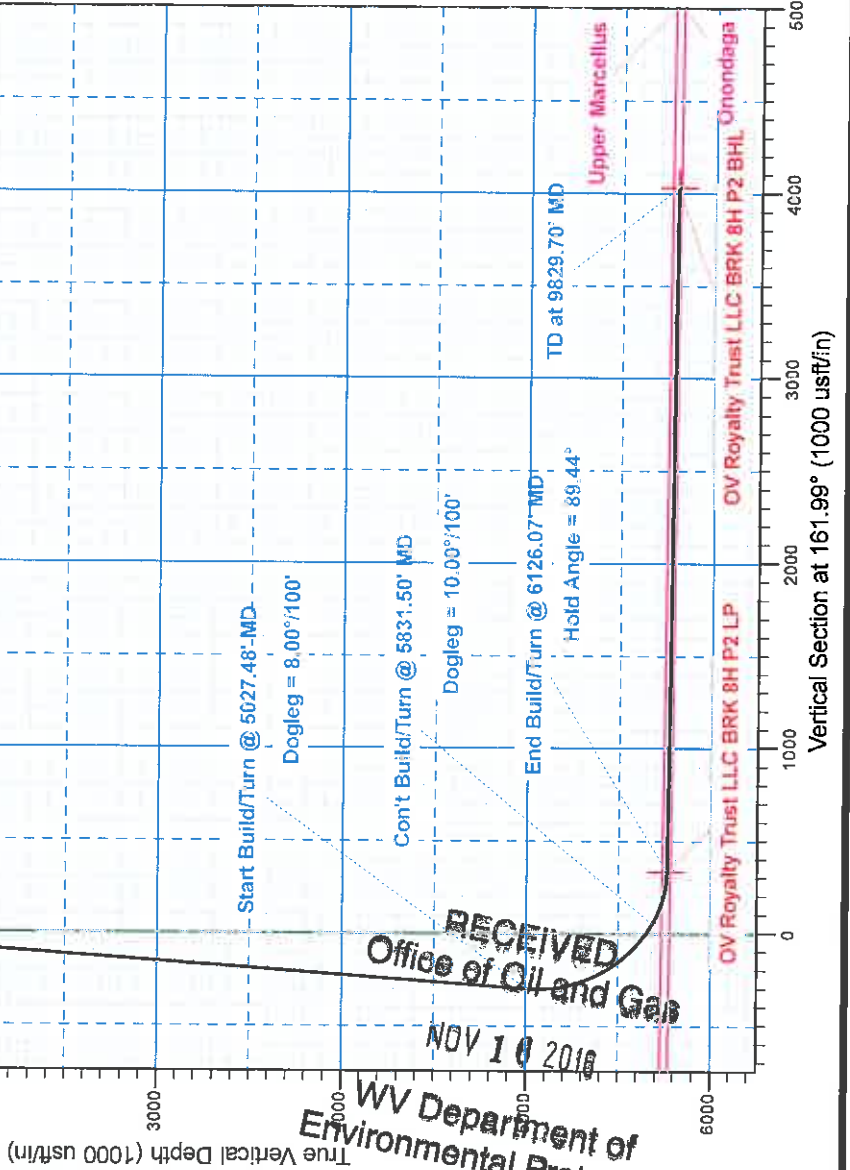


SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSEct	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	Start Build
900.00	4.00	335.00	899.84	6.32	-2.95	2.00	335.00	-6.93	End Build
1450.00	4.00	335.00	1448.50	41.10	-19.16	0.00	0.00	-45.01	Start Build/Turn
1566.86	5.00	307.65	1565.01	47.90	-24.92	2.00	-79.07	-53.26	End Build/Turn
5027.48	5.00	307.65	5012.46	232.14	-263.72	0.00	0.00	-302.29	Start Build/Turn
5831.50	60.00	158.58	5686.23	-106.94	-152.34	8.00	-150.41	54.61	Con't Build/Turn
6126.07	89.44	159.46	5763.00	-369.40	-51.86	10.00	1.80	335.28	End Build/Turn
9829.70	89.44	159.46	5799.00	-3837.48	1247.37	0.00	46.19	4035.12	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

