



Mike Ryniawec BRK 1H
 Brooke Co, WV
 SDC 40
 Plan vs Actual

Plan Data for Mike Ryniawec BRK 1H

Plan Point Information:									
DogLeg Severity Unit:		Position offsets from Slot centre							
MD	Inc	Az	TVD	+N/-S	+E/-W	VSec	DLS	Toolface	Comments
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(DLSU)	(°)	(°)
0.00	0.00	0.00	-0.00	0.00	-0.00	0.00	0.00	0.0	0.0
26.00	0.00	0.00	26.00	0.00	-0.00	0.00	0.00	0.0	KB Offset
600.00	0.00	0.00	600.00	0.00	-0.00	0.00	0.00	0.0	Nudge KOP
850.00	5.00	330.00	849.68	9.44	-5.45	10.88	2.00	330.0	Hold
910.00	5.00	330.00	909.45	13.97	-8.07	16.10	0.00	0.0	Build/Turn
1404.30	9.00	245.14	1400.99	16.38	-54.03	38.54	2.00	245.2	Hold
5171.10	9.00	245.14	5121.42	-231.36	-588.68	52.16	0.00	0.0	Curve KOP 7° DLS
6172.74	70.00	334.23	5885.13	216.90	-904.85	593.93	7.00	92.4	Build/Turn 9° DLS
6406.77	90.78	337.75	5924.00	426.58	-998.01	823.20	9.00	9.8	Landing Point
16715.44	90.78	337.75	5784.00	9966.73	-4901.18	11106.63	0.00	0.0	PBHL Mike R1H

Target Set Information:
 Name: Mike Ryniawec BRK 1H
 Position offsets from Slot centre

Name	TVD	+N/-S	+E/-W	Northing	Easting	Lat	Long
(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(°)	(°)
LP Mike R1H	5924.00	255.57	-927.97	14596672.07	1748612.12	40.191413	-80.612575
PBHL Mike R1H	5784.00	9966.73	-4901.18	14606383.23	1744638.91	40.218127	-80.626655

Plan Data for Mike Ryniawec BRK 1H

Field: SOUTHWESTERN_BROOKE CO, WV UTM NAD 83 (17N)
 Map Unit: USft Vertical Reference Datum (VRD):
 Projected Coordinate System: NAD83 / UTM zone 17N

Site: Mike Ryniawec Pad
 Unit: USFeet TVD Reference:
 Company Name: SOUTHWESTERN ENERGY

Position: Northing: 14596413.14USft Latitude: 40.190691°
 Easting: 1749526.49USft Longitude: -80.609305°
 North Reference: Grid Grid Convergence: 0.25°
 Elevation Above VRD: 1173.00USft

Slot: Mike Ryniawec BRK 1H
 Position:
 Offset is from Site centre
 Northing: 14596416.50USft Latitude: 40.190700°
 Easting: 1749540.09USft Longitude: -80.609256°
 Elevation Above VRD: 1147.20USft

