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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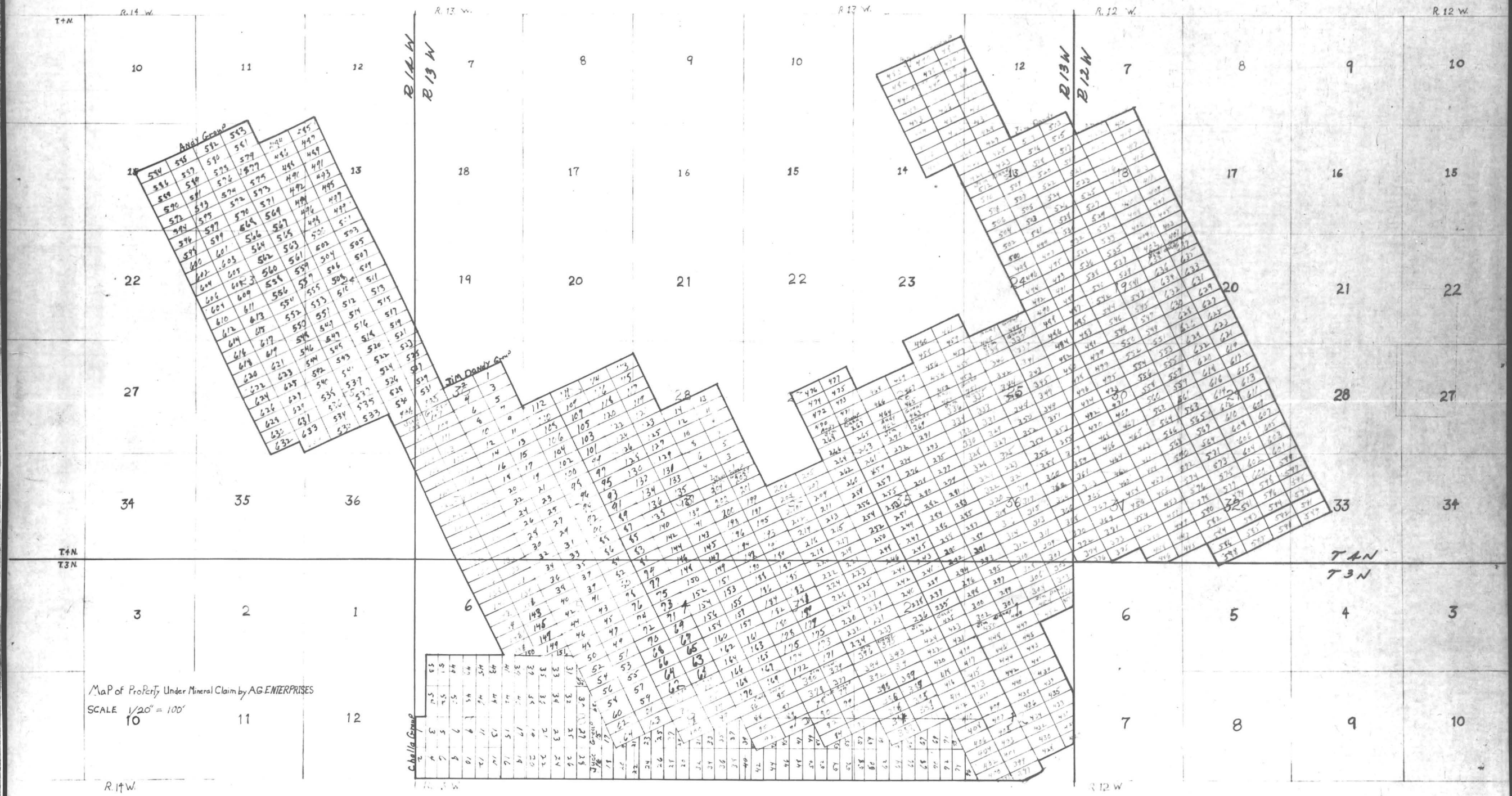
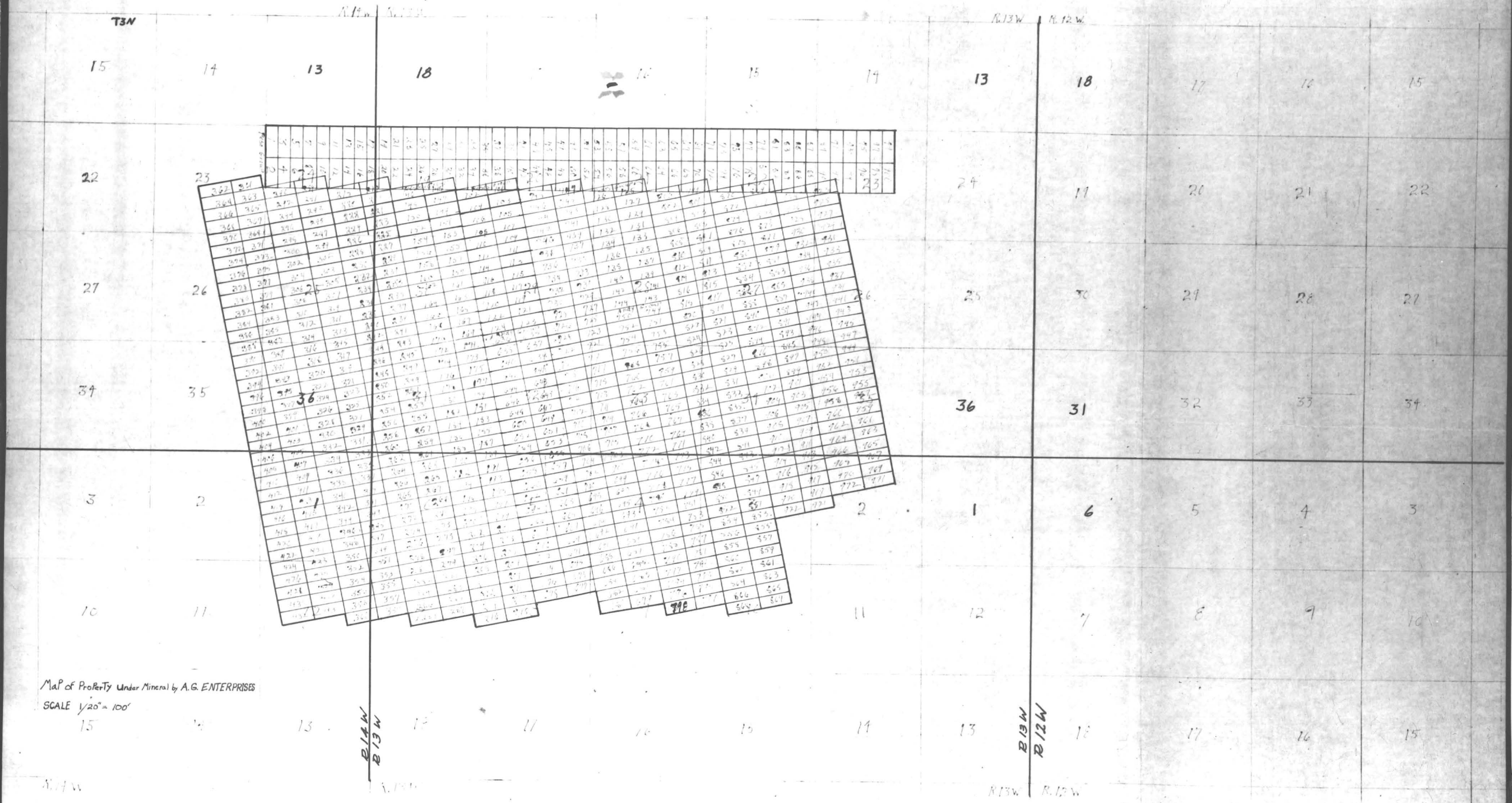


