



DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	7100.00	-1359.32	-8161.35	1420881.46	3196971.24	40.4865620	-104.7918570	Point	
TOP	- plan hits target center 7140.00    -1315.12    -782.73    1420987.03    3204349.23    40.4866870    -104.7653300    Point - plan misses target center by 71.65ft at 7621.35ft MD (7139.99 TVD, -1243.48 N, -783.85 E)								
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
727.50	10.55	187.35	724.52	-48.03	-6.20	2.00	187.35	6.95	
6633.30	10.55	187.35	6530.49	-1120.46	-144.53	0.00	0.00	162.10	
7619.97	90.31	269.10	7140.00	-1243.45	-782.47	9.00	81.83	801.89	
14999.87	90.31	269.10	7100.00	-1359.32	-8161.35	0.00	0.00	8181.69	PBHL
CASING DETAILS						PROJECT DETAILS: SECTION 15, T6N, R66W			
TVD	MD	Name	Size	Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone Colorado Northern Zone System Datum: Mean Sea Level					
1750.00	1770.61	9 5/8"	9.625						



# **SRC ENERGY**

**SECTION 15, T6N, R66W  
HARVESTERS STATE 7-15 PAD  
HARVESTERS STATE 12N-16C-M**

**OH**

**Plan: PLAN #1**

## **Standard Planning Report**

**02 October, 2017**





<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HARVESTERS STATE 12N-16C-M
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	KB @ 4820.00ft
<b>Project:</b>	SECTION 15, T6N, R66W	<b>MD Reference:</b>	KB @ 4820.00ft
<b>Site:</b>	HARVESTERS STATE 7-15 PAD	<b>North Reference:</b>	True
<b>Well:</b>	HARVESTERS STATE 12N-16C-M	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

<b>Project</b>	SECTION 15, T6N, R66W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	HARVESTERS STATE 7-15 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,422,648.53 usft	<b>Latitude:</b> 40.4912300
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,205,120.94 usft	<b>Longitude:</b> -104.7625060
<b>Position Uncertainty:</b>	3.28 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.48 °

<b>Well</b>	HARVESTERS STATE 12N-16C-M, 1933' FNL & 2336' FEL			
<b>Well Position</b>	<b>+N/-S</b>	-339.90 ft	<b>Northing:</b>	1,422,308.61 usft
	<b>+E/-W</b>	-2.78 ft	<b>Easting:</b>	3,205,120.99 usft
<b>Position Uncertainty</b>		3.28 ft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 40.4902970
				<b>Longitude:</b> -104.7625160
				<b>Ground Level:</b> 4,800.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	9/28/2017	8.19	66.92	52,407

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	269.10

<b>Plan Survey Tool Program</b>	<b>Date</b>	10/2/2017		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	14,999.87	PLAN #1 (OH)	MWD+IFR1
				OWSG MWD + IFR1

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
727.50	10.55	187.35	724.52	-48.03	-6.20	2.00	2.00	0.00	187.35	
6,633.30	10.55	187.35	6,530.49	-1,120.46	-144.53	0.00	0.00	0.00	0.00	
7,619.97	90.31	269.10	7,140.00	-1,243.45	-782.47	9.00	8.08	8.29	81.83	
14,999.87	90.31	269.10	7,100.00	-1,359.32	-8,161.35	0.00	0.00	0.00	0.00	PBHL_HARVESTERS

