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Summary of Report on  
GOLD VALLEY MINES, LTD.

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The property of Gold Valley Mines, Limited, consisting of 19 claims and fractions, lies on the west side of Keremeos creek at Olalla, 13 miles south-east of Hedley in a straight line. The property is divisible into two sections both on basis of location and character of mineralization.

On the southern or Something Good section, a shear-zone in sedimentary rocks is drifted on for 350 feet at an elevation 1,000 feet above the Penticton highway. No. 2 adit, 200 feet below, is driven 315 feet in pyroxenite without discovering any mineralization and without locating the downward continuation of the shear-zone. No. 1 adit was sampled throughout its length and appreciable values are found to be restricted to the outermost 110 feet on the foot-wall of the shear-zone. The inner 240 feet assayed from trace to in one instance 0.08 ounces in gold per ton. The outer section contains interesting values over commonly narrow widths. Further development on No. 2 adit-level should shortly prove whether values persist in pyroxenite walls, and even if this is not the case a minable body of limited dimensions may be proven in the shear-zone in sediments. No large body of ore is indicated and calculations at the present stage of development are unwarranted.

On the Sunrise section, nearly a mile to the north, several small veins or occurrences of weakly-mineralized quartz have received little development. Strength of mineralization and continuity are not encouraging, and unless surficial exploration can shortly demonstrate considerably better indications this section of the property has little future.

## Report On

### GOLD VALLEY MINES LIMITED

May 1st, 1937.

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Gold Valley Mines Limited was incorporated in April, 1936 to take over the undertakings of Gold Valley Mines Limited, a private company, on property originally acquired by Olalla Mines Limited two years previous. The head office of the company is 417 Vancouver Block, Vancouver, B. C. A. K. Shives is president, A. C. McDougall is managing director and secretary-treasurer, and the directors are E. S. Harris, R. K. Shives, G. A. Lamont and W. H. Miller. George H. Shepherd is consulting engineer. The total capitalization is 3,000,000 shares.

The property consists of 19 claims and fractions, 5 of which are Crown-granted. It is situated on the west side of Keremeos creek, just below Olalla. The Penticton-Keremeos highway crosses the eastern margin of the property 28 miles from Penticton and between 3 and 4 miles north of Keremeos.

The property flanks the flat bottom of the Keremeos Creek valley and lies on steep and precipitous slopes that rise to summits in excess of 6,000 feet, 10 miles south-east of Nickel Plate mountain.

Grassy and bluff-covered slopes rise from the valley-bottom at angles between 20 and 35 degrees, and are dissected by occasional dry gulleys.

The property is divisible into two sections, one, the Sunrise section, immediately south of Olalla, is served by trail a few hundred feet in length from the highway. The Something Good section, nearly a mile to the south, is reached by an excessively steep switchback trail that climbs to a height of 1,000 feet above the highway. Sufficient mining timber is to be found, and water for the Sunrise section is obtained from Olalla creek, while at the Something Good water is obtained from the mine workings and also from a spring 1,000 feet to the north.

Equipment and buildings include a blacksmith shop at each of the Something Good adits, and a portable compressor at the No. 2 adit supplies air to both. A crudely constructed aerial tram equipped with wooden "buckets" of small capacity leads from the No. 1 adit to a 60-ton bin near the road. On the Sunrise section a frame building houses a semi-permanent compressor installation and also a steel-sharpener. A building a few hundred yards distant in Olalla has been used as a bunk-house. B. C. McDougall has been in charge of a small and variable crew for the past year, except for a suspension of operations during excessively cold weather during the greater part of February and March of 1937.

#### Geology.

The rocks of the region consist of a thick sedimentary series intruded by pyroxenite, granite and <sup>some</sup> ~~less~~ dioritic

rock. The sediments are fine-grained and commonly dark-coloured argillites, cherts and quartzites and less calcareous material, all possessing a blocky fracture. Interbedded with the sediments is greenstone which represents in part at least andesitic lava and perhaps local bands of tuff. The amount of greenstone is not known, but is clearly subordinate, and is not seen in the mine-workings. The structure of these rocks is not known.

