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May 10, 1993

Mr. Michael Gustin
Exploration Manager
Cambior USA Inc.
230 S. Rock Blvd., #23
Reno, NV 89502

Dear Mr. Gustin:

Enclosed are data on a gold prospect in Arizona. Dale Armstrong suggested I submit the matter to you.

In essence, the prospect consists of widespread Fe Ox-MnO_x surficial mineralization in a Miocene conglomerate of limestone cobbles and sandy matrix highly anomalous in As, Sb, Hg, and Ba with weak anomalous Au values essentially confined to the general area of IP response of about 1000' x 3000'. It is proposed that it could be analogous with the Hollister Mine: a discrete vertical zonation with significant Au underlying the Fe-Mn rich zone. The property is several miles NE of Kearney, AZ. I will briefly discuss each enclosure.

1. A copy of part of the map of GQ 1391 and part of the text. The Qtv is much more continuous than shown on the map, in the general area of the IP anomaly it is near totally continuous: The USGS did not recognize unconformable sedimentation in areas between its outcrops as proved by my more detailed study and the IP. The IP target is the junction of several structural trends:

Laramide, possibly rejuvenated and of influence:

The $\pm N 70^{\circ}E$ dike swarm that also appears across the river to the SE.

On the projection of the $N80^{\circ}W$ alignment of the more significant Laramide mineralization of the district.

More obviously of late Tertiary influence:

The $\pm N30^{\circ}W$ paralleling the range front

The N-S faulting in the range to the N

The $\pm N30^{\circ}E$ splits off the Cowboy Fault. Such splits seem to have controlled the spotty Au in the range to the N, and such is the orientation of the IP anomaly.

REC - CAMBIOR USA

MAY 13 1993

2. Report on the IP by Chuck Elliot. I suspect his depth estimates to response are greater than those of other possibly equally proficient geophysicists, such as has been my experience in two other areas in recent years (in event you choose to have depth estimates made, only in line 4 were there any dipole spacings exceeding 400'). May I point out that both Kennecott holes, exploring porphyry Cu possibilities at depth, hit quartzite at 550'-600'; Elliott puts the anomalous zone as lying on basement and orally stated it to be at least a couple hundred feet thick in order to provide the response, which would elevate the top of the response at least a couple hundred feet higher than his 600' estimate. As Au also may have been deposited in the hydrothermally oxidized zone above the response, if there is large scale ore its depth might be only a couple hundred feet. Also, there could be higher grade roots within the basement meriting underground mining. In my opinion, the weak shallow anomalies are due to Mn Ox; the large deeper anomaly is below the present water table and probably always has been.

3. Copy of the paper in Econ. Geol. on the Hollister Mine, one hole could go a long way in defining whether this could be a replica.

Misc. Comments:

The samples very high in As, Sb, & Hg all are FeOx-MnOx rich. Light colored v.f.g. quartz clasts are not abundant in the surficial material of the area of the IP anomaly, but this type constitutes the more distinctly auriferous material, a fair portion of them around 0.01 oz./T, a few over 0.02 by repeated assays. None appear to ever have contained appreciable sulfides. Somewhat similar clasts are abundant in areas removed from the anomaly but contain very much less Au.

The interface of the permeable LS conglomerate and the quartzite, the base of the response per Elliot, would constitute a zone of drastic changes both physically and chemically. Possibly also at about the right depth for all the Au to drop out?

Around 15 years ago, Inspiration had the range area to the N almost completely covered with claims, I assume due to the sporadic Au or alteration associated with it. Perhaps they did not recognize this as a late Tertiary system with its center in the Miocene sediments to the S? The range had to have been somewhat elevated during the Miocene as it was the source of the LS conglomerate. The structural setting of the IP anomaly, together with its much lower elevation, suggests to me that it would have been the focus of discharge of rising solutions for the whole system. Also, west of the anomaly, there are small vertical breccia bodies that represent the last phase of the explosive activity (at least one of them cutting sediments above the unconformity) that are primarily andesitic? fragments with no attendant silicification, indicating a local heat source for the earlier activity. No such igneous activity is known to the N.

If the mineralization is highly siliceous it might be sold as flux, 3 miles downhill to the RR, all the local smelters need flux.

May 10, 1993
Page 3

Most of the material sampled has been clasts of different types, hoping to find something reflecting greater depth. Almost all this was done before the IP, thus with no concentration of sampling in the IP target area. As mentioned, no clast showed signs of any present or appreciable former sulfide content. Could the upward propelling of clasts any great distance have been inhibited by the lateral dimensions of the explosive activity together with the incompetent nature of the Miocene conglomerate? If there is ore, could it largely be in the form of a soft "sanded" body such as sometimes happens with carbonate hosts in Nevada, and would clasts of such survive upward migration? I am a neophyte in Au, cannot evaluate these possibilities. All I can conclude is that there are surficial features characteristic of these Au things, an unexplained sub-surface IP anomaly whose location and orientation conform to known structure and other concepts, and that there now is a known example of the sharp vertical zoning of the same metals that would be required here for the anomaly to reflect large scale ore.

