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P R E L I M I N A R Y R E P O R T

ON THE

B E L L E H E L E N M I N E

OF THE

KAWICH MINING & MILLING COMPANY,

Bellehelen, Nye Co., Nevada.

Examination - January 29, 1919.
Report - January 31, 1919.

By - H. W. STOTESBURY.

P R E L I M I N A R Y R E P O R T

on

KAWICH MINING & MILLING COMPANY'S MINE AT BELLEHELEN, NEVADA.

The Bellehelen Mine of the Kawich Mining & Milling Company is located at the north end of the Kawich Range, about 52 miles east of Tonopah, and five or six miles beyond the old camp of Bellehelen. A good wagon road leads directly to the mine. There is an abundant supply of wood on the property and water is obtained from a spring at Bellehelen. It is claimed that enough water to run a small mill may be obtained from a spring about 1-1/2 miles distant, by installing a pumping plant and pipe line. The ground owned by the Company consists of five unpatented claims, but there has been more than sufficient work done on the property to obtain a patent.

EQUIPMENT:

The property is thoroughly equipped for mining on a small scale. The power plant consists of a compressor capable of running three hammer-drills, or two drills and a small hoist, the power being furnished by a gasoline engine. A blacksmith shop, two comfortable bunk houses and a mess-house, all in good condition, are also located at the mouth of the tunnel. The Company owns two 2-1/2 ton and one 3-ton trucks, which are used for hauling ore to Tonopah and supplies to the mine.

VEINS:

The silver bearing quartz veins occur as filling in narrow fissures in the country rock, which is a rhyolite-breccia. They outcrop for a distance of about 600 feet, but pay-ore has evidently been found for a distance of only about 300 feet. There are several of these narrow veins, each only three or four inches wide, distributed throughout a width of about fifteen

feet, and on the most persistent of these stringers, two shafts have been sunk and a considerable amount of drifting and stoping have been done, as is shown by the attached map.

DEVELOPMENT WORK:

At a depth of 250 feet a tunnel has been driven to intersect the vein, and all work is now being done through this tunnel. From the tunnel level a winze has been sunk to a depth of about 120 feet, and a small amount of stoping done from the winze, and at the present time the work of sinking another 100 feet is in progress.

Where exposed in the tunnel, and especially in the winze, the vein is stronger and shows a greater average width than at the surface where it is split up into numerous stringers.

While the ore coming from above the tunnel level was shipped to the cyanide mills at Tonopah for treatment, the ore in the winze now contains so much sulphide that it is necessary to send it to the smelters, and the grade of the sulphide ore is considerably higher than that of the oxidized ore from the upper levels. There is shown on the attached tables of ore shipments, which show that the ore shipped to the mill during 1918, a total of 609.26 tons, averaged \$62.15 per ton, while that shipped to the smelter during the same period, a total of 355.91 tons, averaged \$108.43 per ton. This increase in both width and value of the vein seem to be a good indication for the development of further ore reserves with depth.

Only one vein has been developed to the present time, but from conditions as shown in the shafts and stopes above the tunnel level, there is a chance that further development work might disclose a parallel vein. A thorough examination of the property with surveys, and sections at right angles to the vein would reveal the true conditions and substantiate this theory.

SAMPLES:

The accompanying stope map is taken from a section made by Mr. L. R. Robins, in November, 1918, and is inaccurate in several places, but will suffice to give an idea of the amount of ore in sight in the property. The samples shown were taken but a short time ago under the direction of Mr. E. M. Rabb, Engineer for a Mr. Burbridge of Cripple Creek, Colorado, who has an option on the property until February 27, 1919. The samples were all inspected during this examination, and are representative samples taken across the vein at intervals of about 10 feet, and are considered reliable. As a matter of fact, the average grade of ore shown by the samples is less than that shown by the mill and smelter returns. The width of the samples was not obtainable, but the average width of each ore-block was obtained from the bookkeeper for the Kawich Company, who had a record of them, and these widths were used in calculating the value of the ore-blocks, as the blocks used in this report coincide very closely with those of a previous report made for the Kawich Company, but ^{ore} much more conservative in regard to area.

