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9-10-14

J. J. Durek
Oakland, California

September 21, 1972

John E. Kinnison
Tucson, Arizona

JEK
File
Blue

Edwards Copper Prospect,
Pima (Twin Buttes) Mining
District, Pima County, Arizona

SUMMARY AND RECOMMENDATIONS

The subject property, which lies midway between the Twin Buttes and the Mission-Pima mines, was originally suggested to this company by J. David Lowell. The federal mining claims which George Edwards holds cover in part an area which is along a path of fault movement which separates the originally continuous Twin Buttes-Pima ore bodies. Lowell had proposed that we search for a mineralized fault slice.

The legal aspect of the property is engulfed by problems whose actual seriousness is unappraised at this time. Our original contact was with Rodney DeVilliars, but it now appears that George Edwards holds title. The Edwards ground is both enclosed by and also crossed by Anaconda claims. Recognition must be given to the probability that any ore on Edwards' land will probably extend on to Anaconda land.

As you know, I was reluctant to propose action on a "fault slice target." However, the geologic merit has now been reappraised, based on information which I have obtained on the Dynamite claims owned by Vernon Smith, and other nearby drill holes. Ore-grade copper mineralization in tactite has been encountered by drilling on the Dynamite claims. These new data, together with weak mineralization in some old Bear Creek holes south of the Dynamite group, and a suggested northerly continuation through a closely drilled Anaconda area in the south half of section 19, indicate that mineralization is widespread. The area is almost certainly a separate copper center in the district, and this new center has been only partly explored. Mineralization so far as known occurs in tactite, and lies wholly in the footwall of the San Xavier fault. The mineralized rocks are covered by a thick sequence of tilted, Middle Tertiary conglomerate which forms the hanging wall of the fault.

The legal aspects take precedent, and should you concur that this area is worthy of exploration by KEM, arrangements should be made for an attorney to appraise the legal entanglements which now exist, and the possible effect on Edwards' property status. From a purely technical standpoint, I feel that the ground held by Edwards has considerable merit, and recommend that KEM follow with positive action.

GEOLOGIC DESCRIPTION

Attachment A is a generalized geologic map of the Edwards area, and also shows partial claim outlines and drill holes. You will note that the Edwards claims lie north of the Paleozoic limestone section which forms Twin Buttes. A thin layer of alluvium covers the entire prospect area.

If you so desire I can document the evidence on which the existence, age, and direction of movement of the fault is based. For the purpose of this report, I will assume that we can agree to the proposal that the fault is real, and that it is post-mineral. Since our interest is now directed to the footwall of the fault, the direction of movement is immaterial. There is some uncertainty concerning normal faults which may somewhat modify the position of the San Xavier fault, but these are not crucial to present the analysis. The fault generally dips northward or northeastward in this general area, as shown by Attachment B, which conforms to general dip based on district-wide mapping. The hanging wall in the Edwards area is composed of the Tertiary Helmet fanglomerate.

The district from Twin Buttes to Pima is shown in cross section by Att. C. Based on drill hole data, it now appears reasonably certain that a new and separate center of mineralization is present beneath the low-dipping San Xavier fault, in the area between the Twin Buttes and Pima-Mission ore bodies. This new mineral zone should have major dimensions, similar to Twin Buttes or Mission-Pima.

Assay data which are available for drill holes on the Dynamite group (Vernon Smith) indicate that erratic sections vary from about 0.5 to more than 2% copper. Some of the old Bear Creek holes to the southeast of Smith's ground intersect very minor zones of ore-grade copper in tactite. Although geology is not directly available for the drill holes on the Dynamite claims, data obtained indirectly from Kenyon Richard indicate that mineralization lies entirely beneath the San Xavier fault, and that it occurs in tactite. Some of the holes may have intersected porphyry or granite in their lower portions. The drill holes shown on the Anaconda ground (Att. A) were located by a graduate student employed by Kenyon Richard. The student was evidently chased off by Anaconda guards on several occasions, and the belief is that there are actually more holes than shown. Based on those which <u>are</u> plotted, however, it is reasonable to guess that Anaconda would not have drilled that many holes, spaced relatively close together, without intersecting significant copper mineralization.

If the tactite mineralization beneath the San Xavier fault is similar to the Mission-Pima zone--and it should be--the chalcopyrite will have a spotty distribution. Mineralization on Edwards' ground will certainly be too deep for open pit mining, and thus we are looking at a block cave target. By shovel sorting at Mission and selectively removing waste areas, the grade in the early years was held between .7 and 1.0% copper. The best part of that deposit is represented by the eastern end of the Mission ore body, which if mined unselectively by block caving would not average over .6% copper. It would seem, therefore, that a tactite objective by itself would not be enticing at the depths which would be encountered on the Edwards property. By projection and inference, however, this new copper center probably includes an intrusive porphyry, as well as Laramide or pre-Cambrian granite. Mesozoic arkose and other clastic sediments may also be present. The intrusive rocks could occur

anywhere laterally to the north or northeast, or at depth. Jurassic-Cretaceous clastics may occur in sequence above the Paleozoic, to the north. Mineralization would be expected to be more uniform in these more homogeneous host rocks. The target, then, is a primary chalcopyrite ore deposit, largely in intrusive rocks or Mesozoic clastics.

In order to test the Edwards ground, it will be necessary to drill at least two and probably three preliminary holes. Depending on the actual thickness of Helmet fanglomerate above the San Xavier fault, and the distance beneath the fault which would be cored, the cost of these three holes could range from $70,000 to $120,000.

The most discouraging aspect of the new copper center is the grade requirement of block-cave ore. Although large tonnages of Argillite with primary chalcopyrite grade .5% Cu at Mission-Pima, very little exceeds .6%. The porphyry at Mission grades .15% Cu, and at Twin Buttes about .2 - .25% Cu. However, alteration is typical of the potassic zone, and it is permissible, I believe, to hope that this new copper center might be somewhat richer than Mission.

