

# **BAYSWATER EXPLORATION & PRODUCTION**

**WELD COUNTY  
SEC 5-T6N-R65W  
SAPPHIRE 2**

**OWB**

**Plan: PROPOSAL 1**

## **Standard Planning Report**

**30 December, 2022**

Project: WELD COUNTY  
Site: SEC 5-T6N-R65W  
Well: SAPPHIRE 2  
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 2

	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
	0.00	0.00	1432794.08	3224682.63	40.518610°N	104.691845°W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1126.86	16.54	337.50	1115.43	109.49	-45.34	2.00	337.50	111.72	
4	6914.96	16.54	337.50	6664.10	1631.64	-675.69	0.00	0.00	1664.88	
5	7662.91	90.00	0.37	7084.00	2184.84	-720.60	10.00	23.74	2219.67	LP-SAPPHIRE 2
6	17932.95	90.00	0.37	7084.00	12454.68	-654.99	0.00	0.00	12471.89	PBHL-SAPPHIRE 2

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	Start Build 2.00
1126.86	16.54	337.50	1115.43	109.49	-45.34	111.72	118.50	Start 5788.10 hold at 1126.86 MD
6914.96	16.54	337.50	6664.10	1631.64	-675.69	1664.88	1766.02	Start DLS 10.00 TFO 23.74
7662.91	90.00	0.37	7084.00	2184.84	-720.60	2219.67	2322.82	Start 10270.05 hold at 7662.91 MD
7932.95	90.00	0.37	7084.00	12454.68	-654.99	12471.89	12592.87	TD at 17932.95

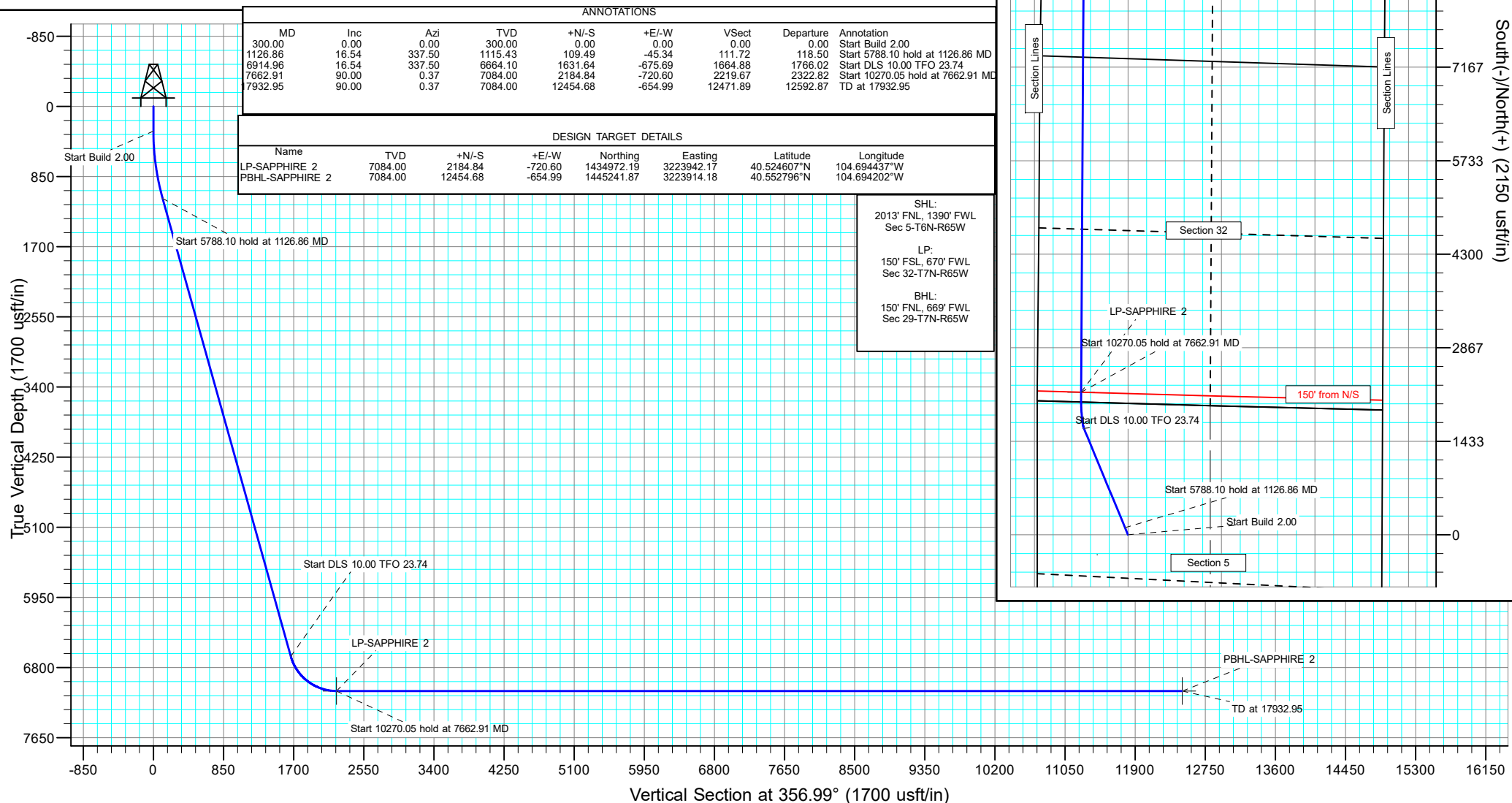
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP-SAPPHIRE 2	7084.00	2184.84	-720.60	1434972.19	3223942.17	40.524607°N	104.694437°W
PBHL-SAPPHIRE 2	7084.00	12454.68	-654.99	1445241.87	3223914.18	40.552796°N	104.694202°W

