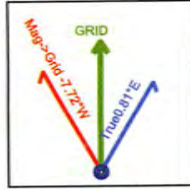
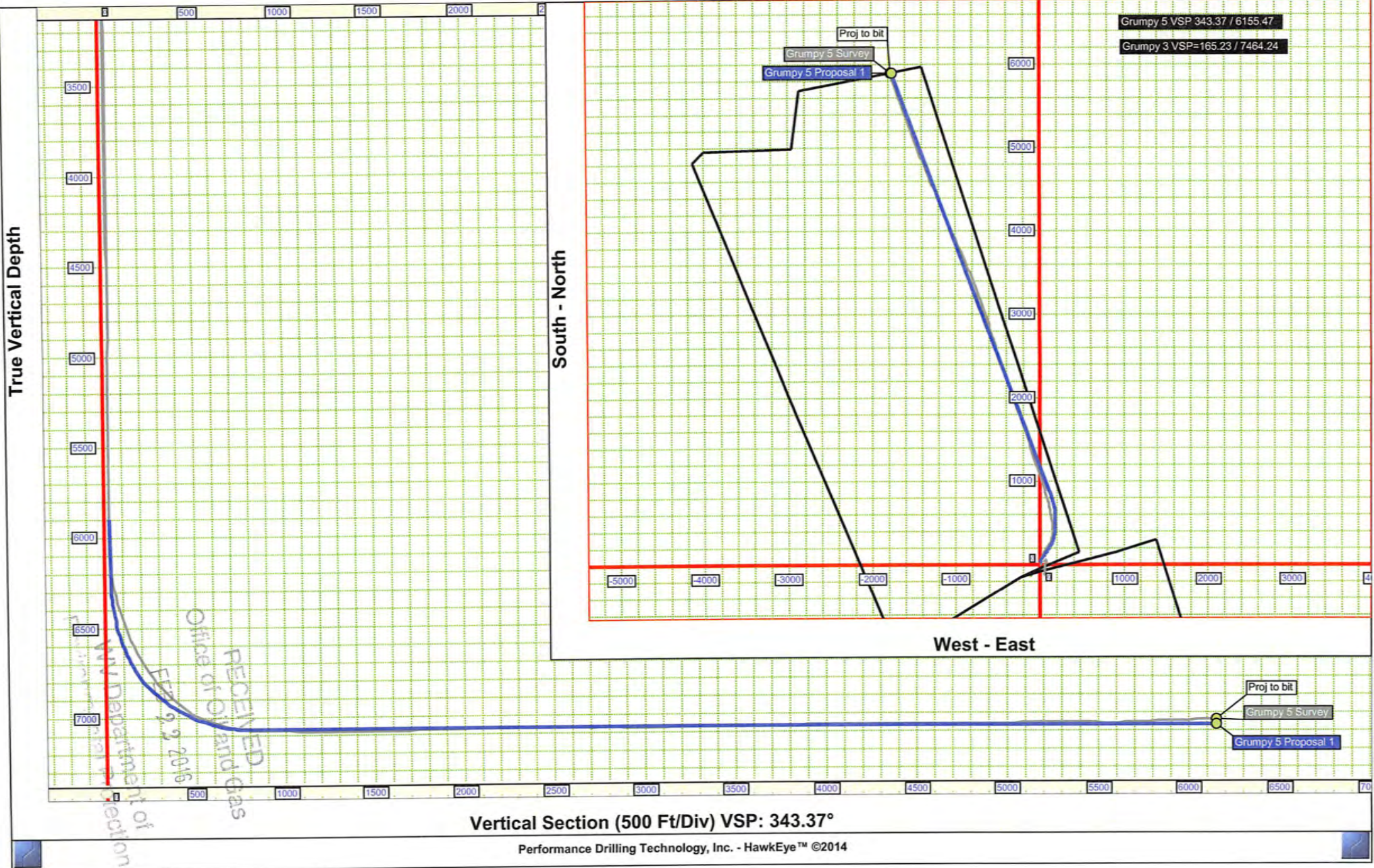




Job Number: Grumpy 5 Svys  
Company: Jay Bee Oil & Gas  
Lease/Well: Grumpy 5  
Location: Northern  
Rig Name:  
State/County: West Virginia/ Tyler  
Country: USA  
API Number:



Elevation (To MSL): 1298.01 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: -8.53  
Grid Convergence: -0.80634 W  
Date: Monday, November 24, 2014





**Job Number:** Grumpy 5 Svys  
**Company:** Jay Bee Oil & Gas  
**Lease/Well:** Grumpy 5  
**Location:** Northern  
**Rig Name:**  
**State/County:** West Virginia/ Tyler  
**Country:** USA

**Elev. GL:** 1298.01 ft    **RKB:** 16.00 ft  
**System:** US State Plane 1927 (Exact solution)  
**Group:** West Virginia North 4701  
**Datum:** CLARKE 1866  
**Mag. Decl.:** -8.53° (C:\HawkEye\IGRF2010.MIF)  
**Grid Conv.:** -0.80634 W  
**Date:** Monday, November 24, 2014



Calculated by HawkEye Software  
 Minimum Curvature Method  
 Vertical Section Plane 343.37°  
 Northing (US ft): 354955.35    Easting (US ft): 1643054.06  
 Latitude: 39°28'3.5940" N    Longitude: -80°45'51.7732" W  
 Direction Reference: Grid North



#	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	LR/EW From-Plan (Ft)	UD/NS From-Plan (Ft)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	354955.35	1643054.06	0.00	-	-
2	100.00	1.55	103.94	100.00	99.99	-0.69	-0.33	1.31	354955.02	1643055.37	1.55	-	-
3	200.00	1.44	146.19	100.00	199.96	-2.58	-1.70	3.32	354953.65	1643057.38	1.08	-	-
4	300.00	0.51	193.68	100.00	299.94	-4.16	-3.17	3.92	354952.18	1643057.98	1.16	-	-
5	400.00	0.26	165.89	100.00	399.94	-4.77	-3.82	3.87	354951.53	1643057.93	0.31	-	-
6	500.00	0.77	139.23	100.00	499.94	-5.61	-4.55	4.36	354950.80	1643058.42	0.55	-	-
7	600.00	0.67	123.48	100.00	599.93	-6.67	-5.39	5.29	354949.96	1643059.35	0.22	-	-
8	700.00	0.57	120.48	100.00	699.92	-7.49	-5.96	6.21	354949.39	1643060.27	0.11	-	-
9	800.00	1.46	52.51	100.00	799.91	-7.40	-5.44	7.65	354949.91	1643061.71	1.35	-	-
10	900.00	2.89	14.06	100.00	899.84	-4.78	-2.22	9.27	354953.13	1643063.33	1.97	-	-
11	1000.00	2.40	10.76	100.00	999.73	-0.75	2.29	10.27	354957.64	1643064.33	0.51	-	-
12	1100.00	1.86	10.51	100.00	1099.66	2.55	5.94	10.96	354961.29	1643065.02	0.54	-	-
13	1200.00	1.65	11.18	100.00	1199.61	5.27	8.95	11.53	354964.30	1643065.59	0.21	-	-
14	1300.00	1.48	11.92	100.00	1299.58	7.68	11.62	12.08	354966.97	1643066.14	0.17	-	-
15	1400.00	1.54	10.73	100.00	1399.54	10.01	14.21	12.60	354969.56	1643066.66	0.07	-	-
16	1500.00	1.60	8.72	100.00	1499.51	12.46	16.91	13.06	354972.26	1643067.12	0.08	-	-
17	1600.00	1.67	0.09	100.00	1599.46	15.12	19.74	13.27	354975.09	1643067.33	0.26	-	-
18	1700.00	1.53	355.61	100.00	1699.43	17.82	22.53	13.17	354977.88	1643067.23	0.19	-	-
19	1800.00	1.40	358.20	100.00	1799.39	20.31	25.08	13.03	354980.43	1643067.09	0.15	-	-
20	1900.00	0.90	12.45	100.00	1899.37	22.17	27.07	13.16	354982.42	1643067.22	0.57	-	-
21	2000.00	1.02	28.42	100.00	1999.36	23.49	28.62	13.76	354983.97	1643067.82	0.29	-	-
22	2100.00	1.67	36.26	100.00	2099.33	25.00	30.58	15.04	354985.93	1643069.10	0.67	-	-
