

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

2N-65W-35 LABRISA 11-35HZ PAD

LABRISA 35-4HZ

Plan A

Plan: Permit Rev-1

Standard Planning Report

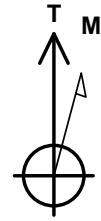
07 September, 2023

Project: WELD-NAD83-UTMFT13N
Site: 2N-65W-35 LABRISA 11-35HZ PAD
Well: LABRISA 35-4HZ
Wellbore: Plan A
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Name	Size
2017.00	2057.57	9 5/8"	9-5/8
7249.00	17615.90	5.5" CSG	5-1/2



Azimuths to True North
Magnetic North: 7.63°

Magnetic Field
Strength: 51680.6nT
Dip Angle: 66.38°
Date: 8/18/2022
Model: IGRF2020

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	260.00	0.00	0.00	260.00	0.00	0.00	0.00	0.00	0.00	
3	1297.33	15.56	187.94	1284.63	-138.65	-19.34	1.50	187.94	138.76	
4	4097.33	15.56	187.94	3982.01	-882.54	-123.09	0.00	0.00	883.22	
5	4875.33	0.00	0.00	4750.48	-986.53	-137.59	2.00	180.00	987.28	
6	6648.65	0.00	0.00	6523.80	-986.53	-137.59	0.00	0.00	987.28	
7	7772.99	89.95	180.32	7240.00	-1702.06	-141.57	8.00	180.32	1702.83	
8	17615.90	89.95	180.32	7249.00	-11544.81	-196.21	0.00	0.00	11545.73	LABRISA 35-4HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	Northing	Easting	Latitude	Longitude
LABRISA 35-4HZ_SHL	0.00	14560192.52	1742978.62	40.091304	-104.633285
LABRISA 35-4HZ_LP	7240.00	14558489.89	1742844.07	40.086630	-104.633792
LABRISA 35-4HZ_BHL	7249.00	14548647.00	1742830.00	40.059600	-104.633987

WELL DETAILS: LABRISA 35-4HZ

GL = 4969'

RKB = 17' @ 4986.00usft (RIG)

FORMATION TOP DETAILS

Plan: Permit Rev-1 (LABRISA 35-4HZ/Plan A)

Date: 9/7/2023

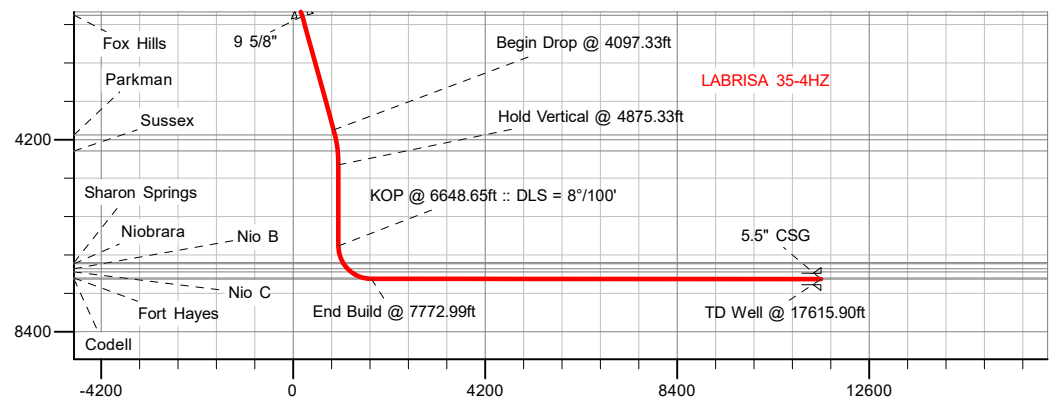
TVDPATH	MDPATH	Formation
1479.00	1499.10	Fox Hills
4094.00	4212.97	Parkman
4444.00	4568.26	Sussex
6887.00	7029.56	Sharon Springs
6912.00	7058.93	Niobrara
7021.00	7198.22	Nio B
7091.00	7303.27	Nio C
7225.00	7626.83	Fort Hayes
7248.00	16522.82	Codell

