

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

2N-65W-25 George 7-25HZ Pad

GEORGE 25-4HZ

Plan A

Plan: Permit Rev-2

SHL Latitude/Longitude: 40.110416/-104.610066

Survey Program: MWD+IFR

Standard Planning Report

28 August, 2017



Azimuths to True North
Magnetic North: 7.93°

Magnetic Field
Strength: 52345.2snT
Dip Angle: 66.63°
Date: 8/16/2017
Model: IGRF2010

SITE: 2N-65W-25 George 7-25HZ Pad

Well: GEORGE 25-4HZ
Wellbore: Plan A
Design: Permit Rev-2

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1369.00	1379.71	Fox Hills
3964.00	4079.01	Parkman
4417.00	4548.22	Sussex
6850.00	7070.71	Sharon Springs
6890.00	7145.07	Niobrara
6953.00	7317.94	Nio B

CASING DETAILS

TVD	MD	Name	Size
1500.00	1515.71	9 5/8" Csg	9-5/8
6971.00	7472.57	Top of Production	5-1/2

WELL DETAILS: GEORGE 25-4HZ

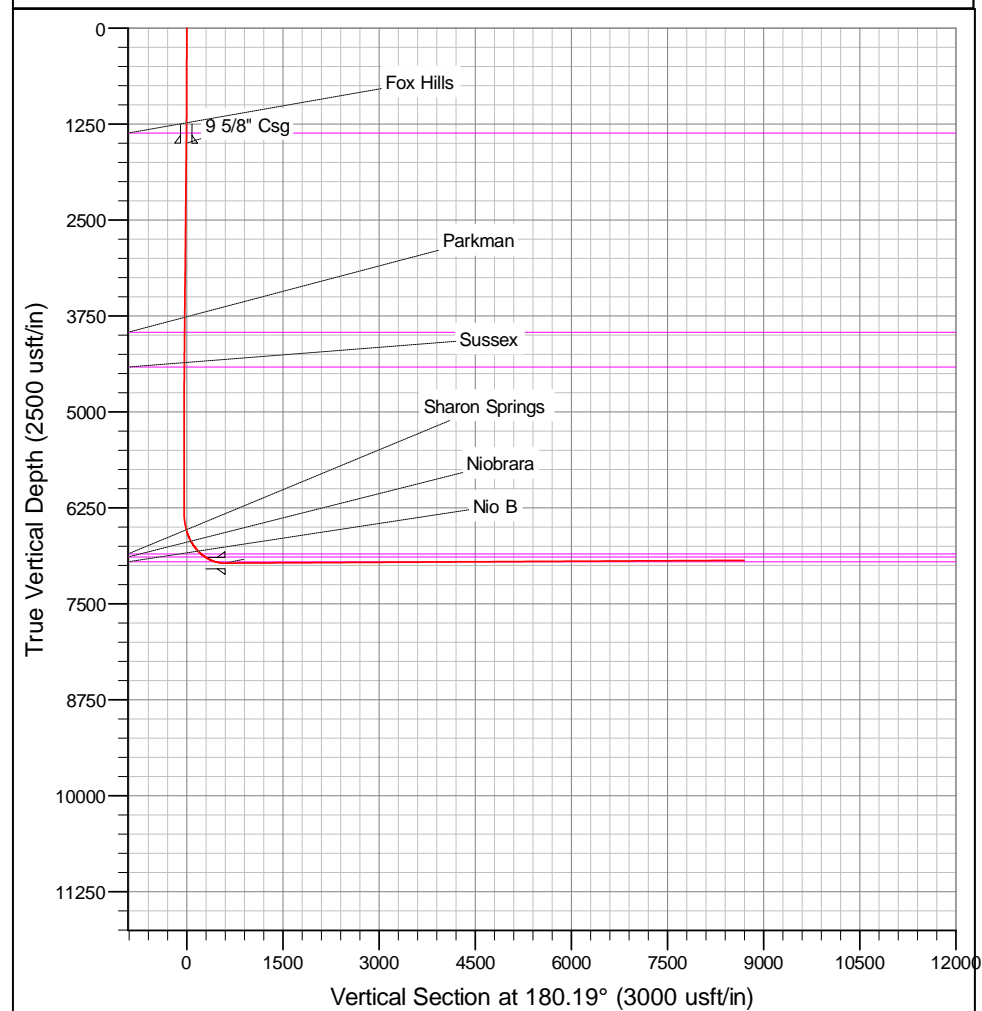
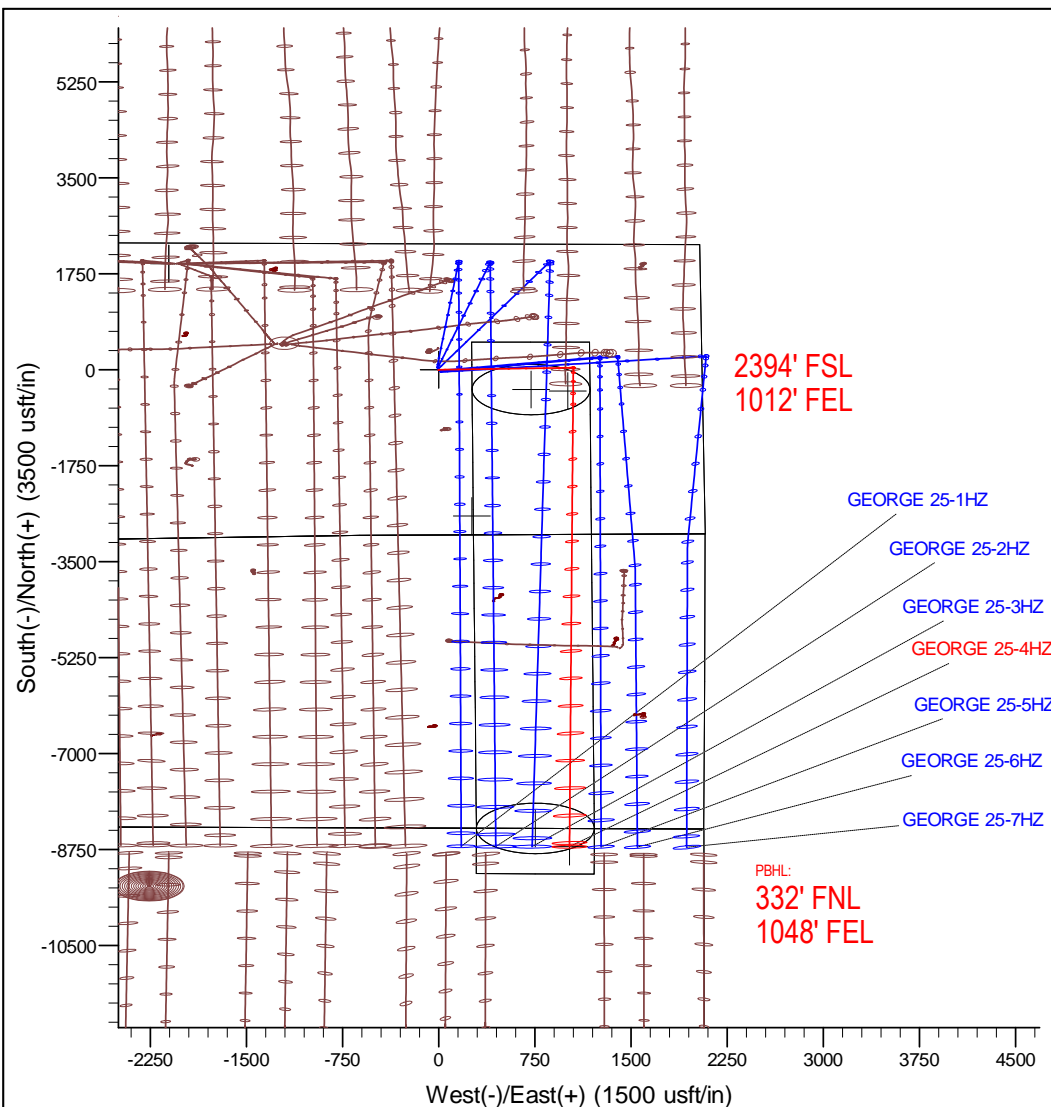
+N/-S	+E/-W	GL: 4900.00 Northing	RKB = 17' @ 4917.00usft (Drilling Rig) Easting	Latitude	Longitude	Slot
0.00	0.00	14567179.81	1749442.11	40.110416	-104.610066	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
GEORGE 25-4HZ_BHL6935.00		-8699.36	1019.76	14558485.00	1750500.00	40.086527	-104.606420