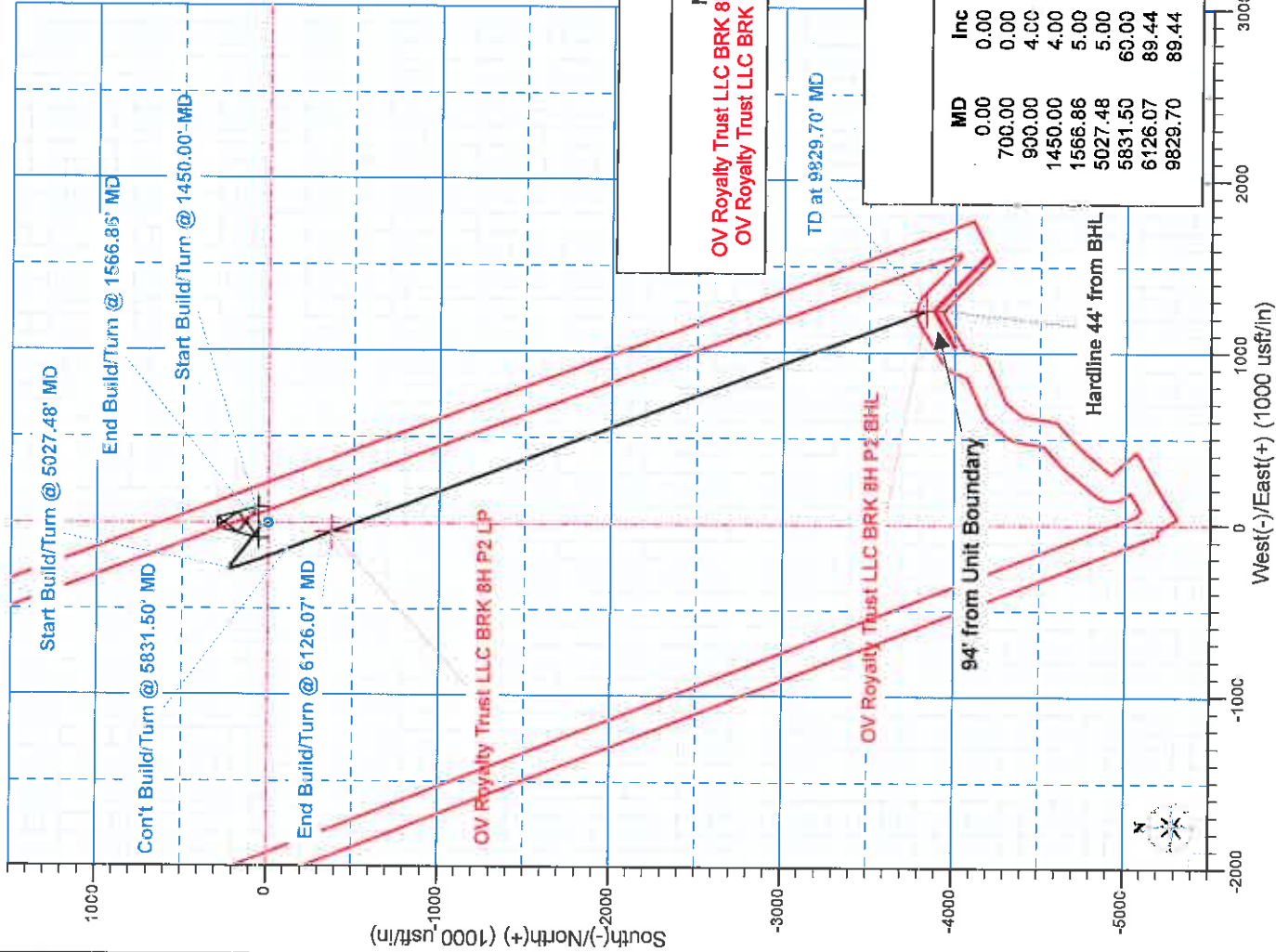
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
OV Royalty Trust LLC BRK 8H P2 BHL	5789.00	-3837.48	1247.37	40.275173	-80.579871
OV Royalty Trust LLC BRK 8H P2 LP	5763.00	-369.40	-51.86	40.284713	-80.584471



Surface Location:
 Universal Transverse Mercator (US Survey Feet)
 Zone 17N (84 W to 78 W)
 Elevation: GL 1181' + KB 26' @ 1207.00usft (SDC 46)
 Northing: 14631052.54 Easting: 17566353.33
 Latitude: 40.285726 Longitude: -80.584279

