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CHARLES A. KITTLE
43 EXCHANGE PLACE
NEW YORK

TELEPHONE NUMBER
HANOVER 7865

July 23/19

Mr. G. M. Colvocoresses

Humboldt

Ariz.

Dear Mr. Colvocoresses:

NEW KING OF ARIZONA MINE

As you know, Mr. Johnson, partner of Mr. Hooley, is a great friend of Mr. Laidlaw, secretary to Mr. Nicholas Brady. It was through this channel that we were successful in getting Mr. Brady's subscription to \$25,000 Arizona underwriting.

Yesterday Mr. Johnson sent Mr. Laidlaw over with a friend of his, a Mr. J. E. McClernon; and it seems that Mr. McClernon and a Mr. W. J. Johnson are partners in the New King of Arizona Mining Co., being the sole owners.

It seems that he and Mr. Johnson advanced to the new Company, \$75,000, with which they have built a dam and water pipe line, and have partly constructed a new mill on the property. Its capacity is to be 100 tons per day.

They still owe on the purchase price, \$100,000, \$50,000 of which is payable March, 1920, and \$50,000 March, 1921.

Their Company owes on open accounts, as he states, \$25,000, and they require to complete the mill, \$50,000.

It seems that this Mr. McClernon is in the electrical equipment business in New York, and is not a mining man.

His partner is a practical engineer, though not having a degree. I do not think that he has had much experience in mining, from

Ac 7/25/19

100,000
75,000

25,000

what Mr. McClernon said.

They have had reports made on the property, by Mr. Oscar A. Knox of ^{we know} him Los Angeles, and Mr. W. A. MacDonald of New York, copies of which I am enclosing.

I am also enclosing a little prospectus prepared from these reports, by Mr. Frederic W. Norton. Mr. McClernon states that the recommendation as made by the examining engineers had been carried out, and that the development to date, as blocked out, is 100,000 tons of ore, which will average \$25 per ton.

They have erected a dam, and about completed a water pipe line, and they have selected the balance of the machinery necessary to complete the mill. This machinery has been selected at Los Angeles, and is awaiting its shipment.

The Company is capitalized for 1,000,000 shares at \$1 a share, of which 900,000 shares are issued, and 100,000 shares are in the treasury.

They are willing to contribute 200,000 shares, and sell these together with the treasury stock, which would make 300,000 shares at $37\frac{1}{2}\phi$ per share, or \$112,500, which would go into the treasury of the Company.

If their estimate for the completion of the mill is correct, it would take \$50,000 of the new money for that purpose, and \$25,000 to pay their open accounts, and would leave them a working capital of only \$37,500, and no treasury stock, and they would face the payment on account of the purchase price, of \$50,000, in March, 1920.

I pointed this fact out to Mr. McClernon; and he said that Mr. Johnson was absolutely confident, if the money could be had promptly, on getting the machinery on the ground and in operation late this fall, they would then be able to meet the purchase price payment from operations.

I know this property is out of your district, and would hardly add

anything to our Arizona enterprise. However, as the matter has been presented by the gentlemen in the manner in which it has, I feel it our duty to investigate, if you have any one available for that purpose. If so, on receipt of this letter, wire me when your man could be on the ground to examine the mine and layout.

Mr. Johnson ordinarily has been staying in Arizona, but he came on to raise the money, and wanted to stay here until after it was obtained. However, Mr. McClernon said that perhaps it might be best to have Mr. Johnson go out there when your man was on the property. We can take that matter up when I hear from you whether you can examine same.

Mr. McClernon tells me that there is a large dump from the old workings, containing considerable gold, which might be of interest to your new volatilization company.

If you feel that the expense involved should not justly be borne by the Arizona Company, please say so and give me an estimate of what it will cost, and I will see if I can get Mr. Hooley to join me in standing the expense. Possibly your volatilization company might stand half of the expense, and Mr. Hooley and myself the other half. Please telegraph me fully.

If they have anything like 100,000 tons of ore at \$25 value, it certainly would look to me like a good business proposition.

Mr. McClernon impressed me favorably with his general appearance, though he admitted he knew nothing about mining, but had great faith and confidence in his partner, Mr. Johnson.

As to the \$75,000 advanced by Messrs. Johnson and McClernon, the repayment of this amount would be subject to arrangement. Probably they would expect re-

payment out of the first earnings. Possibly we can make the same arrangement about what money we are considering advancing the company.

All together it strikes me that it is well worth looking into, if the cost is not too great, or the basis entirely wrong.

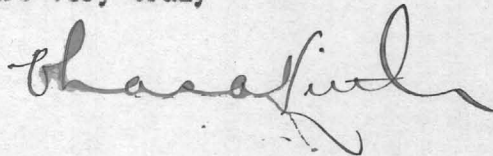
Mr. McClernon desires a speedy decision as to whether we will get him the money or not. He and his partner I think, are fairly comfortable. He said if it was to drag out, that he and his partner would manage the financing themselves. He put it on the ground that he was offering this favorable opportunity solely for quick action.

I am also enclosing a map of the old claims. I believe there are 4 new claims in addition to those outlined on the map.

If nothing comes of this please return the papers to me at your early convenience, and oblige

K/O

Yours very truly



EAGLE-PICHER MINING & SMELTING COMPANY

OFFICE OF
MONTANA MINES OPERATIONS

EXPRESS AND FREIGHT, AMADO, ARIZONA
MAIL & TELEGRAPH, RUBY, ARIZONA
TELEPHONE 502 F 3, NOGALES, ARIZONA

GENERAL OFFICE
214 WEST THIRD STREET
JOPLIN, MISSOURI

~~RUBY~~, ARIZONA

Tucson, Arizona.
November 22, 1945.

A 12/20/45

Mr. G. M. Colvocoresses,
1102 Luhrs Tower,
Phoenix, Arizona.

Dear Mr. Colvo:

I returned from a trip about the time your letter arrived but we have had sickness and I have neglected all else.

I have seen so little of any of the E-P bunch since they moved the office from Tucson to the mill at Sahuarita, that I hardly know what they are doing - so I am completely lost on the Congress situation.

The Byrds told me they had the Harqua Hala on a particularly favorable deal - they only paid \$100.00 month minimum royalty and a year in which to do \$25,000.00 of drilling. However, now that I had nothing to do they thought I might like to join them in finding some one to finance the proposition, all I would have to do would be to name the party who had and would put up the necessary money. They also claimed to have tied up and sold to Shattuck-Denn (I believe it was S-D) the Oro Grande near Wickenburg. But I doubt the sale part.

I have not heard of Ton Johnson for some time, but I doubt that you could get him to take over any work - in the first place I am afraid that he is too ailing and in the second place he is not anxious to get back into harness. He would be a fine man for the job if he was able and willing. I do not have his Mesa address here but Joe can surely give it to you and you could look him up as you go thru Mesa some time. I just found: Tom J. Johnson, Rt 1, Box 84 (or 8) on West 4th Street, Mesa. % Jack Johnson. Phone: 027-J1.

Am glad to learn that more development is in the offing for the Reymert Mine and hope that you have found some one with enough intestinal fortitude and large enough a checking account to really go down and find out what the Maker of Ore Deposits put down below.

With very best regards,

Sincerely,

E. D. Morton

E. D. Morton,
4110 E. Cooper Street,
Tucson, Arizona.

X
(Please note the change of address, but it is still the same house)

*Put up address card
Morton in King's Room
Cory*

EAGLE-PICHER MINING & SMELTING COMPANY

OFFICE OF MONTANA MINES OPERATIONS

EXPRESS AND FREIGHT, AMARCO, ARIZONA
RUBY, ARIZONA
RUBY, ARIZONA
RUBY, ARIZONA
RUBY, ARIZONA

Wm Ed King Esq - Agent of Bank

P. O. Box 10,000, Cas

Wm Ed King Esq 1 mile S of

Cash payment (check a part)

Wm ✓

Wm Ed King

I returned from a trip about the time
but we have had sickness and I have neglected all else
I have seen so little of any of the E-P men since they moved the
office from Tucson to the mill at Sahuarita, that I hardly know what they
are doing - so I am completely lost on the Congress situation.
The boys told me they had the larger claim on a particular
deal - they only paid \$100.00 month minimum royalty and a year in advance to
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thought I might like to join them in finding some one to finance the pro-
position, and I would have to be some one who had and
would not need the necessary money. I have also claimed to have tied up and
sold to Glatton-Dunn (I believe it was) - the one who had the last

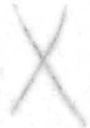
But I doubt the sale part.
I have not heard of Tom Johnson for some time, but I doubt that you
could get him to take over any work - in the first place I am afraid that
he is too busy and in the second place he is not anxious to get back into
business. He would be a fine man for the job if he was able and willing.
I do not have his home address here but Joe can easily give it to you and
you could look him up as you go thru some time. I just found
Tom U. Johnson, Rt. 1, Box 84 (or 8) on West 4th Street, Mesa, Arizona.
Johnson, Phone: 677-71.

I am glad to learn that some development is in the offing for the
Payson mine and hope that you have found some one with enough industrial
fortune and large enough a checking account to really get down and find
out what the state of Ore Deposits put down below.

