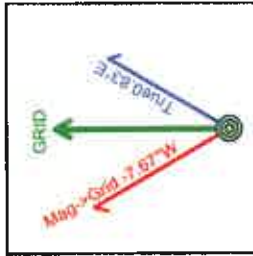
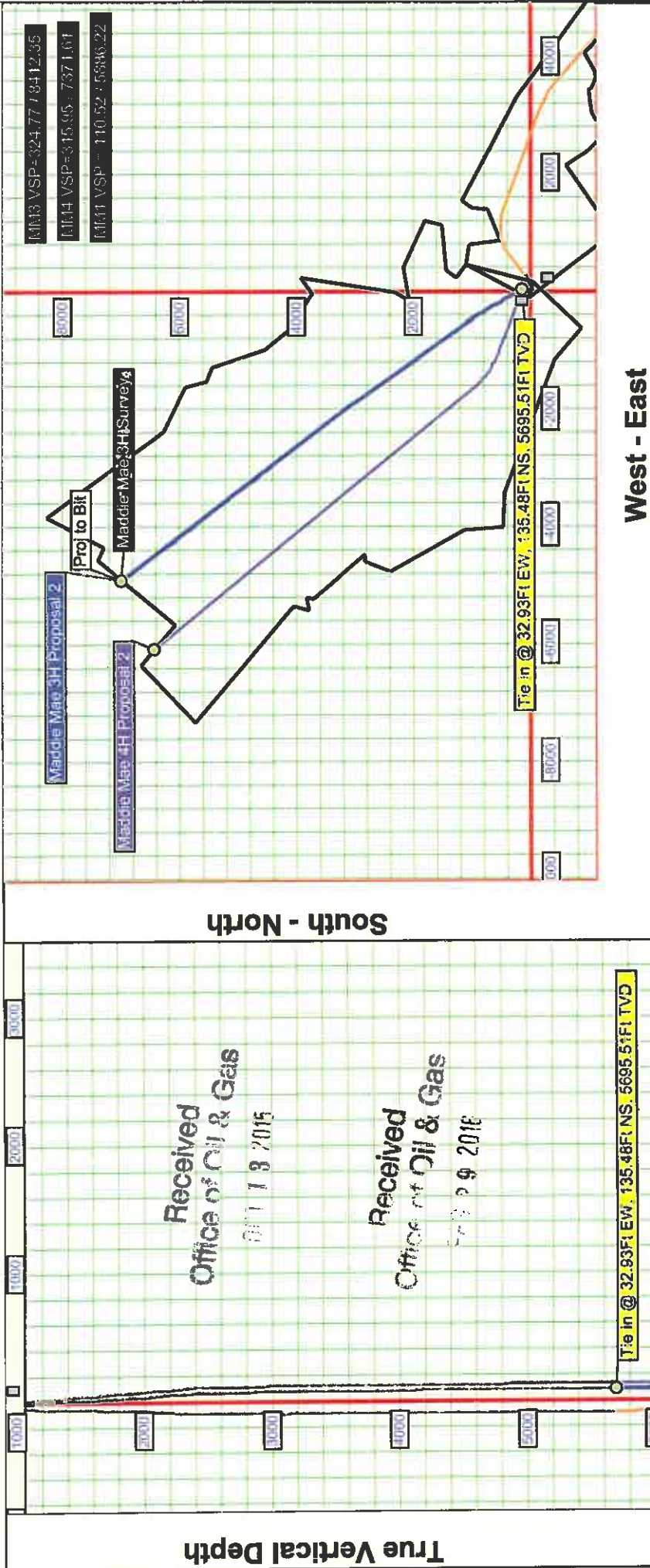


Job Number: Maddie Mae 3H Svy  
 Company: Jay Bee Oil & Gas  
 Lease/Well: Maddie Mae 3H  
 Location: Northern  
 Rig Name:  
 State/County: West Virginia/ Tyler  
 Country: USA  
 API Number:



Elevation (To MSL): 1042.00 ft  
 RKB: 16.00 ft  
 Projection System: US State Plane 1927 (Exact solution)  
 Projection Group: West Virginia North 4701  
 Projection Datum: CLARKE 1866  
 Magnetic Declination: -8.50  
 Grid Convergence: -0.83304 W  
 Date: Tuesday, January 27, 2015



MMB VSP = 324.77 / 8412.35  
 M114 VSP = 315.95 / 7371.61  
 M111 VSP = 110.52 / 5636.22

10/28/2016

Vertical Section (1000 Ft/Div) VSP: 324.77°



**Job Number:** Maddie Mae 3H Svy  
**Company:** Jay Bee Oil & Gas  
**Lease/Well:** Maddie Mae 3H  
**Location:** Northern  
**Rig Name:** West Virginia/ Tyler  
**State/Country:** USA

**Elev. GL:** 1042.00 ft **RKB:** 18.00 ft  
**System:** US State Plane 1927 (Exact solution)  
**Group:** West Virginia North 4701  
**Datum:** CLARKE 1886  
**Mag. Decl.:** -8.50° (C:\HawkEye\IGRF2010.MIF)  
**Grid Conv.:** -0.83304 W  
**Date:** Tuesday, January 27, 2015

**Received**  
**Office of Oil & Gas**

OCT 13 2015 **Received** FEB 29 2016

Calculated by HawkEye Software  
 Minimum Curvature Method  
 Vertical Section Plane 324.77°  
 Northing (US ft): 344219.60 Easting (US ft): 1631075.00  
 Latitude: 39°26'15.7988" N Longitude: -80°48'22.5165" W  
 Direction Reference: Grid North