To convert a Magnetic Direction to a Grid Direction, Subtract 8.74°
 Magnetic Model: HDGM Date: 22-Oct-15
Azimuths to Grid North

Project: Brooke County, WV (NAD 83)
Site: OV Royalty Trust LLC BRK
Well: OV Royalty Trust LLC BRK 8H
Wellbore: Wellbore #1
Design: Plan #2
Rig: SDC 46



Project: Brooke County, WV (NAD 83)
Site: OV Royalty Trust LLC BRK
Well: OV Royalty Trust LLC BRK 8H
Wellbore: Wellbore #1
Design: Plan #2
Rig: SDC 46

To convert a Magnetic Direction to a Grid Direction, Subtract 8.74°

Magnetic Model: HDGM Date: 22-Oct-15
 Azimuths to Grid North

Surface Location:

Universal Transverse Mercator (US Survey Feet)
 Zone 17N (84 W to 78 W)
 Elevation: GL 1'81' + KB 26' @ 1207.00usft (SDC 46)
 Northing 14631052.54 Easting 17563553.33
 Latitude 40.285726 Longitude -80.584279

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	+N/-S	+E/-W	Latitude	Longitude
OV Royalty Trust LLC BRK 8H P2 BHL	-3837.48	1247.37	40.275173	-80.579871
OV Royalty Trust LLC BRK 8H P2 LP	-369.40	-51.86	40.284713	-80.584471

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	Start Build
900.00	4.00	335.00	899.84	6.32	-2.95	2.00	335.00	-6.93	End Build
1450.00	4.00	335.00	1448.50	41.10	-19.16	0.00	0.00	-45.01	Start Build/Turn
1566.86	5.00	307.65	1565.01	47.90	-24.92	2.00	-79.07	-53.26	End Build/Turn
5027.48	5.00	307.65	5012.46	232.14	-263.72	0.00	0.00	-302.29	Start Build/Turn
5831.50	60.00	158.58	5686.23	-106.94	-152.34	8.00	-150.41	54.61	Con't Build/Turn
6126.07	89.44	159.46	5763.00	-369.40	-51.86	10.00	1.80	335.28	End Build/Turn
9829.70	89.44	159.46	5799.00	-3837.48	1247.37	0.00	46.19	4035.12	TD

HALLIBURTON

Sperry Drilling

SWN Production Company LLC

Brooke County, WV (NAD 83)

OV Royalty Trust LLC BRK

OV Royalty Trust LLC BRK 8H - Slot 8H

Wellbore #1

Plan: Plan #2

Standard Planning Report - Geographic

22 October, 2015

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Southwestern Energy

NOV 16 2016

WV Department of
Environmental Protection

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well OV Royalty Trust LLC BRK 8H - Slot 8H
Company:	SWN Production Company LLC	TVD Reference:	GL 1181' + KB 26' @ 1207 00usft (SDC 46)
Project:	Brooke County, WV (NAD 83)	MD Reference:	GL 1181' + KB 26' @ 1207 00usft (SDC 46)
Site:	OV Royalty Trust LLC BRK	North Reference:	Grid
Well:	OV Royalty Trust LLC BRK 8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Project	Brooke County, WV (NAD 83)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 West Virginia - HARN		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	OV Royalty Trust LLC BRK				
Site Position:		Northing:	14,631,069.22 usft	Latitude:	40.285773
From:	Map	Easting:	1,756,330.78 usft	Longitude:	-80.584359
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.27 °

Well	OV Royalty Trust LLC BRK 8H - Slot 8H					
Well Position	+N/-S	0.00 usft	Northing:	14,631,052.54 usft	Latitude:	40.285727
	+E/-W	0.00 usft	Easting:	1,756,353.33 usft	Longitude:	-80.584279
Position Uncertainty	0.00 usft		Wellhead Elevation:	1,181.00 usft	Ground Level:	1,181.00 usft

Wellbore	Wellbore #1
-----------------	-------------

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/22/2015	-8.47	67.88	52,770

Design	Plan #2
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Audit Notes:									
Version:	Phase: PLAN Tie On Depth: 0.00								
Vertical Section:	<table border="1"> <thead> <tr> <th>Depth From (TVD) (usft)</th> <th>+N/-S (usft)</th> <th>+E/-W (usft)</th> <th>Direction (°)</th> </tr> </thead> <tbody> <tr> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>161.99</td> </tr> </tbody> </table>	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	0.00	0.00	0.00	161.99
Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)						
0.00	0.00	0.00	161.99						