Two prominent intrusive rocks are pyroxenite and granite. The former is a medium<sup>to</sup> coarse<sup>grained</sup> rock, light to dark green in color, consisting almost entirely of augite and including a little biotite; it is found both east and west of Keremeos Creek valley. One large body, on the Something Good and Great Eastern claims is, at the elevation of No. 1 adit nearly 2,000 feet wide, and trends up and down the hillside; an offshoot from this body passes immediately south of the adit. A second body, of unknown extent, occurs on the No. 2 Fractional. The pyroxenite weathers to a light-green sandy soil. A body of pink soda granite outcrops at the north end of the property and near Olalla. Some dioritic rock is also to be seen, part of which may be a border phase of the granite and part appears to be a dike -- outcrops are too scarce to show the distribution and relationships of these intrusives, but they are all pre-mineral.

Mineralization is entirely different at the two ends of the property. At the south end, on the Something Good, a shear-zone in argillites and quartzitic sediments contains in

one place small cross-stringers of quartz, and in this section a brecciated footwall-seam contains gold values. On the Sunrise claim are several small veins of white quartz, in granite and pyroxenite, weakly mineralized with pyrite. One of these veins is seen to contain a lens 3 inches wide mineralized with galena and copper sulphides in addition to pyrite.

Something Good Section.

A shear-zone in argillites and quartzitic sediments outcrops on the face of prominent bluffs at an elevation of about 2,600 feet and upwards for 100 feet and more. At the base of the bluffs the rock is pyroxenite which consists of one large body with an offshoot 100 feet wide in the angle between which lies the shear-zone, apparently in both vertical and horizontal section.

The shear-zone, at the lowest point seen, at No. 1 adit is about 4 feet wide and widens upwards to 16-feet, 40 feet above the adit. From the latter point, partly covered by talus and again exposed 50 feet higher on a vertical face, the shear-zone is seen to be a branching structure of sheared and shattered rock. A further 100 feet higher it is lost in overburden and can not be traced with certainty beyond this point. From 20 to 40 feet above the adit the shear-zone is transected diagonally by narrow quartz-stringers striking north 60 degrees west and attaining a maximum width of 3 inches.

Some little quartz is also seen as breccia-filling in this section and part has also been brecciated together with the surrounding rocks; the distribution of quartz is erratic and the total percentage low.

No. 1 adit, 1,035 feet above the road at an elevation of about 2,600 feet, is, at the portal, 30 feet south of the main body of pyroxenite and 40 feet north of the offshoot of the same rock. It follows the foot-wall of the zone, in sediments, for 350 feet, in which distance it curves gradually from south 75 degrees west to south 55 degrees west. No. 2 adit, 200 feet <sup>lower in elevation</sup> ~~vertically below~~ on the 35-degree slope, is driven south 73 degrees west for 315 feet to a point vertically below the portal of No. 1 adit; from the face a 25-foot cross-cut is driven north 40 degrees west. No. 2 adit is in pyroxenite for its entire length and contains no apparent mineralization.

Measurements in No. 1 adit have been taken from a point vertically below the edge of a single set of lagging 15 feet above the rail, and which is 12 feet from the edge of the rock cut at the portal of the adit. For the first 300 feet the adit follows a smooth wall which dips at a very high angle northerly; the adit then crosses into the foot-wall, and at 350 feet a crosscut is driven north-west 24 feet to intersect the shear-zone again. In the first 110 feet there is, adjacent to the smooth wall which is the foot-wall of the shear zone, 6 to 26 inches of more or less cemented brecciated material,

which consists of argillaceous and quartzitic rock and a varying but subordinate amount of vein-quartz, and contains small amounts of scattered pyrite in both fragments and cement. The cement seems to be entirely calcite, and in no part is this breccia material strongly coherent; the fragments are rarely as large as walnuts, and much of the material is of the coarseness of coarse sand. In the hanging wall of this zone of crushing are shattered and sheared argillaceous and quartzitic sediments, the darker of which are frequently graphitic; these grade into firm ground and may or may not be sharply marked off from the foot-wall zone. From 80 to 110 feet the foot-wall zone becomes less marked, and in this distance grades from a few inches to a foot of finely crushed and partly cemented argillite into 1 to 3 inches of gouge.

