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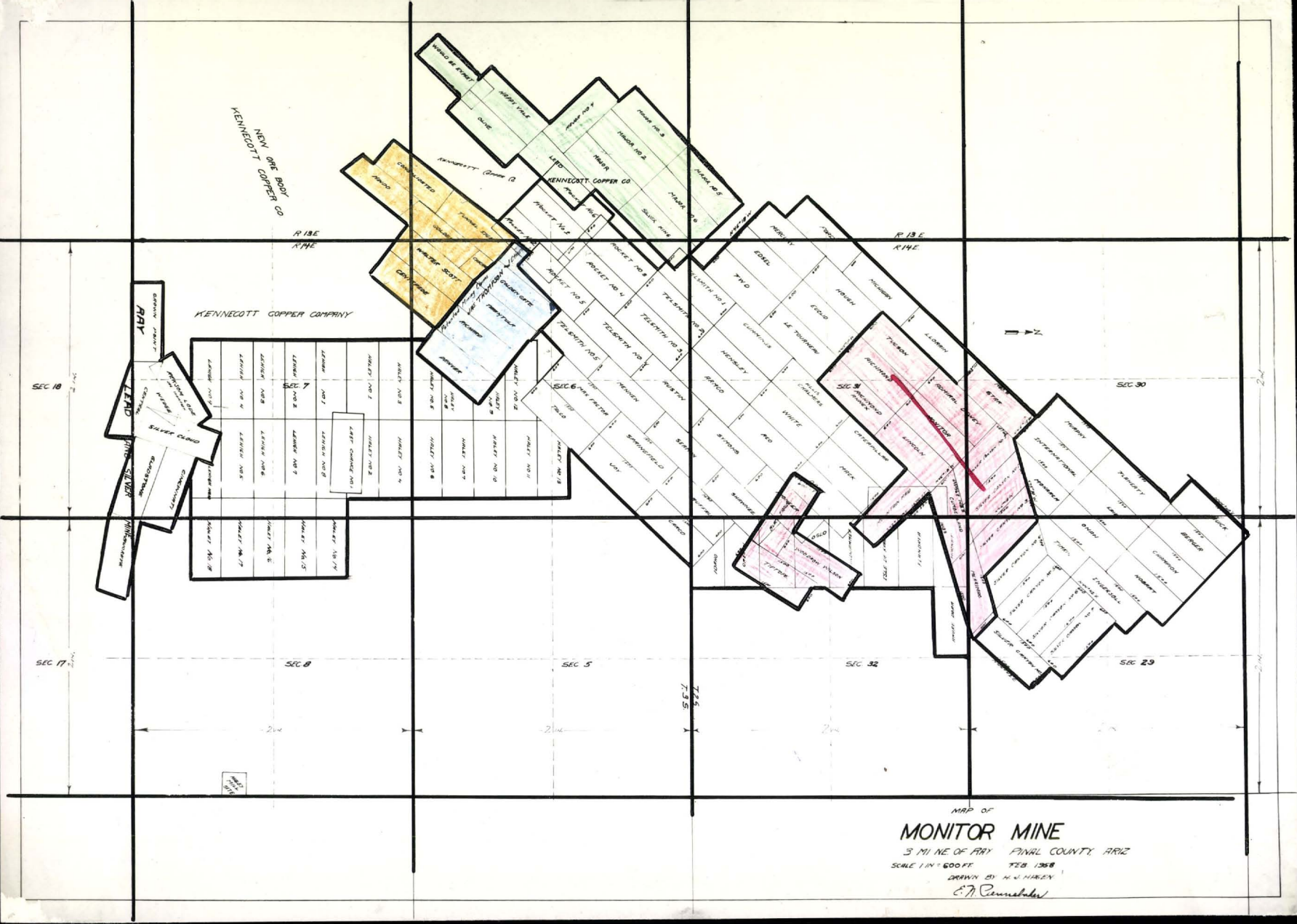
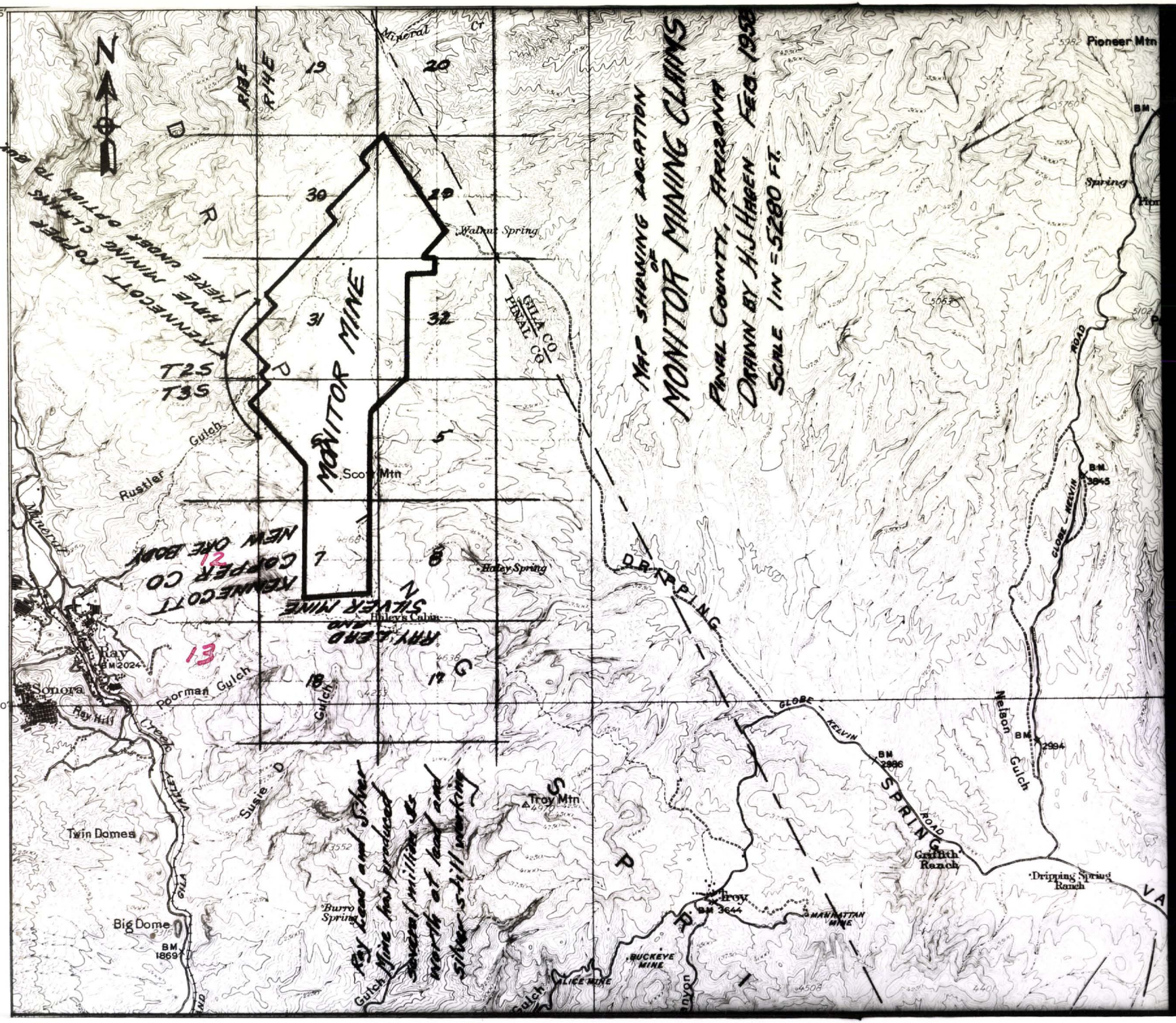
From-To	Material	Grade Range % Cu
0-80	Gravel	
80-130	schist	0.4 - 0.6%
130-250	schist	over 5.0% 50 ft was +8%
250-590	schist	2.0%
590-1000	schist	0.3 - 0.6%
Fault at 1000 feet		
1000-1887	diabase	0.6 - 1.92%


NEW ORE BODY
KENNECOTT COPPER CO
KENNECOTT COPPER COMPANY
KENNECOTT COPPER CO
R 13 E
R 14 E
SEC 18
SEC 17
SEC 7
SEC 8
SEC 6
SEC 5
SEC 31
SEC 32
SEC 30
SEC 29
T 2 S
T 3 S
RAY
LEAD
SILVER CLOUD
MAP OF
MONITOR MINE
3 MI NE OF RAY PINAL COUNTY, ARIZ
SCALE 1 IN = 600 FT. FEB. 1958
DRAWN BY H. J. HAGEN
E. N. Pennebaker


MAP SHOWING LOCATION OF
MONITOR MINING CLAIMS
PINAL COUNTY, ARIZONA
DRAWN BY H.J. HAGEN FEB. 1958
SCALE 1 IN = 5280 FT.
MONITOR MINE
KENNECOTT COPPER CO
NEW ORE BODY
RAY LEAD AND SILVER MINE
KENNECOTT COPPER HAVE MINING CLAIMS HERE UNDER OPTION TO BUY
Ray Lead and Silver Mine has produced several million lbs worth of lead and silver still working
N
R13E
R14E
T2S
T3S
19
20
30
29
31
32
5
7
8
18
17
12
13
Mineral Cr
Walnut Spring
GILA CO
PINAL CO
Scott Mtn
Haley Spring
Haley's Cabin
Rustler Gulch
Poorman Gulch
Ray Hill
Ray
BM 2024
Sonora
Creek
Susie D
Twin Domes
Big Dome
BM 1869
Burro Spring
Troy Mtn
Troy
BM 3644
MANHATTAN MINE
BUCKEYE MINE
ALICE MINE
DRIPPING SPRING
GLOBE - KELVIN ROAD
BM 2986
BM 2994
Nelson Gulch
Griffith Ranch
Dripping Spring Ranch
Pioneer Mtn
BM 3845
Spring
33°15'
10'

F-5.445

MIAMI COPPER COMPANY

MIAMI, ARIZONA

SKETCH NO.

SCALE 1" = 12 miles

DATE

DRAWN BY

CHECKED BY

RECEIVED
SEP 3 - 1958
E. N. PENNEBAKER

THE MONITOR COPPER MINE

Location: The Monitor group is located in sections 29,30,31 and 32, T2S, R14E, Dripping Springs mining district, Gila County, Ariz.

Refer to the Ray quadrangle for location, and the maps and report by J.E. Fowells made in May, 1949, for geology. The Monitor is 3½ airline miles northeast of Ray Arizona.

Size and Ownership: The group consists of seventeen unpatented lode claims which are owned by Mr. H.J. Hagen of Globe, Arizona. The guide was the owner, Mr. Hagen.

Accessibility: The property is accessible by dirt road from Globe, Arizona by way of the Madera Peak road and Government Springs Ranch.

Geology: Ore minerals are oxide copper minerals in black argillite and shale of the upper Dripping Springs quartzite.

The ore occurs near contacts of quartz porphyry and upper Dripping Springs quartzite, in the quartzite. The rock shows no alteration except close to the contacts. The ore consists of thin coatings in the bedding and fractures in the argillite. Most of the ore contains some silver.

Rocks exposed in the area are quartz porphyry, diabase, Pinal schist?? (may be schistose Pioneer shale), Pioneer shale, Barns conglomerate, Dripping Springs quartzite, and Mescal limestone. The copper has been selectively deposited in the black argillite of the upper Dripping Springs quartzite.

Development: There are three open cuts on the property from which ore was shipped. There are also several small pits and some short adits.

Some drilling has been done since the property was visited by Mr. Fowells. Kennecott Copper Corporation drilled two holes on the property, the logs of which were furnished by Mr. Hagen and are in our files. The first hole was drilled on the Admiral Dewey claim 638 feet N77°E of the west corner. Elevation of the collar was 4050 feet. This hole was started May 24, 1951, and completed June 13, 1951, at 407 feet. The following is a brief log of the first hole.

Depth	%Cu	Geology
0-33'	0.03	Oxidized grey green diabase.
33-99'	0.02	Diabase, more sulfide in appearance.
99-117'	0.07	Fault zone, some calcite--105-111'.
117-137'	0.03	Diabase
137-143'	0.02	Fault zone-red limey core.
143-177'	0.02	Diabase
177-197'	0.01	176-195' bull quartz.
197-224'	0.02	Diabase

SKETCH NO.

Depth	%Cu	Geology
224-262'	0.02	Crystalin limestone
262-270'	0.05	Black shale
270-349'	0.01	Black shale
349-407'	0.01	Gray quartzite

The second Kennecott hole is on the Monitor claim 260 feet N52°E of the west corner. Elevation of collar is 4000 feet. The hole was started June 15, 1951, and finished July 10, 1951, at 368 feet depth.

Depth	%Cu	Geology
0-11	--	----
11-132	0.03	Green gray diabase
132-139	0.03	135-137 Porphyry
139-173	0.03	Diabase
173-200	0.01	Hard banded cherty limestone
200-224	0.02	Diabase
224-231	0.02	229-231 soft fault zone
231-260	0.01	Limestone with chert bandings
260-322	0.01	Gray banded quartzite
322-340	0.02	Quartzite with some pyrite
340-368	0.04	Pioneer shale

Mr. Hagen had some holes drilled to test near surface ores. Location is according to a copy of a sketch by Mr. Hagen. The assay data is from assay certificates furnished by Mr. Hagen.

