



ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_SWEETGRASS 14-14

Sweetgrass 11-14

Sweetgrass 11-14

Plan: Sweetgrass 11-14 (wp02)

Standard Planning Report

04 November, 2010





Project: ANADARKO COLORADO NORTHERN ZONE NAD 83
 Site: WELD SWEETGRASS 14-14
 Well: Sweetgrass 11-14
 Wellbore: Sweetgrass 11-14
 Section:
 SHL:
 Design: Sweetgrass 11-14 (wp02)
 Latitude: 40° 2' 59.489 N
 Longitude: 104° 58' 38.237 W
 GL: 5104.0
 KB: WELL @ 5104.0ft (Original Well Elev)



Weatherford®



Azimuths to True North
 Magnetic North: 9.01°

Magnetic Field
 Strength: 52979.1snT
 Dip Angle: 66.77°
 Date: 9/28/2010
 Model: BGGM2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3944.0	4158.4	PK
4763.0	4987.5	SX
7469.0	7693.5	NIO
7849.0	8073.5	CD
7925.0	8149.5	GH
8293.0	8517.5	J

CASING DETAILS

TVD	MD	Name	Size
1160.0	1161.4	9 5/8"	9-5/8

SECTION DETAILS

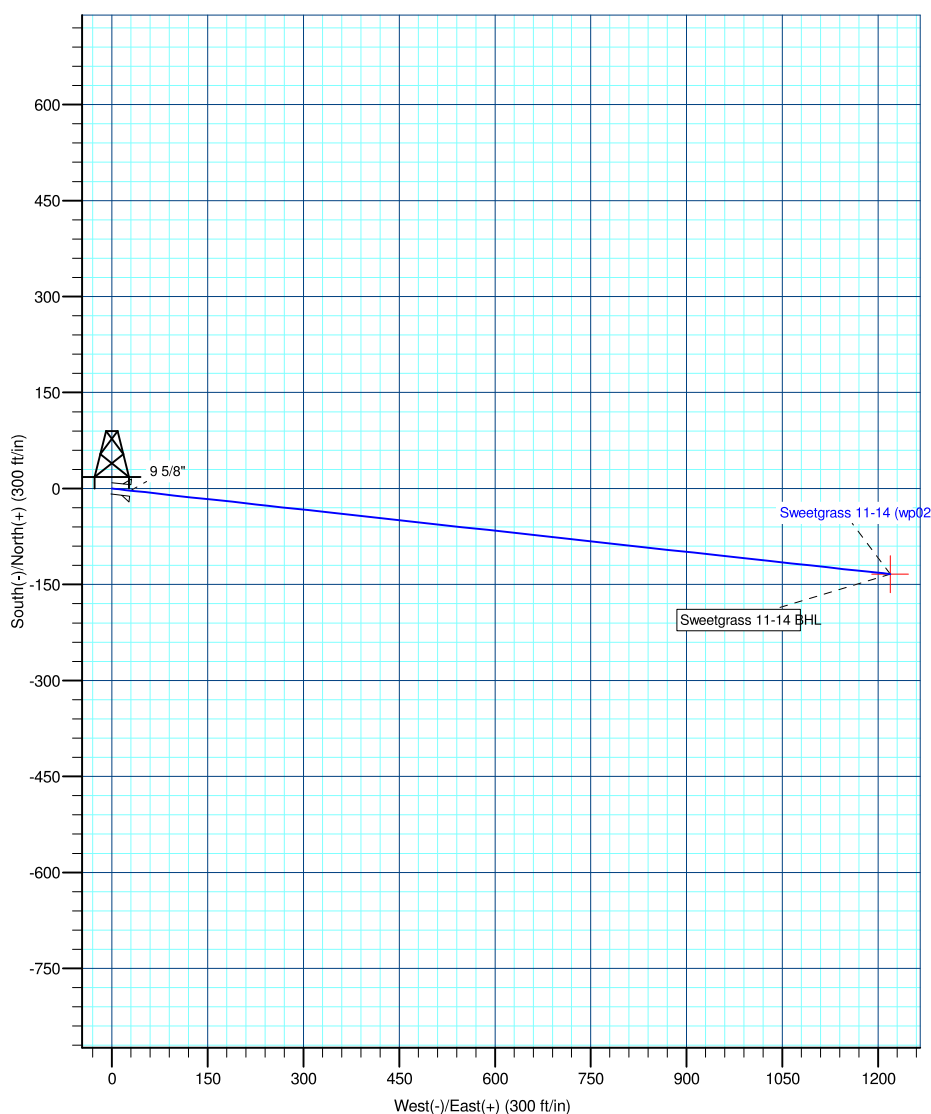
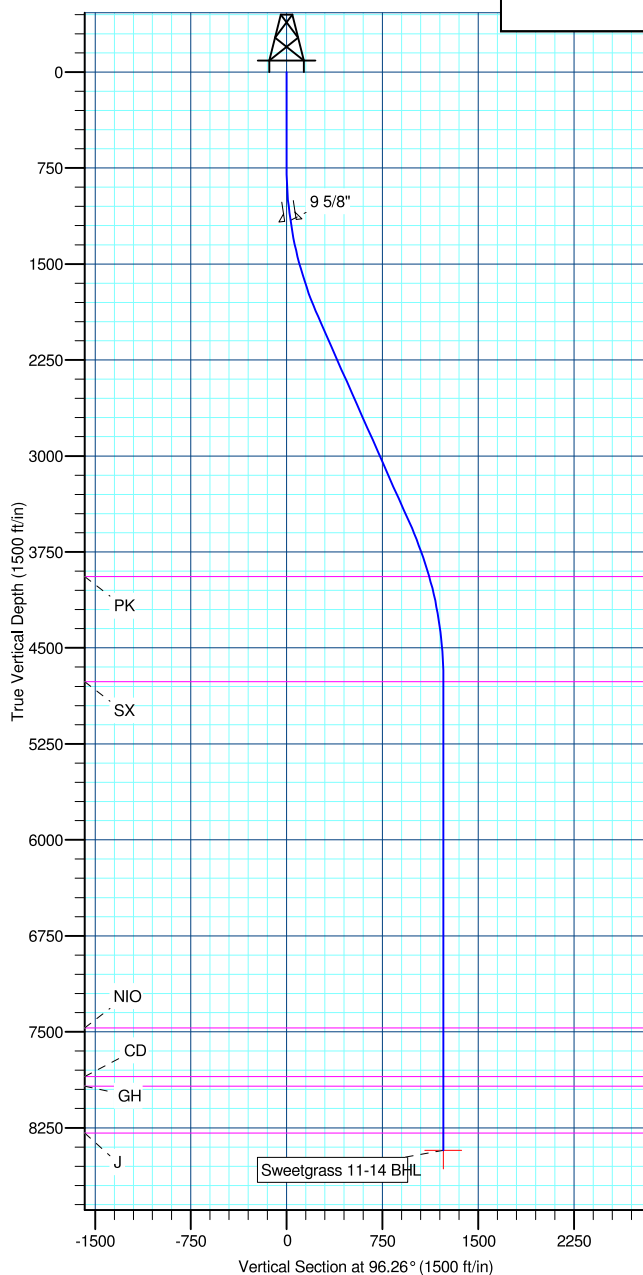
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
1946.5	23.93	96.26	1912.0	-26.8	244.8	2.00	96.26	246.3	
3756.0	23.93	96.26	3566.0	-106.8	974.4	0.00	0.00	980.2	
4952.5	0.00	0.00	4728.0	-133.7	1219.2	2.00	180.00	1226.5	
8652.5	0.00	0.00	8428.0	-133.7	1219.2	0.00	0.00	1226.5	

