



## **CONTACT INFORMATION**

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: BLACK PRINCESS MINE

ALTERNATE NAMES:

BLACK PRINCE  
BLACK PRINCESS  
MINNIE MOORE ~~FILE~~

PIMA COUNTY MILS NUMBER: 97

LOCATION: TOWNSHIP 20 S RANGE 10 E SECTION 14 QUARTER SE  
LATITUDE: N 31DEG 40MIN 56SEC LONGITUDE: W 111DEG 16MIN 56SEC  
TOPO MAP NAME: ARIVACA - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER  
GOLD LODE  
LEAD  
COPPER

BIBLIOGRAPHY:

S.B. KEITH, AZBM BULL. 189, 1974, P. 113  
ADMMR BLACK PRINCESS MINE



STATE OF ARIZONA

DEPARTMENT OF MINES AND MINERAL RESOURCES

Mineral Building, Fairgrounds, Phoenix, Arizona 85007 • (602) 255-3791

MINNIE MOORE MINE  
BLACK PRINCESS GROUP  
BLACK PRINCE

PIMA COUNTY  
CERRO COLORADO DIST.  
T20S, R10E, Sec 13, 14

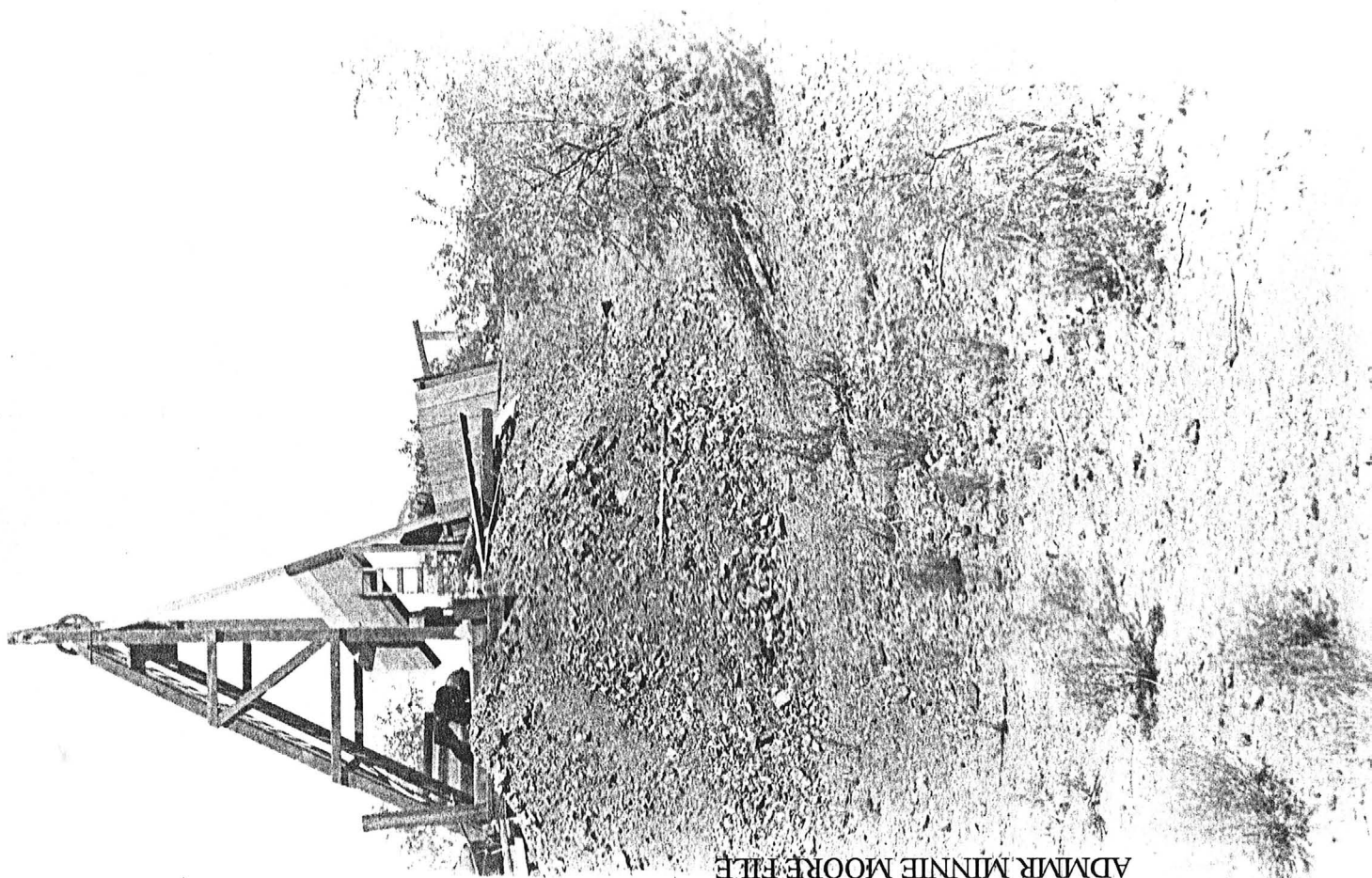
MILS BLACK PRINCESS MINE

ABM 189 p113



A-122-5

1954



ADMR MINNIE MOORE FILE

A-122-C

1954



Box 24 Ruby Sta Rte  
via Tucson Ariz  
Aug 20

Mr J. S. Crupal  
Director -

My Dear Sir - In reply to yours of July 11  
I sent statements & One Report on Tungsten  
Property & also Black Prince's Lead & Silver Property  
Report was in letter by W. J. Abbatt.  
I also sent stamps for return of Copies of  
References (old ones) & the Abbatt report - if not  
needed - Some other business that has come  
up makes it desirable that I have back  
the said papers - Not my statements re-  
said properties but  
Abbatt's signed report in B.P. - and a No  
of Copies of Ref - from Business men &c.  
re my standing - If needed I will  
gladly remit postage.  
Your attention will be appreciated.  
Plenty flood here Roads in bad shape  
off the highway - Regards  
C. E. Udall

Box 44 Ruby Star. 1/2 -

Mr J. D. Coubal

My Dear Sir

Enclosed please find <sup>for</sup> Postage Stamps  
to amt of \$1.00 & Cash

Kindly return me Reports & Copies of ref-  
erences - Letters &c. Mailed you in  
reply to your request of July 11th -  
as have taken Tinsley's property off the  
Market - Optioned - & used the Report  
(Original) of Snyder re - Lead Property -  
Black Princess - also the Strinsfeld  
Letter - Alberts -

Thanking you for trouble in  
the matter - I am yours truly

Charles E. Hall

5 September 1940

Mr. Charles E. Udall,  
Box 24, Ruby Star Route,  
Tucson, Arizona.

My dear Mr. Udall:

In the absence of Mr. J. S. Coupal, I am taking the liberty of acknowledging receipt of your letter of recent date requesting the return of reports and copies of references previously mailed to this office.

I note that you are taking the properties off the market, and I am returning herewith the papers requested.

If you have disposed of these properties I am sure Mr. Coupal would appreciate having any data on it that you would care to give him.

In the future should you desire to again place the properties on the market, kindly advise us in the matter.

Assuring you of our desire to be helpful, I am

Yours very truly,

Jess R. Fickas  
Secretary to Mr. Coupal

jrf  
encls.

Box 14 Ruby Star. P/2 -

Mr J. D. Coubal

My Dear Sir

Inclosed please find <sup>for</sup> Postage Stamps  
to amt of 70¢ & Cash

Kindly return me Reports & Copies of ref-  
erences - Letter & C. Mailed. You in  
reply to your request of July 11th -  
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Market - Offered - & used the Report  
(Original) of Snyder re - Lead Property -  
Black Princess - also the Strinfeld  
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Charles E. Ussell



Box 24 Ruby Star Pk  
via Tucson Ariz  
Aug 20

Mr J. S. Campbell  
Director -

My Dear Sir - In reply to yours of July 11  
I sent statements & one Report on Tungsten  
Property & also Black Prince Lead Silver Property  
Report was in latter by W. J. Abbatt.  
I also sent stamps for return of Copies of  
References (old ones) & the Abbatt report - if not  
needed - Some other business that has come  
up makes it desirable that I have back  
the said papers - Not my statements re -  
said properties but

Abbatts signed report B.P. - and a No  
of Copies of Ref - from Business men &c.  
re my standing - If needed I will  
gladly remit postage.  
Your attention will be appreciated.  
Plenty flood here Roads in bad shape  
off the highway - Regards  
C. E. Udall

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine **Minnie Moore** (formerly "Black Prince"<sup>Group</sup>) Date **March 13, 1956**

District ~~xixix~~ **Cerro Colorado Dist., Pima Co.** Engineer **Axel L. Johnson**

Subject: **Present Status.**

References Please see my report on this property under date of June 2, 1954.

Please file reports of the "Black Princess Group" under "Minnæ Moore"

RA



DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Minnie Moore (formerly "Black Prince" Date March 13, 1956  
District ~~xxxx~~ Cerro Colorado Dist., Pima Co. Engineer Axel L. Johnson  
Subject: Present Status.

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Please file reports of the "Black Princess Group" under "Minnie Moore"

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

Mine Minnie Moore -- (formerly Black Prince) Date June 2, 1954  
District Cerro Colorado District ---Pima County. Engineer Axel L. Johnson  
Subject: Field Engineers Report

Location Secs 13 & 14 - T 20 S - R 10 E. Go north from Arivaca on the Arivaca-Kinsley road for about 8 miles. Turn left on the Las Guijas road. Drive about 1/2 mile on this road, then turn right (north), and drive 2 1/4 miles on private road.

Number of Claims 2 unpatented claims.

Owners M & R. Mining Co. (bought mine from John D. Mitchell of Arivaca 2 months ago.)  
This company originally composed of H. P. McCarthy of San Francisco, Calif., and L. A. Roberts of Walnut Creek, Calif. However, Mr. Roberts passed away a few weeks ago.

Operators M. & R. Mining Co., San Francisco, Calif.

Metals and Minerals Lead with high silver content. Some zinc and copper.

Number of men employed 5 (work started 6 weeks ago.)

Production Rate No ore production yet.

Geology The shaft at which operations are conducted is sunk in the fault gouge of a large fault. Country rock on both sides of the fault is andesite. Fault strikes ENE, and dips about 80 degrees south. On the foot wall of the fault, about an 18 inch layer of hard rock, containing iron and manganese can be observed. This is altered country rock and not a part of the fault gouge. The fault gouge at the place where the shaft is being repaired, is about 3 ft. wide. The writer did not see any ore in the fault gouge in the open cut about 8 ft. deep next to the shaft. John Mitchell states that the ore is found as high grade chunks of ore in the fault gouge, and, also that most of the ore is found near the iron-manganese layer on the footwall.

Ore Values According to a statement by John Mitchell, an assay taken at the breast of an old drift on the 70 ft. level, by crawling into same on hands and knees, was as follows: Silver ---1400 oz. Lead -- 30 % (galena and cerussite) Copper -- 2 % Zinc -- 1 %. (writer did not see the assay report). Sample means very little regardless, as the writer has no way of telling whether it is a specimen sample, or a sample which represents any amount of tonnage; and, also, what proportion is ore and what proportion is fault gouge.

Ore in Sight and Probable No ore in sight, from surface workings. Old workings are inaccessible.

Old Mine Workings 1 --- 110 ft. shaft (incl. 80 degr. S.) ----70 ft. to water level.  
1 --- 25 ft. drift on the 70 ft. level ----in bad shape  
Believed to be some old caved workings on the 20 ft. level  
May be some old workings on the 110 ft. level  
1 --- 40 ft. shaft about 150 ft. east ---- bad condition.  
Some open cut workings.

DEPARTMENT OF MINERAL RESOURCES  
STATE OF ARIZONA  
FIELD ENGINEERS REPORT

OK A.L.J.

Mine Minnie Moore -- (formerly Black Prince) <sup>ES</sup> Date June 2, 1954.

District Cerro Colorado District ---Pima County Engineer Axel L. Johnson

Subject: Field Engineers Report

Past History Following information on past history supplied by John D. Mitchell:

(1) Property was opened up in 1857 by Posten and Heintzelman, who also worked the Silver Queen Mine at Cerro Colorado. It was closed down in 1861 at the beginning of the Civil War, when the removal of U. S. government troops in the area made it hazardous to work the properties on account of frequent Indian raids.

(2) Property was owned by Chas. E. Udall from 1918 to 1952. Mr. Udall did some mining intermittently and on a small scale, and sold the ore to Hugo Miller in Nogales a few tons at a time. This, also, took care of his assessment work.

(3) Relocated by John D. Mitchell in 1952, after death of Mr. Udall.

(4) Sold by John Mitchell to the M. & R. Mining Co. about 2 months ago.

Present Operations John Mitchell is at present supervising the installment of mining equipment for the company with a crew of 4 men and himself. To date, after 6 weeks of work, a 24 ft. gallows frame has been erected, a 15 ft. collar set placed in the shaft, and a 105 c.f.m. compressor, a hoist and a pump has been installed. Shaft is 2 cmpt. 6' x 7 1/2'.

Future Plans Future plans of the company not definitely known by Mr. Mitchell. It would seem logical from current preparations that the company intends to repair and dewater the shaft, and then open up and sample the old workings of the mine in order to determine the size, value, and character of the ore deposit.

Properties believed to be owned by U. of A. - Source unknown.

