



John Hupp BRK 5H
Brooke County, WV
Quail 9



Drawing By: GWR Date: 08/29/2017
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Plan Data for John Hupp BRK 5H

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)	(°)	(°)
4269.00	19.38	116.71	4285.16	-218.48	398.54	-318.57	0.83	204.8	Last WFT SVY
4336.00	19.38	116.71	4268.37	-228.47	418.41	-333.59	0.00	0.0	PTB
5313.51	19.38	116.71	5190.49	-374.27	708.16	-552.65	0.00	0.0	Curve KOP
5904.78	30.00	3.00	5749.94	-266.00	807.91	-475.56	7.00	223.8	Build 7° DLS
6202.17	50.82	3.00	5975.15	-74.54	817.94	-294.03	7.00	0.0	Build/Turn 7° DLS
6611.45	70.00	338.25	6178.69	269.68	753.64	54.71	7.00	304.9	Build 9° DLS
6843.77	90.91	338.25	6217.00	481.29	669.21	281.30	9.00	0.0	Landing Point
14283.75	90.91	338.25	6099.00	7390.73	-2087.42	7679.86	0.00	0.0	PBHL JHSH

Target Set Information:

Name: John Hupp BRK 5H

Position offsets from Slot centre

Name	TVD	+N/-S	+E/-W	Northing	Easting	Lat	Long
(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(°)	(°)
LP JHSH	6217.00	418.05	694.43	14591708.00	1761506.28	40.177618	-80.566491
PBHL JHSH	6099.00	7390.73	-2087.42	14598680.68	1758724.42	40.196802	-80.576331

Plan Data for John Hupp BRK 5H

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

Site: John Hupp Pad

Unit: USFeet TVD Reference:
Company Name: SOUTHWESTERN ENERGY

Position: Northing: 14591276.54USft Latitude: 40.176442°
Easting: 1760880.58USft Longitude: -80.568739°
North Reference: Grid Grid Convergence: 0.28°
Elevation Above VRD: 1276.30USft

