



117 Aug 09  
 1000 4530

HARTNEY MINE - contin.

BS  
 000100

Sta	Bnd	HA Rt	S dist	VA	HI	HP	Calc Bear	H. dist	Vert Dist	Lat		Dep.		Coordinates		Elev	Grade	To A	Elev Rail
										N+	S-	E+	W-	Lat	Dep.				
							S 79° 26' W											1A	-6.3
1	1A	25° 33'		0	2.85	3.59	S 75° 01' E	41.95		10.85	42.52	1000.00	1000.00	4306.30			100	4302.00	
1A	100	152° 39'		0	-2.03	3.01	N 77° 38' E	115.40		24.72	112.72	1024.72	1112.72	4307.28			101	4300.4	
100	101	215° 43'		0	0.63	5.07	S 66° 39' E	187.39		74.27	172.04	950.45	1284.76	4311.72	N 89° 45' E + 24-30 S 65° 45' E		102	4304.4	
101	102	182° 04'		0	2.99	3.28	S 64° 35' E	57.17		24.54	51.64	925.91	1336.40	4312.01			103		
102	103	129° 31'		0	2.34	3.12	N 64° 56' E	156.14		66.15	141.43	992.06	1477.83	4312.79	N 39° 20' E + 24-30 S 63° 30' E		104	4306.8	
103	104	133° 02'		0	1.72	2.31	N 17° 58' E	25.50		24.26	7.87	1016.32	1485.70	4313.38	N 60° 45' W + 24-30 N 17° 45' E		105		
104	105	187° 36'		0			N 25° 34' E	31.2		28.14	13.46	1044.46	1499.16				A		
	A			0				10.0											
104	105	274° 18'		0			S 67° 44' E	16.0		6.06	14.81	1010.26	1500.51					face X cut	
102	103	129° 31'		0			N 64° 56' E	125.5		53.17	113.68	979.08	1450.08					to X-C	
102	2 X-C	251° 15'		0			S 43° 49' E	40.0		29.86	27.69	950.22	1477.77					face X-C	
101	102	48° 08'		0	2.99	1.34	N 18° 31' W	20.34		19.29	6.46	969.74	1278.30	4310.07			106		
102	106	252° 19'		0	2.02	2.45	N 53° 42' E	54.64		32.27	44.09	1002.01	1322.39	4310.50			107	4304.5	
106	107	177° 21'		0	1.86	2.02	N 51° 09' E	38.82		24.35	30.23	1026.36	1352.62	4310.66	N 27° 30' E + 24-30 S 52° 0' E		108	4305.3	
107	108	143° 37'		0	1.08	0.80	N 14° 46' E	25.13		24.30	6.41	1050.66	1359.03	4310.38			109	4305.6	
108	109	148° 10'		0			N 17° 04' W	64.8		61.95	19.02	1112.61	1340.01				A		
	A							13.0											
102	106	252° 19'		0			N 53° 48' E	24.6	Thence S 44° E (true) 14.0 ft to face X-C.									face	

Copy to [unclear]

N 925 to 1112 = 187 = 47" 14"  
 E 959 to 1922 = 963 = 24.1" 40"

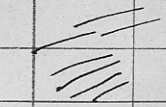
Sl Rail @ #2<sup>1/2</sup> assumed 4300'

Survey of two lower tunnels of the HARTNEY MINE Silverton B.C. June 2, 3 & 4, 1947

Instrument C.C. Starr  
 Assistant W. Postelthwait  
 Polaris Observation T.R. Buckner