I have not brought the property to anyone's attention other than Dale's for several years, long before publication of the Hollister paper. Should you be interested I assume you would notify Dale. I have my hands full of copper properties, my terms would be most reasonable.

Sincerely yours,


Kirby C. Coryell

cc: Dale Armstrong

For the next couple months:
8225 E. Speedway, #611
Tucson, AZ 85710
602-298-2149

Permanent:
11514 104th Pl. SW
Vashon, WA 98070
206-567-4554

DEFINITION OF MAP UNITS

Od

Qal

Qt

Qls

Qp

Qog

Qv

MINE DUMP

ALLUVIUM

TALUS

LANDSLIDE DEPOSITS

TRAVERTINE

SOIL AND GRAVEL VENEER - Occurs on pediments and terraces

OLDER GRAVELS

VEINS (Pleistocene, Pliocene, or Miocene) - Jasperoid-barite-manganese oxide veins and replacement bodies; hachured in areas with extensive veining and replacement of older units

DEPOSITS IN DRIPPING SPRING VALLEY

CONGLOMERATE - Facies dominated by clasts of Williamson Canyon Volcanics

CONGLOMERATE - Facies with clasts of all older rocks

CLAY, SILT, AND SAND - Lakebed facies

BIG DOME FORMATION (Lower Miocene)

CONGLOMERATE - Facies dominated by clasts of Ruin Granite

SANDSTONE AND INTERBEDDED CONGLOMERATE

CONGLOMERATE - Facies dominated by clasts of Paleozoic limestone

CONGLOMERATE - Facies dominated by clasts of Williamson Canyon Volcanics

LAPILLI TUFF - Interbedded in conglomerate

QUARTZ LATITE ASH-FLOW TUFF - Interbedded in conglomerate

SAN MANUEL FORMATION (Lower Miocene and upper Oligocene)

DARK CONGLOMERATE

RHYOLITE(?) TUFF - Interbedded in conglomerate

HORNBLLENDE ANDESITE PORPHYRY

RHYODACITE PORPHYRY

QUARTZ LATITE PORPHYRY

QUARTZ LATITE PORPHYRY

RHYODACITE PORPHYRY († superscript indicates quartz-poor variety)

RHYODACITE PORPHYRY († superscript indicates quartz-poor variety)

RHYODACITE PORPHYRY († superscript indicates quartz-poor variety)

TKH

Kha

Kb

Kw

Mb

Pn

Me

Dpm

Ea

Eb

Ydb

Yt

RHYODACITE PORPHYRY (* superscript indicates presence of a few quartz phenocrysts)

HORNBLLENDE ANDESITE PORPHYRY

BASALT INTRUSIVE BRECCIA - Possibly a feeder for Williamson Canyon Volcanics

WILLIAMSON CANYON VOLCANICS (Upper Cretaceous)

BASALT - Sills and dikes

NACO LIMESTONE (Middle and Lower Pennsylvanian)

ESCABROSA LIMESTONE (Upper and Lower Mississippian)

PERCHA SHALE AND MARTIN FORMATION (Upper Devonian)

ABRIGO FORMATION (Upper and Middle Cambrian)

BOLSA QUARTZITE (Middle Cambrian)

DIABASE - Dikes and sills

TROY QUARTZITE (Precambrian Y)

APACHE GROUP (Precambrian Y)

BASALT - One or more flows

MESCAL LIMESTONE

BASALT AND UNDERLYING MESCAL LIMESTONE

MESCAL LIMESTONE AND DIABASE SILLS

DRIPPING SPRING QUARTZITE - Dots indicate Barnes Conglomerate Member

PIONEER FORMATION - Dots indicate Scanlan Conglomerate Member

RUIN GRANITE (Precambrian Y)

PINAL SCHIST (Precambrian X) - Shown in cross section D-D' only

Contact - Dashed where inferred, approximately located, or buried; dotted where gradational

30

77

90

Major fault - Showing dip; dashed where buried by thin colluvial debris but rarely located; dotted where inferred or buried and approximately located. Bar and ball on downthrown side

Minor fault (< 12 m dip slip) showing dip; dashed where buried by thin colluvial debris but accurately located; dotted where inferred or buried and approximately located. Bar and ball on downthrown side

