

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 36-T4N-R66W

Dejane State 27N-36HZ

Plan B

Plan: Rev B0 Permit

Sperry Drilling Services

Proposal Report

17 March, 2014

Well Coordinates: 1,339,808.39 N, 3,216,894.16 E (40° 15' 48.83" N, 104° 43' 22.04" W)

Ground Level: 4,864.00 usft

Local Coordinate Origin:

Centered on Well Dejane State 27N-36HZ

Viewing Datum:

RKB = 17' @ 4881.00usft (Drilling Rig)

TVDs to System:

N

North Reference:

True

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Project: Weld County, CO (NAD 83)
 Site: Sec. 36-T4N-R66W
 Well: Dejana State 27N-36HZ
 Wellbore: Plan B
 Design: Rev B0 Permit

Anadarko Petroleum Corp.



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	2350.00	0.00	0.00	2350.00	0.00	0.00	0.00	0.00	0.00	
3	3722.09	27.44	165.72	3670.23	-312.39	79.51	2.00	165.72	-311.84	
4	6670.26	27.44	165.72	6286.67	-1629.07	414.64	0.00	0.00	-1626.21	
5	7835.02	90.00	0.39	7108.00	-1116.94	526.10	10.00	-163.57	-1113.34	Dejana State 27N-36HZ_CP
6	13059.98	90.00	0.39	7108.00	4107.89	561.42	0.00	0.00	4111.62	Dejana State 27N-36HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Dejana State 27N-36HZ_LD	0.00	0.00	0.00	40.263564	-104.722789
Dejana State 27N-36HZ_SEC	0.00	0.00	0.00	40.263564	-104.722789
Dejana State 27N-36HZ_SHL	0.00	0.00	0.00	40.263564	-104.722789
Dejana State 27N-36HZ_BHL	7108.00	4107.89	561.42	40.274840	-104.720777
Dejana State 27N-36HZ_CP	7108.00	-1116.94	526.10	40.260498	-104.720904

