US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N
2N-66W-23 HENDU 1-23HZ PAD
HENDU 23-10HZ

Plan A

Plan: Permit Rev-1

SHL Lat/Long: 40.130221/-104.736592
Survey Program: MWD+IFR+MSA

Standard Planning Report

09 November, 2017

Project: WELD-NAD83-UTMFT13N
Site: 2N-66W-23 HENDU 1-23HZ PAD
Well: HENDU 23-10HZ
Wellbore: Plan A
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Size
1500.00	1513.69	9-5/8
7549.00	8046.13	5-1/2

WELL DETAILS: HENDU 23-10HZ
GL = 5100'
RKB = 17' @ 5117.00usft (Drilling Rig)

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	450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	0.00	
3	1516.67	16.00	339.00	1502.86	138.14	-53.03	1.50	339.00	-53.53	
4	4266.67	16.00	339.00	4146.33	845.80	-324.67	0.00	0.00	-327.77	
5	5066.67	0.00	0.00	4935.97	949.40	-364.44	2.00	180.00	-367.92	
6	7043.09	0.00	0.00	6912.39	949.40	-364.44	0.00	0.00	-367.92	
7	8046.13	90.27	90.21	7549.00	947.04	275.21	9.00	90.21	271.74	
8	13073.96	90.27	90.21	7525.00	928.47	5302.96	0.00	0.00	5299.52	HENDU 23-10HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HENDU 23-10HZ_SHL	0.00	0.00	0.00	40.130221	-104.736592
HENDU 23-10HZ_BHL	7525.00	928.47	5302.96	40.132769	-104.717620

