

104.04

Form 257
Ed. Dec. 1947

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

R. E. A. Studds, Director

STATES Utah

SPIRIT LEVEL OBSERVATIONS

LINE

From Jugway Proving Grounds

To Dry Clay Area

INSTRUMENT

Level No. G-8

ARCHIVES

**U. S. COAST & GEODETIC SURVEY
LIBRARY & ARCHIVES**

Date Received _____

MAR 7 1951

Accession No. _____

CHIEF PARTY

L-13768

Comdr. W. R. Porter

1951

----- Vols.

Vol. 2

Dry Clay Area
0.5 scale

Target 5Aa 314 Pages 4! thru 78

Loop "C"-A"-B" stations

Line "B"-to C" Pages 79 thru 82

(other observations not computed)

Form 257
Ed. Dec. 1947

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STATES Utah

SPIRIT LEVEL OBSERVATIONS

LINE

From Dugway Proving Grounds

To _____

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CHIEF PARTY

W. R. Porter

1951

_____ Vols.

Vol. 1

DRY CLAY
SPIRIT

Date 12 January 51 Forward ~~Backward~~
(Strike out one word)

Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	0383					
1	0365	03650	120	8	36	+4°
	0343			.8		
	1095					
<p>Observations of Jan. 12 not used</p>						

LEVELING

From B. M. 40" Station To B. M. 3 N

Wind _____ Time 10:40

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2462					
2442	24423	802	20		
2423	03650	120	19	39	Section
2327	-20773	682		36	5Aa313
1095				75	Pages 3 to 40
2332					
-20773					
<p>Obs. B.E. Neal Red. E.E. Munday</p>					
<p>1 BEN</p>					
<p>31</p>					

DRY CLAY SPIRIT

Date 12 January 51 Forward—Backward _____

(Strike out one word)

Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2863					
7	2850	2850	- 93	13		
	2837	15200	44	13	26	
	8550	+1.3300	- 43			
	4560					
	3990					
	+1.3300					

LEVELING

From B. M. Rivet #2 To B. M. 3d

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
					10-54228-1
1540					
1530	15200	- 498	10		- 1.3303
1520			10	20	+ 1.3300
4560				26	+ 0.3
				46	
					33
					1000

Date 12 January 57 ~~Forward~~ [✓] Backward _____
 Sun _____
 (Strike out one word)

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2873					
9	7859	28593	438	14		76°
	2846	15280	502	13	2)	
	8528	+1.3313	436			
	4584					
	3994					
	+1.3313					

LEVELING

From B. M. Rivet #3 To B. M. 3A
 Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1538					
1528	15280	502	10		-1.3323
1518			10	20	+1.3313
4584					1.0
					34 ✓
					1300

DRY CLAY
SPIRIT

Date 12 January 57 Forward Backward
(Strike out one word)

Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2874					
11	2860	28600	938	14		
	28476	15280	506	14	28	
	8500	+13320	432			
	4584					
	3996					
	+13320					

LEVELING

From B. M. Rivet #4 To B. M. 3N

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1538					
1528	15280	506	10		
1518			10	20	-1.3923
4584				20	+1.3320
				40	4.03
					35
					1000

Date 12 January 51 ^{Forward} ~~Backward~~
 (Strike out one word)
 Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
12	1.175	1.5050	495	10		
	1.285			10	20	
	1.495					
	4.515					

From B. M. 34 Rivet #4 To B. M. 34 Rivet #5
 Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2.617					
2.846	2.8457	934	11		
2.834	1.5050	495	12	23	
2.537	-1.3407	439		20	
4.515				43	
4.022					35 ✓
1.3407					

100M.

DRY CELL
SPIRIT

Date 12 January 51 Forward ~~Backward~~ [✓]

(Strike out one word)

Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2860					
1)	2857	28513	936	9		
	2843	15020	493	8	17	
	8554	+ 1.3493	443			
	4706					
	(4048)					
	+ 1.3493					

LEVELING

From B. M. Rivet #7 To B. M. 34

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1512					
1502	15020	493	10		
1492			10		-1.3490
4505				1)	
				3)	
					38 ✓
					105A.

