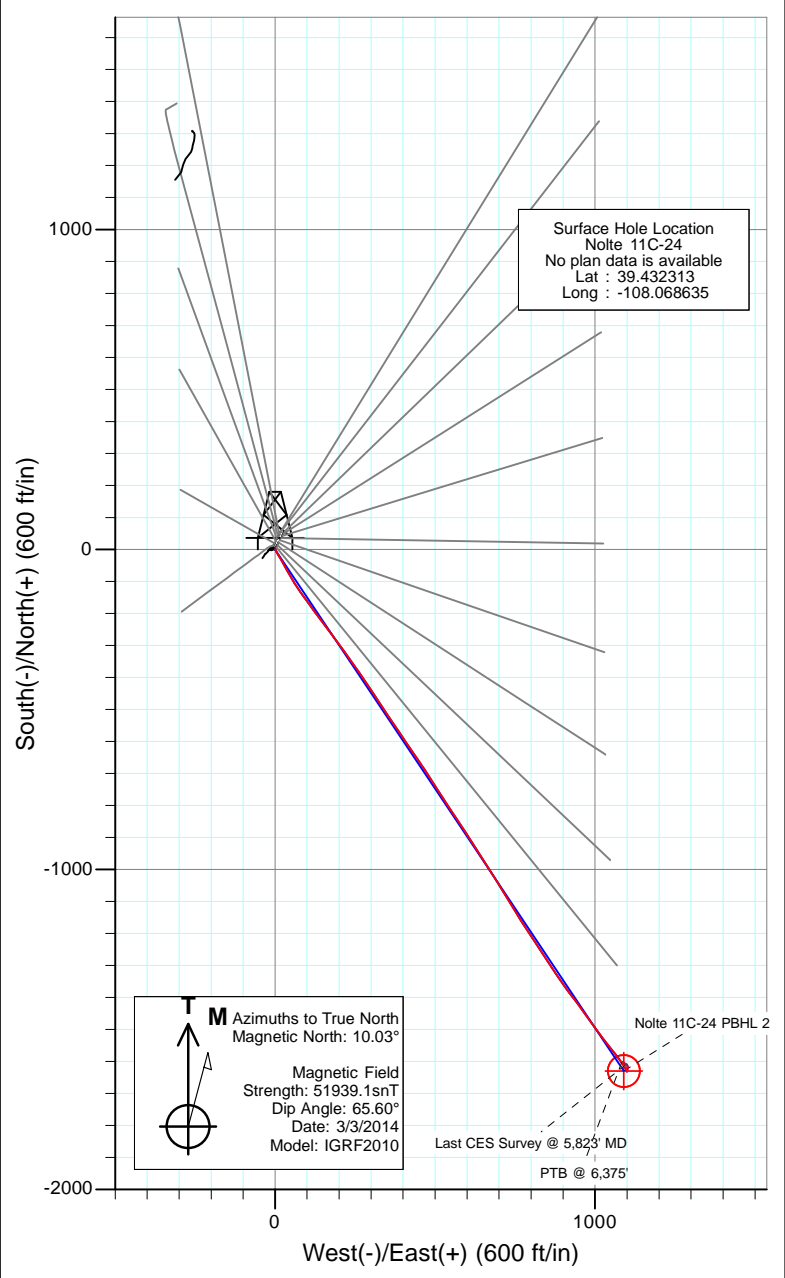
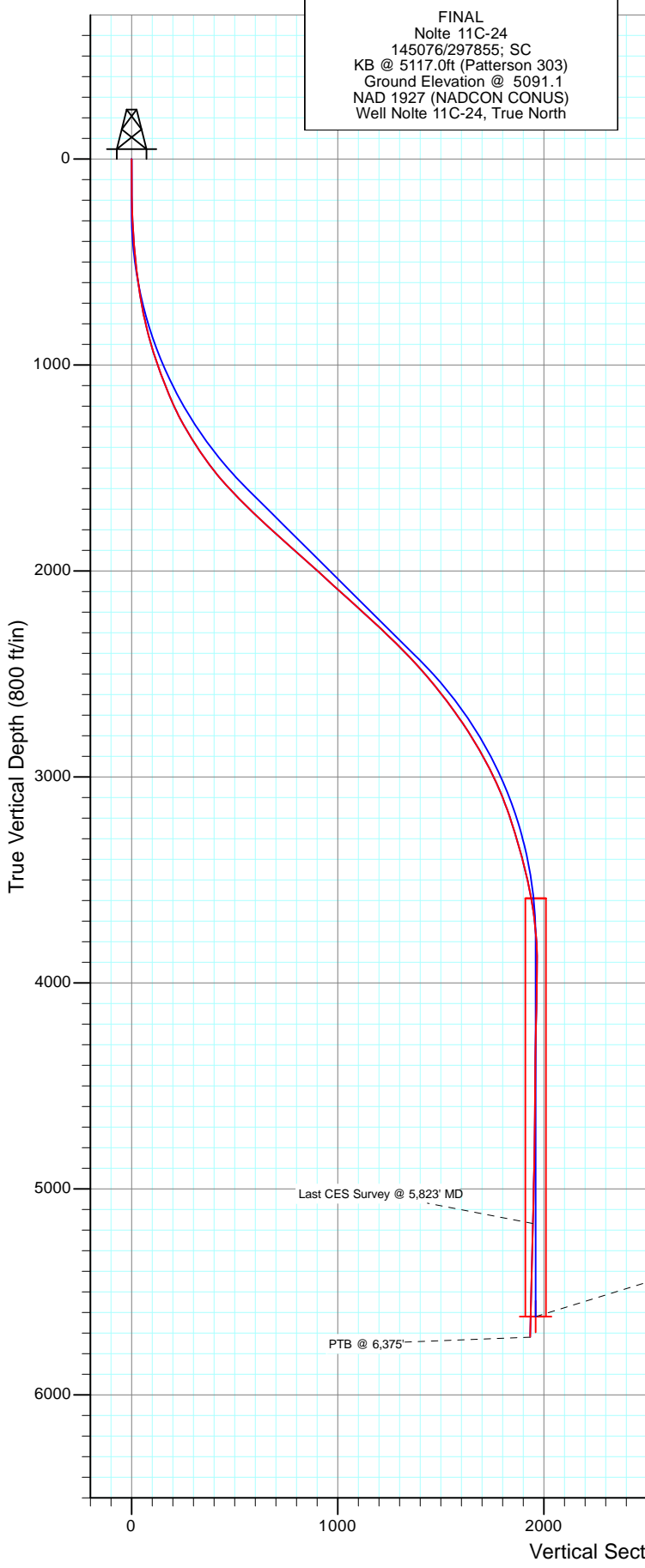


