



ANADARKO PETROLEUM CORP.

ANADARKO COLORADO NORTHERN ZONE NAD 83

WELD_SWEETGRASS 14-14

Sweetgrass 14-14

Sweetgrass 14-14

Plan: Sweetgrass 14-14 (wp02)

Standard Planning Report

04 November, 2010





Project: ANADARKO COLORADO NORTHERN ZONE NAD 83
 Site: WELD_SWEETGRASS 14-14
 Well: Sweetgrass 14-14
 Wellbore: Sweetgrass 14-14
 Section:
 SHL:
 Design: Sweetgrass 14-14 (wp02)
 Latitude: 40° 2' 59.489 N
 Longitude: 104° 58' 38.622 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	4239.1	PK
4758.0	5127.2	SX
7464.0	7847.2	NIO
7844.0	8227.2	CD
7920.0	8303.2	GH
8288.0	8671.2	J

CASING DETAILS

TVD	MD	Name	Size
1145.0	1160.2	9 5/8"	9-5/8

SECTION DETAILS

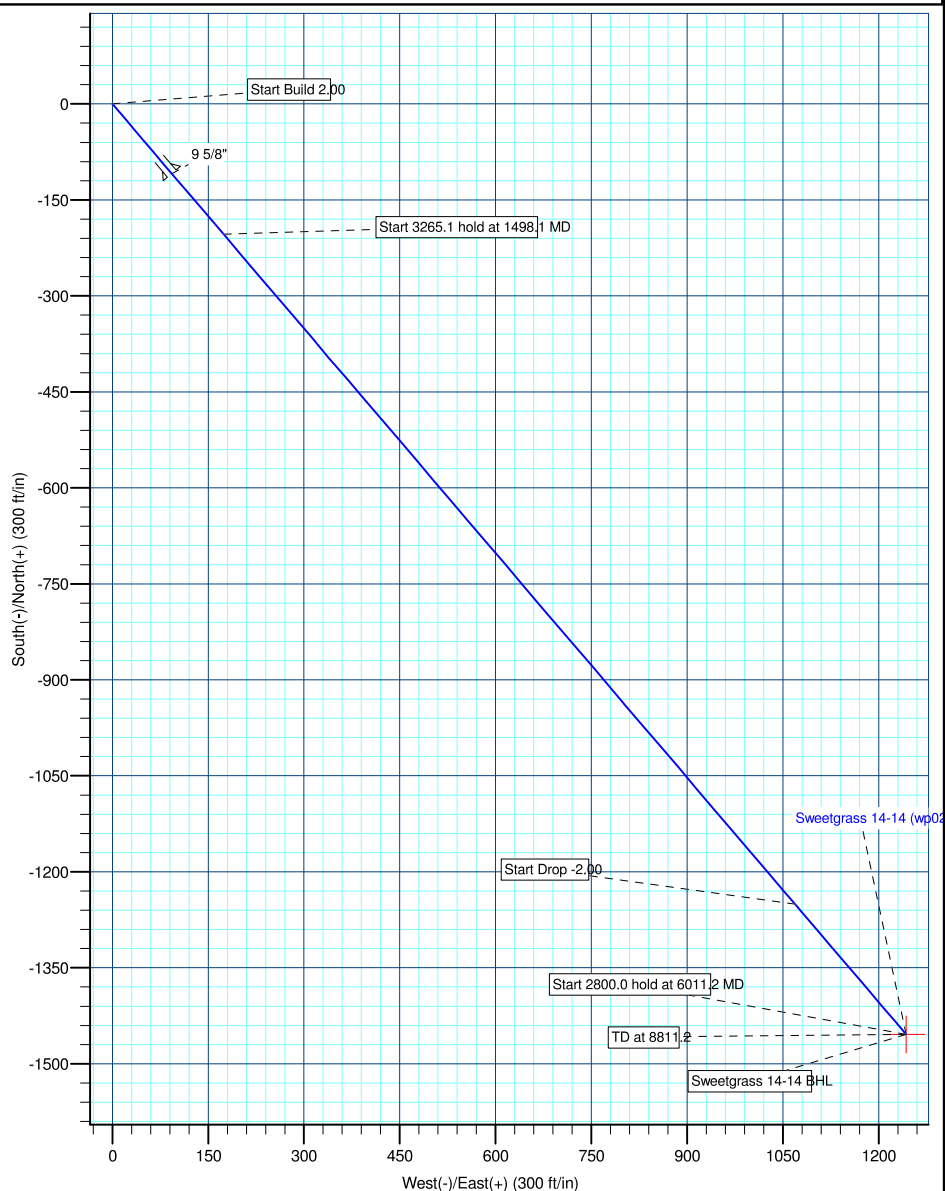
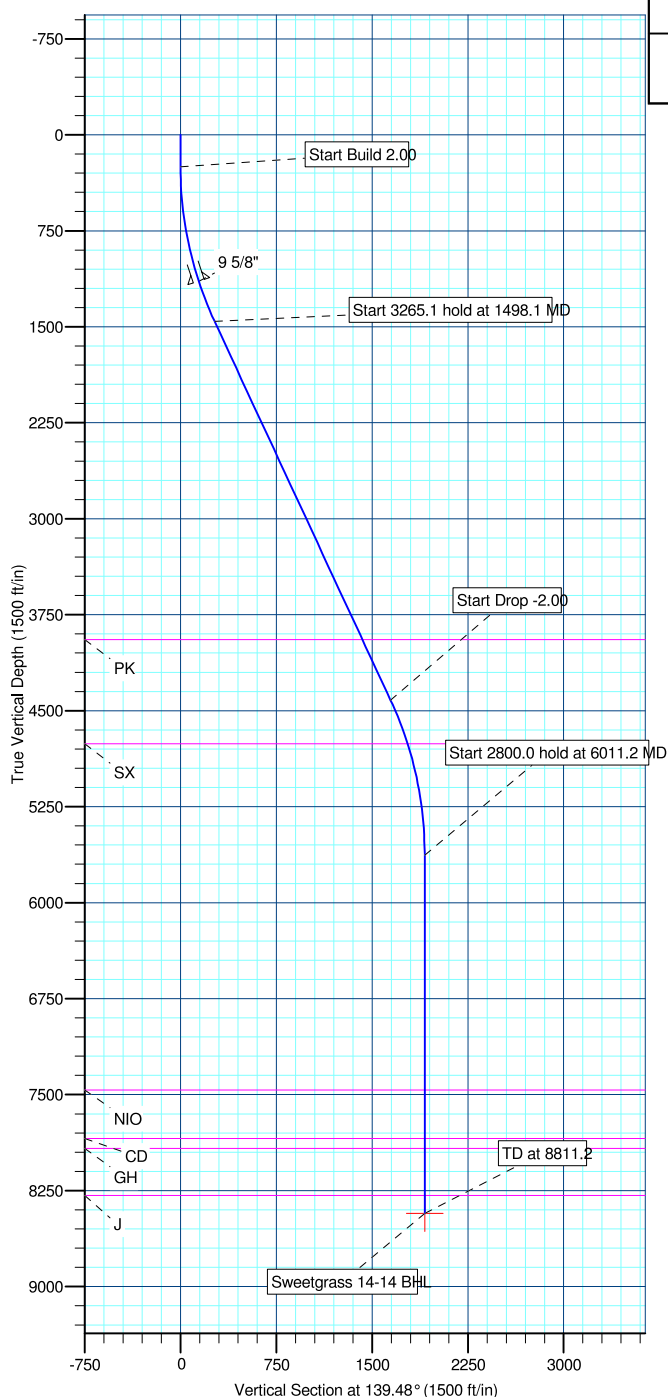
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0	
1498.1	24.96	139.48	1458.9	-203.4	173.9	2.00	139.48	267.6	
4763.1	24.96	139.48	4419.1	-1250.8	1069.2	0.00	0.00	1645.5	
6011.2	0.00	0.00	5628.0	-1454.2	1243.0	2.00	180.00	1913.0	
8811.2	0.00	0.00	8428.0	-1454.2	1243.0	0.00	0.00	1913.0	

