



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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DEPCO, Inc.

MEMO TO G. A. P. DATE April 30, 1981
FROM J. B. I.
SUBJECT

Enclosed are reports covering the Cycloptic, Mockingbird and Van Deeman properties in Mohave County, Arizona. These properties were determined to require follow up work on the basis of preliminary results obtained by N. L. Archbold. Please check these out with further sampling, etc. at your earliest convenience. Thank you.



Attachments: "Reconnaissance of Gold Basin District, Mohave County, Arizona"

January 14, 1981 -- N. L. Archbold

"Reconnaissance of Some Districts in the Northern Black Mountains,

Mohave County, Arizona" January 13, 1981 -- N. L. Archbold

Page 77 from Ariz. Bur. Mines Bull. 137

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Page 77 from Ariz. Bur. Mines Bull. 137

DEKALB Mining, Inc.

MEMO TO: J. B. Imswiler
DATE: Dec. 29, 1981
FROM: N. L. Archbold
SUBJECT: Van Deemen Mine, sec. 29, T. 27 N., R. 21 W., Gold Bug Mining District,
Mohave County, Arizona

Summary

The Van Deemen mine is about 23 line miles southeast of Hoover Dam in the northern Black Mountains of Mohave County, Arizona. My visit to the area resulted from an earlier reconnaissance in January of 1981 that indicated gold values might extend over a broad area of brecciated, altered Precambrian gneiss. A more detailed look at the area indicates the mineralized areas are separated by barren gneiss and that there is limited potential for a bulk-mineable precious metal deposit.

Location

The Van Deemen mine area covers the southwest quarter of unsurveyed sec. 29, T. 27 N., R. 21 W. in the northern end of the Black Mountains of Mohave County, Arizona. The mine, which is part of the Gold Bug Mining district, is about 11 miles west of the better known White Hills district, and is shown on the Mt. Perkins 15 minute topographic quadrangle.

Ownership

I made no search of records in the county courthouse; however, observations in the field show that a broad area involving numerous claim blocks was relocated in January of 1975 by Charles R. Kunkes. Mr. Kunkes' address is given as Las Vegas Star Route, Box 970, Kingman, Arizona. Notices on the mine property state that Kunkes performed assessment work for 1979.

Geology

General geology of the Van Deemen mine area will be discussed by references to the accompanying Mt. Perkins 15 minute topographic quadrangle. The prospects occur in Precambrian gneiss that borders a broad pediment area lying to the west.

Approximately 1,000 feet north of the mine, on the north side of the mine access road, the high hills consist of Tertiary (?) andesite which appears to lie directly on oxidized Precambrian gneiss. It is not clear whether some of this andesite is involved at the Van Deemen mine, but I believe it is not.

The Van Deemen mine area concerns principally three separate areas shown on the topographic map and extending for about half a mile from north to south. The northern most area lies immediately south of the main access road

Van Deemen Mine, Mohave County, Arizona
N. L. Archbold
December 29, 1981
Page 2

and consists of shallow pits and one shaft. The shallow pits cover a zone of sheared, argillized gneiss trending westerly no more than a few hundred feet along the top of a low ridge. Structures that are nearly flat predominate and the shaft at the west end of the zone probably penetrated only barren rock. Minor coatings of secondary copper minerals mark the zone as in the two areas farther south.

The central area covers a westerly trending ridge about 600 feet south from the area described above. The area of altered, fractured gneiss covers an estimated 700 feet from east to west and 200 feet from north to south. Both flat-lying and vertical east-west structures are exposed in the several pits and tunnel in this area. This central area looks to have been sampled in great detail by Kunkes.

The sothern area lies about 1,500 feet to the southeast of the central area. The structure here consists of a well-defined, narrow zone of quartz vein material in the gneiss. This vein can be traced about 1,500 feet in an east-northeasterly direction. This area lacks the pervasive argillic alteration that marks the two areas to the north.

The zones of gneiss between the three mineralized areas appear unaltered and unmineralized and the overall structural grain of the area trends easterly to east-northeasterly.

Conclusions

Even if my samples should show ore-grade values in gold and/or silver, I doubt that a sizeable, continuous ore body could be developed here. If my samples show interesting values, the next step would be to check current ownership and approach Kunkes for his data if he still owns the ground. The area should be dropped from further consideration if the majority of my samples do not show ore-grade values.

Van Deemen Mine, Mohave County, Arizona
 N. L. Archbold
 December 29, 1981
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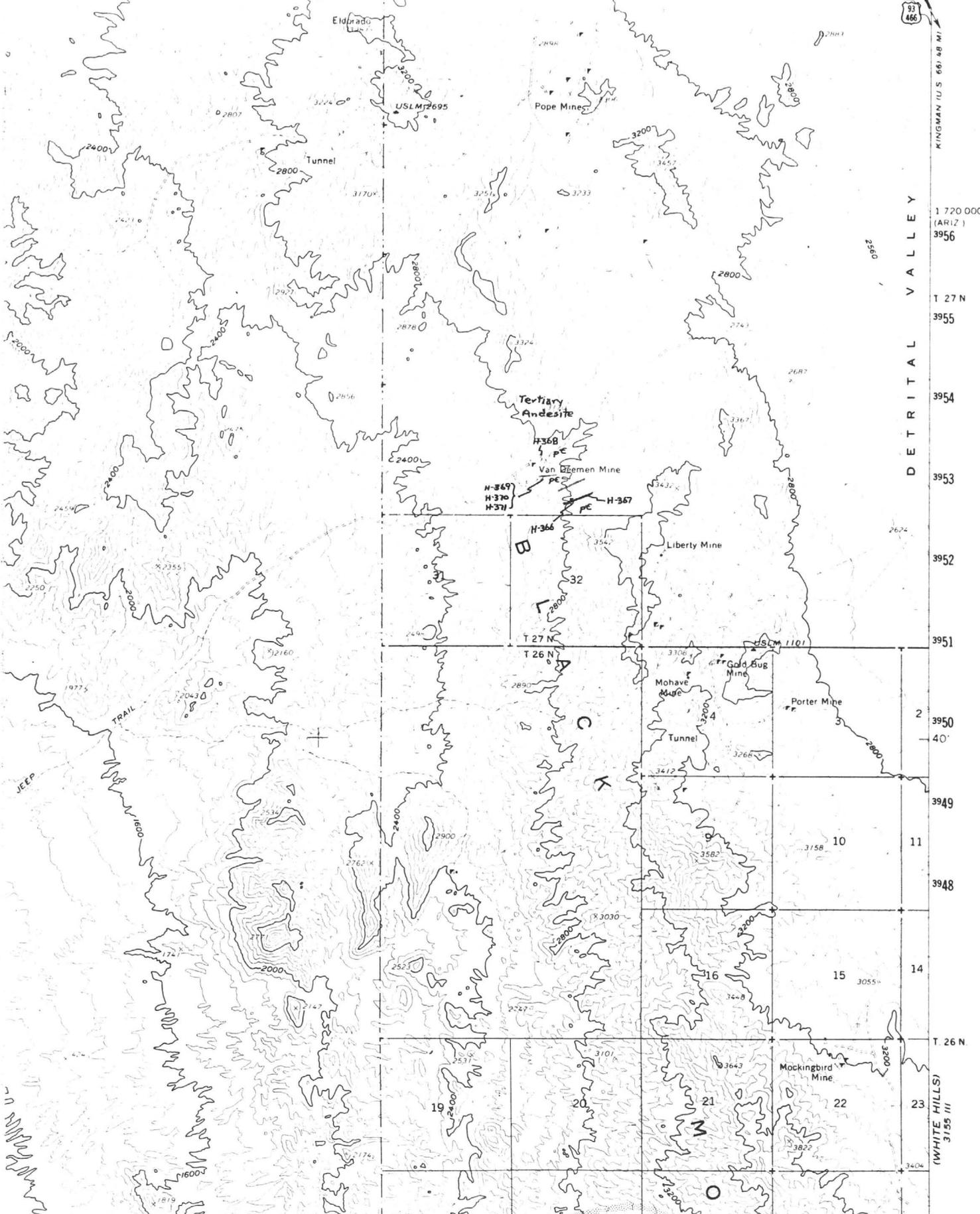
List of Samples