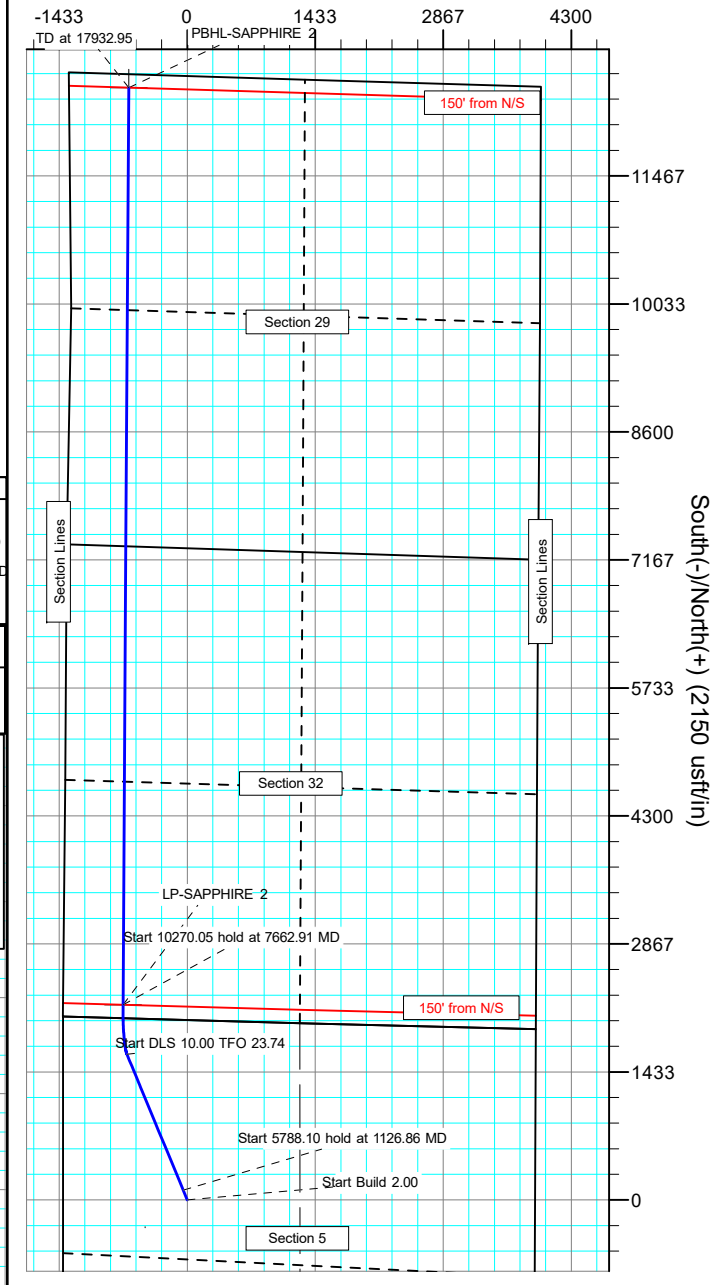
SHL:  
2013' FNL, 1390' FWL  
Sec 5-T6N-R65W