WELL DETAILS: Sweetgrass 11-14

+N/-S	+E/-W	Northing	Easting	Ground Level:	5104.0	Latitude	Longitude	Slot
0.0	0.0	1261440.13	3146331.74	40° 2' 59.489 N	104° 58' 38.237 W			

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Sweetgrass 11-14 BHL	8428.0	-133.7	1219.2	1261313.67	3147551.69	40° 2' 58.168 N	104° 58' 22.559 W	Point



Plan: Sweetgrass 11-14 (wp02) (Sweetgrass 11-14/Sweetgrass 11-14)

Created By: Jason Daguitera Date: 17:06, November 04 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Sweetgrass 11-14
Company:	ANADARKO PETROLEUM CORP.	TVD Reference:	WELL @ 5104.0ft (Original Well Elev)
Project:	ANADARKO COLORADO NORTHERN ZONE NAD 83	MD Reference:	WELL @ 5104.0ft (Original Well Elev)
Site:	WELD_SWEETGRASS 14-14	North Reference:	True
Well:	Sweetgrass 11-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sweetgrass 11-14		
Design:	Sweetgrass 11-14 (wp02)		

Project	ANADARKO COLORADO NORTHERN ZONE NAD 83, ROCKIES, ROCKIES		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site						WELD_SWEETGRASS 14-14											
Site Position:			Northing:			1,261,439.81ft			Latitude:			40° 2' 59.489 N					
From:			Lat/Long			Easting:			3,146,271.81ft			Longitude:			104° 58' 39.007 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.34 °		

