



DESIGN TARGET DETAILS										
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
PBHL	7226.00	442.54	-8162.63	1422923.33	3196954.93	40.4921670	-104.7918570	Point		
- plan hits target center										
TOP	7253.00	500.95	-790.45	1423043.04	3204326.35	40.4923310	-104.7653510	Point		
- plan misses target center by 100.20ft at 7633.20ft MD (7252.99 TVD, 400.75 N, -791.02 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		
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00		
788.00	3.76	337.10	787.87	5.68	-2.40	2.00	337.10	2.43		
6646.73	3.76	337.10	6633.98	359.60	-151.89	0.00	0.00	153.93		
7632.59	90.21	270.32	7253.00	400.74	-790.41	9.00	-66.81	792.66		
15004.98	90.21	270.32	7226.00	442.54	-8162.63	0.00	0.00	8165.00	PBHL	
CASING DETAILS						PROJECT DETAILS: SECTION 15, T6N, R66W				
TVD	MD	Name	Size							
1750.00	1752.21	9 5/8"	9.625							
ESTERS STATE 31C-16-M(1183 FNL 150 FWL)						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				



SRC ENERGY

**SECTION 15, T6N, R66W
HARVESTERS STATE 7-15 PAD
HARVESTERS STATE 31C-16-M**

OH

Plan: PLAN #1

Standard Planning Report

02 October, 2017





Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HARVESTERS STATE 31C-16-
Company:	SRC ENERGY	TVD Reference:	M KB @ 4821.00ft
Project:	SECTION 15, T6N, R66W	MD Reference:	KB @ 4821.00ft
Site:	HARVESTERS STATE 7-15 PAD	North Reference:	True
Well:	HARVESTERS STATE 31C-16-	Survey Calculation Method:	Minimum Curvature
Wellbore:	M OH		
Design:	PLAN #1		

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

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

Well	HARVESTERS STATE 31C-16-M, 1693' FNL & 2333' FEL			
Well Position	+N/-S	-99.83 ft	Northing:	1,422,548.69 usft
	+E/-W	-0.83 ft	Easting:	3,205,120.94 usft
Position Uncertainty		3.28 ft	Wellhead Elevation:	Ground Level: 4,801.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/27/2017	8.19	66.92	52,408

Design	PLAN #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	270.32

Plan Survey Tool Program	Date	10/2/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,004.86	PLAN #1 (OH)	MWD+IFR1
				OWSG MWD + IFR1

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
788.00	3.76	337.10	787.87	5.68	-2.40	2.00	2.00	0.00	337.10	
6,646.73	3.76	337.10	6,633.98	359.60	-151.89	0.00	0.00	0.00	0.00	
7,632.59	90.21	270.32	7,253.00	400.74	-790.41	9.00	8.77	-6.77	-66.81	
15,004.98	90.21	270.32	7,226.00	442.54	-8,162.63	0.00	0.00	0.00	0.00	PBHL_HARVESTERS