LP:  
150' FSL, 670' FWL  
Sec 32-T7N-R65W

BHL:  
150' FNL, 669' FWL  
Sec 29-T7N-R65W



West(-)/East(+) (2150 usft/in)



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAPHIRE 2
<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>	SAPHIRE 2	<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 2					
Well Position	+N/-S	0.00 usft	Northing:	1,432,794.08 usft	Latitude:	40.518610°N
	+E/-W	0.00 usft	Easting:	3,224,682.63 usft	Longitude:	104.691845°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	51,860.50630256

<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	356.99

<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	17,932.95 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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,126.86	16.54	337.50	1,115.43	109.49	-45.34	2.00	2.00	0.00	337.50	
6,914.96	16.54	337.50	6,664.10	1,631.64	-675.69	0.00	0.00	0.00	0.00	
7,662.91	90.00	0.37	7,084.00	2,184.84	-720.60	10.00	9.82	3.06	23.74	LP-SAPHIRE 2
17,932.95	90.00	0.37	7,084.00	12,454.68	-654.99	0.00	0.00	0.00	0.00	PBHL-SAPHIRE 2

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SAPPHIRE 2
<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 2	<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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	337.50	399.98	1.61	-0.67	1.65	2.00	2.00	0.00
500.00	4.00	337.50	499.84	6.45	-2.67	6.58	2.00	2.00	0.00
600.00	6.00	337.50	599.45	14.50	-6.00	14.79	2.00	2.00	0.00
700.00	8.00	337.50	698.70	25.76	-10.67	26.28	2.00	2.00	0.00
800.00	10.00	337.50	797.47	40.21	-16.65	41.03	2.00	2.00	0.00
900.00	12.00	337.50	895.62	57.84	-23.95	59.02	2.00	2.00	0.00
1,000.00	14.00	337.50	993.06	78.62	-32.56	80.22	2.00	2.00	0.00
1,100.00	16.00	337.50	1,089.64	102.53	-42.46	104.62	2.00	2.00	0.00
1,126.86	16.54	337.50	1,115.43	109.49	-45.34	111.72	2.00	2.00	0.00
Start 5788.10 hold at 1126.86 MD									
1,200.00	16.54	337.50	1,185.54	128.72	-53.30	131.34	0.00	0.00	0.00
1,300.00	16.54	337.50	1,281.41	155.02	-64.20	158.18	0.00	0.00	0.00
1,400.00	16.54	337.50	1,377.27	181.32	-75.09	185.01	0.00	0.00	0.00
1,500.00	16.54	337.50	1,473.13	207.61	-85.98	211.84	0.00	0.00	0.00
1,600.00	16.54	337.50	1,569.00	233.91	-96.87	238.68	0.00	0.00	0.00
1,700.00	16.54	337.50	1,664.86	260.21	-107.76	265.51	0.00	0.00	0.00
