

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 19-T1N-R67W

Jelts 16C-19HZ

Plan A Rev 0

Plan: Plan A Rev 0 Permit

Sperry Drilling Services

Proposal Report

03 December, 2012

Well Coordinates: 1,259,063.63 N, 3,160,266.14 E (40° 02' 35.15" N, 104° 55' 39.25" W)

Ground Level: 5,158.00 ft

Local Coordinate Origin: Centered on Well Jelts 16C-19HZ

Viewing Datum: RKB=17 @ 5175.00ft (Drilling Rig)

TVDs to System: N

North Reference: True

Unit System: API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 431

HALLIBURTON

Project: Weld County, CO (NAD 83)
 Site: Sec. 19-T1N-R67W
 Well: Jelts 16C-19HZ
 Wellbore: Plan A Rev 0
 Design: Plan A Rev 0 Permit

Anadarko Petroleum Corp.

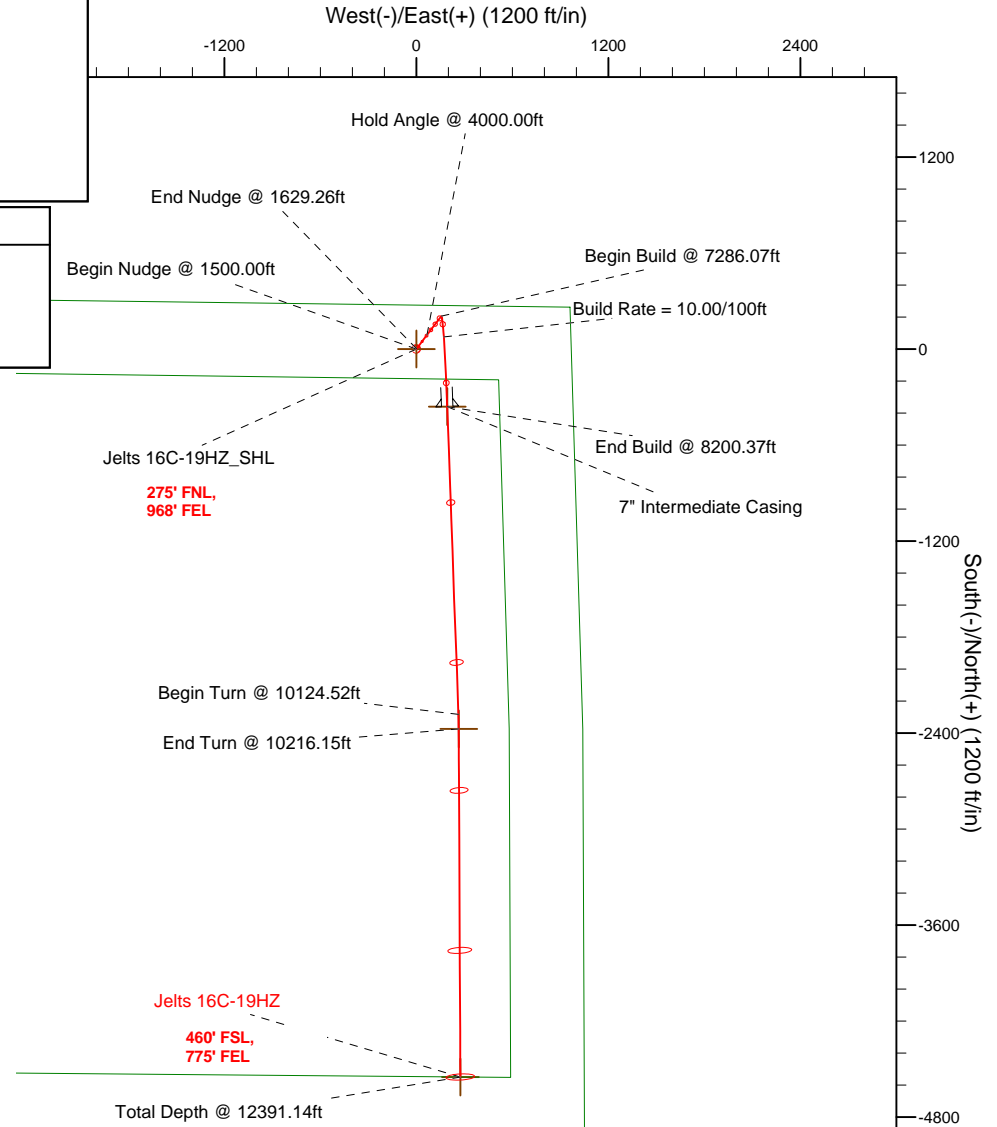
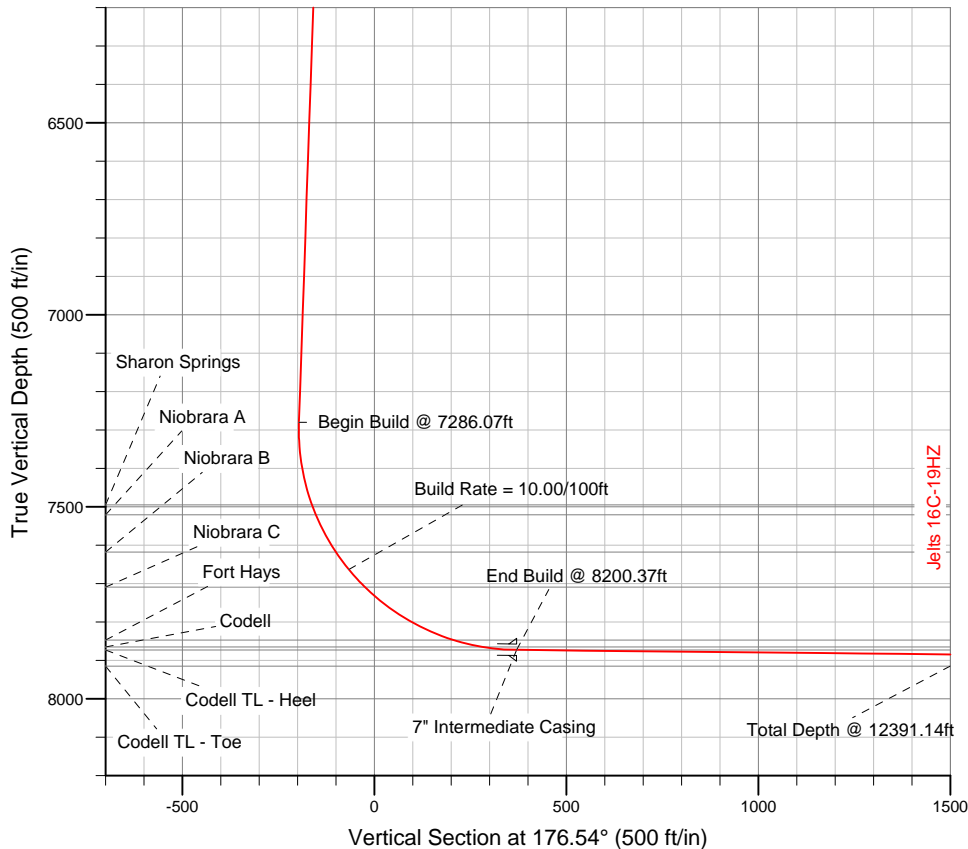


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	
