56-129 104A 14W 104A-11,12,13 January 1942. W. Lynches No. 8.

MOUNTAIN BOY MINE Stewart, B.C.

521096

Circumstances did not permit a visit to this property, some 18 miles north of Stewart, B. C., but it was found possible to prepare from the numerous reports loaned to the writer, a fairly comprehensive picture of the property as it existed in 1930, the last year of active development. Since that time, so far as the writer can learn, the only work done on the property consists of exploration on outlying claims, and the mining and shipping of some 41 tons of high grade silver ore.

The reports to which the writer had access are those by:

William J. Tretheway, E.M., Consulting Mining Engineer Toronto, Ont. Preliminary report - Sept. 28th, 1928.

W. D. Cooper, Montreal - Report Oct. 24th 1928

Leonard Germaine, B.A., A.R.C.S. (England), Member of Corp. of Prof. Engineers, Quebec and Member of C.I.M.M. and A.I.M.E., 634 Querbes Ave., Montreal. Report Nov. 30th 1929

Harry Townsend, 606 Pioneer Bldg., Seattle - report Dec. 10th 1929.

L. Germaine - Report on Lucky Jim - Jan. 12th 1930.

J. M. McDonald (address unknown), Report and mine surveys Jan. 30th, 1931.

Location and Accessibility

The property is situated on the west wall of American Creek valley about 3½ miles north of the intersection with the Bear River valley. The holdings extend for a distance

of about 2 miles north and south and about 1 mile east and west and range in elevation from about 1000 or 1500 feet to over 5000 feet. The main workings and camp are situated between 2500 feet and 3100 feet elevation a short distance north of Mountain Boy Creek, and can be reached from the end of the Bear River road, 14 miles north of Stewart, B. C., in about 1½ to 2 hours by foot or horseback. At and above the camp is a series of precipitous cliffs and steep-walled canyons making it very difficult to gain access to the various showings. Above the cliffs is more gently sloping hillside, covered, in part, by moraine and glaciers. Forest growth fails to extend above the foot of the cliffs, close to the main camp.

Holdings

The property is owned by the Mountain Boy Mining Co. Ltd. with registered offices at 4001 St. Denis St., Montreal, Quebec. The president of the company is L. M. Lymburner, Vice-president J. O. LeFrancois, and secretary P. E. Ostiguy. The holdings consist of 22 Crown Granted claims, in good standing: The Mountain Boy, American Girl, Hard Money, Northern Belle, Belle Fraction, Sigrid and Sigrid No. 1, Mountain Boy Extension and Mountain Boy Extension No. 1, Mountain Boy Fraction, Fox, Cotton Top, Silver Mask, Chris, Lucky Jim Nos. 1 to 6 inclusive, and Last Chance No. 2 and No. 3. Six additional claims are held by location: Eagle, Canary No. 1 No. 2 and No. 3, Black Horse and Last Chance No. 1 .

The main workings are on the 'High Grade' and 'Mann' veins situated on the Hard Money, Mountain Boy and American Girl.

History

The property was originally staked in 1902 and abandoned in 1907. It was then restaked by Bissell, Brightwell, Stewart and Ward, who, in turn, optioned it to Sir Donald Mann. The latter succeeded in locating the 'Mann Vein' and 'North Vein', and a large boulder, of rich silver ore. His company, the Pacific Coast Exploration Co. drove the original tunnel on the Mann vein in 1909. At the commencement of the 1st World War, in 1914, the property reverted to Stewart and his associates. Stewart made an attempt to locate the source of the high grade silver boulder, somewhere amid the precipitous cliffs and canyons above it but his efforts proved fruitless. Mr. Wm. Tolin later secured a bond on the property and scaled the cliffs to discover the long sought outcrop of the silver ore, and located the "High Grade Vein". A shipment of almost 4 tons of hand sorted ore from the outcrop in June 1929, assayed: silver per ton 1,074.4 oz., copper 4.57 percent, and zinc 2.00 percent. Work was then commenced to explore this vein at depth, first with the 'Daly Tunnel' in 1928, then with the 'Fagan Tunnel' in 1929 and 1930. The Tolin tunnel driven to explore the Mann vein, was the main operation of the winter of 1929-30 and apparently it was the intention to continue it on below the "High Grade vein". These efforts, however, failed to locate either the downward continuation of the rich ore shoot on the High Grade vein or valuable ore at depth on the Mann vein, and the work was evidently abandoned. During 1937, more ore was mined from the outcrop of the ore-shoot on the High Grade vein and since that time

prospecting has continued in adjacent areas. Mr. J.O. LeFrancois reports that this work has been successful in locating and extending a copper lead crossing the Lucky Jim No. 3, the Silver Mask, the Fox and the Mountain Boy Fraction, a lead-zinc lead near the boundary of the Lucky Jim No. 2 and the Last Chance No. 1, a lead and zinc lead crossing the Black Horse, Belle Fraction and Northern Belle, and a new ore shoot on the High Grade vein, several hundred feet south of the original discovery.

Geology

The rocks exposed on the property consist for the most part of fine grained to porphyritic red to green andesite and occasionally tuffs, of the Bear River volcanics. These have been broken and sheared, and the shears and fractures replaced and filled with vein material. Macdonald reports " . . Apparently much of the shearing and fracturing was attended with very little, if any, movement. There is some evidence that where movement has occurred, the relative displacement is largely horizontal with a small vertical component. The whole area gives the impression of having been subjected to a tangential or lateral stress, applied so as to produce a twisting strain or movement, as suggested by several conchoidal or spherical-like fault surfaces. The idea is also suggested by the nature of the fractures produced by the faults. A wide, badly-crushed fault will die out as a tight seam in a very shor distance, or will dissipate itself into several other fractures

at entirely

different angles of strike . . . "

"Filling of the zones consist mainly of an intergrowth of quartz and jasper, barite and calcite, carrying varying amounts of silver lead, zinc and copper minerals along certain zones in the andesite that were favorable to replacement . . . At the present stage of our information, several theories suggest themselves, the most probable of which seem to be:

"1. That mineralization followed certain structural features such as fracturing . . . ."

"2. That mineralization followed interformational beds or areas that were favorable to replacement."

Judging from the mapping done by Townsend, post-ore faults are abundant, occurring every 2 or 3 feet, but that in most cases the vein is not appreciably displaced. Instead it is cut into a number of blocks, in which the vein-width shows remarkable variation. In one case, however, on the north side of the Tolin tunnel, is a rather important fault that has apparently completely cut off the Mann vein at depth.