23	2200.00	2.06	55.04	100.00	2199.28	26.44	32.78	17.38	354988.13	1643071.44	0.72	-	-
24	2300.00	1.74	60.56	100.00	2299.22	27.34	34.56	20.17	354989.91	1643074.23	0.37	-	-
25	2400.00	1.46	68.82	100.00	2399.18	27.78	35.77	22.68	354991.12	1643076.74	0.36	-	-
26	2500.00	1.10	83.49	100.00	2499.16	27.71	36.34	24.82	354991.69	1643078.88	0.48	-	-
27	2600.00	0.55	79.37	100.00	2599.15	27.49	36.53	26.25	354991.88	1643080.31	0.55	-	-
28	2700.00	0.39	74.83	100.00	2699.15	27.44	36.71	27.05	354992.06	1643081.11	0.16	-	-
29	2800.00	0.20	63.66	100.00	2799.14	27.46	36.88	27.53	354992.23	1643081.59	0.20	-	-
30	2900.00	0.16	59.52	100.00	2899.14	27.52	37.03	27.81	354992.38	1643081.87	0.04	-	-

#	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	LR/EW From-Plan (Ft)	UD/NS From-Plan (Ft)
31	3000.00	0.21	52.11	100.00	2999.14	27.62	37.21	28.08	354992.56	1643082.14	0.06	-	-
32	3100.00	0.15	48.75	100.00	3099.14	27.74	37.41	28.32	354992.76	1643082.38	0.06	-	-
33	3200.00	0.11	13.24	100.00	3199.14	27.88	37.59	28.44	354992.94	1643082.50	0.09	-	-
34	3300.00	0.33	348.62	100.00	3299.14	28.25	37.96	28.40	354993.31	1643082.46	0.23	-	-
35	3400.00	0.37	318.69	100.00	3399.14	28.83	38.49	28.13	354993.84	1643082.19	0.18	-	-
36	3500.00	0.15	305.90	100.00	3499.14	29.22	38.81	27.81	354994.16	1643081.87	0.23	-	-
37	3600.00	0.29	301.46	100.00	3599.14	29.52	39.02	27.49	354994.37	1643081.55	0.14	-	-
38	3700.00	0.35	282.64	100.00	3699.14	29.85	39.22	26.98	354994.57	1643081.04	0.12	-	-
39	3800.00	0.56	279.19	100.00	3799.13	30.22	39.36	26.20	354994.71	1643080.26	0.21	-	-
40	3900.00	0.32	243.10	100.00	3899.13	30.38	39.31	25.47	354994.66	1643079.53	0.36	-	-
41	4000.00	0.38	237.67	100.00	3999.13	30.24	39.01	24.94	354994.36	1643079.00	0.07	-	-
42	4100.00	0.33	257.16	100.00	4099.13	30.17	38.77	24.38	354994.12	1643078.44	0.13	-	-
43	4200.00	0.44	270.56	100.00	4199.12	30.30	38.71	23.71	354994.06	1643077.77	0.14	-	-
44	4300.00	0.42	277.41	100.00	4299.12	30.56	38.76	22.96	354994.11	1643077.02	0.06	-	-
45	4400.00	0.09	303.50	100.00	4399.12	30.77	38.85	22.54	354994.20	1643076.60	0.34	-	-
46	4500.00	0.44	321.32	100.00	4499.12	31.19	39.19	22.23	354994.54	1643076.29	0.36	-	-
47	4600.00	0.38	282.05	100.00	4599.12	31.71	39.56	21.67	354994.91	1643075.73	0.28	-	-
48	4700.00	0.68	250.91	100.00	4699.11	31.84	39.44	20.78	354994.79	1643074.84	0.41	-	-
49	4800.00	0.88	234.38	100.00	4799.10	31.56	38.79	19.60	354994.14	1643073.66	0.30	-	-
50	4900.00	0.63	233.00	100.00	4899.09	31.12	38.02	18.53	354993.37	1643072.59	0.25	-	-
51	5000.00	0.85	224.72	100.00	4999.09	30.58	37.16	17.57	354992.51	1643071.63	0.24	-	-
52	5100.00	0.86	224.65	100.00	5099.08	29.86	36.10	16.52	354991.45	1643070.58	0.01	-	-
53	5200.00	0.69	224.93	100.00	5199.07	29.21	35.14	15.57	354990.49	1643069.63	0.17	-	-
54	5300.00	0.64	228.50	100.00	5299.06	28.69	34.34	14.73	354989.69	1643068.79	0.06	-	-
55	5400.00	0.60	234.59	100.00	5399.05	28.29	33.67	13.88	354989.02	1643067.94	0.08	-	-
56	5500.00	0.42	221.83	100.00	5499.05	27.93	33.09	13.21	354988.44	1643067.27	0.21	-	-
57	5600.00	0.44	235.97	100.00	5599.05	27.62	32.60	12.65	354987.95	1643066.71	0.11	-	-
