Chevron USA

Skeen 2 26 27 State 4H

Eddy County, New Mexico

Ensign 767

API# 30-015-41118-0000

June 15, 2014 – July 5, 2014

HD-MJ-0901422720

Sperry Drilling

Survey Report

HALLIBURTON

Drilling and Formation Evaluation

WELL INFORMATION	Created On : Jul 04 2014

Survey Report

Customer	: Chevron USA, Inc.
Well Name	: Skeen 2 26 27 State 4H
Job Number	: HD-XX-0901422720
Rig Name	: Ensign 767
Country	: USA
State / Province	: New Mexico

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')
493.00	0.92	17.25	492.98	3.79 N	1.18 E	-3.80	0.19
675.00	0.77	31.75	674.96	6.23 N	2.26 E	-6.25	0.14
861.00	0.65	20.19	860.94	8.29 N	3.28 E	-8.32	0.10
1042.00	0.62	36.08	1,041.93	10.05 N	4.21 E	-10.09	0.10
1234.00	0.54	41.31	1,233.92	11.57 N	5.42 E	-11.62	0.05
1421.00	0.79	50.56	1,420.91	13.05 N	7.00 E	-13.11	0.14
1614.00	0.74	43.00	1,613.89	14.81 N	8.87 E	-14.89	0.06
1708.00	2.12	67.92	1,707.86	15.90 N	10.90 E	-16.00	1.57
1802.00	2.87	74.60	1,801.77	17.18 N	14.77 E	-17.32	0.86
1899.00	1.80	68.09	1,898.69	18.39 N	18.53 E	-18.57	1.14
1995.00	1.89	69.36	1,994.64	19.51 N	21.41 E	-19.71	0.11
2090.00	2.42	70.31	2,089.58	20.74 N	24.76 E	-20.97	0.55
2185.00	1.72	59.51	2,184.51	22.14 N	27.88 E	-22.40	0.83
2279.00	1.45	48.34	2,278.48	23.65 N	29.99 E	-23.93	0.44
2371.00	1.42	59.01	2,370.45	25.01 N	31.84 E	-25.31	0.29
2466.00	1.87	296.69	2,465.43	26.31 N	31.46 E	-26.61	3.04
2561.00	3.95	276.96	2,560.30	27.40 N	26.83 E	-27.65	2.40
2656.00	2.05	272.99	2,655.17	27.89 N	21.89 E	-28.09	2.01
2751.00	1.79	270.89	2,750.12	28.00 N	18.71 E	-28.17	0.28
2847.00	1.71	273.66	2,846.07	28.11 N	15.78 E	-28.26	0.12
2941.00	1.79	274.47	2,940.03	28.32 N	12.92 E	-28.44	0.08
3036.00	1.58	271.49	3,034.99	28.47 N	10.13 E	-28.56	0.24
3131.00	1.76	268.15	3,129.95	28.45 N	7.37 E	-28.52	0.21
3227.00	1.94	266.32	3,225.90	28.30 N	4.27 E	-28.34	0.20
3321.00	1.01	199.44	3,319.87	27.42 N	2.41 E	-27.44	1.91
3415.00	1.20	174.42	3,413.85	25.66 N	2.23 E	-25.68	0.55
3511.00	1.36	178.84	3,509.83	23.52 N	2.36 E	-23.55	0.19
3605.00	1.10	184.72	3,603.81	21.51 N	2.30 E	-21.53	0.30
3700.00	1.14	183.90	3,698.79	19.65 N	2.16 E	-19.67	0.05
3795.00	1.18	190.83	3,793.77	17.75 N	1.92 E	-17.77	0.15
3890.00	1.27	196.39	3,888.75	15.78 N	1.44 E	-15.79	0.16
3985.00	1.35	195.12	3,983.72	13.69 N	0.85 E	-13.70	0.09

