

Form 257
Ed. Dec. 1947

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

R. F. A. Studds, Director

STATES Utah (Dugway Proving Grounds)

SPIRIT LEVEL OBSERVATIONS

LINE

From Dugway Proving Ground

To Dry Clay Area

INSTRUMENT

Level No. 8

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

Date Received MAR 7 1951

Accession No. 102-10-1-13768

CHIEF PARTY

Comdr. W. R. Porter

1951

Vols. _____ Vol. 1

Ben.

Form 257
Ed. Dec. 1947

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

R. F. A. Studds, Director

STATES Utah

SPIRIT LEVEL OBSERVATIONS

LINE

From Dugway Proving Ground

To _____

INSTRUMENT

Level No. 8

ARCHIVES

Date Received _____

Accession No. _____

CHIEF PARTY

W. R. Porter

1951

_____ Vols.

Vol. 1

Determination of "C"

SPIRIT

Date 10 Jan. 1951 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.
		<i>Short</i>				
	1482					
	1534	15340	508	8		
	1526			1	16	
	4682					
	73					
	1458					
	1466	14657 ✓	482	7 ✓		
	1458			8 ✓	15 ✓	
	4397					+ 3.0
	1578					
	1567	15667 ✓	514	11 ✓		
	1554	30324 ✓		12 ✓	38 ✓	
	9997	30307 ✓				
		353117 ✓ (.005 = C)				
						<i>112 W</i>

LEVELING

From B. M. _____ To B. M. _____

Wind _____ Time 09:15

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
					10-54228-1
					<i>long</i>
					<i>Reds - #225-331</i>
					<i>Inst # 8</i>
					<i>Obs. B.E. Neal</i>
					<i>Rec. E.E. Munnery</i>
					<i>Redman S.S. W. H. C.</i>
1538					
1438	14380 ✓	472	100 ✓		
1338			100 ✓	200 ✓	
4314					
1689					
1593	15930 ³ ✓	523	96 ✓		
1498	3031 ³ ✓		93 ✓	391 ✓	
9094	-06 ✓			-38 ✓	
	30307 ✓			353 ✓	

SPIRIT

Date 10 January 51 Forward Backward
 (Strike out one word)
 Sun 2

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.
3	1426	14360	462	10	20	
	1436					
	1426					
	4308 ✓					
Backward						
4	2788	27807	913	7	15	
	2781					
	2773 ✓					
	8342 ✓					
	4435 ✓					
	3907					
+13024						
Forward						
5	1489	14787	486	11	21	
	1479					
	1468					
	4436					

LEVELING

From B. M. ~~XXXXXX~~ ^{IN} To B. M. Rivet No. 1
 Wind 0 Time 10:30

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2745					
2737	27370	898	8		
2729	14360 ✓	462	8	16	✓
8211 ✓	-1.3010 ✓	436		20 ✓	
4308 ✓				36 ✓	
2903 ✓					
-1.3010 ✓					+1.3024 -1.3010 -1.3020
Rivet No. 1 to TBM IN					
1489					
1478	14783	486	11		
1468			10	21	✓
4435 ✓				15 ✓	
8				36 ✓	
TBM IN to Rivet No. 1					
2788					
2781	27807	913	7		
2773	14787	486	8	15	✓
8342	-1.3020	427		21	
4436				36	3
3907					
-1.3020					
TBM					

SPIRIT

Date 10 January 1951 Forward Backward
 Sun 2 (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.
	1452					
6	1442	14420	474	10		
	1432			10	20	
	4326					
Backward						
	2779					
* 7	2773	27730	914	6		
	2767	18850	447	6	12	
	8319	+12880	427			
	4455					
	3864					
	+12880					
Forward						
8	1420					
	1484	14843	487	11		
	1474			10	21	
	4453					
Backward						
	2772					
	2762	27650	907	7		
	2758	14660	482	7	14	
9	8295	+12940	425			
	4398					
	3897					
	+12940					

LEVELING

From B. M. 1-N To B. M. Rivet No. 2
 Wind 0 Time 10:45

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2747					
2741	27407	899	6		
2734	14420	474	7	13	✓ 4
8222	-1.2987	425		20	
4326				33	
13896					
-1.2987					
Rivet No. 2 to TBM 1-N					
1496					
1482	14850	487	11		
14784			"	22	* Centimeter error
4455				12	
				34	
TBM 1-N to Rivet No. 2					
2789					
2783	27830	914	6		
2777	14843	487	6	12	✓ 5
8349	-1.2987	427		21	
4453				33	
3896					
1.2987					
Rivet No. 2 to TBM 1-N					
1476					
1466	14660	482	10		
1456			10	20	✓ 3
4398				14	
				34	

(TRANSPOSE)

fixed

SPIRIT

Date 10 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.
18	1453					
	1443	1442)	- 474	10		
	1432			11	21	
	4328					
<i>Backward</i>						
19	2771					
	2766	27663	- 907	9		
	2757	14680	- 403	8	1)	
	8209	+ 12983	- 424			
	4204					
	13895					
	+ 82983					