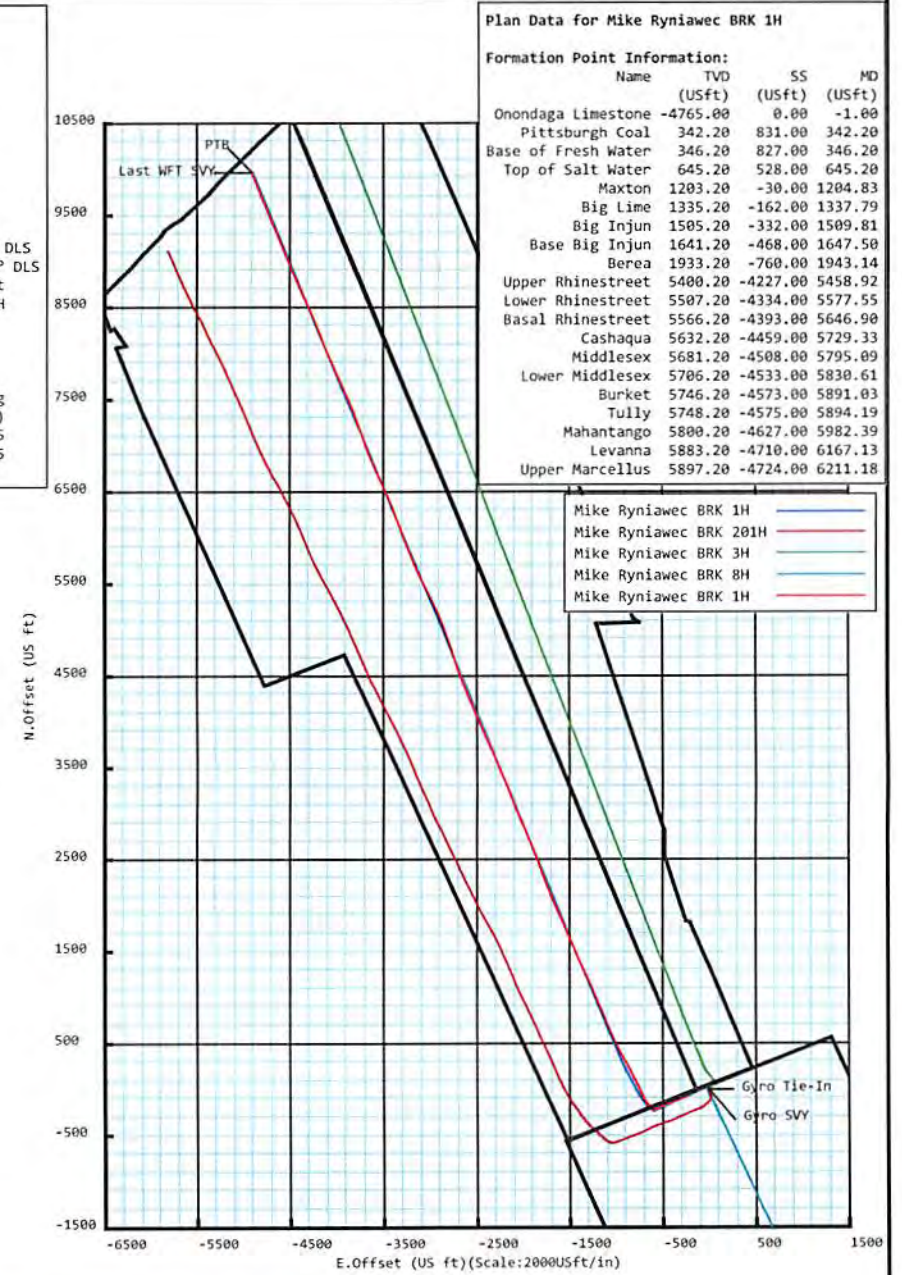
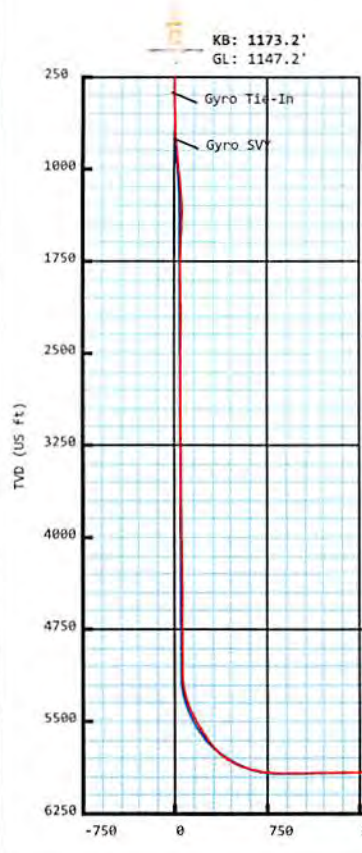
Well: Mike Ryniawec BRK 1H
 Type: Main-Well
 File Number: NE-13033202

Plan Folder: P1 Plan: P1:V2
 Vertical Section: Position offset of origin from Slot centre:
 +N/-S: 0.00USft +E/-W: 0.00USft Azimuth: 333.81°

Magnetic Parameters:
 Field Strength: Declination: Dip: Date:
 52596(nT) -8.23° 67.62° 2018-03-05

Grid Convergence: 0.25°
 Mag Declination: -8.23°
 Bearing:
 True = Mag - 8.23°
 Grid = True - 0.25°
 Total Correction to Grid North -8.76°

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Plan Data for Mike Ryniawec BRK 1H

Formation Point Information:

Name	TVD	SS	MD
(USft)	(USft)	(USft)	(USft)
Onondaga Limestone	-4765.00	0.00	-1.00
Pittsburgh Coal	342.20	831.00	342.20
Base of Fresh Water	346.20	827.00	346.20
Top of Salt Water	645.20	528.00	645.20
Maxton	1203.20	-30.00	1204.83
Big Lime	1335.20	-162.00	1337.79
Big Injun	1505.20	-332.00	1509.81
Base Big Injun	1641.20	-468.00	1647.50
Berea	1933.20	-760.00	1943.14
Upper Rhinestreet	5400.20	-4227.00	5458.92
Lower Rhinestreet	5507.20	-4334.00	5577.55
Basal Rhinestreet	5566.20	-4393.00	5646.90
Cashaqua	5632.20	-4459.00	5729.33
Middlesex	5681.20	-4508.00	5795.09
Lower Middlesex	5706.20	-4533.00	5830.61
Burket	5746.20	-4573.00	5891.03
Tully	5748.20	-4575.00	5894.19
Mahantango	5800.20	-4627.00	5982.39
Levanna	5883.20	-4710.00	6167.13
Upper Marcellus	5897.20	-4724.00	6211.18