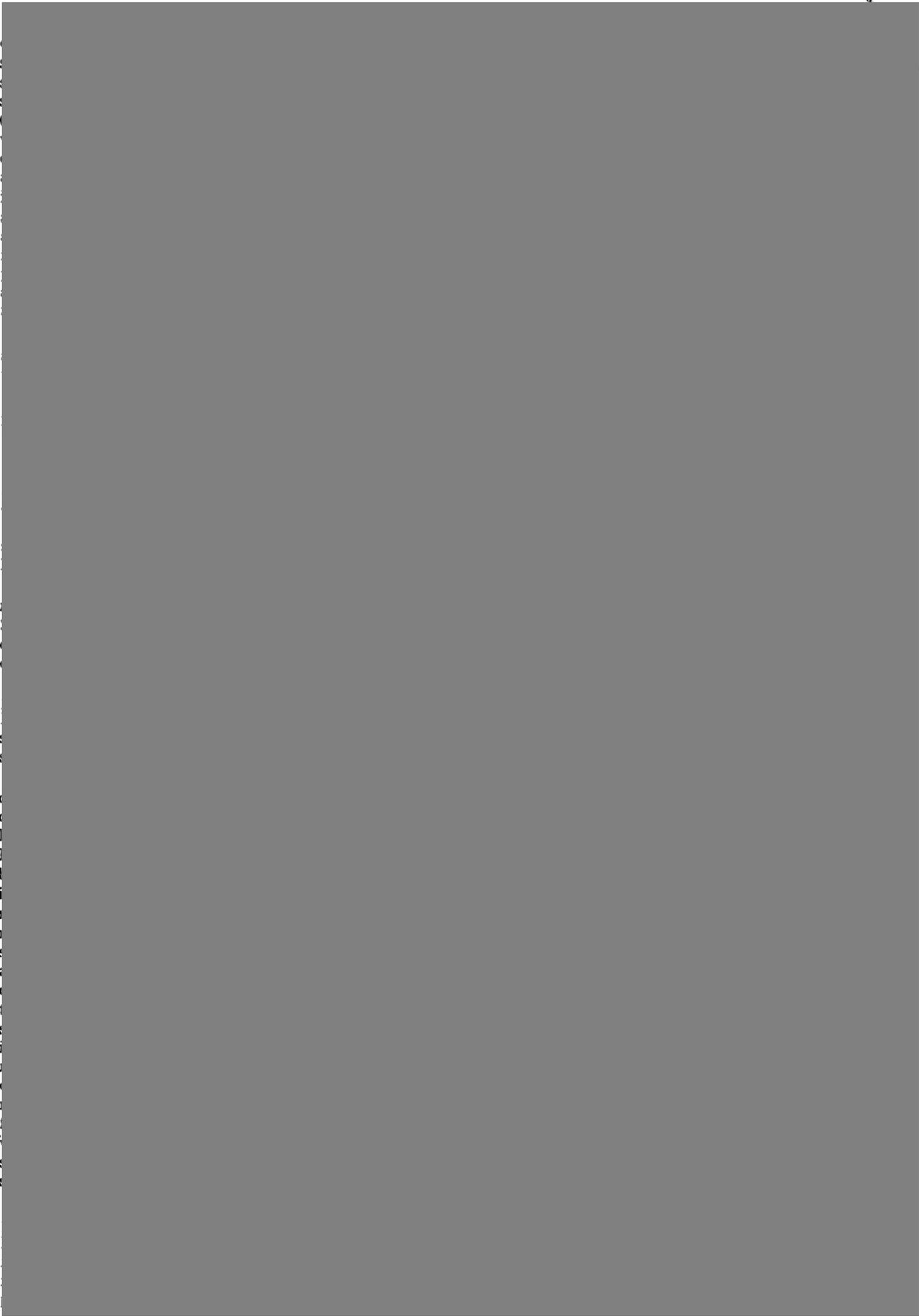
Dike - Showing attitude; bar and ball on downthrown side of intruded fault. Dotted arrows indicate position at anticlinal hinge

Megabreccia

Abundant epidote veins

surface these veins are mostly jasper or spongy quartz







ELLIOT GEOPHYSICAL CO., INC.

3865 E. 34th STREET, SUITE 106

TUCSON, ARIZONA 85713

TEL. (602) 747-7448

3 May, 1990

Kirby C. Coryell
Consulting Geologist
5140 E. Burns St.
Tucson, AZ 85711

REF: CY08E

Dear Kirby:

Re: Induced Polarization-Resistivity survey
Don Claims Area, Pinal County, Arizona

The subject area is located approximately five miles northwest of Hayden, Arizona, and within the confines of the Hayden 7.5 minute quadrangle sheet. An induced polarization-resistivity survey was performed in two parts consisting of a total of four survey lines by Mining Geophysical Surveys Inc., Tucson, Arizona under the direction of W. Gordon Wieduwilt. Survey lines 1 and 2 were run in the period 10 April through 13 April, 1990. Survey lines 3 and 4 were run in the period 25 April through 28 April, 1990. The four survey lines are located in sections 18 and 19 of T45S, R15E and in section 24 of T45S, R14E. The survey was performed using conventional time-domain instrumentation and techniques. The survey was performed using the inline dipole-dipole array with dipole lengths equal to 400 to 500 feet and with separations of the dipoles from 0.5 through 6.