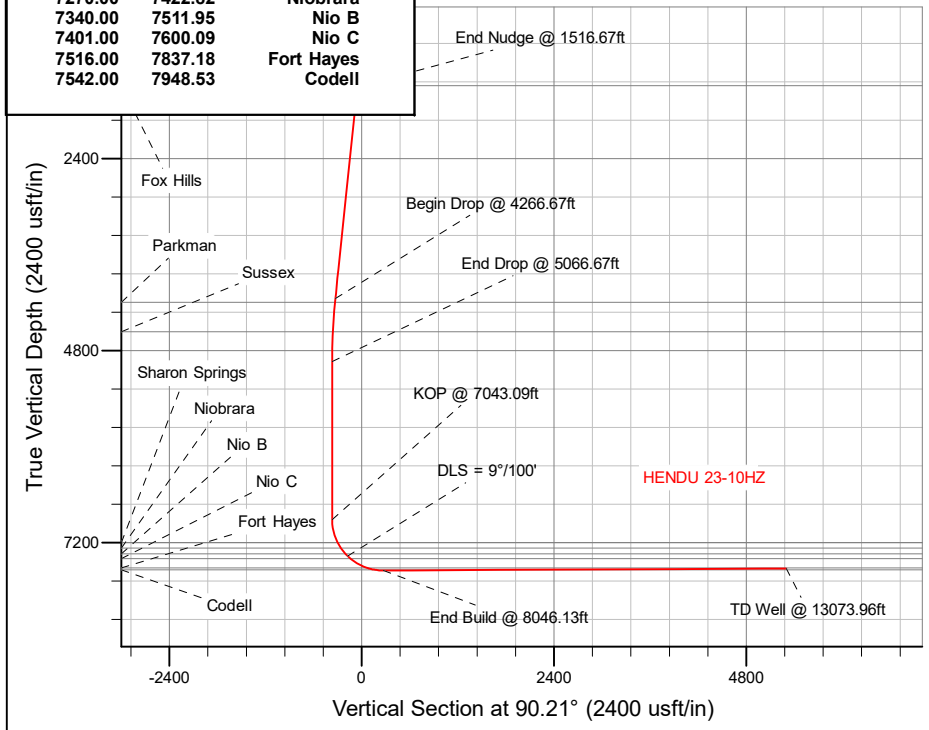
SHL
293' FNL
479' FEL

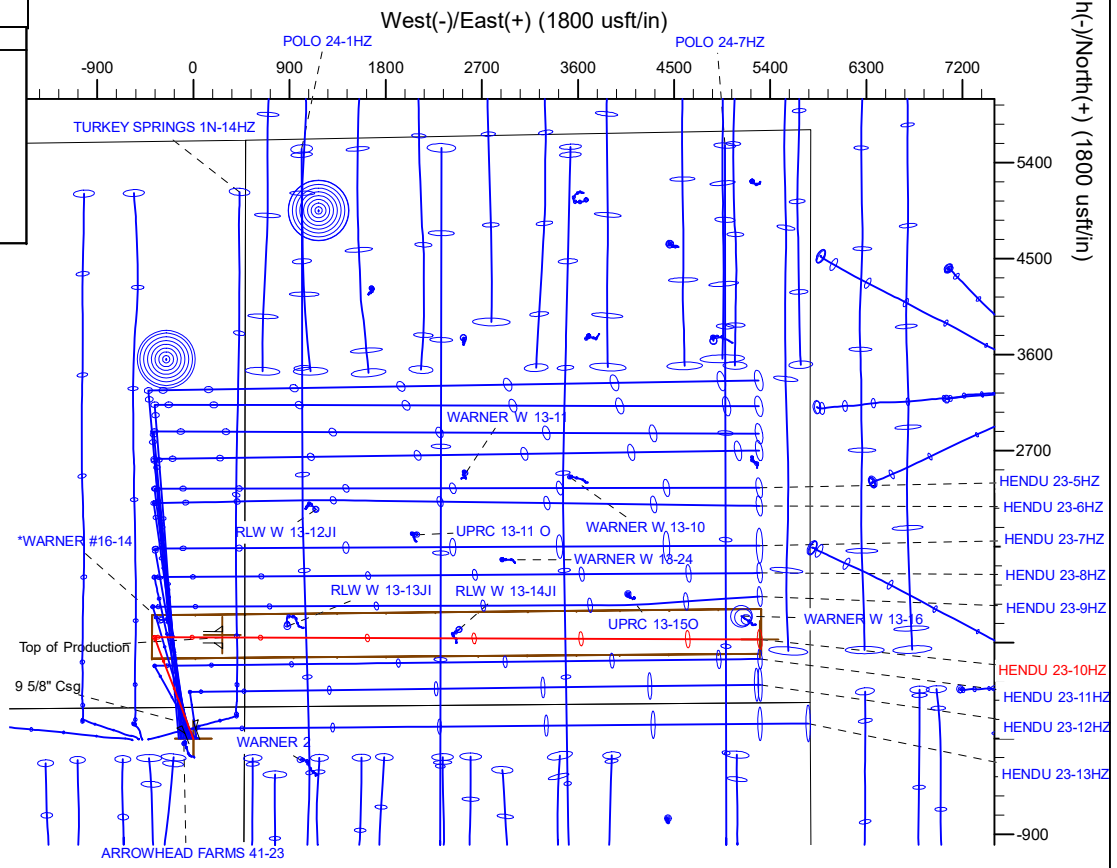
HEEL
650' FSL
209' FEL

TOE
599' FSL
473' FEL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1487.00	1500.18	Fox Hills
4197.00	4319.25	Parkman
4565.00	4694.65	Sussex
7200.00	7341.51	Sharon Springs
7270.00	7422.82	Niobrara
7340.00	7511.95	Nio B
7401.00	7600.09	Nio C
7516.00	7837.18	Fort Hayes
7542.00	7948.53	Codell





Plan: Permit Rev-1 (HENDU 23-10HZ/Plan A)

Created By: Date: 11/10/2017
Reviewed: _____ Date: _____

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-66W-23 HENDU 1-23HZ PAD				
Site Position:		**Northing:**	14,574,259.96 usft	**Latitude:**	40.130217
From:	Lat/Long	**Easting:**	1,713,909.05 usft	**Longitude:**	-104.737075
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.17 °

