

# **BAYSWATER EXPLORATION & PRODUCTION**

**WELD COUNTY  
SEC 5-T6N-R65W  
SAPPHIRE 1**

**OWB**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**30 December, 2022**

Project: WELD COUNTY  
Site: SEC 5-T6N-R65W  
Well: SAPPHIRE 1  
Wellbore: OWB  
Design: PROPOSAL 1

PROJECT DETAILS: WELD COUNTY  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
System Datum: Mean Sea Level



Azimuths to True North  
Magnetic North: 7.66°

Magnetic Field  
Strength: 51860.5nT  
Dip Angle: 66.69°  
Date: 12/30/2022  
Model: IGRF2020

WELL DETAILS: SAPPHIRE 1

	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
	0.00	0.00	1432779.53	3224685.82	40.518570°N	104.691834°W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
3	950.14	17.00	329.10	937.72	107.44	-64.31	2.00	329.10	112.18	
4	7111.29	17.00	329.10	6829.56	1653.34	-989.58	0.00	0.00	1726.22	
5	7866.55	90.00	0.37	7254.00	2208.54	-1053.37	10.00	32.42	2284.72	LP-SAPPHIRE 1
6	18137.33	90.00	0.37	7254.00	12479.10	-987.07	0.00	0.00	12518.08	PBHL-SAPPHIRE 1

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	Start Build 2.00
950.14	17.00	329.10	937.72	107.44	-64.31	112.18	125.22	Start 6161.14 hold at 950.14 MD
7111.29	17.00	329.10	6829.56	1653.34	-989.58	1726.22	1926.86	Start DLS 10.00 TFO 32.42
7866.55	90.00	0.37	7254.00	2208.54	-1053.37	2284.72	2489.17	Start 10270.78 hold at 7866.55 MD
18137.33	90.00	0.37	7254.00	12479.10	-987.07	12518.08	12759.94	TD at 18137.33

