

# Conoco Phillips Company

Adams County, Colorado

Sec. 33-T3S-R65W

Blue 3-65 32-33 1H

Plan A (Lateral)

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 (Lateral)  
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	7262.05	0.00	0.00	7262.05	0.00	0.00	0.00	0.00	0.00	
3	8158.91	89.69	270.30	7835.00	3.03	-569.81	10.00	270.30	569.82	
4	17468.77	89.69	270.30	7886.00	52.55	-9879.40	0.00	0.00	9879.54	Blue 3-65 32-33 1H (Lateral)_Rev A0_BHL Tgt

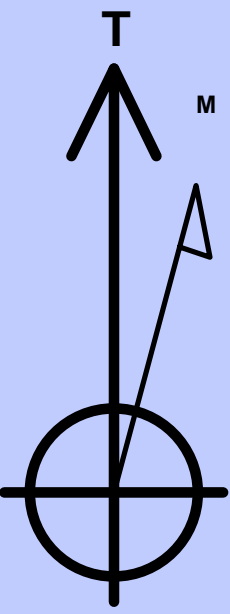
Plan: Rev A0 (Blue 3-65 32-33 1H/Plan A (Lateral))

Created By: Kansa B. Becker Date: 17:43, August 20 2014

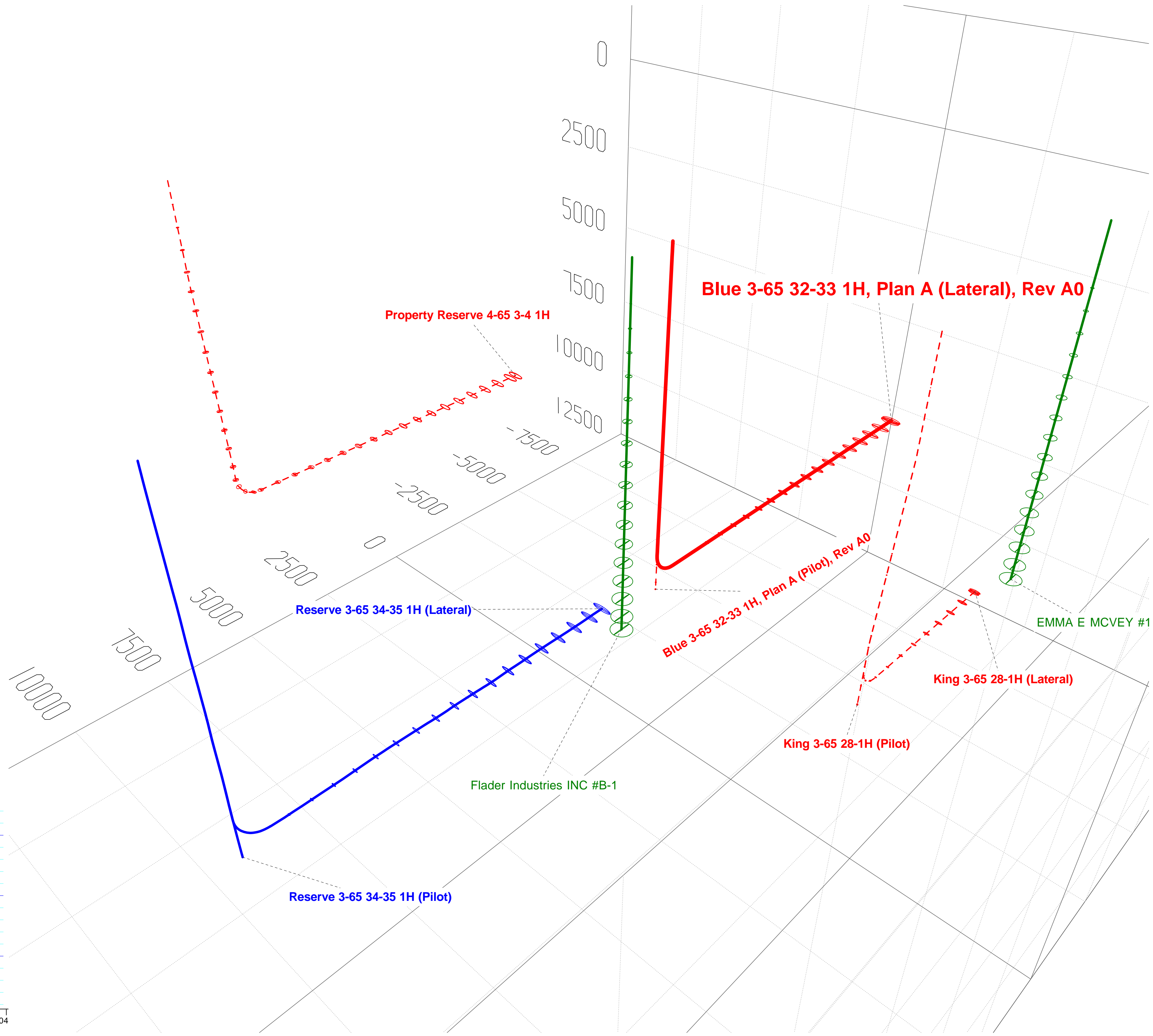
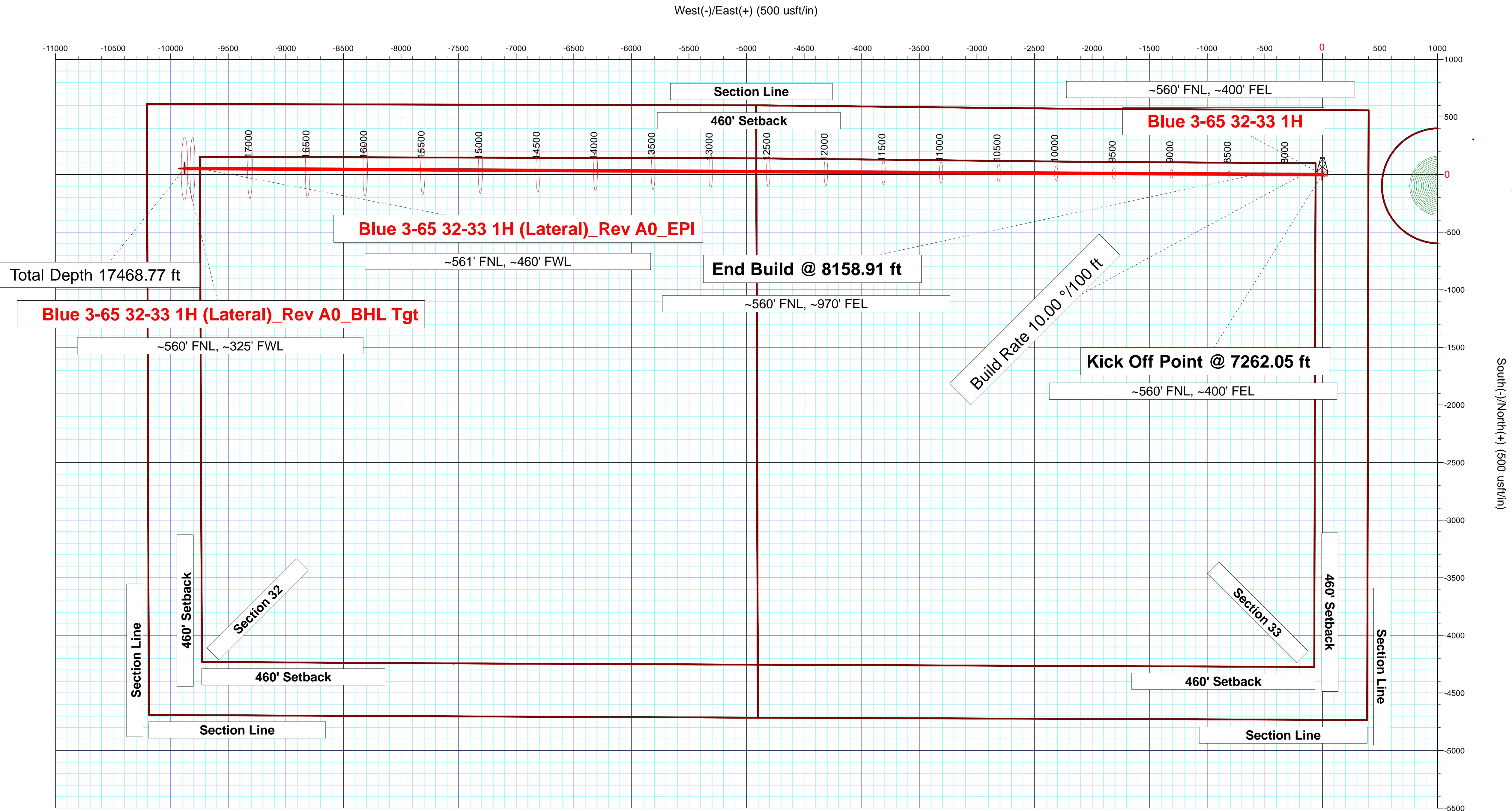
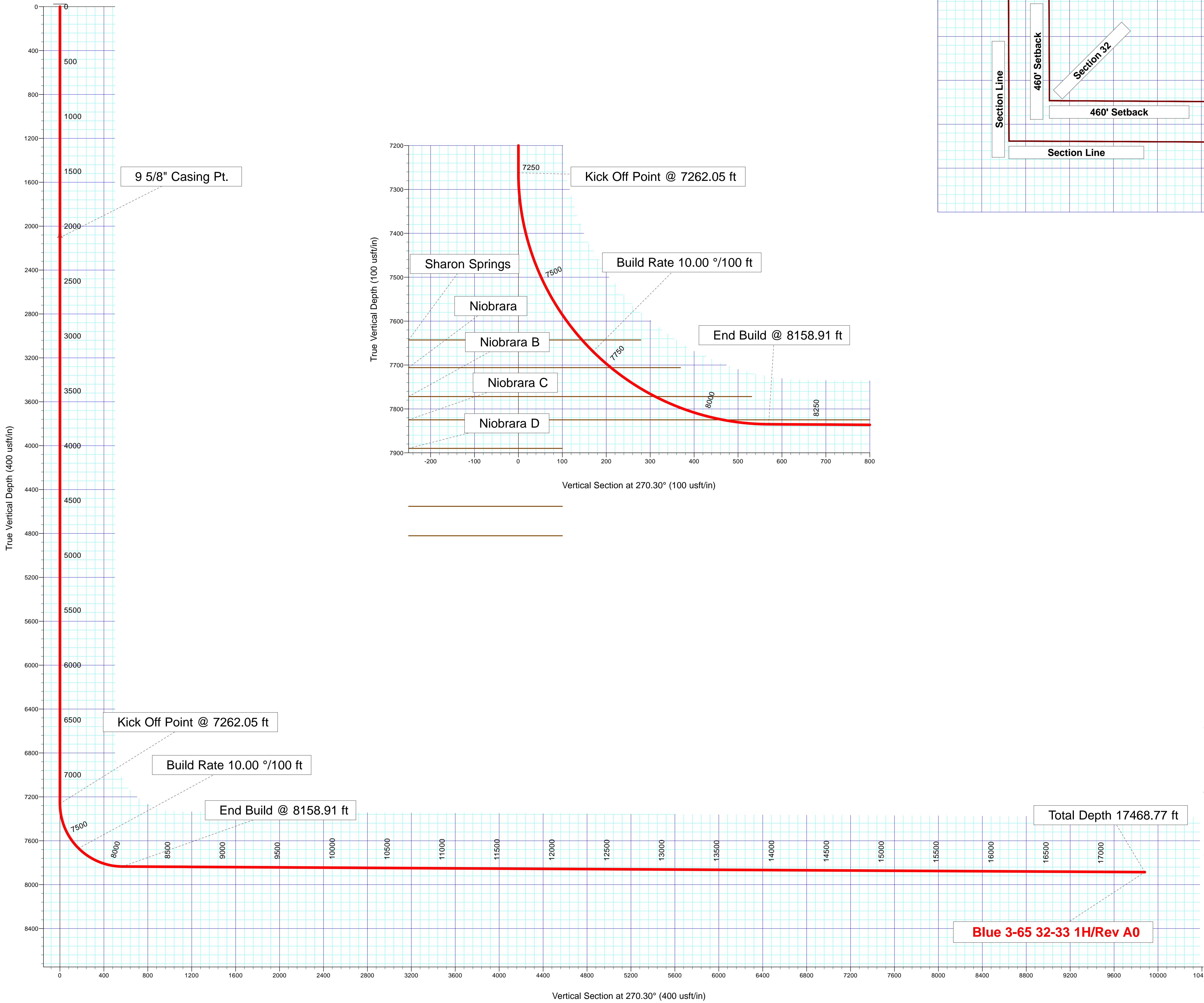
Checked: Date:

