

# Great Northern vein system

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FILED UNDER  
82KNW030

003892

PROPERTY FILE

List of drawings

- Fig. & - Great Northern sub-area:  $1'' = 100'$   
"  $\beta$  - Sketch <sup>plan</sup> of major faults & fault blocks.  
"  $\gamma$  - Composite geological plan of Broadview area  
 $1'' = 40'$ .  
"  $\delta$  - True Fissure - Blue Bell vein outcrops;  
 $1'' = 40'$ .  
"  $\epsilon$  - True Fissure & Blue Bell mines - composite  
surface & underground plan of vein;  $1'' = 40'$ .  
Sec. AA' through Broadview Nos. 1 & 2 levels;  $1'' = 40'$   
" DD' " True Fissure " 2, 3, & 4 " & north  
raise  $2 \leftarrow 3$ ;  $1'' = 40'$ .  
" EE' through lower Blue Bell ~~drift~~ & cut  
south of True Fissure Creek;  $1'' = 40'$ .  
" FF' through south end upper Blue Bell drift,  
 $1'' = 40'$ .  
" GG' through Blue Bell raise;  $1'' = 40'$ .

Plot on 100-scale

~~8dvw shaft & ch fr frontline plan ✓~~  
~~TF vein face fr reduc. ✓~~  
~~5/c nr 238 ✓~~

Site for Keele's 8dvw map

See Edwards re BN claims.

TF composite level plan ✓

Sections

~~The Bell - St. Elmo? - 2223~~

Samples assayed ✓

work on insitu

TS

F. A. replottig for final

over

• 00,000 05

Decide

0/ce on Fig. cc?

so-ords?

No. of secns?

Name? - sub-area, vein system area?

Keele's assays (old, & new T.F. so. now defunct).

Claims or claim map?

weather fine,  
hot

## TRUE FISSURE. 19-8-57

GNE

Rodman to Eastwood  
lost (main) Groveslying in adults and continuing  
around the establishment.

Sta	F.Son. sta	B.Son. sta	height of first red interval	vertical angle	height of point	$\Delta E$	Final $\Delta E$	HD	hor dist.	elev. ft	comments & watercourse
AM (51830)	01	4'	3.7 hh	+12°55'	1.3	+174	+176.7'	710'	5360.5	m. N. of Bl. bell (1st 2 adults)	
	02	"	3.3 hh	+12°20'	0	+140	+136.8'	631'	5320.3	on hillside S.E. of town	
	03	"	3.1 hh	+10°37'	3.0	+114	+115	600'	3290.3	on camp creek	
	07	"	2.3 hh	+9°57'	4.0	+39 $\frac{1}{2}$	+39 $\frac{1}{2}$	451'	5223.3	near side of dump between adults	
	09	"	2.25 wh	-0°20'	8.0	-1.3'	-5.3	225'	3178.5	on bank, on north side of Bl. bell # 2 adult	
						2 UNCON					
	A2	4'	81 hh.	-12°58'	3.9	-17.2	-16.6'	78	5167.2	518.5 m. upstream of road	
	06	"	3.8 wh	+20°32'	5.5	+91.5	+93'	249'	5276.2	on hillside 950' S.E. W.W.	
	07	"	1.9 hh	+21°37'	3'	+123'	+124'	330'	5301.8	above at 6 m. bank	
	08(h)	"	3.00 hh	+8°22'	6'	+96'	+94'	590	5277.3	edge of pool of Bl. bell	
	09	"	3.7 hh	+16°50'	5'	+207	+206'	678	5329.3	edge of river below	
	010(b)	"	2.9 hh	+10°56'	9'	+25.5	+33.5'	468'	5267.3	on bank contour 16.5 ft.	
	011	"	4.9 hh	+14°37'	5'	+212	+211'	817'	5394.8	pete in stream (biggest by water 20 ft. down)	
	012(b)	"	1.0759	+16°03'	3'	+118'	+119	401'	5297.3	blow out and E. 5 ft.	
	013(b)	"	2.9 wh	+11°26'	7'	+56'	+53'	250'	5236.3	blow contour 5 ft. slab bent down	
	014(b)	"	1.85 wh	+0°35'	6'	+1.9'	+0	185	5137	" bend in m. 20' P.N. up	

82KNW030

W sunny  
hutTRUE FISSURE

19-8-57

GN

Sta	FS.	BS	H.I	R1	V4	HD	ΔE-in	Final ΔE	HD	day pt.	Comments
Δ1	015		4°	4.35 hh	+20°15'	5	+312°	+311°	850	59 48	slab contains interdiam from line from ext road cut S
(5103.3)											
016(h)		5		2.4 wh.	+1°40'	4	+7	+7	237	5191	blasted area,
017.				8.25 wh.	+18°49'	5	+250	+249	742	5433	rocks, large and
018.				2.7 hh	+14°16'	55	+128°	+126°	505	5310	bottom of slab face of rock, containing two
019				3.56 hh	+19°39'	5	+225	+224	631	5408	top of bould. face.
020				3 hh	+14°44'	3	+147°	+148°	560	5332	"on contact"
021				3.42 hh.	14°55'	6'	+170	168	640	5352	in weeds, on nose going to country road
022				3.6 hh	15°57'	6	+189	187	678	5371	on weeds
023											

82KNW030

Poles shots

weather.  
warm, dullish.

TRUE FISSURE 20-2-57.

GN  
3

- same general area as yesterday

Sta	FS.	B.S.	H.I.	R1	V.F.	H.P.	$\Delta_{\text{elev}}$ (Poles)	Final DE	H.D.	elevation comments
△2		△1.	3'	8 wh.	+10°33'	3.9	+145'	+141'	77.9'	5109.7 20' S.E. 5108.5 20' 505'
(5108.5) 0/16				2.6 hh	-29°31'	2	+85'	+86'	505'	5254.5 mixed new top
0/7				6.3 wh	+13°35'	6.7'	+144'	+140.3'	599'	5302.8 30' off on weeds
0/8				3.45 hh	+15°39'	7	+155'	+151'	640'	5319.5 higher middle 100'
→ △4				4.5 hh	+18°13'	5	+266'	244	810'	-450.5 in weeds 200' Right flume
△5. 0/19		3½		6.0 hh	-10°54'	4.	-224'	-226'	105½'	5095' in centre of rd 200' below

82KNN030

w. SULLY, TRUE FISSURE  
SULLY, broadening.

