



Caerus Oil & Gas

**Garfield County, CO (UTM 12N)
S8-T5S-R96W NPR K08 596 (H&P 330)
NPR 23B-8 596**

OH [479837]

Survey: CES MWD Survey

Standard Survey Report

13 May, 2019





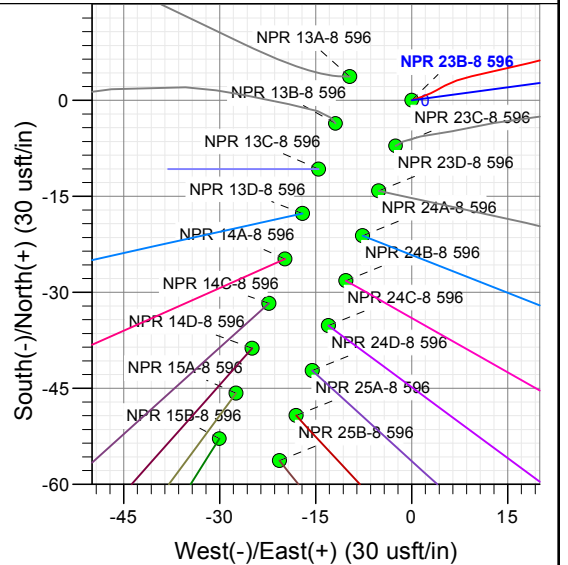
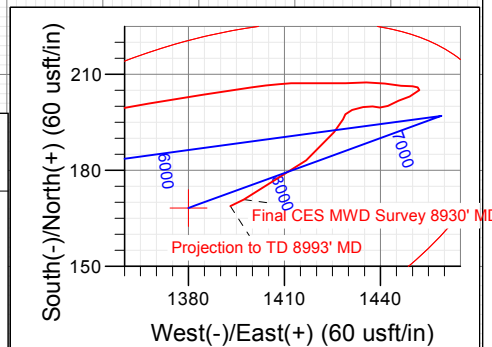
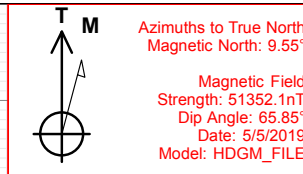
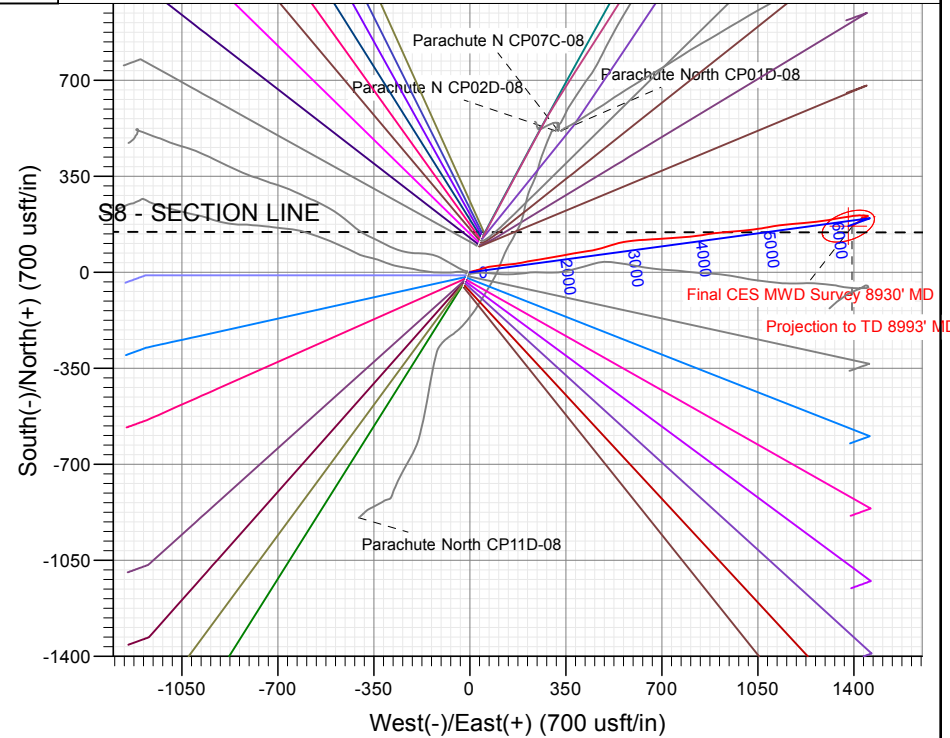
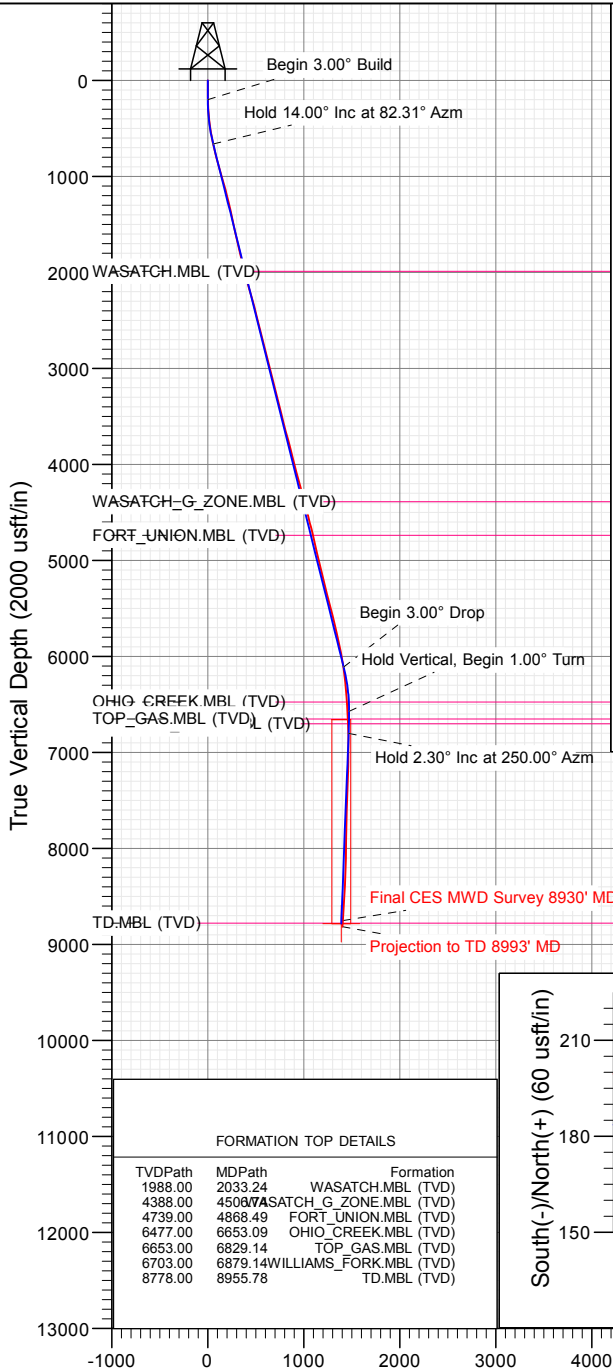
SECTION DETAILS

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	666.75	14.00	82.31	662.12	7.59	56.24	3.00	82.31	56.75	
4	6282.38	14.00	82.31	6110.88	189.41	1402.81	0.00	0.00	1415.42	
5	6749.13	0.00	0.00	6573.00	197.00	1459.05	3.00	180.00	1472.17	
6	6978.86	2.30	250.00	6802.66	195.42	1454.72	1.00	250.00	1467.68	
7	8961.79	2.30	250.00	8784.00	168.23	1380.03	0.00	0.00	1390.25	BHL v2 - NPR 23B-8_596

Project: Garfield County, CO (UTM 12N)
Site: S8-T5S-R96W NPR K08 596 (H&P 330)
Well: NPR 23B-8 596
Wellbore: OH [479837]
Design: Plan 3 (05-03-19 DN)
Gravity: 0.998731

Plan 3 (05-03-19 DN)
NPR 23B-8 596
RKB @ 7793.00usft (H&P 330)
Ground Level @ 7763.00
NAD 1927 - Western US
Well NPR 23B-8 596, True North

Name	Type	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From	TVD
BHL v2 - NPR 23B-8_596	TD			83.05	Slot		0.00	0.00	0.00	
				TVD						
				+N/-S						
				+E/-W						
				Latitude						
				Longitude						



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1988.00	2033.24	WASATCH.MBL (TVD)
4388.00	4508.75	WASATCH_G_ZONE.MBL (TVD)
4739.00	4868.49	FORT_UNION.MBL (TVD)
6477.00	6653.09	OHIO_CREEK.MBL (TVD)
6653.00	6829.14	TOP_GAS.MBL (TVD)
6703.00	6879.14	WILLIAMS_FORK.MBL (TVD)
8778.00	8955.78	TD.MBL (TVD)

WELL DETAILS: NPR 23B-8 596

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14403390.60	2430996.80	39.629208	-108.192426

CATHEDRAL

CATHEDRAL

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Well:	NPR 23B-8 596	North Reference:	True
Wellbore:	OH [479837]	Survey Calculation Method:	Minimum Curvature
Design:	Survey (H&P 329)	Database:	USA EDM 5000 Multi Users DB

Project	Garfield County, CO (UTM 12N)		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	S8-T5S-R96W NPR K08 596 (H&P 330), Gravity: 0.998731				
Site Position:		Northing:	14,403,394.00 usft	Latitude:	39.629218
From:	Map	Easting:	2,430,987.00 usft	Longitude:	-108.192461
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.79 °

Well	NPR 23B-8 596					
Well Position	+N/-S	0.00 usft	Northing:	14,403,390.60 usft	Latitude:	39.629208
	+E/-W	0.00 usft	Easting:	2,430,996.80 usft	Longitude:	-108.192427
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level:	7,763.00 usft

Wellbore	OH [479837]				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	5/5/2019	9.55	65.85	51,352.10000000

Design	Survey (H&P 329)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	83.05	

Survey Program	Date	5/13/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
170.00	8,993.00	CES MWD Survey (OH [479837])	MWD+HDGM	OWSG MWD + HDGM	

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	
170.00	1.14	70.81	169.99	0.56	1.60	1.65	0.67	0.67	0.00	
231.00	1.63	68.00	230.97	1.08	2.97	3.08	0.81	0.80	-4.61	
262.00	2.24	57.71	261.95	1.57	3.90	4.06	2.26	1.97	-33.19	
292.00	3.47	62.02	291.92	2.31	5.19	5.43	4.16	4.10	14.37	
353.00	4.92	76.96	352.75	3.76	9.37	9.76	2.96	2.38	24.49	
445.00	6.68	77.40	444.28	5.82	18.44	19.01	1.91	1.91	0.48	
536.00	8.83	73.71	534.44	8.94	30.31	31.17	2.42	2.36	-4.05	
630.00	12.04	73.45	626.87	13.75	46.64	47.96	3.42	3.41	-0.28	
724.00	13.18	77.05	718.61	18.95	66.48	68.28	1.47	1.21	3.83	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Well:	NPR 23B-8 596	North Reference:	True
Wellbore:	OH [479837]	Survey Calculation Method:	Minimum Curvature
Design:	Survey (H&P 329)	Database:	USA EDM 5000 Multi Users DB

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)
819.00	14.59	84.08	810.83	22.61	88.94	91.02	2.31	1.48	7.40
913.00	16.26	82.68	901.45	25.51	113.77	116.02	1.82	1.78	-1.49
1,007.00	17.40	85.14	991.42	28.38	140.83	143.23	1.43	1.21	2.62
1,101.00	15.47	81.88	1,081.58	31.34	167.25	169.81	2.27	-2.05	-3.47
1,195.00	13.62	78.63	1,172.56	35.29	190.51	193.38	2.15	-1.97	-3.46
1,289.00	12.79	79.86	1,264.08	39.30	211.60	214.80	0.93	-0.88	1.31
1,384.00	13.45	79.16	1,356.59	43.23	232.80	236.33	0.71	0.69	-0.74
1,478.00	12.96	81.45	1,448.11	46.86	253.97	257.77	0.76	-0.52	2.44
1,573.00	12.04	82.15	1,540.86	49.79	274.32	278.33	0.98	-0.97	0.74
1,667.00	11.65	79.51	1,632.86	52.86	293.36	297.60	0.71	-0.41	-2.81
1,761.00	12.31	78.98	1,724.81	56.50	312.53	317.07	0.71	0.70	-0.56
1,855.00	13.40	78.54	1,816.45	60.58	333.04	337.92	1.16	1.16	-0.47
1,949.00	14.28	79.51	1,907.72	64.86	355.11	360.35	0.97	0.94	1.03
2,044.00	15.43	81.71	1,999.54	68.81	379.14	384.68	1.35	1.21	2.32
2,138.00	15.73	79.78	2,090.09	72.88	404.06	409.91	0.64	0.32	-2.05
2,232.00	15.38	80.57	2,180.65	77.18	428.89	435.08	0.44	-0.37	0.84
2,326.00	15.56	79.34	2,271.24	81.56	453.58	460.12	0.40	0.19	-1.31
2,420.00	15.16	75.73	2,361.89	86.92	477.88	484.89	1.10	-0.43	-3.84
2,527.00	14.68	70.37	2,465.28	94.92	504.21	511.99	1.36	-0.45	-5.01
2,622.00	14.19	73.01	2,557.29	102.37	526.69	535.20	0.86	-0.52	2.78
2,715.00	14.06	77.58	2,647.48	108.13	548.62	557.67	1.21	-0.14	4.91
2,810.00	14.06	81.71	2,739.63	112.27	571.31	580.70	1.06	0.00	4.35
2,904.00	13.49	84.52	2,830.93	114.97	593.52	603.07	0.93	-0.61	2.99
2,999.00	15.07	85.14	2,922.99	117.07	616.86	626.49	1.67	1.66	0.65
3,093.00	14.46	86.02	3,013.89	118.92	640.74	650.43	0.69	-0.65	0.94
3,187.00	14.19	87.51	3,104.97	120.24	663.96	673.63	0.49	-0.29	1.59
3,282.00	13.58	86.37	3,197.19	121.45	686.73	696.38	0.70	-0.64	-1.20
3,376.00	14.24	85.66	3,288.43	123.02	709.27	718.94	0.73	0.70	-0.76
3,470.00	14.15	85.40	3,379.56	124.82	732.25	741.97	0.12	-0.10	-0.28
3,564.00	13.98	87.16	3,470.75	126.30	755.04	764.78	0.49	-0.18	1.87
3,658.00	14.33	85.93	3,561.89	127.69	777.99	787.72	0.49	0.37	-1.31
3,752.00	15.47	84.08	3,652.73	129.81	802.06	811.88	1.31	1.21	-1.97
3,847.00	14.72	81.97	3,744.45	132.80	826.62	836.61	0.98	-0.79	-2.22
3,941.00	14.46	81.18	3,835.42	136.27	850.04	860.28	0.35	-0.28	-0.84
4,026.00	13.76	80.13	3,917.86	139.63	870.48	880.98	0.88	-0.82	-1.24
4,130.00	14.11	83.55	4,018.80	143.18	895.27	906.01	0.86	0.34	3.29
4,224.00	16.22	85.31	4,109.52	145.54	919.74	930.59	2.30	2.24	1.87
4,318.00	15.73	85.58	4,199.89	147.59	945.53	956.44	0.53	-0.52	0.29
4,412.00	14.33	85.40	4,290.67	149.51	969.83	980.79	1.49	-1.49	-0.19
4,507.00	14.77	84.08	4,382.62	151.70	993.59	1,004.65	0.58	0.46	-1.39
4,601.00	14.90	84.35	4,473.49	154.12	1,017.54	1,028.71	0.16	0.14	0.29
4,695.00	13.62	82.41	4,564.59	156.78	1,040.54	1,051.86	1.45	-1.36	-2.06
4,789.00	14.77	81.01	4,655.72	160.11	1,063.34	1,074.90	1.28	1.22	-1.49
4,883.00	13.62	78.63	4,746.85	164.16	1,086.03	1,097.91	1.37	-1.22	-2.53

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Well:	NPR 23B-8 596	North Reference:	True
Wellbore:	OH [479837]	Survey Calculation Method:	Minimum Curvature
Design:	Survey (H&P 329)	Database:	USA EDM 5000 Multi Users DB

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)
4,978.00	13.05	81.01	4,839.29	168.05	1,107.59	1,119.78	0.83	-0.60	2.51
5,072.00	12.00	83.11	4,931.05	170.88	1,127.77	1,140.16	1.22	-1.12	2.23
5,166.00	12.66	83.73	5,022.88	173.17	1,147.71	1,160.24	0.72	0.70	0.66
5,260.00	13.40	84.35	5,114.46	175.37	1,168.79	1,181.42	0.80	0.79	0.66
5,354.00	14.50	84.35	5,205.69	177.60	1,191.34	1,204.08	1.17	1.17	0.00
5,450.00	15.07	85.58	5,298.51	179.75	1,215.75	1,228.56	0.68	0.59	1.28
5,543.00	15.07	84.08	5,388.31	181.93	1,239.83	1,252.73	0.42	0.00	-1.61
5,637.00	14.28	84.35	5,479.24	184.33	1,263.52	1,276.54	0.84	-0.84	0.29
5,731.00	14.02	81.88	5,570.39	187.08	1,286.33	1,299.51	0.70	-0.28	-2.63
5,825.00	13.14	80.83	5,661.76	190.39	1,308.15	1,321.57	0.97	-0.94	-1.12
5,920.00	12.57	79.16	5,754.38	194.05	1,328.96	1,342.68	0.72	-0.60	-1.76
6,014.00	12.22	80.21	5,846.19	197.67	1,348.81	1,362.82	0.44	-0.37	1.12
6,109.00	10.90	80.39	5,939.26	200.88	1,367.57	1,381.83	1.39	-1.39	0.19
6,203.00	10.15	81.27	6,031.68	203.62	1,384.52	1,398.99	0.82	-0.80	0.94
6,297.00	8.61	81.80	6,124.42	205.88	1,399.68	1,414.30	1.64	-1.64	0.56
6,392.00	6.50	86.81	6,218.59	207.19	1,412.09	1,426.78	2.32	-2.22	5.27
6,486.00	5.14	93.75	6,312.11	207.21	1,421.60	1,436.23	1.63	-1.45	7.38
6,580.00	4.00	85.75	6,405.81	207.18	1,429.07	1,443.64	1.39	-1.21	-8.51
6,674.00	3.96	89.44	6,499.58	207.46	1,435.59	1,450.14	0.28	-0.04	3.93
6,768.00	3.08	99.55	6,593.40	207.07	1,441.32	1,455.79	1.14	-0.94	10.76
6,863.00	3.12	94.63	6,688.26	206.44	1,446.42	1,460.77	0.28	0.04	-5.18
6,957.00	1.27	87.60	6,782.19	206.27	1,450.01	1,464.31	1.99	-1.97	-7.48
7,051.00	0.88	124.95	6,876.18	205.90	1,451.64	1,465.89	0.83	-0.41	39.73
7,145.00	0.57	192.54	6,970.17	205.03	1,452.13	1,466.27	0.90	-0.33	71.90
7,334.00	1.80	249.67	7,159.13	203.09	1,449.14	1,463.07	0.83	0.65	30.23
7,428.00	2.68	247.38	7,253.06	201.73	1,445.73	1,459.52	0.94	0.94	-2.44
7,522.00	1.93	241.93	7,346.98	200.14	1,442.30	1,455.92	0.83	-0.80	-5.80
7,617.00	1.41	280.43	7,441.94	199.60	1,439.74	1,453.32	1.27	-0.55	40.53
7,711.00	1.32	279.20	7,535.92	199.98	1,437.54	1,451.17	0.10	-0.10	-1.31
7,806.00	2.29	257.67	7,630.87	199.75	1,434.60	1,448.23	1.23	1.02	-22.66
7,900.00	2.11	253.62	7,724.80	198.86	1,431.11	1,444.65	0.25	-0.19	-4.31
7,994.00	1.19	204.76	7,818.76	197.48	1,429.04	1,442.43	1.70	-0.98	-51.98
8,089.00	0.88	207.39	7,913.75	195.94	1,428.29	1,441.50	0.33	-0.33	2.77
8,278.00	2.11	218.29	8,102.68	191.92	1,425.47	1,438.21	0.67	0.65	5.77
8,561.00	2.94	228.93	8,385.40	183.06	1,416.77	1,428.51	0.34	0.29	3.76
8,930.00	4.26	244.04	8,753.68	170.85	1,397.31	1,407.71	0.44	0.36	4.09
Final CES MWD Survey 8930' MD									
8,993.00	4.26	244.04	8,816.50	168.80	1,393.10	1,403.29	0.00	0.00	0.00
Projection to TD 8993' MD									

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Well:	NPR 23B-8 596	North Reference:	True
Wellbore:	OH [479837]	Survey Calculation Method:	Minimum Curvature
Design:	Survey (H&P 329)	Database:	USA EDM 5000 Multi Users DB

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
BHL v2 - NPR 23B-8_	0.00	0.00	8,784.00	168.23	1,380.03	14,403,601.90	2,432,370.90	39.629670	-108.187529
- survey misses target center by 35.00usft at 8930.00usft MD (8753.68 TVD, 170.85 N, 1397.31 E)									
- Ellipse (radii L100.00 W50.00 on 250.00 azi)									

Survey Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S	+E/-W	
(usft)	(usft)	(usft)	(usft)	
8,930.00	8,753.68	170.85	1,397.31	Final CES MWD Survey 8930' MD
8,993.00	8,816.50	168.80	1,393.10	Projection to TD 8993' MD

Checked By: _____ Approved By: _____ Date: _____



Caerus Oil & Gas

**Garfield County, CO (UTM 12N)
S8-T5S-R96W NPR K08 596 (H&P 330)
NPR 23B-8 596**

**OH [479837]
Survey: CES MWD Survey**

Anticollision Report

13 May, 2019



Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Reference	Survey: CES MWD Survey		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.00 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Program	Date	5/13/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
170.00	8,993.00	CES MWD Survey (OH [479837])	MWD+HDGM	OWSG MWD + HDGM

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
S8-T5S-R96W NPR K08 596 (H&P 330)						
NPR 11A-8 596 - OH - Plan 1 (04-07-19 DS)	415.66	402.89	146.52	137.72	16.649	CC
NPR 11A-8 596 - OH - Plan 1 (04-07-19 DS)	445.00	430.25	146.70	136.99	15.109	ES
NPR 11A-8 596 - OH - Plan 1 (04-07-19 DS)	630.00	600.00	155.97	142.73	11.780	SF
NPR 11B-8 596 - OH - Plan 1 (04-07-19 DS)	535.23	520.64	134.29	122.91	11.801	CC
NPR 11B-8 596 - OH - Plan 1 (04-07-19 DS)	536.00	521.35	134.29	122.91	11.791	ES
NPR 11B-8 596 - OH - Plan 1 (04-07-19 DS)	630.00	607.76	136.64	124.16	10.951	SF
NPR 11C-8 596 - OH - Plan 1 (04-07-19 DS)	617.44	602.86	122.05	109.62	9.821	CC, ES
NPR 11C-8 596 - OH - Plan 1 (04-07-19 DS)	630.00	614.44	122.12	109.64	9.785	SF
NPR 11D-8 596 - OH - Plan 1 (04-07-19 DS)	661.92	649.48	111.73	99.08	8.833	CC, ES
NPR 11D-8 596 - OH - Plan 1 (04-07-19 DS)	724.00	706.66	113.75	100.82	8.796	SF
NPR 12A-8 596 - OH - Plan 1 (04-07-19 DS)	323.89	313.35	120.22	113.22	17.177	CC
NPR 12A-8 596 - OH - Plan 1 (04-07-19 DS)	445.00	427.99	123.52	111.18	10.011	ES
NPR 12A-8 596 - OH - Plan 1 (04-07-19 DS)	630.00	596.39	144.29	125.26	7.582	SF
NPR 12B-8 596 - OH - Plan 1 (04-07-19 DS)	421.41	410.99	109.08	99.86	11.831	CC
NPR 12B-8 596 - OH - Plan 1 (04-07-19 DS)	536.00	519.22	111.94	98.31	8.217	ES
NPR 12B-8 596 - OH - Plan 1 (04-07-19 DS)	630.00	605.37	120.61	103.96	7.245	SF
NPR 12C-8 596 - OH - Plan 1 (04-07-19 DS)	520.84	509.93	98.01	86.48	8.498	CC
NPR 12C-8 596 - OH - Plan 1 (04-07-19 DS)	536.00	524.33	98.07	85.99	8.116	ES
NPR 12C-8 596 - OH - Plan 1 (04-07-19 DS)	630.00	612.16	102.09	87.42	6.956	SF
NPR 12D-8 596 - OH - Plan 1 (04-08-19 DS)	521.32	511.14	90.63	78.99	7.789	CC
NPR 12D-8 596 - OH - Plan 1 (04-08-19 DS)	536.00	525.16	90.69	78.48	7.429	ES
NPR 12D-8 596 - OH - Plan 1 (04-08-19 DS)	630.00	613.35	95.01	80.06	6.354	SF
NPR 13A-8 596 - OH [479637] - Survey (H&P 330)	0.00	0.00	11.98			
NPR 13A-8 596 - OH [479637] - Survey (H&P 330)	292.00	284.49	22.31	20.91	15.862	SF
NPR 13B-8 596 - OH [479737] - Survey (H&P 330)	0.00	0.00	13.83			
NPR 13B-8 596 - OH [479737] - Survey (H&P 330)	292.00	285.31	20.05	18.71	15.060	SF
NPR 13C-8 596 - OH - Plan 1 (04-09-19 DS)	0.00	0.00	19.05			
NPR 13C-8 596 - OH - Plan 1 (04-09-19 DS)	231.00	224.97	21.14	16.80	4.873	ES
NPR 13C-8 596 - OH - Plan 1 (04-09-19 DS)	353.00	346.75	27.98	20.67	3.829	SF
NPR 13D-8 596 - OH - Plan 1 (04-09-19 DS)	0.00	0.00	25.29			
NPR 13D-8 596 - OH - Plan 1 (04-09-19 DS)	231.00	224.97	27.44	23.11	6.327	ES
NPR 13D-8 596 - OH - Plan 1 (04-09-19 DS)	445.00	438.28	42.57	33.06	4.476	SF
NPR 14A-8 596 - OH - Plan 1 (04-09-19 DS)	0.00	0.00	32.28			
NPR 14A-8 596 - OH - Plan 1 (04-09-19 DS)	231.00	224.57	34.61	30.24	7.921	ES
NPR 14A-8 596 - OH - Plan 1 (04-09-19 DS)	353.00	343.60	46.02	38.47	6.092	SF
NPR 14C-8 596 - OH - Plan 1 (04-09-19 DS)	0.00	0.00	39.24			
NPR 14C-8 596 - OH - Plan 1 (04-09-19 DS)	231.00	224.97	41.41	37.07	9.547	ES

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
S8-T5S-R96W NPR K08 596 (H&P 330)						
NPR 14C-8 596 - OH - Plan 1 (04-09-19 DS)	536.00	527.48	66.69	55.01	5.709	SF
NPR 14D-8 596 - OH - Plan 1 (04-09-19 DS)	0.00	0.00	46.45			
NPR 14D-8 596 - OH - Plan 1 (04-09-19 DS)	231.00	224.97	48.62	44.28	11.210	ES
NPR 14D-8 596 - OH - Plan 1 (04-09-19 DS)	445.00	437.07	62.55	53.04	6.578	SF
NPR 15A-8 596 - OH - Plan 1 (04-11-19 DS)	0.00	0.00	53.70			
NPR 15A-8 596 - OH - Plan 1 (04-11-19 DS)	231.00	224.97	55.85	51.52	12.878	ES
NPR 15A-8 596 - OH - Plan 1 (04-11-19 DS)	445.00	433.26	73.85	64.30	7.739	SF
NPR 15B-8 596 - OH - Plan 1 (04-11-19 DS)	0.00	0.00	61.13			
NPR 15B-8 596 - OH - Plan 1 (04-11-19 DS)	231.00	224.17	63.44	59.09	14.599	ES
NPR 15B-8 596 - OH - Plan 1 (04-11-19 DS)	445.00	428.12	90.30	80.81	9.510	SF
NPR 15D-5 596 - OH - Plan 1 (04-08-19 DS)	322.81	310.25	149.69	142.95	22.206	CC
NPR 15D-5 596 - OH - Plan 1 (04-08-19 DS)	445.00	424.16	152.66	141.32	13.452	ES
NPR 15D-5 596 - OH - Plan 1 (04-08-19 DS)	630.00	591.34	169.11	151.45	9.574	SF
NPR 21A-8 596 - OH - Plan 1 (04-08-19 DS)	405.97	392.96	138.31	129.86	16.377	CC
NPR 21A-8 596 - OH - Plan 1 (04-08-19 DS)	536.00	513.89	140.76	128.93	11.902	ES
NPR 21A-8 596 - OH - Plan 1 (04-08-19 DS)	819.00	774.14	169.17	148.66	8.249	SF
NPR 21B-8 596 - OH - Plan 1 (04-08-19 DS)	554.66	538.50	125.05	112.92	10.307	CC
NPR 21B-8 596 - OH - Plan 1 (04-08-19 DS)	630.00	608.84	126.05	111.92	8.924	ES
NPR 21B-8 596 - OH - Plan 1 (04-08-19 DS)	724.00	696.43	131.66	115.40	8.098	SF
NPR 21C-8 596 - OH - Plan 1 (04-08-19 DS)	650.18	634.75	110.81	96.77	7.897	CC, ES
NPR 21C-8 596 - OH - Plan 1 (04-08-19 DS)	724.00	704.66	112.68	97.61	7.474	SF
NPR 22A-8 596 - OH - Plan 1 (04-08-19 DS)	379.20	367.19	117.77	108.15	12.243	CC
NPR 22A-8 596 - OH - Plan 1 (04-08-19 DS)	630.00	603.97	124.74	98.04	4.673	ES
NPR 22A-8 596 - OH - Plan 1 (04-08-19 DS)	724.00	692.27	131.43	99.45	4.110	SF
NPR 22B-8 596 - OH - Plan 1 (04-08-19 DS)	596.81	580.40	103.59	84.29	5.366	CC
NPR 22B-8 596 - OH - Plan 1 (04-08-19 DS)	724.00	700.00	106.45	80.62	4.122	ES, SF
NPR 22C-8 596 - OH - Plan 1 (04-08-19 DS)	681.84	667.94	88.76	76.07	6.996	CC, ES
NPR 22C-8 596 - OH - Plan 1 (04-08-19 DS)	724.00	708.86	89.18	76.30	6.923	SF
NPR 22D-8 596 - OH - Plan 1 (04-09-19 DS)	672.37	660.98	81.57	67.11	5.642	CC
NPR 22D-8 596 - OH - Plan 1 (04-09-19 DS)	724.00	711.81	82.15	67.08	5.449	ES, SF
NPR 23B-8 596 - OH [479837] - Plan 3 (05-03-19 DN)	170.00	169.99	1.69	1.06	2.678	CC
NPR 23B-8 596 - OH [479837] - Plan 3 (05-03-19 DN)	7,025.84	7,027.15	11.45	-56.25	0.169	Level 1, ES, SF
NPR 23C-8 596 - OH [481437] - Final (H&P 330)	170.00	164.02	8.56	7.96	14.261	CC, ES
NPR 23C-8 596 - OH [481437] - Final (H&P 330)	7,428.00	7,429.82	252.99	183.44	3.638	SF
NPR 23D-8 596 - OH - Plan 1 (04-12-19 DS)	170.00	163.99	16.17	13.42	5.864	CC
NPR 23D-8 596 - OH - Plan 1 (04-12-19 DS)	231.00	224.97	17.26	12.92	3.979	ES
NPR 23D-8 596 - OH - Plan 1 (04-12-19 DS)	353.00	346.75	23.06	15.75	3.156	SF
NPR 24A-8 596 - OH - Plan 1 (04-12-19 DS)	0.00	0.00	23.30			
NPR 24A-8 596 - OH - Plan 1 (04-12-19 DS)	231.00	224.97	24.66	20.33	5.687	ES
NPR 24A-8 596 - OH - Plan 1 (04-12-19 DS)	445.00	438.28	37.55	28.04	3.948	SF
NPR 24B-8 596 - OH - Plan 1 (04-12-19 DS)	0.00	0.00	30.60			
NPR 24B-8 596 - OH - Plan 1 (04-12-19 DS)	231.00	224.97	32.14	27.80	7.410	ES
NPR 24B-8 596 - OH - Plan 1 (04-12-19 DS)	445.00	438.28	44.52	35.01	4.681	SF
NPR 24C-8 596 - OH - Plan 1 (04-12-19 DS)	0.00	0.00	38.01			
NPR 24C-8 596 - OH - Plan 1 (04-12-19 DS)	231.00	224.97	39.65	35.32	9.143	ES
NPR 24C-8 596 - OH - Plan 1 (04-12-19 DS)	536.00	528.57	61.82	50.10	5.275	SF
NPR 24D-8 596 - OH - Plan 1 (04-11-19 DS)	0.00	0.00	45.40			
NPR 24D-8 596 - OH - Plan 1 (04-11-19 DS)	231.00	224.97	47.10	42.76	10.861	ES
NPR 24D-8 596 - OH - Plan 1 (04-11-19 DS)	630.00	620.85	83.37	66.80	5.031	SF
NPR 25A-8 596 - OH - Plan 1 (04-11-19 DS)	0.00	0.00	52.80			
NPR 25A-8 596 - OH - Plan 1 (04-11-19 DS)	231.00	224.97	54.55	50.22	12.579	ES
NPR 25A-8 596 - OH - Plan 1 (04-11-19 DS)	630.00	617.53	94.83	71.00	3.979	SF
NPR 25B-8 596 - OH - Plan 1 (04-11-19 DS)	0.00	0.00	60.26			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S8-T5S-R96W NPR K08 596 (H&P 330)						
NPR 25B-8 596 - OH - Plan 1 (04-11-19 DS)	231.00	224.58	62.12	57.74	14.189	ES
NPR 25B-8 596 - OH - Plan 1 (04-11-19 DS)	630.00	611.62	112.51	79.44	3.403	SF
Parachute N CP02D-08 - OH - Survey	1,447.01	1,279.14	530.85	520.37	50.674	CC
Parachute N CP02D-08 - OH - Survey	1,478.00	1,308.62	530.96	520.22	49.429	ES
Parachute N CP02D-08 - OH - Survey	8,993.00	8,997.88	1,637.98	1,565.05	22.461	SF
Parachute N CP07C-08 - OH - Survey	2,104.37	1,957.20	469.62	453.37	28.894	CC
Parachute N CP07C-08 - OH - Survey	2,138.00	1,989.63	469.65	453.10	28.376	ES
Parachute N CP07C-08 - OH - Survey	8,993.00	8,715.86	1,187.49	1,123.95	18.689	SF
Parachute North CP01D-08 - OH - Survey 1	677.31	480.41	612.21	608.25	154.581	CC, ES
Parachute North CP01D-08 - OH - Survey 1	8,993.00	9,278.15	1,835.94	1,761.44	24.643	SF
Parachute North CP11D-08 - OH - Survey	1,802.93	1,731.20	192.62	177.74	12.948	CC, ES
Parachute North CP11D-08 - OH - Survey	1,855.00	1,776.50	194.13	178.83	12.684	SF

