ROCKLAND MINE

Lyon Co., Nev.

PRELIMINARY REPORT

ON THE

ROCKLAND GOLD-SILVER MINE

LOCATED IN

LYON COUNTY, NEVADA

PREPARED BY

J. Stanley Hodgson
Consulting Mining Engineer

SUMMARY

Reports that appear reliable state that the Rockland Mine in Lyon County, Nevada, definitely has produced more than $500,000.00 and possibly as much as $7,000,000.00 in Gold and Silver at present prices, between 1870 and 1941, when $40.00 Ore was being mined immediately prior to the Government Order suspending operations. Official Reports covering partial Mint receipts more than verify the smaller production figures.

The Ore is contained in and near silicified Rhyolite and Diorite derived from the same source as the surrounding Granodiorite host rocks. Based upon known geological conditions, the Ore can be expected to increase significantly both in width and in grade for some considerable depth below the deepest existing workings.

Presently proven and indicated Ore Reserves above the level of a proposed Adit 500 feet below the deepest existing workings, are in excess of 100,000 tons that should grade about $40.00 per ton. Ore Potential of the known ore zones above the level of Walker Valley easily could be in excess of 500,000 tons of a similar grade of Ore.

CONCLUSIONS

The Rockland Mine has produced Gold and Silver at a profit in the past, some of which can be attributed to the fact that surface enrichment has taken place

$40.00 per ton in Gold and Silver was being mined on the bottom levels of the Mine, which is nearly 1,000 feet below the enriched zone, prior to the Government ordered suspension of operations in 1941. Geological conditions almost guarantee that both the grade and width of Ore will improve with depth for some considerable distance below where all previous work has been done, which indicates that a profitable mining operation can be developed as the result of implementing the recommendations contained in this report.

LOCATION

The Rockland Mining Property is located about 18 miles south of Yerington, Nevada, and is nearly 5 miles west of the East Walker Valley Road, at an elevation of about 2,500 feet above the floor of the Pine Grove Flat Valley. The Property presently comprises 5 mining claims, which are situated in Sections 8, 9, 16, 17, Township 9N, Range 26E, M.D.B.&M., in Lyon County, Nevada.

HISTORY

Various Reports concerning Gold and Silver recovered from Ore mined on the Rockland Property state that the present value of the recovered metals exceeded half a million dollars at the absolute minimum, and may have been as great as $7,000,000.00. Production began before 1870, and was suspended because of the Second World War in 1941, when the grade of Ore being mined from the lower levels of the Mine was reported to be $40.00 per ton.

GEOLOGY

The Country Rock surrounding the mineralization contained in the Rockland Mine is essentially Granodiorite. The Ore is contained in and near silicified Rhyolite and Diorite derived from the same magmatic source as the Granodiorite. Near surface there is early silicification of both the host and country rocks in the form of Opalite, which is low temperature silica that at some depth could be expected to grade into normal quartz, which itself should carry significant values in Gold and Silver.

Therefore, despite the fact that profitable mining operations have been conducted in the past on this Property, at no time has any exploration been done at a sufficient depth below surface to locate mineralized zones that should contain Gold and Silver across really substantial mining widths in association with the favorable Rhyolite host rock that has been substantially enriched by these earlier silicifying solutions under conditions whereby they would carry significant mineral values.

ORE RESERVES

Based upon a personal examination of the underground workings of the Rockland Mine on August 13, 1966, as well as other information believed reliable, there definitely appears to be a minimum of 25,000 tons of Ore minable from the existing underground workings. In addition, there appears to be more than 75,000 tons of Ore that could be mined when a proposed Adit is driven less than 1,000 feet to intersect the Ore Zone approximately 500

feet below the bottom of the internal Shaft or Winze from which Ore was being mined when operations were suspended in 1941. Reliable information suggests that the average grade of this Ore should be about $40.00 per ton in Gold and Silver.

DEVELOPMENT POTENTIAL

Considering the known geology of the Property, plus the fact that parallel zones of mineralization are known to exist under similar circumstances to the proven Ore, it is entirely reasonable to suppose that there will be in excess of 500,000 tons of minable Ore, of a grade comparable to that which has been mined in the past, above the valley floor that is somewhat in excess of 2,000 feet below where the original Ore Discoveries were made sometime after 1860.

There is strong evidence to suggest that Ore Zones with much greater Ore-Potential than all previously mined sections of the Property will be located as a consequence of conducting an intelligent Exploration Program from the proposed new Lower Adit that is recommended in this report. It is entirely reasonable at this time, to think of a future Profit-Potential, from mining on this property, that would amount to several million dollars during the next 5 to 10 years.