With very best regards,

Sincerely,

E. D. Gordon,
1110 E. Cooper Street,
Tucson, Arizona.



(Please note the change of address, but it is still the same house)

MEMO RE: King of Arizona Mine

file
January 18, 1946

Morton called and said that he had paid \$2500 for a $\frac{1}{2}$ interest and that Eagle Picher had paid \$5000 for the other $\frac{1}{2}$ interest including the very complete reports of Arthur Houle and another engineer who had collected and summarized all of the available data concerning the district and concluded that it should contain a large tonnage of low grade gold ore much of which would be on the King property.

Since ^{then} the Eagle Picher or Morton had spent some 4 or \$5000 on exploration work, watchmen, etc. and had an assayer named Harvey on the property who had been trying to sell it to George Holmes, but apparently Kenneth Holmes is not aware of this deal. Another possible buyer is the Rob Roy Mining Company which has adjacent claims and a mill. The North Star can not be gotten at present nor until after Rodgers dies.

Morton feels that a prospective purchaser should make an offer of \$15,000 cash which would permit him to find out just what the Eagle Picher Company (Fowler and Isern) would take for their interest and both he and they would expect to make a small profit.

(Try to get K. Holmes to offer \$15,000)

Holmestake Mining Company

IMPERIAL COUNTY

WINTERHAVEN, CALIFORNIA

January 29, 1946

George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

File
RE: King of Arizona Mines

Dear Colvocoresses:

At the present time we are too buisy with our own properties to make any definite offer for the King of Arizona.

Perhaps at a later date they may lower their sites and we may be in a better position to make them an offer.

We received the logs on the Diamond drill holes for which we want to thank you.

Yours very truly,

K. A. Holmes

K. A. Holmes

KAH:k

*Transferred by Eagle Packer
1944 ? when they will
do with it*

*King of Ariz
Folder*

May 21, 1918.

Mr. Edwin S. Hooley,
15 Broad Street,
New York City.

MINING PROPERTY
KING OF ARIZONA

My dear Mr. Hooley:

Pardon delay in replying to your letter of May 3rd requesting information in regard to the above mentioned Mining Company. The delay was caused by my absence from Humboldt, to which place I only returned two days ago.

We have very little direct information concerning the King of Arizona. This property was visited some two years ago by our Mr. Smith and at that time the mine was closed down and reputed to be worked out and no information of importance was gathered by Mr. Smith at the time of his visit.

I find that the mine was operated for a period of several years and particularly from 1898 until 1909, during which time it is supposed to have produced a very considerable amount of gold and to have paid in dividends a total of \$396,000. Apparently the company closed down in 1909 or 1910, after there had been considerable dissension among the stockholders and directors, and your letter of May 3rd was the first intimation that I had received that there was any probability of its starting again.

Mr. E. S. Hooley - #2.

May 21, 1918.

If you will refer to the Mining & Scientific Press of October 6, 1917, and also the Mining & Scientific Press of November 19, 1917, page 673, you will find some correspondence in reference to the operations of the old company, but the letters written to the Press appear to refer more particularly to the dissensions among the directors rather than to the actual value of the property, concerning which latter point I have very little information.

From time to time we have occasion to send an engineer to visit copper mines located in the vicinity of the King of Arizona, and should this be of sufficient interest to you, I will be glad to arrange to have an engineer look over this property sometime in the near future and obtain such other information as is now available. Please advise if you wish to have this done.

Yours very truly,

GMC-J

Personal file

December 20, 1945

Mr. E. D. Morton
4110 East Cooper Street
Tucson, Arizona

Dear Morton:

Through some stupidity I appear to have lost the address in California which you gave me over the telephone, but I trust that this letter will be forwarded from Tucson.

I fear that the Christmas season will be rather a sad time for you lacking the sweet lady who has been your companion for so many years, but I sincerely trust that you will find some comfort through spending the holidays with your sister and her family, and I hope that you will be feeling very well and much rested by the time that you return to Arizona.

I have never previously answered your letter to me of November 22, and it is a fact that the Byrds have an option on the Harqua Hala Mine and they are planning to obtain financial assistance from some other parties and carry on a certain amount of drilling and exploration which I sincerely hope will result in proving up a large body of low grade gold ore that can be mined from open pit.

I expect it is true that they have also tied up the Oro Grande near Wickenburg though I do not know anything concerning that deal, but they certainly have not sold it to the Shattuck-Denn people since Mr. Wood the engineer from Denver was looking it over a few weeks ago on behalf of the Humphreys Gold Corporation.

Thank you for information regarding Tom Johnson, and the situation at the Reymert is not yet fully clarified but if the present lessees will go ahead with development at depth, I think that I have located a younger man than Johnson who would be able to take charge of the work and what you have written confirms my opinion that Johnson would not accept such a position.

A few days ago in talking on the phone to Kenneth Holmes, he told me that he was still very much interested in the King of Arizona Mine and would like to be in a position to purchase same, but he did not seem to wish to make any outright offer over the telephone; although, he said that he recognized the fact that some cash would have to be paid.

I shall be in communication with Holmes again very soon and will try to get him to mention a price that he would be willing to pay, but meantime if you would care to give me an idea of the

terms which the owners would expect, that is the amount of cash and subsequent payments, it might enable me to determine whether there is any real chance of doing business with Holmes.

Alden and his wife have settled down at Superior but, of course, will be coming down here frequently, and we are very thankful that they are so near and can be with us at Christmas time.

Once again my very best wishes to you, and I hope that you will drop in to see me when you next pass through Phoenix.

Sincerely,

GMC: IW

January 9, 1946

Mr. E. D. Morton
C/o Mrs. T. W. Taylor
3300 Via Lido
Newport Beach, California

RE: King of Arizona

Dear Morton:

Your California address was discovered after I wrote you on December 20, and I am sending this letter in duplicate, one copy to same and the other to your home in Tucson.

A few days ago I had an opportunity to talk to Kenneth Holmes and mentioned the possibility of his acquiring the King of Arizona Mine provided he was willing to make some cash payment. Holmes said that he was still anxious to secure this property and I understood that it had been sold to you and your associates for \$10,000 cash. I suggested that he might be willing to make a cash payment of similar size and also to make some further payments on terms or leave you with an interest in the mine so that you might obtain a royalty. I did not attempt to go into details as he did not indicate in conversation that there was any hurry about proceeding with the negotiations, but last night he telephoned me from Yuma saying that he was very anxious to know just what price was now being asked for the property, and I told him that I would communicate with you promptly and would try to secure some additional information.

Holmes is organizing a new corporation in which he is apparently combining some of his own mining properties and also he has taken over the lease and option to purchase on our Tumco Mines and apparently he is anxious to expand his holdings and seems to be well supplied with cash.

If you still feel that you and your associates would be willing to part with the King of Arizona, I suggest that you give this matter consideration and you can communicate with me on the subject or, if you prefer, write directly to Kenneth Holmes, Post Office Box 828, Yuma, Arizona. So far our dealings with Holmes and his attorney have been very pleasant and satisfactory and I hope that you can work out something advantageous in respect to the King.

Best personal regards and again all good wishes for the New Year.

Sincerely,

GMC: IW

*File 4
lookup*

January 25, 1946

Mr. Kenneth A. Holmes
C/o Holmestake Mining Company
Box 308
Winterhaven, California

RE: King of Arizona Mine

File

Dear Holmes:

A few days ago I had a personal visit from Mr. E. D. Morton but found that he was somewhat reluctant to discuss the situation at the King of Arizona since apparently there are three or four interested parties including the Eagle Picher Company and himself, and he does not yet know just what policy Eagle Picher will pursue. It seems that several outside people have been trying to get an option on the mine including the Rob Roy Mining Company who have a mill in that vicinity, but so far their efforts have not been successful.

Mr. Morton mentioned that after the former owners had sold the property, either Eagle Picher or some of their associates had spent some \$4,000 or \$5,000 in further exploration and development and in obtaining some lengthy reports by engineers including one by Arthur Houle.

Mr. Morton seemed to think that the present owners would not be in any hurry to dispose of the property but he went on to say that if any prospective purchaser were willing to make a firm offer of \$15,000, he could then definitely ascertain the wishes of the Eagle Picher people, and he believed that they would be willing to sell their interest for a pro rata share of the \$15,000 which would also be his own inclination.

Under the circumstances I do not know whether you wish me to follow up the matter any further just at present, but I shall be in touch with Morton at frequent intervals since he has now returned to Tucson and can further communicate with him as you may desire.

Personal regards.

Yours very truly,

[Handwritten signature]

GMC:IW

THE NEW KING OF ARIZONA MINING COMPANY

(INCORPORATED IN ARIZONA)

512 FIFTH AVENUE

NEW YORK

MINE OFFICE
YUMA, ARIZONA.

copied

Report on

THE NEW KING OF ARIZONA MINING COMPANY

Prepared by

Frederic W. Norton

From the reports and examinations made by

Oscar A. Knox, E.M. of Los Angeles,
W.M. MacDonald, Esq. of New York,
and

United States Geographical Survey Bulletin 620-H

PROPERTY AND LOCATION

The New King property is located in the Kofa Mining District, about 50 miles north and east of Dome station on the Southern Pacific Railroad. The town of Yuma is about 75 miles southeast.