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HARVESTERS STATE 12N-16C-M
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	KB @ 4820.00ft
<b>Project:</b>	SECTION 15, T6N, R66W	<b>MD Reference:</b>	KB @ 4820.00ft
<b>Site:</b>	HARVESTERS STATE 7-15 PAD	<b>North Reference:</b>	True
<b>Well:</b>	HARVESTERS STATE 12N-16C-M	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
300.00	2.00	187.35	299.98	-1.73	-0.22	0.25	2.00	2.00	0.00
400.00	4.00	187.35	399.84	-6.92	-0.89	1.00	2.00	2.00	0.00
500.00	6.00	187.35	499.45	-15.56	-2.01	2.25	2.00	2.00	0.00
600.00	8.00	187.35	598.70	-27.65	-3.57	4.00	2.00	2.00	0.00
700.00	10.00	187.35	697.47	-43.16	-5.57	6.24	2.00	2.00	0.00
727.50	10.55	187.35	724.52	-48.03	-6.20	6.95	2.00	2.00	0.00
<b>Start 5905.80 hold at 727.50 MD</b>									
800.00	10.55	187.35	795.80	-61.20	-7.89	8.85	0.00	0.00	0.00
900.00	10.55	187.35	894.11	-79.35	-10.24	11.48	0.00	0.00	0.00
1,000.00	10.55	187.35	992.42	-97.51	-12.58	14.11	0.00	0.00	0.00
1,100.00	10.55	187.35	1,090.73	-115.67	-14.92	16.73	0.00	0.00	0.00
1,200.00	10.55	187.35	1,189.04	-133.83	-17.26	19.36	0.00	0.00	0.00
1,300.00	10.55	187.35	1,287.35	-151.99	-19.61	21.99	0.00	0.00	0.00
1,400.00	10.55	187.35	1,385.66	-170.15	-21.95	24.62	0.00	0.00	0.00
1,500.00	10.55	187.35	1,483.97	-188.31	-24.29	27.24	0.00	0.00	0.00
1,600.00	10.55	187.35	1,582.28	-206.47	-26.63	29.87	0.00	0.00	0.00
1,700.00	10.55	187.35	1,680.58	-224.63	-28.97	32.50	0.00	0.00	0.00
1,770.61	10.55	187.35	1,750.00	-237.45	-30.63	34.35	0.00	0.00	0.00
<b>9 5/8"</b>									
1,800.00	10.55	187.35	1,778.89	-242.78	-31.32	35.12	0.00	0.00	0.00
1,900.00	10.55	187.35	1,877.20	-260.94	-33.66	37.75	0.00	0.00	0.00
2,000.00	10.55	187.35	1,975.51	-279.10	-36.00	40.38	0.00	0.00	0.00
2,100.00	10.55	187.35	2,073.82	-297.26	-38.34	43.01	0.00	0.00	0.00
2,200.00	10.55	187.35	2,172.13	-315.42	-40.69	45.63	0.00	0.00	0.00
2,300.00	10.55	187.35	2,270.44	-333.58	-43.03	48.26	0.00	0.00	0.00
2,400.00	10.55	187.35	2,368.75	-351.74	-45.37	50.89	0.00	0.00	0.00
2,500.00	10.55	187.35	2,467.06	-369.90	-47.71	53.51	0.00	0.00	0.00
2,600.00	10.55	187.35	2,565.37	-388.06	-50.06	56.14	0.00	0.00	0.00
2,700.00	10.55	187.35	2,663.68	-406.21	-52.40	58.77	0.00	0.00	0.00
2,800.00	10.55	187.35	2,761.99	-424.37	-54.74	61.40	0.00	0.00	0.00
2,900.00	10.55	187.35	2,860.30	-442.53	-57.08	64.02	0.00	0.00	0.00
3,000.00	10.55	187.35	2,958.61	-460.69	-59.42	66.65	0.00	0.00	0.00
3,100.00	10.55	187.35	3,056.92	-478.85	-61.77	69.28	0.00	0.00	0.00
3,200.00	10.55	187.35	3,155.23	-497.01	-64.11	71.90	0.00	0.00	0.00