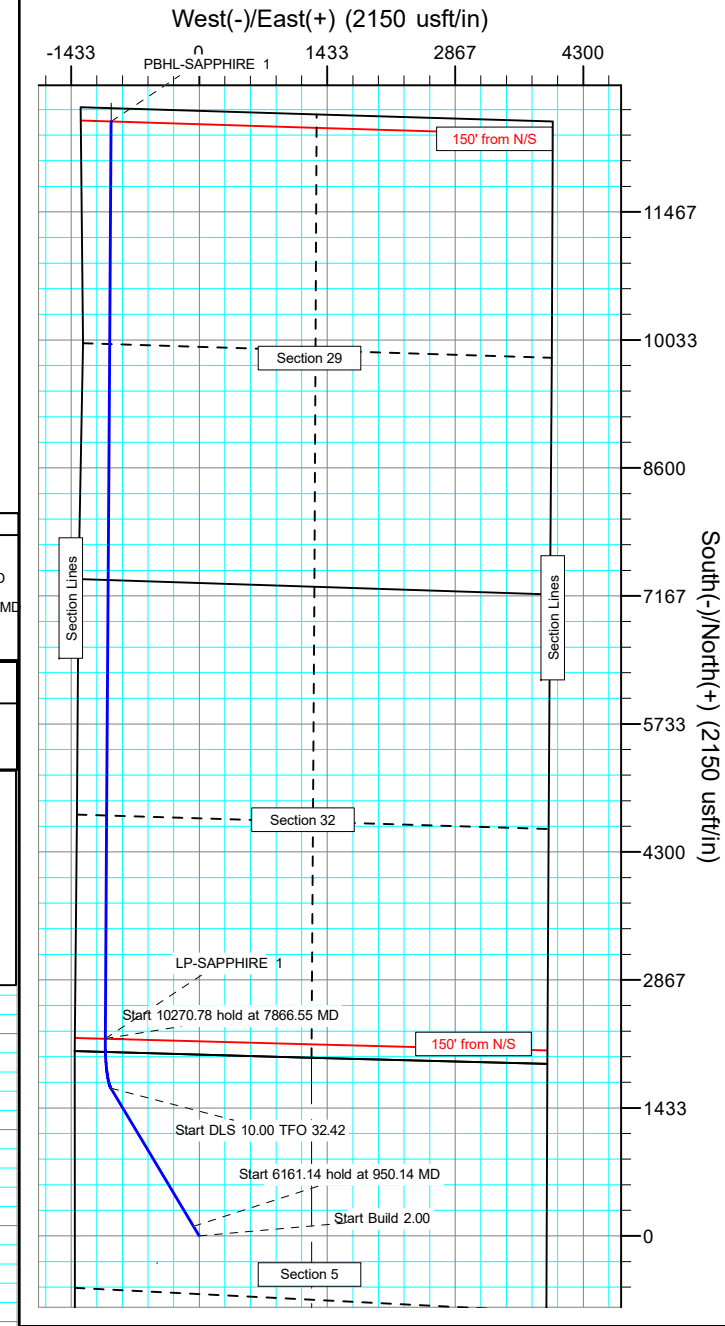
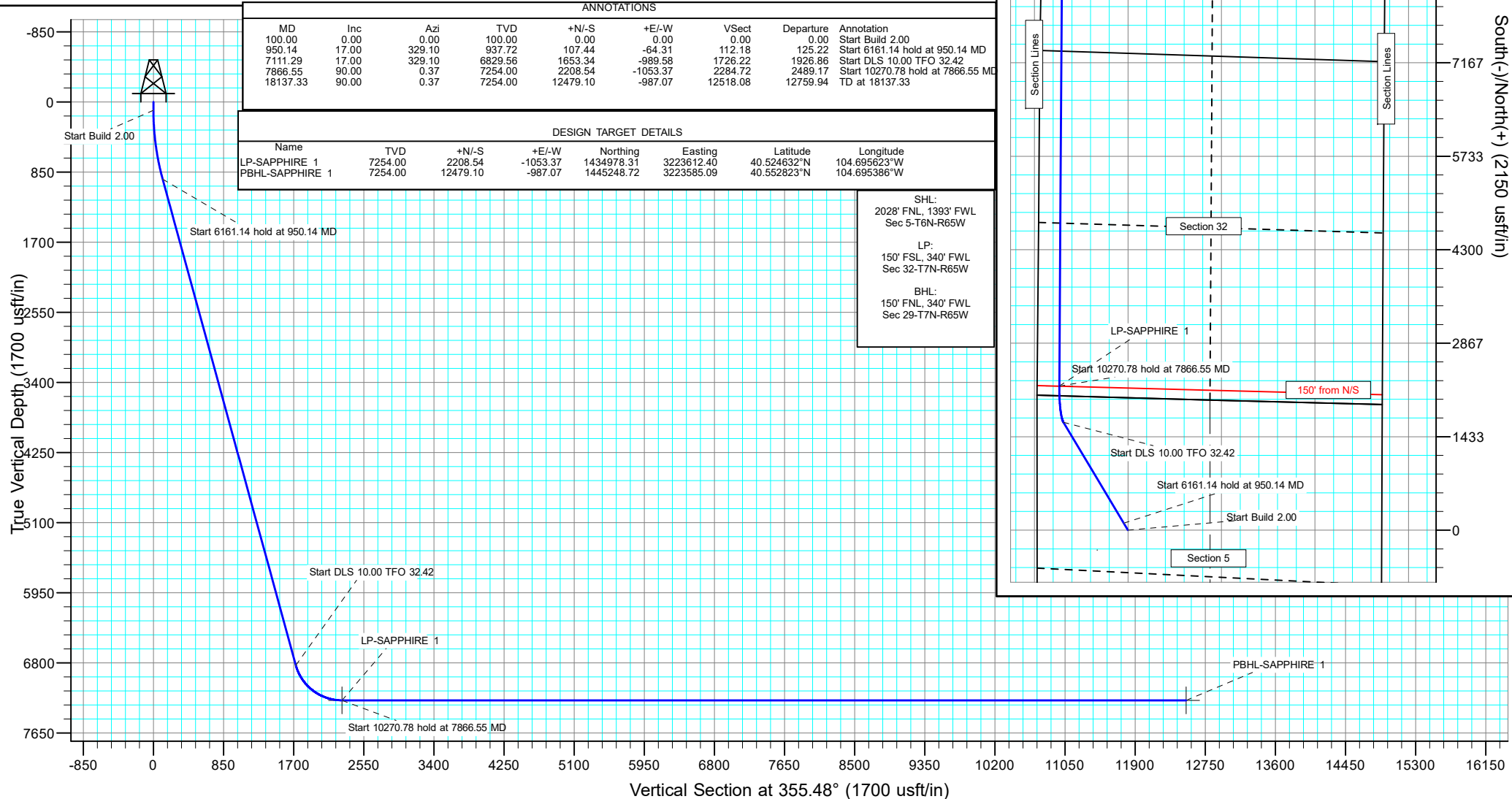
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP-SAPPHIRE 1	7254.00	2208.54	-1053.37	1434978.31	3223612.40	40.524632°N	104.695623°W
PBHL-SAPPHIRE 1	7254.00	12479.10	-987.07	1445248.72	3223585.09	40.552823°N	104.695386°W