Dry Clay
SPIRIT

Date 16 January 51 Forward ~~Backward~~
(Strike out one word)
Sun 0

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	0287					Red
1	0278	02780	092	9		#348
	0269			9	18	348
	0834					+30
	1503					
2	1497	14920	482	6		
	1491	17750	584	6	30	
	5325					

Area Target 5Aa 314 Pages 41 thru 78
LEVELING

From B. M. "C" To B. M. Rivet #1
Wind 0 Time 09:15

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2438					
2427	24263	795	11		Obs. B.E. Neal
2414			13	24	Rec. E.E. Mooney
7279					Redman J. Stafford
2774					
2767	27667	906	7		Weather -
2759	51930	1701	8	39	Cloudy calm
15579	17750	584		30	
5325	-34180	1117		69	0.02 km
10254					Section
34180					5Aa 314

Red

DRY CLAY
SPIRIT

Date 16 January 51 Forward—Backward

(Strike out one word)

Sun 0

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2780					
3	2773	27730 ✓	908	7		
	2766	27707 ✓	903	7	14	
	8319	+0.0023 ✓	1			
	8312 ✓					
	7 ✓					
	+0.0023 ✓					

LEVELING

From B. M. Rivet #1 To B. M. Rivet #2Wind 0 Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2777					
2771	27707	901	6		
2764			7	13 ✓	
8312 ✓				18 ✓	
				21 ✓	0.016 ✓

DOP

DRY CLAY
SPIRIT

Date 16 January 51 Forward ✓ Backward ✓
(Strike out one word)
Sun _____

10-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2682					
6	2673	26730 ✓	886	7		
	2664	26663 ✓	884	9	12	
	8019 ✓	+0.0067 ✓	2		11	
	7989 ✓				35	
	1020 ✓					
	+0.0067 ✓					

LEVELING

From B. M. Rivet #4 To B. M. Rivet #5
Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2675					
2666	26663 ✓	884	9		
2658			8		
7999				11 ✓ 15 ✓ 35 ✓	+0.01K ✓

✓

Date 16 January 57 Forward ✓ Backward

(Strike out one word)

Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
7	2681					
	2677	26767 ✓	87)	8		
	2668	26760 ✓	876	9	17	
	8030	+0.0007 ✓	1			
	8028					
	2					
	+0.0007 ✓					

From B. M. Rivet #5 To B. M. Rivet #6

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2684					
2676	26760 ✓	876	8		
2668			8	16	
8028				17 ✓	
				33 ✓	0.016 ✓

DRY CLAY SPIRIT

Date 16 January 57 Forward Backward
(Strike out one word)

Sun _____

16-54228-1

No. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
8	2745					
	2734	2734.0	895	11		
	2723	2732.3		11	22	
	8202	+0.0017				
	8197	(005)				
	+0.0017					

LEVELING

From B. M. Rivet #6 To B. M. Rivet #7

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2743					
2732	2732.3	895	11		
2722			10	21	
8197				22	
				43	= 0.01K

16-54228-1

slip

DIXIE CLAY
SPIRIT

Date 16 January 57 Forward ✓ Backward _____
(Strike out one word)

Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2752					
9	2742	2742 ✓	898	10		
	2732	2732 ✓	898	10	20	
	8226	+0.0030 ✓	0			
	8217					
	19					
	+0.0030 ✓					

From B. M. Rivet #7 To B. M. Rivet #8

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2749					
2739	2739 ✓	898	10		
2729			10	20 ✓	
8217				20 ✓	0.01K ✓

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DRY CLAY
SPIRIT

Date 16 January 57 Forward Backward
(Strike out one word)

Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2831					
10	2822	2822.0	876	8		
	2813			9	18	
	8466					
	2488					
	2478	2477	812	10		
11	2467	32997 ✓	1688	11	39	
	15899 ✓	18846 ✓	618			
	5634 ✓	+3.4151 ✓	1030			
	10245 ✓					
	13.4150 ✓					

LEVELING

From B. M. Rivet To B. M. "C"

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1564					
1557	1556.3	510	7		
1548			9	16	
4669					
0339					
0328	0328.3	108	11		
0318	18846 ✓	618	10	37	
1354				39	
				76	= 0.03 K ✓

DRP

RYCUM
SPIRIT

LEVELING

Date 16 January 57 ~~Forward~~ - BackwardSun _____
(Strike out one word)

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2608					
18	2596	2596.0	852	12		
	2584	2592.0	850	12	24	
	7788	+0.0040				
	7776					
	(12)					
	+0.0040					

From B. M. River #4 To B. M. River #3

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2603					
2592	2592.0	850	11		+0.0040
2581			11	22	-0.0033
7776				34	0.1
				46	-0.0115
					(-0.0036)

16-54228-1

[Signature]

DRY CLAY
SPIRIT

Date 16 January 57 Forward-Backward _____
(Strike out one word)