LEGAL ASPECTS

The mining claims held by George Edwards will require a thorough title search. Edwards has relocated these claims so many times that there is obviously a potential threat that any of his past partners might make a claim to the ground. The ground has been previously optioned to others, including Rodney DeVilliars, who might also attempt to lay claim to the property. The most recent claims were filed by Edwards on September 1 of last year, on the basis of abandonment by all previous claimants.

Litigation now is pending between Edwards--plaintiff, and the Anaconda Company--defendant, under a conflict of claims in section 20. This litigation is being handled by a Tucson attorney, Paul Reese. Edwards will not discuss the legal aspect with me, but he offers to have Reese openly discuss the matter with a Kaiser representative. As I have verbally suggested, it would be unwise for me to discuss the matter with Reese, as I probably would not appreciate the possible ramifications of the litigation. This initial step (legal inquiry) should be handled by Dennis Day or someone selected by him to act on our behalf.

I cannot say precisely what kind of agreement George Edwards wants, as he prefers not to haggle over this matter until we can state with some degree of reassurance that KEM will not back off because of the exisitng legal problems. So far as I can ascertain, however, he is not looking for front money, but rather for a drilling commitment.

The Vernon Smith Dynamite claims may be available, and I will initiate inquiry if we plan to take further action. Also, consideration might be given to contacting Anaconda on an executive level, to determine their position and interest.

EDWARDS

EDWARDS

SAN XAVIER – TWIN BUTTES HIGHWAY

13|18
24|19

ANACONDA

EDWARDS

18|17
19|20

O A 443 1500'TD - Thf

EDWARDS

Devilliars 1610' Thf

O A 444 1526'TD Thf

T30 1008'

T4 835' (P)

ANACONDA

690-23-1.64
908-11-3.01
763-107-0.88
1130-6-2.42
1379-51-0.70
1465-32-1.05

Edwards 1009' Thf

SAHUARITA ROAD

ANACONDA

Probable W. & S. Limits of mineralization

24|19
25|30

T66 461'

1078-65-1.86
1306-7-0.78

A278

A279 925-43-1.23
1186-17-0.63
1339-40-0.48
1401-43-0.60
1471-12-0.59

A280

927-14-0.70
1287-7-1.45
1365-20-0.74

A345

0-600 Thf
-1308 Ls
-1330 gr
Flt

T22 1330'

A9170 – Lean

A374 374-27-1.07
450-19-3.31
465-46-1.40

A10190

A10190

A337

T48 910'

0-400 Thf
-880 Ls
-910 gr
Flt

T34 705'

T32 741'

SMITH

QMz+TAc 455-401-0.76

QMz+Ls (Tac?) 702-98-0.70

A357

A391

T47 1094'

T69 1164'

T68 977m

T48 1010'

Thf

Thf - 30° dip

A418

SAN XAVIER FAULT

INFERRED NORMAL FAULTS

T50

No Ore QMz+Ls?

T67 1126

T45 564'

4'-.77

T70 910'

Ls
329-5-5.18

T6 753'

Ls, No Cu

OUTCROP

Pal Ls

OUTCROP

Lgr

Pal Ls

OUTCROP

Pal Ls

OUTCROP

T49 No Ore

T71 276'

Pretty siliceous Ls
No ore

T24

30|29
31|32

31|30
36|31

TWIN BUTTES

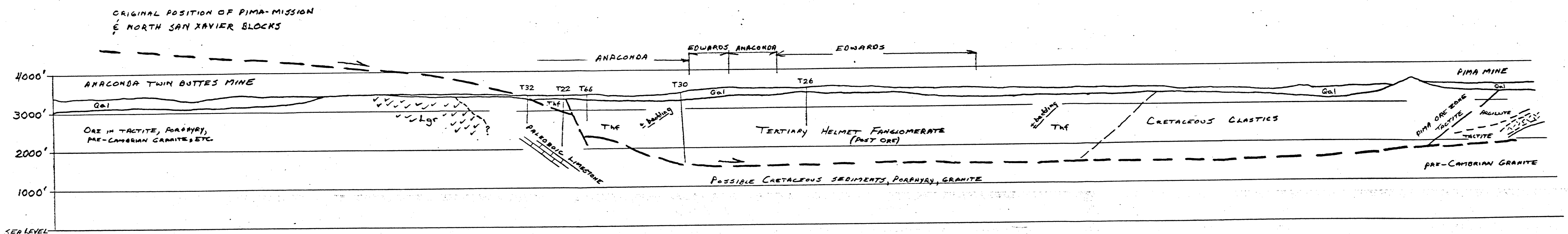
● "EARLY" DRILL HOLES

⊙ "NEW" DRILL HOLES

KAISER
EXPLORATION & MINING COMPANY

EDWARDS PROPERTY
TWIN BUTTES AREA

SCALE 1" ≈ 1000' BY: DATE REVISED TO: DWG. NO.



SCALE: 1" = 2000'

EDWARDS PROSPECT

TWIN BUTTES – PIMA DISTRICT

ARIZONA

JEK Copy
Received from Ga Edwards
Sept 72

January 15, 1969

This is a copy of original, with addresses omitted, and reference to Jay Fuller omitted (see cover)

Edwards Claims
Twin Buttes Area
Pima District, Arizona

Dear Sir:

The maps and sections which I displayed and described during your December exploration meeting accompany this report. The sections have been reduced in scale.

The structural uncertainties which I commented upon in my letter of August 22 are now fairly well resolved. It seems reasonably certain that a new and separate center of mineralization exists beneath the flat, post-mineral San Xavier fault in the area between the Twin Buttes and Pima-Mission ore bodies. This new zone should have major dimensions.

Since the last meeting the locations of a surprising number of additional drillholes have been determined. These are labelled as "new" drillholes on the accompanying 500-scale map. Most of these were drilled by Anaconda within the past 3 years.

