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Vulture Drilling - 1989

Hole No.	Sample No.	From	To	Interval ft.	Gold opt	Silver opt
VIP89-1	196053	265.0	269.0	4.0	0.003	< 0.10
	196054	269.0	272.0	3.0	0.003	< 0.10
	196055	272.0	275.0	3.0	0.004	< 0.10
	196056	275.0	280.0	5.0	0.002	< 0.10
	196057	280.0	285.0	5.0	0.002	< 0.10
	196058	285.0	290.0	5.0	0.001	< 0.10
	196059	290.0	295.0	5.0	0.001	< 0.10
	196060	295.0	300.0	5.0	0.002	< 0.10
	196061	300.0	305.0	5.0	0.002	< 0.10
	196062	305.0	310.3	5.3	0.001	< 0.10
	196063	310.3	314.2	3.9	0.004	< 0.10
	196064	314.2	318.2	4.0	0.002	< 0.10
	196065	318.2	324.0	5.8	0.001	< 0.10
	196066	324.0	329.0	5.0	0.002	< 0.10
	196067	329.0	334.0	5.0	0.001	< 0.10
	196068	334.0	334.5	0.5	0.005	0.14
	196069	334.5	340.0	5.5	0.001	< 0.10
	196070	340.0	342.0	2.0	0.001	< 0.10
	196071	342.0	347.0	5.0	0.001	< 0.10
	196072	347.0	352.0	5.0	0.001	< 0.10
	196073	352.0	356.6	4.6	0.001	< 0.10
	196074	356.6	361.0	4.4	0.001	< 0.10
	196075	361.0	363.5	2.5	< 0.001	< 0.10
	196076	363.5	368.5	5.0	0.001	< 0.10
	196077	368.5	373.8	5.3	< 0.001	< 0.10
	196078	373.8	375.3	1.5	< 0.001	< 0.10
	196079	375.3	380.0	4.7	0.025	< 0.10
	196080	380.0	385.0	5.0	0.001	< 0.10
	196081	385.0	390.0	5.0	0.005	< 0.10
	196082	390.0	394.6	4.6	0.001	< 0.10
	196083	394.6	397.0	2.4	< 0.001	< 0.10
	196084	397.0	401.0	4.0	0.001	< 0.10
	196085	401.0	405.0	4.0	0.001	< 0.10
	196086	405.0	408.3	3.3	0.001	< 0.10

VULTURE MINE; headframe of the west incline, workings along the ~35° dip of mineralization exposed in the walls of pit number one. Quartz porphyry sill is in shadow with hanging wall zone to right and footwall zone in shadow to left.

Ben Dickerson,
Carole O'Brien,
and Milt Hood
at the Vulture.
September, 1984

VULTURE PLACER TESTING

Channel sampling deep backhoe trenches and running material thru a small vibrating screen and riffle box alluvial gold recovery plant. Concentrate from the plant is being panned by consultant, James M. Prudden. December, 1984

Dust cloud from dry reverse circulation rotary drilling

Silhouette of Vulture west incline headframe at sunset

Schramm rotary reverse circulation rig on a vertical hole. Sample recovery is below the cyclone.

VULTURE DRILLING

Typical array of chip and powder samples, both bagged and rejects on the ground, displaying vari-colored five-foot intervals.

Schramm Rotadrill on a -60° angle hole at the Bell property, March, 1985 Note sample recovery and handling using a cyclone and sample splitter. Bob Card is the driller, Randy driller's helper and sample runner, and Karl Budge is splitting samples.

A.F. Budge

MEMO

TO: Ben F. Dickerson, Carole A. O'Brien, Joe Fernandez
cc: R.W. Hodder

FROM: Don White

DATE: January 2, 1987

SUBJECT: Vulture gold recovery in relation to rock types and siliceousness

Initial cyanide leach amenability tests on our samples taken from 6-inch core drilling at the Vulture have confirmed that a problem exists with gold recovery from very siliceous rock. Specifically, the gold recovered from the bottle-roll test of 1-inch material from the quartz zone of hole M-1 yielded only 36% recovery (for a short period).

Metallurgical testing is continuing and finer crushing is expected to enhance recoveries considerably. However, the expectation is that crushing of the siliceous ores will be necessary. Joe Fernandez phoned Friday, Dec. 19, 1986 and requested estimates of how much quartz porphyry intrusive hanging wall and footwall rock to expect in the overall mineralized zone. Joe wanted a spur-of-the-moment estimate and a more carefully studied answer. My spot estimate was 70% qpi, 20% HW, 10% FW, if taken by tonnage, but because the HW zone is higher grade, 50% qpi, 40% HW, 10% FW if estimated by contained ounces of gold.

In order to more accurately answer the question, we agreed that I should log the drill holes for which we had only assays, no geologic logs (Hennessey-era holes H-1-14, 84-1-18). This provides the fundamental data for any study and could not be delayed given Joe's schedule for a response. The chips for those holes were logged and the written logs from Pegasus' pit-area holes were reinterpretted to graphic form compatible with our rock type designations. When the drill data was plotted on longitudinal sections through the planned pit (as provided by A.J. Fernandez, Dec. 1986) it became clear that surface data on rock types in the existing pits and underground information on the rock types down the west incline thru the 150 and 350 levels would be of much help. Thus one day was spent at the mine checking the Noranda 1" = 50' pit maps and one half day underground utilizing the Pegasus maps of workings.

I wish you will study the Noranda geologic maps of the pits for I feel they are well done and highlight some issues I have not stressed enough. Most importantly, they show the aerial extent of the qpi and massive quartz veins. The distinction between the qpi and quartz is one thing I have not made clear enough. The Laramide (?) plutonic activity likely evolved from aplite to quartz porphyry to quartz through time with corresponding increase in gold concentrations.

The bonanza grade gold all occurred in quartz veins. Old stopes are almost exclusively in quartz. The higher grades remaining are in quartz veins. The lower grades occur in the qpi and in silicified rocks. The latter is a pervasive, often intense, silica alteration of the Precambrian wall rocks in

proximity to the qpi. One has to bear in mind the differences between originally siliceous rock (such as the siltite unit and others within the varied Precambrian stratigraphy) silicified rock, quartz porphyry, and quartz as in veins. My previous drill logs, Noranda's maps, and this discussion will hopefully make this clear.

Accompanying are 1" = 50' vertical longitudinal sections, looking north. They show present topography, the planned pit, drilling to date, rock types, and mineralization. Utilizing this data I now estimate that 40% (by volume) of what is considered potential ore grade within the planned pit will be qpi and quartz, probably about equal portions (e.g., 20% qpi, 20% quartz). Another 40% will be very silicified Precambrian wall rock to the qpi and quartz (mainly qs, qsc, and w units) another 10% very siliceous rock of primary nature (e.g., the st unit) and only about 10% non-silicified and non-siliceous but quartz-veined and mineralized rock (e.g., top zone of M-2).

In summary, leachability is a function of rock type because leachability is inversely proportioned to siliceousness (whether primary or a result of silicification). The very nature of the Vulture occurrence as epigenetic, qpi-related gold means that most of the gold is in quartz, qpi or silicified wall rock. Thus the necessity of crushing is inevitable. Ongoing metallurgical studies should tell us how fine a crush is needed.

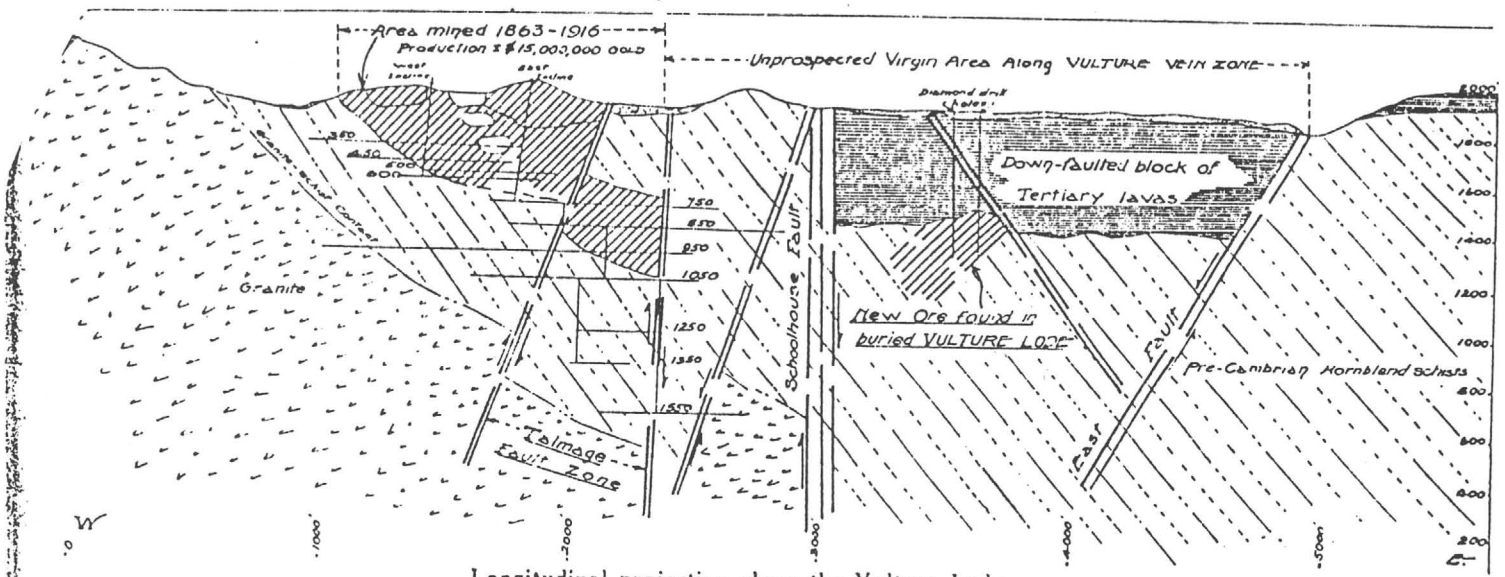
Some further observations on the Vulture longitudinal sections:

1) The steep east end cutoff of the planned pit is probably only an artifact of no drilling further east beneath pit 1. There is every reason to believe that M-1/H-15/H-49 grades will persist east to the Talmadge fault. Mining deeper at the east end would make the overall future pit symmetrical with the capability of having two ramps. Certain efficiencies might result from two ramps, perhaps one-way traffic on each and one to use when the other is being lowered or graded. Any future drilling should include a couple holes collared within pit 1 to confirm mineralization there.

2) Stripping of the Mill Wash area between pits 2 and 4 will yield much sand and gravel, some of it with placer potential. If that material must be handled anyway, it could well be washed for gold and the resulting classified material used on site and/or sold as aggregate in Wickenburg.

3) The "ore shoots" identified by historical workers are now recognizeable in our longitudinal sections. Arthur Perry Thompson (The Mining Journal, Nov. 30, 1930, p. 11 longitudinal section attached) outlines the two main ore shoots corresponding to the west and east incline areas and merging at depth. Our sections reveal the tops of those shoots.

DW:sk



Longitudinal projection along the Vulture Lode.

from: Thompson, Arthur Perry; 1930

Finding the Lost Vulture Lode

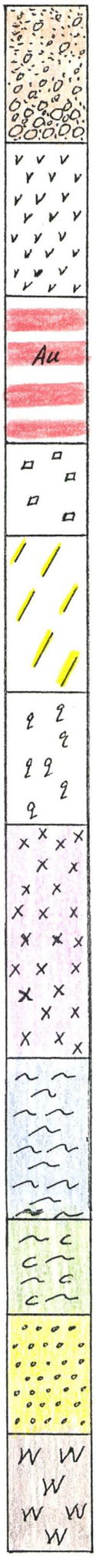
The Mining Journal, p.11

Nov. 30, 1930

VULTURE MINE

GRAPHIC DRILL LOG LEGEND

Compiled from rotary-reverse circulation chips



Quaternary	Qal	ALLUVIUM, colluvium; derived from the same rocks as in this sequence except for granodiorite from ≥2 miles NW. Varied but generally low degree of rounding, sorting, and stratification.
Tertiary	Trd	RHYOLITE DIKE; white, aphanitic, cross-cutting unit up to 15 feet in drill intercept thickness. Commonly contains black Mn dendrites on joint surfaces. Only known to occur in W portion of property near pits 3 and 4.
Alteration & mineralization	Au	GOLD; noted in graphic log where significant assays are reported. Thought to be cogenetic with other Laramide (?) events like qtz-pphy intrusion and associated pyritization, silicification, and quartz veining (see below).
	Py	PYRITE; generally tiny (≤0.5mm) disseminated cubes. Often in qtz or intensely silicified rocks.
	Si	SILICIOUS ROCK; thought to be introduced silica related to the qtz-pphy intrusive. Often obscures foliation and sometimes prevents identity of the original rock type. Intense silicification yields an amorphous quartzite.
Cretaceous (?) (Laramide-?)	Qtz	QUARTZ; only used to designate vein or bull quartz and discrete, visible qtz as in qtz-rich siltite and qtz-pphy intrusive. May harbor sulfides (py, gal) and native gold.
	Kqpi	QUARTZ-PORPHYRY INTRUSIVE; med. to coarse-grained, altered (sericitized, pyritized, silicified) granite to qtz-monzonite with qtz porphyroblasts (often up to 4mm dia). Quartz is typically a soft, pastel green (chloritic-?) or pale gray to milky. Emanates as an apophysis from stock to the W of pit 3. Generally semi-conformable, sill-like.
Precambrian	p€qs	QUARTZ-SERICITE SCHIST; brown, gray, tan, or almost white, thin laminated, fine to med grained quartz and sericite. Often iron stained. Gradational to siltite or wacke (see below) and prone to silicification.
	p€qsc	QUARTZ-SERICITE-CHLORITE SCHIST; same as above with the addition of a chlorite component (usually < 20%).
	p€st	SILTITE; brown or tan to light gray, poorly foliated, very fine grained, meta-silt. Often a quartzite. Grades finer to quartz-sericite schist or coarser to wacke.
	p€w	WACKE; brown, tan, or med to dark gray, poorly foliated, med grained, meta-wacke. Grades to siltite and qtz-ser schist. Prone to silicification.

Don White - Dec. 1984

A.F. Budge (Mining) Ltd.

to: J.W. Norby

Date: 7-31-89

from: J.R. Bosco

Subject: July Monthly Report

Core drilling began on the Vulture property during the month designed to test three of six I.P./resistivity anomalies identified by Joe Ansman earlier this year. All three anomalies are located less than one mile north of the Vulture Mine workings on claims leased by Budge Mining. Four drill holes are currently planned to test these anomalies for potential gold-bearing deposits -- possibly similar to those at the Vulture Mine (Figure 1).

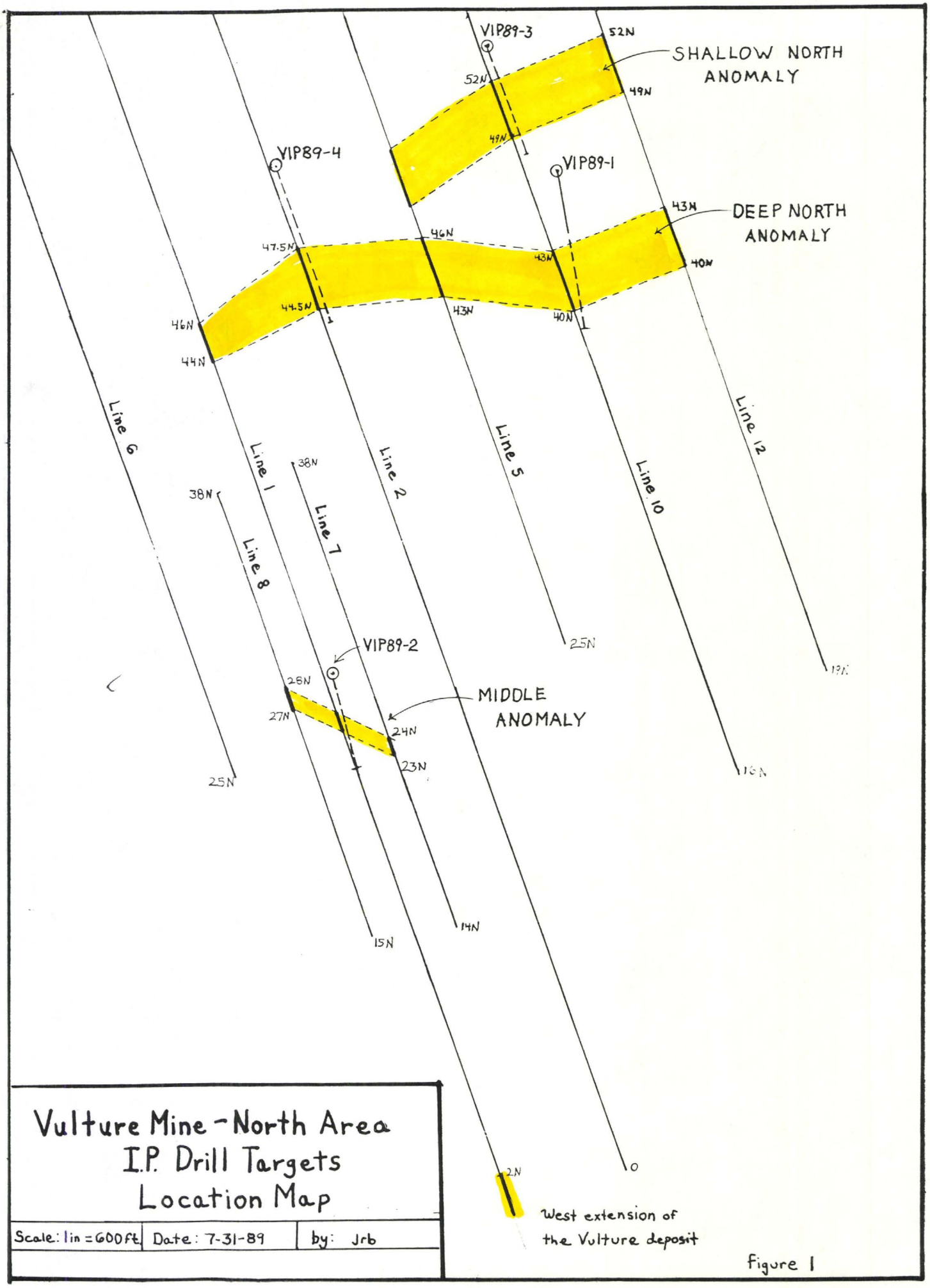
The first drill hole (VIP89-1) was collared on July 11, and is designed to test the eastern extension of the "North Deep" anomaly located along line 10 between 40 and 43 north. VIP89-1 is currently at 520 feet with a planned depth of roughly 1100 Ft. (Figure 2). Of note is a "dacite breccia" (338 feet to present) which contains scattered thin quartz veins and rather evenly distributed sulfides (primarily pyrite with minor chalcopyrite and molybdenite?) in concentrations from 1 to 4 percent. Thus far, however, assay results from this unit have been dissappointing with all analyses being less than .005 opt. - excepting a 4.7 foot interval containing .025 opt gold. The actual I.P. anomaly is expected to occur between 550-900 feet. A Summary log of VIP89-1 follows:

(Attachment A)

0-10 ft.	Overburden
10-48 ft.	Rhyolite intrusive with minor quart stringers
48-128 ft.	PreCambrian schist, minor quartz stringers
128-142 ft.	Rhyolite intrusive with trace pyrite
142-165 ft.	PreCambrian schist
165-172 ft.	Rhyolite intrusive with iron oxides on fractures.
172-196 ft.	PreCambrian Schist
196-269 ft.	Rhyolite intrusive
269-338 ft.	Dacite, weakly foliated
338-454 ft.	Dacite breccia, massive with fragments of granite, rhyolite, and quartz; 1-4 percent sulfide as disseminations, along fractures and with quartz stringers.
454-468 ft.	Rhyolite intrusive
468- Present	Dacite breccia, like above.

Also during the month, the surface projection of the "North Deep" anomaly was mapped (1in. = 20 ft.) along Line 10 between 38 and 43 north. Thirty-two (5-10 ft interval) chip samples were collected across strike from available outcrop. Rocks include PreCambrian argillites and volcaniclastics, metagabbro, rhyolite intrusives and fine to medium grained quartz porphyry intrusives. Of interest is a moderately to highly sericitized zone within a quartz porphyry intrusive (41.25-41.75 North) which may represent the I.P. target. The altered zone is highly bleached and stained with iron oxides. Abundant quartz veining or silicification appears to be lacking, however.

Additional mapping and sampling over the remaining I.P. targets is planned.



Vulture Mine - North Area I.P. Drill Targets Location Map

Scale: 1in = 600ft	Date: 7-31-89	by: Jrb

Figure 1

Vulture Drilling - 1989

Hole No.	Sample No.	From	To	Interval ft.	Gold opt	Silver opt
VIP89-1	196053	265.0	269.0	4.0	0.003	< 0.10
	196054	269.0	272.0	3.0	0.003	< 0.10
	196055	272.0	275.0	3.0	0.004	< 0.10
	196056	275.0	280.0	5.0	0.002	< 0.10
	196057	280.0	285.0	5.0	0.002	< 0.10
	196058	285.0	290.0	5.0	0.001	< 0.10
	196059	290.0	295.0	5.0	0.001	< 0.10
	196060	295.0	300.0	5.0	0.002	< 0.10
	196061	300.0	305.0	5.0	0.002	< 0.10
	196062	305.0	310.3	5.3	0.001	< 0.10
	196063	310.3	314.2	3.9	0.004	< 0.10
	196064	314.2	318.2	4.0	0.002	< 0.10
	196065	318.2	324.0	5.8	0.001	< 0.10
	196066	324.0	329.0	5.0	0.002	< 0.10
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	196068	334.0	334.5	0.5	0.005	0.14
	196069	334.5	340.0	5.5	0.001	< 0.10
	196070	340.0	342.0	2.0	0.001	< 0.10
	196071	342.0	347.0	5.0	0.001	< 0.10
	196072	347.0	352.0	5.0	0.001	< 0.10
	196073	352.0	356.6	4.6	0.001	< 0.10
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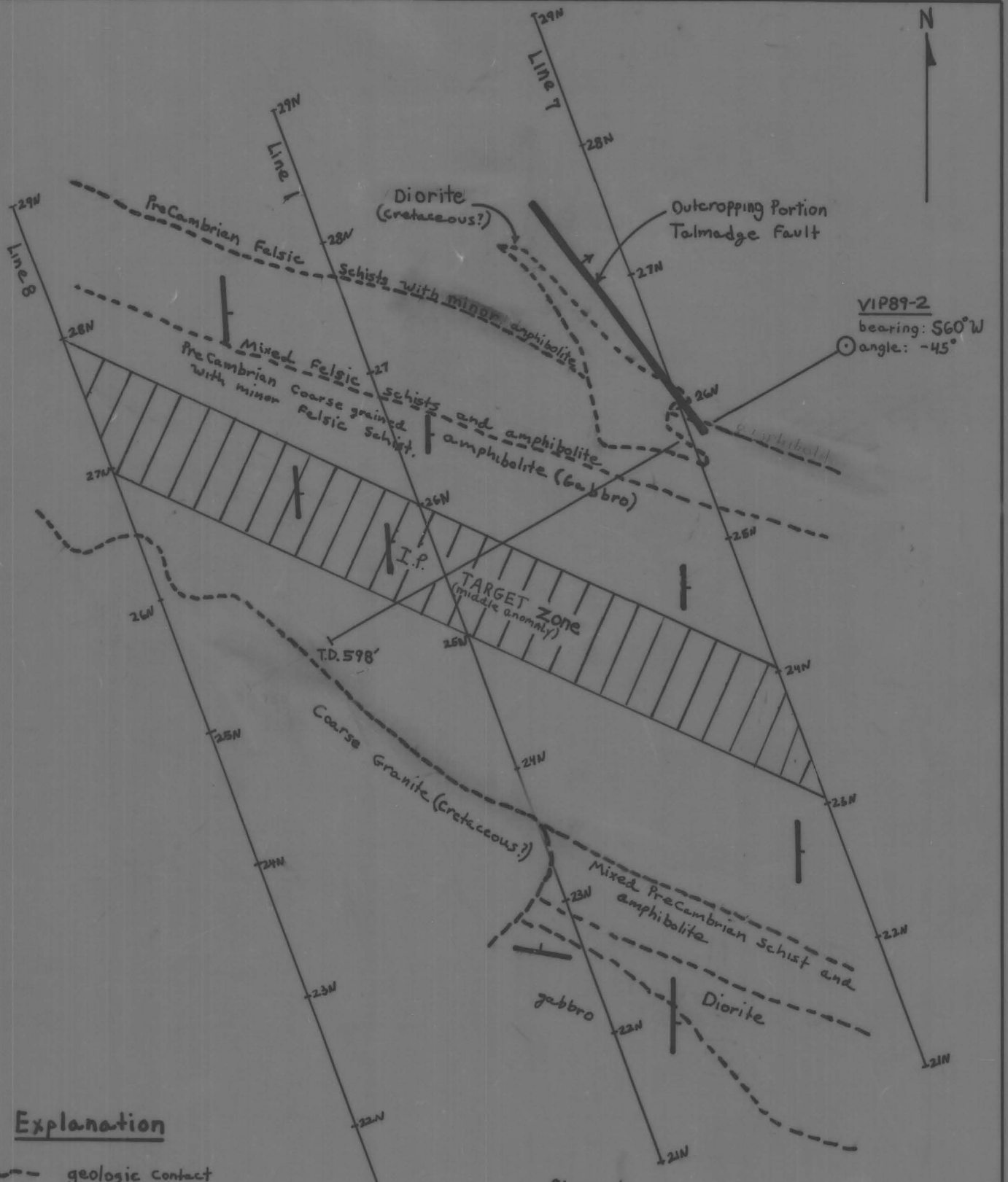
	196076	363.5	368.5	5.0	0.001	< 0.10
	196077	368.5	373.8	5.3	< 0.001	< 0.10
	196078	373.8	375.3	1.5	< 0.001	< 0.10
	196079	375.3	380.0	4.7	0.025	< 0.10
	196080	380.0	385.0	5.0	0.001	< 0.10
	196081	385.0	390.0	5.0	0.005	< 0.10
	196082	390.0	394.6	4.6	0.001	< 0.10
	196083	394.6	397.0	2.4	< 0.001	< 0.10
	196084	397.0	401.0	4.0	0.001	< 0.10
	196085	401.0	405.0	4.0	0.001	< 0.10
	196086	405.0	408.3	3.3	0.001	< 0.10

Attachment A.



