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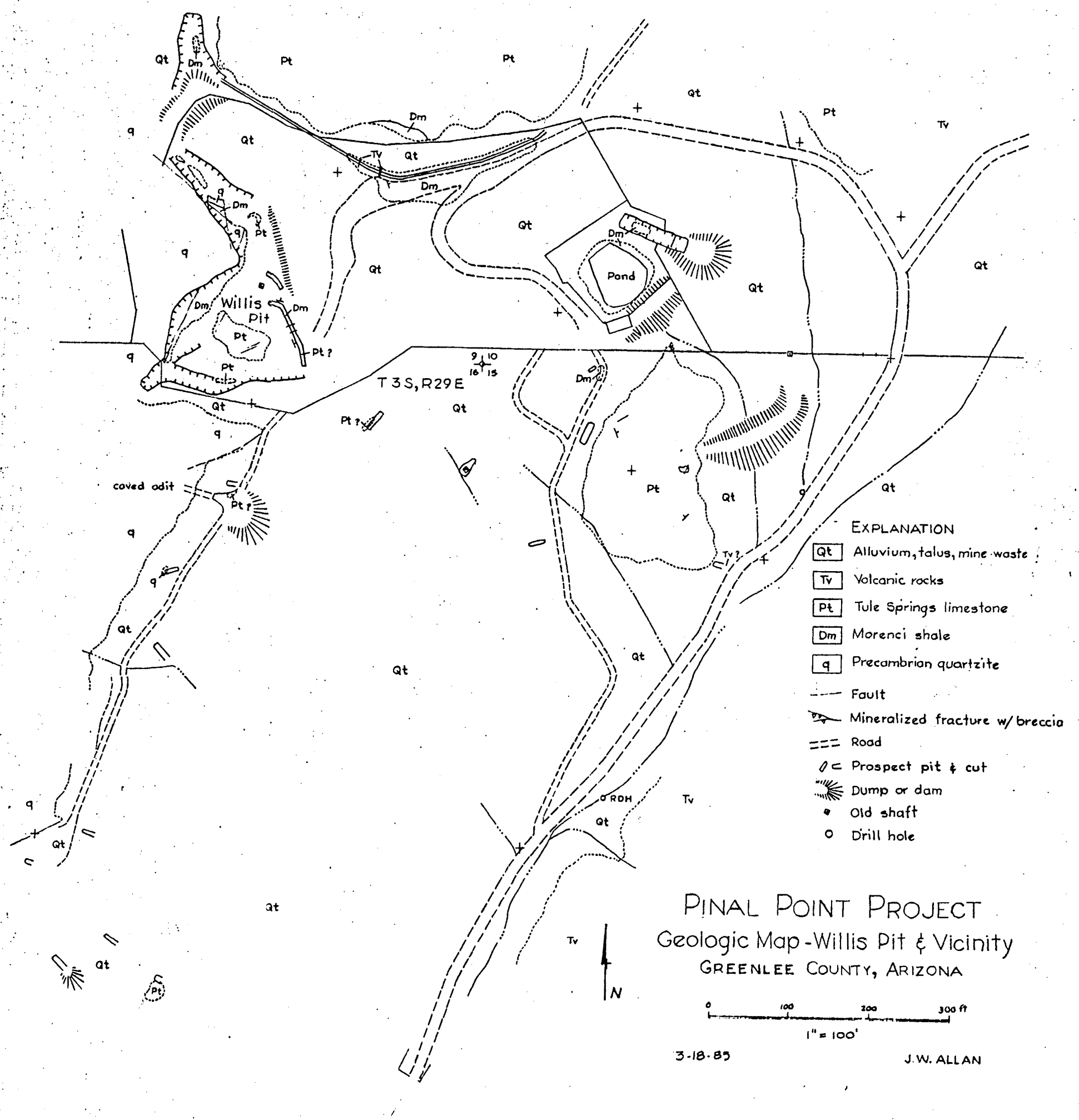
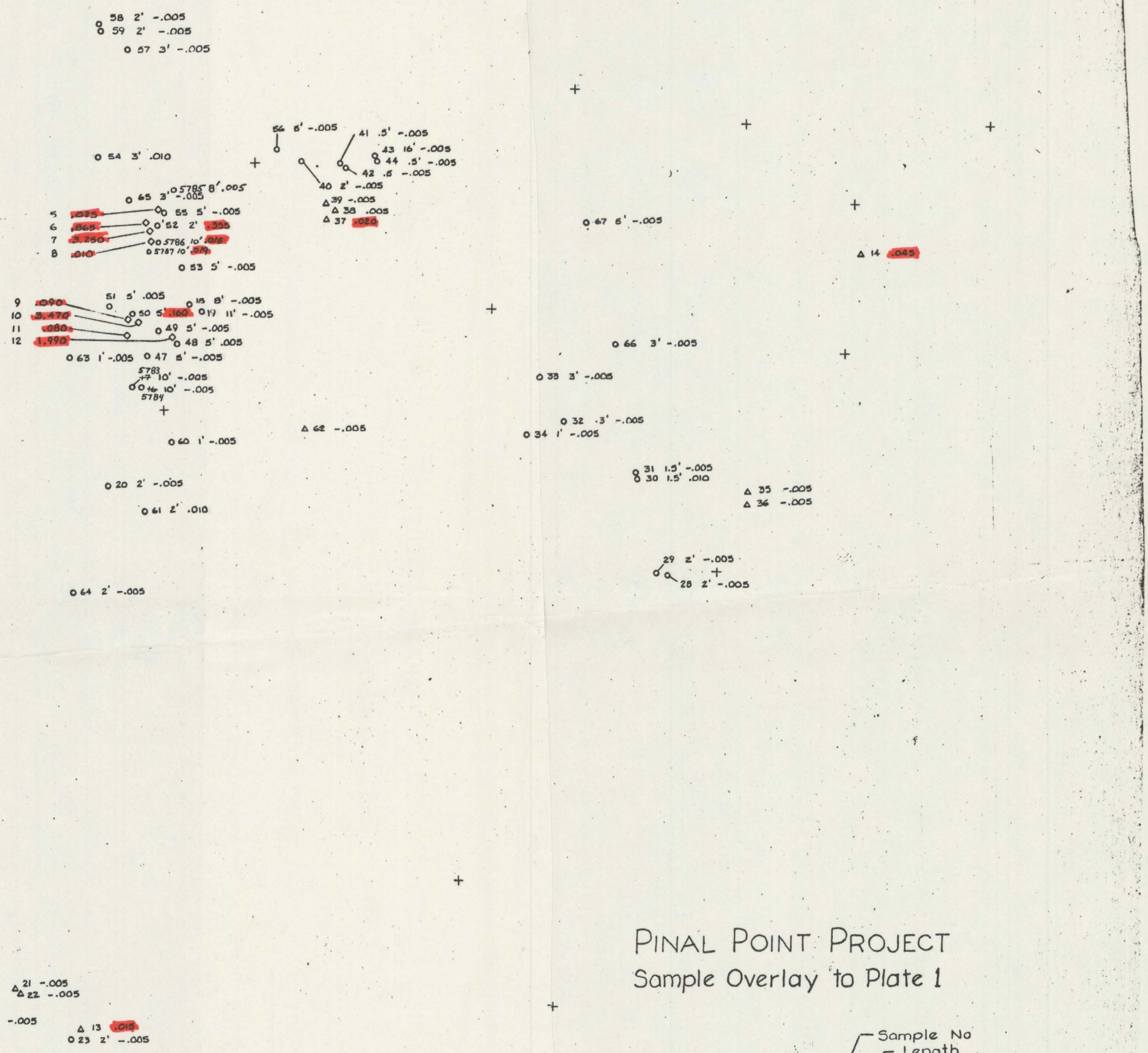