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HARVESTERS STATE 31C-16-
Company:	SRC ENERGY	TVD Reference:	M KB @ 4821.00ft
Project:	SECTION 15, T6N, R66W	MD Reference:	KB @ 4821.00ft
Site:	HARVESTERS STATE 7-15 PAD	North Reference:	True
Well:	HARVESTERS STATE 31C-16-	Survey Calculation Method:	Minimum Curvature
Wellbore:	M OH		
Design:	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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
700.00	2.00	337.10	699.98	1.61	-0.68	0.69	2.00	2.00	0.00
788.00	3.76	337.10	787.87	5.68	-2.40	2.43	2.00	2.00	0.00
Start 5858.73 hold at 788.00 MD									
800.00	3.76	337.10	799.84	6.41	-2.71	2.74	0.00	0.00	0.00
900.00	3.76	337.10	899.62	12.45	-5.26	5.33	0.00	0.00	0.00
1,000.00	3.76	337.10	999.41	18.49	-7.81	7.91	0.00	0.00	0.00
1,100.00	3.76	337.10	1,099.19	24.53	-10.36	10.50	0.00	0.00	0.00
1,200.00	3.76	337.10	1,198.98	30.57	-12.91	13.09	0.00	0.00	0.00
1,300.00	3.76	337.10	1,298.76	36.61	-15.46	15.67	0.00	0.00	0.00
1,400.00	3.76	337.10	1,398.55	42.65	-18.02	18.26	0.00	0.00	0.00
1,500.00	3.76	337.10	1,498.33	48.69	-20.57	20.84	0.00	0.00	0.00
1,600.00	3.76	337.10	1,598.12	54.73	-23.12	23.43	0.00	0.00	0.00
1,700.00	3.76	337.10	1,697.90	60.77	-25.67	26.01	0.00	0.00	0.00
1,752.21	3.76	337.10	1,750.00	63.93	-27.00	27.36	0.00	0.00	0.00
9 5/8"									
1,800.00	3.76	337.10	1,797.69	66.81	-28.22	28.60	0.00	0.00	0.00
1,900.00	3.76	337.10	1,897.47	72.86	-30.77	31.19	0.00	0.00	0.00
2,000.00	3.76	337.10	1,997.26	78.90	-33.33	33.77	0.00	0.00	0.00
2,100.00	3.76	337.10	2,097.04	84.94	-35.88	36.36	0.00	0.00	0.00
2,200.00	3.76	337.10	2,196.83	90.98	-38.43	38.94	0.00	0.00	0.00
2,300.00	3.76	337.10	2,296.61	97.02	-40.98	41.53	0.00	0.00	0.00
2,400.00	3.76	337.10	2,396.40	103.06	-43.53	44.12	0.00	0.00	0.00
2,500.00	3.76	337.10	2,496.18	109.10	-46.08	46.70	0.00	0.00	0.00
2,600.00	3.76	337.10	2,595.96	115.14	-48.64	49.29	0.00	0.00	0.00
2,700.00	3.76	337.10	2,695.75	121.18	-51.19	51.87	0.00	0.00	0.00
2,800.00	3.76	337.10	2,795.53	127.22	-53.74	54.46	0.00	0.00	0.00
2,900.00	3.76	337.10	2,895.32	133.26	-56.29	57.05	0.00	0.00	0.00
3,000.00	3.76	337.10	2,995.10	139.31	-58.84	59.63	0.00	0.00	0.00
3,100.00	3.76	337.10	3,094.89	145.35	-61.39	62.22	0.00	0.00	0.00
3,200.00	3.76	337.10	3,194.67	151.39	-63.95	64.80	0.00	0.00	0.00
3,300.00	3.76	337.10	3,294.46	157.43	-66.50	67.39	0.00	0.00	0.00
3,400.00	3.76	337.10	3,394.24	163.47	-69.05	69.97	0.00	0.00	0.00
