



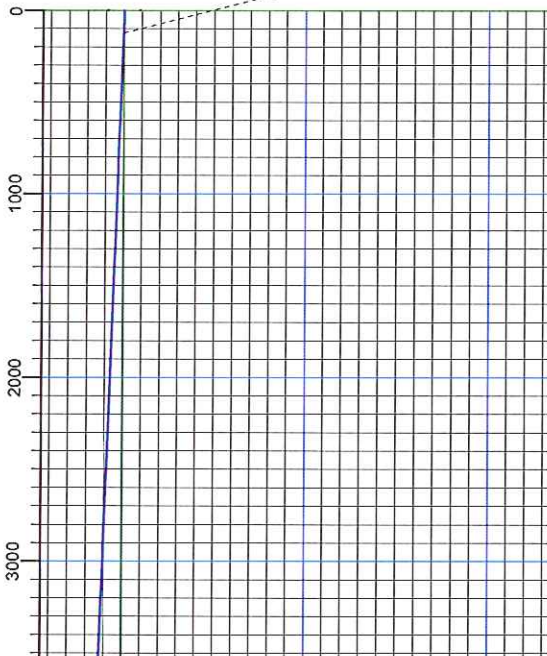
WARD PETROLEUM

WELL DETAILS: Brighton Lakes #2017-3-19HN

Ground Level: 5047.0
Northing 1223392.42
Easting 3194801.72
Site Brighton Lakes Pad, Grid North

Start 6782.6 hold at 123.4 MD

True Vertical Depth (1000 usft/in)



PROJECT DETAILS: West Brighton Adams, CO

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

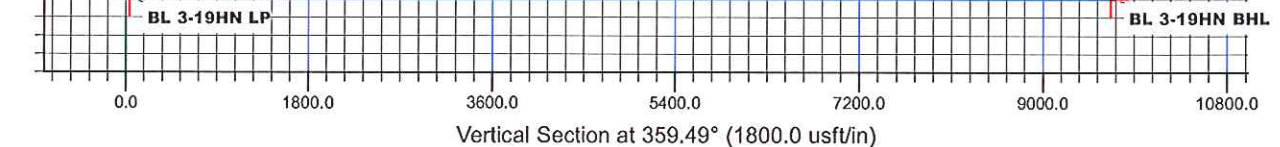
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.2	45.0	0.00	0.00	0.0	
2	123.4	3.70	182.19	123.3	-3.8	44.9	3.00	182.19	-4.0	
3	6906.0	3.70	182.19	6891.7	-441.4	28.1	0.00	0.00	-441.4	
4	7686.8	90.00	359.62	7400.0	35.1	23.4	12.00	177.42	35.1	BL 3-19HN LP
	517321.0	90.00	359.62	7400.0	9669.1	-41.3	0.00	0.00	9669.2	BL 3-19HN BHL

Start DLS 12.00 TFO 177.42

Start 9634.2 hold at 7686.8 MD

TD at 17321.0



Ward Petroleum

West Brighton Adams, CO

Brighton Lakes Pad

Brighton Lakes #2017-3-19HN

State Plan #1

Plan: State Plan #1

Standard Planning Report

30 December, 2016

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Brighton Lakes Pad
Company:	Ward Petroleum	TVD Reference:	KB @ 5073.0usft
Project:	West Brighton Adams, CO	MD Reference:	KB @ 5073.0usft
Site:	Brighton Lakes Pad	North Reference:	Grid
Well:	Brighton Lakes #2017-3-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Plan #1		
Design:	State Plan #1		

Project	West Brighton Adams, CO		
Map System:	US State Plane 1983	System Datum:	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Brighton Lakes Pad			
Site Position:		Northing:	1,223,392.21 usft	Latitude:	39° 56' 40.197 N
From:	Map	Easting:	3,194,756.70 usft	Longitude:	104° 48' 19.368 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well		Brighton Lakes #2017-3-19HN				
Well Position	+N/-S	0.2 usft	Northing:	1,223,392.42 usft	Latitude:	39° 56' 40.196 N
	+E/-W	45.0 usft	Easting:	3,194,801.72 usft	Longitude:	104° 48' 18.790 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	5,047.0 usft