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00
1466.67	16.00	88.00	1452.86	5.16	147.88	1.50	-5.65
4336.67	16.00	88.00	4211.68	32.77	938.48	0.00	-35.88
5136.67	0.00	0.00	5001.32	36.65	1049.39	2.00	-40.13
6469.74	0.00	0.00	6334.39	36.65	1049.39	0.00	-40.13
7472.57	90.25	180.19	6971.00	-602.80	1047.22	9.00	599.33
15569.25	90.25	180.19	6935.00	-8699.36	1019.76	0.00	8695.93



Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well GEORGE 25-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Site:	2N-65W-25 George 7-25HZ Pad	North Reference:	True
Well:	GEORGE 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Project	WELD-NAD83-UTMFT13N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site		2N-65W-25 George 7-25HZ Pad			
Site Position:		Northing:	14,567,222.71 usft	Latitude:	40.110534
From:	Lat/Long	Easting:	1,749,428.22 usft	Longitude:	-104.610115
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.25 °

Well		GEORGE 25-4HZ				
Well Position	+N/-S	-42.97 usft	Northing:	14,567,179.80 usft	Latitude:	40.110416
	+E/-W	13.70 usft	Easting:	1,749,442.10 usft	Longitude:	-104.610066
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,900.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/16/2017	7.93	66.63	52,345.20636233

Design	Permit Rev-2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.19

Plan Survey Tool Program	Date	8/28/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	1,500.00	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declination
2	1,500.00	15,569.25	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declination

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Site:	2N-65W-25 George 7-25HZ Pad	North Reference:	True
Well:	GEORGE 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,466.67	16.00	88.00	1,452.86	5.16	147.88	1.50	1.50	0.00	88.00	
4,336.67	16.00	88.00	4,211.68	32.77	938.48	0.00	0.00	0.00	0.00	
5,136.67	0.00	0.00	5,001.32	36.65	1,049.39	2.00	-2.00	0.00	180.00	
6,469.74	0.00	0.00	6,334.39	36.65	1,049.39	0.00	0.00	0.00	0.00	
7,472.57	90.25	180.19	6,971.00	-602.80	1,047.22	9.00	9.00	-17.93	180.19	
15,569.25	90.25	180.19	6,935.00	-8,699.36	1,019.76	0.00	0.00	0.00	0.00	GEORGE 25-4HZ_BH

