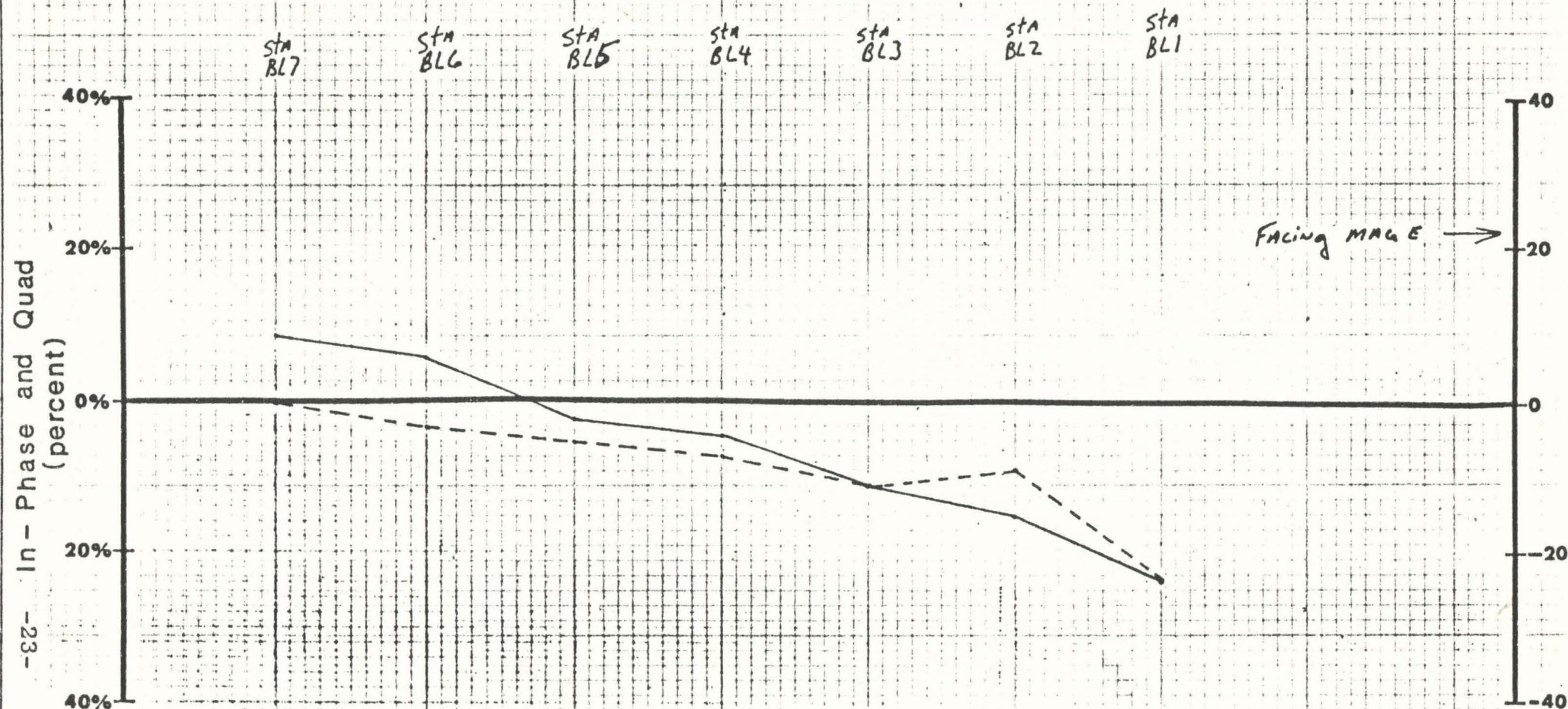
DATA BY C MARTZ

DRAWN BY C MARTZ





# MINING ENTERPRISES EM-16 SURVEY



Station: NGP (18.6 KHz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lake

LINE : BL

DATE 6-9-81

MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

DATA BY C MARTZ

DRAWN BY C MARTZ





# MINING ENTERPRISES EM-16 SURVEY

STA  
BL15

STA  
BL14

STA  
BL13

STA  
BL12

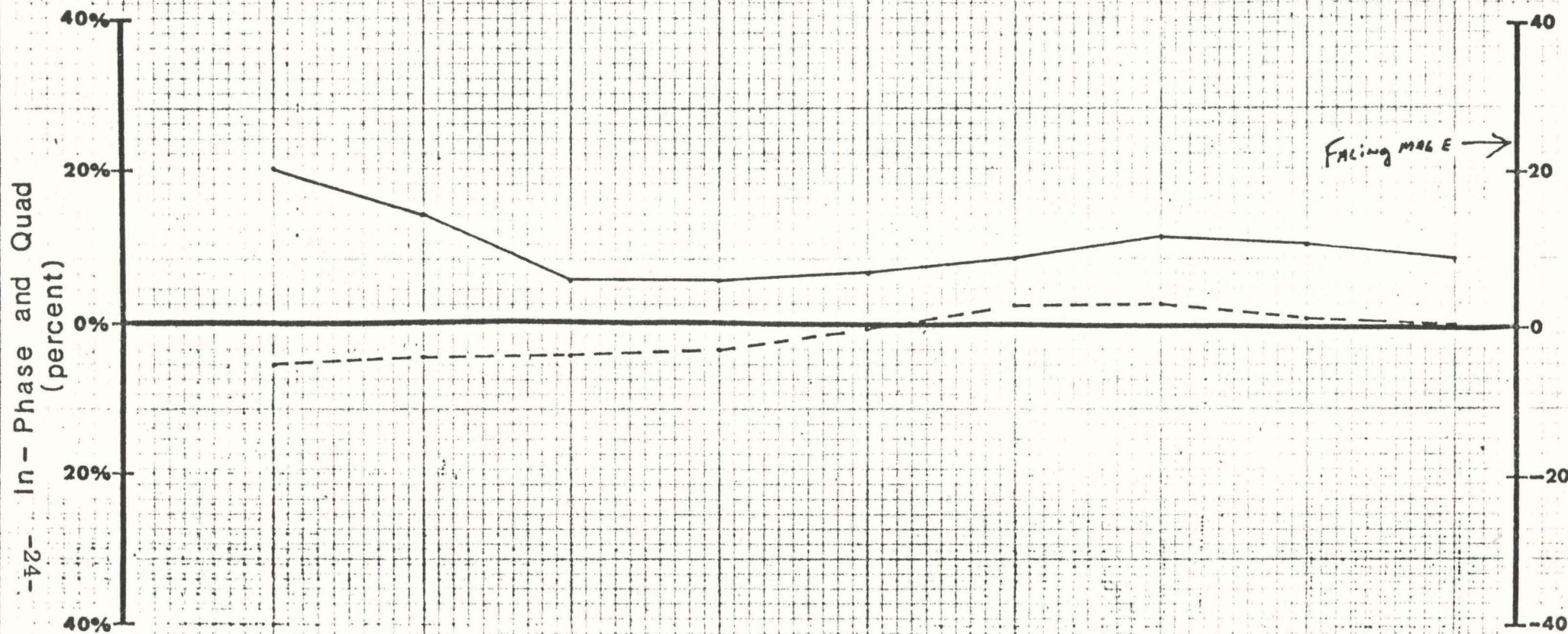
STA  
BL11

STA  
BL10

STA  
BL9

STA  
BL8

STA  
BL7



Station: NGP (18.6 Khz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lodge

LINE : BL

DATE 6-9-81

MAP NUMBER

COUNTY Josephine

STATE ORE.

DATA BY C. MARTZ

DRAWN BY C. MARTZ





# MINING ENTERPRISES

## EM-16 SURVEY

STATIONED AND NOT LISTED

Sta L751

Sta L651

Sta L551

Sta L451

Sta L351

Sta L251

Sta L151

40%  
20%  
0%  
20%  
40%

-52- In - Phase and Quad (percent)

-40  
-20  
0  
-20  
-40

FACING MAG E →

Station: NGP (18.6 KHz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lodge

LINE : 51

DATE 6-9-81

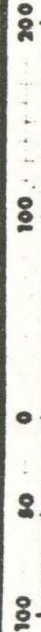
MAP NUMBER

COUNTY JOSEPHINE

STATE ORE.

DATA BY C. MARTZ

DRAWN BY C. MARTZ





# MINING ENTERPRISES EM-16 SURVEY

STA  
L1551

STA  
L1451

STA  
L1351

STA  
L1251

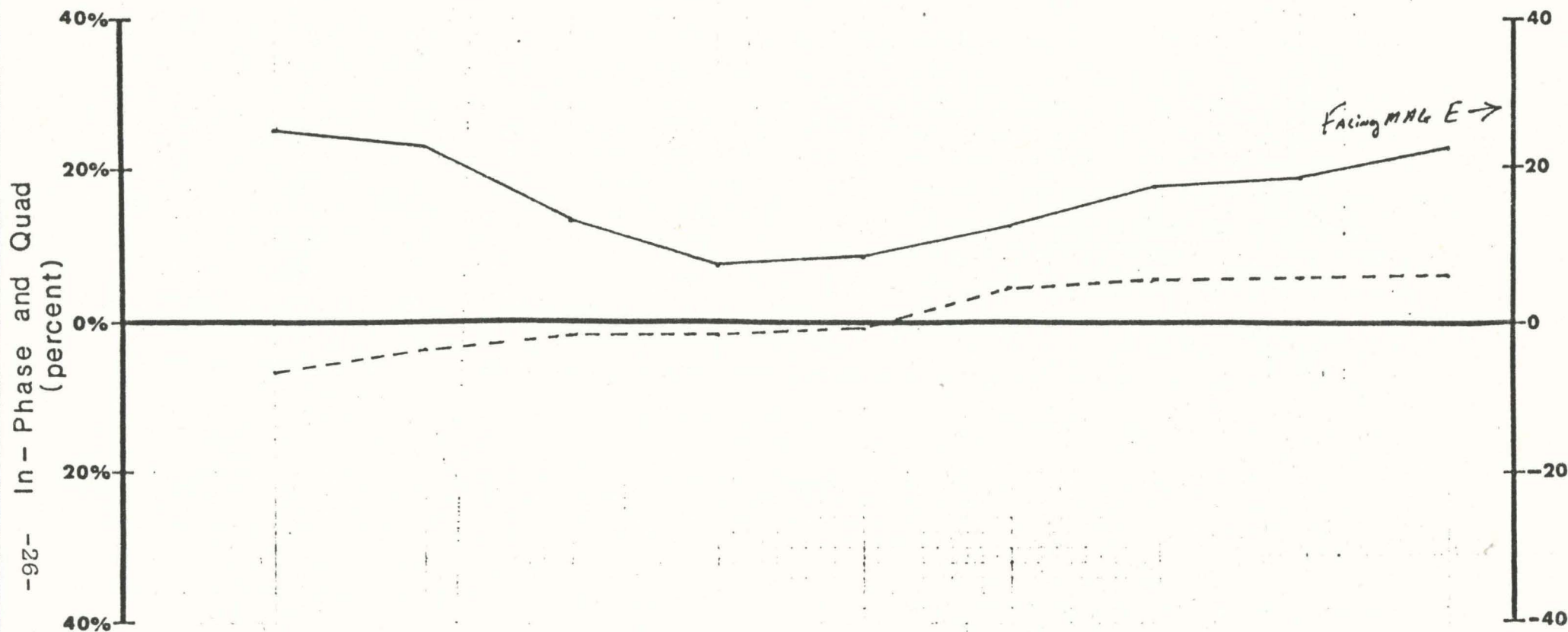
STA  
L1151

STA  
L1051

STA  
L951

STA  
L851

STA  
L751



Station: NGP (18.6 Khz)

IN - PHASE \_\_\_\_\_

QUADRATURE .....