58	5700.00	0.77	239.45	100.00	5699.04	27.34	32.05	11.75	354987.40	1643065.81	0.33	-	-
59	5800.00	1.30	268.04	100.00	5799.03	27.47	31.67	10.04	354987.02	1643064.10	0.72	-	-
60	5900.00	1.37	286.75	100.00	5899.00	28.41	31.97	7.76	354987.32	1643061.82	0.44	-	-
61	5968.00	1.10	298.50	68.00	5966.98	29.32	32.52	6.41	354987.87	1643060.47	0.54	0.20 (E)	0.08 (N)
62	6012.00	0.90	300.30	44.00	6010.98	29.88	32.89	5.74	354988.24	1643059.80	0.46	0.54 (E)	0.15 (N)
63	6056.00	0.80	300.00	44.00	6054.97	30.35	33.22	5.17	354988.57	1643059.23	0.23	0.99 (E)	0.18 (N)
64	6101.00	0.90	293.90	45.00	6099.97	30.81	33.52	4.58	354988.87	1643058.64	0.30	1.42 (E)	0.17 (N)
65	6145.00	2.30	356.30	44.00	6143.95	31.90	34.54	4.21	354989.89	1643058.27	4.65	2.06 (E)	0.88 (N)
66	6189.00	6.60	7.20	44.00	6187.81	35.07	37.93	4.47	354993.28	1643058.53	9.92	2.81 (R)	4.39 (U)
67	6234.00	11.00	15.80	45.00	6232.27	41.06	44.64	5.96	354999.99	1643060.02	10.18	2.75 (R)	11.55 (U)
68	6278.00	15.10	20.30	44.00	6275.12	49.19	54.05	9.09	355009.40	1643063.15	9.59	1.97 (R)	20.19 (U)
69	6323.00	18.20	22.00	45.00	6318.23	59.37	66.07	13.76	355021.42	1643067.82	6.97	0.84 (R)	28.75 (U)
70	6368.00	19.70	23.70	45.00	6360.79	70.64	79.53	19.44	355034.88	1643073.50	3.55	-1.10 (L)	36.32 (U)
71	6412.00	21.50	23.50	44.00	6401.98	82.46	93.72	25.64	355049.07	1643079.70	4.09	-2.69 (L)	41.98 (U)

#	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	LR/EW From-Plan (Ft)	UD/NS From-Plan (Ft)
72	6456.00	24.80	25.10	44.00	6442.43	95.52	109.47	32.77	355064.82	1643086.83	7.63	-6.10 (L)	47.01 (U)
73	6501.00	27.50	27.20	45.00	6482.82	110.06	127.26	41.52	355082.61	1643095.58	6.34	-10.22 (L)	51.17 (U)
74	6546.00	30.20	31.00	45.00	6522.24	125.18	146.21	52.10	355101.56	1643106.16	7.25	-15.36 (L)	53.93 (U)
75	6591.00	32.50	30.80	45.00	6560.66	140.99	166.30	64.13	355121.65	1643118.19	5.12	-17.07 (L)	56.45 (U)
76	6635.00	35.00	31.00	44.00	6597.25	157.49	187.27	76.68	355142.62	1643130.74	5.69	-19.44 (L)	57.63 (U)
77	6679.00	38.50	34.00	44.00	6632.50	174.69	209.45	90.84	355164.80	1643144.90	8.94	-23.63 (L)	57.53 (U)
78	6724.00	40.70	30.10	45.00	6667.17	193.64	233.76	106.04	355189.11	1643160.10	7.38	-22.57 (L)	58.75 (U)
79	6768.00	40.60	24.70	44.00	6700.57	214.23	259.19	119.22	355214.54	1643173.28	8.00	-20.64 (L)	59.55 (U)
80	6813.00	40.60	18.70	45.00	6734.75	237.18	286.37	130.04	355241.72	1643184.10	8.67	-18.97 (L)	58.76 (U)
81	6857.00	40.20	14.00	44.00	6768.26	261.08	313.72	138.06	355269.07	1643192.12	6.98	-19.02 (L)	55.93 (U)
82	6901.00	39.80	9.80	44.00	6801.98	285.92	341.38	143.90	355296.73	1643197.96	6.20	-20.15 (L)	51.01 (U)
83	6945.00	42.90	4.90	44.00	6835.01	312.47	370.19	147.57	355325.54	1643201.63	10.18	-22.18 (L)	44.98 (U)
84	6990.00	45.90	0.70	45.00	6867.17	342.16	401.62	149.08	355356.97	1643203.14	9.33	-26.05 (L)	39.27 (U)
85	7032.00	49.40	357.90	42.00	6895.46	372.00	432.65	148.68	355388.00	1643202.74	9.68	-30.66 (L)	33.96 (U)
86	7077.00	52.10	355.40	45.00	6923.93	405.91	467.43	146.63	355422.78	1643200.69	7.38	-35.90 (L)	28.73 (U)
87	7121.00	54.80	353.20	44.00	6950.13	440.61	502.59	143.11	355457.94	1643197.17	7.33	-40.96 (L)	23.38 (U)