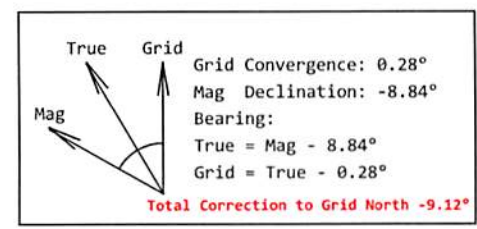
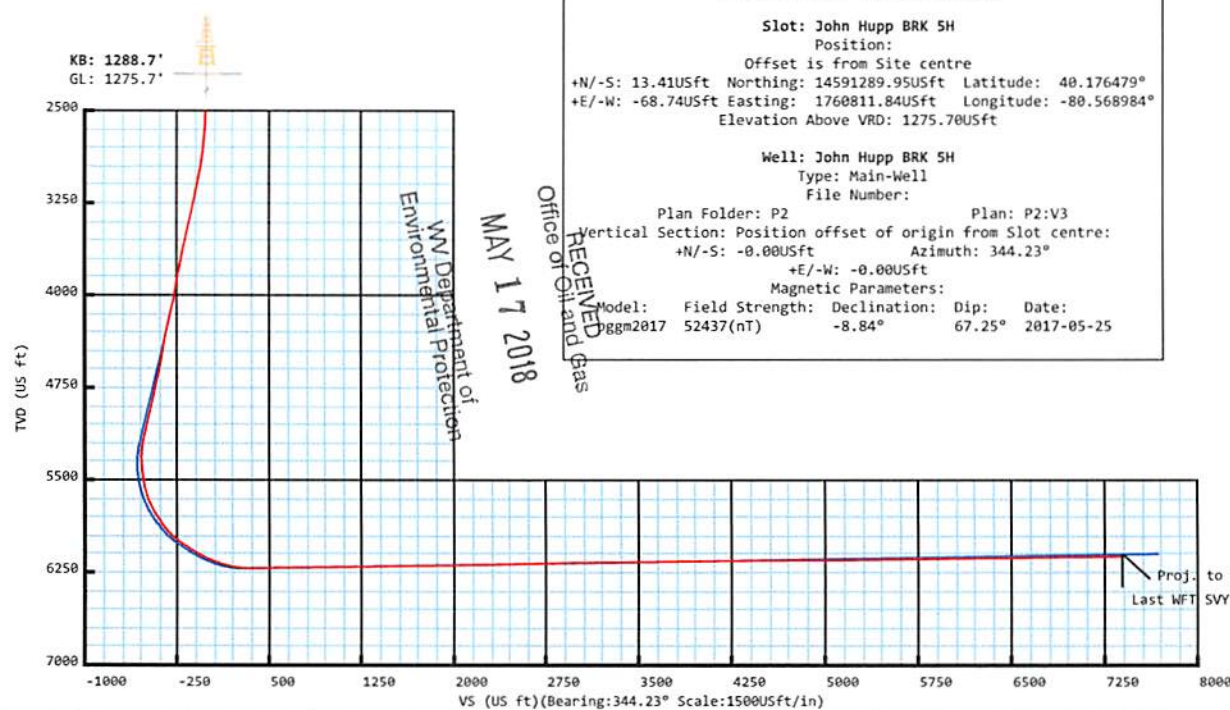
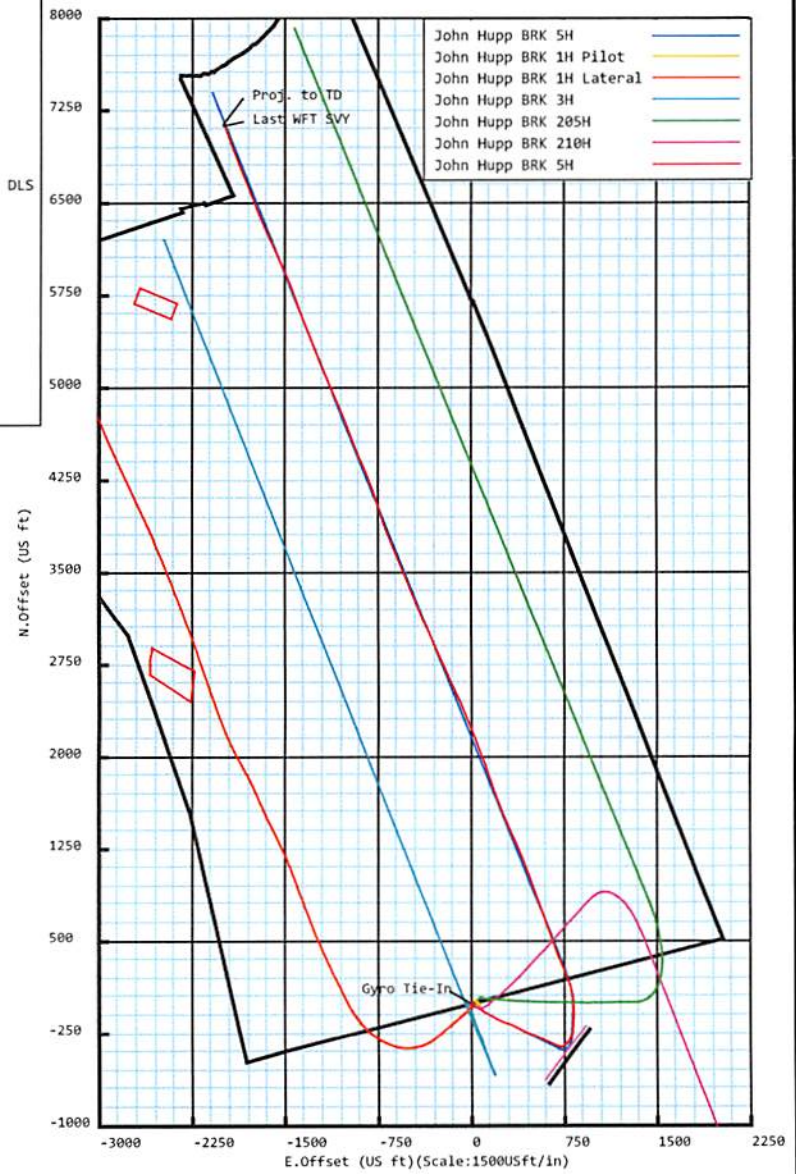
Slot: John Hupp BRK 5H

