

Noble Energy

Weld County, CO (NAD 83)

Sec. 8, T11N, R64W

BEVJAC ZP 08-1H

Plan A - Rev 0 (PERMITTING PLAN ONLY)

Plan: Plan A - Rev 0 Proposal

Standard Planning Report

10 March, 2011

Halliburton Company

Planning Report

Database:	EDM 5000 Cirque Database	Local Co-ordinate Reference:	Site Sec. 8, T11N, R64W
Company:	Noble Energy	TVD Reference:	WELL @ 5629.0ft (Original Well Elev)
Project:	Weld County, CO (NAD 83)	MD Reference:	WELL @ 5629.0ft (Original Well Elev)
Site:	Sec. 8, T11N, R64W	North Reference:	Grid
Well:	BEVJAC ZP 08-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A - Rev 0 (PERMITTING PLAN ONLY)		
Design:	Plan A - Rev 0 Proposal		

Project	Weld County, CO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Sec. 8, T11N, R64W		
Site Position:		Northing:	483,697.60 m
From:	Lat/Long	Easting:	991,994.97 m
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in
		Latitude:	40° 56' 27.096 N
		Longitude:	104° 34' 42.924 W
		Grid Convergence:	0.60 °

Well	BEVJAC ZP 08-1H		
Well Position	+N/-S	0.0 ft	Northing: 483,697.60 m
	+E/-W	0.0 ft	Easting: 991,994.97 m
Position Uncertainty	0.0 ft	Wellhead Elevation:	Ground Level: 5,605.0 ft
			Latitude: 40° 56' 27.096 N
			Longitude: 104° 34' 42.924 W

Wellbore	Plan A - Rev 0 (PERMITTING PLAN ONLY)				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/8/2011	8.85	67.53	53,455

Design	Plan A - Rev 0 Proposal			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	142.50

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,275.3	0.00	0.00	7,275.3	0.0	0.0	0.00	0.00	0.00	0.00	
8,337.8	85.00	142.50	7,988.8	-518.7	398.0	8.00	8.00	0.00	142.50	
8,412.8	85.00	142.50	7,995.3	-578.0	443.5	0.00	0.00	0.00	0.00	
8,475.3	90.00	142.50	7,998.0	-627.5	481.5	8.00	8.00	0.00	0.00	
12,737.1	90.00	142.50	7,998.0	-4,008.7	3,075.9	0.00	0.00	0.00	0.00	BEVJAC ZP 08-01H_

Halliburton Company

Planning Report

Database: EDM 5000 Cirque Database
Company: Noble Energy
Project: Weld County, CO (NAD 83)
Site: Sec. 8, T11N, R64W
Well: BEVJAC ZP 08-1H
Wellbore: Plan A - Rev 0 (PERMITTING PLAN ONLY)
Design: Plan A - Rev 0 Proposal

