



CONTACT INFORMATION

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Arizona Department of Mines and Mineral Resources Mining Collection

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03/20/90

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: KEYSTONE

ALTERNATE NAMES:

MOHAVE COUNTY MILS NUMBER: 124D

LOCATION: TOWNSHIP 23 N RANGE 18 W SECTION 13 QUARTER SE
LATITUDE: N 35DEG 22MIN 38SEC LONGITUDE: W 114DEG 09MIN 09SEC
TOPO MAP NAME: CHLORIDE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER
GOLD LODE
COPPER SULFIDE
LEAD SULFIDE
ZINC SULFIDE
URANIUM
VANADIUM
IRON SULFIDE

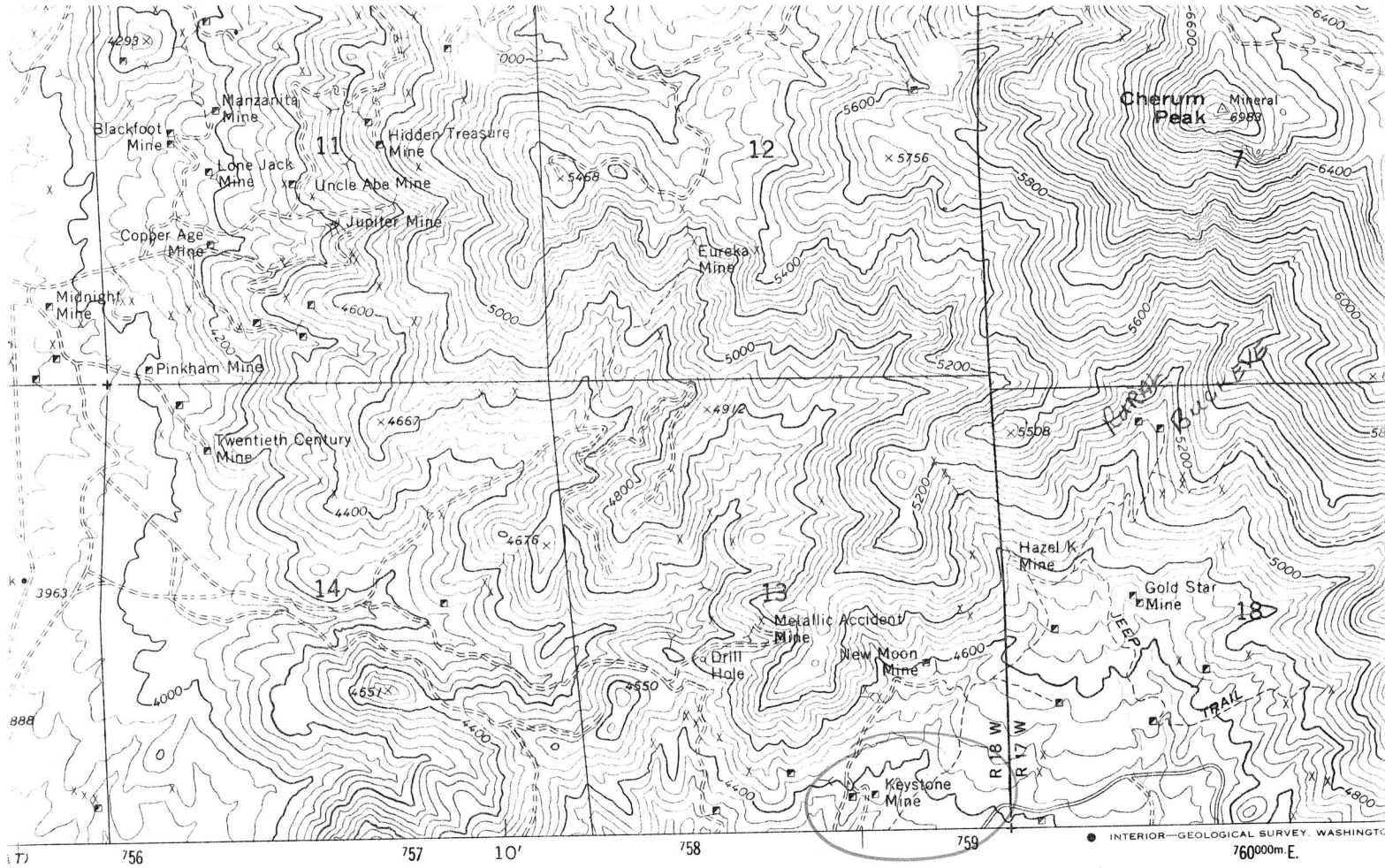
BIBLIOGRAPHY:

ADMMR KEYSTONE MINE FILE
ADMMR MOHAVE CUSTOM MILL PROJECT
SCHRADER, F.C. "MIN. DPSTS OF CRBT RNGE, BLCK
MTSN, GRND WSH CLFS, AZ" USGS BULL 340 P 65
SCHRADER, F.C "MIN. DPSTS OF CRBT RNGE, BLCK
MTN, GRND WSH CLFS,AZ" USGS BULL 397, P 81-2
EVAL. OF MIN. RES. OF HUALAPAI INDIANS, VOL.I
1964, P. 216-220
AZ MNG JNL, AUG. 1920, P. 13
ELSING, M.J., ET AL "AZ METAL PRODUCTION" AZB
M BULL 140, P. 95; 1936
DINGS, M., "WALLAPAI MINING DIST. MOH CO. AZ"
USGS BULL 978-E, P. 147, 156-157; 1952
WEED'S MINES HANDBOOK VOL. XIII, P. 368
AZ. STATE MINE INSP. ANL RPT., P. 5; 1940
BLM AZ. MIN. CLAIM FILE NO. 13342

CONTINUED ON NEXT PAGE

CONTINUATION OF KEYSTONE

ADMMR A.L. FLAGG VANADIUM FILES, BOOK V
A.E.C PRELIM. RECONN RPT. 172-485, P. 51
MALACH, R., "MOHAVE CO. MINES", P. 24; 1977
ADMMR O'BRIEN & GOLDEN GEM FILE (COLVO FILE)



