

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
4N-68W-13 SBJ 22-13HZ PAD
SBJ 13-9HZ**

Plan C

Plan: PERMIT REV-2

Standard Planning Report

04 May, 2021

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SBJ 13-9HZ
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 13-9HZ	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 13-9HZ					
Well Position	+N/-S	241.44 usft	Northing:	14,641,386.96 usft	Latitude:	40.314844
	+E/-W	-63.84 usft	Easting:	1,652,453.54 usft	Longitude:	-104.956820
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	52,016.74048926

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	269.07

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	20,245.09	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	
1,506.42	18.85	93.84	1,483.88	-13.70	204.32	1.50	1.50	0.00	93.84	
6,279.73	18.85	93.84	6,001.29	-116.84	1,742.79	0.00	0.00	0.00	0.00	
7,669.35	92.39	269.07	6,947.00	-156.46	1,035.38	8.00	5.29	12.61	174.89	SBJ 13-9HZ LP
20,245.09	92.39	269.07	6,422.00	-361.34	-11,527.72	0.00	0.00	0.00	0.00	SBJ 13-9HZ BHL

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Well:	SBJ 13-9HZ	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	93.84	300.00	-0.02	0.33	-0.33	1.50	1.50	0.00
400.00	2.25	93.84	399.96	-0.20	2.94	-2.93	1.50	1.50	0.00
500.00	3.75	93.84	499.82	-0.55	8.16	-8.15	1.50	1.50	0.00
556.33	4.59	93.84	556.00	-0.82	12.25	-12.23	1.50	1.50	0.00
Fox Hills									
600.00	5.25	93.84	599.51	-1.07	15.99	-15.97	1.50	1.50	0.00
700.00	6.75	93.84	698.96	-1.77	26.42	-26.39	1.50	1.50	0.00
800.00	8.25	93.84	798.10	-2.64	39.44	-39.39	1.50	1.50	0.00
900.00	9.75	93.84	896.87	-3.69	55.05	-54.98	1.50	1.50	0.00
1,000.00	11.25	93.84	995.19	-4.91	73.23	-73.14	1.50	1.50	0.00
1,100.00	12.75	93.84	1,093.00	-6.30	93.97	-93.86	1.50	1.50	0.00
1,200.00	14.25	93.84	1,190.24	-7.86	117.27	-117.12	1.50	1.50	0.00
1,300.00	15.75	93.84	1,286.83	-9.59	143.09	-142.91	1.50	1.50	0.00
1,400.00	17.25	93.84	1,382.71	-11.49	171.43	-171.22	1.50	1.50	0.00
1,500.00	18.75	93.84	1,477.81	-13.56	202.26	-202.01	1.50	1.50	0.00