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11A-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
0.00	0.00	0.00	0.00	0.00	0.00	16.50	146.51	43.40	152.93				
170.00	169.99	163.99	163.99	0.25	2.50	-54.83	146.51	43.40	151.83	149.07	2.76	55.058	
231.00	230.97	224.97	224.97	0.47	3.86	-52.48	146.51	43.40	150.95	146.61	4.34	34.808	
262.00	261.95	255.95	255.95	0.59	4.51	-42.49	146.51	43.40	150.23	145.14	5.09	29.489	
292.00	291.92	285.92	285.92	0.70	5.13	-47.23	146.51	43.40	149.18	143.35	5.83	25.592	
353.00	352.75	344.15	344.14	0.93	6.43	-63.69	146.97	43.17	147.16	139.88	7.28	20.205	
415.66	415.12	402.89	402.84	1.16	7.88	-66.57	148.99	42.16	146.52	137.72	8.80	16.649	CC
445.00	444.28	430.25	430.15	1.27	9.14	-68.17	150.48	41.41	146.70	136.99	9.71	15.109	ES
536.00	534.44	514.34	513.89	1.62	13.06	-70.13	157.26	38.02	149.23	137.09	12.14	12.288	
630.00	626.87	600.00	598.77	2.02	16.11	-77.14	167.54	32.87	155.97	142.73	13.24	11.780	SF
724.00	718.61	682.19	679.65	2.45	16.12	-88.39	180.59	26.32	169.78	156.78	13.00	13.059	
819.00	810.83	763.10	758.57	2.91	16.14	-102.19	196.46	18.37	193.25	180.18	13.07	14.784	
913.00	901.45	839.99	832.83	3.39	16.17	-106.32	214.31	9.42	224.62	211.23	13.39	16.776	
1,007.00	991.42	913.70	903.19	3.92	16.21	-113.24	233.91	-0.40	262.58	248.74	13.84	18.967	
1,101.00	1,081.58	985.17	970.56	4.44	16.26	-114.34	255.21	-11.08	304.87	290.57	14.31	21.306	
1,195.00	1,172.56	1,055.48	1,035.93	4.93	16.34	-114.17	278.36	-22.68	348.71	334.00	14.71	23.708	
1,289.00	1,264.08	1,124.01	1,098.68	5.40	16.42	-117.27	302.98	-35.02	394.66	379.60	15.05	26.215	
1,384.00	1,356.59	1,190.67	1,158.73	5.88	16.52	-117.21	328.84	-47.98	444.10	428.72	15.38	28.874	
1,478.00	1,448.11	1,258.99	1,219.28	6.35	16.65	-120.66	357.14	-62.17	495.85	480.10	15.76	31.470	
1,573.00	1,540.86	1,337.83	1,288.89	6.82	16.83	-122.47	390.23	-78.75	548.69	532.41	16.27	33.720	
1,667.00	1,632.86	1,416.34	1,358.20	7.27	17.03	-120.29	423.18	-95.27	600.29	583.51	16.78	35.778	
1,761.00	1,724.81	1,495.02	1,427.68	7.72	17.25	-119.72	456.21	-111.82	651.61	634.31	17.31	37.653	
1,855.00	1,816.45	1,573.33	1,496.82	8.18	17.50	-119.06	489.08	-128.30	703.43	685.56	17.87	39.371	
1,949.00	1,907.72	1,651.07	1,565.45	8.67	17.77	-120.06	521.71	-144.65	756.01	737.56	18.45	40.967	
2,044.00	1,999.54	1,728.75	1,634.04	9.18	18.05	-122.24	554.31	-160.99	810.37	791.30	19.07	42.496	
2,138.00	2,090.09	1,805.16	1,701.50	9.70	18.35	-120.55	586.39	-177.07	864.74	845.04	19.69	43.908	
2,232.00	2,180.65	1,881.69	1,769.08	10.22	18.67	-122.08	618.51	-193.17	918.96	898.63	20.33	45.207	
2,326.00	2,271.24	1,958.32	1,836.74	10.74	19.01	-121.09	650.68	-209.29	973.10	952.13	20.97	46.406	
2,420.00	2,361.89	2,035.49	1,904.87	11.26	19.36	-117.93	683.07	-225.53	1,026.45	1,004.83	21.62	47.471	
2,527.00	2,465.28	2,124.61	1,983.55	11.83	19.79	-113.07	720.47	-244.28	1,085.30	1,062.92	22.38	48.489	
2,622.00	2,557.29	2,204.23	2,053.86	12.33	20.19	-116.41	753.90	-261.03	1,136.85	1,113.78	23.07	49.288	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11A-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error: 0.00 usft	
Survey Program: 0-INC+TREND, 501-MWD+HDM												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
2,715.00	2,647.48	2,281.67	2,122.23	12.81	20.59	-121.50	786.40	-277.32	1,188.21	1,164.48	23.73	50.068	
2,810.00	2,739.63	2,360.00	2,191.39	13.31	21.01	-126.04	819.28	-293.80	1,241.89	1,217.49	24.41	50.886	
2,904.00	2,830.93	2,437.07	2,259.43	13.80	21.43	-129.44	851.63	-310.01	1,295.70	1,270.64	25.06	51.702	
2,999.00	2,922.99	2,514.33	2,327.65	14.30	21.87	-129.32	884.05	-326.27	1,350.95	1,325.23	25.73	52.507	
3,093.00	3,013.89	2,590.33	2,394.75	14.81	22.31	-130.71	915.96	-342.26	1,406.23	1,379.83	26.40	53.267	
3,187.00	3,104.97	2,666.41	2,461.93	15.31	22.76	-132.52	947.89	-358.26	1,461.43	1,434.36	27.06	53.997	
3,282.00	3,197.19	2,743.56	2,530.04	15.80	23.23	-131.63	980.27	-374.49	1,516.87	1,489.13	27.74	54.689	
3,376.00	3,288.43	2,820.04	2,597.57	16.29	23.70	-130.53	1,012.37	-390.58	1,571.52	1,543.10	28.41	55.315	
3,470.00	3,379.56	2,896.42	2,665.01	16.79	24.18	-130.34	1,044.43	-406.65	1,626.30	1,597.20	29.10	55.896	
3,564.00	3,470.75	2,972.75	2,732.40	17.28	24.67	-132.37	1,076.47	-422.71	1,681.15	1,651.37	29.78	56.449	
3,658.00	3,561.89	3,048.98	2,799.71	17.78	25.16	-130.87	1,108.47	-438.75	1,736.14	1,705.67	30.47	56.974	
3,752.00	3,652.73	3,125.01	2,866.84	18.29	25.66	-128.30	1,140.38	-454.74	1,791.38	1,760.20	31.18	57.448	
3,847.00	3,744.45	3,202.09	2,934.89	18.81	26.17	-126.56	1,172.74	-470.96	1,846.85	1,814.94	31.91	57.872	
3,941.00	3,835.42	3,278.93	3,002.74	19.31	26.69	-125.94	1,204.99	-487.13	1,900.94	1,868.30	32.64	58.242	
4,026.00	3,917.86	3,348.83	3,064.45	19.76	27.17	-125.28	1,234.33	-501.83	1,949.28	1,915.99	33.30	58.543	
4,130.00	4,018.80	3,434.22	3,139.85	20.30	27.75	-128.80	1,270.17	-519.80	2,008.62	1,974.52	34.10	58.904	
4,224.00	4,109.52	3,510.17	3,206.90	20.82	28.28	-129.59	1,302.05	-535.77	2,063.97	2,029.13	34.84	59.248	
4,318.00	4,199.89	3,585.39	3,273.32	21.36	28.81	-130.26	1,333.62	-551.60	2,120.26	2,084.68	35.58	59.593	
4,412.00	4,290.67	3,661.24	3,340.28	21.87	29.35	-130.90	1,365.46	-567.56	2,175.77	2,139.45	36.31	59.920	
4,507.00	4,382.62	3,738.35	3,408.37	22.38	29.89	-129.26	1,397.83	-583.78	2,231.24	2,194.19	37.05	60.219	
4,601.00	4,473.49	3,814.56	3,475.65	22.90	30.44	-129.53	1,429.81	-599.81	2,286.25	2,248.46	37.79	60.492	
4,695.00	4,564.59	3,891.27	3,543.38	23.39	31.00	-128.17	1,462.01	-615.95	2,340.56	2,302.03	38.54	60.738	
4,789.00	4,655.72	3,968.33	3,611.42	23.89	31.56	-126.07	1,494.36	-632.16	2,394.37	2,355.09	39.28	60.949	
4,883.00	4,746.85	4,045.72	3,679.75	24.39	32.13	-124.23	1,526.84	-648.44	2,447.69	2,407.65	40.04	61.126	
4,978.00	4,839.29	4,124.43	3,749.25	24.87	32.71	-127.09	1,559.88	-665.00	2,500.88	2,460.08	40.80	61.293	
5,072.00	4,931.05	4,202.39	3,818.08	25.33	33.28	-129.86	1,592.60	-681.40	2,553.39	2,511.85	41.54	61.470	
5,166.00	5,022.88	4,280.24	3,886.81	25.79	33.86	-130.15	1,625.28	-697.78	2,606.05	2,563.78	42.27	61.650	
5,260.00	5,114.46	4,357.58	3,955.11	26.26	34.44	-130.40	1,657.74	-714.05	2,659.47	2,616.45	43.01	61.828	
5,354.00	5,205.69	4,434.32	4,022.86	26.75	35.02	-129.82	1,689.95	-730.20	2,713.75	2,669.99	43.77	62.006	
5,450.00	5,298.51	4,512.04	4,091.48	27.28	35.61	-130.87	1,722.58	-746.55	2,770.09	2,725.55	44.54	62.189	
5,543.00	5,388.31	4,587.18	4,157.82	27.79	36.18	-129.28	1,754.11	-762.36	2,824.87	2,779.57	45.30	62.360	
5,637.00	5,479.24	4,663.49	4,225.20	28.29	36.76	-130.04	1,786.14	-778.41	2,879.74	2,833.68	46.06	62.517	
5,731.00	5,570.39	4,740.32	4,293.04	28.79	37.35	-127.54	1,818.39	-794.58	2,933.89	2,887.06	46.83	62.653	
5,825.00	5,661.76	4,817.80	4,361.44	29.27	37.94	-126.92	1,850.91	-810.87	2,987.12	2,939.52	47.59	62.764	
5,920.00	5,754.38	4,896.73	4,431.13	29.75	38.55	-125.45	1,884.05	-827.48	3,039.98	2,991.61	48.36	62.856	
6,014.00	5,846.19	4,975.13	4,500.36	30.21	39.16	-126.73	1,916.95	-843.98	3,091.83	3,042.70	49.13	62.938	
6,109.00	5,939.26	5,054.71	4,570.61	30.65	39.78	-127.57	1,950.35	-860.72	3,143.69	3,093.80	49.88	63.019	
6,203.00	6,031.68	5,133.89	4,640.53	31.07	40.39	-128.80	1,983.59	-877.37	3,194.24	3,143.61	50.62	63.099	
6,297.00	6,124.42	5,213.53	4,710.85	31.47	41.01	-130.00	2,017.02	-894.13	3,243.92	3,192.58	51.35	63.175	
6,392.00	6,218.59	5,294.62	4,782.44	31.83	41.65	-136.01	2,051.06	-911.19	3,292.84	3,240.78	52.06	63.256	
6,486.00	6,312.11	5,375.19	4,853.58	32.16	42.28	-143.54	2,084.88	-928.14	3,340.17	3,287.44	52.73	63.345	
6,580.00	6,405.81	5,456.34	4,925.22	32.47	42.92	-135.48	2,118.94	-945.21	3,386.21	3,332.82	53.39	63.421	
6,674.00	6,499.58	5,537.88	4,997.22	32.77	43.56	-139.06	2,153.16	-962.37	3,431.48	3,377.42	54.06	63.480	
6,768.00	6,593.40	5,619.35	5,069.15	33.06	44.21	-149.47	2,187.36	-979.51	3,476.64	3,421.93	54.71	63.547	
6,863.00	6,688.26	5,701.77	5,141.92	33.35	44.86	-144.18	2,221.95	-996.85	3,522.00	3,466.64	55.37	63.614	
6,957.00	6,782.19	5,783.87	5,214.41	33.62	45.51	-137.41	2,256.42	-1,014.12	3,565.69	3,509.68	56.01	63.660	
7,051.00	6,876.18	5,864.23	5,289.59	33.87	53.51	-172.63	2,627.41	-1,207.74	3,596.89	3,531.99	64.90	55.423	
7,145.00	6,970.17	5,978.20	6,923.53	34.10	53.65	119.75	2,626.63	-1,209.88	3,598.90	3,533.55	65.35	55.073	
7,334.00	7,159.13	7,767.19	7,112.46	34.53	53.92	62.61	2,625.06	-1,214.19	3,600.14	3,533.92	66.22	54.367	
7,428.00	7,253.06	7,861.17	7,206.42	34.73	54.06	64.92	2,624.28	-1,216.34	3,599.59	3,532.94	66.64	54.013	
7,522.00	7,346.98	7,955.16	7,300.38	34.94	54.20	70.39	2,623.50	-1,218.48	3,599.18	3,532.11	67.07	53.663	
7,617.00	7,441.94	8,050.16	7,395.35	35.16	54.35	31.90	2,622.71	-1,220.65	3,598.73	3,531.21	67.52	53.301	



Anticollision Report



Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11A-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,711.00	7,535.92	8,144.15	7,489.32	35.38	54.49	33.11	2,621.93	-1,222.79	3,597.90	3,529.93	67.97	52.934	
7,806.00	7,630.87	8,239.14	7,584.28	35.60	54.64	54.65	2,621.14	-1,224.96	3,596.95	3,528.53	68.42	52.569	
7,900.00	7,724.80	8,333.13	7,678.24	35.82	54.79	58.71	2,620.36	-1,227.10	3,596.03	3,527.16	68.87	52.216	
7,929.06	7,753.84	8,362.19	7,707.29	35.89	54.84	67.96	2,620.12	-1,227.77	3,595.91	3,526.91	69.01	52.108	
7,994.00	7,818.76	8,427.13	7,772.21	36.04	54.94	107.56	2,619.58	-1,229.25	3,596.48	3,527.16	69.32	51.879	
8,089.00	7,913.75	8,522.12	7,867.17	36.28	55.09	104.93	2,618.79	-1,231.42	3,598.04	3,528.24	69.80	51.550	
8,278.00	8,102.68	8,711.09	8,056.09	36.74	55.40	94.03	2,617.23	-1,235.73	3,600.79	3,530.06	70.73	50.906	
8,561.00	8,385.40	8,994.00	8,338.92	37.42	55.88	83.49	2,614.88	-1,242.18	3,603.52	3,531.40	72.12	49.963	
8,930.00	8,753.68	9,362.71	8,707.52	38.30	56.52	68.64	2,611.81	-1,250.60	3,601.57	3,527.64	73.94	48.712	
8,993.00	8,816.50	9,425.63	8,770.42	38.45	56.63	68.69	2,611.29	-1,252.03	3,600.57	3,526.32	74.25	48.495	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11B-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDMG												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	16.34	139.39	40.88	145.38				
170.00	169.99	163.99	163.99	0.25	2.50	-55.02	139.39	40.88	144.28	141.53	2.76	52.323	
231.00	230.97	224.97	224.97	0.47	3.86	-52.69	139.39	40.88	143.41	139.07	4.34	33.070	
262.00	261.95	255.95	255.95	0.59	4.51	-42.71	139.39	40.88	142.70	137.60	5.09	28.010	
292.00	291.92	285.92	285.92	0.70	5.13	-47.48	139.39	40.88	141.65	135.82	5.83	24.300	
353.00	352.75	346.75	346.75	0.93	6.38	-63.97	139.39	40.88	139.24	131.94	7.30	19.073	
445.00	444.28	436.26	436.26	1.27	8.27	-68.00	139.69	40.71	135.72	126.23	9.49	14.300	
535.23	533.68	520.64	520.56	1.62	10.00	-69.74	142.72	39.03	134.29	122.91	11.38	11.801 CC	
536.00	534.44	521.35	521.27	1.62	10.01	-69.77	142.76	39.00	134.29	122.91	11.39	11.791 ES	
630.00	626.87	607.76	607.35	2.02	11.15	-77.29	149.25	35.39	136.64	124.16	12.48	10.951 SF	
724.00	718.61	692.16	691.02	2.45	11.17	-89.66	158.88	30.03	146.20	133.43	12.77	11.447	
819.00	810.83	774.99	772.59	2.91	11.19	-104.64	171.45	23.03	165.95	152.83	13.12	12.653	
913.00	901.45	854.00	849.73	3.39	11.23	-109.75	186.32	14.76	194.30	180.82	13.48	14.417	
1,007.00	991.42	929.92	923.14	3.92	11.28	-117.35	203.22	5.35	229.78	215.94	13.84	16.600	
1,101.00	1,081.58	1,000.00	990.18	4.44	11.34	-118.54	221.07	-4.58	269.84	255.72	14.12	19.110	
1,195.00	1,172.56	1,076.28	1,062.23	4.93	11.43	-118.58	242.92	-16.75	311.37	296.90	14.47	21.514	
1,289.00	1,264.08	1,147.15	1,128.24	5.40	11.55	-121.70	265.47	-29.30	355.02	340.27	14.75	24.072	
1,384.00	1,356.59	1,216.21	1,191.59	5.88	11.68	-121.66	289.48	-42.66	402.24	387.23	15.02	26.787	
1,478.00	1,448.11	1,283.06	1,251.94	6.35	11.83	-125.02	314.61	-56.64	452.03	436.74	15.30	29.552	
1,573.00	1,540.86	1,362.97	1,323.58	6.82	12.06	-126.69	345.53	-73.85	503.31	487.53	15.78	31.895	
1,667.00	1,632.86	1,442.54	1,394.92	7.27	12.31	-124.39	376.32	-90.99	553.30	537.03	16.27	34.003	
1,761.00	1,724.81	1,522.26	1,466.40	7.72	12.58	-123.79	407.17	-108.16	603.04	586.25	16.78	35.930	
1,855.00	1,816.45	1,601.59	1,537.53	8.18	12.89	-123.13	437.87	-125.25	653.34	636.02	17.32	37.718	
1,949.00	1,907.72	1,680.32	1,608.12	8.67	13.21	-124.13	468.33	-142.21	704.50	686.61	17.89	39.387	
2,044.00	1,999.54	1,759.01	1,678.66	9.18	13.56	-126.33	498.78	-159.15	757.48	739.01	18.48	40.996	
2,138.00	2,090.09	1,836.40	1,748.05	9.70	13.92	-124.59	528.73	-175.82	810.54	791.47	19.08	42.490	
2,232.00	2,180.65	1,913.91	1,817.54	10.22	14.30	-126.08	558.72	-192.51	863.45	843.77	19.68	43.865	
2,326.00	2,271.24	1,991.51	1,887.12	10.74	14.70	-125.05	588.75	-209.23	916.26	895.96	20.31	45.125	
2,420.00	2,361.89	2,069.62	1,957.16	11.26	15.12	-121.82	618.98	-226.05	968.30	947.35	20.94	46.238	
2,527.00	2,465.28	2,159.75	2,037.97	11.83	15.62	-116.89	653.85	-245.46	1,025.64	1,003.95	21.68	47.301	
2,622.00	2,557.29	2,240.28	2,110.17	12.33	16.08	-120.21	685.02	-262.81	1,075.81	1,053.46	22.35	48.126	
2,715.00	2,647.48	2,318.65	2,180.43	12.81	16.54	-125.30	715.34	-279.69	1,125.77	1,102.76	23.01	48.921	
2,810.00	2,739.63	2,397.99	2,251.57	13.31	17.02	-129.83	746.05	-296.77	1,177.97	1,154.29	23.68	49.744	
2,904.00	2,830.93	2,476.11	2,321.61	13.80	17.50	-133.19	776.27	-313.60	1,230.26	1,205.92	24.34	50.551	
2,999.00	2,922.99	2,554.44	2,391.84	14.30	17.99	-133.12	806.58	-330.47	1,284.00	1,258.99	25.01	51.347	
3,093.00	3,013.89	2,631.50	2,460.93	14.81	18.48	-134.45	836.41	-347.07	1,337.80	1,312.13	25.67	52.105	
3,187.00	3,104.97	2,708.67	2,530.12	15.31	18.98	-136.22	866.27	-363.69	1,391.48	1,365.14	26.34	52.828	
3,282.00	3,197.19	2,786.92	2,600.28	15.80	19.50	-135.26	896.55	-380.54	1,445.34	1,418.33	27.01	53.504	
3,376.00	3,288.43	2,864.48	2,669.82	16.29	20.02	-134.17	926.56	-397.25	1,498.45	1,470.76	27.69	54.115	
3,470.00	3,379.56	2,941.94	2,739.27	16.79	20.54	-133.96	956.53	-413.93	1,551.71	1,523.33	28.38	54.684	
3,564.00	3,470.75	3,019.35	2,808.68	17.28	21.07	-135.96	986.49	-430.60	1,605.02	1,575.96	29.06	55.226	
3,658.00	3,561.89	3,096.67	2,878.00	17.78	21.60	-134.46	1,016.41	-447.25	1,658.49	1,628.73	29.75	55.741	
3,752.00	3,652.73	3,173.75	2,947.11	18.29	22.14	-131.92	1,046.24	-463.86	1,712.27	1,681.80	30.46	56.210	
3,847.00	3,744.45	3,251.86	3,017.14	18.81	22.68	-130.12	1,076.46	-480.68	1,766.30	1,735.11	31.19	56.633	
3,941.00	3,835.42	3,329.72	3,086.94	19.31	23.23	-129.48	1,106.59	-497.45	1,818.93	1,787.02	31.91	57.000	
4,026.00	3,917.86	3,400.52	3,150.43	19.76	23.74	-128.76	1,133.99	-512.70	1,865.93	1,833.37	32.57	57.296	
4,130.00	4,018.80	3,487.06	3,228.02	20.30	24.36	-132.30	1,167.48	-531.33	1,923.61	1,890.24	33.37	57.647	
4,224.00	4,109.52	3,564.04	3,297.04	20.82	24.91	-133.19	1,197.27	-547.92	1,977.51	1,943.41	34.10	57.988	
4,318.00	4,199.89	3,640.31	3,365.42	21.36	25.47	-133.82	1,226.78	-564.34	2,032.41	1,997.58	34.84	58.337	
4,412.00	4,290.67	3,717.21	3,434.37	21.87	26.03	-134.37	1,256.54	-580.90	2,086.46	2,050.89	35.57	58.661	
4,507.00	4,382.62	3,795.38	3,504.46	22.38	26.60	-132.74	1,286.79	-597.74	2,140.43	2,104.12	36.31	58.954	
4,601.00	4,473.49	3,872.63	3,573.72	22.90	27.17	-133.01	1,316.68	-614.38	2,193.97	2,156.93	37.05	59.222	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11B-8 596 - OH - Plan 1 (04-07-19 DS)													Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance				Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		Minimum Separation (usft)	Separation Factor	
4,695.00	4,564.59	3,950.39	3,643.43	23.39	27.75	-131.57	1,346.77	-631.13	2,246.79	2,209.00	37.79	59.462		
4,789.00	4,655.72	4,028.47	3,713.44	23.89	28.33	-129.51	1,376.98	-647.94	2,299.11	2,260.58	38.53	59.668		
4,883.00	4,746.85	4,106.86	3,783.72	24.39	28.91	-127.61	1,407.32	-664.83	2,350.96	2,311.67	39.29	59.841		
4,978.00	4,839.29	4,186.60	3,855.22	24.87	29.51	-130.44	1,438.17	-682.00	2,402.60	2,362.55	40.04	59.999		
5,072.00	4,931.05	4,265.62	3,926.06	25.33	30.10	-133.16	1,468.75	-699.02	2,453.49	2,412.71	40.78	60.162		
5,166.00	5,022.88	4,344.55	3,996.83	25.79	30.69	-133.47	1,499.29	-716.02	2,504.51	2,463.00	41.52	60.327		
5,260.00	5,114.46	4,422.97	4,067.14	26.26	31.29	-133.76	1,529.64	-732.91	2,556.34	2,514.08	42.26	60.496		
5,354.00	5,205.69	4,500.77	4,136.89	26.75	31.88	-133.22	1,559.74	-749.66	2,609.09	2,566.08	43.01	60.668		
5,450.00	5,298.51	4,579.56	4,207.54	27.28	32.47	-134.30	1,590.24	-766.64	2,663.92	2,620.14	43.78	60.849		
5,543.00	5,388.31	4,655.74	4,275.84	27.79	33.05	-132.70	1,619.71	-783.04	2,717.26	2,672.73	44.53	61.020		
5,637.00	5,479.24	4,733.09	4,345.19	28.29	33.64	-133.41	1,649.65	-799.70	2,770.65	2,725.36	45.29	61.175		
5,731.00	5,570.39	4,810.97	4,415.02	28.79	34.24	-130.89	1,679.78	-816.47	2,823.30	2,777.24	46.05	61.309		
5,825.00	5,661.76	4,889.47	4,485.40	29.27	34.84	-130.21	1,710.16	-833.38	2,874.99	2,828.18	46.81	61.415		
5,920.00	5,754.38	4,969.45	4,557.11	29.75	35.46	-128.71	1,741.11	-850.61	2,926.26	2,878.68	47.58	61.500		
6,014.00	5,846.19	5,048.88	4,628.33	30.21	36.07	-129.98	1,771.85	-867.72	2,976.51	2,928.17	48.34	61.573		
6,109.00	5,939.26	5,129.53	4,700.64	30.65	36.69	-130.75	1,803.05	-885.09	3,026.68	2,977.58	49.10	61.644		
6,203.00	6,031.68	5,209.80	4,772.61	31.07	37.31	-131.95	1,834.12	-902.37	3,075.49	3,025.65	49.84	61.708		
6,297.00	6,124.42	5,290.56	4,845.02	31.47	37.93	-133.08	1,865.37	-919.77	3,123.34	3,072.78	50.57	61.766		
6,392.00	6,218.59	5,372.83	4,918.78	31.83	38.57	-138.99	1,897.20	-937.49	3,170.26	3,118.98	51.28	61.821		
6,486.00	6,312.11	5,454.64	4,992.12	32.16	39.21	-146.45	1,928.86	-955.11	3,215.48	3,163.52	51.96	61.879		
6,580.00	6,405.81	5,537.02	5,065.99	32.47	39.85	-138.36	1,960.74	-972.85	3,259.33	3,206.70	52.64	61.920		
6,674.00	6,499.58	5,619.80	5,140.21	32.77	40.49	-141.93	1,992.77	-990.68	3,302.38	3,249.07	53.31	61.946		
6,768.00	6,593.40	5,702.54	5,214.39	33.06	41.14	-152.30	2,024.79	-1,008.50	3,345.28	3,291.30	53.97	61.978		
6,863.00	6,688.26	5,786.25	5,289.44	33.35	41.79	-147.01	2,057.18	-1,026.53	3,388.31	3,333.67	54.64	62.010		
6,957.00	6,782.19	5,869.73	5,363.04	33.62	42.40	-138.46	2,090.25	-1,044.86	3,430.36	3,375.57	55.31	62.042		
7,051.00	6,876.18	5,953.65	5,446.93	33.87	43.04	-175.87	2,123.46	-1,063.48	3,473.04	3,359.78	56.26	62.112		
7,145.00	6,970.17	6,038.62	5,530.86	34.10	43.69	116.50	2,156.67	-1,082.65	3,515.16	3,461.44	57.22	62.185		
7,239.00	7,064.16	6,123.60	5,617.79	34.33	44.33	59.36	2,189.88	-1,101.92	3,557.46	3,461.84	58.18	62.257		
7,333.00	7,158.15	6,208.59	5,704.75	34.56	44.97	61.68	2,223.09	-1,121.19	3,600.25	3,460.79	59.14	62.329		
7,427.00	7,252.14	6,293.58	5,791.71	34.79	45.61	67.14	2,256.30	-1,140.46	3,642.38	3,459.88	60.10	62.401		
7,521.00	7,346.13	6,378.57	5,878.68	35.02	46.25	28.65	2,289.51	-1,159.73	3,684.49	3,458.97	61.06	62.473		
7,615.00	7,440.12	6,463.56	5,965.64	35.25	46.89	29.87	2,322.72	-1,179.00	3,726.59	3,458.97	62.02	62.545		
7,709.00	7,534.11	6,548.55	6,052.60	35.48	47.53	51.40	2,355.93	-1,198.27	3,768.69	3,457.74	63.00	62.617		
7,803.00	7,628.10	6,633.54	6,139.56	35.71	48.17	55.46	2,389.14	-1,217.54	3,810.79	3,456.34	64.00	62.689		
7,897.00	7,722.09	6,718.53	6,226.52	35.94	48.81	65.01	2,422.35	-1,236.81	3,852.89	3,454.92	65.00	62.761		
7,991.00	7,816.08	6,803.52	6,313.49	36.17	49.45	104.31	2,455.53	-1,256.08	3,894.99	3,453.90	66.00	62.833		
8,085.00	7,910.07	6,888.51	6,400.45	36.40	50.09	29.87	2,488.77	-1,275.35	3,937.09	3,452.74	67.00	62.905		
8,179.00	8,004.06	6,973.50	6,487.41	36.63	50.73	51.40	2,521.98	-1,294.62	3,979.19	3,451.74	68.00	62.977		
8,273.00	8,098.05	7,058.49	6,574.37	36.86	51.37	80.25	2,555.19	-1,313.89	4,021.29	3,450.74	69.00	63.049		
8,367.00	8,192.04	7,143.48	6,661.33	37.09	52.01	65.41	2,588.40	-1,333.16	4,063.39	3,449.74	70.00	63.121		
8,461.00	8,286.03	7,228.47	6,748.29	37.32	52.65		2,621.61	-1,352.43	4,105.49	3,448.74	71.00	63.193		
8,555.00	8,380.02	7,313.46	6,835.25	37.55	53.29		2,654.82	-1,371.70	4,147.59	3,447.74	72.00	63.265		
8,649.00	8,474.01	7,398.45	6,922.21	37.78	53.93		2,688.03	-1,390.97	4,189.69	3,446.74	73.00	63.337		
8,743.00	8,568.00	7,483.44	7,009.17	38.01	54.57		2,721.24	-1,410.24	4,231.79	3,445.74	74.00	63.409		
8,837.00	8,662.00	7,568.43	7,096.13	38.24	55.21		2,754.45	-1,429.51	4,273.89	3,444.74	75.00	63.481		
8,931.00	8,756.00	7,653.42	7,183.09	38.47	55.85		2,787.66	-1,448.78	4,315.99	3,443.74	76.00	63.553		
8,993.00	8,816.50	7,738.41	7,270.05	38.70	56.49		2,820.87	-1,468.05	4,358.09	3,442.74	77.00	63.625		
9,055.00	8,877.00	7,823.40	7,356.91	38.93	57.13		2,854.08	-1,487.32	4,400.19	3,441.74	78.00	63.697		
9,117.00	8,938.00	7,908.39	7,443.87	39.16	57.77		2,887.29	-1,506.59	4,442.29	3,440.74	79.00	63.769		
9,179.00	8,999.00	7,993.38	7,530.83	39.39	58.41		2,920.50	-1,525.86	4,484.39	3,439.74	80.00	63.841		
9,241.00	9,060.00	8,078.37	7,617.79	39.62	59.05		2,953.71	-1,545.13	4,526.49	3,438.74	81.00	63.913		
9,303.00	9,121.00	8,163.36	7,704.75	39.85	59.69		2,986.92	-1,564.40	4,568.59	3,437.74	82.00	63.985		
9,365.00	9,182.00	8,248.35	7,791.71	40.08	60.33		3,020.13	-1,583.67	4,610.69	3,436.74	83.00	64.057		
9,427.00	9,243.00	8,333.34	7,878.67	40.31	60.97		3,053.34	-1,602.94	4,652.79	3,435.74	84.00	64.129		
9,489.00	9,304.00	8,418.33	7,965.63	40.54	61.61		3,086.55	-1,622.21	4,694.89	3,434.74	85.00	64.201		
9,551.00	9,365.00	8,503.32	8,052.59	40.77	62.25		3,119.76	-1,641.48	4,736.99	3,433.74	86.00	64.273		
9,613.00	9,426.00	8,588.31	8,139.55	41.00	62.89		3,152.97	-1,660.75	4,779.09	3,432.74	87.00	64.345		
9,675.00	9,487.00	8,673.30	8,226.51	41.23	63.53		3,186.18	-1,680.02	4,821.19	3,431.74	88.00	64.417		
9,737.00	9,548.00	8,758.29	8,313.47	41.46	64.17		3,219.39	-1,699.29	4,863.29	3,430.74	89.00	64.489		
9,799.00	9,609.00	8,843.28	8,400.43	41.69	64.81		3,252.60	-1,718.56	4,905.39	3,429.74	90.00	64.561		
9,861.00	9,670.00	8,928.27	8,487.39	41.92	65.45		3,285.81	-1,737.83	4,947.49	3,428.74	91.00	64.633		
9,923.00	9,731.00	9,013.26	8,574.35	42.15	66.09		3,319.02	-1,757.10	4,989.59	3,427.74	92.00	64.705		
9,985.00	9,792.00	9,098.25	8,661.31	42.38	66.73		3,352.23	-1,776.37	5,031.69	3,426.74	93.00	64.777		
10,047.00	9,853.00	9,183.24	8,748.27	42.61	67.37		3,385.44	-1,795.64	5,073.79	3,425.74	94.00	64.849		
10,109.00	9,914.00	9,268.23	8,835.23	42.84	68.01		3,418.65	-1,814.91	5,115.89	3,424.74	95.00	64.921		
10,171.00	9,975.00	9,353.22	8,922.19	43.07	68.65		3,451.86	-1,834.18	5,157.99	3,423.74	96.00	64.993		
10,233.00	10,036.00	9,438.21	9,009.15	43.30	69.29		3,485.07	-1,853.45	5,199.09	3,422.74	97.00	65.065		
10,295.00	10,097.00	9,523.20	9,096.11	43.53	69.93		3,518.28	-1,872.72	5,241.19	3,421.74	98.00	65.137		
10,357.00	10,158.00	9,608.19	9,183.09	43.76	70.									

