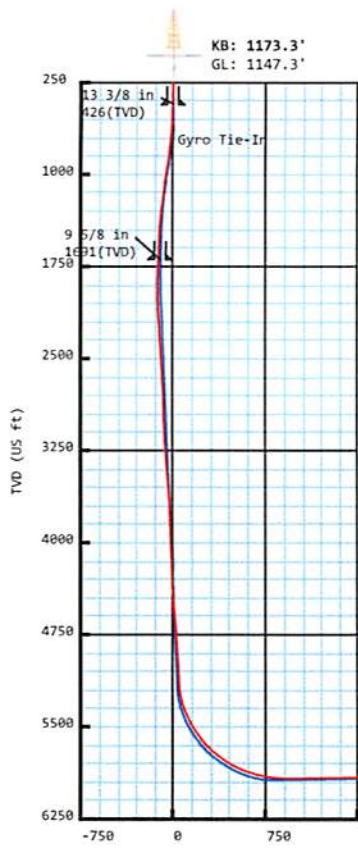




Mike Ryniawec BRK 201H  
 Brooke Co, WV  
 SDC 40  
 Plan vs Actual



Weatherford®



Plan Data for Mike Ryniawec BRK 201H

DogLeg Severity Unit: °/100.00ft

MD (USft)	Inc (°)	Az (°)	TVD (USft)	+N/-S (USft)	+E/-W (USft)	VSec (USft)	DLS (DLSU)	Toolface (°)	Comments
0.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	0.0	
26.00	0.00	0.00	26.00	0.00	0.00	0.00	0.00	0.0	KB Offset
470.00	0.00	0.00	470.00	0.00	0.00	0.00	0.00	0.0	Nudge KOP
970.00	10.00	160.00	967.47	-40.90	14.89	-42.50	2.00	160.0	Turn
1541.62	10.00	230.00	1532.27	-119.70	-6.23	-97.68	2.00	124.6	Hold
1681.47	10.00	230.00	1670.00	-135.31	-24.83	-100.87	0.00	0.0	Build/Turn
2095.49	17.50	245.38	2072.00	-184.43	-109.11	-97.13	2.00	33.6	Hold
5339.86	17.50	245.38	5166.21	-590.87	-996.02	35.62	0.00	0.0	Curve KOP 7° DLS
6324.32	70.00	328.55	5893.92	-211.01	-1424.92	586.27	7.00	89.8	Build/Turn 9° DLS
6566.48	90.86	334.99	5934.00	-1.71	-1536.83	822.94	9.00	17.6	Landing Point
16617.12	90.86	334.99	5783.00	9105.20	-5786.17	10788.16	0.00	0.0	PBHL Mike R201H

Plan Point Information:  
 Position offsets from Slot centre  
 Name TVD +N/-S +E/-W Northing Easting Lat Long  
 (USft) (USft) (USft) (USft) (USft) (°) (°)

LP Mike R201H 5934.00 -166.17 -1460.16 14596246.99 1748066.28 40.190253 -80.614536  
 PBHL Mike R201H 5783.00 9105.20 -5786.17 14605518.36 1743740.27 40.215763 -80.629887

Target Set Information:  
 Name: Mike Ryniawec BRK 201H  
 Position offsets from Slot centre  
 Name TVD +N/-S +E/-W Northing Easting Lat Long  
 (USft) (USft) (USft) (USft) (USft) (°) (°)

Plan Data for Mike Ryniawec BRK 201H

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

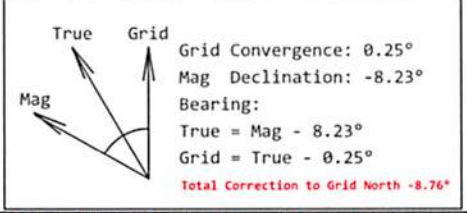
Site: Mike Ryniawec Pad  
 Unit: USFeet TVD Reference:  
 Company Name: SOUTHWESTERN ENERGY  
 Position: Northing: 14596413.14USft Latitude: 40.190691°  
 Easting: 1749526.49USft Longitude: -80.609305°  
 North Reference: Grid Grid Convergence: 0.25°  
 Elevation Above VRD: 1173.00USft

Slot: Mike Ryniawec BRK 201H  
 Position:  
 Offset is from Site centre  
 +N/-S: 0.02USft Northing: 14596413.16USft Latitude: 40.190691°  
 +E/-W: -0.05USft Easting: 1749526.44USft Longitude: -80.609305°  
 Elevation Above VRD: 1147.30USft

Well: Mike Ryniawec BRK 201H  
 Type: Main-Well  
 File Number:

Plan Folder: P1 Plan: P1:V2  
 Vertical Section: Position offset of origin from Slot centre:  
 +N/-S: 0.00USft Azimuth: 327.56°  
 +E/-W: 0.00USft