LEVELING

From B. M. IN To B. M. Rivet No. 8
 Wind _____ Time 11:30

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
2744					
2741	27407	- 499	8		
2732	14427	- 474	9	1)	
8222	- 1.2980	- 425		21	✓ 11
4328				38	
13854					
1.2980					
<i>Rivet No. 8 to TBM IN</i>					
1478					
1468	14600	- 483	10		✓ 10
1458			10	20	
4404				30	
					113.001

DRY CLAY SPIRIT

Date 11 January 51 Forward-Backward
(Strike out one word)
Sun 3

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.
	2539					
2	2523	25233	82	16		
	2508	03373	111	15	31	
	7570	+2.1860	76			
	1012					
	6558					
	+2.1860					

LEVELING

From B. M. 2N To B. M. "C" Station
Wind 2 Time 14:05

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
0303					
0330	03373	111	15		-2.1864 ✓
0321			17	32	+2.1860 ✓
1012				31	
				63	
					13420
					13.811

Date 11 January ~~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.
	2696					
4	2688	26883	882	8		
	2681	14730	484	7	15	
	8065	+1.2153	398			
	4419	-				
	3646	-				
	+1.2153	-				

From B. M. Recent No. 1 To B. M. 2 N
 Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1482					
1473	14730	484	9		-1.2160
1464			9	18	+1.2153
4419				15	+0.7
				33	✓
					10.04
					13

DRY CLAY
SPIRIT

Date 11 January 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.
	2707					
18	2700	27000	886	7		
	2693	14917	489	7	14	
	8100	+1.2083	397			
	4475					
	(3625)	-				
	+1.2083	-				

LEVELING

From B. M. Rivet No. 8 To B. M. 2A
Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1501					16-54228-1
1492	14917	489	9		-1.2094 ✓
1482			10	19	+1.2083
4475				14	
				33	
					20
					18.24

DRY CLAY
SPIRIT

Date 11 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.
	1629					
21	1610	16100	529	19		
	1591	14900	489	19	38	+6
	4830	+0.1200	40			
	4470					
	360					
	+0.1200					

LEVELING

From B. M. Rivet No. 1 To B. M. 2N

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
					16-54228-1
1504					
1490	14900	489	19		-0.1203 ✓
1471			19	38	+0.1200
4470				38	+0.3
				76	
					23
					✓ B.O.V.

Date 11 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.
22	1494	14260 centimeter dust	425	8	16	
	1406					
	1458					
	4438					
23	1482	14633	441	19	37	
	1463					
	4390					

LEVELING

From B. M. 24To B. M. Rivet No. 2

Wind _____

Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1618	15990	525	19	38	
1599					
1580					
4797					
1606	15870	521	19	38	23 ✓
1587					
1568					
4761					
4390	151237	40	37	75	1800.
(371 -					
-91237 -					

Dry C&G
SPIRIT

LEVELING

Date 11 January 17 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.
24	1602					
	1586	15823 ✓	520	20		
	1563	14593	478	19	39	
	4747	+0.1230 -	42			
	4335					
	7369 -					
	70.1230 -					

From B. M. Point No. 2 To B. M. 21

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1478					
1459	14593 -	478	19		✓
1441			18	37	
4748				55	+0.1230
				76	
					24 ✓
					1001.

DRY CLAY
SPIRIT

Date 11 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.
	1603					
26	1587	1586.7	521	16		
	1570	1462	480	17	33	
	4760	+0.1247	41			
	4326					
	324					
	+0.1247					

LEVELING

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

Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1441					
1462	14620	480	19		+0.1247
1443			19	38	-0.1246
1386				33	
				77	
					25
					✓ B.M.

Jay CLAY
SPIRIT

Date 11 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.
28	1584 15832	15833 -	520	18		75°
	1569	14570	478	14	29	
	4750	+0.1263 -	42			
	4321					
	1279 -					
	711263 -					

LEVELING

From B. M. Rivet No. 4 To B. M. 2 N
Wind 2 Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1475					
1457	14570	478	18		-0.1266
1439			18	36	
4371				29	
				66	
					26
					✓ B.M.

DAY CLAY
SPIRIT

Date 11 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.
	1641					
34	1623	16237	534	18		
	1607	14943	532	16	34	
	4871	+0.1294	491			
	4883	.	41			
	388					
	+0.1294					

LEVELING

From B. M. Rivet No. 7 To B. M. 2N
Wind _____ Time _____

THREAD READING FORE SIGHT	MEAN	MIDDLE THREAD READING BACK OF ROD	THREAD INTERVAL	SUM OF INTERVALS	REMARKS
1512					
1494	14943	491	18		+0.1294 ✓
1477			13	31	
4883				34	
				65	
					✓ 1634
					29