Position:
Offset is from Site centre
+N/-S: 13.41USft Northing: 14591289.95USft Latitude: 40.176479°
+E/-W: -68.74USft Easting: 1760811.84USft Longitude: -80.568984°
Elevation Above VRD: 1275.70USft

Well: John Hupp BRK 5H

Type: Main-Well
File Number:

Plan Folder: P2 Plan: P2:V3
Vertical Section: Position offset of origin from Slot centre:
+N/-S: -0.00USft Azimuth: 344.23°
+E/-W: -0.00USft
Magnetic Parameters:
Model: Field Strength: Declination: Dip: Date:
gggm2017 52437(nT) -8.84° 67.25° 2017-05-25



**5D Survey Report**

SOUTHWESTERN ENERGY

Field Name: *SOUTHWESTERN_BROOKE CO, WV UTM NAD 83
(17N)*

Site Name: *John Hupp Pad*

Well Name: *John Hupp BRK 5H*

Survey: *Definitive survey*

8 September 2017

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John Hupp BRK 5H

Field Name:	Map Units: US ft	Company Name: SOUTHWESTERN ENERGY
	Vertical Reference Datum (VRD):	
SOUTHWESTER N_BROOKE CO, WV UTM NAD 83 (17N)	Projected Coordinate System: NAD83 / UTM zone 17N	
	Comment:	

Site:	Units: US ft	North Reference: Grid	Convergence Angle: 0.28
	Position:	Northing: 14591276.54 US ft	Latitude: 40.176442
John Hupp Pad		Easting: 1760880.58 US ft	Longitude: -80.568739
	Elevation above Field Reference: 1276.30 US ft		
	Comment:		

Slot:	Position (Relative to Site Centre)		
	+N/-S: 13.41 US ft	Northing: 14591289.95 US ft	Latitude: 40.176479
	+E/-W: -68.74 US ft	Easting: 1760811.84 US ft	Longitude: -80.568984
John Hupp BRK 5H	Elevation above Field Reference: 1275.70 US ft		
	Comment:		

Well:	Type: Main well	UWI:
	File Number:	Comment:
John Hupp BRK 5H	Closure Distance: 7413.8 US ft	Closure Azimuth: 344.38°
	Vertical Section: Position of Origin (Relative to Slot centre)	
	+N/-S: -0.00 US ft	+E/-W: -0.00 US ft
	Az: 344.23°	

Drill floor: Survey Name: Definitive Survey			
Rig Height (Drill Floor): 26.00 US ft	Elevation above Field Reference: 1301.70 US ft	Inclination: 0.00°	Azimuth: 0.00°

Survey Name: Definitive Survey			
Date: 17/May/2017	Survey Tool: See Survey Tool Ranges below.	Comment:	Company:

Magnetic Model:				
Model Name: bggm2017	Date: 25/May/2017	Field Strength: 52437.7 nT	Declination: -8.84°	Dip: 67.25°
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		

Survey Tool Ranges:			
Name	Start MD(USFt)	End MD(USFt)	Source Survey
GYRO-NS_OW	0.00	568.00	Gyro_01
GYRO-NS_OW	568.00	1754.00	Gyro_02
MWD	1754.00	4269.00	WFT MWD_03
MWD	4269.00	13976.00	WFT MWD_04

Wellpath created using minimum curvature.