Local Co-ordinate Reference: Site Sec. 8, T11N, R64W
TVD Reference: WELL @ 5629.0ft (Original Well Elev)
MD Reference: WELL @ 5629.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
Point NW										
1,664.0	0.00	0.00	1,664.0	0.0	0.0	0.0	0.00	0.00	0.00	
Base Fox Hills										
4,687.0	0.00	0.00	4,687.0	0.0	0.0	0.0	0.00	0.00	0.00	
Parkman										
7,275.3	0.00	0.00	7,275.3	0.0	0.0	0.0	0.00	0.00	0.00	
KOP - Begin 8.0°/100ft Build at 7275.3ft										
7,300.0	1.98	142.50	7,300.0	-0.4	0.3	0.4	8.00	8.00	0.00	
7,400.0	9.98	142.50	7,399.4	-8.6	6.6	10.8	8.00	8.00	0.00	
7,500.0	17.98	142.50	7,496.3	-27.8	21.3	35.0	8.00	8.00	0.00	
7,600.0	25.98	142.50	7,589.0	-57.4	44.0	72.4	8.00	8.00	0.00	
7,700.0	33.98	142.50	7,675.6	-97.0	74.4	122.3	8.00	8.00	0.00	
7,800.0	41.98	142.50	7,754.3	-145.8	111.9	183.8	8.00	8.00	0.00	
7,900.0	49.98	142.50	7,823.8	-202.8	155.6	255.6	8.00	8.00	0.00	
8,000.0	57.98	142.50	7,882.5	-266.9	204.8	336.4	8.00	8.00	0.00	
8,036.4	60.88	142.50	7,901.0	-291.8	223.9	367.7	8.00	8.00	0.00	
Top_Nio										
8,100.0	65.98	142.50	7,929.5	-336.9	258.5	424.6	8.00	8.00	0.00	
8,200.0	73.98	142.50	7,963.7	-411.4	315.7	518.5	8.00	8.00	0.00	
8,300.0	81.98	142.50	7,984.5	-488.9	375.1	616.2	8.00	8.00	0.00	
8,337.8	85.00	142.50	7,988.8	-518.7	398.0	653.8	8.00	8.00	0.00	
Begin 75ft Tangent at 8337.8ft - 7" Csg										
8,363.4	85.00	142.50	7,991.0	-538.9	413.5	679.2	0.00	0.00	0.00	
Top_LowerB_Target										
8,400.0	85.00	142.50	7,994.2	-567.9	435.7	715.8	0.00	0.00	0.00	
8,412.8	85.00	142.50	7,995.3	-578.0	443.5	728.5	0.00	0.00	0.00	
Continue 8°/100ft Build at 8412.8ft										
8,475.3	90.00	142.50	7,998.0	-627.5	481.5	790.9	8.00	8.00	0.00	
End of Build at 8475.3ft										
8,500.0	90.00	142.50	7,998.0	-647.1	496.5	815.6	0.00	0.00	0.00	
8,600.0	90.00	142.50	7,998.0	-726.4	557.4	915.6	0.00	0.00	0.00	
8,700.0	90.00	142.50	7,998.0	-805.8	618.3	1,015.6	0.00	0.00	0.00	
8,800.0	90.00	142.50	7,998.0	-885.1	679.2	1,115.6	0.00	0.00	0.00	
8,900.0	90.00	142.50	7,998.0	-964.5	740.0	1,215.6	0.00	0.00	0.00	
9,000.0	90.00	142.50	7,998.0	-1,043.8	800.9	1,315.6	0.00	0.00	0.00	
9,100.0	90.00	142.50	7,998.0	-1,123.1	861.8	1,415.6	0.00	0.00	0.00	
9,200.0	90.00	142.50	7,998.0	-1,202.5	922.7	1,515.6	0.00	0.00	0.00	
9,300.0	90.00	142.50	7,998.0	-1,281.8	983.5	1,615.6	0.00	0.00	0.00	
9,400.0	90.00	142.50	7,998.0	-1,361.1	1,044.4	1,715.6	0.00	0.00	0.00	
9,500.0	90.00	142.50	7,998.0	-1,440.5	1,105.3	1,815.6	0.00	0.00	0.00	
9,600.0	90.00	142.50	7,998.0	-1,519.8	1,166.2	1,915.6	0.00	0.00	0.00	
9,700.0	90.00	142.50	7,998.0	-1,599.1	1,227.0	2,015.6	0.00	0.00	0.00	
9,800.0	90.00	142.50	7,998.0	-1,678.5	1,287.9	2,115.6	0.00	0.00	0.00	
9,900.0	90.00	142.50	7,998.0	-1,757.8	1,348.8	2,215.6	0.00	0.00	0.00	
10,000.0	90.00	142.50	7,998.0	-1,837.1	1,409.7	2,315.6	0.00	0.00	0.00	
10,100.0	90.00	142.50	7,998.0	-1,916.5	1,470.5	2,415.6	0.00	0.00	0.00	
10,200.0	90.00	142.50	7,998.0	-1,995.8	1,531.4	2,515.6	0.00	0.00	0.00	
10,300.0	90.00	142.50	7,998.0	-2,075.1	1,592.3	2,615.6	0.00	0.00	0.00	
10,400.0	90.00	142.50	7,998.0	-2,154.5	1,653.2	2,715.6	0.00	0.00	0.00	
10,500.0	90.00	142.50	7,998.0	-2,233.8	1,714.0	2,815.6	0.00	0.00	0.00	
Hold Angle at 90°										
10,600.0	90.00	142.50	7,998.0	-2,313.2	1,774.9	2,915.6	0.00	0.00	0.00	

Halliburton Company

Planning Report

Database: EDM 5000 Cirque Database
Company: Noble Energy
Project: Weld County, CO (NAD 83)
Site: Sec. 8, T11N, R64W
Well: BEVJAC ZP 08-1H
Wellbore: Plan A - Rev 0 (PERMITTING PLAN ONLY)
Design: Plan A - Rev 0 Proposal

Local Co-ordinate Reference: Site Sec. 8, T11N, R64W
TVD Reference: WELL @ 5629.0ft (Original Well Elev)
MD Reference: WELL @ 5629.0ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