3	1629.26	2.59	37.08	1629.22	2.33	1.76	2.00	37.08	-2.22	
4	7286.07	2.59	37.08	7280.27	205.88	155.60	0.00	0.00	-196.13	
5	8200.37	89.43	177.91	7873.00	-360.00	193.00	10.00	140.82	370.97	Jelts 16C-19HZ_CP
6	8200.44	89.43	177.91	7873.00	-360.06	193.00	2.00	89.58	371.04	
7	10124.52	89.43	177.91	7892.28	-2282.77	263.13	0.00	0.00	2294.48	
8	10216.15	89.43	179.74	7893.20	-2374.37	265.00	2.00	90.01	2386.03	Jelts 16C-19HZ_TP
9	12391.14	89.43	179.74	7915.00	-4549.23	274.72	0.00	0.00	4557.52	Jelts 16C-19HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Jelts 16C-19HZ_SHL	0.00	0.00	0.00	40.043098	-104.927569	Point
Jelts 16C-19HZ_CP	7873.00	-360.00	193.00	40.042110	-104.926880	Point
Jelts 16C-19HZ_TP	7893.20	-2374.37	265.00	40.036580	-104.926623	Point
Jelts 16C-19HZ_BHL	7915.00	-4549.23	274.72	40.030610	-104.926588	Point



