

# Conoco Phillips Company

Adams County, Colorado

Sec. 33-T3S-R65W

Blue 3-65 32-33 1H

Plan A (Pilot)

Plan: Rev A0

## Sperry Drilling Services

### Proposal Report

20 August, 2014

Well Coordinates: 1,153,974.17 N, 3,235,936.61 E (39° 45' 10.66" N, 104° 39' 39.09" W)

Ground Level: 5,591.90 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

Centered on Well Blue 3-65 32-33 1H

KB 24 ft @ 5615.90usft (H&P 280)

N

True

API - US Survey Feet - Custom

**HALLIBURTON**

Project: Adams County, Colorado  
Site: Sec. 33-T3S-R65W  
Well: Blue 3-65 32-33 1H  
Wellbore: Plan A (Pilot)  
Plan: Rev A0

Conoco Phillips Company

HALLIBURTON  
Sperry Drilling

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	8200.00	0.00	0.00	8200.00	0.00	0.00	0.00	0.00	0.00	Blue 3-65 32-33 1H (Pilot)_Rev A0_BHL Tgt

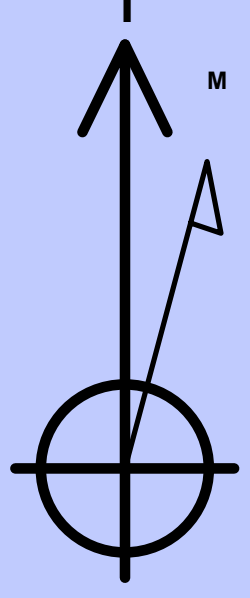
Plan: Rev A0 (Blue 3-65 32-33 1H/Plan A (Pilot))

