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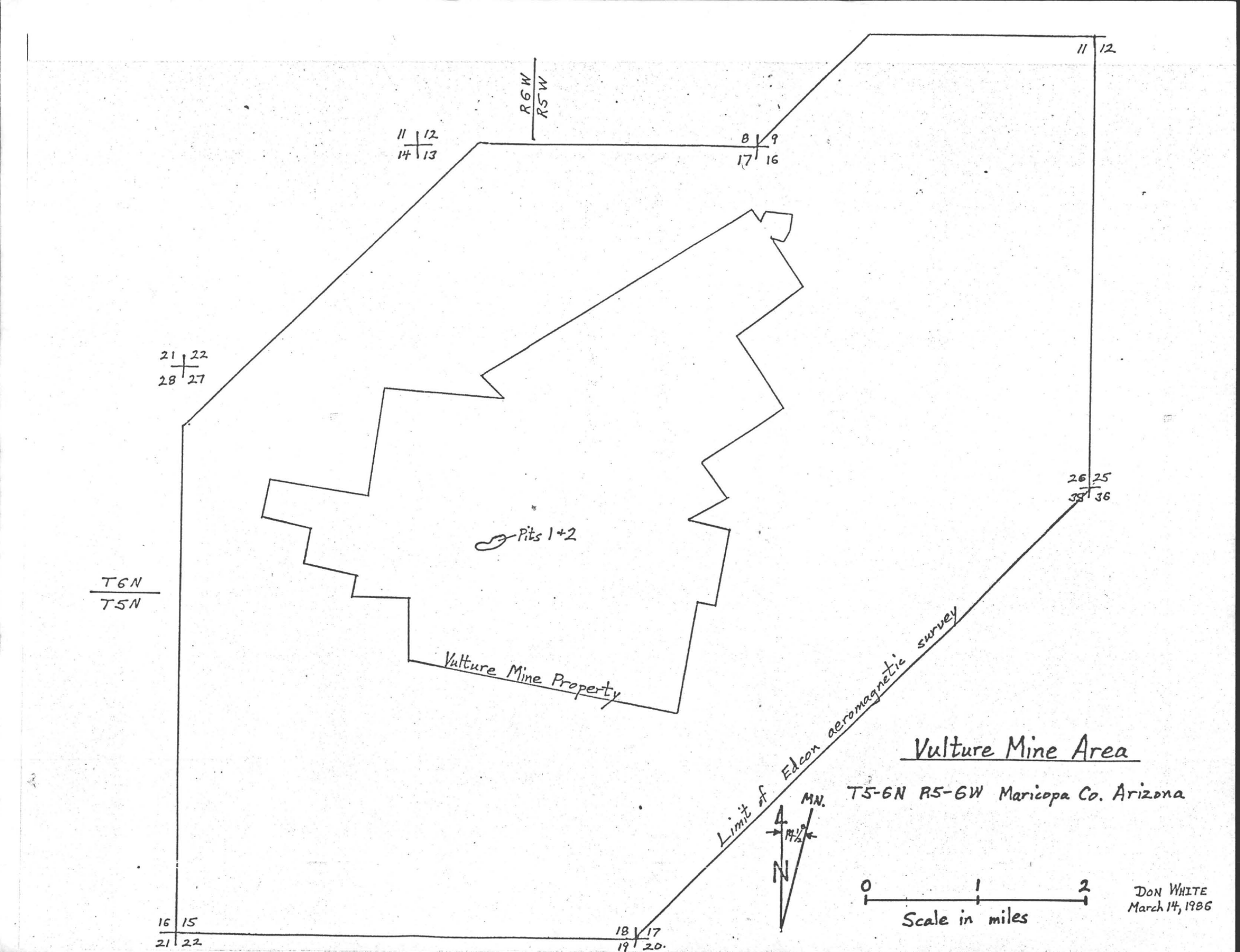
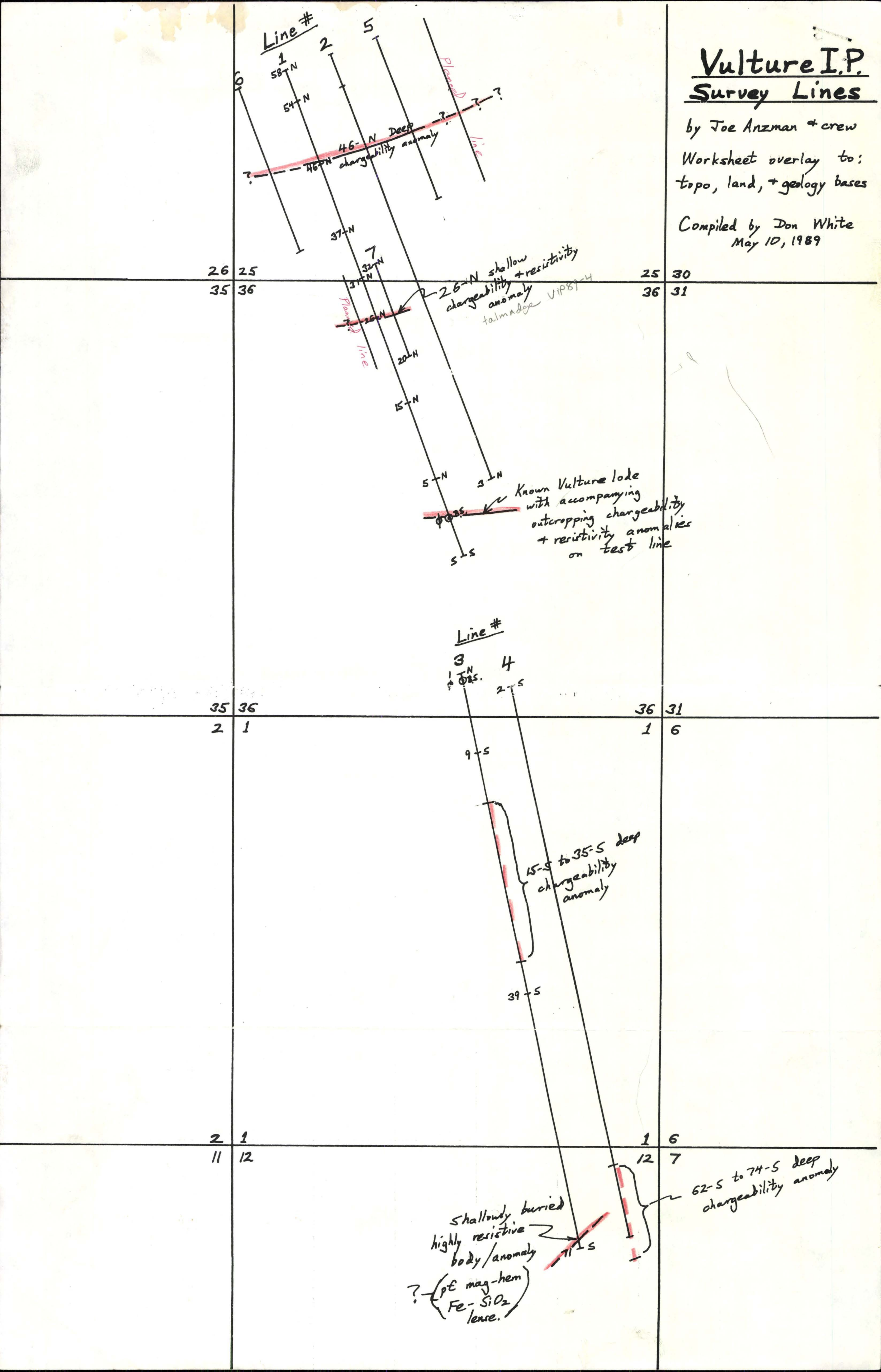

R6W
R5W
11 12
14 13
8 9
17 16
11 12
21 22
28 27
26 25
35 36
T6N
T5N
Pits 1+2
Vulture Mine Property
16 15
21 22
18 17
19 20
Limit of Edcon aeromagnetic survey
MN.
14½°
N
0 1 2
Scale in miles
Vulture Mine Area
T5-6N R5-6W Maricopa Co. Arizona
Don White
March 14, 1986


Vulture I.P.
Survey Lines
by Joe Anzman + crew
Worksheet overlay to:
topo, land, + geology bases
Compiled by Don White
May 10, 1989
Line #
1
2
5
6
7
58 N
54 N
46-N Deep
chargeability anomaly
46 N
37 N
32 N
31 N
26-N shallow
chargeability + resistivity
anomaly
talmadge VIP89-4
Planned line
20 N
15 N
5 N
3 N
Known Vulture lode
with accompanying
outcropping chargeability
+ resistivity anomalies
on test line
B.S.
5 S
Line #
3
4
1 N
2 S
9 S
15-S to 35-S deep
chargeability
anomaly
39 S
62-S to 74-S deep
chargeability anomaly
Shallowly buried
highly resistive
body/anomaly
71 S
?
pЄ mag-hem
Fe-SiO2
lense.
26
25
35
36
30
31
2
1
6
11
12
7

Vulture I.P. Survey Line Summary

Don White – May 10, 1989

Line	Dipole	N end	S end	Remarks
1	100	5-N	5-S	Test/orientation between pits 3+4 Yielded C. + R. anomalies over lode.
1	200	54-N	5-S	Reconnaissance - 26 N + 46 N anomalies
1	100	31-N	15-N	Detail on 26-N anomaly
2	200	54-N	3-N	Recon. - 46 N anomaly
2	300	58N	37-N	Depth test on 46 N anomaly
3	200	1-N	71-S	Recon. - 15-25-S and 70-S anomalies
3	300	9-S	39-S	Depth test on 15-25-S anomaly
4	200	2-S	71-S	Recon. - 62-S-#45 anomaly
5	300	58N	37-N	E. ext'n of 46-N anomaly
6	300	58-N	37-N	W. ext'n of 46-N anomaly
7	100	32N	20-N	E. ext'n of 26-N anomaly

Notes: — Lines 1, 2, 5, 6, 7 are oriented N 20° W

— Lines 3, 4 are oriented N 12° W

— All lines 600-ft. apart except lines 1 and 7 which are 200-ft apart.

Vulture I.P. Anomalies

as per Don White - May 10, 1989
(subject to revision by Joe Anzman)

Line 1 — ØØ — Known lode between pits 3 + 4
Chargeability + resistivity, outcropping, N-dipping

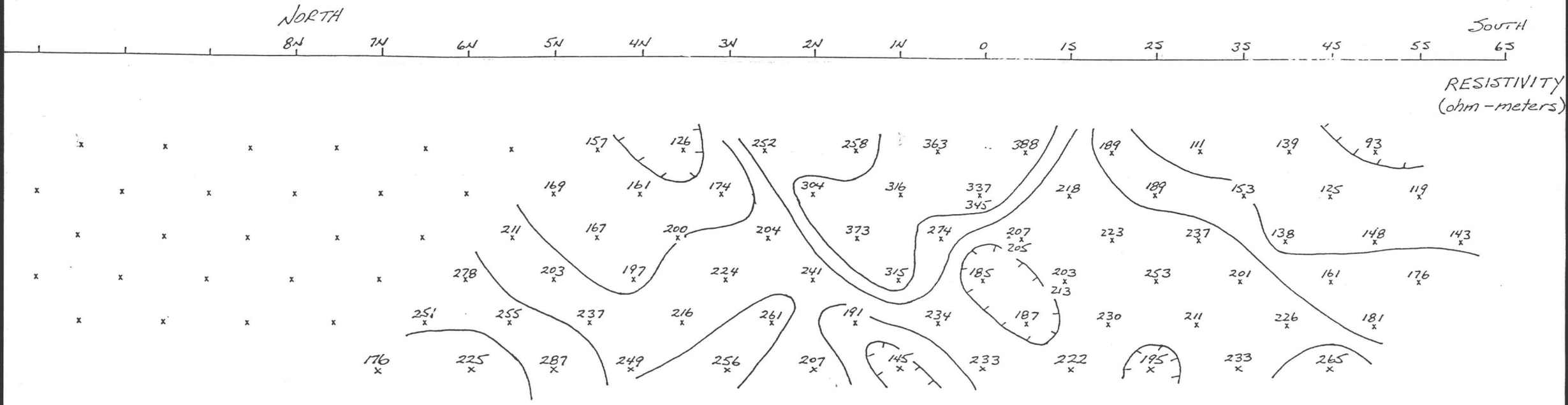
Line 1 — 26-N — Chargeability + resistivity
Shallowly buried, N-dipping (?)

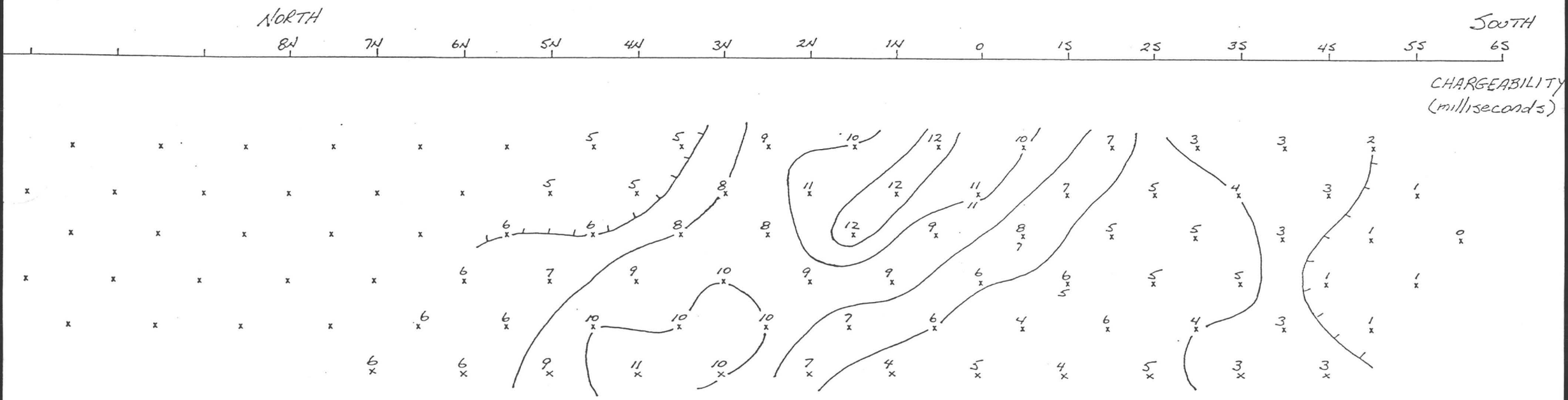
Lines 1, 2, 5, 6 — Approx. 46-N — Chargeability + minor resistivity
Deeply buried (~400'+) steeply N-dipping (?)

Line 3 — 15-S - 35-S — Two-pronged chargeability + minor resistivity
Deeply buried (~400'+) attitude unknown

Line 3 — 70-S — High resistivity only
Buried lense of pC silica (?)
en-echelon to Vulture South outcropping
mag-hem, facies Fe-SiO_2

Line 4 — 62-S - 74-S — Chargeability only
Deeply buried; attitude unknown.