PROPERTY: Copper Lode

LINE : 51

DATE	6-9-81
MAP NUMBER	
COUNTY	JOSEPHINE
STATE	ORE
DATA BY	C. MARTZ
DRAWN BY	C. MARTZ



# MINING ENTERPRISES

## EM-16 SURVEY

STA  
L1552

STA  
L1452

STA  
L1352

STA  
L1252

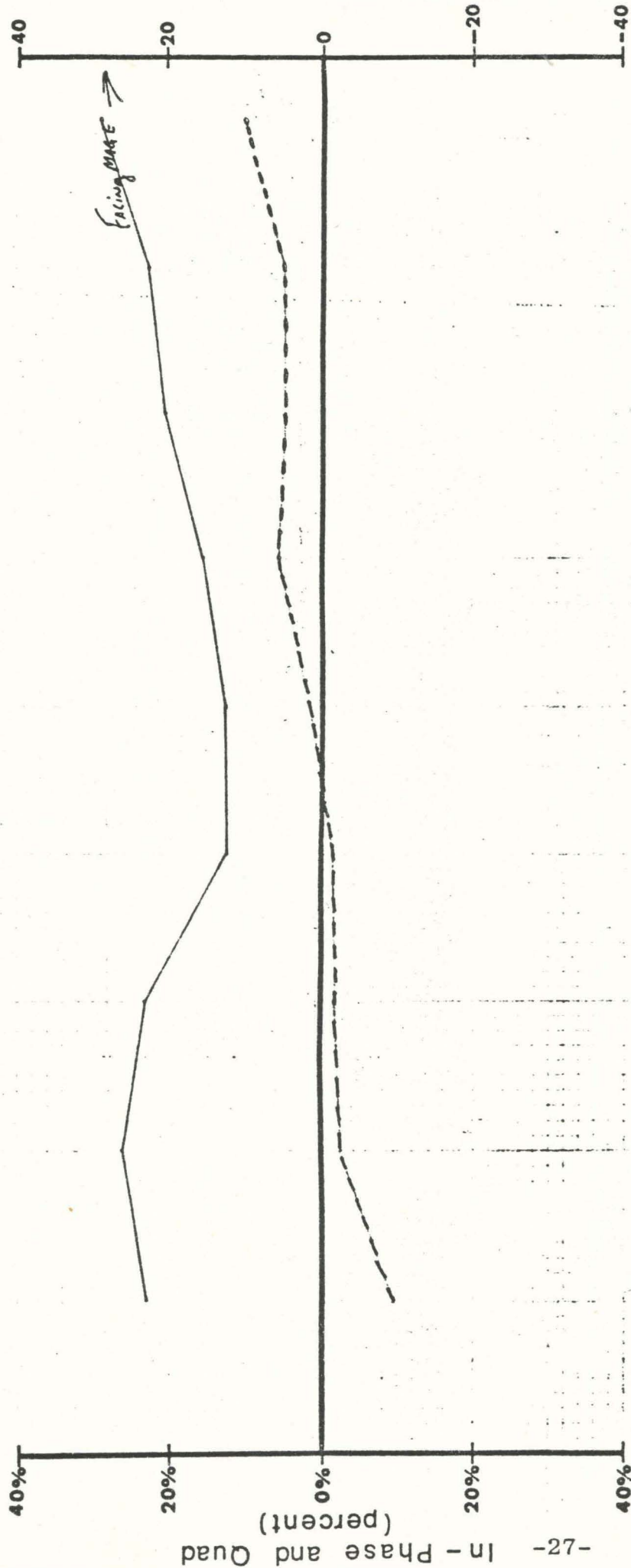
STA  
L1152

STA  
L1052

STA  
L952

STA  
L852

STA  
L752



Station: NGP (18.6 KHz)

IN - PHASE

QUADRATURE

PROPERTY: Copper Lodge

LINE : S 2

DATE	6-9-81
MAP NUMBER	
COUNTY	JOSEPHINE
STATE	ORE
DATA BY	C MARTZ
DRAWN BY	C MARTZ





# MINING ENTERPRISES EM-16 SURVEY

STA  
L752

STA  
L652

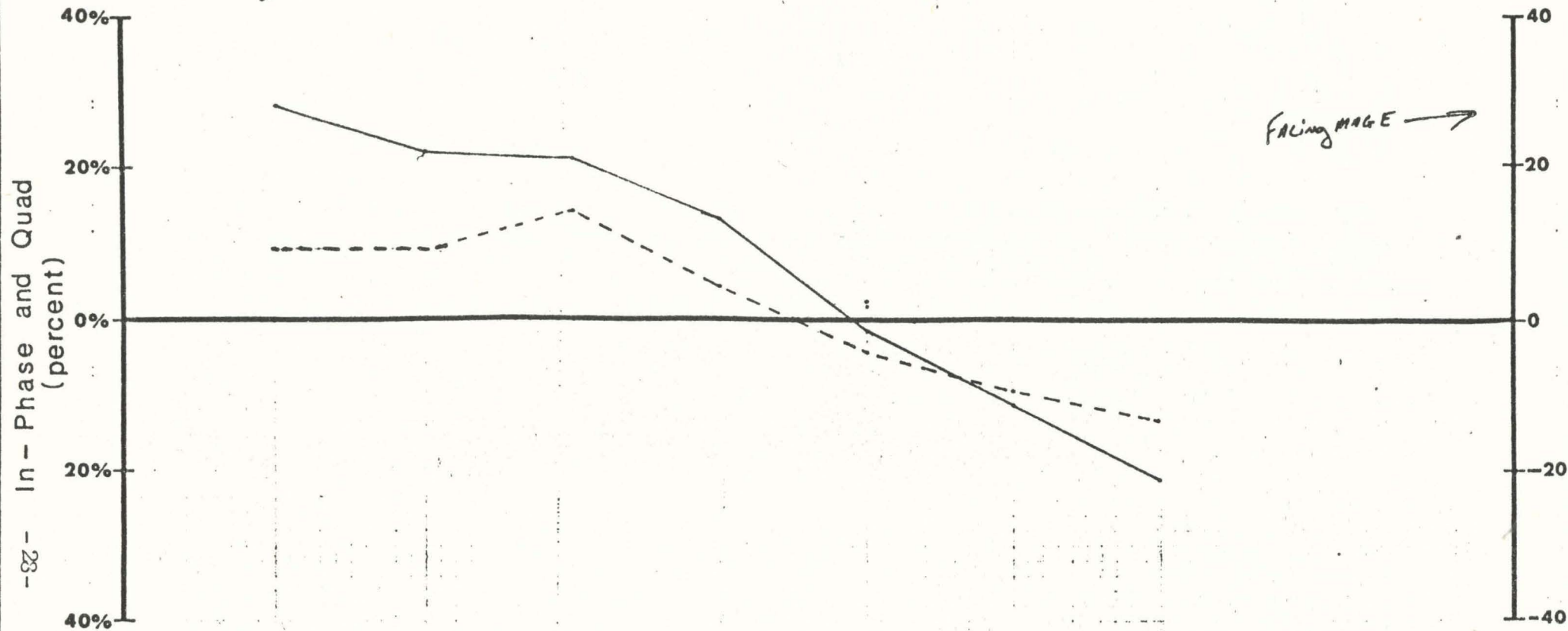
STA  
L552

STA  
L452

STA  
L352

STA  
L252

STA  
L152



Station: NGP (18.6 KHz)

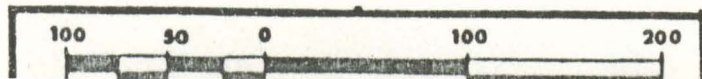
IN - PHASE

QUADRATURE

PROPERTY: Copper Lake

LINE : 52

DATE	6-9-81
MAP NUMBER	
COUNTY	JOSEPHINE
STATE	ORE
DATA BY	C MARTZ
DRAWN BY	C MARTZ



# MINING ENTERPRISES EM-16 SURVEY

sta  
L753

sta  
L653

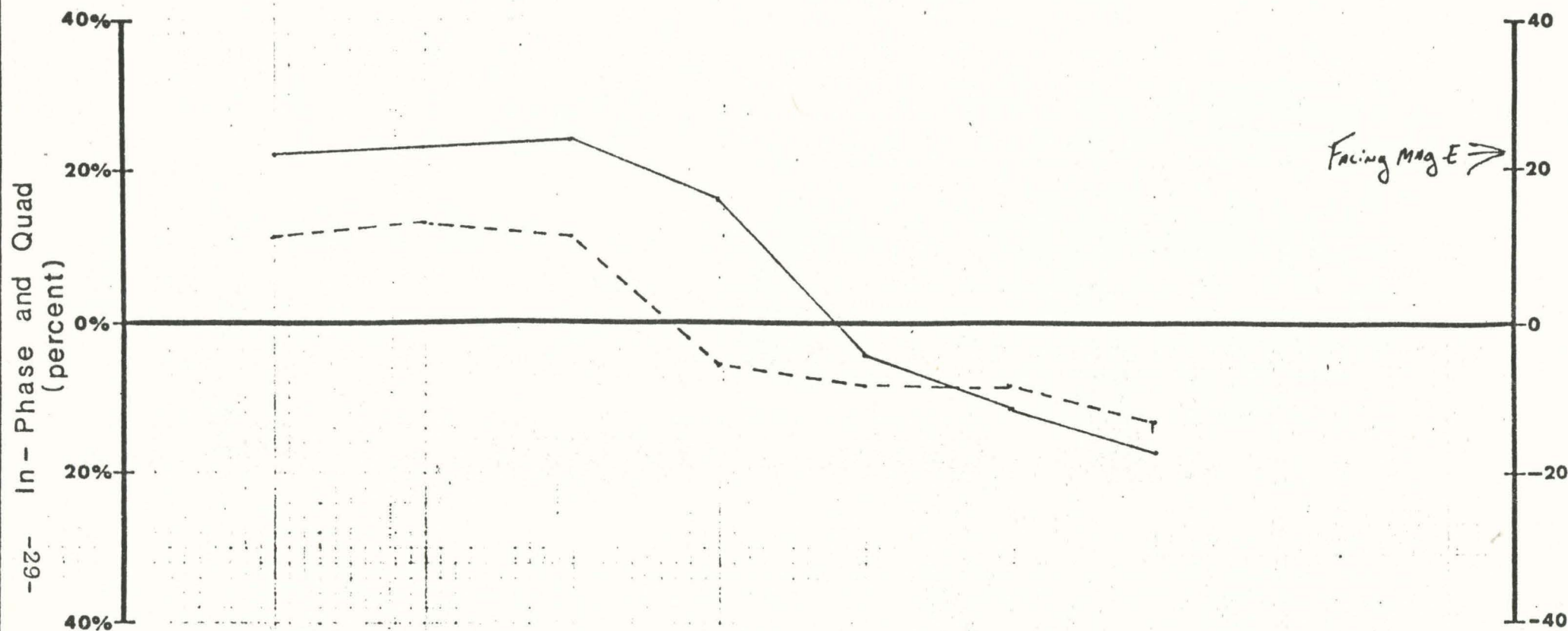
sta  
L553

sta  
L453

sta  
L353

sta  
L253

sta  
L153



Station: NGP (18.6 KHz)

IN - PHASE

QUADRATURE

PROPERTY:

LINE :

Copper lode

S3

DATE 6-9-81

MAP NUMBER

COUNTY JOSEPHINE

STATE ORE.