NAME: PROPERTY	DISTRICT	COUNTY	LOCATION TWP-RGE-SECT	SIZE: ACRES	Total Limit * Assessed \$	MINERAL SURVEY NUMBER	Patented Claims	NOTES
U/A EXPERIMENTAL MINE, SAN XAVIER NO 6	1. DEMOCRAT 2. MARJORIE	PIMA	PIMA	17, 12E 3 10	20.661 16.560	\$ 16,528 13,248	1758P 11-4-76 5398-0134 1759 1000-ANANIAS 5393-0134	MAPS: US & SUTHER
OLD AMADO or MONTOSA MINE 1 MILE N of GLEN	1. Black Diamond 2. Isabella	TYNDALL	SANTA CRUZ	20, 14E 29 NW 1/4	20.661 20.661	\$ 7500 U/A 2967-7/4 UA, 1/4 MACKENZIE 2967-7/4 UA, 1/4 MACKENZIE, 1/4 LENNON	2966-1/4 UA, 1/4 MACKENZIE 2967-7/4 UA, 1/4 MACKENZIE, 1/4 LENNON	SPRINGS MAPS
	SUNSET	TOMBSTONE	COCHISE	20, 22E 14 SW 1/4	12.27 AC	\$ 19,620	Deer 468 R109 LST 50	Patented 1880 2000 ton dump NO MONUMENTS
	ALBATROSS	ARIZONA	PIMA	21, 9E 12 NE 1/4	16.87 AC	\$ 12,653	355	TUNNEL-SHAFT
	TOTAL WRECK	EMPIRE	PIMA	18, 17E 3 E 1/4	17.153	\$ 6,800 12,800	235	Deer J. VAIL WILKINSON on INDIAN RESERVATION contiguous claims
ALLISON MINE (SABOQUIVARI)	1. SENATOR NO 1 2. SUNBEAM NO 1	FRESNAL	PIMA	18, 7E 28 30	20.621 20.522	\$ 16,496 16,416	4063	COMOBIAT MAPS
ANNIE MINE NO 1	MINNIE MINE	CABABI	PIMA	15, 5E 12	20.661	\$ 6,818	4066	20155 Panel No
MILL SITE	SANTO TOMAS	CABABI	PIMA	15, 4E 36	5.0 AC	\$ 1650	Panel 20163	Near Graveyard, Near LINDEN and KO VAYA
LA NUEVA BONITA VISIG PLACERS	EDNA J.	SABOQUIVARI	PIMA	19, 8E 31-32 20, 8E 6-7	LEASE 680 STATELAND	Not on Tax Roles (NA)	UN- PAT'D PLACER	W. of HUNZEL ON INDIAN LAND ALTAR VALLEY Believed to have been WITHDRAWN REVERTED 1979 for lack of activity an in many grants on settlement of grants
GREAT AMERICAN SULPHURETTE ALICE	GREAT AMERICAN GROUP	SWISSHELM	COCHISE	20, 27E 1 E 1/2	76.05 AC	\$ 25,398	830	LESSEE: John FAICK *200/acre To June 1992 4 patented shafts and Stakes
HORN SILVER				20, 28E 6 NE 1/2		\$ 11,823	1262-MS	Sub-leased to ALHAMBRA MINES INC. GENERAL MINERALS OF AMERICA Remained under attachment
MOUNTAIN QUEEN WHALE MAMMOTH KA: ELFRIDA GROUP	MOUNTAIN QUEEN GROUP	SWISSHELM	COCHISE	20, 27E 12	19.66 19.00 19.00	\$ 26,232 Total	272 M9 273 W 274 M	Sparks, Nev
1-10 NUEZ NO 2 - NO 11 11-17 KADLIN NO 1 - NO 7 18 OVERSITE 19-20 OVERSITE NO 1 & 2 20 unpaid PLACER CLAIMS	MAMMOTH	MAMMOTH	PINAL	9S 17E 13, 24 9S 18E 17, 18 19, 20 29, 30	20- 160 AC 3200 AC Total	Not on Tax Roles (NA) 20K/acre \$125/Ac Estd (Hon Actul)	20 each UN- PAT'D PLACER	LESSEE: GILBERT S MOTT GRANHAM MOTT Need ASSESSMENT INK. EACH YEAR 1/4 mile WHITTELL INC \$500/acre
CHRISTMAS FORGET IT DEMOCRAT OCEANIC WEDGE OCEANIC CECIL VICTORIA 1 VICTORIA 2 CROWN POINT WHITE HILL	OCEANIC aka OCEANIC aka SAN LUIS	OCEANIC (LAG GUJIAS)	PIMA	21, 9E 27, 34	15-claims 309.9 AC	\$ 231,726 Total MS \$ 15,458 AC	15 pat'd claims 3685 OCEANIC GROUP MS 4159 "OVERSIGHT"	FCV (Summer * Full Value, Prime Silt: Senator Yavapai Oct 83 Townsite 18.3A PAMIE

\* Up for Sale

BLACK PRINCESS

Pb, Ag

Pima

10 - 7

T 20 S, R 9 E

C. E. Udall, Box 52, Ruby Star Rt., Tucson

'40

NAME OF MINE: BLACK PRINCESS  
OWNER:

COUNTY: PIMA  
DISTRICT: ,  
METALS: Pb,Ag

OPERATOR AND ADDRESS		MINE STATUS	
Date:		Date:	
3/47	Russell & Sowles, 218 N. 4th Ave., Tucson	3/47	Developing







Mr. J. S. Coupal,

Dear Sir:

I am sending you some material by mail - viz - Statement or Report in Tungsten Property standing in my hands with full authority to dispose of as I elect. Title is perfect fought off all the California Crooks and Tucson Crook Lawyers thru two lawsuits for title during past 3 or 4 years - as the the copies of letter sent - I have use for same - possibly - so am enclosing stamps for return of same - as to map and statement, keep for reference, providing you consider worthwhile.

Would be pleased to "reciprocate" if you can assist me in doing business in any sensible plan, but refuse to tie up on cheap promises or fake contracts - especially with so, California Ex R. Estate Crooks - samples are entirely from float from placer, small black pcs. are from 9 ft. chunk of 60 -65% pure placer. Many tons of such quality has been gathered from the property in the past - present values are about 75% in 20 mesh, or finer material easily con. to 60 to 65% - pan or concentrate and extract Feo with magnet or mag. separator.

Values quoted are the lowest ever obtained from sampling by any enquirer or miner - have plenty of offers by cheap has beers and would be capitalists.

Yours truly

/sd/ Charles E. Udall.

Property is for sale for \$50,000.--  
Lowest cash payment acceptable - 5,000.--  
Provided buyer will equip to mill 100 ton Man. daily.  
Will accept 15% R. to apply on P. price.

Prefer to obtain partner with \$25,000 for working capital on 50/50 basis.  
Could make him \$150,000-- inside 2 years. \$175,000 Net profit.

Will not allow anyone to put a lot of junk mchy, in the ground - had plenty of such fake offers --

/sd/ Charles E. Udall.

Mr. J. S. Coupal

Box 24, Ruby Star Rte.,  
July 22d/40

My dear Sir:

I am sending you some data on a lead silver mine with some gold - spotty in gold - The list of shipments probably is not over 50% of what I have shipped and some by leasers - Since Mr. Snyder copies some shipg. returns into a report he made. I can send, in if desired but long and tiresome - I think - of one if desired - both shafts on No. 1 and No. 4 are caved below 50' levels - but No. 1 would be under water if not caved - from that level.

Title to property in writer and title is o.k. No adverses.  
(continued next page)

Property has no ore left in old stopes from 60' l. to near surface. However assays can be had, but cheap leasers have cleaned out anything of shipping grade in sight. We can crawl into levels and see where it came from, but the big ore bodies are "flat" or horizontal and all we have seen or removed are from uplifted fragments of the ore from about 135' in depth and probably 10 or 12 or more feet in thickness.

Will make any reasonable deal with party who will either sink a vertical shaft to 150' or if he prefers, drill the ground. South of incline in No. 1 - but prefer he sinks s. as wont last more than 2 or 3 drill holes and can start drifting in ore and shipping "pronto". Prefer a partner but will sell if I have to.

Can send a lot more data if needed but anyone interested had better come down here and look see. You know the old CC mine in the Arivaca Road - Box 24 - I am only 1500' west of my mail box. If interested party can get car in Tucson and come out - I am not in the hauling business so will not go after him and haul him back to Tucson or Boston.

Regards - /sd/ Udall.

C

*Theresa Moore (file)* ✓  
O The Black Princess group of lead silver mines are located in the Cerro Colorado  
P mining district in Pima Co., Arizona, 18 miles west of Amado Station on the Nogales  
Y branch of the S.P. Ry. - with good road to within 2 miles of property - and fair country road to the mines (the remaining 2 miles).

C

The formation is ideal to make large lead producing mines (with very good silver values and some gold in addition). . Dynamic activities uplifted a very extensive stratum of quartzsite - trend e.w. - across about 1 mile of lateral extent - which quartzsite was buried beneath a rhyolite floor, until exposed by erosion of the rhyolite along its uptilted edge.

To the south and parallel to the quartzsite outcrop a series of extensive limestone magmas are exposed, also uptilted by rhyolite dykes along the northern edge of these, also, eastly and westerly - surface showings.

At one point, adjoining a n.s. faulting. Three separate strata of limestone are closely associated, altho their normal, nearly horizontal position, (in place) was around 100 ft apart in vertical depth, having been inter-stratified with eruptive floors - either rhyolite or andesytic porphyry.

The limestones were exposed on surface are much altered and heavily impregnated with iron and manganese, with some ribs of sebecious material, at times nearly solid quartz. The altered and mineralized limestone strata appear to be 1 to 20 ft in thickness and measure 14 ft ( or more) as shown by a cross cut in a drift from an incline shaft, run at 60 ft below the surface (as measured down the incline) dip. s.

In this working and from 60 ft. to near the surface, the mineralized ore body is generally black being heavily impregnated with manganese and iron oxides. In this mass of ore low grade is silver and lead as samples only 4% lead to 18 oz. silver, occurred shingles of yellow carbonate of lead. (Cerrisite) from 4" to 12" or more in width which shipped from 80 to 125 oz silver - 28 to 38% lead and \$2.00 to 5.00 per ton in gold. Very little Galena was mined, 10 tons in one shipment carried 160 oz silver and 48% lead gold \$4.50.

A drift in this ore body (E. from incline and on No. 1. claim) had considerable stoping done for 20 to 35 ft above the 60' level, always following streaks of carbonate ore of which a considerable tonnage was saved out and sold to ore buyers.

Several carloads of ore were roughly selected from the waste pile and shipped when silver was \$1.00 per oz (after the war) which carried 18 to 30 oz. silver ( and probably around 4% lead). This incline was sunk to 120 ft. and 60 ft below water level - and entire shaft was in ore, width unknown - from 90 to 120' and entire content extracted was piled on the dump and sampled by several mining men besides the writer.

The character of the ore had changed to massive angle, red and brown, but by streaks of white to red clay 6" to 10" in thickness in which some balls of galena up to 8" in size, occurred.

The entire output of the shaft sinking, sampled on surface, gave 20 to 25% lead and 25 to 32 oz. silver - while the galena carried 135 oz. silver ( and probably 60% lead). This incline is caved below the 60' level and the latter blocked with waste, adjoining the shaft, results of work by leases. Below 120' water could not be handled by small - (2" suction) steam pump.

Leaving No. 1 and proceeding to No. 4 - 3000 ft. west old workings had opened and extracted ore to some 50 ft. in depth. A new vertical shaft was sunk to 120 ft. and well timbered and a cross cut run each N.&S. at 100 ft. level and just above water level. N. drift was 100 ft long and seeking an apparent quartz vein - about 120' n. of shaft - as shown by outcrop. S. drift cut a body of white clay 4 ft. thick and next to ore body - worked above apparently massive black iron, which was not even drilled, as water inflow from clay body drained the workings, small stream pump unable to handle the comparatively small amount of water.

This shaft has been entirely lost on account of lending to a "cow man" whose jersey cattle were dying for lack of water in a small drought, and he and his cowboys immediately tore out new timbering, to make a platform for a pump - results, entire s. loft and timbers collapsed for 50 ft. - before owner discovered that the typical cow thief had naturely wrecked the property. Top of old surface stope shows vein of 4 ft in width, surface work (assessment) on n. side of same shows vein material is fully 20 ft. (or more) in width. A shipment from old workings gave copper contents to be 5.5% with silver 26.60 oz. and gold \$1.20 ( at 20.00 oz).

Extensive outcrops in the vicinity of this working have been dug into and gold assays up to \$11.00 obtained from selected ore. There is every evidence of very large ore bodies existing in this immediate vicinity and a new shift has been started and now down 40 ft. (situated 50 ft. s. of caved shaft) and which should penetrate the ore body at about 100 ft. depth.

About 600 ft. south of No. 4 in a parallel ore body, an incline is sunk to some 80 ft. in depth - entire shaft is in ore to a small drift at 60 ft. - ore carries silver and gold values with some lead and barytae. Below 60 ft. a slight faulting occurs and vein is left in foot wall. Assessment holes some 300 ft. west of incline, make good surface showing.

Opposite and south of No. 1 several tons of Henry Barytar, spotted with oxides and carbonate, was shipped by previous owner, from 20 ft. and 30 ft. shaft, claimed to carry values of 200 oz. silver - selected ore from waste pile - only sampled 38 oz.

Development and surface showings are valuable only to give an idea of the extent and general character of the mineralization and probable values.

The great similarity between this new district and Leadville, Colorado are obvious to any enquirer or miner conversant with the Larber Camp and its geology and mineralization.

I consider it one of the most interest mineral deposit veins. I have any knowledge of and well worthy of extensive development, promising very extensive deposits of lead ores with unusual silver values and quite noticeable gold contents as well.

Well I have mentioned only four claims out of 6 in this group - the entire acreage is probably extremely valuable and should be prospected later - but No. 1 and No. 4 deserve of very thorough development and should indicate the value of the additional ground.