Created By: Kansa B. BeckerDate: 17:47, August 20 2014

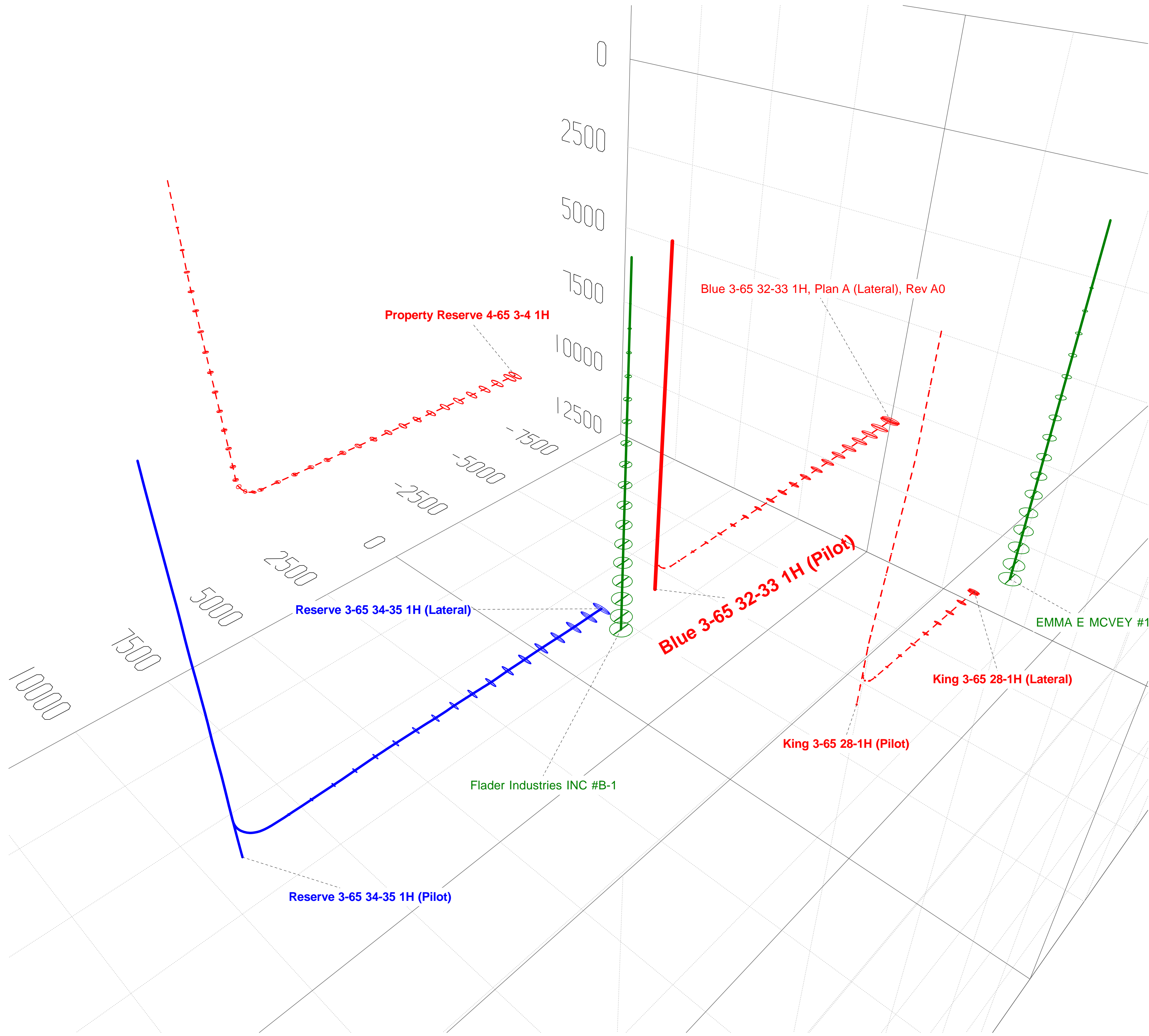
