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ITEM 13

260

Alvarez Rafael,

San Juan Cañon, Washington District, Nye County, Nevada

La Aurora Ledge, Recorded Oct 5th 1863 Book A page 98				600 feet
Independencia	10	"	111	3200 "
St Elena	10	"	112	3200 "
Tesora	"	"	113	3200 "
La Mejicana	"	"	115	3200 "
St Domingo	"	"	116	3200 "
Valenciana	19	"	146	3200 "
Buena Esperanza	31	"	185	3200 "
La Estrella	"	"	186	3200 "
Oriental	Sept 12/64	B.	225	1200 feet
Buena Esperanza 1st N Ext	Oct 31/63	A	188	800 "
Valenciana 1st S. Ext	31/63	"	187	100 "
Diana	Nov 1/64	B.	227	3200 "
Rafael	16/64	B.	248	3200 "
Plutarco	" "	B.	249	3200 "
Francisco	"	B.	250	3200 "

3200	Minerva, Recorded Nov 16/64	Book 15 page	251
3200	Nicolas "	17/64 "	252
3200	Albino "	" " "	253
3200	Prometheus "	" " "	254
3200	Pesperides "	" " "	255
3200	Great Britain "	" " "	256
3200	Buckingham "	" " "	257
3200	Orion "	" " "	258
3200	St Michael "	" " "	259
3200	Vulcan "	18 " "	260
3200	Franconia "	" " "	261
3200	*St. Elena	Nov 20/64 "	144
3200	Numantia a remeasurement and subsequent location of this ledge	Nov 18/64 Book 15	262
3200	Carthage "	"	264
3200	Nuevo Mundo "	"	265
3200	Troy "	19/64 "	268
3200	Denmark "	19/64 "	269
3200	Cervantes "	" " "	270
3200	Julius Cesar "	" " "	271

3200	Homero	Nov 10/64	page 272
3200	Famoso	"	" "
3200	Omego	Jan 21/65	" 286
3200	Crum	21 "	" 287
3200	White	21 "	288
3200	Asahel	"	289

Making in all One hundred twenty one thousand and One hundred (121.100) feet in the above described Ledges, with also all the right title and interest to the following described parcels or lots of land, situate ~~land~~ lying and being in the San Juan & Webster Canon

The tract of land included in Survey No 34 Surveyed Oct 12/63 Containing 373 86/100 acres recorded Book 2 page 13 Lander Co Record

An undivided 1/3 in tract, survey 50 Surveyed Oct 12/63 containing 118 66/100 acres recorded Book 1 page 284 Lander Co Record,

An undivided 2/3 in tract Survey 328 Surveyed Oct 12/63 said tract lying South of Webster Canon, containing 555 64/100 acres, also undivided 1/3 in & to the last mentioned tract

recorded Feb 10/66 Book 2 of Surveys page 177 Lander Co Records
also those certain lots, pieces and parcels of land
situated in San Juan Canon and described as follows
First The tract of timber land as per survey No 60 recorded
Book A page 55 Survey Nye Co Records Containing 76 28/100 acres
Second The tract of timber land as per survey No 61 recorded Feb 8/66
containing 80 31/100 acres Book A page 56 Nye Co Records
together with all and singular the tenements hereditaments
and appurtenances thereto belonging, and all the houses fences
~~and all the houses~~ and all other improvements made on
the premises, also one mill building in process of construction
and all real estate situated in said Canon belonging
to Alvarez however acquired and all his right title
and interest howsoever acquired in & to the Water
timber land and improvements thereon in San
Juan Canon of which he was well seized &
possessed on the first day of Nov. 1867

Extracts from the Report of Sherman
Day, Mining Engineer, on the "Alvarez" Property
made September 1866 ——

I have surveyed and made an accurate topo-
graphical Map of San Juan Canyon and surrounding
summits & spurs among which are situated the mines
& mining claims of Jesus Alvarez. I have ascertained
the precise location of the veins recorded for the account
of Mr. Alvarez as the were pointed out to me by

to Alvarez however acquired and all his right title and interest howsoever acquired in & to the Water Quarter Land and Improvements thereon in San Juan Canon of which he was well seized & owned on the first day of Nov. 1867

Extracts from the Report of Sherman Day, Mining Engineer, on the "Alvarez" Report made September 1866 ——

I have surveyed and made an accurate topographical Map of San Juan Canyon and surrounding Summits & Spurs among which are situated the Mines & Mining Claims of Jesus Alvarez. I have ascertained the precise location of the veins recorded for the account of Mr. Alvarez as they were pointed out to me by Mr. Manning the Deputy Recorder of the District.