PINAL POINT PROJECT

Geologic Map - Willis Pit & Vicinity

GREENLEE COUNTY, ARIZONA

PLATE 1



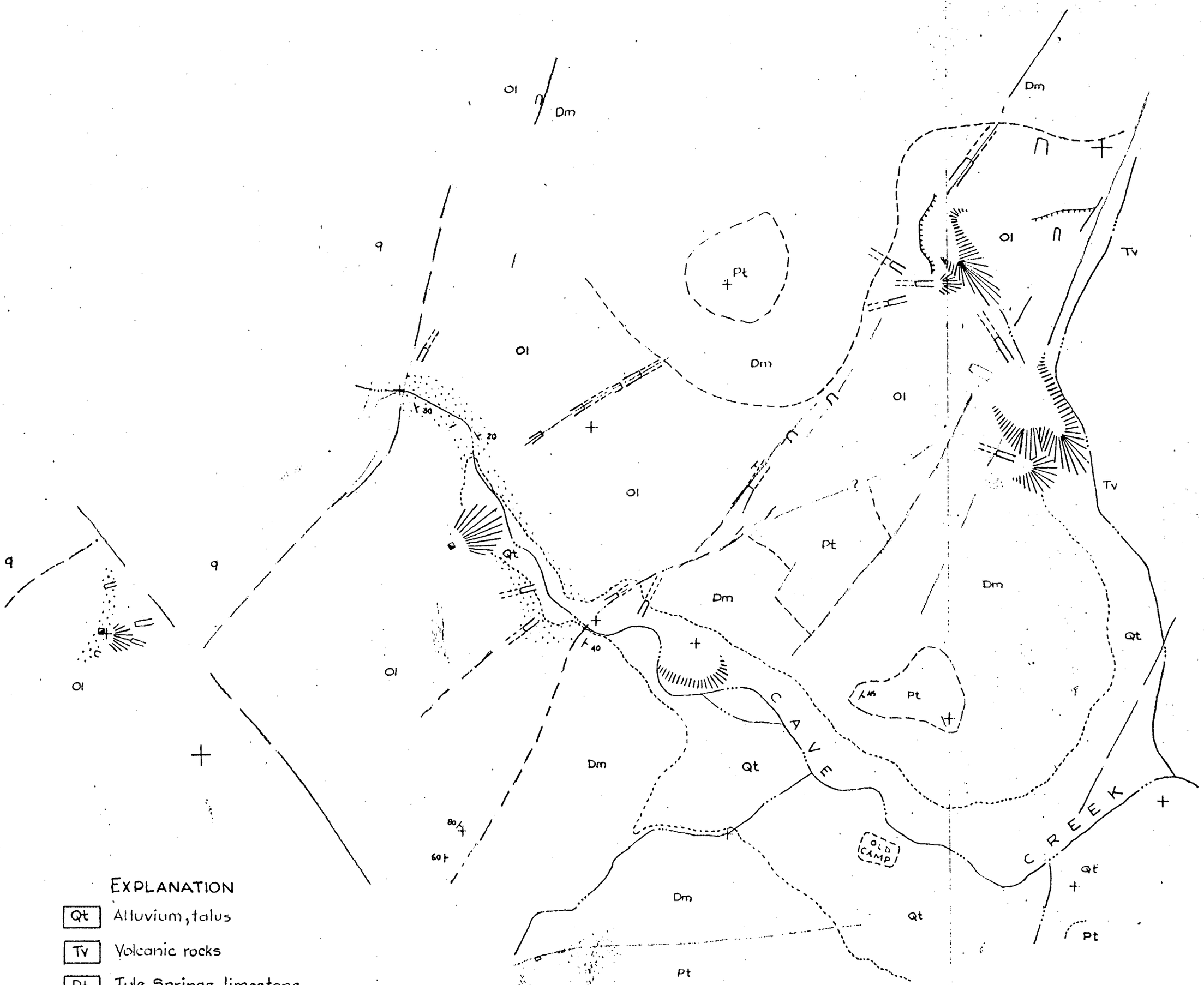
PINAL POINT PROJECT

Sample Overlay to Plate 1

Surface rock chip ○ 56 5' .012 oz/ton Au
(Sample No; Length)

Dump/drill cuttings △ 39 .021 oz/ton Au
(Sample No)

Vein specimen Willis pit ◇ 9 1.760 oz/ton Au
(Sample No)



EXPLANATION

- Qt — Alluvium, talus
- Tv — Volcanic rocks
- Pt — Tule Springs limestone
- Dm — Morenci shale
- Ol — Longfellow limestone
- q — Precambrian quartzite
- Fault
- Vein or mineralized fracture zone
- Sideritic replacement
- Prospect pit & cut
- Adit
- Shaft
- Dump