Depth	Assay	
	%Cu	Ag oz/ton
Hole 1		
0-30	3.90	20.93
30-70	0.40	2.00 water at 70 feet
Hole 2		
0-20	0.35	0.60
20-40	0.03	0.20
Hole 3		
0-20	0.25	0.25
20-60	0.06	trace
Hole 4		
0-8	2.20	2.60
Hole 5		
0-10	1.04	1.00
10-30	0.40	0.15
30-70	0.09	trace
70-90	0.05	0.30
Hole 6		
0-20	0.25	0.30
20-30	0.50	0.80
30-50	0.70	1.60 water at 50 feet

Depth	Assay %Cu	Assay Ag oz/ton	
Hole 7			
0-10	0.60	1.60	
10-20	0.20	0.60	
20-40	nil	0.20	
40-50	0.60	1.60	water at 50 feet
Hole 8			
0-10	0.40	0.10	
10-50	0.14	trace-water at 50 feet	
Hole 9			
0-70	0.06	trace- mud at 70 feet	
Hole 10			
0-50	nil	0.44	water at 50 feet
Hole 11			
0-30	nil	nil	water at 30 feet
Hole 12			
0-20	nil	nil	
20-30	0.80	0.60	
30-40	0.40	nil	
40-100	nil	nil	
Hole 13			
0-60	0.03	0.01	
Hole 14			
0-20	0.05	trace	
20-50	2.02	4.51	
50-70	0.13	0.20	
70-80	0.43	0.54	
Hole 15			
0-60	0.08	0.13	
Hole 16			
0-20	0.24	1.20	
20-30	0.76	1.04	
30-90	0.12	0.10	
Hole 17			
30-90	0.01	nil	
Hole 18			
0-30	0.09	0.05	
30-50	trace	trace	
Hole 19			
0-20	0.39	1.22	
20-40	0.07	0.18	
40-50	0.65	1.24	
50-60	0.29	0.42	
Hole 21	Merrimac Claim		
30	1.50	1.52	
40	0.90	1.28	
60	0.20	0.30	
70	0.11	0.24	

Depth	Assay %Cu	Ag oz/ton
Hole 22 Merrimac		
20	0.16	0.28
30	0.65	0.50
50	0.85	0.48
70	0.90	1.40
Hole 23 Merrimac		
50-60	0.03	trace
Hole 24 Merrimac		
40-50	0.03	0.08
70-80	1.14	4.08
Hole 26 Merrimac		
10	0.17	0.56
20	0.03	0.14
30	0.03	0.08
40	0.22	0.36
Hole 27 Merrimac 2nd bench above tunnel.		
10	0.22	0.24
20	0.54	0.60
30	0.26	0.26
40	0.80	1.28
50	1.70	5.94
Hole 29 Near No.2 hole in pit.		
10	1.32	4.08
20	0.85	3.24
30	0.39	1.26

A surface sample was taken across a trend of mineralization from an area on the Merrimac claim. A brief log follows:

Sample No.	Interval	%Cu Ox	%OxCu	Oz Ag/ton
P-1262	30 feet	0.68	0.53	0.86
P-1263	36 feet	1.73	1.29	1.82
P-1264	18 feet	1.70	1.51	1.82
	30 feet	gap no assay		
P-1265	10 feet	1.84	1.69	0.62
	75 feet	gap no assay		
P-1266B	6 feet	2.24	1.99	2.24

105 feet of 205 feet of 1.45% Cu, 1.13% OxCu, 1.37 oz Ag/ton.

Production: From October 26, 1944 to September 14, 1956, 5,164.58 dry short tons of ore have been shipped to smelters at Miami, Hayden and Douglas, Arizona. This ore averages 1.89% Copper, 4.61 ounces silver per ton, 60.8% silica, and 14.1% alumina. Operations ceased because the smelters refuse to accept ore with such a high alumina content. This production information was obtained from smelter settlement sheets furnished by Mr. Hagen. A compilation of these was made and is in our files.

Summary: Ore grade copper-silver bearing argillite occurs on this property. Refusal of the smelter to handle the ore precludes shipping directly to a smelter. There is poor chance of developing sufficient tonnage to pay for even a small plant for treating the ore. The weak alteration and selective mineralization on this property preclude development of large tonnages of ore.

Recommendations: The property is of no further interest.

Examined: 5-21-57 Reported: 6-7-57

Examined by: DLK Reported by: DLK

March 8, 1958

Mr. G. M. Wiles
Manager, Mining Department
National Lead Company
111 Broadway
New York 6, N. Y.

Dear Gloyd:

RE: Monitor Claims
Pinal County, Arizona

On February 4, 1958, Mr. Harry Hagen of Globe, Arizona, presented to me personally his Monitor group of claims with the expectation that I would bring them to the attention of a client who might be interested in their development and purchase. On February 7 I advised you of this situation over long distance telephone, and you orally authorized me to make a preliminary examination. This I have done, and I am presenting this ground to National as a speculative venture. If, after due consideration, National declines the deal, I shall appreciate your so advising me, because, inasmuch as the claims were presented to me personally and because I am no longer retained on a regular basis by National, I may wish to bring this ground to the attention of others.

Harry Hagen and family own and operate the prosperous Hagen Construction Company of Globe, Arizona. I have known Mr. Hagen for 14 years and formerly leased residential property from him. He also operates a large cattle ranch between Globe and Ray.

As you know, Kennecott Copper Corporation in recent years has expanded its Ray ore body and is now engaged in a construction program that implies that this expansion has been on a tremendous scale. During the past year or so, the movement of their diamond drilling rigs has been across Mineral Creek toward the northesst and toward Monitor ground, which lies high on a mountain slope above Ray. Mr. Hagen, because of his nearby ranching activities, was aware of this and acquired the Monitor ground, which was in an estate and widely scattered among a number of heirs. He advises that he now has conveyances from all of the heirs and clear title. He has enlarged the original group of some 20 claims by locating much additional ground, so that his holdings now contain about 80 claims aggregating some 1500 acres. All of the claims, including the original Monitor group, are unpatented. The recently-located claims have been surveyed-in by transit and stadia and form a contiguous group. Some of them are on State Land and have been taken up under the regulations pertaining thereto.

The disseminated ore body at Ray occurs in Pinal schist and diabase, with porphyry nearby, and the trend of the "original ore body" was to the northwest. Its outlines have recently been expanded with the apparent tendency for part of it to stretch out to the northeast. The latter is the more usual trend of porphyry copper ore bodies, and in the present case there is a strong pattern of faults, presumably pre-mineral, to guide the ore zone in a direction of about N30-45E toward Monitor ground.

Mr. Hagen advises that because of the roads and drill sites graded off, it looks like Kennecott will be drilling within about 3/4 mile of the Monitor claims very shortly. Gossip has it that the ore body is 2,000 feet thick and that it becomes richer toward the east. Kennecott has recently located mining claims up to and abutting upon Monitor ground. Presumably the extended Kennecott ore body has now been traced to within a mile or less of the Monitor property line. The Monitor block of ground is about four miles in extent athwart the northeasterly extension of the Kennecott ore zone.

The "original ore body" at Ray continued easterly up to the Mineral Creek fault, according to what we are presently told. Beyond to the east the formations that immediately overlie the Pinal schist are much in evidence at the surface, and it appears that Kennecott decided to drill through these to seek ore in schist and diabase that had been dropped down by faulting. We are advised that the schist and diabase were found to carry disseminated copper ore of commercial importance and that parts of the overlying formations are also importantly ore-bearing.

Formations occurring immediately above the Precambrian Pinal schist, the so-called Apache group, are the following:

Troy Quartzite: 400 feet thick.
Mescal Limestone: 250 feet thick.
Dripping Spring Quartzite: 400 to 500 feet thick.
Barnes Conglomerate: 10 to 55 feet thick.
Pioneer Shale: 150 to 200 feet thick.
Scanlon Conglomerate: 1-30 feet thick.

Pinal Schist.

From Kennecott's new ore-bearing section just east of Mineral Creek, Dripping Spring quartzite and Pioneer shale at the surface slope up the mountains to Monitor ground and the "average stratigraphic position" of the northern part of the Monitor is approximately the same as that of the ore-bearing section east of Mineral Creek. Consequently, keeping in mind the inclined attitude of the beds, drilling to depths of 500 to 1,000 feet should reach the top of the Pinal schist. Troy quartzite occurs at the surface near the south end of the Monitor property, and here the depth to the Pinal schist is greater. The Monitor area is composed of a mosaic of fault blocks, and detailed mapping would be necessary to guide drilling. Kennecott drilled two unsuccessful holes on Monitor ground a number of years ago, but I am told that drilling was not carried deep enough to reach the Pinal schist because of lack of understanding of the geologic structure.

Whether or not the Pinal schist and associated diabase are ore-bearing in Monitor ground is the important question. If they are, it is possible that the Pioneer shale would act as a cap and confine much of the mineralization to the schist below, with "leaks" coming up and through the shale, mostly along faults, to provide small deposits along these faults and scattered occurrences in the overlying brittle quartzites. This is just the type of mineralization that I found on Monitor ground, particularly toward the north. From such relatively small ore bodies it is reported that about 7,500 tons have been shipped with an average grade of about

2% copper and 4 ounces of silver. From these small deposits and fractures, groundwater has moved and deposited copper in many of the near-surface rocks. Consequently there was a wide dispersal of small amounts of copper in the northern part of Monitor ground.

Furthermore, Mr. Hagen has built many roads and has made various caterpillar excavations for location work that expose a great deal of the Pioneer shale under a surface covering of about one foot of soil and loose rock. Much of the Pioneer shale, normally a red rock, that I saw was bleached white and carries patches of iron oxide associated with a little copper. This I interpreted to be hydrothermal alteration, possibly situated above a copper-bearing zone at depth. Some of the shale inspected was finely fractured. The mapping of these zones might point to a worthwhile prospect at moderate depth in the underlying Pinal schist.

Nevertheless there is one feature that is distinctly discouraging, and it was partly because of this that I turned down the original Monitor claims when I examined them for another client some nine years ago. Erosion has cut through the overlying formations in one of the fault blocks on Monitor ground and has partially exposed an area of Pinal schist about 6 areas in extent. Although this is adjacent to one of the "leakage" faults, this Pinal schist is not mineralized; however, it should be pointed out that this schist is shaly, and it has been distorted and rendered gougey just beneath the Scanlon conglomerate, which here carries a little copper. It has been my experience that the more quartzitic and brittle

sections of the Pinal schist are more likely to be ore-bearing, and the lack of mineralization in the shaly Pinal schist here exposed does not necessarily condemn the entire block of some 1500 acres. I also believe that there are three recent developments that now make the Monitor group attractive as a speculative exploration venture:

1. The great expansion of the ore body at Ray, with a northeasterly extension toward Monitor ground that now reaches to within a mile or less of it.

2. The considerable increase in the size of the Monitor property to some 80 claims disposed in a group that is about 4 miles long (north and south) by ½ to 1¼ miles wide.

3. The exposure of hydrothermally altered Pioneer shale in caterpillar cuts in the northerly part of Monitor ground.

Consequently I wish to propose this as an exploration project to National Lead Company. This would be a major undertaking that would require the following:

1. A contour map of the entire area on a scale of 1 inch equals 200 feet, made by aerial photographic methods at a cost of about $5,000.00.

2. Geological study of the ground. Three months mapping to cost about $7,500.

3. Ten thousand feet of initial diamond drilling to cost about $100,000.

Preliminary discussions with Mr. Hagen indicate that he wants a sales agreement somewhat as follows:

1. One year free time, during which buyer would only be required to do necessary assessment work, preferably in the form of a deep drill hole.

2. Payment of $25,000 at end of first year.

3. Payment of $50,000 at end of second year.

4. Payment of $50,000 at end of third year.

5. Payment of $75,000 at end of fourth year and the formation of an operating corporation in which Hagen would have a 2½% open end, carried interest.

Hagen advises that only a subordinate amount of assessment work will be due on June 30, 1958, with the full amount falling due a year later.

Please give me your reaction as soon as convenient.

With best regards,

Yours sincerely

E. N. Pennebaker

ENP:mc

May 20, 1949

Mr. R. W. Hughes, General Manager
Miami Copper Company
Miami, Arizona

Dear Sir:

During the period of April 18, 1949 to May 13, 1949 inclusive, I spent twelve days in the field examining the Monitor group of claims. Mr. Cocreham assisted me. On the last day, May 13, I accompanied Mr. E. N. Pennebaker over the property.

The Monitor group of claims lies on the north side of Dripping Spring Range just north of Scott Mt. in sections 29, 30, 31 and 32, T. 2 S., R. 14 E.. The property may be reached by a graded road that branches north from Highway 77 about midway between Winkelman and the junction of Highways 70 and 77 near Globe.

The Monitor group comprises 17 claims of which 16 are shown on the attached map. The seventeenth lies to the northwest in section 30. The claims are controlled by P. G. Flumerfelt, Steve Cocreham, G. W. Shute and W. T. Elsind.

The rock formations in the area include the Pinal schist, Apache series, diabase and quartz porphyry. In general the quartz porphyry occurs along the NE faults, and most of the diabase is associated with the faulting and the Mescal limestone. The Scanlon conglomerate is either missing from the Apache series here or covered by overburden.

Northeasterly and northwesterly faults have broken the area into rather small blocks. One NW fault dropped the Mescal limestone against the Barnes conglomerate and the NE fault along Silver canyon dropped the Mescal limestone against the Pioneer shale. These would probably be displacements of 400-500 feet.

Both primary sulphide and oxidized copper minerals occur in the diabase, Mescal limestone and a grey to black shaley member of the Dripping Spring quartzite. The mineralization in the diabase and the limestone is small and shows no indication of widening with depth. The most promising area is the shaley member in the Dripping Spring quartzite. This member is about 175 feet thick, however, the mineralization does not persist very far from the faults along the strike of the beds. Shallow surface pits in the shale away from the indicated mineralized areas failed to show any evidence of copper. The tunnels at the west end of the Monitor claim and below the Discovery shaft on the Richmond claim ran out of the copper mineralization within 50 feet of the portals except where they followed small faults. The workings indicate that the ore that was shipped was mined along small NE faults.

RECEIVED
MAY 20 1949
E. N. PENNEBAKER

A 10 foot channel sample taken from a cut along the small fault in the NW corner of the Lincoln claim assayed 1.06% Cu., 0.97% Cu. oxide, Au-Nil, Ag 2.66 oz./ton.

A 15 foot channel sample taken from the hanging wall of the fault in the discovery shaft of the Richmond claim assayed 1.89% Cu., 1.72% Cu. oxide, Au-Trace, Ag 4.48 oz./ton.