4000
W
756 757 10' 758 759
1 MILE
4000 5000 6000 7000 FEET
1 KILOMETER
VAL 40 FEET
SEA LEVEL

Keystone
T23N R18W Sec. 13 SE



QUADRANGLE LOCATION

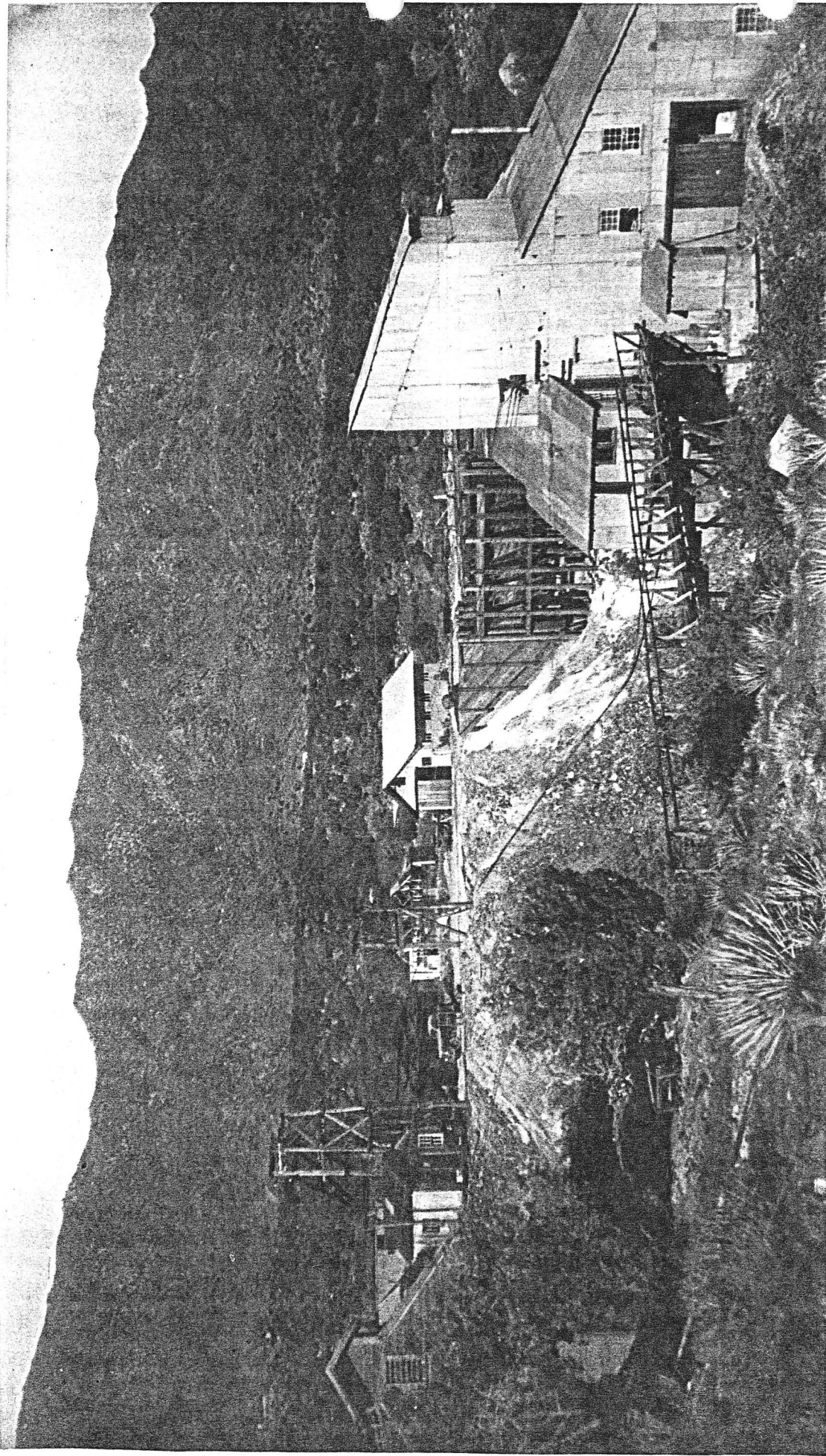
ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light-duty
Unimproved
U.S. Route

