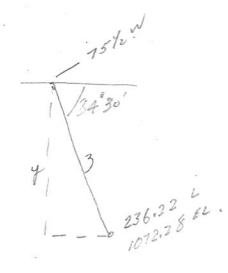


A-1

FROM A-4

LENGTH	BEARING	INTERVAL	COS	H <sub>o</sub> DIST METRES	DIP	SIN	VERT. I	ELEVATION	LENGTH
							M.L. 50°	1307.18	
64.01	✓	64.01					64.01	1243.77	64.01
91.44	74°50	57.91	.0523	3.03	87	.99863	57.83	1185.94	121.92
152.40	34°50	60.96	.1132	6.90	83 30	.99357	60.57	1125.37	182.88
213.36	40°20	53.84	.10958	5.11	84 30	.99540	53.09	1072.28	236.22
259.08	319°50	76.50	.1219	9.33	83	.99255	75.73	996.35	312.72



018297

53.64

7.7  
32

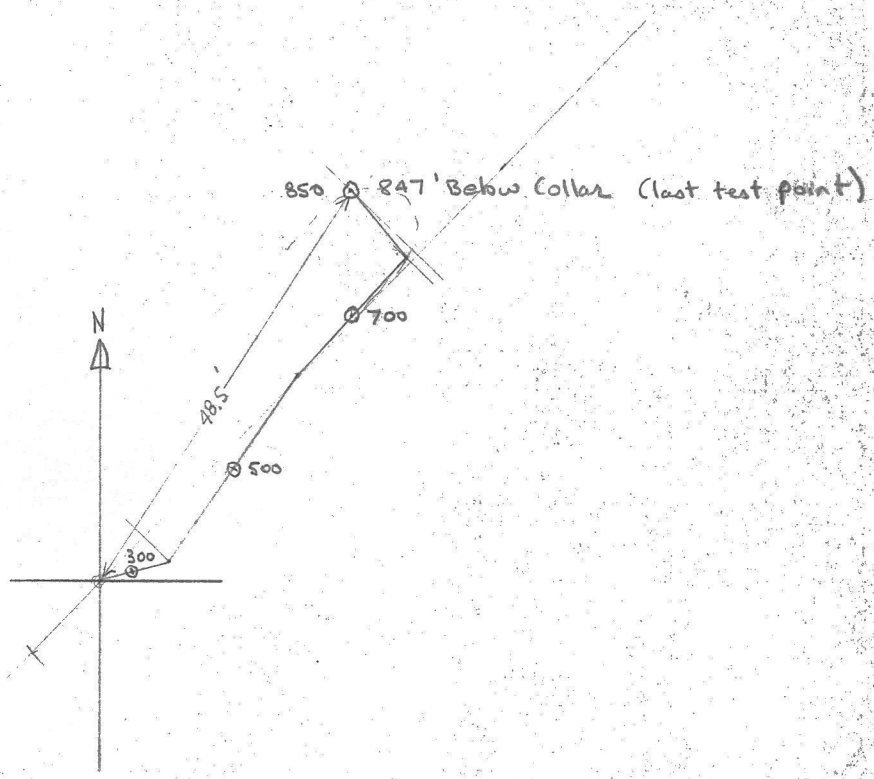
JKC

DATE \_\_\_\_\_  
DATE \_\_\_\_\_

A 4  
DIP & BRG. TEST.  
(Sperry Sun)

SCALE NO. \_\_\_\_\_  
PAGE NO. \_\_\_\_\_

1" = 20'



A-4

Az	DIP	COS	DIST	HD	SIN	VD
0	90°	0	255	0	1.000	255
74.8	87°	.052	145	7.5	.9986	144.8
34.8	83.2°	.118	200	23.6	.993	198.6
42.3	84.5°	.096	175	16.8	.995	174.1
319.8	83°	.123	75	9.2	.993	74.5

850'

847.0 below collar

A.4

D. D. H. Deviation

Scale: 1" = 20'

St.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
64.01	90°	/	45.72	/	-	/	/	-	45.72	1297.38	
91.44	87°	74°50'	76.20	.0523		3.99	.99863		76.10	1251.66	45.72
152.4	83°30'	34°50'	60.96	.1132		6.90	.99357		60.57	1114.99	121.92
213.36	84°30'	42°20'	53.34	.0958		5.11	.99540		53.09	1061.90	182.88
259.08	83°	319°50'	45.72	.1219		5.57	.99255		45.38	1016.52	236.22
						4.01			32.67	983.45	281.94
											<del>281.94</del> 314.86



10, 719.32  
7, 475.03  
76W / B.L.

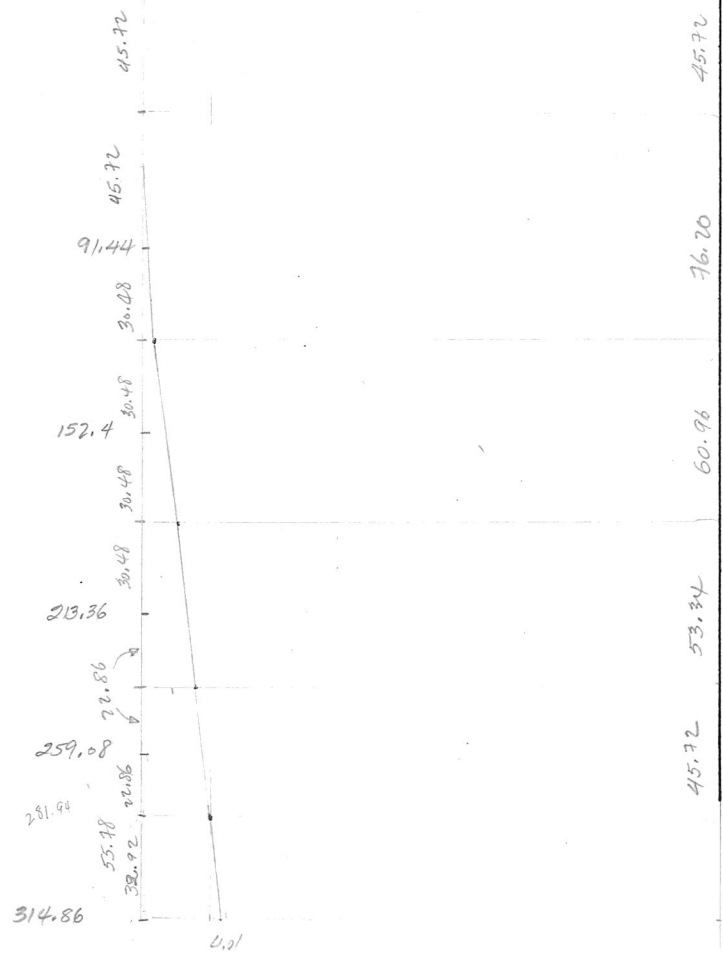
70-50  
91-20  
165-70

90-50 166-10

91.20

1:25

34-50  
54-50  
83-30  
87  
85  
88  
84  
44-30  
20



BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CARD BY \_\_\_\_\_ DATE \_\_\_\_\_

TEST **DIP & BEARING**  
**SURVEY - HOLE # A-5**

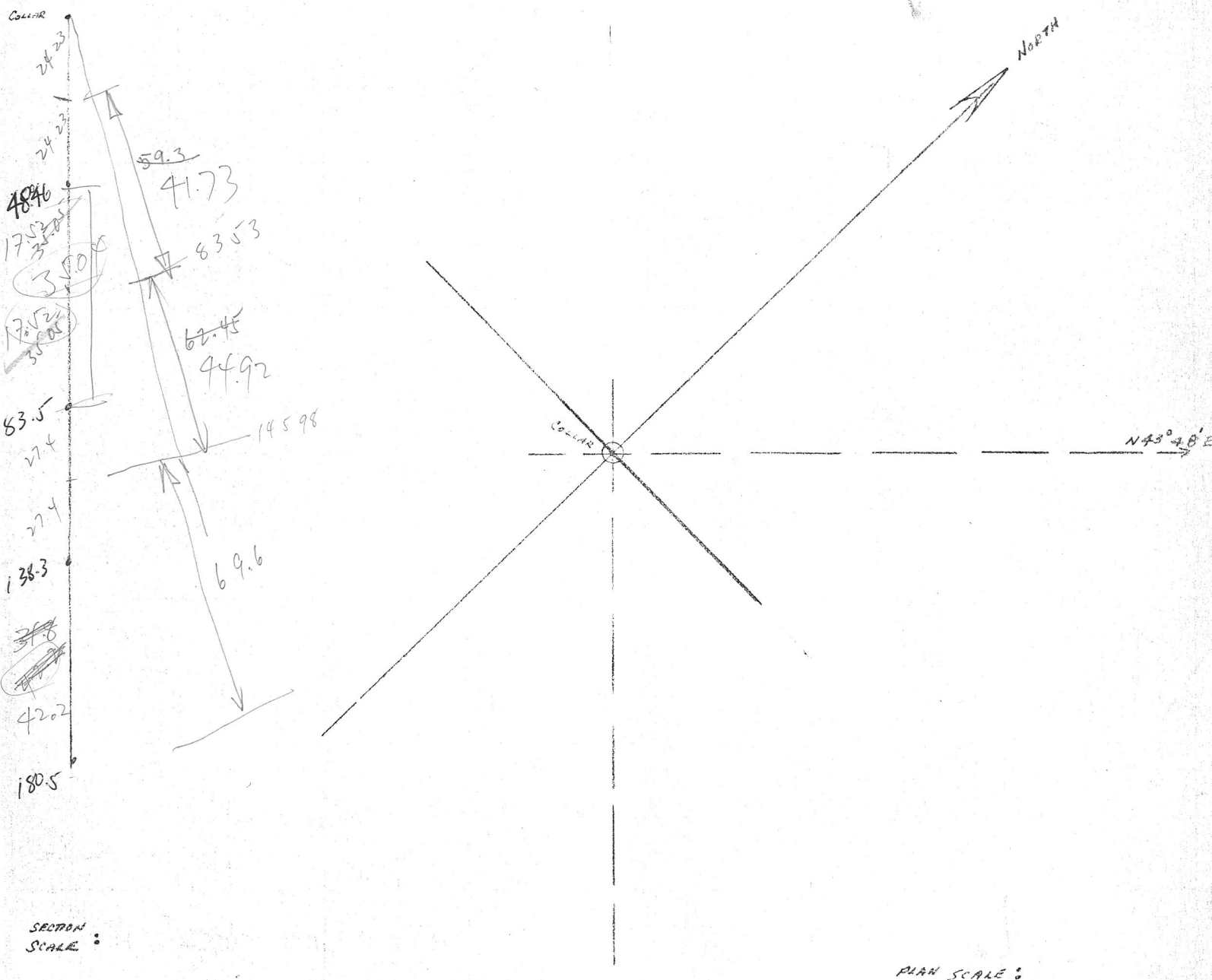
SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. \_\_\_\_\_

Based on A-4 & A-53

EL 1303.85  
 Depth: 180.5 m  
 592.25'

TABLE #1: CORRELATION OF FIELD DATA:

TEST POINT	OBS. BEARING	OBS. AZIMUTH	CORR AZIMUTH	DIP	DIST.	COSINE DIP.	HORIZ. DIST.	SINE DIP.	VERT. DIST.	ELEV.
149'	-	/	/	90	24.23	/	/	1	24.23'	1279.6
159' 48.46	S		84°-20'	-89°	41.73	0.0175	0.73	0.99985	41.70	1237.9
274' - 43.5			83°-10'	-88°	44.92	0.0349	1.56	0.99939	44.89	1193.0
454' 138.37			44-50	-85°-15'	69.60	0.0828	5.76	0.99656	69.3	1123.7
<b>TOTAL VERT. DIST.</b>										



SECTION SCALE :

PLAN SCALE :



Checked & corrected  
 plotted on plan to S.C. Oct 26/76  
 Van Fife

V. 77

Aug. 7

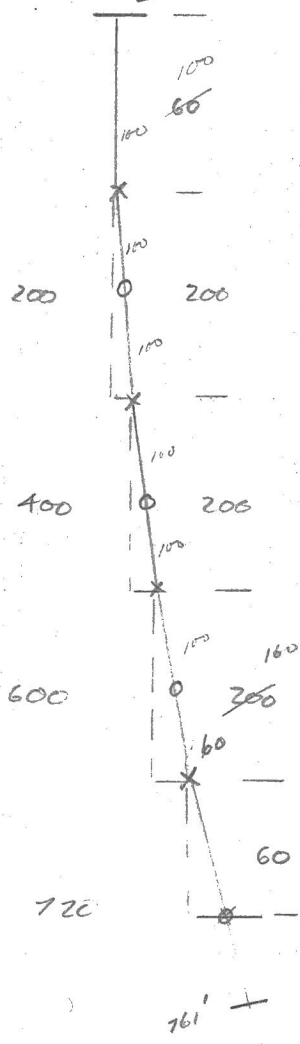
A-9

DIP AND BEARING SURVEY  
 by SPERRY - SUN

GRUNT

AZ	DIP	COS.	DIST.	H.D.	SIN.	V.D.	metres	ELEV.
0	90°	0	80 100	0	1.00	80 100	30.48	1282.4
133°	86°	.0698	200	13.9 4.2 <sup>m</sup>	.9976	199.4	60.78	1221.6
121°	80°	.1736	200	34.5 10.5 <sup>m</sup>	.985	197	60.0	1161.6
114°	79°	.191	200	38.2 11.6 <sup>m</sup>	.9816	196.2	47.9	1113.7
93°	80°	.1736	60	10.4 3.2 <sup>m</sup>	.985	59.1	18.0	1095.7

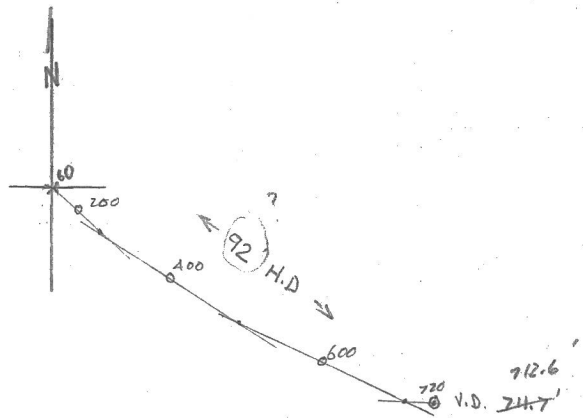
NOT TO SCALE



SCALE 1:40

LENGTH 720' 89.4 (27.2<sup>m</sup>)  
 DEPTH 711.7  
 93° 80° — 41' 7.12 (2.17<sup>m</sup>)  
 712.6 (12.21<sup>m</sup>)  
 40.39

1083.39



Vert. from 712.6  
 DEPTH AT COLLAR = 711.7

JP

DATE

A-10

DIP & BEARING TEST

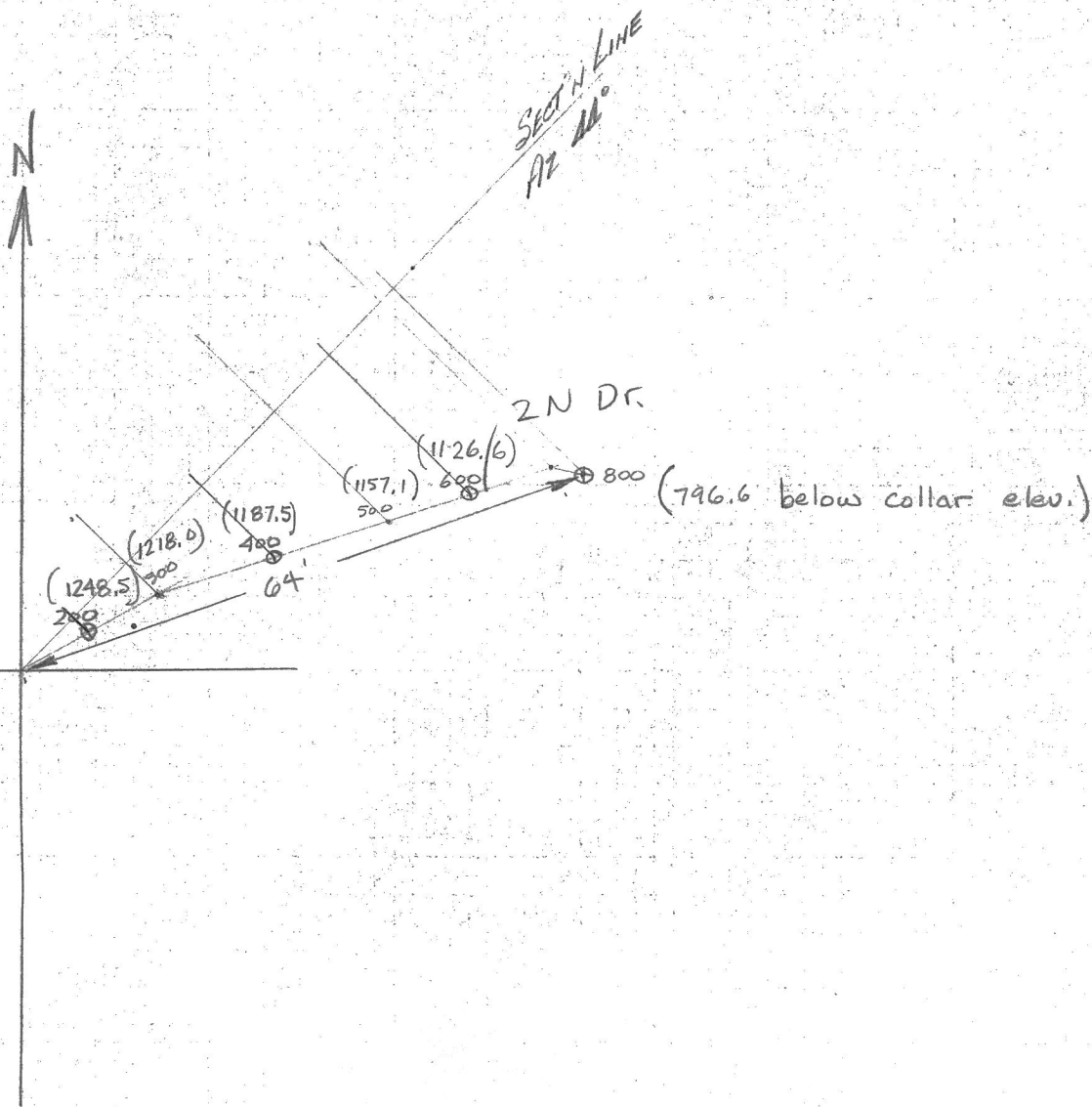
SHEET NO.

DATE

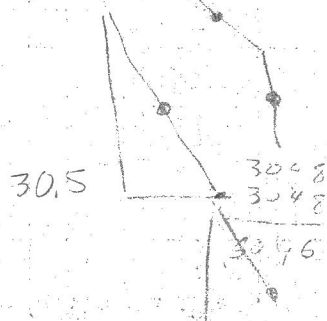
SPERRY SUN INST.

JOB NO.

SCALE 1" = 20'

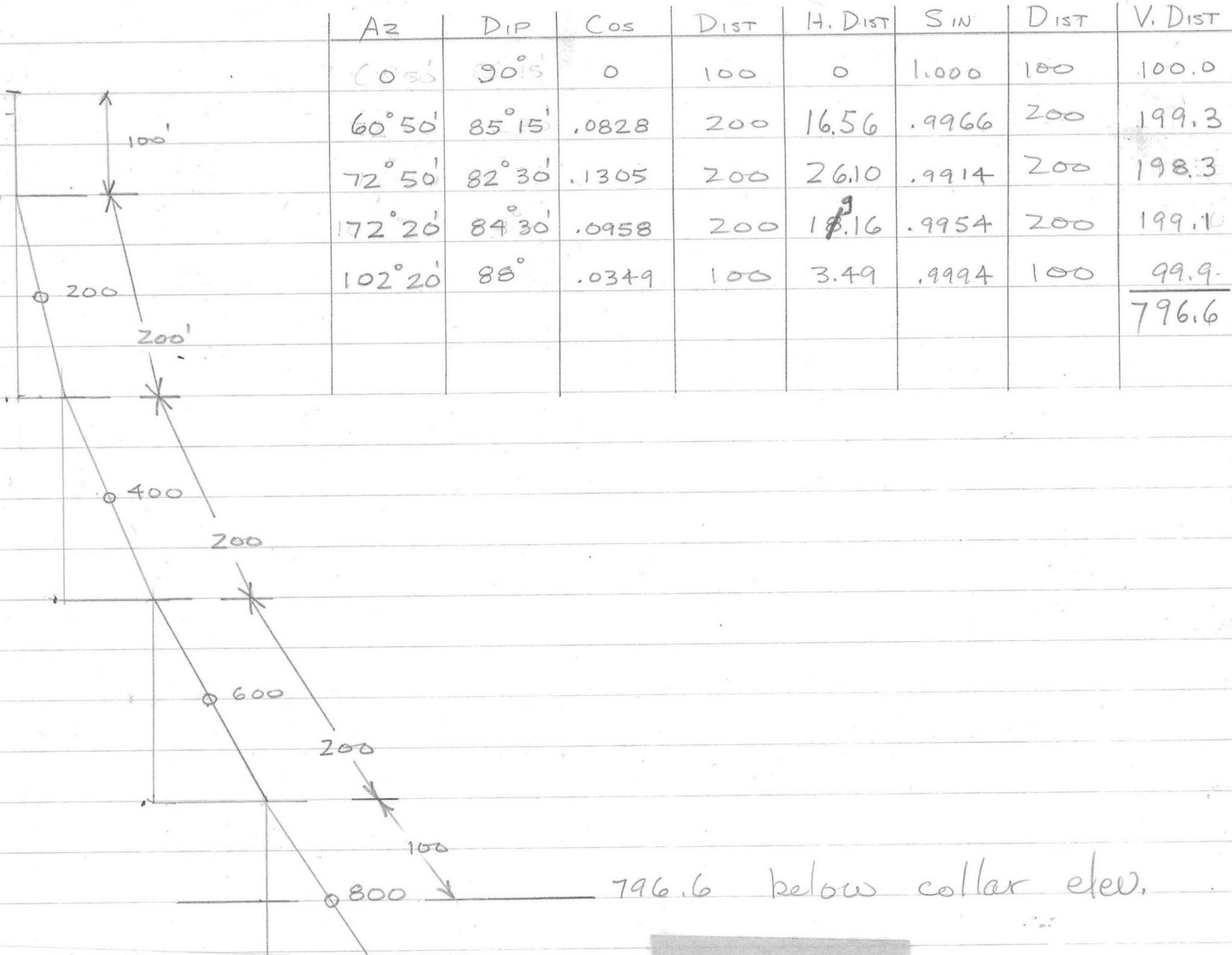


Collar 1309.47 M  
 1122  
 ---  
 187 = 613'



1126.6  
30.5  
---  
096.1

A-10



Az	DIP	Cos	DIST	H. DIST	SIN	DIST	V. DIST
0° 50'	90° 15'	0	100	0	1.000	100	100.0
60° 50'	85° 15'	.0828	200	16.56	.9966	200	199.3
72° 50'	82° 30'	.1305	200	26.10	.9914	200	198.3
172° 20'	84° 30'	.0958	200	19.16	.9954	200	199.1
102° 20'	88°	.0349	100	3.49	.9994	100	99.9
							<u>796.6</u>

796.6 below collar elev.

checked ✓

HOLE 10.

AZIMUT	DIP	INTERVAL	COS.	HOR. DIST		SIN	VERT. DIST		ELEV.	LENGTH OF DDH.
				FT	M		FT	M		
0	90°	✓ 100	✓ 0	0	0	1.000 ✓	100.0 ✓	30.48 ✓	1309.0	30.48
60° 50'	85° 15'	✓ 200	✓ .0828	16.56 ✓	5.05	.9966 ✓	199.3 ✓	60.75 ✓	1278.52	191.44
72° 50'	82° 30'	✓ 200	✓ .1305	26.10 ✓	7.96	.9914 ✓	198.3 ✓	60.44 ✓	1157.32	152.40
72° 20'	84° 30'	✓ 200	✓ .0958	19.16 ✓	5.84	.9954 ✓	199.1 ✓	60.68 ✓	1096.64	213.36
102° 20'	88° 00'	✓ 100	✓ .0349	3.49 ✓	1.06	.9994 ✓	99.9 ✓	30.45 ✓	1066.79	243.84
				168.01	5.86	1.79	167.91	51.18	1045.46	264.57

JKC

DATE

TIME

A-11

SHEET NO.

OF

DIPY BRG. TESTS  
(Sperry Sun)

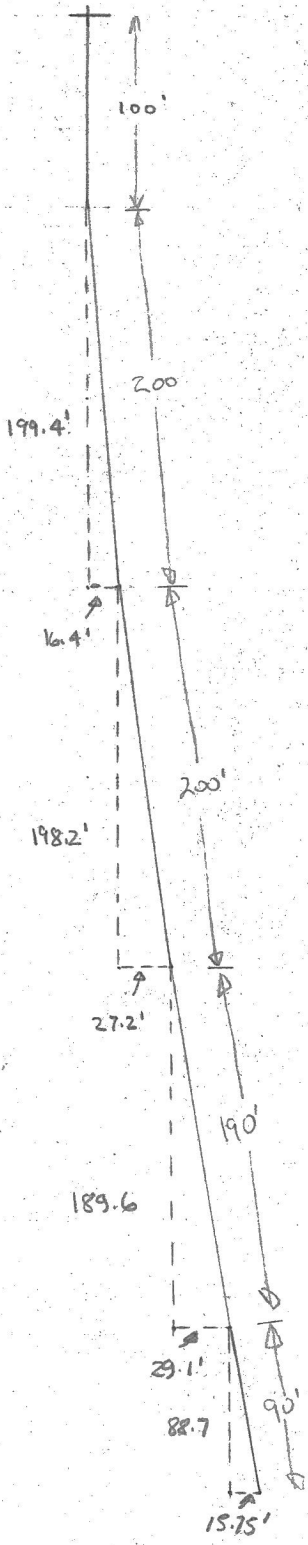
JOB NO.

1" = 20' 1/2" = 100'

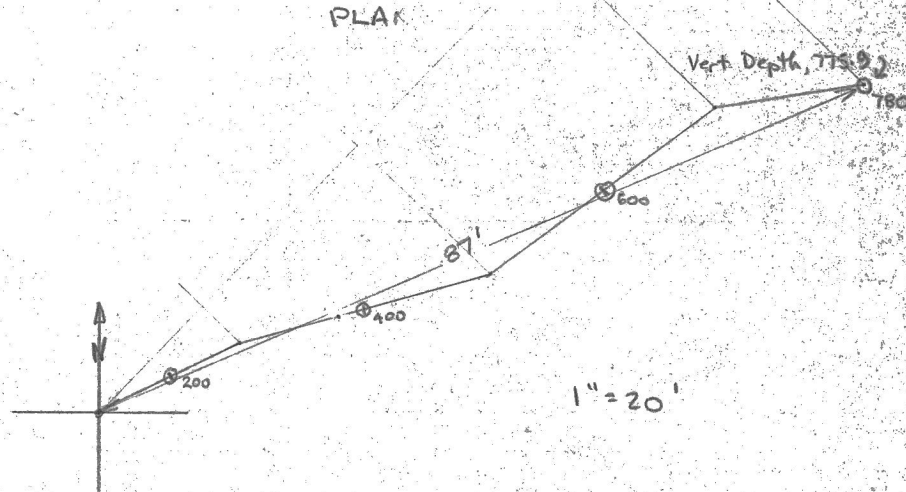
Az	DIP	COS	Dist	HD	SIN	VD
0	90	0	100	0	1.00	100
63.8	85.3	.082	200	16.4	.997	199.4
74.3	82.2	.136	200	27.2	.991	198.2
53.3	81.2	.153	190	29.1	.998	189.6
80.2	79.9	.175	90	15.75	.985	88.7
			780			775.9

SECTION

1" = 100'



PLAN



1" = 20'

VD 775.9'  
D = 780'

-A.11.-

D. D. H. Deviation

Scale: 1" to 20'

Ft.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
60.96	85° 20'	63° 50'	30.48	.0814		4.96	.99668	30.48	1292.05	1261.57	30.48
121.92	82° 30'	74° 20'	60.96	.1305		7.96	.99144	60.76	1200.81	1140.37	91.44
182.88	81° 30'	53° 4'	57.91	.1478		8.56	.98902	60.44	1083.10	1043.98	152.40
237.74	78°	80° 50'	39.63	<del>.1593</del>		<del>6.31</del>	<del>.9725</del>	57.27	<del>1043.98</del>	1044.3	210.31
				.2079		8.24	.97815	38.76			249.94

10,696.65  
7,521.19



A-12

84

A-12

D. D. H. Deviation

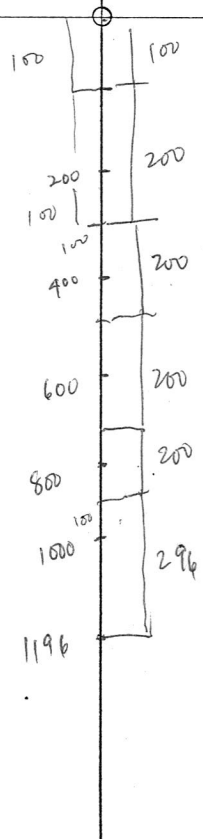
Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL		COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV. 1323.4	LENGTH OF DDH
			FT	M		FT	M		FT	M		
	-90		100		0			1	100	30.48	1293	30.48
200	-86-30'	91-50'	200	300	0.0610	12.2	3.72	0.99813	199.6	60.8	1232.1	91.44
400	-83-30'	84-2'	200	500	0.1132	22.6	6.9	0.99357	198.7	60.5	1171.6	152.4
600	-82	97-35	200	700	0.1392	27.8	8.5	0.99027	198.0	60.3	1111.3	213.4
800	-79-15	93-23	200	900	0.1866	37.3	11.4	0.9825	196.5	59.9	1051.4	274.3
1000	-79-15	89-30'	296	1196	0.1466	55.2	16.8	0.9825	290.8	88.6	962.8	364.5



Depth = 1103.5'  
1196 - 364.5

10 997.64  
7.391.02



NOTE: No D & B Test  
DATA Above are Overages of A-22, ~~A-21~~ A-95, A-20

53

DATE NOV. 2/75

A 13

SHEET NO. 1

DRAWN BY

DATE

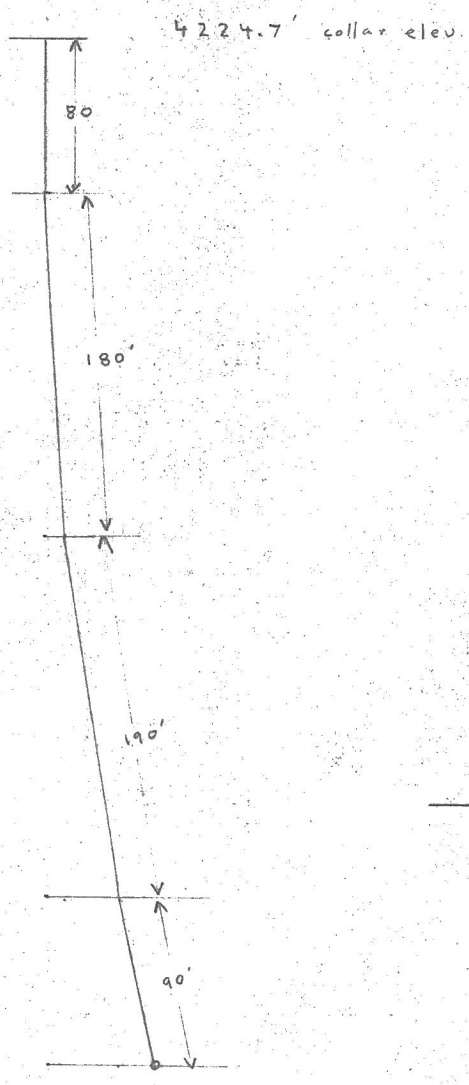
DIP + BEARING TEST

JOB NO.

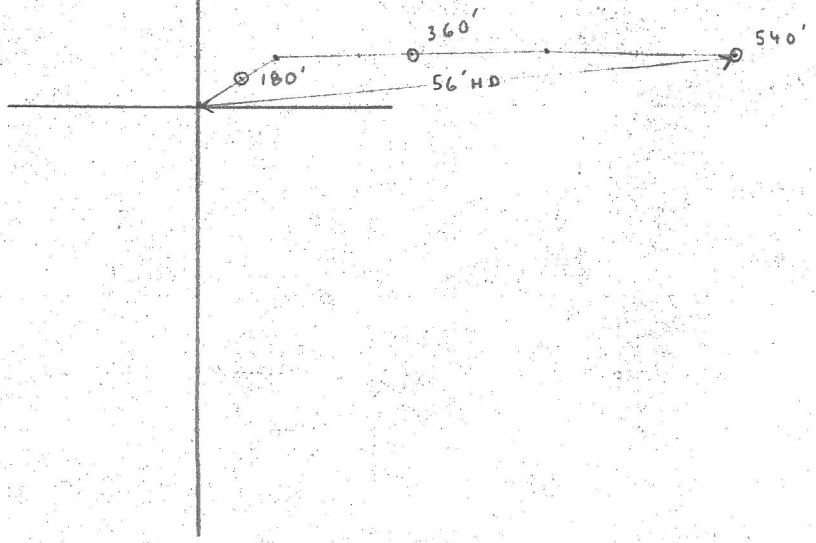
SPERRY - SUN

Az	Dist	Dip	cos	HD	sin	VD	
C	80'	90°	0	0	1.000	80'	
180	57°20'	180'	87°	0.0523	9.4'	0.9986	179.7'
360	88°20'	190'	81°30'	0.1478	28.1'	0.9890	187.9'
540	91°20'	90'	77°30'	0.2164	19.5'	0.9763	87.9'
					Σ	535.5'	

SCALE 1" = 100'



SCALE 1" = 20'



A 13

MAY 23

D+B

SPERRY SUN.

J.H.

	AZ	DIP	DIST	LOS	H.D.	SIN	V.D.
C	-	90°	90	0	0	1.0	90
160 <del>180</del>	57°20'	87°	180	.05234	9.4	.99863	179.8 269.8
360	88°20'	81°30'	180	.14781	26.6	.98902	178.0 447.8
540	91°20'	77°30'	90	.21644	19.5	.97630	87.9 525.7
90			540				

160  
~~180~~

90

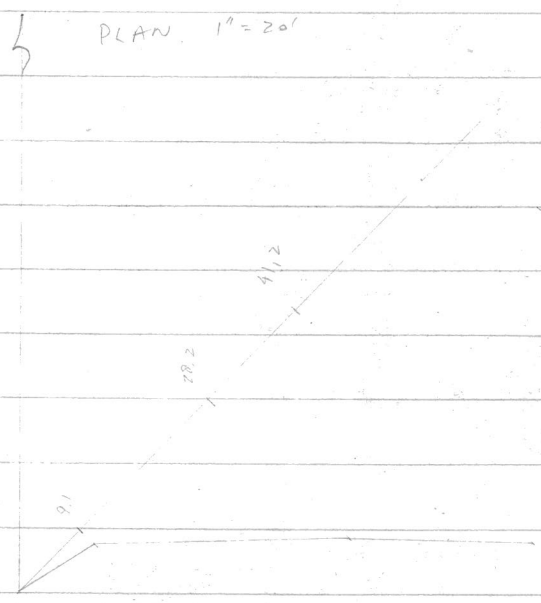
90

360

90

90

540



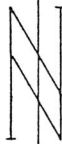
A.13

check '✓'

D. D. H. Deviation

Scale: 1" to 20'

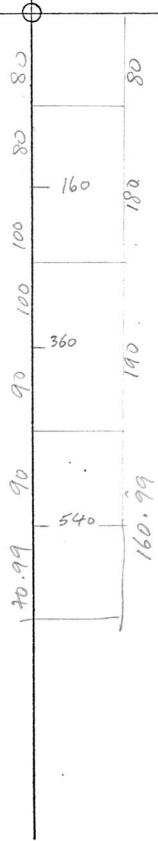
Fl.	Dip	Bearing	HOR. DIST.		VERT. DIST.		SIN.	FT	M	ELEV.	LENGTH OF DDH
			INTERVAL	COS.	FT	M					
	90°		80							1287.69	
160	87°	57°20'	180	.0523	9.41	2.87	.99863	179.75	54.79	1263.31	24.38
360	81°30'	88°20'	190	.1478	28.08	8.56	.98902	187.91	57.27	1208.52	79.25
540	77°30'	91°20'	160.99	.2164	34.84	10.62	.97630	157.17	47.91	1151.25	137.16
											186.23



$$h = \frac{2.50}{.2164} = 11.55$$

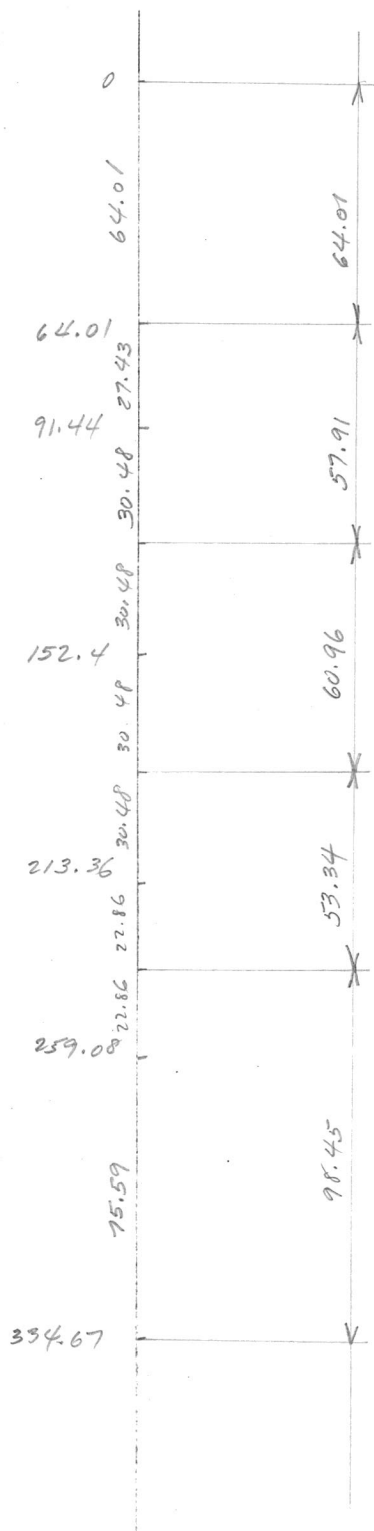
$$67\%w = 1.48.71 \text{ footage}$$

$$j = 11.27$$



A-14 FROM A-4

LENGTH	BEARING	INTERVAL	Hor DIST		DIP	VERT. DIST		ELEVATION	LENGTH
			COS	METRES		M. ER	1300.78		
64.01	X	64.01			90°		64.01	1236.77	64.01
91.44	74°50	57.91	.0523	3.03	87°	.99863	57.83	1178.94	121.92
152.40	34°50	60.96	.1132	6.90	83°30	.99357	60.57	1118.37	182.88
213.36	42°20	53.34	.0958	5.11	84°30	.99340	53.09	1065.28	236.22
259.08	319°50	98.45	.1219	12.00	83°	.99255	97.72	967.56	334.67



A-15

LENGTH	BEARING	INTERVAL	COS	HOR. ST METRES	DIP	SIN	VERT. DI METRES	ELEVATION	LENGTH
60.96	126°	30.48	.1392	8.49	82°	.99027	30.48	1313.91	30.48
121.92	135°	60.96	.2419	14.75	76°	.9703	60.37	1283.43	91.44
182.88	160°	60.96	.3090	18.84	72°	.95106	59.15	1223.06	152.40
243.84	172°	36.27	.2924	10.61	73°	.95630	57.98	1105.93	213.36
							34.69	1071.24	249.63

Calculations from d.d. h A-127.

1327.10
1296.62
1236.25
1177.10
1119.12
1084.43

\* Elevation of A-15 taken from topo map.

Piercing Points

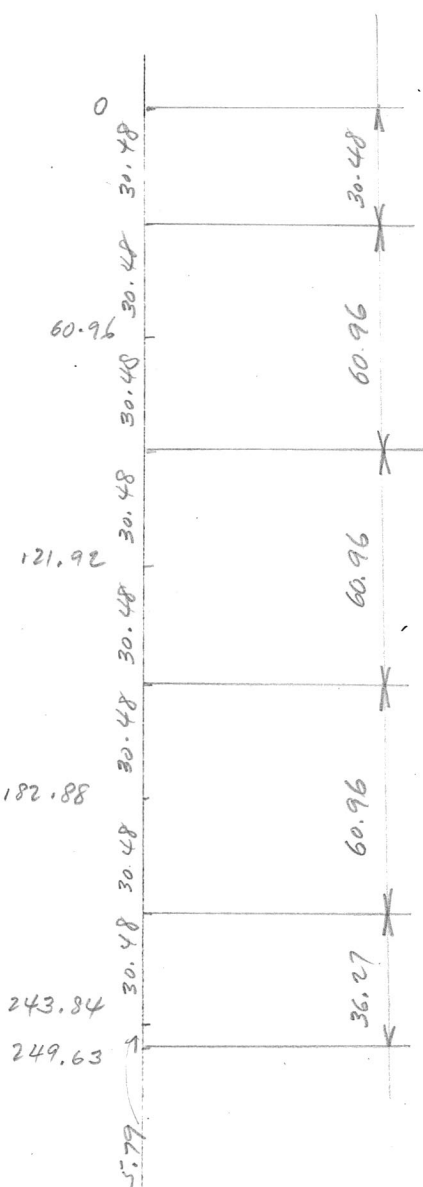
①  $x = \frac{1.0}{.1392} = 7.18 = h$

$y = 7.18 \times .99027 = 7.11$

②  $x = \frac{1.5}{.2419} = 6.20 = h$

$y = 6.20 \times .9703 = 6.02$

③ on 1119.12 elevation (213.36<sup>M</sup>)



A-16 A-64 & A-127 Average

LENGTH	BEARING	INTERVAL	COS	METRES	DIP	SIN	MEIKES	ELEVATION	LENGTH
		30.48					30.48	1308.52	
60.96	139.1	60.96	.1045	6.37	84°	.99452	60.63	1278.04	30.48
121.92	143.6	60.96	.1951	11.89	78° 45'	.9808	59.79	1217.41	91.44
182.88	148.25	60.96	.2952	18.00	72° 50'	.95545	58.24	1157.62	152.40
243.84	158.1	60.96	.3679	22.43	68° 25'	.9299	56.69	1099.38	213.36
304.80	145.6	30.33	.3173	9.62	71° 30'	.94832	28.76	1042.69	274.32
								1013.93	304.65

A-16

1321.0
1290.52
1229.89
1170.10
1111.86
1055.17
1026.41

Piercing Points:

$$\textcircled{1} x = \frac{5.0}{.1951} = 25.63 = h / y = 25.63 \times .9808 = 25.14$$

$$\textcircled{2} x = \frac{8.5}{.2952} = 28.79 = h / y = 28.79 \times .95545 = 27.51$$

$$\textcircled{3} x = \frac{6.7}{.3679} = 18.21 = h / y = 18.21 \times .9299 = 16.93$$

$$\textcircled{4} x = \frac{1.0}{.3173} = 3.15 = h / y = 3.15 \times .94832 = 2.99$$

A-74 (17)

HOR. DIST.

VERT. DIS.

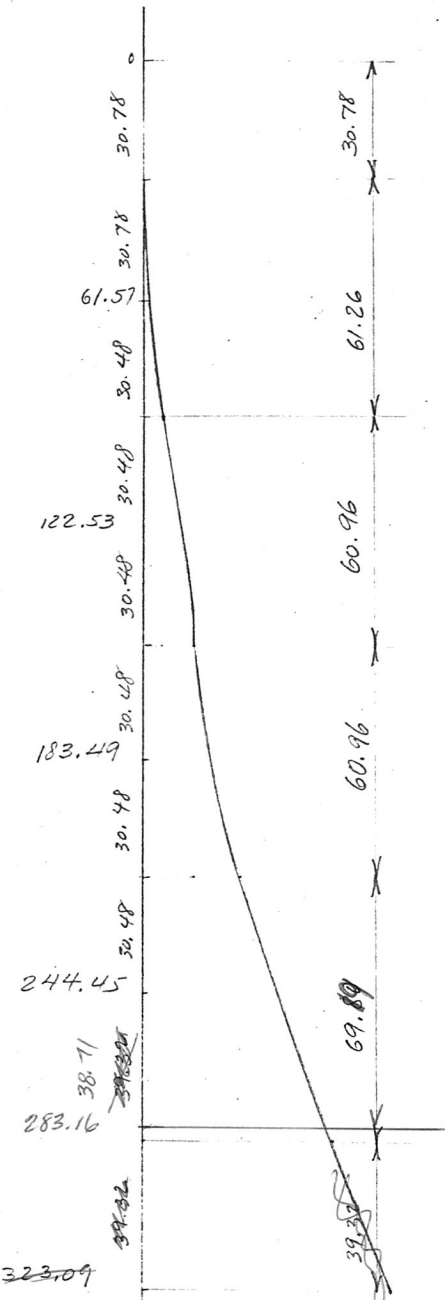
ELEVATION

LENGTH

LENGTH	DIP	BEARING	INTERVAL		METRES	SIN	Mi	ELEVATION	LENGTH
30.78			30.78 ✓				30.18	1283.48	30.78
61.57	85°	110.5°	61.26 ✓	.0872	5.34	.99619	61.03	1252.7	92.04
122.53	82°	80°	60.96 ✓	.1392	8.48	.99027	60.37	1191.67	153.00
183.49	78°	59.5°	60.96 ✓	.2079	12.67	.97815	59.63	1131.3	213.96
244.45	73°	58.5°	69.89 ✓	.2924	26.41	.95630	58.75	1071.67	283.76
			<del>39.82</del> ✓		20.23		66.17	<del>1064.83</del>	<del>323.09</del>
			<del>39.82</del>		<del>20.23</del>		<del>66.17</del>	1005.58	
									323.09

SCALE : 1:20

~~10525.9~~  
7612.95



1284.51
1253.73
1192.70
1132.33
1072.70
1006.53

J.B.C.

A-18

DIP & BRG TESTS  
(Sperry Sum)

SHEET NO.

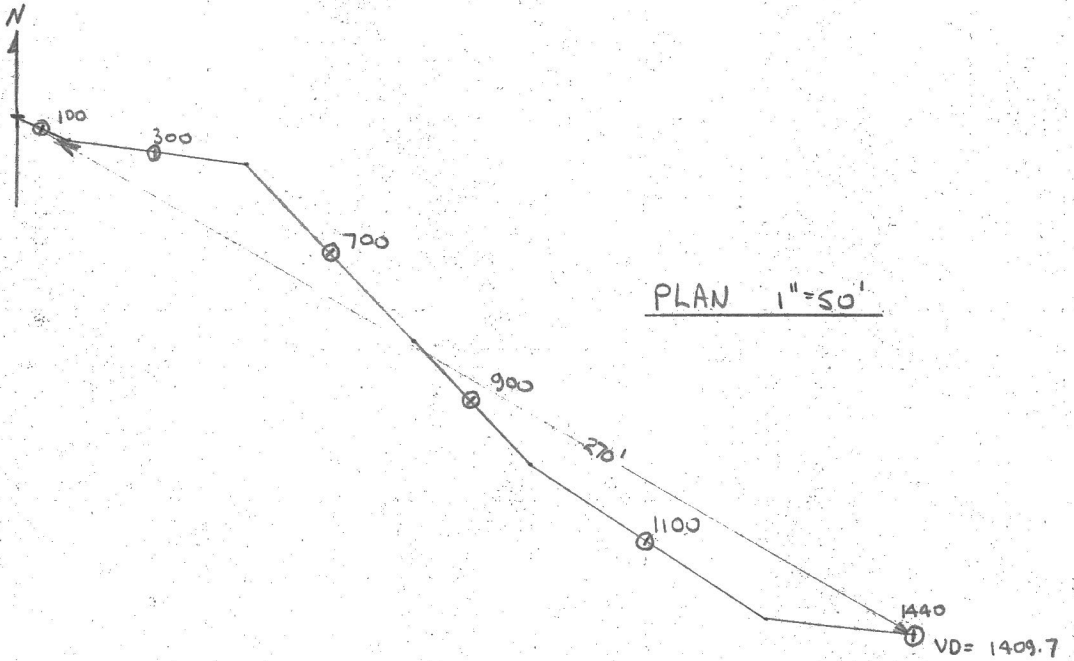
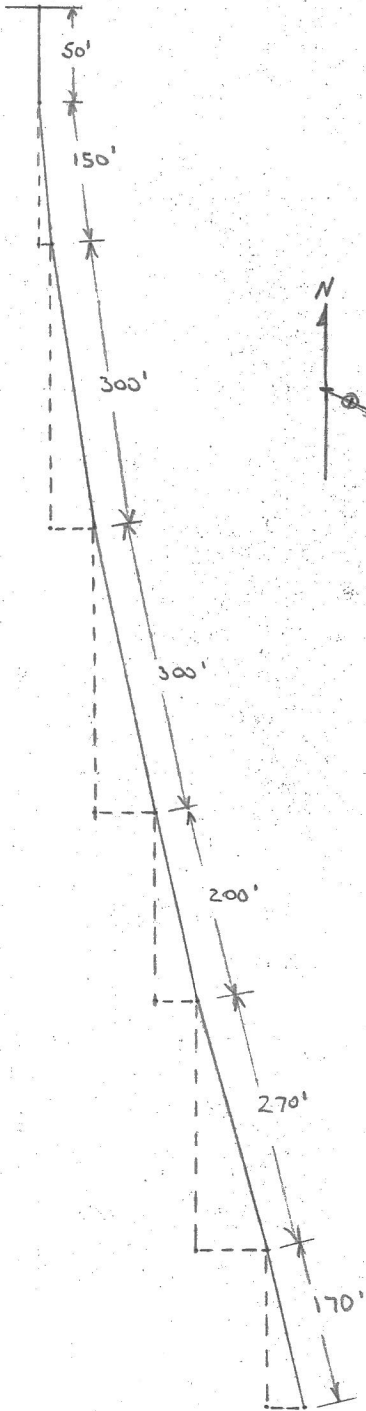
JOB NO.

Hz	DIP	COS	D	HD	SIN	VD
0	90°	0	50	0	1.00	50
113.3	84.3	.099	150	14.9	.995	149.3
97.3	81.0	.156	300	46.8	.988	298.4
136.3	77.9	.210	300	63.0	.978	293.4
136.3	77.2	.222	200	44.4	.975	195.00
123.3	74.3	.271	270	73.2	.963	260.0
95.3	76.8	.228	170	38.8	.974	165.6

$\Sigma = 1440$

$\Sigma = 1409.7$

SECTION 1"=200'



PLAN 1"=50'

A-18

LENGTH	BEARING	INTERVAL	COS	HOR. ST. METRES	DIP	SIN	VERT. DI METRES	ELEVATION	LENGTH
30.48	133.30°	15.24	.099	4.53	84.3	.995	15.24	1300.34	15.24
91.44	97.30°	45.72	.156	14.26	81	.988	45.49	1305.10	60.96
213.36	136.30°	91.44	.210	19.20	77.9	.978	90.34	1259.61	152.40
274.32	126.30°	60.96	.222	13.53	77.2	.975	59.44	1079.93	243.84
335.28	113.30°	82.30	.271	22.30	74.3	.963	79.25	1020.49	304.80
438.91	95.30°	51.82	.228	11.81	76.8	.974	50.47	941.34	387.10
								890.77	438.92

106°20'

X-SECT. 92 W.  
2N.

1333.16
1317.92
1272.43
1182.09
1092.66
1033.22
953.97
903.50

\* elevation of A-18 taken from topog map.

Piercing Points

①  $x = \frac{11.0}{.156} = 70.51 = h$

$y = 70.51 \times .988 = 69.66$

②  $x = \frac{12.5}{.210} = 59.52 = h$

$y = 59.52 \times .978 = 58.21$

③  $x = \frac{8.5}{.222} = 38.29 = h$

$y = 38.29 \times .975 = 37.33$

④  $x = \frac{10}{.271} = 36.90 = h$

$y = 36.90 \times .963 = 35.53$

⑤  $x = \frac{4.0}{.228} = 17.54 = h / y = 17.54 \times .974 = 17.08$

\* A.19 = Approx. dr. of A60 & A21 data.

by J. L. Shaw  
Nov 16/76

D. D. H. Deviation Vano. file

Scale: 1" = 20'

Cellar	Dip	Bearing	INTERVAL	C <sub>v</sub>	HOR. DIST.		SIN.	VE DIST		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
100'								100.00	30.48	1265.04	30.48"
200'	-87°	118°	200'	.0523	10.46	3.19	.99863	199.73	60.88	1204.16	729.44
400'	-83.5°	97.5°	200'	.1132	22.64	6.90	.99357	198.71	60.57	1143.59	152.4
600'	-83°	111.5°	200'	.1219	24.38	7.43	.99255	198.51	60.51	1083.08	213.36
(END)			143'		18.2	5.6		141.8	43.2	1039.9	256.95

256.95 END OF THE (843 ft.)

@ 200' A60 Azim 78°50' ≈ 86°  
 A21 157°20' ≈ 88°30'  
 $\frac{21236 \cdot 10'}{118 \cdot 05'} = \frac{2174 \cdot 30}{87 \cdot 15}$

10, 699.70

7, 609.33

(1295.52 Elev.)

@ 400' A60 ≈ 119° ≈ 85°  
 A21 ≈ 76° ≈ 82°  
 $\frac{21195}{97 \cdot 10} = \frac{2167}{83 \cdot 50}$

72W/2N

@ 600' A60 ≈ 146° 86°  
 A21 ≈ 77° 80°  
 $\frac{2223}{111 \cdot 50} = \frac{2166}{83 \cdot 00}$

100'

100'

200' D

100'

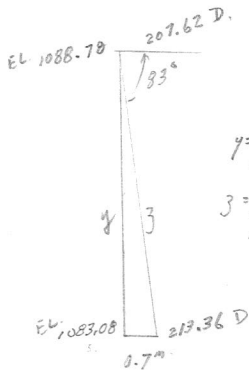
300' D

400' D

500' D

600' D

700' D



$$y = 0.7 (0.144) = 5.70'$$

$$z = \frac{0.7}{.1219} = 5.74'$$

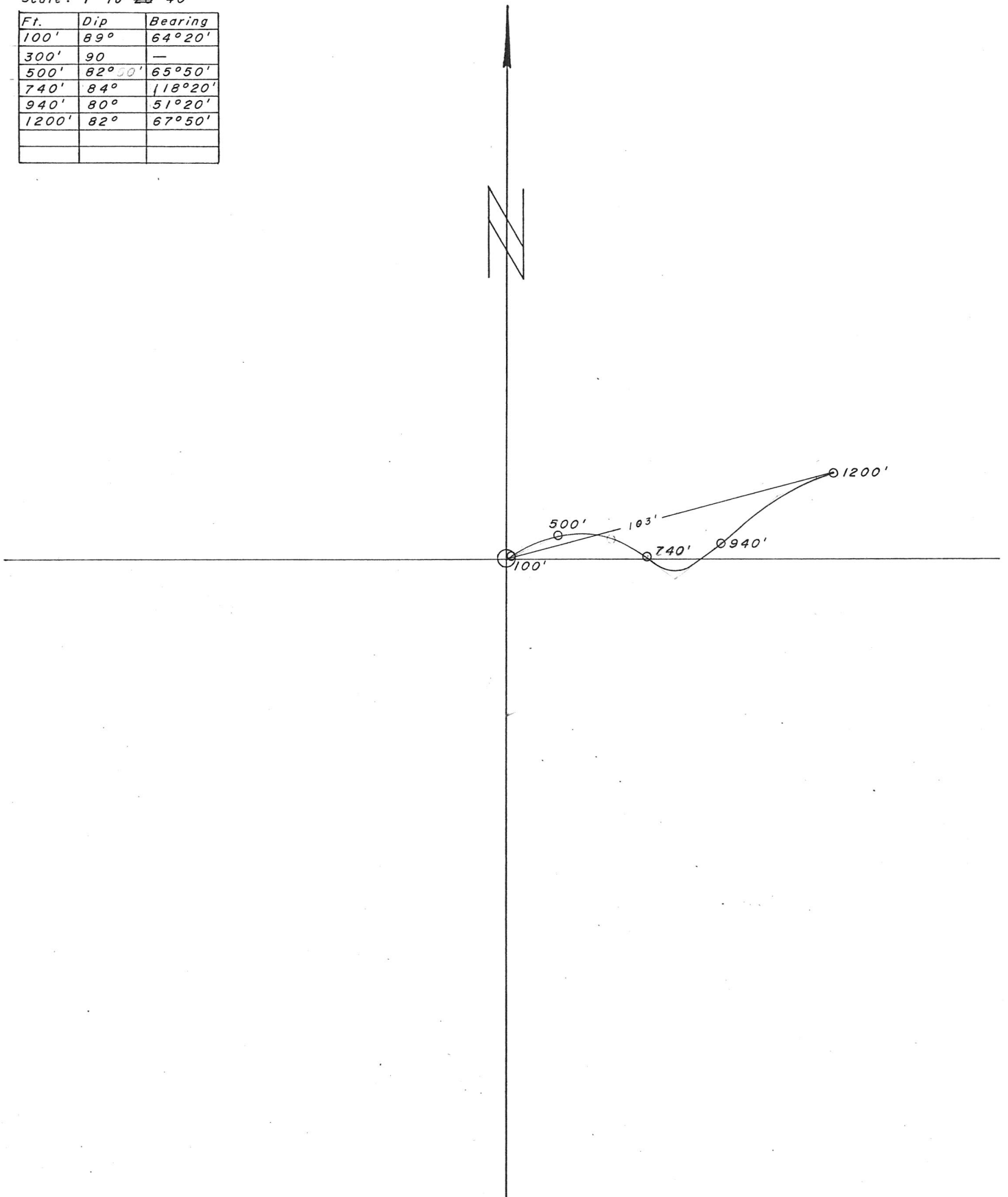
843' D

A-20 (84W. 6N.)

D.D.H. DEVIATION

Scale: 1" to ~~20~~' 40'

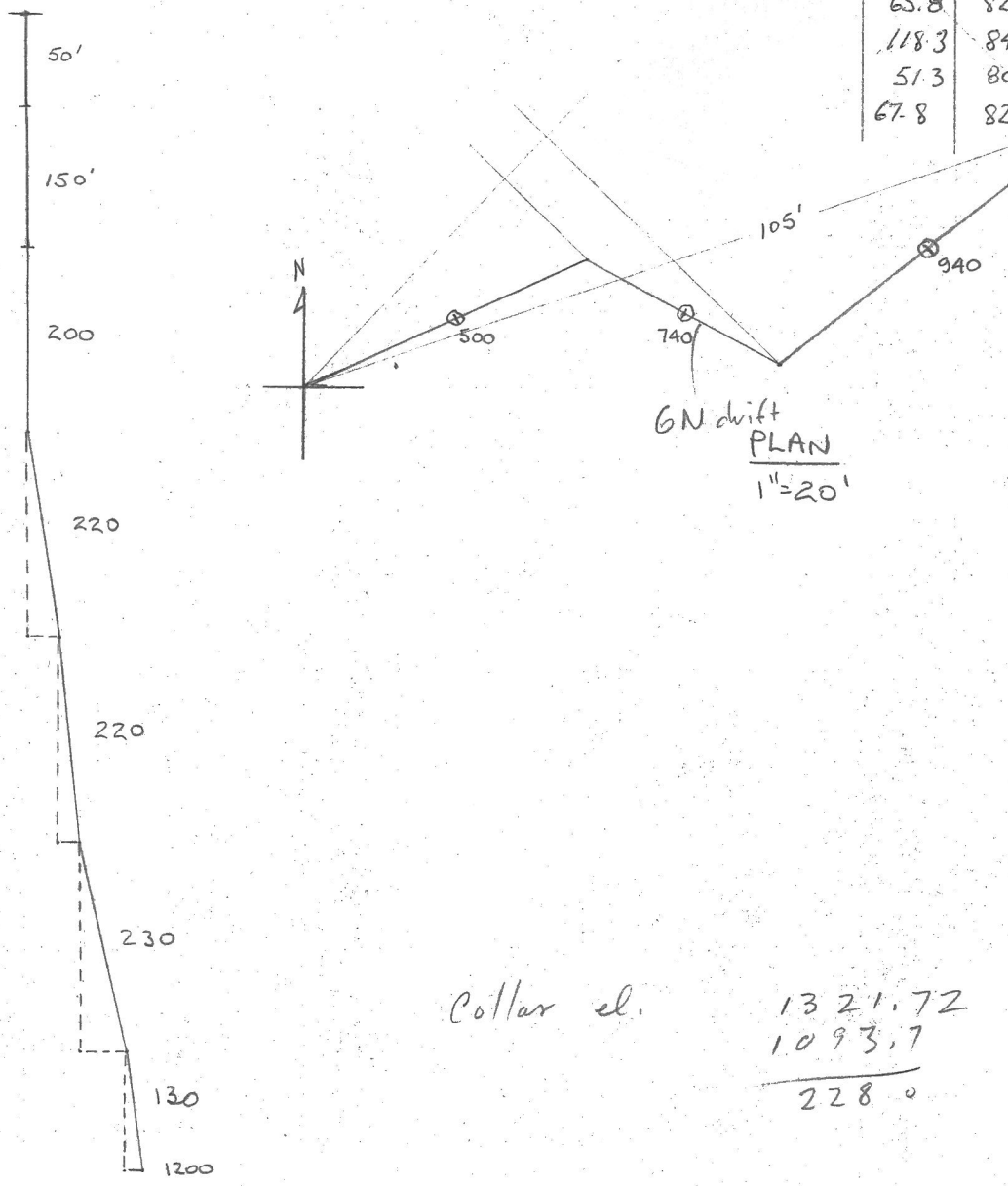
Ft.	Dip	Bearing
100'	89°	64°20'
300'	90	—
500'	82°50'	65°50'
740'	84°	118°20'
940'	80°	51°20'
1200'	82°	67°50'



JKC

A-20  
DIP & BRG TEST

AZ	DIP	COS	D	HD	SIN	VD
0	90	0	50	0	1.00	50
64.3	89	<del>1.00</del> 0.017	150	2.6	1.00	150
0	90	0	200	0	1.00	200
65.8	82	.139	220	30.6 <sup>0</sup>	.99	218
118.3	84	.105	220	23.1 <sup>0</sup>	.995	219
51.3	80	.174	230	40.0 <sup>0</sup>	.985	226.5
67.8	82	.139	130	18.1	.99	128.8
			$\Sigma = 1200$			$\Sigma = 1192.3$



GN drift  
PLAN  
1"=20'

Collar el.      1321.72  
                    1093.7  
                    228.0

SECTION  
1"=200'

VD = 1192.3

A. 20

Checked Nov. 4/76.

D. D. H. Deviation

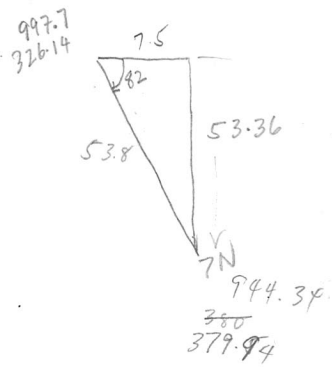
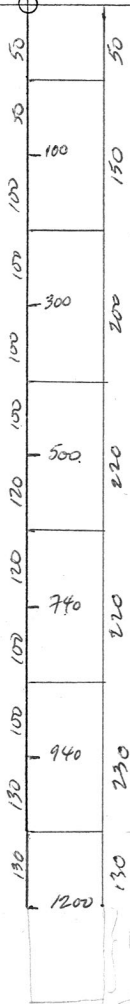
Scale: 1" to 20'

Ft.	Dip	Bearing	INTERVAL		COS.	HOR. DIST.		SIN.	VER. DIST		ELEV.	LENGTH OF DDH
			50			FT	M		M	M		
100	89°	64° 20'	150	200	.0175	2.63	0.80	.99985	149.98	45.71	1260.77	60.96
<del>370</del>	90°		200	400	✓	✓	✓	✓	✓	50.96	1199.81	121.92
500	82°	65° 50'	220	620	.1392	30.62	9.33	.99027	217.86	66.40	1133.41	188.98
740	84°	118° 30'	220	840	.1045	22.99	7.01	.99452	218.79	66.69	1066.72	256.03
940	80°	51°	230	1070	.1736	39.93	12.17	.98481	226.51	69.04	997.68	326.14
<del>1200</del>	82°	67°	264	1334	.1392	18.10	5.52	.99027	128.74	39.24	954.44	365.36
1334						36.74	11.2		261.4	79.68	918	406.6

1334



84 W  
6+00 N  
11 038.90 N  
7 432.51 E



1334

J.P.

DATE \_\_\_\_\_  
DATE \_\_\_\_\_

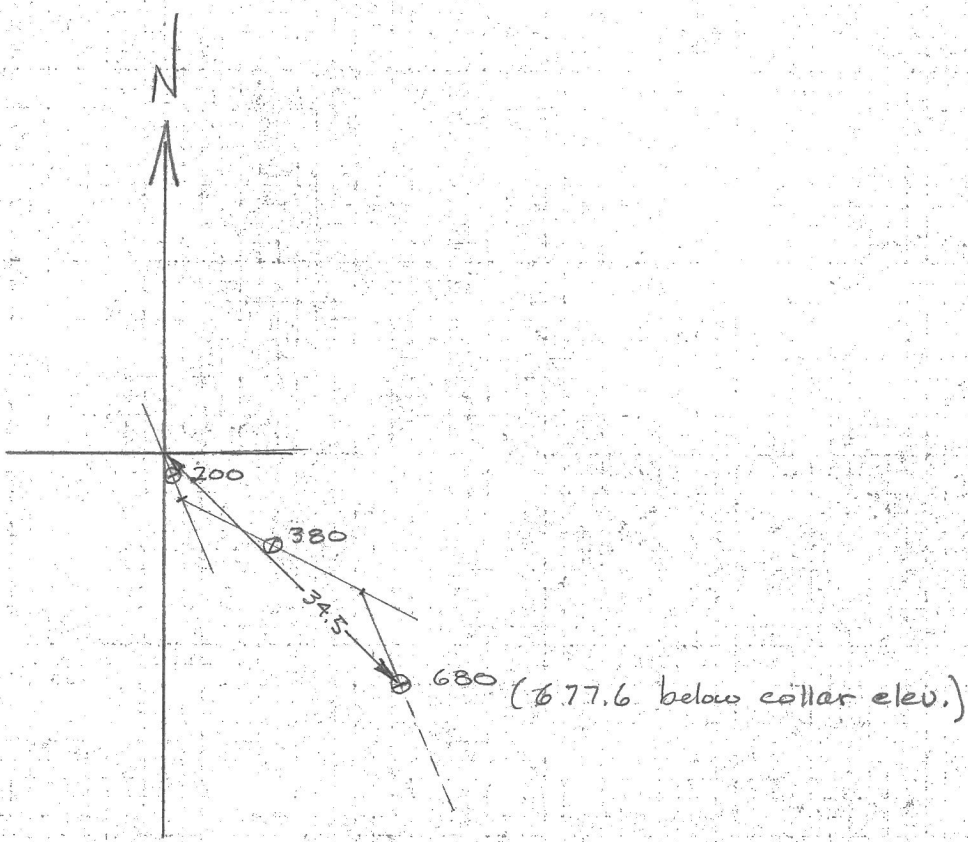
A-21

DIP & BEARING SURVEY  
SPERRY SUN INST.