Some electrical noise which is a detrimental factor in performing time-domain induced polarization and resistivity surveys was apparent, particularly during the survey of lines 1 and 2 in which geomagnetic activity levels were at the highest they had been so far in 1990. Mining Geophysical Surveys, Inc. performed the field data acquisition phase of the program and their field plots and field notes were turned over to Elliot Geophysical Co., Inc. for further processing. As part of this processing, Elliot Geophysical Co., Inc. performed a numeric filtering of the induced polarization data for separation factors n equal to 4, 5, and 6 in order to improve signal-to-noise ratio of the data. While these techniques will not completely eliminate noise effects, they did result in a modest improvement in the data for the subject area particularly for survey lines 1 and 2. The pseudo-section data plots for the four lines attached to this letter present the filtered version of the induced polarization data.

Attached to this letter and forming a part thereof are the following drawings and plots:

1. Data plot psuedo-section Mining Geophysical Surveys data line 1.
2. Data plot psuedo-section Mining Geophysical Surveys data line 2.
3. Data plot psuedo-section Mining Geophysical Surveys data line 3.
4. Data plot psuedo-section Mining Geophysical Surveys data line 4.
5. Topography of the subject area taken from the Hayden 7.5 minute quadrangle, scale 1:12,000, with section lines shown for alignment purposes to the other drawings.
6. IP-resistivity lines location map, at a scale 1:12,000, IP stations are indicated for reference. Also included for reference purposes are the approximate location of two Kennecott test holes that were presumably drilled twelve to fifteen years ago as part of a porphyry copper exploration program. These holes are reportedly in excess of 1,000 feet in depth. The overlying Miocene conglomerate cover was likely not even logged. Basement has been reported to be 500 to 600 feet in depth from collar elevations of 2,600 feet for the westernmost hole and 2,800 feet for the easternmost hole.
7. Geophysical interpretation map with traces of the four IP-resistivity survey lines shown for reference. Scale 1:12,000. This map reflects the interpreted zones of anomalous IP response, in particular the deep primary induced polarization target zone as well as some minor near-surface slightly elevated IP responsive zones.

The Miocene conglomerate known as the Big Dome Formation is the general host rock of the area at surface. It has been interrupted by mapped hydrothermal explosion breccia zones that generally strike through the subject area NW-SE. Both formations likely are fairly porous and therefore one would expect moderately low resistivities for both formations with possibly little contrast between them. The resistivity data from the four survey lines confirms this wherein resistivities are generally in the range of 20 to a little better than 100 ohm-meters extending to the depth limit of the survey electrode geometries that were utilized. Generally, the resistivity section changes from north to South. Line 3 to the north reflects a much higher average resistivity level in which the conglomerate may be thinning

out or possibly there may be more intense breccia development. Lines 1 and 2 would suggest the basement with a moderately higher resistivity can be observed in the data at interpreted depths the order of 800 feet. Line 4, the southernmost line, shows the low resistivity of 20 to 30 ohm-meters continuing to the depth limit of the survey, strongly suggesting that basement is plunging towards the south.

Relief in the area is up to 500 feet, particularly on line 4 with elevations generally from 2,400 feet to 2,900 feet. Average elevation is the order of 2,600 feet. In the central part of the surveyed area, one would then expect basement to be at a elevation of around 2,000 feet. On most of the lines, increased resistivity at the very near surface is evident and probably reflecting porous conglomerate and breccia sitting above the water table.

The induced polarization data is far more interesting and reflects background responses from 0 to 4 milliseconds for the Miocene conglomerate. Several near-surface zones with a slight increase in induced polarization response are noted in the data. These zones have been portrayed on the Geophysical Interpretation Map as the shallow IP zones. Four of these shallow IP zones are noted, one on line 1, one on line 3, and two on line 4. These perhaps are reflecting breccia zones and may or may not have any potential economic interest.

The principal induced polarization target of interest is a deep target zone reflected in the data from three of the survey lines: 1, 2, and 4. The outline of this zone has been indicated on the Geophysical Interpretation Map which has generally closed the zone off laterally west and east, but the zone, conceivably is open to the north, towards section 18 and towards the south approaching the southwest corner of section 19. This principal deep IP target zone, has indicated depth on the order of 600 feet from average surface, and a true induced polarization response in excess of 40 milliseconds which could be reflecting several percent sulfides if, in fact, the responsive zone is due to sulfide mineralization at depth. The target zone as indicated, from the available data, has a width of just under 1,000 feet, and a strike length that is probably greater than 3,000 feet in length, striking NE-SW. The target zone is better developed in IP response towards the south end of the zone.

No further induced polarization-resistivity surveys are indicated at the present time, unless it is desired to completely close off the target zone, north and south. It would seem to be that the more urgent matter would be to test

the target zone by drilling, in order to determine what the causative mineralogy is for the induced polarization response. Sulfides at depth are one of the distinct possibilities, but clay mineralogy often causes induced polarization responses and it is well known that clay zones can occur in conglomerates and therefore one cannot rule out this possibility. From the induced polarization and resistivity data it is quite clear that the responsive material is lying within the low resistivity which is almost certainly the Miocene conglomerate. The perusal of the pseudo-sections of induced polarization response, particularly lines 1 and 2, suggest the the zone has limited thickness vertically and may be indicative that it is likely lying within the conglomerate and on the bedrock surface.

