

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

1N-68W-08 PAPA JO 2-25 19-8HZ Pad

PAPA JO 2-25 29C-8HZ

Plan A

Plan: Permit Rev-1

Standard Planning Report

11 August, 2016



Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52381.8snT
Dip Angle: 66.56°
Date: 8/9/2016
Model: IGRF2010

SITE: 1N-68W-08 PAPA JO 2-25 19-8HZ Pad

Well: PAPA JO 2-25 29C-8HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1020.00	1025.31	Fox Hills
4196.00	4413.05	Parkman
4624.00	4871.93	Sussex
7407.00	7725.37	Sharon Springs
7448.00	7768.71	Niobrara
7586.00	7925.20	Nio B
7698.00	8060.62	Nio C
7823.00	8324.35	Fort Hayes
7844.00	8402.18	Codell

WELL DETAILS: PAPA JO 2-25 29C-8HZ

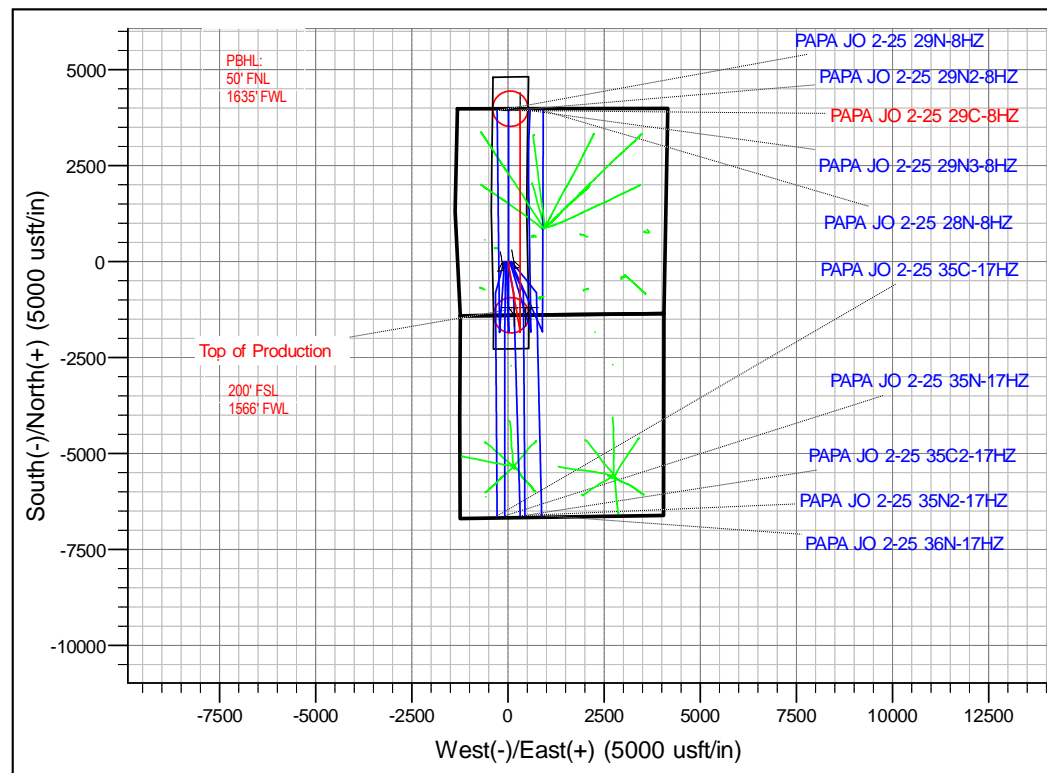
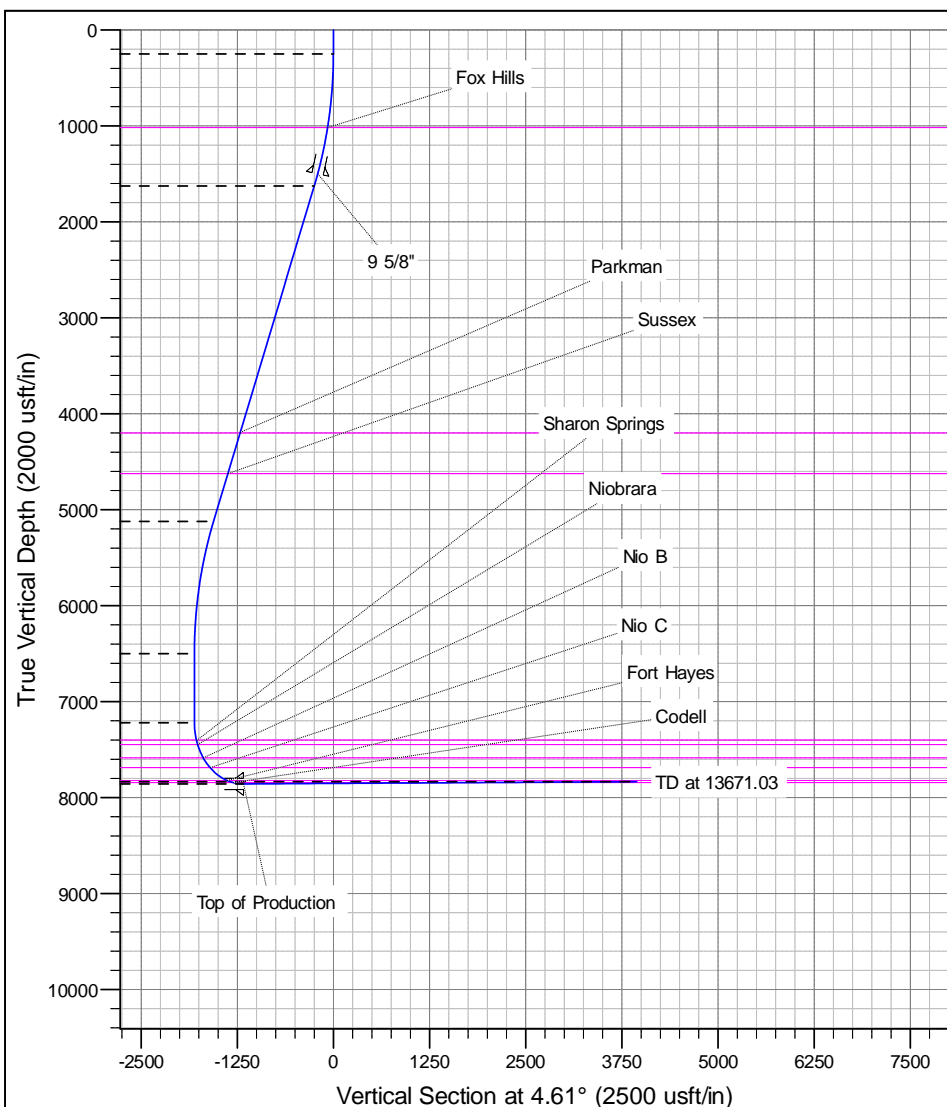
+N/-S	+E/-W	GL: 5065.00	RKB @ 5082.00usft (Original Well Elev)			Slot
0.00	0.00	Northing 14549337.10	Easting 1631278.77	Latitude 40.062069	Longitude -105.032659	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
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
1659.23	21.14	170.22	1627.48	-253.29	43.65	1.50	-248.97
5406.42	21.14	170.22	5122.52	+1584.98	273.13	0.00	1557.93
6815.65	0.00	0.00	6500.00	-1838.27	316.78	1.50	1806.90
7537.32	0.00	0.00	7221.67	-1838.27	316.78	0.00	1806.90
8540.21	90.26	0.00	7858.28	-1198.76	316.78	9.00	1169.45
13671.03	90.26	0.00	7835.00	3932.01	316.79	0.00	3944.75