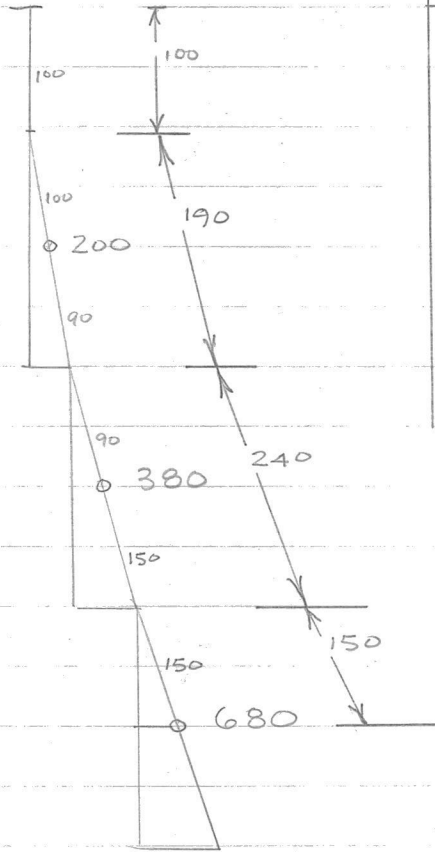
SHEET NO. \_\_\_\_\_

JOB NO. \_\_\_\_\_

Scale 1" = 20'



A-21



Az	Dip Angle	Cos	D <sub>1ST</sub>	H. D <sub>1ST</sub>	Sin	D <sub>1ST</sub>	V. D <sub>1ST</sub>
0	90°	0	100	0	1.000	100	100.0
157°20'	88°30'	.0262	190	-5.0	1.000	190	190.0
117°20'	85°	.0872	240	20.9	.9962	240	238.4
157°20'	86°	.0698	150	10.46	.9976	150	149.2
							<u>677.6</u>

677.6 below collar elev.

Van. file

BY: JP

DATE

SUBJECT A-21

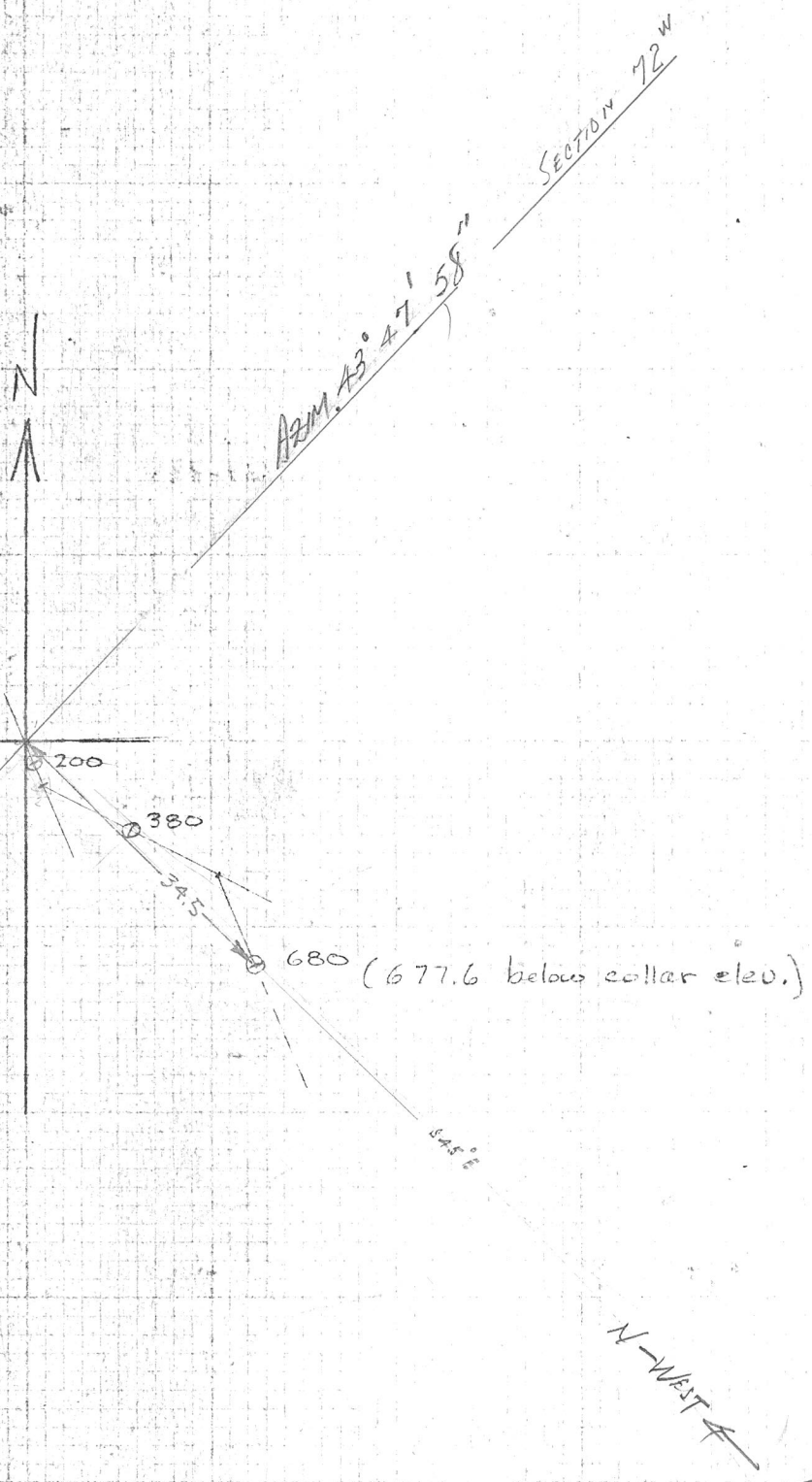
SHEET NO. OF

CNCD. BY

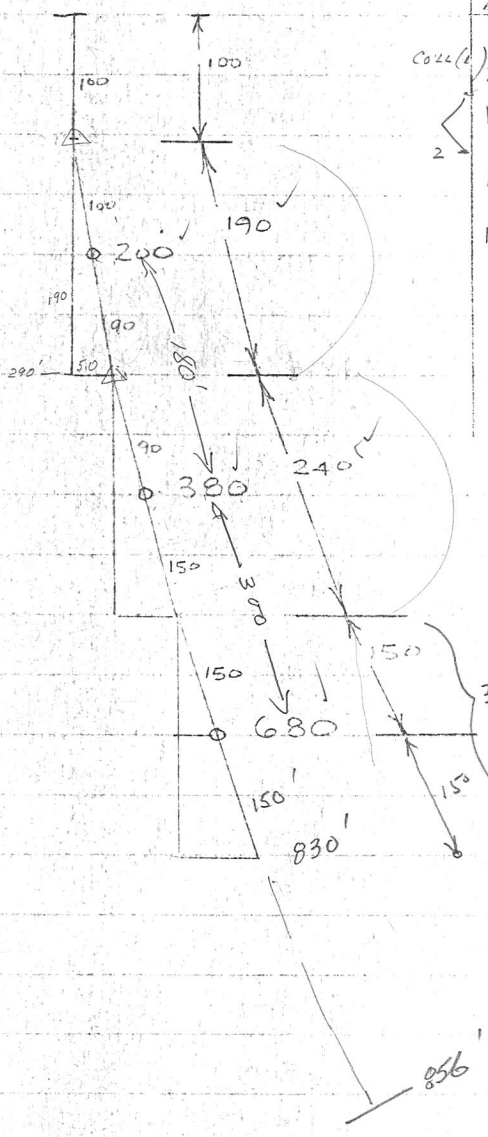
DATE

DIP & BEARING SURVEY  
SPERRY SUN INST.

JOB NO.



A-21



Az	Dip Angle	Cos	LENGTH DEPTH Dist	(H.) Dist	Sin	Dist	V. Dist
Collar	90° ✓	0	100	0	1.000	100	100.0
157° 20'	88° 30' N	.0262	190	5.0	1.000	190	190.0
117° 20'	85° ✓	.0872	240	20.9	.9962	240	238.4
157° 20'	86° ✓	.0698	150	10.46	.9976	150	149.2
							<u>677.6</u>

326'  
677.6 below collar elev.  
26'

see Vane other sheet for further calc's  
JC

Scale: 1" = 20' A-21 (856 D.)

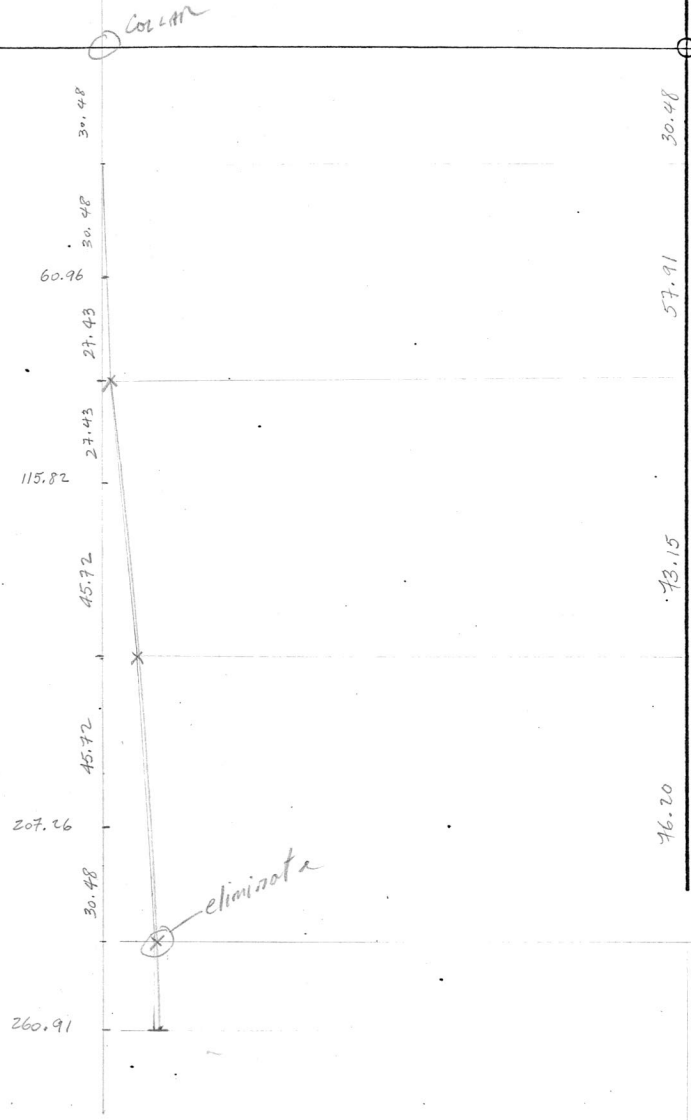
Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		Σ IN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
			30.48 ✓							1301.68	
60.96	88° 30'	159° 20'	57.91 ✓	0.0262 ✓		1.52 ✓	.99966 ✓		30.48 ✓	1271.20	30.48
115.82	85°	117° 30'	73.15 ✓	0.0872 ✓		6.38 ✓	.99619 ✓		57.89 ✓	1213.31	88.39
207.26	86°	159° 30'	96.20 ✓	0.0698 ✓		5.92 ✓	.99756 ✓		72.87 ✓	1140.44	161.54
END			99.36 ✓	"		6.74 ✓			96.01 ✓	1064.43	237.74
									99.12 ✓	1041.32	260.91 END
											260.91

Σ = 14.84

260.36

10,743.08  
7,651.38  
72W. / 4N

Scale 1" = 200'



Survey entered into H.W. Log / Checked & Adjusted by J. G. Nov. 10/76

J.M.

DATE

A-22

SHEET NO.

CAMP AT

DATE

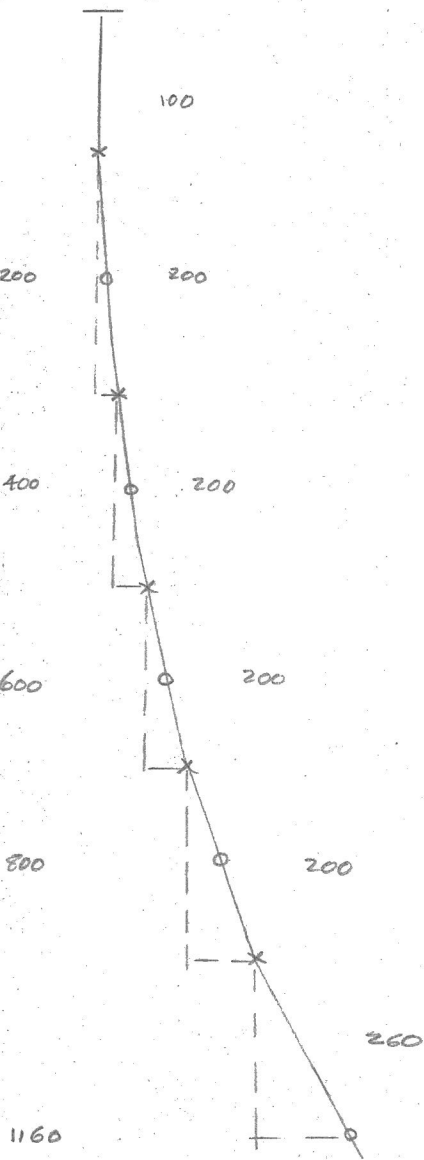
Aug 8

# DIP AND BEARING SURVEY by SPERRY-SUN.

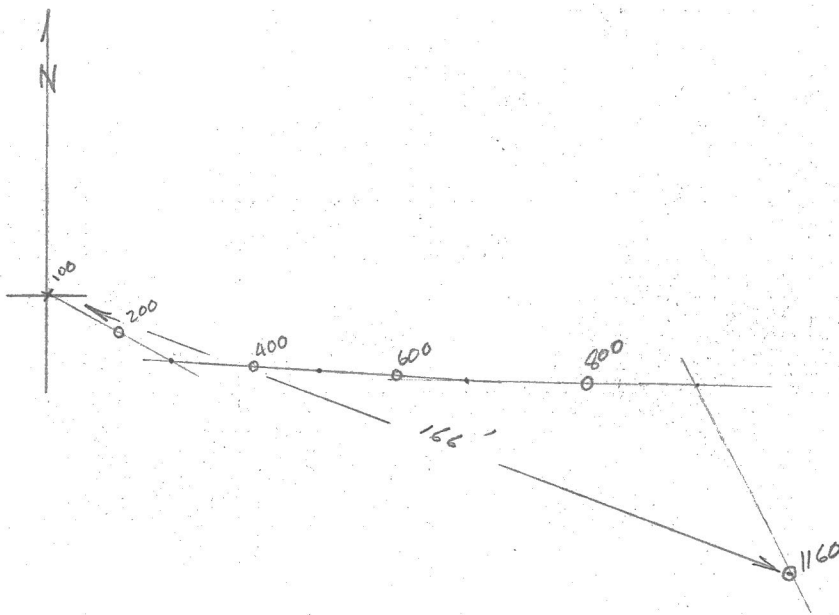
GRUM

AZ.	DIP	COS.	DIST.	HD.	SIN.	V.D.
0	90°	0	100	0	1.00	100
119°20'	83°30'	.122	200	24.4	.992	198.4
103°20'	81°	.156	200	31.2	.987	197.4
103°20'	81°	.156	200	31.2	.987	197.4
102°20'	76°30'	.242	200	48.4	.970	194
154°20'	80°	.173	260	44.9	.985	256.1
			LENGTH	1160	DEPTH 1143.3	

NOT TO SCALE



DEPTH AT COLLAR - 1143.3



Vertical stamp or text on the right edge of the page, possibly a date or reference number.

BY J.M. DATE \_\_\_\_\_  
 CHKD. BY \_\_\_\_\_ DATE Aug 8

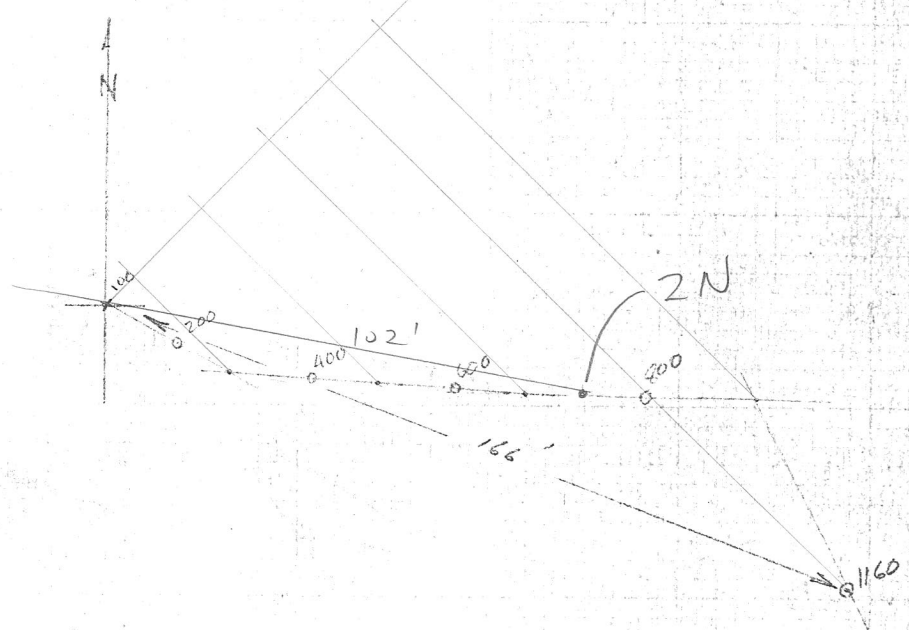
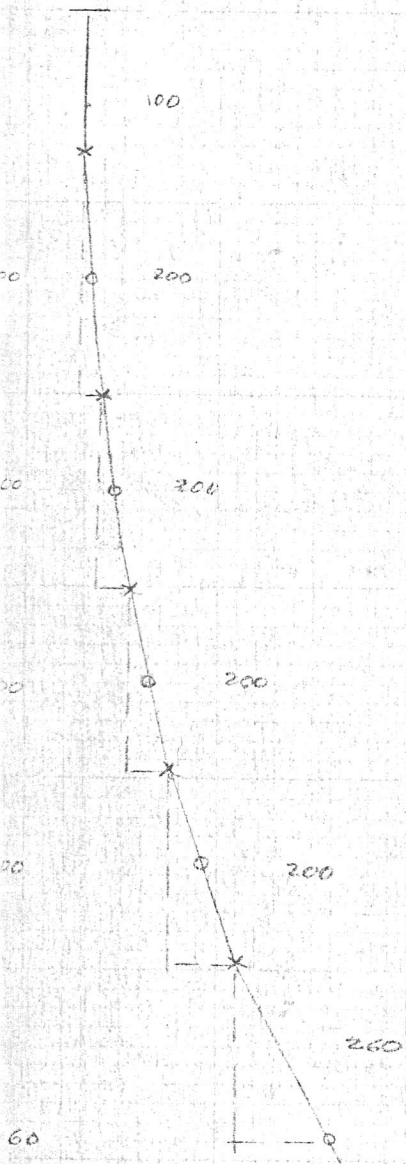
SUBJECT A-22  
DIP AND BEARING SURVEY  
by SPERRY-SUN.

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. GRUNT

SCALE  
 1" = 40'

AZ.	DIP	COS.	DIST.	H.D.	SIN.	V.D.
0	90°	0	100	0	1.00	100
119°20'	83°30'	.122	200	24.4	.992	198.4
103°20'	81°	.156	200	31.2	.987	197.4
103°20'	81°	.156	200	31.2	.987	197.4
107°20'	76°30'	.242	200	48.4	.970	194
154°20'	80°	.172	260	44.9	.985	256.1
			LENGTH	1160	DEPTH 1143.3	

NOT TO SCALE



$$\begin{array}{r}
 \text{Collar} \quad 1322 \\
 2N \quad \quad 1093 \\
 \hline
 229 = 751'
 \end{array}$$

887.5

A.22

84W

Checked by P.D. 3/76

D. D. H. Deviation

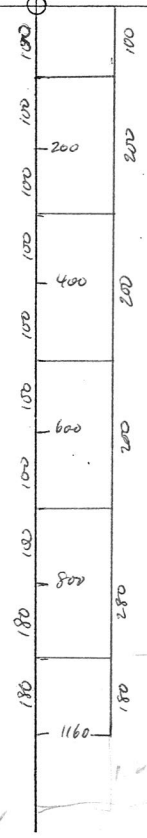
Scale: 1" to 20'

Ft.	Dip	Bearing	INTERVAL		COS.	HOR. DIST.		SIN.	VER. DIST.		ELEV.	LENGTH OF DDH
			100			FT	M		FT	M		
			100								1322.15	
200	83° 30'	119° 20'	200	300	.1132	22.64	6.90	.99357	198.71	60.57	1291.67	30.48
400	81	103° "	200	500	.1564	31.28	9.53	.98769	197.54	60.21	1170.89	154.4
600	81	103° "	200	700	.1564	31.28	9.53	.98769	197.54	60.21	1110.68	213.36
800	76° 30'	102° "	280	980	.2334	65.35	19.92	.97237	272.26	82.98	1027.70	298.70
1160	80	154° "	180	1160	.1736	34.25	9.53	.98481	197.27	54.03	973.67	353.57
			282	1262		48.9	14.9		277.7	84.64	943	384.66

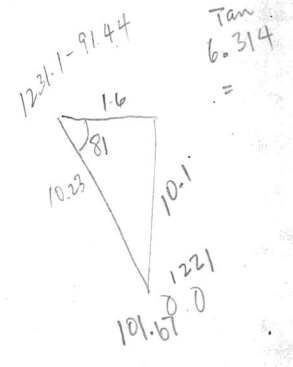
1262'



84 W  
2+00 N  
10 949.58 W  
7 345.91 E



1262'



JP

DATE

A-23

SHEET NO.

OF

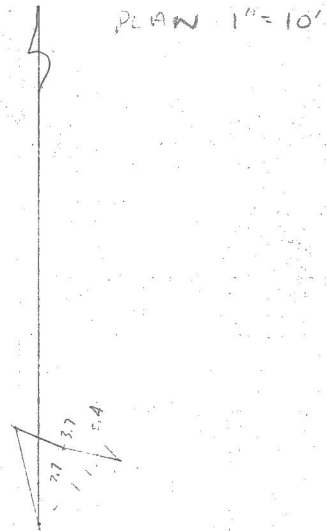
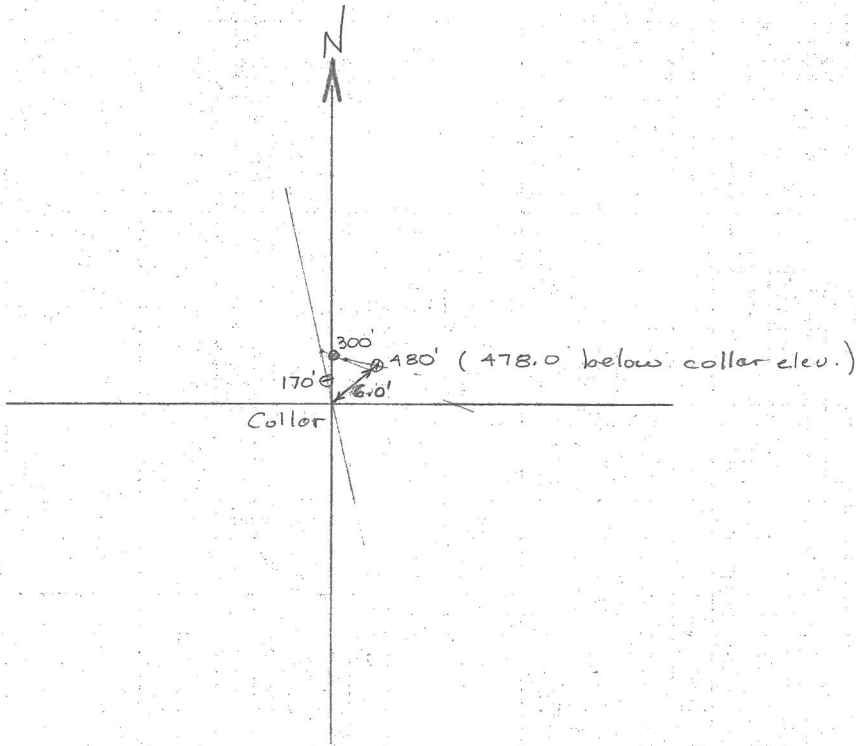
DATE

DATE

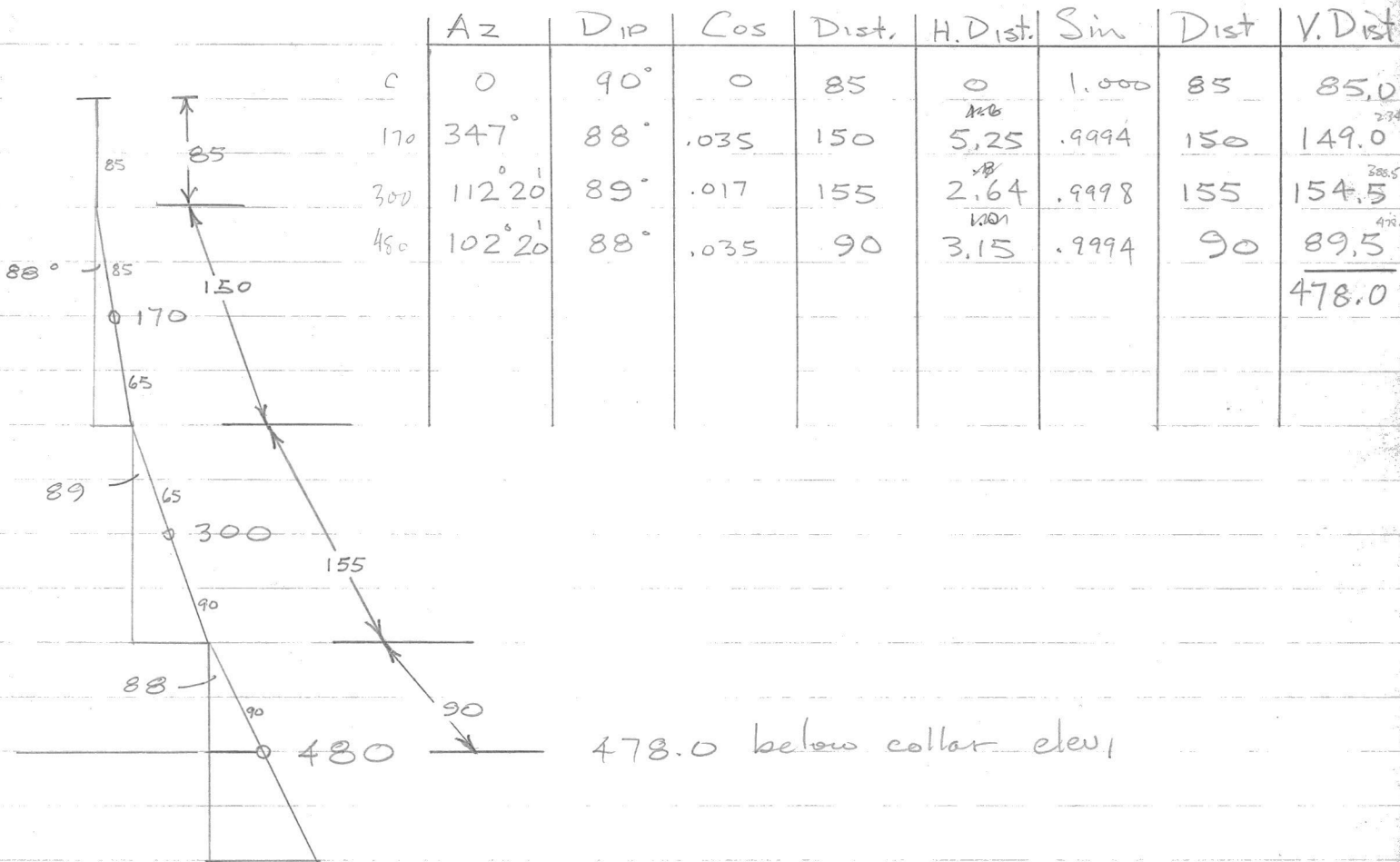
DIP & Bearing TEST  
Sperry Sun Test.

DATE

Scale 1" = 20'



A-23



	Az	Dip	Cos	Dist.	H. Dist.	Sin	Dist	V. Dist
C	0	90°	0	85	0	1.000	85	85.0
170	347°	88°	.035	150	5.25	.9994	150	149.0
300	112° 20'	89°	.017	155	2.64	.9998	155	154.5
480	102° 20'	88°	.035	90	3.15	.9994	90	89.5
								<u>478.0</u>

478.0 below collar elev.

23

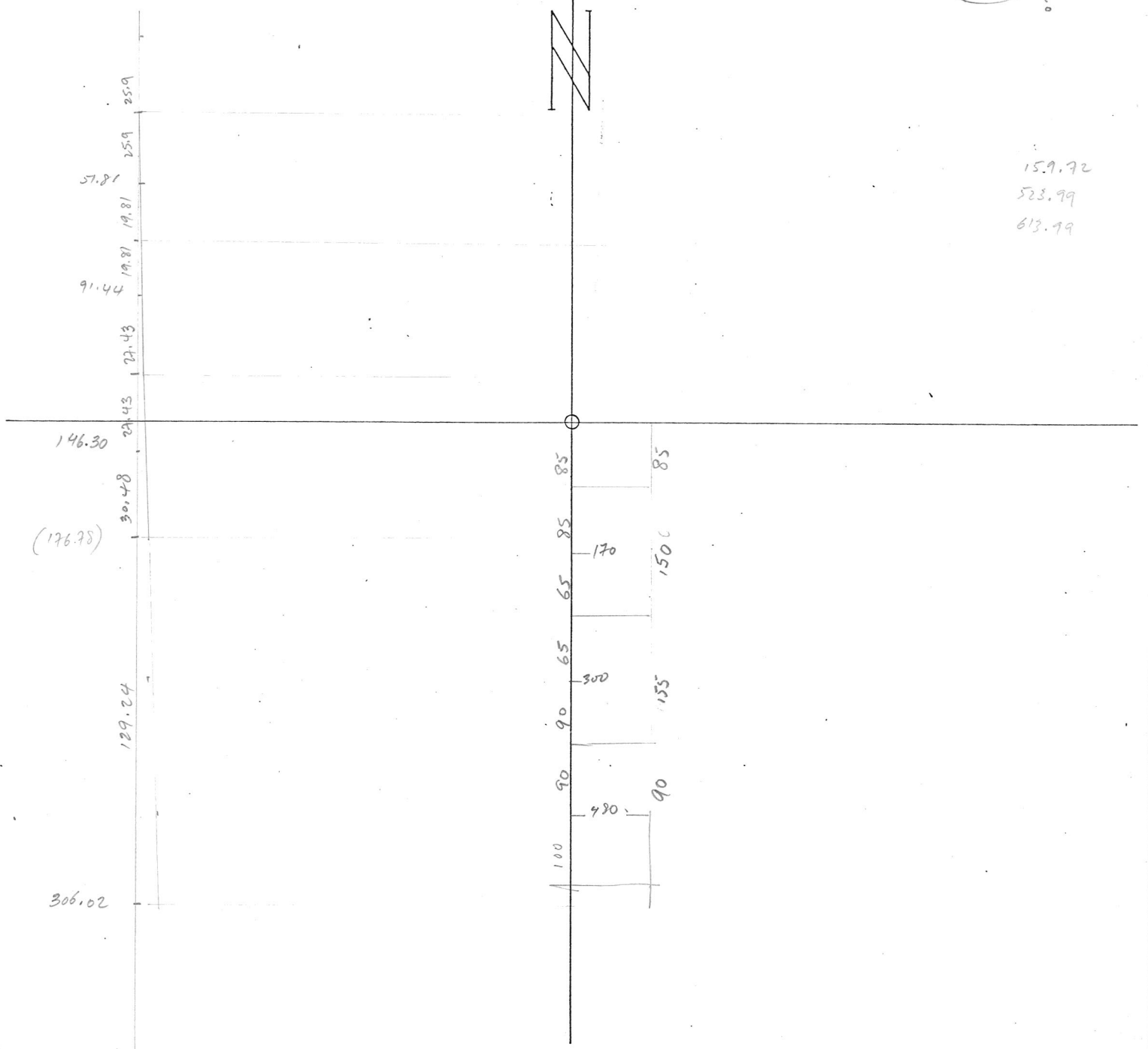
a Red ✓

D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
			85 ✓							1288.52	25.91
170	88° ✓	34.70	150.235 ✓	.0349 ✓	5.24	1.60	.99939	149.91	25.91	1262.61	71.63
300	89° ✓	116.20	155.390 ✓	.0175 ✓	2.71	0.83	.99985	154.98	47.24	1169.68	118.87
480	88° ✓	102.20	190.580 ✓	.0349 ✓	6.63	2.02	.99939	189.88	57.88	1111.80	176.78
					21.43	6.53			187.03	982.64	

306.02 ?



159.72  
523.99  
613.99

JD

DATE

CITY

A-24

SCALE NO.

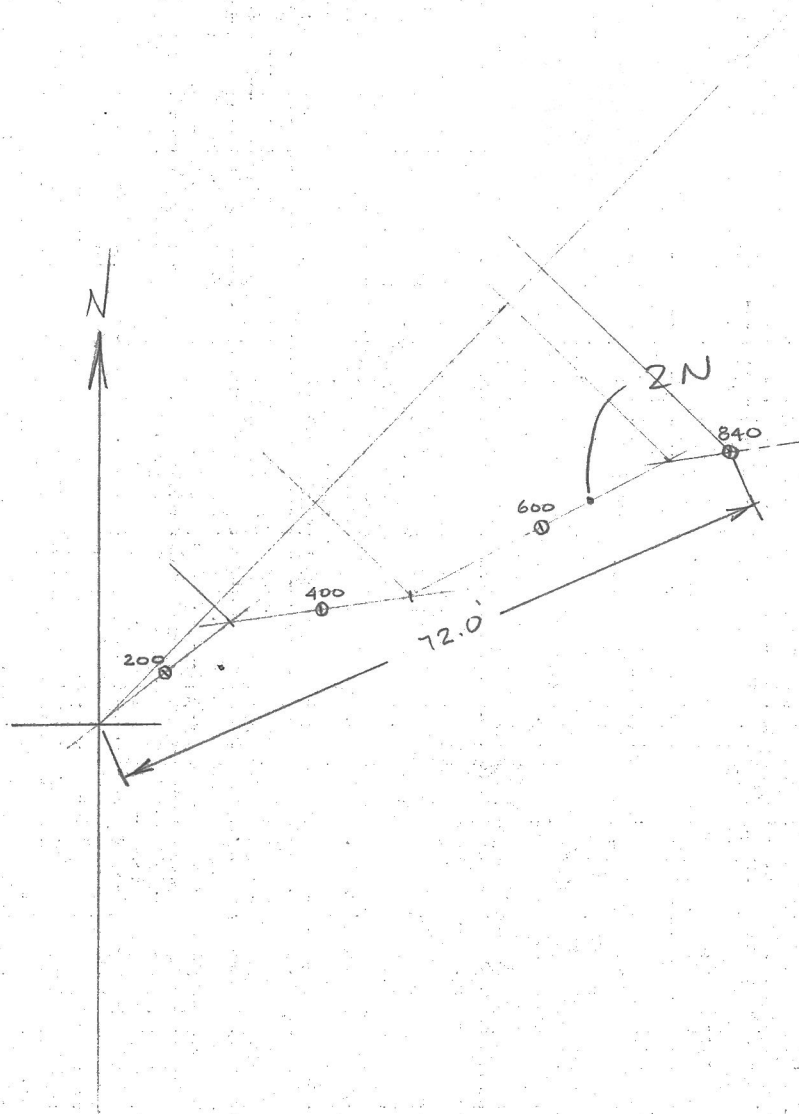
DATE

DATE

DIP & BEARING  
SPERRY SUN 10ST

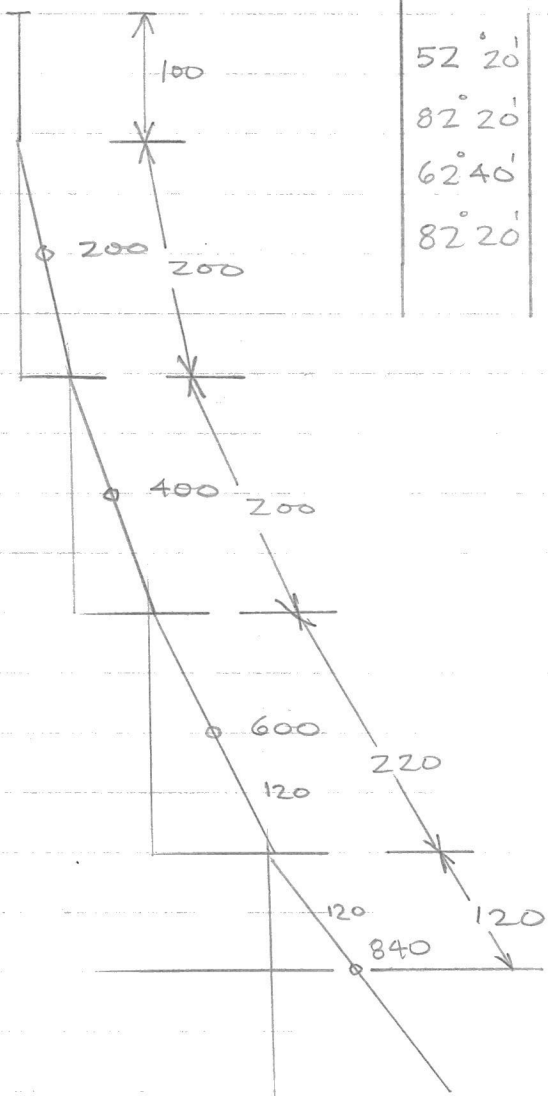
SCALE

SCALE: 1" = 20'



Collar	1314	
2N	1112	
	<hr/>	
	202	= 662

A-24



Az	DIP	Cos	DIST	H.DIST	SIN	DIST	V.DIST
—	90°	0	100	0	1.000	100	100.0
52° 20'	85°	.0872	200	17.4	.9962	200	199.2
82° 20'	84° 30'	.0958	200	19.15	.9954	200	198.1
62° 40'	82°	.1392	220	30.6	.9903	220	217.8
82° 20'	87°	.0523	120	6.3	.9986	120	119.6
							<u>834.7</u>

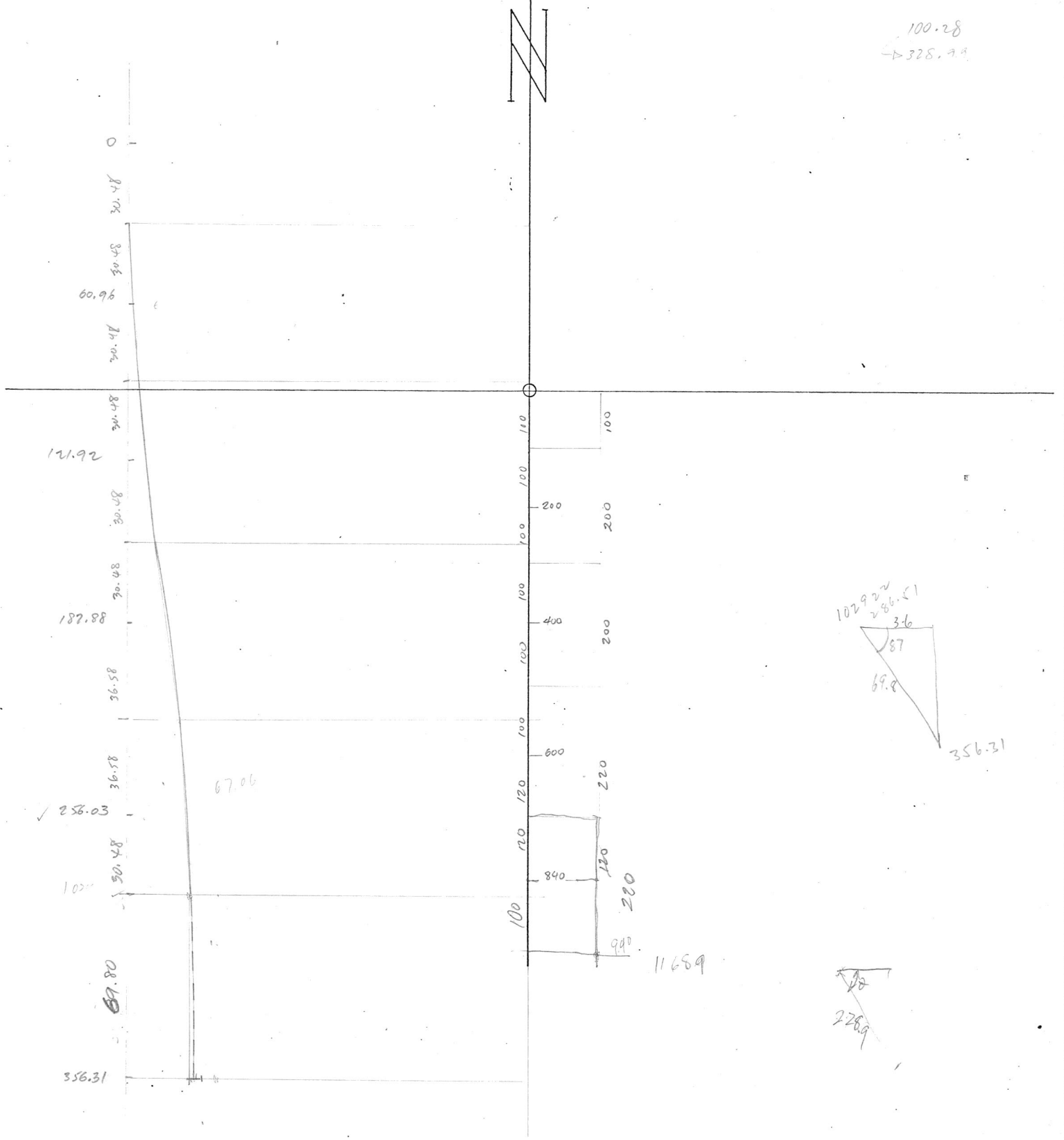
834.7 below collar elev.

A.24 -

D. D. H. Deviation

Scale: 1" = 20'

Ft.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
	90°		100							1314.47	
200	85°00'	52°20'	200 300	.0872	17.44	5.32	.99619	199.24	30.48 ✓	1283.99	30.48
400	84°30'	82°20'	200 500	.0958	19.16	5.84	.99540	199.08	60.73 ✓	1223.26	91.44
600	82°00'	62°40'	220 720	.1392	30.62	9.33	.99027	217.86	66.40 ✓	1162.58	152.40
840	87°00'	82°20'	180 840	.0523	6.28	1.91	.99863	119.84	26.53 ✓	1059.65	219.06 ✓
			220					219.70	66.96 ✓	1029.22	286.51 ✓
			69.8	.0823					69.7	959.52	
					3.65						356.31



A-25

LENGTH	BEARING	INTERVAL	COS	HOR METRES	DIP	SIN	VERT. D METRES	ELEVATION	LENGTH
		30.48						1300.29	
60.96	139.1	60.96	.1045	6.37	84°	.99452	30.48	1269.81	30.48
121.92	143.6	60.96	.1951	11.89	78° 45'	.9808	60.63	1209.18	91.44
182.88	148.25	60.96	.2952	18.00	72° 30'	.95545	59.79	1149.39	152.40
243.84	158.1	60.96	.3679	22.43	68° 25'	.9299	58.24	1090.15	213.36
304.80	145.6	40.84	.3173	12.96	71° 30'	.94832	56.69	1033.46	274.32
							38.73	994.73	315.16

Hole averaged with holes  
A-64 + A-127.

1313.7
1283.22
1222.59
1162.80
1104.56
1047.87
1009.14

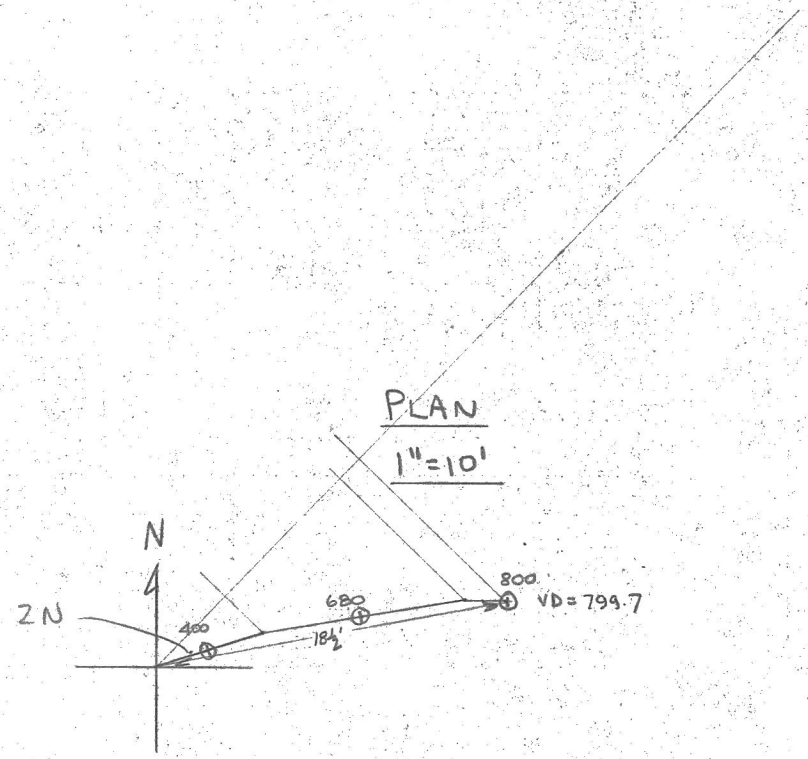
Piercing Points:

$95\frac{1}{2} - \textcircled{1} x = \frac{2.0}{.1951} = 10.25 = h / y = 10.25 \times .9808 = 10.05$   
 $95W - \textcircled{2} x = \frac{5.5}{.2952} = 18.63 = h / y = 18.63 \times .95545 = 17.80$   
 $94\frac{1}{2} - \textcircled{3} x = \frac{3.5}{.3679} = 9.51 = h / y = 9.51 \times .9299 = 8.84$   
 $94W - \textcircled{4} x = \frac{20}{.3679} = 54.36 = h / y = 54.36 \times .9299 = 50.55$

A-26  
 DIP + BRG TEST  
 (Tro pari)

AZ	DIP	COS	D	HD	SIN	VD
0	90	0	200	0	1.00	200
71.3	89	.017	340	5.8	1.00	340
80.3	87	.052	200	10.4	.999	199.8
91.3	88	.035	60	2.1	.999	59.9
			800			799.7

SECTION  
 1" = 100'



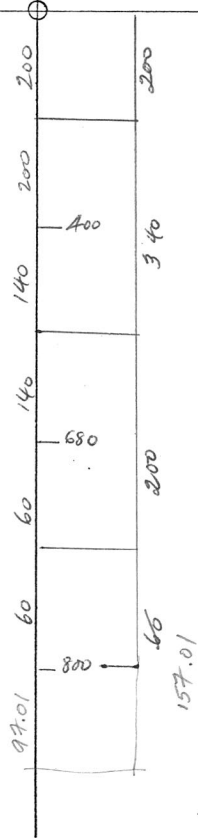
Collar 1287.67 m  
 ZN 1189.8  
 97.9 = 320.5

D. D. H. Deviation

A. 26

Scale: 1" to 20'

Fl.	Dip	Bearing	Cos.		INTERVAL		HOR. DIST.		VERT. DIST		ELEV.	LENGTH OF DDH
			INTERVAL	COS.	FT	M	FT	M				
				200					60.96	1226.71	60.96	
400	89°	71°	.0175	340	540	5.95	1.81	.99985	339.95	103.62	1123.09	<del>103.63</del> 167.59
680	87°	80°	.0523	200	740	10.46	3.19	.99863	199.73	60.88	1062.21	225.55
800	88°	91°	.0349	60	800	2.09	0.64	.99939	59.96	48.28	1043.93	243.84
897.01	"	"	"	157.01		5.48	1.67	"	156.91	47.83	1014.38	273.41
												273.41



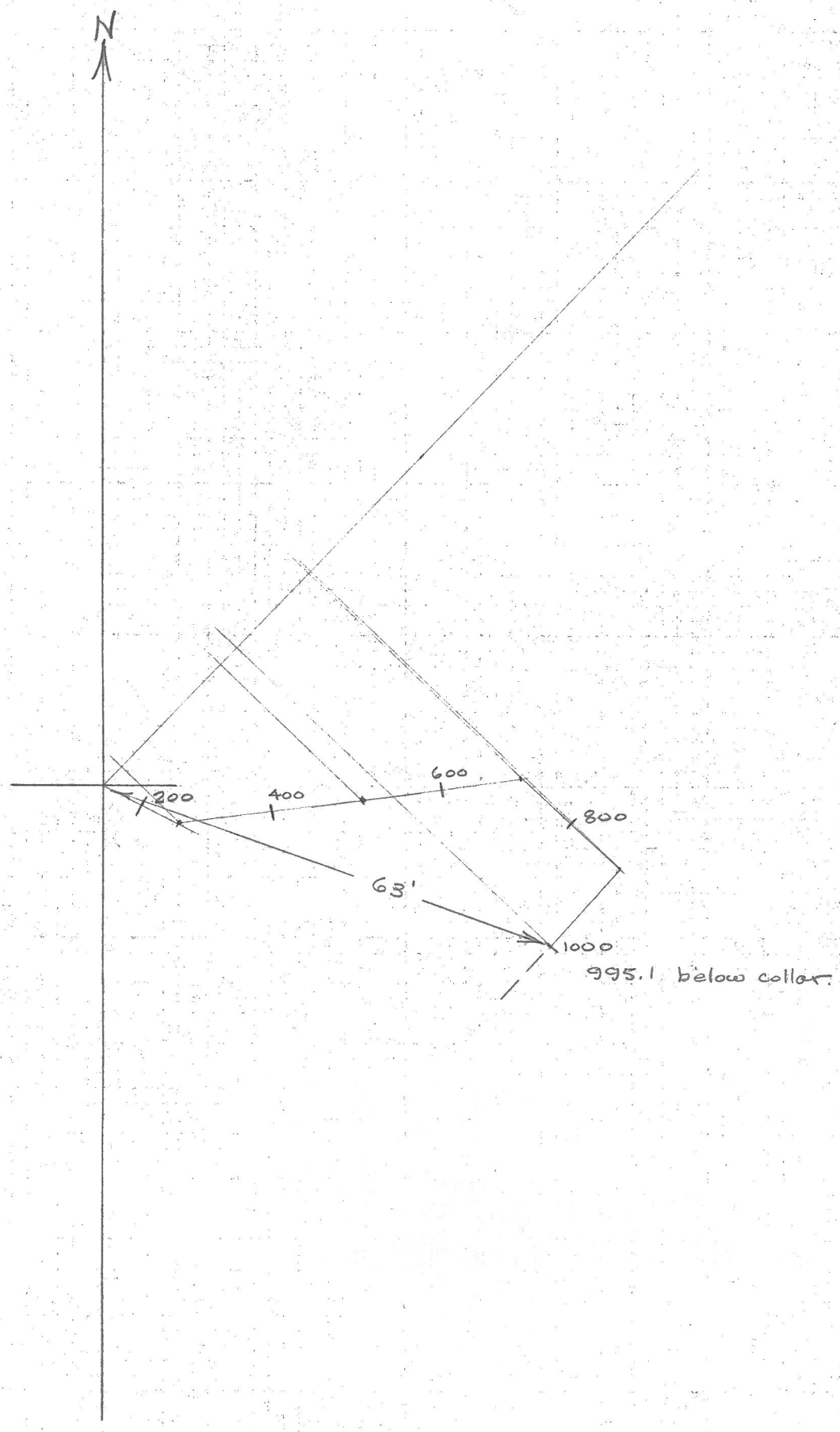
J.P.

DATE  
BY

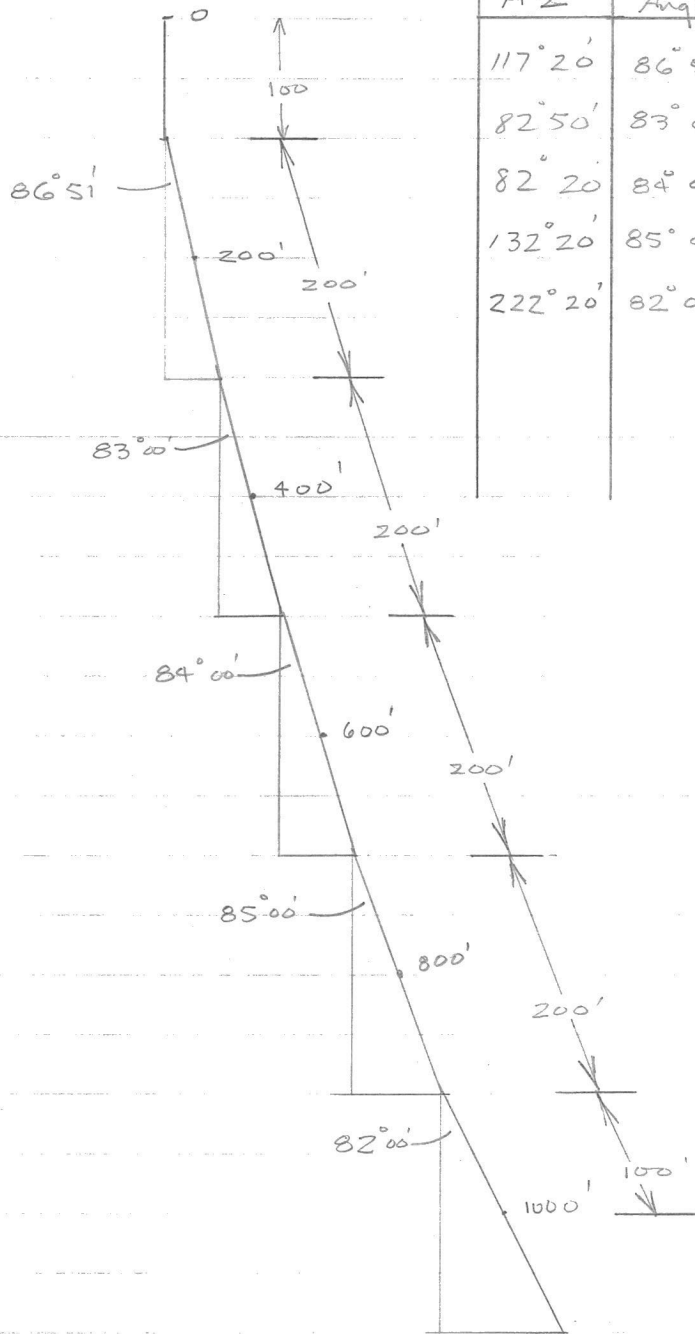
A-27

TROPARI SURVEY PLOT  
SCALE: 1" = 20'

SHEET NO. OF  
JOB NO.



A-27



Az	Dip Angle	Cos	DIST	HDIST	Sin	DIST	V. DIST
117° 20'	86° 51'	.0549	200	10.98	.9985	200	199.70
82° 50'	83° 00'	.1219	200	24.38	.9925	200	198.40
82° 20'	84° 00'	.1045	200	20.90	.9945	200	198.80
132° 20'	85° 00'	.0872	200	17.44	.9962	200	199.24
222° 20'	82° 00'	.1392	100	13.92	.9903	100	99.03

100.0  
 199.7  
 198.4  
 198.8  
 199.2  
 99.0  


---

 995.1

995.1  
below collar

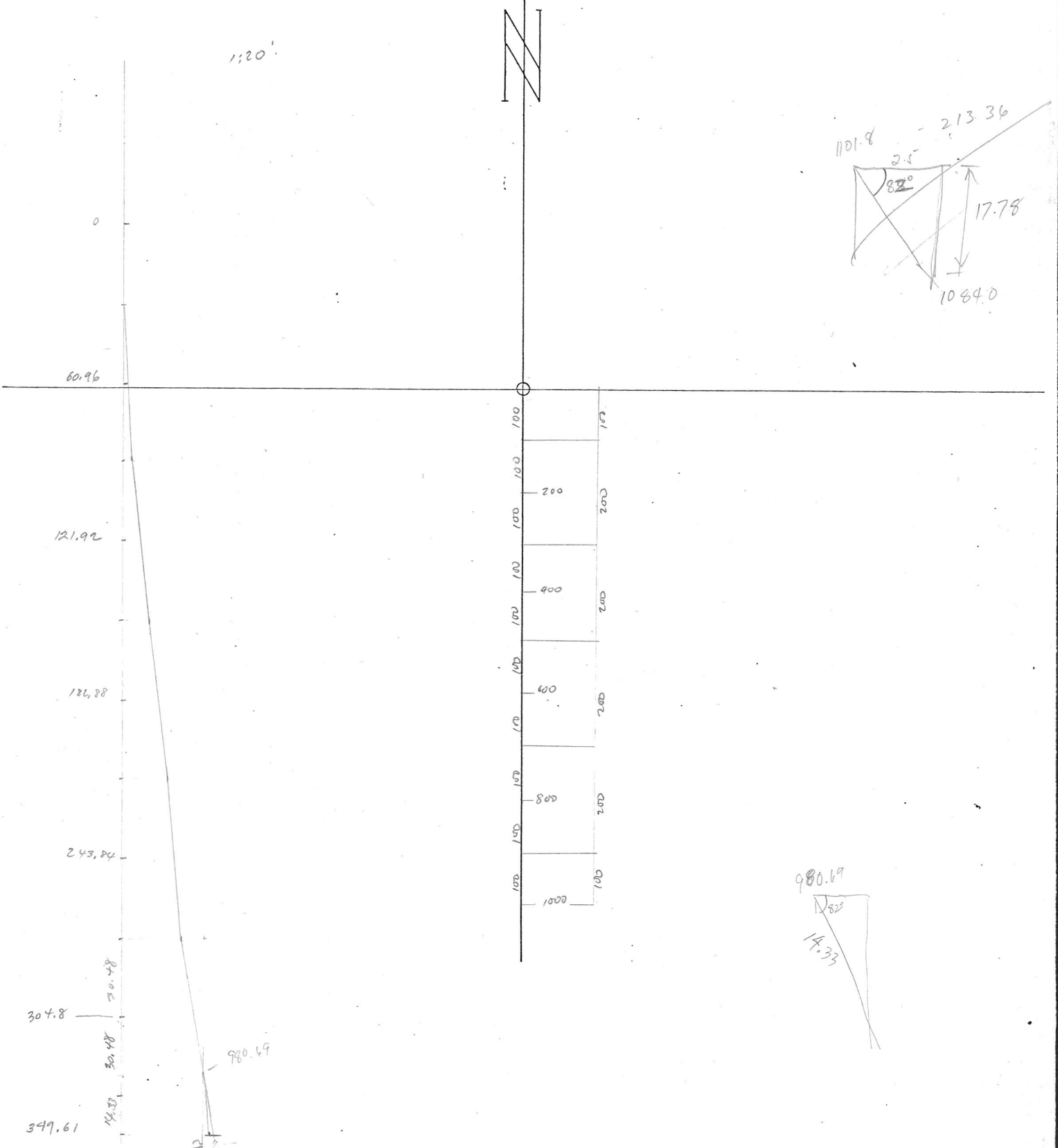
A.27

Check

D. D. H. Deviation

Scale: 1" to 20'

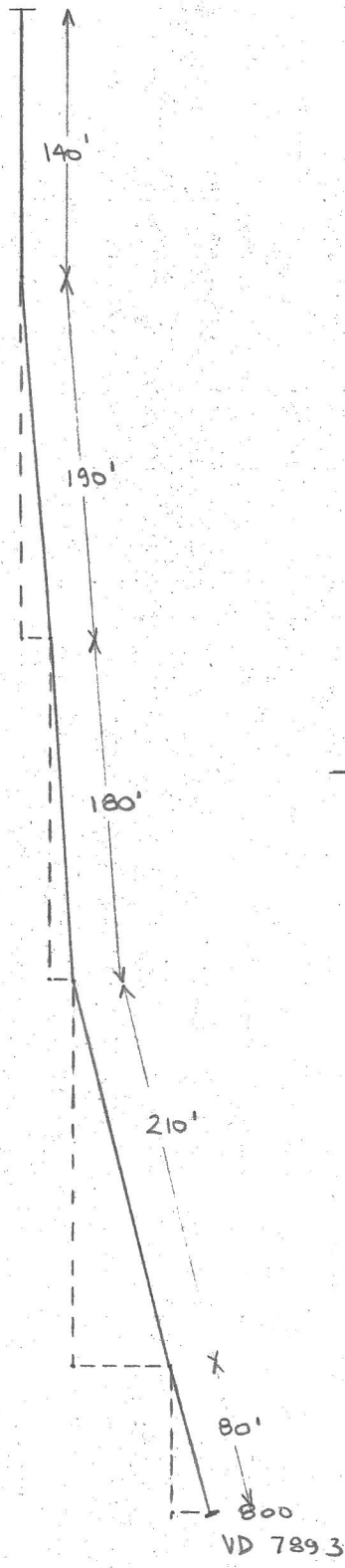
Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
	90°		100							1314.27	30.48
200	86°51'	117.20	200	.0552	11.04	3.36	.99847	199.69	60.87	1222.92	91.44
400	83°	82.50	200	.1219	24.38	7.43	.99255	198.61	60.51	1162.41	152.4
600	84°	82.20	200	.1045	20.90	6.37	.99452	198.90	60.62	1101.79	213.36
800	85°	132.20	200	.0872	17.44	5.22	.99619	199.24	60.73	1041.06	274.32
1000	82°	222.20	200	.1392	13.92	4.27	.99027	197.03	60.18	1000.88	304.8
			200		27.84	8.49		198.05	60.37	980.69	335.28
			143			2			14.4	966.5	349.61



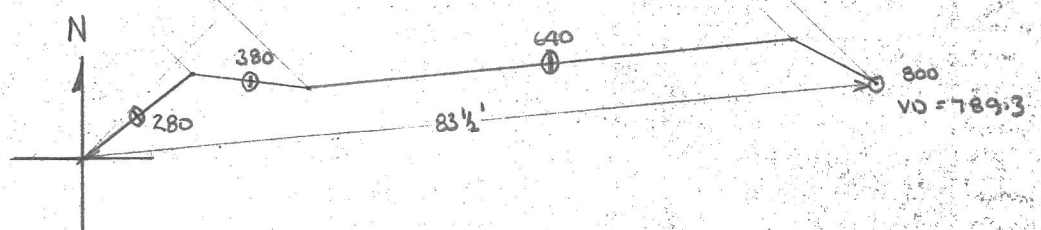
A-28  
 DIP & BRG. TESTS  
 (SPERRY SUN)

AZ	DIP	COS	D	HD	SIN	VD
0	90	0	140	0	1.00	140
52.3	85.7	.075	190	14.3	.997	189.2
97.3	86	.070	180	12.6	.998	179.8
84.3	76	.242	210	50.8	.970	202.8
117.3	75.5	.250	80	20.0	.968	77.5
			$\Sigma 800$			789.3

SECTION  
 1"=100'



PLAN  
 1"=20'

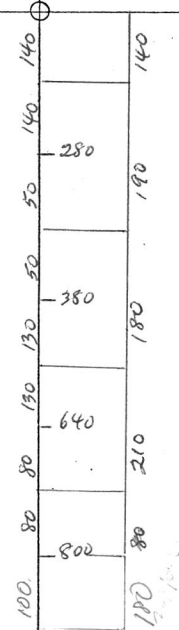
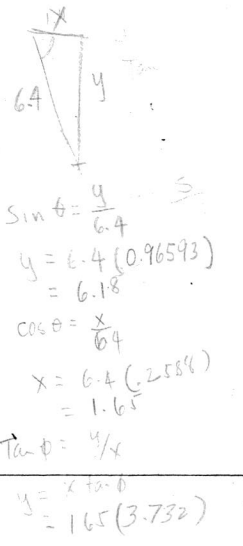


A.28

D. D. H. Deviation

Scale: 1" = 20'

St.	Dip	Bearing	INTERVAL		HOR. DIST.		VERT. DIST.		ELEV.	LENGTH OF DDH
			FT	M	FT	M	FT	M		
			140						1284.65	
280	85°30'	50°20'	140	330	.0785	14.92	4.55	.99692	189.41	57.73
380	86	97° "	180	510	.0698	12.56	3.83	.99456	179.56	54.73
640	76	84° "	210	420	.2419	50.8	15.48	.9703	203.76	62.11
800	75	117° "	86	800	.2588	50.8	6.31	.96593	77.27	23.55
900			180	900	.2588	46.58	14.20	.96593	173.87	53.00
										280.72

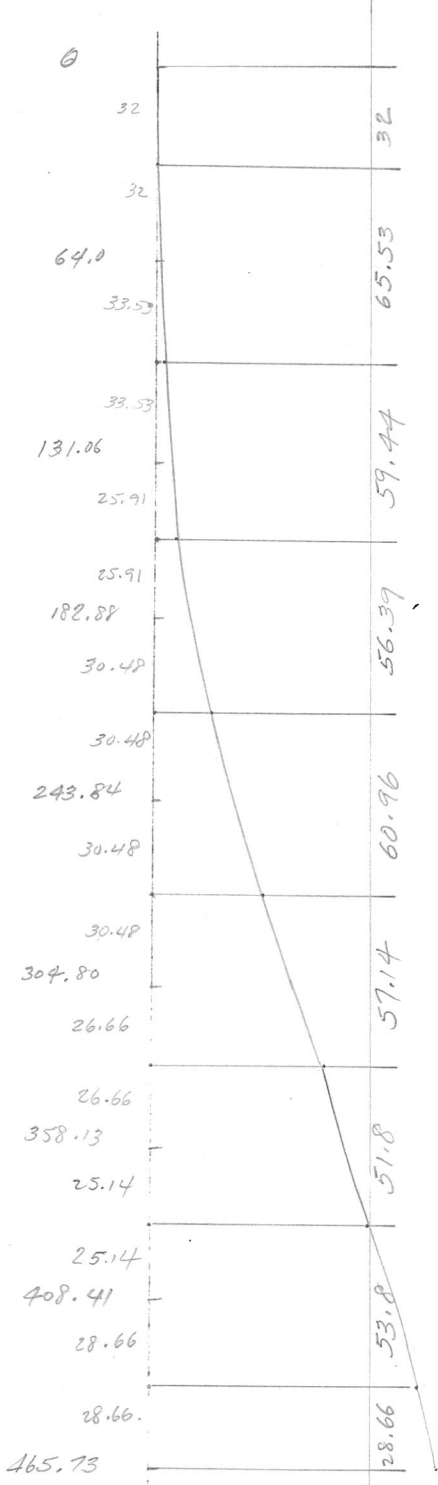


A-29

LENGTH	BEARING	INTERVAL	COS	Ho. DIST METRES	DIP	SIN	VERT. DIST METRES	ELEVATION	LENGTH
		32						1317.20	
64.00	207°52'	65.5	.0378	2.47	87°5'	.99929	32	1285.2	32
131.06	180°52'	59.4	.0828	4.92	85°15'	.99656	65.45	1222.75	97.5
182.88	133°	56.4	.2221	12.53	77°12'	.97502	59.19	1163.56	156.9
243.84	150°	60.9	.2714	16.53	74°15'	.96245	58.61	1108.57	213.3
304.80	138°	57.1	.3684	20.62	68°50'	.93253	53.25	1049.96	274.2
358.13	142°	51.8	.2756	14.28	74°00'	.96126	49.80	996.71	331.3
408.41	141°	53.8	.2882	15.20	73°15'	.95757	51.32	946.91	383.1
		28.7		8.27			27.48	895.39	436.9
								867.91	465.73

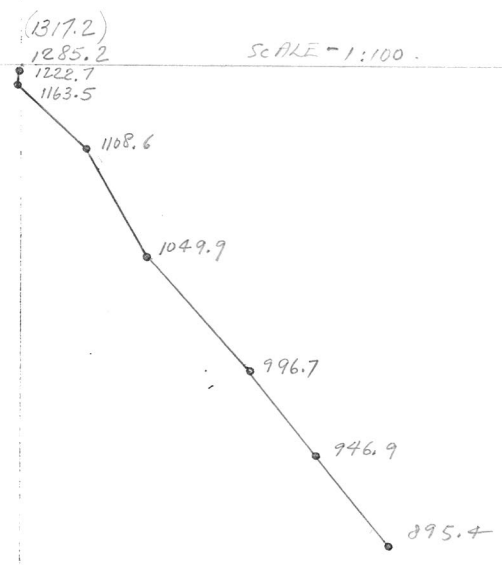
10 25

11498.39 N  
6857.36 E



Piercing Points:

Point	h	y	Elevation
107 1/2	4.50	y = 4.39	(1104.21)
106 1/2	13.85	y = 12.91	(1009.61)
105 1/2	15.61	y = 14.95	(910.35)
108	30.19	y = 30.09	(1193.65)
107	1.84	y = 1.77	(1048.13)
106	14.51	y = 13.95	(960.85)

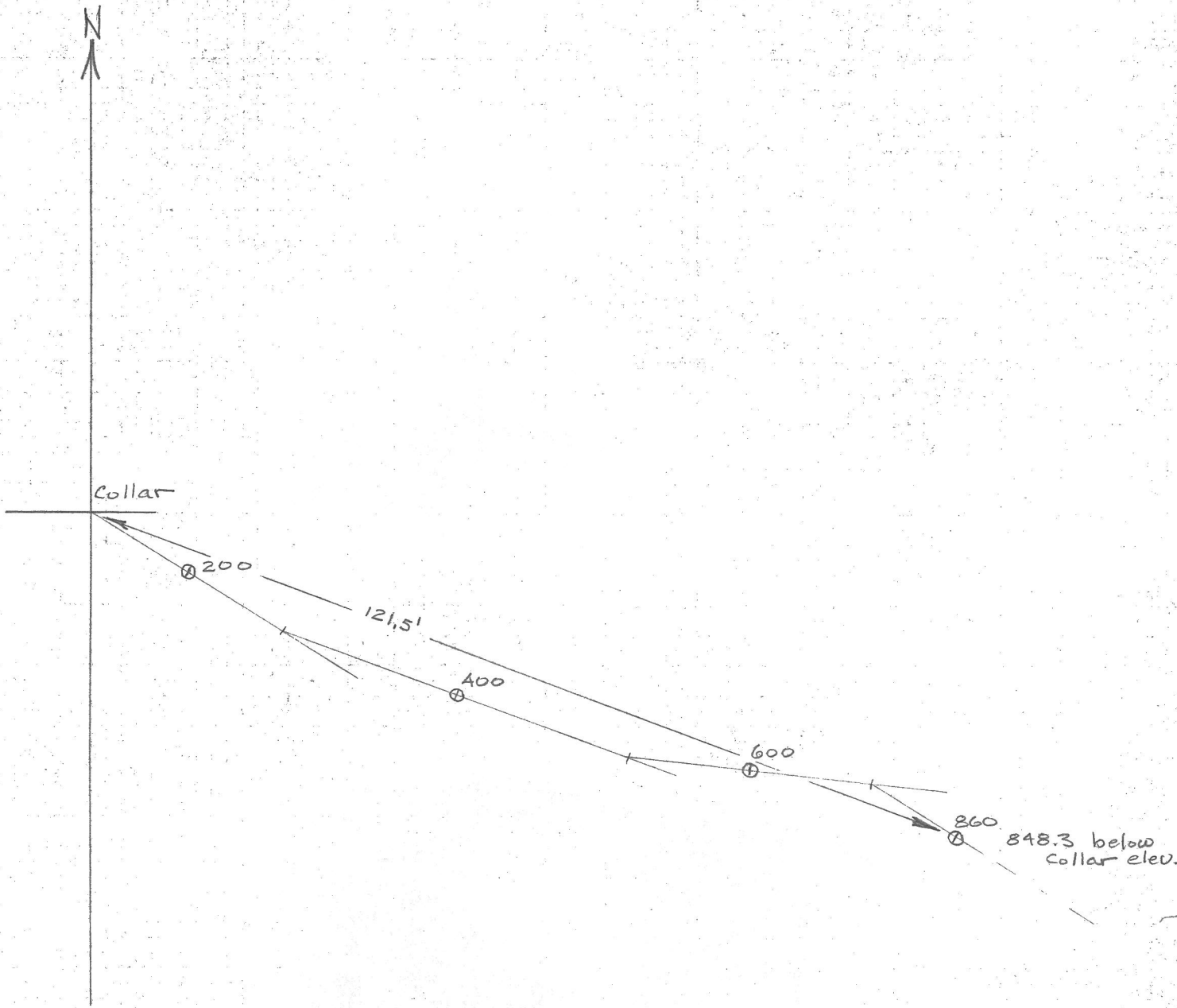


JP

A-30

DIP & BEARING TEST  
SPERRY SUN INST.