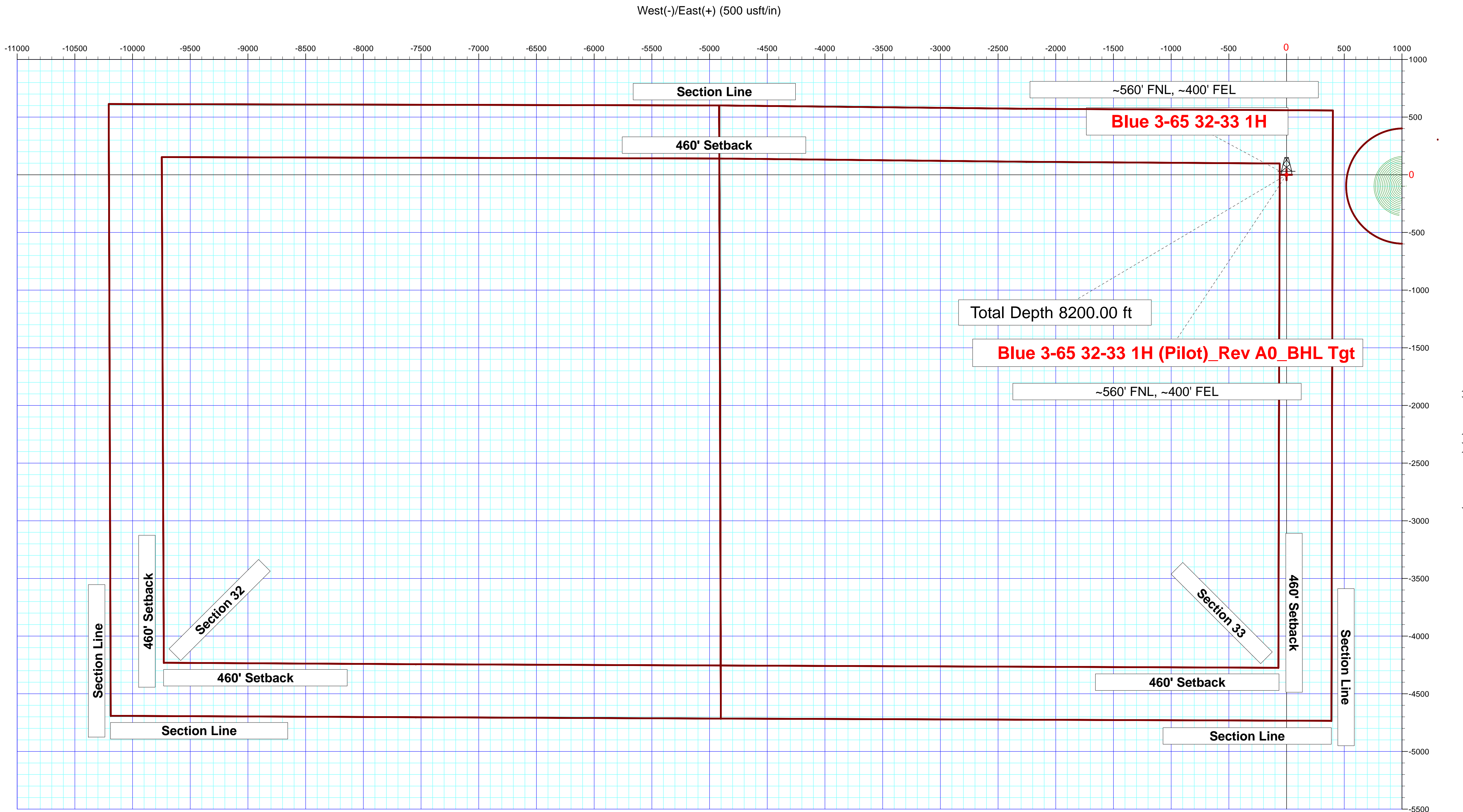
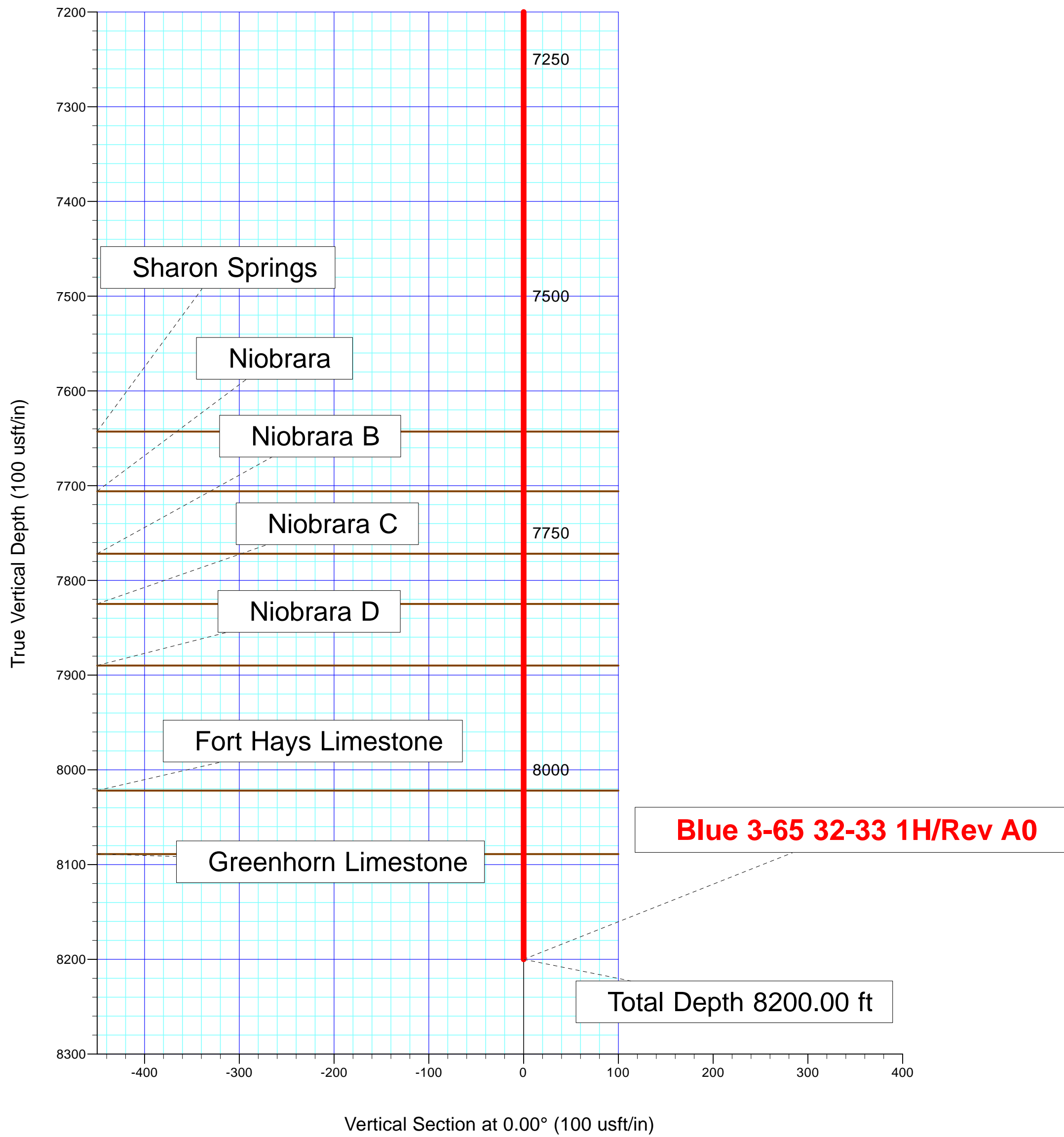