MAP ACCURACY STANDARDS
COLORADO 80225, OR WASHINGTON, D. C. 20242
NO SYMBOLS IS AVAILABLE ON REQUEST

CHLO
NW/4 CHLOF
N3522.5

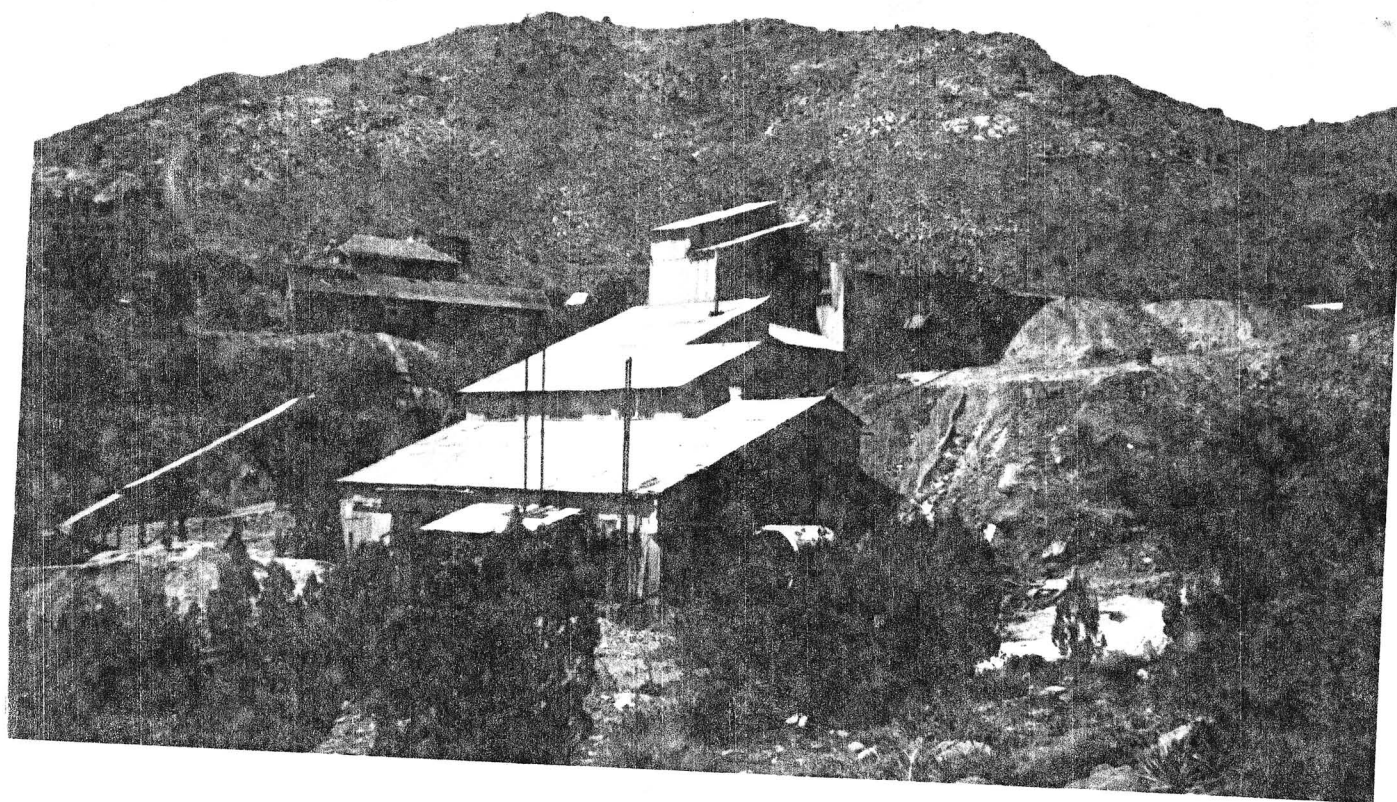
AMS 315A

Chloride 7.5'



A-100-6 KEYSTONE MILL

C- MID-1940s



Keystone Mill where ore from Summit and Alpha mines is milled.

ORIGINAL PHOTO IN SUMMIT MINE FILE

DEPARTMENT OF MINERAL RESOURCES.

News Items

Date 5/12/40

Mine KEYSTONE MINE & MILL

Location KINGMAN

Owner

Address SOLD BY R.A. WARD
OF PRESCOTT.

Operating Co.

Address DOES NOT WANT NAMES
OF PURCHASERS MADE

Pres. PUBLIC.

Genl. Mgr.

Mine Supt. CLOSED DOWN MILL

Mill Supt. & GOING AHEAD WITH

Principal Metals ACTIVE DEVELOPMENT

Men Employed

Production Rate GOLD-SILVER
LEAD-ZINC.

Mill, Type & Capacity

Power, Amt. & Type

Signed

JSC

(Over)

NAME OF MINE: KEYSTONE MILL

OPERATOR AND ADDRESS:

DATE:

9/44

W. L. Witt, Box 1150,
Las Vegas, Nevada

Mineral Park Milling Co.-
P. O. Flatnick, Box 4,
Chloride

12/44

COUNTY: Mohave

DISTRICT:

METALS: pb-zn-cu

MINE STATUS

DATE:

9/44

Reconditioning mill.
Milling

8/45

KEYSTONE MINE & MILL

Mohave

NJN Mine Report 4/14/83: (PAC Mine & Millsite file) Dump material from the Tennessee-Schuylkill, Payroll, Keystone and Ark Mines is being crushed and screened at the Tennessee-Schuylkill dump site. It is then trucked to the PAC Millsite where it is ground, ~~crushed~~^{classified} by a cyclone, jigged, tabled and floated, producing various sulfide concentrates containing galena, sphalerite, arsenopyrite, pyrite, silver and gold. Heads are averaging .025 oz Au/ton. Most gold values are being caught in the jigs with the table and float cells making lead and zinc sulfide concentrate. Lee Mining Corporation, P.O. Box 3849, Kingman, Arizona 86402 is the contractor for the current operators, Mountain States Resources of Lakewood, Colorado.

RH

NAME: KEYSTONE

Chloride $n\frac{1}{2}$

COUNTY: MOHAVE

T23 N

R 18 W

SEC. 13

Elev. 4390

4375 ^{orig: 750}

SE $\frac{1}{4}$

DISTRICT: WALLAPAI

MINERAL PARK

Mineralization: Cu Pb Zn Au Ag

Geology:

Type Operation: 500' Deep

Production: 500,000 / 2703.00, 452,049.00 Ag, 340,778.00, 348,845 Pb 114,033.2g.

References: 42 Mineral. S. 10 Tope. 7 $\frac{1}{2}$

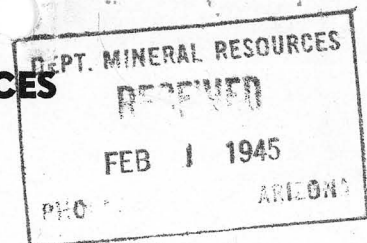
USGS 397 p. 8 / USGS 756 p. 156. / USGS 340 p. 65)

USGS 978-E; clipping file

Mohave Cty Card File

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT



Filing Information

File System.....

File No.....

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

Date JANUARY 26, 1945

Name of Mine KEYSTONE MILL

Owner or Operator MINERAL PARK MILLING CO.

Address P.O. Box 4, CHLORIDE, ARIZONA

Mine Location MINERAL PARK, MOHAVE COUNTY, ARIZONA

PRESENT OPERATIONS: (check X)

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

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

Other (specify).....

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months 0

Approx. present rate per 3 months 0

Anticipated rate next 3 months 6000

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	<u>1</u>	<u>750</u>	<u>50</u>
Light or Service Trucks
Ore Hauling Trucks
Compressors
Other Mine or Mill Eqpt.

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

LEAD, ZINC, AND COPPER CONCENTRATES

REMARKS:

Remodeling Keystone mill for custom work.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By Elmer B. Hoer

COPY of Application Dated Nov 28, 1944

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

to replace lost original

12/16/44

Date.....

Name of Mine.....

Owner or Operator.....

Address.....

Mine Location.....

Filing Information

File System.....

File No.....

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

PRESENT OPERATIONS: (check X)

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

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

Other (specify).....