<u>Sample #</u>	<u>Description</u>	<u>Au</u>	<u>ppm</u>	<u>Ag</u>
H 366	3 foot chip samle across brecciated quartz vein and gneissic wall rock, hematite stained.	0.70		4
H 367	Copper stained shear zone and vein quartz in Precambrian gneiss. Sample taken off dump of small propsect.	0.25		1
H 368	Sheared, argillized gneiss with Cu oxides coating some fractures. Random chips around pit by road and about 200 feet NE of shaft.	0.40		1
H 369	5 foot chip sample across flat, argillized shear in gneiss. Contains veinlets of gypsum.	15.00		16
H 370	Fractured, argillized gneiss with traces of Cu oxides.	2.40		2
H 371	Chips from 3 feet across easterly trending vertical fault zone in tunnel.	2.35		5

MT. PERKINS QUADRANGLE
ARIZONA-NEVADA
15 MINUTE SERIES (TOPOGRAPHIC)

3155 IV
(SENATOR MOUNTAIN)

3055 I CANYON 716 717 718 35' 719 720 721 R 21 W 270 000 FEET (ARIZ) 724 HOOPER DAM 27 MI 114° 30' 35' 45'



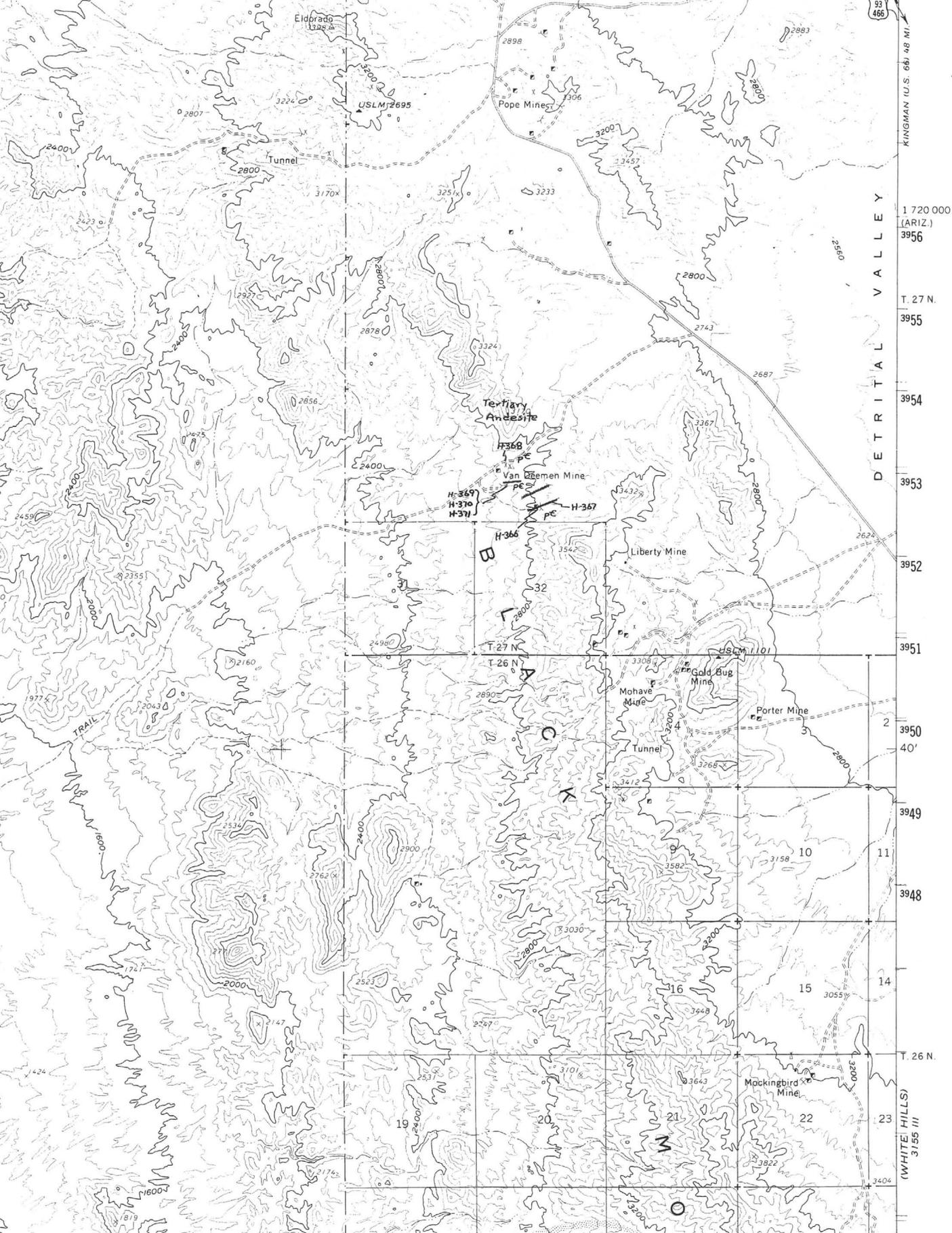
DETRITAL VALLEY

KINGMAN (U.S. 66) 48 MI
1 720 000 FEET (ARIZ) 3956
T 27 N 3955
3954
3953
3952
3951
2 3950
40'
3949
11 3948
10
15 3055
14
T 26 N
23
(WHITE HILLS) 3155 III

MT. PERKINS QUADRANGLE
ARIZONA-NEVADA
15 MINUTE SERIES (TOPOGRAPHIC)

3155 IV
(SENATOR MOUNTAIN)

YON 716 717 718 35' 719 720 721 R. 21 W. 270 000 FEET (ARIZ.) 724 HOOVER DAM 27 MI. 114° 30' 35° 45'



KINGSMAN U.S. 66 48 MI.