1,506.42	18.85	93.84	1,483.88	-13.70	204.32	-204.07	1.50	1.50	0.00
HOLD TANGENT									
1,523.45	18.85	93.84	1,500.00	-14.07	209.81	-209.55	0.00	0.00	0.00
9 5/8" Csg									
1,600.00	18.85	93.84	1,572.45	-15.72	234.48	-234.20	0.00	0.00	0.00
1,700.00	18.85	93.84	1,667.09	-17.88	266.71	-266.39	0.00	0.00	0.00
1,800.00	18.85	93.84	1,761.73	-20.04	298.94	-298.58	0.00	0.00	0.00
1,900.00	18.85	93.84	1,856.37	-22.20	331.18	-330.77	0.00	0.00	0.00
2,000.00	18.85	93.84	1,951.00	-24.36	363.41	-362.96	0.00	0.00	0.00
2,100.00	18.85	93.84	2,045.64	-26.52	395.64	-395.15	0.00	0.00	0.00
2,200.00	18.85	93.84	2,140.28	-28.69	427.87	-427.34	0.00	0.00	0.00
2,300.00	18.85	93.84	2,234.92	-30.85	460.10	-459.54	0.00	0.00	0.00
2,400.00	18.85	93.84	2,329.56	-33.01	492.33	-491.73	0.00	0.00	0.00
2,500.00	18.85	93.84	2,424.20	-35.17	524.56	-523.92	0.00	0.00	0.00
2,600.00	18.85	93.84	2,518.84	-37.33	556.79	-556.11	0.00	0.00	0.00
2,700.00	18.85	93.84	2,613.48	-39.49	589.02	-588.30	0.00	0.00	0.00
2,800.00	18.85	93.84	2,708.12	-41.65	621.25	-620.49	0.00	0.00	0.00
2,900.00	18.85	93.84	2,802.75	-43.81	653.48	-652.68	0.00	0.00	0.00
3,000.00	18.85	93.84	2,897.39	-45.97	685.71	-684.88	0.00	0.00	0.00
3,100.00	18.85	93.84	2,992.03	-48.13	717.94	-717.07	0.00	0.00	0.00
3,200.00	18.85	93.84	3,086.67	-50.29	750.17	-749.26	0.00	0.00	0.00
3,300.00	18.85	93.84	3,181.31	-52.46	782.40	-781.45	0.00	0.00	0.00
3,400.00	18.85	93.84	3,275.95	-54.62	814.63	-813.64	0.00	0.00	0.00
3,500.00	18.85	93.84	3,370.59	-56.78	846.86	-845.83	0.00	0.00	0.00
3,542.70	18.85	93.84	3,411.00	-57.70	860.63	-859.58	0.00	0.00	0.00
Parkman									
3,600.00	18.85	93.84	3,465.23	-58.94	879.10	-878.02	0.00	0.00	0.00
3,700.00	18.85	93.84	3,559.87	-61.10	911.33	-910.21	0.00	0.00	0.00
3,800.00	18.85	93.84	3,654.50	-63.26	943.56	-942.41	0.00	0.00	0.00
3,900.00	18.85	93.84	3,749.14	-65.42	975.79	-974.60	0.00	0.00	0.00
4,000.00	18.85	93.84	3,843.78	-67.58	1,008.02	-1,006.79	0.00	0.00	0.00
4,010.80	18.85	93.84	3,854.00	-67.81	1,011.50	-1,010.26	0.00	0.00	0.00
Sussex									