#	Measured Depth (Ft)	INC Deg	AZM Deg	CL (Ft)	TVD (Ft)	VS (Ft)	NS (Ft)	EW (Ft)	Nothing (US ft)	Easting (US ft)	DLS <sup>1</sup> /100 Ft	LR/VIEW From-Plan (ft)	UD/INS From-Plan (ft)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	344219.60	1631075.00	0.00	-	-
2	100.00	1.27	213.59	100.00	99.99	-0.40	-0.40	-0.61	344218.68	1631074.39	1.27	-	-
3	200.00	2.14	155.76	100.00	199.95	-2.63	-3.55	-0.46	344216.05	1631074.54	1.82	-	-
4	300.00	1.97	122.86	100.00	299.89	-6.06	-6.18	1.75	344213.42	1631076.75	1.18	-	-
5	400.00	1.78	100.17	100.00	399.84	-8.76	-7.39	4.72	344212.21	1631079.72	0.76	-	-
6	500.00	2.05	84.35	100.00	499.78	-10.75	-7.49	8.03	344212.11	1631083.03	0.59	-	-
7	600.00	2.27	83.48	100.00	599.71	-12.59	-7.09	11.78	344212.51	1631086.78	0.22	-	-
8	700.00	1.52	56.78	100.00	699.66	-13.58	-6.14	14.86	344213.46	1631089.86	1.14	-	-
9	800.00	1.30	32.83	100.00	799.63	-13.21	-4.46	16.58	344215.14	1631091.58	0.62	-	-
10	900.00	1.75	14.09	100.00	899.60	-11.79	-2.02	17.57	344217.58	1631092.57	0.67	-	-
11	1000.00	2.18	9.40	100.00	999.54	-9.44	1.33	18.25	344220.93	1631093.25	0.46	-	-
12	1100.00	2.74	8.33	100.00	1099.44	-6.35	5.58	18.91	344225.18	1631093.91	0.56	-	-
13	1200.00	3.23	11.06	100.00	1199.31	-2.67	10.71	19.79	344230.31	1631094.79	0.51	-	-
14	1300.00	3.64	10.82	100.00	1299.13	1.48	16.59	20.93	344236.19	1631095.93	0.41	-	-
15	1400.00	3.90	9.93	100.00	1398.91	6.08	23.06	22.11	344242.66	1631097.11	0.27	-	-
16	1500.00	4.02	9.52	100.00	1498.67	10.97	29.86	23.28	344249.46	1631098.28	0.12	-	-
17	1600.00	4.22	7.89	100.00	1598.41	16.14	36.96	24.36	344256.56	1631099.36	0.23	-	-
18	1700.00	4.16	8.06	100.00	1698.15	21.47	44.20	25.38	344263.80	1631100.38	0.06	-	-
19	1800.00	4.33	7.72	100.00	1797.87	26.87	51.53	26.39	344271.13	1631101.39	0.17	-	-
20	1900.00	4.60	5.78	100.00	1897.57	32.66	59.26	27.30	344278.86	1631102.30	0.31	-	-
21	2000.00	4.70	6.41	100.00	1997.24	38.75	67.32	28.17	344286.92	1631103.17	0.11	-	-
22	2100.00	4.61	8.18	100.00	2096.91	44.73	75.37	29.19	344294.97	1631104.19	0.17	-	-
23	2200.00	4.85	10.09	100.00	2196.57	50.62	83.51	30.51	344303.11	1631105.51	0.29	-	-
24	2300.00	5.07	7.93	100.00	2296.20	56.81	92.05	31.86	344311.65	1631106.86	0.29	-	-
25	2400.00	3.73	3.21	100.00	2395.90	62.59	99.68	32.65	344319.28	1631107.65	1.39	-	-
26	2500.00	2.11	353.46	100.00	2495.77	66.75	104.75	32.62	344324.35	1631107.62	1.69	-	-
27	2600.00	1.15	352.61	100.00	2595.72	69.25	107.58	32.28	344327.18	1631107.28	0.96	-	-
28	2700.00	0.82	350.57	100.00	2695.71	70.78	109.28	32.04	344328.88	1631107.04	0.33	-	-
29	2800.00	0.96	298.13	100.00	2795.70	72.18	110.38	31.18	344329.98	1631106.18	0.80	-	-
30	2900.00	0.66	297.02	100.00	2895.69	73.43	111.04	29.93	344330.64	1631104.93	0.30	-	-

#	Measured Depth (FT)	INC Deg	AZM Deg	CL (FT)	TVD (FT)	VS (FT)	NS (FT)	EW (FT)	Northing (US ft)	Existing (US \$)	OILS "/100 FT	L'REW From-Plan (FT)	UD/INS From-Plan (FT)
31	3000.00	0.47	293.19	100.00	2995.68	74.29	111.46	29.04	344331.06	1631104.04	0.19	-	-
32	3100.00	0.70	300.08	100.00	3095.68	75.20	111.93	28.13	344331.53	1631103.13	0.24	-	-
33	3200.00	0.65	275.42	100.00	3195.67	76.12	112.29	27.04	344331.89	1631102.04	0.29	-	-
34	3300.00	0.35	287.89	100.00	3295.67	76.74	112.43	26.18	344332.03	1631101.18	0.32	-	-
35	3400.00	0.38	344.63	100.00	3395.67	77.29	112.84	25.80	344332.44	1631100.80	0.35	-	-