Well	HENDU 23-10HZ					
Well Position	**+N/-S**	1.46 usft	**Northing:**	14,574,261.82 usft	**Latitude:**	40.130221
	+E/-W	135.01 usft	**Easting:**	1,714,044.05 usft	**Longitude:**	-104.736592
Position Uncertainty		3.28 usft	**Wellhead Elevation:**		**Ground Level:**	5,100.00 usft

Wellbore	Plan A				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/2/2017	7.97	66.61	52,318.76641509

Design	Permit Rev-1				
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	90.21	

Plan Survey Tool Program **Date** 11/9/2017

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	1,500.00	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I	
				Fixed:v2:crustal field declinatio	
2	1,500.00	13,073.96	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I	
				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	
450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,516.67	16.00	339.00	1,502.86	138.14	-53.03	1.50	1.50	0.00	339.00	
4,266.67	16.00	339.00	4,146.33	845.80	-324.67	0.00	0.00	0.00	0.00	
5,066.67	0.00	0.00	4,935.97	949.40	-364.44	2.00	-2.00	0.00	180.00	
7,043.09	0.00	0.00	6,912.39	949.40	-364.44	0.00	0.00	0.00	0.00	
8,046.13	90.27	90.21	7,549.00	947.04	275.21	9.00	9.00	8.99	90.21	
13,073.96	90.27	90.21	7,525.00	928.47	5,302.96	0.00	0.00	0.00	0.00	HENDU 23-10HZ_BH