The Kofa Mining District is in the southern part of the range known as the Kofa mountains, an isolated mountainous area in the central part of Yuma County, Arizona.

The property under consideration consists of eight lode mining claims, comprising about 160 acres and covering the gold bearing mineral zone for a distance of over 6,000 feet.

Four claims, generally known as the King of Arizona group, are held by United States patent while title to the remaining four is held by location and possessory right under the United States mining laws.

The claims are contiguous and are known by the following names:

Moscow	(King of Arizona Group)
King Extension	Mucho Bueno
Tuxedo No.1	Homestake
Tuxedo No.2	King of Arizona
	Last Hope

HISTORY PRIOR TO NEW KING REGIME'

Although southwestern Arizona had been prospected for many years, especially in the early sixties, this particular section received little attention until the discovery of the King of Arizona orebody in 1896.

The King of Arizona mine produced ore and gold and sil-

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NEW YORK

MINE OFFICE
YUMA, ARIZONA.

- ver bullion continuously from the date of opening to the summer of 1910. The surface ore was extremely rich much of it being worth \$1 a pound or \$2000 a ton. Ore of this grade was packed or hauled to Mohawk on the Gila River, 45 miles away, and there treated in a small cyanide mill at a big profit.

In 1899, a 225 ton milling plant was built at the mine and was operated until the property closed down. The total value of the production, taken from only a small section of the mineralized zone on the Homestake and eastern part of the King claims, amounted to over \$4,000,000.

Various stories are told as to why the property closed down but I put the most emphasis on the following:

Active development work in an exploratory way was not kept up and consequently as no new orebodies were opened it was obvious that work must be discontinued. There were two separate operating companies-- one mining and the other milling-- and naturally the more ore sent to the mill the greater the return accruing to the milling company. To keep the mill at capacity it was impossible to block out ore reserves ahead of production.

By the end of 1910 cost of water and fuel had reached a terrific figure and new and cheaper sources for both were needed. Some idea of the tremendous cost can be had taking into the consideration the fact that the power plants were driven by steam-engines, the fuel for which was desert wooded hauled for miles and purchased by the ton.

Water or lack of it, was the most serious factor. The supply for camp and mill was pumped from wells 1,000 feet deep sunk in the plain five miles distant and 600 feet lower in elevation. It is said to have cost nearly \$15,000 a month to supply the mill with water alone.

Even had the owners decided to change to the use of fuel oil it is a question whether operations would have been profitable on account of the water problem. Then too, changing to oil fuel would have meant remodeling the power plants both at the water pumping station and the mine. Other alterations at the mill necessitated because of worn out machinery, would have made the capital expenditures very heavy. The owners apparently preferred to keep their profits rather than lay out further funds in investment.

GEOLOGY AND ORE DEPOSITS *Stop*

Conditions under which the ore occurs could not be better from a geological viewpoint. The region is composed in general of igneous and metamorphic rocks and on the New King property these are cut by a large dyke-like intrusion of andesite in which the orebodies occur.

The ore is found in a quartz vein occupying a fissure within

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MINE OFFICE
YUMA, ARIZONA.

the andesite intrusion. The breaking down of the earth's surface left vents through which the water percolated hollowing out great caverns the latter being again filled with a crushed mass of quartz and country rock through which the ascending mineralized solutions penetrated depositing their gold values. The veins vary in width from one to twenty feet. In the main they stand nearly vertical with well-defined walls and the pay ore occurs in strong shoots of considerable length and thickness.

There has been some slight faulting subsequent to ore deposition but nothing which makes for complicated mining conditions. There are no great irregularities nor abrupt cutting off of the ore bodies.

The main vein has a general east and west trend. It is strong with uniform values and, in some places, has spectacular specimen ore which will assay \$6,000 to \$10,000 a ton. There is in the west end of New King development at least 2,000 feet of the unworked vein awaiting intensive development.

DEVELOPMENT

The old workings in the eastern end of the King of Arizona claim and the Homestake claim are very extensive. There is a working shaft sunk about 750 feet with four working horizons opened by levels. In all there is approximately 15,000 feet of lateral development and stoping. While there is still a large tonnage of ore available in the unworked portions of the vein which will average between \$10 and \$20 a ton, present development is and will be confined to the New King or western end of the property.

The recent underground work has brought gratifying results in opening up what is apparently the bonanza vein worked in the earlier days of the mine. The main tunnel level, the 200 foot horizon, has been driven through and connected by an upraise with shaft No.2 at the extreme west end of the King claim thus affording a clear haulage-way and open ventilation for over 2,000 feet. This tunnel, therefore, directly connects shaft No/2 with the ore bins at the mill.

Three crosscuts have been driven from the tunnel, to intersect the vein. Two have intercepted the ten foot vein of \$25 to \$30 ore which has been opened on the surface outcrop for a distance of over 150 feet. Ore of the same and higher grade has been opened in both shafts Nos. 1 and 2. Shaft No. 1 is about 200 feet east of shaft No.2 but has not been connected with the tunnel level. Nearly 1,000 feet east of shaft No.2 the same vein has been opened in surface prospecting.

It is apparent therefore, that a large orebody is practically blocked out and proved in the territory above the 200 foot level and for 1,000 feet east of the old King. The eastern

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YUMA, ARIZONA.

development showed ore persistent to a depth of over 500 feet and it is reasonable to expect similar conditions to obtain in the new development.

ORE RESERVES

No systematic sampling has been done in the old King workings and an accurate estimate of the ore possibilities in the old workings is, therefore, impossible. There is without doubt, however, a large tonnage of high grade ore available with only minor development.

In the New King development careful sampling shows an average tenor of \$25 a ton. There is probably at least 100,000 tons of ore partially blocked out now which will average about \$25 a ton in value. This is unquestionably conservative and further development latterly and at depth should increase this estimate quickly.

SAMPLING AND ASSAYS

Some of the representative results obtained by Mr. Knox in his sampling of the New King development at the western end of the King claim are given as follows:

No. Sample	Location	Value per ton
1	New King #1 across west end 1.6'	\$36.38
2	" " " " east " 3.5'	7.85
3	" " " " vein 5.0'	37.20
4	" " #2 " " 6.2'	7.85
5	Open cut #4 " east face 1.0'	69.45
6	" " #3 " " " 1.0'	31.01
7	" " #2 " west " 0.5'	48.78

An average analysis of these samples shows that the average value per foot sampled is \$25 a ton. This is very high grade for free-milling gold ore.

MINING METHODS AND COSTS

The location and form of occurrence of the New King ore-body naturally makes the method of mining simple and the cost very low. The ground above the 200 foot or tunnel level can be stoped out quickly and cheaply by driving upraises at regular intervals and then breaking the ore down to the stope floor by top slicing and overhand stoping. The ore goes direct to the cars through the chutes in the stope floor by gravity. No rehandling or hoisting is necessary as the ore cars can be trammed direct to the ore bins at the mill. The tunnel portal is within 300 feet of the mill.

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MINE OFFICE
YUMA, ARIZONA.

The only timbering necessary is the stulls, lagging and chutes which form the floor of the stopes. Many of the old stopes have stood open to a depth of several hundred feet for years without supports of any kind. The walls of the veins are very solid and firm. The mine is practically dry and no pumping is required.

On the basis of the present scale of wages-- \$3.50 a day for muckers, trammers and laborers and \$4.75 to \$5.25 for miner's blacksmith, foreman, etc.-- it should not cost more than \$3.50 a ton to deliver 100 tons of ore daily to the mill. This cost also takes into consideration a charge for development of ore reserves ahead of production. It is the policy of the management to add at least one ton of ore to the reserves for each ton milled.

MILLING METHODS AND COSTS

It is quite apparent that the simplest kind of mill treatment will yield the best results. A very good extraction could be obtained by simple amalgamation for the ore is practically free-milling. The method to be used, however, gives an extraction as high as 95 per cent at a very low cost.

The treatment by cyanidation as outlined is extremely simple, no complicated or expensive methods of fine grinding and concentrating being necessary. After being dry-crushed through jaw-crushers and rollers to pass 18 by 20 mesh the crushed ore is loaded into vats of 100 tons capacity and there leached for a period of nine days. The strength of the solution is about 4.5 pounds of cyanide per ton of water. The gold is then precipitated in zinc boxes and the precipitate smelted into bullion ready for shipment.

The cost of milling 100 tons of ore daily should not exceed \$1.50 a ton. This estimate is based on the results of actual tests and former operation records. The most important reductions in cost were brought about by obtaining a cheap water supply from the Company's reservoir and by using oil as fuel in place of wood.

FUEL

The use of coal or wood as fuel is out of the question. Both are extremely difficult and costly to obtain. On the contrary, however, California crude oil "tops" can be delivered at Dome station for less than ten cents a gallon. The cost of converting the present equipment to the use of fuel oil will be quickly made up by the saving in operating costs. Fuel formerly cost the King about \$100 a day as against an estimate of \$25 daily as a maximum figure using fuel oil instead of wood.