Drawing By: Gary Rhodes Date: 5 March 2018
 Office Name: MidCon DS
 Address: 7725 W. Reno Ave, Ste. #220
 Oklahoma City, OK 73127
 Phone: +1.405.728.4257



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Mike Ryniawec BRK 1H

Field Name: SOUTHWESTER N_BROOKE CO, WV UTM NAD 83 (17N)	Map Units: US ft	Company Name: SOUTHWESTERN ENERGY	
	Vertical Reference Datum (VRD):		
	Projected Coordinate System: NAD83 / UTM zone 17N		
Comment:			
Site: Mike Ryniawec Pad	Units: US ft	North Reference: Grid	Convergence Angle: 0.25
	Position:	Northing: 14596413.14 US ft	Latitude: 40.190691
		Easting: 1749526.49 US ft	Longitude: -80.609305
	Elevation above Field Reference: 1173.00 US ft	Comment:	
Slot: Mike Ryniawec BRK 1H	Position (Relative to Site Centre)		
	+N/-S: 3.36 US ft	Northing: 14596416.50 US ft	Latitude: 40.190700
	+E/-W: 13.60 US ft	Easting: 1749540.09 US ft	Longitude: -80.609256
	Elevation above Field Reference: 1147.20 US ft	Comment:	
Well: Mike Ryniawec BRK 1H	Type: Main well	UWI:	
	File Number: NE-13033202	Comment:	
	Closure Distance: 11105 US ft	Closure Azimuth: 333.77°	
	Vertical Section: Position of Origin (Relative to Slot centre)		
	+N/-S: 0.00 US ft	+E/-W: -0.00 US ft	Az: 333.81°

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Drill floor: Survey Name: Definitive Survey

Rig Height (Drill Floor): 26.00 US ft	Elevation above Field Reference: 1173.20 US ft	Inclination: 0.00°	Azimuth: 0.00°
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Survey Name: Definitive Survey

Date: 09/Feb/2018	Survey Tool: See Survey Tool Ranges below.	Comment:	Company:
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Magnetic Model:

Model Name: HDGM	Date: 05/Mar/2018	Field Strength: 52596.0 nT	Declination: -8.23°	Dip: 67.62°
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Tie Point:

MD: 0.00 US ft	Inclination: 0.00°	Azimuth: 0.00°	TVD: -0.00 US ft	North Offset: 0.00 US ft	East Offset: -0.00 US ft
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3D Survey Report

Survey Tool Ranges:			
Name	Start MD(usft)	End MD(usft)	Source Survey
GYRO_GC_WIR+DPIPE_GYD	0.00	386.00	Gyro_01
MFAC_US_V2	386.00	716.00	WFT MFAC_01
GYRO_GC_WIR+DPIPE_GYD	716.00	761.00	Gyro_02
MWD	761.00	1635.00	WFT MWD_02
MWD	1635.00	5829.00	WFT MWD_03
MWD	5829.00	6416.00	WFT MWD_04
MWD	6416.00	16705.00	WFT MWD_05

Wellpath created using minimum curvature.