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
450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 450.00ft									
500.00	0.75	339.00	500.00	0.31	-0.12	-0.12	1.50	1.50	0.00
600.00	2.25	339.00	599.96	2.75	-1.06	-1.07	1.50	1.50	0.00
700.00	3.75	339.00	699.82	7.64	-2.93	-2.96	1.50	1.50	0.00
800.00	5.25	339.00	799.51	14.96	-5.74	-5.80	1.50	1.50	0.00
900.00	6.75	339.00	898.96	24.72	-9.49	-9.58	1.50	1.50	0.00
1,000.00	8.25	339.00	998.10	36.90	-14.17	-14.30	1.50	1.50	0.00
1,100.00	9.75	339.00	1,096.87	51.51	-19.77	-19.96	1.50	1.50	0.00
1,200.00	11.25	339.00	1,195.19	68.52	-26.30	-26.55	1.50	1.50	0.00
1,300.00	12.75	339.00	1,293.00	87.93	-33.75	-34.08	1.50	1.50	0.00
1,400.00	14.25	339.00	1,390.24	109.72	-42.12	-42.52	1.50	1.50	0.00
1,500.00	15.75	339.00	1,486.83	133.89	-51.39	-51.88	1.50	1.50	0.00
1,500.18	15.75	339.00	1,487.00	133.93	-51.41	-51.90	0.00	0.00	0.00
Fox Hills									
1,513.69	15.96	339.00	1,500.00	137.38	-52.73	-53.24	1.52	1.52	0.00
9 5/8" Csg									
1,516.67	16.00	339.00	1,502.86	138.14	-53.03	-53.53	1.50	1.50	0.00
End Nudge @ 1516.67ft									
1,600.00	16.00	339.00	1,582.96	159.59	-61.26	-61.84	0.00	0.00	0.00
1,700.00	16.00	339.00	1,679.09	185.32	-71.14	-71.82	0.00	0.00	0.00
1,800.00	16.00	339.00	1,775.21	211.05	-81.02	-81.79	0.00	0.00	0.00
1,900.00	16.00	339.00	1,871.34	236.78	-90.89	-91.76	0.00	0.00	0.00
2,000.00	16.00	339.00	1,967.47	262.52	-100.77	-101.73	0.00	0.00	0.00
2,100.00	16.00	339.00	2,063.59	288.25	-110.65	-111.70	0.00	0.00	0.00
2,200.00	16.00	339.00	2,159.72	313.98	-120.53	-121.68	0.00	0.00	0.00
2,300.00	16.00	339.00	2,255.85	339.72	-130.40	-131.65	0.00	0.00	0.00
2,400.00	16.00	339.00	2,351.97	365.45	-140.28	-141.62	0.00	0.00	0.00
2,500.00	16.00	339.00	2,448.10	391.18	-150.16	-151.59	0.00	0.00	0.00
2,600.00	16.00	339.00	2,544.22	416.92	-160.04	-161.57	0.00	0.00	0.00
2,700.00	16.00	339.00	2,640.35	442.65	-169.92	-171.54	0.00	0.00	0.00
2,800.00	16.00	339.00	2,736.48	468.38	-179.79	-181.51	0.00	0.00	0.00
2,900.00	16.00	339.00	2,832.60	494.11	-189.67	-191.48	0.00	0.00	0.00
3,000.00	16.00	339.00	2,928.73	519.85	-199.55	-201.45	0.00	0.00	0.00
3,100.00	16.00	339.00	3,024.85	545.58	-209.43	-211.43	0.00	0.00	0.00
3,200.00	16.00	339.00	3,120.98	571.31	-219.31	-221.40	0.00	0.00	0.00
3,300.00	16.00	339.00	3,217.11	597.05	-229.18	-231.37	0.00	0.00	0.00
3,400.00	16.00	339.00	3,313.23	622.78	-239.06	-241.34	0.00	0.00	0.00
3,500.00	16.00	339.00	3,409.36	648.51	-248.94	-251.32	0.00	0.00	0.00
3,600.00	16.00	339.00	3,505.49	674.24	-258.82	-261.29	0.00	0.00	0.00
3,700.00	16.00	339.00	3,601.61	699.98	-268.70	-271.26	0.00	0.00	0.00
3,800.00	16.00	339.00	3,697.74	725.71	-278.57	-281.23	0.00	0.00	0.00
3,900.00	16.00	339.00	3,793.86	751.44	-288.45	-291.20	0.00	0.00	0.00
4,000.00	16.00	339.00	3,889.99	777.18	-298.33	-301.18	0.00	0.00	0.00
4,100.00	16.00	339.00	3,986.12	802.91	-308.21	-311.15	0.00	0.00	0.00
4,200.00	16.00	339.00	4,082.24	828.64	-318.09	-321.12	0.00	0.00	0.00
4,266.67	16.00	339.00	4,146.33	845.80	-324.67	-327.77	0.00	0.00	0.00
Begin Drop @ 4266.67ft									
4,300.00	15.33	339.00	4,178.42	854.20	-327.90	-331.03	2.00	-2.00	0.00
4,319.25	14.95	339.00	4,197.00	858.89	-329.70	-332.84	2.00	-2.00	0.00
Parkman									
4,400.00	13.33	339.00	4,275.30	877.31	-336.77	-339.98	2.00	-2.00	0.00
4,500.00	11.33	339.00	4,372.99	897.25	-344.42	-347.71	2.00	-2.00	0.00
4,600.00	9.33	339.00	4,471.36	914.00	-350.85	-354.20	2.00	-2.00	0.00
4,694.65	7.44	339.00	4,565.00	926.89	-355.80	-359.19	2.00	-2.00	0.00
Sussex									
4,700.00	7.33	339.00	4,570.30	927.53	-356.04	-359.44	2.00	-2.00	0.00
4,800.00	5.33	339.00	4,669.69	937.83	-360.00	-363.43	2.00	-2.00	0.00
4,900.00	3.33	339.00	4,769.40	944.88	-362.71	-366.17	2.00	-2.00	0.00
5,000.00	1.33	339.00	4,869.31	948.68	-364.16	-367.64	2.00	-2.00	0.00
5,066.67	0.00	0.00	4,935.97	949.40	-364.44	-367.92	2.00	-2.00	0.00