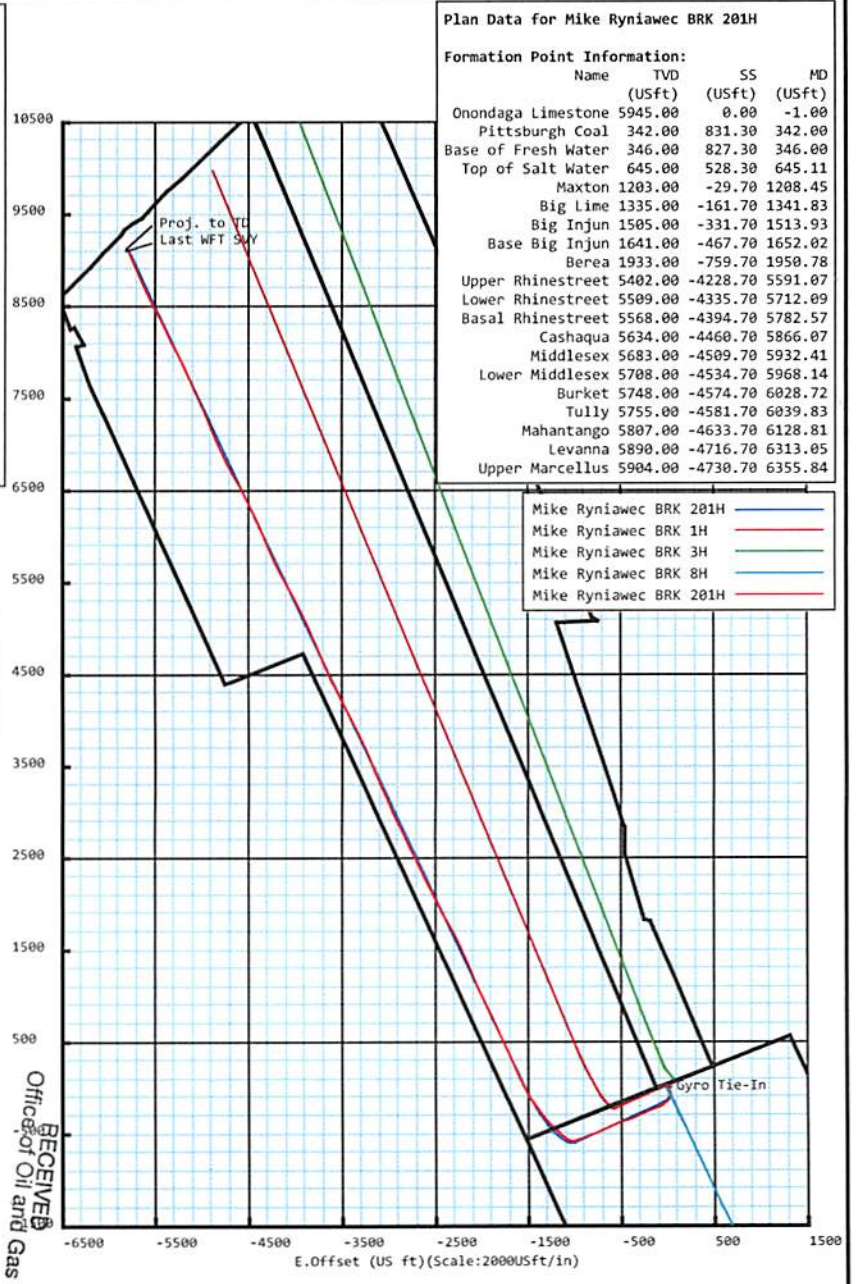
Magnetic Parameters:  
 Model: Field Strength: Declination: Dip: Date:  
 HDGM 52603(nT) -8.23° 67.62° 2018-02-12



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Plan Data for Mike Ryniawec BRK 201H

Formation Point Information:  
 Name TVD SS MD  
 (USft) (USft) (USft)

Onondaga Limestone	5945.00	0.00	-1.00
Pittsburgh Coal	342.00	831.30	342.00
Base of Fresh Water	346.00	827.30	346.00
Top of Salt Water	645.00	528.30	645.11
Maxton	1203.00	-29.70	1208.45
Big Lime	1335.00	-161.70	1341.83
Big Injun	1505.00	-331.70	1513.93
Base Big Injun	1641.00	-467.70	1652.02
Berea	1933.00	-759.70	1950.78
Upper Rhinestreet	5402.00	-4228.70	5591.07
Lower Rhinestreet	5509.00	-4335.70	5712.09
Basal Rhinestreet	5568.00	-4394.70	5782.57
Cashaqua	5634.00	-4460.70	5866.07
Middlesex	5683.00	-4509.70	5932.41
Lower Middlesex	5708.00	-4534.70	5968.14
Burket	5748.00	-4574.70	6028.72
Tully	5755.00	-4581.70	6039.83
Mahantango	5807.00	-4633.70	6128.81
Levanna	5890.00	-4716.70	6313.05
Upper Marcellus	5904.00	-4730.70	6355.84

