

BC Operating, Inc.

Lea Co, NM (Nad-83_2010)

Blue Quail 7 Fed Com 4H

Blue Quail 7 Fed Com 4H

Lateral #1

Plan: Design #1

Standard Planning Report

22 April, 2015

HOBBS OCD
MAR 09 2017
RECEIVED

M3P
DIRECTIONAL
SERVICES

M3P Directional Services

Planning Report



Database: EDM 5000.1 Single User Db
Company: BC Operating, Inc.
Project: Lea Co, NM (Nad-83_2010)
Site: Blue Quail 7 Fed Com 4H
Well: Blue Quail 7 Fed Com 4H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Site Blue Quail 7 Fed Com 4H
WELL @ 3538.00usft (Original Well Elev)
WELL @ 3538.00usft (Original Well Elev)
Grid
Minimum Curvature

Project Lea Co, NM (Nad-83_2010)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

Site Blue Quail 7 Fed Com 4H, Sec 6, T-23S, R-32E

Site Position: Northing: 482,986.42 usft Latitude: 32° 19' 34.747 N
From: Map Easting: 730,310.85 usft Longitude: 103° 43' 17.568 W
Position Uncertainty: 0.00 usft Slot Radius: 13-3/16 " Grid Convergence: 0.33 °

Well Blue Quail 7 Fed Com 4H

Well Position +N/-S 0.00 usft Northing: 482,986.42 usft Latitude: 32° 19' 34.747 N
 +E/-W 0.00 usft Easting: 730,310.85 usft Longitude: 103° 43' 17.568 W
Position Uncertainty 0.00 usft Wellhead Elevation: Ground Level: 3,513.00 usft

Wellbore Lateral #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/22/2015	7.19	60.16	48,276

Design Design #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.69

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,227.04	0.00	0.00	11,227.04	0.00	0.00	0.00	0.00	0.00	0.00	
12,127.04	90.00	179.69	11,800.00	-572.95	3.11	10.00	10.00	0.00	179.69	
16,632.37	90.00	179.69	11,800.00	-5,078.21	27.56	0.00	0.00	0.00	0.00	PBHL - TD (BQ7FC4)

M3P Directional Services

Planning Report



Database: EDM 5000.1 Single User Db
 Company: BC Operating, Inc.
 Project: Lea Co, NM (Nad-83_2010)
 Site: Blue Quail 7 Fed Com 4H
 Well: Blue Quail 7 Fed Com 4H
 Wellbore: Lateral #1
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site Blue Quail 7 Fed Com 4H
 WELL @ 3538.00usft (Original Well Elev)
 WELL @ 3538.00usft (Original Well Elev)
 Grid
 Minimum Curvature

Planned Survey

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)
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
200.00	0.00	0.00	200.00	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
400.00	0.00	0.00	400.00	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
600.00	0.00	0.00	600.00	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
800.00	0.00	0.00	800.00	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
1,000.00	0.00	0.00	1,000.00	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
1,200.00	0.00	0.00	1,200.00	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
1,400.00	0.00	0.00	1,400.00	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
1,600.00	0.00	0.00	1,600.00	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
1,800.00	0.00	0.00	1,800.00	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
2,000.00	0.00	0.00	2,000.00	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
2,200.00	0.00	0.00	2,200.00	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
2,400.00	0.00	0.00	2,400.00	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
2,600.00	0.00	0.00	2,600.00	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
2,800.00	0.00	0.00	2,800.00	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
3,000.00	0.00	0.00	3,000.00	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
3,200.00	0.00	0.00	3,200.00	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
3,400.00	0.00	0.00	3,400.00	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
3,600.00	0.00	0.00	3,600.00	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
3,800.00	0.00	0.00	3,800.00	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
4,000.00	0.00	0.00	4,000.00	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
4,200.00	0.00	0.00	4,200.00	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
4,400.00	0.00	0.00	4,400.00	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
4,600.00	0.00	0.00	4,600.00	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
4,800.00	0.00	0.00	4,800.00	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
5,000.00	0.00	0.00	5,000.00	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
5,200.00	0.00	0.00	5,200.00	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

