



CONTACT INFORMATION

Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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08/01/88

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: BIG KIMBLE

ALTERNATE NAMES:

ESPERANZA
GOOD HOPE

MOHAVE COUNTY MILS NUMBER: 392A

LOCATION: TOWNSHIP 11 N RANGE 14 W SECTION 34 QUARTER NE
LATITUDE: N 34DEG 14MIN 28SEC LONGITUDE: W 113DEG 44MIN 41SEC
TOPO MAP NAME: ARTILLERY PEAK - 15 MIN

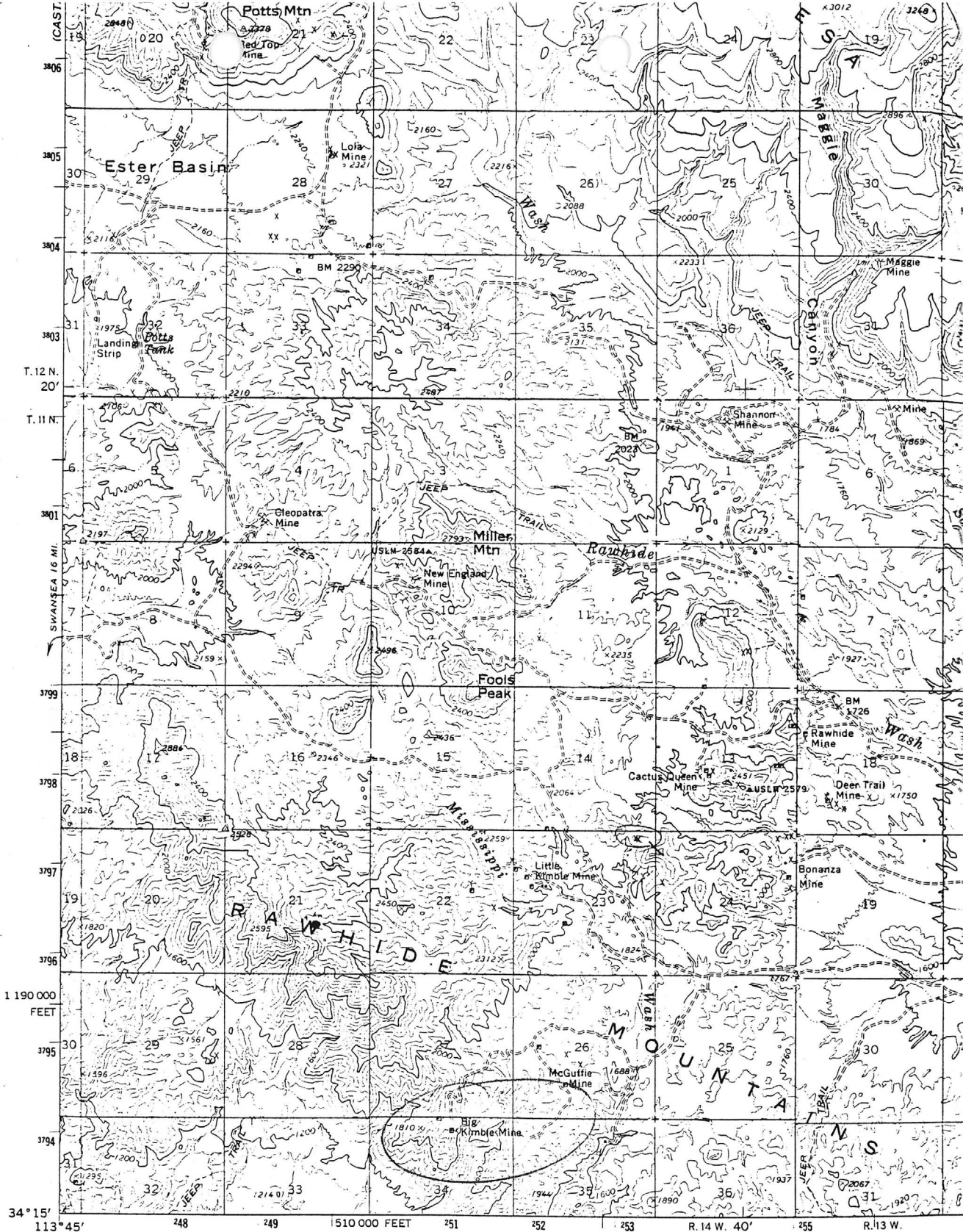
CURRENT STATUS: UNKNOWN

COMMODITY:

GOLD
COPPER
COPPER OXIDE
SILVER

BIBLIOGRAPHY:

ADMMR BIG KIMBLE FILE
AZ. STATE MINE INSP. ANL RPT P 4, 1960



(SWANSEA)
3252 III

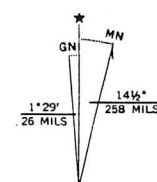
Mapped, edited, and published by the Geological Survey

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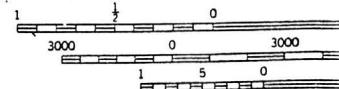
Topography by photogrammetric methods from aerial photographs taken 1964. Field checked 1966

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

Blue hatching indicates areas to be submerged by Alamo Reservoir at elevation 1070. Areas covered by dashed light-blue pattern are subject to controlled inundation



UTM GRID AND 1966 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET.



DO

THIS MAP IS
FOR SALE BY U.S. GEOLOGICAL
A FOLDER DESCRIBING

(F)

Name of Mine or Prospect Big Kimble	Township 11N	Range 14W	Section 34abb	Priority C
Principal Minerals: Manganese Oxides	1:250,000 Quad Prescott		7.5' - 15' Quad Artillery Peak	
Associated Minerals:	District Artillery Mtns.		Principal Product Manganese	
Type of Operation:	County Mohave	State AZ	Type of Deposit Sedimentary host	
Ownership or Controlling Interest: Consult Current USBLM mining claim records				
Access: Vehicle access is difficult due to poor road conditions; consult topographic map for existing jeep trails.				
Structural Control or Geological Association: <p>"Older Precambrian Age, Schist."¹</p> <p>"The Big Kimble mine occurs along a northwest striking fault in mylonitic gneiss, structurally below the Rawhide Mountains detachment fault."²</p>				
Age of Mineralization:				
Production History		Geochemical Analyses		
References				
<p>1) Wilson and M-ore (1959), Geologic map</p> <p>2) Shackelford (1976) Geologic map.</p>				

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

September 26, 1958

To the Owner or Operator of the Arizona Mining Property named below:

Esperanza

(Mohave County)

copper

(Property)

(ore)



h we would like to have

form with as complete detail
ay returns, shipment returns
d which might interest a

Mr. Charles E. Brown

P.O. Box 582

Kingman, Arizona

Declassed

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

September 26, 1958

To the Owner or Operator of the Arizona Mining Property named below:

Esperanza	(Mohave County)	copper
(Property)		(ore)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

NAME OF MINE: *Esperanza*

COUNTY: *Mohave*

DISTRICT:

METALS: *Cu*

OPERATOR AND ADDRESS:

MINE STATUS

DATE: *Chas. E. Brown, T Box*
12/44 *582, Kingman*

DATE: *12/44* *Developing*
1/45 *Closed*

ESPERANZA *(file)*

Cu, Au

Mohave

Sec 34
8 - 13

T 11 N, R 14 W

Chas. E. Brown, Box 582, Kingman

'43

Outcrop & Fault
showing on opposite
mtn. side

Trail to Phipps Camp

Trail 1 mile to Phipps camp road

Outcrop
Strike $N35^{\circ}-40^{\circ}W$
Dip $65^{\circ}-70^{\circ}N.E.$

Ore piles
Sample
No. 5716

50' Shaft (inaccessible)
150' Trench

Upper Tunnel

Proposed Access Road - 1/4 mile
Approx. Grade - 18%

Trail

To Cuts & Pits

Gulch

Trail

? Cuts

Trail

Gulch

Trail

Shaft
(caved)

Ore pile

Middle Tunnel
Samples No. 5717
and 5733

Lower Tunnel
Samples No. 5731
and 5732

Ore Pile
Sample No. 5734

SKETCH MAP

ESPERANZA MINE — MOHAVE COUNTY, ARIZ.

ACCESS ROAD NO. 170

Mine Exam No. 14108

May 27, 1957

ESPERANZA GROUP

MOHAVE COUNTY
OWENS DIST.

This property idle.

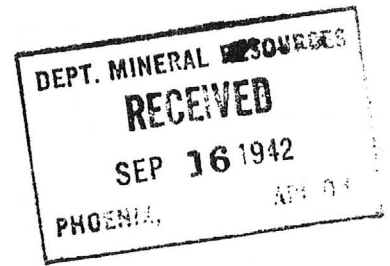
MARK GEMMILL

Sec 34 T 11 N. R 14 W

also called

Good Hope & Big Knoll

Washington, D.C.
Sept. 14, 1942



SUBJECT: Access Road
 ' Esperanza mine
 Charles Stewart

Hasting's memo on subject matter is at hand.

