

Project: RIO BLANCO COUNTY, COLORADO (NAD-83)  
 Site: MOHEE FED  
 Well: MOHEE FED 0297-17-20-14 NH  
 Wellbore: PILOT  
 Design: PERMIT  
 Lat: 40.1436589  
 Long: -108.2975610  
 GL:  
 RKB = 27.5' @ 6018.90usft (CYCLONE 39)

WELL DETAILS: MOHEE FED 0297-17-20-14 NH

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1307514.42	2218033.96	40.1436589	-108.2975610

PROJECT DETAILS: RIO BLANCO COUNTY, COLORADO (NAD-83)

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Northern Zone  
 System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2906.00	2922.03	Mesaverde
6010.00	6064.00	Cameo Coals
6184.00	6240.13	Rollins
7331.00	7401.17	Mancos -Buck Tongue
7369.00	7439.63	Loyd
7456.00	7527.69	Loyd Shale
7566.00	7639.04	Lower Loyd
7723.00	7797.96	Lower Loyd Shale
7908.00	7985.22	Castlegate
8184.00	8264.60	Mancos- Bluegate Tongue
8734.00	8821.33	Mancos B
9362.00	9457.01	Lower Mancos
10435.00	10537.50	Niobrara
10762.00	10864.50	Tow Creek
10959.00	11061.50	top hz target
10973.00	11075.50	HZ target
10987.00	11089.50	base hz target
11121.00	11223.50	Wolf Mountain
11495.00	11597.50	Rangely
11727.00	11829.50	Carlile
12008.00	12110.50	Frontier
12092.00	12194.50	Mowry
12403.00	12505.50	Dakota
12475.00	12577.50	Morrison
12629.00	12731.50	TD Pilot

SECTION DETAILS

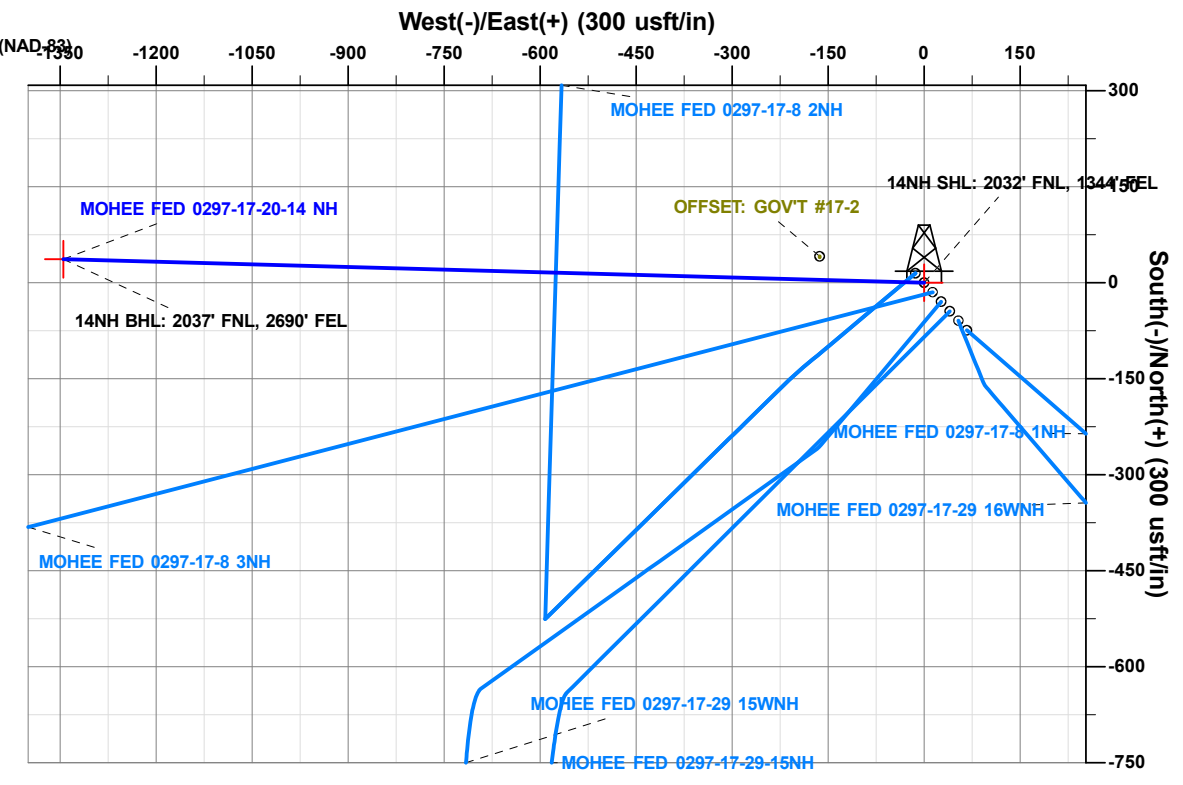
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	
3	1794.49	8.92	271.57	1792.09	1.27	-46.15	1.50	271.57	46.17	
4	9877.90	8.92	271.57	9777.80	35.62	-1298.69	0.00	0.00	1299.18	
5	10472.39	0.00	360.00	10369.89	36.89	-1344.84	1.50	180.00	1345.35	
6	12731.50	0.00	360.00	12629.00	36.89	-1344.84	0.00	360.00	1345.35	