3,500.00	3.76	337.10	3,494.03	169.51	-71.60	72.56	0.00	0.00	0.00
3,600.00	3.76	337.10	3,593.81	175.55	-74.15	75.15	0.00	0.00	0.00
3,700.00	3.76	337.10	3,693.60	181.59	-76.70	77.73	0.00	0.00	0.00
3,800.00	3.76	337.10	3,793.38	187.63	-79.26	80.32	0.00	0.00	0.00
3,900.00	3.76	337.10	3,893.17	193.67	-81.81	82.90	0.00	0.00	0.00
4,000.00	3.76	337.10	3,992.95	199.72	-84.36	85.49	0.00	0.00	0.00
4,100.00	3.76	337.10	4,092.74	205.76	-86.91	88.08	0.00	0.00	0.00
4,200.00	3.76	337.10	4,192.52	211.80	-89.46	90.66	0.00	0.00	0.00
4,300.00	3.76	337.10	4,292.31	217.84	-92.01	93.25	0.00	0.00	0.00
4,400.00	3.76	337.10	4,392.09	223.88	-94.57	95.83	0.00	0.00	0.00
4,500.00	3.76	337.10	4,491.88	229.92	-97.12	98.42	0.00	0.00	0.00
4,600.00	3.76	337.10	4,591.66	235.96	-99.67	101.00	0.00	0.00	0.00
4,700.00	3.76	337.10	4,691.44	242.00	-102.22	103.59	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HARVESTERS STATE 31C-16-
Company:	SRC ENERGY	TVD Reference:	M KB @ 4821.00ft
Project:	SECTION 15, T6N, R66W	MD Reference:	KB @ 4821.00ft
Site:	HARVESTERS STATE 7-15 PAD	North Reference:	True
Well:	HARVESTERS STATE 31C-16-	Survey Calculation Method:	Minimum Curvature
Wellbore:	M OH		
Design:	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	3.76	337.10	4,791.23	248.04	-104.77	106.18	0.00	0.00	0.00
4,900.00	3.76	337.10	4,891.01	254.08	-107.32	108.76	0.00	0.00	0.00
5,000.00	3.76	337.10	4,990.80	260.12	-109.88	111.35	0.00	0.00	0.00
5,100.00	3.76	337.10	5,090.58	266.17	-112.43	113.93	0.00	0.00	0.00
5,200.00	3.76	337.10	5,190.37	272.21	-114.98	116.52	0.00	0.00	0.00
5,300.00	3.76	337.10	5,290.15	278.25	-117.53	119.11	0.00	0.00	0.00
5,400.00	3.76	337.10	5,389.94	284.29	-120.08	121.69	0.00	0.00	0.00
5,500.00	3.76	337.10	5,489.72	290.33	-122.63	124.28	0.00	0.00	0.00
5,600.00	3.76	337.10	5,589.51	296.37	-125.19	126.86	0.00	0.00	0.00
5,700.00	3.76	337.10	5,689.29	302.41	-127.74	129.45	0.00	0.00	0.00
5,800.00	3.76	337.10	5,789.08	308.45	-130.29	132.04	0.00	0.00	0.00
5,900.00	3.76	337.10	5,888.86	314.49	-132.84	134.62	0.00	0.00	0.00
6,000.00	3.76	337.10	5,988.65	320.53	-135.39	137.21	0.00	0.00	0.00
6,100.00	3.76	337.10	6,088.43	326.57	-137.94	139.79	0.00	0.00	0.00
6,200.00	3.76	337.10	6,188.22	332.62	-140.50	142.38	0.00	0.00	0.00
6,300.00	3.76	337.10	6,288.00	338.66	-143.05	144.96	0.00	0.00	0.00
6,400.00	3.76	337.10	6,387.79	344.70	-145.60	147.55	0.00	0.00	0.00
6,500.00	3.76	337.10	6,487.57	350.74	-148.15	150.14	0.00	0.00	0.00