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11C-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	16.12	132.37	38.26	137.92				
170.00	169.99	163.99	163.99	0.25	2.50	-55.27	132.37	38.26	136.82	134.06	2.76	49.615	
231.00	230.97	224.97	224.97	0.47	3.86	-52.97	132.37	38.26	135.95	131.61	4.34	31.349	
262.00	261.95	255.95	255.95	0.59	4.51	-43.01	132.37	38.26	135.24	130.14	5.09	26.546	
292.00	291.92	285.92	285.92	0.70	5.13	-47.81	132.37	38.26	134.20	128.37	5.83	23.022	
353.00	352.75	346.75	346.75	0.93	6.38	-64.38	132.37	38.26	131.81	124.51	7.30	18.055	
445.00	444.28	438.28	438.28	1.27	8.25	-68.63	132.37	38.26	128.09	118.58	9.51	13.469	
536.00	534.44	527.02	527.02	1.62	9.76	-70.20	132.53	38.16	123.85	112.47	11.38	10.881	
617.44	614.58	602.86	602.81	1.97	10.48	-76.68	134.71	36.78	122.05	109.62	12.43	9.821 CC, ES	
630.00	626.87	614.44	614.38	2.02	10.48	-77.88	135.27	36.43	122.12	109.64	12.48	9.785 SF	
724.00	718.61	700.00	699.63	2.45	10.49	-91.10	141.23	32.69	127.52	114.64	12.88	9.900	
819.00	810.83	784.70	783.65	2.91	10.51	-107.30	150.30	26.99	143.50	130.21	13.29	10.797	
913.00	901.45	865.59	863.36	3.39	10.55	-113.46	161.91	19.70	168.77	155.10	13.67	12.344	
1,007.00	991.42	943.54	939.56	3.92	10.59	-121.79	175.78	10.98	201.72	187.69	14.03	14.378	
1,101.00	1,081.58	1,019.39	1,013.01	4.44	10.66	-123.39	191.80	0.91	239.44	225.09	14.35	16.687	
1,195.00	1,172.56	1,100.00	1,090.18	4.93	10.74	-123.50	211.51	-11.48	278.73	264.01	14.72	18.940	
1,289.00	1,264.08	1,167.23	1,153.74	5.40	10.84	-126.49	230.05	-23.13	319.95	305.06	14.90	21.478	
1,384.00	1,356.59	1,238.55	1,220.28	5.88	10.96	-126.50	251.78	-36.78	364.90	349.73	15.17	24.061	
1,478.00	1,448.11	1,306.41	1,282.66	6.35	11.10	-129.79	274.39	-50.99	412.54	397.13	15.42	26.757	
1,573.00	1,540.86	1,386.77	1,355.91	6.82	11.31	-131.32	302.38	-68.59	461.96	446.08	15.88	29.092	
1,667.00	1,632.86	1,467.52	1,429.50	7.27	11.55	-128.92	330.52	-86.27	510.06	493.70	16.36	31.174	
1,761.00	1,724.81	1,548.40	1,503.21	7.72	11.81	-128.29	358.70	-103.98	557.93	541.06	16.86	33.084	
1,855.00	1,816.45	1,628.85	1,576.53	8.18	12.10	-127.64	386.73	-121.59	606.45	589.06	17.39	34.873	
1,949.00	1,907.72	1,708.69	1,649.30	8.67	12.40	-128.65	414.55	-139.08	655.92	637.98	17.94	36.567	
2,044.00	1,999.54	1,788.49	1,722.03	9.18	12.73	-130.88	442.36	-156.55	707.26	688.75	18.51	38.208	
2,138.00	2,090.09	1,866.98	1,793.56	9.70	13.08	-129.11	469.70	-173.74	758.76	739.67	19.09	39.739	
2,232.00	2,180.65	1,945.57	1,865.20	10.22	13.44	-130.54	497.09	-190.95	810.11	790.43	19.69	41.153	
2,326.00	2,271.24	2,024.26	1,936.91	10.74	13.82	-129.48	524.51	-208.18	861.35	841.07	20.29	42.457	
2,420.00	2,361.89	2,103.42	2,009.06	11.26	14.22	-126.19	552.09	-225.51	911.83	890.93	20.90	43.621	
2,527.00	2,465.28	2,194.68	2,092.23	11.83	14.69	-121.18	583.89	-245.49	967.41	945.78	21.63	44.735	
2,622.00	2,557.29	2,276.20	2,166.53	12.33	15.13	-124.49	612.29	-263.34	1,015.98	993.70	22.28	45.601	
2,715.00	2,647.48	2,355.61	2,238.90	12.81	15.57	-129.58	639.96	-280.73	1,064.30	1,041.38	22.92	46.430	
2,810.00	2,739.63	2,436.07	2,312.24	13.31	16.03	-134.11	668.00	-298.35	1,114.77	1,091.19	23.58	47.282	
2,904.00	2,830.93	2,515.36	2,384.50	13.80	16.49	-137.42	695.62	-315.71	1,165.27	1,141.05	24.22	48.116	
2,999.00	2,922.99	2,594.89	2,456.98	14.30	16.96	-137.41	723.33	-333.13	1,217.23	1,192.35	24.87	48.939	
3,093.00	3,013.89	2,673.14	2,528.30	14.81	17.43	-138.68	750.60	-350.26	1,269.30	1,243.77	25.53	49.722	
3,187.00	3,104.97	2,751.52	2,599.74	15.31	17.91	-140.42	777.91	-367.42	1,321.18	1,295.00	26.18	50.465	
3,282.00	3,197.19	2,831.01	2,672.18	15.80	18.40	-139.39	805.61	-384.83	1,373.20	1,346.36	26.84	51.161	
3,376.00	3,288.43	2,909.79	2,743.98	16.29	18.90	-138.32	833.05	-402.08	1,424.49	1,396.99	27.50	51.793	
3,470.00	3,379.56	2,988.44	2,815.66	16.79	19.40	-138.08	860.46	-419.30	1,475.97	1,447.79	28.18	52.383	
3,564.00	3,470.75	3,067.06	2,887.32	17.28	19.90	-140.06	887.85	-436.52	1,527.48	1,498.63	28.85	52.944	
3,658.00	3,561.89	3,145.59	2,958.89	17.78	20.41	-138.55	915.22	-453.71	1,579.14	1,549.61	29.53	53.477	
3,752.00	3,652.73	3,223.85	3,030.22	18.29	20.93	-136.06	942.48	-470.85	1,631.20	1,600.98	30.22	53.974	
3,847.00	3,744.45	3,303.11	3,102.45	18.81	21.45	-134.19	970.10	-488.21	1,683.54	1,652.61	30.93	54.425	
3,941.00	3,835.42	3,382.10	3,174.44	19.31	21.98	-133.52	997.62	-505.50	1,734.48	1,702.83	31.64	54.817	
4,026.00	3,917.86	3,453.93	3,239.91	19.76	22.46	-132.76	1,022.65	-521.23	1,779.92	1,747.63	32.28	55.132	
4,130.00	4,018.80	3,541.73	3,319.93	20.30	23.05	-136.31	1,053.24	-540.46	1,835.64	1,802.57	33.07	55.506	
4,224.00	4,109.52	3,619.88	3,391.16	20.82	23.58	-137.32	1,080.47	-557.57	1,887.86	1,854.07	33.79	55.871	
4,318.00	4,199.89	3,697.31	3,461.73	21.36	24.11	-137.91	1,107.45	-574.52	1,941.12	1,906.61	34.51	56.247	
4,412.00	4,290.67	3,775.40	3,532.89	21.87	24.65	-138.36	1,134.66	-591.62	1,993.44	1,958.22	35.23	56.591	
4,507.00	4,382.62	3,854.76	3,605.23	22.38	25.20	-136.74	1,162.31	-609.00	2,045.65	2,009.70	35.95	56.902	
4,601.00	4,473.49	3,933.18	3,676.70	22.90	25.74	-137.01	1,189.64	-626.17	2,097.48	2,060.80	36.68	57.189	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11C-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,695.00	4,564.59	4,012.10	3,748.62	23.39	26.29	-135.49	1,217.13	-643.45	2,148.54	2,111.14	37.40	57.447	
4,789.00	4,655.72	4,091.32	3,820.83	23.89	26.85	-133.48	1,244.74	-660.80	2,199.12	2,160.99	38.13	57.669	
4,883.00	4,746.85	4,170.82	3,893.28	24.39	27.41	-131.50	1,272.44	-678.21	2,249.26	2,210.38	38.88	57.859	
4,978.00	4,839.29	4,251.70	3,967.00	24.87	27.98	-134.31	1,300.62	-695.92	2,299.09	2,259.47	39.62	58.030	
5,072.00	4,931.05	4,331.90	4,040.09	25.33	28.54	-136.98	1,328.56	-713.48	2,348.11	2,307.76	40.35	58.200	
5,166.00	5,022.88	4,412.03	4,113.12	25.79	29.11	-137.32	1,356.48	-731.02	2,397.22	2,356.15	41.07	58.372	
5,260.00	5,114.46	4,491.64	4,185.68	26.26	29.68	-137.64	1,384.22	-748.46	2,447.18	2,405.38	41.80	58.548	
5,354.00	5,205.69	4,570.63	4,257.66	26.75	30.24	-137.16	1,411.74	-765.75	2,498.15	2,455.61	42.54	58.731	
5,450.00	5,298.51	4,650.63	4,330.58	27.28	30.82	-138.26	1,439.62	-783.27	2,551.21	2,507.91	43.29	58.927	
5,543.00	5,388.31	4,727.96	4,401.06	27.79	31.37	-136.65	1,466.56	-800.20	2,602.86	2,558.83	44.03	59.113	
5,637.00	5,479.24	4,806.49	4,472.63	28.29	31.93	-137.31	1,493.93	-817.40	2,654.52	2,609.74	44.78	59.282	
5,731.00	5,570.39	4,885.52	4,544.66	28.79	32.50	-134.76	1,521.46	-834.70	2,705.40	2,659.88	45.52	59.427	
5,825.00	5,661.76	4,965.17	4,617.25	29.27	33.08	-134.03	1,549.22	-852.14	2,755.32	2,709.04	46.27	59.543	
5,920.00	5,754.38	5,046.30	4,691.20	29.75	33.67	-132.50	1,577.49	-869.91	2,804.74	2,757.71	47.03	59.636	
6,014.00	5,846.19	5,126.89	4,764.64	30.21	34.25	-133.75	1,605.57	-887.56	2,853.12	2,805.34	47.78	59.715	
6,109.00	5,939.26	5,208.73	4,839.23	30.65	34.85	-134.46	1,634.08	-905.48	2,901.33	2,852.81	48.53	59.788	
6,203.00	6,031.68	5,290.20	4,913.48	31.07	35.44	-135.62	1,662.47	-923.32	2,948.11	2,898.85	49.26	59.849	
6,297.00	6,124.42	5,372.19	4,988.21	31.47	36.04	-136.67	1,691.04	-941.27	2,993.84	2,943.86	49.98	59.901	
6,392.00	6,218.59	5,455.76	5,064.37	31.83	36.65	-142.48	1,720.15	-959.57	3,038.45	2,987.76	50.69	59.943	
6,486.00	6,312.11	5,538.91	5,140.16	32.16	37.25	-149.87	1,749.13	-977.78	3,081.22	3,029.85	51.37	59.981	
6,580.00	6,405.81	5,622.66	5,216.49	32.47	37.87	-141.73	1,778.31	-996.11	3,122.53	3,070.49	52.04	60.000	
6,674.00	6,499.58	5,706.80	5,293.17	32.77	38.48	-145.30	1,807.62	-1,014.54	3,163.01	3,110.29	52.72	60.002	
6,768.00	6,593.40	5,790.92	5,369.84	33.06	39.10	-155.62	1,836.93	-1,032.96	3,203.28	3,149.90	53.38	60.009	
6,863.00	6,688.26	5,876.04	5,447.42	33.35	39.73	-150.35	1,866.59	-1,051.60	3,243.61	3,189.57	54.05	60.013	
6,957.00	6,782.19	5,961.24	5,525.31	33.62	40.36	-142.07	2,099.53	-1,203.26	3,259.78	3,198.50	61.28	53.191	
7,051.00	6,876.18	6,046.17	5,606.20	33.87	40.97	-179.48	2,098.77	-1,205.36	3,262.59	3,200.82	61.77	52.818	
7,145.00	6,970.17	6,131.10	5,691.19	34.10	41.59	112.89	2,098.01	-1,207.46	3,264.76	3,202.52	62.24	52.451	
7,334.00	7,159.13	6,316.06	5,876.15	34.53	42.22	55.76	2,096.47	-1,211.68	3,266.01	3,202.84	63.17	51.703	
7,428.00	7,253.06	6,401.01	5,961.10	34.73	42.84	58.07	2,095.70	-1,213.78	3,265.28	3,201.66	63.62	51.324	
7,522.00	7,346.98	6,485.96	6,046.05	34.94	43.46	63.54	2,094.94	-1,215.88	3,264.68	3,200.61	64.08	50.950	
7,617.00	7,441.94	6,570.91	6,131.00	35.16	44.07	25.05	2,094.17	-1,218.00	3,264.19	3,199.64	64.55	50.569	
7,711.00	7,535.92	6,655.86	6,216.05	35.38	44.69	26.27	2,093.40	-1,220.10	3,263.44	3,198.41	65.03	50.186	
7,806.00	7,630.87	6,740.81	6,301.00	35.60	45.31	47.80	2,092.63	-1,222.22	3,262.46	3,196.95	65.51	49.804	
7,900.00	7,724.80	6,825.76	6,386.05	35.82	45.93	51.86	2,091.87	-1,224.32	3,261.40	3,195.42	65.98	49.431	
7,932.76	7,757.54	6,858.50	6,418.79	35.90	46.55	62.59	2,091.60	-1,225.05	3,261.24	3,195.10	66.15	49.304	
7,994.00	7,818.76	6,900.00	6,480.00	36.04	47.17	100.71	2,091.10	-1,226.42	3,261.78	3,195.32	66.46	49.078	
8,089.00	7,913.75	6,985.05	6,565.05	36.28	47.79	98.09	2,090.33	-1,228.54	3,263.34	3,196.38	66.96	48.737	
8,278.00	8,102.68	7,070.00	6,650.00	36.74	48.41	87.19	2,088.79	-1,232.76	3,265.92	3,197.98	67.95	48.067	
8,561.00	8,385.40	7,155.00	6,735.00	37.42	49.03	76.68	2,086.49	-1,239.08	3,267.80	3,198.38	69.42	47.075	
8,930.00	8,753.68	7,543.68	7,123.68	38.30	49.91	61.85	2,083.49	-1,247.32	3,264.07	3,192.73	71.34	45.752	
8,993.00	8,816.50	7,606.50	7,186.50	38.45	50.06	61.90	2,082.98	-1,248.73	3,262.70	3,191.03	71.67	45.522	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11D-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	15.87	125.35	35.64	130.45				
170.00	169.99	163.99	163.99	0.25	2.50	-55.56	125.35	35.64	129.35	126.59	2.76	46.908	
231.00	230.97	224.97	224.97	0.47	3.86	-53.28	125.35	35.64	128.49	124.15	4.34	29.629	
262.00	261.95	255.95	255.95	0.59	4.51	-43.35	125.35	35.64	127.78	122.69	5.09	25.083	
292.00	291.92	285.92	285.92	0.70	5.13	-48.17	125.35	35.64	126.75	120.92	5.83	21.744	
353.00	352.75	346.75	346.75	0.93	6.38	-64.85	125.35	35.64	124.39	117.09	7.30	17.039	
445.00	444.28	438.28	438.28	1.27	8.25	-69.34	125.35	35.64	120.76	111.25	9.51	12.698	
536.00	534.44	528.44	528.44	1.62	9.78	-71.30	125.35	35.64	116.53	105.13	11.40	10.222	
630.00	626.87	619.86	619.86	2.02	10.48	-79.23	125.43	35.58	112.23	99.73	12.50	8.977	
661.92	658.07	649.48	649.48	2.16	10.49	-83.81	125.87	35.26	111.73	99.08	12.65	8.833 CC, ES	
724.00	718.61	706.66	706.60	2.45	10.50	-92.93	127.77	33.90	113.75	100.82	12.93	8.796 SF	
819.00	810.83	792.59	792.26	2.91	10.53	-110.12	133.24	29.99	125.98	112.61	13.37	9.425	
913.00	901.45	875.15	874.20	3.39	10.57	-117.30	141.43	24.12	148.08	134.31	13.77	10.754	
1,007.00	991.42	954.94	952.90	3.92	10.61	-126.36	152.09	16.49	178.39	164.24	14.14	12.614	
1,101.00	1,081.58	1,032.73	1,029.04	4.44	10.67	-128.23	165.04	7.22	213.66	199.19	14.47	14.764	
1,195.00	1,172.56	1,109.47	1,103.45	4.93	10.74	-128.28	180.27	-3.69	250.43	235.67	14.76	16.965	
1,289.00	1,264.08	1,184.62	1,175.53	5.40	10.83	-131.47	197.53	-16.05	289.27	274.23	15.04	19.233	
1,384.00	1,356.59	1,258.09	1,245.15	5.88	10.95	-131.53	216.62	-29.72	331.82	316.50	15.32	21.658	
1,478.00	1,448.11	1,328.12	1,310.61	6.35	11.07	-134.77	236.84	-44.19	377.20	361.62	15.58	24.204	
1,573.00	1,540.86	1,406.65	1,383.24	6.82	11.25	-136.14	261.12	-61.58	424.82	408.83	15.99	26.564	
1,667.00	1,632.86	1,488.41	1,458.82	7.27	11.45	-133.63	286.48	-79.74	471.19	454.73	16.47	28.618	
1,761.00	1,724.81	1,570.28	1,534.49	7.72	11.69	-132.97	311.88	-97.92	517.36	500.39	16.96	30.501	
1,855.00	1,816.45	1,651.70	1,609.76	8.18	11.95	-132.33	337.13	-116.01	564.27	546.79	17.48	32.279	
1,949.00	1,907.72	1,732.49	1,684.44	8.67	12.23	-133.34	362.19	-133.95	612.21	594.19	18.02	33.977	
2,044.00	1,999.54	1,813.26	1,759.10	9.18	12.52	-135.60	387.24	-151.89	662.09	643.51	18.58	35.640	
2,138.00	2,090.09	1,892.69	1,832.52	9.70	12.84	-133.78	411.88	-169.53	712.19	693.05	19.14	37.202	
2,232.00	2,180.65	1,972.22	1,906.03	10.22	13.17	-135.16	436.55	-187.20	762.15	742.42	19.72	38.645	
2,326.00	2,271.24	2,051.83	1,979.62	10.74	13.52	-134.07	461.24	-204.88	811.98	791.67	20.31	39.979	
2,420.00	2,361.89	2,131.89	2,053.62	11.26	13.88	-130.70	486.08	-222.66	861.07	840.16	20.91	41.178	
2,527.00	2,465.28	2,224.10	2,138.86	11.83	14.31	-125.63	514.68	-243.14	915.10	893.48	21.61	42.340	
2,622.00	2,557.29	2,306.46	2,214.99	12.33	14.72	-128.93	540.22	-261.43	962.26	940.01	22.25	43.250	
2,715.00	2,647.48	2,386.74	2,289.21	12.81	15.12	-134.02	565.13	-279.26	1,009.13	986.25	22.88	44.113	
2,810.00	2,739.63	2,468.18	2,364.48	13.31	15.55	-138.54	590.39	-297.35	1,058.03	1,034.52	23.52	44.993	
2,904.00	2,830.93	2,548.47	2,438.70	13.80	15.97	-141.80	615.29	-315.18	1,106.91	1,082.77	24.14	45.848	
2,999.00	2,922.99	2,629.04	2,513.18	14.30	16.41	-141.85	640.28	-333.08	1,157.24	1,132.46	24.78	46.695	
3,093.00	3,013.89	2,708.33	2,586.47	14.81	16.85	-143.06	664.88	-350.69	1,207.73	1,182.30	25.42	47.508	
3,187.00	3,104.97	2,787.77	2,659.90	15.31	17.30	-144.75	689.52	-368.33	1,257.97	1,231.91	26.06	48.274	
3,282.00	3,197.19	2,868.34	2,734.38	15.80	17.76	-143.67	714.51	-386.23	1,308.29	1,281.59	26.71	48.988	
3,376.00	3,288.43	2,948.16	2,808.16	16.29	18.22	-142.61	739.27	-403.96	1,357.92	1,330.57	27.36	49.639	
3,470.00	3,379.56	3,027.85	2,881.83	16.79	18.69	-142.34	763.99	-421.66	1,407.78	1,379.76	28.01	50.254	
3,564.00	3,470.75	3,107.54	2,955.49	17.28	19.16	-144.29	788.71	-439.35	1,457.64	1,428.96	28.67	50.838	
3,658.00	3,561.89	3,187.13	3,029.05	17.78	19.64	-142.78	813.39	-457.03	1,507.65	1,478.31	29.34	51.392	
3,752.00	3,652.73	3,266.40	3,102.34	18.29	20.12	-140.33	837.98	-474.64	1,558.15	1,528.14	30.01	51.914	
3,847.00	3,744.45	3,346.66	3,176.53	18.81	20.61	-138.40	862.88	-492.46	1,608.96	1,578.25	30.71	52.394	
3,941.00	3,835.42	3,426.63	3,250.44	19.31	21.11	-137.71	887.68	-510.22	1,658.36	1,626.96	31.40	52.814	
4,026.00	3,917.86	3,499.33	3,317.64	19.76	21.56	-136.90	910.23	-526.37	1,702.39	1,670.36	32.03	53.153	
4,130.00	4,018.80	3,588.23	3,399.82	20.30	22.12	-140.47	937.81	-546.12	1,756.35	1,723.55	32.80	53.551	
4,224.00	4,109.52	3,667.39	3,472.99	20.82	22.62	-141.58	962.36	-563.70	1,807.03	1,773.53	33.50	53.942	
4,318.00	4,199.89	3,745.83	3,545.50	21.36	23.12	-142.13	986.69	-581.12	1,858.80	1,824.60	34.20	54.344	
4,412.00	4,290.67	3,824.94	3,618.63	21.87	23.63	-142.49	1,011.23	-598.69	1,909.56	1,874.66	34.90	54.712	
4,507.00	4,382.62	3,905.34	3,692.95	22.38	24.14	-140.88	1,036.17	-616.55	1,960.17	1,924.55	35.61	55.044	
4,601.00	4,473.49	3,984.77	3,766.37	22.90	24.66	-141.15	1,060.81	-634.19	2,010.43	1,974.11	36.32	55.352	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 11D-8 596 - OH - Plan 1 (04-07-19 DS)													Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
4,695.00	4,564.59	4,064.70	3,840.26	23.39	25.18	-139.55	1,085.60	-651.94	2,059.90	2,022.87	37.03	55.628		
4,789.00	4,655.72	4,144.91	3,914.40	23.89	25.70	-137.59	1,110.48	-669.75	2,108.92	2,071.17	37.75	55.869		
4,883.00	4,746.85	4,225.36	3,988.77	24.39	26.23	-135.54	1,135.43	-687.62	2,157.51	2,119.04	38.47	56.079		
4,978.00	4,839.29	4,307.22	4,064.44	24.87	26.77	-138.33	1,160.83	-705.81	2,205.71	2,166.51	39.20	56.267		
5,072.00	4,931.05	4,388.44	4,139.51	25.33	27.30	-140.94	1,186.02	-723.84	2,253.01	2,213.10	39.91	56.447		
5,166.00	5,022.88	4,469.61	4,214.54	25.79	27.84	-141.31	1,211.20	-741.87	2,300.39	2,259.76	40.62	56.626		
5,260.00	5,114.46	4,550.26	4,289.10	26.26	28.38	-141.67	1,236.21	-759.79	2,348.65	2,307.31	41.34	56.813		
5,354.00	5,205.69	4,630.27	4,363.05	26.75	28.91	-141.24	1,261.03	-777.56	2,397.99	2,355.92	42.06	57.010		
5,450.00	5,298.51	4,711.32	4,437.97	27.28	29.45	-142.37	1,286.17	-795.56	2,449.44	2,406.63	42.81	57.223		
5,543.00	5,388.31	4,789.66	4,510.38	27.79	29.98	-140.74	1,310.47	-812.96	2,499.55	2,456.03	43.53	57.425		
5,637.00	5,479.24	4,869.20	4,583.91	28.29	30.51	-141.36	1,335.14	-830.62	2,549.65	2,505.39	44.26	57.609		
5,731.00	5,570.39	4,949.24	4,657.90	28.79	31.05	-138.79	1,359.97	-848.40	2,598.93	2,553.95	44.99	57.768		
5,825.00	5,661.76	5,029.88	4,732.44	29.27	31.60	-138.01	1,384.98	-866.31	2,647.23	2,601.51	45.72	57.896		
5,920.00	5,754.38	5,112.01	4,808.35	29.75	32.15	-136.44	1,410.46	-884.55	2,694.98	2,648.51	46.47	57.999		
6,014.00	5,846.19	5,193.59	4,883.76	30.21	32.71	-137.68	1,435.76	-902.67	2,741.68	2,694.47	47.20	58.085		
6,109.00	5,939.26	5,276.45	4,960.36	30.65	33.27	-138.32	1,461.46	-921.07	2,788.10	2,740.17	47.94	58.162		
6,203.00	6,031.68	5,358.96	5,036.63	31.07	33.83	-139.45	1,487.06	-939.40	2,833.03	2,784.37	48.66	58.224		
6,297.00	6,124.42	5,442.02	5,113.41	31.47	34.40	-140.43	1,512.82	-957.85	2,876.81	2,827.44	49.37	58.271		
6,392.00	6,218.59	5,526.72	5,191.70	31.83	34.98	-146.14	1,539.09	-976.66	2,919.29	2,869.22	50.07	58.302		
6,486.00	6,312.11	5,611.06	5,269.66	32.16	35.56	-153.47	1,565.25	-995.39	2,959.79	2,909.04	50.75	58.323		
6,580.00	6,405.81	5,696.00	5,348.18	32.47	36.14	-145.30	1,591.60	-1,014.26	2,998.73	2,947.31	51.42	58.320		
6,674.00	6,499.58	5,781.32	5,427.05	32.77	36.73	-148.87	1,618.07	-1,033.21	3,036.82	2,984.73	52.09	58.301		
6,768.00	6,593.40	5,866.65	5,505.93	33.06	37.31	-159.15	1,644.53	-1,052.16	3,074.63	3,021.88	52.75	58.284		
6,863.00	6,688.26	5,952.05	5,585.57	33.35	37.89	-152.87	1,671.00	-1,071.11	3,104.60	3,045.29	53.41	58.267		
6,957.00	6,782.19	6,037.35	5,665.11	33.62	38.47	-145.94	1,697.47	-1,090.06	3,109.21	3,049.39	53.98	58.250		
7,051.00	6,876.18	6,122.24	5,744.65	33.87	39.05	-145.30	1,723.94	-1,109.02	3,112.27	3,051.95	54.54	58.233		
7,145.00	6,970.17	6,207.13	5,822.19	34.10	39.63	-145.30	1,750.41	-1,127.97	3,114.63	3,053.82	55.10	58.216		
7,239.00	7,064.16	6,292.02	5,900.73	34.33	40.21	-145.30	1,776.88	-1,146.90	3,116.07	3,054.31	55.66	58.199		
7,333.00	7,158.15	6,376.91	5,979.27	34.56	40.79	-145.30	1,803.35	-1,165.83	3,117.50	3,054.80	56.22	58.182		
7,427.00	7,252.14	6,461.80	6,057.81	34.79	41.37	-145.30	1,829.82	-1,184.76	3,118.93	3,055.29	56.78	58.165		
7,521.00	7,346.13	6,546.69	6,136.35	35.02	41.95	-145.30	1,856.29	-1,203.69	3,120.36	3,055.78	57.34	58.148		
7,615.00	7,440.12	6,631.58	6,214.89	35.25	42.53	-145.30	1,882.76	-1,222.62	3,121.79	3,056.27	57.90	58.131		
7,709.00	7,534.11	6,716.47	6,293.43	35.48	43.11	-145.30	1,909.23	-1,241.55	3,123.22	3,056.76	58.46	58.114		
7,803.00	7,628.10	6,801.36	6,371.97	35.71	43.69	-145.30	1,935.70	-1,260.48	3,124.65	3,057.25	59.02	58.097		
7,897.00	7,722.09	6,886.25	6,450.51	35.94	44.27	-145.30	1,962.17	-1,279.41	3,126.08	3,057.74	59.58	58.080		
7,991.00	7,816.08	6,971.14	6,529.05	36.17	44.85	-145.30	1,988.64	-1,298.34	3,127.51	3,058.23	60.14	58.063		
8,085.00	7,910.07	7,056.03	6,607.59	36.40	45.43	-145.30	2,015.11	-1,317.27	3,128.94	3,058.72	60.70	58.046		
8,179.00	8,004.06	7,140.92	6,686.13	36.63	46.01	-145.30	2,041.58	-1,336.20	3,130.37	3,059.21	61.26	58.029		
8,273.00	8,098.05	7,225.81	6,764.67	36.86	46.59	-145.30	2,068.05	-1,355.13	3,131.80	3,059.70	61.82	58.012		
8,367.00	8,192.04	7,310.70	6,843.21	37.09	47.17	-145.30	2,094.52	-1,374.06	3,133.23	3,060.19	62.38	57.995		
8,461.00	8,286.03	7,395.59	6,921.75	37.32	47.75	-145.30	2,120.99	-1,392.99	3,134.66	3,060.68	62.94	57.978		
8,555.00	8,380.02	7,480.48	7,000.29	37.55	48.33	-145.30	2,147.46	-1,411.92	3,136.09	3,061.17	63.50	57.961		
8,649.00	8,474.01	7,565.37	7,078.83	37.78	48.91	-145.30	2,173.93	-1,430.85	3,137.52	3,061.66	64.06	57.944		
8,743.00	8,568.00	7,650.26	7,157.37	38.01	49.49	-145.30	2,200.40	-1,449.78	3,138.95	3,062.15	64.62	57.927		
8,837.00	8,661.99	7,735.15	7,235.91	38.24	50.07	-145.30	2,226.87	-1,468.71	3,140.38	3,062.64	65.18	57.910		
8,931.00	8,755.98	7,820.04	7,314.45	38.47	50.65	-145.30	2,253.34	-1,487.64	3,141.81	3,063.13	65.74	57.893		
9,025.00	8,849.97	7,904.93	7,392.99	38.70	51.23	-145.30	2,279.81	-1,506.57	3,143.24	3,063.62	66.30	57.876		
9,119.00	8,943.96	7,989.82	7,471.53	38.93	51.81	-145.30	2,306.28	-1,525.50	3,144.67	3,064.11	66.86	57.859		
9,213.00	9,037.95	8,074.71	7,550.07	39.16	52.39	-145.30	2,332.75	-1,544.43	3,146.10	3,064.60	67.42	57.842		
9,307.00	9,131.94	8,159.60	7,628.61	39.39	52.97	-145.30	2,359.22	-1,563.36	3,147.53	3,065.09	67.98	57.825		
9,401.00	9,225.93	8,244.49	7,707.15	39.62	53.55	-145.30	2,385.69	-1,582.29	3,148.96	3,065.58	68.54	57.808		
9,495.00	9,319.92	8,329.38	7,785.69	39.85	54.13	-145.30	2,412.16	-1,601.22	3,150.39	3,066.07	69.10	57.791		
9,589.00	9,413.91	8,414.27	7,864.23	40.08	54.71	-145.30	2,438.63	-1,620.15	3,151.82	3,066.56	69.66	57.774		
9,683.00	9,507.90	8,499.16	7,942.77	40.31	55.29	-145.30	2,465.10	-1,639.08	3,153.25	3,067.05	70.22	57.757		
9,777.00	9,601.89	8,584.05	8,021.31	40.54	55.87	-145.30	2,491.57	-1,658.01	3,154.68	3,067.54	70.78	57.740		
9,871.00	9,695.88	8,668.94	8,100.85	40.77	56.45	-145.30	2,518.04	-1,676.94	3,156.11	3,068.03	71.34	57.723		
9,965.00	9,789.87	8,753.83	8,179.39	41.00	57.03	-145.30	2,544.51	-1,695.87	3,157.54	3,068.52	71.90	57.706		
10,059.00	9,883.86	8,838.72	8,257.93	41.23	57.61	-145.30	2,570.98	-1,714.80	3,158.97	3,069.01	72.46	57.689		
10,153.00	9,977.85	8,923.61	8,336.47	41.46	58.19	-145.30	2,597.45	-1,733.73	3,160.40	3,069.50	73.02	57.672		
10,247.00	10,071.84	9,008.50	8,415.01	41.69	58.77	-145.30	2,623.92	-1,752.66	3,161.83	3,070.00	73.58	57.655		
10,341.00	10,165.83	9,093.39	8,493.55	41.92	59.35	-145.30	2,650.39	-1,771.59	3,163.26	3,070.49	74.14	57.638		
10,435.00	10,259.82	9,178.28	8,572.09	42.15	59.93	-145.30	2,676.86	-1,790.52	3,164.69	3,070.98	74.70	57.621		
10,529.00	10,353.81	9,263.17	8,650.63	42.38	60.51	-145.30	2,703.33	-1,809.45	3,166.12	3,071.47	75.26	57.604		
10,623.00	10,447.80	9,348.06	8,729.17	42.61	61.09	-145.30	2,729.80	-1,828.38	3,167.55	3,071.96	75.82	57.587		
10,717.00	10,541.79	9,432.95	8,807.71	42.84	61.67	-145.30	2,756.27	-1,847.31	3,168.98	3,072.45	76.38	57.570		
10,811.00	10,635.78	9,517.84	8,886.25	43.07	62.25	-145.30	2,782.74	-1,866.24	3,170.41	3,072.94	76.94	57.553		
10,905.00	10,729.77	9,602.73	8,964.79	43.30	62.83	-145.30	2,809.21	-1,885.17	3,171.84	3,073.43	77.50	57.536		