SHL
1387' FSL
1989' FWL

LP
315' FNL
1839' FWL

BHL
315' FSL
1819' FWL

True Vertical Depth (4200 usft/in)



Vertical Section at 180.32° (4200 usft/in)

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well LABRISA 35-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4986.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4986.00usft (RIG)
Site:	2N-65W-35 LABRISA 11-35HZ PAD	North Reference:	True
Well:	LABRISA 35-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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-35 LABRISA 11-35HZ PAD			
Site Position:		Northing:	14,560,192.78 usft	Latitude:	40.091305
From:	Map	Easting:	1,742,933.63 usft	Longitude:	-104.633447
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	

Well		LABRISA 35-4HZ				
Well Position	+N/-S	0.00 usft	Northing:	14,560,192.52 usft	Latitude:	40.091304
	+E/-W	0.00 usft	Easting:	1,742,978.62 usft	Longitude:	-104.633286
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,969.00 usft
Grid Convergence:		0.24 °				

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	8/7/2023	7.53	66.34	51,578.27126054

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	180.32	

Plan Survey Tool Program		Date	9/7/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	2,017.00	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio	
2	2,017.00	17,615.90	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio	

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Well:	LABRISA 35-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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	
260.00	0.00	0.00	260.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,297.33	15.56	187.94	1,284.63	-138.65	-19.34	1.50	1.50	0.00	187.94	
4,097.33	15.56	187.94	3,982.01	-882.54	-123.09	0.00	0.00	0.00	0.00	
4,875.33	0.00	0.00	4,750.48	-986.53	-137.59	2.00	-2.00	0.00	180.00	
6,648.65	0.00	0.00	6,523.80	-986.53	-137.59	0.00	0.00	0.00	0.00	
7,772.99	89.95	180.32	7,240.00	-1,702.06	-141.57	8.00	8.00	-15.98	180.32	
17,615.90	89.95	180.32	7,249.00	-11,544.81	-196.21	0.00	0.00	0.00	0.00	LABRISA 35-4HZ_BH