SHEET NO. OF  
JOB NO.  
SCALE 1" = 20'

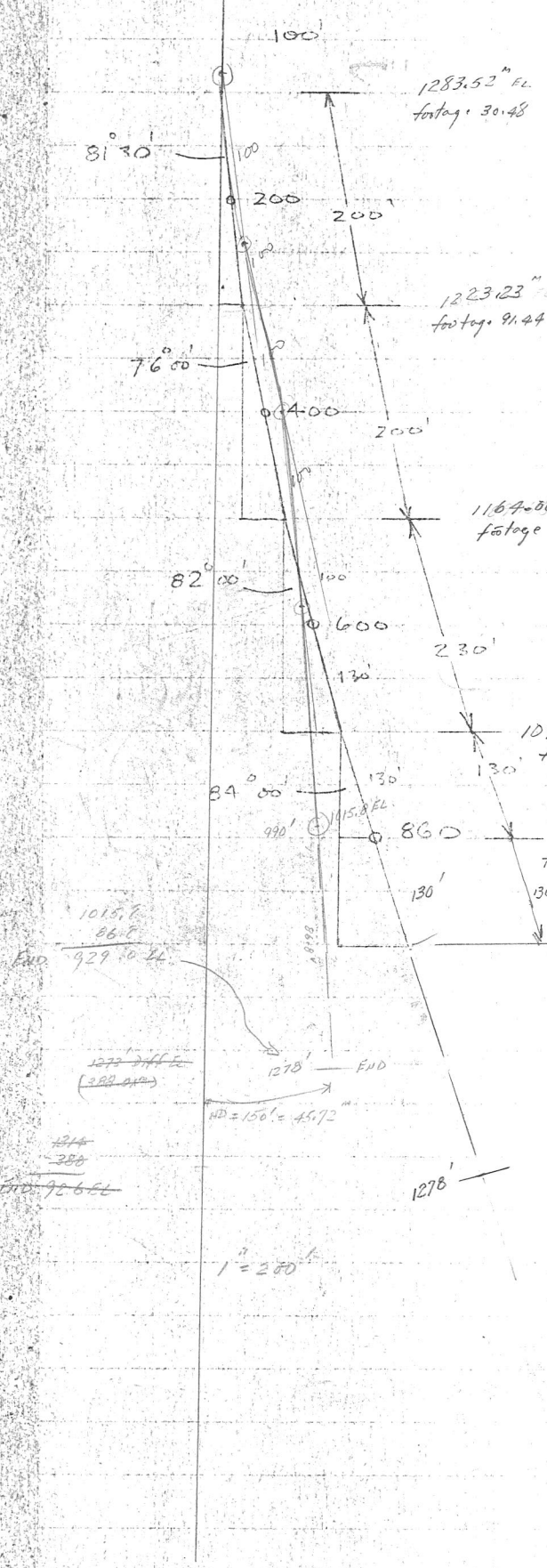


A-30 1278' = 389.53m

Van...  
1994

checked 26  
plotted on Merit...  
Oct 25/76

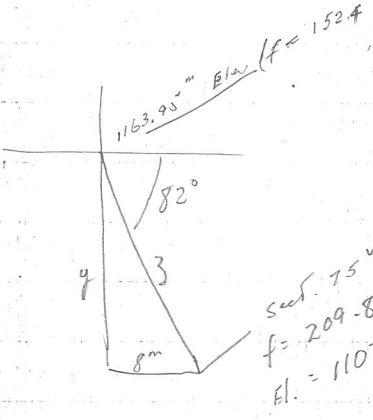
Collar 1314' ELEV



Bear	Dip Angle	Cos	Dist	H. Dist	SIN	DIST	✓
127° 20'	81° 30'	.1478	200	8.98m 29.47'	.9890	200	100 97.8 (60.28)
110° 20'	76°	.2419	200	14.75m 48.4'	.9703	200	194.06 (59.15)
96° 20'	82°	.1392	230	9.75m 32.0'	.9903	230	227.71 (69.42)
122° 20'	84°	.1045	130	4.15m 13.6'	.9945	130	129.29 (39.41)
122° 20'	84°	.1045	130	(4.15m) 13.6'	.9945	130	8 100 748.7 348.9 (258.75)
							VEER DIST 129.29 (39.41')
							ELEV 1015.84

1015.8  
86.0  
END 929.02 EL  
1278' END  
HD = 150' = 45.72  
1278'  
1" = 250'

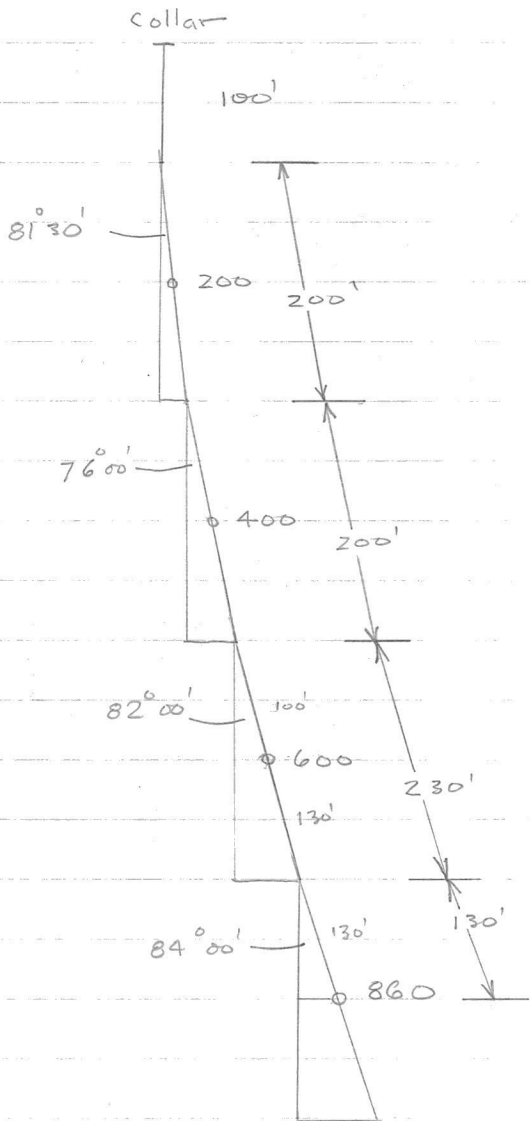
J. A. J. 6  
Ann. [Signature]



$y = 8 (7.115) = 56.92$   
 $z = \frac{8}{0.1392} = 57.47$

sect. 75m  
f = 209.87m  
El. = 1107.03m

A-30



Bea	Dip Angle	Cos	DIST	H.DIST.	SIN	DIST	V. DIST
							100.0
122° 20'	81° 30'	.1478	200	29.47	.9890	200	197.5
110° 20'	76°	.2419	200	48.4	.9703	200	194.0
96° 20'	82°	.1392	230	32.0	.9903	230	227.8
122° 20'	84°	.1045	130	13.6	.9945	130	129.0
							<u>848.3</u>

848.3 below collar elev.

A-30.

checked ✓

D. D. H. Deviation

Scale: 1" to 20'

FF. M	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
			30.48							1313.87	
60.96	81° 30'	122° 20'	60.96	.1478		9.01	.98902	30.48	1283.39		30.48
121.92	76°	110° 20'	60.96	.2419		14.74	.9703	60.29	1223.10		91.44
182.88	82°	96° 20'	70.10	.1392		9.76	.99027	59.15	1163.95		152.40
262.13	84°	122° 20'	79.25	.1045		8.28	.99452	69.42	1094.53		222.50
								78.81	1015.72		301.75
			301.75			9.17		89.29	928.42		389.53

87.78

$x = 8$

$\cos \theta = 82^\circ = .1392$

$h = \frac{8}{.1392} = 57.47$

$y = 57.47 \times .99027 = 56.91$

dev: 1107.04



10,840.94

7,578.39

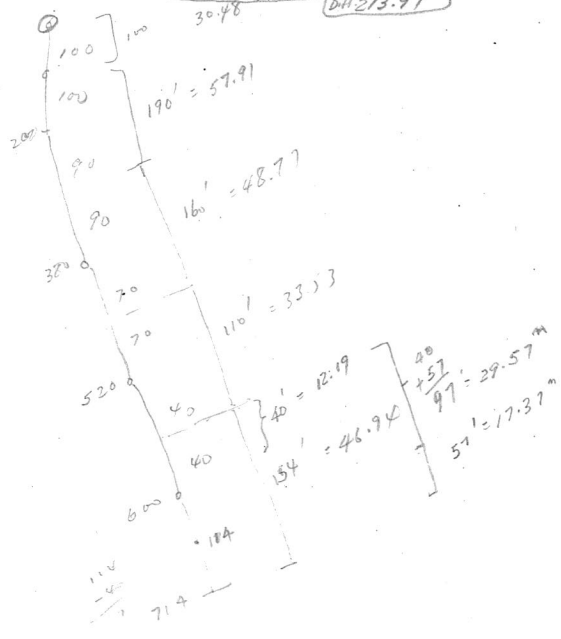
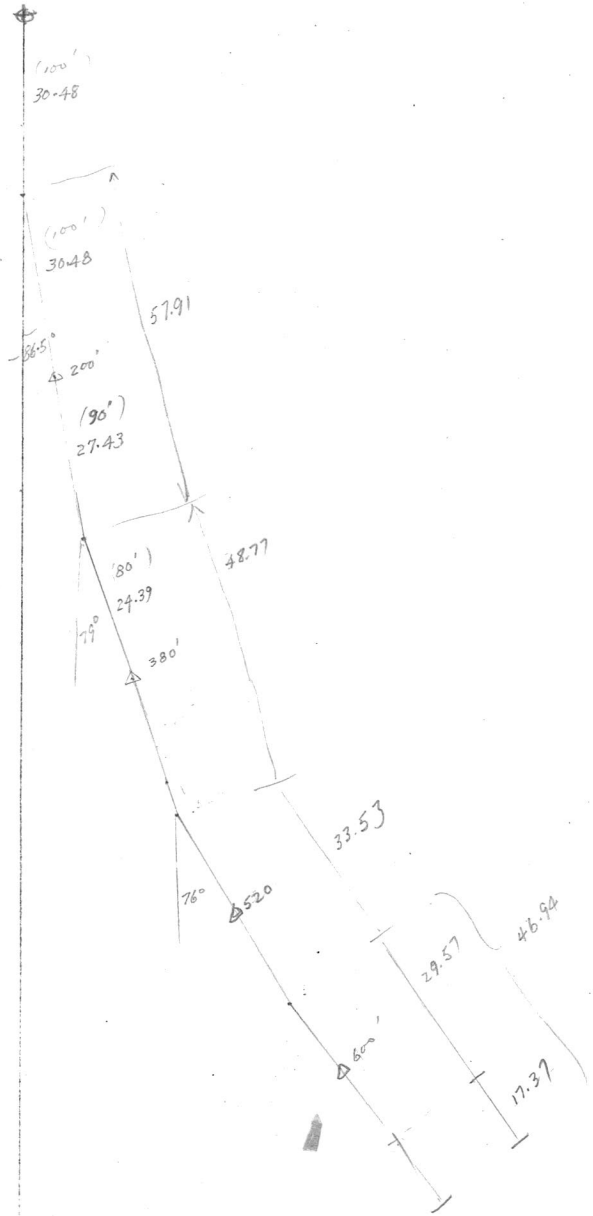
76W-4N

\* Brg & Dip = Av. of A-110 and A-119

DDH. # A-31

DEPTH LENGTH	BEARING	INTERVAL	COS	Hori 1ST METRES	DIP	SIN	VERT. D MEIKER	ELEVATION	LENGTH
COLLAR		30.48						1278.24	0
200' = 60.96	112°	57.91	0.061	3.53	-90°	1.0	-30.48	1247.76	30.48
380' = 115.82	089°	48.77	0.1908	9.31	-86.5°	0.99813	-57.80	1189.96	88.39
520' = 158.50	062°	33.53	0.2419	8.11	-79°	.98163	-47.87	1142.09	137.16
600' = 182.88	059°	29.57	0.2672		-76°	.97030	-32.53	1109.56	170.69
					-74.5°	.96363			
714' = 217.63 (End)		17.37							
		46.944		12.54	as above				
							-45.23	1064.33	217.63
							213.91		
							30.48		
							213.91		

88.28  
48.77  
137.05



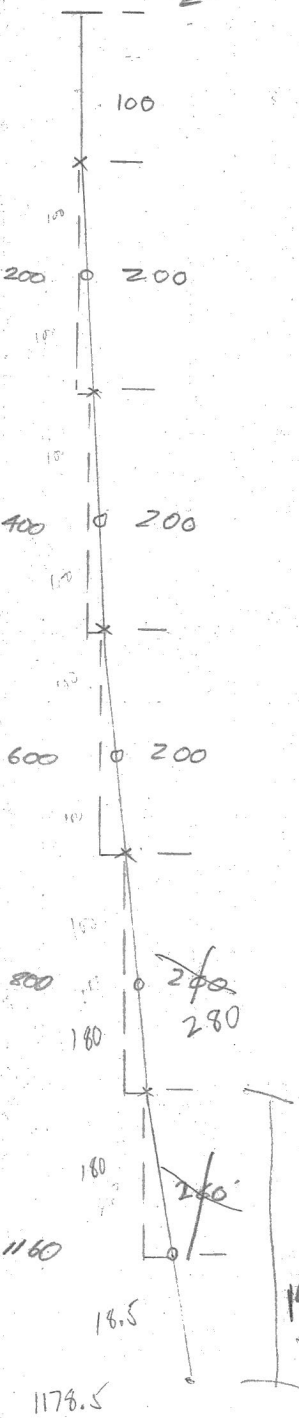
I.M. DATE Aug. 10

A-32  
DIP AND BEARING SURVEY BY  
SPERRY - SUN.

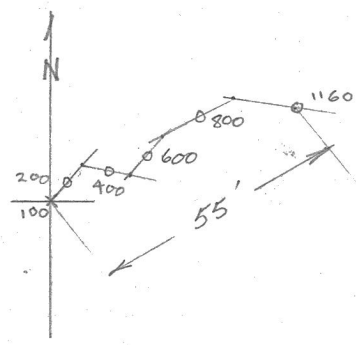
GRUM.

AZ.	DIP	CR.	DIST.	H.D.	SIN.	V.D.
90°	0	100	0	1.000	100	
43°20'	87°	.052	200	10.4	.998	199.6
100°20'	87°	.052	200	10.4	.998	199.6
42°20'	87°	.052	200	10.4	.998	199.6
52°20'	85°	.087	200	17.4	.996	199.2
97°10'	87°	.052	260	13.5	.998	259.5
			1160			1157.5

NOT TO SCALE



SCALE 1:40



1178.5'

DEPTH FROM COLLAR - 1157.5

18.5

1178.5

A.32

Left 80W

D. D. H. Deviation

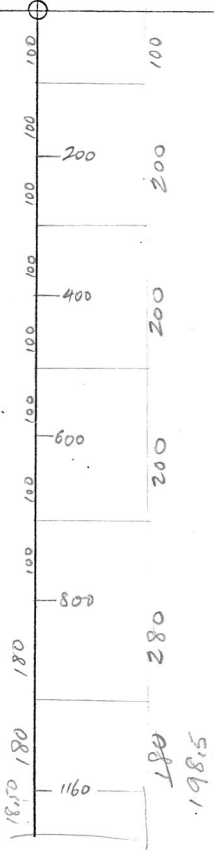
Scale: 1" to 20'

Ft.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
	90°		100							1315.03	30.48
200	87°	43°20	200 300	.0523	10.46	3.19	.99863	199.73	60.88	1284.55	91.24
400	87°	100.20	200 500	.0523	10.46	"	.99863	"	"	1223.64	152.4
600	87°	42.20	200 700	.0523	10.46	"	.99863	"	"	1162.79	213.36
800	85°	62.20	280 980	.0872	24.42	7.44	.99619	278.93	85.02	1101.91	298.70
1160	87°	97°20	180 1160	.0523	9.41	2.87	.99863	179.75	54.79	962.10	353.57
			198.5		10.38	3.16		198.23	60.42	956.47	359.21



5.64  
18.50

1178.46



A-33

See A-110.

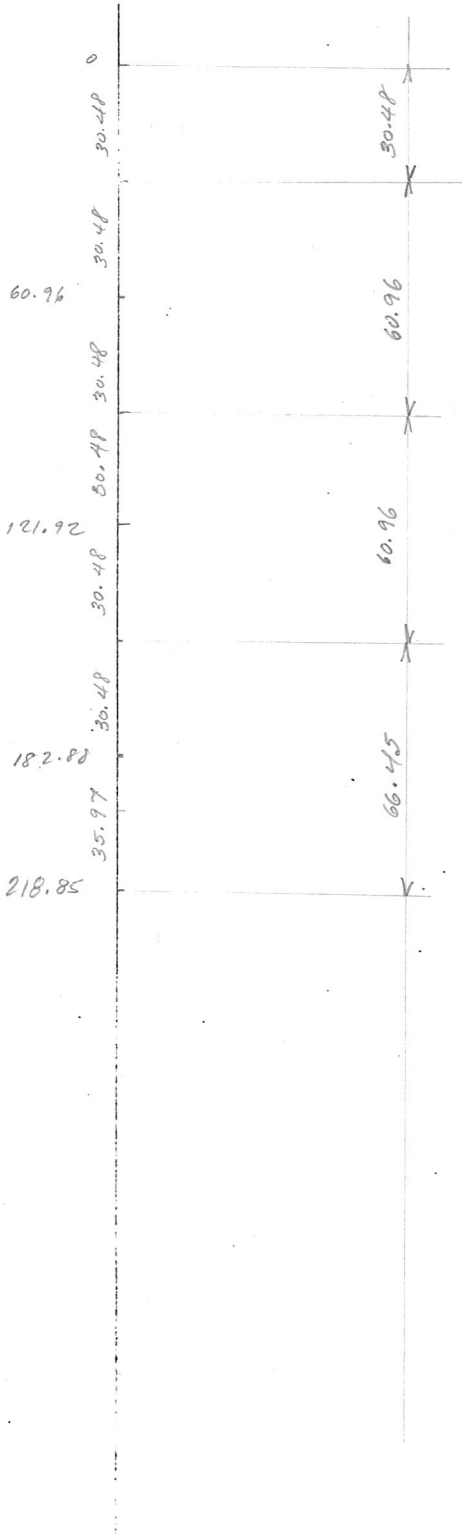
Hor DIST

VERT. DIST

ELEVATION

LENGTH

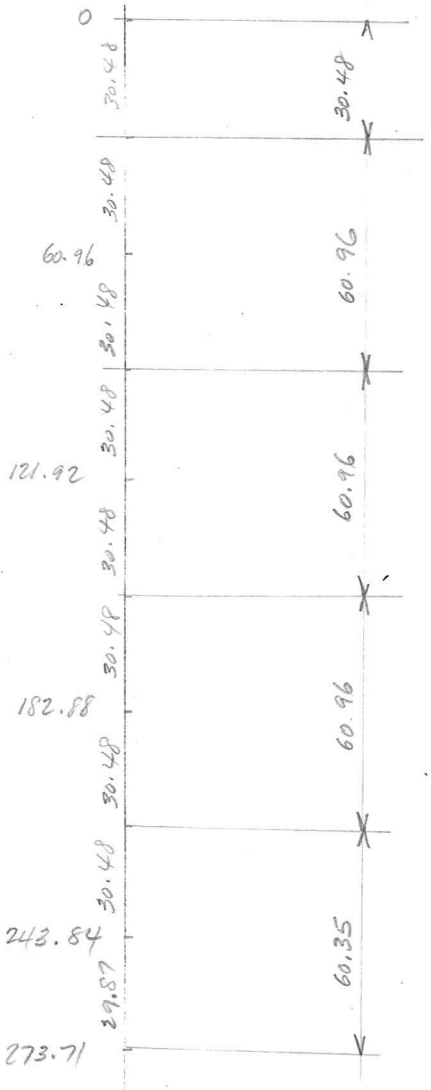
LENGTH	BEARING	INTERVAL	COS	METRES	DIP	SIN	VERT. DIST	ELEVATION	LENGTH
		30.48					30.48	1273.10	30.48
60.96	152	60.96	.0349	2.13	88	.99939	60.92	1181.70	91.44
121.92	66	60.96	.1908	11.63	79	.98163	59.84	1121.86	152.40
182.88	59	66.45	.2672	17.76	74.5°	.96363	64.03	1057.83	218.55



A-34

LENGTH	BEARING	INTERVAL	COS	HOR. ST METRES	DIP	SIN	VERT. DIS METRES	ELEVATION	LENGTH
60.96	152°20	30.48	.0698	4.26	86°	.99756	30.48	1315.30	30.48
121.92	152°20	60.96	.1478	9.01	81°30'	.98902	60.81	1284.82	91.44
182.88	136°20	60.96	.254	17.40	73°25'	.9584	58.42	1224.01	152.40
243.84	144°20	60.35	.4462	26.93	63°30'	.89493	54.01	1163.72	213.36
								1051.30	273.71

Calculation from d.d.h A-64.



Piercing Points

- ①  $x = 8.0m$   
 $h = \frac{8.0}{.1478} = 54.13$   
 $y = 54.13 \times .98902 = 53.54 \times$
- ②  $x = 14.25m$   
 $h = \frac{14.25}{.254} = 56.10$   
 $y = 56.10 \times .9584 = 53.77 \times$
- ③  $x = 12.0m$   
 $h = \frac{12.0}{.4462} = 26.89$   
 $y = 26.89 \times .89493 = 24.06 \times$

# A-35 (Use Dip & Az from A-32)

D. D. H. Deviation

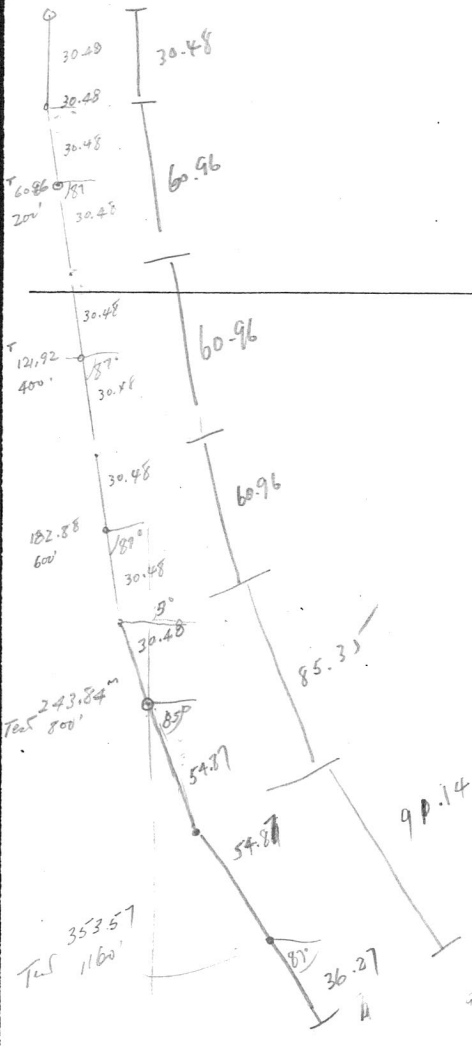
Scale: 1" = 20'

Ft. M	DIP		INTERVAL	COS.	HOR. DIST.		SIN.	VERI. DIST.		ELEV.	LENGTH OF DDH
	B/R	D/R			FT	M		FT	M		
60.96	43° 20'	87°	30.48	.0523		3.19	.99963	30.48	1285.47	1285.47	30.48
121.92	100° 20'	87°	60.96	.0523		3.19	"	60.88	1222.34	1222.34	91.44
182.88	42° 20'	87°	60.96	.0523		3.19	"	60.88	1160.46	1160.46	152.40
243.84	62° 20'	85°	85.35	.0872		7.44	.99619	60.88	1100.58	1100.58	213.36
353.57	97° 20'	87°	91.14	.0523		4.77	.99863	85.02	1015.56	1015.56	298.81
389.84	End Hole							90.02	924.54	924.54	389.85



~~NO TESTS~~ 10,546.468  
4,631.155

~~68 W / 1.8~~



A-35

FROM: A-32

LENGTH	BEARING	INTERVAL	COS	HOR. ST METRES	DIP	SIN	VERT. DI METRES	ELEVATION	LENGTH
		30.48						1313.70	
60.96	43 20	60.96	.0523	3.19	87	.99863	30.48	1283.2	30.48
121.92	100 20	60.96	.0523	3.19	87	.99863	60.88	1222.3	91.44
182.88	42 20	60.96	.0523	3.19	87	.99863	60.88	1161.4	152.40
243.84	62 20	85.34	.0872	7.44	85	.99619	85.02	1100.6	213.36
353.57	97 20	91.44	.0523	4.77	87	.99863	91.01	1015.6	298.70
								924.5	390.14 (389.84)

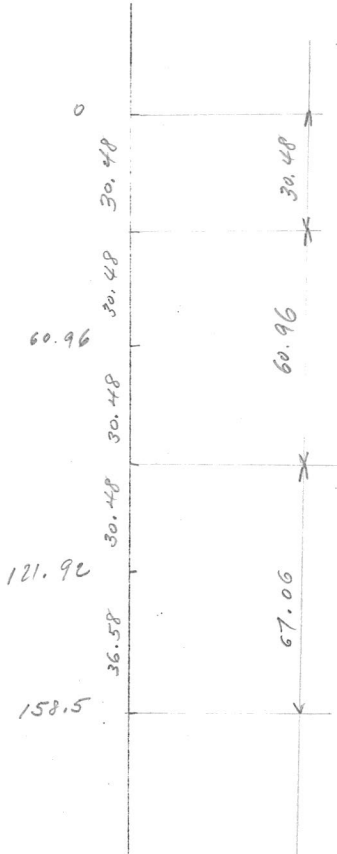
(ENDS 1279)

A-37 Sec. A-108

Ho. DIST

VERT. I

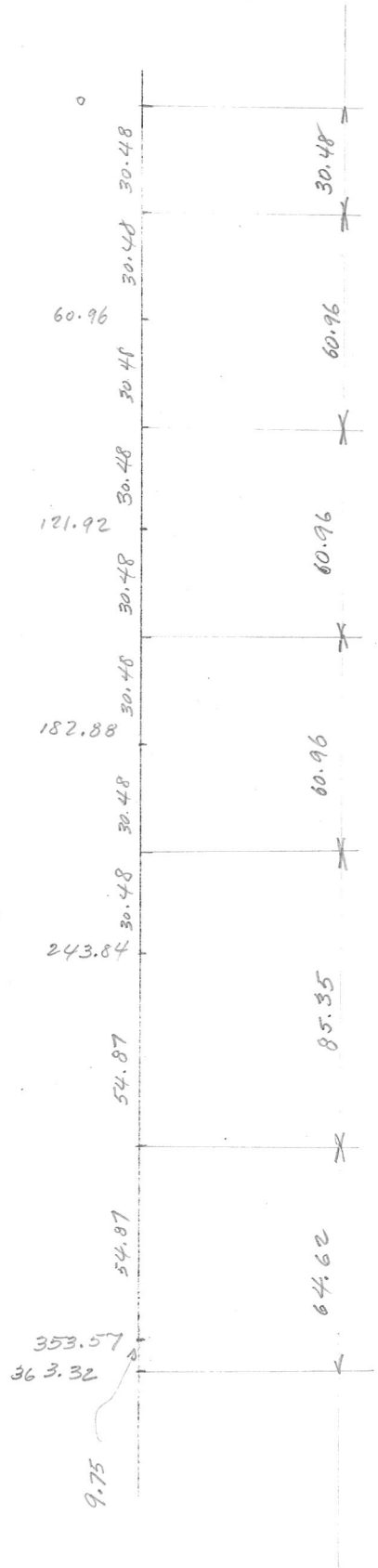
LENGTH	BEARING	INTERVAL	COS	METRES	DIP	SIN	METRES	ELEVATION	LENGTH
		30.48					30.48	1266.44	
60.96	39	60.96	.0175	1.07	89	.99985	60.95	1235.96	30.48
121.92	50	67.06	.0698	4.68	86	.99756	66.90	1175.01	91.44
								1108.11	158.50



A-38

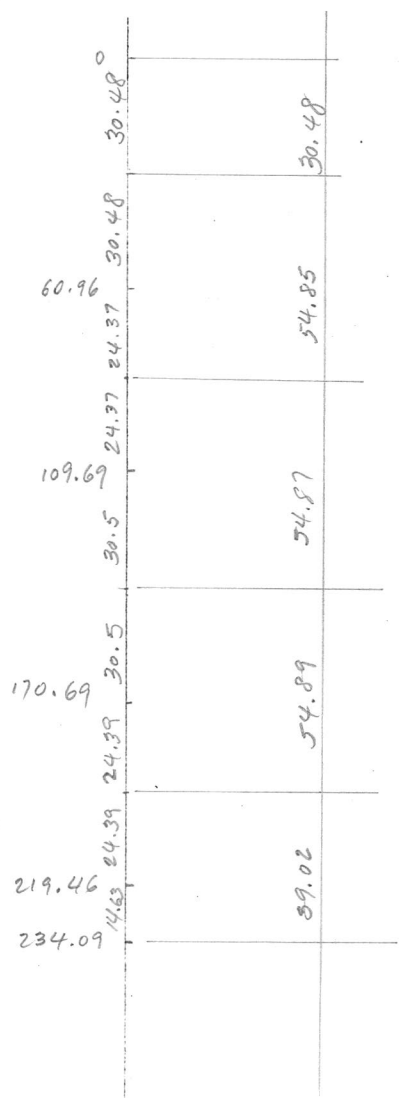
FROM A-32

LENGTH	BEARING	INTERVAL	H <sub>o</sub> COS	DIST METRES	DIP	SIN	VERT. I METRES	ELEVATION	LENGTH
60.96	43° 20	30.48	.0523	3.19	87	.99863	30.48	1281.99	30.48
121.92	100° 20	60.96	.0523	3.19	87	"	60.88	1221.11	91.44
182.88	42° 20	60.96	.0523	3.19	87	"	60.88	1160.23	152.40
243.84	62° 20	85.35	.0872	7.44	85	.99619	85.02	1099.35	213.36
353.57	97° 20	64.62	.0523	3.38	87	.99863	64.53	1014.33	298.71
								949.80	363.33



A-39 see (A-114)  
 Hor. ST

LENGTH	BEARING	INTERVAL	COS	HOR. METRES	DIP	SIN	VERT. DI. METRES	ELEVATION	LENGTH
60.96		30.48					30.48	1262.24	30.48
109.73	54	54.85	.0872	4.78	85	.99619	54.85	1231.76	85.33
170.69	40	54.89	.1219	6.69	83	.99255	54.66	1176.91	140.90
219.46	13	39.02	.1736	6.77	80	.98481	54.48	1122.25	195.09
							38.43	1067.77	234.11
								1029.34	



A-41

FROM A-32

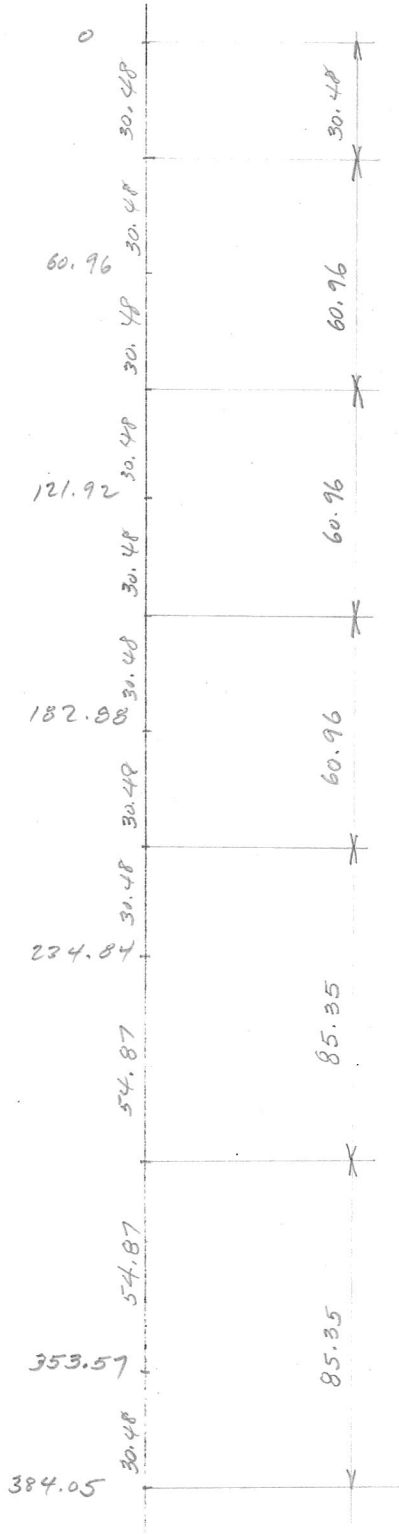
Hor DIST

VERT. I

ELEVATION

LENGTH

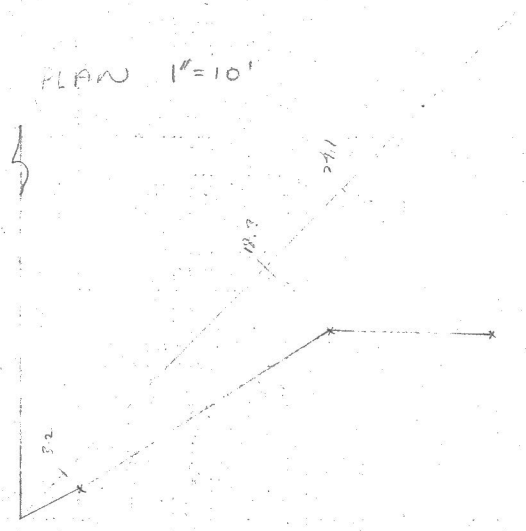
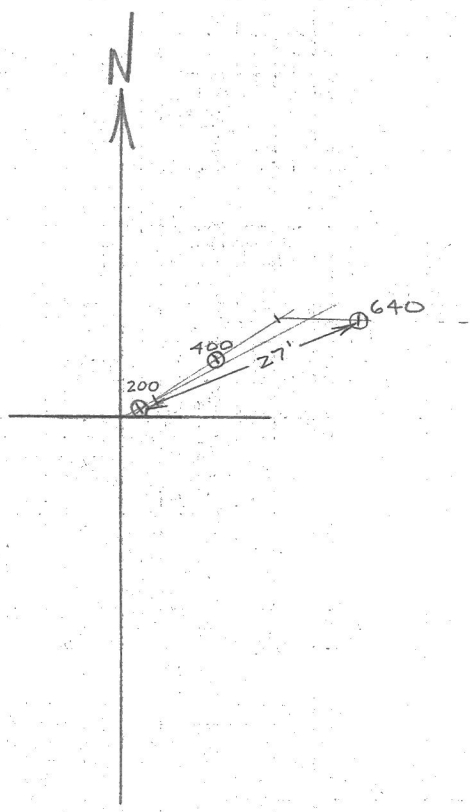
LENGTH	BEARING	INTERVAL	COS	METRES	DIP	SIN	MULTIPLIER	ELEVATION	LENGTH
60.96	43° 20	30.48	.0523	3.19	87	.99863	30.48	1288.15	30.48
121.92	100° 20	60.96	"	3.19	87	"	60.88	1227.27	91.44
182.88	42° 20	60.96	"	3.19	87	"	60.88	1166.39	152.40
243.84	62° 20	85.35	.0872	7.44	85	.99619	85.02	1105.51	213.36
353.57	97° 20	85.35	.0523	4.46	87	.99863	85.73	1020.49	298.71
								935.26	384.06



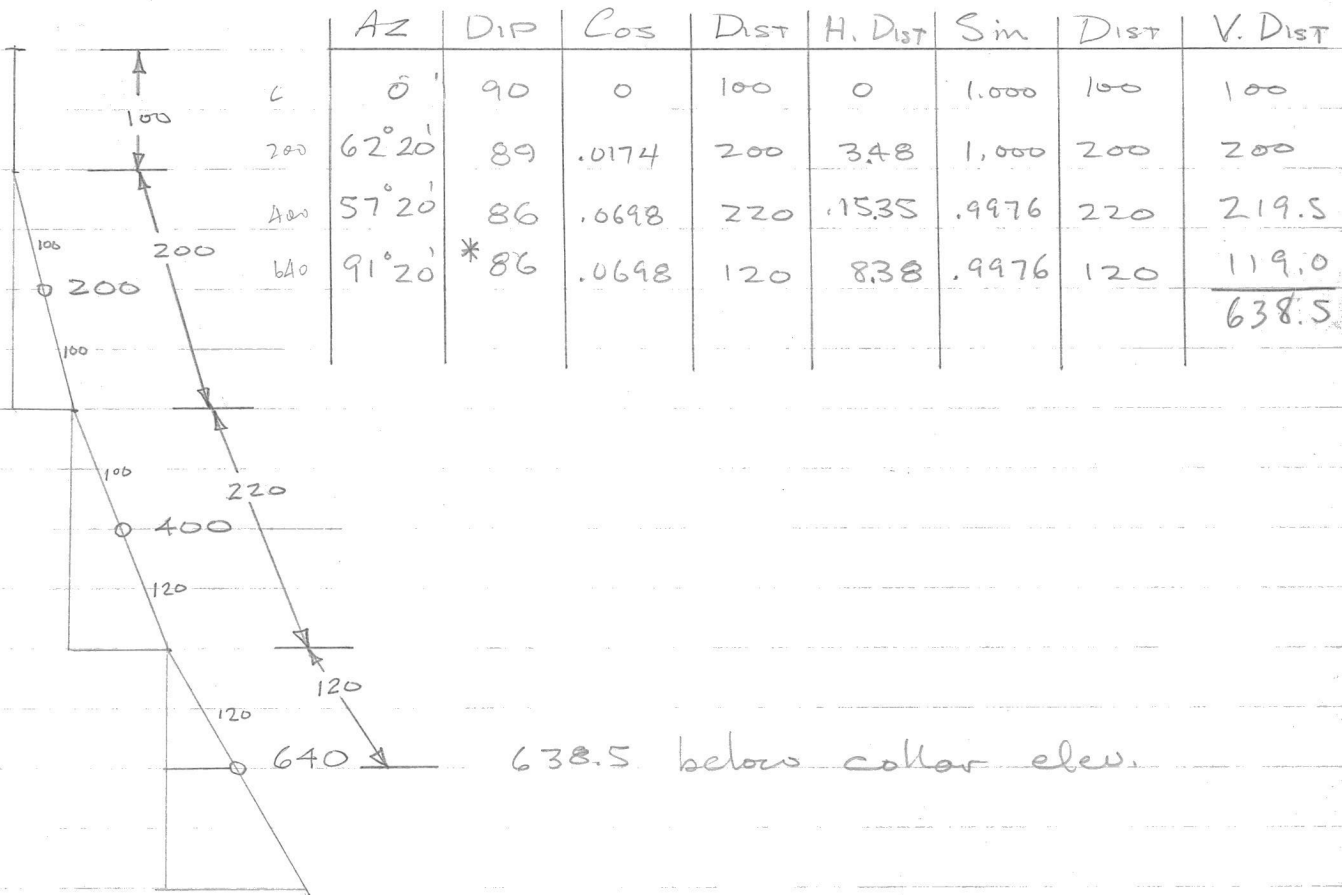
BY: JP  
DATE:  
CH: 10 DATE:

A-45  
DIP & Bearing Test  
Sperry Sun Inst.

Scale 1" = 20'



A-45



638.5 below collar elev.

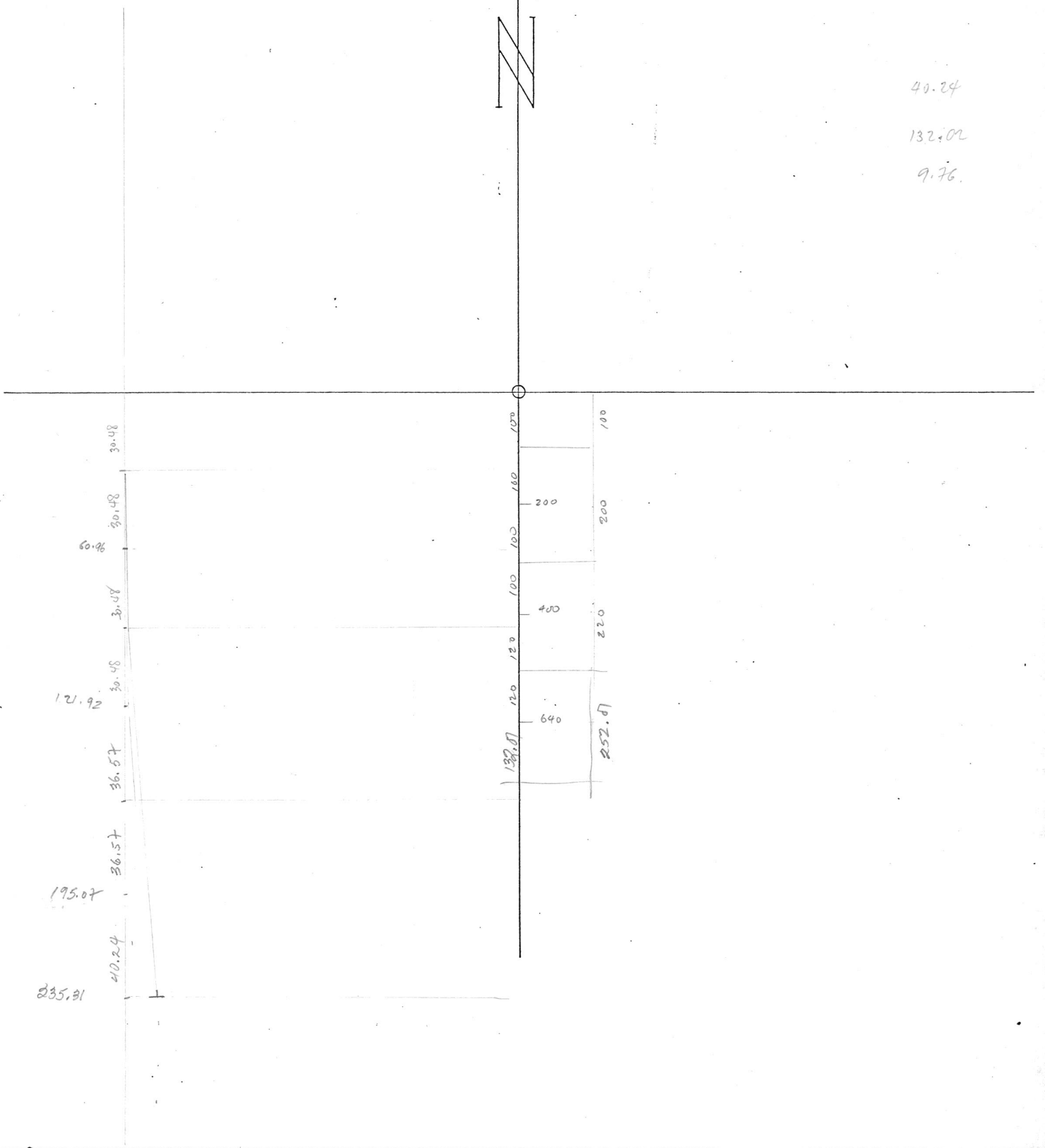
\* NOTE: No dip recorded. 86° assumed

Scale: 1" = 20'

Fl.	Dip	Bearing	HOR. DIST.				VERT DIST		ELEV.	LENGTH OF DDH	
			INTERVAL	COS.	FT	M	FT	M			
	90		100					1292.05	30.48		
200	89°	62.20	200 300	.0175	3.50	1.07	.99985	1261.57	30.48		
400	86°	57.20	220 520	.0698	15.36	4.68	.99756	1200.62	91.44		
640	86°	91.20	220 740	.0698	15.36	4.68	.99756	1133.73	158.50		
					17.59	5.36		1066.84	225.55		
			252.01	.0698	17.59	5.36	.99756	251.39	76.62	1057.10	235.31



40.24  
132.02  
9.76



51

A-51 Average fr. A-22 & A-115

D.D.H. Deviation

Scale: 1" to 20'

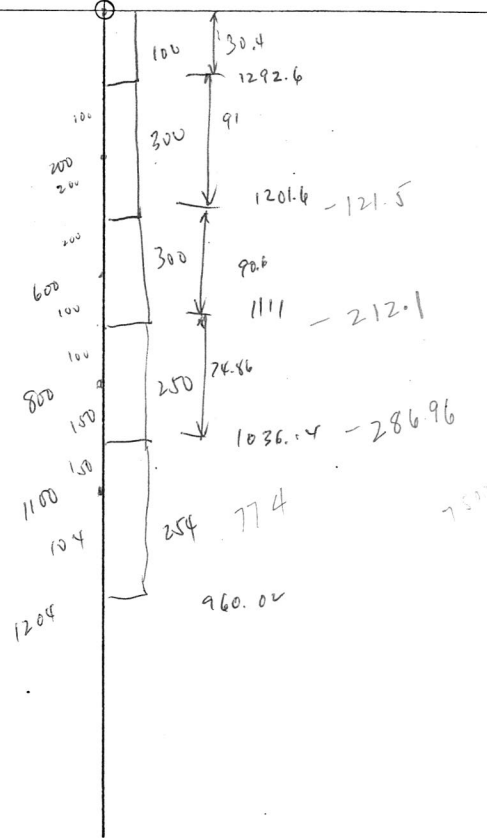
1323.02

Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT DIST		ELEV.	LENGTH OF DDH	TAN
					FT	M		FT	M			
200	84-30	84-50	300	0.0958	28.74	8.76	0.99540	298.62	91	1201.6	<del>214</del> 121.9	10.39
600	82-30	95-20	300	0.1305	39.15	11.93	0.99144	297.4	90.6	1111.0	<del>152</del> 213.3	7.59
800	79-15	102-50	250	0.1866	46.65	14.22	0.9825	245.6	74.86	1036.14	<del>286</del> 286.9	5.26
1204	79-30	127	254	0.1822	46.27	14.10	0.98325	249.7	76.12	960.02	366.9	5.396

1204



10 906.31  
7 303.36  
366.98m



11.3  
3

J.P.

22/Aug/15

DIP & BEA Survey

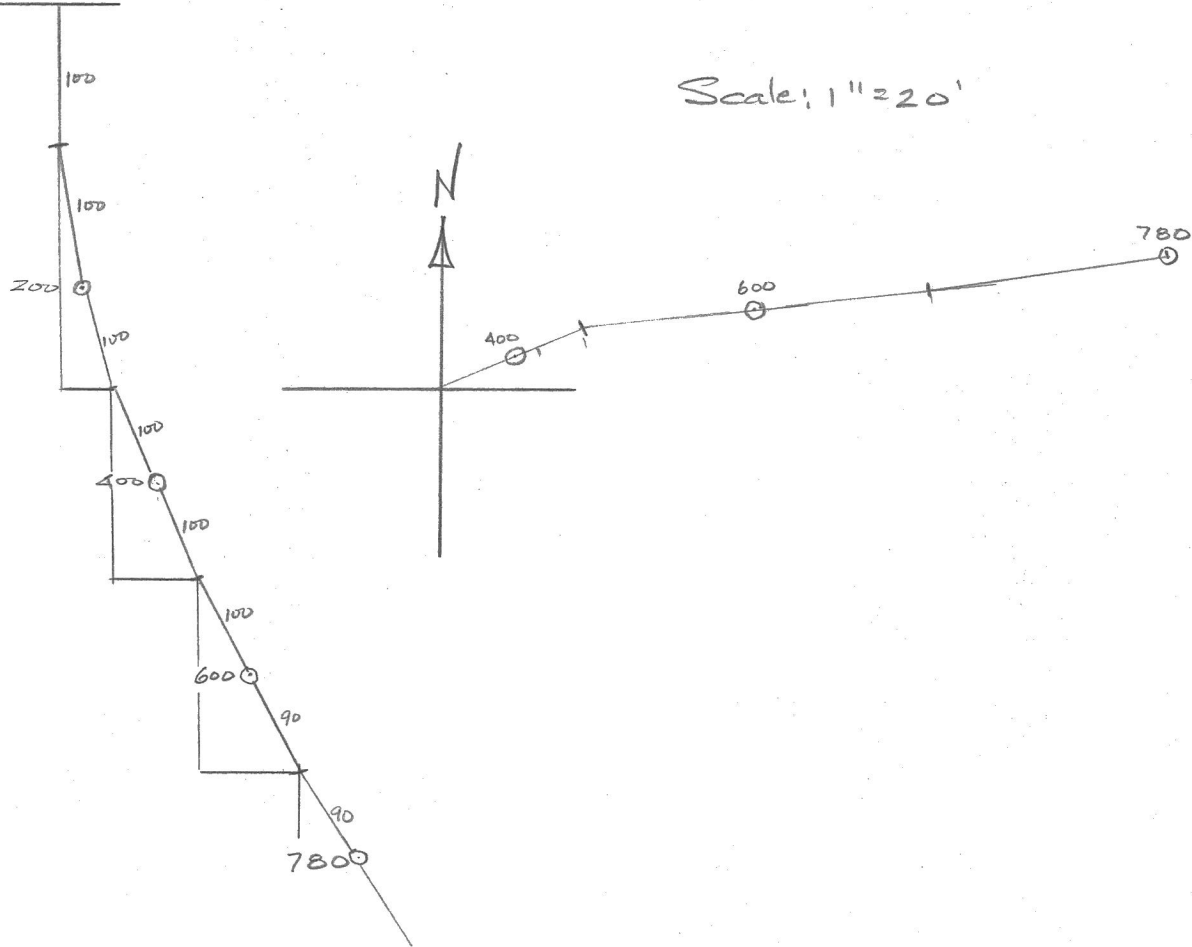
A-52

AZ	DIP	COS	DIST	H.D.	SIN	VD
0	90°		100			100
0	90°		200			200
67°	85°30'	.0787	200	15.7	.9969	199
84°	79°0'	.1908	190	36.2	.9816	186
82°	74°0'	.2756	90	24.8	.9613	86

771

Not to Scale

Scale: 1" = 20'



$$\frac{1300}{1171} = 423$$

$$\frac{1300}{1152} = 485$$

A. 52

check ✓

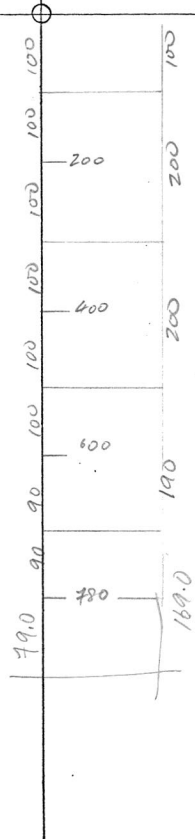
D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
	90°	0	100 ✓							1299.89	
200	90°	0	200 ✓							30.48	30.48
400	85.30 ✓	67°	200 ✓	.0785 ✓	15.7 ✓	4.79	.99692 ✓	199.38 ✓	60.77	1208.45	91.44
600	79° ✓	82°	190 ✓	.1908 ✓	36.25 ✓	11.05	.98163 ✓	186.51 ✓	56.85	1147.68	152.4
480	74° ✓	82°	169.89	.2756 ✓	46.58	14.20	.96126 ✓	162.45	49.57	1090.83	210.31
										1041.32	261.82
											261.82



10,702.92  
 7,782.06  
 68W/6N



JP

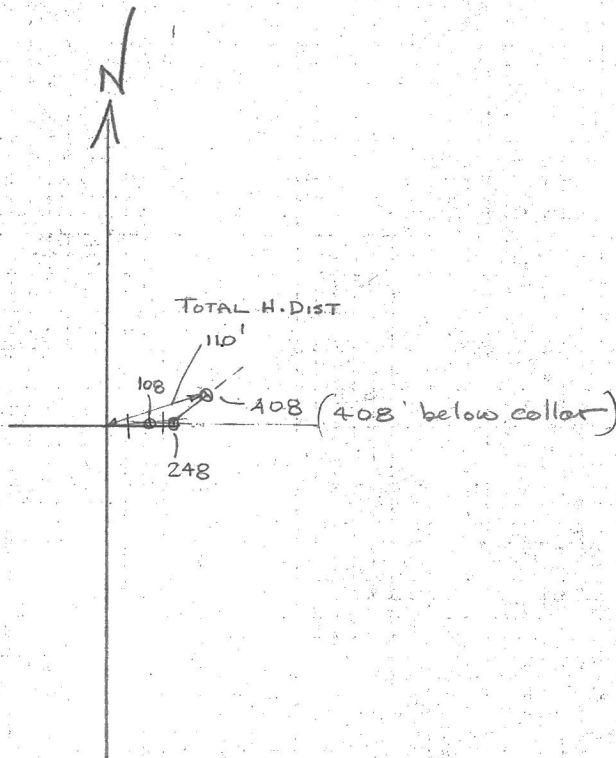
A-53

DIP & BEARING TEST

SHEET NO. ....

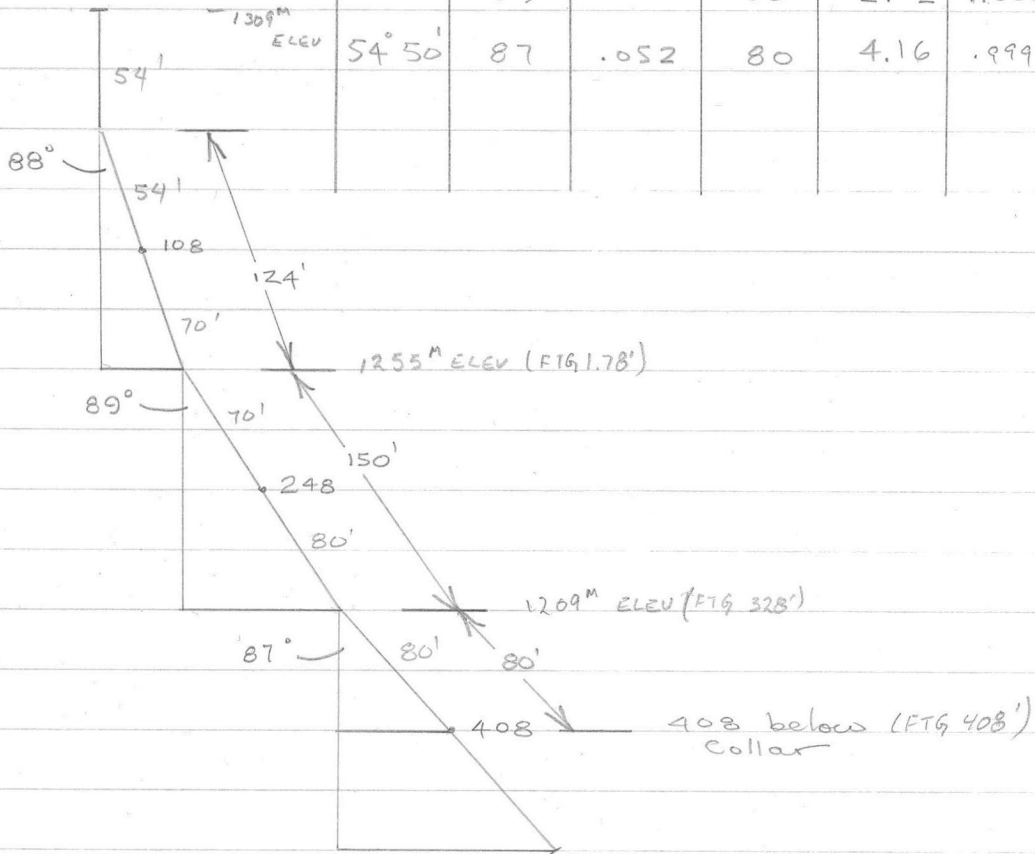
DATE

Scale 1" = ~~20'~~  
20'



A-53

Bea	Dip Angle	Cos	Dist	H. Dist.	Sm	Dist	V. Dist.
84° 20'	88	.035	124	4.35	.999	124	124
91° 20'	89	.017	150	2.52	1.000	150	150
54° 50'	87	.052	80	4.16	.999	80	80



54  
 124  
 150  
 80  
 ---  
 408

83

DATE Nov 2/75

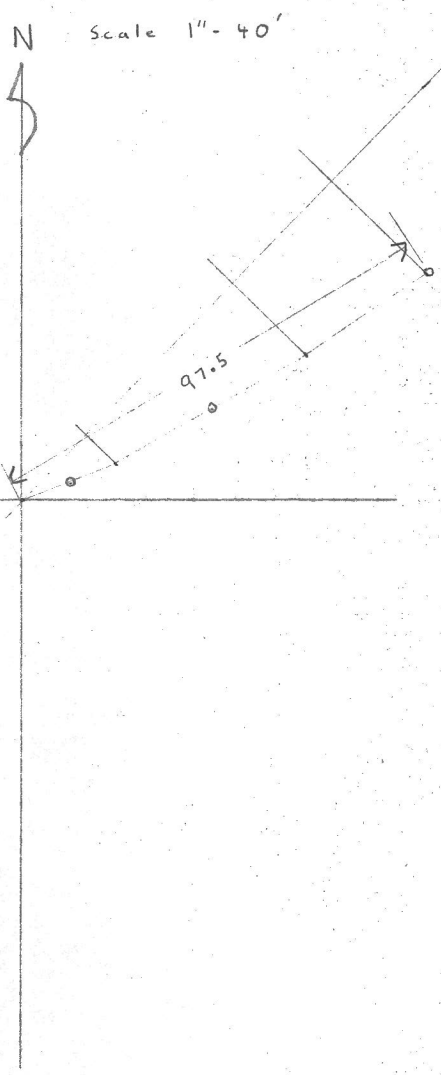
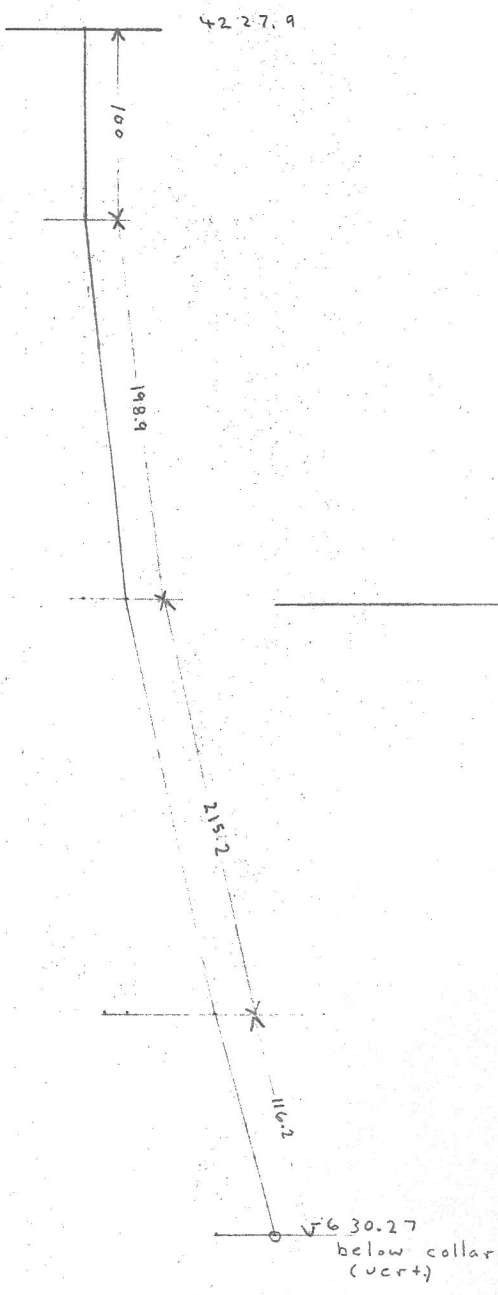
DDH A-55 / 75

64-W, 4-N

DIP + BEARING, Sperry Sun

Azm	Dist int	Dip	cos	HD	sin	VD
—	100	90	0	0	1.0000	100
67°20'	200	84	0.10453	20.91	0.99452	198.9
60°20'	220	78	0.20791	45.74	0.97815	215.19
56°20'	120	75.5	0.25038	30.05	0.96815	116.18
					Σ	630.27

Scale 1" = 100'

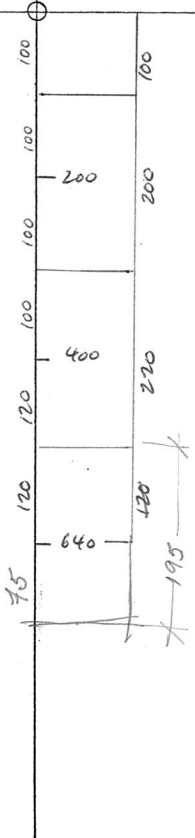


A. 55

D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL		COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
			FT	M		FT	M					
	90		100							1288.66		
200	84	67.20	200	300	.1045	20.9	6.37	.99452	198.90	30.48	1258.18	30.48
400	78	60."	220	520	.2079	45.74	13.94	.97815	215.19	65.59	1197.56	91.44
640	75.30	56."	120	640	.2504	30.05	9.16	.96815	46.18	35.41	1131.97	158.50
715			195	715	.2504	48.83	14.88	.96815	188.79	57.54	1096.56	195.07
												217.93



J.M.