WELL DETAILS: Jelts 16C-19HZ	
Ground Level	5158.00 RKB=17 @ 5175.00ft (Drilling Rig)
Plan: Plan A Rev 0 Permit (Jelts 16C-19HZ/Plan A Rev 0)	
Created By: Fred Hartmann	Date: 12/03/2012
Reviewed: _____	Date: _____

Plan Report for Jelts 16C-19HZ - Plan A Rev 0 Permit

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jelts 16C-19HZ_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
1,100.00	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
Begin Nudge @ 1500.00ft										
1,600.00	2.00	37.08	1,599.98	1.39	1.05	-1.32	2.00	2.00	0.00	37.08
1,629.26	2.59	37.08	1,629.22	2.32	1.76	-2.21	2.00	2.00	0.00	0.00
End Nudge @ 1629.26ft										
1,700.00	2.59	37.08	1,699.88	4.87	3.68	-4.64	0.00	0.00	0.00	0.00
1,800.00	2.59	37.08	1,799.78	8.47	6.40	-8.06	0.00	0.00	0.00	0.00
1,900.00	2.59	37.08	1,899.68	12.06	9.12	-11.49	0.00	0.00	0.00	0.00
2,000.00	2.59	37.08	1,999.58	15.66	11.84	-14.92	0.00	0.00	0.00	0.00
2,100.00	2.59	37.08	2,099.48	19.26	14.56	-18.35	0.00	0.00	0.00	0.00
2,200.00	2.59	37.08	2,199.38	22.86	17.28	-21.78	0.00	0.00	0.00	0.00
2,300.00	2.59	37.08	2,299.27	26.46	20.00	-25.20	0.00	0.00	0.00	0.00
2,400.00	2.59	37.08	2,399.17	30.06	22.72	-28.63	0.00	0.00	0.00	0.00
2,500.00	2.59	37.08	2,499.07	33.66	25.44	-32.06	0.00	0.00	0.00	0.00
2,600.00	2.59	37.08	2,598.97	37.25	28.16	-35.49	0.00	0.00	0.00	0.00
2,700.00	2.59	37.08	2,698.87	40.85	30.88	-38.92	0.00	0.00	0.00	0.00
2,800.00	2.59	37.08	2,798.76	44.45	33.60	-42.34	0.00	0.00	0.00	0.00
2,900.00	2.59	37.08	2,898.66	48.05	36.32	-45.77	0.00	0.00	0.00	0.00
3,000.00	2.59	37.08	2,998.56	51.65	39.04	-49.20	0.00	0.00	0.00	0.00
3,100.00	2.59	37.08	3,098.46	55.25	41.76	-52.63	0.00	0.00	0.00	0.00
3,200.00	2.59	37.08	3,198.36	58.84	44.48	-56.06	0.00	0.00	0.00	0.00
3,300.00	2.59	37.08	3,298.26	62.44	47.20	-59.48	0.00	0.00	0.00	0.00
3,400.00	2.59	37.08	3,398.15	66.04	49.92	-62.91	0.00	0.00	0.00	0.00
3,500.00	2.59	37.08	3,498.05	69.64	52.63	-66.34	0.00	0.00	0.00	0.00
3,600.00	2.59	37.08	3,597.95	73.24	55.35	-69.77	0.00	0.00	0.00	0.00
3,700.00	2.59	37.08	3,697.85	76.84	58.07	-73.20	0.00	0.00	0.00	0.00
3,800.00	2.59	37.08	3,797.75	80.44	60.79	-76.62	0.00	0.00	0.00	0.00
3,900.00	2.59	37.08	3,897.65	84.03	63.51	-80.05	0.00	0.00	0.00	0.00
4,000.00	2.59	37.08	3,997.54	87.63	66.23	-83.48	0.00	0.00	0.00	0.00
Hold Angle @ 4000.00ft										
4,100.00	2.59	37.08	4,097.44	91.23	68.95	-86.91	0.00	0.00	0.00	0.00
4,200.00	2.59	37.08	4,197.34	94.83	71.67	-90.34	0.00	0.00	0.00	0.00
4,300.00	2.59	37.08	4,297.24	98.43	74.39	-93.76	0.00	0.00	0.00	0.00
4,400.00	2.59	37.08	4,397.14	102.03	77.11	-97.19	0.00	0.00	0.00	0.00
4,500.00	2.59	37.08	4,497.03	105.62	79.83	-100.62	0.00	0.00	0.00	0.00
4,600.00	2.59	37.08	4,596.93	109.22	82.55	-104.05	0.00	0.00	0.00	0.00
4,700.00	2.59	37.08	4,696.83	112.82	85.27	-107.48	0.00	0.00	0.00	0.00
4,800.00	2.59	37.08	4,796.73	116.42	87.99	-110.90	0.00	0.00	0.00	0.00
4,900.00	2.59	37.08	4,896.63	120.02	90.71	-114.33	0.00	0.00	0.00	0.00
4,928.40	2.59	37.08	4,925.00	121.04	91.48	-115.31	0.00	0.00	0.00	0.00
Sussex										
5,000.00	2.59	37.08	4,996.53	123.62	93.43	-117.76	0.00	0.00	0.00	0.00