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	4.00	335.00	899.84	6.32	-2.95	2.00	2.00	0.00	335.00	
1,450.00	4.00	335.00	1,448.50	41.10	-19.16	0.00	0.00	0.00	0.00	
1,566.86	5.00	307.65	1,565.01	47.90	-24.92	2.00	0.86	-23.40	-79.07	
5,027.48	5.00	307.65	5,012.46	232.14	-263.72	0.00	0.00	0.00	0.00	
5,831.50	60.00	158.58	5,686.23	-106.94	-152.34	8.00	6.84	-18.54	-150.41	
6,126.07	89.44	159.46	5,763.00	-369.40	-51.86	10.00	9.99	0.30	1.80	
9,829.70	89.44	159.46	5,799.00	-3,837.48	1,247.37	0.00	0.00	0.00	46.19	

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 WV Department of
 Environmental Protection
COMPASS 10.1 Build 74

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well OV Royalty Trust LLC BRK 8H - Slot 8H
Company:	SWN Production Company LLC	TVD Reference:	GL 1181' + KB 26' @ 1207 00usft (SDC 46)
Project:	Brooke County, WV (NAD 83)	MD Reference:	GL 1181' + KB 26' @ 1207 00usft (SDC 46)
Site:	OV Royalty Trust LLC BRK	North Reference:	Grid
Well:	OV Royalty Trust LLC BRK 8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,631,052.54	1,756,353.33	40.285727	-80.584279
100.00	0.00	0.00	100.00	0.00	0.00	14,631,052.54	1,756,353.33	40.285727	-80.584279
200.00	0.00	0.00	200.00	0.00	0.00	14,631,052.54	1,756,353.33	40.285727	-80.584279
300.00	0.00	0.00	300.00	0.00	0.00	14,631,052.54	1,756,353.33	40.285727	-80.584279
400.00	0.00	0.00	400.00	0.00	0.00	14,631,052.54	1,756,353.33	40.285727	-80.584279
500.00	0.00	0.00	500.00	0.00	0.00	14,631,052.54	1,756,353.33	40.285727	-80.584279
600.00	0.00	0.00	600.00	0.00	0.00	14,631,052.54	1,756,353.33	40.285727	-80.584279
700.00	0.00	0.00	700.00	0.00	0.00	14,631,052.54	1,756,353.33	40.285727	-80.584279
Start Build @ 700.00' MD - Build Rate = 2.00°/100'									
800.00	2.00	335.00	799.98	1.58	-0.74	14,631,054.12	1,756,352.59	40.285731	-80.584281
900.00	4.00	335.00	899.84	6.32	-2.95	14,631,058.86	1,756,350.38	40.285744	-80.584289
End Build @ 900.00' MD - Hold Angle = 4.00°									
1,000.00	4.00	335.00	999.59	12.65	-5.90	14,631,065.18	1,756,347.43	40.285761	-80.584300
1,100.00	4.00	335.00	1,099.35	18.97	-8.85	14,631,071.51	1,756,344.48	40.285779	-80.584310
1,200.00	4.00	335.00	1,199.11	25.29	-11.79	14,631,077.83	1,756,341.53	40.285796	-80.584321
1,300.00	4.00	335.00	1,298.86	31.61	-14.74	14,631,084.15	1,756,338.58	40.285814	-80.584331
1,400.00	4.00	335.00	1,398.62	37.94	-17.69	14,631,090.47	1,756,335.64	40.285831	-80.584342
1,450.00	4.00	335.00	1,448.50	41.10	-19.16	14,631,093.63	1,756,334.16	40.285840	-80.584347
Start Build/Turn @ 1450.00' MD - Dogleg = 2.00°/100'									
1,500.00	4.30	321.80	1,498.37	44.15	-21.06	14,631,096.69	1,756,332.27	40.285848	-80.584353
1,566.86	5.00	307.65	1,565.01	47.90	-24.92	14,631,100.44	1,756,328.41	40.285858	-80.584367
End Build/Turn @ 1566.86' MD - Hold Angle = 5.00°									
1,600.00	5.00	307.65	1,598.02	49.67	-27.21	14,631,102.20	1,756,326.12	40.285863	-80.584375