DATE  
Aug 5

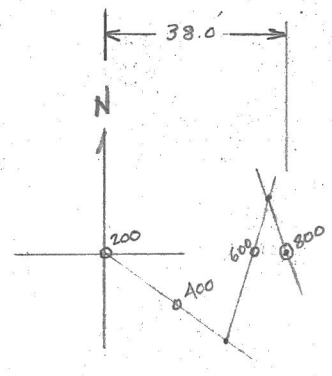
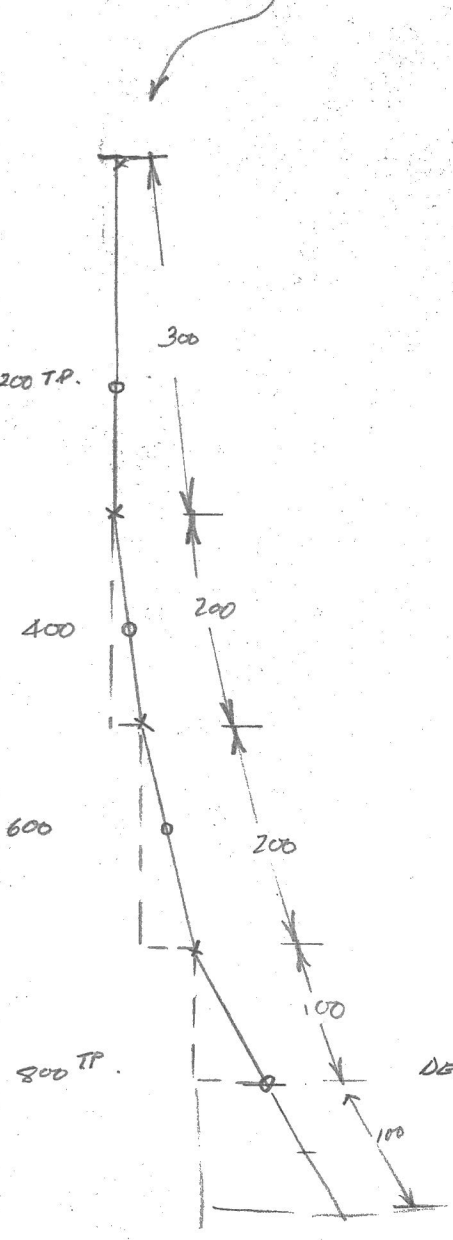
A-56 (1128 b.)  
DIP AND BEARING SURVEY  
by SPERRY - SUN

GRUM

AZ.	DIP	COS.	DIST.	H.D.	SIN.	V.D.
0	90°	0	300	0	1.00	300
126°20'	81°	.156	200	31.2	.987	197.4
116°20'	81°	.156	200	31.2	.987	197.4
161°20'	83°	.122	100	12.2	.992	99.2
			LENGTH	800	DEPTH 794.2	

NOT TO SCALE

SCALE 1:40



DEPTH FROM COLLAR 794.2

Vertical stamp: 1935

Scale: 1" = 20'

A-56 (1126')

D. D. H. DEVIATION

Van. file

FT.	Dip	Bearing	INTERVAL	COS	HOR. DIST.		VERT. DIST.		ELEV.	LENGTH OF DDH.
					FT	M	FT	1310.39		
60.96	90°	0	91.44			0		91.44	1218.95	91.44
121.92	81°	126° 20'	60.96	.1564		9.53	.98769	60.21	1158.74	132.40
182.88	81°	116° 20'	60.96	.1564		9.53	.98769	60.21	1098.53	213.36
243.84	83°	161° 30'	60.96	.1219		4.43	.99255	60.51	1038.02	244.32
END	≈ 85°		68.88	.0872		6.01	.99619	68.62	969.4	343.20

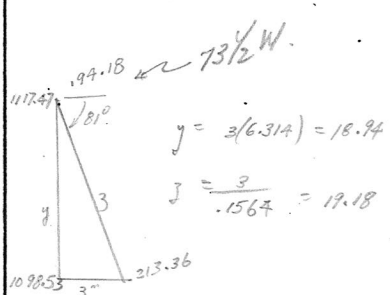
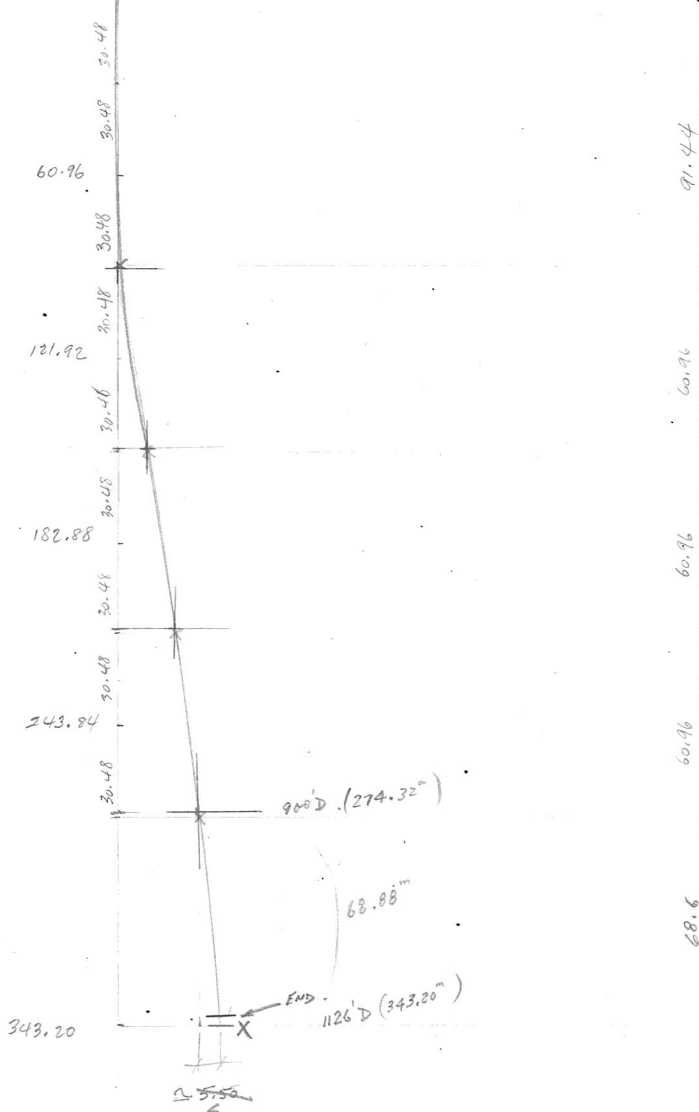
N

72W / 6N

10,786.97

7,691.92

Scale: 1" = 25' metric

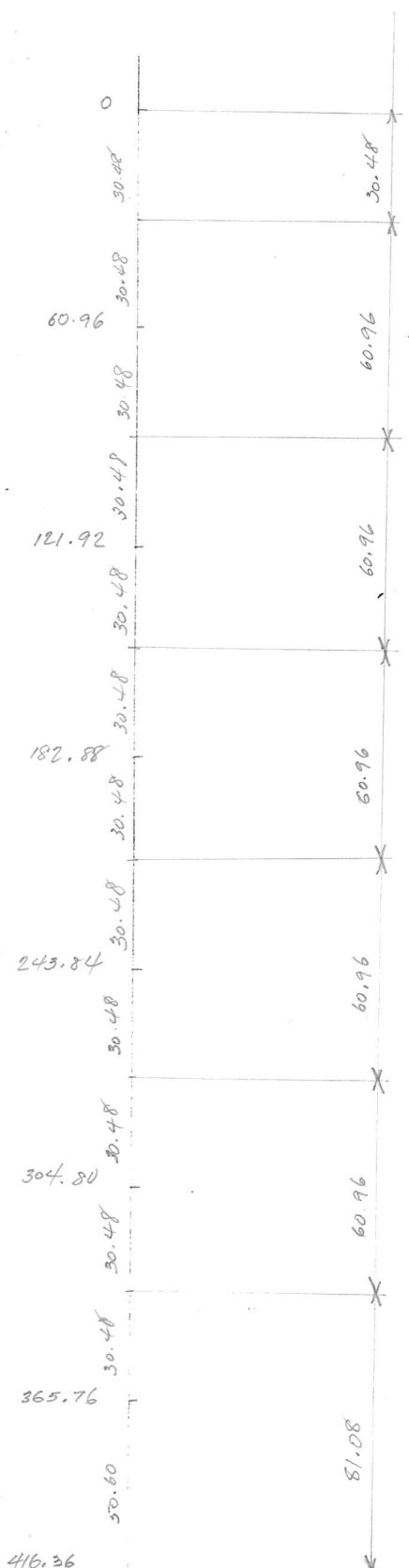


Checked & adjusted by J.C. Nov 16/76

A-57

LENGTH	BEARING	INTERVAL	Hor. DIST		VERT. D.		ELEVATION	LENGTH
			COS	METRES	DIP	SIN		
60.96	121° 20'	30.48	.0785	4.79	85° 30'	.99692	1325.54	30.48
121.92	126°	60.96	.1363	8.31	82° 10'	.99067	1295.06	91.44
182.88	125°	60.96	.2221	13.54	77° 10'	.97502	1173.90	152.40
243.84	123°	60.96	.3551	21.68	69° 10'	.93462	1114.46	213.36
304.80	122°	60.96	.3173	19.34	71° 30'	.94832	1057.49	274.32
365.76	132°	81.08	.2504	20.40	75° 30'	.96815	997.68	335.28 (335.28)
							921.18	416.36

\* d.d.h calculations  
from A-59 & A-64.  
Average -



A-57

LENGTH	BEARING	INTERVAL	HOR 1ST		VERT. D.		ELEVATION	LENGTH
			COS	METRES	DIP	SIN		
		30.48					1312.41	
60.96	139.1	60.96	.1045	6.37	84°	.99452	1281.93	30.48
121.92	143.6	60.96	.1951	11.89	78°45'	.9808	1221.30	91.44
182.88	148.25	60.96	.2952	18.00	72°56'	.95545	1101.51	152.40
243.84	158.1	60.96	.3679	22.43	68°25'	.9299	1103.27	213.36
304.80	145.6	86.24	.3173	27.367	71°30'	.94832	1046.58	274.32
	55.78	6					964.80	360.26
				17.70			52.90	

45.07

416.36

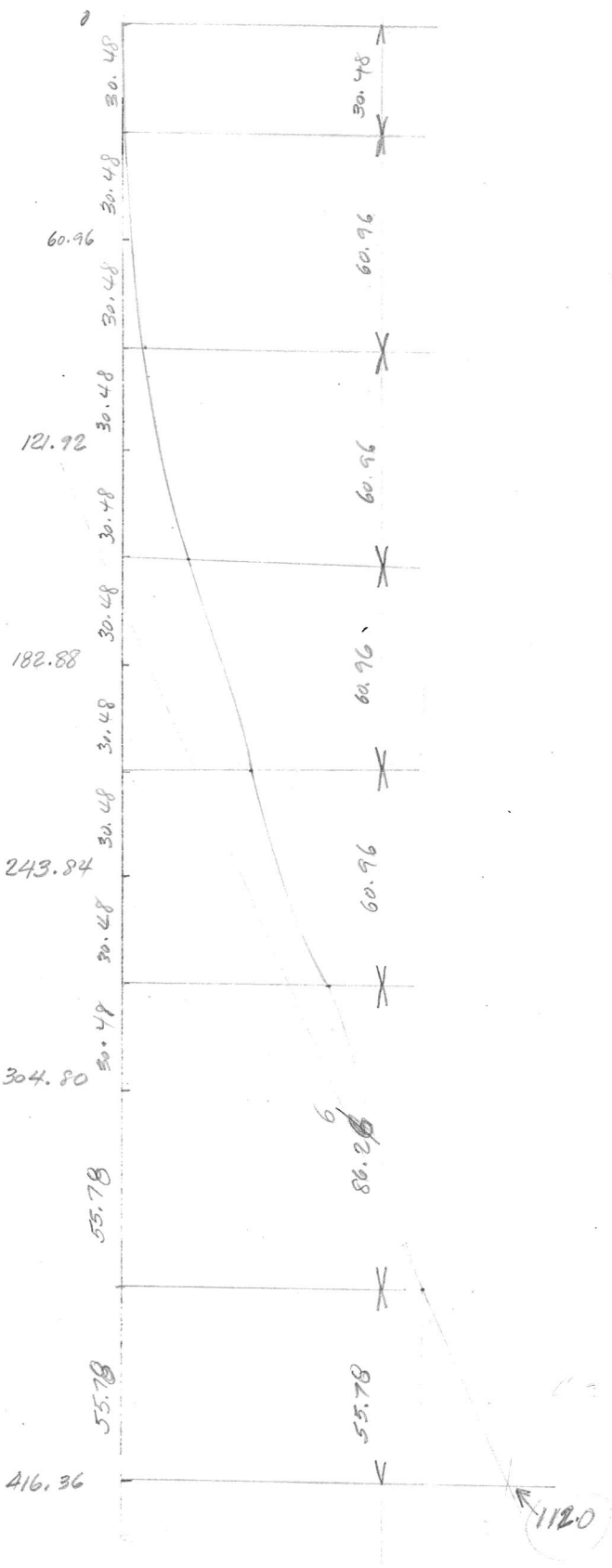
Calculation from averaged  
A 64 & A 107.

- 1325.54
- 1295.06
- 1234.43
- 1174.64
- 1116.40
- 1059.71
- 977.93
- x 925.05 end.

\* Elevation of A-57 taken from topo map.

Piercing Points

- ①  $x = 6.0$   
 $h = \frac{6.0}{.1951} = 30.75$   
 $y = 30.75 \times .9808 = 30.16$
- ②  $x = 9.7$   
 $h = \frac{9.7}{.2952} = 32.86$   
 $y = 32.86 \times .95545 = 31.40$
- ③  $x = 7.6$   
 $h = \frac{7.6}{.3679} = 20.66$   
 $y = 20.66 \times .9299 = 19.21$
- ④  $x = 2.0$   
 $h = 2.0 \times .3173 = 6.3$   
 $y = 6.3 \times .94832 = 5.97$



Piercing Points:

$$\begin{aligned} \textcircled{5} \quad x &= 17.5 \\ h &= \frac{17.5}{.3173} = 55.15 \\ y &= 55.15 \times .94832 = 52.30 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad x &= 5.7 \\ h &= \frac{5.7}{.3173} = 17.96 \\ y &= 17.96 \times .94832 = 17.03 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad x &= 21.0 \\ h &= \frac{21.0}{.3175} = 66.18 \\ y &= 66.18 \times .94832 = 62.76 \end{aligned}$$

$$\begin{aligned} x &= \frac{21.0}{.3987} = 52.67 \\ y &= 52.67 \times .91706 = 48.30 \end{aligned}$$

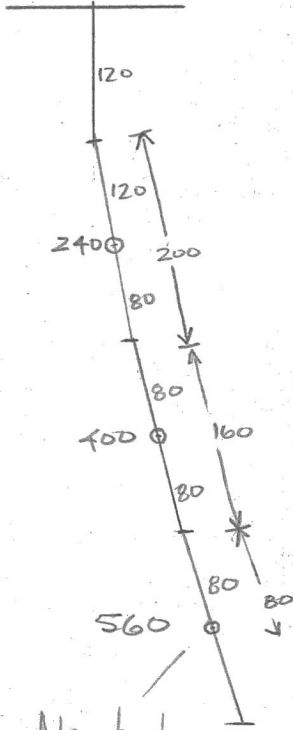
JP

22/Sept/75

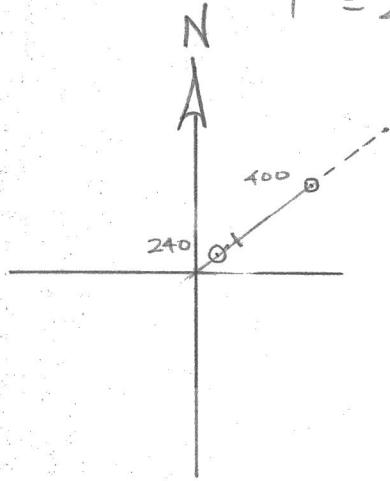
Dip & Bea Survey

A-58

Az	Dip	Cos	Dist	H.D.	Sin	V.D.
0	90	0	120		1	120.0
53	87	.0523	200	5.06	.9986	199.7
54	83	.1219	160	19.5	.9925	158.9



Scale  
1" = 20'



No test recorded.

Collar

$$\begin{array}{r} 1293.2 \\ 1191 \\ \hline 102 = 334 \\ 462 \end{array}$$

$$\begin{array}{r} 1293.2 \\ 1152 \\ \hline 141 \end{array}$$

A-58 - depth 187.45 m.

D. D. H. Deviation

Scale: 1" to 20'

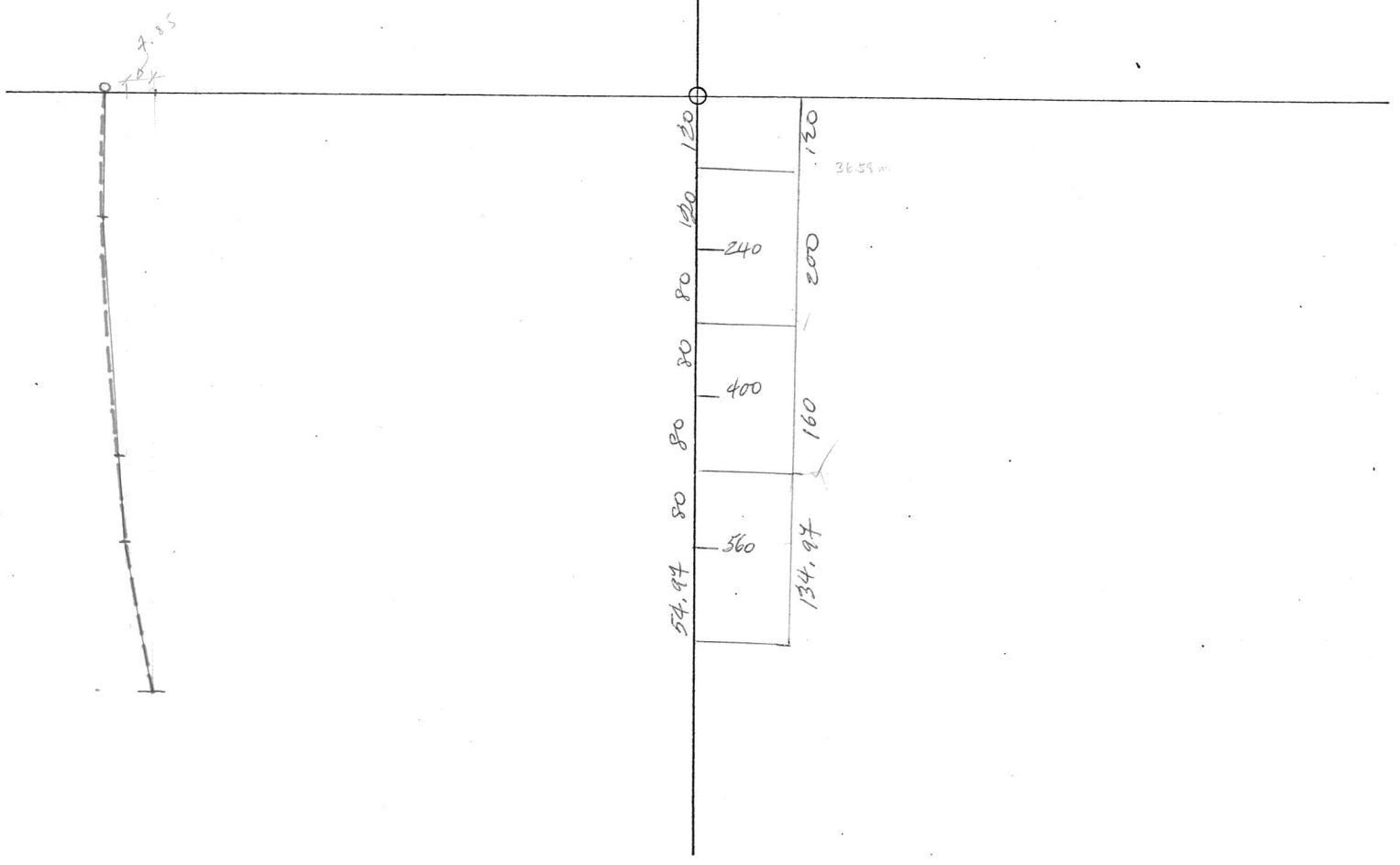
Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT DIST		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
			120							1293.25	
240	87°	53°	200	.0523	10.46	3.191	.99863	199.93	36.58	1256.67	36.58
400	83°	54°	160	.1219	19.50	5.94	.99255	79.40	60.88	1195.79	97.54
560	79°		134.97	.1908	25.75	2.85	.98163	158.81	48.41	1147.38	<del>121.40</del> 146.3
								132.49	40.38		
										1107.00	

187.45

10,618.08  
7,870.86



1:20



V.M.

Aug 7

A-59

# DIP AND BEARING SURVEY

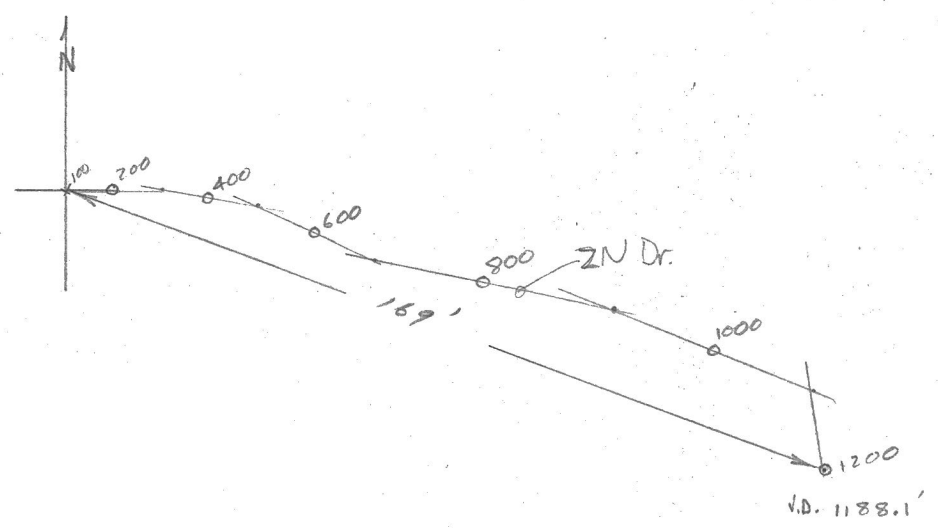
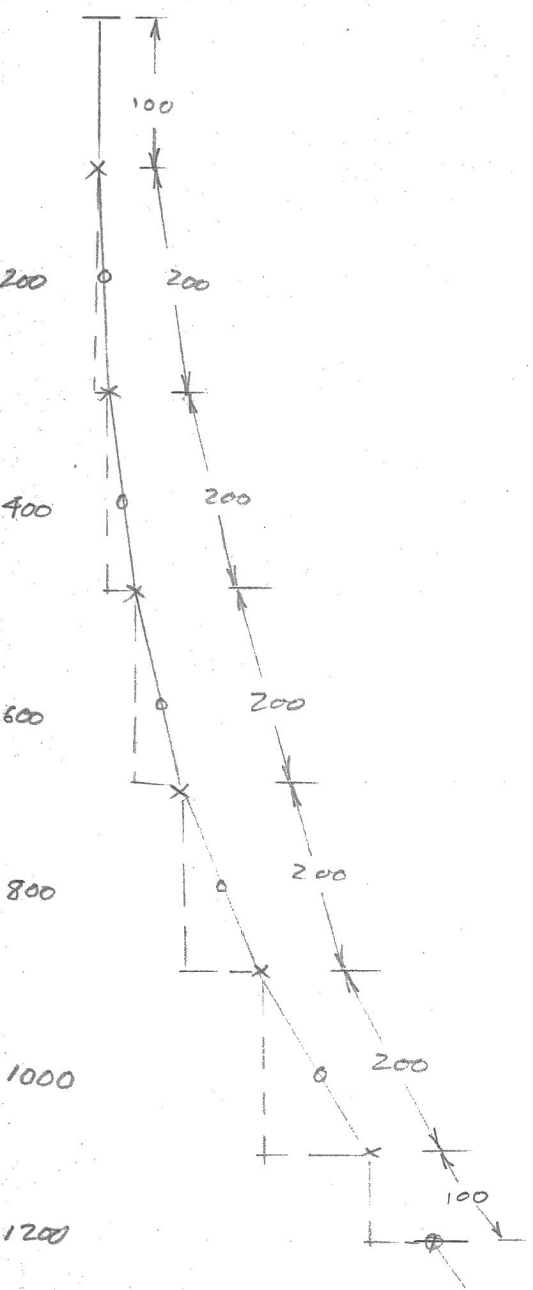
By SPERRY - SON.

GRANT.

AZ.	DIP.	COS.	DIST.	H.D.	SIN.	V.D.
0	90	0	100	0	1.00	100
90°20'	85°	.104	200	20.8	.994	198.8
100°20'	84°	.104	200	20.8	.994	198.8
114°20'	82°	.139	200	27.8	.990	198.0
102°20'	75°	.259	200	51.8	.966	199.2
110°20'	77°	.225	200	45.0	.974	194.8
172°20'	80°	.173	100	17.3	.985	98.5
			LENGTH 1200	DEPTH 1188.1		

NOT TO SCALE

SCALE 1:40



Collar 1329.27  
 2N1073  
 256

1188.1' DEPTH AT COLLAR

A.59

(METRIC)

LENGTH	BEARING	INTERVAL	Ho. DIST		DIP	VERT. $\pm$		ELEVATION	LENGTH
			COS	METRES		SIN	METRES		
		30.48	.0872				1329.27		
60.96	90°20'	60.96	—	5.32	85°	.99619	30.48	30.48	
121.92	100°	60.96	.1045	6.37	84°	.99452	60.73	1238.06	
182.88	114°	60.96	.1392	8.49	82°	.99027	60.62	1177.44	
243.84	102°	60.96	.2588	15.78	75°	.96593	60.37	1117.07	
304.80	110°	60.96	.2250	13.72	77°	.97437	58.88	1058.19	
365.76	122°	30.48	.1736	5.29	80°	.98481	59.40	998.79	
							30.02	968.77	

T: 397.58

A-59

off =

D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL	HOR. DIST.			SIN.	VERT. DIST		ELEV.	LENGTH OF DDH
				FT	M			FT	M		
			100						1329.27		
200	85°	90° 20'	200	.0872	17.44	5.32	.99619	199.24	30.48	1298.79	30.48
400	84°	100	200	.1045	20.90	6.37	.99452	198.90	60.73	1238.06	91.44
600	82°	114	200	.1392	27.84	8.49	.99027	198.05	60.62	1177.44	152.4
800	75°	102	200	.2588	51.76	15.78	.96593	193.19	60.37	1117.07	213.36
1000	77°	110	200	.2250	45.0	13.72	.97437	194.87	58.88	1058.19	274.32
1200	80°	122	100	.1730	17.36	5.29	.98481	98.48	59.40	998.79	335.28
									20.02	968.77	365.76
											397.58

13044

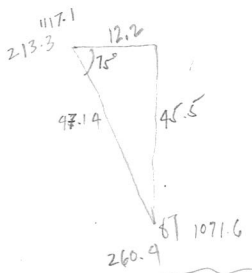


88 W

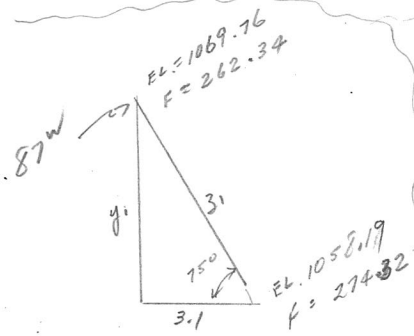
2 N

11 034.67

7 260.11

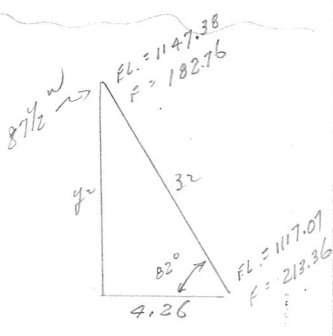


$\tan 75^\circ = 3.732$



$y_1 = 3.1(3.732)$   
 $= 11.57$

$z_1 = \frac{3.1}{0.2588}$   
 $= 11.98$

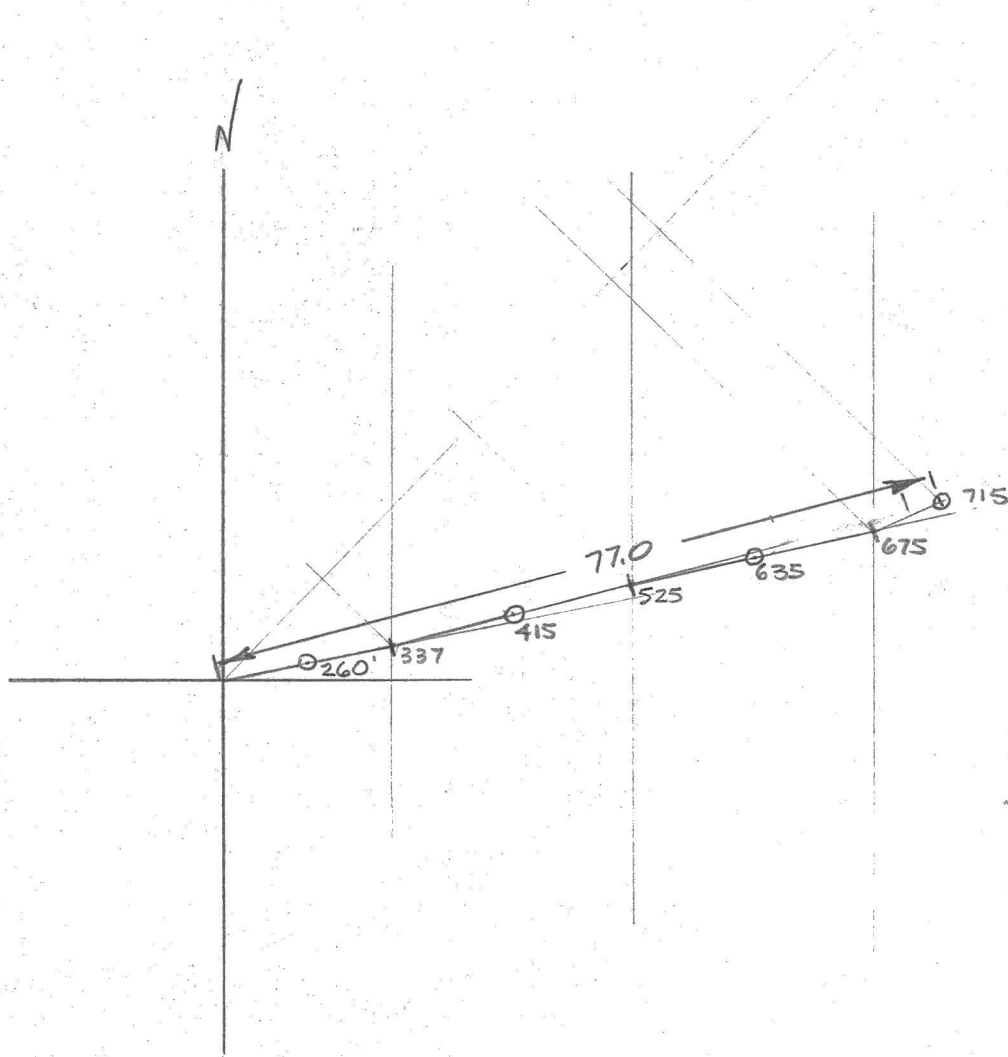


$y_2 = 4.26(7.115)$   
 $= 30.31$

$z_2 = \frac{4.26}{0.1392}$   
 $= 30.60$

# A-60 Dip & Bearing Test TROPARI

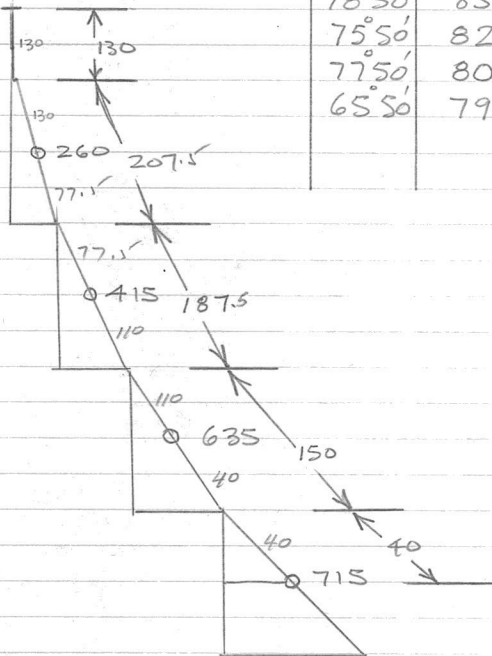
Scale: 1" = 20'



A-60

*Do Not Use*  
*see Vane file*

AZ	DIP	COS	DIST	H.DIST	SIN	DIST	V.DIST
0	90	0	130	0	1.00	130	130
78.50	85	.0872	207.5	18.09	.9962	207.5	206
75.50	82	.1392	187.5	26.0	.9903	187.5	185
77.50	80	.1736	150	26.0	.9848	150	148
65.50	79	.1908	40	7.6	.9816	40	39
							<u>708</u>

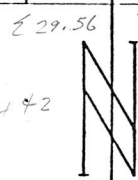


708 below collar elevation

A-60

Scale: 1" = 20'

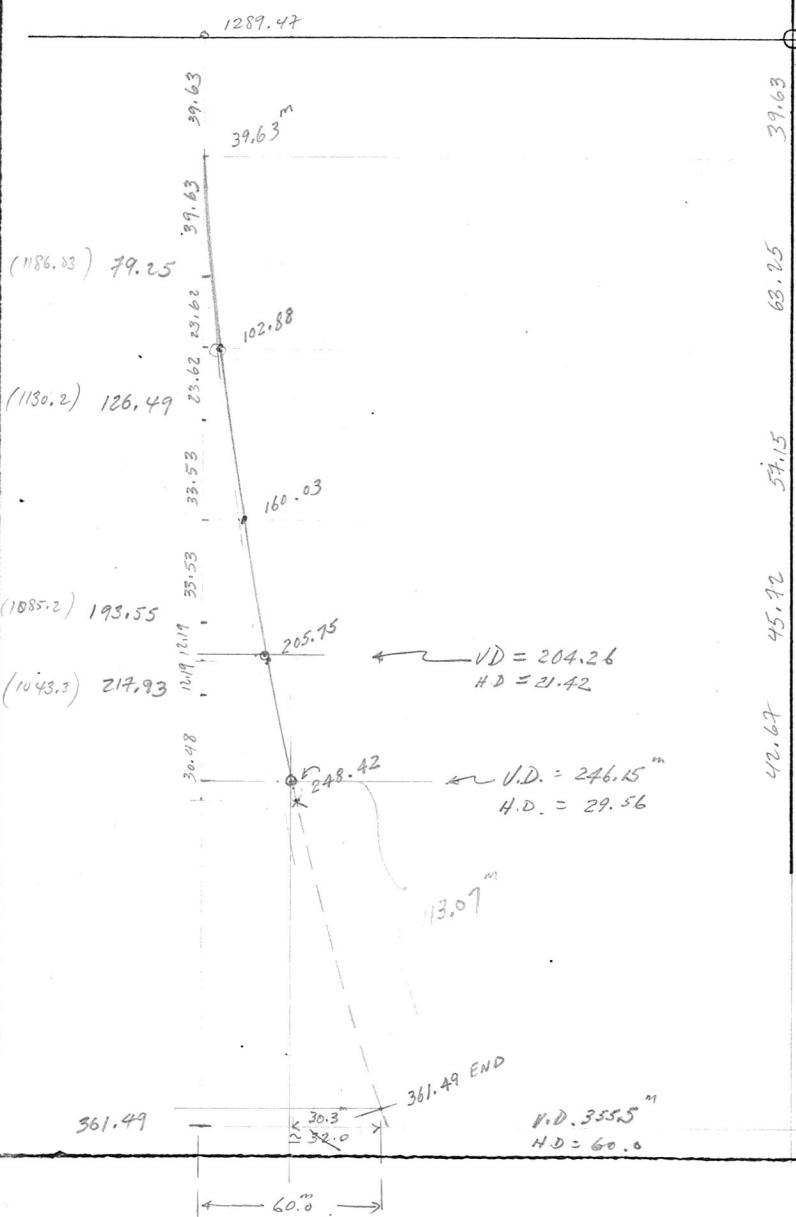
Fl.	Dip	Bearing	INTERVAL	HOR. DIST.		SIN.	FT	DIST	ELEV.	LENGTH OF DDH
				FT	M					
			39.63					1289.47		
79.25	85°	78° 50'	63.25	0872	5.52	.99629	39.63	1249.84	39.63	
126.49	82°	75° "	57.15	1392	7.96	.99097	63.01	1186.83	102.88	
193.55	80°	77° 4	45.72	1736	7.94	.98481	56.59	1130.24	160.03	
217.93	79°	65° 4	42.67	1908	8.14	.98163	45.03	1085.21	205.75	
							41.89	1043.32	248.42	
								934.6	361.49	END of H



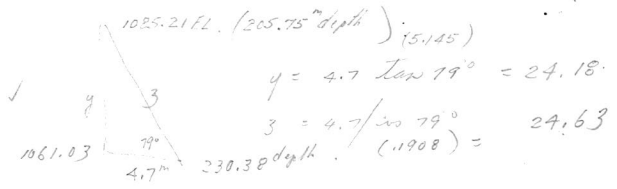
$E 246.15$   
 $+ 109.0$   
 $\hline 355.15$   
 72W / B.L

10,656.40  
 7,568.59

scale - 1:25



$361.49$   
 $- 248.42$   
 $\hline 113.07$   
 $1289.47$   
 $355.15$   
 $\hline 1644.62$



Checked & re-plotted on Plan & Section  
 Nov. 15/76

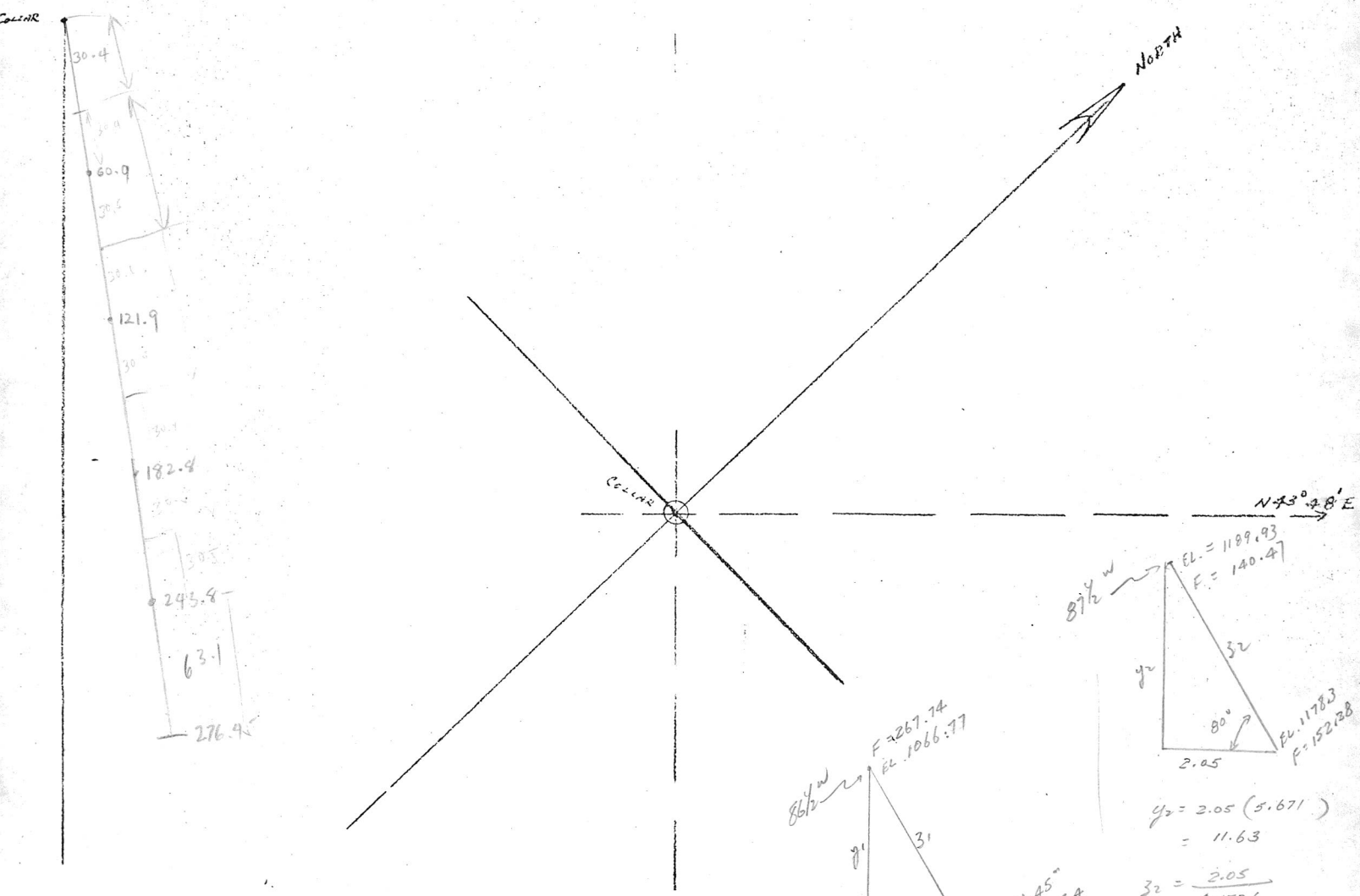
900' = 276.45 m

SEC NOTE BELOW

TABLE #1: CORRELATION OF FIELD DATA:

TEST POINT	OBS. BEARING	OBS. AZIMUTH	COER. AZIMUTH	DIP	DIST.	COSINE DIP	HORIZ. DIST.	SINE DIP	VERT. DIST.	ELEV. 1329.2
Collar	-	-	-	-90	30.48				30.48	1298.7
60.9 m		108-10'	108-10	-83.5°	60.9 <sup>41.30</sup>	0.1132	6.9	0.9935	60.5	1238.2
121.9m		117-30'	117-30	-80.0	60.9 <sup>52.20</sup>	0.1736	10.57	0.9848	59.9	1178.3
182.8		137	137	-77	60.9 <sup>21.3</sup>	0.2250	13.7	0.97437	59.3	1119.0
243.8		137	137	-74	63.1 <sup>27.75</sup>	0.2756	17.4	0.96126	60.6	1058.4
									<b>TOTAL VERT. DIST. 270.76</b>	

include end of hole  
276.45 m



NOTE: A-61 - Abandoned hole.  
 This dip and bearing data are  
 approximate only. ARRIVED AT  
 BY AVERAGING A-59 & A-123

$$y = 2.4(3.487) = 8.37$$

$$z = \frac{2.4}{0.2756} = 8.71$$

$$y_2 = 2.05(5.671) = 11.63$$

$$z_2 = \frac{2.05}{0.1736} = 11.81$$

SECTION SCALE:

PLAN SCALE:

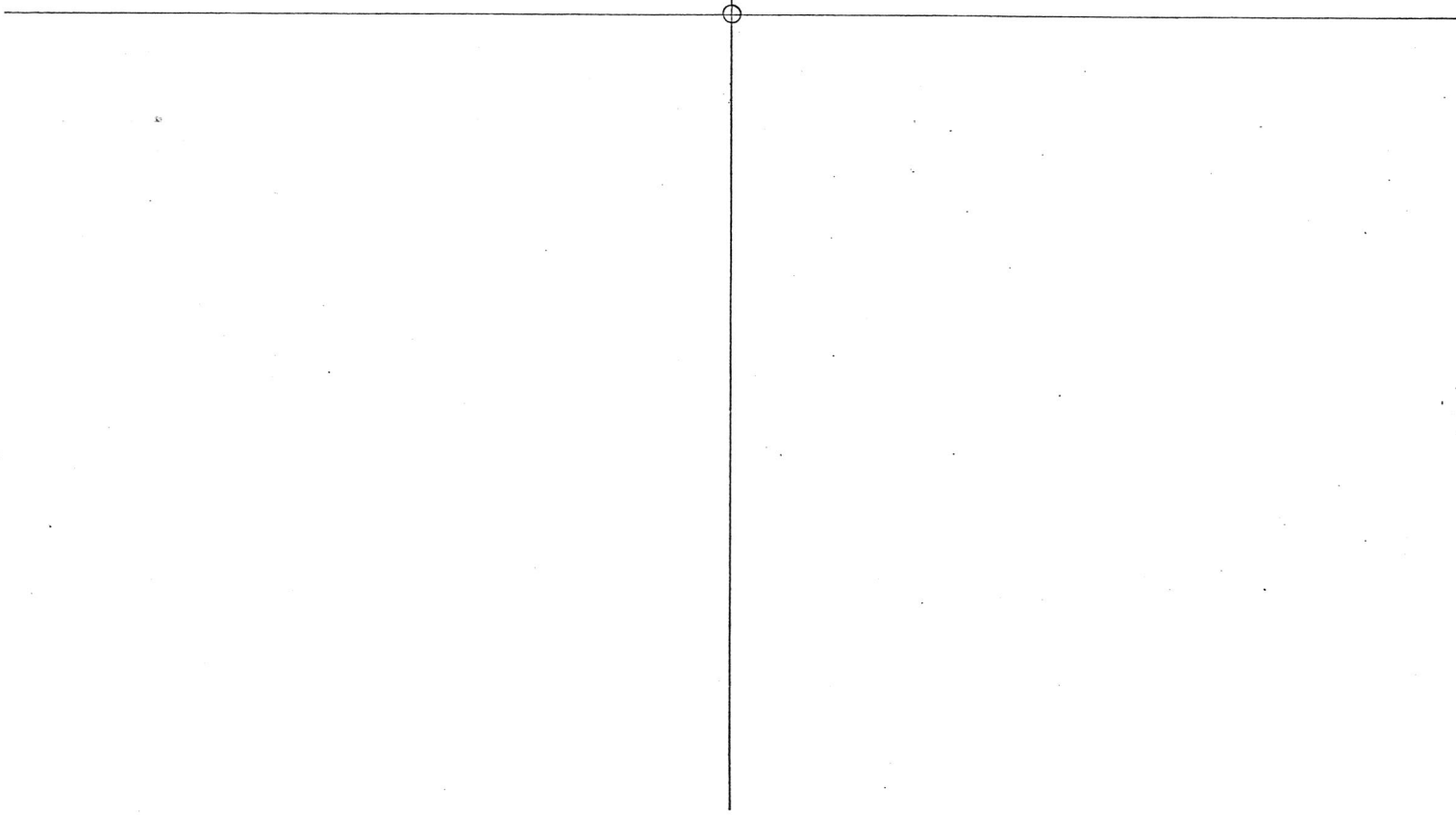
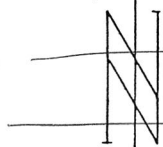
A-125 A-61

Scale: 1" = 20'

D. D. H. Deviation

Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST		ELEV.	LENGTH OF DDH
					FT	M		FT	M		

A-61	-	276.45	-	1289.41	—	11080.86	-	7302.55	4N
A-126	-	147.50	-	1330.51	—	10989.82	-	7217.80	2+00



JP

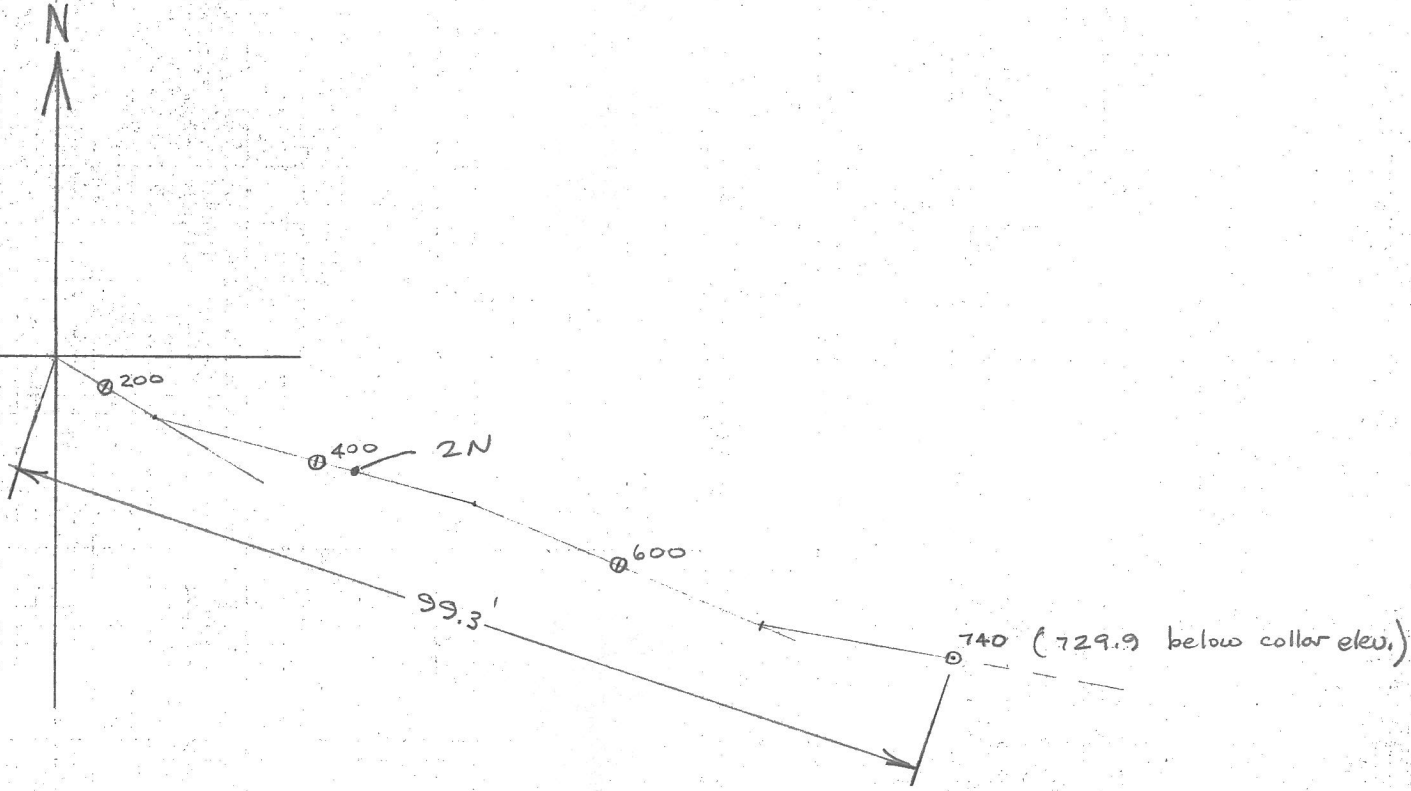
BY DATE

CHKD. DATE

FIELD A-62  
DIP & BEARING TESTS  
SPERRY SUN INST.

PROJECT NO.

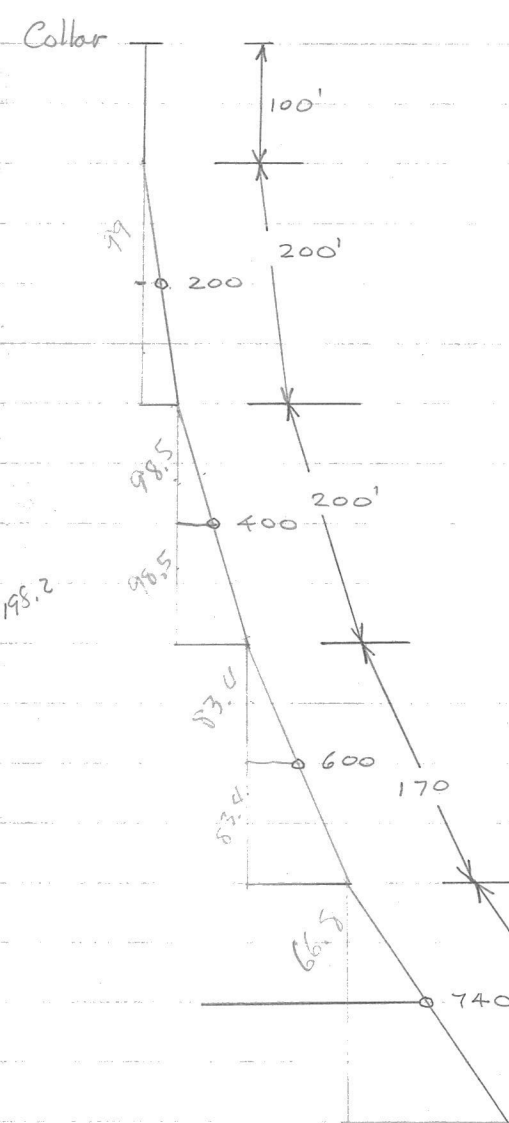
SCALE 1" = 20'



Collar -	1290.45	
2N	<u>1160.7</u>	425.7
	129.75	= <del>345.5</del>

skipped & plotted  
 on Master Snd.  
 Nov/76  
 See  
 Van & office file

A-62



Collar	Az	DIP	Cos	DIST	H DIST	SIN	DIST	V. DIST
	0	90	0	100	0	1.000	100	100
	121° 20'	86° 30'	.0610	200	12.2 <sup>3.7</sup>	.9981	200	199.3
	105° 20'	80°	.1736	200	34.7 <sup>10.6</sup>	.9848	200	197.0
	113° 26'	79°	.1908	170	32.4 <sup>9.9</sup>	.9816	170	166.8
	100° 20'	73°	.2924	70	20.4 <sup>6.2</sup>	.9563	70	66.8
								<u>729.9</u>

729.9 below collar elevation

1290.45  
 1090.75 ✓  
 892.55

1290.45  
 99.70  
 -----  
 1190.75 ✓  
 1092.25 ✓  
 1008.85 ✓  
 942.05 ✓

1290.

A02

Checked by P.H. OK  
 End Adj. by F.C.

D.D.H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
	90°	—	100'	—	—	—	—	—	—	1290.45	—
	86°30'	121°20'	200'	.0610	12.2	3.72	.9981	199.62	30.48	1259.97	30.48
	80°	105°20'	200'	.1736	34.72	10.58	.9848	196.96	60.84	1199.13	91.44
	79°	113°20'	170'	.1908	32.44	9.88	.9816	166.87	60.03	1139.10	152.40
	73°	100°20'	70'	.2924	20.47	6.24	.9563	66.92	50.86	1088.24	204.22
	"	"	70'	"	"	"	"	66.92	20.41	1067.83	225.55 (Tot Pt 740)
										1047.42	246.89 (810')

178 to END.  
 (54.25m)

50.8

996.6

301.14 END. (988')



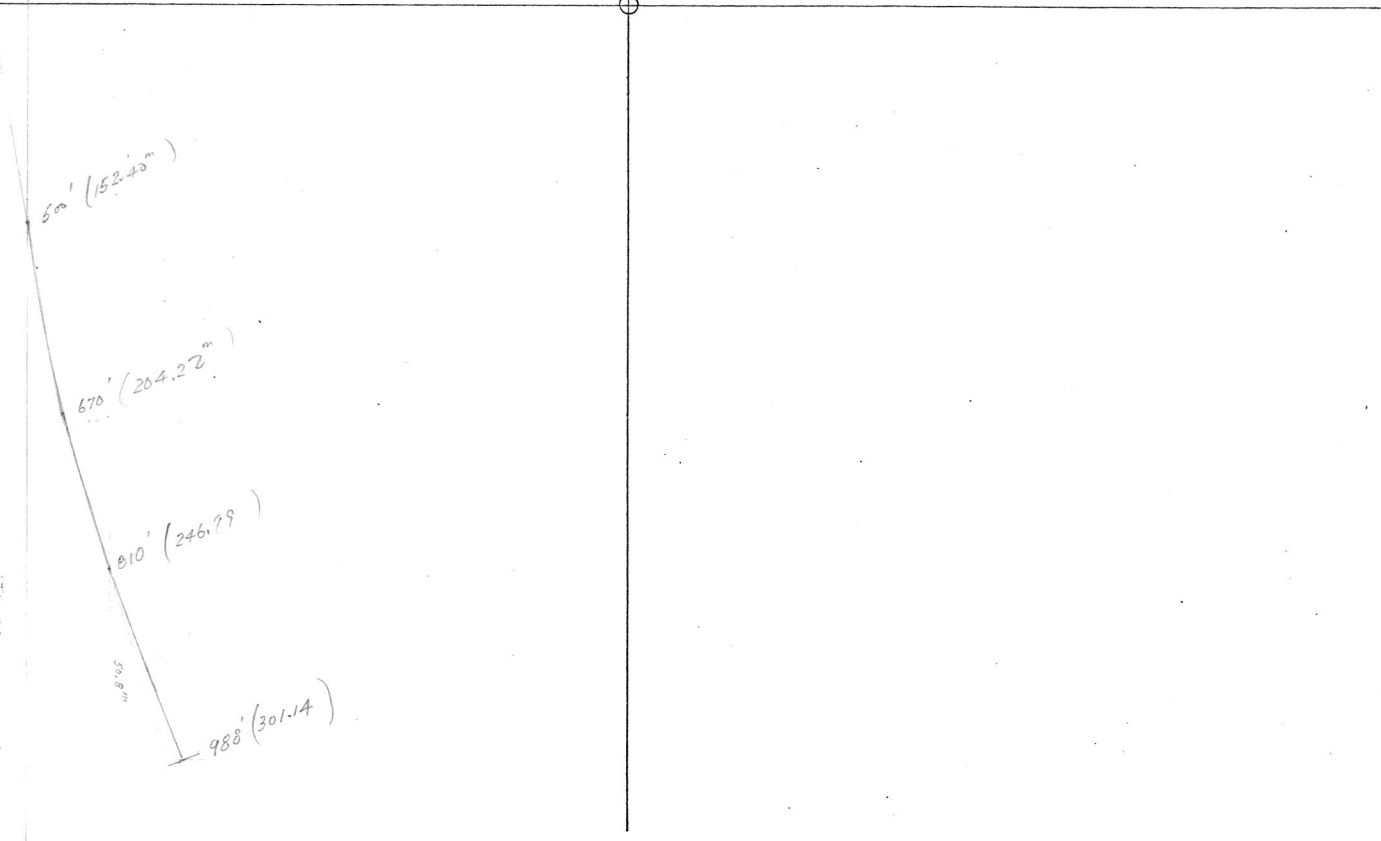
300' (91.44)

500' (152.40m)

670' (204.22m)

810' (246.89m)

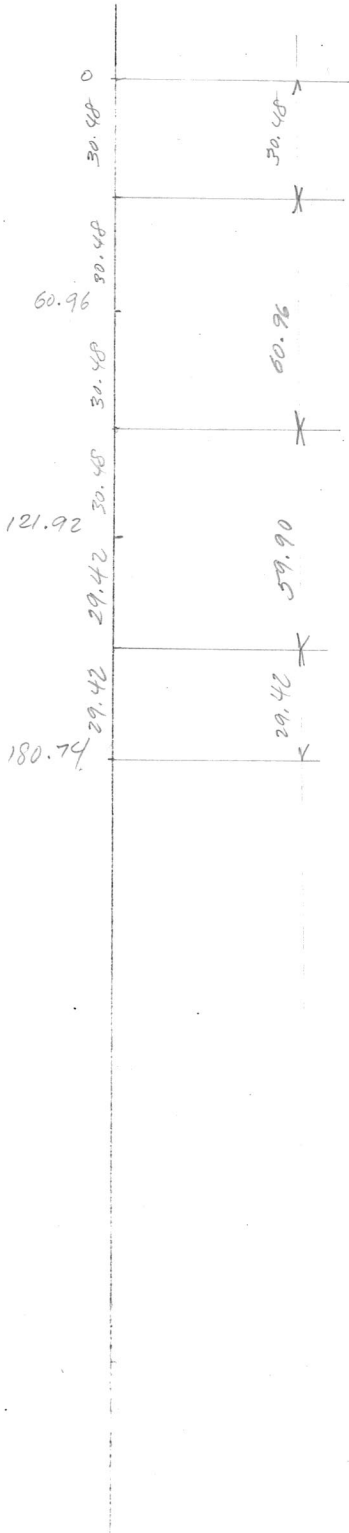
988' (301.14m)



A-63

LENGTH	BEARING	INTERVAL	HOR COS	ST METRES	DIP	SIN	VERT. DI MEIKER	ELEVATION 1271.3	LENGTH
60.96	152°	30.48	.0175	1.07	89°	.99985	30.48	1240.82	30.48
121.92	58.5°	60.96	.1392	8.34	82°	.99027	60.95	1179.87	91.214
151.00	53.98	29.42	.1736	5.11	80°	.98481	28.97	1120.55	151.34
								1091.58	180.76

Hole A-63 weighed average  
with holes A-114 & A-110



Average Calculations =

$$\begin{array}{r}
 170.69 \\
 -109.73 \\
 \hline
 60.96
 \end{array}
 \qquad
 \begin{array}{r}
 121.92 \\
 -109.73 \\
 \hline
 12.19
 \end{array}
 \qquad
 \begin{array}{r}
 180.0 \\
 -12.2 \\
 \hline
 167.8
 \end{array}$$

60.96 = 89° / 152°

$$\frac{12.19}{60.96} \times 14 = 0.4$$

$$\begin{array}{r}
 84.6^\circ \\
 -54 \\
 \hline
 30.6
 \end{array}$$

$$79^\circ - \frac{51.2}{66}$$

$$163.6 \left( \frac{117.2}{58.6} \right)$$

A-110 @ 151m -

$$\begin{array}{r}
 \frac{29}{77.2} \times \text{Btg} (-7^\circ) = -\frac{66}{63.34} \\
 \times \text{dip} (-4.5^\circ) \quad \frac{79^\circ}{-1.71} \\
 \hline
 77.29
 \end{array}$$

A-114 @ 110m -

$$\begin{array}{r}
 \frac{41}{61} \times \text{Btg} (-14^\circ) = \frac{54}{-9.38} \\
 \times \text{dip} (-2^\circ) = \frac{85}{-1.34} \\
 \hline
 83.66
 \end{array}$$

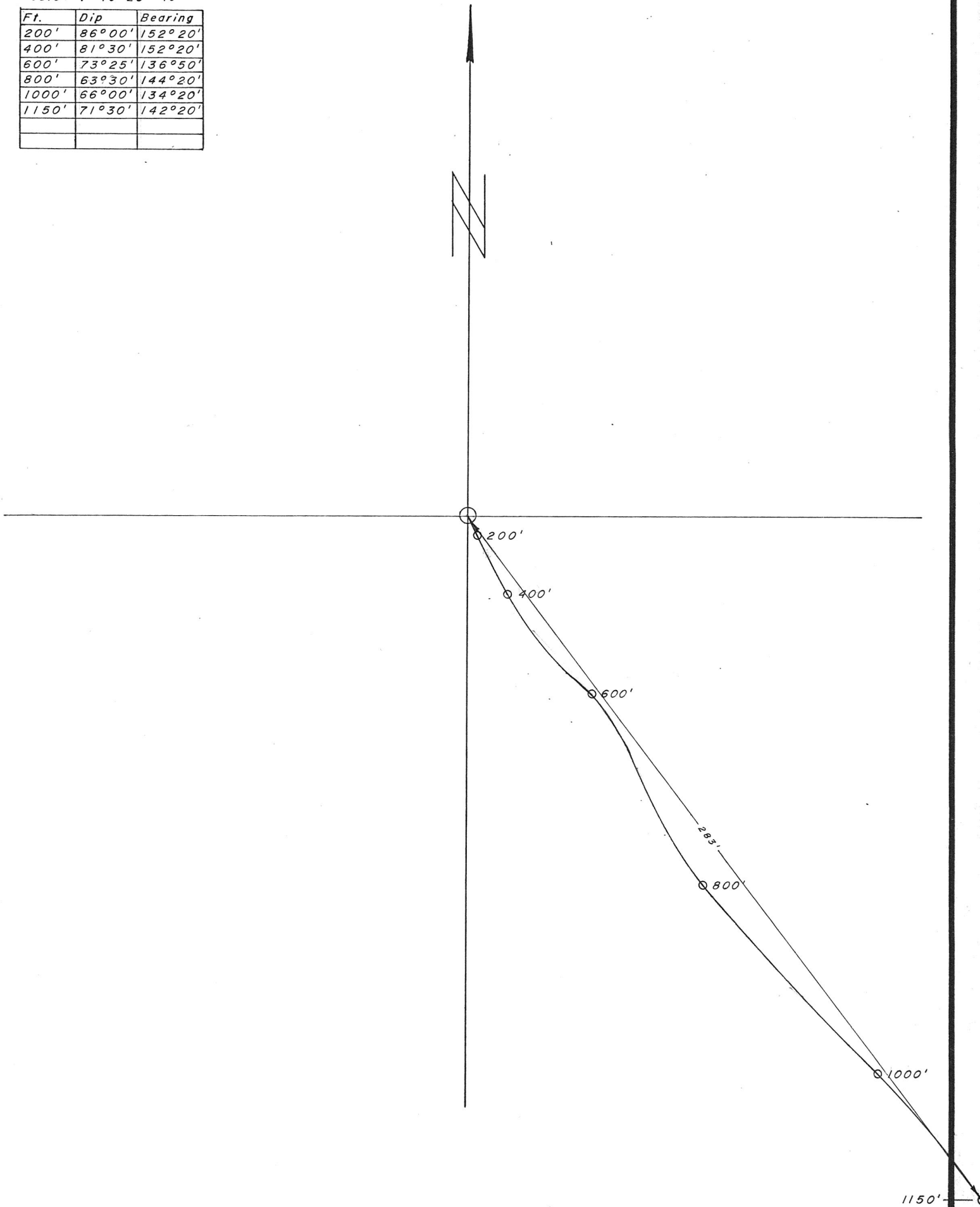
$$\begin{array}{l}
 63.34 + 44.62 = \text{---} : 2 = 53.98 \\
 77.29 + 83.66 = \text{---} : 2 = 80^\circ 5
 \end{array}$$

A-64 (107+96W 8+00 N.)