M3P Directional Services

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Blue Quail 7 Fed Com 4H
Company:	BC Operating, Inc.	TVD Reference:	WELL @ 3538.00usft (Original Well Elev)
Project:	Lea Co, NM (Nad-83_2010)	MD Reference:	WELL @ 3538.00usft (Original Well Elev)
Site:	Blue Quail 7 Fed Com 4H	North Reference:	Grid
Well:	Blue Quail 7 Fed Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Planned Survey										
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)	
5,400.00	0.00	0.00	5,400.00	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	
5,600.00	0.00	0.00	5,600.00	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	
5,800.00	0.00	0.00	5,800.00	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	
6,000.00	0.00	0.00	6,000.00	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	
6,200.00	0.00	0.00	6,200.00	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	
6,400.00	0.00	0.00	6,400.00	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	
6,600.00	0.00	0.00	6,600.00	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	
6,800.00	0.00	0.00	6,800.00	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	
7,000.00	0.00	0.00	7,000.00	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	
7,200.00	0.00	0.00	7,200.00	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	
7,400.00	0.00	0.00	7,400.00	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	
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,900.00	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	
8,100.00	0.00	0.00	8,100.00	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	
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,700.00	0.00	0.00	0.00	0.00	0.00	0.00	

M3P Directional Services

Planning Report



Database: EDM 5000.1 Single User Db
Company: BC Operating, Inc.
Project: Lea Co, NM (Nad-83_2010)
Site: Blue Quail 7 Fed Com 4H
Well: Blue Quail 7 Fed Com 4H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Site Blue Quail 7 Fed Com 4H
WELL @ 3538.00usft (Original Well Elev)
WELL @ 3538.00usft (Original Well Elev)
Grid
Minimum Curvature