WELL DETAILS: Sweetgrass 14-14

+N/-S	+E/-W	Northing	Ground Level:	5104.0	Latitude	Longitude	Slot
0.0	0.0	1261439.95	Easting	3146301.78	40° 2' 59.489 N	104° 58' 38.622 W	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Sweetgrass 14-14 BHL	8428.0	-1454.2	1243.0	40° 2' 45.118 N	104° 58' 22.638 W	Point



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

Created By: Jason Daguitera Date: 8:26, November 18 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Sweetgrass 14-14
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 14-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sweetgrass 14-14		
Design:	Sweetgrass 14-14 (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 14-14					
Well Position	+N-S	0.0 ft	Northing:	1,261,439.95 ft	Latitude:	40° 2' 59.489 N
	+E-W	30.0 ft	Easting:	3,146,301.78 ft	Longitude:	104° 58' 38.622 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,104.0 ft

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

Design	Sweetgrass 14-14 (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	139.48

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	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,498.1	24.96	139.48	1,458.9	-203.4	173.9	2.00	2.00	0.00	139.48	
4,763.1	24.96	139.48	4,419.1	-1,250.8	1,069.2	0.00	0.00	0.00	0.00	
6,011.2	0.00	0.00	5,628.0	-1,454.2	1,243.0	2.00	-2.00	0.00	180.00	
8,811.2	0.00	0.00	8,428.0	-1,454.2	1,243.0	0.00	0.00	0.00	0.00	Sweetgrass 14-14 f