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months.....

Approx. present rate per 3 months.....

Anticipated rate next 3 months.....

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 Trucks	<i>3 1/4 ton</i>	<i>3000 mi</i>	<i>200 gal</i>
Ore Hauling Trucks
Compressors
Other Mine or Mill Eqpt.

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Lead, Copper, Zinc Concentrates

REMARKS:

Application approved as above

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By.....

Chief Dunning

Copy for ODT

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date 12/16

Name of Mine Keystone Mill

Owner or Operator Mineral Park Milling Co.

Address PO Box 4 Chino Valley, Ariz.

Mine Location Mineral Park Milling Co. Ariz.

Filing Information

File System.....

File No.....

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

PRESENT OPERATIONS: (check X)

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

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

Other (specify) Custom milling

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months

Approx. present rate per 3 months

Anticipated rate next 3 months 6000 tons

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 Trucks	<u>3/4 ton</u>	<u>2000 mi</u>	<u>200 gal</u>
Ore Hauling Trucks
Compressors
Other Mine or Mill Eqpt.

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Lead Zinc Copper

REMARKS:

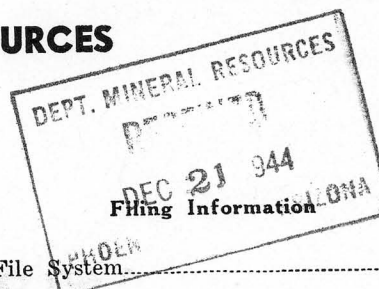
Operation strategies and approved

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By Charles Drumming

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT



Date 12/13/44

Name of Mine Mineral Park Milling Co.

Owner or Operator F. J. McEntee and O. P. Zlatnik

Address P.O. Box 1, Chloiride, Arizona

Mine Location Mineral Park Milling Co.

File System.....

File No.....

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

PRESENT OPERATIONS: (check X)

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

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

Other (specify) Operation of custom mill on lead-zinc ores.

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months

0

Approx. present rate per 3 months

0

Anticipated rate next 3 months

3000 to 4500 tons

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	<u>1</u>	<u>750</u>	<u>50</u>
Light or Service Trucks			
Ore Hauling Trucks			
Compressors			
Other Mine or Mill Eqpt.			

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Lead and zinc concentrates

REMARKS:

This application covers use of personal car of O. P. Zlatnik in conducting above business.

Approved by Actis
12/21/44

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By.....

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date Nov. 28, 1944
 Name of Mine Kington Mill
 Owner or Operator Mineral Park Milling Co.
 Address P.O. Box 4, Chloiside, Arizona
 Mine Location Mineral Park, Mojave County, Arizona

Filing Information

File System.....

File No.....

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

PRESENT OPERATIONS: (check X)

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

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

Other (specify) Custom milling lead-zinc ore

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months

Approx. present rate per 3 months

Anticipated rate next 3 months

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 Trucks	<u>3/4 Ton</u>	<u>2000 mi.</u>	<u>200 gal.</u>
Ore Hauling Trucks			
Compressors			
Other Mine or Mill Eqpt.			

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Lead, Copper, Zinc, Concentrates

REMARKS:

.....

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By.....

GENERAL PARTNERS
F. J. MCENTEE, JR.
D. F. ZLATNIK

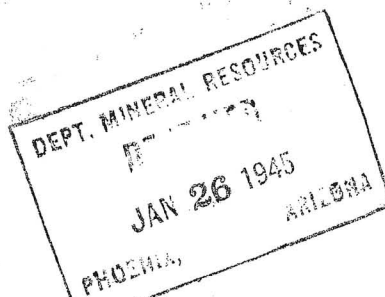
MINERAL PARK MILLING CO.

P. O. BOX 4
CHLORIDE, ARIZONA

January 24, 1945

MILL AND OFFICE
AT
MINERAL PARK, ARIZONA

Mr. C. H. Dunning
Department of Mineral Resources
State of Arizona
304 Home Builders Building
Phoenix, Arizona



Dear Mr. Dunning:

The purpose of this letter is to express, very belatedly but no less sincerely, our appreciation for your assistance in connection with us obtaining gasoline for our pick-up truck and for business use of my personal car. The delay has been due to being "snowed under" with a multitude of items to be cleared up in connection with starting up of this project.

You may be interested in the rest of the gasoline story even though it is now history. Thanks to your action in Phoenix the O. D. T. certificate arrived in Kingman December 19th, was duly considered again by the board and the gasoline issued Dec. 22nd, twenty four days after the date of application. As to the gas for my personal car, thanks to your letter direct to the Kingman board, I was advised on Dec. 26th that your letter had been received by the board but that I must wait until the board met and approved my gasoline. On Dec. 29th I was advised that I must appear again before the board for further questioning. This occurred on Jan. 3rd and at that time they wanted a list of customers, the exact tonnage to be milled for each, etc. I, of course advised them that such a list could not be furnished. They then decided to grant the gasoline that you had approved and written the letter about - for a period of 30 days only. The attitude of the board during this entire time can be summed up as complete indifference and, as far as I am concerned, gross arrogance. I wondered if this attitude was personal and if I had done something to offend them. However, I am advised by numerous local people that this attitude is standard procedure and extended to all.

And now to more pleasant subjects. I am happy to report that, with the glaring exception of the ration board, we have met with courtesy and consideration on every side. So much so that it is the high point of our operations here to date. If good will could make this project a success, I am sure it will be.

The rehabilitation and reconditioning work on the Keystone Mill is proceeding quite satisfactorily but due to certain repairs involving much more work than had been anticipated, we have had to postpone our anticipated start-up date from Jan. 1st to about Feb. 15th.

GENERAL PARTNERS
F. J. McENTEE, JR.
D. F. ZLATNIK

MINERAL PARK MILLING CO.

P. O. BOX 4
CHLORIDE, ARIZONA
January 24, 1945

MILL AND OFFICE
AT
MINERAL PARK, ARIZONA

Mr. C. H. Dunning - Page 2.

Providing certain materials and supplies now ordered arrive within the next ten days, we should have no trouble meeting our revised start-up date.

We are looking forward to the return of Mr. Holt and to making his acquaintance.