Planned Survey

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)
10,800.00	0.00	0.00	10,800.00	0.00	0.00	0.00	0.00	0.00	0.00
10,900.00	0.00	0.00	10,900.00	0.00	0.00	0.00	0.00	0.00	0.00
11,000.00	0.00	0.00	11,000.00	0.00	0.00	0.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,100.00	0.00	0.00	0.00	0.00	0.00	0.00
11,200.00	0.00	0.00	11,200.00	0.00	0.00	0.00	0.00	0.00	0.00
11,227.04	0.00	0.00	11,227.04	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 10°/100'									
11,250.00	2.30	179.69	11,249.99	-0.46	0.00	0.46	10.00	10.00	0.00
11,300.00	7.30	179.69	11,299.80	-4.64	0.03	4.64	10.00	10.00	0.00
11,350.00	12.30	179.69	11,349.06	-13.14	0.07	13.14	10.00	10.00	0.00
11,400.00	17.30	179.69	11,397.39	-25.91	0.14	25.91	10.00	10.00	0.00
11,450.00	22.30	179.69	11,444.42	-42.84	0.23	42.84	10.00	10.00	0.00
11,500.00	27.30	179.69	11,489.79	-63.80	0.35	63.80	10.00	10.00	0.00
11,550.00	32.30	179.69	11,533.17	-88.63	0.48	88.64	10.00	10.00	0.00
11,600.00	37.30	179.69	11,574.21	-117.16	0.64	117.16	10.00	10.00	0.00
11,650.00	42.30	179.69	11,612.62	-149.15	0.81	149.15	10.00	10.00	0.00
11,700.00	47.30	179.69	11,648.09	-184.37	1.00	184.37	10.00	10.00	0.00
11,750.00	52.30	179.69	11,680.35	-222.54	1.21	222.55	10.00	10.00	0.00
11,800.00	57.30	179.69	11,709.17	-263.38	1.43	263.39	10.00	10.00	0.00
11,850.00	62.30	179.69	11,734.32	-306.58	1.66	306.59	10.00	10.00	0.00
11,900.00	67.30	179.69	11,755.60	-351.81	1.91	351.81	10.00	10.00	0.00
11,932.42	70.54	179.69	11,767.26	-382.05	2.07	382.06	10.00	10.00	0.00
FTP (BQ7FC4H)									
11,950.00	72.30	179.69	11,772.86	-398.71	2.16	398.72	10.00	10.00	0.00
12,000.00	77.30	179.69	11,785.97	-446.95	2.43	446.95	10.00	10.00	0.00
12,050.00	82.30	179.69	11,794.83	-496.14	2.69	496.15	10.00	10.00	0.00
12,100.00	87.30	179.69	11,799.36	-545.92	2.96	545.93	10.00	10.00	0.00
12,127.04	90.00	179.69	11,800.00	-572.95	3.11	572.96	10.00	10.00	0.00
EOC - Hold 90°									
12,200.00	90.00	179.69	11,800.00	-645.91	3.51	645.92	0.00	0.00	0.00
12,300.00	90.00	179.69	11,800.00	-745.90	4.05	745.92	0.00	0.00	0.00
12,400.00	90.00	179.69	11,800.00	-845.90	4.59	845.92	0.00	0.00	0.00
12,500.00	90.00	179.69	11,800.00	-945.90	5.13	945.92	0.00	0.00	0.00
12,600.00	90.00	179.69	11,800.00	-1,045.90	5.68	1,045.92	0.00	0.00	0.00
12,700.00	90.00	179.69	11,800.00	-1,145.90	6.22	1,145.92	0.00	0.00	0.00
12,800.00	90.00	179.69	11,800.00	-1,245.90	6.76	1,245.92	0.00	0.00	0.00
12,900.00	90.00	179.69	11,800.00	-1,345.90	7.30	1,345.92	0.00	0.00	0.00
13,000.00	90.00	179.69	11,800.00	-1,445.89	7.85	1,445.92	0.00	0.00	0.00
13,100.00	90.00	179.69	11,800.00	-1,545.89	8.39	1,545.92	0.00	0.00	0.00
13,200.00	90.00	179.69	11,800.00	-1,645.89	8.93	1,645.92	0.00	0.00	0.00
13,300.00	90.00	179.69	11,800.00	-1,745.89	9.48	1,745.92	0.00	0.00	0.00
13,400.00	90.00	179.69	11,800.00	-1,845.89	10.02	1,845.92	0.00	0.00	0.00
13,500.00	90.00	179.69	11,800.00	-1,945.89	10.56	1,945.92	0.00	0.00	0.00
13,600.00	90.00	179.69	11,800.00	-2,045.89	11.10	2,045.92	0.00	0.00	0.00
13,700.00	90.00	179.69	11,800.00	-2,145.88	11.65	2,145.92	0.00	0.00	0.00
13,800.00	90.00	179.69	11,800.00	-2,245.88	12.19	2,245.92	0.00	0.00	0.00
13,900.00	90.00	179.69	11,800.00	-2,345.88	12.73	2,345.92	0.00	0.00	0.00
14,000.00	90.00	179.69	11,800.00	-2,445.88	13.27	2,445.92	0.00	0.00	0.00
14,100.00	90.00	179.69	11,800.00	-2,545.88	13.82	2,545.92	0.00	0.00	0.00
14,200.00	90.00	179.69	11,800.00	-2,645.88	14.36	2,645.92	0.00	0.00	0.00
14,300.00	90.00	179.69	11,800.00	-2,745.88	14.90	2,745.92	0.00	0.00	0.00
14,400.00	90.00	179.69	11,800.00	-2,845.87	15.44	2,845.92	0.00	0.00	0.00
14,500.00	90.00	179.69	11,800.00	-2,945.87	15.99	2,945.92	0.00	0.00	0.00

M3P Directional Services

Planning Report



Database: EDM 5000.1 Single User Db
Company: BC Operating, Inc.
Project: Lea Co, NM (Nad-83_2010)
Site: Blue Quail 7 Fed Com 4H
Well: Blue Quail 7 Fed Com 4H
Wellbore: Lateral #1
Design: Design #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Site Blue Quail 7 Fed Com 4H
WELL @ 3538.00usft (Original Well Elev)
WELL @ 3538.00usft (Original Well Elev)
Grid
Minimum Curvature