1,700.00	5.00	307.65	1,697.64	54.99	-34.11	14,631,107.53	1,756,319.22	40.285878	-80.584400
1,800.00	5.00	307.65	1,797.26	60.31	-41.01	14,631,112.85	1,756,312.32	40.285893	-80.584425
1,900.00	5.00	307.65	1,896.88	65.64	-47.91	14,631,118.18	1,756,305.42	40.285907	-80.584449
2,000.00	5.00	307.65	1,996.50	70.96	-54.81	14,631,123.50	1,756,298.52	40.285922	-80.584474
2,100.00	5.00	307.65	2,096.12	76.29	-61.71	14,631,128.82	1,756,291.62	40.285937	-80.584499
2,200.00	5.00	307.65	2,195.74	81.61	-68.61	14,631,134.15	1,756,284.72	40.285951	-80.584523
2,300.00	5.00	307.65	2,295.36	86.93	-75.51	14,631,139.47	1,756,277.82	40.285966	-80.584548
2,400.00	5.00	307.65	2,394.98	92.26	-82.41	14,631,144.79	1,756,270.92	40.285981	-80.584573
2,500.00	5.00	307.65	2,494.60	97.58	-89.31	14,631,150.12	1,756,264.02	40.285996	-80.584597
2,600.00	5.00	307.65	2,594.22	102.90	-96.21	14,631,155.44	1,756,257.11	40.286010	-80.584622
2,700.00	5.00	307.65	2,693.84	108.23	-103.11	14,631,160.77	1,756,250.21	40.286025	-80.584647
2,800.00	5.00	307.65	2,793.46	113.55	-110.01	14,631,166.09	1,756,243.31	40.286040	-80.584671
2,900.00	5.00	307.65	2,893.08	118.88	-116.91	14,631,171.41	1,756,236.41	40.286054	-80.584696
3,000.00	5.00	307.65	2,992.70	124.20	-123.81	14,631,176.74	1,756,229.51	40.286069	-80.584721
3,100.00	5.00	307.65	3,092.32	129.52	-130.71	14,631,182.06	1,756,222.61	40.286084	-80.584745
3,200.00	5.00	307.65	3,191.93	134.85	-137.62	14,631,187.38	1,756,215.71	40.286099	-80.584770
3,300.00	5.00	307.65	3,291.55	140.17	-144.52	14,631,192.71	1,756,208.81	40.286113	-80.584795
3,400.00	5.00	307.65	3,391.17	145.49	-151.42	14,631,198.03	1,756,201.91	40.286128	-80.584819
3,500.00	5.00	307.65	3,490.79	150.82	-158.32	14,631,203.36	1,756,195.01	40.286143	-80.584844
3,600.00	5.00	307.65	3,590.41	156.14	-165.22	14,631,208.68	1,756,188.11	40.286157	-80.584869
3,700.00	5.00	307.65	3,690.03	161.47	-172.12	14,631,214.00	1,756,181.21	40.286172	-80.584893
3,800.00	5.00	307.65	3,789.65	166.79	-179.02	14,631,219.33	1,756,174.31	40.286187	-80.584918
3,900.00	5.00	307.65	3,889.27	172.11	-185.92	14,631,224.65	1,756,167.41	40.286202	-80.584942
4,000.00	5.00	307.65	3,988.89	177.44	-192.82	14,631,229.98	1,756,160.51	40.286216	-80.584967
4,100.00	5.00	307.65	4,088.51	182.76	-199.72	14,631,235.30	1,756,153.61	40.286231	-80.584992
4,200.00	5.00	307.65	4,188.13	188.08	-206.62	14,631,240.62	1,756,146.71	40.286245	-80.585016
4,300.00	5.00	307.65	4,287.75	193.41	-213.52	14,631,245.95	1,756,139.80	40.286260	-80.585041
4,400.00	5.00	307.65	4,387.37	198.73	-220.42	14,631,251.27	1,756,132.90	40.286274	-80.585066
4,500.00	5.00	307.65	4,486.99	204.06	-227.32	14,631,256.59	1,756,126.00	40.286289	-80.585090
4,600.00	5.00	307.65	4,586.61	209.38	-234.22	14,631,261.92	1,756,119.10	40.286304	-80.585115
4,700.00	5.00	307.65	4,686.23	214.70	-241.12	14,631,267.24	1,756,112.20	40.286319	-80.585140