Corporate
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well GEORGE 25-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Site:	2N-65W-25 George 7-25HZ Pad	North Reference:	True
Well:	GEORGE 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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)
0.00	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
200.00	0.00	0.00	200.00	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
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50									
500.00	1.50	88.00	499.99	0.05	1.31	-0.05	1.50	1.50	0.00
600.00	3.00	88.00	599.91	0.18	5.23	-0.20	1.50	1.50	0.00
700.00	4.50	88.00	699.69	0.41	11.77	-0.45	1.50	1.50	0.00
800.00	6.00	88.00	799.27	0.73	20.91	-0.80	1.50	1.50	0.00
900.00	7.50	88.00	898.57	1.14	32.66	-1.25	1.50	1.50	0.00
1,000.00	9.00	88.00	997.54	1.64	47.00	-1.80	1.50	1.50	0.00
1,100.00	10.50	88.00	1,096.09	2.23	63.92	-2.44	1.50	1.50	0.00
1,200.00	12.00	88.00	1,194.16	2.91	83.42	-3.19	1.50	1.50	0.00
1,300.00	13.50	88.00	1,291.70	3.68	105.47	-4.03	1.50	1.50	0.00
1,379.71	14.70	88.00	1,369.00	4.36	124.88	-4.77	1.50	1.50	0.00
Fox Hills									
1,400.00	15.00	88.00	1,388.62	4.54	130.07	-4.97	1.50	1.50	0.00
1,466.67	16.00	88.00	1,452.86	5.16	147.88	-5.65	1.50	1.50	0.00
Start 2870.00 hold at 1466.67 MD									
1,500.00	16.00	88.00	1,484.90	5.48	157.06	-6.01	0.00	0.00	0.00
1,515.71	16.00	88.00	1,500.00	5.64	161.39	-6.17	0.00	0.00	0.00
9 5/8" Csg									
1,600.00	16.00	88.00	1,581.03	6.45	184.61	-7.06	0.00	0.00	0.00
1,700.00	16.00	88.00	1,677.15	7.41	212.16	-8.11	0.00	0.00	0.00
1,800.00	16.00	88.00	1,773.28	8.37	239.70	-9.17	0.00	0.00	0.00
1,900.00	16.00	88.00	1,869.40	9.33	267.25	-10.22	0.00	0.00	0.00
2,000.00	16.00	88.00	1,965.53	10.29	294.80	-11.27	0.00	0.00	0.00
2,100.00	16.00	88.00	2,061.66	11.26	322.34	-12.33	0.00	0.00	0.00
2,200.00	16.00	88.00	2,157.78	12.22	349.89	-13.38	0.00	0.00	0.00
2,300.00	16.00	88.00	2,253.91	13.18	377.44	-14.43	0.00	0.00	0.00
2,400.00	16.00	88.00	2,350.03	14.14	404.98	-15.49	0.00	0.00	0.00
2,500.00	16.00	88.00	2,446.16	15.10	432.53	-16.54	0.00	0.00	0.00
2,600.00	16.00	88.00	2,542.29	16.07	460.08	-17.59	0.00	0.00	0.00
2,700.00	16.00	88.00	2,638.41	17.03	487.62	-18.65	0.00	0.00	0.00
2,800.00	16.00	88.00	2,734.54	17.99	515.17	-19.70	0.00	0.00	0.00
2,900.00	16.00	88.00	2,830.67	18.95	542.72	-20.75	0.00	0.00	0.00
3,000.00	16.00	88.00	2,926.79	19.91	570.27	-21.81	0.00	0.00	0.00
3,100.00	16.00	88.00	3,022.92	20.88	597.81	-22.86	0.00	0.00	0.00
3,200.00	16.00	88.00	3,119.04	21.84	625.36	-23.91	0.00	0.00	0.00
3,300.00	16.00	88.00	3,215.17	22.80	652.91	-24.96	0.00	0.00	0.00
3,400.00	16.00	88.00	3,311.30	23.76	680.45	-26.02	0.00	0.00	0.00
3,500.00	16.00	88.00	3,407.42	24.72	708.00	-27.07	0.00	0.00	0.00
3,600.00	16.00	88.00	3,503.55	25.69	735.55	-28.12	0.00	0.00	0.00
3,700.00	16.00	88.00	3,599.68	26.65	763.09	-29.18	0.00	0.00	0.00
3,800.00	16.00	88.00	3,695.80	27.61	790.64	-30.23	0.00	0.00	0.00
3,900.00	16.00	88.00	3,791.93	28.57	818.19	-31.28	0.00	0.00	0.00
4,000.00	16.00	88.00	3,888.05	29.53	845.74	-32.34	0.00	0.00	0.00
4,079.01	16.00	88.00	3,964.00	30.29	867.50	-33.17	0.00	0.00	0.00
Parkman									
4,100.00	16.00	88.00	3,984.18	30.50	873.28	-33.39	0.00	0.00	0.00
4,200.00	16.00	88.00	4,080.31	31.46	900.83	-34.44	0.00	0.00	0.00
4,300.00	16.00	88.00	4,176.43	32.42	928.38	-35.50	0.00	0.00	0.00
4,336.67	16.00	88.00	4,211.68	32.77	938.48	-35.88	0.00	0.00	0.00