Either I misunderstood Stewart or we are talking about two separate things, as I expect we are.

My understanding was that Stewart, entirely separate from the Alamo Crossing project, has $1\frac{1}{2}$ miles of road near his property to complete, and it was this piece which I recommended his putting in on his loan application.

I warned him that the RFC does not look auspiciously upon an application where a large part of the money is devoted to road work or equipment, so he could not possibly have misunderstood me and thought I was talking about the district access road project.

I gathered from his conversation that there was some difference of opinion as to the location of the district access road, but he did not seem to be so very concerned about the routes, I thought, as long as something is done.

Are you getting any action on these access roads under the Hayden amendment? Other than just talk and "study"?

Bill
Bill Broadgate

June 21, 1944

Mr. P. J. Schiele
Grazing Service
504 Heard Building
Phoenix, Arizona

Dear Mr. Schiele:

I am enclosing two copies of report
on the Esperanza Group by Elgin B. Holt as
requested by you.

Yours very truly,

J. S. Coupal

JSC:LP
Enc.

June 2, 1942

MEMORANDUM

TO: Elgin B. Holt

FROM: J. S. Coupal

We have had note that Charles E. Steward, or Stewart, St. Louis, Missouri, is reported to be opening up the Esperanza mining property of the Good Hope group in Mojave County.

Please get the correct name and give the location of property, who is in charge, and nay other pertinent information.

September 11, 1942

MEMORANDUM

STEWART'S ESPERANZA MINE

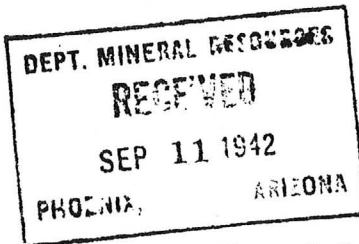
TO: W. C. Broadgate
FROM: Earl F. Hastings

We note in your memorandum on this subject that Stewart is considering including the cost of his access road in his loan application rather than utilize the mine access road fund. This might possibly cause some confusion as the Alamo Crossing project is now being intensely studied by the Bureau of Grazing, as well as all other governmental agencies directly concerned.

Stewart, of course, prefers a crossing in the Planet section, however, a road in that area would serve only a portion of the properties, while one utilizing the Alamo Crossing would serve all of them with equal results.

We therefore feel that the inclusion of a road allotment in his application would duplicate work which has already been done. If the Alamo project is completed as planned, there will no doubt be a very short side road required to service his property which might be allowable in his application. However, to build an entire road as he wishes would cost more than all of the underground work that he intends to do.

We hope that he will not push his Planet Crossing project too far because if there appears to be a difference of opinion in the area as to which route should be used, then there would be a definite delay in getting the construction done.



Washington, D.C.
Sept. 9, 1942

SUBJECT: Class B Loans
Charles E. Stewart

Stewart lunched with me this noon and spent most of the afternoon considering his various problems.

He will undoubtedly call for assistance from the Department to get up a Class B application for the Esperanza Group, Pimosa Mining District, Mohave County.

As you will note ~~from~~ from the letter enclosed, Hubert Smith referred him here.

Stewart thought he might have wanted an access road built to his mine, but we decided that as long as he was to get a mine loan, it would save time to put the road work into the same application and save going by two routes. Furthermore, I don't know as yet what the experience is with time on the access road applications... I am a little afraid they may go slowly.

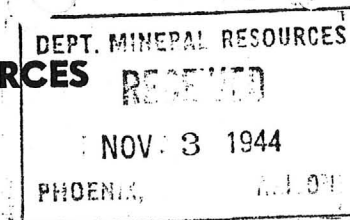
I also got Stewart information on fluorspar and graphite.

Bill
Bill Broadgate

To: Office of Defense Transportation,
328 Security Bldg.
Phoenix, Arizona.

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON
ACTIVE MINING PROJECT



Filing Information

Date.....Nov. 1, 1944

Name of Mine.....Esperanza

Owner or Operator.....Chas. E. Brown,

Address.....P. O. Box 582, Kingman, Ariz.

Mine Location.....Mohave County, 100 miles south of Kingman.

File System.....

File No.....

This chart to be used for gallons of gasoline required per month.

PRESENT OPERATIONS: (check X)

Production.....; Development...X...; Financing.....; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify).....

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months.....None

Approx. present rate per 3 months.....None

Anticipated rate next 3 months.....150

If in distant future check (X) here.....

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars
Light or Service Trucks1.....600 miles.....40.....
Ore Hauling Trucks
Compressors
Other Mine or Mill Eqpt.