Drawing By: Gary Rhodes Date: 14 February 2018  
 Office Name: MidCon DS  
 Address: 7725 W. Reno Ave, Ste. #220  
 Oklahoma City, OK 73127  
 Phone: +1.405.720.4257

## Mike Ryniawec BRK 201H

<b>Field Name:</b>	<b>Map Units:</b> US ft	<b>Company Name:</b> SOUTHWESTERN ENERGY	
SOUTHWESTER N_BROOKE CO, WV UTM NAD 83 (17N)	<b>Vertical Reference Datum (VRD):</b>	<b>Projected Coordinate System:</b> NAD83 / UTM zone 17N	
	<b>Comment:</b>		
	<b>Units:</b> US ft	<b>North Reference:</b> Grid	<b>Convergence Angle:</b> 0.25
Mike Ryniawec Pad	<b>Position:</b>	<b>Northing:</b> 14596413.14 US ft	<b>Latitude:</b> 40.190691
		<b>Easting:</b> 1749526.49 US ft	<b>Longitude:</b> -80.609305
	<b>Elevation above Field Reference:</b> 1173.00 US ft	<b>Comment:</b>	
Mike Ryniawec BRK 201H	<b>Position (Relative to Site Centre)</b>		
	<b>+N/-S:</b> 0.02 US ft	<b>Northing:</b> 14596413.16 US ft	<b>Latitude:</b> 40.190691
	<b>+E/-W:</b> -0.05 US ft	<b>Easting:</b> 1749526.44 US ft	<b>Longitude:</b> -80.609305
<b>Elevation above Field Reference:</b> 1147.30 US ft	<b>Comment:</b>		
Mike Ryniawec BRK 201H	<b>Type:</b> Main well	<b>UWI:</b>	
	<b>File Number:</b>	<b>Comment:</b>	
	<b>Closure Distance:</b> 10808.7 US ft	<b>Closure Azimuth:</b> 327.52°	
<b>Vertical Section: Position of Origin (Relative to Slot centre)</b>	<b>+N/-S:</b> 0.00 US ft	<b>+E/-W:</b> 0.00 US ft	<b>Az:</b> 327.56°

<b>Drill floor: Survey Name:</b> Definitive Survey			
<b>Rig Height (Drill Floor):</b> 26.00 US ft	<b>Elevation above Field Reference:</b> 1173.30 US ft	<b>Inclination:</b> 0.00°	<b>Azimuth:</b> 0.00°

<b>Survey Name:</b> Definitive Survey				
<b>Date:</b> 09/Feb/2018	<b>Survey Tool:</b> See Survey Tool Ranges below.	<b>Comment:</b>	<b>Company:</b>	
<b>Magnetic Model:</b>				
<b>Model Name:</b> HDGM	<b>Date:</b> 12/Feb/2018	<b>Field Strength:</b> 52603.0nT	<b>Declination:</b> -8.23°	<b>Dip:</b> 67.62°

<b>Tie Point:</b>					
<b>MD:</b> 0.00 US ft	<b>Inclination:</b> 0.00°	<b>Azimuth:</b> 0.00°	<b>TVD:</b> -0.00 US ft	<b>North Offset:</b> 0.00 US ft	<b>East Offset:</b> 0.00 US ft

Survey Tool Ranges:			
Name	Start MD(usft)	End MD(usft)	Source Survey
GYRO_GC_WIR+DPIPE_GYD	0.00	270.00	Gyro_01
GYRO_GC_WIR+DPIPE_GYD	270.00	750.00	Gyro_02
MWD	750.00	1635.00	WFT MWD_01
MWD	1635.00	5677.00	WFT MWD_02
MWD	5677.00	16600.00	WFT MWD_03

Wellpath created using minimum curvature.