Sun _____

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2622					
19	2610	26103 ✓	856	12		
	2599	26030 ✓	854	11	23	
	7831	+0.0073 ✓	L			
	7809					
	(22)					
	+0.0023 ✓					

LEVELING

From B. M. Sheet 43 To B. M. Rivet #2

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2614					
2603	26030 ✓	854	11		-0.007
2592			11	22	+0.003
7809				23	✓ .4
				44	0.011 ✓ (-0.0075)

12/11/57

JKY CLAY
SPIRIT

Date 16 January 57 Forward-Backward _____
(Strike out one word)
Sun 0

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	2811					
21	2799	27990	918	12		
	2787			12	24	
	8393					
	2493					
22	2420	24847	813	11		
	2410	52807 ✓	1731	12	41	
	15842 ✓	8610 ✓	611			
	5573 ✓	+3.4197 ✓	1120			
	(10259 ✓)					
	+3.4197 ✓					

LEVELING

From B. M. Pivot #1 To B. M. "C"
Wind 0 Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1537					+3.4197
1528	15287	502	9		-3.4180
1521			7	16	1.)
4386					
0343					
0332	03323	109	11		
1322	18610 ✓	611	10	31	
5593				47 ✓	
				85 ✓	= 0.03 K ✓

[Handwritten signature]

Date 16 January 57 Forward BackwardSun 3

(Strike out one word)

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	0444					#348
25	0347	03963	130	102		6°
	0293			104	206	
	1189					
	1544					
26	1454	14540	477	90		
	1364	18503	607	90	306	
	5551					
	1258					
27	1668	16682°	548	90		↓
	1578	35186°	1153	90	266	6°
	10555					
	1369					
28	1274	12790	420	90		↑
	1184	47973	1575	90	246	
	14392					
	2278					
29	2187	21870	718	90		
	2096	69843	2243	90	225	
	20953					
	2364					
30	2310	23103	759	54		
	2257	92946	3052	53	1035	
	27884					
	1563					
31	1553	15530	509	10		
	1543	108476	3561	10	1055	
	32543		3555			6°

From B. M. StationTo B. M. "C" StationWind 1Time 14:35

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2014					
1913	19130	628	101		
1812			101	202	
5739					
1944					
1854	18543	608	90		
1765	37673	1236	89	381	
11382					
1025					
0946	09460	324	89		
0847	49533	1560	89	559	
14260					
1950					
1860	18600	610	90		
1770	66133	2170	90	739	
19840					
2572					
2482	24820	814	90		
2392	90953	2784	90	918	
22286					
1521					
1468	14683	472	53		
1413	105626	3456	55	1027	
31688					
0312					
0302	03017	099	10		
0291	108643	3555	11	1048	
32593	108476			1055	
32543	-0.0167			2103	= 0.71 Km
50					
-0.0167					

Date 16 January 51 Forward-Backward
(Strike out one word)
Sun 7

16-54228-1

NO. OF STATION	THREAD READING BACK SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	ROD AND TEMP.
	0285					
32	0279	02790	092	10		
	0269			10	20	490
	0837					
	1373					
33	1318	1383	433	55		
	1264	15923	525	54	129	
	4792					
	2595					
34	2506	25060	822	89		
	2417	41033	1347	89	307	
	12310					✓
	1281					
35	1901	14010	624	80		110
	1811	60043	1921	80	407	
	18013					↑
	1081					
36	0992	09917	326	89		
	0902	69960	2297	80	666	
	20988					
	2009					
37	1919	19190	630	80		
	1829	89150	2922	80	846	
	26745					
	20724					
38	1969	19697	645	102		✓
	1869	108847	3572	100	1040	
	32654	108623	3167			110
	92887	0.0224	5			
	67					
	10.0229					

LEVELING

From B. M. "C" To B. M. "B"
Wind 0 Time 15:25

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
					16-54228-1
1541					
1531	15307	502	10		+0.0224
1520			11	21	-0.0167
4592					-5.2
2215					
2161	21613	709	54		
2108	36920	1211	53	128	
11076					
2299					
2209	22090	725	90		
2119	59010	1936	90	308	
17703					
14191					
1339	13197	434	92		
1259	22207	2370	90	490	
21662					
1763					
1674	16740	850	89		
1585	88947	2920	89	668	
26684					
1608					
1518	15183	499	80		
1428	104130	3419	89	847	
31239					
0557					
0449	04493	148	102		
0348	108623	3567	101	1050	✓
32587				1048	✓
				2099	✓ = 0.71 km

1.000