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

.....Copper.....

REMARKS:

.....Applicant is starting work again on the Esperanza mine, which he has had under lease for the last 7 years. Has been laid up for last three years due to a mine accident.

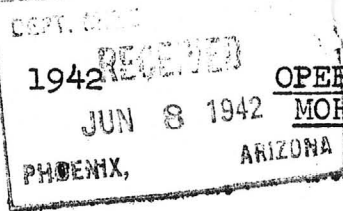
.....He is filing application to O. D. T., Phoenix, for a Certificate of War Necessity. I recommend that this certificate be granted.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By.....

Elgin B. Holt, Field Engineer.

June 3, 1942



OPERATING MINES
MOHAVE COUNTY

To: J. S. Coupal
From: Elgin B. Holt

NOT OPERATING ON THIS DATE

ESPERANZA GROUP (8 claims): Located in Owens Mining District, Mohave County, Arizona, six miles northwest of Alamo Crossing. Owned by Good Hope Mining and Exploration Company, which company is controlled by a Mrs. Douglas of Long Beach, Calif.

NOTE: This property has been held under lease and option for a number of years by Chas. E. Brown, P. O. Box 582, Kingman, Arizona, about the only work requirement being that Brown keep up the assessment work in order to hold option. About 10 months ago, Brown was injured in a mine accident and was laid up in the Veterans Hospital, Prescott, until recently. I saw Brown just before I left Kingman and he informed me that Mrs. Douglas had wrongfully given a lease and option to a man by the name of Stewart; but that he Brown intended to enter legal proceedings in order to validate his option.

REPORT: You have a report by myself in your files concerning this property.

MEMORANDUM BY COUPAL TO ~~XXXX~~ E. B. H.: I note your memorandum of June 2, 1942, stating that a Mr. Charles E. Steward, or Stewart, of St. Louis, Mo., is reported to have an option on the above property and that he is starting work. When at Alamo and vicinity, I made enquiries about operating mines in this region, but no one mentioned the said property; so do not think it is operating now. Your memo was not received until I reached Parker; but will check later on and when and if this mine starts up, I will furnish you data requested.

6/14/42

October 31, 1942

MEMORANDUM

Fisher-Stewart Mining Co.

Chas. E. Stewart of Bouse

Roy R. Fisher, c/o Valeceke State Bank of Detroit, Detroit, Mich.

Have taken over properties in Yuma and Mohave County near Bill Williams
River north of Bouse.

Leases on

Planet Mine - working with Kaiser on iron

Townsend Group (Silverfield properties)

copper, gold, silver, lead

Doyle Manganese

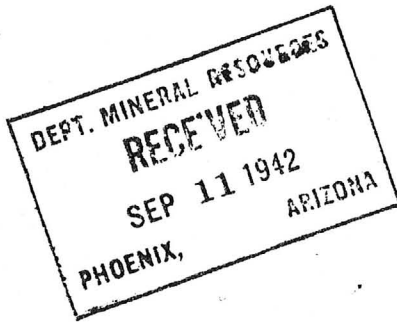
Reynolds Group - Copper Gold, Silver, Lead

Mildred Group - " " " "

Esperanza (or Good Hope) Group (Big Kumble)

Fisher enroute to Washington trying for short cut on R.F.C. on Metals
Reserve to finance.

J. HUBERT SMITH
STATE SENATOR
KINGMAN, ARIZONA



Arizona State Senate

FIFTEENTH LEGISLATURE

Phoenix, Arizona

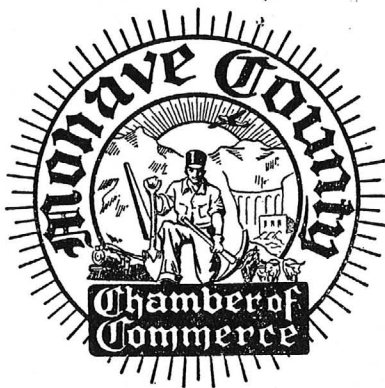


This will introduce the bearer, CHARLES E. STEWART, with whom the undersigned is acquainted for some time past and who is, to writer's knowledge active and interested in mining.

My connection with this party has been pleasant and he has, at all times, proved himself of integrity and worth and I would appreciate any courtesies and favors shown as those shown to myself.

Dated at Kingman, Arizona, this 31 day of August, 1942.

TO: Wm. C. Broadgate,
With Ariz. Dept. of Min. Resource,
Hotel Harrington,
11th & E. Streets,
WASHINGTON, D. C.



