

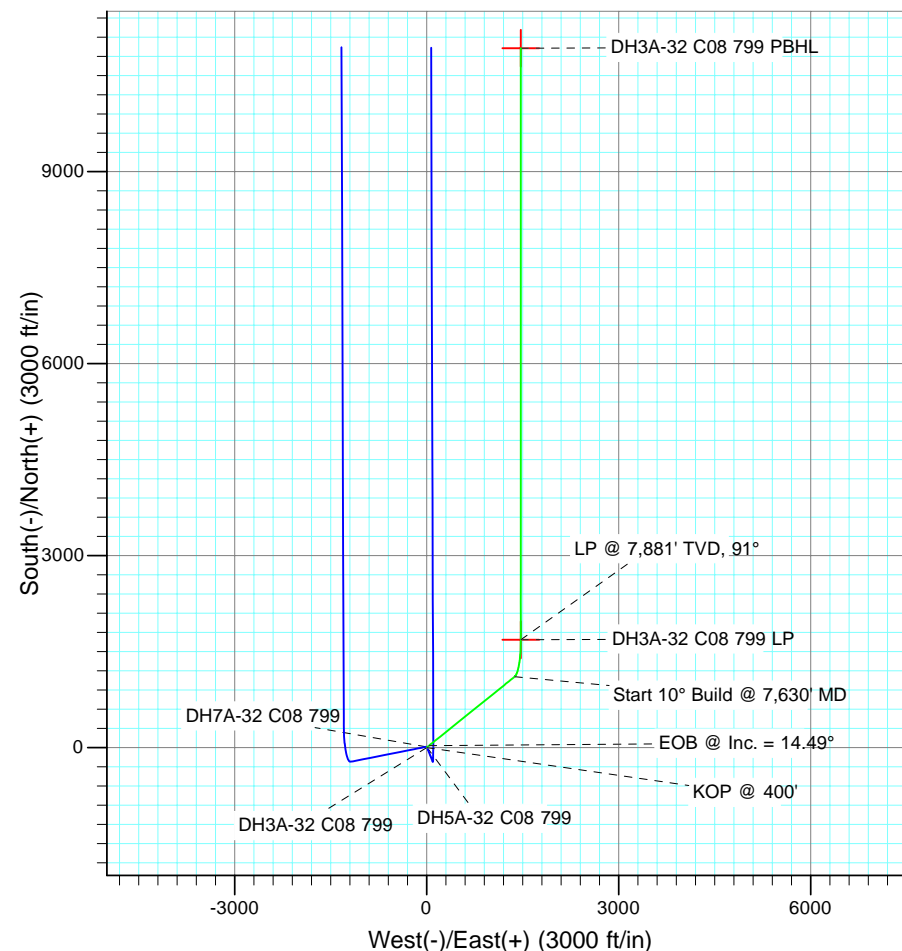
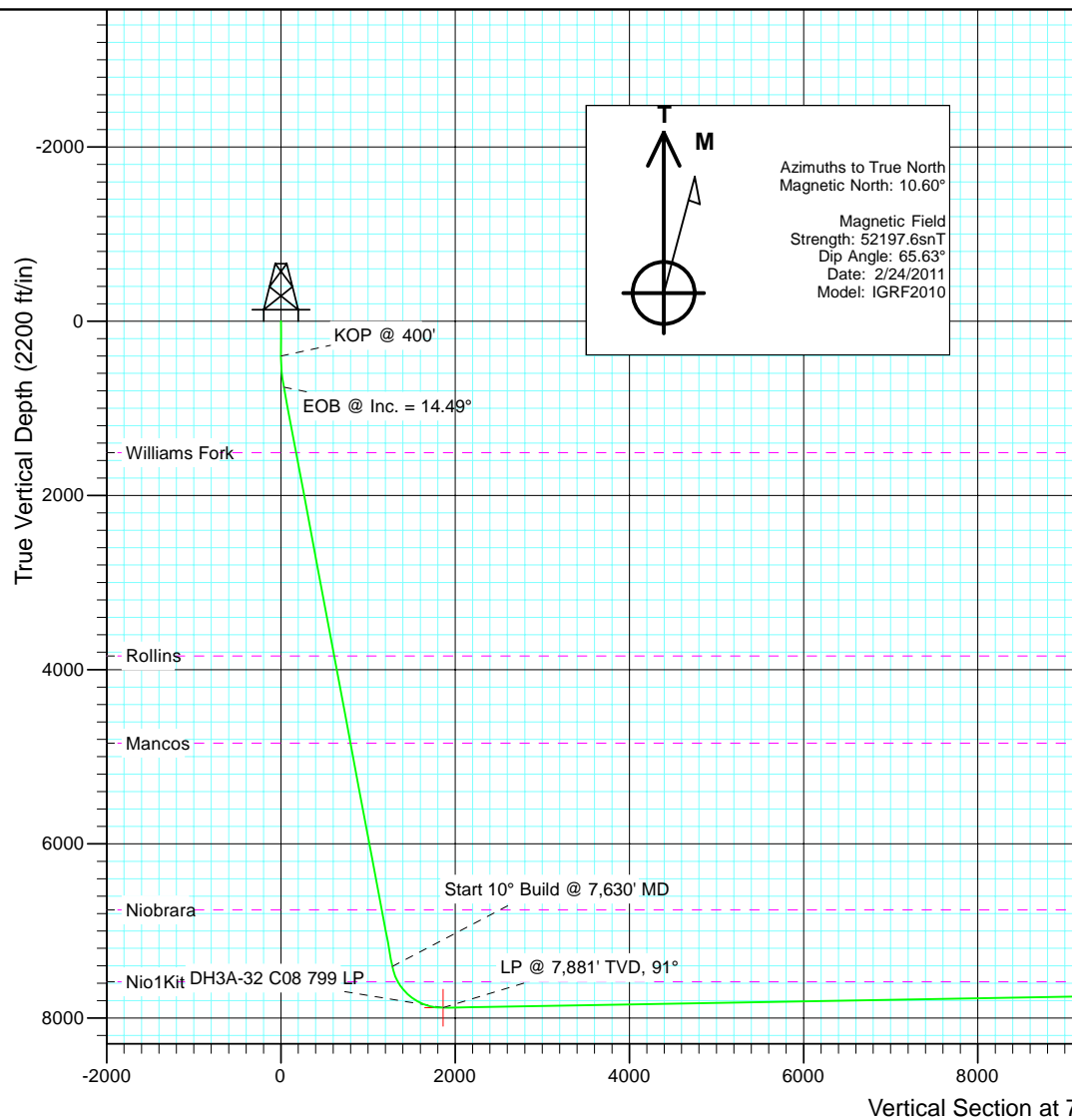