FINAL
 Nolte 11C-24
 145076/297855; SC
 KB @ 5117.0ft (Patterson 303)
 Ground Elevation @ 5091.1
 NAD 1927 (NADCON CONUS)
 Well Nolte 11C-24, True North



Last CES Survey @ 5,823' MD

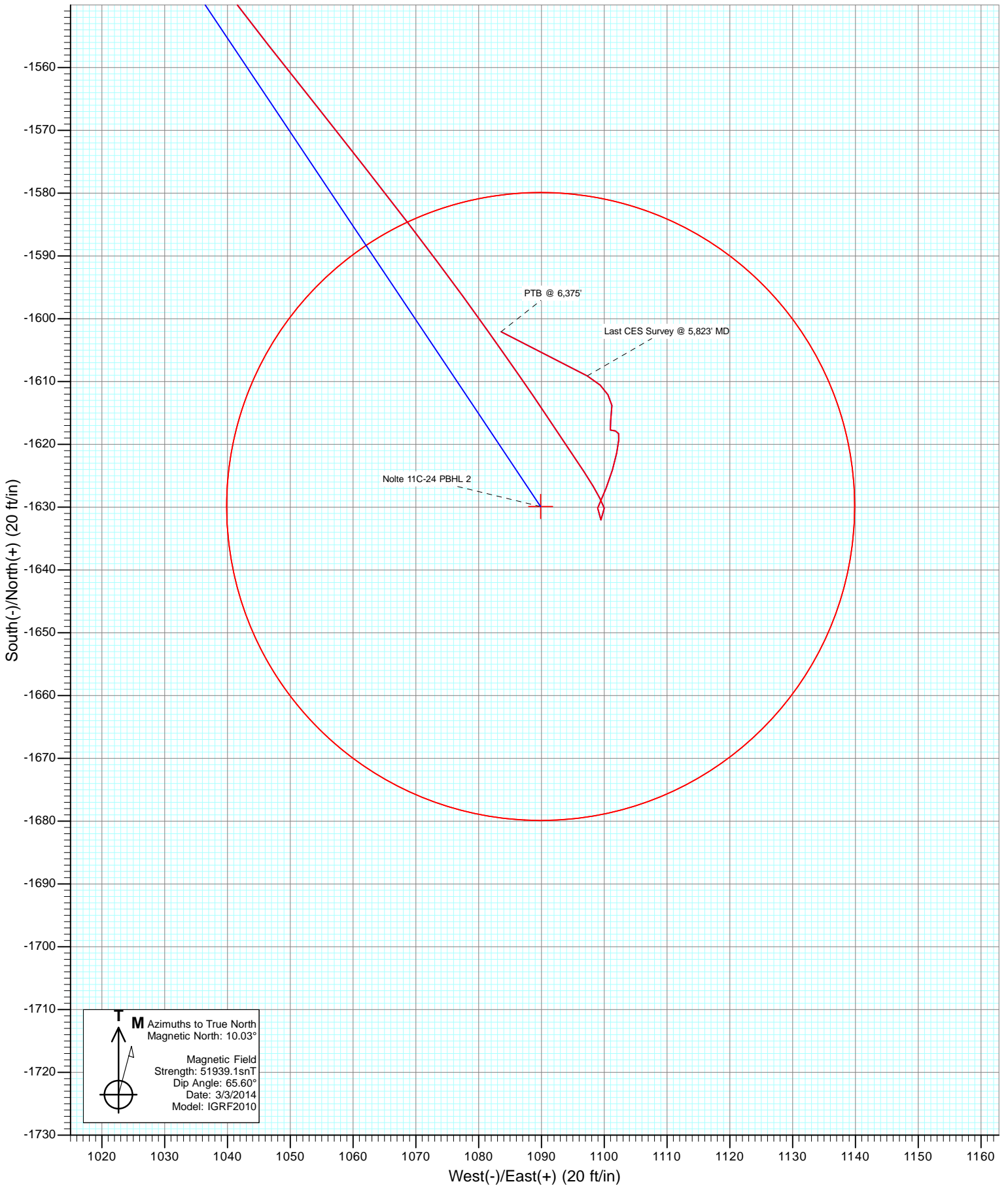
Nolte 11C-24 PBHL 2

PTB @ 6,375'

Last CES Survey @ 5,823' MD
 PTB @ 6,375'

Nolte 11C-24 PBHL 2

Vertical Section at 146.23° (800 ft/in)



Cathedral Energy Services

Survey Report

Company: Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference: Well Nolte 11C-24
Project: Garfield County, CO	TVD Reference: KB @ 5117.0ft (Patterson 303)
Site: S14-T7S-R96W	MD Reference: KB @ 5117.0ft (Patterson 303)
Well: Nolte 11C-24	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: FINAL	Database: USA EDM 5000 Multi Users DB

Project Garfield County, CO		
Map System: US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum: NAD 1927 (NADCON CONUS)		
Map Zone: Colorado Central 502		

Site S14-T7S-R96W					
Site Position:		Northing:	592,603.28 ft	Latitude:	39.432320
From:	Lat/Long	Easting:	1,274,372.48 ft	Longitude:	-108.069280
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.62 °

Well Nolte 11C-24						