PINAL POINT PROJECT

Geologic Map - Cave Creek Area

GREENLEE COUNTY, ARIZONA

0 100 200 300

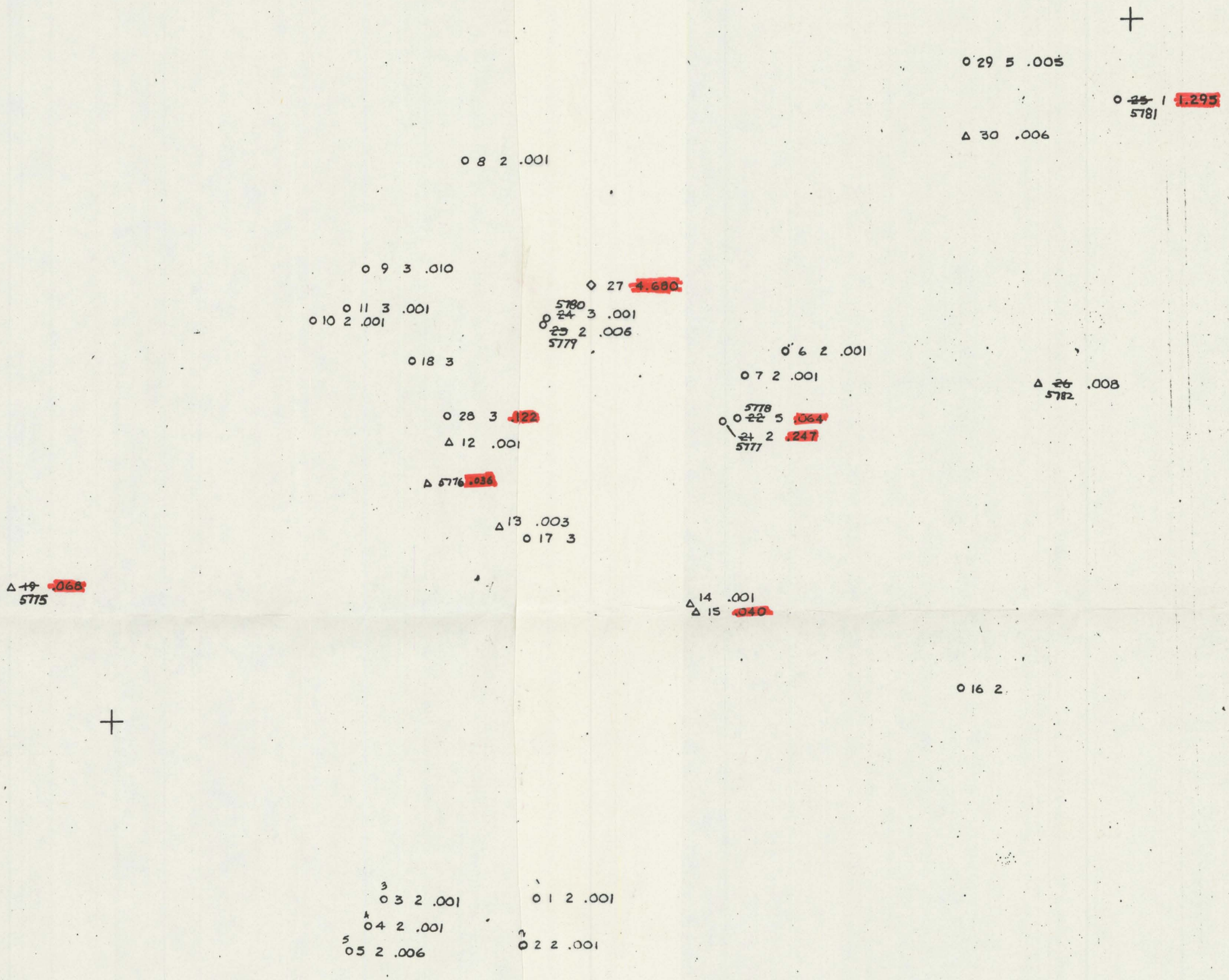
1" = 100'

N

6-17-85

J.W. ALLAN

PLATE 2



PINAL POINT PROJECT

Sample Overlay to Plate 2

		Sample No	Length	
Surface rock chip	○	56	5'	.012 oz/ton Au

		Sample No	
Dump	△	39	.021 oz/ton Au

		Sample No	
Vein specimen	◇	9	1.760 oz/ton Au

SUMMARY REPORT
PINAL POINT GOLD PROSPECT
GREENLEE COUNTY, ARIZONA

Introduction

Coarse visible gold and locally disseminated gold mineralization occurs at the Pinal Point prospect along the splays of a poorly exposed normal fault zone which separates Paleozoic limestones and shales from Precambrian quartzite. Au mineralization along the fault zone can be traced for a length of about 3000 feet. The mineralized sub-parallel splays attain discontinuous widths of +500 feet. This surface mineralization is locally underlain at a shallow depth by about 75 feet of relatively flat lying carbonaceous shale and intercalated black limestone which may have acted as a chemical trap favorable to gold deposition.This horizon should be tested by drilling for the presence of a bulk minable disseminated gold deposit.

Location & Access

The Pinal Point prospect is located approximately seven miles North of the town of Morenci in Greenlee Co. Arizona. It specifically is in Sections 9,10,15,16 T3S R29E G&SRM. State Highway No. 666 leads N. from Morenci along Chase Creek to a good jeep trail just S. of Pinal Point. This trail accesses the south end of the claim group in about ¼ mile. The northern end of the claim group is in the Coronado National Forest and is reached only by foot path.