36	3500.00	0.59	325.24	100.00	3495.68	78.12	113.59	25.42	344333.19	1631100.42	0.26	-	-
37	3600.00	0.27	334.56	100.00	3595.66	79.27	114.49	24.71	344334.09	1631099.71	0.16	-	-
38	3700.00	0.18	311.43	100.00	3695.65	80.05	115.07	24.17	344334.67	1631099.17	0.55	-	-
39	3800.00	0.48	314.83	100.00	3795.65	80.60	115.59	23.96	344335.19	1631098.96	0.36	-	-
40	3900.00	1.02	355.18	100.00	3895.64	81.76	116.89	23.79	344336.49	1631098.79	0.54	-	-
41	4000.00	0.27	334.56	100.00	3995.63	82.76	117.99	23.61	344337.59	1631098.61	0.77	-	-
42	4100.00	0.72	26.72	100.00	4095.63	83.29	118.77	23.79	344338.37	1631098.79	0.59	-	-
43	4200.00	0.85	32.47	100.00	4195.62	83.87	119.95	24.47	344339.55	1631099.47	0.15	-	-
44	4300.00	0.81	42.18	100.00	4295.61	84.30	121.10	25.35	344340.70	1631100.35	0.15	-	-
45	4400.00	0.85	20.97	100.00	4395.60	84.87	122.32	26.09	344341.92	1631101.09	0.31	-	-
46	4500.00	0.54	24.84	100.00	4495.59	85.52	123.44	26.55	344343.04	1631101.55	0.31	-	-
47	4600.00	0.67	46.43	100.00	4595.59	85.84	124.27	27.17	344343.87	1631102.17	0.26	-	-
48	4700.00	0.68	39.72	100.00	4695.58	86.08	125.13	27.97	344344.73	1631102.97	0.08	-	-
49	4800.00	0.90	19.20	100.00	4795.57	86.69	126.33	28.61	344345.93	1631103.61	0.36	-	-
50	4900.00	0.71	31.25	100.00	4895.56	87.39	127.60	29.19	344347.20	1631104.19	0.25	-	-
51	5000.00	0.63	30.31	100.00	4995.56	87.87	128.60	29.79	344348.20	1631104.79	0.08	-	-
52	5100.00	0.58	32.01	100.00	5095.55	88.29	129.51	30.33	344349.11	1631105.33	0.05	-	-
53	5200.00	0.79	31.54	100.00	5195.54	88.76	130.53	30.96	344350.13	1631105.96	0.21	-	-
54	5300.00	0.96	30.76	100.00	5295.53	89.37	131.83	31.75	344351.43	1631106.75	0.17	-	-
55	5400.00	0.59	14.05	100.00	5395.52	90.05	133.05	32.31	344352.65	1631107.31	0.43	-	-
56	5500.00	0.57	13.08	100.00	5495.52	90.71	134.04	32.54	344353.64	1631107.54	0.02	-	-
57	5600.00	0.43	15.62	100.00	5595.51	91.28	134.88	32.76	344354.48	1631107.76	0.14	-	-
58	5700.00	0.28	17.07	100.00	5695.51	91.67	135.48	32.93	344355.08	1631107.93	0.15	0.00 (E)	0.00 (S)
59	5821.00	0.70	356.80	121.00	5816.51	92.47	136.50	32.98	344356.10	1631107.98	0.37	-0.13 (W)	0.45 (N)
60	5866.00	0.40	337.40	45.00	5861.50	92.86	136.92	32.90	344356.52	1631107.90	0.78	-0.27 (W)	0.66 (N)
61	5910.00	2.00	329.60	44.00	5905.49	93.78	137.72	32.45	344357.32	1631107.45	3.65	-0.78 (W)	1.26 (N)
62	5955.00	7.50	336.00	45.00	5950.32	97.44	141.08	30.86	344360.68	1631105.86	12.26	-0.43 (L)	5.06 (U)
63	5999.00	9.90	334.50	44.00	5993.81	103.99	147.12	28.06	344366.72	1631103.06	5.48	-0.37 (L)	11.62 (U)
64	6043.00	12.60	336.30	44.00	6038.96	112.42	154.93	24.50	344374.53	1631099.50	6.19	-0.81 (L)	18.56 (U)
65	6085.00	15.80	333.90	42.00	6077.67	122.56	164.26	20.15	344383.86	1631095.15	7.75	0.26 (R)	25.01 (U)
66	6129.00	19.60	332.00	44.00	6119.58	135.80	176.16	14.04	344395.76	1631089.04	8.73	1.32 (R)	31.51 (U)
67	6174.00	21.80	329.70	45.00	6161.68	151.61	190.04	6.28	344409.64	1631081.28	5.21	2.54 (R)	37.56 (U)
68	6218.00	23.10	327.40	44.00	6202.34	168.37	204.37	-2.49	344423.97	1631072.51	3.57	3.45 (R)	41.76 (U)
69	6262.00	25.60	327.30	44.00	6242.43	186.50	219.64	-12.28	344439.24	1631062.72	5.68	2.53 (R)	44.84 (U)
70	6307.00	28.90	327.10	45.00	6282.43	207.08	236.96	-23.44	344456.56	1631051.56	7.34	1.45 (R)	47.29 (U)
71	6351.00	32.30	328.50	44.00	6320.29	229.44	255.92	-35.36	344475.52	1631039.64	7.89	-0.66 (L)	49.28 (U)