Planning Report

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Site:	2N-65W-35 LABRISA 11-35HZ PAD	North Reference:	True
Well:	LABRISA 35-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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
260.00	0.00	0.00	260.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 260.00ft									
300.00	0.60	187.94	300.00	-0.21	-0.03	0.21	1.50	1.50	0.00
400.00	2.10	187.94	399.97	-2.54	-0.35	2.54	1.50	1.50	0.00
500.00	3.60	187.94	499.84	-7.47	-1.04	7.47	1.50	1.50	0.00
600.00	5.10	187.94	599.55	-14.98	-2.09	14.99	1.50	1.50	0.00
700.00	6.60	187.94	699.03	-25.07	-3.50	25.09	1.50	1.50	0.00
800.00	8.10	187.94	798.20	-37.74	-5.26	37.77	1.50	1.50	0.00
900.00	9.60	187.94	897.01	-52.98	-7.39	53.02	1.50	1.50	0.00
1,000.00	11.10	187.94	995.38	-70.77	-9.87	70.83	1.50	1.50	0.00
1,100.00	12.60	187.94	1,093.25	-91.11	-12.71	91.18	1.50	1.50	0.00
1,200.00	14.10	187.94	1,190.54	-113.98	-15.90	114.06	1.50	1.50	0.00
1,297.33	15.56	187.94	1,284.63	-138.65	-19.34	138.76	1.50	1.50	0.00
Hold Tangent @ 1297.33ft									
1,300.00	15.56	187.94	1,287.20	-139.36	-19.44	139.47	0.00	0.00	0.00
1,400.00	15.56	187.94	1,383.53	-165.93	-23.14	166.05	0.00	0.00	0.00
1,499.10	15.56	187.94	1,479.00	-192.25	-26.81	192.40	0.00	0.00	0.00
Fox Hills									
1,500.00	15.56	187.94	1,479.87	-192.49	-26.85	192.64	0.00	0.00	0.00
1,600.00	15.56	187.94	1,576.20	-219.06	-30.55	219.23	0.00	0.00	0.00
1,700.00	15.56	187.94	1,672.54	-245.63	-34.26	245.82	0.00	0.00	0.00
1,800.00	15.56	187.94	1,768.87	-272.20	-37.96	272.40	0.00	0.00	0.00
1,900.00	15.56	187.94	1,865.21	-298.76	-41.67	298.99	0.00	0.00	0.00
2,000.00	15.56	187.94	1,961.54	-325.33	-45.38	325.58	0.00	0.00	0.00
2,057.57	15.56	187.94	2,017.00	-340.63	-47.51	340.89	0.00	0.00	0.00
9 5/8"									
2,100.00	15.56	187.94	2,057.88	-351.90	-49.08	352.17	0.00	0.00	0.00
2,200.00	15.56	187.94	2,154.21	-378.47	-52.79	378.76	0.00	0.00	0.00
2,300.00	15.56	187.94	2,250.55	-405.03	-56.49	405.34	0.00	0.00	0.00
2,400.00	15.56	187.94	2,346.88	-431.60	-60.20	431.93	0.00	0.00	0.00
2,500.00	15.56	187.94	2,443.22	-458.17	-63.90	458.52	0.00	0.00	0.00
2,600.00	15.56	187.94	2,539.55	-484.74	-67.61	485.11	0.00	0.00	0.00
2,700.00	15.56	187.94	2,635.89	-511.30	-71.31	511.70	0.00	0.00	0.00
2,800.00	15.56	187.94	2,732.22	-537.87	-75.02	538.28	0.00	0.00	0.00
2,900.00	15.56	187.94	2,828.56	-564.44	-78.72	564.87	0.00	0.00	0.00
3,000.00	15.56	187.94	2,924.89	-591.01	-82.43	591.46	0.00	0.00	0.00
3,100.00	15.56	187.94	3,021.23	-617.58	-86.14	618.05	0.00	0.00	0.00
3,200.00	15.56	187.94	3,117.56	-644.14	-89.84	644.63	0.00	0.00	0.00
3,300.00	15.56	187.94	3,213.90	-670.71	-93.55	671.22	0.00	0.00	0.00
3,400.00	15.56	187.94	3,310.23	-697.28	-97.25	697.81	0.00	0.00	0.00
3,500.00	15.56	187.94	3,406.57	-723.85	-100.96	724.40	0.00	0.00	0.00
3,600.00	15.56	187.94	3,502.90	-750.41	-104.66	750.99	0.00	0.00	0.00
3,700.00	15.56	187.94	3,599.24	-776.98	-108.37	777.57	0.00	0.00	0.00
3,800.00	15.56	187.94	3,695.57	-803.55	-112.07	804.16	0.00	0.00	0.00
3,900.00	15.56	187.94	3,791.91	-830.12	-115.78	830.75	0.00	0.00	0.00
4,000.00	15.56	187.94	3,888.24	-856.68	-119.48	857.34	0.00	0.00	0.00
4,097.33	15.56	187.94	3,982.01	-882.54	-123.09	883.22	0.00	0.00	0.00
Begin Drop @ 4097.33ft									
4,100.00	15.51	187.94	3,984.58	-883.25	-123.19	883.92	2.00	-2.00	0.00
4,200.00	13.51	187.94	4,081.39	-908.06	-126.65	908.75	2.00	-2.00	0.00
4,212.97	13.25	187.94	4,094.00	-911.03	-127.06	911.72	2.00	-2.00	0.00

Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4986.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4986.00usft (RIG)
Site:	2N-65W-35 LABRISA 11-35HZ PAD	North Reference:	True
Well:	LABRISA 35-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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)
Parkman									
4,300.00	11.51	187.94	4,179.01	-929.50	-129.64	930.21	2.00	-2.00	0.00
4,400.00	9.51	187.94	4,277.33	-947.56	-132.16	948.29	2.00	-2.00	0.00
4,500.00	7.51	187.94	4,376.22	-962.21	-134.20	962.95	2.00	-2.00	0.00
4,568.26	6.14	187.94	4,444.00	-970.25	-135.32	970.99	2.00	-2.00	0.00
Sussex									
4,600.00	5.51	187.94	4,475.57	-973.44	-135.77	974.18	2.00	-2.00	0.00
4,700.00	3.51	187.94	4,575.26	-981.22	-136.85	981.97	2.00	-2.00	0.00
4,800.00	1.51	187.94	4,675.16	-985.55	-137.46	986.30	2.00	-2.00	0.00
4,875.33	0.00	0.00	4,750.48	-986.53	-137.59	987.28	2.00	-2.00	0.00
Hold Vertical @ 4875.33ft									
4,900.00	0.00	0.00	4,775.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,000.00	0.00	0.00	4,875.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,100.00	0.00	0.00	4,975.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,200.00	0.00	0.00	5,075.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,300.00	0.00	0.00	5,175.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,400.00	0.00	0.00	5,275.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,500.00	0.00	0.00	5,375.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,600.00	0.00	0.00	5,475.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,700.00	0.00	0.00	5,575.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,800.00	0.00	0.00	5,675.15	-986.53	-137.59	987.28	0.00	0.00	0.00
5,900.00	0.00	0.00	5,775.15	-986.53	-137.59	987.28	0.00	0.00	0.00
6,000.00	0.00	0.00	5,875.15	-986.53	-137.59	987.28	0.00	0.00	0.00
6,100.00	0.00	0.00	5,975.15	-986.53	-137.59	987.28	0.00	0.00	0.00
6,200.00	0.00	0.00	6,075.15	-986.53	-137.59	987.28	0.00	0.00	0.00
6,300.00	0.00	0.00	6,175.15	-986.53	-137.59	987.28	0.00	0.00	0.00
6,400.00	0.00	0.00	6,275.15	-986.53	-137.59	987.28	0.00	0.00	0.00
6,500.00	0.00	0.00	6,375.15	-986.53	-137.59	987.28	0.00	0.00	0.00
6,600.00	0.00	0.00	6,475.15	-986.53	-137.59	987.28	0.00	0.00	0.00
6,648.65	0.00	0.00	6,523.80	-986.53	-137.59	987.28	0.00	0.00	0.00
KOP @ 6648.65ft :: DLS = 8°/100'									
6,650.00	0.11	180.32	6,525.15	-986.53	-137.59	987.28	8.00	8.00	0.00
6,700.00	4.11	180.32	6,575.10	-988.37	-137.60	989.12	8.00	8.00	0.00
6,750.00	8.11	180.32	6,624.81	-993.69	-137.63	994.44	8.00	8.00	0.00
6,800.00	12.11	180.32	6,674.02	-1,002.46	-137.68	1,003.22	8.00	8.00	0.00
6,850.00	16.11	180.32	6,722.51	-1,014.65	-137.75	1,015.40	8.00	8.00	0.00
6,900.00	20.11	180.32	6,770.02	-1,030.18	-137.84	1,030.94	8.00	8.00	0.00
6,950.00	24.11	180.32	6,816.33	-1,049.00	-137.94	1,049.75	8.00	8.00	0.00
7,000.00	28.11	180.32	6,861.22	-1,071.00	-138.06	1,071.75	8.00	8.00	0.00
7,029.56	30.47	180.32	6,887.00	-1,085.46	-138.14	1,086.21	8.00	8.00	0.00
Sharon Springs									
7,050.00	32.11	180.32	6,904.47	-1,096.07	-138.20	1,096.83	8.00	8.00	0.00
7,058.93	32.82	180.32	6,912.00	-1,100.86	-138.23	1,101.62	8.00	8.00	0.00
Niobrara									
7,100.00	36.11	180.32	6,945.86	-1,124.10	-138.36	1,124.86	8.00	8.00	0.00
7,150.00	40.11	180.32	6,985.19	-1,154.95	-138.53	1,155.71	8.00	8.00	0.00
7,198.22	43.97	180.32	7,021.00	-1,187.24	-138.71	1,187.99	8.00	8.00	0.00
Nio B									
7,200.00	44.11	180.32	7,022.28	-1,188.47	-138.72	1,189.23	8.00	8.00	0.00
7,250.00	48.11	180.32	7,056.94	-1,224.50	-138.92	1,225.26	8.00	8.00	0.00
7,300.00	52.11	180.32	7,089.00	-1,262.85	-139.13	1,263.61	8.00	8.00	0.00
7,303.27	52.37	180.32	7,091.00	-1,265.44	-139.14	1,266.19	8.00	8.00	0.00
Nio C									