BS	On Δ	Hor Ang RT	S Dist	Vert Ang	HI	HP	Calc Bear	Hor Dist	Vert Dist	Lat		Dep		Coordinates		Elev	Sight	To Sta	Elev rail	
										A +	B -	E +	W -	Lat.	Dep.					
100	B	297° 46'		49° 30' (±)			N 0° 10' E		cloudy											
1A	100	317° 25'																		
1	1A	25° 33'	41.95	0	2.85	3.59														
2	1	190° 23'	192.91 145.12	-32.23 -20° 52'	2.63 0.0	0.0 -2.85		162.91 135.60	-103.32 -51.69											
Polaris	B	62° 14'					N 62° 24' E							assumed 1000.00	1000.00	4306.30		100	assumed 4300.00	
B	100	42° 35'		0	3.59	2.85	N 75° 01' W	41.95	0	10.85		40.52	1010.85	959.48	4299.86			1A		
100	1A	334° 27'			2.85	2.63	N 79° 26' E	298.45	+155.01	54.73		293.39	1065.58	1252.87	4455.09			1		
1A	1	169° 37'		0	2.63	4.14	N 69° 03' E	36.44		13.03		34.03	1078.61	1286.90	4461.86			2	-6.3	
1	2	203° 22'	52.32	+10° 09'	1.82	1.71	S 87° 35' E	52.31	+1.05		2.21	52.27	1076.40	1339.17	4462.80			3	-6.2	
2	3	218° 04'		0	1.54	1.71	S 49° 31' E	47.59			30.90	36.20	1045.50	1375.37	4462.57			4	-6.3	
3	4	137° 03'		0	1.98	3.58	N 87° 32' E	187.39		8.07		187.22	1053.57	1562.59	4464.17			5	-6.4	
4	5	153° 10'		0	1.75	1.99	N 60° 42' E	26.88		13.15		23.44	1066.72	1586.03	4464.41			6	-5.9	
5	6	209° 06'		0	1.51	2.92	S 89° 48' E	90.43			0.32	90.43	1066.40	1676.46	4465.82			7	-6.05	
6	7	183° 49'		0	1.62	2.91	S 86° 23' E	130.61			8.24	130.35	1058.16	1806.81	4467.11			8	-6.2	
7	8	173° 58'		0	1.62	3.04	N 87° 35' E	43.55		1.84		43.51	1060.00	1850.32	4468.53			9	-7.0	
8	9	195° 05'		0	2.47	2.53	S 77° 20' E	57.37			12.58	55.97	1047.42	1906.29	4468.59			10	-6.1	
9	10	177° 05'	16.2	+10° 30'	1.2	0	S 80° 15' E	15.9			2.69	15.67	1044.73	1921.96			10A	on much file		
	10A							33.0												
1	2	203° 22'					S 87° 35' E	46.3	To x-c	running	True N 44° E	for 50' +?	(dub water)						face Drift	
3	4	137° 03'					N 87° 32' E	16.5	To x-c	"	True N 14° E	20.0' to							face x-cut	
6	7	183° 49'					S 86° 23' E	120.5	To x-c	"	True S 10° W	14.5' to							face x-cut	

Check Calc to Needle — leaving out all varying more than 2° (three together in upper turn) the diff of 5 readings is 0-02'.



$\Sigma$  Elong 3:09 LCT June 1

W Elong 15:00 LCT June 1

2)  $\frac{11:51}{5:55}$  LCT

15:00 LCT ~~June 1~~

Calmination  $\frac{15:00}{20:55}$  LCT June 1

Merid.  $120^\circ$  is 8 ho W of Greenwich  
Hartney  $\Sigma$  of 12.0 by 12 min

Hartney Calmin  $\frac{7:48^{27}}{12:07}$  W of Greenwich June 1

3<sup>h</sup> - 09 June 1

1 - 11 July 1

30)  $\frac{1-58}{3.9 \times 3 = 12 \text{ min (mins)}}$

20:55 (LCT)  
~~12~~ (stand time)

20:43 ~~LCT~~ = 8:43 PM  
12 min

8:31 PM

→ 9:31 DST

52

48

107

27

90

131

213

57

16

33

578

945

1523

36

~~300~~

115

187

57

195

6

250

945

10:20  
9:31

0:49 min after culmin      65-45  
113-21

In 6 ho varies 10'10' - in 1 ho varies

$$\frac{70}{6} = 11.7 \text{ min or } \frac{11.7}{60} = .195' \text{ per min}$$

$$.195' \times 49 \text{ min} = 9.65 \text{ min of angle } \Sigma \text{ of Culm.}$$

N 79-26 E

113-21

64-56

17-58

51-09

$$\begin{array}{r} 5) \underline{324-170} \\ 65-22 \end{array}$$

N 78-50 E

114-15

63-50

17-45

52-00

$$\begin{array}{r} 5) \underline{324-160} \\ 65-20 \end{array}$$

$$\begin{array}{r} 170 \\ \underline{240} \\ 5) \underline{410} \\ 82 \end{array}$$

$$\begin{array}{r} 160 \\ \underline{240} \\ 5) \underline{400} \\ 80 \\ 6 \end{array}$$