1,800.00	16.54	337.50	1,760.72	286.51	-118.65	292.34	0.00	0.00	0.00
1,900.00	16.54	337.50	1,856.59	312.81	-129.54	319.18	0.00	0.00	0.00
2,000.00	16.54	337.50	1,952.45	339.10	-140.43	346.01	0.00	0.00	0.00
2,100.00	16.54	337.50	2,048.31	365.40	-151.32	372.84	0.00	0.00	0.00
2,200.00	16.54	337.50	2,144.18	391.70	-162.21	399.68	0.00	0.00	0.00
2,300.00	16.54	337.50	2,240.04	418.00	-173.10	426.51	0.00	0.00	0.00
2,400.00	16.54	337.50	2,335.90	444.30	-183.99	453.35	0.00	0.00	0.00
2,500.00	16.54	337.50	2,431.77	470.59	-194.88	480.18	0.00	0.00	0.00
2,600.00	16.54	337.50	2,527.63	496.89	-205.77	507.01	0.00	0.00	0.00
2,700.00	16.54	337.50	2,623.49	523.19	-216.66	533.85	0.00	0.00	0.00
2,800.00	16.54	337.50	2,719.36	549.49	-227.55	560.68	0.00	0.00	0.00
2,900.00	16.54	337.50	2,815.22	575.79	-238.44	587.51	0.00	0.00	0.00
3,000.00	16.54	337.50	2,911.08	602.08	-249.33	614.35	0.00	0.00	0.00
3,100.00	16.54	337.50	3,006.95	628.38	-260.22	641.18	0.00	0.00	0.00
3,200.00	16.54	337.50	3,102.81	654.68	-271.11	668.02	0.00	0.00	0.00
3,300.00	16.54	337.50	3,198.68	680.98	-282.00	694.85	0.00	0.00	0.00
3,400.00	16.54	337.50	3,294.54	707.28	-292.90	721.68	0.00	0.00	0.00
3,500.00	16.54	337.50	3,390.40	733.58	-303.79	748.52	0.00	0.00	0.00
3,600.00	16.54	337.50	3,486.27	759.87	-314.68	775.35	0.00	0.00	0.00
3,700.00	16.54	337.50	3,582.13	786.17	-325.57	802.18	0.00	0.00	0.00
3,800.00	16.54	337.50	3,677.99	812.47	-336.46	829.02	0.00	0.00	0.00
3,900.00	16.54	337.50	3,773.86	838.77	-347.35	855.85	0.00	0.00	0.00
4,000.00	16.54	337.50	3,869.72	865.07	-358.24	882.69	0.00	0.00	0.00
4,100.00	16.54	337.50	3,965.58	891.36	-369.13	909.52	0.00	0.00	0.00
4,200.00	16.54	337.50	4,061.45	917.66	-380.02	936.35	0.00	0.00	0.00
4,300.00	16.54	337.50	4,157.31	943.96	-390.91	963.19	0.00	0.00	0.00
4,400.00	16.54	337.50	4,253.17	970.26	-401.80	990.02	0.00	0.00	0.00
4,500.00	16.54	337.50	4,349.04	996.56	-412.69	1,016.85	0.00	0.00	0.00
4,600.00	16.54	337.50	4,444.90	1,022.85	-423.58	1,043.69	0.00	0.00	0.00
4,700.00	16.54	337.50	4,540.76	1,049.15	-434.47	1,070.52	0.00	0.00	0.00
4,800.00	16.54	337.50	4,636.63	1,075.45	-445.36	1,097.36	0.00	0.00	0.00
4,900.00	16.54	337.50	4,732.49	1,101.75	-456.25	1,124.19	0.00	0.00	0.00
5,000.00	16.54	337.50	4,828.35	1,128.05	-467.14	1,151.02	0.00	0.00	0.00
5,100.00	16.54	337.50	4,924.22	1,154.34	-478.03	1,177.86	0.00	0.00	0.00