A drill test to confirm the causative mineralogy might well be performed on line 4 between stations C1 and C2 in order to hit the principal higher induced polarization responsive material.

Sincerely yours,

ELLIOT GEOPHYSICAL CO., INC.

Charles L. Elliot

Charles L. Elliot, President



Attachments: 4 Pseudo-section Data Plots

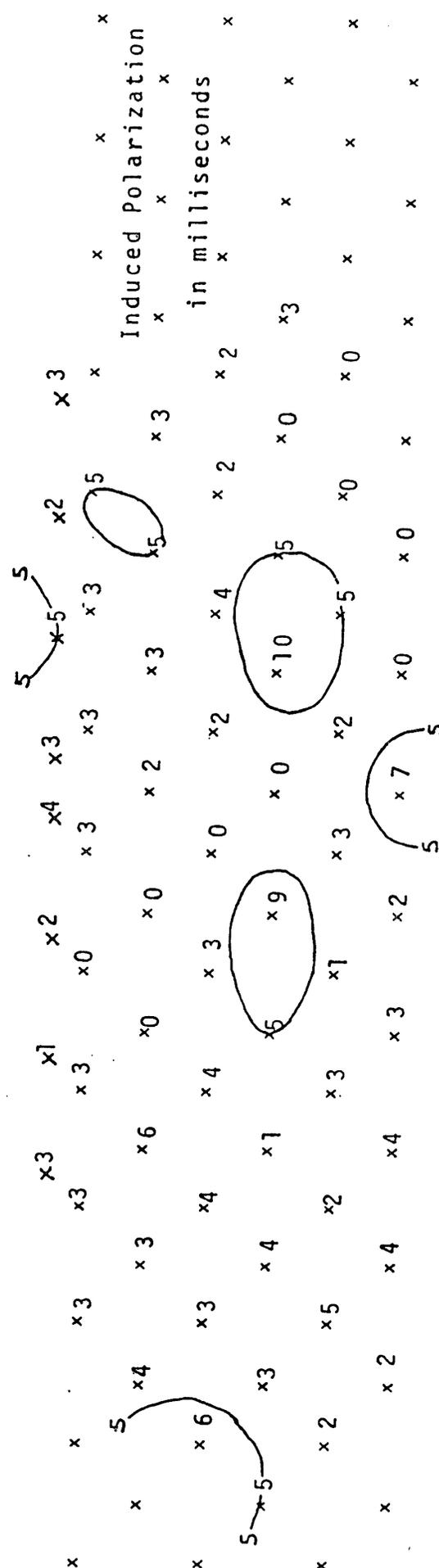
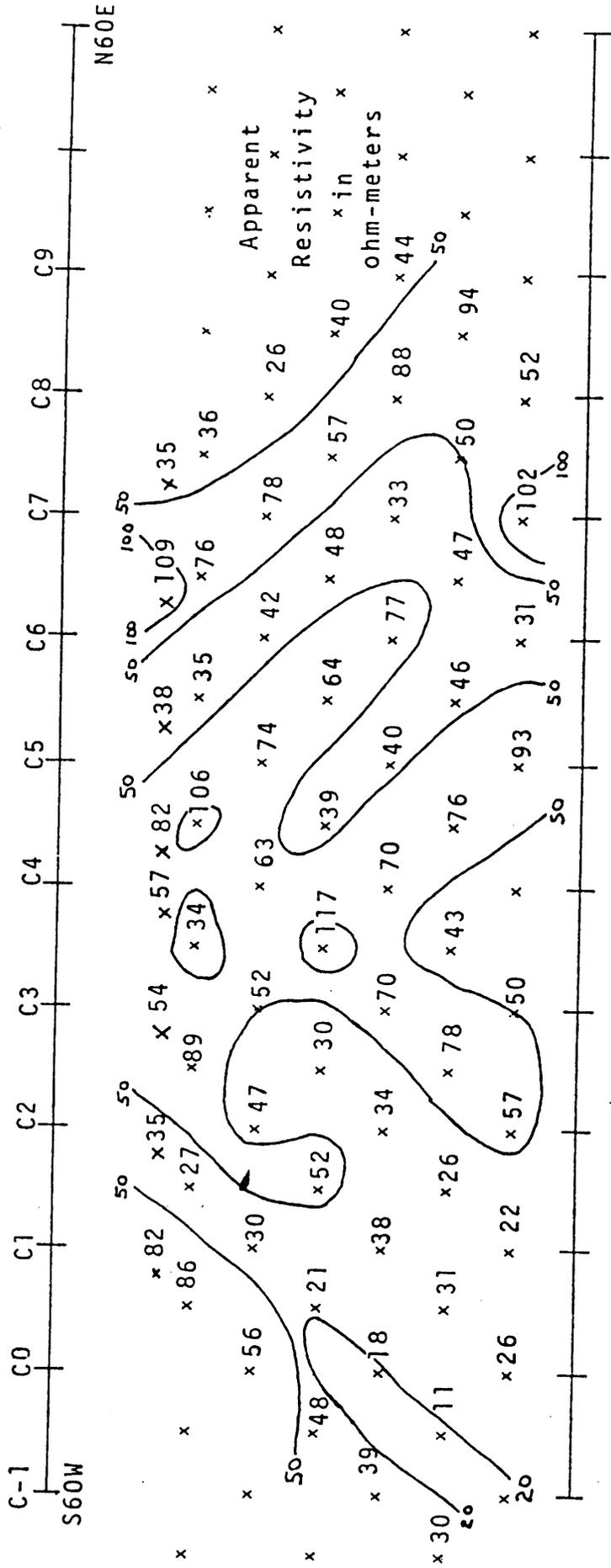
3 Plan Drawings