Samples taken from the tunnels where copper minerals did not show did not yield an assay for copper.

Conclusions: The mineralization is confined to the fault areas and does not extend more than 100 feet from the fault along the strike of the most favorable bed. Lack of mineralization in the Pinal schist and the Pioneer shale where they are near or adjacent to mineralization in the grey shale indicates that they would probably not be favorable formations with depth.

I do not believe that there is a reasonable chance of finding a fair sized ore body on this property.

Respectfully submitted,

Joseph E Fowells

Joseph E. Fowells

HAGEN *Construction Company, Inc.*

General Contractors

EXCAVATING • PAVING • CONCRETE STRUCTURES • READY-MIX CONCRETE • BUILDINGS • SAND AND ROCK PLANT

PHONE GA 5-5784
GLOBE, ARIZONA

Feb. 11, 1958

Mr. E. N. Pennebaker,
Scottsdale, Arizona

Dear Mr. Pennebaker:

I am enclosing a couple of maps of the Monitor group of mining claims North-east of Ray which I talked to you about the other day.

It seems that the new ore body on the east side of Mineral Creek is a big one and is headed toward the Monitor claims. From the roads and drill sites graded off it looks like they will be drilling within about 3/4 of a mile of the Monitor claims very shortly. Gossip has it that the ore body is 2,000 ft. thick and the further they drill toward the Monitor the richer it is. I have heard that they have two years drilling lined out ahead.

I would like to interest some-one in drilling the property.

I have smelter returns on about 100 cars of ore that was shiped from an open pit which averaged about 2 % copper and 4 ounces silver. I have only shiped one car load which was off the surface that went $4\frac{1}{2}$ % copper and 22 ounces silver.

For a distance of about a mile you can find low grade copper on the surface.

Next time I am in Phoenix will try to see you.

Yours very truly,

H. J. Hagen

H. J. Hagen

RECEIVED
FEB 14 1958
E. N. PENNEBAKER

E. N. PENNEBAKER
CONSULTING GEOLOGIST
P. O. BOX 2996
GLOBE, ARIZONA

May 21, 1949

Mr. R. W. Hughes, General Manager
Miami Copper Company
P. O. Box 100
Miami, Arizona

Dear Mr. Hughes:

On Friday, May 13, 1949, I spent the day with Mr. Fowells examining the Monitor group of claims in the Dripping Spring Range, Pinal County, Arizona. This ground lies just east of the divide marking the head of Rustler Gulch, which flows southwesterly toward Ray, and is in a moderately steep and rugged area. It is made accessible by prospectors' roads and can be reached by automobile from Globe in about 2½ hours. The ground lies in parts of Sections 29, 30, 31, and 32; Township 2S; Range 14 East, and is of interest because of the copper mineralization exposed therein.

Mr. Fowells has spent some time on this property making a geologic map of an area about 3/4 of a mile on a side. The holdings consist of 13 unpatented mining claims in a compact group plus a small detached group of 3 claims lying about 1/2 mile to the southeast. I am told that another claim lies to the northwest in Section 30.

The area is one of very abundant faulting and plentiful intrusions of diabase. Two sets of faults are well-displayed on Mr. Fowells' map. One of these runs about N 45 E and the other to the northwest at about right angles. Along some of the northeasterly faults are porphyry intrusions, apparently younger than the diabase and possibly related to the mineralization. The bedrock is thus broken up to form a complicated mosaic with various formations displayed at the surface in the numerous discrete blocks so developed.

The sedimentary and metamorphic formations identified and mapped are as follows:

Mescal limestone
Dripping Spring quartzite
Barnes conglomerate
Pioneer shale
Pinal schist

The Dripping Spring quartzite appears to be the formation most susceptible to mineralization, and within this formation an intercalated zone of dark shale or argillite about 175 feet thick is the "favorable bed" that is most abundantly mineralized.

The principal northeast fault zone near which most of the copper mineralization is located strikes through the Monitor claim and continues northeasterly down Silver Canyon. It is a fault of considerable magnitude and has been traced by Mr. Fowells for nearly a mile. Undoubtedly it persists much farther to the northeast and to the southwest. At various places along its course all of the formations enumerated above, as well as diabase, are displayed at the surface along its walls. Throughout most of the Monitor claim this fault is abundantly intruded by a thick dike of porphyry.

Consequently the structural relations would appear favorable for mineralization. As is also the case at Globe and Superior, we have an easterly striking fault that is persistent and cuts a variety of formations. As at Superior, this fault contains an intruded porphyry dike apparently related to mineralization. On the other hand, a more limited number of formations abut its walls in the Monitor area and there is the opportunity for less numerous "favorable horizons". Whereas at Globe and Superior we have the full stratigraphic column from the Pinal schist on up to the Naco limestone, in the Monitor area the formations above the Mescal limestone are missing (these being the Troy quartzite, Martin limestone, Escabrosa limestone, and Naco limestone). Furthermore, in the Monitor area all of the formations there existing are displayed at the surface in juxtaposition to the fault, so that there are no hidden favorable horizons at depth except those whose habits of mineralization are already exposed to our view on the surface. Consequently, an appraisal of mineralization appearing at and near the surface should accurately forecast our reasonable expectations at depth.

Mineralization now exposed to view consists mostly of oxidized copper minerals (chrysocolla and the carbonates) coating fracture planes in a dark, shaly horizon of the Dripping Spring quartzite. Most of this is irregularly disposed in the near vicinity of the northeast fault through the Monitor claim and certain other faults and fractures with this same northeasterly trend. Copper mineralization does not extend away from these faults along the bedding for importance distances, and ore shipments made in the past came from nearby these faults. Mr. Fowells has determined that the mineralization does not extend out into the bedding more than 100 feet away from the main fault and does not everywhere reach out this far. A very rough calculation indicates that the maximum favorable expectations for developing ore with a copper content of around 1.00% is in the range of about one million tons, providing exploration results were exceedingly fortunate. The lack of mineralization in the Pioneer shale and Pinal schist near the favorable fault zone discourages the belief that these formations might become ore-bearing at depth.

Past exploration has been effected largely by tunnels and relatively shallow shafts. The better ore revealed is mostly oxidized and ranges between 1% and 2% copper with a few ounces of associated silver. The shale that contains it displays very little hydrothermal alteration, and the oxidized ore is accompanied by very little or no iron oxide. There is no evidence in the oxidized zone to indicate that copper has been removed and has migrated downward to form a zone of secondary sulphide enrichment. On the contrary, most of the copper appears to be fixed in the oxidized zone, and the tenor near the surface should reflect the approximate tenor at depth in the same horizon.

There is also some minor mineralization in the Mescal limestone and in the diabase. In this limestone in one locality there are some very narrow streaks of attractive sulphides, but there is nothing to encourage the belief that this mineralization will swell out along the bedding and form a body of any commercial importance.

Mineralization displayed in the three claims on the southeast (Black Eagle, Woodrow Wilson, and Tip Top) is very scanty.

Because of the various features enumerated above, it is not believed that this property warrants further exploration. The fact that most of the exposed mineralization is so closely confined to the northeast fault zones where they cross one stratigraphic horizon precludes the existence of any great tonnage at a minable grade. Furthermore the lack of widespread rock alteration makes the discovery of buried zones not otherwise indicated at the surface exceedingly unlikely.

It is recommended that this Monitor property be dropped.

Yours very truly,

E. N. Cunnebaker

HAGEN *Construction Company, Inc.*

General Contractors

EXCAVATING • PAVING • CONCRETE STRUCTURES • READY-MIX CONCRETE • BUILDINGS • SAND AND ROCK PLANT

PHONE GA 5-5784
GLOBE, ARIZONA

Nov. 10, 1958

Dear Mr. Pennebaker:

During the past 6 weeks I have met up with a couple of mine promoters that want to form a stock company of the Monitor mine. I don't know any thing about them. They rented some equipment to look over another property near Safford so I showed them the Monitor claims.

Will be in Phoenix this week and will drop by and see you.

Yours very truly

W. J. Hagen

Globe, Arizona,
October 23, 1958.

Mr. H. J. Hagen
Hagen Construction Company,
Globe, Arizona.

Dear Mr. Hagen:

This letter sets forth our proposals concerning an agreement between us for the development of your Monitor Group of mining claims.

We have three financially powerful groups with which to negotiate for the money required. All of these are actively looking for mining properties of merit, and all of them have requested us to bring properties that we can recommend to them. Two of these groups are Canadian and the other is American. The group with which we believe we can deal most advantageously and quickly is a Canadian one and we are drawing up the following proposals on the assumption that the financing will be done through a Canadian company.

(1) We will form a company capitalized at 3,000,000 shares.

(2) For transferring your claims to this company you will receive 10% of the capitalized stock (that is, 300,000 shares) and a royalty of one half of one percent of the net smelter value of all production from these claims.

(3) You will be one of the directors of this company.

(4) The company will agree to make a further geological survey of the claims, to supplement and expand the survey that has already been made, and to put down a minimum of 5,000 feet of exploratory drill hole, with one hole to be put down to 1,000 feet. Work will start on the property within six months of the signing of a formal legal agreement and the drilling will be completed within twelve months thereafter.

(5) On the completion of the geological survey and the drilling outlined in (4) the company will have sixty days to evaluate the results and will then either provide a further $250,000 for additional exploratory work or turn the claims back to you free of all debts and encumbrances.

(6) The company will covenant to do all work in a proper and minerlike manner, will keep the property free of debts and liens, and will keep all claims in good standing by doing and recording the assessment work thirty days prior to the date on which the assessment work is due.

(7) As a director of the company you will receive a monthly report giving the full details (that is, geological reports, drill logs assay returns, maps. etc.) of all work done since the previous monthly report was submitted.

(8) We (Fraser and Morrison) would expect to be able to receive 100.000 shares each of the stock of the company for our efforts. In the event that we are able to negotiate with our financial backers for more shares than these we will agree that any shares over this amount (that is, shares in excess of 200,000 jointly) will be divided one third to you, one third to Morrison and one third to Fraser.

(9) Except for the firm provision that you will receive 300.000 shares, that is, 10% of the total capital stock, it is not possible at this time to set out the share distribution specifically. From our experience in like ventures, however, we would estimate this as follows:

Hagen	300,000	
Morrison	100,000	
Fraser	100.000	
	500.000	
Financial backers	250,000	
	750 000	
$100,000 in shares sold at 80¢ net	125,000	
$250,000 in shares sold at $1.40 net	178,500	Approximately #
	1,053.500	
Remaining in the company treasury for further financing	1,946,500	
	3,000,000	

#This money would not be firm at the first instance, but would be on an option basis pending the outcome of the results obtained by the first 5,000 feet of drilling. From the above example, when $350 000 had been spent on the property, 1.053 500 shares would have been issued and 1,946 500 would remain in the company treasury.

The above is only by way of example to illustrate the probable financial arrangements that would be made. It is agreed, however, that any preliminary arrangements that would be less favorable than the example outlined above would not be completed without your prior approval.

(10) We do not believe that it is possible to predict what the financial arrangements will be beyond those set up in (9) above, since such arrangements will depend entirely on the ore developments at the property resulting from the drilling that has been done. Future financial arrangements would have to be made at the discretion of the directors of the company, of which you would be one.

(11) By way of making some points clearer with regard to Canadian companies we wish to record the following;

(a) Amaximum of 25% of the total capitalization (that is, 750,000 shares out of 3,000,000 shares) is allowed for considerations other than cash, that is, for properties, promotion, commissions, bonuses, etc. All other shares must be paid for in cash. The 750,000 shares that may be issued for considerations other than cash are shown in (9) as split among the three of us and our financial backers.
(b) All shares are fully paid and non assessable, including the 750,000 shares issued for considerations other than cash.
(c) There is no personal liability on the part of any of the shareholders, officers, or directors.
(d) There is no capital gains tax in Canada on the sale of shares. The only tax (other than a small transfer tax) for an American citizen is the capital gains tax he pays in the United States.
(e) There would be no Canadian tax applicable to any of your income from the one half of one percent royalty.
(f) Dividends paid by a Canadian company to American citizens are subject to a withholding tax (we believe that this is 15%) but the amount so paid is claimed by an American citizen as a credit against his American income tax.

If the provisions outlined in this letter meet with your approval we would ask you to signify this by signing a copy of it.

We understand that you propose to check the personal references we have given to you and that a final agreement is dependent on these references being satisfactory to you. In this event it is understood that we would then procede to draw up a formal legal agreement.

On the basis of your acceptance of this letter we would be prepared to go ahead with tentative arrangements to provide the necessary financing, it being understood that such arrangements would not be completed until you had completed your checking of references satisfactorily and until the formal legal agreement is signed.

Yours truly,

R. S. T. Fraser

Joe I. Morrison

Approved

H. J. Hagen

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EXCAVATING • PAVING • CONCRETE STRUCTURES • READY-MIX CONCRETE • BUILDINGS • SAND AND ROCK PLANT

PHONE GA 5-5784
GLOBE, ARIZONA

July 6-1958

Mr E. N. Pennebaker, Geologist
Scotsdale Ariz

Dear Mr. Pennebaker:

I seem to have lost the smelter returns sheets on the shipments from the Monitor Claims. If you have them would you please return them to me. The mining business looks pretty quiet just now. Regards

Yours very truly
H J Hagen

Returned 7/7/58

E. N. PENNEBAKER
CONSULTING GEOLOGIST
P. O. BOX 817
SCOTTSDALE, ARIZONA

March 8, 1958

Mr. G. M. Wiles
Manager, Mining Department
National Lead Company
111 Broadway
New York 6, N. Y.

Dear Gloyd:

RE: Monitor Claims
Pinal County, Arizona

COPY

On February 4, 1958, Mr. Harry Hagen of Globe, Arizona, presented to me personally his Monitor group of claims with the expectation that I would bring them to the attention of a client who might be interested in their development and purchase. On February 7 I advised you of this situation over long distance telephone, and you orally authorized me to make a preliminary examination. This I have done, and I am presenting this ground to National as a speculative venture. If, after due consideration, National declines the deal, I shall appreciate your so advising me, because, inasmuch as the claims were presented to me personally and because I am no longer retained on a regular basis by National, I may wish to bring this ground to the attention of others.