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
7,262.05	0.00	0.00	7,262.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Kick Off Point @ 7262.05 ft</b>										
7,300.00	3.80	270.30	7,299.97	0.01	-1.26	1.26	10.00	10.00	0.00	270.30
7,400.00	13.80	270.30	7,398.67	0.09	-16.53	16.53	10.00	10.00	0.00	0.00
7,500.00	23.80	270.30	7,493.22	0.26	-48.70	48.70	10.00	10.00	0.00	0.00
7,600.00	33.80	270.30	7,580.74	0.51	-96.81	96.81	10.00	10.00	0.00	0.00
7,678.78	41.67	270.30	7,643.00	0.77	-144.99	144.99	10.00	10.00	0.00	0.00
<b>Sharon Springs</b>										
7,700.00	43.80	270.30	7,658.58	0.85	-159.38	159.39	10.00	10.00	0.00	0.00
7,715.00	45.30	270.30	7,669.27	0.90	-169.90	169.91	10.00	10.00	0.00	0.00
<b>Build Rate 10.00 °/100 ft</b>										
7,769.95	50.79	270.30	7,706.00	1.12	-210.75	210.76	10.00	10.00	0.00	0.00
<b>Niobrara</b>										
7,800.00	53.80	270.30	7,724.37	1.25	-234.52	234.53	10.00	10.00	0.00	0.00
7,890.82	62.88	270.30	7,772.00	1.66	-311.74	311.75	10.00	10.00	0.00	0.00
<b>Niobrara B</b>										
7,900.00	63.80	270.30	7,776.12	1.70	-319.94	319.95	10.00	10.00	0.00	0.00
8,000.00	73.80	270.30	7,812.24	2.20	-413.05	413.06	10.00	10.00	0.00	0.00
8,054.80	79.28	270.30	7,825.00	2.48	-466.33	466.34	10.00	10.00	0.00	0.00
<b>Niobrara C</b>										
8,100.00	83.80	270.30	7,831.65	2.72	-511.02	511.03	10.00	10.00	0.00	0.00
8,158.91	89.69	270.30	7,835.00	3.03	-569.81	569.82	10.00	10.00	0.00	0.00
<b>End Build @ 8158.91 ft</b>										
8,200.00	89.69	270.30	7,835.22	3.25	-610.90	610.91	0.00	0.00	0.00	0.00
8,300.00	89.69	270.30	7,835.77	3.78	-710.90	710.91	0.00	0.00	0.00	0.00
8,400.00	89.69	270.30	7,836.32	4.31	-810.89	810.90	0.00	0.00	0.00	0.00
8,500.00	89.69	270.30	7,836.87	4.85	-910.89	910.90	0.00	0.00	0.00	0.00
8,600.00	89.69	270.30	7,837.42	5.38	-1,010.89	1,010.90	0.00	0.00	0.00	0.00
8,700.00	89.69	270.30	7,837.96	5.91	-1,110.88	1,110.90	0.00	0.00	0.00	0.00
8,800.00	89.69	270.30	7,838.51	6.44	-1,210.88	1,210.90	0.00	0.00	0.00	0.00
8,900.00	89.69	270.30	7,839.06	6.97	-1,310.88	1,310.90	0.00	0.00	0.00	0.00
9,000.00	89.69	270.30	7,839.61	7.51	-1,410.88	1,410.90	0.00	0.00	0.00	0.00
9,100.00	89.69	270.30	7,840.15	8.04	-1,510.87	1,510.89	0.00	0.00	0.00	0.00
9,200.00	89.69	270.30	7,840.70	8.57	-1,610.87	1,610.89	0.00	0.00	0.00	0.00
9,300.00	89.69	270.30	7,841.25	9.10	-1,710.87	1,710.89	0.00	0.00	0.00	0.00
9,400.00	89.69	270.30	7,841.80	9.63	-1,810.86	1,810.89	0.00	0.00	0.00	0.00
9,500.00	89.69	270.30	7,842.35	10.17	-1,910.86	1,910.89	0.00	0.00	0.00	0.00
9,600.00	89.69	270.30	7,842.89	10.70	-2,010.86	2,010.89	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 (°)
9,700.00	89.69	270.30	7,843.44	11.23	-2,110.85	2,110.88	0.00	0.00	0.00	0.00
9,800.00	89.69	270.30	7,843.99	11.76	-2,210.85	2,210.88	0.00	0.00	0.00	0.00
9,900.00	89.69	270.30	7,844.54	12.29	-2,310.85	2,310.88	0.00	0.00	0.00	0.00
10,000.00	89.69	270.30	7,845.08	12.82	-2,410.85	2,410.88	0.00	0.00	0.00	0.00