## 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
0.00	0.00	0.00	-0.00	0.00	0.00	0.00	40.190691	-80.609305	0.00	
50.00	0.08	202.31	50.00	-0.02	-0.03	-0.01	40.190691	-80.609305	0.16	
100.00	0.15	54.77	100.00	-0.04	-0.03	0.03	40.190691	-80.609305	0.44	
150.00	0.36	66.69	150.00	-0.06	0.07	0.22	40.190692	-80.609304	0.43	
210.00	0.29	76.80	210.00	-0.14	0.18	0.55	40.190692	-80.609303	0.15	
270.00	0.62	99.90	270.00	-0.41	0.16	1.01	40.190692	-80.609301	0.62	
299.00	0.95	123.66	298.99	-0.73	0.00	1.37	40.190691	-80.609300	1.58	
350.00	1.09	129.22	349.99	-1.58	-0.54	2.10	40.190690	-80.609297	0.34	
385.00	1.32	126.00	384.98	-2.27	-0.99	2.68	40.190689	-80.609295	0.68	
425.00	1.36	136.41	424.97	-3.17	-1.60	3.38	40.190687	-80.609293	0.62	
475.00	2.08	161.13	474.94	-4.63	-2.89	4.08	40.190683	-80.609290	2.04	
515.00	2.37	166.18	514.91	-6.12	-4.38	4.51	40.190679	-80.609289	0.87	
566.00	3.54	177.23	565.85	-8.49	-6.98	4.84	40.190672	-80.609287	2.54	
610.00	4.19	175.18	609.75	-11.09	-9.94	5.04	40.190664	-80.609287	1.51	
658.00	4.89	175.77	657.60	-14.45	-13.72	5.34	40.190654	-80.609286	1.46	
700.00	5.28	172.48	699.43	-17.78	-17.42	5.73	40.190643	-80.609284	1.16	
750.00	5.67	167.42	749.20	-22.19	-22.12	6.57	40.190631	-80.609282	1.24	Gyro Tie-In
900.00	7.95	151.93	898.15	-39.50	-38.50	13.06	40.190586	-80.609259	1.94	
993.00	9.61	158.83	990.06	-53.53	-51.42	18.89	40.190550	-80.609238	2.11	
1086.00	9.04	176.37	1081.85	-67.55	-65.95	22.16	40.190510	-80.609226	3.10	
1179.00	10.02	185.48	1173.57	-80.33	-81.30	21.85	40.190468	-80.609228	1.93	
1271.00	11.04	194.74	1264.02	-92.64	-97.79	18.84	40.190423	-80.609239	2.14	
1364.00	10.58	206.53	1355.38	-103.09	-114.04	12.76	40.190378	-80.609261	2.42	
1457.00	10.97	220.16	1446.76	-110.14	-128.44	3.24	40.190339	-80.609295	2.77	
1549.00	11.15	228.97	1537.06	-114.09	-140.97	-9.12	40.190304	-80.609340	1.85	
1635.00	11.28	229.17	1621.41	-116.55	-151.93	-21.75	40.190274	-80.609385	0.16	
1795.00	11.03	226.51	1778.39	-121.77	-172.70	-44.70	40.190218	-80.609467	0.36	
1888.00	10.62	229.01	1869.74	-124.75	-184.44	-57.62	40.190186	-80.609514	0.67	
1981.00	11.19	242.05	1961.07	-125.32	-194.29	-72.06	40.190159	-80.609566	2.72	
2073.00	13.72	246.17	2050.90	-122.99	-202.89	-89.93	40.190135	-80.609630	2.91	
2166.00	17.39	247.40	2140.48	-118.96	-212.69	-112.86	40.190109	-80.609712	3.96	
2259.00	19.60	248.14	2228.67	-113.72	-223.84	-140.17	40.190078	-80.609810	2.39	
2351.00	20.13	247.72	2315.20	-108.09	-235.58	-169.14	40.190047	-80.609914	0.60	
2444.00	20.57	245.82	2402.39	-102.92	-248.34	-198.85	40.190012	-80.610021	0.85	
2537.00	20.13	245.73	2489.59	-98.30	-261.61	-228.35	40.189976	-80.610126	0.47	
2630.00	19.21	247.08	2577.16	-93.50	-274.15	-257.03	40.189942	-80.610229	1.10	
2722.00	19.02	246.50	2664.09	-88.66	-286.02	-284.72	40.189909	-80.610329	0.29	
2815.00	17.25	246.59	2752.46	-84.14	-297.54	-311.27	40.189878	-80.610424	1.90	
2908.00	16.59	242.66	2841.44	-80.80	-309.12	-335.72	40.189847	-80.610512	1.42	
3001.00	16.12	242.62	2930.68	-78.48	-321.16	-358.98	40.189814	-80.610595	0.51	
3093.00	15.54	249.56	3019.20	-74.79	-331.34	-381.87	40.189786	-80.610677	2.15	
3186.00	14.92	251.21	3108.93	-69.38	-339.54	-404.88	40.189764	-80.610760	0.81	
3279.00	14.76	250.59	3198.83	-63.88	-347.34	-427.38	40.189743	-80.610840	0.24	
3372.00	15.99	252.52	3288.50	-57.90	-355.12	-450.78	40.189722	-80.610924	1.43	
3464.00	17.75	252.69	3376.54	-50.97	-363.10	-476.25	40.189700	-80.611016	1.91	
3557.00	18.96	251.44	3464.80	-43.64	-372.13	-504.11	40.189676	-80.611116	1.37	
3650.00	18.28	251.15	3552.93	-36.59	-381.65	-532.24	40.189650	-80.611216	0.74	
3743.00	17.60	248.22	3641.41	-30.56	-391.58	-559.10	40.189623	-80.611313	1.21	
3835.00	17.42	245.52	3729.15	-26.08	-402.45	-584.55	40.189593	-80.611404	0.90	
3928.00	17.19	243.93	3817.94	-22.63	-414.25	-609.56	40.189561	-80.611494	0.57	
4021.00	16.66	242.83	3906.92	-19.88	-426.38	-633.77	40.189528	-80.611581	0.67	
4114.00	16.59	243.52	3996.03	-17.28	-438.39	-657.51	40.189495	-80.611666	0.23	
4206.00	16.85	246.23	4084.14	-13.91	-449.62	-681.47	40.189465	-80.611752	0.89	
4299.00	16.83	245.54	4173.15	-10.01	-460.63	-706.06	40.189435	-80.611840	0.22	
4392.00	17.61	244.74	4261.98	-6.38	-472.20	-731.04	40.189404	-80.611930	0.88	
4485.00	17.00	246.67	4350.77	-2.47	-483.59	-756.25	40.189373	-80.612020	0.90	
4578.00	18.03	250.40	4439.46	2.88	-493.80	-782.29	40.189345	-80.612114	1.64	
4670.00	18.88	250.40	4526.73	9.36	-503.57	-809.72	40.189318	-80.612212	0.92	
4763.00	18.72	251.19	4614.77	16.22	-513.43	-838.03	40.189292	-80.612313	0.32	

