

B.C. Operating, INC.

Lea County, NM (NAD-27)

Sec 26-T25S-R34E

Dogie Draw 23 Federal 4H

Dogie Draw 23 Federal 4H

Plan: Plan #1

Standard Planning Report

21 April, 2015

HOBBS OCD

MAR 09 2017

RECEIVED

Hawkeye Directional

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Dogie Draw 23 Federal 4H
Company:	B.C. Operating, INC.	TVD Reference:	GL 3350' + KB 20' = 3370' @ 3370.00usft
Project:	Lea County, NM (NAD-27)	MD Reference:	GL 3350' + KB 20' = 3370' @ 3370.00usft
Site:	Sec 26-T25S-R34E	North Reference:	Grid
Well:	Dogie Draw 23 Federal 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dogie Draw 23 Federal 4H		
Design:	Plan #1		

Project	Lea County, NM (NAD-27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Sec 26-T25S-R34E		
Site Position:		Northing:	404,125.91 usft
From:	Map	Easting:	774,537.61 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	32° 6' 28.636 N
		Longitude:	103° 26' 48.077 W
		Grid Convergence:	0.47 °

Well	Dogie Draw 23 Federal 4H		
Well Position	+N/-S	26.18 usft	Northing: 404,152.09 usft
	+E/-W	3,963.97 usft	Easting: 778,501.58 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 6' 28.570 N
		Longitude:	103° 26' 1.992 W
		Ground Level:	3,350.00 usft

Wellbore	Dogie Draw 23 Federal 4H		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	04/20/15	7.04
			Dip Angle (°)
			60.01
			Field Strength (nT)
			48,177

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (°)
			359.58

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100ft)	(°/100ft)	(°/100ft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,677.04	0.00	0.00	11,677.04	0.00	0.00	0.00	0.00	0.00	0.00	
12,577.04	90.00	359.58	12,250.00	572.94	-4.21	10.00	10.00	0.00	359.58	
17,277.54	90.00	359.58	12,250.00	5,273.31	-38.78	0.00	0.00	0.00	0.00	

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

Well Dogie Draw 23 Federal 4H
GL 3350' + KB 20' = 3370' @ 3370.00usft
GL 3350' + KB 20' = 3370' @ 3370.00usft
Grid
Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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

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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