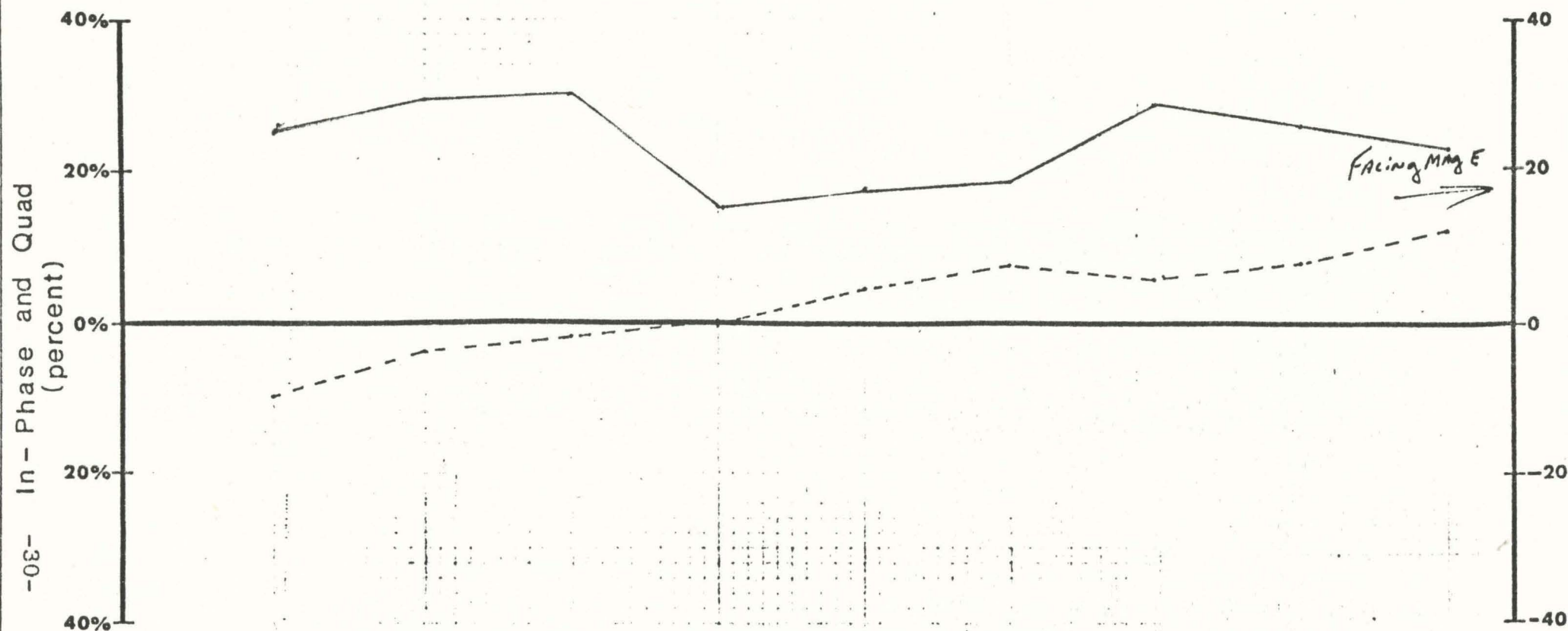
DATA BY C MARTZ

DRAWN BY



# MINING ENTERPRISES EM-16 SURVEY

Sta L1553    Sta L1453    Sta L1353    Sta L1253    Sta L1153    Sta L1053    Sta L953    Sta L853    Sta L753



Facing Mag E →

Station: NGP (18.6 Khz)

IN - PHASE \_\_\_\_\_

QUADRATURE: .....

PROPERTY: Copper Lodge

LINE : 53

DATE	6-9-81
MAP NUMBER	
COUNTY	Josephine
STATE	ORE
DATA BY	C MARTZ
DRAWN BY	C MARTZ





# MINING ENTERPRISES EM-16 SURVEY

STA  
L1554

STA  
L1454

STA  
L1354

STA  
L1254

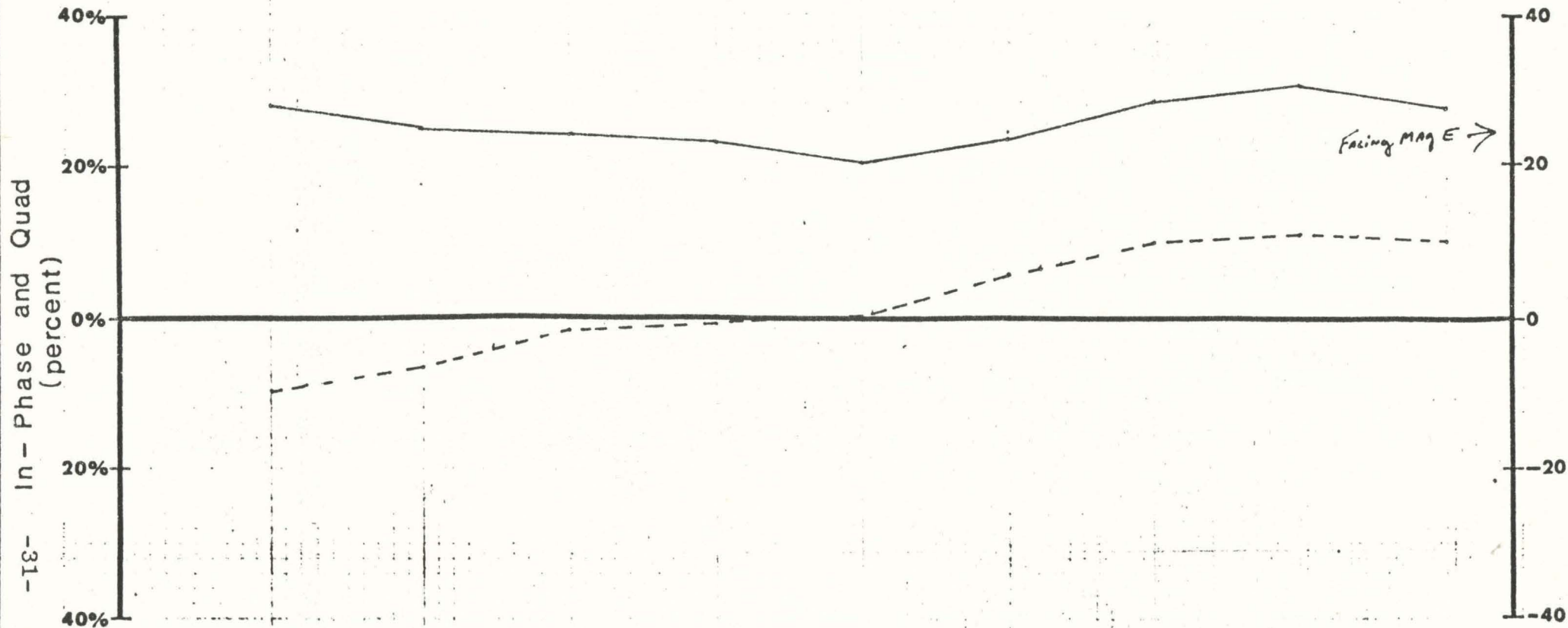
STA  
L1154

STA  
L1054

STA  
L954

STA  
L854

STA  
L754



Station: NGP (18.6 KHz)

IN - PHASE \_\_\_\_\_

QUADRATURE .....  
.....

PROPERTY: Copper Lode

LINE : 54

DATE 6-9-81

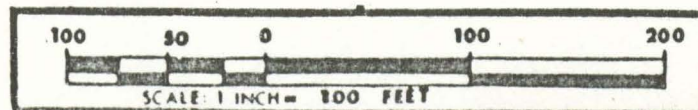
MAP NUMBER

COUNTY JOSEPHINE

STATE ORE

DATA BY C MARTZ

DRAWN BY C MARTZ



# MINING ENTERPRISES

# EM-16 SURVEY

STA  
L754

STA  
L654

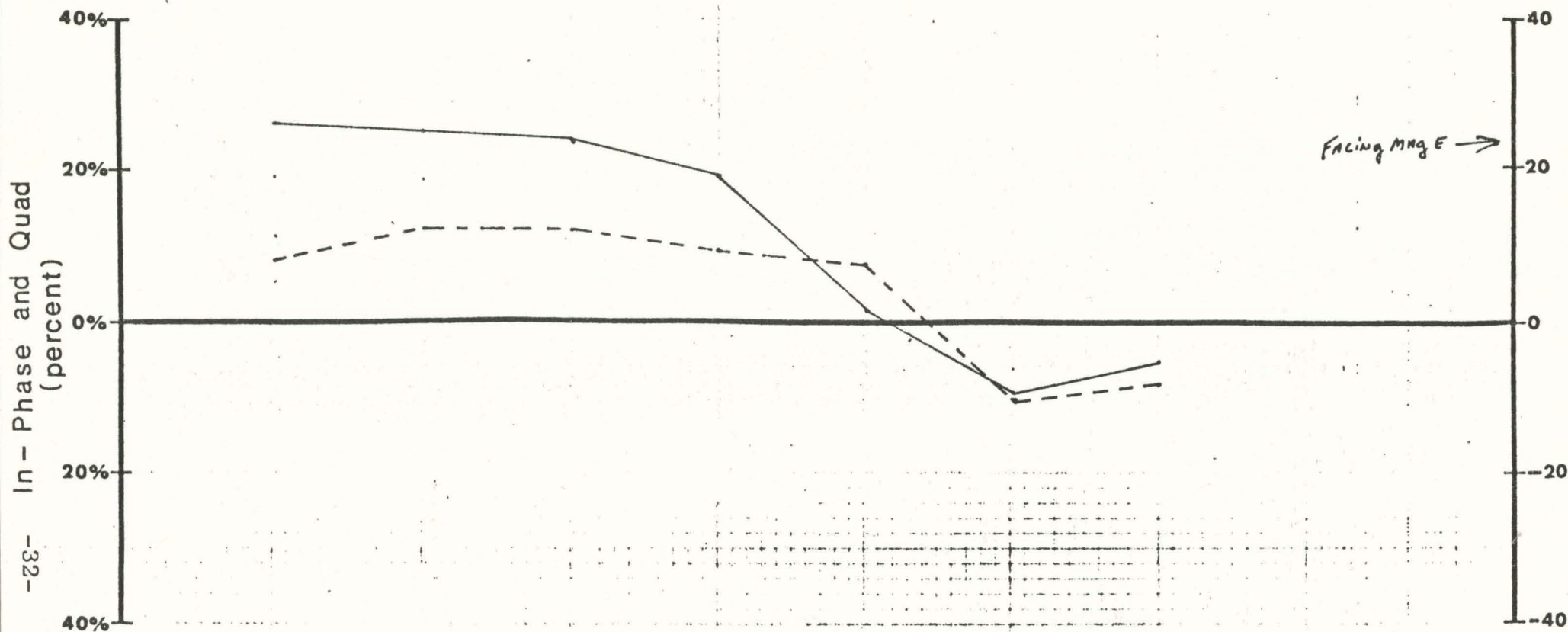
STA  
L554

STA  
L454

STA  
L354

STA  
L254

STA  
L154



FACING MNG E →

Station: NGP (18.6 Khz)

IN - PHASE

QUADRATURE

PROPERTY: COPPER LODE

LINE : 54

DATE	6-9-81
MAP NUMBER	
COUNTY	JOSEPHINE
STATE	ORE
DATA BY	C. MARTZ
DRAWN BY	C. MARTZ

100 80 0 100 200

SCALE: 1 INCH = 100 FEET



## MINING ENTERPRISES

## EM-16 ELECTROMAGNETIC SURVEY

Project: Copper Lake  
Line No: N 4  
Facing: E

Station: JIM CREEK WA.  
FREQ: 1.8.6 KHZ.  
Rx Operator: CORT MARTZ  
Data: CORT MARTZ  
Line Oriented: MAG-N  
Station Spacing feet: 50 FT

[illegible]

## MINING ENTERPRISES

## EM-16 ELECTROMAGNETIC SURVEY

Project: Copper Lake  
Line No: N3  
Facing: MAG-E

Station: Jim CR. WA.  
FREQ: 18.6 KHZ  
Rx Operator: LOTT MARTZ  
Data: CORT MARTZ  
Line Oriented: MAG N  
Station Spacing feet: 500

[illegible]

## NOTES

A little Back ground noise

A LITTLE BACK GROUND NOISE  
A LITTLE BACK GROUND NOISE

ALITTLE BACK Ground Noise  
This sta. in center of Rd To ILL Above THU  
First Switch BACK

THIS STA AT TOP EDGE OF CUT 100 FT LONG N-S  
EXPOSING SEVERAL VEINS SHOWING MALACHITE  
AZURITE COVELLITE + CAPRITE THE VEINS STRIKE  
GENERALLY N-S AT NEAR VERTICAL DIP  
AN VARY FROM 3-12 FT IN WIDTH.



— 35 —

Project: Copper Lake  
Line No: N2  
Facing: MAG E

Station: Jim CR. WA.  
FREQ: 13.6 KHZ  
Rx Operator: Coat MARTZ  
Data: Coat MARTZ  
Line Oriented: MAA N  
Station Spacing feet: 50 Ft

[illegible]



## MINING ENTERPRISES

## EM-16 ELECTROMAGNETIC SURVEY

Project: Copper Lake  
Line No: N1  
Facing: MAG E

Station: JIM CREEK WA  
FREQ: 18.6 KHZ  
Rx Operator: CORT MARTZ  
Data: CORT MARTZ  
Line Oriented: MAG N  
Station Spacing feet: 50 ft

[illegible]

## NOTES

THIS STA AT S. TOP edge OF prospect cut  
THIS STA AT S. TOP edge OF prospect cut  
Showing ~~top~~ malacite Azurite comp. etc.  
THIS STA AT S. edge OF prospect cut running  
E-W AND Rd.