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Well:	SBJ 13-9HZ	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)
4,100.00	18.85	93.84	3,938.42	-69.74	1,040.25	-1,038.98	0.00	0.00	0.00
4,200.00	18.85	93.84	4,033.06	-71.90	1,072.48	-1,071.17	0.00	0.00	0.00
4,300.00	18.85	93.84	4,127.70	-74.06	1,104.71	-1,103.36	0.00	0.00	0.00
4,400.00	18.85	93.84	4,222.34	-76.22	1,136.94	-1,135.55	0.00	0.00	0.00
4,500.00	18.85	93.84	4,316.98	-78.39	1,169.17	-1,167.74	0.00	0.00	0.00
4,600.00	18.85	93.84	4,411.62	-80.55	1,201.40	-1,199.94	0.00	0.00	0.00
4,700.00	18.85	93.84	4,506.25	-82.71	1,233.63	-1,232.13	0.00	0.00	0.00
4,800.00	18.85	93.84	4,600.89	-84.87	1,265.86	-1,264.32	0.00	0.00	0.00
4,900.00	18.85	93.84	4,695.53	-87.03	1,298.09	-1,296.51	0.00	0.00	0.00
5,000.00	18.85	93.84	4,790.17	-89.19	1,330.32	-1,328.70	0.00	0.00	0.00
5,100.00	18.85	93.84	4,884.81	-91.35	1,362.55	-1,360.89	0.00	0.00	0.00
5,200.00	18.85	93.84	4,979.45	-93.51	1,394.78	-1,393.08	0.00	0.00	0.00
5,300.00	18.85	93.84	5,074.09	-95.67	1,427.01	-1,425.27	0.00	0.00	0.00
5,400.00	18.85	93.84	5,168.73	-97.83	1,459.25	-1,457.47	0.00	0.00	0.00
5,500.00	18.85	93.84	5,263.37	-99.99	1,491.48	-1,489.66	0.00	0.00	0.00
5,600.00	18.85	93.84	5,358.00	-102.15	1,523.71	-1,521.85	0.00	0.00	0.00
5,700.00	18.85	93.84	5,452.64	-104.32	1,555.94	-1,554.04	0.00	0.00	0.00
5,800.00	18.85	93.84	5,547.28	-106.48	1,588.17	-1,586.23	0.00	0.00	0.00
5,900.00	18.85	93.84	5,641.92	-108.64	1,620.40	-1,618.42	0.00	0.00	0.00
6,000.00	18.85	93.84	5,736.56	-110.80	1,652.63	-1,650.61	0.00	0.00	0.00
6,100.00	18.85	93.84	5,831.20	-112.96	1,684.86	-1,682.80	0.00	0.00	0.00
6,200.00	18.85	93.84	5,925.84	-115.12	1,717.09	-1,715.00	0.00	0.00	0.00
6,279.73	18.85	93.84	6,001.29	-116.84	1,742.79	-1,740.66	0.00	0.00	0.00
KOP DLS 8									
6,300.00	17.23	94.32	6,020.57	-117.29	1,749.05	-1,746.91	8.00	-7.97	2.41
6,400.00	9.30	99.12	6,117.82	-119.69	1,771.83	-1,769.66	8.00	-7.93	4.80
6,500.00	2.01	143.99	6,217.30	-122.40	1,780.86	-1,778.64	8.00	-7.29	44.87
6,600.00	7.04	255.51	6,317.05	-125.35	1,775.95	-1,773.68	8.00	5.03	111.52
6,700.00	14.93	262.80	6,415.14	-128.51	1,757.20	-1,754.89	8.00	7.89	7.28
6,800.00	22.90	265.09	6,509.67	-131.79	1,724.98	-1,722.61	8.00	7.97	2.29
6,900.00	30.88	266.24	6,598.78	-135.15	1,679.91	-1,677.50	8.00	7.98	1.15
6,968.75	36.38	266.76	6,656.00	-137.46	1,641.92	-1,639.47	8.00	7.99	0.76
Sharon Springs									
7,000.00	38.87	266.95	6,680.75	-138.51	1,622.87	-1,620.41	8.00	7.99	0.62
7,029.06	41.20	267.11	6,703.00	-139.48	1,604.20	-1,601.73	8.00	7.99	0.56
Niobrara									
7,100.00	46.87	267.45	6,753.98	-141.81	1,554.97	-1,552.46	8.00	7.99	0.48
7,101.49	46.99	267.46	6,755.00	-141.85	1,553.88	-1,551.37	8.00	7.99	0.43
Nio B									
7,184.52	53.62	267.78	6,808.00	-144.50	1,490.08	-1,487.54	8.00	7.99	0.39
Nio C									
7,200.00	54.86	267.84	6,817.04	-144.98	1,477.53	-1,474.99	8.00	7.99	0.35
7,300.00	62.86	268.15	6,868.72	-147.96	1,392.06	-1,389.48	8.00	8.00	0.32
7,400.00	70.85	268.42	6,907.99	-150.70	1,300.23	-1,297.61	8.00	8.00	0.27
7,500.00	78.85	268.67	6,934.10	-153.14	1,203.81	-1,201.17	8.00	8.00	0.25
7,600.00	86.85	268.91	6,946.54	-155.24	1,104.69	-1,102.03	8.00	8.00	0.23
7,609.51	87.61	268.93	6,947.00	-155.42	1,095.19	-1,092.53	8.00	8.00	0.23
Fort Hayes									
7,669.35	92.39	269.07	6,947.00	-156.46	1,035.38	-1,032.70	8.00	8.00	0.23
LANDING POINT									
7,700.00	92.39	269.07	6,945.72	-156.96	1,004.76	-1,002.08	0.00	0.00	0.00
7,800.00	92.39	269.07	6,941.55	-158.59	904.86	-902.17	0.00	0.00	0.00
7,900.00	92.39	269.07	6,937.37	-160.22	804.96	-802.26	0.00	0.00	0.00

