

US ROCKIES WATTENBERG PLANNING

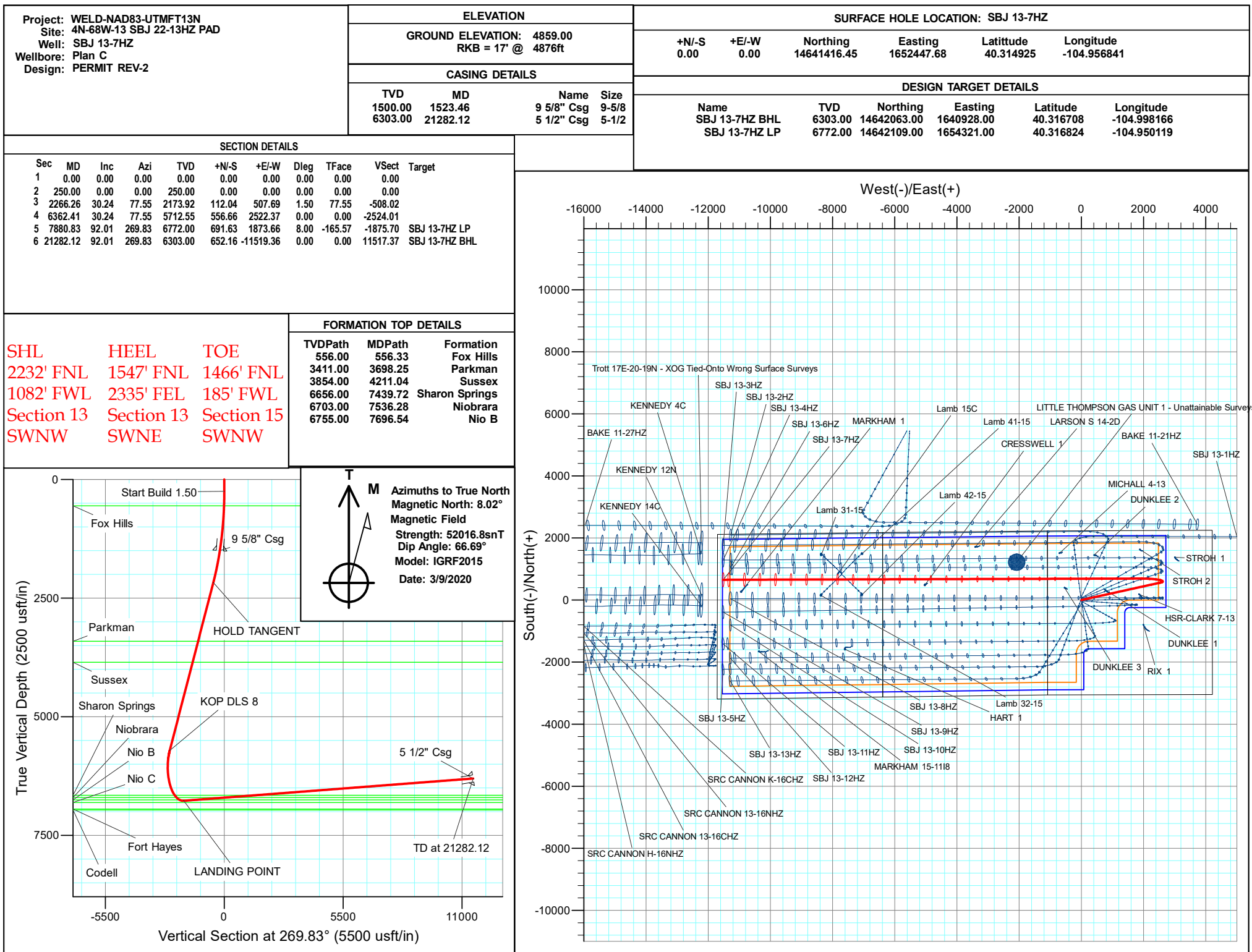
**WELD-NAD83-UTMFT13N
4N-68W-13 SBJ 22-13HZ PAD
SBJ 13-7HZ**

Plan C

Plan: PERMIT REV-2

Standard Planning Report

04 May, 2021



Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SBJ 13-7HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4876.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4876.00usft (Drilling Rig)
Site:	4N-68W-13 SBJ 22-13HZ PAD	North Reference:	True
Well:	SBJ 13-7HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan C		
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		4N-68W-13 SBJ 22-13HZ PAD			
Site Position:		Northing:	14,641,145.55 usft	Latitude:	40.314181
From:	Lat/Long	Easting:	1,652,517.50 usft	Longitude:	-104.956591
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.03 °