Both the pattern and the number of Anaconda drillholes are informative, even though we do not have their results. I would judge they have not drilled enough holes either to have measured or delimited an ore body. The inference, however, is clear that they have obtained ore-grade intercepts in practically all drillholes in the south half of section 19. There is no other reasonable explanation for that many drillholes with that pattern.

The major ore bodies in the district vary from one to over two miles in length. Assuming that Anaconda 's "inferred" new ore body will have a similar size, there is good reason to expect that substantial portions of it will be found on the Edwards claims to the N. as well as to the NE. of the presently known cluster of holes.

Since it is anticipated that ore occurs only beneath the San Xavier fault, depths to the top of any ore within the claims E. of the Twin Buttes highway should range within 500' to 2000'. The implication in this is, of course, that any ore body found would be susceptible only to underground cave mining.

The data at hand for some of the older drillholes consist only of a few assay-averages. But those geologic logs which I do have indicate that for 500' or so below the San Xavier fault the mineralization occurs in tactite (mineralized Paleozoic limestone) and Tertiary porphyry. Some intercepts of mineralized igneous rock probably are Precambrian granite. It is to be expected that any ore in the Edwards claims will occur in tactite for the first few hundred feet below the fault. At greater depths all mineralization should be in granite and porphyry; and, most importanly, mineralization should continue more-or-less indefinitely in depth.

If the tactite mineralization beneath the San Xavier fault is like that in the Mission-Pima zone, and it should be, the chalcopyrite will have spotty distribution. An ore body of that type actually consists of a large number of small lenses of better-grade ore separated by about equal tonnages of waste. By selective

shovel mining the production grades at Mission in tactite (half the ore is in lower grade argillite) are maintained at .7 to 1.0 Cu. This same mass of rock would have a production grade of about .6 Cu by cave mining, and that is what we would by looking for with the proposed drillholes.

If, as expected, mineralization continues in depth into the porphyry and granite zone, the copper there should be distributed more uniformly than in tactite.

Briefly, there is a moderately good chance to find a large tonnage, low grade, cave-mining ore body on the subject property east of the highway.

Anaconda probably has enough deep underground-mining ore both at Twin Buttes and in this inferred "new" ore body of theirs to last practically indefinitely without need for any additional ore on the Edwards property. There is no reason for acquisition of this property in order to wait for Anaconda to require it.

Three drillholes shown on the 500-scale map are proposed as a worthwhile, minimum, preliminary exploration program to test the Edwards claims. Estimated drillhole depths are as follows:

	Depth to Fault	Total Depth if Unmineralized	Total Depth if Mineralized
1	900	1300	1900
2	1400	1800	2400
3	2000	2400	3000
			7300

The holes should be drilled by rotary through alluvium and Helmet fanglomerate until the fault is crossed. Spot core-runs without casing should be made at 100' intervals beginning about 300' above the expected depths to the fault. Rotary cuttings will have to be observed continuously. Casing should be set as soon as the fault has been penetrated. Thereafter, drilling should be by wire-line coring with emphasis on core recovery. The contract should specify a stiff penalty for each core-run below 60% recovery and, in effect, a good bonus for more than 80% recovery. This point is made here because poor core recovery can result in an uncertainty of .2, up or down, in the average Cu percentage. That degree of uncertainty would wipe out the usefulness of an entire drillhole. The contractor can be informed that rock drilling conditions should be similar to those of the Mission zone and also, I would think, of the Twin Buttes zone.

The entire cost of this preliminary program, including drilling contract, sample handling, logging and supervision, should approximate $120,000.

If any one of these holes gives indication of ore grade and thickness, an "ore body measurement" program then would cost from $2 to 4 million.

The property boundaries and ownership shown on the 500-scale map have not been checked. They were derived only from material handed to me by Edwards.

Anaconda has not drilled for several months in the area east of the Twin Buttes-San Xavier highway, but during that time they

have drilled at least a couple of holes, and probably more, to the west of the highway. This westerly area involves the Continental Mine in the area of drillholes T31, T52, etc. on the 500-scale map. This was a recent commercial fiasco. The property is now owned by Anaconda. The point is, the Continental zone (mineralized but not an ore body) can be accounted for only by selecting one of several structural interpretations, all of which are quite awkward. I have always considered that this mineralized block was in the hangingwall of the San Xavier fault. Possibly a better interpretation now is that some mineralized areas exist beneath the fault, and Anaconda has been investigating leads of that kind with their latest drillholes.

After trying without success to spot Anaconda's "new" drillholes from the air, I hired Vern DeRuyter, a graduate U. of A. geology student with a built-in excuse for climbing fences into Anaconda ground: "just looking for a thesis area." Surprisingly, Anaconda security guards chased DeRuyter around and made quite an effort to learn who he was really working for. So, I stopped the work before he had checked the area west of the Twin Buttes-San Xavier highway.

The thing about all this is that Anaconda's activity west of the highway is probably more than just claim assessment work, and the Edwards claims in that area may have more value than I had formerly thought.

Although it is hardly necessary, I would like to emphasize

that the information on section A-A' should not be allowed to get outside of your organization.

Yours very truly,

Kenyon Richard

Atts:

One Plan Map 1" = 500'

One Plan Map 1" = 1 mile

One Section 1" = 2000'

One Sheet of 4 sections 1" = 2000'

Edwards Cer

Dick Metzler drilled for DeVilliers
to ± 1400 (that depth as quoted by me). No Data
in Edwards hands. - actually he thinks, 1600 ft
Bottomed in "transition zone" - did not
hear of "Anaconda Rock"

Sec 19 - about middle 17 S 13 E

DeVilliers has all data ——
Edwards has none left.