Well Position	+N/-S	0.0 ft	Northing:	592,595.45 ft	Latitude:	39.432313
	+E/-W	0.0 ft	Easting:	1,274,554.52 ft	Longitude:	-108.068635
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,091.1 ft

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/3/2014	10.03	65.60	51,939

Design FINAL					
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
		0.0	0.0	0.0	146.23

Survey Program					
		Date	3/10/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
145.0	6,375.0	Survey #1 (DD)	MWD	Geolink MWD	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
145.0	0.70	123.10	145.0	-0.5	0.7	0.8	0.48	0.48	
176.0	0.90	128.90	176.0	-0.7	1.1	1.2	0.70	0.65	
206.0	1.20	149.80	206.0	-1.2	1.4	1.8	1.61	1.00	
237.0	1.60	157.20	237.0	-1.8	1.8	2.5	1.41	1.29	
267.0	2.20	160.00	267.0	-2.8	2.1	3.5	2.02	2.00	
298.0	2.80	156.40	297.9	-4.0	2.6	4.8	2.00	1.94	
329.0	3.20	154.30	328.9	-5.5	3.3	6.4	1.34	1.29	
360.0	3.60	154.60	359.8	-7.2	4.1	8.2	1.29	1.29	
391.0	4.20	152.60	390.8	-9.0	5.0	10.3	1.98	1.94	
421.0	4.70	152.70	420.7	-11.1	6.1	12.6	1.67	1.67	
512.0	6.30	148.50	511.3	-18.7	10.4	21.3	1.81	1.76	
604.0	7.80	146.70	602.6	-28.2	16.5	32.6	1.65	1.63	

