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*Notes prepared by Com. made by H. H. H. in 1912
under O.*

copied

CLIMAX GOLD MINE

Interview with Robert Truman - April 24, 1931,
now employed by the Pacific Coast Adjustment Bureau, Luhrs
Tower.

Truman has only a dim recollection of property
as his father left there about 1912 when he was only 14 years
old. Believes that his father had a good opinion of the pro-
perty and would have liked to return to operate same under
lease, but could not get along with the company which then own-
ed the mine, which was a fly-by-night affair.

Says that the old workings near the top of the
hill produced some very high grade ore, but always from small
pockets. There is a strong vein from 2' to 4' wide with good
hanging wall and foot wall, but the ore occurs in irregular
shoots generally very narrow and always associated with quartz.

Between the shoots the vein filling is quite
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Bob Truman thinks that there should be some very
good ore still remaining below the fourth level and down to the
5th level where sulphides came in, and he does not know anything
concerning the value of the sulphides as these could not be

Climax Gold Mine - 2 - April 24, 1931.

handled with profit in the stamp-mill with which the property was equipped. The last work done by J. K. Truman for the company was development on the 5th level where the ground was hard and this work should not be badly caved and would probably give information concerning the size and value of the sulphides. Truman knows nothing concerning the Tellurides.

On this property there is a large porphyry dike some 60' or more in width, which Truman thinks carried gold to the value of \$4 or \$5 per ton. This might represent a large tonnage and could probably be cheaply mined, but was never considered as ore when the property was operated since they could not handle any rock that ran less than \$25 with the granite. There are a number of faults which cut through the vein and which made mining expensive and money obtained from mining the rich pockets in the upper levels was generally spent in looking for the next pocket.

The value of this property would appear to depend upon the size and grade of the sulphide ore in the lower levels and mining below the river level might be expensive on account of water.

The porphyry dike should also receive attention if it is as large as Truman thinks and mining costs in working the porphyry should be very low.

2222 N. Mitchell St
Phoenix

NOTES ON CLIMAX GOLD MINE

From interview with present owner, J. H. Richmond, April 22, 1931.

Property consists of four mining claims staked by Richmond last year after the old company which owned twelve unpatented mining claims had failed to do the assessment work for several years.

Located about ten miles southeast of Prescott on the Hassayampa River. Road to property turns off from White Spar Road about one mile south of Glen Oaks. Road is too rough for an auto and it is about two miles from the highway to the mine which is located just across the river from the old camp and postoffice of Catocin.

Property was worked in the 80s or thereabouts and some high grade ore said to have been extracted. Acquired about 1903 by the Climax Gold Mining Company of Los Angeles, and J. K. Truman was Superintendent for them, Daniel Bessler was Foreman.

Vein is developed by adit levels with raises and winzes, and about 3,000' of underground work was carried out, the stopes having produced, it is said, upwards of \$250,000 in ore. Property was surveyed in 1912 by W.M. Warra of Prescott, who made maps offered by Richmond.

Apparently ex-Governor Louis Wolfley of Arizona was intimately connected with the property from 1903 to 1908.

April 22, 1931.

In 1915 Truman took a lease on the property and operated for one year taking out a little high grade ore.

The vein is developed on three levels and to a depth of upwards of 300' below the surface. The upper level is quite long but the southern section is caved and Richmond thinks that the best ore will be found in this southern part of the property. The 200' level is about 400' long and only a little work was done on the 300' level, which is apparently now inaccessible. High grade ore running several hundred dollars a ton appears to occur in narrow stringers from 3" to 10" in width. Wolfley mentions on the 300' level an 8" vein assaying \$200 and 60' further on in the tunnel a width of 6' or 7' of lower grade ore. Also mentions that in the Yaqui Drift they have a length of 70' of ore 10" wide assaying \$65 and a considerable width of wall rock running \$15. In the Climax Drift they have 100' length of \$60 ore, width not stated. In 1908 one bar of gold was shipped to the Mint, weighing nearly 75 ounces, and yielding \$1365.

Only part of the values were in free milling gold and it is recorded that most of the ore was in the form of tellurides, principally a telluride of gold and copper, and a geologist compared the conditions to those at Telluride, Colorado, and mentioned that the barren rock dikes of volcanic rock which cut through the formation are very similar to the trap rock found in Telluride.

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There appears to be also some sulphides and the efforts to treat the ore only by free milling were unsatisfactory, the tailings often containing \$16 or \$17 value per ton.

All the levels of the mine are now accessible but the ladders are down in the old stopes in which there is a considerable tonnage of fill or unknown value, but Richmond thinks that the fines in both the fills and the dumps could be worked over with profit.

There is practically no ore developed for sampling and measuring, but indications are that substantial tonnage could be proved up at comparatively small expense, particularly under the southern section of the upper level.

The equipment consists of three old Marine type Gas Engines, a 300' giant compressor, a 10-stamp mill, and a few buildings. The machinery is probably of little or no value and could not be operated with economy, although it might be fixed up to permit exploration and development.

The property has been examined casually by Simkins who took a few samples which gave good results. The present owner, Richmond, is anxious to make a deal and appears to be reasonable. Would give plenty of time to examine and sample the property under option and then lease and bond on royalty with purchase price to be determined later.

NOTE:-

(Try to obtain additional information from Gohring and Simkins, also some of the old-timers in Prescott, and if this is favorable an examination might seem justified.)

CLIMAX

(Note by G. M. Colvocoresses)

October, 1937.

I visited this mine on April 15, 1932 with Geo. Harbauer and we could only find small pillars and end of ore shoots in the upper workings, which appeared to be worth mining. They represented a very small tonnage.

The lower workings were not accessible and there was no evidence of values elsewhere in the surface of the claims.

I concluded that the property was only suitable for small scale operations by lessees.

During the past four years two or three unsuccessful attempts have been made to operate and a small mill has been erected.