Received  
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FEB 29 2016

Office of Oil & Gas

OCT 15 2015

10/28/2016

#	Measured Depth (Ft)	INC Deg	AZM Deg	CL (Ft)	TVD (Ft)	VS (Ft)	NS (Ft)	EW (Ft)	Northing (US ft)	Easting (US ft)	DLS 1/100 Ft	LRIEW From-Plan (Ft)	LDIWS From-Plan (Ft)
72	6396.00	35.70	331.20	45.00	6357.60	254.49	277.68	-47.97	344497.28	1631027.03	8.27	-2.94 (L)	51.04 (U)
73	6440.00	39.40	330.60	44.00	6392.47	281.15	301.10	-61.02	344520.70	1631013.98	8.48	-2.37 (L)	52.36 (U)
74	6482.00	42.50	332.20	42.00	6424.19	308.49	325.27	-74.18	344544.87	1631000.88	7.79	-3.05 (L)	53.56 (U)
75	6526.00	45.60	332.70	44.00	6455.81	338.80	352.40	-88.32	344572.00	1630986.68	7.09	-2.30 (L)	54.14 (U)
76	6571.00	48.50	331.80	44.00	6486.47	371.45	381.55	-103.64	344601.15	1630971.36	6.57	-0.69 (L)	54.25 (U)
77	6615.00	50.50	331.80	45.00	6517.05	404.65	411.05	-119.42	344630.85	1630955.58	4.55	0.23 (R)	53.22 (U)
78	6660.00	52.40	332.10	45.00	6547.63	439.57	442.11	-135.97	344661.71	1630939.03	4.25	1.06 (R)	50.73 (U)
79	6704.00	54.40	331.70	44.00	6578.21	474.62	473.27	-152.61	344692.87	1630922.39	4.60	2.26 (R)	46.92 (U)
80	6748.00	57.80	330.20	44.00	6608.79	510.92	505.18	-170.35	344724.78	1630904.65	8.23	3.29 (R)	42.04 (U)
81	6793.00	61.10	330.10	45.00	6639.37	549.50	538.79	-189.63	344758.39	1630885.37	7.34	3.13 (R)	36.95 (U)
82	6837.00	64.40	329.70	44.00	6669.95	588.45	572.62	-209.25	344792.22	1630865.75	7.54	2.88 (R)	31.35 (U)
83	6882.00	68.50	329.00	45.00	6700.53	629.56	608.10	-230.28	344827.70	1630844.72	9.22	2.21 (R)	25.81 (U)
84	6926.00	72.20	329.00	44.00	6731.11	670.88	643.62	-251.62	344863.22	1630823.38	8.41	1.16 (R)	20.39 (U)
85	6971.00	75.30	329.80	45.00	6761.69	713.94	680.80	-273.60	344900.40	1630801.40	7.10	0.35 (R)	14.82 (U)
86	7015.00	78.00	330.90	44.00	6792.27	756.54	718.00	-294.78	344937.60	1630780.22	6.60	0.31 (R)	8.70 (U)
87	7060.00	81.80	331.60	45.00	6822.85	800.55	756.84	-316.08	344976.44	1630758.92	8.58	1.05 (R)	2.31 (U)
88	7104.00	86.60	331.90	44.00	6853.43	843.99	795.39	-336.79	345014.99	1630738.21	10.93	2.17 (R)	-2.47 (D)
89	7149.00	91.10	331.90	45.00	6884.01	888.62	835.06	-357.98	345054.66	1630717.02	10.00	3.53 (R)	-3.76 (D)
90	7193.00	91.40	332.60	44.00	6914.59	932.23	873.99	-378.46	345093.59	1630696.54	1.73	5.83 (R)	-3.19 (D)
91	7237.00	91.80	332.10	44.00	6945.17	975.83	912.95	-398.87	345132.55	1630676.13	1.45	9.31 (R)	-2.35 (D)
92	7281.00	90.90	328.30	44.00	6975.75	1019.61	951.12	-420.73	345170.72	1630654.27	8.87	12.03 (R)	-1.89 (D)
93	7326.00	90.80	327.80	45.00	7006.33	1064.54	989.30	-444.54	345208.90	1630630.46	1.13	14.20 (R)	-1.41 (D)
94	7370.00	90.20	324.60	44.00	7036.91	1108.51	1025.85	-469.01	345245.45	1630605.99	7.40	15.38 (R)	-1.40 (D)
95	7414.00	90.30	323.70	44.00	7067.49	1152.51	1061.52	-494.78	345281.12	1630580.22	2.06	15.00 (R)	-1.59 (D)
96	7459.00	90.10	322.50	45.00	7098.07	1197.49	1097.50	-521.80	345317.10	1630553.20	2.70	13.80 (R)	-1.83 (D)
97	7503.00	89.80	321.90	44.00	7128.65	1241.45	1132.27	-548.77	345351.87	1630526.23	1.52	11.93 (R)	-2.25 (D)
98	7547.00	89.70	320.90	44.00	7159.23	1285.37	1166.65	-576.22	345386.25	1630498.78	2.28	9.45 (R)	-2.82 (D)
99	7590.00	89.50	320.40	43.00	7189.81	1328.26	1199.90	-603.48	345419.50	1630471.52	1.25	6.45 (R)	-3.50 (D)
100	7634.00	90.00	322.10	44.00	7220.39	1372.17	1234.22	-631.02	345453.82	1630443.98	4.03	3.84 (R)	-4.08 (D)
101	7679.00	89.70	322.00	45.00	7250.97	1417.12	1269.70	-658.69	345489.30	1630416.31	0.70	1.80 (R)	-4.59 (D)
102	7723.00	89.90	323.30	44.00	7281.55	1461.09	1304.68	-685.39	345524.28	1630389.61	2.99	0.27 (R)	-5.13 (D)
103	7768.00	89.60	322.40	45.00	7312.13	1506.06	1340.55	-712.56	345560.15	1630362.44	2.11	-1.14 (L)	-6.72 (D)
104	7812.00	90.00	322.90	44.00	7342.71	1550.03	1375.52	-739.26	345595.12	1630335.74	1.46	-2.66 (L)	-6.25 (D)
105	7857.00	89.90	322.30	45.00	7373.29	1595.00	1411.27	-766.59	345630.87	1630308.41	1.35	-4.27 (L)	-6.68 (D)
106	7899.00	89.60	321.70	42.00	7403.87	1636.95	1444.37	-792.44	345663.97	1630282.56	1.80	-6.21 (L)	-7.24 (D)
107	7944.00	90.40	322.40	45.00	7434.45	1681.90	1479.85	-820.12	345699.45	1630254.88	2.36	-8.24 (L)	-7.63 (D)
108	7988.00	90.20	321.60	44.00	7465.03	1725.85	1514.52	-847.21	345734.12	1630227.79	1.87	-10.27 (L)	-7.78 (D)
109	8032.00	91.40	321.90	44.00	7495.61	1769.78	1549.07	-874.44	345768.67	1630200.56	2.81	-12.49 (L)	-7.55 (D)
110	8077.00	91.60	321.00	45.00	7526.19	1814.69	1584.25	-902.48	345803.85	1630172.52	2.05	-15.00 (L)	-6.77 (D)
111	8122.00	91.60	323.50	45.00	7556.77	1859.62	1619.82	-930.01	345839.42	1630144.99	5.55	-16.86 (L)	-5.90 (D)
112	8166.00	91.40	323.10	44.00	7587.35	1903.60	1655.08	-956.30	345874.68	1630118.70	1.02	-17.89 (L)	-5.14 (D)