Wellbore	State Plan #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.00	66.73	53,016

Design	State Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.2	45.0	359.49

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.2	45.0	0.00	0.00	0.00	0.00	
123.4	3.70	182.19	123.3	-3.8	44.9	3.00	3.00	0.00	182.19	
6,906.0	3.70	182.19	6,891.7	-441.4	28.1	0.00	0.00	0.00	0.00	
7,686.8	90.00	359.62	7,400.0	35.1	23.4	12.00	11.05	22.72	177.42	BL 3-19HN LP
17,321.0	90.00	359.62	7,400.0	9,669.0	-41.3	0.00	0.00	0.00	0.00	BL 3-19HN BHL

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Brighton Lakes Pad
Company:	Ward Petroleum	TVD Reference:	KB @ 5073.0usft
Project:	West Brighton Adams, CO	MD Reference:	KB @ 5073.0usft
Site:	Brighton Lakes Pad	North Reference:	Grid
Well:	Brighton Lakes #2017-3-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Plan #1		
Design:	State Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.2	45.0	0.0	0.00	0.00	0.00
100.0	3.00	182.19	100.0	-2.4	44.9	-2.6	3.00	3.00	0.00
123.4	3.70	182.19	123.3	-3.8	44.9	-4.0	3.00	3.00	0.00
200.0	3.70	182.19	199.8	-8.7	44.7	-8.9	0.00	0.00	0.00
300.0	3.70	182.19	299.5	-15.2	44.4	-15.4	0.00	0.00	0.00
400.0	3.70	182.19	399.3	-21.6	44.2	-21.8	0.00	0.00	0.00
500.0	3.70	182.19	499.1	-28.1	43.9	-28.3	0.00	0.00	0.00
600.0	3.70	182.19	598.9	-34.5	43.7	-34.7	0.00	0.00	0.00
700.0	3.70	182.19	698.7	-41.0	43.4	-41.2	0.00	0.00	0.00
800.0	3.70	182.19	798.5	-47.4	43.2	-47.6	0.00	0.00	0.00
900.0	3.70	182.19	898.3	-53.9	42.9	-54.1	0.00	0.00	0.00
1,000.0	3.70	182.19	998.1	-60.3	42.7	-60.5	0.00	0.00	0.00
1,100.0	3.70	182.19	1,097.9	-66.8	42.5	-67.0	0.00	0.00	0.00
1,200.0	3.70	182.19	1,197.7	-73.2	42.2	-73.4	0.00	0.00	0.00
1,300.0	3.70	182.19	1,297.5	-79.7	42.0	-79.9	0.00	0.00	0.00
1,400.0	3.70	182.19	1,397.3	-86.1	41.7	-86.3	0.00	0.00	0.00
1,500.0	3.70	182.19	1,497.0	-92.6	41.5	-92.8	0.00	0.00	0.00
1,600.0	3.70	182.19	1,596.8	-99.0	41.2	-99.2	0.00	0.00	0.00
1,700.0	3.70	182.19	1,696.6	-105.5	41.0	-105.7	0.00	0.00	0.00
1,800.0	3.70	182.19	1,796.4	-111.9	40.7	-112.1	0.00	0.00	0.00
1,900.0	3.70	182.19	1,896.2	-118.4	40.5	-118.6	0.00	0.00	0.00
2,000.0	3.70	182.19	1,996.0	-124.8	40.2	-125.0	0.00	0.00	0.00
2,100.0	3.70	182.19	2,095.8	-131.3	40.0	-131.5	0.00	0.00	0.00
2,200.0	3.70	182.19	2,195.6	-137.8	39.7	-137.9	0.00	0.00	0.00