Veins

Several veins have been located on the Mountain Boy property, of which two, the "High Grade Vein" and the "Mann Vein", have been developed by fairly extensive workings.

The "High Grade Vein" strikes north and south in its northern part but curves to the southeast at its southern end, and dips at angles of from 20 to 25 degrees to the west at the surface but apparently steepens somewhat at depth. Its out-

crop ranges in elevation between about 3000 feet and 3150 feet above sea level, and has been traced more or less continuously for as much as 1200 feet. It is cut off at its southern end by a fault, and has apparently been displaced at two points between the "Daly" and "Fagan" tunnels by faults, where, in both cases, the northern side of the fault has been shifted eastward. The vein has been intersected at two points in the "Daly" tunnel, at points 60 feet west of and 40 to 60 feet below the outcrop. In the northern or "Fagan" tunnel, the vein is exposed at only one point, some 340 feet from the portal and about 170 feet west of and 120 feet below its surface outcrop. Elsewhere in this tunnel.the vein has evidently been cut off by faults. Germaine reports (p. 8) "The mineralization consists of a variety of silver minerals such as argentite, native silver, stromeyerite, pyrargyrite or ruby silver, etc., with chalcopyrite, chalcocite, and galena in a gangue of quartz and jasper". The vein was first discovered in a small gulch where about 45 tons of ore carrying high silver values has been recovered. There, according to samples taken by Tretheway, an average value of Silver 210.5 oz. per ton over 13.5 feet could be obtained and, hand sorted ore running as high as Silver 2000 oz. per ton has been shipped. Elsewhere in the vein, however, assays are less encouraging, the silver values ranging from 0.5 oz. per ton over 2 feet to 100 oz. per ton over 10 feet. The few assays given suggest that the widest part of the vein is the richest in silver. Gold values are very low; a trace to 0.02 oz. per ton, lead assays vary between nil and 3.6 percent

averaging 0.65 percent, zinc ranges between nil and 4.2 percent averaging 0.46 percent and copper ranges between nil and 6.3 percent averaging 1.21 percent.

The "Mann Vein" is situated about 500 feet east of and 500 feet below the "High Grade Vein". In the vicinity of the main workings it strikes northeast and dips at an angle of from 45 to 65 degrees to the southeast, but 200 feet to the southwest what has been regarded as the same vein is indicated as striking north 20 degrees east and dipping steeply to the northwest. Beyond the latter point are two or more branching veins, one of which has been followed for 400 feet to the "South Mann" tunnel. The main workings on the "Mann Vein" consist of the "Mann" tunnel at 2500 foot elevation, which is a drift following the vein for 150 feet, and the "Tolin" tunnel some 80 feet lower which evidently succeeded in exposing the vein at only one point, at the foot of an inclined raise between it and the upper tunnel. Macdonald concluded that the vein was cut off by a fault striking north 75 degrees east and dipping 70 to 80 degrees to the northwest, exposed along the north wall of the "Tolin" tunnel, and suggested that the downward continuation of the vein might be found repeated some distance to the southeast. So far as can be determined exploration, has not been continued in this direction.

Germaine reports (p. 7) that " . . . The vein is 35 feet wide, strikes S 60°W, dips at an angle of 55°to the southeast and consists mainly of white quartz mineralized with ribbons of almost solid galena and sphalerite. The surface is inaccessible

except at the entrance to the "Mann" tunnel . . .".

"The vein, as exposed in the "Mann" tunnel, is between 35 and 40 feet in width and consists of quartz, barite, and calcite. The tunnel was started in the footwall of the vein where the best values have been obtained, in lead zinc and silver. The galena and sphalerite occur as nests and bands in the quartz".

Assay plans show mineralization over considerable widths, 25 to 35 feet in places, but the values are not outstanding. The assays for gold vary from nil to 0.01 oz. per ton; for silver from 0.6 oz. to a maximum of 53 oz. per ton and for the most part fall between 1 and 5 oz. per ton. For zinc the values range between nil and 16 percent and average 4 to 5 percent in the "Mann" tunnel but decline to 1 percent at the "Tolin" tunnel and to half a percent at the surface; for lead the values range between nil and 10 percent and average 1 percent or less. Copper values are very low.

Two short drifts, the "North Mann" tunnel 500 feet north of the main workings and the "South Mann" tunnel 600 feet south, make up the balance of the underground workings. The relation of the veins in the former te the other veins of the property has not been determined. This vein varies in width from 1 foot to 15 feet and carries low values in silver, some lead and zinc, and virtually no gold or copper. In the latter the mineralization is about 10 feet in width and carries low values in silver.