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Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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
11,300.00	0.00	0.00	11,300.00	0.00	0.00	0.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,400.00	0.00	0.00	0.00	0.00	0.00	0.00
11,500.00	0.00	0.00	11,500.00	0.00	0.00	0.00	0.00	0.00	0.00
11,600.00	0.00	0.00	11,600.00	0.00	0.00	0.00	0.00	0.00	0.00
11,677.04	0.00	0.00	11,677.04	0.00	0.00	0.00	0.00	0.00	0.00
Start Build at 11677.04' MD - DLS=10.00°/100'									
11,700.00	2.30	359.58	11,699.99	0.46	0.00	0.46	10.00	10.00	0.00
11,800.00	12.30	359.58	11,799.06	13.14	-0.10	13.14	10.00	10.00	0.00
11,900.00	22.30	359.58	11,894.42	42.83	-0.32	42.84	10.00	10.00	0.00
12,000.00	32.30	359.58	11,983.17	88.63	-0.65	88.64	10.00	10.00	0.00
12,100.00	42.30	359.58	12,062.62	149.15	-1.10	149.15	10.00	10.00	0.00
12,200.00	52.30	359.58	12,130.35	222.54	-1.64	222.54	10.00	10.00	0.00
12,300.00	62.30	359.58	12,184.32	306.58	-2.25	306.59	10.00	10.00	0.00
12,400.00	72.30	359.58	12,222.86	398.71	-2.93	398.72	10.00	10.00	0.00
12,500.00	82.30	359.58	12,244.83	496.13	-3.65	496.15	10.00	10.00	0.00
12,574.08	89.70	359.58	12,249.99	569.98	-4.19	570.00	10.00	10.00	0.00
Dogie Draw 23 Federal 4H / FTP									
12,577.04	90.00	359.58	12,250.00	572.94	-4.21	572.96	10.00	10.00	0.00
End Build at 12577.04' MD - Hold Angle=90.00°									
12,600.00	90.00	359.58	12,250.00	595.90	-4.38	595.92	0.00	0.00	0.00
12,700.00	90.00	359.58	12,250.00	695.90	-5.12	695.92	0.00	0.00	0.00
12,800.00	90.00	359.58	12,250.00	795.89	-5.85	795.92	0.00	0.00	0.00
12,900.00	90.00	359.58	12,250.00	895.89	-6.59	895.92	0.00	0.00	0.00
13,000.00	90.00	359.58	12,250.00	995.89	-7.32	995.92	0.00	0.00	0.00
13,100.00	90.00	359.58	12,250.00	1,095.89	-8.06	1,095.92	0.00	0.00	0.00
13,200.00	90.00	359.58	12,250.00	1,195.88	-8.79	1,195.92	0.00	0.00	0.00
13,300.00	90.00	359.58	12,250.00	1,295.88	-9.53	1,295.92	0.00	0.00	0.00
13,400.00	90.00	359.58	12,250.00	1,395.88	-10.27	1,395.92	0.00	0.00	0.00
13,500.00	90.00	359.58	12,250.00	1,495.87	-11.00	1,495.92	0.00	0.00	0.00
13,600.00	90.00	359.58	12,250.00	1,595.87	-11.74	1,595.92	0.00	0.00	0.00
13,700.00	90.00	359.58	12,250.00	1,695.87	-12.47	1,695.92	0.00	0.00	0.00
13,800.00	90.00	359.58	12,250.00	1,795.87	-13.21	1,795.92	0.00	0.00	0.00
13,900.00	90.00	359.58	12,250.00	1,895.86	-13.94	1,895.92	0.00	0.00	0.00
14,000.00	90.00	359.58	12,250.00	1,995.86	-14.68	1,995.92	0.00	0.00	0.00
14,100.00	90.00	359.58	12,250.00	2,095.86	-15.41	2,095.92	0.00	0.00	0.00
14,200.00	90.00	359.58	12,250.00	2,195.86	-16.15	2,195.92	0.00	0.00	0.00
14,300.00	90.00	359.58	12,250.00	2,295.85	-16.88	2,295.92	0.00	0.00	0.00
14,400.00	90.00	359.58	12,250.00	2,395.85	-17.62	2,395.92	0.00	0.00	0.00
14,500.00	90.00	359.58	12,250.00	2,495.85	-18.35	2,495.92	0.00	0.00	0.00
14,600.00	90.00	359.58	12,250.00	2,595.84	-19.09	2,595.92	0.00	0.00	0.00
14,700.00	90.00	359.58	12,250.00	2,695.84	-19.83	2,695.92	0.00	0.00	0.00
14,800.00	90.00	359.58	12,250.00	2,795.84	-20.56	2,795.92	0.00	0.00	0.00
14,900.00	90.00	359.58	12,250.00	2,895.84	-21.30	2,895.92	0.00	0.00	0.00
15,000.00	90.00	359.58	12,250.00	2,995.83	-22.03	2,995.92	0.00	0.00	0.00
15,100.00	90.00	359.58	12,250.00	3,095.83	-22.77	3,095.92	0.00	0.00	0.00
15,200.00	90.00	359.58	12,250.00	3,195.83	-23.50	3,195.92	0.00	0.00	0.00
15,300.00	90.00	359.58	12,250.00	3,295.83	-24.24	3,295.92	0.00	0.00	0.00
15,400.00	90.00	359.58	12,250.00	3,395.82	-24.97	3,395.92	0.00	0.00	0.00

Hawkeye Directional Planning Report

Database: EDM 5000.1 Single User Db
Company: B.C. Operating, INC.
Project: Lea County, NM (NAD-27)
Site: Sec 26-T25S-R34E
Well: Dogie Draw 23 Federal 4H
Wellbore: Dogie Draw 23 Federal 4H
Design: Plan #1