/sd/ Charles E. Udall. Dec 8/39

RALPH ARNOLD  
CONSULTING GEOLOGIST AND PETROLEUM ENGINEER

CABLE: RALFARNOL

CODE: BENTLEY'S

SUBWAY TERMINAL BLDG., LOS ANGELES, CAL.

120 BROADWAY, NEW YORK.

LOS ANGELES,  
DECEMBER 13, 1937.

MR. CHARLES E. UDALL,  
BOX 24, RUBY STAR ROUTE,  
VIA TUCSON, ARIZONA.

DEAR MR. UDALL:

My associates and I are quite interested in your letter of the 11th which has just come to hand.

I have two clients who I think would be interested in this mine if it measures up to what you say about it. However, I have had dealings with these people before, and I find it absolutely essential that we have a firm option on the property at terms satisfactory to the owner with a firm commission agreement attached, so that my clients will have time to give the matter thought, and if they are interested, will then be given plenty of time to make any necessary examinations. Both these clients always request that I state the parties to whom the mine has been presented before. Each one has one or more associates which they usually call in to help finance a deal of this size. In one instance one of the associates they called in had had the mine on better terms than I had offered it to them, and you can just guess that I came very near losing this client on account of that experience. I therefore, request that you ascertain to whom the mine has been presented, what action any or all of the prospective purchasers took besides turning it down, etc.

The fact that Mr. Park Channing has examined the property and likes it is a recommendation for it, as Channing is very well known for his conservatism.

If you will get the option as requested, I assure you that I will devote enough of my time to it to give the proposition a good run. I think that after the first of the year will be a good time to make such a presentation.

Yours very truly,

/signed/ RALPH ARNOLD.

RA-MS

C

O

P

Y

W E S T E R N

U N I O N

A1937 MAR 15 PM 12 19

SA 161 10 - HD HOLLYWOOD CALIF 15 1100A

CHAS E UDALL - MAIL BB 24 RUBY STAR ROUTE

TUCSON ARIZ

ARRIVE HOTEL SANTARITA TUESDAY EVENING PLEASE MEET ME WEDNESDAY MORNING

J PARKE CHANNING

C

O

P

Y

C

O

P

Y

J. PARKIE CHANNING

61 Broadway  
New York

602 Cahuenga Blvd.,  
Los Angeles, California.

Cable Address "Channing New York"

July 23, 1936.

My dear Mr. Udall:

Your letter of the 10th received in  
N.Y. the 14th has been forwarded to me. I have retired from a time  
practice, but could have Mr. F. B. Alsdorf of this city examine the  
property for me. Mr. Alsdorf of this city is the man who brought Miami  
to me and had experience in the Clifton-Morenci District with the  
prophyries long before Jaekling opened up the Utah. He is no  
"Cheap Scout".

I can have Mr. Alsdorf go by train to Tucson to  
meet you. Is the property near Tucson?

Mr. Susmann address is 61 Broadway, New York, N.Y.  
Room 1825, and he goes to the office occasionally.

Faithfully yours,

/sd/ J. Parke Channing.

Charles E. Udall Esq.,  
Box 24 Ruby Star Route,  
Tucson, Arizona.

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ALBERT STEINFELD & CO.,

TUCSON, ARIZONA.

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September 30, 1933.

Capt. John A. Hassell,  
632 Subway Terminal Bldg.,  
Los Angeles, California.

Dear Sir:

In answer to your inquiry regarding Mr. Charles E. Udall would state that I have known this party for the past thirty years that he has been a resident in this vicinity as a mining engineer and operator, during which time has handled some important mining properties, and has generally borne a good reputation as to his honesty, trustworthiness and ability as a mining engineer.

I believe that he understands his profession thoroughly.

Yours truly,

/sd/ Albert Steinfeld.

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ELEVEN BROADWAY

NEW YORK

November 21, 1929.

Dear Mr. Udall:

I thank you very much for your letter. I wish that I had the means and time to go with you into the proposition which you mention, but, unfortunately, I have neither.

I try to manage to get off once every three or four years, and in the interim I am always hard at work in my business.

Faithfully yours,

(Signed) HERMIT ROOSEVELT.

Charles E. Udall, Esq.  
Ruby, Arizona.

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Los Angeles, California. Dec. 15, 1928.

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Mr. Chas. G. Russell,

Dear Sir:-

In replying to your letter of the 5th, I wish to state I have known Mr. Udall, since about 1900, when I bought an interest in a gold prospect in the vicinity of Tucson, from a Mr. Brrow; while my knowledge of Mr. Udall is somewhat limited, I believe <sup>be</sup> him to/a good mining engineer, and thoroughly reliable.

I know his general reputation to be good, and personally I have every confidence in him.

Respectfully,

(Signed) JOHN BROCKMAN.

-----  
NOTE-

The late Mr. Brockman, was the purchaser of the "Pierce Mine" in Southern Arizona, paying \$70,000.00 practically cash, for a prospect hole, in a large quartz vein.

During the following years, he and his associates, the Commonwealth Company, has extracted from the ground 600,000 tons of ore, averaging \$20.00 per ton in gold and silver, at a profit of over six million (\$6,000,000.00) dollars.

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FIDELTY TRUST COMPANY

State Street

Boston, Mass. Sept. 20, 1919.

To Whom It May Concern:

This is to certify that I have long and intimately been acquainted with Mr. Charles E. Udall of Tucson, Arizona, and can vouch for him, as a fully qualified Engineer and a Scientist of no mean standing.

He is honest, energetic and thorough as I have cause to know. I consider him a thoroughly well posted Metallurgist and Geologist, and can recommend him to anyone desiring his services.

(Signed) HENRY BURDEN MC DOWELL.

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GILBERT MILLS

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4th Ave. & 15th St.,

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New York City. Sept. 11, 1919.

Office of  
Selling Agent.

Mr. Charles Briggs,  
Boston, Mass.

My Dear Sir:

Your inquiry received and will state -

Mr. Charles E. Udall is well and favorably known to me as a  
man of probity and proven ability in his line.

Myself, wife and son, visited him some years since  
in Arizona, and his wife and he are welcome guests at my home.

I understand that he ranks high in his profession as a  
Mining Engineer.

Trusting this answers your inquiry, I am

Yours truly,

(SIGNED) GEO. O. LEAVITT.

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AMERICAN WOOLENS COMPANY  
4th Ave. & 18th St.,  
New York.

Sept. 10, 1919.

Office of Selling Agent.

Mr. Charles Driggs,  
Boston, Mass.

Dear Sir:-

Replying to your inquiry, am pleased to state:

"I have known Mr. Charles E. Udall intimately for  
past fifteen years, and had considerable dealings with him during  
that time.

I know him to be a man of energy and ability in his  
line as a mining engineer, and was glad to have my son  
hold a position under him in an Arizona mining property.

His reputation for honesty and integrity is unquestioned  
and I can heartily recommend him to you.

Yours truly,

(SIGNED) ROGER NEWTON ARMS.

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GEORGE CRAWFORD

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Mines and Mining  
10 Wall Street,  
New York.

Cable Address  
RABATO

April 3, 1919.

TO WHOM IT MAY CONCERN:

This is to certify that I have known Mr. Chas. E. Udall, for a great number of years past, since about 1890, and consider him one of the best mining men and mineralogists I have ever known, during my thirty years in this line of business. I have had occasion to thoroughly investigate his ability and standing, and can state he has great executive ability, and unfailing energy, and is strictly dependable and honest in all his dealings. As a mine operator and handler of men, I consider it hard to find his equal.

Yours truly,

(Signed) GEORGE CRAWFORD.

---

NOTE-

Mr. George Crawford paid \$125,000.00 for a 10 foot hole in ore on the "Yankee Girl Claim" at Red Mountain (between Ouray and Silverton), Colorado, and later on an equal price for the adjoining Robinson Mine, with no surface showing.

From these two claims, he mined and shipped to the smelters, \$18,000,000.00 of ore during the following eight years, at an extremely large profit.

Mr. Otto Mears, built at his own expense, 22 miles of narrow gauge railway to serve this property on contract for total freight, and made money in his railroad venture, while reducing cost of transportation for the mine, to nearly half of the former cost of packing ore and supplies.

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PEINE WEBBER & COMPANY

Shawmutt Bank Building,  
Boston, Mass.

October, 1926.

Mr. W. S. Hutchinson,  
43 Exchange Place,  
New York City.

Dear Sir:

In reply to your inquiry regarding  
Mr. Charles E. Udall, will state, I have known  
Mr. Udall since about 1900 when I met him in Arizona, in  
regard to properties on which I had his report. Our engineers  
reports that they found him report exceptionally accurate  
and endorsed the same.

Since that time, I have frequently had occasion  
to consult him regarding properties in which I was interested,  
and consider him, a first class mining Engineer, and worthy  
of your fullest confidence

Yours truly,

(Signed) WM. A. PAINE.

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THOMAS F. WILSON  
Attorney-at-Law

Tucson, Arizona.  
October 15, 1916.

Mr. W. S. Hutchinson,  
New York City, New York.

Dear Sir:

Replying to your inquiry will state, I have known  
Mr. Charles E. Udall, intimately for a considerable number  
of years, and can cordially recommend him to you, as a first  
class Geologist and Metallurgist, as well as an able executive.

For energy and perserverence, I do not know his equal.

I am satisfied that you will be entirely satisfied with  
any business dealings you may have with him, and will find him  
absolutely honest in all his dealings.

(SIGNED) THOMAS F. WILSON.

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SELIM M. FRANKLIN  
A ttorney-at-Law

Tucson, Arizona  
October 12, 1916.

This is to certify that I have known  
Mr. Charles E. Udall for a number of years past, since 1899  
I believe.

For a number of years past, I have acted as his attorney  
and have consulted him in regard to mining properties.

I consider Mr. Udall to be well posted in mines and ores  
and their treatment.

He purchased and worked a very large quantity of tailings  
from a compny in which I was interested, and showed marked  
ability in his operations, in working low grade ores, and also  
in handling men and keeping down expenses.

I can recommend him as an able executive, and a man of  
thorough integrity, to anyone doing business with him.

(SIGNED) SELIM M. FRANKLIN.

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GUARANTEE TRUST COMPANY

New York City, Sept. 11, 1916.

Mr. Charles G. Russell,  
Tucson,  
Arizona.

Dear Sir:-

In reply to your of 5th. inst. will state, I have known Mr. Charles E. Udall, since 1907 or 8, when he carried an account with the Standard Trust Company, for several years, of which company, I was an officer.

Since that date I have had considerable personal contact with Mr. Udall, and have every reason to consider him a man of probity and ability; my dealings with him have been entirely satisfactory, as have the banking houses with which I have been connected. I understand his rating among mining engineers, is first class.

(signed) W.C.Cox

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Tucs Arizona.  
July 13, 1916.

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Mr. John P. Owen.

My Dear Sir:

At your request I recently visited and inspected the Black Princess Group of mines two miles north of Cerro Colorado, and am pleased to report as follows:

The country is rolling hills, and an automobile or wagon can reach any part of it on or off from roads. The wagon road to the Southern Pacific railway at Amadoville is good, and I measured the distance by speedometer and found it 18 miles. Judged the altitude at about 3000 feet.

The formation is very attractive to a miner, because the ore occurs in the contact of limestone and eruptive rocks, and this I consider the best possible formation for large and lasting ore bodies. The dump on the Black Princess speaks for itself, being largely composed of black manganese ledge matter, carrying both lead and silver values. I went into the workings down an inclined shaft, sunk in ore about 6 ft. between walls, and examined a drift fully 50 ft. long, driven east at about 50 to 60 ft. in depth. This work is in similar ore to that on the dump, but much richer, as it contains small streaks of high grade carbonate of lead, rich in silver, and all of this grade of ore has been sorted out of the dump when mined. In this drift a shot has been fired into the foot-wall; and this shows up even better ore than the drift or shaft--at least it is heavier in manganese and lead than the average of the ore in shaft. The hanging wall is broken at 60 or 70 ft. in depth, and 4 ins. of high grade lead-silver ore exposed back of the so-called hanging wall. From these conditions it is plain plain that the shaft and drift have not exposed or developed but part of the vein, and that the ore is much greater in width than at first sight one would expect. I inspected the surface, and am satisfied that there is a very extensive body of ore on this property, and that a moderate amount of development will prove this to be the case.

As the water was not out of the dump I could not fully examine the lower part of the shaft, but ore from below the water level shows much heavier in lead values, and the character has changed from carbonate of lead to sulphide and sulphate. I estimate ores above water level 20 to 25% lead and 35 to 50 oz. in silver. While selected ore will go quite high in lead, one sample of galena that I took carrying over 60% lead and 112 oz. silver.

At the next shaft, west on No. 4, a shoot of fine ore has been stoped across the shaft 30 or 40 ft. in depth, and this carries more copper and less lead, but silver values are very good. The stope in places is over 6 ft. in width, and as there is no waste dump it was unquestionably all ore of sufficient grade to ship at a profit. A cross cut drift is started east at 100 ft. level to cut this ore shoot on its pitch, and I don't consider they have far to go to get into it/ My assays from this ore body run from 20 to 80 oz. and some samples taken will go more than 3% copper.

The workings on Nos. 5 and 6 are on feeders or branch veins that join to make the large ore bodies opened on No. 4 and No. 1. There are certainly two good ore shoots on this vein and of such size that they can produce heavily. A cross cut run north from No. 4 shaft for about 100 ft. will probably cut a side vein in a little more driving, as this side vein outcrops on surface and pans considerable gold.

The Barytae claims are in a good sized fissured zone, and need heavy equipment. Good ore is opened, carrying values in lead, copper and silver. A stope produced a considerable quantity of good ore east of a 70 ft. shaft. A tunnel is driven into same vein below the shaft and is into ore one to two feet wide. This property needs more depth, and is in good shape for sinking.