CASING DETAILS

TVD	MD	Size
3500.00	3523.29	10-3/4
10169.98	10272.39	7-5/8

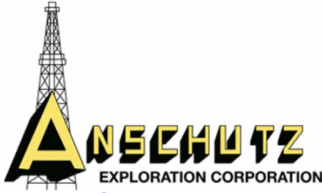
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
14NH SHL: 2032' FNL, 1344' FEL	0.00	0.01	0.00	1307514.43	2218033.96	40.1436590	-108.2975610
14NH BHL: 2037' FNL, 2690' FEL	12629.00	36.89	-1344.84	1307551.31	2216689.12	40.1436436	-108.3023733



Vertical Section at 271.57° (2000 usft/in)

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# **ANSCHUTZ EXPLORATION COMPANY**

**RIO BLANCO COUNTY, COLORADO (NAD-83)  
MOHEE FED  
MOHEE FED 0297-17-20-14 NH**

**PILOT**

**Plan: PERMIT**

## **Standard Planning Report**

**01 May, 2025**



**PROTOTYPE  
WELL PLANNING**  
WELL PLANNED. WELL EXECUTED.



# PROTOTYPE Planning Report



<b>Database:</b>	PROTO SANDBOX 1	<b>Local Co-ordinate Reference:</b>	Well MOHEE FED 0297-17-20-14 NH
<b>Company:</b>	ANSCHUTZ EXPLORATION COMPANY	<b>TVD Reference:</b>	RKB = 27.5' @ 6018.90usft (CYCLONE 39)
<b>Project:</b>	RIO BLANCO COUNTY, COLORADO (NAD-83)	<b>MD Reference:</b>	RKB = 27.5' @ 6018.90usft (CYCLONE 39)
<b>Site:</b>	MOHEE FED	<b>North Reference:</b>	Grid
<b>Well:</b>	MOHEE FED 0297-17-20-14 NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PILOT		
<b>Design:</b>	PERMIT		

<b>Project</b>	RIO BLANCO COUNTY, COLORADO (NAD-83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Well</b>	MOHEE FED 0297-17-20-14 NH					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,307,514.42 usft	<b>Latitude:</b>	40.1436590
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,218,033.96 usft	<b>Longitude:</b>	-108.2975610
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	5,991.40 usft
<b>Grid Convergence:</b>		-1.81 °				

<b>Design</b>	PERMIT			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	271.57

<b>Plan Survey Tool Program</b>	<b>Date</b>	4/25/2025		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	12,731.50	PERMIT (PILOT)	MWD+IGRF OWSG MWD + IGRF or WM

<b>Plan Sections</b>											
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		
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00		
1,794.49	8.92	271.57	1,792.09	1.27	-46.15	1.50	1.50	0.00	271.57		
9,877.90	8.92	271.57	9,777.80	35.62	-1,298.69	0.00	0.00	0.00	0.00		
10,472.39	0.00	360.00	10,369.89	36.89	-1,344.84	1.50	-1.50	0.00	180.00		
12,731.50	0.00	360.00	12,629.00	36.89	-1,344.84	0.00	0.00	0.00	360.00		