WATER- THE NEW KING RESERVOIR

There is a vast difference between pumping a water

THE NEW KING OF ARIZONA MINING COMPANY

(INCORPORATED IN ARIZONA)

512 FIFTH AVENUE

MINE OFFICE
YUMA, ARIZONA.

NEW YORK

supply five miles against a 600 foot head and having it flow by gravity from a reservoir which will hold, at one time, sufficient for several years' supply.

The construction of the New King reservoir is the outstanding development completed by the company during the year. A thirty foot masonry dam was built across the mouth of a long two-forked canyon located about three miles northeast of the mine and 200 feet above it. There is now more than 5,000,000 gallons of water in this reservoir. After the seasonal rains, the supply should be doubled.

The water mains are now being laid from the reservoir to the mill. Within the very near future an ample supply of water should be available at the New King. Several neighboring properties are making preparations to open up again as soon as the New King will contract to furnish water.

Where formerly the cost of an adequate water supply was over \$15,000 monthly, New King will now actually have a net revenue from this source in addition to supplying its own needs completely.

TRANSPORTATION

Dome station on the Southern Pacific Railroad, situated about 50 miles southwest of Kofa, is the supply and shipping point for the New King. An excellent desert road suitable for motor truck hauling at all seasons of the year connects the mine and railroad center.

EQUIPMENT

The property is unusually well equipped both on the surface and underground. Three commodious bunk houses and a large boarding house provide quarters for 50 to 60 men. A general store and hospital will be maintained by the company for the convenience and welfare of the employees. Two bungalows are provided for the superintendent and storekeeper.

At the main shaft there are large ore bins and hoisting equipment with a capacity of 250 tons daily from a depth of 500 feet. The hoist is not in use at the present time as all underground work is being directed from the tunnel level. Near the shaft headframe are the foreman's office, blacksmith shop, powder house and storage facilities for supplies, water, etc.

The mill when completed will be in four sections or divisions: the power plant, orebins and crushing department, cyanide leaching tanks, and the refinery including the precipitating room and smelting furnace. The alterations necessary in the mill are new engines to permit the use of fuel oil in the power plant, new leaching tanks and crushing machinery. All the shaftings, pulleys, piping, etc. are ready to turn over when the alterations are completed.

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512 FIFTH AVENUE

MINE OFFICE
YUMA, ARIZONA.

NEW YORK

Underground equipment is complete with drills, drill steel, air pipelines, trackage, ore cars, etc.

COSTS, PRODUCTION AND EARNINGS

With the mill ready to run on 100 tons daily, the total cost a ton should not exceed \$5.25 divided as follows:

Mining (including development)	\$3.50
Milling (" superintendence)	1.50
Overhead and general (incl. taxes, etc.)	.25
Total cost	\$5.25

On the basis of a daily mill run of 100 tons, the net annual profits should be \$540,000.

Average value of ore as sampled in the mine is about	\$25 a ton.
Total gross value of ore sent to mill daily	\$2500
Net Value recovered (93% extraction)	2325
Total daily cost at \$5.25 a ton	525
Net daily profit	\$1800
Net annual profit (300 working day year)	\$540,000

An annual profit of \$540,000 means 60 cents a share on the outstanding capitalization. Of course when tonnage is increased later profits will be greater.

CONCLUSION

Mr. MacDonald, in concluding his report, makes the following statement:

"Taking all points into consideration from the discovery of the mine down to the present time, it seems but fair to assume that with the ore in sight and the wonderful possibilities for a further great tonnage to be opened up, that given a clear-headed systematic business administration, this mine should again take its rightful place among the dividend-payers."

New King is a "made" mine in the full sense of the word. In every step since the Company was organized the management has shown unusual foresight and engineering ingenuity.

The old King mine with its vast underground workings and exploratory tunnels gives New King development and prospecting work that would cost nearly one-half million dollars should it become necessary to do it now. The tunnel on the 200 foot level connecting shaft No. 2 at the most westerly point on the King claim with the ore bins at the mill provides a clear haulage way for over 2,500 feet. This work could not be duplicated for less than \$200,000. The equipment,

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(INCORPORATED IN ARIZONA)

512 FIFTH AVENUE**NEW YORK****MINE OFFICE
YUMA, ARIZONA.**

surface buildings, machinery, etc. adds a very substantial amount to the capital assets.

To be sure the value of the old mine is of importance but the New King discoveries in the western end of the property far overshadow any values formerly found. It is conservatively estimated that 100,000 tons of \$25.00 ore are blocked out above the 200 foot level while the bonanza vein of high grade ore has been opened at various points for a distance of over 2000 feet in virgin territory. There should be, therefore, an increasingly large tonnage of high-grade free-milling gold ore developed quickly.

It should be remembered that the reservoir built by the New King company absolutely solves the water problem. This provides an ample supply of water for the mill and a source of additional income. It has been the one big factor which has made the New King the mine it is today.

Personally, I believe New King can be placed on a dividend-paying basis early next spring. Within a few months the mill will be finished and operating. Earnings at the rate of 60 cents a share annually should be expected which would certainly warrant dividends of at least two and one-half cents a share monthly- 30 cents a share annually.

Expectations of early dividends should be an added factor in keeping New King stock above the \$2 level in the market.

Frederic W. Norton

REPORT ON NEW KING OF ARIZONA MINE, YUMA COUNTY, ARIZONA.

W. J. Johnson, Esq.,

Dear Sir:

In accordance with your request I visited the mine during my recent trip to Arizona and herewith submit the following report:

PROPERTY AND LOCATION:

Consisting of four mining claims held under Patent from the U. S. Government, and four additional claims under location rights and subject to patent after the sum of \$500. has been expended on each claim is located in Yuma County, Arizona, fifty miles north of Dome Station on the Southern Pacific Railroad, and is reached by a good auto road.

Titles to the claims are in perfect order.

HISTORY:

The property was located in 1897 and was under active operation for a period of thirteen years. Various tales have been told as to why the mines suspended, but the writer having been a resident of Arizona during its greatest prosperity, puts more credence in the report of the miners employed, i.e., that active development work in an exploratory way was not kept up and consequently as no new ore bodies were opened, it was obvious that work must be discontinued.

It is known that there were two separate operating companies, one mining the ore and the other milling it and naturally the more ore or tonnage of rock sent to the mill the greater the return accruing to the milling company.

Fuel was a most important factor, wood for steam purposes being hauled for miles and purchased by the ton, and the nature of this desert wood is such that after being piled in the yard for a short time, it would deteriorate almost 50%.

Water, or the lack of it, was another serious problem and the supply was pumped from the so-called "Deep Wells" up to the mine at an enormous expense.

Had the old company exhibited the foresight shown by you and built the dam now under construction from whence water for all purposes can be delivered on the ground by gravity, this history would have been different.

I consider the securing of this dam site a very diplomatic move, and one which will tend to materially lessen your general costs.

At the time of my visit the Face was up fifteen feet insuring at that height sufficient amount of water for a fair sized milling plant.

P O W E R:

This should be generated from engines burning Tops a low gravity oil from the California fields which should be landed at Dome Station at a price not to exceed 10¢ per gallon.

From what you have stated about the size of the first mill unit you intend installing, plus the amount needed for your hoisting engine, your fuel costs in the maximum should not exceed \$25.00 per day, against \$100. and over for wood under the old regime.

LABOR:

There is no shortage of labor.

The native Arizona Mexican is a good miner and wages should range from \$2.00 to \$3.00 per day for ordinary labor and mining up to say \$5.00 for skilled mechanics such as carpenters, blacksmiths, engineer and millman.

Eight hours constitute a working day in Arizona and the climate is such that work can be carried on the year around.

GEOLOGY:

Conditions under which the ore occurs could not be better from a geological viewpoint. The prevailing rocks being Andesite and Rhyolite.

The ore is found in a quartz vein varying in width from one to twenty feet, occurring in sheer zones in the Andesite.

The breaking down of the earth's surface left vents through which the water percolated hollowing out great caverns the latter being again filled with a crushed mass of quartz and country rock through which the ascending solutions penetrated depositing their gold value.

This great action was so strong that in one place the contents of a cavern 80 feet across were mined out and milled.

At the time of my visit work was being carried on in the main tunnel, the principal objective being to connect these workings with the West shaft which no doubt has been finished, and which connection will prove invaluable in that it will not

only afford a fine ventilation, but will more thoroughly demonstrate your ore.

You have ahead of you in the West end approximately two thousand feet of unproven ground.

The vein is strong, the values uniform and in some place spectacular, and I see no reason why this section should not prove equal in production to that already mined, and from which a sum around \$5,000,000 was handled by the company while rumor has it that at least one million additional was diverted to other channels.

The vein having an East and West trend there is plain evidence of a faulting on the Eastern end, but this I consider merely local, and would not reach any great depth, and while the East End was neglected by the original owner, I know of no reason why large ore bodies should not also be found here.

From long experience in Arizona gold and silver properties, the writer expects that at depth the vein will be more compact and confined between well defined walls with more regular and higher values.

EQUIPMENT:

At the time of my visit a firm was hauling away the old machinery, your company having reserved for its own use anything needed for the time being.