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<b>Well:</b>	SAPPHIRE 2	<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)	
5,200.00	16.54	337.50	5,020.08	1,180.64	-488.92	1,204.69	0.00	0.00	0.00	
5,300.00	16.54	337.50	5,115.95	1,206.94	-499.81	1,231.52	0.00	0.00	0.00	
5,400.00	16.54	337.50	5,211.81	1,233.24	-510.70	1,258.36	0.00	0.00	0.00	
5,500.00	16.54	337.50	5,307.67	1,259.54	-521.60	1,285.19	0.00	0.00	0.00	
5,600.00	16.54	337.50	5,403.54	1,285.83	-532.49	1,312.02	0.00	0.00	0.00	
5,700.00	16.54	337.50	5,499.40	1,312.13	-543.38	1,338.86	0.00	0.00	0.00	
5,800.00	16.54	337.50	5,595.26	1,338.43	-554.27	1,365.69	0.00	0.00	0.00	
5,900.00	16.54	337.50	5,691.13	1,364.73	-565.16	1,392.53	0.00	0.00	0.00	
6,000.00	16.54	337.50	5,786.99	1,391.03	-576.05	1,419.36	0.00	0.00	0.00	
6,100.00	16.54	337.50	5,882.85	1,417.33	-586.94	1,446.19	0.00	0.00	0.00	
6,200.00	16.54	337.50	5,978.72	1,443.62	-597.83	1,473.03	0.00	0.00	0.00	
6,300.00	16.54	337.50	6,074.58	1,469.92	-608.72	1,499.86	0.00	0.00	0.00	
6,400.00	16.54	337.50	6,170.44	1,496.22	-619.61	1,526.69	0.00	0.00	0.00	
6,500.00	16.54	337.50	6,266.31	1,522.52	-630.50	1,553.53	0.00	0.00	0.00	
6,600.00	16.54	337.50	6,362.17	1,548.82	-641.39	1,580.36	0.00	0.00	0.00	
6,700.00	16.54	337.50	6,458.03	1,575.11	-652.28	1,607.20	0.00	0.00	0.00	
6,800.00	16.54	337.50	6,553.90	1,601.41	-663.17	1,634.03	0.00	0.00	0.00	
6,900.00	16.54	337.50	6,649.76	1,627.71	-674.06	1,660.86	0.00	0.00	0.00	
6,914.96	16.54	337.50	6,664.10	1,631.64	-675.69	1,664.88	0.00	0.00	0.00	
Start DLS 10.00 TFO 23.74										
7,000.00	24.55	345.74	6,743.68	1,660.00	-684.69	1,693.67	10.00	9.43	9.69	
7,100.00	34.27	350.62	6,830.70	1,708.04	-694.42	1,742.15	10.00	9.72	4.88	
7,200.00	44.10	353.53	6,908.12	1,770.56	-702.95	1,805.03	10.00	9.83	2.91	
7,300.00	53.99	355.56	6,973.59	1,845.64	-710.03	1,880.39	10.00	9.88	2.03	
7,400.00	63.90	357.13	7,025.12	1,931.03	-715.42	1,965.93	10.00	9.91	1.57	
7,500.00	73.82	358.45	7,061.15	2,024.11	-718.99	2,059.07	10.00	9.92	1.32	
7,600.00	83.75	359.64	7,080.57	2,122.06	-720.60	2,156.98	10.00	9.93	1.19	
7,662.91	90.00	0.37	7,084.00	2,184.84	-720.60	2,219.67	10.00	9.93	1.15	
Start 10270.05 hold at 7662.91 MD										
7,700.00	90.00	0.37	7,084.00	2,221.93	-720.36	2,256.70	0.00	0.00	0.00	
7,800.00	90.00	0.37	7,084.00	2,321.93	-719.72	2,356.53	0.00	0.00	0.00	
7,900.00	90.00	0.37	7,084.00	2,421.93	-719.08	2,456.35	0.00	0.00	0.00	
8,000.00	90.00	0.37	7,084.00	2,521.93	-718.44	2,556.18	0.00	0.00	0.00	
8,100.00	90.00	0.37	7,084.00	2,621.93	-717.80	2,656.01	0.00	0.00	0.00	
8,200.00	90.00	0.37	7,084.00	2,721.92	-717.16	2,755.83	0.00	0.00	0.00	
8,300.00	90.00	0.37	7,084.00	2,821.92	-716.53	2,855.66	0.00	0.00	0.00	