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Well:	SBJ 13-9HZ	Survey Calculation Method:	Minimum Curvature
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)
8,000.00	92.39	269.07	6,933.20	-161.85	705.07	-702.35	0.00	0.00	0.00
8,100.00	92.39	269.07	6,929.02	-163.48	605.17	-602.43	0.00	0.00	0.00
8,200.00	92.39	269.07	6,924.85	-165.11	505.27	-502.52	0.00	0.00	0.00
8,300.00	92.39	269.07	6,920.67	-166.74	405.37	-402.61	0.00	0.00	0.00
8,400.00	92.39	269.07	6,916.50	-168.37	305.47	-302.69	0.00	0.00	0.00
8,500.00	92.39	269.07	6,912.32	-170.00	205.57	-202.78	0.00	0.00	0.00
8,600.00	92.39	269.07	6,908.15	-171.62	105.67	-102.87	0.00	0.00	0.00
8,700.00	92.39	269.07	6,903.97	-173.25	5.77	-2.96	0.00	0.00	0.00
8,800.00	92.39	269.07	6,899.80	-174.88	-94.13	96.96	0.00	0.00	0.00
8,900.00	92.39	269.07	6,895.62	-176.51	-194.03	196.87	0.00	0.00	0.00
9,000.00	92.39	269.07	6,891.45	-178.14	-293.93	296.78	0.00	0.00	0.00
9,100.00	92.39	269.07	6,887.27	-179.77	-393.83	396.70	0.00	0.00	0.00
9,200.00	92.39	269.07	6,883.10	-181.40	-493.73	496.61	0.00	0.00	0.00
9,300.00	92.39	269.07	6,878.93	-183.03	-593.63	596.52	0.00	0.00	0.00
9,400.00	92.39	269.07	6,874.75	-184.66	-693.53	696.43	0.00	0.00	0.00
9,500.00	92.39	269.07	6,870.58	-186.29	-793.43	796.35	0.00	0.00	0.00
9,600.00	92.39	269.07	6,866.40	-187.92	-893.33	896.26	0.00	0.00	0.00
9,700.00	92.39	269.07	6,862.23	-189.54	-993.23	996.17	0.00	0.00	0.00
9,800.00	92.39	269.07	6,858.05	-191.17	-1,093.13	1,096.09	0.00	0.00	0.00
9,900.00	92.39	269.07	6,853.88	-192.80	-1,193.03	1,196.00	0.00	0.00	0.00
10,000.00	92.39	269.07	6,849.70	-194.43	-1,292.93	1,295.91	0.00	0.00	0.00
10,100.00	92.39	269.07	6,845.53	-196.06	-1,392.83	1,395.82	0.00	0.00	0.00
10,200.00	92.39	269.07	6,841.35	-197.69	-1,492.72	1,495.74	0.00	0.00	0.00
10,300.00	92.39	269.07	6,837.18	-199.32	-1,592.62	1,595.65	0.00	0.00	0.00
10,400.00	92.39	269.07	6,833.00	-200.95	-1,692.52	1,695.56	0.00	0.00	0.00
10,500.00	92.39	269.07	6,828.83	-202.58	-1,792.42	1,795.48	0.00	0.00	0.00
10,600.00	92.39	269.07	6,824.65	-204.21	-1,892.32	1,895.39	0.00	0.00	0.00
10,700.00	92.39	269.07	6,820.48	-205.84	-1,992.22	1,995.30	0.00	0.00	0.00
10,800.00	92.39	269.07	6,816.30	-207.46	-2,092.12	2,095.21	0.00	0.00	0.00
10,900.00	92.39	269.07	6,812.13	-209.09	-2,192.02	2,195.13	0.00	0.00	0.00
11,000.00	92.39	269.07	6,807.96	-210.72	-2,291.92	2,295.04	0.00	0.00	0.00
11,100.00	92.39	269.07	6,803.78	-212.35	-2,391.82	2,394.95	0.00	0.00	0.00
11,200.00	92.39	269.07	6,799.61	-213.98	-2,491.72	2,494.86	0.00	0.00	0.00
11,300.00	92.39	269.07	6,795.43	-215.61	-2,591.62	2,594.78	0.00	0.00	0.00
11,400.00	92.39	269.07	6,791.26	-217.24	-2,691.52	2,694.69	0.00	0.00	0.00
11,500.00	92.39	269.07	6,787.08	-218.87	-2,791.42	2,794.60	0.00	0.00	0.00