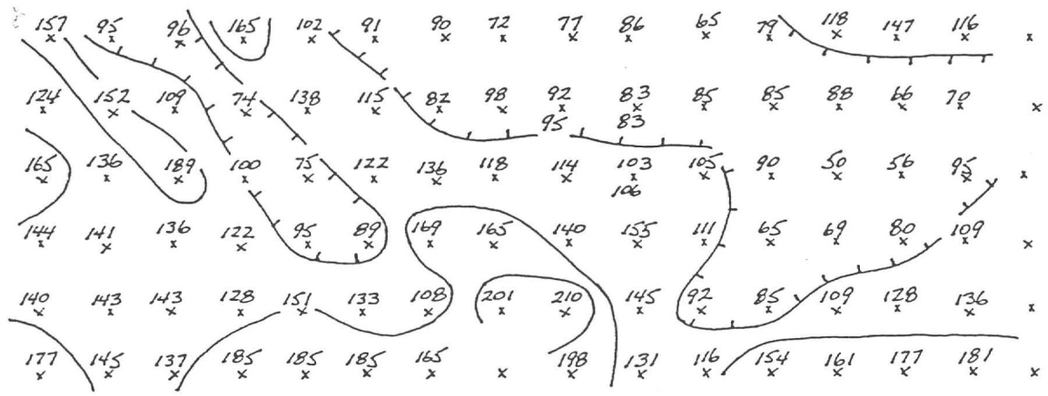


A.F BUDGE (IMMING) LIMITED Line #1

NORTH — SOUTH

58N 55N 52N 49N 46N 43N 40N 37N 34N

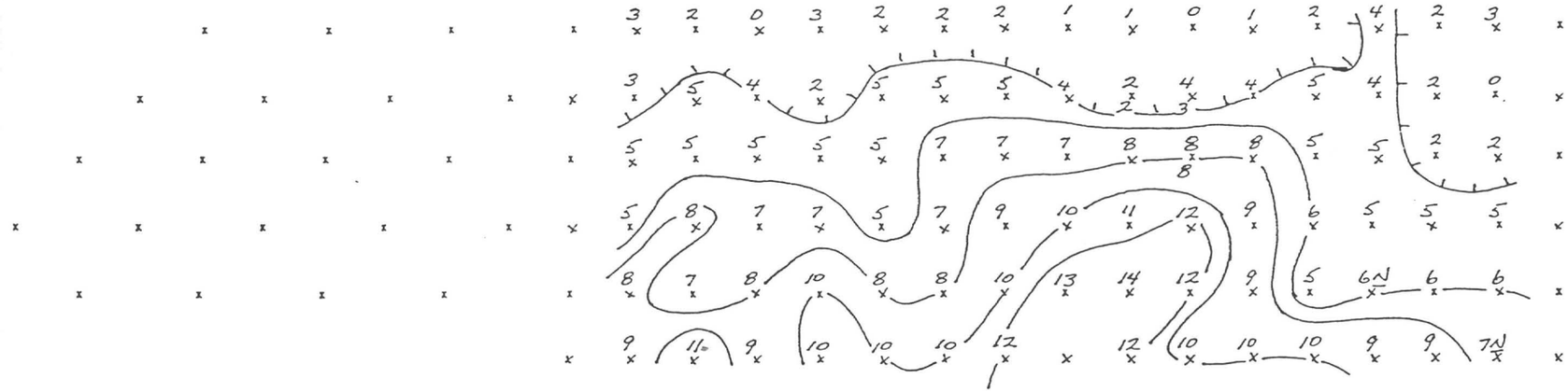
RESISTIVITY
(ohm - meters)



NORTH — SOUTH

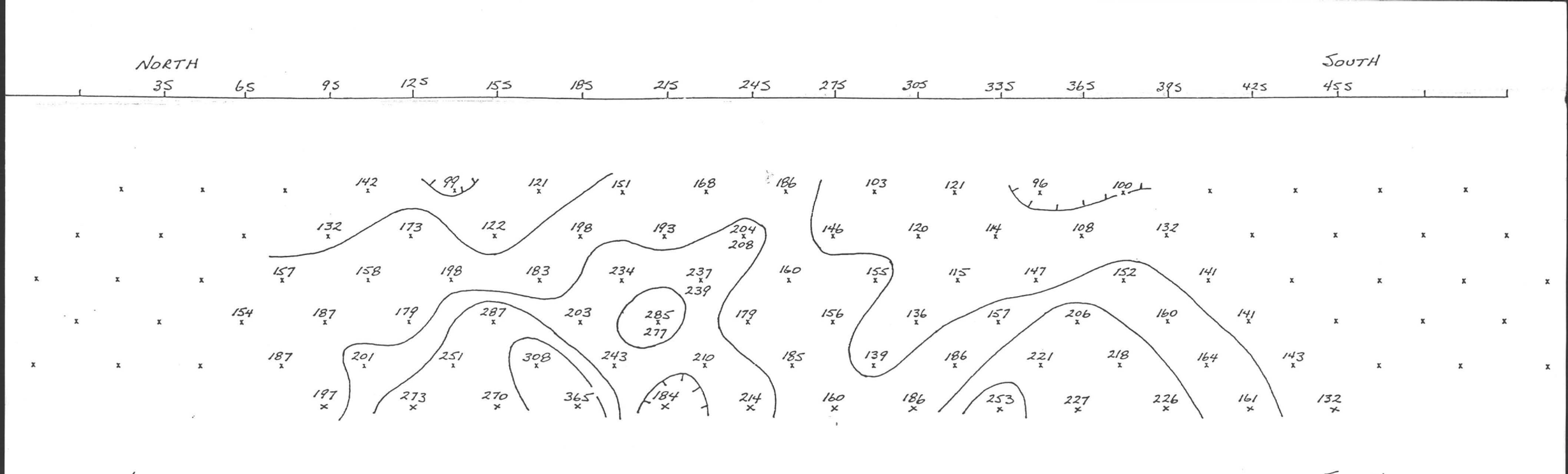
58N 55N 52N 49N 46N 43N 40N 37N 34N

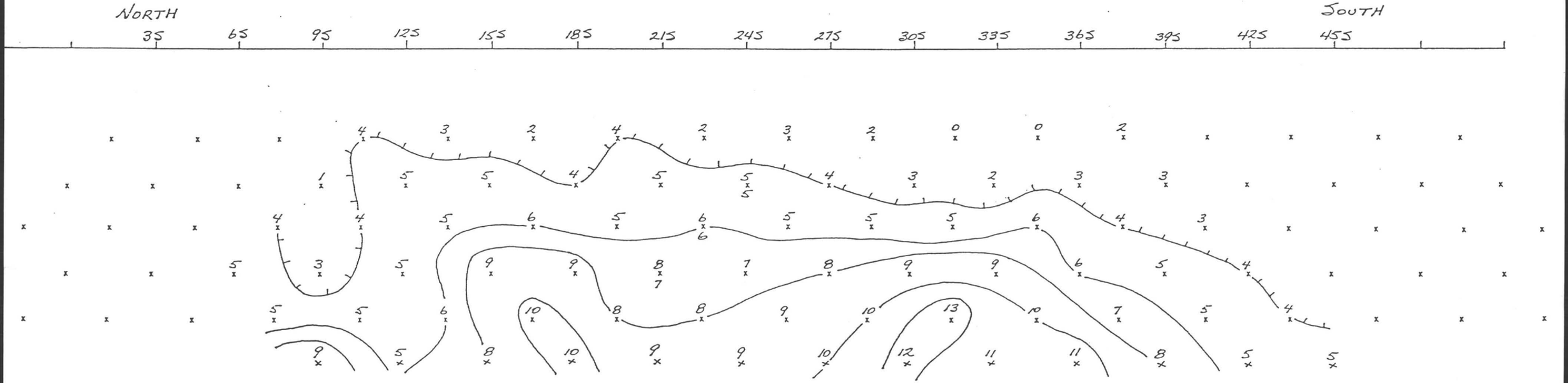
CHARGEABILITY
(milliseconds)



N: noise

A.F. Bridge (Mining) Limited Line #2

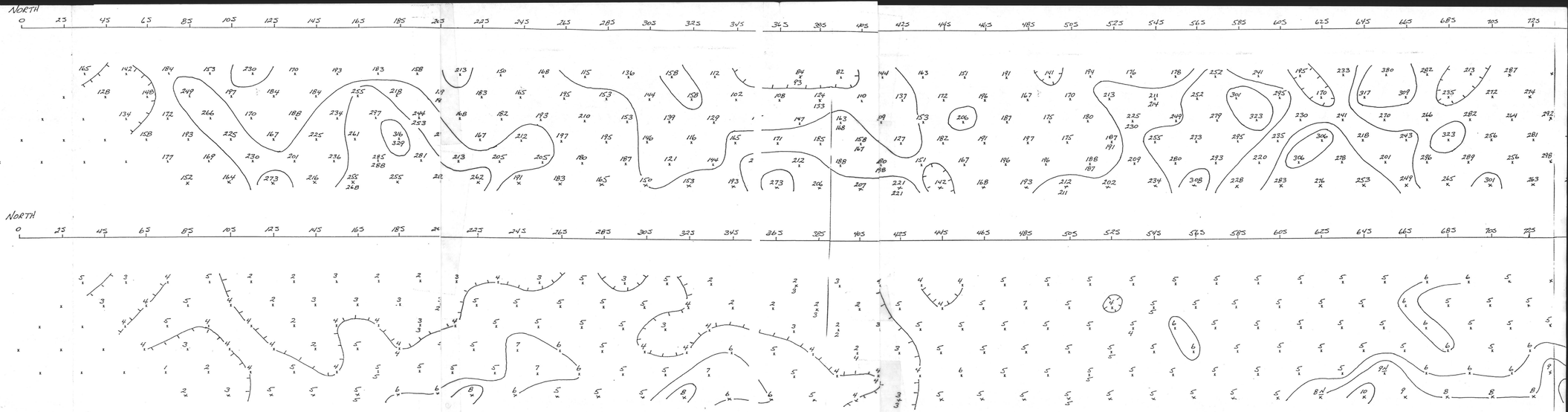




CONTOUR

A.F BUDGE (MINING) LIMITED

Line #3



N: horse

CONTOUR

R.E. SWEGE (MINING) LIMITED
VULTURE MINE PROJECT
MARICOPA COUNTY ARIZONA

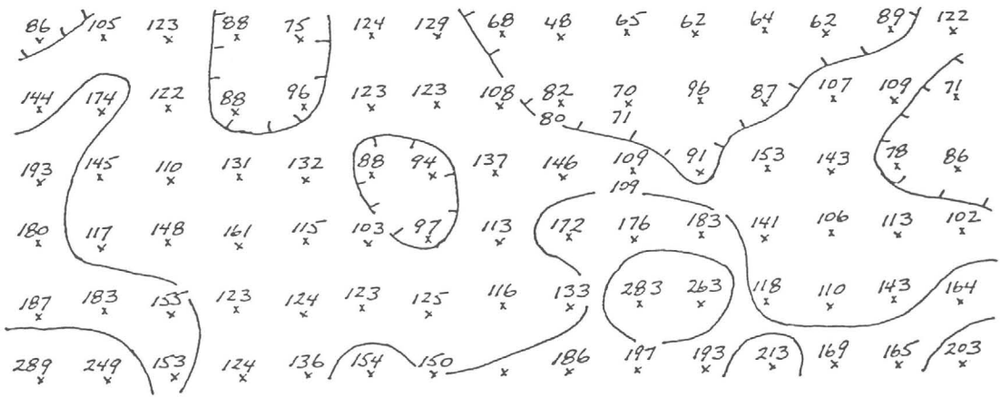
CROSS 4

Scanned (4 of 7) mc
7/12/11

NORTH — SOUTH

58N 55N 52N 49N 46N 43N 40N 37N

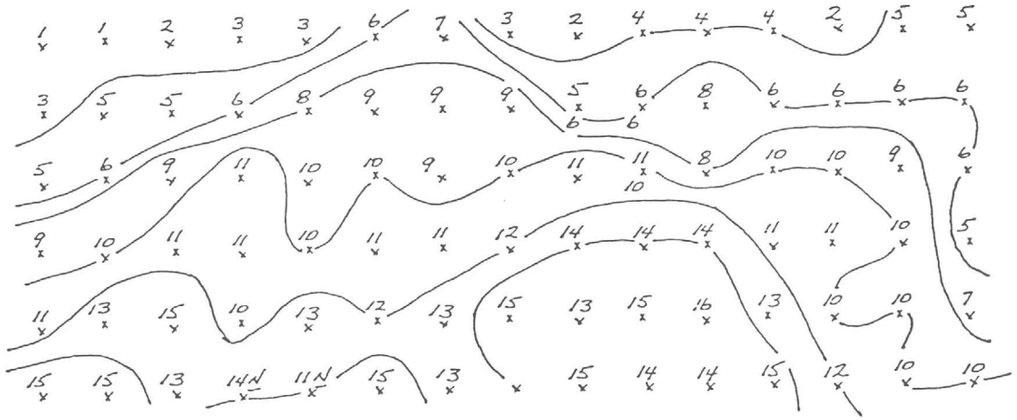
RESISTIVITY
(ohm-meters)