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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
0.00	0.00	0.00	0.00	0.00	-0.00	-0.00	40.176479	-80.568985	0.00	
25.00	0.00	0.00	25.00	0.00	-0.00	-0.00	40.176479	-80.568985	0.00	
113.00	0.28	244.57	113.00	-0.04	-0.09	-0.19	40.176479	-80.568985	0.32	
213.00	0.75	210.99	213.00	-0.53	-0.76	-0.75	40.176477	-80.568987	0.54	
313.00	1.61	218.31	312.97	-1.80	-2.42	-1.96	40.176473	-80.568992	0.87	
413.00	2.36	218.43	412.91	-3.83	-5.14	-4.11	40.176465	-80.568999	0.75	
513.00	2.03	232.09	512.84	-5.70	-7.84	-6.79	40.176458	-80.569009	0.62	
568.00	1.71	232.63	567.81	-6.37	-8.93	-8.21	40.176455	-80.569014	0.58	
613.00	1.90	233.72	612.79	-6.88	-9.78	-9.34	40.176453	-80.569018	0.43	
713.00	1.42	234.46	712.75	-7.88	-11.48	-11.69	40.176448	-80.569027	0.48	
813.00	0.40	270.73	812.73	-8.20	-12.20	-13.05	40.176446	-80.569031	1.12	
913.00	0.53	355.91	912.73	-7.64	-11.73	-13.43	40.176447	-80.569033	0.64	
1013.00	0.57	15.68	1012.73	-6.77	-10.79	-13.33	40.176450	-80.569032	0.19	
1113.00	0.59	11.44	1112.72	-5.88	-9.81	-13.09	40.176453	-80.569032	0.05	
1213.00	0.58	19.79	1212.72	-5.01	-8.83	-12.82	40.176455	-80.569031	0.09	
1313.00	0.61	23.61	1312.71	-4.19	-7.87	-12.43	40.176458	-80.569029	0.05	
1413.00	1.06	57.20	1412.70	-3.51	-6.88	-11.44	40.176461	-80.569026	0.65	
1513.00	1.11	53.76	1512.68	-2.90	-5.80	-9.88	40.176464	-80.569020	0.08	
1613.00	0.25	125.54	1612.67	-2.73	-5.36	-8.92	40.176465	-80.569017	1.06	
1713.00	0.73	169.11	1712.67	-3.54	-6.11	-8.63	40.176463	-80.569015	0.58	
1754.00	0.84	168.48	1753.67	-4.10	-6.66	-8.52	40.176461	-80.569015	0.27	Gyro Tie-In
1935.00	1.23	274.15	1934.65	-4.76	-7.82	-10.19	40.176458	-80.569021	0.92	
2023.00	0.57	197.31	2022.64	-4.80	-8.17	-11.26	40.176457	-80.569025	1.40	
2111.00	2.48	151.58	2110.61	-7.03	-10.26	-10.48	40.176451	-80.569022	2.41	
2199.00	2.18	158.61	2198.53	-10.55	-13.50	-8.97	40.176443	-80.569017	0.47	
2288.00	1.52	164.06	2287.49	-13.42	-16.21	-8.03	40.176435	-80.569014	0.77	
2376.00	1.88	148.53	2375.45	-15.97	-18.56	-6.95	40.176429	-80.569010	0.66	
2464.00	2.75	103.60	2463.38	-18.40	-20.29	-4.15	40.176424	-80.569000	2.21	
2552.00	4.82	92.29	2551.19	-20.58	-20.93	1.60	40.176422	-80.568979	2.49	
2640.00	6.65	101.98	2638.75	-24.10	-22.14	10.28	40.176419	-80.568948	2.35	