On the Chris claim is a vein 12 feet wide carrying

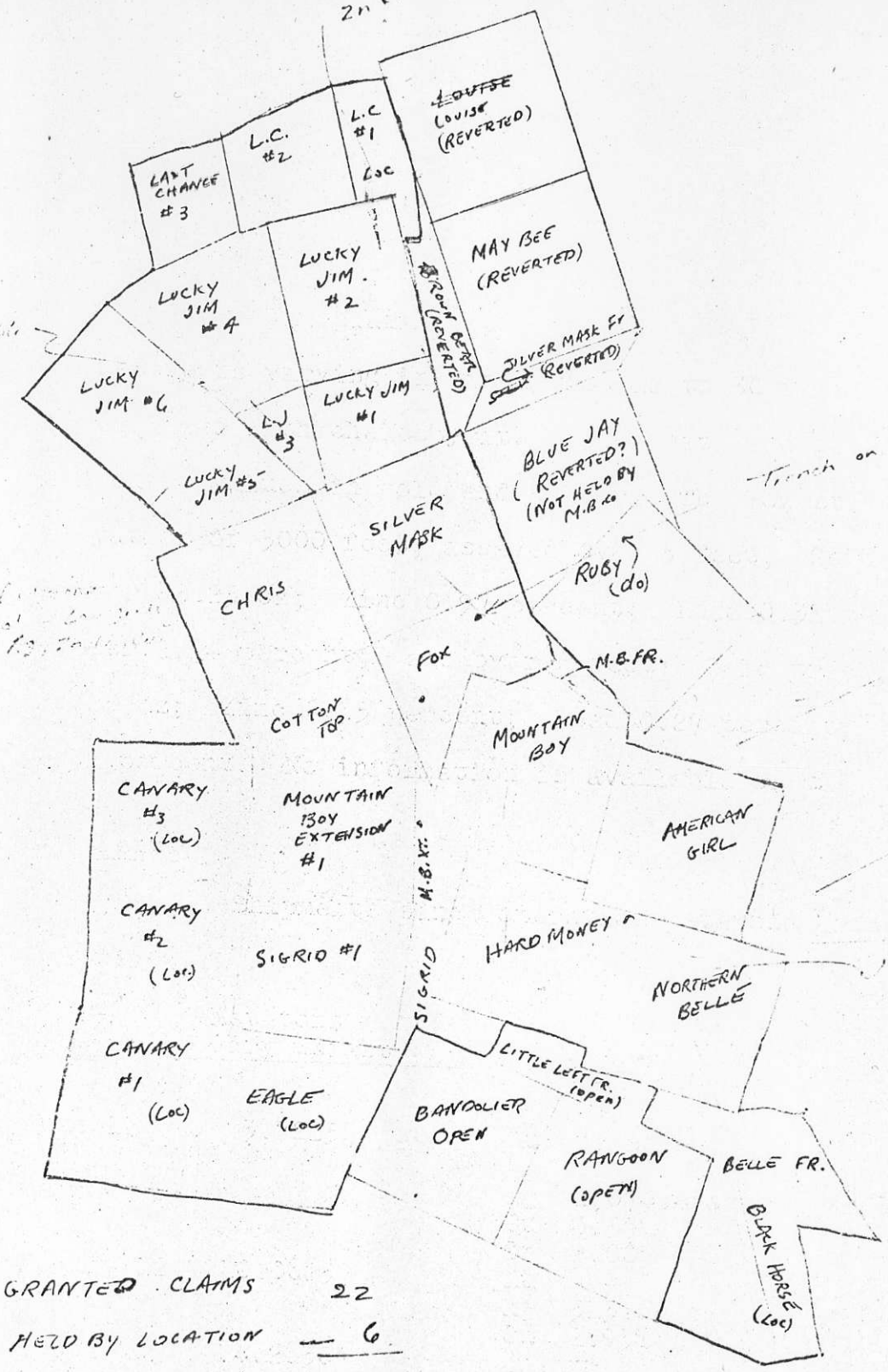
values in gold and copper. On the Sigrid claim is an iron capping carrying low values in silver and some lead and zinc. On the Lucky Jim claims according to Germaine are no less than 5 veins varying in width from 12 to 30 feet. They are mineralized with chalcopyrite, chalcocite and tetrahedrite and carry values in gold and silver. The lowest vein, at an elevation of 3000 feet, assayed over 5 feet; Gold Nil; Silver 93.25 oz; Zinc 0.97 percent; Lead 0.31 percent; Copper 2.14 percent; and over 6 feet: Gold trace; Silver 28.25 oz; Zinc 0.15 percent; Lead 0.27 percent, and Copper 2.32 percent. No information is available on the other veins.

Shipments

Shipments since operations started are summarized below:

Date	Net tons (dry weight)	Assays		Payments
June 11, 1929	3.7215	Au	traces	- -
		Ag	1,074.4 oz	$2,041.69
		Cu	4.57%	35.95
		Zn	2.00%	-
August 12, 1937	10.0825	Au	-	
		Ag	513.85 oz	$2,202.53
		Cu	2.93%	43.86
Sept. 18, 1937	14.2830	Au	tr	
		Ag	591.56 oz	$3,591.99
		Cu	3.29%	69.16
Oct. 7 1937	0.9015	Au	-	-
		Ag	2,027.34 oz	$ 776.98
		Cu	10.67%	17.18
Nov. 13 1937	16.7270	Au	-	-
		Ag	504.90	$3,590.38
		Cu	3.64%	66.22
Totals	44.7155	Ag		$12,435.94
		Cu		232.37
				$12,668.31

