

REPORT ON THE

A J A X G R O U P

Beaverhead County, Montana

by

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Butte, Montana
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THE AJAX GROUP--BEAVERHEAD COUNTY, MONTANA

PROPERTY:

The Ajax group comprises four quartz lode mining claims of which one, the Ajax, is patented; the other three, Hattle & Erma, Edith & Edna and Ajax extension, have been surveyed for patent, and patents have been applied for field sketch of these claims, with such geographical features as could be seen at the time of examination. Three of these claims are full sized mining claims, while the fourth, the Hattle & Erma, is 1000 feet by feet.

LOCATION:

The claims lie as shown in Plate 1 in the of a spur from the main range of the rocky Mountains. The claims extend in a nearly easterly and westerly direction, following the outcrop of the vein. They are at the head of Swamp Creek, 29 miles by road from the town of Wisdom in Big Hole basin. The west end of the claims is very close to the state line between Montana and Idaho. It is eleven miles to the nearest ranch (Stanchfield's), and 20 miles across the mountains to Salmon City, Idaho.

ACCESSIBILITY:

The group is reached by a wagon road only, and that by two routes which offer about equal facilities; one route from Divide, on the Oregon Short Line, up the Big Hole River to Wisdom and across the Big Hole Basin to Stanchfield's ranch; the other from Dillon, on the Oregon Short Line, to Bannock, up the Grasshopper, and across a low ridge to Fox, and from Fox to Stanchfield's. Each is about the same distance, but the former has possibly a more even grade, and that a slight one, from the railroad to Stanchfield's Ranch. From the ranch there is but one road up to the mine. This road is good, without excessive grades, as far as the mill, but from there up to the mine the grade is very steep. At this time of the year there is a great deal of snow to be contended with, and a good road can only be maintained by constant traffic.

DEVELOPMENT:

All the developments to be seen at this time of the year are on the Ajax Claim, and consist of four tunnels, three of which are on the vein, and the fourth a cross-cut tunnel started to tap the vein at the lowest possible depth.

The approximate position of these tunnels is shown by Plates I and III. No. 1 tunnel is the highest and runs on the vein for a distance of 131 feet. From this tunnel two inclines go up to the surface, and are said to develop the vein throughout their length. At present they are both inaccessible. Twenty-five feet back from the face of No. 1 tunnel a raise has been driven on the vein and the vein is exposed in the top thirty-five feet from the tunnel floor.

No. 2 tunnel is about 60 feet below No. 1, and is driven along the vein for a distance of about 222 feet, the East seven feet of which is now filled with ore. A raise on ore connects No. 1 and 2 tunnels.

No. 3 tunnel is about 160 feet lower than No. 2, and about 250 feet South-west. It opens up the vein for 136 feet, and from it two winzes have been sunk to a depth of 12 feet. No. 4 tunnel lies directly West of No. 3 about 350 feet, and below No. 3 about 170 feet. This is the last tunnel started on the location, and though not being driven at present, is intended to cut the vein at a point about 165 feet deep, and be used as the main tunnel, from which the whole vein is to be worked.

GEOLOGY:

As far as I was able to discover, the country rock was a quartzite which had been tilted to a steep angle and much shattered. The general strike is N. 22° E. with a dip to the South-east of between 50° and 60° from the horizontal.

The vein is a fissure, striking across the bedding of the quartzite, running about N. 60° E. and dipping 40° to 50° to the South-east. The fissure has well defined walls, along which there has been some movement. The fissure is filled with an altered schist or quartzite through which irregular streaks of quartz run approximately parallel to the walls. The vein is strong and apparently persistent, as it can be traced nearly the whole length of the claims - four thousand feet.

SAMPLES:

- No. 1. 12 feet from mouth of No. 1 tunnel, 4 ft. of hanging-wall streak of quartz. Lost.
- No. 2. Cross-cut from No. 1 tunnel - 10 ft. center streak mixed quartz, quartzite and schist.
- No. 3. Cross-cut from No. 1 tunnel - foot wall streak-2 ft. quartz and schist.
- No. 4. 58 ft. from mouth of No. 1 tunnel - hanging-wall streak - 2 ft. 6 in. quartz.