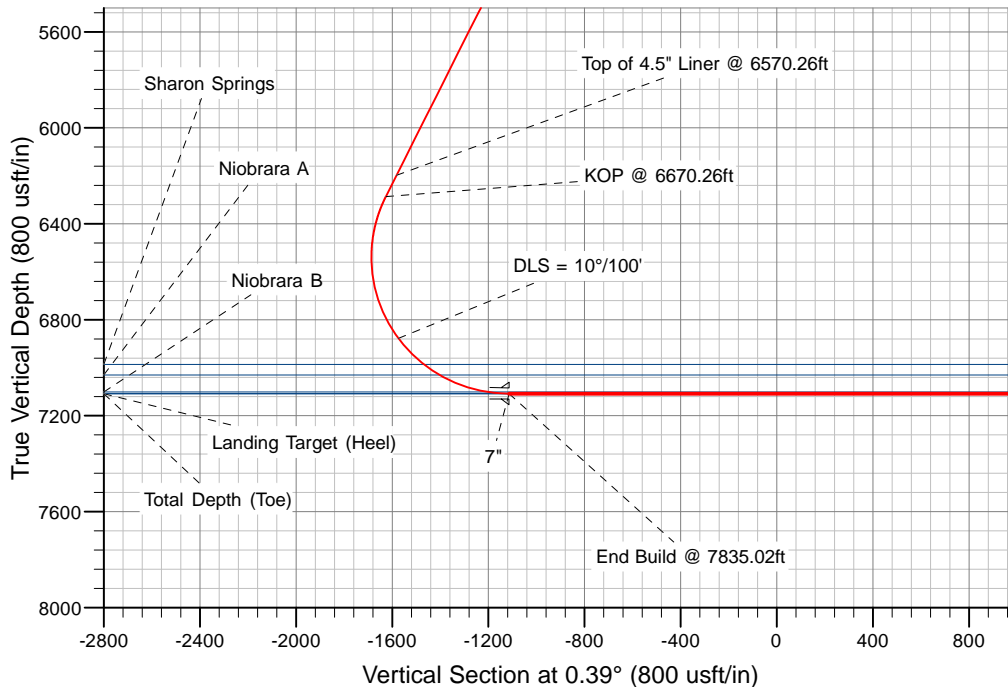
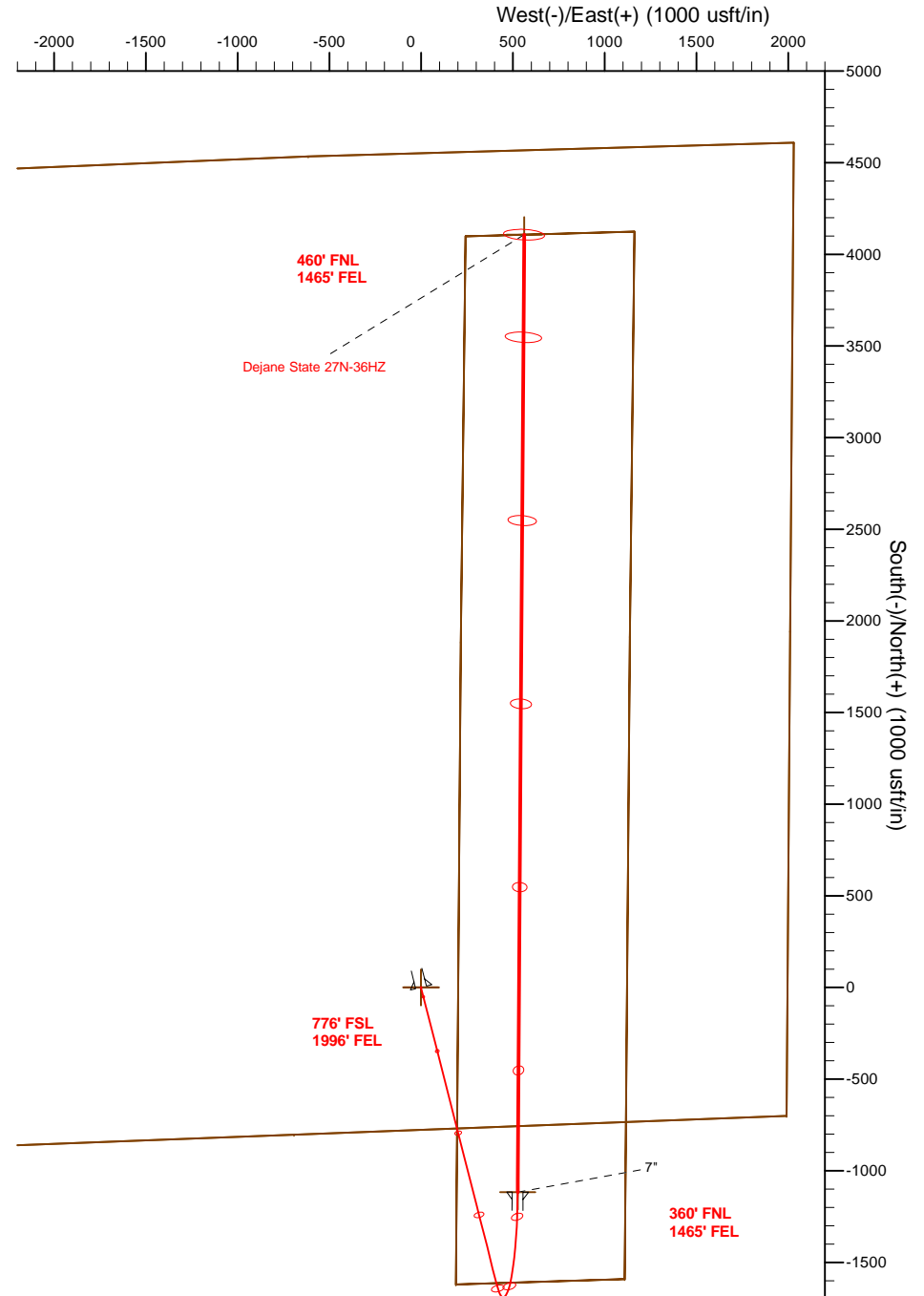
WELL DETAILS: Dejana State 27N-36HZ