2,300.0	3.70	182.19	2,295.4	-144.2	39.5	-144.4	0.00	0.00	0.00
2,400.0	3.70	182.19	2,395.2	-150.7	39.2	-150.8	0.00	0.00	0.00
2,500.0	3.70	182.19	2,495.0	-157.1	39.0	-157.3	0.00	0.00	0.00
2,600.0	3.70	182.19	2,594.7	-163.6	38.7	-163.7	0.00	0.00	0.00
2,700.0	3.70	182.19	2,694.5	-170.0	38.5	-170.2	0.00	0.00	0.00
2,800.0	3.70	182.19	2,794.3	-176.5	38.3	-176.6	0.00	0.00	0.00
2,900.0	3.70	182.19	2,894.1	-182.9	38.0	-183.1	0.00	0.00	0.00
3,000.0	3.70	182.19	2,993.9	-189.4	37.8	-189.5	0.00	0.00	0.00
3,100.0	3.70	182.19	3,093.7	-195.8	37.5	-196.0	0.00	0.00	0.00
3,200.0	3.70	182.19	3,193.5	-202.3	37.3	-202.4	0.00	0.00	0.00
3,300.0	3.70	182.19	3,293.3	-208.7	37.0	-208.9	0.00	0.00	0.00
3,400.0	3.70	182.19	3,393.1	-215.2	36.8	-215.3	0.00	0.00	0.00
3,500.0	3.70	182.19	3,492.9	-221.6	36.5	-221.7	0.00	0.00	0.00
3,600.0	3.70	182.19	3,592.7	-228.1	36.3	-228.2	0.00	0.00	0.00
3,700.0	3.70	182.19	3,692.5	-234.5	36.0	-234.6	0.00	0.00	0.00
3,800.0	3.70	182.19	3,792.2	-241.0	35.8	-241.1	0.00	0.00	0.00
3,900.0	3.70	182.19	3,892.0	-247.4	35.5	-247.5	0.00	0.00	0.00
4,000.0	3.70	182.19	3,991.8	-253.9	35.3	-254.0	0.00	0.00	0.00
4,100.0	3.70	182.19	4,091.6	-260.3	35.0	-260.4	0.00	0.00	0.00
4,200.0	3.70	182.19	4,191.4	-266.8	34.8	-266.9	0.00	0.00	0.00
4,300.0	3.70	182.19	4,291.2	-273.2	34.5	-273.3	0.00	0.00	0.00
4,400.0	3.70	182.19	4,391.0	-279.7	34.3	-279.8	0.00	0.00	0.00
4,500.0	3.70	182.19	4,490.8	-286.1	34.1	-286.2	0.00	0.00	0.00
4,600.0	3.70	182.19	4,590.6	-292.6	33.8	-292.7	0.00	0.00	0.00
4,700.0	3.70	182.19	4,690.4	-299.0	33.6	-299.1	0.00	0.00	0.00
4,800.0	3.70	182.19	4,790.2	-305.5	33.3	-305.6	0.00	0.00	0.00
4,900.0	3.70	182.19	4,889.9	-311.9	33.1	-312.0	0.00	0.00	0.00
5,000.0	3.70	182.19	4,989.7	-318.4	32.8	-318.5	0.00	0.00	0.00
5,100.0	3.70	182.19	5,089.5	-324.9	32.6	-324.9	0.00	0.00	0.00
5,200.0	3.70	182.19	5,189.3	-331.3	32.3	-331.4	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Brighton Lakes Pad
Company:	Ward Petroleum	TVD Reference:	KB @ 5073.0usft
Project:	West Brighton Adams, CO	MD Reference:	KB @ 5073.0usft
Site:	Brighton Lakes Pad	North Reference:	Grid
Well:	Brighton Lakes #2017-3-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Plan #1		
Design:	State Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	3.70	182.19	5,289.1	-337.8	32.1	-337.8	0.00	0.00	0.00