In closing I should like to repeat that the assistance given this project by your office in the past has been most sincerely appreciated.

Yours very truly,

MINERAL PARK MILLING CO.

D. F. Zlatnik
D. F. Zlatnik

Kept on

December 21, 1944

War Price and Rationing Board
Kingman, Arizona

Gentlemen:

We have received from you the yellow and pink copies of gas application from Messrs. F. J. McEntee and O. F. Zlatnick, P. O. Box 4, Chloride, Arizona, for 50 gallons per month for Mr. Zlatnick's personal car.

In these cases when our field engineer is not available you should also send the white copy for that is the one we are supposed to sign and return to you. The yellow copies stay in our main office for our complete file and we send the pink copy to the field engineer of the district for his file.

We will give Mr. Zlatnick's application approval and you might mark the white copy, which you probably still have, "approved by letter from Department of Mineral Resources, December 21, 1944".

Thanking you for your attention.

Yours very truly,

Chas. H. Dunning
Director

CHD:LP

Keystone

December 16, 1944

Mr. D. F. Zlatnik
Mineral Park Milling Company
Chloride, Arizona

We received your night letter of the 13th in regard to gas.

Our file shows that the application for pick-up gas dated November 28 was immediately approved by us and the original (white copy) was signed and forwarded either to yourself or the Kingman board.

In order to avoid further delay in case this has been lost, we are enclosing a new signed copy.

The application for personal car gas has not yet been received here.

The application for O.D.T. certificate was received at that office this morning and we have given them another copy of the approval form and this should be processed immediately.

We are enclosing the new white copy instead of sending it to the board. You can take it in personally and there is less chance of its being mislaid.

We are sorry you have had delays and hope this will straighten you out.

Yours very truly,

Chas. H. Dunning
Director

CHD:LP
Enc.

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

A. N. WILLIAMS
PRESIDENT

1220

SYMBOLS

DL - Day Letter

NL - Night Letter

LC - Deferred Cable

NLT - Cable Night Letter

Ship Radiogram

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

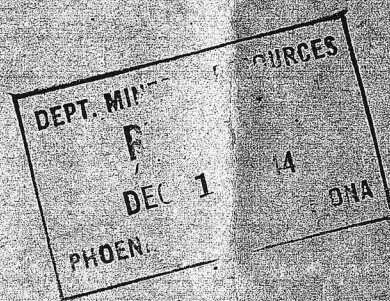
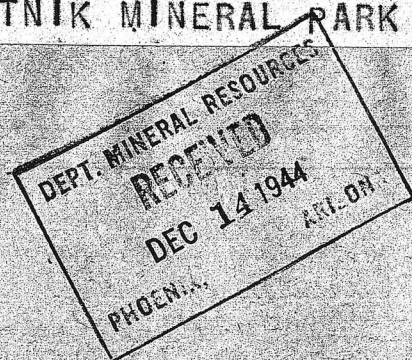
SA47 NL PD=KG KINGMAN ARIZ 13

C H DUNNING, DEPT OF MINERAL RESOURCES STATE OF ARIZ. 1944 DEC 14 AM 3 50

=HOME BUILDERS BLDG PHNX=

RECONDITIONING WORK ON KEYSTONE MILL FOR OPERATION AS CUSTOM
MILL BEING DELAYED BY NO GASOLINE FOR TRUCK. DELAY PRINCIPALLY
DUE TO FAILURE ON PART OF OPA BOARD AT KINGMAN TO FORWARD
ODT APPLICATION TO PHOENIX THIS APPLICATION IN MAIL TONIGHT.
ASMOA DESCRIPTIVE FORM FOR APPROVAL DATED 11/28 IN YOUR OFFICE
NOW FOR TRUCK. ANOTHER IN MAIL TONIGHT FOR USE OF PERSONAL
CAR IN BUSINESS BY D F ZLATNIK WOULD APPRECIATE YOUR OFFICE
APPROVING BOTH AT THE EARLIEST TIME AND SENDING APPROVED
FORMS TO OPA KINGMAN ALSO FACILITATING ODT INSURANCE OF
CERTIFICATE OF WAR NECESSITY AT ODT OFFICE PHOENIX=

D F ZLATNIK MINERAL PARK MILLING CO.

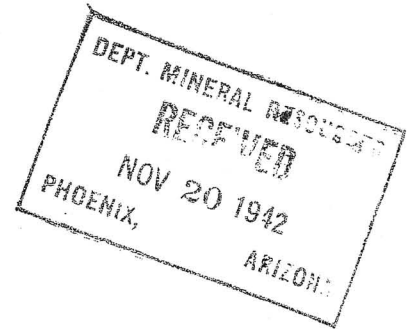


OPA OD ASMOA 11/28 OPA ODT.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

*Keystone
Mobile Co.*

1045 South Bedford Street,
Los Angeles, California.
November 18th, 1942.



Mr. J. S. Coupal, Director,
413 Home Builders Building,
Phoenix,
Arizona.

Dear Mr. Coupal;

I appreciate your letter of the 11th. Hope you had a pleasant trip to Salt Lake City. In talking with Mr. Ingram today he said he talked with you and Mr. Willis there.

I had a very encouraging letter from Mr. Gehring and am writing him as per copy inclosed. He suggested, as he did before, that the matter I am working on should be taken up with the War Production Board. I am sure he will aid all he can.

I expect to complete all the options I think are essential while here this trip and then build up the facts and presentation in good shape before going east. I really do not see how developing properties in the Cerbat district can get far without having access to a milling and treating plant equipped for sampling, weighing and selective flotation where they can market their ore.

I now intend to spend two or three days in Kingman after I finish here and then a couple days in Phoenix with your people whose advice and aid I will need and then go on to Washington. I am anxious to build up a sound and self evident basis upon which to apply for the necessary financing.

Will see you in Phoenix soon and meantime will appreciate any suggestions you may have to offer.

Sincerely,

Ralph R. Langley
Ralph R. Langley

1045 South Bedford Street,
Los Angeles California.
November 18th, 1942.

Mr. W. B. Gohring,
325 Heard Building,
Phoenix, Arizona.

Dear Mr. Gohring;

Thanks for your letter of the 11th.

