

69-00161



**Field:**

Map Units:	usFt
Vertical Reference Datum (VRD):	Mean Sea Level
Projected Coordinate System:	Zone 17N (84 W to 78 W)

**Section:**

Company Name:	Southwestern Energy Company	
Units:	Feet	
TVD Reference:	Rotary Table	
Position:		
	Northing:	14,546,367.140
	Easting:	1,758,769.009
North Reference:	Grid	Grid Cor
Comment :		

**Slot:**

Position (Relative to SW Corner Of Section)			
N/S	-15.609	Northing:	14,546,351.531
E/W	-12.535	Easting:	1,758,756.474
Ground Level Elevation (usft):	Ground Level:		
Comment :			

**Well:**

Type:	Main well		
KB Elevation	RKB @ 1294.00usft (SDC 40)		
Closure Distance:	5318.15	Closure Azimut	
Comment:			

**Vertical Section:**

Position of Origin (Relative to Slot centre)	N/S
Vertical Section Azimuth:	320.91

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**Survey**

Name	Definitive Survey	Company	SWN
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**Magnetic Parameters:**

Model:	BGGM2014	Field Strength:	52,524	Declination:	-8.76	Dip:
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**Survey Tool Ranges:**

Survey Tool	Start MD ( ft )	End MD ( ft )
VES	100.00	608.00
VES	608.00	1016.00
MWD	1075.00	6044.00
MWD	6091.00	6648.00
MWD	6694.00	11974.00

**Survey Points:** (Relative to Slot Centre, TVD Relative to Slot TVD Reference)

MD (Ft)	Inc	Az	TVD (Ft)	+N/-S (Ft)	+E/-W (Ft)	V Sec (Ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.45	276.86	100.00	0.05	-0.39	0.28
200.00	0.20	284.53	200.00	0.14	-0.95	0.71
300.00	0.30	278.18	300.00	0.22	-1.38	1.04
400.00	0.08	285.27	400.00	0.27	-1.70	1.29
500.00	0.19	297.49	500.00	0.37	-1.92	1.50
600.00	0.25	275.18	599.99	0.47	-2.28	1.80
608.00	0.26	276.42	607.99	0.47	-2.32	1.83
655.00	0.17	286.56	654.99	0.50	-2.49	1.96
737.00	0.25	280.51	736.99	0.57	-2.78	2.20
829.00	1.67	207.37	828.98	-0.59	-3.60	1.81
920.00	3.58	223.74	919.88	-3.82	-6.17	0.93
1016.00	5.12	223.12	1015.60	-9.11	-11.17	-0.03
1075.00	5.99	216.99	1074.32	-13.49	-14.82	-1.12
1168.00	6.07	207.82	1166.81	-21.71	-20.04	-4.22
1260.00	4.74	208.46	1258.40	-29.36	-24.12	-7.58
1353.00	5.32	208.54	1351.04	-36.52	-28.01	-10.69
1446.00	5.90	211.45	1443.60	-44.39	-32.56	-13.92
1539.00	5.56	202.82	1536.13	-52.62	-36.81	-17.63
1632.00	6.35	206.11	1628.63	-61.39	-40.82	-21.91
1724.00	6.84	208.82	1720.02	-70.76	-45.70	-26.11
1817.00	6.09	208.47	1812.43	-79.95	-50.72	-30.07
1910.00	5.62	212.74	1904.95	-88.12	-55.53	-33.38
2002.00	6.10	215.00	1996.46	-95.91	-60.77	-36.12
2095.00	6.31	207.29	2088.92	-104.50	-65.95	-38.62
2166.00	5.75	200.13	2159.53	-111.31	-68.96	-42.91
2282.00	4.40	191.77	2275.07	-121.12	-71.87	-48.69
2375.00	7.72	208.03	2367.55	-130.13	-75.53	-53.37