I have been mine superintendent on some of the largest mines in Leadville, Aspen, and Cripple Creek, and from my personal knowledge in regard to ore deposits and formations, I am satisfied that the Princess vein will make, with proper development, one of the largest mines in Southern Arizona, and of good grade ore as well.

Respectfully submitted - /sd/ W.C.Abbott. Tucson, Arizona-July 13, '16

The Safety Tungst Property consists of 8 lode min claims, also covering and holding title to the same area of placer ground - and a mill race and water right of about 5 acres. Claims are located 600 x 1500' each. All situated in Sec. 15 (or adjoining sections) Twp. 20, R. 10 E. in Pinal County, Arizona. 22 miles from Armado Station in the S.P. Ry. (Nogales Branch) and 58 miles from either Tucson or Nogales. County road to within 6 miles of property and a possible road (needs some repairs for heavy teaming) if 6 miles to and onto the property.

Formation is entirely eruptive and intrusive, general magma is a fine quarried yellow porphyry, much crushed and kaolinized lying between extensive dykes or laccolites of eruptives. Ryolite and andesite and cut through its magma (Extensive Magma) by small dykes sills of various eruptives of intrusives. Diabase, diorite and a granular porphyry carrying considerable percentage of sulphides of iron and C, together with dykes of apparently dolomite. The yellow to brown magma in which the considerable number of fractures or veins occur is of very considerable extent, in places where exposed to surface having an area of up to 800 by 700 ft. at one point (on Spar claim and adjoining S 4 & 5. See Map). and from which an extensive belt shows easterly (on Spar) and another northerly into Octopus and Spar 2).

Only slight work has been done as development on the group, surface cuts and shallow shafts on veins - where the surface ores or vein fillings, 3 or 4 ft. between walls, carried small quartz stringers, seldom over 8" in thickness to a depth of 10 ft. seldom averaged over 2% - with 4 or 5% limit. However, one incline near W. end of spar claim was sunk, (incline at 30 at 35°) to 35 in depth, measured on incline, and from 20 to 35' depth along some 60' of drift and stope output fully 20 tons of 17% ore as mined ore varying from 2 or 3 to 8" in thickness. 7 tons of this shipped to Hy-Wood Co. in Denver, saved 17 1/2 % of 68% concentrates, wolframite and electric separation saved about 5% of scheelite - (5% amount of concentrates).

Two other lots, total 8 tons, of hand sorted ore sold to Whitcomb at Las Gujas carried 35 & 39%  $WO_3$ . About 20 tons of low grade ores, waste from operations - averaged 4% and some 7 tons of "waste Piles" from surface prospecting and assessment work hauled away by Ben Wilson and others, was started to carry only 2%. The largest quartz vein showing in the property, crushed to present depth, shows 2' to 2-1/2' of quartz in 20' incline 75° with only slight showing of  $WO_3$  - to that depth altho an 8' shaft some 200' east of incline showed some 5% ore in 8-10 & 12" quartz of same vein. This work is on Spar No. 4 near e. end of spar, a cut and shaft (12') cuts into a quite extensive body of ledge material. Black and grey with manganese, width not yet determined - which carries some  $WO_3$  to surface - 1 to 1-1/2% with extensive surface outcrops e. of the development.

The magma in which the veins occur is generally seamed with brown to black iron and carries small values in  $WO_3$  were tested - in fact very considerable width of such material giving up 1/2% or better in concentrates - (around 60% C.).

The property needs extensive development to prove the value and extent of ore at depth for surface ores in soft veins are probably extensively leached of their original values. Thru descending surface waters - carrying soda and potash in solution - leaching agencies for all tungsten minerals - and such values should be deposited in depth. Note. - on account of extensively soft formation of surface rocks and the fact that veins are quite "flat" - workings are largely caved - assisted by Mexican "mine robbers" many of whom have lived for years past picking float and clearing out ore leavings from workings on this property (together with California bums - who, when I would not give them working leases, took possession of and worked the property, and when ordered off, jumped same and caused me to fight two law suits for title, (one outfit, broke and crooked, backed by "petty forgery" hollering lawyers - of course we beat them and plenty of expense, which prevented doing development intended).

Immediately, available values open for estimates and sampling forming a reserve of raw material ready for manufacture as soon as equipment is established with which to treat (manufacture) same.



PARTIAL LIST OF ORE SHIPMENTS.

Made from 850 feet of development work on

BLACK PRINCESS or LEAD TROUGH GROUP OF MINES,

On waste piles about 500 tons of sorted and shipped best of same depth now low grade.

Extracted from Claim No. 1

	CONTENTS IN				<u>Net Returns</u>
	<u>Gold</u>	<u>Silver</u>	<u>Lead</u>	<u>Copper</u>	
By Leasor (from trench east of) maining incline shaft on No. 1 to) El Paso Smelter, about 10 tons)	\$	Ounces	%	%	\$
		200	40.		\$ 900.00
By owners to Phelps-Dodge Corp.) Douglas, Arizona )					
54,220 lbs. (No lead returns as) copper smelter. )		38.88		.96	743.84
64,960 lbs.		23.70		.81	435.05
52,900 lbs.		16.32		1.54	255.03
35,929 lbs.		24.99		.48	216.02
From Claim No. 4		26.60		5.50	861.86
81,820 lbs.					
Selected ore sold to Miller & ) Cox, Nogales, Arizona. )					
2,366 lbs.	2.00	31.60	11.20		13.70
1,387 lbs.	2.00	77.20	14.00		28.40
3,106 lbs.		77.50	22.70		39.20
13,374 lbs.		252.00	42.80		140.40
5,645 lbs.	1.20	63.00	16.10		125.15
725 lbs		115.90	23.70		12.35
2,740 lbs.		128.50	39.00		124.20

TOTAL - - - - - \$3945.26

NOTE -

Additional ore to the amount of about \$1,700.00 has been shipped from this property but as mixed with other ores, cannot be segregated and added.

Above data copied from Snyders Report - much ore has been shipped since above list was made out but return sheets carried away by a Canadian and could not get back.

/sd/ UDALL

NOTE - W. C. ABBOTT was Sup't. of the Ibex Mining Co. (Little Johnnie Mine) Leadville, Colo. while it output many millions of lead-silver ores in lime porphyry, horizontal cutouts. Suhhate Leadville Colorado has produced more wealth as values of ores and made much larger profits from its mines than all the mines of the comstock lode in Cripple Creek and Goldfield taken together.

J J (Jim) Brown, 1/2 owner, with J. F. Campian, in the Little Johnnie examined the Black Princess some year ago and made me an offer on the dump at No. 1 which I refused, shortly after he died in L.A. and I wrote to John Campian, re, the property, his attorney wrote that my letter came too late - John was killed in auto wreck few days before.

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STEWART & COMPANY

A ttorney-at-Law

41 Liberty St.

New York City, Oct. 20, 1913.

This is to certify that I have known Mr. Charles E. Udall, for a number of years past, and had considerable business dealings with him, and have taken accasion to check up as to his ability and integrity.

I take pleasure in stating that I have found Mr. Udall, to be exceptionally well informed mining man, well grounded in geology and metallurgical problems, and an executive of marked ability and energy, and proven probity.

I heartily recommend him to anyone desiring his service.

(SIGNED) MERVIN A. RICE.

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TRAYLOR ENGINEERING COMPANY

ALLENTOWN, PENNSYLVANIA  
October 6, 1913.

Mr. S. M. Franklyn,  
Tucson, Arizona.

Dear Sir:-

Replying to your inquiry, I will state, I am well acquainted with Mr. Charles E. Udall of your city, having had opportunity to check up on his ability and knowledge over several years of his operations.

I can recommend him to you as a well posted engineer and operator, able, efficient and dependable.

In my estimation he can accomplish more with a given capital than any operator of my acquaintance.

Yours truly,

(Signed) SAMUEL L. TRAYLOR.

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HELVETIA MINES

James B. Seager, Mgr.,

Tucson, Arizona.  
Sept. 10, 1912.

TO WHOM IT MAY CONCERN:

This is to certify, that our Company purchased this property from Mr. Charles E. Udall, and that we found the report on same by Mr. Udall, to be conservative and accurate in all respects.

It is the first time in my experience that on the working of a property, the results obtained held up to the vendors report and claims.

During several years past, I have had dealings with Mr. Udall, and have found him strictly dependable, and a first class judge of mines and formations, and can strongly recommend him to those who may have business dealings with him.

(Signed) JAS. B. SEAGER.

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CALUMET & HECKLA SMELTING WORKS

Houghton, Michigan,  
Sept. 15, 1900.

This is to certify that I have known  
Mr. Charles E. Udall, for some years past, he having reported on a  
copper property, in which I became interested in Arizona.

Myself, and associations found Mr. Udall, to be a  
man of good judgement and probity, and I take pleasure in  
stating that I have confidence in his ability and judgment.

(SIGNED) JAS. H. COOPER.

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This consists of placer deposits immediately exposed upon the surface, covering the main gulch sands and gravels with the adjoining flats and side hills. The ground covered by this detritus or placer deposits derived from the erosion of the vein materials and adjoining. Impregnated, country rock, covers very considerable areas (marked approximately in blue on map). These surfaces or reserves vary in depth in thickness from 1 ft to 8 & 10 ft. and apparently averages 3 ft. in depth. On Spar, Spar 4 and Spar 5 claims, covering some 1800 ft. of gulch and extensive side hill areas the safely workable material covers a surface area of fully 500 x 1200 ft. by 3 ft. in depth or 1,800,000 cu.ft. which at 18 c.f. to 1 ton equals 100,000 tons, which will average not less than 1/4% Wo. (assay based on 100% metal not oxide) which latter is 79 to 80% Wo metal and we are figuring on working 60% Wo<sub>3</sub> concentrates so that 1/4% Wo equals 5 lbs. metal per ton or approx. 6 lbs. Wo<sub>3</sub> (80%) or 8-1/3 lbs. of 60% WO<sub>3</sub>. While quotations of say \$18.00 unit (20#) are in oxide - Wo<sub>3</sub> - not metal, which cannot be made at ordinary mills and in fact the oxide is used direct for steel alloying.

On Octopus, Octopus No. 2, Spar No. 2 and Manuel claims, covering the drainage channel, adjoining flats and some mesa grounds (see map) an even larger tonnage is available but carrying only 1/2 the value in tungsten viz 1/8% Wo.

We thus find that 100,000 tons of better grade ore carrying 1/4% will produce

Tons of tungsten 250.

While 100,000 tons of the lower grade ore 1/8% =  $\frac{125}{375 \text{ T.}}$

And as all run estimates are made on 60% concentrates we would have not 375 T but

625 T.

of 60% Wo<sub>3</sub>.

In Arizona, water is an important requisite in mining operations. This I consider we have demonstrated to have available in sufficient quantity for all needs up to the milling of 100 tons daily which means the working of 200 T. of crude ore, as only 1/2 of the material as scraped to the plant will go to the concentration tables, requiring 400 tons, maximum of water ~~ks~~ 100,000 gals per day - by reference to map it will be seen that the extensive drainage system (in red) is crossed at right angles by a very extensive dyke of eruptive rock, (andesyte) which forms a natural dam, holding back the water in a very extensive soft vein or vertical stratum 20 to 40 ft. in thickness. Below this dam (on wells below same on Cattle ranches) it is 100 ft or more to water, above the dam it is 42 ft. to large water vein - as proven by well already sunk - to water - see estimate p.99.

#### Cast of Production and Marketing.

Operating force after equipment is installed - operating & functioning - 3 shifts, 8 hrs ea.

12 American average wage \$4.00	48.00
16 Mexicans ( American citizens?) \$2.00	32.00
Sax per ton 2.00 teaming to Ry. \$2.00	4.00
Fuel oil and up-keep	12.00
Insurance	4.00
Daily expenses treating 100 tons to mill - equals \$1.00 per ton -	
Treating total of 200,000 tons - - - - -	\$200,000.00
Cost of original investment - - - - -	30,000.00
Taxes, Insurance & C & C - - - - -	20,000.00
TOTAL	\$250,000.00

Saving = (Net 281 1/2¢)	\$2.75	
Operating costs	1.00	
Investment Taxes & C?	.25	
	\$ 1.25	
Net Profit =	\$ 1.50 =	\$300,000.00

Expense of equipment property to handle 100 tons daily to concentrating tables  
(equal to 200 tons crude material daily)  
Water -

Sunk present 42' shaft to 100'  
Drift and cross cut 142' at 100' L. = 200' @ 10.00 \$2,000.00

Under Water

Timber shaft and drifts where necessary	500.00
2 - 10,000 gal tanks and platforms	1,000.00
Pump at well 2 1/2" discharge -	
Engine and pipe line to tanks & Mill & bldgs. - & shed -	1,500.00
Mill building to house	
6 concentrating tables (below) - Rolls-	
Set 2 screens ( 3 sizes of ore)	
Ore floor pan grizzlies and drag	
3 steel lined ore Pockets to tables	5,000.00
Grizzlies and picking belts with small engine - 2" dp grizzly	
Steel gr. to 1/4" for mill -	
P. Belts handle 1/4"/1' & 1" to 2"	1,200.00
Drag line to mill	600.00
6 tables erected	3,200.00
	<u>15,000.00</u>
1-2 ton truck	750.00
1 Lt. car	650.00
Dry Namo & lights	650.00
Repairs to road	400.00
2 Tractors & 2 Scrapers & Plow	3,700.00
Stock fuel & Lub. oil & Tks.	500.00
" lumber - Sax & C	500.00
B.S. Shop - work shop & tools	800.00
Bunk house - boarding H & Office and fixtures	1,050.00
Foundations, excavating, erecting & Sund. exp.	
Testing out plant etc.	800.00
Insurance	200.00
	<u>\$25,000.00</u>
Working capital for 60 days - wages @ 80	4,800.00
Expenses	200.00
TOTAL - - - - -	<u>\$30,000.00</u>

This property consists of 8 mining claims located 600'x1500' each 1 mill site & water right of about 5 acres or a total acreage of about 150 acres, allowing for laps of claims - as fol.:-

NAME	RECORDED IN BOOK	PAGE	DATE
Spar	" UU.	253	April 13, 1916
Spar No. 2	" "	254	April 13, 1916
Spar No. 3	" "	255	April 3, 1916
Spar No. 4	" "	256	" " "
Spar No. 5	" UU	256	" " "
Manuel	" Y.Y.	421	May 6, 1916
Octopus	" SSS	370	March 3, 1934
Octopus No. 2	2 "	370	July 2, 1936
Octopus Millsite & W. Rf.	M.S.2	466	" " "

Title is perfect and affidavit for ass't. work for 39/40 has been filed for record.