2729.00	7.44	117.85	2727.08	-30.47	-25.90	20.42	40.176408	-80.568912	2.35	
2817.00	9.00	120.05	2814.17	-39.34	-32.01	31.41	40.176391	-80.568873	1.81	
2905.00	12.28	118.36	2900.65	-50.80	-39.90	45.61	40.176369	-80.568822	3.74	
2993.00	14.19	117.63	2986.31	-64.72	-49.35	63.40	40.176343	-80.568758	2.18	
3081.00	15.35	121.99	3071.40	-80.76	-60.52	82.84	40.176312	-80.568689	1.82	
3169.00	16.58	122.95	3156.01	-98.82	-73.52	103.25	40.176276	-80.568616	1.43	
3258.00	16.57	119.54	3241.31	-117.38	-86.69	124.95	40.176240	-80.568539	1.09	
3348.00	16.89	119.05	3327.50	-135.72	-99.36	147.55	40.176205	-80.568458	0.39	
3436.00	18.28	121.44	3411.39	-154.86	-112.77	170.50	40.176168	-80.568376	1.78	
3523.00	17.74	119.80	3494.13	-174.34	-126.48	193.64	40.176130	-80.568293	0.85	
3609.00	17.97	116.69	3575.98	-192.65	-138.95	216.86	40.176095	-80.568211	1.14	
3697.00	18.60	112.48	3659.54	-210.51	-150.41	241.96	40.176063	-80.568121	1.66	
3786.00	16.84	110.04	3744.32	-226.84	-160.26	267.19	40.176036	-80.568031	2.15	
3874.00	15.67	107.61	3828.80	-240.84	-168.22	290.49	40.176014	-80.567947	1.54	
3962.00	15.63	110.75	3913.54	-254.43	-176.01	312.91	40.175992	-80.567867	0.96	
4049.00	16.79	116.59	3997.09	-269.87	-185.79	335.11	40.175965	-80.567788	2.30	
4136.00	19.29	117.76	4079.80	-288.24	-198.11	359.06	40.175931	-80.567703	2.90	
4225.00	19.71	117.17	4163.70	-308.59	-211.81	385.42	40.175893	-80.567608	0.52	
4269.00	19.38	116.71	4205.16	-318.57	-218.48	398.54	40.175874	-80.567562	0.83	
4345.00	19.75	117.57	4276.77	-335.90	-230.09	421.19	40.175842	-80.567481	0.62	
4441.00	15.96	115.23	4368.14	-355.70	-243.23	447.52	40.175806	-80.567387	4.02	
4537.00	15.16	112.17	4460.62	-372.08	-253.59	471.08	40.175777	-80.567302	1.19	
4633.00	18.32	109.18	4552.54	-388.44	-263.29	496.97	40.175750	-80.567210	3.41	
4730.00	18.32	112.65	4644.63	-406.65	-274.17	525.43	40.175720	-80.567108	1.12	
4826.00	18.57	112.53	4735.69	-425.50	-285.84	553.48	40.175687	-80.567008	0.26	
4923.00	18.57	117.99	4827.65	-445.76	-299.01	581.39	40.175651	-80.566908	1.79	
5018.00	18.71	116.40	4917.67	-466.45	-312.88	608.39	40.175612	-80.566812	0.55	
5114.00	19.88	112.93	5008.28	-486.99	-326.09	637.22	40.175576	-80.566709	1.71	
5211.00	19.31	113.44	5099.66	-507.44	-338.89	667.12	40.175540	-80.566602	0.61	