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2467.00	9.47	212.87	2458.51	-141.94	-82.55	-58.12
2560.00	10.24	207.79	2550.14	-155.68	-90.55	-63.73
2653.00	10.07	203.43	2641.68	-170.45	-97.64	-70.73
2746.00	10.70	204.22	2733.16	-185.79	-104.42	-78.36
2839.00	9.52	211.12	2824.72	-200.24	-111.93	-84.84
2932.00	10.00	206.80	2916.37	-214.04	-119.55	-90.75
3024.00	9.77	207.07	3007.01	-228.12	-126.70	-97.16
3117.00	10.24	206.12	3098.59	-242.57	-133.93	-103.82
3210.00	10.17	207.26	3190.12	-257.29	-141.33	-110.58
3303.00	10.43	208.61	3281.62	-271.97	-149.12	-117.07
3396.00	10.83	209.05	3373.03	-287.00	-157.40	-123.51
3488.00	10.76	210.43	3463.40	-301.96	-165.94	-129.74
3581.00	10.62	207.62	3554.79	-317.04	-174.31	-136.16
3674.00	10.73	206.52	3646.18	-332.38	-182.15	-143.13
3767.00	10.80	209.15	3737.54	-347.74	-190.26	-149.93
3859.00	9.99	205.80	3828.03	-362.45	-197.93	-156.51
3952.00	9.91	203.96	3919.63	-377.03	-204.70	-163.56
4045.00	10.47	204.29	4011.16	-392.04	-211.42	-170.98
4138.00	10.53	205.47	4102.61	-407.42	-218.55	-178.41
4230.00	10.10	210.32	4193.12	-421.97	-226.24	-184.86
4323.00	10.28	214.31	4284.66	-435.86	-235.03	-190.10
4416.00	11.03	215.09	4376.05	-450.00	-244.83	-194.90
4509.00	10.47	214.07	4467.42	-464.28	-254.67	-199.77
4601.00	11.48	221.15	4557.74	-478.10	-265.38	-203.74
4694.00	11.60	212.42	4648.87	-492.96	-276.49	-208.28
4787.00	11.04	207.46	4740.06	-508.75	-285.60	-214.79
4880.00	10.40	201.98	4831.44	-524.44	-292.85	-222.39
4973.00	11.08	204.46	4922.81	-540.36	-299.69	-230.43
5065.00	10.93	200.72	5013.12	-556.56	-306.44	-238.76
5158.00	10.55	206.49	5104.49	-572.43	-313.36	-246.71
5251.00	11.28	211.38	5195.81	-587.82	-321.89	-253.27
5344.00	10.56	208.25	5287.13	-603.09	-330.66	-259.59
5437.00	10.83	206.66	5378.51	-618.40	-338.62	-266.47
5529.00	11.50	204.74	5468.77	-634.46	-346.33	-274.06
5622.00	13.60	208.50	5559.54	-652.49	-355.43	-282.32
5715.00	14.75	202.23	5649.72	-673.06	-365.13	-292.17
5812.00	15.21	204.51	5743.42	-696.07	-375.08	-303.75
5815.00	15.18	205.62	5746.32	-696.78	-375.41	-304.10
5859.00	15.30	222.04	5788.79	-706.29	-381.79	-307.45
5905.00	14.60	236.80	5833.25	-713.97	-390.71	-307.79
5915.00	14.38	239.40	5842.93	-715.29	-392.83	-307.48
5952.00	13.81	249.62	5878.82	-719.17	-400.93	-305.39
5998.00	14.77	267.48	5923.42	-721.34	-411.94	-300.13
6015.00	15.37	274.73	5939.84	-721.25	-416.35	-297.28