11,600.00	92.39	269.07	6,782.91	-220.50	-2,891.32	2,894.52	0.00	0.00	0.00
11,700.00	92.39	269.07	6,778.73	-222.13	-2,991.22	2,994.43	0.00	0.00	0.00
11,800.00	92.39	269.07	6,774.56	-223.76	-3,091.12	3,094.34	0.00	0.00	0.00
11,900.00	92.39	269.07	6,770.38	-225.39	-3,191.02	3,194.25	0.00	0.00	0.00
12,000.00	92.39	269.07	6,766.21	-227.01	-3,290.92	3,294.17	0.00	0.00	0.00
12,100.00	92.39	269.07	6,762.03	-228.64	-3,390.82	3,394.08	0.00	0.00	0.00
12,200.00	92.39	269.07	6,757.86	-230.27	-3,490.72	3,493.99	0.00	0.00	0.00
12,300.00	92.39	269.07	6,753.68	-231.90	-3,590.62	3,593.91	0.00	0.00	0.00
12,400.00	92.39	269.07	6,749.51	-233.53	-3,690.51	3,693.82	0.00	0.00	0.00
12,500.00	92.39	269.07	6,745.33	-235.16	-3,790.41	3,793.73	0.00	0.00	0.00
12,600.00	92.39	269.07	6,741.16	-236.79	-3,890.31	3,893.64	0.00	0.00	0.00
12,700.00	92.39	269.07	6,736.99	-238.42	-3,990.21	3,993.56	0.00	0.00	0.00
12,800.00	92.39	269.07	6,732.81	-240.05	-4,090.11	4,093.47	0.00	0.00	0.00
12,900.00	92.39	269.07	6,728.64	-241.68	-4,190.01	4,193.38	0.00	0.00	0.00
13,000.00	92.39	269.07	6,724.46	-243.31	-4,289.91	4,293.30	0.00	0.00	0.00
13,100.00	92.39	269.07	6,720.29	-244.93	-4,389.81	4,393.21	0.00	0.00	0.00
13,200.00	92.39	269.07	6,716.11	-246.56	-4,489.71	4,493.12	0.00	0.00	0.00
13,300.00	92.39	269.07	6,711.94	-248.19	-4,589.61	4,593.03	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SBJ 13-9HZ
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 13-9HZ	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)
13,400.00	92.39	269.07	6,707.76	-249.82	-4,689.51	4,692.95	0.00	0.00	0.00
13,500.00	92.39	269.07	6,703.59	-251.45	-4,789.41	4,792.86	0.00	0.00	0.00
13,600.00	92.39	269.07	6,699.41	-253.08	-4,889.31	4,892.77	0.00	0.00	0.00
13,700.00	92.39	269.07	6,695.24	-254.71	-4,989.21	4,992.69	0.00	0.00	0.00
13,800.00	92.39	269.07	6,691.06	-256.34	-5,089.11	5,092.60	0.00	0.00	0.00
13,900.00	92.39	269.07	6,686.89	-257.97	-5,189.01	5,192.51	0.00	0.00	0.00
14,000.00	92.39	269.07	6,682.71	-259.60	-5,288.91	5,292.42	0.00	0.00	0.00
14,100.00	92.39	269.07	6,678.54	-261.23	-5,388.81	5,392.34	0.00	0.00	0.00
14,200.00	92.39	269.07	6,674.36	-262.86	-5,488.71	5,492.25	0.00	0.00	0.00
14,300.00	92.39	269.07	6,670.19	-264.48	-5,588.61	5,592.16	0.00	0.00	0.00
14,400.00	92.39	269.07	6,666.02	-266.11	-5,688.51	5,692.08	0.00	0.00	0.00
14,500.00	92.39	269.07	6,661.84	-267.74	-5,788.40	5,791.99	0.00	0.00	0.00
14,600.00	92.39	269.07	6,657.67	-269.37	-5,888.30	5,891.90	0.00	0.00	0.00
14,700.00	92.39	269.07	6,653.49	-271.00	-5,988.20	5,991.81	0.00	0.00	0.00
14,800.00	92.39	269.07	6,649.32	-272.63	-6,088.10	6,091.73	0.00	0.00	0.00
14,900.00	92.39	269.07	6,645.14	-274.26	-6,188.00	6,191.64	0.00	0.00	0.00