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PAPA JO 2-25 29C-8HZ_PBHL	7835.00	3932.01	316.79	14553269.00	1631597.00	40.072867	-105.031527



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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well PAPA JO 2-25 29C-8HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5082.00usft (Original Well Elev)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5082.00usft (Original Well Elev)
Site:	1N-68W-08 PAPA JO 2-25 19-8HZ Pad	North Reference:	True
Well:	PAPA JO 2-25 29C-8HZ	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						1N-68W-08 PAPA JO 2-25 19-8HZ Pad											
Site Position:						Northing:			14,549,337.87 usft			Latitude:			40.062071		
From:			Lat/Long			Easting:			1,631,173.84 usft			Longitude:			-105.033034		
Position Uncertainty:			0.00 usft			Slot Radius:			13-3/16 "			Grid Convergence:			-0.02		

Well	PAPA JO 2-25 29C-8HZ					
Well Position	+N-S	-0.73 usft	Northing:	14,549,337.10 usft	Latitude:	40.062069
	+E-W	104.92 usft	Easting:	1,631,278.77 usft	Longitude:	-105.032659
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,065.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/9/2016	8.29	66.56	52,382

Design	Permit Rev-1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	4.61

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	
1,659.23	21.14	170.22	1,627.48	-253.29	43.65	1.50	1.50	0.00	170.22	
5,406.42	21.14	170.22	5,122.52	-1,584.98	273.13	0.00	0.00	0.00	0.00	
6,815.65	0.00	0.00	6,500.00	-1,838.27	316.78	1.50	-1.50	0.00	180.00	
7,537.32	0.00	0.00	7,221.67	-1,838.27	316.78	0.00	0.00	0.00	0.00	
8,540.21	90.26	0.00	7,858.28	-1,198.76	316.78	9.00	9.00	0.00	0.00	
13,671.03	90.26	0.00	7,835.00	3,932.01	316.79	0.00	0.00	0.00	0.00	PAPA JO 2-25 29C

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Planning Report

Database: PLANNING
Company: US ROCKIES WATTENBERG PLANNING
Project: WELD-NAD83-UTMFT13N
Site: 1N-68W-08 PAPA JO 2-25 19-8HZ Pad
Well: PAPA JO 2-25 29C-8HZ
Wellbore: Plan A
Design: Permit Rev-1

Local Co-ordinate Reference: Well PAPA JO 2-25 29C-8HZ
TVD Reference: RKB @ 5082.00usft (Original Well Elev)
MD Reference: RKB @ 5082.00usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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
300.00	0.75	170.22	300.00	-0.32	0.06	-0.32	1.50	1.50	0.00
400.00	2.25	170.22	399.96	-2.90	0.50	-2.85	1.50	1.50	0.00
500.00	3.75	170.22	499.82	-8.06	1.39	-7.92	1.50	1.50	0.00
600.00	5.25	170.22	599.51	-15.79	2.72	-15.52	1.50	1.50	0.00
700.00	6.75	170.22	698.96	-26.09	4.50	-25.65	1.50	1.50	0.00
800.00	8.25	170.22	798.10	-38.95	6.71	-38.29	1.50	1.50	0.00
900.00	9.75	170.22	896.87	-54.37	9.37	-53.44	1.50	1.50	0.00