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (°/100US ft)	Comment
0.00	0.00	0.00	-0.00	0.00	0.00	-0.00	40.190700	-80.609256	0.00	
50.00	0.29	137.01	50.00	-0.12	-0.09	0.09	40.190700	-80.609255	0.58	
100.00	0.24	164.19	100.00	-0.35	-0.29	0.20	40.190700	-80.609255	0.27	
150.00	0.21	137.37	150.00	-0.54	-0.45	0.29	40.190699	-80.609255	0.22	
200.00	0.27	110.35	200.00	-0.71	-0.56	0.46	40.190699	-80.609254	0.25	
250.00	0.43	116.29	250.00	-0.94	-0.69	0.74	40.190699	-80.609253	0.33	
300.00	0.36	114.69	300.00	-1.21	-0.84	1.05	40.190698	-80.609252	0.14	
350.00	0.07	353.14	350.00	-1.31	-0.87	1.19	40.190698	-80.609252	0.80	
386.00	0.46	276.02	386.00	-1.21	-0.83	1.05	40.190698	-80.609252	1.25	Gyro Tie-In
444.00	0.07	255.12	443.99	-1.08	-0.82	0.78	40.190698	-80.609253	0.68	
535.00	0.80	348.26	534.99	-0.45	-0.21	0.60	40.190700	-80.609254	0.89	
625.00	2.02	338.61	624.96	1.74	1.88	-0.11	40.190706	-80.609256	1.38	
716.00	3.65	346.65	715.85	6.16	6.19	-1.36	40.190717	-80.609261	1.84	
761.00	4.82	340.81	760.73	9.43	9.37	-2.31	40.190726	-80.609264	2.77	Gyro SVY
899.00	6.13	322.65	898.10	22.42	20.71	-8.69	40.190757	-80.609287	1.56	
992.00	6.48	310.45	990.54	32.11	28.06	-15.70	40.190778	-80.609312	1.49	
1084.00	6.90	297.40	1081.92	41.32	33.97	-24.55	40.190794	-80.609343	1.71	
1174.00	7.52	279.02	1171.22	49.07	37.38	-35.17	40.190803	-80.609381	2.64	
1267.00	8.70	264.31	1263.30	55.04	37.64	-48.18	40.190804	-80.609428	2.56	
1360.00	8.13	242.11	1355.32	57.31	33.87	-61.00	40.190794	-80.609474	3.52	
1452.00	9.80	235.07	1446.20	55.92	26.34	-73.17	40.190774	-80.609517	2.17	
1545.00	7.90	220.36	1538.10	52.18	16.93	-83.80	40.190748	-80.609556	3.16	
1635.00	7.28	224.14	1627.31	47.79	8.13	-91.78	40.190724	-80.609584	0.88	
1743.00	5.96	238.25	1734.60	44.95	0.27	-101.31	40.190702	-80.609619	1.93	
1789.00	6.16	238.69	1780.34	44.49	-2.27	-105.45	40.190695	-80.609633	0.45	
1882.00	8.64	249.70	1872.56	44.76	-7.29	-116.27	40.190682	-80.609672	3.06	
1975.00	9.55	249.45	1964.39	46.24	-12.42	-130.04	40.190668	-80.609722	0.98	
2067.00	10.85	248.60	2054.94	47.71	-18.26	-145.25	40.190652	-80.609776	1.42	
2160.00	11.54	245.72	2146.17	48.75	-25.28	-161.88	40.190633	-80.609836	0.95	
2253.00	11.17	243.55	2237.35	49.02	-33.12	-178.42	40.190612	-80.609895	0.61	
2345.00	10.62	242.83	2327.69	48.83	-40.96	-193.95	40.190590	-80.609951	0.62	
2438.00	10.09	242.49	2419.17	48.50	-48.63	-208.79	40.190569	-80.610004	0.57	
2531.00	9.63	243.17	2510.80	48.22	-55.91	-222.96	40.190550	-80.610055	0.51	
2624.00	9.19	243.06	2602.55	48.04	-62.78	-236.52	40.190531	-80.610104	0.47	
2716.00	8.93	242.03	2693.40	47.72	-69.46	-249.38	40.190513	-80.610150	0.33	
2809.00	8.76	239.61	2785.29	46.97	-76.43	-261.86	40.190494	-80.610195	0.44	
2902.00	8.11	242.65	2877.29	46.32	-83.02	-273.80	40.190476	-80.610237	0.85	
2995.00	7.32	248.16	2969.45	46.64	-88.24	-285.13	40.190462	-80.610278	1.16	
3087.00	7.48	247.12	3060.68	47.43	-92.75	-296.08	40.190449	-80.610317	0.23	
3180.00	8.11	246.49	3152.82	48.08	-97.72	-307.68	40.190436	-80.610359	0.68	
3273.00	8.34	245.25	3244.86	48.56	-103.16	-319.82	40.190421	-80.610403	0.31	
3365.00	8.89	243.47	3335.83	48.68	-109.13	-332.24	40.190405	-80.610447	0.66	
3458.00	9.00	244.06	3427.69	48.67	-115.52	-345.21	40.190387	-80.610494	0.15	
3551.00	9.46	246.58	3519.49	49.07	-121.74	-358.76	40.190370	-80.610542	0.66	
3644.00	8.87	245.63	3611.30	49.66	-127.74	-372.30	40.190354	-80.610591	0.65	
3737.00	8.94	246.69	3703.18	50.25	-133.56	-385.47	40.190338	-80.610638	0.19	

