COPY

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ROSEDALE DISTRICT

Geographic Relations

Rosedale is situated on the northeastern slope of the San Mateo Range, about 25 miles southwest of Magdalena and about 30 miles west by a little north of San Marcial, on the Rio Grande. The little mining town of Rosedale lies well within the recesses of the hills at an elevation of about 7,100 feet. The surface is one of strong relief, with scrub oak covering the lower slopes and a fairly good growth of pinion, cedar and juniper on the higher elevations and in the intermontane valleys. A mile or two east of Rosedale the rugged, hilly country gives place to the gravel-filled valley plain which lies between the San Mateo Mountains and the Magdalena Range on the northeast. This valley leads outward to the southeast from the east end of the San Augustin Plain to the Rio Grande valley. The valley is floored by the Palomas gravel and later wash deposits from the adjoining slopes. The beds are composed largely of subangular pieces of rock, chiefly rhyolite and andesite, as a rule loosely consolidated. The rock fragments are large and more angular along the border of the valley and become gradually finer away from it.

Historical Note

The discovery of gold in the San Mateo Mountains dates from 1882. A rush to the district soon followed, but it was checked by the frequent incursions of the Apache Indians under Geronimo, and after several massacres most of the prospectors left the country.

The only mine is the Rosedale, which is said to have the distinction of paying dividends simply from the ore encountered in sinking and drifting on the vein.

Geology

So far as present observations extend no important bodies of sedimentary rocks occur within the San Mateo Mountains. The range apparently consists wholly of rhyolite with its associated breccias, tuffs, and devitrified glass. Underlying all, probably, is a basal deposit of andesite. At the north end of the range a small exposure of stratified tuffs was observed at the foot of the slope, and near Estalina Spring, on the ranch of A. Clemens, a small mass of limestone is inclosed on all sides by rhyolite. It is not improbable that other and larger areas of sedimentary rock may appear on the west side through the stripping away of the rhyolite by erosion.

NM Mine File No.5668

Ore Deposits

General Character The deposits at Rosedale contain principally free-milling ore in a gangue of bluish-white quartz, carrying in places small amounts of oxide of iron and manganese dioxide. The latter appears to be associated with the richer grades of ore. The ore in the deepest workings is said to be base. Repeated assays of the mill run are said to give an average value of $10 a ton in gold. Very little silver is present.

Geologic Relations The ores occur in a well-marked fissure vein in the rhyolite having a strike of about North 20 degrees West and dipping at a high angle (80 degrees) toward the east. The vein is from 3 to 5 feet wide at the surface, but is said to reach in places a width of 12 feet. The rhyolite shows in hand specimens easily recognized crystals of quartz in a well-crystalized groundmass giving the rock a granitoid appearance.

Two ore shoots have been located, one immediately below the hoist house, the other some distance to the south. They approach each other with increasing depth and by some are supposed to join below.

The writer was unable to enter the mine, operations having ceased a short time before, preliminary to the transfer of the property to a new company, and is indebted to Mr. F. A. Jones for most of the facts touching the underground conditions.

The ground-water level occurs at a depth of 726 feet, above which the ores are all oxidized; free-milling sulphides appear below this level.

Workings Twelve men were employed when the mine was last in operation and an average of about 450 tons of ore was produced monthly. This was treated on the ground by crushing with stamps, amalgamating on copper plates, and treating by cyanide. The cyanide slimes were sent to El Paso, after drying, for treatment. The workings consist of 732 feet shaft and levels approximating 4,644 feet.

THE ROSEDALE MINE

From T. B. Everheart - Mining Engineer

I examined the property in 1915. My samples were not as high as I expected and the terms at that time on the property were too high to consider.

The mine has caved pretty badly in the last few years and is inaccessible.

My samples showed about 35,000 tons of $7.00 gold ore left mostly in pillars and drift floots. The last Company that operated stoped and milled about all they could see.

There is one raise however that shows pretty good ore; I cut 3 samples at about 20 foot intervals as follows:

Width	Value
10.5 Feet	$25.60
9.3 "	9.15
7.0 "	54.90

From C. T. Brown - Mining Engineer

I made the examination and report on the property in April and May 1904, sampling the entire property very thoroughly, at which time there was 40,000 tons of ore blocked out, of an average grade of $10.00 per ton.

I have no present knowledge of the property. It was, however, operated for ten or fifteen years, after my examination, when a fire destroyed the mill, shaft house, and I understand the timbering in the shaft near the surface.

According to reports, no development work was done by the operators after 1904.

The above is all the information that I can give you concerning the present status of the property.