From 110 feet from the portal in to the face the foot-wall slip is accompanied by an inch or so to nearly a foot of gouge or strongly sheared argillite, in many places graphitic. The remainder of the ground exposed in this inner 240 feet of the adit consists of dark-coloured argillaceous to cherty rock sheared and brecciated to a greater or lesser extent, and containing occasional veinlets and tiny lenses of calcite as well as sparse and erratically disseminated pyrite. A crosscut extends 25 feet north of the foot-wall at a point 175 feet from the portal, and shows merely shattered and sheared dark argillites.

#### Sampling.

In No. 1 adit holes have been drilled in foot-wall,

hanging-wall and back to a depth from collar between 4 and 5 feet, averaging about  $4\frac{1}{2}$  feet. Holes are drilled into the foot-wall at five-foot intervals between 148 and 342 feet and into the hanging-wall between 148 and 348; holes are drilled at 10-foot intervals upwards in the back from 150 to 340 feet. Sludge samples are reported to have been taken from all of these holes, 100 in number, but the assay returns are not at hand.

The writer took samples throughout the length of the adit, commencing at 20 feet from the outer edge of the lagging. Samples were cut with a moil across the foot-wall crushed zone, and restricted to this zone except where it was bounded by shattered or sheared rock, when the sample was extended to firm ground. In the innermost 100 feet samples were cut across the most shattered portion, regardless of whether there was a clearly defined foot-wall zone or not. Both crosscuts were sampled for their full length.

From 20 to 80 feet the foot-wall zone was cut every five feet. From 80 feet in the foot-wall zone is less well marked and the sample interval was extended to ten feet, the sample in each case being of strongly shattered or sheared ground as distinct from the blocky sediments of the general country. From 190 to 240 feet the back breaks to a shear-zone dipping southerly 15 to 45 degrees, and samples were not taken in this interval except as representing the material of this zone which appears to cross through, and to offset



slightly, the main foot-wall slip. The westerly wall of each cross-cut was sampled in 5-foot sections. The returns of this sampling are given below in tabular form. The samples were all run for silver, but as the highest return was 0.6 ounces per ton, corresponding to the highest gold value, and very few were above a trace, the silver values have been omitted.

<u>Sample No.</u>	<u>Distance from portal in feet.</u>	<u>Width in inches</u>	<u>Gold Oz. per Ton.</u>	<u>Remarks</u>
4348B	20	7	0.30	Footwall breccia zone.
49	20	35	nil	In hanging wall of above
4350B	25	11	0.16	Footwall breccia zone
51	30	13½	0.24	" " "
52	30	36	0.02	In. H. W. of above
53	35	13½	0.36	F. W. breccia zone
54	40	23	0.44	" " " "
55	45	23	0.36	" " " "
56	50	25	0.54	" " " "
57	55	15	0.22	" " " "
58	60	27	0.06	" " " "
59	65	20	0.06	" " " "
4360B	70	32	0.72	" " " "
61	75	52	0.30	" " " " (zone not clearly defined)
62	80	56	0.16	" " " " (zone not clearly defined)
63	90	11	0.32	" " " " (solid hanging wall)
64	100	16	1.60	" " " "

