

----- 413 Granville St.

May 25, 1956.

Mr. A. M. Ham, Manager,
Western Exploration Co. Ltd.
Silverton, B. C.

Dear Art:-

Herewith is a copy of my letter to Riddell, Stead, Graham and Hutchison giving the estimated ore reserve tonnages. Thanks for the data you sent which was quite helpful to fill out my data which only extended along the drift up to Sept 1st 1955.

I figured the Hecla tonnage from the length of ore in the drift multiplied by the width (brought up to $3\frac{1}{2}$ feet stoping width) multiplied by 50 feet up the dip of the vein, this product divided by 10 gave the tons. The 8000 tons figured previously from drill holes was added in and also 1000 tons of ore in storage in the Mammoth.

The value of the ore (not reported to R.S.G.&H) is figured from drift samples up to Sept. 1st, last and the figures you sent for the remainder of the drift, all brought up to $3\frac{1}{2}$ feet stoping width, at prices of 16¢ lead 13¢ zinc and 90¢ silver. This gave an average gross value of \$34.89 per ton for the Hecla drift. The Monarch drill hole ore calculated at the above prices gave an average value per ton of \$73.61. The combined Monarch-Hecla ore value (gross) is \$54.81 per ton or a total of \$756,352.

These values are of course approximate only but they certainly look good.

I'm looking forward to seeing you in about a week.

Sincerely,

Estimate of Ore Reserve April 30, 1956

Hecla Drift plus Monarch Ore.
 Preliminary - Subject to correction after sampling

Completed

See letter of May 22, 1956

Part of AMH 2nd section

Samples 1778-1785 — Average 2.93 Pb - 9.06 Zn - 27.15 Ag over 1.7 ft. Length 35 ft.
 at 16¢ 13½¢ 90¢
 \$9.44 24.43 24.73 " 1.7 oz \$28.46 over 3.5' stoping width
 Gross Value

1762-1775 — Average 2.90 9.69 29.44 over 2.73 ft. Length 80 ft. (AMH 2nd section)
 at 16¢ 13½¢ 90¢
 \$9.28 26.16 26.58 over 2.73 ft or \$48.31 over 3.5' stoping width
 Gross Value

1749-51-53-36-58 — Average 1.00 2.74 - 7.71 over 2.3 ft. Length 45 ft. (AMH 1st section)
 at 16¢ 13½¢ 90¢
 \$3.20 7.40 6.94 over 2.3 ft or \$11.52 over 3.5' stoping width
 Gross Value

65' balance of section 3 of AMH
 50 Section 4

115 feet @ 3' wide 2.1 Pb 5.4 Zn 23.5 Ag Average
 @ .16 .135 .90
 \$9.04 14.58 21.15 over 3.0 ft or \$36.66 over 3.5 ft width
 Gross Value

	Product
35 ft long @ \$28.46	996.10
80 " " @ 48.31	3864.80
45 " " @ 11.52	518.40
115 " " @ 36.66	4215.90
<u>275</u>	<u>9595.20</u>

9595.20 ÷ 275 = \$34.89 Avg Gross Value

long Wid up along vein
 275 x 3.5 x 50 = 962.5 x 50 = 48125 cu ft. @ 10 cu ft/ton = 4812 Tons

Estimate 4800 Tons along Hecla level by drift
 8000 " above " by D-D Holes

12,800 Tons estimated April 30, 1956 (plus 1000 Tons stored) = 13800 Tons
 8000 tons @ 73.61 = \$588,880
 4800 tons @ 34.89 = 167,472 } estimated gross value
 In storage 1000 tons @ 54.81 = \$54,810 }
 Total 13,800 tons

1775 - 1.8 - 4.7 - 22.4 x 1.5 = 2.70 - 7.05 - 33.60
 1774 5.1 - 11.8 - 58.1 x 3.2 = 16.32 - 37.76 - 166.00
 1772 2.4 - 11.9 - 26.5 x 3.0 = 7.20 - 35.70 - 79.50
 1773 1.6 - 10.2 - 22.1 x 2.3 = 3.68 - 23.46 - 50.83
 1771 5.5 - 6.3 - 5.2 x 2.5 = 13.75 - 15.75 - 12.50
 1769 2.9 - 9.0 - 30.8 x 2.5 = 7.25 - 22.50 - 77.00
 1770 5.3 - 16.4 - 51.7 x 3.0 = 15.90 - 49.20 - 155.10
 1768 3.8 - 17.8 - 25.2 x 3.0 = 11.40 - 53.40 - 75.60
 1766 0.7 - 13.3 - 10.8 x 3.0 = 2.10 - 39.90 - 32.40
 1767 1.9 - 10.2 - 17.3 x 3.0 = 5.70 - 30.60 - 51.90
 1765 1.1 - 3.9 - 6.6 x 2.5 = 2.75 - 9.75 - 16.50
 1764 3.1 - 6.9 - 34.0 x 3.0 = 9.30 - 20.70 - 102.00
 1763 4.4 - 6.1 - 47.7 x 3.0 = 13.20 - 18.30 - 143.10
 1762 1.3 - 5.8 - 16.8 x 2.0 = 2.60 - 11.60 - 33.60

14) $\frac{37.5}{2.67}$

113.85 375.67 1136.13
 3.03 10.02 30.27

15) $\frac{40.9}{2.73}$

This sheet - average of samples in Niela drift between Stations 758A & 763 approx

Values given are estimated net value at smelter based on payments -
 Lead 9.25¢ per lb
 Zinc 5.75¢ " "
 Silver 70.5¢ " oz