KINGMAN, ARIZONA

3,350 FEET ABOVE SEA LEVEL

MINES:

\$100,000,000 PRODUCTION

FEDERAL PROJECTS:

BOULDER DAM

DAVIS DAM

BRIDGE CANYON DAM

WAR PROJECTS:

\$50,000,000

LIVESTOCK:

CATTLE

HORSES

SHEEP

GOATS

HOGS

METALS:

GOLD

SILVER

LEAD

ZINC

COPPER

TUNGSTEN

MOLYBDENUM

FELDSPAR

INDIUM

VANADIUM

HUALPAI MOUNTAIN PARK

MILE HIGH

IN THE PINES

GOOD ROAD

Cooperation Will Win The War

LIKEWISE BUILD MOHAVE COUNTY

September 8, 1942.

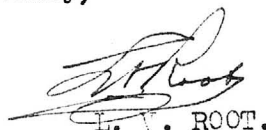
Mr. Chaires F. Willis, Chairman,
Board of Governors,
Department of Mineral Resources,
413 Home Builders Building,
Phoenix, Arizona.

Dear Charlie:-

I have made several inquiries concerning Charles E. Stewart. My own acquaintance with him was very casual, but he impressed me possessing a considerable knowledge of the mining industry, talking the lingo in good form. Another thing that impressed me was that he was willing and did pay for any service he asked for.

His Kingman address was probably just a temporary one for the occasion.

Yours very truly,


L. V. ROOT.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ESPERANZA GROUP (8 claims).

Date Dec. 13, 1939.

District Owens, Mohave Co., Ariz.

Engineer Elgin B. Holt

Subject:

SYNOPSIS REPORT

Owner: ✓ Good Hope Mining & Exp. Co., Long Beach, California.
Lessor: ✓ Chas. E. Brown, P. O. Box 582, Kingman, Arizona.

Location: Property located in Owens Mining District, Mohave County, Arizona, 9 miles west of Alamo Crossing. It is reached by country road, over which ore can be hauled by truck, from Aguila, a station on the Santa Fe R. R., 30 miles distant from property. A new survey of Highway 93, now being made from Aguila to Kingman, passes within 3 or 4 miles from property.

Topography: Mine is situated in a hilly country on the southwest slope of a desert mountain and about two miles from the Williams River. Elevation above sea level of apex of vein where it crosses a mountain ridge is 1910 feet.

Geology: The country rock surrounding property consists of granite-gneiss complex of pre-Cambrian origin.

Veins: Three prominent veins traverse property; main vein, on which development work is located, is traceable for about 4,000 feet.

Vein Minerals: Gangue is mainly quartz, with streaks of calcite and some small amounts of Limonite. The ore is Crysocholla, Malachite and oxides of copper, associated with free gold, which can be obtained by panning.

Main Vein: The strike of this vein is N. 40 deg. West; dip 62 deg. N.E. Width ranges from 18 inches to 6 feet; but in addition there is a mineralized streak of brecciated selvage matter on hanging wall about two feet in thickness. Also the foot wall rock material is broken and also mineralized, showing copper stains.

Values: Assays taken by Willard Mallery, Mining Geologist, some years ago, ran from \$5.00 to \$50.00 gold per ton, plus from 3% to 15% copper. Also samples taken by R. C. Ferguson, of Kingman, 1939, ranged from \$6.30 to \$47.25 gold and less than one ounce silver per ton, plus from 1.8% to 5.6% copper, across vein widths ranging from 10 inches to 4 feet.

Development Work: Consists of a shaft 50 feet deep on main vein where it crosses apex of ridge, at an elevation above sea level of 1910 feet; Tunnel No. 1 on vein, started at bottom of canyon at an elevation of 1525 feet, has a length of 185 feet, vein width being 4 feet ~~wide~~, and assaying from \$5.00 to \$12.00 gold, per Mr. Brown; Tunnel No. 2, 230 feet in length on vein, was started on side hill at an elevation of 1630 feet. This latter tunnel shows best average assays of all other workings noted in gold, with very little copper showing. As this vein has been subjected to long ages of weathering and leaching, thus robbing the surface ores of copper values to a considerable depth, deeper work should result in the uncovering of secondary enrichments of copper ore, such as chalcocite, bornite and chalcopyrite, retaining the gold values found in the oxidized surface ores. This property seems to have merit.

R E P O R T
ON THE
ESPERANZA GROUP OF MINING CLAIMS

By WILLARD MALLERY
Mining Geologist.