88	7165.00	59.30	351.70	44.00	6974.06	477.06	539.18	138.25	355494.53	1643192.31	10.62	-45.80 (L)	18.29 (U)
89	7210.00	63.80	350.30	45.00	6995.49	516.27	578.25	132.05	355533.60	1643186.11	10.37	-50.10 (L)	14.40 (U)
90	7254.00	68.40	349.60	44.00	7013.31	556.22	617.85	125.03	355573.20	1643179.09	10.56	-53.22 (L)	11.45 (U)
91	7296.00	70.90	348.50	42.00	7027.92	595.40	656.50	117.54	355611.85	1643171.60	6.44	-55.36 (L)	9.45 (U)
92	7340.00	71.80	347.90	44.00	7041.99	636.94	697.31	109.02	355652.66	1643163.08	2.42	-56.48 (L)	6.14 (U)
93	7382.00	75.70	346.70	42.00	7053.74	677.16	736.64	100.15	355691.99	1643154.21	9.68	-56.76 (L)	2.86 (U)
94	7427.00	80.60	345.40	45.00	7062.98	721.14	779.36	89.53	355734.71	1643143.59	11.25	-56.29 (L)	0.33 (U)
95	7471.00	84.70	345.20	44.00	7068.61	764.75	821.56	78.46	355776.91	1643132.52	9.33	-54.87 (L)	-0.97 (D)
96	7515.00	88.90	343.10	44.00	7071.06	808.66	863.81	66.47	355819.16	1643120.53	10.67	-52.56 (L)	-1.41 (D)
97	7560.00	89.10	343.10	45.00	7071.85	853.65	906.86	53.39	355862.21	1643107.45	0.44	-49.91 (L)	-1.92 (D)
98	7602.00	89.20	342.80	42.00	7072.47	895.65	947.01	41.07	355902.36	1643095.13	0.75	-47.35 (L)	-2.54 (D)
99	7647.00	88.20	343.00	45.00	7073.49	940.63	990.01	27.84	355945.36	1643081.90	2.27	-44.67 (L)	-3.56 (D)
100	7691.00	88.10	342.80	44.00	7074.91	984.61	1032.05	14.91	355987.40	1643068.97	0.51	-42.03 (L)	-4.98 (D)
101	7736.00	88.00	342.30	45.00	7076.44	1029.58	1074.95	1.43	356030.30	1643055.49	1.13	-39.60 (L)	-6.52 (D)
102	7780.00	88.20	342.00	44.00	7077.90	1073.54	1116.81	-12.05	356072.16	1643042.01	0.82	-37.55 (L)	-7.97 (D)
103	7825.00	89.70	341.20	45.00	7078.73	1118.51	1159.50	-26.25	356114.85	1643027.81	3.78	-35.87 (L)	-8.79 (D)
104	7869.00	89.20	340.90	44.00	7079.15	1162.48	1201.11	-40.54	356156.46	1643013.52	1.33	-34.66 (L)	-9.22 (D)
105	7914.00	88.90	340.20	45.00	7079.89	1207.41	1243.54	-55.52	356198.89	1642998.54	1.69	-33.82 (L)	-9.96 (D)
106	7958.00	88.60	339.70	44.00	7080.85	1251.33	1284.86	-70.61	356240.21	1642983.45	1.32	-33.46 (L)	-10.92 (D)
107	8002.00	88.70	340.90	44.00	7081.89	1295.25	1326.27	-85.43	356281.62	1642968.63	2.74	-32.84 (L)	-11.96 (D)
108	8046.00	89.70	341.40	44.00	7082.51	1339.21	1367.91	-99.65	356323.26	1642954.41	2.54	-31.57 (L)	-12.57 (D)
109	8091.00	92.00	342.60	45.00	7081.84	1384.19	1410.70	-113.55	356366.05	1642940.51	5.76	-29.65 (L)	-11.91 (D)
110	8135.00	92.60	342.30	44.00	7080.07	1428.15	1452.62	-126.81	356407.97	1642927.25	1.52	-27.36 (L)	-10.15 (D)
111	8180.00	90.60	340.90	45.00	7078.82	1473.11	1495.30	-141.01	356450.65	1642913.05	5.42	-25.66 (L)	-8.88 (D)
112	8224.00	90.60	341.30	44.00	7078.36	1517.07	1536.92	-155.26	356492.27	1642898.80	0.91	-24.42 (L)	-8.42 (D)

#	Measured Depth (Ft)	INC Deg	AZM Deg	CL (Ft)	TVD (Ft)	VS (Ft)	NS (Ft)	EW (Ft)	Northing (US ft)	Easting (US ft)	DLS <sup>2</sup> /100 Ft	LR/EW From-Plan (Ft)	UD/NS From-Plan (Ft)
113	8269.00	90.40	341.80	45.00	7077.96	1562.04	1579.61	-169.50	356534.96	1642884.56	1.20	-22.80 (L)	-8.02 (D)
114	8311.00	90.20	340.90	42.00	7077.74	1604.02	1619.40	-182.93	356574.75	1642871.13	2.20	-21.42 (L)	-7.80 (D)