Well	SBJ 13-7HZ					
Well Position	+N/-S	270.94 usft	Northing:	14,641,416.45 usft	Latitude:	40.314925
	+E/-W	-69.69 usft	Easting:	1,652,447.67 usft	Longitude:	-104.956841
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,859.00 usft

Wellbore	Plan C				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/9/2020	8.02	66.69	52,016.78019864

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	269.83

Plan Survey Tool Program	Date	5/4/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	2,000.00	PERMIT REV-2 (Plan C)	APC_ISCWSA REV 2 MWD Fixed:v2:standard declination
2	2,000.00	21,282.12	PERMIT REV-2 (Plan C)	APC_ISCWSA REV 2 MWD+II Fixed:v2:Rockies, crustal dec +

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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,266.26	30.24	77.55	2,173.92	112.04	507.69	1.50	1.50	0.00	77.55	
6,362.41	30.24	77.55	5,712.55	556.66	2,522.37	0.00	0.00	0.00	0.00	
7,880.83	92.01	269.83	6,772.00	691.63	1,873.66	8.00	4.07	-11.05	-165.57	SBJ 13-7HZ LP
21,282.12	92.01	269.83	6,303.00	652.16	-11,519.36	0.00	0.00	0.00	0.00	SBJ 13-7HZ BHL

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Well:	SBJ 13-7HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan C		
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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50									
300.00	0.75	77.55	300.00	0.07	0.32	-0.32	1.50	1.50	0.00
400.00	2.25	77.55	399.96	0.63	2.88	-2.88	1.50	1.50	0.00
500.00	3.75	77.55	499.82	1.76	7.99	-7.99	1.50	1.50	0.00
556.33	4.59	77.55	556.00	2.65	11.99	-12.00	1.50	1.50	0.00
Fox Hills									
600.00	5.25	77.55	599.51	3.45	15.65	-15.66	1.50	1.50	0.00
700.00	6.75	77.55	698.96	5.71	25.85	-25.87	1.50	1.50	0.00
800.00	8.25	77.55	798.10	8.52	38.60	-38.63	1.50	1.50	0.00
900.00	9.75	77.55	896.87	11.89	53.88	-53.91	1.50	1.50	0.00
1,000.00	11.25	77.55	995.19	15.82	71.67	-71.72	1.50	1.50	0.00
1,100.00	12.75	77.55	1,093.00	20.30	91.97	-92.03	1.50	1.50	0.00
1,200.00	14.25	77.55	1,190.24	25.33	114.77	-114.84	1.50	1.50	0.00
1,300.00	15.75	77.55	1,286.83	30.91	140.04	-140.13	1.50	1.50	0.00
1,400.00	17.25	77.55	1,382.71	37.03	167.77	-167.88	1.50	1.50	0.00