Explanation

geologic contact

quartz vein

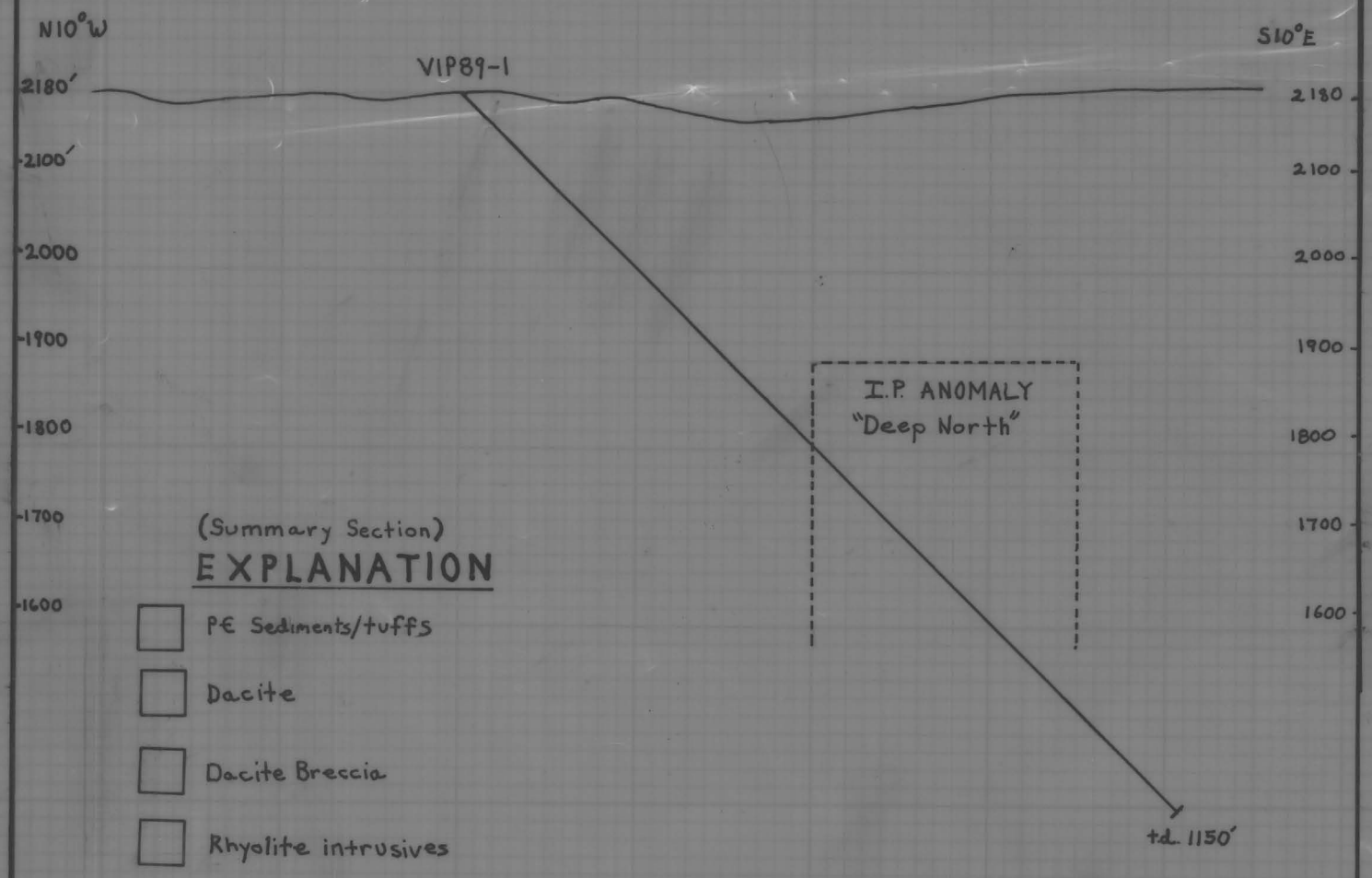
fault

figure 1

Vulture Property

Geologic/ Location MAP of the "Middle" I.P. Anomaly

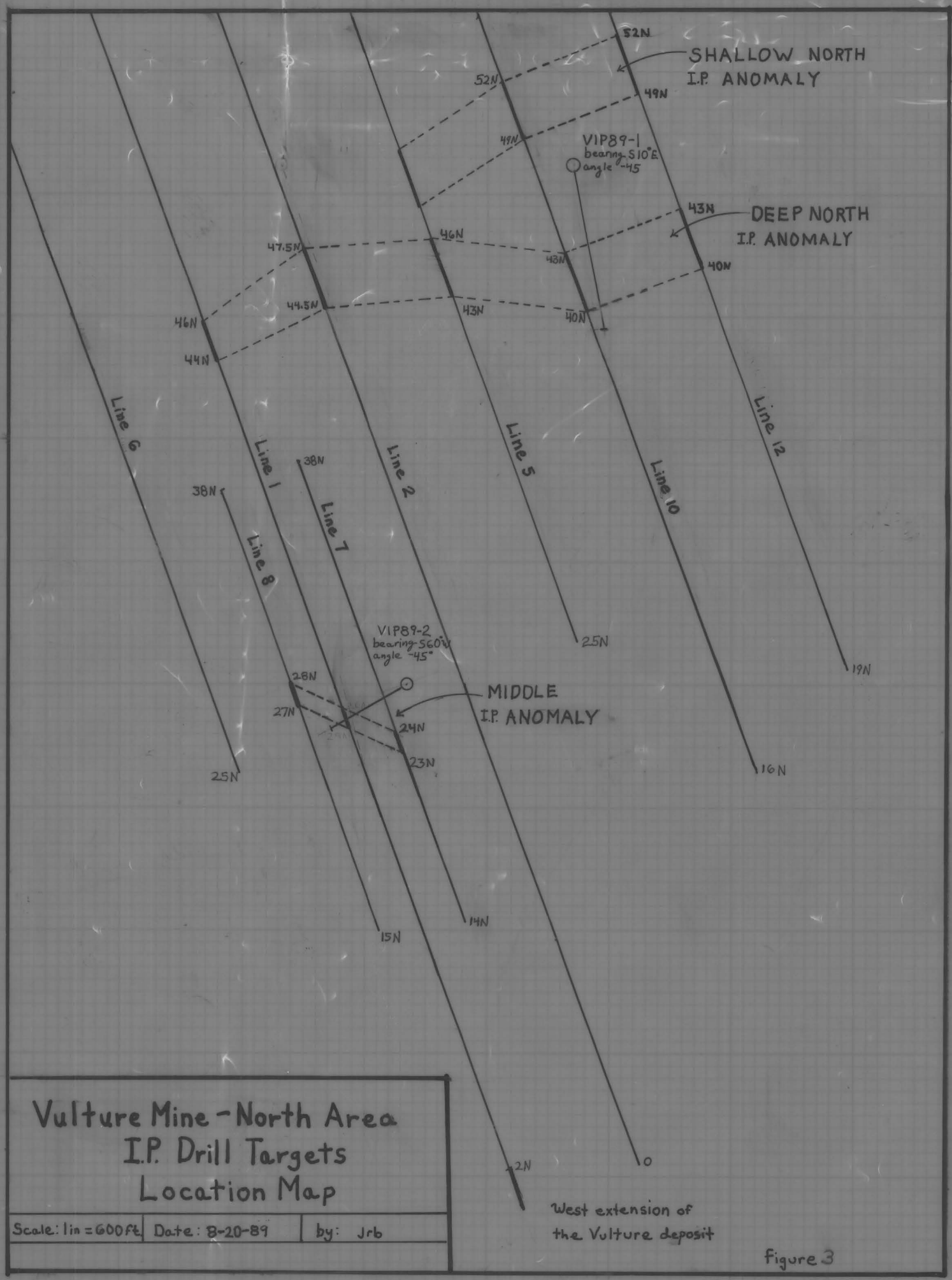
Scale: 1in = 100 Ft.	date: 8-20-89	by: JRB



VULTURE MINE
I.P. ANOMALY TESTS
DRILL HOLE VIP89-1

Scale: 1in.=200 ft.	Date: 7-30-89	BY: Jrb
	8-20-89	

Figure 1



Vulture Mine - North Area
I.P. Drill Targets
Location Map

Scale: 1in = 600ft	Date: 8-20-89	by: Jrb

figure 3

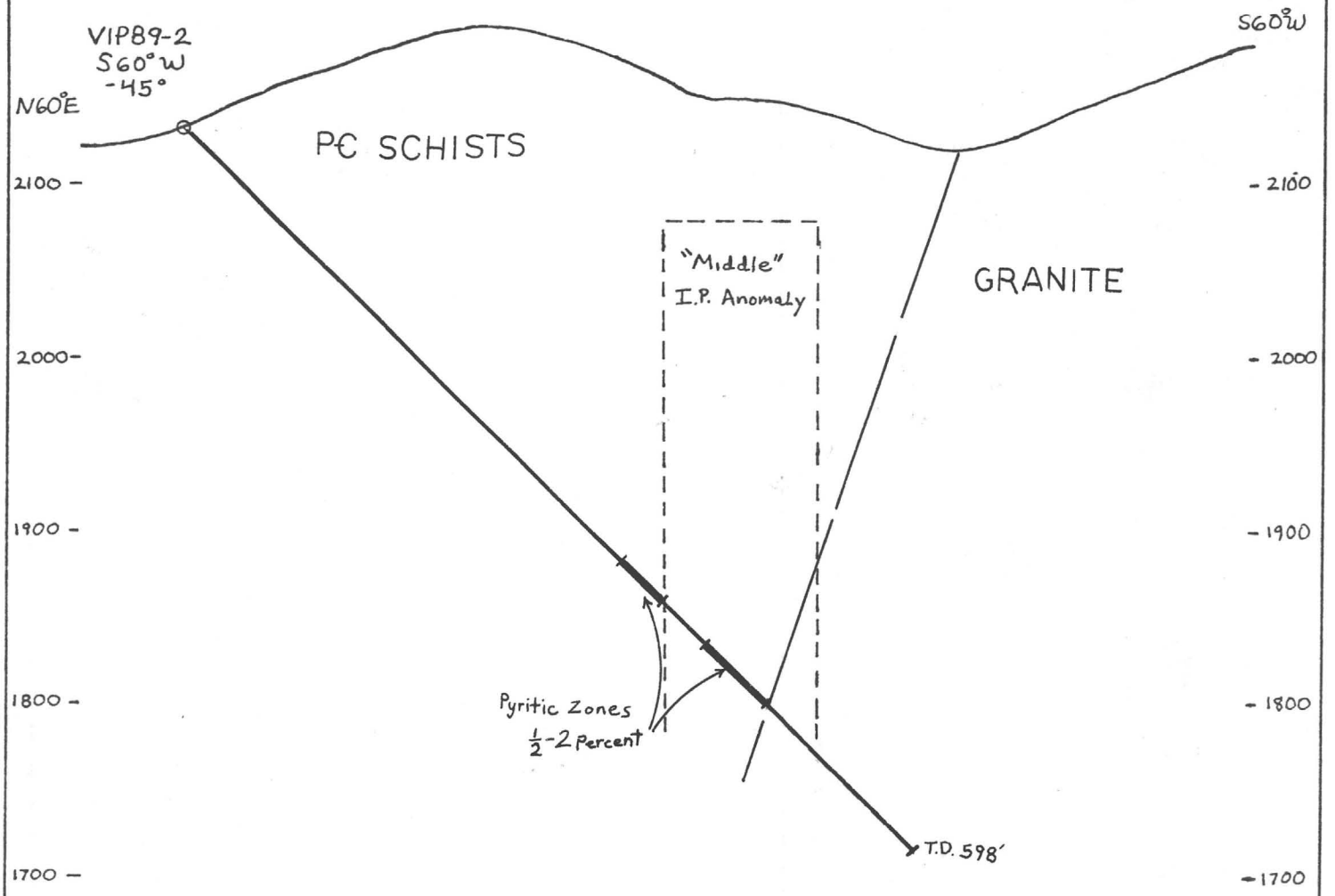


Figure 2.

Vulture Mine I.P. Anomaly Tests Drill Hole VIP89-2 Crossection Looking S30°E.		
Scale: 1in.=100ft.	Date: 8-20-89	by: Jrb
	9-10-89	

To: J.W. Norby

Date: 9-10-89

From: J.R. Bosco

Subject: Monthly Report; August 1, 1989 to September 9, 1989

Drill hole VIP89-2 was completed on 9-8-89 at a total depth of 598 feet. The hole was designed to test the "middle" I.P. anomaly which is a steeply dipping N65°W trending chargeable zone which occurs across lines 1, 7 and 8 at a depth from 50 feet to roughly 400 ft. In addition, the hole was situated to test (1) the northwest extension of the Talmadge Fault; (2) Several 1 to 6 inch pyrite, galena and chalcopyrite bearing quartz veins seen at the surface and (3) the Cretaceous? Vulture stock granite/PreCambrian Schist contact (Figure 1).

Examination of the core indicates a zone containing from ½ to occassionally 2 percent pyrite (and minor galena) occurring between 359 feet and 394 feet (Figure 2). Sulfides in this interval appear associated with carbonatization and pervasive quartz-carbonate stringers which line and cement thin (less than ⅛ inch thick) fractures. A second sulfidic zone is located between 430 and 480 feet with ½ to 2 percent pyrite occurring as disseminations and with occassional thin (less than ½ inch) quartz veinlets. At 410 feet a 4 inch (2.75 inch true thickness) quartz vein was cut which contains 25 percent combined galena and pyrite. Previous outcrop samples collected in the area from a 4-6 inch quartz vein with similar minerology and appearance have assayed .236 and .141 opt gold.

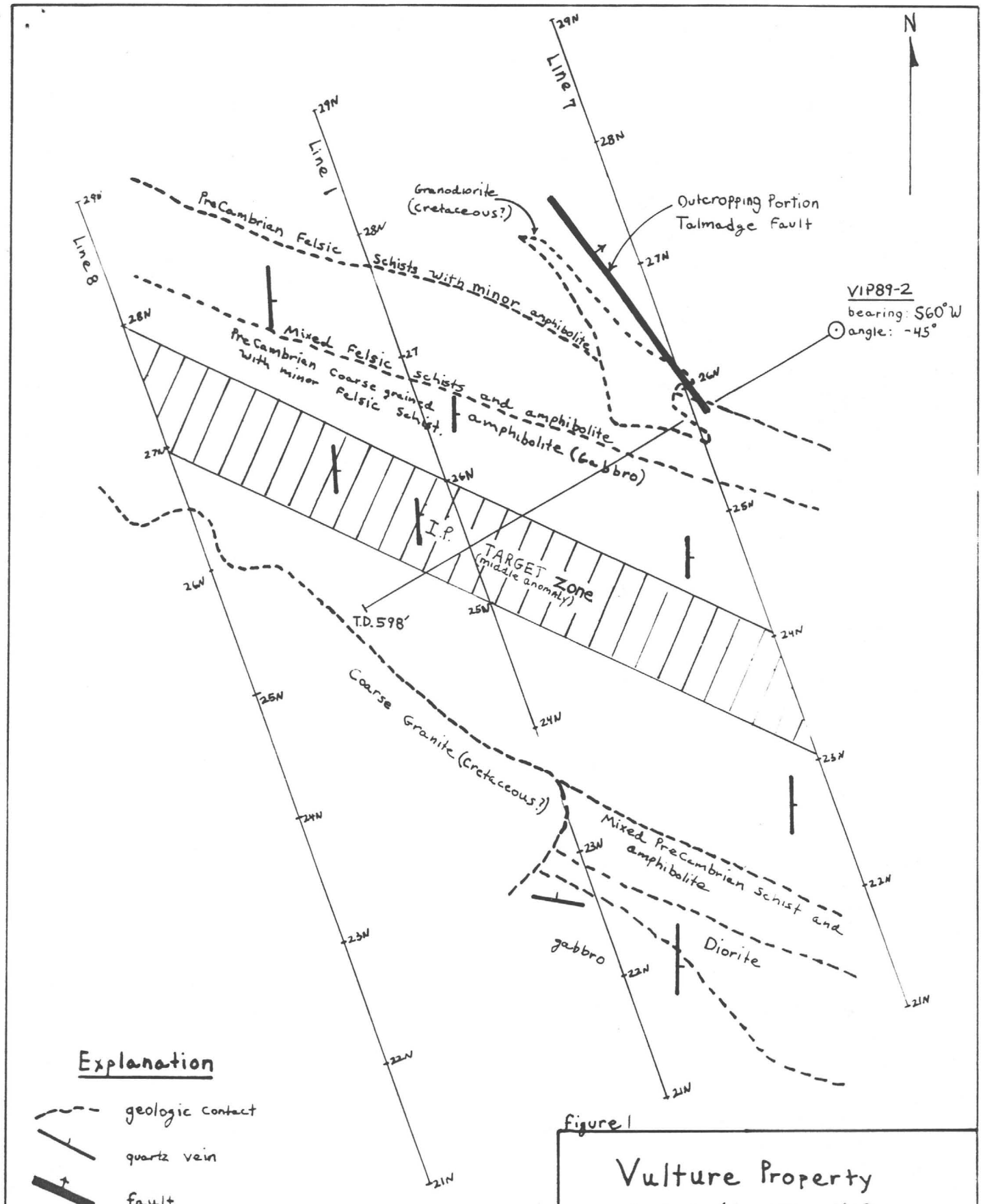
The "middle" anomaly closely parallels the Vulture granite/precambrian schist contact and probably resulted from intrusion of the Vulture granite with associated sulfide localization (through fracturing and quartz veining) in the precambrian rocks near the granite contact. Samples from 10-204 feet are currently at the Iron King lab undergoing assay. Samples from 204-598 feet will be sent to the lab this week.

A Summary log Follows:

10-30 Ft. Gabbro, coarse grained.
30-53 Ft. Mixed basalt and andesite tuffs.
53-151 ft. Mixed gabbro and basalt.
57-68 Ft. Fault gouge - Carbonate/quartz cement with gabbro breccia Fragments.
68-94 Ft. Rubbly, oxidized gabbro.
151-174 ft. andesite tuff
174-255 ft. Dacite tuff, trace to ½ percent pyrite
255-346 ft. Mixed dacite, basalt and gabbro.
346-396 ft. Predominantly basalt mixed with gabbro.
359-394 Ft. Rocks moderately Carbonated. Pervasive quartz/carbonate filling thin Fractures. ½-2% pyrite, very minor galena.
396-405 Ft. Granodiorite - trace pyrite.
405-481 Ft. Basalt mixed with gabbro
430-480. ½-1% pyrite as disseminations and with occassional thin (less than ½ inch) quartz veins.
481-598 ft. Granite with minor gabbro inliers/dikes. Barren.

Drill hole VIP89-1 which tested the "north deep" I.P. anomaly was stopped at 1150 Feet on 8-18-89. The anomaly is represented by a broad zone (339 to 1150 Feet) Containing 1 to 4 percent pyrite which crosses several lithologies including diorite and granodiorite sills interlayered with precambrian rocks of intermediate to mafic compositions. With the exception of pyritization and a Few localized silicified zones, hydrothermal alteration is lacking in the core. Assay results from All 246 samples of the hole have been received. The results indicate little gold enrichment with all Samples assaying .008 opt or less excepting a 4.7 ft. Sample at 375 ft. grading .025 opt and a 5 Ft Sample at 1095 ft grading .033 opt.

Also during the month, the surface projection of the "north shallow" I.P. anomaly (Figure 3) was mapped at a scale of 1 inch = 20 ft. along line 10 between 43N and 53N. Thirty-one, 5-12 ft., chip samples were collected across strike from available outcrops. Geologically, the area is characterized by Pre Cambrian volcanics of felsic to intermediate compositions intruded by Cretaceous units ranging from granite to diorite. Rocks are highly fractured and oxidized due to east, northeast and northwest faults cutting the area. Sulfide contents (where exposed) are pyrite, chalcopyrite and galena in scattered thin northwest trending quartz veins. Zones of reddish iron oxide (after pyrite?) occur sporadically in fractured Pre Cambrian units. Sample results are expected this week.



Explanation

geologic contact

quartz vein

fault

figure 1

Vulture Property

Geologic/ Location MAP of the "Middle" I.P. Anomaly

Scale: 1in = 100 ft.	date: 8-20-89	by: vrb

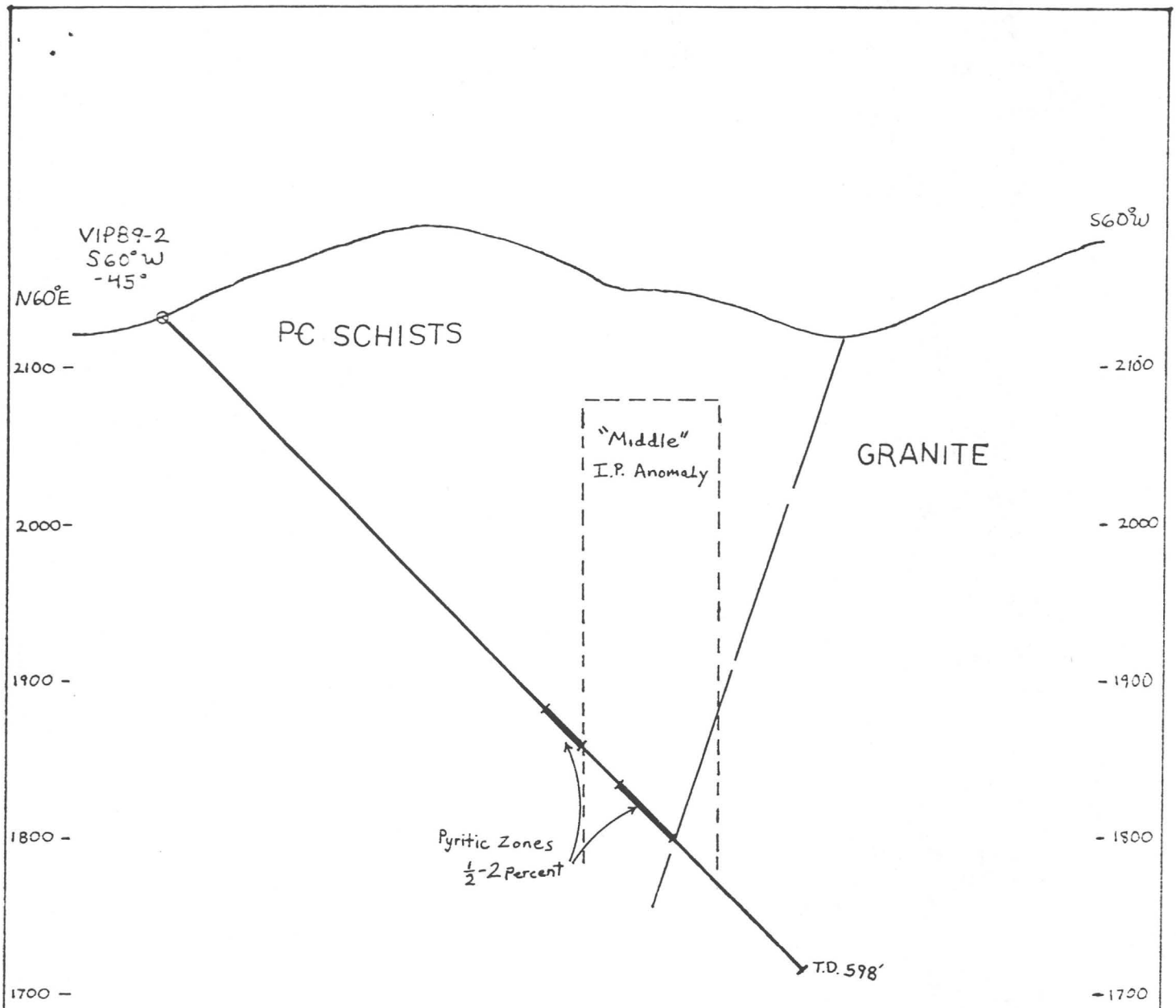
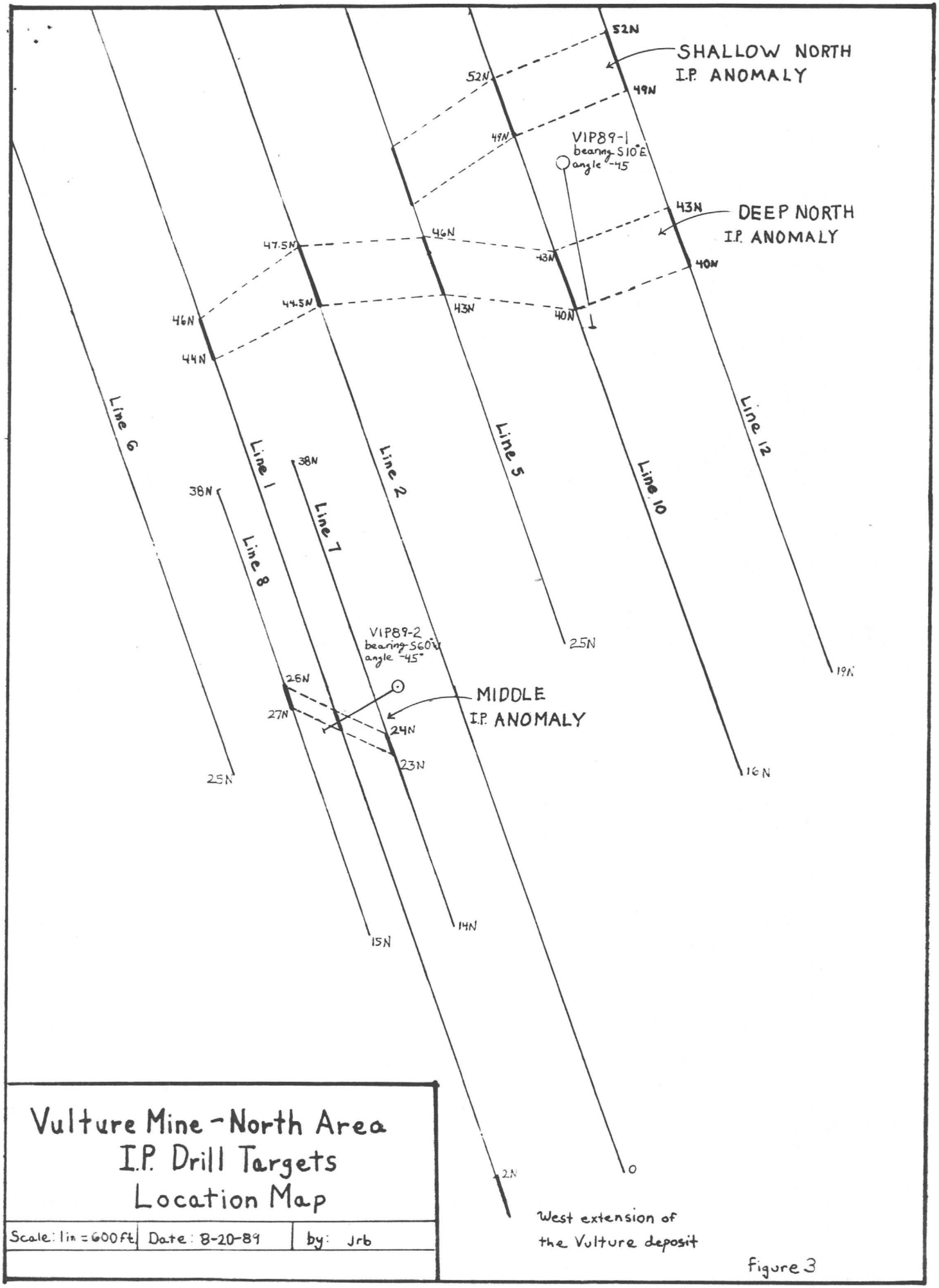


Figure 2

Vulture Mine
I.P. Anomaly Tests
Drill Hole VIP89-2
Crosssection Looking S30°E

Scale: 1in =100ft.	Date: 8-20-89	by: Jrb
	9-10-89	



Vulture Mine - North Area
I.P. Drill Targets
Location Map

Scale: 1in = 600ft	Date: 8-20-89	by: Jrb

Figure 3

A.F. Budge (Mining) Limited

Date: September 26, 1989

To: J.W. Norby

From: J. Bosco

Subject: Vulture Update

VIP89-1 North deep I.P. Anomaly

Copper and Molybdenum A.A. results from drill hole VIP89-1 have been received. Copper contents from the entire core section are consistently in the 100-300 ppm range (.01 to .03 percent) with the exception of a 6 foot interval at 600 feet which averages 667 ppm copper (.067 percent). Molybdenum results typically are in the 50 to 200 ppm range (.005 to .02 percent) with the exception of a 4.1 section at 705 feet grading 500 ppm (.05 percent) and a 3.5 foot section at 770 ft running 3250 ppm (.325 percent). The molybdenum results correlate with disseminations of a soft, "silvery" metallic in the core suspected to be Molybdenite. Excepting the 3250 ppm molybdenum sample which is from a thin 3.5 ft granodiorite intrusive, fluctuations in Cu and Mo contents show little correlation with any specific lithology. The "North deep" I.P. zone is not considered a promising base metal target.

VIP89-2 Middle I.P. ANOMALY

All gold analyses from VIP89-2 core have been received. Several scattered gold anomalies do occur, but, none are associated with weakly pyritic (½-2 percent) rock thought to represent the I.P. target. A summary of the gold occurrences located between the surface and the granite contact follows:

Ft.	grade Au(opt)		description
89-94	.014		Sheared gabbro with several 1 to 6 inch quartz veins containing 1 percent py, trace cpy and MoSz. Abundant Red FeOx. West margin of the Talmadge Fault.
154-159 and 159-164	.007 .038	.023 (ave.)	Foliated PE dacite/andesite with minor FeOx along fractures. 159-164 interval contains a ½ ft. section of barren quartz vein rubble.
410.2-410.6	.276		"The Vein". Sulfidic quartz vein 2¾ inch (true) thick with up to 25 percent Ga and py.