113.85 - 375.67 - 1136.13
 4.93 - 20.84 - 68.03
 118.78 - 396.51 - 1204.16
 2.90 9.69 29.44

5.36
 11.16
 23.12
 \$ 39.64 @ 3.5¢ = \$ 30.92

1745 - 1.3 - 8.5 - 20.6 x 4.0 = 5.20 - 34.00 - 82.40
 1743 - 0.7 - 3.8 - 11.1 x 4.6 = 3.22 - 17.18 - 51.06
 1744 - 4.0 - 6.9 - 44.2 x 1.6 = 6.40 - 11.04 - 70.72
 1742 - 3.4 - 1.45 - 6.13 - 20.01

A →

A 1.45 - 6.13 - 20.01 x 3.4 = 4.93 - 20.84 - 68.03

no samp 0 - 0 - 0 x 4.8 = 0 0 0
 1749 0.2 - 4.5 - 4.4 x 2.1 = 0.42 - 9.45 - 9.24
 1751 0.2 - 2.4 - 6.0 x 4.3 = 0.86 - 10.32 - 25.80
 no ore 0 0 0 x 2.5 = 0 0 0
 1753 3.9 - 2.5 - 11.7 x 2.2 = 8.58 - 5.50 - 25.74
 1736 0.2 - 5.1 - 12.7 x 1.0 = 0.20 - 5.10 - 12.70
 1758 1.4 - 4.5 - 20.1 x 1.6 = 2.24 - 7.20 - 32.16

~~1723 58.41 - 173.67~~
~~0.91 2.09 9.18~~
 13.7 13.7) 12.30 37.57 105.64
 2.3 1.00 2.74 7.71

\$ 1.85
 3.15
 6.05
 \$ 11.05 @ 2.3¢
 7.26 @ 3.5¢

hm

$$1784 - 3.6 - 2.2 - 37.9 \times 1.3 = 4.68 - 2.86 - 49.27$$

$$1785 - 6.7 \quad 8.0 \quad 12.8 \times 1.9 = 12.73 - 15.20 - 24.32$$

$$\begin{array}{r} 3.2 \overline{) 17.41} \\ \underline{6.4} \\ 11.01 \\ \underline{6.4} \\ 4.61 \\ \underline{3.2} \\ 1.41 \end{array}$$

$$1784 \} 5.4 - 5.6 - 23.0 \times 3.2 = 17.41 - 18.06 - 73.59$$

$$1785 \} 1.0 - 1.5 - 5.5 \times 1.5 = 1.50 - 2.25 - 8.25$$

$$1782 \quad 0 - 0 - 0 - 0.03 = 0 \quad 0 \quad 0$$

$$1781 \quad 0.8 - 5.8 - 43.5 - 1.2 = 0.96 - 6.96 - 52.20$$

$$1780 \quad 0.3 - 16.7 - 7.9 - 1.2 = 0.36 - 12.84 - 9.48$$

$$1779 \quad 5.3 - 2.5.1 - 96.4 - 1.8 = 9.54 - 45.18 - 90.00$$

$$1778 \quad 3.0 - 12.8 - 73.3 - 1.9 = 5.70 - 24.32 - 95.00$$

$$1777 \quad 1.0 - 8.9 - 20.6 - 0.75 = 0.75 - 6.68 - 15.45$$

$$9 \overline{) 14.2} = 36.22 - 116.29 - 343.97$$

$$1.6 - 2.55 - 8.19 - 24.22$$

5.42
10.41
21.32
37.15
x 1.7 mil
or
18.03 for 3.5 ft

$$1737 - 1.8 - 7.8 - 19.6 \times 1.1 = 1.98 - 8.58 - 20.90$$

$$1735 - 0.2 - 7.1 - 12.7 \times 1.3 = 0.26 - 9.23 - 16.51$$

$$1733 - 1.6 - 2.6 - 12.6 \times 2.3 = 3.68 - 5.98 - 28.98$$

$$3 \overline{) 4.7} = 5.92 - 23.79 - 66.39$$

$$1.6 \checkmark = 1.26 \quad 5.06 \quad 14.12$$

$$1738 - 1.0 - 17.9 - 39.1 \times 1.4 = 1.40 - 25.06 - 70.00$$

$$1736 - 0.8 - 5.7 - 19.6 \times 1.0 = 0.80 - 5.70 - 19.60$$

$$1734 - 1.9 - 5.2 - 18.3 \times 3.0 = 5.70 - 15.60 - 54.90$$

C \longrightarrow

$$3 \overline{) 5.4} = 7.90 - 46.36 - 144.50$$

$$1.8 \checkmark \quad 1.46 \quad 8.58 \quad 26.76$$

$$1.6 - 1.3 - 5.1 - 14.1 \times 1.6 = 2.08 - 8.16 - 22.56$$

$$1.5 - 8.6 - 26.8 \times 1.8 = 2.70 - 15.48 - 48.24$$

$$1.46 - 3.3 - 9.1 - 34.7 \times 1.7 = 5.61 - 15.47 - 59.99$$

$$1.47 - 0.17 - 5.3 - 19.5 \times 1.2 = .84 - 6.36 - 23.40$$

$$1.50 - 0.2 - 2.3 - 20.9 \times 2.0 = .40 - 4.60 - 41.80$$

$$1.40 \checkmark \quad 2.0 = 1.40 \quad 2.70 \quad 7.67 \quad 20.79$$

$$1.2.3 \checkmark \quad 12.03 \quad 17.67 \quad 20.79$$

$$1.75 \checkmark \quad -0.98 - 6.31 - 16.31$$

1.81
7.25
12.81
21.87 max 17.5 ft
10.93 " 3.5 ft

B C