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 12A-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	15.64	118.32	33.12	123.02				
170.00	169.99	163.99	163.99	0.25	2.50	-55.83	118.32	33.12	121.91	119.15	2.76	44.211	
231.00	230.97	224.08	224.08	0.47	3.91	-53.64	118.44	33.02	121.15	116.78	4.36	27.763	
262.00	261.95	253.95	253.94	0.59	4.64	-43.95	118.91	32.63	120.82	115.65	5.17	23.380	
292.00	291.92	282.79	282.76	0.70	5.36	-49.16	119.70	31.96	120.44	114.49	5.95	20.241	
323.89	323.73	313.35	313.29	0.82	6.46	-59.62	120.90	30.95	120.22	113.22	7.00	17.177 CC	
353.00	352.75	341.13	341.01	0.93	7.90	-67.06	122.31	29.76	120.43	112.22	8.21	14.672	
445.00	444.28	427.99	427.45	1.27	13.78	-74.17	128.73	24.37	123.52	111.18	12.34	10.011 ES	
536.00	534.44	512.12	510.74	1.62	22.45	-78.66	137.80	16.74	130.78	114.32	16.46	7.945	
630.00	626.87	596.39	593.55	2.02	34.23	-87.51	149.70	6.74	144.29	125.26	19.03	7.582 SF	
724.00	718.61	677.50	672.54	2.45	40.94	-99.81	163.77	-5.10	166.44	149.13	17.31	9.615	
819.00	810.83	755.88	748.06	2.91	42.75	-113.70	179.81	-18.58	198.73	183.41	15.32	12.970	
913.00	901.45	829.55	818.21	3.39	42.76	-117.24	197.03	-33.05	238.62	223.66	14.96	15.949	
1,007.00	991.42	900.00	884.43	3.92	42.77	-123.64	215.42	-48.51	284.66	268.93	15.73	18.093	
1,101.00	1,081.58	973.83	953.06	4.44	42.79	-124.49	236.25	-66.02	333.79	316.92	16.87	19.789	
1,195.00	1,172.56	1,053.90	1,027.43	4.93	42.82	-124.35	258.97	-85.13	381.27	363.30	17.97	21.220	
1,289.00	1,264.08	1,135.00	1,102.75	5.40	42.86	-127.67	281.98	-104.47	427.69	408.77	18.92	22.606	
1,384.00	1,356.59	1,216.99	1,178.90	5.88	42.91	-127.95	305.24	-124.03	474.83	455.02	19.81	23.970	
1,478.00	1,448.11	1,297.96	1,254.10	6.35	42.96	-131.65	328.22	-143.35	521.89	501.26	20.63	25.302	
1,573.00	1,540.86	1,380.08	1,330.37	6.82	43.02	-133.53	351.52	-162.93	569.25	547.91	21.34	26.673	
1,667.00	1,632.86	1,461.85	1,406.32	7.27	43.09	-131.47	374.72	-182.44	615.32	593.33	21.99	27.982	
1,761.00	1,724.81	1,543.71	1,482.35	7.72	43.17	-131.18	397.95	-201.97	661.22	638.57	22.65	29.198	
1,855.00	1,816.45	1,625.09	1,557.93	8.18	43.25	-130.83	421.04	-221.38	707.87	684.53	23.34	30.334	
1,949.00	1,907.72	1,705.81	1,632.89	8.67	43.34	-132.08	443.95	-240.64	755.57	731.52	24.05	31.415	
2,044.00	1,999.54	1,786.48	1,707.82	9.18	43.44	-134.54	466.84	-259.88	805.24	780.46	24.78	32.491	
2,138.00	2,090.09	1,865.79	1,781.47	9.70	43.54	-132.91	489.34	-278.80	855.16	829.65	25.51	33.517	
2,232.00	2,180.65	1,945.19	1,855.22	10.22	43.66	-134.47	511.87	-297.74	904.98	878.75	26.23	34.504	
2,326.00	2,271.24	2,024.68	1,929.05	10.74	43.77	-133.54	534.42	-316.70	954.70	927.77	26.93	35.458	
2,420.00	2,361.89	2,104.59	2,003.26	11.26	43.90	-130.33	557.10	-335.76	1,003.71	976.08	27.63	36.329	
2,527.00	2,465.28	2,196.61	2,088.73	11.83	44.05	-125.41	583.21	-357.71	1,057.66	1,029.22	28.44	37.187	
2,622.00	2,557.29	2,278.81	2,165.07	12.33	44.20	-128.83	606.53	-377.32	1,104.80	1,075.65	29.15	37.900	
2,715.00	2,647.48	2,358.98	2,239.53	12.81	44.35	-134.05	629.28	-396.45	1,151.66	1,121.86	29.80	38.646	
2,810.00	2,739.63	2,440.33	2,315.08	13.31	44.50	-138.70	652.36	-415.85	1,200.57	1,170.15	30.42	39.465	
2,904.00	2,830.93	2,520.59	2,389.62	13.80	44.66	-142.09	675.14	-435.00	1,249.45	1,218.46	31.00	40.311	
2,999.00	2,922.99	2,601.12	2,464.42	14.30	44.83	-142.27	697.99	-454.21	1,299.80	1,268.22	31.58	41.164	
3,093.00	3,013.89	2,680.37	2,538.02	14.81	45.00	-143.58	720.47	-473.11	1,350.30	1,318.14	32.16	41.989	
3,187.00	3,104.97	2,759.79	2,611.79	15.31	45.18	-145.38	743.01	-492.06	1,400.56	1,367.84	32.72	42.804	
3,282.00	3,197.19	2,840.36	2,686.61	15.80	45.37	-144.39	765.87	-511.28	1,450.89	1,417.61	33.28	43.598	
3,376.00	3,288.43	2,920.17	2,760.74	16.29	45.57	-143.43	788.52	-530.32	1,500.54	1,466.69	33.85	44.335	
3,470.00	3,379.56	2,999.84	2,834.73	16.79	45.76	-143.25	811.12	-549.32	1,550.41	1,515.98	34.43	45.036	
3,564.00	3,470.75	3,079.51	2,908.72	17.28	45.97	-145.28	833.73	-568.32	1,600.28	1,565.28	35.00	45.720	
3,658.00	3,561.89	3,159.08	2,982.63	17.78	46.18	-143.85	856.30	-587.31	1,650.31	1,614.73	35.58	46.381	
3,752.00	3,652.73	3,238.31	3,056.21	18.29	46.40	-141.47	878.78	-606.20	1,700.85	1,664.66	36.19	46.996	
3,847.00	3,744.45	3,318.49	3,130.67	18.81	46.62	-139.59	901.53	-625.33	1,751.71	1,714.88	36.83	47.566	
3,941.00	3,835.42	3,398.37	3,204.87	19.31	46.85	-138.94	924.20	-644.39	1,801.17	1,763.71	37.46	48.088	
4,026.00	3,917.86	3,471.01	3,272.33	19.76	47.06	-138.18	944.81	-661.71	1,845.25	1,807.22	38.02	48.528	
4,130.00	4,018.80	3,559.85	3,354.84	20.30	47.33	-141.82	970.02	-682.91	1,899.27	1,860.55	38.71	49.061	
4,224.00	4,109.52	3,638.94	3,428.30	20.82	47.57	-143.01	992.46	-701.77	1,950.00	1,910.66	39.34	49.563	
4,318.00	4,199.89	3,717.30	3,501.08	21.36	47.82	-143.60	1,014.70	-720.47	2,001.85	1,961.86	39.98	50.067	
4,412.00	4,290.67	3,796.36	3,574.51	21.87	48.07	-143.99	1,037.13	-739.33	2,052.66	2,012.06	40.60	50.552	
4,507.00	4,382.62	3,876.72	3,649.14	22.38	48.34	-142.43	1,059.93	-758.49	2,103.31	2,062.08	41.24	51.008	
4,601.00	4,473.49	3,956.09	3,722.85	22.90	48.60	-142.73	1,082.45	-777.43	2,153.64	2,111.77	41.87	51.436	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 12A-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error: 0.00 usft	
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,695.00	4,564.59	4,035.97	3,797.04	23.39	48.87	-141.16	1,105.12	-796.48	2,203.17	2,160.66	42.50	51.836	
4,789.00	4,655.72	4,116.11	3,871.47	23.89	49.15	-139.25	1,127.86	-815.60	2,252.25	2,209.10	43.15	52.200	
4,883.00	4,746.85	4,196.48	3,946.12	24.39	49.43	-137.21	1,150.66	-834.77	2,300.92	2,257.12	43.80	52.529	
4,978.00	4,839.29	4,278.30	4,022.10	24.87	49.73	-140.04	1,173.88	-854.29	2,349.19	2,304.73	44.46	52.844	
5,072.00	4,931.05	4,359.51	4,097.53	25.33	50.03	-142.68	1,196.92	-873.66	2,396.52	2,351.44	45.08	53.161	
5,166.00	5,022.88	4,440.69	4,172.93	25.79	50.33	-143.10	1,219.96	-893.03	2,443.90	2,398.20	45.70	53.478	
5,260.00	5,114.46	4,521.34	4,247.83	26.26	50.63	-143.51	1,242.84	-912.26	2,492.18	2,445.85	46.33	53.792	
5,354.00	5,205.69	4,601.32	4,322.11	26.75	50.94	-143.12	1,265.53	-931.34	2,541.56	2,494.58	46.97	54.105	
5,450.00	5,298.51	4,682.32	4,397.34	27.28	51.25	-144.29	1,288.52	-950.66	2,593.07	2,545.43	47.64	54.426	
5,543.00	5,388.31	4,760.60	4,470.04	27.79	51.56	-142.69	1,310.73	-969.34	2,643.26	2,594.96	48.30	54.728	
5,637.00	5,479.24	4,840.08	4,543.86	28.29	51.88	-143.32	1,333.28	-988.30	2,693.42	2,644.46	48.96	55.015	
5,731.00	5,570.39	4,920.08	4,618.16	28.79	52.20	-140.76	1,355.98	-1,007.38	2,742.77	2,693.15	49.62	55.277	
5,825.00	5,661.76	5,000.67	4,693.01	29.27	52.53	-139.99	1,378.85	-1,026.61	2,791.13	2,740.84	50.28	55.508	
5,920.00	5,754.38	5,082.77	4,769.26	29.75	52.87	-138.44	1,402.14	-1,046.19	2,838.93	2,787.97	50.95	55.717	
6,014.00	5,846.19	5,164.32	4,845.01	30.21	53.21	-139.70	1,425.28	-1,065.64	2,885.66	2,834.04	51.61	55.909	
6,109.00	5,939.26	5,241.67	4,932.74	30.65	53.53	-141.60	1,448.41	-1,085.16	2,936.90	2,884.77	52.27	56.083	
6,203.00	6,031.68	5,323.72	5,015.78	31.07	53.85	-142.80	1,471.66	-1,105.32	2,990.92	2,863.06	52.93	56.257	
6,297.00	6,124.42	5,406.14	5,078.17	31.47	54.17	-143.67	1,495.02	-1,124.61	3,046.93	2,876.06	53.59	56.431	
6,392.00	6,218.59	5,490.04	5,142.06	31.83	54.49	-149.01	1,517.46	-1,143.90	3,098.94	2,887.15	54.25	56.605	
6,486.00	6,312.11	5,573.36	5,205.35	32.16	54.81	-156.16	1,540.81	-1,163.18	3,152.95	2,896.32	54.91	56.779	
6,580.00	6,405.81	5,656.89	5,268.87	32.47	55.13	-148.28	1,570.16	-1,182.48	3,206.96	2,903.72	55.57	56.953	
6,674.00	6,499.58	5,740.52	5,332.48	32.77	55.45	-152.07	1,569.51	-1,204.27	3,270.81	2,910.15	56.23	57.127	
6,768.00	6,593.40	5,824.22	5,406.15	33.06	55.77	-162.29	1,568.85	-1,206.07	3,297.39	2,916.21	56.89	57.301	
6,863.00	6,688.26	5,908.96	5,480.88	33.35	56.09	-157.42	1,568.19	-1,207.88	3,283.52	2,921.83	57.55	57.475	
6,957.00	6,782.19	5,993.70	5,554.70	33.62	56.41	-150.48	1,567.54	-1,209.68	3,288.09	2,925.89	58.21	57.649	
7,051.00	6,876.18	6,078.42	5,628.62	33.87	56.73	-172.12	1,566.88	-1,211.48	3,291.02	2,928.32	58.87	57.823	
7,145.00	6,970.17	6,162.14	5,702.57	34.10	57.33	104.50	1,566.23	-1,213.28	3,293.16	2,929.99	59.53	57.997	
7,239.00	7,064.16	6,246.86	5,771.52	34.53	57.59	47.38	1,564.91	-1,216.91	3,294.01	2,929.92	60.19	58.171	
7,248.00	7,253.06	7,553.69	7,205.48	34.73	57.73	49.71	1,564.25	-1,218.71	3,292.90	2,928.35	60.85	58.345	
7,522.00	7,346.98	7,647.67	7,299.45	34.94	57.86	55.18	1,563.60	-1,220.51	3,291.88	2,926.89	61.51	58.519	
7,617.00	7,441.94	7,742.66	7,394.42	35.16	58.00	16.69	1,562.93	-1,222.33	3,291.16	2,925.70	62.17	58.693	
7,711.00	7,535.92	7,836.66	7,488.39	35.38	58.14	17.90	1,562.28	-1,224.13	3,290.33	2,924.39	62.83	58.867	
7,806.00	7,630.87	7,931.65	7,583.37	35.60	58.28	39.44	1,561.62	-1,225.95	3,289.14	2,922.72	63.49	59.041	
7,900.00	7,724.80	8,025.63	7,677.33	35.82	58.42	43.50	1,560.96	-1,227.75	3,287.74	2,920.85	64.15	59.215	
7,943.75	7,768.53	8,069.38	7,721.07	35.92	58.48	59.12	1,560.65	-1,228.59	3,287.46	2,920.35	64.81	59.389	
7,994.00	7,818.76	8,119.62	7,771.30	36.04	58.56	92.36	1,560.30	-1,229.56	3,287.83	2,920.46	65.47	59.563	
8,089.00	7,913.75	8,214.61	7,866.27	36.28	58.71	89.74	1,559.64	-1,231.38	3,289.18	2,921.32	66.13	59.737	
8,278.00	8,102.68	8,403.59	8,055.21	36.74	59.00	78.87	1,558.32	-1,235.00	3,291.13	2,922.29	66.79	59.911	
8,561.00	8,385.40	8,686.48	8,338.05	37.42	59.45	68.39	1,556.35	-1,240.42	3,291.36	2,921.09	67.45	60.085	
8,930.00	8,753.68	9,055.14	8,706.62	38.30	60.06	53.59	1,553.78	-1,247.49	3,284.82	2,912.67	68.11	60.259	
8,993.00	8,816.50	9,118.04	8,769.52	38.45	60.17	53.65	1,553.34	-1,248.69	3,282.90	2,910.44	68.77	60.433	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 12B-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	15.27	111.30	30.39	115.54				
170.00	169.99	163.99	163.99	0.25	2.50	-56.24	111.30	30.39	114.43	111.67	2.76	41.498	
231.00	230.97	224.97	224.97	0.47	3.86	-54.04	111.30	30.39	113.58	109.25	4.34	26.192	
262.00	261.95	255.95	255.95	0.59	4.51	-44.16	111.30	30.39	112.89	107.79	5.09	22.159	
292.00	291.92	285.92	285.92	0.70	5.13	-49.05	111.30	30.39	111.87	106.04	5.83	19.192	
353.00	352.75	345.31	345.31	0.93	6.45	-66.15	111.68	30.01	109.88	102.54	7.34	14.961	
421.41	420.83	410.99	410.93	1.18	8.22	-70.76	113.56	28.09	109.08	99.86	9.22	11.831 CC	
445.00	444.28	433.49	433.38	1.27	9.26	-72.69	114.57	27.06	109.20	99.07	10.13	10.781	
536.00	534.44	519.22	518.74	1.62	14.28	-77.67	120.10	21.42	111.94	98.31	13.62	8.217 ES	
630.00	626.87	605.37	604.07	2.02	22.07	-88.13	128.35	12.99	120.61	103.96	16.65	7.245 SF	
724.00	718.61	688.51	685.84	2.45	26.82	-102.32	138.86	2.26	138.63	122.32	16.31	8.497	
819.00	810.83	769.12	764.42	2.91	27.49	-117.73	151.42	-10.56	167.70	152.49	15.22	11.020	
913.00	901.45	845.06	837.69	3.39	27.50	-122.25	165.36	-24.80	205.17	190.12	15.05	13.636	
1,007.00	991.42	917.15	906.47	3.92	27.52	-129.23	180.47	-40.22	249.29	233.87	15.42	16.165	
1,101.00	1,081.58	992.47	977.57	4.44	27.55	-130.18	197.85	-57.97	296.74	280.71	16.03	18.511	
1,195.00	1,172.56	1,073.64	1,054.10	4.93	27.59	-130.05	216.77	-77.29	342.49	325.80	16.69	20.517	
1,289.00	1,264.08	1,155.84	1,131.61	5.40	27.64	-133.39	235.93	-96.86	387.04	369.73	17.31	22.354	
1,384.00	1,356.59	1,238.95	1,209.97	5.88	27.70	-133.75	255.31	-116.63	432.27	414.34	17.93	24.109	
1,478.00	1,448.11	1,321.05	1,287.38	6.35	27.78	-137.44	274.44	-136.17	477.43	458.92	18.52	25.783	
1,573.00	1,540.86	1,404.34	1,365.91	6.82	27.86	-139.27	293.86	-155.99	522.76	503.69	19.07	27.417	
1,667.00	1,632.86	1,487.26	1,444.10	7.27	27.95	-137.18	313.18	-175.73	566.76	547.16	19.59	28.926	
1,761.00	1,724.81	1,570.25	1,522.35	7.72	28.06	-136.93	332.53	-195.48	610.62	590.49	20.13	30.328	
1,855.00	1,816.45	1,652.73	1,600.12	8.18	28.17	-136.64	351.75	-215.11	655.35	634.65	20.70	31.660	
1,949.00	1,907.72	1,734.53	1,677.25	8.67	28.29	-137.95	370.82	-234.57	701.24	679.95	21.28	32.947	
2,044.00	1,999.54	1,816.31	1,754.36	9.18	28.42	-140.47	389.88	-254.04	749.14	727.26	21.88	34.236	
2,138.00	2,090.09	1,896.71	1,830.16	9.70	28.56	-138.84	408.62	-273.17	797.40	774.91	22.48	35.470	
2,232.00	2,180.65	1,977.18	1,906.04	10.22	28.71	-140.35	427.38	-292.32	845.54	822.46	23.08	36.638	
2,326.00	2,271.24	2,057.75	1,982.00	10.74	28.87	-139.41	446.16	-311.50	893.59	869.91	23.67	37.746	
2,420.00	2,361.89	2,138.68	2,058.32	11.26	29.03	-136.14	465.02	-330.76	940.96	916.68	24.28	38.756	
2,527.00	2,465.28	2,231.77	2,146.09	11.83	29.23	-131.16	486.72	-352.91	993.11	968.12	24.99	39.748	
2,622.00	2,557.29	2,314.91	2,224.48	12.33	29.42	-134.58	506.10	-372.70	1,038.60	1,012.99	25.61	40.551	
2,715.00	2,647.48	2,396.07	2,301.00	12.81	29.62	-139.81	525.02	-392.01	1,083.75	1,057.54	26.21	41.353	
2,810.00	2,739.63	2,478.53	2,378.75	13.31	29.82	-144.46	544.24	-411.64	1,130.80	1,104.01	26.80	42.200	
2,904.00	2,830.93	2,559.95	2,455.53	13.80	30.03	-147.80	563.22	-431.01	1,177.74	1,150.38	27.36	43.048	
2,999.00	2,922.99	2,641.69	2,532.60	14.30	30.25	-148.07	582.27	-450.47	1,226.11	1,198.18	27.93	43.900	
3,093.00	3,013.89	2,722.15	2,608.45	14.81	30.47	-149.32	601.02	-469.61	1,274.70	1,246.20	28.50	44.727	
3,187.00	3,104.97	2,802.80	2,684.50	15.31	30.70	-151.08	619.82	-488.81	1,322.97	1,293.91	29.06	45.524	
3,282.00	3,197.19	2,884.62	2,761.65	15.80	30.95	-150.03	638.89	-508.28	1,371.24	1,341.61	29.63	46.282	
3,376.00	3,288.43	2,965.66	2,838.06	16.29	31.19	-149.09	657.78	-527.57	1,418.87	1,388.67	30.20	46.982	
3,470.00	3,379.56	3,046.53	2,914.31	16.79	31.45	-148.88	676.63	-546.81	1,466.77	1,435.99	30.78	47.649	
3,564.00	3,470.75	3,127.43	2,990.59	17.28	31.71	-150.89	695.49	-566.07	1,514.64	1,483.27	31.36	48.291	
3,658.00	3,561.89	3,208.23	3,066.78	17.78	31.97	-149.47	714.32	-585.30	1,562.66	1,530.71	31.95	48.908	
3,752.00	3,652.73	3,288.65	3,142.60	18.29	32.24	-147.15	733.06	-604.43	1,611.30	1,578.74	32.56	49.492	
3,847.00	3,744.45	3,369.98	3,219.29	18.81	32.53	-145.19	752.02	-623.79	1,660.31	1,627.13	33.18	50.036	
3,941.00	3,835.42	3,450.99	3,295.67	19.31	32.81	-144.52	770.90	-643.07	1,707.93	1,674.12	33.80	50.523	
4,026.00	3,917.86	3,524.63	3,365.11	19.76	33.08	-143.70	788.07	-660.60	1,750.32	1,715.95	34.37	50.926	
4,130.00	4,018.80	3,614.74	3,450.07	20.30	33.41	-147.37	809.07	-682.04	1,802.21	1,767.16	35.06	51.405	
4,224.00	4,109.52	3,695.00	3,525.75	20.82	33.71	-148.70	827.78	-701.14	1,851.09	1,815.40	35.69	51.868	
4,318.00	4,199.89	3,774.55	3,600.76	21.36	34.01	-149.23	846.32	-720.07	1,901.12	1,864.80	36.32	52.341	
4,412.00	4,290.67	3,854.81	3,676.43	21.87	34.32	-149.52	865.03	-739.17	1,950.03	1,913.08	36.95	52.780	
4,507.00	4,382.62	3,936.37	3,753.33	22.38	34.64	-147.97	884.04	-758.58	1,998.73	1,961.15	37.58	53.184	
4,601.00	4,473.49	4,016.92	3,829.27	22.90	34.97	-148.28	902.81	-777.75	2,047.17	2,008.96	38.22	53.565	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 12B-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,695.00	4,564.59	4,097.96	3,905.69	23.39	35.29	-146.61	921.71	-797.04	2,094.77	2,055.92	38.86	53.912	
4,789.00	4,655.72	4,179.23	3,982.32	23.89	35.63	-144.76	940.65	-816.38	2,141.97	2,102.46	39.50	54.223	
4,883.00	4,746.85	4,260.70	4,059.14	24.39	35.97	-142.65	959.64	-835.77	2,188.79	2,148.63	40.16	54.503	
4,978.00	4,839.29	4,343.64	4,137.33	24.87	36.32	-145.44	978.97	-855.51	2,235.10	2,194.29	40.82	54.758	
5,072.00	4,931.05	4,426.01	4,215.01	25.33	36.68	-148.02	998.17	-875.11	2,280.38	2,238.92	41.46	55.004	
5,166.00	5,022.88	4,508.39	4,292.68	25.79	37.03	-148.48	1,017.37	-894.72	2,325.65	2,283.56	42.10	55.246	
5,260.00	5,114.46	4,590.23	4,369.85	26.26	37.39	-148.93	1,036.45	-914.19	2,371.88	2,329.14	42.74	55.494	
5,354.00	5,205.69	4,671.40	4,446.38	26.75	37.76	-148.62	1,055.37	-933.51	2,419.29	2,375.89	43.40	55.750	
5,450.00	5,298.51	4,753.62	4,523.90	27.28	38.13	-149.82	1,074.53	-953.08	2,468.84	2,424.78	44.07	56.023	
5,543.00	5,388.31	4,833.07	4,598.81	27.79	38.49	-148.20	1,093.05	-971.98	2,517.17	2,472.44	44.72	56.283	
5,637.00	5,479.24	4,913.73	4,674.86	28.29	38.86	-148.78	1,111.85	-991.18	2,565.42	2,520.03	45.39	56.524	
5,731.00	5,570.39	4,994.88	4,751.38	28.79	39.23	-146.19	1,130.77	-1,010.49	2,612.84	2,566.78	46.05	56.737	
5,825.00	5,661.76	5,076.61	4,828.45	29.27	39.62	-145.37	1,149.82	-1,029.95	2,659.25	2,612.53	46.72	56.917	
5,920.00	5,754.38	5,159.84	4,906.92	29.75	40.01	-143.78	1,169.22	-1,049.75	2,705.05	2,657.65	47.40	57.069	
6,014.00	5,846.19	5,242.53	4,984.88	30.21	40.40	-145.02	1,188.49	-1,069.43	2,749.76	2,701.69	48.07	57.203	
6,109.00	5,939.26	6,179.31	5,898.43	30.65	43.47	-146.44	1,308.75	-1,193.31	2,790.47	2,737.26	53.22	52.437	
6,203.00	6,031.68	6,265.68	5,984.78	31.07	43.60	-147.60	1,308.17	-1,194.91	2,806.28	2,752.47	53.81	52.156	
6,297.00	6,124.42	6,358.10	6,077.19	31.47	43.74	-148.45	1,307.54	-1,196.65	2,820.68	2,766.29	54.40	51.855	
6,392.00	6,218.59	6,452.01	6,171.08	31.83	43.89	-153.78	1,306.90	-1,198.41	2,832.98	2,778.01	54.97	51.536	
6,486.00	6,312.11	6,545.33	6,264.38	32.16	44.04	-160.91	1,306.26	-1,200.16	2,843.11	2,787.59	55.52	51.211	
6,580.00	6,405.81	6,638.87	6,357.90	32.47	44.19	-153.01	1,305.62	-1,201.92	2,851.39	2,795.34	56.06	50.867	
6,674.00	6,499.58	6,732.50	6,451.51	32.77	44.34	-156.79	1,304.98	-1,203.68	2,858.68	2,802.09	56.59	50.513	
6,768.00	6,593.40	6,826.20	6,545.19	33.06	44.50	-167.00	1,304.34	-1,205.44	2,865.51	2,808.38	57.12	50.162	
6,863.00	6,688.26	6,920.95	6,639.92	33.35	44.66	-162.13	1,303.69	-1,207.22	2,871.85	2,814.19	57.66	49.807	
6,957.00	6,782.19	7,014.79	6,733.75	33.62	44.82	-155.17	1,303.05	-1,208.98	2,876.62	2,818.43	58.19	49.438	
7,051.00	6,876.18	7,108.73	6,827.67	33.87	44.98	-167.43	1,302.41	-1,210.74	2,879.65	2,820.95	58.70	49.055	
7,145.00	6,970.17	7,202.70	6,921.62	34.10	45.14	99.82	1,301.77	-1,212.51	2,881.83	2,822.62	59.21	48.674	
7,334.00	7,159.13	7,391.70	7,110.57	34.53	45.48	42.71	1,300.48	-1,216.06	2,882.60	2,822.41	60.19	47.891	
7,428.00	7,253.06	7,485.68	7,204.54	34.73	45.65	45.03	1,299.83	-1,217.82	2,881.34	2,820.67	60.67	47.490	
7,522.00	7,346.98	7,579.66	7,298.50	34.94	45.82	50.50	1,299.19	-1,219.59	2,880.17	2,819.01	61.16	47.095	
7,617.00	7,441.94	7,674.65	7,393.47	35.16	45.99	12.01	1,298.54	-1,221.37	2,879.41	2,817.75	61.66	46.700	
7,711.00	7,535.92	7,768.65	7,487.45	35.38	46.17	13.22	1,297.90	-1,223.13	2,878.61	2,816.45	62.16	46.307	
7,806.00	7,630.87	7,863.64	7,582.42	35.60	46.35	34.76	1,297.25	-1,224.92	2,877.39	2,814.72	62.67	45.913	
7,900.00	7,724.80	7,957.62	7,676.39	35.82	46.53	38.82	1,296.61	-1,226.68	2,875.88	2,812.71	63.17	45.525	
7,947.06	7,771.84	8,004.68	7,723.43	35.93	46.62	56.07	1,296.29	-1,227.57	2,875.55	2,812.13	63.43	45.338	
7,994.00	7,818.76	8,051.61	7,770.36	36.04	46.71	87.68	1,295.97	-1,228.45	2,875.88	2,812.20	63.68	45.161	
8,089.00	7,913.75	8,146.60	7,865.33	36.28	46.89	85.06	1,295.32	-1,230.23	2,877.18	2,812.97	64.20	44.812	
8,278.00	8,102.68	8,335.58	8,054.27	36.74	47.26	74.20	1,294.03	-1,233.78	2,878.89	2,813.65	65.25	44.123	
8,561.00	8,385.40	8,618.47	8,337.10	37.42	47.83	63.73	1,292.09	-1,239.09	2,878.42	2,811.63	66.79	43.093	
8,930.00	8,753.68	8,987.12	8,705.68	38.30	48.59	48.93	1,289.57	-1,246.01	2,870.62	2,801.81	68.82	41.714	
8,993.00	8,816.50	9,050.02	8,768.57	38.45	48.72	48.98	1,289.14	-1,247.20	2,868.47	2,799.30	69.16	41.474	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 12C-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	14.97	104.28	27.87	108.11				
170.00	169.99	163.99	163.99	0.25	2.50	-56.60	104.28	27.87	107.00	104.24	2.76	38.804	
231.00	230.97	224.97	224.97	0.47	3.86	-54.45	104.28	27.87	106.16	101.82	4.34	24.481	
262.00	261.95	255.95	255.95	0.59	4.51	-44.59	104.28	27.87	105.47	100.38	5.09	20.704	
292.00	291.92	285.92	285.92	0.70	5.13	-49.53	104.28	27.87	104.46	98.63	5.83	17.922	
353.00	352.75	346.75	346.75	0.93	6.38	-66.61	104.28	27.87	102.20	94.90	7.30	14.001	
445.00	444.28	437.24	437.24	1.27	8.28	-72.15	104.50	27.59	99.11	89.57	9.54	10.388	
520.84	519.45	509.93	509.87	1.56	10.11	-75.65	106.22	25.37	98.01	86.48	11.53	8.498	CC
536.00	534.44	524.33	524.25	1.62	10.71	-76.79	106.76	24.67	98.07	85.99	12.08	8.116	ES
630.00	626.87	612.16	611.72	2.02	14.52	-88.41	111.49	18.56	102.09	87.42	14.68	6.956	SF
724.00	718.61	697.20	696.00	2.45	17.22	-104.55	118.41	9.62	115.76	100.43	15.33	7.551	
819.00	810.83	779.93	777.43	2.91	17.32	-121.69	127.33	-1.91	141.32	126.28	15.04	9.396	
913.00	901.45	858.05	853.68	3.39	17.33	-127.35	137.74	-15.36	176.11	161.00	15.11	11.657	
1,007.00	991.42	933.63	926.72	3.92	17.36	-135.08	149.59	-30.66	218.05	202.68	15.37	14.183	
1,101.00	1,081.58	1,015.31	1,005.38	4.44	17.40	-136.38	163.06	-48.07	261.99	246.17	15.81	16.567	
1,195.00	1,172.56	1,098.62	1,085.62	4.93	17.45	-136.30	176.80	-65.82	303.78	287.52	16.25	18.689	
1,289.00	1,264.08	1,182.92	1,166.80	5.40	17.52	-139.74	190.70	-83.78	344.24	327.54	16.70	20.608	
1,384.00	1,356.59	1,268.15	1,248.88	5.88	17.60	-140.26	204.76	-101.94	385.34	368.17	17.17	22.439	
1,478.00	1,448.11	1,352.37	1,329.98	6.35	17.69	-143.99	218.65	-119.88	426.43	408.80	17.64	24.178	
1,573.00	1,540.86	1,437.84	1,412.29	6.82	17.80	-145.80	232.74	-138.09	467.52	449.41	18.10	25.827	
1,667.00	1,632.86	1,522.88	1,494.19	7.27	17.91	-143.74	246.77	-156.21	507.26	488.70	18.56	27.329	
1,761.00	1,724.81	1,607.95	1,576.11	7.72	18.04	-143.61	260.80	-174.33	546.93	527.89	19.04	28.732	
1,855.00	1,816.45	1,692.51	1,657.54	8.18	18.18	-143.46	274.74	-192.35	587.60	568.07	19.53	30.087	
1,949.00	1,907.72	1,776.41	1,738.34	8.67	18.33	-144.87	288.58	-210.22	629.56	609.53	20.04	31.417	
2,044.00	1,999.54	1,860.37	1,819.19	9.18	18.49	-147.51	302.42	-228.11	673.59	653.03	20.56	32.760	