10,100.00	89.69	270.30	7,845.63	13.36	-2,510.84	2,510.88	0.00	0.00	0.00	0.00
10,200.00	89.69	270.30	7,846.18	13.89	-2,610.84	2,610.88	0.00	0.00	0.00	0.00
10,300.00	89.69	270.30	7,846.73	14.42	-2,710.84	2,710.88	0.00	0.00	0.00	0.00
10,400.00	89.69	270.30	7,847.28	14.95	-2,810.83	2,810.87	0.00	0.00	0.00	0.00
10,500.00	89.69	270.30	7,847.82	15.48	-2,910.83	2,910.87	0.00	0.00	0.00	0.00
10,600.00	89.69	270.30	7,848.37	16.02	-3,010.83	3,010.87	0.00	0.00	0.00	0.00
10,700.00	89.69	270.30	7,848.92	16.55	-3,110.83	3,110.87	0.00	0.00	0.00	0.00
10,800.00	89.69	270.30	7,849.47	17.08	-3,210.82	3,210.87	0.00	0.00	0.00	0.00
10,900.00	89.69	270.30	7,850.02	17.61	-3,310.82	3,310.87	0.00	0.00	0.00	0.00
11,000.00	89.69	270.30	7,850.56	18.14	-3,410.82	3,410.87	0.00	0.00	0.00	0.00
11,100.00	89.69	270.30	7,851.11	18.68	-3,510.81	3,510.86	0.00	0.00	0.00	0.00
11,200.00	89.69	270.30	7,851.66	19.21	-3,610.81	3,610.86	0.00	0.00	0.00	0.00
11,300.00	89.69	270.30	7,852.21	19.74	-3,710.81	3,710.86	0.00	0.00	0.00	0.00
11,400.00	89.69	270.30	7,852.75	20.27	-3,810.81	3,810.86	0.00	0.00	0.00	0.00
11,500.00	89.69	270.30	7,853.30	20.80	-3,910.80	3,910.86	0.00	0.00	0.00	0.00
11,600.00	89.69	270.30	7,853.85	21.34	-4,010.80	4,010.86	0.00	0.00	0.00	0.00
11,700.00	89.69	270.30	7,854.40	21.87	-4,110.80	4,110.85	0.00	0.00	0.00	0.00
11,800.00	89.69	270.30	7,854.95	22.40	-4,210.79	4,210.85	0.00	0.00	0.00	0.00
11,900.00	89.69	270.30	7,855.49	22.93	-4,310.79	4,310.85	0.00	0.00	0.00	0.00
12,000.00	89.69	270.30	7,856.04	23.46	-4,410.79	4,410.85	0.00	0.00	0.00	0.00
12,100.00	89.69	270.30	7,856.59	24.00	-4,510.78	4,510.85	0.00	0.00	0.00	0.00
12,200.00	89.69	270.30	7,857.14	24.53	-4,610.78	4,610.85	0.00	0.00	0.00	0.00
12,300.00	89.69	270.30	7,857.68	25.06	-4,710.78	4,710.85	0.00	0.00	0.00	0.00
12,400.00	89.69	270.30	7,858.23	25.59	-4,810.78	4,810.84	0.00	0.00	0.00	0.00
12,500.00	89.69	270.30	7,858.78	26.12	-4,910.77	4,910.84	0.00	0.00	0.00	0.00
12,600.00	89.69	270.30	7,859.33	26.66	-5,010.77	5,010.84	0.00	0.00	0.00	0.00
12,700.00	89.69	270.30	7,859.88	27.19	-5,110.77	5,110.84	0.00	0.00	0.00	0.00
12,800.00	89.69	270.30	7,860.42	27.72	-5,210.76	5,210.84	0.00	0.00	0.00	0.00
12,900.00	89.69	270.30	7,860.97	28.25	-5,310.76	5,310.84	0.00	0.00	0.00	0.00
13,000.00	89.69	270.30	7,861.52	28.78	-5,410.76	5,410.84	0.00	0.00	0.00	0.00
13,100.00	89.69	270.30	7,862.07	29.32	-5,510.76	5,510.83	0.00	0.00	0.00	0.00
13,200.00	89.69	270.30	7,862.62	29.85	-5,610.75	5,610.83	0.00	0.00	0.00	0.00
13,300.00	89.69	270.30	7,863.16	30.38	-5,710.75	5,710.83	0.00	0.00	0.00	0.00
13,400.00	89.69	270.30	7,863.71	30.91	-5,810.75	5,810.83	0.00	0.00	0.00	0.00
13,500.00	89.69	270.30	7,864.26	31.44	-5,910.74	5,910.83	0.00	0.00	0.00	0.00
13,600.00	89.69	270.30	7,864.81	31.98	-6,010.74	6,010.83	0.00	0.00	0.00	0.00
13,700.00	89.69	270.30	7,865.35	32.51	-6,110.74	6,110.82	0.00	0.00	0.00	0.00
13,800.00	89.69	270.30	7,865.90	33.04	-6,210.74	6,210.82	0.00	0.00	0.00	0.00