3,300.00	10.55	187.35	3,253.54	-515.17	-66.45	74.53	0.00	0.00	0.00
3,400.00	10.55	187.35	3,351.85	-533.33	-68.79	77.16	0.00	0.00	0.00
3,500.00	10.55	187.35	3,450.16	-551.49	-71.14	79.79	0.00	0.00	0.00
3,600.00	10.55	187.35	3,548.47	-569.64	-73.48	82.41	0.00	0.00	0.00
3,700.00	10.55	187.35	3,646.78	-587.80	-75.82	85.04	0.00	0.00	0.00
3,800.00	10.55	187.35	3,745.09	-605.96	-78.16	87.67	0.00	0.00	0.00
3,900.00	10.55	187.35	3,843.39	-624.12	-80.51	90.29	0.00	0.00	0.00
4,000.00	10.55	187.35	3,941.70	-642.28	-82.85	92.92	0.00	0.00	0.00
4,100.00	10.55	187.35	4,040.01	-660.44	-85.19	95.55	0.00	0.00	0.00
4,200.00	10.55	187.35	4,138.32	-678.60	-87.53	98.18	0.00	0.00	0.00
4,300.00	10.55	187.35	4,236.63	-696.76	-89.87	100.80	0.00	0.00	0.00
4,400.00	10.55	187.35	4,334.94	-714.92	-92.22	103.43	0.00	0.00	0.00
4,500.00	10.55	187.35	4,433.25	-733.07	-94.56	106.06	0.00	0.00	0.00
4,600.00	10.55	187.35	4,531.56	-751.23	-96.90	108.68	0.00	0.00	0.00
4,700.00	10.55	187.35	4,629.87	-769.39	-99.24	111.31	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HARVESTERS STATE 12N-16C-M
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	KB @ 4820.00ft
<b>Project:</b>	SECTION 15, T6N, R66W	<b>MD Reference:</b>	KB @ 4820.00ft
<b>Site:</b>	HARVESTERS STATE 7-15 PAD	<b>North Reference:</b>	True
<b>Well:</b>	HARVESTERS STATE 12N-16C-M	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,800.00	10.55	187.35	4,728.18	-787.55	-101.59	113.94	0.00	0.00	0.00
4,900.00	10.55	187.35	4,826.49	-805.71	-103.93	116.57	0.00	0.00	0.00
5,000.00	10.55	187.35	4,924.80	-823.87	-106.27	119.19	0.00	0.00	0.00
5,100.00	10.55	187.35	5,023.11	-842.03	-108.61	121.82	0.00	0.00	0.00
5,200.00	10.55	187.35	5,121.42	-860.19	-110.96	124.45	0.00	0.00	0.00
5,300.00	10.55	187.35	5,219.73	-878.35	-113.30	127.07	0.00	0.00	0.00
5,400.00	10.55	187.35	5,318.04	-896.50	-115.64	129.70	0.00	0.00	0.00
5,500.00	10.55	187.35	5,416.35	-914.66	-117.98	132.33	0.00	0.00	0.00
5,600.00	10.55	187.35	5,514.66	-932.82	-120.32	134.96	0.00	0.00	0.00
5,700.00	10.55	187.35	5,612.97	-950.98	-122.67	137.58	0.00	0.00	0.00
5,800.00	10.55	187.35	5,711.28	-969.14	-125.01	140.21	0.00	0.00	0.00
5,900.00	10.55	187.35	5,809.59	-987.30	-127.35	142.84	0.00	0.00	0.00
6,000.00	10.55	187.35	5,907.90	-1,005.46	-129.69	145.46	0.00	0.00	0.00
6,100.00	10.55	187.35	6,006.20	-1,023.62	-132.04	148.09	0.00	0.00	0.00
6,200.00	10.55	187.35	6,104.51	-1,041.78	-134.38	150.72	0.00	0.00	0.00
6,300.00	10.55	187.35	6,202.82	-1,059.93	-136.72	153.35	0.00	0.00	0.00
6,400.00	10.55	187.35	6,301.13	-1,078.09	-139.06	155.97	0.00	0.00	0.00