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6044.00	16.88	285.63	5967.70	-719.80	-424.24	-291.18
6091.00	18.29	294.03	6012.51	-714.96	-437.55	-279.03
6137.00	21.10	299.87	6055.82	-707.89	-451.32	-264.86
6184.00	25.24	305.01	6099.02	-697.92	-466.88	-247.31
6230.00	28.75	309.19	6140.01	-685.30	-483.49	-227.04
6276.00	32.18	311.20	6179.65	-670.24	-501.29	-204.13
6323.00	35.53	313.09	6218.68	-652.66	-520.68	-178.25
6369.00	39.31	315.91	6255.21	-633.05	-540.59	-150.48
6416.00	43.18	317.04	6290.54	-610.58	-561.92	-119.60
6462.00	47.92	318.26	6322.75	-586.31	-584.02	-86.82
6509.00	53.73	318.31	6352.42	-559.13	-608.25	-50.44
6555.00	57.60	318.90	6378.37	-530.63	-633.36	-12.49
6601.00	61.38	319.35	6401.71	-500.67	-659.29	27.11
6648.00	66.21	320.61	6422.46	-468.38	-686.39	69.26
6694.00	70.26	321.43	6439.52	-435.18	-713.26	111.97
6741.00	73.86	323.63	6453.99	-399.69	-740.44	156.66
6787.00	76.50	324.73	6465.76	-363.63	-766.46	201.05
6833.00	79.76	325.68	6475.22	-326.67	-792.15	245.93
6880.00	83.80	327.12	6481.94	-287.93	-817.88	292.23
6926.00	86.97	329.33	6485.64	-248.96	-842.02	337.70
6973.00	88.55	330.32	6487.48	-208.36	-865.62	384.09
7019.00	89.34	330.47	6488.32	-168.37	-888.34	429.45
7112.00	89.69	330.48	6489.11	-87.45	-934.17	521.16
7205.00	90.92	330.69	6488.62	-6.45	-979.85	612.83
7298.00	89.96	330.55	6487.90	74.59	-1025.47	704.49
7390.00	89.08	328.84	6488.67	154.01	-1071.89	795.41
7483.00	89.69	330.23	6489.67	234.17	-1119.04	887.35
7576.00	89.16	329.64	6490.60	314.65	-1165.63	979.19
7669.00	91.63	334.10	6489.96	396.63	-1209.46	1070.46
7762.00	90.40	332.15	6488.31	479.57	-1251.49	1161.34
7854.00	90.84	330.62	6487.32	560.33	-1295.55	1251.80
7947.00	91.80	329.32	6485.18	640.82	-1342.08	1343.61
8040.00	91.36	328.49	6482.61	720.42	-1390.09	1435.67
8133.00	91.89	327.59	6479.98	799.29	-1439.29	1527.91
8226.00	91.98	328.56	6476.83	878.18	-1488.44	1620.13
8318.00	91.63	328.13	6473.94	956.45	-1536.70	1711.31
8411.00	90.57	328.78	6472.15	1035.70	-1585.35	1803.49
8504.00	91.19	327.96	6470.72	1114.87	-1634.11	1895.69
8597.00	91.28	329.07	6468.72	1194.16	-1682.67	1987.85
8689.00	92.33	329.58	6465.82	1273.25	-1729.58	2088.81
8782.00	91.54	330.17	6462.68	1353.64	-1776.23	2170.62
8875.00	91.01	330.62	6460.61	1434.48	-1822.16	2262.33
8968.00	90.40	330.97	6459.47	1515.65	-1867.54	2353.94
9061.00	91.10	332.05	6458.25	1597.38	-1911.90	2445.34

