

Endurance Resources, Inc.

Stratocaster 20 Federal 2H

Lea County, NM

Patriot 4

API# 30-025-41381-0000

HOBBS OCD
OCT 14 2014
RECEIVED

January 26, 2014 – February 17, 2014

HD-MJ-901040590

Sperry Drilling

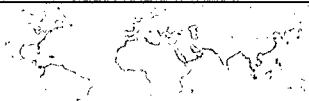
Survey Report

Logan Tucker

HALLIBURTON

**Drilling and Formation
Evaluation**

OCT 17 2014



Survey Report for Endurance

Rig	:	Patriot 4
Well Name	:	Stratocaster 20 Federal 2H
Field Name	:	Delaware Basin
Country	:	USA
Job Number	:	HD-XX-0901040590
Job Start Date	:	27-Jan-14
API Number	:	30-025-41381-0000

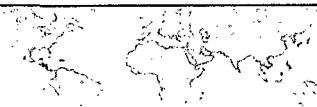


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GENERAL INFORMATION

Company	: Endurance
Rig	: Patriot 4
Well	: Stratocaster 20 Federal 2H
Field	: Delaware Basin
State	: New Mexico
County	: Lea,
Country	: USA
API Number	: 30-025-41381-0000
Sperry Drilling Job Number	: HD-XX-0901040590
Job Start Date	: 27-Jan-14
Job End Date	: 17-Feb-14
North Reference	: Grid
Total Correction (deg)	: 6.894
Dip Angle (deg)	: 60.177
Total Magnetic Field (nT)	: 48408
Date of Magnetic Data	: 26 January, 2014
Well Head coordinates N	: 32 deg. 17 min 1.54 sec North
Well Head coordinates E	: 103 deg. 29 min 39.19 sec West
Vertical section direction (deg)	: 359.46
Unit Number	: 11164419
MWD Engineers	: John Welton, Wes Beale, Jonathan Smith, Logan Tucker, Alexis Vargas
Company Representatives	:
Company Geologist:	:



DIRECTIONAL SURVEY DATA

Tie-in

0.00

0.00

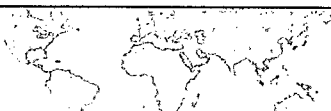
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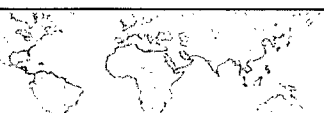
0.00 E