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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
4856.00	18.59	250.09	4702.88	22.95	-523.29	-866.09	40.189265	-80.612414	0.40	
4949.00	18.69	249.50	4791.01	29.25	-533.56	-893.99	40.189237	-80.612514	0.23	
5041.00	18.29	248.40	4878.26	35.01	-544.04	-921.22	40.189209	-80.612612	0.58	
5134.00	17.99	248.27	4966.63	40.43	-554.73	-948.13	40.189180	-80.612708	0.33	
5227.00	16.90	247.02	5055.36	45.32	-565.32	-973.91	40.189151	-80.612801	1.24	
5320.00	16.47	247.54	5144.44	49.82	-575.63	-998.54	40.189123	-80.612889	0.49	
5366.00	17.24	259.85	5188.48	53.54	-579.33	-1011.28	40.189113	-80.612935	7.92	
5412.00	18.25	269.73	5232.30	59.96	-580.56	-1025.20	40.189109	-80.612985	6.90	
5459.00	19.83	278.94	5276.74	69.15	-579.36	-1040.44	40.189113	-80.613039	7.21	
5505.00	21.99	287.99	5319.71	80.95	-575.49	-1056.34	40.189124	-80.613096	8.43	
5551.00	24.59	295.89	5361.97	95.75	-568.64	-1073.15	40.189143	-80.613156	8.82	
5595.00	26.36	301.52	5401.70	112.32	-559.54	-1089.72	40.189168	-80.613215	6.81	
5641.00	27.62	307.27	5442.70	131.50	-547.74	-1106.91	40.189201	-80.613277	6.30	
5677.00	28.95	310.75	5474.40	147.67	-537.00	-1120.15	40.189230	-80.613324	5.88	
5737.00	32.68	313.18	5525.92	177.27	-516.43	-1142.98	40.189287	-80.613405	6.55	
5783.00	35.53	313.97	5564.01	202.30	-498.64	-1161.65	40.189336	-80.613472	6.27	
5829.00	38.76	314.90	5600.67	229.35	-479.19	-1181.48	40.189390	-80.613543	7.13	
5876.00	43.31	314.25	5636.11	259.40	-457.55	-1203.46	40.189449	-80.613621	9.72	
5922.00	46.60	313.72	5668.66	290.99	-434.99	-1226.84	40.189512	-80.613704	7.20	
5969.00	49.13	314.35	5700.19	324.88	-410.76	-1251.90	40.189578	-80.613794	5.47	
6015.00	51.55	315.77	5729.55	359.45	-385.69	-1276.90	40.189648	-80.613883	5.77	
6061.00	53.75	317.67	5757.45	395.36	-359.06	-1301.96	40.189721	-80.613972	5.80	
6108.00	55.85	320.46	5784.55	433.34	-330.05	-1327.11	40.189801	-80.614062	6.59	
6154.00	60.12	323.14	5808.93	472.13	-299.40	-1351.20	40.189885	-80.614148	10.51	
6200.00	64.93	324.33	5830.15	512.84	-266.50	-1375.33	40.189976	-80.614233	10.71	
6247.00	68.09	324.59	5848.88	555.88	-231.42	-1400.38	40.190073	-80.614323	6.74	
6293.00	70.39	325.49	5865.18	598.84	-196.17	-1425.02	40.190170	-80.614410	5.32	
6337.00	72.87	326.11	5879.05	640.58	-161.64	-1448.49	40.190265	-80.614494	5.79	
6383.00	75.44	327.94	5891.61	684.82	-124.52	-1472.57	40.190367	-80.614579	6.77	
6429.00	78.90	329.54	5901.82	729.66	-86.18	-1495.84	40.190473	-80.614662	8.25	
6476.00	82.16	330.96	5909.56	775.96	-45.94	-1518.84	40.190583	-80.614744	7.55	
6522.00	84.20	332.73	5915.02	821.50	-5.67	-1540.38	40.190694	-80.614820	5.85	
6568.00	85.13	333.39	5919.30	867.09	35.16	-1561.13	40.190807	-80.614894	2.48	
6612.00	87.04	334.35	5922.30	910.72	74.57	-1580.47	40.190915	-80.614963	4.86	
6658.00	90.68	335.64	5923.22	956.31	116.24	-1599.90	40.191030	-80.615032	8.39	
6751.00	91.17	337.88	5921.71	1048.10	201.68	-1636.59	40.191265	-80.615162	2.47	
6844.00	91.17	335.17	5919.81	1139.94	286.95	-1673.63	40.191499	-80.615293	2.91	
6936.00	91.17	335.26	5917.94	1231.10	370.46	-1712.19	40.191729	-80.615430	0.10	
7026.00	90.99	335.31	5916.24	1320.26	452.20	-1749.81	40.191954	-80.615563	0.21	
7119.00	90.68	335.09	5914.88	1412.43	536.62	-1788.81	40.192186	-80.615702	0.41	
7212.00	90.80	337.59	5913.68	1504.32	621.79	-1826.13	40.192421	-80.615834	2.69	
7304.00	90.62	335.48	5912.54	1595.19	706.17	-1862.76	40.192653	-80.615964	2.30	
7397.00	90.62	334.42	5911.54	1687.41	790.41	-1902.13	40.192885	-80.616103	1.14	
7490.00	90.74	335.61	5910.43	1779.61	874.70	-1941.41	40.193117	-80.616243	1.29	
7583.00	90.86	332.83	5909.13	1871.97	958.43	-1981.85	40.193347	-80.616386	2.99	
7675.00	90.74	334.52	5907.85	1963.43	1040.88	-2022.64	40.193574	-80.616531	1.84	
7768.00	90.74	337.24	5906.65	2055.44	1125.74	-2060.64	40.193807	-80.616666	2.92	
7861.00	91.05	338.60	5905.19	2146.91	1211.91	-2095.59	40.194044	-80.616790	1.50	
7954.00	90.62	337.24	5903.84	2238.38	1298.08	-2130.55	40.194281	-80.616913	1.53	
8046.00	90.86	336.57	5902.65	2329.15	1382.70	-2166.63	40.194514	-80.617041	0.77	
8139.00	91.17	337.11	5901.00	2420.92	1468.19	-2203.20	40.194749	-80.617171	0.67	
8232.00	91.11	334.57	5899.15	2512.92	1553.02	-2241.26	40.194983	-80.617306	2.73	
8324.00	91.23	333.43	5897.27	2604.32	1635.69	-2281.58	40.195210	-80.617449	1.25	
8417.00	90.68	331.39	5895.72	2696.97	1718.10	-2324.64	40.195437	-80.617602	2.27	
8510.00	90.44	329.48	5894.82	2789.84	1798.98	-2370.52	40.195660	-80.617765	2.07	
8603.00	90.80	330.91	5893.81	2882.74	1879.67	-2416.75	40.195882	-80.617929	1.59	
8696.00	90.92	334.80	5892.41	2975.31	1962.40	-2459.16	40.196110	-80.618080	4.18	
8785.00	90.92	333.49	5890.98	3063.71	2042.48	-2497.97	40.196330	-80.618218	1.47	
8878.00	91.17	333.00	5889.29	3156.24	2125.51	-2539.83	40.196558	-80.618366	0.59	