20-8-57.

Blanks taken

GN4

Sta	F.S.	B.S.	H.H.	R.I.	V.F.	H.P.	Delay	Final Echo	H.D.	elev. pt	Comments
△2	76)	3	3' hh.	13°33'	10'	+135½	+128½	570'	5397.	mouth of hollow at 600' S. of stream	
△5.			2.8wh	-10°42'	2.3'	-51.6	-50.9	271'	5117.6	on ledge id. 40 p.m.s.	
△5	△2	3½	14 hh	+9°23'	3.6	+45.5	+45.4	271'			
(5723.5)	8(6)	.	25 hh	-9°08'	3	-26.5	-26.	165'		by creek mouth	
(8)	.		5.05 wh	-26°47'	4.5	-200'	-201'	101'		(Cer 15° N, 10' down stream) on dump's land (belongs to Mr. Morgan's easement) (TENNA)	
(9)	.		779h	-29°30'	5.0	-182'	-133½	232'		10' N., 10' above on 150' upstream of 9(6).	
△2.	3½	2.8wh.	+9°10'	5.4	+46.1	+44.2				- check shot on Sta 2. The Sta 2->sta 5 for sight reducing unit angle.	
		5.6		3.5		<u>say 15'</u>					

82KNW030

GNS

AUGUST 30th 1957

TRUE FISSURE

STA.	VERTICAL	H.F.	R.F.	REMARKS	H.F.	H.R.	V.H.	A.F.E.L.V.	ELEVATION	H.F.READ.	REMARKS
A5	42	4.0	+2.75	+18	8.24	265.7	+345	-232.1	51 52.7	3.4	B.S.
A6	4	2.2	-18	5.0	213.0	-39.6	-38.6	5079.0	3.4	on inside of road embankment	
A7	"	3.0	-7	7.5	293.0	-21.0	-17.5	57 00.1	.7		
A7	45	"	3.0	+7	7.8	~	~	~	~	.7	P.S. above = ~ Elev A7 = 5700.1
Q20	"	2.9	+34	+34	9.5	778.1	+30.6	+25.7	51 25.2	13.2	anything uphill west of table
Q21	"	1.4	+34	8.7	121.5	+47.6	+12.9	51 43.0	13.2	" " " "	
Q22	"	1.3	+45	8.6	96.2	+58.5	+53.9	41 54.0	26	in woods directly uphill from table	
Q23	"	1.9	+45	3.0	140.6	+85.5	+86.5	51 86.6	26	corner just starts toward far end	
A6	45	"	2.2	+18	5.0	~	~	~	~	3.4	B.S. agrees Elev 00 = 5079.0
Q24	"	2.7	-16	5.6	263.0	-43.2	-41.6	50 37.4	2.6	at corner of hillside woods	
A8	48	"	5.1	-18	7.5	196.8	-91.8	-89.3	4989.7	3.4	
A8	46	"	5.2	+18	7.6	~	~	~	~	3.4	B.S. Elev 00 = 4989.7
Q25	"	1.1	-21	2.5	105	-23.1	-24.6	4966.1	4.6	outside of road embankment	
Q26	"	3.2	-18	5.5	309.1	-57.6	-56.2	4933.5	3.4		
49	"	7.0	-18	5.5	2676.2	-12.6	-124.5	4865.2	3.4	outside of road at telephone pole	

82KWW030

August 31st, 1957

## TRUE FISSTURE

Declination =  
21° 45'

GN6

STA	SIGHTON	H.F.	R.E.	BEAMON	H.D.	H.D.	$\pm VH$	$\Delta ELEV$	ELEVATION	H.RULE	REMARKS
A1	410	H.1	6.3	+30	9.2	5.67	+189.0	+184.0	53 67.8	10	ELEV A1 = 5343.8 E.C.
A10	A1	H.3	6.2	-30	9.1	5.58	-186.0	~	~	10	B.3
A11	"	3.8	-16	9.0	3.50	6.6	-57.6	-53.9	53 13.9	2.6	F.S.
O21	"	1.8	+21	10.0	17.1	1.8	+27.8	+32.1	53 99.9	4.7	Very small ridge
412	"	3.2	+33	9.6	4.56	0	+171.6	+166.0	53 33.8	12.3	
D12	D10	"	5.2	-28	9.6	~	~	~	~	12.3	D.S. agrees ✓
O22	"	1.0	-5	9.0	18.9	0	-90	-142	53 19.6	1.2	6/14/57 - 5332.8 on downstream side of ridge with stream flowing down
O24	"	2.8	-12	8.0	2.78	5	-33.6	-37.6	54 96.2	1.6	6/14/57 - 5332.8 more to upstream side, small ridge
O30	"	1.2	+35	9.6	10.7	0	-12.0	-28.4	53 05.4	14.2	fuel rod dump at elevation
O31	"	1.4	-64	8.1	10.6	0	-6.6	-66.0	54 67.8	24	
O32	"	1.0	-30	6.5	9.0	~	-30.0	-34.7	54 99.1	10	
A13	"	2.0	+16	4.0	3.89	~	+6.4	+60.3	53 94.1	2.7	On back of ridge Elev 0.4 = 5352.4
A14	"	0.2	+33	9.4	7.0	~	+2.4	+2.1	53 54.8	2.3	
A14	Sept. 12, 1957	O23	H.0	0.4	+29	6.0	36.2	+11.6	53 564.0	9.4	on trail directly uphill from table
O34	"	0.63	+30	3.6	6.85	~	+19.5	+10.9	53 78.7	10	working uphill from table
O35	"	1.6	+18	5.7	15.4	6	+20.8	+27.1	53 81.9	3.4	

82KNW1030

SEPT 1ST 1957

TRUE ELEVATION

GN7.