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9153.00	90.66	332.06	6456.84	1678.64	-1955.00	2535.59
9246.00	90.22	331.69	6456.12	1760.65	-1998.84	2626.89
9339.00	91.19	332.50	6454.98	1842.83	-2042.36	2718.12
9432.00	91.19	331.16	6453.05	1924.80	-2086.26	2809.41
9525.00	90.04	328.43	6452.05	2005.16	-2133.04	2901.28
9617.00	89.87	328.05	6452.12	2083.38	-2181.46	2992.53
9710.00	90.84	328.23	6451.54	2162.37	-2230.55	3084.79
9803.00	91.19	328.92	6449.90	2241.71	-2279.03	3176.94
9896.00	90.75	329.19	6448.32	2321.46	-2326.85	3268.99
9988.00	89.34	329.33	6448.25	2400.54	-2373.87	3360.01
10081.00	89.87	329.13	6448.89	2480.44	-2421.45	3452.03
10174.00	91.01	330.47	6448.18	2560.81	-2468.22	3543.91
10267.00	90.04	330.01	6447.33	2641.54	-2514.38	3635.67
10359.00	90.31	329.87	6447.04	2721.17	-2560.47	3726.53
10452.00	91.10	330.11	6445.90	2801.69	-2606.98	3818.36
10545.00	91.01	330.51	6444.19	2882.47	-2653.03	3910.09
10638.00	89.87	329.66	6443.47	2963.08	-2699.41	4001.90
10731.00	90.66	329.16	6443.04	3043.13	-2746.74	4093.87
10823.00	90.66	329.68	6441.98	3122.33	-2793.54	4184.86
10916.00	90.13	329.59	6441.34	3202.57	-2840.55	4276.78
11009.00	90.04	330.00	6441.20	3282.94	-2887.34	4368.66
11102.00	90.31	330.04	6440.92	3363.50	-2933.81	4460.49
11195.00	90.40	331.68	6440.34	3444.73	-2979.09	4552.08
11287.00	91.10	332.79	6439.14	3526.12	-3021.94	4642.28
11380.00	90.34	331.88	6437.97	3608.48	-3065.12	4733.43
11473.00	90.31	330.92	6437.44	3690.13	-3109.64	4824.87
11566.00	90.48	330.19	6436.80	3771.12	-3155.35	4916.56
11658.00	89.78	329.93	6436.59	3850.84	-3201.27	5007.38
11751.00	90.75	330.86	6436.16	3931.70	-3247.21	5099.11
11844.00	90.84	331.82	6434.87	4013.29	-3291.81	5190.56
11923.00	91.19	331.95	6433.47	4082.96	-3329.03	5268.11
11974.00	91.19	331.95	6432.41	4127.96	-3353.01	5318.15

Wellpath created using minimum curvature

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# CHARLES FRYE OHI 1H

Ohio Co. WV

PANHANDLE (CHARLES FRYE)

Latitude: 40.0531456600

Longitude: -80.5770625600

Divergence: 0.27

CHARLES FRYE OHI 1H

Latitude: 40.0531029600

Longitude: -80.5771076200

CHARLES FRYE OHI 1H

Rig Height ( Drill Floor): 26

h: 320.914

0.00 E/W 0.00

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67.37      Date:    2/22/2015

**Source Survey**

- Gyro/VES/SDC 40 (WB#1
- GYRO+MWD/SLB/SDC 40 (W
- MWD/SLB/SDC40 (WB#1
- MWD/SLB/DMAG/SDC40 (W
- MWD/SLB2/SDC 40 (WB#

DLS (deg/ 100ft)	Build Rate (deg/ 100ft)	Turn Rate (deg/ 100ft)	
0.00	0.00	0.00	
0.45	0.45	0.00	G
0.25	-0.25	7.67	G
0.10	0.10	-6.35	G
0.22	-0.22	7.09	G
0.11	0.11	12.22	G
0.10	0.06	-22.31	G
0.14	0.13	15.50	G
0.21	-0.19	21.57	GYRC
0.10	0.10	-7.38	GYRC
1.76	1.54	-79.50	GYRC
2.23	2.10	17.99	GYRC
1.60	1.60	-0.65	GYRC
1.78	1.47	-10.39	M
1.04	0.09	-9.86	M
1.45	-1.45	0.70	M
0.62	0.62	0.09	M
0.69	0.62	3.13	M
0.99	-0.37	-9.28	M
0.93	0.85	3.54	M
0.63	0.53	2.95	M
0.81	-0.81	-0.38	M
0.69	-0.51	4.59	M
0.58	0.52	2.46	M
0.92	0.23	-8.29	M
1.32	-0.79	-10.08	M
1.32	-1.16	-7.21	M
3.98	3.57	17.48	M