1,500.00	18.75	77.55	1,477.81	43.69	197.95	-198.08	1.50	1.50	0.00
1,523.46	19.10	77.55	1,500.00	45.33	205.38	-205.51	1.50	1.50	0.00
9 5/8" Csg									
1,600.00	20.25	77.55	1,572.07	50.88	230.54	-230.69	1.50	1.50	0.00
1,700.00	21.75	77.55	1,665.43	58.60	265.54	-265.71	1.50	1.50	0.00
1,800.00	23.25	77.55	1,757.81	66.85	302.91	-303.10	1.50	1.50	0.00
1,900.00	24.75	77.55	1,849.16	75.61	342.62	-342.85	1.50	1.50	0.00
2,000.00	26.25	77.55	1,939.42	84.89	384.66	-384.91	1.50	1.50	0.00
2,100.00	27.75	77.55	2,028.52	94.67	428.99	-429.27	1.50	1.50	0.00
2,200.00	29.25	77.55	2,116.40	104.96	475.59	-475.89	1.50	1.50	0.00
2,266.26	30.24	77.55	2,173.92	112.04	507.69	-508.02	1.50	1.50	0.00
HOLD TANGENT									
2,300.00	30.24	77.55	2,203.07	115.70	524.28	-524.62	0.00	0.00	0.00
2,400.00	30.24	77.55	2,289.46	126.56	573.47	-573.84	0.00	0.00	0.00
2,500.00	30.24	77.55	2,375.85	137.41	622.65	-623.06	0.00	0.00	0.00
2,600.00	30.24	77.55	2,462.24	148.27	671.84	-672.27	0.00	0.00	0.00
2,700.00	30.24	77.55	2,548.63	159.12	721.02	-721.49	0.00	0.00	0.00
2,800.00	30.24	77.55	2,635.02	169.98	770.21	-770.71	0.00	0.00	0.00
2,900.00	30.24	77.55	2,721.40	180.83	819.39	-819.93	0.00	0.00	0.00
3,000.00	30.24	77.55	2,807.79	191.69	868.58	-869.14	0.00	0.00	0.00
3,100.00	30.24	77.55	2,894.18	202.54	917.76	-918.36	0.00	0.00	0.00
3,200.00	30.24	77.55	2,980.57	213.40	966.95	-967.58	0.00	0.00	0.00
3,300.00	30.24	77.55	3,066.96	224.25	1,016.13	-1,016.79	0.00	0.00	0.00
3,400.00	30.24	77.55	3,153.35	235.10	1,065.32	-1,066.01	0.00	0.00	0.00
3,500.00	30.24	77.55	3,239.74	245.96	1,114.50	-1,115.23	0.00	0.00	0.00
3,600.00	30.24	77.55	3,326.13	256.81	1,163.69	-1,164.44	0.00	0.00	0.00
3,698.25	30.24	77.55	3,411.00	267.48	1,212.01	-1,212.79	0.00	0.00	0.00
Parkman									
3,700.00	30.24	77.55	3,412.52	267.67	1,212.87	-1,213.66	0.00	0.00	0.00
3,800.00	30.24	77.55	3,498.90	278.52	1,262.05	-1,262.88	0.00	0.00	0.00
3,900.00	30.24	77.55	3,585.29	289.38	1,311.24	-1,312.09	0.00	0.00	0.00
4,000.00	30.24	77.55	3,671.68	300.23	1,360.42	-1,361.31	0.00	0.00	0.00
4,100.00	30.24	77.55	3,758.07	311.09	1,409.61	-1,410.53	0.00	0.00	0.00
4,200.00	30.24	77.55	3,844.46	321.94	1,458.79	-1,459.74	0.00	0.00	0.00