Plan Report for Jelts 16C-19HZ - Plan A Rev 0 Permit

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
5,100.00	2.59	37.08	5,096.42	127.22	96.15	-121.19	0.00	0.00	0.00	0.00
5,200.00	2.59	37.08	5,196.32	130.81	98.87	-124.62	0.00	0.00	0.00	0.00
5,300.00	2.59	37.08	5,296.22	134.41	101.59	-128.04	0.00	0.00	0.00	0.00
5,400.00	2.59	37.08	5,396.12	138.01	104.31	-131.47	0.00	0.00	0.00	0.00
5,500.00	2.59	37.08	5,496.02	141.61	107.03	-134.90	0.00	0.00	0.00	0.00
5,600.00	2.59	37.08	5,595.91	145.21	109.75	-138.33	0.00	0.00	0.00	0.00
5,700.00	2.59	37.08	5,695.81	148.81	112.47	-141.76	0.00	0.00	0.00	0.00
5,800.00	2.59	37.08	5,795.71	152.40	115.19	-145.18	0.00	0.00	0.00	0.00
5,900.00	2.59	37.08	5,895.61	156.00	117.91	-148.61	0.00	0.00	0.00	0.00
6,000.00	2.59	37.08	5,995.51	159.60	120.63	-152.04	0.00	0.00	0.00	0.00
6,100.00	2.59	37.08	6,095.41	163.20	123.34	-155.47	0.00	0.00	0.00	0.00
6,200.00	2.59	37.08	6,195.30	166.80	126.06	-158.90	0.00	0.00	0.00	0.00
6,300.00	2.59	37.08	6,295.20	170.40	128.78	-162.32	0.00	0.00	0.00	0.00
6,400.00	2.59	37.08	6,395.10	174.00	131.50	-165.75	0.00	0.00	0.00	0.00
6,500.00	2.59	37.08	6,495.00	177.59	134.22	-169.18	0.00	0.00	0.00	0.00
6,600.00	2.59	37.08	6,594.90	181.19	136.94	-172.61	0.00	0.00	0.00	0.00
6,700.00	2.59	37.08	6,694.80	184.79	139.66	-176.04	0.00	0.00	0.00	0.00
6,800.00	2.59	37.08	6,794.69	188.39	142.38	-179.46	0.00	0.00	0.00	0.00
6,900.00	2.59	37.08	6,894.59	191.99	145.10	-182.89	0.00	0.00	0.00	0.00
7,000.00	2.59	37.08	6,994.49	195.59	147.82	-186.32	0.00	0.00	0.00	0.00
7,100.00	2.59	37.08	7,094.39	199.18	150.54	-189.75	0.00	0.00	0.00	0.00
7,200.00	2.59	37.08	7,194.29	202.78	153.26	-193.18	0.00	0.00	0.00	0.00
7,286.07	2.59	37.08	7,280.27	205.88	155.60	-196.13	0.00	0.00	0.00	0.00
Begin Build @ 7286.07ft										
7,300.00	1.74	67.39	7,294.19	206.21	155.99	-196.44	10.00	-6.04	217.56	140.82
7,400.00	9.53	168.15	7,393.73	198.68	159.10	-188.73	10.00	7.78	100.76	110.53
7,500.00	19.45	173.30	7,490.43	173.98	162.75	-163.85	10.00	9.93	5.15	9.91