DETRITAL VALLEY

1 720 000 FEET (ARIZ.) 3956

T. 27 N. 3955

3954

3953

3952

3951

3950 40'

3949

3948

10 11

12 13

14 15

16 17

T. 26 N. (WHITE HILLS) 3155 III

DEKALB Mining, Inc.

MEMO TO: File

DATE: January 4, 1982

FROM: K. M. Emanuel

SUBJECT: Followup Sampling and Mapping of the Van Deeman, Mockingbird and P & LM Areas, Northern Mohave County, Arizona

Maps and References:

Mount Parkins 15', White Hills 15' and Garnet Mountain 15' Quadrangles, USGS Bulletin #397.

Summary and Conclusions:

Follow-up sampling and mapping of the Van Deeman, Mockingbird and P & LM mines (CF. N.L. Archbolds memo's 1/13/81 & 1/14/81) did not show these areas to be of economic interest at present. The Cycloptic mine was not sampled, as the property had been drilled extensively (100 + holes) since N. L. Archbold's initial visit.

Location:

Cf. of N. L. Archbolds memo's of 1/13/81 & 1/14/81.

Geology:

Van Deeman mine - The area was visited by myself and D. J. Wronkiewicz on July 13 & 14, 1981 and was mapped at a scale of 1"=200' by pace, tape and compass methods. The rocks in the vicinity of the workings consist of schist and gneiss that have been variably argillized and Fe stained. Adjacent to irregular brecciated masses and below a thick flow (?) unit of andesite, a total of eight samples were taken from prospects and shallow workings in altered andesite and country rock. The extent of the altered area is shown in the overlay accompanying the map. Gold above 0.1 ppm was only detected in 2 samples (0.94 & 1.17 ppm) and the silver content was uniformly low (1.2 to 4.0 ppm). The average gold content was 0.26 ppm (0.007 oz/t). Mineralization here appears too erratic and low grade to justify further work at this time.

	<u>Sample Descriptions</u>	<u>Au</u>	<u>ppm</u>	<u>Ag</u>
X-307	Outcrop chip sample. Argillically altered and Fe stained chlorite phyllite.	<0.1		<0.1
X-308	Random chip across adit portal in kaolinized muscovite schist and chlorite phyllites.	1.17		1.2
X-309	Rep dump sample from small open cut; argillically altered gneiss and gneiss breccia with quartz, clays and Fe oxides in matrix.	<0.1		1.2

K.M. Emanuel
 Van Deeman, Mockingbird and P&LM Areas, Mohave Co. AZ
 Page Two
 January 4, 1982

<u>Sample Descriptions (Cont.):</u>	<u>Au</u>	<u>ppm</u> <u>Ag</u>
X-310 Random chip across adit portal near main shaft. Chloritized phyllite and chloritic argillized andesite breccia.	<0.1	1.2
X-311 Chip across portal in f.g. hematitically altered and (?) with actinalite and abundant limonite.	<0.1	1.2
X-312 Rep grab from large open pit in brecciated andesite with f.g. hematite quartz and limonite matrix.	0.94	3.8
X-313 Rep grab from small dump in quartz cemented breccia composed of argillically altered andesite.	<0.1	3.5
X-314 Chip from portal of small portal extensively brecciated and argillized andesite and phyllite; abundant Fe oxides.	<0.1	4.0

Mocking Bird Mine:

The area was visited and sampled by myself and D. J. Wronkiewicz on July 14 & 15, 1981 and was mapped by tape, pace and compass methods on a scale of 1"=100'. Au mineralization is associated with Cu oxides and jasperoidal red quartz within a 3 to 10 foot thick lamprophyre sill that dips 15-25° north within quartzofeld-spathic gneiss and amphibolite host rocks. The western part of the area is overlain by porphyritic rhyolite that is not seen in contact with the sill, but which locally contains minor copper shows. The sill appears to have acted as a receptive host rather than a source for the Cu-Au mineralization. A total of eight samples were taken from the numerous pits and open cuts within the sill. Au above 0.1 ppm was detected in a single sample (1.87 ppm); both gold and silver (<3.4 ppm are highest in copper rich zones that carry trace amounts of tetrahedrite (?) and abundant Cu oxides. The paucity of Cu oxides in most exposures and the low assay results do not justify further work on this property at this time.

Sample Descriptions

	<u>Au</u>	<u>ppm</u> <u>Ag</u>	<u>Cu%</u>
X-315 Rep dump grab-green lamprophyre with a few stringers of white quartz with hematite.	<0.1	<0.1	0.037%
X-316 4' chip in open cut; f.g. lamprophyre with irregular red patches of jasperoidal quartz.	<0.1	<0.1	0.004%

K.M. Emanuel
 Van Deeman, Mockingbird and P&LM Areas, Mohave Co. AZ
 Page Three
 January 4, 1982

<u>Sample Descriptions (Cont.):</u>		<u>Au</u>	<u>ppm</u> <u>Ag</u>	<u>Cu%</u>
X-317	7' chip in open cut-same as X-315 with minor brecciation and a few patches of red jasperoidal quartz.	<0.1	<0.1	0.010%
X-318	6' chip in open cut. Lamprophyre containing sparse red jasperoidal quartz and a few white quartz stringers.	<0.1	1.2	0.062%
X-319	6' chip across portal of small adit locally sheared and brecciated lamprophyre with zone near center of sill (10") that carried about 3% Cu oxide.	1.87	3.4	0.26%
X-320	Rep dump grab-lamprophyre with irregular patches of red jasperoidal quartz and locally abundant Cu oxides.	<0.1	2.0	0.60%
X-321	Rep dump grab-locally brecciated lamprophyre with quartz-hematite-calcite cement.	<0.1	<1.0	0.009%
X-322	Rep grab of Fe oxide stained latite porphyry dike (?) exposed in small open cut.	<0.1	2.4	0.006%

(Lee) P & LM Mine:

The area was mapped and sampled on July 17, 1981, by compass and pace methods. (11"=100'). A grid of survey stakes (100' centers), no more than a few weeks old, covered most of the area. The mine occurs within a group of low outcrops standing less than a meter above the surrounding pediment. Workings are found in slightly brecciated propylitized granite that is locally bleached and heavily Fe stained. Stockwork like veinlets and veins (up to 10 cm) of white massive quartz are locally abundant, but do not follow a fixed orientation or have a uniform distribution. Some outcrops on the southeast end of the area contain considerable fine grained purple fluorite. Hematite flooding of the granite is particularly abundant in areas where prominent quartz mineralization occurs. A total of six samples were taken.