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<b>Project:</b>	RIO BLANCO COUNTY, COLORADO (NAD-83)	<b>MD Reference:</b>	RKB = 27.5' @ 6018.90usft (CYCLONE 39)
<b>Site:</b>	MOHEE FED	<b>North Reference:</b>	Grid
<b>Well:</b>	MOHEE FED 0297-17-20-14 NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PILOT		
<b>Design:</b>	PERMIT		

## 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	
<b>14NH SHL: 2032' FNL, 1344' FEL</b>										
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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	1.50	271.57	1,299.99	0.04	-1.31	1.31	1.50	1.50	0.00	
1,400.00	3.00	271.57	1,399.91	0.14	-5.23	5.23	1.50	1.50	0.00	
1,500.00	4.50	271.57	1,499.69	0.32	-11.77	11.77	1.50	1.50	0.00	
1,600.00	6.00	271.57	1,599.27	0.57	-20.92	20.92	1.50	1.50	0.00	
1,700.00	7.50	271.57	1,698.57	0.90	-32.67	32.68	1.50	1.50	0.00	
1,794.49	8.92	271.57	1,792.09	1.27	-46.15	46.17	1.50	1.50	0.00	
1,800.00	8.92	271.57	1,797.54	1.29	-47.01	47.02	0.00	0.00	0.00	
1,900.00	8.92	271.57	1,896.33	1.71	-62.50	62.52	0.00	0.00	0.00	
2,000.00	8.92	271.57	1,995.12	2.14	-78.00	78.03	0.00	0.00	0.00	
2,100.00	8.92	271.57	2,093.91	2.56	-93.49	93.53	0.00	0.00	0.00	
2,200.00	8.92	271.57	2,192.70	2.99	-108.99	109.03	0.00	0.00	0.00	
2,300.00	8.92	271.57	2,291.49	3.41	-124.48	124.53	0.00	0.00	0.00	
2,400.00	8.92	271.57	2,390.28	3.84	-139.98	140.03	0.00	0.00	0.00	
2,500.00	8.92	271.57	2,489.08	4.26	-155.47	155.53	0.00	0.00	0.00	
2,600.00	8.92	271.57	2,587.87	4.69	-170.97	171.03	0.00	0.00	0.00	
2,700.00	8.92	271.57	2,686.66	5.11	-186.46	186.53	0.00	0.00	0.00	
2,800.00	8.92	271.57	2,785.45	5.54	-201.96	202.03	0.00	0.00	0.00	
2,900.00	8.92	271.57	2,884.24	5.96	-217.45	217.53	0.00	0.00	0.00	
2,922.03	8.92	271.57	2,906.00	6.06	-220.87	220.95	0.00	0.00	0.00	
<b>Mesaverde</b>										
3,000.00	8.92	271.57	2,983.03	6.39	-232.95	233.03	0.00	0.00	0.00	
3,100.00	8.92	271.57	3,081.82	6.81	-248.44	248.54	0.00	0.00	0.00	
3,200.00	8.92	271.57	3,180.61	7.24	-263.94	264.04	0.00	0.00	0.00	
3,300.00	8.92	271.57	3,279.41	7.67	-279.43	279.54	0.00	0.00	0.00	
3,400.00	8.92	271.57	3,378.20	8.09	-294.93	295.04	0.00	0.00	0.00	
3,500.00	8.92	271.57	3,476.99	8.52	-310.42	310.54	0.00	0.00	0.00	
3,523.29	8.92	271.57	3,500.00	8.61	-314.03	314.15	0.00	0.00	0.00	
<b>10-3/4" Surface Casing</b>										
3,600.00	8.92	271.57	3,575.78	8.94	-325.92	326.04	0.00	0.00	0.00	
3,700.00	8.92	271.57	3,674.57	9.37	-341.41	341.54	0.00	0.00	0.00	
3,800.00	8.92	271.57	3,773.36	9.79	-356.91	357.04	0.00	0.00	0.00	
3,900.00	8.92	271.57	3,872.15	10.22	-372.40	372.54	0.00	0.00	0.00	
4,000.00	8.92	271.57	3,970.94	10.64	-387.90	388.04	0.00	0.00	0.00	
4,100.00	8.92	271.57	4,069.74	11.07	-403.39	403.55	0.00	0.00	0.00	
4,200.00	8.92	271.57	4,168.53	11.49	-418.89	419.05	0.00	0.00	0.00	
4,300.00	8.92	271.57	4,267.32	11.92	-434.38	434.55	0.00	0.00	0.00	
4,400.00	8.92	271.57	4,366.11	12.34	-449.88	450.05	0.00	0.00	0.00	
4,500.00	8.92	271.57	4,464.90	12.77	-465.37	465.55	0.00	0.00	0.00	
4,600.00	8.92	271.57	4,563.69	13.19	-480.87	481.05	0.00	0.00	0.00	