115	8356.00	90.10	340.60	45.00	7077.62	1648.97	1661.88	-197.77	356617.23	1642856.29	0.70	-20.42 (L)	-7.69 (D)
116	8400.00	90.10	339.50	44.00	7077.55	1692.90	1703.24	-212.78	356658.59	1642841.28	2.50	-19.99 (L)	-7.61 (D)
117	8445.00	91.20	340.80	45.00	7077.04	1737.82	1745.56	-228.06	356700.91	1642826.00	3.78	-19.47 (L)	-7.10 (D)
118	8487.00	91.10	341.30	42.00	7076.19	1779.78	1785.28	-241.69	356740.63	1642812.37	1.21	-18.33 (L)	-6.26 (D)
119	8531.00	91.30	341.40	44.00	7075.27	1823.74	1826.96	-255.76	356782.31	1642798.30	0.51	-16.90 (L)	-5.33 (D)
120	8576.00	91.60	341.40	45.00	7074.13	1868.70	1869.60	-270.11	356824.95	1642783.95	0.67	-15.39 (L)	-4.19 (D)
121	8620.00	91.50	341.00	44.00	7072.94	1912.65	1911.23	-284.28	356866.58	1642769.78	0.94	-14.07 (L)	-3.00 (D)
122	8665.00	91.30	340.30	45.00	7071.84	1957.59	1953.68	-299.19	356909.03	1642754.87	1.62	-13.15 (L)	-1.90 (D)
123	8709.00	91.10	339.80	44.00	7070.92	2001.50	1995.03	-314.20	356950.38	1642739.86	1.22	-12.71 (L)	-0.98 (D)
124	8754.00	90.80	339.40	45.00	7070.18	2046.40	2037.20	-329.88	356992.55	1642724.18	1.11	-12.62 (L)	-0.23 (D)
125	8798.00	90.90	339.40	44.00	7069.52	2090.29	2078.38	-345.36	357033.73	1642708.70	0.23	-12.68 (L)	0.42 (U)
126	8842.00	90.90	339.30	44.00	7068.83	2134.18	2119.55	-360.88	357074.90	1642693.18	0.23	-12.79 (L)	1.11 (U)
127	8887.00	90.90	338.50	45.00	7068.13	2179.03	2161.53	-377.07	357116.88	1642676.99	1.78	-13.25 (L)	1.82 (U)
128	8931.00	91.00	338.80	44.00	7067.40	2222.88	2202.50	-393.09	357157.85	1642660.97	0.72	-13.89 (L)	2.55 (U)
129	8975.00	91.20	340.40	44.00	7066.55	2266.77	2243.73	-408.42	357199.08	1642645.64	3.66	-13.80 (L)	3.39 (U)
130	9020.00	91.30	340.40	45.00	7065.57	2311.70	2286.12	-423.52	357241.47	1642630.54	0.22	-13.08 (L)	4.38 (U)
131	9064.00	90.00	341.20	44.00	7065.07	2355.65	2327.67	-437.99	357283.02	1642616.07	3.47	-12.07 (L)	4.88 (U)
132	9109.00	90.20	341.70	45.00	7064.99	2400.63	2370.33	-452.30	357325.68	1642601.76	1.20	-10.53 (L)	4.96 (U)
133	9153.00	88.80	343.60	44.00	7065.38	2444.62	2412.32	-465.42	357367.67	1642588.64	5.36	-8.12 (L)	4.57 (U)
134	9198.00	88.90	344.00	45.00	7066.28	2489.61	2455.53	-477.97	357410.88	1642576.09	0.92	-4.73 (L)	3.67 (U)
135	9240.00	88.70	343.30	42.00	7067.16	2531.60	2495.82	-489.79	357451.17	1642564.27	1.73	-1.66 (L)	2.79 (U)
136	9284.00	88.60	343.50	44.00	7068.20	2575.59	2537.97	-502.36	357493.32	1642551.70	0.51	1.35 (R)	1.75 (U)
137	9328.00	88.60	343.10	44.00	7069.27	2619.57	2580.10	-515.00	357535.45	1642539.06	0.91	4.28 (R)	0.68 (U)
138	9373.00	88.70	342.70	45.00	7070.33	2664.56	2623.10	-528.23	357578.45	1642525.83	0.92	6.97 (R)	-0.38 (D)
139	9418.00	90.60	343.40	45.00	7070.61	2709.56	2666.14	-541.35	357621.49	1642512.71	4.50	9.78 (R)	-0.65 (D)
140	9462.00	91.00	344.10	44.00	7069.99	2753.55	2708.38	-553.66	357663.73	1642500.40	1.83	13.07 (R)	-0.04 (D)
141	9506.00	89.50	343.80	44.00	7069.80	2797.55	2750.67	-565.82	357706.02	1642488.24	3.48	16.50 (R)	0.15 (U)
142	9550.00	89.50	343.80	44.00	7070.18	2841.54	2792.92	-578.10	357748.27	1642475.96	0.00	19.82 (R)	-0.23 (D)