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Well:	SBJ 13-7HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan C		
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)	
4,211.04	30.24	77.55	3,854.00	323.14	1,464.22	-1,465.18	0.00	0.00	0.00	
Sussex										
4,300.00	30.24	77.55	3,930.85	332.80	1,507.98	-1,508.96	0.00	0.00	0.00	
4,400.00	30.24	77.55	4,017.24	343.65	1,557.16	-1,558.18	0.00	0.00	0.00	
4,500.00	30.24	77.55	4,103.63	354.50	1,606.35	-1,607.39	0.00	0.00	0.00	
4,600.00	30.24	77.55	4,190.02	365.36	1,655.53	-1,656.61	0.00	0.00	0.00	
4,700.00	30.24	77.55	4,276.41	376.21	1,704.72	-1,705.83	0.00	0.00	0.00	
4,800.00	30.24	77.55	4,362.79	387.07	1,753.90	-1,755.04	0.00	0.00	0.00	
4,900.00	30.24	77.55	4,449.18	397.92	1,803.09	-1,804.26	0.00	0.00	0.00	
5,000.00	30.24	77.55	4,535.57	408.78	1,852.27	-1,853.48	0.00	0.00	0.00	
5,100.00	30.24	77.55	4,621.96	419.63	1,901.46	-1,902.69	0.00	0.00	0.00	
5,200.00	30.24	77.55	4,708.35	430.49	1,950.64	-1,951.91	0.00	0.00	0.00	
5,300.00	30.24	77.55	4,794.74	441.34	1,999.82	-2,001.13	0.00	0.00	0.00	
5,400.00	30.24	77.55	4,881.13	452.20	2,049.01	-2,050.34	0.00	0.00	0.00	
5,500.00	30.24	77.55	4,967.52	463.05	2,098.19	-2,099.56	0.00	0.00	0.00	
5,600.00	30.24	77.55	5,053.91	473.90	2,147.38	-2,148.78	0.00	0.00	0.00	
5,700.00	30.24	77.55	5,140.29	484.76	2,196.56	-2,197.99	0.00	0.00	0.00	
5,800.00	30.24	77.55	5,226.68	495.61	2,245.75	-2,247.21	0.00	0.00	0.00	
5,900.00	30.24	77.55	5,313.07	506.47	2,294.93	-2,296.43	0.00	0.00	0.00	
6,000.00	30.24	77.55	5,399.46	517.32	2,344.12	-2,345.64	0.00	0.00	0.00	
6,100.00	30.24	77.55	5,485.85	528.18	2,393.30	-2,394.86	0.00	0.00	0.00	
6,200.00	30.24	77.55	5,572.24	539.03	2,442.49	-2,444.08	0.00	0.00	0.00	
6,300.00	30.24	77.55	5,658.63	549.89	2,491.67	-2,493.29	0.00	0.00	0.00	
6,362.41	30.24	77.55	5,712.55	556.66	2,522.37	-2,524.01	0.00	0.00	0.00	
KOP DLS 8										
6,400.00	27.34	75.92	5,745.48	560.80	2,539.99	-2,541.64	8.00	-7.72	-4.34	
6,500.00	19.76	69.47	5,837.10	572.33	2,578.15	-2,579.84	8.00	-7.58	-6.46	
6,600.00	12.67	55.84	5,933.10	584.44	2,603.10	-2,604.82	8.00	-7.09	-13.63	
6,700.00	7.61	18.87	6,031.60	596.88	2,614.33	-2,616.09	8.00	-5.06	-36.97	
6,800.00	9.09	322.31	6,130.69	609.42	2,611.64	-2,613.43	8.00	1.48	-56.57	
6,900.00	15.32	297.58	6,228.45	621.81	2,595.07	-2,596.90	8.00	6.23	-24.73	
7,000.00	22.67	287.71	6,322.96	633.81	2,564.95	-2,566.82	8.00	7.35	-9.87	
7,100.00	30.34	282.56	6,412.39	645.19	2,521.86	-2,523.76	8.00	7.67	-5.15	
7,200.00	38.14	279.35	6,495.00	655.72	2,466.65	-2,468.58	8.00	7.80	-3.21	
7,300.00	46.00	277.10	6,569.18	665.20	2,400.38	-2,402.34	8.00	7.86	-2.25	
7,400.00	53.89	275.38	6,633.48	673.45	2,324.35	-2,326.34	8.00	7.89	-1.72	
7,439.72	57.03	274.79	6,656.00	676.34	2,291.77	-2,293.77	8.00	7.91	-1.48	
Sharon Springs										
7,500.00	61.80	273.97	6,686.67	680.30	2,240.04	-2,242.05	8.00	7.91	-1.36	
7,536.28	64.67	273.52	6,703.00	682.41	2,207.72	-2,209.73	8.00	7.92	-1.26	
Niobrara										
7,600.00	69.72	272.76	6,727.69	685.62	2,149.08	-2,151.11	8.00	7.93	-1.18	
7,696.54	77.38	271.71	6,755.00	689.21	2,056.64	-2,058.67	8.00	7.93	-1.09	
Nio B										
7,700.00	77.66	271.67	6,755.75	689.31	2,053.26	-2,055.29	8.00	7.93	-1.05	
7,800.00	85.59	270.64	6,770.31	691.30	1,954.43	-1,956.47	8.00	7.94	-1.03	
7,880.83	92.01	269.83	6,772.00	691.63	1,873.66	-1,875.70	8.00	7.94	-1.01	
LANDING POINT										
7,900.00	92.01	269.83	6,771.33	691.58	1,854.50	-1,856.54	0.00	0.00	0.00	
8,000.00	92.01	269.83	6,767.83	691.28	1,754.56	-1,756.60	0.00	0.00	0.00	
8,100.00	92.01	269.83	6,764.33	690.99	1,654.62	-1,656.67	0.00	0.00	0.00	
8,200.00	92.01	269.83	6,760.83	690.69	1,554.68	-1,556.73	0.00	0.00	0.00	
8,300.00	92.01	269.83	6,757.33	690.40	1,454.75	-1,456.79	0.00	0.00	0.00	