03/12/42



CROWN GRANTED CLAIMS 22

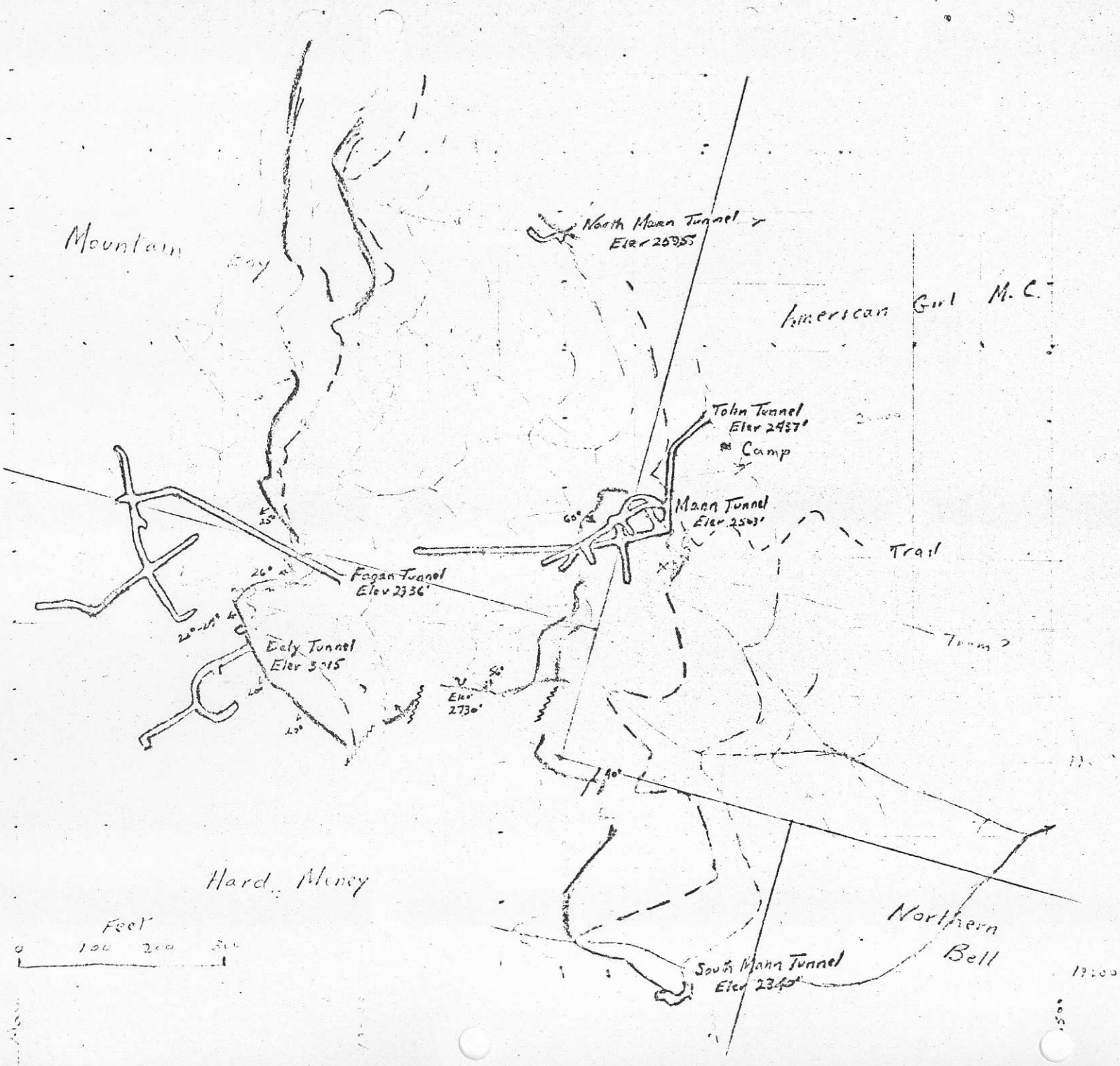
CLAIMS HELD BY LOCATION — 6

28

MOUNTAIN BOY MINING CO. LTD.

4001 ST DENIS ST.
MONTREAL.

Pres. L.M. Lymburner
Vice -J.O. LeFrançois
Sec. -P.E Ostiguy


Mountain
North Mann Tunnel
Elev 2595
American Girl M.C.
John Tunnel
Elev 2487'
Camp
Mann Tunnel
Elev 2503'
Trail
Fagan Tunnel
Elev 2336'
Daly Tunnel
Elev 3015
Elev 2730'
Hard Money
Feet
0 100 200
Northern Bell
South Mann Tunnel
Elev 2340'

Sacked ore - from H-6 vein? - hand sorted

Au	Ag	Zn	Pb	Cu
Tr	2518.1	—	4.3	12.6 - Trethewey

After H. Townsend

	Au	Ag	Zn	Pb	Cu
3' -	.01	2354	—	Tr	1.7
2.0' -	.015	5102	4.2	N.I	1.7
2.6' -	Tr	0.5	N.I	N.I	Tr
2.3' -	Tr	0.7	N.I	N.I	N.I
3.5' -	0.01	11.4	N.I	0.5	Tr
3' -	Tr	8.8	—	—	—
3' -	Tr	0.8	—	—	—
2' -	Tr	276.0	—	—	—
2' -	Tr	432.0	—	—	—
5' -	0.01	76.6	Tr	Tr	0.4
2.5' -	Tr	2.0	—	—	—

S. End Fagan Tunnel

Elev 3006

	Au	Ag	Pb	Cu
3' -	—	6.0	3.6	—
15" -	Tr	11.6	0.2	—
21" -	Tr	659.5	1.4	3.2
6' -	Tr	16.6	.04	—
18" -	Tr	1038.1	3.6	6.3