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3D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (%/100US ft)	Comment
3829.00	9.88	249.29	3793.94	51.37	-139.18	-399.42	40.190323	-80.610688	1.12	
3922.00	9.34	247.93	3885.64	52.67	-144.83	-413.88	40.190308	-80.610740	0.63	
4015.00	8.63	246.39	3977.50	53.52	-150.46	-427.26	40.190292	-80.610788	0.81	
4107.00	9.26	247.74	4068.38	54.34	-156.03	-440.44	40.190277	-80.610835	0.72	
4200.00	10.49	250.43	4160.00	55.83	-161.70	-455.34	40.190262	-80.610889	1.41	
4293.00	10.12	248.90	4251.50	57.53	-167.48	-470.94	40.190246	-80.610945	0.49	
4386.00	9.57	246.62	4343.13	58.63	-173.49	-485.66	40.190230	-80.610997	0.72	
4479.00	9.35	244.41	4434.86	59.09	-179.82	-499.57	40.190213	-80.611047	0.46	
4571.00	9.20	241.31	4525.66	58.85	-186.58	-512.76	40.190194	-80.611095	0.57	
4664.00	8.89	242.90	4617.51	58.41	-193.42	-525.68	40.190176	-80.611141	0.43	
4757.00	8.86	246.75	4709.39	58.66	-199.52	-538.66	40.190159	-80.611188	0.64	
4849.00	8.77	244.68	4800.31	59.13	-205.32	-551.51	40.190143	-80.611234	0.36	
4942.00	8.82	242.94	4892.21	59.13	-211.59	-564.27	40.190126	-80.611280	0.29	
5035.00	8.59	242.85	4984.14	58.90	-218.01	-576.80	40.190109	-80.611325	0.25	
5128.00	7.71	244.32	5076.20	58.84	-223.88	-588.60	40.190093	-80.611367	0.97	
5174.00	8.03	264.12	5121.78	59.98	-225.55	-594.58	40.190088	-80.611388	5.90	
5221.00	9.67	283.42	5168.23	63.64	-224.97	-601.68	40.190090	-80.611414	7.17	
5267.00	12.04	296.29	5213.41	69.91	-221.94	-609.75	40.190098	-80.611443	7.34	
5313.00	14.87	303.73	5258.14	78.82	-216.54	-618.96	40.190113	-80.611475	7.20	
5360.00	17.20	311.39	5303.32	90.47	-208.59	-629.19	40.190135	-80.611512	6.69	
5406.00	19.96	316.22	5346.92	104.24	-198.43	-639.73	40.190163	-80.611550	6.86	
5453.00	23.41	319.61	5390.59	120.94	-185.52	-651.33	40.190199	-80.611591	7.81	
5499.00	26.06	321.61	5432.36	139.68	-170.64	-663.53	40.190240	-80.611634	6.04	
5545.00	28.05	323.97	5473.33	160.22	-153.97	-676.17	40.190286	-80.611679	4.91	
5592.00	29.49	326.97	5514.53	182.59	-135.33	-688.98	40.190337	-80.611725	4.34	
5647.00	31.18	332.38	5562.00	210.28	-111.36	-702.96	40.190403	-80.611775	5.84	
5693.00	32.50	336.98	5601.09	234.52	-89.43	-713.31	40.190463	-80.611811	6.00	
5736.00	35.26	337.42	5636.78	258.45	-67.33	-722.60	40.190524	-80.611844	6.44	
5783.00	38.73	336.64	5674.32	286.68	-41.30	-733.64	40.190596	-80.611883	7.45	
5829.00	41.38	335.53	5709.52	316.26	-14.25	-745.65	40.190670	-80.611926	5.97	
5863.00	43.20	336.57	5734.67	339.12	6.66	-754.93	40.190728	-80.611959	5.73	
5909.00	48.65	335.01	5766.66	372.13	36.78	-768.50	40.190811	-80.612007	12.10	
5955.00	54.04	331.95	5795.39	408.03	68.89	-784.56	40.190899	-80.612064	12.81	
6002.00	58.53	331.83	5821.47	447.09	103.36	-802.97	40.190994	-80.612129	9.56	
6048.00	62.64	333.24	5844.06	487.14	138.91	-821.44	40.191092	-80.612195	9.32	
6095.00	67.86	334.23	5863.73	529.81	177.18	-840.32	40.191197	-80.612262	11.27	
6141.00	73.23	333.79	5879.04	573.17	216.15	-859.32	40.191304	-80.612329	11.71	
6187.00	77.12	331.32	5890.81	617.61	255.60	-879.82	40.191413	-80.612402	9.92	
6234.00	79.02	330.26	5900.53	663.53	295.73	-902.26	40.191523	-80.612482	4.61	
6280.00	80.27	330.00	5908.79	708.69	334.97	-924.79	40.191631	-80.612562	2.77	
6323.00	82.08	331.39	5915.39	751.11	372.02	-945.59	40.191733	-80.612636	5.28	
6370.00	85.55	334.34	5920.46	797.82	413.60	-966.89	40.191848	-80.612711	9.67	
6416.00	88.52	334.88	5922.83	843.75	455.09	-986.59	40.191962	-80.612781	6.56	
6475.00	89.45	334.54	5923.88	902.73	508.43	-1011.79	40.192109	-80.612871	1.68	
6568.00	90.00	336.23	5924.33	995.69	592.97	-1050.52	40.192341	-80.613008	1.91	
6658.00	90.31	336.63	5924.08	1085.60	675.46	-1086.51	40.192568	-80.613136	0.56	
6751.00	91.35	337.57	5922.74	1178.43	761.12	-1122.69	40.192804	-80.613264	1.51	
6843.00	91.05	338.35	5920.81	1270.17	846.38	-1157.21	40.193039	-80.613386	0.91	
6936.00	91.11	337.36	5919.06	1362.92	932.50	-1192.26	40.193275	-80.613510	1.07	
7026.00	91.11	336.72	5917.31	1452.76	1015.36	-1227.36	40.193503	-80.613635	0.71	
7119.00	90.99	335.92	5915.61	1545.66	1100.51	-1264.70	40.193738	-80.613767	0.87	
7211.00	90.92	335.78	5914.07	1637.59	1184.45	-1302.34	40.193969	-80.613901	0.17	
7304.00	91.05	335.71	5912.48	1730.52	1269.23	-1340.54	40.194202	-80.614036	0.16	
7397.00	91.17	336.64	5910.67	1823.42	1354.28	-1378.10	40.194436	-80.614169	1.01	
7490.00	91.36	336.97	5908.62	1916.27	1439.75	-1414.72	40.194671	-80.614299	0.41	
7582.00	91.29	337.32	5906.49	2008.09	1524.50	-1450.44	40.194904	-80.614426	0.39	
7675.00	91.05	337.49	5904.59	2100.89	1610.34	-1486.16	40.195140	-80.614552	0.32	
7768.00	90.80	336.47	5903.09	2193.74	1695.93	-1522.53	40.195376	-80.614681	1.13	
7861.00	91.11	335.96	5901.54	2286.64	1781.02	-1560.03	40.195610	-80.614814	0.64	