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2.06	1.90	5.26	N
1.25	0.83	-5.46	N
0.85	-0.18	-4.69	N
0.69	0.68	0.85	N
1.82	-1.27	7.42	N
0.94	0.52	-4.65	N
0.26	-0.25	0.29	N
0.54	0.51	-1.02	N
0.23	-0.08	1.23	N
0.38	0.28	1.45	N
0.44	0.43	0.47	N
0.29	-0.08	1.50	N
0.58	-0.15	-3.02	N
0.25	0.12	-1.18	N
0.53	0.08	2.83	N
1.10	-0.88	-3.64	N
0.35	-0.09	-1.98	N
0.61	0.60	0.35	N
0.24	0.06	1.27	N
1.05	-0.47	5.27	N
0.78	0.19	4.29	N
0.82	0.81	0.84	N
0.64	-0.60	-1.10	N
1.83	1.10	7.70	N
1.88	0.13	-9.39	N
1.21	-0.60	-5.33	N
1.29	-0.69	-5.89	N
0.88	0.73	2.67	N
0.79	-0.16	-4.07	N
1.23	-0.41	6.20	N
1.27	0.78	5.26	N
1.00	-0.77	-3.37	N
0.43	0.29	-1.71	N
0.83	0.73	-2.09	N
2.42	2.26	4.04	N
2.06	1.24	-6.74	N
0.77	0.47	2.35	N
9.78	-1.16	37.06	N
9.78	0.28	37.31	N
8.39	-1.52	32.09	N
6.89	-2.24	26.03	N
6.89	-1.53	27.61	N
9.77	2.09	38.83	N
11.64	3.54	42.67	N

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11.64	5.20	37.57	N
6.17	3.00	17.87	MWC
7.45	6.11	12.70	MWC
9.80	8.81	10.94	MWC
8.67	7.63	9.09	MWC
7.78	7.46	4.37	MWC
7.47	7.13	4.02	MWC
9.02	8.22	6.13	MWC
8.38	8.23	2.40	MWC
10.48	10.30	2.65	MWC
12.36	12.36	0.11	MWC
8.48	8.41	1.28	MWC
8.26	8.22	0.98	MWC
10.55	10.28	2.68	MWC
8.96	8.80	1.78	M'
8.86	7.66	4.68	M'
6.19	5.74	2.39	M'
7.37	7.09	2.07	M'
9.11	8.60	3.06	M'
8.39	6.89	4.80	M'
3.97	3.36	2.11	M'
1.75	1.72	0.33	M'
0.38	0.38	0.01	M'
1.34	1.32	0.23	M'
1.04	-1.03	-0.15	M'
2.09	-0.96	-1.86	M'
1.63	0.66	1.49	M'
0.85	-0.57	-0.63	M'
5.48	2.66	4.80	M'
2.48	-1.32	-2.10	M'
1.73	0.48	-1.66	M'
1.74	1.03	-1.40	M'
1.01	-0.47	-0.89	M'
1.12	0.57	-0.97	M'
1.05	0.10	1.04	M'
0.60	-0.38	-0.47	M'
1.34	-1.14	0.70	M'
1.11	0.67	-0.88	M'
1.20	0.10	1.19	M'
1.27	1.14	0.55	M'
1.06	-0.85	0.63	M'
0.75	-0.57	0.48	M'
0.76	-0.66	0.38	M'
1.38	0.75	1.16	M'

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0.48	-0.48	0.01	M'
0.62	-0.47	-0.40	M'
1.36	1.04	0.87	M'
1.44	0.00	-1.44	M'
3.19	-1.24	-2.94	M'
0.45	-0.18	-0.41	M'
1.06	1.04	0.19	M'
0.83	0.38	0.74	M'
0.56	-0.47	0.29	M'
1.54	-1.53	0.15	M'
0.61	0.57	-0.22	M'
1.89	1.23	1.44	M'
1.15	-1.04	-0.49	M'
0.33	0.29	-0.15	M'
0.89	0.85	0.26	M'
0.44	-0.10	0.43	M'
1.53	-1.23	-0.91	M'
1.01	0.85	-0.54	M'
0.57	0.00	0.57	M'
0.58	-0.57	-0.10	M'
0.45	-0.10	0.44	M'
0.29	0.29	0.04	M'
1.77	0.10	1.76	M'
1.43	0.76	1.21	M'
1.27	-0.82	-0.98	M'
1.03	-0.03	-1.03	M'
0.81	0.18	-0.78	M'
0.81	-0.76	-0.28	M'
1.44	1.04	1.00	M'
1.04	0.10	1.03	M'
0.47	0.44	0.16	M'
0.00	0.00	0.00	