7,504.85	19.94	173.42	7,495.00	172.35	162.94	-162.22	10.00	9.96	2.51	4.91
Sharon Springs										
7,532.77	22.72	174.02	7,521.00	162.26	164.05	-152.08	10.00	9.97	2.16	4.79
Niobrara A										
7,600.00	29.43	175.03	7,581.35	132.86	166.83	-122.56	10.00	9.98	1.50	4.23
7,643.02	33.73	175.48	7,618.00	110.41	168.69	-100.04	10.00	9.99	1.04	3.32
Niobrara B										
7,700.00	39.42	175.94	7,663.74	76.57	171.22	-66.11	10.00	9.99	0.81	2.94
Build Rate = 10.00/100ft										
7,761.40	45.55	176.32	7,709.00	35.22	174.01	-24.66	10.00	9.99	0.63	2.57
Niobrara C										
7,800.00	49.41	176.53	7,735.08	6.83	175.78	3.78	10.00	9.99	0.53	2.29
7,900.00	59.40	176.96	7,793.21	-74.25	180.38	84.99	10.00	9.99	0.43	2.15
8,000.00	69.40	177.31	7,836.37	-164.21	184.87	175.05	10.00	9.99	0.35	1.90
8,032.72	72.67	177.42	7,847.00	-195.11	186.29	205.99	10.00	10.00	0.32	1.74
Fort Hays										
8,100.00	79.39	177.62	7,863.23	-260.31	189.11	271.23	10.00	10.00	0.30	1.71
8,110.07	80.40	177.65	7,865.00	-270.21	189.52	281.14	10.00	10.00	0.29	1.66
Codell										
8,200.00	89.39	177.91	7,873.00	-359.63	192.99	370.61	10.00	10.00	0.29	1.66
8,200.37	89.43	177.91	7,873.00	-360.00	193.00	370.98	9.91	9.91	0.28	1.63
End Build @ 8200.37ft - Codell TL - Heel - 7" Intermediate Casing - Jelts 16C-19HZ_CP										
8,200.44	89.43	177.91	7,873.00	-360.07	193.00	371.04	2.04	0.50	1.98	75.76
8,300.00	89.43	177.91	7,874.00	-459.56	196.63	470.57	0.00	0.00	0.00	0.00
8,400.00	89.43	177.91	7,875.00	-559.48	200.28	570.54	0.00	0.00	0.00	0.00
8,500.00	89.43	177.91	7,876.00	-659.41	203.92	670.51	0.00	0.00	0.00	0.00
8,600.00	89.43	177.91	7,877.00	-759.34	207.56	770.47	0.00	0.00	0.00	0.00
8,700.00	89.43	177.91	7,878.01	-859.27	211.21	870.44	0.00	0.00	0.00	0.00
8,800.00	89.43	177.91	7,879.01	-959.20	214.85	970.41	0.00	0.00	0.00	0.00
8,900.00	89.43	177.91	7,880.01	-1,059.13	218.50	1,070.37	0.00	0.00	0.00	0.00
9,000.00	89.43	177.91	7,881.01	-1,159.06	222.14	1,170.34	0.00	0.00	0.00	0.00