Harry Hagen and family own and operate the prosperous Hagen Construction Company of Globe, Arizona. I have known Mr. Hagen for 14 years and formerly leased residential property from him. He also operates a large cattle ranch between Globe and Ray.

As you know, Kennecott Copper Corporation in recent years has expanded its Ray ore body and is now engaged in a construction program that implies that this expansion has been on a tremendous scale. During the past year or so, the movement of their diamond drilling rigs has been across Mineral Creek toward the northeast and toward Monitor ground, which lies high on a mountain slope above Ray. Mr. Hagen, because of his nearby ranching activities, was aware of this and acquired the Monitor ground, which was in an estate and widely scattered among a number of heirs. He advises that he now has conveyances from all of the heirs and clear title. He has enlarged the original group of some 20 claims by locating much additional ground, so that his holdings now contain about 80 claims aggregating some 1500 acres. All of the claims, including the original Monitor group, are unpatented. The recently-located claims have been surveyed-in by transit and stadia and form a contiguous group. Some of them are on State Land and have been taken up under the regulations pertaining thereto.

The disseminated ore body at Ray occurs in Pinal schist and diabase, with porphyry nearby, and the trend of the "original ore body" was to the northwest. Its outlines have recently been expanded with the apparent tendency for part of it to stretch out to the northeast. The latter is the more usual trend of porphyry copper ore bodies, and in the present case there is a strong pattern of faults, presumably pre-mineral, to guide the ore zone in a direction of about N30-45E toward Monitor ground.

Mr. Hagen advises that because of the roads and drill sites graded off, it looks like Kennecott will be drilling within about 3/4 mile of the Monitor claims very shortly. Gossip has it that the ore body is 2,000 feet thick and that it becomes richer toward the east. Kennecott has recently located mining claims up to and abutting upon Monitor ground. Presumably the extended Kennecott ore body has now been traced to within a mile or less of the Monitor property line. The Monitor block of ground is about four miles in extent athwart the northeasterly extension of the Kennecott ore zone.

The "original ore body" at Ray continued easterly up to the Mineral Creek fault, according to what we are presently told. Beyond to the east the formations that immediately overlie the Pinal schist are much in evidence at the surface, and it appears that Kennecott decided to drill through these to seek ore in schist and diabase that had been dropped down by faulting. We are advised that the schist and diabase were found to carry disseminated copper ore of commercial importance and that parts of the overlying formations are also importantly ore-bearing.

Formations occurring immediately above the Precambrian Pinal schist, the so-called Apache group, are the following:

Troy Quartzite: 400 feet thick.
Mescal Limestone: 250 feet thick.
Dripping Spring Quartzite: 400 to 500 feet thick.
Barnes Conglomerate: 10 to 55 feet thick.
Pioneer Shale: 150 to 200 feet thick.
Scanlon Conglomerate: 1-30 feet thick.

Pinal Schist.

From Kennecott's new ore-bearing section just east of Mineral Creek, Dripping Spring quartzite and Pioneer shale at the surface slope up the mountains to Monitor ground and the "average stratigraphic position" of the northern part of the Monitor is approximately the same as that of the ore-bearing section east of Mineral Creek. Consequently, keeping in mind the inclined attitude of the beds, drilling to depths of 500 to 1,000 feet should reach the top of the Pinal schist. Troy quartzite occurs at the surface near the south end of the Monitor property, and here the depth to the Pinal schist is greater. The Monitor area is composed of a mosaic of fault blocks, and detailed mapping would be necessary to guide drilling. Kennecott drilled two unsuccessful holes on Monitor ground a number of years ago, but I am told that drilling was not carried deep enough to reach the Pinal schist because of lack of understanding of the geologic structure.

Whether or not the Pinal schist and associated diabase are ore-bearing in Monitor ground is the important question. If they are, it is possible that the Pioneer shale would act as a cap and confine much of the mineralization to the schist below, with "leaks" coming up and through the shale, mostly along faults, to provide small deposits along these faults and scattered occurrences in the overlying brittle quartzites. This is just the type of mineralization that I found on Monitor ground, particularly toward the north. From such relatively small ore bodies it is reported that about 7,500 tons have been shipped with an average grade of about

2% copper and 4 ounces of silver. From these small deposits and fractures, groundwater has moved and deposited copper in many of the near-surface rocks. Consequently there was a wide dispersal of small amounts of copper in the northern part of Monitor ground.

Furthermore, Mr. Hagen has built many roads and has made various caterpillar excavations for location work that expose a great deal of the Pioneer shale under a surface covering of about one foot of soil and loose rock. Much of the Pioneer shale, normally a red rock, that I saw was bleached white and carries patches of iron oxide associated with a little copper. This I interpreted to be hydrothermal alteration, possibly situated above a copper-bearing zone at depth. Some of the shale inspected was finely fractured. The mapping of these zones might point to a worthwhile prospect at moderate depth in the underlying Pinal schist.

Nevertheless there is one feature that is distinctly discouraging, and it was partly because of this that I turned down the original Monitor claims when I examined them for another client some nine years ago. Erosion has cut through the overlying formations in one of the fault blocks on Monitor ground and has partially exposed an area of Pinal schist about 6 areas in extent. Although this is adjacent to one of the "leakage" faults, this Pinal schist is not mineralized; however, it should be pointed out that this schist is shaly, and it has been distorted and rendered gougey just beneath the Scanlon conglomerate, which here carries a little copper. It has been my experience that the more quartzitic and brittle

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Consequently I wish to propose this as an exploration project to National Lead Company. This would be a major undertaking that would require the following:

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Please give me your reaction as soon as convenient.

With best regards,

Yours sincerely

E. N. Pennebaker

ENP:mc

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P. O. BOX 817
SCOTTSDALE, ARIZONA

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With best regards,

Yours sincerely

E. N. Pennebaker

ENP:mc

THE MONITOR MINING CLAIMS

Mineral Creek Mining District Pinal County, Arizona

The Ray mine of the Kennecott Copper Company is located on Mineral Creek in Pinal County Arizona. This mine has operated for the past 50 years and until the last few years it was thot that the ore body was only located on the West side of Mineral Creek. Mineral Creek being a fault in the earth surface was believed to have cut off the copper ore deposit. About three years ago Kennecott Copper Company decided to drill on the East side of Mineral Creek to see if possibly the Ray ore body did not also continue in that direction but at a different elevation. Exactly what they found we do not know except as a result of this work, Kennecott Copper Company is now spending over $100,000,000.00 enlarging their mill at Hayden and building a new smelter, moving the town of Ray and building a new town about 6 miles from the town of Ray, moving their Ray plant, shops, crushing plant, railroad, state highway and moving the stream bed of Mineral Creek. Moving the Mineral Creek stream bed alone requires some 15,000,000 cu. yds of rock excavation according to some plans which I have seen. I understand from their engineers that they have now ore blocked out to run them for over 100 years.

All major ore veins in Arizona run North-east or South-west. Four miles North 45° East from the center of the Kennecott Copper Companie's Ray mine is the center of the Monitor group of mining claims. The South end of the Monitor claims and the North end of the Kennecott property is only about ¼ mile apart. The Kennecott property being on the south slope of Government Mountain and the Monitor Mining Claims being on the North slope. From tests that I have had made the ores from the two properties are much the same.

For a distance of 1¼ miles on the Monitor Claims there is a break in the earth formations from which the earth layers slope down south-west to Mineral Creek at Ray and down north-east toward the Globe-Miami mining district. For the entire distance along this break there is showings of low-grade copper and silver ore. From two places along this break about 150 cars of ore has been shiped which was mined by the open pit method. This ore averaged 2% copper and about 4 ounces silver. There has also been shiped some high grade copper and silver ore. The ores now in sight are oxides and can be treated by the cheap leaching process now being used by the large copper mining companies. This property can be very cheaply mined by this process.

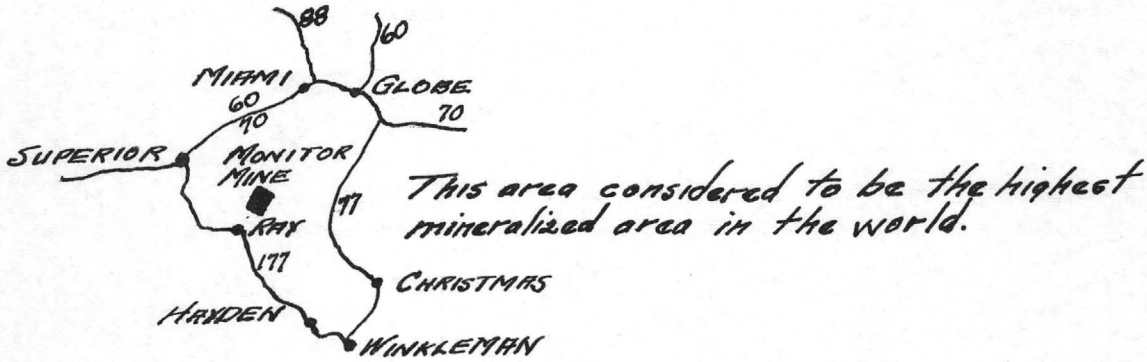
At the Castle Dome property of the Miami Copper Company at Miami, Arizona with a working force of only eight men in 1956 they produced an average of 490,000 lbs of copper per month at present prices worth about $130,000.00 leaching ores which I understand runs ¼ of 1% copper.

From what can be seen on the surface; from the results of the drilling done recently by Kennecott Copper Company on the East side of Mineral Creek at Ray; and information received from one of the leading geologists in this district, it appears that the Monitor Mining Claims might be an extension of the Ray ore body or another similar deposit. The Monitor Group of Claims consists of 1,000 Acres of mining claims in the same mineral belt in which is situated many large copper mines. Four miles south-west is the Ray mine of the Kennecott Copper Co, 16 miles north-east is the Globe Miami Copper mining district location of the Ol Dominion Copper Co, Inspiration Consolidated Copper Co., Miami, Copper Company, Copper Cities Copper Co., and Castle Dome Copper Co. Eight miles north-west

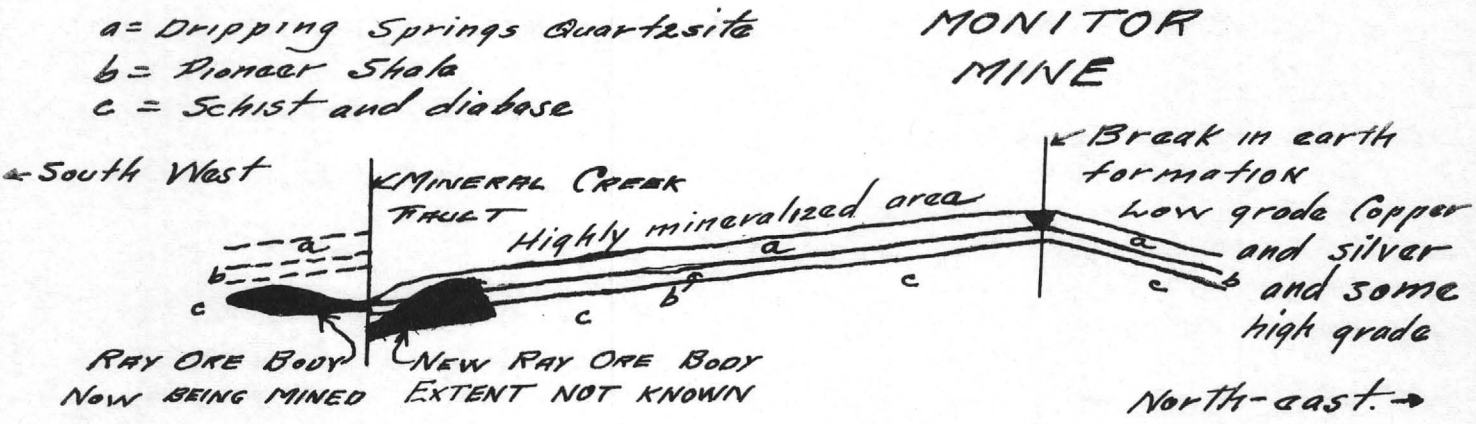
is the Magma Copper Company at Superior, Arizona, and 15 miles South east is the Christmas Copper Co., in which during the past year the Inspiration Copper Company has discovered and blocked out a large body of high grade copper ore.

The owners of this property do not have sufficient capitol to drill and develop this property and are interested in selling the property or an interest in the property for capitol to drill and develop the property. They are owners of Hagen Construction Company of Globe, Arizona, residents of that district for 40 years. They have done much of the construction work for the mining companies of that district.

Any-one can spend up to 100,000.00 each year on development work on a mining property and charge it all off as expense. On ores sold a 15% depletion is allowed in figuring income tax.



LOCATION OF MONITOR MINE PINAL COUNTY, ARIZONA



SKETCH SHOWING GEOLOGICAL FORMATION RAY AND MONITOR MINE

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THE MONITOR MINING CLAIMS

Mineral Creek Mining District Pinal County, Arizona

The Ray mine of the Kennecott Copper Company is located on Mineral Creek in Pinal County Arizona. This mine has operated for the past 50 years and until the last few years it was thot that the ore body was only located on the West side of Mineral Creek. Mineral Creek being a fault in the earth surface was believed to have cut off the copper ore deposit. About three years ago Kennecott Copper Company decided to drill on the East side of Mineral Creek to see if possibly the Ray ore body did not also continue in that direction but at a different elevation. Exactly what they found we do not know except as a result of this work, Kennecott Copper Company is now spending over $100,000,000.00 enlarging their mill at Hayden and building a new smelter, moving the town of Ray and building a new town about 6 miles from the town of Ray, moving their Ray plant, shops, crushing plant, railroad, state highway and moving the stream bed of Mineral Creek. Moving the Mineral Creek stream bed alone requires some 15,000,000 cu. yds of rock excavation according to some plans which I have seen. I understand from their engineers that they have now ore blocked out to run them for over 100 years.