Interestingly, the Vulture Stock granite (encountered from 481 ft to the end of hole at 598 ft) contains abundant low-grade gold. Only very rare traces of pyrite or evidence of pyrite (voids/FeOx) is noteable in core samples of the granite. The granite is white to light pink, medium to coarse grained, massive and occasionally broken and oxidized. A brief description of the granite hosted gold anomalies follows: (Note - the rock between the anomalies contains .001 opt Au or less)

Ft	grade Au(opt)		description
510-515	.026		From a 10 ft. thick chloritic gabbro intrusive? Within the granite. Trace pyrite.
525-530 530-535 535-540	.007 .003 .002	.004 (ave.)	barren granite with scattered fractures & rubble zones.

Ft.	grade Au (opt)		description
545-550	.012	.013 (ave.)	Typical massive granite No sulfides.
550-555	.020		
555-560	.014		
560-565	.004		
570-575	.013		Same
580-585	.006		Same

These granite hosted gold anomalies although low-level seem to indicate some gold concentrating mechanism. Chasing these anomalies in search of larger, richer zones may be a tough proposition, however, in light of sparse outcrop in the area and the lack of obvious exploration targets such as sulfides, veins, lithology or structure. Possibly the granite in VIP89-2 should be reexamined knowing that it is auriferous.

North Shallow I.P. ANOMALY

Assay results from 31 channel samples collected across the "North Shallow" I.P. anomaly, along line 10 between 43N and 52N, have been received. All results are .004 opt Au or less. These results along with surface mapping completed in the area give NO indication of an attractive drill target.

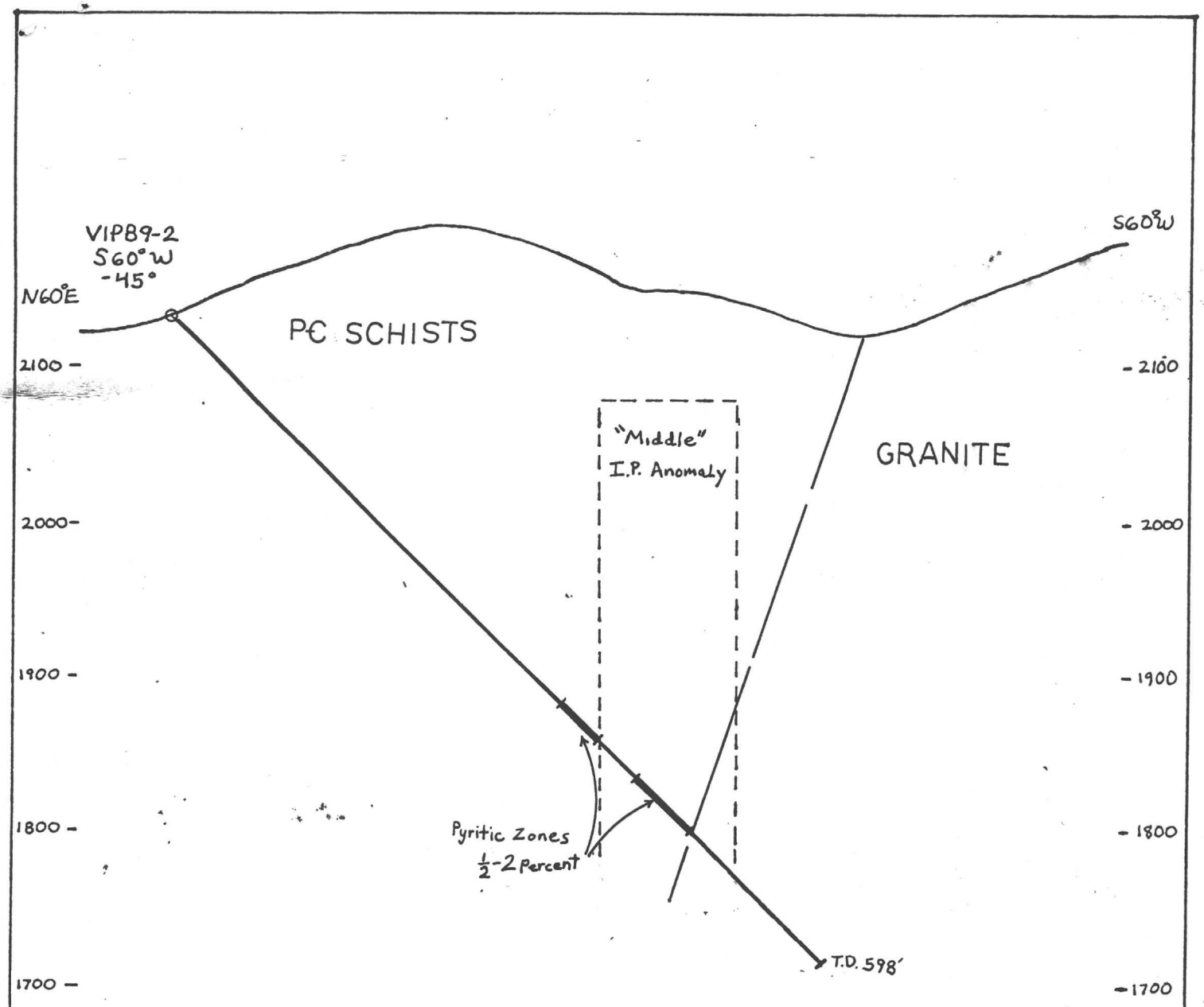


Figure 2

Vulture Mine
I.P. Anomaly Tests
Drill Hole VIP89-2
Crossection Looking S30°E

Scale: 1 in. ≡ 100 ft.	Date: 8-20-89	by: Jrb
	9-10-89	

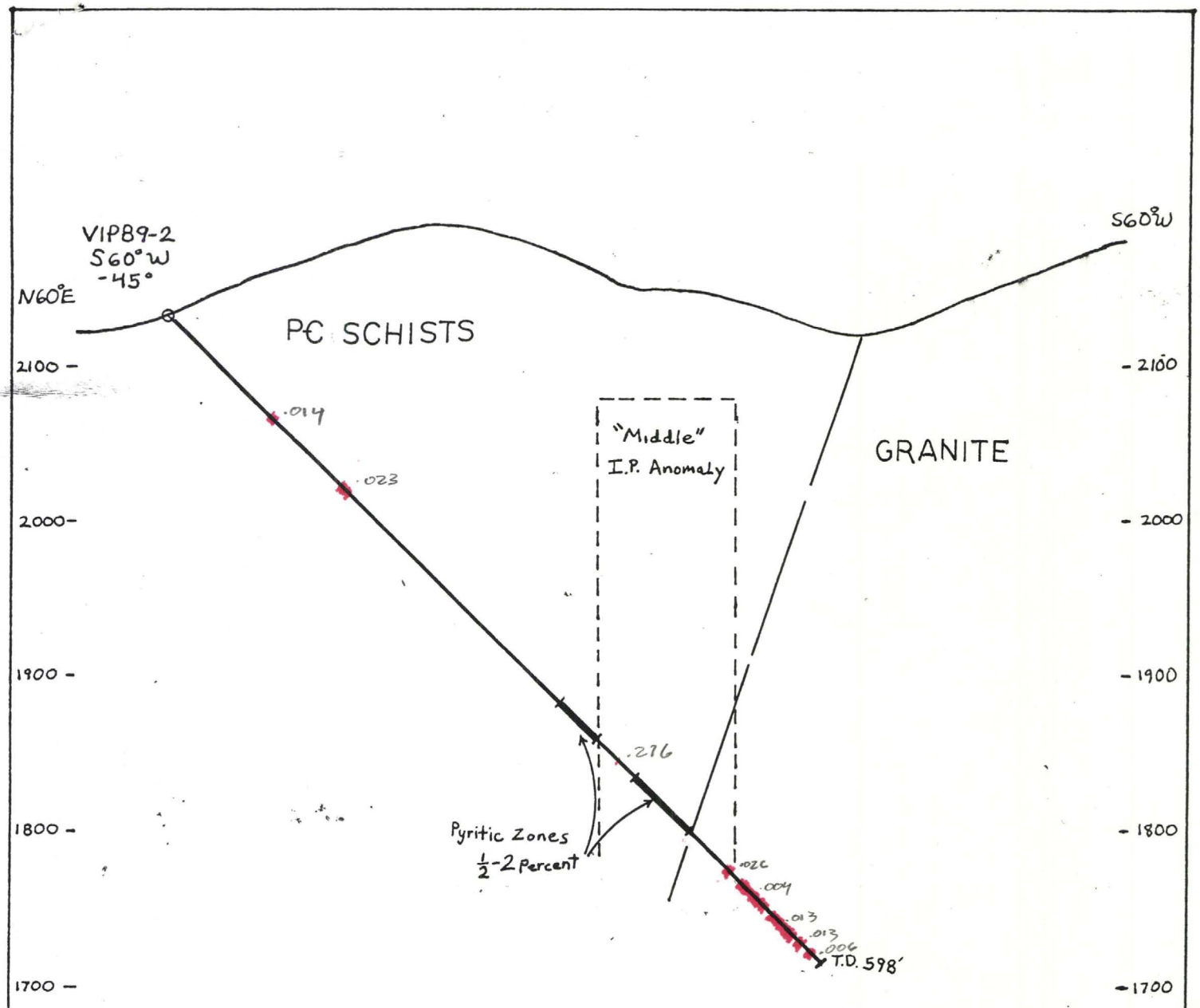


Figure 2.

Vulture Mine
I.P. Anomaly Tests
Drill Hole VIP89-2
Crossection Looking S30°E.

Scale: 1in.=100ft.	Date: 8-20-89	by: Jrb
	9-10-89	

Vulture Drilling - 1989

Hole No.	Sample No.	From	To	Interval ft.	Gold opt	Silver opt
VIP89-1	196001	10.0	15.0	5.0	0.008	
	196002	15.0	20.0	5.0	0.001	
collared	196003	20.0	25.0	5.0	< 0.001	
07-11-89	196004	25.0	30.0	5.0	< 0.001	
	196005	30.0	35.0	5.0	0.001	
drilling	196006	35.0	40.0	5.0	< 0.001	
07-12-89	196007	40.0	45.0	5.0	0.001	
to	196008	45.0	50.0	5.0	0.001	
	196009	50.0	55.0	5.0	0.001	
	196010	55.0	60.0	5.0	0.001	
	196011	60.0	65.0	5.0	< 0.001	
	196012	65.0	70.0	5.0	< 0.001	
	196013	70.0	75.0	5.0	0.002	
	196014	75.0	80.0	5.0	< 0.001	
	196015	80.0	85.0	5.0	0.001	
	196016	85.0	90.0	5.0	0.001	
	196017	90.0	95.0	5.0	0.002	
	196018	95.0	100.0	5.0	0.002	
	196019	100.0	105.0	5.0	0.002	
	196020	105.0	110.0	5.0	0.001	
	196021	110.0	115.0	5.0	0.002	
	196022	115.0	120.0	5.0	0.001	
	196023	120.0	125.0	5.0	0.001	
	196024	125.0	128.0	3.0	0.001	
	196025	128.0	133.0	5.0	0.001	
	196026	133.0	140.0	7.0	0.002	
	196027	140.0	145.0	5.0	0.001	
	196028	145.0	150.0	5.0	0.001	
	196029	150.0	155.0	5.0	0.001	
	196030	155.0	160.0	5.0	0.001	
	196031	160.0	165.0	5.0	0.001	
	196032	165.0	170.0	5.0	re-run	
	196033	170.0	175.0	5.0	re-run	
	196034	175.0	180.0	5.0	re-run	
	196035	180.0	185.0	5.0	0.001	
	196036	185.0	190.0	5.0	0.001	
	196037	190.0	195.0	5.0	0.001	
	196038	195.0	200.0	5.0	0.001	
	196039	200.0	205.0	5.0	0.001	
	196040	205.0	210.0	5.0	0.001	
	196041	210.0	215.0	5.0	0.001	
	196042	215.0	220.0	5.0	0.004	
	196043	220.0	225.0	5.0	0.001	
	196044	225.0	230.0	5.0	0.001	
	196045	230.0	235.0	5.0	0.001	
	196046	235.0	240.0	5.0	0.001	
	196047	240.0	245.0	5.0	0.001	
	196048	245.0	247.0	2.0	0.005	
	196049	247.0	250.4	3.4	0.002	

196050	250.4	255.0	4.6		0.003		
196051	255.0	260.0	5.0		0.001		
196052	260.0	265.0	5.0		0.001		
196053	265.0	269.0	4.0		0.003	<	0.10
196054	269.0	272.0	3.0		0.003	<	0.10
196055	272.0	275.0	3.0		0.004	<	0.10
196056	275.0	280.0	5.0		0.002	<	0.10
196057	280.0	285.0	5.0		0.002	<	0.10
196058	285.0	290.0	5.0		0.001	<	0.10
196059	290.0	295.0	5.0		0.001	<	0.10
196060	295.0	300.0	5.0		0.002	<	0.10
196061	300.0	305.0	5.0		0.002	<	0.10
196062	305.0	310.3	5.3		0.001	<	0.10
196063	310.3	314.2	3.9		0.004	<	0.10
196064	314.2	318.2	4.0		0.002	<	0.10
196065	318.2	324.0	5.8		0.001	<	0.10
196066	324.0	329.0	5.0		0.002	<	0.10
196067	329.0	334.0	5.0		0.001	<	0.10
196068	334.0	334.5	0.5		0.005		0.14
196069	334.5	340.0	5.5		0.001	<	0.10
196070	340.0	342.0	2.0		0.001	<	0.10
196071	342.0	347.0	5.0		0.001	<	0.10
196072	347.0	352.0	5.0		0.001	<	0.10
196073	352.0	356.6	4.6		0.001	<	0.10
196074	356.6	361.0	4.4		0.001	<	0.10
196075	361.0	363.5	2.5	<	0.001	<	0.10
196076	363.5	368.5	5.0		0.001	<	0.10
196077	368.5	373.8	5.3	<	0.001	<	0.10
196078	373.8	375.3	1.5	<	0.001	<	0.10
196079	375.3	380.0	4.7		0.025	<	0.10
196080	380.0	385.0	5.0		0.001	<	0.10
196081	385.0	390.0	5.0		0.005	<	0.10
196082	390.0	394.6	4.6		0.001	<	0.10
196083	394.6	397.0	2.4	<	0.001	<	0.10
196084	397.0	401.0	4.0		0.001	<	0.10
196085	401.0	405.0	4.0		0.001	<	0.10
196086	405.0	408.3	3.3		0.001	<	0.10
196087	408.3	413.0	4.7				

Carole

Don White
521 East Willis St.
Prescott, AZ 86301
778-3140

July 22nd, 1988

Robert Crook
Iron King Assay, Inc.
Humboldt, AZ 86329

Vulture

Hello Bob,

Total of 21 samples accompanying for gold only fire assay/AA finish (one assay ton).

They are numbered:

1	T-135	Ø-3	11	T-141	4-6
2	T-135	3-4	12	T-142	Ø-2
3	T-136	Ø-2	13	T-143	Ø-1
4	T-137	Ø-2	14	T-143	1-3
5	T-138	Ø-3	15	T-144	Ø-3
6	T-139	Ø-2	16	ST-1	Ø-2
7	T-140	Ø-3	17	ST-2	Ø-3
8	T-140	3-4	18	ST-3	Ø-2
9	T-141	Ø-1	19	VR-1	
10	T-141	1-4	20	VR-2	
			21	VR-3	

Please save all pulps + rejects for my pickup
Please send a copy of the results & billing to:

Carole A. O'Brien
A.F. Budge (Mining) Ltd.
4301 North 75th St.
Suite 101
Scottsdale, AZ 85251

Thankyou,

Don White
Geologist, CPG.

~~VS~~ VSG-1 -41

(246) / at $600 per Sample

1	.002		699	
2	.001		728.3	
3				
4	.001			
5	.001			
↓			196	147
14	.001		153	
15	<.001			
16	.001			
17	.001			
18	.001			
19				
20	.001			
21	.003			
22	.001			
23	.003			
24	.003			
25	.002			
26	.006	.029	.051	
27	.019			
28	.002			
29	.141			
30	.236			
31	.003			
32	.005			
33	.001			
34	<.001	.029 (wt %) (99 PPM)		
35	.001	.051		
36	.001			
37	.017			
38	<.001			
39	.001			
40	.001			
41	.001			

46

632-7245

Paul

John

Paul Tylor

906032 –	<.001
33	.001
34	.004
196087	.001
88	.001
89	.002
90	<.001
91	< —
92	< —
93	< —
94	.001
95	< —
6	< —
7	< —
8	< —
9	< —
100	.001
1	.001
2	<
3	.001
4	.001
5	<
6	<
7	.001
196108	.001
~~9~~	
~~196110~~	
VT-20	.002
21	.002
22	.002
23	.001
24	.001
25	.001
26	.001
27	.001
28	.001
29	.001
30	.050
31	.036
32	.001
33	.002
34	.003

35	.002
36	.001
37	.001
38	.001
39	.001
40	.001
41	
42	
43	
44	
45	
46	.001
47	<
48	.001
49	
50	
51	

515.5

FROM THE DESK OF

BEN F. DICKERSON III

1 to 1/2" 50% red + 18.6 rec

1/2 to 1/4" 50% = + 9.54

1/4-1/8" 50% " + 5.00 ?

Preliminary (Given over the phone from Frank M. 1/8/87)

Bottle Roll Test Results -- Vulture Qpi Samples
minus 1/4 inch

Size Fraction	Weight (g)	% Weight	Au Assay	Au Distribution
-1/4+6mesh	1524.0	30.5	.031	14.3
-6+10mesh	1277.5	25.6	.034	13.2
-10+20mesh	705.7	14.1	.018	3.9
-20+35mesh	347.0	7.0	.030	3.2
-35mesh	1135.6	22.8	.007	2.4
Calc Residue	4989.8	100	.024	37.0
Leach Solution	5044.2		.041	63.0 — recovery
Calc Head	4989.8		.06~~8~~5	100.0

Bottle Roll Test Results -- Vulture Qpi Samples
minus 1/2 inch

Size Fraction	Weight (g)	% Weight	Au Assay	Au Distribution
-1/2+1/4	2385	47.8	.024	22.3
-1/4+6mesh	965.8	19.3	.029	10.9
-6+10mesh	515.0	10.3	.021	4.2
-10+20mesh	272.5	05.4	.018	1.9
-20+35mesh	141.4	2.8	.017	1.1
-35mesh	720.9	14.4	.008	2.3
Calc Residue	5000.6	100	.022	42.7
Leach Solution	5069.4		.029	57.3 -recovery
Calc Head	5000.6		.051	100.0

IRON KING ASSAY INC.

23-Jun-88

LAB JOB #: AFB02657

ATTN: Carole A. O'Brien

Client name: A. F. Budge (Mining) Ltd.

No. Samples: 45
Date Received: 06-10-88
Submitted by: Don White

Billing address: 7340 E. Shoeman Ln
Suite #111-B-E
Scottsdale, AZ 85251

Phone number: (602) 945-4630/778-3140

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID AFB02657	Lab ID	FA/AA Au oz/ton
T-123 0-3	2657- 1	0.014
T-123 3-6	2657- 2	0.014
T-123 6-9	2657- 3	0.010
T-123 9-12	2657- 4	0.015
T-123 12-15	2657- 5	0.027
T-123 15-17	2657- 6	0.043
T-124 0-3	2657- 7	0.009
T-124 3-6	2657- 8	0.020
T-124 6-9	2657- 9	0.013
T-124 9-12	2657- 10	0.024
T-124 12-15	2657- 11	0.016
T-125 0-3	2657- 12	0.007
T-125 3-6	2657- 13	0.045
T-126 0-3	2657- 14	0.024
T-126 3-6	2657- 15	0.011
T-126 6-9	2657- 16	0.010
T-126 9-12	2657- 17	0.010

REGISTERED ASSAYER
CERTIFICATE NO. 14315
ROBERT G. CROOK
Date Signed 6-23-88
ARIZONA, U.S.A.

P.O. Box 56 • Humboldt, Arizona 86329 • Phone (602) 632-7410

Client ID AFB02657	Lab ID	FA/AA Au oz/ton
T-126 12-15	2657- 18	0.010
T-126 15-17	2657- 19	0.012
T-127 0-3	2657- 20	0.010
T-127 3-6	2657- 21	0.037
T-1276-9	2657- 22	0.012
T-127 9-12	2657- 23	0.017
T-127 12-15	2657- 24	0.022
T-127 15-16	2657- 25	0.050
T-128 0-3	2657- 26	0.009
T-128 3-5	2657- 27	0.017
T-129 0-2	2657- 28	<.001
T-130 0-3	2657- 29	0.056
T-130 3-6	2657- 30	0.038
T-130 6-9	2657- 31	0.032
T-130 9-12	2657- 32	0.055
T-130 12-15	2657- 33	0.033
T-130 15-16	2657- 34	0.108
T-131 0-3	2657- 35	0.051
T-131 3-6	2657- 36	0.020
T-131 6-8	2657- 37	0.033
T-132 0-3	2657- 38	0.040
T-132 3-4	2657- 39	0.021
T-133 0-3	2657- 40	0.047
T-133 3-6	2657- 41	0.035
T-134 0-3	2657- 42	0.011
T-134 3-6	2657- 43	0.010

REGISTERED ASSAYER
CERTIFICATE NO.
14315
ROBERT G.
CROOK
Date Signed 6-23-88
ARIZONA, U.S.A.

Client ID AFB02657	Lab ID	FA/AA Au oz/ton
T-1346-9	2657- 44	0.013
T-134 9-12	2657- 45	0.031

IRON KING ASSAY INC.

 17-Jun-88

RECEIVED JUN 23 1988

LAB JOB #: AFB02622

Client name: A.F. Budge (Mining) Ltd.

Billing address: 7340 E. Shoeman Ln.
Ste.# 111-B-E
Scottsdale, AZ 85251

Phone number: (602) 778-3140/945-4630

No. Samples: 49
Date Received: 06-02-88
Submitted by: Don White

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID AFB02622	Lab ID	FA/AA Au oz/ton
T-54-A 0-3	2622- 1	0.020
T-54-A 3-7	2622- 2	0.035
TR-1-A 0-5	2622- 3	0.028
TR-1-A 5-10	2622- 4	0.050
TR-1-A 10-14	2622- 5	0.038
T-101-0-3	2622- 6	0.025
T-101-3-6	2622- 7	0.019
T-101-6-9	2622- 8	0.019
T-102-0-2	2622- 9	0.040
T-103-0-2	2622- 10	0.015
T-104-0-3	2622- 11	0.073
T-105-0-3	2622- 12	0.040
T-105-3-4	2622- 13	0.008
T-106-0-2	2622- 14	0.023
T-107-0-3	2622- 15	0.003
T-107-3-6	2622- 16	0.002
T-107-6-9	2622- 17	0.006

REGISTERED ASSAYER CERTIFICATE NO. 14315 ROBERT G. CROOK Date Signed 6-20-88 ARIZONA, U.S.A.

P.O. Box 56 • Humboldt, Arizona 86329 • Phone (602) 632-7410

Client ID AFB02622	Lab ID	FA/AA Au oz/ton
T-108-0-3	2622- 18	0.005
T-108-3-6	2622- 19	0.007
T-108-6-8	2622- 20	0.005
T-109-0-3	2622- 21	0.012
T-110-0-1	2622- 22	0.028
T-111-0-3	2622- 23	0.033
T-111-3-5	2622- 24	0.027
T-112-0-2	2622- 25	0.032
T-113-0-3	2622- 26	0.031
T-114-0-3	2622- 27	0.054
T-114-3-5	2622- 28	0.040
T-115-0-3	2622- 29	0.052
T-115-3-6	2622- 30	0.025
T-116-0-3	2622- 31	0.032
T-116-3-6	2622- 32	0.020
T-116-6-8	2622- 33	0.026
T-117-0-4	2622- 34	0.037
T-118-0-3	2622- 35	0.015
T-118-3-5	2622- 36	0.011
T-119-0-3	2622- 37	0.023
T-119-3-6	2622- 38	0.024
T-119-6-8	2622- 39	0.033
T-120-0-3	2622- 40	0.012
T-120-3-6	2622- 41	0.015
T-120-6-9	2622- 42	0.012
T-120-9-12	2622- 43	0.013

REGISTERED ASSAYER
CERTIFICATE NO.
14311
ROBERT G.
CROOK
Date Signed 6-20-88
ARIZONA, U.S.A.

IRON KING ASSAY INC

17-Jun-88

Client ID AFB02622	Lab ID	FA/AA Au oz/ton
T-120-12-14	2622- 44	0.012
T-121-0-3	2622- 45	0.022
T-121-3-6	2622- 46	0.033
T-122-0-3	2622- 47	0.035
T-122-3-6	2622- 48	0.010
T-122-6-9	2622- 49	0.013

REGISTERED ASSAYER
CERTIFICATE NO.
14315
ROBERT G.
CROOK
Date Signed .....
ARIZONA, U.S.A.

Jim Boscoe

LAB JOB #: AFB04078

Client name: A.F.Budge Mining Ltd.