Mr. Leon A. Fuller,
Los Angeles,
California.

Dear Sir:-

Pursuant to your instructions and in behalf of yourself and associates, I hand you herewith a report, giving the results of my examination of the Esperanza Group of Mining Claims, situated in the Williams mountains, Owens Mining District, Mohave County, Arizona.

PROPERTY:

The property consists of seven full mining claims, an area approximating 140 acres in extent.

GENERAL DESCRIPTION:

The locality is best reached via Bouse, Arizona, a station on the Parker Cut-off of the Santa Fe Railroad. From Bouse, a branch line known as the Arizona and Swansea Railroad extends 21 miles northeastward to Swansea. The Swansea Post-office is the one nearest to the property. From Claire Siding, 4 miles south of Swansea, a good wagon road leads 11 miles northeastward to the Brooks Ranch on the Bill Williams River. From the Brooks Ranch a trail crossing the river leads 3 miles northeast to the property.

Comparatively good transportation facilities in conjunction with natural conditions, gives this section operating advantages not enjoyed by most arid regions of the southwest.

The country is mountainous but not rugged. Wagon roads can be made to most points desired at small expense.

The Bill Williams River is a large tributary of the Colorado River. From 3 to 6 months during the winter rainy season, there is a large flow of surface-water in this river and in July and August freshets are liable to come, but the river-bed is dry and can be crossed by teams for from 9 to 10 months of the year. In the bottom lands the sub-flow is from 8 to 20 feet below the surface. An inexhaustable supply of water can be obtained at all times from wells tapping this source.

TOPOGRAPHY:

The property is situated on the southwest slope of one of the most prominent ranges of the Williams Mountains. The elevation within the property lines ranges from 1500 feet to 2000 feet. The drainage is to the southwest, over a surface that descends abruptly and then with decreasing declivity to the Bill Williams River. From the property to the river at the nearest point the distance is 2 miles. The elevation of the river at this point is 1100 feet.

GEOLOGY:

The mountain range in which the property is situated is mainly made up of granite-gneiss. This rock shows prominent schistose structure but is more massive than most rocks of the same general character in this region. It still retains to a notable degree the crystalline texture of the granitic rock from which it was derived and because of its less altered character it has offered a maximum resistance to erosional agencies. This massive structure is also responsible for the integrity with which this formation has preserved the profound cross-fractures which are now occupied by the fissure-veins in this property.

Basic phases, complimentary to the magma that formed the original granitic rock, were intruded into the granite before it was altered into gneiss. The basic rocks thus formed are now represented by amphibolite and greenstone schists, inter-

terminated with the gneiss. The whole resulting in a gneiss-schist complex which represents a portion of the pre-Cambrian Gneiss-Schist Complex, the basal formation throughout this entire region.

At most of the mines and prospects in northern Yuma and Southern Mohave Counties some phase of the Gneiss-Schist Complex forms the country rock.

VEINS:

The claims of this group are so located as to cover the outcrops of three prominent veins. These veins belong to the true-fissure type and possess exceptional continuity.

The country rock of all these veins is granite-gneiss with intertimated amphibole and greenstone schists. The planes of foliation in the gneiss, dip 10° to 20° southwest. The veins are quartz-filled fissures and they cut the structural planes of the country rock at a high angle.

Main Vein

The main vein extends through the Esperanza #1 and #2 claims. It was followed by me over an unbroken outcrop for a distance of 3500 feet and is probably traceable considerably further. The strike is north 40° west and the dip is 45° northeast. The width ranges from 18 inches to 6 feet. Along the walls occur slickensided surfaces and breccia, composed of quartz and country rock, which show much movement and crushing along the plain of the vein subsequent to its formation.

Vein Minerals

Quartz is the principal gangue mineral, with occasional stringers of calcite. Limonite is also present in small amounts. The ore minerals are Chrysocolla, Malachite and Cuprite, with which free gold is associated.

Aside from shallow surface openings no development work has been done on this vein. Copper ores carrying free gold occur associated with the quartz throughout its entire length.

The outcrop does not show ore continuously but ore-streaks and ore-shoots are of frequent occurrence, the latter filling the entire width of the vein and extending along the strike for distances ranging from 10 feet to 100 feet.

Vein #2.

This vein lies 600 feet southwest and parallel to the main vein and has the same strike and dip. The outcrop of this vein shows on the surface for a distance of 2000 feet. (See plan of claims; closed lines represent outcrops examined; broken lines probable extensions).

This vein has the same characteristics as the main vein, and shows the same association of free gold with copper carbonates and oxides. The outcrops do not show such continuous mineralization as the main vein.