SHL:  
2028' FNL, 1393' FWL  
Sec 5-T6N-R65W

LP:  
150' FSL, 340' FWL  
Sec 32-T7N-R65W

BHL:  
150' FNL, 340' FWL  
Sec 29-T7N-R65W



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAPPHIRE 1
<b>Company:</b>	BAYSWATER EXPLORATION & PRODUCTION	<b>TVD Reference:</b>	KB 17' @ 4834.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 17' @ 4834.00usft
<b>Site:</b>	SEC 5-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	SAPPHIRE 1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

<b>Project</b>	WELD COUNTY		
<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		Using geodetic scale factor

Site		SEC 5-T6N-R65W				
Site Position:		Northing:	1,434,834.96	usft	Latitude:	40.524247°N
From:	Lat/Long	Easting:	3,223,272.58	usft	Longitude:	104.696850°W
Position Uncertainty:		0.00	usft	Slot Radius:	13.200	in

Well	SAPPHIRE 1					
Well Position	+N/-S	0.00 usft	Northing:	1,432,779.53 usft	Latitude:	40.518570°N
	+E/-W	0.00 usft	Easting:	3,224,685.82 usft	Longitude:	104.691834°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,817.00 usft
Grid Convergence:		0.52 °				

<b>Wellbore</b>	OWB				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	12/30/2022	7.66	66.69	51,860.49459276

<b>Design</b>	PROPOSAL 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	355.48

<b>Plan Survey Tool Program</b>	<b>Date</b>	12/30/2022		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	18,136.37 PROPOSAL 1 (OWB)	MWD	
			OWSG MWD - Standard	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</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	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
950.14	17.00	329.10	937.72	107.44	-64.31	2.00	2.00	0.00	329.10	
7,111.29	17.00	329.10	6,829.56	1,653.34	-989.58	0.00	0.00	0.00	0.00	
7,866.55	90.00	0.37	7,254.00	2,208.54	-1,053.37	10.00	9.67	4.14	32.42	LP-SAPPHIRE 1
18,137.33	90.00	0.37	7,254.00	12,479.10	-987.07	0.00	0.00	0.00	0.00	PBHL-SAPPHIRE 1