143	9595.00	89.70	343.80	45.00	7070.50	2886.54	2836.13	-590.65	357791.48	1642463.41	0.44	23.22 (R)	-0.54 (D)
144	9640.00	89.70	344.00	45.00	7070.73	2931.54	2879.36	-603.13	357834.71	1642450.93	0.44	26.70 (R)	-0.78 (D)
145	9684.00	89.80	343.50	44.00	7070.93	2975.54	2921.60	-615.44	357876.95	1642438.62	1.16	29.96 (R)	-0.97 (D)
146	9728.00	89.80	340.90	44.00	7071.08	3019.52	2963.49	-628.89	357918.84	1642425.17	5.91	31.99 (R)	-1.12 (D)
147	9773.00	90.20	340.30	45.00	7071.08	3064.47	3005.94	-643.84	357961.29	1642410.22	1.60	32.86 (R)	-1.12 (D)
148	9817.00	90.70	340.60	44.00	7070.73	3108.41	3047.40	-658.56	358002.75	1642395.50	1.33	33.60 (R)	-0.78 (D)
149	9861.00	91.30	341.80	44.00	7069.97	3152.37	3089.05	-672.74	358044.40	1642381.32	3.05	34.94 (R)	-0.01 (D)
150	9906.00	92.00	342.60	45.00	7068.67	3197.34	3131.87	-686.49	358087.22	1642367.57	2.36	37.10 (R)	1.29 (U)
151	9950.00	90.90	341.20	44.00	7067.56	3241.31	3173.68	-700.16	358129.03	1642353.90	4.05	38.92 (R)	2.40 (U)
152	9994.00	91.10	341.40	44.00	7066.79	3285.28	3215.35	-714.26	358170.70	1642339.80	0.64	40.32 (R)	3.17 (U)
153	10038.00	90.30	339.20	44.00	7066.25	3329.21	3256.77	-729.09	358212.12	1642324.97	5.32	40.92 (R)	3.71 (U)

#	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	LR/EW From-Plan (Ft)	UD/NS From-Plan (Ft)
154	10080.00	90.10	339.10	42.00	7066.10	3371.09	3296.02	-744.04	358251.37	1642310.02	0.53	40.67 (R)	3.85 (U)
155	10125.00	90.30	338.00	45.00	7065.95	3415.93	3337.90	-760.49	358293.25	1642293.57	2.48	39.95 (R)	4.01 (U)
156	10169.00	90.40	338.20	44.00	7065.68	3459.75	3378.73	-776.91	358334.08	1642277.15	0.51	38.89 (R)	4.28 (U)
157	10214.00	90.60	338.00	45.00	7065.29	3504.56	3420.48	-793.69	358375.83	1642260.37	0.63	37.80 (R)	4.68 (U)
158	10258.00	91.00	337.60	44.00	7064.67	3548.34	3461.21	-810.31	358416.56	1642243.75	1.29	36.51 (R)	5.29 (U)
159	10302.00	89.50	336.80	44.00	7064.48	3592.09	3501.77	-827.36	358457.12	1642226.70	3.86	34.78 (R)	5.48 (U)
160	10347.00	89.60	336.80	45.00	7064.83	3636.79	3543.13	-845.09	358498.48	1642208.97	0.22	32.67 (R)	5.13 (U)
161	10391.00	89.90	337.30	44.00	7065.02	3680.52	3583.65	-862.25	358539.00	1642191.81	1.33	30.79 (R)	4.94 (U)
162	10434.00	90.00	336.90	43.00	7065.06	3723.26	3623.26	-878.98	358578.61	1642175.08	0.96	29.01 (R)	4.90 (U)
163	10478.00	90.50	336.80	44.00	7064.87	3766.98	3663.72	-896.28	358619.07	1642157.78	1.16	26.99 (R)	5.09 (U)
164	10523.00	90.80	336.80	45.00	7064.36	3811.68	3705.07	-914.00	358660.42	1642140.06	0.67	24.87 (R)	5.61 (U)
165	10567.00	91.00	337.10	44.00	7063.67	3855.40	3745.56	-931.23	358700.91	1642122.83	0.82	22.92 (R)	6.30 (U)
166	10612.00	91.10	336.40	45.00	7062.84	3900.09	3786.90	-948.99	358742.25	1642105.07	1.57	20.78 (R)	7.12 (U)
167	10656.00	91.00	336.30	44.00	7062.04	3943.75	3827.19	-966.64	358782.54	1642087.42	0.32	18.38 (R)	7.93 (U)
168	10700.00	91.00	336.00	44.00	7061.27	3987.40	3867.43	-984.42	358822.78	1642069.64	0.68	15.82 (R)	8.70 (U)
169	10742.00	91.20	335.80	42.00	7060.46	4029.03	3905.76	-1001.57	358861.11	1642052.49	0.67	13.19 (R)	9.51 (U)