Billing address: 4301 N. 75th St. #101
Scottsdale, AZ.
85251-3504

Phone number: 945-4630

No. Samples: 106
Date Received: 08-02-89
Submitted by: D. Allen

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID AFB04078	Lab ID	AA Au oz/ton
196001	4078- 1	0.008
196002	4078- 2	0.001
196003	4078- 3	<.001
196004	4078- 4	<.001
196005	4078- 5	0.001
196006	4078- 6	<.001
196007	4078- 7	0.001
196008	4078- 8	0.001
196009	4078- 9	0.001
196010	4078- 10	0.001
196011	4078- 11	<.001
196012	4078- 12	<.001
196013	4078- 13	0.002
196014	4078- 14	<.001
196015	4078- 15	0.001
196016	4078- 16	0.001
196017	4078- 17	0.002

Client ID AFB04078	Lab ID	AA Au oz/ton
196018	4078- 18	0.002
196019	4078- 19	0.002
196020	4078- 20	0.001
196021	4078- 21	0.002
196022	4078- 22	0.001
196023	4078- 23	0.001
196024	4078- 24	0.001
196025	4078- 25	0.001
196026	4078- 26	0.002
196027	4078- 27	0.001
196028	4078- 28	0.001
196029	4078- 29	0.001
196030	4078- 30	0.001
196031	4078- 31	0.001
196032	4078- 32	<.001
196033	4078- 33	0.001
196034	4078- 34	0.001
196035	4078- 35	0.001
196036	4078- 36	0.001
196037	4078- 37	0.001
196038	4078- 38	0.001
196039	4078- 39	0.001

Client ID AFB04078	Lab ID	AA Au oz/ton
196040	4078- 40	0.001
196041	4078- 41	0.001
196042	4078- 42	0.004
196043	4078- 43	0.001
196044	4078- 44	0.001
196045	4078- 45	0.001
196046	4078- 46	0.001
196047	4078- 47	0.001
196048	4078- 48	0.005
196049	4078- 49	0.002
196050	4078- 50	0.003
196051	4078- 51	0.001
196052	4078- 52	0.001
196087	4078- 53	0.001
196088	4078- 54	0.001
196089	4078- 55	0.002
196090	4078- 56	<.001
196091	4078- 57	<.001
196092	4078- 58	<.001
196093	4078- 59	<.001
196094	4078- 60	.001
196095	4078- 61	<.001
196096	4078- 62	<.001

08-Aug-89

Client ID AFB04078	Lab ID	AA Au oz/ton
196097	4078- 63	<.001
196098	4078- 64	<.001
196099	4078- 65	<.001
196100	4078- 66	0.001
196101	4078- 67	0.001
196102	4078- 68	<.001
196103	4078- 69	0.001
196104	4078- 70	0.001
196105	4078- 71	<.001
196106	4078- 72	<.001
196107	4078- 73	0.001
196108	4078- 74	0.001
VT-20	4078- 75	0.002
VT-21	4078- 76	0.002
VT-22	4078- 77	0.002
VT-23	4078- 78	0.001
VT-24	4078- 79	0.001
VT-25	4078- 80	0.001
VT-26	4078- 81	0.001
VT-27	4078- 82	0.001
VT-28	4078- 83	0.001
VT-29	4078- 84	0.001

VT samples are 5-10 ft chip samples along Line 10 38N-42.5N

08-Aug-89

Client ID AFB04078	Lab ID	AA Au oz/ton
VT-30	4078- 85	0.050
VT-31	4078- 86	0.036
VT-32	4078- 87	0.001
VT-33	4078- 88	0.002
VT-34	4078- 89	0.003
VT-35	4078- 90	0.002
VT-36	4078- 91	0.001
VT-37	4078- 92	0.001
VT-38	4078- 93	0.001
VT-39	4078- 94	0.001
VT-40	4078- 95	0.001
VT-41	4078- 96	0.001
VT-42	4078- 97	0.001
VT-43	4078- 98	0.001
VT-44	4078- 99	0.001
VT-45	4078- 100	0.001
VT-46	4078- 101	0.001
VT-47	4078- 102	<.001
VT-48	4078- 103	0.001
VT-49	4078- 104	0.001
VT-50	4078- 105	0.001
VT-51	4078- 106	0.001

11-Aug-89

LAB JOB #: AFB04082

Client name: A.F.Budge Mining Ltd

Billing address: 4301 N. 75th St #101
Scottsdale, AZ.
85251-3504

Phone number: 945-4630

ATTN: D. Allen

No. Samples: 46
Date Received: 08-04-89
Submitted by: D. Allen

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID AFB04082	Lab ID		AA Au oz/ton
196109	4082-	1	0.002
196110	4082-	2	0.003
196111	4082-	3	0.001
196112	4082-	4	0.001
196113	4082-	5	<.001
196114	4082-	6	<.001
196115	4082-	7	<.001
196116	4082-	8	<.001
196117	4082-	9	0.001
196118	4082-	10	<.001
196119	4082-	11	<.001
196120	4082-	12	<.001
196121	4082-	13	<.001
196122	4082-	14	<.001
196123	4082-	15	<.001
196124	4082-	16	<.001
196125	4082-	17	0.001

Client ID AFB04082	Lab ID	AA Au oz/ton
196126	4082- 18	0.002
196127	4082- 19	0.001
196128	4082- 20	0.001
196129	4082- 21	0.002
196130	4082- 22	0.001
196131	4082- 23	0.001
196132	4082- 24	0.001
196133	4082- 25	<.001
196134	4082- 26	<.001
196135	4082- 27	<.001
196136	4082- 28	0.001
196137	4082- 29	<.001
196138	4082- 30	0.001
196139	4082- 31	0.001
196140	4082- 32	0.001
196141	4082- 33	0.001
196142	4082- 34	0.001
196143	4082- 35	0.001
196144	4082- 36	<.001
196145	4082- 37	0.001
196146	4082- 38	0.001
V25-1	4082- 39	0.096

Client ID AFB04082	Lab ID	AA Au oz/ton
V25-2	4082- 40	0.014
V25-3	4082- 41	0.088
V25-4	4082- 42	0.020
V25-5	4082- 43	0.018
V25-6	4082- 44	0.006
V25-7	4082- 45	0.042
V25-8	4082- 46	0.595

SAMPLE SUBMITTAL

DATE 8-16-89 PROJECT Vulture SAMPLE TYPE Core

SUBMITTED BY: Budge Mining

	SAMPLE NUMBER	FOOTAGE	Au (opt)	Ag (opt)
1	196199	931.9 - 937		
2	200	937 - 942		
3	201	942 - 945.5		
4	202	945.5 - 950.3		
5	203	950.3 - 955.7		
6	204	955.7 - 959		
7	205	959 - 963.3		
8	206	963.3 - 968		
9	207	968 - 973		
10	208	973 - 975		
11	209	975 - 978.2		
12	210	978.2 - 982.3		
13	211	982.3 - 987		
14	212	987 - 992		
15	213	992 - 996		
16	214	996 - 1000.4		
17	215	1000.4 - 1005		
18	216	1005 - 1009		
19	217	1009 - 1014		
20	218	1014 - 1019		
21	219	1019 - 1024		
22	196220	1024 - 1028		
23	221	1028 - 1033		
24	222	1033 - 1038		
25	223	1038 - 1043		
26	224	1043 - 1048		
27	225	1048 - 1053		
28	226	1053 - 1055		
29	227	1055 - 1060		
30	228	1060 - 1065		
31	229	1065 - 1070		
32	230	1070 - 1075		
33	231	1075 - 1080		
34	232	1080 - 1085		

SAMPLE SUBMITTAL

DATE 8-18-89 PROJECT Vulture SAMPLE TYPE core

SUBMITTED BY: Budge

	SAMPLE NUMBER	FOOTAGE	Au (opt)	Ag (opt)
1	196233	1085-1090		
2	234	1090-1095		
3	235	1095-1100		
4	236	1100-1105		
5	237	1105-1110		
6	238	1110-1115		
7	239	1115-1120		
8	240	1120-1125		
9	241	1125-1130		
10	242	1130-1133.2		
11	243	1133.2-1138		
12	244	1138-1143.3		
13	245	1143.3-1147		
14	246	1147-1150		
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				

 29-Aug-89

LAB JOB #: AFB04108

ATTN: D. Allen

Client name: A.F.Budge Mining Ltd.

No. Samples: 63
Date Received: 08-23-89
Submitted by: J. Boscoe

Billing address: 4301 N. 75th St. #101
Scottsdale, AZ.
85251-3504

Phone number: 945-4630

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID AFB04108	Lab ID	AA Au oz\ton
196184	4108- 1	0.006
196185	4108- 2	0.004
196186	4108- 3	0.001
196187	4108- 4	0.001
196188	4108- 5	0.001
196189	4108- 6	0.001
196190	4108- 7	0.001
196191	4108- 8	<.001
196192	4108- 9	<.001
196193	4108- 10	0.001
196194	4108- 11	0.001
196195	4108- 12	<.001
196196	4108- 13	0.002
196197	4108- 14	0.001
196198	4108- 15	0.001
196199	4108- 16	0.002
196200	4108- 17	0.001

Client ID AFB04108	Lab ID	AA Au oz\ton
196201	4108- 18	0.001
196202	4108- 19	0.002
196203	4108- 20	0.001
196204	4108- 21	0.001
196205	4108- 22	0.002
196206	4108- 23	0.001
196207	4108- 24	<.001
196208	4108- 25	0.001
196209	4108- 26	0.007
196210	4108- 27	0.001
196211	4108- 28	0.001
196212	4108- 29	0.002
196213	4108- 30	<.001
196214	4108- 31	<.001
196215	4108- 32	0.004
196216	4108- 33	<.001
196217	4108- 34	<.001
196218	4108- 35	<.001
196219	4108- 36	<.001
196220	4108- 37	<.001
196221	4108- 38	<.001
196222	4108- 39	<.001

Client ID AFB04108	Lab ID	AA Au oz\ton
196223	4108- 40	<.001
196224	4108- 41	0.001
196225	4108- 42	<.001
196226	4108- 43	<.001
196227	4108- 44	<.001
196228	4108- 45	<.001
196229	4108- 46	<.001
196230	4108- 47	<.001
196231	4108- 48	0.001
196232	4108- 49	0.001
196233	4108- 50	0.001
196234	4108- 51	0.001
196235	4108- 52	0.033
196236	4108- 53	0.001
196237	4108- 54	0.001
196238	4108- 55	0.001
196239	4108- 56	0.001
196240	4108- 57	0.001
196241	4108- 58	0.001
196242	4108- 59	0.001
196243	4108- 60	0.001
196244	4108- 61	0.001
196245	4108- 62	0.001

Client ID	Lab ID	AA Au oz\ton
AFB04108		
196246	4108- 63	0.001

IRON KING ASSAY INC.

13-Sep-89

LAB JOB #: AFB04127

Client name: A.F. Budge Mining Ltd.

Billing address: 4301 N. 75th St. #101
Scottsdale, AZ
85251-3504

Phone number: 945-4630

No. Samples: 212
Date Received: 9-89
Submitted by: J. Bosco

INVOICE ATTACHED

ANALYTICAL REPORT

ppm to wt. Percent divide by 10,000

Client ID AFB04127	Lab ID	AA Cu ppm (800)	Mo ppm (325)
196001	4127- 1	280	460
196002	4127- 2	202	120
196003	4127- 3	261	110
196004	4127- 4	650	130
196005	4127- 5	202	90
196006	4127- 6	195	70
196007	4127- 7	182	180
196008	4127- 8	200	100
196009	4127- 9	247	160
196010	4127- 10	198	150
196011	4127- 11	180	110
196012	4127- 12	204	130
196013	4127- 13	221	80
196014	4127- 14	202	90
196015	4127- 15	185	110
196016	4127- 16	142	100
196017	4127- 17	191	160

Client ID AFB04127	Lab ID	AA Cu ppm	Mo ppm
196018	4127- 18	203	110
196019	4127- 19	199	190
196020	4127- 20	185	100
196021	4127- 21	153	80
196022	4127- 22	141	90
196023	4127- 23	180	100
196024	4127- 24	120	150
196025	4127- 25	101	70
196026	4127- 26	105	40
196027	4127- 27	113	30
196028	4127- 28	80	30
196029	4127- 29	122	40
196030	4127- 30	125	80
196031	4127- 31	120	50
196032	4127- 32	102	30
196033	4127- 33	130	40
196034	4127- 34	100	30
196035	4127- 35	251	70
196036	4127- 36	202	50
196037	4127- 37	170	50
196038	4127- 38	99	50
196039	4127- 39	123	70

Client ID AFB04127	Lab ID	AA Cu ppm	Mo ppm
196040	4127- 40	78	50
196041	4127- 41	82	60
196042	4127- 42	90	70
196043	4127- 43	101	110
196044	4127- 44	97	130
196045	4127- 45	100	50
196046	4127- 46	105	80
196047	4127- 47	121	100
196048	4127- 48	122	90
196049	4127- 49	185	120
196050	4127- 50	123	60
196051	4127- 51	82	80
196052	4127- 52	84	60
196087	4127- 53	202	100
196088	4127- 54	282	100
196089	4127- 55	201	70
196090	4127- 56	184	70
196091	4127- 57	323	130
196092	4127- 58	275	110
196093	4127- 59	40	100
196094	4127- 60	322	150
196095	4127- 61	304	80
196096	4127- 62	253	100

Client ID AFB04127	Lab ID	AA Cu ppm	Mo ppm
196097	4127- 63	198	60
196098	4127- 64	165	60
196099	4127- 65	321	120
196100	4127- 66	298	170
196101	4127- 67	300	130
196102	4127- 68	200	90
196103	4127- 69	189	50
196104	4127- 70	350	210
196105	4127- 71	299	230
196106	4127- 72	220	160
196107	4127- 73	169	270
196108	4127- 74	123	100
196109	4127- 75	156	130
196110	4127- 76	184	130
196111	4127- 77	190	140
196112	4127- 78	178	180
196113	4127- 79	272	160
196114	4127- 80	170	200
196115	4127- 81	153	140
196116	4127- 82	166	100
196117	4127- 83	270	80
196118	4127- 84	182	90

Client ID AFB04127	Lab ID	AA Cu ppm	Mo ppm
196119	4127- 85	120	130
196120	4127- 86	118	60
196121	4127- 87	153	120
196122	4127- 88	202	100
196123	4127- 89	195	80
196124	4127- 90	222	80
196125	4127- 91	234	170
196126	4127- 92	800	210
196127	4127- 93	553	350
196128	4127- 94	272	140
196129	4127- 95	205	80
196130	4127- 96	372	130
196131	4127- 97	324	90
196132	4127- 98	150	140
196133	4127- 99	188	220
196134	4127- 100	232	120
196135	4127- 101	300	100
196136	4127- 102	385	240
196137	4127- 103	131	100
196138	4127- 104	154	80
196139	4127- 105	99	40
196140	4127- 106	142	100
196141	4127- 107	200	90

Client ID AFB04127	Lab ID	AA Cu ppm	Mo ppm
196142	4127- 108	193	50
196143	4127- 109	190	90
196144	4127- 110	232	50
196145	4127- 111	387	200
196146	4127- 112	275	170
196147	4127- 113	250	360
196148	4127- 114	322	180
196149	4127- 115	272	500
196150	4127- 116	113	150
196151	4127- 117	347	130
196152	4127- 118	280	100
196153	4127- 119	233	110
196154	4127- 120	304	100
196155	4127- 121	217	110
196156	4127- 122	250	90
196157	4127- 123	190	100
196158	4127- 124	184	100
196159	4127- 125	179	300
196160	4127- 126	302	80
196161	4127- 127	121	60
196162	4127- 128	120	80
196163	4127- 129	204	320

Client ID AFB04127	Lab ID	AA Cu ppm	Mo ppm
196164	4127- 130	155	3250
196165	4127- 131	232	150
196166	4127- 132	321	80
196167	4127- 133	150	80
196168	4127- 134	168	80
196169	4127- 135	198	60
196170	4127- 136	200	50
196171	4127- 137	253	60
196172	4127- 138	255	60
196173	4127- 139	190	90
196174	4127- 140	232	80
196175	4127- 141	360	140
196176	4127- 142	78	40
196177	4127- 143	102	80
196178	4127- 144	143	110
196179	4127- 145	120	100
196180	4127- 146	100	90
196181	4127- 147	144	80
196182	4127- 148	123	50
196183	4127- 149	100	50
196184	4127- 150	250	40
196185	4127- 151	80	40
196186	4127- 152	172	50

Client ID AFB04127	Lab ID	AA Cu ppm	Mo ppm
196187	4127- 153	302	100
196188	4127- 154	195	50
196189	4127- 155	323	90
196190	4127- 156	211	120
196191	4127- 157	204	80
196192	4127- 158	172	160
196193	4127- 159	121	50
196194	4127- 160	118	60
196195	4127- 161	202	50
196196	4127- 162	175	50
196197	4127- 163	253	130
196198	4127- 164	204	140
196199	4127- 165	194	60
196200	4127- 166	222	50
196201	4127- 167	156	40
196202	4127- 168	200	80
196203	4127- 169	172	300
196204	4127- 170	184	110
196205	4127- 171	119	90
196206	4127- 172	158	110
196207	4127- 173	201	90
196208	4127- 174	183	50

13-Sep-89

Client ID FB04127	Lab ID	AA Cu ppm	Mo ppm
96209	4127- 175	500	100
96210	4127- 176	432	170
96211	4127- 177	156	60
96212	4127- 178	121	50
96213	4127- 179	118	50
96214	4127- 180	202	60
96215	4127- 181	480	100
96216	4127- 182	375	60
96217	4127- 183	120	110
96218	4127- 184	144	70
96219	4127- 185	122	90
96220	4127- 186	228	60
96221	4127- 187	351	80
96222	4127- 188	230	90
96223	4127- 189	347	60
96224	4127- 190	200	160
96225	4127- 191	430	100
96226	4127- 192	384	70
96227	4127- 193	301	70
96228	4127- 194	205	60
96229	4127- 195	277	100
96230	4127- 196	386	100
96231	4127- 197	252	110

Client ID AFB04127	Lab ID	AA Cu ppm	Mo ppm
196232	4127- 198	450	110
196233	4127- 199	600	167
196234	4127- 200	402	170
196235	4127- 201	296	100
196236	4127- 202	402	100
196237	4127- 203	323	100
196238	4127- 204	520	110
196239	4127- 205	441	80
196240	4127- 206	255	110
196241	4127- 207	203	50
196242	4127- 208	130	110
196243	4127- 209	200	220
196244	4127- 210	222	140
196245	4127- 211	146	150
196246	4127- 212	98	110

IRON KING ASSAY INC.

21-Sep-89

LAB JOB #: AFB04117

Client name: A.F. Budge Mining Ltd.

Billing address: 4301 N. 75th St
Suite 101
Scottsdale, AZ 85251-3504

Phone number: 945-4630

No. Samples: 31
Date Received: 09-10-89
Submitted by: J Bosco

INVOICE ATTACHED

ANALYTICAL REPORT

Client ID AFB04117	Lab ID	FA/AA Au oz/ton
V 25- 9	4117- 1	0.002
V 25-10	4117- 2	0.001
V 25-11	4117- 3	0.001
V 25-12	4117- 4	0.001
V 25-13	4117- 5	0.001
V 25-14	4117- 6	0.001
V 25-15	4117- 7	0.002
V 25-16	4117- 8	0.001
V 25-17	4117- 9	0.001
V 25-18	4117- 10	0.001
V 25-19	4117- 11	0.001
V 25-20	4117- 12	<.001
V 25-21	4117- 13	<.001
V 25-22	4117- 14	<.001
V 25-23	4117- 15	0.001
V 25-24	4117- 16	<.001
V 25-25	4117- 17	<.001

CROOK
Signed 9-21-89
ARIZONA, U.S.A.

P.O. Box 56 • Humboldt, Arizona 86329 • Phone (602) 632-7410

21-Sep-89

Client ID AFB04117	Lab ID	FA/AA Au oz/ton
V 25-26	4117- 18	0.002
V 25-27	4117- 19	0.002
V 25-28	4117- 20	<.001
V 25-29	4117- 21	0.002
V 25-30	4117- 22	<.001
V 25-31	4117- 23	0.001
V 25-32	4117- 24	<.001
V 25-33	4117- 25	0.001
V 25-34	4117- 26	0.001
V 25-35	4117- 27	0.003
V 25-36	4117- 28	<.001
V 25-37	4117- 29	0.002
V 25-38	4117- 30	0.001
V 25-39	4117- 31	0.004

9-21-89

M E M O

TO: Dale Allen
cc: C.A. O'Brien, R.R. Short, A.F. Budge

FROM: Don White

DATE: October 21, 1988

SUBJECT: Silver distribution in Vulture stamp mill tailings

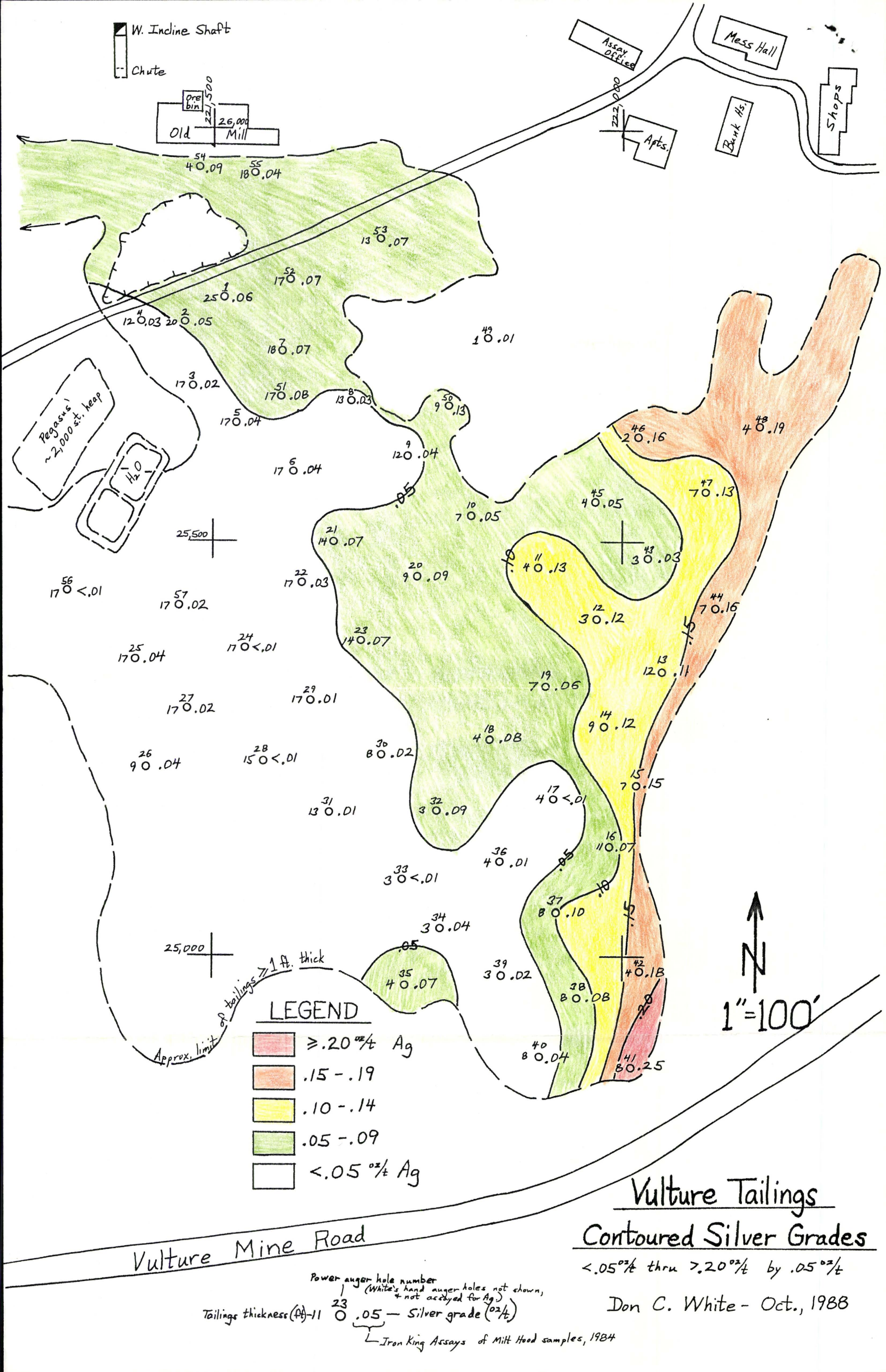
In response to your request for information on silver in the Vulture stamp mill tailings, I was able to dig up old, uncompiled, silver assays from the initial round of sampling in earliest 1984. That was power-auger drilling of the tailings by Milt Hood, prior to my involvement in any way. Silver was reported by Iron King Assay, Inc. with a detection limit of 0.01 oz/t Ag. It was assayed for every 5-foot interval of 57 holes drilled.

I have averaged those assays for each hole and plotted that data on the same 1"=100' base as the gold data that you have. Attached is a contoured version of the silver data which reveals a strong zonation of higher grade Ag to the east, grading to the detection limit westward into the cyanide tailings.

There is some reason to doubt the accuracy of the assays since your head assays on tails excavated near the east perimeter the last month or more have often assayed 0.2 oz/t Ag or even greater. As you pointed out, Ag fire assays where the main objective is accurate gold assay, are notoriously inaccurate. But they are off in a systematic way and the pattern of relative grades is useful.

What the plan reveals is that your first cut along the east perimeter is the highest silver zone and that all heads will diminish in silver content as excavation proceeds westward. It also shows that the lowest gold zones (<.02 oz/t Au) of the cyanide tailings are also very low in Ag (probably all < .05 oz/t Ag).

DW:sk


W. Incline Shaft
Chute
Ore bin
Old Mill
22,500
26,000
Assay Office
Mess Hall
Shops
Bunk Hs.
Apts.
22,000
Pegasus ~2,000 s.t. heap
H_2O
25,500
25,000
Approx. limit of tailings ≥1 ft. thick
LEGEND
≥.20 oz/t Ag
.15 - .19
.10 - .14
.05 - .09
<.05 oz/t Ag
N
1"=100'
Vulture Mine Road
Vulture Tailings
Contoured Silver Grades
<.05 oz/t thru >.20 oz/t by .05 oz/t
Don C. White - Oct., 1988
Power auger hole number
(White's hand auger holes not shown, + not assayed for Ag.)
Tailings thickness (ft)-11 23 .05 — Silver grade (oz/t)
Iron King Assays of Milt Hood samples, 1984

STA	BS/FS	H-∠	V-∠	BEARING	SL DIST	H-DIST	COORDINATES N	COORDINATES E	ELEV	
RP1	VM2	0°00'00'		268°04'25"			26193.15	21 577.70	2080.4	HI = 2085.15
LATH ON TC LINE							25 644.24	21 237.55	2079.0	HI = 2082.4
	NW VCT	0°00'00"	91°14'16"	280°47'41"	899.90	899.69	25 812.74	20 353.78	2051.0	
	RP2	271°50'14"	92°10'01"	192°37'55"	1191.89	1190.63	24 482.43	20 977.17	2019.7	
RP2	LATH ON TC LINE	0°00'00"		12°37'55"			24 482.43	20 977.17	2019.7	HI = 2024.45
	VS8	241°30'24"	89°41'09"	254°08'19"	384.60	384.59	24 377.32	20 607.22	2018.6	
	VS2N	213°15'36"	90°14'13"	225°53'31"	513.83	513.83	24 124.80	20 608.23	2014.3	
	VS7	192°50'39"	90°08'55"	205°28'34"	745.03	745.03	23 809.84	20 656.71	2010.5	
VS7	RP2	0°00'00"		25°28'34"			23 809.84	20656.71	2010.5	HI = 2015.7
	VS6	134°39'27"	90°32'02"	160°08'01"	309.57	309.56	23 518.70	20761.91	2004.8	
	VS10	139°23'46"	90°42'43"	164°52'20"	594.50	594.45	23 235.99	20811.85	2000.3	

STA	BS/FS	H-∠	V-∠	BEARING	SLOPE DIST	H-DIST	COORDINATES N	COORDINATES E	Δ-VERT	ELEV.
VM2							26 200.98	21 345.04		2098.2
	VM3	0°00'00"	89°23'53"	289°06'56"	1157 42	1157.36	26 579.96	20 251.57	+11 99/1160	2109.8
	84-17	358°27'55"	89°44'20"	287°34'51"	1104 75	1104.74	26 534.67	20291.90	+4 86	2103.1
	H-26	355°01'30"	91°05'11"	284°08'26"	934 36	934.19	26,429.20	20,439.16	–	2080.3
	H-11	354°30'47"	91°33'02"	283°37'43"	858.98	858.67	26,403.31	20,510.54	–	2074.8
	84-10	350°45'51"	91°18'16"	279°52'47"	846.35	846.13	26, 346.16	20,511.46	–	2078.8
	H 43	343°18'25"	91°08'59"	272°25'21"	786.44	786.28	26,234.21	20.559.46	–	2082.3
	H24	348°30'37"	90°43'48"	277°37'33"	995.43	995.35	26 333.07	20 358.49	–	2081.3
	H35	353°54'56"	91°46'03"	283°06'52"	807.58	807.20	26 384.13	20 558.89	–	2069.1
	H-45	0°06'34"	92°06'33"	289°07'30"	794.29	793.75	26 461.64	20 595.10	–	2064.8
	H22	357°46'40"	92°26'21"	286°53'36"	737.50	736.83	26,415.10	20640.00		2062.6
	H-44	0°08'56"	91°07'43"	289°15'52"	980.64	979.85	26,524.26	20420.66		2074.7
	84-16	10°24'28"	91°43'25"	299°31'24"	970.17	969.73	26,678.84	20501.22		2068.8
	84-~~5~~ 6	7°20'38"	90°42'47"	296°27'34"	1142.80	1142.71	26,710.13	20 322.03		2083.8
	?	8°42'19"	90°61'09"	297°49'15"	1280.80	1280.80	26 798.74	20212.29		2093.6
	?	19°38'54"	91°35'55"	308°45'50"	1030.00	1029.60	26 845.63	20 542.23		2065.3

STA	BS/FS	H-∠	V-∠	BEARING	SLOPE DIST.	H-DIST	COORDINATES N	COORDINATES E	ELEV	
VM2	84-5	23°55'38"	91°55'57"	313°02'34"	879.50	879.00	26800.94	20702.63	2068.4	
	84-4	18°19'49"	92°18'59"	307°26'45"	805.97	805.31	26690.62	20705.68	2061.5	
	H30	14°32'46"	92°01'16"	303°39'42"	837.30	836.78	26664.80	20648.57	2064.5	
	H46	12°04'33"	93°20'29"	301°11'29"	610.25	609.21	26516.49	20823.90	2054.5	
	H59	118°45'34"	97°21'21"	47°52'30"	333.38	330.64	26422.76	21590.27	2051.3	
	H60	109°21'46"	95°45'08"	38°28'42"	454.45	452.16	26554.95	21626.38	2056.5	
	H49	105°11'56"	96°10'01"	34°18'52"	358.60	356.52	26495.45	21546.02	2055.5	
	H2	91°10'31"	93°59'11"	20°17'27"	448.68	447.59	26620.79	21500.26	2062.8	
	M-1	115°25'46"	98°03'52"	44°32'42"	256.79	254.25	26382.18	21523.39	2058.0	
	H32	91°27'34"	99°54'43"	20°34'30"	196.22	193.29	26381.94	21412.97	2060.3	
	H48	43°40'03"	94°45'23"	332°46'59"	345.72	344.53	26507.36	21187.47	2063.4	
	RP1	162°48'39"	95°18'57"	91°55'35"	233.80	232.79	26193.15	21577.70	2080.4	
RP1	VM2	0°00'00"		268°04'25"					2080.4	HI = 2085.15
	H63	134°54'46"	101°51'03"	42°59'11"	347.50	340.09	26441.93	21809.58	2013.8	
	H65	127°13'09"	103°17'15"	35°17'34"	290.73	282.95	26424.10	21741.18	2018.3	
	H61	115°01'51"	105°25'36"	23°06'16"	246.25	237.38	26411.49	21670.85	2019.6	

VULTURE Drill Hole Survey

10/15 + 10/21

BM 829
ELEV = 2050.09

STA	BS	∡ RT	FS	DIST	ELEV
CP 1	829	65°01'		410	2050.09 ✓
			CP2	425	2053.67 ✓
P 2	CP1				
		198°18'	H-40	244	2050.38 ✓
		180°21	CP-3	404	2080.60 ✓
P3	CP2				
		175°51'	H-53	180	2084.65 ✓
-53	CP3				
		186°58'	M-3	147	2072.90 ✓
		209°41'	H-54	172	2080.15 ✓
		212°24'	H-41	~~319~~ 219	2079.53 ✓
		188°26'	CP-4	~~620~~ 420	2088.77 ✓
P-4	H-53				
		229°0'	H-50	135	2087.72 ✓
		359°19'	(1) LS5429	80	—
		196°05'	CP5	337	2053.86 ✓
P-5	CP-4				
		283°14'	H 42	115	2061.38 ✓
		199°35'	H55	240	2050.37 ✓

Vulture Oil Holes 10/14 AIF AND JOSE ONTIVEROS

STA	BS	∠ RT	FS	DIST		Δ ELEV		
CP1	IP		~~CP2~~	13^{02}	8^{95}	$+11^{0}$		
		65°01'	CP2	9^{55}	5^{30}	-1^{42}		
CP2	CP1							CP2 ELEV. HI $+5^{23}$
		198°18'	H-40 ~~CP3~~	9^{74}	7^{30}	-8^{52}		
		180°21'	CP3	8^{50}	4^{45}	-6^{48}	V ∠ 4°0'	
CP3	CP2	175°51'	H53	6^{05}	4^{25}	-1^{0}	HI	CP3 ELEV. $+5^{05}$
H53	CP3	186°58'	M-3	14^{47}	13^{0}	-13^{73}	V ∠ −1°0'	H53 HI $+4^{55}$
		209°41'	H54	9^{92}	8^{20}	-9^{05}		
		212°24'	H41	7^{58}	10^{77}	-9^{67}		
		188°26'	CP4	0	6^{2}	-4^{10}	V ∠ +0°30'	
CP4	H53	229°0'	~~H53~~ H50	$\boxed{13^{5}}$		-6^{05}		CP4 HI $+5^{0}$
		359°19'	1 25429	4^{88}	4^{08}			
		196°05'	CP5	8^{85}	12^{23}	-10^{53}	V ∠ −5°	
CP5	CP4	283°14'	H42	1^{13}	2^{28}	-1^{70}	V ∠ +2°	CP5 HI $+5^{2}$

where is Hole 5A?