Map of Property Under Mineral Claim by AG ENTERPRISES

SCALE 1/20" = 100'

R. N. PENNEBAKER
POST OFFICE BOX 817
SCOTTSDALE, ARIZONA
85252



Map of Property Under Mineral by A.G. ENTERPRISES

SCALE 1/20" = 100'

E. N. PENNEBAKER
POST OFFICE BOX 817
SCOTTSDALE, ARIZONA
85252

MINING PROPERTY OF
A. G. ENTERPRISES
Yuma County, Arizona

July 12, 1968

E. N. PENNEBAKER
Consulting Geologist
SCOTTSDALE, ARIZONA

MINING PROPERTY

OF

A. G. ENTERPRISES

-- Submitted to National Lead Company
July 12, 1968

By E. N. Pennebaker

E. N. Pennebaker

(2)

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SUMMARY

The property of A. G. Enterprises consists of some 2,600 unpatented lode mining claims. Although nearby mines have yielded a modest production of gold in past years, the area of present interest has had little or no production.

Much of this area is covered by sand and gravel with no bedrock exposed. In areas of outcrops of sedimentary and metamorphic rocks, a very small sprinkling of oxidized copper minerals can be seen here and there, none of which constitutes a promising prospect. The granitic rocks are in places altered with the development of chlorite and epidote plus some scattered mineralization by pyrite and quartz, in a few localities accompanied by a little copper. Nowhere did they display the kind of alteration associated with the usual type of Arizona porphyry copper deposit.

It is recommended that National Lead Company decline to enter any exploration agreement involving A. G. Enterprises' claims at this time; however, exploration should be watched to see if the alluvium-covered ground south of the Harquahala mine might have some future promise, which is doubtful.

MINING PROPERTY OF
A. G. ENTERPRISES

INTRODUCTION

On June 11 and July 2, 1968, the writer made a reconnaissance inspection of the mining claims controlled by A. G. Enterprises of Safford, Arizona.

These claims are situate in the Ellsworth mining district, Yuma County, Arizona. Their northern boundary is a few miles south of the town of Salome, and they occupy parts of Townships 2, 3 and 4 North, Ranges 12, 13 and 14 West, Salt River Base and Meridian. Their southern border is about 17 miles south of Salome.

THE PROPERTY

The property is a large one and is represented to consist of some 2,600 unpatented lode mining claims (or about 52,000 acres). These claims are subdivided into three groups.

The central group is found just south of the old Harquahala mine, with a wing extending to the northwest toward the little settlement of Hope. It occupies most of an area about nine miles long (E-W) by roughly four miles in width and consists of some 638 claims.

The southern group occupies most of an area about 6 miles long (E-W) by about four miles wide and consists of some 972 claims.

The Southern and central groups are separated by an E-W strip one mile wide that is reserved to the State Highway Department, from which it will select a right-of-way for a new freeway now being constructed.

The southern and central groups are shown on property maps made available to the writer. These groups are tied to the public land system; this permits their being transferred onto the Hope quadrangle, which accompanies this report.

The third group is located north and west of the old Harquahala mine and consists of some 412 unpatented lode mining claims. This is known as the W. D. Roper property and is apparently a part of the package presented by A. G. Enterprises. The map made available to the writer showing this group is not to scale and the claims on it are not tied to the public land system; consequently it is represented on the map accompanying this report by the words "ROPER GROUND".

The maps of the three groups noted above show 2,022 mining claims. The writer does not know where the remainder of the 2,600 are.

In the present area of interest there are two old mining properties (and probably other ground of less importance) that are not included in A. G. Enterprises' package. These are situate on the north and consist of the Rio Del Monte claims and the Harquahala mining area (which includes the nearby Golden Eagle Mine). The A. G. Enterprises ground wraps around these properties and borders them on the west, south and east.

PAST PRODUCTION OF NEARBY MINES

From 1891 to 1929 the Harquahala and Golden Eagle mines produced 142,200 pounds of lead and 120,560 ounces of gold for a gross value (at early-day metal prices) of $2,510,698. Some of the gold ore is reported to have been very rich.

Production from the Rio Del Monte ground is not known, but gold ore was obtained from it.

A limited amount of copper has been produced from nearby claims of outside ownership.

Very little or no production has been gained from A. G. Enterprises' claims.

THE ACCOMPANYING MAP

As previously mentioned, a copy of the Hope quadrangle map accompanies this report. On it the claims controlled by A. G. Enterprises are enclosed within red lines, except the Roper group. The approximate position of the latter is shown by the designation "ROPER GROUND".

The mapped geology in the area of interest was enlarged and transferred from the GEOLOGIC MAP OF YUMA COUNTY, ARIZONA, prepared by the Arizona Bureau of Mines. Consequently the formational boundaries are only approximate due to difficulties in transferring the data.

The area covered by Quaternary sand and gravel on A. G. Enterprises ground is colored yellow. This amounts to a very substantial part of the claim holdings.

GEOLOGY

Six formations are found in the area of interest, as shown on the map accompanying this report and the legend affixed thereto.

The schists and metamorphic rocks are classified by the Bureau of Mines as Mesozoic in age, although they might readily be confused with rocks of Precambrian age.

The Paleozoic sediments (designated Ps on the map) consist of limestone, shale, sandstone and quartzite.

The Mesozoic schists (designated Msch on the map) are apparently derived from a variety of rocks, some of which originally may have been lava flows.

The Mesozoic sediments (designated Ms on the map) consist of shale, sandstone, conglomerate and limestone, locally metamorphased.

The Mesozoic granite and related intrusive rocks (designated as Mgr on the map) are coarse-to-medium-grained granite. They are commonly altered with the development of chlorite and epidote.

The geologic structure of the district is undoubtedly complex and cannot be deciphered in the course of a short visit.