From Charles W. Henderson - Mineral Geographer - U. S. G. S.

No work has been done there since 1910.

REPORT ON THE ROSEDALE MINE.

By Jas. H. Batchelder, Jr.
Mining Engineer.

Rosedale, New Mexico,

Nov. 25th, 1910.

DESCRIPTION:

The Rosedale Mining District is situated in the South Central part of Socorro County, New Mexico, and in the North Central part of the San Mateo Mountains.

The claims of the Rosedale Mining & Milling Company are situated in the Eastern part of the district, on the North-eastern slope of the San Mateo range, in Sec. 7, T. 6, South Range 3 West New Mexico Principal Meridian.

The San Mateo Mountains rise to an elevation of 10,000 feet above sea level, forming an eastern sub-division of the Rockies, and pass through the territory in a South-western direction.

The Rosedale Mine, owned by the Rosedale Mining & Milling Company, is the only prominent mine in the district. There are a number of very promising prospects on the North and South extention of the Rosedale vein, and also on the parallel veins.

The surface is very rough with scrub oak covering the lower slopes, and a good growth of pine, cedar, and juniper on the higher elevations. Two miles to the East of Rosedale the rugged hill country gives place to the gravel-filled plain, which lies between the San Mateo Mountains and the Magdalena Range on the North-east.

PRECIPITATION:

The average for the last five years 15.7 inches. The maximum occurring in the month of August, 1907: 8.10 inches.

WATER SUPPLY:

There are no running streams the year around. They dry up during the Spring and early Summer. Water is piped in a three inch spiral rivetted pipe from three miles South of the mine. The Springs are owned by the Rosedale Mining & Milling Company. The mine makes two thousand gallons of water per day, and, with the water from the Springs, would furnish sufficient for a 100-ton mill and cyanide plant.

LOCATION:

The district is not directly connected by rail. The nearest railroad point is Magdalena, twenty-eight miles North-east, which is situated on a branch of the A. T. & S. F R. R. Thirty miles West, a little North of Socorro, is the Junction with the main line. Soccorro is one hundred and eighty miles North of El Paso, Texas.

The stage runs every other day from San Marcial, a station on the Santa Fe Railroad, a distance of thirty miles east by a little south. Most of the freight is brought from Magdalena, the road being hard, and, except for three or four grades, is in good condition to haul heavy mining machinery. The road in its present condition will give no serious trouble.

The nearest reduction works are situated in El Paso, Texas, where there is also a well equipped foundry.

The property of the Rosedale Mining & Milling Company consists of two patented lode claims, the Great London and the Rothchild, both 1500 by 600 feet. The two mill sites; the Rothchild 330 x 660 feet, situate three miles south of the mine, was taken up to control the water from the springs; the Great London, 340 x 500 feet, is situated adjoining the lode claim of the same name. All the above claims are held by United States patent surveys Nos. 1936-A, 1976-B and 1877-B, located February 27th, 1888, approved for patent July 10th, 1900, at Santa Fe, New Mexico. The elevation given by the United States Geological Survey is 7,100 feet.

HISTORY: Rothchild - 1077 A+B Great London - 1076 A Mill site 1078 B

Gold was first discovered in the Rosedale district by Uncle Jack Richards on Dec. 15th, 1882, on which is now the Rosedale Mine. This precipitated a rush to this district, but it was soon checked by the frequent incrusions of the Apache Indians under the leadership of Geronimo. Several Massacres occurred and the prospectors left the country.

The Rosedale Mine was developed by the W. H. Martin Company. They put a 10-stamp mill on the property. This is one of the few prpperties that has done development work and paid dividends without taking out any ore other than that encountered in sinking and drifting. In 1899 a cyanide leaching plant was added. They were unable to treat the slimes and they were run to waste.

The following data was taken from the records of the W. H. Martin Company:-

Dec. 1, 1896:	Ore taken from old tunnel before cyanide plant was installed, saved on plates	$ 944.41
May 16, "98:	Three tons of rich ore from old tunnel sent to Magdalena Smelter, netted	1,209.11
	In 1898 about 2000 tons of ore was treated as follows:	
	July-ore taken out while drifting	1,239.07
	Sept. and Oct. ore taken out while drifting	2,501.39
	Aug. ore taken out while drifting	3,454.83
	Nov. (half month) " "	1,600.00

The following ore was treated by amalgamation and cyanide:

Date	Bullion From Plates	Slimes From Zinc Boxes	Totals.
Feb. 1899 to Jan. 1900	$ 18,403.87	$ 9,224.83	$ 27,628.10
Tons milled 4,731; Average recovery per tom $5.78			
Jan. 1900 to Jan. 1901	29,063.45	14,762.11	43,820.56.
Tons milled 5,995; Average value per ton $7.31.			
Jan. 1901 Jan. 1902	13,614.55	6,064.04	19,678.59
Tons milled 3,406; Average recovery per ton $5.78			
Mill closed until Sept. 1903.			
Sept. Nov. Dec. 1903	6,191.45	3,528.88	9,718.33
Tons milled 912; Average receovery per ton $10.65			
Jan. 1904 Jan. 1905	23,170.15	14,628.36	37,798.51.
Tons milled 5,741.			
Jan. 1905 to July 1905	12,774.48	7,021.26	19,301.88
Tons milled 3452			

Average expense per ton..... $ 4.89
Average recovery per ton treated.... 6.58
Profit per ton 1.69
Total mine and mill expense.....$14,129.80

Total mine and mill expense.... 16,304.88
Average expense per ton treated 4.72
Average recovery per ton 5.75
Profit per ton 1.03

In the Mill Book the average battery heads
from Feb. 4th, 1904, to Feb. 20th,
1904, were .... $ 12.30
Tails 6.75
From Apl. 4th, 1905 to Apl. 30th,
1905, battery heads 9.76
Cyanide Tails 5.40

This constitutes all of the records that were furnished me in regard to the operations of the W. H. Martin Company.

The Rosedale Mine is owned at the present time by the Rosedale Mining & Milling Company: J. P. Worrell, President; W. A. Hamilton, Vice-President; George O. Dix, Secretary and Treasurer.

The following data in regards to mill runs, etc., were furnished by this Company:

Date	Level Mined		Tons Milled	Average Battery heads		Average Tails	Bullion
1909							
Mar. 22	54		133.8				
to	5		60.8				
Apl. 1.	8		105.4				
			300.0	$ 8.56		$1.688	$ 1657.28
Average bullion recovered per ton....					$ 5.52		
1909	4		229.9	8.75		1.02	2245.89
Apl. 1	5		90.1				
to	7		28.5				
May 1	8		29.7				
	9		7.7				
	13		11.1				
			349.0				
Average bullion recovered per ton....					5.14		
1909	4		228.2				
May 1	5		225.3				
June 1	9		70.1				
	13		73.1				
			596.7	10.08		1.09	5153.40
Average recovery per ton				....	8.60		
1909	4		28.1				
June 1	5		90.1				
July 1	6		122.8				
	7	46.3	156.3				
	9		155.1				
			442.4				
Average bullion recovered per ton				7.68	5.79	.94	2561.76
1909	4		47.7				
July 1	5		209.1				
Aug. 1	6		80.3				
	7		74.8				
	9		196.4				
			638.3	7.32		.66	3855.99
Average recovery per ton				....	6.32		
Aug. 1	5		210.0				
to Sep.	6		4.3				
1, 1909	7		199.3				
	9		92.7				
	11		122.0				
			628.3	5.68		.81	3061.07
Average recovery per ton				....	6.87		
1909	5		144.9				
Sep. 1	6		40.0				
Oct. 1	7		185.3				
	9		127.9	7.42		.75	2907.84
Average recivery per ton				....	5.84		

Date		Level Mined	Tons Milled	Average Battery Heads	Average Tails	Bullion
1909		5	117.7	$	$	$
Oct. 1		6	3.0			
to		7	106.3			
Nov. 1		9	91.8	8.54	1.24	2092.85
	Average recovery per ton				$6.56	
1909		5	109.2			
Nov. 1		7	166.6			
Dec. 1		9	212.5			
			488.3	8.04	1.88	2026.89
	Average recovery per ton				4.13	
1909		5	72.5			
Dec. 1		7	80.3			
Jan.1		8	100.3			
			253.1	7.78	1.50	2376.69
	Average recovery per ton				9.38	
	Mill closed May , 1910.					
1910	(South)	5	87.5			
May 6	"	7	70.1			
to		9	241.7			
June 1			399.3	7.54	1.07	1328.00
	Average recovery per ton				3.00	
1910	North	5	61.6			
June 1	South	5	130.9			
to	"	7	142.8			
July 1	"	9	183.6			
			518.9	7.64	1.40	1655.00
	Average recovery per ton				3.19	
1910	South	5	159.8			
July 1	North	5	105.8			
Aug. 1	South	9	164.0			
			429.6			

It will be seen by the preceding tables that, at times, the battery heads do not check the bullion and tails by two to three dollars. The reasons for this are that the battery samples are not taken regularly, and were only grab samples at best; also on account of insufficient tank capacity a great deal of gold solution overflowed and was lost.