All major ore veins in Arizona run North-east or South-west. Four miles North 45° East from the center of the Kennecott Copper Companie's Ray mine is the center of the Monitor group of mining claims. The South end of the Monitor claims and the North end of the Kennecott property is only about ¼ mile apart. The Kennecott property being on the south slope of Government Mountain and the Monitor Mining Claims being on the North slope. From tests that I have had made the ores from the two properties are much the same.

For a distance of 1¼ miles on the Monitor Claims there is a break in the earth formations from which the earth layers slope down south-west to Mineral Creek at Ray and down north-east toward the Globe-Miami mining district. For the entire distance along this break there is showings of low-grade copper and silver ore. From two places along this break about 150 cars of ore has been shiped which was mined by the open pit method. This ore averaged 2% copper and about 4 ounces silver. There has also been shiped some high grade copper and silver ore. The ores now in sight are oxides and can be treated by the cheap leaching process now being used by the large copper mining companies. This property can be very cheaply mined by this process.

At the Castle Dome property of the Miami Copper Company at Miami, Arizona with a working force of only eight men in 1956 they produced an average of 490,000 lbs of copper per month at present prices worth about $130,000.00 leaching ores which I understand runs ¼ of 1% copper.

From what can be seen on the surface; from the results of the drilling done recently by Kennecott Copper Company on the East side of Mineral Creek at Ray; and information received from one of the leading geologists in this district, it appears that the Monitor Mining Claims might be an extension of the Ray ore body or another similar deposit. The Monitor Group of Claims consists of 1,000 Acres of mining claims in the same mineral belt in which is situated many large copper mines. Four miles south-west is the Ray mine of the Kennecott Copper Co, 16 miles north-east is the Globe Miami Copper mining district location of the Ol Dominion Copper Co, Inspiration Consolidated Copper Co., Miami, Copper Company, Copper Cities Copper Co., and Castle Dome Copper Co. Eight miles north-west

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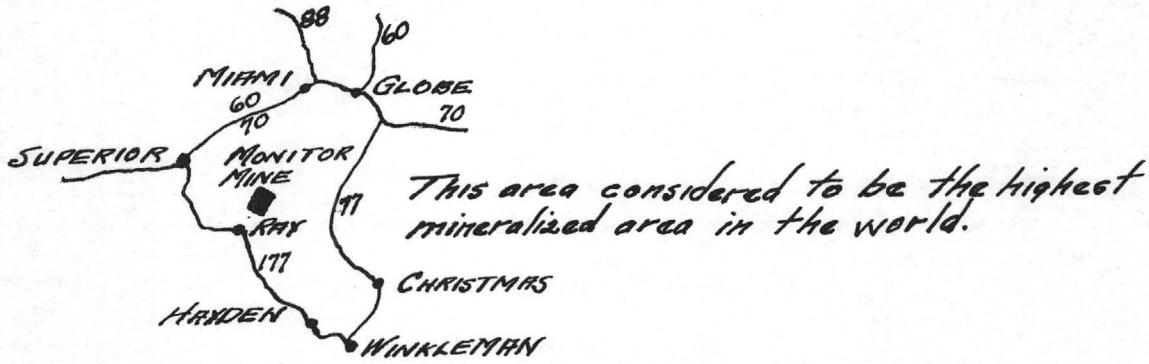
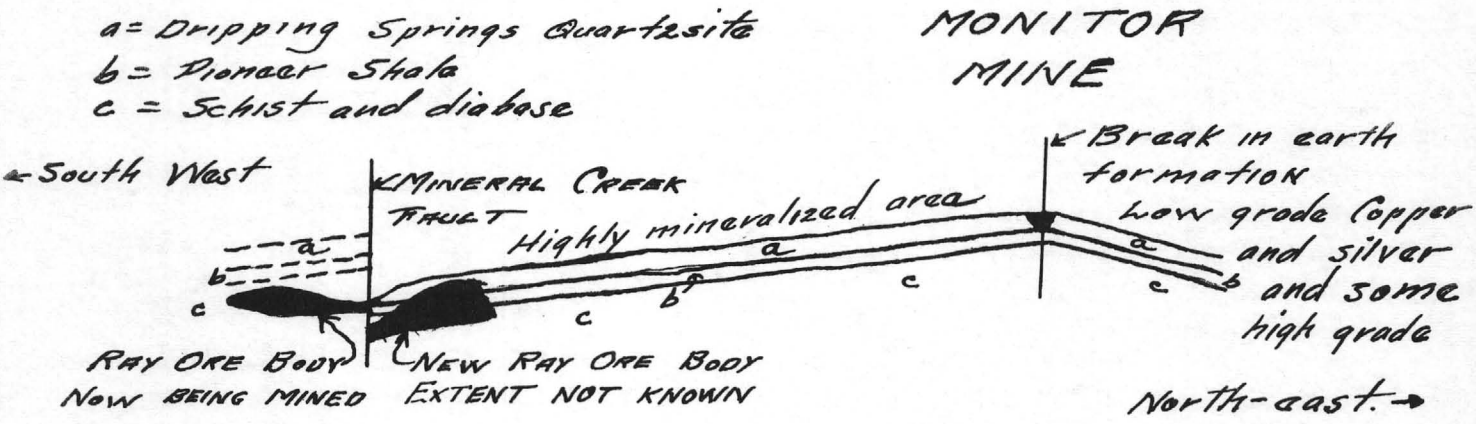


LOCATION OF MONITOR MINE PINAL COUNTY, ARIZONA



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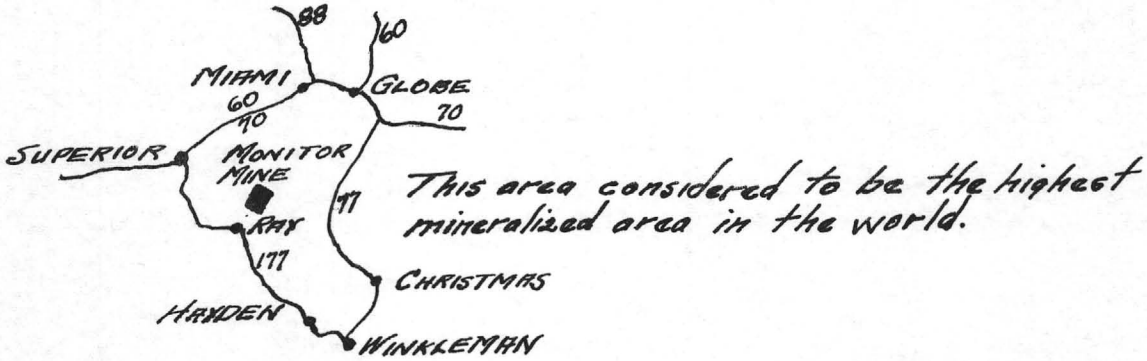
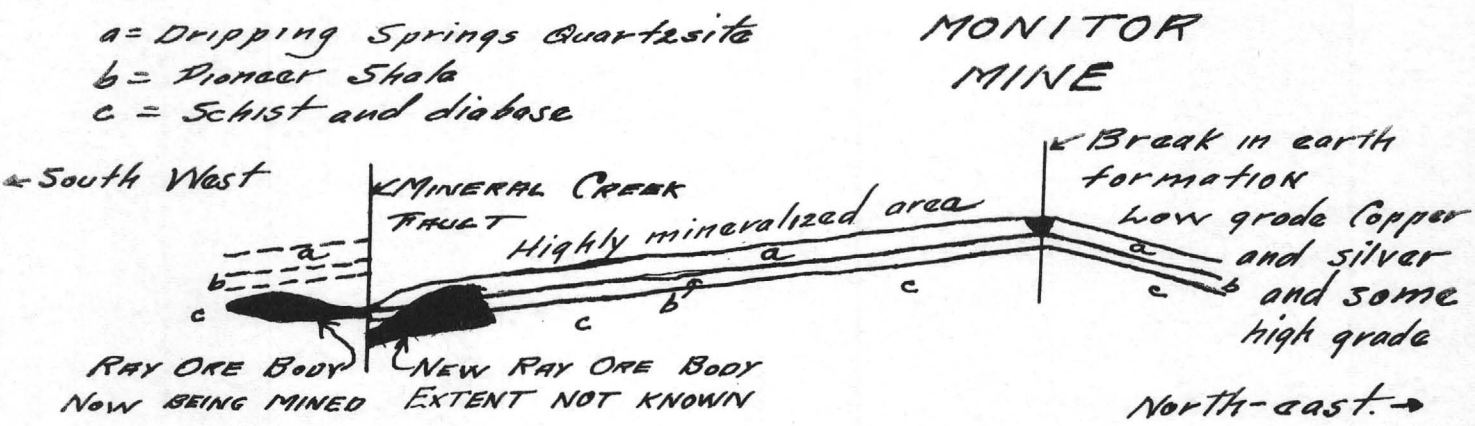


LOCATION OF MONITOR MINE PINAL COUNTY, ARIZONA



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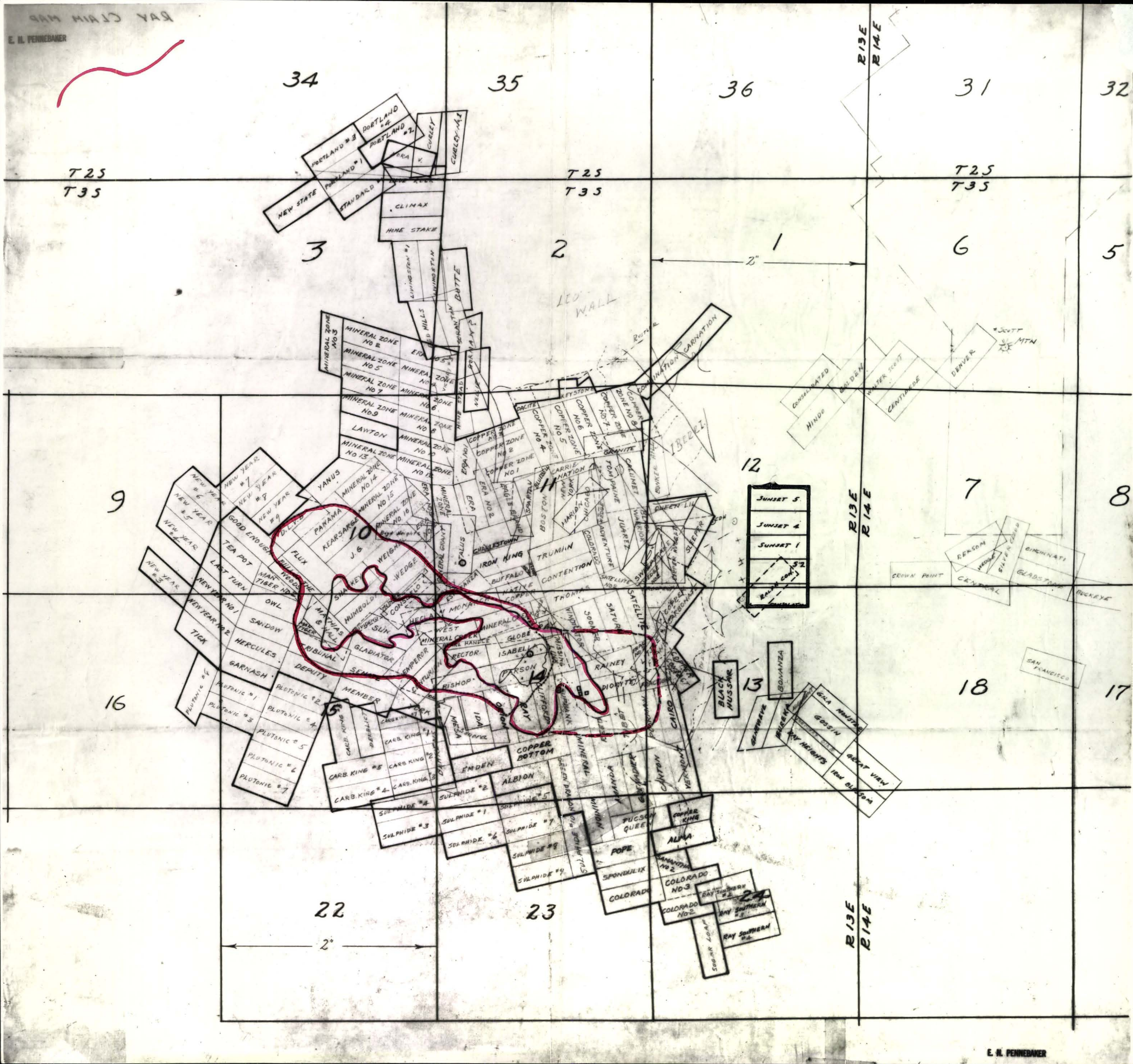
		Total Cu.	Ox Cu.	Au	Ag
	5' Channel —	1.06	0.97	Nil	2.66
	5' "	0.92	0.73	Nil	0.94
near flt	15' "	1.89	1.72	Nil	4.48

