

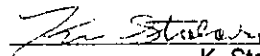
HALLIBURTON

30-015-42670

3950 Interwood S. Pkwy • Houston, TX 77032
PHONE 281.986.4400 • FAX 281.986.4499

State of New Mexico, Eddy County

I, Kevin Stolarski certify that I am employed by Halliburton Energy Services, Inc. (aka Sperry Drilling) and that on the dates of 1-December-2014 through 28-December-2014, I did conduct or supervise the taking of MWD directional surveys for the well Rustler Bluff 33 24 29 Fed #1 from a depth of 168' MD to a depth of 13883' MD. This data is true, correct, complete and within the limitations of the tools as set forth by Halliburton Energy Services, Inc. (aka Sperry Drilling). I am authorized and qualified to make this report and these surveys were conducted at the request of Chevron USA, Inc. for the well Rustler Bluff 33 24 29 Fed #1, API No. 30-015-42670-0000 in Eddy County, New Mexico. I have reviewed this report and find that it conforms to the principles and procedures as set forth by Halliburton Energy Services, Inc. (aka Sperry Drilling).


K. Stolarski
Field Engineer

Chevron USA, Inc.

Rustler Bluff 33 24 29 Fed #1

Eddy County, New Mexico

Ensign 767

API# 30-015-42670-0000

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 21 2015

RECEIVED

December 1, 2014 – December 28, 2014

MO-MJ-0901886528

Sperry Drilling Services
MWD Survey Report

Submitted by K. Stolarski

3950 Interwood South Parkway

Houston, TX 77032

Ph: 281.986.4400

HALLIBURTON

Drilling and Formation
Evaluation

[REDACTED]
[REDACTED]
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[REDACTED]

Survey Report for Chevron USA, Inc.

Rig : Ensign 767
Well Name : Rustler bluff 33 24 29 Fed #1
Field Name : Willow Lake
Country : USA
Job Number : MO-XX-0901886528
Job Start Date : 01-Dec-14
API Number : 30-015-42670-0000

DIRECTIONAL SURVEY DATA

Tie-in

0.00

0.00

0.00

0.00

0.00 N

0.00 E

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
168.00	0.32	27.11	168.00	0.42 N	0.21 E	0.42	0.19
589.00	0.31	259.67	589.00	1.26 N	0.38 W	1.27	0.14
770.00	0.22	313.58	769.99	1.42 N	1.13 W	1.42	0.14
953.00	0.54	349.12	952.99	2.51 N	1.55 W	2.52	0.21
1144.00	0.22	342.35	1,143.99	3.74 N	1.83 W	3.75	0.17
1332.00	0.34	76.51	1,331.98	4.21 N	1.39 W	4.22	0.22
1521.00	1.19	154.49	1,520.97	2.58 N	0.01 E	2.58	0.62
1709.00	2.65	171.40	1,708.86	3.47 S	1.50 E	-3.48	0.83
1804.00	1.86	150.85	1,803.79	6.99 S	2.57 E	-7.00	1.18
1899.00	2.14	106.13	1,898.73	8.83 S	5.03 E	-8.86	1.62
2088.00	2.59	70.03	2,087.58	8.35 S	12.43 E	-8.42	0.81
2278.00	2.87	83.75	2,277.37	6.36 S	21.20 E	-6.49	0.37
2372.00	2.99	78.85	2,371.25	5.63 S	25.95 E	-5.79	0.30
2466.00	2.90	63.22	2,465.12	4.09 S	30.48 E	-4.27	0.86
2560.00	2.14	87.40	2,559.03	2.94 S	34.35 E	-3.15	1.37
2655.00	1.89	107.83	2,653.98	3.28 S	37.46 E	-3.51	0.86
2750.00	2.30	106.89	2,748.92	4.26 S	40.61 E	-4.51	0.65
2827.00	1.00	112.77	2,825.89	4.97 S	42.71 E	-5.23	1.70
2932.00	0.34	168.73	2,930.88	5.64 S	43.62 E	-5.90	0.82
3120.00	0.48	153.42	3,118.88	6.90 S	44.08 E	-7.17	0.09
3309.00	0.77	115.30	3,307.87	8.15 S	45.58 E	-8.43	0.26
3497.00	0.79	148.66	3,495.85	9.80 S	47.40 E	-10.09	0.24
3686.00	0.54	304.62	3,684.85	10.41 S	47.34 E	-10.70	0.69
3874.00	0.36	304.26	3,872.84	9.58 S	46.13 E	-9.86	0.10
3968.00	1.57	275.13	3,966.83	9.30 S	44.60 E	-9.57	1.35
4157.00	1.36	284.64	4,155.77	8.50 S	39.86 E	-8.74	0.17
4346.00	1.57	268.68	4,344.70	7.99 S	35.09 E	-8.21	0.24
4534.00	1.93	270.83	4,532.62	8.00 S	29.35 E	-8.18	0.19
4722.00	1.68	259.22	4,720.52	8.47 S	23.48 E	-8.62	0.24
4911.00	1.90	280.19	4,909.43	8.44 S	17.68 E	-8.54	0.36
5100.00	1.77	243.64	5,098.34	9.18 S	11.99 E	-9.25	0.61
5289.00	1.03	203.05	5,287.29	12.04 S	6.70 E	-12.10	0.63
5478.00	1.80	211.83	5,476.23	16.13 S	6.47 E	-16.17	0.42
5667.00	0.41	219.38	5,665.19	19.18 S	4.48 E	-19.20	0.74
5855.00	0.82	207.16	5,853.18	20.89 S	3.44 E	-20.91	0.22
6044.00	0.68	171.06	6,042.16	23.20 S	3.00 E	-23.22	0.25
6234.00	1.08	160.42	6,232.14	26.00 S	3.77 E	-26.02	0.23
6423.00	0.72	107.49	6,421.12	28.04 S	5.51 E	-28.07	0.46
6611.00	0.57	40.83	6,609.11	27.69 S	7.25 E	-27.73	0.38
6800.00	1.05	105.37	6,798.09	27.44 S	9.52 E	-27.50	0.50
6988.00	0.94	83.88	6,986.07	27.73 S	12.72 E	-27.81	0.20