Cathedral Energy Services

Survey Report

Company:	Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference:	Well Nolte 11C-24
Project:	Garfield County, CO	TVD Reference:	KB @ 5117.0ft (Patterson 303)
Site:	S14-T7S-R96W	MD Reference:	KB @ 5117.0ft (Patterson 303)
Well:	Nolte 11C-24	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
696.0	10.00	151.80	693.4	-40.5	23.7	46.8	2.54	2.39	
788.0	12.70	151.30	783.6	-56.4	32.3	64.8	2.94	2.93	
879.0	15.40	151.30	871.9	-75.7	42.9	86.8	2.97	2.97	
970.0	18.00	147.80	959.1	-98.2	56.2	112.9	3.06	2.86	
1,001.0	19.00	147.00	988.5	-106.5	61.5	122.8	3.33	3.23	
1,072.0	20.60	147.10	1,055.3	-126.7	74.6	146.8	2.25	2.25	
1,135.0	21.60	143.40	1,114.0	-145.3	87.6	169.5	2.64	1.59	
1,199.0	23.60	144.90	1,173.1	-165.3	101.9	194.1	3.25	3.12	
1,262.0	26.00	142.70	1,230.3	-186.6	117.6	220.4	4.08	3.81	
1,325.0	29.20	143.00	1,286.1	-209.8	135.2	249.6	5.08	5.08	
1,389.0	31.30	143.40	1,341.4	-235.7	154.5	281.8	3.30	3.28	
1,452.0	33.40	143.20	1,394.6	-262.7	174.6	315.4	3.34	3.33	
1,515.0	34.80	143.30	1,446.8	-291.0	195.8	350.7	2.22	2.22	
1,579.0	37.40	144.30	1,498.5	-321.4	218.0	388.4	4.17	4.06	
1,642.0	39.50	144.30	1,547.8	-353.2	240.9	427.5	3.33	3.33	
1,737.0	44.60	146.30	1,618.4	-405.5	277.1	491.1	5.55	5.37	
1,832.0	44.80	146.50	1,685.9	-461.2	314.0	557.9	0.26	0.21	
1,927.0	47.50	145.90	1,751.7	-518.1	352.1	626.5	2.88	2.84	
2,022.0	47.90	146.40	1,815.6	-576.5	391.3	696.7	0.57	0.42	
2,117.0	47.70	144.90	1,879.5	-634.6	431.0	767.1	1.19	-0.21	
2,212.0	48.10	147.20	1,943.1	-693.1	470.3	837.6	1.84	0.42	
2,307.0	47.70	147.20	2,006.8	-752.3	508.5	908.0	0.42	-0.42	
2,402.0	48.10	146.70	2,070.5	-811.4	547.0	978.5	0.57	0.42	
2,497.0	48.30	146.30	2,133.9	-870.4	586.1	1,049.3	0.38	0.21	
2,592.0	47.30	148.00	2,197.7	-929.6	624.2	1,119.7	1.69	-1.05	
2,687.0	47.10	146.90	2,262.2	-988.3	661.7	1,189.4	0.88	-0.21	
2,782.0	45.10	148.50	2,328.1	-1,046.2	698.3	1,257.8	2.43	-2.11	
2,877.0	45.50	148.50	2,394.9	-1,103.7	733.6	1,325.3	0.42	0.42	
2,973.0	42.10	147.80	2,464.2	-1,160.2	768.7	1,391.7	3.58	-3.54	
3,068.0	39.20	146.60	2,536.3	-1,212.2	802.2	1,453.6	3.16	-3.05	
3,163.0	37.30	146.40	2,610.9	-1,261.2	834.6	1,512.4	2.00	-2.00	
3,258.0	36.10	146.40	2,687.0	-1,308.5	866.0	1,569.1	1.26	-1.26	
3,353.0	33.30	145.90	2,765.1	-1,353.4	896.2	1,623.2	2.96	-2.95	
3,448.0	30.80	141.50	2,845.6	-1,394.1	925.9	1,673.5	3.60	-2.63	
3,543.0	28.10	143.90	2,928.4	-1,431.2	954.3	1,720.1	3.10	-2.84	
3,638.0	24.80	144.60	3,013.4	-1,465.5	979.0	1,762.4	3.49	-3.47	
3,733.0	21.90	144.00	3,100.6	-1,496.1	1,000.9	1,800.1	3.06	-3.05	
3,827.0	19.20	142.80	3,188.6	-1,522.6	1,020.6	1,833.0	2.91	-2.87	
3,922.0	16.80	142.50	3,279.0	-1,545.9	1,038.4	1,862.3	2.53	-2.53	
4,017.0	14.90	141.40	3,370.4	-1,566.4	1,054.4	1,888.2	2.02	-2.00	
4,112.0	13.80	142.60	3,462.4	-1,584.9	1,068.9	1,911.7	1.20	-1.16	
4,207.0	11.70	144.60	3,555.1	-1,601.8	1,081.3	1,932.6	2.26	-2.21	
4,302.0	8.00	146.20	3,648.6	-1,615.1	1,090.6	1,948.8	3.90	-3.89	
4,397.0	5.40	146.30	3,743.0	-1,624.3	1,096.8	1,959.9	2.74	-2.74	
4,492.0	2.70	159.90	3,837.7	-1,630.2	1,100.0	1,966.6	3.00	-2.84	
4,587.0	1.60	280.00	3,932.7	-1,632.0	1,099.5	1,967.8	3.96	-1.16	
4,682.0	2.20	25.20	4,027.7	-1,630.2	1,098.9	1,966.0	3.20	0.63	
4,777.0	2.00	21.00	4,122.6	-1,627.0	1,100.3	1,964.1	0.27	-0.21	
4,872.0	1.70	16.60	4,217.6	-1,624.1	1,101.3	1,962.2	0.35	-0.32	
4,967.0	1.60	10.80	4,312.5	-1,621.4	1,102.0	1,960.4	0.20	-0.11	
5,063.0	0.90	7.30	4,408.5	-1,619.3	1,102.3	1,958.9	0.73	-0.73	
5,158.0	0.40	340.60	4,503.5	-1,618.3	1,102.3	1,958.0	0.60	-0.53	
5,253.0	0.50	285.80	4,598.5	-1,617.9	1,101.8	1,957.3	0.45	0.11	