Bear Creek Gravity on Record Aero Mag

Dick Weaver - Vernon Smith revealed
Ore Estimated

Reese must handle legal
Smith's question mining law

J. E. K.

AUG 16 1972

Telephone Talk with Geo Edwards

Geo Edwards private (Carlsbad)
tel no. 297-3842

J. J. Durek
Oakland, California

May 16, 1972

John E. Kinnison
Tucson, Arizona

T. F. O'Neill
File
Blue

Edwards Copper, Pima Mine District, Pima County, Arizona

I have just discussed the subject property over the telephone with Mr. Jay Fuller, the man I had mentioned earlier as my contact with Edwards. The following points resulted:

1. Fuller states that Victor Verity, Edwards' attorney, states that Rodney DeVilliers has no hold on the claims and that they still legally stand firm under Edwards' ownership. Of course, this still does not rule out future litigation. Casual inspection of the ground, which evidences much restaking during the past years leaves open numerous possibilities for litigation.

2. Edwards is playing a "hard-to-get" game. I do not have his address, and his telephone is unlisted. All remarks have been and will be filtered through Fuller, who will take his own cut out of any deal. The message relayed by Fuller is that Edwards has seen lot of talking and no action during the past years and wants to know if we are truly interested in the property. After my brief meeting with Edwards a few years ago when I reviewed the property for Asarco, I admit that this attitude would be in keeping with his personality.

3. I stated our position as follows: The property has been brought to our attention, although not by DeVilliers, and that I have been asked to evaluate its potential if possible. It is, therefore, my intention and desire to review such data as are available on the property. This includes some nearby drill holes done some years ago by Anaconda, and also the possibility of obtaining some information on the Dynamite group owned by Mr. Vernon Smith. This latter property adjoins the Edwards' group on the south and has been reported by two different sources to contain an indicated reserve of 36,000,000 tons, which grades 0.6% Cu. I do not believe this tonnage, and certainly some very old Bear Creek drill holes do not support it. However, drilling may have been done since that time. I advised Fuller that if this data could be made available, I would review them at his office, which would take initially but a few hours, and then would be in a position to evaluate Kaiser's interest in the property. I informed him that this evaluation would be submitted to Oakland management who would be in a position to promptly advise of our interest. I did not go into any questions of terms, but did state that I would like at the time I reviewed available data to know how much front-end money is asked.

I stressed to Fuller, that based on information I had previously seen when I examined the property for Asarco, I could frankly not be enthusiastic about it. However, I pointed out that this is a different company, with a different outlook on risk, and that since my previous investigation other data may have become available, and that therefore my company would like to at least have a chance to review the property and come to a decision.

The matter will rest on this until I hear from Fuller again. He has stated that he will contact Edwards, and I believe we will get a chance to look at the information. By the way, I did ask Fuller if he was aware of the 1,500 foot drill hole which DeVilliers claims to have put down in the center of the group, which intersected mineralized rock. Fuller denies any knowledge of such a hole and doubts that it exists. This hole, which DeVilliers reported to have intersected mineralized sediments, was one of the main points of interest and now it seems that it may not even exist. Certainly, Rodney DeVilliers has refused every request to make drill-hole cuttings and core available.

JEK/bl

DN

INTER-OFFICE MEMORANDUM

TO J. J. Durek
AT Oakland, California

DATE March 24, 1972

FROM John E. Kinnison
AT Tucson, Arizona

COPIES TO File
Blue

SUBJECT Edwards Copper, Pima County, Arizona

Having tried, as you know, repeatedly during January and February to negotiate through Rodney DeVillier for information on the subject property, a brief check of records on the ground and in the court house was made. This check, although incomplete, shows the ground undoubtedly to contain numerous possibilities for litigation over the mining claims.

George Edwards appears, in fact, to perhaps have a tighter control over the outcome of the property than does DeVillier. I have, therefore, made indirect contact with Edwards through Jay Fuller, a local contractor and mining promoter whom I believe you know. Edwards has an unlisted number, and Fuller was going to obtain his number for me. However, as things now stand, Fuller has dealt himself a hand in the game and he and Edwards are to meet with me early in April.

Following a review of such information as they can furnish at that time concerning property status and drill-hole data, I will prepare an opinion.

JEK/bl

Colbert Rodney DeVillors 310-14 Jo Edwards Co JEK

4612 Danube Dr N.E.
ABQ 87111

Kelvin McDougal —

Next week maybe —
to get ere out

J. E. K.
FEB 4 1972

Claim Map —

1610 feet
lost 15' in B.R. —

Litigation just beat wrapped up

DN

INTER-OFFICE MEMORANDUM

To John E. Kinnison
At Tucson

Date February 1, 1972

From Joseph J. Durek
At Oakland, 2026 KB

J. E. K.

FEB 4 1972

Copies to

Subject COPPER-ARIZONA
Edwards Property

Please give priority to resolution of the status of the Edwards property. If you cannot contact the owner, inquire of DeVilliers about his present involvement.

JJD:la

RECEIVED
FEB 3 1972
TUCSON
KAISER EXPLORATION & MINING CO.

J. E. K.
JAN 20 1972

JEK file
Edwards group.

JEK Phone call to:

DeWilliams - Edwards property -

Mtg was prematurely foreclosed and in process of defeating - However, he is not pushing property at this time -

Will send man - McDougal - from Silver City - to make core available. Will send map showing location.

Call back next week to remind if have not heard.

File
Tucson Office

December 11, 1970

J. E. Kinnison
Tucson, Arizona

J. J. Durek

Twin Buttes Area, Pima
County, Arizona

Mr. DeVilliers telephoned December 11, 1970, regarding the Twin Buttes property.

There has been a lien on the Twin Buttes property, and he has been waiting for sale of uranium property near Grants to furnish cash to clear the title, before presenting data for inspection.

JEK/bl

M. Harrison

P. O. Box 3605
903 University Boulevard
Tucson, Arizona 85722

November 5, 1970

Mr. W. Rodney DeVilliers
10, 000 Country Club Lane, NW
Alburquerque, New Mexico 87114

Blind Subject: Twin Buttes Area,
Pima County, Arizona

Dear Rodney:

As we determined through our telephone conversation of October 22, through an apparent misunderstanding you were waiting for me to initiate contact in reference to the Twin Buttes land you hold, while I was waiting for you to send data to me. During that conversation I again requested certain data regarding the property, which I have not yet received. I realize that you are in no particular hurry on this subject, but I have certain reasons for wanting to make a decision rather soon.