Well	Sweetgrass 11-14					
Well Position	+N/-S	0.0 ft	Northing:	1,261,440.13 ft	Latitude:	40° 2' 59.489 N
	+E/-W	59.9 ft	Easting:	3,146,331.74 ft	Longitude:	104° 58' 38.237 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,104.0 ft

Wellbore	Sweetgrass 11-14				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2010	9/28/2010	9.01	66.77	52,979

Design	Sweetgrass 11-14 (wp02)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	96.26

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,946.5	23.93	96.26	1,912.0	-26.8	244.8	2.00	2.00	0.00	96.26	
3,756.0	23.93	96.26	3,566.0	-106.8	974.4	0.00	0.00	0.00	0.00	
4,952.5	0.00	0.00	4,728.0	-133.7	1,219.2	2.00	-2.00	0.00	180.00	
8,652.5	0.00	0.00	8,428.0	-133.7	1,219.2	0.00	0.00	0.00	0.00	Sweetgrass 11-14 f

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Site:	WELD_SWEETGRASS 14-14	North Reference:	True
Well:	Sweetgrass 11-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sweetgrass 11-14		
Design:	Sweetgrass 11-14 (wp02)		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	1.00	96.26	800.0	0.0	0.4	0.4	2.00	2.00	0.00
900.0	3.00	96.26	899.9	-0.4	3.9	3.9	2.00	2.00	0.00
1,000.0	5.00	96.26	999.7	-1.2	10.8	10.9	2.00	2.00	0.00
1,100.0	7.00	96.26	1,099.1	-2.3	21.2	21.4	2.00	2.00	0.00
1,161.4	8.23	96.26	1,160.0	-3.2	29.3	29.5	2.00	2.00	0.00
9 5/8"									
1,200.0	9.00	96.26	1,198.2	-3.8	35.1	35.3	2.00	2.00	0.00
1,300.0	11.00	96.26	1,296.6	-5.7	52.3	52.6	2.00	2.00	0.00
1,400.0	13.00	96.26	1,394.4	-8.0	73.0	73.4	2.00	2.00	0.00
1,500.0	15.00	96.26	1,491.5	-10.6	97.0	97.6	2.00	2.00	0.00
1,600.0	17.00	96.26	1,587.6	-13.6	124.4	125.2	2.00	2.00	0.00
1,700.0	19.00	96.26	1,682.7	-17.0	155.1	156.1	2.00	2.00	0.00
1,800.0	21.00	96.26	1,776.6	-20.7	189.1	190.3	2.00	2.00	0.00
1,900.0	23.00	96.26	1,869.4	-24.8	226.4	227.7	2.00	2.00	0.00
1,946.5	23.93	96.26	1,912.0	-26.8	244.8	246.3	2.00	2.00	0.00
2,000.0	23.93	96.26	1,960.9	-29.2	266.4	268.0	0.00	0.00	0.00
2,100.0	23.93	96.26	2,052.3	-33.6	306.7	308.5	0.00	0.00	0.00
2,200.0	23.93	96.26	2,143.7	-38.0	347.0	349.1	0.00	0.00	0.00
2,300.0	23.93	96.26	2,235.1	-42.5	387.3	389.6	0.00	0.00	0.00
2,400.0	23.93	96.26	2,326.5	-46.9	427.6	430.2	0.00	0.00	0.00
2,500.0	23.93	96.26	2,417.9	-51.3	468.0	470.8	0.00	0.00	0.00
2,600.0	23.93	96.26	2,509.3	-55.7	508.3	511.3	0.00	0.00	0.00
2,700.0	23.93	96.26	2,600.7	-60.1	548.6	551.9	0.00	0.00	0.00
2,800.0	23.93	96.26	2,692.1	-64.6	588.9	592.5	0.00	0.00	0.00
2,900.0	23.93	96.26	2,783.6	-69.0	629.2	633.0	0.00	0.00	0.00
3,000.0	23.93	96.26	2,875.0	-73.4	669.6	673.6	0.00	0.00	0.00
3,100.0	23.93	96.26	2,966.4	-77.8	709.9	714.1	0.00	0.00	0.00
3,200.0	23.93	96.26	3,057.8	-82.2	750.2	754.7	0.00	0.00	0.00
3,300.0	23.93	96.26	3,149.2	-86.7	790.5	795.3	0.00	0.00	0.00
3,400.0	23.93	96.26	3,240.6	-91.1	830.9	835.8	0.00	0.00	0.00
3,500.0	23.93	96.26	3,332.0	-95.5	871.2	876.4	0.00	0.00	0.00
3,600.0	23.93	96.26	3,423.4	-99.9	911.5	917.0	0.00	0.00	0.00
3,700.0	23.93	96.26	3,514.8	-104.3	951.8	957.5	0.00	0.00	0.00
3,756.0	23.93	96.26	3,566.0	-106.8	974.4	980.2	0.00	0.00	0.00
3,800.0	23.05	96.26	3,606.3	-108.7	991.8	997.8	2.00	-2.00	0.00
3,900.0	21.05	96.26	3,699.0	-112.8	1,029.1	1,035.3	2.00	-2.00	0.00
4,000.0	19.05	96.26	3,792.9	-116.6	1,063.2	1,069.6	2.00	-2.00	0.00
4,100.0	17.05	96.26	3,888.0	-119.9	1,094.0	1,100.6	2.00	-2.00	0.00
4,158.4	15.88	96.26	3,944.0	-121.7	1,110.5	1,117.1	2.00	-2.00	0.00
PK									
4,200.0	15.05	96.26	3,984.1	-122.9	1,121.5	1,128.2	2.00	-2.00	0.00
4,300.0	13.05	96.26	4,081.1	-125.6	1,145.6	1,152.5	2.00	-2.00	0.00
4,400.0	11.05	96.26	4,178.9	-127.9	1,166.4	1,173.4	2.00	-2.00	0.00
4,500.0	9.05	96.26	4,277.4	-129.8	1,183.7	1,190.8	2.00	-2.00	0.00