Ground Level: 4864.00
 RKB = 17' @ 4881.00usft (Drilling Rig)

Plan: Rev B0 Permit (Dejana State 27N-36HZ/Plan B)

Created By: Clint Eshelman Date: 3/17/2014
 Reviewed: _____ Date: _____

TVD	MD	Description
6197.92	6570.26	Top of 4.5" Liner @ 6570.26ft
6286.67	6670.26	KOP @ 6670.26ft



Plan Report for Dejana State 27N-36HZ - Rev B0 Permit

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)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dejana State 27N-36HZ_SEC - Dejana State 27N-36HZ_LD - Dejana State 27N-36HZ_SHL										
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	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	0.00
900.00	0.00	0.00	900.00	0.00	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	0.00
1,037.00	0.00	0.00	1,037.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Marker										
1,087.00	0.00	0.00	1,087.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"										
1,100.00	0.00	0.00	1,100.00	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	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,350.00	0.00	0.00	2,350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 2350.00ft										
2,400.00	1.00	165.72	2,400.00	-0.42	0.11	-0.42	2.00	2.00	0.00	165.72
2,500.00	3.00	165.72	2,499.93	-3.80	0.97	-3.80	2.00	2.00	0.00	0.00
2,600.00	5.00	165.72	2,599.68	-10.56	2.69	-10.55	2.00	2.00	0.00	0.00
2,700.00	7.00	165.72	2,699.13	-20.69	5.27	-20.66	2.00	2.00	0.00	0.00
2,800.00	9.00	165.72	2,798.15	-34.18	8.70	-34.12	2.00	2.00	0.00	0.00
2,900.00	11.00	165.72	2,896.63	-51.01	12.98	-50.92	2.00	2.00	0.00	0.00
3,000.00	13.00	165.72	2,994.44	-71.16	18.11	-71.03	2.00	2.00	0.00	0.00
3,100.00	15.00	165.72	3,091.46	-94.60	24.08	-94.43	2.00	2.00	0.00	0.00
3,200.00	17.00	165.72	3,187.58	-121.31	30.88	-121.10	2.00	2.00	0.00	0.00
3,300.00	19.00	165.72	3,282.68	-151.26	38.50	-150.99	2.00	2.00	0.00	0.00
3,400.00	21.00	165.72	3,376.65	-184.40	46.93	-184.08	2.00	2.00	0.00	0.00
3,500.00	23.00	165.72	3,469.36	-220.70	56.17	-220.31	2.00	2.00	0.00	0.00
3,600.00	25.00	165.72	3,560.71	-260.12	66.21	-259.66	2.00	2.00	0.00	0.00
3,700.00	27.00	165.72	3,650.59	-302.60	77.02	-302.06	2.00	2.00	0.00	0.00
3,722.09	27.44	165.72	3,670.23	-312.39	79.51	-311.84	2.00	2.00	0.00	0.00
End Nudge @ 3722.09ft										
3,800.00	27.44	165.72	3,739.37	-347.18	88.37	-346.57	0.00	0.00	0.00	0.00
3,891.98	27.44	165.72	3,821.00	-388.26	98.82	-387.58	0.00	0.00	0.00	0.00
Parkman										
3,900.00	27.44	165.72	3,828.12	-391.84	99.73	-391.16	0.00	0.00	0.00	0.00
4,000.00	27.44	165.72	3,916.87	-436.50	111.10	-435.74	0.00	0.00	0.00	0.00
4,100.00	27.44	165.72	4,005.62	-481.17	122.47	-480.32	0.00	0.00	0.00	0.00
4,200.00	27.44	165.72	4,094.37	-525.83	133.84	-524.90	0.00	0.00	0.00	0.00
4,300.00	27.44	165.72	4,183.11	-570.49	145.20	-569.49	0.00	0.00	0.00	0.00
4,392.27	27.44	165.72	4,265.00	-611.70	155.69	-610.62	0.00	0.00	0.00	0.00
Sussex										