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
151.40	0.15	217.78	151.40	0.16 S	0.12 W	-0.16	0.10
246.20	0.14	250.62	246.20	0.29 S	0.31 W	-0.29	0.09
341.00	0.18	210.55	341.00	0.46 S	0.49 W	-0.46	0.12
435.80	0.15	166.47	435.80	0.71 S	0.54 W	-0.70	0.13
530.60	0.23	179.73	530.60	1.02 S	0.51 W	-1.01	0.10
625.40	0.32	192.98	625.40	1.47 S	0.57 W	-1.46	0.12
720.20	0.22	274.89	720.20	1.71 S	0.81 W	-1.70	0.38
815.00	0.12	356.80	815.00	1.60 S	0.99 W	-1.59	0.25
909.80	0.15	38.24	909.80	1.40 S	0.92 W	-1.39	0.11
1004.60	0.19	79.68	1,004.60	1.27 S	0.69 W	-1.27	0.13
1099.40	0.38	78.90	1,099.39	1.18 S	0.23 W	-1.18	0.20
1194.20	0.43	78.12	1,194.19	1.05 S	0.43 E	-1.06	0.05
1289.00	0.44	69.47	1,288.99	0.85 S	1.12 E	-0.86	0.07
1383.80	0.40	60.81	1,383.79	0.56 S	1.75 E	-0.58	0.08
1478.60	0.31	66.71	1,478.59	0.30 S	2.27 E	-0.32	0.10
1573.40	0.24	72.61	1,573.38	0.14 S	2.70 E	-0.16	0.08
1668.20	0.15	65.36	1,668.18	0.03 S	3.00 E	-0.05	0.10
1763.00	0.06	58.11	1,762.98	0.05 N	3.15 E	0.02	0.10
1857.80	0.20	20.05	1,857.78	0.23 N	3.25 E	0.20	0.17
1952.60	0.34	341.98	1,952.58	0.66 N	3.22 E	0.63	0.23
2047.40	0.39	343.34	2,047.38	1.23 N	3.04 E	1.20	0.05
2142.20	0.37	344.69	2,142.18	1.84 N	2.87 E	1.81	0.02
2237.00	0.55	336.76	2,236.98	2.55 N	2.61 E	2.53	0.20
2331.80	0.74	328.83	2,331.77	3.49 N	2.11 E	3.47	0.22
2426.60	0.69	335.79	2,426.56	4.54 N	1.56 E	4.52	0.11
2521.40	0.64	352.75	2,521.36	5.58 N	1.26 E	5.57	0.21
2616.20	1.00	58.67	2,616.15	6.54 N	1.90 E	6.52	0.99
2711.00	1.36	101.60	2,710.93	6.74 N	3.71 E	6.71	0.98
2805.80	1.39	73.75	2,805.70	6.84 N	5.91 E	6.78	0.70
2900.60	1.41	36.89	2,900.48	8.09 N	7.72 E	8.02	0.93
2995.40	1.82	24.24	2,995.24	10.40 N	9.04 E	10.31	0.57
3090.20	2.22	11.60	3,089.98	13.57 N	10.02 E	13.47	0.63
3185.00	2.29	5.60	3,184.71	17.25 N	10.58 E	17.15	0.26
3279.80	2.35	359.60	3,279.43	21.08 N	10.75 E	20.98	0.26
3374.60	2.28	344.56	3,374.15	24.84 N	10.23 E	24.74	0.64
3469.40	2.20	334.52	3,468.88	28.30 N	8.95 E	28.22	0.42
3564.20	2.01	356.56	3,563.62	31.60 N	8.07 E	31.53	0.87
3659.00	2.02	23.60	3,658.36	34.79 N	8.64 E	34.71	0.99
3753.80	1.88	37.26	3,753.11	37.56 N	10.25 E	37.47	0.51
3848.60	1.74	50.91	3,847.86	39.71 N	12.30 E	39.59	0.48
3943.40	1.64	44.10	3,942.62	41.59 N	14.37 E	41.45	0.24



DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
4038.20	1.53	45.28	4,037.38	43.46 N	16.21 E	43.30	0.12
4133.00	2.28	53.33	4,132.13	45.47 N	18.62 E	45.29	0.84
4227.80	3.04	61.38	4,226.83	47.80 N	22.34 E	47.59	0.89
4322.60	3.73	71.80	4,321.46	49.97 N	27.48 E	49.71	0.97
4417.40	4.43	80.23	4,416.02	51.55 N	34.01 E	51.23	0.97
4512.20	4.68	89.87	4,510.52	52.18 N	41.49 E	51.79	0.85
4607.00	4.94	93.50	4,604.99	51.94 N	49.43 E	51.48	0.42
4701.80	4.68	102.74	4,699.46	50.84 N	57.28 E	50.30	0.86
4796.60	4.41	113.98	4,793.96	48.51 N	64.38 E	47.90	0.98
4891.40	4.04	120.05	4,888.50	45.35 N	70.60 E	44.69	0.61
4986.20	3.67	116.13	4,983.09	42.35 N	76.22 E	41.62	0.48
5081.00	3.09	103.64	5,077.73	40.41 N	81.42 E	39.64	0.99
5175.80	2.51	89.15	5,172.41	39.83 N	85.98 E	39.02	0.96
5270.60	2.22	68.14	5,267.13	40.55 N	89.76 E	39.70	0.96
5365.40	1.94	47.12	5,361.87	42.32 N	92.64 E	41.45	0.85
5460.20	1.71	76.11	5,456.63	43.76 N	95.19 E	42.86	0.99
5555.00	1.48	109.09	5,551.39	43.70 N	97.72 E	42.77	0.98
5649.80	1.42	95.16	5,646.16	43.19 N	100.05 E	42.24	0.38
5744.60	1.36	61.22	5,740.94	43.63 N	102.20 E	42.66	0.86
5839.40	1.28	68.69	5,835.71	44.55 N	104.18 E	43.57	0.20
5934.20	1.20	76.17	5,930.49	45.17 N	106.13 E	44.17	0.19
6029.00	0.87	114.95	6,025.27	45.11 N	107.74 E	44.09	0.80
6123.80	0.54	153.74	6,120.07	44.40 N	108.59 E	43.38	0.59
6218.60	0.49	134.12	6,214.86	43.72 N	109.08 E	42.69	0.19
6313.40	0.43	114.50	6,309.66	43.29 N	109.70 E	42.25	0.18
6408.20	0.46	94.62	6,404.46	43.11 N	110.40 E	42.07	0.17
6503.00	0.48	74.74	6,499.25	43.19 N	111.16 E	42.14	0.17
6597.80	0.42	67.84	6,594.05	43.42 N	111.87 E	42.37	0.09
6692.60	0.34	60.94	6,688.85	43.69 N	112.43 E	42.63	0.10
6787.40	0.37	64.06	6,783.65	43.96 N	112.95 E	42.89	0.04
6882.20	0.41	67.17	6,878.45	44.23 N	113.54 E	43.15	0.05
6977.00	0.29	22.39	6,973.24	44.58 N	113.95 E	43.50	0.30
7071.80	0.17	337.60	7,068.04	44.93 N	113.98 E	43.85	0.22
7166.60	0.21	330.93	7,162.84	45.21 N	113.85 E	44.14	0.05
7261.40	0.23	324.25	7,257.64	45.52 N	113.65 E	44.45	0.03
7356.20	0.48	308.25	7,352.44	45.92 N	113.23 E	44.85	0.28
7451.00	0.73	292.24	7,447.23	46.39 N	112.36 E	45.33	0.32
7545.80	0.64	278.55	7,542.03	46.70 N	111.27 E	45.65	0.20
7640.60	0.56	264.85	7,636.82	46.74 N	110.29 E	45.70	0.17
7735.40	0.65	233.97	7,731.62	46.38 N	109.39 E	45.35	0.35
7830.20	0.75	203.09	7,826.41	45.49 N	108.71 E	44.47	0.41
7925.00	0.79	202.15	7,921.20	44.32 N	108.23 E	43.30	0.04
8019.80	0.73	201.20	8,015.99	43.15 N	107.76 E	42.13	0.06
8114.60	0.97	173.43	8,110.78	41.79 N	107.63 E	40.77	0.50
8209.40	1.22	145.66	8,205.57	40.16 N	108.29 E	39.14	0.61