6,500.00	10.55	187.35	6,399.44	-1,096.25	-141.41	158.60	0.00	0.00	0.00
6,600.00	10.55	187.35	6,497.75	-1,114.41	-143.75	161.23	0.00	0.00	0.00
6,633.30	10.55	187.35	6,530.49	-1,120.46	-144.53	162.10	0.00	0.00	0.00
<b>Start DLS 9.00 TFO 81.83</b>									
6,700.00	12.84	215.11	6,595.85	-1,132.59	-149.58	167.34	9.00	3.44	41.62
6,800.00	19.46	237.61	6,691.94	-1,150.64	-170.08	188.12	9.00	6.62	22.51
6,900.00	27.44	248.25	6,783.65	-1,168.14	-205.62	223.94	9.00	7.98	10.64
7,000.00	35.88	254.28	6,868.71	-1,184.65	-255.33	273.90	9.00	8.44	6.03
7,100.00	44.51	258.24	6,945.04	-1,199.76	-317.98	336.78	9.00	8.63	3.96
7,200.00	53.24	261.13	7,010.75	-1,213.11	-392.03	411.03	9.00	8.73	2.89
7,300.00	62.03	263.43	7,064.23	-1,224.37	-475.65	494.81	9.00	8.79	2.30
7,400.00	70.85	265.37	7,104.16	-1,233.25	-566.79	586.08	9.00	8.82	1.95
7,500.00	79.69	267.12	7,129.56	-1,239.54	-663.20	682.58	9.00	8.84	1.75
7,600.00	88.54	268.77	7,139.80	-1,243.08	-762.51	781.93	9.00	8.85	1.65
7,619.97	90.31	269.10	7,140.00	-1,243.45	-782.47	801.89	9.00	8.85	1.63
<b>LP(2097 FSL 2228 FWL)</b>									
7,621.35	90.31	269.10	7,139.99	-1,243.48	-783.85	803.28	0.00	0.00	0.00
<b>TOP_HARVESTERS STATE 12N-16C-M(2026 FSL 2228 FWL)</b>									
7,700.00	90.31	269.10	7,139.56	-1,244.71	-862.49	881.93	0.00	0.00	0.00
7,800.00	90.31	269.10	7,139.02	-1,246.28	-962.48	981.93	0.00	0.00	0.00
7,900.00	90.31	269.10	7,138.48	-1,247.85	-1,062.46	1,081.92	0.00	0.00	0.00
8,000.00	90.31	269.10	7,137.94	-1,249.42	-1,162.45	1,181.92	0.00	0.00	0.00
8,100.00	90.31	269.10	7,137.39	-1,250.99	-1,262.44	1,281.92	0.00	0.00	0.00
8,200.00	90.31	269.10	7,136.85	-1,252.56	-1,362.42	1,381.92	0.00	0.00	0.00
8,300.00	90.31	269.10	7,136.31	-1,254.13	-1,462.41	1,481.92	0.00	0.00	0.00
8,400.00	90.31	269.10	7,135.77	-1,255.70	-1,562.39	1,581.92	0.00	0.00	0.00
8,500.00	90.31	269.10	7,135.23	-1,257.27	-1,662.38	1,681.92	0.00	0.00	0.00
8,600.00	90.31	269.10	7,134.69	-1,258.84	-1,762.37	1,781.91	0.00	0.00	0.00
8,700.00	90.31	269.10	7,134.14	-1,260.41	-1,862.35	1,881.91	0.00	0.00	0.00
8,800.00	90.31	269.10	7,133.60	-1,261.98	-1,962.34	1,981.91	0.00	0.00	0.00
8,900.00	90.31	269.10	7,133.06	-1,263.55	-2,062.33	2,081.91	0.00	0.00	0.00
9,000.00	90.31	269.10	7,132.52	-1,265.12	-2,162.31	2,181.91	0.00	0.00	0.00
9,100.00	90.31	269.10	7,131.98	-1,266.69	-2,262.30	2,281.91	0.00	0.00	0.00
9,200.00	90.31	269.10	7,131.43	-1,268.26	-2,362.28	2,381.90	0.00	0.00	0.00
9,300.00	90.31	269.10	7,130.89	-1,269.83	-2,462.27	2,481.90	0.00	0.00	0.00
9,400.00	90.31	269.10	7,130.35	-1,271.40	-2,562.26	2,581.90	0.00	0.00	0.00