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well Sweetgrass 14-14
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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 14-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sweetgrass 14-14		
Design:	Sweetgrass 14-14 (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
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	1.00	139.48	300.0	-0.3	0.3	0.4	2.00	2.00	0.00
400.0	3.00	139.48	399.9	-3.0	2.6	3.9	2.00	2.00	0.00
500.0	5.00	139.48	499.7	-8.3	7.1	10.9	2.00	2.00	0.00
600.0	7.00	139.48	599.1	-16.2	13.9	21.4	2.00	2.00	0.00
700.0	9.00	139.48	698.2	-26.8	22.9	35.3	2.00	2.00	0.00
800.0	11.00	139.48	796.6	-40.0	34.2	52.6	2.00	2.00	0.00
900.0	13.00	139.48	894.4	-55.8	47.7	73.4	2.00	2.00	0.00
1,000.0	15.00	139.48	991.5	-74.2	63.4	97.6	2.00	2.00	0.00
1,100.0	17.00	139.48	1,087.6	-95.2	81.3	125.2	2.00	2.00	0.00
1,160.2	18.20	139.48	1,145.0	-109.0	93.2	143.4	2.00	2.00	0.00
9 5/8"									
1,200.0	19.00	139.48	1,182.7	-118.6	101.4	156.1	2.00	2.00	0.00
1,300.0	21.00	139.48	1,276.6	-144.6	123.6	190.3	2.00	2.00	0.00
1,400.0	23.00	139.48	1,369.4	-173.1	148.0	227.7	2.00	2.00	0.00
1,498.1	24.96	139.48	1,458.9	-203.4	173.9	267.6	2.00	2.00	0.00
1,500.0	24.96	139.48	1,460.7	-204.0	174.4	268.4	0.00	0.00	0.00
1,600.0	24.96	139.48	1,551.4	-236.1	201.8	310.6	0.00	0.00	0.00
1,700.0	24.96	139.48	1,642.0	-268.2	229.2	352.8	0.00	0.00	0.00
1,800.0	24.96	139.48	1,732.7	-300.3	256.7	395.0	0.00	0.00	0.00
1,900.0	24.96	139.48	1,823.4	-332.3	284.1	437.2	0.00	0.00	0.00
2,000.0	24.96	139.48	1,914.0	-364.4	311.5	479.4	0.00	0.00	0.00
2,100.0	24.96	139.48	2,004.7	-396.5	338.9	521.6	0.00	0.00	0.00
2,200.0	24.96	139.48	2,095.3	-428.6	366.3	563.8	0.00	0.00	0.00
2,300.0	24.96	139.48	2,186.0	-460.6	393.8	606.0	0.00	0.00	0.00
2,400.0	24.96	139.48	2,276.6	-492.7	421.2	648.2	0.00	0.00	0.00
2,500.0	24.96	139.48	2,367.3	-524.8	448.6	690.4	0.00	0.00	0.00
2,600.0	24.96	139.48	2,458.0	-556.9	476.0	732.6	0.00	0.00	0.00
2,700.0	24.96	139.48	2,548.6	-589.0	503.5	774.8	0.00	0.00	0.00
2,800.0	24.96	139.48	2,639.3	-621.0	530.9	817.0	0.00	0.00	0.00
2,900.0	24.96	139.48	2,729.9	-653.1	558.3	859.2	0.00	0.00	0.00
3,000.0	24.96	139.48	2,820.6	-685.2	585.7	901.4	0.00	0.00	0.00
3,100.0	24.96	139.48	2,911.3	-717.3	613.1	943.6	0.00	0.00	0.00
3,200.0	24.96	139.48	3,001.9	-749.3	640.6	985.8	0.00	0.00	0.00
3,300.0	24.96	139.48	3,092.6	-781.4	668.0	1,028.0	0.00	0.00	0.00
3,400.0	24.96	139.48	3,183.2	-813.5	695.4	1,070.2	0.00	0.00	0.00
3,500.0	24.96	139.48	3,273.9	-845.6	722.8	1,112.4	0.00	0.00	0.00
3,600.0	24.96	139.48	3,364.6	-877.6	750.2	1,154.6	0.00	0.00	0.00
3,700.0	24.96	139.48	3,455.2	-909.7	777.7	1,196.8	0.00	0.00	0.00
3,800.0	24.96	139.48	3,545.9	-941.8	805.1	1,239.0	0.00	0.00	0.00
3,900.0	24.96	139.48	3,636.5	-973.9	832.5	1,281.2	0.00	0.00	0.00
4,000.0	24.96	139.48	3,727.2	-1,006.0	859.9	1,323.4	0.00	0.00	0.00
4,100.0	24.96	139.48	3,817.9	-1,038.0	887.3	1,365.6	0.00	0.00	0.00
4,200.0	24.96	139.48	3,908.5	-1,070.1	914.8	1,407.8	0.00	0.00	0.00
4,239.1	24.96	139.48	3,944.0	-1,082.7	925.5	1,424.3	0.00	0.00	0.00
PK									
4,300.0	24.96	139.48	3,999.2	-1,102.2	942.2	1,450.0	0.00	0.00	0.00
4,400.0	24.96	139.48	4,089.8	-1,134.3	969.6	1,492.2	0.00	0.00	0.00
4,500.0	24.96	139.48	4,180.5	-1,166.3	997.0	1,534.4	0.00	0.00	0.00
4,600.0	24.96	139.48	4,271.2	-1,198.4	1,024.4	1,576.6	0.00	0.00	0.00