I believe I have told you, Mr. Edwards--the former owner--was in possession of a considerable amount of information concerning Anaconda's drilling nearby, and also Anaconda's geophysical work. I reviewed these data in J. Fuller's office a few years ago when he and Edwards were working together on this matter. Unfortunately, I cannot locate my notes in my personal files. Inasmuch as these data were available at one time and in Mr. Edward's possession, I presume that you might now have these data. If so, I would appreciate copies.

Also, the drill hole logs on the dynamite group would be of value to me, as well as the contour map of the basement thrust fault, which you state you have prepared.

Any of the above which you can furnish will be of value. However, as a very minimum I must have the following before proceeding further:

1. Land map, showing location of your deep drill hole.

2. Log of that drill hole.

In addition, I need either a letter of authorization to the caretaker of the core, or else verbal communication from you to him, giving me permission to examine this core. Also please let me know who has the core and where it is stored.

I cannot proceed further in the evaluation of your Twin Buttes property until you comply with my basic requests enumerated above, and please bear in mind that in truth and in fact all other pertinent data--such as listed above--would be of considerable help in my evaluation.

Yours very truly,

John E. Kinnison
Regional Geologist

JEK/bl

b. c. c. Dr. T. F. O'Neill
File
Blue

Telephone Call, DeVilliers

J. E. K.

OCT 09 1970

Edwards Claims now owned by DeVilliers Nuclear Corp.

2 2o NSR to Geo Metals → Geo Edwards + another (Jesus Ortiz)

Hanna has the Dynamite claims — (3 Mo ago at least)

file: Edwards Copper
JEK file

Rodney
~~Rocky~~ De Villiers — De Villiers Nuclear.
Albuquerque 357 Washington SE
505-898-4504

Terms —
W. Hwy — 25,000 work requirement.
6 Mo.
Assume more work requirements beyond 6 Mo.

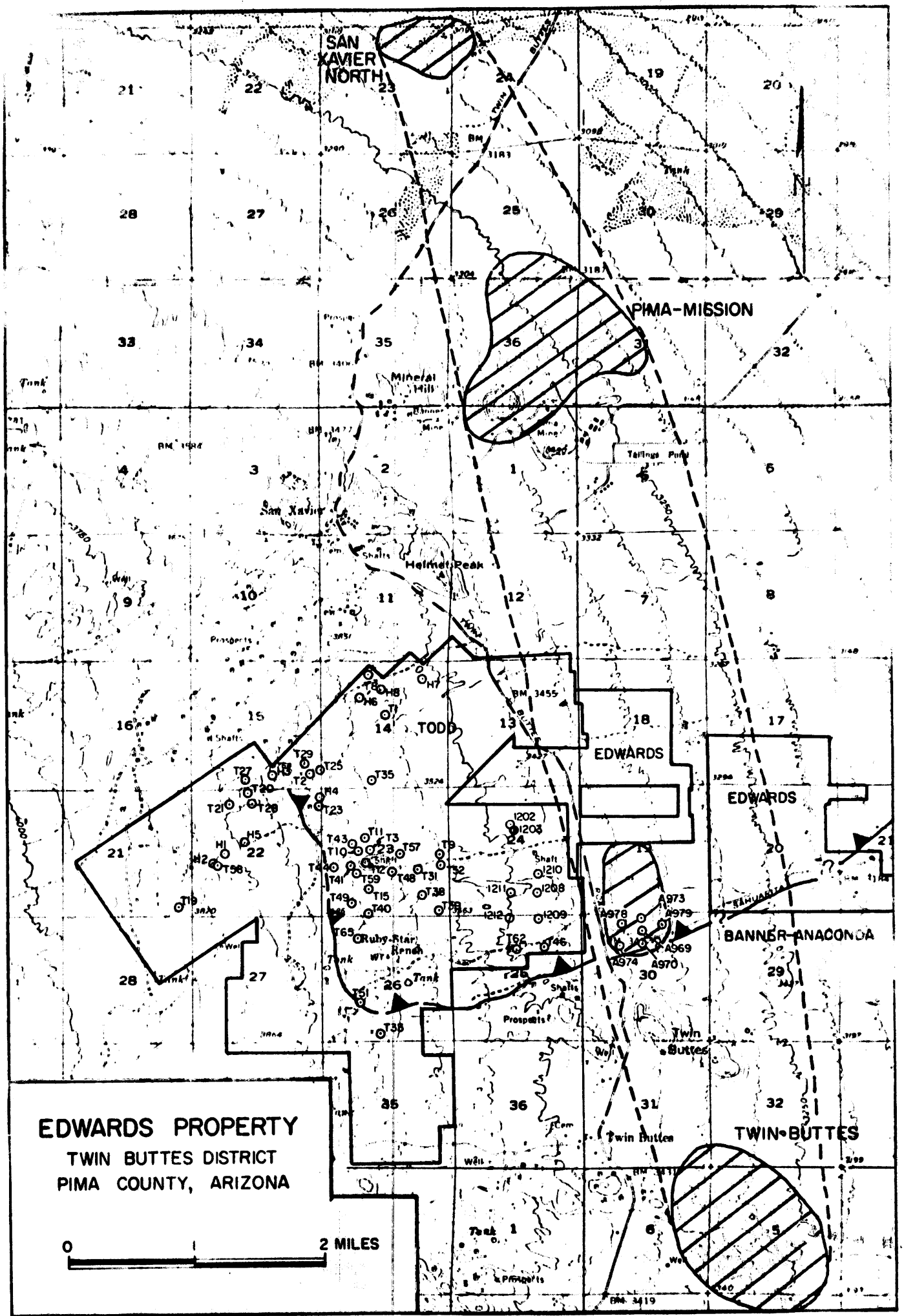
leaving
O'Neil Sunday for 3 Weeks

J. E. K.
SEP 30 1970

leaving
Vickers 11/13 th for 10 days

Give them Results soon as
possible on initial inquiry

3-10-14 KEM Ex 6



AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

April 10, 1969

J.E.K.
APR 10 1969

TO: J.H. Courtright

FROM: J.E. Kinnison

Edwards Fuller Claims
Pima Mining District
(Twin Buttes)
Pima County, Arizona

This past fall I studied geological and drill hole data in the subject area, presented by Mr. Jay E. Fuller, a contractor with offices at 1301 E. Ft. Lowell Rd. The claims are held in partnership with George Edwards, a small mine operator. Tape recorded notes abstracting data, and free hand sketches are appended.