15,000.00	92.39	269.07	6,640.97	-275.89	-6,287.90	6,291.55	0.00	0.00	0.00
15,100.00	92.39	269.07	6,636.79	-277.52	-6,387.80	6,391.47	0.00	0.00	0.00
15,200.00	92.39	269.07	6,632.62	-279.15	-6,487.70	6,491.38	0.00	0.00	0.00
15,300.00	92.39	269.07	6,628.44	-280.78	-6,587.60	6,591.29	0.00	0.00	0.00
15,400.00	92.39	269.07	6,624.27	-282.40	-6,687.50	6,691.20	0.00	0.00	0.00
15,500.00	92.39	269.07	6,620.09	-284.03	-6,787.40	6,791.12	0.00	0.00	0.00
15,600.00	92.39	269.07	6,615.92	-285.66	-6,887.30	6,891.03	0.00	0.00	0.00
15,700.00	92.39	269.07	6,611.74	-287.29	-6,987.20	6,990.94	0.00	0.00	0.00
15,800.00	92.39	269.07	6,607.57	-288.92	-7,087.10	7,090.85	0.00	0.00	0.00
15,900.00	92.39	269.07	6,603.39	-290.55	-7,187.00	7,190.77	0.00	0.00	0.00
16,000.00	92.39	269.07	6,599.22	-292.18	-7,286.90	7,290.68	0.00	0.00	0.00
16,100.00	92.39	269.07	6,595.05	-293.81	-7,386.80	7,390.59	0.00	0.00	0.00
16,200.00	92.39	269.07	6,590.87	-295.44	-7,486.70	7,490.51	0.00	0.00	0.00
16,300.00	92.39	269.07	6,586.70	-297.07	-7,586.60	7,590.42	0.00	0.00	0.00
16,400.00	92.39	269.07	6,582.52	-298.70	-7,686.50	7,690.33	0.00	0.00	0.00
16,500.00	92.39	269.07	6,578.35	-300.32	-7,786.40	7,790.24	0.00	0.00	0.00
16,600.00	92.39	269.07	6,574.17	-301.95	-7,886.30	7,890.16	0.00	0.00	0.00
16,700.00	92.39	269.07	6,570.00	-303.58	-7,986.19	7,990.07	0.00	0.00	0.00
16,800.00	92.39	269.07	6,565.82	-305.21	-8,086.09	8,089.98	0.00	0.00	0.00
16,900.00	92.39	269.07	6,561.65	-306.84	-8,185.99	8,189.90	0.00	0.00	0.00
17,000.00	92.39	269.07	6,557.47	-308.47	-8,285.89	8,289.81	0.00	0.00	0.00
17,100.00	92.39	269.07	6,553.30	-310.10	-8,385.79	8,389.72	0.00	0.00	0.00
17,200.00	92.39	269.07	6,549.12	-311.73	-8,485.69	8,489.63	0.00	0.00	0.00
17,300.00	92.39	269.07	6,544.95	-313.36	-8,585.59	8,589.55	0.00	0.00	0.00
17,400.00	92.39	269.07	6,540.77	-314.99	-8,685.49	8,689.46	0.00	0.00	0.00
17,500.00	92.39	269.07	6,536.60	-316.62	-8,785.39	8,789.37	0.00	0.00	0.00
17,600.00	92.39	269.07	6,532.42	-318.25	-8,885.29	8,889.29	0.00	0.00	0.00
17,700.00	92.39	269.07	6,528.25	-319.87	-8,985.19	8,989.20	0.00	0.00	0.00
17,800.00	92.39	269.07	6,524.08	-321.50	-9,085.09	9,089.11	0.00	0.00	0.00
17,900.00	92.39	269.07	6,519.90	-323.13	-9,184.99	9,189.02	0.00	0.00	0.00
18,000.00	92.39	269.07	6,515.73	-324.76	-9,284.89	9,288.94	0.00	0.00	0.00
18,100.00	92.39	269.07	6,511.55	-326.39	-9,384.79	9,388.85	0.00	0.00	0.00
18,200.00	92.39	269.07	6,507.38	-328.02	-9,484.69	9,488.76	0.00	0.00	0.00
18,300.00	92.39	269.07	6,503.20	-329.65	-9,584.59	9,588.68	0.00	0.00	0.00
18,400.00	92.39	269.07	6,499.03	-331.28	-9,684.49	9,688.59	0.00	0.00	0.00
18,500.00	92.39	269.07	6,494.85	-332.91	-9,784.39	9,788.50	0.00	0.00	0.00
18,600.00	92.39	269.07	6,490.68	-334.54	-9,884.29	9,888.41	0.00	0.00	0.00