170	10786.00	90.70	335.80	44.00	7059.73	4072.64	3945.89	-1019.60	358901.24	1642034.46	1.14	10.36 (R)	10.23 (U)
171	10831.00	91.10	336.50	45.00	7059.03	4117.28	3987.04	-1037.80	358942.39	1642016.26	1.79	7.73 (R)	10.94 (U)
172	10875.00	90.00	337.40	44.00	7058.60	4161.00	4027.53	-1055.02	358982.88	1641999.04	3.23	5.79 (R)	11.36 (U)
173	10919.00	90.20	337.00	44.00	7058.53	4204.75	4068.09	-1072.07	359023.44	1641981.99	1.02	4.03 (R)	11.44 (U)
174	10963.00	89.20	337.70	44.00	7058.76	4248.50	4108.69	-1089.02	359064.04	1641965.04	2.77	2.40 (R)	11.21 (U)
175	11008.00	89.00	338.00	45.00	7059.47	4293.29	4150.37	-1105.98	359105.72	1641948.08	0.80	1.11 (R)	10.51 (U)
176	11052.00	88.90	337.30	44.00	7060.27	4337.06	4191.05	-1122.71	359146.40	1641931.35	1.61	-0.29 (L)	9.70 (U)
177	11096.00	88.80	337.20	44.00	7061.15	4380.80	4231.62	-1139.72	359186.97	1641914.34	0.32	-2.01 (L)	8.82 (U)
178	11141.00	88.80	336.90	45.00	7062.10	4425.52	4273.05	-1157.27	359228.40	1641896.79	0.67	-3.92 (L)	7.88 (U)
179	11185.00	89.20	336.60	44.00	7062.87	4469.22	4313.47	-1174.63	359268.82	1641879.43	1.14	-6.03 (L)	7.11 (U)
180	11229.00	90.20	337.50	44.00	7063.10	4512.95	4353.99	-1191.79	359309.34	1641862.27	3.06	-7.90 (L)	6.88 (U)
181	11274.00	90.50	337.10	45.00	7062.82	4557.70	4395.50	-1209.15	359350.85	1641844.91	1.11	-9.62 (L)	7.15 (U)
182	11318.00	90.90	337.30	44.00	7062.28	4601.44	4436.06	-1226.20	359391.41	1641827.86	1.02	-11.37 (L)	7.69 (U)
183	11362.00	91.00	337.40	44.00	7061.55	4645.19	4476.66	-1243.15	359432.01	1641810.91	0.32	-13.01 (L)	8.42 (U)
184	11407.00	90.20	337.80	45.00	7061.08	4689.96	4518.26	-1260.29	359473.61	1641793.77	1.99	-14.48 (L)	8.89 (U)
185	11450.00	90.50	338.00	43.00	7060.82	4732.76	4558.10	-1276.47	359513.45	1641777.59	0.84	-15.67 (L)	9.16 (U)
186	11494.00	90.70	338.00	44.00	7060.36	4776.57	4598.90	-1292.95	359554.25	1641761.11	0.45	-16.81 (L)	9.62 (U)
187	11538.00	90.90	338.00	44.00	7059.74	4820.37	4639.69	-1309.43	359595.04	1641744.63	0.45	-17.95 (L)	10.23 (U)
188	11583.00	91.60	337.90	45.00	7058.76	4865.16	4681.39	-1326.32	359636.74	1641727.74	1.57	-19.16 (L)	11.22 (U)
189	11627.00	89.90	337.20	44.00	7058.19	4908.93	4722.05	-1343.12	359677.40	1641710.94	4.18	-20.65 (L)	11.79 (U)
190	11672.00	90.30	337.30	45.00	7058.11	4953.67	4763.55	-1360.52	359718.90	1641693.54	0.92	-22.41 (L)	11.87 (U)
191	11716.00	90.40	337.00	44.00	7057.84	4997.41	4804.09	-1377.61	359759.44	1641676.45	0.72	-24.20 (L)	12.14 (U)
192	11760.00	90.90	336.60	44.00	7057.34	5041.12	4844.53	-1394.94	359799.88	1641659.12	1.46	-26.28 (L)	12.64 (U)
193	11804.00	90.90	338.20	44.00	7056.65	5084.87	4885.15	-1411.85	359840.50	1641642.21	3.64	-27.85 (L)	13.33 (U)
194	11848.00	91.30	338.50	44.00	7055.80	5128.69	4926.03	-1428.08	359881.38	1641625.98	1.14	-28.72 (L)	14.18 (U)

#	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	LR/EW From-Plan (Ft)	UD/NS From-Plan (Ft)
195	11893.00	90.60	340.00	45.00	7055.06	5173.57	4968.11	-1444.02	359923.46	1641610.04	3.68	-28.89 (L)	14.92 (U)
196	11938.00	90.70	339.60	45.00	7054.55	5218.48	5010.34	-1459.56	359965.69	1641594.50	0.92	-28.64 (L)	15.44 (U)