I have thought that it might be well for me to pave the way for a trip to Washington by getting in touch with the proper official of the War Production Board by mail--and perhaps with someone of authority in the Defense Plant Corporation and maybe the Army and Navy Munitions Board. If you think that would be wise perhaps you could send me the names and addresses of such people.

The more thought I give to the Cerbat district the more I realize the necessity of a basic milling and treating plant, having trucks to get the ore from small producers and having portable compressors and mining equipment to loan or lease and grubstake money to advance. I doubt if such a project can operate at a profit until after it develops enough ore of its own for full capacity but it would be producing badly needed zinc and lead. Any loss would have to be absorbed in the financing as a higher price paid for the metals.

I believe the Preliminary Loans and also the Development Loans are very desirable but unless such borrowers have a place where their ore can be milled, treated and marketed I see little hope of getting any results from such loans.

I have agreed with the owners of the Keystone mill and with the owners of some of the key claims on opt on contracts and should have them drawn and executed by the end of the week. I will then prepare maps and detail data for presentation to the proper authorities. I assume such application and presentation should pass through your office. Please advise me regarding that.

Awaiting your further advice, I am,

sincerely,

Ralph R. Lagley
Lagley

Myerson
Malone

H

November 11, 1942

Mr. Ralph R. Langley
P. O. Box 455
Kingman, Arizona

Dear Mr. Langley:

Many thanks for your letter of November 9. I have not had a chance to discuss the subject matter with Mr. Gohring and probably will not be able to do so until some time after November 20. Mr. Willis and I are leaving for Salt Lake City on November 13 to attend the American Mining Congress Conference of the Metals Division, and we will not return to the office until November 20.

Anytime after that, I will be glad to meet and discuss with you your project, and I do believe you can well afford to go at a comprehensive set-up along the lines indicated.

Mr. Gohring or this office cannot say whether such a set-up as contemplated would get favorable action from the Reconstruction Finance Corporation. It does seem to me as though such a plan is in line with what is wanted, and I believe it well worthwhile going after.

With best wishes and kindest regards,

Very truly yours,

J. S. Coupal
Director

JSC:kk

RALPH R. LANGLEY
1045 SOUTH BEDFORD STREET
LOS ANGELES, CALIFORNIA

P. O. BOX 455
KINGMAN, ARIZONA

Kingman Arizona,
November 9th, 1942.

Mr. W. B. Gohring,
325 Heard Building,
Phoenix, Arizona.

Dear Mr. Gohring;

The owners of the Golden Gem claims advise that they are in favor of me making the R. F. C. Loan and I will have their executed waiver most any day.

I have been working up a project which I think will immediately produce some zinc.lead and a little copper while extensive development work is being done for permanent operation. I have written Mr. Coupal about the matter and inclose a copy of the letter.

I am anxious to get such reaction as you and he can express pending completion of the setup for presentation. It will cost mesome time and money to build up the material and take it to Washington and so, if either of you see any material holes in the idea or if either of you can lead any encouragement I would greatly appreciate a note from you to my Los Angeles address where I will be for a day or so the latter part of the week. Would like any suggestions either of you may have to offer.

Sincerely,

Ralph R. Langley.

P. S.

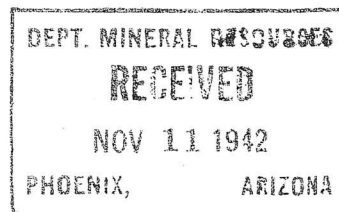
Expect to come to Phoenix soon after I return from California and to go from Phoenix to Washington.

CC to J. S. Coupal.

RALPH R. LANGLEY
1045 SOUTH BEDFORD STREET
LOS ANGELES, CALIFORNIA

Kingman Arizona.
November 9th, 1942.

P. O. BOX 455
KINGMAN, ARIZONA



Mr. J. S. Coupal,
Home Builders Building,
Phoenix, Arizona.

Dear Mr. Coupal;

I had planned on getting to Phoenix for a talk with you and Mr. Gohring this coming week but am afraid I will not make it for the reason that I have to be in Los Angeles on Thursday and in Oakland on Friday--so will probably not get to Phoenix untill the following week.

I want to talk with you both about the situation I am working on here. It is the Keystone mill, claims and about all the adjacent claims thus making up a solid block of interesting ground. Unless something unforeseen turns up, I have the properties all in hand on terms which are workable--with Government financing in mind.

It is my belief that--if the Government really needs zinc--also some lead and copper, that the Keystone mill should be revised into a complete selective flotation mill of about 150 tons capacity, that an ample number of dump and other trucks should be provided and some portable compressors and mining equipment made available for loan or for use on several developed claims which will each immediately produce some zinc and lead thus supplying the full capacity of the mill for the production of lead, zinc and some copper while the claims immediately belonging to the project are being developed. In that way an immediate supply of lead and zinc can be had and a much greater supply later. In addition to ample working capital and capital for reconditioning the mill and for trucks etc there should be a very substantial development fund provided.

I do not believe that such an operation will make any money for the owner and operator until it is well established and supported by some sort of reduction plant but eventually it should be a valuable asset and meantime will produce lead and zinc for the Government at a somewhat greater cost than the present premium prices--but will actually produce those metals.

I am working on a set up and records and reports for presentation at Washington and with the idea of going to Washington personally with the support and approval of yourself, Mr. Gohring and other independent engineers.

This effort is going to cost me considerable expense and I do not want to be working along lines that seem unwise to you and to Mr. Gohring and so would appreciate having an expression from you

as to your reaction to the effort generally--and would like to have the reaction of Mr. Gohring also.

I do not know to what extent either of you would feel justified, due to your official positions, in expressing yourselves in advance of a finished and formal proposal but am hoping that you can give me your general ideas. Will you please talk the matter over with Mr. Gohring, to whom I am sending a copy hereof, and advise me to Los Angeles.

Mr. Holt has spent some time with me at the Keystone mill and on some of the claims and I feel that he thinks well of the proposed project and of my ideas with respect to the financing.

The Golden Gem situation is working along all right and I will soon have the necessary waivers and be in position to avail myself of the loan and start work.