Plan Report for Jelts 16C-19HZ - Plan A Rev 0 Permit

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
9,100.00	89.43	177.91	7,882.02	-1,258.98	225.79	1,270.30	0.00	0.00	0.00	0.00
9,200.00	89.43	177.91	7,883.02	-1,358.91	229.43	1,370.27	0.00	0.00	0.00	0.00
9,300.00	89.43	177.91	7,884.02	-1,458.84	233.08	1,470.24	0.00	0.00	0.00	0.00
9,400.00	89.43	177.91	7,885.02	-1,558.77	236.72	1,570.20	0.00	0.00	0.00	0.00
9,500.00	89.43	177.91	7,886.02	-1,658.70	240.36	1,670.17	0.00	0.00	0.00	0.00
9,600.00	89.43	177.91	7,887.03	-1,758.63	244.01	1,770.14	0.00	0.00	0.00	0.00
9,700.00	89.43	177.91	7,888.03	-1,858.56	247.65	1,870.10	0.00	0.00	0.00	0.00
9,800.00	89.43	177.91	7,889.03	-1,958.48	251.30	1,970.07	0.00	0.00	0.00	0.00
9,900.00	89.43	177.91	7,890.03	-2,058.41	254.94	2,070.04	0.00	0.00	0.00	0.00
10,000.00	89.43	177.91	7,891.03	-2,158.34	258.59	2,170.00	0.00	0.00	0.00	0.00
10,100.00	89.43	177.91	7,892.04	-2,258.27	262.23	2,269.97	0.00	0.00	0.00	0.00
10,124.52	89.43	177.91	7,892.28	-2,282.77	263.13	2,294.48	0.00	0.00	0.00	0.00
Begin Turn @ 10124.52ft										
10,200.00	89.43	179.42	7,893.04	-2,358.23	264.88	2,369.90	2.00	0.00	2.00	90.01
10,216.15	89.43	179.74	7,893.20	-2,374.38	265.00	2,386.03	2.00	0.00	2.00	90.00
End Turn @ 10216.15ft - Jelts 16C-19HZ_TP										
10,300.00	89.43	179.74	7,894.04	-2,458.22	265.37	2,469.75	0.00	0.00	0.00	89.99
10,400.00	89.43	179.74	7,895.04	-2,558.21	265.82	2,569.58	0.00	0.00	0.00	0.00
10,500.00	89.43	179.74	7,896.05	-2,658.21	266.27	2,669.42	0.00	0.00	0.00	0.00
10,600.00	89.43	179.74	7,897.05	-2,758.20	266.71	2,769.26	0.00	0.00	0.00	0.00
10,700.00	89.43	179.74	7,898.05	-2,858.20	267.16	2,869.10	0.00	0.00	0.00	0.00
10,800.00	89.43	179.74	7,899.05	-2,958.19	267.61	2,968.94	0.00	0.00	0.00	0.00
10,900.00	89.43	179.74	7,900.05	-3,058.18	268.06	3,068.78	0.00	0.00	0.00	0.00
11,000.00	89.43	179.74	7,901.06	-3,158.18	268.50	3,168.62	0.00	0.00	0.00	0.00
11,100.00	89.43	179.74	7,902.06	-3,258.17	268.95	3,268.46	0.00	0.00	0.00	0.00
11,200.00	89.43	179.74	7,903.06	-3,358.16	269.40	3,368.30	0.00	0.00	0.00	0.00
11,300.00	89.43	179.74	7,904.06	-3,458.16	269.84	3,468.14	0.00	0.00	0.00	0.00
11,400.00	89.43	179.74	7,905.07	-3,558.15	270.29	3,567.98	0.00	0.00	0.00	0.00
11,500.00	89.43	179.74	7,906.07	-3,658.15	270.74	3,667.81	0.00	0.00	0.00	0.00
11,600.00	89.43	179.74	7,907.07	-3,758.14	271.18	3,767.65	0.00	0.00	0.00	0.00
11,700.00	89.43	179.74	7,908.07	-3,858.13	271.63	3,867.49	0.00	0.00	0.00	0.00
11,800.00	89.43	179.74	7,909.07	-3,958.13	272.08	3,967.33	0.00	0.00	0.00	0.00
11,900.00	89.43	179.74	7,910.08	-4,058.12	272.52	4,067.17	0.00	0.00	0.00	0.00
12,000.00	89.43	179.74	7,911.08	-4,158.12	272.97	4,167.01	0.00	0.00	0.00	0.00
12,100.00	89.43	179.74	7,912.08	-4,258.11	273.42	4,266.85	0.00	0.00	0.00	0.00
12,200.00	89.43	179.74	7,913.08	-4,358.10	273.86	4,366.69	0.00	0.00	0.00	0.00
12,300.00	89.43	179.74	7,914.09	-4,458.10	274.31	4,466.53	0.00	0.00	0.00	0.00
12,391.14	89.43	179.74	7,915.00	-4,549.23	274.72	4,557.52	0.00	0.00	0.00	0.00
Total Depth @ 12391.14ft - Jelts 16C-19HZ_BHL										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,500.00	1,500.00	0.00	0.00	Begin Nudge @ 1500.00ft
1,629.26	1,629.22	2.33	1.76	End Nudge @ 1629.26ft
4,000.00	3,997.54	87.63	66.23	Hold Angle @ 4000.00ft
7,286.07	7,280.27	205.88	155.60	Begin Build @ 7286.07ft
7,700.00	7,663.74	76.57	171.22	Build Rate = 10.00/100ft
8,200.37	7,873.00	-360.00	193.00	End Build @ 8200.37ft
10,124.52	7,892.28	-2,282.77	263.13	Begin Turn @ 10124.52ft
10,216.15	7,893.20	-2,374.37	265.00	End Turn @ 10216.15ft
12,391.14	7,915.00	-4,549.23	274.72	Total Depth @ 12391.14ft