5/11/87 T A.J.F
P Jose O.

BS	STA	FS	HZ	VZ	S-DIST	HI	ROD length
M3	VM2		[illegible]	89°23'53"	1157.42	3.83	4°
		DH	358°27'55"	99°40'20"	1104.75		4°
		H26	355°01'30"	71°05'11"	934.36		4°
		H-11	354°30'47"	91°33'02"	858.58		4°
		84-10	350°45'51"	91°18'16"	846.35		4°
		H-43	343°18'23"	91°03'59"	786.44		4°
			[illegible]°30'37"	90°43'48"	995.43		8°
			353°59'56"	91°46'03"	807.58		8°
		45	0°00'34"	92°06'33"	794.29		8°
			357°46'40"	92°2[illegible]'21"	737.50		[illegible]
		H-44	0°08'56"	91°07'43"	980.04		8°
			10°24'28"	91°43'25"	970.17		4°
		84-5	7°20'38"	90°42'47"	1142.80		4°
			8°42'19"	90°01'05"	1280.80		8°

Vulture Mine Placer Trench
Coordinates and Elevations

Temp. survey control pt.	Northing	Easting	Elev.
319	25,427.35	222,406.44	2,049.07
318	25,041.84	222,331.79	2,028.50
pt. 1	25,048.95	222,147.61	2,030.27
pt. 2	25,036.12	222,013.02	2,029.95
pt. 3	24,884.51	221,933.66	2,020.98
pt. 4	25,162.27	221,888.45	2,032.21
pt. 5	24,822.97	221,825.09	2,028.64
pt. 6	25,321.21	222,000.18	2,024.61
pt. 7	25,353.98	221,907.93	2,035.66
pt. 8	25,540.63	221,972.65	2,039.20
pt. 9	25,456.53	222,076.44	2,027.36
pt. 10	25,533.12	222,255.36	2,039.83
pt. 11	25,594.61	222,076.35	2,034.13
pt. 12	25,718.40	222,001.11	2,041.58
pt. 13	25,749.40	221,815.18	2,042.50
pt. 14	25,787.13	222,089.54	2,040.86
pt. 15	25,818.28	222,224.90	2,040.86

Vulture Mine Placer Trench
Coordinates and Elevations

Temp. survey control pt.	Northing	Easting	Elev.
pt. 16	25,972.81	222,210.46	2,042.86
pt. 17	25,813.58	222,361.51	2,042.23
pt. 18	25,951.42	222,412.48	2,045.10
pt. 19	25,717.33	222,534.09	2,042.88
pt. 20	25,672.66	222,721.23	2,042.63
pt. 21	25,653.29	222,877.84	2,040.77
pt. 22	25,734.89	222,996.31	2,036.86
pt. 23	25,659.46	222,931.34	2,041.86
pt. 24	24,847.49	222,293.93	2,024.74
pt. 25	24,666.60	222,222.56	2.013.31
pt. 26	24,497.98	222,129.62	2,016.79
pt. 27	24,323.20	222,123.04	2,019.23
pt. 28	24,314.64	221,936.44	2,017.81
pt. 29	24,349.83	221,739.15	2,019.88
pt. 30	24,397.45	221,546.96	2,017.86
pt. 31	26,932.45	221,696.73	
pt. 32	26,900.99	220,915.00	2,057.12

elev. correct, coordinates wrong

Vulture Mine Placer Trench
Coordinates and Elevations

Trench #	Northing	Easting	Elev.
T-1	25,016.19	221,985.85	2022.07
T-2	25,015.92	221,931.76	2020.94
T-3	25,016.97	221,883.05	2023.03
T-4	24,925.61	221,926.55	2020.75
T-5	24,917.76	221,985.73	2018.23
T-6	25,119.08	221,959.20	2021.40
T-7	25,128.49	221,863.50	2027.82
T-8	24,827.45	222,012.23	2019.74
T-9	24,826.51	221,953.51	2019.58
T-10	24,953.55	221,874.38	2021.94
T-11	25,222.18	221,859.59	2031.28
T-12	25,224.04	221,910.53	2026.95
T-13	25,146.61	221,800.02	2032.51
T-14	25,156.51	221,736.26	2031.92
T-15	24,822.97	221,825.09	2028.64
T-16	24,766.37	221,727.52	2025.26
T-17	24,943.75	221,755.51	2026.33
T-18	25,050.89	221,778.94	2029.39
T-19	25,034.64	221,820.63	2030.47
T-20	25,247.49	221,804.92	2032.17
T-21	25,167.57	221,688.12	2028.91
T-22	25,219.08	221,957.67	2022.48
T-23	25,201.72	222,004.11	2027.98
T-24	25,303.09	222,018.79	2024.65
T-25	25,321.21	221,932.74	2031.68
T-26	25,364.96	221,875.85	2029.62
T-27	25,344.66	221,822.84	2034.66
T-28/14-K	25,446.59	221,835.77	2036.36
T-29/14-J	25,458.68	221,880.25	2035.16
T-30/14-I	25,458.96	221,927.59	2036.48

Vulture Mine Placer Trench

Coordinates and Elevations cont.

Trench #	Northing	Easting	Elev.
T-31/14-H	25,462,18	221,979.82	2036.42
T-32/14-G	25,441.13	222,055.32	2025.17
T-33/14-F	25,447.84	222,097.84	2028.02
T-34/14-E	25,454.98	222,153.42	2034.02
T-35/14-D	25,459.33	222,201.49	2036.20
T-36/14-C	25,462.72	222,250.78	2037.02
T-37/13-A	25,545.93	222,197.90	2037.02
T-38/13-B	25,542.98	222,150.30	2026.47
T-39/13-C	25,543.89	222,099.84	2030.42
T-40/14-B	25,468.10	222,298.61	2035.77
T-41/14-A	25,470.72	222,344.73	2036.08
T-42	25,565.92	222,378.02	2042.72
T-43/12-A	25,638.88	222,198.32	2030.12
T-44/13-D	25,548.66	222,059.32	2033.31
T-45/13-E	25,582.84	222,063.40	2038.29
T-46	25,546.53	221,952.77	2038.29
T-47/13-G	25,550.33	221,897.45	2037.87
T-48/12-C	25,650.37	222,044.13	2038.29
T-49/12-C also	25,639.93	222,096.38	2034.18
T-50/12-B	25,640.47	222,151.34	2034.10
T-51/11-B	25,736.31	222,154.03	2033.64
T-52/11-A	25,741.35	222,189.34	2038.29
T-53/12-D	25,648.08	221,994.85	2039.62
T-54/12-E	25,645.71	221,939.26	2037.36
T-55/12-F	25,643.28	221,898.46	2040.72
T-56/11-C	25,740.00	222,083.42	2039.24
T-57/11-D	25,739.34	222,040.60	2041.29
T-58/11-E	25,737.20	221,987.01	2039.95
T-59/11-F	25,734.16	221,935.37	2040.49
T-60/11-G	25,732.28	221,881.81	2040.48
T-61/11-H	25,726.93	221,835.83	2040.86

Vulture Mine Placer Trench

Coordinates and Elevations cont.

Trench #	Northing	Easting	Elev.
T-62/10-E	25,835.04	221,936.37	2042.24
T-63/10-D	25,835.82	221,977.85	2041.95
T-64/10-C	25,835.67	222,028.10	2042.41
T-65/10-B	25,837.37	222,085.75	2040.72
T-66/10-A	25,838.08	222,123.88	2037.37
T-67	25,728.90	221,789.32	2042.14
T-68	25,722.33	221,721.10	2043.47
T-69	25,835.93	222,197.73	2039.46
T-70	25,846.99	222,245.44	2040.32
T-71	25,850.66	222,309.54	2034.85

Vulture Mine Placer Trench
Coordinates and Elevations

Trench #	Northing	Easting	Elev.
T-72	25,899.41	222,329.53	2,035.66
T-73	25,986.35	222,168.49	2,042.76
T-74	25,968.02	222,234.28	2,042.92
T-75	25,950.95	222,283.04	2,042.22
T-76	25,949.01	222,348.42	2,035.23
T-77	25,937.74	222,403.70	2,044.51
T-78	25,928.42	222,453.35	2,045.40
T-79	25,918.05	222,503.88	2,045.45
T-80west,(T9E,5+18)	25,903.71	222,550.04	2,044.60
T-80east,(T9E)	25,684.30	222,948.51	2,040.43 ?
T-81	25,842.27	222,360.86	2,043.20
T-82	25,825.22	222,320.64	2,042.08
T-83	25,836.60	222,444.79	2,041.83
T-84west/T10E,4+92	25,815.85	222,496.35	2,042.11
T-84east/T10E,0+00	25,679.68	222,946.76	2,040.30
T-85	25,614.58	222,770.41	2,041.66
T-86west	25,496.99	222,764.42	2,037.01
T-86east/T12E	25,476.94	222,912.37	2,034.95
T-87	25,594.23	222,864.74	2,036.71
T-88	25,588.40	222,891.98	2,036.76
T-89	25,581.59	222,926.76	2,037.03
T-90	25,575.23	222,962.97	2,037.30
T-91	25,566.54	223,007.25	2,036.21
T-92	25,740.24	222,303.10	2,032.50
T-93	25,74133	222,369.05	2,040.77
T-94	25,737.84	222,435.67	2,039.09
T-95 / 22-D	24,272.00	222,123.69	2,016.77
T-96 / 22-C	24,315.95	221,926.07	2,017.96
T-97	24,349.83	221,739.15	2,019.88

Vulture Mine Placer Trench
Coordinates and Elevations

Trench #	Northing	Easting	Elev.
T-98-1	26,861.93	221,745.97	2,061.11
T-98-2	26,892.85	221,942.25	2,057.69
T-98-3	26,846.03	221,549.31	2,063.32
T-98-4	26,913.97	222,083.48	2,055.85
T-98-5	26,836.37	221,350.24	2,066.46
T-98-6	26,836.03	221,250.84	2,070.79
T-99N	26,902.04	221,240.58	2,071.40
T-99S	26,767.10	221,226.80	2,068.99
T-98-7	26,813.03	221,057.22	2,061.54
T-98-8	26,809.38	221,015.63	2,064.14
T-100	26,758.44	220,866.41	2,055.03
T-101	26,987.39	220,841.93	2,067.96

DRILL TEST HOLES - CONT.

	ANALYTIC POINT #	EASTING X	NORTHING Y	ELEV Z	Drill Hole № SURVEY ID
200	241	219952.691	1027062.617	2097.132	60
200	242	220119.852	1027047.759	2094.868	61
200	243	220232.031	1027042.241	2089.507	62
200	244	220422.751	1026998.261	2086.900	63
200	245	220563.125	1026939.140	2074.436	64
200	246	220656.177	1026872.867	2065.768	65
200	247	220586.857	1026690.921	2067.862	66
200	248	220300.876	1026279.648	2069.721	87
200	249	220397.291	1026319.890	2074.589	88
200	250	220475.834	1026387.609	2079.792	89
200	251	220552.236	1026257.997	2082.420	90
200	252	220696.254	1026477.162	2059.803	67
200	253	220978.674	1026355.014	2058.498	91
200	254	221157.635	1026427.429	2066.698	92
200	255	221312.188	1026437.801	2059.206	93
200	256	221460.573	1026467.879	2056.518	94
200	257	221618.205	1026491.389	2057.178	95
200	258	221749.328	1026682.925	2058.361	E
200	259	221946.245	1027963.165	2112.776	CLAIM COR
200	260	222321.489	1027962.723	2108.688	52
200	261	222403.737	1027839.613	2105.123	53
200	262	222373.276	1027660.777	2109.723	54
200	263	222287.177	1027612.399	2105.658	55
200	264	222392.202	1027389.870	2077.236	56
200	265	222415.610	1027228.555	2086.650	57
200	266	222261.649	1027162.404	2076.866	58
200	267	222212.653	1027017.730	2065.572	59
200	268	222804.163	1026626.546	2055.492	D
200	269	222844.292	1026228.456	2058.511	A
200	270	222855.814	1026035.771	2051.672	B
200	271	222880.356	1025931.267	2045.691	77
200	272	222806.569	1025762.958	2043.815	76
200	273	223001.084	1025082.915	2033.869	68
200	274	223004.742	1024907.062	2027.301	69
200	275	222994.471	1024613.417	2032.712	70
	276	NUMBER NOT	USED		
200	277	223103.961	1024464.668	2032.823	71
200	278	223263.327	1024333.185	2028.164	72
200	279	221609.701	1023267.016	2008.230	81
200	280	221516.579	1022757.632	2048.764	80
200	281	221919.961	1022790.244	2015.956	79
200	282	221970.031	1022908.505	2001.058	82
200	283	222147.189	1022801.569	2005.394	78
200	284	222484.379	1022639.263	1991.852	84
200	285	222644.209	1022715.892	1986.078	85
200	286	222649.589	1022498.811	2020.558	83
200	287	224893.047	1025087.867	2035.856	75
200	288	224908.825	1024940.301	2041.386	74
200	289	225046.139	1024819.931	2043.189	73
	290	223342.000	1025692.500	2042.5	86
	291	222946.000	1027101.000	2062.0	C

DRILL HOLE SURVEY DATA

Calculated from M. Peterson Map

by D. Smith

D.H. No.	N Co-ord	E Co-ord	Elevation
1	1,026,098.27	221,423.51	2088.93
2	1,026,174.02	221,835.08	2074.59
3	1,026,769.57	220,229.79	2092.78
4	1,026,820.71	220,562.23	2064.39
5	1,026,357.56	220,618.40	2067.32
6	1,025,951.44	220,576.25	2053.78
7	1,026,565.43	221,418.62	2056.19
8	1,026,683.20	221,841.03	2053.06
9	1,026,827.08	222,313.03	2059.14
10	1,026,472.94	222,284.01	2050.19

11 & 11A Not surveyed--East Vulture location

COORDINATE FILE:VUL LENGTH = 136 POINTS; TIME ON FILE: 7 14 38.33
VULTURE MINE ***** JOB #82022

********** COGO **********

FROM	TYPE	BEARING	DISTANCE	TO	NORTHING	EASTING	ELEVATION

T=TARGET
POINTS 101 THROUGH 123 ARE CALCULATED FROM WILEY SURVEY BEGINNING AT THE NORTHERN MOST CORNER THEN CLOCKWISE AROUND PLAT****USE FIELD VALUES WHERE INDICATED****

****BASIS OF COORDINATES IS ARIZONA STATE PLANE CENTRAL ZONE****

LIST

1	1,028,503.17989	215,940.37242	2,120.29900	701
2	1,028,122.72361	217,545.20232	2,328.83060	902
3	1,024,363.49530	216,648.94448	2,052.91810	903
4	1,026,242.97540	219,225.01032	2,056.58940	904
5	.00000	.00000	2,339.66100	5JD
6	1,028,874.39680	225,426.10140	2,090.27500	6JD
7	.00000	.00000	1,958.43800	7JD
8	1,039,821.34984	224,053.78710	2,335.50100	808
9	1,030,628.85613	225,146.89660	2,120.35500	809
10	1,023,972.80966	223,102.71061	2,005.75220	910
11	1,023,917.90729	223,098.76393	2,004.69360	711
12	.00000	.00000	0.00000	712
13	1,023,913.36633	225,567.99831	2,025.33600	913
14	1,035,628.41409	236,502.78766	2,262.14790	914
15	1,029,193.09461	223,143.60516	2,100.94720	715
16	1,029,205.52584	223,139.47763	2,100.40490	916
17	1,029,340.13955	211,519.58917	2,186.22190	717
18	1,021,050.46697	216,602.46988	1,993.46840	718
19	1,018,537.61092	229,864.38420	1,910.58510	719
20	1,023,816.01775	233,662.69732	1,986.16560	720
21	1,023,791.07557	233,661.82578	1,984.75100	921
22	1,018,813.68210	223,008.62113	1,954.48430	922
23	1,030,157.71283	233,711.14157	2,104.89880	923
24	.00000	.00000	0.00000	724
25	1,041,180.45103	234,748.68210	2,401.17960	925
26	.00000	.00000	0.00000	726
27	1,030,950.69418	218,849.53773	2,141.78630	927

Page 1 of 3

Page 2 of 3

AMC co-ord's & elev. for
Wiley's claim boundary survey.

28	1,035,326.91085	217,722.49131	2,272.34440	928
31	1,028,503.17989	215,940.37242	2,120.29900	T701
32	1,028,122.72361	217,545.20232	2,328.50060	T902
33	1,024,363.49530	216,648.94448	2,052.91810	T903
34	1,026,242.97540	219,225.01032	2,056.53940	T904
35	.00000	.00000	2,339.16100	T5JD
36	1,028,874.39680	225,426.10140	2,089.66500	T6JD
37	.00000	.00000	1,958.13800	T7JD
38	1,039,821.34984	224,053.78710	2,335.50100	T808
39	1,030,628.85613	225,146.89660	2,120.18500	T809
40	1,023,972.80966	223,102.71061	2,005.70220	T910
41	1,023,917.90729	223,098.76393	2,003.34360	T711
42	.00000	.00000	0.00000	T712
43	1,023,913.36633	225,567.99831	2,025.28600	T913
44	1,035,628.41409	236,502.78766	2,262.14790	T914
45	1,029,193.09461	223,143.60516	2,099.94720	T715
46	1,029,205.52584	223,139.47763	2,100.35490	T916
47	1,029,340.13955	211,519.58917	2,186.22190	T717
48	1,021,050.46697	216,602.46988	1,993.21840	T718
49	1,018,537.61092	229,864.38420	1,910.33510	T719
50	1,023,816.01775	233,662.69732	1,985.16560	T720
51	1,023,791.07557	233,661.82578	1,984.75100	T921
52	1,018,813.68210	223,008.62113	1,954.48430	T922
53	1,030,157.71283	233,711.14157	2,104.89880	T923
54	.00000	.00000	0.00000	T724
55	1,041,180.45103	234,748.68210	2,401.17960	T925
56	.00000	.00000	0.00000	T726
57	1,030,950.69418	218,849.53772	2,141.78630	T927
58	1,035,326.91085	217,722.49131	2,272.34440	T928
60	1,002,612.44000	211,736.37000	1,777.84500	VALLEY
61	1,048,480.57000	233,634.92000	3,660.00000	VULTURE
101	1,042,394.72247	233,773.15469	724	
102	1,038,524.70572	236,611.27652		
103	1,036,007.37291	232,882.20454		
104	1,032,621.10825	235,365.56114		
105	1,030,103.77544	231,636.48916		
106	1,028,652.51916	232,700.78484		
107	1,027,009.33856	230,266.64554		
108	1,026,609.74614	232,375.69028		
109	1,023,664.33516	231,808.75426		
110	1,023,839.39395	230,884.79579		
111	1,018,537.65419	229,864.31097	719	
112	1,021,050.29950	216,602.59527	718	
113	1,023,406.62838	217,056.14375		
114	1,023,685.81119	215,582.61979		

	North	East	
115	1,024,863.97563	215,809.39402	
116	1,025,422.34126	212,862.34609	
117	1,027,189.58791	213,202.50745	
118	1,027,572.89289	211,179.42781	
119	1,029,340.13955	211,519.58917	717
120	1,028,502.59128	215,940.16045	701
121	1,033,804.33126	216,960.64453	726
122	1,032,807.89823	222,219.80800	
123	1,034,003.61252	221,342.91684	

TIME FOR THIS RUN: 0 06 02.53; TOTAL TIME ON FILE: 7 20 40.86
COORDINATES STORED

Page 3 of 3

AMC co-ord's & elev. for
Wiley's claim boundary survey

AEROTRIANGULATION STRIP AND BLOCK ADJUSTMENT
AERIAL MAPPING CO JOB 82022 MODELS 3/1-3/4 PHOTO SCALE 1/12000

AXIS REVERSAL= 0

-222

	POINT	X	Y	Z	RX	RY	RZ
R							
300	903	216648.940	1024363.500	2052.920	0.165	0.204	0.001
300	701	215940.370	1028503.180	2120.300	-0.354	-0.058	0.392
300	902	217545.200	1028122.720	2328.500	0.148	-0.096	-0.604
300	904	219225.010	1026242.980	2056.540	-0.095	0.070	-0.005
300	916	223139.480	1029205.530	2100.350	0.127	0.100	0.250
300	910	223102.710	1023972.810	2005.700	-0.111	0.118	0.208
300	809	225146.900	1030628.860	2120.190	-0.069	-0.359	-0.001
300	606	225426.100	1028874.400	2089.670	-0.081	0.187	-0.114
300	913	225568.000	1023913.370	2025.290	0.270	-0.168	-0.125
300	1110	215940.016	1028503.084	2120.692			
300	1120	216028.391	1026738.045	2089.814			
300	1130	215960.695	1023969.754	2047.396			
300	2110	219169.474	1028767.350	2155.672			
300	2120	219225.069	1026243.013	2056.534			
300	2130	219350.229	1023838.088	2010.198			
300	3110	223139.645	1029205.669	2100.599			
300	3120	222673.564	1026424.532	2055.257			
300	3130	223102.446	1023972.927	2005.910			
300	346	220916.445	1025702.990	2052.478			
300	347	220858.797	1025324.725	2066.830			
300	348	221593.580	1026185.023	2081.104			
300	349	221496.852	1025584.903	2054.710			
300	711	223098.675	1023918.760	2003.485			
300	715	223143.346	1029192.584	2100.344			
300	4110	225426.018	1028874.587	2089.517			
300	4120	225722.756	1026582.090	2041.232			
300	4130	225568.270	1023913.202	2025.165			
300	712	225741.342	1023889.781	2011.423			

82022

"VULTURE MINE PROPERTIES

" ZORTMAN MINING Co.

FLT 3(1-4)

1:12000

old claim location pt. - New corner established by Peterson about 20' NNW DOB

Pts 346 → 349 are targeted claim cors which were not originally picked up.

Claim Corners & Control Points

P. 1 of 4

-222 FINAL

5/4/82 C.R.B.

AEROTRIANGULATION STRIP AND BLOCK ADJUSTMENT
AERIAL MAPPING CO JOB 82022 MODELS 3/1-3/4 PHOTO SCALE 1/12000

AXIS REVERSAL= 0

-222
R

	POINT	X	Y	Z	RX	RY	RZ
300	903	216648.940	1024363.500	2052.920	0.236	0.385	-0.048
300	701	215940.370	1028503.180	2120.300	-0.438	-0.192	0.459
300	902	217545.200	1028122.720	2328.500	-0.059	-0.070	-0.589
300	904	219225.010	1026242.980	2056.540	0.006	0.247	-0.102
300	916	223139.480	1029205.530	2100.350	0.007	0.151	0.039
300	910	223102.710	1023972.810	2005.700	0.030	0.080	0.487
300	809	225146.900	1030628.860	2120.190	-0.041	-0.629	0.304
JD 300	~~606~~	225426.100	1028874.400	2089.670	-0.113	0.275	-0.333
300	913	225568.000	1023913.370	2025.290	0.371	-0.246	-0.218
300	1110	~~215939.933~~	~~1028502.950~~	~~2120.759~~ → USE 00701			
300	1120	216028.440	1026738.191	2089.581			
300	1130	215960.768	1023969.668	2046.947			
300	2110	219169.124	1028767.523	2155.190			
300	2120	~~219225.016~~	~~1026243.227~~	~~2056.438~~ → USE 00904			
300	2130	219350.117	1023838.435	2010.568			
300	301	217306.286	1027628.085	2169.397			
300	302	218885.269	1027924.515	2129.033			
300	303	218778.439	1027346.225	2183.618			
300	304	218666.716	1026764.403	2128.940			
300	3110	~~223139.407~~	~~1029205.719~~	~~2100.389~~ → USE 00916			
300	3120	222673.414	1026424.688	2055.444			
300	3130	~~223102.434~~	~~1023972.850~~	~~2006.189~~ → USE 00910			
300	305	220745.662	1024737.376	2031.819			
300	306	220033.446	1025902.227	2041.416			
300	307	220131.513	1026479.799	2076.613			
300	308	220244.241	1027063.334	2090.305			
300	309	220383.024	1027648.483	2082.452			
300	310	222389.612	1030301.744	2123.157			
300	311	222277.248	1029712.526	2114.048			
300	312	222164.237	1029122.930	2100.320			
300	313	222050.800	1028537.055	2092.913			
300	314	221946.079	1027962.106	2113.635			
300	315	221826.916	1027369.507	2071.533			
300	316	221713.897	1026780.405	2061.669			

Claim Corners & Control Points
P. 2 of 4.

82022

"VULTURE MINE PROPERTIES"
ZORTMAN MINING Co.

FLT 3(1-4)

1: 12000

Pts 301 → 345 are targeted claim cors.

-222 FINAL
4/14/82 C.R.B.