A third similar attempt is being made at the present time but I have no information regarding its progress.

I do not consider the mine attractive, altho there is a considerable area of mineralized ground which has some possibilities.

Note Re Climax Mine

1/25/38

David Brooks says that last year when he visited Prescott, John Russell told him that he was milling at the Climax 25 tons of \$12.00 ore per day = \$300.00 and producing 6 tons of \$3.00 concentrates per week = \$1800 - 86% recovery (which is reasonable if mill worked 7 days per week on this basis)

That his profit was \$1000 per week or say \$50,000 per annum.

Cost of equipment \$15000.

(All the above is probably rubbish as I greatly doubt if the mill ever ran steadily, if the ore ever averaged \$12.00 per ton or if the costs of mining, milling etc. were as low as \$4.60 per ton)

G.M.C.

CLIMAX MINE

One carload of concentrates shipped to Humboldt in
1912 had the following analysis:

Au. = 2.80 oz.
Ag. = 0.7 oz.
Cu. = 0.9 %
Fe. = 31.0%
S. = 22.0%
Insol. = 35.4%

CLIMAX GOLD MINE

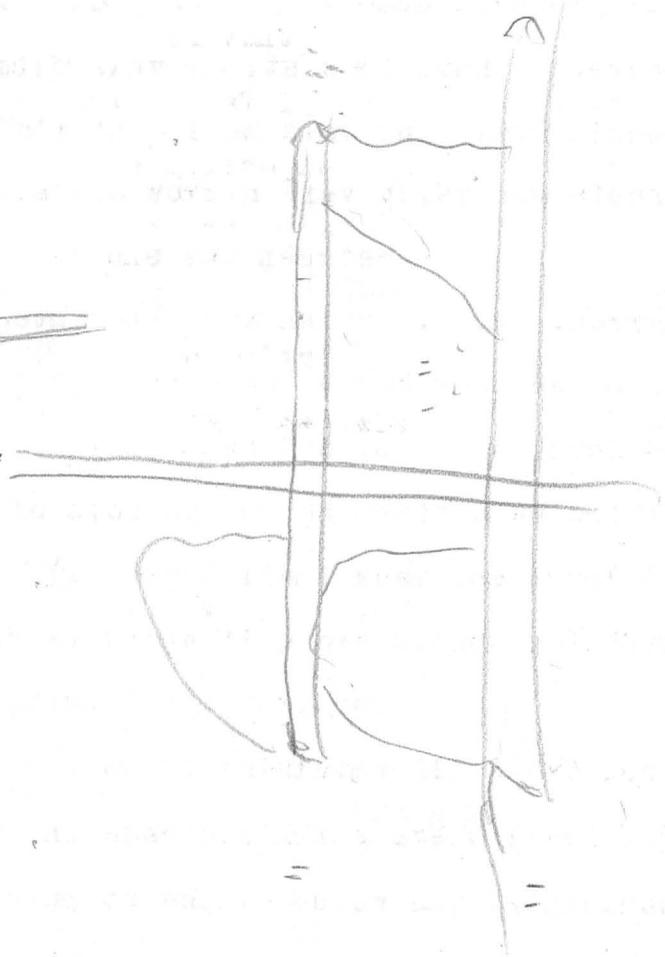
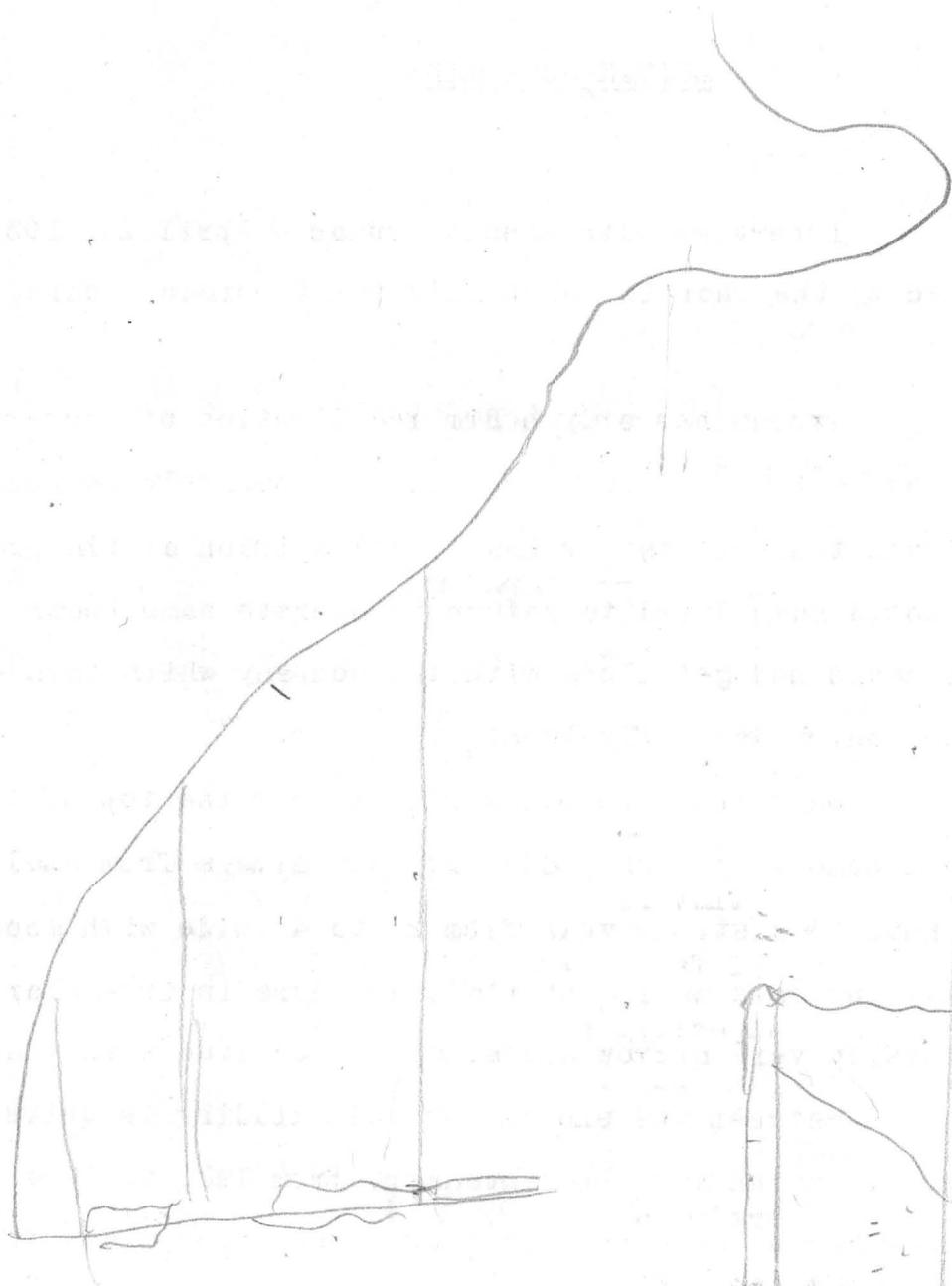
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Harlow to handle the Gold of 7 new San & Super