- No. 5. No. 2 incline, 10 ft. above tunnel-foot-wall streak- 4 ft. 6 in. quartz and schist.
- No. 6. No. 1 tunnel, 10 ft. East of raise-hanging-wall streak- 2 ft. of quartz.
- No. 7. Face of No. 1 tunnel-hanging-wall streak- 1 ft. 6 in. quartz.
- No. 8. Back of raise from No. 1 tunnel- 35 ft. above No. 1 tunnel-hanging-wall streak-1 ft. 6 in. quartz & schist.
- No. 9. Back of stope above No. 2 tunnel, 20 ft. East of raise, foot-wall streak- 18 in. quartz.
- No. 10. Back of stope above No. 2 tunnel, 20 ft. West of raise-foot-wall streak, 5 ft. quartz containing some PbS.
- No. 11. Back of short vertical raise from stope above No. 2 tunnel-hanging-wall streak 3 ft. quartz.
- No. 12. Back of stope above No. 2 tunnel, 30 ft. West of raise-foot-wall streak- 3 ft. 6 in. of quartz.
- No. 13. Side of No. 2 tunnel nearly opposite raise-hanging-wall streak 4 ft. quartz and shattered quartzite.
- No. 14. Back of short raise from stope 25 ft. East of West face-hanging-wall streak, 3 ft. quartz.
- No. 15. West face of stope, foot-wall streak 3 ft. 6 in. quartz.
- No. 16. 40 ft. from mouth of No. 2 tunnel- foot-wall streak- 1 ft. quartz.
- No. 17. Face of No. 3 tunnel-hanging-wall streak 2 ft. quartz.
- No. 18. No. 3 tunnel by East winze, hanging-wall streak, 3 ft. 6 in. quartz.
- No. 19. 16 ft. West of above winze, 1 ft. 6 in. quartz. Apparently all the quartz in the vein at that point.
- No. 20. No. 3 tunnel by West winze, hanging-wall streak 5 ft. quartz.
- No. 21. Outcrop of vein between No's. 3 and 4 tunnels, 3 ft. quartz.

ASSAYS:

Sample Number	Width	% Cu.	Ozs. Ag.	Au.	%	Pb.	Value.
1	4.0 ft.		Lost.				
2	10.		1.00	\$0.80			\$1.30
3	2.		.80	1.60			2.00
4	2.5		.70	1.00			1.35
5	4.5		1.00	.80			1.30
6	2.		.80	2.40			2.80
7	1.5		.50	5.20			5.45
8	1.5		.60	1.60			1.90
9	1.5		.30	4.00			4.15
10	5.		.90	5.20		0.30	5.65
11	3.	Tr.	.90	2.00			2.45
12	3.5	"	.90	4.00			4.45
13	4.	"	1.10	22.40			22.95
14	3.	"	2.30	4.00		Tr.	5.40
15	3.5		.40	.80		"	1.00
16	1.		.50	1.60			1.85
17	2.		.70	.80			1.15
18	3.5		.90	2.40			2.84
19	1.5		.40	1.20			1.40
20	5.		1.40	5.60			6.30
21	3.		1.10	3.20			3.75
Schist			.90	1.60		Tr.	2.05

The average width sampled was 3' 2", while the average width of the whole vein where exposed was 16 ft. The average value per ton shown by the above samples is \$4.27. The ore being mined at present is 3.4 ft. wide, and shows an average assay value of \$7.19. Outside of a very small tonnage in the shoot of ore being mined, no ore can be estimated as being blocked out.

TIMBER:

The mine itself is above the timber line, but immediately below it there is plenty of timber for all mining purposes.

WATER:

The water supply is derived from the small creek flowing out of the lake shown in Plate I. There is sufficient water in this stream for all mining and milling purposes, but not for power.

EQUIPMENT:

The present company, The Montana Ajax Mining Company, has erected a ten stamp mill of modern design, with ore bins, rock breaker and two Wilfley tables. They have two gravity tramways, one from No. 2 tunnel to flat above lake, and one from head of gulch above mill to the mill. Each of these is about 750 ft. long. At present they are installing dynamo and motor for running an electric power drill.

CONCLUSIONS:

That the cost of mining under present conditions is excessive is obvious, from the fact that the ore has to be handled four times between the funnel and the mill, necessitating double the number of men, besides a heavy cost (\$1.50 per ton), for hauling ore between the two tramways. The cost of milling, too, is high, as there are more men than necessary employed about the mill.

The probability is that there are some more good shoots of ore in so strong a vein, and as the ore they are now mining would pay under proper management it is reasonable to believe that other shoots could be worked to advantage.

On account of the great quantity of snow an aerial tramway is necessary to transport the ore from the mine to the mill, as cheaply as possible, but before any such tramway is built, No. 4 tunnel should be continued to the vein and the vein exploited at that level and sufficient ore opened up to warrant the expense of constructing proper ore bins and aerial tramway.

I believe the showing warrants such exploration, but as the mining and milling going on at present costs more than the ore produces, mining should be stopped until it can be done at a reasonable cost.

Respectfully submitted,

Fred T. Greene