The property, entirely alluvial covered, was presented to us by Fuller with two exploration objectives in mind. The first hangs on geologic theory developed by Dick Weaver, formerly with Bear Creek. The second proposal bases on the alleged existance of 88 mill tons grading 0.8% Cu in claims adjacent, to the south of the Edwards-Fuller group.

Weaver's hypothesis centers around his interpretation of the origin of the San Xavier Conglomerate (Helmet fanglomerate), which I believe to be incorrect.

The value reported to exist on the ground to the south, owned by Vernon Smith and under option to Hanna, is unsubstantiated. If it can be shown to be a realistic appraisal, then the extension of the same on the Edwards ground is worthy of testing by drilling. Our present data suggest, however, that the reported tonnage is non-existent. Mr. Fuller advises me that he now has additional data on the Smith Claims -- which data I have not yet examined.

John E. Kinnison

John E. Kinnison

JEK:lzb
Encl.

cc: WESaegart, w/encl.

LIST OF ATTACHMENTS

Correspondence and map by Jay E. Fuller

Tape Recorder notes

Assays of some drill holes

Sketches show drill hole location and summary results

JOHN P. KELLOGG
CONSULTING MINING AND GEOLOGICAL ENGINEER
P.O. BOX 939, ASPEN, COLORADO 81611

September 17, 1968

Mr. R. K. Kirkpatrick, Supervisor
AMERICAN SMELTING & REFINING COMPANY
1805 South Bellaire Street, Suite 301
Denver, Colorado 80222

Dear Roger:

A quickie note - attached is a map of a potential porphyry copper property, about four sections, in the center of the major porphyry areas in the world - south of Tucson in Twin Buttes Area. Your Mission Pit and "New" pit is to the north.

The man to contact on this is:

Mr. Jay E. Fuller
JAY E. FULLER CONSTRUCTION CO.
1301 East Fort Lowell Road
Tucson, Arizona 85719
Phone: 602 - 325-1505

No exploration, no drilling done on this. Mr. Fuller will discuss participation - and what the owners are asking. To my mind, with the potential here, their terms are extremely modest.

Now, because you will be here in one minute, I will close.

Regards,

John P. Kellogg

cc: J. E. Fuller

JEK

J.H.C.
SEP 23 1968

ASARCO

AMERICAN SMELTING AND REFINING COMPANY
ROCKY MOUNTAIN EXPLORATION DIVISION
1805 SOUTH BELLAIRE STREET, SUITE 301
DENVER, COLORADO 80222
303-757-5107

J. E. K.
OCT 01 1968

September 19, 1968

W.E.S.
SEP 24 1968

Mr. J. H. Courtright
American Smelting & Refining Company
P. O. Box 5795
Tucson, Arizona 85703

Pima District

Dear Harold:

The enclosed letter and map were handed to me by John Kellogg of Aspen just before we went into the field. I told him that I would pass the information on to you.

It hardly seems likely that there has been no exploration and drilling on the Edwards group, as alleged.

Very truly yours,

R. K. Kirkpatrick

RKK/kjw
Enclosures (2)

Located 55-56 by George Edwards
Assessment drilling — 700' max. depth
Dick Weaver — MA thesis - Ruby Star Ranch Area

Edwards'
~~Eduardo~~ Claims
Pima Mining District
(Twin Buttes)

T 45 365-369 .79% Cu

T 42 Surface to 462 no ore

T 16 302 TD no ore

T 6 No assays

T 71 0-160 RoB Tsx or gravel
276 TD ls, prtly silic. no sulf

T 70 TD 510 Qal RB to 170'

T 68 977 TD Tsx all way, Bd 30°,
exotic Cu to 400'

T 69 1164 TD
0-200 Qal
-450 Qmz
-480 Tac w/Cu sulf.

T 67 0-180 Qal
1126 TD Qmz 180' to 490'

T 48 1011 TD All Tsx reddish

T 47 0-220 Qal
-605 Qmz
-1074 TD Ls (hornfels) with porph 650-700'

T 6 753 TD 0-260 Qal
-TD Ls no Cu

T 16 545 TD No Cu, Ls

T 42 544 TD Cpy & Bn diss but assays vy low. No ore grade

T 70 213-346 Core
329-334,5', 5.18% Cu

T 71 No assays

T 69 249-1164 Cored and assayed
455-65 1.22% Cu
76 ..,88
84 .73
496 .24
} .76
No other ore intercepts