MINERALIZATION

The writer reported on the nearby Rio Del Monte claims in 1961. Mineralization here is displayed by a robust group of quartz veins that in general strikes E-W across a generally north-trending zone. There are at least ten or twelve principal members of this group, plus numerous branches and spurs that in detail give a complex pattern of several elements. The widths of the veins vary for the most part from two to ten feet. The quartz filling of

the veins is of two types. One kind is white, dense and barren. The other is iron-stained and pitted, with iron oxide filling or coating many of the cavities. These pits were formerly (before oxidation) occupied by pyrite, chalcopyrite and galena. The better parts of the veins are those with the iron-stained, pitted quartz, which is of substantial amount but is discontinuous along the courses of the various veins. It appears that the average precious metal assay value was around $6.00 to $8.00 per ton, carried mostly by gold (valued at $20.00 per ounce), and this occurred in the oxidized zone. At depth, below water level (about 100 feet below surface) the appearance of copper and lead sulphides contributes to the value of the veins, and, therefore, some exploration at depth might be warranted in the Rio Del Monte area. However, ore shoots would be erratic in distribution with a relatively high cost for their development.

The ore deposits of the Harquahala mine were localized within a zone of faulting that strikes northerly through limestone, shale, quartzite and basal granite. The ore shoots occurred between two shear zones that dipped toward each other to form a V-shaped structure. The gold ore was oxidized and was found above 170 level. Sulphide ore was encountered in lower levels and carried copper, silver and gold.

The Golden Eagle mine is about a mile northeast of the Harquahala. The main vein strikes northerly through quartzite and dips to the southeast. It produced iron-rich oxidized gold ore above the water level (300-foot level), below which pyrite, chalcopyrite and galena are reported to occur.

The above constitute the better-mineralized areas, as now known, and these are outside of, but nearby, the claims controlled by A. G. Enterprises. This productive zone taken as a unit strikes northerly.

A small copper-bearing zone is reported just west of A. G. Enterprises claims. This is said to have supported a small operation for a number of years.

On the A. G. Enterprises claims, very small showings of oxidized copper minerals are widespread in the sedimentary and metamorphic rocks and a few small deposits are exposed here and there, but nowhere did the writer see indications of a worthwhile prospect. Alteration of the granitic rocks in places developed chlorite and epidote with very scattered mineralization by pyrite and quartz, in a few localities accompanied by a little copper. Nowhere did it resemble the kind of alteration associated with the usual type of Arizona porphyry copper deposit.

COVERED AREAS

Inspection of the accompanying map shows that about two-thirds of the area controlled by A G. Enterprises is covered by Quaternary sand and gravel that mask the bedrock. The amount of mineralization underneath this cover is speculative, but there is no reason to believe that it is any better than the mineralization observed in exposed areas. Present information indicates but does not prove that the major productive zone dies out before extending southerly into the covered area on A. G Enterprises ground.

CURRENT EXPLORATION

At present, Colorado Fuel and Iron Corporation is drilling on the old Harquahala property. It is rumored that a number of holes have been drilled to a depth of about 500 feet with indifferent results and that some of these holes are now to be deepened to 1,000 feet.

No work is apparently going on at the Rio Del Monte property.

A. G. Enterprises has recently completed a self-potential geophysical survey over parts of its holdings where bedrock is covered by sand and gravel. Several anomalies are reported, but to the writer these appear to be of questionable value because of the saline character of desert soils and groundwater.

A. G. Enterprises states that it will soon drill a number of exploratory holes on its ground to be financed by a Government loan.

CONCLUSIONS

It appears to the writer that any exploration on Rio Del Monte, Golden Eagle and Harquahala ground, which are outside of the area of present interest, must be done with the hope that the oxidized ore bodies will change at depth to gold-bearing sulphide deposits and that these will expand in size laterally to give substantial tonnages. The first seems to be a reasonable expectation, but there appears to be no geological reason to expect the latter. On the contrary, the ore deposits may constrict in the sulphide zone. The trend of the Rio Del Monte, Harquahala and Golden Eagle productive ground taken as a unit is northerly but does not appear to extend southerly into A G. Enterprises' property, as noted above. However, results of Colorado Fuel and Iron and A. G. Enterprises drilling should be watched to see if this conclusion should be modified.

Exploration in A. G. Enterprises ground appears less promising than in the known productive zone. At best only a limited amount of this vast acreage is worth holding, and at present it is doubtful if this is worth exploring. Extended and expensive geophysical work over the covered areas offers little promise.

It is recommended that National Lead Company decline to enter any exploration agreement involving A. G. Enterprises' claims at this time; however, future exploration should be watched to see if the alluvium-covered ground south of the Harquahala might have some future promise, which is doubtful.