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5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (%/100US ft)	Comment
7953.00	90.86	336.14	5899.96	2378.56	1865.08	-1597.37	40.195841	-80.614946	0.33	
8046.00	90.55	336.14	5898.82	2471.47	1950.13	-1634.98	40.196075	-80.615080	0.33	
8139.00	90.93	336.14	5897.62	2564.39	2035.17	-1672.60	40.196309	-80.615213	0.41	
8232.00	90.86	337.72	5896.16	2657.24	2120.72	-1709.04	40.196544	-80.615342	1.70	
8324.00	90.99	338.59	5894.68	2748.96	2206.10	-1743.27	40.196779	-80.615464	0.96	
8417.00	90.55	339.65	5893.43	2841.55	2292.99	-1776.41	40.197018	-80.615581	1.23	
8510.00	90.68	340.46	5892.43	2934.00	2380.40	-1808.13	40.197259	-80.615693	0.88	
8603.00	90.43	339.56	5891.53	3026.45	2467.79	-1839.92	40.197499	-80.615806	1.00	
8695.00	90.49	338.69	5890.79	3118.05	2553.75	-1872.70	40.197736	-80.615922	0.95	
8785.00	90.80	338.84	5889.78	3207.71	2637.64	-1905.30	40.197966	-80.616037	0.38	
8878.00	90.43	337.66	5888.78	3300.42	2724.01	-1939.76	40.198204	-80.616159	1.33	
8971.00	90.68	336.47	5887.88	3393.26	2809.65	-1975.99	40.198439	-80.616288	1.31	
9063.00	90.68	336.86	5886.79	3485.14	2894.12	-2012.43	40.198672	-80.616417	0.42	
9156.00	90.99	337.53	5885.43	3572.97	2979.84	-2048.48	40.198908	-80.616545	0.79	
9249.00	90.80	337.86	5883.98	3670.75	3065.87	-2083.77	40.199144	-80.616670	0.41	
9342.00	90.74	338.06	5882.73	3763.50	3152.07	-2118.66	40.199381	-80.616793	0.22	
9435.00	90.86	338.34	5881.43	3856.21	3238.41	-2153.20	40.199619	-80.616916	0.33	
9527.00	90.92	338.27	5880.00	3947.92	3323.88	-2187.20	40.199854	-80.617036	0.10	
9620.00	90.74	337.78	5878.65	4040.66	3410.11	-2222.00	40.200091	-80.617159	0.56	
9713.00	90.99	337.07	5877.25	4133.46	3495.98	-2257.70	40.200327	-80.617286	0.81	
9806.00	90.86	337.56	5875.75	4226.28	3581.77	-2293.56	40.200564	-80.617413	0.55	
9898.00	91.11	336.87	5874.17	4318.10	3666.58	-2329.18	40.200797	-80.617539	0.80	
9991.00	90.62	335.95	5872.76	4410.99	3751.80	-2366.40	40.201031	-80.617671	1.12	
10084.00	90.80	335.72	5871.61	4503.93	3836.64	-2404.46	40.201265	-80.617806	0.31	
10176.00	90.55	336.17	5870.53	4595.86	3920.64	-2441.96	40.201496	-80.617939	0.56	
10269.00	90.71	336.71	5869.50	4688.76	4005.89	-2479.13	40.201730	-80.618071	0.61	
10362.00	90.62	337.15	5868.43	4781.61	4091.44	-2515.57	40.201966	-80.618200	0.48	
10454.00	90.62	336.84	5867.43	4873.46	4176.12	-2551.53	40.202199	-80.618328	0.34	
10547.00	90.55	338.24	5866.48	4966.26	4262.06	-2587.05	40.202435	-80.618454	1.51	