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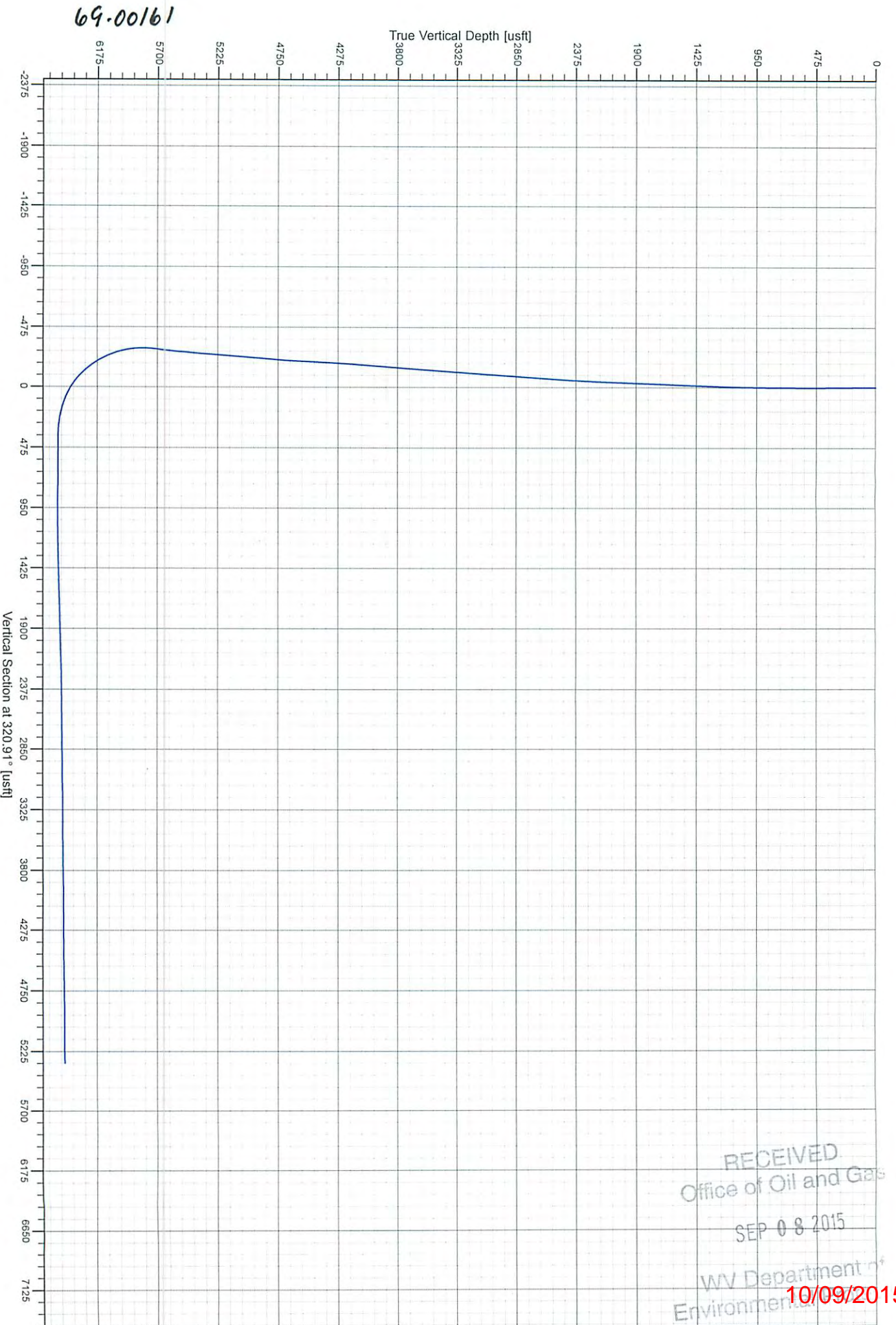