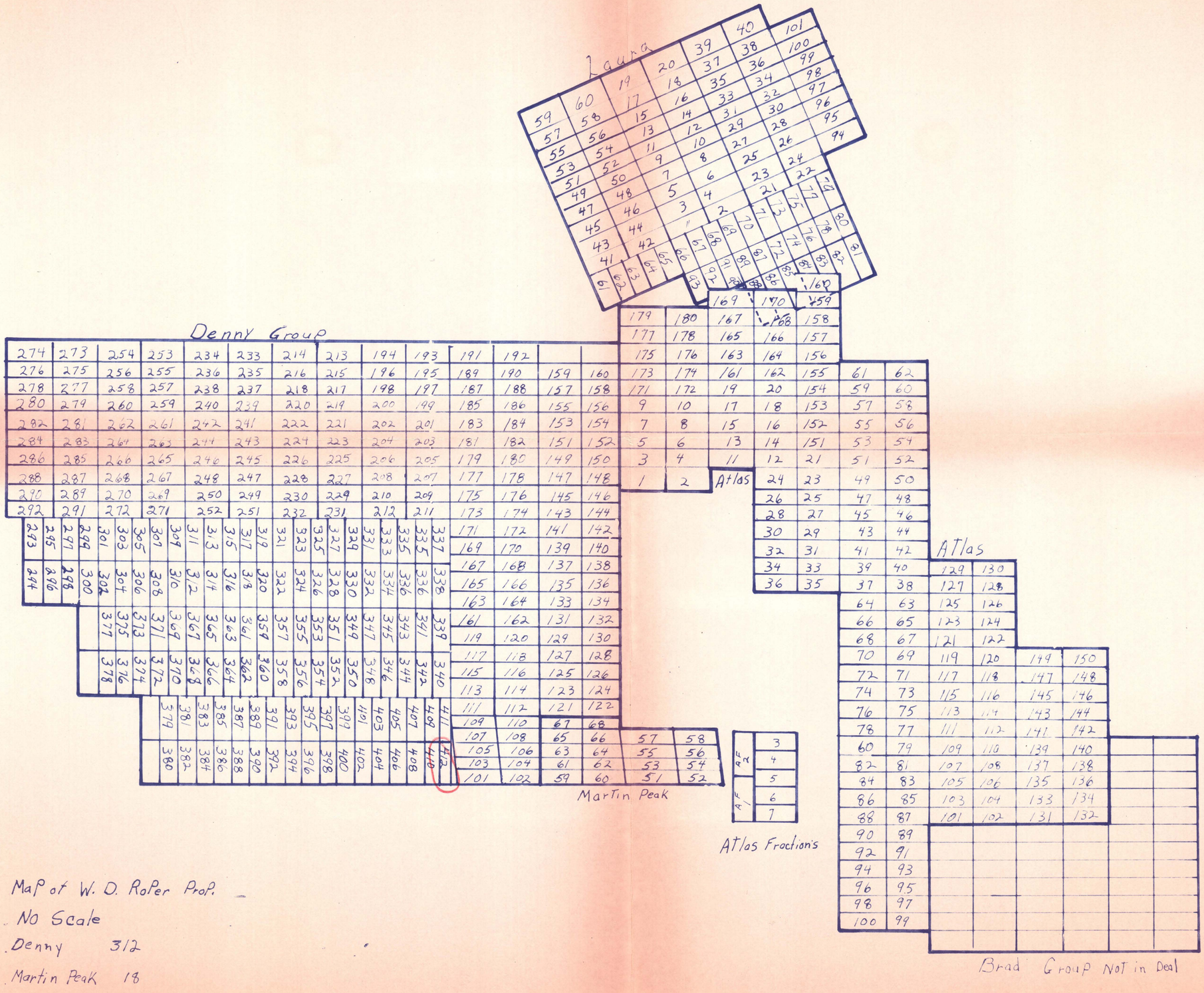
E. N. Pennebaker

E. N. Pennebaker

Scottsdale, Arizona
July 12, 1968

LEGEND

Qal	Quaternary	Sand, silt and gravel
Qb	Quaternary	Basalt
Mgr	Mesozoic	Granite, etc.
Ms	Mesozoic	Sediments
Msch	Mesozoic	Schist
Ps	Paleozoic	Sediments
	A. G. Enterprise Property Line	
	Most Productive Zone of Gold Ore	



Map of W. D. Roper Prop.