RECOMMENDATIONS

The most logical procedure for the systematic future Development of the Rockland Property is as follows:

(1) Sample the Ore remaining in all Stopes wherever present workings will permit mining to be conducted, at a cost not to exceed $30,000.00, which will include necessary rehabilitation of these workings.

(2) Accurately Map the entire Property on surface, and survey all existing underground workings, at a cost of not more than $20,000.00.

(3) Drive an Adit, starting approximately 500 feet below the bottom of the present workings, nearly 1,000 feet horizontally to intersect the Ore Zone, and develop a probable minimum of 75,000 tons of Ore above the Adit level, at a cost of about $100,000.00

(4) Formulate Plans to begin production in a manner whereby there is the least risk and the most profit involved, and which will dovetail with a program designed to outline large tonnages or Ore in unexplored areas of the Property.

Respectfully Submitted,

5826 Harold Way
Hollywood, California
August 14, 1966

J. Stanley Hodgson
Consulting Mining Engineer

Mining Districts and Mineral Resources of Nevada by Frances Church

...yry at the Aureola Mine 5 m. S. E. of Sodaville, according to Weed Argentiferous galena occurs with tungsten in the E. part of the district as noted below.

Mercury. Cinnabar deposits occur in the Pilot Mts. in a belt 2 m. in length having a N. E. trend and an elevation of 11,300 ft. These deposits are 1½ m. by road E. S. E. of Mina, according to Knopf, and were rediscovered in 1913 by Pepper & Keough, the original discoverer being unknown. On Cinnabar Mt. where the discovery was made, the deposits occur in fracture zones in limestone. Cinnabar is intergrown with calcite or dolomite in veinlets in the limestone or occurs as replacements of the adjoining wall rock, and in one instance it is associated with stibnite. To the N. cinnabar is found in a gangue of barite and with brecciated chert as country rock; while still farther N., the country rock is graywacke and the cinnabar is disseminated through a siliceous gangue.

Turquoise. The Montezuma mine of the German American Turquoise Co. is in the foothills of the Pilot Mts. at an elevation of 5900 ft., according to Sterrett, and is 20 m. by road E. of Sodaville. The turquoise occurs as seams, veinlets, and nodules up to 1 inch or more in thickness in an altered porphyritic rock which is probably trachyte. The turquoise varies from hard gem material of fine color to soft material of poor color, and the bulk of the output was low grade.

Tungsten. The tungsten deposits are located near Graham Spring on the E slope of the Pilot Mts. about 23 m. by road from Mina, according to Hess & Larsen. The orebodies are at or near the contact of granodiorite and limestone. The ore occurs in 3 forms, contact-metamorphic deposits, a quartz-calcite-scheelite contact vein, and bunches of quartz, calcite, galena, and scheelite, rich in silver. The contact-metamorphic ore is composed mainly of garnet with some quartz, calcite, and diopside.

Bibliography. MR1905 268 MR1909 II 785-6 Turquoise MR1920 I 432-3
MR1908 I 484 Mercury
USGS Hawthorne and Tonopah topographic maps.
Hess, F. L., & Larsen, E. S., "Contract-Metamorphic Tungsten Deposits of the U. S.", USGS B 725D (1921) 278-280.
Hill 507 209-210.
Knopf, A., "Some Cinnabar Deposits in Western Nevada", USGS B 620D (1915) 59-62.
Spurr 208 103-5 Pilot Mts.
Weed MH 1138 Aureola Ms. Co.

PINE GROVE (Wilson, Rockland)

Gold, Silver

Location. The Pine Grove District is situated at Pine Grove on the E. flank of the Smith Valley Range in W. Mineral County. It is 20 m. S. of Yerington, which is on the N. C. B. R. R. Pine Grove camp is at an elevation of 6,700 ft. in a canyon to the N. of Pine Grove Summit which reaches an altitude of 8,695 ft. The camp of Rockland is 3 m. S. E. of Pine Grove to the E. of Pine Grove Summit and at an elevation of 7,500 ft.