Plan Report for Dejana State 27N-36HZ - Rev B0 Permit

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)	Toolface Azimuth (°)
4,400.00	27.44	165.72	4,271.86	-615.15	156.57	-614.07	0.00	0.00	0.00	0.00
4,500.00	27.44	165.72	4,360.61	-659.81	167.94	-658.65	0.00	0.00	0.00	0.00
4,600.00	27.44	165.72	4,449.36	-704.47	179.31	-703.23	0.00	0.00	0.00	0.00
4,700.00	27.44	165.72	4,538.11	-749.13	190.67	-747.82	0.00	0.00	0.00	0.00
4,800.00	27.44	165.72	4,626.85	-793.79	202.04	-792.40	0.00	0.00	0.00	0.00
4,900.00	27.44	165.72	4,715.60	-838.45	213.41	-836.98	0.00	0.00	0.00	0.00
5,000.00	27.44	165.72	4,804.35	-883.11	224.77	-881.56	0.00	0.00	0.00	0.00
5,100.00	27.44	165.72	4,893.10	-927.77	236.14	-926.15	0.00	0.00	0.00	0.00
5,200.00	27.44	165.72	4,981.84	-972.43	247.51	-970.73	0.00	0.00	0.00	0.00
5,300.00	27.44	165.72	5,070.59	-1,017.10	258.88	-1,015.31	0.00	0.00	0.00	0.00
5,400.00	27.44	165.72	5,159.34	-1,061.76	270.24	-1,059.89	0.00	0.00	0.00	0.00
5,500.00	27.44	165.72	5,248.09	-1,106.42	281.61	-1,104.47	0.00	0.00	0.00	0.00
5,600.00	27.44	165.72	5,336.84	-1,151.08	292.98	-1,149.06	0.00	0.00	0.00	0.00
5,700.00	27.44	165.72	5,425.58	-1,195.74	304.35	-1,193.64	0.00	0.00	0.00	0.00
5,800.00	27.44	165.72	5,514.33	-1,240.40	315.71	-1,238.22	0.00	0.00	0.00	0.00
5,900.00	27.44	165.72	5,603.08	-1,285.06	327.08	-1,282.80	0.00	0.00	0.00	0.00
6,000.00	27.44	165.72	5,691.83	-1,329.72	338.45	-1,327.39	0.00	0.00	0.00	0.00
6,100.00	27.44	165.72	5,780.58	-1,374.38	349.81	-1,371.97	0.00	0.00	0.00	0.00
6,200.00	27.44	165.72	5,869.32	-1,419.04	361.18	-1,416.55	0.00	0.00	0.00	0.00
6,300.00	27.44	165.72	5,958.07	-1,463.70	372.55	-1,461.13	0.00	0.00	0.00	0.00
6,400.00	27.44	165.72	6,046.82	-1,508.36	383.92	-1,505.72	0.00	0.00	0.00	0.00
6,500.00	27.44	165.72	6,135.57	-1,553.03	395.28	-1,550.30	0.00	0.00	0.00	0.00
6,570.26	27.44	165.72	6,197.92	-1,584.40	403.27	-1,581.62	0.00	0.00	0.00	0.00
Top of 4.5" Liner @ 6570.26ft										
6,600.00	27.44	165.72	6,224.32	-1,597.69	406.65	-1,594.88	0.00	0.00	0.00	0.00
6,670.26	27.44	165.72	6,286.67	-1,629.07	414.64	-1,626.21	0.00	0.00	0.00	0.00
KOP @ 6670.26ft										
6,700.00	24.60	163.70	6,313.39	-1,641.65	418.07	-1,638.77	10.00	-9.55	-6.79	-163.57