INDUCED POLARIZATION - RESISTIVITY SURVEY DIPOLE - DIPOLE ARRAY

DON CLAIMS, PINAL CO., ARIZONA
KIRBY C. CORYELL

CY08E
5-3-90

LINE 3



18
ring

10

29670

2927

2800

2800

2800

2600

2500

2800

24

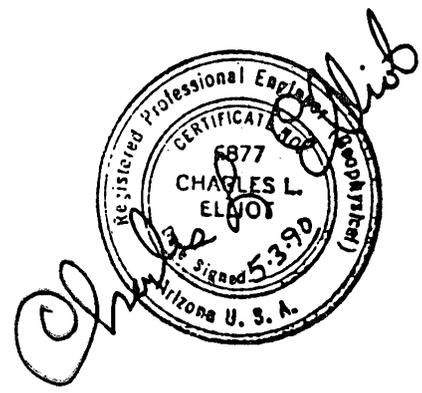
2642

x2849

19

2400

2600



ELLIOT GEOPHYSICAL CO., INC
TUCSON, ARIZONA

TOPOGRAPHY
DON CLAIMS
PINAL CO., ARIZONA
SCALE 1:12000

CY08E

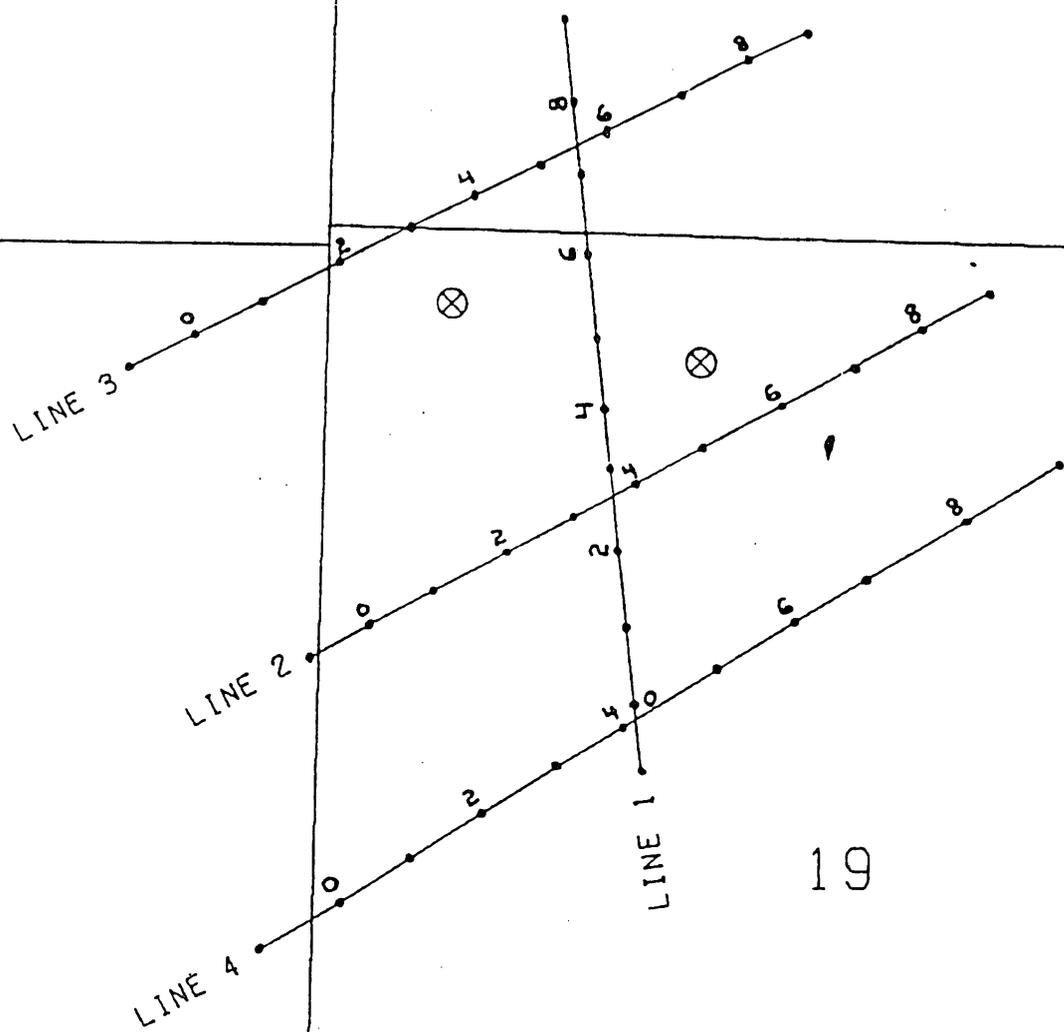
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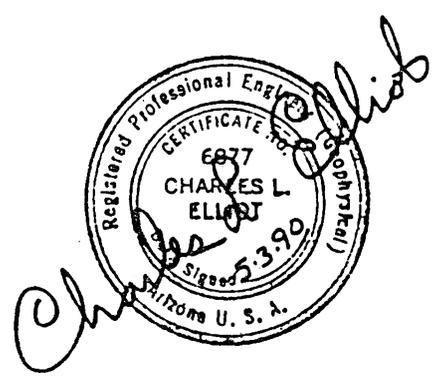
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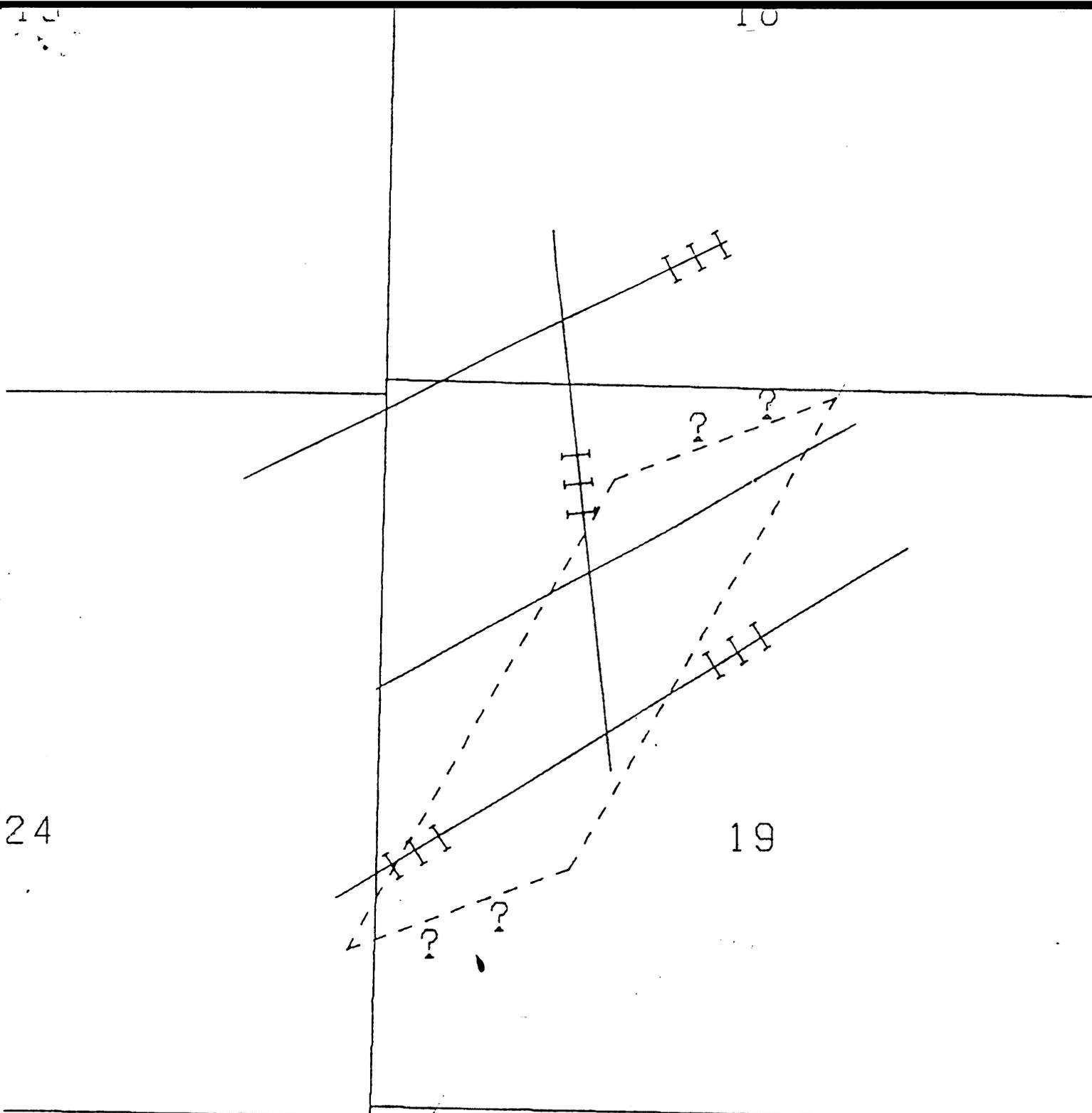
19