2,138.00	2,090.09	1,942.93	1,898.70	9.70	18.66	-145.90	316.04	-245.70	718.11	697.02	21.09	34.056	
2,232.00	2,180.65	2,025.55	1,978.27	10.22	18.83	-147.38	329.66	-263.31	762.53	740.92	21.61	35.279	
2,326.00	2,271.24	2,108.26	2,057.92	10.74	19.02	-146.46	343.30	-280.93	806.84	784.70	22.15	36.432	
2,420.00	2,361.89	2,191.26	2,137.85	11.26	19.21	-143.17	356.99	-298.61	850.54	827.85	22.69	37.485	
2,527.00	2,465.28	2,286.54	2,229.61	11.83	19.45	-138.18	372.70	-318.91	898.58	875.26	23.32	38.526	
2,622.00	2,557.29	2,371.58	2,311.50	12.33	19.67	-141.60	386.73	-337.03	940.41	916.51	23.89	39.356	
2,715.00	2,647.48	2,454.71	2,391.56	12.81	19.90	-146.83	400.44	-354.74	981.82	957.37	24.45	40.155	
2,810.00	2,739.63	2,539.31	2,473.03	13.31	20.13	-151.48	414.39	-372.77	1,024.92	999.91	25.01	40.977	
2,904.00	2,830.93	2,622.95	2,553.57	13.80	20.38	-154.75	428.18	-390.59	1,067.81	1,042.24	25.56	41.774	
2,999.00	2,922.99	2,706.98	2,634.50	14.30	20.63	-155.14	442.04	-408.49	1,112.09	1,085.97	26.12	42.574	
3,093.00	3,013.89	2,789.73	2,714.19	14.81	20.88	-156.31	455.69	-426.12	1,156.66	1,129.98	26.68	43.353	
3,187.00	3,104.97	2,872.71	2,794.10	15.31	21.14	-158.02	469.37	-443.80	1,200.82	1,173.59	27.24	44.088	
3,282.00	3,197.19	2,956.87	2,875.15	15.80	21.42	-156.91	483.25	-461.73	1,244.88	1,217.08	27.80	44.776	
3,376.00	3,288.43	3,040.20	2,955.39	16.29	21.69	-156.03	496.99	-479.48	1,288.39	1,260.02	28.37	45.412	
3,470.00	3,379.56	3,123.36	3,035.48	16.79	21.98	-155.81	510.71	-497.20	1,332.20	1,303.25	28.95	46.022	
3,564.00	3,470.75	3,206.56	3,115.60	17.28	22.26	-157.78	524.43	-514.93	1,375.95	1,346.42	29.52	46.603	
3,658.00	3,561.89	3,289.67	3,195.64	17.78	22.56	-156.39	538.13	-532.64	1,419.85	1,389.74	30.11	47.160	
3,752.00	3,652.73	3,372.37	3,275.29	18.29	22.86	-154.17	551.77	-550.26	1,464.51	1,433.81	30.70	47.701	
3,847.00	3,744.45	3,455.96	3,355.79	18.81	23.17	-152.15	565.56	-568.07	1,509.58	1,478.27	31.31	48.213	
3,941.00	3,835.42	3,539.15	3,435.90	19.31	23.48	-151.46	579.28	-585.79	1,553.29	1,521.37	31.92	48.665	
4,026.00	3,917.86	3,614.74	3,508.69	19.76	23.76	-150.59	591.74	-601.89	1,592.12	1,559.65	32.47	49.034	
4,130.00	4,018.80	3,707.25	3,597.78	20.30	24.12	-154.27	607.00	-621.60	1,639.59	1,606.45	33.15	49.464	
4,224.00	4,109.52	3,789.79	3,677.27	20.82	24.44	-155.77	620.61	-639.19	1,684.53	1,650.77	33.76	49.891	
4,318.00	4,199.89	3,871.66	3,756.11	21.36	24.77	-156.25	634.11	-656.63	1,730.69	1,696.30	34.38	50.336	
4,412.00	4,290.67	3,954.23	3,835.62	21.87	25.10	-156.39	647.73	-674.22	1,775.61	1,740.61	35.00	50.735	
4,507.00	4,382.62	4,038.08	3,916.37	22.38	25.44	-154.89	661.56	-692.09	1,820.25	1,784.63	35.62	51.097	
4,601.00	4,473.49	4,120.88	3,996.12	22.90	25.78	-155.20	675.21	-709.73	1,864.72	1,828.47	36.25	51.442	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 12C-8 596 - OH - Plan 1 (04-07-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,695.00	4,564.59	4,204.15	4,076.31	23.39	26.13	-153.42	688.95	-727.47	1,908.31	1,871.44	36.88	51.749	
4,789.00	4,655.72	4,287.60	4,156.67	23.89	26.48	-151.69	702.71	-745.25	1,951.54	1,914.03	37.51	52.026	
4,883.00	4,746.85	4,371.20	4,237.18	24.39	26.83	-149.49	716.49	-763.06	1,994.47	1,956.31	38.15	52.276	
4,978.00	4,839.29	4,456.26	4,319.10	24.87	27.20	-152.23	730.52	-781.19	2,036.72	1,997.93	38.80	52.493	
5,072.00	4,931.05	4,540.80	4,400.51	25.33	27.56	-154.72	744.46	-799.20	2,077.83	2,038.39	39.43	52.690	
5,166.00	5,022.88	4,625.37	4,481.95	25.79	27.93	-155.23	758.41	-817.22	2,118.87	2,078.80	40.07	52.879	
5,260.00	5,114.46	4,709.43	4,562.90	26.26	28.30	-155.75	772.27	-835.13	2,160.93	2,120.22	40.71	53.081	
5,354.00	5,205.69	4,792.85	4,643.23	26.75	28.67	-155.52	786.03	-852.90	2,204.26	2,162.90	41.35	53.301	
5,450.00	5,298.51	4,877.39	4,724.65	27.28	29.05	-156.77	799.97	-870.91	2,249.73	2,207.71	42.02	53.544	
5,543.00	5,388.31	4,959.10	4,803.34	27.79	29.41	-155.15	813.45	-888.32	2,294.13	2,251.47	42.66	53.778	
5,637.00	5,479.24	5,042.02	4,883.19	28.29	29.79	-155.65	827.12	-905.99	2,338.40	2,295.09	43.31	53.992	
5,731.00	5,570.39	5,125.39	4,963.48	28.79	30.17	-153.06	840.87	-923.75	2,381.80	2,337.84	43.96	54.177	
5,825.00	5,661.76	5,209.28	5,044.27	29.27	30.55	-152.16	854.70	-941.62	2,424.19	2,379.57	44.62	54.329	
5,920.00	5,754.38	5,294.64	5,126.47	29.75	30.95	-150.53	868.78	-959.81	2,465.87	2,420.58	45.29	54.450	
6,014.00	5,846.19	5,379.42	5,208.12	30.21	31.34	-151.76	882.76	-977.87	2,506.46	2,460.51	45.95	54.551	
6,109.00	5,939.26	5,465.59	5,291.09	30.65	31.74	-152.23	896.97	-996.23	2,546.47	2,499.86	46.61	54.632	
6,203.00	6,031.68	5,551.43	5,373.76	31.07	32.14	-153.29	911.13	-1,014.52	2,584.76	2,537.49	47.27	54.686	
6,297.00	6,124.42	5,637.88	5,457.02	31.47	32.55	-154.09	925.39	-1,032.94	2,621.60	2,573.68	47.92	54.713	
6,392.00	6,218.59	5,726.14	5,542.02	31.83	32.97	-159.53	939.94	-1,051.74	2,656.51	2,607.95	48.56	54.704	
6,486.00	6,312.11	5,814.18	5,626.80	32.16	33.39	-166.70	954.46	-1,070.50	2,688.94	2,639.75	49.19	54.663	
6,580.00	6,405.81	5,902.81	5,712.16	32.47	33.81	-158.49	969.08	-1,089.39	2,719.55	2,669.74	49.82	54.591	
6,674.00	6,499.58	5,991.78	5,797.83	32.77	34.24	-162.11	983.75	-1,108.34	2,749.23	2,698.78	50.45	54.499	
6,768.00	6,593.40	6,076.33	5,891.72	33.06	34.67	-171.86	1,045.32	-1,189.61	2,761.62	2,707.02	51.09	54.576	
6,863.00	6,688.26	6,163.05	5,982.42	33.35	35.05	-166.97	1,044.61	-1,191.58	2,768.47	2,713.34	51.73	54.606	
6,957.00	6,782.19	6,252.87	6,072.21	33.62	35.41	-160.01	1,043.82	-1,193.74	2,773.77	2,718.09	52.36	54.632	
7,051.00	6,876.18	6,342.79	6,162.10	33.87	35.75	-162.59	1,043.03	-1,195.91	2,777.27	2,721.05	52.98	54.652	
7,145.00	6,970.17	6,432.75	6,252.04	34.10	36.08	-165.11	1,042.24	-1,198.08	2,779.83	2,723.09	53.59	54.668	
7,239.00	7,064.16	6,522.74	6,341.93	34.33	36.39	-167.63	1,040.65	-1,202.44	2,781.25	2,723.48	54.19	54.680	
7,334.00	7,159.13	6,612.73	6,431.92	34.53	36.68	-170.15	1,039.86	-1,204.61	2,780.23	2,721.95	54.78	54.688	
7,428.00	7,253.06	6,702.72	6,521.91	34.73	36.96	-172.67	1,039.07	-1,206.77	2,779.27	2,720.49	55.36	54.693	
7,522.00	7,346.98	6,792.71	6,611.90	34.94	37.23	-175.19	1,038.28	-1,208.97	2,778.84	2,719.53	55.93	54.697	
7,617.00	7,441.94	6,882.70	6,701.89	35.16	37.50	-177.71	1,037.49	-1,211.13	2,778.45	2,718.62	56.50	54.699	
7,711.00	7,535.92	6,972.69	6,791.88	35.38	37.76	-180.23	1,036.69	-1,213.33	2,777.58	2,717.21	57.07	54.700	
7,806.00	7,630.87	7,062.68	6,881.87	35.60	38.01	-182.75	1,035.90	-1,215.50	2,776.34	2,715.45	57.64	54.701	
7,900.00	7,724.80	7,152.67	6,971.86	35.82	38.26	-185.27	1,035.59	-1,216.36	2,776.13	2,715.03	58.21	54.702	
7,997.00	7,818.76	7,242.66	7,061.85	36.04	38.50	-187.79	1,035.11	-1,217.66	2,776.61	2,715.19	58.78	54.703	
8,091.00	7,913.75	7,332.65	7,151.84	36.28	38.73	-190.31	1,034.31	-1,219.86	2,778.21	2,716.24	59.35	54.704	
8,186.00	8,008.74	7,422.64	7,241.83	36.51	38.96	-192.83	1,032.73	-1,224.22	2,780.41	2,717.36	59.92	54.705	
8,281.00	8,103.73	7,512.63	7,331.82	36.74	39.19	-195.35	1,030.35	-1,230.74	2,780.31	2,715.63	60.49	54.706	
8,376.00	8,198.72	7,602.62	7,421.81	36.96	39.42	-197.87	1,027.26	-1,239.25	2,772.68	2,705.87	61.06	54.707	
8,471.00	8,293.71	7,692.61	7,511.80	37.19	39.65	-200.39	1,026.73	-1,240.70	2,770.53	2,703.36	61.63	54.708	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 12D-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	14.57	97.16	25.25	100.56				
170.00	169.99	163.99	163.99	0.25	2.50	-57.06	97.16	25.25	99.46	96.70	2.76	36.068	
231.00	230.97	224.97	224.97	0.47	3.86	-54.96	97.16	25.25	98.63	94.29	4.34	22.744	
262.00	261.95	255.95	255.95	0.59	4.51	-45.14	97.16	25.25	97.95	92.85	5.09	19.226	
292.00	291.92	285.92	285.92	0.70	5.13	-50.13	97.16	25.25	96.95	91.12	5.83	16.632	
353.00	352.75	346.75	346.75	0.93	6.38	-67.39	97.16	25.25	94.73	87.43	7.30	12.978	
445.00	444.28	437.52	437.52	1.27	8.30	-73.40	97.34	24.93	91.75	82.19	9.56	9.600	
521.32	519.93	511.14	511.08	1.57	10.17	-77.70	98.73	22.42	90.63	78.99	11.64	7.789 CC	
536.00	534.44	525.16	525.07	1.62	10.77	-78.99	99.15	21.66	90.69	78.48	12.21	7.429 ES	
630.00	626.87	613.35	612.90	2.02	14.54	-92.00	102.93	14.84	95.01	80.06	14.95	6.354 SF	
724.00	718.61	700.00	698.77	2.45	17.23	-109.55	108.56	4.69	109.73	94.16	15.57	7.048	
819.00	810.83	781.12	778.59	2.91	17.24	-127.05	115.54	-7.90	136.75	121.67	15.08	9.069	
913.00	901.45	858.92	854.52	3.39	17.25	-132.84	123.77	-22.74	173.10	158.07	15.03	11.517	
1,007.00	991.42	939.47	932.63	3.92	17.28	-140.92	133.31	-39.95	215.59	200.29	15.30	14.092	
1,101.00	1,081.58	1,021.58	1,012.23	4.44	17.32	-142.02	143.07	-57.54	258.89	243.21	15.67	16.518	
1,195.00	1,172.56	1,105.28	1,093.38	4.93	17.37	-141.84	153.01	-75.46	299.92	283.85	16.07	18.664	
1,289.00	1,264.08	1,189.96	1,175.49	5.40	17.43	-145.29	163.07	-93.60	339.54	323.05	16.49	20.592	
1,384.00	1,356.59	1,275.59	1,258.51	5.88	17.51	-145.88	173.24	-111.94	379.78	362.84	16.93	22.427	
1,478.00	1,448.11	1,360.22	1,340.56	6.35	17.60	-149.62	183.29	-130.07	420.01	402.63	17.38	24.168	
1,573.00	1,540.86	1,446.13	1,423.85	6.82	17.69	-151.42	193.49	-148.47	460.13	442.30	17.83	25.810	
1,667.00	1,632.86	1,531.61	1,506.73	7.27	17.80	-149.38	203.65	-166.78	498.89	480.62	18.27	27.300	
1,761.00	1,724.81	1,617.09	1,589.61	7.72	17.92	-149.30	213.80	-185.09	537.64	518.90	18.74	28.694	
1,855.00	1,816.45	1,702.03	1,671.96	8.18	18.05	-149.22	223.89	-203.28	577.48	558.27	19.22	30.052	
1,949.00	1,907.72	1,786.30	1,753.67	8.67	18.19	-150.69	233.90	-221.33	618.70	598.99	19.71	31.392	
2,044.00	1,999.54	1,870.65	1,835.45	9.18	18.34	-153.38	243.92	-239.40	662.00	641.79	20.21	32.750	
2,138.00	2,090.09	1,953.59	1,915.86	9.70	18.49	-151.76	253.77	-257.16	705.86	685.14	20.72	34.066	
2,232.00	2,180.65	2,036.58	1,996.32	10.22	18.65	-153.21	263.62	-274.94	749.63	728.40	21.23	35.311	
2,326.00	2,271.24	2,119.65	2,076.86	10.74	18.83	-152.28	273.49	-292.73	793.29	771.54	21.74	36.483	
2,420.00	2,361.89	2,202.96	2,157.63	11.26	19.01	-148.95	283.39	-310.58	836.40	814.13	22.27	37.559	
2,527.00	2,465.28	2,298.52	2,250.28	11.83	19.23	-143.91	294.74	-331.04	883.89	861.01	22.88	38.631	
2,622.00	2,557.29	2,383.79	2,332.96	12.33	19.43	-147.34	304.86	-349.31	925.22	901.79	23.43	39.486	
2,715.00	2,647.48	2,467.22	2,413.85	12.81	19.64	-152.60	314.77	-367.18	966.03	942.05	23.97	40.300	
2,810.00	2,739.63	2,552.20	2,496.24	13.31	19.86	-157.26	324.87	-385.38	1,008.37	983.85	24.52	41.129	
2,904.00	2,830.93	2,636.28	2,577.76	13.80	20.08	-160.50	334.85	-403.39	1,050.37	1,025.32	25.05	41.927	
2,999.00	2,922.99	2,720.79	2,659.69	14.30	20.31	-160.98	344.89	-421.49	1,093.74	1,068.14	25.60	42.727	
3,093.00	3,013.89	2,804.02	2,740.39	14.81	20.55	-162.10	354.78	-439.32	1,137.42	1,111.27	26.14	43.508	
3,187.00	3,104.97	2,887.51	2,821.33	15.31	20.79	-163.79	364.69	-457.20	1,180.61	1,153.92	26.69	44.241	
3,282.00	3,197.19	2,972.19	2,903.44	15.80	21.05	-162.64	374.75	-475.34	1,223.66	1,196.43	27.24	44.923	
3,376.00	3,288.43	3,056.01	2,984.71	16.29	21.31	-161.79	384.71	-493.29	1,266.20	1,238.41	27.79	45.556	
3,470.00	3,379.56	3,139.66	3,065.81	16.79	21.57	-161.56	394.64	-511.21	1,309.08	1,280.73	28.36	46.165	
3,564.00	3,470.75	3,223.36	3,146.96	17.28	21.84	-163.52	404.59	-529.13	1,351.87	1,322.94	28.92	46.743	
3,658.00	3,561.89	3,306.98	3,228.03	17.78	22.11	-162.14	414.52	-547.04	1,394.80	1,365.31	29.49	47.298	
3,752.00	3,652.73	3,390.15	3,308.66	18.29	22.39	-159.98	424.40	-564.86	1,438.59	1,408.52	30.07	47.844	
3,847.00	3,744.45	3,474.17	3,390.13	18.81	22.67	-157.91	434.38	-582.85	1,482.86	1,452.20	30.66	48.363	
3,941.00	3,835.42	3,557.77	3,471.18	19.31	22.96	-157.20	444.30	-600.76	1,525.79	1,494.54	31.25	48.824	
4,026.00	3,917.86	3,633.71	3,544.81	19.76	23.23	-156.28	453.32	-617.03	1,563.91	1,532.12	31.79	49.198	
4,130.00	4,018.80	3,726.69	3,634.96	20.30	23.56	-160.00	464.37	-636.94	1,610.46	1,578.02	32.45	49.633	
4,224.00	4,109.52	3,809.69	3,715.43	20.82	23.86	-161.61	474.23	-654.72	1,654.56	1,621.51	33.05	50.066	
4,318.00	4,199.89	3,892.02	3,795.26	21.36	24.17	-162.04	484.01	-672.35	1,699.89	1,666.24	33.65	50.519	
4,412.00	4,290.67	3,975.06	3,875.77	21.87	24.48	-162.10	493.87	-690.14	1,743.93	1,709.68	34.25	50.922	
4,507.00	4,382.62	4,059.39	3,957.52	22.38	24.79	-160.62	503.89	-708.20	1,787.68	1,752.82	34.86	51.285	
4,601.00	4,473.49	4,142.65	4,038.24	22.90	25.11	-160.93	513.77	-726.03	1,831.30	1,795.83	35.47	51.634	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 12D-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,695.00	4,564.59	4,226.36	4,119.41	23.39	25.44	-159.09	523.72	-743.97	1,874.03	1,837.95	36.08	51.944	
4,789.00	4,655.72	4,310.23	4,200.72	23.89	25.76	-157.41	533.68	-761.93	1,916.45	1,879.75	36.70	52.226	
4,883.00	4,746.85	4,394.20	4,282.14	24.39	26.09	-155.14	543.65	-779.92	1,958.62	1,921.30	37.32	52.483	
4,978.00	4,839.29	4,479.67	4,365.00	24.87	26.43	-157.87	553.80	-798.22	2,000.05	1,962.10	37.95	52.703	
5,072.00	4,931.05	4,564.65	4,447.40	25.33	26.78	-160.31	563.90	-816.42	2,040.23	2,001.66	38.57	52.897	
5,166.00	5,022.88	4,649.69	4,529.84	25.79	27.12	-160.87	574.00	-834.64	2,080.28	2,041.09	39.19	53.080	
5,260.00	5,114.46	4,734.22	4,611.80	26.26	27.47	-161.43	584.04	-852.74	2,121.39	2,081.57	39.82	53.279	
5,354.00	5,205.69	4,818.11	4,693.13	26.75	27.81	-161.26	594.00	-870.71	2,163.81	2,123.36	40.45	53.499	
5,450.00	5,298.51	4,903.13	4,775.56	27.28	28.17	-162.53	604.10	-888.92	2,208.38	2,167.29	41.09	53.746	
5,543.00	5,388.31	4,985.30	4,855.23	27.79	28.51	-160.91	613.86	-906.52	2,251.93	2,210.21	41.72	53.983	
5,637.00	5,479.24	5,068.67	4,936.07	28.29	28.86	-161.37	623.76	-924.38	2,295.33	2,252.98	42.35	54.200	
5,731.00	5,570.39	5,152.48	5,017.33	28.79	29.22	-158.75	633.72	-942.33	2,337.88	2,294.89	42.99	54.387	
5,825.00	5,661.76	5,236.79	5,099.07	29.27	29.58	-157.81	643.73	-960.39	2,379.43	2,335.80	43.63	54.541	
5,920.00	5,754.38	5,322.57	5,182.23	29.75	29.95	-156.16	653.92	-978.76	2,420.24	2,375.97	44.28	54.663	
6,014.00	5,846.19	5,407.76	5,264.83	30.21	30.32	-157.38	664.04	-997.01	2,459.96	2,415.04	44.92	54.763	
6,109.00	5,939.26	5,494.36	5,348.79	30.65	30.70	-157.80	674.33	-1,015.56	2,499.02	2,453.45	45.57	54.840	
6,203.00	6,031.68	5,580.65	5,432.46	31.07	31.07	-158.84	684.58	-1,034.04	2,536.27	2,490.06	46.21	54.886	
6,297.00	6,124.42	5,667.59	5,516.75	31.47	31.46	-159.59	694.90	-1,052.66	2,571.99	2,525.14	46.85	54.900	
6,392.00	6,218.59	5,756.39	5,602.84	31.83	31.85	-164.97	705.45	-1,071.68	2,605.60	2,558.11	47.49	54.871	
6,486.00	6,312.11	5,845.03	5,688.78	32.16	32.25	-172.10	715.98	-1,090.67	2,636.55	2,588.44	48.11	54.804	
6,580.00	6,405.81	5,934.27	5,775.30	32.47	32.64	-163.88	726.58	-1,109.78	2,665.62	2,616.89	48.73	54.701	
6,674.00	6,499.58	6,023.82	5,862.13	32.77	33.05	-167.53	737.21	-1,128.96	2,693.75	2,644.39	49.35	54.580	
6,768.00	6,593.40	6,111.30	5,949.90	33.06	33.26	-177.39	747.88	-1,148.36	2,721.67	2,672.51	50.00	54.456	
6,863.00	6,688.26	6,200.05	6,038.63	33.35	33.57	-172.49	758.63	-1,168.13	2,750.38	2,701.66	50.65	54.331	
6,957.00	6,782.19	6,289.89	6,130.45	33.62	33.88	-165.50	769.43	-1,188.00	2,779.15	2,730.21	51.30	54.206	
7,051.00	6,876.18	6,380.83	6,224.37	33.87	34.18	-157.11	780.28	-1,207.83	2,808.02	2,758.92	51.95	54.081	
7,145.00	6,970.17	6,472.80	6,318.33	34.10	34.42	89.52	791.17	-1,227.66	2,837.01	2,787.81	52.60	53.956	
7,239.00	7,064.16	6,564.79	6,412.28	34.33	34.69	32.40	802.10	-1,247.49	2,866.12	2,816.92	53.25	53.831	
7,333.00	7,158.15	6,656.78	6,506.23	34.56	34.96	34.72	813.03	-1,267.32	2,895.23	2,846.03	53.90	53.706	
7,427.00	7,252.14	6,748.77	6,599.18	34.79	35.27	40.19	823.96	-1,287.15	2,924.34	2,875.14	54.55	53.581	
7,521.00	7,346.13	6,840.76	6,692.13	35.02	35.58	1.70	834.89	-1,306.98	2,953.45	2,904.25	55.20	53.456	
7,615.00	7,440.12	6,932.75	6,785.08	35.25	35.94		845.82	-1,326.81	2,982.56	2,933.36	55.85	53.331	
7,710.00	7,534.11	7,024.74	6,877.07	35.48	36.21	2.91	856.75	-1,346.64	3,011.67	2,962.47	56.50	53.206	
7,804.00	7,628.10	7,116.73	6,969.06	35.71	36.48	24.44	867.68	-1,366.47	3,040.78	2,991.58	57.15	53.081	
7,898.00	7,722.09	7,208.72	7,061.05	35.94	36.75	28.50	878.61	-1,386.30	3,069.89	3,020.69	57.80	52.956	
7,992.00	7,816.08	7,300.71	7,153.04	36.17	37.02	48.56	889.54	-1,406.13	3,099.00	3,049.80	58.45	52.831	
8,086.00	7,910.07	7,392.70	7,245.03	36.40	37.29	77.36	900.47	-1,425.96	3,128.11	3,078.91	59.10	52.706	
8,180.00	8,004.06	7,484.69	7,337.02	36.63	37.56		911.40	-1,445.79	3,157.22	3,108.02	59.75	52.581	
8,274.00	8,098.05	7,576.68	7,429.01	36.86	37.83		922.33	-1,465.62	3,186.33	3,137.13	60.40	52.456	
8,368.00	8,192.04	7,668.67	7,521.00	37.09	38.10		933.26	-1,485.45	3,215.44	3,166.24	61.05	52.331	
8,462.00	8,286.03	7,760.66	7,613.00	37.32	38.37		944.19	-1,505.28	3,244.55	3,195.35	61.70	52.206	
8,556.00	8,380.02	7,852.65	7,705.00	37.55	38.64		955.12	-1,525.11	3,273.66	3,224.46	62.35	52.081	
8,650.00	8,474.01	7,944.64	7,797.00	37.78	38.91		966.05	-1,544.94	3,302.77	3,253.57	63.00	51.956	
8,744.00	8,568.00	8,036.63	7,889.00	38.01	39.18		976.98	-1,564.77	3,331.88	3,282.68	63.65	51.831	
8,838.00	8,661.99	8,128.62	7,981.00	38.24	39.45		987.91	-1,584.60	3,360.99	3,311.79	64.30	51.706	
8,932.00	8,755.98	8,220.61	8,073.00	38.47	39.72		998.84	-1,604.43	3,390.10	3,340.90	64.95	51.581	
9,026.00	8,849.97	8,312.60	8,165.00	38.70	40.00		1,009.77	-1,624.26	3,419.21	3,370.01	65.60	51.456	
9,120.00	8,943.96	8,404.59	8,257.00	38.93	40.27		1,020.70	-1,644.09	3,448.32	3,400.12	66.25	51.331	
9,214.00	9,037.95	8,496.58	8,349.00	39.16	40.54		1,031.63	-1,663.92	3,477.43	3,430.23	66.90	51.206	
9,308.00	9,131.94	8,588.57	8,441.00	39.39	40.81		1,042.56	-1,683.75	3,506.54	3,460.34	67.55	51.081	
9,402.00	9,225.93	8,680.56	8,533.00	39.62	41.08		1,053.49	-1,703.58	3,535.65	3,490.45	68.20	50.956	
9,496.00	9,319.92	8,772.55	8,625.00	39.85	41.35		1,064.42	-1,723.41	3,564.76	3,520.56	68.85	50.831	
9,590.00	9,413.91	8,864.54	8,717.00	40.08	41.62		1,075.35	-1,743.24	3,593.87	3,550.67	69.50	50.706	
9,684.00	9,507.90	8,956.53	8,809.00	40.31	41.89		1,086.28	-1,763.07	3,622.98	3,580.78	70.15	50.581	
9,778.00	9,601.89	9,048.52	8,901.00	40.54	42.16		1,097.21	-1,782.90	3,652.09	3,610.89	70.80	50.456	
9,872.00	9,695.88	9,140.51	8,993.00	40.77	42.43		1,108.14	-1,802.73	3,681.20	3,641.00	71.45	50.331	
9,966.00	9,789.87	9,232.50	9,085.00	41.00	42.70		1,119.07	-1,822.56	3,710.31	3,671.11	72.10	50.206	
10,060.00	9,883.86	9,324.49	9,177.00	41.23	42.97		1,130.00	-1,842.39	3,739.42	3,701.22	72.75	50.081	
10,154.00	9,977.85	9,416.48	9,269.00	41.46	43.24		1,140.93	-1,862.22	3,768.53	3,731.33	73.40	49.956	
10,248.00	10,071.84	9,508.47	9,361.00	41.69	43.51		1,151.86	-1,882.05	3,797.64	3,761.44	74.05	49.831	
10,342.00	10,165.83	9,600.46	9,453.00	41.92	43.78		1,162.79	-1,901.88	3,826.75	3,791.55	74.70	49.706	
10,436.00	10,259.82	9,692.45	9,545.00	42.15	44.05		1,173.72	-1,921.71	3,855.86	3,821.66	75.35	49.581	
10,530.00	10,353.81	9,784.44	9,637.00	42.38	44.32		1,184.65	-1,941.54	3,884.97	3,851.77	76.00	49.456	
10,624.00	10,447.80	9,876.43	9,729.00	42.61	44.59		1,195.58	-1,961.37	3,914.08	3,881.88	76.65	49.331	
10,718.00	10,541.79	9,968.42	9,821.00	42.84	44.86		1,206.51	-1,981.20	3,943.19	3,911.99	77.30	49.206	
10,812.00	10,635.78	10,060.41	9,913.00	43.07	45.13		1,217.44	-2,001.03	3,972.30	3,942.10	77.95	49.081	
10,906.00	10,729.77	10,152.40	10,005.00	43.30	45.40		1,228.37	-2,020.86	4,001.41	3,972.21	78.60	48.956	
11,000.00	10,823.76	10,244.39	10,097.00	43.53	45.67		1,239.30	-2,040.69	4,030.52	4,002.32	79.25	48.831	
11,094.00	10,917.75	10,336.38	10,189.00	43.76	45.94		1,250.23	-2,060.52	4,059.63	4,032.43	79.90	48.706	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 13A-8 596 - OH [479637] - Survey (H&P 330)												Offset Site Error:	0.00 usft
Survey Program: 172-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-69.07	3.70	-9.69	11.98				
170.00	169.99	163.74	163.73	0.25	0.26	-146.90	3.75	-11.31	13.30	12.78	0.52	25.713	
231.00	230.97	224.20	224.16	0.47	0.46	-147.80	4.01	-13.37	16.63	15.68	0.95	17.476	
262.00	261.95	254.89	254.79	0.59	0.58	-139.10	4.40	-15.01	19.15	17.97	1.18	16.222	
292.00	291.92	284.49	284.33	0.70	0.69	-145.01	4.95	-16.91	22.31	20.91	1.41	15.862 SF	
353.00	352.75	343.94	343.53	0.93	0.91	-161.17	6.81	-21.85	31.54	29.66	1.87	16.829	
445.00	444.28	431.70	430.51	1.27	1.26	-160.30	11.74	-32.45	51.81	49.25	2.56	20.239	
536.00	534.44	516.02	513.42	1.62	1.61	-155.56	18.57	-46.16	78.52	75.30	3.22	24.363	
630.00	626.87	601.11	596.34	2.02	2.00	-154.35	28.05	-62.70	112.97	109.06	3.90	28.949	
724.00	718.61	686.83	679.61	2.45	2.41	-157.91	38.30	-80.29	151.67	147.09	4.58	33.122	
819.00	810.83	775.68	766.16	2.91	2.84	-164.96	48.44	-97.61	192.26	186.98	5.27	36.457	
913.00	901.45	861.90	850.56	3.39	3.25	-163.45	56.24	-113.36	233.55	227.61	5.95	39.284	
1,007.00	991.42	937.07	924.04	3.92	3.60	-166.59	61.68	-128.29	278.03	271.47	6.56	42.359	
1,101.00	1,081.58	1,013.35	998.23	4.44	3.99	-163.98	65.92	-145.46	323.99	316.82	7.16	45.236	
1,195.00	1,172.56	1,090.44	1,072.93	4.93	4.38	-161.72	68.32	-164.34	368.47	360.73	7.74	47.581	
1,289.00	1,264.08	1,171.20	1,150.92	5.40	4.80	-164.24	69.27	-185.29	412.19	403.83	8.36	49.327	
1,384.00	1,356.59	1,255.08	1,231.95	5.88	5.24	-164.29	70.01	-206.96	456.28	447.27	9.01	50.658	
1,478.00	1,448.11	1,334.93	1,308.94	6.35	5.68	-167.26	72.87	-227.92	500.62	490.99	9.64	51.954	
1,573.00	1,540.86	1,422.93	1,393.77	6.82	6.16	-168.17	77.92	-250.78	544.45	534.12	10.33	52.720	
1,667.00	1,632.86	1,514.64	1,482.26	7.27	6.66	-165.14	85.75	-273.55	585.99	574.93	11.05	53.027	
1,761.00	1,724.81	1,616.50	1,580.89	7.72	7.20	-164.10	96.70	-296.48	625.72	613.87	11.86	52.767	
1,855.00	1,816.45	1,705.03	1,666.94	8.18	7.65	-163.25	106.04	-315.06	665.36	652.79	12.57	52.929	