1,000.00	11.25	170.22	995.19	-72.33	12.46	-71.09	1.50	1.50	0.00
1,025.31	11.63	170.22	1,020.00	-77.28	13.32	-75.96	1.50	1.50	0.00
Fox Hills									
1,100.00	12.75	170.22	1,093.00	-92.82	15.99	-91.23	1.50	1.50	0.00
1,200.00	14.25	170.22	1,190.24	-115.82	19.96	-113.85	1.50	1.50	0.00
1,300.00	15.75	170.22	1,286.83	-141.33	24.35	-138.92	1.50	1.50	0.00
1,400.00	17.25	170.22	1,382.71	-169.32	29.18	-166.43	1.50	1.50	0.00
1,500.00	18.75	170.22	1,477.81	-199.77	34.42	-196.36	1.50	1.50	0.00
1,523.46	19.10	170.22	1,500.00	-207.27	35.72	-203.73	1.50	1.50	0.00
9 5/8"									
1,600.00	20.25	170.22	1,572.07	-232.66	40.09	-228.69	1.50	1.50	0.00
1,659.23	21.14	170.22	1,627.48	-253.29	43.65	-248.97	1.50	1.50	0.00
1,700.00	21.14	170.22	1,665.50	-267.78	46.14	-263.21	0.00	0.00	0.00
1,800.00	21.14	170.22	1,758.78	-303.32	52.27	-298.14	0.00	0.00	0.00
1,900.00	21.14	170.22	1,852.05	-338.86	58.39	-333.07	0.00	0.00	0.00
2,000.00	21.14	170.22	1,945.32	-374.39	64.52	-368.00	0.00	0.00	0.00
2,100.00	21.14	170.22	2,038.59	-409.93	70.64	-402.94	0.00	0.00	0.00
2,200.00	21.14	170.22	2,131.86	-445.47	76.76	-437.87	0.00	0.00	0.00
2,300.00	21.14	170.22	2,225.13	-481.01	82.89	-472.80	0.00	0.00	0.00
2,400.00	21.14	170.22	2,318.40	-516.55	89.01	-507.73	0.00	0.00	0.00
2,500.00	21.14	170.22	2,411.67	-552.09	95.14	-542.66	0.00	0.00	0.00
2,600.00	21.14	170.22	2,504.94	-587.62	101.26	-577.59	0.00	0.00	0.00
2,700.00	21.14	170.22	2,598.22	-623.16	107.39	-612.53	0.00	0.00	0.00
2,800.00	21.14	170.22	2,691.49	-658.70	113.51	-647.46	0.00	0.00	0.00
2,900.00	21.14	170.22	2,784.76	-694.24	119.63	-682.39	0.00	0.00	0.00
3,000.00	21.14	170.22	2,878.03	-729.78	125.76	-717.32	0.00	0.00	0.00
3,100.00	21.14	170.22	2,971.30	-765.32	131.88	-752.25	0.00	0.00	0.00
3,200.00	21.14	170.22	3,064.57	-800.86	138.01	-787.19	0.00	0.00	0.00
3,300.00	21.14	170.22	3,157.84	-836.39	144.13	-822.12	0.00	0.00	0.00
3,400.00	21.14	170.22	3,251.11	-871.93	150.25	-857.05	0.00	0.00	0.00
3,500.00	21.14	170.22	3,344.39	-907.47	156.38	-891.98	0.00	0.00	0.00
3,600.00	21.14	170.22	3,437.66	-943.01	162.50	-926.91	0.00	0.00	0.00
3,700.00	21.14	170.22	3,530.93	-978.55	168.63	-961.85	0.00	0.00	0.00
3,800.00	21.14	170.22	3,624.20	-1,014.09	174.75	-996.78	0.00	0.00	0.00
3,900.00	21.14	170.22	3,717.47	-1,049.63	180.87	-1,031.71	0.00	0.00	0.00
4,000.00	21.14	170.22	3,810.74	-1,085.16	187.00	-1,066.64	0.00	0.00	0.00
4,100.00	21.14	170.22	3,904.01	-1,120.70	193.12	-1,101.57	0.00	0.00	0.00
4,200.00	21.14	170.22	3,997.28	-1,156.24	199.25	-1,136.51	0.00	0.00	0.00
4,300.00	21.14	170.22	4,090.55	-1,191.78	205.37	-1,171.44	0.00	0.00	0.00
4,400.00	21.14	170.22	4,183.83	-1,227.32	211.49	-1,206.37	0.00	0.00	0.00
4,413.05	21.14	170.22	4,196.00	-1,231.96	212.29	-1,210.93	0.00	0.00	0.00
Parkman									