Footwall

After W.J. Trethewey

Daly Tunnel

Elev 3015

Irreg. 90°

2', Tr, 0.52 — — }
2', Tr, 0.40 — — } H Townsend
— .02, 2.26 — — Curtain

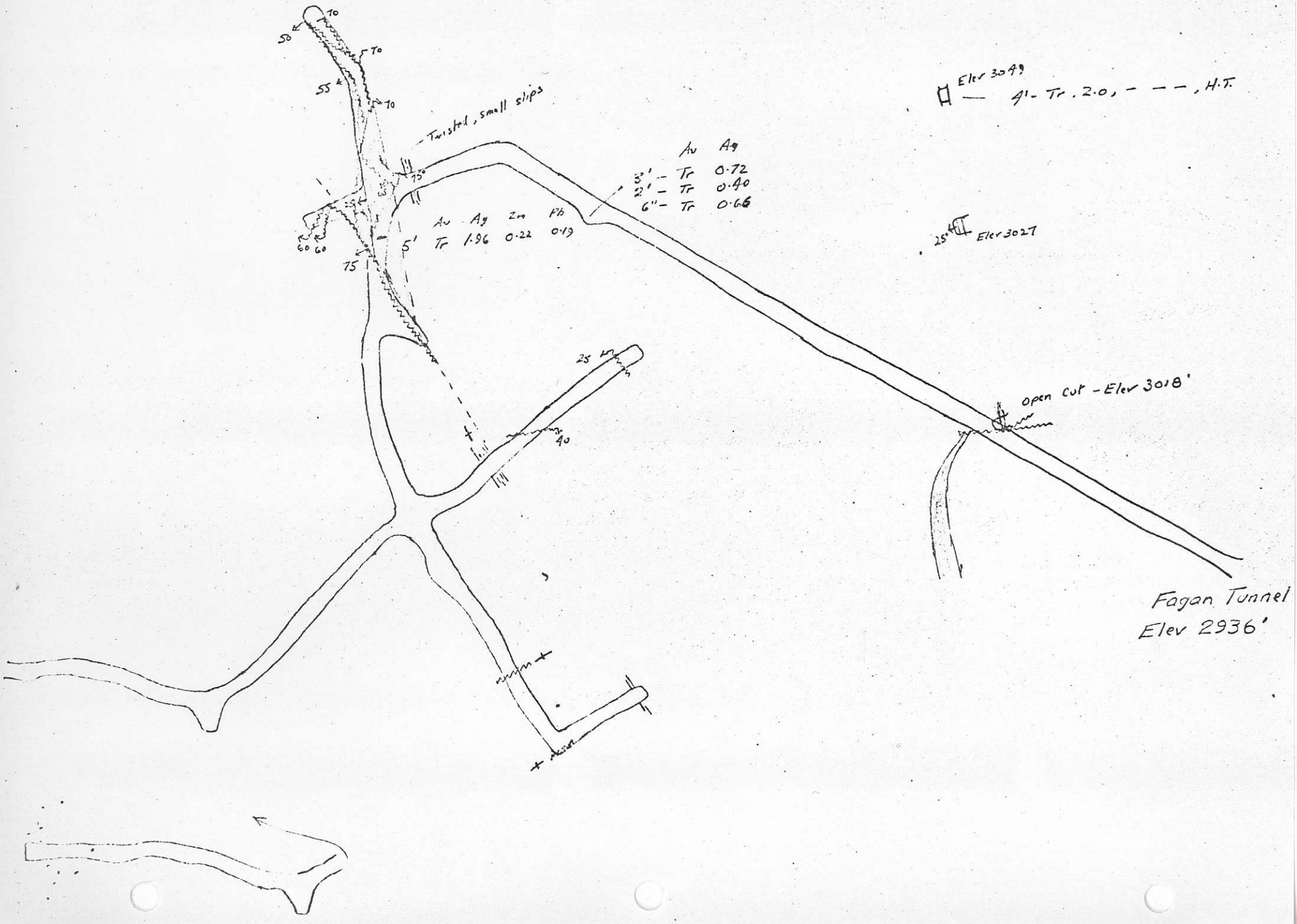
10 ft raise

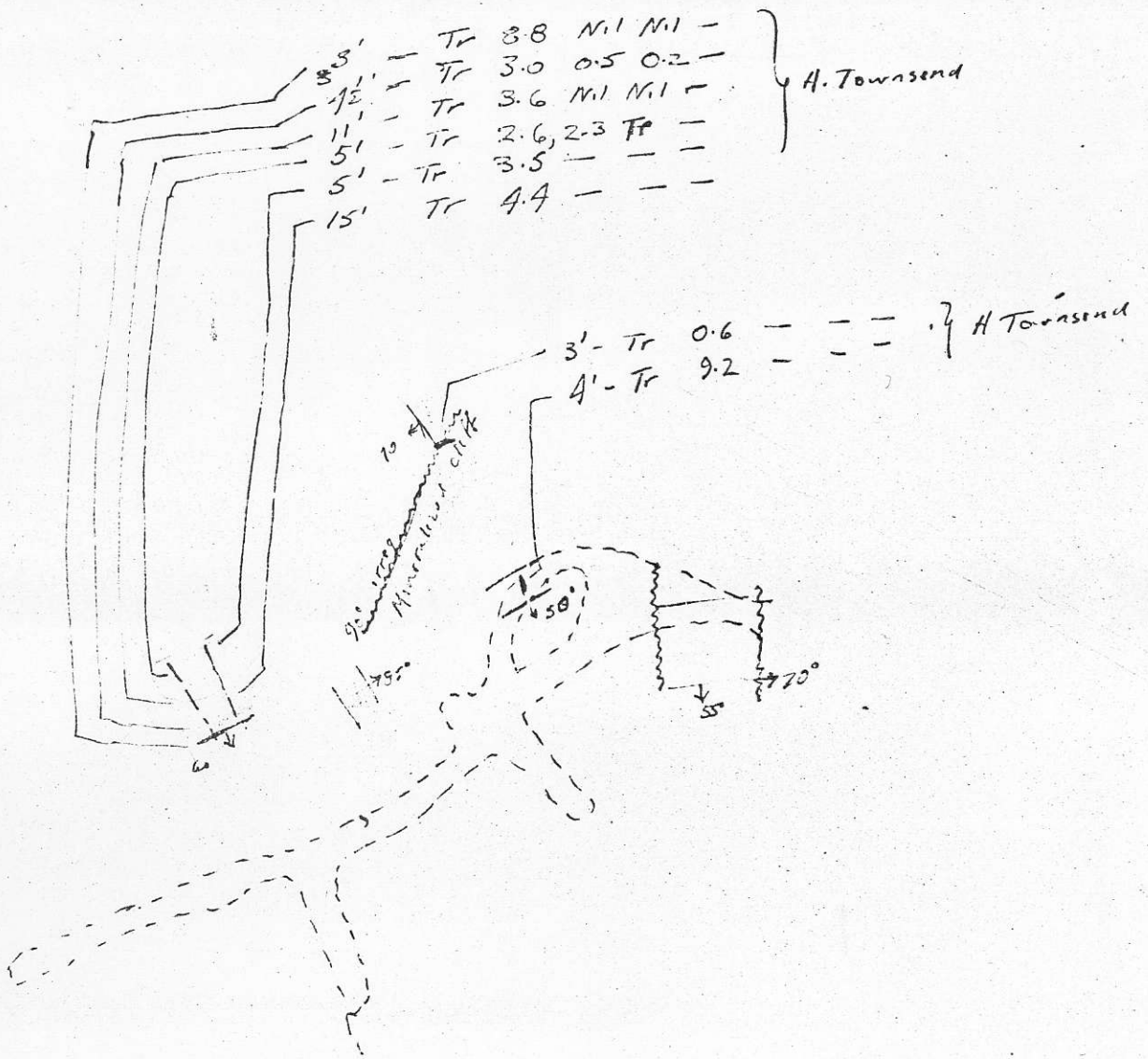
2.5' — 16.9 — 3.7 — 250' from Discovery (Elev 3006)

After W.J. Trethewey

W.D. Cooper — High grade vein

		Au	Ag	
#1 open cut -	4'	.04	186.98	— — —
	3'	— Tr	329.40	— — —
#2 " "	4'	— Tr	8.70	— — —
#4 " "	1.6'	— Tr	536.90	— — —
#5 " "	3'	Tr	317.70	— — —
#6 " "	.15'	Tr	92.10	— — —
#7 " "	2.5'	Tr	4.30	— — —
Wall rock		—	8.30	— — —