5,400.0	3.70	182.19	5,388.9	-344.2	31.8	-344.3	0.00	0.00	0.00
5,500.0	3.70	182.19	5,488.7	-350.7	31.6	-350.7	0.00	0.00	0.00
5,600.0	3.70	182.19	5,588.5	-357.1	31.3	-357.2	0.00	0.00	0.00
5,700.0	3.70	182.19	5,688.3	-363.6	31.1	-363.6	0.00	0.00	0.00
5,800.0	3.70	182.19	5,788.1	-370.0	30.8	-370.1	0.00	0.00	0.00
5,900.0	3.70	182.19	5,887.9	-376.5	30.6	-376.5	0.00	0.00	0.00
6,000.0	3.70	182.19	5,987.7	-382.9	30.3	-383.0	0.00	0.00	0.00
6,100.0	3.70	182.19	6,087.4	-389.4	30.1	-389.4	0.00	0.00	0.00
6,200.0	3.70	182.19	6,187.2	-395.8	29.9	-395.9	0.00	0.00	0.00
6,300.0	3.70	182.19	6,287.0	-402.3	29.6	-402.3	0.00	0.00	0.00
6,400.0	3.70	182.19	6,386.8	-408.7	29.4	-408.8	0.00	0.00	0.00
6,500.0	3.70	182.19	6,486.6	-415.2	29.1	-415.2	0.00	0.00	0.00
6,600.0	3.70	182.19	6,586.4	-421.6	28.9	-421.7	0.00	0.00	0.00
6,700.0	3.70	182.19	6,686.2	-428.1	28.6	-428.1	0.00	0.00	0.00
6,800.0	3.70	182.19	6,786.0	-434.5	28.4	-434.6	0.00	0.00	0.00
6,900.0	3.70	182.19	6,885.8	-441.0	28.1	-441.0	0.00	0.00	0.00
6,906.0	3.70	182.19	6,891.7	-441.4	28.1	-441.4	0.00	0.00	0.00
7,000.0	7.59	358.36	6,985.6	-438.2	27.8	-438.2	12.00	4.13	187.37
7,100.0	19.59	359.15	7,082.6	-414.7	27.4	-414.8	12.00	12.00	0.78
7,200.0	31.58	359.34	7,172.6	-371.6	26.8	-371.7	12.00	12.00	0.20
7,300.0	43.58	359.44	7,251.7	-310.8	26.2	-310.8	12.00	12.00	0.10
7,400.0	55.58	359.50	7,316.4	-234.8	25.5	-234.8	12.00	12.00	0.06
7,500.0	67.58	359.55	7,363.9	-147.0	24.8	-147.0	12.00	12.00	0.05
7,600.0	79.58	359.58	7,392.1	-51.2	24.0	-51.3	12.00	12.00	0.04
7,686.8	90.00	359.62	7,400.0	35.1	23.4	35.1	12.00	12.00	0.04
7,700.0	90.00	359.62	7,400.0	48.3	23.3	48.3	0.00	0.00	0.00
7,800.0	90.00	359.62	7,400.0	148.3	22.7	148.3	0.00	0.00	0.00
7,900.0	90.00	359.62	7,400.0	248.3	22.0	248.3	0.00	0.00	0.00
8,000.0	90.00	359.62	7,400.0	348.3	21.3	348.3	0.00	0.00	0.00
8,100.0	90.00	359.62	7,400.0	448.3	20.7	448.3	0.00	0.00	0.00
8,200.0	90.00	359.62	7,400.0	548.3	20.0	548.3	0.00	0.00	0.00
8,300.0	90.00	359.62	7,400.0	648.3	19.3	648.3	0.00	0.00	0.00
8,400.0	90.00	359.62	7,400.0	748.3	18.6	748.3	0.00	0.00	0.00
8,500.0	90.00	359.62	7,400.0	848.3	18.0	848.3	0.00	0.00	0.00
8,600.0	90.00	359.62	7,400.0	948.3	17.3	948.3	0.00	0.00	0.00
8,700.0	90.00	359.62	7,400.0	1,048.3	16.6	1,048.3	0.00	0.00	0.00
8,800.0	90.00	359.62	7,400.0	1,148.3	16.0	1,148.3	0.00	0.00	0.00