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)
10,700.0	90.00	142.50	7,998.0	-2,392.5	1,835.8	3,015.6	0.00	0.00	0.00
10,800.0	90.00	142.50	7,998.0	-2,471.8	1,896.7	3,115.6	0.00	0.00	0.00
10,900.0	90.00	142.50	7,998.0	-2,551.2	1,957.6	3,215.6	0.00	0.00	0.00
11,000.0	90.00	142.50	7,998.0	-2,630.5	2,018.4	3,315.6	0.00	0.00	0.00
11,100.0	90.00	142.50	7,998.0	-2,709.8	2,079.3	3,415.6	0.00	0.00	0.00
11,200.0	90.00	142.50	7,998.0	-2,789.2	2,140.2	3,515.6	0.00	0.00	0.00
11,300.0	90.00	142.50	7,998.0	-2,868.5	2,201.1	3,615.6	0.00	0.00	0.00
11,400.0	90.00	142.50	7,998.0	-2,947.8	2,261.9	3,715.6	0.00	0.00	0.00
11,500.0	90.00	142.50	7,998.0	-3,027.2	2,322.8	3,815.6	0.00	0.00	0.00
11,600.0	90.00	142.50	7,998.0	-3,106.5	2,383.7	3,915.6	0.00	0.00	0.00
11,700.0	90.00	142.50	7,998.0	-3,185.8	2,444.6	4,015.6	0.00	0.00	0.00
11,800.0	90.00	142.50	7,998.0	-3,265.2	2,505.4	4,115.6	0.00	0.00	0.00
11,900.0	90.00	142.50	7,998.0	-3,344.5	2,566.3	4,215.6	0.00	0.00	0.00
12,000.0	90.00	142.50	7,998.0	-3,423.9	2,627.2	4,315.6	0.00	0.00	0.00
12,100.0	90.00	142.50	7,998.0	-3,503.2	2,688.1	4,415.6	0.00	0.00	0.00
12,200.0	90.00	142.50	7,998.0	-3,582.5	2,748.9	4,515.6	0.00	0.00	0.00
12,300.0	90.00	142.50	7,998.0	-3,661.9	2,809.8	4,615.6	0.00	0.00	0.00
12,400.0	90.00	142.50	7,998.0	-3,741.2	2,870.7	4,715.6	0.00	0.00	0.00
12,500.0	90.00	142.50	7,998.0	-3,820.5	2,931.6	4,815.6	0.00	0.00	0.00
12,600.0	90.00	142.50	7,998.0	-3,899.9	2,992.5	4,915.6	0.00	0.00	0.00
12,700.0	90.00	142.50	7,998.0	-3,979.2	3,053.3	5,015.6	0.00	0.00	0.00
12,737.1	90.00	142.50	7,998.0	-4,008.6	3,075.9	5,052.7	0.00	0.00	0.00

Total Depth at 12737.1ft - BEVJAC ZP 08-01H_Plan A - Rev 0_BHL Tgt

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude
Point NW - hit/miss target - Shape	0.00	0.00	0.0	600.0	-600.0	483,880.49	991,812.08	40° 56' 33.086 N	104° 34' 50.661 W
- plan misses target center by 848.5ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Circle (radius 50.0)									
BEVJAC ZP 08-01H_Plan A - hit/miss target - Shape	0.00	0.00	7,998.0	-4,008.7	3,075.9	482,475.73	992,932.52	40° 55' 47.172 N	104° 34' 3.396 W
- plan misses target center by 0.1ft at 12737.1ft MD (7998.0 TVD, -4008.6 N, 3075.9 E) - Circle (radius 50.0)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
8,337.8	7,988.8	7" Csg	7.000	7.500

Halliburton Company
Planning Report

Database:	EDM 5000 Cirque Database	Local Co-ordinate Reference:	Site Sec. 8, T11N, R64W
Company:	Noble Energy	TVD Reference:	WELL @ 5629.0ft (Original Well Elev)
Project:	Weld County, CO (NAD 83)	MD Reference:	WELL @ 5629.0ft (Original Well Elev)
Site:	Sec. 8, T11N, R64W	North Reference:	Grid
Well:	BEVJAC ZP 08-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A - Rev 0 (PERMITTING PLAN ONLY)		
Design:	Plan A - Rev 0 Proposal		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,664.0	830.0	Base Fox Hills		0.00	
4,687.0	3,853.0	Parkman		0.00	
8,036.4	7,067.0	Top_Nio		0.00	
8,363.4	7,157.0	Top_LowerB_Target		0.00	