Project: Kimball Mtn
Site: Section 8 (C08 799)
Well: DH3A-32 C08 799
Wellbore: HZ
Design: Plan #2



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	762.2	14.49	51.17	758.3	28.6	35.5	4.00	51.17	33.0	
4	7630.0	14.49	51.17	7407.8	1105.9	1373.8	0.00	0.00	1279.2	
5	8449.6	91.00	360.00	7881.0	1681.6	1470.7	10.00	-51.87	1862.7	DH3A-32 C08 799 LP
6	17695.6	91.00	360.00	7719.0	10926.2	1470.2	0.00	0.00	11024.6	DH3A-32 C08 799 PBHL

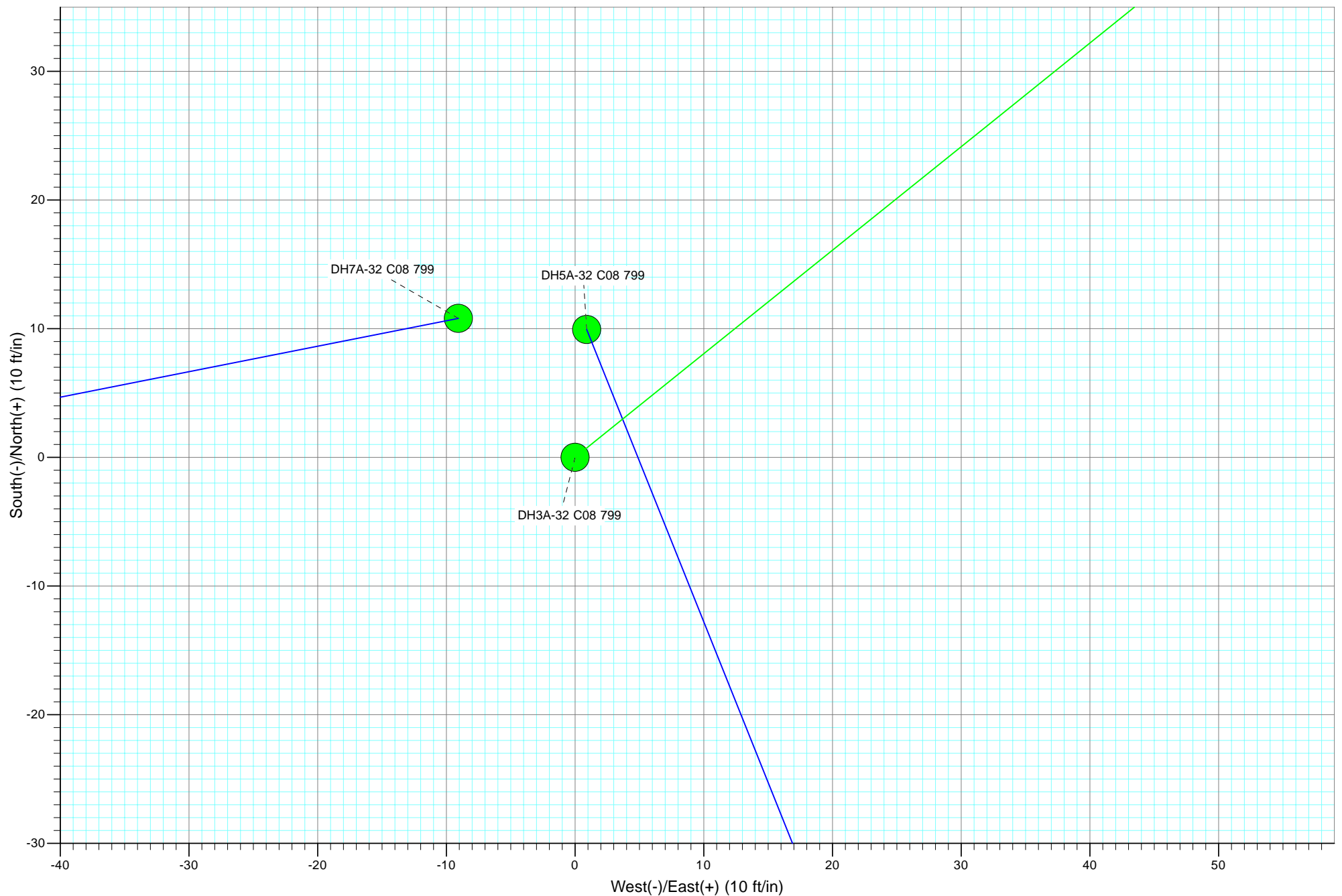


Plan #2
DH3A-32 C08 799
KBE @ 6480.0ft (Original Well Elev)
North American Datum 1983
Well DH3A-32 C08 799, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	TVD
TD	No Target (Freehand)	7.66	Slot		0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
DH3A-32 C08 799 PBHL	7719.0	10926.2	1470.2	39° 29' 44.41 N	108° 27' 40.72 W		
DH3A-32 C08 799 LP	7881.0	1681.6	1470.7	39° 28' 13.04 N	108° 27' 40.72 W		

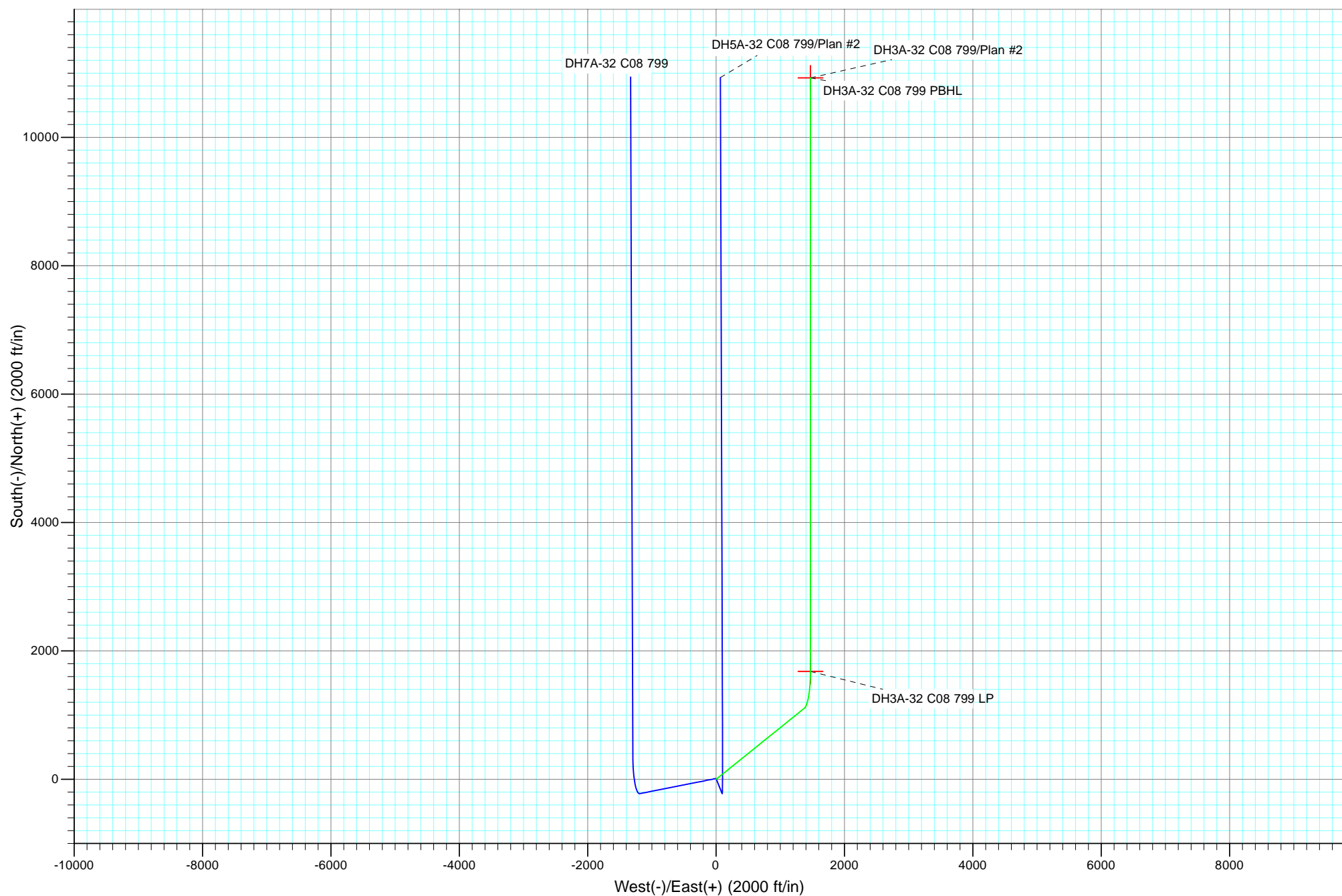


Project: Kimball Mtn
Site: Section 8 (C08 799)
Well: DH3A-32 C08 799
Wellbore: HZ
Design: Plan #2