Land Status

The area of interest is held by 25 Federal lode mining claims located on lands managed by the Bureau of Land Management on the southern end and managed by the U.S. Forest Service on the northern portion. Additionally, one Arizona State Prospecting Permit is held on one half section of state land. Application for the permit was made in 1984 by Meridian Minerals Co..Eleven of the lode claims were located in 1981 by O. B. Willis Inc. as the O.B.W.Fry claims while the remaining forteen claims were located in 1985 as the cave 1-14 claims by Meridian Minerals Co..All are currently owned by O.B.Willis Inc. of Safford Az. and are lease / optioned for exploration and mining to Harrison E. Matson P.O. Box 44171 Tucson,Az. 85733. The option agreement is assignable.

Geology & Mineralization

The prospect area is situated within the precious metal aureole of a major porphyry intrusive system centered about four miles to the South at the Morenci District. The Pinal fault zone, along which the prospect is located, is a normal fault of major displacement which has been traced into the central portion of the Morenci District. At the prospect, Paleozoic age carbonate rocks, as well as a sequence of Tertiary volcanic flow rocks, have been progressively downdropped to the East along splays of the fault.

The irregular fault trace strikes roughly NE with a steep dip to the South. Late tertiary normal faulting with a NW and W trend has dissected and offset the principal structure. The western footwall is composed of a relatively impermeable Precambrian quartzite and further to the South, a Precambrian granite. The quartzite forms the main mass of Pinal Point and is mapped as a local unit of the Pinal Shist.

The Paleozoic section of the hanging wall, in which mineralization occurs, is composed of the following : (1) The Lower Mississippian Tule Springs Limestone, the Escabrosa Limestone equivalent, which is a thick bedded, cliff-forming, locally fossiliferous limestone sequence. Only the lowermost ±100 feet of this unit remains uneroded at the prospect. (2) The Devonian Morenci Shale, equivalent to the Percha Shale in New Mexico, is composed of an upper 100 feet of fissil clay shale and a lower 75 feet of carbonaceous black shale and intercalated black limestone. This is the Ready Pay member equivalent. (3) The Longfellow Limestone, Ordovician El Paso Limestone equivalent, is estimated at 400 feet thick with the lower 250 feet consisting of shaly limestone under 150 feet of dolomitic limestone. This sequence is underlain by thick bedded,probably non-reactive,Cambrian Bolsa Quartzite.

Au mineralization occurs sporadically in these limestone and shale units as both disseminated replacements and as breccia filling, quartz/calcite veins formed along high angle structures. The mineralized structures extend in length for about 3000 feet towards the NE and locally occur across a zone of approximately 500 feet in width. The southern extension of these mineralized structures is obscured by talus cover from Pinal Point. The quartzite of the footwall is apparently non-reactive and is relatively unaltered and unmineralized.

The mineralization containing coarse visible gold is associated with either the veining or pervasive silification of brecciated limestone and horses of carbonaceous shale near the face of the major fault. The observed coarse gold is a sort of mustard yellow which occurs as thin fracture fillings and is often found with a diameter of +2mm. Samples collected over areas where visible gold was previously found have, of course, yielded highly erratic results and range in reported value from 3.2 opt to .01 opt Au. Silver values are generally low for all samples, averaging less than 3ppm,while Zn and Pb values to several percent are reported with the higher gold values.

Elsewhere, disseminated Au mineralization is found as replacements in shaly limestones along high angle faults. As exposed on the surface, they are of narrow width and most appear to extend less than 10 feet on either side of the feeder structure. A different response by rock type to replacement is indicated by several scattered dump samples collected of black sooty mineralized limestone, probably from the Morenci Shale,the lower member of which has little surface exposure. These samples were found to contain Au values ranging from .068 opt to .001 opt and have a median value of .03 opt. Zn values ranged to 1% and Pb values ranged to .5% .

Target Description

Although the surface mineralization is interesting, it is none the less subeconomic even by tonnage standards alone. The mineralized structures are discontinuous and relatively narrow. The widest is perhaps 50 feet at the Willis Pit while the average is probably closer to 2 or 3 feet. The exploration potential of this prospect lies in the possibility of unexposed disseminated Au replacements existing at shallow depth.

One horizon which may be favorable to replacement is the lower 75 feet of the Morenci Shale. This carbonaceous shale and black limestone member is capped by clay shale of low permeability and lies at shallow depth under exposed geochemically anomalous mineralization. This unit should underlie the Willis Pit area at a depth of less than 200 feet with a northern dip toward the mineralized fault face of about 20 degrees or less. There are also flat lying exposures of the Upper Morenci clay shales in the northern part of the claim group which offer a shallow exploration target.