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

Well Dogie Draw 23 Federal 4H
GL 3350' + KB 20' = 3370' @ 3370.00usft
GL 3350' + KB 20' = 3370' @ 3370.00usft
Grid
Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,500.00	90.00	359.58	12,250.00	3,495.82	-25.71	3,495.92	0.00	0.00	0.00
15,600.00	90.00	359.58	12,250.00	3,595.82	-26.44	3,595.92	0.00	0.00	0.00
15,700.00	90.00	359.58	12,250.00	3,695.82	-27.18	3,695.92	0.00	0.00	0.00
15,800.00	90.00	359.58	12,250.00	3,795.81	-27.91	3,795.92	0.00	0.00	0.00
15,900.00	90.00	359.58	12,250.00	3,895.81	-28.65	3,895.92	0.00	0.00	0.00
16,000.00	90.00	359.58	12,250.00	3,995.81	-29.39	3,995.92	0.00	0.00	0.00
16,100.00	90.00	359.58	12,250.00	4,095.80	-30.12	4,095.92	0.00	0.00	0.00
16,200.00	90.00	359.58	12,250.00	4,195.80	-30.86	4,195.92	0.00	0.00	0.00
16,300.00	90.00	359.58	12,250.00	4,295.80	-31.59	4,295.92	0.00	0.00	0.00
16,400.00	90.00	359.58	12,250.00	4,395.80	-32.33	4,395.92	0.00	0.00	0.00
16,500.00	90.00	359.58	12,250.00	4,495.79	-33.06	4,495.92	0.00	0.00	0.00
16,600.00	90.00	359.58	12,250.00	4,595.79	-33.80	4,595.92	0.00	0.00	0.00
16,700.00	90.00	359.58	12,250.00	4,695.79	-34.53	4,695.92	0.00	0.00	0.00
16,800.00	90.00	359.58	12,250.00	4,795.79	-35.27	4,795.92	0.00	0.00	0.00
16,900.00	90.00	359.58	12,250.00	4,895.78	-36.00	4,895.92	0.00	0.00	0.00
17,000.00	90.00	359.58	12,250.00	4,995.78	-36.74	4,995.92	0.00	0.00	0.00
17,100.00	90.00	359.58	12,250.00	5,095.78	-37.47	5,095.92	0.00	0.00	0.00
17,187.54	90.00	359.58	12,250.00	5,183.31	-38.12	5,183.45	0.00	0.00	0.00
Dogie Draw 23 Federal 4H / LTP									
17,200.00	90.00	359.58	12,250.00	5,195.77	-38.21	5,195.92	0.00	0.00	0.00
17,277.54	90.00	359.58	12,250.00	5,273.31	-38.78	5,273.45	0.00	0.00	0.00
TD at 17277.54' MD - Dogie Draw 23 Federal 4H / BHL									

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									
Dogie Draw 23 Federal 4H - plan hits target center - Point	0.00	0.00	12,250.00	5,273.31	-38.78	409,425.40	778,462.80	32° 7' 20.754 N	103° 26' 1.931 W
Dogie Draw 23 Federal 4H - plan misses target center by 0.88usft at 12574.08usft MD (12249.99 TVD, 569.98 N, -4.19 E) - Point	0.00	0.00	12,250.00	569.97	-5.07	404,722.06	778,496.51	32° 6' 34.210 N	103° 26' 1.996 W
Dogie Draw 23 Federal 4H - plan misses target center by 0.02usft at 17187.54usft MD (12250.00 TVD, 5183.31 N, -38.12 E) - Point	0.00	0.00	12,250.00	5,183.31	-38.14	409,335.40	778,463.44	32° 7' 19.864 N	103° 26' 1.932 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
11,677.04	11,677.04	0.00	0.00	Start Build at 11677.04' MD
11,677.04	11,677.04	0.00	0.00	DLS=10.00°/100'
12,577.04	12,250.00	572.94	-4.21	End Build at 12577.04' MD
12,577.04	12,250.00	572.94	-4.21	Hold Angle=90.00°
17,277.54	12,250.00	5,273.31	-38.78	TD at 17277.54' MD

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Dogie Draw 23 Federal 4H / BHL	12250.00	5273.31	-38.78	409425.40	778462.80	32° 7' 20.754 N	103° 26' 1.931 W	Point
Dogie Draw 23 Federal 4H / FTP	12250.00	569.97	-5.07	404722.06	778496.51	32° 6' 34.210 N	103° 26' 1.996 W	Point
Dogie Draw 23 Federal 4H / LTP	12250.00	5183.31	-38.14	409335.40	778463.44	32° 7' 19.864 N	103° 26' 1.932 W	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11677.04	0.00	0.00	11677.04	0.00	0.00	0.00	0.00	0.00	Start Build at 11677.04' MD
12577.04	90.00	359.58	12250.00	572.94	-4.21	10.00	359.58	572.96	End Build at 12577.04' MD
17277.54	90.00	359.58	12250.00	5273.31	-38.78	0.00	0.00	5273.45	TD at 17277.54' MD