# PROTOTYPE Planning Report



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<b>Project:</b>	RIO BLANCO COUNTY, COLORADO (NAD-83)	<b>MD Reference:</b>	RKB = 27.5' @ 6018.90usft (CYCLONE 39)
<b>Site:</b>	MOHEE FED	<b>North Reference:</b>	Grid
<b>Well:</b>	MOHEE FED 0297-17-20-14 NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PILOT		
<b>Design:</b>	PERMIT		

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)	
4,700.00	8.92	271.57	4,662.48	13.62	-496.36	496.55	0.00	0.00	0.00	
4,800.00	8.92	271.57	4,761.28	14.04	-511.86	512.05	0.00	0.00	0.00	
4,900.00	8.92	271.57	4,860.07	14.47	-527.36	527.55	0.00	0.00	0.00	
5,000.00	8.92	271.57	4,958.86	14.89	-542.85	543.05	0.00	0.00	0.00	
5,100.00	8.92	271.57	5,057.65	15.32	-558.35	558.56	0.00	0.00	0.00	
5,200.00	8.92	271.57	5,156.44	15.74	-573.84	574.06	0.00	0.00	0.00	
5,300.00	8.92	271.57	5,255.23	16.17	-589.34	589.56	0.00	0.00	0.00	
5,400.00	8.92	271.57	5,354.02	16.59	-604.83	605.06	0.00	0.00	0.00	
5,500.00	8.92	271.57	5,452.81	17.02	-620.33	620.56	0.00	0.00	0.00	
5,600.00	8.92	271.57	5,551.61	17.44	-635.82	636.06	0.00	0.00	0.00	
5,700.00	8.92	271.57	5,650.40	17.87	-651.32	651.56	0.00	0.00	0.00	
5,800.00	8.92	271.57	5,749.19	18.29	-666.81	667.06	0.00	0.00	0.00	
5,900.00	8.92	271.57	5,847.98	18.72	-682.31	682.56	0.00	0.00	0.00	
6,000.00	8.92	271.57	5,946.77	19.14	-697.80	698.06	0.00	0.00	0.00	
6,064.00	8.92	271.57	6,010.00	19.41	-707.72	707.99	0.00	0.00	0.00	
<b>Cameo Coals</b>										
6,100.00	8.92	271.57	6,045.56	19.57	-713.30	713.57	0.00	0.00	0.00	
6,200.00	8.92	271.57	6,144.35	19.99	-728.79	729.07	0.00	0.00	0.00	
6,240.13	8.92	271.57	6,184.00	20.16	-735.01	735.29	0.00	0.00	0.00	
<b>Rollins</b>										
6,300.00	8.92	271.57	6,243.14	20.42	-744.29	744.57	0.00	0.00	0.00	
6,400.00	8.92	271.57	6,341.94	20.84	-759.78	760.07	0.00	0.00	0.00	