Project: Kimball Mtn
Site: Section 8 (C08 799)
Well: DH3A-32 C08 799
Wellbore: HZ
Design: Plan #2



Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well DH3A-32 C08 799
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6480.0ft (Original Well Elev)
Project:	Kimball Mtn	MD Reference:	KBE @ 6480.0ft (Original Well Elev)
Site:	Section 8 (C08 799)	North Reference:	True
Well:	DH3A-32 C08 799	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Project	Kimball Mtn		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Section 8 (C08 799)			
Site Position:		Northing:	1,608,176.57 ft	Latitude:	39° 27' 56.42 N
From:	Lat/Long	Easting:	2,162,638.87 ft	Longitude:	108° 27' 59.47 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.87 °

Well	DH3A-32 C08 799					
Well Position	+N/-S	0.0 ft	Northing:	1,608,176.57 ft	Latitude:	39° 27' 56.42 N
	+E/-W	0.0 ft	Easting:	2,162,638.87 ft	Longitude:	108° 27' 59.47 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,460.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/24/2011	10.60	65.63	52,198

Design	Plan #2				
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	7.66	

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
762.2	14.49	51.17	758.3	28.6	35.5	4.00	4.00	0.00	51.17	
7,630.0	14.49	51.17	7,407.8	1,105.9	1,373.8	0.00	0.00	0.00	0.00	
8,449.6	91.00	360.00	7,881.0	1,681.6	1,470.7	10.00	9.34	-6.24	-51.87	DH3A-32 C08 799 LP
17,695.6	91.00	360.00	7,719.0	10,926.2	1,470.2	0.00	0.00	0.00	0.00	DH3A-32 C08 799 PE