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Wellbore:	Plan C		
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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)
8,400.00	92.01	269.83	6,753.83	690.11	1,354.81	-1,356.85	0.00	0.00	0.00
8,500.00	92.01	269.83	6,750.33	689.81	1,254.87	-1,256.91	0.00	0.00	0.00
8,600.00	92.01	269.83	6,746.83	689.52	1,154.93	-1,156.97	0.00	0.00	0.00
8,700.00	92.01	269.83	6,743.33	689.22	1,054.99	-1,057.03	0.00	0.00	0.00
8,800.00	92.01	269.83	6,739.83	688.93	955.05	-957.09	0.00	0.00	0.00
8,900.00	92.01	269.83	6,736.33	688.63	855.12	-857.16	0.00	0.00	0.00
9,000.00	92.01	269.83	6,732.83	688.34	755.18	-757.22	0.00	0.00	0.00
9,100.00	92.01	269.83	6,729.33	688.04	655.24	-657.28	0.00	0.00	0.00
9,200.00	92.01	269.83	6,725.83	687.75	555.30	-557.34	0.00	0.00	0.00
9,300.00	92.01	269.83	6,722.33	687.45	455.36	-457.40	0.00	0.00	0.00
9,400.00	92.01	269.83	6,718.83	687.16	355.42	-357.46	0.00	0.00	0.00
9,500.00	92.01	269.83	6,715.33	686.87	255.49	-257.52	0.00	0.00	0.00
9,600.00	92.01	269.83	6,711.83	686.57	155.55	-157.58	0.00	0.00	0.00
9,700.00	92.01	269.83	6,708.34	686.28	55.61	-57.65	0.00	0.00	0.00
9,800.00	92.01	269.83	6,704.84	685.98	-44.33	42.29	0.00	0.00	0.00
9,900.00	92.01	269.83	6,701.34	685.69	-144.27	142.23	0.00	0.00	0.00
10,000.00	92.01	269.83	6,697.84	685.39	-244.21	242.17	0.00	0.00	0.00
10,100.00	92.01	269.83	6,694.34	685.10	-344.14	342.11	0.00	0.00	0.00
10,200.00	92.01	269.83	6,690.84	684.80	-444.08	442.05	0.00	0.00	0.00
10,300.00	92.01	269.83	6,687.34	684.51	-544.02	541.99	0.00	0.00	0.00
10,400.00	92.01	269.83	6,683.84	684.21	-643.96	641.93	0.00	0.00	0.00
10,500.00	92.01	269.83	6,680.34	683.92	-743.90	741.86	0.00	0.00	0.00
10,600.00	92.01	269.83	6,676.84	683.63	-843.84	841.80	0.00	0.00	0.00
10,700.00	92.01	269.83	6,673.34	683.33	-943.77	941.74	0.00	0.00	0.00
10,800.00	92.01	269.83	6,669.84	683.04	-1,043.71	1,041.68	0.00	0.00	0.00
10,900.00	92.01	269.83	6,666.34	682.74	-1,143.65	1,141.62	0.00	0.00	0.00
11,000.00	92.01	269.83	6,662.84	682.45	-1,243.59	1,241.56	0.00	0.00	0.00
11,100.00	92.01	269.83	6,659.34	682.15	-1,343.53	1,341.50	0.00	0.00	0.00
11,200.00	92.01	269.83	6,655.84	681.86	-1,443.47	1,441.44	0.00	0.00	0.00
11,300.00	92.01	269.83	6,652.34	681.56	-1,543.40	1,541.37	0.00	0.00	0.00
11,400.00	92.01	269.83	6,648.84	681.27	-1,643.34	1,641.31	0.00	0.00	0.00
11,500.00	92.01	269.83	6,645.34	680.97	-1,743.28	1,741.25	0.00	0.00	0.00
11,600.00	92.01	269.83	6,641.84	680.68	-1,843.22	1,841.19	0.00	0.00	0.00
11,700.00	92.01	269.83	6,638.34	680.39	-1,943.16	1,941.13	0.00	0.00	0.00
11,800.00	92.01	269.83	6,634.84	680.09	-2,043.10	2,041.07	0.00	0.00	0.00
11,900.00	92.01	269.83	6,631.34	679.80	-2,143.03	2,141.01	0.00	0.00	0.00
12,000.00	92.01	269.83	6,627.84	679.50	-2,242.97	2,240.95	0.00	0.00	0.00
12,100.00	92.01	269.83	6,624.34	679.21	-2,342.91	2,340.88	0.00	0.00	0.00
12,200.00	92.01	269.83	6,620.84	678.91	-2,442.85	2,440.82	0.00	0.00	0.00