A second potentially favorable horizon for replacement is the lowermost shaly limestone beds of the Longfellow Limestone which lie just above the basal quartzite. These beds may, however, lie at a depth exceeding exploration limits in some areas of the prospect. They are estimated to begin 150 feet below the base of the Morenci Shale and continue for a additional 250 feet to the top of the quartzite.

Conclusions & Recommendations

The wide areal distribution of gold bearing mineralized structures and the existence at a shallow depth of lithologys favorable to replacement type mineralization, combine to merit an exploration program designed to test for the presence of a bulk minable, disseminated gold deposit. No subsurface exploration work within the last 50 years has tested the target horizons.

A shallow, low cost, reverse circulation rotary drilling project is recommended. The initial exploration work could be accomplished with a minimum of expenditures on the S. end of the property, near the Willis Pit since only minimal road building and site preparation costs would be incurred. A six hole project with a total footage of about 1800 feet should be adequate for this level of evaluation.

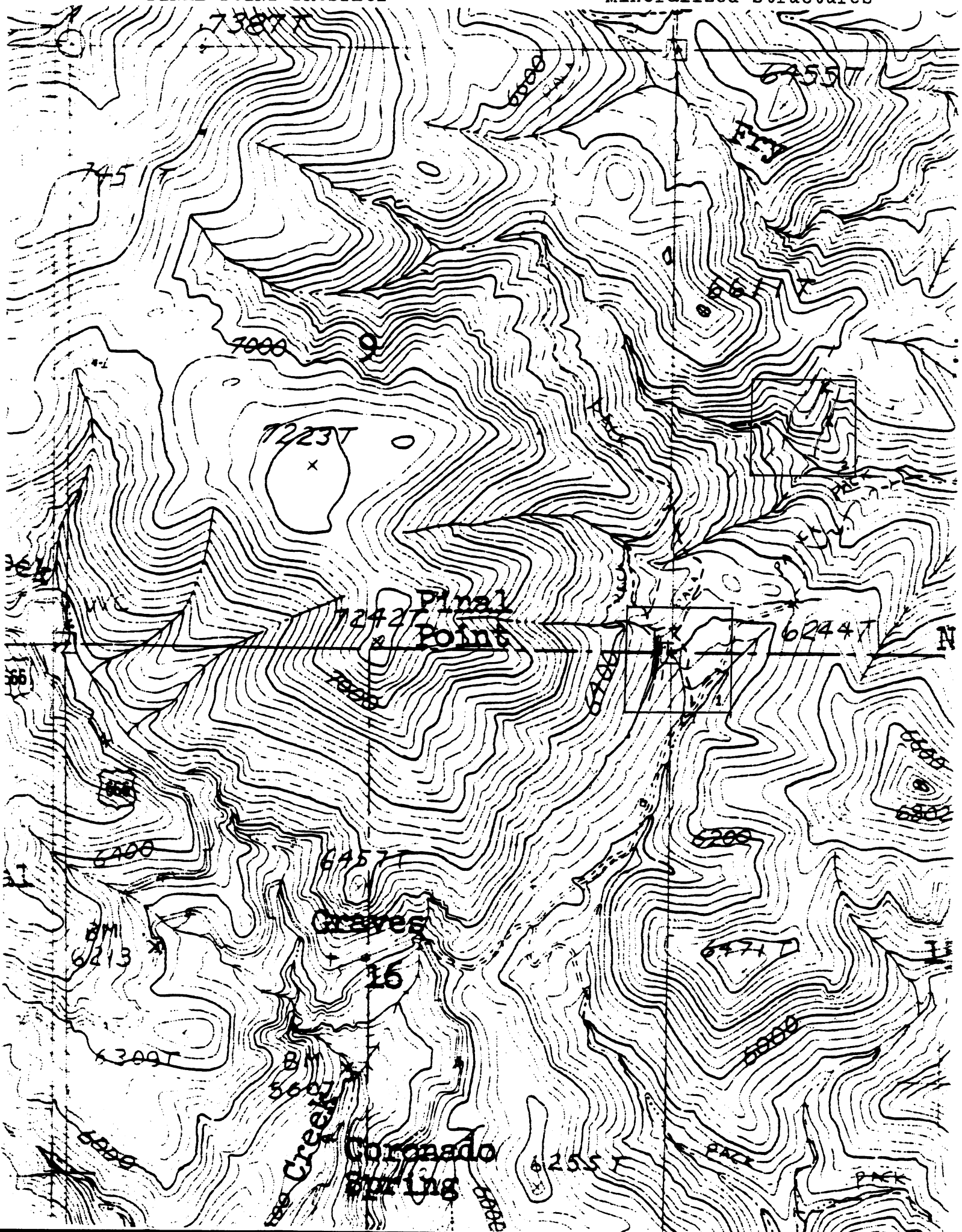
Harrison E Matson

Harrison E. Matson
Geologist

November 15,1985

PINAL POINT PROSPECT

Mineralized Structures



SKYLINE LABS, INC.
1775 W. Sahuaro Dr. • P.O. Box 50106
Tucson, Arizona 85703
(602) 622-4836

