

P.O. BOX 1500 (575) 3910699 FAX (575) 391- 3824 HOBBS, NEW MEXICO 88241

RECEIVED
SEP 25 2013
NMOCD ARTESIA

WELL NAME AND NUMBER	INDIAN FLATS 13 FEDERAL #1
LOCATION	EDDY COUNTY
OPERATOR:	BOPCO., LP
DRILLING CONTRACTOR:	CAVALOZ DRILLING INC.

30-015-41467

[illegible]

BY: Bob Wegner
BOB WEGNER
DRILLING SUPERINTENDENT

SUBSCRIBED AND SWORN TO BEFORE ME ON THE 26th DAY OF August, 2013

MY COMMISSION EXPIRES: 3-1-2015

21st DAY OF August, 2019
Dina Chaurasia



OFFICIAL SEAL
DINA CHAVARRIA
NOTARY PUBLIC - STATE OF NEW MEXICO
My commission expires: 3-1-2015



INTEQ

Company: **BOPCO**

Field:

County: **EDDY, NM**Well Name: **N. Indian Flats 13 Fed #1**Rig: **Cabaloz 3**Job Number: **5724779**Magnetic Decl: **7.660**Grid Corr: **-0.46**Total Survey Corr: **7.200**Date Printed: **24-Sep-13**Proposed Azimuth: **0.00**Target Inclination: **0.00**TVD: **3100**BRN From Survey: **0.21**BRN From Bit: **0.14**

Projection 55			Depth (ft) 3265		Incl. 0.23			Azimuth 92.53		TVD 3264.20		VS 16.25		N/S 16.25 N		E/W
No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Quadrant	Course Lgth(ft)	TVD (ft)	VS (ft)	Coordinates N/S (ft) E/W (ft)		Closure Dist (ft) Ang (°)		DLS (%/100')		Bld Rate (%/100')	
0	Tie	369.00	1.830	76.110	N 0.00		369.00	0.00	0.00 S	0.00 W	0.00	261.17				
1	MWD	492.00	1.330	102.100	S 77.90 E	123	491.95	0.17	0.17 N	3.30 E	3.31	87.01	0.70		-0.41	
2	MWD	584.00	1.280	94.540	S 85.46 E	92	583.93	-0.13	0.13 S	5.37 E	5.37	91.42	0.19		-0.05	
3	MWD	678.00	1.530	94.520	S 85.48 E	94	677.90	-0.31	0.31 S	7.67 E	7.67	92.35	0.27		0.27	
4	MWD	772.00	1.970	87.100	N 87.10 E	94	771.86	-0.33	0.33 S	10.53 E	10.54	91.81	0.53		0.47	
5	MWD	898.00	1.540	70.340	N 70.34 E	126	897.80	0.35	0.35 N	14.29 E	14.29	88.61	0.53		-0.34	
6	MWD	992.00	0.940	76.050	N 76.05 E	94	991.78	0.96	0.96 N	16.23 E	16.26	86.62	0.65		-0.64	
7	MWD	1086.00	1.660	70.260	N 70.26 E	94	1085.75	1.60	1.60 N	18.26 E	18.33	84.98	0.78		0.77	
8	MWD	1180.00	0.960	108.830	S 71.17 E	94	1179.73	1.81	1.81 N	20.28 E	20.37	84.90	1.16		-0.74	
9	MWD	1275.00	1.400	97.900	S 82.10 E	95	1274.71	1.39	1.39 N	22.19 E	22.23	86.41	0.52		0.46	
10	MWD	1370.00	2.110	91.770	S 88.23 E	95	1369.66	1.18	1.18 N	25.09 E	25.11	87.31	0.77		0.75	
11	MWD	1465.00	3.680	67.700	N 67.70 E	95	1464.54	2.28	2.28 N	29.65 E	29.74	85.60	2.06		1.65	
12	MWD	1558.00	2.400	76.720	N 76.72 E	93	1557.41	3.86	3.86 N	34.31 E	34.53	83.58	1.47		-1.38	
13	MWD	1653.00	2.110	49.060	N 49.06 E	95	1652.34	5.47	5.47 N	37.57 E	37.96	81.72	1.17		-0.31	
14	MWD	1747.00	1.090	23.540	N 23.54 E	94	1746.30	7.42	7.42 N	39.23 E	39.93	79.29	1.30		-1.09	
15	MWD	1841.00	1.370	5.410	N 5.41 E	94	1840.28	9.36	9.36 N	39.70 E	40.78	76.74	0.51		0.30	
16	MWD	1935.00	1.200	10.610	N 10.61 E	94	1934.26	11.44	11.44 N	39.98 E	41.59	74.03	0.22		-0.18	
17	MWD	2030.00	0.960	26.630	N 26.63 E	95	2029.24	13.13	13.13 N	40.52 E	42.60	72.04	0.40		-0.25	
18	MWD	2123.00	0.660	31.220	N 31.22 E	93	2122.23	14.29	14.29 N	41.15 E	43.56	70.85	0.33		-0.32	
19	MWD	2216.00	0.610	69.060	N 69.06 E	93	2215.23	14.92	14.92 N	41.89 E	44.47	70.39	0.45		-0.05	
20	MWD	2439.00	0.480	50.240	N 50.24 E	223	2438.22	15.94	15.94 N	43.72 E	46.53	69.96	0.10		-0.06	
21	MWD	2628.00	0.160	65.020	N 65.02 E	189	2627.21	16.56	16.56 N	44.56 E	47.54	69.61	0.17		-0.17	
22	MWD	2784.00	0.370	89.290	N 89.29 E	156	2783.21	16.66	16.66 N	45.27 E	48.23	69.79	0.15		0.13	
23	MWD	2974.00	0.530	103.030	S 76.97 E	190	2973.20	16.47	16.47 N	46.73 E	49.55	70.59	0.10		0.08	
24	MWD	3150.00	0.230	92.530	S 87.47 E	176	3149.20	16.27	16.27 N	47.88 E	50.57	71.23	0.17		-0.17	
25	BIT	3210.00	0.230	92.530	S 87.47 E	60	3209.20	16.26	16.26 N	48.12 E	50.79	71.33	0.00		0.00	

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