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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
5307.00	19.17	113.24	5190.30	-527.40	-351.42	696.17	40.175505	-80.566498	0.16	
5352.00	16.75	99.49	5233.12	-534.82	-355.41	709.36	40.175494	-80.566451	10.81	
5403.00	15.88	84.47	5282.09	-539.20	-355.95	723.56	40.175492	-80.566400	8.42	
5448.00	15.24	70.81	5325.45	-539.94	-353.41	735.28	40.175499	-80.566358	8.25	
5500.00	15.14	60.65	5375.65	-537.94	-347.84	747.65	40.175514	-80.566314	5.12	
5548.00	15.63	51.47	5421.93	-533.96	-340.74	758.18	40.175534	-80.566276	5.17	
5596.00	16.07	45.02	5468.11	-528.22	-332.01	767.94	40.175558	-80.566241	3.78	
5644.00	17.24	40.12	5514.10	-520.99	-321.87	777.22	40.175585	-80.566208	3.81	
5693.00	19.30	34.25	5560.63	-511.71	-309.63	786.46	40.175619	-80.566174	5.63	
5741.00	22.21	27.49	5605.52	-500.00	-295.02	795.11	40.175659	-80.566143	7.84	
5789.00	25.07	21.85	5649.49	-485.34	-277.52	803.09	40.175707	-80.566114	7.59	
5837.00	27.94	14.57	5692.45	-467.57	-257.19	809.70	40.175762	-80.566090	9.02	
5885.00	29.98	7.05	5734.46	-446.80	-234.40	814.01	40.175825	-80.566075	8.69	
5933.00	32.19	1.64	5775.58	-423.54	-209.71	815.85	40.175893	-80.566068	7.42	
5981.00	34.24	1.92	5815.73	-398.47	-183.43	816.66	40.175965	-80.566064	4.28	
6029.00	37.93	2.78	5854.52	-371.61	-155.19	817.83	40.176042	-80.566059	7.76	
6078.00	41.98	2.91	5892.07	-341.80	-123.76	819.39	40.176129	-80.566053	8.23	
6126.00	45.82	1.73	5926.65	-310.16	-90.51	820.73	40.176220	-80.566048	8.18	
6173.00	49.70	0.50	5958.24	-276.87	-55.73	821.40	40.176315	-80.566045	8.48	
6221.00	52.82	358.64	5988.27	-240.77	-18.30	821.10	40.176418	-80.566045	7.17	
6269.00	54.44	353.91	6016.75	-202.99	20.25	818.58	40.176524	-80.566054	8.62	
6317.00	56.38	349.92	6044.00	-163.84	59.35	813.00	40.176632	-80.566073	7.95	
6365.00	58.06	346.55	6070.00	-123.59	98.85	804.77	40.176740	-80.566102	6.86	
6413.00	60.27	343.46	6094.60	-82.39	138.64	794.09	40.176850	-80.566139	7.19	
6462.00	63.17	340.12	6117.82	-39.29	179.62	780.60	40.176962	-80.566187	8.43	
6510.00	66.49	337.61	6138.23	3.95	220.12	764.92	40.177074	-80.566242	8.38	
6558.00	69.27	337.35	6156.31	48.10	261.19	747.89	40.177187	-80.566303	5.81	
6606.00	71.82	337.28	6172.29	93.03	302.95	730.44	40.177302	-80.566364	5.31	
6655.00	73.56	337.46	6186.87	139.47	346.13	712.44	40.177420	-80.566428	3.57	