STA	SIGHTED	HI	RT	BEAMAN	HP	HD	VH	DELEV	ELEVATION	HT READ.	REMARKS
AB	A12	4.0	H.O	76	8	~	~	~	~	2.7	Elev. 512 = 5594.1 B.S. agreed ✓
036	"	1.8	+3	4-1	179.5	+5.4	+5.2	555 99.4	.3	73 rods away across draw	
037	"	2.0	+12	5.0	196.8	+24	+23	556 17.1	1.6		
038	"	2.2	+6	4.8	215.9	+13.2	+14.0	556 08.1	-8		
039	"	2.5	+15	4.4	244.2	+37.5	+36.9	556 31.0	2.3		
040	"	1.9	+15	4.0	285.6	+28.5	+28.5	556 29.6	2.3	Cuttercap to SE of 13010	
A15	"	2.5	+19	8.2	288.2	+47.5	+43.3	556 21.4	2.7		
041	"	1.5	+11	8.7	145.8	+25.5	+20.8	556 14.9	2.8		
A16	"	3.6	±0	9.0	360	±0	±0	555 98.7	0	Across draw	
A15	A13	2.5	-18	3.2	~	~	~	~	2.6	B.S. agreed ✓ Elev. 015 = 5560.0	
047	"	3.0	-4	2.0	49.8	-20	-24	556 17.4	4		
042	"	1.75	±0	3.9	175.7	±0	±0	556 41.6	0	on bank	
043	"	1.60	+2	3.8	159.3	+3.2	+3.4	556 20.8	-2	In draw (10 ft to left)	
118	"	2.4	+16	5.0	233.5	+38.4	+37.6	556 78.8	2.7		
044	"	1.4	+10	9.0	132.6	+16	+16	556 50.0	1		
045	"	1.2	±0	2.6	119.3	+7.2	+7.6	556 44.0	16		
A17	A15	5.0	+4	10	~	~	~	~	4		

82R NW 020

GN8

SEPT. 11, 1917 TRUE CLOSURE.

STA	SIGHT ON	H.I.	R.T.	REAMAN	H.D.	H.O.	X H.F.	Δ ELEV.	ELEVATION	U.R.E.	REMARKS
417	046	2.0	0.9	-15	9.5	PP	-13.3	-P	5609.4	2.3	ELEV 217 = 5617.4 in Woods down hills north.
A19	"	2.4	-32	2.9	213.0	-76.8	-75.8	5571.6	11.7		
049	"	1.6	-36	8.5	74.7	-36.0	-31.5	55855.9	13.3		
Sept. 10/57											
A19	417	"	2.4	+32	3.0	~	~	~	~	11.7	B.S. 049 = 25 Elev 219 = 5571.6 abt to right of rdg
048	"	2.3	+24	-	5.0	218.7	+53.2	+54.2	55795.8	6.2	
049	"	1.4	-22	6.4	132.9	+30.8	+28.8	5570.0	5.1	behind brown dum	
050	"	1.1	+18	5.6	106.2	+10.8	+9.2	5530.8	3.3		
051	"	0.7	+15	2.5	68.3	+10.5	+12	5553.6	2.4		
052	"	0.8	-26	3.4	74.2	-20.8	-20.2	5521.4	7.2	end of dum	
053	"	0.6	+18	6.6	58.0	+10.8	+8.2	5549.8	3.3		
054	"	1.2	+27	4.4	110.1	+32.4	+32	5573.6	7.8		
055	"	1.4	-21	8.7	133.4	+29.4	+24.7	5566.3	4.7		
056	"	1.0	-7	3.8	99.3	-7.0	-6.5	5535.1	-7		
057	"	1.9	-17	4.0	184.5	-32.3	-32.3	5509.3	2.9	in weeds off end of water course	

82KNW030

GN9

STATION	ELEV. INT.	LT	RT	REFRACTION	HP	HD	± V.H.	ELEV.	ELEVATION	H. SIGHT	REMARKS	
											Sep. 10/1977 (cont'd)	Steadywind
A19	A20	+0.0	1.4	-1	7.6	140.0	-1.0	10	5341.6	0.1	Elev. A19 = 5341.6 E.S.	
A20	A19	"	1.4	0	3.4	~	~	~	~	0.3	E.S. Elev. A20 = 5341.6	
058	"	0.35	+3	3.2	35.0	+1.05	+0.2	5271.8	0.3	outcrop to left of adit (SE off sheet)		
059	"	0.4	+14	3.4	34.4	+21.6	+22.2	5373.5	6.2	above adit		
060	"	1.0	+24	3.5	93.8	+24	+24.8	5566.1	6.2	above to right of adit		
061	"	2.3	-21	3.0	212.0	-62.1	-58.1	5483.5	7.8	down to lower adit		
062	"	22.0	-7	4.0	2124.6	-154.0	-158.0	5387.6	0.7	large hole in hill (Rancho)		
063	"	22.0	-7	4.0	2124.6	-154.0	-158.0	5387.6	0.7	continuation of gray layer	OFF SHEET	
064	"	22.4	+3	4.0	2134.3	-67.2	-67.2	5474.4	0.3	down above right of gray layer	OFF SHEET	
065	"	26.0	+0	3.0	2670	+0	+0	5541.6	0.0	down left of previous shot	OFF SHEET	
066	"	26.0	+0	4.0	2670	+0	+0	5541.6	0.0	down left of previous shot		
<u>SEPT. 12, 1977</u>												
A16	A13	"	4.0	+0	8.0	400	+0	+0	5349.1	0.0	Elev. A16 = 5349.1 E.S.	
067	"	1.1	-23	4.5	103.8	-25.3	-28.2	5569.3	3.6	new adit, Rancho Serrano - 264.2		
068	"	1.1	+9	4.4	109	+9.9	+9.5	5603.6	0.9			
A21	"	1.1	+26	3.5	102.1	+28.4	+27.1	5621.2	7.2			
								82KNW030				

GN10

SEPT. 12, 1927 (cont'd)