Along similar engineering and operating lines Mr. C. E. Udall has had a very considerable experience having with Mr. Charles Poullot, shipped very high grade Uranium Ore to Otto Krupp at Hamburg, Germany from the Kirk Mine in Gilpin Colorado, about 6 tons carrying 59-1/2%  $UO_3$ , about 11 tons carrying 22%  $UO_3$ , bought for Fried Krupp of Essen.

In 1901 purchased the Tailings Dump at Mammoth, Arizona. 400,000 tons of waste which had been worked over twice by crushing and amalgamation and later by cyaniding.

Udall sunk and cased wells installed pump up to 5" discharge. Erected a plant, put 70 men and 70 horses and mules to work and concentrated 300,000 tons of ore developing and pumping 600,000 gallons of water per day.

Plant cost \$16,000 and output 1252 tons of willfenite (mobybdate of lead) concentrates in 20 months operations, treating an average of 500 tons daily.

Ore contained 1/2% wulfenite and concentrates carried 20 to 22%  $MoO_3$  which was paid for at 25¢ per lb. or \$100 to 110.00 per ton. Original value of wulfenite in ore (tailings) was 50¢ per ton and the operations showed a profit of about 20% in costs. Note: as much of (\$13.) the lead mobybdate was broken to 100 to 250 mesh (wheat flour 260 mesh) the fines could not be saved on wet concentrating tables and therefore Udall built a "dry mill" a battery of 4 operative (1 reserve) Dry concentrating tables and saved in excess of 400 tons of his 1250 tons gross saving - Dry gross sales \$125,000.

The product went to Stein & Boencke "Primas Chemical Co.", Primas, Pa., who built a \$40,000. plant in which to treat this product and resold to U.S. Steel Corporation - Chas. Schwab, Pres. This was the first commercial production of molybdenum in the U.S.A. and was equal to 20 times the world's previous yearly production. It required 9 months of effort in N.Y. and the east to induce any American steel man to contract for such a "huge quantity" of a nearly unknown metal on which only the Germans had any real knowledge. (2-3/4% alloy in liners for 12" - 70 ton 50 ft. artillery extended the safe life of the guns from 20 to 100 discharges, was the information I passed along to Mr. W. obtained from a German artillery officer in Newport, R.I. - 1901).

The Primas Co. reduced and cleaned the Mo. metal to 98% - arsenic and sulphur free and obtained 75¢ lb. from U.S. Steel, made some money - present total run \$2.60 lb.

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During World War 1, Udall sold tungsten concentrates from \$35.00 up per ton. U. S. Sales sold to Geo. C. Blackwell Sons Co. (Purveyors at the Admiralty) the Albany, Liverpool Eng. a number of carloads of Molybdenum ores and concentrates together with 38 shipments of ferro vanadium, total about \$200,000. at war prices. Cancelled their contracts for cause and sold to Atlantic Metals & Alloy Co. (Morgan Belmont & Cary Belmont) \$135,040. of Molybdenum ores and to E.J. Lavino & Co. Philadelphia, Pa. \$25,947.51.

Above sales all sampled and shipped through Ledoux & Co. 99 John St., New York. Hereto attached are some references and copies of old references, re: Mr. Udall and his standing.

5 September 1940

Mr. Charles E. Udall,  
Box 24, Ruby Star Route,  
Tucson, Arizona.

My dear Mr. Udall:

In the absence of Mr. J. S. Coupal, I am taking the liberty of acknowledging receipt of your letter of recent date requesting the return of reports and copies of references previously mailed to this office.

I note that you are taking the properties off the market, and I am returning herewith the papers requested.

If you have disposed of these properties I am sure Mr. Coupal would appreciate having any data on it that you would care to give him.

In the future should you desire to again place the properties on the market, kindly advise us in the matter.

Assuring you of our desire to be helpful, I am

Yours very truly,

Jess R. Fickas  
Secretary to Mr. Coupal

jrf  
encls.

Mr. J. S. Coupal,

Dear Sir:

I am sending you some material by mail - viz - Statement or Report in Tungsten Property standing in my hands with full authority to dispose of as I elect. Title is perfect fought off all the California Crooks and Tucson Crook Lawyers thru two lawsuits for title during past 3 or 4 years - as the the copies of letter sent - I have use for same - possibly - so am enclosing stamps for return of same - as to map and statement, keep for reference, providing you consider worthwhile.

Would be pleased to "reciprocate" if you can assist me in doing busines in any sensible plan, but refuse to tie up on cheap promises or fake contracts - especially with so, California Ex R. Estate Crooks - samples are entirely from float from placer, small black pcs. are from 9 ft. chunk of 60 -65% pure placer. Many tons of such quality has been gathered from the property in the past - present values are about 75% in 20 mesh, or finer material easily con. to 60 to 65% - pan or concentrate and extract Feo with magnet or mag. separator.

Values quoted are the lowest ever obtained from sampling by any enquirer or miner - have plenty of offers by cheap has beers and would be capitalists.

Yours truly

/sd/ Charles E. Udall.

Property is for sale for \$50,000.--  
Lowest cash payment acceptable - 5,000.--  
Provided buyer will equip to mill 100 ton Man. daily.  
Will accept 15% R. to apply on P. price.

Prefer to obtain partner with \$25,000 for working capital on 50/50 basis.  
Could make him \$150,000-- inside 2 years. \$175,000 Net profit.

Will not allow anyone to put a lot of junk mchy, in the ground - had plenty of such fake offers --

/sd/ Charles E. Udall.

Box 24, Ruby Star Rte.,  
July 22d/40

Mr. J. S. Coupal

My dear Sir:

I am sending you some data on a lead silver mine with some gold - spotty in gold - The list of shipments probably is not over 50% of what I have shipped and some by leasers - Since Mr. Snyder copies some shipg. returns into a report he made. I can send in if desired but long and tiresome I think of one if desired - both shafts on No. 1 and No. 4 are caved below 50' levels - but No. 1 would be under water if not caved - from that level.

Title to property in writer and title is o.k. No adverses.  
(continued next page)



Property has no ore left in old stopes from 60' l. to near surface. However assays can be had, but cheap leasers have cleaned out anything of shipping grade in sight. We can crawl into levels and see where it came from, but the big ore bodies are "flat" or horizontal and all we have seen or removed are from uplifted fragments of the ore from about 135' in depth and probably 10 or 12 or more feet in thickness.

Will make any reasonable deal with party who will either sink a vertical shaft to 150' or if he prefers, drill the ground. South of incline in No. 1 - but prefer he sinks s. as wont last more than 2 or 3 drill holes and can start drifting in ore and shipping "pronto". Prefer a partner but will sell if I have to.

Can send a lot more data if needed but anyone interested had better come down here and look see. You know the old CC mine in the Arivaca Road - Box 24 - I am only 1500' west of my mail box. If interested party can get car in Tucson and come out - I am not in the hauling business so will not go after him and haul him back to Tucson or Boston.

Regards - /sd/ Udall.

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*Minnie Moore (file)*

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O The Black Princess group of lead silver mines are located in the Cerro Colorado  
P mining district in Pima Co., Arizona, 18 miles west of Amado Station on the Nogales  
Y branch of the S.P. Ry. - with good road to within 2 miles of property - and fair country road to the mines (the remaining 2 miles).

The formation is ideal to make large lead producing mines (with very good silver values and some gold in addition). . Dynamic activities uplifted a very extensive stratum of quartzite - trend e.w. - across about 1 mile of lateral extent - which quartzite was buried beneath a rhyolite floor, until exposed by erosion of the rhyolite along its uptilted edge.

To the south and parallel to the quartzite outcrop a series of extensive limestone magmas are exposed, also uptilted by rhyolite dykes along the northern edge of these, also, eastly and westerly - surface showings.

At one point, adjoining a n.s. faulting. Three separate strata of limestone are closely associated, altho their normal, nearly horizontal position, (in place) was around 100 ft apart in vertical depth, having been inter-stratified with eruptive floors - either rhyolite or andesytic porphyry.

The limestones were exposed on surface are much altered and heavily impregnated with iron and manganese, with some ribs of sebecious material, at times nearly solid quartz. The altered and mineralized limestone strata appear to be 1 to 20 ft in thickness and measure 14 ft ( or more) as shown by a cross cut in a drift from an incline shaft, run at 60 ft below the surface (as measured down the incline) dip. s.

In this working and from 60 ft. to near the surface, the mineralized ore body is generally black being heavily impregnated with manganese and iron oxides. In this mass of ore low grade is silver and lead as samples only 4% lead to 18 oz. silver, occurred shingles of yellow carbonate of lead. (Cerussite) from 4" to 12" or more in width which shipped from 80 to 125 oz silver - 28 to 38% lead and \$2.00 to 5.00 per ton in gold. Very little Galena was mined, 10 tons in one shipment carried 160 oz silver and 48% lead gold \$4.50.

A drift in this ore body (E. from incline and on No. 1. claim) had considerable stoping done for 20 to 35 ft above the 60' level, always following streaks of carbonate ore of which a considerable tonnage was saved out and sold to ore buyers.

Several carloads of ore were roughly selected from the waste pile and shipped when silver was \$1.00 per oz (after the war) which carried 18 to 30 oz. silver ( and probably around 4% lead). This incline was sunk to 120 ft. and 60 ft below water level - and entire shaft was in ore, width unknown - from 90 to 120' and entire content extracted was piled on the dump and sampled by several mining men besides the writer.

The character of the ore had changed to massive angleite, red and brown, but by streaks of white to red clay 6" to 10" in thickness in which some balls of galena up to 8" in size, occurred.

The entire output of the shaft sinking, sampled on surface, gave 20 to 25% lead and 25 to 32 oz. silver - while the galena carried 135 oz. silver ( and probably 60% lead). This incline is caved below the 60' level and the latter blocked with waste, adjoining the shaft, results of work by leases. Below 120' water could not be handled by small - (2" suction) steam pump.

Leaving No. 1 and proceeding to No. 4 - 3000 ft. west old workings had opened and extracted ore to some 50 ft. in depth. A new vertical shaft was sunk to 120 ft. and well timbered and a cross cut run each N.&S. at 100 ft. level and just above water level. N. drift was 100 ft long and seeking an apparent quartz vein - about 120' n. of shaft - as shown by outcrop. S. drift cut a body of white clay 4 ft. thick and next to ore body - worked above apparently massive black iron, which was not even drilled, as water inflow from clay body drained the workings, small stream pump unable to handle the comparatively small amount of water.

This shaft has been entirely lost on account of lending to a "cow man" whose jersey cattle were dying for lack of water in a small drought, and he and his cowboys immediately tore out new timbering, to make a platform for a pump - results, entire s. loft and timbers collapsed for 50 ft. - before owner discovered that the typical cow thief had naturely wrecked the property. Top of old surface stope shows vein of 4 ft in width, surface work (assessment) on n. side of same shows vein material is fully 20 ft. (or more) in width. A shipment from old workings gave copper contents to be 5.5% with silver 26.60 oz. and gold \$1.20 ( at 20.00 oz).

Extensive outcrops in the vicinity of this working have been dug into and gold assays up to \$11.00 obtained from selected ore. There is every evidence of very large ore bodies existing in this immediate vicinity and a new shift has been started and now down 40 ft. (situated 50 ft. s. of caved shaft) and which should penetrate the ore body at about 100 ft. depth.

About 600 ft. south of No. 4 in a parallel ore body, an incline is sunk to some 80 ft. in depth - entire shaft is in ore to a small drift at 60 ft. - ore carries silver and gold values with some lead and barytae. Below 60 ft. a slight faulting occurs and vein is left in foot wall. Assessment holes some 300 ft. west of incline, make good surface showing.

Opposite and south of No. 1 several tons of Henry Barytar, spotted with oxides and carbonate, was shipped by previous owner, from 20 ft. and 30 ft. shaft, claimed to carry values of 200 oz. silver - selected ore from waste pile - only sampled 38 oz.

Development and surface showings are valuable only to give an idea of the extent and general character of the mineralization and probable values.

The great similarity between this new district and Leadville, Colorado are obvious to any enquirer or miner conversant with the Larber Camp and its geology and mineralization.

I consider it one of the most interest mineral deposit veins. I have any knowledge of and well worthy of extensive development, promising very extensive deposits of lead ores with unusual silver values and quite noticeable gold contents as well.

Well I have mentioned only four claims out of 6 in this group - the entire acreage is probably extremely valuable and should be prospected later - but No. 1 and No. 4 deserve of very thorough development and should indicate the value of the additional ground.