Plan Annotations

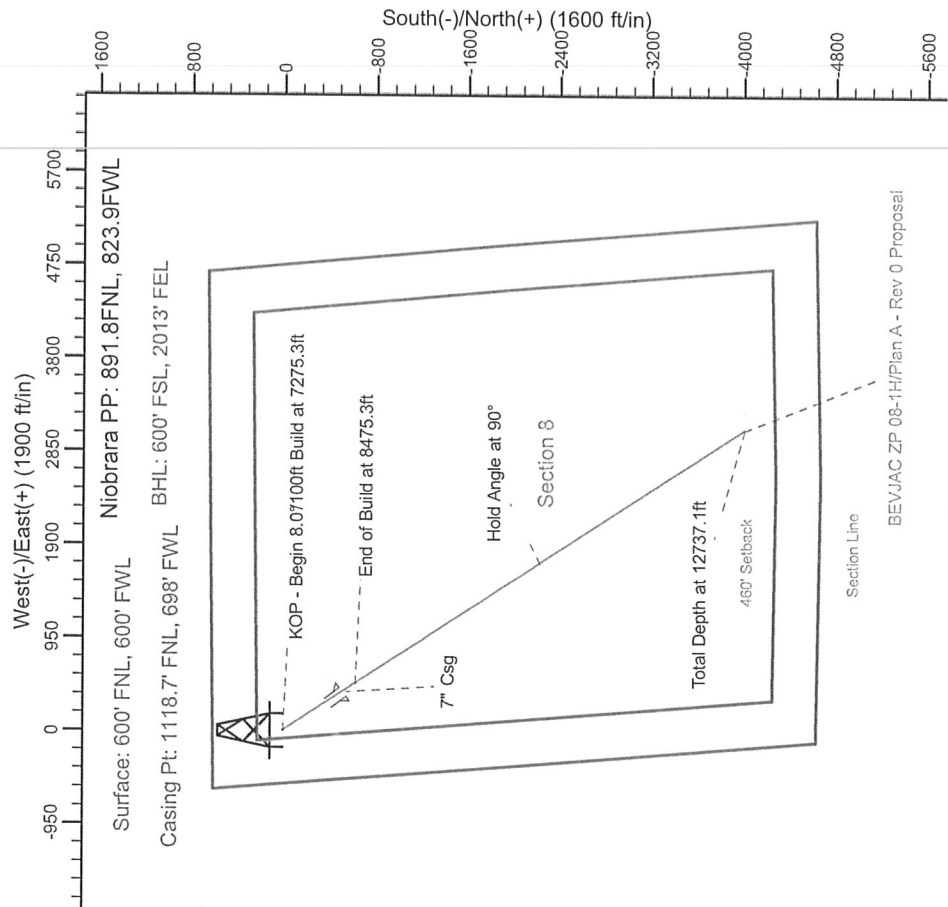
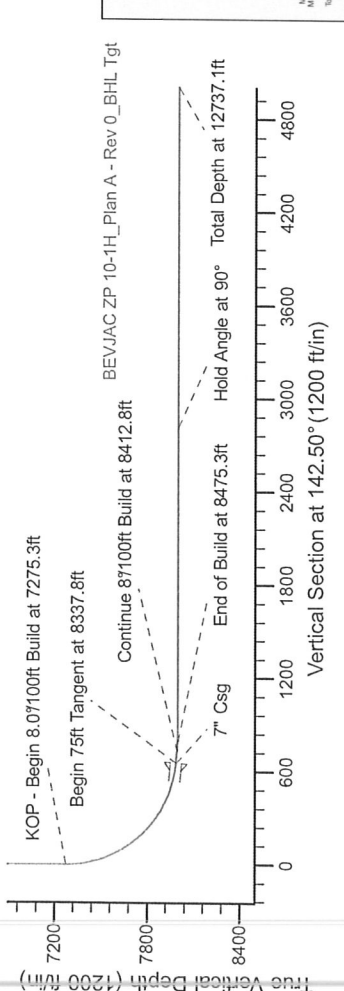
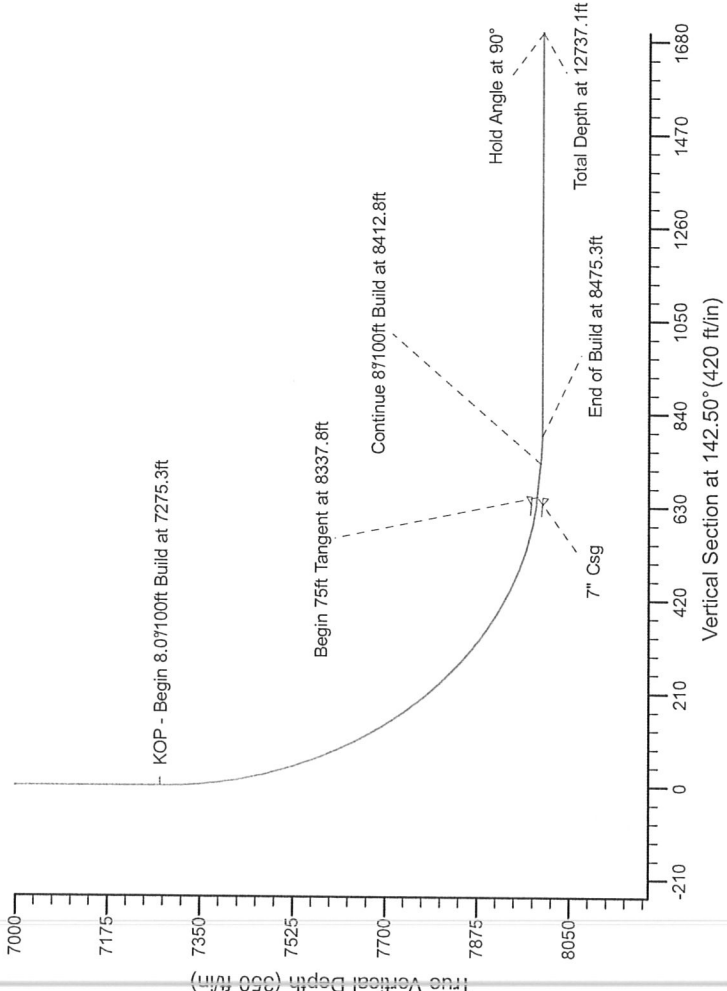
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,275.3	7,275.3	0.0	0.0	KOP - Begin 8.0°/100ft Build at 7275.3ft
8,337.8	7,988.8	-518.7	398.0	Begin 75ft Tangent at 8337.8ft
8,412.8	7,995.3	-578.0	443.5	Continue 8°/100ft Build at 8412.8ft
8,475.3	7,998.0	-627.5	481.5	End of Build at 8475.3ft
10,500.0	7,998.0	-2,233.8	1,714.0	Hold Angle at 90°
12,737.1	7,998.0	-4,008.6	3,075.9	Total Depth at 12737.1ft