STATION	WIND DIR.	AS	RT	SEPARATION	WD	WD	WZ	SELECTED	SEPARATION	WD, REAS	REASONS
A21	A.E.	N.W.	N.E.	-25°	S.W.	~	~	~	~	~	B.S. against ✓
069	"	0.4	+11	3.8	84.2	135.6	155.8	5627.0	2	5627.0	E104221 = 5627.0 as per
070	"	1.5	+32	6.3	132.5	138.8	145.7	5666.9	11.7	5666.9	Directly below
A22	"	2.0	+7	3.0	198.6	218	213.0	5638.3	7	5638.3	F.S.
A22	D.21	"	2.0	+7	50	~	~	~	~	7	B.S. against ✓
071	"	0.8	-24	9.4	78.2	-19.2	-13.8	5620.4	6	5620.4	E104222 = 5620.4
072	"	1.4	-34	9.4	77.7	-21.6	-26.2	5608.13	13	5608.13	
073	"	1.6	-24	8.7	180.4	-3.8	-33.7	5600.5	6	5600.5	
A23	"	2.0	-9	3.4	277.3	-25.3	-20.8	5613.4	9	5613.4	
A23	A22	b	2.8	+10	84	~	~	~	~	10	B.S.
A23 1/2											REVERSED 2nd - DUE TO THE WIND!
074	"	0.2	+8	2.4	89.3	+7.2	+7.8	5621.3	3	5621.3	E104223 = 5621.3
075	"	0.8	-2	3.2	119.0	-8	-10	5613.4	2	5613.4	
076	"	0.7	+6	3.3	69.6	+4.2	+4.9	5618.3	6	5618.3	
A24	"	1.2	+5°	4.4	139.3	+7.0	+6.6	5606.8	5	5606.8	
077	"	1.3	+29	8.4	117.8	+31.7	+33.1	5646.5	9.4	5646.5	
078	"	0.8	-11	9.4	19.0	-8.8	-3.4	5610.0	1.2	5610.0	
								82KNW030			

GNH

STATION	Lat	Long	B.CORR	UP	DOWN	W.D.	ZELLY	BL CORR	W.E.COR	R - INCLINOMETER
A23	8.0	1.4	+5	4.4	~	-	-	-	.35	B3 09002 ✓
Q79	"	5.4	-4	2.8	139.5	-5.6	-0.8	5606.0	.26	E140.20 = 5606.2
Q80	"	6.3	+9	6.4	162.4	+32.7	+36.7	5643.5	.9	OFF SHEET
Q81	"	6.0	+10	7.0	59.4	+60	+59	5863.8	1	OFF SHEET <sup>incl</sup> , grey blue
Q82	"	5.0	+10	5.8	530	+0	+0	5605.0	.00	OFF SHEET grey blue
A25	"	2.3	-2	8.2	228.4	-4.6	-0.4	5606.4	.2	FS.
A25	A24	2.3	+2	9.2	~	—	—	—	—	Q3 09002 ✓
Q83	"	1.3	-1	4.4	130.0	-1.3	-1.7	5604.7	.1	E140.3 = 5604.8
Q84	"	1.6	-2	3.8	159	+2.6	+3.2	5632.2	.5	
A26	"	1.8	-2	3.9	179.5	-3.4	-2.7	5676.0	.3	FS.
A26	A25	1.8	+4	8.9	~	~	~	~	.4	Q3 09002 ✓
Q85	"	1.0	-7	3.5	190	-7.0	-7.5	5603.5	.7	E140.20 = 5603.2
Q86	"	1.2	+0	8.6	120.0	+0	+0	5606.0	.20	
Q87	"	2.4	+2	4.7	180	11.8	+11.1	5610.1	.12	
Q88	"	.8	-17	3.4	97.7	-13.6	-13.0	5603.0	2.9	

82KNN030

$$\text{Eleu} = \text{Eleu Sta.} + \text{H.I} - \text{H.Pt.} + V$$

GN12

At	To	H.I.	R.I.	Vort. L.	H.Pt.	H	V	$\Delta E$	Elevation	Remarks
A17	A29	3.8'	1.64'	0° 59'	6'	164'	+2.8'	+7.6'	5618.5'	5/6/4 Elev. A17=5617.4'
X29	S17	4.2'	1.64'	0°	4.8'	164'	0'	-6'	5617.4'	5/6/4 Elev A29=5618
A29	089	4.2'	1.02'	17° 15'	9'	92'	+28.6'	+23.8'	5614.2'	5/6/2
A29	090	4.2'	.58	25° 8'	6'	47'	+22.3'	+20.5'	5638.5'	5/6/58
Z29	A30	4.2'	.71'	6° 23'	4'	70'	-7.9'	-7.7'	5610.3'	5/6/1 Elev A30=5610.3'
A30	A29	4.1'	.71'	7° 47'	6'	70'	+9.6'	+7.7'	5618'	5/6/11
A30	092	4.1'	.87'	8° 30'	9'	85'	-12.7'	-12.6'	5593'	5/6/87
A30	093	4.1'	.84	6° 34'	6'	83'	-9.6'	-11.5'	5599'	5/6/84
A30	A31	4.1'	1.92'	2° 44'	7'	191'	-9.2'	-12.1'	5598.2'	5/6/08
A31	A30	4.0'	1.93'	5° 10'	6'	191'	+17.4'	+15.4'		5/6/9 Elev A31=5594.9
B31	094	4.0'	1.80'	16° 34'	6'	165'	-49.0'	-51.0'	5544'	5/6/20
A31	A30	4.0'	1.95'	6° 4'	9'	192'	+20.5'	+15.5'		5/6/95
A31	A32	4.0'	1.42	6° 58'	4'	190'	-17.1'	-17.1'	5592.8'	5/6/58
A31	095	4.0'	.56	26° 33'	6'	45'	+22.3'	+21.3'	5616'	5/6/56
A31	096	4.0'	101'	25° 95'	7'	82'	+39'	+36'	5631'	5/6/01
A31	A33	4.0'	2.20'	26° 2'	5'	177'	+86.6'	+85.6'	5680.5'	5/6/80 Elev A33=5681.1
A33	A31	3.9'	2.11	27° 37'	5'	168'	-85.8'	-86.9'	5593.6'	5/6/89
									82KNW020	