6,600.00	3.76	337.10	6,587.35	356.78	-150.70	152.72	0.00	0.00	0.00
6,646.73	3.76	337.10	6,633.98	359.60	-151.89	153.93	0.00	0.00	0.00
Start DLS 9.00 TFO -66.81									
6,700.00	7.16	299.06	6,687.02	362.83	-155.48	157.53	9.00	6.39	-71.41
6,800.00	15.65	282.78	6,784.98	368.85	-174.12	176.21	9.00	8.49	-16.28
6,900.00	24.51	277.95	6,878.81	374.72	-207.89	210.01	9.00	8.85	-4.83
7,000.00	33.44	275.59	6,966.21	380.28	-255.95	258.10	9.00	8.93	-2.36
7,100.00	42.39	274.13	7,045.03	385.40	-317.12	319.30	9.00	8.96	-1.45
7,200.00	51.36	273.10	7,113.32	389.95	-389.89	392.09	9.00	8.97	-1.03
7,300.00	60.34	272.31	7,169.40	393.82	-472.47	474.69	9.00	8.98	-0.80
7,400.00	69.32	271.64	7,211.89	396.92	-562.82	565.06	9.00	8.98	-0.66
7,500.00	78.30	271.05	7,239.75	399.17	-658.73	660.98	9.00	8.98	-0.59
7,600.00	87.28	270.50	7,252.28	400.51	-757.83	760.09	9.00	8.98	-0.55
7,632.59	90.21	270.32	7,253.00	400.74	-790.41	792.66	9.00	8.98	-0.54
LP(1295 FNL 2217 FWL)									
7,633.20	90.21	270.32	7,253.00	400.75	-791.02	793.28	0.00	0.00	0.00
TOP_HARVESTERS STATE 31C-16-M(1195 FNL 2217 FWL)									
7,700.00	90.21	270.32	7,252.75	401.13	-857.81	860.08	0.00	0.00	0.00
7,800.00	90.21	270.32	7,252.38	401.69	-957.81	960.07	0.00	0.00	0.00
7,900.00	90.21	270.32	7,252.02	402.26	-1,057.81	1,060.07	0.00	0.00	0.00
8,000.00	90.21	270.32	7,251.65	402.83	-1,157.81	1,160.07	0.00	0.00	0.00
8,100.00	90.21	270.32	7,251.29	403.39	-1,257.81	1,260.07	0.00	0.00	0.00
8,200.00	90.21	270.32	7,250.92	403.96	-1,357.80	1,360.07	0.00	0.00	0.00
8,300.00	90.21	270.32	7,250.55	404.53	-1,457.80	1,460.07	0.00	0.00	0.00
8,400.00	90.21	270.32	7,250.19	405.09	-1,557.80	1,560.07	0.00	0.00	0.00
8,500.00	90.21	270.32	7,249.82	405.66	-1,657.80	1,660.07	0.00	0.00	0.00
8,600.00	90.21	270.32	7,249.45	406.23	-1,757.79	1,760.07	0.00	0.00	0.00
8,700.00	90.21	270.32	7,249.09	406.80	-1,857.79	1,860.07	0.00	0.00	0.00
8,800.00	90.21	270.32	7,248.72	407.36	-1,957.79	1,960.07	0.00	0.00	0.00
8,900.00	90.21	270.32	7,248.36	407.93	-2,057.79	2,060.07	0.00	0.00	0.00
9,000.00	90.21	270.32	7,247.99	408.50	-2,157.79	2,160.07	0.00	0.00	0.00
9,100.00	90.21	270.32	7,247.62	409.06	-2,257.78	2,260.07	0.00	0.00	0.00
9,200.00	90.21	270.32	7,247.26	409.63	-2,357.78	2,360.07	0.00	0.00	0.00
9,300.00	90.21	270.32	7,246.89	410.20	-2,457.78	2,460.06	0.00	0.00	0.00
9,400.00	90.21	270.32	7,246.53	410.76	-2,557.78	2,560.06	0.00	0.00	0.00