# Planning Report

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<b>Company:</b>	BAYSWATER EXPLORATION & PRODUCTION	<b>TVD Reference:</b>	KB 17' @ 4834.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 17' @ 4834.00usft
<b>Site:</b>	SEC 5-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	SAPPHIRE 1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	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
Start Build 2.00									
200.00	2.00	329.10	199.98	1.50	-0.90	1.56	2.00	2.00	0.00
300.00	4.00	329.10	299.84	5.99	-3.58	6.25	2.00	2.00	0.00
400.00	6.00	329.10	399.45	13.47	-8.06	14.06	2.00	2.00	0.00
500.00	8.00	329.10	498.70	23.92	-14.32	24.98	2.00	2.00	0.00
600.00	10.00	329.10	597.47	37.34	-22.35	38.99	2.00	2.00	0.00
700.00	12.00	329.10	695.62	53.72	-32.15	56.08	2.00	2.00	0.00
800.00	14.00	329.10	793.06	73.02	-43.70	76.24	2.00	2.00	0.00
900.00	16.00	329.10	889.64	95.22	-56.99	99.42	2.00	2.00	0.00
950.14	17.00	329.10	937.72	107.44	-64.31	112.18	2.00	2.00	0.00
Start 6161.14 hold at 950.14 MD									
1,000.00	17.00	329.10	985.40	119.95	-71.80	125.24	0.00	0.00	0.00
1,100.00	17.00	329.10	1,081.03	145.05	-86.81	151.44	0.00	0.00	0.00
1,200.00	17.00	329.10	1,176.66	170.14	-101.83	177.64	0.00	0.00	0.00
1,300.00	17.00	329.10	1,272.28	195.23	-116.85	203.83	0.00	0.00	0.00
1,400.00	17.00	329.10	1,367.91	220.32	-131.87	230.03	0.00	0.00	0.00
1,500.00	17.00	329.10	1,463.54	245.41	-146.89	256.23	0.00	0.00	0.00
1,600.00	17.00	329.10	1,559.17	270.50	-161.90	282.42	0.00	0.00	0.00
1,700.00	17.00	329.10	1,654.80	295.59	-176.92	308.62	0.00	0.00	0.00
1,800.00	17.00	329.10	1,750.43	320.68	-191.94	334.82	0.00	0.00	0.00
1,900.00	17.00	329.10	1,846.06	345.77	-206.96	361.02	0.00	0.00	0.00
2,000.00	17.00	329.10	1,941.69	370.86	-221.97	387.21	0.00	0.00	0.00
2,100.00	17.00	329.10	2,037.32	395.96	-236.99	413.41	0.00	0.00	0.00
2,200.00	17.00	329.10	2,132.95	421.05	-252.01	439.61	0.00	0.00	0.00
2,300.00	17.00	329.10	2,228.57	446.14	-267.03	465.80	0.00	0.00	0.00
2,400.00	17.00	329.10	2,324.20	471.23	-282.05	492.00	0.00	0.00	0.00
2,500.00	17.00	329.10	2,419.83	496.32	-297.06	518.20	0.00	0.00	0.00
2,600.00	17.00	329.10	2,515.46	521.41	-312.08	544.40	0.00	0.00	0.00
2,700.00	17.00	329.10	2,611.09	546.50	-327.10	570.59	0.00	0.00	0.00
2,800.00	17.00	329.10	2,706.72	571.59	-342.12	596.79	0.00	0.00	0.00
2,900.00	17.00	329.10	2,802.35	596.68	-357.14	622.99	0.00	0.00	0.00
3,000.00	17.00	329.10	2,897.98	621.78	-372.15	649.18	0.00	0.00	0.00
3,100.00	17.00	329.10	2,993.61	646.87	-387.17	675.38	0.00	0.00	0.00
3,200.00	17.00	329.10	3,089.24	671.96	-402.19	701.58	0.00	0.00	0.00
3,300.00	17.00	329.10	3,184.86	697.05	-417.21	727.78	0.00	0.00	0.00
3,400.00	17.00	329.10	3,280.49	722.14	-432.22	753.97	0.00	0.00	0.00
3,500.00	17.00	329.10	3,376.12	747.23	-447.24	780.17	0.00	0.00	0.00
3,600.00	17.00	329.10	3,471.75	772.32	-462.26	806.37	0.00	0.00	0.00
3,700.00	17.00	329.10	3,567.38	797.41	-477.28	832.56	0.00	0.00	0.00
3,800.00	17.00	329.10	3,663.01	822.50	-492.30	858.76	0.00	0.00	0.00
3,900.00	17.00	329.10	3,758.64	847.60	-507.31	884.96	0.00	0.00	0.00
4,000.00	17.00	329.10	3,854.27	872.69	-522.33	911.16	0.00	0.00	0.00
4,100.00	17.00	329.10	3,949.90	897.78	-537.35	937.35	0.00	0.00	0.00
4,200.00	17.00	329.10	4,045.53	922.87	-552.37	963.55	0.00	0.00	0.00
4,300.00	17.00	329.10	4,141.15	947.96	-567.39	989.75	0.00	0.00	0.00
4,400.00	17.00	329.10	4,236.78	973.05	-582.40	1,015.94	0.00	0.00	0.00
4,500.00	17.00	329.10	4,332.41	998.14	-597.42	1,042.14	0.00	0.00	0.00
4,600.00	17.00	329.10	4,428.04	1,023.23	-612.44	1,068.34	0.00	0.00	0.00
4,700.00	17.00	329.10	4,523.67	1,048.32	-627.46	1,094.54	0.00	0.00	0.00
4,800.00	17.00	329.10	4,619.30	1,073.41	-642.47	1,120.73	0.00	0.00	0.00
4,900.00	17.00	329.10	4,714.93	1,098.51	-657.49	1,146.93	0.00	0.00	0.00