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
4081.00	0.93	197.95	4,079.70	11.86 N	0.31 E	-11.86	0.45
4175.00	1.05	197.15	4,173.69	10.32 N	0.17 W	-10.31	0.13
4270.00	1.28	201.03	4,268.67	8.50 N	0.81 W	-8.49	0.25
4366.00	1.27	190.79	4,364.65	6.45 N	1.40 W	-6.44	0.24
4461.00	1.52	190.01	4,459.62	4.17 N	1.81 W	-4.16	0.27
4556.00	1.58	189.44	4,554.58	1.63 N	2.25 W	-1.61	0.07
4651.00	1.56	191.69	4,649.55	0.93 S	2.73 W	0.96	0.07
4747.00	1.35	189.64	4,745.52	3.33 S	3.18 W	3.36	0.23
4842.00	1.39	186.62	4,840.49	5.58 S	3.50 W	5.61	0.08
4937.00	1.35	194.62	4,935.46	7.80 S	3.91 W	7.83	0.21
5032.00	0.66	310.38	5,030.45	8.52 S	4.61 W	8.57	1.83
5127.00	2.55	347.50	5,125.41	6.11 S	5.49 W	6.16	2.17
5223.00	3.24	6.73	5,221.29	1.33 S	5.63 W	1.39	1.23
5318.00	5.15	9.28	5,316.03	5.54 N	4.63 W	-5.50	2.03
5414.00	5.41	12.22	5,411.63	14.22 N	2.98 W	-14.19	0.39
5509.00	5.29	10.73	5,506.21	22.90 N	1.21 W	-22.89	0.20
5604.00	4.98	12.48	5,600.83	31.23 N	0.49 E	-31.23	0.36
5699.00	4.63	12.12	5,695.50	39.00 N	2.19 E	-39.02	0.38
5794.00	3.86	7.82	5,790.24	45.92 N	3.43 E	-45.95	0.88
5888.00	3.41	11.37	5,884.05	51.79 N	4.41 E	-51.83	0.54
5984.00	4.51	4.75	5,979.82	58.34 N	5.29 E	-58.39	1.24
6079.00	4.20	1.69	6,074.54	65.55 N	5.70 E	-65.60	0.41
6174.00	2.53	1.35	6,169.38	71.13 N	5.85 E	-71.18	1.76
6268.00	2.93	348.48	6,263.27	75.56 N	5.42 E	-75.61	0.77
6363.00	3.31	351.72	6,358.13	80.65 N	4.54 E	-80.69	0.44
6458.00	3.68	343.28	6,452.95	86.28 N	3.27 E	-86.31	0.67
6553.00	4.50	345.60	6,547.71	92.81 N	1.46 E	-92.82	0.88
6648.00	2.72	333.84	6,642.52	98.45 N	0.46 W	-98.44	2.02
6694.00	2.53	338.95	6,688.47	100.38 N	1.31 W	-100.36	0.66
6789.00	2.87	348.80	6,783.36	104.66 N	2.52 W	-104.63	0.60
6884.00	2.87	347.36	6,878.25	109.31 N	3.50 W	-109.27	0.08
6979.00	2.91	342.84	6,973.13	113.93 N	4.73 W	-113.88	0.24
7073.00	2.84	342.22	7,067.01	118.42 N	6.14 W	-118.36	0.08
7168.00	0.98	333.15	7,161.95	121.39 N	7.23 W	-121.31	1.98
7262.00	1.03	293.16	7,255.94	122.43 N	8.37 W	-122.35	0.73
7358.00	1.97	205.21	7,351.91	121.28 N	9.86 W	-121.19	2.28
7389.00	5.46	189.66	7,382.84	119.35 N	10.33 W	-119.25	11.63
7421.00	9.33	187.64	7,414.57	115.28 N	10.93 W	-115.17	12.11
7451.00	13.51	195.06	7,443.97	109.48 N	12.17 W	-109.36	14.76
7483.00	17.08	195.51	7,474.83	101.34 N	14.40 W	-101.20	11.14
7515.00	19.25	196.50	7,505.24	91.75 N	17.15 W	-91.59	6.85
7546.00	20.67	192.33	7,534.38	81.51 N	19.77 W	-81.32	6.49
7577.00	22.96	188.67	7,563.16	70.18 N	21.85 W	-69.97	8.60
7609.00	26.35	186.02	7,592.24	56.95 N	23.54 W	-56.72	11.13
7641.00	31.15	183.21	7,620.28	41.61 N	24.75 W	-41.37	15.59