THIS STA 6 FT. BELOW TOP OF WASTE PILE  
OF OVER BURDEN REMOVED FROM RIDGE  
CREST.

-37-

Project: Copper Lake  
Line No: BL  
Facing: MAG E

Station: Jim CR. WA.  
FREQ: 18.6 KHz  
Rx Operator: Cort MARTZ  
Data: Coat MARTZ  
Line Oriented: MAG N  
Station Spacing feet: 50 ft

[illegible]



— 3 —

Project: Copper Code  
Line No: 51  
Facing: MAGE

Station: JIM CR. WA  
FREQ: 18.6 KHz  
Rx Operator: CORT MARTZ  
Data: CORT MARTZ  
Line Oriented: MAG N  
Station Spacing feet: 50 Ft

[illegible]

MINING ENTERPRISES

EM-16 ELECTROMAGNETIC SURVEY

Project: Copper Lake  
Line No: 52  
Facing: MAG E

Station: Jim CR. WASH  
FREQ: 18.6 KHz  
Rx Operator: CORT MARTZ  
Data: CORT MARTZ  
Line Oriented: MAG N  
Station Spacing feet: 50 Ft

[illegible]

\* This sta at <sup>3</sup> edge of Rd at crest of ridge  
This sta on S. side of ridge

THIS STA ON N EDGE OF RD TO FALL CR.  
THIS STA ON S EDGE OF RD TO FALL CR.



## EM-16 ELECTROMAGNETIC SURVEY

Station: JIM G. WA.  
FREQ: 18.6 KHZ  
Rx Operator: CORT MARTZ  
Data: CORT MARTZ  
Line Oriented: MAGN  
Station Spacing feet: 50 FT

[illegible]

-41-

Project: Copper Lode  
Line No: 54  
Facing: MAG E

Station: JIM CREEK  
FREQ: 18.6 KHZ  
Rx Operator: GORT MARTZ  
Data: GORT MARTZ  
Line Oriented: MAG N  
Station Spacing feet: 50 FT

[illegible]





## Western Testing Laboratories

1275 Kleppe Lane, #5  
Sparks, Nevada 89431  
Telephone: (702) 331-3600

### Report of Analysis

Submitted by: Mining Enterprises  
P.O. Box 914  
Arnold, CA 95223  
Attn: Roy Cornelius

Date: May 15, 1981

Laboratory number: 128-3

Analytical method: A.A.

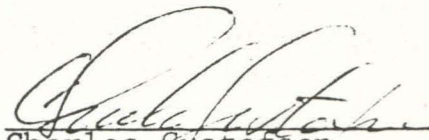
Your order number:

Report on: Cu

Invoice number: C735

---

<u>Sample</u>	<u>Cu (%)</u>
W #1	27.30
W #2	10.30
W #3	0.85
W #4	5.70
W #5	33.40
W #6	1.63
W #7	1.16
W #8	0.43
W #9	1.02
W #10	3.81
W #11	11.00
W #12	3.42
W #13	0.33
W #14	0.60
W #15	13.50
W #16	2.54
W #17	28.10
W #18	3.93
W #19	1.80
W #20	5.06

  
Charles Gustafson  
Laboratory Manager

Note: All Samples Should be Run Electrolytically.

**ppm** = Parts per million  
**Percent** = Parts per hundred  
**1 oz/ton** = 34.286 ppm  
**1.0%** = 20 pounds/ton

**Oz/ton** = Troy ounces per ton of 2000 pounds avoirdupois  
**Fineness** = Parts per thousand  
**1 ppm** = 0.0001% 1 ppm = 0.029167 oz/ton  
Read + as "greater than." Read - as "less than."



# BARRINGER RESOURCES

BARRINGER RESOURCES INC.  
OFFICES & MINERALS  
LABORATORY:  
1455 DEMING WAY, SUITE 15  
SPARKS, NEVADA 89431  
PHONE: (702) 358-1158

AUTHORITY: A. R. CORNELIUS

27/APR/81

PAGE 1 OF 1

WORK ORDER # 152R-81

MINING ENTERPRISES  
P.O. BOX 914  
ARNOLD, CALIFORNIA 95223  
ATTN: A.R. CORNELIUS

\*\*\*FINAL REPORT\*\*\*

## G E O C H E M I C A L L A B O R A T O R Y R E P O R T

SAMPLE TYPE:	ASSAY	ASSAY	
ROCK	FIRE ASSAY	FIRE ASSAY	
	AG	AU	CU
SAMPLE NUMBER	OZ/TON	OZ/TON	PPM
GP			
1S	N D	T	*%22.8
2S	.12	T	*%4.33
3S	N D	.012	*%19.6
4N	I S	I S	*%63.
5N	N D	.084	*%51.3
6N	.14	.016	*%13.

*ave. 29.005 g*

\*P=QUESTIONABLE PRECISION; \*I=INTERFERENCE; \*%=POSTED AS %; T=TRACE; ND=NOT DETECTED; NA=NOT ANALYZED; IS=INSUFFICIENT SAMPLE; MS=MISSING SAMPLE  
COMMENTS:

BY James Lee  
JAMES R. LEE





# BARRINGER RESOURCES

BARRINGER RESOURCES INC.  
OFFICES & MINERALS  
LABORATORY:  
1455 DEMING WAY, SUITE 15  
SPARKS, NEVADA 89431  
PHONE: (702) 358-1158

AUTHORITY: RAY CORNELIUS

15/MAY/81  
PAGE 1 OF 1  
WORK ORDER # 231R-81

MINING ENTERPRISES  
P.O. BOX 914  
ARNOLD, CALIFORNIA 95223

\*\*\*FINAL REPORT\*\*\*

## GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE:  
ROCK

SAMPLE NUMBER	CU
B	%
1	.73
2	37.1
3	3.75
4	2.03
5	14.4
6	3.15
7	4.25
8	11.3
9	1.
10	2.46
11	1.59
12	27.2
13	.12
15	.6
16	6.1

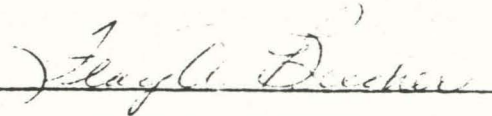
COMMENTS:

BY

  
JAMES R. LEE

Sample No.	ppm Copper
R-1	0.98%
R-2	0.96%
R-3	5.86%
R-4	21.6%
R-5	1.41%
R-6	0.44%
R-7	9.97%
R-8	4.39%
R-9	450
R-10	1.39%
R-11	12.1%
R-12	3.71%
R-13	6.94%
R-14	20.2%
R-15	6.78%
R-16	15.2%
R-17	1.99%

BY



FLOY A. BEECHER



ROCKY MOUNTAIN GEOCHEMICAL CORP.

SALT LAKE CITY, UTAH

RENO, NEVADA

TUCSON, ARIZONA

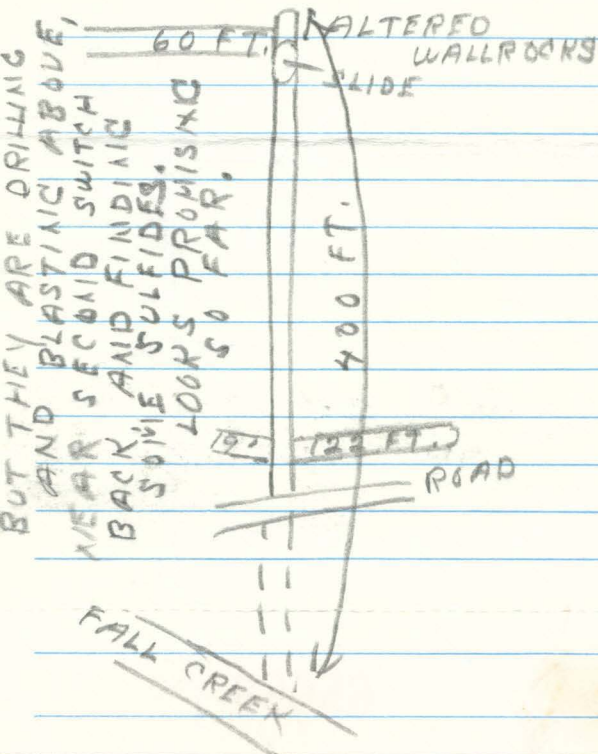


to Leo Ramp -  
Geologist.

- Thank You -

TUNNEL 400' LONG - 200'  
OF CROSSCUTS. NO  
SIGNS OF ANY ORE!

Bud.



# JOSEPHINE COUNTY

## Fall Creek Copper

(United Copper - Gold  
Mines) Sec 4, T38S, R9W

Small bodies of  
massive chalcopyrite and  
pyrrhotite in serpentine  
near a greenstone contact,

→ This property was presented  
to us in July, '75, by  
Bud Cornett who now has  
the claims. Both Ranchers  
Exploration and American  
Sels have turned it down  
because of the  
environmental ~~difficulties~~  
problems



that would arise if any  
attempt were made to  
establish a mining  
operation along this  
portion of the Illinois  
River, ~~about~~ (see  
attached correspondence).

No interest (or very little)  
~~has~~ due to adverse  
environmental considerations

Not in Bull. 61.

In addition, part of the  
area claimed by Cornett has  
~~been~~ apparently has been  
withdrawn from mineral  
entries.

# FALL CREEK COPPER MINE

## Josephine County, Oregon

\*\*\*\*\*

### LOCATION:

The Fall Creek Copper Mine is situated on Fall Creek at the base of Copper Mountain, twenty-eight miles southeast of Grants Pass, Oregon.

The location is in Sec. 4, R.9 W., Ts 37 N.

The property is reached over the main Redwood Highway from Grant's Pass to Selma, a distance of 12 miles, thence for a distance of sixteen miles over a good dirt road which is kept up by the Forestry Service and is now in use for hauling chrome ore from the extensive chrome deposits in the vicinity of the copper property.

### AREA:

The Fall Creek property consists of 11 unpatented claims, each a full claim of twenty acres, 600' X 1500' and comprising a total of 120 acres.

The claims are as follows:

Fall Creek Claim No. 1	(Evidentially 5 claims were located and added after this report was made)
Fall Creek Claim No. 2	
Fall Creek Claim No. 3	
Fall Creek Claim No. 4	
Fall Creek Claim No. 5	
Fall Creek Claim No. 6	

The claims extend on both sides of Fall Creek and up and over the slopes of Copper Mountain.

### TITLES:

The claims are not patented but are held by right of location and all assessment work has been properly done and the Proof of Labor properly recorded. These location notices are recorded in the office of the County Recorder at Grant's Pass, Oregon-the County Seat of Josephine County and are open for inspection at any time and these have been verified by the writer.

### HISTORY:

The copper ores of this locality have attracted attention for many years. Early in the sixties of the last century a small furnace was located on the south of Anchroite Creek and a small furnace was built on Fall Creek in 1894 and the matte was packed out thirty miles across the mountains to the coast. Owing to difficulties of transportation it is stated that it was not a commercial success and the price of copper was much lower than it is at present.

In 1899 several hundred tons of ore were packed out to Selma and shipped to Grant's Pass and thence on to the smelter of the Americam Smelting & Refining Company at Tacoma, Washington, where it was smelted at a good profit. The mine has been idle for several years until the present owners acquired it and since then considerable development has been done, all by tunnel and approximately all in ore.



## GEOLOGY:

The veins of this property are contact veins lying between Greenstone and Serpentine. The Greenstone is an ancient volcanic mass, a mixture of lava flows and tuffs of the mesozoic age and are greatly altered. The fragmental character, though not a permanent feature, may be clearly see in close examination of the clean ore exposure near the mouth of Fall Creek where the rock is made up of many lapilli.

The Serpentine is an altered Saxonite, evidently of a later eruption than the Greenstone with which it is in contact.

## ORE AND VALUES:

The ore minerals are Chalcopyrite and Pyrrhotite generally more or less inter-mingled and either may be most abundant. Malachite is rare. In some places the Pyrrhotite appears in small streaks in the Chalcopyrite. The ores formerly produced were in the Serpentine near the contact with the Greenstone. It is possible that some ore occurs in the Greenstone but the greater portion appears to belong to the Serpentine.