6703.00	76.76	338.29	6199.16	185.58	389.10	694.97	40.177539	-80.566490	6.87	
6751.00	81.40	339.54	6208.26	232.50	433.07	678.02	40.177660	-80.566550	10.00	
6799.00	84.82	340.35	6214.01	280.01	477.82	661.69	40.177783	-80.566607	7.32	
6847.00	88.15	341.05	6216.96	327.82	523.04	645.85	40.177907	-80.566663	7.09	
6944.00	91.36	339.34	6217.37	424.56	614.28	612.99	40.178158	-80.566779	3.75	
7040.00	91.23	340.09	6215.20	520.24	704.30	579.72	40.178406	-80.566897	0.79	
7136.00	91.17	341.11	6213.19	616.03	794.83	547.84	40.178655	-80.567009	1.06	
7233.00	90.56	341.06	6211.73	712.87	886.58	516.40	40.178907	-80.567120	0.63	
7328.00	90.55	340.45	6210.81	807.69	976.27	485.09	40.179154	-80.567231	0.64	
7425.00	90.86	338.98	6209.61	904.38	1067.24	451.46	40.179404	-80.567350	1.55	
7521.00	90.56	338.29	6208.42	999.91	1156.64	416.49	40.179650	-80.567473	0.78	
7618.00	91.05	337.79	6207.06	1096.34	1246.59	380.22	40.179898	-80.567602	0.72	
7714.00	90.86	335.73	6205.46	1191.50	1334.79	342.35	40.180140	-80.567736	2.15	
7810.00	90.93	336.10	6203.96	1286.48	1422.42	303.18	40.180381	-80.567874	0.39	
7905.00	91.23	337.16	6202.17	1380.63	1509.61	265.50	40.180621	-80.568008	1.16	
8002.00	90.99	338.63	6200.29	1477.02	1599.46	229.01	40.180869	-80.568137	1.54	
8098.00	91.11	340.32	6198.53	1572.67	1689.35	195.36	40.181116	-80.568256	1.76	
8194.00	90.86	342.18	6196.88	1668.52	1780.23	164.50	40.181366	-80.568365	1.95	
8290.00	90.37	341.35	6195.85	1764.42	1871.41	134.47	40.181617	-80.568471	1.00	
8385.00	91.29	339.80	6194.47	1859.22	1960.99	102.88	40.181863	-80.568582	1.90	
8481.00	90.86	339.39	6192.67	1954.88	2050.95	69.41	40.182111	-80.568700	0.62	
8577.00	90.99	338.20	6191.12	2050.44	2140.43	34.69	40.182357	-80.568823	1.25	
8673.00	90.92	337.56	6189.52	2145.84	2229.35	-1.45	40.182601	-80.568951	0.67	
8769.00	91.11	338.36	6187.82	2241.25	2318.32	-37.47	40.182846	-80.569078	0.86	
8866.00	90.99	337.30	6186.04	2337.62	2408.14	-74.07	40.183093	-80.569208	1.10	
8961.00	91.36	334.77	6184.10	2431.63	2494.92	-112.64	40.183332	-80.569344	2.69	
9058.00	91.05	334.94	6182.06	2527.31	2582.71	-153.85	40.183574	-80.569490	0.36	
9153.00	91.66	336.89	6179.81	2621.28	2669.41	-192.60	40.183812	-80.569628	2.15	
9249.00	91.42	336.65	6177.23	2716.43	2757.59	-230.46	40.184055	-80.569762	0.35	
9346.00	90.99	336.21	6175.19	2812.51	2846.48	-269.23	40.184300	-80.569899	0.63	