6,500.00	8.92	271.57	6,440.73	21.27	-775.28	775.57	0.00	0.00	0.00	
6,600.00	8.92	271.57	6,539.52	21.69	-790.77	791.07	0.00	0.00	0.00	
6,700.00	8.92	271.57	6,638.31	22.12	-806.27	806.57	0.00	0.00	0.00	
6,800.00	8.92	271.57	6,737.10	22.54	-821.76	822.07	0.00	0.00	0.00	
6,900.00	8.92	271.57	6,835.89	22.97	-837.26	837.57	0.00	0.00	0.00	
7,000.00	8.92	271.57	6,934.68	23.39	-852.75	853.07	0.00	0.00	0.00	
7,100.00	8.92	271.57	7,033.47	23.82	-868.25	868.58	0.00	0.00	0.00	
7,200.00	8.92	271.57	7,132.27	24.24	-883.74	884.08	0.00	0.00	0.00	
7,300.00	8.92	271.57	7,231.06	24.67	-899.24	899.58	0.00	0.00	0.00	
7,400.00	8.92	271.57	7,329.85	25.09	-914.73	915.08	0.00	0.00	0.00	
7,401.17	8.92	271.57	7,331.00	25.10	-914.91	915.26	0.00	0.00	0.00	
<b>Mancos -Buck Tongue</b>										
7,439.63	8.92	271.57	7,369.00	25.26	-920.87	921.22	0.00	0.00	0.00	
<b>Loyd</b>										
7,500.00	8.92	271.57	7,428.64	25.52	-930.23	930.58	0.00	0.00	0.00	
7,527.69	8.92	271.57	7,456.00	25.63	-934.52	934.87	0.00	0.00	0.00	
<b>Loyd Shale</b>										
7,600.00	8.92	271.57	7,527.43	25.94	-945.72	946.08	0.00	0.00	0.00	
7,639.04	8.92	271.57	7,566.00	26.11	-951.77	952.13	0.00	0.00	0.00	
<b>Lower Loyd</b>										
7,700.00	8.92	271.57	7,626.22	26.37	-961.22	961.58	0.00	0.00	0.00	
7,797.96	8.92	271.57	7,723.00	26.78	-976.40	976.77	0.00	0.00	0.00	
<b>Lower Loyd Shale</b>										
7,800.00	8.92	271.57	7,725.01	26.79	-976.71	977.08	0.00	0.00	0.00	
7,900.00	8.92	271.57	7,823.81	27.22	-992.21	992.58	0.00	0.00	0.00	
7,985.23	8.92	271.57	7,908.00	27.58	-1,005.42	1,005.79	0.00	0.00	0.00	
<b>Castlegate</b>										
8,000.00	8.92	271.57	7,922.60	27.64	-1,007.71	1,008.08	0.00	0.00	0.00	
8,100.00	8.92	271.57	8,021.39	28.07	-1,023.20	1,023.59	0.00	0.00	0.00	
8,200.00	8.92	271.57	8,120.18	28.49	-1,038.70	1,039.09	0.00	0.00	0.00	