NORTH — SOUTH

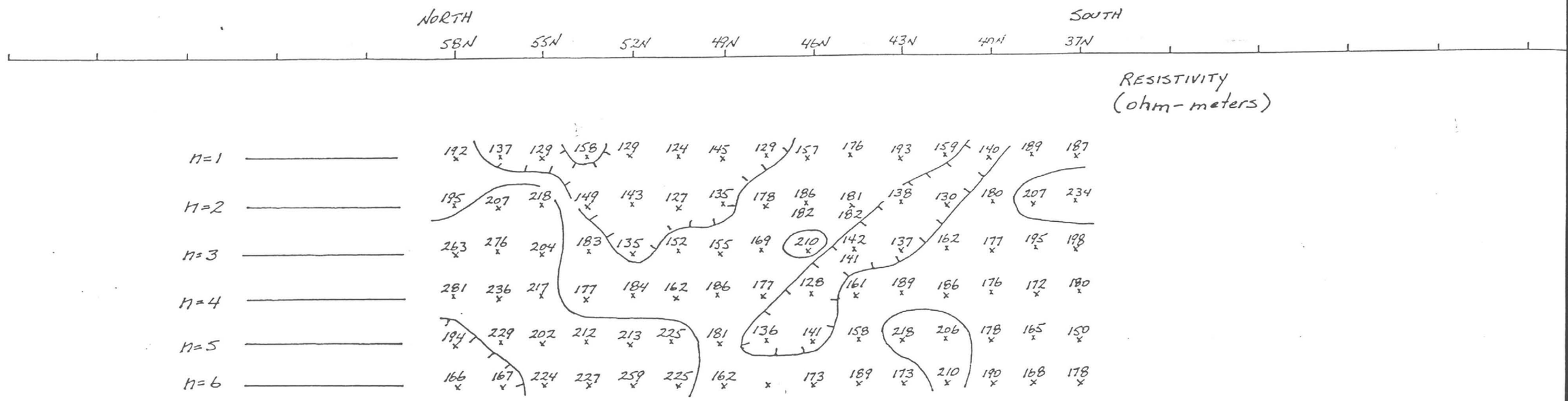
58N 55N 52N 49N 46N 43N 40N 37N

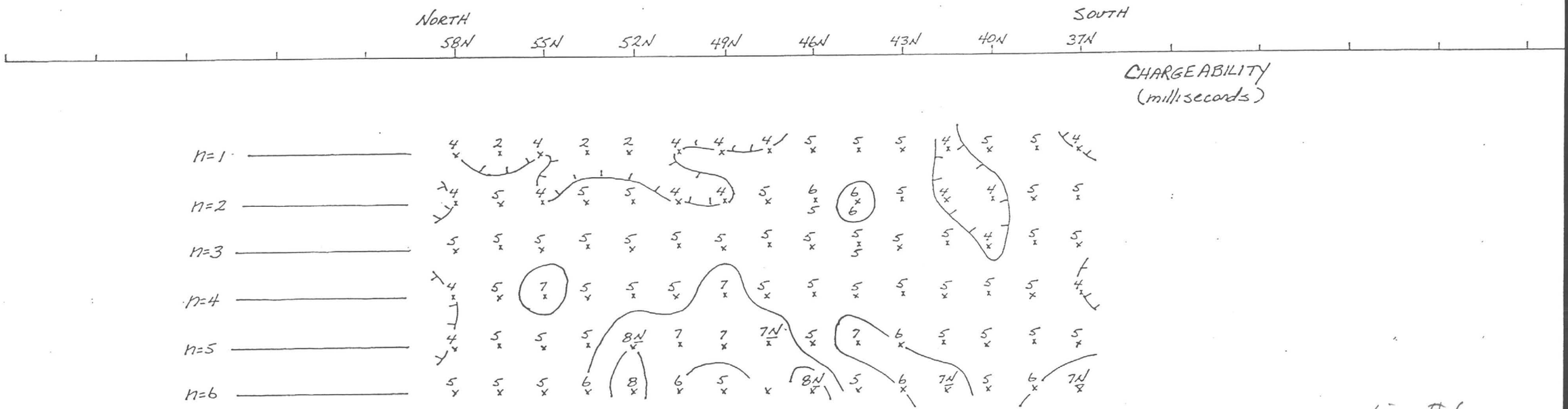
CHARGEABILITY
(milliseconds)



N: noise

Line #5

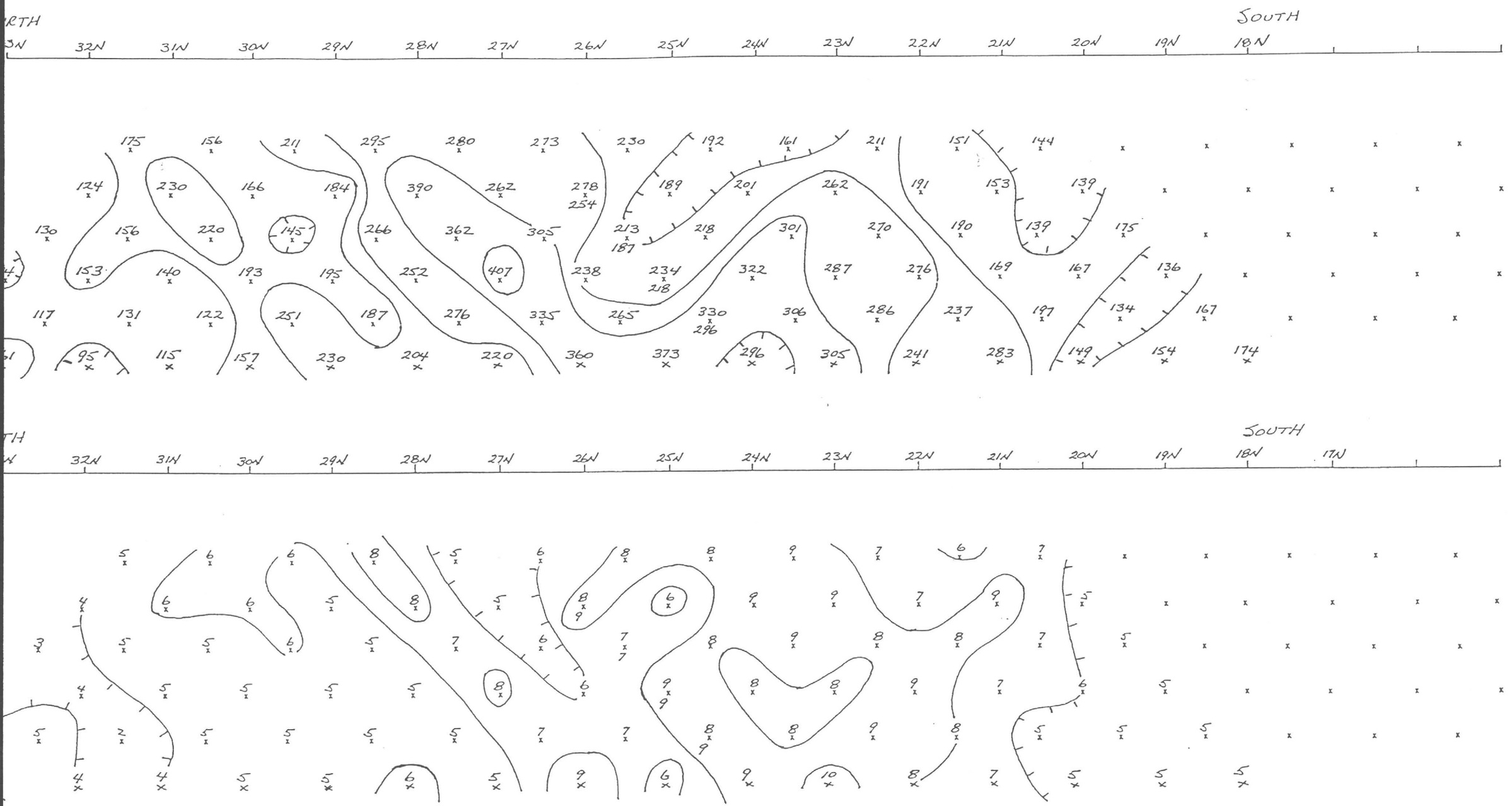




Line #6

A.F. Budge (Mines) Limited

Scanned (6 of 7) mc
7/12/11



H.F BUDGE (MINING) LIMITED
VULTURE MINE PROJECT

Line #7

CONTOURS

Scanned (7 of 7) mc
7/12/11

Chute

One bin

22'x50'

Old Mill

222, 000

1 pts.

Bunk Hs

Shop

Backhoe Trench-1-A

Pegasus' ~2,000 sf. heap

H2O

Tailings ≥ 1 ft. thick

Approx. limit

Vulture Mine Road

LEGEND

- ≥.05 oz/t
- .040 - .049
- .030 - .039
- .020 - .029
- <.020 oz/t

Power auger hole (S.H.B.) — Hole number — Hand auger hole (D.C.W.)

Tailings thickness (ft) — 11 ● 23 ○ .031 — Gold grade (oz/t)

x = Surface grab sample (B.D.H.)

Vulture Tailings

Contoured Gold Grade (oz/t)

<.02 oz/t thru >.05 oz/t by .01 oz/t

Don C. White - June, 1988

1"=100'

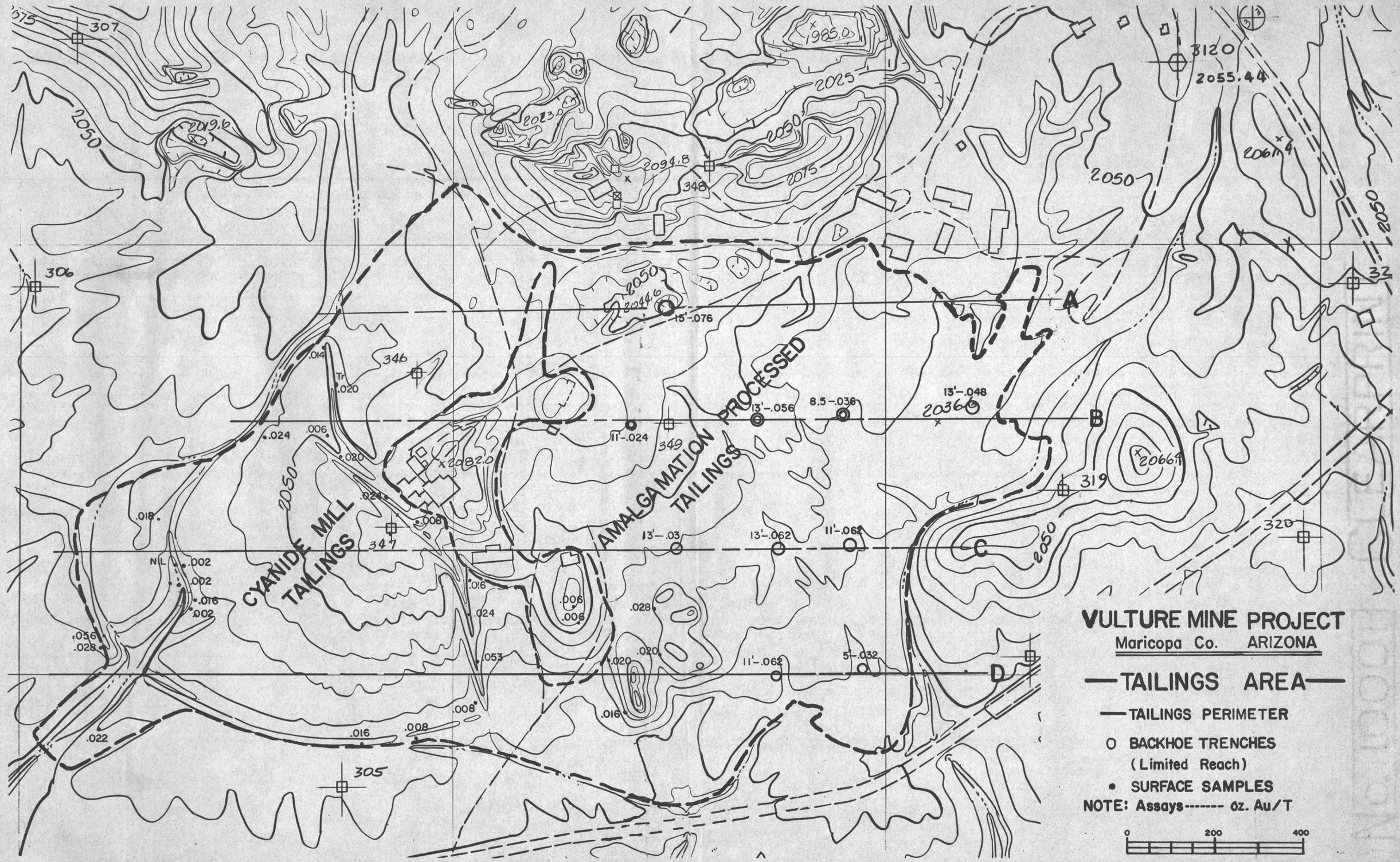
6-15-88

Carole —

You wanted some preliminary idea where the new hand auger holes are. Here's the plan with new holes 101 thru 134.

Don

Work Sheet for Carole



VULTURE MINE PROJECT

Maricopa Co. ARIZONA

—TAILINGS AREA—

—TAILINGS PERIMETER

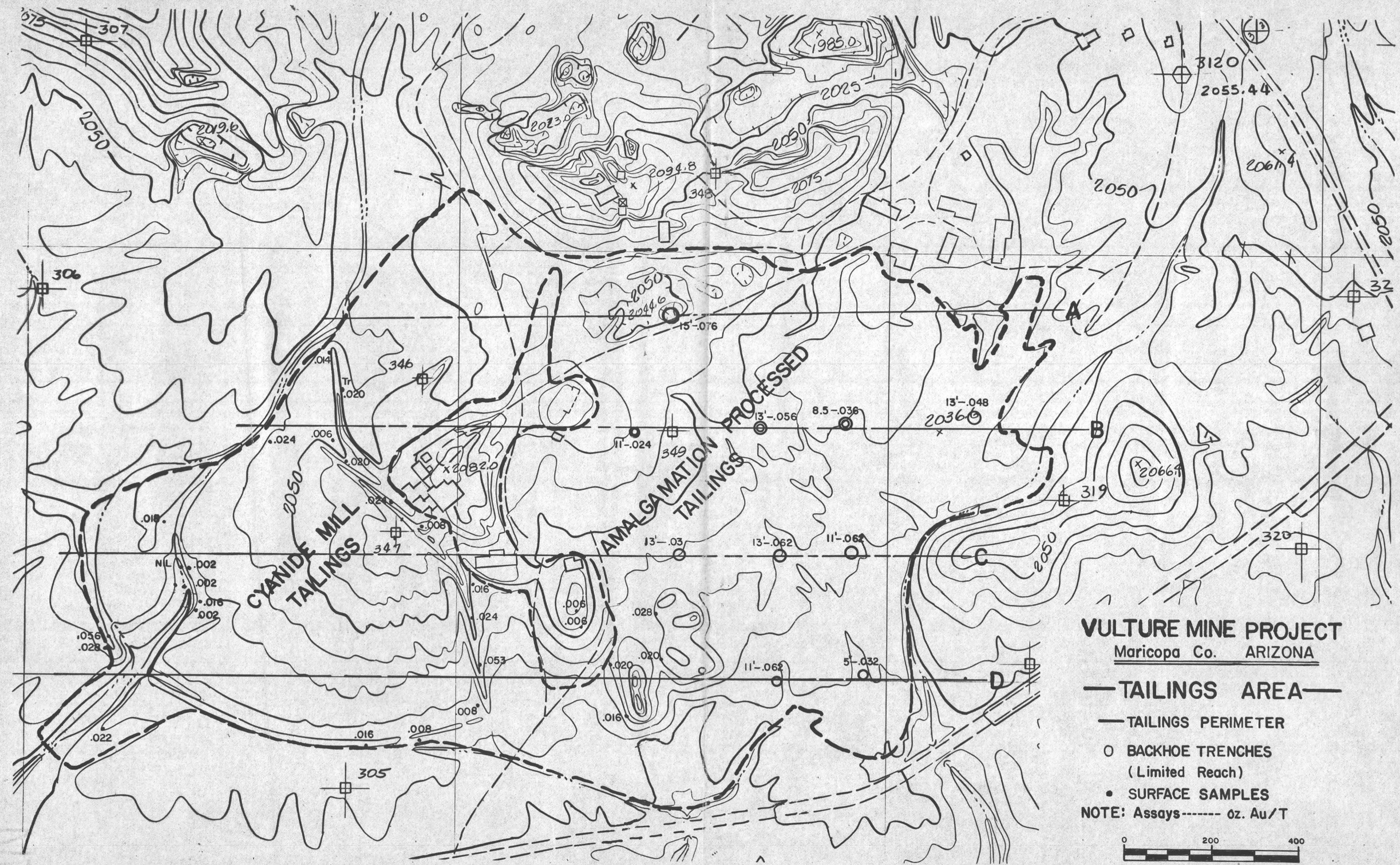
O BACKHOE TRENCHES
(Limited Reach)

• SURFACE SAMPLES

NOTE: Assays------- oz. Au/T

0 200 400

Scale: 1"=200' OCT. 1982 By G.D.H



VULTURE MINE PROJECT

Maricopa Co. ARIZONA

—TAILINGS AREA—

—TAILINGS PERIMETER

O BACKHOE TRENCHES
(Limited Reach)

• SURFACE SAMPLES

NOTE: Assays------- oz. Au/T

0 200 400

Scale: 1"=200' OCT. 1982 By G.D.H

Ron Short

M E M O

TO: Dale Allen, Carole O'Brien, Anthony Budge

FROM: Don White

DATE: July 8, 1988

SUBJECT: Vulture stamp mill tailings reserve

My memo of May 27th reviewed the tailings reserve with respect to the data then available. Since then I have completed the necessary extension and fill-in augering to define the limits of the economic tails. The new data comes from 36 new hand-auger holes sampled on 3-foot or shorter intervals and logged to indicate variations in tailings color, grain size, and induration. Of course the tailings to alluvium contact was logged. Additionally, the limits of the tails were mapped more carefully.