Climax Gold Mine - 2 - April 24, 1931.

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5/22. '31

Harbain says 8 property belongs to
Martin J. L. C. & Mrs M. E. Spaulding
of Prescott who is rep by. Pat C. Sullivan
who he investigated & - sales of 1 and the
I always been properly done.

~~Harbain~~ ~~thinks~~ ~~highly~~ ~~of~~ ~~property~~
of mine for lease & sold 8 1 to and
of photo 28.00 + other of 5000
change claim for 1 low gl

5/24. '31

Rutherford called word of Richard a
harboring 1 property & also line of bait until I, later
have action

C. J. Fetty - 1209 E. Hubbell St. - interested + Rutherford
Per 36549.

copied

2222 h. Mitchell Dr. Phoenix
Prop by C. H. Rutherford
Head Bell

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Mitchell Dr was built from Prescott to here 11/29/12

*Head 0
20/12*

From the papers of George S. Schott

Brundage - Schott was in contact

with Brundage grants a card by Dylan of

direct a dealer - a property

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→ Richmond says that the tellurides are in the Smith drift which is low sand & siltstone. (Probably Sulphides here mistaken for tellurides)

One can of core shipped to Abbe in 1912

$A_{in} = 2.8 \text{ g}$

$A_{y} = 0.7 \text{ g}$

$A_{u} = 0.9 \%$

$Fe = 31.0$

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$P_{total} = 35.4$

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Notes on this wire page 1931