6,800.00	15.41	151.89	6,407.30	-1,673.43	430.20	-1,670.46	10.00	-9.20	-11.81	-161.75
6,900.00	8.26	115.54	6,505.23	-1,688.28	442.97	-1,685.23	10.00	-7.14	-36.35	-150.61
7,000.00	9.90	49.24	6,604.22	-1,685.76	456.01	-1,682.62	10.00	1.64	-66.29	-114.92
7,100.00	18.08	24.14	6,701.25	-1,665.94	468.90	-1,662.71	10.00	8.17	-25.10	-49.28
7,200.00	27.46	15.04	6,793.38	-1,629.42	481.26	-1,626.11	10.00	9.39	-9.10	-24.84
7,300.00	37.15	10.38	6,877.81	-1,577.32	492.72	-1,573.93	10.00	9.69	-4.66	-16.42
DLS = 10°/100'										
7,400.00	46.96	7.44	6,951.98	-1,511.21	502.91	-1,507.75	10.00	9.81	-2.94	-12.47
7,454.08	52.29	6.22	6,987.00	-1,470.32	507.80	-1,466.83	10.00	9.85	-2.25	-10.27
Sharon Springs										
7,500.00	56.82	5.32	7,013.62	-1,433.11	511.55	-1,429.59	10.00	9.87	-1.97	-9.48
7,533.23	60.10	4.72	7,031.00	-1,404.90	514.02	-1,401.37	10.00	9.88	-1.80	-8.96
Niobrara A										
7,600.00	66.71	3.63	7,060.87	-1,345.38	518.35	-1,341.82	10.00	9.89	-1.63	-8.65
7,700.00	76.61	2.18	7,092.30	-1,250.70	523.13	-1,247.11	10.00	9.90	-1.45	-8.16
7,744.98	81.07	1.57	7,101.00	-1,206.60	524.57	-1,203.00	10.00	9.91	-1.36	-7.70
Niobrara B										
7,800.00	86.53	0.84	7,106.94	-1,151.94	525.72	-1,148.34	10.00	9.91	-1.32	-7.58
7,835.02	90.00	0.39	7,108.00	-1,116.94	526.10	-1,113.34	10.00	9.91	-1.31	-7.50
End Build @ 7835.02ft - Landing Target (Heel) - 7" - Dejana State 27N-36HZ_CP										
7,900.00	90.00	0.39	7,108.00	-1,051.97	526.53	-1,048.36	0.00	0.00	0.00	-7.49
8,000.00	90.00	0.39	7,108.00	-951.97	527.21	-948.36	0.00	0.00	0.00	0.00
8,100.00	90.00	0.39	7,108.00	-851.97	527.89	-848.36	0.00	0.00	0.00	0.00
8,200.00	90.00	0.39	7,108.00	-751.97	528.56	-748.36	0.00	0.00	0.00	0.00
8,300.00	90.00	0.39	7,108.00	-651.98	529.24	-648.36	0.00	0.00	0.00	0.00
8,400.00	90.00	0.39	7,108.00	-551.98	529.91	-548.36	0.00	0.00	0.00	0.00
8,500.00	90.00	0.39	7,108.00	-451.98	530.59	-448.36	0.00	0.00	0.00	0.00
8,600.00	90.00	0.39	7,108.00	-351.98	531.27	-348.36	0.00	0.00	0.00	0.00
8,700.00	90.00	0.39	7,108.00	-251.99	531.94	-248.36	0.00	0.00	0.00	0.00
8,800.00	90.00	0.39	7,108.00	-151.99	532.62	-148.36	0.00	0.00	0.00	0.00
8,900.00	90.00	0.39	7,108.00	-51.99	533.30	-48.36	0.00	0.00	0.00	0.00