8,400.00	90.00	0.37	7,084.00	2,921.92	-715.89	2,955.48	0.00	0.00	0.00	
8,500.00	90.00	0.37	7,084.00	3,021.92	-715.25	3,055.31	0.00	0.00	0.00	
8,600.00	90.00	0.37	7,084.00	3,121.92	-714.61	3,155.14	0.00	0.00	0.00	
8,700.00	90.00	0.37	7,084.00	3,221.91	-713.97	3,254.96	0.00	0.00	0.00	
8,800.00	90.00	0.37	7,084.00	3,321.91	-713.33	3,354.79	0.00	0.00	0.00	
8,900.00	90.00	0.37	7,084.00	3,421.91	-712.69	3,454.62	0.00	0.00	0.00	
9,000.00	90.00	0.37	7,084.00	3,521.91	-712.05	3,554.44	0.00	0.00	0.00	
9,100.00	90.00	0.37	7,084.00	3,621.91	-711.42	3,654.27	0.00	0.00	0.00	
9,200.00	90.00	0.37	7,084.00	3,721.90	-710.78	3,754.10	0.00	0.00	0.00	
9,300.00	90.00	0.37	7,084.00	3,821.90	-710.14	3,853.92	0.00	0.00	0.00	
9,400.00	90.00	0.37	7,084.00	3,921.90	-709.50	3,953.75	0.00	0.00	0.00	
9,500.00	90.00	0.37	7,084.00	4,021.90	-708.86	4,053.57	0.00	0.00	0.00	
9,600.00	90.00	0.37	7,084.00	4,121.90	-708.22	4,153.40	0.00	0.00	0.00	
9,700.00	90.00	0.37	7,084.00	4,221.89	-707.58	4,253.23	0.00	0.00	0.00	
9,800.00	90.00	0.37	7,084.00	4,321.89	-706.94	4,353.05	0.00	0.00	0.00	
9,900.00	90.00	0.37	7,084.00	4,421.89	-706.30	4,452.88	0.00	0.00	0.00	
10,000.00	90.00	0.37	7,084.00	4,521.89	-705.67	4,552.71	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 2
<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 2	<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)	
10,100.00	90.00	0.37	7,084.00	4,621.89	-705.03	4,652.53	0.00	0.00	0.00	
10,200.00	90.00	0.37	7,084.00	4,721.88	-704.39	4,752.36	0.00	0.00	0.00	
10,300.00	90.00	0.37	7,084.00	4,821.88	-703.75	4,852.19	0.00	0.00	0.00	
10,400.00	90.00	0.37	7,084.00	4,921.88	-703.11	4,952.01	0.00	0.00	0.00	
10,500.00	90.00	0.37	7,084.00	5,021.88	-702.47	5,051.84	0.00	0.00	0.00	
10,600.00	90.00	0.37	7,084.00	5,121.88	-701.83	5,151.67	0.00	0.00	0.00	
10,700.00	90.00	0.37	7,084.00	5,221.87	-701.19	5,251.49	0.00	0.00	0.00	
10,800.00	90.00	0.37	7,084.00	5,321.87	-700.56	5,351.32	0.00	0.00	0.00	
10,900.00	90.00	0.37	7,084.00	5,421.87	-699.92	5,451.14	0.00	0.00	0.00	
11,000.00	90.00	0.37	7,084.00	5,521.87	-699.28	5,550.97	0.00	0.00	0.00	
11,100.00	90.00	0.37	7,084.00	5,621.87	-698.64	5,650.80	0.00	0.00	0.00	
11,200.00	90.00	0.37	7,084.00	5,721.86	-698.00	5,750.62	0.00	0.00	0.00	
11,300.00	90.00	0.37	7,084.00	5,821.86	-697.36	5,850.45	0.00	0.00	0.00	
11,400.00	90.00	0.37	7,084.00	5,921.86	-696.72	5,950.28	0.00	0.00	0.00	
11,500.00	90.00	0.37	7,084.00	6,021.86	-696.08	6,050.10	0.00	0.00	0.00	
11,600.00	90.00	0.37	7,084.00	6,121.85	-695.45	6,149.93	0.00	0.00	0.00	
11,700.00	90.00	0.37	7,084.00	6,221.85	-694.81	6,249.76	0.00	0.00	0.00	
11,800.00	90.00	0.37	7,084.00	6,321.85	-694.17	6,349.58	0.00	0.00	0.00	