□ Glen Esker
10 mi to Plover

10 mi to Plover

1 mi

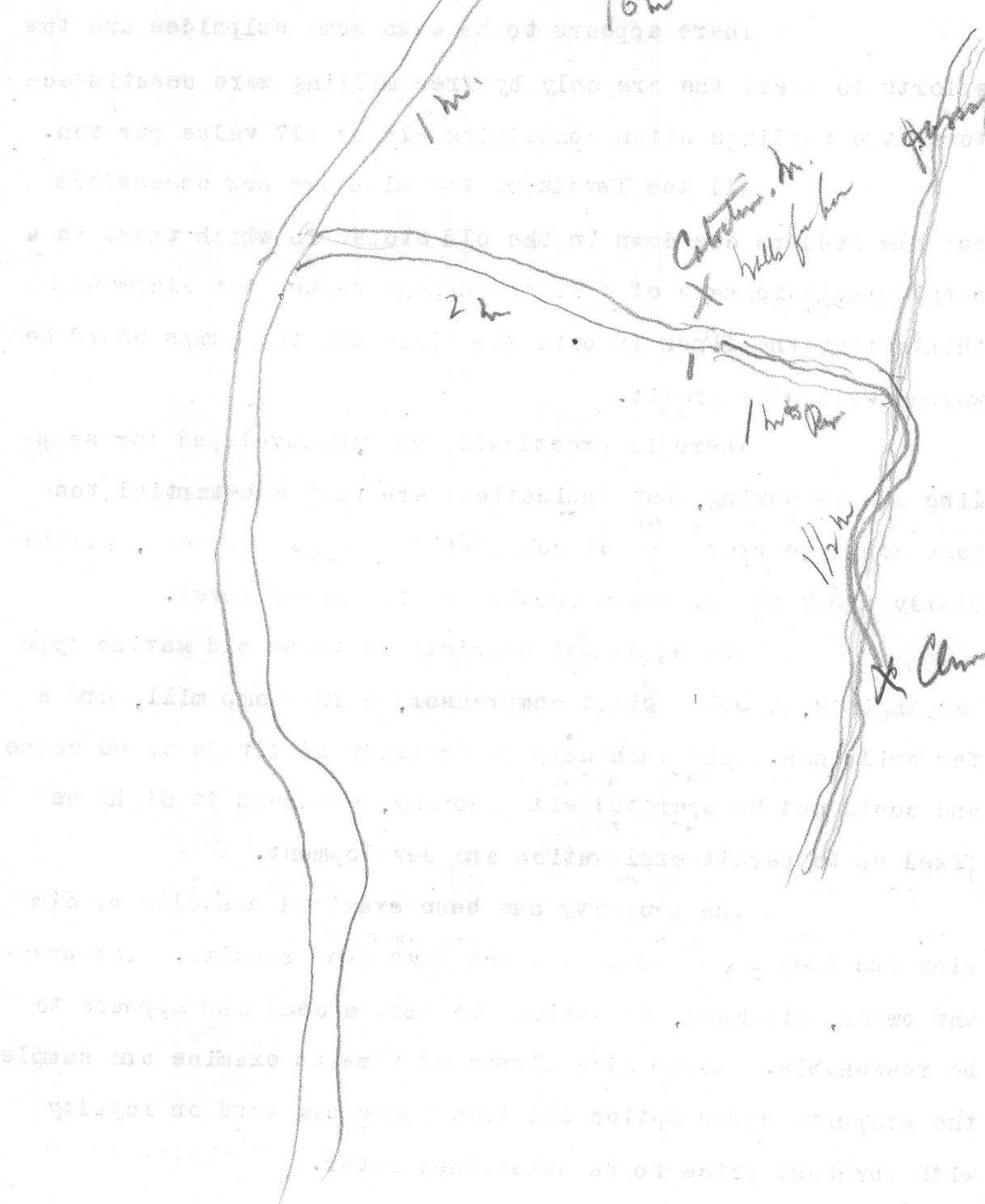
Collection. M.
X hills for her

2 mi

1 mi to Plover

1/2 mi

X Clonny



the property... with certain...
the property... with certain...
the property... with certain...
the property... with certain...

Virginia Dare Mine
(Formerly known as the Climax Mine)

Yavapai County
Arizona

June 18th 1931

Messrs. Richmond & Petty
Phoenix, Arizona

Gentlemen:-

The following is a Summary of the information I have been able to gather regarding the Virginia Dare Group, formerly known as the Climax Mine. This data has been compiled from what records are at hand covering the operations of the Climax Company, a visit to the property, and a brief interview with Mr. J. W. Waara of Prescott, Arizona who was connected with this Company in an advisory capacity for many years.

LOCATION: *

Elevation 4700'. The group of seven unpatented claims are situated in the Hassayampa Mining District, Yavapai County, Arizona, about 15 miles South of Prescott, the County Seat and 4 miles east of the Phoenix-Prescott Highway. It is within an area that has been highly productive in gold, Silver, Copper and some lead, the gold predominating.

The adjacent district, from Congress and Octave on the South, through Prescott, Senator, Bigbug, Mayer, McCabe, and Walker Poland, to and including the Jerome Quadrangle to the Northeast, have been important factors in the development of the mineral wealth of Arizona, and are credited with a total production of over one half Billion Dollars.

PHYSICAL ASPECTS:

The Virginia Dare holdings lie in the Northern section of the Hassayampa River drainage basin and present an aspect of rugged and abrupt contours in a highly fractured zone in the Bradshaw Geological structure. The surface is cut by the deep canyon of the river and numerous side gulches and is covered with a dense growth of chapparral. It is, however, outside the limits of the forested areas and mine timbers and lumber will need be hauled in to the property from adjoining districts, a few miles distant.

The deep gorge of the Hassayampa at this point affords a very good tunnelsite into the ore zones of the property, of which advantage has been taken in the developments and operations of the former owners. No. 5 drift, a crosscut of some 500 ft, cuts the veins at a depth of 600 ft. below the crest of the first western uplift in the canyon wall.

EQUIPMENT:

There is on the property at the portal of No. 5 tunnel, a ten stamp mill with a 9 x 11 Blake Crusher and two amalgamating plates. The two concentrating tables have been dismantled. The batteries are driven by a 25 H P Corliss Diesel Engine a 12 H P Corliss Diesel drives and Crusher. Two Challenge tappet driven ore feeders and various belting, shafting and pulleys complete the mill equipment. A 300 cu. ft. Giant Air Compressor and air receiver are in a separate building at the tunnel portal. This is driven by a 40 H P Corliss deisel. All of this machinery is in good condition and can be put in running order with a little overhauling and very little replacements. A Blacksmith shop with forge, bellows, vise, anvil, and some other miscellaneous tools and some hundreds of feet of used rail are on the lower dump.

In addition to the mill building, power house and blacksmith shop there are: Boarding house, assay office, 3 bunk houses, cellar and out-houses. All the drifts have 12 lb. Trail tracks in place and there are three ore cars and track scale at No. 5 tunnel. A cookstove and some kitchen and table ware are in the boarding house. Accomodations for a crew of 30 men can be readily provided with a small amount of reclamation and repairs on these buildings. The timbers in the mill are hewn and in a fair state of preservation and will serve as a nucleous for a new structure.

DEVELOPMENTS:

About 5,000 lineal feet of drift, crosscuts and raises are shown on the amps of the property. The vein exposures are shown in the Climax, Cub, Lion and leppard for about 2,000 feet. The Total depth reached is some 600 feet. About 10% of the ore as shown

in the drifts on the veins has been stoped. Details are shown on the maps to which reference is made.

GEOLOGY:

The Geology of the Bradshaw Quadrangle was studied in minute detail in the early days by Jager and Palache (Pamphlet 126), and late, in 1926, by Lindgren (U.S.G.S.) Bul. #782). The data compiled in these reconnoissances, together with the knowledge gained in over 40 years of intensive operations in these districts, makes the local features of the vein structure and conditions fairly well known and removes many of the elements of speculation and conjecture from new explorations in this field.

Briefly, the geological aspects at this property are as follows: The holdings lie in an area of the Yavapai Formation that is made up, in large part, by Schistose Groundmass, intruded by dykes and sheets of granodiorite and a gneissoidal (lenticular) phase of the rhyolite. This latter, with a Brecciated andesine schist, quartz and some calcite, makes up the vein filling. While the intrusives are dense and more or less blocky, the schistosity extends into them and into the fissure aggregates. The whole area opened up by the workings is much faulted, and two major faults are shown on the map; the one to the south being along or near the contact of the schist with a zone of diabase in the Leppard Claim. This formation, while apparently containing the south extension of the Lion Fissure, with little or no displacement, present ore inclosures differing from these found in the schists, and the values are mainly in a telluride complex, said to contain some copper. No samples or specimens of this were found, however, information given was derived from the old records of the Climax Company. The workings in this part of the mine are at this time, inaccessible.