Plan Report for DeJane State 27N-36HZ - Rev B0 Permit

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)	Toolface Azimuth (°)
9,000.00	90.00	0.39	7,108.00	48.01	533.97	51.64	0.00	0.00	0.00	0.00
9,100.00	90.00	0.39	7,108.00	148.00	534.65	151.64	0.00	0.00	0.00	0.00
9,200.00	90.00	0.39	7,108.00	248.00	535.32	251.64	0.00	0.00	0.00	0.00
9,300.00	90.00	0.39	7,108.00	348.00	536.00	351.64	0.00	0.00	0.00	0.00
9,400.00	90.00	0.39	7,108.00	448.00	536.68	451.64	0.00	0.00	0.00	0.00
9,500.00	90.00	0.39	7,108.00	548.00	537.35	551.64	0.00	0.00	0.00	0.00
9,600.00	90.00	0.39	7,108.00	647.99	538.03	651.64	0.00	0.00	0.00	0.00
9,700.00	90.00	0.39	7,108.00	747.99	538.70	751.64	0.00	0.00	0.00	0.00
9,800.00	90.00	0.39	7,108.00	847.99	539.38	851.64	0.00	0.00	0.00	0.00
9,900.00	90.00	0.39	7,108.00	947.99	540.06	951.64	0.00	0.00	0.00	0.00
10,000.00	90.00	0.39	7,108.00	1,047.98	540.73	1,051.64	0.00	0.00	0.00	0.00
10,100.00	90.00	0.39	7,108.00	1,147.98	541.41	1,151.64	0.00	0.00	0.00	0.00
10,200.00	90.00	0.39	7,108.00	1,247.98	542.08	1,251.64	0.00	0.00	0.00	0.00
10,300.00	90.00	0.39	7,108.00	1,347.98	542.76	1,351.64	0.00	0.00	0.00	0.00
10,400.00	90.00	0.39	7,108.00	1,447.98	543.44	1,451.64	0.00	0.00	0.00	0.00
10,500.00	90.00	0.39	7,108.00	1,547.97	544.11	1,551.64	0.00	0.00	0.00	0.00
10,600.00	90.00	0.39	7,108.00	1,647.97	544.79	1,651.64	0.00	0.00	0.00	0.00
10,700.00	90.00	0.39	7,108.00	1,747.97	545.47	1,751.64	0.00	0.00	0.00	0.00
10,800.00	90.00	0.39	7,108.00	1,847.97	546.14	1,851.64	0.00	0.00	0.00	0.00
10,900.00	90.00	0.39	7,108.00	1,947.96	546.82	1,951.64	0.00	0.00	0.00	0.00
11,000.00	90.00	0.39	7,108.00	2,047.96	547.49	2,051.64	0.00	0.00	0.00	0.00
11,100.00	90.00	0.39	7,108.00	2,147.96	548.17	2,151.64	0.00	0.00	0.00	0.00
11,200.00	90.00	0.39	7,108.00	2,247.96	548.85	2,251.64	0.00	0.00	0.00	0.00
11,300.00	90.00	0.39	7,108.00	2,347.95	549.52	2,351.64	0.00	0.00	0.00	0.00
11,400.00	90.00	0.39	7,108.00	2,447.95	550.20	2,451.64	0.00	0.00	0.00	0.00
11,500.00	90.00	0.39	7,108.00	2,547.95	550.87	2,551.64	0.00	0.00	0.00	0.00
11,600.00	90.00	0.39	7,108.00	2,647.95	551.55	2,651.64	0.00	0.00	0.00	0.00
11,700.00	90.00	0.39	7,108.00	2,747.95	552.23	2,751.64	0.00	0.00	0.00	0.00
11,800.00	90.00	0.39	7,108.00	2,847.94	552.90	2,851.64	0.00	0.00	0.00	0.00
11,900.00	90.00	0.39	7,108.00	2,947.94	553.58	2,951.64	0.00	0.00	0.00	0.00
12,000.00	90.00	0.39	7,108.00	3,047.94	554.25	3,051.64	0.00	0.00	0.00	0.00
12,100.00	90.00	0.39	7,108.00	3,147.94	554.93	3,151.64	0.00	0.00	0.00	0.00
12,200.00	90.00	0.39	7,108.00	3,247.93	555.61	3,251.64	0.00	0.00	0.00	0.00
12,300.00	90.00	0.39	7,108.00	3,347.93	556.28	3,351.64	0.00	0.00	0.00	0.00
12,400.00	90.00	0.39	7,108.00	3,447.93	556.96	3,451.64	0.00	0.00	0.00	0.00
12,500.00	90.00	0.39	7,108.00	3,547.93	557.64	3,551.64	0.00	0.00	0.00	0.00
12,600.00	90.00	0.39	7,108.00	3,647.92	558.31	3,651.64	0.00	0.00	0.00	0.00
12,700.00	90.00	0.39	7,108.00	3,747.92	558.99	3,751.64	0.00	0.00	0.00	0.00
12,800.00	90.00	0.39	7,108.00	3,847.92	559.66	3,851.64	0.00	0.00	0.00	0.00
12,900.00	90.00	0.39	7,108.00	3,947.92	560.34	3,951.64	0.00	0.00	0.00	0.00
13,000.00	90.00	0.39	7,108.00	4,047.92	561.02	4,051.64	0.00	0.00	0.00	0.00
13,059.97	90.00	0.39	7,108.00	4,107.88	561.42	4,111.61	0.00	0.00	0.00	0.00
Total Depth (Toe)										
13,059.98	90.00	0.39	7,108.00	4,107.89	561.42	4,111.62	0.00	0.00	0.00	0.00
TD Well @ 13059.98ft - DeJane State 27N-36HZ_BHL										