I have noted the position of the principal bodies of woodland, an item very important in view of the necessary use of fuel in reducing the ores. I have made a critical examination of the veins on which an important amount of work has been done, and I have also measured the cubic feet per minute of running water at two places on San Juan Creek and on one on Furnace Creek

The village of Washington is about 29 1/2 miles South of Austin. The St. Helena Mine is about 2260 feet above Reese river valley. There is a good road quite to the mine and half a mile further

The principal mine opened the St. Helena is situated on the North side of the creek — the outcrop is about 150 feet above the bed of the creek. The vein varies in thickness from 10 inches to 2 1/2 or 3 feet, occupying a nearly perpendicular fissure in the slate rocks. The ore is an argentiferous galena alternating in seams with the gangue of quartz. Sulphurets of iron are also common in the ore and apparently other combinations of lead besides galena

The proportion of silver has been ascertained by assays to vary from $60 to $100 per ton; near the surface the vein is oxidised, forming a gossan much decomposed but at a depth of 20 to 30 feet the ore is exceedingly brilliant and massive. The vein is sharply defined within its walls. The masses of pure metallic ore vary in thickness from two inches to eight or ten

The opening of the vein at the outcrop was originally by an open cut, & a short shaft 17 feet deep down which the vein about 2 feet thick & much oxidised is distinctly traced to the bottom. It is traced thence along the upper corner of the short upper drift until it meets with a small branch in the adit coming from the South, Another short shaft of 20 feet was here sunk to the middle drift, where the vein opens very formally & from this level the main shaft is sunk to the lower tunnel, which is at this point about 100 feet below the head of the

apparent, other combinations of lead besides galena

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The length of vein laid open on the Upper Tunnel is about 30 feet; on the middle about 40 feet; and on the lower about 155 feet. These openings added to the Shafts make about 302 feet altogether opened along the vein: and a large body of excellent ore say about 200 tons is now lying at the mouth of the two adits, testifying conclusively to the quality of that part of the vein worked out. Throwing out of the estimate whatever may still remain above the middle drift, there ought to be between the middle & lower drifts, a body of ore still unextracted exceeding by about 50 per cent the amount already extracted. For this no expense is needed beyond the simple cost of sloping, timbering, hauling & reduction the cost of opening & tunneling having already been incurred.

The St Helena vein then may be said to be well proved by actual working through a depth of 100 feet and a length on the vein of more than 150 feet, varying in thickness from 1 foot to 2½ to 3 feet; and carrying a

very considerable proportion of its thickness, say from one quarter to one third in massive metallic ore.

The openings at the "Oriental" which will be noticed further on, & the smaller ones higher up at the "Buena Esperanza" and "Orion", indicate there are other veins of galena on the same spur, & probably by pushing the St Helena tunnel ahead other veins may be encountered. The course of Oriental is such that, it might be cut by the St Helena Tunnel within in say between 300 to 400 feet

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There on the same spur with the "St Helena" four other ledges on which shafts have been sunk or other work done, with promising indication & a fair show of argentiferous galena, these are the "Oriental"-"Orion" the "Buena Esperanza" and the "Orion", there are also two other the "Independencia" and the Valenciana upon which inclined shafts have been sunk which are not on the same spur but only seperated from it by a dry ravine, & could be included under one system of deep tunneling if further exploration should justify it. The "Oriental" is about 750 feet nearly northwest from the main shaft of the "St Helena." The top of its shaft

is about 106 feet above the floor of tunnel at St Helena Shaft. The "Diana" Ledge is opened on the yard at the mouth of the St Helena Tunnel by an open cut in the bank 8 or 9 feet high and a perpendicular shaft sunk 9 feet on the vein. Its outcrop & appearance is very similar to those of the St Helena and if followed deeper, it may perhaps eclipse its neighbor It certainly deserves more thorough prospecting.

The "Buena Esperanza" is a short tunnel run N 80 E about 19 feet into the soft shales & debris of the surface ground. There is some rusty mottled ore in the dump with a little bright galena. The "Drift" is a similar opening further up on the slope to the Northeast Some ores of the same quality. Both these openings give favorable indications of there being other more massive veins at a greater depth. These openings are respectively 1550 and 1800 feet north of the St Helena Shaft & 664 & 855 feet above the tunnels.

The Independencia is situated among a series of dark & hard ferruginous schists that may be seen outcropping in several bold & prominent cliffs. The Independencia shows on the surface a hard quartz vein 2 feet to 2½ thick. Goes down the shaft nearly perpendicular but towards the bottom bends to the East and forms a massive white quartz vein 2 feet thick; the quartz is fractured & stained with ochre much like some of the decomposed Northern quartz of the "Murphey" mine. The shaft is about 30 feet deep part of it inclined

The Valenciana vein is two [illegible] quartz vein

a little right gauged. The Vein is a similar opening further up on the spur to the northeast showing ores of the same quality. Both these openings give favorable indications of there being other more massive veins at a greater depth. These openings are respectively 1550 and 1800 feet north of the St Helena shaft & 669 & 855 feet above the tunnel.