Planning Report

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Well:	LABRISA 35-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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)	
7,350.00	56.11	180.32	7,118.31	-1,303.35	-139.35	1,304.11	8.00	8.00	0.00	
7,400.00	60.11	180.32	7,144.72	-1,345.79	-139.59	1,346.55	8.00	8.00	0.00	
7,450.00	64.11	180.32	7,168.10	-1,389.97	-139.83	1,390.73	8.00	8.00	0.00	
7,500.00	68.11	180.32	7,188.35	-1,435.68	-140.09	1,436.44	8.00	8.00	0.00	
7,550.00	72.11	180.32	7,205.36	-1,482.69	-140.35	1,483.45	8.00	8.00	0.00	
7,600.00	76.11	180.32	7,219.05	-1,530.77	-140.62	1,531.53	8.00	8.00	0.00	
7,626.83	78.25	180.32	7,225.00	-1,556.93	-140.76	1,557.69	8.00	8.00	0.00	
Fort Hayes										
7,650.00	80.11	180.32	7,229.35	-1,579.68	-140.89	1,580.44	8.00	8.00	0.00	
7,700.00	84.11	180.32	7,236.21	-1,629.20	-141.16	1,629.96	8.00	8.00	0.00	
7,750.00	88.11	180.32	7,239.61	-1,679.07	-141.44	1,679.83	8.00	8.00	0.00	
7,772.99	89.95	180.32	7,240.00	-1,702.06	-141.57	1,702.83	8.00	8.00	0.00	
End Build @ 7772.99ft										
7,800.00	89.95	180.32	7,240.02	-1,729.07	-141.72	1,729.83	0.00	0.00	0.00	
7,900.00	89.95	180.32	7,240.11	-1,829.06	-142.27	1,829.83	0.00	0.00	0.00	
8,000.00	89.95	180.32	7,240.20	-1,929.06	-142.83	1,929.83	0.00	0.00	0.00	
8,100.00	89.95	180.32	7,240.29	-2,029.06	-143.38	2,029.83	0.00	0.00	0.00	
8,200.00	89.95	180.32	7,240.39	-2,129.06	-143.94	2,129.83	0.00	0.00	0.00	
8,300.00	89.95	180.32	7,240.48	-2,229.06	-144.49	2,229.83	0.00	0.00	0.00	
8,400.00	89.95	180.32	7,240.57	-2,329.06	-145.05	2,329.83	0.00	0.00	0.00	
8,500.00	89.95	180.32	7,240.66	-2,429.05	-145.60	2,429.83	0.00	0.00	0.00	
8,600.00	89.95	180.32	7,240.75	-2,529.05	-146.16	2,529.83	0.00	0.00	0.00	
8,700.00	89.95	180.32	7,240.84	-2,629.05	-146.71	2,629.83	0.00	0.00	0.00	
8,800.00	89.95	180.32	7,240.93	-2,729.05	-147.27	2,729.83	0.00	0.00	0.00	
8,900.00	89.95	180.32	7,241.03	-2,829.05	-147.82	2,829.83	0.00	0.00	0.00	
9,000.00	89.95	180.32	7,241.12	-2,929.05	-148.38	2,929.83	0.00	0.00	0.00	
9,100.00	89.95	180.32	7,241.21	-3,029.05	-148.93	3,029.83	0.00	0.00	0.00	
9,200.00	89.95	180.32	7,241.30	-3,129.04	-149.49	3,129.83	0.00	0.00	0.00	
9,300.00	89.95	180.32	7,241.39	-3,229.04	-150.04	3,229.83	0.00	0.00	0.00	
9,400.00	89.95	180.32	7,241.48	-3,329.04	-150.60	3,329.83	0.00	0.00	0.00	
9,500.00	89.95	180.32	7,241.58	-3,429.04	-151.15	3,429.83	0.00	0.00	0.00	
9,600.00	89.95	180.32	7,241.67	-3,529.04	-151.71	3,529.83	0.00	0.00	0.00	
9,700.00	89.95	180.32	7,241.76	-3,629.04	-152.26	3,629.83	0.00	0.00	0.00	