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)
End Drop @ 5066.67ft									
5,100.00	0.00	0.00	4,969.30	949.40	-364.44	-367.92	0.00	0.00	0.00
5,200.00	0.00	0.00	5,069.30	949.40	-364.44	-367.92	0.00	0.00	0.00
5,300.00	0.00	0.00	5,169.30	949.40	-364.44	-367.92	0.00	0.00	0.00
5,400.00	0.00	0.00	5,269.30	949.40	-364.44	-367.92	0.00	0.00	0.00
5,500.00	0.00	0.00	5,369.30	949.40	-364.44	-367.92	0.00	0.00	0.00
5,600.00	0.00	0.00	5,469.30	949.40	-364.44	-367.92	0.00	0.00	0.00
5,700.00	0.00	0.00	5,569.30	949.40	-364.44	-367.92	0.00	0.00	0.00
5,800.00	0.00	0.00	5,669.30	949.40	-364.44	-367.92	0.00	0.00	0.00
5,900.00	0.00	0.00	5,769.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,000.00	0.00	0.00	5,869.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,100.00	0.00	0.00	5,969.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,200.00	0.00	0.00	6,069.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,300.00	0.00	0.00	6,169.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,400.00	0.00	0.00	6,269.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,500.00	0.00	0.00	6,369.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,600.00	0.00	0.00	6,469.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,700.00	0.00	0.00	6,569.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,800.00	0.00	0.00	6,669.30	949.40	-364.44	-367.92	0.00	0.00	0.00
6,900.00	0.00	0.00	6,769.30	949.40	-364.44	-367.92	0.00	0.00	0.00
7,000.00	0.00	0.00	6,869.30	949.40	-364.44	-367.92	0.00	0.00	0.00
7,043.09	0.00	0.00	6,912.39	949.40	-364.44	-367.92	0.00	0.00	0.00
KOP @ 7043.09ft									
7,100.00	5.12	90.21	6,969.23	949.39	-361.90	-365.38	9.00	9.00	0.00
7,200.00	14.12	90.21	7,067.72	949.33	-345.20	-348.68	9.00	9.00	0.00
7,300.00	23.12	90.21	7,162.39	949.22	-313.30	-316.78	9.00	9.00	0.00
7,341.51	26.86	90.21	7,200.00	949.15	-295.77	-299.25	9.00	9.00	0.00
Sharon Springs									
7,400.00	32.12	90.21	7,250.90	949.04	-266.99	-270.46	9.00	9.00	0.00
7,422.82	34.18	90.21	7,270.00	949.00	-254.51	-257.99	9.00	9.00	0.00
Niobrara									
7,500.00	41.12	90.21	7,331.07	948.82	-207.39	-210.87	9.00	9.00	0.00
7,511.95	42.20	90.21	7,340.00	948.79	-199.45	-202.93	9.00	9.00	0.00
Nio B									
7,550.00	45.62	90.21	7,367.41	948.70	-173.07	-176.54	9.00	9.00	0.00
DLS = 9°/100'									
7,600.00	50.12	90.21	7,400.94	948.56	-135.99	-139.47	9.00	9.00	0.00
7,600.09	50.12	90.21	7,401.00	948.56	-135.92	-139.40	0.00	0.00	0.00
Nio C									
7,700.00	59.12	90.21	7,458.78	948.26	-54.54	-58.02	9.01	9.01	0.00
7,800.00	68.12	90.21	7,503.16	947.93	34.95	31.48	9.00	9.00	0.00
7,837.18	71.47	90.21	7,516.00	947.80	69.84	66.37	9.00	9.00	0.00
Fort Hayes									
7,900.00	77.12	90.21	7,533.00	947.58	130.29	126.82	9.00	9.00	0.00
7,948.53	81.49	90.21	7,542.00	947.40	177.96	174.49	9.00	9.00	0.00
Codell									
8,000.00	86.12	90.21	7,547.55	947.21	229.12	225.65	9.00	9.00	0.00
8,046.13	90.27	90.21	7,549.00	947.04	275.22	271.74	9.00	9.00	0.00
End Build @ 8046.13ft - Top of Production									
8,100.00	90.27	90.21	7,548.75	946.84	329.09	325.61	0.00	0.00	0.00
8,200.00	90.27	90.21	7,548.27	946.47	429.08	425.61	0.00	0.00	0.00
8,300.00	90.27	90.21	7,547.79	946.10	529.08	525.61	0.00	0.00	0.00
8,400.00	90.27	90.21	7,547.31	945.73	629.08	625.61	0.00	0.00	0.00
8,500.00	90.27	90.21	7,546.84	945.36	729.08	725.61	0.00	0.00	0.00
8,600.00	90.27	90.21	7,546.36	945.00	829.08	825.61	0.00	0.00	0.00
8,700.00	90.27	90.21	7,545.88	944.63	929.07	925.61	0.00	0.00	0.00
8,800.00	90.27	90.21	7,545.40	944.26	1,029.07	1,025.61	0.00	0.00	0.00
8,900.00	90.27	90.21	7,544.93	943.89	1,129.07	1,125.60	0.00	0.00	0.00
9,000.00	90.27	90.21	7,544.45	943.52	1,229.07	1,225.60	0.00	0.00	0.00
9,100.00	90.27	90.21	7,543.97	943.15	1,329.07	1,325.60	0.00	0.00	0.00
9,200.00	90.27	90.21	7,543.49	942.78	1,429.07	1,425.60	0.00	0.00	0.00
9,300.00	90.27	90.21	7,543.02	942.41	1,529.06	1,525.60	0.00	0.00	0.00
9,400.00	90.27	90.21	7,542.54	942.04	1,629.06	1,625.60	0.00	0.00	0.00
9,500.00	90.27	90.21	7,542.06	941.67	1,729.06	1,725.60	0.00	0.00	0.00
9,600.00	90.27	90.21	7,541.58	941.30	1,829.06	1,825.60	0.00	0.00	0.00