⊗ APPROX. LOCATION KENNECOTT DRILL HOLES



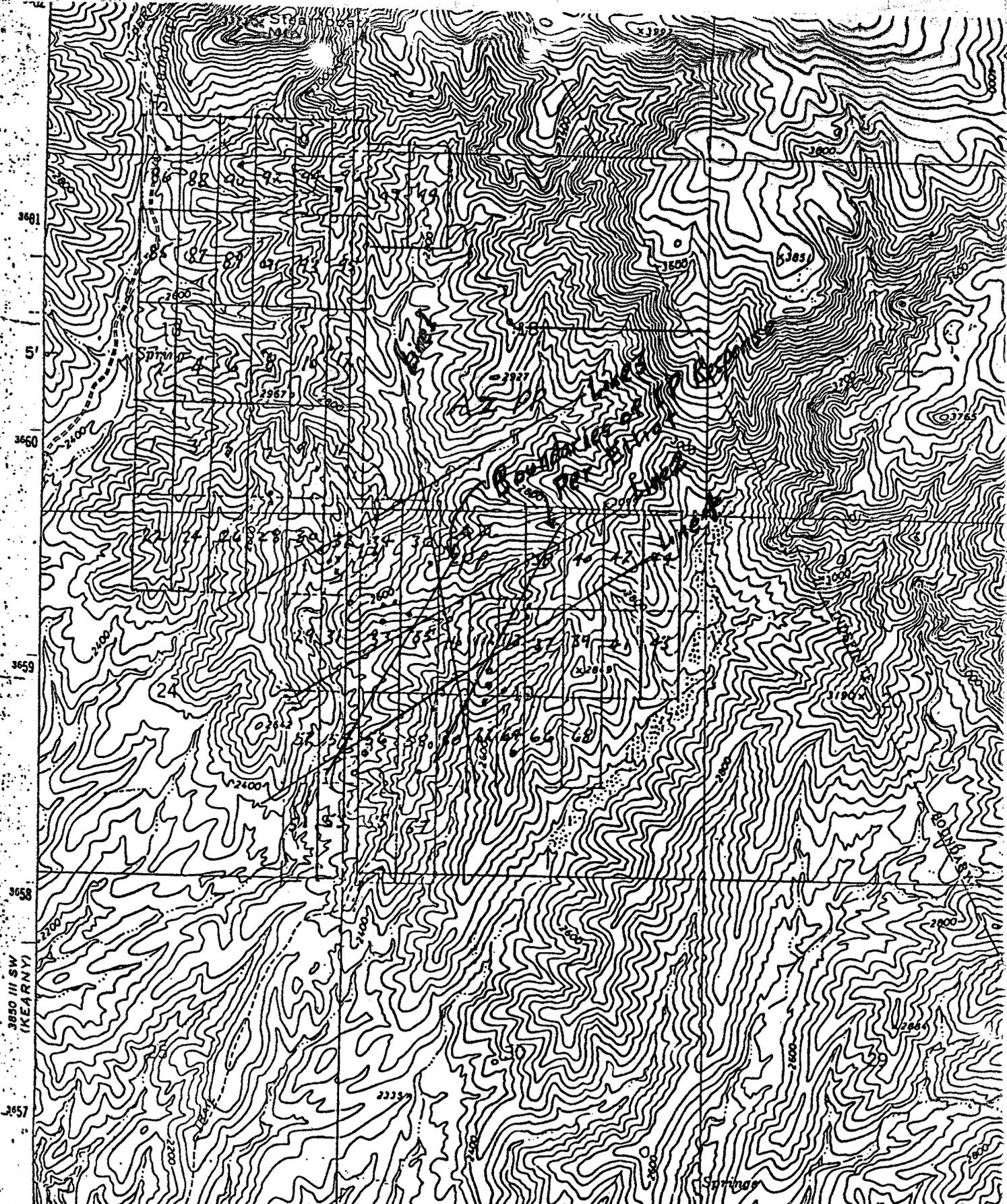
	ELLIOT GEOPHYSICAL CO., INC TUCSON, ARIZONA
	IP - RESISTIVITY LINES DON CLAIMS PINAL CO., ARIZONA SCALE 1:12000 CY08E 5-3-90



NOTES: III SHALLOW IP ZONES
 ----- DEEP IP TARGET ZONE



	ELLIOT GEOPHYSICAL CO., INC TUCSON, ARIZONA
	GEOPHYSICAL INTERPRETATION DON CLAIMS PINAL CO., ARIZONA SCALE 1:12000 CY08E 5-3-90



This page added to Elliotts report by KCC

Don Claim Area : IP Lines with respect to Topography and Property Boundaries, added by KCC

Only the target area has been maintained the past couple years, peripheral claims for working region can be re-located. 5-10-93 KCC