ORE RESERVES:

All ore-blocks shown may be considered as assured ore. Block B-1 below the winze, altho' not yet developed, may be considered as assured ore because of the conditions in the winze, and the persistence of the vein at all points above. No probable ore has been estimated, altho' it is reasonable to assume that pay-ore will be found in some places outside the limits of the blocks shown. Development work to date has opened up only one ore shoot, altho' the tunnel followed the vein for a considerable distance before encountering the shoot now being worked; and from appearances on the surface, chances for opening up another shoot are remote, except, as mentioned above, by the development of a parallel vein.

A very conservative estimate of the ore in sight, as shown on the accompanying map, is 3689.10 tons having an average value of \$49.62 per ton. The filled stope contains approximately 850 tons of ore averaging \$30.00 per ton.

PRODUCTION:

During the year 1918 the Kawich Company sent to the West End Mill at Tonopah, 609.26 tons of ore having a gross value of \$62.15 per ton, and received from the mill after deducting treatment charges \$32523.00. During the same period they sent to the smelter in California 355.91 tons of ore having a gross value of \$108.43 per ton, and received from the smelter after deducting treatment and freight charges \$30599.78. The total production for the year, then, was 965.17 tons of ore having an average gross value of ~~\$85.29~~ ^{not weighted} per ton, and the net returns were \$63122.78.

COSTS:

Mining, milling or smelting, and transportation charges are estimated at about \$40.00 per ton. These costs could probably be lowered by a change in the method of mining, and if the ore below the tunnel level remains of the same character as that now showing, a further saving could be made by the installation of a small concentrator at the mine.

TERMS:

The price asked for the property is \$175,000.00. Of this amount a cash payment of \$25,000. is asked, the balance to be paid in installments; approximately \$88,000.00 to be paid the first year, and the remaining \$62,000. to be distributed over a longer period. More definite terms would be arranged if an option were taken on the property, but the cash payment would be insisted upon.

CONCLUSIONS:

There is enough ore in sight to guarantee the return of a cash payment of \$25,000., but the development of enough ore to take care of the balance of the purchase price is questionable

because of the narrow limits of the ore shoot, and the uncertainty of the values holding out with depth. A picked sample of so-called high-grade sulphide ore from the bottom of the winze gave returns of \$6.45 per ton, and a cut sample across about 18" of vein at the same place gave \$13.50, which was not very encouraging. If the sinking of the winze proves the values to hold up for another 100 feet below the present winze bottom, thus proving that the change in the character of the ore is not detrimental to the values, the property will be worth a more thorough examination. In that case, however, the Owners will in all probability raise the purchase price.

This property is considered a good small prospect, but not one capable of producing a large tonnage. If the ore in the winze holds out with depth, and a small property of this type is desirable, the above terms are considered reasonable.

If the present option on this property is not exercised, a second trip at a later date to watch developments in the winze is recommended.

ORE RESERVES:

<u>Block No.</u>	<u>Tons.</u>	<u>Av.Width</u>	<u>Av.Value</u>	<u>Foot Dollars.</u>
A-1	97.2	.35 ft.	\$125.44	43.90
A-2	144.4	.50 ft.	85.30	42.65
A-3	734.6	.92 ft.	47.54	43.74
A-4	284.6	1.00 ft.	29.89	29.89
A-5	729.2	.79 ft.	45.06	35.60
A-6	205.4	.89 ft.	21.79	19.39
A-7	88.4	.92 ft.	35.82	32.95
A-8	48.3	.42 ft.	36.16	15.19
A-9	189.5	.35 ft.	74.81	26.18
A-10	700.1	1.23 ft.	56.38	69.35
A-11	116.3	.42 ft.	35.91	15.08
B-1	351.1	.83 ft.	65.00	53.95
TOTAL	3689.10	.72 ft.	\$49.62	427.87

Filling in stope - 850 tons @ \$30.00

ORE SHIPMENTS TO WEST END MILL AT TONOPAH DURING
YEAR - 1918.