What the new data and careful study of the old tells us is:

1) The power auger hole data from Milt Hood had to be adjusted to cut out the alluvium footages.

2) The eight Pegasus backhoe trenches are spurious both for location (I confirmed some "off" by about 100 feet!) and for assays (consistently higher than adjacent or even surrounding drilling; bad lab work - ?). Thus they are eliminated.

3) The mapping of tails limits defined two major historical excavations nearly to the base of the tails. These occur near the NE and NW ends of the tails area (see plan) and eliminate substantial tonnage that Milt Hood's reserve blocks included in error.

4) A key observation is that all the power auger hole collars are on topographic highs, effectively biasing the thickness and hence the tonnage calculations. The original near planar tailings surface has been severely dissected by erosion with some channels cut 10 feet deep and 20 feet across. Of course these and even much less severe watercourses thwarted the truck-mounted auger rig. Hence all the accessible drill sites were selectively on the top-most flat. My "guestimate" is that approximately a 10% discount need be made to adjust for the tails removed by erosion. Only a careful survey would allow accurate quantification of this problem. This does not seem warranted.

What I have done to compute the reserve is to utilize the data in its entirety. Rather than merely assign orthogonal blocks to each hole, I have contoured both the gold grade and the tails thickness and used the overlay of those two plans to define the natural cutoffs of blocks (see reserve block plan). This means that each block is expected to be uniform within a range of 0.01 oz/t Au and 5 feet in thickness.

The ensuing tabulations and reserve chart are accompanying. After applying the somewhat arbitrary 10% erosion discount we are left with about 200,000 short tons at .037 oz/t, using a .020 oz/t cutoff.

Considerations for the future

In the course of the hand augering and manipulation of the old data, some revelations were made which ought to help planning:

1) There is a tendency for the more yellow tinted tails, as opposed to the reddish tails, to be the most consistently better grade. Some of the red or pink tails do carry good grades however. Also, the coarser the grain size (i.e., the less well tuned the stamps) the better the gold remaining in the tails.

2) There are some beds within the tails that are very well indurated fines and slimes. I can't imagine these not being some problem, even with agglomeration. Caking on equipment, plugging the agglomerator or stacker, etc. is likely. Such material seems most abundant in the < .020 oz/t areas and .020-.029 tails of the overlap area between cyanide tails and underlying stamp mill tails.

3) My narrower assay intervals confirm a tendency toward better grade in the bottom foot of the tails in all areas. Thus good cleanup excavation will be important. The large belly-dump excavator may not be the best tool for the bottom-most cleanup against the irregular alluvium and bedrock surface. A smaller bucket-loader may be needed to reach into the old tails-filled channels for the best grade tails.

4) Milt Hood's sampling of alluvium from beneath tailings (assayed by Skyline, Tucson) and Jim Prudden's placer study both confirm that gold grades there may be comparable to the tails themselves. The question then is how well does it leach and can it be mixed with tails, handled by the agglomerator, etc. The gold distribution in the underlying gravels ought to be studied more carefully as it becomes accessible (i.e., as tails are removed) for it could be a nice bonus to the tails operation.

5) If the process, all the way from excavation through bullion pour, can be made as efficient as possible and thus lowest possible cost, one may be able to attack the remaining low grade tailing east of the new plant. Such tailings constitute an extra 150,000 tons averaging .014 oz/t or about 1,500 recoverable ounces, assuming similar 70% recoveries to the better grade.

VULTURE STAMP MILL TAILINGS RESERVE (1)

Grade Category	Wtd. Avg. Au Grade (oz/t)	Volume (Cubic yds)	Tonnage (2) (s.t.)	% of Tons	Contained oz Au	Recoverable (3) oz Au	Value @ $450/oz	% of Value
> .05 oz/t	.053	14,600	23,000	11	1,260	880	398,000	15
.040 - .049	.043	44,000	71,200	31	3,100	2,170	977,000	37
.030 - .039	.035	51,600	83,600	37	2,900	2,030	913,000	34
.020 - .029	.024	29,800	48,300	21	1,140	800	360,000	14
TOTALS (4)								
⩾ .020 oz/t	.037	140,000	227,000	100	8,400	5,880	2,650,000	100
After discounting roughly 10% for erosion of surface:								
	.037	125,000	200,000	--	7,500	5,300	2,300,000	--
< .020 oz/t	.014	94,000	150,000	--	2,100	1,470	660,000	--

NOTES: (1) Based upon spring, 1984 S.H.B. power auger drilling data (T-1 thru T-57), Milt Hood's tailings thickness notes and hole locations, Skyline and Iron King Assay reports, and Don White's hand auger holes (T-101 thru T-134) contoured gold grade plan, tailings isopachs.

(2) Volume to tonnage conversion based upon S.H.B.'s bulk density determination of 1.62 s.t./yd^3 (16.7 ft^3/s.t.).

(3) Assume 70% metallurgical recovery.

(4) Totals for .020 oz/t cutoff; considered grade for which recovery value marginally exceeds operating (variable) costs. Note, however, that gold price increases > $450/oz could make the low grade economic.

Don C. White
July, 1988

Vulture Stamp Mill

Tailings Reserve

Tables

Block #	Au Grade (oz/st)	Thickness (ft)	Area (ft²)	Cubic Yards ((t·a)/27)	Short Tons ((d³ × 1.62 st/yd³))	Contained oz Au
1	.073	3	4200	467	757	55
2	.053	22	5500	4481	7260	385
3	.051	17	4700	2959	4794	244
4	.055	4	2900	430	696	38
5	.053	9	12000	4000	6480	343
6	.053	7	3500	907	1470	78
7	.053	6	6300	1400	2268	120
≥.050 subtotal	.0532	—	—	14,644	23,725	1,263
8	.044	17	2100	1322	2142	94
9	.044	22	3300	2689	4356	192
10	.045	22	3200	2607	4224	190
11	.044	17	20000	12593	20400	898
12	.042	12	12700	5644	9144	384
13	.042	12	5500	2444	3960	166
14	.042	8	8600	2548	4128	173
15	.040	4	11200	1659	2688	108
16	.047	8	16300	4830	7824	368
17	.040	4	7600	1126	1824	73
18	.044	5	26600	4926	8029	353
19	.041	4	10500	1556	2520	103
≥.040 subtotal	.0435	—	—	43,975	71,239	3,102

Vulture Stamp Mill
Tailings Reserve
Tables (cont.)

Block #	Au Grade (oz/t)	Thickness (ft)	Area (ft²)	Cubic Yards ((t·a)/27)	Short Tons (ft³ × 1.62 t/yd³)	Contained oz Au
20	.032	4	4900	726	1176	38
21	.035	5	8800	1630	2640	92
22	.034	7	11200	2903	4704	160
23	.031	12	4400	1456	3168	98
24	.034	17	17900	11270	18256	621
25	.037	13	20900	10063	16302	603
26	.035	8	24500	7259	11760	412
27	.034	4	4700	696	1128	38
28	.035	3	37400	4156	6732	236
29	.034	6	20200	4489	7272	247
30	.037	11	4400	1793	2904	107
31	.035	3	9000	1000	1620	57
32	.032	5	15600	2889	4680	150
33	.031	2	10500	778	1260	39
≥ .030 Subtotal	.0347	—	—	57,607	83,604	2,898
34	.023	2	7,200	533	864	20
35	.021	9	2,000	667	1080	23
36	.026	8	2,400	711	1152	30
37	.024	3	4200	467	756	18
38	.022	17	3,800	2393	3876	85
39	.026	6	6,500	1444	2340	61
40	.024	16	15,000	8889	14400	346
41	.020	14	5,400	2800	4536	91
42	.024	7	19,800	5133	8316	200
43	.029	4	9,100	1348	2184	63
44	.024	6	12,700	2822	4572	110
45	.022	3	22,400	2489	4032	89
46	.028	1	3,600	133	216	6
≥ .020 Subtotal	.0236	—	—	29,830	48,324	1,142
< .020 Subtotal	.014	15	170,000	94,444	153,000	2,142

Vulture Tailings

Reserve Blocks

with thickness + grade attributed to each block. Blocks determined by overlap of grade contours and isopachs (thickness contours).

Don C. White - July, 1988

W. Incline Shaft

Chute

Ore bin

Old Mill

Mess Hall

Shops

Bunk Hs

Apts.

Too thin + dd excavation area
No reserve attributed here

Pegasus' ~2,000 st. heap

Vinyl-lined ponds

Bonthoa Trench-14

Bottom 3'.045

Bottom 4'.029

Top 3'.035

Bottom 5'.033

Bottom 3'.031

J. Prudden's placer trench #3

Grge.

< .020 low grade block

< .020 low grade

High piles of cyanidation tailings

Approx. limit of tailings ≥ 1 ft. thick

x .006

x .006

x .028

x .020

x .020

x .016

Vulture Mine Road

N

1" = 100'

LEGEND

- ≥ .05 oz/t
- .040 - .049
- .030 - .039
- .020 - .029
- < .020 oz/t

Hole number

Power auger hole (S.H.B.) | Hand auger hole (D.C.W.)

Tailings thickness (ft) — 11 ● ○ .031 — Gold grade (oz/t)

23

x = Surface grab sample (G.D.H.)

W. Incline Shaft

Chute

Ore bin

Old Mill

Assay office

Mess Hall

Shops

Bunk Hs

Apts.

222,000

221,500

Barbara Trench 1-A

15'.057

Pegasus' ~2,000 st. heap

H2O

Bottom 3'.045

Bottom 4'.029

Bottom 5'.033

Top 3'.035

Grge.

J. Prudden's placer trench #3

Bottom 3'.031

Approx. limit of tailings ≥1ft. thick

LEGEND

- ≥.05 oz/t
- .040 - .049
- .030 - .039
- .020 - .029
- <.020 oz/t

Hole number

Power auger hole (S.H.E.) | Hand auger hole (D.C.W.)

Tailings thickness (ft) — 11 ● 23 ○ .031 — Gold grade (oz/t)

x = Surface grab sample (B.D.H.)

N

1" = 100'

Vulture Tailings

Contoured Gold Grade (oz/t)

<.02 oz/t thru >.05 oz/t by .01 oz/t

Don C. White - July, 1988

Vulture Mine Road

W. Incline Shaft

Chute

Ore bin

Old Mill

Mess Hall

Shops

Bunk Hs

Apts.

Old excavation area

Old excavation area

Pit

Pegasus' ~2,000 st. heap

Grge.

Cyanide tails

Tall piles

Approx. limit of tailings

1 ft. thick

Bottom 3', .045

Bottom 4', .029

Bottom 5', .033

Top 3', .035

Bottom 3', .031

J. Prudden's placer trench #3

Vulture Mine Road

LEGEND

- 20-25 ft.
- 15-20
- 10-15
- 5-10
- 1-5 ft.

Hole number

Power auger hole (S.H.B.) | Hand auger hole (D.C.W.)

Tailings thickness (ft) — 11 ● ○ 23 .031 — Gold grade (oz/t)

x = Surface grab sample (B.D.H.)

N

1" = 100'

Vulture Tailings

Isopachs (Thickness contours)

Don C. White - July, 1988

M E M O

TO: Dale Allen, Carole O'Brien, Ron Short, Anthony Budge

FROM: Don White

DATE: October 25, 1988

SUBJECT: Vulture Tailings Excavation Blocks

Dale requested I tally reserves of Vulture stamp mill tailings by six large blocks corresponding to his anticipated excavation sequence. This provides him with subtotals against which he may compare measured tons (based on scraper loads) and recovered ounces (based on bullion pours).