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)
9,700.00	90.27	90.21	7,541.11	940.93	1,929.06	1,925.59	0.00	0.00	0.00
9,800.00	90.27	90.21	7,540.63	940.56	2,029.05	2,025.59	0.00	0.00	0.00
9,900.00	90.27	90.21	7,540.15	940.19	2,129.05	2,125.59	0.00	0.00	0.00
10,000.00	90.27	90.21	7,539.67	939.82	2,229.05	2,225.59	0.00	0.00	0.00
10,100.00	90.27	90.21	7,539.20	939.45	2,329.05	2,325.59	0.00	0.00	0.00
10,200.00	90.27	90.21	7,538.72	939.09	2,429.05	2,425.59	0.00	0.00	0.00
10,300.00	90.27	90.21	7,538.24	938.72	2,529.05	2,525.59	0.00	0.00	0.00
10,400.00	90.27	90.21	7,537.77	938.35	2,629.04	2,625.59	0.00	0.00	0.00
10,500.00	90.27	90.21	7,537.29	937.98	2,729.04	2,725.59	0.00	0.00	0.00
10,600.00	90.27	90.21	7,536.81	937.61	2,829.04	2,825.58	0.00	0.00	0.00
10,700.00	90.27	90.21	7,536.33	937.24	2,929.04	2,925.58	0.00	0.00	0.00
10,800.00	90.27	90.21	7,535.86	936.87	3,029.04	3,025.58	0.00	0.00	0.00
10,900.00	90.27	90.21	7,535.38	936.50	3,129.03	3,125.58	0.00	0.00	0.00
11,000.00	90.27	90.21	7,534.90	936.13	3,229.03	3,225.58	0.00	0.00	0.00
11,100.00	90.27	90.21	7,534.42	935.76	3,329.03	3,325.58	0.00	0.00	0.00
11,200.00	90.27	90.21	7,533.95	935.39	3,429.03	3,425.58	0.00	0.00	0.00
11,300.00	90.27	90.21	7,533.47	935.02	3,529.03	3,525.58	0.00	0.00	0.00
11,400.00	90.27	90.21	7,532.99	934.65	3,629.03	3,625.58	0.00	0.00	0.00
11,500.00	90.27	90.21	7,532.51	934.28	3,729.02	3,725.57	0.00	0.00	0.00
11,600.00	90.27	90.21	7,532.04	933.91	3,829.02	3,825.57	0.00	0.00	0.00
11,700.00	90.27	90.21	7,531.56	933.54	3,929.02	3,925.57	0.00	0.00	0.00
11,800.00	90.27	90.21	7,531.08	933.18	4,029.02	4,025.57	0.00	0.00	0.00
11,900.00	90.27	90.21	7,530.60	932.81	4,129.02	4,125.57	0.00	0.00	0.00
12,000.00	90.27	90.21	7,530.13	932.44	4,229.01	4,225.57	0.00	0.00	0.00
12,100.00	90.27	90.21	7,529.65	932.07	4,329.01	4,325.57	0.00	0.00	0.00
12,200.00	90.27	90.21	7,529.17	931.70	4,429.01	4,425.57	0.00	0.00	0.00
12,300.00	90.27	90.21	7,528.69	931.33	4,529.01	4,525.57	0.00	0.00	0.00
12,400.00	90.27	90.21	7,528.22	930.96	4,629.01	4,625.56	0.00	0.00	0.00
12,500.00	90.27	90.21	7,527.74	930.59	4,729.01	4,725.56	0.00	0.00	0.00
12,600.00	90.27	90.21	7,527.26	930.22	4,829.00	4,825.56	0.00	0.00	0.00
12,700.00	90.27	90.21	7,526.79	929.85	4,929.00	4,925.56	0.00	0.00	0.00
12,800.00	90.27	90.21	7,526.31	929.48	5,029.00	5,025.56	0.00	0.00	0.00
12,900.00	90.27	90.21	7,525.83	929.11	5,129.00	5,125.56	0.00	0.00	0.00
13,000.00	90.27	90.21	7,525.35	928.74	5,229.00	5,225.56	0.00	0.00	0.00
13,073.96	90.27	90.21	7,525.00	928.47	5,302.96	5,299.52	0.00	0.00	0.00