8,900.0	90.00	359.62	7,400.0	1,248.3	15.3	1,248.3	0.00	0.00	0.00
9,000.0	90.00	359.62	7,400.0	1,348.3	14.6	1,348.3	0.00	0.00	0.00
9,100.0	90.00	359.62	7,400.0	1,448.3	13.9	1,448.3	0.00	0.00	0.00
9,200.0	90.00	359.62	7,400.0	1,548.2	13.3	1,548.3	0.00	0.00	0.00
9,300.0	90.00	359.62	7,400.0	1,648.2	12.6	1,648.3	0.00	0.00	0.00
9,400.0	90.00	359.62	7,400.0	1,748.2	11.9	1,748.3	0.00	0.00	0.00
9,500.0	90.00	359.62	7,400.0	1,848.2	11.3	1,848.3	0.00	0.00	0.00
9,600.0	90.00	359.62	7,400.0	1,948.2	10.6	1,948.3	0.00	0.00	0.00
9,700.0	90.00	359.62	7,400.0	2,048.2	9.9	2,048.3	0.00	0.00	0.00
9,800.0	90.00	359.62	7,400.0	2,148.2	9.2	2,148.3	0.00	0.00	0.00
9,900.0	90.00	359.62	7,400.0	2,248.2	8.6	2,248.3	0.00	0.00	0.00
10,000.0	90.00	359.62	7,400.0	2,348.2	7.9	2,348.3	0.00	0.00	0.00
10,100.0	90.00	359.62	7,400.0	2,448.2	7.2	2,448.3	0.00	0.00	0.00
10,200.0	90.00	359.62	7,400.0	2,548.2	6.6	2,548.3	0.00	0.00	0.00
10,300.0	90.00	359.62	7,400.0	2,648.2	5.9	2,648.3	0.00	0.00	0.00
10,400.0	90.00	359.62	7,400.0	2,748.2	5.2	2,748.3	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Brighton Lakes Pad
Company:	Ward Petroleum	TVD Reference:	KB @ 5073.0usft
Project:	West Brighton Adams, CO	MD Reference:	KB @ 5073.0usft
Site:	Brighton Lakes Pad	North Reference:	Grid
Well:	Brighton Lakes #2017-3-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Plan #1		
Design:	State Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,500.0	90.00	359.62	7,400.0	2,848.2	4.5	2,848.3	0.00	0.00	0.00	
10,600.0	90.00	359.62	7,400.0	2,948.2	3.9	2,948.3	0.00	0.00	0.00	
10,700.0	90.00	359.62	7,400.0	3,048.2	3.2	3,048.3	0.00	0.00	0.00	
10,800.0	90.00	359.62	7,400.0	3,148.2	2.5	3,148.3	0.00	0.00	0.00	
10,900.0	90.00	359.62	7,400.0	3,248.2	1.9	3,248.3	0.00	0.00	0.00	
11,000.0	90.00	359.62	7,400.0	3,348.2	1.2	3,348.3	0.00	0.00	0.00	
11,100.0	90.00	359.62	7,400.0	3,448.2	0.5	3,448.3	0.00	0.00	0.00	
11,200.0	90.00	359.62	7,400.0	3,548.2	-0.2	3,548.3	0.00	0.00	0.00	
11,300.0	90.00	359.62	7,400.0	3,648.2	-0.8	3,648.3	0.00	0.00	0.00	
11,400.0	90.00	359.62	7,400.0	3,748.2	-1.5	3,748.3	0.00	0.00	0.00	
11,500.0	90.00	359.62	7,400.0	3,848.2	-2.2	3,848.3	0.00	0.00	0.00	
11,600.0	90.00	359.62	7,400.0	3,948.2	-2.8	3,948.3	0.00	0.00	0.00	
11,700.0	90.00	359.62	7,400.0	4,048.2	-3.5	4,048.3	0.00	0.00	0.00	