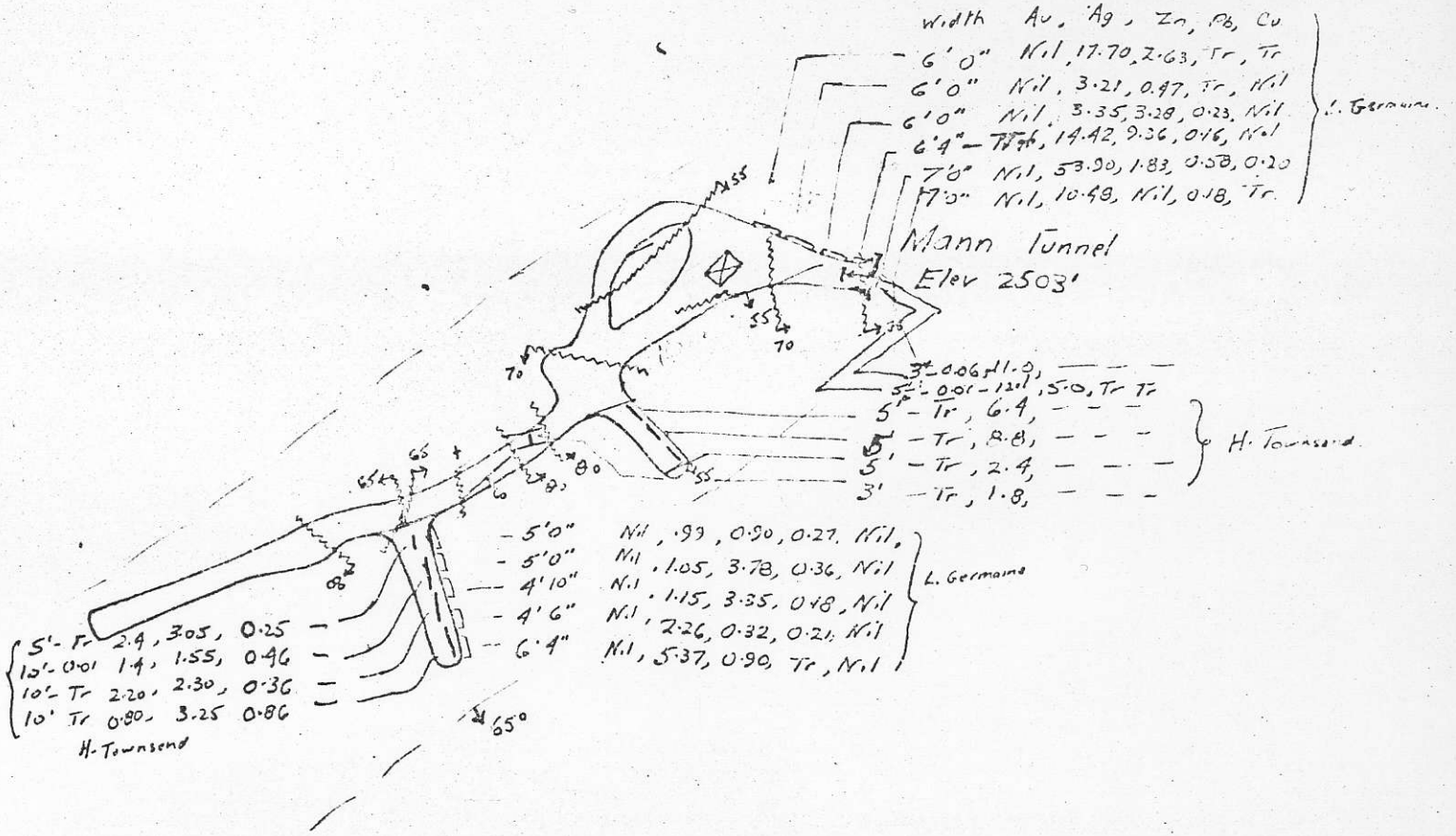

Elev 3049
41 - Tr . 2.0, - - -, H.T.
Twisted, small slips
Au Ag
3' - Tr 0.72
2' - Tr 0.40
6" - Tr 0.66
Au Ag Zn Pb
5' Tr 1.96 0.22 0.19
Elev 3027
open cut - Elev 3018'
Fagan Tunnel
Elev 2936'



Surface Exposures
Mann Vein

			Au	Ag	Zn	Pb	Cu
#1	CC.N.	5'-	—	0.7	3.5	0.2	—
#2	CC.S	6'-	—	3.4	9.7	9.2	—
#3	T.W	8'-	—	3.1	10.3	2.09	—
#4	T.W.	16'-	—	1.1	16.04	1.1	—
#5	C.C.S.	7'-	—	3.3	6.3	0.4	—
#6	T.N.	10'-	—	2.9	7.8	0.3	—
#7	C.C.S.	11'-	—	10.8	0.3	1.9	—

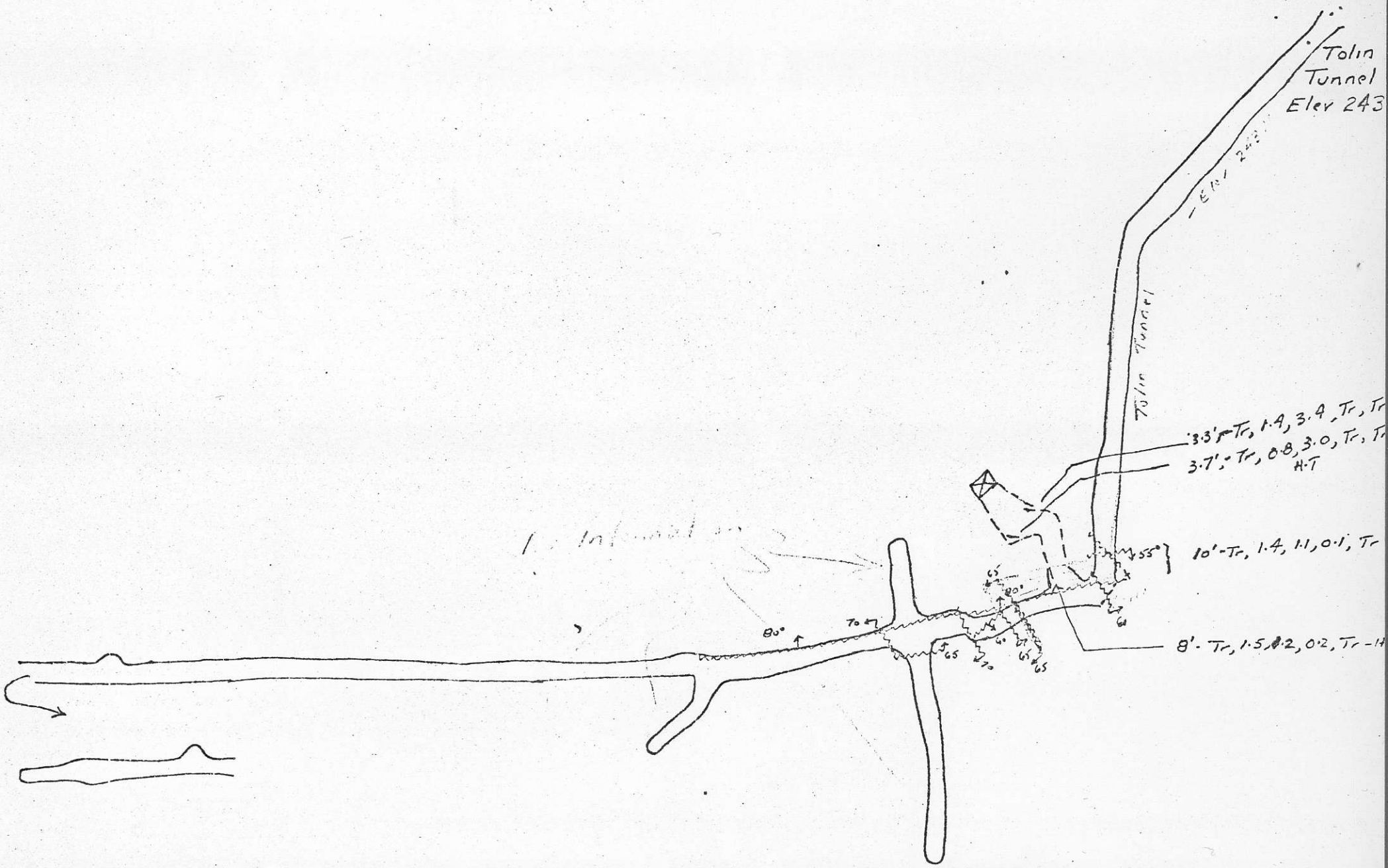
Assays on Mann Vein after W.J. Trethewey
Locations not specified