All that was involved is recombining the reserve blocks (my memo and maps of July 8, 1988) according to location within the newly defined excavation blocks (plan accompanying). The computations are appended and the totals are summarized as follows:

VULTURE TAILINGS

Summary of excavation blocks

(after discounting 10% for surface erosion)

Excavation block #	Cubic yards	Short tons	Grade (oz/t)	Contained oz Au
1	27,300	44,000	.041	1,800
2	10,600	17,000	.030	500
3	37,700	61,000	.032	2,000
4	49,300	80,000	.040	3,200
5	7,700	13,000	.038	500
Subtotal, First 5 blocks (≥.020 oz/t)	132,000yd^3	215,000 s.t.	.037 oz/t	8,000 oz Au
Low grade block 6	94,000yd^3	150,000 s.t.	.014 oz/t	2,000 oz Au
Grand Total including low grade	226,000yd^3	365,000 s.t.	.027 oz/t	10,000 oz Au

Block 5
(off sheet to W)

221,500 E

26,000 N

222,000 E

Block 4

Block 3 extn

25,500 N

Block 3

Excavation Block 1

Block 6

Block 2

25,000 N

Block 6
(extension)

N

1"=100'

Vulture Tailings Excavation Blocks

(Intended as an overlay to the reserve block plan)

Don C. White- Oct., 1988

Tabulation of Vulture Tailings Reserve Blocks by Excavation Blocks

Don C. White - Oct, 1988

Reserve Block #	Au Grade (oz/t)	Thickness (ft)	Area (ft^2)	Cubic Yards ($ft^3/27$)	Short Tons ($Yd^3 \times 1.62$ s.t./yd^3)	Contained oz. Au
32	.032	5	15,600	2,889	4,680	150
33	.031	2	10,500	778	1,260	39
18	.044	5	26,600	4,926	8,029	353
6	.053	7	3,500	907	1,470	78
5	.053	9	12,000	4,000	6,480	343
16	.047	8	16,300	4,830	7,824	368
19	.041	4	10,500	1,556	2,520	103
7	.053	6	6,300	1,400	2,268	120
30	.037	11	4,400	1,793	2,904	107
29	.034	6	20,200	4,489	7,272	247
44	.024	6	12,700	2,822	4,572	110
Excavation Block 1	.041	—	—	30,390	49,279	2,018
17	.040	4	7,600	1,126	1,824	73
28	.035	3	37,400	4,156	6,732	236
42	.024	7	19,800	5,133	8,316	200
43	.029	4	9,100	1,348	2,184	63
Excavation Block 2	.030	—	—	11,763	19,056	572
46	.028	1	3,600	133	216	6
45	.022	3	22,400	2489	4,032	89
31	.035	3	9,000	1,000	1,620	57
15	.040	4	11,200	1,659	2,688	108
4	.055	4	2,900	430	696	38
27	.034	4	4,700	696	1,128	38
14	.042	8	8,600	2,548	4,128	173
13	.042	12	5,500	2,444	3,960	166
26	.035	8	24,500	7,259	11,760	412
25	.037	13	20,900	10,063	16,302	603
41	.020	14	5,400	2,800	4,536	91
40	.024	16	15,000	8,889	14,400	346
39	.026	6	6,500	1,444	2,340	61
Excavation Block 3	.032	—	—	41,854	67,806	2,188

Reserve Block #	Au Grade (oz/t)	Thickness (ft)	Area (ft²)	Cubic Yards (ft³/27)	Short Tons (yd³ x 1.62 st/yd³)	Contained oz. Au
24	.034	17	17,900	11,270	18,258	621
38	.022	17	3,800	2,393	3,876	85
11	.044	17	20,000	12,593	20,400	898
3	.051	17	4,700	2,959	4,794	244
2	.053	22	5,500	4,481	7,260	385
9	.044	22	3,300	2,689	4,356	192
10	.045	22	3,200	2,607	4,224	190
8	.044	17	2,100	1,322	2,142	94
23	.031	12	4,400	1,956	3,168	98
21	.035	5	8,800	1,630	2,640	92
35	.021	9	2,000	667	1,080	23
34	.023	2	7,200	533	864	20
12	.042	12	12,700	5,644	9144	384
22	.034	7	11,200	2,903	4,704	160
36	.026	8	2,400	711	1,152	30
37	.024	3	4,200	467	756	18
Excavation Block 4	.040	—	—	54,825	88,818	3,534
1	.073	3	4,200	467	757	55
Add-on*	.036	2	110,000	8,148	13,200	475
Excavation Block 5	.038	—	—	8,615	13,957	525
Excavation Block 6+	.014	15	170,000	94,000	150,000	2,100

* "Add-on" = Area of yellow, stamp mill tailing to N.W. of main body (W of old mill site) found in August, 1988 (subsequent to July, 1988 reserve memo)

\+ Block 6 is the low grade, partially cyanide tails bounding the SW side of the stamp mill tails. They may be economic.

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

54 40 .09

55 18 .04

53 13 .07

52 17 .07

1 25 .06

4 12 .03

2 20 .05

7 18 .07

49 1 .01

3 17 .02

51 17 .08

8 13 .03

50 9 .13

5 17 .04

48 4 .19

46 2 .16

9 12 .04

6 17 .04

Pegasus ~2,000 s.t. heap

H_2O

.05

47 7 .13

10 7 .05

45 4 .05

25,500

21 14 .07

11 4 .13

43 3 .03

.10

56 17 <.01

57 17 .02

20 9 .09

22 17 .03

12 3 .12

44 7 .16

.15

24 17 <.01

23 14 .07

25 17 .04

13 12 .11

19 7 .06

27 17 .02

29 17 .01

14 9 .12

18 4 .08

26 9 .04

28 15 <.01

30 8 .02

15 7 .15

31 13 .01

32 3 .09

17 4 <.01

16 11 .07

36 4 .01

.05

33 3 <.01

.10

37 8 .10

34 3 .04

.05

25,000

35 4 .07

39 3 .02

42 4 .18

.15

38 8 .08

40 8 .04

41 8 .25

Approx. limit of tailings ≥ 1 ft. thick

N

1" = 100'

LEGEND

- ≥ .20 oz/t Ag
- .15 - .19
- .10 - .14
- .05 - .09
- < .05 oz/t Ag

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

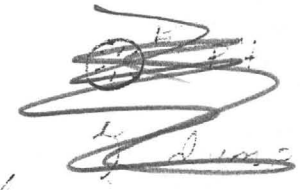
VULTURE MINE AREA
GEOLOGIC LEGEND

Tertiary	**Trd**	**Rhyolite dike** White, aphanitic, massive blocky. Commonly contains black MnOx dendrites on joint surfaces.
	Kgr	**Granite** White to pinkish white, medium to coarse grained quartz-Kspar (sericite)-biotite.
	Kgdr	**Granodiorite** White to light grey, massive, medium grained, quartz-plagioclase-biotite.
	Kd	**Diorite** Grey on fresh surface, brownish-red on weathered surface. Moderate foliation to massive. Usually granular. Plagioclase-quartz-amphibole-biotite.
Cretaceous	**Kdb**	**Diorite Breccia** Groundmass medium to dark grey-green, fine grained, siliceous quartz-amphibole-plagioclase-chlorite. Unit contains from 10-50% angular to rounded breccia fragments of variable composition. Commonly magnetic.
	Kqpi	**Quartz Porphyry Intrusive** Medium to coarse grained altered (sericitized, pyritized, silicified) granite to quartz monzonite with quartz porphyroblasts (1-4 mm).
	Kqs	**Quartz-Sericite Rock** Similar to above but lacking significant quartz porphyroblasts. Typically white, fine to occasionally medium grained. Granular. FeOx stained.
	PCqs	**Quartz-Sericite Schist** Rhyolite to dacite tuffs and volcaniclastics. Grey, tan to buff. Finely foliated. Fine to medium grained quartz and sericite. Commonly with 1-3 mm quartz clasts.
	PCqsc	**Quartz-Sericite-Chlorite Schist** Dacite. Light to medium grey-green. Finely foliated.
PreCambrian	**PCAmb**	**Amphibolite** Basalt tuffs and flows. Dark grey, fine to medium grained amphibole-plagioclase-chlorite-quartz.
	PCAmg	**Amphibolite** Gabbro. Like PCAmb but medium to very coarse grained.
	PCst	**Siltite** Brown or tan to light grey. Moderately foliated. Fine grained, occasionally with granular quartz.

Symbols (Heading)

Silicification

Sericitization



area of outcrop

geologic contact

fault w/ dip direction

Shear

Breccia zone

V25-35 Interval of chip sample

location of grab sample

Strike/Dip Foliation

Strike/Dip Bedding

Strike/dip joints

Pit

Dump

NOT SCANNED

SYMBOLS

Silicification

Sericitization

Area of Outcrop

Geologic Contact

Fault with Dip Direction

Shear

Breccia Zone

Interval of Chip Sample

Location of Grab Sample

Strike/Dip Foliation

Strike/Dip Bedding

Strike/Dip Joints

Pit

Dump

Vulture Mine Area
Geologic Legend

Tertiary

Trd — **Rhyolite dike** — White, aphanitic, massive blocky. Commonly contains black MnOx dendrites on joint surfaces.

Kgr — **Granite** — White to Pinkish White. Medium to coarse grained quartz-K-spar (Sericite)-biotite

Kgdr — **Granodiorite** — White to Light grey, massive, Medium grained, Quartz-plagioclase-biotite.

Kd — **Diorite** — Grey on fresh surface after weathers brownish-red. Moderate foliation to Massive. Usually granular. Plagioclase-Quartz-Amphibole-biotite

Cretaceous

Kdb — **Diorite Breccia** — Groundmass medium to dark grey-green Fine grained, Siliceous quartz-amphibole-plagioclase-chlorite. Unit contains From 10-50% angular to rounded breccia fragments of variable composition Commonly Magnetic

Kqpi — **Quartz Porphyry Intrusive** — medium to coarse grained altered (sericitized, pyritized, silicified) granite to quartz monzonite with qtz. Porphyroblasts (1-4mm)

Kqs — **quartz-Sericite Rock** — Similar to Above but Lacking significant quartz porphyroblasts. Typically White, Fine to occassionally medium grained. Granular. FeOx Stained.

PCqs — **Quartz-Sericite Schist** — Rhyolite to Dacite tuffs and volcaniclastics. Grey, tan to buff. Finely foliated. Fine to medium grained quartz and Sericite. Commonly with 1-3 mm quartz clasts

PCqsc — **Quartz-Sericite-chlorite Schist** (Dacite). Light to medium grey-green. Finely Foliated.

PreCambrian

PC Amb — **Amphibolite** — basalt tuffs & flows. Dark grey, fine to medium grained Amphibole-Plagioclase-chlorite-quartz.

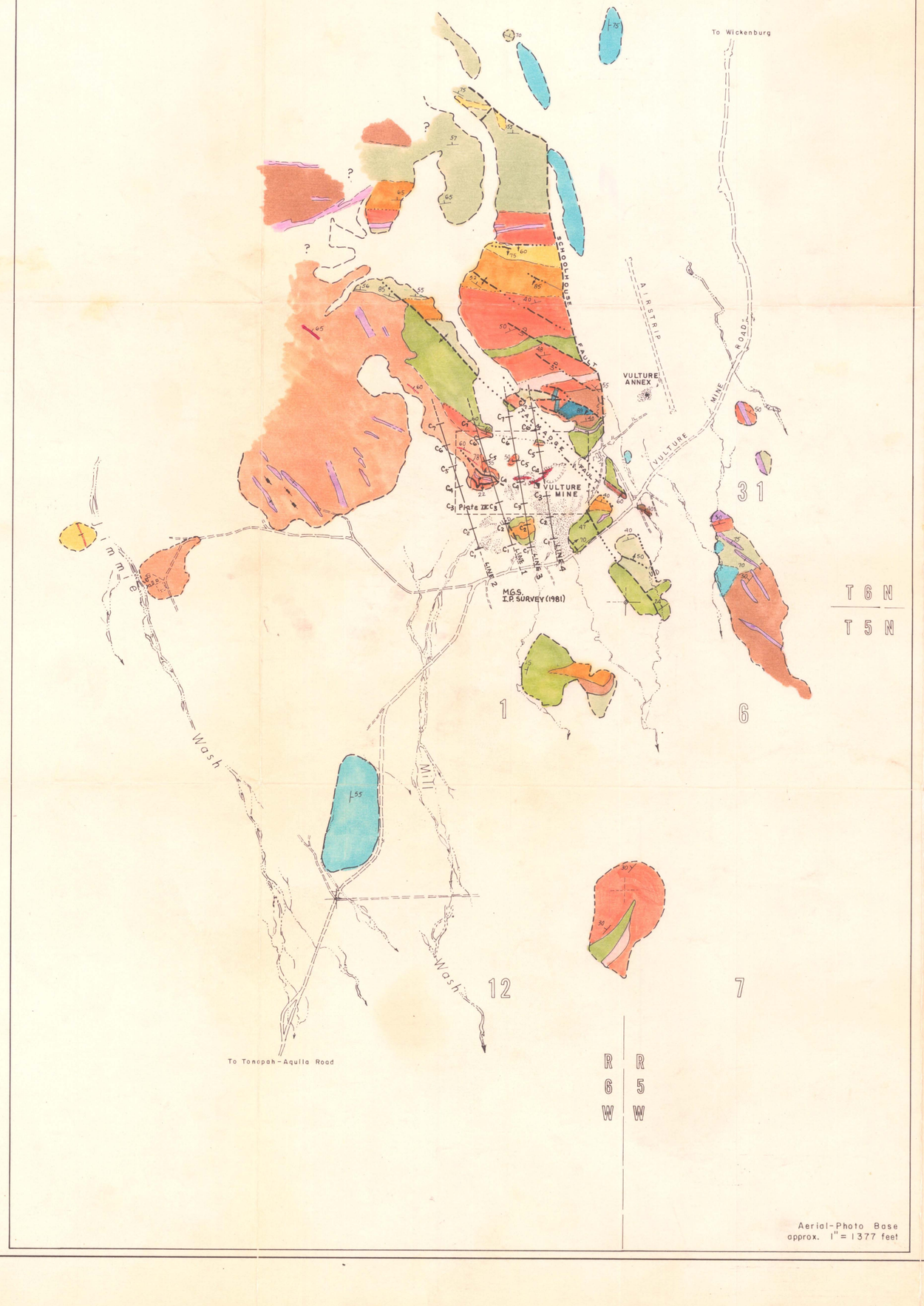
PC AMg — **Amphibolite** — Gabbro. Like PC Amb, but medium to Very Coarse grained

PCst — Siltite — brown or tan to light grey Moderately Foliated. Fine grained occassionally with granular quartz grains.

VULTURE MINE AREA
GEOLOGIC LEGEND

(delete 2-3 lines)

Tertiary	Trd	**Rhyolite dike** (Rhyolite ? dike) White, aphanitic, massive blocky. Commonly contains black MnOx dendrites on joint surfaces.
	Kgr	**Granite** (D S) White to pinkish white, medium to coarse grained quartz-Kspar (Sericite)-biotite.
	Kgdr	**Granodiorite** White to light grey, massive, medium grained, quartz-plagioclase-biotite.
	Kd	**Diorite** Grey on fresh surface, brownish-red ~~after weathering~~ on weathered surface. Moderate foliation to massive. Usually granular. Plagioclase-quartz-amphibole-biotite.
Cretaceous	Kdb	**Diorite Breccia** Groundmass medium to dark grey-green, fine grained, siliceous quartz-amphibole-plagioclase-chlorite. Unit contains from 10-50% angular to rounded breccia fragments of variable composition. Commonly magnetic.
	Kgpi	**Quartz Porphyry Intrusive** Medium to coarse grained altered (sericitized, pyritized, silicified) granite to quartz monzonite with quartz porphyroblasts (1-4 mm).
	Kgs	**Quartz-Sericite Rock** Similar to above but lacking significant quartz porphyroblasts. Typically white, fine to occasionally medium grained. Granular. FeOx stained.
	PCqs	**Quartz-Sericite Schist** Rhyolite to dacite tuffs and volcaniclastics. Grey, tan to buff. Finely foliated. Fine to medium grained quartz and sericite. Commonly with 1-3 mm quartz clasts.
	PCqsc	**Quartz-Sericite-Chlorite Schist** ~~Dacite~~. Light to medium grey-green. Finely foliated.
PreCambrian	PCAmb	**Amphibolite** Basalt tuffs and flows. Dark grey, fine to medium grained amphibole-plagioclase-chlorite-quartz.
	PCAmg	**Amphibolite** Gabbro. Like PCAmb, but medium to very coarse grained.
	PCst	**Siltite** Brown or tan to light grey. Moderately foliated. Fine grained, occasionally with granular quartz [illegible].



EXPLANATION

- Quaternary alluvium, Tertiary gravels; mine tailings and dumps

MID-TERTIARY

- Intermediate tuffs and ash flows
- Latite to andesite dikes
- White, aphanitic rhyolite

TERTIARY? – CRETACEOUS? (LARAMIDE?)