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Planning Report

Database: PLANNING
Company: US ROCKIES WATTENBERG PLANNING
Project: WELD-NAD83-UTMFT13N
Site: 1N-68W-08 PAPA JO 2-25 19-8HZ Pad
Well: PAPA JO 2-25 29C-8HZ
Wellbore: Plan A
Design: Permit Rev-1

Local Co-ordinate Reference: Well PAPA JO 2-25 29C-8HZ
TVD Reference: RKB @ 5082.00usft (Original Well Elev)
MD Reference: RKB @ 5082.00usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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)	
4,500.00	21.14	170.22	4,277.10	-1,262.86	217.62	-1,241.30	0.00	0.00	0.00	
4,600.00	21.14	170.22	4,370.37	-1,298.39	223.74	-1,276.23	0.00	0.00	0.00	
4,700.00	21.14	170.22	4,463.64	-1,333.93	229.87	-1,311.17	0.00	0.00	0.00	
4,800.00	21.14	170.22	4,556.91	-1,369.47	235.99	-1,346.10	0.00	0.00	0.00	
4,871.93	21.14	170.22	4,624.00	-1,395.03	240.40	-1,371.22	0.00	0.00	0.00	
Sussex										
4,900.00	21.14	170.22	4,650.18	-1,405.01	242.12	-1,381.03	0.00	0.00	0.00	
5,000.00	21.14	170.22	4,743.45	-1,440.55	248.24	-1,415.96	0.00	0.00	0.00	
5,100.00	21.14	170.22	4,836.72	-1,476.09	254.36	-1,450.89	0.00	0.00	0.00	
5,200.00	21.14	170.22	4,930.00	-1,511.63	260.49	-1,485.82	0.00	0.00	0.00	
5,300.00	21.14	170.22	5,023.27	-1,547.16	266.61	-1,520.76	0.00	0.00	0.00	
5,400.00	21.14	170.22	5,116.54	-1,582.70	272.74	-1,555.69	0.00	0.00	0.00	
5,406.42	21.14	170.22	5,122.52	-1,584.98	273.13	-1,557.93	0.00	0.00	0.00	
5,500.00	19.73	170.22	5,210.21	-1,617.18	278.68	-1,589.58	1.50	-1.50	0.00	
5,600.00	18.23	170.22	5,304.77	-1,649.24	284.20	-1,621.09	1.50	-1.50	0.00	
5,700.00	16.73	170.22	5,400.15	-1,678.85	289.30	-1,650.19	1.50	-1.50	0.00	
5,800.00	15.23	170.22	5,496.28	-1,705.99	293.98	-1,676.87	1.50	-1.50	0.00	
5,900.00	13.73	170.22	5,593.10	-1,730.64	298.23	-1,701.10	1.50	-1.50	0.00	
6,000.00	12.23	170.22	5,690.54	-1,752.78	302.04	-1,722.86	1.50	-1.50	0.00	
6,100.00	10.73	170.22	5,788.53	-1,772.40	305.42	-1,742.15	1.50	-1.50	0.00	
6,200.00	9.23	170.22	5,887.02	-1,789.48	308.37	-1,758.94	1.50	-1.50	0.00	
6,300.00	7.73	170.22	5,985.92	-1,804.02	310.87	-1,773.23	1.50	-1.50	0.00	
6,400.00	6.23	170.22	6,085.17	-1,816.01	312.94	-1,785.01	1.50	-1.50	0.00	
6,500.00	4.73	170.22	6,184.71	-1,825.43	314.56	-1,794.27	1.50	-1.50	0.00	
6,600.00	3.23	170.22	6,284.47	-1,832.27	315.74	-1,801.00	1.50	-1.50	0.00	
6,700.00	1.73	170.22	6,384.37	-1,836.55	316.48	-1,805.20	1.50	-1.50	0.00	
6,800.00	0.23	170.22	6,484.35	-1,838.24	316.77	-1,806.86	1.50	-1.50	0.00	
6,815.65	0.00	0.00	6,500.00	-1,838.27	316.78	-1,806.90	1.50	-1.50	0.00	
6,900.00	0.00	0.00	6,584.35	-1,838.27	316.78	-1,806.90	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,684.35	-1,838.27	316.78	-1,806.90	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,784.35	-1,838.27	316.78	-1,806.90	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,884.35	-1,838.27	316.78	-1,806.90	0.00	0.00	0.00	
7,300.00	0.00	0.00	6,984.35	-1,838.27	316.78	-1,806.90	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,084.35	-1,838.27	316.78	-1,806.90	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,184.35	-1,838.27	316.78	-1,806.90	0.00	0.00	0.00	
7,537.32	0.00	0.00	7,221.67	-1,838.27	316.78	-1,806.90	0.00	0.00	0.00	
7,600.00	5.64	0.00	7,284.25	-1,835.19	316.78	-1,803.82	9.00	9.00	0.00	
7,700.00	14.64	0.00	7,382.59	-1,817.60	316.78	-1,786.29	9.00	9.00	0.00	
7,725.37	16.92	0.00	7,407.00	-1,810.70	316.78	-1,779.41	9.00	9.00	0.00	
Sharon Springs										
7,768.71	20.83	0.00	7,448.00	-1,796.68	316.78	-1,765.44	9.00	9.00	0.00	
Niobrara										
7,800.00	23.64	0.00	7,476.96	-1,784.84	316.78	-1,753.64	9.00	9.00	0.00	
7,900.00	32.64	0.00	7,565.05	-1,737.73	316.78	-1,706.67	9.00	9.00	0.00	
7,925.21	34.91	0.00	7,586.00	-1,723.71	316.78	-1,692.71	9.00	9.00	0.00	
Nio B										
8,000.00	41.64	0.00	7,644.68	-1,677.41	316.78	-1,646.55	9.00	9.00	0.00	
8,060.62	47.10	0.00	7,688.00	-1,635.04	316.78	-1,604.32	9.00	9.00	0.00	
Nio C										
8,100.00	50.64	0.00	7,713.90	-1,605.38	316.78	-1,574.75	9.00	9.00	0.00	
8,200.00	59.64	0.00	7,771.00	-1,523.41	316.78	-1,493.05	9.00	9.00	0.00	
8,300.00	68.64	0.00	7,814.57	-1,433.51	316.78	-1,403.44	9.00	9.00	0.00	
8,324.35	70.83	0.00	7,823.00	-1,410.67	316.78	-1,380.67	9.00	9.00	0.00	