D.D.H. DEVIATION

Scale: 1" to ~~20'~~ 40'

Ft.	Dip	Bearing
200'	86°00'	152°20'
400'	81°30'	152°20'
600'	73°25'	136°50'
800'	63°30'	144°20'
1000'	66°00'	134°20'
1150'	71°30'	142°20'



1150'

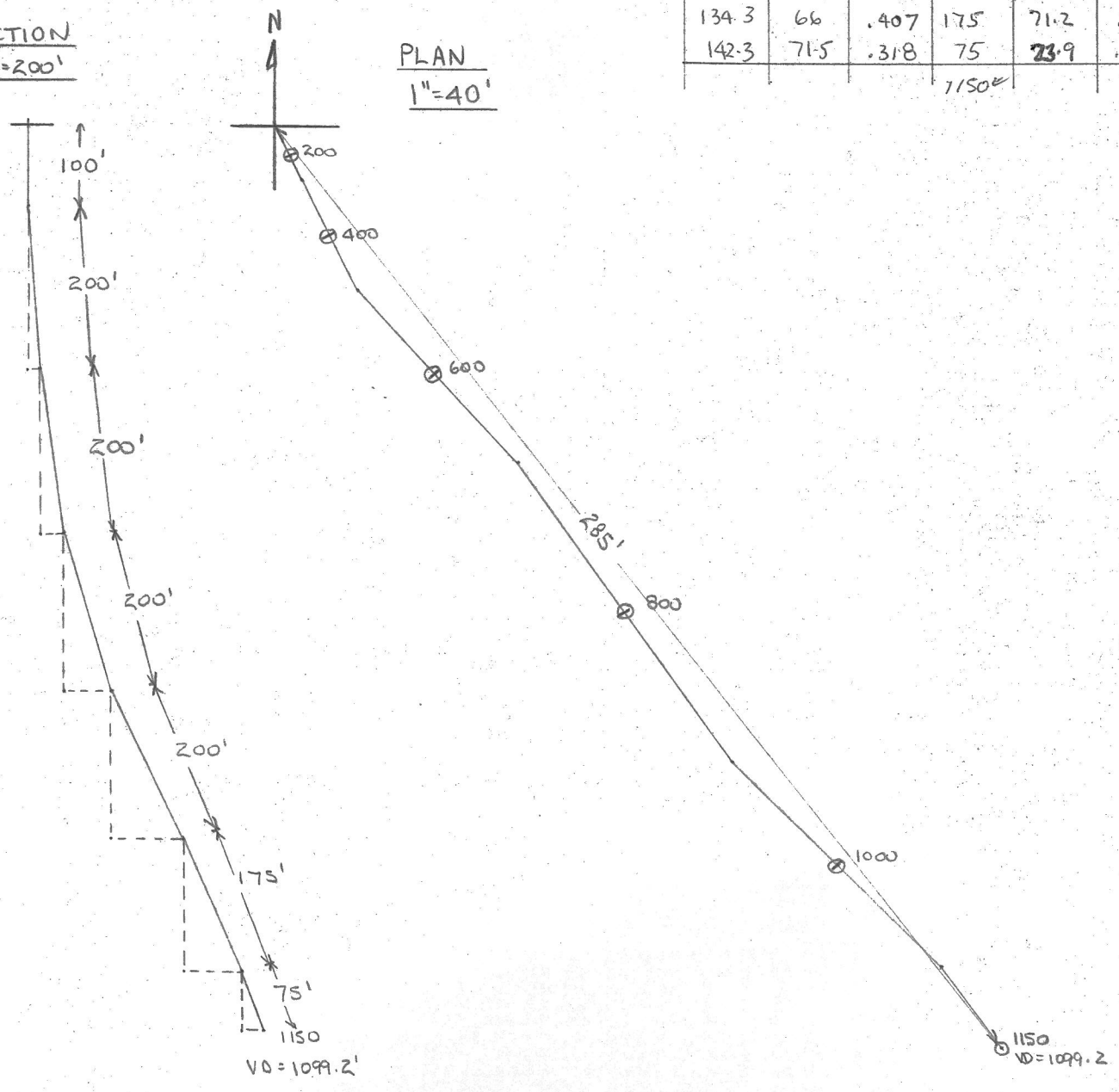
# A-64

## DIP & BEARING TESTS (SPERRY SUN)

AZ	DIP	COS	D	HD	SIN	VD
0	90	0	100	0	1.00	100
152.3	86	.070	200	14.0	.998	199.6
152.3	81.5	<del>.148</del>	200	29.6	.989	197.8
136.8	73.4	.285	200	57.0	.958	191.6
144.3	63.5	.446	200	89.2	.895	179.0
134.3	66	.407	175	71.2	.914	160.0
142.3	71.5	.318	75	<del>23.9</del>	.948	71.2
						1099.2

SECTION  
 1" = 200'

PLAN  
 1" = 40'

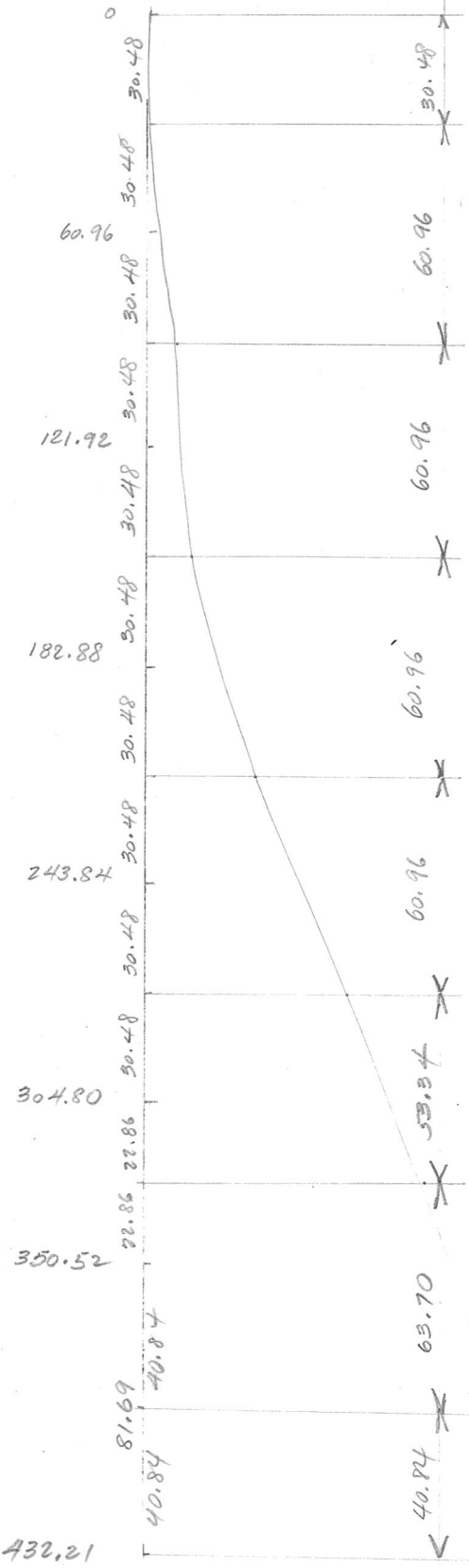


A-64

8

LENGTH	BEARING	INTERVAL	COS	METRES	DIP	SIN	METRES	ELEVATION	LENGTH
		30.48					30.48	1305.76	
60.96	152° 20'	60.96	.0698	4.26	86°	.99756	60.81	1275.0	30.48
121.92	152° 20'	60.96	.1478	9.01	81° 30'	.98902	60.29	1214.19	91.44
182.88	136° 50'	60.96	.2854	17.40	73° 25'	.9584	58.42	1153.9	152.40
243.84	144° 20'	60.96	.4462	27.20	63° 30'	.89493	54.55	1095.48	213.36
304.80	134° 20'	53.34	.4067	21.69	66°	.91355	48.73	1040.73	274.32
350.52	142° 20'	63.70	.3173	20.21	71° 30'	.94832	60.41	992.2	327.66
		40.84	"	12.96	"	"	38.73	931.79	391.36
								893.06	432.20

432.20



1:20

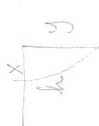
① Calculations of Piercing Point:

$$\phi = 81^{\circ}30'$$

$$X = 4.04$$

$$A = \frac{4}{.1478} = 27.06$$

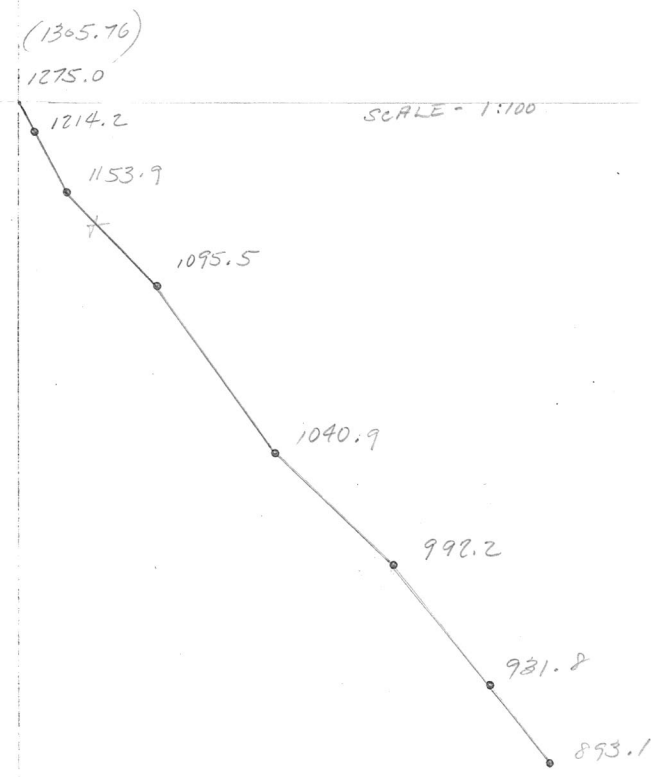
$$y = 27.06 \times .98902 = 26.76$$



11589.36 N  
6945.43 E

Piercing Point

- ①  $h = 27.06$ ;  $y = 26.76$  (1127.14) ✓
  - ②  $h = 21.96$ ;  $y = 19.66$  (1060.56) ✓
  - ③  $h = 2.95$ ;  $y = 2.69$  (994.89) ✓
  - ④  $h = 29.94$ ;  $y = 28.40$  (903.4) ✓
- 108  $h = 42.98$   $y = 42.87$  (1257.06) ✓  
L: 48.46
- 107  $h = 7.01$   $y = 6.72$  (1088.78) ✓  
L: 220.37
- 106  $h = 12.33$   $y = 11.03$  (1029.87) ✓  
L: 286.65
- 105  $h = 18.91$   $y = 17.93$  (949.73) ✓  
L: 372.45 ✓



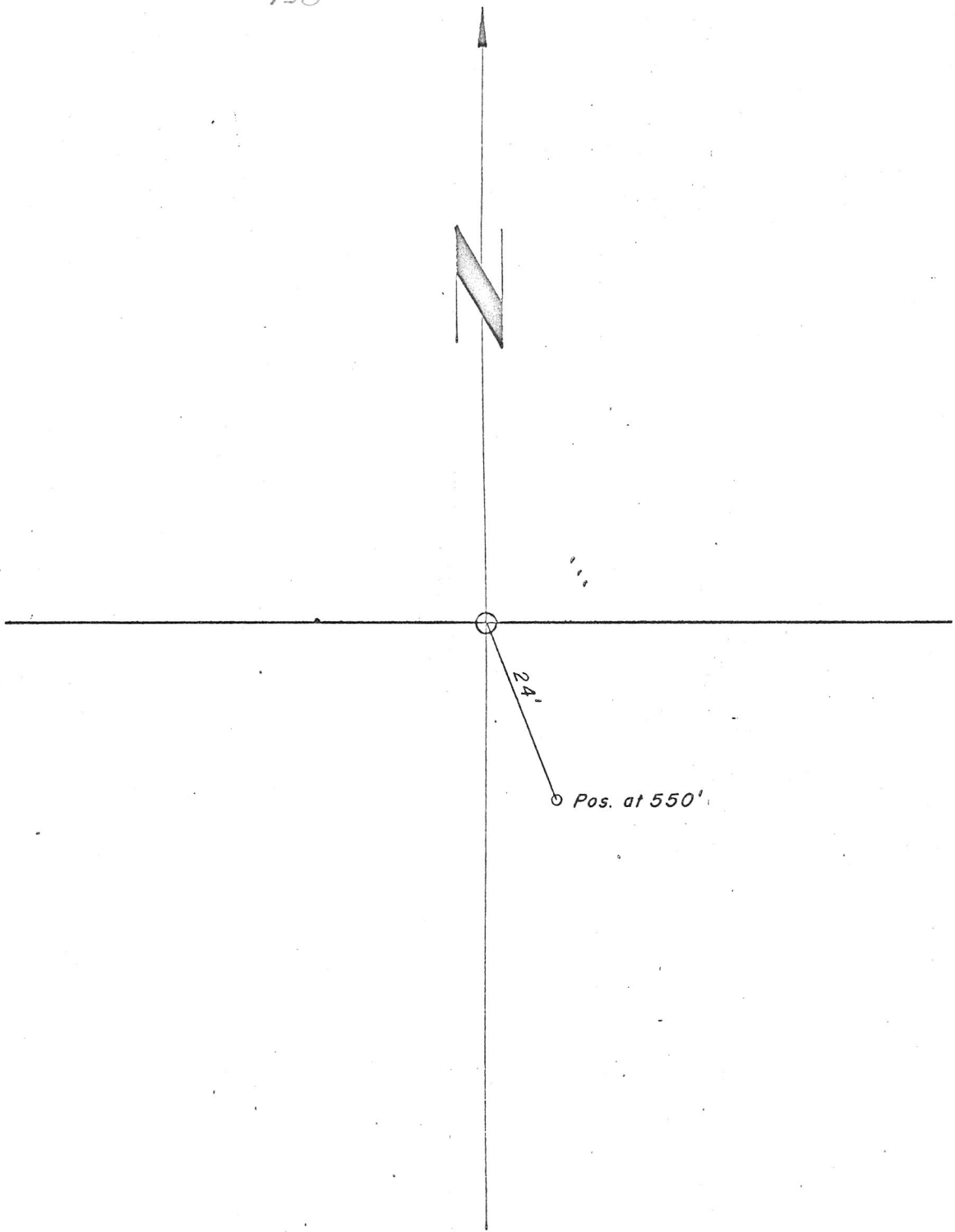
SCALE = 1:100

432.21

A-65 (74+00 W 2+00 N)

Scale: 1" to 20'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>	
550'	85°	158°	124° 35' mag N.
			+34.
			<u>158</u>



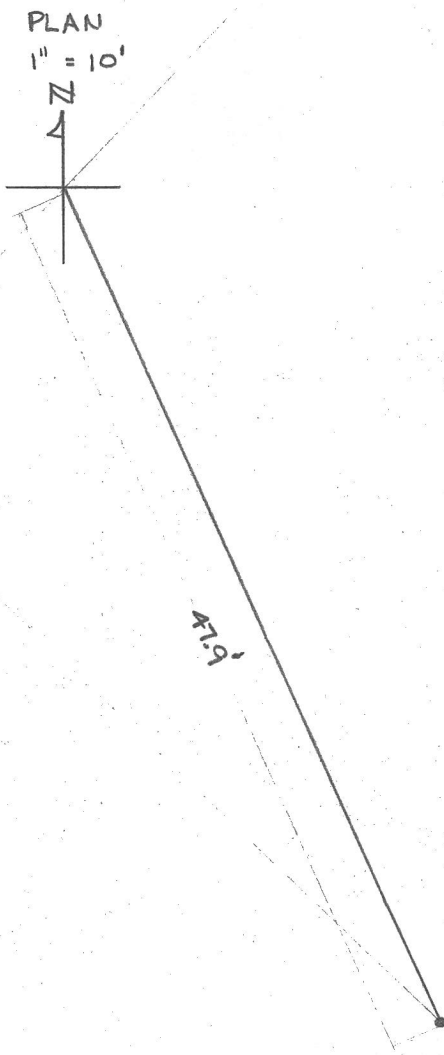
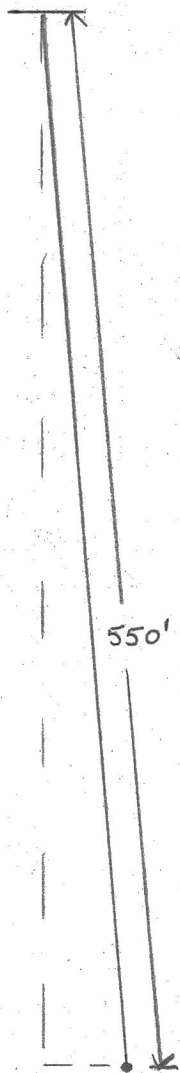
W

DATE 14/11/75

# A-65 DIP + BEA. SURVEY TROPARI

AZ	DIP	COS	DIST	HD	SIN	VD
156	85	.08716	550	47.9	.99619	547.9

SKETCH  
1" = 100'



A.65

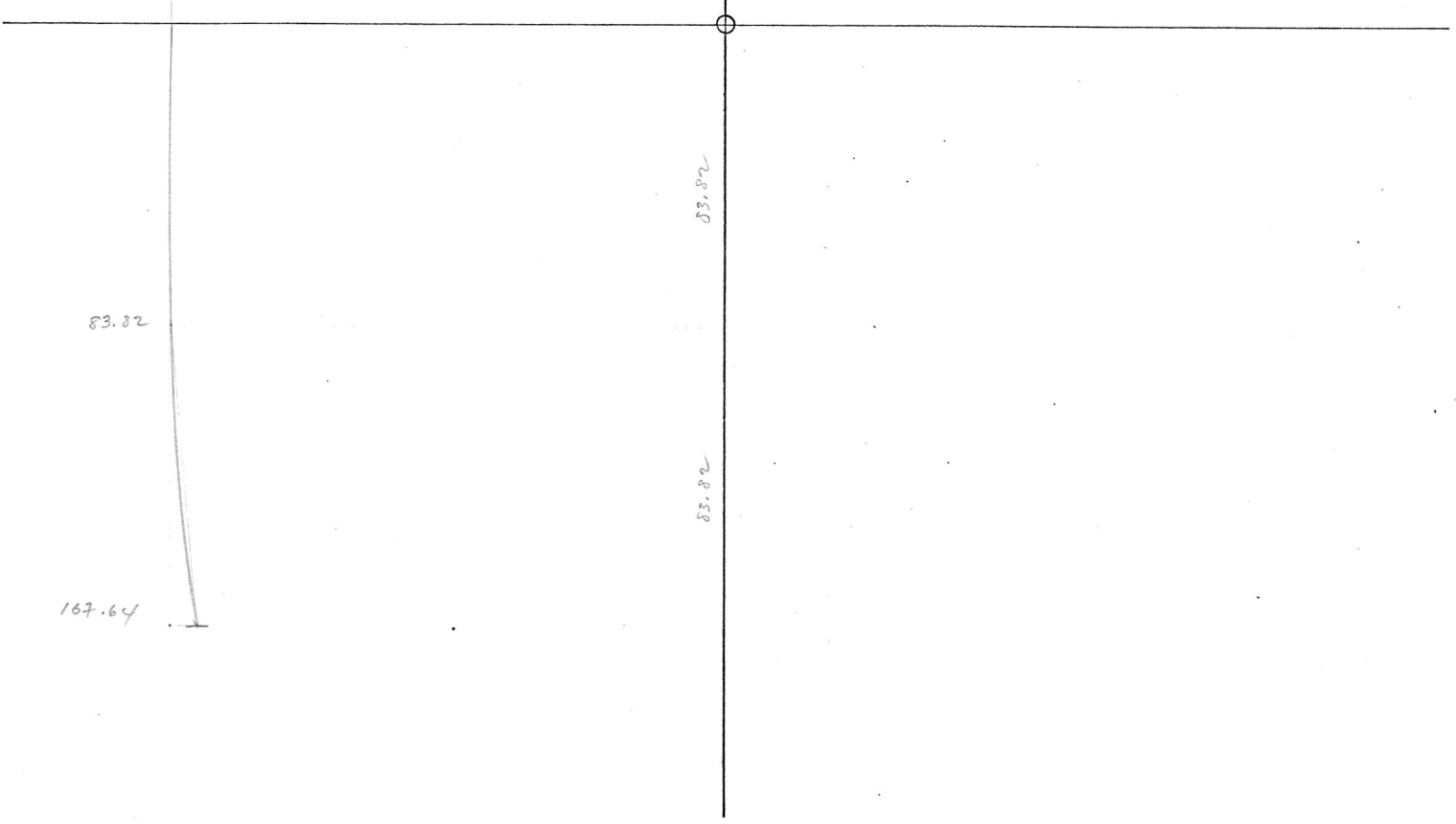
D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
167.64	85°	158°	83.82	.0872		7.31	.99619	83.82	1299.30	1215.48	83.82
			83.82					83.50	1131.98		167.64



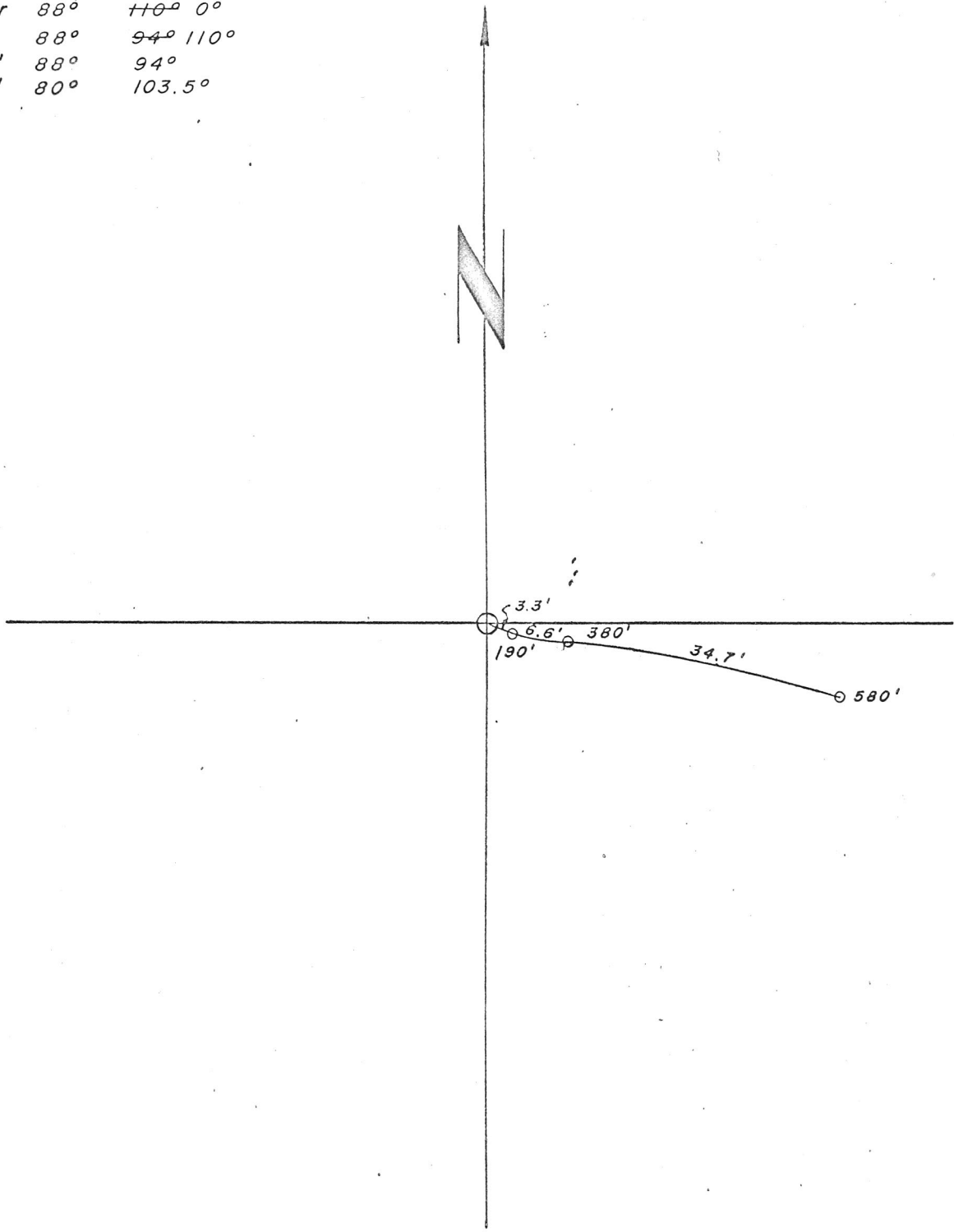
10,742.70  
 7,559.77  
 74 W / 2 N.



A-66 (66+00W. 2+00N.)

Scale: 1" to 20'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
19		
Collar	88°	110° 00'
190'	88°	94° 110°
380'	88°	94°
580'	80°	103.5°



W

DATE 14/11/75

A - 66

# DIP & BEARING SURVEY

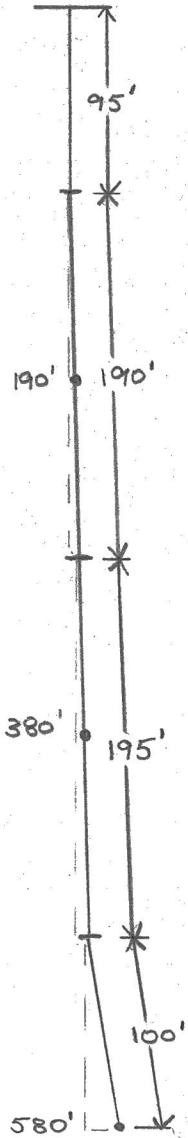
## TROPARI

AZ	DIP	COS	DIST	HD	SIN	VD
	90	0	95	0	1.00	95
110	88	.03490	190	6.6	.99939	189.9
94	88	.03490	195	6.8	.99939	194.9
103	80	.17365	100	17.4	.98481	98.5

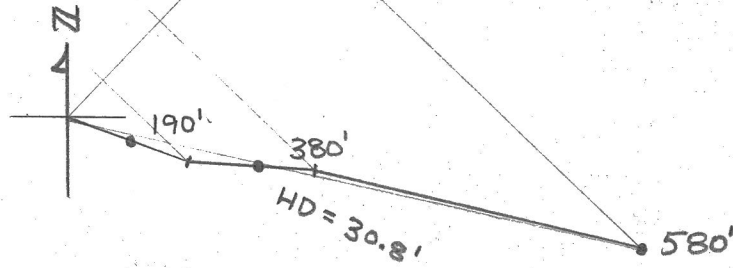
580'  
LENGTH

578.3'  
DEPTH

SKETCH  
1" = 100'



PLAN  
1" = 10'

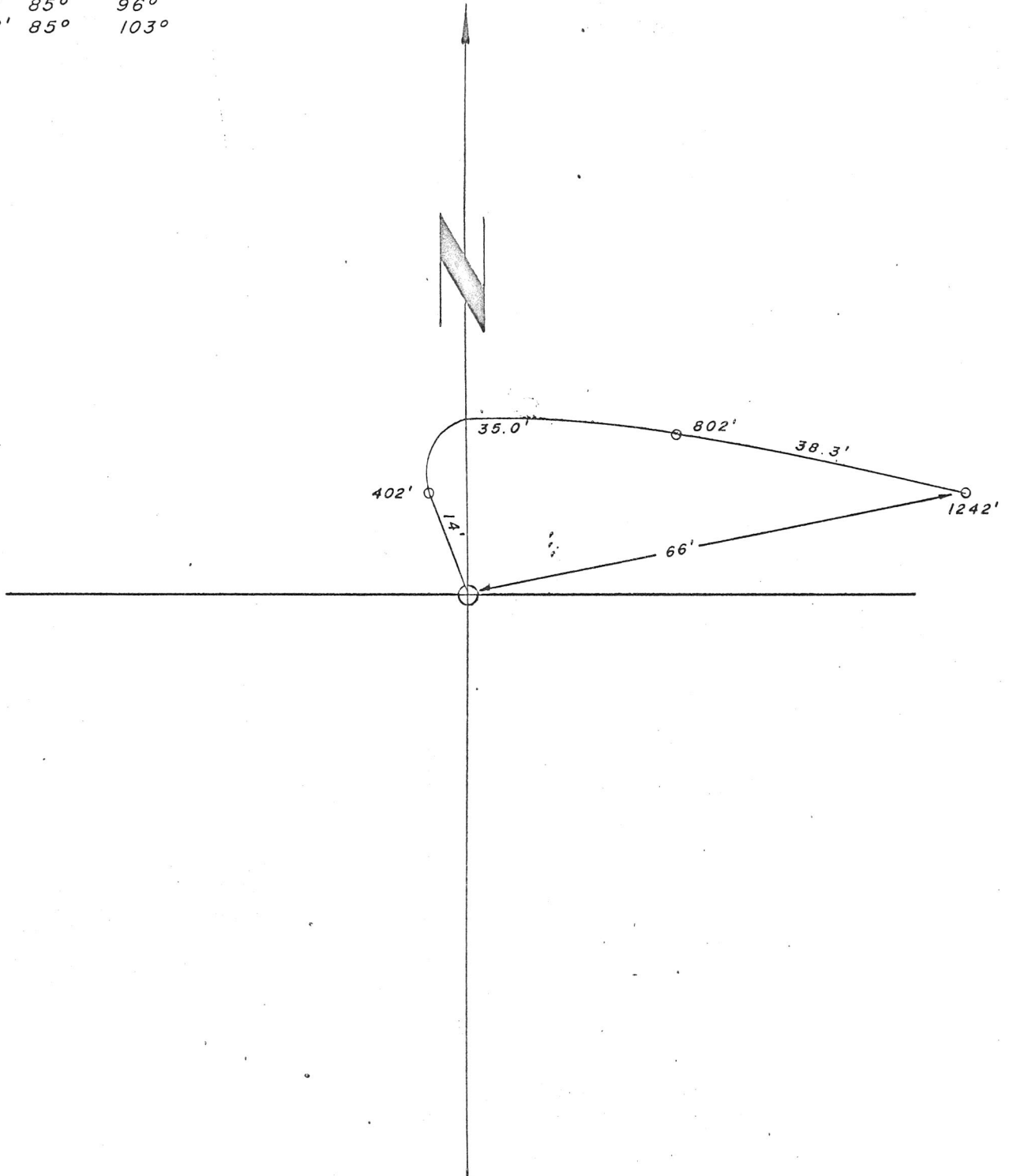




A-67 (78+00 W 6+00 N)

Scale: 1" to 20'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
402'	86°	340°
802'	85°	96°
1242'	85°	103°



B3

DATE Nov 12/75

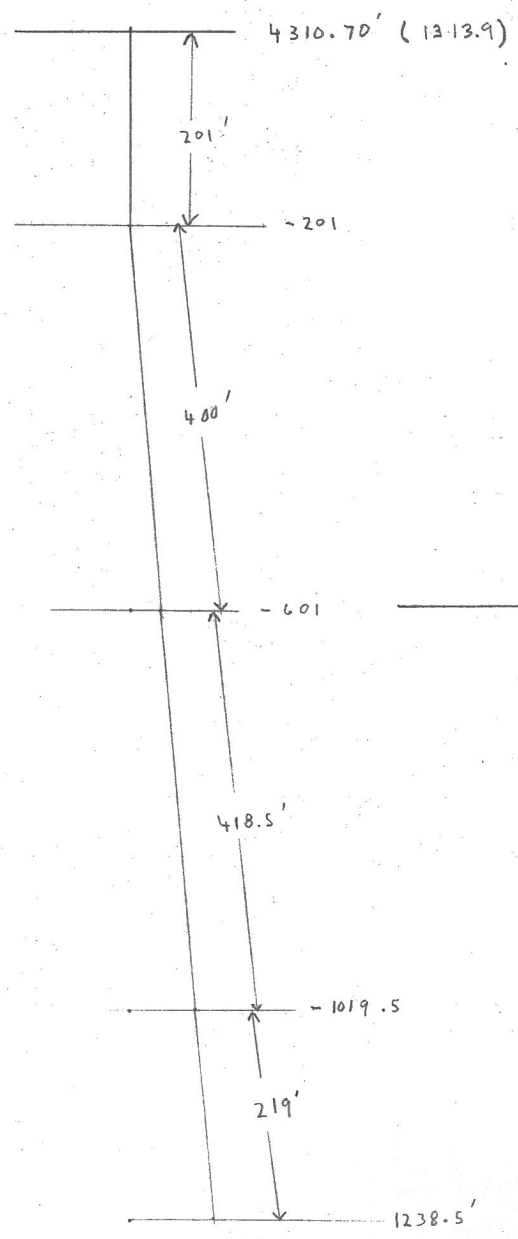
DDH - A 67 / 75

1 1 1

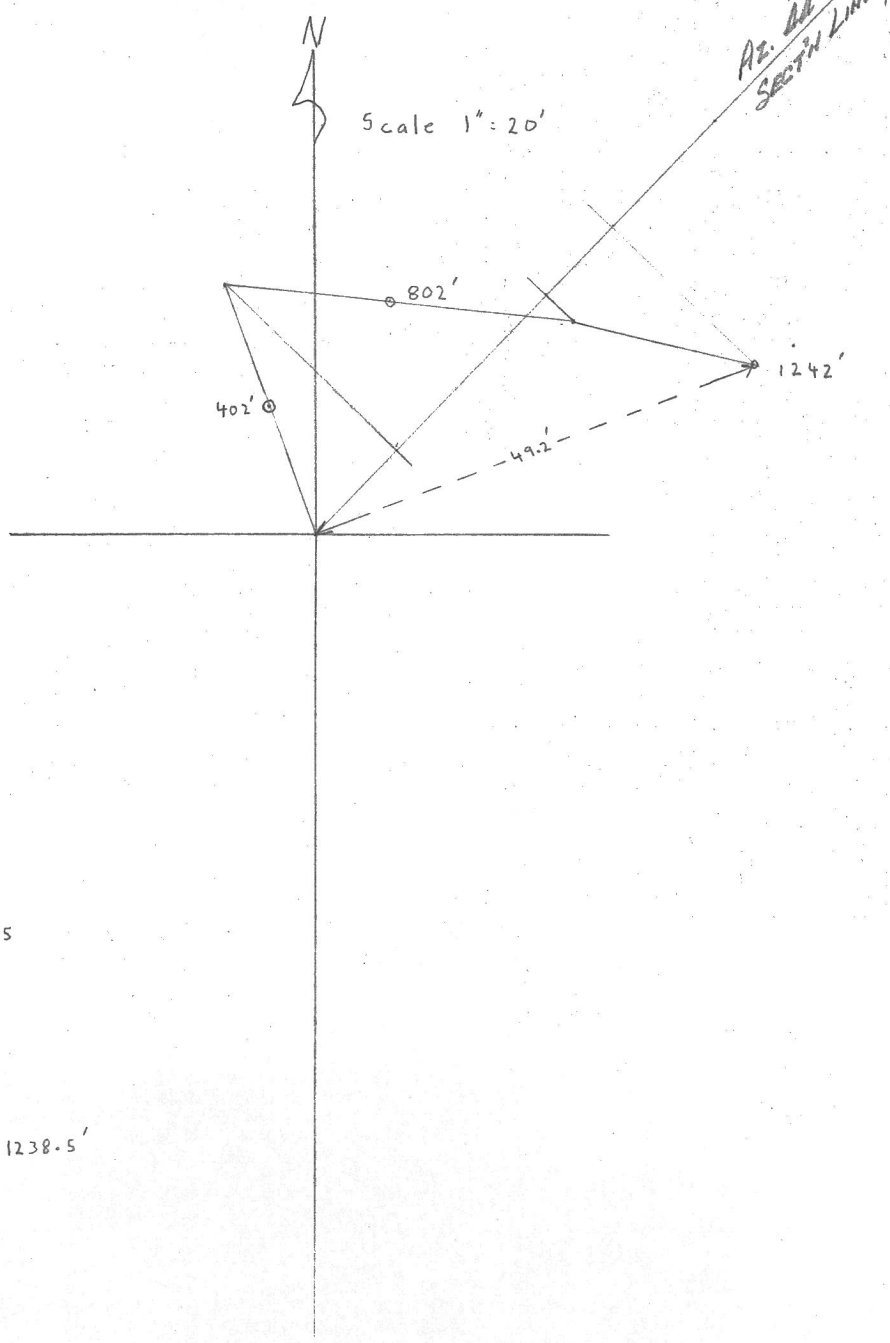
DIP + BEARING TEST

AZM	DIST	DIP	cos	HD	Sin	VD
-	201	90	0	0	1.0000	201
340°	401	86	0.0698	28	0.9976	400
96°	420	85	0.0872	37	0.9962	418
103°	220	85	0.0872	19	0.9962	219

Scale 1" = 200'



Scale 1" = 20'



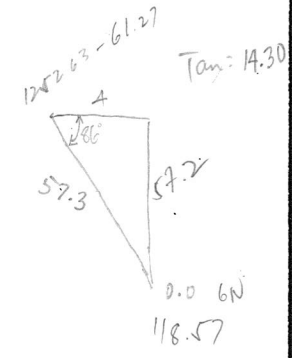
#.67

Checked ✓

D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
122.53	86° ✓	340° ✓	61.27 ✓	.0698 ✓		8.53 ✓	.9976 ✓		61.27	1313.90	61.27
244.45	85° ✓	96° ✓	122.23 ✓	.0872 ✓		11.16 ✓	.9962 ✓		121.94	1252.63	183.50
378.56	85° ✓	103° ✓	95.10 ✓	.0872 ✓		8.29 ✓	.9962 ✓		127.53	1003.16	311.52
									94.74	908.42	406.62

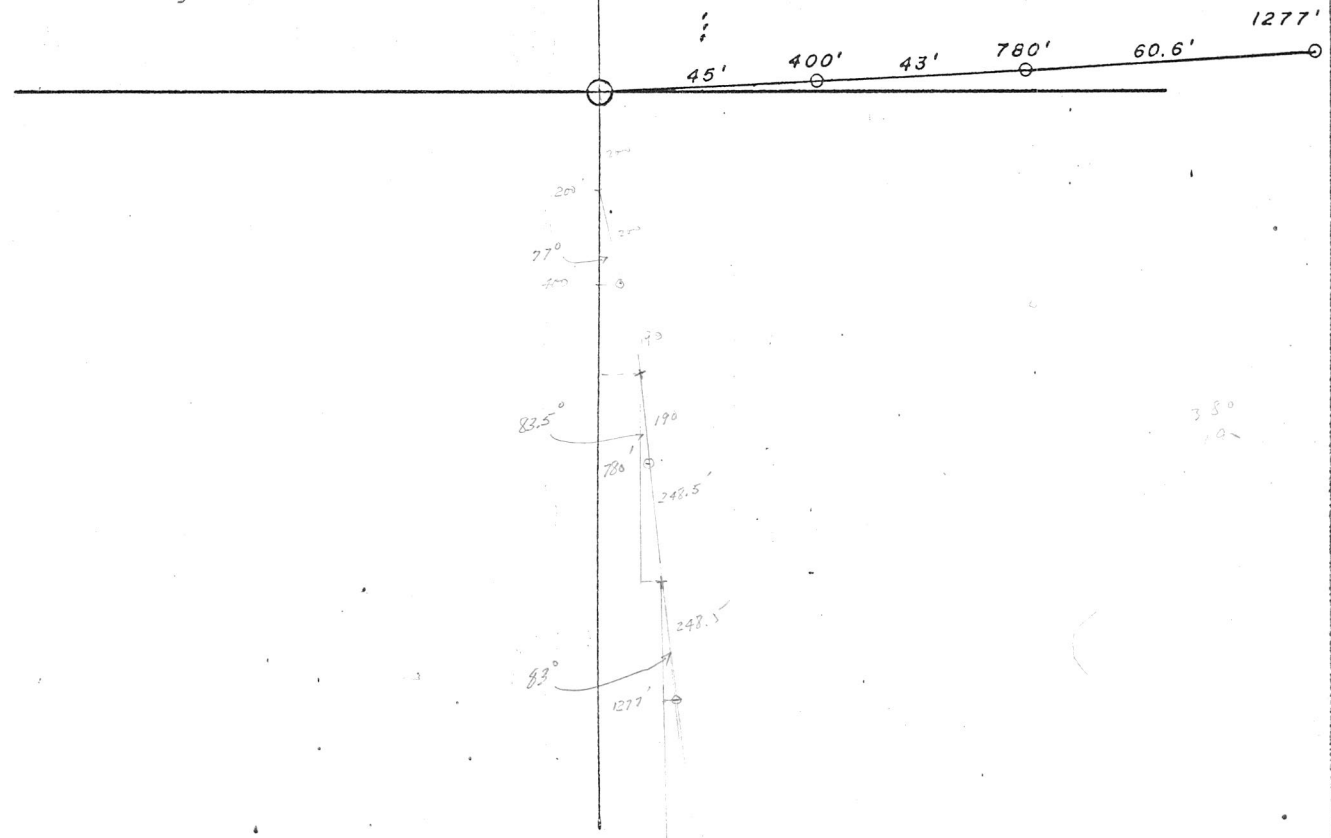
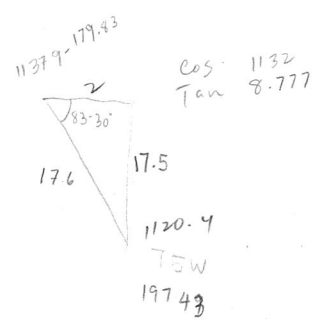


checked & plotted on Master of C. Vans. file -

A-68 (76+00W 6+00W.) Depth 1277'  
 Scale: 1" to 40' ?

Test @ Ft.	Dip	Bearing	Cos		DIST	H.D		V.D		ELEV		DEPTH ADJ	
			Co	Si		0	0	200	60.96'	Coll	1314.7'	0	0
400'	77°	119°	0.235	.97437	390	87.75	26.75	380.0	115.83	1253.74	200	60.96	
780'	83.5°		0.1132	.99357	488.5	49.64	15.13	435.68	132.8	1137.91	590	179.83	
1277'	83°		0.1219	0.99255	248.5	30.29	9.23	246.65	75.10	1005.11	1022.5	313.49	
										929.93	1277	389.23	

497  
248.5



380  
10

Checked on plotted on Master feet  
 6/26/76  
 Field Office file

W

13/11/75

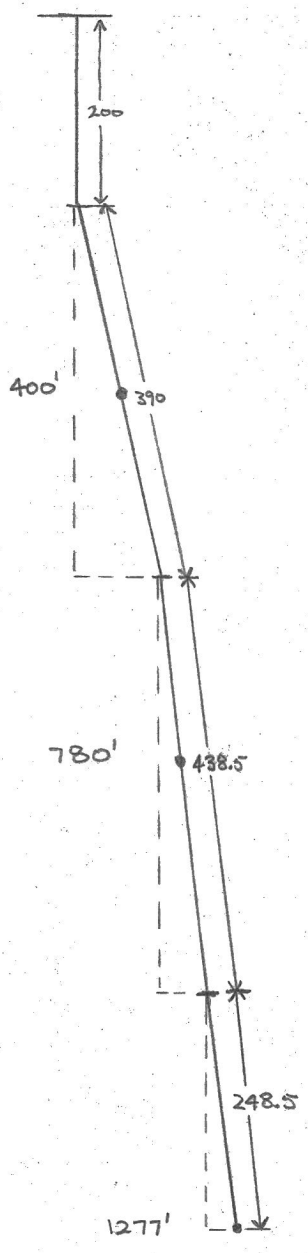
DIP + BEA. SURVEY  
 TROPARI  
 A-68

SHEET NO. OF  
 JOB NO.

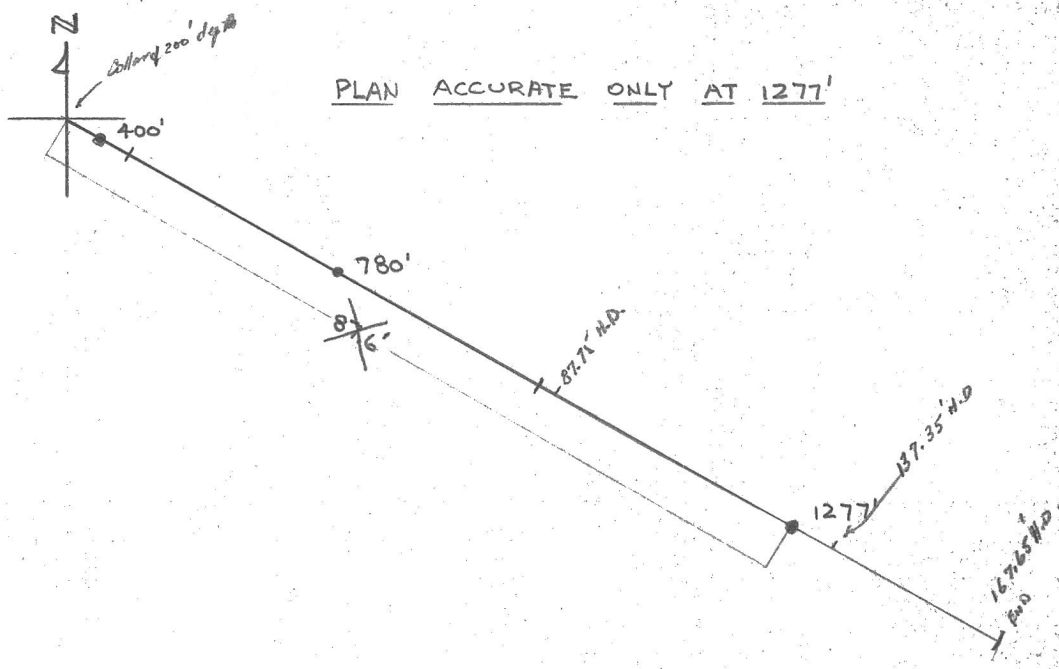
AZ	DIP	COS	DIST	HD	VD	SIN
-	90	0	200	0	200	1.00
-	77	.22495	390	7.1 <sup>87.75</sup>	380	.97437
-	83.5	.11320	438.5	49.6	435.7	.99357
119	83.	.12187	248.5	30.3	246.6	.99255

1277 LENGTH  
 1262.3 DEPTH

SKETCH  
 1" = 200'



PLAN  
 1" = 20'

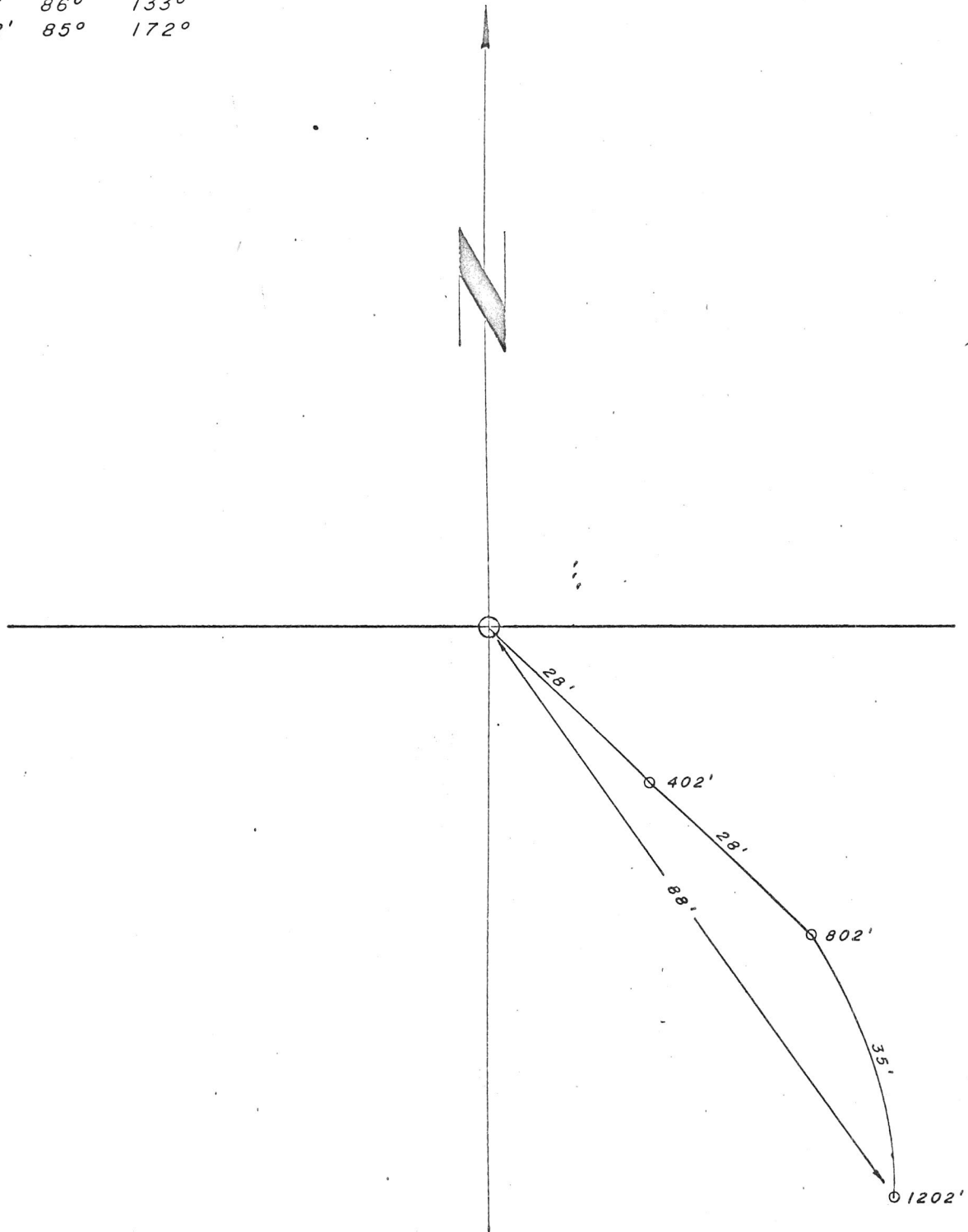


PLAN ACCURATE ONLY AT 1277'

A-69 (80+00W 6+00N)

Scale: 1" to 20'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
402'	82°	133°
802'	86°	133°
1202'	85°	172°



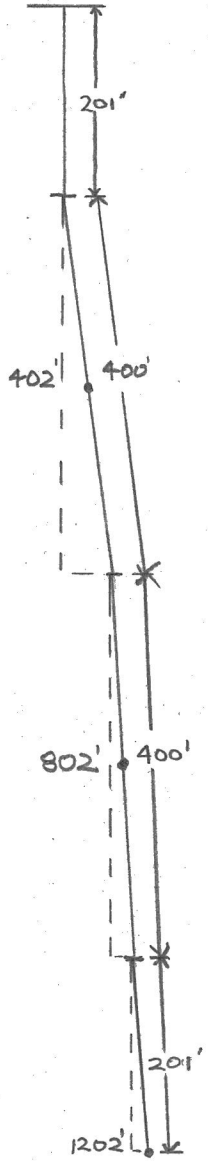
CJ 13/11/75

A-69  
DIP + BEA. SURVEY  
TROPARI

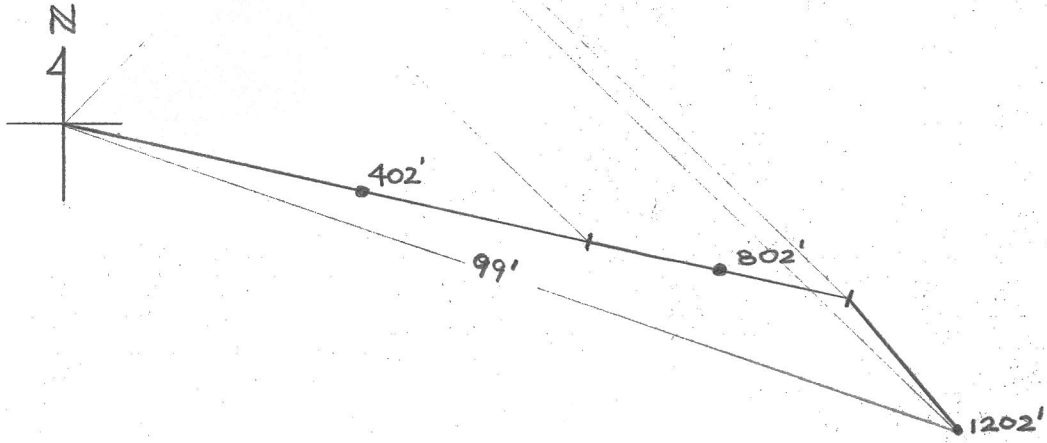
AZ	DIP	COS	DIST	HD	VD	SIN
	90	0	201	0	201	1.00
100.8	82	.13917	400	55.7	396.1	.99027
100.6	86	.06976	400	27.9	399	.99756
140.0	85	.08716	201	17.5	200.2	.99619

1202 LENGTH 1196.3 DEPTH

SKETCH  
1" = 200'



PLAN  
1" = 20'



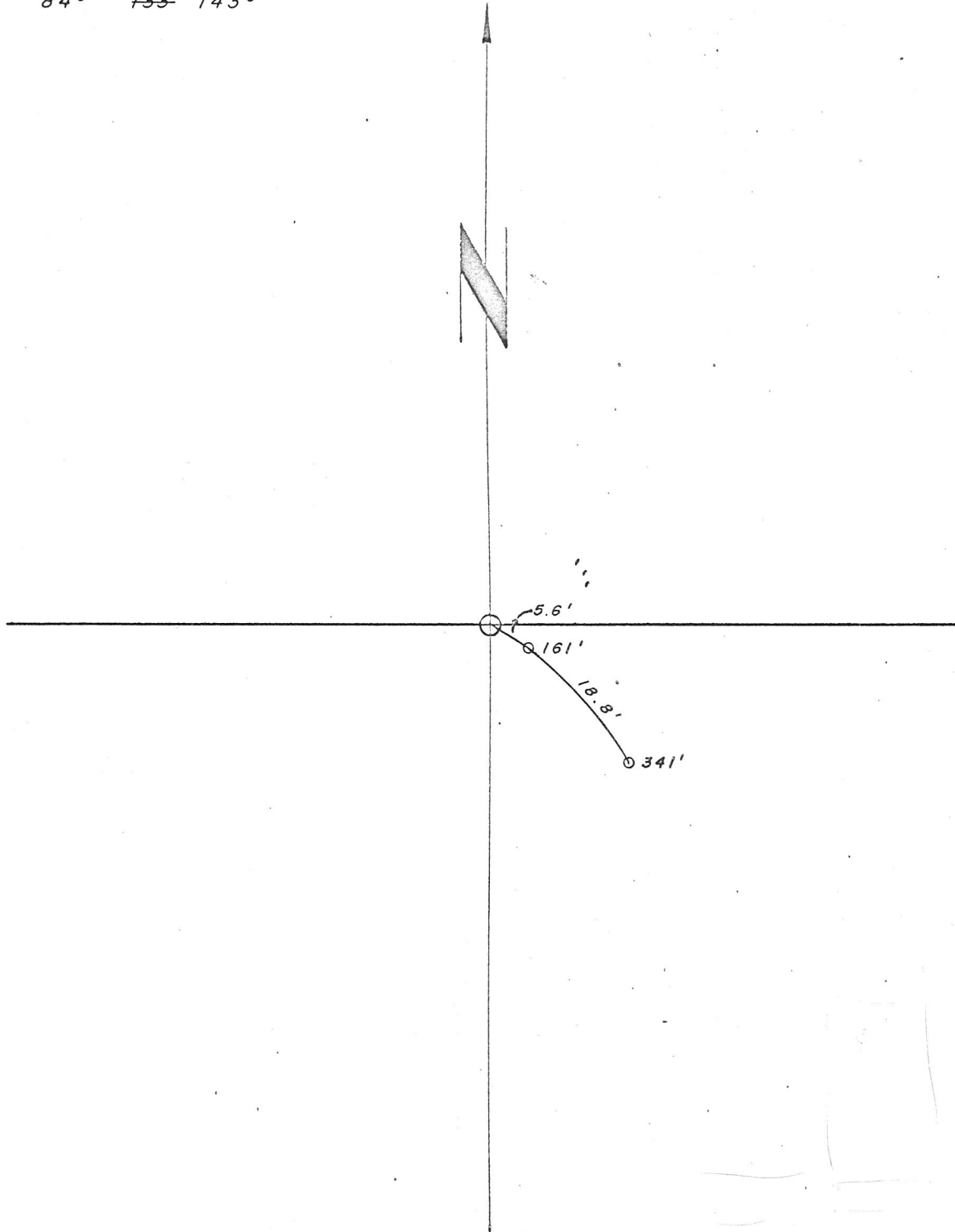


Vent. file

A-70 (70+00W 4+00N)

Scale: 1" to 20'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
161'	86°	<del>133°</del> 122°
341'	84°	<del>133°</del> 143°



Liceo

BY S.S.

DATE Nov 2/75

PROJECT A 70 / 75

SHEET NO 1 of 1

ORIGIN BY

DATE

70 W - 4 N

JOB NO.

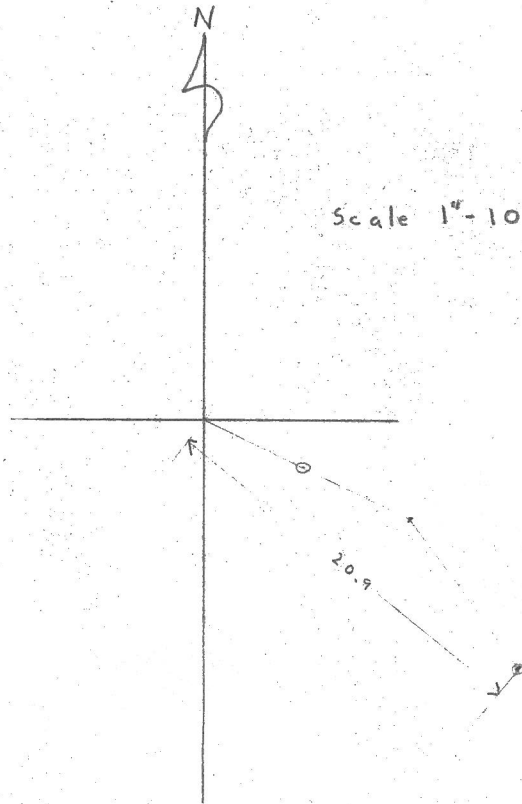
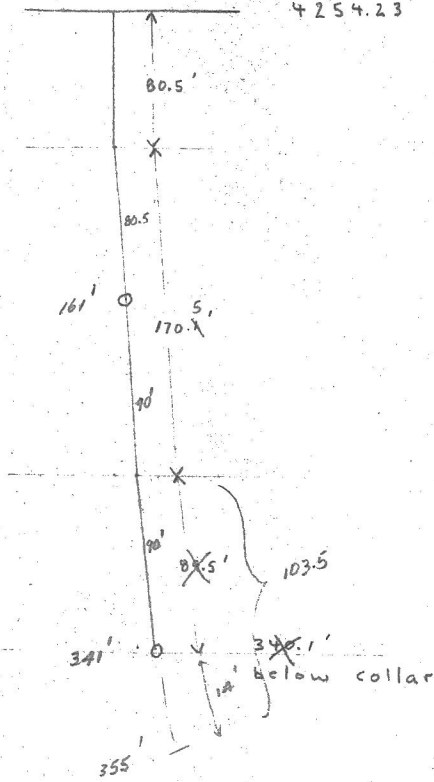
OLP + Bearing Trapari

scale 1" = 100'

4254.23' (1296.69)

Azm	Dist int	Dip	cos	HD	sin	VD
—	80.5	-90	0	0	1.0000	80.5
122° 20'	170.5	-86	0.0698	11.89	0.9976	170.08
143° 14.5'	90	-84	0.1045	9.47	0.9945	89.51
	103.5				Σ	340.09

see Vaux file  
for final calc'n.  
9/1  
Nov/76



A-70

355' depth

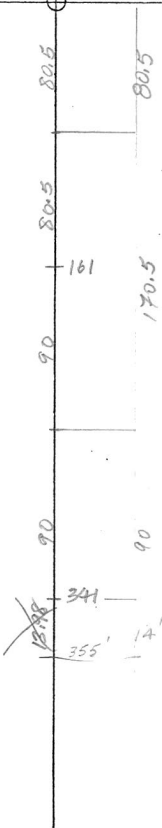
Checked & corrected by J.L. Nov 4/76  
Plotted on Master X-5 (Free 1000) -  
D.D.H. Deviation

Scale: 1" to 20'

Ft.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	FT	VER. DIST		ELEV.	LENGTH OF DDH
					FT	M			M	M		
	90°		80.5							1296.69		
161	86°	122°20'	170.5	.0698	11.90	3.63	.9976	170.09	24.534	1272.165	24.534	
341	84°	143°15'	103.98	.1045	10.82	3.30	.9945	103.41	31.5837	1220.581	76.50	
			103.5					102.93		1188.80	108.20	
										954		



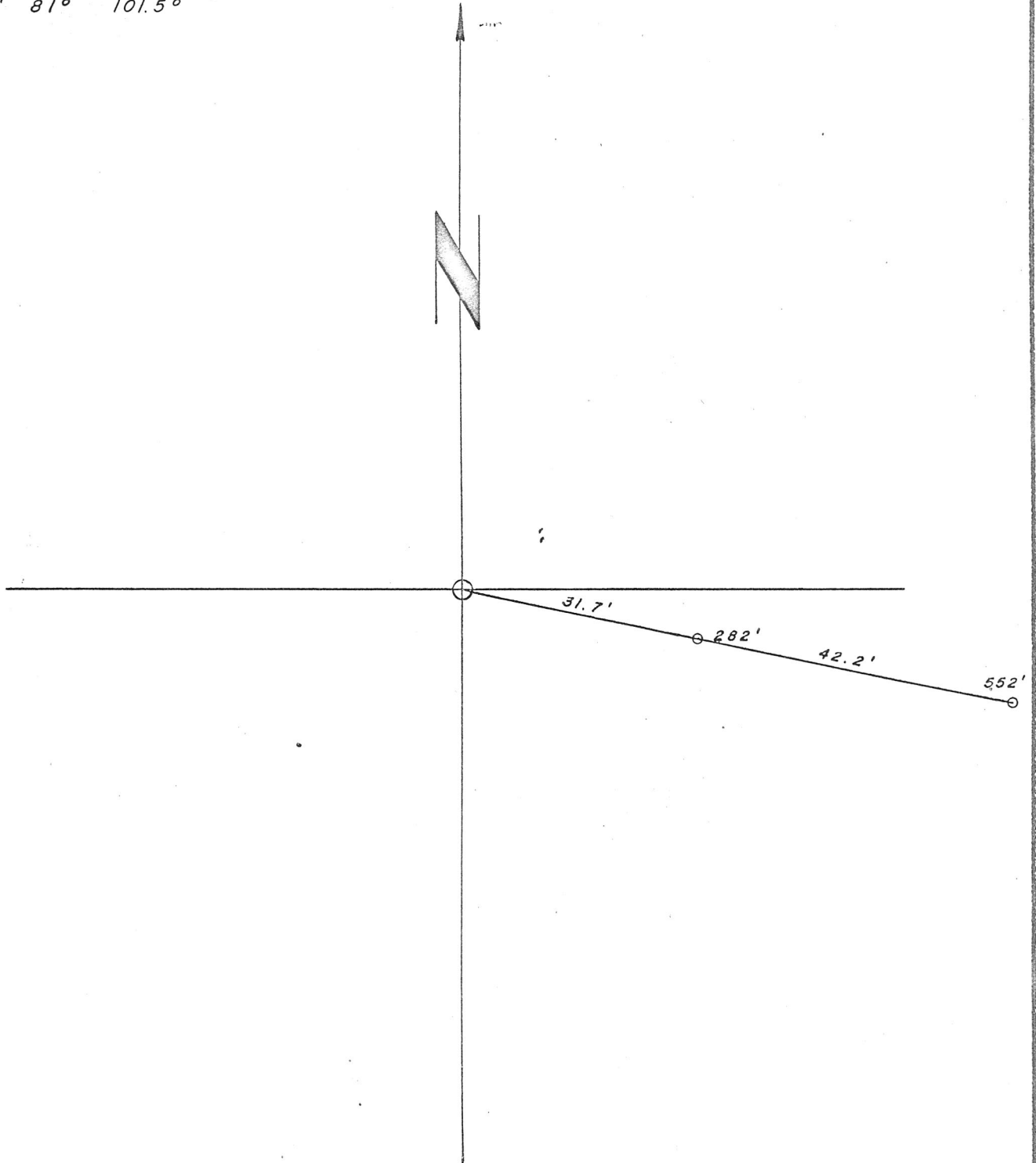
10,760.88  
7,694.94  
70W / 4N



A-71 (74+00W 4+00N)

Scale 1" to 20'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
282'	77°	101.5°
552'	81°	101.5°



BY: SJ

DATE: Nov 2/75

PROJECT: DDH - A 71 / 75

SHEET NO. 1 OF 1

CHIEF BY:

DATE:

7.4 W - 4 N

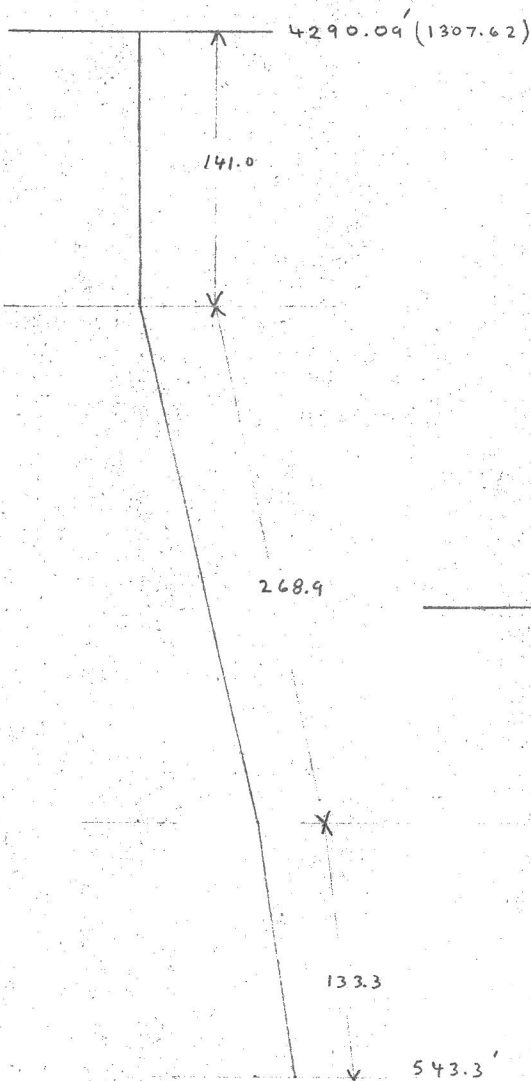
JOB NO.