K. M. Emanuel
 Van Deeman, Mockingbird and P&LM Areas, Mohave Co. AZ
 Page Four
 January 4, 1982

	<u>Sample Descriptions</u>	<u>Au</u>	<u>ppm</u> <u>Ag</u>	<u>Mo</u>
X-323	Random outcrop chip of v.f.g. granite with abundant microveinlets of hematite and quartz.	<0.1	<0.1	13
X-324	6' chip in prospect pit; coarse granite and quartz breccia, with quartz hematite matrix.	<0.1	4.7	102
X-325	6' chip in prospect pit. Altered granite breccia with cross cutting quartz stockwork (0.054 oz/t) and a few sulfide ghosts (pyrite).	1.17	<1.0	7
X-326	3' chip in small pit; brecciated granite shot through with quartz veinlets. A few granitic fragments are propylitized; locally abundant Fe oxides.	<0.1	<1.0	17
X-327	Rep dump sample, main shaft; slightly propylitized and bleached granite breccia shot with white quartz; minor Fe oxides.	4.69	1.1	17
X-328	2' chip in small prospect pit. Brecciated propylitized granite with matrix of clear quartz, purple fluorite and Fe oxides; matrix assemblage also occurs as replacement patches and as veinlet fillings.	<0.1	<0.1	4

The low erratic gold values and the present land status (currently claimed by V. E. Lee, Oatman, Arizona 86433) do not seem to justify further work at this time. There does seem to be some potential for covered extensions beneath the adjacent pediment, however, and a check on the status of the current claim block might be advisable at some point during the next assessment year.

Vandeman
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Sw/ly
Sec 29 unsum
C N 1/2 (NE 1/4)
Sec 22
T 27 N
R 21 W
T 26 N
R 21 W

DEPCO, Inc.

MINERALS DIVISION

MEMO TO: J. B. Imswiler

DATE: January 13, 1981

FROM: N. L. Archbold

Cycloptic Sec 30 T 27 N R 18 W
Lee P & L Mine NW 1/4 Sec 4 T 27 N R 18 W

SUBJECT: Reconnaissance of Some Districts in the Northern Black Mountains, Mohave County, Arizona

Districts Included: Eldorado Pass, Gold Bug, Mocking Bird, and Pilgrim.

Maps and References:

Mount Perkins 15' and White Hills 15' Quadrangles.
USGS Bulletin 397, p. 214-218.
Arizona Bureau of Mines Bulletin 137, p. 78-80.

General Types of Deposits:

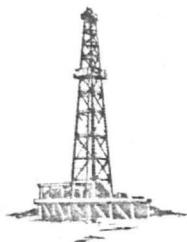
- 1) Gold and silver in narrow veins cutting Precambrian gneiss.
- 2) Precious metals associated with lamprophyre.
- 3) Veins and stockworks in Tertiary volcanic rocks associated with Tertiary volcanic intrusions.

Notes on My Examinations: (see numbers on accompanying Mt. Perkins 15' Quadrangle).
Eldorado Pass District

- 1) Enigma Mine - narrow vein in Precambrian granite. Strikes N 60° W about vertical.
- 2) Nearly vertical vein in unaltered granite. Strikes about N 80° W.
- 3) Old mill site and Pope #1 location. Vein in Precambrian granite gneiss. Strikes about N 35° E and dips steeply NW. Looks like some attempt at leaching in recent years.
- 4, 5, & 6) Broader zone of iron staining and brecciation related to flat (?) structure. This area might be worth mapping and sampling if my samples show any values.

SAMPLE	Au ppm	Ag
H-14 - Portal of tunnel at northeast end of area. Sheared, argillized and slightly iron-stained granite.	- .1	- 1
H-15 - Portal of tunnel about 1000 feet SW of H-14. Brecciated, iron-stained and argillized granite.	- .1	- 1
H-16 - Dump at road intersection about 1000 feet SW of H-15. Brecciated, argillized and hematite-stained granite with some veinlets of hematite.	1.1	0.32 2

7) Prospects in hematite-cemented pediment gravels with some secondary



- copper minerals. This makes me wonder what lies below the gravels?
 8) Vertical shaft in brecciated, altered, apparently barren granite.

<u>SAMPLE</u>	<u>Au</u> ppm	<u>Ag</u>
H-17 - Brecciated, iron-stained granite with silicification, argillization, and sericitization.	-1	-1

My general impression is that there is little probability of an important deposit in the Eldorado Pass area. Closer examination of the area in the SW ¼ of sec. 17, T. 27 N., R. 21 W. might be advisable. The gravels here suggest the possibility of a pyritic, disseminated-type of deposit (porphyry copper?) in the area.

Gold Bug District

- 9) Van Deemen Mine - This looks like an intrusive mass of Tertiary andesite into the Precambrian gneiss with abundant brecciation, iron oxides and argillization. I noted some veinlets of gypsum. There appear to have been countless shallow drill holes and samples taken by some small operator. There is a small dump set out on a makeshift leach pad. The area should be looked at more closely if my two samples from the dump show ore-grade values of gold or silver.

<u>SAMPLE</u>	<u>Au</u> ppm	<u>Ag</u>
H-18 - Brecciated, iron-stained, and argillized gneiss and andesite off one side of small leach dump.	6.0, 175	9
H-19 - From other side of same dump as H-18.	.7	3

- 10) Liberty Mine - Brief underground examination indicates small stope on structure that strikes WNW with dip to N. Structures are narrow and in brecciated, hematite-stained gneiss.
 11) Narrow quartz vein strikes N 65° W and dips 53° SW.
 12) Minor quartz in fault zone that strikes N 65° E and dips 53° NW in gneiss.
 13) Mohave Mine - Not much to see here. Main dump has much siliceous granite (almost a pegmatite). Looks like shaft sunk on pegmatitic granite body cutting gneiss.
 14) Gold Bug Mine - Not much outcrop here. Shafts appear to be on two parallel structures which may be contacts of high-angle mafic dike or dikes cutting gneiss. I got strikes of N 35° E and N 55° E. Structures extend about 300 feet on surface.
 15) Minor quartz lens in unaltered gneiss.
 16) Porter Mine - Relationships not well exposed. Probably along a fault trending N 40° W and dipping 30° NE in gneiss.

My general impression of the Gold Bug District is that only the Van Deemen Mine might warrant closer examination if my samples H-18 and H-19 show significant gold and silver values.

Mocking Bird District

- 17) Mocking Bird Mine - Numerous shallow pits in lamprophyre. Apparently a flat-lying body with some brecciation and shearing. Would make a good drilling and mining target. Some Cu oxides. Worth mapping and sampling if my one sample shows gold values.