13,900.00	89.69	270.30	7,866.45	33.57	-6,310.73	6,310.82	0.00	0.00	0.00	0.00
14,000.00	89.69	270.30	7,867.00	34.10	-6,410.73	6,410.82	0.00	0.00	0.00	0.00
14,100.00	89.69	270.30	7,867.55	34.63	-6,510.73	6,510.82	0.00	0.00	0.00	0.00
14,200.00	89.69	270.30	7,868.09	35.17	-6,610.72	6,610.82	0.00	0.00	0.00	0.00
14,300.00	89.69	270.30	7,868.64	35.70	-6,710.72	6,710.82	0.00	0.00	0.00	0.00
14,400.00	89.69	270.30	7,869.19	36.23	-6,810.72	6,810.81	0.00	0.00	0.00	0.00
14,500.00	89.69	270.30	7,869.74	36.76	-6,910.71	6,910.81	0.00	0.00	0.00	0.00
14,600.00	89.69	270.30	7,870.28	37.29	-7,010.71	7,010.81	0.00	0.00	0.00	0.00
14,700.00	89.69	270.30	7,870.83	37.83	-7,110.71	7,110.81	0.00	0.00	0.00	0.00
14,800.00	89.69	270.30	7,871.38	38.36	-7,210.71	7,210.81	0.00	0.00	0.00	0.00
14,900.00	89.69	270.30	7,871.93	38.89	-7,310.70	7,310.81	0.00	0.00	0.00	0.00
15,000.00	89.69	270.30	7,872.48	39.42	-7,410.70	7,410.81	0.00	0.00	0.00	0.00
15,100.00	89.69	270.30	7,873.02	39.95	-7,510.70	7,510.80	0.00	0.00	0.00	0.00
15,200.00	89.69	270.30	7,873.57	40.49	-7,610.69	7,610.80	0.00	0.00	0.00	0.00
15,300.00	89.69	270.30	7,874.12	41.02	-7,710.69	7,710.80	0.00	0.00	0.00	0.00
15,400.00	89.69	270.30	7,874.67	41.55	-7,810.69	7,810.80	0.00	0.00	0.00	0.00
15,500.00	89.69	270.30	7,875.21	42.08	-7,910.69	7,910.80	0.00	0.00	0.00	0.00
15,600.00	89.69	270.30	7,875.76	42.61	-8,010.68	8,010.80	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 (°)
15,700.00	89.69	270.30	7,876.31	43.15	-8,110.68	8,110.79	0.00	0.00	0.00	0.00
15,800.00	89.69	270.30	7,876.86	43.68	-8,210.68	8,210.79	0.00	0.00	0.00	0.00
15,900.00	89.69	270.30	7,877.41	44.21	-8,310.67	8,310.79	0.00	0.00	0.00	0.00
16,000.00	89.69	270.30	7,877.95	44.74	-8,410.67	8,410.79	0.00	0.00	0.00	0.00
16,100.00	89.69	270.30	7,878.50	45.27	-8,510.67	8,510.79	0.00	0.00	0.00	0.00
16,200.00	89.69	270.30	7,879.05	45.81	-8,610.67	8,610.79	0.00	0.00	0.00	0.00
16,300.00	89.69	270.30	7,879.60	46.34	-8,710.66	8,710.79	0.00	0.00	0.00	0.00
16,400.00	89.69	270.30	7,880.15	46.87	-8,810.66	8,810.78	0.00	0.00	0.00	0.00
16,500.00	89.69	270.30	7,880.69	47.40	-8,910.66	8,910.78	0.00	0.00	0.00	0.00
16,600.00	89.69	270.30	7,881.24	47.93	-9,010.65	9,010.78	0.00	0.00	0.00	0.00
16,700.00	89.69	270.30	7,881.79	48.47	-9,110.65	9,110.78	0.00	0.00	0.00	0.00
16,800.00	89.69	270.30	7,882.34	49.00	-9,210.65	9,210.78	0.00	0.00	0.00	0.00
16,900.00	89.69	270.30	7,882.88	49.53	-9,310.64	9,310.78	0.00	0.00	0.00	0.00
17,000.00	89.69	270.30	7,883.43	50.06	-9,410.64	9,410.78	0.00	0.00	0.00	0.00
17,100.00	89.69	270.30	7,883.98	50.59	-9,510.64	9,510.77	0.00	0.00	0.00	0.00
17,200.00	89.69	270.30	7,884.53	51.13	-9,610.64	9,610.77	0.00	0.00	0.00	0.00
17,300.00	89.69	270.30	7,885.08	51.66	-9,710.63	9,710.77	0.00	0.00	0.00	0.00
17,400.00	89.69	270.30	7,885.62	52.19	-9,810.63	9,810.77	0.00	0.00	0.00	0.00
17,468.77	89.69	270.30	7,886.00	52.55	-9,879.40	9,879.54	0.00	0.00	0.00	0.00
Total Depth 17468.77 ft										