The small fortune in timber in the mine and buildings will make unnecessary any purchases in this line for some time to come, and it is well to note in this connection that due to the extreme dryness of the climate all timber and

lumber are in excellent condition.

RECOMMENDATION:

The ore is very free and amenable to straight amalgamation, the simplest form of recovery in which line of work one can obtain very comprehensive knowledge of his ore by panning in a gold pan, and we worked up several batches of the rock which yielded very gratifying returns.

My idea would be to continue work on the ore as exposed in paying shoots at many points and block out the same against the erection of the mill. And in this connection permit me to say, please, that I would not handicap the mine with a large plant at the outset, but would erect one unit of the type I intended installing and so arrange my foundation that additional equipment could be added as the development of new ore bodies warranted.

Summed up the situation is this, you have a vein several thousand feet long from which one portion has been cut and milled yielding the large results above mentioned.

There is on the West end of the old workings at least 2000 feet of unbroken ground carrying this vein and showing fine values, and there is every indication that the same condition will obtain here as in the old section. While the East end shows the same ores.

Erosion has washed down the hills and several Mexicans are making a good living by washing gold from the sand in the flats below your workings in primitive machines called Drywashers.

Taking all points into consideration from the discovery of the mine down to the present time, it seems but fair to assume that with the ore in sight and the wonderful possibilities for a further great tonnage to be opened up, that given a clear headed systematic business administration this mine should again take its rightful place among the dividend payers.

Yours respectfully,

(Signed) W. A. MAC DONALD

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REPORT ON THE PROPERTY
ON THE
NEW KING OF ARIZONA COMPANY.
YUMA COUNTY, ARIZONA

OSCAR A. KNOX, E.M.

Los Angeles, Cal.

The property under consideration is generally known as the King of Arizona mine and is situated in the Southern part of Yuma County, Arizona, about fifty miles in a Northerly direction from the Southern Pacific Railroad. The shipping point is Dome Station, with which the property is connected by an exceptionally good desert road, suitable for motor truck haulage at all seasons of the year, with the exception of a short period when high water in the Gila River may cause inconvenience. This condition, however, lasts but a short time.

CLAIMS & AREA:

The property consists of eight lode mining claims, comprising approximately 160 acres and covering the mineral zone for a distance of about 6,000 feet. There is comprised within the boundaries of the property the necessary site for mill and camp purposes.

TITLE: Title to four of the claims comprised in the group is held by United States patent and title to the remaining four claims by location and possessory right under the United States mining law.

HISTORY:

The King of Arizona mine was originally located in 1897 and was worked continuously from that time until 1910 as a low grade gold proposition. At that time the mill and mining machinery being practically worn out the then owners suspended operations. At the time that these operations were under way

wood was used for fuel and steam driven machinery utilized throughout. Wood became increasingly scarcer and consequently more expensive and to have continued operations would have necessitated the erection of entirely new plants, utilizing internal combustion engines or some other cheaper form of power than the old steam plant. All this would have necessitated a large investment and the then owners evidently preferred to keep the profit which they had made from their operations rather than to re-equip the property so that it could be economically operated under the conditions.

FACILITIES:

As previously stated, the property is about fifty miles from railroad transportation and conditions for hauling to and from the railway are very fair.

Power for future operations will necessarily be generated by internal combustion engines, as fuel for the generation of steam power is no longer obtainable.

During previous operations, water for milling and domestic purposes was pumped from wells about five miles distant from the mine entailing a large expense. The present plan, however, contemplates the erection of a storage dam in a canyon about three miles from the mine. Water sufficient for all purposes under the plan of operations contemplated can be brought from this dam site to the mine by gravity, greatly reducing the cost of operation as compared to the plan of obtaining water which was formerly in vogue.

The country adjacent to the property is bare of timber and timber for mining and building purposes would be obtained from the Pacific Coast; however, there is on hand among the other equipment left by the former operators, a very large amount of lumber and timber, probably sufficient for the needs of the mine for some years to come.

Labor is fairly plentiful and the prevailing wages for white miners and mill men are from \$4.50 to \$5.00 per day of eight hours. Mexicans can probably be obtained for common labor at about \$3.00 per day.

The climate is that typical of the desert regions of the South-west. Operations can be carried on at all seasons of the year without any interference from climate conditions.

TOPOGRAPHY:

The property is situated in the Short Horn Range of mountains, just at the edge of the comparatively flat desert country. The topography on the property itself is fairly rugged, but as heretofore stated there are reasonably good camp and mill sites included within the boundaries.

GEOLOGY:

The region is composed in general of igneous and metamorphic rocks and on the King of Arizona property these are cut by a large dyke-like intrusion of andesite in which the ore bodies occur. The higher mountains are capped by rhyolite tuffs and other extrusives.

The ore occurs as a wide vein of quartz occupying a fault fissure within the andesite intrusion. There has been some slight faulting subsequent to ore deposition, but nothing which makes for complicated mining conditions, or either irregularity or abrupt cutting off of the ore bodies.

In the main the vein stands nearly vertical with well defined walls and the pay ore appears to occur in well-defined shoots of considerable length and thickness.

EQUIPMENT:

There is a large amount of old equipment on the property, but practically all of this is worn out and of no present value. The present plans contemplate the re-equip-

ment of the property with more modern machinery, enabling work to be carried on a more economical scale than could have been possible with the old equipment.

DEVELOPMENT:

The old workings on the property are very extensive and are comprehensively shown in the large map which you now have in hand.

The present plans contemplate the opening up of new ore bodies outside of the old workings and it is not contemplated to mine from the old workings, at least at the present time.

MILLING:

The valuable metal in the ore is gold and is practically free milling. There is no doubt but that a very high recovery can be made by simple amalgamation.

PRODUCTION:

The property has produced from the gold workings about \$4,500,000. This was represented by approximately 1,000,000 tons of ore, averaging approximately \$4.50 per ton. There are now on the property enormous tailing dumps representing these former operations.

SAMPLING:

Inasmuch as operations of the immediate future do not contemplate utilizing the old workings, these were not sampled. A number of representative samples were taken from the ore bodies on the West end of the King of Arizona claim known as the New King workings. These gave results as follows:

#1	"New King" #1 Across West end of cut 1.6'	\$36.38
#2	"New King" #1 Across East end of cut 3.5'	\$ 7.85
#3	"New King" #1 Cross vein 5.0' wide	\$37.20
#4	"New King" #2 Across 6.2' including cross vein	\$ 7.85

#5 Open cut on #4 vein "King of Arizona" 12" across East face \$69.45

#6 Open cut on #3 vein "King of Arizona" 12" across East face 31.01

#7 Open cut on #2 vein "King of Arizona" 6" across West face 48.78

An analysis of the above sampling shows that the average value per foot sampled is \$25.00, a very high grade showing for a free milling gold ore.

FUTURE EQUIPMENT & DEVELOPMENT:

The plans at present under consideration include the development of the New King ore shoot, from which the above samples were taken, by means of extending the old King of Arizona tunnel a distance of thirty-five feet to a connection with shaft #2 shown on the plan attached to this report. This will provide ventilation for that part of the mine and transportation to the mill site through the King of Arizona tunnel. In addition to this it is proposed to extend the South cross-cut from the King of Arizona tunnel a distance of about fifty feet to the ore shoot as proved in the shafts above and to raise on the ore to a connection with shaft #1 thus blocking out the ore body between shafts Nos. 1 and 2, and above the tunnel level, as will be seen by reference to the longitudinal section accompanying this report.

It is proposed to erect a modern mill of approximately fifty tons daily capacity and to operate this mill on ore of approximately the grade indicated by the sampling referred to above, which can be done by mining the better portions of the ore bodies only, instead of mining on the large scale that was attempted by the old company which greatly diminished the average value of the ore milled.

It is proposed to erect a storage dam for water supply as previously mentioned in this report, thus doing away with the cost of pumping water a distance of five miles against

a head of 500 feet; consequently lowering working costs.

CONCLUSION:

It is the writer's conclusion that the property when worked on the lines that have been outlined can be made to yield a handsome profit and that the cost of equipment can be held down to a very reasonable figure.

The writer recommends development of the property along the lines outlined herein.

Respectfully submitted,

(Signed) OSCAR A KNOX

copy

REPORT ON NEW KING OF ARIZONA MINE, YUMA COUNTY, ARIZONA.

W. J. Johnson, Esq.,

Dear Sir:

In accordance with your request I visited the mine during my recent trip to Arizona and herewith submit the following report:

PROPERTY AND LOCATION:

Consisting of four mining claims held under Patent from the U. S. Government, and four additional claims under location rights and subject to patent after the sum of \$500 has been expended on each claim is located in Yuma Couma County, Arizona, fifty miles north of Dome Station on the Southern Pacific Railroad, and is reached by a good auto road.

Titles to the claims are in perfect order.

HISTORY:

The property was located in 1897 and was under active operation for a period of thirteen years. Various tales have been told as to why the mines suspended, but the writer having been a resident of Arizona during its greatest prosperity, puts more credence in the report of the miners employed, i.e., that active development work in an exploratory way was not kept up and consequently as no new ore bodies were opened, it was obvious that work must be discontinued.