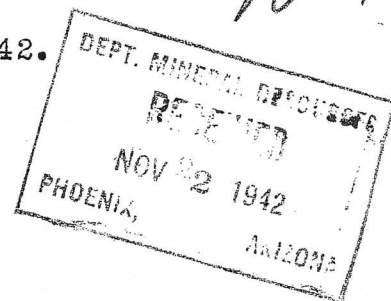
Sincerely, .

A handwritten signature in cursive script, appearing to read 'Ralph R. Langley'.

Ralph R. Langley.

CC to W. B. Gohring.

Keystone
Phoenix
Kingman Arizona--October 31st, 1942. *W H C*



Mr. J. S. Coupal, Director,
Department of Mineral Resources,
413 Home Builders Building,
Phoenix, Arizona.

Dear Mr. Coupal;

In reply to your letter of the 26th--The Mark F. Jones application for a development loan was made the last days of September ~~on~~ the first day or so of October. It is the New Moon mine near the Keystone project. The docket number is No. B-ND-4284. The engineer who sampled the mine and who says in a letter dated October 13th that "about two weeks ago said report was sent out from the Phoenix office". The engineer is Ralph B. Youtz. I will appreciate any information you can get for me.

One of my sublessors who has an intervening interest in the Golden Gem Mine has held me ~~up~~ a few days in that he has not yet signed the waiver. But am quite sure we will arrange it.

I am now working on what looks to me to be a comprehensive setup--with a lot of encouragement. It is the Keystone mill, Keystone mine, New Moon property and the other adjacent claims which have evidence of considerable zinc. I am composing the differences between the owner of the Keystone mill and the owners of the Keystone claims on which the mill is located and taking an option to take a bond and lease against the combined project. I am working on the matter diligently now and will be in Phoenix soon to talk matters over with you and Mr. Gohring. Meantime will work closely with Mr. Holt.

My idea is to recondition the Keystone mill and install the necessary additional flotation units so that it will really mill and treat 150 tons per day, acquire enough trucks and portable mining equipment to serve the smaller properties within reach, including the New Moon, so as to supply the mill while developing the lower depths for a permanent supply of zinc and lead.

Coupled with such a set up I am working up the data, through two competent engineers, for the erection of one unit of an electrolytic reduction plant so as to reduce the zinc to metal here on the ground. That would be one of the same units which make up a much larger reduction plant. Mr. Frank R. Wicks and Mr. Schroter of Los Angeles are working up the reduction plant layout for me. Of course I have in mind Government financing. I am coming to Phoenix to talk the matter over with you when I am a little farther along--maybe the end of next week.

Best wishes,

Ralph R. Langley
Ralph R. Langley
Box 455, Kingman.

CHAPTER X.

ARIZONA.

Mining interests generally look more hopeful in this Territory than at any time for the last ten years; and if the Apache question can be finally settled in favor of the miner, as it bids fair to be soon, the country will, by the time of the advent of the Southern Pacific Railroad, be in a forward state for a large and permanent production of the precious metals.

During the last year the yield of the Territory has fallen off considerably, principally on account of the troubles of the Vulture mine, but the activity in several new silver-districts promises to make up for this, as soon as the preparatory developments of the mines have progressed sufficiently. I estimate last year's product as follows:

Gold from Vulture mine	\$150,000
Gold from placer-mines and arrastras	200,000
Silver in bullion and ore-shipments	175,000
	<hr/> \$525,000

I have again to thank Mr. John Wasson, surveyor-general of Arizona, for notes in regard to the mining industry of the Territory; and Messrs. T. J. Bidwell, of Yuma Country, W. F. Henning and W. H. Hardy, of Mojave County, have kindly furnished information in regard to their several districts.

The Planet mine, on Williams Fork, owned by the Planet Mining Company, and operated by the same, keeps about twenty men at work continually, and has shipped from 100 to 150 tons each month to San Francisco. The mine pays now, and has always paid. It carries copper-ore of a high grade.

The Constancia mine, about fifteen miles from Ehrenberg is owned and operated by the Constancia Mining Company, Charles Bennett, superintendent. During the past year they erected a 10-stamp mill. They have three shafts in the mine, over 150 feet deep each, in which a ledge of about 4 feet in width is developed, paying from \$15 to \$25 per ton; at latest accounts about \$18 in gold. Cost of mining and milling, from \$6 to \$8 per ton. Work is going on now. 1873

In Castle Dome district, Captain Polhamus & Co. are sinking on the Flora Temple mine. They are now down about 200 feet, and shipping about 50 tons of ore per month. They are mainly laboring to develop the actual worth of the mine, although the receipts from sales of ore defray expenses. The ore is argentiferous galena.

William P. Miller & Co. are operating on a mine near the Flora Temple on same kind of ore. They ship about 150 tons per month, and are making money, and work is going on now.

The Vulture mine, near Wickenburg, has been idle for over six months. Endeavors are being made to procure capital to take water to the mine, with what success I do not know. The product of the mine is about half that of former years, or about \$150,000. William P. Smith & Co. are putting up a 10-stamp mill on the Hassayampa, about fifteen miles below Wickenburg, and will soon commence crushing ore from their claims, which adjoin the Vulture Company's ground. They express great confidence of success. Mr. Peter Taylor, formerly mine-superintendent of the Vulture, is an interested party with Smith & Co.

in the present operations, and is convinced that their ground, as well as the Vulture, will pay well under proper management.

In Yavapai County no mills were put up in 1872, and I believe none but the Vulture ran at any time. Several arrastras have been kept going in Bradshaw district, and patents for eight mines therein, mainly on the Tiger lode, have been applied for. The placer-mines in Yavapai have been worked with average success in most of this district, and their yield is not less than in the previous year. In the extreme southeastern portion of Yavapai County a copper-district of great value has been discovered, and four surveys for patents to as many mines, and also one mill-site, have recently been made. A Detroit company stand ready to pay a large price for them and to commence work as soon as patents issue therefor.

In Pima County much prospecting has been done, and some new discoveries have been made. The necessary work is now being done to procure patents. Two mines have been patented, and more applications will soon be made. Returns have just been received of the working results of a lot of ore sent to San Francisco some months ago by Samuel Hughes, of Tucson; the ore coming from a mine located about thirty-five miles southwest of that town. The ore contains mainly copper, and purchasers offer for such ore \$200 per ton, laid down on the San Francisco wharf.