20
3.60
2.00


E. H. PENNEBAKER
34
35
36
31
32
T2S
T3S
R13E
R14E
3
2
1
6
5
2"
9
10
11
12
7
8
16
15
14
13
18
17
22
23
24
NEW STATE
PORTLAND #3
PORTLAND #4
PORTLAND #2
PORTLAND #1
STANDARD
CURLEY
CURLEY No. 1
CLIMAX
HOME STAKE
LIVINGSTON #1
LIVINGSTON
BUTTE
SCRANTON
MINERAL ZONE NO 3
MINERAL ZONE NO 2
MINERAL ZONE NO 5
MINERAL ZONE NO 7
MINERAL ZONE NO 9
LAWTON
MINERAL ZONE NO 13
MINERAL ZONE NO 14
MINERAL ZONE NO 15
MINERAL ZONE NO 16
MINERAL ZONE NO 4
MINERAL ZONE NO 6
MINERAL ZONE NO 8
MINERAL ZONE NO 10
MINERAL ZONE NO 12
MINERAL ZONE
HOME STEAD
ERA No 1
ERA
ERA NO 2
COPPER ZONE NO 3
COPPER ZONE NO 2
COPPER ZONE NO 1
COPPER ZONE NO 4
COPPER ZONE NO 5
COPPER ZONE NO 6
COPPER ZONE NO 7
COPPER ZONE NO 8
DACITE
KEYSTONE
GRANITE
COMBINATION
CARNATION
RUSTLER
IBERRI
WALL
CARRIE NATION
NEW YORK
MARION
CHICAGO
TOM PAINE
CALUMET
BUNKER HILL
QUEEN LIL
WARRIOR
SLEEPER
BOSTON
SPARTAN
BLUEBELL
EAGLE BIRD
JUAREZ
ADVENTURE
COLORADO
TRUMAN
CONTENTION
SATELLITE NO 2
SATELLITE
SATURN
SOONER
THOMAS
CHARLESTOWN
IRON KING
BUFFALO
NATIVE
COPPER
TALUS
MINERAL GRANT
Boyd Heights
YANUS
NEW YEAR #7
NEW YEAR #8
NEW YEAR #9
NEW YEAR #6
NEW YEAR #5
NEW YEAR #4
NEW YEAR #3
GOOD ENOUGH
TEA POT
LAST TURN
MAN TIGER NO 2
WOODS
NEW YEAR NO 1
NEW YEAR NO 2
TICK
OWL
SANDOW
HERCULES
GARNASH
DEPUTY
TRIBUNAL
GLADIATOR
MATHIAS & HALL
MAN TIGER
D.L.V.B
PANAMA
KEARSARGE
FLUX
J.G
WEIGH
WEDGE
SHARKEY
HUMBOLDT
DIVIDEND
SUN
HECLA
MONARCH
WEST
MINERAL CREEK
EMPEROR
RECTOR
ISABELL
GLOBE
PARSON
BISHOP
MEMBER
MISSING LINK
RAINEY
DIORYTE
CAIRO
MESA
IDA
RAY
CLIFFORD
COPPER BOTTOM
EMDEN
ALBION
MINERAL
GREEN DRAGON
VERMONT
CARB. KING
DERELICT
CARB. KING #1
CARB. KING #2
CARB. KING #3
CARB. KING #4
CARB. KING #5
PLUTONIC #1
PLUTONIC #2
PLUTONIC #3
PLUTONIC #4
PLUTONIC #5
PLUTONIC #6
PLUTONIC #7
SULPHIDE #1
SULPHIDE #2
SULPHIDE #3
SULPHIDE #4
SULPHIDE #5
SULPHIDE #6
SULPHIDE #7
SULPHIDE #8
SULPHIDE #9
SULPHIDE #10
TUCSON QUEEN
COPPER KING
ALMA
POPE
SPONDULIX
COLORADO
SAMANTHA NO 2
COLORADO NO 3
COLORADO NO 2
RAY SOUTHERN #2
RAY SOUTHERN #3
RAY SOUTHERN #4
SUGAR LOAF
SUNSET 5
SUNSET 4
SUNSET 1
BLACK HUSSAR
BONANZA
GENEVIEVE
EUREKA
GILA MONSTER
GOSSIN
RAY HEIGHTS
GREAT VIEW
IRON BLOSSOM
CONSOLIDATED
HINDO
GOLDEN
WALTER SCOTT
CENTIPEDE
DENVER
SCOTT MTN
REKSOM
WEDGE
SILVER CLOUD
CINCINNATI
GLADSTONE
CROWN POINT
CENTRAL
BUCKEYE
SAN FRANCISCO
E. H. PENNEBAKER

May 20

Penny

There is a small fault that strikes N35°W and dips 60°W that passes through the discovery shaft on the Richmond claim.

It isn't on your map

Joe

Log of churn drill hole on Fred
Mitchells property, Ray, Arizona.

Data from Harry Hagen as given to him by Fred Mitchell.

From-To	Material	Grade Range % Cu
0-80	Gravel	
80-130	schist	0.4 - 0.6%
130-250	schist	over 5.0% 50 ft was +8%
250-590	schist	2.0%
590-1000	schist	0.3 - 0.6%
Fault at 1000 feet		
1000-1887	diabase	0.6 - 1.92%

Sept. 2, 1958
WWS

RECEIVED
SEP 3 - 1958
E. N. PENNEBAKER

December 31, 1958

Mr. Harry J. Hagen
Globe, Arizona

Dear Harry:

I am enclosing herewith copies of Public Laws 85-736 and 85-876, these being the new regulations with respect to assessment work on mining claims. You will note that Public Law 85-876 allows geological work to be done, under certain limitations, to fulfill the annual requirement, but $100 worth of work must still be done on each claim.

As I recall, your Monitor group contains about 100 claims, necessitating about $10,000 worth of work each year. It is my further understanding that you wish to accomplish most of this work for 1959 by drilling a deep hole at the most promising location.

The selection of such a location should be based on a geological survey of the ground and not on a hunch, and you will recall that Miami Copper's drilling is generally preceded by several months' study of the area of interest. My suggestion is that you allocate about $4,000 to geological mapping and $6,000 for drilling for the 1959 work.

As regards the report that must be filed, I think that this can be written in a manner that will not divulge any confidential information that should remain with the owner.

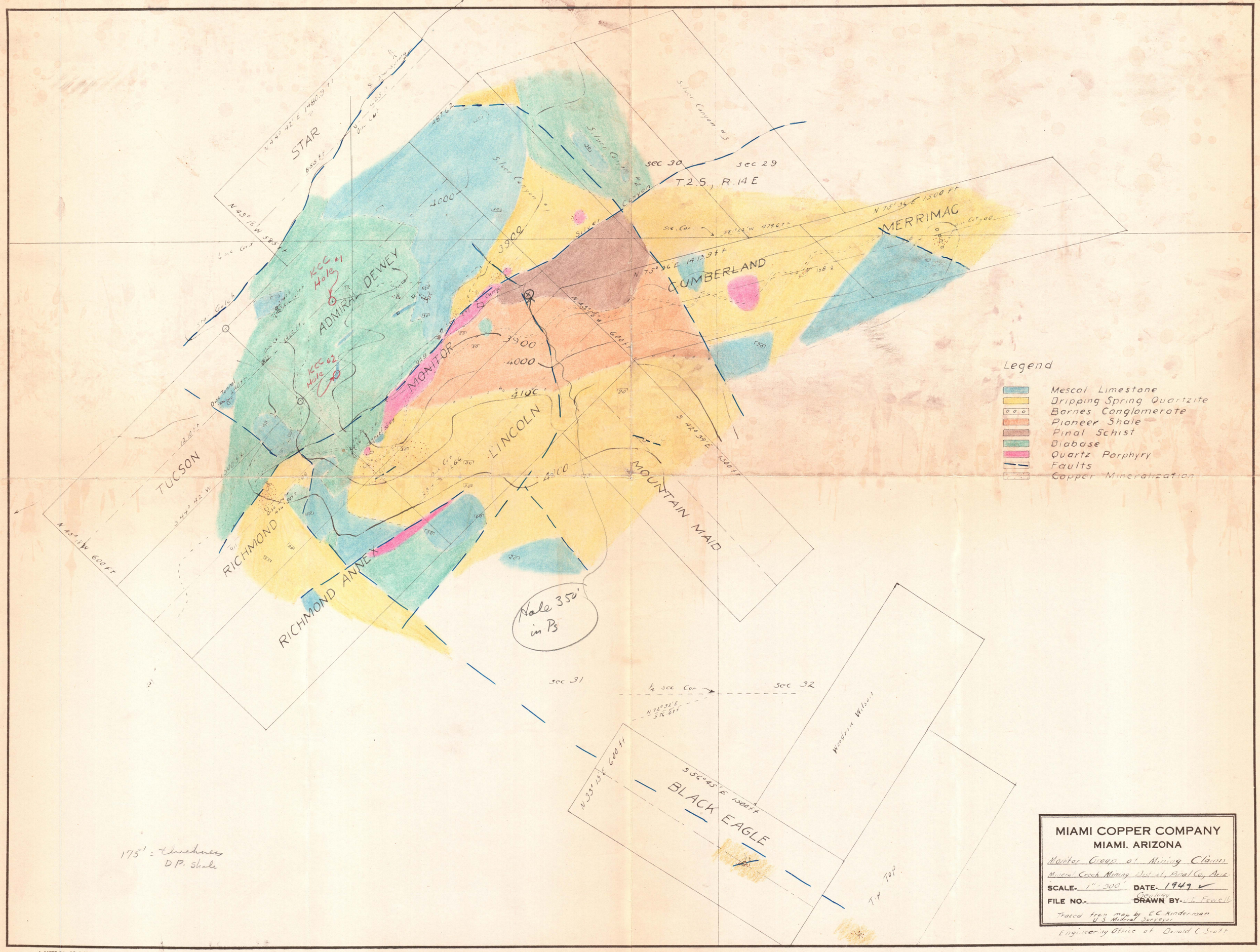
When you are next in Phoenix I suggest that you drop in for a chat about this matter.

With best New Year's wishes to you and Mrs. Hagen from us both,

Yours sincerely

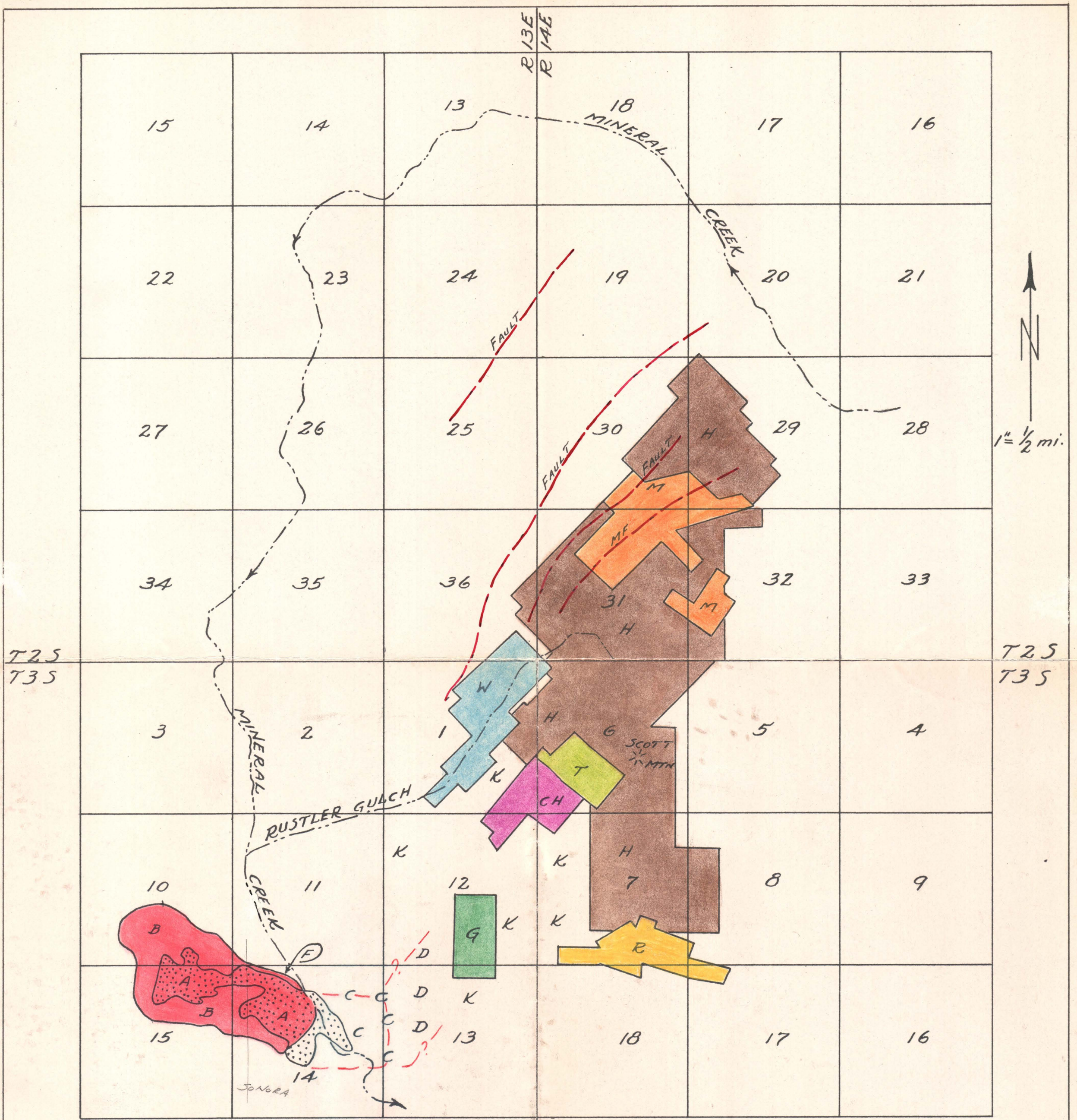
E. N. Pennebaker

ENP:mc
encls.



A. LIETZ CO. SC 8-47

Monitor Claims
Dripping Spring Range
M.C. Co.