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Company:	SRC ENERGY	TVD Reference:	M KB @ 4821.00ft
Project:	SECTION 15, T6N, R66W	MD Reference:	KB @ 4821.00ft
Site:	HARVESTERS STATE 7-15 PAD	North Reference:	True
Well:	HARVESTERS STATE 31C-16-	Survey Calculation Method:	Minimum Curvature
Wellbore:	M OH		
Design:	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	90.21	270.32	7,246.16	411.33	-2,657.77	2,660.06	0.00	0.00	0.00
9,600.00	90.21	270.32	7,245.79	411.90	-2,757.77	2,760.06	0.00	0.00	0.00
9,700.00	90.21	270.32	7,245.43	412.46	-2,857.77	2,860.06	0.00	0.00	0.00
9,800.00	90.21	270.32	7,245.06	413.03	-2,957.77	2,960.06	0.00	0.00	0.00
9,900.00	90.21	270.32	7,244.69	413.60	-3,057.76	3,060.06	0.00	0.00	0.00
10,000.00	90.21	270.32	7,244.33	414.16	-3,157.76	3,160.06	0.00	0.00	0.00
10,100.00	90.21	270.32	7,243.96	414.73	-3,257.76	3,260.06	0.00	0.00	0.00
10,200.00	90.21	270.32	7,243.60	415.30	-3,357.76	3,360.06	0.00	0.00	0.00
10,300.00	90.21	270.32	7,243.23	415.87	-3,457.76	3,460.06	0.00	0.00	0.00
10,400.00	90.21	270.32	7,242.86	416.43	-3,557.75	3,560.06	0.00	0.00	0.00
10,500.00	90.21	270.32	7,242.50	417.00	-3,657.75	3,660.06	0.00	0.00	0.00
10,600.00	90.21	270.32	7,242.13	417.57	-3,757.75	3,760.06	0.00	0.00	0.00
10,700.00	90.21	270.32	7,241.76	418.13	-3,857.75	3,860.06	0.00	0.00	0.00
10,800.00	90.21	270.32	7,241.40	418.70	-3,957.74	3,960.05	0.00	0.00	0.00
10,900.00	90.21	270.32	7,241.03	419.27	-4,057.74	4,060.05	0.00	0.00	0.00
11,000.00	90.21	270.32	7,240.67	419.83	-4,157.74	4,160.05	0.00	0.00	0.00
11,100.00	90.21	270.32	7,240.30	420.40	-4,257.74	4,260.05	0.00	0.00	0.00
11,200.00	90.21	270.32	7,239.93	420.97	-4,357.74	4,360.05	0.00	0.00	0.00
11,300.00	90.21	270.32	7,239.57	421.53	-4,457.73	4,460.05	0.00	0.00	0.00
11,400.00	90.21	270.32	7,239.20	422.10	-4,557.73	4,560.05	0.00	0.00	0.00
11,500.00	90.21	270.32	7,238.84	422.67	-4,657.73	4,660.05	0.00	0.00	0.00
11,600.00	90.21	270.32	7,238.47	423.23	-4,757.73	4,760.05	0.00	0.00	0.00
11,700.00	90.21	270.32	7,238.10	423.80	-4,857.72	4,860.05	0.00	0.00	0.00
11,800.00	90.21	270.32	7,237.74	424.37	-4,957.72	4,960.05	0.00	0.00	0.00
11,900.00	90.21	270.32	7,237.37	424.94	-5,057.72	5,060.05	0.00	0.00	0.00
12,000.00	90.21	270.32	7,237.00	425.50	-5,157.72	5,160.05	0.00	0.00	0.00
12,100.00	90.21	270.32	7,236.64	426.07	-5,257.71	5,260.05	0.00	0.00	0.00
12,200.00	90.21	270.32	7,236.27	426.64	-5,357.71	5,360.04	0.00	0.00	0.00
12,300.00	90.21	270.32	7,235.91	427.20	-5,457.71	5,460.04	0.00	0.00	0.00
12,400.00	90.21	270.32	7,235.54	427.77	-5,557.71	5,560.04	0.00	0.00	0.00
12,500.00	90.21	270.32	7,235.17	428.34	-5,657.71	5,660.04	0.00	0.00	0.00
12,600.00	90.21	270.32	7,234.81	428.90	-5,757.70	5,760.04	0.00	0.00	0.00
12,700.00	90.21	270.32	7,234.44	429.47	-5,857.70	5,860.04	0.00	0.00	0.00
12,800.00	90.21	270.32	7,234.07	430.04	-5,957.70	5,960.04	0.00	0.00	0.00