<u>Date.</u>	<u>Lot No.</u>	<u>Dry Tons.</u>	<u>Val.per Ton.</u>	<u>Treatment Charges.</u>	<u>Settlement.</u>
Jan.2	11	21.63	\$59.08	\$9.56	\$1071.12
" 28	12	42.70	71.23	10.92	2575.41
Feb.2	13	38.18	51.94	9.02	1638.82
" 12	14	37.07	69.24	10.94	2161.41
" 18	15	64.95	49.76	8.53	2677.97
Mar.6	16	35.35	63.63	9.32	1919.65
Apr 2	17	49.17	70.22	9.80	2979.57
" 19	18	44.25	68.08	9.57	2589.01
May 2	x	32.14	34.74	5.86	928.32
" 12	19	36.81	60.07	8.67	1892.19
June 22	20	40.54	47.22	7.25	1620.30
July 1	21	37.15	54.67	8.07	1731.38
" 15	22	16.09	76.22	10.47	1057.99
" 29	23	38.45	82.16	10.83	2731.22
Sep t 4	24	21.90	39.77	6.12	730.25
Nov. 18	25	43.44	99.08	12.70	3739.42
Dec. 18	26	<u>9.44</u>	<u>59.35</u>	8.29	<u>487.97</u>
		609.26	\$62.15		\$32523.00

ORE SHIPPED TO UNITES STATES SMELTING, REFINING
& MINING COMPANY DURING YEAR 1918.

<u>Date</u>	<u>Lot No.</u>	<u>Dry Tons</u>	<u>Value per Ton</u>	<u>Smelter Chgs.</u>	<u>Frt.</u>	<u>Settlement</u>
Jan. 13	1	75.75	\$61.04	\$7.00	\$6.50	\$3583.81
July 13	2	31.55	73.90	7.00	8.80	1819.90
Sept 12	3	39.74	32.10	5.00	6.30	815.25
" 23	4	28.66	101.17	8.00	10.60	2348.50
Nov. 14	5	36.34	91.05	8.00	-	2661.50
" 19	8	29.12	145.06	8.00	11.90	3627.66
Dec. 17	9	28.69	142.31	8.00	-	3495.08
Jan.2 2	6	43.81	154.96	10.00	-	5802.23
" 2	7	<u>42.25</u>	<u>174.34</u>	8.00	-	<u>6445.85</u>
		355.91	\$108.43			\$30599.78

TOTAL SHIPMENTS FOR YEAR - 1918.

	<u>Tons.</u>	<u>Av.Value.</u>	<u>Settlement.</u>
West End Mill	609.26	\$62.15	\$32523.00
Smelter	<u>355.91</u>	<u>108.43</u>	<u>30599.78</u>
TOTAL,	965.17	\$85.29	\$63122.78

SAMPLES TAKEN AT BELLEHELEN MINE

UNDER DIRECTION OF E. M. RABB, January, 1919.

<u>No.</u>	<u>Gold Oz.</u>		<u>Silver Oz.</u>	<u>Value.</u>
701	.18		27.80	\$31.40
702	.42		86.20	94.60
703	.27		72.90	78.30
704	.43		170.20	178.80
705	.15		37.60	40.60
706	1.22		261.50	285.90
707	.53		96.50	107.10
708	.90		102.80	120.80
709	.74		112.00	126.80
710	.14		27.70	30.50
711	.25		174.50	179.50
712	.26		28.10	33.30
713	.02		5.00	5.40
714	.18		15.70	19.30
715	.38		59.70	67.30
716	.26		46.20	51.40
717	.04		6.70	7.50
718	1.20		179.10	203.10
719	1.34		162.70	189.70
720	1.44		333.80	362.60
721	.68		93.70	107.20
722	.81		105.50	121.70
723	.14		30.00	32.80
724	.10		39.90	41.90
725	.12		21.10	23.50
726	.07		24.90	26.30
727	.31		46.60	52.60
728	.12		14.10	16.50
729	.14		28.30	31.10
730	.45		44.70	53.70
731		Missed		
732	.37		63.00	70.40
733	.55		75.80	86.80
734	.22		43.80	48.20
735	.32		37.10	43.50
736	.40		47.20	55.20
737	.15		23.00	26.00
738	.32		66.90	73.30
739	.28		42.50	48.10
740	.45		68.00	77.00
741	.18		37.50	41.10
742	.35		64.10	71.10
743	.18		44.20	47.80
744	.14		10.30	13.10
745	.04		9.40	10.20
746	.23		22.90	29.50
747	.10		11.00	13.00
748	.16		25.80	29.00
749	.16		12.40	15.60
750	.28		49.70	45.30
751	.14		33.90	36.70
752	.08		19.60	21.20
753	.01		.50	.70
754	.10		17.90	19.90
755	.07		26.80	28.20