The Independencia is situated among a series of dark & hard ferruginous schists that may be seen outcropping in several bold & prominent cliffs. The Independencia shows on top a hard quartz vein 2 feet to 2½ thick. Goes down the shaft nearly perpendicular but towards the bottom bends to the East and joins a massive white quartz vein 2 feet thick; the quartz is fractured & stained with ochre much like some of the decomposed & broken quartz of the "Murphy" mine. The shaft is about 30 feet deep part of it inclined

The Valenciana carries two strong quartz veins on the surface each about 3 to 4 feet thick with a horse between them of about 5 feet. The shaft is perpendicular for 12 feet then goes on an incline. Course of incline N 50° E dip 33° timbered with 8 feet caps & posts 6 or 7 feet apart, length of incline 36 feet. It is about 1800 feet N.W. of the shaft of the St Helena & about 544 feet above the tunnel

These are the only ledges thus far efficiently opened that would likely be combined in any system of

work with the St Helena, The "Crown", "Nuevo Mundo" St Michael the N St Helena, and the "White" & "Omega" inside the tunnel, are merely ledges, staked off & recorded, with some "assessment work done on them, & are held for what they may possibly be worth on further developement.

On the Spur next East & about 1300 feet from the St Helena there may be noticed a series of claims called the North, Middle South & Carthage. These ledges at several points stand boldly above the surface. The Carthage takes the form of an immense Altar 20 feet square and about 20 feet high. As no work has been done of importance on the Carthage, I shall notice the other

The North vein is 12 to 15 in thick. The shaft is about 18 feet deep from the surface & 13 from the plateau. Specimens on the dump show a yellowish green ore, resembling in appearance some of the ores of the Murphey mine; The Middle vein is about 8 to 10 inches on top widening to a foot or 15 inches

(? if not carbonate ores as at Eureka W.C.

as it goes down. Hole is about 10 to 12 feet deep. The ore is yellowish green with a large proportion of the dark blue rock & also of sulphurets of iron

At the "South" Ledge consist of two parallel quartz veins nearly perpendicular, each about 6 to 8 inches thick. Hole about 6 feet deep. Specimens show a good proportion of the greenish yellow honeycomb ore. This ledge is about 100 to 130 feet above the creek.

The North Ledge is about 687 feet above the

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The North Ledge is about 687 feet above the mouth of the St Helena Tunnel & about 1700 feet horizontal. In case these ledges should be proved to be valuable a tunnel of 1200 feet long on the creek would cut the whole of them.

Of the other claims laid down upon the map I need not go into detail. Many of them have been located by Mr Alvarez merely to keep out troublesome neighbours. They are regularly staked off and recorded & some assessment work done on most of them. It would need much more prospecting

to decide whether they have value or not.

The "St Helena" mine is in a condition to admit of putting in at once a party of 16 to 20 miners to extract ore on tribute and about 8 to 12 men more might advantageously put upon tutwork in drifting & prospecting inside. The ores should be treated by roasting, smelting & refining for silver & for these suitable furnaces must be erected. There are two rude furnaces of stone & adobe bulks, erected by a Mexican, in which some experimental smelting has been done, enough to show that the ores work very kindly by this process with the use of charcoal & the usual fluxes. — ? Carbonate ores

Mr Alvarez by a wise foresight has taken care to provide himself by purchase or preemption with various tracts of timber. There is ample water for sluicing, concentrating or amalgamating but there is not a very large supply for power at any one point.

There is abundance of good building stone from Granite to Sandstone & Slate. There are also

good clays for making ordinary brick, a burnt red stone is brought about 25 miles from Big Creek which makes a good firebrick. I think it probable that a similar or equally good material might be found near here, on, or a little over the summit. I am told that they burn lime in Cottonwood or San Pedro Canyon, five or six miles north of here. A good quality of fire clay is said to be in San Pedro Cañon.

The fertility of this Canyon along the creek & also along its branches is surprising to one who has

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There is abundance of good building stone from Granite to Sandstone & Slate. There are also

good clay, for making ordinary brick, a burnt red stone is brought about 25 miles from Big Creek which makes a good firebrick. I think it probable that a similar or equally good material might be found near here, on, or a little over the summit. I am told that they burn lime in Cottonwood or San Pedro Canyon, five or six miles north of here. A good quality of fire clay is said to be in San Pedro Cañon.

The fertility of this Canyon along the creek & also along its branches is surprising to one who has travelled over the Alkaline & sage brush plains of this state. Fifty or more families could find pleasant homes along this canyon & each have a productive garden & keep a cow, horse, hogs & sheep as well as in Vermont or Maine.

There are in the neighboring Canyons, especially on the north, other mines of galena, as well as other silver ores which if a furnace were established here, might ~~[illegible]~~ be relied on for a further supply of ores.

To sum up Ker. I must cheerfully state my opinion that the mine, claims of Mr Alvarez and mine especially the St Helena Mine, with the accompanying timber lands, pasture lands & water privileges, present a valuable and desirable opportunity for the investment of capital, judiciously, and in good faith, with a view to derive an income from the actual works of the mines.

(Signed) Sherman Day
Mining Engineer