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
7673.00	36.00	184.14	7,646.94	23.95 N	25.89 W	-23.71	15.22
7704.00	39.57	182.10	7,671.44	5.00 N	26.91 W	-4.74	12.20
7736.00	43.98	181.48	7,695.29	16.31 S	27.58 W	16.56	13.85
7768.00	49.29	181.03	7,717.26	39.55 S	28.08 W	39.82	16.64
7799.00	53.53	180.96	7,736.59	63.78 S	28.50 W	64.04	13.66
7831.00	56.77	179.78	7,754.88	90.03 S	28.66 W	90.30	10.58
7863.00	59.27	180.35	7,771.82	117.17 S	28.70 W	117.44	7.96
7895.00	60.79	179.68	7,787.81	144.89 S	28.70 W	145.16	5.08
7927.00	64.95	179.63	7,802.40	173.37 S	28.53 W	173.63	13.00
7958.00	68.80	178.38	7,814.57	201.87 S	28.03 W	202.12	12.95
7990.00	72.27	176.67	7,825.23	232.00 S	26.72 W	232.24	11.96
8022.00	76.59	176.15	7,833.82	262.76 S	24.79 W	262.98	13.60
8054.00	81.21	177.34	7,839.98	294.10 S	23.01 W	294.31	14.88
8085.00	85.43	178.90	7,843.58	324.87 S	22.01 W	325.06	14.49
8117.00	88.92	179.84	7,845.16	356.82 S	21.65 W	357.01	11.31
8212.00	89.88	179.38	7,846.15	451.81 S	21.00 W	451.99	1.11
8307.00	92.16	179.31	7,844.46	546.78 S	19.91 W	546.95	2.40
8402.00	90.71	178.03	7,842.09	641.72 S	17.70 W	641.86	2.03
8497.00	88.71	178.81	7,842.57	736.68 S	15.09 W	736.79	2.26
8592.00	90.74	179.05	7,843.03	831.66 S	13.31 W	831.75	2.15
8687.00	93.51	179.39	7,839.51	926.58 S	12.02 W	926.65	2.94
8783.00	91.11	179.08	7,835.64	1,022.48 S	10.74 W	1022.54	2.53
8878.00	92.99	178.98	7,832.24	1,117.40 S	9.13 W	1117.44	1.98
8972.00	90.49	180.54	7,829.39	1,211.35 S	8.75 W	1211.38	3.13
9068.00	89.23	180.96	7,829.62	1,307.34 S	10.01 W	1307.37	1.39
9163.00	91.42	180.83	7,829.08	1,402.32 S	11.49 W	1402.37	2.31
9258.00	90.37	180.92	7,827.59	1,497.29 S	12.94 W	1497.35	1.11
9353.00	91.97	180.72	7,825.65	1,592.26 S	14.30 W	1592.33	1.70
9448.00	90.77	181.17	7,823.38	1,687.22 S	15.86 W	1687.29	1.35
9543.00	89.91	180.60	7,822.81	1,782.21 S	17.32 W	1782.29	1.09
9638.00	91.93	180.51	7,821.29	1,877.18 S	18.24 W	1877.27	2.13
9733.00	90.71	180.82	7,819.10	1,972.15 S	19.35 W	1972.25	1.33
9828.00	89.91	182.40	7,818.59	2,067.11 S	22.01 W	2067.22	1.86
9923.00	89.51	183.00	7,819.07	2,162.00 S	26.49 W	2162.15	0.77
10019.00	91.54	183.29	7,818.19	2,257.85 S	31.76 W	2258.05	2.14
10113.00	91.60	181.30	7,815.62	2,351.73 S	35.52 W	2351.96	2.11
10208.00	89.66	181.43	7,814.57	2,446.69 S	37.78 W	2446.94	2.05
10303.00	92.15	181.41	7,813.07	2,541.65 S	40.14 W	2541.91	2.62
10397.00	92.03	182.16	7,809.63	2,635.54 S	43.06 W	2635.83	0.80
10492.00	90.34	183.63	7,807.66	2,730.39 S	47.86 W	2730.72	2.37
10587.00	88.37	182.72	7,808.74	2,825.23 S	53.13 W	2825.61	2.29
10682.00	89.57	180.48	7,810.45	2,920.17 S	55.78 W	2920.57	2.68
10778.00	91.48	179.60	7,809.57	3,016.16 S	55.85 W	3016.55	2.19
10872.00	90.37	179.24	7,808.06	3,110.14 S	54.90 W	3110.52	1.24
10967.00	89.48	179.89	7,808.18	3,205.14 S	54.18 W	3205.51	1.16