REPORT OF ANALYSIS

JOB NO. UGH 093
January 30, 1986
A1253 TO A1289

NICOR MINERAL VENTURES
Attn: Mr. Gary Parkison
2341 So. Friebus, Suite 12
Tucson, Arizona 85713

Analysis of 37 Rock Samples

ITEM	SAMPLE NO.	FIRE ASSAY Au* (ppm)	FIRE ASSAY Ag* (ppm)
1	A1253	.13	.2
2	A1254	75.00	.2
3	A1255	80.00	38.0
4	A1256	.45	1.1

DATE 1/3/86 **A 1256**

PROJECT: A2 Rem

LOCATION: Same as A 1255 area, but caved adit just above creek ~ 1000' SW of A 1255

DESCRIPTION: rep grab of MnOx?, permeated blk limestone, local white calcite vhlts, prob. dead, near fault

TEST FOR:

INITIAL:

A 1256

TEST FOR:

DATE 1/3/86 **A 1255**

PROJECT:
A2. Recon.

LOCATION:
Same as A1252 but ~ ½ mi NE along the faults - short adit - trench on S. side of hill - area of +4 or the smpl.

DESCRIPTION:
select samples of 'replacement' ore - silicified carbonate, local vuggy, some CuOx, up to 1% c.g. galena, some wolfenite, along ~ 1' wide fault zn

TEST FOR:

INITIAL:

A 1255

TEST FOR:

DATE 1/3/86 **A 1254**

PROJECT: AL Recu

LOCATION: Same as A 1253

DESCRIPTION: hi-grade sample from outside Willis mill building and Trailer, Small pile of "red rock"

TEST FOR:

INITIAL:

A 125

TEST FOR:

DATE Jan 3, 1986 **A 1253**

PROJECT:
AZ Recon

LOCATION:
Pinal Point Area - ~~[illegible]~~ Matson claims, north of Morenci pit - at cam cor. Secs 9, 10, 15, 16, T 3S R 29E Greenlee Cty

DESCRIPTION:
rep grab, chip over area ~ 15' x 10' at S. end of Willis pit. Mostly fractured white, tan quartzite w/ some FeOx clay fracts, brec. zones - stuff should run

TEST FOR:
Au Ag

INITIAL: GAP

A 1253

TEST FOR:

RESUME

Personal Data

Harrison E. Matson
P.O. Box 44171
Tucson, Arizona 85733
(602)~~882-9417~~
326 5377

Height: 5'10"
Weight: 170 lbs.
Health: Excellent
Birthdate: Sept. 13, 1949

Education

B.A. Geology, 1977, University of Arizona, Tucson, Arizona
Graduate Studies in Geology, 1983, University of Arizona

Professional Experience

June 1984 - Mar. 1985 — Meridian Minerals Company, Tucson, Arizona
Project Geologist. Conducted reconnaissance in Arizona for bulk minable gold deposits, supervised a drilling project to evaluate a disseminated gold occurrence in western Arizona, and identified another precious metal prospect suitable for acquisition and advanced exploration. The performance of these duties required the understanding and application of pertinent conceptual models as well as ability to interpret complex geologic conditions. Office closure ended employment.

Oct. 1983 - June 1984 — Westworld Inc., Tucson, Arizona
Geologist. Responsible for evaluation of precious metal prospects and properties submitted to, and held by Westworld Inc. Examinations were completed in western Arizona, southern Nevada, and California.

Aug. 1983 - Oct. 1983 — Atlas Minerals, Sparks, Nevada
Consulting Geologist. Services provided were the geologic mapping, surveying, and geochemical sampling of an epithermal vein system located in southwestern Utah.

Feb. 1983 - June 1983 — GRE Corporation, Kellogg, Idaho
Consulting Geologist. Part-time work on land status investigations and sales of mining properties.

July 1979 - Nov. 1982 — GRC Exploration Company, Tucson, Arizona
Exploration Geologist. Initial responsibilities at the project level entailed surface and underground geologic mapping and geochemical sampling, core logging and drill project supervision. Duties eventually included reconnaissance for precious and base metals in the western United States, and evaluation of mining property submittals. Job ended upon company closure.