<u>No.</u>	<u>Gold Oz.</u>	<u>Silver Oz.</u>	<u>Value.</u>
756	.03	4.10	4.70
757	.02	2.10	2.50
758	.16	40.30	43.50
759	.15	21.80	24.80
760	.20	42.50	46.50
761	.05	14.70	15.90
762	.42	70.10	78.50
763	.22	30.10	34.50
764	.36	53.70	60.90
765	.15	27.60	30.60
766	.36	78.80	86.00
767	.12	18.90	21.30
768	.22	40.00	44.40
769	.11	22.90	25.10
770	.16	36.00	39.20
771	.12	31.60	34.00
772	.06	26.00	27.20
773	.15	17.20	20.20
774	.10	21.50	23.50
775	.08	12.50	14.10
776	.04	10.70	11.50
777	.17	66.80	70.20
778	.04	9.10	9.90
779	.18	65.80	69.40
780	.03	2.60	3.20
781	.11	46.80	49.00
782	.02	3.20	3.60
783	.01	.20	.40
784	.02	6.80	7.20
785	.12	24.50	26.90
786	.02	1.80	2.20
787	.01	.60	.80
788	.02	.70	1.10
789	Tr	.40	.40
790	.02	1.30	1.70
791	.01	1.60	1.80
792	.01	1.30	1.60
793	.01	1.80	2.00
794	.03	2.20	2.80
795	.03	5.30	5.90
796	.02	3.80	4.20
797	.01	1.40	1.60
798	.01	1.30	1.50
799	Tr	.60	.60
800	.01	1.30	1.50
801	.08	25.70	27.30
802	.23	16.20	20.80
803	.24	28.10	32.90
804	.42	115.90	124.30
805	.20	18.20	22.20
806	.13	21.10	23.70
807	.25	33.70	38.70
808	.35	79.10	86.10
809	.90	83.80	101.80
810	.40	106.20	114.20
811	.50	100.40	110.40
812	.22	60.00	64.40
813			
814	.10	25.90	27.90
815	.08	11.90	13.50
816	.31	41.40	47.60
817	.24	126.40	131.20
818	.58	59.50	71.10
819	.20	28.60	32.60