1,949.00	1,907.72	1,783.69	1,743.40	8.67	8.05	-164.07	113.86	-331.79	706.61	693.40	13.22	53.470	
2,044.00	1,999.54	1,872.99	1,830.18	9.18	8.51	-166.20	122.64	-350.93	750.06	736.12	13.94	53.796	
2,138.00	2,090.09	1,950.39	1,905.38	9.70	8.91	-163.92	130.71	-367.36	793.95	779.37	14.58	54.437	
2,232.00	2,180.65	2,023.96	1,976.61	10.22	9.30	-164.69	139.43	-383.60	838.60	823.40	15.20	55.175	
2,326.00	2,271.24	2,103.78	2,053.45	10.74	9.73	-163.00	150.96	-401.84	883.98	868.11	15.87	55.713	
2,420.00	2,361.89	2,199.52	2,145.61	11.26	10.25	-158.72	166.62	-422.54	928.08	911.42	16.67	55.684	
2,527.00	2,465.28	2,296.77	2,239.17	11.83	10.77	-152.68	183.95	-442.64	976.17	958.68	17.49	55.817	
2,622.00	2,557.29	2,377.53	2,316.90	12.33	11.21	-155.43	197.83	-459.58	1,018.22	1,000.05	18.18	56.020	
2,715.00	2,647.48	2,455.89	2,392.35	12.81	11.63	-160.18	210.57	-476.46	1,059.89	1,041.05	18.84	56.254	
2,810.00	2,739.63	2,536.51	2,470.03	13.31	12.07	-164.43	222.73	-494.28	1,103.25	1,083.73	19.52	56.524	
2,904.00	2,830.93	2,616.09	2,546.79	13.80	12.51	-167.33	233.55	-512.28	1,146.40	1,126.22	20.18	56.808	
2,999.00	2,922.99	2,691.02	2,619.05	14.30	12.92	-167.64	242.92	-529.73	1,191.34	1,170.53	20.80	57.265	
3,093.00	3,013.89	2,778.86	2,703.74	14.81	13.41	-168.50	253.43	-550.55	1,236.85	1,215.31	21.53	57.441	
3,187.00	3,104.97	2,900.85	2,822.00	15.31	14.05	-169.97	266.03	-577.65	1,280.46	1,257.95	22.51	56.889	
3,282.00	3,197.19	2,982.99	2,902.02	15.80	14.47	-168.71	273.37	-594.68	1,322.39	1,299.22	23.17	57.078	
3,376.00	3,288.43	3,060.94	2,977.81	16.29	14.87	-167.77	281.38	-611.01	1,364.19	1,340.39	23.80	57.316	
3,470.00	3,379.56	3,149.32	3,063.75	16.79	15.32	-167.44	289.76	-629.84	1,406.59	1,382.07	24.52	57.375	
3,564.00	3,470.75	3,238.45	3,150.56	17.28	15.77	-169.30	297.98	-648.33	1,448.33	1,423.09	25.23	57.403	
3,658.00	3,561.89	3,314.37	3,224.52	17.78	16.15	-167.90	304.44	-664.20	1,490.28	1,464.44	25.85	57.658	
3,752.00	3,652.73	3,383.27	3,291.49	18.29	16.51	-165.74	310.32	-679.27	1,533.98	1,507.57	26.42	58.070	
3,847.00	3,744.45	3,479.56	3,385.15	18.81	17.00	-163.61	317.80	-700.34	1,578.18	1,550.98	27.19	58.034	
3,941.00	3,835.42	3,562.80	3,456.42	19.31	17.38	-162.88	322.84	-716.46	1,621.07	1,593.28	27.79	58.329	
4,026.00	3,917.86	3,607.65	3,509.67	19.76	17.67	-161.91	326.73	-728.99	1,659.85	1,631.60	28.25	58.764	
4,130.00	4,018.80	3,683.11	3,582.60	20.30	18.07	-165.62	333.39	-747.21	1,708.51	1,679.64	28.87	59.188	
4,224.00	4,109.52	3,788.53	3,684.62	20.82	18.64	-167.30	342.88	-771.98	1,753.95	1,724.22	29.73	58.997	
4,318.00	4,199.89	3,878.29	3,771.76	21.36	19.11	-167.72	349.24	-792.57	1,799.95	1,769.49	30.46	59.084	
4,412.00	4,290.67	3,964.53	3,855.46	21.87	19.56	-167.67	356.67	-811.95	1,844.42	1,813.25	31.16	59.184	
4,507.00	4,382.62	4,049.20	3,937.66	22.38	20.01	-166.16	364.21	-830.81	1,888.46	1,856.60	31.86	59.283	
4,601.00	4,473.49	4,119.57	4,005.88	22.90	20.38	-166.42	371.02	-846.66	1,932.71	1,900.27	32.44	59.576	
4,695.00	4,564.59	4,242.11	4,124.72	23.39	21.03	-164.40	384.22	-873.46	1,975.69	1,942.27	33.43	59.105	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 13A-8 596 - OH [479637] - Survey (H&P 330)												Offset Site Error:	0.00 usft
Survey Program: 172-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,343.40	4,223.35	23.89	21.53	-162.70	394.45	-894.11	2,017.01	1,982.77	34.24	58.905	
4,883.00	4,746.85	4,427.07	4,305.00	24.39	21.95	-160.36	401.36	-911.07	2,057.82	2,022.89	34.92	58.923	
4,978.00	4,839.29	4,507.00	4,382.87	24.87	22.35	-163.01	409.06	-927.29	2,098.02	2,062.45	35.58	58.974	
5,072.00	4,931.05	4,623.09	4,496.18	25.33	22.92	-165.32	420.76	-949.67	2,135.92	2,099.43	36.48	58.543	
5,166.00	5,022.88	4,677.98	4,549.75	25.79	23.19	-165.90	425.69	-960.54	2,174.10	2,137.16	36.95	58.846	
5,260.00	5,114.46	4,755.15	4,624.91	26.26	23.58	-166.46	432.67	-976.65	2,214.26	2,176.69	37.57	58.931	
5,354.00	5,205.69	4,826.15	4,693.99	26.75	23.95	-166.30	439.58	-991.48	2,255.90	2,217.74	38.16	59.113	
5,450.00	5,298.51	4,887.72	4,753.78	27.28	24.26	-167.57	445.34	-1,004.99	2,300.53	2,261.84	38.68	59.470	
5,543.00	5,388.31	4,967.85	4,831.59	27.79	24.68	-165.95	451.25	-1,023.19	2,344.58	2,305.24	39.34	59.598	
5,637.00	5,479.24	5,084.42	4,945.01	28.29	25.28	-166.44	458.11	-1,049.21	2,388.03	2,347.77	40.26	59.314	
5,731.00	5,570.39	5,160.95	5,019.52	28.79	25.66	-163.82	463.77	-1,065.76	2,430.18	2,389.29	40.89	59.438	
5,825.00	5,661.76	5,245.40	5,101.69	29.27	26.10	-162.84	470.67	-1,083.99	2,471.41	2,429.84	41.57	59.451	
5,920.00	5,754.38	5,310.55	5,165.03	29.75	26.43	-161.15	476.06	-1,098.24	2,512.20	2,470.09	42.11	59.659	
6,014.00	5,846.19	5,382.61	5,234.90	30.21	26.81	-162.34	482.51	-1,114.63	2,552.66	2,509.96	42.70	59.783	
6,109.00	5,939.26	5,586.01	5,433.19	30.65	27.83	-162.75	497.92	-1,157.13	2,590.83	2,546.60	44.23	58.571	
6,203.00	6,031.68	6,226.72	6,069.31	31.07	30.09	-164.12	520.93	-1,215.52	2,619.70	2,572.11	47.59	55.044	
6,297.00	6,124.42	6,319.71	6,162.28	31.47	30.31	-164.77	522.25	-1,213.74	2,632.86	2,584.65	48.21	54.609	
6,392.00	6,218.59	6,406.94	6,249.49	31.83	30.51	-169.91	522.51	-1,212.46	2,643.68	2,594.87	48.81	54.168	
6,486.00	6,312.11	6,518.27	6,360.80	32.16	30.76	-176.93	521.62	-1,210.36	2,651.23	2,601.78	49.45	53.618	
6,580.00	6,405.81	6,593.88	6,436.39	32.47	30.94	-168.96	520.53	-1,209.18	2,657.04	2,607.05	49.99	53.155	
6,674.00	6,499.58	6,669.44	6,511.94	32.77	31.12	-172.70	519.08	-1,208.56	2,662.51	2,611.99	50.52	52.699	
6,768.00	6,593.40	6,769.00	6,611.47	33.06	31.35	177.11	516.62	-1,208.61	2,668.06	2,616.94	51.13	52.187	
6,863.00	6,688.26	6,818.11	6,660.55	33.35	31.47	-178.00	515.14	-1,209.04	2,673.43	2,621.85	51.58	51.831	
6,957.00	6,782.19	6,900.82	6,743.20	33.62	31.67	-171.04	512.17	-1,210.37	2,678.10	2,625.97	52.13	51.371	
7,051.00	6,876.18	7,026.08	6,868.37	33.87	31.98	151.51	507.84	-1,211.89	2,680.59	2,627.77	52.82	50.750	
7,145.00	6,970.17	7,119.75	6,962.03	34.10	32.22	83.92	506.80	-1,211.91	2,681.08	2,627.69	53.39	50.216	
7,334.00	7,159.13	7,271.97	7,114.20	34.53	32.60	26.76	503.12	-1,213.17	2,679.45	2,625.06	54.39	49.265	
7,428.00	7,253.06	7,334.00	7,176.19	34.73	32.77	29.04	501.57	-1,214.69	2,678.20	2,623.37	54.83	48.848	
7,522.00	7,346.98	7,446.65	7,288.76	34.94	33.08	34.47	499.02	-1,217.78	2,677.33	2,621.87	55.46	48.274	
7,617.00	7,441.94	7,576.02	7,418.06	35.16	33.42	-4.09	495.18	-1,219.59	2,675.77	2,619.62	56.15	47.652	
7,711.00	7,535.92	7,706.02	7,548.05	35.38	33.77	-2.89	493.72	-1,220.01	2,673.80	2,616.96	56.84	47.044	
7,806.00	7,630.87	7,779.73	7,621.76	35.60	33.96	18.66	493.43	-1,219.78	2,670.58	2,613.24	57.34	46.577	
7,900.00	7,724.80	7,849.40	7,691.43	35.82	34.15	22.71	492.66	-1,220.27	2,667.74	2,609.92	57.82	46.141	
7,964.59	7,789.36	7,901.00	7,743.01	35.97	34.29	49.90	491.77	-1,221.07	2,667.02	2,608.86	58.16	45.854	
7,994.00	7,818.76	7,935.25	7,777.25	36.04	34.38	71.55	491.08	-1,221.67	2,667.15	2,608.79	58.36	45.700	
8,089.00	7,913.75	8,035.20	7,877.17	36.28	34.66	68.91	488.84	-1,222.90	2,667.49	2,608.52	58.97	45.233	
8,278.00	8,102.68	8,184.00	8,025.88	36.74	35.07	57.99	484.99	-1,226.30	2,668.85	2,608.85	60.00	44.481	
8,561.00	8,385.40	8,468.80	8,310.44	37.42	35.91	47.39	477.46	-1,234.89	2,668.84	2,607.06	61.78	43.202	
8,930.00	8,753.68	8,780.00	8,621.44	38.30	36.84	32.42	471.73	-1,244.53	2,661.91	2,598.06	63.85	41.692	
8,970.77	8,794.34	8,780.00	8,621.44	38.40	36.84	32.42	471.73	-1,244.53	2,661.60	2,597.68	63.92	41.639	
8,993.00	8,816.50	8,780.00	8,621.44	38.45	36.84	32.42	471.73	-1,244.53	2,661.69	2,597.73	63.96	41.617	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 13B-8 596 - OH [479737] - Survey (H&P 330)												Offset Site Error:	0.00 usft
Survey Program: 202-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toofface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-106.93	-3.63	-11.92	13.83				
170.00	169.99	163.93	163.93	0.25	0.26	-175.19	-3.03	-12.40	14.45	13.94	0.52	28.022	
231.00	230.97	224.78	224.77	0.47	0.40	-170.73	-2.51	-12.91	16.28	15.40	0.88	18.544	
262.00	261.95	255.57	255.56	0.59	0.51	-159.81	-2.18	-13.52	17.82	16.71	1.11	16.110	
292.00	291.92	285.31	285.28	0.70	0.62	-163.81	-1.81	-14.42	20.05	18.71	1.33	15.060 SF	
353.00	352.75	345.53	345.43	0.93	0.84	-177.23	-1.03	-17.05	26.89	25.10	1.78	15.064	
445.00	444.28	435.45	435.16	1.27	1.17	-175.22	0.10	-22.86	41.81	39.36	2.46	17.011	
536.00	534.44	523.05	522.39	1.62	1.49	-170.33	1.58	-30.69	61.74	58.62	3.12	19.787	
630.00	626.87	611.31	610.10	2.02	1.83	-170.62	2.11	-40.49	88.56	84.76	3.80	23.289	
724.00	718.61	696.37	694.38	2.45	2.17	-175.29	1.19	-51.94	121.12	116.66	4.46	27.127	
819.00	810.83	779.50	776.34	2.91	2.52	177.19	-0.53	-65.71	158.94	153.84	5.10	31.138	
913.00	901.45	860.43	855.82	3.39	2.87	179.45	-1.22	-80.91	200.46	194.72	5.73	34.972	
1,007.00	991.42	934.48	928.10	3.92	3.21	177.50	-1.12	-96.98	246.39	240.07	6.32	38.992	
1,101.00	1,081.58	1,011.09	1,002.40	4.44	3.58	-178.17	-0.82	-115.68	293.99	287.09	6.90	42.580	
1,195.00	1,172.56	1,091.25	1,079.88	4.93	3.99	-174.26	0.11	-136.19	339.83	332.33	7.49	45.364	
1,289.00	1,264.08	1,177.77	1,163.41	5.40	4.43	-175.02	3.25	-158.52	383.73	375.58	8.15	47.061	
1,384.00	1,356.59	1,268.50	1,251.37	5.88	4.89	-173.70	6.63	-180.49	426.62	417.76	8.86	48.161	
1,478.00	1,448.11	1,356.28	1,336.60	6.35	5.34	-175.59	11.19	-200.99	468.39	458.85	9.54	49.083	
1,573.00	1,540.86	1,445.53	1,423.48	6.82	5.78	-175.88	15.02	-221.07	508.94	498.71	10.23	49.742	
1,667.00	1,632.86	1,533.41	1,509.17	7.27	6.21	-172.79	17.87	-240.36	547.66	536.75	10.91	50.207	
1,761.00	1,724.81	1,623.11	1,596.71	7.72	6.65	-171.94	21.40	-259.61	586.08	574.47	11.60	50.505	
1,855.00	1,816.45	1,713.07	1,684.61	8.18	7.09	-171.12	26.00	-278.18	625.00	612.69	12.31	50.769	
1,949.00	1,907.72	1,792.00	1,761.63	8.67	7.47	-171.80	31.09	-294.64	665.54	652.60	12.94	51.430	
2,044.00	1,999.54	1,869.22	1,836.74	9.18	7.86	-173.74	37.11	-311.51	708.94	695.37	13.57	52.262	
2,138.00	2,090.09	1,946.22	1,911.42	9.70	8.26	-171.17	43.68	-329.10	753.78	739.59	14.19	53.120	
2,232.00	2,180.65	2,020.31	1,983.19	10.22	8.64	-171.79	49.51	-346.55	799.21	784.42	14.79	54.041	
2,326.00	2,271.24	2,093.05	2,053.54	10.74	9.03	-170.27	53.72	-364.57	845.55	830.17	15.38	54.988	
2,420.00	2,361.89	2,173.17	2,130.89	11.26	9.46	-166.22	58.57	-384.85	892.04	876.02	16.03	55.659	
2,527.00	2,465.28	2,281.51	2,235.38	11.83	10.05	-160.19	68.97	-411.50	943.05	926.14	16.91	55.767	
2,622.00	2,557.29	2,369.83	2,320.62	12.33	10.52	-162.92	78.98	-432.32	986.64	969.00	17.63	55.957	
2,715.00	2,647.48	2,442.59	2,390.75	12.81	10.91	-167.67	87.34	-449.80	1,029.64	1,011.41	18.23	56.485	
2,810.00	2,739.63	2,526.10	2,471.13	13.31	11.37	-171.80	97.20	-470.20	1,074.19	1,055.27	18.91	56.793	
2,904.00	2,830.93	2,611.23	2,553.17	13.80	11.83	-174.49	106.52	-490.93	1,118.02	1,098.41	19.61	57.020	
2,999.00	2,922.99	2,700.61	2,639.52	14.30	12.31	-174.74	114.85	-512.41	1,162.86	1,142.53	20.34	57.182	
3,093.00	3,013.89	2,797.55	2,733.42	14.81	12.82	-175.39	123.33	-534.95	1,207.31	1,186.19	21.12	57.158	
3,187.00	3,104.97	2,890.04	2,823.26	15.31	13.30	-176.71	131.16	-555.51	1,250.30	1,228.43	21.86	57.186	
3,282.00	3,197.19	2,962.17	2,893.35	15.80	13.68	-175.28	136.82	-571.55	1,293.14	1,270.70	22.44	57.615	
3,376.00	3,288.43	3,035.90	2,964.83	16.29	14.06	-174.30	142.21	-588.81	1,336.51	1,313.47	23.04	58.008	
3,470.00	3,379.56	3,119.13	3,045.41	16.79	14.51	-173.80	149.18	-608.44	1,380.48	1,356.77	23.71	58.214	
3,564.00	3,470.75	3,206.24	3,129.95	17.28	14.96	-175.64	153.74	-628.93	1,424.16	1,399.75	24.41	58.338	
3,658.00	3,561.89	3,282.00	3,203.59	17.78	15.36	-174.26	156.04	-646.59	1,467.77	1,442.75	25.02	58.672	
3,752.00	3,652.73	3,356.27	3,275.69	18.29	15.75	-172.17	158.01	-664.29	1,512.83	1,487.21	25.62	59.058	
3,847.00	3,744.45	3,490.87	3,406.56	18.81	16.44	-169.98	162.39	-695.43	1,558.09	1,531.42	26.68	58.403	
3,941.00	3,835.42	3,587.03	3,500.64	19.31	16.90	-169.25	164.58	-715.16	1,599.61	1,572.18	27.43	58.309	
4,026.00	3,917.86	3,641.67	3,554.03	19.76	17.17	-168.24	165.69	-726.73	1,637.01	1,609.14	27.88	58.720	
4,130.00	4,018.80	3,736.82	3,646.82	20.30	17.64	-172.01	168.07	-747.64	1,683.36	1,654.73	28.63	58.792	
4,224.00	4,109.52	3,815.45	3,723.55	20.82	18.03	-173.85	169.92	-764.74	1,726.98	1,697.71	29.27	59.009	
4,318.00	4,199.89	3,903.25	3,809.19	21.36	18.47	-174.24	171.21	-784.05	1,772.00	1,742.03	29.97	59.128	
4,412.00	4,290.67	3,998.01	3,901.75	21.87	18.93	-174.15	173.08	-804.26	1,815.10	1,784.38	30.71	59.098	
4,507.00	4,382.62	4,089.06	3,990.78	22.38	19.37	-172.74	174.19	-823.28	1,857.53	1,826.10	31.43	59.105	
4,601.00	4,473.49	4,162.67	4,062.77	22.90	19.72	-173.13	173.82	-838.63	1,899.88	1,867.86	32.02	59.338	
4,695.00	4,564.59	4,224.00	4,122.61	23.39	20.02	-171.16	174.20	-852.05	1,942.23	1,909.72	32.51	59.737	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 13B-8 596 - OH [479737] - Survey (H&P 330)												Offset Site Error:	0.00 usft
Survey Program: 202-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,353.39	4,248.97	23.89	20.66	-169.58	178.72	-879.51	1,983.84	1,950.32	33.52	59.189	
4,883.00	4,746.85	4,443.45	4,337.21	24.39	21.09	-167.17	181.36	-897.28	2,024.03	1,989.80	34.23	59.130	
4,978.00	4,839.29	4,507.00	4,399.37	24.87	21.40	-169.81	183.99	-910.27	2,064.05	2,029.30	34.75	59.400	
5,072.00	4,931.05	4,593.08	4,483.38	25.33	21.82	-172.08	189.10	-928.30	2,103.06	2,067.63	35.43	59.358	
5,166.00	5,022.88	4,697.53	4,585.36	25.79	22.33	-172.59	196.32	-949.70	2,141.47	2,105.23	36.25	59.081	
5,260.00	5,114.46	4,772.61	4,658.71	26.26	22.70	-173.14	201.14	-964.94	2,180.77	2,143.92	36.85	59.177	
5,354.00	5,205.69	4,876.19	4,760.11	26.75	23.20	-173.03	205.93	-985.51	2,220.98	2,183.31	37.66	58.970	
5,450.00	5,298.51	4,950.64	4,833.07	27.28	23.55	-174.33	208.85	-1,000.06	2,263.12	2,224.86	38.27	59.137	
5,543.00	5,388.31	5,017.87	4,898.75	27.79	23.88	-172.65	212.35	-1,013.98	2,305.30	2,266.48	38.82	59.381	
5,637.00	5,479.24	5,101.84	4,980.72	28.29	24.29	-172.94	217.07	-1,031.55	2,347.55	2,308.05	39.50	59.435	
5,731.00	5,570.39	5,213.87	5,090.24	28.79	24.84	-170.25	222.38	-1,054.56	2,388.68	2,348.31	40.37	59.167	
5,825.00	5,661.76	5,317.79	5,192.15	29.27	25.33	-169.21	226.61	-1,074.44	2,427.55	2,386.37	41.18	58.951	
5,920.00	5,754.38	5,399.69	5,272.44	29.75	25.71	-167.47	230.69	-1,090.08	2,465.69	2,423.86	41.83	58.946	
6,014.00	5,846.19	5,474.91	5,346.12	30.21	26.07	-168.61	234.75	-1,104.63	2,502.97	2,460.54	42.43	58.987	
6,109.00	5,939.26	5,543.00	5,412.74	30.65	26.40	-168.90	238.28	-1,118.27	2,540.03	2,497.05	42.98	59.097	
6,203.00	6,031.68	5,766.57	5,632.08	31.07	27.43	-169.74	252.11	-1,159.10	2,574.35	2,529.77	44.59	57.739	
6,297.00	6,124.42	6,215.87	6,079.25	31.47	28.96	-170.31	267.50	-1,192.25	2,592.96	2,545.90	47.05	55.106	
6,392.00	6,218.59	6,314.87	6,178.24	31.83	29.23	-175.44	267.65	-1,193.65	2,606.66	2,558.94	47.72	54.625	
6,486.00	6,312.11	6,392.00	6,255.37	32.16	29.44	177.55	267.38	-1,194.61	2,617.40	2,569.11	48.29	54.204	
6,580.00	6,405.81	6,485.46	6,348.81	32.47	29.70	-174.43	266.67	-1,196.08	2,626.32	2,577.41	48.91	53.693	
6,674.00	6,499.58	6,562.31	6,425.64	32.77	29.92	-178.16	265.81	-1,197.84	2,634.95	2,585.48	49.47	53.261	
6,768.00	6,593.40	6,680.92	6,544.20	33.06	30.25	171.67	264.00	-1,200.55	2,642.84	2,592.65	50.19	52.657	
6,863.00	6,688.26	6,781.20	6,644.46	33.35	30.53	176.59	263.16	-1,202.12	2,649.42	2,598.58	50.84	52.115	
6,957.00	6,782.19	6,877.49	6,740.75	33.62	30.79	-176.38	262.52	-1,203.44	2,654.28	2,602.81	51.47	51.574	
7,051.00	6,876.18	6,965.24	6,828.48	33.87	31.04	146.24	261.75	-1,204.73	2,657.28	2,605.23	52.05	51.049	
7,145.00	6,970.17	7,051.00	6,914.22	34.10	31.28	78.66	261.03	-1,206.19	2,659.38	2,606.76	52.62	50.539	
7,334.00	7,159.13	7,214.29	7,077.47	34.53	31.76	21.54	259.68	-1,210.01	2,660.83	2,607.13	53.70	49.554	
7,428.00	7,253.06	7,291.22	7,154.35	34.73	32.00	23.84	258.87	-1,212.44	2,660.40	2,606.20	54.20	49.083	
7,464.50	7,289.52	7,320.46	7,183.57	34.81	32.08	25.55	258.40	-1,213.51	2,660.26	2,605.86	54.40	48.904	
7,522.00	7,346.98	7,366.55	7,229.61	34.94	32.23	29.28	257.43	-1,215.36	2,660.61	2,605.91	54.70	48.637	
7,617.00	7,441.94	7,450.70	7,313.64	35.16	32.48	-9.23	255.06	-1,219.22	2,662.35	2,607.11	55.25	48.188	
7,711.00	7,535.92	7,560.48	7,423.29	35.38	32.82	-8.06	252.48	-1,223.89	2,664.08	2,608.17	55.91	47.650	
7,806.00	7,630.87	7,649.03	7,511.75	35.60	33.10	13.43	251.39	-1,227.48	2,664.99	2,608.51	56.48	47.185	
7,900.00	7,724.80	7,726.09	7,588.74	35.82	33.35	17.48	250.69	-1,231.01	2,665.80	2,608.80	57.00	46.770	
7,994.00	7,818.76	7,806.00	7,668.53	36.04	33.61	66.32	250.06	-1,235.19	2,668.65	2,611.11	57.54	46.382	
8,089.00	7,913.75	7,901.83	7,764.21	36.28	33.92	63.71	249.02	-1,240.44	2,673.11	2,614.95	58.16	45.962	
8,278.00	8,102.68	8,093.10	7,955.17	36.74	34.54	52.78	245.14	-1,250.58	2,680.32	2,620.92	59.39	45.128	
8,561.00	8,385.40	8,360.51	8,222.08	37.42	35.42	42.17	238.18	-1,265.26	2,687.20	2,626.06	61.14	43.950	
8,930.00	8,753.68	8,715.71	8,576.42	38.30	36.61	27.13	228.32	-1,287.91	2,691.29	2,627.84	63.45	42.417	
8,979.89	8,803.43	8,759.00	8,619.59	38.42	36.76	27.12	226.63	-1,290.69	2,691.16	2,627.43	63.74	42.224	
8,993.00	8,816.50	8,759.00	8,619.59	38.45	36.76	27.12	226.63	-1,290.69	2,691.19	2,627.44	63.76	42.211	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 13C-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-126.47	-10.75	-14.54	19.05				
170.00	169.99	163.99	163.99	0.25	2.50	164.18	-10.75	-14.54	19.71	16.95	2.76	7.141	
231.00	230.97	224.97	224.97	0.47	3.86	167.96	-10.75	-14.54	21.14	16.80	4.34	4.873 ES	
262.00	261.95	255.95	255.95	0.59	4.51	178.54	-10.75	-14.54	22.18	17.08	5.10	4.351	
292.00	291.92	285.92	285.92	0.70	5.13	174.48	-10.75	-14.54	23.67	17.83	5.83	4.057	
353.00	352.75	346.75	346.75	0.93	6.38	161.72	-10.75	-14.54	27.98	20.67	7.31	3.829 SF	
445.00	444.28	437.62	437.62	1.27	8.31	166.06	-10.75	-14.91	37.25	27.73	9.52	3.914	
536.00	534.44	525.31	525.22	1.62	10.83	174.26	-10.75	-18.65	52.87	41.14	11.73	4.507	
630.00	626.87	613.13	612.69	2.02	14.50	177.91	-10.75	-26.42	77.49	63.71	13.79	5.620	
724.00	718.61	700.00	698.77	2.45	16.91	176.92	-10.75	-38.06	109.55	95.22	14.33	7.646	
819.00	810.83	778.97	776.49	2.91	16.92	171.95	-10.76	-52.02	147.60	133.18	14.42	10.236	
913.00	901.45	860.16	855.88	3.39	16.94	175.67	-10.76	-68.99	190.48	175.85	14.63	13.017	
1,007.00	991.42	942.37	936.23	3.92	16.97	174.48	-10.76	-86.39	235.75	220.82	14.93	15.790	
1,101.00	1,081.58	1,024.90	1,016.89	4.44	17.00	179.22	-10.76	-103.85	280.55	265.30	15.24	18.405	
1,195.00	1,172.56	1,108.90	1,098.99	4.93	17.05	-176.77	-10.77	-121.62	322.66	307.08	15.58	20.715	
1,289.00	1,264.08	1,193.88	1,182.05	5.40	17.11	-177.82	-10.77	-139.60	362.81	346.87	15.94	22.766	
1,384.00	1,356.59	1,279.82	1,266.04	5.88	17.18	-176.78	-10.77	-157.78	403.26	386.94	16.33	24.702	
1,478.00	1,448.11	1,364.79	1,349.09	6.35	17.26	-179.02	-10.77	-175.76	443.44	426.72	16.72	26.523	
1,573.00	1,540.86	1,451.13	1,433.47	6.82	17.35	-179.48	-10.78	-194.02	483.00	465.88	17.12	28.206	
1,667.00	1,632.86	1,537.02	1,517.42	7.27	17.44	-176.46	-10.78	-212.19	521.16	503.63	17.54	29.720	
1,761.00	1,724.81	1,622.83	1,601.29	7.72	17.55	-175.75	-10.78	-230.35	559.51	541.55	17.96	31.145	
1,855.00	1,816.45	1,708.06	1,684.59	8.18	17.67	-175.17	-10.78	-248.38	599.15	580.75	18.41	32.549	
1,949.00	1,907.72	1,792.59	1,767.21	8.67	17.79	-176.13	-10.79	-266.27	640.26	621.40	18.86	33.948	
2,044.00	1,999.54	1,877.26	1,849.95	9.18	17.92	-178.40	-10.79	-284.18	683.34	664.01	19.32	35.361	
2,138.00	2,090.09	1,960.48	1,931.30	9.70	18.06	-176.17	-10.79	-301.79	727.02	707.23	19.79	36.736	
2,232.00	2,180.65	2,043.73	2,012.66	10.22	18.21	-177.00	-10.79	-319.40	770.66	750.40	20.26	38.039	
2,326.00	2,271.24	2,127.05	2,094.10	10.74	18.37	-175.59	-10.80	-337.03	814.17	793.44	20.74	39.262	
2,420.00	2,361.89	2,210.50	2,175.66	11.26	18.53	-171.67	-10.80	-354.68	857.44	836.21	21.22	40.402	
2,527.00	2,465.28	2,305.99	2,268.98	11.83	18.72	-166.03	-10.80	-374.89	905.65	883.87	21.79	41.569	
2,622.00	2,557.29	2,391.15	2,352.22	12.33	18.91	-169.13	-10.81	-392.90	947.67	925.38	22.30	42.504	
2,715.00	2,647.48	2,474.66	2,433.84	12.81	19.09	-174.17	-10.81	-410.57	988.59	965.79	22.80	43.359	
2,810.00	2,739.63	2,559.93	2,517.18	13.31	19.29	-178.61	-10.81	-428.61	1,030.46	1,007.14	23.32	44.191	
2,904.00	2,830.93	2,644.46	2,599.80	13.80	19.49	-178.46	-10.81	-446.50	1,071.52	1,047.68	23.83	44.959	
2,999.00	2,922.99	2,729.50	2,682.91	14.30	19.70	-177.93	-10.82	-464.49	1,113.76	1,089.40	24.36	45.720	
3,093.00	3,013.89	2,813.29	2,764.80	14.81	19.92	-177.15	-10.82	-482.21	1,156.27	1,131.38	24.89	46.461	
3,187.00	3,104.97	2,897.39	2,847.00	15.31	20.14	-175.71	-10.82	-500.01	1,198.12	1,172.71	25.41	47.143	
3,282.00	3,197.19	2,982.71	2,930.39	15.80	20.37	-177.14	-10.82	-518.06	1,239.77	1,213.81	25.96	47.766	
3,376.00	3,288.43	3,067.12	3,012.88	16.29	20.60	-178.04	-10.83	-535.92	1,281.04	1,254.54	26.50	48.347	
3,470.00	3,379.56	3,151.33	3,095.18	16.79	20.84	-178.45	-10.83	-553.73	1,322.74	1,295.70	27.04	48.911	
3,564.00	3,470.75	3,235.62	3,177.57	17.28	21.08	-176.67	-10.83	-571.57	1,364.25	1,336.65	27.59	49.440	
3,658.00	3,561.89	3,319.85	3,259.89	17.78	21.33	-178.13	-10.83	-589.39	1,405.89	1,377.74	28.15	49.945	
3,752.00	3,652.73	3,403.54	3,341.69	18.29	21.58	-179.76	-10.84	-607.09	1,448.64	1,419.93	28.71	50.458	
3,847.00	3,744.45	3,487.99	3,424.23	18.81	21.84	-177.39	-10.84	-624.96	1,492.13	1,462.85	29.28	50.959	
3,941.00	3,835.42	3,571.94	3,506.28	19.31	22.11	-176.51	-10.84	-642.72	1,534.40	1,504.55	29.85	51.406	
4,026.00	3,917.86	3,648.19	3,580.80	19.76	22.35	-175.38	-10.84	-658.85	1,571.98	1,541.61	30.37	51.769	