- Quartz veins
- Fine-grained equigranular granite
- Quartz porphyry intrusive

PRECAMBRIAN

- Diabase
- Amphibolitic mafic flows, sills and dikes
- Mafic tuff
- Felsic tuff
- Arkosic sandstone (quartzite)
- Quartz wacke
- Wacke, fine-grained

- TAILINGS
- OPEN PIT
- SHAFT
- BEDROCK OUTLINE
- CONTACT, DOTTED WHERE INFERRED OR COVERED
- FAULT
- JOINT
- STRIKE AND DIP
- ROAD
- BRAIDED, EPHEMERAL STREAM

Aerial-Photo Base
approx. 1" = 1377 feet

N

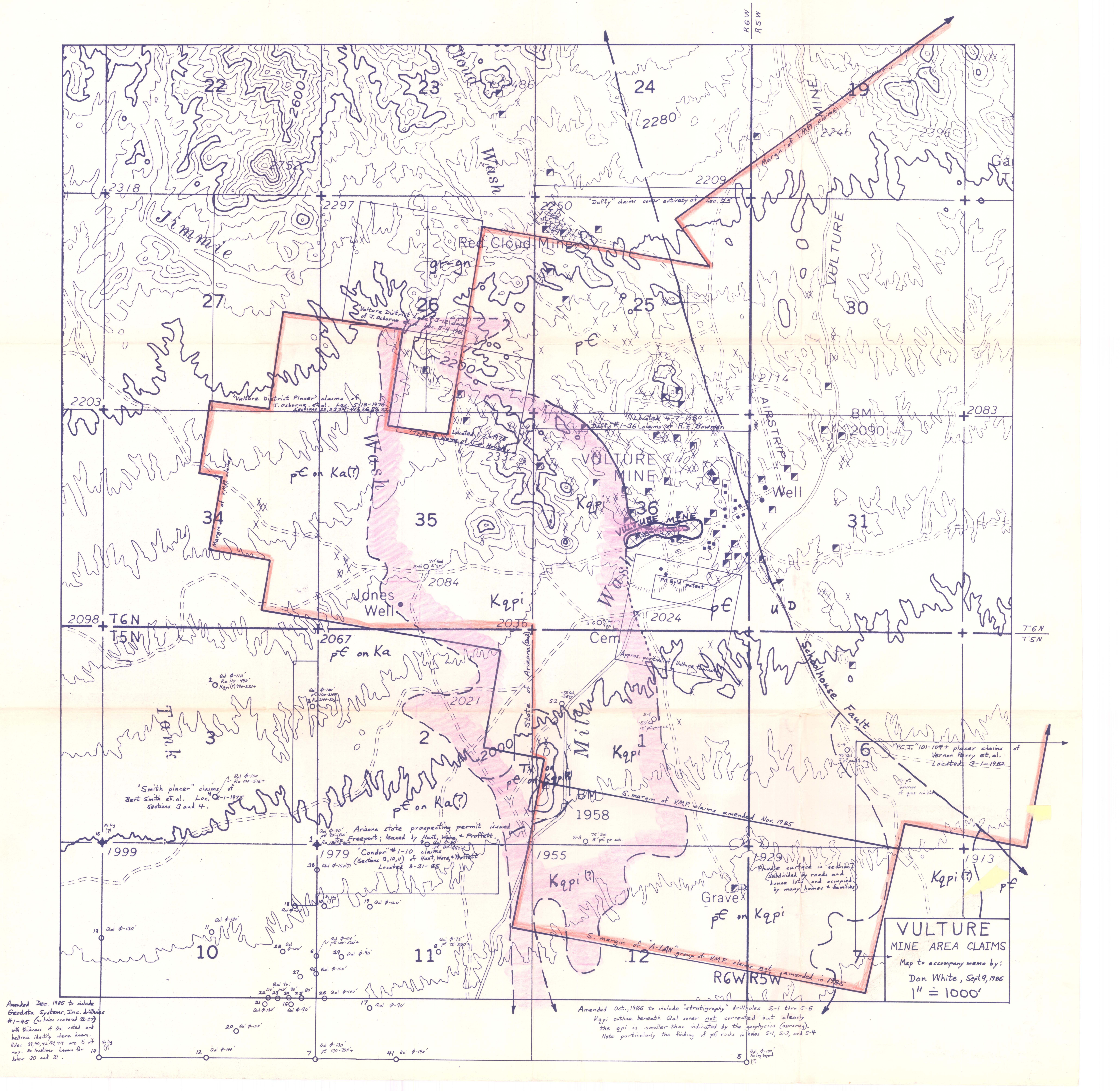
0 500 1000 2000 3500 5000 FEET

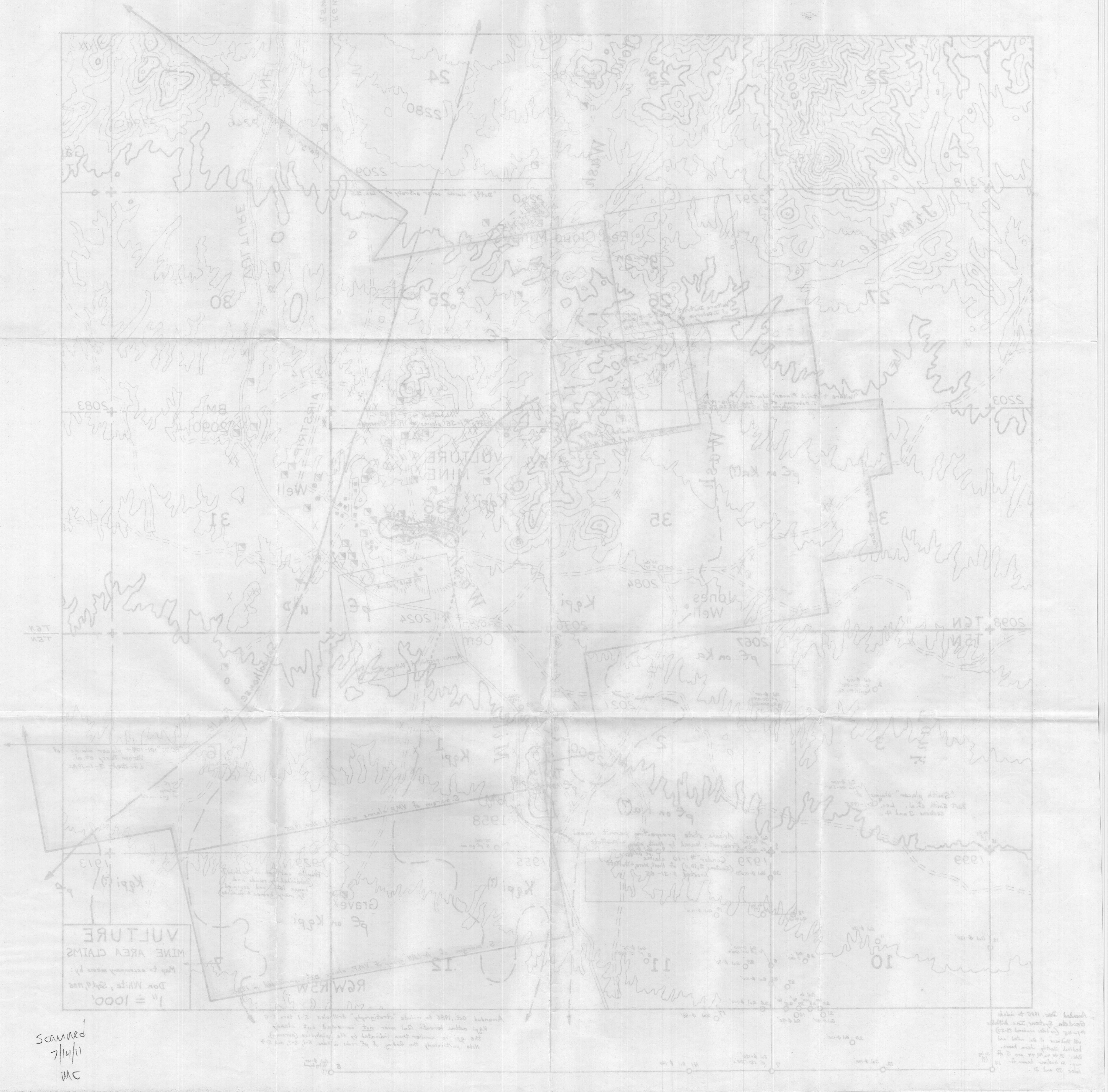
VULTURE MINE DISTRICT GEOLOGIC MAP

FILE NO.

REVISED	
	PROJECT: ARIZONA Au DISTRICTS NO. 0844
	LOCATION: MARICOPA Co., ARIZONA
	DATA BY: JFD, MED DATE: Jan., 1981
	DRAWN BY: N.L.C.
PLATE I	noranda NORANDA EXPLORATION, INC. INDEX

SCANNED 8-2010 NJN


VULTURE
MINE AREA CLAIMS
Map to accompany memo by:
Don White, Sept. 9, 1986
1" = 1000'
R6W
R5W
T6N
T5N
22
23
24
19
27
26
25
30
34
35
36
31
3
2
1
6
10
11
12
7
Jimmie
Wash
Red Cloud Mine
gr-gn
"Duffy" claims cover entirety of Sec. 25
Margin of V.M.P. claims
VULTURE
MINE
"Vulture District Placer" claims of T. Osborne et. al. Loc. 5-18-1976
"Duffy" #1-36 claims of R. E. Bowman
Located 4-7-1960
VULTURE MINE
AIRSTRIP
BM 2090
Well
p€ on Ka(?)
Jones Well
Kqpi
p€
"Pit Gold" patent
U D
Cem
Schoolhouse Fault
Approx. position of Vulture townsite
p€ on Ka
State of Arizona
Milk
Tank
"P.C.J." 101-104 + placer claims of Vernon Perry et. al. Located 3-1-1982
"Smith placer" claims of Bert Smith et. al. Loc. 4-1-1975 Sections 3 and 4.
p€ on Ka(?)
Arizona state prospecting permit issued to Freeport; leased by Hunt, Ware, + Proffett.
"Condor" #1-10 claims (Sections 3, 10, 11) of Hunt, Ware, + Proffett Located 8-31-85
S. margin of V.M.P. claims amended Nov. 1985
BM 1958
Private surface in section 7 subdivided by roads and house lots and occupied by many homes + families
Grave
p€ on Kqpi
Kqpi (?)
S. margin of "A-LAN" group of V.M.P. claims not amended in 1985
Amended Dec. 1986 to include Geodata Systems, Inc. drillholes #1-45 (no holes numbered 32-37) with thickness of Qal noted and bedrock identity where known. Holes 39, 40, 42, 43, 44 are S off map. No locations known for holes 30 and 31.
Amended Oct., 1986 to include "stratigraphy" drillholes S-1 thru S-6. Kqpi outline beneath Qal cover not corrected but clearly the qpi is smaller than indicated by the geophysics (aeromag). Note particularly the finding of p€ rocks in holes S-1, S-3, and S-4.