12,900.00	90.21	270.32	7,233.71	430.60	-6,057.70	6,060.04	0.00	0.00	0.00
13,000.00	90.21	270.32	7,233.34	431.17	-6,157.69	6,160.04	0.00	0.00	0.00
13,100.00	90.21	270.32	7,232.98	431.74	-6,257.69	6,260.04	0.00	0.00	0.00
13,200.00	90.21	270.32	7,232.61	432.30	-6,357.69	6,360.04	0.00	0.00	0.00
13,300.00	90.21	270.32	7,232.24	432.87	-6,457.69	6,460.04	0.00	0.00	0.00
13,400.00	90.21	270.32	7,231.88	433.44	-6,557.69	6,560.04	0.00	0.00	0.00
13,500.00	90.21	270.32	7,231.51	434.01	-6,657.68	6,660.04	0.00	0.00	0.00
13,600.00	90.21	270.32	7,231.15	434.57	-6,757.68	6,760.04	0.00	0.00	0.00
13,700.00	90.21	270.32	7,230.78	435.14	-6,857.68	6,860.03	0.00	0.00	0.00
13,800.00	90.21	270.32	7,230.41	435.71	-6,957.68	6,960.03	0.00	0.00	0.00
13,900.00	90.21	270.32	7,230.05	436.27	-7,057.67	7,060.03	0.00	0.00	0.00
14,000.00	90.21	270.32	7,229.68	436.84	-7,157.67	7,160.03	0.00	0.00	0.00
14,100.00	90.21	270.32	7,229.31	437.41	-7,257.67	7,260.03	0.00	0.00	0.00
14,200.00	90.21	270.32	7,228.95	437.97	-7,357.67	7,360.03	0.00	0.00	0.00
14,300.00	90.21	270.32	7,228.58	438.54	-7,457.66	7,460.03	0.00	0.00	0.00
14,400.00	90.21	270.32	7,228.22	439.11	-7,557.66	7,560.03	0.00	0.00	0.00
14,500.00	90.21	270.32	7,227.85	439.67	-7,657.66	7,660.03	0.00	0.00	0.00
14,600.00	90.21	270.32	7,227.48	440.24	-7,757.66	7,760.03	0.00	0.00	0.00
14,700.00	90.21	270.32	7,227.12	440.81	-7,857.66	7,860.03	0.00	0.00	0.00
14,800.00	90.21	270.32	7,226.75	441.37	-7,957.65	7,960.03	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well HARVESTERS STATE 31C-16-
Company:	SRC ENERGY	TVD Reference:	M KB @ 4821.00ft
Project:	SECTION 15, T6N, R66W	MD Reference:	KB @ 4821.00ft
Site:	HARVESTERS STATE 7-15 PAD	North Reference:	True
Well:	HARVESTERS STATE 31C-16-	Survey Calculation Method:	Minimum Curvature
Wellbore:	M OH		
Design:	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	90.21	270.32	7,226.38	441.94	-8,057.65	8,060.03	0.00	0.00	0.00
15,000.00	90.21	270.32	7,226.02	442.51	-8,157.65	8,160.03	0.00	0.00	0.00
15,004.98	90.21	270.32	7,226.00	442.54	-8,162.63	8,165.00	0.00	0.00	0.00
TD at 15004.98 - PBHL_HARVESTERS STATE 31C-16-M(1183 FNL 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	7,226.00	442.54	-8,162.63	1,422,923.33	3,196,954.93	40.4921670	-104.7918570
- plan hits target center									
- Point									
TOP_HARVESTERS ST	0.00	0.00	7,253.00	500.94	-790.45	1,423,043.04	3,204,326.35	40.4923310	-104.7653510
- plan misses target center by 100.20ft at 7633.20ft MD (7252.99 TVD, 400.75 N, -791.02 E)									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,752.21	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
600.00	600.00	0.00	0.00	Start Build 2.00
788.00	787.87	5.68	-2.40	Start 5858.73 hold at 788.00 MD
6,646.73	6,633.98	359.60	-151.89	Start DLS 9.00 TFO -66.81
7,632.59	7,253.00	400.74	-790.41	LP(1295 FNL 2217 FWL)
15,004.98	7,226.00	442.54	-8,162.63	TD at 15004.98