10640.00	90.55	338.93	5865.59	5058.93	4348.64	-2621.01	40.202673	-80.618574	0.74	
10733.00	90.62	338.85	5864.64	5151.56	4435.39	-2654.50	40.202912	-80.618692	0.11	
10825.00	90.43	340.38	5863.79	5243.09	4521.62	-2686.54	40.203149	-80.618806	1.68	
10918.00	90.74	341.76	5862.85	5335.33	4609.59	-2716.71	40.203391	-80.618913	1.52	
11011.00	90.43	342.89	5861.90	5427.30	4698.19	-2744.95	40.203635	-80.619012	1.26	
11104.00	90.49	341.18	5861.15	5519.34	4786.65	-2773.63	40.203878	-80.619114	1.84	
11196.00	90.92	340.75	5860.02	5610.62	4873.61	-2803.63	40.204117	-80.619220	0.66	
11289.00	90.86	340.93	5858.57	5702.91	4961.45	-2834.15	40.204359	-80.619328	0.20	
11382.00	90.86	339.26	5857.18	5795.34	5048.88	-2865.81	40.204599	-80.619440	1.80	
11475.00	90.62	336.98	5855.98	5888.06	5135.17	-2900.46	40.204836	-80.619563	2.46	
11568.00	91.11	334.66	5854.57	5980.99	5219.99	-2938.55	40.205070	-80.619698	2.55	
11660.00	91.32	333.89	5852.62	6072.96	5302.85	-2978.47	40.205298	-80.619839	0.87	
11753.00	91.23	334.55	5850.55	6165.94	5386.58	-3018.91	40.205528	-80.619983	0.72	
11843.00	91.41	334.60	5848.48	6255.90	5467.84	-3057.54	40.205752	-80.620120	0.21	
11936.00	91.54	334.78	5846.08	6348.86	5551.88	-3097.28	40.205983	-80.620261	0.24	
12026.00	91.11	335.37	5844.00	6438.82	5633.48	-3135.20	40.206207	-80.620396	0.81	
12118.00	91.17	336.58	5842.17	6530.73	5717.49	-3172.65	40.206439	-80.620528	1.32	
12208.00	91.05	338.21	5840.43	6620.53	5800.56	-3207.24	40.206667	-80.620651	1.82	
12301.00	90.80	338.50	5838.93	6713.23	5886.99	-3241.54	40.206905	-80.620773	0.41	
12393.00	90.93	339.16	5837.54	6804.87	5972.77	-3274.76	40.207141	-80.620890	0.73	
12486.00	90.74	339.24	5836.18	6897.45	6059.70	-3307.78	40.207380	-80.621007	0.22	
12579.00	90.62	340.17	5835.08	6989.95	6146.92	-3340.03	40.207620	-80.621121	1.01	
12672.00	90.12	339.53	5834.48	7082.43	6234.22	-3372.07	40.207860	-80.621235	0.87	
12764.00	90.37	337.93	5834.09	7174.09	6319.95	-3405.44	40.208096	-80.621353	1.76	
12857.00	90.62	337.97	5833.28	7266.84	6406.15	-3440.35	40.208333	-80.621477	0.27	
12950.00	90.62	336.17	5832.28	7359.68	6491.79	-3476.58	40.208568	-80.621605	1.94	
13043.00	90.68	335.44	5831.22	7452.62	6576.62	-3514.70	40.208802	-80.621740	0.79	
13136.00	90.43	335.03	5830.32	7545.59	6661.06	-3553.65	40.209034	-80.621879	0.52	
13228.00	90.92	335.20	5829.24	7637.56	6744.51	-3592.36	40.209264	-80.622016	0.56	
13321.00	90.79	337.95	5827.85	7730.43	6829.83	-3629.33	40.209499	-80.622147	2.96	