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<b>Well:</b>	SAPPHIRE 1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,000.00	17.00	329.10	4,810.56	1,123.60	-672.51	1,173.13	0.00	0.00	0.00	
5,100.00	17.00	329.10	4,906.19	1,148.69	-687.53	1,199.32	0.00	0.00	0.00	
5,200.00	17.00	329.10	5,001.82	1,173.78	-702.55	1,225.52	0.00	0.00	0.00	
5,300.00	17.00	329.10	5,097.44	1,198.87	-717.56	1,251.72	0.00	0.00	0.00	
5,400.00	17.00	329.10	5,193.07	1,223.96	-732.58	1,277.92	0.00	0.00	0.00	
5,500.00	17.00	329.10	5,288.70	1,249.05	-747.60	1,304.11	0.00	0.00	0.00	
5,600.00	17.00	329.10	5,384.33	1,274.14	-762.62	1,330.31	0.00	0.00	0.00	
5,700.00	17.00	329.10	5,479.96	1,299.23	-777.63	1,356.51	0.00	0.00	0.00	
5,800.00	17.00	329.10	5,575.59	1,324.33	-792.65	1,382.70	0.00	0.00	0.00	
5,900.00	17.00	329.10	5,671.22	1,349.42	-807.67	1,408.90	0.00	0.00	0.00	
6,000.00	17.00	329.10	5,766.85	1,374.51	-822.69	1,435.10	0.00	0.00	0.00	
6,100.00	17.00	329.10	5,862.48	1,399.60	-837.71	1,461.30	0.00	0.00	0.00	
6,200.00	17.00	329.10	5,958.11	1,424.69	-852.72	1,487.49	0.00	0.00	0.00	
6,300.00	17.00	329.10	6,053.73	1,449.78	-867.74	1,513.69	0.00	0.00	0.00	
6,400.00	17.00	329.10	6,149.36	1,474.87	-882.76	1,539.89	0.00	0.00	0.00	
6,500.00	17.00	329.10	6,244.99	1,499.96	-897.78	1,566.08	0.00	0.00	0.00	
6,600.00	17.00	329.10	6,340.62	1,525.05	-912.80	1,592.28	0.00	0.00	0.00	
6,700.00	17.00	329.10	6,436.25	1,550.15	-927.81	1,618.48	0.00	0.00	0.00	
6,800.00	17.00	329.10	6,531.88	1,575.24	-942.83	1,644.68	0.00	0.00	0.00	
6,900.00	17.00	329.10	6,627.51	1,600.33	-957.85	1,670.87	0.00	0.00	0.00	
7,000.00	17.00	329.10	6,723.14	1,625.42	-972.87	1,697.07	0.00	0.00	0.00	
7,100.00	17.00	329.10	6,818.77	1,650.51	-987.88	1,723.27	0.00	0.00	0.00	
7,111.29	17.00	329.10	6,829.56	1,653.34	-989.58	1,726.22	0.00	0.00	0.00	
Start DLS 10.00 TFO 32.42										
7,200.00	24.94	340.41	6,912.36	1,682.15	-1,002.54	1,755.96	10.00	8.94	12.75	
7,300.00	34.41	346.97	6,999.18	1,729.65	-1,016.01	1,804.38	10.00	9.47	6.56	
7,400.00	44.09	350.94	7,076.54	1,791.69	-1,027.89	1,867.16	10.00	9.68	3.97	
7,500.00	53.87	353.72	7,142.10	1,866.38	-1,037.82	1,942.40	10.00	9.78	2.78	
7,600.00	63.70	355.87	7,193.86	1,951.44	-1,045.48	2,027.81	10.00	9.83	2.15	
7,700.00	73.56	357.68	7,230.26	2,044.30	-1,050.66	2,120.78	10.00	9.86	1.81	
7,800.00	83.43	359.32	7,250.19	2,142.14	-1,053.19	2,218.51	10.00	9.87	1.64	
7,866.55	90.00	0.37	7,254.00	2,208.54	-1,053.37	2,284.72	10.00	9.88	1.57	
Start 10270.78 hold at 7866.55 MD										
7,900.00	90.00	0.37	7,254.00	2,241.99	-1,053.15	2,318.05	0.00	0.00	0.00	
8,000.00	90.00	0.37	7,254.00	2,341.99	-1,052.51	2,417.69	0.00	0.00	0.00	
8,100.00	90.00	0.37	7,254.00	2,441.98	-1,051.86	2,517.32	0.00	0.00	0.00	
8,200.00	90.00	0.37	7,254.00	2,541.98	-1,051.22	2,616.96	0.00	0.00	0.00	
8,300.00	90.00	0.37	7,254.00	2,641.98	-1,050.57	2,716.59	0.00	0.00	0.00	
8,400.00	90.00	0.37	7,254.00	2,741.98	-1,049.93	2,816.23	0.00	0.00	0.00	
8,500.00	90.00	0.37	7,254.00	2,841.98	-1,049.28	2,915.86	0.00	0.00	0.00	