<u>SAMPLE</u>	<u>Au</u> ppm	<u>Ag</u>
H-20 - Sheared lamprophyre with silicification and some Cu oxides.	8.3 ₂₄₂	12 ₃₅₀
18) Dandy Mine- This might be Schrader's "Hall" Mine. Narrow shear in granite gneiss strikes N 50° E, dips 50° NW. One drill hole noted.		
19) Great West Mine - Narrow, argillized fault and fracture zone in Precambrian granite structure strikes about N 85° E and is about vertical. Younger dike appears to trend northerly across mine area.		
20) Pocahontas (?) Mine - Not much to see here. Old shaft is now utilized as a well. Country rock is granite gneiss.		
21) Kemple Camp - Not examined. Small exploration or development project in progress January, 1981. Camp is occupied.		
22) Relatively flat-lying mafic dike cuts gneiss adjacent to porphyritic granite dike.		

<u>SAMPLE</u>	<u>Au</u> ppm	<u>Ag</u>
H-21 - Brecciated, altered and copper-stained gneiss in 4-ft. vertical cut below mafic dike.	0.9 ₀₂₆	1

Pilgrim District

The district has apparently been completely taken up by a single operator. I saw evidence of at least 278 claims (Golden Door Extension) staked by D. K. Martin, 4728 West 21st Avenue, Phoenix, Arizona 85015. There is a large camp (unoccupied when I visited) with numerous drill roads and drill holes. I visited briefly at the Dixie Queen Mine, and it appears to offer some potential for a disseminated type of precious metal deposit. A white, Tertiary rhyolitic body intrudes a latite along a southeasterly trend with a dip to the northeast. In the mine area the workings seem to follow the contact where veinlets of quartz and calcite also occur. The zone has been followed at least 600 feet and has obviously been mapped and sampled recently. This looks like a good project where we are simply too late.

DEKALB Mining, Inc.

MEMO TO: File

DATE: January 4, 1982

FROM: K. M. Emanuel

SUBJECT: Followup Sampling and Mapping of the Van Deeman, Mockingbird and P & LM Areas, Northern Mohave County, Arizona

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Geology:

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	<u>Sample Descriptions</u>	<u>Au</u>	<u>ppm</u>	<u>Ag</u>
X-307	Outcrop chip sample. Argillically altered and Fe stained chlorite phyllite.	<0.1		<0.1
X-308	Random chip across adit portal in kalinized musquite schist and chlorite phyllites.	1.17		1.2
X-309	Rep dump sample from small open cut argillically altered gneiss and gneiss breccia with quartz, clays and Fe oxides in matrix.	<0.1		1.2

K.M. Emanuel
 Van Deeman, Mockingbird and P&LM Areas, Mohave Co. AZ
 Page Two
 January 4, 1982

<u>Sample Descriptions (Cont.):</u>		<u>Au</u>	<u>ppm</u>	<u>Ag</u>
X-310	Random chip across adit portal near main shaft. Chloritized phyllite and chloritic argillized andesite breccia.	<0.1		1.2
X-311	Chip across portal in f.g. hematitically altered and (?) with actinalite and abundant limonite.	<0.1		1.2
X-312	Rep grab from large open pit in brecciated andesite with fig. hematite quartz and limonite matrix.	0.94		3.8
X-313	Rep grab from small dump in quartz cemented breccia composed of argillically altered andesite.	<0.1		3.5
X-314	Chip from portal of small portal extensively brecciated and argillized andesite and phyllite; abundant Fe oxides.	<0.1		4.0

Mocking Bird Mine:

The area was visited and sampled by myself and D. J. Wronkiewicz on July 14 & 15, 1981 and was mapped by tape, pace and compass methods on a scale of 1"=100'. Au mineralization is associated with Cu oxides and jasperoidal red quartz within a 3 to 10 foot thick lamprophyre sill that dips 15-25° north within quartzofeld. Spathic gneiss and amphibolite host rocks. The western part of the area is overlain by porphyritic rhyolite that is not seen in contact with the sill, but which locally contains minor copper shows. The sill appears to have acted as a receptive host rather than a source for the Cu-Au mineralization. A total of eight samples were taken from the numerous pits and open cuts within the sill. Au above 0.1 ppm was detected in a single sample (1.87 ppm); both gold and silver (<3.4 ppm are highest in copper rich zones that carry trace amounts of tetrahedrite (?) and abundant Cu oxides. The paucity of Cu oxides in most exposures and the low assay results do not justify further work on this property at this time.

Sample Descriptions

		<u>Au</u>	<u>ppm</u> <u>Ag</u>	<u>Cu%</u>
X-315	Rep dump grab-green lamprophyre with a few stringers of white quartz with hematite.	<0.1	<0.1	0.037%
X-316	4' chip in open cut; f.g. lamprophyre with irregular red patches of jasperoidal quartz.	<0.1	<0.1	0.004%

K.M. Emanuel
 Van Deeman, Mockingbird and P&LM Areas, Mohave Co. AZ
 Page Three
 January 4, 1982

<u>Sample Descriptions (Cont.):</u>		<u>Au</u>	<u>ppm</u> <u>Ag</u>	<u>Cu%</u>
X-317	7' chip in open cut-same as X-315 with minor brecciation and a few patches of red jasperoidal quartz.	<0.1	<0.1	0.010%
X-318	6' chip in open cut. Lamprophyre containing sparse red jasperoidal quartz and a few white quartz stringers.	<0.1	1.2	0.062%
X-319	6' chip across portal of small adit locally sheared and brecciated lamprophyre with zone near center of sill (10") that carried about 3% Cu oxide.	1.87	3.4	0.26%
X-320	Rep dump grab-lamprophyre with irregular patches of red jasperoidal quartz and locally abundant Cu oxides.	<0.1	2.0	0.60%
X-321	Rep dump grab-locally brecciated lamprophyre with quartz-hematite-calcite cement.	<0.1	<1.0	0.009%
X-322	Rep grab of Fe oxide stained latite porphyry dike (?) exposed in small open cut.	<0.1	2.4	0.006%

(Lee) P & LM Mine:

The area was mapped and sampled on July 17, 1981, by compass and pace methods. (11"=100'). A grid of survey stakes (100' centers), no more than a few weeks old, covered most of the area. The mine occurs within a group of low outcrops standing less than a meter above the surrounding pediment. Workings are found in slightly brecciated propylitized granite that is locally bleached and heavily Fe stained. Stockwork like veinlets and veins (up to 10 cm) of white massive quartz are locally abundant, but do not follow a fixed orientation or have a uniform distribution. Some outcrops on the southeast end of the area contain considerable fine grained purple fluorite. Hematite flooding of the granite is particularly abundant in areas where prominent quartz mineralization occurs. A total of six samples were taken.