History. The Pine Grove District was discovered by William Wilson in 1865. He located the Wilson Mine; and the Wheeler Mine was located shortly afterwards; while the Rockland Mine was discovered in 1868. In 1868 there were a 5-stamp mill, a 10-stamp mill, and an arrastra at Pine Grove, and about 1870 a 10-stamp mill, was erected at Rockland but burned down a few months afterwards. In 1882, the Wheeler Mine was operating a 15-stamp mill and the Wilson Mine a 10-stamp mill. A 5-stamp mill was

constructed for the Rockland Mine in 1902 and a 15-ton cyanide plant added later; and in 1907 a 60-ton dry-crushing and leaching plant was erected. The new mill proved unsuccessful, and the property was taken over by the Pittsburg-Dolores M. Co. in 1912. This company reconstructed the milling plant and operated from 1915 to 1918 when it shut down.

Production. The production of the Wilson Mine up to 1893 is estimated at about $5,000,000; and that of the Wheeler Mine at $3,000,000. Since that time these properties have only been worked intermittently. The Rockland Mine is credited with a production of $700,000 up to 1921.

Geology. The principal country rock of the Pine Grove District is quartz-monzonite which is probably of Cretaceous age. This has been intruded by dikes of granite porphyry and capped by Tertiary rhyolite and basalt. The orebodies in the Wilson and Wheeler Mines lie in a zone of intense crushing and alteration in the quartz-monzonite immediately S. of a well-marked fault, according to Hill. This zone contains considerable disseminated pyrite and a large number of interlacing quartz stringers carrying pyrite, as well as lenses of quartz and pyrite up to 2 ft. or 3 ft. thick and 10 ft. to 150 ft. in length. The stringers and lenses constitute the ore. A minor amount of chalcopyrite occurs with the pyrite. The principal valuable constituent of the ore is gold with a minor amount of silver. At the Rockland Mine, according to data furnished by E. J. Schrader, the vein is entirely in granodorite at its N. end, then follows a rhyolite dike as a hanging wall, passes into the dike, and at the S. end has the dike as footwall. The vein is a filled fissure with some replacement of the walls by ore. Gold values predominate but there is little free gold. The silver minerals are argentite, stephanite and pyrarggrite.

Bibliography.

B1867 336-7
R1868 116-7
R1871 141
SMN1866 40
SMN1867-8 89-91
SMN1869-70 109
SMN1871-2 32-4
SMN1873-4 24
SMN1875-6 37-8
MR1905 268
MR1906 294
MR1907 I 359
MR1908 I 484
MR1909 I 406
MR1910 I 523
MR1911 I 686
MR1912 I 804
MR1913 I 832-3
MR1914 I 596-7
MR1915 I 643
MR1916 I 488
MR1917 I 285
MR1918 I 249
MR1919 I 401

Refer to U.S.B.M. Minerals Year-Books

USGS Bull. 527 USGS Bull. 594

USGS Wellington topographic map.

Davis 857, 952. Hill 507 209. Hill 594 133-140.

C&ME, "Cyaniding by Continuous Decantation at Two Nevada Silver Mills", 14 (1916) 435-7.

Schrader, J. F., "Pittsburg-Dolores M. Co.'s Mill at Rockland, Nevada", E&MJ 99 (1915) 653-4.

——"The Pittsburg-Dolores Mill", E&MJ 104 (1917) 155-6.

StuartNMR 46. Thompson & West 41. WeedMH 1320 Rockland M. Co.

Hill 594 133-140. M&SP 117 (1918) 538.

Olson, C. R., "Specific Gravity Apparatus", E&MJ 102 (1916) 305.

RAND (BOVARD)

Silver, Gold, Copper, Lead, (Potash, Turquoise)

Location. The Rand or Bovard District is situated just W. of Bovard on the N. E. slope of the Gabbs Valley Range in N. E. Mineral Co. Bovard is 17 m. N. E. of Nolan station, (Rand postoffice), which is on the S. P.

THE WILSON (Pine Grove, Rockland, Cambridge) DISTRICT

The Wilson district properly takes its name from William Wilson who made the first discovery of gold in this area in 1866 and located the Wilson mine from which there has been recorded with the State a production over the years 1870–1899 of 7,623 tons of a gross value of $220,368. A Mr. Wheeler located on the south side of the canyon from the Wilson mine, and there was recorded over the years 1873–1878 a production from the Wheeler mine of 6,038 tons of a gross value of $165,911. Both mines had stamp mills using amalgamation, and the local community was termed Pine Grove. The Rockland mine is three miles south of Pine Grove and was also discovered in the late '60's. It had a similar mill at the Dolores-Rockland mine, owned by Governor

H. G. Blasdel, and was credited over the years of 1870–1879 with 2,747 tons of a gross value of $74,503.

A much greater production is these early years was probably made than reported to the State, as a U. S. Government publication gave the production as late as 1902 to 1913 as 19,125 tons of a value of $163,741, of which the State has no record.