DIP - BEARING

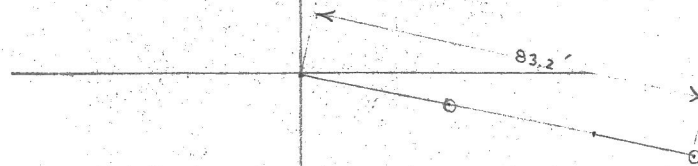
TROPARI

AZM	DIST IN'	DIP	cos	HD	sin	VD
-	141	90°	0	0	1.000	141.0
101°40'	276	77°	0.2250	62.09	0.9744	268.93
101°50'	135	81°	0.1544	21.12	0.9877	133.34
					Σ	543.27

Scale 1" = 100'



Scale 1" = 40'



Scale: 1" = 20'

A. 71

Checked by *[Signature]* 11/1/76

D. D. H. Deviation

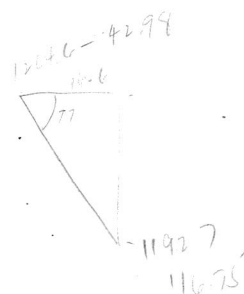
Sta.	Dip	Bearing	Interval	COS	HOR. DIST.		SIN.	VERT. DIST.	ELEV.	LENGTH OF DDH
					FT	M				
85.95	77°	101.5°	42.98	.2250		18.93	.97437	1.98	1307.62	42.98
168.25	81°	101.5°	50.29	.1564		7.87	.98769	49.67	1182.67	127.11
									1133.00	177.40
										177.39



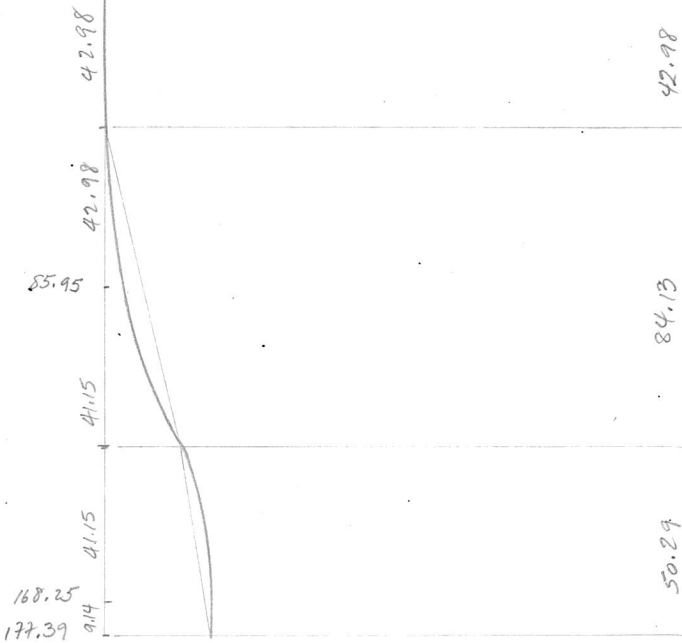
10,783.74

7,606.99

74W / 4N



Scale - 1:20



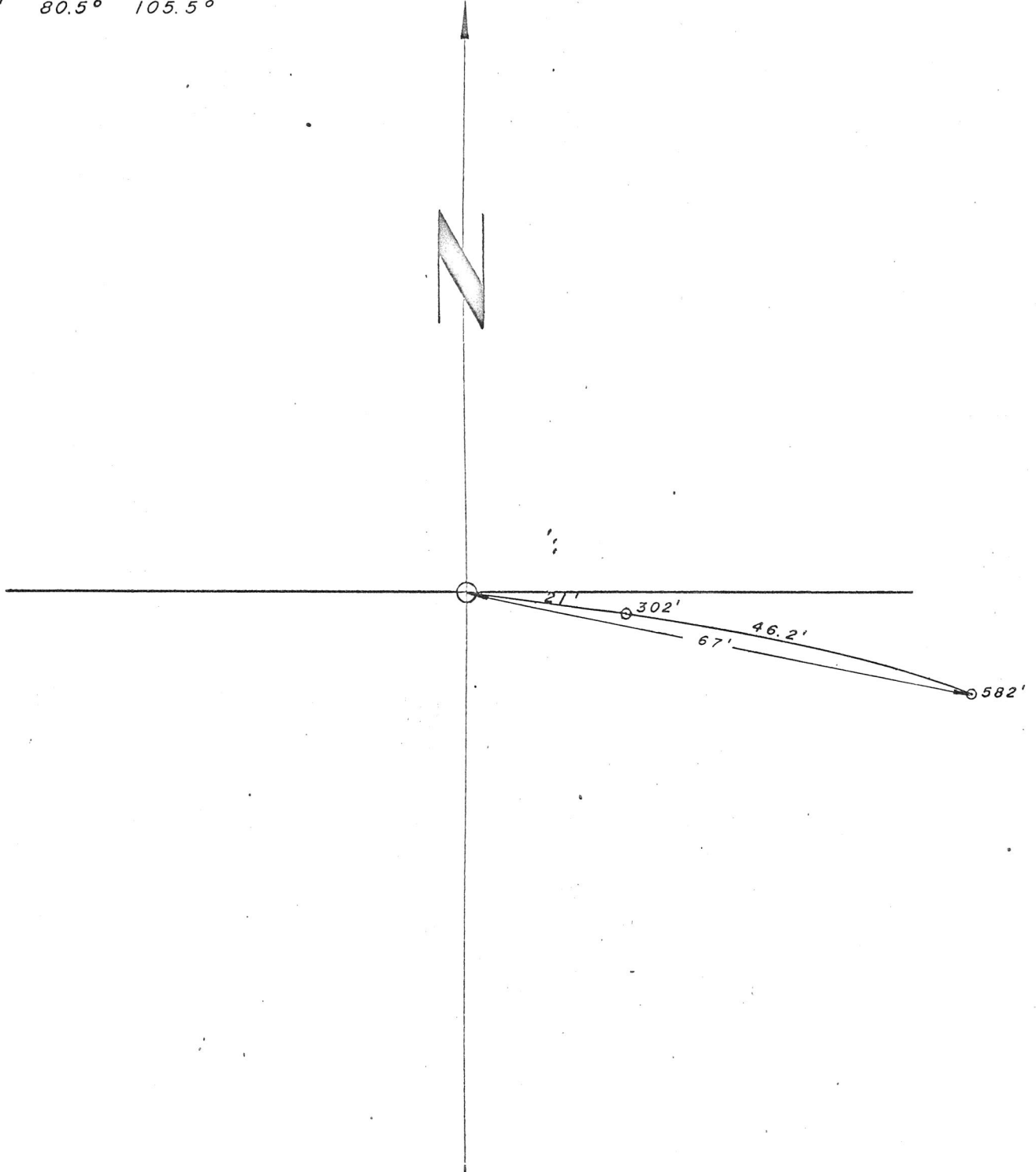
A-72 (78+00W 4+00N)

Scale: 1" to 20'

Ft.    Dip    Bearing

302'    82°    96.5°

582'    80.5°    105.5°



W

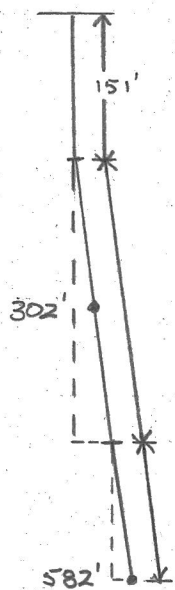
DATE 13/11/75

# A-72 DIP & BEA. SURVEY TROPARI

AZ	DIP	COS	DIST	HD	SIN	VD
-	90	0	151	0	1.00	151
97	82	.13917	291 <sup>80</sup>	40.5	.99027	288.2
106	80.5	.16505	140 <sup>47</sup>	23.1	.98629	138.1
			582			571.3
			LENGTH			DEPTH

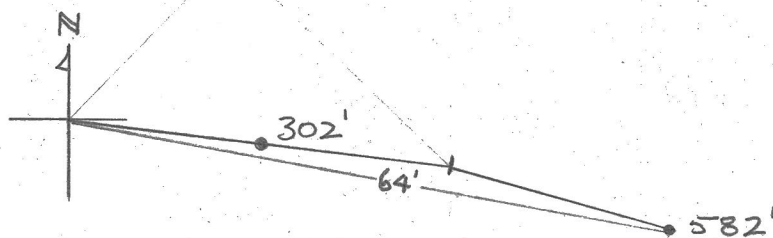
SKETCH

1" = 200'



PLAN

1" = 20'



A. 72 checked

D. D. H. Deviation

Scale: 1" = 20'

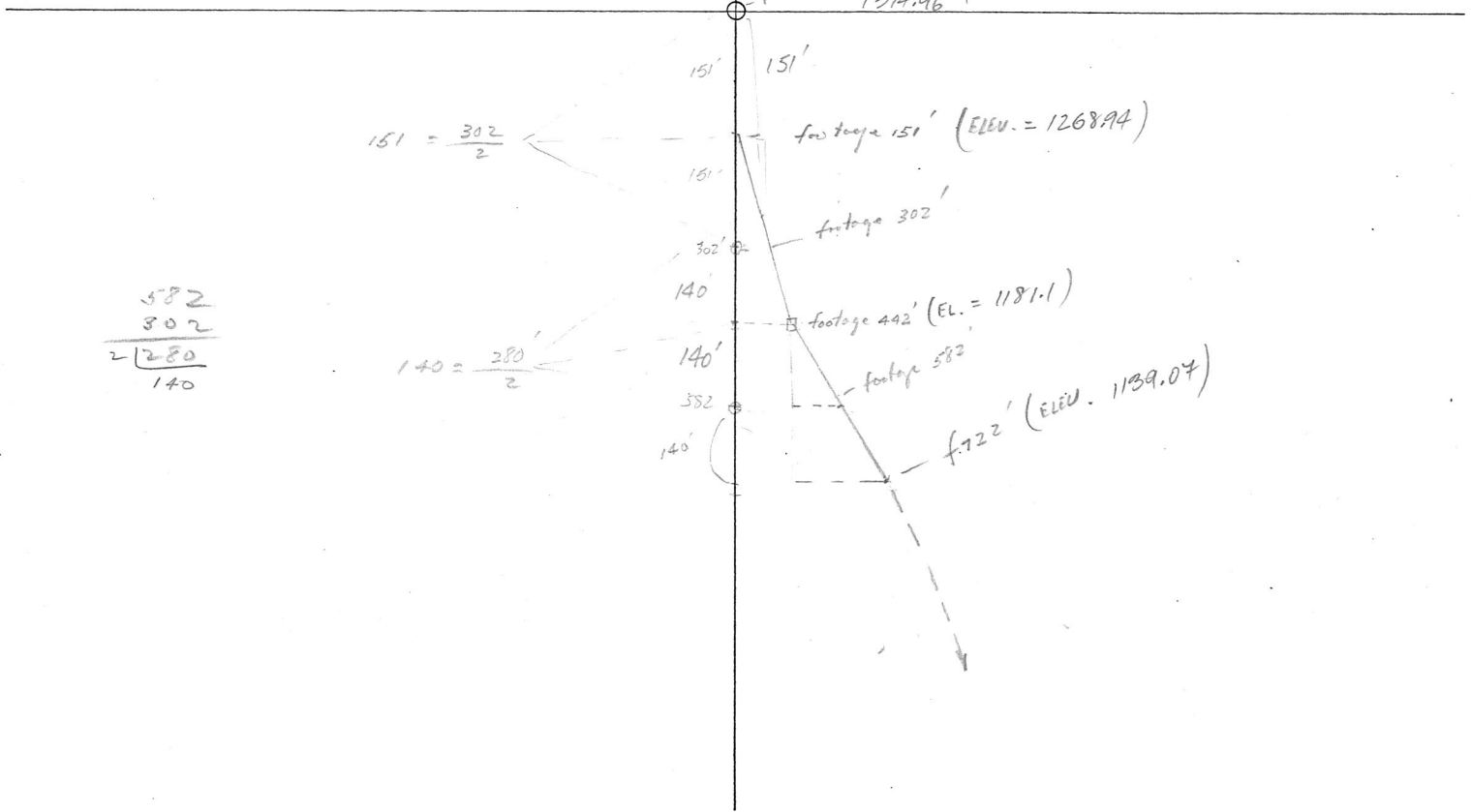
Pt.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VER. DIST		ELEV. M	LENGTH OF DDH
					FT	M		FT	M		
0	-90°	0°	151' ✓	✓	0	0	✓	151'	46.02 ✓	1214.96	
302'	82°	96.50°	291' ✓	✓ .1392	✓ 40.51	✓ 12.35	✓ .9903	✓ 288.18	✓ 87.84	✓ 1268.94	46.03
582'	80° 30'	105.50°	<del>140</del>	<del>.140</del>	<del>24.36</del>	<del>7.42</del>	<del>.4849</del>	<del>132.89</del>	<del>42.03</del>	<del>1181.10</del>	<del>177.37</del>
			198	.1650	32.67	9.96	.98629	195.28	59.52	1121.57	195.07
										END	17.68



Piercing Point: 77 1/2' W

h = 14.37

y = 14.23



$$\begin{array}{r} 582 \\ 302 \\ \hline 280 \\ 140 \end{array}$$

$$151 = \frac{302}{2}$$

$$140 = \frac{280}{2}$$

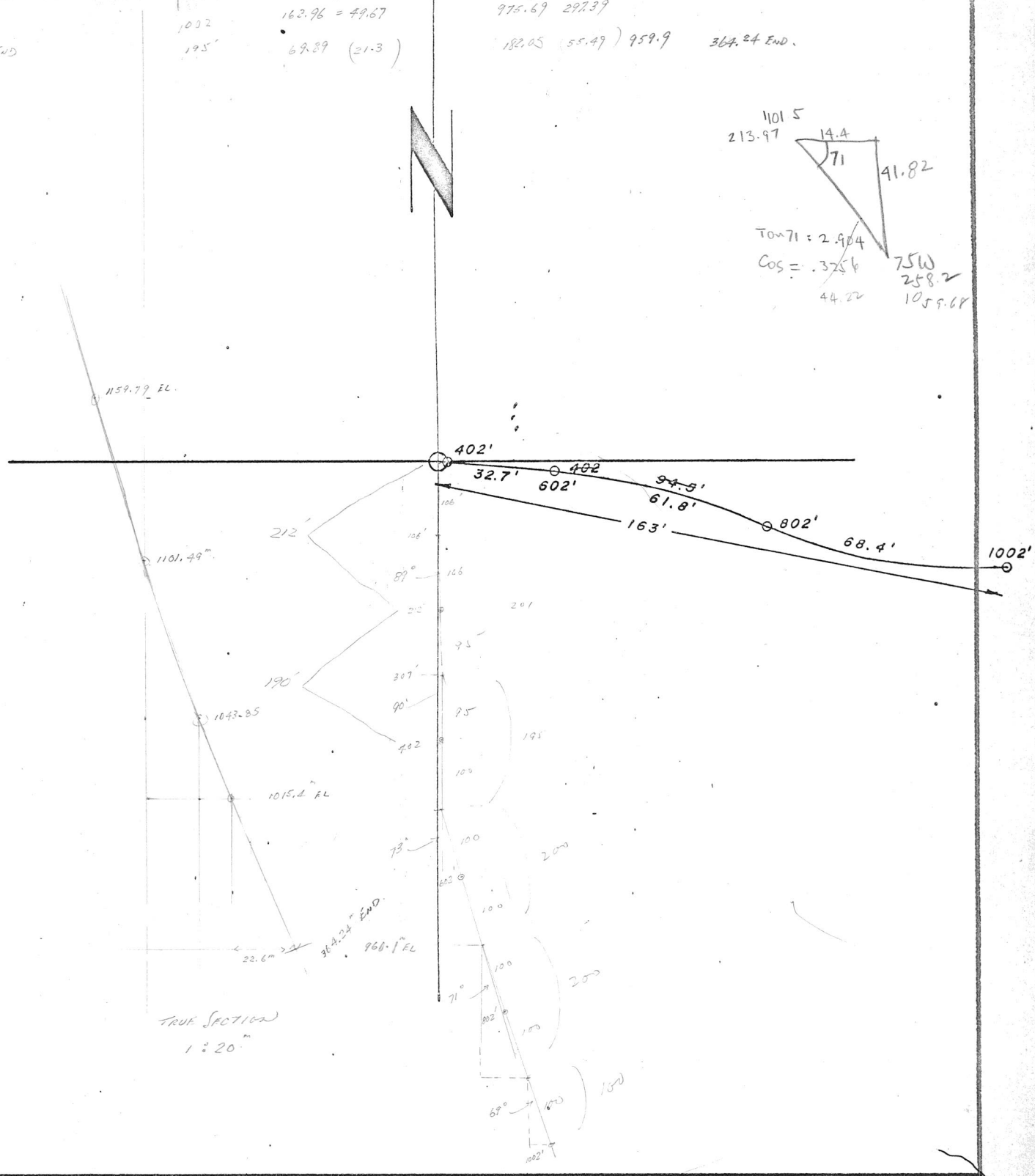
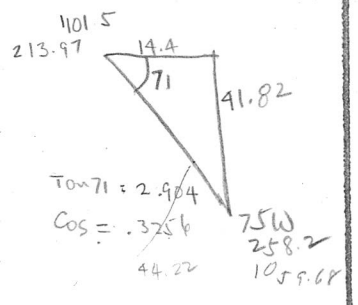
$$\begin{array}{r} 134.72 \\ 14.23 \\ \hline 148.95 \end{array}$$

A-73 (76+00 W 9+21.5 N)

Scale: 1" to 40'

Station	Ft.	Dip	Bearing	INTERNAL				V.D.		ELEV.		LENGTH DEPTH OF DIRT.
				Dist	Cos	FT H.D.	M	FT	M.	1312.8	0	
0	202.00	89°	101°	106	0	0	0	106	32.31	1280.99	32.31	
212'	89°	101°	201	0.0175	3.52	1.07	0.9999	200.98	61.26	1219.23	93.57	
402'	90°	90.5°	195		0	0		195	59.44	1159.79	153.01	
602'	73°	94.5°	200	0.2924	58.48	17.82	0.9563	191.26	59.3	1101.49	213.97	
802'	71°	105.5°	200	0.3256	65.12	19.85	0.9455	189.1	57.64	1043.85	274.93	
1002'	69°	99°	100	0.3574	35.84	10.92	0.9336	93.35	28.45	1015.4	305.41	

1195 END      1002      162.96 = 49.67      975.69      297.39  
 195      69.89 (21.3)      182.05 (55.49)      959.9      364.24 END.



TRUE SECTION  
1:20"

field.

BY W

DATE 14/11/75

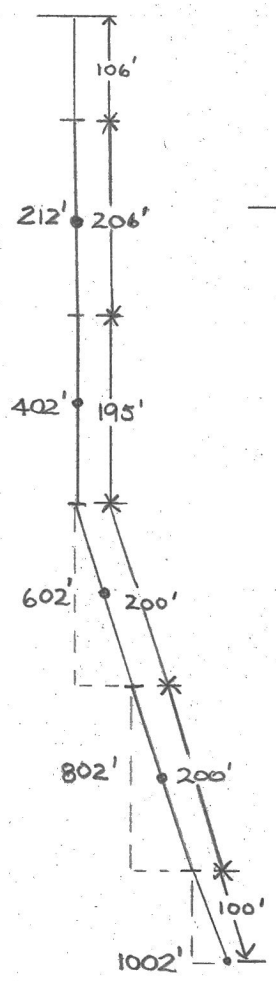
A-73

# DIP & BEARING SURVEY TROPARI

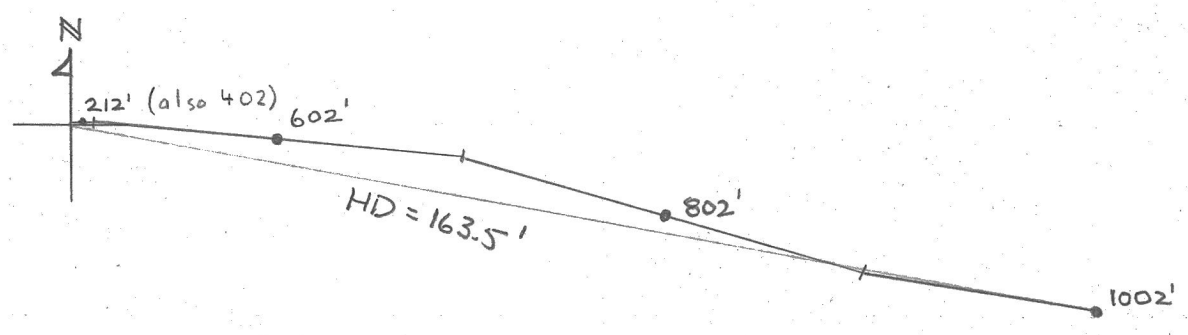
SHEET NO. OF

AZ	DIP	COS	DIST	HD	SIN	VD
-	90	0	106	0	1.00	106
101	89	.01745	201	3.5	.99985	200.9
91	90	0	195	0	1.00	195
95	73	.29237	200	58.5	.9563	191.3
106	71	.32537	200	65.1	.94552	189.1
99	69	.35837	100	35.8	.93358	93.4

SKETCH  
1" = 200'



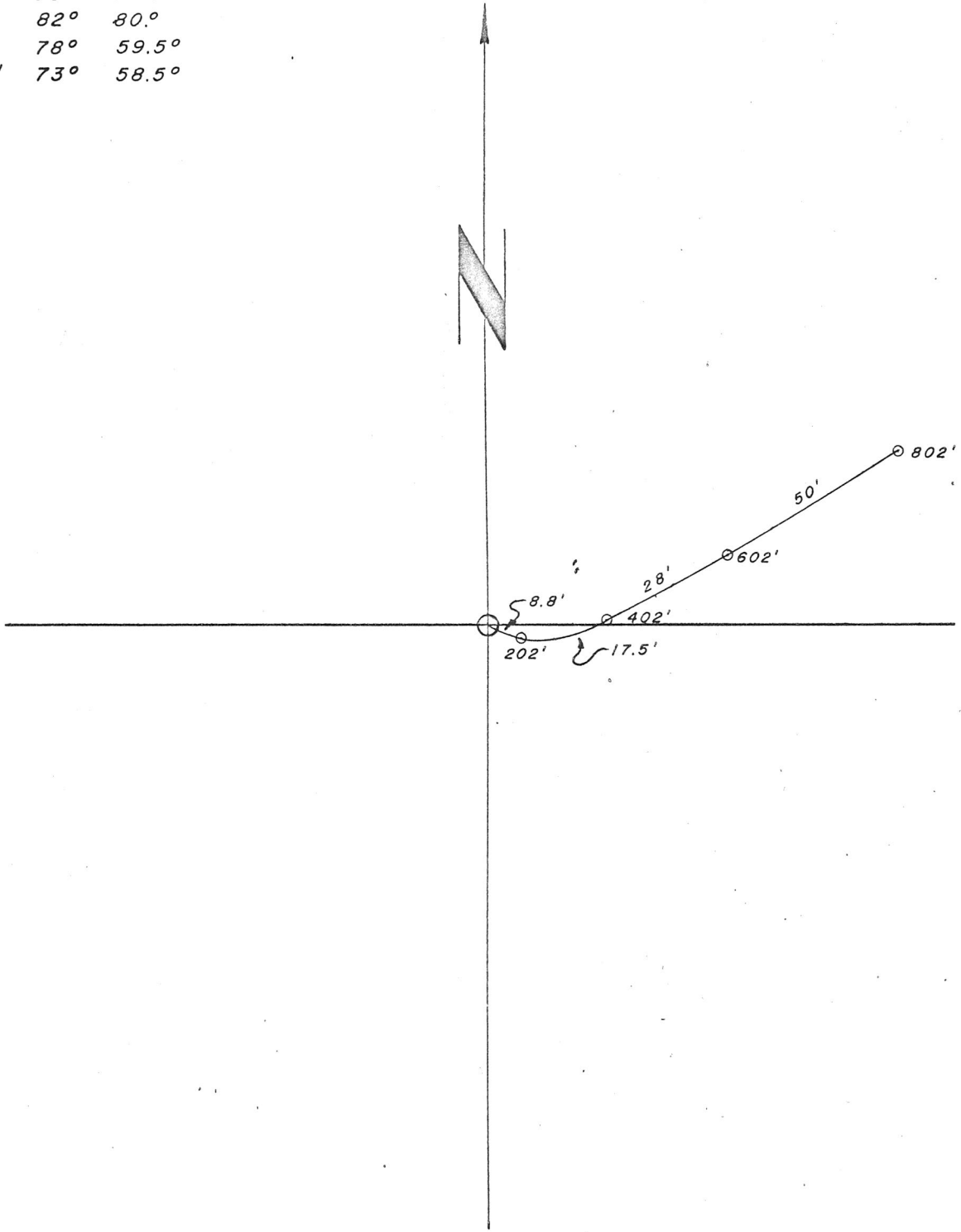
PLAN  
1" = 30'



A-74 (68+00 W 2+00 S)

Scale: 1" = 40'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
202'	85°	110.5°
402'	82°	80.0°
602'	78°	59.5°
802'	73°	58.5°



JKC

DATE

SUBJECT

A-74

SHEET NO.

OF

DRWD. BY

DATE

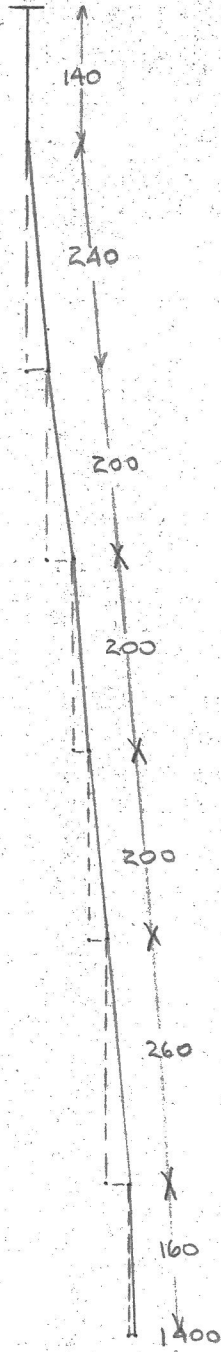
DIP & BRG. TESTS.  
(TROPARI)

JOB NO.

AZ	DIP	COS	D	HD	SIN	VD
-	90	0	140	0	1.00	140
93.8	85	.087	240	20.9	.996	239
119.8	82	.139	200	27.8	.990	198
111.8	85	.087	200	17.4	.996	199.2
79.8	85	.087	200	17.4	.996	199.2
75.3	85	.087	200	22.6	.986	259
38.3	89	.017	160	2.7	1.00	160
			1400.			$\Sigma = 1394.4$

SECTION

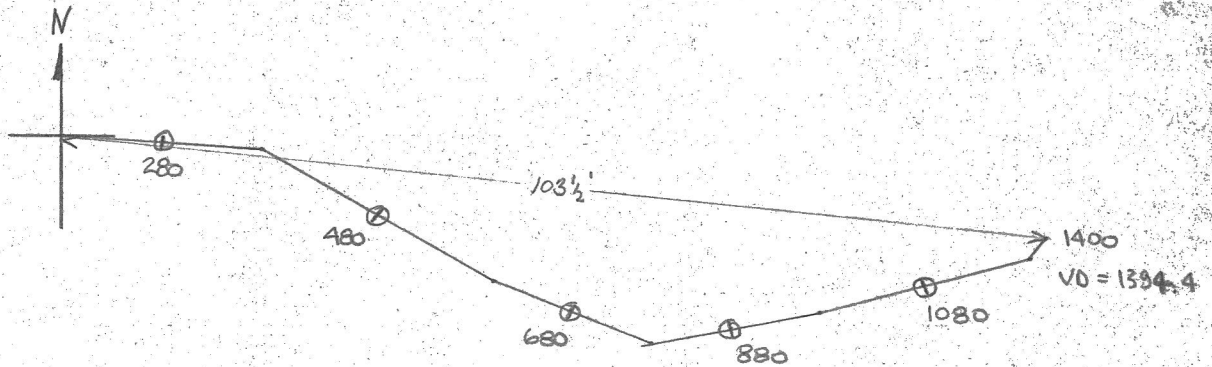
1" = 200'



VD = 1394.4

PLAN

1" = 20'



A-74

HOR. DIST.

VERT. D

ELEVATION

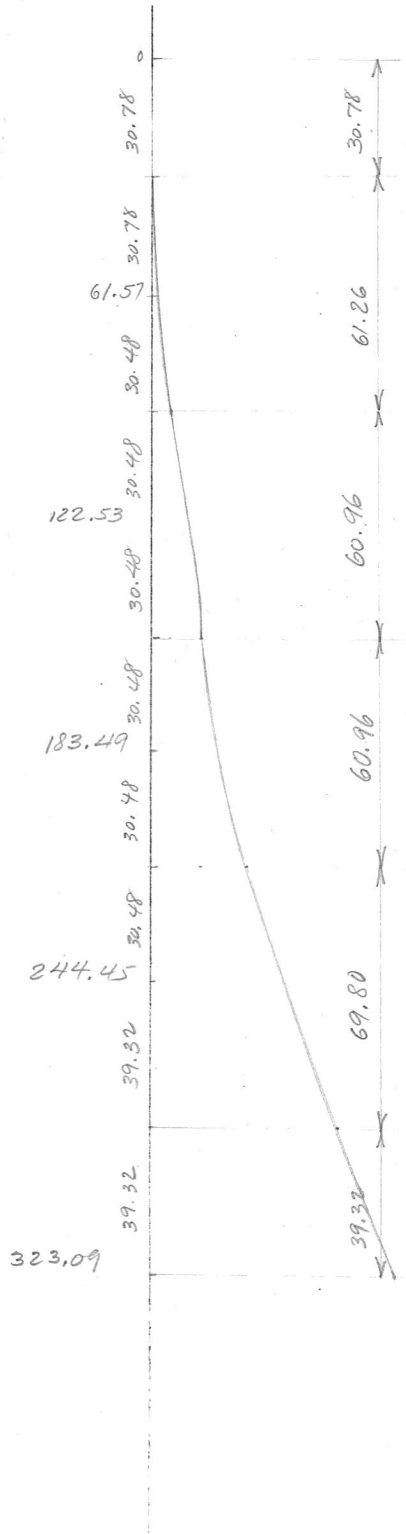
LENGTH

LENGTH	DIP	BEARING	INTERVAL	COS	METRES	SIN	ME. EP	ELEVATION	LENGTH
30.78			30.78 ✓				30.78	1283.48	<del>30.78</del>
61.57	85°	110.5°	61.26 ✓	.0872	5.34	.99619	61.03	1252.7	← 92.04
122.53	82°	80°	60.96 ✓	.1392	8.48	.99027	60.37	1191.67	← 153.00
183.49	78°	59.5°	60.96 ✓	.2079	12.67	.97815	59.63	1131.3	← 213.96
244.45	73°	58.5°	69.80 ✓	.2924	20.41	.95630	66.75	1071.67	← 283.76
			39.32 ✓	.2924	11.50	.95630	37.60	1004.92	← 323.09
								967.32	←
									323.09

SCALE = 1:20

10 525.9

7 612.95

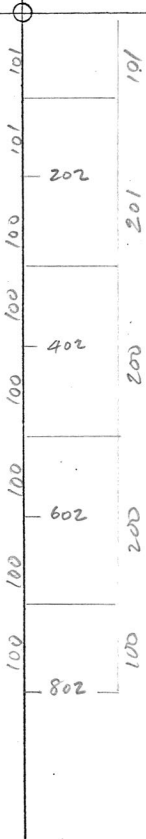


74

D. D. H. Deviation

Scale: 1" to 20'

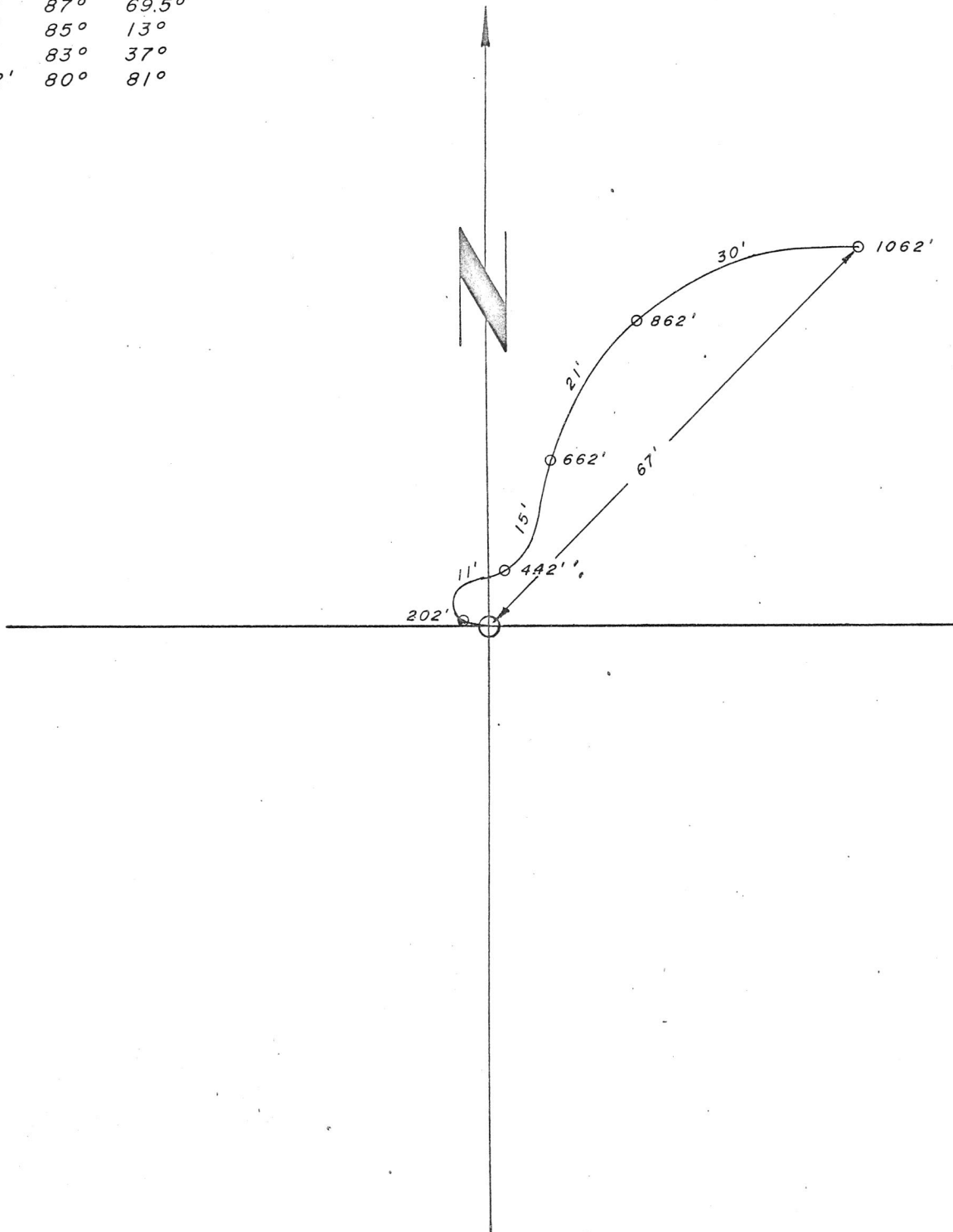
Ft.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT DIST		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
			101							1283.48	
202	85°	110.5	201 302	.0872	17.53	5.34	.99619	200.23	30.78	1252.70	30.78
402	82°	80.	200 302	.1392	27.84	8.49	.99027	198.05	60.37	1191.67	92.05
602	78°	59.5	200 302	.2079	41.58	12.67	.97815	195.63	59.63	1071.67	213.97
802	73°	58.5	100 802	.2924	29.24	8.91	.95630	95.63	29.15	1042.52	244.45
											323.09



A-75 (78+00 W 10+00 S)

Scale: 1" to 20'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
202'	88°	280°
442'	87°	69.5°
662'	85°	13°
862'	83°	37°
1062'	80°	81°



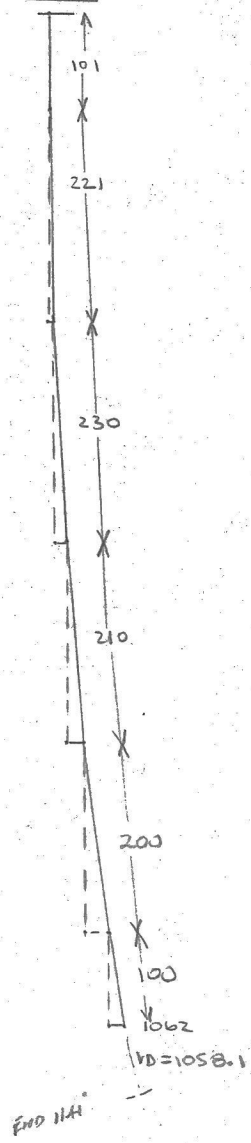
AKC

A-75  
DIP & BRG TESTS  
(TROPARI)

SHEET NO.

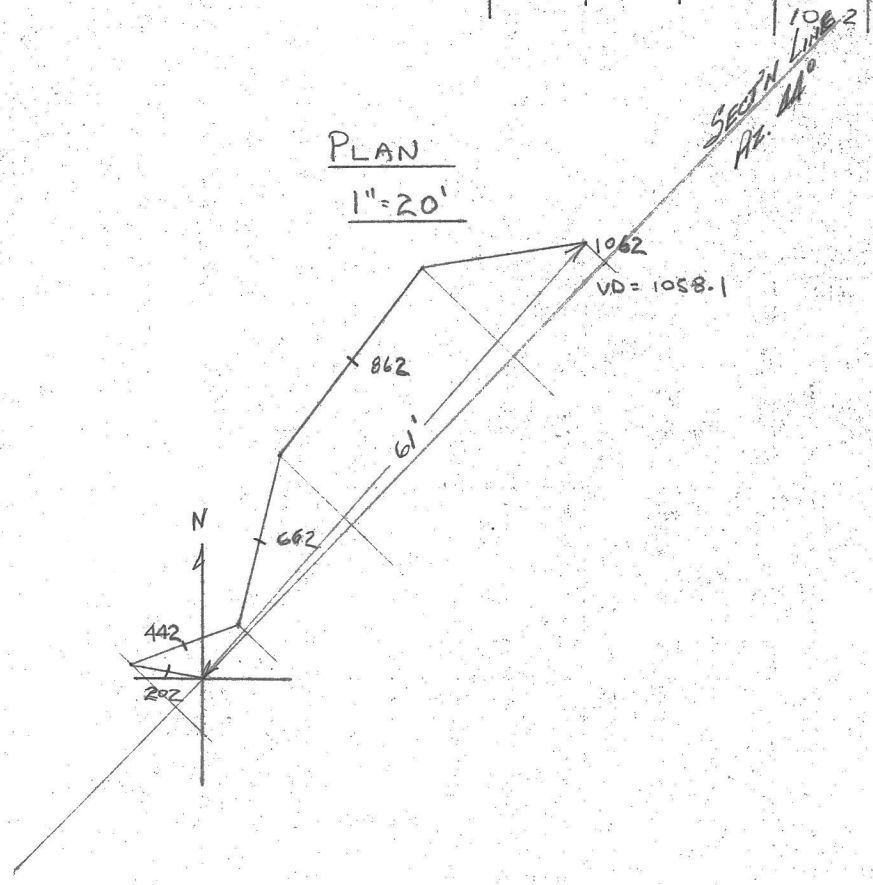
DATE

SECTION  
1"=200'



AZ	DIP	COS	D	HD	SIN	VD
0	90	0	101	0	1.00	101
279.8	88	.035	221	7.7	.999	221
69.6	87	.052	230	11.9	.999	230
13.3	85	.087	210	18.3	.996	209
36.8	83	.122	200	24.4	.993	198.6
80.8	80	.174	100	17.4	.985	98.5

PLAN  
1"=20'



959.6

A 75

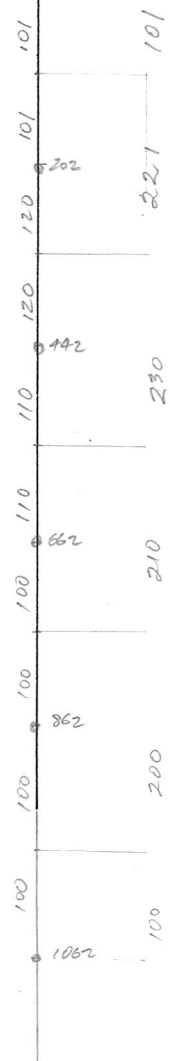
D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL	HOR. DIST.		VERT. DIST.		ELEV.	LENGTH OF DDH		
				cos.	FT	M	SIN.			FT	M
			101					1311.83			
202	88°	280°	221 322	.0349	7.713	2.35	.9994	220.87	30.78	1281.05	30.78
442	87°	69.5°	230 552	.0523	12.03	3.67	.9986	229.68	67.32	1213.73	98.15
662	85°	13°	210 762	.0872	18.31	5.58	.9962	209.20	70.01	1143.72	168.25
862	83°	37°	200 962	.1219	24.38	7.43	.9925	198.5	63.76	1079.96	232.26
1062	80°	81°	100 1062	.1756	17.36	5.30	.9848	98.48	60.50	1019.46	293.22
									30.02	989.44	323.69
										347.78	

N

Do Not Use  
gl



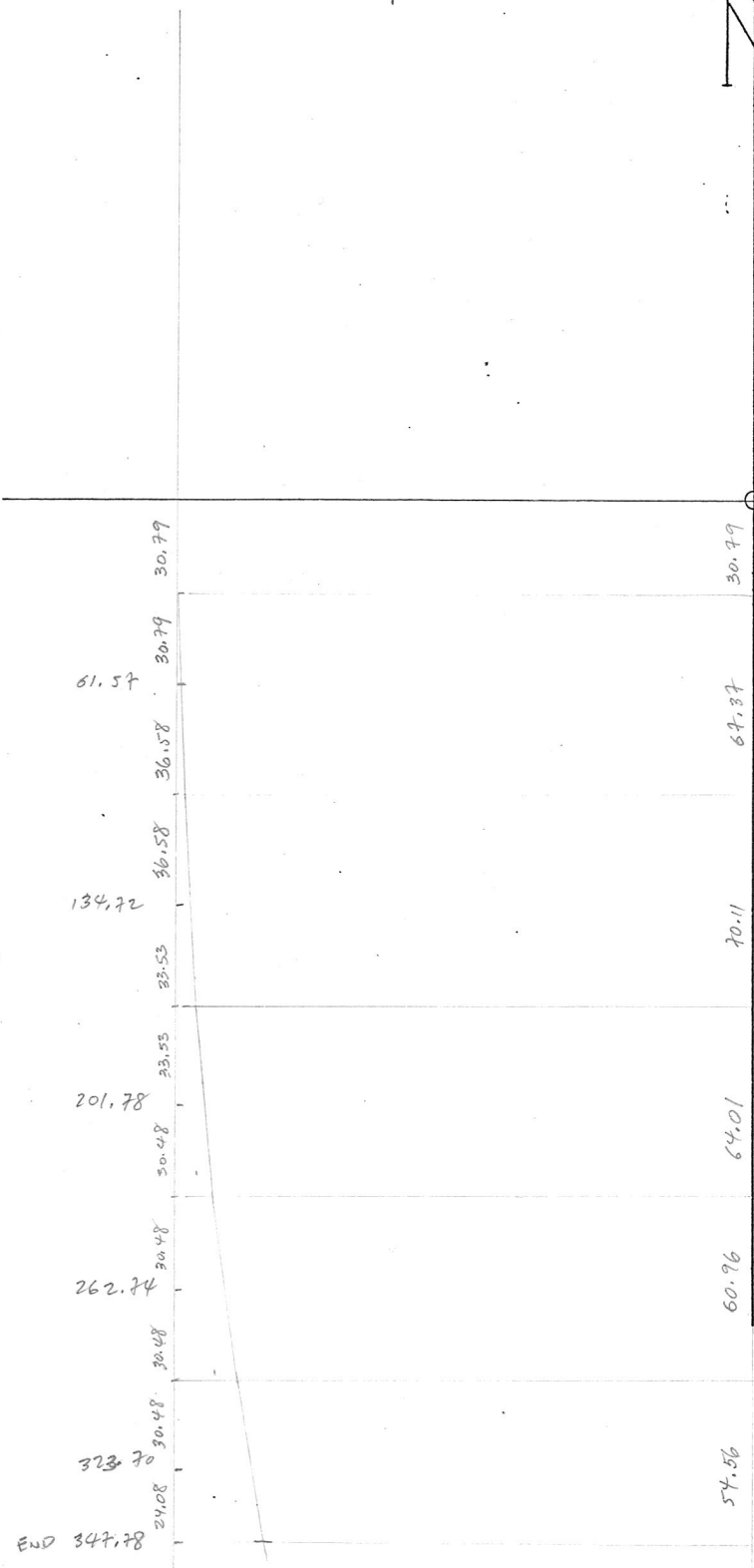
A.75

checked ✓

D. D. H. Deviation

Scale: 1" to 20'

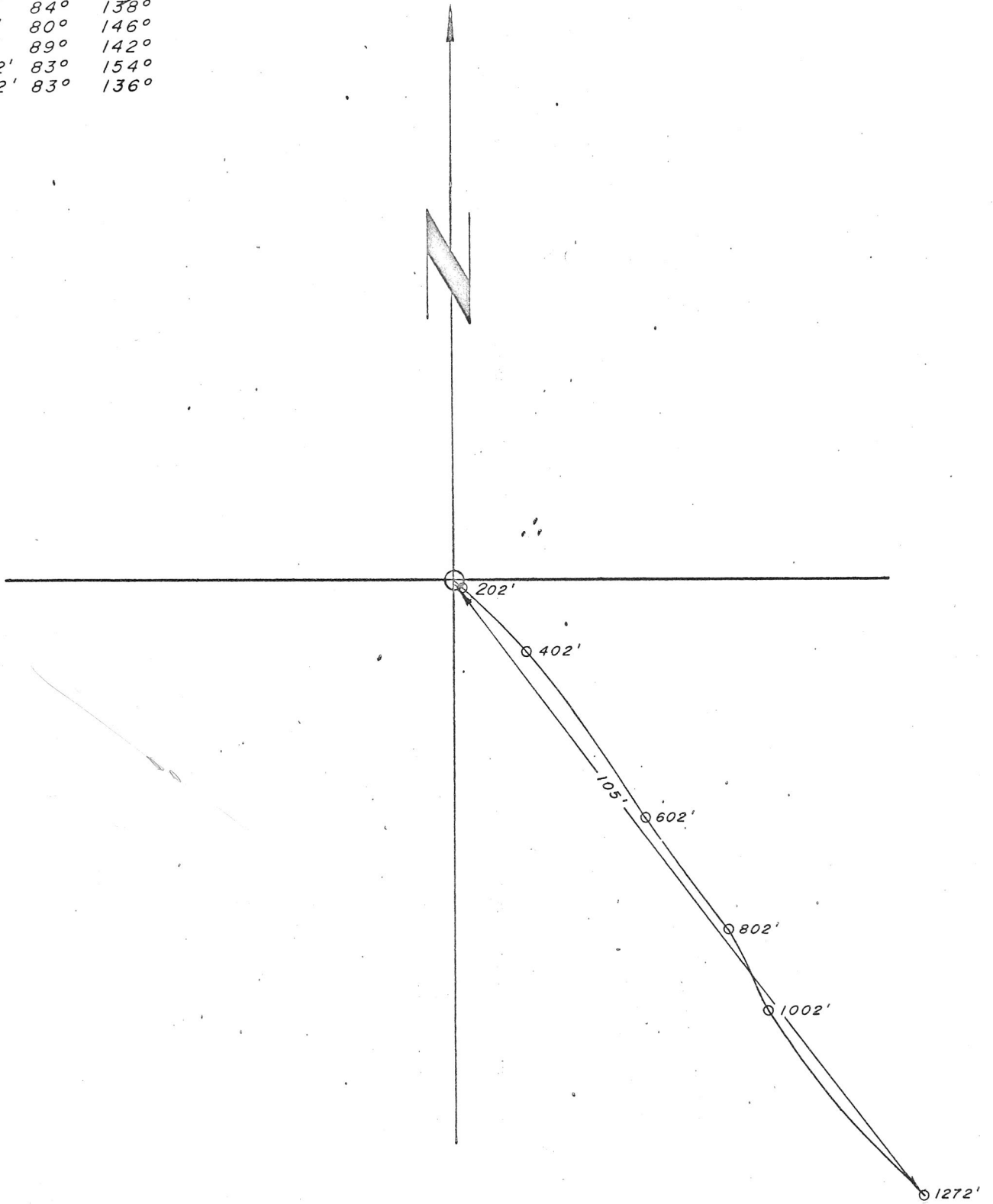
Fl.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
61.57	88° ✓	280° ✓	30.79 ✓	.0349 ✓		2.35 ✓	.9994 ✓	30.79 ✓	1311.83 ✓	1281.04 ✓	30.79 ✓
134.72	87° ✓	64.5 ✓	70.11 ✓	.0523 ✓		3.67 ✓	.9986 ✓	67.33 ✓	1213.71 ✓	1143.70 ✓	98.16 ✓
201.78	85° ✓	13° ✓	64.01 ✓	.0872 ✓		5.58 ✓	.9962 ✓	70.01 ✓	1079.93 ✓	1079.93 ✓	168.27 ✓
262.74	83° ✓	37° ✓	60.96 ✓	.1219 ✓		7.43 ✓	.9925 ✓	63.77 ✓	1019.43 ✓	1019.43 ✓	232.28 ✓
323.70	80° ✓	81° ✓	<del>54.56</del>	.1736 ✓		9.99 ✓	.9848 ✓	60.50 ✓	967.74 ✓	967.74 ✓	293.24 ✓
			54.56			9.47		53.73	965.7 ✓		350.80 ✓
											347.78 ✓



A-76 (80+00 W 8+00 N)

Scale: 1" to 20'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
202'	89°	130°
402'	84°	138°
602'	80°	146°
802'	89°	142°
1002'	83°	154°
1272'	83°	136°



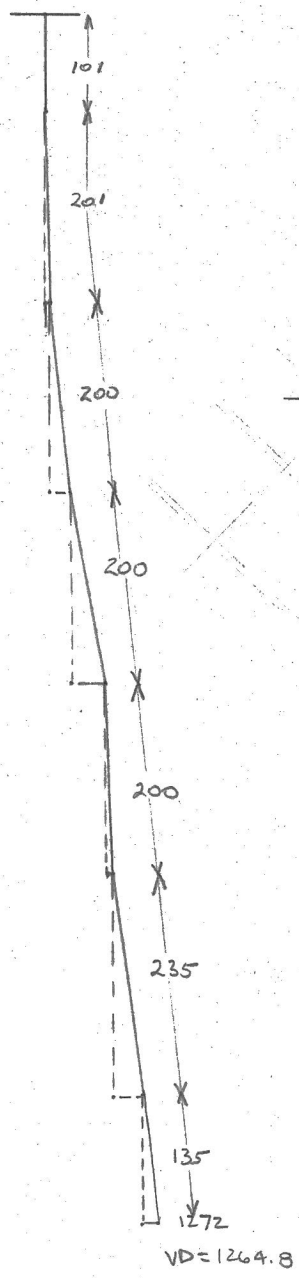
J.K.C.  
 DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_ DATE: \_\_\_\_\_

A-76  
 DIP & BRG. TESTS  
 (Tropari)

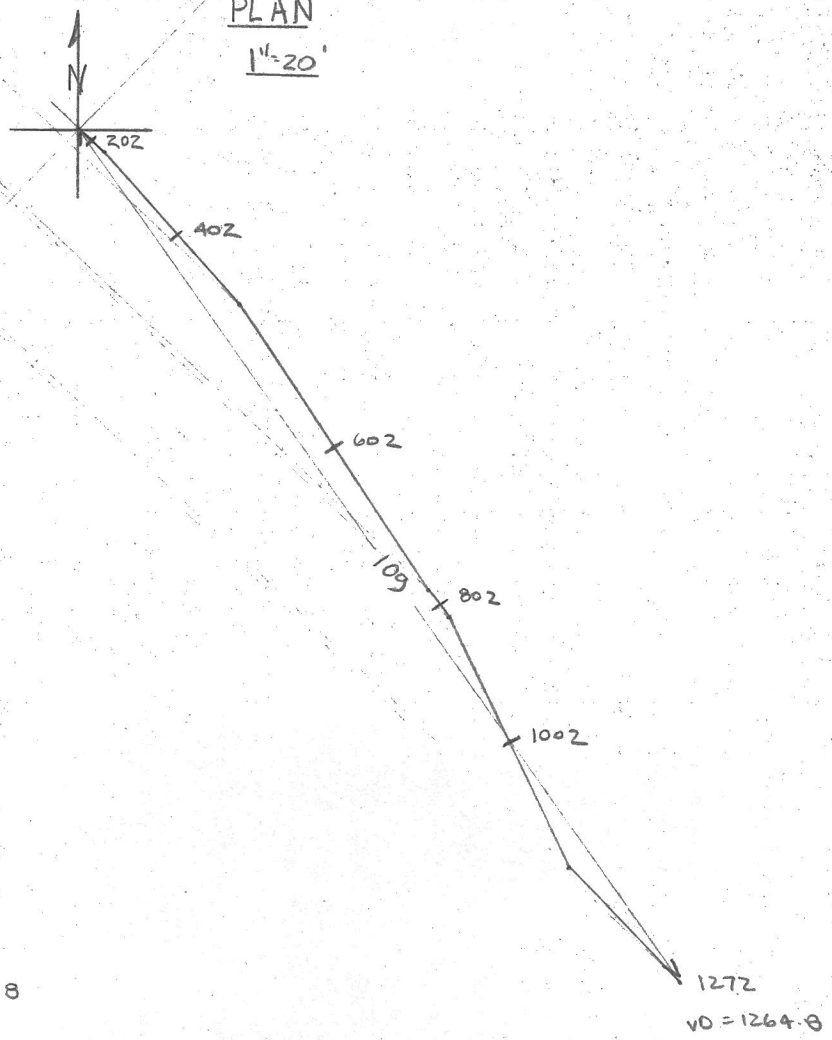
CHART NO. \_\_\_\_\_  
 SHEET NO. \_\_\_\_\_

Az	DIP	COS	D	HD	SIN	VD
-	90	0	101	0	1.00	101
129.8	89	.017	201	3.41	1.00	201
137.8	84	.105	200	21.06	.995	199
147.7	79.75	.178	200	35.61	.984	196.8
141.8	89	.017	200	3.41	1.00	200
153.7	83	.123	235	28.99	.993	233
136	83	.123	135	16.65	.993	134
			1272			1264.8

SECTION  
 1"=200'



PLAN  
 1"=20'



1130.4

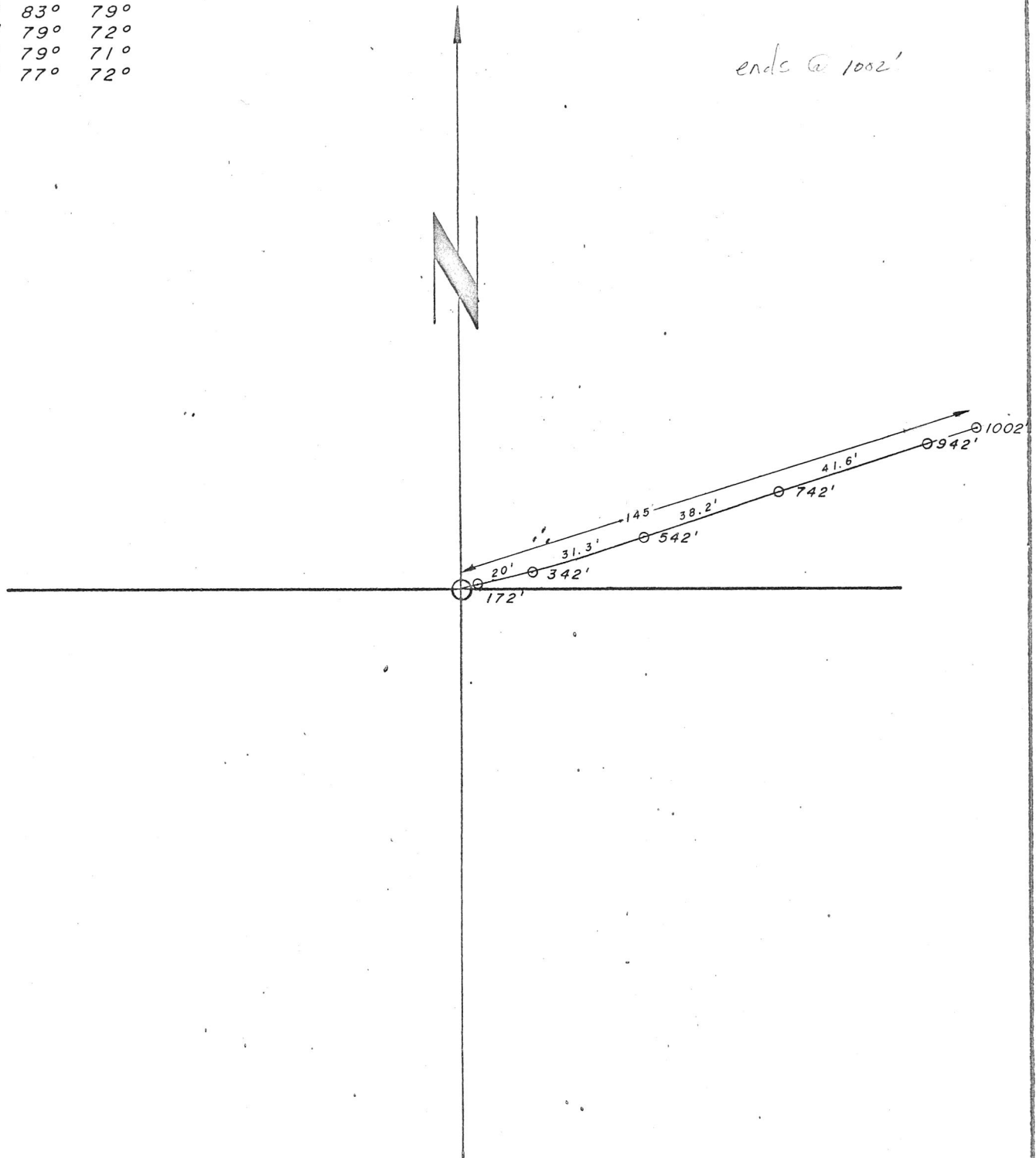


A-77 (64+00W 2+00S)

Scale: 1" to 40'

<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
172'	87°	69°
342'	83°	79°
542'	79°	72°
742'	79°	71°
942'	77°	72°

ends @ 1002'



BY JKC

DATE

SHEET NO.

A77

OF

DATE

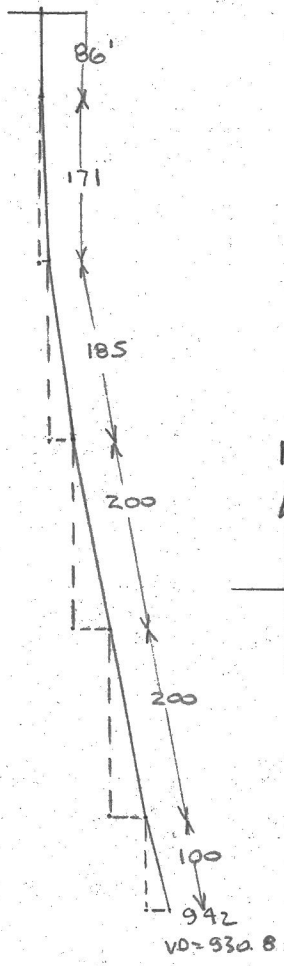
DATE

DIP + BRG TESTS  
(Tropari)

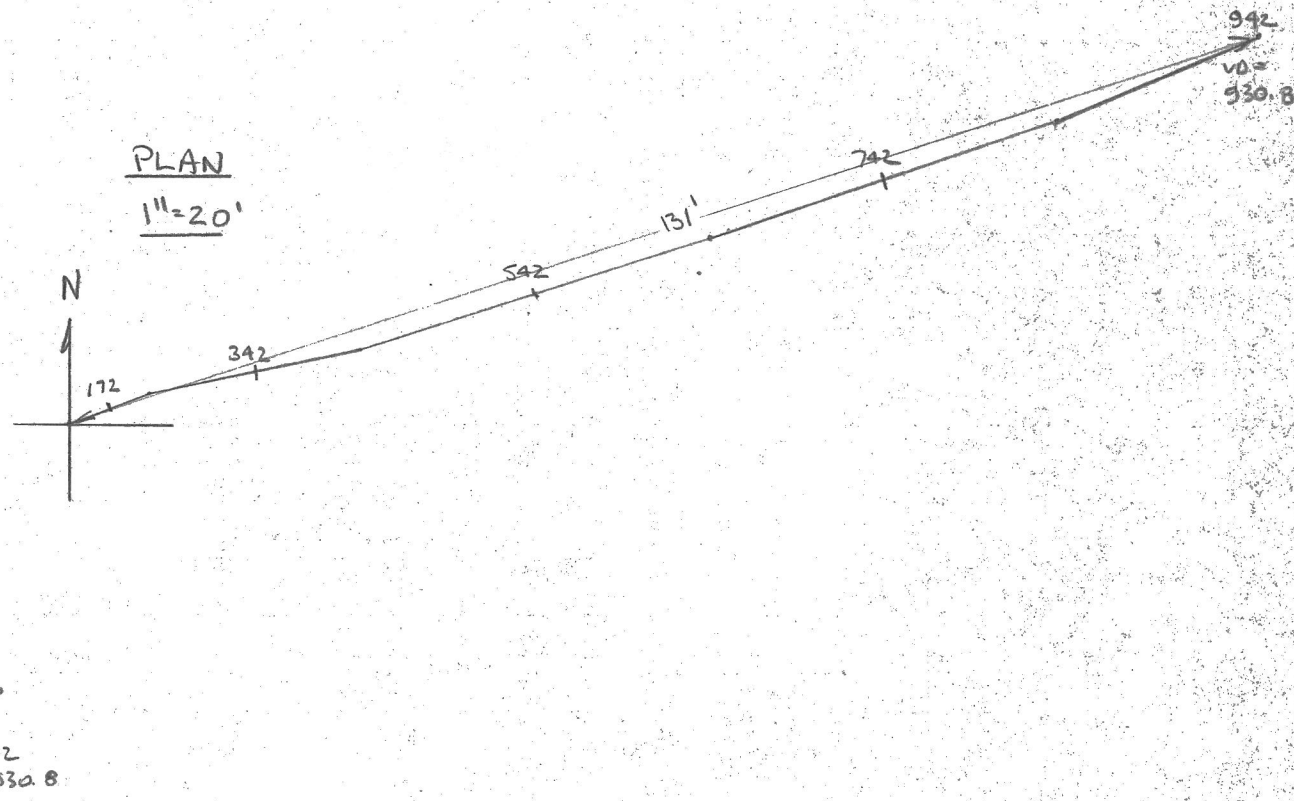
NO. NO.