<u>Sample No.</u>	<u>Distance from portal in feet.</u>	<u>Width in inches</u>	<u>Gold Oz. per Ton.</u>	<u>Remarks</u>
4365B	110	11	2.20	F. W. breccia zone. (solid hanging wall)
66	120	54	0.04	Shear zone.
67	130	25	0.08	On foot-wall.
68	140	15	trace	" " "
69	150	42	trace	" " "
4370B	160	37	0.02	" " "
71	170	70	trace	Across back.
72	180	60	trace	" "
73	180	60	trace	Across back at cross-cut.
74	180	60	trace	West wall of cross-cut.
75	180	60	trace	" " " " "
76	180	60	trace	" " " " " at face.
78	200	12	trace	Flat shear in back.
79	210	20	trace	" " " "
4380B	250	50	trace	Shear zone.
81	260	48	trace	" "
82	270	70	trace	" "
83	280	40	trace	" " (foot-wall -- strongly crushed)
84	280	40	trace	" " (hanging wall - blocky ground)
85	290	55	0.02	" "
86	300	64	trace	" "
87	310	62	trace	In F. W. of foot-wall slip.
88	320	52	trace	" " " " " "

<u>Sample No.</u>	<u>Distance from portal in feet.</u>	<u>Width in inches</u>	<u>Gold Oz. per Ton.</u>	<u>Remarks</u>
4389B	330	51	trace	In F. W. of foot-wall slip.
90	340	46	trace	" " " " " " "
91	350	60	trace	W. wall cross-cut 15 - 10' from face.
92	350	60	trace	Ditto -- 10 - 5' from face.
4393B	350	60	trace	Ditto -- 5' at face, on strong shear.

An interesting section is undoubtedly shown in the first 110 feet in from the portal. The writer has not averaged this section, however, because only a few of the samples are taken over minable widths. He believes that a re-sampling at 3-foot intervals over practical mining widths would be necessary before an accurate estimate of the value of this section could be made. The inner 240 feet of the adit is of no interest.

Values are restricted to that portion of the foot-wall of the shear-zone in which there has been some cementation by calcite of crushed and granulated material that contains some vein-quartz in addition to rock. The end of the mineralized section is coincident with the appearance of a poorly defined shearing that emerges from the north wall of the adit, and from that point to the face the structure is characteristically that of an ordinary shear-zone in rocks of the type described.

The shear-zone has not been intersected by No. 2 adit, so it is not known whether values exist in pyroxenite

walls, but the matter is doubtful. The distance on the shear-zone to pyroxenite below No. 1 adit is not known.

Appreciable values are restricted in No. 1 adit to a section little more than 100 feet long, of an average height to surface of 50 feet or less, and of unknown but perhaps slight depth. The situation of the workings makes transportation difficult and expensive, and, in view of the broken character of the ground and difficulty of sorting, neither clean nor cheap mining is indicated.

Two grab samples were taken from the surface of the full 60-ton bin near the road. One was of fines and one of the more highly cemented breccia characteristic of the outermost 80 feet of No. 1 adit. These samples returned each a trace in gold.

#### Sunrise Section.

As previously mentioned the rocks underlying this section include granite, pyroxenite and sedimentary and dioritic rocks, the distribution and relationship of which are obscured by overburden. Mineralization is in the form of narrow quartz veins.

On the highway,  $\frac{1}{4}$  mile south of Olalla is an old adit driven 88 feet in a direction south 75 degrees west. This adit follows a vertical quartz-vein 5 to 16 inches wide, frozen in granite. The quartz contains calcite locally, and is very sparsely mineralized with small grains of pyrite. At 34 feet from the portal the vein, here containing considerable

calcite, is partly lost in the north wall, from which it emerges at 54 feet, and is continuous to the face. A cross-cut is driven 10 feet north at 68 feet, and a similar strand of quartz 6 feet distant is drifted on for 10 feet to the west.

Three samples were taken in this adit:

Face of north drift, quartz 17 inches wide:	gold, nil;	silver, nil.
Main adit, opposite crosscut 5	" " : "	tr.; " tr.
" " 28 feet from portal 16	" " : "	tr.; " tr.

An old shaft is sunk to a reported depth of 45 feet on what is evidently the same vein at a point 150 feet westerly and 110 feet higher than the adit. This shaft shows the vein to be vertical and 8 to perhaps 20 inches wide, between solid and unaltered granite walls.