# PROTOTYPE Planning Report



<b>Database:</b>	PROTO SANDBOX 1	<b>Local Co-ordinate Reference:</b>	Well MOHEE FED 0297-17-20-14 NH
<b>Company:</b>	ANSCHUTZ EXPLORATION COMPANY	<b>TVD Reference:</b>	RKB = 27.5' @ 6018.90usft (CYCLONE 39)
<b>Project:</b>	RIO BLANCO COUNTY, COLORADO (NAD-83)	<b>MD Reference:</b>	RKB = 27.5' @ 6018.90usft (CYCLONE 39)
<b>Site:</b>	MOHEE FED	<b>North Reference:</b>	Grid
<b>Well:</b>	MOHEE FED 0297-17-20-14 NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PILOT		
<b>Design:</b>	PERMIT		

## 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)	
8,264.60	8.92	271.57	8,184.00	28.77	-1,048.71	1,049.10	0.00	0.00	0.00	
<b>Mancos- Bluegate Tongue</b>										
8,300.00	8.92	271.57	8,218.97	28.92	-1,054.19	1,054.59	0.00	0.00	0.00	
8,400.00	8.92	271.57	8,317.76	29.34	-1,069.69	1,070.09	0.00	0.00	0.00	
8,500.00	8.92	271.57	8,416.55	29.77	-1,085.18	1,085.59	0.00	0.00	0.00	
8,600.00	8.92	271.57	8,515.34	30.19	-1,100.68	1,101.09	0.00	0.00	0.00	
8,700.00	8.92	271.57	8,614.14	30.62	-1,116.17	1,116.59	0.00	0.00	0.00	
8,800.00	8.92	271.57	8,712.93	31.04	-1,131.67	1,132.09	0.00	0.00	0.00	
8,821.33	8.92	271.57	8,734.00	31.13	-1,134.97	1,135.40	0.00	0.00	0.00	
<b>Mancos B</b>										
8,900.00	8.92	271.57	8,811.72	31.47	-1,147.16	1,147.59	0.00	0.00	0.00	
9,000.00	8.92	271.57	8,910.51	31.89	-1,162.66	1,163.09	0.00	0.00	0.00	
9,100.00	8.92	271.57	9,009.30	32.32	-1,178.15	1,178.59	0.00	0.00	0.00	
9,200.00	8.92	271.57	9,108.09	32.74	-1,193.65	1,194.10	0.00	0.00	0.00	
9,300.00	8.92	271.57	9,206.88	33.17	-1,209.14	1,209.60	0.00	0.00	0.00	
9,400.00	8.92	271.57	9,305.67	33.59	-1,224.64	1,225.10	0.00	0.00	0.00	
9,457.01	8.92	271.57	9,362.00	33.84	-1,233.47	1,233.94	0.00	0.00	0.00	
<b>Lower Mancos</b>										
9,500.00	8.92	271.57	9,404.47	34.02	-1,240.13	1,240.60	0.00	0.00	0.00	
9,600.00	8.92	271.57	9,503.26	34.44	-1,255.63	1,256.10	0.00	0.00	0.00	
9,700.00	8.92	271.57	9,602.05	34.87	-1,271.12	1,271.60	0.00	0.00	0.00	
9,800.00	8.92	271.57	9,700.84	35.29	-1,286.62	1,287.10	0.00	0.00	0.00	
9,877.90	8.92	271.57	9,777.80	35.62	-1,298.69	1,299.18	0.00	0.00	0.00	
9,900.00	8.59	271.57	9,799.64	35.72	-1,302.05	1,302.54	1.50	-1.50	0.00	
10,000.00	7.09	271.57	9,898.70	36.09	-1,315.68	1,316.17	1.50	-1.50	0.00	
10,100.00	5.59	271.57	9,998.09	36.39	-1,326.71	1,327.21	1.50	-1.50	0.00	
10,200.00	4.09	271.57	10,097.73	36.62	-1,335.14	1,335.64	1.50	-1.50	0.00	
10,272.39	3.00	271.57	10,169.98	36.75	-1,339.61	1,340.11	1.50	-1.50	0.00	
<b>7-5/8" Intermediate Casing</b>										
10,300.00	2.59	271.57	10,197.56	36.78	-1,340.95	1,341.46	1.50	-1.50	0.00	
10,400.00	1.09	271.57	10,297.51	36.87	-1,344.15	1,344.66	1.50	-1.50	0.00	
10,472.39	0.00	360.00	10,369.89	36.89	-1,344.84	1,345.35	1.50	-1.50	0.00	
10,500.00	0.00	0.00	10,397.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
10,537.50	0.00	0.00	10,435.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
<b>Niobrara</b>										
10,600.00	0.00	0.00	10,497.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,597.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,697.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
10,864.50	0.00	0.00	10,762.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
<b>Tow Creek</b>										
10,900.00	0.00	0.00	10,797.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
11,000.00	0.00	0.00	10,897.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
11,061.50	0.00	0.00	10,959.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
<b>top hz target</b>										
11,075.50	0.00	0.00	10,973.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
<b>HZ target - 14NH LP/ FTP: 2631' FSL, 2590' FWL - 14NH BHL/ LTP: 200 FSL, 2590' FWL</b>										
11,089.50	0.00	0.00	10,987.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
<b>base hz target</b>										
11,100.00	0.00	0.00	10,997.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
11,200.00	0.00	0.00	11,097.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
11,223.50	0.00	0.00	11,121.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00	
<b>Wolf Mountain</b>										