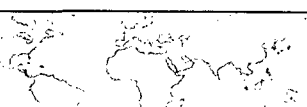
DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100)
8304.20	1.06	190.14	8,300.35	38.46 N	108.71 E	37.44	0.92
8399.00	0.90	234.63	8,395.14	37.17 N	107.95 E	36.15	0.80
8493.80	0.76	235.13	8,489.93	36.38 N	106.83 E	35.37	0.15
8588.60	0.54	235.64	8,584.72	35.77 N	105.94 E	34.77	0.23
8683.40	0.62	230.13	8,679.52	35.18 N	105.18 E	34.19	0.10
8778.20	0.67	224.63	8,774.31	34.46 N	104.40 E	33.48	0.08
8873.00	0.72	188.69	8,869.10	33.48 N	103.92 E	32.50	0.46
8967.80	0.77	152.76	8,963.90	32.32 N	104.12 E	31.34	0.49
9062.60	0.55	181.04	9,058.69	31.30 N	104.40 E	30.32	0.41
9157.40	0.33	209.33	9,153.49	30.61 N	104.26 E	29.62	0.32
9252.20	0.40	222.20	9,248.29	30.13 N	103.90 E	29.14	0.11
9347.00	0.46	235.06	9,343.08	29.66 N	103.37 E	28.69	0.12
9441.80	0.48	293.48	9,437.88	29.60 N	102.69 E	28.63	0.48
9536.60	0.51	281.90	9,532.68	29.85 N	101.92 E	28.89	0.11
9631.40	1.66	276.44	9,627.46	30.09 N	100.14 E	29.14	1.22
9726.20	1.63	287.91	9,722.22	30.66 N	97.49 E	29.74	0.35
9821.00	1.46	286.29	9,816.99	31.41 N	95.05 E	30.51	0.19
9916.00	1.40	293.96	9,911.96	32.22 N	92.83 E	31.35	0.21
9947.00	2.33	327.88	9,942.94	32.91 N	92.15 E	32.04	4.52
9979.00	4.95	354.69	9,974.87	34.83 N	91.67 E	33.97	9.55
10011.00	8.87	359.63	10,006.64	38.68 N	91.53 E	37.81	12.40
10043.00	12.78	1.67	10,038.06	44.68 N	91.62 E	43.82	12.25
10074.00	16.67	358.67	10,068.04	52.56 N	91.61 E	51.69	12.80
10106.00	20.06	355.81	10,098.40	62.62 N	91.10 E	61.76	10.95
10138.00	23.07	353.76	10,128.16	74.33 N	90.02 E	73.48	9.70
10169.00	26.35	356.18	10,156.32	87.24 N	88.90 E	86.40	11.06
10201.00	28.41	358.75	10,184.73	101.94 N	88.26 E	101.10	7.43
10233.00	31.18	1.53	10,212.50	117.83 N	88.32 E	117.00	9.67
10265.00	34.26	3.06	10,239.42	135.11 N	89.02 E	134.27	9.97
10296.00	36.59	5.12	10,264.68	153.03 N	90.31 E	152.18	8.44
10328.00	39.34	5.55	10,289.91	172.63 N	92.14 E	171.76	8.63
10360.00	42.39	5.71	10,314.10	193.46 N	94.19 E	192.57	9.54
10392.00	45.33	4.88	10,337.17	215.54 N	96.24 E	214.62	9.36
10424.00	48.93	4.06	10,358.94	238.92 N	98.06 E	237.98	11.41
10456.00	51.89	2.98	10,379.33	263.53 N	99.57 E	262.58	9.62
10487.00	54.39	2.07	10,397.93	288.31 N	100.66 E	287.34	8.40
10519.00	56.32	1.21	10,416.12	314.62 N	101.41 E	313.65	6.41
10551.00	58.46	1.35	10,433.36	341.57 N	102.02 E	340.59	6.69
10583.00	61.12	1.06	10,449.46	369.21 N	102.60 E	368.23	8.36
10615.00	64.26	0.56	10,464.14	397.64 N	103.00 E	396.65	9.90
10646.00	66.79	359.07	10,476.99	425.85 N	102.90 E	424.86	9.26
10678.00	70.69	357.63	10,488.59	455.65 N	102.04 E	454.67	12.89
10709.00	74.60	357.83	10,497.84	485.21 N	100.87 E	484.24	12.63
10741.00	78.45	358.06	10,505.29	516.30 N	99.75 E	515.34	12.08
10773.00	80.97	358.03	10,511.01	547.77 N	98.68 E	546.81	7.86



DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
10805.00	83.67	358.33	10,515.29	579.46 N	97.67 E	578.51	8.48
10836.00	87.00	359.11	10,517.81	610.35 N	96.98 E	609.40	11.05
10868.00	89.57	359.02	10,518.76	642.32 N	96.46 E	641.39	8.02
10900.00	90.46	358.69	10,518.76	674.32 N	95.82 E	673.38	2.98
10995.00	91.97	356.29	10,516.74	769.20 N	91.67 E	768.30	2.99
11090.00	90.19	355.95	10,514.95	863.96 N	85.24 E	863.12	1.91
11186.00	89.51	356.14	10,515.21	959.73 N	78.63 E	958.94	0.74
11281.00	88.30	357.64	10,517.02	1,054.57 N	73.48 E	1053.83	2.02
11376.00	88.83	357.51	10,519.41	1,149.45 N	69.46 E	1148.75	0.57
11471.00	89.60	357.91	10,520.71	1,244.37 N	65.66 E	1243.69	0.92
11566.00	88.92	357.83	10,521.94	1,339.29 N	62.12 E	1338.65	0.72
11661.00	90.09	357.62	10,522.76	1,434.21 N	58.35 E	1433.60	1.25
11757.00	89.14	358.04	10,523.40	1,530.14 N	54.71 E	1529.56	1.08
11852.00	89.32	357.99	10,524.68	1,625.07 N	51.42 E	1624.52	0.20
11947.00	90.06	357.55	10,525.19	1,720.00 N	47.72 E	1719.47	0.91
12042.00	90.89	357.45	10,524.40	1,814.90 N	43.57 E	1814.41	0.88
12137.00	89.91	357.33	10,523.74	1,909.80 N	39.25 E	1909.35	1.04
12232.00	89.23	357.94	10,524.45	2,004.72 N	35.33 E	2004.30	0.96
12328.00	89.97	358.41	10,525.12	2,100.67 N	32.27 E	2100.27	0.91
12423.00	90.18	357.95	10,525.00	2,195.62 N	29.25 E	2195.24	0.53
12518.00	90.65	357.70	10,524.31	2,290.55 N	25.64 E	2290.20	0.55
12613.00	91.07	357.54	10,522.88	2,385.45 N	21.70 E	2385.14	0.48
12708.00	90.25	357.52	10,521.79	2,480.36 N	17.60 E	2480.08	0.87
12803.00	88.70	358.27	10,522.66	2,575.29 N	14.11 E	2575.04	1.81
12898.00	89.94	358.44	10,523.78	2,670.24 N	11.38 E	2670.01	1.31
12993.00	88.86	358.23	10,524.78	2,765.19 N	8.62 E	2764.99	1.15
13088.00	89.85	358.03	10,525.85	2,860.13 N	5.52 E	2859.95	1.06
13183.00	91.17	358.15	10,525.01	2,955.07 N	2.36 E	2954.92	1.40
13278.00	90.40	358.30	10,523.71	3,050.02 N	0.58 W	3049.89	0.82
13373.00	88.98	358.11	10,524.22	3,144.97 N	3.55 W	3144.86	1.50
13468.00	88.77	359.15	10,526.08	3,239.92 N	5.82 W	3239.83	1.11
13564.00	89.35	359.30	10,527.65	3,335.90 N	7.11 W	3335.82	0.63
13659.00	90.00	359.69	10,528.19	3,430.89 N	7.95 W	3430.82	0.79
13754.00	90.83	0.16	10,527.50	3,525.89 N	8.08 W	3525.81	1.01
13849.00	89.54	0.56	10,527.19	3,620.89 N	7.49 W	3620.80	1.43
13944.00	90.34	0.44	10,527.29	3,715.88 N	6.66 W	3715.78	0.86
14039.00	91.44	0.31	10,525.81	3,810.87 N	6.05 W	3810.75	1.17
14134.00	90.77	0.11	10,523.98	3,905.85 N	5.70 W	3905.73	0.74
14230.00	89.35	359.22	10,523.87	4,001.84 N	6.25 W	4001.72	1.74
14325.00	90.09	359.89	10,524.33	4,096.84 N	6.99 W	4096.72	1.04
14420.00	89.57	359.85	10,524.61	4,191.84 N	7.21 W	4191.72	0.55
14515.00	90.22	359.51	10,524.79	4,286.83 N	7.73 W	4286.72	0.77
14611.00	89.23	358.97	10,525.25	4,382.82 N	9.00 W	4382.71	1.17
14706.00	89.94	358.85	10,525.95	4,477.80 N	10.81 W	4477.71	0.76
14753.00	90.52	358.78	10,525.76	4,524.79 N	11.78 W	4524.70	1.25


DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (%/100')
14806.00	90.52	358.78	10,525.27	4,577.78 N	12.91 W	4577.70	0.00

SURVEY FOOTER

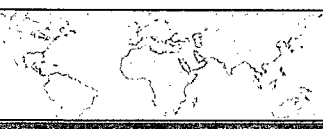
SURVEYS CALCULATED USING SHORT COLLAR METHOD.
 TIE-ON ASSUMED VERTICAL AT SURFACE.
 SURVEYS FROM 151' MD TO 9821' MD PROVIDED BY VAUGHN ENERGY SERVICES.
 SURVEYS FROM 9916' MD TO 14753' MD PROVIDED BY SPERRY DRILLING SERVICES.
 SURVEY 14753' MD IS PROJECTED TO BIT AT 14806' MD.
 SPERRY ENGINEERS: L. TUCKER, A. VARGAS.

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 359.46 degrees (Grid)
- A total correction of 6.89 deg from Magnetic north to Grid north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 14,806.00 feet is 4,577.80 feet along 359.84 degrees (Grid)

WARRANTY

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HALLIBURTON / SPERRY DRILLING
3950 INTERWOOD SOUTH PARKWAY
HOUSTON, TEXAS 77032-3346

PHONE: 281-986-4400
FAX: 281-986-4498