Planned Survey

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)
14,600.00	90.00	179.69	11,800.00	-3,045.87	16.53	3,045.92	0.00	0.00	0.00
14,700.00	90.00	179.69	11,800.00	-3,145.87	17.07	3,145.92	0.00	0.00	0.00
14,800.00	90.00	179.69	11,800.00	-3,245.87	17.62	3,245.92	0.00	0.00	0.00
14,900.00	90.00	179.69	11,800.00	-3,345.87	18.16	3,345.92	0.00	0.00	0.00
15,000.00	90.00	179.69	11,800.00	-3,445.86	18.70	3,445.92	0.00	0.00	0.00
15,100.00	90.00	179.69	11,800.00	-3,545.86	19.24	3,545.92	0.00	0.00	0.00
15,200.00	90.00	179.69	11,800.00	-3,645.86	19.79	3,645.92	0.00	0.00	0.00
15,300.00	90.00	179.69	11,800.00	-3,745.86	20.33	3,745.92	0.00	0.00	0.00
15,400.00	90.00	179.69	11,800.00	-3,845.86	20.87	3,845.92	0.00	0.00	0.00
15,500.00	90.00	179.69	11,800.00	-3,945.86	21.41	3,945.92	0.00	0.00	0.00
15,600.00	90.00	179.69	11,800.00	-4,045.86	21.96	4,045.92	0.00	0.00	0.00
15,700.00	90.00	179.69	11,800.00	-4,145.85	22.50	4,145.92	0.00	0.00	0.00
15,800.00	90.00	179.69	11,800.00	-4,245.85	23.04	4,245.92	0.00	0.00	0.00
15,900.00	90.00	179.69	11,800.00	-4,345.85	23.59	4,345.92	0.00	0.00	0.00
16,000.00	90.00	179.69	11,800.00	-4,445.85	24.13	4,445.92	0.00	0.00	0.00
16,100.00	90.00	179.69	11,800.00	-4,545.85	24.67	4,545.92	0.00	0.00	0.00
16,200.00	90.00	179.69	11,800.00	-4,645.85	25.21	4,645.92	0.00	0.00	0.00
16,300.00	90.00	179.69	11,800.00	-4,745.85	25.76	4,745.92	0.00	0.00	0.00
16,400.00	90.00	179.69	11,800.00	-4,845.84	26.30	4,845.92	0.00	0.00	0.00
16,500.00	90.00	179.69	11,800.00	-4,945.84	26.84	4,945.92	0.00	0.00	0.00
16,542.37	90.00	179.69	11,800.00	-4,988.21	27.07	4,988.28	0.00	0.00	0.00
LTP (BQ7FC4H)									
16,600.00	90.00	179.69	11,800.00	-5,045.84	27.38	5,045.92	0.00	0.00	0.00
16,632.37	90.00	179.69	11,800.00	-5,078.21	27.56	5,078.28	0.00	0.00	0.00
PBHL - TD (BQ7FC4H)									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
FTP (BQ7FC4H)	0.00	0.00	11,800.00	-370.00	1.97	482,616.42	730,312.82	32° 19' 31.086 N	103° 43' 17.570 W
- plan misses target center by 34.89usft at 11932.42usft MD (11767.26 TVD, -382.05 N, 2.07 E)									
- Point									
PBHL - TD (BQ7FC4H)	0.00	0.00	11,800.00	-5,078.21	27.56	477,908.21	730,338.41	32° 18' 44.495 N	103° 43' 17.585 W
- plan hits target center									
- Point									
LTP (BQ7FC4H)	0.00	0.00	11,800.00	-4,988.21	27.06	477,998.21	730,337.91	32° 18' 45.386 N	103° 43' 17.585 W
- plan misses target center by 0.01usft at 16542.37usft MD (11800.00 TVD, -4988.21 N, 27.07 E)									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
+N/-S (usft)	+E/-W (usft)		
11,227.04	11,227.04	0.00	0.00
12,127.04	11,800.00	-572.95	3.11
KOP - Build 10°/100'			
EOC - Hold 90°			



Wellhead @ 3538.00usft (Original Well Elev)
Ground Level: 3513.00

BC Operating, Inc.