4,130.00	4,018.80	3,741.60	3,672.10	20.30	22.65	-179.06	-10.85	-678.62	1,617.69	1,586.68	31.00	52.179	
4,224.00	4,109.52	3,825.09	3,753.70	20.82	22.92	-179.07	-10.85	-696.28	1,660.83	1,629.25	31.58	52.587	
4,318.00	4,199.89	3,907.96	3,834.69	21.36	23.20	-178.86	-10.85	-713.81	1,705.15	1,672.99	32.16	53.015	
4,412.00	4,290.67	3,991.54	3,916.38	21.87	23.48	-179.14	-10.85	-731.50	1,748.10	1,715.36	32.74	53.386	
4,507.00	4,382.62	4,076.39	3,999.30	22.38	23.77	-179.35	-10.86	-749.45	1,790.80	1,757.47	33.34	53.718	
4,601.00	4,473.49	4,160.13	4,081.15	22.90	24.06	-179.60	-10.86	-767.16	1,833.48	1,799.55	33.93	54.041	
4,695.00	4,564.59	4,244.30	4,163.42	23.39	24.36	-177.46	-10.86	-784.97	1,875.30	1,840.78	34.52	54.325	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 13C-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,328.55	4,245.75	23.89	24.66	-175.88	-10.86	-802.79	1,917.00	1,881.88	35.12	54.590	
4,883.00	4,746.85	4,412.81	4,328.11	24.39	24.96	-173.35	-10.87	-820.62	1,958.65	1,922.93	35.72	54.840	
4,978.00	4,839.29	4,498.60	4,411.96	24.87	25.27	-175.96	-10.87	-838.77	1,999.46	1,963.14	36.32	55.047	
5,072.00	4,931.05	4,584.01	4,495.44	25.33	25.58	-178.22	-10.87	-856.84	2,038.70	2,001.78	36.93	55.211	
5,166.00	5,022.88	4,669.54	4,579.04	25.79	25.90	-178.85	-10.88	-874.94	2,077.67	2,040.14	37.53	55.358	
5,260.00	5,114.46	4,754.59	4,662.16	26.26	26.21	-179.47	-10.88	-892.93	2,117.68	2,079.54	38.14	55.522	
5,354.00	5,205.69	4,838.98	4,744.64	26.75	26.53	-179.42	-10.88	-910.79	2,159.06	2,120.31	38.75	55.714	
5,450.00	5,298.51	4,924.54	4,828.26	27.28	26.85	179.27	-10.88	-928.89	2,202.57	2,163.19	39.38	55.935	
5,543.00	5,388.31	5,007.21	4,909.06	27.79	27.17	-179.03	-10.89	-946.38	2,245.14	2,205.15	39.98	56.151	
5,637.00	5,479.24	5,091.07	4,991.02	28.29	27.49	-179.30	-10.89	-964.12	2,287.58	2,246.98	40.60	56.347	
5,731.00	5,570.39	5,175.33	5,073.38	28.79	27.82	-176.59	-10.89	-981.95	2,329.24	2,288.03	41.21	56.515	
5,825.00	5,661.76	5,260.02	5,156.14	29.27	28.15	-175.47	-10.89	-999.87	2,370.03	2,328.20	41.83	56.654	
5,920.00	5,754.38	5,346.14	5,240.31	29.75	28.49	-173.71	-10.90	-1,018.09	2,410.14	2,367.68	42.46	56.761	
6,014.00	5,846.19	5,431.67	5,323.91	30.21	28.83	-174.86	-10.90	-1,036.18	2,449.13	2,406.04	43.08	56.845	
6,109.00	5,939.26	5,518.66	5,408.93	30.65	29.17	-175.10	-10.90	-1,054.59	2,487.30	2,443.58	43.72	56.898	
6,203.00	6,031.68	5,605.40	5,493.71	31.07	29.52	-176.05	-10.90	-1,072.94	2,523.52	2,479.18	44.34	56.913	
6,297.00	6,124.42	5,692.84	5,579.17	31.47	29.87	-176.63	-10.91	-1,091.44	2,558.01	2,513.05	44.96	56.889	
6,392.00	6,218.59	5,782.25	5,666.56	31.83	30.23	178.19	-10.91	-1,110.35	2,590.06	2,544.47	45.59	56.806	
6,486.00	6,312.11	5,869.00	5,753.23	32.16	32.22	171.41	-11.10	-1,128.10	2,612.98	2,563.90	46.21	56.723	
6,580.00	6,405.81	5,954.52	5,840.73	32.47	32.37	179.46	-11.52	-1,146.25	2,622.08	2,572.51	46.83	56.640	
6,674.00	6,499.58	6,040.13	5,926.32	32.77	32.60	175.75	-12.25	-1,164.23	2,630.64	2,580.47	47.45	56.557	
6,768.00	6,593.40	6,125.81	6,011.97	33.06	32.83	165.63	-12.97	-1,182.22	2,638.36	2,587.60	48.07	56.474	
6,863.00	6,688.26	6,211.54	6,100.68	33.35	33.06	170.57	-13.70	-1,199.23	2,645.45	2,594.08	48.69	56.391	
6,957.00	6,782.19	6,297.37	6,188.49	33.62	33.29	177.62	-14.42	-1,216.22	2,651.06	2,599.10	49.31	56.308	
7,051.00	6,876.18	6,383.30	6,275.39	33.87	33.53	180.26	-15.15	-1,233.21	2,654.70	2,602.15	49.93	56.225	
7,145.00	6,970.17	6,469.26	6,361.33	34.10	33.77	172.68	-15.87	-1,250.20	2,657.16	2,604.04	50.55	56.142	
7,239.00	7,064.16	6,555.19	6,447.32	34.33	34.00	170.19	-16.60	-1,267.19	2,659.62	2,606.02	51.17	56.059	
7,334.00	7,159.13	6,641.12	6,533.29	34.53	34.25	155.57	-17.33	-1,283.20	2,658.13	2,603.89	51.79	55.976	
7,428.00	7,253.06	6,727.05	6,619.24	34.73	34.49	171.87	-18.06	-1,299.21	2,656.66	2,601.87	52.41	55.893	
7,522.00	7,346.98	6,811.97	6,705.16	34.94	34.73	23.33	-18.78	-1,315.22	2,655.16	2,599.82	53.03	55.810	
7,617.00	7,441.94	6,896.90	6,790.11	35.16	34.98	-15.16	-19.52	-1,331.23	2,654.63	2,598.72	53.65	55.727	
7,711.00	7,535.92	6,981.82	6,875.06	35.38	35.23	-13.96	-20.24	-1,347.24	2,654.51	2,598.03	54.27	55.644	
7,806.00	7,630.87	7,066.74	6,959.99	35.60	35.48	7.56	-20.97	-1,363.25	2,653.64	2,596.59	54.89	55.561	
7,900.00	7,724.80	7,151.66	7,045.91	35.82	35.73	11.61	-21.70	-1,379.26	2,652.13	2,594.51	55.51	55.478	
7,995.00	7,818.76	7,236.58	7,131.83	35.94	35.87	31.45	-22.10	-1,395.27	2,651.75	2,593.82	56.13	55.395	
8,090.00	7,913.75	7,321.50	7,217.80	36.04	35.98	60.47	-22.42	-1,411.28	2,652.00	2,593.81	56.75	55.312	
8,185.00	8,008.74	7,406.42	7,302.71	36.28	36.24	57.86	-23.16	-1,427.29	2,653.19	2,594.41	57.37	55.229	
8,280.00	8,103.68	7,491.34	7,387.62	36.74	36.75	47.02	-24.62	-1,443.30	2,654.16	2,594.21	57.99	55.146	
8,375.00	8,198.67	7,576.26	7,472.53	37.20	37.21	36.53	-26.80	-1,459.31	2,650.92	2,589.24	58.61	55.063	
8,470.00	8,293.66	7,661.18	7,557.44	38.30	38.55	21.62	-29.64	-1,475.32	2,638.58	2,574.63	63.96	41.255	
8,565.00	8,388.65	7,746.10	7,642.35	38.45	38.73	21.65	-30.13	-1,491.33	2,635.60	2,571.25	64.35	40.960	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 13D-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-136.01	-17.68	-17.06	25.29				
170.00	169.99	163.99	163.99	0.25	2.50	154.85	-17.68	-17.06	26.09	23.33	2.76	9.454	
231.00	230.97	224.97	224.97	0.47	3.86	158.88	-17.68	-17.06	27.44	23.11	4.34	6.327 ES	
262.00	261.95	255.95	255.95	0.59	4.51	169.72	-17.68	-17.06	28.45	23.36	5.10	5.583	
292.00	291.92	285.92	285.92	0.70	5.13	166.03	-17.68	-17.06	29.91	24.08	5.83	5.128	
353.00	352.75	346.75	346.75	0.93	6.38	153.91	-17.68	-17.06	34.03	26.73	7.31	4.658	
445.00	444.28	438.28	438.28	1.27	8.25	158.97	-17.68	-17.06	42.57	33.06	9.51	4.476 SF	
536.00	534.44	527.68	527.68	1.62	10.10	166.85	-17.72	-17.26	54.53	42.85	11.68	4.670	
630.00	626.87	616.52	616.44	2.02	11.76	170.62	-18.44	-20.53	74.62	61.14	13.48	5.535	
724.00	718.61	700.00	699.63	2.45	12.11	169.87	-19.94	-27.28	102.32	88.64	13.69	7.475	
819.00	810.83	785.77	784.70	2.91	12.12	165.43	-22.29	-37.90	136.04	122.05	14.00	9.721	
913.00	901.45	864.48	862.27	3.39	12.15	169.22	-25.17	-50.91	175.47	161.21	14.26	12.303	
1,007.00	991.42	939.10	935.25	3.92	12.18	168.13	-28.53	-66.13	220.43	205.92	14.51	15.193	
1,101.00	1,081.58	1,020.52	1,014.50	4.44	12.23	173.20	-32.56	-84.34	266.67	251.82	14.85	17.959	
1,195.00	1,172.56	1,103.69	1,095.45	4.93	12.29	177.37	-36.68	-102.95	310.41	295.22	15.19	20.431	
1,289.00	1,264.08	1,187.85	1,177.37	5.40	12.37	176.34	-40.85	-121.78	352.25	336.69	15.56	22.640	
1,384.00	1,356.59	1,272.97	1,260.23	5.88	12.46	177.32	-45.06	-140.82	394.41	378.46	15.95	24.725	
1,478.00	1,448.11	1,357.13	1,342.15	6.35	12.57	175.09	-49.23	-159.66	436.24	419.89	16.35	26.680	
1,573.00	1,540.86	1,442.71	1,425.46	6.82	12.70	174.63	-53.47	-178.80	477.44	460.68	16.76	28.485	
1,667.00	1,632.86	1,527.85	1,508.33	7.27	12.83	177.65	-57.68	-197.85	517.26	500.08	17.18	30.113	
1,761.00	1,724.81	1,612.89	1,591.10	7.72	12.98	178.29	-61.89	-216.88	557.31	539.70	17.61	31.652	
1,855.00	1,816.45	1,697.30	1,673.27	8.18	13.14	178.81	-66.07	-235.76	598.66	580.61	18.05	33.165	
1,949.00	1,907.72	1,780.99	1,754.73	8.67	13.31	177.80	-70.22	-254.49	641.45	622.95	18.50	34.664	
2,044.00	1,999.54	1,864.80	1,836.31	9.18	13.50	175.46	-74.36	-273.24	686.16	667.19	18.97	36.169	
2,138.00	2,090.09	1,947.16	1,916.48	9.70	13.69	177.72	-78.44	-291.66	731.45	712.01	19.44	37.630	
2,232.00	2,180.65	2,029.54	1,996.67	10.22	13.89	176.93	-82.52	-310.10	776.71	756.81	19.91	39.015	
2,326.00	2,271.24	2,111.99	2,076.92	10.74	14.10	178.36	-86.60	-328.54	821.86	801.48	20.39	40.316	
2,420.00	2,361.89	2,194.52	2,157.25	11.26	14.32	-177.66	-90.69	-347.01	866.86	845.99	20.87	41.537	
2,527.00	2,465.28	2,288.88	2,249.10	11.83	14.58	-171.94	-95.36	-368.12	917.25	895.82	21.43	42.808	
2,622.00	2,557.29	2,373.03	2,331.02	12.33	14.83	-175.03	-99.53	-386.95	961.25	939.32	21.93	43.833	
2,715.00	2,647.48	2,455.63	2,411.42	12.81	15.07	179.90	-103.62	-405.43	1,003.98	981.55	22.43	44.760	
2,810.00	2,739.63	2,540.05	2,493.60	13.31	15.33	175.43	-107.80	-424.31	1,047.53	1,024.58	22.95	45.646	
2,904.00	2,830.93	2,623.82	2,575.13	13.80	15.60	172.52	-111.94	-443.05	1,090.13	1,066.66	23.47	46.452	
2,999.00	2,922.99	2,708.10	2,657.18	14.30	15.87	171.89	-116.12	-461.91	1,133.86	1,109.86	24.00	47.242	
3,093.00	3,013.89	2,791.15	2,738.01	14.81	16.15	171.14	-120.23	-480.49	1,177.79	1,153.26	24.53	48.007	
3,187.00	3,104.97	2,874.54	2,819.19	15.31	16.44	169.72	-124.36	-499.15	1,221.04	1,195.97	25.07	48.706	
3,282.00	3,197.19	2,959.16	2,901.55	15.80	16.73	171.18	-128.55	-518.08	1,264.10	1,238.48	25.62	49.347	
3,376.00	3,288.43	3,042.85	2,983.02	16.29	17.03	172.04	-132.69	-536.81	1,306.81	1,280.64	26.16	49.947	
3,470.00	3,379.56	3,126.33	3,064.27	16.79	17.33	172.46	-136.82	-555.48	1,349.95	1,323.24	26.72	50.529	
3,564.00	3,470.75	3,209.91	3,145.63	17.28	17.64	170.67	-140.96	-574.18	1,392.88	1,365.60	27.27	51.074	
3,658.00	3,561.89	3,293.43	3,226.93	17.78	17.95	172.12	-145.10	-592.87	1,435.92	1,408.09	27.83	51.592	
3,752.00	3,652.73	3,376.36	3,307.65	18.29	18.27	174.18	-149.20	-611.42	1,480.12	1,451.72	28.40	52.119	
3,847.00	3,744.45	3,460.00	3,389.07	18.81	18.59	176.60	-153.34	-630.14	1,525.15	1,496.17	28.97	52.641	
3,941.00	3,835.42	3,543.13	3,469.99	19.31	18.91	177.51	-157.46	-648.74	1,569.01	1,539.47	29.54	53.111	
4,026.00	3,917.86	3,618.64	3,543.48	19.76	19.21	178.68	-161.20	-665.63	1,608.05	1,577.99	30.06	53.495	
4,130.00	4,018.80	3,711.17	3,633.55	20.30	19.58	174.96	-165.78	-686.33	1,655.51	1,624.82	30.70	53.927	
4,224.00	4,109.52	3,793.89	3,714.07	20.82	19.92	172.96	-169.87	-704.84	1,700.12	1,668.84	31.28	54.347	
4,318.00	4,199.89	3,875.98	3,793.98	21.36	20.25	172.79	-173.94	-723.20	1,745.85	1,713.98	31.87	54.782	
4,412.00	4,290.67	3,958.81	3,874.61	21.87	20.59	173.16	-178.04	-741.74	1,790.22	1,757.77	32.45	55.162	
4,507.00	4,382.62	4,042.90	3,956.45	22.38	20.94	174.65	-182.20	-760.55	1,834.41	1,801.36	33.05	55.504	
4,601.00	4,473.49	4,125.87	4,037.22	22.90	21.29	174.39	-186.31	-779.11	1,878.56	1,844.91	33.64	55.837	
4,695.00	4,564.59	4,209.27	4,118.40	23.39	21.64	176.61	-190.44	-797.77	1,921.90	1,887.66	34.24	56.133	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 13D-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,789.00	4,655.72	4,292.71	4,199.62	23.89	21.99	178.13	-194.57	-816.44	1,965.19	1,930.35	34.84	56.411	
4,883.00	4,746.85	4,376.13	4,280.82	24.39	22.35	-179.26	-198.70	-835.10	2,008.49	1,973.06	35.44	56.678	
4,978.00	4,839.29	4,461.10	4,363.53	24.87	22.72	178.13	-202.91	-854.11	2,050.99	2,014.94	36.05	56.901	
5,072.00	4,931.05	4,545.76	4,445.94	25.33	23.09	175.90	-207.10	-873.06	2,091.82	2,055.17	36.65	57.076	
5,166.00	5,022.88	4,630.57	4,528.49	25.79	23.46	175.23	-211.30	-892.03	2,132.35	2,095.09	37.26	57.231	
5,260.00	5,114.46	4,714.89	4,610.57	26.26	23.83	174.56	-215.47	-910.90	2,173.88	2,136.01	37.87	57.402	
5,354.00	5,205.69	4,798.54	4,691.99	26.75	24.19	174.55	-219.61	-929.61	2,216.75	2,178.26	38.49	57.599	
5,450.00	5,298.51	4,883.32	4,774.52	27.28	24.57	173.21	-223.81	-948.58	2,261.74	2,222.63	39.11	57.823	
5,543.00	5,388.31	4,965.24	4,854.25	27.79	24.94	174.92	-227.87	-966.91	2,305.74	2,266.02	39.72	58.043	
5,637.00	5,479.24	5,048.33	4,935.14	28.29	25.31	174.69	-231.98	-985.50	2,349.67	2,309.33	40.34	58.244	
5,731.00	5,570.39	5,131.82	5,016.40	28.79	25.68	177.43	-236.11	-1,004.18	2,392.86	2,351.90	40.96	58.419	
5,825.00	5,661.76	5,215.71	5,098.06	29.27	26.06	178.59	-240.27	-1,022.95	2,435.26	2,393.68	41.58	58.567	
5,920.00	5,754.38	5,301.03	5,181.11	29.75	26.45	-179.61	-244.49	-1,042.03	2,477.04	2,434.83	42.21	58.685	
6,014.00	5,846.19	5,385.77	5,263.60	30.21	26.83	179.24	-248.69	-1,060.99	2,517.71	2,474.87	42.83	58.780	
6,109.00	5,939.26	5,472.01	5,347.54	30.65	27.23	179.05	-252.96	-1,080.29	2,557.55	2,514.09	43.46	58.842	
6,203.00	6,031.68	5,558.04	5,431.28	31.07	27.62	178.11	-257.22	-1,099.54	2,595.43	2,551.33	44.09	58.864	
6,297.00	6,124.42	6,215.83	6,081.57	31.47	29.95	177.61	-275.06	-1,179.83	2,624.21	2,576.37	47.84	54.852	
6,392.00	6,218.59	6,291.10	6,156.82	31.83	30.14	172.58	-275.56	-1,181.20	2,638.43	2,590.04	48.39	54.528	
6,486.00	6,312.11	6,384.41	6,250.10	32.16	30.38	165.65	-276.25	-1,183.08	2,649.76	2,600.77	48.99	54.088	
6,580.00	6,405.81	6,477.93	6,343.61	32.47	30.62	173.73	-276.93	-1,184.97	2,659.08	2,609.49	49.59	53.622	
6,674.00	6,499.58	6,571.55	6,437.21	32.77	30.86	170.04	-277.62	-1,186.85	2,667.52	2,617.33	50.19	53.150	
6,768.00	6,593.40	6,665.24	6,530.87	33.06	31.11	159.94	-278.31	-1,188.74	2,675.07	2,624.28	50.79	52.672	
6,863.00	6,688.26	6,759.98	6,625.59	33.35	31.35	164.90	-279.00	-1,190.64	2,681.97	2,630.58	51.39	52.187	
6,957.00	6,782.19	6,853.82	6,719.41	33.62	31.60	171.97	-279.69	-1,192.53	2,687.45	2,635.47	51.99	51.695	
7,051.00	6,876.18	6,947.75	6,813.32	33.87	31.86	134.62	-280.38	-1,194.43	2,690.98	2,638.40	52.58	51.183	
7,145.00	6,970.17	7,041.72	6,907.27	34.10	32.11	67.05	-281.06	-1,196.32	2,693.29	2,640.14	53.15	50.671	
7,334.00	7,159.13	7,230.71	7,096.21	34.53	32.62	9.94	-282.45	-1,200.12	2,693.99	2,639.71	54.28	49.634	
7,428.00	7,253.06	7,324.69	7,190.18	34.73	32.88	12.24	-283.14	-1,202.02	2,692.37	2,637.55	54.83	49.105	
7,522.00	7,346.98	7,418.68	7,284.14	34.94	33.14	17.70	-283.83	-1,203.91	2,690.70	2,635.32	55.38	48.583	
7,617.00	7,441.94	7,513.67	7,379.11	35.16	33.40	-20.80	-284.52	-1,205.82	2,690.09	2,634.14	55.95	48.080	
7,711.00	7,535.92	7,607.67	7,473.08	35.38	33.66	-19.59	-285.21	-1,207.71	2,689.98	2,633.46	56.51	47.598	
7,806.00	7,630.87	7,702.66	7,568.05	35.60	33.93	1.92	-285.91	-1,209.63	2,689.06	2,631.97	57.08	47.106	
7,900.00	7,724.80	7,796.64	7,662.02	35.82	34.19	5.97	-286.60	-1,211.52	2,687.45	2,629.80	57.65	46.618	
7,959.06	7,783.84	7,855.70	7,721.06	35.96	34.36	29.78	-287.03	-1,212.71	2,686.99	2,628.98	58.01	46.320	
7,994.00	7,818.76	7,890.64	7,755.99	36.04	34.46	54.83	-287.29	-1,213.41	2,687.15	2,628.92	58.22	46.153	
8,089.00	7,913.75	7,985.63	7,850.96	36.28	34.73	52.23	-287.98	-1,215.32	2,688.14	2,629.33	58.81	45.707	
8,278.00	8,102.68	8,174.60	8,039.89	36.74	35.27	41.39	-289.37	-1,219.13	2,688.63	2,628.65	59.98	44.823	
8,561.00	8,385.40	8,457.50	8,322.72	37.42	36.09	30.89	-291.44	-1,224.83	2,684.47	2,622.74	61.73	43.486	
8,930.00	8,753.68	8,826.17	8,691.31	38.30	37.17	15.95	-294.14	-1,232.25	2,670.95	2,606.94	64.00	41.731	
8,993.00	8,816.50	8,889.08	8,754.20	38.45	37.35	15.97	-294.60	-1,233.52	2,667.77	2,603.38	64.39	41.431	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 14A-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-141.41	-24.79	-19.78	32.28				
170.00	169.99	163.99	163.99	0.25	2.50	149.33	-24.79	-19.78	33.16	30.40	2.76	12.020	
231.00	230.97	224.57	224.57	0.47	3.93	153.43	-24.86	-19.93	34.61	30.24	4.37	7.921 ES	
262.00	261.95	255.01	255.00	0.59	4.67	164.71	-25.12	-20.51	36.17	31.03	5.14	7.039	
292.00	291.92	284.37	284.34	0.70	5.40	161.67	-25.55	-21.49	38.61	32.74	5.87	6.581	
353.00	352.75	343.60	343.46	0.93	8.05	150.73	-26.98	-24.72	46.02	38.47	7.55	6.092 SF	
445.00	444.28	431.37	430.81	1.27	14.10	156.71	-30.48	-32.58	63.06	53.28	9.78	6.449	
536.00	534.44	515.62	514.18	1.62	22.93	164.79	-35.35	-43.56	87.31	75.59	11.72	7.452	
630.00	626.87	600.00	597.08	2.02	34.73	167.83	-41.73	-57.93	120.74	107.20	13.54	8.916	
724.00	718.61	683.24	678.40	2.45	35.64	166.14	-48.95	-74.18	159.89	146.26	13.63	11.732	
819.00	810.83	768.62	761.81	2.91	35.65	160.57	-56.37	-90.88	201.05	187.13	13.92	14.445	
913.00	901.45	852.03	843.28	3.39	35.66	163.75	-63.61	-107.19	243.90	229.57	14.33	17.020	
1,007.00	991.42	934.37	923.72	3.92	35.67	162.39	-70.77	-123.30	288.79	273.98	14.81	19.506	
1,101.00	1,081.58	1,017.02	1,004.44	4.44	35.69	167.33	-77.94	-139.46	333.27	318.00	15.27	21.823	
1,195.00	1,172.56	1,101.00	1,086.48	4.93	35.72	171.51	-85.24	-155.89	375.41	359.72	15.69	23.934	
1,289.00	1,264.08	1,185.92	1,169.43	5.40	35.75	170.50	-92.62	-172.50	415.68	399.59	16.09	25.828	
1,384.00	1,356.59	1,271.81	1,253.33	5.88	35.79	171.42	-100.08	-189.30	456.26	439.73	16.53	27.608	
1,478.00	1,448.11	1,356.75	1,336.30	6.35	35.83	169.21	-107.46	-205.91	496.48	479.52	16.96	29.269	
1,573.00	1,540.86	1,443.11	1,420.66	6.82	35.87	168.76	-114.96	-222.80	536.01	518.60	17.41	30.779	
1,667.00	1,632.86	1,528.98	1,504.55	7.27	35.92	171.76	-122.42	-239.60	574.22	556.36	17.86	32.154	
1,761.00	1,724.81	1,614.74	1,588.32	7.72	35.98	172.35	-129.87	-256.37	612.71	594.40	18.31	33.471	
1,855.00	1,816.45	1,699.89	1,671.50	8.18	36.04	172.83	-137.27	-273.03	652.51	633.75	18.76	34.774	
1,949.00	1,907.72	1,784.36	1,754.01	8.67	36.10	171.80	-144.60	-289.55	693.75	674.51	19.24	36.065	
2,044.00	1,999.54	1,869.01	1,836.70	9.18	36.17	169.45	-151.96	-306.11	736.82	717.09	19.73	37.344	
2,138.00	2,090.09	1,952.24	1,917.99	9.70	36.24	171.71	-159.19	-322.39	780.49	760.26	20.23	38.588	
2,232.00	2,180.65	2,035.46	1,999.29	10.22	36.32	170.99	-166.42	-338.67	824.16	803.44	20.72	39.777	
2,326.00	2,271.24	2,118.75	2,080.65	10.74	36.40	172.43	-173.65	-354.96	867.72	846.50	21.22	40.899	
2,420.00	2,361.89	2,202.07	2,162.04	11.26	36.48	176.44	-180.89	-371.25	911.23	889.52	21.71	41.981	
2,527.00	2,465.28	2,297.23	2,254.99	11.83	36.59	177.80	-189.16	-389.87	960.11	937.87	22.25	43.158	
2,622.00	2,557.29	2,382.06	2,337.86	12.33	36.68	179.16	-196.53	-406.46	1,002.82	980.09	22.73	44.120	
2,715.00	2,647.48	2,465.37	2,419.24	12.81	36.78	174.13	-203.76	-422.75	1,044.15	1,020.92	23.23	44.957	
2,810.00	2,739.63	2,550.59	2,502.48	13.31	36.89	169.70	-211.17	-439.42	1,086.11	1,062.35	23.76	45.720	
2,904.00	2,830.93	2,635.19	2,585.13	13.80	37.00	166.84	-218.52	-455.97	1,127.01	1,102.72	24.30	46.388	
2,999.00	2,922.99	2,720.37	2,668.33	14.30	37.11	166.15	-225.92	-472.63	1,168.96	1,144.10	24.86	47.030	
3,093.00	3,013.89	2,804.33	2,750.35	14.81	37.23	165.44	-233.21	-489.05	1,211.10	1,185.69	25.42	47.649	
3,187.00	3,104.97	2,888.64	2,832.70	15.31	37.35	164.04	-240.53	-505.55	1,252.52	1,226.54	25.98	48.206	
3,282.00	3,197.19	2,974.17	2,916.25	15.80	37.48	165.52	-247.96	-522.28	1,293.73	1,267.18	26.56	48.715	
3,376.00	3,288.43	3,058.76	2,998.87	16.29	37.61	166.35	-255.31	-538.82	1,334.64	1,307.51	27.13	49.199	
3,470.00	3,379.56	3,143.12	3,081.29	16.79	37.74	166.77	-262.64	-555.32	1,376.01	1,348.30	27.70	49.674	
3,564.00	3,470.75	3,227.61	3,163.81	17.28	37.88	165.01	-269.98	-571.85	1,417.12	1,388.84	28.28	50.115	
3,658.00	3,561.89	3,312.03	3,246.28	17.78	38.02	166.43	-277.31	-588.36	1,458.35	1,429.49	28.86	50.534	
3,752.00	3,652.73	3,395.87	3,328.18	18.29	38.17	168.43	-284.60	-604.76	1,500.78	1,471.34	29.44	50.973	
3,847.00	3,744.45	3,480.41	3,410.75	18.81	38.32	170.89	-291.94	-621.29	1,544.10	1,514.07	30.03	51.421	
3,941.00	3,835.42	3,564.38	3,492.79	19.31	38.47	171.80	-299.23	-637.72	1,586.32	1,555.72	30.60	51.834	
4,026.00	3,917.86	3,640.62	3,567.25	19.76	38.62	173.01	-305.86	-652.63	1,623.91	1,592.79	31.12	52.175	
4,130.00	4,018.80	3,734.06	3,658.54	20.30	38.79	169.30	-313.97	-670.91	1,669.55	1,637.78	31.77	52.554	
4,224.00	4,109.52	3,817.69	3,740.23	20.82	38.96	167.23	-321.24	-687.27	1,712.40	1,680.04	32.37	52.908	
4,318.00	4,199.89	3,900.75	3,821.35	21.36	39.12	167.10	-328.45	-703.51	1,756.34	1,723.37	32.97	53.274	
4,412.00	4,290.67	3,984.50	3,903.17	21.87	39.30	167.54	-335.73	-719.89	1,798.93	1,765.36	33.57	53.591	
4,507.00	4,382.62	4,069.49	3,986.19	22.38	39.47	169.00	-343.11	-736.52	1,841.35	1,807.17	34.17	53.880	
4,601.00	4,473.49	4,153.36	4,068.11	22.90	39.65	168.75	-350.40	-752.92	1,883.76	1,848.99	34.78	54.164	
4,695.00	4,564.59	4,237.62	4,150.42	23.39	39.83	171.02	-357.72	-769.40	1,925.40	1,890.02	35.38	54.420	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 14A-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,321.88	4,232.74	23.89	40.02	172.48	-365.04	-785.88	1,967.05	1,931.07	35.98	54.670	
4,883.00	4,746.85	4,406.11	4,315.01	24.39	40.21	175.12	-372.36	-802.36	2,008.78	1,972.20	36.58	54.915	
4,978.00	4,839.29	4,491.86	4,398.77	24.87	40.41	172.56	-379.80	-819.13	2,049.68	2,012.50	37.19	55.121	
5,072.00	4,931.05	4,577.30	4,482.23	25.33	40.61	170.39	-387.23	-835.84	2,088.86	2,051.07	37.79	55.274	
5,166.00	5,022.88	4,662.90	4,565.85	25.79	40.81	169.69	-394.66	-852.59	2,127.69	2,089.29	38.40	55.405	
5,260.00	5,114.46	4,748.04	4,649.02	26.26	41.01	168.99	-402.06	-869.24	2,167.51	2,128.49	39.02	55.549	
5,354.00	5,205.69	4,832.55	4,731.57	26.75	41.22	168.93	-409.40	-885.77	2,208.64	2,169.00	39.64	55.716	
5,450.00	5,298.51	4,918.26	4,815.30	27.28	41.43	167.58	-416.85	-902.53	2,251.84	2,211.56	40.28	55.906	
5,543.00	5,388.31	5,001.09	4,896.20	27.79	41.64	169.28	-424.04	-918.73	2,294.10	2,253.20	40.90	56.094	
5,637.00	5,479.24	5,085.07	4,978.24	28.29	41.86	169.10	-431.34	-935.16	2,336.29	2,294.77	41.52	56.266	
5,731.00	5,570.39	5,169.41	5,060.62	28.79	42.07	171.83	-438.66	-951.66	2,377.79	2,335.65	42.15	56.419	
5,825.00	5,661.76	5,254.10	5,143.35	29.27	42.30	173.03	-446.02	-968.22	2,418.56	2,375.79	42.77	56.552	
5,920.00	5,754.38	5,340.19	5,227.44	29.75	42.53	174.84	-453.50	-985.06	2,458.74	2,415.35	43.39	56.662	
6,014.00	5,846.19	5,425.67	5,310.95	30.21	42.76	173.71	-460.92	-1,001.78	2,497.82	2,453.81	44.01	56.750	
6,109.00	5,939.26	5,512.64	5,395.90	30.65	42.99	173.56	-468.48	-1,018.79	2,536.05	2,491.41	44.64	56.807	
6,203.00	6,031.68	5,599.36	5,480.61	31.07	43.23	172.65	-476.01	-1,035.75	2,572.30	2,527.04	45.27	56.825	
6,297.00	6,124.42	5,686.79	5,566.02	31.47	43.48	172.16	-483.61	-1,052.86	2,606.81	2,560.92	45.89	56.804	
6,392.00	6,218.59	5,776.24	5,653.39	31.83	43.73	167.08	-491.38	-1,070.35	2,638.79	2,592.27	46.52	56.722	
6,486.00	6,312.11	5,865.72	5,740.80	32.16	43.98	160.08	-499.15	-1,087.85	2,667.56	2,620.41	47.15	56.582	