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well DH3A-32 C08 799
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6480.0ft (Original Well Elev)
Project:	Kimball Mtn	MD Reference:	KBE @ 6480.0ft (Original Well Elev)
Site:	Section 8 (C08 799)	North Reference:	True
Well:	DH3A-32 C08 799	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	4.00	51.17	499.9	2.2	2.7	2.5	4.00	4.00	
600.0	8.00	51.17	599.4	8.7	10.9	10.1	4.00	4.00	
700.0	12.00	51.17	697.8	19.6	24.4	22.7	4.00	4.00	
762.2	14.49	51.17	758.3	28.6	35.5	33.0	4.00	4.00	EOB @ Inc. = 14.49°
800.0	14.49	51.17	795.0	34.5	42.8	39.9	0.00	0.00	
900.0	14.49	51.17	891.8	50.2	62.3	58.0	0.00	0.00	
1,000.0	14.49	51.17	988.6	65.9	81.8	76.2	0.00	0.00	
1,100.0	14.49	51.17	1,085.4	81.6	101.3	94.3	0.00	0.00	
1,200.0	14.49	51.17	1,182.2	97.2	120.8	112.5	0.00	0.00	
1,300.0	14.49	51.17	1,279.1	112.9	140.3	130.6	0.00	0.00	
1,400.0	14.49	51.17	1,375.9	128.6	159.8	148.8	0.00	0.00	
1,500.0	14.49	51.17	1,472.7	144.3	179.3	166.9	0.00	0.00	
1,538.5	14.49	51.17	1,510.0	150.3	186.8	173.9	0.00	0.00	Williams Fork
1,600.0	14.49	51.17	1,569.5	160.0	198.7	185.1	0.00	0.00	
1,700.0	14.49	51.17	1,666.3	175.7	218.2	203.2	0.00	0.00	
1,800.0	14.49	51.17	1,763.2	191.4	237.7	221.3	0.00	0.00	
1,900.0	14.49	51.17	1,860.0	207.0	257.2	239.5	0.00	0.00	
2,000.0	14.49	51.17	1,956.8	222.7	276.7	257.6	0.00	0.00	
2,100.0	14.49	51.17	2,053.6	238.4	296.2	275.8	0.00	0.00	
2,200.0	14.49	51.17	2,150.4	254.1	315.7	293.9	0.00	0.00	
2,300.0	14.49	51.17	2,247.3	269.8	335.1	312.1	0.00	0.00	
2,400.0	14.49	51.17	2,344.1	285.5	354.6	330.2	0.00	0.00	
2,500.0	14.49	51.17	2,440.9	301.2	374.1	348.4	0.00	0.00	
2,600.0	14.49	51.17	2,537.7	316.8	393.6	366.5	0.00	0.00	
2,700.0	14.49	51.17	2,634.5	332.5	413.1	384.6	0.00	0.00	
2,800.0	14.49	51.17	2,731.4	348.2	432.6	402.8	0.00	0.00	
2,900.0	14.49	51.17	2,828.2	363.9	452.1	420.9	0.00	0.00	
3,000.0	14.49	51.17	2,925.0	379.6	471.5	439.1	0.00	0.00	
3,100.0	14.49	51.17	3,021.8	395.3	491.0	457.2	0.00	0.00	
3,200.0	14.49	51.17	3,118.6	411.0	510.5	475.4	0.00	0.00	
3,300.0	14.49	51.17	3,215.5	426.6	530.0	493.5	0.00	0.00	
3,400.0	14.49	51.17	3,312.3	442.3	549.5	511.7	0.00	0.00	
3,500.0	14.49	51.17	3,409.1	458.0	569.0	529.8	0.00	0.00	
3,600.0	14.49	51.17	3,505.9	473.7	588.5	547.9	0.00	0.00	
3,700.0	14.49	51.17	3,602.7	489.4	607.9	566.1	0.00	0.00	
3,800.0	14.49	51.17	3,699.6	505.1	627.4	584.2	0.00	0.00	
3,900.0	14.49	51.17	3,796.4	520.8	646.9	602.4	0.00	0.00	
3,948.1	14.49	51.17	3,843.0	528.3	656.3	611.1	0.00	0.00	Rollins
4,000.0	14.49	51.17	3,893.2	536.4	666.4	620.5	0.00	0.00	
4,100.0	14.49	51.17	3,990.0	552.1	685.9	638.7	0.00	0.00	
4,200.0	14.49	51.17	4,086.9	567.8	705.4	656.8	0.00	0.00	
4,300.0	14.49	51.17	4,183.7	583.5	724.9	675.0	0.00	0.00	
4,400.0	14.49	51.17	4,280.5	599.2	744.4	693.1	0.00	0.00	
4,500.0	14.49	51.17	4,377.3	614.9	763.8	711.2	0.00	0.00	
4,600.0	14.49	51.17	4,474.1	630.6	783.3	729.4	0.00	0.00	
4,700.0	14.49	51.17	4,571.0	646.2	802.8	747.5	0.00	0.00	
4,800.0	14.49	51.17	4,667.8	661.9	822.3	765.7	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well DH3A-32 C08 799
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6480.0ft (Original Well Elev)
Project:	Kimball Mtn	MD Reference:	KBE @ 6480.0ft (Original Well Elev)