AZ	DIP	COS	D	HD	SIN	VD
0	90	0	86	0	1.00	<del>86</del>
69	87	.052	<del>171</del>	<del>89</del>	.999	<del>171</del>
78	83	.122	185	226	.993	183.5
72	79	.191	200	38.2	.982	196.4
71	79	.191	200	38.2	.982	196.4
72	77	.225	100	22.5	.974	97.4
			942			930.8

SECTION  
1"=200'

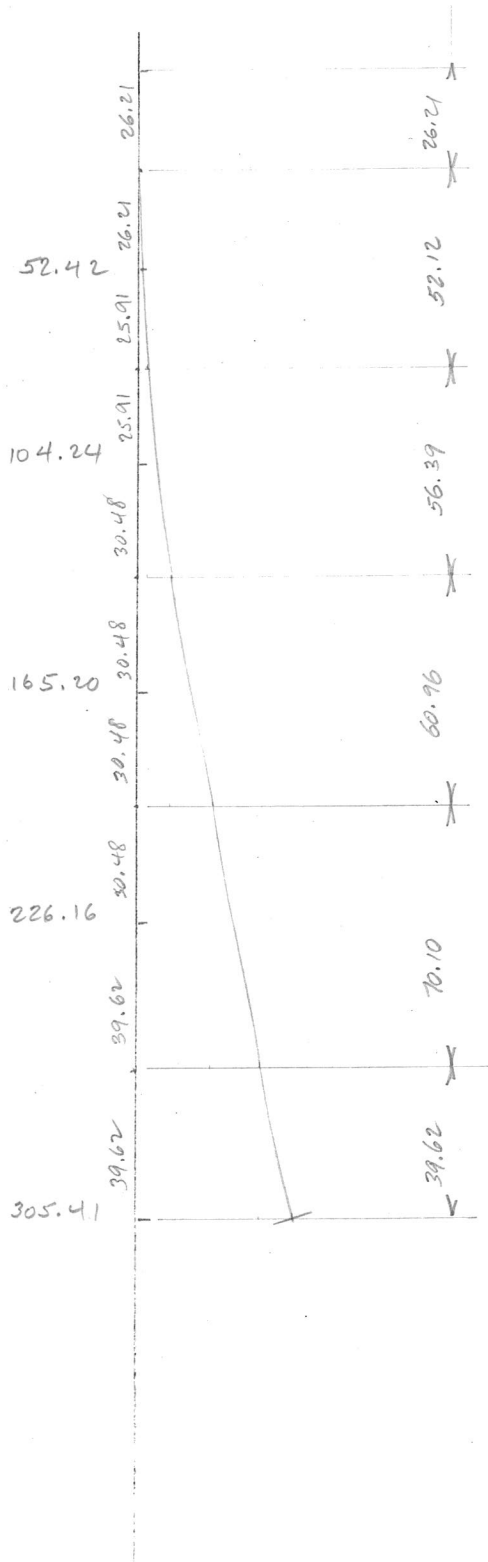


PLAN  
1"=200'



A-77

LENGTH	DIP	BEARING	INTERVAL	HOR. DIST.		VERT. D		ELEVATION	LENGTH
				COS	METRES	SIN	METRES		
			26.21				26.21	1278.23	
52.42	87	69	52.12	.0523 ✓	2.73	.99863 ✓	52.05	1252.02	26.21
104.24	83	79	56.39	.1219 ✓	6.87	.99255 ✓	55.97	1199.97	78.33
165.20	79	72	60.96	.1908 ✓	11.63	.98163 ✓	59.84	1144.00	134.72
226.16	79	71	70.10	.1908 ✓	13.37	.98163 ✓	68.81	1084.16	195.68
305.41	77	72	39.62	.2250 ✓	8.91	.97437 ✓	38.60	1015.35	265.78
								976.75	305.40



A 77

D. D. H. Deviation

Scale: 1" = 20'

St.	Dip	Bearing	INTERVAL	cos.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
176	87°	69°	86	.0523	8.94	2.72	.99863	170.77	26.21	1278.23	26.21
342	83	79°	171	.1219	22.55	6.87	.99255	183.62	52.05	1199.97	38.33
542	79	72°	200	.1908	38.16	11.63	.98163	196.33	59.84	1144.00	134.72
742	79°	71°	200	.1908	38.16	11.63	.98163	196.33	59.84	1084.16	195.68
<del>942</del>	77									1024.32	256.64
1002	77	72°	160	.2250	36.0	10.97	.97437	155.90	47.52	976.80	305.41



10.5

79 79

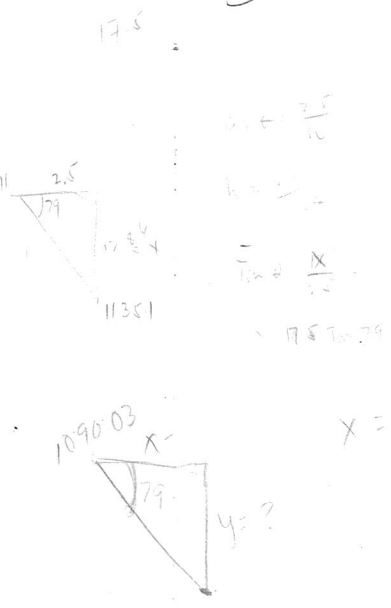
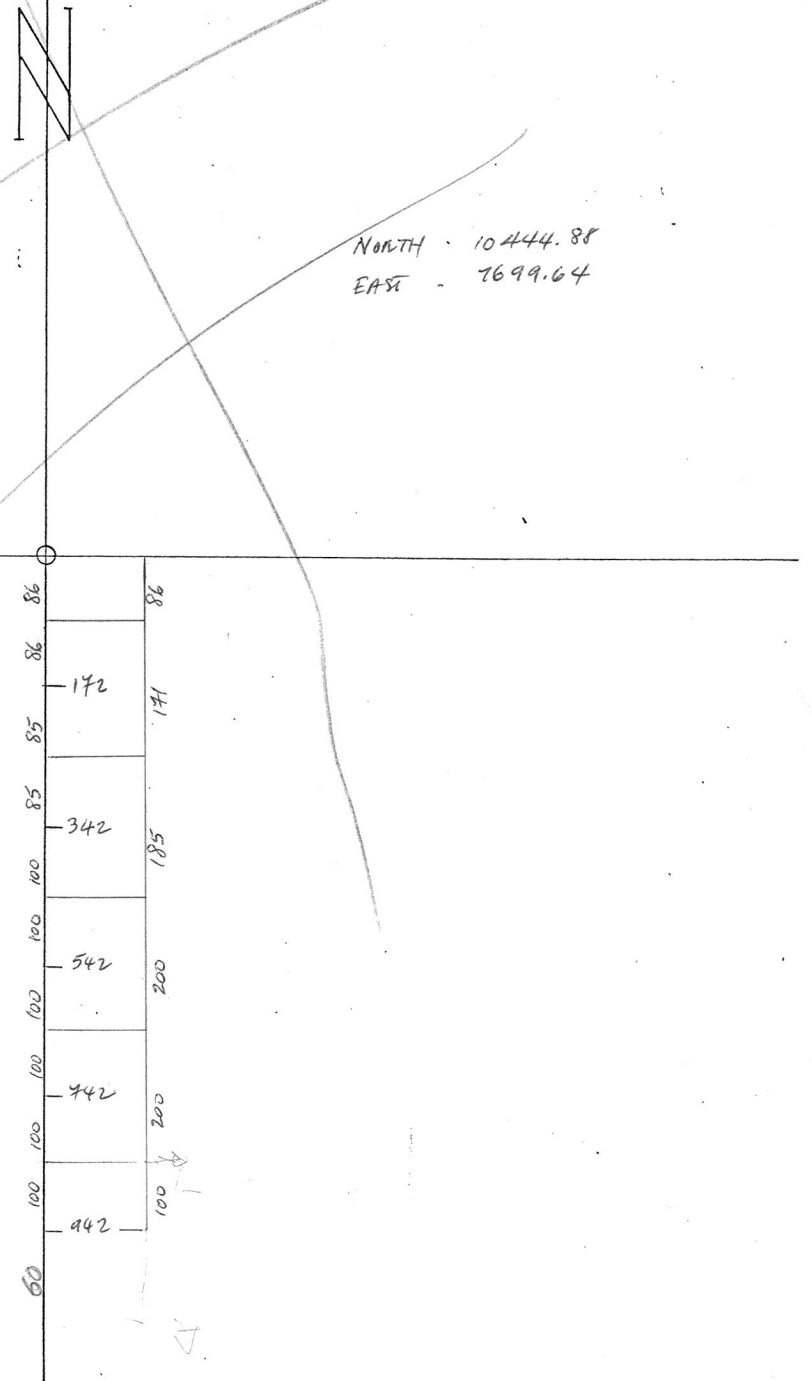


A.77

D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	INTERVAL		COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
			FT	M		FT	M					
172	90°	690	86	0	0	61.29	18.68	.93358	159.64	26.21	1298.23	26.21
342	87°	79	171	257	.3584	35.30	10.76	.98163	181.60	48.66	1203.36	134.72
542	83°	79	185	442	.1908	61.8	18.84	.95106	190.21	55.35	1148.01	195.68
742	49°	72	200	642	.3090	68.86	20.99	.94552	189.10	57.98	1090.03	256.64
942	79°	71	200	842	.3443	30.9	9.42	.95106	95.11	28.99	1003.40	287.12
1002	77°	72	100	942	.3090	49.44	15.07	.95106	152.17	46.38	986.01	305.41

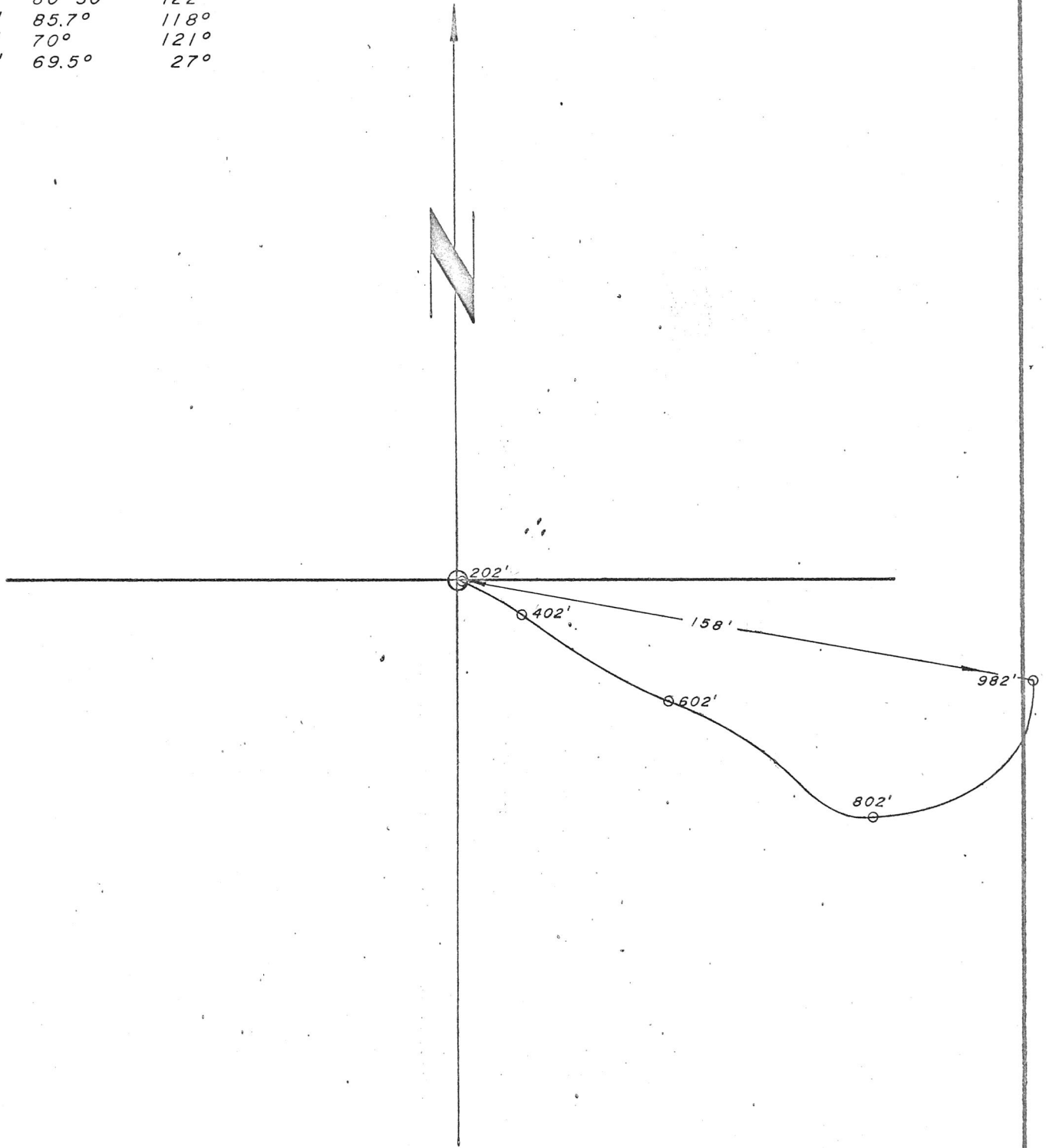


A-78 (78+00 W 12+00 N)

Scale: 1" to 40'

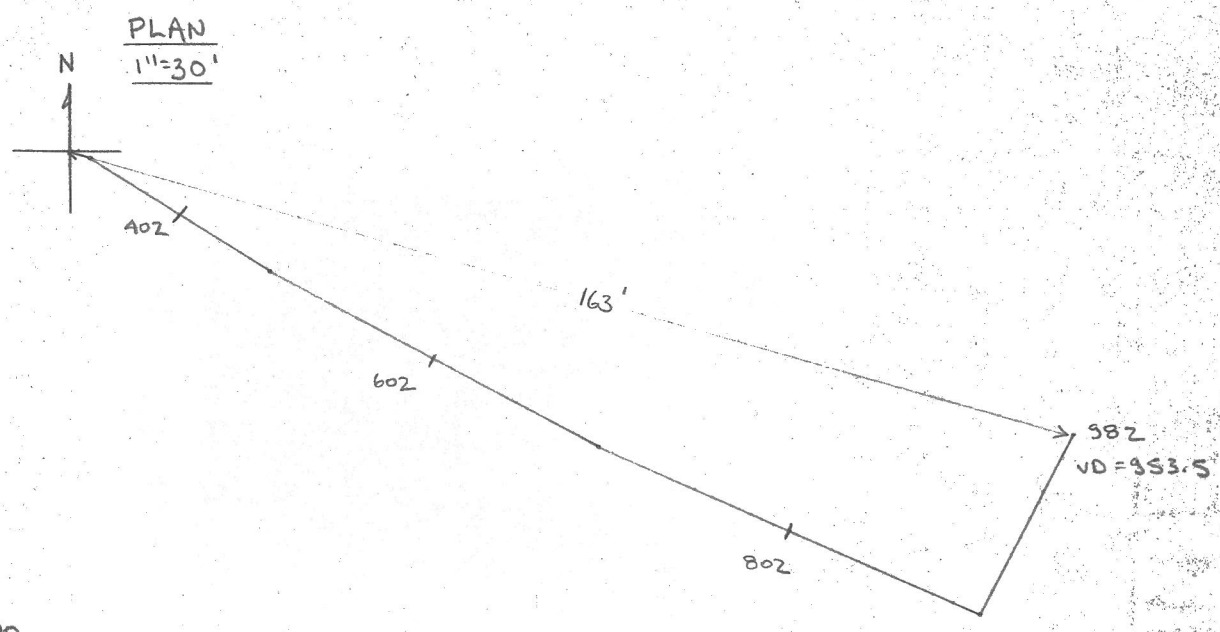
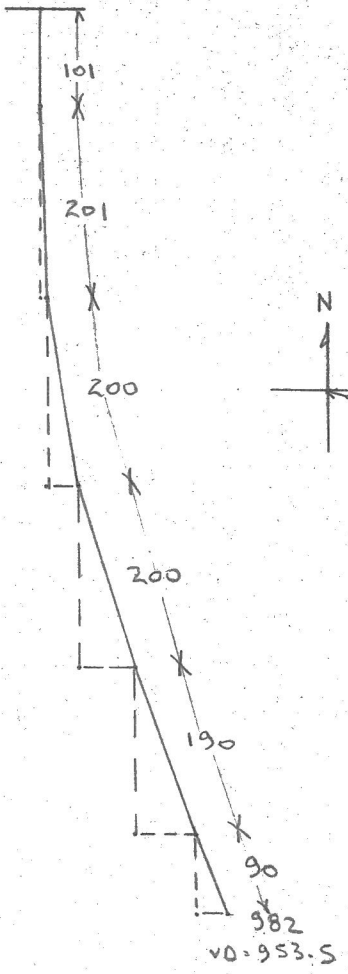
<u>Ft.</u>	<u>Dip</u>	<u>Bearing</u>
202'	89°	106°
402'	80°30'	122°
602'	85.7°	118°
802'	70°	121°
982'	69.5°	27°

Bee



AZ	DIP	cos	D	HD	SIN	VD
-	90	0	101	0	1.00	101
106	89	.017	201	3.41	1.00	201
122	80.5	.165	200	33.010	.986	197.2
118	73	.292	200	58.418	.956	191.2
114	70	.342	190	65.020	.940	178.7
27	69.5	.350	90	31.575	.937	84.4
			982			953.5

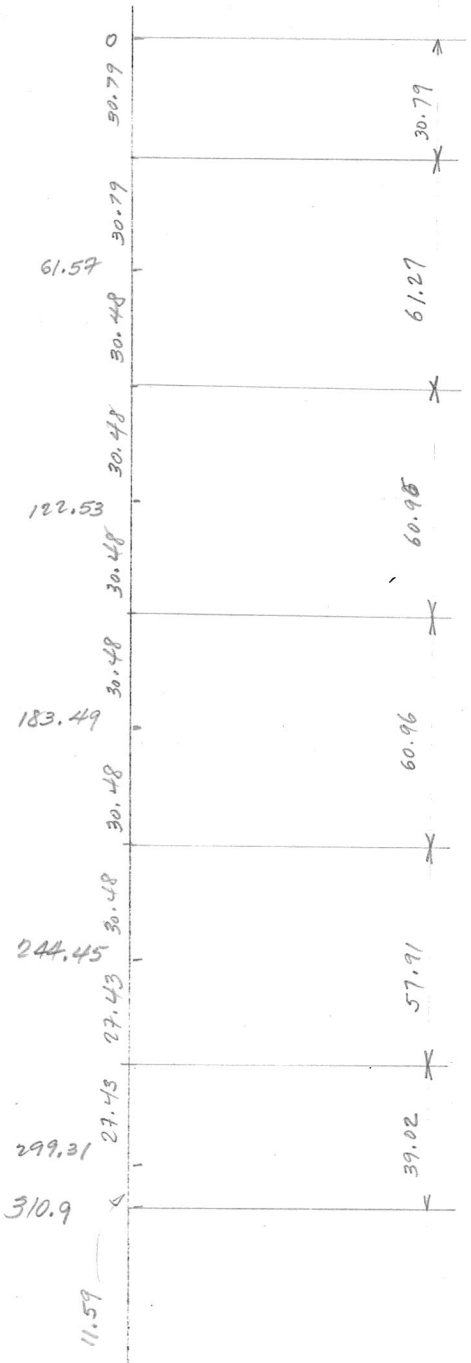
SECTION  
1"=200'



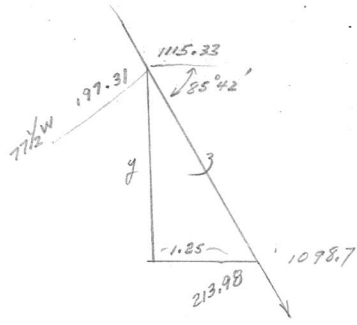
A-78

LENGTH	BEARING	INTERVAL	COS	HOR 1ST METRES	DIP	SIN	VERT. D METRES	ELEVATION 1311.67	LENGTH
61.57	106	30.79	.0175	1.07	89°	.99985	30.79	1200.88	30.79
122.53	122	60.96	.1650	10.06	80° 30'	.98629	61.26	1219.62	92.06
183.49	118	60.96	.0756	4.61	85.7°	.99714	60.12	1159.50	153.02
244.45	<del>114</del> 114	57.91	.3400	19.81	70°	.93969	60.79	1098.71	213.98
299.31	27	39.02	.3502	13.66	69.5°	.93667	54.42	1044.29	271.89
							36.55	1007.74	310.91

310.9

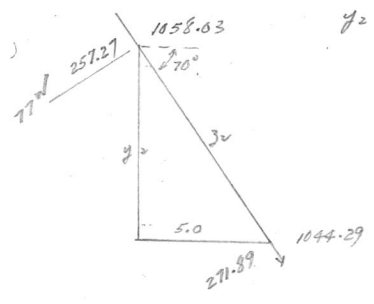


$$z = \frac{1.25}{0.0750} = 16.67$$



$$y = 1.25 (0.99718) = 16.625$$

$$z_2 = \frac{5}{0.342} = 14.62$$



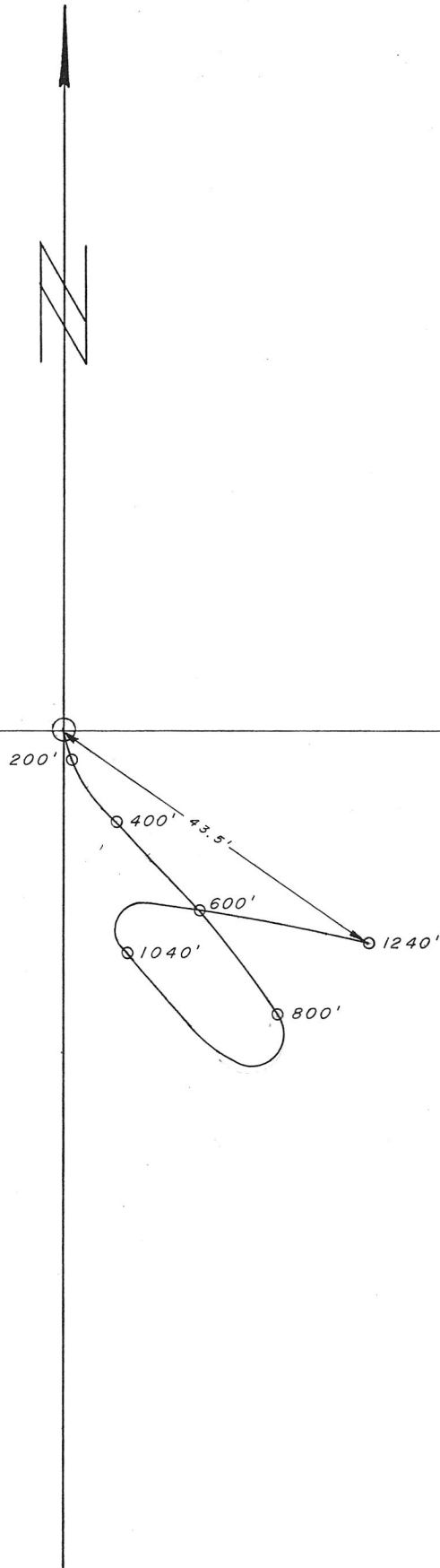
$$y_2 = 5 (2.747) = 13.74$$

A-79 (80+04W 9+96N)

D.D.H. DEVIATION

Scale: 1" to 20'

Ft.	Dip	Bearing
200'	98° 89'	165° 56'
400'	87°	139° 40'
600'	85°	136° 56'
800'	86°	145° 50'
1040'	82°	319° 50'
1240'	81°	105° 44'



JKC

DATE 7/28/75

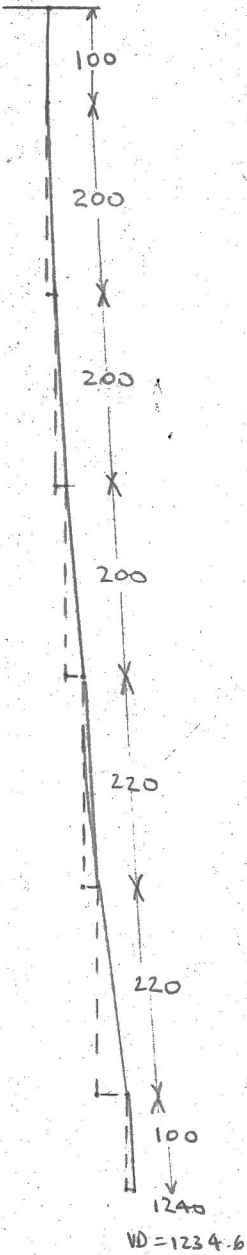
A 79  
DIP & BRG TESTS  
(TROPARI)

SHEET NO. OF

JOB NO.

SECTION

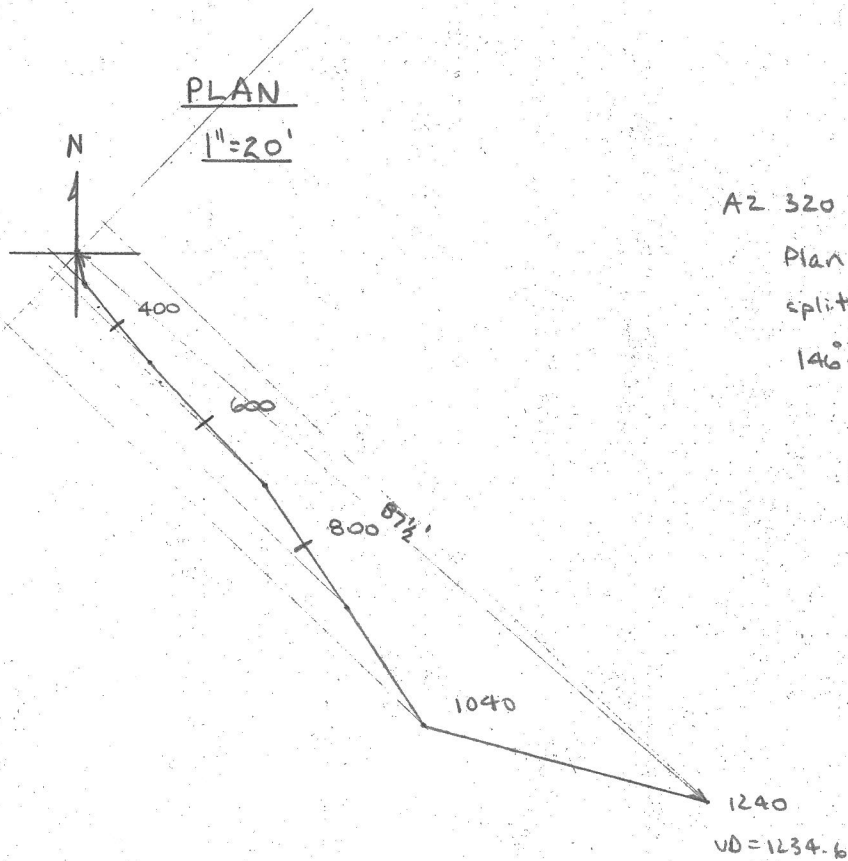
1" = 200'



AZ	DIP	COS	D	HD	SIN	VD
-	90	0	100	0	1.00	100
166	89	.017	200	3.4	.999	200
140	87	.052	200	10.4	.999	199.8
137	85	.087	200	17.4	.996	199.2
146	86	.070	220	15.4	.996	219
Not used ? → 320	82	.139	220	30.6	.990	217.8
105	81	.156	100	15.6	.988	98.8
			1240			1234.6

PLAN

1" = 20'



AZ 320 Not used in plotting  
Plan sketch. HD of 30.6  
split evenly between azimuths  
146 & 105°.

3  
79

80

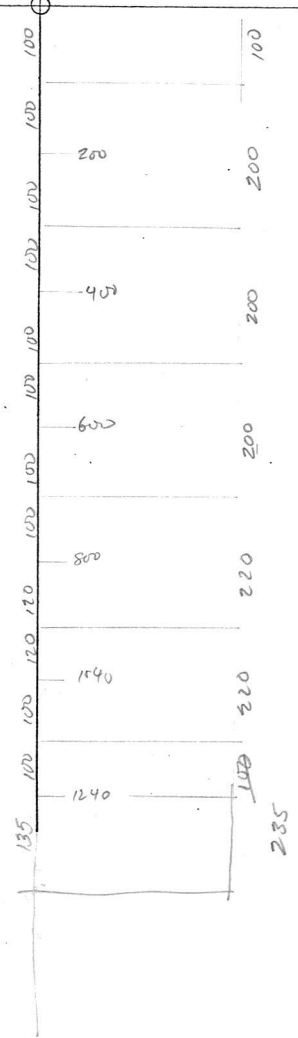
D. D. H. Deviation

Scale: 1" = 20'

Fl.	Dip	Bearing	INTERVAL	HOR. DIST.		VERT. DIST.		ELEV.	LENGTH OF DDH
				COS.	FT	M	SIN.		
			100					1281.68	30.48 ✓
200	89	165.86	200 300	.0175	3.5	1.07	.99985	199.97	60.95 ✓
400	87	139.40	200 500	.0523	10.46	3.19	.99863	199.73	60.88 ✓
600	85	136.86	200 700	.0872	17.44	5.32	.99619	199.24	60.73 ✓
800	86	145.50	220 920	.0698	15.36	4.68	.99756	219.46	66.89 ✓
1040	82	319.50	220 1140	.1392	30.62	9.33	.99027	217.86	66.40 ✓
1240	81	105.44	100 1240	.1564	15.64	4.77	.98769	98.77	30.4 ✓
			235		36.75	11.20		232.11	70.75



41.15  
135.00

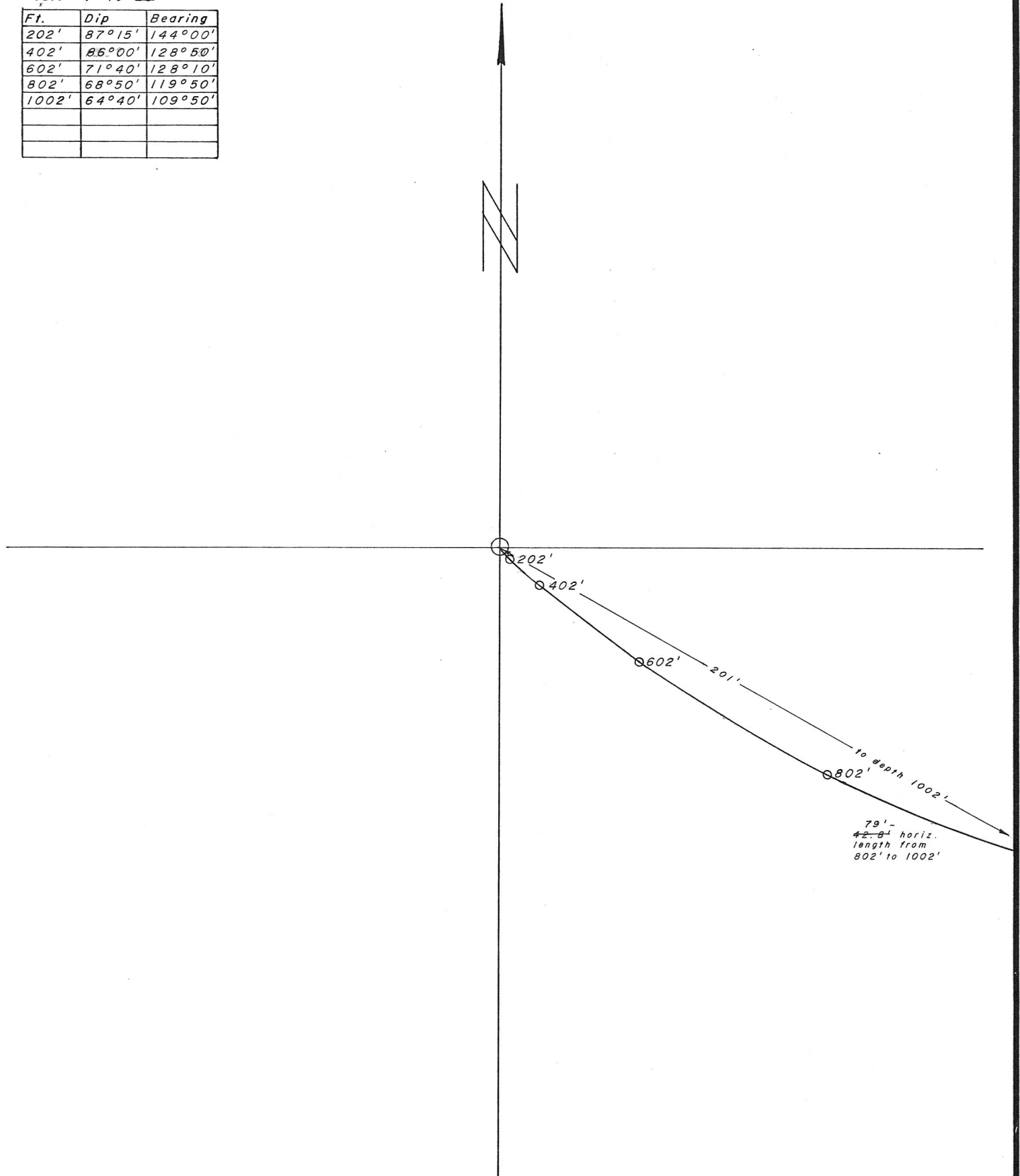


A-80 (77+94 W 14+09 . )

D.D.H. DEVIATION

Scale: 1" to ~~20'~~ 40'

Ft.	Dip	Bearing
202'	87°15'	144°00'
402'	86°00'	128°50'
602'	71°40'	128°10'
802'	68°50'	119°50'
1002'	64°40'	109°50'



JRC

DATE 7/28/75

SHEET NO.

A-80

DATE

BY

DATE

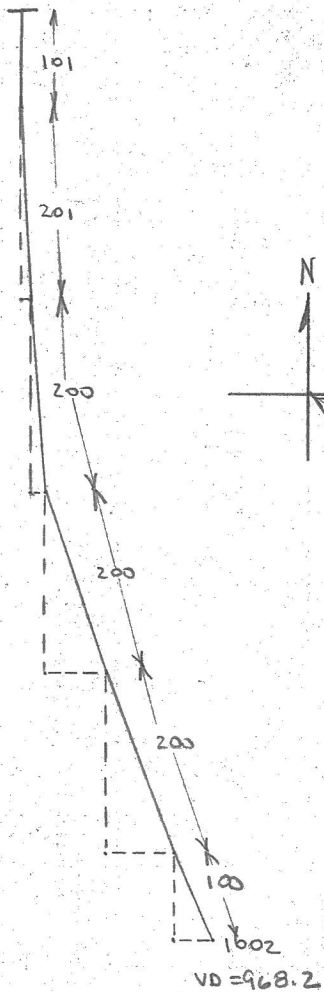
DIP & BRG TESTS

JOB NO.

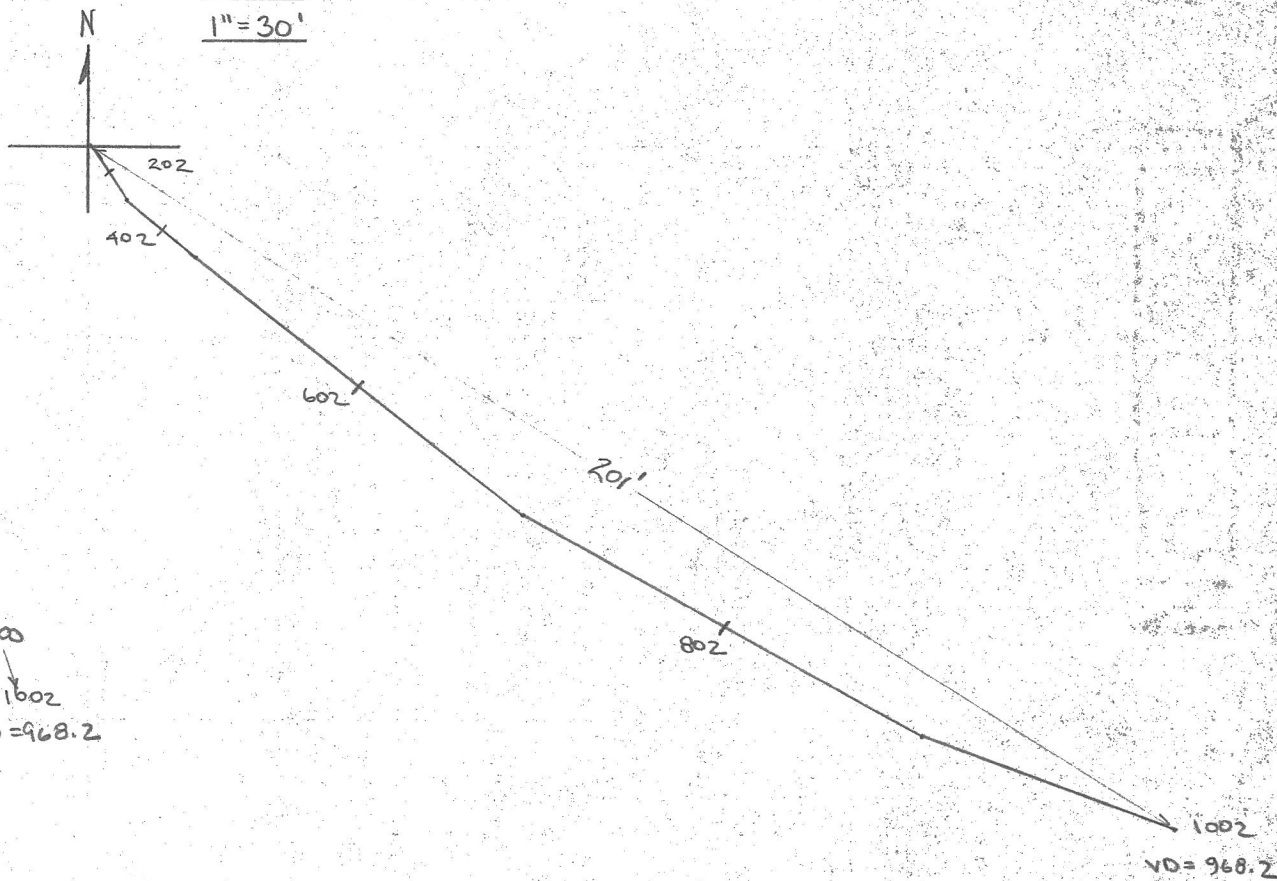
(Tropaci)

Az	DIP	cos	D	HD	SIN	VD
-	90	0	101	0	1.00	101
144	87	.052	201	10.03	.999	201
129	86	.070	200	14.04	.998	199.6
128	71	.326	200	65.220	.946	189.2
119	69	.358	200	71.622	.934	186.8
110	65	.423	100	42.313	.906	90.6
			1002			968.2

SECTION  
1"=200'



PLAN  
1"=30'



A-80

HOR. 15'

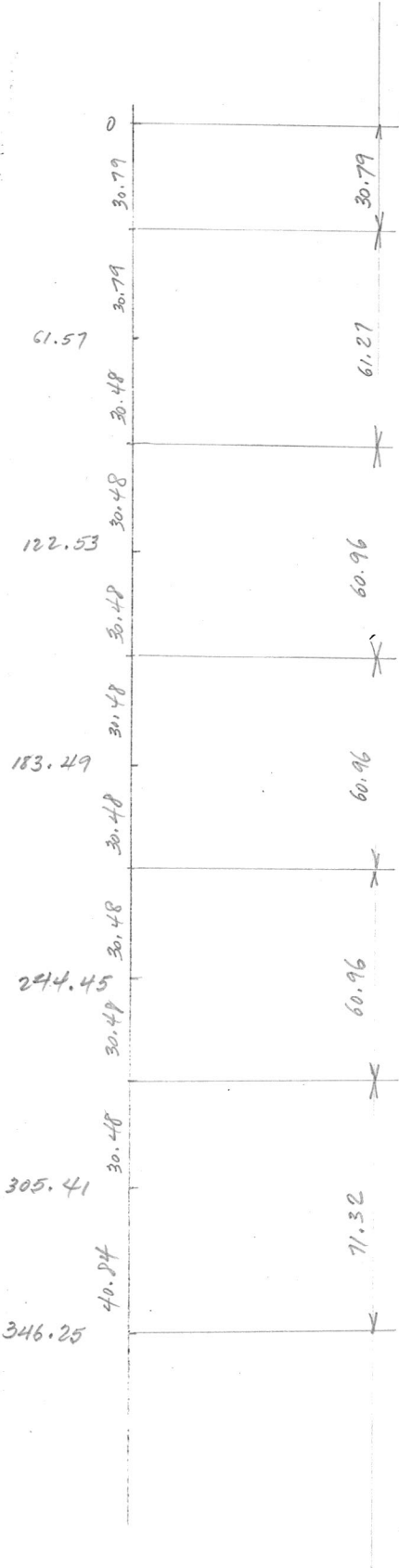
VERT. DI

ELEVATION

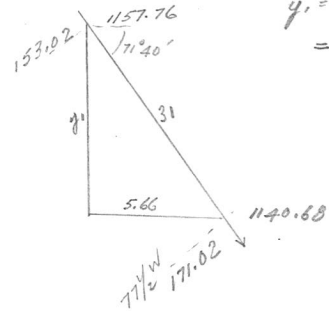
LENGTH

LENGTH	BEARING	INTERVAL	COS	METRES	DIP	SIN	METRES	ELEVATION	LENGTH
61.57	144	30.79	.050	3.06	87° 15'	.99890	30.79	1310.56	30.79
122.53	128° 50'	61.27	.0698	4.26	86°	.99756	61.20	1279.77	92.06
183.49	128° 10'	60.96	.3145	19.17	71° 40'	.94924	60.81	1218.57	153.02
244.45	119° 50'	60.96	.3611	22.01	68° 50'	.96253	57.87	1157.76	213.98
305.41	109° 50'	71.32	.4279	30.52	64° 40'	.90383	56.85	1099.89	274.94
							64.46	1043.04	346.25

346.25

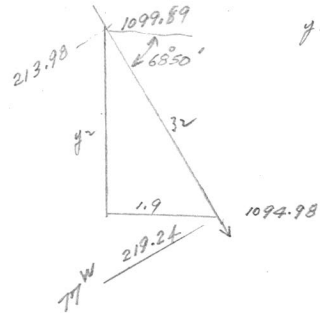


$$z_1 = \frac{5.66}{0.3145} = 18$$



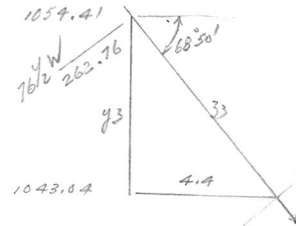
$$y_1 = 5.66 (3.018) = 17.08$$

$$z_2 = \frac{1.9}{0.3611} = 5.26$$



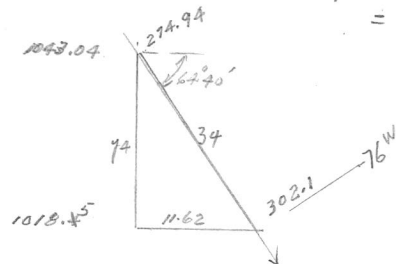
$$y_2 = 1.9 (2.583) =$$

$$z_3 = \frac{4.4}{0.3611} = 12.19$$



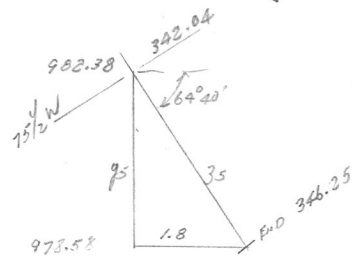
$$y_3 = 4.4 (2.583) = 11.37$$

$$z_4 = \frac{11.62}{0.4279} = 27.16$$



$$y_4 = 11.62 (2.112) = 24.54$$

$$z_5 = \frac{1.8}{0.4279} = 4.21$$



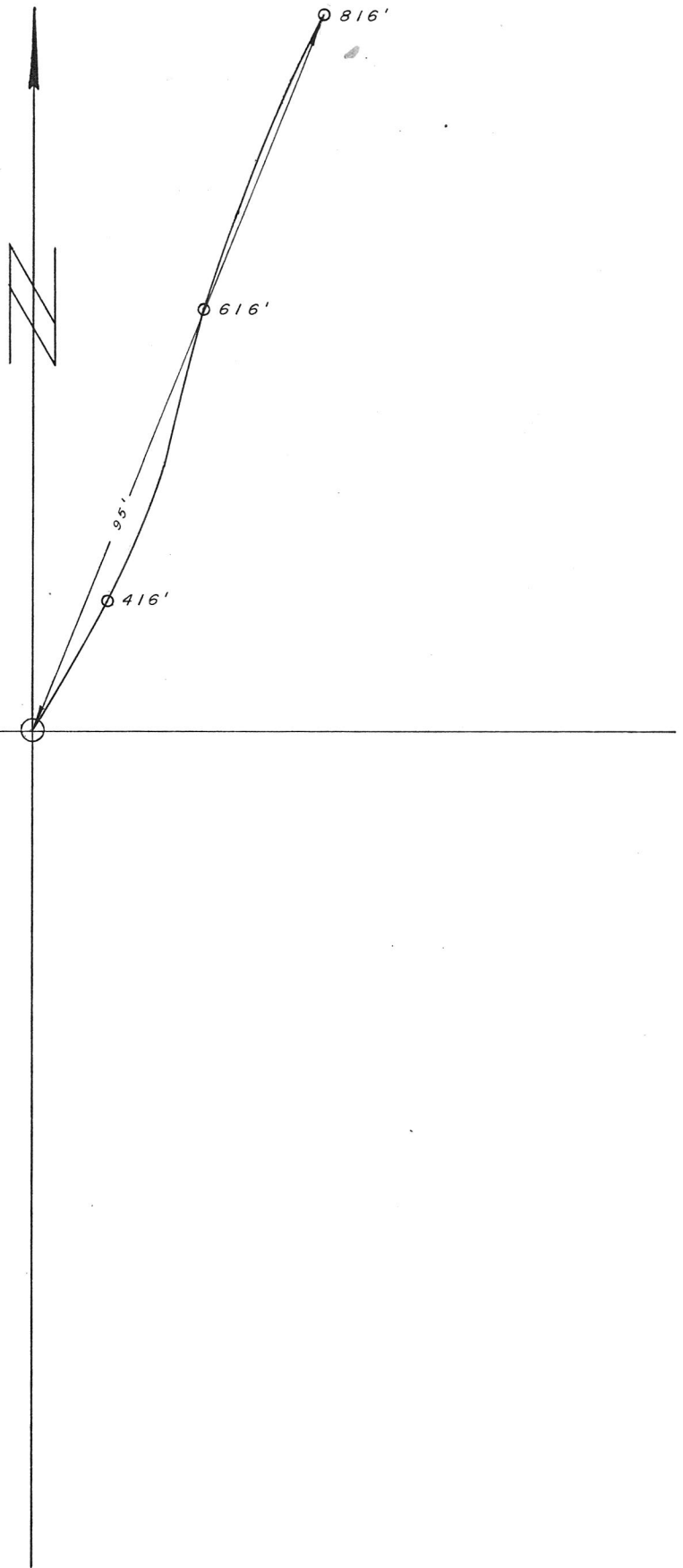
$$y_5 = 1.8 (2.112) = 3.80$$

A-81 (62+21W. 2+00S.)

D.D.H. DEVIATION

Scale: 1" to 20'

Ft.	Dip	Bearing
216'	N.G.	22°20'
416'	80°05'	59°50'
616'	79°20'	75°20'
816'	79°10'	65°20'



JKC

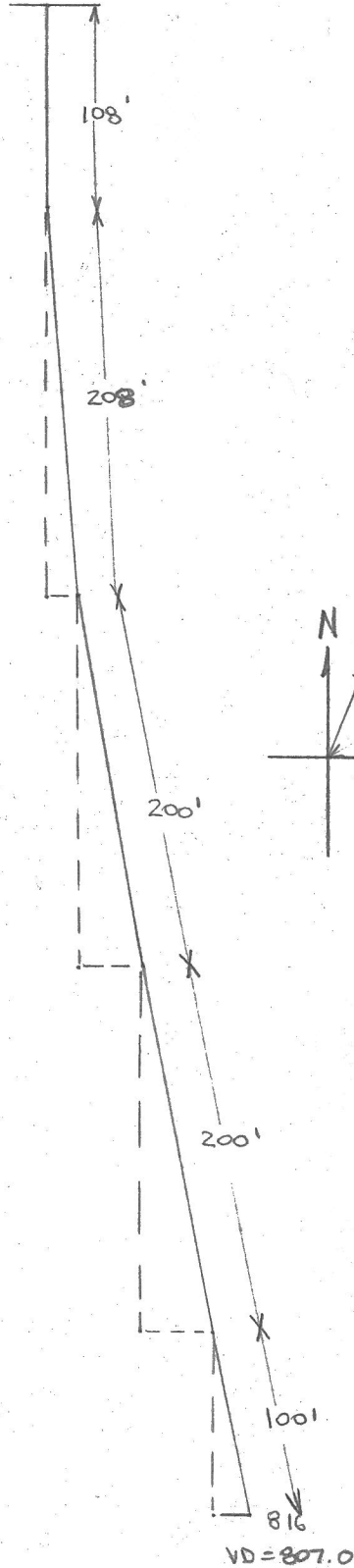
7/28/15

# A 81 DIP & BRG. TESTS (Sperry Sun)

SHEET NO. 1 OF 1  
JOB NO.

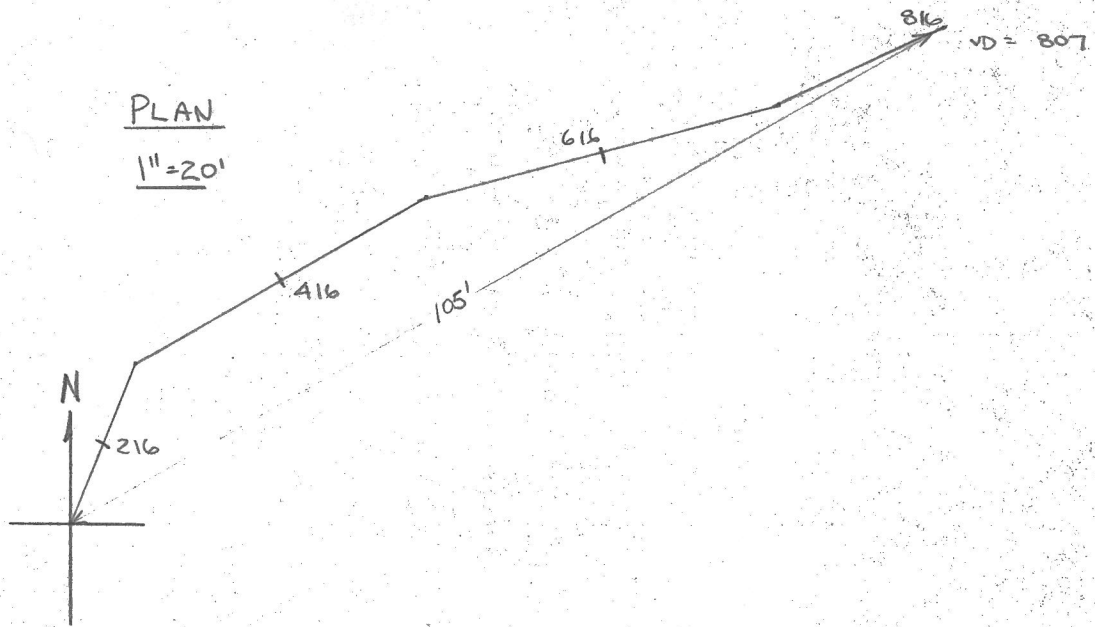
## SECTION

1" = 100'



## PLAN

1" = 20'



Az	DIP	COS	D	HD	SIN	VD
-	90	0	108	0	1.00	108
22	85*	.087	208	18.1	.996	207.4
60	80	.174	200	34.8	.985	197.0
75	79	.191	200	38.2	.982	196.4
65	79	.191	100	19.1	.982	98.2
			816.			807.0

\* Assumed dip - unable to read on instrument.

A-81

Average dip = 35°

Scale: 1" to 20'

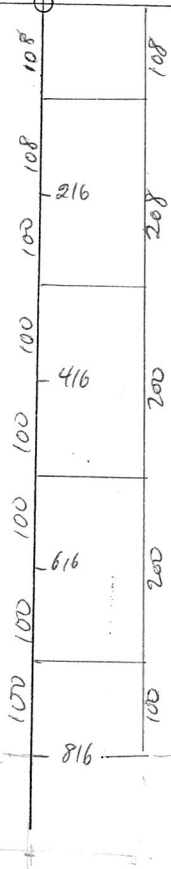
D. D. H. Deviation

Ft.	Dip	Bearing	INTERVAL		COS.	HOR. DIST.		SIN.	V. DIST		ELEV.	LENGTH OF DDH
						FT	M		FT	M		
216	(N.G)	22° 20'	208	316	.0872	18.14	5.53	.99619	207.21	32.92	1275.39	32.92
416	80° 05'	59° 50'	200	516	.1722	34.44	10.50	.98506	197.01	63.16	1179.31	96.32
616	79° 20'	75°	200	716	.1851	37.02	11.28	.98272	196.54	60.05	1119.26	157.28 ✓
816	79° 10'	65°	102	816	.1880	18.80	5.73	.98218	98.22	59.91	1059.35	218.24 ✓
(398)	"	"	82		"	15.42	4.70	"	80.54	29.94	1029.41	248.72
END										24.55	1004.86	273.71

126.8  
187.7  
248.72



62 W  
25  
10 403.99 N  
7739.45 E



248.72

248.72  
273.71

A. 81

checked

HOR. DIST.

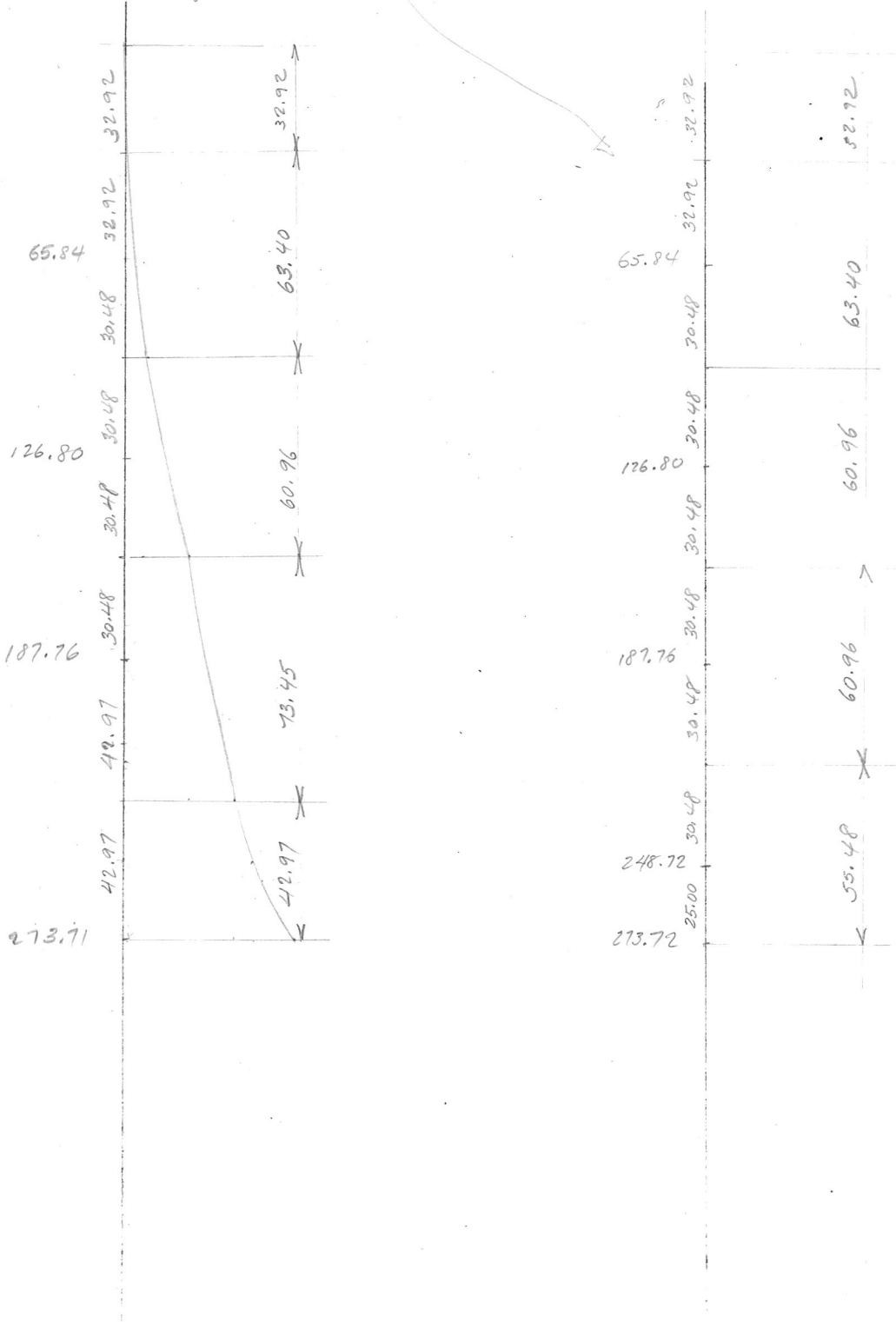
VERT. I

ELEVATION

LENGTH

LENGTH	DIP	BEARING	INTERVAL	LOS	METRES	SIN	MEASURES	ELEVATION	LENGTH
65.84	85	22 20	32.92	.0872	5.53	.99619	32.92	1275.39	32.92
126.80	80 05	59 50	60.96	.1722	10.49	.98510	63.16	1242.47	96.32
187.76	79 20	75	73.45	.1851	13.60	.98272	60.05	1179.31	157.28
273.71	79 10	65	42.97	.1880	8.08	.98218	72.18	1047.08	230.73
			60.96		11.28		42.20	1004.88	273.70
			55.48		10.43		59.91	1059.35	
							54.49	1004.86	

Hole on X-SECT 62W  
Sheet S-E  
25

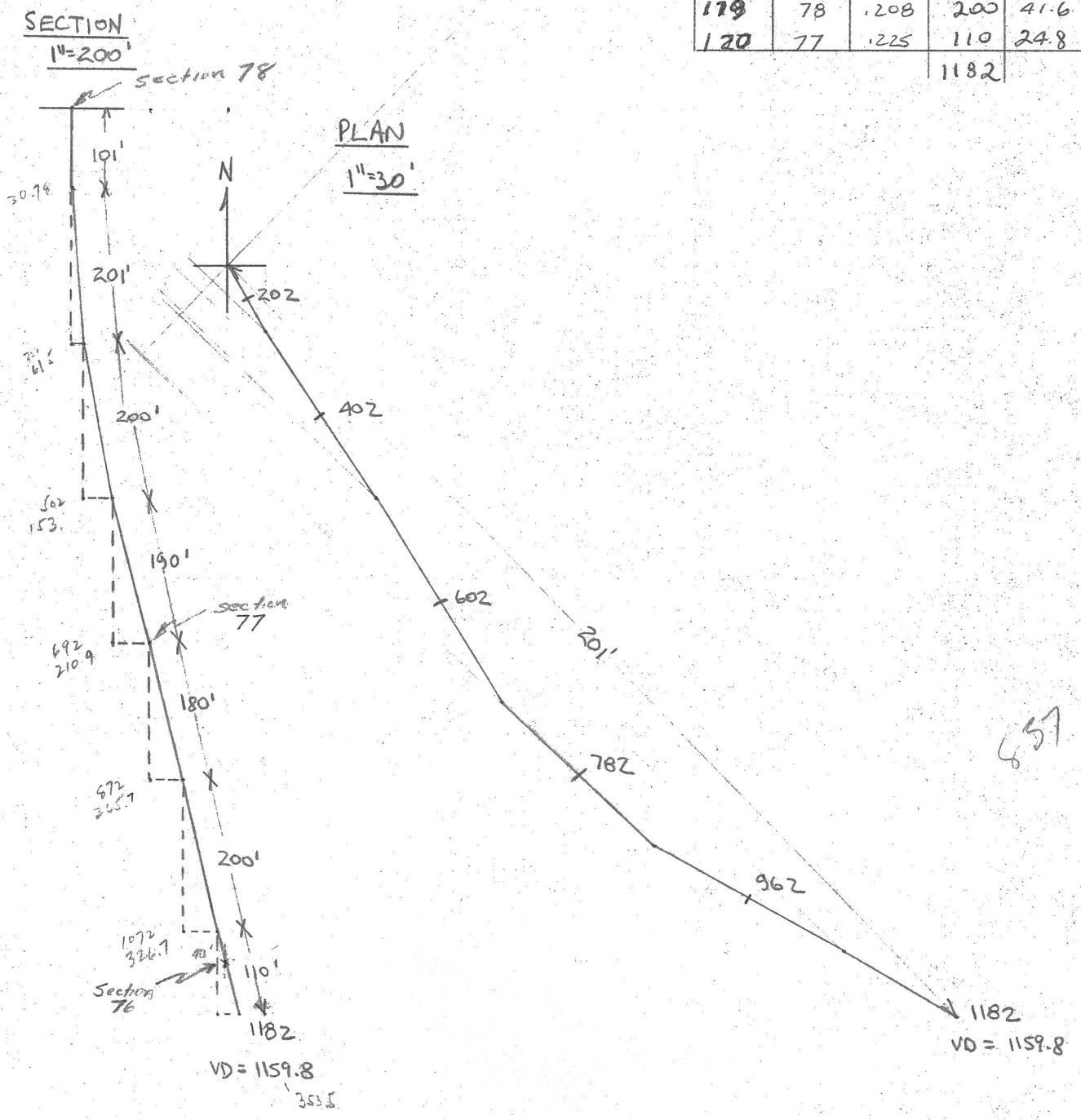


JKC DATE 7/28/75

A 82  
DIP & BRG TESTS  
(Tropari)

SHEET NO. \_\_\_\_\_  
JOB NO. \_\_\_\_\_

Az	DIP	COS	D	MD	SIN	VD
-	90	0	101	0	1.00	101
149	85	.070	201	14.1	.996	200.2
146	79	.191	200	39.2	.982	196.4
146	76	.242	190	46.0	.970	184.3
133	77	.225	180	40.5	.974	175.1
179	78	.208	200	41.6	.978	195.6
120	77	.225	110	24.8	.974	107.2
			1182			1159.8



A-92

Checked by J.C. Nov. 1/76 Vans file -  
 reported on Master Sheet  
 D.D.H. Deviation

Scale: 1" to 20'

Ft.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
20±	85	148°50'	101	.0872	17.53	5.34	.9962	101'	30.78	1281.52	30.78 ✓
402	79	146°20'	200	.1908	38.16	11.63	.9816	200.24	61.03	1220.49	92.05 ✓
602	76	147°50'	190	.2419	45.96	14.01	.9703	184.56	56.25	1104.40	210.92 ✓
782	77	132°50'	180	.2250	40.5	12.34	.9744	175.39	53.46	1050.94	265.785 ✓
962	78	118°50'	200	.2079	41.58	12.67	.9781	195.62	59.62	991.32	326.74
1182	77	149°50'	110	.2250	24.75	7.54	.9744	107.18	32.67	958.65	360.27
	77	119°50'	123		27.6	8.41		119.8	36.5	954.82	3.97

1195. FT

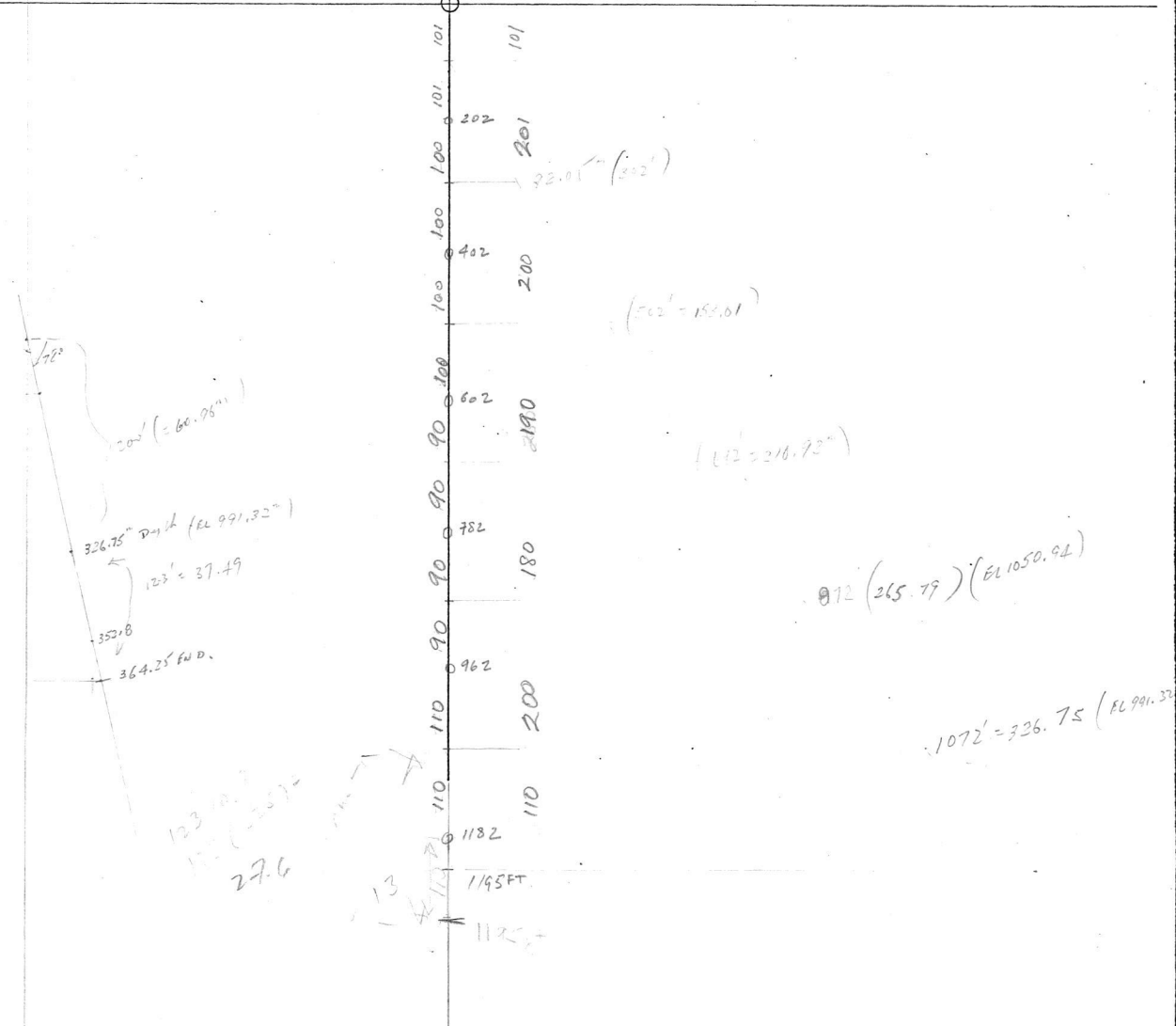
364.24 END



$$h = 131.88$$

$$y = 131.38$$

Pitching Point - 77 1/2 W -

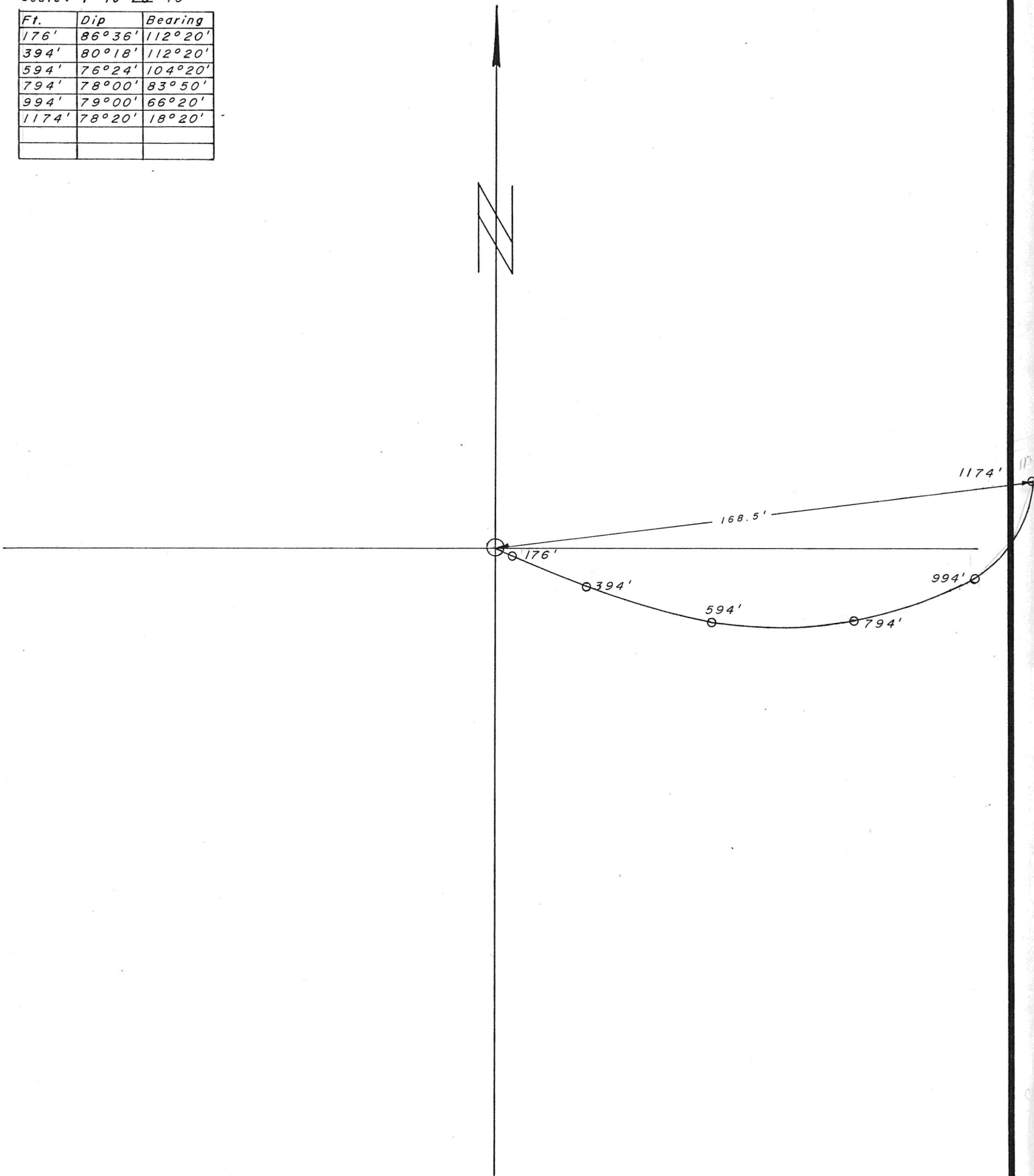


A-83 (71+85 W 2+00 S)

D.D.H. DEVIATION

Scale: 1" to ~~40~~ 40'

Ft.	Dip	Bearing
176'	86°36'	112°20'
394'	80°18'	112°20'
594'	76°24'	104°20'
794'	78°00'	83°50'
994'	79°00'	66°20'
1174'	78°20'	18°20'



BY J.P.

DATE

SUBJECT

A-83

SHEET NO.

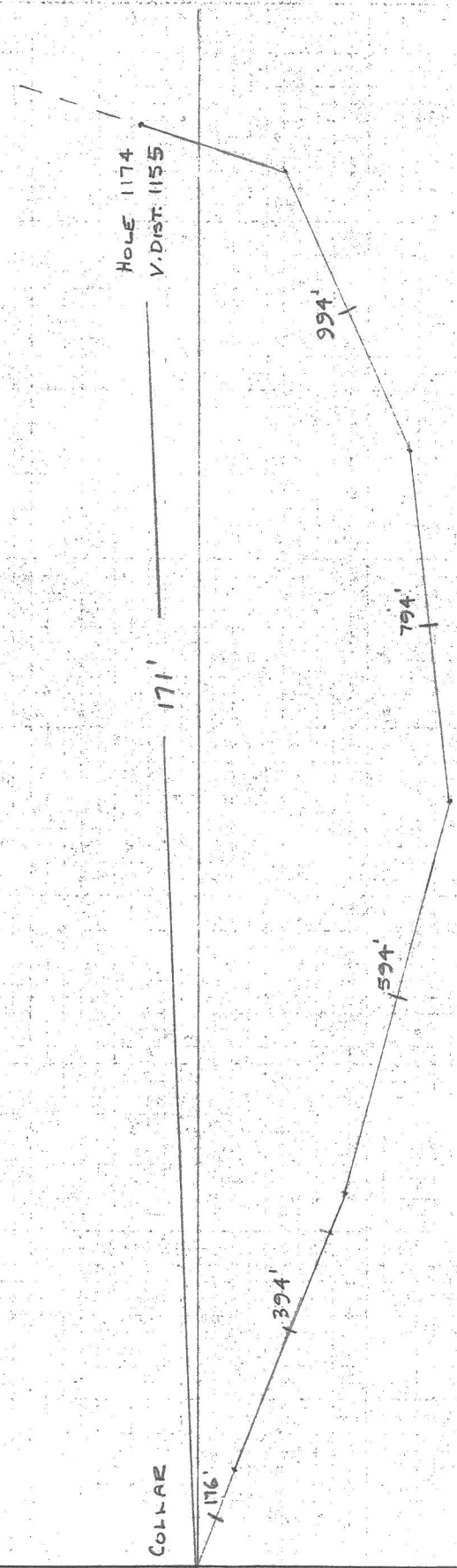
CHKD BY

DATE

TROPARI SUTUEY PLOT

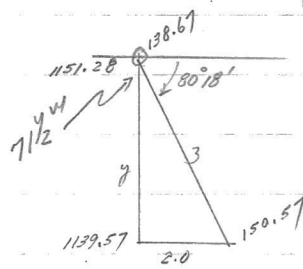
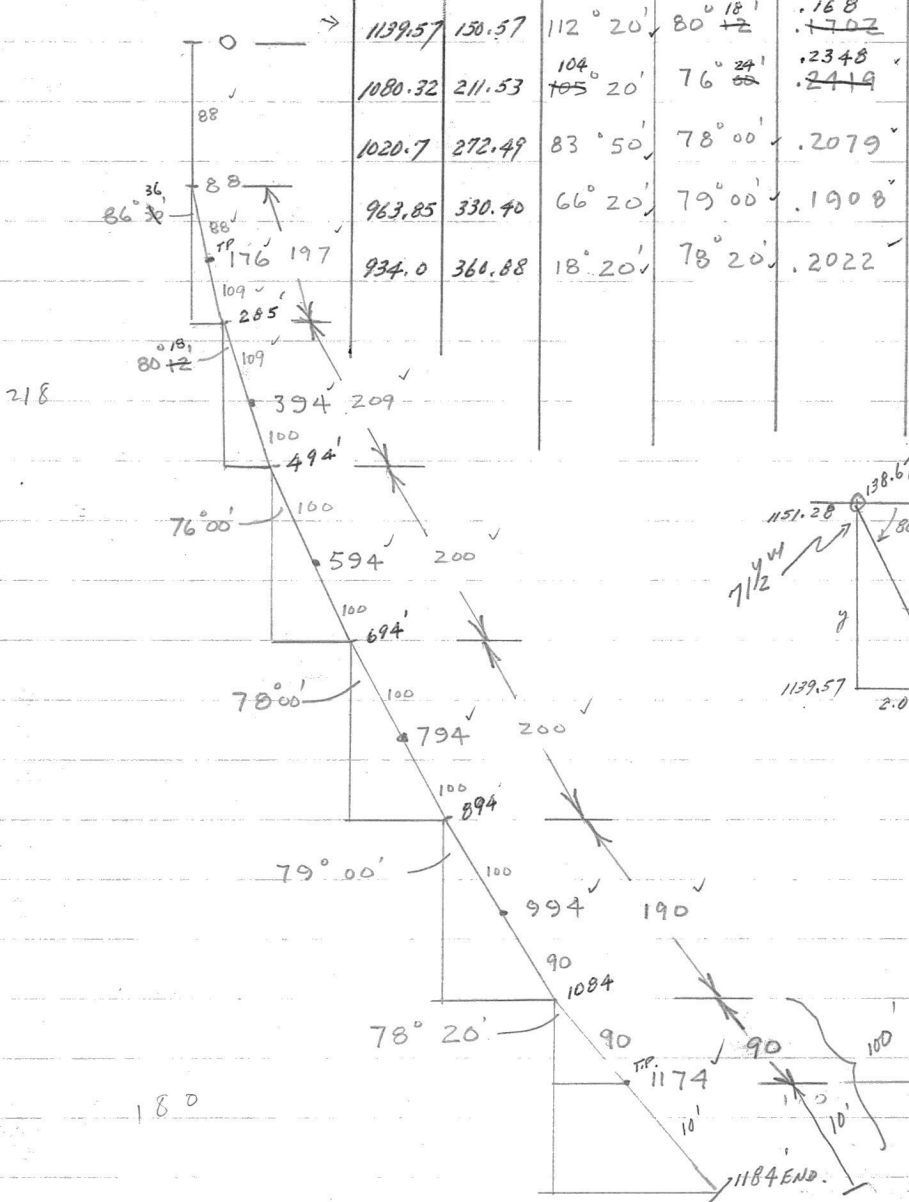
JOB NO.