Leonard Herman report - P7

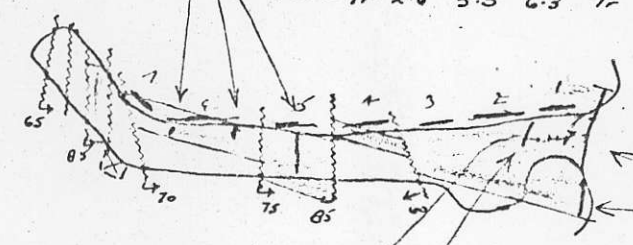
"...The vein is 35 feet wide, strikes S60°W, dips at an angle of 55° to the southeast and consists mainly of white quartz mineralized with ~~almost solid~~ ribbons of almost solid galena and sphalerite. The surface is inaccessible except at the entrance to the Mann tunnel...."

"The vein, as exposed in the tunnel, is between 35 and 40 feet in width and consists of quartz, baryte, and calcite. A tunnel was started in the footwall of the vein where the best values have been obtained, in lead zinc and silver. The galena and sphalerite occur as nests and bands in the quartz


Tolin
Tunnel
Elev 243
Tolin Tunnel
3·3'-Tr, 1·4, 3·4, Tr, Tr
3·7'-Tr, 0·8, 3·0, Tr, Tr
H·T
10'-Tr, 1·4, 1·1, 0·1, Tr
8'-Tr, 1·5, 0·2, 0·2, Tr-H
80°
70°
65°
60°
55°

Diagrams ... after H. Townsend

	Au	Ag	Zn	Pb	Cu
1' -	Tr	2.0	1.8	Tr	Tr
1.5' -	Tr	1.8	4.3	Tr	Tr
4.5' -	Tr	2.6	3.5	6.3	Tr



North Mann Tunnel
Scale 1" = 20'

Quartz barite vein cutting andesite

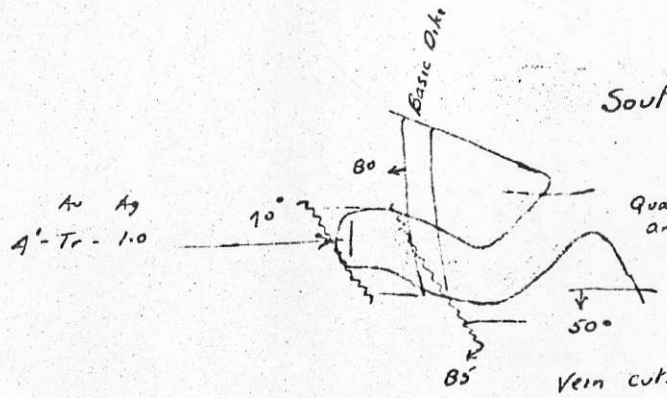
4'	Tr	0.7	0.6	0.8	Tr
5'	Tr	1.4	0.5	Tr	Tr
3.5'	Tr	2.0	1.1	Tr	Tr
5.'	.005	3.6	Nil	0.8	Nil

Assays after Trelfaway - locations not specified

8' -	—	6.4	— 1.0 —
17' -	—	1.3	— 7.9 —
—	—	2.5	— 2.7 —

Assays after L. Germaine

				width
1. -	Nil,	1.39,	2.02, 0.09	— 5'
2. -	Tr,	.82,	9.36, 0.40	— 5'
3. -	Tr,	.90,	4.10, 0.77	— 5'
4. -	Tr,	2.03,	0.36, 0.29	— 5'
5. -	Tr,	1.02,	6.70, 0.10	— 4'
6. -	Tr,	1.99,	7.56, 3.53	— 10'
7. -	Tr,	2.28,	6.77, 6.17	— 10'