Cathedral Energy Services

Survey Report

Company: Caerus Oil & Gas (NAD 27)	Local Co-ordinate Reference: Well Nolte 11C-24
Project: Garfield County, CO	TVD Reference: KB @ 5117.0ft (Patterson 303)
Site: S14-T7S-R96W	MD Reference: KB @ 5117.0ft (Patterson 303)
Well: Nolte 11C-24	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: FINAL	Database: USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
5,348.0	0.50	276.40	4,693.5	-1,617.7	1,101.0	1,956.8	0.09	0.00	
5,443.0	1.80	18.30	4,788.5	-1,616.2	1,101.0	1,955.6	2.07	1.37	
5,537.0	1.30	345.30	4,882.4	-1,613.8	1,101.2	1,953.7	1.07	-0.53	
5,633.0	0.90	331.50	4,978.4	-1,612.1	1,100.6	1,951.9	0.50	-0.42	
5,728.0	1.50	314.80	5,073.4	-1,610.6	1,099.4	1,949.9	0.72	0.63	
5,823.0	1.60	297.10	5,168.3	-1,609.1	1,097.3	1,947.5	0.51	0.11	Last CES Survey @ 5,823' MD
6,375.0	1.60	297.10	5,720.1	-1,602.1	1,083.6	1,934.1	0.00	0.00	PTB @ 6,375'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Nolte 11C-24 PBHL 2	0.00	0.00	5,620.0	-1,629.9	1,089.9	590,935.40	1,275,597.88	39.427838	-108.064777
- hit/miss target - Shape - actual wellpath misses target center by 26.8ft at 6274.4ft MD (5619.6 TVD, -1603.3 N, 1086.1 E) - Circle (radius 50.0)									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
5,823.0	5,168.3	-1,609.1	1,097.3	Last CES Survey @ 5,823' MD	
6,375.0	5,720.1	-1,602.1	1,083.6	PTB @ 6,375'	

Checked By: _____ Approved By: _____ Date: _____