11,800.0	90.00	359.62	7,400.0	4,148.2	-4.2	4,148.3	0.00	0.00	0.00	
11,900.0	90.00	359.62	7,400.0	4,248.2	-4.9	4,248.3	0.00	0.00	0.00	
12,000.0	90.00	359.62	7,400.0	4,348.2	-5.5	4,348.3	0.00	0.00	0.00	
12,100.0	90.00	359.62	7,400.0	4,448.2	-6.2	4,448.3	0.00	0.00	0.00	
12,200.0	90.00	359.62	7,400.0	4,548.2	-6.9	4,548.3	0.00	0.00	0.00	
12,300.0	90.00	359.62	7,400.0	4,648.2	-7.5	4,648.3	0.00	0.00	0.00	
12,400.0	90.00	359.62	7,400.0	4,748.2	-8.2	4,748.3	0.00	0.00	0.00	
12,500.0	90.00	359.62	7,400.0	4,848.2	-8.9	4,848.3	0.00	0.00	0.00	
12,600.0	90.00	359.62	7,400.0	4,948.2	-9.6	4,948.3	0.00	0.00	0.00	
12,700.0	90.00	359.62	7,400.0	5,048.2	-10.2	5,048.3	0.00	0.00	0.00	
12,800.0	90.00	359.62	7,400.0	5,148.2	-10.9	5,148.3	0.00	0.00	0.00	
12,900.0	90.00	359.62	7,400.0	5,248.2	-11.6	5,248.3	0.00	0.00	0.00	
13,000.0	90.00	359.62	7,400.0	5,348.2	-12.2	5,348.3	0.00	0.00	0.00	
13,100.0	90.00	359.62	7,400.0	5,448.2	-12.9	5,448.3	0.00	0.00	0.00	
13,200.0	90.00	359.62	7,400.0	5,548.2	-13.6	5,548.3	0.00	0.00	0.00	
13,300.0	90.00	359.62	7,400.0	5,648.2	-14.3	5,648.3	0.00	0.00	0.00	
13,400.0	90.00	359.62	7,400.0	5,748.2	-14.9	5,748.3	0.00	0.00	0.00	
13,500.0	90.00	359.62	7,400.0	5,848.2	-15.6	5,848.3	0.00	0.00	0.00	
13,600.0	90.00	359.62	7,400.0	5,948.2	-16.3	5,948.3	0.00	0.00	0.00	
13,700.0	90.00	359.62	7,400.0	6,048.1	-16.9	6,048.3	0.00	0.00	0.00	
13,800.0	90.00	359.62	7,400.0	6,148.1	-17.6	6,148.2	0.00	0.00	0.00	
13,900.0	90.00	359.62	7,400.0	6,248.1	-18.3	6,248.2	0.00	0.00	0.00	
14,000.0	90.00	359.62	7,400.0	6,348.1	-19.0	6,348.2	0.00	0.00	0.00	
14,100.0	90.00	359.62	7,400.0	6,448.1	-19.6	6,448.2	0.00	0.00	0.00	
14,200.0	90.00	359.62	7,400.0	6,548.1	-20.3	6,548.2	0.00	0.00	0.00	
14,300.0	90.00	359.62	7,400.0	6,648.1	-21.0	6,648.2	0.00	0.00	0.00	
14,400.0	90.00	359.62	7,400.0	6,748.1	-21.6	6,748.2	0.00	0.00	0.00	
14,500.0	90.00	359.62	7,400.0	6,848.1	-22.3	6,848.2	0.00	0.00	0.00	
14,600.0	90.00	359.62	7,400.0	6,948.1	-23.0	6,948.2	0.00	0.00	0.00	
14,700.0	90.00	359.62	7,400.0	7,048.1	-23.7	7,048.2	0.00	0.00	0.00	
14,800.0	90.00	359.62	7,400.0	7,148.1	-24.3	7,148.2	0.00	0.00	0.00	
14,900.0	90.00	359.62	7,400.0	7,248.1	-25.0	7,248.2	0.00	0.00	0.00	
15,000.0	90.00	359.62	7,400.0	7,348.1	-25.7	7,348.2	0.00	0.00	0.00	
15,100.0	90.00	359.62	7,400.0	7,448.1	-26.3	7,448.2	0.00	0.00	0.00	