Site:	Section 8 (C08 799)	North Reference:	True
Well:	DH3A-32 C08 799	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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)	Comments / Formations
4,900.0	14.49	51.17	4,764.6	677.6	841.8	783.8	0.00	0.00	
4,982.0	14.49	51.17	4,844.0	690.5	857.8	798.7	0.00	0.00	Mancos
5,000.0	14.49	51.17	4,861.4	693.3	861.3	802.0	0.00	0.00	
5,100.0	14.49	51.17	4,958.2	709.0	880.8	820.1	0.00	0.00	
5,200.0	14.49	51.17	5,055.1	724.7	900.2	838.3	0.00	0.00	
5,300.0	14.49	51.17	5,151.9	740.4	919.7	856.4	0.00	0.00	
5,400.0	14.49	51.17	5,248.7	756.1	939.2	874.5	0.00	0.00	
5,500.0	14.49	51.17	5,345.5	771.7	958.7	892.7	0.00	0.00	
5,600.0	14.49	51.17	5,442.3	787.4	978.2	910.8	0.00	0.00	
5,700.0	14.49	51.17	5,539.2	803.1	997.7	929.0	0.00	0.00	
5,800.0	14.49	51.17	5,636.0	818.8	1,017.2	947.1	0.00	0.00	
5,900.0	14.49	51.17	5,732.8	834.5	1,036.6	965.3	0.00	0.00	
6,000.0	14.49	51.17	5,829.6	850.2	1,056.1	983.4	0.00	0.00	
6,100.0	14.49	51.17	5,926.4	865.9	1,075.6	1,001.6	0.00	0.00	
6,200.0	14.49	51.17	6,023.3	881.5	1,095.1	1,019.7	0.00	0.00	
6,300.0	14.49	51.17	6,120.1	897.2	1,114.6	1,037.8	0.00	0.00	
6,400.0	14.49	51.17	6,216.9	912.9	1,134.1	1,056.0	0.00	0.00	
6,500.0	14.49	51.17	6,313.7	928.6	1,153.6	1,074.1	0.00	0.00	
6,600.0	14.49	51.17	6,410.5	944.3	1,173.0	1,092.3	0.00	0.00	
6,700.0	14.49	51.17	6,507.4	960.0	1,192.5	1,110.4	0.00	0.00	
6,800.0	14.49	51.17	6,604.2	975.7	1,212.0	1,128.6	0.00	0.00	
6,900.0	14.49	51.17	6,701.0	991.3	1,231.5	1,146.7	0.00	0.00	
6,959.9	14.49	51.17	6,759.0	1,000.7	1,243.2	1,157.6	0.00	0.00	Niobrara
7,000.0	14.49	51.17	6,797.8	1,007.0	1,251.0	1,164.9	0.00	0.00	
7,100.0	14.49	51.17	6,894.7	1,022.7	1,270.5	1,183.0	0.00	0.00	
7,200.0	14.49	51.17	6,991.5	1,038.4	1,290.0	1,201.2	0.00	0.00	
7,300.0	14.49	51.17	7,088.3	1,054.1	1,309.5	1,219.3	0.00	0.00	
7,400.0	14.49	51.17	7,185.1	1,069.8	1,328.9	1,237.4	0.00	0.00	
7,500.0	14.49	51.17	7,281.9	1,085.5	1,348.4	1,255.6	0.00	0.00	
7,600.0	14.49	51.17	7,378.8	1,101.1	1,367.9	1,273.7	0.00	0.00	
7,630.0	14.49	51.17	7,407.8	1,105.9	1,373.8	1,279.2	0.00	0.00	Start 10° Build @ 7,630' MD
7,700.0	19.58	34.55	7,474.7	1,121.0	1,387.2	1,296.0	10.00	7.28	
7,800.0	28.27	22.12	7,566.1	1,156.8	1,405.7	1,334.0	10.00	8.69	
7,819.3	30.03	20.51	7,583.0	1,165.6	1,409.1	1,343.1	10.00	9.15	Nio1Kit
7,900.0	37.57	15.32	7,650.0	1,208.3	1,422.7	1,387.3	10.00	9.35	
8,000.0	47.13	10.94	7,723.8	1,273.9	1,437.8	1,454.2	10.00	9.56	
8,100.0	56.81	7.74	7,785.4	1,351.5	1,450.4	1,532.9	10.00	9.68	
8,200.0	66.56	5.19	7,832.8	1,438.9	1,460.2	1,620.7	10.00	9.75	
8,300.0	76.34	2.99	7,864.5	1,533.3	1,466.9	1,715.2	10.00	9.78	
8,400.0	86.14	0.97	7,879.8	1,632.0	1,470.3	1,813.5	10.00	9.80	
8,449.6	91.00	360.00	7,881.0	1,681.6	1,470.7	1,862.7	10.00	9.80	LP @ 7,881' TVD, 91° - DH3A-32 C08 799 LP
8,500.0	91.00	360.00	7,880.1	1,731.9	1,470.7	1,912.6	0.00	0.00	
8,600.0	91.00	360.00	7,878.4	1,831.9	1,470.7	2,011.7	0.00	0.00	
8,700.0	91.00	360.00	7,876.6	1,931.9	1,470.7	2,110.8	0.00	0.00	
8,800.0	91.00	360.00	7,874.9	2,031.9	1,470.7	2,209.9	0.00	0.00	
8,900.0	91.00	360.00	7,873.1	2,131.9	1,470.7	2,308.9	0.00	0.00	
9,000.0	91.00	360.00	7,871.4	2,231.9	1,470.7	2,408.0	0.00	0.00	
9,100.0	91.00	360.00	7,869.6	2,331.8	1,470.7	2,507.1	0.00	0.00	