At	To	H.I.	R.I.	Vertl.	H.P.	H.	V.	DE	Elevation	Remarks
Δ33 097	3.9	.87'	26°35'	9'	70	-34.8'	-39.9'	5641'	5.82	Elev Δ33
Δ33 099	3.9	100'	1341'	9'	94'	+23.1'	+19'	5700	5.50 =	5681.1'
Δ33 Δ34	3.9	2.07'	22°29'	5'	173'	+73.1'	+72'	5753.1	5.02	
Δ34 Δ33	3.3	1.96'	20°41'	9'	173'	-64.9'	-70.6	5682.5	5.05	Elev Δ34 = 5752.4'
Δ34 0100	3.3	1.16'	27°14'	9'	92'	-47.1'	-52.8	5700'	5.16	
Δ34 041	3.3	1.83'	3°11'	9'	83'	+4.4'	-1.3	5757'	5.83	
Δ34 Δ35	3.3	.73'	24°48'	6'	60'	+27.6	+24.9	5777.3	5.73	Elev Δ35 = 5777.3
Δ35 Δ35	4.0	.67'	18°42'	9'	60'	-20.3	-25.3	5762.0	5.67	
Δ35 0102	4.0	.65'	90°58'	4'	63'	-11.1	-11.1	5766'	5.65	
Δ35 0103	4.0	1.18'	8°	11.2'	118'	0	-7.2'	5770'	5.81	
Δ35 Δ36	4.0	1.80'	24°8'	4'	150'	+67.3'	+67.3	5844.8'	5.20	Elev Δ36 = 5844.8
Δ36 Δ35	4.1	1.73	23°29'	7"	142'	+63.4	-66.3	5778.5	5.73	
Δ36 0104	4.1	1.81'	39°3'	4"	180'	-11.7	-11.6	5833'	5.79	
Δ36 0105	4.1	1.38'	9°7'	6'	135'	+21.7	+19.8	5864'	5.38	
Δ36 0106	4.1	.98'	20°21'	6'	98'	+4.0'	+2.1	5846'	5.26	
Δ36 0107	4.1	1.05'	19°27'	4'	105'	+37.6	+37.1	5881'	5.82	
Δ36 0108	4.1	1.60	24°8'	4'	133'	+59.9'	+60'	5904'	5.40	

Sept. 1<sup>st</sup> 1958 R.T. snowy & sun & Hail & Rain

At	To	H.I.	R.I.	Vert L	H.I.F.	H.	V.	ΔE	Elevation	Remarks
Δ38	0121	4.0'	1.70'	0°	4.0'	170'	0'	-5'	5697'	8.70 Elev Δ38 = 5622'
Δ38	0122	4.0'	2.18'	0° 55'	5'	218'	+3.5'	+2.5'	5700'	8.18
Δ38	Δ39	4.0'	3.63'	4° 8'	8'	360'	-26.0'	-30.6'	5667.7'	5.23
Δ38	0123	4.0'	2.07'	17° 45'	5'	187'	+60.0'	+59.0'	5757'	8.73
Δ38	0124	4.0'	2.10'	3° 18'	2'	210'	+12.2'	+14.2'	5712'	8.10
Δ38	0125	4.0'	1.99'	5° 15'	9'	197'	-18.3'	-23.3'	5674'	8.99
Sept. 30		3.5'	The Sun	She is a shinin'	the clouds they are comin'					
Δ38	0126	3.5'	2.82'	16° 51'	8'	258'	+78.0'	+73.5'	5771'	8.82
Δ38	0127	3.5'	3.02'	22° 5'	5'	259'	+105.5'	+104'	5802'	8.51
Δ38	0128	3.5'	4.70'	23° 22'	7'	395'	+171'	+167.5'	5865'	5.70
Δ38	0129	3.5'	5.43'	21° 25'	7'	461'	+184'	+180.5'	5878'	8.43
Δ38	0130	3.5'	5.36'	19° 26'	7'	475'	+166.5'	+163'	5861'	8.36
Δ38	0131	3.5'	4.63'	17° 12'	7'	421'	+130.5'	+127'	5823'	8.63
Δ38	0132	3.5'	1.50'	0°	5.3'	150'	0'	-18'	5696'	8.52
Δ38	0133	3.5'	1.44'	5° 34'	9'	143'	+14.0'	+8.5'	5706'	8.44
Δ38	0134	3.5'	3.02'	12° 8'	8'	289'	+62.5'	+58'	5756'	8.98
Δ38	0135	3.5'	3.64'	15° 10'	5'	339'	+92.0'	+90.5'	5788'	8.96

Af	To	H.I.	R.I.	Vert.L.	H.Pt.	H.	V.	ΔE	Elevation	Remarks
△38	0136	3.5'	3.65'	20°7'	5'	321'	+117.5'	+116'	5814'	3.35 Elev △38 = 5697.7'
△38	0137	3.5'	4.95'	17°33'	7'	450'	-142.5'	+139'	5837'	9.95
△38	0138	3.5'	4.10'	14°1'	7'	384'	+96.5'	+93'	5791'	8.52
△39	△38	4.0'	3.66'	5°27'	8'	360'	+34.5'	+30.5'	5698.2'	6.66 Elev △39 = 5667.5
△39	0139	4.0'	1.28	2°15'	3'	128'	+5.1'	+6.1'	5674'	12.28
△39	0140	4.0'	1.73'	10°23'	6'	166'	+30.8'	+28.8'	5696'	6.23
△39	0141	4.0'	2.30	13°16'	8'	219'	+51.0'	+47'	5714.5'	9.70
△39	0142	4.0'	2.41'	7°29'	8'	238'	+31.1'	+27.1'	5695'	9.59
△39	0143	4.0'	3.13'	5°41'	5'	310'	+31'	+30'	5697.5'	3.87
Sept. 4 <sup>th</sup>		Der Wetter.	F1	ist	Wunderbar.				Plies	Schlecht!!
△10	0144	2.9'	.73	3°0'	91	73'	+3.8'	-2.3	5365.5'	9.73 Elev △10 = 5367.8'
△10	0145	2.9'	1.27'	0°	0.8'	127'	0'	+2.1	5370'	2.13
△10	0146	2.9'	1.77'	13°58'	9'	166'	+41.2'	+35.1'	5403'	9.77
△10	0147	2.9'	1.57'	9°46'	3'	153'	+26.1'	+26'	5394'	3.52
△10	0148	2.9'	1.53'	6°33'	1'	151'	+17.5'	+19.4'	5387'	2.47
△10	0149	2.9'	1.78'	11°48'	3'	170'	+35.7'	+35.6'	5403.4'	2.78
△10	0150	2.9'	1.63	9°54'	3'	158'	+27.7'	+27.6	5393.4'	2.65