Professional Memberships

Society of Economic Geologists (associate)
Geological Society of America

References

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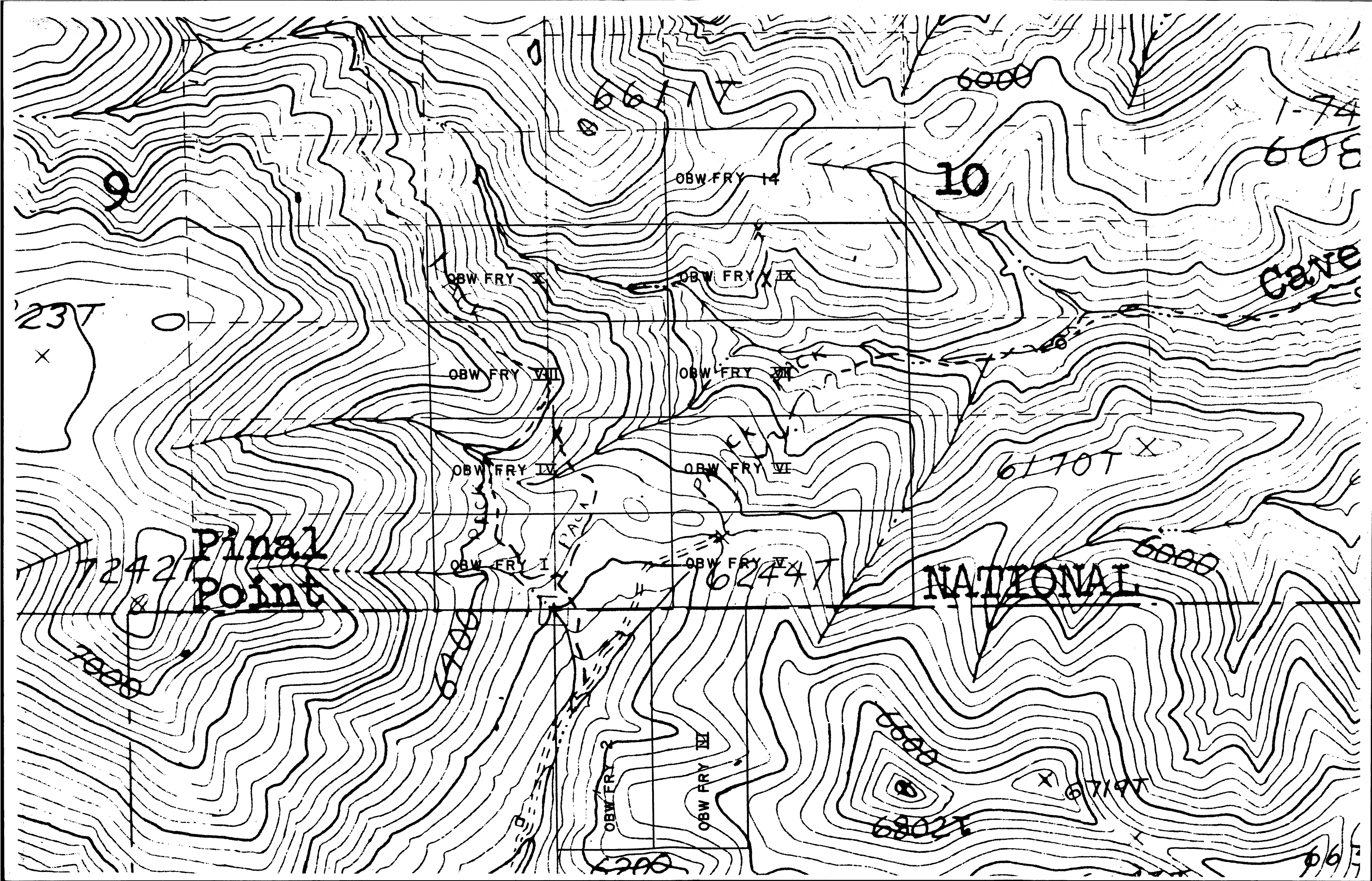
(406)586-8667

Annan Cook
942 Wanda Vista Place
Tucson, Arizona 85704
(602)297-4908



6611T
6000
1-74
608
9
10
OBW FRY 14
OBW FRY X
OBW FRY IX
Cave
23T
OBW FRY VIII
OBW FRY VII
OBW FRY IV
OBW FRY VI
6170T
Pinal
Point
7242T
OBW FRY I
OBW FRY V
6244T
NATIONAL
6000
7000
6400
OBW FRY 2
OBW FRY VI
6600
6719T
6802T
6200