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well OV Royalty Trust LLC BRK 8H - Slot 8H
Company:	SWN Production Company LLC	TVD Reference:	GL 1181' + KB 26' @ 1207 00usft (SDC 46)
Project:	Brooke County, WV (NAD 83)	MD Reference:	GL 1181' + KB 26' @ 1207 00usft (SDC 46)
Site:	OV Royalty Trust LLC BRK	North Reference:	Grid
Well:	OV Royalty Trust LLC BRK 8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,800.00	5.00	307.65	4,785.85	220.03	-248.03	14,631,272.57	1,756,105.30	40.286334	-80.585164
4,900.00	5.00	307.65	4,885.47	225.35	-254.93	14,631,277.89	1,756,098.40	40.286349	-80.585189
5,000.00	5.00	307.65	4,985.09	230.67	-261.83	14,631,283.21	1,756,091.50	40.286363	-80.585214
5,027.48	5.00	307.65	5,012.46	232.14	-263.72	14,631,284.68	1,756,089.60	40.286367	-80.585220
Start Build/Turn @ 5027 48' MD - Dogleg = 8.00°/100'									
5,050.00	3.55	293.12	5,034.92	233.01	-265.14	14,631,285.55	1,756,088.19	40.286370	-80.585226
5,100.00	2.86	216.67	5,084.86	232.62	-267.31	14,631,285.15	1,756,086.02	40.286369	-80.585233
5,150.00	5.98	181.43	5,134.71	229.01	-268.12	14,631,281.55	1,756,085.21	40.286359	-80.585236
5,200.00	9.76	171.65	5,184.23	222.21	-267.57	14,631,274.75	1,756,085.76	40.286340	-80.585234
5,250.00	13.67	167.35	5,233.18	212.24	-265.66	14,631,264.78	1,756,087.67	40.286313	-80.585228
5,300.00	17.62	164.95	5,281.32	199.16	-262.40	14,631,251.70	1,756,090.93	40.286277	-80.585216
5,350.00	21.59	163.40	5,328.42	183.04	-257.80	14,631,235.57	1,756,095.52	40.286232	-80.585200
5,400.00	25.56	162.32	5,374.23	163.94	-251.90	14,631,216.47	1,756,101.43	40.286180	-80.585179
5,450.00	29.54	161.51	5,418.55	141.96	-244.71	14,631,194.50	1,756,108.62	40.286119	-80.585154
5,500.00	33.53	160.88	5,461.16	117.21	-236.27	14,631,169.75	1,756,117.05	40.286051	-80.585124
5,550.00	37.52	160.37	5,501.84	89.81	-226.63	14,631,142.35	1,756,126.70	40.285976	-80.585090
5,600.00	41.51	159.94	5,540.41	59.89	-215.83	14,631,112.43	1,756,137.50	40.285894	-80.585052
5,650.00	45.50	159.58	5,576.67	27.60	-203.92	14,631,080.14	1,756,149.41	40.285805	-80.585009
5,700.00	49.50	159.26	5,610.44	-6.90	-190.96	14,631,045.64	1,756,162.37	40.285710	-80.584964
5,750.00	53.49	158.98	5,641.56	-43.45	-177.01	14,631,009.09	1,756,176.32	40.285609	-80.584914
5,800.00	57.49	158.72	5,669.89	-81.86	-162.15	14,630,970.67	1,756,191.18	40.285504	-80.584862
5,831.50	60.00	158.58	5,686.23	-106.94	-152.34	14,630,945.59	1,756,200.98	40.285435	-80.584827
Con't Build/Turn @ 5831 50' MD - Dogleg = 10.00°/100'									
5,850.00	61.85	158.64	5,695.22	-122.00	-146.45	14,630,930.54	1,756,206.88	40.285393	-80.584806
5,900.00	66.85	158.81	5,716.86	-163.98	-130.10	14,630,888.55	1,756,223.23	40.285278	-80.584748
5,950.00	71.84	158.97	5,734.49	-207.62	-113.25	14,630,844.92	1,756,240.07	40.285158	-80.584688
6,000.00	76.84	159.11	5,747.98	-252.56	-96.04	14,630,799.98	1,756,257.29	40.285034	-80.584627
6,050.00	81.84	159.25	5,757.22	-298.48	-78.58	14,630,754.06	1,756,274.75	40.284908	-80.584565
6,100.00	86.84	159.39	5,762.15	-345.01	-61.01	14,630,707.53	1,756,292.31	40.284780	-80.584503
6,126.07	89.44	159.46	5,763.00	-369.40	-51.86	14,630,683.13	1,756,301.47	40.284713	-80.584471
End Build/Turn @ 6126 07' MD - Hold Angle = 89 44°									
6,200.00	89.44	159.46	5,763.72	-438.63	-25.92	14,630,613.91	1,756,327.40	40.284522	-80.584379
6,300.00	89.44	159.46	5,764.69	-532.27	9.16	14,630,520.27	1,756,362.49	40.284265	-80.584255
6,400.00	89.44	159.46	5,765.67	-625.91	44.24	14,630,426.63	1,756,397.57	40.284007	-80.584131
6,500.00	89.44	159.46	5,766.64	-719.55	79.32	14,630,332.99	1,756,432.65	40.283750	-80.584006
6,600.00	89.44	159.46	5,767.62	-813.19	114.40	14,630,239.35	1,756,467.73	40.283492	-80.583882
6,700.00	89.44	159.46	5,768.59	-906.83	149.49	14,630,145.71	1,756,502.81	40.283234	-80.583758
6,800.00	89.44	159.46	5,769.56	-1,000.47	184.57	14,630,052.07	1,756,537.89	40.282977	-80.583634
6,900.00	89.44	159.46	5,770.54	-1,094.11	219.65	14,629,958.43	1,756,572.97	40.282719	-80.583510
7,000.00	89.44	159.46	5,771.51	-1,187.75	254.73	14,629,864.79	1,756,608.05	40.282462	-80.583385
7,100.00	89.44	159.46	5,772.48	-1,281.39	289.81	14,629,771.15	1,756,643.14	40.282204	-80.583261
7,200.00	89.44	159.46	5,773.46	-1,375.03	324.89	14,629,677.51	1,756,678.22	40.281947	-80.583137
7,300.00	89.44	159.46	5,774.43	-1,468.67	359.97	14,629,583.87	1,756,713.30	40.281689	-80.583013
7,400.00	89.44	159.46	5,775.40	-1,562.31	395.05	14,629,490.23	1,756,748.38	40.281431	-80.582889
7,500.00	89.44	159.46	5,776.37	-1,655.95	430.13	14,629,396.59	1,756,783.46	40.281174	-80.582764
7,600.00	89.44	159.46	5,777.35	-1,749.59	465.21	14,629,302.95	1,756,818.54	40.280916	-80.582640
7,700.00	89.44	159.46	5,778.32	-1,843.23	500.29	14,629,209.31	1,756,853.62	40.280659	-80.582516
7,800.00	89.44	159.46	5,779.29	-1,936.87	535.37	14,629,115.67	1,756,888.70	40.280401	-80.582392
7,900.00	89.44	159.46	5,780.26	-2,030.51	570.45	14,629,022.03	1,756,923.78	40.280143	-80.582268
8,000.00	89.44	159.46	5,781.24	-2,124.15	605.53	14,628,928.39	1,756,958.86	40.279886	-80.582143
8,100.00	89.44	159.46	5,782.21	-2,217.79	640.61	14,628,834.75	1,756,993.94	40.279628	-80.582019
8,200.00	89.44	159.46	5,783.18	-2,311.43	675.69	14,628,741.11	1,757,029.02	40.279371	-80.581895
8,300.00	89.44	159.46	5,784.15	-2,405.07	710.77	14,628,647.47	1,757,064.10	40.279113	-80.581771
8,400.00	89.44	159.46	5,785.12	-2,498.71	745.85	14,628,553.83	1,757,099.18	40.278855	-80.581647