12,300.00	92.01	269.83	6,617.34	678.62	-2,542.79	2,540.76	0.00	0.00	0.00
12,400.00	92.01	269.83	6,613.84	678.32	-2,642.73	2,640.70	0.00	0.00	0.00
12,500.00	92.01	269.83	6,610.34	678.03	-2,742.66	2,740.64	0.00	0.00	0.00
12,600.00	92.01	269.83	6,606.84	677.73	-2,842.60	2,840.58	0.00	0.00	0.00
12,700.00	92.01	269.83	6,603.35	677.44	-2,942.54	2,940.52	0.00	0.00	0.00
12,800.00	92.01	269.83	6,599.85	677.15	-3,042.48	3,040.46	0.00	0.00	0.00
12,900.00	92.01	269.83	6,596.35	676.85	-3,142.42	3,140.39	0.00	0.00	0.00
13,000.00	92.01	269.83	6,592.85	676.56	-3,242.35	3,240.33	0.00	0.00	0.00
13,100.00	92.01	269.83	6,589.35	676.26	-3,342.29	3,340.27	0.00	0.00	0.00
13,200.00	92.01	269.83	6,585.85	675.97	-3,442.23	3,440.21	0.00	0.00	0.00
13,300.00	92.01	269.83	6,582.35	675.67	-3,542.17	3,540.15	0.00	0.00	0.00
13,400.00	92.01	269.83	6,578.85	675.38	-3,642.11	3,640.09	0.00	0.00	0.00
13,500.00	92.01	269.83	6,575.35	675.08	-3,742.05	3,740.03	0.00	0.00	0.00
13,600.00	92.01	269.83	6,571.85	674.79	-3,841.98	3,839.97	0.00	0.00	0.00
13,700.00	92.01	269.83	6,568.35	674.49	-3,941.92	3,939.90	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SBJ 13-7HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4876.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4876.00usft (Drilling Rig)
Site:	4N-68W-13 SBJ 22-13HZ PAD	North Reference:	True
Well:	SBJ 13-7HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan C		
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)
13,800.00	92.01	269.83	6,564.85	674.20	-4,041.86	4,039.84	0.00	0.00	0.00
13,900.00	92.01	269.83	6,561.35	673.91	-4,141.80	4,139.78	0.00	0.00	0.00
14,000.00	92.01	269.83	6,557.85	673.61	-4,241.74	4,239.72	0.00	0.00	0.00
14,100.00	92.01	269.83	6,554.35	673.32	-4,341.68	4,339.66	0.00	0.00	0.00
14,200.00	92.01	269.83	6,550.85	673.02	-4,441.61	4,439.60	0.00	0.00	0.00
14,300.00	92.01	269.83	6,547.35	672.73	-4,541.55	4,539.54	0.00	0.00	0.00
14,400.00	92.01	269.83	6,543.85	672.43	-4,641.49	4,639.48	0.00	0.00	0.00
14,500.00	92.01	269.83	6,540.35	672.14	-4,741.43	4,739.41	0.00	0.00	0.00
14,600.00	92.01	269.83	6,536.85	671.84	-4,841.37	4,839.35	0.00	0.00	0.00
14,700.00	92.01	269.83	6,533.35	671.55	-4,941.31	4,939.29	0.00	0.00	0.00
14,800.00	92.01	269.83	6,529.85	671.25	-5,041.24	5,039.23	0.00	0.00	0.00
14,900.00	92.01	269.83	6,526.35	670.96	-5,141.18	5,139.17	0.00	0.00	0.00
15,000.00	92.01	269.83	6,522.85	670.67	-5,241.12	5,239.11	0.00	0.00	0.00
15,100.00	92.01	269.83	6,519.35	670.37	-5,341.06	5,339.05	0.00	0.00	0.00
15,200.00	92.01	269.83	6,515.85	670.08	-5,441.00	5,438.99	0.00	0.00	0.00
15,300.00	92.01	269.83	6,512.35	669.78	-5,540.94	5,538.92	0.00	0.00	0.00
15,400.00	92.01	269.83	6,508.85	669.49	-5,640.87	5,638.86	0.00	0.00	0.00
15,500.00	92.01	269.83	6,505.35	669.19	-5,740.81	5,738.80	0.00	0.00	0.00
15,600.00	92.01	269.83	6,501.86	668.90	-5,840.75	5,838.74	0.00	0.00	0.00
15,700.00	92.01	269.83	6,498.36	668.60	-5,940.69	5,938.68	0.00	0.00	0.00
15,800.00	92.01	269.83	6,494.86	668.31	-6,040.63	6,038.62	0.00	0.00	0.00