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3D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Latitude (° ' ")	Longitude (° ' ")	DLS (%/100US ft)	Comment
13414.00	90.49	339.59	5826.81	7823.07	6916.51	-3663.00	40.209737	-80.622266	1.79	
13507.00	90.25	340.39	5826.21	7915.53	7003.89	-3694.82	40.209977	-80.622379	0.90	
13599.00	90.55	339.95	5825.57	8006.96	7090.43	-3726.03	40.210215	-80.622490	0.58	
13692.00	90.92	340.51	5824.37	8099.37	7177.94	-3757.48	40.210456	-80.622601	0.72	
13785.00	91.11	341.12	5822.73	8191.66	7265.76	-3788.04	40.210697	-80.622709	0.69	
13878.00	91.23	339.43	5820.83	8284.05	7353.29	-3819.42	40.210938	-80.622820	1.82	
13970.00	90.62	337.78	5819.34	8375.71	7438.93	-3852.98	40.211174	-80.622939	1.91	
14063.00	90.79	336.71	5818.20	8468.54	7524.69	-3888.94	40.211410	-80.623066	1.16	
14156.00	90.71	335.48	5816.98	8561.45	7609.70	-3926.63	40.211644	-80.623200	1.33	
14245.00	90.80	336.12	5815.81	8650.39	7690.87	-3963.11	40.211867	-80.623330	0.73	
14335.00	90.71	336.36	5814.62	8740.30	7773.23	-3999.36	40.212093	-80.623458	0.28	
14428.00	91.11	336.05	5813.14	8833.21	7858.32	-4036.88	40.212328	-80.623591	0.54	
14521.00	90.88	337.24	5811.53	8926.08	7943.68	-4073.74	40.212562	-80.623722	1.30	
14610.00	91.11	337.97	5809.98	9014.87	8025.96	-4107.65	40.212789	-80.623842	0.86	
14703.00	90.49	339.28	5808.68	9107.53	8112.55	-4141.54	40.213027	-80.623962	1.56	
14796.00	90.92	339.13	5807.54	9200.12	8199.49	-4174.55	40.213266	-80.624079	0.49	
14889.00	90.99	337.99	5805.99	9292.78	8286.04	-4208.54	40.213504	-80.624200	1.23	
14981.00	90.92	336.27	5804.46	9384.61	8370.79	-4244.29	40.213737	-80.624326	1.87	
15074.00	90.37	336.47	5803.41	9477.51	8455.99	-4281.56	40.213972	-80.624459	0.63	
15167.00	90.80	335.17	5802.46	9570.45	8540.82	-4319.65	40.214205	-80.624594	1.47	
15260.00	90.55	336.10	5801.36	9663.39	8625.53	-4358.02	40.214438	-80.624730	1.04	
15349.00	90.62	336.81	5800.46	9752.29	8707.12	-4393.57	40.214663	-80.624856	0.80	
15442.00	90.62	336.44	5799.45	9845.18	8792.48	-4430.46	40.214897	-80.624987	0.40	
15535.00	90.68	336.84	5798.39	9938.06	8877.85	-4467.34	40.215132	-80.625118	0.43	
15628.00	90.49	337.47	5797.45	10030.89	8963.55	-4503.44	40.215368	-80.625246	0.71	
15721.00	90.68	337.83	5796.50	10123.68	9049.56	-4538.80	40.215605	-80.625371	0.44	
15813.00	90.43	337.84	5795.60	10215.45	9134.76	-4573.51	40.215839	-80.625494	0.27	
15906.00	90.31	337.92	5795.00	10308.21	9220.91	-4608.53	40.216076	-80.625618	0.16	
15996.00	90.35	337.06	5794.49	10398.03	9304.05	-4642.98	40.216305	-80.625740	0.96	
16088.00	90.49	337.08	5793.81	10489.88	9388.78	-4678.83	40.216538	-80.625867	0.15	
16181.00	90.43	337.17	5793.06	10582.72	9474.46	-4714.98	40.216773	-80.625996	0.12	
16274.00	90.55	337.64	5792.27	10675.53	9560.32	-4750.71	40.217010	-80.626122	0.52	
16367.00	90.43	337.53	5791.47	10768.33	9646.29	-4786.17	40.217246	-80.626248	0.18	
16460.00	89.94	338.64	5791.17	10861.07	9732.57	-4820.88	40.217483	-80.626371	1.30	
16552.00	90.19	339.17	5791.07	10952.70	9818.40	-4853.99	40.217719	-80.626488	0.64	
16645.00	89.75	339.21	5791.12	11045.29	9905.33	-4887.03	40.217959	-80.626605	0.48	
16682.00	89.88	339.62	5791.24	11082.12	9939.97	-4900.04	40.218054	-80.626652	1.16	Last WFT SVY
16705.00	89.88	339.62	5791.29	11105.00	9961.53	-4908.05	40.218113	-80.626680	0.00	PTB

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