9,800.00	89.95	180.32	7,241.85	-3,729.03	-152.82	3,729.83	0.00	0.00	0.00	
9,900.00	89.95	180.32	7,241.94	-3,829.03	-153.38	3,829.83	0.00	0.00	0.00	
10,000.00	89.95	180.32	7,242.03	-3,929.03	-153.93	3,929.83	0.00	0.00	0.00	
10,100.00	89.95	180.32	7,242.12	-4,029.03	-154.49	4,029.83	0.00	0.00	0.00	
10,200.00	89.95	180.32	7,242.22	-4,129.03	-155.04	4,129.83	0.00	0.00	0.00	
10,300.00	89.95	180.32	7,242.31	-4,229.03	-155.60	4,229.83	0.00	0.00	0.00	
10,400.00	89.95	180.32	7,242.40	-4,329.02	-156.15	4,329.83	0.00	0.00	0.00	
10,500.00	89.95	180.32	7,242.49	-4,429.02	-156.71	4,429.83	0.00	0.00	0.00	
10,600.00	89.95	180.32	7,242.58	-4,529.02	-157.26	4,529.83	0.00	0.00	0.00	
10,700.00	89.95	180.32	7,242.67	-4,629.02	-157.82	4,629.83	0.00	0.00	0.00	
10,800.00	89.95	180.32	7,242.76	-4,729.02	-158.37	4,729.83	0.00	0.00	0.00	
10,900.00	89.95	180.32	7,242.86	-4,829.02	-158.93	4,829.83	0.00	0.00	0.00	
11,000.00	89.95	180.32	7,242.95	-4,929.02	-159.48	4,929.83	0.00	0.00	0.00	
11,100.00	89.95	180.32	7,243.04	-5,029.01	-160.04	5,029.83	0.00	0.00	0.00	
11,200.00	89.95	180.32	7,243.13	-5,129.01	-160.59	5,129.83	0.00	0.00	0.00	
11,300.00	89.95	180.32	7,243.22	-5,229.01	-161.15	5,229.83	0.00	0.00	0.00	
11,400.00	89.95	180.32	7,243.31	-5,329.01	-161.70	5,329.83	0.00	0.00	0.00	
11,500.00	89.95	180.32	7,243.41	-5,429.01	-162.26	5,429.83	0.00	0.00	0.00	
11,600.00	89.95	180.32	7,243.50	-5,529.01	-162.81	5,529.83	0.00	0.00	0.00	
11,700.00	89.95	180.32	7,243.59	-5,629.00	-163.37	5,629.83	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well LABRISA 35-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4986.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4986.00usft (RIG)
Site:	2N-65W-35 LABRISA 11-35HZ PAD	North Reference:	True
Well:	LABRISA 35-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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)
11,800.00	89.95	180.32	7,243.68	-5,729.00	-163.92	5,729.83	0.00	0.00	0.00
11,900.00	89.95	180.32	7,243.77	-5,829.00	-164.48	5,829.83	0.00	0.00	0.00
12,000.00	89.95	180.32	7,243.86	-5,929.00	-165.03	5,929.83	0.00	0.00	0.00
12,100.00	89.95	180.32	7,243.95	-6,029.00	-165.59	6,029.83	0.00	0.00	0.00
12,200.00	89.95	180.32	7,244.05	-6,129.00	-166.14	6,129.83	0.00	0.00	0.00
12,300.00	89.95	180.32	7,244.14	-6,228.99	-166.70	6,229.83	0.00	0.00	0.00
12,400.00	89.95	180.32	7,244.23	-6,328.99	-167.25	6,329.83	0.00	0.00	0.00
12,500.00	89.95	180.32	7,244.32	-6,428.99	-167.81	6,429.83	0.00	0.00	0.00
12,600.00	89.95	180.32	7,244.41	-6,528.99	-168.36	6,529.83	0.00	0.00	0.00
12,700.00	89.95	180.32	7,244.50	-6,628.99	-168.92	6,629.83	0.00	0.00	0.00