VEINS AND ORE MINERALS:

Due to the broken nature of the ground, it is difficult to determine the exact number of veins and ore-bearing fissures, dykes and faults disclosed in the workings on this property. One main vein, with a general course North 24° west, through the Climax,

Cub, Lion and Leppard Claims is apparent. This has a dip to the east 70° in the upper horizons and at the No. 5 tunnel is nearly vertical. Displacements of 20 to 40 feet were noted at the two major faults with little or none along the smaller slips and the several dykes shown. A rather flat injection of white quartz is seen in the Yockey drift on No. 5 level. This cuts the fissure but its effect, if any, on the ore occurrence is not apparent. Segregated blocks containing ore lenses appear in several crosscuts. Seepages are found, coming into the lower level from the east from an area that was crosscut by the main adit to the north, indicating a migration of minerals from this part of the mine. These seepages show the oxides of iron and manganese, with some fluorite, included in chalcedonic incrustations on the wall of the drift. Mention is made of some black dyke in connection with the tellurides in the records of the old company. These presumably, in the diabase area to the south.

All the exposures in the mine, from the surface down to the 500 foot level, show both oxide and sulphide ores, and it is fairly certain that the bottom of the transition zone has not been reached. As it is still some 100 feet or more to the canyon floor, it is likely that any secondary aggregates will be below this point, and that free gold milling ore may be expected to the 1,000 foot level. The water table appears just above the 500 level, and a small flow runs out this tunnel to the surface.

No copper or lead minerals were noted in the upper part of the mine, near the surface in the Lion ground, above a sill containing some disseminated arseno-pyrite, a deposition area was exposed, showing a wonderful range of colors in the arsenite complexes in connection with some fluorite. The composition of these was not determined and they have no apparent significance with respect to the value factor in the ore.

ECONOMIC ASPECTS:

No samples were taken at the time of this examination. Access was had, however, to some recent assays on samples from various

parts of the mine and the mine and tailings dump. These include several taken in the back of the north fault some 100 feet east of the Lion - Cub vein. The returns were from \$9.00 to \$15.00 per ton in gold. Samples of the solid arsene-pyrites showed \$20.00, \$25.00 and \$29.60. Some disseminated pyrite, \$12.40, Ten inches at the foot of the air raise, \$33.60, west dump fines, \$8.40, fines from dump under tramway, \$18.00 to \$20.00, A special sample from the lower drift, \$88.00; mill tailings \$3.20. All values given are for gold only, the silver ratio is low.

A copy of a smelter settlement sheet shows assay as follows: Gold \$56.00, Silver 0.7 oz; Copper, 0.9%; Iron, 31.07%; Insoluble, 57.54%. Details of settlement not shown.

It has been estimated that the various dumps, screened to minus 1 inch, will yield some 3,000 tons of ore of \$10.00 grade (gold).

Old letters show: Floor of Yockey Drift, 70 ft. long, 10 inches wide. \$65.00 Climax Drift 100 ft. long \$60.00. Vein filling \$15.00. Eight inches in winze (telluride in Leppard) \$300.00, 6 to 7 feet alongside, "low grade".

Mint returns, 1 bar 73.72 ozs, \$1,372.88.

Reference is also made in the old letters to ores of \$2,000 and \$4,000 value per ton and to one shipment of three sacks that returned some \$1,500.00. Most of the tonnage mined was milled, with a resultant concentrate that was shipped to the smelter, as was also the sorted sulphides from the crude ore.

An electric power line is within six miles of the property. Water for milling can be had from the Hassayampa River and from deeper workings in the mine. The south fault throws a spring that can be developed for domestic use with gravity flow to the camp.

In the interview with Mr. Warra, he stated that during the early operations at this property only that development incidental to reaching the high grade lenses and pipes was carried on, and no systematic attempts were made by the owners to properly explore the ground. He stated further that the better grades of ores were found near the faults but that the rejects left in the mine at that

time would be profitable now with proper Metallurgical processes and efficient operating equipment. The Concentrates made in the mill and the sorted crude ores (Sulphides) that were shipped to the smelter always gave satisfactory returns. He characterized the vein as a contact between two faces of the schist.

RECOMMENDATIONS:

These would include the cleaning out of those entrances and passageways into the mine that are now blocked and a complete sampling of all the ore exposed. The ground stands well after many years without timbers, and the only places that are blocked are where the gobs have run into some of the raises and drifts.

A survey of the north Major fault to determine at what point it will cross the canyon below the mill with the view to starting a still lower adit into the vein system. This would develop any ores in the fault itself and is a good line of prospecting as this fault shows values in the upper horizon. It would also pick up any fissures that may exist in the eastern area. If the Survey should prove that this proposed tunnel would be longer than the depth attained would warrant, heavier compressor equipment should be installed and sinking begun.

Metallurgical test should be made to determine a proper flow sheet for the ores so far developed and a plant commensurate with the indicated tonnage already developed should be erected. This could be so arranged that additional units could be added when conditions demanded it.

A complete assay and laboratory equipment should be at the property and any values that may be in the many faults, dykes bedding planes and slips as well as the vein fissures and offset lenses and blocks that are shown by the present developments determined.

CONCLUSION:

In the light of the foregoing outline of the conditions that prevail at the Virginia Dare property, it is apparent that it has aspects of unusual merit and presents a rare opportunity for a

safe and sound mining investment. The past history, while rather fragmentary and vague, is evidence of a profitable enterprise covering a period of many years. Working conditions and natural facilities are exceptional, and with the efficiency of present day engineering practice and metallurgical processes, this property has attractive features that are hard to find elsewhere in the mining field.