11,900.00	90.00	0.37	7,084.00	6,421.85	-693.53	6,449.41	0.00	0.00	0.00	
12,000.00	90.00	0.37	7,084.00	6,521.85	-692.89	6,549.24	0.00	0.00	0.00	
12,100.00	90.00	0.37	7,084.00	6,621.84	-692.25	6,649.06	0.00	0.00	0.00	
12,200.00	90.00	0.37	7,084.00	6,721.84	-691.61	6,748.89	0.00	0.00	0.00	
12,300.00	90.00	0.37	7,084.00	6,821.84	-690.97	6,848.71	0.00	0.00	0.00	
12,400.00	90.00	0.37	7,084.00	6,921.84	-690.33	6,948.54	0.00	0.00	0.00	
12,500.00	90.00	0.37	7,084.00	7,021.84	-689.70	7,048.37	0.00	0.00	0.00	
12,600.00	90.00	0.37	7,084.00	7,121.83	-689.06	7,148.19	0.00	0.00	0.00	
12,700.00	90.00	0.37	7,084.00	7,221.83	-688.42	7,248.02	0.00	0.00	0.00	
12,800.00	90.00	0.37	7,084.00	7,321.83	-687.78	7,347.85	0.00	0.00	0.00	
12,900.00	90.00	0.37	7,084.00	7,421.83	-687.14	7,447.67	0.00	0.00	0.00	
13,000.00	90.00	0.37	7,084.00	7,521.83	-686.50	7,547.50	0.00	0.00	0.00	
13,100.00	90.00	0.37	7,084.00	7,621.82	-685.86	7,647.33	0.00	0.00	0.00	
13,200.00	90.00	0.37	7,084.00	7,721.82	-685.22	7,747.15	0.00	0.00	0.00	
13,300.00	90.00	0.37	7,084.00	7,821.82	-684.59	7,846.98	0.00	0.00	0.00	
13,400.00	90.00	0.37	7,084.00	7,921.82	-683.95	7,946.81	0.00	0.00	0.00	
13,500.00	90.00	0.37	7,084.00	8,021.82	-683.31	8,046.63	0.00	0.00	0.00	
13,600.00	90.00	0.37	7,084.00	8,121.81	-682.67	8,146.46	0.00	0.00	0.00	
13,700.00	90.00	0.37	7,084.00	8,221.81	-682.03	8,246.28	0.00	0.00	0.00	
13,800.00	90.00	0.37	7,084.00	8,321.81	-681.39	8,346.11	0.00	0.00	0.00	
13,900.00	90.00	0.37	7,084.00	8,421.81	-680.75	8,445.94	0.00	0.00	0.00	
14,000.00	90.00	0.37	7,084.00	8,521.81	-680.11	8,545.76	0.00	0.00	0.00	
14,100.00	90.00	0.37	7,084.00	8,621.80	-679.48	8,645.59	0.00	0.00	0.00	
14,200.00	90.00	0.37	7,084.00	8,721.80	-678.84	8,745.42	0.00	0.00	0.00	
14,300.00	90.00	0.37	7,084.00	8,821.80	-678.20	8,845.24	0.00	0.00	0.00	
14,400.00	90.00	0.37	7,084.00	8,921.80	-677.56	8,945.07	0.00	0.00	0.00	
14,500.00	90.00	0.37	7,084.00	9,021.80	-676.92	9,044.90	0.00	0.00	0.00	
14,600.00	90.00	0.37	7,084.00	9,121.79	-676.28	9,144.72	0.00	0.00	0.00	
14,700.00	90.00	0.37	7,084.00	9,221.79	-675.64	9,244.55	0.00	0.00	0.00	
14,800.00	90.00	0.37	7,084.00	9,321.79	-675.00	9,344.38	0.00	0.00	0.00	
14,900.00	90.00	0.37	7,084.00	9,421.79	-674.36	9,444.20	0.00	0.00	0.00	
15,000.00	90.00	0.37	7,084.00	9,521.79	-673.73	9,544.03	0.00	0.00	0.00	
15,100.00	90.00	0.37	7,084.00	9,621.78	-673.09	9,643.85	0.00	0.00	0.00	
15,200.00	90.00	0.37	7,084.00	9,721.78	-672.45	9,743.68	0.00	0.00	0.00	
15,300.00	90.00	0.37	7,084.00	9,821.78	-671.81	9,843.51	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 2
<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 2	<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)	