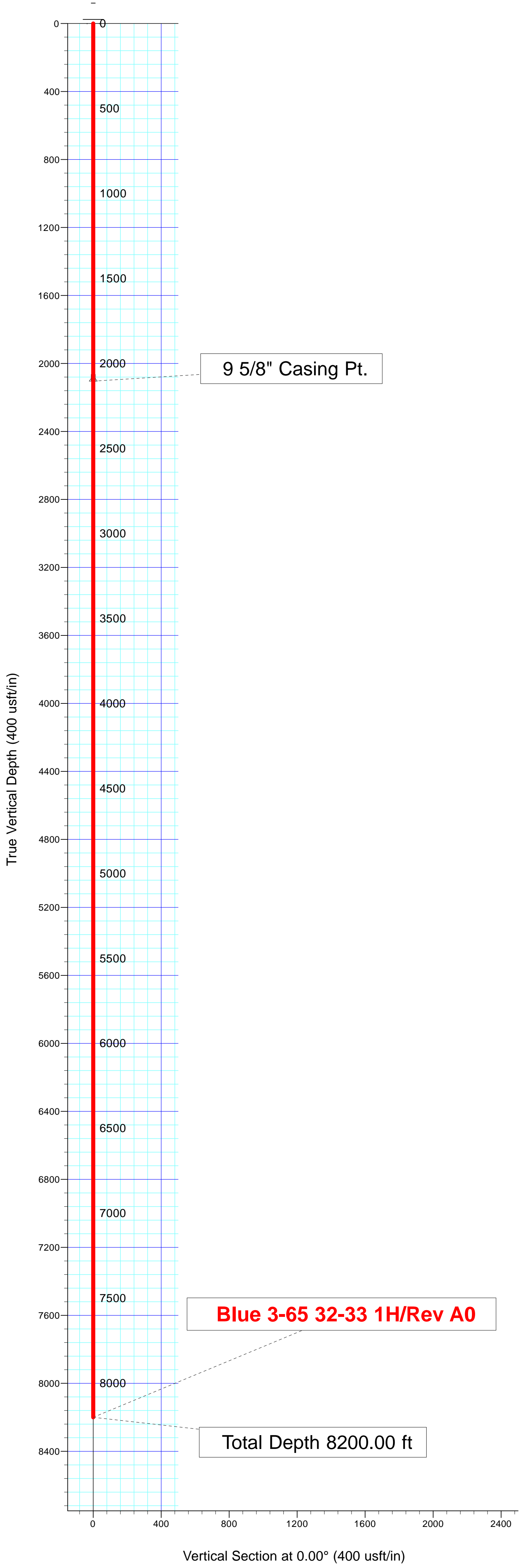
Checked: \_\_\_\_\_Date: \_\_\_\_\_