15,900.00	92.01	269.83	6,491.36	668.01	-6,140.57	6,138.56	0.00	0.00	0.00
16,000.00	92.01	269.83	6,487.86	667.72	-6,240.50	6,238.50	0.00	0.00	0.00
16,100.00	92.01	269.83	6,484.36	667.43	-6,340.44	6,338.43	0.00	0.00	0.00
16,200.00	92.01	269.83	6,480.86	667.13	-6,440.38	6,438.37	0.00	0.00	0.00
16,300.00	92.01	269.83	6,477.36	666.84	-6,540.32	6,538.31	0.00	0.00	0.00
16,400.00	92.01	269.83	6,473.86	666.54	-6,640.26	6,638.25	0.00	0.00	0.00
16,500.00	92.01	269.83	6,470.36	666.25	-6,740.20	6,738.19	0.00	0.00	0.00
16,600.00	92.01	269.83	6,466.86	665.95	-6,840.13	6,838.13	0.00	0.00	0.00
16,700.00	92.01	269.83	6,463.36	665.66	-6,940.07	6,938.07	0.00	0.00	0.00
16,800.00	92.01	269.83	6,459.86	665.36	-7,040.01	7,038.01	0.00	0.00	0.00
16,900.00	92.01	269.83	6,456.36	665.07	-7,139.95	7,137.94	0.00	0.00	0.00
17,000.00	92.01	269.83	6,452.86	664.77	-7,239.89	7,237.88	0.00	0.00	0.00
17,100.00	92.01	269.83	6,449.36	664.48	-7,339.83	7,337.82	0.00	0.00	0.00
17,200.00	92.01	269.83	6,445.86	664.19	-7,439.76	7,437.76	0.00	0.00	0.00
17,300.00	92.01	269.83	6,442.36	663.89	-7,539.70	7,537.70	0.00	0.00	0.00
17,400.00	92.01	269.83	6,438.86	663.60	-7,639.64	7,637.64	0.00	0.00	0.00
17,500.00	92.01	269.83	6,435.36	663.30	-7,739.58	7,737.58	0.00	0.00	0.00
17,600.00	92.01	269.83	6,431.86	663.01	-7,839.52	7,837.52	0.00	0.00	0.00
17,700.00	92.01	269.83	6,428.36	662.71	-7,939.46	7,937.45	0.00	0.00	0.00
17,800.00	92.01	269.83	6,424.86	662.42	-8,039.39	8,037.39	0.00	0.00	0.00
17,900.00	92.01	269.83	6,421.36	662.12	-8,139.33	8,137.33	0.00	0.00	0.00
18,000.00	92.01	269.83	6,417.86	661.83	-8,239.27	8,237.27	0.00	0.00	0.00
18,100.00	92.01	269.83	6,414.36	661.53	-8,339.21	8,337.21	0.00	0.00	0.00
18,200.00	92.01	269.83	6,410.86	661.24	-8,439.15	8,437.15	0.00	0.00	0.00
18,300.00	92.01	269.83	6,407.36	660.95	-8,539.09	8,537.09	0.00	0.00	0.00
18,400.00	92.01	269.83	6,403.86	660.65	-8,639.02	8,637.03	0.00	0.00	0.00
18,500.00	92.01	269.83	6,400.36	660.36	-8,738.96	8,736.96	0.00	0.00	0.00
18,600.00	92.01	269.83	6,396.87	660.06	-8,838.90	8,836.90	0.00	0.00	0.00
18,700.00	92.01	269.83	6,393.37	659.77	-8,938.84	8,936.84	0.00	0.00	0.00
18,800.00	92.01	269.83	6,389.87	659.47	-9,038.78	9,036.78	0.00	0.00	0.00
18,900.00	92.01	269.83	6,386.37	659.18	-9,138.72	9,136.72	0.00	0.00	0.00
19,000.00	92.01	269.83	6,382.87	658.88	-9,238.65	9,236.66	0.00	0.00	0.00
19,100.00	92.01	269.83	6,379.37	658.59	-9,338.59	9,336.60	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SBJ 13-7HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4876.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4876.00usft (Drilling Rig)
Site:	4N-68W-13 SBJ 22-13HZ PAD	North Reference:	True
Well:	SBJ 13-7HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan C		
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)	
19,200.00	92.01	269.83	6,375.87	658.29	-9,438.53	9,436.54	0.00	0.00	0.00	
19,300.00	92.01	269.83	6,372.37	658.00	-9,538.47	9,536.47	0.00	0.00	0.00	