T 68 no ore 231-408 cored & assayed

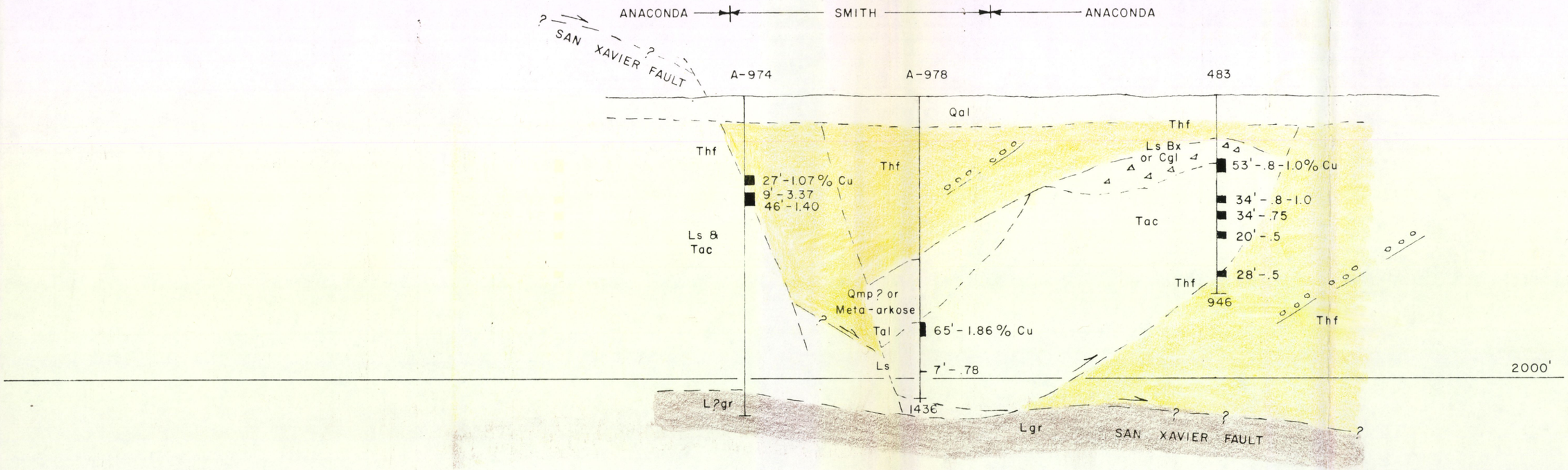
T 48 No assays

T 47 200-880 TD of assays

T 47 (cont'd)

635-644	1.31% Cu			
702-712	.59	10	5.9	
-723	1.00	11	11.0	
-733	.34	10	3.4	
-742	.04	9	.3	
-748	1.35	6	8.1	
-756	.51	8	4.1	
-766	.58	10	5.8	
-776	1.60	10	16.0	
-786	1.58	10	15.8	
-796	.76	10	7.6	
-806	.86	10	8.6	
-813	.40	7	2.8	
-823	.49	10	4.9	
		124	94.3	= .78
-834	.20	10	9.2	
856-866	.92	10	18.6	
-876	1.86	5	8.1	
-881	1.61	25	35.9	= 1.44

T 67 181'-1083' TD No ore; cored & Assayed.



EDWARDS COPPER
SECTION C-C'
LOOKING WEST

SCALE: 1" = 500'

J. E. KINNISON

JUNE, 1976

from the desk of

J. DAVID LOWELL

1/6/78

John:

Would you mind writing a very short memorandum recommending a drill project on the Edwards ground?

What we would need is

(1) location & depth of the minimum number of holes which we might drill (probably not more than four holes as a minimum program)

(2) cost of program

(3) estimated time to complete

We wont hold you to the figures, but need something as a basis for negotiations

Thanks

Dave

1032 1275 W edge of west side Dyn.

- 779 Conglomerate

779 - 802 Alt Ls.

802 - 822.5 Alt Q m p?

- 1247 Ls + Dol. sam argill ls silic.

1247 - 1258 Q m P?

1258 - 1260 argillite

1260 - 1275 EOH Q m P?

Kelly's note 1242.5 - 1275 Q m. looks like Coop. granodiorite P is mostly in dissemin Blks. same as 7416 cor. other minz.

822.5 - 862 .28 - 2.89 av. ± 1%t

1039 752' ± 200 E of 1030 ± 300 E of SW cor Dyn.

- 120 Calc-sil Congl.

120 - 122 Q m P & strongly alt.

122 - 125 (?) a mess.

125 - 142 str. alt. silty Ls.

142 - 373 " " Q m P. (2)

abundant small blks blk b.o. feld all clay

specks CuFeS2

373 - 390 garnet silty Ls.

390 - 395 str. alt Q m P.

395 - 399 gar. silty ls.

399 - 405 str. alt Q m P.

405 - 448 silty ls.

448 - 484 ?

✓997 1363 near Twin Butte Rd just NW of SW cor. Dpll.

to 313 Fnql.

313 - 1242 meta - all scales

1242 - 1260 Qtz P?

quite strong

Local flooding by Ht span

except 1244 - 1247

Bio chl. somewhat destroyed

1260 - 1360 EOH Sam. doesn't look like the "granite" more like the "granodiorite" Bio mostly in clots, veinlets, books. not strongly altered

356 - 396 2.13 % Cu occ spots of mala.

1100 - 1120 ± .5 % Cu

1199 - 1220 ± .4 % Cu

1330 - 1340 ± .5 % Cu

✓1030 SW just SE of SW cor Dpll.

-119 Colluvium

119 - 199 strongly Alt. Qtz poor(?) intercomp. brecc. fold. pervasive clay Bio wk to intense alt. to clay

199 - 205 Siltst. serpentinized

205 - 396 apparently Qtz (porph?) basalt, alt. brecciated. small bx bio. mostly gouge, slip

396 - 444 Siltst. + Ls. alt.

444 - 455 Alt. Qtz P? 455 incr in Bio bx.

455 - 547 EOH some comp. many slips

199 - 205 .35 % Cu

✓984 SW-3E 19

157½ - 181½ Prob fnql. pyroclastics
silicated + alt. Ls some Cu Cx coatings

181½ - 255 Cf. ± 55°

Ls (?) conq. poorly sorted.
some garnet.

255 - 463 garnetite sil Ls sil. Limy slts.

463 - 495 broken Qztb

495 - 508 alt punky sltst

508 - 702 Q M ~~&~~ plant porph. strongly alt. broken zone.
locally chlorite

702 - 860 Fnql. CT ± 60°

255 - ~~284~~ 311 ± .3% Cu

~~284 — 311~~

356 - 453 ± .6 Cu

508 - 702 Q M, ?? >, < .2 getting lower near bottom

✓ 582 755' all fugl. 3/31/66 NE-SE 18

✓ 1208 1513' CWT gr. Midland #6 SE-SE 24

— 1262 Fugl.