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (ft/100)
7176.00	1.09	98.36	7,174.04	27.82 S	16.03 E	-27.92	0.16
7365.00	1.60	65.47	7,362.99	26.99 S	20.22 E	-27.11	0.48
7553.00	1.23	319.46	7,550.95	24.37 S	21.30 E	-24.50	1.21
7743.00	0.84	340.43	7,740.92	21.51 S	19.51 E	-21.63	0.28
7932.00	2.55	156.62	7,929.87	24.06 S	20.72 E	-24.19	1.79
8027.00	1.84	190.76	8,024.81	27.50 S	21.27 E	-27.63	1.53
8102.00	1.77	189.54	8,099.77	29.82 S	20.85 E	-29.95	0.11
8165.00	1.63	215.31	8,162.74	31.51 S	20.18 E	-31.63	1.22
8197.00	2.20	281.91	8,194.73	31.76 S	19.31 E	-31.87	6.73
8228.00	4.39	304.23	8,225.68	30.96 S	17.75 E	-31.07	8.08
8260.00	7.21	313.55	8,257.51	28.89 S	15.28 E	-28.98	9.24
8291.00	10.20	319.00	8,288.15	25.48 S	12.07 E	-25.55	9.99
8322.00	12.83	321.81	8,318.53	20.70 S	8.14 E	-20.75	8.69
8354.00	14.90	325.42	8,349.59	14.52 S	3.61 E	-14.55	7.00
8387.00	17.67	327.26	8,381.27	6.82 S	1.51 W	-5.81	8.53
8416.00	20.92	325.50	8,408.63	1.15 N	6.82 W	1.19	11.39
8447.00	23.70	323.81	8,437.31	10.74 N	13.64 W	10.83	9.20
8479.00	27.77	323.21	8,466.13	21.91 N	21.90 W	22.04	12.77
8510.00	32.61	323.92	8,492.92	34.45 N	31.15 W	34.64	15.63
8542.00	37.40	325.36	8,519.12	49.42 N	41.76 W	49.68	15.19
8573.00	40.96	330.60	8,543.16	66.03 N	52.10 W	66.34	15.68
8604.00	44.12	335.87	8,566.00	84.74 N	61.51 W	85.11	15.37
8636.00	48.48	339.17	8,588.11	106.11 N	70.33 W	106.54	15.52
8667.00	54.58	342.37	8,607.39	129.02 N	78.29 W	129.50	21.28
8698.00	59.94	345.01	8,624.15	154.04 N	85.59 W	154.56	18.71
8730.00	62.95	347.03	8,639.45	181.31 N	92.37 W	181.87	10.90
8761.00	66.88	349.41	8,652.59	208.79 N	98.09 W	209.39	14.48
8792.00	70.58	350.81	8,663.83	237.24 N	103.05 W	237.87	12.64
8824.00	73.89	351.53	8,673.60	267.35 N	107.72 W	268.01	10.57
8856.00	77.78	352.75	8,681.43	298.08 N	111.96 W	298.76	12.71
8875.00	80.16	353.88	8,685.06	316.60 N	114.13 W	317.29	13.81
8919.00	85.90	355.45	8,690.40	360.07 N	118.19 W	360.78	13.52
8950.00	88.92	355.50	8,691.80	390.94 N	120.63 W	391.67	9.75
9013.00	90.68	355.99	8,692.02	453.76 N	125.31 W	454.52	2.89
9107.00	93.43	356.73	8,688.66	547.50 N	131.28 W	548.29	3.03
9202.00	92.50	357.19	8,683.75	642.24 N	136.31 W	643.06	1.09
9296.00	89.97	358.81	8,681.72	736.15 N	139.59 W	736.99	3.19
9390.00	90.59	358.99	8,681.27	830.13 N	141.40 W	830.98	0.69
9485.00	90.65	0.34	8,680.24	925.12 N	141.95 W	925.97	1.43
9579.00	89.75	2.68	8,679.92	1,019.08 N	139.47 W	1019.91	2.66
9674.00	89.85	3.42	8,680.25	1,113.94 N	134.42 W	1114.74	0.79
9758.00	90.49	3.40	8,679.97	1,207.78 N	128.82 W	1208.54	0.69
9863.00	91.73	3.36	8,678.13	1,302.59 N	123.22 W	1303.32	1.30
9957.00	89.69	3.41	8,676.96	1,396.42 N	117.67 W	1397.11	2.17
10051.00	89.01	3.41	8,678.02	1,490.24 N	112.08 W	1490.90	0.72