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
11062.00	91.57	180.11	7,807.32	3,300.13 S	54.18 W	3300.49	2.22
11156.00	90.34	179.39	7,805.75	3,394.11 S	53.77 W	3394.47	1.52
11250.00	88.03	179.84	7,807.09	3,488.09 S	53.14 W	3488.44	2.51
11346.00	89.82	180.06	7,808.90	3,584.07 S	53.06 W	3584.41	1.88
11441.00	92.84	180.12	7,806.70	3,679.04 S	53.21 W	3679.38	3.18
11536.00	90.92	180.21	7,803.58	3,773.98 S	53.49 W	3774.32	2.02
11631.00	88.74	180.67	7,803.87	3,868.97 S	54.22 W	3869.31	2.35
11725.00	91.29	180.87	7,803.84	3,962.95 S	55.48 W	3963.30	2.73
11821.00	94.31	180.95	7,799.15	4,058.82 S	57.01 W	4059.17	3.15
11916.00	93.46	180.67	7,792.71	4,153.59 S	58.35 W	4153.95	0.95
12011.00	92.25	179.03	7,787.98	4,248.46 S	58.10 W	4248.82	2.15
12106.00	89.38	179.01	7,786.62	4,343.43 S	56.48 W	4343.77	3.02
12201.00	90.99	179.53	7,786.32	4,438.42 S	55.27 W	4438.74	1.77
12296.00	89.66	179.46	7,785.78	4,533.41 S	54.43 W	4533.72	1.40
12390.00	90.62	179.30	7,785.55	4,627.41 S	53.42 W	4627.70	1.03
12485.00	87.41	180.33	7,787.19	4,722.38 S	53.11 W	4722.67	3.54
12581.00	88.74	180.54	7,790.41	4,818.32 S	53.84 W	4818.61	1.40
12676.00	90.95	180.68	7,790.66	4,913.31 S	54.85 W	4913.61	2.34
12702.00	91.54	180.62	7,790.10	4,939.30 S	55.14 W	4939.60	2.27
12759.00	91.54	180.62	7,788.56	4,996.27 S	55.76 W	4996.58	0.00

SURVEY FOOTER

SURVEYS CALCULATED USING SHORT COLLAR METHOD
TIE-ON SURVEY ASSUMED VERTICAL AT SURFACE
SURVEYS FROM 0.00' MD TO 12702.00' MD ARE PROVIDED BY SPERRY DRILLING MWD
SURVEY AT 12702' MD HAS BEEN PROJECTED TO TD AT 12759' MD
SPERRY ENGINEERS: JOHN WELTON, ALAN SMILEY, ANDY FRAIZER, JUSTIN WATERMAN

DIRECTIONAL SURVEY DATA NOTES

- Calculation based on minimum curvature method.
- Survey coordinates relative to well system reference point.
- TVD values given relative to drilling measurement point.
- Vertical section relative to well head.
- Vertical section is computed along a direction of degrees ()
- A total correction of deg from Magnetic north to True north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 12,759.00 feet is 4,996.59 feet along 180.64 degrees ()

WARRANTY

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HALLIBURTON

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State of New Mexico, Eddy County

I, John Welton, certify that I am employed by Halliburton Energy Services, Inc. (AKA Sperry Drilling) and that on the dates of 15 June 2014 through 5 July 2014, I did conduct or supervise the taking of MWD directional surveys for the well Skeen 2 26 27 State 4H from surface to a depth of 12702' 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 this survey which was conducted at the request of Chevron USA for the well of Skeen 2 26 27 State 4H, API No. 30-015-41118-0000 in Eddy County, New Mexico. I have reviewed this report and find that it confirms to the principles and procedures as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling).

Field Engineer