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Yours respectfully,

(signed) W. A. MacDONALD

copy

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ON THE
NEW KING OF ARIZONA COMPANY
YUMA COUNTY, ARIZONA
OSCAR A KNOX, E. M.
Los Angeles, California

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the then owners evidently preferred to keep the profit which they had made from their operations rather than to re-equip the property so that it could be economically operated under the conditions.

FACILITIES:

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TOPOGRAPHY:

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EQUIPMENT:

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The present plans contemplate the opening up of new ore bodies outside of the old workings and it is not contemplated to mine from the old workings, at least at the present time.

MILLING:

The valuable metal in the ore is gold and is practically free milling. There is no doubt but that a very high recovery can be made by simple amalgamation.

PRODUCTION:

The property has produced from the gold workings about \$4,500,000. This was represented by approximately 1,000,000 tons of ore, averaging approximately \$4.50 per ton. There are now on the property enormous tailing dumps representing these former operations.

SAMPLING:

Inasmuch as operations of the immediate future do not contemplate utilizing the old workings, these were not sampled. A number of representative samples were taken from the ore bodies on the West end of the King of Arizona claim known as the New King workings. These gave results as follows:

#1	"New King" #1 Across West end of cut 1.6'	\$36.38
#2	"New King" #1 Across East end of cut 3.5'	7.85
#3	"New King" #1 Across vein 5.0' wide	37.20
#4	"New King" #2 Across 6.2' including cross vein	7.85
#5	Open cut on #4 vein "King of Arizona" 12" across East face	69.45
#6	Open cut on #3 vein "King of Arizona" 12" across East face	31.01
#7	Open cut on #2 vein "King of Arizona" 6" across West face	48.78

An analysis of the above sampling shows that the average value per foot sampled is \$25.00, a very high grade showing for a free milling gold ore.

FUTURE EQUIPMENT & DEVELOPMENT:

The plans at present under consideration include the development of the New King ore shoot, from which the above samples were taken, by means of extending the old King of Arizona tunnel a distance of thirty-five feet to a connection with shaft #2 shown on the plan attached to this report. This will provide ventilation for that part of the mine and transportation to the mill site through the King of

Arizona tunnel. In addition to this it is proposed to extend the South crosscut from the King of Arizona tunnel a distance of about fifty feet to the ore shoot as proved in the shafts above and to raise on the ore to a connection with shaft #1 thus blocking out the ore body between shafts Nos. 1 and 2, and above the tunnel level, as will be seen by reference to the longitudinal section accompanying this report.

It is proposed to erect a modern mill of approximately fifty tons daily capacity and to operate this mill on ore of approximately the grade indicated by the sampling referred to above, which can be done by mining the better portions of the ore bodies only, instead of mining on the large scale that was attempted by the old company which greatly diminished the average value of the ore milled.

It is proposed to erect a storage dam for water supply as previously mentioned in this report, thus doing away with the cost of pumping water a distance of five miles against a head of 500 feet; consequently lowering working costs.

CONCLUSION:

It is the writer's conclusion that the property when worked on the lines that have been outlined can be made to yield a handsome profit and that the cost of equipment can be held down to a very reasonable figure.

The writer recommends development of the property along the lines outlined herein.

Respectfully submitted,

(signed)

OSCAR A KNOX

copy

Report on
THE NEW KING OF ARIZONA MINING COMPANY

Prepared by

Frederic W. Norton

From the reports and examinations made by

Oscar A. Knox, E. M. of Los Angeles
W. M. MacDonald, Edq. of New York,

United States Geographical Survey Bulletin 620-H

PROPERTY AND LOCATION

The New King property is located in the Kofa Mining District, about 50 miles north and east of Dome station on the Southern Pacific Railroad. The town of Yuma is about 75 miles southeast.

The Kofa Mining District is in the southern part of the range known as the Kofa mountains, an isolated mountainous area in the central part of Yuma County, Arizona.

The property under consideration consists of eight lode mining claims, comprising about 160 acres and covering the gold bearing mineral zone for a distance of over 6,000 feet.

Four claims, generally known as the King of Arizona group, are held by United States patent while title to the remaining four is held by location and possessory right under the United States mining laws.

The claims are contiguous and are known by the following names:

Moscow	(King of Arizona Group)
King Extension	Mucho Bueno
Tuxedo No. 1	Homestake
Tuxedo No. 2	King of Arizona
	Last Hope

HISTORY PRIOR TO NEW KING REGIME

Although southwestern Arizona had been prospected for many years, especially in the early sixties, this particular section received little attention until the discovery of the King of Arizona orebody in 1896.

The King of Arizona mine produced ore and gold and silver bullion continuously from the date of opening to the summer of 1910. The surface ore was extremely rich much of it being worth \$1 a pound

or \$2000 a ton. Ore of this grade was packed or hauled to Mohawk on the Gila River, 45 miles away, and there treated in a small cyanide mill at a big profit.

In 1899, a 225 ton milling plant was built at the mine and was operated until the property closed down. The total value of the production, taken from only a small section of the mineralized zone on the Homestake and eastern part of the King Claims, amounted to over \$4,000,000.

Various stories are told as to why the property closed down but I put the most emphasis on the following:

Active development work in an exploratory way was not kept up and consequently as no new orebodies were opened it was obvious that work must be discontinued. There were two separate operating companies--one mining and the other milling--and naturally the more ore sent to the mill the greater the return accruing to the milling company. To keep the mill at capacity it was impossible to block out ore reserves ahead of production.

By the end of 1910 cost of water and fuel had reached a terrific figure and new and cheaper sources for both were needed. Some idea of the tremendous cost can be had taking into the consideration the fact that the power plants were driven by steam-engines, the fuel for which was desert wooded hauled for miles and purchased by the ton.

Water or lack of it, was the most serious factor. The supply for camp and mill was pumped from wells 1,000 feet deep sunk in the plain five miles distant and 600 feet lower in elevation. It is said to have cost nearly \$15,000 a month to supply the mill with water alone.

Even had the owners decided to change to the use of fuel oil it is a question whether operations would have been profitable on account of the water problem. Then, too, changing to oil fuel would have meant remodeling the power plants both at the water pumping station and the mine. Other alterations at the mill necessitated because of worn out machinery, would have made the capital expenditures very heavy. The owners apparently preferred to keep their profits rather than lay out further funds in investment.

GEOLOGY AND ORE DEPOSITS

Conditions under which the ore occurs could not be better from a geological viewpoint. The region is composed in general of igneous and metamorphic rocks and on the New King property these are cut by a large dyke-like intrusion of andesite in which the orebodies occur.

The ore is found in a quartz vein occupying a fissure within the andesite intrusion. The breaking down of the earth's surface left vents through which the water percolated hollowing out great caverns the latter being again filled with a crushed mass of quartz and country rock through which the ascending mineralized solutions penetrated depositing their gold values. The veins vary in width from one to twenty feet. In the main they stand nearly vertical with well-defined walls and the pay ore occurs in strong shoots of considerable length and thickness.

There has been some slight faulting subsequent to ore deposition but nothing which makes for complicated mining conditions. There are no great irregularities nor abrupt cutting off of the ore bodies.

The main vein has a general east and west trend. It is strong with uniform values and, in some places, has spectacular specimen ore which will assay \$6,000 to \$10,000 a ton. There is in the west end of New King development at least 2,000 feet of the unworked vein awaiting intensive development.

DEVELOPMENT

The old workings in the eastern end of the King of Arizona claim and the Homestake claim are very extensive. There is a working shaft sunk about 750 feet with four working horizons opened by levels. In all there is approximately 15,000 feet of lateral development and stoping. While there is still a large tonnage of ore available in the unworked portions of the vein which will average between \$10 and \$20 a ton, present development is and will be confined to the New King or western end of the property.

The recent underground work has brought gratifying results

in opening up what is apparently the bonanza vein worked in the earlier days of the mine. The main tunnel level, the 200 foot horizon, has been driven through and connected by an upraise with shaft No. 2 at the extreme west end of the King claim thus affording a clear haulage-way and open ventilation for over 2,000 feet. This tunnel, therefore, directly connects shaft No. 2 with the ore bins at the mill.

Three crosscuts have been driven from the tunnel, to intersect the vein. Two have intercepted the ten foot vein of \$25 to \$30 ore which has been opened on the surface outcrop for a distance of over 150 feet. Ore of the same and higher grade has been opened in both shafts Nos. 1 and 2. Shaft No. 1 is about 200 feet east of shaft No. 2 but has not been connected with the tunnel level. Nearly 1,000 feet east of shaft No. 2 the same vein has been opened in surface prospecting.

It is apparent therefore, that a large orebody is practically blocked out and proved in the territory above the 200 foot level and for 1,000 feet east of the old King. The eastern development showed ore persistent to a depth of over 500 feet and it is reasonable to expect similar conditions to obtain in the new development.

ORE RESERVES

No systematic sampling has been done in the old King workings and an accurate estimate of the ore possibilities in the old workings is, therefore, impossible. There is without doubt, however, a large tonnage of high grade ore available with only minor development.