K. M. Emanuel
 Van Deeman, Mockingbird and P&LM Areas, Mohave Co. AZ
 Page Four
 January 4, 1982

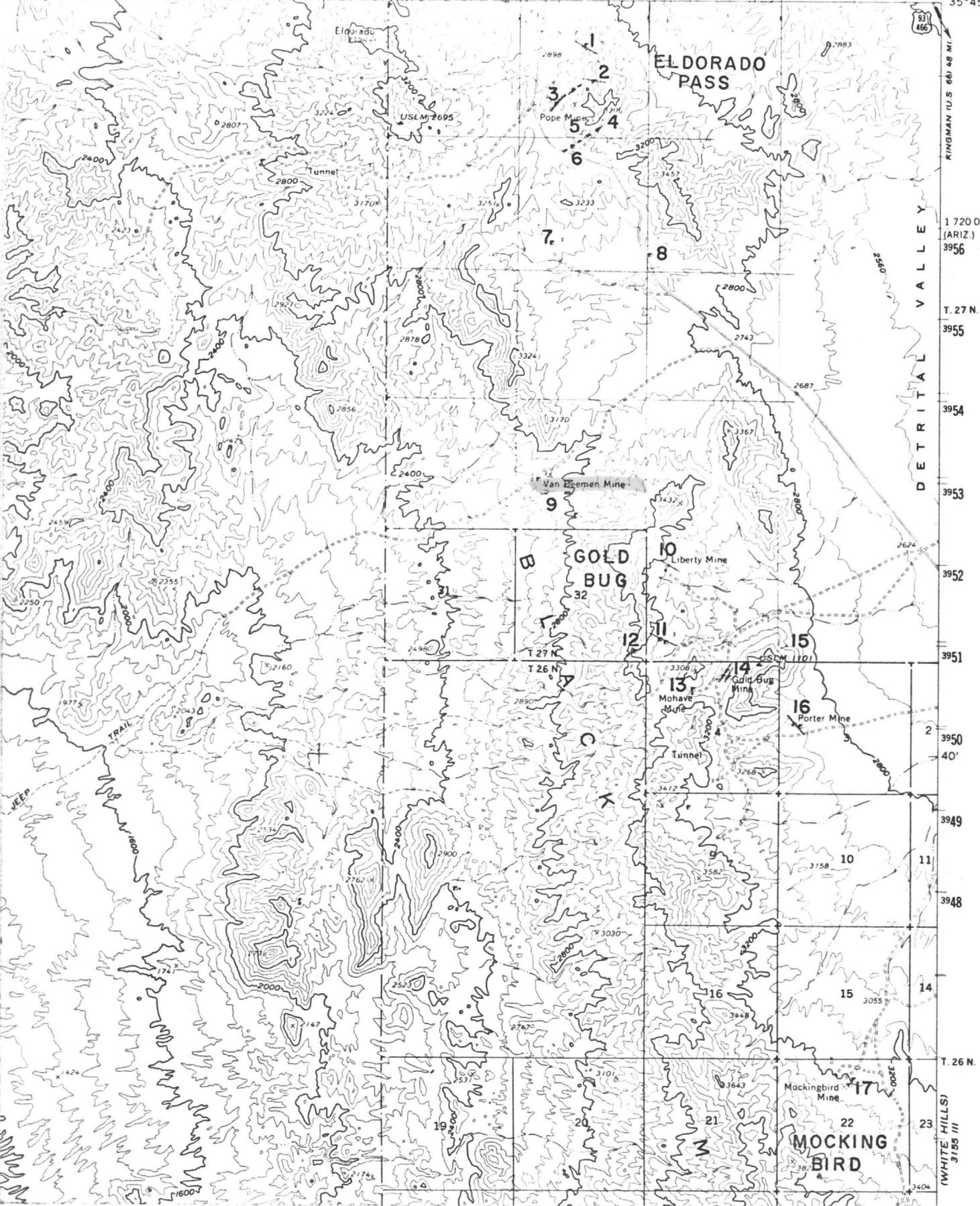
	<u>Sample Descriptions</u>	<u>Au</u>	<u>ppm</u> <u>Ag</u>	<u>Mo</u>
X-323	Random outcrop chip of v.f.g. granite with abundant microveinlets of hematite and quartz.	<0.1	<0.1	13
X-324	6' chip in prospect pit; coarse granite and quartz breccia, with quartz hematite matrix.	<0.1	4.7	102
X-325	6' chip in prospect pit. Altered granite breccia with cross cutting quartz stockwork and a few sulfide ghosts (pyrite).	1.17 (0.054 oz/t)	<1.0	7
X-326	3' chip in small pit; brecciated granite shot through with quartz veinlets. A few granitic fragments are propylitized; locally abundant Fe oxides.	<0.1	<1.0	17
X-327	Rep dump sample, main shaft; slightly propylitized and bleached granite breccia shot with white quartz; minor Fe oxides.	4.69	1.1	17
X-328	2' chip in small prospect pit. Brecciated propylitized granite with matrix of clear quartz, purple fluorite and Fe oxides; matrix assemblage also occurs as replacement patches and as veinlet fillings.	<0.1	<0.1	4

The low erratic gold values and the present land status (currently claimed by V. E. Lee, Oatman, Arizona 86433) do not seem to justify further work at this time. There does seem to be some potential for covered extensions beneath the adjacent pediment, however, and a check on the status of the current claim block might be advisable at some point during the next assessment year.

MT. PERKINS QUADRANGLE
ARIZONA-NEVADA
15 MINUTE SERIES (TOPOGRAPHIC)

3155 IV
(SENATOR MOUNTAIN)

055 / CANYON 716 717 718 35' 719 720 721 R 21 W 270 000 FEET (ARIZ.) 724 HOOPER DAM 27 MI. 114° 30' 35' 45'



114° 30' 35' 45'
KINGMAN IUS 681 48 MI.
1 720 000 FEET (ARIZ.)
3956
T. 27 N.
3955
3954
3953
3952
3951
2 3950
40'
3949
3948
11
14
T. 26 N.
(WHITE HILLS)
3155 III

Amir Mines and Arizona Star Resource Corp. are joint venturing a gold property near Kingman, Ariz. The work is actually being funded by Amir through share subscriptions in Arizona Star, which is putting the money into the property. Ultimately, Amir will control Arizona Star.

Drill indicated and inferred reserves are estimated to be two million tons grading 0.042 oz gold of heap leach reserves. A phase two

program on the (Van Deemen) property will include 10,000 ft of reverse circulation drilling to expand reserves in known zones. Also to be tested is the extensive detachment breccia on much of the property. At last report, the work program was under way.

Northern Miner. June 5, 1987

Amir buys control of Arizona Star

A 36% interest of Vancouver-based **Arizona Star Resource** was recently acquired by **Amir Mines**. The latter purchased 1.2 million shares for \$864,000.

In addition, Amir acquired a one-year option to purchase 600,000 shares at \$1.35 per share and a 2-year option for 600,000 shares at \$2 per share; if all options are exercised, Amir will own in excess of 50% of Arizona Star's outstanding shares.

Arizona Star is earning a 50% interest in the Van Deemen gold property in northern Arizona, where a heap-leach operation is planned. Exploration work on the property has consisted of surface and underground sampling and reverse circulation drilling. Reserves of about two million tons grading 0.04 oz gold per ton have been indicated to date.