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<b>Project:</b>	RIO BLANCO COUNTY, COLORADO (NAD-83)	<b>MD Reference:</b>	RKB = 27.5' @ 6018.90usft (CYCLONE 39)
<b>Site:</b>	MOHEE FED	<b>North Reference:</b>	Grid
<b>Well:</b>	MOHEE FED 0297-17-20-14 NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PILOT		
<b>Design:</b>	PERMIT		

## 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)
11,300.00	0.00	0.00	11,197.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
11,400.00	0.00	0.00	11,297.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
11,500.00	0.00	0.00	11,397.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
11,597.50	0.00	0.00	11,495.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
<b>Rangely</b>									
11,600.00	0.00	0.00	11,497.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
11,700.00	0.00	0.00	11,597.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
11,800.00	0.00	0.00	11,697.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
11,829.50	0.00	0.00	11,727.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
<b>Carlile</b>									
11,900.00	0.00	0.00	11,797.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,000.00	0.00	0.00	11,897.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,100.00	0.00	0.00	11,997.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,110.50	0.00	0.00	12,008.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
<b>Frontier</b>									
12,194.50	0.00	0.00	12,092.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
<b>Mowry</b>									
12,200.00	0.00	0.00	12,097.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,300.00	0.00	0.00	12,197.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,400.00	0.00	0.00	12,297.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,500.00	0.00	0.00	12,397.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,505.50	0.00	0.00	12,403.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
<b>Dakota</b>									
12,577.50	0.00	0.00	12,475.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
<b>Morrison</b>									
12,600.00	0.00	0.00	12,497.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,700.00	0.00	0.00	12,597.50	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
12,731.50	0.00	0.00	12,629.00	36.89	-1,344.84	1,345.35	0.00	0.00	0.00
<b>TD Pilot - 14NH BHL: 2037' FNL, 2690' FEL</b>									

## Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
14NH SHL: 2032' FNL - hit/miss target - Shape	0.00	0.00	0.00	0.01	0.00	1,307,514.43	2,218,033.96	40.1436590	-108.2975610
- plan misses target center by 0.01usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
14NH BHL: 2037' FNL - plan hits target center - Point	0.00	360.00	12,629.00	36.89	-1,344.84	1,307,551.31	2,216,689.12	40.1436436	-108.3023733

## Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
3,523.29	3,500.00	10-3/4" Surface Casing	10-3/4	13-1/2
10,272.39	10,169.98	7-5/8" Intermediate Casing	7-5/8	9-7/8



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<b>Project:</b>	RIO BLANCO COUNTY, COLORADO (NAD-83)	<b>MD Reference:</b>	RKB = 27.5' @ 6018.90usft (CYCLONE 39)
<b>Site:</b>	MOHEE FED	<b>North Reference:</b>	Grid
<b>Well:</b>	MOHEE FED 0297-17-20-14 NH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PILOT		
<b>Design:</b>	PERMIT		

**Formations**

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,922.03	2,906.00	Mesaverde			
6,064.00	6,010.00	Cameo Coals			
6,240.13	6,184.00	Rollins			
7,401.17	7,331.00	Mancos -Buck Tongue			
7,439.63	7,369.00	Loyd			
7,527.69	7,456.00	Loyd Shale			
7,639.04	7,566.00	Lower Loyd			
7,797.96	7,723.00	Lower Loyd Shale			
7,985.23	7,908.00	Castlegate			
8,264.60	8,184.00	Mancos- Bluegate Tongue			
8,821.33	8,734.00	Mancos B			
9,457.01	9,362.00	Lower Mancos			
10,537.50	10,435.00	Niobrara			
10,864.50	10,762.00	Tow Creek			
11,061.50	10,959.00	top hz target			
11,075.50	10,973.00	HZ target			
11,089.50	10,987.00	base hz target			
11,223.50	11,121.00	Wolf Mountain			
11,597.50	11,495.00	Rangely			
11,829.50	11,727.00	Carlile			
12,110.50	12,008.00	Frontier			
12,194.50	12,092.00	Mowry			
12,505.50	12,403.00	Dakota			
12,577.50	12,475.00	Morrison			
12,731.50	12,629.00	TD Pilot			