In the New King development careful sampling shows an average tenor of \$25 a ton. There is probably at least 100,000 tons of ore partially blocked out now which will average about \$25 a ton in value. This is unquestionably conservative and further development latterly and at depth should increase this estimate quickly.

SAMPLING AND ASSAYS

Some of the representative results obtained by Mr. Knox in

his sampling of the New King development at the western end of the King claim are given as follows:

No. Sample	Location	Value Per ton
1	New King #1 across west end 1.6'	\$36.38
2	" " " " east " 3.5'	7.85
3	" " " " vein 5.0'	37.20
4	" " #2 " " 6.2'	7.85
5	Open cut #4 " east face 1.0'	69.45
6	" " #3 " " " 1.0'	31.01
7	" " #2 " west " 0.5'	48.78

An average analysis of these samples shows that the average value per foot sampled is \$25 a ton. This is very high grade for free-milling gold ore.

MINING METHODS AND COSTS

The location and form of occurrence of the New King orebody naturally makes the method of mining simple and the cost very low. The ground above the 200 foot or tunnel level can be stoped out quickly and cheaply by driving upraises at regular intervals and then breaking the ore down to the stope floor by top slicing and overhand stoping. The ore goes direct to the cars through the chutes in the stope floor by gravity. No rehandling or hoisting is necessary as the ore cars can be trammed direct to the ore bins at the mill. The tunnel portal is within 300 feet of the mill.

The only timbering necessary is the stulls, lagging and chutes which form the floor of the stopes. Many of the old stopes have stood open to a depth of several hundred feet for years without supports of any kind. The walls of the veins are very solid and firm. The mine is practically dry and no pumping is required.

On the basis of the present scale of wages -- \$3.50 a day for muckers, trammers and laborers and \$4.75 to \$5.25 for miner's, blacksmith, foreman, etc. -- it should not cost more than \$3.50 a ton to deliver 100 tons of ore daily to the mill. This cost also takes into consideration a charge for development of ore reserves ahead of production. It is the policy of the management to add at least one ton of ore to the reserves for each ton milled.

MILLING METHODS AND COSTS

It is quite apparent that the simplest kind of mill treatment

will yield the best results. A very good extraction could be obtained by simple amalgamation for the ore is practically free-milling. The method to be used, however, gives an extraction as high as 95 per cent at a very low cost.

The treatment by cyanidation as outlined is extremely simple, no complicated or expensive methods of fine grinding and concentrating being necessary. After being dry-crushed through jaw-crushers and rollers to pass 18 by 20 mesh the crushed ore is loaded into vats of 100 tons capacity and there leached for a period of nine days. The strength of the solution is about 4.5 pounds of cyanide per ton of water. The gold is then precipitated in zinc boxes and the precipitate smelted into bullion ready for shipment.

The cost of milling 100 tons of ore daily should not exceed \$1.50 a ton. This estimate is based on the results of actual tests and former operation records. The most important reductions in cost were brought about by obtaining a cheap water supply from the Company's reservoir and by using oil as fuel in place of wood.

FUEL

The use of coal or wood as fuel is out of the question. Both are extremely difficult and costly to obtain. On the contrary, however, California crude oil "tops" can be delivered at Dome station for less than ten cents a gallon. The cost of converting the present equipment to the use of fuel oil will be quickly made up by the saving in operating costs. Fuel formerly cost the King about \$100 a day as against an estimate of \$25 daily as a maximum figure using fuel oil instead of wood.

WATER - THE NEW KING RESERVOIR

There is a vast difference between pumping a water supply five miles against a 600 foot head and having it flow by gravity from a reservoir which will hold, at one time, sufficient for several year's supply.

The construction of the New King reservoir is the outstanding development completed by the company during the year. A thirty foot masonry dam was built across the mouth of a long two-forked canyon located about three miles northeast of the mine and 200 feet above it.

There is now more than 5,000,000 gallons of water in this reservoir. After the seasonal rains, the supply should be doubled.

The water mains are now being laid from the reservoir to the mill. Within the very near future an ample supply of water should be available at the New King. Several neighboring properties are making preparations to open up again as soon as the New King will contract to furnish water.

Where formerly the cost of an adequate water supply was over \$15,000 monthly, New King will now actually have a net revenue from this source in addition to supplying its own needs completely.

TRANSPORTATION

Dome station on the Southern Pacific Railroad, situated about 50 miles southwest of Kofa, is the supply and shipping point for the New King. An excellent desert road suitable for motor truck hauling at all seasons of the year connects the mine and railroad center.

EQUIPMENT

The property is unusually well equipped both on the surface and underground. Three commodious bunk houses and allarge boarding house provide quarters for 50 to 60 men. A general store and hospital will be maintained by the company for the convenience and welfare of the employees. Two bungalows are provided for the superintendent and storekeeper.

At the main shaft there are large ore bins and hoisting equipment with a capacity of 250 tons daily from a depth of 500 feet. The hoist is not is use at the present time as all underground work is being directed from the tunnel level. Near the shaft headframe are the foreman's office, blacksmith shop, powder house and storage facilities for supplies, water, etc.

The mill when completed will be in four sections or divisions: the power plant, orebins and crushing department, cyanide leaching tanks, and the refinery including the precipitating room and smelting furnace. The alterations necessary in the mill are new engines to permit the use of fuel oil in the power plant, new leaching tanks and crushing machinery. All the shaftings, pulleys, piping, etc. are ready

to turn over when the alterations are completed.

Underground equipment is complete with drills, drill steel, air pipelines, trackage, ore cars, etc.

COSTS, PRODUCTION AND EARNINGS

With the mill ready to run on 100 tons daily, the total cost a ton should not exceed \$5.25 divided as follows:

Mining (including development)	\$3.50
Milling (" superintendence)	1.50
Overhead and general (incl. taxes, etc.)	.25
Total cost	<u>\$5.25</u>

On the basis of a daily mill run of 100 tons, the net annual profits should be \$540,000.

Average value of ore as sampled in the mine is about \$25 a ton.

Total gross value of ore sent to mill daily	\$2500
Net Value recovered (93% extraction)	2325
Total daily cost at \$5.25 a ton	525
Net daily profit	<u>\$1800</u>
Net annual profit (300 working day year)	\$540,000

An annual profit of \$540,000 means 60 cents a share on the outstanding capitalization. Of course when tonnage is increased later profits will be greater.

CONCLUSION

Mr. MacDonald, in concluding his report, makes the following statement:

"Taking all points into consideration from the discovery of the mine down to the present time, it seems but fair to assume that with the ore in sight and the wonderful possibilities for a further great tonnage to be opened up, that given a clear-headed systematic business administration, this mine should again take its rightful place among the dividend-payers."

New King is a "made" mine in the full sense of the word. In every step since the Company was organized the management has shown unusual foresight and engineering ingenuity.

The Old King mine with its vast underground workings and exploratory tunnels give New King development and prospecting work that would cost nearly one-half million dollars should it become necessary to do it now. The tunnel on the 200 foot level connecting shaft No. 2 at

the most westerly point on the King claim with the ore bins at the mill provides a clear haulage way for over 2,500 feet. This work could not be duplicated for less than \$200,000. The equipment, surface buildings, machinery, etc. adds a very substantial amount of the capital assets.

To be sure the value of the old mine is of importance but the New King discoveries in the western end of the property far overshadow any values formerly found. It is conservatively estimated that 100,000 tons of \$25, ore are blocked out above the 200 foot level while the bonanza vein of high grade ore has been opened at various points for a distance of over 2000 feet in virgin territory. There should be, therefore, an increasingly large tonnage of high-grade free-milling gold ore developed quickly.

It should be remembered that the reservoir built by the New King company absolutely solves the water problem. This provides an ample supply of water for the mill and a source of additional income. It has been the one big factor which has made the New King the mine it is today.

Personally, I believe New King can be placed on a dividend-paying basis early next spring. Within a few months the mill will be finished and operating. Earnings at the rate of 60 cents a share annually should be expected which would certainly warrant dividends of at least two and one-half cents a share monthly - 30 cents a share annually.