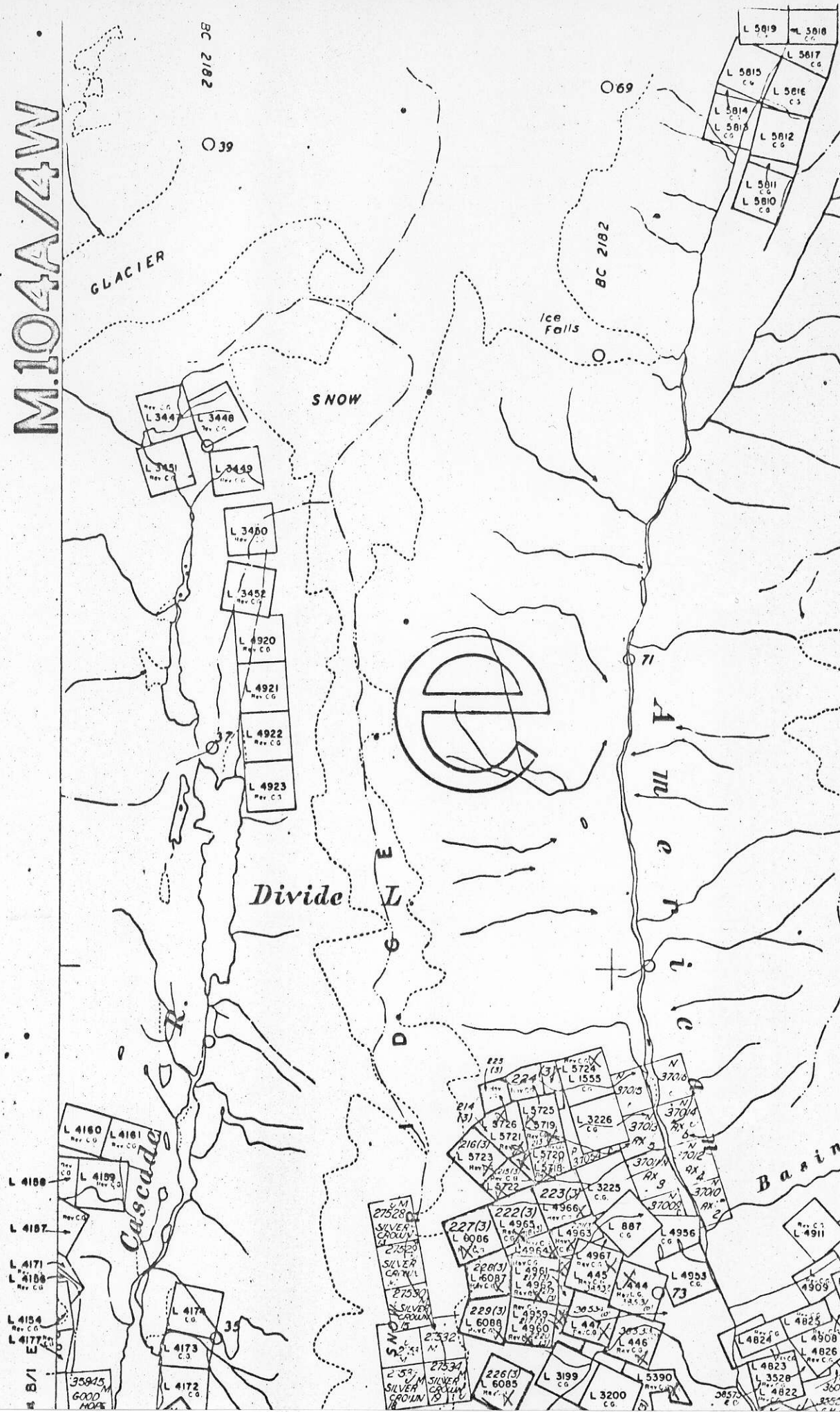
South Mann Tunnel
App. Elev 2380'
700' south of Mann Tunnel

Au Ag
4' - Tr - 1.0

Quartz-barite and some galena

Vein cuts andesite

W. Hill


M.104A/4W
GLACIER
SNOW
Ice Falls
BC 2182
Divide
Cascade
Basin
L 3447
L 3448
L 3451
L 3449
L 3450
L 3452
L 4920
L 4921
L 4922
L 4923
L 4160
L 4161
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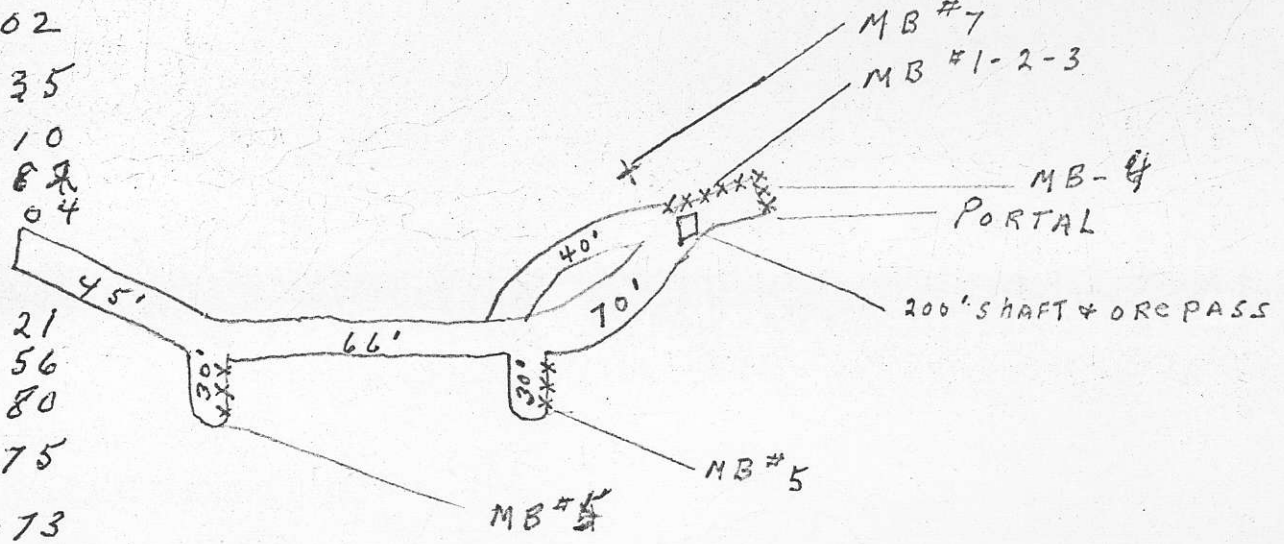
L 4908
L 4826
L 4823
L 3528
L 4822
27528
SILVER CROWN
27530
SILVER CROWN
27534
SILVER CROWN
35915
GOOD HOPE
69
39
37
71
73
35

M.B #1	AG	16.6
	P.B	1.92
	Z N	9.88
	C U	.11
M.B #2	AG.	3.05
	P.B.	.67
	Z N	1.72
	C U	.02
M.B. #3	A G.	2.35
	P.B	.10
	Z N	.84
	C U	.04
MB #4	AG.	75.21
	P.B.	4.56
	Z N	7.80
	C U	.75
M.B #5	A G.	2.73
	P.B.	.17
	Z. N	1.57
	C U	.02
M.B #6.	A G.	2.19
	P.B.	.20
	Z N	1.49
	C U	.20
M.B. #7	A G.	6.44
	P.B	.26
	Z N	1.26
	C U	.07



NOT TO SCALE