TO ACCOMPANY
REPORT BY
E. N. PENNEBAKER
DATED
9/12/58

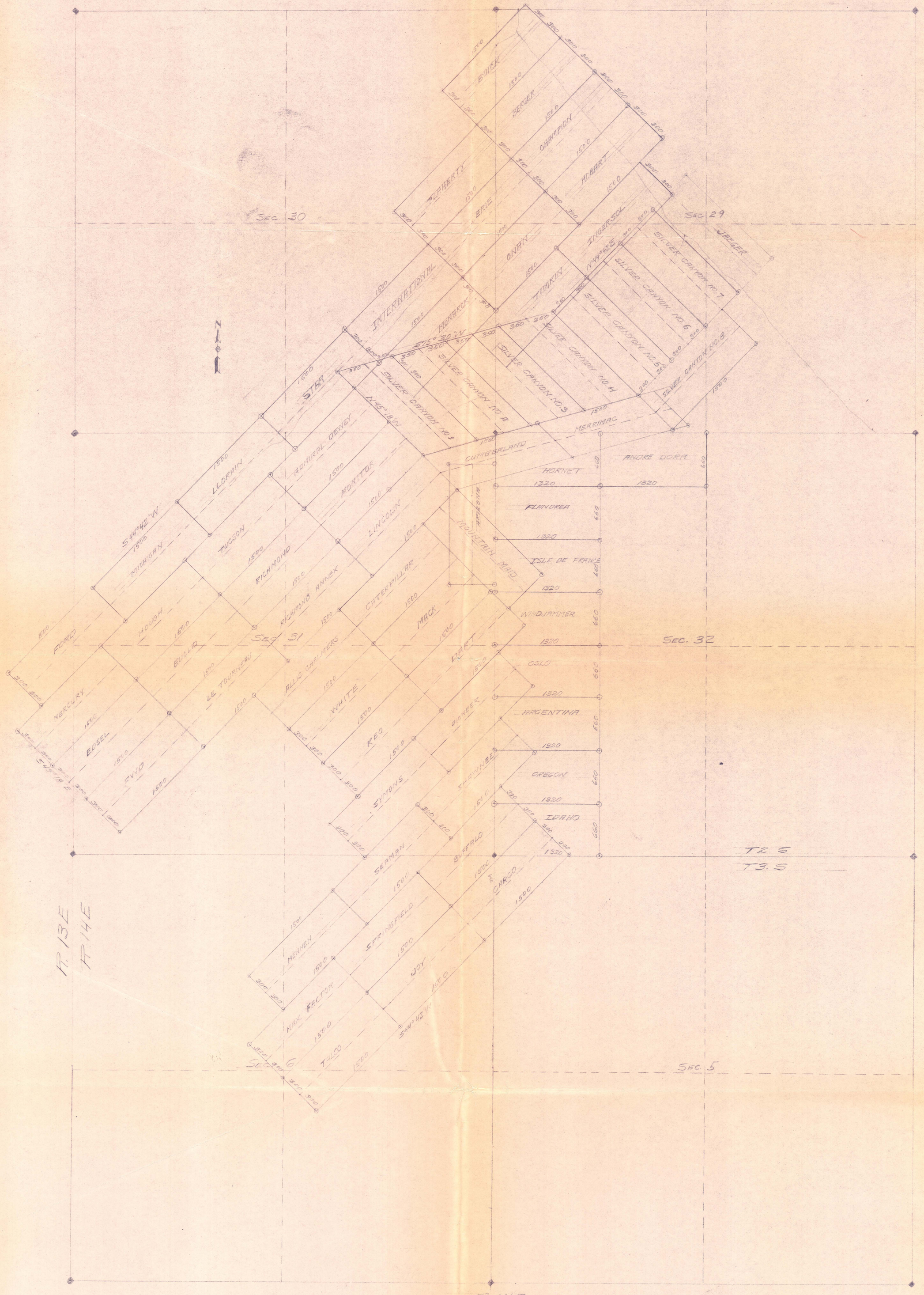
SKETCH
RAY-MONITOR AREA
PINAL COUNTY, ARIZONA.

See Report, Pages XX2, For Legend

MAP OF
MONITOR MINE
3 MI NE. OF RAY PINAL COUNTY, ARIZ
SCALE 1 IN = 600 FT. FEB. 1958
DRAWN BY H. J. HAGEN
1" = 600'
SEC 30
SEC 29
SEC 31
SEC. 32
SEC. 6
SEC 5
SEC. 7
SEC. 8
SEC. 18
SEC 17
R. 13 E.
R. 14 E.
T. 2 S.
T. 3 S.
2 IN.
N
BUICK
BERGER
CHAMPION
HOBART
FLAHERTY
ERIE
ONAN
INGERSOLL
MURPHY
INTERNATIONAL
MONARCH
TIMKIN
SILVER CANYON NO 7
SILVER CANYON NO 6
SILVER CANYON NO 5
SILVER CANYON NO 4
SILVER CANYON NO 8
SILVER CANYON NO 3
MERRIMAC
STAR
ADMIRAL DEWEY
MONITOR
LINCOLN
CUMBERLAND
HORNET
ANDRE DORR
FLANDREA
ISLE DE FRANCE
ARIZONA
MOUNTAIN MAID
WINDJAMMER
WOODROW WILSON
OSLO
DART
PIONEER
BLACK EAGLE
TIPTOPE
OREGON
IDAHO
LLORAIN
TUCSON
RICHMOND
RICHMOND ANNEX
MICHIGAN
HOUGH
FORD
EUCLID
CATERPILLAR
MACK
ALLIS CHALMERS
LE TOURNEAU
MERCURY
EDSEL
F.W.D
CUMMINGS
WHITE
REO
HENSLEY
SYMONS
SHAWNEE
BUFFALO
CARCO
TELSMITH NO 1
TELSMITH NO. 2
TELSMITH NO. 3
TELSMITH NO. 4
TELSMITH NO 5
ARMCO
AUSTIN
SEAMAN
SPRINGFIELD
MENNEN
JOY
MAX FACTOR
TALCO
ROCKET NO. 3
ROCKET NO. 4
ROCKET NO 5
ROCKET No 6
ROCKET No 1
ROCKET No 2
Leo Wall Group
MAJOR NO 5
MAJOR NO 6
MAJOR NO. 3
MAJOR NO 2
SILVER KING
MAJOR
MAJOR NO 4
LEAD
KENNECOTT COPPER CO.
HAPPY VALE
OLIVE
WOULD BE EXPERT
KENNECOTT Copper Co
GOLDEN GATE
TARANTULA
RICHARD
DENVER
JAS THOMPSON
Patented Mining Claims
Thompson Group
TUNNEL SIGHT
CHICAGO
GOLDEN
WALTER SCOTT
CENTEPEDE
CONSOLIDATED
HINDO
Chevalier Group
HALEY NO. 13
HALEY NO 11
HALEY NO. 12
HALEY NO. 9
HALEY NO 10
HALEY NO 7
HALEY NO. 8
HALEY NO. 5
HALEY NO 6
HALEY NO. 3
HALEY NO 4
HALEY NO 1
HALEY NO 2
LAST CHANCE NO.
LEHIGH NO 1
LEHIGH NO 8
LEHIGH NO. 2
LEHIGH NO 7
LEHIGH NO 3
LEHIGH NO. 6.
LEHIGH NO 4
LEHIGH NO. 5
LEHIGH NO 9
LEHIGH NO. 10
HALEY No. 14
HALEY No. 15
HALEY No. 16
HALEY No. 17
HALEY No. 18
HALEY MILL SITE
KENNECOTT COPPER COMPANY
NEW ORE BODY
KENNECOTT COPPER CO.
REKSOM LODE
JAS. THOMPSON
WEDGE
SILVER CLOUD
CINCINNATI
GLADSTONE
CROWN POINT
CENTRAL
RAY LEAD AND SILVER MINE
BUCKEYE

0 .5 1 2 3 4 mi.
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
(Florence 1/62500)
111°00'
33°15'
55'
10'
Mineral Cr
Walnut Spring
GILA Co
PINAL Co
Scott Mtn
5175
4868
Haley Spring
Haley's Cabin
4572
4690
4474
4408
4638
4253
Rustler Gulch
Mineral
Ray
BM 2024
Sonora
Ray Hill
Poorman Gulch
Creek
Susie
Twin Domes
Troy Mtn
4970
3552
25
35

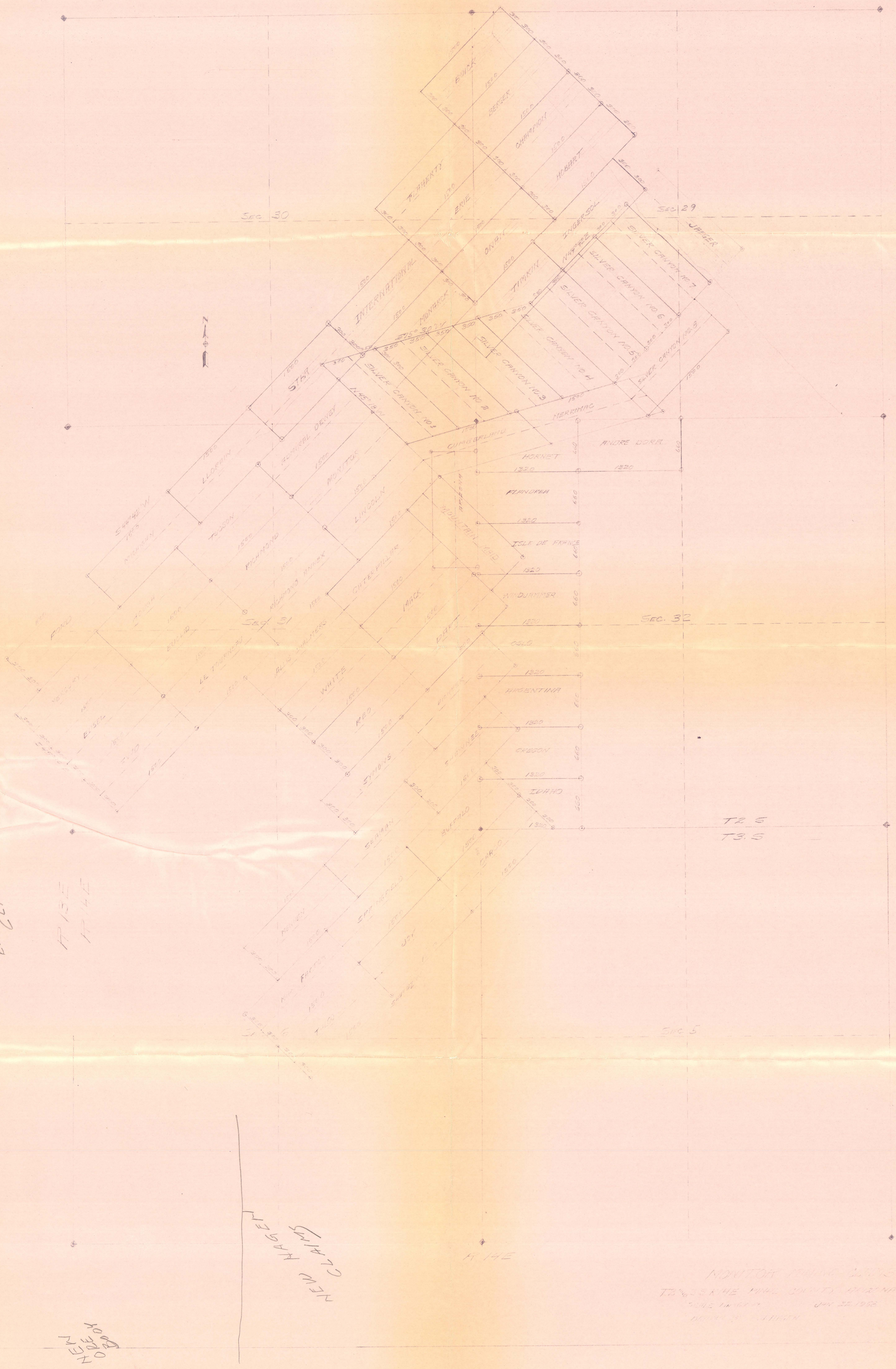
MONITOR TOPOG.