AEROTRIANGULATION STRIP AND BLOCK ADJUSTMENT
AERIAL MAPPING CO JOB 82022 MODELS 3/1-3/4 PHOTO SCALE 1/12000 AXIS REVERSAL= 0

	POINT	X	Y	Z	RX	RY	RZ
300	317	222216.573	1024454.834	2011.090			
300	318	222331.787	1025041.842	2028.496			
300	319	222406.438	1025427.346	2049.068			
300	320	222960.110	1025318.751	2036.699			
300	321	223073.604	1025908.120	2048.125			
300	711	~~223098.704~~	~~1023918.770~~	~~2003.739~~ →	x: 223098.76	y: 1,023,917.91	z: 2003.34 (FIELD VALUE)
300	715	~~223143.225~~	~~1029192.715~~	~~2099.944~~ →	x: 223143.61	y: 1029193.09	z: 2099.95 " "
300	4110	~~225425.987~~	~~1028874.675~~	~~2089.337~~ → USE 6JD			
300	4120	225722.828	1026582.180	2041.191			
300	4130	~~225568.370~~	~~1023913.124~~	~~2025.034~~ → USE 00913			
300	322	223183.921	1026497.327	2054.952			
300	323	223299.556	1027086.659	2061.093			
300	324	223412.318	1027670.677	2078.010			
300	325	224227.306	1027750.475	2072.735			
300	326	223994.938	1028054.045	2079.222			
300	327	223864.050	1028243.367	2082.344			
300	328	223525.057	1028258.015	2084.582			
300	329	223338.183	1028180.852	2084.590			
300	330	223267.609	1028187.258	2090.740			
300	331	223282.811	1028781.742	2093.896			
300	332	223500.379	1028737.291	2091.604			
300	333	223637.813	1028844.464	2092.736			
300	334	224010.472	1028659.030	2084.567			
300	335	223750.983	1029434.045	2101.842			
300	336	223863.691	1030023.625	2115.328			
300	337	224712.693	1029323.603	2083.179			
300	338	225067.764	1028839.576	2081.969			
300	339	225419.886	1028359.965	2077.161			
300	340	224776.298	1027869.150	2066.961			
300	341	224861.728	1027274.970	2060.461			
300	342	224748.752	1026690.496	2045.947			
300	343	224659.218	1026213.476	2037.251			
300	344	224545.697	1025623.532	2032.238			
300	345	224432.004	1025034.216	2025.165			

Claim Corners & Control Points

P 3 of 4

AEROTRIANGULATION STRIP AND BLOCK ADJUSTMENT
AERIAL MAPPING CO JOB 82022 MODELS 3/1-3/4 PHOTO SCALE 1/12000 AXIS REVERSAL= 0

	POINT	X	Y	Z	RX	RY	RZ
300	712	225741.490	1023889.876	2011.642	(NO FIELD CONTROL)		

Claim Corners & Control Points
P. 4 of 4

VULTURE MINE COORDINATES
A. F. Budge (Mining) Ltd.

STATION	COORDINATES N.	COORDINATES E.	ELEVATION
Stations			
BM 6JD 2090	1,028,873.53	225,426.54	2,090.
307	1,026,479.80	220,131.51	2,077.9
316	1,026,780.40	221,713.90	2,063.2
319	1,025,427.35	222,406.44	2,049.8
VM 1	1,027,046.17	222,465.51	2,109.2
VM 2	1,026,200.98	221,345.04	2,098.2
VM 3	1,026,579.96	220,251.57	2,109.8
△ 829	1,026,031.83	222,614.23	2,050.2
WW-1	1,027,549.59	223,626.30	2,074.0
Water Well	1,027,499.66	223,619.18	2,073.3
Unknown stake	1,026,799.48	221,750.02	2,062.7
GOLD PIT			
N.E. Cor.	1,025,041.34	222,331.96	
S.E. Cor.	1,024,451.99	222,218.23	
S.W. Cor.	1,024,737.42	220,745.66	
N.W. Cor.	1,025,326.16	220,859.36 ?	
VULTURE CITY Townsite			
N.E. Cor.	1,025,315.85	222,959.86	probably BLM 2" Brass pipe
S.E. Cor.	1,022,679.00	222,438.86	
S.W. Cor.	1,023,210.13	219,822.82	
N.W. Cor.	1,025,812.74	220,353.78	
Drill Holes			
H-5	1,026,376.41	221,190.68	2,070.2
H-6	1,026,421.32	221,103.12	2,064.8
~~H-12~~ 84-12 ?	1,026,391.66	221,101.81	2,065.8
H-16	1,026,400.58	221,017.69	2,061.0
H-~~24~~ 44	1,026,525.19	220,420.84	2,075.4
H-26	1,026,430.12	220,440.22	2,080.0
H-28	1,026,566.48	220,378.26	2,085.3
H-29	1,026,731.74	220,516.51	2,068.5
H-36	1,026,678.06	220,501.14	2,069.0
H-43	1,026,233.56	220,559.79	2,081.8
H-45	1,026,461.29	220,596.03	2,064.6
H-47	1,026,460.18	220,979.87	2,059.4
H-49	1,026,496.68	221,546.07	2,054.9
△ 829	26,032N	222,615E	2050.09
~~3120 (CPI)~~	26,424.53N	22,673.56E	2055.28

VULTURE MINE COORDINATES
A. F. Budge (Mining) Ltd.

STATION	COORDINATES N.	COORDINATES E.	ELEVATION
Stations			
BM 6JD 2090	1,028,873.53	225,426.54	2,090.
307	1,026,479.80	220,131.51	2,077.9
316	1,026,780.40	221,713.90	2,063.2
319	1,025,427.35	222,406.44	2,049.8
VM 1	1,027,046.17	222,465.51	2,109.2
VM 2	1,026,200.98	221,345.04	2,098.2
VM 3	1,026,579.96	220,251.57	2,109.8
△ 829	1,026,031.83	222,614.23	2,050.2
WW-1	1,027,549.59	223,626.30	2,074.0
Water Well	1,027,499.66	223,619.18	2,073.3
Unknown stake	1,026,799.48	221,750.02	2,062.7
GOLD PIT			
N.E. Cor.	1,025,041.34	222,331.96	
S.E. Cor.	1,024,451.99	222,218.23	
S.W. Cor.	1,024,737.42	220,745.66	
N.W. Cor.	1,025,326.16	220,859.36	
VULTURE CITY Townsite			
N.E. Cor.	1,025,315.85	222,959.86	
S.E. Cor.	1,022,679.00	222,438.86	
S.W. Cor.	1,023,210.13	219,822.82	
N.W. Cor.	1,025,812.74	220,353.78	
Drill Holes			
H-5	1,026,376.41	221,190.68	2,070.2
H-6	1,026,421.32	221,103.12	2,064.8
H-12	1,026,391.66	221,101.81	2,065.8
H-16	1,026,400.58	221,017.69	2,061.0
H-~~24~~ 44	1,026,525.19	220,420.84	2,075.4
H-26	1,026,430.12	220,440.22	2,080.0
H-28	1,026,566.48	220,378.26	2,085.3
H-29	1,026,731.74	220,516.51	2,068.5
~~H-36~~ 84-16	1,026,678.06	220,501.14	2,069.0
H-43	1,026,233.56	220,559.79	2,081.8
H-45	1,026,461.29	220,596.03	2,064.6
H-47	1,026,460.18	220,979.87	2,059.4
H-49	1,026,496.68	221,546.07	2,054.9

100°55'15"
100 56'48"

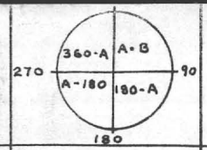
Drill Hole Coordinates Vulture Drilling to March 1987

Number	Northing	Easting	Elevation
84-1	26230.00	20673.00	2062.00
84-2	26382.00	20705.00	2052.50
84-3	26321.00	20685.00	2062.00
84-4	26690.62	20705.68	2061.50
84-5	26800.94	20702.63	2068.40
84-6	26710.13	20322.03	2083.80
84-7	26394.00	20242.00	2089.00
84-8	26201.00	20917.00	2051.50
84-9	26376.00	20897.00	2055.00
84-10	26346.16	20511.46	2078.80
84-11	26517.00	20495.00	2065.00
84-12	26391.66	21101.81	2066.00
84-13	26489.00	21462.00	2057.50
84-14	26525.00	21105.00	2066.00
84-15	26516.00	20900.00	2058.50
84-16	26678.84	20501.22	2067.00
84-17	26534.67	20291.90	2103.10
84-18	26240.00	20080.00	2046.50
H-1	26627.00	20755.00	2057.50
H-2	26620.79	21500.26	2062.80
H-3	26376.00	21454.00	2059.00
H-4	26350.00	21340.00	2065.00
H-5	26376.41	21190.68	2070.20
H-6	26421.32	21103.12	2064.80
H-7	26299.00	20899.00	2053.00
H-8	26421.00	20902.00	2055.00
H-9	26158.00	20699.00	2055.00
H-10	26444.00	20702.00	2058.00
H-11	26403.31	20510.54	2074.80
H-12	26304.00	20305.00	2065.80
H-13	26440.00	20820.00	2059.00
H-14	26132.00	21582.00	2071.00
H-15	26394.00	21535.00	2056.00
H-16	26400.58	21017.69	2061.00
H-17	26391.00	20964.00	2057.00
H-18	26324.00	20828.00	2051.00
H-19	26444.00	20823.00	2051.00
H-20	26306.00	20765.00	2051.00
H-21	26442.00	20759.00	2050.00
H-22	26415.10	20640.00	2062.60
H-23	26249.00	20177.00	2056.00
H-24	26333.07	20358.49	2081.30
H-25	26302.00	20435.00	2080.60
H-26	26429.20	20439.16	2080.30
H-27	26444.00	20362.00	2081.00
H-28	26566.48	20378.26	2085.30
H-29	26731.74	20516.51	2068.50
H-30	26664.80	20648.57	2064.50
H-31	26690.00	21815.00	2058.00
H-32	26381.94	21412.97	2060.30
H-33	26601.00	20979.00	2060.00

H-34	26659.00	20860.00	2053.50
H-35	26384.13	20558.89	2069.10
H-36			
H-37			
H-38			
H-39			
H-40	26335.00	22045.00	2050.40
H-41	26240.00	21420.00	2079.50
H-42	26235.00	21018.00	2061.40
H-43	26234.21	20559.46	2082.30
H-44	26524.26	20420.06	2074.70
H-45	26461.04	20595.10	2064.80
H-46	26516.49	20823.00	2054.50
H-47	26460.18	20979.87	2059.40
H-48	26507.36	21187.47	2063.40
H-49	26495.45	21546.02	2055.50
H-50	26100.00	21300.00	2087.70
H-51			
H-52			
H-53	26160.00	21730.00	2084.70
H-54	26195.00	21560.00	2080.00
H-55	26235.00	20760.00	2050.40
H-56	26180.00	20630.00	2056.40
H-57	26230.00	20240.00	2058.30
H-58	26515.00	21520.00	2056.80
H-59	26422.76	21590.27	2051.30
H-60	26554.95	21626.38	2056.50
H-61	26411.49	21670.85	2019.60
H-62	26424.10	21741.18	2018.30
H-63	26441.93	21809.58	2013.80
M-1	26382.18	21523.39	2058.00
M-2	26415.00	20621.00	2061.00
M-3	26130.00	21587.00	2072.90
DH-1	26119.00	21402.00	
DH-5	26377.00	20549.00	2067.00
DH-7	26581.00	21394.00	2056.50
DH-8	26708.00	21804.00	2058.00
DH-67	26474.00	20702.00	2062.00
DH-87	26277.00	20302.00	2071.00
DH-88	26317.00	20402.00	2076.00
DH-89	26386.00	20482.00	2081.00
DH-90	26260.00	20555.00	2084.00
DH-91	26356.00	20982.00	2060.00
DH-92	26430.00	21159.00	2066.00
DH-93	26439.00	21312.00	2060.00
DH-94	26464.00	21467.00	2057.00
DH-E	26692.00	21753.00	2058.50

3/22/89
Vulture Mine Placer Trench Survey

$A_3^2 = A_3' + \measuredangle rt.$
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

E = sin B × H.D.

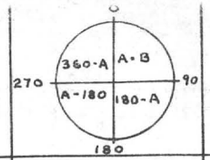
V.D. = cos V.A. × S.D.

~~<90°, -H.I. + VD + H.S.~~
~~>90°, -H.I. + H.S. - V.D.~~
<90, +HI - HS + VD
>90, +HI - HS - VD
=90, +HI - HS

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
319						025,427.35	222,406.44				Assumed top of pipe 2,049.07
318	190°57'33"	S 10°57'33"W				25,041.84	222,331.79				2028.50
1	261° 15' 10" 451° 72' 43" 452° 12' 43" -180 272° 12' 43"	N 87°47'17"W N 87.7881°W	184.33'	89°29'00" 89.4833°	184.32	7.11 25,048.95	184.18 222,147.61	3.11	3.0	1.66	+ 3.11 + 1.66 - 3.0 2030.27
2	172° 18 30" 444 30 73 444 31 13 -180 264° 31' 13"	S 84°31'13"W S 84.5536W	135.20	90°	135.20	-12.83 25,036.12	-134.59 222,013.02	3.85	4.17	0.0	+ 3.85 - 4.17 2029.95
T-1	149 13 10 413 44 23 -180 233° 44' 23"	S 53°44'23"W S 53.7397°W	33.70	90°	33.70	- 19.93 25 016.19	- 27.17 221,985.85	4.14	12.02	0.0	+ 4.14 -12.02 2022.07
2 → T-2	264 31 13 171 31 00 435 62 13 436 02 13 -180 256° 02' 15"	S 76°02'13"W S 76.0369°W	84.20'	96°05'20" 96.0889°	83.73	25,036.12 - 20.20 25,015.92	222,013.02 -81.26 221931.76	4.14	4.00	8.93	2029.93 + 4.14 - 4.00 - 8.93 2020.94
T-3	264 31 13 177 06 00 441 37 13 -180 261° 37' 13"	S 81°37'13"W S 81.6203°W	131.55	92°58'50" 92.9806°	131.37	25,036.12 -19.15 25,016.97	222,013.02 -129.97 221,883.05	4.14	4.00	6.84	2029.93 + 4.14 - 4.00 - 6.84 2023.03

#2 Vulture cont.

$A_3^2 = A_3' + \angle rt.$
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

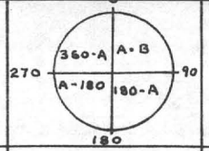
E = sin B × H.D.

V.D. = cos V.A. × S.D.

~~<90°: -H.I. + VD + H.S.~~
~~>90°: -H.I. + H.S. - V.D.~~

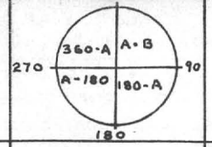
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-4	264 31 13 133 30 50 397 61 63 398 02 03 -180 218° 02' 03"	S38°02'03"W S38.0425°W	140.50	92°54'10" 92.9028°	140.32	25,036.12 -110.51 24925.61	222,013.02 -86.47 221926.55	4.14	6.00	7.12	2029.73 +4.14 -6.00 -7.12 2020.75
T-5	264 31 13 108 27 50 372 58 63 372 59 03 -180 192° 59' 03"	S12°59'03"W S12.9842°W	122.23	96°24'30" 96.4083°	121.47	25,036.12 -118.36 24,917.76	222,013.02 -27.29 221,985.73	4.14	2.0	13.64	2029.73 +4.14 +2.0 -13.64 2018.23
3	264 31 13 123 06 30 387 37 43 -180 207° 37' 43"	S27°37'43"W S27.6286°W	171.60	94°18'30" 94.3083	171.12	25036.12 -151.61 24884.51	222,013.02 -79.36 221933.66	4.14	00	12.89	2029.73 +4.14 -12.89 2020.98
T-6	264 31 13 242 30 20 506 61 33 507 01 33 -180 327° 01' 33"	N32°58'27"W N32.9742°W	99.25	94°53'50" 94.8972°	98.89	25036.12 +82.96 25119.08	222,013.02 -53.82 221,959.20	4.14	4.00	8.47	2029.73 +4.14 -4.00 -8.47 2021.40
T-7	264 31 13 217 11 10 481 42 23 -180 301° 42' 23"	N58°17'37"W N58.2936°W	175.75	90—	175.75	25036.12 +92.37 25128.49	222,013.02 -149.52 221863.50	4.14	6.05	0.0	2029.73 +4.14 -6.05 2027.82
4	264 31 13 230 50 30 494 81 43 495 21 43 -180 315° 21' 43"	N44°38'17"W N44.6381°W	177.30	90°32'10" 90.5361	177.29	25036.12 +126.15 25162.27	222,013.02 -124.57 221888.45	4.14	0.0	1.66	2029.73 +4.14 -1.66 2032.21

③ Vulture cont.

	$A_3^2 = A_3' + \measuredangle rt.$ 0-180, +180 180-540, -180 540+, -540				H.D. = sin V.A. × S.D.	N = cos B × H.D.	E = sin B × H.D.			V.D. = cos V.A. × S.D.	~~<90°, -H.I.+VD+H.S.~~ ~~>90°, -H.I.+H.S.-V.D.~~
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
△3 T-8	207°37'43" 98 21 40 305 58 83 305 59 23 -180 125°59'23"	S54°00'37"E S54.0103°E	97.10	90-	97.10	24884.51 -57.06 24827.45	221933.66 +78.57 222012.23	4.11	5.35	0.0	2020.98 +4.11 -5.35 2019.74
T-9	207°37'43" 133 28 50 340 65 93 341 06 33 -180 161°06'33"	S18°53'27"E S18.8908°E	61.30	90-	61.30	24884.51 -58.00 24826.51	221933.66 +19.85 221953.51	4.11	5.51	0.0	2020.98 +4.11 -5.51 2019.58
T-10	207 37 43 291 43 20 498 80 63 499 21 03 -180 319°21'03"	N40°38'57"W N40.6492°W	91.0	90-	91.0	24884.51 +69.04 24953.55	221933.66 -59.28 221874.38	4.11	3.15	0.0	2020.98 +4.11 -3.15 2021.94
△4 T-11	315°21'43" 198 55 00 513 76 43 514 16 43 -180 334°16'43"	N25°43'17"W N25.7214°W	66.50	90-	66.50	25162.27 +59.91 25222.18	221888.45 -28.86 221859.59	4.05	4.98	0.0	2032.21 +4.05 -4.98 2031.28
T-12	315°21'43" 244 18 20 559 39 63 559 40 03 -540 19°40'03"	N19°40'03"E N19.6675°E	65.60	90-	65.60	25162.27 +61.77 25224.04	221888.45 +22.08 221910.53	4.05	9.31	0.0	2032.21 +4.05 -9.31 2026.95
T-13	315°21'43" 124°35'50" 439 56 93 439 57 33 -180 259°57'33"	S79°57'33"W S79.9592°W	89.80	90-	89.80	25162.27 -15.66 25146.61	221888.45 -88.43 221800.02	4.05	3.75	0.0	2032.21 +4.05 -3.75 2032.51
T-14	315 21 43 132 28 20 447 49 63 447 50 03 -180 267°50'03"	S87°50'03"W S87.8342W	152.30	90-	152.30	25162.27 -5.76 25156.51	221888.45 -152.19 221736.26	4.05	4.34	0.0	2032.21 +4.05 -4.34 2031.92

#4 Vulture cont.

$A_3^2 = A_3' + \frac{1}{2}$ rt.
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

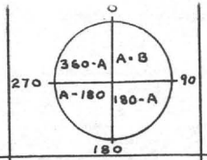
E = sin B × H.D.

V.D. = cos V.A. × S.D.

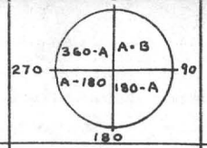
~~<90°, H.I. + VD + H.S.~~
~~>90°, H.I. + H.S. - V.D.~~

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
3 5	207°37'43" 212'49'30" 419 86 73 420 27 13 -180 240°27'13"	S 60°27'13"W S60.4536°W	125.03	86°33'20" 86.5556	124.80	24884.51 -61.54 24822.97	221933.66 -108.57 221825.09	4.15	4.00	7.51	2020.98 +4.15 -4.00 +7.51 2028.64
T-15	240 27 13 249 11 20 489 38 33 -180 309°38'33"	N50°21'27"W N50.3575°W	46.15	90-	46.15	24822.97 +29.44 24852.41	221825.09 -35.54 221789.55	4.16	4.50	0.0	2028.64 +4.16 -4.50 2028.30
T-16	240 27 13 179 25 50 419 52 63 419 53 03 -180 239°53'03"	S59°53'03"W S59.8842°W	112.80	90-	112.80	24822.97 -56.60 24766.37	221825.09 -97.57 221727.52	4.16	7.54	0.0	2028.64 +4.16 -7.54 2025.26
T-17	240 27 13 269 36 00 509 63 13 510 03 13 -180 330°03'13"	N29°56'47"W N29.9464°W	139.40	89°22'10" 89.3694	139.39	24822.97 +120.78 24943.75	221825.09 -69.58 221755.51	4.16	8.00	1.53	2028.64 +4.16 -8.00 +1.53 2026.33
4 T-18	315 21 43 89 09 10 404 30 53 -180 224°30'53"	S44°30'53"W S44.5147°W	156.20	90-	156.20	25162.27 -111.38 25050.89	221888.45 -109.51 221778.94	4.18	7.00	0.0	2032.21 +4.18 -7.0 2029.39
T-19	315 21 43 72 37 10 387 58 53 -180 207°58'53"	S27°58'53"W S27.9814°W	144.55	90-	144.55	25162.27 -127.65 25034.64	221888.45 -67.82 221820.63	4.18	5.92	0.0	2032.21 +4.18 -5.92 2030.47
T-20	315 21 43 180 12 40 495 33 83 495 34 23 -180 315°34'23"	N44°25'37"W N44.4269°W	119.35	88°51'20" 88.8556	119.33	25162.27 +85.22 25247.49	221888.45 -83.53 221804.92	4.18	6.6	2.38	2032.21 +4.18 -6.6 +2.38 2032.17

#5
Vulture
cont.

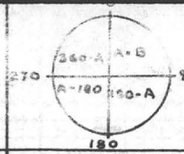
	$A_3^2 = A_3' + \angle rt.$ 0-180, +180 180-540, -180 540+, -540				H.D. = sin V.A. × S.D.	N = cos B × H.D.	E = sin B × H.D.			V.D. = cos V.A. × S.D.	~~<90°, -H.I. + VD + H.S.~~ ~~>90°, -H.I. + H.S. - V.D.~~
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-21	315°21'43" 136 09 10 451°30'53" -180 271°30'53"	N88°29'07"W N88.4853°W	200.40	90-	200.40	25162.27 + 5.30 25167.57	221888.45 - 200.33 - 221688.12	4.18	7.48	0.0	2032.21 +4.18 -7.48 2028.91
T-22	315 21 43 275 15 40 590°36' 83" 590 37'23" -540 50°37'23"	N50°37'23"E N50.6231°E	90.1	96°18'50" 96.3139	89.55	25162.27 +56.81 25219.08	221888.45 +69.22 221957.67	4.18	4.0	9.91	2032.21 +4.18 -4.00 -9.91 2022.48
T-23	315 21 43 295 48 10 610 69 53 611 09 53 -540 71° 09'53"	N71°09'53"E N71.1647°E	122.2	90-	122.2	25162.27 +39.45 25201.72	221888.45 +115.66 222004.11	4.18	8.41	0.0	2032.21 +4.18 -8.41 2027.98
6	315 21 43 259 44 40 574 65 83 575 06 23 -540 35°06'23"	N35°06'23"E N35.1064°E	194.40	91°59'50" 91.9972	194.28	25162.27 +158.94 25321.21	221888.45 +111.73 222000.18	4.18	5.00	6.78	2032.21 +4.18 -5.00 -6.78 2024.61
7	315 21 43 230 26 20 545 47 63 545 48 03 -540 5°48'03"	N5°48'03"E N5.8008°E	192.70	90-	192.70	25162.27 +191.71 25353.98	221888.45 +19.48 221907.93	4.18	0.73	0.0	2032.21 +4.18 -.73 2035.66
7 T-24	5° 48'03" 288 51 20 293° 99'23" 294 39 23 -180 114°39'23"	S65°20'37"E S65.3436	122.4	94°45'30" 94.7583	121.98	25353.98 -50.89 25303.09	221907.93 +110.86 222018.79	4.14	5.00	10.15	2035.66 +4.14 -5.00 -10.15 2024.65
6	5° 48'03 283 53 30 288 101 33 289 41 33 -180 109°41'33"	S70°18'27"E S70.3075°E	98.45	95°54'10" 95.9028	97.93	25353.98 -33.0 25320.98	221907.93 +92.20 222,000.13	4.14	5.10	10.13	2035.66 +4.14 -5.10 -10.13 2024.57

#6 Vulture cont.

	$A_3^2 = A_3' + \angle rt.$ 0-180, +180 180-540, -180 540+, -540				H.D. = sin V.A. × S.D.	N = cos B × H.D.	E = sin B × H.D.			V.D. = cos V.A. × S.D.	<90°, -H.I. + VD + H.S. >90°, -H.I. + H.S. - V.D.
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-25	5° 48' 03" 317 04 00 322 52 03 +180 142° 52' 03"	S 37° 07' 57" E S 37.1325° E	41.1	90 -	41.1	25353.98 - 32.77 25321.21	221907.93 + 24.81 221932.74	4.14	8.12	0.0	2035.66 + 4.14 - 8.12 2031.68
T-26	5° 48' 03" 103 05 10 108 53' 13" +180 288° 53' 13"	N 71° 06' 47" W N 71.1131° W	34.3	98° 41' 30" 98.6917	33.91	25353.98 + 10.98 25364.96	221907.93 - 32.08 221875.85	4.14	5.00	5.18	2035.66 + 4.14 - 5.00 - 5.18 2029.62
T-27	5 48 03 77 56 50 82° 104' 53" 83 44 53" +180 263° 44' 53"	S 83° 44' 53" W S 83.7481° W	85.6	90 -	85.6	25353.98 - 9.32 25344.66	221907.93 - 85.09 221822.84	4.14	5.14	0.0	2035.66 + 4.14 - 5.14 2034.66
T-28 (14-K)	5 48 03 136 16 30 141 64 33 142 04 33 +180 322° 04' 33"	N 37° 55' 27" W N 37.9242° W	117.4	90 -	117.4	25353.98 + 92.61 25446.59	221907.93 - 72.16 221835.77	4.14	3.44	0.0	2035.66 + 4.14 - 3.44 2036.36
T-29 (14-J)	5 48 03 159 23 20 164 71 23 165 11 23 +180 345° 11' 23"	N 14° 48' 37" W N 14.8103° W	108.3	90 -	108.3	25353.98 + 104.70 25458.68	221907.93 - 27.68 221880.25	4.14	4.64	0.0	2035.66 + 4.14 - 4.64 2035.16
T-30 (14-I)	5 48 03 184 48 20 189 96' 23" 190 36 23 -180 10° 36' 23"	N 10° 36' 23" E N 10.6064° E	106.8	90 -	106.8	25353.98 + 104.98 25458.96	221907.93 + 19.66 221927.59	4.14	3.32	0.0	2035.66 + 4.14 - 3.32 2036.48
8	5 48 03 193 19 20 198 67 23 199 07 23 180 19° 07' 23"	N 19° 07' 23" E N 19.1231 E	197.55	90	197.55	25353.98 + 186.65 25540.63	221907.93 + 64.72 221972.65	4.14	.60	0.0	2035.66 + 4.14 - .60 2039.20

#7
Vulture
Cont.

$A_3^2 = A_3' + \angle rt.$
0-180, +180
180-540, -180
540+, -540

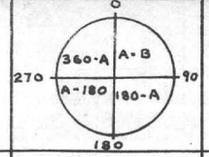


H.D. = sin V.A. × S.D. N = cos B × H.D. E = sin B × H.D. V.D. = cos V.A. × S.D. ~~<90°, H.I. + VD~~ ~~>90°, H.I. + H.S. - V.D.~~

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-31 (14-H)	5 48 03 207 48 00 212 96 03 213 36 03 -180 33 36 03	N33°36'03"E N33.6008°E	129.9	90-	129.9	25353.98 + 108.20 25462.18	221907.93 + 71.89 221979.82	4.14	3.38	0.0	2035.66 + 4.14 - 3.38 2036.42
T-32 (14-G)	5 48 03 233 36 10 238 84 13 239 24 13 -180 59°24"13"	N59°24'13"E N59.4036°E	171.50	93°13'10" 93.2194	171.23	25353.98 + 87.15 25441.13	221907.93 + 147.39 222055.32	4.14	5.00	9.63	2035.66 + 4.14 - 5.00 - 9.63 2025.17
9	5 48 03 232 52 30 237 100 33 238 40 33 -180 58°40'33"	N58°40'33"E N58.6758°E	197.40	92°09'40" 92.1611	197.26	25353.98 + 102.55 25456.53	221907.93 + 168.51 222076.44	4.14	5.00	7.44	2035.66 + 4.14 - 5.00 - 7.44 2027.36
T-33 (14-F)	233 25 00 291 65 33 292 05 33 -180 112°05'33"	S67°54'27"E S67.9075°E	23.10	90-	23.10	- 8.69 25447.84	+ 21.40 222097.84	4.36	3.48	0.0	+ 4.36 - 3.48 2028.02
T-34 (14-E)	58 40 33 212 28 30 270 68 63 271 09 03 -180 91°09'03"	S88°50'57"E S88.8492°E	77.20	86°03'50" 86.0639	77.02	25456.53 - 1.55 25454.98	222076.44 + 77.01 222153.42	4.36	3.00	5.30	2027.36 + 4.36 - 3.00 + 5.30 2034.02
T-35 (14-D)	58 40 33 210 02 50 268 42 83 268 43 23 -180 88°43'23"	N88°43'23"E N88.7231°E	125.80	86°08'00" 86.1333°	125.51	25456.53 + 2.80 25459.33	222076.44 + 125.49 222201.49	4.36	4.00	8.48	2027.36 + 4.36 - 4.00 + 8.48 2036.20
T-36 (14-C)	58 40 33 209 18 40 267 58 73 267 59 13 -180 87°59'13"	N87°59'13"E N87.9669°E	174.70	86°56'50" 86.9472°	174.45	25456.53 + 6.19 25462.72	222076.44 + 174.34 222250.78	4.36	4.00	9.30	2027.36 + 4.36 - 4.00 + 9.30 2037.02

8 Vulture Cont.

$A_3^2 = A_3' + \angle rt.$
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

E = sin B × H.D.