TD Well @ 13073.96ft

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,513.69	1,500.00	9 5/8" Csg	9-5/8	13-1/2
8,046.13	7,549.00	Top of Production	5-1/2	7-7/8

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,500.18	1,487.00	Fox Hills			
4,319.25	4,197.00	Parkman			
4,694.65	4,565.00	Sussex			
7,341.51	7,200.00	Sharon Springs			
7,422.82	7,270.00	Niobrara			
7,511.95	7,340.00	Nio B			
7,600.09	7,401.00	Nio C			
7,837.18	7,516.00	Fort Hayes			
7,948.53	7,542.00	Codell			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
450.00	450.00	0.00	0.00	Begin Nudge @ 450.00ft
1,516.67	1,502.86	138.14	-53.03	End Nudge @ 1516.67ft
4,266.67	4,146.33	845.80	-324.67	Begin Drop @ 4266.67ft
5,066.67	4,935.97	949.40	-364.44	End Drop @ 5066.67ft
7,043.09	6,912.39	949.40	-364.44	KOP @ 7043.09ft
7,550.00	7,367.41	948.70	-173.07	DLS = 9°/100'
8,046.13	7,549.00	947.04	275.22	End Build @ 8046.13ft
13,073.96	7,525.00	928.47	5,302.96	TD Well @ 13073.96ft