SCALE: 1" = 20'



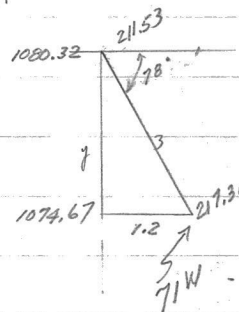
A-83 (1184' or 360.88")

ELEV.	FOOTAGE	AZ	DIP Angle	Cos	DIST	H Dist	Sm	DIST	V DIST
1287.13	0		90°		88 (26.82)	0	1.0000	88	88 (26.82)
1262.31	26.82	112° 20'	86° 36'	.0618	197	12.0	.99821	197	197 (59.94)
1202.37	86.87	112° 20'	80° 18'	.168	209	35.11 (10.70)	.9858	209	206.03 (62.8)
1139.57	150.57	104° 20'	76° 24'	.2348	200	46.96 (14.31)	.9785	200	194.86 (59.25)
1080.32	211.53	83° 50'	78° 00'	.2079	200	110.3	.9785	200	195.62 (59.62)
1020.7	272.49	66° 20'	79° 00'	.1908	190	36.2	.9816	190	186.5 (56.85)
963.85	330.40	18° 20'	78° 20'	.2022	100	20.22	.9793	90	97.93
934.0	360.88				90	18.0 (6.16)		90	88.0 (26.82)
								Σ	1155
									1165.13 (355.13)



$$y = 2(5.854) = 11.71$$

$$z = \frac{2}{0.168} = 11.90$$



$$y = 1.2(4.705) = 5.646$$

$$z = \frac{1.2}{.2079} = 5.77$$

Elev. Diff.

88	
197	
206	3
94	
196	
186	14
88	
1155	21

checked and by Tolson  
Nov. 17/96

A-83

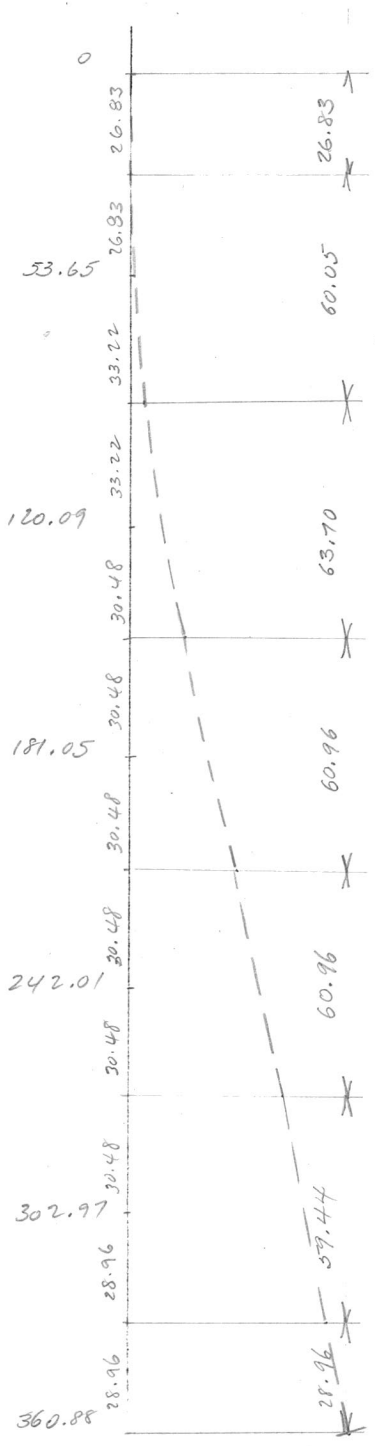
HOR. DIST.

VERT.  $\Sigma$

ELEVATION

LENGTH

LENGTH	DIP	BEARING	INTERVAL	COS	METRES	SIN	MEIKER	ELEVATION	LENGTH
53.65	86 30	112 20	26.83	.0610	3.66	.99813	26.83	1262.3	26.83
120.09	80 20	112 20	63.70	.1679	10.70	.98580	59.94	1202.36	86.88
181.05	76 20	104 20	60.96	.2363	14.40	.97169	59.23	1139.56	150.58
242.01	78	83 50	60.96	.2079	12.67	.97815	59.63	1080.33	211.54
302.97	79	66 20	59.44	.1908	11.34	.98163	58.35	1020.7	272.50
360.88	78 20	18 20	28.96	.2022	5.86	.97934	28.36	962.35	331.94
								933.99	360.90

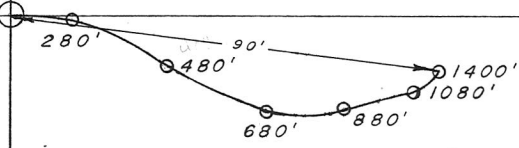


A-84 (78 W. B.L. - 00)

D.D.H. DEVIATION

Scale: 1" to ~~20'~~ 40'

Ft.	Dip	Bearing
280'	85°	93°50'
480'	82°	119°50'
680'	85°	111°50'
880'	85°	79°50'
1080'	85°	75°20'
1400'	89°	38°20'



JP

A-84

# DIP & BEARING SURVEY

TROPARI INST.

WESTING

EASTING

SCALE 1" = 20'

N  
↑

280

480

680

880

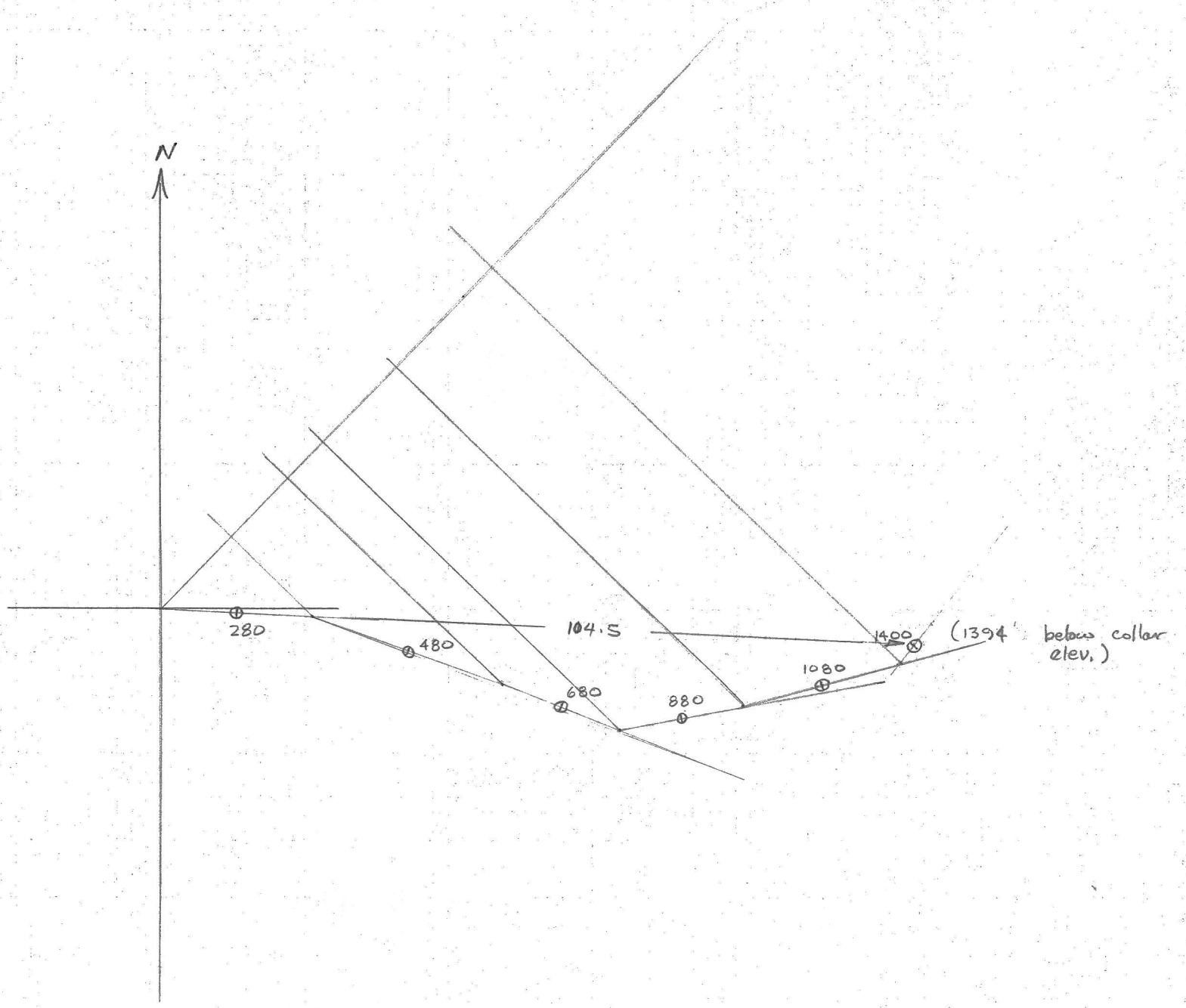
1080

1400

104.5

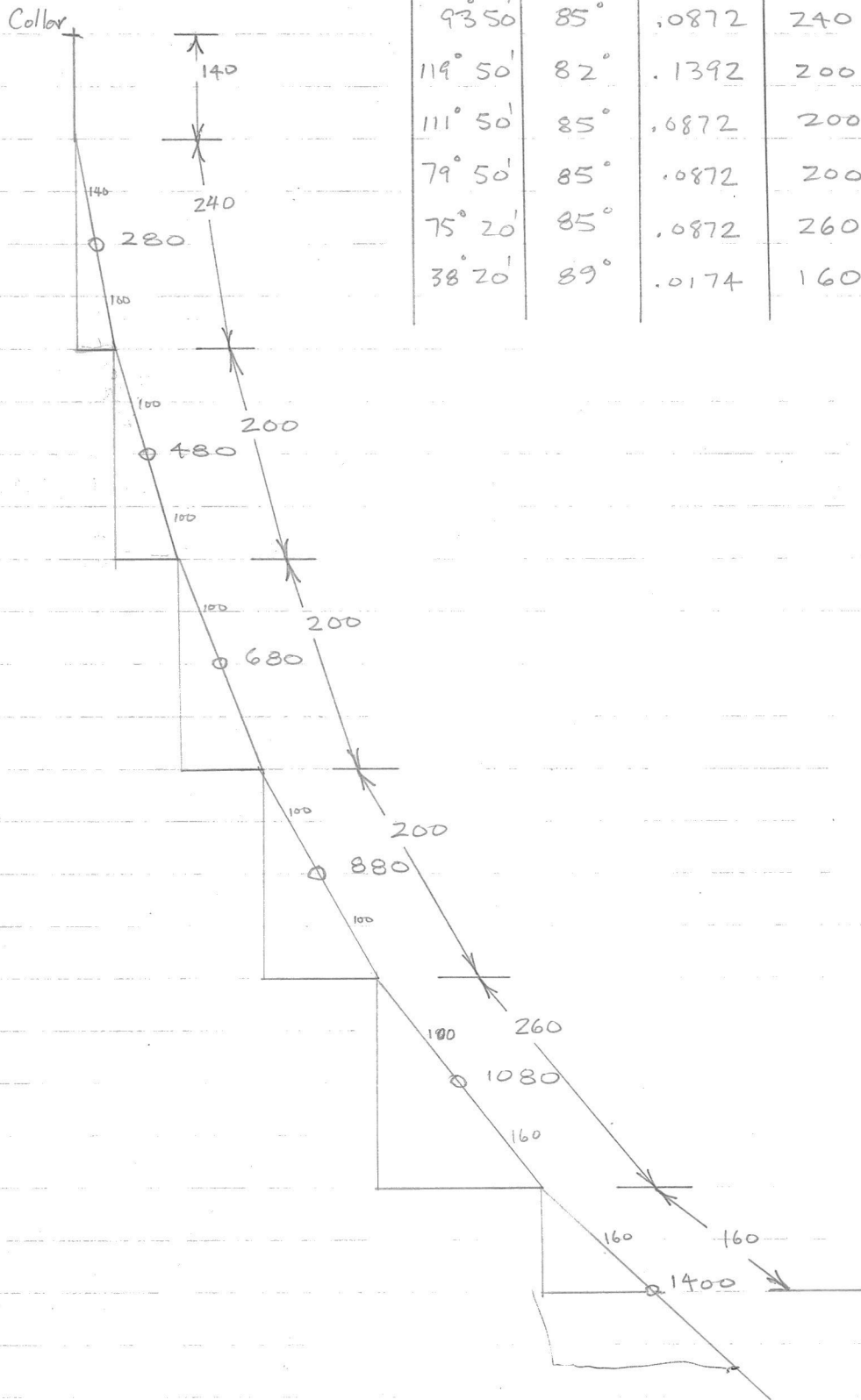
(1394'

below collar elev.)



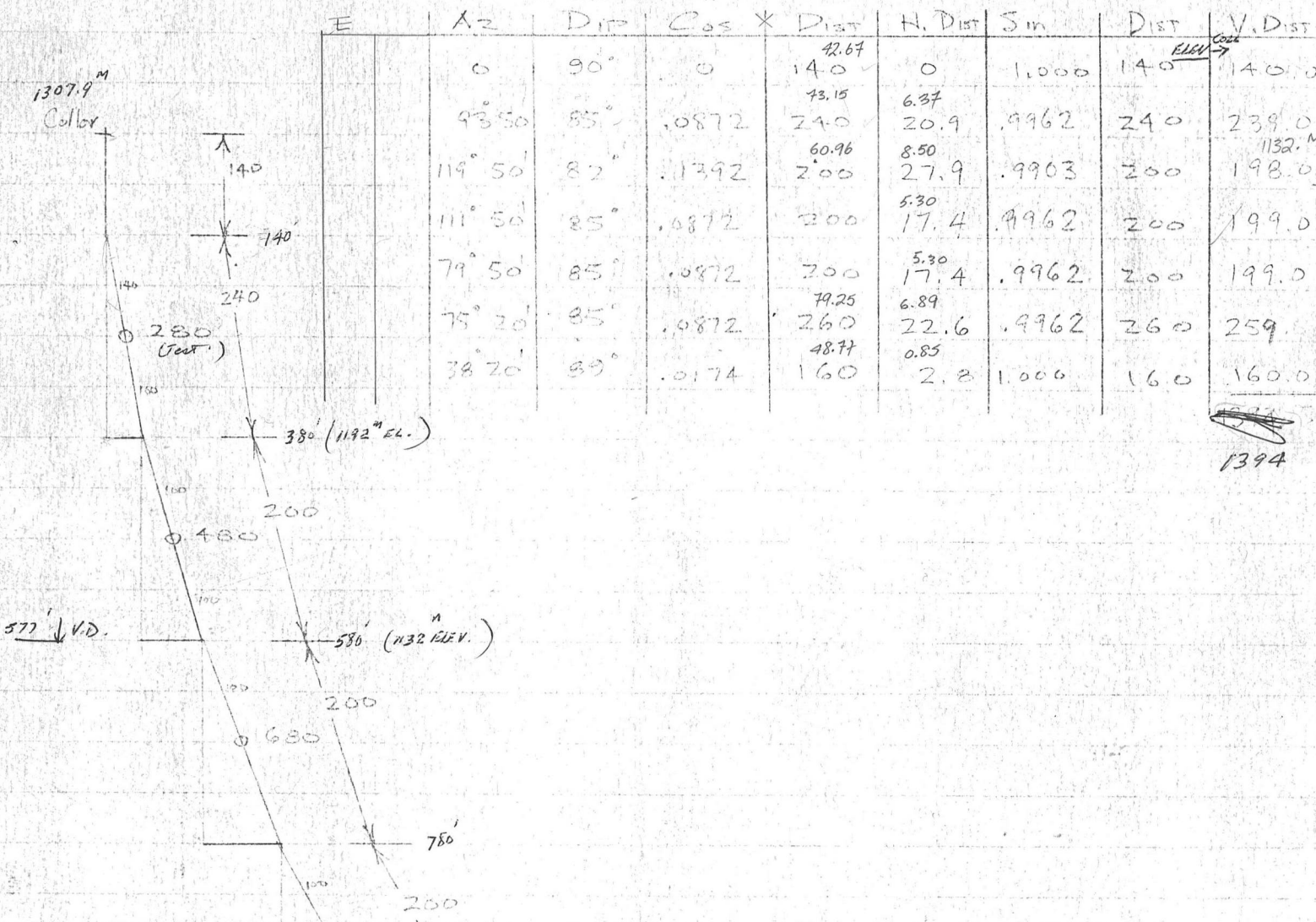
A-84

Az	DIP	cos	DIST	H. DIST	Sin	DIST	V. DIST
0	90°	0	140	0	1.000	140	140.0
93° 50'	85°	.0872	240	20.9	.9962	240	239.0
119° 50'	82°	.1392	200	27.9	.9903	200	198.0
111° 50'	85°	.0872	200	17.4	.9962	200	199.0
79° 50'	85°	.0872	200	17.4	.9962	200	199.0
75° 20'	85°	.0872	260	22.6	.9962	260	259.5
38° 20'	89°	.0174	160	2.8	1.000	160	160.0
				9.0			1394.5



1394.5 below collar elevation

A-84



1394

AZIMUTH	DIP	INTERVAL	COS	HOR. DIST		SIN	VERT. DIST		ELEV.	LENGTH OF DDH
				FT	M		FT	M		
0	90°	140	0	0	0	1.000	140.0	42.67	1307.9	42.64
93° 50'	85°	240	.0872	20.9	6.37	.99629	239.0	72.85	1265.23	115.82
119° 50'	82°	200	.1392	27.9	8.50	.99027	198.	60.35	1192.38	176.78
111° 50'	85°	200	.0872	17.4	5.30	.99619	199	60.65	1132.03	237.74
79° 50'	85°	200	.0872	17.4	5.30	.99619	199	60.65	1071.38	298.70
75° 20'	85°	260	.0872	22.6	6.89	.99619	259	78.94	1010.73	377.95
38° 20'	89°	160	.0175	2.8	0.85	1.000	160.	48.77	931.79	426.72
						.99985			883.02	456.59 END

29.87

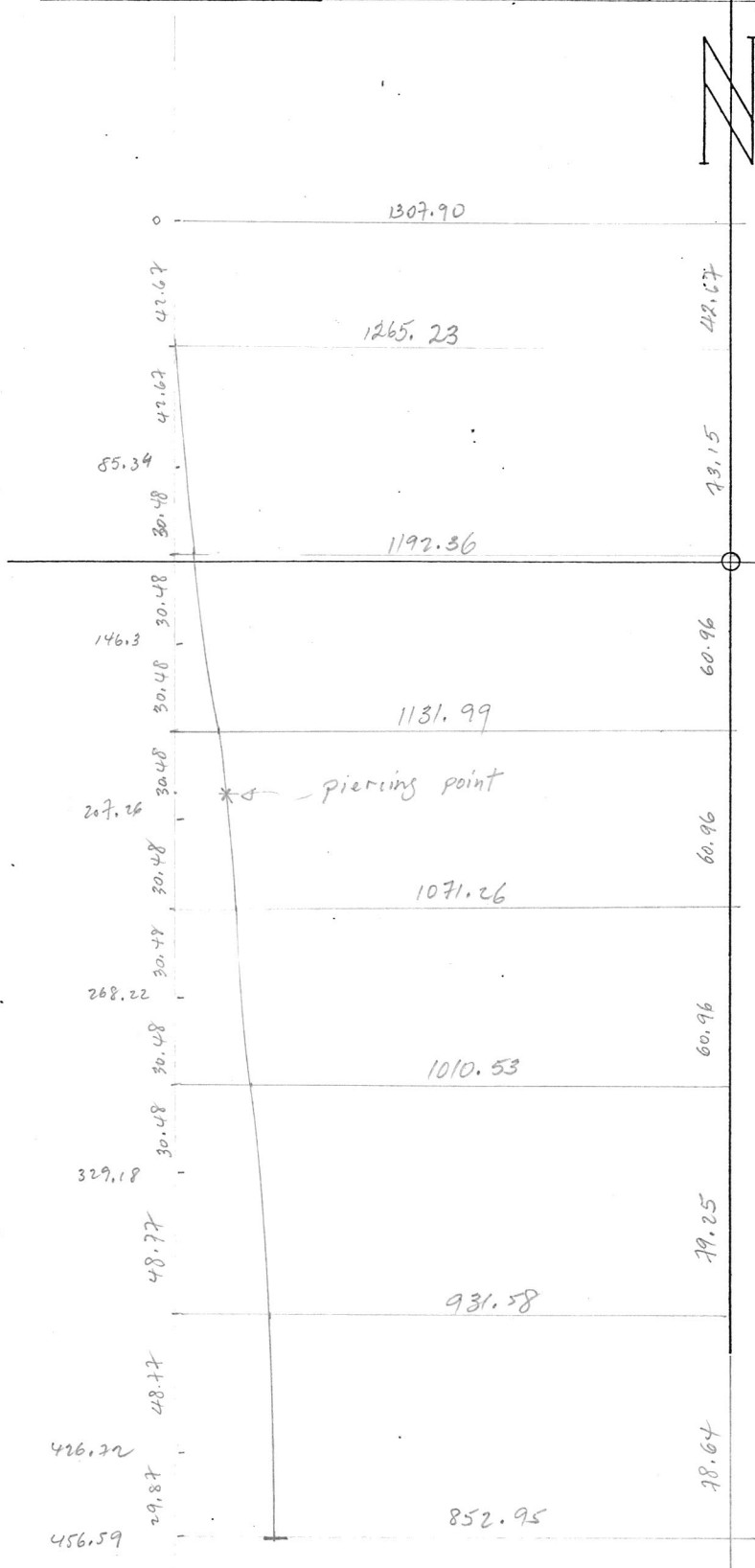
A. 84

checked ✓

D. D. H. Deviation

Scale: 1" to 20'

Fl.	Dip	Bearing	HOR. DIST.		VERT. DIST.		ELEV.	LENGTH OF DDH
			FT	M	FT	M		
85.34	85° ✓	93° 50' ✓	42.67 ✓	73.15 ✓	6.38 ✓	42.67 ✓	1307.9	42.67 ✓
146.3	82° ✓	119° " ✓	60.96 ✓	11392 ✓	8.49 ✓	72.87 ✓	1265.23	115.82 ✓
207.26	85° ✓	111° " ✓	60.96 ✓	10872 ✓	5.32 ✓	60.37 ✓	1192.36	176.78 ✓
268.22	85° ✓	79° " ✓	60.96 ✓	10872 ✓	5.32 ✓	60.73 ✓	1131.99	237.74 ✓
329.18	85° ✓	75° 20' ✓	79.25 ✓	10872 ✓	6.91 ✓	60.73 ✓	1071.26	298.70 ✓
426.72	89° ✓	38° 20' ✓	78.64 ✓	10175 ✓	1.38 ✓	78.95 ✓	1010.53	377.95 ✓
						78.63	852.95	456.59 ✓



Piercing point:

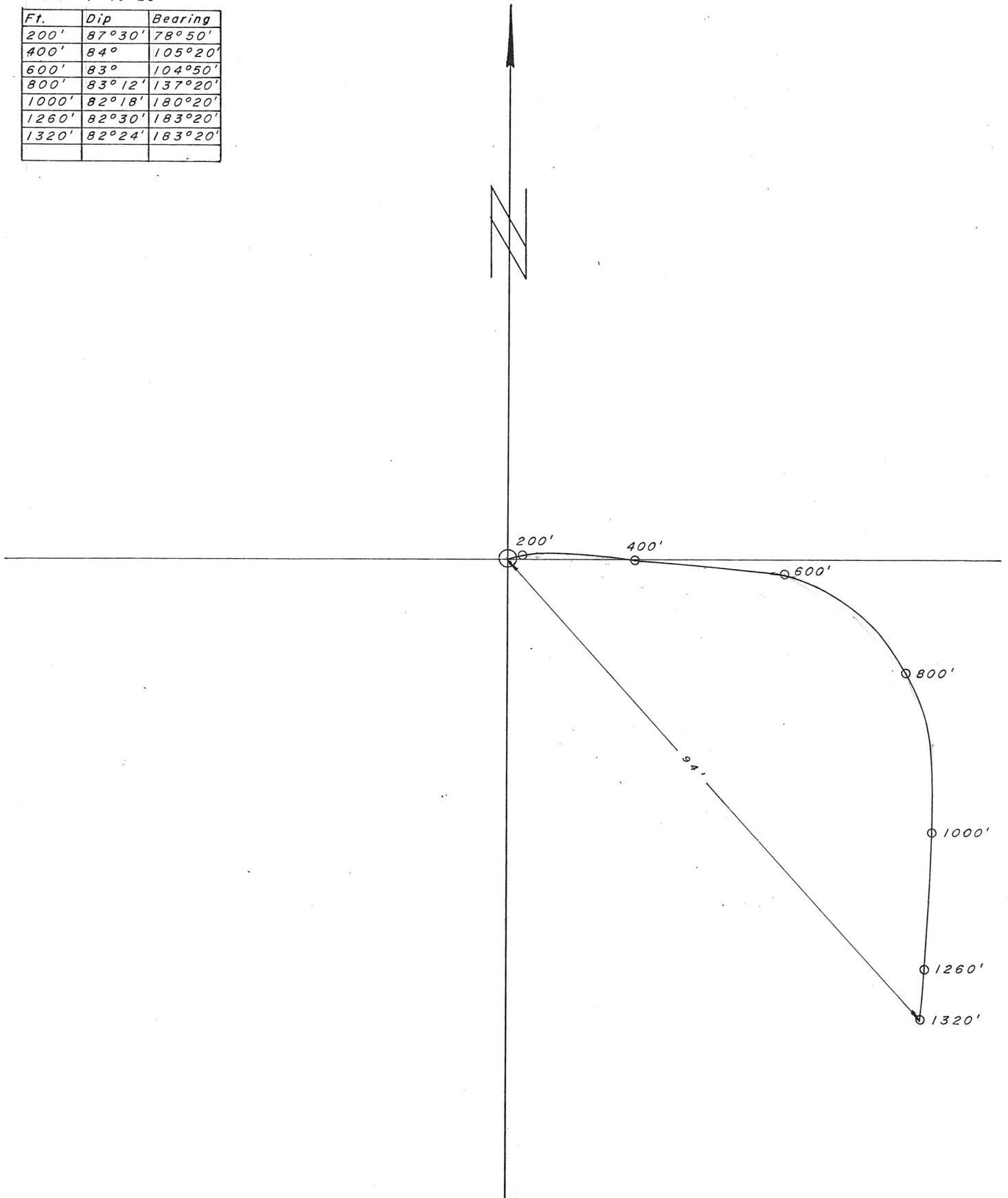
$77\frac{1}{2} W : y = 21.34$   
 $R = 21.55$   
 $length = 198.33$

A-85 (82 W., 4 N.)

D.D.H. DEVIATION

Scale: 1" to 20'

Ft.	Dip	Bearing
200'	87°30'	78°50'
400'	84°	105°20'
600'	83°	104°50'
800'	83°12'	137°20'
1000'	82°18'	180°20'
1260'	82°30'	183°20'
1320'	82°24'	183°20'



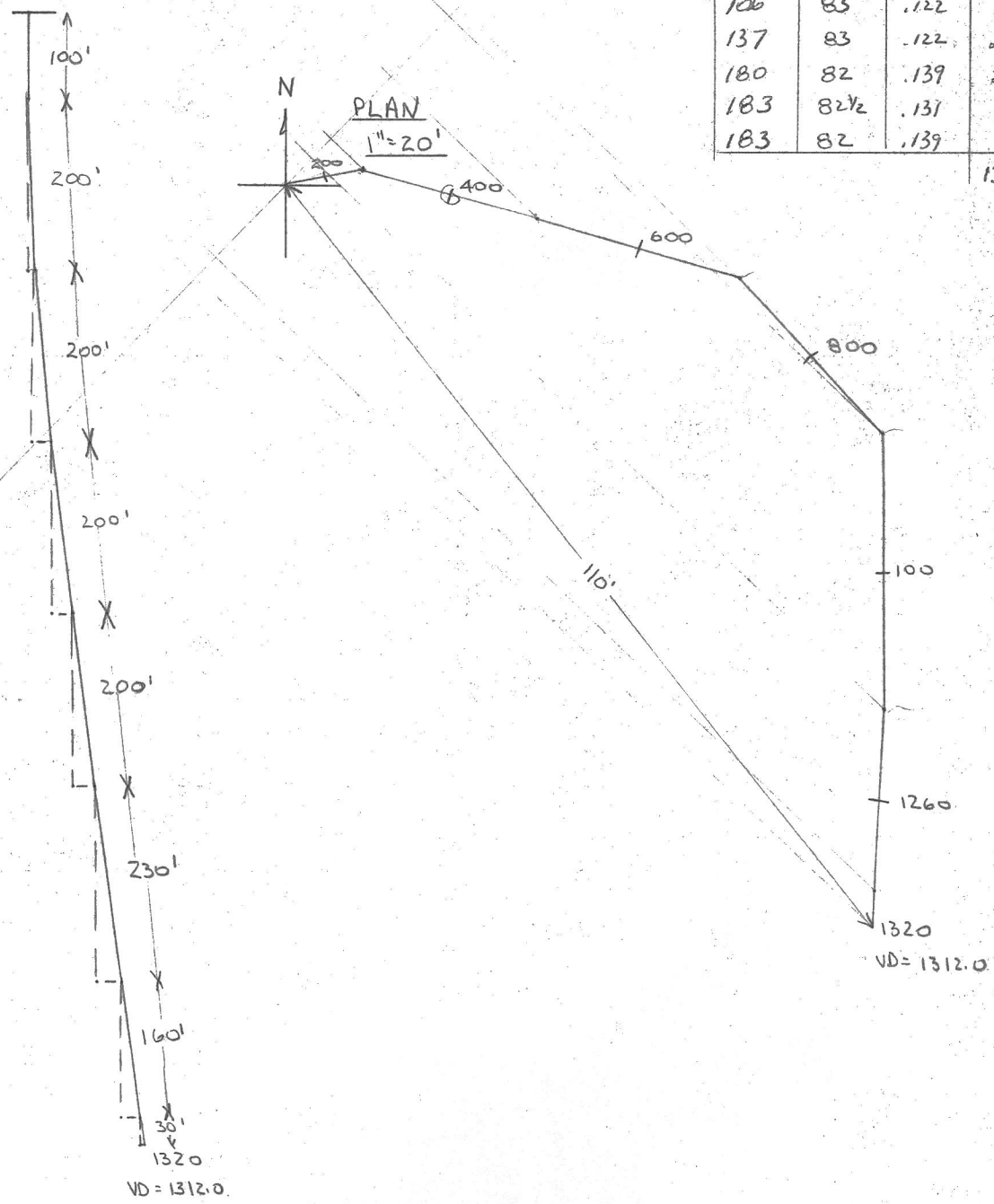
JKC

7/28/75

# A-85 DIP & BRG TESTS (Sperry Sun)

SECTION  
1" = 200'

AZ	DIP	COS	D	HD	SIN	VD
-	90	0	100	0	1.00	100.0
79	87.5	.045	200	9.0	.999	199.8
105	84	.105	200	21.0	.995	199.0
106	83	.122	200	24.4	.993	198.6
137	83	.122	200	24.4	.993	198.6
180	82	.139	230	32.0	.990	227.8
183	82 1/2	.131	160	21.0	.991	158.5
183	82	.139	30	4.27	.990	29.7
			1320			1312.0



896  
1123.8

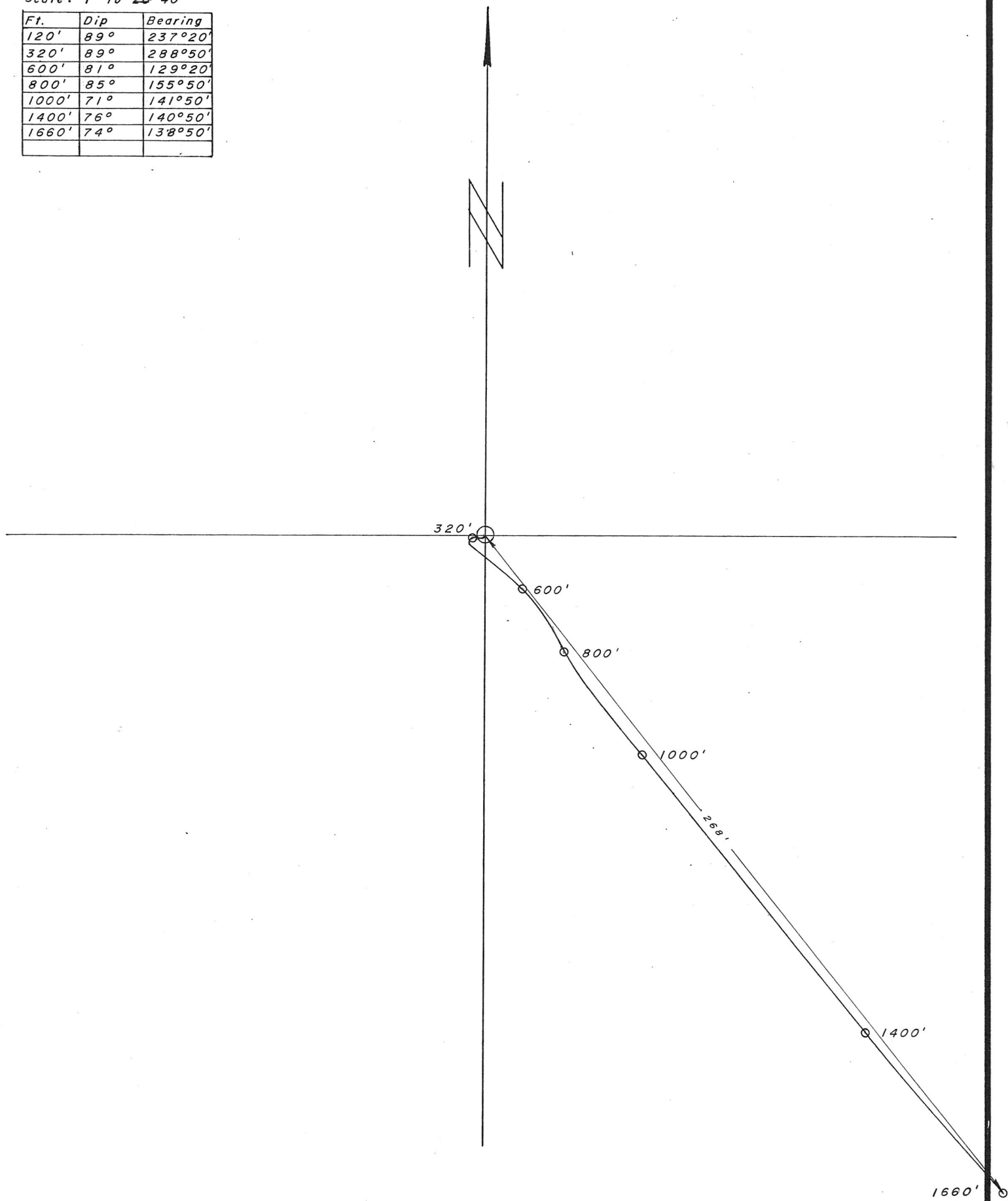


A-86 (108+06W. 12+03N.)

D.D.H. DEVIATION

Scale: 1" to ~~20'~~ 40'

Ft.	Dip	Bearing
120'	89°	237°20'
320'	89°	288°50'
600'	81°	129°20'
800'	85°	155°50'
1000'	71°	141°50'
1400'	76°	140°50'
1660'	74°	138°50'



JP

A-86

DIP & Bearing Survey  
Tropari Instrument

SHEET NO.

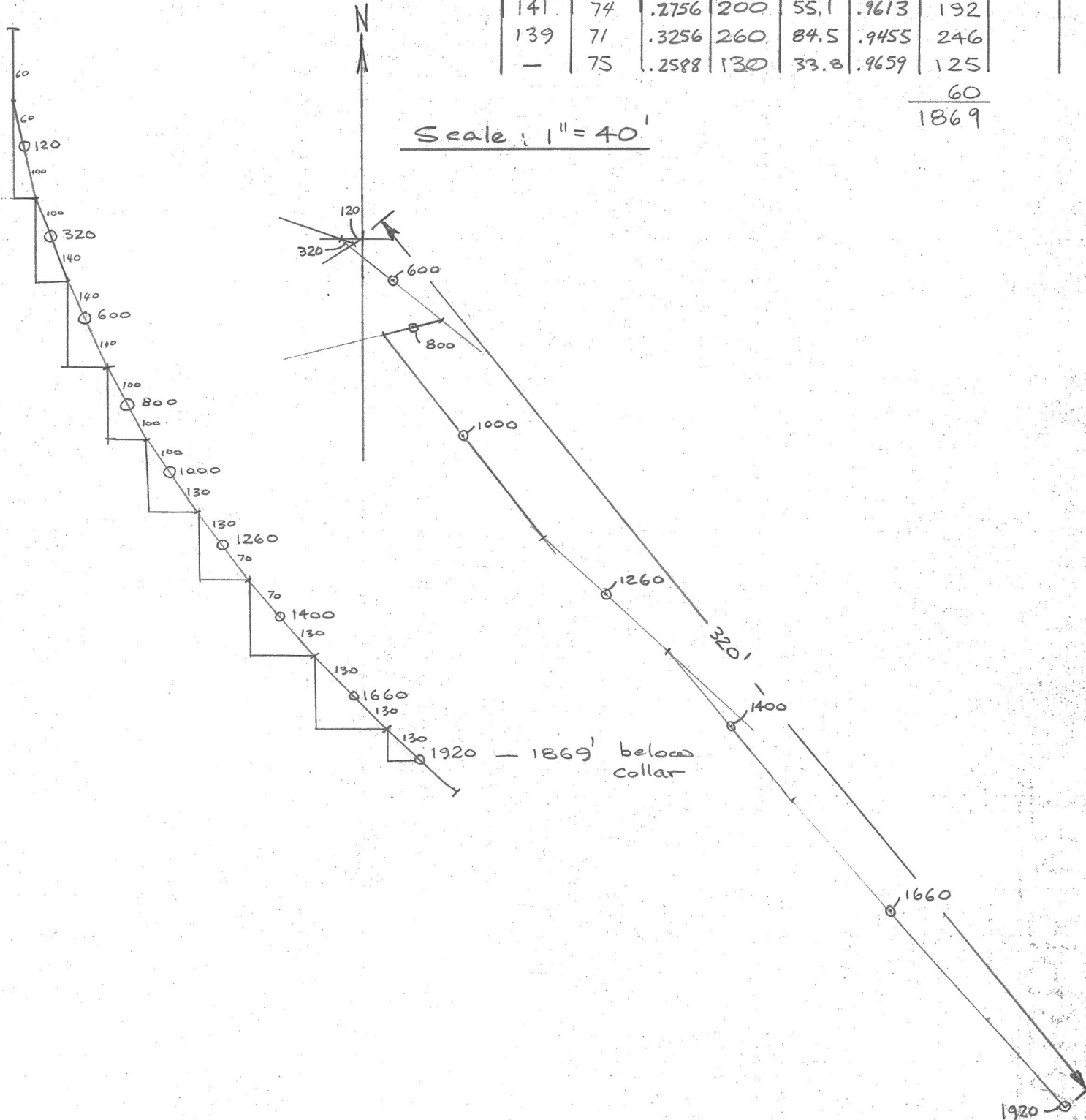
JOB NO.

Scale 1" = 40'

Az	DIP	Cos	D	HD	Sin	VD
237	89	.0174	160	2.78	.9998	160
289	89	.0174	240	4.18	.9998	240
129	81	.1564	240	37.6	.9877	236
256	85	.0872	200	17.4	.9962	199
142	71	.3256	230	74.7	.9455	217
133	76	.2419	200	48.4	.9703	194
141	74	.2756	200	55.1	.9613	192
139	71	.3256	260	84.5	.9455	246
-	75	.2588	130	33.8	.9659	125
						60
						1869

Sketch Section  
not to scale

Scale: 1" = 40'

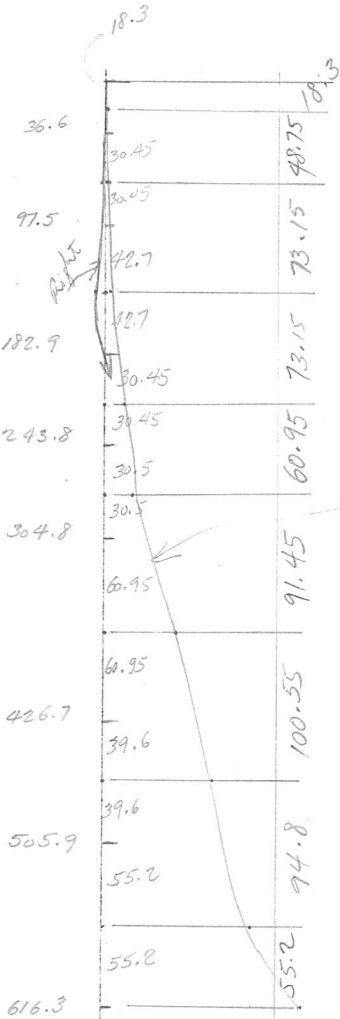


A-86

LENGTH	BEARING	INTERVAL	Hor. DIST		VERT. D.		ELEVATION	LENGTH
			COS	METRES	DIP	SIN		
		18.3					1301.36	
36.6	237°20	48.75	.0175	0.85	89°	.99985	1283.06	18.30
97.5	288°50	73.15	.0175	1.28	89°	.99985	1234.36	67.05
182.9	129°20	73.15	.1564	11.44	81°	.98769	1161.26	140.20
243.8	155°50	60.95	.0872	5.31	85°	.99619	1089.01	213.35
304.8	141°50	91.45	.3256	29.78	71°	.94552	1028.29	274.30
426.7	140°50	100.55	.2419	24.32	76°	.97030	941.82	365.75
505.9	138°50	94.8	.2756	26.73	74°	.96126	844.26	466.30
		55.2		15.2			753.13	561.10
							700.07	616.31
							601.29	

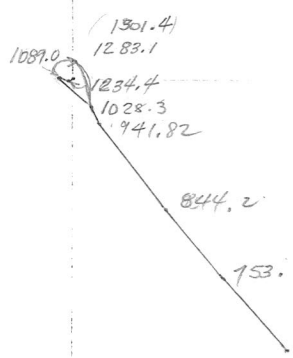
1:5000

11 680.81 N  
7 027.90 E



wrong.

	x =	y =	elevation	Length
108W	33.89	33.47	1122.48	179.46
107 1/2	70.64	66.8	1008.6	295.11
107	23.03	21.78	963.58	342.72
106 1/2	23.03	21.78	920.02	388.78
106	5.79	5.62	849.92	460.57
105 1/2	57.87	56.16	788.14	524.17
105	10.88	10.46	742.64	571.98



Scale - 1:100

108<sup>W</sup> - Topo elevations:

10 N

11 - 1301.2

12 - 1301.35

13 - 1301.45 ✓

14 - 1303.31 ✓

15 - 1307.65 ✓

16 - 1308.4 ✓

17 - 1311.93 ✓

18 - 1310.89 ✓

19 - 1310.96 ✓

20 - 1317.42 ✓

21 - 1320.68 ✓

22 - 1322.02 ✓

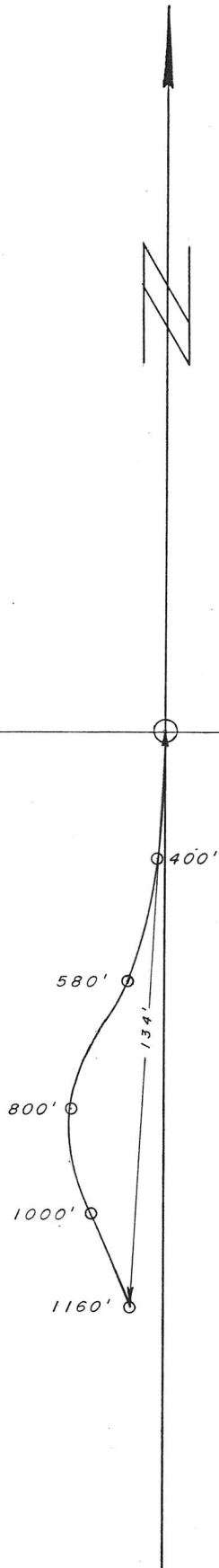
23 - 1321.78 ✓

A-87 ( 82+07 W. 6+00 N. )

D.D.H. DEVIATION

Scale: 1" to ~~20'~~ 40'

Ft.	Dip	Bearing	
400'	81°30'	<del>182°30'</del>	132°20
580'	80°	<del>197°20'</del>	137°20
800'	83°	<del>207°20'</del>	127°20
1000'	82°30'	157°20'	✓
1160'	<del>81°</del>	157°20'	✓



JP

July 27/75

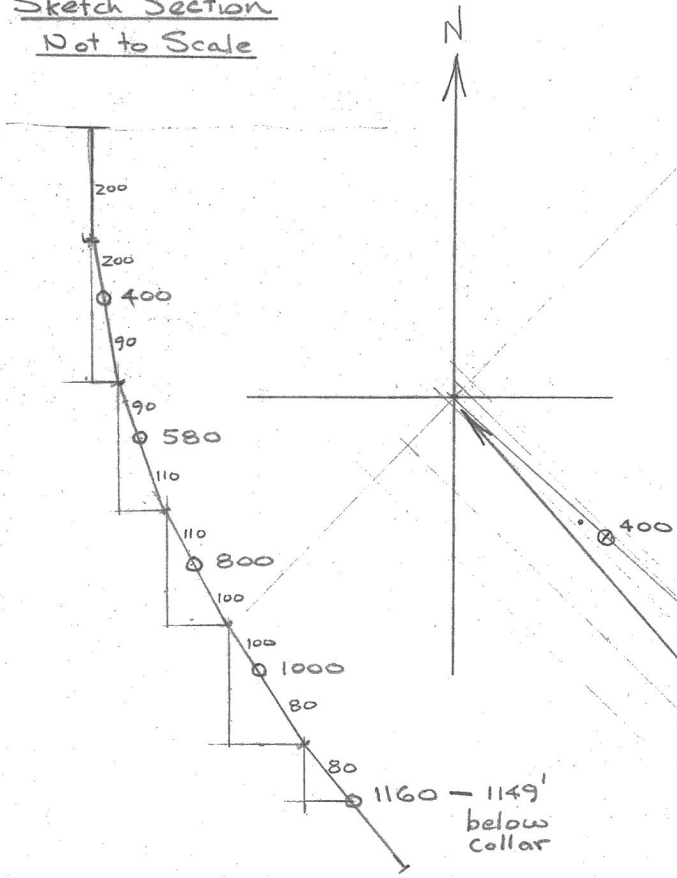
A-87

Dip & Bearing Survey  
Sperry Sun Instrument

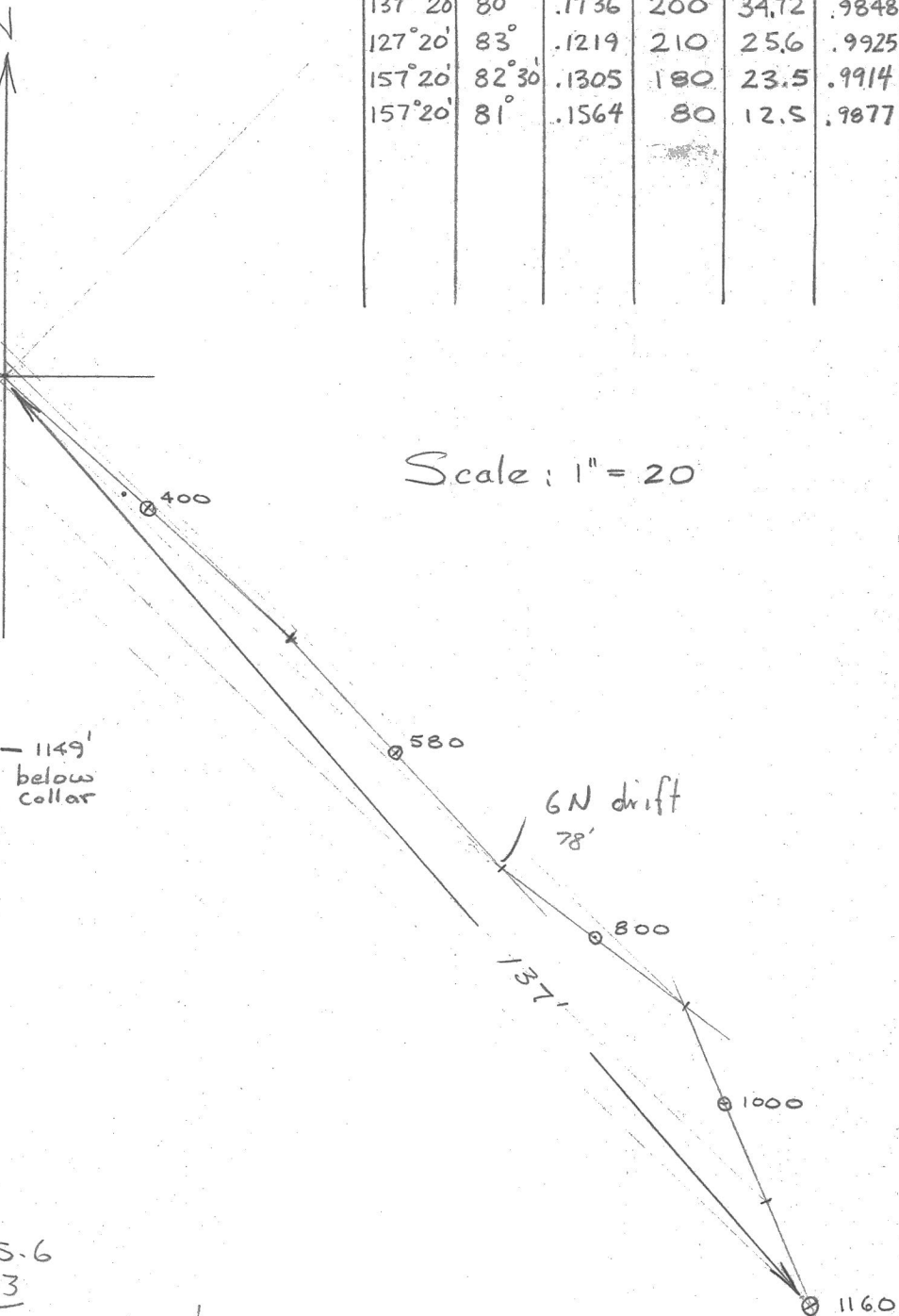
Scale: 1" = 20'

Az	Dip	Cos	Dist.	H.D	Sin	VD
132° 20'	81° 30'	.1478	290	42.9	.9890	286
137° 20'	80°	.1736	200	34.72	.9848	197
127° 20'	83°	.1219	210	25.6	.9925	208
157° 20'	82° 30'	.1305	180	23.5	.9914	178
157° 20'	81°	.1564	80	12.5	.9877	80
						200
						1149

Sketch Section  
Not to Scale



Scale: 1" = 20'



Collar

$$\begin{array}{r} 1315.6 \\ 1103 \\ \hline 213 = 698' \end{array}$$

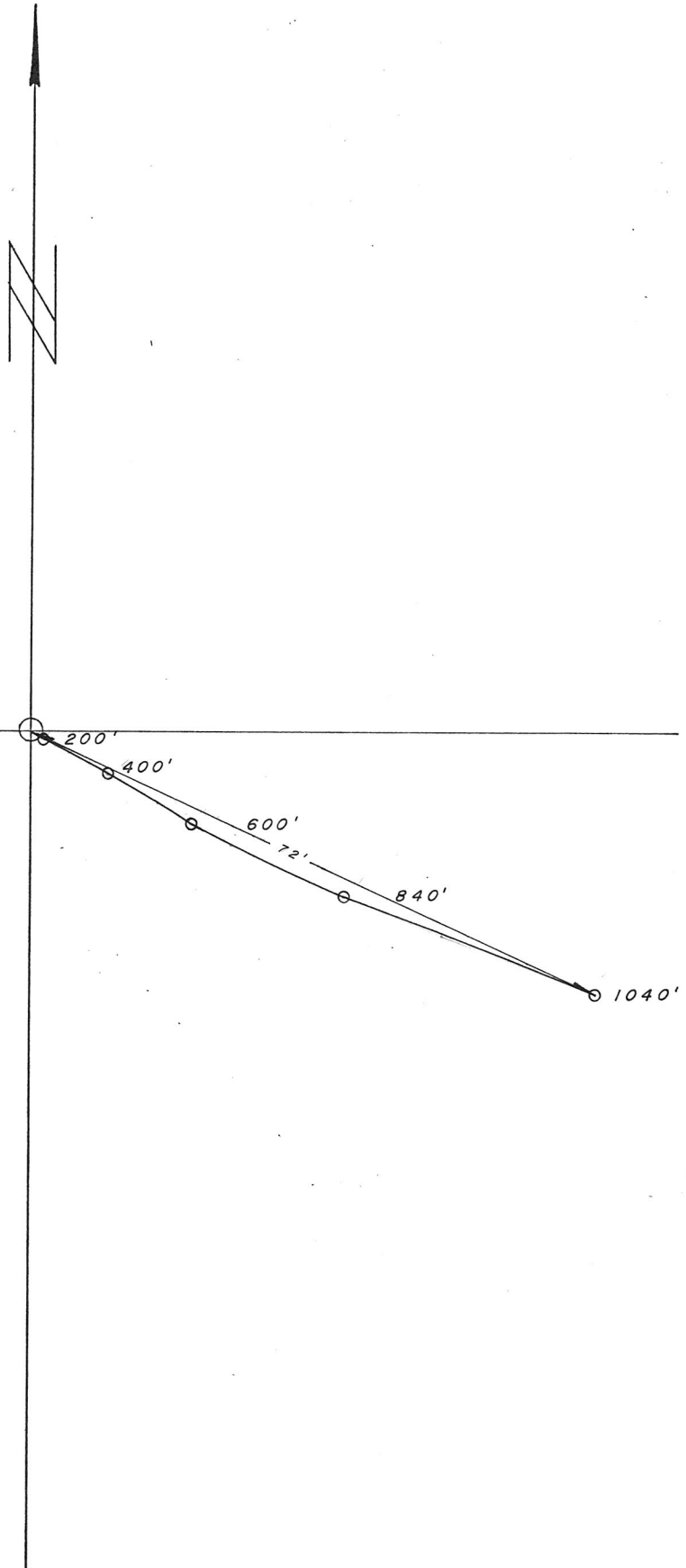


A-83 (74+02W. 5+90N.)

D.D.H. DEVIATION

Scale: 1" to 20'

Ft.	Dip	Bearing
200'	89°	121°20'
400'	86°	118°20'
600'	87°30'	122°20'
840'	83°	115°20'
1040'	79°	111°20'



J.P.

July 31

1975

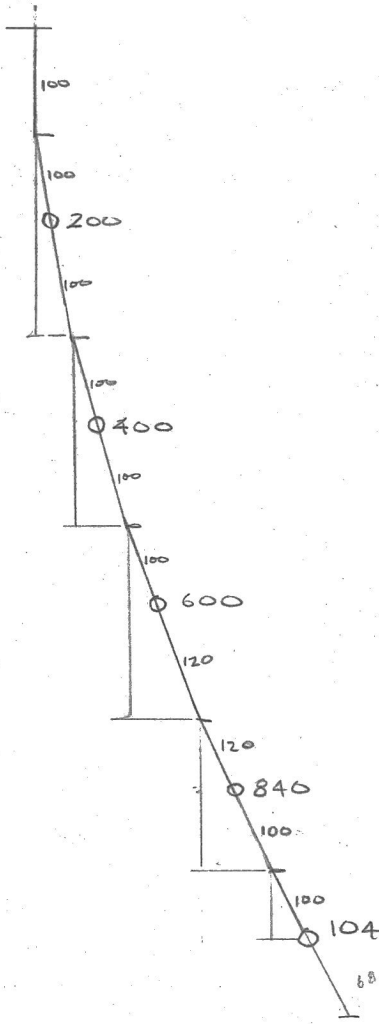
A-88

DIP & BEARING SURVEYS  
TROPARI INSTRUMENT

Scale: 1" = 20'

Sketch  
Not to scale

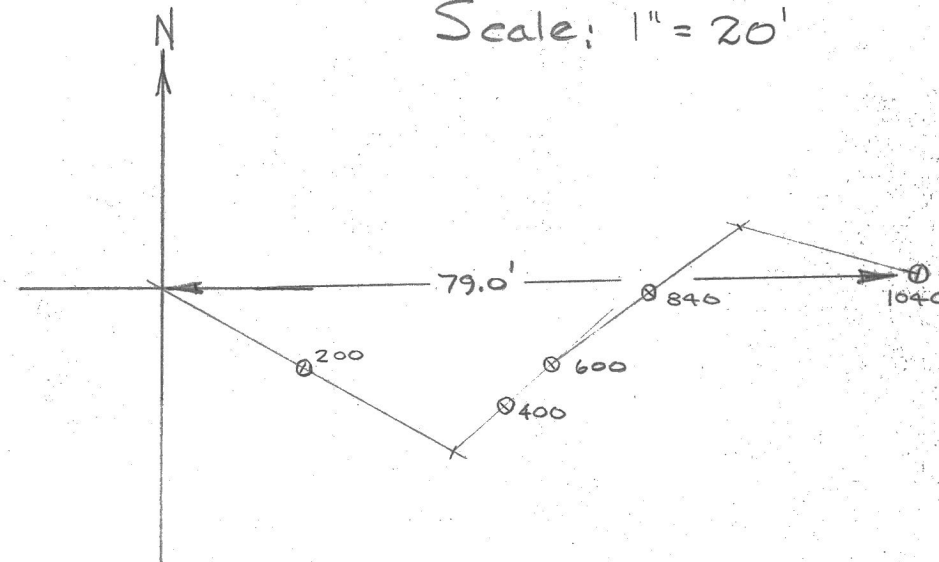
AZ	DIP	cos	DIST	HD	SIN	VD
119° 50'	89	.0174	200	34.8	1.000	200
48° 50'	86	.0698	200	13.9	.9976	199.5
<del>119° 50'</del>	90	0	220	0	1.000	220
54° 20'	83	.1219	220	24.8	.9925	218
105° 20'	79	.1908	100	19.1	.9816	98.2
						100
						1035.7



1040 - 1035.7' below collar  
1108 - 1102.3' below collar

$$\begin{array}{r} 4310.9 \\ - 1102.3 \\ \hline 3208.6' = 977.98'' \text{ clear} \end{array}$$

Scale: 1" = 20'



$$\begin{array}{r} 620 \\ 360 \\ \hline 260 \end{array}$$

Collar

$$\begin{array}{r} 1314.0 \\ 1140.3 \\ \hline 173.7 \end{array}$$

Scale: 1" = 10 20' A. 88

B.D.M. DEVIATION

FT.	Dip	Bearing	INTERVAL	COS	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH.
					FT	M		FT	1		
			30.48						48	1313.97	30.48
60.96	89°	121° 20'	60.96	.0175		1.07	.99985		60.95	1222.54	91.44
121.92	86°	118° "	60.96	.0698		4.26	.99756		60.81	1161.73	152.40
182.88	87° 30'	122°	67.06	.0436		2.92	.99905		67.00	1094.73	219.46
256.03	83°	115°	67.06	.1219		8.17	.99255		66.56	1028.17	386.52
316.99	79°	111°	<del>54.26</del>	.1908		<del>10.35</del>	.98163		<del>53.26</del>	<del>944.97</del>	340.48
			51.19			9.70			50.24	977.93	337.7

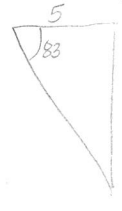
~~340.48~~  
337.7

10,827.58  
7,649.82

74W/6N

Scale - 1:25

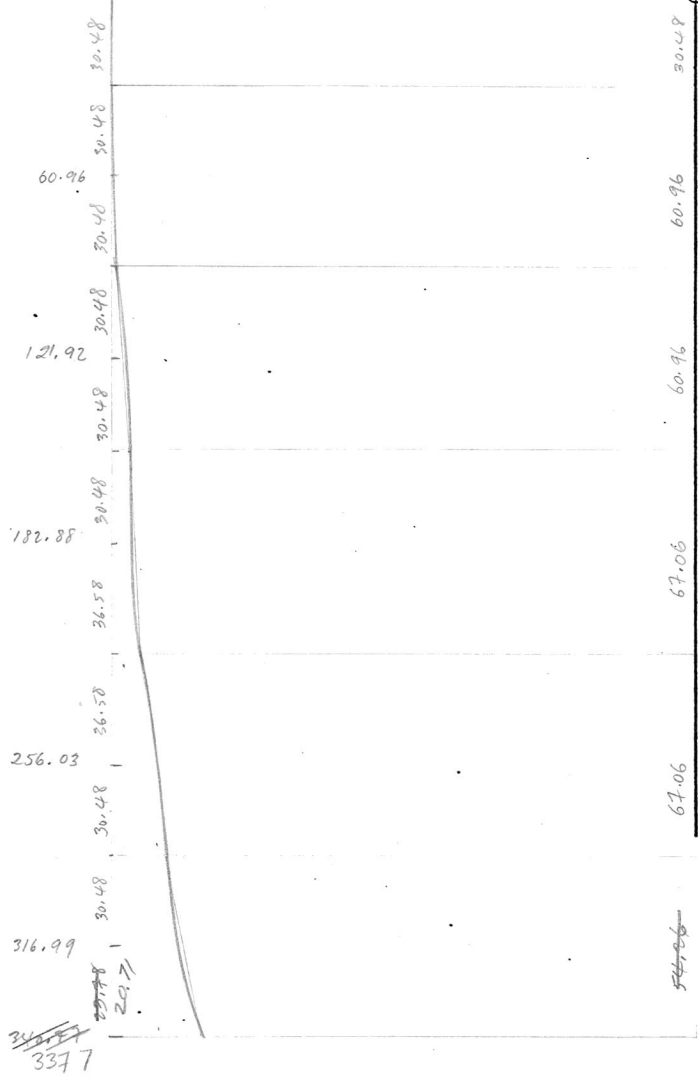
10947  
29.46



Tan = 8.144  
L = 40.72

1053.98  
260.47

N



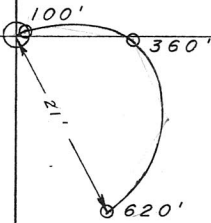
~~340.48~~  
337.7

A-89 (82+10 W. 8+00 N)

D.D.H. DEVIATION

Scale: 1" to 20'

Ft.	Dip	Bearing
100'	89°	62°50'
360'	86°	98°50'
620'	85°	213°50'



J.P.

July 31

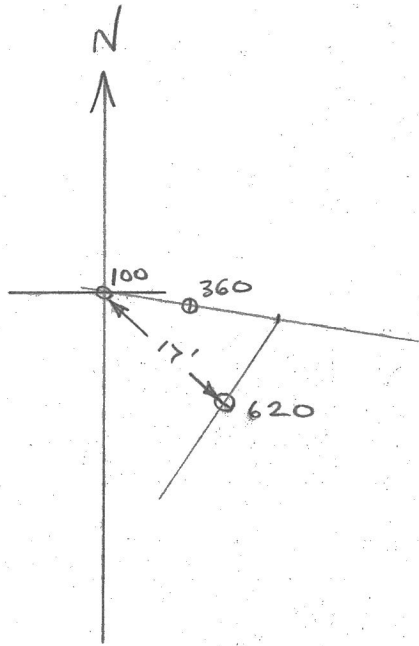
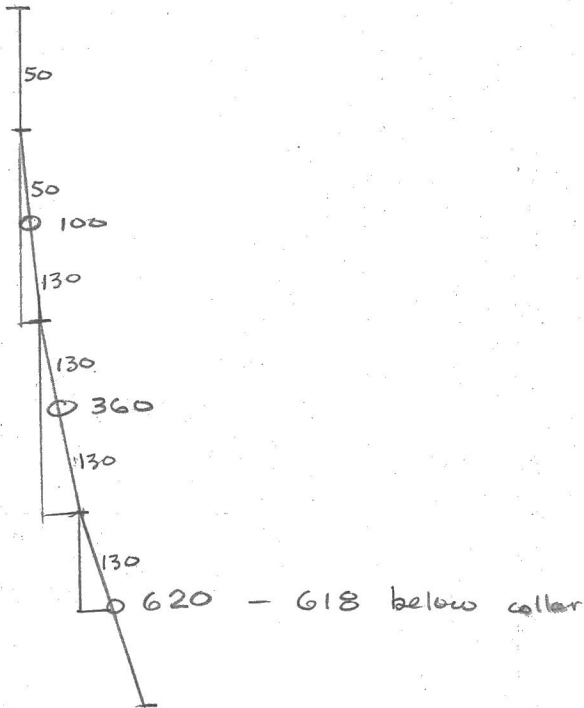
A-89

1975

# DIP & BEARING SURVEY TROPARI INSTRUMENT

AZ	DIP	Cos	Dist	HD	SIN	VD
-	90°	0	180	0	1.000	180
98°36'	86°	.0698	260	18.2	.9976	259
213°36'	85°	.0872	130	10.8	.9962	129
						50
						618

Sketch  
Not to scale



RECEIVED

A. 89

D. D. H. Deviation

Scale: 1" to 20'

Ft.	Dip	Bearing	INTERVAL	COS.	HOR. DIST.		SIN.	VERT. DIST.		ELEV.	LENGTH OF DDH
					FT	M		FT	M		
100	89°	62°50'	50							1915.36	
			180	.0175	3.15	0.96	.99985	179.97	15.24	1300.12	15.24 ✓
360	86°	98°50'	260	.0698	18.15	5.53	.99756	259.32	54.85	1245.27	70.10 ✓
620	85°	213°50'	260	.0892	11.24	3.46	.99619	124.80	79.06	1166.21	149.35 ✓
			260		22.67	6.91		259.01	39.49	1087.74	188.98
						3.02			78.95	1087.26	228.6
									146.78	936.48	
											377.95