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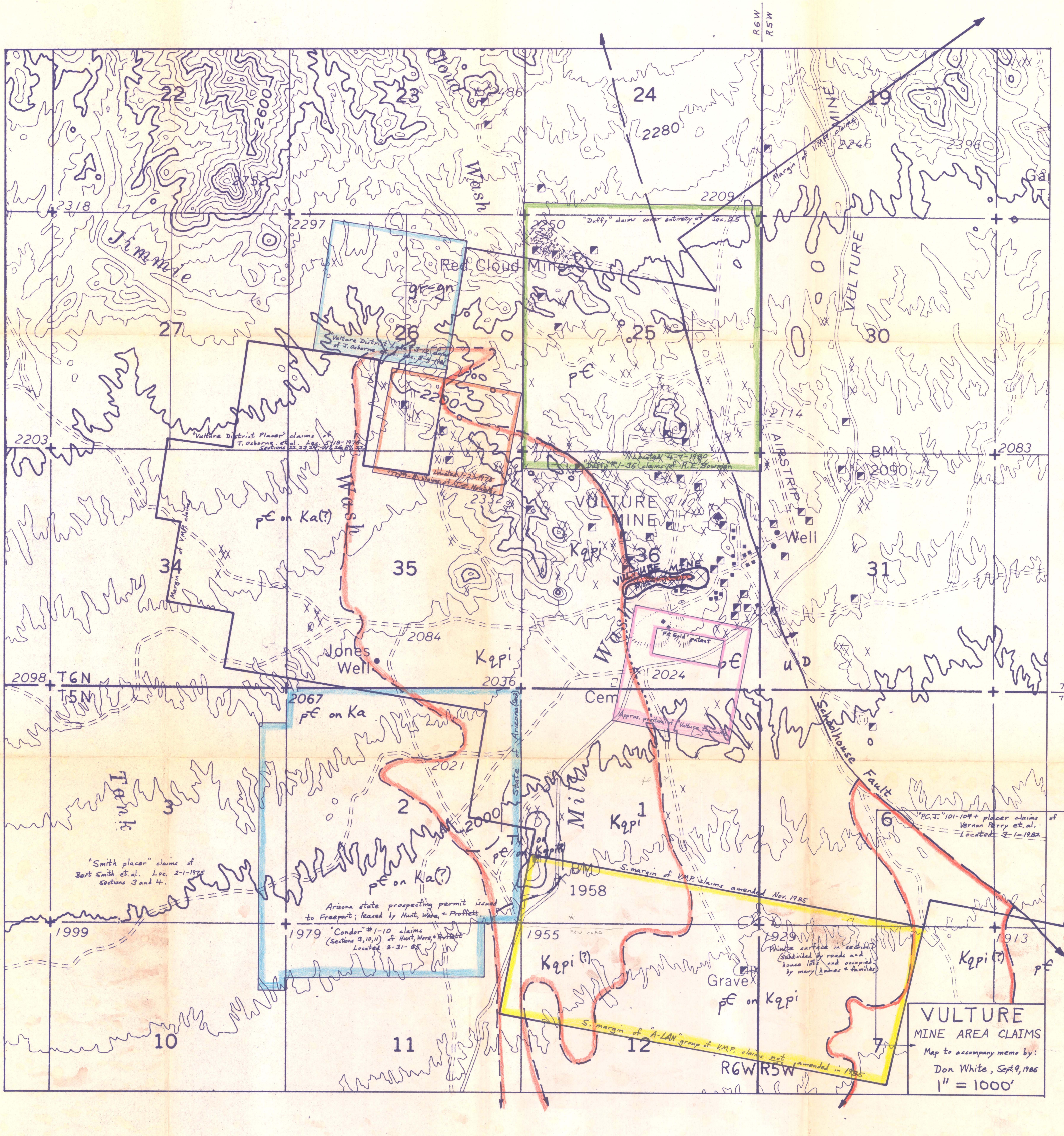
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24
19
27
26
25
30
34
35
36
31
3
2
1
6
10
11
12
7
Red Cloud Mine
VULTURE MINE
Jimmie
Wash
Jones Well
Well
Cem
Grave
AIRSTRIP
VULTURE
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pЄ
Kqpi
Kqpi (?)
gr-gn
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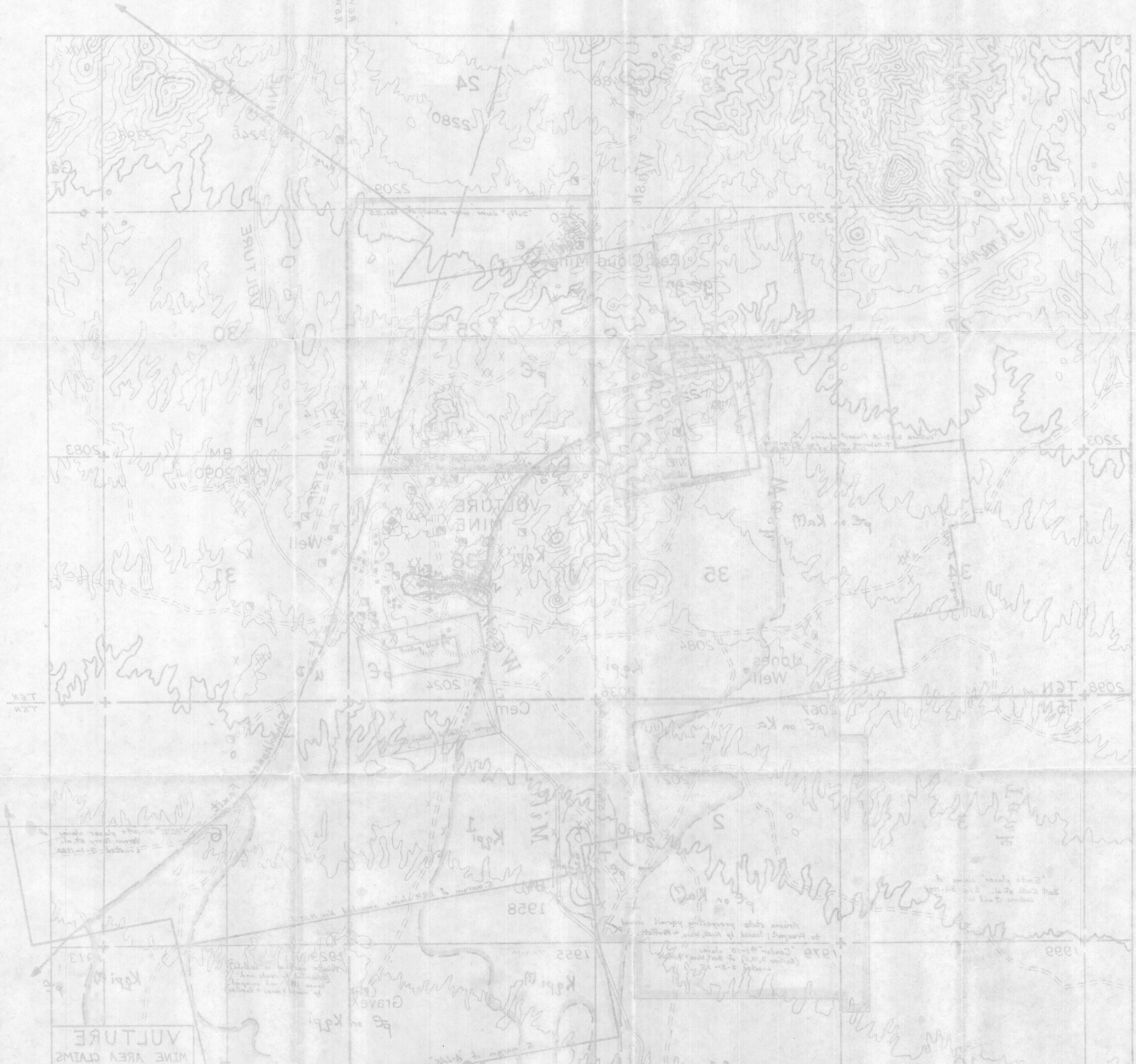
"P.C.J." 101-104+ placer claims of Vernon Parry et.al. Located 3-1-1982
Private surface in section 7 (subdivided by roads and about 12+ and occupied by many homes + families)
State of Arizona
"Pit Gold" patent
Approx. position of Vulture Deposit
2600
2486
2280
2246
2396
2318
2297
2250
2209
2203
2114
2083
2084
2036
2098
2067
2021
2024
2000
1999
1979
1955
1929
1913



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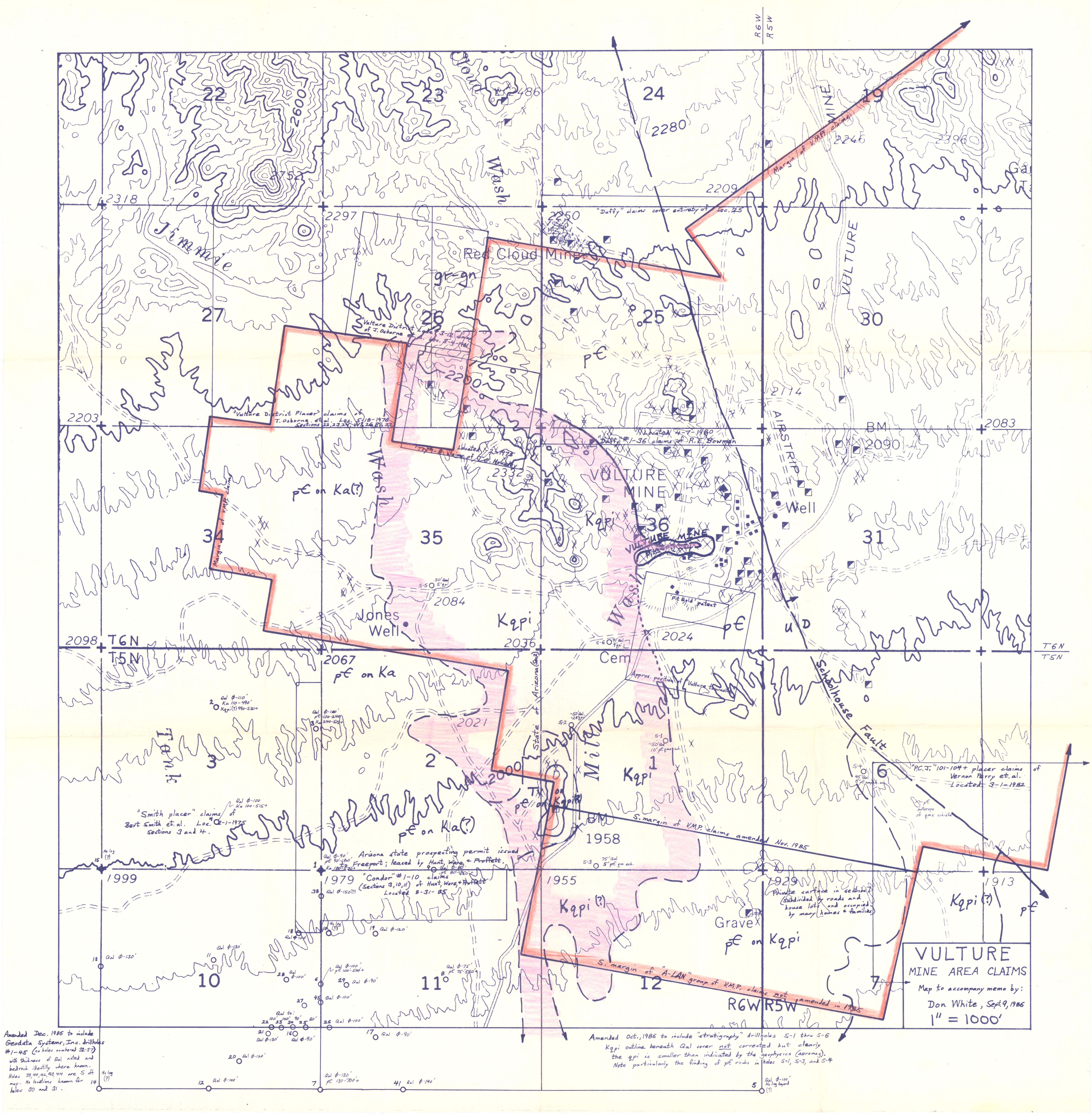
7/14/11
MC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pЄ on Ka
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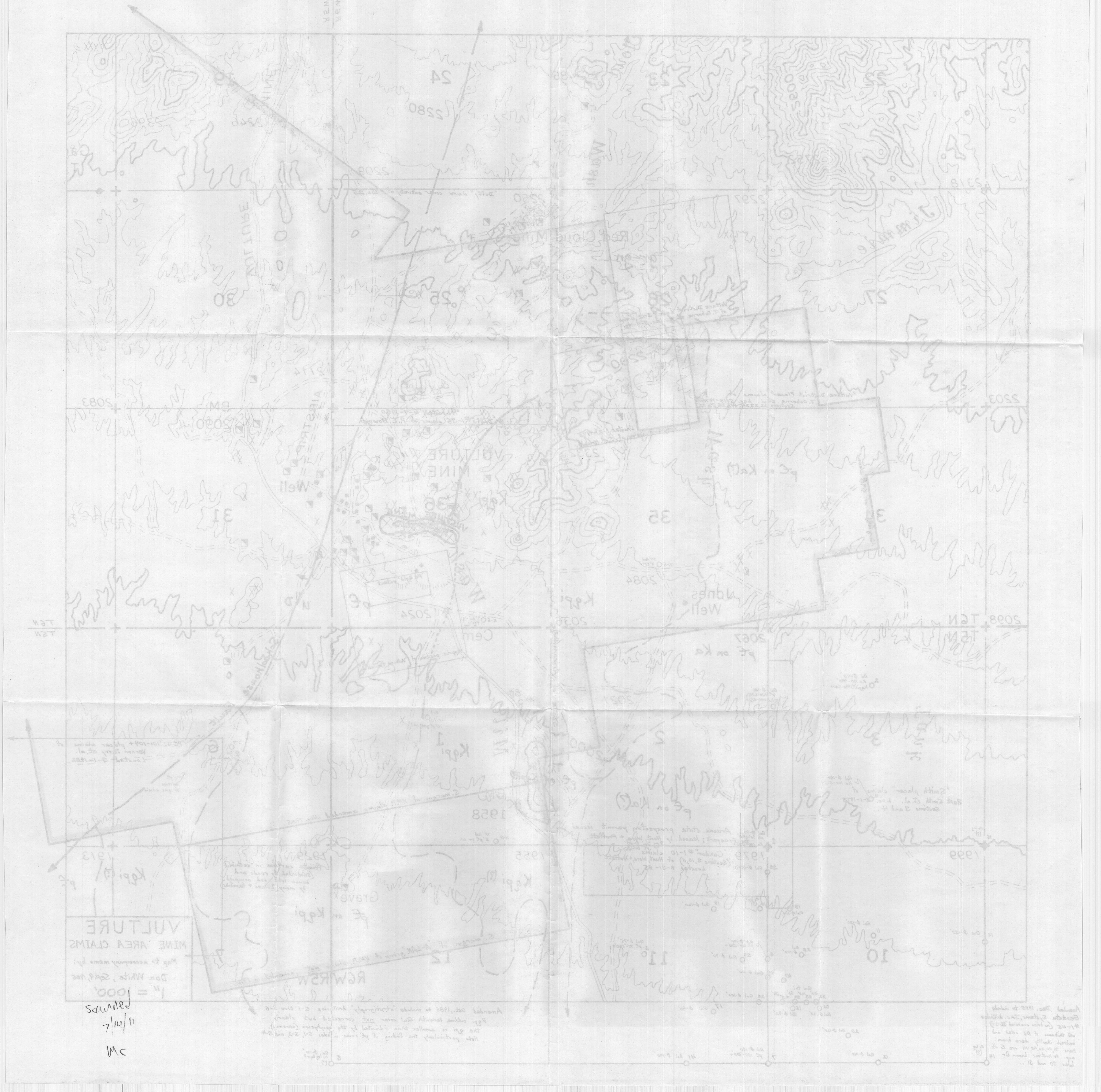
Qal 0-130'
Qal 0-100'
pЄ 100-500'+
Qal 0-90'
Qal 0-75'
pЄ 75-560'+
Qal 0-140'
Qal 0-130'
pЄ 130-700'+
Qal 0-120'
Qal 0-100'
No log beyond (?)
No log (?)
Qal to: 100' 140' 90' 80'
BM 2090
BM 1958
2318
2297
2250
2209
2203
2083
2098
2067
2036
2024
2084
2021
2000
1999
1979
1955
1929
1913
2332
2280
2246
2396
2600
2751
2486
2114
2200
22
23
24
19
27
26
25
30
34
35
36
31
3
2
1
6
10
11
12
7
Wash
Jimmie
Tank
Mill
VULTURE
U D