<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HARVESTERS STATE 12N-16C-M
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	KB @ 4820.00ft
<b>Project:</b>	SECTION 15, T6N, R66W	<b>MD Reference:</b>	KB @ 4820.00ft
<b>Site:</b>	HARVESTERS STATE 7-15 PAD	<b>North Reference:</b>	True
<b>Well:</b>	HARVESTERS STATE 12N-16C-M	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,500.00	90.31	269.10	7,129.81	-1,272.97	-2,662.24	2,681.90	0.00	0.00	0.00	
9,600.00	90.31	269.10	7,129.27	-1,274.54	-2,762.23	2,781.90	0.00	0.00	0.00	
9,700.00	90.31	269.10	7,128.72	-1,276.11	-2,862.21	2,881.90	0.00	0.00	0.00	
9,800.00	90.31	269.10	7,128.18	-1,277.68	-2,962.20	2,981.90	0.00	0.00	0.00	
9,900.00	90.31	269.10	7,127.64	-1,279.25	-3,062.19	3,081.89	0.00	0.00	0.00	
10,000.00	90.31	269.10	7,127.10	-1,280.82	-3,162.17	3,181.89	0.00	0.00	0.00	
10,100.00	90.31	269.10	7,126.56	-1,282.39	-3,262.16	3,281.89	0.00	0.00	0.00	
10,200.00	90.31	269.10	7,126.01	-1,283.96	-3,362.15	3,381.89	0.00	0.00	0.00	
10,300.00	90.31	269.10	7,125.47	-1,285.53	-3,462.13	3,481.89	0.00	0.00	0.00	
10,400.00	90.31	269.10	7,124.93	-1,287.10	-3,562.12	3,581.89	0.00	0.00	0.00	
10,500.00	90.31	269.10	7,124.39	-1,288.67	-3,662.10	3,681.89	0.00	0.00	0.00	
10,600.00	90.31	269.10	7,123.85	-1,290.24	-3,762.09	3,781.88	0.00	0.00	0.00	
10,700.00	90.31	269.10	7,123.30	-1,291.81	-3,862.08	3,881.88	0.00	0.00	0.00	
10,800.00	90.31	269.10	7,122.76	-1,293.38	-3,962.06	3,981.88	0.00	0.00	0.00	
10,900.00	90.31	269.10	7,122.22	-1,294.95	-4,062.05	4,081.88	0.00	0.00	0.00	
11,000.00	90.31	269.10	7,121.68	-1,296.52	-4,162.04	4,181.88	0.00	0.00	0.00	
11,100.00	90.31	269.10	7,121.14	-1,298.09	-4,262.02	4,281.88	0.00	0.00	0.00	
11,200.00	90.31	269.10	7,120.59	-1,299.66	-4,362.01	4,381.88	0.00	0.00	0.00	
11,300.00	90.31	269.10	7,120.05	-1,301.23	-4,461.99	4,481.87	0.00	0.00	0.00	
11,400.00	90.31	269.10	7,119.51	-1,302.80	-4,561.98	4,581.87	0.00	0.00	0.00	
11,500.00	90.31	269.10	7,118.97	-1,304.37	-4,661.97	4,681.87	0.00	0.00	0.00	
11,600.00	90.31	269.10	7,118.43	-1,305.94	-4,761.95	4,781.87	0.00	0.00	0.00	
11,700.00	90.31	269.10	7,117.88	-1,307.51	-4,861.94	4,881.87	0.00	0.00	0.00	
11,800.00	90.31	269.10	7,117.34	-1,309.08	-4,961.93	4,981.87	0.00	0.00	0.00	
11,900.00	90.31	269.10	7,116.80	-1,310.65	-5,061.91	5,081.87	0.00	0.00	0.00	
12,000.00	90.31	269.10	7,116.26	-1,312.22	-5,161.90	5,181.86	0.00	0.00	0.00	
12,100.00	90.31	269.10	7,115.72	-1,313.79	-5,261.88	5,281.86	0.00	0.00	0.00	
12,200.00	90.31	269.10	7,115.17	-1,315.36	-5,361.87	5,381.86	0.00	0.00	0.00	
12,300.00	90.31	269.10	7,114.63	-1,316.93	-5,461.86	5,481.86	0.00	0.00	0.00	
12,400.00	90.31	269.10	7,114.09	-1,318.50	-5,561.84	5,581.86	0.00	0.00	0.00	
12,500.00	90.31	269.10	7,113.55	-1,320.07	-5,661.83	5,681.86	0.00	0.00	0.00	
12,600.00	90.31	269.10	7,113.01	-1,321.64	-5,761.81	5,781.85	0.00	0.00	0.00	
12,700.00	90.31	269.10	7,112.46	-1,323.21	-5,861.80	5,881.85	0.00	0.00	0.00	
12,800.00	90.31	269.10	7,111.92	-1,324.78	-5,961.79	5,981.85	0.00	0.00	0.00	
12,900.00	90.31	269.10	7,111.38	-1,326.35	-6,061.77	6,081.85	0.00	0.00	0.00	
13,000.00	90.31	269.10	7,110.84	-1,327.92	-6,161.76	6,181.85	0.00	0.00	0.00	
13,100.00	90.31	269.10	7,110.30	-1,329.49	-6,261.75	6,281.85	0.00	0.00	0.00	
13,200.00	90.31	269.10	7,109.75	-1,331.06	-6,361.73	6,381.85	0.00	0.00	0.00	
13,300.00	90.31	269.10	7,109.21	-1,332.63	-6,461.72	6,481.84	0.00	0.00	0.00	
13,400.00	90.31	269.10	7,108.67	-1,334.20	-6,561.70	6,581.84	0.00	0.00	0.00	
13,500.00	90.31	269.10	7,108.13	-1,335.77	-6,661.69	6,681.84	0.00	0.00	0.00	
13,600.00	90.31	269.10	7,107.59	-1,337.34	-6,761.68	6,781.84	0.00	0.00	0.00	
13,700.00	90.31	269.10	7,107.04	-1,338.91	-6,861.66	6,881.84	0.00	0.00	0.00	
13,800.00	90.31	269.10	7,106.50	-1,340.48	-6,961.65	6,981.84	0.00	0.00	0.00	
13,900.00	90.31	269.10	7,105.96	-1,342.05	-7,061.64	7,081.84	0.00	0.00	0.00	
14,000.00	90.31	269.10	7,105.42	-1,343.62	-7,161.62	7,181.83	0.00	0.00	0.00	
14,100.00	90.31	269.10	7,104.88	-1,345.19	-7,261.61	7,281.83	0.00	0.00	0.00	
14,200.00	90.31	269.10	7,104.34	-1,346.76	-7,361.59	7,381.83	0.00	0.00	0.00	
14,300.00	90.31	269.10	7,103.79	-1,348.33	-7,461.58	7,481.83	0.00	0.00	0.00	
14,400.00	90.31	269.10	7,103.25	-1,349.90	-7,561.57	7,581.83	0.00	0.00	0.00	
14,500.00	90.31	269.10	7,102.71	-1,351.47	-7,661.55	7,681.83	0.00	0.00	0.00	
14,600.00	90.31	269.10	7,102.17	-1,353.04	-7,761.54	7,781.83	0.00	0.00	0.00	
14,700.00	90.31	269.10	7,101.63	-1,354.61	-7,861.53	7,881.82	0.00	0.00	0.00	
14,800.00	90.31	269.10	7,101.08	-1,356.18	-7,961.51	7,981.82	0.00	0.00	0.00	