Received  
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FEB 29 2016

Office of Oil & Gas

10/28/2016

#	Measured Depth (Ft)	INC Deg	AZM Deg	CL (Ft)	TVD (Ft)	VS (Ft)	NS (Ft)	EW (Ft)	Northing (US Ft)	Easting (US Ft)	DLS %100 Ft	LREW From Plan (Ft)	LRNS From Plan (Ft)
113	8211.00	91.20	323.60	45.00	6697.12	1948.57	1691.18	-983.16	345910.78	1630091.84	1.20	-18.90 (L)	-4.50 (D)
114	8255.00	91.20	323.90	44.00	6696.20	1992.35	1726.65	-1009.17	345946.25	1630065.83	0.68	-19.59 (L)	-3.97 (D)
115	8297.00	92.50	325.90	42.00	6694.84	2034.53	1760.99	-1033.30	345980.59	1630041.70	5.68	-19.40 (L)	-2.97 (D)
116	8341.00	92.60	326.00	44.00	6692.88	2078.47	1797.41	-1057.92	346017.01	1630017.08	0.32	-18.40 (L)	-1.40 (D)
117	8386.00	91.30	326.40	44.00	6691.35	2123.43	1834.79	-1082.93	346054.39	1629992.07	3.02	-17.18 (L)	-0.26 (D)
118	8430.00	91.20	326.60	44.00	6690.39	2167.41	1871.36	-1107.37	346090.96	1629967.63	0.72	-15.94 (L)	0.32 (U)
119	8475.00	91.30	326.30	45.00	6689.41	2212.38	1908.75	-1132.40	346128.35	1629942.60	0.50	-14.71 (L)	0.91 (U)
120	8519.00	91.10	324.90	44.00	6688.49	2256.37	1945.04	-1157.25	346164.64	1629917.55	3.21	-13.97 (L)	1.44 (U)
121	8564.00	90.80	324.50	45.00	6687.74	2301.36	1981.77	-1183.25	346201.37	1629891.75	1.11	-13.93 (L)	1.79 (U)
122	8608.00	90.80	324.00	44.00	6687.13	2345.36	2017.47	-1208.96	346237.07	1629866.04	1.14	-14.23 (L)	2.02 (U)
123	8652.00	90.70	323.70	44.00	6686.55	2389.35	2053.00	-1234.91	346272.60	1629840.09	0.72	-14.84 (L)	2.22 (U)
124	8695.00	90.80	323.40	43.00	6685.99	2432.33	2087.58	-1260.46	346307.18	1629814.54	0.74	-15.66 (L)	2.40 (U)
125	8739.00	90.80	326.20	44.00	6685.38	2476.32	2123.53	-1285.81	346343.13	1629789.19	6.36	-15.53 (L)	2.64 (U)
126	8783.00	91.00	326.80	44.00	6684.69	2520.30	2160.17	-1310.16	346379.77	1629764.84	1.02	-14.18 (L)	2.95 (U)
127	8826.00	89.90	326.40	43.00	6684.35	2563.28	2196.03	-1333.89	346415.63	1629741.11	2.60	-12.79 (L)	2.91 (U)
128	8870.00	89.80	326.50	44.00	6684.46	2607.26	2232.70	-1358.21	346452.30	1629716.79	0.32	-11.40 (L)	2.41 (U)
129	8915.00	89.80	326.40	45.00	6684.62	2652.24	2270.20	-1383.08	346489.80	1629691.92	0.22	-9.98 (L)	1.86 (U)
130	8959.00	89.90	325.90	44.00	6684.74	2696.23	2306.74	-1407.59	346526.34	1629667.41	1.16	-8.82 (L)	1.36 (U)
131	9004.00	90.00	325.20	45.00	6684.77	2741.22	2343.85	-1433.04	346563.45	1629641.96	1.57	-8.10 (L)	0.93 (U)
132	9048.00	89.90	324.60	44.00	6684.81	2785.22	2379.85	-1458.34	346599.45	1629616.66	1.38	-7.90 (L)	0.50 (U)
133	9092.00	90.00	324.80	44.00	6684.85	2829.22	2415.76	-1483.77	346635.36	1629591.23	0.51	-7.85 (L)	0.08 (U)
134	9135.00	90.30	325.80	43.00	6684.74	2872.22	2451.11	-1508.25	346670.71	1629566.75	2.43	-7.36 (L)	-0.18 (D)
135	9179.00	90.10	325.60	44.00	6684.58	2916.21	2487.46	-1533.04	346707.06	1629541.96	0.64	-6.55 (L)	-0.41 (D)
136	9224.00	90.00	325.70	45.00	6684.55	2961.21	2524.61	-1558.43	346744.21	1629516.57	0.31	-5.76 (L)	-0.76 (D)
137	9269.00	89.90	325.00	45.00	6684.58	3006.21	2561.63	-1584.02	346781.23	1629490.98	1.57	-5.20 (L)	-1.20 (D)
138	9313.00	90.00	325.50	44.00	6684.62	3050.20	2597.78	-1609.10	346817.38	1629465.90	1.16	-4.73 (L)	-1.62 (D)
139	9357.00	90.60	325.40	44.00	6684.39	3094.20	2634.02	-1634.05	346853.62	1629440.95	1.38	-4.11 (L)	-1.77 (D)
140	9400.00	90.80	326.10	43.00	6683.87	3137.19	2669.56	-1658.25	346889.16	1629416.75	1.69	-3.28 (L)	-1.62 (D)
141	9444.00	90.90	325.80	44.00	6683.21	3181.18	2706.01	-1682.88	346925.61	1629392.12	0.72	-2.27 (L)	-1.35 (D)
142	9489.00	90.70	325.20	45.00	6682.59	3226.17	2743.10	-1708.37	346962.70	1629366.63	1.41	-1.60 (L)	-1.12 (D)
143	9533.00	91.20	325.70	44.00	6681.86	3270.16	2779.33	-1733.32	346998.93	1629341.68	1.61	-0.97 (L)	-0.77 (D)
144	9577.00	91.60	325.90	44.00	6680.78	3314.14	2815.71	-1758.04	347035.31	1629316.96	1.02	-0.08 (L)	-0.08 (D)
145	9622.00	91.80	325.80	45.00	6679.45	3359.11	2852.93	-1783.29	347072.53	1629291.71	0.50	0.87 (R)	0.86 (U)
146	9666.00	91.00	325.80	44.00	6678.37	3403.09	2889.31	-1808.02	347108.91	1629266.98	1.82	1.76 (R)	1.55 (U)
147	9711.00	91.10	325.40	45.00	6677.55	3448.08	2926.44	-1833.44	347146.04	1629241.56	0.92	2.51 (R)	1.98 (U)
148	9753.00	90.30	325.30	42.00	6677.03	3490.07	2960.99	-1857.31	347180.59	1629217.69	1.92	3.03 (R)	2.13 (U)
149	9797.00	90.40	325.30	44.00	6676.77	3534.07	2997.16	-1882.36	347216.76	1629192.64	0.23	3.54 (R)	2.02 (U)
150	9842.00	90.50	325.60	45.00	6676.41	3579.06	3034.22	-1907.88	347253.82	1629167.12	0.70	4.17 (R)	1.98 (U)
151	9884.00	90.20	324.00	42.00	6676.16	3621.06	3068.54	-1932.09	347288.14	1629142.91	3.88	4.72 (R)	1.87 (U)
152	9929.00	90.50	323.60	45.00	6675.88	3666.05	3104.85	-1958.67	347324.45	1629116.33	1.11	5.30 (R)	1.75 (U)
153	9973.00	90.40	321.90	44.00	6675.54	3710.02	3139.88	-1985.30	347359.48	1629089.70	3.87	5.22 (R)	1.71 (U)