9,200.0	91.00	360.00	7,867.9	2,431.8	1,470.7	2,606.2	0.00	0.00	
9,300.0	91.00	360.00	7,866.1	2,531.8	1,470.7	2,705.3	0.00	0.00	
9,400.0	91.00	360.00	7,864.3	2,631.8	1,470.7	2,804.4	0.00	0.00	
9,500.0	91.00	360.00	7,862.6	2,731.8	1,470.7	2,903.5	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well DH3A-32 C08 799
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6480.0ft (Original Well Elev)
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Site:	Section 8 (C08 799)	North Reference:	True
Well:	DH3A-32 C08 799	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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)	Comments / Formations
9,600.0	91.00	360.00	7,860.8	2,831.8	1,470.7	3,002.6	0.00	0.00	
9,700.0	91.00	360.00	7,859.1	2,931.7	1,470.6	3,101.7	0.00	0.00	
9,800.0	91.00	360.00	7,857.3	3,031.7	1,470.6	3,200.8	0.00	0.00	
9,900.0	91.00	360.00	7,855.6	3,131.7	1,470.6	3,299.9	0.00	0.00	
10,000.0	91.00	360.00	7,853.8	3,231.7	1,470.6	3,398.9	0.00	0.00	
10,100.0	91.00	360.00	7,852.1	3,331.7	1,470.6	3,498.0	0.00	0.00	
10,200.0	91.00	360.00	7,850.3	3,431.7	1,470.6	3,597.1	0.00	0.00	
10,300.0	91.00	360.00	7,848.6	3,531.7	1,470.6	3,696.2	0.00	0.00	
10,400.0	91.00	360.00	7,846.8	3,631.6	1,470.6	3,795.3	0.00	0.00	
10,500.0	91.00	360.00	7,845.1	3,731.6	1,470.6	3,894.4	0.00	0.00	
10,600.0	91.00	360.00	7,843.3	3,831.6	1,470.6	3,993.5	0.00	0.00	
10,700.0	91.00	360.00	7,841.6	3,931.6	1,470.6	4,092.6	0.00	0.00	
10,800.0	91.00	360.00	7,839.8	4,031.6	1,470.6	4,191.7	0.00	0.00	
10,900.0	91.00	360.00	7,838.1	4,131.6	1,470.6	4,290.8	0.00	0.00	
11,000.0	91.00	360.00	7,836.3	4,231.5	1,470.6	4,389.9	0.00	0.00	
11,100.0	91.00	360.00	7,834.6	4,331.5	1,470.6	4,488.9	0.00	0.00	
11,200.0	91.00	360.00	7,832.8	4,431.5	1,470.6	4,588.0	0.00	0.00	
11,300.0	91.00	360.00	7,831.1	4,531.5	1,470.6	4,687.1	0.00	0.00	
11,400.0	91.00	360.00	7,829.3	4,631.5	1,470.5	4,786.2	0.00	0.00	
11,500.0	91.00	360.00	7,827.6	4,731.5	1,470.5	4,885.3	0.00	0.00	
11,600.0	91.00	360.00	7,825.8	4,831.5	1,470.5	4,984.4	0.00	0.00	
11,700.0	91.00	360.00	7,824.1	4,931.4	1,470.5	5,083.5	0.00	0.00	
11,800.0	91.00	360.00	7,822.3	5,031.4	1,470.5	5,182.6	0.00	0.00	
11,900.0	91.00	360.00	7,820.5	5,131.4	1,470.5	5,281.7	0.00	0.00	
12,000.0	91.00	360.00	7,818.8	5,231.4	1,470.5	5,380.8	0.00	0.00	
12,100.0	91.00	360.00	7,817.0	5,331.4	1,470.5	5,479.9	0.00	0.00	
12,200.0	91.00	360.00	7,815.3	5,431.4	1,470.5	5,578.9	0.00	0.00	
12,300.0	91.00	360.00	7,813.5	5,531.3	1,470.5	5,678.0	0.00	0.00	
12,400.0	91.00	360.00	7,811.8	5,631.3	1,470.5	5,777.1	0.00	0.00	
12,500.0	91.00	360.00	7,810.0	5,731.3	1,470.5	5,876.2	0.00	0.00	
12,600.0	91.00	360.00	7,808.3	5,831.3	1,470.5	5,975.3	0.00	0.00	
12,700.0	91.00	360.00	7,806.5	5,931.3	1,470.5	6,074.4	0.00	0.00	
12,800.0	91.00	360.00	7,804.8	6,031.3	1,470.5	6,173.5	0.00	0.00	
12,900.0	91.00	360.00	7,803.0	6,131.3	1,470.5	6,272.6	0.00	0.00	
13,000.0	91.00	360.00	7,801.3	6,231.2	1,470.5	6,371.7	0.00	0.00	
13,100.0	91.00	360.00	7,799.5	6,331.2	1,470.5	6,470.8	0.00	0.00	
13,200.0	91.00	360.00	7,797.8	6,431.2	1,470.4	6,569.9	0.00	0.00	
13,300.0	91.00	360.00	7,796.0	6,531.2	1,470.4	6,668.9	0.00	0.00	
13,400.0	91.00	360.00	7,794.3	6,631.2	1,470.4	6,768.0	0.00	0.00	
13,500.0	91.00	360.00	7,792.5	6,731.2	1,470.4	6,867.1	0.00	0.00	