The expense was $4.92 per ton, divided as follows:

Day Shift	Mill	Night Shift
$ 3.00	Foreman	$ 3.00
1.50	Helper	1.50
1.50	Fireman	1.50
1.00	Crusher Boy	1.00
3.00	Carpenter	
10.00		7.00
	Cyanide Plant	
5.00	Foreman	
3.00	Filterman	
1.50	Lander Boy	

Cost of milling and cyanide plant, per ton: $ 1.69

SUPPLIES FOR MILL AND CYANIDE PLANT:

Wood, 4½ to 5 cords per day of 24 hours at $3.50 to $4.00	$ 18.00
Cyanide, thirteen pounds	3.25
Oil and other incidentals	3.00
Zinc, three pounds	.60
(Cost per ton for milling and cyanide plant $ 3.29)	24.85

MINE

Day Shift	
Foreman	$ 4.00
Timberman	3.00
5 miners	10.00
2 Trammers	3.00
Hoistman	3.50
	23.50

Cost per ton for mining: $ 1.50

ECONOMIC GEOLOGY:

The rock encountered in the vicinity of Rosedale are flows; probably of the Tertiary Age. The vein is a fault fissure in Rhyolite, striking North 27° West, dipping South 80° West.

There are two flows that we know of. The first is over seven hundred feet thick at the Rosedale mine. The later one is very nearly eroded. After the first flow came a period of fracturing and faulting, and these become channels for circulating mineralized solutions. The wall rock on both sides of the fissure is badly fractured and these permitted the passage of mineralized waters into the walls on either side, and, by replacement, made them ore-bearing along the strike for considerable distances, and in width from a few inches to several feet. In a great many places it is very hard to tell the difference between the non-ore-bearing and the ore-bearing rhyolite. Flourite is often intimately associated with the silicas. The two known reasons for the formation of these are that the cross-fracturing in these places are more fully developed and allowed the mineral-bearing solutions more surface on which to deposit. This cross-fracturing also made it easy for erosion to take place, and I believe that by examining the topography along the strike of the vein new ore shoots can be found.

After the disposition of the ore a second flow occurred, followed by a period of erosion, and it is only where the second flow has been entirely eroded that the vein outcrops.

By referring to the claim map it will be seen that the vein does not outcrop on the North half of the Rothchild or the South half of the Great London, but by going a short distance further South a good outcrop can be traced on the top of the ridge for some distance.

With a mill on the property to treat not less than fifty tons per day it can be delivered at the mill at a cost not to exceed one dollar per ton, and a milling and cyanide cost of not over two dollars per ton. Allowing one dollar for depreciation and loss, it will make a total of four dollars per ton.

VALUATION:

33,091 tons	....	....	$	214,587.91
71,111 "	....	....		414,817.15
175,311 "	....	....		1,265,141.00

TOTAL POSITIVE AND PROBABLE ORE:

104,202 tons gross, Value .... $ 629,405.06
Average gross value per ton $ 6.04
Total cost of extraction 4.00
Average net value 2.04
Total net value.... ...212,572.08

With a fifty ton mill running three hundred days a year it will take 6.8 years to exhaust the present supply of positive and probable ore. With a 75-ton mill it will take 4.6 years; with a 100-ton mill it will take 3.5 years.

The shaft, which is 4 x 9, is divided into a hoisting compartment 4 x 5 and a man-way 4 x 4. With some repairing this will handle seventy-five tons per day.

I should advise a 75-ton mill and a cyanide plant, and this should give a profit of $ 45,900.00 per year.

The wreckage from the old mill can be given but little value. The Tube mill was badly damaged. When a new mill is erected there are parts of different machinery, which went through the fire, and were not badly damaged, that can be held for emergencies.

There is a slime dump of 2,000 tons, which the W. H. Martin Company could not treat, which assays $ 3.50 per ton. These can be easily treated and a profit of two dollars per ton made. This gives a net value of four thousand dollars. Below this there is a second dump of sand treated by the same company which contains twelve thousand tons and with an assay value of three dollars per ton. These can be treated at a profit of one dollar per ton, which makes a net value of twelve thousand dollars for the dump.

There are upon the property the following buildings:

Blacksmith Shop,
Store House,
Hoisting Plant (which is in good condition)
Assay Office, fully eqipped for fire and wet work.

In the mine there are the following:

7 tons 8-pound rails,
4 trucks for buckets,
2 steel ore cars,
4 hoisting buckets, 850 pounds capacity.