From records of numerous assays formerly taken it is determined that the average value of the ore is approximately 18% copper.

A dark gossan stained with copper carbonate is underlaid by ore at about fifteen feet in depth carrying the average copper value and about \$4.00 in gold with a fraction of an ounce in silver.

Based on numerous samples, the assay certificates are not available at this time but which are considered authentic, the average value in copper is approximately 18% although there were many higher than that. In addition there is about \$4.00 in gold.

Various samples taken by the writer were segregated into two composite samples which were sent for analysis to the smelters of the American Smelting and Refining Company. at Salt Lake City and to Tacoma, Washington respectively. The results of these samples are used as a basis of the calculation of averages of copper values and of the final results shown later in this report.

The results of these samples are as follows:

American Smelting & Refining Company., Salt Lake City plant:

Gold	0.11	oz.
Silver	0.40	oz.
Copper	9.87%	

American Smelting & Refining Company., Tacoma, Washington

Gold	0.17	oz.
Silver	1.11	oz.
Lead	None	
Copper	10.87%	
Arsenic	0.39%	
Antimony	None	
Silica	2.60%	
Iron	43.60%	
Lime	1.10%	
Sulphur	31.10%	
Alumina	0.50%	



The high iron and sulphur content is noticeable and is an important factor in obtaining a low smelting charge.

It will be noted that the two samples sent to the smelters checked very close as to copper and gold content. These were composite samples.

It has been determined that the sample taken from the lower level of No. 1 Tunnel is of better grade than any samples taken at upper levels which would indicate that the deeper ores are of a better grade.

#### DEVELOPMENT:

The development of this property is almost entirely by tunnel, there being a total of approximately over 1000 feet in the various tunnels, all of which is in ore. This tunnel development assures a minimum of ore production cost.

Fall Creek flows between No. 1 and No. 3 tunnels. No. 3 tunnel is about 30 feet from the creek and No. 1 is about 100 feet.

No. 1 tunnel is in approximately 125 feet from the portal and a 5 foot vein of high grade ore is exposed and extends down to what is known as the old 40 foot level and the ore continues on from that level for a distance of 55 feet.

Ore is showing in the face of this old 40 foot level and the extent of this ore shoot has not been determined.

No. 3 tunnel is in approximately 500 feet and cuts numerous veins of heavy sulphide ore. This tunnel was driven principally for exploration purposes but it is reported that 1000 tons of ore are exposed in the workings and ready for extraction. This tunnel was inaccessible when this examination was made.

The tunnels are not all on one claim but wherever work has been done on any of the claims the same character of ore has been found and all of commercial grade. The tonnage so far indicated will be greatly increased by additional development according to all indications, for all the veins are very strong and persistent.

Tunnel No. 1-- Driven for a distance of 125 feet with an inclined winze at a point 75' from the portal and extending down for 40'. From the bottom of this winze a drift has been run for a distance of 55' into the mountain, all in ore. Projected development of this tunnel for a distance of 420' will reach a point approximately 600' vertical distance below the apex of the mountain, thereby giving a large amount of stoping ground.

Tunnel No. 2-- Driven into the mountain for a distance of 40' and has a vertical depth of about 40'.

Tunnel No. 3-- Extends for a distance of 500' on the opposite side of Fall Creek from No. 1 Tunnel. At a point 125' from the portal a crosscut was driven N\*E for 170' and another crosscut S-W for 40'.

Tunnel No. 4---Driven for a distance of 20' at a point 125' below No. 2 Tunnel and is all in ore.

Tunnel No. 5---Extends for a distance of 60' in ore and approximately 125' below the apex of the mountain.



In addition to the above there are numerous open cuts and short tunnels driven to show the ore and expose its continuity.

The total development consists of the following:

No. 1 Tunnel	125 feet.
No. 1 Winze	40 "
No. 1 Lower Drift	66 "
No. 3 Tunnel	500 "
No. 3 Crosscut N-E	170 "
No. 3 " " " S-W	40 "
No. 4 Tunnel	16 "
No. 5 Tunnel	60 "
No. 6 Tunnel	40 "

1057 Feet

EQUIPMENT  
&  
IMPROVEMENTS

There are no equipment nor improvements on the property at this time.

The equipment required for successful operation of this mine consists of the usual mining equipment required in the practical and extensive operation of a property of this character.

The principal equipment that is required is a compressor, Jackhammers, pipelines for air and water, steel, ore bunkers, track, cars and miscellaneous small items along tool lines, a small amount of road building is required which can easily be accomplished with a bull-dozer. Also small cabins and camp accommodations for the workmen, mess house and combination office and living quarters. Ore hauling to the railroad will be done by contract which can easily be arranged for. THE FACT THAT ALL THE ORE PRODUCED FROM THIS PROPERTY IS OF SHIPPING GRADE ELIMINATES THE NECESSITY FOR AN EXPENSIVE MILL OR REDUCTION WORKS AND THE CONSEQUENT COST OF SUCH AN OPERATION.

WATER AND  
TIMBER

There is an all year flow of water in Fall Creek sufficient for all camp and mining requirements as well as for water power if desired. There is also an abundance of timber for mining and other purposes.

ESTIMATED  
TONNAGE

The block of ground from the bottom of the winze in No. 1 tunnel located on No. 1 claim and up to No. 5 tunnel, located on No. 5 claim is estimated at approximately 10,000 tons of proven ore.

This is of the same character and grade as the ore exposed in Tunnels No. 3, 4, and 5 which are short tunnels and the vertical distance from No. 1 to No. 5 tunnel is estimated at about 600'.

No. 3 tunnel has a reported 1000 tons of ore available. Various other workings and ore exposures may safely be estimated at another 1000 tons. It must be remembered that this is a very heavy sulphide ore running only about eight cubic feet per ton.

It must be understood that the above tonnage is not actually blocked out on 4 sides, but is proven and probable ore shown in various ore exposures over a considerable lateral distance and can be measured up at various points and can be depended upon to give approximately the tonnage reported.



Since the above estimate was made as shown and stated in the former report a revised estimate of the available tonnage based on a more recent calculation shows approximately 16,400 tons. There is an additional estimated probable tonnage of 15,000.

The above indicated tonnage is only a limited portion of that which may eventually be developed in the Fall Creek property.

#### PRODUCTION COSTS

The cost of production of copper ore from this property as indicated in the following conservative estimate.

Mining (including supervision)	\$5.00	per ton
Truck transportation to railroad	3.23	" "
Railroad transportation to Smelter	6.59	" "
( This is a maximum charge and based on ore valuation of \$100.00 per ton or more.		
Lower rates are applied to lower grade ores)		
Smelter charges	\$4.50	
Fixed charges, taxes, insurance	.60	

Total costs \$19.90

A certain amount of open pit mining will be done with bull-dozer and power shovel and this will materially reduce mining costs in that area, as long as that type of mining can be done.

Not over six men will be required at the beginning of operations and those will be used on preliminary work which must be conducted prior to actual production of ore. It is estimated that about 6 weeks will be required to install machinery and establish the camp and prepare to mine for actual breaking of ore.

When the above is accomplished then the work will be devoted to ore production and to development ahead of production which must be done in order to keep ore reserves always ahead of current requirements. At that time the force will not need to exceed twelve men and at that time there should be an output of from 250 to 350 tons per week to be gradually increased as conditions warrant.

Eventually sinking on the ore body below No. 1 tunnel will be prosecuted and at that point the largest ore body is now exposed and where the highest grade of ore has been found. Ore production will commence immediately upon the completion of the installation of the equipment and machinery necessary for the operation and the completion of camp accommodations.

ALL THE ORE PRODUCED WILL BE OF SHIPPING GRADE to the smelters of the American Smelting and Refining Company at Tacoma, Wash.

Estimated cost of machinery and equipment is approximately \$12,000.00 Estimated payroll for first 60 days is \$6000.00 which includes supervision and all fixed expenses, such as taxes, insurance etc.

Therefore an operating capital of \$25,000.00 should be made available when operations are started and this should easily provide for any unforeseen emergencies.

However, ore shipments should be made within the first ten or twelve weeks and returns from such shipments be received within the next ten days thereafter. Therefore at that time it is conservatively estimated that the property should be on a self supporting and profitable basis and the original investment provided should not be entirely exhausted.



RECOMMENDATIONS:

It is recommended that the ground be prepared at once for open pit mining in the area designated as such indicated on claim No. 2. There is practically no overburden to remove.

At the same time recondition No. 3 tunnel for extracting the 1000 tons of ore known to be available in this working and at the same time continue development of ore reserves in these workings.

It is recommended that sinking be continued on the ore body showing in No. 1 tunnel and also continue to drift at that point to furnish the stoping ground indicated which would give several hundred feet of backs.

There are numerous other ore exposures to be developed whenever conditions warrant doing so.

Respectfully submitted

(Signed) E. H. Crabtree, Sr

Sonora, California  
December 1, 1950

Copied by C. H. Tuller, Assayer-Chemist  
1336 York St Denver 80206  
Engineer Crabtree--was well known



STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
1069 State Office Building - Portland, Oregon 97201REQUEST FOR SAMPLE INFORMATION

The State law governing free analysis of samples sent to State Assay Laboratories requires that certain information be furnished the laboratory regarding samples sent for assay or identification. A copy of the law will be found on the back of this blank. Please fill in the information requested completely, and submit it along with your sample. Keep a copy of the information on each sample for your own reference.

Date sample is sent:

9/22/70

Robert Cornett

P.O. Box 291

Grants Pass, Oregon 97526

Name of claim sampled:

Fall Creek Copper

Please print your name and address in space above

Name of property owners Robert CornettAre you hiring labor? No Are you milling or shipping ore? No

Location of property or source of sample. (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining district Illinois RiverTownship 38 S Range 9 W Section 4 Quarter sectionHow far from passable road and name of road 1 mile Illinois River Rd.Channel (length) Grab Assay for DescriptionSample No. 1 x Au, Ag, Cu

Sample No. 2

(Samples for assay should be at least 1 lb. in weight; clay samples for ceramic testing at least 5 lbs.) IMPORTANT: A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) Robert Cornett

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description Mixture of pyrite, chalcopryrite, limonite, and malachite.

Sample Number	GOLD		SILVER		Copper Cu			
	oz./T.	Value	oz./T.	Value				
AEG-213 P-35457	0.34	-----	0.30	-----	32.30%	-----	-----	-----
	-----	-----	-----	-----	-----	-----	-----	-----

Report mailed 10/7/70



RECORD IDENTIFICATION

RECORD NO..... M060587  
 RECORD TYPE..... X1M  
 COUNTRY/ORGANIZATION. USGS  
 DEPOSIT NO..... DDGMI 100-279  
 MAP CODE NO. OF REC..

REPORTER

NAME..... JOHNSON, MAUREEN G.  
 UPDATED..... 81 04  
 BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION

DEPOSIT NAME..... FALL CREEK COPPER  
 SYNONYM NAME..... UNITED COPPER

COUNTRY CODE..... US  
 COUNTRY NAME: UNITED STATES

STATE CODE..... OR  
 STATE NAME: OREGON

COUNTY..... JOSEPHINE  
 DRAINAGE AREA..... 17100311 PACIFIC NORTHWEST  
 PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS  
 LAND CLASSIFICATION..... 41

QUAD SCALE QUAD NO OR NAME  
 1: 62500 PEARSOLL PEAK

LATITUDE LONGITUDE  
 42-17-44N 123-46-03W

UTM NORTHING UTM EASTING UTM ZONE NO  
 4682676.0 436734.5 +10

TWP..... 38S  
 RANGE..... 09W  
 SECTION.. 04

LOCATION COMMENTS: MOSTLY WITHIN A WILD AND SCENIC RIVER CORRIDOR

COMMODITY INFORMATION

COMMODITIES PRESENT..... CU AG AU

PRODUCER(PAST OR PRESENT):  
 MAJOR PRODUCTS.. CJ

ORE MATERIALS (MINERALS, ROCKS, ETC.):  
CHALCOPYRITE, PYRRHOTITE, MALACHITE

ANALYTICAL DATA (GENERAL)

HIGH GRADE SAMPLE ASSAYED 0.16 OZ/TON AU; 0.25 OZ/TON AG; 0.80 % ZN; 0.31 % NI; 23.0 % CU

EXPLORATION AND DEVELOPMENT

STATUS OF EXPLOR. OR DEV. 4

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:

MASSIVE SULFIDE

FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA

SIZE OF DEPOSIT..... SMALL  
MAX LENGTH..... 600 FT  
MAX WIDTH..... 12 FT  
STRIKE OF OREBODY.... N10-15W  
DIP OF OREBODY..... 70E-70W

COMMENTS (DESCRIPTION OF DEPOSIT):

THREE MINERALIZED ZONES

DESCRIPTION OF WORKINGS

SURFACE AND UNDERGROUND

COMMENTS (DESCRIP. OF WORKINGS):

ABOUT 1000 FEET OF DEVELOPMENT WORK IN TWO TUNNELS.