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#	Measured Depth (Ft)	INC Deg	AZIM Deg	CL (Ft)	TVD (Ft)	VS (Ft)	NS (Ft)	EW (Ft)	Monitoring (US Ft)	Existing (US Ft)	DLS %/100 Ft	LRIEW From-Plan (Ft)	UD/NS From-Plan (Ft)
154	10018.00	90.50	322.00	45.00	675.18	3754.97	3175.31	-2013.03	347394.91	1629061.97	0.31	4.51 (R)	1.87 (U)
155	10062.00	89.10	321.90	44.00	675.34	3798.91	3209.96	-2040.15	347429.56	1629034.85	0.31	3.82 (R)	1.14 (U)
156	10106.00	89.00	321.90	44.00	676.06	3842.85	3244.55	-2067.33	347464.15	1629007.67	0.32	3.06 (R)	0.02 (U)
157	10149.00	88.80	321.90	43.00	676.88	3885.77	3278.20	-2094.09	347497.80	1628980.91	1.47	2.05 (R)	-1.18 (D)
158	10193.00	90.10	322.10	44.00	677.31	3929.70	3312.70	-2121.39	347532.30	1628953.61	3.59	1.12 (R)	-1.99 (D)
159	10237.00	90.10	322.00	44.00	677.24	3973.65	3347.40	-2148.45	347567.00	1628926.55	0.23	0.51 (R)	-2.29 (D)
160	10282.00	89.90	322.10	45.00	677.24	4018.60	3382.88	-2176.12	347602.48	1628898.88	0.50	-0.12 (L)	-2.89 (D)
161	10326.00	89.80	321.50	44.00	677.35	4062.54	3417.46	-2203.33	347637.06	1628871.67	1.38	-0.92 (L)	-3.19 (D)
162	10371.00	89.70	321.40	45.00	677.55	4107.47	3452.65	-2231.38	347672.25	1628843.62	0.31	-2.02 (L)	-3.77 (D)
163	10415.00	90.30	322.40	44.00	677.55	4151.41	3487.28	-2258.52	347706.88	1628816.48	2.65	-2.75 (L)	-4.16 (D)
164	10459.00	90.50	322.70	44.00	677.24	4195.38	3522.21	-2285.28	347741.81	1628789.72	0.82	-2.98 (L)	-4.23 (D)
165	10502.00	90.50	322.90	43.00	676.86	4238.35	3556.46	-2311.28	347776.06	1628763.72	0.47	-3.01 (L)	-4.23 (D)
166	10546.00	90.40	322.80	44.00	676.52	4282.33	3591.53	-2337.85	347811.13	1628737.15	0.32	-3.01 (L)	-4.27 (D)
167	10590.00	90.60	323.20	44.00	676.14	4326.30	3626.67	-2364.33	347846.27	1628710.67	1.02	-2.90 (L)	-4.27 (D)
168	10635.00	90.50	323.10	45.00	675.70	4371.28	3662.67	-2391.31	347882.27	1628683.69	0.31	-2.66 (L)	-4.23 (D)
169	10679.00	90.80	323.70	44.00	675.20	4415.27	3698.00	-2417.54	347917.60	1628657.46	1.52	-2.24 (L)	-4.12 (D)
170	10723.00	91.60	324.20	44.00	674.28	4459.25	3733.56	-2443.43	347953.16	1628631.57	2.14	-1.39 (L)	-3.58 (D)
171	10767.00	91.70	323.90	44.00	673.02	4503.23	3769.17	-2469.25	347988.77	1628605.75	0.72	-0.47 (L)	-2.70 (D)
172	10812.00	91.80	324.00	45.00	671.64	4548.20	3805.53	-2495.72	348025.13	1628579.28	0.31	0.39 (R)	-1.72 (D)
173	10856.00	91.80	323.80	44.00	670.26	4592.18	3841.07	-2521.63	348060.67	1628553.37	0.45	1.20 (R)	-0.72 (D)
174	10901.00	91.50	323.70	45.00	668.96	4637.15	3877.34	-2548.23	348096.94	1628526.77	0.70	1.91 (R)	0.19 (U)
175	10945.00	91.50	323.50	44.00	667.81	4681.13	3912.74	-2574.33	348132.34	1628500.67	0.45	2.49 (R)	0.95 (U)
176	10989.00	91.50	323.20	44.00	666.66	4725.10	3948.03	-2600.59	348167.63	1628474.41	0.68	2.87 (R)	1.72 (U)
177	11033.00	91.60	322.80	44.00	665.47	4769.06	3983.16	-2627.06	348202.76	1628447.94	0.94	2.99 (R)	2.53 (U)
178	11075.00	91.60	322.40	42.00	664.30	4811.02	4016.51	-2652.56	348236.11	1628422.44	0.95	2.80 (R)	3.33 (U)
179	11120.00	90.70	323.00	45.00	663.39	4855.98	4052.30	-2679.82	348271.90	1628395.18	2.40	2.69 (R)	3.84 (U)
180	11164.00	90.30	321.80	44.00	663.01	4899.94	4087.16	-2706.67	348306.76	1628368.33	2.87	2.34 (R)	3.84 (U)
181	11208.00	88.30	321.70	44.00	663.55	4943.87	4121.71	-2733.90	348341.31	1628341.10	4.55	1.50 (R)	2.93 (U)
182	11253.00	88.30	321.40	45.00	664.88	4988.78	4156.94	-2761.87	348376.54	1628313.13	0.67	0.48 (R)	1.20 (U)
183	11297.00	90.60	321.20	44.00	665.31	5032.69	4191.27	-2789.38	348410.87	1628285.62	5.25	-0.71 (L)	0.39 (U)
184	11342.00	90.70	321.10	45.00	664.79	5077.60	4226.31	-2817.61	348445.91	1628257.39	0.31	-2.04 (L)	0.51 (U)
185	11386.00	90.70	320.70	44.00	664.26	5121.50	4260.46	-2845.36	348480.06	1628229.64	0.91	-3.54 (L)	0.66 (U)
186	11430.00	90.50	320.10	42.00	663.82	5163.37	4292.82	-2872.13	348512.42	1628202.87	1.51	-5.34 (L)	0.73 (U)
187	11474.00	90.40	320.10	44.00	663.47	5207.22	4326.57	-2900.35	348546.17	1628174.65	0.23	-7.45 (L)	0.69 (U)
188	11517.00	90.50	320.20	45.00	663.12	5252.08	4361.12	-2929.18	348580.72	1628145.82	0.31	-9.57 (L)	0.65 (U)
189	11561.00	90.50	319.60	44.00	662.73	5295.92	4394.77	-2957.52	348614.37	1628117.48	1.36	-11.84 (L)	0.65 (U)
190	11605.00	90.60	320.10	45.00	662.30	5340.75	4429.17	-2986.54	348648.77	1628088.46	1.13	-14.20 (L)	0.69 (U)
191	11649.00	89.80	321.80	44.00	662.15	5384.65	4463.34	-3014.26	348682.94	1628060.74	4.27	-15.64 (L)	0.47 (U)
192	11693.00	89.80	321.80	44.00	662.30	5428.59	4497.91	-3041.47	348717.51	1628033.53	0.00	-16.45 (L)	-0.07 (D)
193	11737.00	89.80	321.90	44.00	662.46	5472.53	4532.51	-3068.64	348752.11	1628006.36	0.23	-17.21 (L)	-0.61 (D)
194	11781.00	90.00	321.80	45.00	662.53	5517.47	4567.90	-3096.44	348787.50	1627978.56	0.50	-18.00 (L)	-1.08 (D)