Signed C. K. Tibbetts
Metallurgist

Value of samples taken from the Climax Mine
Virginia Dare Company

by Mr. J. H. Richmond

	<u>Gold - Ounces</u>
General - - - - -	4.40
West Dump - - - - -	.42
Heads - - - - -	.76
Concentrates - - - - -	35.25
#2 Heads - - - - -	27.70
Sulfide in sack - - - - -	.62
Quartzsite - - - - -	.02
#3 East Dump - - - - -	.55
Tails - - - - -	.16
#2 50 ft. East - - - - -	1.68
300 level - - - - -	1.48

CLIMAX

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The lower workings were not accessible and there was no evidence of values elsewhere in the surface of the claims.

I concluded that the property was only suitable for small scale operations by lessees.

During the past four years two or three unsuccessful attempts have been made to operate and a small mill has been erected.

A third similar attempt is being made at the present time but I have no information regarding its progress.

I do not consider the mine attractive, altho there is a considerable area of mineralized ground which has some possibilities.

CLIMAX GOLD MINE

Interview with Robert Truman - April 24, 1931, now employed by the Pacific Coast Adjustment Bureau, Luhrs Tower.

Truman has only a dim recollection of property as his father left there about 1912 when he was only 14 years old. Believes that his father had a good opinion of the property and would have liked to return to operate same under lease, but could not get along with the company which then owned the mine, which was a fly-by-night affair.

Says that the old workings near the top of the hill produced some very high grade ore, but always from small pockets. There is a strong vein from 2' to 4' wide with good hanging wall and foot wall, but the ore occurs in irregular shoots generally very narrow and always associated with quartz.

Between the shoots the vein filling is quite barren. J. K. Truman was Superintendent from 1902 to 1905 or 1906 and then had a lease on a portion of the mine above the #4 level and took out some good ore, more than paying expenses. At the same time the Duncan boys of Prescott leased above the #3 level and made their lease pay, but both outfits had trouble with the owners and quit about 1912, when Martin took it over.

Bob Truman thinks that there should be some very good ore still remaining below the fourth level and down to the 5th level where sulphides came in, and he does not know anything concerning the value of the sulphides as these could not be handled with profit in the stamp-mill with which the property was equipped. The last work done by J. K. Truman for the company was development on the 5th level where the ground was hard and this work should not be badly caved and would probably give information concerning the size and value of the sulphides. Truman knows nothing concerning the Tellurides.

On this property there is a large porphyry dike some 60' or more in width, which Truman thinks carried gold to the value of \$4 or \$5 per ton. This might represent a large tonnage and could

probably be cheaply mined, but was never considered as ore when the property was operated since they could not handle any rock that ran less than \$25 with the granite. There are a number of faults which cut through the vein and which made mining expensive and money obtained from mining the rich pockets in the upper levels was generally spent in looking for the next pocket.

The value of this property would appear to depend upon the size and grade of the sulphide ore in the lower levels and mining below the river level might be expensive on account of water.

The porphyry dike should also receive attention if it is as large as Truman thinks and mining costs in working the porphyry should be very low.

* * * * *

NOTES ON CLIMAX GOLD MINE

From interview with present owner, J. H. Richmond, April 22, 1931.

Property consists of four mining claims staked by Richmond last year after the old company which owned twelve unpatented mining claims had failed to do the assessment work for several years.

Located about ten miles southeast of Prescott on the Hassayampa River. Road to property turns off from White Spar Road about one mile south of Glen Oaks. Road is too rough for an auto and it is about two miles from the highway to the mine which is located just across the river from the old camp and postoffice of Catoctin.

Property was worked in the 80's or thereabouts and some high grade ore said to have been extracted. Acquired about 1903 by the Climax Gold Mining Company of Los Angeles, and J. K. Truman was Superintendent for them, Daniel Bessler was Foreman.

Vein is developed by adit levels with raises and winzes, and about 3,000' of underground work was carried out, the stopes having produced, it is said, upwards of \$250,000 in ore. Property was surveyed in 1912 by W. M. Warra of Prescott, who made maps offered by Richmond.

Apparently ex-Governor Louis Wolfley of Arizona was intimately connected with the property from 1903 to 1908.

In 1915 Truman took a lease on the property and operated for one year taking out a little high grade ore.

The vein is developed on three levels and to a depth of upwards of 300' below the surface. The upper level is quite long but the southern section is caved and Richmond thinks that the best ore will be found in this southern part of the property. The 200' level is about 400' long and only a little work was done on the 300' level, which is apparently now inaccessible. High grade ore running several hundred dollars a ton appears to occur in narrow stringers from 3" to 10" in width. Wolfley mentions on the 300' level an 8" vein assaying \$300 and 60' further on in the tunnel a width of 6' or 7' of lower grade ore. Also mentions that in the Yaqui Drift they have a length of 70' of ore 10" wide assaying \$65 and a considerable width of wall rock running \$15. In the Climax Drift they have 100' length of \$60 ore, width not stated. In 1908 one bar of gold was shipped to the Mint, weighing nearly 75 ounces, and yielding \$1365.

Only part of the values were in free milling gold and it is recorded that most of the ore was in the form of tellurides, principally a telluride of gold and copper, and a geologist compared the conditions to those at Telluride, Colorado, and mentioned that the barren rock dikes of volcanic rock which cut through the formation are very similar to the trap rock found in Telluride.

There appears to be also some sulphides and the efforts to treat the ore only by free milling were unsatisfactory, the tailings often containing \$16 or \$17 value per ton.

All the levels of the mine are now accessible but the ladders are down in the old stopes in which there is a considerable tonnage of fill or unknown value, but Richmond thinks that the fines in both the fills and the dumps could be worked over with profit.

There is practically no ore developed for sampling and measuring, but indications are that substantial tonnage could be

proved up at comparatively small expense, particularly under the southern section of the upper level.