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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
8971.00	91.91	332.94	5886.79	3248.79	2208.32	-2582.08	40.196786	-80.618516	0.80	
9064.00	92.03	334.94	5883.59	3341.15	2291.81	-2622.91	40.197016	-80.618661	2.15	
9156.00	90.68	336.02	5881.42	3432.25	2375.49	-2661.08	40.197246	-80.618797	1.88	
9249.00	90.74	334.42	5880.26	3524.41	2459.92	-2700.05	40.197479	-80.618935	1.72	
9342.00	90.92	333.53	5878.92	3616.81	2543.48	-2740.85	40.197709	-80.619080	0.98	
9435.00	90.68	334.70	5877.62	3709.20	2627.14	-2781.45	40.197939	-80.619224	1.28	
9528.00	90.68	334.57	5876.51	3801.48	2711.17	-2821.28	40.198170	-80.619365	0.14	
9620.00	90.98	334.75	5875.18	3892.77	2794.31	-2860.66	40.198399	-80.619505	0.38	
9713.00	90.88	333.89	5873.67	3985.11	2878.11	-2900.95	40.198629	-80.619648	0.93	
9806.00	90.97	334.24	5872.17	4077.50	2961.73	-2941.62	40.198860	-80.619792	0.39	
9899.00	90.92	336.56	5870.64	4169.61	3046.27	-2980.33	40.199092	-80.619930	2.49	
9991.00	90.37	336.65	5869.60	4260.46	3130.70	-3016.85	40.199324	-80.620059	0.61	
10084.00	90.49	335.93	5868.90	4352.38	3215.85	-3054.25	40.199559	-80.620192	0.78	
10176.00	90.37	336.76	5868.21	4443.29	3300.12	-3091.16	40.199790	-80.620323	0.91	
10269.00	90.43	336.84	5867.56	4535.09	3385.60	-3127.80	40.200026	-80.620453	0.11	
10362.00	90.80	338.77	5866.56	4626.59	3471.70	-3162.92	40.200262	-80.620577	2.11	
10455.00	90.74	338.13	5865.31	4717.91	3558.19	-3197.08	40.200500	-80.620698	0.69	
10547.00	90.98	337.20	5863.93	4808.47	3643.27	-3232.04	40.200734	-80.620822	1.04	
10640.00	91.23	333.26	5862.14	4900.60	3727.68	-3270.99	40.200967	-80.620960	4.24	
10733.00	90.92	335.35	5860.39	4992.94	3811.47	-3311.30	40.201197	-80.621103	2.27	
10825.00	91.11	335.10	5858.76	5084.10	3894.99	-3349.85	40.201427	-80.621240	0.34	
10918.00	90.80	333.21	5857.21	5176.47	3978.67	-3390.38	40.201657	-80.621384	2.06	
11011.00	90.62	334.07	5856.06	5268.94	4061.99	-3431.67	40.201887	-80.621530	0.94	
11104.00	90.49	333.11	5855.16	5361.42	4145.28	-3473.04	40.202116	-80.621677	1.04	
11197.00	90.49	334.60	5854.37	5453.85	4228.76	-3514.01	40.202346	-80.621823	1.60	
11289.00	90.31	333.36	5853.72	5545.27	4311.43	-3554.37	40.202573	-80.621966	1.36	
11382.00	90.25	333.88	5853.27	5637.75	4394.75	-3595.69	40.202802	-80.622113	0.56	
11475.00	91.05	335.53	5852.21	5730.02	4478.82	-3635.42	40.203034	-80.622254	1.97	
11568.00	90.68	336.89	5850.81	5821.95	4563.91	-3672.93	40.203268	-80.622387	1.52	