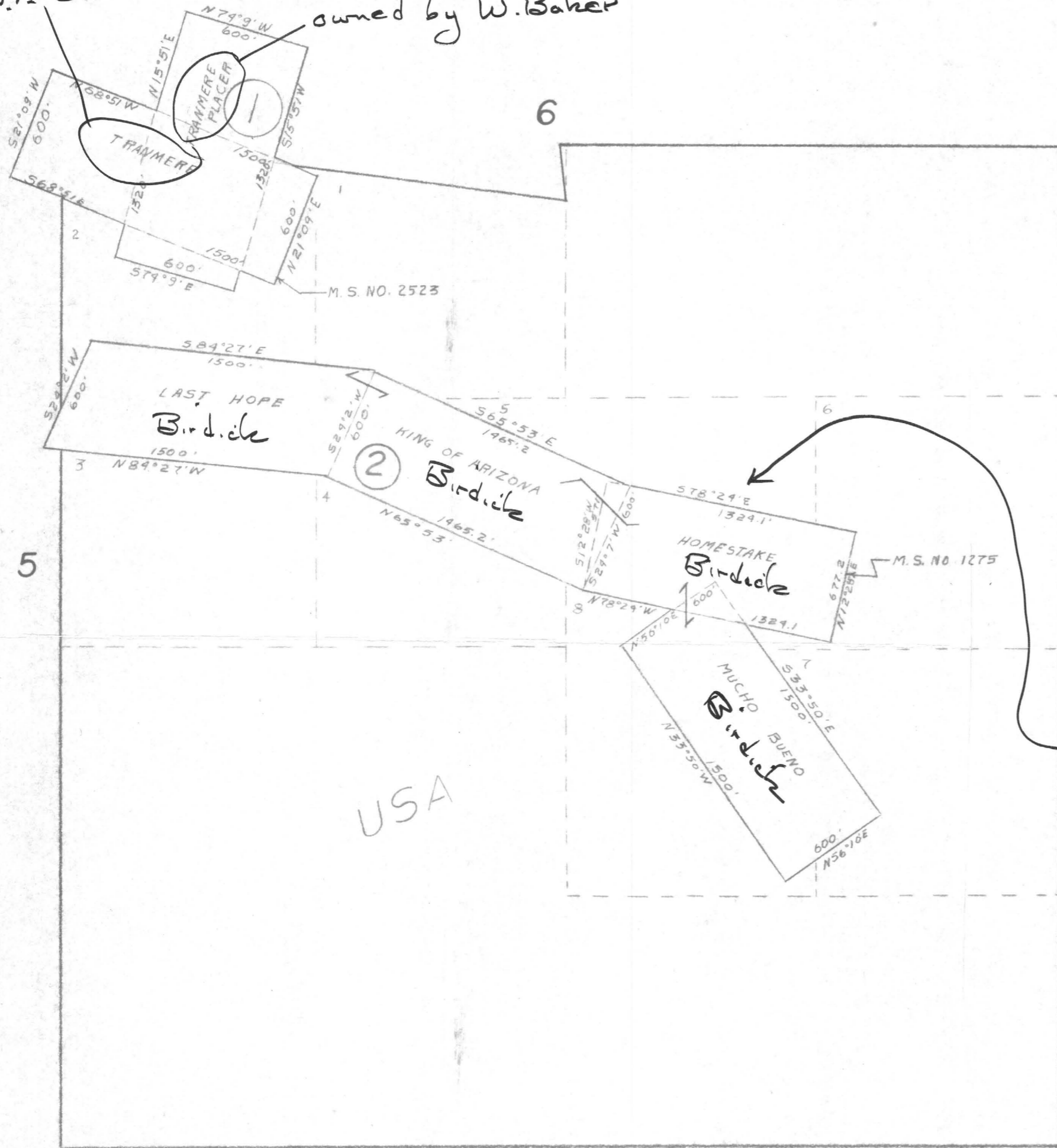
Expectations of early dividends should be an added factor in keeping New King stock above the \$2 level in the market.

Frederic W. Norton

King
Angora

Owned by P.A. Birdick

owned by W. Baker



MAP 7

Would like to exchange land at Clip Mill Site. (No. 1 acre of the total of 5 acres)

(Mr. Hindle owns 4 acres
P.A. Birdick one acre)

for some acreage just North of the patented Homestake which I also own.

I would like to patent the land that the Bob Roy Mill is located on. This exchange would accomplish this purpose.



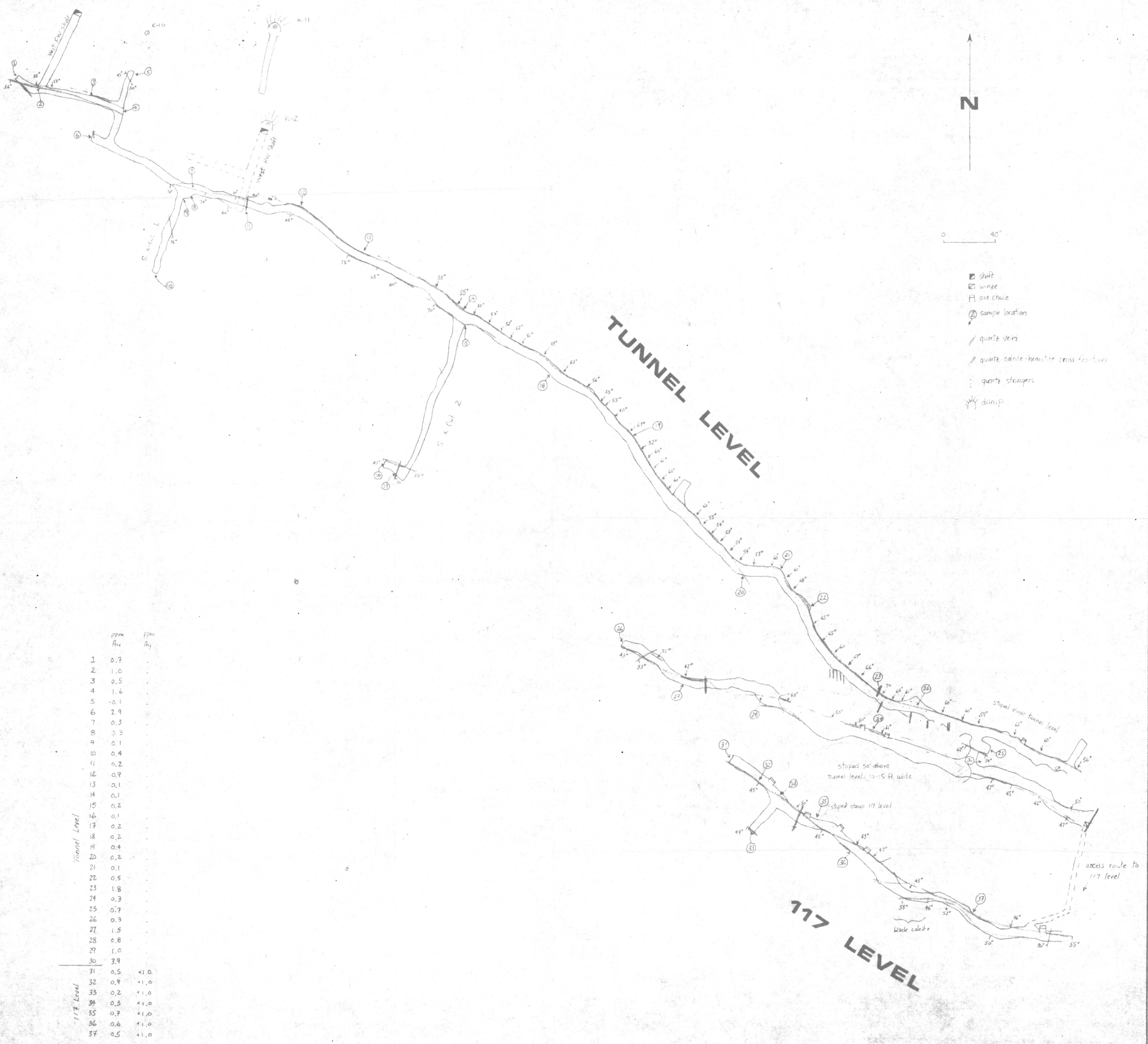
SCALE 1" = 600'

FOR INFORMATION ONLY
NO LIABILITY ASSUMED
YUMA CO. ASSESSOR

OTIS SHIPP
YUMA COUNTY ASSESSOR

1963

25-17W-12



	ppm Au	ppm Ag
1	0.7	
2	1.0	
3	0.5	
4	1.6	
5	-0.1	
6	2.9	
7	0.3	
8	0.3	
9	0.1	
10	0.4	
11	0.2	
12	0.9	
13	0.1	
14	0.1	
15	0.2	
16	0.1	
17	0.2	
18	0.2	
19	0.4	
20	0.2	
21	0.1	
22	0.5	
23	1.8	
24	0.3	
25	0.7	
26	0.3	
27	1.5	
28	0.8	
29	1.0	
30	3.9	
31	0.5	41.0
32	0.9	41.0
33	0.2	41.0
34	0.3	41.0
35	0.7	41.0
36	0.6	41.0
37	0.5	41.0

KING OF ARIZONA

SCALE: 1 in. = 40 ft.	APPROVED BY: T. C. PATTON	DRAWN BY: T.C.P.
DATE: 11-20-81	REVISION:	

TUNNEL, 117 LEVELS

YUMA CO., AZ.

DRAWING NUMBER

Brunton and Tape Traverse

KING OF ARIZONA.

HOMESTAKE.

LAST HOPE.

MUCHO BUENO.

KING OF ARIZONA CO
PROPERTIES,
KOFA, YUMA CO,
ARIZONA.

LEGEND.

Total and Net Area	Last Hope Lode	1038 Acres.
" "	King of Arizona Lode	2048 Acres.
Total	Homestake	1819
Less conflict with King of Arizona		077
	Mucho Bueno	106
Net area of Homestake		1642
Total and	Mucho Bueno	2060
Total	All Claims	7484

Claims located Feb. 13, 1897. Variation 15° 30' E.
Surveyed for Patent Dec. 27, 1897, by W. H. Elliott.

SCALE - 1 inch = 500 ft. - W. A. Pomeroy



DA

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King
Angora