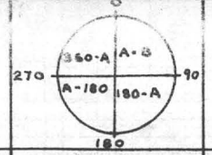
V.D. = cos V.A. × S.D.

<90°, -H.I. + VD + H.S.
>90°, -H.I. + H.S. - V.D.

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
10	58 40 33 188 09 00 246 49 33 -180 66°49'33"	N66°49'33"E N66.8258°E	195.00	86°26'20" 86.4389	194.62	25456.53 + 76.59 25533.12	222076.44 + 178.92 222255.36	4.36	4.06	12.11	2027.36 +4.36 -4.00 +12.11 2039.83
T-37 (13-A)	58 40 33 174 58 10 232 98 43 233 38 43 -180 53°38'43"	N53°38'43"E N53.6453°E	150.90	87°59'20" 87.9889	150.81	25456.53 + 89.40 25545.93	222076.44 +121.46 222197.90	4.36	0.0.	5.30	2027.36 +4.36 +5.30 2037.02
T-38 (13-B)	58 40 33 161 50 00 219 90 33 220 30 33 -180 40°30'33"	N 40°30'33'E N40.5092°E	113.70	90—	113.70	25456.53 + 86.45 25542.98	222076.44 + 73.86 222150.30	4.36	5.25	0.0	2027.36 +4.36 -5.25 2026.47
10	58 40 33 188 09 00 246 49 33 -180 66°49'33"	N66°49'33"E N66.8258°E	195.00	86°26'20" 86.4389	194.62	25456.53 + 76.59 25533.12	222076.44 + 178.92 222255.36	4.36	4.00	12.11	2027.36 +4.36 -4.00 +12.11 2039.83
T-37 (13-A)	58 40 33 174 58 10 232 98 43 233 38 43 -180 53°38'43"	N53°38'43"E N53.6453°E	150.90	87°59'20" 87.9889	150.81	25456.53 + 89.40 25545.93	222076.44 + 121.46 222197.90	4.36	0.0	5.30	2027.36 +4.36 +5.30 2037.02
T-38 (13-B)	58 40 33 161 50 00 219 90 33 220 30 33 -180 40°30'33"	N40°30'33"E N40.5092°E	113.70	90—	113.70	25456.53 + 86.45 25542.98	222076.44 + 73.86 222150.30	4.36	5.25	0.0	2027.36 +4.36 -5.25 2026.47
11	58 40 33 120 17 20 178 57 53 -180 358°57'53"	N00°02'07"W N0.0353°W	138.1	89°00'00" 89.0000	138.08	25456.53 +138.08 25594.61	222076.44 - .09 222076.35	4.36	0.0.	2.41	2027.36 +4.36 +2.41 2034.13

9 Vulture (cont.

$A_3^2 = A_3' + \lambda_3 + t$
0-180, +180
180-540, -180
540+, -540

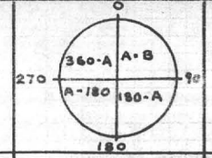


H.D. = sin V.A. × S.D. N = cos B × H.D. E = sin B × H.D. V.D. = cos V.A. × S.D. <90°, -H.I. + V.D. + H.S. >90°, -H.I. + H.S. - V.D.

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
△ 10 → T-40 (14-13)	66°49'33" 259°32'50" 325 81 83 326 22 23 -180 146°22'23"	S33°37'37"E S33.6269°E	78.2	93°04'20" 93.0722	78.09	25533.12 -65.02 25468.1	222255.36 +43.25 222298.61	4.13	4.0	4.19	2039.83 +4.13 -4.0 -4.19 2035.77
T-41 (14-A)	66 49 33 238 06 00 304 55 33 -180 124°55'33"	S55°04'27"E S55.0742°E	109.0	90—	109.0	25533.12 -62.40 25470.72	222255.36 +89.37 222344.73	4.13	7.88	0.0	2039.83 +4.13 -7.88 2036.08
pt 319	66 49 33 238 14 50 304°63' 83 305 04 23 -180 125°04'23"	S54°55'37"E S54.9269°E	184.0	88°32'00" 88.5333	183.94	25533.12 -105.70 (.07') 25427.42	222255.36 +150.54 (.54) 222405.90	4.13	0.0	4.71	2039.83 +4.13 +4.71 (.4) 2048.67
T-42	66 49 33 188 12 20 254 61 53 255 01 53 -180 75°01'53"	N75°01'53"E N75.0314°E	127.0	91°14'40" 91.2444	126.97	25533.12 +32.80 25565.92	222255.36 +122.66 222378.02	4.13	4.0	2.76	2039.83 +4.13 -4.0 -2.76 2042.72
T-43 (12-A)	66 49 33 84 50 00 150 99 33 151 39 33 +180 331°39'33"	N28°20'27"W N28.3408°W	120.3	92°46'50" 92.7806	120.16	25533.12 +105.76 25638.88	222255.36 -57.04 222198.32	4.13	8.0	5.84	2039.83 +4.13 -8.00 -5.84 2030.12
△ 11 → T-39 (13-c)	358°57'53" 336 11 00 694 68 53 695 08 53 540 155°08'53"	S24°51'07"E S24.8519°E	55.9	90—	55.9	25594.61 -50.72 25543.89	222076.35 +23.49 222099.84	4.16	7.87	0.0	2034.13 +4.16 -7.87 2030.42
T-44 13-0	358 57 53 21 22 10 379 79 63 380 20 63 -180 200°20'03"	S20°20'03"W S20.3342°W	49.0	90	49.0	25594.61 -45.95 25548.66	222076.35 -17.03 222059.32	4.16	4.98	0.0	2034.13 +4.16 -4.98 2033.31

#10
Vulture
cont.

$A_3^2 = A_3' + 7$ rt.
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

E = sin B × H.D.

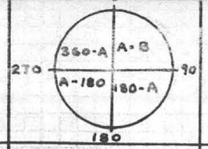
V.D. = cos V.A. × S.D.

<90°, -H.I. + VD + H.S.
>90°, -H.I. + H.S. - V.D.

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-45 (13-E)	358 57 53 48 45 00 406 102 53 407 42 53 -180 227° 42' 53"	S47°42'53"W S47.7147°W	17.5	90 —	17.5	25594.61 — 11.77 25582.84	222076.35 — 12.95 222063.4	4.16	0.0	0.0	2034.13 +4.16 2038.29
T-46	358 57 53 69 46 40 427 103 93 428 44 33 -180 248° 44' 33"	S68°44'33"W S68.7425°W	132.6	90-	132.6	25594.61 — 48.08 25546.53	222076.35 — 123.58 221952.77	4.16	0.0	0.0	2034.13 +4.16 2038.29
T-47 (13-G)	358 57 53 77 08 00 435 65 53 436 05 53 -180 256° 05 53	S76°05'53W S76.0981°W	184.3	89°11'50" 89.1972	184.3	25594.61 — 44.28 25550.33	222076.35 — 178.90 221897.45	4.16	3.00	2.58	2034.13 +4.16 -3.00 +2.58 2037.87
T-48 (12-C)	358 57 53 151 01 10 509 58 63 509 59 03 -180 329 59 03	N30°00'57"W N30.0158 W	64.4	90-	64.4	25594.61 + 55.76 25650.37	222076.35 — 32.22 222044.13	4.16	0.0	0.0	2034.13 +4.16 2038.29
△12	358 57 53 149 44 40 507 101 93 508 42 33 -180 328° 42' 33"	N31°17'27"W N31.2908	145.0	87°30'50" 87.5139	144.86	25594.61 + 123.79 25718.40	222076.35 — 75.24 222001.11	4.16	3.0	6.29	2034.13 +4.16 -3.0 +6.29 2041.58
T-49 (12-C@150)	358 57 53 204 52 30 562 109 83 563 50 23 -540 23° 50' 23"	N23°50'23E N23.8397	49.55	90—	49.55	25594.61 + 45.32 25639.93	222076.35 + 20.03 222096.38	4.16	4.11	0.0	2034.13 +4.16 -4.11 2034.18
T-50 (12-B)	358 57 53 239 35 10 597 92 63 598 33 03 -540 58° 33' 03"	N58°33'03"E N58.5508°E	87.9	90—	87.9	25594.61 + 45.86 25640.47	222076.35 + 74.99 222151.34	4.16	4.19	0.0	2034.13 +4.16 -4.19 2034.10

#11
Vulture
cont.

$A_3^2 = A_3' + \angle rt.$
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

E = sin B × H.D.

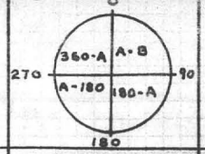
V.D. = cos V.A. × S.D.

<90°, -H.I. + V.D + H.S.
>90°, -H.I. + H.S. - V.D

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-51 (11-B)	358 57 53 209 46 00 567 103 53 568 43 53 -540 28° 43' 53"	N 28° 43' 53" E N 28.7314° E	161.6	90-	161.6	25594.61 +141.70 25736.31	222076.35 + 77.68 222154.03	4.16	4.65	0.0	2034.13 +4.16 -4.65 2033.64
T-52 (11-A)	358 57 53 218 37 50 576 94 103 577 35 43 540 37° 35' 43"	N 37° 35' 43" E N 37.5953° E	185.2	90-	185.2	25594.61 +146.74 25741.35	222076.35 + 112.99 222189.34	4.16	0.0	0.0	2034.13 +4.16 2038.29
△ → T-53 (12-D)	328 42 33 36 22 50 364 64 83 365 05 23 -180 185° 05' 23"	S 05° 05' 23" W S 05.0897° W	70.6	90-	70.6	25718.40 - 70.32 25648.08	222001.11 - 6.26 221994.85	4.14	6.1	0.0	2041.58 +4.14 -6.1 2039.62
T-54 (12-E)	328 42 33 71 41 00 399 83 33 400 23 33 -180 220° 23' 33"	S 40° 23' 33" W S 40.3925° W	95.5	92° 01' 00" 92.0167	95.44	25718.40 -72.69 25645.71	222001.11 - 61.85 221939.26	4.14	5.0	3.36	2041.58 +4.14 -5.0 -3.36 2037.36
T-55 (12-F)	328 42 33 85 05 30 413 47 63 413 48 03 -180 233° 48' 03"	S 53° 48' 03" W S 53.8008° W	127.2	90-	127.2	25718.40 - 75.12 25643.28	222001.11 - 102.65 221898.46	4.14	5.0	0.0	2041.58 +4.14 -5.0 2040.72
T-56 (11-C)	328 42 33 286 35 20 614 77 53 615 17 53 540 75° 17' 53"	N 75° 17' 53" E N 75.2981° E	85.1	90	85.1	25718.40 + 21.60 25740.0	222001.11 + 82.31 222083.42	4.14	6.48	0.0	2041.58 +4.14 -6.48 2039.24
T-57 (11-D)	328 42 33 273 21 10 601 63 43 602 03 43 540 62° 03' 43"	N 62° 03' 43" E N 62.0619° E	44.7	90-	44.7	25718.40 + 20.94 25739.34	222001.11 + 39.49 222040.6	4.14	4.43	0.0	2041.58 +4.14 -4.43 2041.29

#12 Vulture cont.

$A_3^2 = A_3' + \angle rt.$
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

E = sin B × H.D.

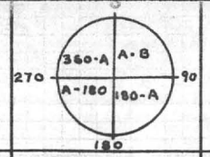
V.D. = cos V.A. × S.D.

<90°, -H.I. + VD + H.S.
>90°, -H.I. + H.S. - V.D.

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-58 (11-E)	328 42 33 174 24 30 502 66 63 503 07 03 -180 323° 07' 03"	N36° 52' 57" W N36.8825° W	23.5	90-	23.5	25718.40 + 18.80 25737.20	222001.11 - 14.10 221987.01	4.14	5.77	0.0	2041.58 + 4.14 - 5.77 2039.95
T-59 (11-F)	328 42 33 134 46 30 462 88 63 463 29 03 -180 283° 29' 03"	N76° 30' 57" W N76.5158° W	67.6	90-	67.6	25718.40 + 15.76 25734.16	222001.11 - 65.74 221935.37	4.14	5.23	0.0	2041.58 + 4.14 - 5.23 2040.49
T-60 (11-G)	328 42 33 127 55 40 455 97 73 456 38 13 -180 276° 38' 13"	N 83° 21' 47" W N83.3631° W	120.1	90-	120.1	25718.40 + 13.88 25732.28	222001.11 - 119.30 221881.81	4.14	5.24	0.0	2041.58 + 4.14 - 5.24 2040.48
T-61 (11-H)	328 42 33 125 14 40 452 56 73 452 57 13 -180 272° 57' 13"	N 87° 02' 47" W N 87.0464° W	165.5	90-	165.5	25718.40 + 8.53 25726.93	222001.11 - 165.28 221835.83	4.14	4.86	0.0	2041.58 + 4.14 - 4.86 2040.86
13	328 42 33 130 45 20 458 87 53 457 27 53 -180 279° 27' 53"	N 80° 32' 07" W N80.5353° W	188.5	90-	188.5	25718.40 + 31.0 25749.4	222001.11 - 185.93 221815.18	4.14	3.22	0.0	2041.58 + 4.14 - 3.22 2042.5
T-62 (10-E)	328 42 33 182 05 30 510 57 63 510 58 03 -180 330 58 03	N 29° 01' 57" W N29.0325° W	133.4	90	133.4	25718.40 + 116.64 25835.04	222001.11 - 64.74 221936.37	4.14	3.48	0.0	2041.58 + 4.14 - 3.48 2042.24
T-63 (10-D)	328 42 33 200 05 10 528 47 43 -180 348° 47' 43"	N 11° 12' 17" W N11.2047° W	119.7	90-	119.7	25718.40 + 117.42 25835.82	222001.11 - 23.26 221977.85	4.14	3.77	0.0	2041.58 + 4.14 - 3.77 2041.95

#13
Vulture
cont.

$A_3^2 = A_3' + 4rt.$
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

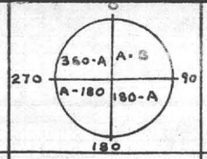
E = sin B × H.D.

V.D. = cos V.A. × S.D.

>90°, -H.I. + H.S. - V.D.

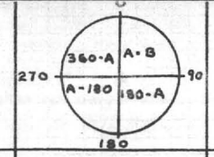
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-64 (10-C)	328 42 33 224 15 10 552 57 43 -540 12° 57' 43"	N12° 57' 43" E N12.9619° E	120.4	88° 08' 50" 88.1472°	120.34	25718.40 + 117.27 25835.67	222001.11 + 26.99 222028.10	4.14	7.20	3.89	2041.58 + 4.14 - 7.20 + 3.89 2042.41
T-65 (10-B)	328 42 33 246 43 10 574 85 43 575 25 43 -540 35° 25' 43"	N 35° 25' 43" E N35.4286° E	146.0	90-	146.0	25718.40 + 118.97 25837.37	222001.11 + 84.64 222085.75	4.14	5.00	0.0	2041.58 + 4.14 - 5.00 2040.72
T-66 (10-A)	328 42 33 257 01 10 585 43 43 -540 45° 43' 43"	N45° 43' 43" E N45.7286	171.5	91° 27' 10" 91.4528	171.45	25718.40 + 119.68 25838.08	222001.11 + 122.77 222123.88	4.14	4.00	4.35	2041.58 + 4.14 - 4.00 - 4.35 2037.37
△14	328 42 33 263° 26' 10" 591 68 43 592 08 43 540 52° 08' 43"	N52° 08' 43" E N52.1453° E	112	90-	112	25718.40 + 68.73 25787.13	222001.11 + 88.43 222089.54	4.14	4.86	0.0	2041.58 + 4.14 - 4.86 2040.86
△ → T-67	279 27 53 132 07 20 411 34 73 411 35 13 -180 231° 35' 13"	S51° 35' 10" W S51.5869° W	33.0	90-	33.0	25749.40 - 20.50 25728.90	221815.18 - 25.86 221789.32	4.25	4.61	0.0	2042.5 + 4.25 - 4.61 2042.14
T-68	279 27 53 154 29 00 433 56 53 -180 253° 56' 53"	S73° 56' 53" W S73.9481° W	79.7	90-	97.9	25749.40 - 27.07 25722.33	221815.18 - 94.08 221721.1	4.25	3.28	0.0	2042.5 + 4.25 - 3.28 2043.47
△ → △15	52 08 43 204 53 50 256 61 93 257 02 33 -180 77° 02' 33"	N77° 02' 33" E N77.0425° E	138.9	90-	138.9	25787.13 + 31.15 25818.28	222089.54 + 135.36 222224.9	4.30	4.30	0.0	2040.86 + 4.30 - 4.30 2040.86

#14
Vulture
cont.

	$A_3^2 = A_3' + 7$ rt. 0-180, +180 180-540, -180 540+, -540				H.D. = sin V.A. × S.D.	N = cos B × H.D.	E = sin B × H.D.			V.D. = cos V.A. × S.D.	~~<90°, -H.I. + VD + H.S.~~ ~~>90°, -H.I. + H.S. - V.D.~~
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-69	77 02 33 45 57 50 122 59 83 123 00 23 +180 303° 00' 23"	N 56°59'37" W N 56.9936° W	32.4	90-	32.4	25818.28 + 17.65 25835.93	222224.90 - 27.17 222197.73	4.26	5.66	0.0	2040.86 + 4.26 - 5.66 2039.46
T-70	77 02 33 138 31 50 215 33 83 215 34 23 -180 35° 34' 23"	N 35°34'23" E N 35.5731° E	35.3	90-	35.3	25818.28 + 28.71 25846.99	222224.90 + 20.54 222245.44	4.26	4.80	0.0	2040.86 + 4.26 - 4.80 2040.32
T-71	77 02 33 172 01 20 249 03 53 -180 69° 03' 53"	N 69°03'53" E N 69.0647° E	90.7	92°23'00" 92.3833°	90.62	25818.28 + 32.38 25850.66	222224.90 + 84.64 222309.54	4.26	6.50	3.77	2040.86 + 4.26 - 6.50 - 3.77 2034.85

#15 Vulture cont.

$A_3^2 = A_3' + 4$ rt.
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

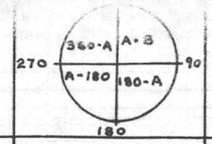
E = sin B × H.D.

V.D. = cos V.A. × S.D.

~~90°, -H.I. + V.D. + H.S.~~
~~>90°, -H.I. + H.S. - V.D.~~

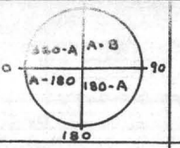
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
16	77 02 33 97 37 10 17 4 39 43 +180 354 39'43"	N 5°20'17"W N 5.3381°W	155.2	90-	155.2	25818.28 +154.53 25 972.81	222224.90 - 14.44 222, 210.46	4.20	2.2	0.0	2040.86 +4.20 -2.2 2042.86
17	77 02 33 194 55 40 271 57 73 271 58 13 -180 91° 58'13"	S 88°01'47"E S 88.0297°E	136.7	90	136.7	25818.28 - 4.70 25813.58	222,224.90 + 136.61 222,361.51	4.20	2.83	0.0	2040.86 +4.2 -2.83 2042.23
T-72	77 02 33 155 10 10 232 12 43 -180 52° 12'43"	N52°12'43"E N52.2119°E	132.4	90	132.4	25818.28 +81.13 25899.41	222,224.90 + 104.63 222,329.53	4.20	9.4	0.0	2040.86 +4.2 -9.4 2035.66
16 → T-73	354 39 43 113 13 00 467 52 43 -180 287°52'43"	N72°07'17"W N72.1214°W	44.1	90	44.1	25972.81 +13.54 25986.35	222,210.46 - 41.97 222,168.49	4.30	4.40	0.0	2042.86 +4.3 -4.4 2042.76
T-74	354 39 43 286 42 40 640 81 83 641 22 23 -540 00 00 101°22'23"	S78°37'37"E S78.6269°E	24.3	90-	24.3	25972.81 - 4.79 25968.02	222,210.46 + 23.82 222,234.28	4.30	4.24	00	2042.86 +4.30 -4.24 2042.92
T-75	354 39 43 292 05 50 646 44 93 646 45 33 -540 106°45'33"	S73°14'27"E S73.2408°E	75.8	90-	75.8	25972.81 - 21.86 25950.95	222,219.46 + 72.58 222,283.04	4.30	4.94	0.0	2042.86 +4.30 -4.94 2042.22
T-76	354 39 43 285 07 30 639 46 73 639 47 13 -540 99°47'13"	S80°12'47"E S80.2131°E	140.0	90-	140.0	25972.81 - 23.80 25, 949.01	222,210.46 + 137.96 222, 348.42	4.30	9.93	0.0	2042.86 +4.30 -9.93 2035.23

#16 Vulture cont.

	Azimuth: 0-180, +180; 180-540, -180; 540+, -540					N = cos B × H.D.	E = sin B × H.D.			V.D. = cos V.A. × S.D.	<90°, -H.I. + VD + H.S.; >90°, -H.I. + H.S. - V.D.
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-77	354 39 43 285 37 30 639 76 73 640 17 13 -540 100°17'13"	S79°42'47"E S79.7131°E	196.4	90—	196.40	25972.81 — 35.07 25937.74	222,210.46 + 193.24 222,403.70	4.30	2.65	0.0	2042.86 +4.30 -2.65 2044.51
18	354 39 43 281 22 50 635 61 93 636 02 33 -540 96°02'33"	S83°57'27"E S83.9575°E	203.15	90—	203.15	25972.81 — 21.39 25951.42	222,210.46 + 202.02 222,412.48	4.30	2.06	0.0	2042.86 +4.30 -2.06 2045.10
18 T-78	96 02 33 203 19 40 299 21 73 299 22 13 -180 119° 22' 13"	S60°37'47"E S60.6297°E	46.9	90—	46.9	25951.42 - 23.00 25928.42	222,412.48 + 40.87 222453,35	4.89	4.59	0.0	2045.10 +4.89 -4.59 2045.40
T-79	96 02 33 194 01 00 290 03 33 -180 110°03'33"	S69°56'27"E S69.9408°E	97.3	90—	97.3	25951.42 — 33.37 25918.05	222,412.48 + 91.40 222,503.88	4.89	4.54	0.0	2045.10 +4.89 -4.54 2045.45
West end T-80 T9E, 5+18'	96 02 33 193 05 00 289 07 33 -180 109° 07'33"	S70°52'27"E S70.8742°E	145.6	90—	145.6	25951.42 — 47.71 25903.71	222,412.48 + 137.56 222,550.04	4.89	5.39	0.0	2045.10 +4.89 -5.39 2044.6
T-81	91° 58'13" 86 43 50 177 101 63 178 42 03 +180 358°42'03"	N01°17'57"W N01.2992°E	28.7	90—	28.7	25813.58 + 28.69 25842.27	222,361.51 - .65 222360.86	4.50	3.53	0.0	2042.23 +4.50 -3.53 2043.2
T-82	91 58 13 13 55 40 104°11 3' 53" 105 53 53" +180 285°53"53"	N74°06'07"W N74.1019°W	42.5	90—	42.5	25813.58 + 11.64 25825.22	222,361.51 — 40.87 222,320.64	4.50	4.65	0.0	2042.23 +4.50 -4.65 2042.08

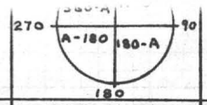
#17 Vulture (cont.)

$Az^2 = Az^1 + A$
0-180, +180
180-540, -180
540+, -540



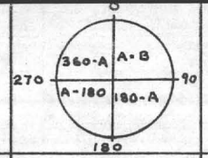
H.D. = sin V.A. × S.D. | N = cos B × H.D. | E = sin B × H.D. | V.D. = cos V.A. × S.D. | <90°, -H.I. + V.D. + H.S. | >90°, -H.I. + H.S. - V.D.

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-83	91 58 13 162 34 40 253 92 53 254 32 53 -180 74°32'53"	N74°32'53"E N74.5481°E	86.4	90-	86.4	25813.58 + 23.02 25836.60	222,361.51 + 83.28 222,444.79	4.50	4.90		2042.23 +4.50 -4.90 2041.83
19	91 58 13 207 10 40 298 68 53 299 08 53 -180 119°08'53"	S60°51'07"E S60.8519°E	197.6	90-	197.6	25813.58 - 96.25 25717.33	222,361.51 + 172.58 222,534.09	4.50	3.85	0.0	2042.23 +4.50 -3.85 2042.88
19 westend T-84 T10E (4+92'	119 08 53 39 53 40 158 61 93 159 02 33 -180 339°02'33"	N20°57'27"W N20.9575°W	105.5	90-	105.5	25717.33 + 98.52 25815.85	222,534.09 - 37.74 222,496.35	4.25	5.02	0.0	2042.88 +4.25 -5.02 2042.11
20	119 08 53 164 16 40 283 24 93 283 25 33 -180 103°25'33"	S76°34'27"E S76.5742°E	192.4	90-	192.4	25717.33 - 44.67 25672.66	222,534.09 + 187.14 222,721.23	4.25	4.50	0.0	2042.88 +4.25 -4.50 2042.63
T-85	103 25 33 216 19 00 319 44 33 -180 139°44'33"	S40°15'27"E S40.2575°E	76.1	90-	76.1	25672.66 - 58.08 25614.58	222,721.23 + 49.18 222,770.41	4.38	5.35	0.0	2042.63 +4.38 -5.35 2041.66
T-86 westend	103 25 33 242 45 40 345 70 73 346 11 13 -180 166°11'13"	S13°48'47"E S13.8131°E	180.9	90-	180.9	25672.66 - 175.67 25496.99	222,721.23 + 43.19 222,764.42	4.38	10.0	0.0	2042.63 +4.38 -10.0 2037.01
21	103 25 33 173 37 30 276 62 63 277 03 03 -180 97°03'03"	S82°56'57"E S82.9492°E	157.8	90-	157.8	25672.66 - 19.37 25653.29	222,721.23 + 156.61 222,877.84	4.38	6.24	0.0	2042.63 +4.38 -6.24 2040.77

	0-180, +180 180-540, -180 540+, -540										>90, -H.I. + H.S. - V.D.
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation

#18 Vulture cont.