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well PAPA JO 2-25 29C-8HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5082.00usft (Original Well Elev)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5082.00usft (Original Well Elev)
Site:	1N-68W-08 PAPA JO 2-25 19-8HZ Pad	North Reference:	True
Well:	PAPA JO 2-25 29C-8HZ	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)
Fort Hayes									
8,400.00	77.64	0.00	7,843.54	-1,337.91	316.78	-1,308.15	9.00	9.00	0.00
8,402.18	77.84	0.00	7,844.00	-1,335.78	316.78	-1,306.02	9.00	9.00	0.00
Codell									
8,500.00	86.64	0.00	7,857.20	-1,238.95	316.78	-1,209.51	9.00	9.00	0.00
8,540.21	90.26	0.00	7,858.28	-1,198.76	316.78	-1,169.45	9.00	9.00	0.00
Top of Production - PAPA JO 2-25 29C-8HZ_PHL									
8,600.00	90.26	0.00	7,858.01	-1,138.97	316.78	-1,109.85	0.00	0.00	0.00
8,700.00	90.26	0.00	7,857.56	-1,038.97	316.78	-1,010.18	0.00	0.00	0.00
8,800.00	90.26	0.00	7,857.10	-938.97	316.78	-910.50	0.00	0.00	0.00
8,900.00	90.26	0.00	7,856.65	-838.97	316.78	-810.82	0.00	0.00	0.00
9,000.00	90.26	0.00	7,856.20	-738.97	316.78	-711.15	0.00	0.00	0.00
9,100.00	90.26	0.00	7,855.74	-638.97	316.78	-611.47	0.00	0.00	0.00
9,200.00	90.26	0.00	7,855.29	-538.98	316.78	-511.80	0.00	0.00	0.00
9,300.00	90.26	0.00	7,854.84	-438.98	316.78	-412.12	0.00	0.00	0.00
9,400.00	90.26	0.00	7,854.38	-338.98	316.78	-312.44	0.00	0.00	0.00
9,500.00	90.26	0.00	7,853.93	-238.98	316.78	-212.77	0.00	0.00	0.00
9,600.00	90.26	0.00	7,853.47	-138.98	316.78	-113.09	0.00	0.00	0.00
9,700.00	90.26	0.00	7,853.02	-38.98	316.78	-13.42	0.00	0.00	0.00
9,800.00	90.26	0.00	7,852.57	61.02	316.78	86.26	0.00	0.00	0.00
9,900.00	90.26	0.00	7,852.11	161.02	316.78	185.94	0.00	0.00	0.00
10,000.00	90.26	0.00	7,851.66	261.02	316.78	285.61	0.00	0.00	0.00
10,100.00	90.26	0.00	7,851.20	361.02	316.78	385.29	0.00	0.00	0.00
10,200.00	90.26	0.00	7,850.75	461.01	316.78	484.97	0.00	0.00	0.00
10,300.00	90.26	0.00	7,850.30	561.01	316.78	584.64	0.00	0.00	0.00
10,400.00	90.26	0.00	7,849.84	661.01	316.78	684.32	0.00	0.00	0.00
10,500.00	90.26	0.00	7,849.39	761.01	316.78	783.99	0.00	0.00	0.00
10,600.00	90.26	0.00	7,848.94	861.01	316.78	883.67	0.00	0.00	0.00
10,700.00	90.26	0.00	7,848.48	961.01	316.78	983.35	0.00	0.00	0.00
10,800.00	90.26	0.00	7,848.03	1,061.01	316.78	1,083.02	0.00	0.00	0.00
10,900.00	90.26	0.00	7,847.57	1,161.01	316.78	1,182.70	0.00	0.00	0.00
11,000.00	90.26	0.00	7,847.12	1,261.01	316.78	1,282.37	0.00	0.00	0.00
11,100.00	90.26	0.00	7,846.67	1,361.01	316.78	1,382.05	0.00	0.00	0.00
11,200.00	90.26	0.00	7,846.21	1,461.00	316.78	1,481.73	0.00	0.00	0.00
11,300.00	90.26	0.00	7,845.76	1,561.00	316.78	1,581.40	0.00	0.00	0.00
11,400.00	90.26	0.00	7,845.31	1,661.00	316.78	1,681.08	0.00	0.00	0.00
11,500.00	90.26	0.00	7,844.85	1,761.00	316.78	1,780.75	0.00	0.00	0.00