15,200.0	90.00	359.62	7,400.0	7,548.1	-27.0	7,548.2	0.00	0.00	0.00	
15,300.0	90.00	359.62	7,400.0	7,648.1	-27.7	7,648.2	0.00	0.00	0.00	
15,400.0	90.00	359.62	7,400.0	7,748.1	-28.4	7,748.2	0.00	0.00	0.00	
15,500.0	90.00	359.62	7,400.0	7,848.1	-29.0	7,848.2	0.00	0.00	0.00	
15,600.0	90.00	359.62	7,400.0	7,948.1	-29.7	7,948.2	0.00	0.00	0.00	
15,700.0	90.00	359.62	7,400.0	8,048.1	-30.4	8,048.2	0.00	0.00	0.00	
15,800.0	90.00	359.62	7,400.0	8,148.1	-31.0	8,148.2	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Brighton Lakes Pad
Company:	Ward Petroleum	TVD Reference:	KB @ 5073.0usft
Project:	West Brighton Adams, CO	MD Reference:	KB @ 5073.0usft
Site:	Brighton Lakes Pad	North Reference:	Grid
Well:	Brighton Lakes #2017-3-19HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	State Plan #1		
Design:	State Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,900.0	90.00	359.62	7,400.0	8,248.1	-31.7	8,248.2	0.00	0.00	0.00	
16,000.0	90.00	359.62	7,400.0	8,348.1	-32.4	8,348.2	0.00	0.00	0.00	
16,100.0	90.00	359.62	7,400.0	8,448.1	-33.1	8,448.2	0.00	0.00	0.00	
16,200.0	90.00	359.62	7,400.0	8,548.1	-33.7	8,548.2	0.00	0.00	0.00	
16,300.0	90.00	359.62	7,400.0	8,648.1	-34.4	8,648.2	0.00	0.00	0.00	
16,400.0	90.00	359.62	7,400.0	8,748.1	-35.1	8,748.2	0.00	0.00	0.00	
16,500.0	90.00	359.62	7,400.0	8,848.1	-35.7	8,848.2	0.00	0.00	0.00	
16,600.0	90.00	359.62	7,400.0	8,948.1	-36.4	8,948.2	0.00	0.00	0.00	
16,700.0	90.00	359.62	7,400.0	9,048.1	-37.1	9,048.2	0.00	0.00	0.00	
16,800.0	90.00	359.62	7,400.0	9,148.1	-37.8	9,148.2	0.00	0.00	0.00	
16,900.0	90.00	359.62	7,400.0	9,248.1	-38.4	9,248.2	0.00	0.00	0.00	
17,000.0	90.00	359.62	7,400.0	9,348.1	-39.1	9,348.2	0.00	0.00	0.00	
17,100.0	90.00	359.62	7,400.0	9,448.1	-39.8	9,448.2	0.00	0.00	0.00	
17,200.0	90.00	359.62	7,400.0	9,548.1	-40.4	9,548.2	0.00	0.00	0.00	
17,300.0	90.00	359.62	7,400.0	9,648.1	-41.1	9,648.2	0.00	0.00	0.00	
17,321.0	90.00	359.62	7,400.0	9,669.0	-41.3	9,669.2	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
BL 3-19HN BHL	0.00	0.00	7,400.0	9,669.0	-41.3	1,233,061.26	3,194,715.44	39° 58' 15.754 N	104° 48' 18.925 W	
- plan hits target center										
- Point										
BL 3-19HN LP	0.00	0.00	7,400.0	35.1	23.4	1,223,427.29	3,194,780.13	39° 56' 40.542 N	104° 48' 19.063 W	
- plan hits target center										
- Point										