$A_3^2 = A_3' + 4rt.$
0-180, +180
180-540, -180
540+, -540



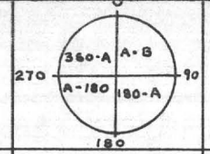
H.D. = sin V.A. × S.D.
N = cos B × H.D.
E = sin B × H.D.
V.D. = cos V.A. × S.D.
~~<90°, -H.I. + V.D. + H.S.~~
~~>90°, -H.I. + H.S. - V.D.~~

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
East end T-84 T10E (0+00)	97 03 03 151 59 50 248 62 53 249 02 53 +180 69°02'53"	N69°02'53"E N69.0481°E	73.8	90-	73.8	25653.29 +26.39 25679.68	222,877.84 +68.92 222,946.76	4.58	5.05	0.0	2040.77 +4.58 -5.05 2040.30
T-87	97 03 03 275 27 10 372 30 33 -180 192°30'33"	S12°30'33"W S12.5092°W	60.5	90-	60.5	25653.29 -59.06 25594.23	222877.84 -13.10 222864.74	4.58	8.64	0.0	2040.77 +4.58 -8.64 2036.71
T-88	97 03 03 250 39 20 347 42 23 -180 167°42'23"	S12°17'37"E S12.2936°E	66.4	90-	66.4	25653.29 -64.89 25588.40	222877.84 +14.14 222,891.98	4.58	8.59	0.0	2040.77 +4.58 -8.59 2036.76
east end T-86 T12E	97 03 03 251 52 20 348 55 23 -180 168°55'23"	S11°04'37"E S11.0769°E	179.8	91°43'20" 91.7222°	179.7	25653.29 -176.35 25476.94	222,877.84 +34.53 222,912.37	4.58	5.00	5.40	2040.77 +4.58 -5.00 -5.40 2034.95
T-89	97 03 03 228 38 50 325 41 53 -180 145°41'53"	S34°18'07"E S34.3019°E	86.8	90-	86.8	25653.29 -71.70 25,581.59	222,877.84 +48.92 222,926.76	4.58	8.32	0.0	2040.77 +4.58 -8.32 2037.03
T-90	97 03 03 215 28 10 312 31 13 -180 132°31'13"	S47°28'47"E S47.4797°E	115.5	90-	115.5	25653.29 -78.06 25,575.23	222,877.84 +85.13 222,962.97	4.58	8.05	0.0	2040.77 +4.58 -8.05 2037.30
T-91	97 03 03 206 47 10 303 50 13 -180 123°50'13"	S56°09'47E S56.1631°E	155.8	90-	155.8	25653.29 -86.75 25566.54	222,877.84 +129.41 223,007.25	4.58	9.14	0.0	2040.77 +4.58 -9.14 2036.21

ok

#19 Vulture cont.

$A_3^2 = A_3' + 7$ rt.
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

E = sin B × H.D.

V.D. = cos V.A. × S.D.

<90°, -H.I. + VD + H.S.
>90°, -H.I. + H.S. - V.D.

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
maybe wrong 22	97 03 03 138 23 30 235 26 33 -180 55°26'33"	N 55°26'33"E N55.4425°E	144.1	93°22'40" 93.3778	143.85	25653.29 + 81.60 25,734.89	222,877.84 + 118.47 222996.31	4.58	0.0	8.49	2040.77 +4.58 − 8.49 2036.86
22 → wrong east end T-80 T9E	55 26 33 347 56 00 402 82 33 403 22 33 -180 223°22'33"	S 43°22'33"W S43.3758°W	69.6	90−	69.6	25734.89 − 50.59 25,684.30	222,996.31 − 47.80 222,948.51	4.74	1.17	0.0	2036.86 +4.74 − 1.17 2040.43
wrong 23	55 26 33 345 17 50 400 43 83 400 44 23 -180 220°44'23"	S 40°44'23"W S40.7397°W	99.55	89°51'00" 89.8500	99.55	25734.89 − 75.43 25659.46	222,996.31 − 64.97 222,931.34	4.74	0.0	.26	2036.86 +4.74 + .26 2041.86
wrong → pt 321	220 44 23 125 42 10 345 86 33 348 26 33 -180 168°26'33"	S 13°33'27"E S13.5575°E	112.6	89°45'20" 89.7556°	112.60	25659.46 − 109.96 25,550.00	222,931.34 + 28.40 222,959.74	4.6	0.0	.48	2041.86 + + .48

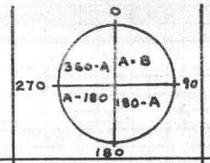
#20 Vulture cont.

$A_3^2 = A_3' + \measuredangle + \pi$

0-180, +180

180-540, -180

540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

E = sin B × H.D.

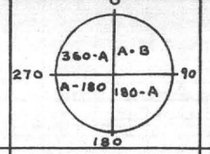
V.D. = cos V.A. × S.D.

<90°, -H.I. + VD + H.S.

>90°, -H.I. + H.S. - V.D.

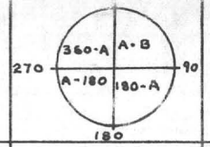
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
13 → T-92	77 02 33 237 53 50 314 55 83 314 56 23 -180 134° 56' 23"	S 45° 03' 37" E S45.0603	110.9	94° 58' 30" 94.9750°	110.48	25818.28 − 78.04 25740.24	222,224.90 + 78.20 222,303.10	4.26	3.0	9.62	2040.86 +4.26 −3.0 −9.62 2032.50
T-93	77 02 33 221 03 00 298 05 33 -180 118° 05' 33"	S 61° 54' 27" E S61.9075° E	163.4	90−	163.4	25818.28 − 76.95 25741.33	222,224.90 + 144.15 222,369.05	4.26	4.35	0.0	2040.86 +4.26 −4.35 2040.77
13 → T-94	91 58 13 223 37 50 314 95 63 315 36 03 -180 135° 36' 03"	S 44° 23' 57" E S44.3992° E	106.0	90−	106.0	25813.58 − 75.74 25,737.84	222,361.51 + 74.16 222,435.67	4.50	7.64	0.0	2042.23 +4.50 −7.64 2039.09
318 → 24	190° 57' 33" 180 03 50 370 60 83 371 01 23 -180 191 01 23	S 11° 01' 23" W S11.0231° W	198.0	90−	198.0	25,041.84 − 194.35 24,847.49	222,331.79 − 37.86 222,293.93	2.89	6.65	0.0	2028.50 +2.89 −6.65 2024.74
↓ 25	190 30 30 381 31 53 -180 201° 31' 53"	S 21° 31' 53" W S21.5314	194.6	92° 11' 50" 92.1972	194.46	− 180.89 24666.60	− 71.37 222,222.56	4.93	9.0	7.46	+4.93 −9.0 −7.46 2013.21
↓ 26	187 19 50 388 50 103 388 51 43 -180 208° 51' 43"	S 28° 51' 43" W S28.8619° W	192.7	87° 41' 00" 87.6833	192.54	− 168.62 24497.98	− 92.94 222,129.62	4.79	9.0	7.79	+4.79 −9.0 +7.79 2016.79
↓ 27	153 17 40 361 68 83 362 09 23 -180 182° 09' 23"	S 02° 09' 23" W S2.1564	174.9	90−	174.9	− 174.78 24323.20	− 6.58 222,123.04	4.87	2.43	0.0	+4.87 −2.43 2019.23

#21
Vulture
cont.

	$A_3^2 = A_3' + \angle rt.$ 0-180, +180 180-540, -180 540+, -540				H.D. = sin V.A. × S.D.	N = cos B × H.D.	E = sin B × H.D.			V.D. = cos V.A. × S.D.	<90°, -H.I. + VD + H.S. >90°, -H.I. + H.S. - V.D.
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-95 (22-D)	182°09'23" 177 06 58 359 15 73 359 16 13 -180 179°16'13"	S 00°43'47" E S0.7297	51.2	90-	51.2	24323.20 - 51.20 24272.00	222,123.04 + 65 222,123.69	4.93	7.39	0.0	2019.23 + 4.93 - 7.39 ✓ 2016.77
T-96 22-C	182 09 23 265 44 10 447 53 33 -180 267°53'33"	S 87°53'33" W S87.8925°W	197.1	90-	197.1	24323.20 - 7.25 24315.95	222,123.04 - 196.97 221,926.07	4.93	6.2	0.0	2019.23 + 4.93 ✓ - 6.2 2017.96
20	182 09 23 265 13 00 447 22 23 -180 267°22'23"	S 87°22'23" W S87.3731	186.8	90-	186.8	24323.20 - 8.56 24314.64	222,123.04 - 186.60 221,936.44	4.93	6.35	0.0	2019.23 + 4.93 - 6.35 ✓ 2017.81
T-97 29	192°44'30" 459 66 53 460 00 53 -180 280°06'53"	N 79°53'07" W N79.8853°W	200.4	90-	200.4	+ 35.19 24349.83	- 197.29 221,739.15	4.92	2.85	0.0	+ 4.92 - 2.85 ✓ 2019.88
30	183 48 10 463 54 63 463 55 03 -180 283°55'03"	N 76°04'57" W N76.0825	198.0	90-	198.0	+ 47.62 24397.45	- 192.19 221,546.96	4.88	6.90	0.0	+ 4.88 - 6.90 2017.86

#22
Vulture
cont.

$A_3^2 = A_3' + 4rt.$
0-180, +180
180-540, -180
540+, -540



H.D. = sin V.A. × S.D.

N = cos B × H.D.

E = sin B × H.D.

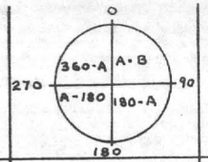
V.D. = cos V.A. × S.D.

<90°, -H.I. + VD + H.S.
>90°, -H.I. + H.S. - V.D.

Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
pt 31						26,932.45	221,696.73				
pt 316	173.5568 173°33'25"					26,780.41	221,713.90				2061.67
T-98-1	27 55 10 200 88 35 201 28 35 -180 21 28 35	N21°28'35"E N21.4764°E	87.6	90-	87.6	26,861.93 + 81.52	221,745.97 + 32.07	3.33	3.89	0.0	+3.33 -3.89 2061.11
T-98-2	239 34 20 260 62 55 261 02 55 -180 81°02'55"	N81°02'55"E N81.0486°E	198.7	90-	198.7	26,892.85 + 30.92	221,942.25 + 196.28	4.90	8.32	0.0	+4.9 -8.32 2057.69
T-98-1 → T-98-3	21 28 35 63 54 10 84 82 45 85 22 45 +180 265°22'45"	S85°22'45"W S85.3792°W	197.3	90-	197.3	26,861.93 - 15.80	221,745.97 - 196.66	4.90	2.69	0.0	2061.11 +4.9 -2.69 2063.32
T-98-2 T-98-4	81 02 55 180 26 50 261 28 105 261 79 45 -180 81°29'45"	N81°29'45"E N81.4958	142.8	90-	142.8	26,892.85 + 21.12	221,942.25 + 141.23	4.85	6.69	0.0	2057.69 +4.85 -6.69 2055.85
T-98-3 → T-98-5	265 22 45 181 50 30 446 72 75 447 13 15 -180 267°13'15"	S87°13'15"W S87.2208	199.3	90-	199.3	26846.03 - 9.66	221,549.31 - 199.07	4.95	1.81	0.0	2063.32 +4.95 -1.81 2066.46

#23 Vulture cont.

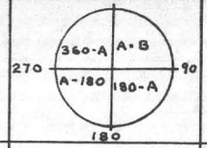
$A_3^2 = A_3' + \measuredangle rt.$
0-180, +180
180-540, -180
540+, -540

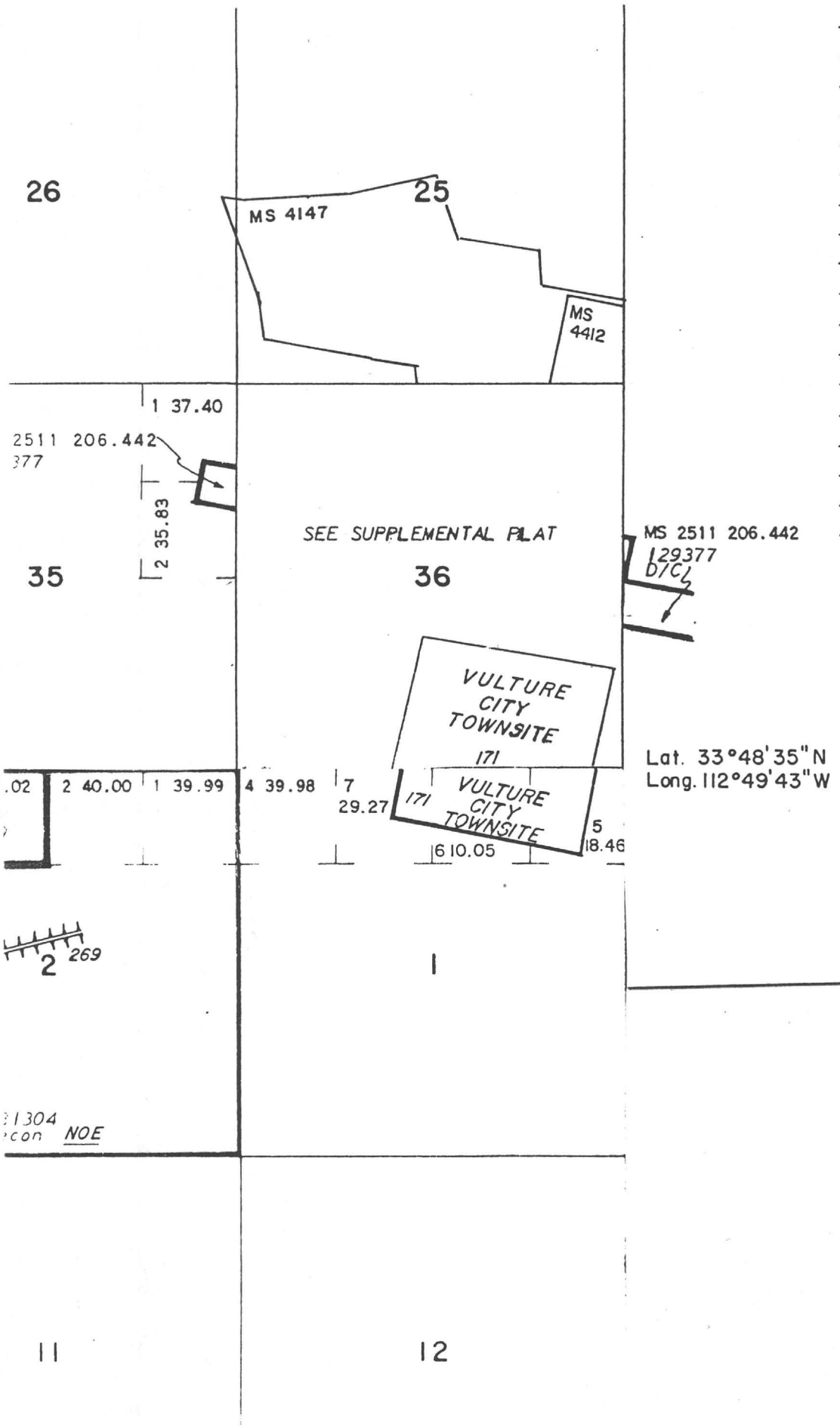


H.D. = sin V.A. × S.D.
N = cos B × H.D.
E = sin B × H.D.
V.D. = cos V.A. × S.D.
<90°, -H.I. + VD + H.S.
>90°, -H.I. + H.S. - V.D.

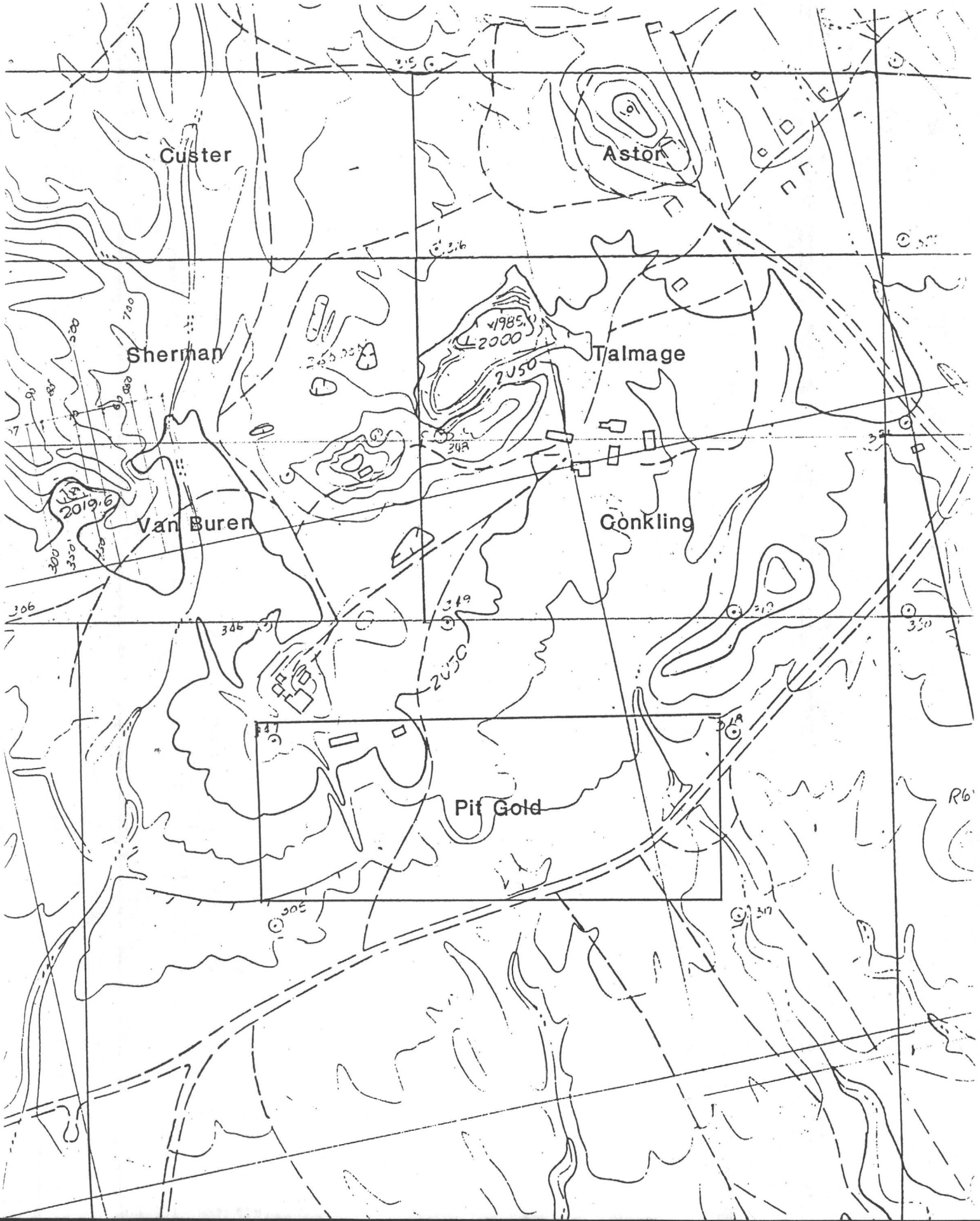
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
T-98-5 → T-98-6	267 13 15 182 35 10 449°48 25 -180 269°48'25"	S89°48'25"W S89.8069°W	99.4	90-	99.4	26,836.37 - .34 26836.03	221,350.24 - 99.40 221,250.84	4.93	.60	0.0	2066.46 +4.93 -.60 2070.79
T-99N	261 21 40 530 69 65 531 10 05 -180 351°10'05"	N 8°49'55"W N8.8319°W	66.8	90-	66.8	+ 66.01 26 902.04	- 10.26 221,240.58	4.96	4.35	0.0	+4.96 -4.35 2071.40
T-99S	269 48 25 109 25 20 378 73 45 379 13 45 -180 199°13'45"	S19°13'45"W S19.2292	73.0	90-	73.0	26836.03 - 68.93 26,767.10	221,250.84 - 24.04 221,226.80	4.96	6.76	0.0	2070.79 +4.96 -6.76 2068.99
T-98-7	269 48 25 173 25 10 442°73' 35" 443 13 35 -180 263°13'35"	S83°13'35"W S83.2264°W	195.2	92°42'20" 92.7056	194.98	26836.03 - 23.00 26 813.03	221,250.84 - 193.62 221,057.22	4.96	5.0	9.21	2070.79 +4.96 -5.0 -9.21 2061.54
T-98-8	181 45 20 444 58 55 -180 264°58'55"	S84°58'55"W S84.9819	41.75	90-	41.75	- 3.65 26809.38	- 41.59 221 015.63	5.10	2.50	0.0	+5.1 -2.5 2064.14
T-100	166 10 10 430°68 65 431 09 05 -180 251°09'05"	S71°09'05"W S71.1514W	158.3	95°05'20" 95.0889	157.68	- 50.94 26,758.44	- 149.22 220,866.41	4.93	0.0	14.04	+4.93 -14.04 2055.03
32	264°58' 55" 227 19 50 491°77 105 492 18 45 -180 312°18'45"	N47°41'15"W N47.6875	136.6	95°01'00" 95.0167	136.08	26809.38 + 91.61 26,900.99	221015.63 - 100.63 220,915.0	4.93	0.0	11.95	2064.14 +4.93 -11.95 2057.12

#24
Vulture
cont.

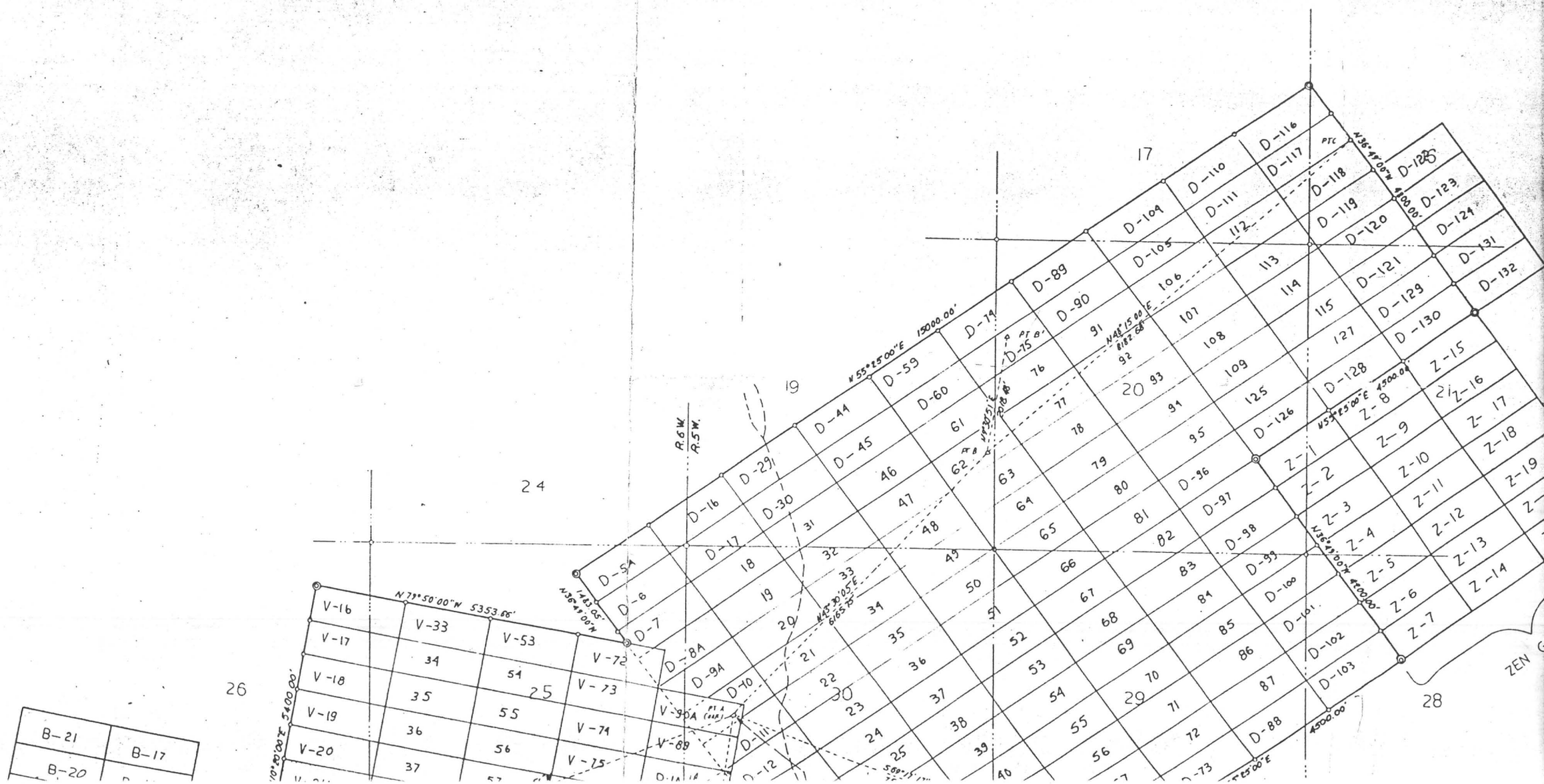
	$A_3^2 = A_3' + \frac{1}{2}$ rt. 0-180, +180 180-540, -180 540+, -540				H.D. = sin V.A. × S.D.	N = cos B × H.D.	E = sin B × H.D.			V.D. = cos V.A. × S.D.	<90°, -H.I. + VD + H.S >90°, -H.I. + H.S. - V.D
Station	Azimuth	Bearing	Slope Dist.	Vert. Angle	Hort. Dist.	Northing (Lat.)	Easting (Dep.)	H.I.	H.S.	Vert. Dist.	Elevation
△ →	312° 18' 45" 187 28 00 499° 46 45 -180	N 40° 13' 15" W		87° 03' 30"		26,900.99 + 86.40	220,915.0 - 73.07				2057.12 + 5.02 + 5.82
T-101	319° 46' 45"	N40.2208° W	113.3	87.0583	113.15	26,987.39	220,841.93	5.02	0.0	5.82	2067.96



CURRENT TO	
OG	


Custer
Aston
Sherman
Talmage
Van Buren
Conkling
Pit Gold

PATENTED CLAIMS
SEE MAP NO 2
VULTURE MINE ROAD
BLAN GROUP
T. 6 N.
T. 5 N.
LEGEND
BOUNDARY CORNERS (IRON PIPES)
INTERMITTENT CLAIM CORNERS (2"x2" WOODEN HUBS)
SECTION CORNERS.
CONTROL POINTS.
Scale 1" = 1000'


17
19
24
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30
20
21
R.6 W.
R.5 W.
N 55°25'00"E 15000.00'
N 36°49'00"W 4500.00'
N 55°25'00"E 4500.00'
N 36°49'00"W 4500.00'
N 79°50'00"W 5353.86'
N 10°20'00"E 5400.00'
N 36°49'00"W
N 48°15'00"E 8182.68'
N 43°30'05"E 8165.35'
4500.00'
ZEN
D-54
D-6
D-7
D-8A
D-9A
D-10
D-111
D-12
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D-103
V-16
V-17
V-18
V-19
V-20
V-33
V-53
V-72
V-73
V-74
V-75
V-90A
V-68
Z-2
Z-3
Z-4
Z-5
Z-6
Z-7
Z-8
Z-9
Z-10
Z-11
Z-12
Z-13
Z-14
Z-15
Z-16
Z-17
Z-18
Z-19
B-21
B-17
B-20

INDUCED POLARIZATION SURVEY

VULTURE MINE PROJECT

MARICOPA COUNTY, ARIZONA

for

A. F. BUDGE (MINING) LIMITED

Joseph R. Anzman
Exploration Geophysicist
July 21, 1989

CONTENTS

INTRODUCTION 1

CONCLUSIONS AND RECOMMENDATIONS 2

INTERPRETATION 4

NORTH AREA 4

SOUTH AREA 8

SURVEY INFORMATION 10

ILLUSTRATIONS

INTERPRETATION MAPS . . . . . Map Pocket 1

NORTH AREA

LINE 1 Test, 100-foot dipoles
LINE 1 200-foot dipoles
LINE 1 100-foot dipoles
LINE 2 200-foot dipoles
LINE 2 300-foot dipoles . . . . . Map Pocket 2

LINE 5 300-foot dipoles
LINE 6 300-foot dipoles
LINE 7 100-foot dipoles
LINE 8 100-foot dipoles
LINE 9 100-foot dipoles
LINE 10 300-foot dipoles
LINE 12 300-foot dipoles . . . . . Map Pocket 3

SOUTH AREA

LINE 3 200-foot dipoles
LINE 3 300-foot dipoles
LINE 4 200-foot dipoles
LINE 11 300-foot dipoles . . . . . Map Pocket 4

INTRODUCTION

This report presents the results of an induced polarization survey carried out at the Vulture Mine Project, Maricopa County, Arizona for A. F. Budge (Mining) Limited.

The purpose of the induced polarization survey was to try to detect geologic conditions that were indicative of favorable locations for gold mineralization. At the Vulture Mine, a quartz monzonite stock has intruded Proterozoic rocks. An apophysis of this stock extends as a sill into the Proterozoic and dips northerly at about 35°. Gold mineralization was present within the sill and within its hanging wall and footwall. The gold was almost always associated with quartz veining and silicification as well as with pyrite. These geologic conditions, it was hoped, would be reflected in the IP survey by high resistivity accompanied by anomalous chargeability values.