At	To	H.I.	R.I.	Vert.L.	H.Pt.	H.	V.	ΔE	Elevation	Remarks
Δ10 0151		2.9'	1.65'	7° 0'	1'	163'	+20.0'	+21.9'	5390'	2/3.35 Elev. Δ10 = 5362.8'
Δ10 0152		2.9'	1.50'	5° 28'	9'	148'	+14.3'	+8.2'	5376'	8/9.50
Δ10 0153		2.9'	1.61'	6° 36'	3'	159'	+18.5'	+18.4'	5386'	2/3.61
Δ10 0154		2.9'	1.83'	6° 35'	3'	180'	+20.9'	+20.8'	5389.6'	2/3.83
Δ10 0155		2.9'	1.96'	8° 31'	3'	192'	+28.4'	+28.8'	5396.6'	2/3.96
Δ10 0156		2.9'	1.87'	10° 58'	3'	180'	+34.8'	+34.7'	5402.5'	2/3.87
Δ10 0157		2.9'	2.36'	17° 22'	5'	215'	+67.6'	+64.9'	5433'	6/3.64
Δ10 0158		2.9'	2.02	14° 41'	2'	190'	+49.8'	+50.7'	5418.5'	2/3.02
Δ10 0159		2.9'	2.50	18° 2'	2'	226'	+73.5'	+74.4'	5442'	2/3.50
Δ10 0160		2.9'	2.65	19° 48'	5'	235'	+84.4'	+82.3'	5450'	2/6.65
Δ10 0161		2.9'	3.02	20° 33'	6'	265'	+99.0'	+95.9'	5464'	2/3.98
Δ10 0162		2.9'	3.17	19° 20'	8'	270'	+98.5'	+93.4'	5461'	10/6.83
Δ10 0163		2.9'	2.78	18° 11'	8'	247'	+81.0'	+75.9'	5444'	2/6.27
Δ10 0164		2.9'	2.62	15° 42'	8'	243'	+68.6'	+63.5'	5431'	2/3.62
Δ10 0165		2.9'	2.90	15° 52'	8'	269'	+76.3'	+71.2'	5439'	2/4.91
Δ10 0166		2.9'	3.42	17° 38'	8'	311'	+99.1'	+94.0'	5462'	8/7.71
Δ10 0167		2.9'	3.89	17° 53'	8'	351'	+103.1'	+98.0'	5466'	16/6.11

At	To	A.I.	R.I.	Vert. L.	H. Pts.	H.	V.	ΔE	Elevation	Remarks
Δ10	0168	2.9'	4.32'	15°14'	6'	904'	+110.7'	+102.0'	5475'	3.63, Elevation - 5367.8'
Δ10	0169	2.9'	4.19'	20°26'	7'	368'	+137.1'	+133.6'	5501'	5.12
Δ10	0170	2.9'	5.32'	21°14'	7'	462'	+178.5'	+174.4'	5542'	5.82
Δ10	0171	2.9'	3.30'	18°59'	5'	294'	+101.8'	+99.7'	5467.5'	3.20
Δ10	0172	2.9'	3.80'	21°52'	8'	328'	+131.1'	+121.0'	5494'	6.20
Δ10	0173	2.9'	3.34'	20°58'	5'	293'	+111.1'	+109.6'	5477'	3.66
Δ10	0174	2.9'	2.64'	19°55'	5'	234'	+84.8'	+82.7'	5450.5'	6.56
Δ10	0175	2.9'	2.35'	19°31'	8'	209'	+72.6'	+62.5'	5435'	7.35
Δ10	0176	2.9'	2.22'	16°0'	5'	206'	+59.0'	+56.9'	5425'	6.78
Sept 5 <sup>th</sup>										
Δ10	0177	8.0'	1.59'	2°22'	3'	159'	-6.6'	-6.6'	5361'	3.59
Δ10	0178	3.0'	1.93'	0°	3.1'	193'	0'	-1'	5368'	3.93
Δ10	0179	3.0'	1.94'	5°37'	4'	192'	-20.1'	-21.1'	5347'	3.20
Δ10	0180	3.0'	1.20'	9°43'	3'	116'	-20.0'	-20.0'	5348'	3.20
Δ10	0181	3.0'	.45'	8°52'	9'	44'	-6.9'	-12.9'	5355'	9.45
Δ10	Δ40	3.0'	1.87'	21°33'	9'	162'	-63.5'	-69.4'	5298.3'	7.87
Δ10	0182	3.0'	2.91'	11°34'	5'	280'	-57.3'	-59.3'	5308.5'	6.09