11,600.00	90.26	0.00	7,844.40	1,861.00	316.78	1,880.43	0.00	0.00	0.00
11,700.00	90.26	0.00	7,843.94	1,961.00	316.78	1,980.11	0.00	0.00	0.00
11,800.00	90.26	0.00	7,843.49	2,061.00	316.78	2,079.78	0.00	0.00	0.00
11,900.00	90.26	0.00	7,843.04	2,161.00	316.78	2,179.46	0.00	0.00	0.00
12,000.00	90.26	0.00	7,842.58	2,261.00	316.78	2,279.13	0.00	0.00	0.00
12,100.00	90.26	0.00	7,842.13	2,360.99	316.78	2,378.81	0.00	0.00	0.00
12,200.00	90.26	0.00	7,841.68	2,460.99	316.79	2,478.49	0.00	0.00	0.00
12,300.00	90.26	0.00	7,841.22	2,560.99	316.79	2,578.16	0.00	0.00	0.00
12,400.00	90.26	0.00	7,840.77	2,660.99	316.79	2,677.84	0.00	0.00	0.00
12,500.00	90.26	0.00	7,840.31	2,760.99	316.79	2,777.51	0.00	0.00	0.00
12,600.00	90.26	0.00	7,839.86	2,860.99	316.79	2,877.19	0.00	0.00	0.00
12,700.00	90.26	0.00	7,839.41	2,960.99	316.79	2,976.87	0.00	0.00	0.00
12,800.00	90.26	0.00	7,838.95	3,060.99	316.79	3,076.54	0.00	0.00	0.00
12,900.00	90.26	0.00	7,838.50	3,160.99	316.79	3,176.22	0.00	0.00	0.00
13,000.00	90.26	0.00	7,838.05	3,260.99	316.79	3,275.89	0.00	0.00	0.00
13,100.00	90.26	0.00	7,837.59	3,360.98	316.79	3,375.57	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well PAPA JO 2-25 29C-8HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5082.00usft (Original Well Elev)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5082.00usft (Original Well Elev)
Site:	1N-68W-08 PAPA JO 2-25 19-8HZ Pad	North Reference:	True
Well:	PAPA JO 2-25 29C-8HZ	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)
13,200.00	90.26	0.00	7,837.14	3,460.98	316.79	3,475.25	0.00	0.00	0.00
13,300.00	90.26	0.00	7,836.68	3,560.98	316.79	3,574.92	0.00	0.00	0.00
13,400.00	90.26	0.00	7,836.23	3,660.98	316.79	3,674.60	0.00	0.00	0.00
13,500.00	90.26	0.00	7,835.78	3,760.98	316.79	3,774.27	0.00	0.00	0.00
13,600.00	90.26	0.00	7,835.32	3,860.98	316.79	3,873.95	0.00	0.00	0.00
13,671.03	90.26	0.00	7,835.00	3,932.01	316.79	3,944.75	0.00	0.00	0.00
PAPA JO 2-25 29C-8HZ_PBHL									

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									
PAPA JO 2-25 29C-8H - plan hits target center - Point	0.00	0.00	7,835.00	3,932.01	316.79	14,553,269.00	1,631,597.00	40.072867	-105.031527
PAPA JO 2-25 29C-8H - plan hits target center - Point	0.00	0.00	7,858.28	-1,198.76	316.78	14,548,138.22	1,631,595.10	40.058777	-105.031527

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,523.46	1,500.00	9 5/8"	9-5/8	13-1/2	
8,540.21	7,858.28	Top of Production	5-1/2	8-1/2	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,025.31	1,020.00	Fox Hills				
4,413.05	4,196.00	Parkman				
4,871.93	4,624.00	Sussex				
7,725.37	7,407.00	Sharon Springs				
7,768.71	7,448.00	Niobrara				
7,925.21	7,586.00	Nio B				
8,060.62	7,688.00	Nio C				
8,324.35	7,823.00	Fort Hayes				
8,402.18	7,844.00	Codell				