No Scale

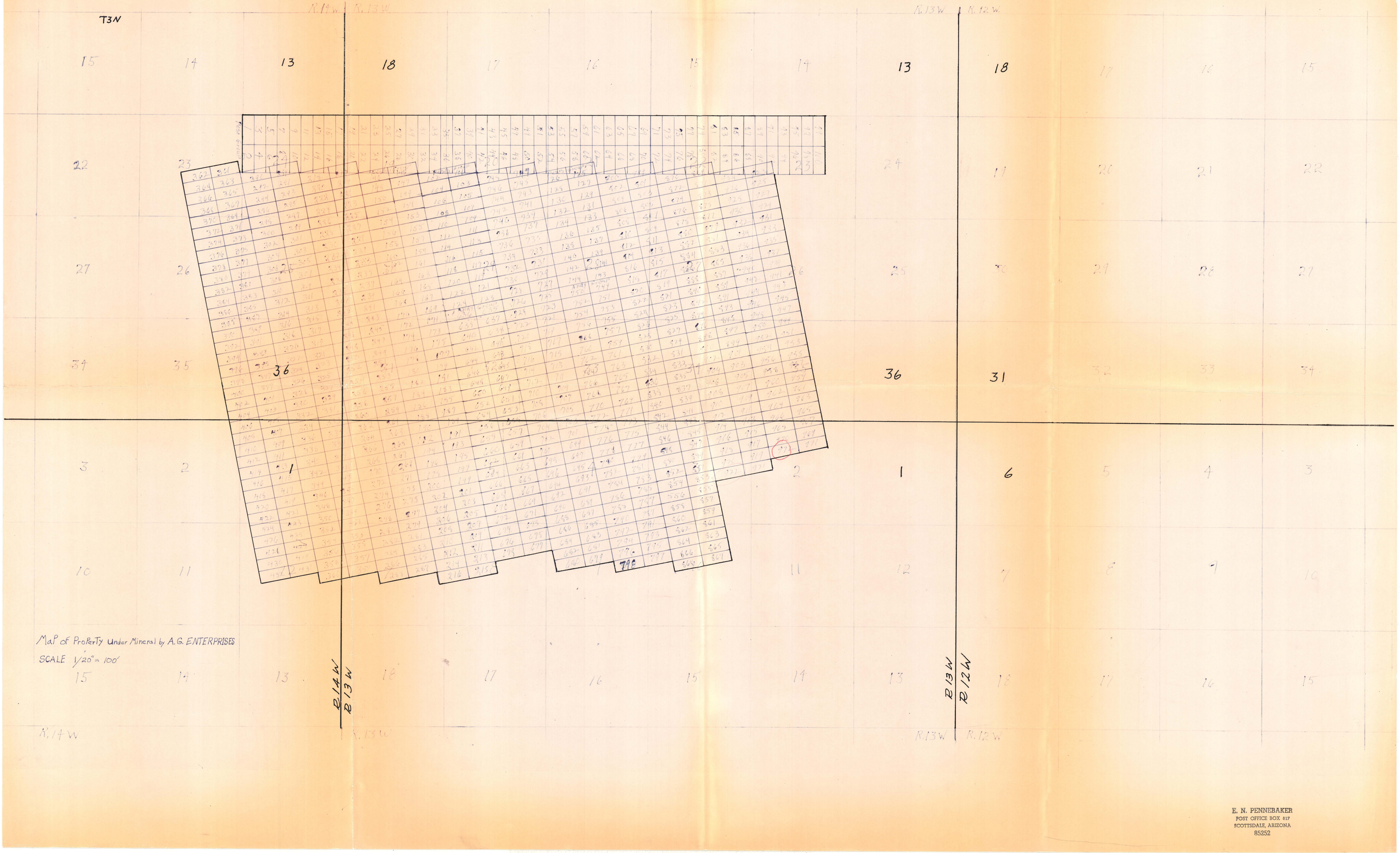
Denny 312

Martin Peak 18

Atlas 180

Laura 101

Total 611



Map of Property Under Mineral by A.G. ENTERPRISES

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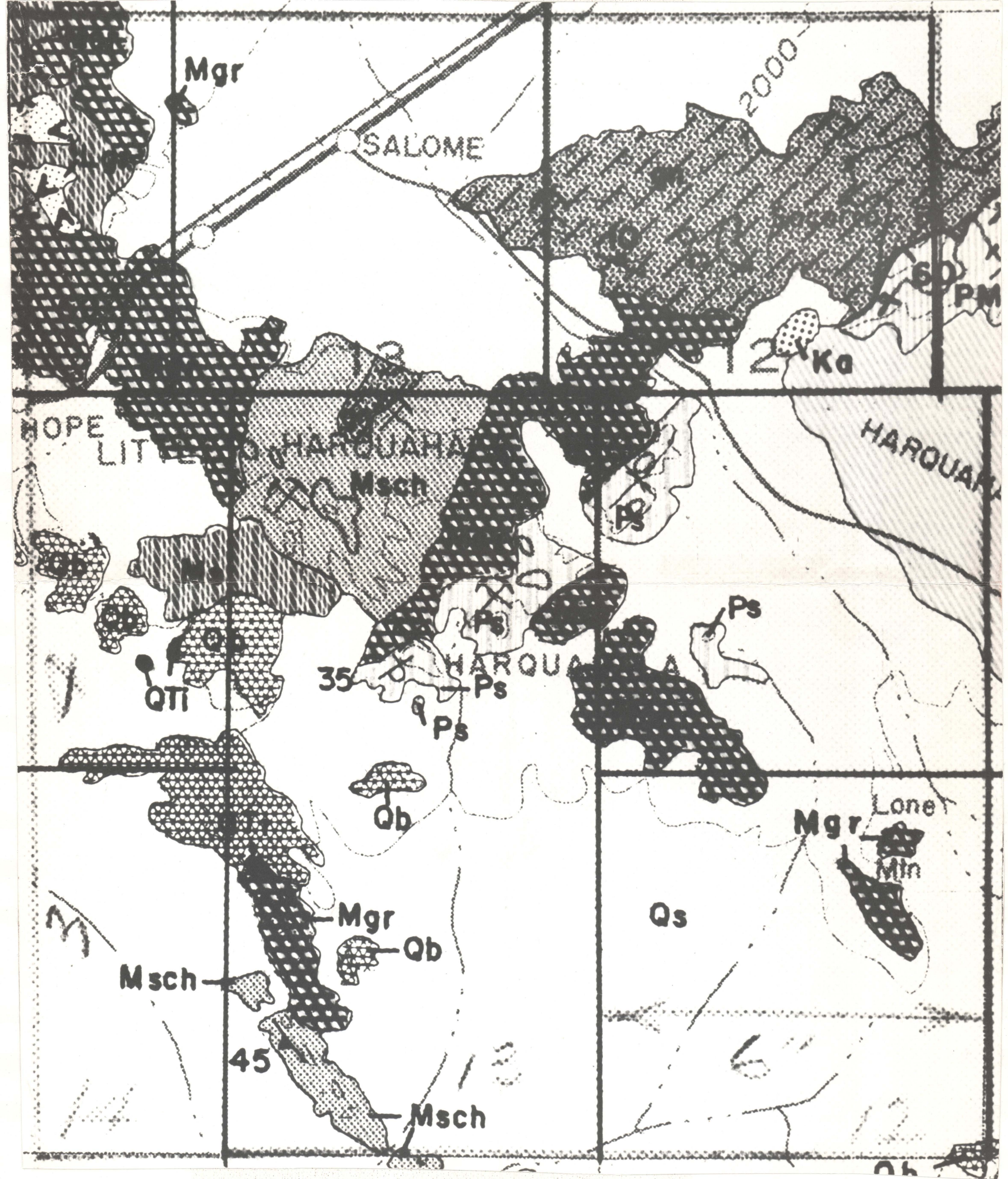
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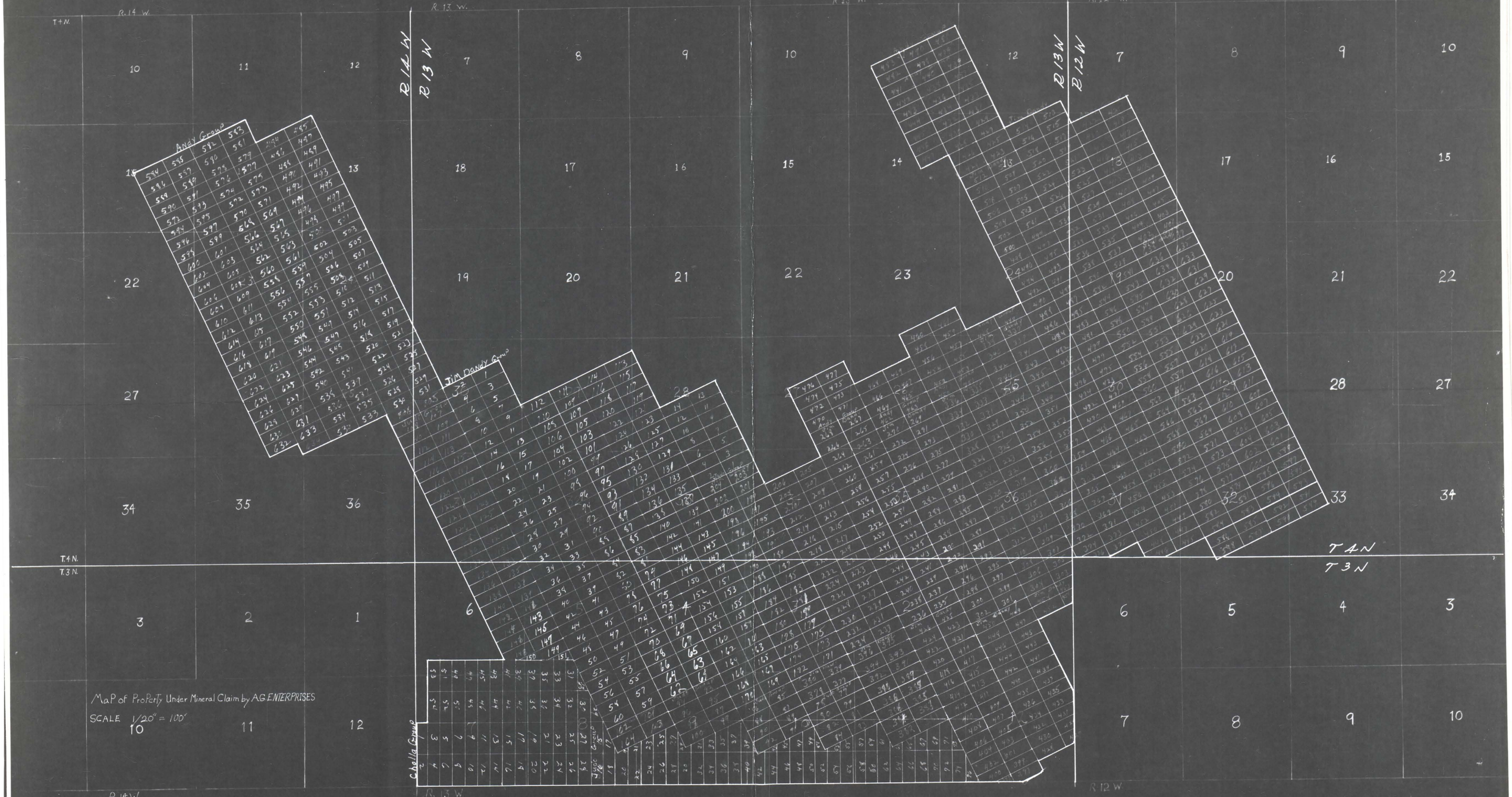