PRODUCTION

YES

SMALL PRODUCTION

ANNUAL PRODUCTION (ORE, COMMOD., CONC., OVERBURD.)

ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE, REMARKS
1 ORE	EST	0000.400	TONS	1899	
2 ORE	EST	0000.025	TONS	1956	18 % CU

CUMULATIVE PRODUCTION (ORE, COMMOD., CONC., OVERBUR.)

ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE, REMARKS
15 ORE	EST	0000.425	TONS	1899, 1956	
23 CU, OCCUR					CU



## RESERVES AND POTENTIAL RESOURCES

ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE OR	USE
1 ORE	EST	0145.000	TONS	1973	1.8 %	CU

## GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS.....	JUR
HOST ROCK TYPES.....	GREENSTONE AND SERPENTINE
IGNEOUS ROCK TYPES.....	SERPENTINE

## LOCAL GEOLOGY

SIGNIFICANT ALTERATION:  
GOSSAN, TRACE OF NI FOUND

## COMMENTS (GEOLOGY AND MINERALOGY):

MASSIVE SULFIDES, MOSTLY CHALCOPYRITE AND PYRRHOTITE, OCCUR AS LENSES IN GREENSTONE AND SERPENTINE.

## GENERAL REFERENCES

- 1) RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100 45P
- 2) CLOSE, T., AND RAMP, L., 1973, MINERAL RESOURCES OF THE ILLINOIS RIVER BASIN, OREGON; USBM UNPUBLISHED REPORT
- 3) OREGON METAL MINES HANDBOOK, 1942, ODGMI BULL. 14-C, VOL. 2, SEC. 1, P.148

## FALL CREEK COPPER MINE REOPENED

The Fall Creek Mining Company, Inc., has leased the United Copper Gold Mines Co. property from J. A. Phillips of Grants Pass. The new company was formed by Morris Herman, Max Frohwirth, and Leon Lutz, all of New York. Earl White of Grants Pass is the general manager.

The mine is located in sec. 4, T. 38 S., R. 9 W., on Fall Creek in Josephine County. Metavolcanics of the Galice formation of Upper Jurassic age and serpentine comprise the country rock. The ore is chalcopryrite and pyrrhotite with some silver and gold. Phillips reports assays as high as 24 percent copper and averaging about 15 to 20 percent. The earliest work reported at the property was in 1894 when a small smelter was built. Several years later, ore was hauled to Selma by mules, then shipped to Grants Pass and Tacoma.

The new company has built offices, a camp,  $2\frac{1}{4}$  miles of road, and a low-water bridge across the Illinois River. Exploration and mining programs are now being carried on. To date, two drifts have been opened and one 20-ton lens of chalcopryrite extracted. The company expects to clean out about a thousand feet of old workings and begin a diamond drilling program soon. It also plans to build a mill on the mine property and ship concentrates to the Tacoma smelter.

\*\*\*\*\*

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\*\*\*\*\*



## OWNERS OF VALID CLAIMS CAN PROTECT SURFACE RIGHTS

The date of the first public advertisement (Notice to Mining Claimants) on land determinations is the official date after which the surface rights of the claim may be contested by the Forest Service or the Bureau of Land Management. If a claim is proved invalid, the management of the surface resources comes under the jurisdiction of the Government agencies, according to Public Law 167 (see Ore.-Bin, August 1955 and April 1956). The only way a mining claimant can hope to protect his rights to the surface resources on his property is to file with the Bureau of Land Management a verified statement (a statement under oath) setting forth certain facts about his claim. Failure to file such a statement within 150 days of the first notice shall:

1. Be considered conclusive evidence that the mining claim owner waives and relinquishes any right, title, or interest under such mining claim as regards the surface rights.
2. Constitute a consent by the mining claimant that the mining claim shall be subject to the limitations and restrictions of Public Law 167.
3. Precludes thereafter any assertion of such mining claimant of any right, title, or interest in the mining claim contrary to or in conflict with Public Law 167.

After the mining claimant files a verified statement with the Bureau of Land Management, a mineral examiner will be sent to the mining claim to determine whether the claim should be recognized as valid. If the claim is found to be clearly valid and effective, the owner of the mine may conduct his operation as if Public Law 167 had never been passed. If, on the other hand, the Government doubts the validity of the mining claim, a hearing will be arranged by the Department of the Interior to be held in the county where the claims are located, unless the mining claimant agrees otherwise. The hearing will determine whether the mining claim is valid and effective or invalid and ineffective. Claims declared invalid and ineffective will have their surface subject to management and disposition by the Government bureaus.

\* \* \* \* \*

## FREE FORMS AVAILABLE FOR MINING CLAIMANTS

The Department is distributing free of charge two forms (Nos. 3 and 4) to assist persons owning mining claims on public lands investigated by the Forest Service or the Bureau of Land Management under Public Law 167. The two forms apply only to unpatented mining claims located before July 23, 1955.

Form No. 4 is a request by the mining claimant for a copy of the Government's notice that land determinations have been made in the area where his claims are located. In order to be sure of receiving the Government bureau's "Notice to Mining Claimants," Form No. 4 should be filed with the County Recorder in the county where the mining claim or claims are located.

Form No. 3 is a verified statement by the mining claimant who wishes to keep the surface rights to his claim the same as before passage of Public Law 167. Form No. 3 is filed in response to the Government bureau's published "Notice to Mining Claimants" that land determinations are to be made. The Notice is published in a newspaper having general circulation in the county in which lands involved are located. If in a daily paper, the Notice will appear in the Wednesday issue and every Wednesday thereafter for nine weeks; if in a weekly paper, the Notice will appear



in nine consecutive issues; if in a semiweekly or a triweekly paper, the Notice will be in the issue of the same day of each week for nine consecutive weeks. Form No. 3 must be filed with the Bureau of Land Management, Department of the Interior, 1001 N.E. Lloyd Blvd., Portland 8, Oregon, within 150 days from the date of the first advertisement of the Notice. Anyone who fails to file a verified statement automatically forfeits to the Government the right to manage the surface resources of his claim.

\* \* \* \* \*

### SOUTHWEST OREGON MINING NEWS

A 46-ton pod of massive chromite ore measuring 6 by 8 by 10 feet was recently taken out of the Lucky Hunch chromite mine by the owners, Fred Langley and C. W. Dean of Grants Pass. This pod is reported to be the largest chunk of chrome ore ever mined out in one piece in Oregon. Another large pod lies immediately south of the 46-ton pod, and other smaller ones are known to be present. Returns from the first shipment of ore to the Grants Pass depot in October averaged nearly 45 percent  $\text{Cr}_2\text{O}_3$ . The discovery was made a few months ago as the result of excavation by bulldozer of an area where massive chromite float had been found. The owners are enlarging the open cut and have built about 350 yards of road to the cut. The property is located in the SE $\frac{1}{4}$  sec. 33, T. 37 S., R. 9 W., in Josephine County, about 10 miles down the Illinois River from Selma.

\* \* \* \* \*

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\* \* \* \* \*

### NORTHWEST CERAMIC INDUSTRY AND RESOURCES REVIEWED

"Ceramic industry development and raw-material resources of Oregon, Washington, Idaho, and Montana," by H. J. Kelly and others, has been published by the U.S. Bureau of Mines as Information Circular 7752.

The publication summarizes the present ceramic industries and raw-material resources for each of the four States, and is intended as a guide to future development of the industry in the light of an increasing market for ceramic products and availability of natural gas to a large portion of the Northwest. The report reviews the sources of clay, feldspar, expanding shales, and other ceramic as well as refractory materials by counties for each State. Included are illustrations and index maps showing location of deposits and ceramic plants.

Information Circular 7752 is available free of charge from: Publications Distribution Section, U.S. Bureau of Mines, 4800 Forbes Street, Pittsburgh, 13, Pennsylvania.

\* \* \* \* \*

### RECORD ON ROGUE RIVER WITHDRAWALS STILL OPEN

A public hearing was held November 20 in Grants Pass on the proposed withdrawal of 23,000 acres of public land along the Rogue River from mineral entry. In addition to oral testimony from 18 witnesses, about 20 written statements were entered on the record. Mr. Virgil T. Heath, State Supervisor of the BLM, conducted the hearing and announced that the record would remain open until December 6 for additional written statements. Testimony should be sent to State Supervisor, Bureau of Land Management, 1001 N.E. Lloyd Blvd., P.O. Box 3861, Portland 8, Oregon.

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STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
Head Office: 1069 State Office Bldg., Portland 1, Oregon  
Telephone: CApitol 6-2161, Ext. 488

Field Offices

2033 First Street  
Baker

239 S.E. "H" Street  
Grants Pass

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DOMESTIC MINERAL POLICIES PROPOSED

Spokesmen representing all phases of western mining met November 7 and 8 in Sacramento, California. Their purpose was to formulate mineral policy recommendations that would insure a domestic mining industry sufficient to meet the needs of the United States in the event foreign supplies of minerals were cut off. The conference, called by Governor Goodwin Knight of California after consulting with Governor Charles Russell of Nevada, had as its nucleus members of the Western Governors Mining Advisory Council.

After a general session the meeting was divided into sections on mineral economics, taxation, lands and water, research, and public information. The mineral economic section was further divided into the following committees: antimony, chrome, lead - zinc - silver, copper, gold, manganese, molybdenum, quicksilver, tungsten, uranium - vanadium, rare earths - thorium, aggregates - clay - talc, asbestos, cement, coal, phosphates, potash, and fluorspar. From the discussions in the committees the mining men worked out policy recommendations considered as the most likely to maintain the nation's mineral security.

Among the recommendations of the conference committee on mineral economics was 15- to 100-percent tariffs on most minerals imported to this country. An alternative to protective tariffs was modest increases with the tariff revenues to be turned over to domestic miners. The recommendation for gold was to the effect that legislation be passed to allow direct sale of gold from producer to consumer at a "free market" price.

In the report from the group on taxation were recommendations that new mines be exempt from income taxes for three years after commercial production begins and that costs of exploration and development be allowed as a deduction without present limitations.

The committee on lands and water expressed confidence in the general mining laws and opposed further Federal withdrawal of lands from the public domain.

The committee on research recommended the organization of permanent minerals research advisory boards at State and Federal levels and establishment of a definite Federal mineral policy so that private industry might carry on long-range research programs.

After a general session the committees' recommendations were turned over to the Western Governors Mining Advisory Council. The council members who met the following day were to consider the recommendations and to report to their governors. In this way it was hoped the western states would be in accord on mineral policy. With this backing a national mineral policy could be defined that might allow the nation some comfort, at least mineral-wise, in this time of continuing international stress.



The enthusiasm with which the Sacramento meeting was received by the western mining industry was attested by the nearly 700 people who attended. The importance with which the governors of the eleven western states, South Dakota, and Alaska considered it was shown by the 51 delegates and 38 technical advisers appointed by them to represent their states. The governors of California, Nevada, Utah, Idaho, Wyoming, and the Lieutenant Governor of Colorado attended the meetings and took active parts. Oregon's delegation appointed by Governor Paul Patterson was: Mason L. Bingham, Fay W. Libbey, and Hollis Dole, Portland; Niel Allen (Chairman of the Council delegation) and Fay I. Bristol, Grants Pass; Austin Dunn and Anthony Brandenthaler, Baker; Earl S. Mollard, Riddle; and D. Ford McCormick, Medford. Fay Bristol was Co-Chairman of the Chrome Committee. A. O. Bartell, Portland, was a technical adviser.