8,600.00	90.00	0.37	7,254.00	2,941.97	-1,048.64	3,015.50	0.00	0.00	0.00	
8,700.00	90.00	0.37	7,254.00	3,041.97	-1,047.99	3,115.14	0.00	0.00	0.00	
8,800.00	90.00	0.37	7,254.00	3,141.97	-1,047.34	3,214.77	0.00	0.00	0.00	
8,900.00	90.00	0.37	7,254.00	3,241.97	-1,046.70	3,314.41	0.00	0.00	0.00	
9,000.00	90.00	0.37	7,254.00	3,341.97	-1,046.05	3,414.04	0.00	0.00	0.00	
9,100.00	90.00	0.37	7,254.00	3,441.96	-1,045.41	3,513.68	0.00	0.00	0.00	
9,200.00	90.00	0.37	7,254.00	3,541.96	-1,044.76	3,613.31	0.00	0.00	0.00	
9,300.00	90.00	0.37	7,254.00	3,641.96	-1,044.12	3,712.95	0.00	0.00	0.00	
9,400.00	90.00	0.37	7,254.00	3,741.96	-1,043.47	3,812.59	0.00	0.00	0.00	
9,500.00	90.00	0.37	7,254.00	3,841.95	-1,042.83	3,912.22	0.00	0.00	0.00	
9,600.00	90.00	0.37	7,254.00	3,941.95	-1,042.18	4,011.86	0.00	0.00	0.00	
9,700.00	90.00	0.37	7,254.00	4,041.95	-1,041.53	4,111.49	0.00	0.00	0.00	
9,800.00	90.00	0.37	7,254.00	4,141.95	-1,040.89	4,211.13	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAPPHIRE 1
<b>Company:</b>	BAYSWATER EXPLORATION & PRODUCTION	<b>TVD Reference:</b>	KB 17' @ 4834.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 17' @ 4834.00usft
<b>Site:</b>	SEC 5-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	SAPPHIRE 1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,900.00	90.00	0.37	7,254.00	4,241.95	-1,040.24	4,310.76	0.00	0.00	0.00	
10,000.00	90.00	0.37	7,254.00	4,341.94	-1,039.60	4,410.40	0.00	0.00	0.00	
10,100.00	90.00	0.37	7,254.00	4,441.94	-1,038.95	4,510.03	0.00	0.00	0.00	
10,200.00	90.00	0.37	7,254.00	4,541.94	-1,038.31	4,609.67	0.00	0.00	0.00	
10,300.00	90.00	0.37	7,254.00	4,641.94	-1,037.66	4,709.31	0.00	0.00	0.00	
10,400.00	90.00	0.37	7,254.00	4,741.94	-1,037.02	4,808.94	0.00	0.00	0.00	
10,500.00	90.00	0.37	7,254.00	4,841.93	-1,036.37	4,908.58	0.00	0.00	0.00	
10,600.00	90.00	0.37	7,254.00	4,941.93	-1,035.72	5,008.21	0.00	0.00	0.00	
10,700.00	90.00	0.37	7,254.00	5,041.93	-1,035.08	5,107.85	0.00	0.00	0.00	
10,800.00	90.00	0.37	7,254.00	5,141.93	-1,034.43	5,207.48	0.00	0.00	0.00	
10,900.00	90.00	0.37	7,254.00	5,241.93	-1,033.79	5,307.12	0.00	0.00	0.00	
11,000.00	90.00	0.37	7,254.00	5,341.92	-1,033.14	5,406.76	0.00	0.00	0.00	
11,100.00	90.00	0.37	7,254.00	5,441.92	-1,032.50	5,506.39	0.00	0.00	0.00	
11,200.00	90.00	0.37	7,254.00	5,541.92	-1,031.85	5,606.03	0.00	0.00	0.00	
11,300.00	90.00	0.37	7,254.00	5,641.92	-1,031.21	5,705.66	0.00	0.00	0.00	
11,400.00	90.00	0.37	7,254.00	5,741.92	-1,030.56	5,805.30	0.00	0.00	0.00	
11,500.00	90.00	0.37	7,254.00	5,841.91	-1,029.92	5,904.93	0.00	0.00	0.00	
11,600.00	90.00	0.37	7,254.00	5,941.91	-1,029.27	6,004.57	0.00	0.00	0.00	
11,700.00	90.00	0.37	7,254.00	6,041.91	-1,028.62	6,104.21	0.00	0.00	0.00	
11,800.00	90.00	0.37	7,254.00	6,141.91	-1,027.98	6,203.84	0.00	0.00	0.00	
11,900.00	90.00	0.37	7,254.00	6,241.90	-1,027.33	6,303.48	0.00	0.00	0.00	
12,000.00	90.00	0.37	7,254.00	6,341.90	-1,026.69	6,403.11	0.00	0.00	0.00	