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Well:	Sweetgrass 11-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sweetgrass 11-14		
Design:	Sweetgrass 11-14 (wp02)		

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)
4,600.0	7.05	96.26	4,376.4	-131.3	1,197.7	1,204.8	2.00	-2.00	0.00
4,700.0	5.05	96.26	4,475.8	-132.4	1,208.1	1,215.4	2.00	-2.00	0.00
4,800.0	3.05	96.26	4,575.6	-133.2	1,215.2	1,222.4	2.00	-2.00	0.00
4,900.0	1.05	96.26	4,675.5	-133.6	1,218.7	1,226.0	2.00	-2.00	0.00
4,952.5	0.00	0.00	4,728.0	-133.7	1,219.2	1,226.5	2.00	-2.00	0.00
4,987.5	0.00	0.00	4,763.0	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
SX									
5,000.0	0.00	0.00	4,775.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,100.0	0.00	0.00	4,875.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,200.0	0.00	0.00	4,975.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,300.0	0.00	0.00	5,075.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,175.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,500.0	0.00	0.00	5,275.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,375.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,700.0	0.00	0.00	5,475.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,575.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
5,900.0	0.00	0.00	5,675.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,775.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,100.0	0.00	0.00	5,875.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,200.0	0.00	0.00	5,975.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,075.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,175.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,275.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,375.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,475.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,575.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
6,900.0	0.00	0.00	6,675.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,775.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,100.0	0.00	0.00	6,875.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,200.0	0.00	0.00	6,975.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,300.0	0.00	0.00	7,075.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,175.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,500.0	0.00	0.00	7,275.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,375.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,693.5	0.00	0.00	7,469.0	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
NIO									
7,700.0	0.00	0.00	7,475.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,800.0	0.00	0.00	7,575.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
7,900.0	0.00	0.00	7,675.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
8,000.0	0.00	0.00	7,775.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
8,073.5	0.00	0.00	7,849.0	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
CD									
8,100.0	0.00	0.00	7,875.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
8,149.5	0.00	0.00	7,925.0	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
GH									
8,200.0	0.00	0.00	7,975.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
8,300.0	0.00	0.00	8,075.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
8,400.0	0.00	0.00	8,175.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
8,500.0	0.00	0.00	8,275.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
8,517.5	0.00	0.00	8,293.0	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
J									
8,600.0	0.00	0.00	8,375.5	-133.7	1,219.2	1,226.5	0.00	0.00	0.00
8,652.5	0.00	0.00	8,428.0	-133.7	1,219.2	1,226.5	0.00	0.00	0.00

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Well:	Sweetgrass 11-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sweetgrass 11-14		
Design:	Sweetgrass 11-14 (wp02)		

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)
Sweetgrass 11-14 BHL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,161.4	1,160.0	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,158.4	3,944.0	PK		0.00	
8,149.5	7,925.0	GH		0.00	
4,987.5	4,763.0	SX		0.00	
8,517.5	8,293.0	J		0.00	
8,073.5	7,849.0	CD		0.00	
7,693.5	7,469.0	NIO		0.00	