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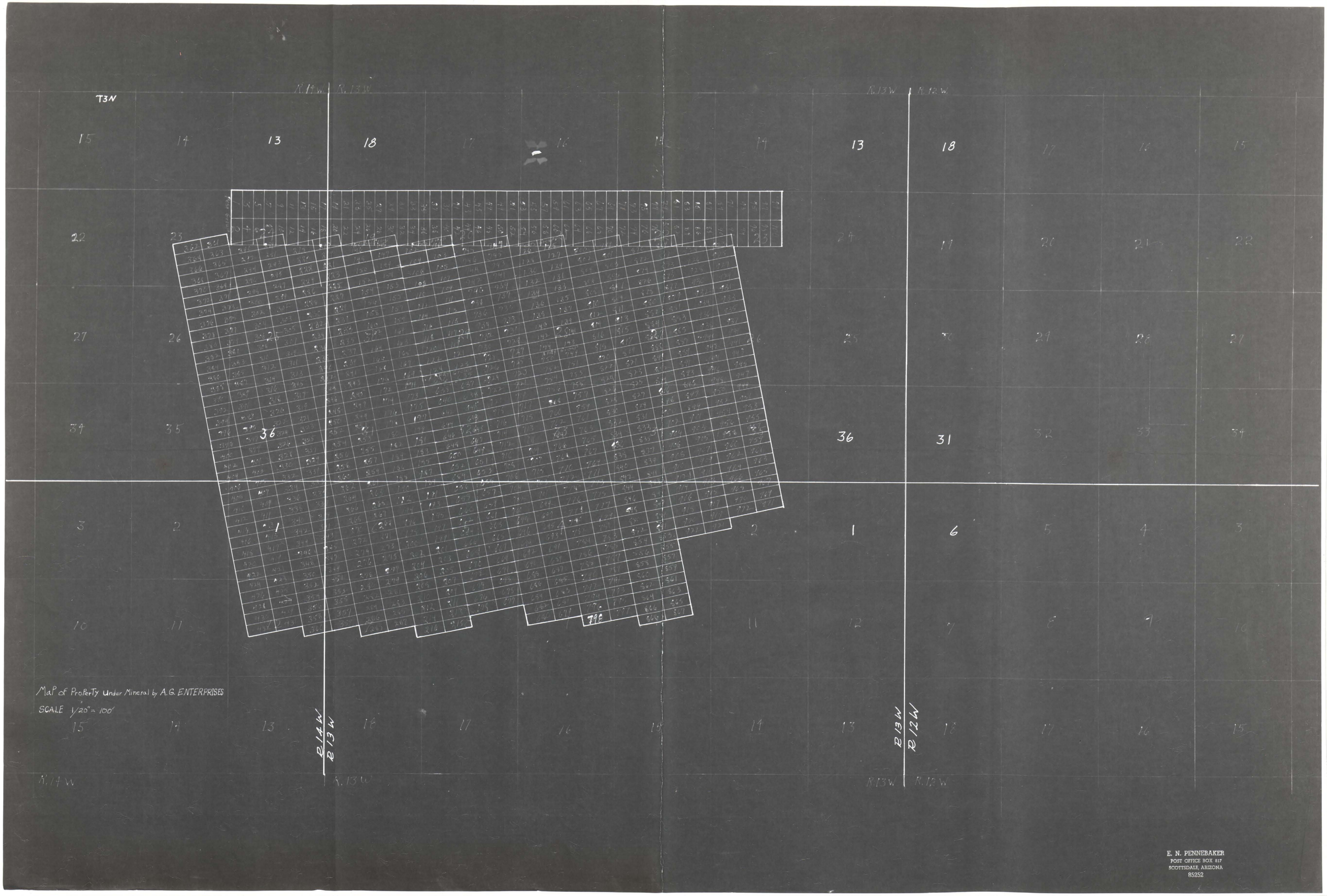
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R.14W.
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R.13W.
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R13W
R12W
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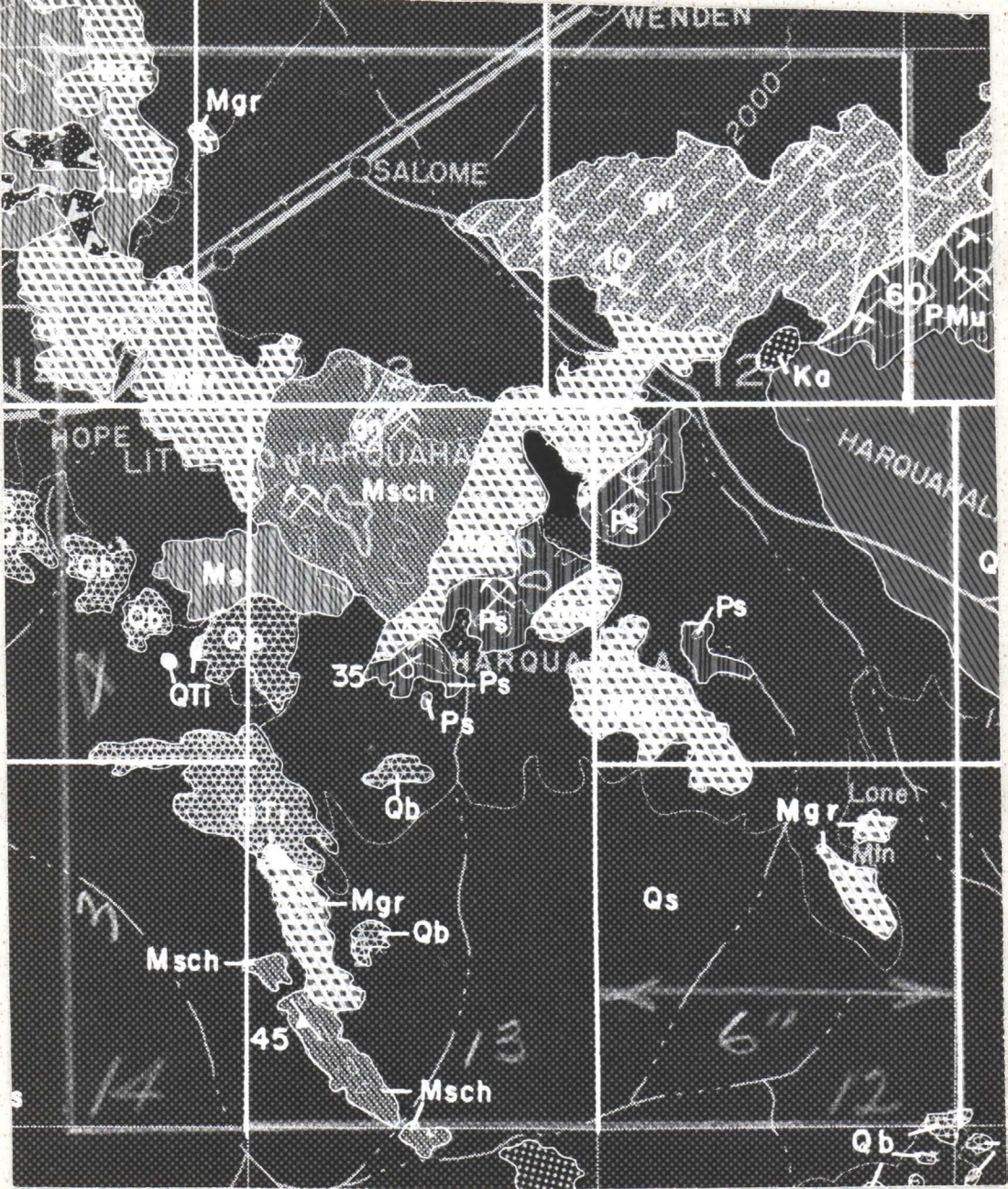
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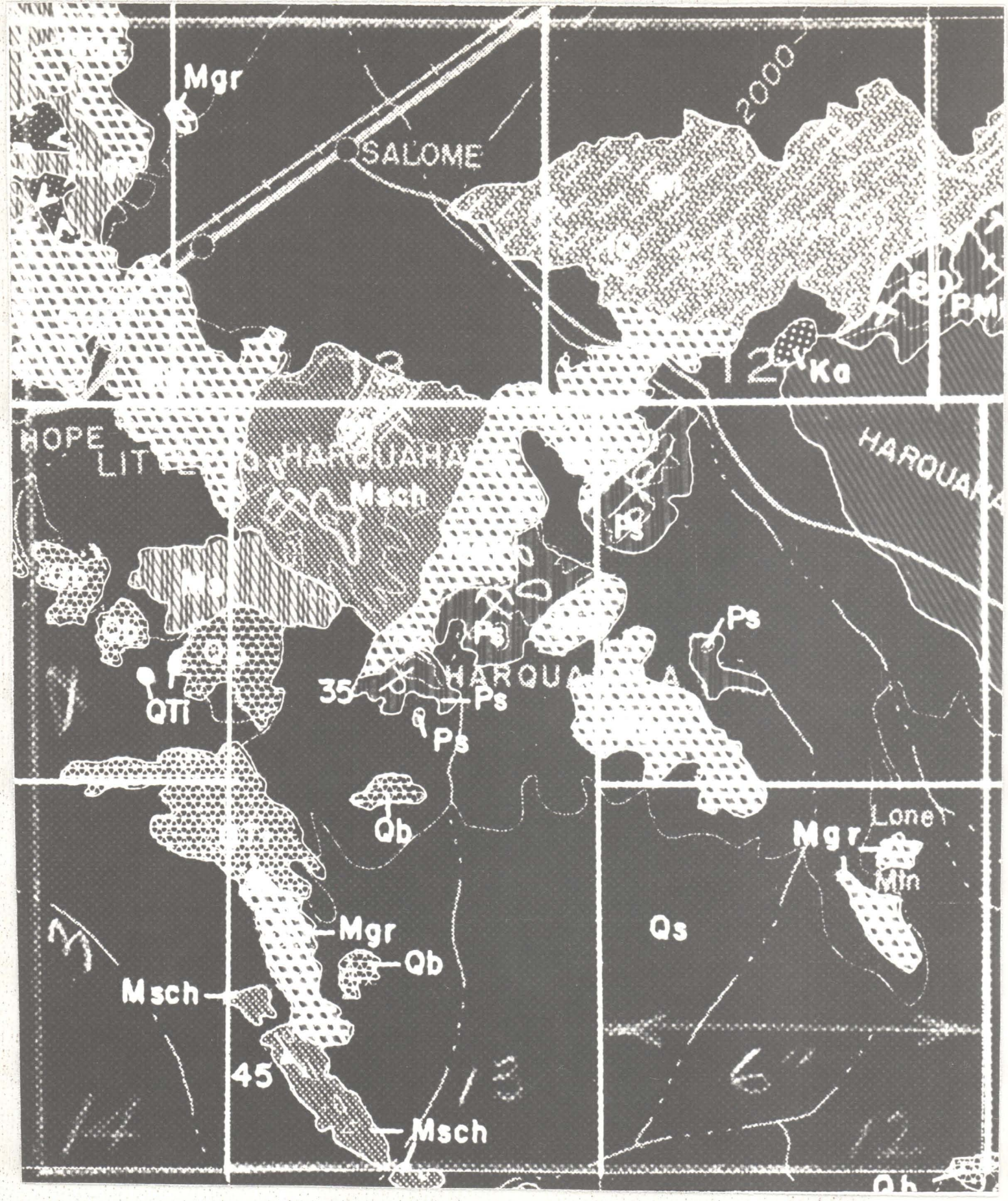