Vein #3.

This vein lies 1200 feet southwest of the main vein and 600 feet southwest of vein #2. It has the same strike and direction of dip, but the dip is steeper about 60° northeast. It is traceable on the surface for 900 feet and probably extends much further. On the western extension the outcrop is obscured by overburden. ^{the vein} It ranges from 8 inches to 2 feet in width and, like the other veins, is a quartz-filled fissure in granite-gneiss. Carrying free gold associated with carbonates and oxides of copper. Iron oxide is present in larger amounts than in the other two veins and the ore carries higher values in gold.

Summary.

My examination of the property was mainly of a geological nature and no general ore samples were taken; therefore, no attempt is made to estimate average ore-values. In fact, sampl-

ing which would have a concrete value, cannot be made upon this property in its present undeveloped state.

Samples showing the general distribution of gold associated with copper were taken and tested by me and showed values in gold ranging from \$5.00 to \$50.00 per ton, and copper contents ranging from 3% to 15%. A sample taken from the ore-exposure on the western opening in Vein #3 gave a return of \$90.00 per ton in gold and 19% copper.

The features of primary importance and those upon which I based my recommendation for development work on the veins, are as follows:-

First:-- Operating advantages, which, as will be seen by reviewing what is said under the heading of General Description, are much better than those encountered in most arid mining regions of the southwest.

Second:-- The exceptional continuity of the veins; and the assurance that the main vein and probably veins #2 and #3 will persist and can be followed to any depth practicable in mining.

Third:-- The extensive mineralization of the veins; as show by ore-exposures along the outcrops: the almost continuous copper-mineralization of the Main Vein and the prevalence of free gold associated with the copper minerals.

Fourth:-- The great age of the veins; and the fact that they have been subjected to long periods of leaching by descending surface-waters. Several cycles of re-concentration of values of the primary ore minerals (presumably Pyrite and Chalcopyrite) have occurred. Conditions indicate that the surface-ores now exposed are the result of such concentration at a pre-existing water-level and they in turn have been robbed of a portion of their values by descending surface-waters.

In all probability this re-concentration of values has reached its maximum at the present ground-water level as has proven to be the case in so many arid mining regions of the southwest.

Pre-existing water-levels at which such secondary enrichment has occurred may be encountered above and possibly below the present one.

It must therefore be appreciated that the entire vertical extension of these veins, down to and for some distance below the present water-levels afford promising horizons in which to prospect for ore-bodies; this applies especially to the main vein.

From such evidence as is available, I estimate that the water-level will be encountered in these veins; somewhere between 250 feet to 300 feet below the lowest points on their outcrops.

Development.

The Main Vein is the one that most merits development.

Adit.

There is an excellent tunnel-site on this vein where it crosses the gulch near the west-end line of Esperanza #3 claim. A drift southeast should be driven on the vein from this point. It will give a depth of 400 feet on the incline of the vein in a horizontal distance of 700 feet. This drift will show the character and grade of the ore in the vein above the water-level and mining can be carried on through this adit, as there will be extensive backs in the vein above this level. Upraises and winzes can be projected from this adit-level, if such projections are indicated.

Shaft.

An incline shaft following the vein should be started at a point near the one from which the adit is started and driven to water-level. Drifts from the bottom of this shaft should be driven on both extensions of the vein. Surface indications favor the southeast extension of the vein from this drifting, but conditions encountered in the adit-drift and shaft will influence the work projected from the bottom of the shaft.

Vein #2.

Development on this vein is not considered of vital importance during initial operations. The work projected on the main vein and on vein #3 will not only show what to expect from development on this vein, but will also be of value in projecting such work.

Vein #3.

A drift on this vein starting where it is exposed in the gulch near the west end-line of Esperanza #4 claim, should be driven south-east for 200 or 300 feet. This drift will give a depth on the vein of 150 feet in a horizontal distance of 300 feet and will develop substantial backs.

In the initial operations it may not be possible to undertake all the work projected.

The drift on the Main vein is the work that should be undertaken first as only a small amount of equipment will be required to advance this drift. Then as soon as possible the shaft should be sunk. The sinking of the shaft and drifting from bottom of same is the most vital work in a plan of substantial mine development.

The drift on Vein #3 is of less importance than that projected on the Main vein, but development on this vein promises so well that it is included in the first work projected and being a smaller undertaking it may with reason take precedence over the work projected on the Main Vein.

CONCLUSION.