Project: Lea Co, NM (Nad-83_2010)
Well: Blue Quail 7 Fed Com 4H
Wellbore: Lateral #1
Design: Design #1
Original Well Elev

M3P
DIRECTIONAL
SERVICES

WELL DETAILS

+N-S	+E-W	North	Ground Level	3513.00	Latitude	Longitude
0.00	0.00	482986.42	East	730310.85	32° 19' 34.747 N	103° 43' 17.568 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	TFace	VSet	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	11227.04	0.00	0.00	11227.04	0.00	0.00	0.00	0.00	0.00		KOP - Build 10°/100'
3	12127.04	90.00	179.69	11800.00	-572.95	3.11	10.00	179.69	572.96		EOC - Hold 90°
4	16632.37	90.00	179.69	11800.00	-5078.21	27.56	0.00	0.00	5078.28	PBHL - TD (BQ7FC4H)	

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	North	East	Latitude	Longitude	Shape
FTP (BQ7FC4H)	11800.00	-370.00	1.97	482616.42	730312.82	32° 19' 31.086 N	103° 43' 17.570 W	Point
LTP (BQ7FC4H)	11800.00	-4988.21	27.06	477968.21	730337.91	32° 18' 45.386 N	103° 43' 17.585 W	Point
PBHL - TD (BQ7FC4H)	11800.00	-5078.21	27.56	477968.21	730338.41	32° 18' 44.495 N	103° 43' 17.585 W	Point

- plan misses target center by 34.89usft at 11932.42usft MD (11767.26 TVD, -362.05 N, 2.07 E)
- plan misses target center by 0.01usft at 16542.37usft MD (11800.00 TVD, -4988.21 N, 27.07 E)
- plan hits target center

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone
Local Origin: Site Blue Quail 7 Fed Com 4H, Grid North
Latitude: 32° 19' 34.747 N
Longitude: 103° 43' 17.568 W
Grid East: 730310.85
Grid North: 482986.42
Scale Factor: 1.000

Geomagnetic Model: IGRF2010
Sample Date: 22-Apr-15
Magnetic Declination: 7.19°
Dip Angle from Horizontal: 60.16°
Magnetic Field Strength: 48276

To convert a Magnetic Direction to a Grid Direction, Add 6.86°
To convert a Magnetic Direction to a True Direction, Add 7.19° East
To convert a True Direction to a Grid Direction, Subtract 0.33°

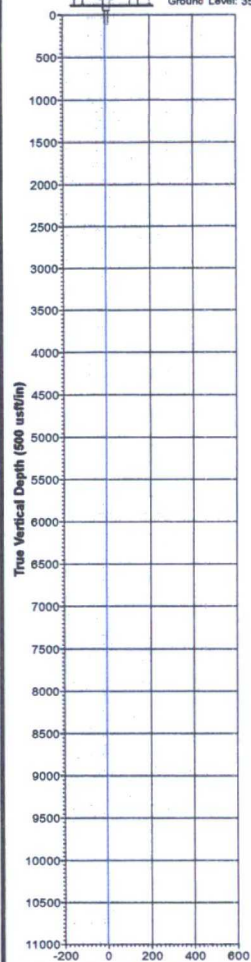
LEGEND

Design #1

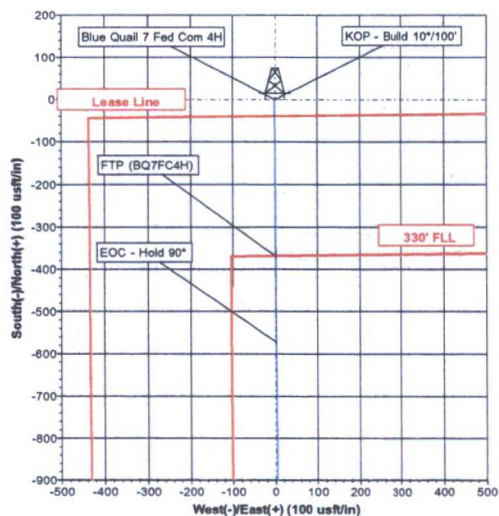


Azimuths to Grid North
True North: -0.33°
Magnetic North: 6.86°

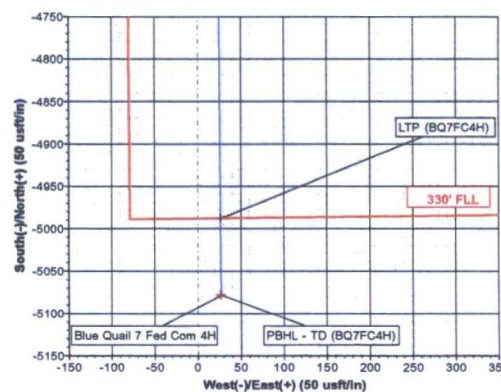
Magnetic Field
Strength: 48275.7nT
Dip Angle: 60.16°
Date: 4/22/2015
Model: IGRF2010