The equipment consists of three old Marine type Gas Engines, a 300' giant compressor, a 10-stamp mill, and a few buildings. The machinery is probably of little or no value and could not be operated with economy, although it might be fixed up to permit exploration and development.

The property has been examined casually by Simkins who took a few samples which gave good results. The present owner, Richmond, is anxious to make a deal and appears to be reasonable. Would give plenty of time to examine and sample the property under option and then lease and bond on royalty with purchase price to be determined later.

NOTE:-

(Try to obtain additional information from Gohring and Simkins, also some of the old-timers in Prescott, and if this is favorable an examination might seem justified.)

4700
Elev

Copied

Virginia Dare Mine
Yavapai County
Arizona

June 18th 1931

Messrs Richmond & Petty
Phoenix, Ariz.

Gentlemen:-

The following is a Summary of the information I have been able to gather regarding the Virginia Dare Group, formerly known as the Climax Mine. This data has been compiled from what records are at hand covering the operations of the Climax Company, a visit to the property, and a brief interview with Mr. J.W. Waara of Prescott, Ariz. who was connected with this Company in an advisory capacity for many years.

LOCATION:

The group of seven unpatented claims are situated in the Hassayampa Mining District, Yavapai County, Arizona, about 15 miles South of Prescott, the County Seat and 4 miles east of the Phoenix-Prescott Highway. It is within an area that has been highly productive in gold, Silver, Copper and some lead, the gold predominating.

The adjacent district, from Congress and Octave on the South, through Prescott, Senator, Bigbug, Mayer, McCabe, and Walker Poland, to and including the Jerome Quadrangle to the Northeast, have been important factors in the development of the mineral wealth of Arizona, and are credited with a total production of over one half Billion Dollars.

Physical aspects:

The Virginia Dare holdings lie in the Northern section of the Hassayampa River drainage basin and present an aspect of rugged and abrupt contours in a highly fractured zone in the Bradshaw Geological structure. The surface is cut by the deep canyon of the river and numerous side gulches and is covered with a dense growth of chapparral. It is, however, outside the limits of the forested areas and mine timbers and lumber will need be hauled in to the property from adjoining districts, a few miles distant.

The deep gorge of the Hassayampa at this point affords a very good tunnel site into the ore zones of the property, of which advantage has been taken in the developments and operations of the former owners. No 5 drift, a crosscut of some 500 ft, cuts the veins at a depth of 600 ft below the crest of the first western uplift in the canyon wall.

Equipment:

There is on the property at the portal of No 5 tunnel, a ten stamp mill with a 9 x 11 Blake Crusher and two amalgamating plates. The two concentrating tables have been dismantled. The batteries are driven by a 25 H P Corliss Diesel Engine a 12 H P Corliss Diesel drives the Crusher. Two Challenge tappet driven ore feeders and various belting, shafting and pulleys complete the mill equipment. A 300 cu. ft. Giant Air Compressor and air receiver are in a separate building at the tunnel portal. This is driven by a 40 H P Corliss Diesel. All of this machinery is in good condition and can be put in running order with a little overhauling and very little replacements. A Blacksmith shop with forge, bellows, vise, anvil, and some other miscellaneous tools and some hundreds of feet of used rail are on the lower dump.

In addition to the mill building, power house and blacksmith shop there are: Boarding house, assay office, 5 bunk houses, cellar and outhouses. All the drifts have 12 -lb T rail tracks in place and there are three ore cars and track scale at No. 5 tunnel. A Cookstove and some kitchen and table ware are in the boarding house. Accomodations for a crew of 30 men can be readily provided with a small amount of reclamation and repairs on these buildings. The timbers in the mill are hewn and in a fair state of preservation and will serve as a nucleus for a new structure.

Developments:

About 5,000 lineal feet of drift, crosscuts and raises are shown on the maps of the property. The vein exposures are shown in the Climax, Cub, Lion and Leppard for about 2,000 feet. The Total depth reached is some 600 feet. About 10% of the ore as shown in the drifts on the veins has been stoped. Details are shown on the maps to which reference is made.

Geology:

The Geology of the Bradshaw Quadrangle ^{does include this area} was studied in minute detail in the early days by Jager and Palache (Pamphlet 126) and later, in 1926, by Lindgren (U.S.G.S) Bul. #782. The data compiled in these reconnaissances, together with the knowledge gained in over 40 years of intensive operations in these districts, make the local features of the vein structure and conditions fairly well known and removes many of the elements of speculation and conjecture from new explorations in this field.

Briefly, the geological aspects at this property are as follows: The holdings lie in an area of the Yavapai Formation that is made up, in large part, by Schistose Groundmass, intruded by dykes and sheets of ~~granodiorite~~ granodiorite and a gneissoidal (lenticular) phase of the rhyolite. This latter, with a brecciated andesine schist, quartz and some calcite, makes up the vein filling. While the intrusives are dense and more or less blocky, the schistosity extends into them and into the fissure aggregates. The whole area opened up by the workings is much faulted, and two major faults are shown on the map; the one to the south being along or near the contact of the schist with a zone of diabase in the Leppard Claim. This formation, while apparently containing the south extension of the Lion Fissure, with little or no displacement, present ore inclosures differing from those found in the schists, and the values are mainly in a telluride complex, said to contain some copper. No samples or specimens of this were found, however, information given was derived from the old records of the Climax Company. The workings in this part of the mine are at this time, inaccessible.