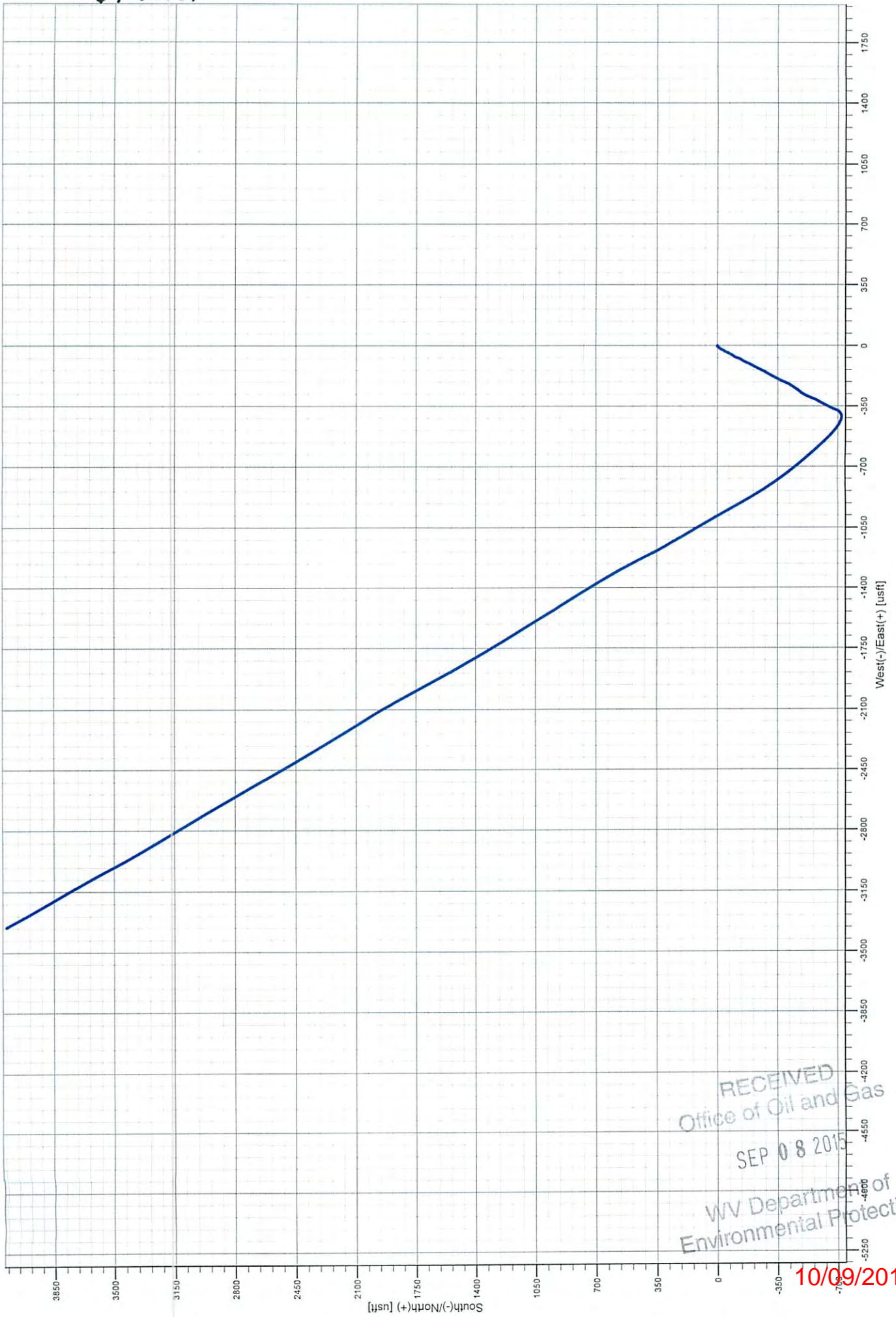


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