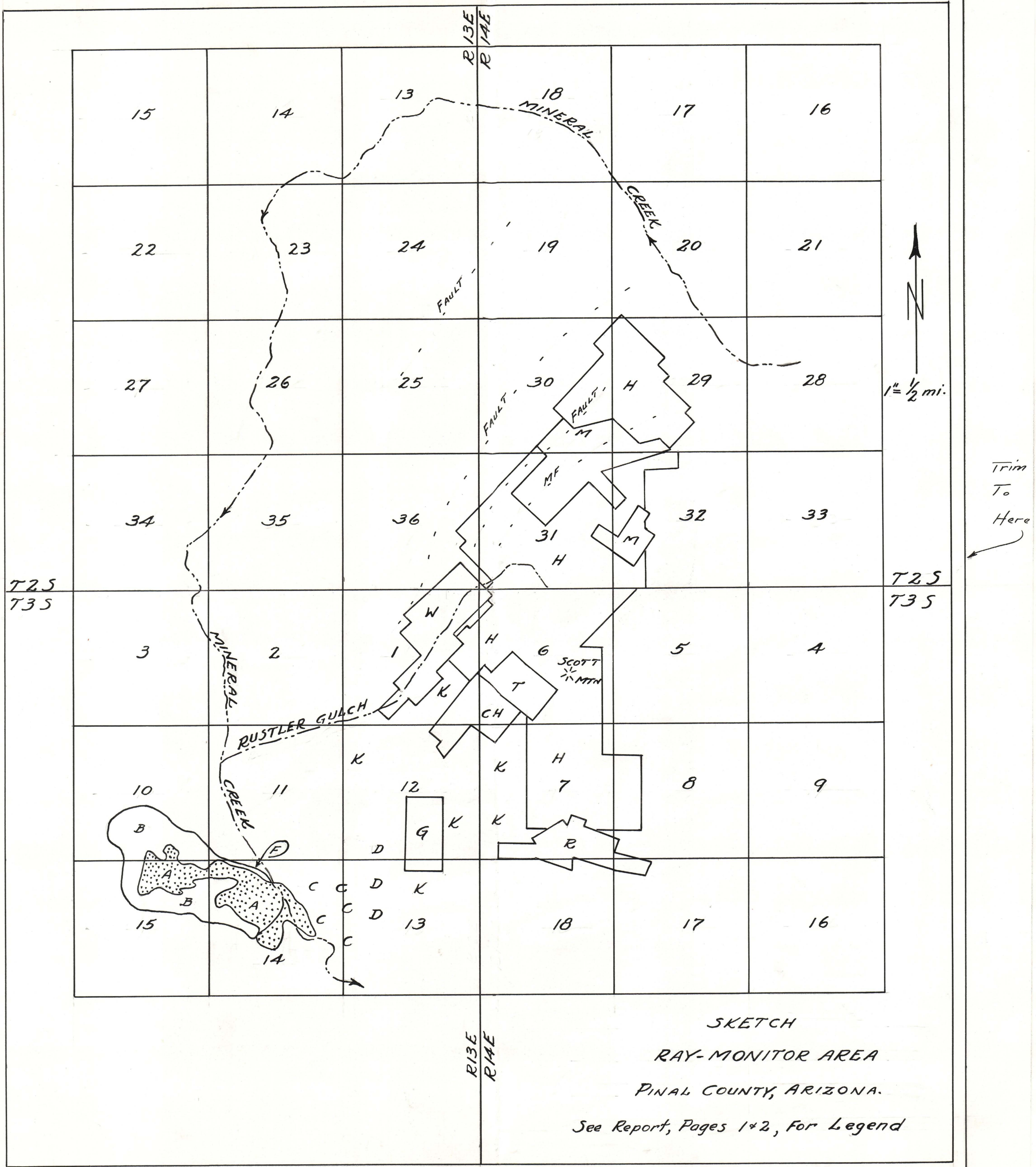


MONITOR MINING CLAIMS
T2 & 3 S. R14E PINAL COUNTY ARIZONA
SCALE 1 IN = 600 FT JAN 22, 1958
DRAWN BY H. J. HIGGEN

RECEIVED
FEB 1 4 1958
E. N. PENNEBAKER

RECEIVED
FEB 14 1958
E. N. PENNEBAKER





SKETCH

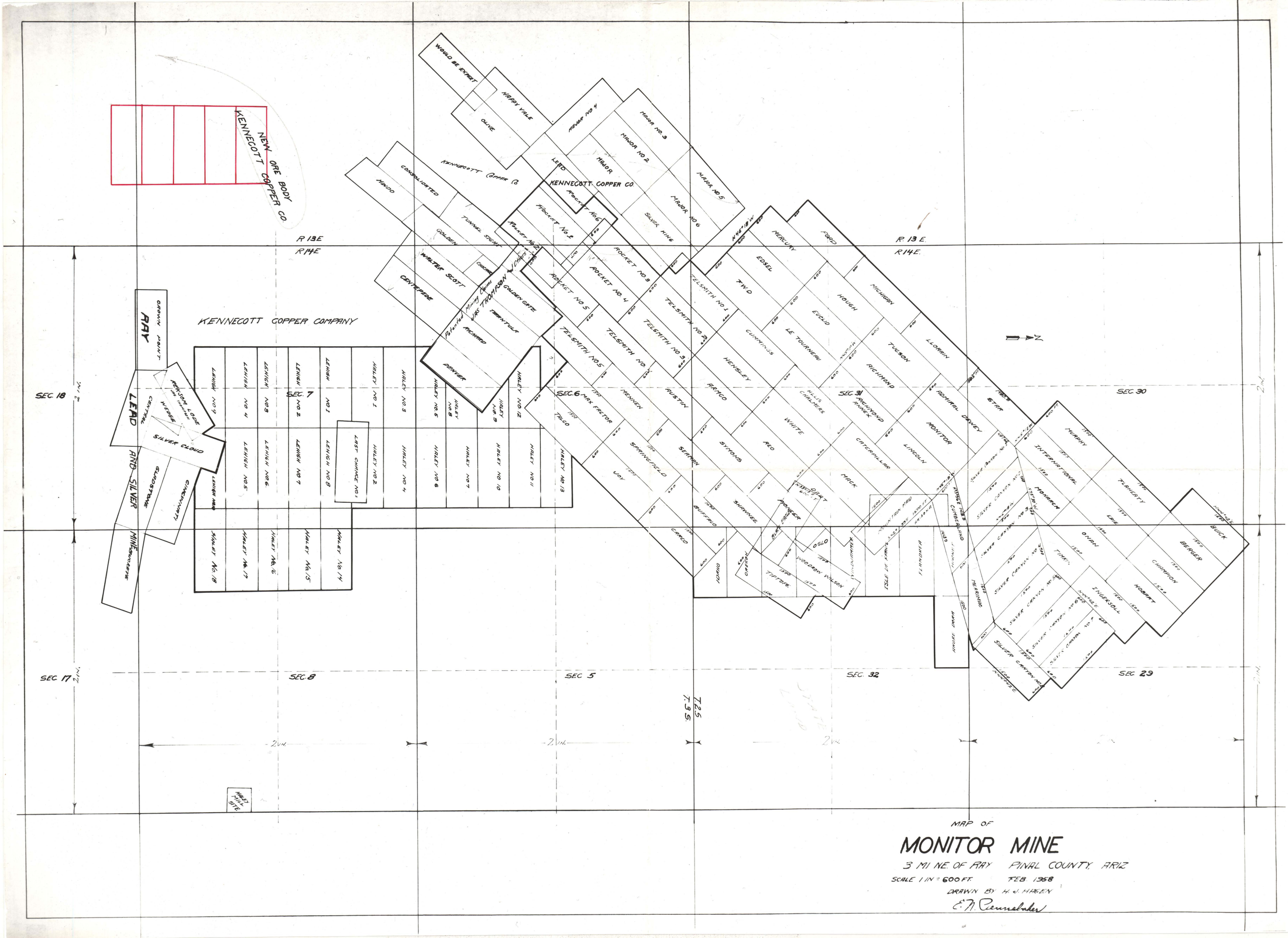
RAY-MONITOR AREA

PINAL COUNTY, ARIZONA.

See Report, Pages 1 & 2, For Legend

RAY CLAIM MAP
E. N. PENNEBAKER
34
35
36
31
32
T2S
T3S
R13E
R14E
3
2
1
6
5
2"
9
10
11
12
7
8
16
15
14
13
18
17
22
23
24
PORTLAND #3
PORTLAND #4
PORTLAND #2
PORTLAND #1
NEW STATE
STANDARD
CURLEY
CURLEY No.1
CLIMAX
HOME STAKE
LIVINGSTON #1
LIVINGSTON
RED HILLS
SCRANTON
BUTTE
LEO WALL
RUSTLER
COMBINATION
CARNATION
MINERAL ZONE NO 2
MINERAL ZONE NO 3
MINERAL ZONE NO 4
MINERAL ZONE NO 5
MINERAL ZONE NO 6
MINERAL ZONE NO 7
MINERAL ZONE NO 8
MINERAL ZONE NO 9
MINERAL ZONE NO 10
MINERAL ZONE NO 12
MINERAL ZONE NO 13
MINERAL ZONE NO 14
MINERAL ZONE NO 15
MINERAL ZONE NO 16
LAWTON
ERA NO 5
HOME STEAD
NELLIE
DACITE
KEYSTONE
COPPER ZONE NO 1
COPPER ZONE NO 2
COPPER ZONE NO 3
COPPER ZONE NO 4
COPPER ZONE NO 5
COPPER ZONE NO 6
COPPER ZONE NO 7
COPPER ZONE NO 8
GRANITE
IBERRI
ERA NO1
ERA NO 2
ERA
EAGLE BRAND
SPARTAN
BLUEBELL
CARRIE NATION
BOSTON
NEW YORK
MARION
CHICAGO
TOM PAINE
CALUMET
BUNKER HILL
ADVENTURE
JUAREZ
BLACK WARRIOR
QUEEN LIL
SLEEPER
NEW YEAR #1
NEW YEAR #3
NEW YEAR #4
NEW YEAR #5
NEW YEAR #6
NEW YEAR #7
NEW YEAR #8
NEW YEAR #9
NEW YEAR NO 1
NEW YEAR NO 2
YANUS
D.L.V.B
PANAMA
KEARSARGE
J.G.
GOOD ENOUGH
TEA POT
FLUX
LAST TURN
MAN TIGER NO 2
WOODS
OWL
SANDOW
HERCULES
GARNASH
TICK
TRIBUNAL
DEPUTY
MEMBER
SENATE
GLADIATOR
SHARKEY
HUMBOLDT
MATHIAS & HALL
WEIGHER
WEDGE
DIVIDEND
SUN
CONSUELO
McKINLEY
HECLA
MONARCH
GENERAL GRANT
TALLIS
CHARLESTOWN
IRON KING
TRUMAN
BUFFALO
NATIVE COPPER
CONTENTION
COLORADO
SATELLITE NO 2
SATELLITE
THOMAS
SOONER
SATURN
VINDICATOR
WEST MINERAL CREEK
MINERAL CREEK
PEARL HANDLE
GLOBE
RAY
RECTOR
ISABELLA
PARSON
EMPEROR
CENTURION
BISHOP
ORION
RAINEY
DIORYTE
MISSING LINK
CLIFFORD
TIBBET
CAIRO
PLUTONIC #1
PLUTONIC #2
PLUTONIC #3
PLUTONIC #4
PLUTONIC #5
PLUTONIC #6
PLUTONIC #7
CARB. KING
CARB. KING #1
CARB. KING #2
CARB. KING #3
CARB. KING #4
CARB. KING #5
DERELICT
YORK
MESA
IDA
COPPER BOTTOM
EMDEN
ALBION
MINERAL
AMANDA
GRENADIER
CANTON
VERMONT
GREEN DRAGON
SULPHIDE #1
SULPHIDE #2
SULPHIDE #3
SULPHIDE #4
SULPHIDE #5
SULPHIDE #6
SULPHIDE #7
SULPHIDE #8
SULPHIDE #9
TUCSON QUEEN
COPPER KING
ALMA
POPE
SPONDULIX
COLORADO
SAMANTHA NO 2
COLORADO NO 3
COLORADO NO 2
RAY SOUTHERN #2
RAY SOUTHERN #3
RAY SOUTHERN #4
SUGAR LOAF
SUNSET 5
SUNSET 4
SUNSET 1
RALPH CON.
CONSOLATION
BLACK HUSSAR
BONANZA
GENEVIEVE
EUREKA
GILA MONSTER
GOSSIN
RAY HEIGHTS
GREAT VIEW
IRON BLOSSOM
CONSOLIDATED
HINDO
GOLDEN
WALTER SCOTT
CENTIPEDE
DENVER
SCOTT MTN
REKSOM
WEDGE
SILVER CLOUD
CINCINNATI
CROWN POINT
CENTRAL
GLADSTONE
BUCKEYE
SAN FRANCISCO
E. N. PENNEBAKER

62+



MAP OF

MONITOR MINE

3 MI NE. OF RAY PINAL COUNTY, ARIZ

SCALE 1 IN = 600 FT. FEB. 1958

DRAWN BY H. J. HAGEN

E. A. Rennebaker

MAP OF
MONITOR MINE
3 MI NE. OF RAY PINAL COUNTY, ARIZ
SCALE 1 IN = 600 FT. FEB. 1958
DRAWN BY H. J. HAGEN
SEC 30
SEC 29
SEC 31
SEC 32
SEC 6
SEC 5
SEC 7
SEC 8
SEC 18
SEC 17
R. 13 E.
R 14 E.
T. 2 S.
T. 3 S.
N
BUICK
BERGER
CHAMPION
HOBART
FLAHERTY
ERIE
ONAN
INGERSOLL
MURPHY
INTERNATIONAL
MONARCH
TIMKIN
SILVER CANYON NO 7
SILVER CANYON NO 6
SILVER CANYON NO 5
SILVER CANYON NO 4
SILVER CANYON NO 3
SILVER CANYON NO 2
SILVER CANYON NO 1
SILVER CANYON NO. 8
MERRIMAC
CUMBERLAND
HORNET
ANORE DORA
FLANDREA
ISLE DE FRANCE
MOUNTAIN MAID
ARIZONA
WINDJAMMER
WOODROW WILSON
OSLO
TIPTOPE
OREGON
IDAHO
STAR
LLORAIN
ADMIRAL DEWEY
MONITOR
LINCOLN
MICHIGAN
TUCSON
RICHMOND
RICHMOND ANNEX
CATERPILLAR
MACK
FORD
HOUGH
EUCLID
LE TOURNEAU
ALLIS CHALMERS
WHITE
DART
PIONEER
BLACK EAGLE
MERCURY
EDSEL
F.W.D
CUMMINGS
HENSLEY
REO
SYMONS
SHAWNEE
TELSMITH NO 1
TELSMITH NO. 2
TELSMITH NO. 3
TELSMITH NO. 4
TELSMITH NO 5
ARMCO
SEAMAN
BUFFALO
CARGO
AUSTIN
SPRINGFIELD
MENNEN
JOY
MAX FACTOR
TALCO
ROCKET NO. 3
ROCKET NO. 4
ROCKET NO 5
MAJOR NO 5
MAJOR NO 6
MAJOR NO. 3
MAJOR NO 2
MAJOR NO 4
MAJOR
SILVER KING
KENNECOTT COPPER CO.
LEAD
HAPPY VALE
OLIVE
WOULD BE EXPERT
GOLDEN GATE
TARANTULA
RICHARD
DENVER
Patented Mining Claims JAS. THOMPSON w/ Others
TUNNEL SIGHT
CHICAGO
GOLDEN
WALTER SCOTT
CENTEPEDE
CONSOLIDATED
HINDO
HALEY NO. 13
HALEY NO 11
HALEY NO. 12
HALEY NO. 9
HALEY NO 10
HALEY NO 7
HALEY NO. 8
HALEY NO. 5
HALEY NO 6
HALEY NO. 3
HALEY NO 4
HALEY NO 1
HALEY NO 2
LAST CHANCE NO. 1
LEHIGH NO. 1
LEHIGH NO 8
LEHIGH NO. 2
LEHIGH NO 7
LEHIGH NO 3
LEHIGH NO. 6.
LEHIGH NO 4
LEHIGH NO. 5
LEHIGH NO 9
LEHIGH NO 10
KENNECOTT COPPER COMPANY
NEW ORE BODY
KENNECOTT COPPER CO.
REKSOM LODE
JAS. THOMPSON
WEDGE
SILVER CLOUD
CINCINNATI
GLADSTONE
CENTRAL
CROWN POINT
RAY
LEAD AND SILVER MINE
BUCKEYE
HALEY MILL SITE