At	To	H.J.	R.T.	VertL.	A.PF	A.	V.	ΔE	Elevation	Remarks
Δ10 0183		3.0'	3.23'	2° 17'	5'	322'	-12.9'	-14.9'	5353'	$\frac{3}{3.23}$ Elevation 418 = 5367.8'
Δ10 0184		3.0'	2.38'	1° 14'	2'	238'	+5.1'	+6.1'	5374'	$\frac{1}{2.38}$
Δ10 0185		3.0'	2.71'	1° 38'	5'	271'	+7.8'	+5.8'	5373.6'	$\frac{5}{2.71}$
Δ10 0186		3.0'	3.03	4° 0'	6'	301'	+21.1'	+18.1'	5386'	$\frac{2}{3.03}$
Δ10 0187		3.0'	4.22	1° 19'	4'	422'	-9.8'	-10.8'	5357'	$\frac{2}{4.22}$
Δ10 0188		3.0'	A.60	0°	3.8'	460'	0'	-.8'	5363'	$\frac{8}{A.60}$
Δ10 0189		3.0'	8.29	1° 23'	5'	827'	-20.1'	-22.1'	5345.7'	$\frac{9}{8.29}$
Δ10 0190		3.0'	.47	20° 1'	6'	41'	+15.2'	+12.2'	5380'	$\frac{6}{.47}$
Δ10 0191		3.0'	1.49	8° 56'	9'	146'	-22.9'	-28.9'	5339'	$\frac{9}{1.49}$
Δ10 0192		3.0'	1.65	11° 44'	3'	158'	+32.8'	+32.8'	5400.6'	$\frac{9}{1.65}$
Δ10 0193		3.0'	2.48	6° 28'	5'	245'	+27.8'	+25.8'	5393.6'	$\frac{5}{2.48}$
Δ10 0194		3.0'	2.48	10° 27'	5'	240'	+44.1'	+42.1'	5410'	$\frac{6}{2.48}$
Δ10 0195		3.0'	2.70	5° 53'	5'	267'	+27.5'	+25.5'	5393'	$\frac{5}{2.70}$
Δ10 0196		3.0'	3.37	7° 7'	5'	331'	+41.5'	+39.5'	5407'	$\frac{7}{3.37}$
Δ10 0197		3.0'	4.86	7° 26'	7'	478'	+62.3'	+58.3'	5426'	$\frac{7}{4.86}$
Δ10 0198		3.0'	4.74	9° 30'	4'	460'	+77.2'	+76.2'	5444'	$\frac{9}{4.74}$

A1	To	H.I.	S.I.	Vert. L.	H.P.	A	V	DE	Elevation	Remarks
Δ10	0119	3.0'	5.04'	12° 13'	7'	472'	+104.5'	+160.5'	5468'	9.00 Elev A11=5362.8
Δ10	0200	3.0'	4.00'	12° 11'	7'	381'	+82.0'	+78.0'	5446'	3.00
Δ10	0201	3.0'	4.50'	13° 17'	6'	426'	+100.0'	+97.0'	5465'	3.50
Δ10	0202	3.0'	3.50	14° 50'	81	328'	+81.0'	+82.0'	5450'	3.50
Δ10	0203	3.0'	4.00	14° 29'	7'	374'	+96.5'	+92.5'	5460'	3.00
Δ10	0204	3.0'	4.40	18° 25'	7'	395'	+131.5'	+127.5'	5495'	4.40 Elev A10=5292.2'
Δ40	Δ10	3.8'	2.00	24° 11'	7'	166'	+74.9'	+71.7'	5370.0'	8.00
Δ40	0205	3.8'	.90'	19° 35'	3"	80'	+28.4'	+29.2'	5326A'	3.70
Δ40	0206	3.8'	.50	8° 22'	10'	49'	-7.2'	-13.4'	5284	9.50
Δ41	0207	3.8'	1.09	9° 47'	3"	101'	-17.5'	-16.7'	5280.5'	3.00
Δ40	0208	3.8'	2.36	23° 43'	5"	198'	-86.7'	-87.9'	5209'	6.44 & 6' above ground
Δ41	0209	3.8'	2.02'	19° 56'	5"	179'	-64.9'	-66.1'	5231'	3.98
Sept.	6 <sup>th</sup>	The significance of 3 more P.D.'s.								PREVIOUS ELEV A11=5314

Δ11	01	3.2'	9.50	20° 23'	5'	947'	+39.4'	+97.6'	5351.6'	10.06
Δ11	0211	3.2'	.76	10° 15'	9'	93'	-16.9'	-22.7'	5302'	3.96
Δ11	0212	3.2'	1.66	14° 46'	7'	155'	-40.9'	-44.7'	5280'	3.34 Elev Δ11=5324.9
Δ11	0213	3.2'	1.48	19° 22'	7'	133'	-46.6'	-50.4'	5274.5'	6.63

B2KNW000

At	To	H.I.	R.I.	Vert.	H.P.	H.	V.	SE	Elevation	Remarks
AII	0214	3.2'	1.82'	13°52'	9'	171'	-42.5'	+4.83	5276.6'	8.88 Elev AII = 5324.9
AII	0215	3.2'	1.12'	3°53'	7'	112'	-7.61'	-11.4	5313.5'	8.88
AII	0216	3.2'	1.78'	5°22'	9'	176'	+16.7'	+10.9'	5336'	8.78
AII	0217	3.2'	2.40'	9°18'	8'	243'	+38.0'	+33.2'	5358'	8.60
AII	0218	3.2'	3.17'	10°52'	8'	305'	+58.4'	+53.6'	5378.5'	8.83
AII	0219	3.2'	4.26'	11°22'	6'	409'	+82.0'	+79.2'	5404'	8.13
AII	0220	3.2'	1.74'	10°7'	11'	168'	+30.0'	+22.2'	5342'	10.73
AII	0221	3.2'	3.30'	10°21'	13'	319'	+58.0'	+48.2'	5373'	8.68
AII	0222	3.2'	8.50'	2°59'	5'	846'	+44.0'	+48.2'	5367'	8.50
AII	0223	3.2'	9.86'	4°39'	3'	980'	+79.5'	+79.7'	5404.6'	8.07
AII	0224	3.2'	12.05'	8°57'	5'	1168'	+184.4'	+182.6'	5507.5'	8.00
AII	0225	3.2'	10.82'	9°17'	7'	1038'	+154.6'	+150.8'	5476'	8.41
AII	0226	3.2'	11.86'	10°56'	6'	1138'	+219'	+216.2'	5541'	8.08
AII	0227	3.2'	12.90'	12°36'	6'	1230'	+273.4'	+270.6'	5595.5'	8.45
AII	0228	3.2'	13.88'	13°28'	6'	1308'	+312'	+309.2'	5634'	8.98
AII	0229	3.2'	12.88'	18°53'	6'	1836'	+237'	+234.2'	5559'	8.10
AII	0230	3.2'	13.90'	7°46'	6'	1360'	+188'	+185.2'	5513'	8.95