Corporate
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well GEORGE 25-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Site:	2N-65W-25 George 7-25HZ Pad	North Reference:	True
Well:	GEORGE 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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)
Start Drop -2.00									
4,400.00	14.73	88.00	4,272.75	33.36	955.25	-36.53	2.00	-2.00	0.00
4,500.00	12.73	88.00	4,369.88	34.19	978.97	-37.43	2.00	-2.00	0.00
4,548.22	11.77	88.00	4,417.00	34.54	989.20	-37.82	2.00	-2.00	0.00
Sussex									
4,600.00	10.73	88.00	4,467.79	34.90	999.30	-38.21	2.00	-2.00	0.00
4,700.00	8.73	88.00	4,566.34	35.49	1,016.19	-38.86	2.00	-2.00	0.00
4,800.00	6.73	88.00	4,665.43	35.96	1,029.64	-39.37	2.00	-2.00	0.00
4,900.00	4.73	88.00	4,764.92	36.30	1,039.62	-39.75	2.00	-2.00	0.00
5,000.00	2.73	88.00	4,864.71	36.53	1,046.13	-40.00	2.00	-2.00	0.00
5,100.00	0.73	88.00	4,964.66	36.64	1,049.15	-40.12	2.00	-2.00	0.00
5,136.67	0.00	0.00	5,001.32	36.65	1,049.39	-40.13	2.00	-2.00	0.00
Start 1333.07 hold at 5136.67 MD									
5,200.00	0.00	0.00	5,064.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
5,300.00	0.00	0.00	5,164.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
5,400.00	0.00	0.00	5,264.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
5,500.00	0.00	0.00	5,364.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
5,600.00	0.00	0.00	5,464.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
5,700.00	0.00	0.00	5,564.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
5,800.00	0.00	0.00	5,664.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
5,900.00	0.00	0.00	5,764.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
6,000.00	0.00	0.00	5,864.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
6,100.00	0.00	0.00	5,964.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
6,200.00	0.00	0.00	6,064.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
6,300.00	0.00	0.00	6,164.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
6,400.00	0.00	0.00	6,264.65	36.65	1,049.39	-40.13	0.00	0.00	0.00
6,469.74	0.00	0.00	6,334.39	36.65	1,049.39	-40.13	0.00	0.00	0.00
KOP @ 6469.74ft									
6,500.00	2.72	180.19	6,364.64	35.93	1,049.38	-39.41	9.00	9.00	0.00
6,600.00	11.72	180.19	6,463.75	23.36	1,049.34	-26.84	9.00	9.00	0.00
6,700.00	20.72	180.19	6,559.67	-4.55	1,049.25	1.07	9.00	9.00	0.00
6,800.00	29.72	180.19	6,650.04	-47.12	1,049.10	43.64	9.00	9.00	0.00
6,900.00	38.72	180.19	6,732.64	-103.30	1,048.91	99.82	9.00	9.00	0.00
7,000.00	47.72	180.19	6,805.43	-171.71	1,048.68	168.24	9.00	9.00	0.00
7,050.00	52.22	180.19	6,837.58	-209.99	1,048.55	206.51	9.00	9.00	0.00
DLS = 9°/100'									
7,100.00	56.72	180.19	6,866.63	-250.67	1,048.41	247.20	9.00	9.00	0.00
7,195.85	65.35	180.19	6,913.00	-334.46	1,048.13	330.98	9.00	9.00	0.00
Sharon Springs									
7,200.00	65.72	180.19	6,914.72	-338.23	1,048.11	334.76	9.00	9.00	0.00
7,300.00	74.72	180.19	6,948.52	-432.24	1,047.80	428.76	9.00	9.00	0.00
7,317.94	76.34	180.19	6,953.00	-449.61	1,047.74	446.14	9.00	9.00	0.00
Niobrara									
7,400.00	83.72	180.19	6,967.20	-530.37	1,047.46	526.90	9.00	9.00	0.00
7,472.57	90.25	180.19	6,971.00	-602.80	1,047.22	599.33	9.00	9.00	0.00
End Build @ 7472.57ft - Top of Production									
7,500.00	90.25	180.19	6,970.88	-630.23	1,047.12	626.76	0.00	0.00	0.00
7,600.00	90.25	180.19	6,970.44	-730.23	1,046.79	726.76	0.00	0.00	0.00
7,700.00	90.25	180.19	6,969.99	-830.23	1,046.45	826.76	0.00	0.00	0.00
7,800.00	90.25	180.19	6,969.55	-930.23	1,046.11	926.75	0.00	0.00	0.00
7,900.00	90.25	180.19	6,969.10	-1,030.23	1,045.77	1,026.75	0.00	0.00	0.00
8,000.00	90.25	180.19	6,968.66	-1,130.23	1,045.43	1,126.75	0.00	0.00	0.00
8,100.00	90.25	180.19	6,968.21	-1,230.22	1,045.09	1,226.75	0.00	0.00	0.00