Plan Report for Jelts 16C-19HZ - Plan A Rev 0 Permit**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target	Jelts 16C-19HZ_BHL	176.54	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	12,391.14	Plan A Rev 0 Permit	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
8,200.37	7,873.00	7" Intermediate Casing	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	7,915.00	Codell TL - Toe		0.00	
4,928.40	4,925.00	Sussex		0.00	
7,504.85	7,495.00	Sharon Springs		0.00	
7,532.77	7,521.00	Niobrara A		0.00	
7,643.02	7,618.00	Niobrara B		0.00	
7,761.40	7,709.00	Niobrara C		0.00	
8,032.72	7,847.00	Fort Hays		0.00	
8,110.07	7,865.00	Codell		0.00	
8,200.37	7,873.00	Codell TL - Heel		0.00	

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Jelts 16C-19HZ_SHL	0.00	0.00	0.00	Point
Jelts 16C-19HZ_BHL	7,915.00	-4,549.23	274.72	Point
Jelts 16C-19HZ_TP	7,893.20	-2,374.38	265.00	Point
Jelts 16C-19HZ_CP	7,873.00	-360.00	193.00	Point

North Reference Sheet for Sec. 19-T1N-R67W - Jelts 16C-19HZ - Plan A Rev 0

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 @ 5175.00ft (Drilling Rig). Northing and Easting are relative to Jelts 16C-19HZ
 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: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99996338

Grid Coordinates of Well: 1,259,063.63 ft N, 3,160,266.14 ft E
 Geographical Coordinates of Well: 40° 02' 35.15" N, 104° 55' 39.25" W
 Grid Convergence at Surface is: 0.37°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,391.14ft
 the Bottom Hole Displacement is 4,557.52ft in the Direction of 176.54° (True).

Magnetic Convergence at surface is: -8.40° (3 December 2012, , BGGM2012)