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,350.00	2,350.00	0.00	0.00	Begin Nudge @ 2350.00ft
3,722.09	3,670.23	-312.39	79.51	End Nudge @ 3722.09ft
6,570.26	6,197.92	-1,584.40	403.27	Top of 4.5" Liner @ 6570.26ft
6,670.26	6,286.67	-1,629.07	414.64	KOP @ 6670.26ft
7,300.00	6,877.81	-1,577.32	492.72	DLS = 10°/100'
7,835.02	7,108.00	-1,116.95	526.09	End Build @ 7835.02ft
13,059.98	7,108.00	4,107.89	561.42	TD Well @ 13059.98ft

Plan Report for DeJane State 27N-36HZ - Rev B0 Permit**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	0.39	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,835.02	Rev B0 Permit	MWD
7,835.02	13,059.98	Rev B0 Permit	MWD

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,087.00	1,087.00	9 5/8"	9-5/8	13-1/2
7,835.02	7,108.00	7"	7	8-3/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,037.00	1,037.00	Fox Hills Marker		0.00	
3,891.98	3,821.00	Parkman		0.00	
4,392.27	4,265.00	Sussex		0.00	
7,454.08	6,987.00	Sharon Springs		0.00	
7,533.23	7,031.00	Niobrara A		0.00	
7,744.98	7,101.00	Niobrara B		0.00	
7,835.02	7,108.00	Landing Target (Heel)		0.00	
13,059.97	7,108.00	Total Depth (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
DeJane State 27N-36HZ_SEC	0.00	0.00	0.00	Polygon
DeJane State 27N-36HZ_LD	0.00	0.00	0.00	Polygon
DeJane State 27N-36HZ_SHL	0.00	0.00	0.00	Point
DeJane State 27N-36HZ_BHL	7,108.00	4,107.89	561.42	Point
DeJane State 27N-36HZ_CP	7,108.00	-1,116.94	526.10	Point

Directional Difficulty Index

Average Dogleg over Survey:	1.02 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 7,543.78 usft
Net Tortousity applicable to Plans:	1.02 °/100usft	Directional Difficulty Index:	6.436

Plan Report for DeJane State 27N-36HZ - Rev B0 Permit

Audit Info

North Reference Sheet for Sec. 36-T4N-R66W - DeJane State 27N-36HZ - Plan B

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.
Vertical Depths are relative to RKB = 17' @ 4881.00usft (Drilling Rig). Northing and Easting are relative to DeJane State 27N-36HZ
Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980
Projection method is Lambert Conformal Conic (2 parallel)
Central Meridian is -105.50°, Longitude Origin:0.000000°, Latitude Origin:40.783333°
False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99995687

Grid Coordinates of Well: 1,339,808.39 usft N, 3,216,894.16 usft E
Geographical Coordinates of Well: 40° 15' 48.83" N, 104° 43' 22.04" W
Grid Convergence at Surface is: 0.50°

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,059.98usft
the Bottom Hole Displacement is 4,146.08usft in the Direction of 7.78° (True).

Magnetic Convergence at surface is: -8.02° (23 December 2013, , BGGM2013)

Magnetic Model: BGGM2013
Date: 23-Dec-13
Declination: 8.53°
Inclination/Dip: 66.85°
Field Strength: 52722

Grid North is 0.50° East of True North (Grid Convergence)
Magnetic North is 8.53° East of True North (Magnetic Declination)
Magnetic North is 8.02° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0.50°
To convert a Magnetic Direction to a True Direction, Add 8.53° East
To convert a Magnetic Direction to a Grid Direction, Add 8.02°