The ability of the group to resolve their many and oftentimes diverse approaches to the problems and to arrive at recommendations was due in large part to the excellent organization given the meetings by Co-Chairmen S. H. Williston of Cordero Mining Company, and Dewitt Nelson, Director of the California Department of Natural Resources.

H.M.D.

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#### FALL CREEK COPPER MINE REOPENED

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#### SQUAW BASIN COAL EXPLORED

Roy Rannells, Jim Carrol, and A. A. Robins, all of Riddle, Oregon, are exploring a 7-foot coal seam in the south end of Eden Ridge, T. 33 S., R. 11 W., Coos County. This is the first significant exploration that has been carried out in the Eden Ridge and Squaw Basin fields since a period of active prospecting between 1907 and 1912.

According to Rannells, the coal is suitable for coking. The bed dips 5 to 8 degrees and is believed to be on a small synclinal structure. A 400-foot drift has been driven, and reserves appear to be fairly extensive.

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# State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland, Oregon

## FALL CREEK COPPER

Illinois River Area

UNITED COPPER GOLD MINES COMPANY

OWNERS (1971) Robert Cornett and Paul Cougle, Grants Pass, Or.

Location: Section 4, T 38 S., R 9 W.

History: Parks and Swartley (Handbook of the Mining Industry of Oregon: Oregon Bureau of Mines and Geology Mineral Resources of Oregon. Vol. 2, No. 4., 1916) reported as follows:

"Office: Room 4 Murphy Block, Salem, Oregon. W. S. Low, Pres.; Daniel Webster, Sec.; C. E. Lebold, Treas.; all of Salem, Oregon. Capital stock, \$500,000; par value, \$1.00; \$219,654 subscribed, issued and paid up. (1916 report).

"This company owned property on Pickett Creek near Merlin which has been sold. It now owns 12 claims in Illinois District about 12 miles northwest of Selma, on Fall Creek, one-half mile above its junction with the Illinois, at an elevation of about 1400 feet.

"The copper ore of this locality has attracted attention many years. Early in the sixties of the last century a small smelting furnace was located at the mouth of Rancherie Creek. The matte was packed out about 30 miles across the mountains to the coast. Another small furnace was built on Fall Creek in 1894, but was not a commercial success, owing to the difficulties of transportation. In 1899, several hundred tons of ore was packed out to Selma, hauled to Grants Pass and shipped to Tacoma, where it is said to have been smelted at a profit. The mine has now been idle for several years.

"The geology is described by Diller as follows:

"The country rocks of the deposit are greenstone and serpentine. The greenstone is an ancient volcanic mass, a mixture of lava flows and tuffs of Mesozoic age that are greatly altered. Its fragmental character, though not a prominent feature, may be clearly seen on close examination of the clean exposure near the mouth of Fall Creek, where the rock is made up of many lapilli. The serpentine is an altered saxonite, evidently of later eruption than the greenstone with which it is in contact.

"The ore minerals are chalcopyrite and pyrrhotite, generally more or less intermingled, and either may be most abundant. Malachite is rare. In some places the pyrrhotite appears as small streaks in the chalcopyrite. The ore bodies removed were in the serpentine near its contact with the greenstone. It is possible that some ore occurred in the



greenstone, but the greater portion, if not all of it, appears to belong to the serpentine. The ore bodies were comparatively small and were in irregular bunches, not in distinct veins. The pyrrhotite was tested for nickel by R. C. Wells in the chemical laboratory of the Geological Survey. A mere trace of nickel was found, possibly 0.001 per cent.

"The following statement is made by the management: There is 1000 feet of development work, including a 500-foot tunnel, and a 200-foot crosscut, exposing 1000 tons of ore. A dark gossan sometimes stained with copper is underlain at 15 feet in depth by ore carrying 18 per cent copper and 5 to 10 ounces silver and upwards of \$1.00 in gold."



UNITED COPPER GOLD MINES COMPANY

Illinois River Area

Location: sec. 4, T. 38 S., R. 9 W.

OWNERS (1971) Bob Cornett & Paul Cogle

History: Parks and Swartley reported as follows:

"Office: Room 4 Murphy Block, Salem, Oregon. W. S. Low, Pres.; Daniel Webster, Sec.; C. E. Lebold, Treas.; all of Salem, Oregon. Capital stock, \$500,000; par value, \$1.00; \$219,654 subscribed, issued and paid up. (1916 report)

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(continued page 149 - Josephine Co. Handbook)

average several dollars a ton, the source of the gold is difficult to trace. Some of the gold, however, appears to be in the slates, whose bronze slickensides are due to shearing movements after the deposition of the ore.

"Some distance up Lightning gulch Eugene McPherson has a mine tunnel 200 feet in length that follows the contact between greenstone and banded quartzite. The greenstone is greatly altered and the contact is very irregular. A small quantity of rich telluride ore is reported to have been stoped from this tunnel. I was unable to obtain a sample of the ore at the mine, but a small fragment was given me by Mr. Bowden, who assured me that it came from the McPherson tunnel. Mr. Bowden also gave me a sample from his own prospect farther northwest, on Lightning gulch. Both samples reacted strongly for the tellurium, giving a decided purple solution when boiled in concentrated sulphuric acid."

Reference: Diller, 14: 69-70 (quoted)

Parks and Swartley 16:238

#### YOUNG PLACERS

Illinois River area

(also see Elkhorn Placer, adjoining)

Owners: E. E. Young and Ovid V. Johnson, Grants Pass, Oregon

Location: On Briggs Creek 40 miles by road SW. of Grants Pass in secs 7 and 18, T. 36 S., R. 9 W. Elevation, 2050 feet.

General: Property located May 13, 1929 by present owners, is in litigation. Three test pits indicate 10 to 15¢ per yard. No production; no equipment. A 2-mile ditch from Dutchy Creek has been built.

Informant: J. E. Morrison, 39



STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon

1069 State Office Building  
Portland 1, Oregon

239 S.E. "H" Street  
Grants Pass, Oregon

## REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full J. A. Phillips

Street or P.O. Box 312 SW "I" St. City & State Grants Pass, Oregon

Are you a citizen of Oregon? Yes Date on which sample is sent 8/5/53

Name (or names) of owners of the property Phillips

Are you hiring labor? No Are you milling or shipping ore? No

Name of claim sample obtained from Fall Creek Copper

Location of property or source of sample (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining District Illinois River

Township 38 S Range 9 W Section 4 Quarter section NE

How far from passable road? 1 mile Name of road Rancherie Creek Rd.

Channel (length) Grab Assay for Description

Sample no. 1 x Au, Ag, Co, Cu, Ni from 6-A tunnel

Sample no. 2 (Samples for assay should be at least 1 pound in weight)

(Signed) J. A. Phillips

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Sample Description Massive sulphides, largely pyrrhotite with minor chalcopyrite and calcite stringers.

Sample number	GOLD		SILVER		COBALT	COPPER	NICKEL	
	oz./T.	Value	oz./T.	Value	Co	Cu	Ni	
P-14961 NG-284	0.16	\$5.60	Nil	- -	0.10%	1.70%	0.20%	- - -

Report issued Card filed Report mailed 8/14/53 Called for

Samples from Fall Creek Copper Co., Sec. 4, T. 38 S., R. 9 W.  
STATE DEPT. OF GEOLOGY & MINERAL INDUSTRIES -- ASSAYER: L. L. HOAGLAND

SAMPLE NUMBER	SUBMITTED BY	DATE	GOLD Au oz./T	SILVER Ag oz./T	COBALT Co %	COPPER Cu %	IRON Fe %	NICKEL Ni %	SULPHUR S %	ZINC Zn %
DG -- 43	Earl White	2/5/43	0.04	Tr	----	4.84	----	----	----	----
DG -- 44	Earl White	"	0.08	0.2	----	10.6	----	----	----	----
DG - 139	J. B. Isgrig	6/2/43	0.02	1.0	----	21.3	----	0.3	----	----
DG - 140	J. B. Isgrig	"	0.02	1.1	----	1.3	----	Tr	----	----
IG -- 54	H. D. Wolfe (DOGAMI)	3/9/48	0.10	Tr	----	0.41	----	0.15	----	----
IG -- 55	H. D. Wolfe	"	0.10	0.50	----	19.90	----	----	----	----
IG - 261	Geo. Wilhelm	Oct. 1948	0.07	Tr	Nil	9.30	----	0.05	----	----
JG -- 34	A. W. Johns	2/21/49	0.12	----	----	20.70	----	----	----	0.20
MG-- 170	J. A. Phillips	5/8/52	0.08	Tr	----	16.80	42.60	----	----	----
NG - 252	J. A. Phillips	7/14/53	0.10	----	----	18.20	43.57	----	18.50	----
NG - 284	J. A. Phillips	8/5/53.	0.16	Nil	0.10	1.70	----	0.20	----	----



## STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon1069 State Office Building  
Portland 1, Oregon239 S.E. "H" Street  
Grants Pass, Oregon

## REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full J. B. IsgrigStreet or P.O. Box Rt. 1 Box 352 City & State Grants Pass, OregonAre you a citizen of Oregon? Yes Date on which sample is sent 6/2/43Name (or names) of owners of the property Earl White & Ferguson

Are you hiring labor? \_\_\_\_\_ Are you milling or shipping ore? \_\_\_\_\_

Name of claim sample obtained from \_\_\_\_\_

Location of property or source of sample (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining District Illinois RiverTownship 38 S Range 9 W Section 4 Quarter section \_\_\_\_\_How far from passable road? 1½ miles Name of road \_\_\_\_\_

Channel (length)	Grab	Assay for	Description
Sample no. 1 <u>54" channel</u>		<u>Au, Ag, Cu, Ni</u>	<u>in #1 tunnel</u>
Sample no. 2 <u>Chip from 10' zone</u>			<u>in #6 tunnel.</u>

(Samples for assay should be at least 1 pound in weight)

(Signed) J. B. Isgrig

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Sample Description \_\_\_\_\_

Sample number	GOLD		SILVER		COPPER	NICKEL		
	oz./T.	Value	oz./T.	Value	Cu	Ni		
DG-139	0.02	\$0.70	1.0	\$0.71	21.3%	0.3%	- - -	- - -
DG-140	0.02	\$0.70	1.1	0.78	1.3%	Trace	- - -	- - -

Report issued \_\_\_\_\_ Card filed \_\_\_\_\_ Report mailed \_\_\_\_\_ Called for \_\_\_\_\_

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon

1069 State Office Building  
Portland 1, Oregon

239 S.E. "H" Street  
Grants Pass, Oregon

## REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full J. A. Phillips

Street or P.O. Box 312 SW "I" St. City & State Grants Pass, Oregon

Are you a citizen of Oregon? Yes Date on which sample is sent 7/14/53

Name (or names) of owners of the property Same

Are you hiring labor? No Are you milling or shipping ore? No

Name of claim sample obtained from Fall Creek Copper #1

Location of property or source of sample (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining District Illinois River

Township 38 S Range 9 W Section 4 Quarter section

How far from passable road? 11 miles down river Name of road from Selma

Channel (length) Grab Assay for Description

Sample no. 1  Au, Cu, Fe, S chip sample

Sample no. 2

(Samples for assay should be at least 1 pound in weight)

(Signed) J. A. Phillips

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Sample Description Massive sulphide--largely chalcopyrite.

Sample number	GOLD		SILVER		COPPER	IRON	SULPHUR	
	oz./T.	Value	oz./T.	Value	Cu	Fe	S	
P-14807 NG-252	0.10	\$3.50	- - -	- -	18.20%	43.57%	18.50%	- - -

Report issued  Card filed  Report mailed 7/27/53 Called for



STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon

1069 State Office Building  
Portland 1, Oregon

239 S.E. "H" Street  
Grants Pass, Oregon

## REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full J. A. Phillips

Street or P.O. Box 312 SW "I" St. City & State Grants Pass, Oregon

Are you a citizen of Oregon? Yes Date on which sample is sent 5/8/52

Name (or names) of owners of the property Earl White

Are you hiring labor?                      Are you milling or shipping ore?                     