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HARVESTERS STATE 12N-16C-M
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	KB @ 4820.00ft
<b>Project:</b>	SECTION 15, T6N, R66W	<b>MD Reference:</b>	KB @ 4820.00ft
<b>Site:</b>	HARVESTERS STATE 7-15 PAD	<b>North Reference:</b>	True
<b>Well:</b>	HARVESTERS STATE 12N-16C-M	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,900.00	90.31	269.10	7,100.54	-1,357.75	-8,061.50	8,081.82	0.00	0.00	0.00
14,999.87	90.31	269.10	7,100.00	-1,359.32	-8,161.35	8,181.69	0.00	0.00	0.00
TD at 14999.87 - PBHL_HARVESTERS STATE 12N-16C-M(2058 FSL 150' FWL)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_HARVESTERS S	0.00	0.00	7,100.00	-1,359.32	-8,161.35	1,420,881.47	3,196,971.24	40.4865620	-104.7918570
- plan hits target center									
- Point									
TOP_HARVESTERS ST	0.00	0.00	7,140.00	-1,315.12	-782.73	1,420,987.03	3,204,349.23	40.4866870	-104.7653300
- plan misses target center by 71.65ft at 7621.35ft MD (7139.99 TVD, -1243.48 N, -783.85 E)									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,770.61	1,750.00	9 5/8"	9.625	13.500	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
200.00	200.00	0.00	0.00	Start Build 2.00
727.50	724.52	-48.03	-6.20	Start 5905.80 hold at 727.50 MD
6,633.30	6,530.49	-1,120.46	-144.53	Start DLS 9.00 TFO 81.83
7,619.97	7,140.00	-1,243.45	-782.47	LP(2097 FSL 2228 FWL)
14,999.87	7,100.00	-1,359.32	-8,161.35	TD at 14999.87