Corporate Planning Report

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Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
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Well:	GEORGE 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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)	
8,200.00	90.25	180.19	6,967.77	-1,330.22	1,044.75	1,326.75	0.00	0.00	0.00	
8,300.00	90.25	180.19	6,967.33	-1,430.22	1,044.41	1,426.75	0.00	0.00	0.00	
8,400.00	90.25	180.19	6,966.88	-1,530.22	1,044.07	1,526.75	0.00	0.00	0.00	
8,500.00	90.25	180.19	6,966.44	-1,630.22	1,043.73	1,626.75	0.00	0.00	0.00	
8,600.00	90.25	180.19	6,965.99	-1,730.22	1,043.39	1,726.75	0.00	0.00	0.00	
8,700.00	90.25	180.19	6,965.55	-1,830.21	1,043.05	1,826.75	0.00	0.00	0.00	
8,800.00	90.25	180.19	6,965.10	-1,930.21	1,042.72	1,926.74	0.00	0.00	0.00	
8,900.00	90.25	180.19	6,964.66	-2,030.21	1,042.38	2,026.74	0.00	0.00	0.00	
9,000.00	90.25	180.19	6,964.21	-2,130.21	1,042.04	2,126.74	0.00	0.00	0.00	
9,100.00	90.25	180.19	6,963.77	-2,230.21	1,041.70	2,226.74	0.00	0.00	0.00	
9,200.00	90.25	180.19	6,963.32	-2,330.21	1,041.36	2,326.74	0.00	0.00	0.00	
9,300.00	90.25	180.19	6,962.88	-2,430.21	1,041.02	2,426.74	0.00	0.00	0.00	
9,400.00	90.25	180.19	6,962.43	-2,530.20	1,040.68	2,526.74	0.00	0.00	0.00	
9,500.00	90.25	180.19	6,961.99	-2,630.20	1,040.34	2,626.74	0.00	0.00	0.00	
9,600.00	90.25	180.19	6,961.54	-2,730.20	1,040.00	2,726.74	0.00	0.00	0.00	
9,700.00	90.25	180.19	6,961.10	-2,830.20	1,039.66	2,826.74	0.00	0.00	0.00	
9,800.00	90.25	180.19	6,960.66	-2,930.20	1,039.32	2,926.74	0.00	0.00	0.00	
9,900.00	90.25	180.19	6,960.21	-3,030.20	1,038.99	3,026.73	0.00	0.00	0.00	
10,000.00	90.25	180.19	6,959.77	-3,130.19	1,038.65	3,126.73	0.00	0.00	0.00	
10,100.00	90.25	180.19	6,959.32	-3,230.19	1,038.31	3,226.73	0.00	0.00	0.00	
10,200.00	90.25	180.19	6,958.88	-3,330.19	1,037.97	3,326.73	0.00	0.00	0.00	
10,300.00	90.25	180.19	6,958.43	-3,430.19	1,037.63	3,426.73	0.00	0.00	0.00	
10,400.00	90.25	180.19	6,957.99	-3,530.19	1,037.29	3,526.73	0.00	0.00	0.00	
10,500.00	90.25	180.19	6,957.54	-3,630.19	1,036.95	3,626.73	0.00	0.00	0.00	
10,600.00	90.25	180.19	6,957.10	-3,730.19	1,036.61	3,726.73	0.00	0.00	0.00	