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Site:	WELD_SWEETGRASS 14-14	North Reference:	True
Well:	Sweetgrass 14-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sweetgrass 14-14		
Design:	Sweetgrass 14-14 (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)
4,700.0	24.96	139.48	4,361.8	-1,230.5	1,051.9	1,618.8	0.00	0.00	0.00
4,763.1	24.96	139.48	4,419.1	-1,250.8	1,069.2	1,645.5	0.00	0.00	0.00
4,800.0	24.22	139.48	4,452.6	-1,262.4	1,079.1	1,660.8	2.00	-2.00	0.00
4,900.0	22.22	139.48	4,544.5	-1,292.4	1,104.8	1,700.2	2.00	-2.00	0.00
5,000.0	20.22	139.48	4,637.7	-1,319.9	1,128.3	1,736.4	2.00	-2.00	0.00
5,100.0	18.22	139.48	4,732.1	-1,344.9	1,149.7	1,769.4	2.00	-2.00	0.00
5,127.2	17.68	139.48	4,758.0	-1,351.3	1,155.1	1,777.7	2.00	-2.00	0.00
SX									
5,200.0	16.22	139.48	4,827.6	-1,367.4	1,168.9	1,799.0	2.00	-2.00	0.00
5,300.0	14.22	139.48	4,924.1	-1,387.4	1,186.0	1,825.2	2.00	-2.00	0.00
5,400.0	12.22	139.48	5,021.4	-1,404.8	1,200.8	1,848.1	2.00	-2.00	0.00
5,500.0	10.22	139.48	5,119.5	-1,419.6	1,213.5	1,867.6	2.00	-2.00	0.00
5,600.0	8.22	139.48	5,218.2	-1,431.8	1,223.9	1,883.6	2.00	-2.00	0.00
5,700.0	6.22	139.48	5,317.4	-1,441.3	1,232.1	1,896.2	2.00	-2.00	0.00
5,800.0	4.22	139.48	5,417.0	-1,448.2	1,238.0	1,905.3	2.00	-2.00	0.00
5,900.0	2.22	139.48	5,516.8	-1,452.5	1,241.6	1,910.9	2.00	-2.00	0.00
6,000.0	0.22	139.48	5,616.8	-1,454.1	1,243.0	1,913.0	2.00	-2.00	0.00
6,011.2	0.00	0.00	5,628.0	-1,454.2	1,243.0	1,913.0	2.00	-2.00	0.00
6,100.0	0.00	0.00	5,716.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
6,200.0	0.00	0.00	5,816.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
6,300.0	0.00	0.00	5,916.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,016.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,116.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,216.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,316.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,416.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,516.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,616.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,100.0	0.00	0.00	6,716.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,200.0	0.00	0.00	6,816.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,300.0	0.00	0.00	6,916.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,016.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,116.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,216.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,316.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,416.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
7,847.2	0.00	0.00	7,464.0	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
NIO									
7,900.0	0.00	0.00	7,516.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,000.0	0.00	0.00	7,616.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,100.0	0.00	0.00	7,716.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,200.0	0.00	0.00	7,816.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,227.2	0.00	0.00	7,844.0	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
CD									
8,300.0	0.00	0.00	7,916.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,303.2	0.00	0.00	7,920.0	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
GH									
8,400.0	0.00	0.00	8,016.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,116.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,216.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,671.2	0.00	0.00	8,288.0	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
J									
8,700.0	0.00	0.00	8,316.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00

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Site:	WELD_SWEETGRASS 14-14	North Reference:	True
Well:	Sweetgrass 14-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sweetgrass 14-14		
Design:	Sweetgrass 14-14 (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)
8,800.0	0.00	0.00	8,416.8	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
8,811.2	0.00	0.00	8,428.0	-1,454.2	1,243.0	1,913.0	0.00	0.00	0.00
Sweetgrass 14-14 BHL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,160.2	1,145.0	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,239.1	3,944.0	PK		0.00	
7,847.2	7,464.0	NIO		0.00	
8,303.2	7,920.0	GH		0.00	
8,227.2	7,844.0	CD		0.00	
5,127.2	4,758.0	SX		0.00	
8,671.2	8,288.0	J		0.00	