The production of the district was reported as of Mineral County up to 1933, when a change of boundaries placed the district in Lyon County.

In U. S. Geological Survey Bulletin 594 the country rock around Pine Grove is described as quartz-monzonite with dikes of granite porphyry and capped by rhyolite and basalt flows with the ore bodies in the Wilson and Wheeler mines occurring in zones of intense crushing and alteration as interlacing quartz stringers and lenses. Oxidation gave easily treated surface ores of mainly free gold with some silver chloride.

The Wilson mine was developed by tunnels with three miles of workings all within 140 feet of the outcrop. At 250 feet the ore became one of gold-bearing pyrite of lower grade. Likewise, the Wheeler and the Rockland mines were developed by tunnels. The ore in the Rockland mine is described by Eric J. Schrader of Reno as occurring in a vein entirely in granodiorite at its north end, then following and passing into a rhyolite dike with the dike finally as a footwall. The vein ran along a hillside dipping at 45 to 70 degrees and away from the summit, and having an average width of three feet. The oxidized float on the outcrop was early hauled to the Wilson mill, but the ore at shallow depth became pyritic. The early cyanide plants of 1902 and 1907 were failures, but remodeled in 1914 by the Pittsburg-Dolores Company for fine grinding and counter current agitation the mill operated successfully at 50 to 60 tons a day from June 1915 to May 1918. The mine was worked through the "700" tunnel, being 700 feet below the outcrop. Mr. Schrader, as manager, recalls one stope over one thousand feet along the strike. A "900" tunnel was driven and connected with the "700" and a winze sunk 200 feet below the "900." The mine superintendent was J. B. Perry, now of the Westvaco Company, and the mill superintendent was C. R. Olson, now of San Francisco. The company reported its production to the State for the years 1915–1917 as 42,597 tons of a gross value of $263,071. The increasing high cost of labor and supplies, due to the war, closed the property in 1918.

With the increased price of gold in 1932 the Interstate Mining and Development Co. took over the property. The winze in the

"900" tunnel was sunk another 100 feet to water level. The company reported a production during 1933 and 1934 of 443 tons with a gross value of $43,037. Later, Tom Flynn, with Judge Moran of Reno, operated the property but there is no production record. Tom Flynn, as the present owner, is reported to come to the mine, in the summertime, from his Grass Valley home.

Both the Wilson and Wheeler mines have been worked, also with other mines on a small scale at periods since 1900, along with cyanide tailing plants. The Wilson mine is now owned by the Nevada Gold Mining Company for which company the late Wm. Boyle was the attorney. The Wheeler mine is now owned by Messrs. Pope and Talbot of San Francisco. Messrs. Freeman and Goldsworthy of Reno own unpatented claims close by and mine on them in the summertime.

Gold was discovered many years ago, as indicated by an old arrastra, about eight miles northeast of Pine Grove in what was formerly Mineral County. In Lyon County this area has been recognized as the "Cambridge Mining District" but in published literature it is included in the Pine Grove district and there is no description or mention of it as a separate district.

The Minerals Yearbook for 1936 mentions the reopening of an old mine 24 miles southeast of Yerington by the Cambridge Mining Company with a small Huntington mill with amalgamating plates and concentrating tables. The company is controlled by Visalia, California, interests and the mine is developed by a vertical shaft with reported 300- and 400-foot levels. Apparently the work was done to develop a quartz vein in granitic rock and a stope comes to the surface.

The Horseshoe group of claims lies about 2½ miles south of the Cambridge mine and is owned by P. B. Mapes of Yerington and associates. About 300 feet of tunneling has been done to intersect a three-foot quartz vein that is in a country rock of quartzite with andesite intrusions with the vein having a north-south course and a 45° dip to the east. The most favorable sample across the vein assayed 0.35 oz. gold and 4.5 oz. silver.

The Cowboy Tungsten mine, a single mine by itself about 17 miles southeast of Wellington and off the Wellington to Sweetwater road, can best be included in the Wilson district.