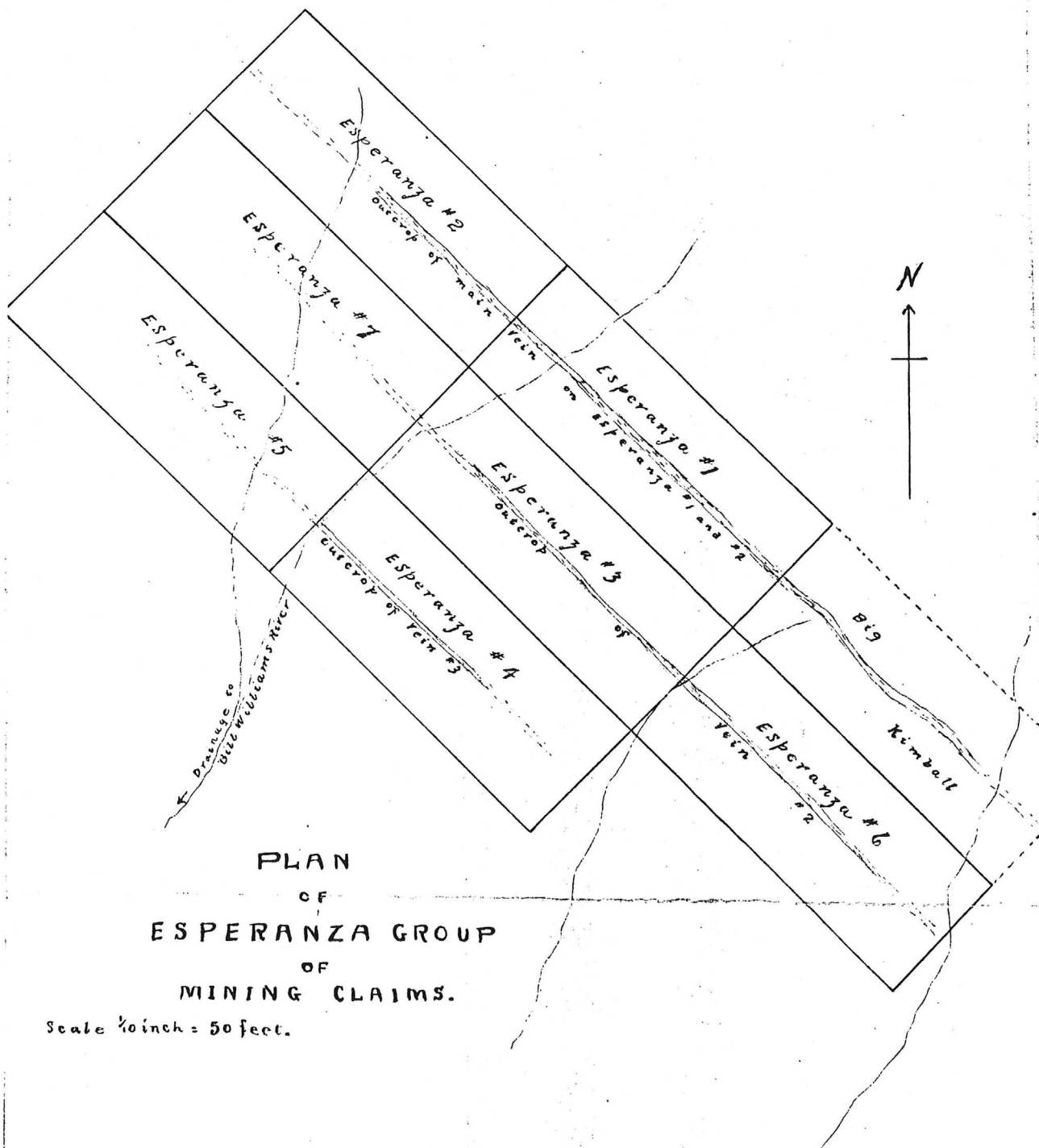
The question of primary importance in regard to an undeveloped mining property of this nature is-- Does an intelligent, unbiased study of surface conditions give promise for permanent mine development? This question is answered in the affirmative. As regards the extent of initial development,

the property unquestionably merits the development work recommended herein.

This report is meant to meet the questions that naturally arise prior to the commencement of development work, that is, it deals with geological, physical and to some extent with economic conditions. When the work takes definite shape, I will be pleased to supplement this report with one dealing with-- transportation, mining methods, equipment, ore treatment, costs and other mining details.

Yours respectfully,

Willard Mallory



PLAN
OF
ESPERANZA GROUP
OF
MINING CLAIMS.

Scale 1/4 inch = 50 feet.