Project: Weld County, CO (NAD 83)
 Site: Sec. 8, T11N, R64W
 Well: BEVJAC ZP 08-1H
 Wellbore: Plan A - Rev 0 (PERMITTING PLAN ONLY)
 Design: Plan A - Rev 0 Proposal

SECTION DETAILS

Sec MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	0.0
2	7275.3	0.00	7275.3	0.0	0.0	0.00	0.00	0.0	0.0
3	8337.8	85.00	7988.8	-518.7	398.0	8.00	142.50	653.8	653.8
4	8412.8	85.00	7985.3	-578.0	443.5	0.00	0.00	728.5	728.5
5	8475.3	90.00	7988.0	-627.5	481.5	8.00	0.00	790.9	790.9
6	12737.1	90.00	7998.0	-4008.7	3075.9	0.00	0.00	5052.7	5052.7

BEVJAC ZP 08-01H_Plan A - Rev 0_BHL_Tgt



WELL DETAILS: BEVJAC ZP 08-1H

Ground Level:	5605.0
Northing	483697.59
Easting	991994.96
Latitude	40°56'27.096 N
Longitude	104°34'42.924 W

Plan: Plan A - Rev 0 Proposal (BEVJAC ZP 08-1H/Plan A - Rev 0 (PERMITTING PLAN ONLY))

Created By: Erasmo Mendoza

Date: 9/14, March 10 2011

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Magnetic: Meade 10092910
 True North: 0.00°
 Magnetic North: 8.25°
 Strike: 0.00°
 Dip: 0.00°
 Date: 3/8/2011

Compass rose showing True North (T), Magnetic North (M), and Survey North (S). True North is 0.00° East of True North (Old Convention). Magnetic North is 8.25° East of True North (Magnetic Convention). Survey North is 0.00° East of True North (Survey Convention). To convert a Magnetic Direction to a True Direction, Add 8.25° East.