There are plenty of both white and Mexican workmen.

Miners, white, ...	.....	$ 3.00	nine hours; Mexicans $1.50--$3.00
Trammers and Muckers	.....	1.25	to 175.
Hoistmen	.....	3.00	
Mill Foremen	.....	3.00	(helpers) Mexicans 1.50
Cyanide Foremen	.....	5.00	
Filtermen	.....	3.00	

This property owning the water supply for the camp practically controls the surrounding properties, and, as they develope, can, if desired, treat the ore from them; and this should prove a source of large revenue.

LUMBER YARD AND EQUIPMENT:

Thirty HP Boiler and Engine (Portable);
One 36-inch Circular Saw;
" 42-inch " "
" 16-foot Log Carrier.

POWER MACHINERY:

700 feet 6-inch pipe;
Three miles 3-inch spiral riveted pipe;
One Hoist, Vulcan Iron Works, 8 x 10 inches;
" 12-inch Blower;
" 30-HP Boiler and Engine, and

A number of pumps that were in the mill when it was destroyed that can be used with a little repairing.

ASSAY VALUES: GOLD AT $ 20.00 PER TON.

No.	Width ft.	Val. $	No.	Width ft.	Val. $
1	8.5	$ 4.00	2	4.6	4.00
3	4.5	4.20	4	5.0	7.50
6	3.5	4.20	7	5.25	4.20
8	5.0	11.60	9	5.0	3.50
10	4.5	10.40	11	5.0	3.30
12	6.5	7.80	13	6.6	8.00
14	5.5	20.00	15	6.2	9.15
16	5.0	8.00	17	7.3	3.90
18	8.5	7.95	19	10.0	9.15
20	3.2	3.00	21	3.5	4.90
22	4.0	2.10	23	6.2	4.35
24	11.4	5.15	25	6.3	4.25
26	4.0	.20	27	10.0	25.60
28	9.3	9.15	29	7.0	54.90
30	7.0	6.24	31	3.0	3.40
32	11.6	3.30	33	4.3	4.00
34	4.0	3.90	35	4.0	5.40
36	3.3	4.90	37	4.5	11.65
38	4.0	14.15	39	6.75	6.25
40	5.0	4.20	41	6.8	10.80
42	3.7	1.65	43	3.75	25.60
44	7.4	4.00	45	3.0	2.50
46	5.8	1.80	47	6.0	4.90
48	5.25	4.90	49	5.0	10.80
50	4.7	3.40	51	7.5	3.20
52	4.0	4.00	53	7.5	7.50
54	9.0	41.60	55	6.75	5.85
56	7.0	4.00	57	8.3	4.35
58	7.75	5.70	59	9.2	7.50
60	7.5	4.00	61	5.5	3.35
62	5.75	4.90	63	6.3	4.90
64	4.8	3.10	65	9.5	10.80
66	6.0	9.15	67	6.8	4.40
68	8.0	7.50	69	9.5	4.00
70	3.75	7.10	71	3.4	1.00
72	4.0	7.90	73	10.0	5.55
74	9.0	9.15	75	11.0	4.90

Rosedale-9

No.	Width ft.	Val $	No.	Width ft.	Val. $
76	7.5	16.00	77	4.5	5.40
78	6.6	16.25	79	15.0	8.75
80	14.0	2.70	81	5.5	6.65
82	7.0	4.55	83	6.0	4.55
84	6.6	4.20	85	6.0	9.50
86	7.0	2.10	87	8.5	16.20
88	9.5	3.95	89	6.75	5.60
90	5.5	11.40	91	7.7	6.90
92	6.0	4.15	93	7.4	4.90
94	3.5	4.00	95	4.7	3.30
96	5.0	8.70	97	6.7	8.75
98	7.8	9.15	99	11.0	4.30
100	4.4	6.65	101	6.3	3.90
102	6.5	7.50	103	4.0	4.15
104	5.0	6.25	105	4.7	5.25
106	2.7	4.15	107	4.0	3.90
108	4.5	4.00	109	3.5	7.50
110	4.0	2.50	111	4.0	3.80
112	5.0	3.20	113	4.5	4.90
114	2.5	3.30	115	4.8	6.65
116	5.0	9.15	117	5.0	6.45
118	5.2	8.30	119	4.5	4.20
120	8.0	6.65	121	5.0	24.10
122	2.5	4.20	123	5.5	7.20
124	5.5	8.30	125	4.0	2.10
126	9.3	1.80	127	4.7	8.35
128	4.5	4.00			

Respectfully Submitted,