The vein cannot definitely be traced farther, but some 600 feet westerly from the shaft, and 260 feet higher is an open-cut in pyroxenite and exposing quartz that may or may not be the continuation of the same vein. The quartz is in two members 6 feet apart, dipping 70 to 85 degrees northerly, and is quite irregular. The width varies from 5 inches or less to 32 inches, and no appreciable mineralization is to be seen in the white and friable quartz. Neither of the veins appears to be continuous: the footwall vein pinches out at a depth of about 12 feet and the hanging wall vein appears to lens out along the strike.

Samples returned:

Footwall vein,	west side of cut, 32 inches wide:	Au., tr; Ag., 0.4 oz.
" " "	east " " " 8 " " "	nil; " nil.
Hanging wall vein,	west " " " 15 " " "	tr; " 0.4 oz.

An adit is collared 130 feet north of this cut and 100 feet lower, and is driven 217 feet in a direction south 06 degrees east directly beneath the cut. No mineralization of any significance is encountered by this adit, which is in pyroxenite for its entire length. One small and discontinuous lens of quartz is to be seen on the west wall 45 feet from the portal, at 170 feet an 11-foot branch is driven easterly on sheared pyroxenite, and at random intervals throughout the remainder of the crosscut sparse seams and tiny lenses of calcite and quartz are seen to occur. Unless there has been some faulting, for which there is no evidence, the veins exposed in the upper cut do not persist to the level of the adit.

On the edge of the highway, 130 feet northerly from the old adit is an open-cut which has been continued as an adit a distance of 10 feet in a direction of south 80 degrees west on a shear-zone which dips 75 degrees northerly. This shear-zone contains as much as several inches of quartz or quartzose material, of irregular distribution. A sample across the face, showing an average width of 19 inches including practically no quartz, returned, gold, 0.04 oz. per ton; silver, trace. At the <sup>top of the portal</sup> ~~base~~ of the adit in the foot-wall of the zone, is a lens

of quartz to a maximum width of 9 inches, including an extreme footwall band 3 inches wide mineralized with galena, chalcocite (?) and perhaps other copper and silver-bearing sulphides. This material is reported to assay high in gold and silver, but was not sampled by the writer because of the spotty nature of mineralization and the fact that the whole lens is not continuous.

In addition to these showings on the Sunrise section of the property, several hundred feet north-west of the old adit, and 100 feet or so apart, are three piles of a hundred to several hundred pounds of quartz, the sources of which are not clearly indicated, although of local derivation. Between this point and the new upper adit a little work has been done on granite that is seen to contain a strand of quartz 4 to 10 inches wide and dipping 15 degrees north-westerly. Another exposure of white quartz is seen 65 feet north-easterly from the portal of the upper adit, but no work has been done on it, and width and attitude are not apparent.

In summary, the vein exposed by shaft and adit appears to be too narrow and low-grade to be worthy of further development unless perhaps some stripping, not yet attempted, discloses sections bearing consistently high values. The upper adit has been driven sufficiently far. Of the other veins or quartz outcrops none has received serious development; random, picked samples are of little significance, and unless some stripping

and open-cutting can demonstrate continuity and consistent values sufficiently high to offset the narrow widths, it is doubtful if development is warranted.

Conclusions.

On the Something Good section of the property No. 1 adit discloses a mineralized section 100 feet or so in length that contains interesting gold values. The upward extension of this section is distinctly limited and the downward continuation has not been proved. The chief matter in doubt is the behavior and value of the shear-zone in pyroxenite, the boundaries of which body of rock are not known beneath the portal of the adit. Even if values do not persist downwards into pyroxenite there may be 100 feet of depth in sediments, and close-interval sampling following further development may show a minable body of limited dimensions. Calculations at the present stage of development are inadvisable.

On the Sunrise section there is at present no minable tonnage. The continuity and value of the quartz-veins so far developed are not sufficiently encouraging to warrant extensive development. Unless surficial exploration, so far hardly attempted, can shortly demonstrate considerably better indications, this part of the property has little future.

Respectfully submitted,

*M. S. Hedley*

Resident Mining Engineer.

Penticton, B. C.  
May 14th, 1937.