At	To	H.I.	R.I.	Vert L	H.Pt	H.	V.	ΔE	Elevation	Remarks
ΔII 0231	3.2'	14.08		8° 54'	5'	1364'	+214'	+22.8'	5537'	3/200 Elevation = 5324.8
ΔII 0232	3.2'	18.86		4° 39'	8'	1072'	+87.6'	+82.8'	5708'	3/20
Sunday Sept. 7 <sup>th</sup> .	Concerned with Train									Elev = 5360.5
ΔI 01	3.1'	7.34		15° 34'	6'	699'	+167'	+164.7'	5348.2	2/30 PREVIOUS Elevation = 5123.8
ΔI 0233	3.4'	4.12		9° 15'	6'	406'	+66.2'	+63.6'	5260'	8/23 R/T Elev. ΔI = 5196.1
ΔI Δ41	3.4'	2.20		6° 34'	8'	217'	+25.1'	+20.5'	5216.6'	2/30 Elev. Used from 0233 on
ΔI 0234	3.4'	1.09		15° 54'	3'	181'	+28.8'	+22.8'	5225'	3/29
ΔI 0235	3.4'	1.83		2° 50'	9'	182'	-9.1'	-14.7'	5181'	3/29
ΔI 0236	3.4'	1.42		0°	2.2'	142'	0'	+1.2'	5197'	3/42
ΔI 0237	3.1'	1.88		0°	4.1'	182'	0'	- .7'	5195'	3/82
ΔI Δ2	3.4'	.80		7° 15'	9'	79'	-10.1'	-15.7'	5180.4'	2/30 ORIENTATION CHECKS
Δ41 Δ1	4.0'	2.18		4° 14'	8'	216'	-16.2'	-20.2'	5196.4'	2/17
AAI 0238	4.0'	2.34		9° 14'	5'	228'	+36.1'	+35.1'	5131'	3/29 Elev Δ41 = 5216.5
Δ41 0239	4.0'	1.50		3° 6'	3'	150'	+8.2'	+9.2'	5226'	2/30
Δ41 0240	4.0'	3.35		5° 56'	8'	330'	+34.4'	+30.4'	5247'	6/25
Δ41 0241	4.0'	3.70		17° 10'	7'	338'	+204.0'	+186.0'	5317.5'	10/30
Δ41 0242	4.0'	4.59		19° 25'	6'	408'	+143.4'	+141.4'	5358'	8/21

82KNW080

A1	10	H.I.	R.I.	Vert. L.	H.P4	H.	V.	SE	Elevation	Remarks
Δ5	Δ2	4.0'	2.80'	9°50'	3'	272'	+47.1'	+48.1'	5165.7'	R.K.5 Elev Δ2 = 5180.2'
Δ5	0243	4.0'	2.00'	18°31'	3'	180'	-60.3'	-59.3'	5073'	P.P.E. PREVIOUS Elev Δ5 = 5112.6'
Δ5	Δ42	4.0'	4.10'	26°58'	6'	327'	-165'	-167'	4965.1'	8.90
Δ42	Δ5	3.8'	2.26	27°46'	7'	343'	+174'	+174'	5135.3	R.K.5 fused in 0243 m
Δ42	0244	3.8'	2.24	22°50'	10'	191'	+80'	+73.8'	5038'	3.84 Elev Δ5 = 5132.1'
Δ42	0245	3.8'	2.33	16°59'	2'	214'	+64.9'	+65.7'	5030'	3.33 Elev Δ42 = 4964.6'
Δ42	0246	3.8'	2.50'	16°4'	5'	230'	+66.9'	+65.7'	5030'	3.50
Δ42	0247	3.8'	1.11'	1°55'	4'	111'	+3.7'	+3.5'	4968'	3.81 Portal M.K.C
Δ42	0248	3.8'	1.21'	0°	2.7'	121'	0'	+1.1'	4965.6'	3.81
Δ42	0249	3.8'	1.23	0°	3.6'	123'	0'	+1.2'	4965'	3.82

B2KNW030

Alt	T	H2	A2	Vertical	9.14	8	7	SE	Elevation	Remarks
Δ5	Δ2	4.0'	2.80'	9°50'	3'	27	+192.1'	+48.1'	5163.7'	6' 3.80 Elev Δ2 = 5180.8 PREVIOUS
L5	0243	4.0'	2.00'	18°31'	3'	180'	-60.3'	-59.3'	5073'	6' 0.00 Elev Δ5 = 5112.6
Δ5	Δ42	4.0'	4.10'	26°58'	6'	321'	-165'	-167'	4963.1'	6' 3.90
Δ42	Δ5	3.8'	2.26'	27°46'	7'	322'	+174'	+172'	5135.3'	6' Δ42 fused in 0.243 m
Δ42	0243	3.8'	2.24'	22°50'	10'	191'	+48.0'	+73.6'	5038'	6' 0.243 Δ5 = 5132.1'
Δ42	0243	3.8'	2.33'	16°54'	21'	211'	+64.9'	+65.7'	5030'	6' 3.33 Elev Δ42 = 4766.5
Δ42	0243	3.8'	2.50'	16°41'	5	230'	+66.9'	+65.7'	5030'	6' 3.50
Δ42	0243	3.8'	1.11'	1°53'	4'	111'	+2.7'	+2.5'	4965'	6' 3.81 Port 8 m.s.c.
Δ42	0243	3.8'	1.21'	0°	2.7'	121'	0'	+1.1'	4965.6'	6' 3.81
Δ42	0243	3.8'	1.23'	0°	3.6'	123'	0'	+1.2'	4965'	6' 3.83

B2KNW030