Veins and Ore Minerals;

Due to the broken nature of the ground, it is difficult to determine the exact number of veins and ore-bearing fissures, dykes and faults disclosed in the workings on this property. One main vein, with a general course North 24° west, through the Climax, Cub, Lion and Leppard Claims is apparent. This has a dip to the east 70° in the upper horizons and at the No 5 tunnel is nearly vertical. Displacements of 20 to 40 feet were noted at the two major faults with little or none along the smaller slips and the several dykes shown. A rather flat injection of white quartz is seen in the Yockey drift on No 5 level. This cuts the fissure but its effect, if any, on the ore occurrence is not apparent. Segregated blocks containing ore lenses appear in several crosscuts. Seepages are found, coming into the lower level from the east from an area that was crosscut by the main adit to the north, indicating a migration of minerals from this part of the mine. These seepages show the oxides of iron and manganese, with some fluorite, inclosed in chalcedonic incrustations on the wall of the drift. Mention is made of some black dyke in connection with the tellurides in the records of the old company. These presumably, in the diabase area to the south.

All the exposures in the mine, from the surface down to the 500 foot level, show both oxide and sulphide ores, and it is fairly certain that the bottom of the transition zone has not been reached, as it is still some 100 feet or more to the canyon floor, it is likely that any secondary aggregates will be below this point, and that free gold milling ore may be expected to the 1,000 foot level.

The water table appears just above the 500 level, and a small flow runs out this tunnel to the surface.

No copper or lead minerals were noted in the upper part of the mine, near the surface in the Lion ground, above a sill containing some disseminated arseno-pyrite, a deposition area was exposed, showing a wonderful range of colors in the arsenite complexes in connection with some fluorite. The composition of these was not determined and they have no apparent significance with respect to the value factor in the ore.

Economic Aspects:

No samples were taken at the time of this examination. Access was had, however, to some recent assays on samples from various parts of the mine and the mine and tailings dump. These include several taken in the back of the north fault some 100 feet east of the Lion - Cub vein. The returns were from \$9.00 to \$15.00 per ton in gold. Samples of the solid arseno-pyrites showed \$20.00 \$25.60 and 29.60. Some disseminated pyrite, \$12.40 Ten inches at the foot of the air raise, \$33.60, west dump fines, \$8.40; fines from dump under tramway, \$18.00 to \$20.00. A special sample from the lower drift, \$38.00; mill tailings \$3.20. All values given are for gold only, the silver ratio is low.

Concentrate
A copy of a smelter settlement sheet shows assays as follows: Gold \$56.00 Silver 0.7 oz; Copper, 0.9%; Iron, 31.07%; Insoluble, 57.54%. Details of settlement not shown.

It has been estimated that the various dumps, screened to minus 1 inch, will yield some 3,000 tons of ore of \$10.00 grade (gold)

Old letters show: Floor of Yockey Drift, 70 ft long, 10 inches wide, \$65.00. Climax Drift 100 ft long \$60.00 Vein filling \$15.00 Eight inches in width (telluride in Leppard) \$300.00 6 to 7 feet alongside, "low grade".

Mint returns, 1 bar ~~###~~ 73.72 oss, \$1,372.38

Reference is also made in the old letters to ores of \$2,000 and \$4,000 value per ton and to one shipment of three sacks that returned some \$1,500.00 Most of the tonnage mined was milled, with a resultant concentrate that was shipped to the smelter, as was also the sorted sulphides from the crude ore.

An electric power line is within six miles of the property. Water for milling can be had from the Massayampa River and from deeper workings in the mine. The south fault throws a spring that can be developed for domestic use with gravity flow to the camp.

In the interview with Mr. Wazra, he stated that during the early operations at this property only that development incidental to reaching the high grade lenses and pipes was carried on, and no systematic attempts were made by the owners to properly explore the ground. He stated further that the better grades of ores were found near the faults but that the rejects left in the mine at that time would be profitable now with proper Metallurgical processes and efficient operating equipment. The concentrates made in the mill, and the sorted crude ores (Sulphides) that were shipped to the smelter always gave satisfactory returns. He characterized the vein as a contact between two facies of the schist.

Recommendations:

of
These would include the cleaning out of those entrances and passageways into the mine that are now blocked and a complete sampling of all the ore exposed. The ground stands well after many years without timbers, and the only places that are blocked are where the gobs have run into some of the raises and drifts.

A survey of the north Major fault to determine at what point it will cross the canyon below the mill with the view to starting a still lower adit into the vein system. This would develop any ores in the fault itself and is a good line of prospecting as this fault shows values in the upper horizons. It would also pick up any fissures that may exist in the eastern area. If the Survey should prove that this proposed tunnel would be longer than the depth attained would warrant, heavier compressor equipment should be installed and sinking begun.

Metallurgical test should be made to determine a proper flow sheet for the ores so far developed and a plant commensurate with the indicated tonnage already developed should be erected, this could be so arranged that additional units could be added when conditions demanded it.

A complete assay and laboratory equipment should be at the property and any values that may be in the many faults, dykes, bedding planes and slips as well as the vein fissures and offset lenses and blocks that are shown by the present developments, determined.

Conclusion:

In the light of the foregoing outline of the conditions that prevail at the Virginia Dare property, it is apparent that it has aspects of unusual merit and presents a rare opportunity for a safe and sound mining investment. The past history, while rather fragmentary and vague, is evidence of a profitable enterprise covering a period of many years. Working conditions and natural facilities are exceptional, and with the efficiency of present day engineering practice and metallurgical processes, this property has attractive features that are hard to find elsewhere in the mining field.

Signed C.K. Tibbetts
Metallurgist

a liberal project which justifies ^{conf.} examination

Value of samples taken from the Climax Mine
Virginia Dare Company

by Mr. J. H. Richmond

					<u>Gold - Ounces</u>
General--	-	-	-	-	4.40
West Dump	-	-	-	-	.42
Heads	-	-	-	-	.76
Concentrates	-	-	-	-	35.25
#2 Heads	-	-	-	-	27.70
Sulfide in sack	-	-	-	-	.62
Quartzsite	-	-	-	-	.02
#3 East Dump	-	-	-	-	.55
Tails	-	-	-	-	.16
#2 50 ft. East	-	-	-	-	1.68
300 level	-	-	-	-	1.48