18,700.00	92.39	269.07	6,486.50	-336.17	-9,984.19	9,988.33	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SBJ 13-9HZ
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 13-9HZ	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)
18,800.00	92.39	269.07	6,482.33	-337.79	-10,084.09	10,088.24	0.00	0.00	0.00
18,900.00	92.39	269.07	6,478.15	-339.42	-10,183.98	10,188.15	0.00	0.00	0.00
19,000.00	92.39	269.07	6,473.98	-341.05	-10,283.88	10,288.07	0.00	0.00	0.00
19,100.00	92.39	269.07	6,469.80	-342.68	-10,383.78	10,387.98	0.00	0.00	0.00
19,200.00	92.39	269.07	6,465.63	-344.31	-10,483.68	10,487.89	0.00	0.00	0.00
19,300.00	92.39	269.07	6,461.45	-345.94	-10,583.58	10,587.80	0.00	0.00	0.00
19,400.00	92.39	269.07	6,457.28	-347.57	-10,683.48	10,687.72	0.00	0.00	0.00
19,500.00	92.39	269.07	6,453.11	-349.20	-10,783.38	10,787.63	0.00	0.00	0.00
19,600.00	92.39	269.07	6,448.93	-350.83	-10,883.28	10,887.54	0.00	0.00	0.00
19,700.00	92.39	269.07	6,444.76	-352.46	-10,983.18	10,987.45	0.00	0.00	0.00
19,800.00	92.39	269.07	6,440.58	-354.09	-11,083.08	11,087.37	0.00	0.00	0.00
19,900.00	92.39	269.07	6,436.41	-355.72	-11,182.98	11,187.28	0.00	0.00	0.00
20,000.00	92.39	269.07	6,432.23	-357.34	-11,282.88	11,287.19	0.00	0.00	0.00
20,100.00	92.39	269.07	6,428.06	-358.97	-11,382.78	11,387.11	0.00	0.00	0.00
20,200.00	92.39	269.07	6,423.88	-360.60	-11,482.68	11,487.02	0.00	0.00	0.00
20,245.09	92.39	269.07	6,422.00	-361.34	-11,527.72	11,532.07	0.00	0.00	0.00
TD at 20245.09									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SBJ 13-9HZ BHL - hit/miss target - Shape - Point	0.00	0.00	6,422.00	-361.34	-11,527.72	14,641,020.00	1,640,926.00	40.313844	-104.998173
SBJ 13-9HZ LP - plan hits target center - Point	0.00	0.00	6,947.00	-156.46	1,035.38	14,641,231.00	1,653,489.00	40.314414	-104.953106

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,523.45	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
20,245.09	6,422.00	5 1/2" Csg	5-1/2	7-7/8	

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well SBJ 13-9HZ
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 13-9HZ	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				
3,542.70	3,411.00	Parkman				
4,010.80	3,854.00	Sussex				
6,968.75	6,656.00	Sharon Springs				
7,029.06	6,703.00	Niobrara				
7,101.49	6,755.00	Nio B				
7,184.52	6,808.00	Nio C				
7,609.51	6,947.00	Fort Hayes				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			Comment
		+N/-S (usft)	+E/-W (usft)		
250.00	250.00	0.00	0.00		Start Build 1.50
1,506.42	1,483.88	-13.70	204.32		HOLD TANGENT
6,279.73	6,001.29	-116.84	1,742.79		KOP DLS 8
7,669.35	6,947.00	-156.46	1,035.38		LANDING POINT
20,245.09	6,422.00	-361.34	-11,527.72		TD at 20245.09