11661.00	91.11	337.87	5849.36	5913.57	4649.74	-3708.70	40.203504	-80.622514	1.15	
11753.00	90.68	337.11	5847.92	6004.18	4734.72	-3743.91	40.203738	-80.622638	0.95	
11843.00	91.50	335.83	5846.21	6093.08	4817.22	-3779.84	40.203965	-80.622766	1.69	
11936.00	91.11	336.64	5844.09	6184.99	4902.31	-3817.31	40.204199	-80.622899	0.97	
12026.00	90.79	336.53	5842.60	6273.86	4984.89	-3853.07	40.204426	-80.623025	0.38	
12119.00	90.98	336.68	5841.16	6365.69	5070.23	-3889.99	40.204661	-80.623156	0.26	
12208.00	90.92	334.51	5839.69	6453.80	5151.26	-3926.75	40.204884	-80.623287	2.44	
12301.00	91.29	332.99	5837.89	6546.24	5234.66	-3967.88	40.205113	-80.623433	1.68	
12394.00	91.11	332.84	5835.94	6638.81	5317.44	-4010.21	40.205341	-80.623583	0.25	
12486.00	91.11	332.82	5834.16	6730.41	5399.27	-4052.22	40.205566	-80.623732	0.02	
12579.00	90.68	330.68	5832.71	6823.14	5481.18	-4096.23	40.205792	-80.623889	2.35	
12672.00	91.11	330.96	5831.26	6915.98	5562.37	-4141.56	40.206015	-80.624050	0.55	
12765.00	90.43	332.86	5830.01	7008.70	5644.40	-4185.35	40.206241	-80.624206	2.17	
12857.00	90.18	335.28	5829.52	7100.10	5727.13	-4225.57	40.206468	-80.624348	2.64	
12950.00	90.86	336.91	5828.67	7192.06	5812.15	-4263.25	40.206702	-80.624482	1.90	
13043.00	90.62	338.83	5827.47	7283.55	5898.28	-4298.28	40.206939	-80.624606	2.08	
13136.00	90.80	338.14	5826.32	7374.85	5984.80	-4332.39	40.207177	-80.624727	0.77	
13229.00	90.79	336.71	5825.03	7466.47	6070.66	-4368.09	40.207413	-80.624854	1.54	
13321.00	90.62	335.68	5823.90	7557.42	6154.83	-4405.22	40.207645	-80.624985	1.13	
13414.00	90.68	333.85	5822.84	7649.67	6238.94	-4444.86	40.207876	-80.625126	1.97	
13507.00	91.06	333.71	5821.43	7742.11	6322.36	-4485.95	40.208106	-80.625272	0.44	
13600.00	91.15	333.36	5819.64	7834.59	6405.60	-4527.38	40.208335	-80.625419	0.39	
13692.00	91.17	332.69	5817.77	7926.15	6487.57	-4569.11	40.208561	-80.625567	0.73	
13785.00	90.68	331.12	5816.27	8018.87	6569.60	-4612.90	40.208786	-80.625723	1.77	
13878.00	90.92	329.99	5814.97	8111.73	6650.58	-4658.61	40.209009	-80.625885	1.24	
13971.00	90.43	332.51	5813.88	8204.53	6732.10	-4703.33	40.209234	-80.626044	2.76	
14063.00	90.68	333.57	5812.99	8296.10	6814.10	-4745.04	40.209459	-80.626192	1.18	
14156.00	90.55	334.43	5811.99	8388.51	6897.68	-4785.81	40.209689	-80.626337	0.94	
14246.00	90.49	336.14	5811.17	8477.68	6979.43	-4823.43	40.209914	-80.626471	1.90	
14335.00	90.49	335.85	5810.41	8565.72	7060.73	-4859.64	40.210138	-80.626599	0.33	