10,700.00	90.25	180.19	6,956.65	-3,830.18	1,036.27	3,826.73	0.00	0.00	0.00	
10,800.00	90.25	180.19	6,956.21	-3,930.18	1,035.93	3,926.73	0.00	0.00	0.00	
10,900.00	90.25	180.19	6,955.76	-4,030.18	1,035.59	4,026.72	0.00	0.00	0.00	
11,000.00	90.25	180.19	6,955.32	-4,130.18	1,035.25	4,126.72	0.00	0.00	0.00	
11,100.00	90.25	180.19	6,954.87	-4,230.18	1,034.92	4,226.72	0.00	0.00	0.00	
11,200.00	90.25	180.19	6,954.43	-4,330.18	1,034.58	4,326.72	0.00	0.00	0.00	
11,300.00	90.25	180.19	6,953.98	-4,430.17	1,034.24	4,426.72	0.00	0.00	0.00	
11,400.00	90.25	180.19	6,953.54	-4,530.17	1,033.90	4,526.72	0.00	0.00	0.00	
11,500.00	90.25	180.19	6,953.10	-4,630.17	1,033.56	4,626.72	0.00	0.00	0.00	
11,600.00	90.25	180.19	6,952.65	-4,730.17	1,033.22	4,726.72	0.00	0.00	0.00	
11,700.00	90.25	180.19	6,952.21	-4,830.17	1,032.88	4,826.72	0.00	0.00	0.00	
11,800.00	90.25	180.19	6,951.76	-4,930.17	1,032.54	4,926.72	0.00	0.00	0.00	
11,900.00	90.25	180.19	6,951.32	-5,030.16	1,032.20	5,026.71	0.00	0.00	0.00	
12,000.00	90.25	180.19	6,950.87	-5,130.16	1,031.86	5,126.71	0.00	0.00	0.00	
12,100.00	90.25	180.19	6,950.43	-5,230.16	1,031.52	5,226.71	0.00	0.00	0.00	
12,200.00	90.25	180.19	6,949.98	-5,330.16	1,031.18	5,326.71	0.00	0.00	0.00	
12,300.00	90.25	180.19	6,949.54	-5,430.16	1,030.85	5,426.71	0.00	0.00	0.00	
12,400.00	90.25	180.19	6,949.09	-5,530.16	1,030.51	5,526.71	0.00	0.00	0.00	
12,500.00	90.25	180.19	6,948.65	-5,630.16	1,030.17	5,626.71	0.00	0.00	0.00	
12,600.00	90.25	180.19	6,948.20	-5,730.15	1,029.83	5,726.71	0.00	0.00	0.00	
12,700.00	90.25	180.19	6,947.76	-5,830.15	1,029.49	5,826.71	0.00	0.00	0.00	
12,800.00	90.25	180.19	6,947.31	-5,930.15	1,029.15	5,926.71	0.00	0.00	0.00	
12,900.00	90.25	180.19	6,946.87	-6,030.15	1,028.81	6,026.70	0.00	0.00	0.00	
13,000.00	90.25	180.19	6,946.43	-6,130.15	1,028.47	6,126.70	0.00	0.00	0.00	
13,100.00	90.25	180.19	6,945.98	-6,230.15	1,028.13	6,226.70	0.00	0.00	0.00	
13,200.00	90.25	180.19	6,945.54	-6,330.14	1,027.79	6,326.70	0.00	0.00	0.00	
13,300.00	90.25	180.19	6,945.09	-6,430.14	1,027.45	6,426.70	0.00	0.00	0.00	
13,400.00	90.25	180.19	6,944.65	-6,530.14	1,027.12	6,526.70	0.00	0.00	0.00	
13,500.00	90.25	180.19	6,944.20	-6,630.14	1,026.78	6,626.70	0.00	0.00	0.00	