197	11983.00	91.10	339.50	45.00	7053.84	5263.37	5052.50	-1475.28	360007.85	1641578.78	0.92	-28.59 (L)	16.14 (U)
198	12028.00	90.00	340.20	45.00	7053.41	5308.29	5094.74	-1490.78	360050.09	1641563.28	2.90	-28.31 (L)	16.57 (U)
199	12072.00	90.40	340.10	44.00	7053.26	5352.22	5136.12	-1505.72	360091.47	1641548.34	0.94	-27.79 (L)	16.73 (U)
200	12116.00	88.40	340.10	44.00	7053.72	5396.14	5177.49	-1520.69	360132.84	1641533.37	4.55	-27.33 (L)	16.27 (U)
201	12159.00	88.70	339.80	43.00	7054.80	5439.05	5217.87	-1535.43	360173.22	1641518.63	0.99	-26.97 (L)	15.18 (U)
202	12201.00	88.70	340.00	42.00	7055.76	5480.96	5257.31	-1549.86	360212.66	1641504.20	0.48	-26.67 (L)	14.23 (U)
203	12246.00	88.70	339.10	45.00	7056.78	5525.85	5299.46	-1565.58	360254.81	1641488.48	2.00	-26.61 (L)	13.21 (U)
204	12288.00	89.10	338.70	42.00	7057.58	5567.71	5338.63	-1580.70	360293.98	1641473.36	1.35	-27.04 (L)	12.40 (U)
205	12333.00	90.60	340.00	45.00	7057.70	5612.60	5380.74	-1596.56	360336.09	1641457.50	4.41	-27.15 (L)	12.29 (U)
206	12377.00	92.50	340.90	44.00	7056.51	5656.53	5422.19	-1611.28	360377.54	1641442.78	4.78	-26.40 (L)	13.49 (U)
207	12422.00	92.70	340.10	45.00	7054.47	5701.42	5464.56	-1626.29	360419.91	1641427.77	1.83	-25.60 (L)	15.53 (U)
208	12466.00	92.50	339.00	44.00	7052.47	5745.28	5505.75	-1641.65	360461.10	1641412.41	2.54	-25.56 (L)	17.53 (U)
209	12510.00	91.90	340.10	44.00	7050.79	5789.15	5546.94	-1657.01	360502.29	1641397.05	2.85	-25.50 (L)	19.21 (U)
210	12552.00	92.30	340.30	42.00	7049.25	5831.06	5586.43	-1671.22	360541.78	1641382.84	1.06	-24.97 (L)	20.76 (U)
211	12596.00	91.80	340.90	44.00	7047.67	5874.98	5627.91	-1685.83	360583.26	1641368.23	1.77	-24.11 (L)	22.33 (U)
212	12640.00	91.80	341.10	44.00	7046.29	5918.92	5669.49	-1700.15	360624.84	1641353.91	0.45	-22.95 (L)	23.71 (U)
213	12685.00	91.90	341.40	45.00	7044.84	5963.86	5712.08	-1714.60	360667.43	1641339.46	0.70	-21.56 (L)	25.17 (U)
214	12729.00	92.50	341.70	44.00	7043.15	6007.81	5753.79	-1728.52	360709.14	1641325.54	1.52	-19.96 (L)	26.87 (U)
215	12773.00	92.50	341.90	44.00	7041.23	6051.75	5795.55	-1742.25	360750.90	1641311.81	0.45	-18.18 (L)	28.79 (U)
216	12816.00	92.00	343.30	43.00	7039.54	6094.71	5836.54	-1755.10	360791.89	1641298.96	3.45	-15.84 (L)	30.47 (U)
Proj to bit													
217	12877.00	92.00	343.30	61.00	7037.41	6155.67	5894.94	-1772.62	360850.29	1641281.44	0.00	-	-
<b>GEODETIC INFORMATION</b>													
Latitude: 39°28'3.5940" N Dec. Latitude: 39.46766500 Longitude: -80°45'51.7732" W Dec. Longitude: -80.76438144 Geodetic Group: US State Plane 1927 (Exact solution)							Geodetic Zone: West Virginia North 4701 Geodetic Datum: NAD27 Easting: 1643054.06 Northing: 354955.35 Convergence: -0.81						
<b>MAGNETICS INFORMATION</b>													
Magnetic Model: C:\HawkEye\IGRF2010.MIF Date for Magnetics: 11/12/2014 Latitude: 39°28'3.5940" N Longitude: -80°45'51.7732" W Magnetic Declination: -8.53 Total Correction(Mag to Grid): -7.72							Field Strength (nt): 52336 B-X Component (nt): 20298 B-Y Component (nt): -3045 B-Z Component (nt): 48144 B-Horz Component (nt): 20525 Dip Angle: 66.91						