13,600.0	91.00	360.00	7,790.8	6,831.1	1,470.4	6,966.2	0.00	0.00	
13,700.0	91.00	360.00	7,789.0	6,931.1	1,470.4	7,065.3	0.00	0.00	
13,800.0	91.00	360.00	7,787.3	7,031.1	1,470.4	7,164.4	0.00	0.00	
13,900.0	91.00	360.00	7,785.5	7,131.1	1,470.4	7,263.5	0.00	0.00	
14,000.0	91.00	360.00	7,783.8	7,231.1	1,470.4	7,362.6	0.00	0.00	
14,100.0	91.00	360.00	7,782.0	7,331.1	1,470.4	7,461.7	0.00	0.00	
14,200.0	91.00	360.00	7,780.2	7,431.1	1,470.4	7,560.8	0.00	0.00	
14,300.0	91.00	360.00	7,778.5	7,531.0	1,470.4	7,659.9	0.00	0.00	
14,400.0	91.00	360.00	7,776.7	7,631.0	1,470.4	7,758.9	0.00	0.00	
14,500.0	91.00	360.00	7,775.0	7,731.0	1,470.4	7,858.0	0.00	0.00	
14,600.0	91.00	360.00	7,773.2	7,831.0	1,470.4	7,957.1	0.00	0.00	
14,700.0	91.00	360.00	7,771.5	7,931.0	1,470.4	8,056.2	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well DH3A-32 C08 799
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6480.0ft (Original Well Elev)
Project:	Kimball Mtn	MD Reference:	KBE @ 6480.0ft (Original Well Elev)
Site:	Section 8 (C08 799)	North Reference:	True
Well:	DH3A-32 C08 799	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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)	Comments / Formations
14,800.0	91.00	360.00	7,769.7	8,031.0	1,470.4	8,155.3	0.00	0.00	
14,900.0	91.00	360.00	7,768.0	8,130.9	1,470.3	8,254.4	0.00	0.00	
15,000.0	91.00	360.00	7,766.2	8,230.9	1,470.3	8,353.5	0.00	0.00	
15,100.0	91.00	360.00	7,764.5	8,330.9	1,470.3	8,452.6	0.00	0.00	
15,200.0	91.00	360.00	7,762.7	8,430.9	1,470.3	8,551.7	0.00	0.00	
15,300.0	91.00	360.00	7,761.0	8,530.9	1,470.3	8,650.8	0.00	0.00	
15,400.0	91.00	360.00	7,759.2	8,630.9	1,470.3	8,749.9	0.00	0.00	
15,500.0	91.00	360.00	7,757.5	8,730.9	1,470.3	8,848.9	0.00	0.00	
15,600.0	91.00	360.00	7,755.7	8,830.8	1,470.3	8,948.0	0.00	0.00	
15,700.0	91.00	360.00	7,754.0	8,930.8	1,470.3	9,047.1	0.00	0.00	
15,800.0	91.00	360.00	7,752.2	9,030.8	1,470.3	9,146.2	0.00	0.00	
15,900.0	91.00	360.00	7,750.5	9,130.8	1,470.3	9,245.3	0.00	0.00	
16,000.0	91.00	360.00	7,748.7	9,230.8	1,470.3	9,344.4	0.00	0.00	
16,100.0	91.00	360.00	7,747.0	9,330.8	1,470.3	9,443.5	0.00	0.00	
16,200.0	91.00	360.00	7,745.2	9,430.7	1,470.3	9,542.6	0.00	0.00	
16,300.0	91.00	360.00	7,743.5	9,530.7	1,470.3	9,641.7	0.00	0.00	
16,400.0	91.00	360.00	7,741.7	9,630.7	1,470.3	9,740.8	0.00	0.00	
16,500.0	91.00	360.00	7,739.9	9,730.7	1,470.3	9,839.9	0.00	0.00	
16,600.0	91.00	360.00	7,738.2	9,830.7	1,470.3	9,938.9	0.00	0.00	
16,700.0	91.00	360.00	7,736.4	9,930.7	1,470.2	10,038.0	0.00	0.00	
16,800.0	91.00	360.00	7,734.7	10,030.7	1,470.2	10,137.1	0.00	0.00	
16,900.0	91.00	360.00	7,732.9	10,130.6	1,470.2	10,236.2	0.00	0.00	
17,000.0	91.00	360.00	7,731.2	10,230.6	1,470.2	10,335.3	0.00	0.00	
17,100.0	91.00	360.00	7,729.4	10,330.6	1,470.2	10,434.4	0.00	0.00	
17,200.0	91.00	360.00	7,727.7	10,430.6	1,470.2	10,533.5	0.00	0.00	
17,300.0	91.00	360.00	7,725.9	10,530.6	1,470.2	10,632.6	0.00	0.00	
17,400.0	91.00	360.00	7,724.2	10,630.6	1,470.2	10,731.7	0.00	0.00	
17,500.0	91.00	360.00	7,722.4	10,730.5	1,470.2	10,830.8	0.00	0.00	
17,600.0	91.00	360.00	7,720.7	10,830.5	1,470.2	10,929.9	0.00	0.00	
17,695.6	91.00	360.00	7,719.0	10,926.2	1,470.2	11,024.6	0.00	0.00	TD @ 17,695' MD - DH3A-32 C08 799 PBHL