/sd/ Charles E. Udall. Dec 8/39

RALPH ARNOLD  
CONSULTING GEOLOGIST AND PETROLEUM ENGINEER

CABLE: RALFARNOLL

CODE: BENTLEY'S

SUBWAY TERMINAL BLDG., LOS ANGELES, CAL.

120 BROADWAY, NEW YORK.

LOS ANGELES,  
DECEMBER 13, 1937.

MR. CHARLES E. UDALL,  
BOX 24, RUBY STAR ROUTE,  
VIA TUCSON, ARIZONA.

DEAR MR. UDALL:

My associates and I are quite interested in your letter of the 11th which has just come to hand.

I have two clients who I think would be interested in this mine if it measures up to what you say about it. However, I have had dealings with these people before, and I find it absolutely essential that we have a firm option on the property at terms satisfactory to the owner with a firm commission agreement attached, so that my clients will have time to give the matter thought, and if they are interested, will then be given plenty of time to make any necessary examinations. Both these clients always request that I state the parties to whom the mine has been presented before. Each one has one or more associates which they usually call in to help finance a deal of this size. In one instance one of the associates they called in had had the mine on better terms than I had offered it to them, and you can just guess that I came very near losing this client on account of that experience. I therefore, request that you ascertain to whom the mine has been presented, what action any or all of the prospective purchasers took besides turning it down, etc.

The fact that Mr. Park Channing has examined the property and likes it is a recommendation for it, as Channing is very well known for his conservatism.

If you will get the option as requested, I assure you that I will devote enough of my time to it to give the proposition a good run. I think that after the first of the year will be a good time to make such a presentation.

Yours very truly,

/signed/ RALPH ARNOLD.

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CHAS E UDALL - MAIL BB 24 RUBY STAR ROUTE

TUCSON ARIZ

ARRIVE HOTEL SANTARITA TUESDAY EVENING PLEASE MEET ME WEDNESDAY MORNING

J PARKE CHANNING

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J. PARKE CHANNING  
61 Broadway  
New York

Cable Address "Channing New York"

602 Cahuenga Blvd.,  
Los Angeles, California.

July 23, 1936.

My dear Mr. Udall:

Your letter of the 10th received in  
N.Y. the 14th has been forwarded to me. I have retired from a time  
practice, but could have Mr. F. B. Alsdorf of this city examine the  
property for me. Mr. Alsdorf of this city is the man who brought Miami  
to me and had experience in the Clifton-Morenci District with the  
prophyries long before Jaekling opened up the Utah. He is no  
"Cheap Scout".

I can have Mr. Alsdorf go by train to Tucson to  
meet you. Is the property near Tucson?

Mr. Susmann address is 61 Broadway, New York, N.Y.  
Room 1824, and he goes to the office occasionally.

Faithfully yours,

/sd/ J. Parke Channing.

Charles E. Udall Esq.,  
Box 24 Ruby Star Route,  
Tucson, Arizona.

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ALBERT STEINFELD & CO.,

TUCSON, ARIZONA.

September 30, 1933.

Capt. John A. Hassell,  
632 Subway Terminal Bldg.,  
Los Angeles, California.

Dear Sir:

In answer to your inquiry regarding Mr. Charles E. Udall would state that I have known this party for the past thirty years that he has been a resident in this vicinity as a mining engineer and operator, during which time has handled some important mining properties, and has generally borne a good reputation as to his honesty, trustworthiness and ability as a mining engineer.

I believe that he understands his profession thoroughly.

Yours truly,

/sd/ Albert Steinfeld.

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ELEVEN BROADWAY

NEW YORK

November 21, 1929.

Dear Mr. Udall:

I thank you very much for your letter. I wish that I had the means and time to go with you into the proposition which you mention, but, unfortunately, I have neither.

I try to manage to get off once every three or four years, and in the interim I am always hard at work in my business.

Faithfully yours,

(Signed) HERMIT ROOSEVELT.

Charles E. Udall, Esq.  
Ruby, Arizona.

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Los Angeles, California. Dec. 15, 1928.

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Mr. Chas. G. Russell,

Dear Sir:-

In replying to your letter of the 5th, I wish to state I have known Mr. Udall, since about 1900, when I bought an interest in a gold prospect in the vicinity of Tucson, from a Mr. Brrow; while my knowledge of Mr. Udall is somewhat limited, I believe <sup>be</sup> him to/a good mining engineer, and thoroughly reliable.

I know his general reputation to be good, and personally I have every confidence in him.

Respectfully,

(Signed) JOHN BROCKMAN.

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NOTE-

The late Mr. Brockman, was the purchaser of the "Pierce Mine" in Southern Arizona, paying \$70,000.00 practically cash, for a prospect hole, in a large quartz vein.

During the following years, he and his associates, the Commonwealth Company, has extracted from the ground 600,000 tons of ore, averaging \$20.00 per ton in gold and silver, at a profit of over six million (\$6,000,000.00) dollars.

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FIDELITY TRUST COMPANY

State Street

Boston, Mass. Sept. 20, 1919.

To Whom It May Concern:

This is to certify that I have long and intimately been acquainted with Mr. Charles E. Udall of Tucson, Arizona, and can vouch for him, as a fully qualified Engineer and a Scientist of no mean standing.

He is honest, energetic and thorough as I have cause to know. I consider him a thoroughly well posted Metallurgist and Geologist, and can recommend him to anyone desiring his services.

(Signed) HENRY BURDEN MC DOWELL.

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GILBERT MILLS

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4th Ave. & 15th St.,

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New York City. Sept. 11, 1919.

Office of  
Selling Agent.

Mr. Charles Briggs,  
Boston, Mass.

My Dear Sir:

Your inquiry received and will state -

Mr. Charles E. Udall is well and favorably known to me as a  
man of probity and proven ability in his line.

Myself, wife and son, visited him some years since  
in Arizona, and his wife and he are welcome guests at my home.

I understand that he ranks high in his profession as a  
Mining Engineer.

Trusting this answers your inquiry, I am

Yours truly,

(SIGNED) GEO. O. LEAVITT.

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AMERICAN WOOLENS COMPANY  
4th Ave. & 18th St.,  
New York.

Sept. 10, 1919.

Office of Selling Agent.

Mr. Charles Driggs,  
Boston, Mass.

Dear Sir:-

Replying to your inquiry, am pleased to state:

"I have known Mr. Charles E. Udall intimately for  
past fifteen years, and had considerable dealings with him during  
that time.

I know him to be a man of energy and ability in his  
line as a mining engineer, and was glad to have my son  
hold a position under him in an Arizona mining property.

His reputation for honesty and integrity is unquestioned  
and I can heartily recommend him to you.

Yours truly,

(SIGNED) ROGER NEWTON ARMS.

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GEORGE CRAWFORD

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Mines and Mining  
10 Wall Street,  
New York.

Cable Address  
RABATO

April 3, 1919.

TO WHOM IT MAY CONCERN:

This is to certify that I have known Mr. Chas. E. Udall, for a great number of years past, since about 1890, and consider him one of the best mining men and mineralogists I have ever known, during my thirty years in this line of business. I have had occasion to thoroughly investigate his ability and standing, and can state he has great executive ability, and unfailing energy, and is strictly dependable and honest in all his dealings. As a mine operator and handler of men, I consider it hard to find his equal.

Yours truly,

(Signed) GEORGE CRAWFORD.

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NOTE-

Mr. George Crawford paid \$125,000.00 for a 10 foot hole in ore on the "Yankee Girl Claim" at Red Mountain (between Ouray and Silverton), Colorado, and later on an equal price for the adjoining Robinson Mine, with no surface showing.

From these two claims, he mined and shipped to the smelters, \$18,000,000.00 of ore during the following eight years, at an extremely large profit.

Mr. Otto Mears, built at his own expense, 22 miles of narrow gauge railway to serve this property on contract for total freight, and made money in his railroad venture, while reducing cost of transportation for the mine, to nearly half of the former cost of packing ore and supplies.

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PEINE WEBBER & COMPANY

Shawmutt Bank Building,  
Boston, Mass.

October, 1926.

Mr. W. S. Hutchinson,  
43 Exchange Place,  
New York City.

Dear Sir:

In reply to your inquiry regarding  
Mr. Charles E. Udall, will state, I have known  
Mr. Udall since about 1900 when I met him in Arizona, in  
regard to properties on which I had his report. Our engineers  
reports that they found him report exceptionally accurate  
and endorsed the same.

Since that time, I have frequently had occasion  
to consult him regarding properties in which I was interested,  
and consider him, a first class mining Engineer, and worthy  
of your fullest confidence

Yours truly,

(Signed) WM. A. PAINE.

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THOMAS F. WILSON  
Attorney-at-Law

Tucson, Arizona.  
October 15, 1916.

Mr. W. S. Hutchinson,  
New York City, New York.

Dear Sir:

Replying to your inquiry will state, I have known  
Mr. Charles E. Udall, intimately for a considerable number  
of years, and can cordially recommend him to you, as a first  
class Geologist and Metallurgist, as well as an able executive.

For energy and perserverence, I do not know his equal.

I am satisfied that you will be entirely satisfied with  
any business dealings you may have with him, and will find him  
absolutely honest in all his dealings.

(SIGNED) THOMAS F. WILSON.

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SELIM M. FRANKLIN  
A ttorney-at-Law

Tucson, Arizona  
October 12, 1916.

This is to certify that I have known  
Mr. Charles E. Udall for a number of years past, since 1899  
I believe.

For a number of years past, I have acted as his attorney  
and have consulted him in regard to mining properties.

I consider Mr. Udall to be well posted in mines and ores  
and their treatment.

He purchased and worked a very large quantity of tailings  
from a compny in which I was interested, and showed marked  
ability in his operations, in working low grade ores, and also  
in handling men and keeping down expenses.

I can recommend him as an able executive, and a man of  
thorough integrity, to anyone doing business with him.

(SIGNED) SELIM M. FRANKLIN.

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GUARANTEE TRUST COMPANY

New York City, Sept. 11, 1916.

Mr. Charles G. Russell,  
Tucson,  
Arizona.

Dear Sir:-

In reply to your of 5th. inst. will state, I have known Mr. Charles E. Udall, since 1907 or 8, when he carried an account with the Standard Trust Company, for several years, of which company, I was an officer.

Since that date I have had considerable personal contact with Mr. Udall, and have every reason to consider him a man of probity and ability; my dealings with him have been entirely satisfactory, as have the banking houses with which I have been connected. I understand his rating among mining engineers, is first class.

(signed) W.C.Cox

V.P.

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Tucson, Arizona.  
July 13, 1916.

Mr. John P. Owen.

My Dear Sir:

At your request I recently visited and inspected the Black Princess Group of mines two miles north of Cerro Colorado, and am pleased to report as follows:

The country is rolling hills, and an automobile or wagon can reach any part of it on or off from roads. The wagon road to the Southern Pacific railway at Amadoville is good, and I measured the distance by speedometer and found it 18 miles. Judged the altitude at about 3000 feet.

The formation is very attractive to a miner, because the ore occurs in the contact of limestone and eruptive rocks, and this I consider the best possible formation for large and lasting ore bodies. The dump on the Black Princess speaks for itself, being largely composed of black manganese ledge matter, carrying both lead and silver values. I went into the workings down an inclined shaft, sunk in ore about 6 ft. between walls, and examined a drift fully 50 ft. long, driven east at about 50 to 60 ft. in depth. This work is in similar ore to that on the dump, but much richer, as it contains small streaks of high grade carbonate of lead, rich in silver, and all of this grade of ore has been sorted out of the dump when mined. In this drift a shot has been fired into the foot-wall, and this shows up even better ore than the drift or shaft--at least it is heavier in manganese and lead than the average of the ore in shaft. The hanging wall is broken at 60 or 70 ft. in depth, and 4 ins. of high grade lead-silver ore exposed back of the so-called hanging wall. From these conditions it is plain plain that the shaft and drift have not exposed or developed but part of the vein, and that the ore is much greater in width than at first sight one would expect. I inspected the surface, and am satisfied that there is a very extensive body of ore on this property, and that a moderate amount of development will prove this to be the case.

As the water was not out of the dump I could not fully examine the lower part of the shaft, but ore from below the water level shows much heavier in lead values, and the character has changed from carbonate of lead to sulphide and sulphate. I estimate ores above water level 20 to 25% lead and 35 to 50 oz. in silver. While selected ore will go quite high in lead, one sample of galena that I took carrying over 60% lead and 112 oz. silver.

At the next shaft, west on No. 4, a shoot of fine ore has been stoped across the shaft 30 or 40 ft. in depth, and this carries more copper and less lead, but silver values are very good. The stope in places is over 6 ft. in width, and as there is no waste dump it was unquestionably all ore of sufficient grade to ship at a profit. A cross cut drift is started east at 100 ft. level to cut this ore shoot on its pitch, and I don't consider they have far to go to get into it/ My assays from this ore body run from 20 to 80 oz. and some samples taken will go more than 3% copper.

The workings on Nos. 5 and 6 are on feeders or branch veins that join to make the large ore bodies opened on No. 4 and No. 1. There are certainly two good ore shoots on this vein and of such size that they can produce heavily. A cross cut run north from No. 4 shaft for about 100 ft. will probably cut a side vein in a little more driving, as this side vein outcrops on surface and pans considerable gold.

The Barytae claims are in a good sized fissured zone, and need heavy equipment. Good ore is opened, carrying values in lead, copper and silver. A stope produced a considerable quantity of good ore east of a 70 ft. shaft. A tunnel is driven into same vein below the shaft and is into ore one to two feet wide. This property needs more depth, and is in good shape for sinking.

I have been mine superintendent on some of the largest mines in Leadville, Aspen, and Cripple Creek, and from my personal knowledge in regard to ore deposits and formations, I am satisfied that the Princess vein will make, with proper development, one of the largest mines in Southern Arizona, and of good grade ore as well.