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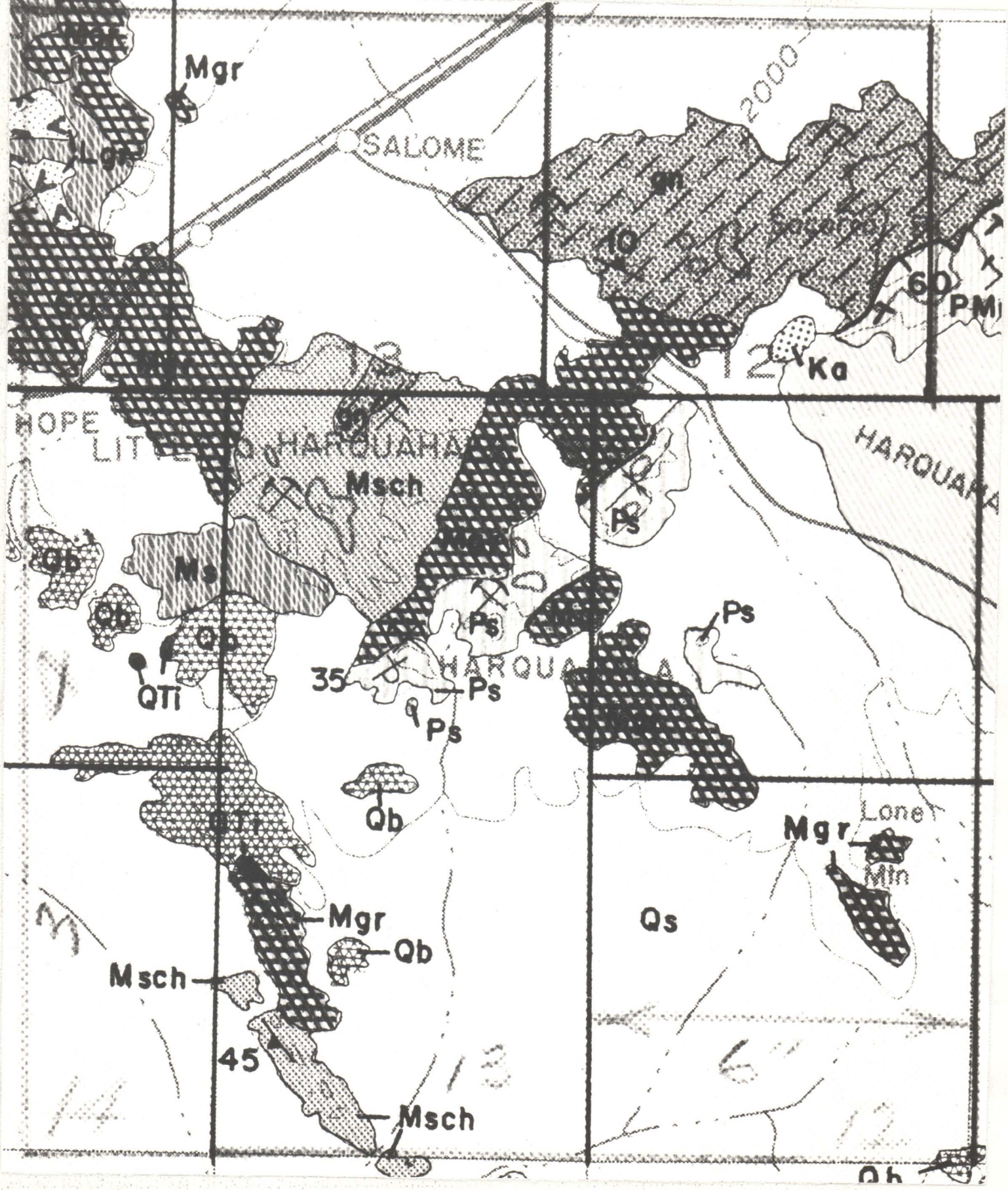
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Msch
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DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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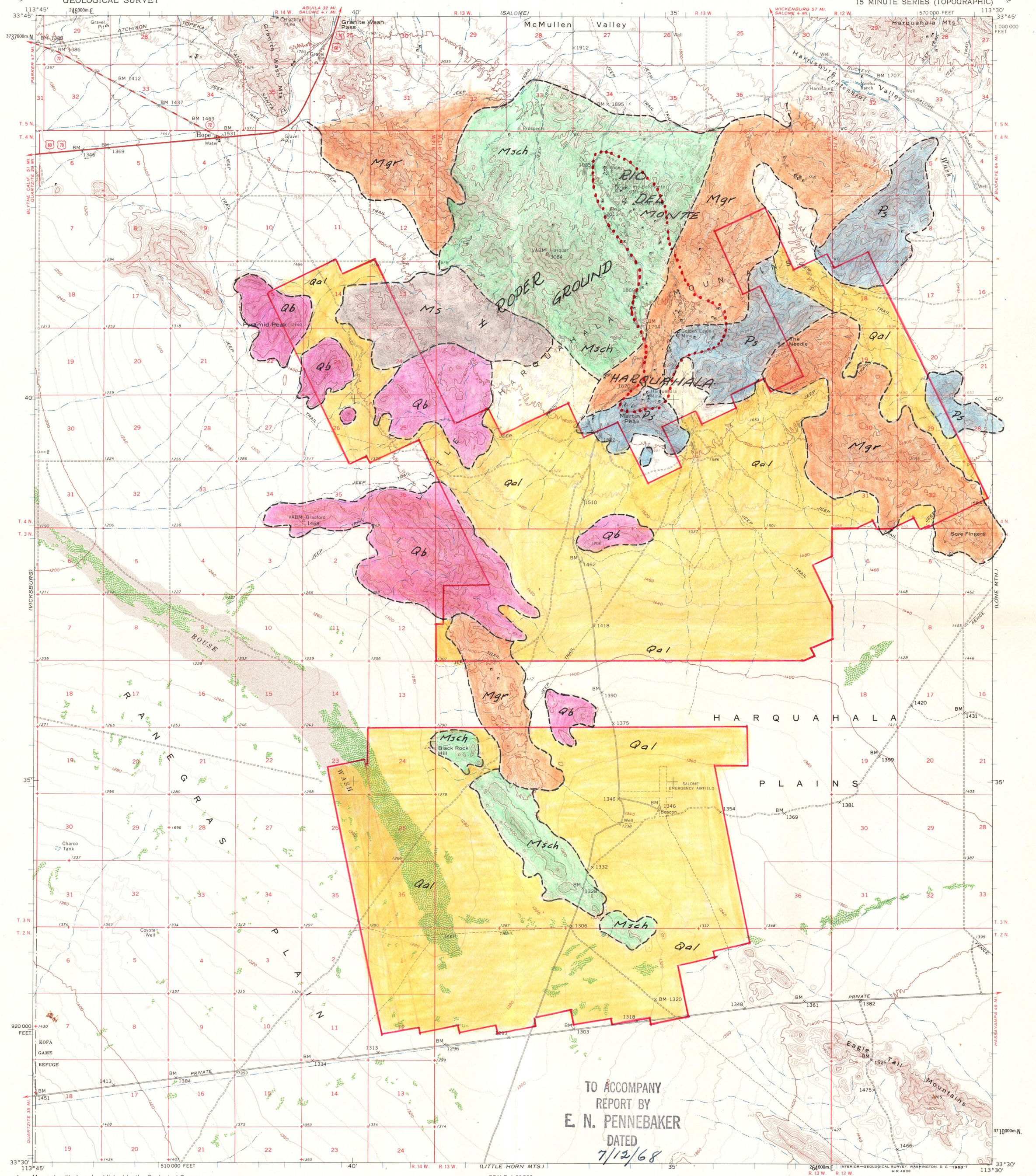

TO ACCOMPANY
REPORT BY
E. N. PENNEBAKER
DATED
7/12/68

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 and planetable surveys 1961

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

Where omitted, land lines have not been established

TRUE NORTH
MAGNETIC NORTH
14½°
APPROXIMATE MEAN DECLINATION, 1961

SCALE 1:62 500

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

ARIZONA
QUADRANGLE LOCATION

ROAD CLASSIFICATION

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

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

HOPE, ARIZ.
N3330—W11330/15

1961

E.N.P

LEGEND

Qal	Quaternary	Sand, silt and gravel
Qb	Quaternary	Basalt
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