Name of claim sample obtained from Fall Creek Copper

Location of property or source of sample (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining District Illinois River

Township 38 S Range 9 W Section 4 Quarter section                     

How far from passable road? 1/4 mile Name of road Chrome Road

Channel (length) Grab Assay for Description

Sample no. 1                      x Au, Ag, Cu, Fe massive sulfides

Sample no. 2                     

(Samples for assay should be at least 1 pound in weight)

(Signed) J. A. Phillips

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Sample Description Massive sulfides--largely chalcopyrite and pyrrhotite.

Sample number	GOLD		SILVER		COPPER	IRON		
	oz./T.	Value	oz./T.	Value	Cu	Fe		
P-12723	0.08	\$2.80	Trace	- -	16.80%	42.60%	- - -	- - -
MG-170								

Report issued                      Card filed                      Report mailed 5/23/52 Called for

## STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon1069 State Office Building  
Portland 1, Oregon239 S.E. "H" Street  
Grants Pass, Oregon

## REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full Geo. WilhelmStreet or P.O. Box Wardrobe Cleaners City & State CityAre you a citizen of Oregon?            Date on which sample is sent October 1948Name (or names) of owners of the property Earl WhiteAre you hiring labor?            Are you milling or shipping ore?           Name of claim sample obtained from           

Location of property or source of sample (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining District Illinois RiverTownship 38 S Range 9 W Section 4 Quarter section           How far from passable road? 1 mile Name of road Selma-Oak Flat Rd.

Channel (length)	Grab	Assay for	Description
Sample no. 1 <u>10'</u>		<u>Au, Ag, Co, Cu, Ni</u>	
Sample no. 2 <u>          </u>			

(Samples for assay should be at least 1 pound in weight)

(Signed) W. D. Bowser

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Sample Description           

Sample number	GOLD		SILVER		COBALT	COPPER	NICKEL	
	oz./T.	Value	oz./T.	Value	Co	Cu	Ni	
P-8021 IG-261	0.07		Trace		Nil	9.30%	0.05%	- - -

Report issued 11-3-48 Card filed            Report mailed            Called for



STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon

1069 State Office Building  
Portland 1, Oregon

239 S.E. "H" Street  
Grants Pass, Oregon

## REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full Earl White

Street or P.O. Box \_\_\_\_\_ City & State Kerby, Oregon

Are you a citizen of Oregon? Yes Date on which sample is sent 2/5/43

Name (or names) of owners of the property Ferguson & White

Are you hiring labor? \_\_\_\_\_ Are you milling or shipping ore? \_\_\_\_\_

Name of claim sample obtained from Fall Creek Copper Mines

Location of property or source of sample (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining District Illinois River

Township 38 S Range 9 W Section 4 Quarter section \_\_\_\_\_

How far from passable road? 1 1/2 miles Name of road \_\_\_\_\_

Channel (length) Grab Assay for Description

Sample no. 1 chip Au, Ag, Cu

Sample no. 2 \_\_\_\_\_

(Samples for assay should be at least 1 pound in weight)

(Signed) Earl White

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Sample Description 4 or 5 lb. samples of massive chalcopryite ore. 1 to 3 inch pieces.

Sample number	GOLD		SILVER		COPPER		
	oz./T.	Value	oz./T.	Value	Cu		
DG - 43	0.04		Trace		4.84%		
DG - 44	0.08		0.2		10.6%		

Report issued \_\_\_\_\_ Card filed \_\_\_\_\_ Report mailed \_\_\_\_\_ Called for \_\_\_\_\_



STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

2033 First Street  
Baker, Oregon

1069 State Office Building  
Portland 1, Oregon

239 S.E. "H" Street  
Grants Pass, Oregon

## REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full H. D. Wolfe (DOGAMI)

Street or P.O. Box P.O. Box 417 City & State Grants Pass, Oregon

Are you a citizen of Oregon? Yes Date on which sample is sent 3/9/48

Name (or names) of owners of the property Roy Ferguson & Earl White

Are you hiring labor?                      Are you milling or shipping ore?                     

Name of claim sample obtained from Fall Creek Copper Mine  
Jan. - 1943

Location of property or source of sample (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining District Illinois River

Township 38 S Range 9 W Section 4 Quarter section                     

How far from passable road? 1 mile Name of road                     

Channel (length) Grab Assay for Description

Sample no. 1                      x Au, Ag, Cu, Ni

Sample no. 2                      x Au, Ag, Cu

(Samples for assay should be at least 1 pound in weight)

(Signed) H. D. Wolfe

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Sample Description #1 - Grab sample of pyrrhotite from dump outside caved tunnel - East side  
of Fall Creek. #2 - Grab sample of chalcopyrite from dump of main tunnel--West side of Fall C

Sample number	GOLD		SILVER		COPPER	NICKEL		
	oz./T.	Value	oz./T.	Value	Cu	Ni		
P-7028 IG-54	0.10		Trace	- -	0.41%	0.15%	- - -	- - -
P-7029 IG-55	0.10		0.50		19.90%	- - -	- - -	- - -

Report issued 3/23/48 Card filed                      Report mailed                      Called for



## MINERAL RESOURCES OF THE ILLINOIS RIVER BASIN, OREGON

by

Terry Close, U. S. Bureau of Mines

and

Len Ramp, Oregon State Department of Geology &amp; Mineral Industries

## Fall Creek Copper Prospect

The Fall Creek copper prospect (fig. 1, No. 119) is on Fall Creek, approximately one-half mile by trail from the confluence of Fall Creek with the Illinois River. Access from Selma, Oregon is by the Illinois River road westerly 12 miles to Rancherie Creek and then by trail three-fourths mile to the property. An alternate route of access is to ford the Illinois River about three-fourths mile upstream from the confluence of Fall Creek, using a rough jeep road maintained by the claim owners.

The Fall Creek prospect was first located and a small smelting furnace built at the mouth of Rancherie Creek in 1863. Another furnace was built on Fall Creek in 1894. Neither furnace was a commercial success. In 1899, 400 tons of ore was shipped to Tacoma, Washington and was said to have been smelted at a profit (16, p. 148). In 1956, 25 tons of ore, averaging 18 percent copper, was shipped from the property.

The workings on the property consist of a number of open cuts, a shallow shaft, three caved and one open adit.

The country rock consists of sheared and altered serpentinite, bounded on the east by serpentized peridotite and on the west by greenstone. The serpentinite is cut by the Fall Creek shear zone which trends within a few degrees of north. Along the shear zone, the serpentinite is bleached, and is cut by 1- to 4-inch thick chrysotile stringers. It is also cut by predominantly north trending, faulted, pinching and swelling mineralized shear zones composed of gougey wallrock, pyrrhotite, chalcopyrite, and chalcocite. The mineralized shear zones are occupied by vuggy, earthy to jasperoidal, limonite, hematite, malachite, and azurite-bearing gossan at the surface. The mineralized shear zones pinch out in a short distance, or are faulted, and are difficult to trace. There are at least four near-parallel mineralized shear zones on the property.

The No. 1 mineralized shear zone is exposed over a horizontal distance of approximately 600 feet. The shear zone trends N 10° to 15° W, dips 70° SW to 70° NE, and is 5 to 12 feet wide. It is composed of 80 percent bleached, brecciated, gougey serpentinite and talc with 20 percent hematite, limonite, pyrrhotite, and malachite. Massive chalcopyrite was observed in the stream channel of Fall Creek along the trend of the shear zone.



The No. 2 mineralized shear zone is exposed over a horizontal distance of 440 feet. The shear zone trends N 5° W, dips vertically, and is 6 feet wide. It is composed of 80 percent gouge brecciated serpentinite, and 20 percent pyrrhotite, chalcocite, hematite, limonite, malachite, and azurite. The shear zone has a sharp contact with the serpentinite wallrock.

A third mineralized shear zone is exposed by very intermittent outcrops between the first two. It is estimated to be 5 feet wide, trend N 15° E, and dip 30° SE. It is composed of about 95 percent brecciated, gouge, serpentinite, talc, and 5 percent hematite, limonite, azurite, and malachite. A small shear exposure 350 feet to the south may be part of the same zone.

A weighted average of seven samples from the three shear zones is 1.8 percent copper and traces of gold and silver. About 145,000 tons of resources averaging 1.8 percent copper can be inferred from surface exposures. High-grade zones in underground workings sampled in 1952, contained up to 23 percent copper, 0.16 ounce gold per ton, 0.25 ounce silver per ton, 0.8 percent zinc, and 0.31 percent nickel.

The deposits would have to be mined by small scale underground methods. They appear to be too small, low-grade, and remote for current technology and economics.

Approximately 1,100 feet south from the main workings, along the continuation of the Fall Creek shear zone, is an open adit on a small mineralized shear zone. The small shear zone is approximately perpendicular to the Fall Creek zone and other mineralized shear zones. It trends S 80° W, dips 66° SE, and is 4 to 18 inches wide. Iron-oxide and malachite staining extend for up to 8 feet into the serpentinite wallrock on either side of the shear.

The shear zone is composed of 88 percent brecciated serpentinite, and 12 percent hematite, limonite, pyrrhotite, chalcopyrite, and malachite.

Mineralized shears and shear zones outcrop within the major Fall Creek shear zone across a width of about 630 feet and a length of about 1,700 feet. Possibly the mineralized shears persist along the Fall Creek zone to the south and to the north and at depth.



STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
1069 State Office Building - Portland, Oregon 97201

REQUEST FOR SAMPLE INFORMATION

The State law governing free analysis of samples sent to State Assay Laboratories requires that certain information be furnished the laboratory regarding samples sent for assay or identification. A copy of the law will be found on the back of this blank. Please fill in the information requested completely, and submit it along with your sample. Keep a copy of the information on each sample for your own reference.

Date sample is sent:

Len Ramp

2/26/70

P.O. Box 417

Grants Pass, Oregon 97526

Name of claim sampled:

Fall Creek Copper

Please print your name and address in space above

Name of property owners Robert Cornett

Are you hiring labor?                      Are you milling or shipping ore?                     

Location of property or source of sample. (If legal description is not known, give location with reference to known geographical point.)

County Josephine Mining district Illinois River

Township 38 S Range 9 W Section 4 Quarter section N1

How far from passable road and name of road 1 mile - Illinois River Rd.

Channel (length) Grab Assay for Description

Sample No. 1 x Cu from ore pile of about 1 ton

Sample No. 2                                                               

(Samples for assay should be at least 1 lb. in weight; clay samples for ceramic testing at least 5 lbs.) IMPORTANT: A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) Len Ramp

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description Chalcocite with some malachite, limonite, chalcopyrite, pyrrhotite & serpentinite.

Sample Number	GOLD		SILVER		COPPER			
	oz./T.	Value	oz./T.	Value	Cu			
P-34521	- -	- -	- -	- -	54.10%	- -	- -	- -
AEG-29								

Report mailed 3-4-70





# SHASTA ANALYTICAL GEOCHEMISTRY LABORATORY

1240 Redwood Boulevard, Redding, California 96003 (916) 244-4441

**Date:** August 26, 1981

**Date Received:** 8/7/81

**Client:** Robert Corbett  
Box 291  
Grants Pass, Oregon 97502

**Samples Analyzed For:** Au and Ag

**Client Order No:** 000331

**Analytical Methods:** Fire Assay

**Number of Samples:** 3

**Remarks:** Results in oz/ton

**Samples Submitted By:** Mail

<u>Sample #</u>	<u>Au</u>	<u>Ag</u>
#1 Fall Creek	0.761	ND
#2 Gossan	0.009	ND
#3 Quartz	0.005	ND

*> Curry Co.*

**BY:**

*[Signature]*  
BRUCE KNOWLTON  
FIRE ASSAYER

**BY:**

JOANNE DANIELSON  
ANALYTICAL GEOCHEMIST

**VERIFIED:**

*[Signature]*  
PATRICIA COOKSLEY  
LABORATORY MANAGER

ND: No Detection

MS: Missing Sample

1 Troy oz/ton : 34.286 ppm

NA: Not Analyzed

IS: Insufficient Sample

1ppm: 0.0292 Troy oz/ton

This analytical report is the confidential property of the above mentioned client and for the protection of this client and ourselves, we reserve the right to forbid publication or reproduction of this report or any part thereof without written permission.