The Mowry mine is now being worked by some men who have put an engine thereon, and I understand with good results. The parties, being "jumpers," keep very still, waiting for the time to expire which is given by law of Congress to owners of mines to do the necessary work on their claims or forfeit them.

Ore from Pinal district, near Florence, (about 5 tons,) was sent to San Francisco last summer, and yielded about \$200 per ton. The parties were, however, driven away from the mines by Indians. They intended to commence work again soon, as they were certain of profits, judging from the 5 tons worked in San Francisco.

Wallapai or Hualpai district.—During the year 1871 little else was done by miners of this district than running over the hills and locating mines, and doing what work on each claim was necessary to hold it in accordance with the local laws of the district. Early in 1872 a 5-stamp mill (wet crushing) was completed; there were also two furnaces completed. Both mill and furnaces were owned and managed by men of but little experience in this matter; the mill would save only from 30 to 50 per cent. of the gold and silver, and the furnaces were a total failure.

In December, 1872, a third furnace was completed, and managed by an expert. This furnace has been a success; yet there is a question now about good smelting ores, as experience proves the ores of this district to be base milling ores, which require chloridizing, roasting, and amalgamation.

Within the past year there have been shipped to San Francisco about 120 tons of ore, averaging in value \$600 per ton. Of gold and silver bullion there have been shipped about \$35,000, and of base bullion about 10 tons. As the greater part of this is now in transit, the value is not yet known, but it is estimated at \$600 per ton, or worth \$6,000 in gold and silver. During the years 1871 and 1872 work was generally done on the surface, and until July of the last year but few shafts were down lower than 30 feet. It was found that in sinking from 20 to 40 feet most of the gold, silver, and lead ores gave out, and the ledges turned to iron sulphurets or arsenides. At water-level but little ore

was found of value. Miners became discouraged, and many left the district in disgust. During the latter part of the year 1872 some of the more sanguine miners commenced sinking below the water-level. Silver-ores soon came in, and there is not a single instance reported where a valuable mine was not found within 10 feet of the former stoppage. The ores are generally antimonial or ruby silver, with sulphurets and the native metal.

At the present time miners are laboring under a greater disadvantage than ever before, although they are certain that they have valuable mines. It will require machinery to handle the water, and this requires capital. Some companies have been incorporated in San Francisco, and help is expected from that city. Until that is forthcoming, rapid progress will certainly be impossible.

There have already been located in this district 2,700 claims for companies, and about 1,000 of them are on separate ledges, the rest being on extensions. Several other new districts have been located within the past year. The Maynard district, located about ten miles south of the Wallapai district, is one of them. The Cedar district, about sixty miles south of the Wallapai, is another. Both districts are promising well. Preparations are being made for shipping ore from them at an early day. Preparations are also being made for putting up a mill and roasting-furnaces in the Wallapai district. When this is done, the district will have a better chance. The most valuable mines are located ten miles north of the original discoveries in the southern part of the range. The locations are scattered within a distance of fifteen miles. There are at the present time about twenty-five shafts, on as many different ledges, below the water-level, and the prospects, so far as richness of the mines is concerned, are truly flattering. But most of these mines will be compelled to suspend operations soon, on account of too much water. Mr. Hardy, at the end of the year, was prospecting the Fairfield, and three shifts of three men each, besides two men to assist outside, or eleven men at \$4 per day, were employed. The shaft was down 150 feet, 20 feet below water-level, and 200 gallons of water per hour had to be drawn up by hand. It is seen from this that under such circumstances profitable mining is difficult, even on veins carrying as rich ores as those of Wallapai.

The following data in regard to individual claims are furnished by Mr. W. F. Henning, a member of the legislature of Arizona Territory:

Little Tiger, situated at Stockton, shaft over 100 feet deep. At bottom, vein 2½ feet wide. Very rich in native silver, ruby silver, and black sulphurets.

Cupel, near the former mine; about the same amount of work is done here as on the Little Tiger. The vein exhibits about the same quality and quantity of ore. Work has been recently suspended on account of over-abundance of water.

Empire, situated in Empire Cañon, near Chloride, has two shafts of 100 feet each, and some drifting has been done; ledge-matter is several feet wide; exhibits a large body of rich sulphurets-ore. Work was recently suspended on account of too much water. These mines all belong to the Oirbat Consolidated Company, of San Francisco, and the work has been done chiefly during the past summer. Hoisting-works for each of them are expected from San Francisco in the course of one or two months, and work will then be resumed.

Sixty-two, situated near Stockton, and owned by an unincorporated company. During the past summer several shipments of ore have been made to San Francisco, at a cost of nearly \$100 per ton, including min-

ing, transportation, sampling, &c. The returns left a handsome profit for the owners.

Lone Star, situated at Mineral Park. During the past year about 150 tons have been worked in a 5-stamp mill. They yielded about \$7,000. Recently, work was resumed in an old shaft, and at a depth of 50 or 60 feet a body of ore, carrying large quantities of native silver and black sulphurets, was uncovered. The mine is owned by a company incorporated under the laws of Arizona. Work is still progressing; water plenty in the mine.

The Keystone has two shafts, about 60 feet deep each. It is situated at Mineral Park; two feet ledge, chloride of silver on top. Just below water-level, a heavy body of ore, carrying black sulphurets, native and ruby silver, has been uncovered in each shaft. The top ore, worked in the 5-stamp mill at Mineral Park, yielded \$200 per ton, and not more than 50 per cent. was saved in the process. Several tons, shipped to San Francisco, yielded \$600 per ton. Ore from the bottom of the shafts assays as high as \$1,800 per ton. The mine was recently sold in San Francisco. Hoisting-works are to be put up about March, 1873, and work will then be resumed.

Besides the mines above mentioned, there are probably one hundred other locations, nearly as well developed, and giving promise of permanency and great value. Among them are the Todd mine, the Washington, the Independence, the Dexter, the Vanderbilt, the New Era, the Washington No. 2, the Donahue, the Treasure Hill, the Valley View, the Ida, the Bobtail, &c.