1262 - 1331 Serp. alt. Ls.

1331 - 1512 Coarsely xl. pinkish ls.

1512 - 1572 EOH 10/11/68 Str. alt. granodiorite somewhat bx and veined. Bio alt. to chl. abundant pink Kspar trace sulf.

✓ 1209 1363' CWT gr. Mid #6 SE-SE 24

— 930 fugl.

930 - 936 bx? maybe fugl.

936 - 1190 pinkish coarse xl Ls.

1190 - 1296 Serp. alt. silty Ls.

1296 - 1363 EOH 11/6/68 altered granodiorite pink to tan white feldspars. speck. w/ small blks + ~~blebs~~ flakes bio. alt. to chl. strong clay alt. of feldspars. mnz. tr. Fe_3O_4 tr to mil sulf.

✓ 1210 1760' CWT Cls. Midland #26 NE-SE 24

— 805 fugl.

805 - 848 Biotite porph ? rhyritic andesite

848 - 1617 fugl.

1617 - 1696 Arkosic Ark. Qtzite

1696 - 1708 fault zone

1708 - 1760 EOH 11/20/68 Str. alt granite or granodiorite text. obscr. by bx str. clay alt. flds. + small flakes bio.

✓1174 1064' Hel. Pk A. Sub #15 SW-NW 16

-0-372 cuts "washed"

340-372 Arkose (BR@340)

372-715 EOH fragl.

715-891 Ank. porphy turkey track

891-917 fragl.

917-1064 EOH 1/12/74 (notes) Granite + Schistose mafic

mafic intruded by lt. col. equi-gr. granite

granite ~~and~~ w/ tr co. gr. gem chl. kaol. ~~rock~~.

some close to QM less alt.

✓106 1331' Banner hole NW-NW 17 No logs assays look like

fragl. 281-283½ .51%Cu (?) others)

✓1107 Helmet Pk. NE-NW 18

-760 fragl.

✓1136 CDH 10/26/68 Helmet Pk. Monday #4 NW-NW 18

0-402 fragl. (?)

✓535 CDH 8/24/64 NW-NW 18

0-485 fragl. (?)

485-1010 EOH 12/14/64 Congl. (fragl. ?)

~~424~~ 750' SE-NE 20

all fnql. 1/23/65

~~1207~~ Fan #1 SW-SW 19

-1259 all fnql. 9/9/68 1060-1065 .37% Cu

~~971~~

-1504 all fnql. NW-SE 19

~~1204~~ SW-SW 19

-691 Fnql.

-843 sharp Ls contact

843-915 EOH fnql.

8/14/68

251-261 .20% Cu
721-829 .13 "
829-843 1.13 "

~~1235~~ 975' NE NE 30 near Sec 8 corner

all fnql. 4/1/70

± 950-975 some Ls frg. show garnetization + FeOx

~~534~~ 957' SE-NE 17

all fnql. 12/19/64

~~1200~~ 513' NE-NW 21

386 fnql.

386-461 Ls unaltered + mixed Ls-Qtz-Ls bx

461-513 EOH granite somewhat alt. milky feldspar milky Qtz.

4467 695' BR ± 340 SE-NW 21

340 - 695 EOH 6/27/66 dk & lt. gray ls., lt. yel. brn. ls., silty ss
sand. ls. & lime. ss., ls. buff-gray & silst. etc.
(no mention of steam)

491 727' SE-NW 21

- 435 Sand & gravel
435 - 727 EOH 4/6/67 silty ~~lime~~ sand. ls., sand. silst. sand ls.,
ls., silst. w/ ls.,
(no mention of steam)

421 925' NE-NW 28

0 - 681 alluvium
681 - 808 ~~776~~ ls w/ some Qtzites & silst. & sandy silts.,
808 - 833 EOH 1/11/65 broken zone in Qtzites.
833 - 925 Qtzite lt gray feldspathic.

1218 1015' Emmons #17 Claim - NW-NW 21

0 - 309 Rotary cuts, possible fngl.
309 - 831 ~~326~~ fngl.
831 - 858 bl. gry ls.
- 952 silst. 952 strong BX crushing
- 985 Qtzite.
- 1015 ls

✓1202 1594' Elizabeth mine SE-NW 24

-1227 fuql.

1227 - 1266 Frags. Ls. + Qtzite in silty sandy matrix + Qtz matrix garnetized frags. ark. Qtzite.

1266 - 1442 mixed ark. Qtzt. siltst. talc alt. ~~feldspathic~~ silts.

1415 - ~~1420~~ 1424 Qtz. vns. limy str. to mas. massive FeS2 w/ scal. PbS + ZnS mixed Fe Ox.

1412 - ~~1447~~ 1451 clastic tuff. frags. reworked

1451 - 1502 fuql. (?) Qtzite Bx limy near 1500

1502 - 1548 fuql. mix. Ls + Qtzite bx

1548 - 1594 fuql.

(1502 EOH 6/24/68 ; 1594 EOH 7/23/68)

1230 - 1239 .14 - .15% Cu

1365 - 1366.5' .25% Cu .68% Zn .31% Pb

1415 - 1424 Little Cu av. .21% Zn . 21% Pb

✓1219 915' Fan #3 Cl. SW-SW 19

-345 fuql.

345 - 523 Ls w-gl (prob. fuql.)

523 - ~~540~~ Blue gray Ls. possible BX

~~540~~ - 708 Blue gray Ls (fuql. ?) Frag. amb. Brxtd.

708 - 816 EOH 3/11/72 garnetite + mineral. sil. argillite

loc. mod to str. Cu FeS2 FeS2 scatt. ZnS - Pb S 2765

816 - 915 EOH 9x15 | 72 a.a. above 713-862 149' .16% Cu
862-915 53' .97% Cu

703 - 713 5' 5.36% Cu

724 - 734 10' .4 % Cu

774 - 779 5' .73 - oltic spots of mine.