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
DH3A-32 C08 799 LP	0.00	0.00	7,881.0	1,681.6	1,470.7	1,609,809.22	2,164,163.71	39° 28' 13.04 N	108° 27' 40.72 W
- plan hits target center									
- Point									
DH3A-32 C08 799 PBHL	0.00	0.00	7,719.0	10,926.2	1,470.2	1,619,048.90	2,164,465.00	39° 29' 44.41 N	108° 27' 40.72 W
- plan hits target center									
- Point									

Cathedral Energy Services

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well DH3A-32 C08 799
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6480.0ft (Original Well Elev)
Project:	Kimball Mtn	MD Reference:	KBE @ 6480.0ft (Original Well Elev)
Site:	Section 8 (C08 799)	North Reference:	True
Well:	DH3A-32 C08 799	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,538.5	1,510.0	Williams Fork				
3,948.1	3,843.0	Rollins				
4,982.0	4,844.0	Mancos				
6,959.9	6,759.0	Niobrara				
7,819.3	7,583.0	Nio1Kit				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400'	
762.2	758.3	28.6	35.5	EOB @ Inc. = 14.49°	
7,630.0	7,407.8	1,105.9	1,373.8	Start 10° Build @ 7,630' MD	
8,449.6	7,881.0	1,681.6	1,470.7	LP @ 7,881' TVD, 91°	
17,695.6	7,719.0	10,926.2	1,470.2	TD @ 17,695' MD	