12,800.00	89.95	180.32	7,244.59	-6,728.99	-169.48	6,729.83	0.00	0.00	0.00
12,900.00	89.95	180.32	7,244.69	-6,828.99	-170.03	6,829.83	0.00	0.00	0.00
13,000.00	89.95	180.32	7,244.78	-6,928.98	-170.59	6,929.83	0.00	0.00	0.00
13,100.00	89.95	180.32	7,244.87	-7,028.98	-171.14	7,029.83	0.00	0.00	0.00
13,200.00	89.95	180.32	7,244.96	-7,128.98	-171.70	7,129.83	0.00	0.00	0.00
13,300.00	89.95	180.32	7,245.05	-7,228.98	-172.25	7,229.83	0.00	0.00	0.00
13,400.00	89.95	180.32	7,245.14	-7,328.98	-172.81	7,329.83	0.00	0.00	0.00
13,500.00	89.95	180.32	7,245.23	-7,428.98	-173.36	7,429.83	0.00	0.00	0.00
13,600.00	89.95	180.32	7,245.33	-7,528.97	-173.92	7,529.83	0.00	0.00	0.00
13,700.00	89.95	180.32	7,245.42	-7,628.97	-174.47	7,629.83	0.00	0.00	0.00
13,800.00	89.95	180.32	7,245.51	-7,728.97	-175.03	7,729.83	0.00	0.00	0.00
13,900.00	89.95	180.32	7,245.60	-7,828.97	-175.58	7,829.83	0.00	0.00	0.00
14,000.00	89.95	180.32	7,245.69	-7,928.97	-176.14	7,929.83	0.00	0.00	0.00
14,100.00	89.95	180.32	7,245.78	-8,028.97	-176.69	8,029.83	0.00	0.00	0.00
14,200.00	89.95	180.32	7,245.88	-8,128.96	-177.25	8,129.83	0.00	0.00	0.00
14,300.00	89.95	180.32	7,245.97	-8,228.96	-177.80	8,229.83	0.00	0.00	0.00
14,400.00	89.95	180.32	7,246.06	-8,328.96	-178.36	8,329.83	0.00	0.00	0.00
14,500.00	89.95	180.32	7,246.15	-8,428.96	-178.91	8,429.83	0.00	0.00	0.00
14,600.00	89.95	180.32	7,246.24	-8,528.96	-179.47	8,529.83	0.00	0.00	0.00
14,700.00	89.95	180.32	7,246.33	-8,628.96	-180.02	8,629.83	0.00	0.00	0.00
14,800.00	89.95	180.32	7,246.42	-8,728.96	-180.58	8,729.83	0.00	0.00	0.00
14,900.00	89.95	180.32	7,246.52	-8,828.95	-181.13	8,829.83	0.00	0.00	0.00
15,000.00	89.95	180.32	7,246.61	-8,928.95	-181.69	8,929.83	0.00	0.00	0.00
15,100.00	89.95	180.32	7,246.70	-9,028.95	-182.24	9,029.83	0.00	0.00	0.00
15,200.00	89.95	180.32	7,246.79	-9,128.95	-182.80	9,129.83	0.00	0.00	0.00
15,300.00	89.95	180.32	7,246.88	-9,228.95	-183.35	9,229.83	0.00	0.00	0.00
15,400.00	89.95	180.32	7,246.97	-9,328.95	-183.91	9,329.83	0.00	0.00	0.00
15,500.00	89.95	180.32	7,247.06	-9,428.94	-184.46	9,429.83	0.00	0.00	0.00
15,600.00	89.95	180.32	7,247.16	-9,528.94	-185.02	9,529.83	0.00	0.00	0.00
15,700.00	89.95	180.32	7,247.25	-9,628.94	-185.57	9,629.83	0.00	0.00	0.00
15,800.00	89.95	180.32	7,247.34	-9,728.94	-186.13	9,729.83	0.00	0.00	0.00
15,900.00	89.95	180.32	7,247.43	-9,828.94	-186.69	9,829.83	0.00	0.00	0.00
16,000.00	89.95	180.32	7,247.52	-9,928.94	-187.24	9,929.83	0.00	0.00	0.00
16,100.00	89.95	180.32	7,247.61	-10,028.93	-187.80	10,029.83	0.00	0.00	0.00
16,200.00	89.95	180.32	7,247.70	-10,128.93	-188.35	10,129.83	0.00	0.00	0.00