12,100.00	90.00	0.37	7,254.00	6,441.90	-1,026.04	6,502.75	0.00	0.00	0.00	
12,200.00	90.00	0.37	7,254.00	6,541.90	-1,025.40	6,602.38	0.00	0.00	0.00	
12,300.00	90.00	0.37	7,254.00	6,641.90	-1,024.75	6,702.02	0.00	0.00	0.00	
12,400.00	90.00	0.37	7,254.00	6,741.89	-1,024.11	6,801.66	0.00	0.00	0.00	
12,500.00	90.00	0.37	7,254.00	6,841.89	-1,023.46	6,901.29	0.00	0.00	0.00	
12,600.00	90.00	0.37	7,254.00	6,941.89	-1,022.81	7,000.93	0.00	0.00	0.00	
12,700.00	90.00	0.37	7,254.00	7,041.89	-1,022.17	7,100.56	0.00	0.00	0.00	
12,800.00	90.00	0.37	7,254.00	7,141.89	-1,021.52	7,200.20	0.00	0.00	0.00	
12,900.00	90.00	0.37	7,254.00	7,241.88	-1,020.88	7,299.83	0.00	0.00	0.00	
13,000.00	90.00	0.37	7,254.00	7,341.88	-1,020.23	7,399.47	0.00	0.00	0.00	
13,100.00	90.00	0.37	7,254.00	7,441.88	-1,019.59	7,499.10	0.00	0.00	0.00	
13,200.00	90.00	0.37	7,254.00	7,541.88	-1,018.94	7,598.74	0.00	0.00	0.00	
13,300.00	90.00	0.37	7,254.00	7,641.88	-1,018.30	7,698.38	0.00	0.00	0.00	
13,400.00	90.00	0.37	7,254.00	7,741.87	-1,017.65	7,798.01	0.00	0.00	0.00	
13,500.00	90.00	0.37	7,254.00	7,841.87	-1,017.01	7,897.65	0.00	0.00	0.00	
13,600.00	90.00	0.37	7,254.00	7,941.87	-1,016.36	7,997.28	0.00	0.00	0.00	
13,700.00	90.00	0.37	7,254.00	8,041.87	-1,015.71	8,096.92	0.00	0.00	0.00	
13,800.00	90.00	0.37	7,254.00	8,141.87	-1,015.07	8,196.55	0.00	0.00	0.00	
13,900.00	90.00	0.37	7,254.00	8,241.86	-1,014.42	8,296.19	0.00	0.00	0.00	
14,000.00	90.00	0.37	7,254.00	8,341.86	-1,013.78	8,395.83	0.00	0.00	0.00	
14,100.00	90.00	0.37	7,254.00	8,441.86	-1,013.13	8,495.46	0.00	0.00	0.00	
14,200.00	90.00	0.37	7,254.00	8,541.86	-1,012.49	8,595.10	0.00	0.00	0.00	
14,300.00	90.00	0.37	7,254.00	8,641.86	-1,011.84	8,694.73	0.00	0.00	0.00	
14,400.00	90.00	0.37	7,254.00	8,741.85	-1,011.20	8,794.37	0.00	0.00	0.00	
14,500.00	90.00	0.37	7,254.00	8,841.85	-1,010.55	8,894.00	0.00	0.00	0.00	
14,600.00	90.00	0.37	7,254.00	8,941.85	-1,009.90	8,993.64	0.00	0.00	0.00	
14,700.00	90.00	0.37	7,254.00	9,041.85	-1,009.26	9,093.28	0.00	0.00	0.00	
14,800.00	90.00	0.37	7,254.00	9,141.84	-1,008.61	9,192.91	0.00	0.00	0.00	
14,900.00	90.00	0.37	7,254.00	9,241.84	-1,007.97	9,292.55	0.00	0.00	0.00	
15,000.00	90.00	0.37	7,254.00	9,341.84	-1,007.32	9,392.18	0.00	0.00	0.00	
15,100.00	90.00	0.37	7,254.00	9,441.84	-1,006.68	9,491.82	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAPPHIRE 1
<b>Company:</b>	BAYSWATER EXPLORATION & PRODUCTION	<b>TVD Reference:</b>	KB 17' @ 4834.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 17' @ 4834.00usft
<b>Site:</b>	SEC 5-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	SAPPHIRE 1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
15,200.00	90.00	0.37	7,254.00	9,541.84	-1,006.03	9,591.45	0.00	0.00	0.00	
15,300.00	90.00	0.37	7,254.00	9,641.83	-1,005.39	9,691.09	0.00	0.00	0.00	
15,400.00	90.00	0.37	7,254.00	9,741.83	-1,004.74	9,790.73	0.00	0.00	0.00	
15,500.00	90.00	0.37	7,254.00	9,841.83	-1,004.09	9,890.36	0.00	0.00	0.00	
15,600.00	90.00	0.37	7,254.00	9,941.83	-1,003.45	9,990.00	0.00	0.00	0.00	