Respectfully submitted - /sd/ W.C.Abbott. Tucson, Arizona-July 13, '16



The Safety Tungsten Property consists of 8 lode mineral claims, also covering and holding title to the same area of placer ground - and a mill race and water right of about 5 acres. Claims are located 600 x 1500' each. All situated in Sec. 15 (or adjoining sections) Twp. 20, R. 10 E. in Pinal County, Arizona. 22 miles from Armado Station in the S.P. Ry. (Nogales Branch) and 58 miles from either Tucson or Nogales. County road to within 6 miles of property and a possible road (needs some repairs for heavy teaming) if 6 miles to and onto the property.

Formation is entirely eruptive and intrusive, general magma is a fine grained yellow porphyry, much crushed and kaolinized lying between extensive dykes or laccolites of eruptives. Rhyolite and andesite and cut through its magma (Extensive Magma) by small dykes sills of various eruptives of intrusives. Diabase, diorite and a granular porphyry carrying considerable percentage of sulphides of iron and C, together with dykes of apparently dolomite. The yellow to brown magma in which the considerable number of fractures or veins occur is of very considerable extent, in places where exposed to surface having an area of up to 800 by 700 ft. at one point (on Spar claim and adjoining S 4 & 5. See Map). and from which an extensive belt shows easterly (on Spar) and another northerly into Octopus and Spar 2).

Only slight work has been done as development on the group, surface cuts and shallow shafts on veins - where the surface ores or vein fillings, 3 or 4 ft. between walls, carried small quartz stringers, seldom over 8" in thickness to a depth of 10 ft. seldom averaged over 2% - with 4 or 5% limit. However, one incline near W. end of Spar claim was sunk, (incline) at 30 to 35° to 35 in depth, measured on incline, and from 20 to 35' depth along some 60' of drift and stope output fully 20 tons of 17% ore as mined ore varying from 2 or 3 to 8" in thickness 7 tons of this shipped to Hy-Wood Co. in Denver, saved 17 1/2 % of 68% concentrates, wolframite and electric separation saved about 5% of scheelite - (5% amount of concentrates).

Two other lots, total 8 tons, of hand sorted ore sold to Whitcomb at Las Gujas carried 35 & 39%  $WO_3$ . About 20 tons of low grade ores, waste from operations - averaged 4% and some 7 tons of "waste Piles" from surface prospecting and assessment work hauled away by Ben Wilson and others, was started to carry only 2%. The largest quartz vein showing in the property, crushed to present depth, shows 2' to 2-1/2' of quartz in 20' incline 75° with only slight showing of  $WO_3$  - to that depth altho an 8' shaft some 200' east of incline showed some 5% ore in 8-10 & 12" quartz of same vein. This work is on Spar No. 4 near e. end of Spar, a cut and shaft (12') cuts into a quite extensive body of ledge material. Black and grey with manganese, width not yet determined - which carries some  $WO_3$  to surface - 1 to 1-1/2% with extensive surface outcrops e. of the development.

The magma in which the veins occur is generally seamed with brown to black iron and carries small values in  $WO_3$  were tested - in fact very considerable width of such material gives up 1/2% or better in concentrates - (around 60% C.).

The property needs extensive development to prove the value and extent of ore at depth for surface ores in soft veins are probably extensively leached of their original values. Thru descending surface waters - carrying soda and potash in solution - leaching agencies for all tungsten minerals - and such values should be deposited in depth. Note. - on account of extensively soft formation of surface rocks and the fact that veins are quite "flat" - workings are largely caved - assisted by Mexican "mine robbers" many of whom have lived for years past picking float and clearing out ore leavings from workings on this property (together with California bums - who, when I would not give them working leases, took possession of and worked the property, and when ordered off, jumped same and caused me to fight two law suits for title, (one outfit, broke and crooked, backed by "petty forgery" hollering lawyers - of course we beat them and plenty of expense, which prevented doing development intended).

Immediately, available values open for estimates and sampling forming a reserve of raw material ready for manufacture as soon as equipment is established with which to treat (manufacture) same.



PARTIAL LIST OF ORE SHIPMENTS.

Made from 850 feet of development work on  
BLACK PRINCESS or LEAD TROUGH GROUP OF MINES,

On waste piles about 500 tons of sorted and shipped best of same depth now low grade.

Extracted from Claim No. 1

	CONTENTS IN				<u>Net Returns</u>
	<u>Gold</u>	<u>Silver</u>	<u>Lead</u>	<u>Copper</u>	
By Leasor (from trench east of) maing incline shaft on No. 1 to) El Paso Smelter, about 10 tons)	\$	Ounces	%	%	\$
		200	40.		\$ 900.00
By owners to Phelps-Dodge Corp.) Douglas, Arizona )					
54,220 lbs. (No lead returns as) copper smelter. )		38.88		.96	743.84
64,960 lbs.		23.70		.81	435.05
52,900 lbs.		16.32		1.54	255.03
35,929 lbs.		24.99		.48	216.02
From Claim No. 4		26.60		5.50	861.86
81,820 lbs.					
Selected ore sold to Miller & ) Cox, Nogales, Arizona. )					
2,366 lbs.	2.00	31.60	11.20		13.70
1,387 lbs.	2.00	77.20	14.00		28.40
3,106 lbs.		77.50	22.70		39.20
13,374 lbs.		252.00	42.80		140.40
5,645 lbs.	1.20	63.00	16.10		125.15
725 lbs		115.90	23.70		12.35
2,740 lbs.		128.50	39.00		124.20
TOTAL - - - - -					\$3945.26

NOTE -

Additional ore to the amount of a bout \$1,700,00 has been shipped from this property but as mixed with other ores, cannot be segregated and added.

Above data copied from Snyders Report - much ore has been shipped since above list was made out but return sheets carried away by a Canadian and could not get back.

/sd/ UDALL

NOTE - W. C. ABBOTT was Sup't. of the Ibex Mining Co. (Little Johnnie Mine) Leadville, Colo. while it output many millions of lead-silver ores in lime porphyry, horizontal cutouts. Sunnate Leadville Colorado has produced more wealth as values of ores and made much larger profits from its mines than all the mines of the comstock lode in Cripple Creek and Goldfield taken together.

J J (Jim) Brown, 1/2 owner, with J. F. Campian, in the Little Johnnie examined the Black Princess some year ago and made me an offer on the dump at No. 1 which I refused, shortly after he died in L.A. and I wrote to John Campian, re, the property, his attorney wrote that my letter came too late - John was killed in auto wreck few days before.

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STEWART & COMPANY

A ttorney-at-Law

41 Liberty St.

New York City, Oct. 20, 1913.

This is to certify that I have known Mr. Charles E. Udall, for a number of years past, and had considerable business dealings with him, and have taken accasion to check up as to his ability and integrity.

I take pleasure in stating that I have found Mr. Udall, to be exceptionally well informed mining man, well grounded in geology and metallurgical problems, and an executive of marked ability and energy, and proven probity.

I heartily recommend him to anyone desiring his service.

(SIGNED) MERVYN A. RICE.

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TRAYLOR ENGINEERING COMPANY

ALLENTOWN, PENNSYLVANIA  
October 6, 1913.

Mr. S. M. Franklyn,  
Tucson, Arizona.

Dear Sir:-

Replying to your inquiry, I will state, I am well acquainted with Mr. Charles E. Udall of your city, having had opportunity to check up on his ability and knowledge over several years of his operations.

I can recommend him to you as a well posted engineer and operator, able, efficient and dependable.

In my estimation he can accomplish more with a given capital than any operator of my acquaintance.

Yours truly,

(Signed) SAMUEL L. TRAYLOR.

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HELVETIA MINES

James B. Seager, Mgr.,

Tucson, Arizona.

Sept. 10, 1912.

TO WHOM IT MAY CONCERN:

This is to certify, that our Company purchased this property from Mr. Charles E. Udall, and that we found the report on same by Mr. Udall, to be conservative and accurate in all respects.

It is the first time in my experience that on the working of a property, the results obtained held up to the vendors report and claims.

During several years past, I have had dealings with Mr. Udall, and have found him strictly dependable, and a first class judge of mines and formations, and can strongly recommend him to those who may have business dealings with him.

(Signed) JAS. B. SEAGER.

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CALUMET & HECKLA SMELTING WORKS

Houghton, Michigan,  
Sept. 15, 1900.

This is to certify that I have known  
Mr. Charles E. Udall, for some years past, he having reported on a  
copper property, in which I became interested in Arizona.

Myself, and associations found Mr. Udall, to be a  
man of good judgement and probity, and I take pleasure in  
stating that I have confidence in his ability and judgment.

(SIGNED) JAS. H. COOPER.

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This consists of placer deposits immediately exposed upon the surface, covering the main gulch sands and gravels with the adjoining flats and side hills. The ground covered by this detritus or placer deposits derived from the erosion of the vein materials and adjoining. Impregnated, country rock, covers very considerable areas (marked approximately in blue on map). These surfaces or reserves vary in depth in thickness from 1 ft to 8 & 10 ft. and apparently averages 3 ft. in depth. On Spar, Spar 4 and Spar 5 claims, covering some 1800 ft. of gulch and extensive side hill areas the safely workable material covers a surface area of fully 500 x 1200 ft. by 3 ft. in depth or 1,800,000 cu.ft. which at 18 c.f. to 1 ton equals 100,000 tons, which will average not less than 1/4% Wo. (assay based on 100% metal not oxide) which latter is 79 to 80% Wo metal and we are figuring on working 60% Wo<sub>3</sub> concentrates so that 1/4% Wo equals 5 lbs. metal per ton or approx. 6 lbs. Wo<sub>3</sub> (80%) or 8 1/3 lbs. of 60% Wo<sub>3</sub>. While quotations of say \$18.00 unit (20#) are in oxide - Wo<sub>3</sub> - not metal, which cannot be made at ordinary mills and in fact the oxide is used direct for steel alloying.

On Octopus, Octopus No. 2, Spar No. 2 and Manuel claims, covering the drainage channel, adjoining flats and some mesa grounds (see map) an even larger tonnage is available but carrying only 1/2 the value in tungsten viz 1/8% Wo.

We thus find that 100,000 tons of better grade ore carrying 1/4% will produce

Tons of tungsten	250.
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While 100,000 tons of the lower grade ore 1/8%	=	125.
		375 T.

And as all run estimates are made on 60% concentrates we would have not 375 T but

of 60% Wo<sub>3</sub>.

625 T.

In Arizona, water is an important requisite in mining operations. This I consider we have demonstrated to have available in sufficient quantity for all needs up to the milling of 100 tons daily which means the working of 200 T. of crude ore, as only 1/2 of the material as scraped to the plant will go to the concentration tables, requiring 400 tons, maximum of water ks 100,000 gals per day - by reference to map it will be seen that the extensive drainage system (in red) is crossed at right angles by a very extensive dyke of eruptive rock, (andesyte) which forms a natural dam, holding back the water in a very extensive soft vein or vertical stratum 20 to 40 ft. in thickness. Below this dam (on wells below same on Cattle ranches) it is 100 ft or more to water, above the same it is 42 ft. to large water vein - as proven by well already sunk - to water - see estimate p.99.

#### Cost of Production and Marketing.

Operating force after equipment is installed - operating & functioning - 3 shifts, 8 hrs ea.

12 American average wage \$4.00	48.00
16 Mexicans (American citizens?) \$2.00	32.00
Sax per ton 2.00 teaming to Ry. \$2.00	4.00
Fuel oil and up-keep	12.00
Insurance	4.00
Daily expenses treating 100 tons to mill - equals \$1.00 per ton -	
Treating total of 200,000 tons - - - - -	\$200,000.00
Cost of original investment - - - - -	30,000.00
Taxes, Insurance & C & C - - - - -	20,000.00
	<u>\$250,000.00</u>
	TOTAL
Saving = (Net 281 1/2¢)	\$2.75
Operating costs	1.00
Investment Taxes & C?	.25
	\$ 1.25
Net Profit =	\$ 1.50 = \$300,000.00

Expense of equipment & property to handle 100 tons daily to concentrating tables  
(equal to 200 tons crude material daily)  
Water -

Sunk present 42' shaft to 100'

Drift and cross cut 142' at 100' L. = 200' @ 10.00

\$2,000.00

Under Water

Timber shaft and drifts where necessary	500.00
2 - 10,000 gal tanks and platforms	1,000.00
Pump at well 2 1/2" discharge -	
Engine and pipe line to tanks & Mill & bldgs. - & shed -	1,500.00
Mill building to house	
6 concentrating tables (below) - Rolls-	
Set 2 screens ( 3 sizes of ore)	
Ore floor pan grizzlies and drag	
3 steel lined ore Pockets to tables	5,000.00
Grizzlies and picking belts with small engine - 2" dp grizzly	
Steel gr. to 1/4" for mill -	
P. Belts handle 1/4"/1' & 1" to 2"	1,200.00
Drag line to mill	600.00
6 tables erected	3,200.00
	<u>15,000.00</u>
1-2 ton truck	750.00
1 Lt. car	650.00
Dry Nemo & lights	650.00
Repairs to road	400.00
2 Tractors & 2 Scrapers & Plow	3,700.00
Stock fuel & Lub. oil & Tks.	500.00
" lumber - Sax & C	500.00
B.S. Shop - work shop & tools	800.00
Bunk house - boarding H & Office and fixtures	1,050.00
Foundations, excavating, erecting & Sund. exp.	
Testing out plant etc.	800.00
Insurance	200.00
	<u>\$25,000.00</u>
Working capital for 60 days - wages @ 80	4,800.00
Expenses	200.00
TOTAL - - - - -	<u>\$30,000.00</u>

This property consists of 8 mining claims located 600'x1500' each 1 mill site & water right of about 5 acres or a total acreage of about 150 acres, allowing for laps of claims - as fol.:-

NAME	RECORDED IN BOOK	PAGE	DATE
Spar	" 00.	253	April 13, 1916
Spar No. 2	" "	254	April 13, 1916
Spar No. 3	" "	255	April 3, 1916
Spar No. 4	" "	256	" " "
Spar No. 5	" 00	256	" " "
Manuel	" Y.Y.	421	May 6, 1916
Octopus	" SSS	370	March 3, 1934
Octopus No. 2	2 "	370	July 2, 1936
Octopus Millsite & W. Rf.	M.S.2	466	" " "

Title is perfect and affidavit for ass't. work for 39/40 has been filed for record.