16,300.00	89.95	180.32	7,247.80	-10,228.93	-188.91	10,229.83	0.00	0.00	0.00
16,400.00	89.95	180.32	7,247.89	-10,328.93	-189.46	10,329.83	0.00	0.00	0.00
16,500.00	89.95	180.32	7,247.98	-10,428.93	-190.02	10,429.83	0.00	0.00	0.00
16,522.82	89.95	180.32	7,248.00	-10,451.75	-190.14	10,452.65	0.00	0.00	0.00
Codell									
16,600.00	89.95	180.32	7,248.07	-10,528.93	-190.57	10,529.83	0.00	0.00	0.00
16,700.00	89.95	180.32	7,248.16	-10,628.93	-191.13	10,629.83	0.00	0.00	0.00
16,800.00	89.95	180.32	7,248.25	-10,728.92	-191.68	10,729.83	0.00	0.00	0.00
16,900.00	89.95	180.32	7,248.35	-10,828.92	-192.24	10,829.83	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well LABRISA 35-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4986.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4986.00usft (RIG)
Site:	2N-65W-35 LABRISA 11-35HZ PAD	North Reference:	True
Well:	LABRISA 35-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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)	
17,000.00	89.95	180.32	7,248.44	-10,928.92	-192.79	10,929.83	0.00	0.00	0.00	
17,100.00	89.95	180.32	7,248.53	-11,028.92	-193.35	11,029.83	0.00	0.00	0.00	
17,200.00	89.95	180.32	7,248.62	-11,128.92	-193.90	11,129.83	0.00	0.00	0.00	
17,300.00	89.95	180.32	7,248.71	-11,228.92	-194.46	11,229.83	0.00	0.00	0.00	
17,400.00	89.95	180.32	7,248.80	-11,328.91	-195.01	11,329.83	0.00	0.00	0.00	
17,500.00	89.95	180.32	7,248.89	-11,428.91	-195.57	11,429.83	0.00	0.00	0.00	
17,600.00	89.95	180.32	7,248.99	-11,528.91	-196.12	11,529.83	0.00	0.00	0.00	
17,615.90	89.95	180.32	7,249.00	-11,544.81	-196.21	11,545.73	0.00	0.00	0.00	
TD Well @ 17615.90ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
2,057.57	2,017.00	9 5/8"	9-5/8	13-1/2	
17,615.90	7,249.00	5.5" CSG	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,499.10	1,479.00	Fox Hills				
4,212.97	4,094.00	Parkman				
4,568.26	4,444.00	Sussex				
7,029.56	6,887.00	Sharon Springs				
7,058.93	6,912.00	Niobrara				
7,198.22	7,021.00	Nio B				
7,303.27	7,091.00	Nio C				
7,626.83	7,225.00	Fort Hayes				
16,522.82	7,248.00	Codell				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
260.00	260.00	0.00	0.00	Begin Nudge @ 260.00ft	
1,297.33	1,284.63	-138.65	-19.34	Hold Tangent @ 1297.33ft	
4,097.33	3,982.01	-882.54	-123.09	Begin Drop @ 4097.33ft	
4,875.33	4,750.48	-986.53	-137.59	Hold Vertical @ 4875.33ft	
6,648.65	6,523.80	-986.53	-137.59	KOP @ 6648.65ft :: DLS = 8°/100'	
7,772.99	7,240.00	-1,702.06	-141.57	End Build @ 7772.99ft	
17,615.90	7,249.00	-11,544.81	-196.21	TD Well @ 17615.90ft	