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#	Measured Depth (ft)	INC Deg	AZM Deg	CL (ft)	TVD (ft)	VS (ft)	NS (ft)	EW (ft)	Northing (US ft)	Easting (US ft)	DLS "/100 Ft	LRNEW From-Plan (ft)	VDNS From-Plan (ft)
195	11828.00	90.30	322.10	45.00	6662.42	5562.42	4603.34	-3124.18	348822.94	1627950.82	0.94	-18.70 (L)	-1.35 (D)
196	11872.00	90.60	322.40	44.00	6662.07	5606.37	4638.13	-3151.11	348857.73	1627923.89	0.96	-19.16 (L)	-1.39 (D)
197	11917.00	90.80	322.60	45.00	6661.52	5651.34	4673.83	-3178.51	348893.43	1627896.49	0.63	-19.43 (L)	-1.23 (D)
198	11961.00	90.90	322.60	44.00	6660.87	5695.30	4708.78	-3205.23	348928.38	1627869.77	0.23	-19.62 (L)	-0.97 (D)
199	12005.00	90.90	322.40	44.00	6660.25	5739.26	4743.68	-3232.01	348963.28	1627842.99	0.64	-19.89 (L)	-0.74 (D)
200	12047.00	90.60	321.70	42.00	6659.78	5781.21	4776.82	-3257.81	348996.42	1627817.19	1.45	-20.44 (L)	-0.63 (D)
201	12091.00	90.90	321.70	44.00	6659.15	5825.15	4811.37	-3285.05	349030.97	1627789.95	0.72	-21.29 (L)	-0.44 (D)
202	12136.00	90.40	323.50	45.00	6658.69	5870.11	4847.12	-3312.38	349066.72	1627762.82	4.15	-21.48 (L)	-0.31 (D)
203	12180.00	90.40	323.40	44.00	6658.38	5914.10	4882.46	-3338.58	349102.06	1627736.42	0.23	-21.02 (L)	-0.39 (D)
204	12225.00	88.70	324.30	45.00	6658.74	5959.09	4918.79	-3365.12	349138.39	1627709.88	4.27	-20.24 (L)	-1.13 (D)
205	12267.00	88.70	324.20	42.00	6659.69	6001.07	4952.87	-3389.65	349172.47	1627685.35	0.24	-19.21 (L)	-2.45 (D)
206	12311.00	88.90	324.80	44.00	6660.61	6045.06	4988.69	-3415.20	349208.29	1627659.80	1.44	-17.94 (L)	-3.76 (D)
207	12356.00	88.70	324.30	45.00	6661.55	6090.05	5025.33	-3441.29	349244.93	1627633.71	1.20	-16.60 (L)	-5.10 (D)
208	12400.00	88.60	323.70	44.00	6662.59	6134.04	5060.92	-3467.15	349280.52	1627607.65	1.38	-15.72 (L)	-6.52 (D)
209	12442.00	88.40	323.20	42.00	6663.69	6176.01	5094.65	-3492.15	349314.25	1627582.85	1.28	-15.28 (L)	-7.99 (D)
210	12487.00	90.10	322.70	45.00	6664.28	6220.98	5130.56	-3519.26	349350.16	1627555.74	3.94	-15.20 (L)	-8.97 (D)
211	12531.00	90.10	322.40	44.00	6664.20	6264.95	5165.49	-3546.02	349385.09	1627528.98	0.68	-15.43 (L)	-9.27 (D)
212	12576.00	90.00	321.60	45.00	6664.16	6309.90	5200.95	-3573.72	349420.55	1627501.28	1.79	-16.10 (L)	-9.63 (D)
213	12620.00	90.00	321.00	44.00	6664.16	6353.82	5235.29	-3601.23	349454.89	1627473.77	1.36	-17.29 (L)	-10.01 (D)
214	12664.00	90.00	322.60	44.00	6664.16	6397.76	5269.87	-3628.44	349489.47	1627446.56	3.64	-18.09 (L)	-10.39 (D)
215	12709.00	88.80	321.80	45.00	6664.24	6442.71	5305.42	-3656.02	349525.02	1627418.98	1.83	-18.60 (L)	-10.87 (D)
216	12753.00	88.60	323.60	44.00	6664.47	6486.68	5340.42	-3682.68	349560.02	1627392.32	4.12	-18.71 (L)	-11.48 (D)
217	12798.00	89.30	323.10	45.00	6664.90	6531.66	5376.52	-3709.54	349596.12	1627365.46	1.30	-18.32 (L)	-12.31 (D)
218	12842.00	90.50	323.50	44.00	6664.98	6575.65	5411.80	-3735.84	349631.40	1627339.16	2.87	-17.97 (L)	-12.76 (D)
219	12886.00	90.50	323.50	44.00	6664.60	6619.64	5447.17	-3762.01	349666.77	1627312.99	0.00	-17.47 (L)	-12.76 (D)
220	12931.00	90.10	322.40	45.00	6664.36	6664.61	5483.08	-3789.12	349702.68	1627285.88	2.60	-17.39 (L)	-12.92 (D)
221	12975.00	89.90	321.60	44.00	6664.36	6708.56	5517.76	-3816.21	349737.36	1627258.79	1.87	-18.05 (L)	-13.31 (D)
222	13019.00	89.50	321.10	44.00	6664.59	6752.48	5552.12	-3843.69	349771.72	1627231.31	1.46	-19.21 (L)	-13.93 (D)
223	13064.00	89.60	320.70	45.00	6664.95	6797.38	5587.04	-3872.07	349806.64	1627202.93	0.92	-20.74 (L)	-14.67 (D)
224	13108.00	90.50	323.20	44.00	6664.91	6841.32	5621.68	-3899.19	349841.28	1627175.81	6.04	-21.42 (L)	-15.01 (D)
225	13150.00	90.20	322.40	42.00	6664.65	6883.29	5655.14	-3924.58	349874.74	1627150.42	2.03	-21.45 (L)	-15.12 (D)
226	13194.00	90.10	322.00	44.00	6664.54	6927.25	5689.90	-3951.55	349909.50	1627123.45	0.94	-21.95 (L)	-15.39 (D)
227	13239.00	89.90	321.00	45.00	6664.54	6972.17	5725.12	-3979.56	349944.72	1627095.44	2.27	-23.02 (L)	-15.79 (D)
228	13283.00	89.90	320.50	44.00	6664.61	7016.07	5759.19	-4007.40	349978.79	1627067.60	1.14	-24.64 (L)	-16.25 (D)
229	13328.00	90.50	323.50	45.00	6664.45	7061.01	5794.65	-4035.10	350014.25	1627039.90	6.80	-25.29 (L)	-16.48 (D)
230	13372.00	90.40	323.50	44.00	6664.11	7105.00	5830.02	-4061.27	350049.62	1627013.73	0.23	-24.79 (L)	-16.51 (D)
231	13417.00	90.20	323.00	45.00	6663.87	7149.98	5866.07	-4088.20	350085.67	1626986.80	1.20	-24.47 (L)	-16.67 (D)
232	13462.00	90.20	322.20	45.00	6663.72	7194.95	5901.82	-4115.53	350121.42	1626959.47	1.78	-24.67 (L)	-16.91 (D)
233	13506.00	90.10	321.40	44.00	6663.60	7238.89	5934.60	-4142.74	350156.00	1626932.26	1.83	-25.48 (L)	-17.18 (D)
234	13550.00	90.00	321.30	44.00	6663.56	7282.81	5970.76	-4170.22	350190.36	1626904.78	0.32	-26.63 (L)	-17.53 (D)
235	13595.00	89.80	320.20	45.00	6663.64	7327.70	6005.61	-4198.69	350225.21	1626876.31	2.48	-28.30 (L)	-18.01 (D)