The geology of the area is apparently that of a quartz monzonite intrusion into limestone and schists giving taconite areas carrying garnet and scheelite. The discovery coming close to the time of the late war attracted the attention of both private and government examining geologists and mining engineers. About three options were given with limited work under each resulting

UCTION

DUPLICATE

16 13560-1 U. S. GOVERNMENT PRINTING OFFICE

CONCENTRATES PRODUCED									RECOVERED IN BULLION	
				GROSS METAL CONTENT						
Lead (Pounds)	Zinc (Pounds)	Dry Tons	Class	Gold (Ounces)	Silver (Ounces)	Copper (Pounds)	Lead (Pounds)	Zinc (Pounds)	Gold (Ounces)	Silver (Ounces)
									2885	20,064
									5,417	43,936
									597	4,11
									17	114
									15	5
		11	au	248	256	—	—	—	351	25
									182	72
									230	2,02
—	—								722	7,46
									1,123	11,27
									5	2

DUPLICATE

DUPLICATE

PRODUCTION

Year	Objection to Publication	Crude Ore Produced: Dry Tons: Ore	Dry Tons: Old Tailings, etc.	Class	Treatment	Gross Metal Content: Gold (Ounces)	Silver (Ounces)	Copper (Pounds)	Lead (Pounds)	Zinc (Pounds)
1915		9,052		au	cy					
1916		18,379	1,891	au	cy					
1917		No production reported.								
1918		2,134		au	cy					
1919		No production reported.								
1920		40		au	cy					
1921-27		No production reported.								
1928		20		au	cy					
1929-32		No production reported								
1933		7		au	cy					
1934		327		au	cy/sts					
1935		668		au	cy					
1936		3241		au	cy					
1937		5,758		au	mill/dy	2	179	—	—	—
1938		No production								
1939		do								
'40		do								
1941		4		au	cy					

DUPLICATE

BUREAU OF MINES

ENT INDIVIDUAL MINE RECORD

DUPLICATE

OFFICIAL OUTPUT—OVER

CHARACTER OF DEPOSIT: sulphide

16—12560-1

OPERATOR (Name and address)	DAYS OPERATED	DEVELOPMENT AND OTHER DATA
is Mng. Co., E. J. Schrader, Mgr., Yerington	6-1 to 12-31	Dev. about 12,000' drifts, etc.
do do	all yr.	Dev. by adits, total work 15,000', 2000' opened ore gone.
do do	1-1 to 5-1	Dev. 1500' adit; by cross-cuts up to 580', 9 levels
ng. Co., Yerington Nevada		
Yerington, Nevada		Dev. 40' cross-cut tunnel and surface work; by 200' vert. shaft, drifts & 560' tunnel
ne & Dev. Co., 317 Lyon Bldg., Reno, Nev.		Dev. 1,000', by 200' vert shaft; 12,000' drifts & 600' tun
do		Dev. 1,500', do 14,000' drifts do
ines Co., Reno, Nevada	97	Dev. by drifts, shafts, stopes & winzes.
do	365	do do
do	300	Dev. 600'; by 300' shaft; 1400' drifts
do		
do		
do		
Lyman Nichols, 2200 Jerrold Ave. S.F.		

UPLICATE

(August 1919)

DUPLICATE

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
PERMANENT INDIVIDUAL MINE

Rockland MER
(Name of group—Alphabetical listing)

CLAIMS:

Nevada Lyon
(State) (County) (District)

SEC. 31 TWP. 10N RANGE: 26E

YEAR	OWNER (Name and address)	OPERATOR (Name and address)
1915		Pittsburgh Dolores Mng. Co., E. J. Schrad
1916		do do
1917	No production reported.	
1918		do do
1919	No production reported.	Rockland Mng. Co., Yerington
1920		T. J. Flynn, Yerington, Nevada
1921-27	No production reported.	
1928		
1929-32	No production reported.	
1933	Vignos et al - % Amer. Mine Door Co. Canton, Ohio	Interstate Mines Div. Co., 317 Lyon,
1934		do
1935	Rockland Mines Co., 318 Lyons Bldg, Reno, Nevada	Rockland Mines Co., Reno, Nev
1936		do
1937		do
1938		do
1939		do
1940		do
1941		T. L. Peckham % Hyman Michaels, 2206

APEX
APEX EXTENTION
MARION
MARION 1-2-3-4
MARION EXTENTION
TUNNEL #9
TUNNEL #9 EXT
LYON COUNTY NEV
JAMES C PHELAN
MARION D PHELAN
18510 McCOURTNEY RD CV
273-3629

SEC 31 T10 N0R
26E MER
MAP 1972-
BOOK 114-5B
WARREN E LEWIS
Box 927 YER NEV
89447

DUPLICATE