Reviewed: \_\_\_\_\_Date: \_\_\_\_\_

Approved: \_\_\_\_\_Date: \_\_\_\_\_



Azimuths to True North  
Magnetic Field  
Magnetic North: 8.40°  
Strength: 52319.0snT  
Dip Angle: 66.42°  
Date: 11/19/2014  
Model: BGGM2014



**Plan Report for Blue 3-65 32-33 1H - Rev A0**

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
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
1,570.00	0.00	0.00	1,570.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills</b>										
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
1,904.00	0.00	0.00	1,904.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pierre Shale</b>										
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
2,104.00	0.00	0.00	2,104.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Surface Casing - 9 5/8" Casing Pt.</b>										
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
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Plan Report for Blue 3-65 32-33 1H - Rev A0**

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 (°)
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,643.00	0.00	0.00	7,643.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Sharon Springs</b>										
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,706.00	0.00	0.00	7,706.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Niobrara</b>										
7,772.00	0.00	0.00	7,772.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Niobrara B</b>										
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,825.00	0.00	0.00	7,825.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Niobrara C</b>										
7,890.00	0.00	0.00	7,890.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Niobrara D</b>										
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,022.00	0.00	0.00	8,022.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fort Hays Limestone</b>										
8,089.00	0.00	0.00	8,089.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Greenhorn Limestone</b>										
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Depth 8200.00 ft</b>										

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,200.00	8,200.00	0.00	0.00	Total Depth 8200.00 ft

## Plan Report for Blue 3-65 32-33 1H - Rev A0

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
Target	Blue 3-65 32-33 1H (Pilot)_Rev A0_BHL Tgt	0.00	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	2,104.00	Rev A0	NS-GYRO-MS
2,104.00	8,200.00	Rev A0	MWD

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,104.00	2,104.00	9 5/8" Casing Pt.	9-5/8	13-1/2

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,570.00	1,570.00	Fox Hills			
1,904.00	1,904.00	Pierre Shale			
2,104.00	2,104.00	Surface Casing			
7,643.00	7,643.00	Sharon Springs			
7,706.00	7,706.00	Niobrara			
7,772.00	7,772.00	Niobrara B			
7,825.00	7,825.00	Niobrara C			
7,890.00	7,890.00	Niobrara D			
8,022.00	8,022.00	Fort Hays Limestone			
8,089.00	8,089.00	Greenhorn Limestone			

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Blue 3-65 32-33 1H_SB	0.00	0.00	0.00	Polygon
Blue 3-65 32-33 1H_SL	0.00	0.00	0.00	Polygon
EMMA E MCVEY #1_500 ft SB	3.50	5,305.42	-6,869.11	Circle
Flader Industries INC B-1_SB (500 ft)	85.90	-97.64	1,016.53	Circle
Blue 3-65 32-33 1H (Pilot)_Rev A0_BHL Tgt	8,200.00	0.00	0.00	Point

Plan Report for Blue 3-65 32-33 1H - Rev A0

Directional Difficulty Index

Average Dogleg over Survey:	0.00 °/100usft	Maximum Dogleg over Survey:	0.00 °/100usft at 0.00 usft
Net Tortousity applicable to Plans:	0.00 °/100usft	Directional Difficulty Index:	0.000

Audit Info

North Reference Sheet for Sec. 33-T3S-R65W - Blue 3-65 32-33 1H - Plan A (Pilot)

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference .  
Vertical Depths are relative to KB 24 ft @ 5615.90usft (H&P 280). Northing and Easting are relative to Blue 3-65 32-33 1H  
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° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°  
False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99999434

Grid Coordinates of Well: 1,153,974.17 usft N, 3,235,936.61 usft E  
Geographical Coordinates of Well: 39° 45' 10.66" N, 104° 39' 39.09" W  
Grid Convergence at Surface is: 0.54°

Based upon Minimum Curvature type calculations, at a Measured Depth of 8,200.00usft  
the Bottom Hole Displacement is 0.00usft in the Direction of 0.00° ( True).

Magnetic Convergence at surface is: -7.85° (19 November 2014, , BGGM2014)