VULTURE
MINE AREA CLAIMS
1" = 1000'
VULTURE MINE
Red Cloud Mine
Jones Well
Well
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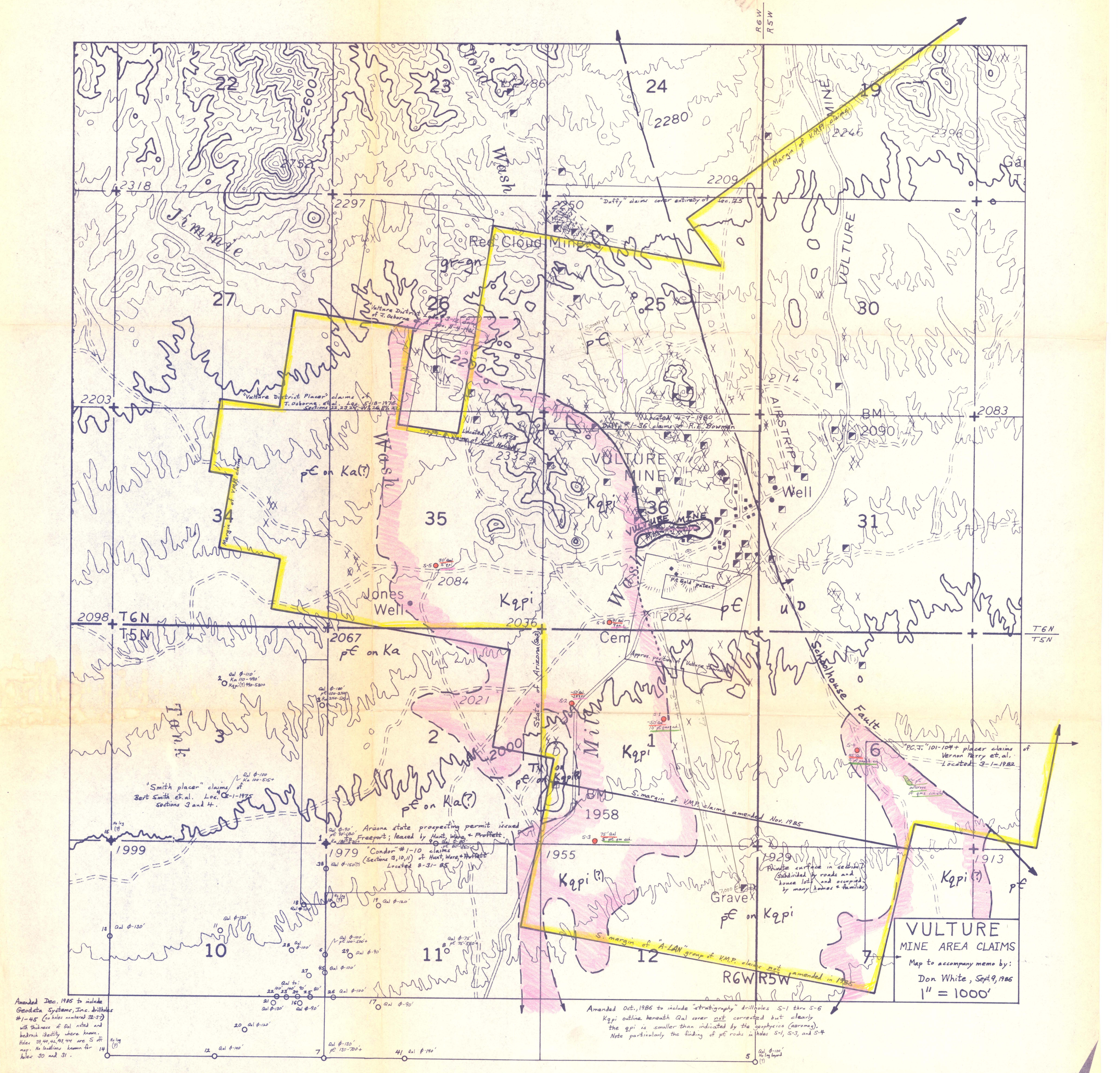
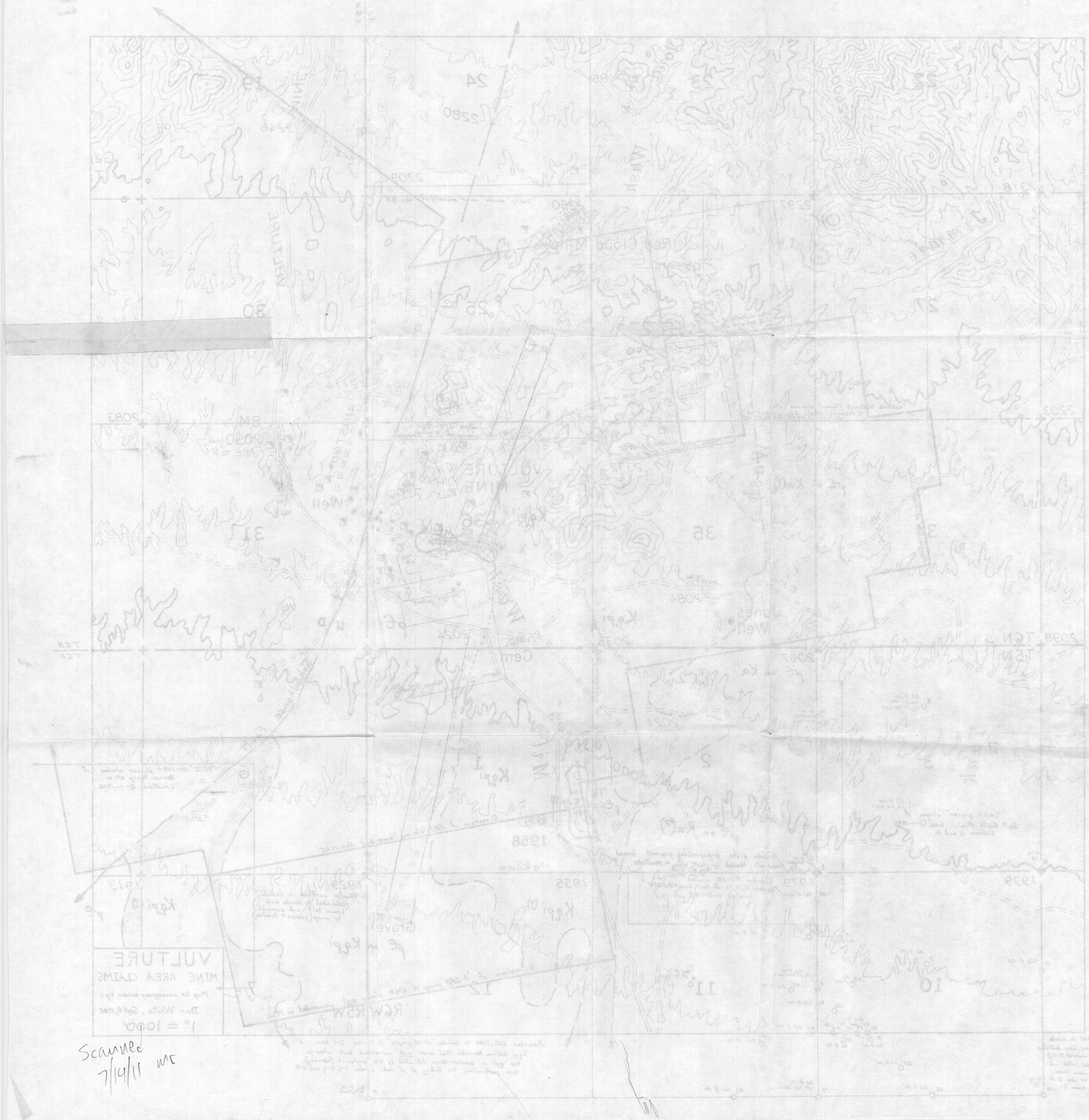
MC


VULTURE
MINE AREA CLAIMS
Map to accompany memo by:
Don White, Sept. 9, 1986
1" = 1000'
Amended Dec. 1986 to include Geodata Systems, Inc. drillholes #1-45 (no holes numbered 32-37) with thickness of Qal noted and bedrock identity where known. Holes 39, 40, 42, 43, 44 are S off map. No locations known for holes 30 and 31.
Amended Oct., 1986 to include "stratigraphy" drillholes S-1 thru S-6
Kqpi outline beneath Qal cover not corrected but clearly the qpi is smaller than indicated by the geophysics (aeromag).
Note particularly the finding of p€ rocks in holes S-1, S-3, and S-4
S. margin of "A-LAN" group of V.M.P. claims not amended in 1985
S. margin of VMP claims amended Nov. 1985
Margin of V.M.P. claims
"Duffy" claims cover entirety of sec. 25
"Duffy" #1-36 claims of R.E. Bowman
"Vulture District Placer" claims of T. Osborne et al.
"Smith placer" claims of Bert Smith et.al.
Sections 3 and 4.
Arizona state prospecting permit issued Freeport; leased by Hunt, Ware, + Proffett
1979 "Condor" #1-10 claims (Sections 3, 10, 11) of Hunt, Ware, + Proffett
Located 8-31-85
"P.C.J." 101-104 + placer claims of Vernon Perry et. al.
Located 3-1-1982
Private surface in sections subdivided by roads and house lots and occupied by many homes + families
VULTURE MINE
Red Cloud Mine
Jones Well
Well
Cem
Grave
AIRSTRIP
Schoolhouse Fault
Jimmie
Wash
Tank
VULTURE
MINE
p€ on Ka(?)
p€ on Ka
p€ on Kqpi
Kqpi
Kqpi (?)
gr-gn
p€
U D
T6N
T5N
R6W
R5W
R6W R5W
BM 2090
BM 1958
22
23
24
19
27
26
25
30
34
35
36
31
3
2
1
6
10
11
12
7
2318
2297
2250
2209
2280
2246
2396
2203
2114
2083
2084
2098
2036
2067
2024
2021
2000
1999
1955
1929
1913
2332
Qal ϕ-100'
No log beyond
(?)
No log
Qal ϕ-130'
Qal ϕ-120'
Qal ϕ-140'
Qal to:
100' 140' 90'



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N

VULTURE PROJECT
1981 IP SURVEY
Scale 1" = 200'
2-24-86 DEOIE

LINE 1
LINE 2
LINE 3
LINE 4

SEC 36

SCANNED 8-2010 NIN

VULTURE PROJECT
1981 IP SURVEY
Scale 1" = 500'
5-5H-8S DEOIE

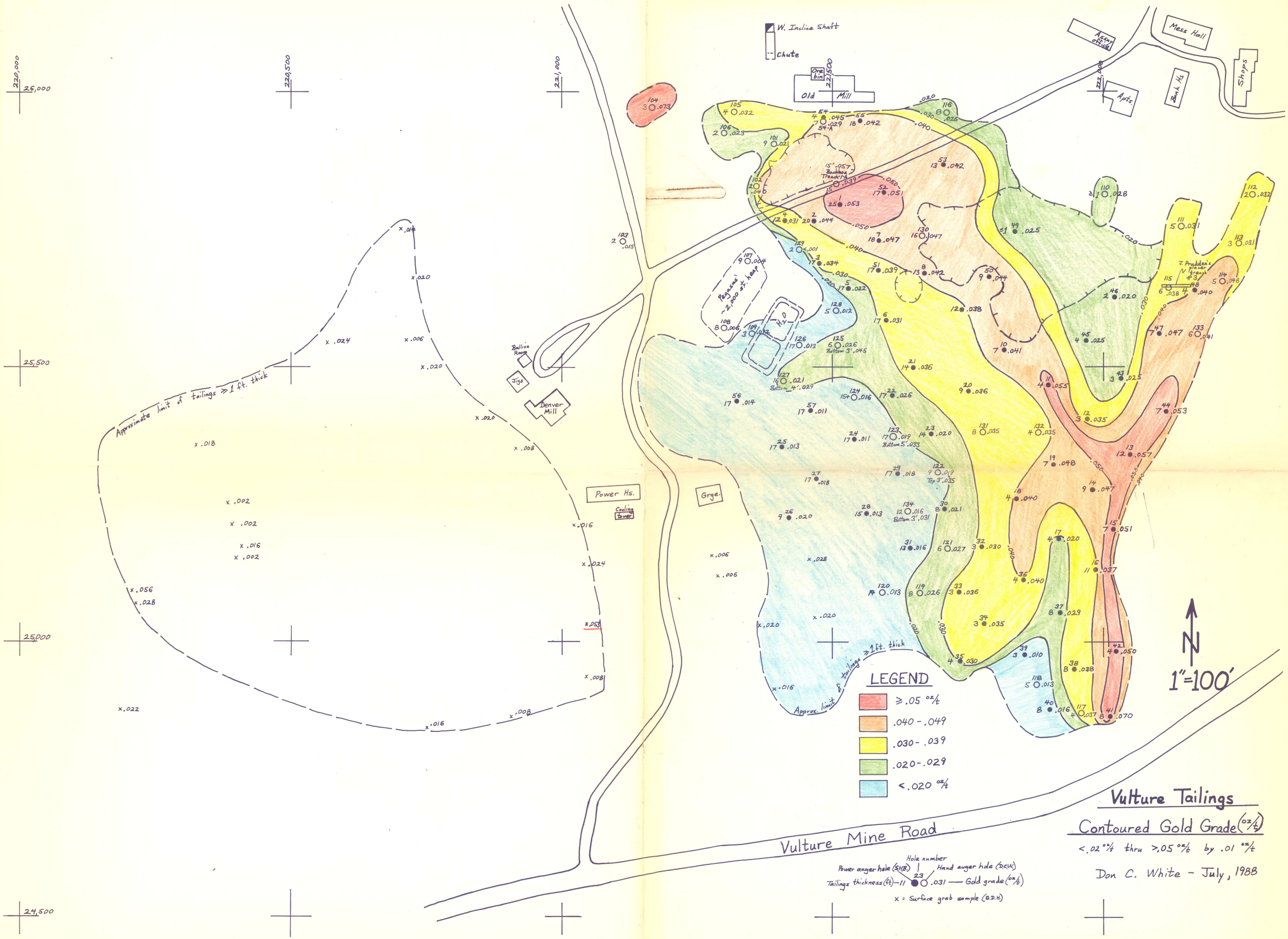
SEC 35

LINE 5
LINE 7
LINE 9
LINE 11

C'
C''
C'''

A
B
C
D

N



Vulture Tailings
Contoured Gold Grade (oz/t)
<.02 oz/t thru >.05 oz/t by .01 oz/t
Don C. White - July, 1988
LEGEND
≥.05 oz/t
.040 - .049
.030 - .039
.020 - .029
<.020 oz/t
Hole number
Power auger hole (S.H.B.)
Hand auger hole (D.C.W.)
Tailings thickness (ft) — 11
.031 — Gold grade (oz/t)
x = Surface grab sample (D.D.H.)
1"=100'
N
Vulture Mine Road
W. Incline Shaft
Chute
Ore bin
Old Mill
Assay office
Mess Hall
Apts.
Bunk Hs
Shops
Bullion Room
Jigs
Denver Mill
Power Hs.
Cooling tower
Grge.
Approximate limit of tailings ≥1 ft. thick
Approx. limit of tailings ≥1 ft. thick
Backhoe Trench 1A
J. Prudden's placer trench #3
Pegasus' ~2,100 st. heap
220,000
220,500
221,000
221,500
222,000
26,000
25,500
25,000
24,500

Vulture Tailings

Contoured Gold Grade(oz/t)

Dan C. Peterson - July, 1988

Scanned
7/14/11
MC

Vulture Tailings

Contoured Gold Grade (oz/t)

<.02 oz/t thru >.05 oz/t by .01 oz/t

Don C. White - July, 1988

Updated to Oct., 1988

1"=100'

N

LEGEND

- ≥.05 oz/t
- .040 - .049
- .030 - .039
- .020 - .029
- <.020 oz/t

Hole number

Power auger hole (SHB) | Hand auger hole (DCW)

Tailings thickness (ft) — 11 ● 23 ○ .031 — Gold grade (oz/t)

x = Surface grab sample (D.D.H.)

Approximate limit of tailings ≥ 1 ft. thick

Area now occupied by A.F. Budge (Mining) Ltd. heap leach pad & ponds & plant.

Vulture Mine Road

W. Incline Shaft

Chute

Ore bin

Old Mill

Mess Hall

Assay Office

Apts.

Bunk Hs.

Shops

Power Hs.

Cooling tower

Grge.

Ballion Room

Jigs

Denver Mill

Pegram's ~2,000 st. heap

J. Prudden's Placer Trench #3

Backhoe Trenching

H2O

220,000

220,500

221,000

221,500

222,000

25,500

25,000

24,500

Scanned 7/14/11 MC

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

VULTURE MOUNTAINS QUADRANGLE
ARIZONA
15 MINUTE SERIES (TOPOGRAPHIC)

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1951 and 1960. Field checked 1961

Polyconic projection. 1927 North American datum
10,000-foot grid based on Arizona coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue

To place on the predicted North American Datum 1983 move the projection lines 2 meters south and 68 meters east

UTM GRID AND 1961 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:62500

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ARIZONA
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U.S. Route — State Route

VULTURE MOUNTAINS, ARIZ.
N3345—W11245/15

1961

3451 IV—SERIES V798