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well GEORGE 25-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Site:	2N-65W-25 George 7-25HZ Pad	North Reference:	True
Well:	GEORGE 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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)	
13,600.00	90.25	180.19	6,943.76	-6,730.14	1,026.44	6,726.70	0.00	0.00	0.00	
13,700.00	90.25	180.19	6,943.31	-6,830.14	1,026.10	6,826.70	0.00	0.00	0.00	
13,800.00	90.25	180.19	6,942.87	-6,930.14	1,025.76	6,926.70	0.00	0.00	0.00	
13,900.00	90.25	180.19	6,942.42	-7,030.13	1,025.42	7,026.69	0.00	0.00	0.00	
14,000.00	90.25	180.19	6,941.98	-7,130.13	1,025.08	7,126.69	0.00	0.00	0.00	
14,100.00	90.25	180.19	6,941.53	-7,230.13	1,024.74	7,226.69	0.00	0.00	0.00	
14,200.00	90.25	180.19	6,941.09	-7,330.13	1,024.40	7,326.69	0.00	0.00	0.00	
14,300.00	90.25	180.19	6,940.64	-7,430.13	1,024.06	7,426.69	0.00	0.00	0.00	
14,400.00	90.25	180.19	6,940.20	-7,530.13	1,023.72	7,526.69	0.00	0.00	0.00	
14,500.00	90.25	180.19	6,939.75	-7,630.12	1,023.38	7,626.69	0.00	0.00	0.00	
14,600.00	90.25	180.19	6,939.31	-7,730.12	1,023.05	7,726.69	0.00	0.00	0.00	
14,700.00	90.25	180.19	6,938.87	-7,830.12	1,022.71	7,826.69	0.00	0.00	0.00	
14,800.00	90.25	180.19	6,938.42	-7,930.12	1,022.37	7,926.69	0.00	0.00	0.00	
14,900.00	90.25	180.19	6,937.98	-8,030.12	1,022.03	8,026.68	0.00	0.00	0.00	
15,000.00	90.25	180.19	6,937.53	-8,130.12	1,021.69	8,126.68	0.00	0.00	0.00	
15,100.00	90.25	180.19	6,937.09	-8,230.11	1,021.35	8,226.68	0.00	0.00	0.00	
15,200.00	90.25	180.19	6,936.64	-8,330.11	1,021.01	8,326.68	0.00	0.00	0.00	
15,300.00	90.25	180.19	6,936.20	-8,430.11	1,020.67	8,426.68	0.00	0.00	0.00	
15,400.00	90.25	180.19	6,935.75	-8,530.11	1,020.33	8,526.68	0.00	0.00	0.00	
15,500.00	90.25	180.19	6,935.31	-8,630.11	1,019.99	8,626.68	0.00	0.00	0.00	
15,569.25	90.25	180.19	6,935.00	-8,699.36	1,019.76	8,695.93	0.00	0.00	0.00	
TD Well @ 15569.25ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,515.71	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
7,472.57	6,971.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,379.71	1,369.00	Fox Hills				
4,079.01	3,964.00	Parkman				
4,548.22	4,417.00	Sussex				
7,195.85	6,913.00	Sharon Springs				
7,317.94	6,953.00	Niobrara				

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well GEORGE 25-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4917.00usft (Drilling Rig)
Site:	2N-65W-25 George 7-25HZ Pad	North Reference:	True
Well:	GEORGE 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
400.00	400.00	0.00	0.00	Start Build 1.50
1,466.67	1,452.86	5.16	147.88	Start 2870.00 hold at 1466.67 MD
4,336.67	4,211.68	32.77	938.48	Start Drop -2.00
5,136.67	5,001.32	36.65	1,049.39	Start 1333.07 hold at 5136.67 MD
6,469.74	6,334.39	36.65	1,049.39	KOP @ 6469.74ft
7,050.00	6,837.58	-209.99	1,048.55	DLS = 9°/100'
7,472.57	6,971.00	-602.80	1,047.22	End Build @ 7472.57ft
15,569.25	6,935.00	-8,699.36	1,019.76	TD Well @ 15569.25ft