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well OV Royalty Trust LLC BRK 8H - Slot 8H
Company:	SWN Production Company LLC	TVD Reference:	GL 1181' + KB 26' @ 1207 00usft (SDC 46)
Project:	Brooke County, WV (NAD 83)	MD Reference:	GL 1181' + KB 26' @ 1207 00usft (SDC 46)
Site:	OV Royalty Trust LLC BRK	North Reference:	Grid
Well:	OV Royalty Trust LLC BRK 8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,500.00	89.44	159.46	5,786.09	-2,592.35	780.93	14,628,460.19	1,757,134.26	40.278598	-80.581522
8,600.00	89.44	159.46	5,787.07	-2,685.99	816.01	14,628,366.55	1,757,169.34	40.278340	-80.581398
8,700.00	89.44	159.46	5,788.04	-2,779.63	851.09	14,628,272.91	1,757,204.41	40.278083	-80.581274
8,800.00	89.44	159.46	5,789.01	-2,873.27	886.17	14,628,179.27	1,757,239.49	40.277825	-80.581150
8,900.00	89.44	159.46	5,789.98	-2,966.91	921.25	14,628,085.63	1,757,274.57	40.277567	-80.581026
9,000.00	89.44	159.46	5,790.95	-3,060.55	956.32	14,627,991.99	1,757,309.65	40.277310	-80.580902
9,100.00	89.44	159.46	5,791.92	-3,154.19	991.40	14,627,898.35	1,757,344.73	40.277052	-80.580777
9,200.00	89.44	159.46	5,792.89	-3,247.83	1,026.48	14,627,804.71	1,757,379.81	40.276795	-80.580653
9,300.00	89.44	159.46	5,793.86	-3,341.47	1,061.56	14,627,711.07	1,757,414.89	40.276537	-80.580529
9,400.00	89.44	159.46	5,794.83	-3,435.11	1,096.64	14,627,617.43	1,757,449.97	40.276280	-80.580405
9,500.00	89.44	159.46	5,795.80	-3,528.75	1,131.72	14,627,523.79	1,757,485.04	40.276022	-80.580281
9,600.00	89.44	159.46	5,796.77	-3,622.39	1,166.79	14,627,430.14	1,757,520.12	40.275764	-80.580157
9,700.00	89.44	159.46	5,797.74	-3,716.03	1,201.87	14,627,336.50	1,757,555.20	40.275507	-80.580032
9,800.00	89.44	159.46	5,798.71	-3,809.67	1,236.95	14,627,242.86	1,757,590.28	40.275249	-80.579908
9,829.70	89.44	159.46	5,799.00	-3,837.48	1,247.37	14,627,215.05	1,757,600.69	40.275173	-80.579871