15,700.00	90.00	0.37	7,254.00	10,041.83	-1,002.80	10,089.63	0.00	0.00	0.00	
15,800.00	90.00	0.37	7,254.00	10,141.82	-1,002.16	10,189.27	0.00	0.00	0.00	
15,900.00	90.00	0.37	7,254.00	10,241.82	-1,001.51	10,288.90	0.00	0.00	0.00	
16,000.00	90.00	0.37	7,254.00	10,341.82	-1,000.87	10,388.54	0.00	0.00	0.00	
16,100.00	90.00	0.37	7,254.00	10,441.82	-1,000.22	10,488.17	0.00	0.00	0.00	
16,200.00	90.00	0.37	7,254.00	10,541.82	-999.58	10,587.81	0.00	0.00	0.00	
16,300.00	90.00	0.37	7,254.00	10,641.81	-998.93	10,687.45	0.00	0.00	0.00	
16,400.00	90.00	0.37	7,254.00	10,741.81	-998.29	10,787.08	0.00	0.00	0.00	
16,500.00	90.00	0.37	7,254.00	10,841.81	-997.64	10,886.72	0.00	0.00	0.00	
16,600.00	90.00	0.37	7,254.00	10,941.81	-996.99	10,986.35	0.00	0.00	0.00	
16,700.00	90.00	0.37	7,254.00	11,041.81	-996.35	11,085.99	0.00	0.00	0.00	
16,800.00	90.00	0.37	7,254.00	11,141.80	-995.70	11,185.62	0.00	0.00	0.00	
16,900.00	90.00	0.37	7,254.00	11,241.80	-995.06	11,285.26	0.00	0.00	0.00	
17,000.00	90.00	0.37	7,254.00	11,341.80	-994.41	11,384.90	0.00	0.00	0.00	
17,100.00	90.00	0.37	7,254.00	11,441.80	-993.77	11,484.53	0.00	0.00	0.00	
17,200.00	90.00	0.37	7,254.00	11,541.79	-993.12	11,584.17	0.00	0.00	0.00	
17,300.00	90.00	0.37	7,254.00	11,641.79	-992.48	11,683.80	0.00	0.00	0.00	
17,400.00	90.00	0.37	7,254.00	11,741.79	-991.83	11,783.44	0.00	0.00	0.00	
17,500.00	90.00	0.37	7,254.00	11,841.79	-991.18	11,883.07	0.00	0.00	0.00	
17,600.00	90.00	0.37	7,254.00	11,941.79	-990.54	11,982.71	0.00	0.00	0.00	
17,700.00	90.00	0.37	7,254.00	12,041.78	-989.89	12,082.35	0.00	0.00	0.00	
17,800.00	90.00	0.37	7,254.00	12,141.78	-989.25	12,181.98	0.00	0.00	0.00	
17,900.00	90.00	0.37	7,254.00	12,241.78	-988.60	12,281.62	0.00	0.00	0.00	
18,000.00	90.00	0.37	7,254.00	12,341.78	-987.96	12,381.25	0.00	0.00	0.00	
18,100.00	90.00	0.37	7,254.00	12,441.78	-987.31	12,480.89	0.00	0.00	0.00	
18,137.33	90.00	0.37	7,254.00	12,479.10	-987.07	12,518.08	0.00	0.00	0.00	
TD at 18137.33										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LP-SAPPHIRE 1 - hit/miss target - Shape	0.00	0.00	7,254.00	2,208.54	-1,053.37	1,434,978.31	3,223,612.40	40.524632°N	104.695623°W
PBHL-SAPPHIRE 1 - plan hits target center - Point	0.00	0.00	7,254.00	12,479.10	-987.07	1,445,248.72	3,223,585.09	40.552823°N	104.695386°W

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAPPHIRE 1
<b>Company:</b>	BAYSWATER EXPLORATION & PRODUCTION	<b>TVD Reference:</b>	KB 17' @ 4834.00usft
<b>Project:</b>	WELD COUNTY	<b>MD Reference:</b>	KB 17' @ 4834.00usft
<b>Site:</b>	SEC 5-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	SAPPHIRE 1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	PROPOSAL 1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.00	100.00	0.00	0.00	Start Build 2.00
950.14	937.72	107.44	-64.31	Start 6161.14 hold at 950.14 MD
7,111.29	6,829.56	1,653.34	-989.58	Start DLS 10.00 TFO 32.42
7,866.55	7,254.00	2,208.54	-1,053.37	Start 10270.78 hold at 7866.55 MD
18,137.33	7,254.00	12,479.10	-987.07	TD at 18137.33