19,400.00	92.01	269.83	6,368.87	657.71	-9,638.41	9,636.41	0.00	0.00	0.00	
19,500.00	92.01	269.83	6,365.37	657.41	-9,738.35	9,736.35	0.00	0.00	0.00	
19,600.00	92.01	269.83	6,361.87	657.12	-9,838.28	9,836.29	0.00	0.00	0.00	
19,700.00	92.01	269.83	6,358.37	656.82	-9,938.22	9,936.23	0.00	0.00	0.00	
19,800.00	92.01	269.83	6,354.87	656.53	-10,038.16	10,036.17	0.00	0.00	0.00	
19,900.00	92.01	269.83	6,351.37	656.23	-10,138.10	10,136.11	0.00	0.00	0.00	
20,000.00	92.01	269.83	6,347.87	655.94	-10,238.04	10,236.05	0.00	0.00	0.00	
20,100.00	92.01	269.83	6,344.37	655.64	-10,337.98	10,335.98	0.00	0.00	0.00	
20,200.00	92.01	269.83	6,340.87	655.35	-10,437.91	10,435.92	0.00	0.00	0.00	
20,300.00	92.01	269.83	6,337.37	655.05	-10,537.85	10,535.86	0.00	0.00	0.00	
20,400.00	92.01	269.83	6,333.87	654.76	-10,637.79	10,635.80	0.00	0.00	0.00	
20,500.00	92.01	269.83	6,330.37	654.47	-10,737.73	10,735.74	0.00	0.00	0.00	
20,600.00	92.01	269.83	6,326.87	654.17	-10,837.67	10,835.68	0.00	0.00	0.00	
20,700.00	92.01	269.83	6,323.37	653.88	-10,937.60	10,935.62	0.00	0.00	0.00	
20,800.00	92.01	269.83	6,319.87	653.58	-11,037.54	11,035.56	0.00	0.00	0.00	
20,900.00	92.01	269.83	6,316.37	653.29	-11,137.48	11,135.49	0.00	0.00	0.00	
21,000.00	92.01	269.83	6,312.87	652.99	-11,237.42	11,235.43	0.00	0.00	0.00	
21,100.00	92.01	269.83	6,309.37	652.70	-11,337.36	11,335.37	0.00	0.00	0.00	
21,200.00	92.01	269.83	6,305.87	652.40	-11,437.30	11,435.31	0.00	0.00	0.00	
21,282.12	92.01	269.83	6,303.00	652.16	-11,519.36	11,517.38	0.00	0.00	0.00	
TD at 21282.12										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
SBJ 13-7HZ BHL	0.00	0.00	6,303.00	652.16	-11,519.36	14,642,063.00	1,640,928.00	40.316709	-104.998166	
- plan hits target center										
- Point										
SBJ 13-7HZ LP	0.00	0.00	6,772.00	691.63	1,873.66	14,642,109.00	1,654,321.00	40.316824	-104.950120	
- plan hits target center										
- Point										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,523.46	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
21,282.12	6,303.00	5 1/2" Csg	5-1/2	7-7/8	

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SBJ 13-7HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4876.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4876.00usft (Drilling Rig)
Site:	4N-68W-13 SBJ 22-13HZ PAD	North Reference:	True
Well:	SBJ 13-7HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan C		
Design:	PERMIT REV-2		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
556.33	556.00	Fox Hills			
3,698.25	3,411.00	Parkman			
4,211.04	3,854.00	Sussex			
7,439.72	6,656.00	Sharon Springs			
7,536.28	6,703.00	Niobrara			
7,696.54	6,755.00	Nio B			

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
250.00	250.00	0.00	0.00	Start Build 1.50	
2,266.26	2,173.92	112.04	507.69	HOLD TANGENT	
6,362.41	5,712.55	556.66	2,522.37	KOP DLS 8	
7,880.83	6,772.00	691.63	1,873.66	LANDING POINT	
21,282.12	6,303.00	652.16	-11,519.36	TD at 21282.12	