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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
9442.00	91.23	336.40	6173.33	2907.58	2934.37	-307.81	40.184541	-80.570036	0.32	
9538.00	91.05	337.06	6171.42	3002.74	3022.54	-345.72	40.184784	-80.570170	0.71	
9635.00	90.62	336.77	6170.01	3098.94	3111.77	-383.75	40.185030	-80.570304	0.53	
9731.00	90.74	337.14	6168.87	3194.16	3200.10	-421.33	40.185273	-80.570437	0.41	
9827.00	90.68	338.04	6167.68	3289.51	3288.84	-457.93	40.185517	-80.570567	0.94	
9923.00	90.74	337.87	6166.49	3384.92	3377.82	-493.95	40.185762	-80.570694	0.19	
10019.00	90.74	337.32	6165.25	3480.27	3466.56	-530.54	40.186006	-80.570824	0.57	
10115.00	90.62	338.15	6164.11	3575.65	3555.40	-566.91	40.186250	-80.570953	0.87	
10211.00	90.62	337.46	6163.07	3671.04	3644.28	-603.18	40.186495	-80.571081	0.72	
10307.00	90.68	337.50	6161.98	3766.37	3732.95	-639.94	40.186739	-80.571211	0.08	
10403.00	90.80	338.42	6160.74	3861.78	3821.93	-675.96	40.186984	-80.571338	0.97	
10499.00	91.05	342.00	6159.19	3957.52	3912.23	-708.46	40.187232	-80.571453	3.74	
10595.00	90.86	342.31	6157.59	4053.44	4003.60	-737.87	40.187483	-80.571557	0.38	
10691.00	91.05	342.58	6155.99	4149.38	4095.12	-766.82	40.187735	-80.571659	0.34	
10787.00	90.43	339.75	6154.75	4245.23	4185.96	-797.81	40.187985	-80.571768	3.02	
10884.00	90.56	337.85	6153.91	4341.78	4276.39	-832.88	40.188234	-80.571892	1.96	
10980.00	90.55	337.21	6152.98	4437.12	4365.09	-869.57	40.188478	-80.572022	0.67	
11075.00	90.49	337.29	6152.12	4531.42	4452.70	-906.31	40.188719	-80.572152	0.11	
11172.00	90.43	337.48	6151.34	4627.72	4542.24	-943.61	40.188965	-80.572284	0.21	
11268.00	90.49	339.42	6150.57	4723.23	4631.52	-978.87	40.189211	-80.572409	2.02	
11364.00	90.43	339.48	6149.80	4818.89	4721.41	-1012.56	40.189458	-80.572528	0.09	
11461.00	89.88	337.52	6149.54	4915.40	4811.65	-1048.11	40.189706	-80.572654	2.10	
11557.00	90.37	336.08	6149.33	5010.59	4899.89	-1085.93	40.189949	-80.572788	1.58	
11653.00	90.00	336.20	6149.02	5105.63	4987.68	-1124.76	40.190191	-80.572925	0.41	
11749.00	90.80	336.72	6148.35	5200.75	5075.69	-1163.10	40.190433	-80.573061	0.99	
11846.00	90.80	337.73	6146.99	5297.01	5165.12	-1200.65	40.190679	-80.573194	1.04	
11942.00	90.74	338.31	6145.70	5392.44	5254.13	-1236.58	40.190924	-80.573321	0.61	
12038.00	90.74	338.82	6144.46	5487.96	5343.48	-1271.66	40.191170	-80.573445	0.53	
12134.00	90.74	338.58	6143.22	5583.51	5432.92	-1306.53	40.191416	-80.573568	0.25	
12230.00	90.74	339.29	6141.98	5679.09	5522.50	-1341.03	40.191662	-80.573690	0.74	
12326.00	90.80	339.47	6140.69	5774.74	5612.34	-1374.83	40.191909	-80.573810	0.20	
12423.00	90.86	339.67	6139.29	5871.41	5703.23	-1408.69	40.192159	-80.573930	0.22	
12518.00	90.68	339.12	6138.01	5966.06	5792.14	-1442.12	40.192404	-80.574048	0.61	
12613.00	90.62	337.13	6136.93	6060.51	5880.29	-1477.51	40.192647	-80.574173	2.10	
12710.00	90.55	335.68	6135.94	6156.60	5969.17	-1516.33	40.192891	-80.574310	1.50	
12806.00	90.62	336.05	6134.96	6251.57	6056.78	-1555.58	40.193132	-80.574449	0.39	
12901.00	90.62	334.54	6133.94	6345.41	6143.08	-1595.28	40.193370	-80.574590	1.59	
12997.00	90.55	335.13	6132.96	6440.12	6229.96	-1636.10	40.193609	-80.574735	0.62	
13094.00	90.74	336.20	6131.86	6536.03	6318.33	-1676.07	40.193852	-80.574876	1.12	
13190.00	90.80	337.43	6130.57	6631.22	6406.57	-1713.86	40.194095	-80.575010	1.28	
13286.00	90.62	339.79	6129.38	6726.74	6495.94	-1748.87	40.194341	-80.575134	2.47	
13381.00	90.68	338.74	6128.31	6821.38	6584.78	-1782.50	40.194585	-80.575253	1.11	
13477.00	90.80	337.75	6127.07	6916.85	6673.94	-1818.08	40.194830	-80.575379	1.04	
13571.00	90.55	337.67	6125.96	7010.23	6760.91	-1853.73	40.195070	-80.575505	0.28	
13667.00	90.74	339.34	6124.88	7105.74	6850.22	-1888.90	40.195315	-80.575629	1.75	
13762.00	90.68	340.03	6123.70	7200.44	6939.31	-1921.88	40.195560	-80.575746	0.73	
13857.00	90.43	339.48	6122.78	7295.14	7028.43	-1954.75	40.195806	-80.575862	0.64	
13953.00	91.54	340.14	6121.13	7390.84	7118.52	-1987.88	40.196053	-80.575979	1.35	
13976.00	91.54	340.14	6120.51	7413.77	7140.14	-1995.69	40.196113	-80.576007	0.00	

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