TD at 9829 70' MD

Design Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
OV Royalty Trust LLC	- plan hits target center	0.00	0.00	5,763.00	-369.40	-51.86	14,630,683.13	1,756,301.47	40.284713	-80.584471
	- Point									
OV Royalty Trust LLC	- plan hits target center	0.00	0.00	5,799.00	-3,837.48	1,247.37	14,627,215.05	1,757,600.69	40.275173	-80.579871
	- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
100.00	100.00	26"	26.000	30.000
300.00	300.00	13 3/8"	13.375	17.500
1,549.00	1,547.21	9 5/8"	9.625	12.250

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,970.03	5,740.49	Upper Marcellus		0.44	161.99

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Well OV Royalty Trust LLC BRK 8H - Slot 8H
Company:	SWN Production Company LLC	TVD Reference:	GL 1181' + KB 26' @ 1207.00usft (SDC 46)
Project:	Brooke County, WV (NAD 83)	MD Reference:	GL 1181' + KB 26' @ 1207.00usft (SDC 46)
Site:	OV Royalty Trust LLC BRK	North Reference:	Grid
Well:	OV Royalty Trust LLC BRK 8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
700.00	700.00	0.00	0.00	Start Build @ 700.00' MD
700.00	700.00	0.00	0.00	Build Rate = 2.00°/100'
900.00	899.84	6.32	-2.95	End Build @ 900.00' MD
900.00	899.84	6.32	-2.95	Hold Angle = 4.00°
1,450.00	1,448.50	41.10	-19.16	Start Build/Turn @ 1450.00' MD
1,450.00	1,448.50	41.10	-19.16	Dogleg = 2.00°/100'
1,566.86	1,565.01	47.90	-24.92	End Build/Turn @ 1566.86' MD
1,566.86	1,565.01	47.90	-24.92	Hold Angle = 5.00°
5,027.48	5,012.46	232.14	-263.72	Start Build/Turn @ 5027.48' MD
5,027.48	5,012.46	232.14	-263.72	Dogleg = 8.00°/100'
5,831.50	5,686.23	-106.94	-152.34	Con't Build/Turn @ 5831.50' MD
5,831.50	5,686.23	-106.94	-152.34	Dogleg = 10.00°/100'
6,126.07	5,763.00	-369.40	-51.86	End Build/Turn @ 6126.07' MD
6,126.07	5,763.00	-369.40	-51.86	Hold Angle = 89.44°
9,829.70	5,799.00	-3,837.48	1,247.37	TD at 9829.70' MD

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