Northern Miner, Aug. 23, 1987

Property	Ownership	Location	Reserves (Mt ore)	Grade gold (g/t Au)	Milling Rate (t/y)	Output (kg/y Au)	Completion date	Capital cost (millions)	Type	Remarks
U.S.A. (continued)										
Mesquite	Gold Fields Mining Corp. (Cons. Gold Fields)	Imperial Co., California	45.0	1.7	—	7,000	90	—	P	Company planned to expand output from present to 4,700 kg/y.
Natomas Canyon Placer	Battle Mountain Gold Company	Nevada	33.6	0.17	—	560	89	—	A	Alluvial property under development. Reserves in m ³ .
Pine Tree	Goldenbell Resources	Mariposa Co., California	—	—	—	4,043	88	\$51.8	P/U	1st stage of project will be an open pit. Underground working after 7 years.
Rain	Newmont Gold	Carlin Gold Belt, Nevada	—	—	—	—	92	\$400	P	Heap leaching operation to be introduced and rate to be increased to 20 Mt/y. Second leach operation to process 10 Mt/y eventually.
Reid	Terramar Resources Corp./Pacific Concord Resources	Redding, California	0.4	12.1	—	—	—	—	U/Cn	Includes former producers Central/Evening Star. Dewatering and feasibility studies underway.
Rich Gulch	Inca Resources	Fresno, California	16.0	3.1	1.1M	3,104	—	\$75	P	Wright Engineers reviewing feasibility study for new mine, heap leaching operation based on Central zone reserves.
Richmond Hill Ridgeway	St. Joe Gold Corp. Amselco Minerals/Galactic Res.	S. Dakota Fairfield Co., S. Carolina	3.9 46.3	1.9 1.3	— 5.0M	1,244 5,000	88 89	— \$80	P P	Also 7.9 g/t Ag. Joint venture development (heap leaching oxide ore and conventional milling of sulphides).
Round Mountain	Echo Bay Mines/Homestake Mining/Case Pomeroy Resources	Nevada	194.27	1.2	12.5M	9,650	88	\$140	P	This, the world's largest heap leaching operation is to double its capacity by end-1988.
San Juan	Centurion Minerals	Nevada	—	—	—	1,025	89	—	P	Centurion plans amalgamation with Californian Gold Mines Co. with object of reaching annual gold output of 3,100 kg within two years. New company to be called Centurion Gold.
San Luis	Battle Mountain Gold Company	Colorado	9.0	1.3	—	775	89	—	A	Alluvial property under development.
Santa Fe	Lacana Mining Corp.	Nevada	7.7	0.93	—	1,550	88	\$12.1	P	Open pit heap leach operation which will produce about 4,600 oz/y Ag.
Shumagin	Alaska Apollo Co.	Ungas Island, Aleutians	1.43	10.9	270,000	—	—	\$20	—	Latest drilling results suggest the quoted ore reserve is substantially understated.
Sleeper	Amax Gold	Nevada	45.7	1.03	4.5M	6,220	88	—	Cn	Reserve and milling figures refer to heap leach operation, where production is being expanded.
Stewart	Pegasus Gold	Alpine Co., California	12.2	0.8	—	960	89	\$12	P	Heap leaching project.
Sunbeam	Geodome Resources	Idaho	3.3	2.6	—	1,275	88	—	P	May reach production early 1988. Drilling for reserve delineation proceeding.
Surprise	Battle Mountain Gold Co.	Fortitude, Nevada	—	—	—	500	88	\$3	P	A satellite gold project near the Fortitude mine. Complex orebody being developed initially as a heap leach operation.
Tonkin Springs	Silver State Mining	Nevada	—	—	—	1,600	89	\$16	Cn	Enlarging heap leach operations.
Unga Island	Alaska Apollo Gold Mines	Shumagin, Alaska	1.3	10.8	300,000	2,880	—	—	U/Cn	Mine reopening assessment. By-product Ag grades 47 g/t.
Van Deeman	Arizona Star Resources Corp.	Mohave Co., Arizona	2.0	1.7	—	—	—	—	P	Minimum of 2 Mt of ore to sustain an open pit heap leaching operation.
White Pine	Silver State Mining	Nevada	—	—	—	500	—	\$2	P	Heap leach operation given go-ahead early 1988.
Zaca	California Gold Mines	Nevada	8.53	1.0	1.0	1,150	88	\$25	P	Heap leach operation to be developed shortly.

Central and South America

ARGENTINA

Bajo la Alumbrera	Yacimientos Mineros Aguas de Dionisio	Bajo la Alumbrera	350.0	—	—	1,929	—	\$650	P/Cn/Sm	Finance sought for new mine project
Huemules	Minieria Proyecto Huemules	Huemules, Chubut	—	—	180,000	—	—	—	U	Exploration/development bids sought last year