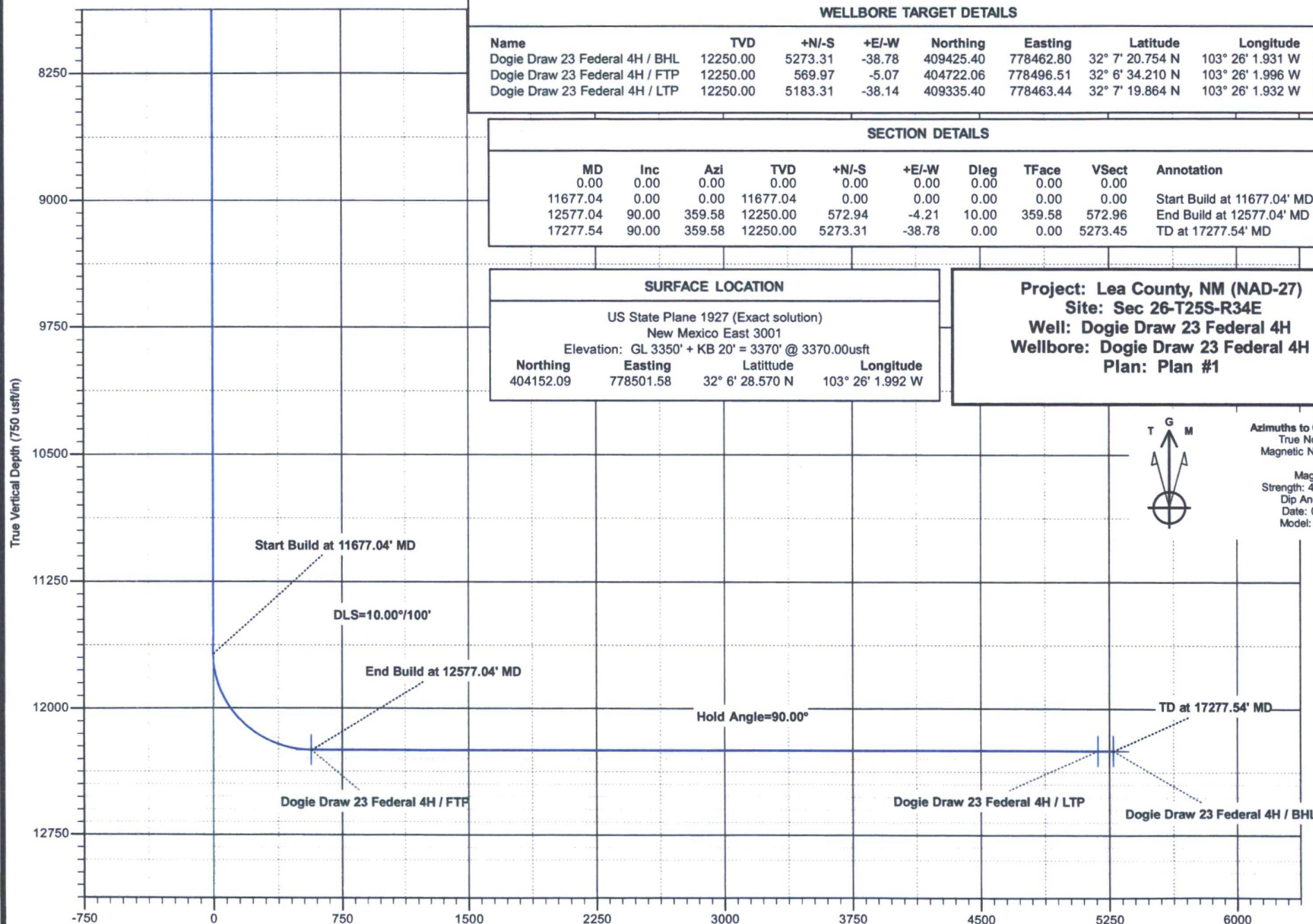
SURFACE LOCATION

US State Plane 1927 (Exact solution)
New Mexico East 3001
Elevation: GL 3350' + KB 20' = 3370' @ 3370.00usft
 Northing 404152.09 Easting 778501.58 Latitude 32° 6' 28.570 N Longitude 103° 26' 1.992 W

Project: Lea County, NM (NAD-27)
Site: Sec 26-T25S-R34E
Well: Dogie Draw 23 Federal 4H
Wellbore: Dogie Draw 23 Federal 4H
Plan: Plan #1



Azimuths to Grid North
 True North: -0.48°
 Magnetic North: 6.56°
Magnetic Field
 Strength: 48176.6snT
 Dip Angle: 60.01°
 Date: 04/20/2015
 Model: IGRF2010



Vertical Section at 359.58° (750 usft/in)

Designed By: Shawn Eisenman Date: 15:38, April 21 2015

Project: Lea County, NM (NAD-27)
 Site: Sec 26-T25S-R34E
 Well: Dogie Draw 23 Federal 4H
 Wellbore: Dogie Draw 23 Federal 4H
 Plan: Plan #1

SURFACE LOCATION

US State Plane 1927 (Exact solution)
 New Mexico East 3001
 Elevation: GL 3350' + KB 20' = 3370.00usft
 Northing 404152.09 Easting 778501.58 Latitude 32° 6' 28.570 N Longitude 103° 26' 1.992 W