15,400.00	90.00	0.37	7,084.00	9,921.78	-671.17	9,943.33	0.00	0.00	0.00	
15,500.00	90.00	0.37	7,084.00	10,021.78	-670.53	10,043.16	0.00	0.00	0.00	
15,600.00	90.00	0.37	7,084.00	10,121.77	-669.89	10,142.99	0.00	0.00	0.00	
15,700.00	90.00	0.37	7,084.00	10,221.77	-669.25	10,242.81	0.00	0.00	0.00	
15,800.00	90.00	0.37	7,084.00	10,321.77	-668.62	10,342.64	0.00	0.00	0.00	
15,900.00	90.00	0.37	7,084.00	10,421.77	-667.98	10,442.47	0.00	0.00	0.00	
16,000.00	90.00	0.37	7,084.00	10,521.77	-667.34	10,542.29	0.00	0.00	0.00	
16,100.00	90.00	0.37	7,084.00	10,621.76	-666.70	10,642.12	0.00	0.00	0.00	
16,200.00	90.00	0.37	7,084.00	10,721.76	-666.06	10,741.94	0.00	0.00	0.00	
16,300.00	90.00	0.37	7,084.00	10,821.76	-665.42	10,841.77	0.00	0.00	0.00	
16,400.00	90.00	0.37	7,084.00	10,921.76	-664.78	10,941.60	0.00	0.00	0.00	
16,500.00	90.00	0.37	7,084.00	11,021.76	-664.14	11,041.42	0.00	0.00	0.00	
16,600.00	90.00	0.37	7,084.00	11,121.75	-663.51	11,141.25	0.00	0.00	0.00	
16,700.00	90.00	0.37	7,084.00	11,221.75	-662.87	11,241.08	0.00	0.00	0.00	
16,800.00	90.00	0.37	7,084.00	11,321.75	-662.23	11,340.90	0.00	0.00	0.00	
16,900.00	90.00	0.37	7,084.00	11,421.75	-661.59	11,440.73	0.00	0.00	0.00	
17,000.00	90.00	0.37	7,084.00	11,521.74	-660.95	11,540.56	0.00	0.00	0.00	
17,100.00	90.00	0.37	7,084.00	11,621.74	-660.31	11,640.38	0.00	0.00	0.00	
17,200.00	90.00	0.37	7,084.00	11,721.74	-659.67	11,740.21	0.00	0.00	0.00	
17,300.00	90.00	0.37	7,084.00	11,821.74	-659.03	11,840.04	0.00	0.00	0.00	
17,400.00	90.00	0.37	7,084.00	11,921.74	-658.39	11,939.86	0.00	0.00	0.00	
17,500.00	90.00	0.37	7,084.00	12,021.73	-657.76	12,039.69	0.00	0.00	0.00	
17,600.00	90.00	0.37	7,084.00	12,121.73	-657.12	12,139.51	0.00	0.00	0.00	
17,700.00	90.00	0.37	7,084.00	12,221.73	-656.48	12,239.34	0.00	0.00	0.00	
17,800.00	90.00	0.37	7,084.00	12,321.73	-655.84	12,339.17	0.00	0.00	0.00	
17,900.00	90.00	0.37	7,084.00	12,421.73	-655.20	12,438.99	0.00	0.00	0.00	
17,932.95	90.00	0.37	7,084.00	12,454.68	-654.99	12,471.89	0.00	0.00	0.00	
TD at 17932.95										

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL-SAPPHIRE 2 - plan hits target center - Point	0.00	0.00	7,084.00	12,454.68	-654.99	1,445,241.87	3,223,914.18	40.552796°N	104.694202°W
LP-SAPPHIRE 2 - plan hits target center - Point	0.00	0.00	7,084.00	2,184.84	-720.60	1,434,972.19	3,223,942.17	40.524607°N	104.694437°W

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,126.86	1,115.43	109.49	-45.34	Start 5788.10 hold at 1126.86 MD
6,914.96	6,664.10	1,631.64	-675.69	Start DLS 10.00 TFO 23.74
7,662.91	7,084.00	2,184.84	-720.60	Start 10270.05 hold at 7662.91 MD
17,932.95	7,084.00	12,454.68	-654.99	TD at 17932.95