BOLIVIA

La Joya	Intiraymi	Oruro Region	—	—	1.46M	—	—	—	P	Open pit leach operation, tripling capacity with funding from Overseas Private Investment Corporation.
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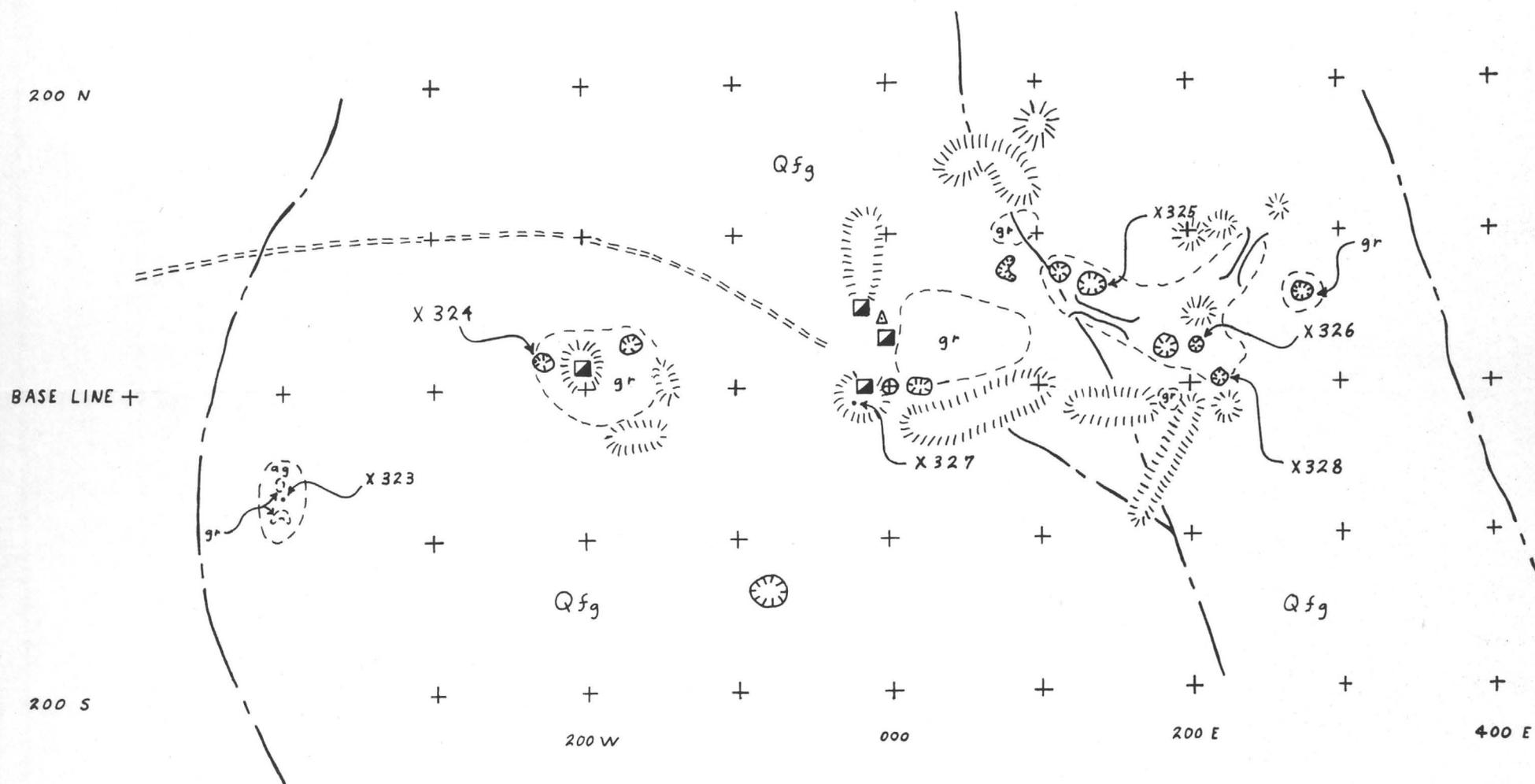
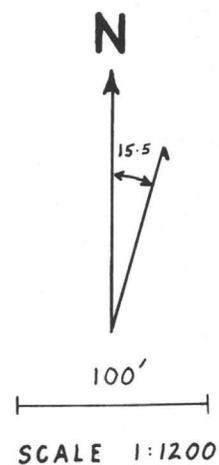
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P. & L. M. MINE

KME & DJW
7/16/81
PACE & COMPASS +

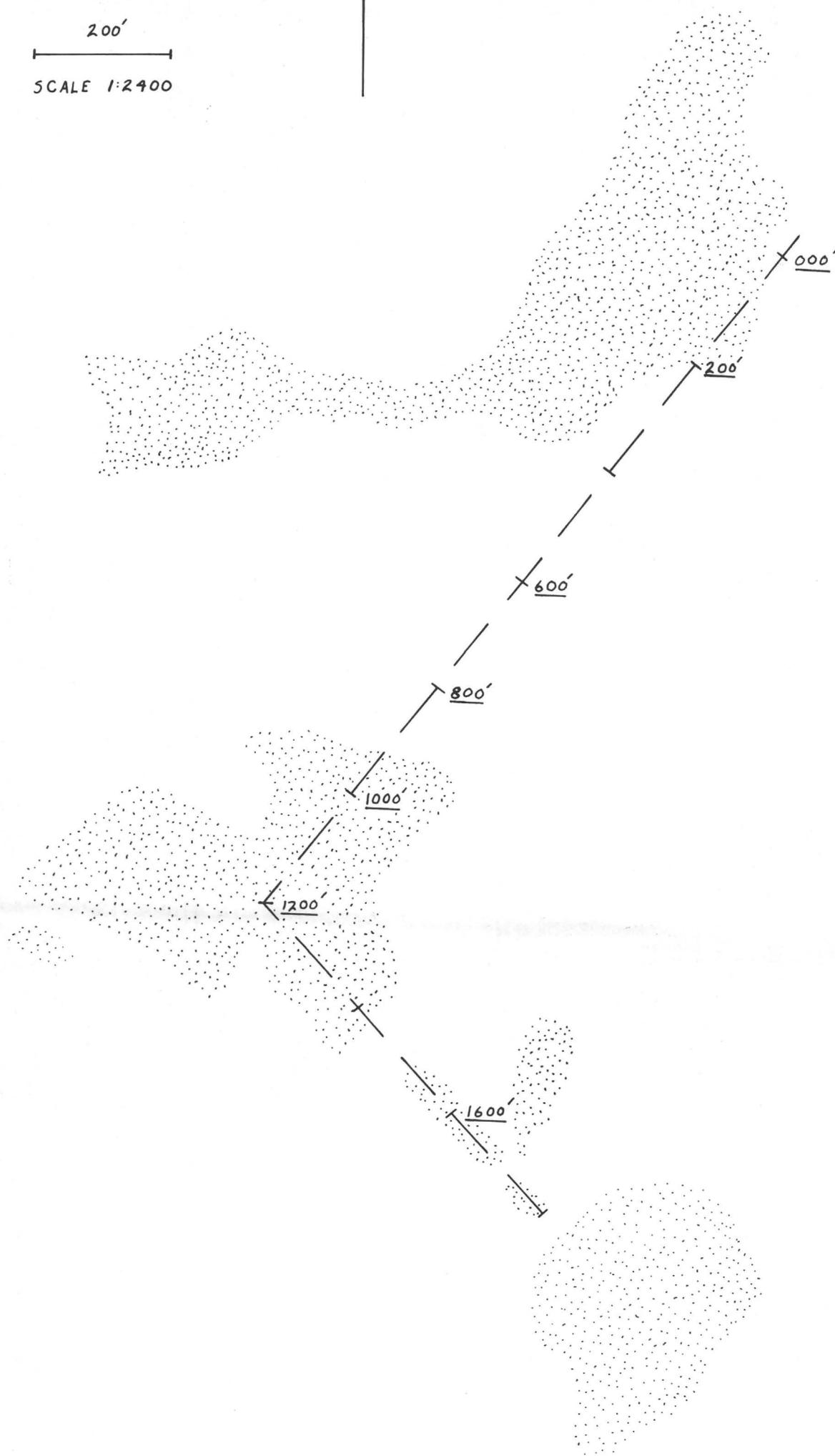
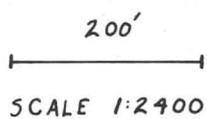


KEY

	SHAFT		ACCESS ROAD
	SURVEY MARKER		WASH
	MONUMENT		PROSPECT PIT
	DUMP PILE		QUATERNARY FANGLOMERATE
	OPEN TRENCH		CSG. PROPYLITIZED GRANITE
			V.F.G. HEM RICH (APLITIC) GRANITE

ALTERATION ZONE OVERLAY
FOR THE VAN DEEMEN MINE

N



ALTERATION ZONE OVERLAY
FOR THE VAN DEEMEN MINE

200'
SCALE 1:2400