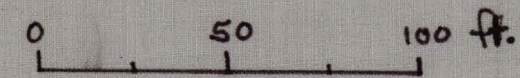
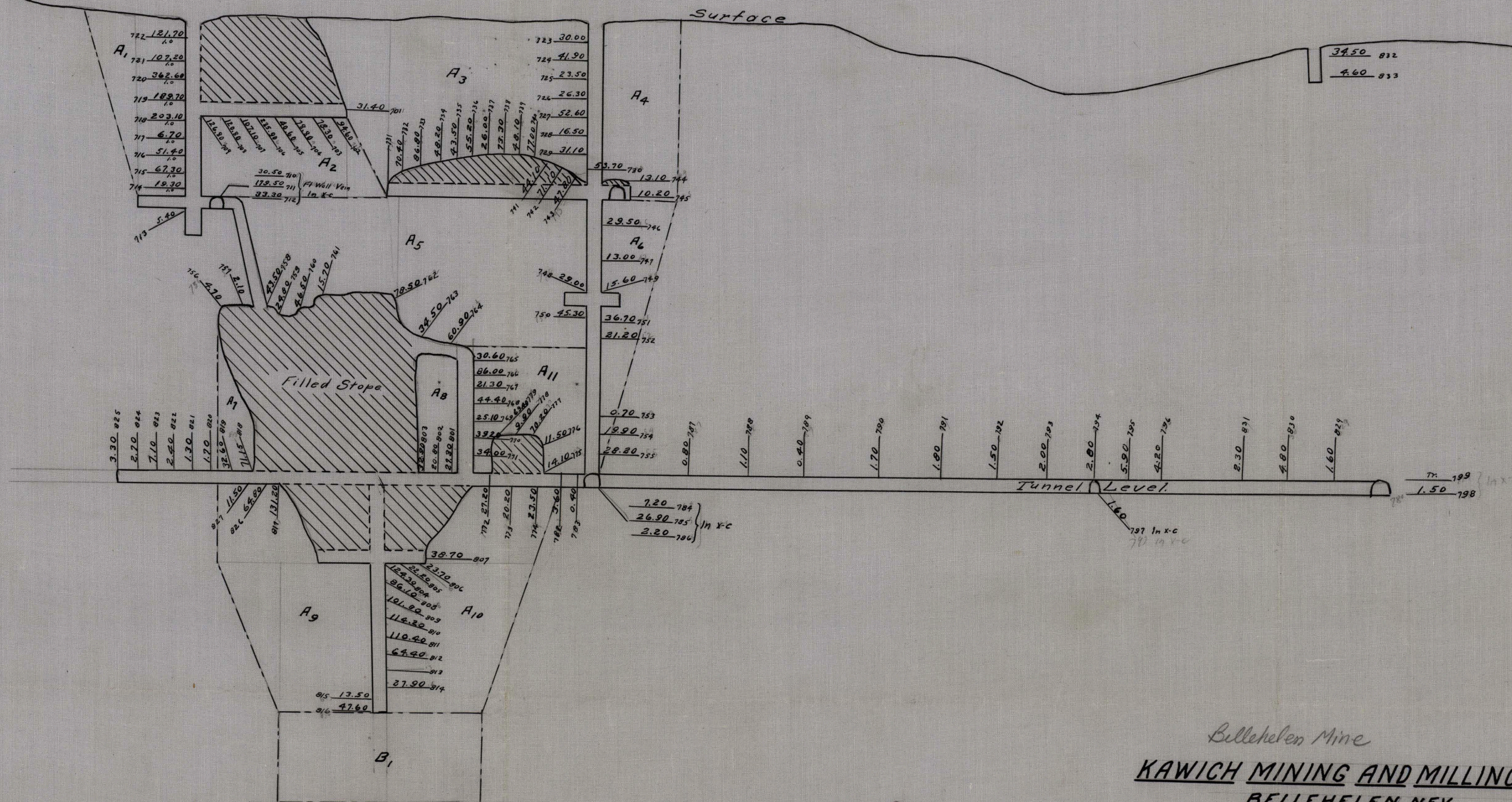
Missed

<u>No.</u>	<u>Gold Oz.</u>	<u>Silver Oz.</u>	<u>Value.</u>
820	.01	1.50	1.70
821	.01	1.10	1.30
822	.04	1.60	2.40
823	.03	6.50	7.10
824	.02	2.30	2.70
825	.01	3.10	3.30
826	.40	64.00	64.80
827	.02	11.10	11.50
828	.02	1.70	2.10
829	.01	1.40	1.60
830	.04	4.00	4.80
831	.01	2.10	2.30
832	.14	31.70	34.50
833	.02	4.20	4.60
834	.17	25.50	28.90

West.

East.

214 (item 2)



Bellehelen Mine
KAWICH MINING AND MILLING CO.
BELLEHELEN NEV.
ORE RESERVES.

Scale 1"=50 Ft.

Jan. 31st 1919.

N. end Kawich Range
52 mi. E. of Tonopah
5-6 mi. from Bellehelen, by road
1 mi. from spring

032-023-0259

214 item 2

H.W.S.

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