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Along similar engineering and operating lines Mr. C. E. Udall has had a very considerable experience having with Mr. Charles Poullot; shipped very high grade Uranium Ore to Otto Krupp at Hamburg, Germany from the Kirk Mine in Gilpin Colorado, about 6 tons carrying 59-1/2%  $UO_3$ , about 11 tons carrying 22%  $UO_3$ , bought for Fried Krupp of Essen.

In 1901 purchased the Tailings Dump at Mammoth, Arizona. 400,000 tons of waste which had been worked over twice by crushing and amalgamation and later by cyaniding.

Udall sunk and cased wells installed pump up to 5" discharge. Erected a plant, put 70 men and 70 horses and mules to work and concentrated 300,000 tons of ore developing and pumping 600,000 gallons of water per day.

Plant cost \$16,000 and output 1252 tons of willfenite (mobydate of lead) concentrates in 20 months operations, treating an average of 500 tons daily.

Ore contained 1/2% wulfenite and concentrates carried 20 to 22%  $MoO_3$  which was paid for at 25¢ per lb. or \$100 to 110.00 per ton. Original value of wulfenite in ore (tailings) was 50¢ per ton and the operations showed a profit of about 20% in costs. Note: as much of (\$13.) the lead mobydate was broken to 100 to 250 mesh (wheat flour 260 mesh) the fines could not be saved on wet concentrating tables and therefore Udall built a "dry mill" a battery of 4 operative (1 reserve) Dry concentrating tables and saved in excess of 400 tons of his 1250 tons gross saving - Dry gross sales \$125,000.

The product went to Stein & Boencke "Primas Chemical Co.", Primas, Pa., who built a \$40,000. plant in which to treat this product and resold to U.S. Steel Corporation - Chas. Schwab, Pres. This was the first commercial production of molybdenum in the U.S.A. and was equal to 20 times the world's previous yearly production. It required 9 months of effort in N.Y. and the east to induce any American steel man to contract for such a "huge quantity" of a nearly unknown metal on which only the Germans had any real knowledge. (2-3/4% alloy in liners for 12" - 70 ton 50 ft. artillery extended the safe life of the guns from 20 to 100 discharges, was the information I passed along to Mr. S. obtained from a German artillery officer in Newport, R.I. - 1901).

The Primas Co. reduced and cleaned the Mo. metal to 98% - arsenic and sulphur free and obtained 75¢ lb. from U.S. Steel, made some money - present total run \$2.60 lb.

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During World War 1, Udall sold tungsten concentrates from \$35.00 up per ton. U. S. Sales sold to Geo. C. Blackwell Sons Co. (Purveyors at the Admiralty) the Albany, Liverpool Eng. a number of carloads of Molybdenum ores and concentrates together with 38 shipments of ferro vanadium, total about \$200,000. at war prices. Cancelled their contracts for cause and sold to Atlantic Metals & Alloy Co. (Morgan Belmont & Cary Belmont) \$135,040. of Molybdenum ores and to E.J. Lavino & Co. Philadelphia, Pa. \$25,947.51.

Above sales all sampled and shipped through Ledoux & Co. 99 John St., New York. Hereto attached are some references and copies of old references, re: Mr. Udall and his standing.

**DEPARTMENT OF MINERAL RESOURCES**  
**STATE OF ARIZONA**  
**FIELD ENGINEERS REPORT**

Mine Minnie Moore -- (formerly Black Prince)s Date June 2, 1954  
District Cerro Colorado District ---Pima County. Engineer Axel L. Johnson  
Subject: Field Engineers Report

Location Secs 13 & 14 - T 20 S - R 10 E. Go north from Arivaca on the Arivaca-Kinsley road for about 8 miles. Turn left on the Las Guijas road. Drive about 1/2 mile on this road, then turn right (north), and drive 2 1/4 miles on private road.

Number of Claims 2 unpatented claims.

Owners M & R. Mining Co. (bought mine from John D. Mitchell of Arivaca 2 months ago.)  
This company originally composed of H. P. McCarthy of San Francisco, Calif., and L. A. Roberts of Walnut Creek, Calif. However, Mr. Roberts passed away a few weeks ago.

Operators M. & R. Mining Co., San Francisco, & Calif.

Metals and Minerals Lead with high silver content. Some zinc and copper.

Number of men employed 5 (work started 6 weeks ago.)

Production Rate No ore production yet.

Geology The shaft at which operations are conducted is sunk in the fault gouge of a large fault. Country rock on both sides of the fault is andesite. Fault strikes ENE, and dips about 80 degrees south. On the foot wall of the fault, about an 18 inch layer of hard rock, containing iron and manganese can be observed. This is altered country rock and not a part of the fault gouge. The fault gouge at the place where the shaft is being repaired, is about 3 ft. wide. The writer did not see any ore in the fault gouge in the open cut about 8 ft. deep next to the shaft. John Mitchell states that the ore is found as high grade chunks of ore in the fault gouge, and, also that most of the ore is found near the iron-manganese layer on the footwall.

Ore Values According to a statement by John Mitchell, an assay taken at the breast of an old drift on the 70 ft. level, by crawling into same on hands and knees, was as follows: Silver ---1400 oz. Lead -- 30 % (galena and cerussite) Copper -- 2 % Zinc -- 1 %. (writer did not see the assay report). Sample means very little regardless, as the writer has no way of telling whether it is a specimen sample, or a sample which represents any amount of tonnage; and, also, what proportion is ore and what proportion is fault gouge.

Ore in Sight and Probable No ore in sight, from surface workings. Old workings are inaccessible.

Old Mine Workings 1 --- 110 ft. shaft (incl. 80 degr. S.) ----70 ft. to water level.  
1 --- 25 ft. drift on the 70 ft. level ----in bad shape  
Believed to be some old caved workings on the 20 ft. level  
May be some old workings on the 110 ft. level  
1 --- 40 ft. shaft about 150 ft. east ---- bad condition.  
Some open cut workings.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Minnie Moore -- (formerly Black Prince)~~S~~ Date June 2, 1954.  
District Cerro Colorado District ---Pima County Engineer Axel L. Johnson  
Subject: Field Engineers Report

Past History Following information on past history supplied by John D. Mitchell:

(1) Property was opened up in 1857 by Posten and Heintzelman, who also worked the Silver Queen Mine at Cerro Colorado. It was closed down in 1861 at the beginning of the Civil War, when the removal of U. S. government troops in the area made it hazardous to work the properties on account of frequent Indian raids.

(2) Property was owned by Chas. E. Udall from 1918 to 1952. Mr. Udall did some mining intermittently and on a small scale, and sold the ore to Hugo Miller in Nogales a few tons at a time. This, also, took care of his assessment work.

(3) Relocated by John D. Mitchell in 1952, after death of Mr. Udall.

(4) Sold by John Mitchell to the M. & R. Mining Co. about 2 months ago.

Present Operations John Mitchell is at present supervising the installment of mining equipment for the company with a crew of 4 men and himself. To date, after 6 weeks of work, a 24 ft. gallows frame has been erected, a 15 ft. collar set placed in the shaft, and a 105 c.f.m. compressor, a hoist and a pump has been installed. Shaft is 2 cmt. 6' x 7 1/2'

Future Plans Future plans of the company not definitely known by Mr. Mitchell. It would seem logical from current preparations that the company intends to repair and dewater the shaft, and then open up and sample the old workings of the mine in order to determine the size, value, and character of the ore deposit.



Properties believed to be owned by U. of A. - Source unknown.

	NAME: PROPERTY	DISTRICT	COUNTY	LOCATION TWP - RGE - SECT	SIZE: ACRES	Total Limit * Assessed \$	MINERAL SURVEY NUMBER	Patented Claims	NOTES
U/A EXPERIMENTAL MINE, SAN XAVIER NO 6	1. DEMOCRAT 2. MARJORIE	PIMA	PIMA	17 <sub>5</sub> 12 <sub>E</sub> 3 <sub>10</sub>	20.661 16.560	\$ 16,528 13,248	1758?	11-4-76 5398-D134	MAPS: UG & Surface
OLD AMADO OR MONTOSA MINE 1 MINE IN & GLOVE	1. Black Diamond 2. Isabella	TYNDALL	SANTA CRUZ	20 <sub>5</sub> 14 <sub>E</sub> 29 <sub>1</sub> NW 1/4	20.661 20.661	\$ 7500	U/A Part 2966 - 1/2 U/A, 1/2 MACKENZIE 1/2 U/A, 1/2 MACKENZIE, 1/2 LENNON	5393-D134	SPRINT OWNERS MAPS
	SUNSET	TOMBSTONE	COCHISE	20 <sub>5</sub> 22 <sub>E</sub> 14 <sub>SW</sub> 1/4	12.27 Ac	\$ 19,620	Donner 468 R109 LST 50	Patented 1880	2000 ton dump No Monuments
	ALBATROSS	ARIVACA	PIMA	21 <sub>5</sub> 9 <sub>E</sub> 12 <sub>NE</sub> 1/4	16.87 Ac	\$ 12,653	355		Tunnel - SHAFT
	TOTAL WRECK	EMPIRE	PIMA	18 <sub>5</sub> 17 <sub>E</sub> 3 <sub>E</sub> 1/4	17.153	\$ 6,800 Actual 12,800	235	Donner J. VAIL WILKINSON	MAPS UG & Surface
ALLISON MINE (SABOQUIVARI)	1. SENATOR NO 1 2. SUNBEAM NO 1	FRESNAL	PIMA	18 <sub>5</sub> 7 <sub>E</sub> 28 <sub>29</sub> 30	20.621 20.522	\$ 16,496 \$ 16,416	4063	Donner J. VAIL WILKINSON on INDIAN RESERVATION contiguous claims	
ANNIE MINE NO 1	MINNIE MINE	CABABI	PIMA	15 <sub>5</sub> 5 <sub>E</sub> 12	20.661	\$ 6,818	4066	COMOBABI MTS	
MILL SITE	SANTO TOMAS	CABABI	PIMA	15 <sub>5</sub> 4 <sub>E</sub> 36	5.0 Ac	\$ 1650	Panel 20163	20155 Panel No	
LA NUEVA BONITA VISTA PLACERS	EDNA J.	BOBOQUIVARI	PIMA	19 <sub>5</sub> 8 <sub>E</sub> 31-32 20 <sub>5</sub> 8 <sub>E</sub> 6-7	LEASE 680 STATE LAND	Not on Tax Roles (NA)	UN- PAT'D PLACER	W. of Hwy 266 on INDIAN LAND ALTAR VALLEY Believed to have been WITHDRAWN REVERTED 1979 for lack of activity an incising, granules on sediment of granite	
GREAT AMERICAN SULPHURETTE ALICE	GREAT AMERICAN GROUP	SWISSHELM	COCHISE	20 <sub>5</sub> 27 <sub>E</sub> 1 <sub>E</sub> 1/2	76.05 Ac	\$ 25,398	830 { GA S A	LESSEE: John FAICK * 200/mt To June 1992 4 open shafts and Stops	
HORN SILVER				20 <sub>5</sub> 28 <sub>E</sub> 6 <sub>NE</sub> 1/2		\$ 11,823	1262-M	Sub-leased to ALHAMBRA MINES INC. GENERAL MINERALS OF AMERICA Remined base information	
MOUNTAIN QUEEN WHALE	MOUNTAIN	SWISSHELM	COCHISE	20 <sub>5</sub> 27 <sub>E</sub> 12	19.66 19.00 19.00	\$ 26,232	272 M9 273 W 274 M		
KA: ELFRIDA GROUP	QUEEN GROUP					Total			
1-10 NUEZ NO 2 - NO 11 11-17 KADLIN NO 1 - NO 7 18 OVERSITE 19-20 OVERSITE NO 1 & 2	MANMOTH	MANMOTH	PINAL	9 <sub>5</sub> 17 <sub>E</sub> 13,24 9 <sub>5</sub> 18 <sub>E</sub> 17,18 19,20 29,30	20- 160 Ac 3200 Ac Total	Not on Tax Roles (NA) 100K \$15/Ac Est'd	20000 UN- PAT'D PLACER	LESSEE: GILBERT S MOTT GRAHAM MOTT Need ASSESSMENT INK EACH YEAR Lease 15000 INDUSTRIES INC \$ 500/mt	
2D unpat'd FLACER CLAIMS									
CHRISTMAS FORGET IT DEMOCRAT OCEANIC WEDGE OCEANIC CECIL VICTORIA 1 VICTORIA 2 CROWN POINT WHITE HILL	OCEANIC  aka OCEANIC  aka SAN LUIS	OCEANIC  (Las Guijas)	PIMA	21 <sub>5</sub> 9 <sub>E</sub> 27,34	15-claims 3099 Ac	\$ 231,726 Total \$ 154582	MS 3685 OCEANIC GROUP MS 4159 "OVERSIGHT"	15 pat'd Claims FLV (Summer * Full Value, Prime Improvements Sold: Senator Yavapai Oct 83 Townsite 18.3A Pavilion	

\* Up for Sale