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#	Measured Depth (Ft)	INC Deg	AZIM Deg	CL (Ft)	TVD (Ft)	VS (Ft)	NS (Ft)	EW (Ft)	Northing (US ft)	Easting (US ft)	DLS %100 Ft	LR/EW From-Plan (Ft)	UD/NS From-Plan (Ft)
236	13637.00	89.80	319.60	42.00	6663.79	7389.54	6037.74	-4225.74	350257.34	1626849.26	1.43	-30.48 (L)	-18.52 (D)
237	13682.00	89.90	322.70	45.00	6663.91	7414.45	6072.78	-4253.97	350292.38	1626821.03	6.89	-31.76 (L)	-19.02 (D)
238	13726.00	89.90	323.20	44.00	6663.98	7458.43	6107.89	-4280.48	350327.48	1626794.52	1.14	-31.69 (L)	-19.48 (D)
239	13769.00	90.50	324.80	43.00	6663.83	7501.42	6142.68	-4305.75	350362.28	1626769.25	3.97	-30.85 (L)	-19.69 (D)
240	13813.00	90.50	324.70	44.00	6663.45	7545.42	6178.61	-4331.14	350398.21	1626743.86	0.23	-29.38 (L)	-19.70 (D)
241	13858.00	90.20	324.40	45.00	6663.17	7590.42	6215.27	-4357.24	350434.87	1626717.76	0.94	-28.04 (L)	-19.81 (D)
242	13902.00	90.10	324.00	44.00	6663.06	7634.42	6250.96	-4382.98	350470.56	1626692.02	0.94	-26.99 (L)	-20.09 (D)
243	13947.00	91.70	324.30	45.00	6662.35	7679.41	6287.42	-4409.33	350507.02	1626665.67	3.62	-25.99 (L)	-19.77 (D)
244	13989.00	91.60	324.30	42.00	6661.14	7721.39	6321.52	-4433.83	350541.12	1626641.17	0.24	-24.93 (L)	-18.93 (D)
245	14034.00	92.10	324.90	45.00	6659.69	7766.36	6358.18	-4459.88	350577.78	1626615.12	1.74	-23.57 (L)	-17.87 (D)
246	14076.00	90.40	325.00	42.00	6658.77	7808.35	6392.55	-4484.00	350612.15	1626591.00	4.05	-22.01 (L)	-17.32 (D)
247	14121.00	90.60	324.80	45.00	6658.38	7853.35	6429.37	-4509.87	350648.97	1626565.13	0.63	-20.40 (L)	-17.32 (D)
248	14166.00	89.80	324.90	45.00	6658.22	7898.35	6466.16	-4535.78	350685.76	1626539.22	1.79	-18.82 (L)	-17.55 (D)
249	14210.00	89.60	324.30	44.00	6658.45	7942.35	6502.03	-4561.27	350721.63	1626513.73	1.44	-17.46 (L)	-18.17 (D)
250	14254.00	89.00	323.70	44.00	6658.99	7986.34	6537.62	-4587.13	350757.22	1626487.87	1.93	-16.58 (L)	-19.10 (D)
251	14300.00	89.10	323.60	46.00	6659.75	8032.33	6574.86	-4614.39	350794.26	1626460.61	0.31	-15.93 (L)	-20.26 (D)
252	14344.00	89.10	323.90	44.00	6660.45	8076.31	6610.14	-4640.40	350829.74	1626434.60	0.68	-15.24 (L)	-21.34 (D)
253	14388.00	89.00	323.80	44.00	6661.17	8120.30	6645.67	-4666.35	350865.27	1626408.65	0.32	-14.47 (L)	-22.45 (D)
254	14432.00	88.90	323.70	44.00	6661.98	8164.29	6681.15	-4692.37	350900.75	1626382.63	0.32	-13.78 (L)	-23.64 (D)
255	14477.00	88.90	323.30	45.00	6662.85	8209.27	6717.31	-4719.13	350936.91	1626355.87	0.89	-13.27 (L)	-24.90 (D)
256	14521.00	88.90	322.90	44.00	6663.69	8253.24	6752.49	-4745.54	350972.09	1626329.46	0.91	-13.08 (L)	-26.13 (D)
257	14565.00	88.00	322.90	44.00	6664.50	8297.21	6787.58	-4772.08	351007.18	1626302.92	0.23	-13.04 (L)	-27.32 (D)
258	14610.00	88.90	322.20	45.00	6665.32	8342.17	6823.30	-4798.44	351042.90	1626275.56	1.57	-13.28 (L)	-28.54 (D)
259	14652.00	88.60	321.80	42.00	6666.24	8384.11	6856.39	-4825.29	351075.99	1626249.71	1.19	-13.91 (L)	-29.83 (D)
260	14697.00	88.40	321.40	45.00	6667.41	8429.02	6891.64	-4853.23	351111.24	1626221.77	0.99	-14.90 (L)	-31.41 (D)
261	14741.00	89.30	321.00	44.00	6668.30	8472.93	6925.92	-4880.80	351145.52	1626194.20	2.24	-16.16 (L)	-32.66 (D)
262	14755.00	90.50	321.60	14.00	6668.32	8486.90	6936.85	-4889.55	351156.45	1626185.45	9.58	-16.52 (L)	-32.80 (D)
Proj to Bit	14810.00	90.50	321.60	55.00	6667.84	8541.82	6979.95	-4923.71	351199.55	1626151.29	0.00	-	-

**GEODETTIC INFORMATION**

Geodetic Zone: West Virginia North 4701  
 Geodetic Datum: NAD27  
 Easting: 1631075.00  
 Northing: 344219.60  
 Convergence: -0.83

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