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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
14428.00	90.92	338.35	5809.27	8657.42	7146.39	-4895.82	40.210373	-80.626727	2.73	
14521.00	90.18	338.60	5808.37	8748.73	7232.90	-4929.94	40.210611	-80.626848	0.84	
14611.00	90.25	336.59	5808.04	8837.35	7316.10	-4964.24	40.210840	-80.626970	2.23	
14703.00	90.55	336.20	5807.39	8928.25	7400.40	-5001.08	40.211072	-80.627101	0.53	
14796.00	91.17	336.66	5806.00	9020.13	7485.63	-5038.26	40.211307	-80.627233	0.83	
14889.00	90.79	335.48	5804.41	9112.09	7570.62	-5075.98	40.211541	-80.627366	1.33	
14982.00	90.80	335.76	5803.12	9204.16	7655.32	-5114.37	40.211774	-80.627503	0.30	
15074.00	90.62	337.19	5801.98	9295.04	7739.66	-5151.08	40.212006	-80.627633	1.57	
15167.00	90.74	335.05	5800.87	9387.00	7824.69	-5188.73	40.212240	-80.627766	2.30	
15260.00	90.43	334.89	5799.92	9479.21	7908.95	-5228.07	40.212471	-80.627906	0.38	
15349.00	90.71	333.19	5799.04	9567.64	7988.97	-5267.03	40.212692	-80.628044	1.94	
15442.00	90.99	332.66	5797.66	9660.22	8071.77	-5309.35	40.212919	-80.628195	0.64	
15535.00	90.55	335.40	5796.41	9752.61	8155.36	-5350.07	40.213149	-80.628339	2.98	
15628.00	90.88	336.18	5795.25	9844.64	8240.17	-5388.21	40.213383	-80.628475	0.91	
15721.00	91.05	333.36	5793.68	9936.89	8324.28	-5427.84	40.213614	-80.628615	3.04	
15814.00	90.80	330.73	5792.18	10029.58	8406.41	-5471.42	40.213840	-80.628770	2.84	
15906.00	90.62	331.84	5791.04	10121.38	8487.09	-5515.62	40.214062	-80.628927	1.22	
15996.00	90.55	334.90	5790.12	10210.90	8567.53	-5555.95	40.214284	-80.629071	3.40	
16089.00	90.80	335.38	5789.02	10303.08	8651.90	-5595.05	40.214516	-80.629209	0.58	
16181.00	90.31	334.59	5788.13	10394.30	8735.27	-5633.95	40.214745	-80.629347	1.01	
16274.00	90.44	336.18	5787.52	10486.43	8819.81	-5672.68	40.214978	-80.629485	1.72	
16367.00	90.62	336.59	5786.66	10578.33	8905.02	-5709.94	40.215212	-80.629617	0.48	
16460.00	90.80	336.66	5785.51	10670.16	8990.38	-5746.83	40.215447	-80.629748	0.21	
16552.00	90.62	335.14	5784.37	10761.18	9074.35	-5784.39	40.215678	-80.629881	1.66	
16577.00	90.62	335.24	5784.10	10785.95	9097.05	-5794.88	40.215740	-80.629919	0.40	Last WFT SVY
16600.00	90.62	335.24	5783.85	10808.75	9117.93	-5804.52	40.215798	-80.629953	0.00	Proj. to TD

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