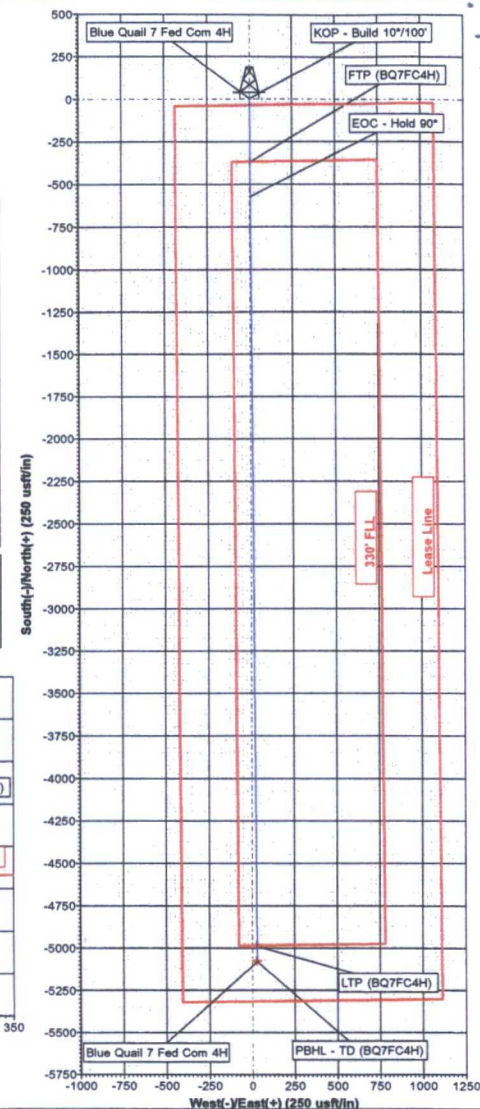
Vertical Section at 179.69° (200 usft/in)



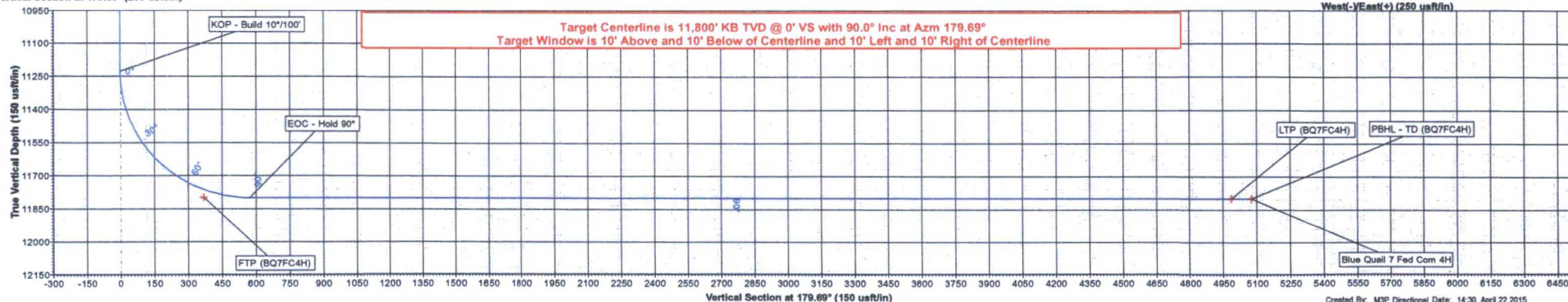
West(-)/East(+) (100 usft/in)



West(-)/East(+) (50 usft/in)



West(-)/East(+) (250 usft/in)



Vertical Section at 179.69° (150 usft/in)

Created By: M3P Directional Date: 14:30, April 22 2015