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
7,262.05	7,262.05	0.00	0.00	Kick Off Point @ 7262.05 ft
7,715.00	7,669.27	0.90	-169.90	Build Rate 10.00 °/100 ft
8,158.91	7,835.00	3.03	-569.81	End Build @ 8158.91 ft
17,468.77	7,886.00	52.55	-9,879.40	Total Depth 17468.77 ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	+E/-W (usft)	Start TVD (usft)
Target	Blue 3-65 32-33 1H (Lateral)_Rev A0_BHL Tgt	270.30	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	17,468.77	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

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

### 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			
7,678.78	7,643.00	Sharon Springs			
7,769.95	7,706.00	Niobrara			
7,890.82	7,772.00	Niobrara B			
8,054.80	7,825.00	Niobrara C			

### *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 (Lateral)_Rev A0_EPI	7,886.00	51.49	-9,744.39	Point
Blue 3-65 32-33 1H (Lateral)_Rev A0_BHL Tgt	7,886.00	52.55	-9,879.40	Point

### Directional Difficulty Index

Average Dogleg over Survey:	0.51 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 8,158.91 usft
Net Tortousity applicable to Plans:	0.51 °/100usft	Directional Difficulty Index:	6.577

### Audit Info

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

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 17,468.77usft  
the Bottom Hole Displacement is 9,879.54usft in the Direction of 270.30° ( True).  
Magnetic Convergence at surface is: -7.85° (19 November 2014, , BGGM2014)