6,580.00	6,405.81	5,955.80	5,828.79	32.47	44.24	168.31	-506.98	-1,105.47	2,694.44	2,646.67	47.77	56.408	
6,674.00	6,499.58	6,000.00	6,466.09	32.77	45.78	164.57	-539.01	-1,177.67	2,717.92	2,666.57	51.35	52.929	
6,768.00	6,593.40	6,666.08	6,532.16	33.06	45.89	154.49	-539.42	-1,178.81	2,724.96	2,673.11	51.84	52.560	
6,863.00	6,688.26	6,750.50	6,616.56	33.35	46.05	159.45	-540.12	-1,180.72	2,731.95	2,679.54	52.41	52.127	
6,957.00	6,782.19	6,844.32	6,710.35	33.62	46.22	166.55	-540.89	-1,182.85	2,737.61	2,684.61	53.00	51.652	
7,051.00	6,876.18	6,938.25	6,804.25	33.87	46.40	129.20	-541.67	-1,184.98	2,741.34	2,687.76	53.59	51.159	
7,145.00	6,970.17	7,032.21	6,898.18	34.10	46.58	61.64	-542.44	-1,187.11	2,743.84	2,689.68	54.16	50.665	
7,334.00	7,159.13	7,221.20	7,087.12	34.53	46.94	4.53	-544.00	-1,191.39	2,744.98	2,689.71	55.27	49.666	
7,428.00	7,253.06	7,315.19	7,181.08	34.73	47.12	6.83	-544.78	-1,193.52	2,743.58	2,687.77	55.81	49.156	
7,522.00	7,346.98	7,409.17	7,275.04	34.94	47.31	12.28	-545.55	-1,195.65	2,742.11	2,685.75	56.36	48.652	
7,599.71	7,424.66	7,486.88	7,352.72	35.12	47.46	-17.51	-546.19	-1,197.41	2,741.77	2,684.95	56.82	48.254	
7,617.00	7,441.94	7,504.17	7,370.01	35.16	47.50	-26.21	-546.34	-1,197.80	2,741.79	2,684.87	56.92	48.169	
7,711.00	7,535.92	7,598.16	7,463.97	35.38	47.69	-25.01	-547.11	-1,199.93	2,742.03	2,684.55	57.48	47.707	
7,806.00	7,630.87	7,693.16	7,558.94	35.60	47.88	-3.50	-547.89	-1,202.08	2,741.43	2,683.39	58.04	47.235	
7,900.00	7,724.80	7,787.15	7,652.90	35.82	48.07	0.54	-548.67	-1,204.21	2,740.08	2,681.49	58.60	46.763	
7,951.51	7,776.29	7,838.66	7,704.40	35.94	48.17	20.10	-549.10	-1,205.38	2,739.75	2,680.85	58.91	46.510	
7,994.00	7,818.76	7,881.14	7,746.87	36.04	48.26	49.40	-549.45	-1,206.34	2,739.98	2,680.81	59.16	46.311	
8,089.00	7,913.75	7,976.13	7,841.83	36.28	48.46	46.80	-550.23	-1,208.49	2,741.12	2,681.37	59.75	45.877	
8,278.00	8,102.68	8,165.10	8,030.75	36.74	48.86	35.96	-551.79	-1,212.78	2,741.86	2,680.94	60.91	45.012	
8,561.00	8,385.40	8,448.01	8,313.58	37.42	49.46	25.44	-554.12	-1,219.19	2,737.89	2,675.23	62.65	43.699	
8,930.00	8,753.68	8,816.72	8,682.18	38.30	50.27	10.47	-557.16	-1,227.54	2,724.72	2,659.81	64.91	41.974	
8,993.00	8,816.50	8,879.64	8,745.08	38.45	50.41	10.48	-557.68	-1,228.97	2,721.63	2,656.33	65.30	41.679	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 14C-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-144.89	-31.72	-22.30	39.24				
170.00	169.99	163.99	163.99	0.25	2.50	145.71	-31.72	-22.30	40.16	37.40	2.76	14.557	
231.00	230.97	224.97	224.97	0.47	3.86	149.61	-31.72	-22.30	41.41	37.07	4.34	9.547 ES	
262.00	261.95	255.95	255.95	0.59	4.51	160.48	-31.72	-22.30	42.36	37.26	5.10	8.313	
292.00	291.92	285.92	285.92	0.70	5.13	156.88	-31.72	-22.30	43.75	37.92	5.83	7.501	
353.00	352.75	346.75	346.75	0.93	6.38	144.69	-31.72	-22.30	47.56	40.26	7.31	6.511	
445.00	444.28	438.28	438.28	1.27	8.25	149.77	-31.72	-22.30	55.40	45.89	9.51	5.825	
536.00	534.44	527.48	527.48	1.62	10.08	158.30	-31.85	-22.45	66.69	55.01	11.68	5.709 SF	
630.00	626.87	615.78	615.70	2.02	11.68	162.21	-34.07	-24.91	86.21	72.80	13.41	6.427	
724.00	718.61	700.00	699.63	2.45	11.70	161.15	-38.72	-30.08	113.21	99.93	13.28	8.526	
819.00	810.83	784.82	783.77	2.91	11.71	156.02	-45.90	-38.06	145.83	132.22	13.61	10.715	
913.00	901.45	864.07	861.87	3.39	11.73	159.06	-54.86	-48.02	183.74	169.83	13.92	13.205	
1,007.00	991.42	939.65	935.78	3.92	11.77	157.37	-65.42	-59.75	226.92	212.72	14.20	15.976	
1,101.00	1,081.58	1,012.56	1,008.43	4.44	11.81	161.90	-77.45	-73.12	272.75	258.30	14.45	18.872	
1,195.00	1,172.56	1,090.80	1,081.62	4.93	11.88	165.60	-91.91	-89.18	318.78	304.02	14.76	21.598	
1,289.00	1,264.08	1,173.58	1,161.13	5.40	11.97	164.03	-107.33	-106.31	363.28	348.14	15.13	24.004	
1,384.00	1,356.59	1,257.32	1,241.56	5.88	12.07	164.45	-122.93	-123.64	408.11	392.57	15.54	26.267	
1,478.00	1,448.11	1,340.16	1,321.13	6.35	12.19	161.87	-138.36	-140.79	452.52	436.57	15.95	28.372	
1,573.00	1,540.86	1,424.48	1,402.11	6.82	12.33	161.16	-154.07	-158.24	496.27	479.90	16.37	30.308	
1,667.00	1,632.86	1,508.33	1,482.64	7.27	12.49	163.89	-169.69	-175.59	538.74	521.94	16.81	32.057	
1,761.00	1,724.81	1,592.00	1,563.00	7.72	12.66	164.18	-185.27	-192.91	581.55	564.30	17.25	33.708	
1,855.00	1,816.45	1,675.01	1,642.73	8.18	12.85	164.36	-200.73	-210.09	625.63	607.91	17.72	35.315	
1,949.00	1,907.72	1,757.31	1,721.78	8.67	13.05	163.09	-216.06	-227.12	671.04	652.85	18.19	36.892	
2,044.00	1,999.54	1,839.79	1,801.00	9.18	13.26	160.50	-231.43	-244.19	718.17	699.49	18.68	38.446	
2,138.00	2,090.09	1,920.85	1,878.84	9.70	13.48	162.66	-246.53	-260.97	765.77	746.60	19.17	39.940	
2,232.00	2,180.65	2,001.88	1,956.67	10.22	13.71	161.89	-261.62	-277.74	813.41	793.74	19.67	41.352	
2,326.00	2,271.24	2,082.97	2,034.55	10.74	13.95	163.25	-276.72	-294.52	860.95	840.77	20.18	42.671	
2,420.00	2,361.89	2,164.00	2,112.38	11.26	14.21	167.29	-291.82	-311.29	908.59	887.90	20.69	43.920	
2,527.00	2,465.28	2,256.37	2,201.10	11.83	14.51	173.09	-309.02	-330.41	962.51	941.24	21.27	45.256	
2,622.00	2,557.29	2,338.69	2,280.17	12.33	14.79	169.99	-324.36	-347.45	1,009.81	988.02	21.79	46.346	
2,715.00	2,647.48	2,419.70	2,357.97	12.81	15.07	164.85	-339.45	-364.21	1,055.45	1,033.14	22.31	47.308	
2,810.00	2,739.63	2,502.75	2,437.73	13.31	15.37	160.31	-354.92	-381.40	1,101.58	1,078.73	22.86	48.196	
2,904.00	2,830.93	2,585.33	2,517.05	13.80	15.68	157.41	-370.30	-398.49	1,146.46	1,123.05	23.41	48.976	
2,999.00	2,922.99	2,668.53	2,596.96	14.30	15.99	156.51	-385.80	-415.71	1,192.27	1,168.29	23.98	49.720	
3,093.00	3,013.89	2,750.55	2,675.73	14.81	16.31	155.81	-401.08	-432.68	1,238.13	1,213.58	24.55	50.430	
3,187.00	3,104.97	2,832.97	2,754.90	15.31	16.64	154.38	-416.43	-449.74	1,283.25	1,258.12	25.13	51.070	
3,282.00	3,197.19	2,916.61	2,835.23	15.80	16.97	155.87	-432.01	-467.05	1,328.24	1,302.53	25.71	51.653	
3,376.00	3,288.43	2,999.29	2,914.64	16.29	17.31	156.58	-447.41	-484.16	1,372.94	1,346.63	26.30	52.199	
3,470.00	3,379.56	3,081.72	2,993.81	16.79	17.66	156.97	-462.77	-501.23	1,418.07	1,391.18	26.89	52.727	
3,564.00	3,470.75	3,164.31	3,073.13	17.28	18.01	155.17	-478.15	-518.32	1,462.93	1,435.44	27.49	53.214	
3,658.00	3,561.89	3,246.84	3,152.40	17.78	18.37	156.53	-493.52	-535.40	1,507.88	1,479.78	28.09	53.673	
3,752.00	3,652.73	3,328.71	3,231.03	18.29	18.73	158.39	-508.77	-552.34	1,554.03	1,525.33	28.70	54.145	
3,847.00	3,744.45	3,411.16	3,310.23	18.81	19.09	160.92	-524.13	-569.41	1,601.19	1,571.88	29.31	54.622	
3,941.00	3,835.42	3,493.04	3,388.87	19.31	19.46	161.85	-539.38	-586.35	1,647.37	1,617.45	29.92	55.060	
4,026.00	3,917.86	3,567.36	3,460.24	19.76	19.79	163.11	-553.23	-601.73	1,688.62	1,658.15	30.47	55.421	
4,130.00	4,018.80	3,658.52	3,547.80	20.30	20.21	159.30	-570.21	-620.60	1,738.67	1,707.53	31.15	55.821	
4,224.00	4,109.52	3,740.15	3,626.20	20.82	20.59	156.97	-585.41	-637.49	1,785.24	1,753.47	31.77	56.189	
4,318.00	4,199.89	3,821.22	3,704.07	21.36	20.96	156.88	-600.51	-654.27	1,832.74	1,800.34	32.40	56.563	
4,412.00	4,290.67	3,903.03	3,782.64	21.87	21.35	157.45	-615.75	-671.20	1,879.00	1,845.97	33.03	56.888	
4,507.00	4,382.62	3,986.02	3,862.35	22.38	21.74	158.85	-631.21	-688.38	1,925.22	1,891.55	33.67	57.183	
4,601.00	4,473.49	4,067.89	3,940.98	22.90	22.13	158.57	-646.46	-705.32	1,971.40	1,937.09	34.30	57.471	
4,695.00	4,564.59	4,150.13	4,019.97	23.39	22.53	160.96	-661.78	-722.34	2,016.90	1,981.97	34.94	57.732	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 14C-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,232.32	4,098.90	23.89	22.92	162.29	-677.09	-739.35	2,062.53	2,026.96	35.57	57.985	
4,883.00	4,746.85	4,314.39	4,177.73	24.39	23.32	165.07	-692.38	-756.34	2,108.34	2,072.13	36.20	58.236	
4,978.00	4,839.29	4,397.99	4,258.02	24.87	23.73	162.52	-707.95	-773.64	2,153.44	2,116.60	36.84	58.449	
5,072.00	4,931.05	4,481.42	4,338.15	25.33	24.14	160.39	-723.49	-790.91	2,196.74	2,159.26	37.48	58.608	
5,166.00	5,022.88	4,565.06	4,418.49	25.79	24.56	159.59	-739.07	-808.22	2,239.63	2,201.50	38.13	58.743	
5,260.00	5,114.46	4,648.25	4,498.39	26.26	24.97	158.78	-754.57	-825.43	2,283.40	2,244.62	38.78	58.888	
5,354.00	5,205.69	4,730.78	4,577.66	26.75	25.38	158.59	-769.94	-842.52	2,328.38	2,288.95	39.43	59.053	
5,450.00	5,298.51	4,814.48	4,658.05	27.28	25.80	157.16	-785.53	-859.84	2,375.36	2,335.26	40.10	59.237	
5,543.00	5,388.31	4,895.35	4,735.71	27.79	26.21	158.86	-800.59	-876.57	2,421.28	2,380.53	40.75	59.417	
5,637.00	5,479.24	4,977.33	4,814.46	28.29	26.62	158.75	-815.86	-893.54	2,467.24	2,425.84	41.41	59.584	
5,731.00	5,570.39	5,059.64	4,893.51	28.79	27.04	161.51	-831.20	-910.58	2,512.64	2,470.57	42.06	59.733	
5,825.00	5,661.76	5,142.27	4,972.87	29.27	27.46	162.79	-846.59	-927.68	2,557.45	2,514.74	42.72	59.867	
5,920.00	5,754.38	5,226.23	5,053.51	29.75	27.89	164.66	-862.23	-945.06	2,601.87	2,558.49	43.38	59.980	
6,014.00	5,846.19	5,309.63	5,133.61	30.21	28.32	163.53	-877.76	-962.32	2,645.20	2,601.17	44.03	60.074	
6,109.00	5,939.26	5,394.54	5,215.16	30.65	28.75	163.48	-893.58	-979.89	2,687.77	2,643.07	44.69	60.136	
6,203.00	6,031.68	5,479.28	5,296.56	31.07	29.19	162.59	-909.36	-997.43	2,728.38	2,683.03	45.35	60.162	
6,297.00	6,124.42	5,564.80	5,378.69	31.47	29.63	162.18	-925.29	-1,015.13	2,767.31	2,721.31	46.01	60.151	
6,392.00	6,218.59	5,652.43	5,462.86	31.83	30.09	157.20	-941.62	-1,033.26	2,803.85	2,757.19	46.67	60.082	
6,486.00	6,312.11	5,740.28	5,547.23	32.16	30.54	150.21	-957.98	-1,051.44	2,837.17	2,789.85	47.32	59.957	
6,580.00	6,405.81	5,828.73	5,632.18	32.47	31.00	158.49	-974.46	-1,069.75	2,868.73	2,820.76	47.97	59.801	
6,674.00	6,499.58	5,917.40	5,717.34	32.77	31.47	154.63	-990.97	-1,088.10	2,899.61	2,850.99	48.62	59.636	
6,768.00	6,593.40	6,001.43	5,808.89	33.06	31.94	144.39	-1,067.27	-1,113.83	2,909.92	2,856.71	53.21	54.685	
6,863.00	6,688.26	6,084.00	5,894.43	33.35	32.41	149.37	-1,068.04	-1,115.95	2,916.53	2,862.74	53.79	54.220	
6,957.00	6,782.19	6,167.82	5,989.22	33.62	32.88	156.50	-1,068.83	-1,118.11	2,921.97	2,867.60	54.37	53.747	
7,051.00	6,876.18	6,251.74	6,064.12	33.87	33.35	119.17	-1,069.61	-1,120.26	2,925.56	2,870.63	54.93	53.258	
7,145.00	6,970.17	6,335.70	6,149.05	34.10	33.81	51.62	-1,070.40	-1,122.42	2,927.90	2,872.42	55.48	52.770	
7,239.00	7,064.16	6,419.69	6,234.04	34.33	34.28	-5.48	-1,071.97	-1,124.75	2,928.95	2,872.40	56.56	51.787	
7,334.00	7,159.13	6,500.68	6,319.94	34.53	34.70	-3.19	-1,072.76	-1,127.91	2,927.57	2,870.49	57.08	51.285	
7,428.00	7,253.06	6,581.68	6,405.90	34.73	35.17	2.26	-1,073.54	-1,131.06	2,926.08	2,868.47	57.61	50.787	
7,522.00	7,346.98	6,662.67	6,491.90	34.94	35.64	-21.23	-1,074.08	-1,134.54	2,925.78	2,867.80	57.98	50.460	
7,617.00	7,441.94	6,743.66	6,577.87	35.16	36.11	-36.24	-1,074.34	-1,138.24	2,925.85	2,867.69	58.16	50.310	
7,711.00	7,535.92	6,824.66	6,663.84	35.38	36.58	-35.03	-1,075.12	-1,141.40	2,926.31	2,867.61	58.70	49.854	
7,806.00	7,630.87	6,905.65	6,749.80	35.60	37.05	-13.52	-1,075.92	-1,144.58	2,925.88	2,866.63	59.24	49.388	
7,900.00	7,724.80	6,986.64	6,835.77	35.82	37.52	-9.48	-1,076.70	-1,147.74	2,924.63	2,864.84	59.78	48.920	
7,995.81	7,818.76	7,067.64	6,921.73	35.95	37.99	12.44	-1,077.17	-1,150.92	2,924.29	2,864.18	60.11	48.648	
7,994.00	7,818.76	7,067.64	6,921.73	36.04	38.06	39.37	-1,077.49	-1,154.10	2,924.45	2,864.11	60.34	48.470	
8,089.00	7,913.75	8,049.62	7,836.69	36.28	38.53	36.77	-1,078.28	-1,157.28	2,925.41	2,864.51	60.90	48.034	
8,278.00	8,102.68	8,238.59	8,025.61	36.74	39.00	25.93	-1,079.86	-1,160.46	2,925.71	2,863.68	62.03	47.165	
8,561.00	8,385.40	8,521.51	8,308.44	37.42	39.68	15.39	-1,082.22	-1,164.90	2,920.90	2,857.18	63.72	45.841	
8,930.00	8,753.68	8,890.22	8,677.04	38.30	40.20	0.35	-1,085.30	-1,169.36	2,907.02	2,841.11	65.91	44.103	
8,993.00	8,816.50	8,953.14	8,739.94	38.45	40.38	0.35	-1,085.82	-1,172.80	2,903.87	2,837.58	66.29	43.806	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 14D-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-147.24	-38.74	-24.92	46.45				
170.00	169.99	163.99	163.99	0.25	2.50	143.20	-38.74	-24.92	47.41	44.65	2.76	17.185	
231.00	230.97	224.97	224.97	0.47	3.86	147.00	-38.74	-24.92	48.62	44.28	4.34	11.210 ES	
262.00	261.95	255.95	255.95	0.59	4.51	157.84	-38.74	-24.92	49.55	44.46	5.10	9.724	
292.00	291.92	285.92	285.92	0.70	5.13	154.21	-38.74	-24.92	50.91	45.08	5.83	8.730	
353.00	352.75	346.75	346.75	0.93	6.38	141.84	-38.74	-24.92	54.62	47.31	7.30	7.477	
445.00	444.28	437.07	437.06	1.27	8.27	146.55	-39.01	-25.16	62.55	53.04	9.51	6.578 SF	
536.00	534.44	523.58	523.50	1.62	10.66	154.59	-41.73	-27.57	77.09	65.39	11.69	6.594	
630.00	626.87	610.42	610.00	2.02	14.34	157.96	-47.41	-32.60	100.69	87.17	13.51	7.451	
724.00	718.61	694.14	692.98	2.45	16.27	156.57	-55.66	-39.92	131.42	117.91	13.51	9.724	
819.00	810.83	775.71	773.29	2.91	16.43	151.04	-66.31	-49.35	167.41	153.53	13.88	12.059	
913.00	901.45	852.91	848.67	3.39	16.44	153.86	-78.74	-60.37	208.28	194.01	14.27	14.598	
1,007.00	991.42	926.38	919.74	3.92	16.47	152.04	-92.69	-72.73	254.12	239.50	14.62	17.384	
1,101.00	1,081.58	997.74	988.03	4.44	16.50	156.72	-108.17	-86.45	302.47	287.57	14.90	20.298	
1,195.00	1,172.56	1,078.75	1,065.16	4.93	16.56	160.60	-126.71	-102.88	350.14	334.89	15.26	22.949	
1,289.00	1,264.08	1,160.69	1,143.18	5.40	16.63	159.13	-145.45	-119.49	396.18	380.56	15.62	25.366	
1,384.00	1,356.59	1,243.58	1,222.10	5.88	16.72	159.54	-164.42	-136.30	442.57	426.55	16.01	27.638	
1,478.00	1,448.11	1,325.60	1,300.19	6.35	16.82	157.01	-183.18	-152.93	488.49	472.07	16.42	29.752	
1,573.00	1,540.86	1,409.10	1,379.70	6.82	16.93	156.35	-202.29	-169.86	533.77	516.92	16.84	31.694	
1,667.00	1,632.86	1,492.14	1,458.76	7.27	17.06	159.11	-221.28	-186.69	577.81	560.54	17.27	33.461	
1,761.00	1,724.81	1,574.97	1,537.63	7.72	17.20	159.37	-240.23	-203.48	622.21	604.50	17.71	35.137	
1,855.00	1,816.45	1,657.13	1,615.86	8.18	17.35	159.51	-259.03	-220.14	667.86	649.69	18.17	36.760	
1,949.00	1,907.72	1,738.58	1,693.41	8.67	17.51	158.21	-277.66	-236.66	714.78	696.14	18.64	38.339	
2,044.00	1,999.54	1,820.23	1,771.15	9.18	17.69	155.57	-296.35	-253.21	763.33	744.19	19.14	39.875	
2,138.00	2,090.09	1,900.46	1,847.54	9.70	17.87	157.75	-314.70	-269.48	812.29	792.65	19.65	41.343	
2,232.00	2,180.65	1,980.66	1,923.90	10.22	18.06	157.01	-333.05	-285.74	861.31	841.16	20.16	42.732	
2,326.00	2,271.24	2,060.92	2,000.31	10.74	18.27	158.39	-351.41	-302.01	910.25	889.58	20.67	44.034	
2,420.00	2,361.89	2,141.07	2,076.63	11.26	18.48	162.48	-369.75	-318.26	959.36	938.17	21.19	45.281	
2,527.00	2,465.28	2,232.34	2,163.54	11.83	18.74	168.37	-390.63	-336.77	1,015.12	993.36	21.76	46.641	
2,622.00	2,557.29	2,313.68	2,240.98	12.33	18.98	165.30	-409.24	-353.26	1,064.11	1,041.83	22.28	47.761	
2,715.00	2,647.48	2,393.79	2,317.25	12.81	19.22	160.16	-427.57	-369.50	1,111.32	1,088.52	22.80	48.738	
2,810.00	2,739.63	2,475.99	2,395.51	13.31	19.48	155.62	-446.37	-386.16	1,158.95	1,135.59	23.36	49.621	
2,904.00	2,830.93	2,557.79	2,473.40	13.80	19.74	152.75	-465.09	-402.75	1,205.24	1,181.32	23.92	50.389	
2,999.00	2,922.99	2,640.24	2,551.90	14.30	20.02	151.75	-483.95	-419.46	1,252.39	1,227.89	24.50	51.113	
3,093.00	3,013.89	2,721.51	2,629.29	14.81	20.30	151.09	-502.55	-435.94	1,299.54	1,274.45	25.09	51.796	
3,187.00	3,104.97	2,803.22	2,707.09	15.31	20.59	149.67	-521.24	-452.51	1,345.95	1,320.27	25.68	52.411	
3,282.00	3,197.19	2,886.14	2,786.03	15.80	20.89	151.18	-540.21	-469.32	1,392.26	1,365.98	26.28	52.972	
3,376.00	3,288.43	2,968.09	2,864.06	16.29	21.20	151.86	-558.96	-485.93	1,438.28	1,411.40	26.88	53.499	
3,470.00	3,379.56	3,049.78	2,941.84	16.79	21.51	152.25	-577.65	-502.50	1,484.74	1,457.25	27.49	54.010	
3,564.00	3,470.75	3,131.64	3,019.78	17.28	21.83	150.46	-596.38	-519.09	1,530.91	1,502.81	28.10	54.481	
3,658.00	3,561.89	3,213.45	3,097.68	17.78	22.15	151.79	-615.09	-535.68	1,577.15	1,548.44	28.72	54.923	
3,752.00	3,652.73	3,294.58	3,174.92	18.29	22.47	153.60	-633.65	-552.13	1,624.60	1,595.26	29.34	55.377	
3,847.00	3,744.45	3,376.25	3,252.68	18.81	22.81	156.17	-652.34	-568.69	1,673.11	1,643.15	29.96	55.839	
3,941.00	3,835.42	3,457.32	3,329.87	19.31	23.15	157.12	-670.89	-585.12	1,720.68	1,690.10	30.58	56.270	
4,026.00	3,917.86	3,530.89	3,399.92	19.76	23.46	158.42	-687.72	-600.04	1,763.24	1,732.11	31.14	56.631	
4,130.00	4,018.80	3,621.17	3,485.87	20.30	23.84	154.59	-708.37	-618.34	1,814.88	1,783.06	31.82	57.028	
4,224.00	4,109.52	3,702.04	3,562.88	20.82	24.19	152.15	-726.88	-634.74	1,862.74	1,830.28	32.46	57.381	
4,318.00	4,199.89	3,782.39	3,639.38	21.36	24.55	152.09	-745.26	-651.03	1,911.46	1,878.35	33.11	57.732	
4,412.00	4,290.67	3,863.46	3,716.57	21.87	24.91	152.73	-763.81	-667.47	1,958.98	1,925.23	33.75	58.041	
4,507.00	4,382.62	3,945.69	3,794.86	22.38	25.28	154.11	-782.62	-684.14	2,006.53	1,972.13	34.40	58.325	
4,601.00	4,473.49	4,026.80	3,872.09	22.90	25.65	153.83	-801.17	-700.58	2,054.03	2,018.98	35.05	58.603	
4,695.00	4,564.59	4,108.27	3,949.66	23.39	26.02	156.29	-819.81	-717.10	2,100.91	2,065.21	35.70	58.857	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 14D-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,189.65	4,027.14	23.89	26.40	157.56	-838.43	-733.60	2,147.95	2,111.61	36.34	59.108	
4,883.00	4,746.85	4,270.89	4,104.49	24.39	26.78	160.40	-857.02	-750.07	2,195.23	2,158.25	36.98	59.359	
4,978.00	4,839.29	4,353.64	4,183.29	24.87	27.17	157.87	-875.95	-766.85	2,241.86	2,204.23	37.63	59.576	
5,072.00	4,931.05	4,436.27	4,261.96	25.33	27.56	155.79	-894.86	-783.60	2,286.66	2,248.39	38.28	59.740	
5,166.00	5,022.88	4,519.14	4,340.86	25.79	27.96	154.96	-913.81	-800.40	2,331.03	2,292.10	38.93	59.878	
5,260.00	5,114.46	4,601.56	4,419.34	26.26	28.36	154.11	-932.67	-817.11	2,376.23	2,336.64	39.59	60.021	
5,354.00	5,205.69	4,683.34	4,497.20	26.75	28.76	153.86	-951.38	-833.69	2,422.57	2,382.32	40.26	60.180	
5,450.00	5,298.51	4,766.28	4,576.17	27.28	29.16	152.40	-970.36	-850.51	2,470.89	2,429.95	40.94	60.352	
5,543.00	5,388.31	4,846.40	4,652.45	27.79	29.56	154.10	-988.69	-866.75	2,518.08	2,476.47	41.61	60.521	
5,637.00	5,479.24	4,927.63	4,729.79	28.29	29.96	154.03	-1,007.27	-883.22	2,565.37	2,523.09	42.28	60.680	
5,731.00	5,570.39	5,009.16	4,807.42	28.79	30.37	156.81	-1,025.92	-899.75	2,612.15	2,569.20	42.95	60.825	
5,825.00	5,661.76	5,090.97	4,885.32	29.27	30.78	158.14	-1,044.64	-916.34	2,658.43	2,614.82	43.61	60.959	
5,920.00	5,754.38	5,174.10	4,964.47	29.75	31.20	160.03	-1,063.66	-933.19	2,704.39	2,660.11	44.28	61.076	
6,014.00	5,846.19	5,256.66	5,043.08	30.21	31.62	158.91	-1,082.55	-949.93	2,749.29	2,704.34	44.94	61.175	
6,109.00	5,939.26	5,340.74	5,123.13	30.65	32.05	158.92	-1,101.78	-966.98	2,793.45	2,747.84	45.61	61.245	
6,203.00	6,031.68	5,424.67	5,203.04	31.07	32.48	158.06	-1,120.99	-984.00	2,835.70	2,789.43	46.27	61.282	
6,297.00	6,124.42	5,509.38	5,283.70	31.47	32.91	157.70	-1,140.37	-1,001.17	2,876.32	2,829.38	46.93	61.284	
6,392.00	6,218.59	5,596.23	5,366.39	31.83	33.36	152.78	-1,160.24	-1,018.78	2,914.62	2,867.02	47.60	61.231	
6,486.00	6,312.11	5,683.33	5,449.32	32.16	33.81	145.82	-1,180.16	-1,036.44	2,949.72	2,901.46	48.26	61.124	
6,580.00	6,405.81	5,771.04	5,532.83	32.47	34.27	154.12	-1,200.23	-1,054.22	2,983.15	2,934.24	48.91	60.990	
6,674.00	6,499.58	5,858.94	5,616.53	32.77	34.73	150.25	-1,220.34	-1,072.04	3,015.96	2,966.40	49.56	60.849	
6,768.00	6,593.40	6,775.64	6,514.98	33.06	38.12	139.87	-1,331.08	-1,171.28	3,032.63	2,977.95	54.69	55.454	
6,863.00	6,688.26	6,869.41	6,608.72	33.35	38.33	144.87	-1,331.87	-1,173.45	3,039.00	2,983.74	55.26	54.996	
6,957.00	6,782.19	6,963.22	6,702.51	33.62	38.54	152.00	-1,332.66	-1,175.62	3,044.29	2,988.47	55.82	54.538	
7,051.00	6,876.18	7,057.14	6,796.40	33.87	38.76	114.68	-1,333.45	-1,177.79	3,047.78	2,991.41	56.37	54.066	
7,145.00	6,970.17	7,151.11	6,890.33	34.10	38.97	47.13	-1,334.24	-1,179.97	3,050.04	2,993.13	56.91	53.595	
7,334.00	7,159.13	7,340.09	7,079.27	34.53	39.41	-9.97	-1,335.83	-1,184.34	3,051.05	2,993.10	57.95	52.648	
7,428.00	7,253.06	7,434.08	7,173.23	34.73	39.64	-7.68	-1,336.62	-1,186.51	3,049.70	2,991.23	58.46	52.164	
7,522.00	7,346.98	7,528.07	7,267.19	34.94	39.86	-2.23	-1,337.41	-1,188.68	3,048.21	2,989.23	58.98	51.684	
7,581.80	7,406.75	7,587.87	7,326.97	35.08	40.00	-23.63	-1,337.92	-1,190.06	3,047.93	2,988.62	59.31	51.390	
7,617.00	7,441.94	7,623.07	7,362.15	35.16	40.09	-40.73	-1,338.21	-1,190.88	3,048.03	2,988.52	59.50	51.223	
7,711.00	7,535.92	7,717.06	7,456.12	35.38	40.31	-39.52	-1,339.00	-1,193.05	3,048.59	2,988.56	60.03	50.785	
7,806.00	7,630.87	7,812.05	7,551.08	35.60	40.55	-18.01	-1,339.80	-1,195.25	3,048.24	2,987.68	60.56	50.334	
7,900.00	7,724.80	7,906.05	7,645.05	35.82	40.78	-13.97	-1,340.59	-1,197.42	3,047.05	2,985.97	61.09	49.881	
7,957.96	7,782.73	7,964.00	7,702.99	35.96	40.92	9.19	-1,341.08	-1,198.76	3,046.72	2,985.30	61.42	49.607	
7,994.00	7,818.76	8,000.04	7,739.01	36.04	41.01	34.88	-1,341.39	-1,199.60	3,046.85	2,985.22	61.62	49.443	
8,089.00	7,913.75	8,095.03	7,833.97	36.28	41.24	32.28	-1,342.19	-1,201.79	3,047.72	2,985.54	62.18	49.016	
8,278.00	8,102.68	8,284.00	8,022.89	36.74	41.71	21.44	-1,343.78	-1,206.16	3,047.83	2,984.55	63.28	48.163	
8,561.00	8,385.40	8,566.92	8,305.72	37.42	42.43	10.89	-1,346.16	-1,212.70	3,042.70	2,977.77	64.93	46.861	
8,930.00	8,753.68	8,935.63	8,674.32	38.30	43.39	-4.18	-1,349.26	-1,221.23	3,028.67	2,961.59	67.08	45.152	
8,993.00	8,816.50	8,998.55	8,737.22	38.45	43.55	-4.18	-1,349.79	-1,222.68	3,025.52	2,958.08	67.44	44.860	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 15A-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-149.05	-45.76	-27.44	53.70				
170.00	169.99	163.99	163.99	0.25	2.50	141.27	-45.76	-27.44	54.67	51.91	2.76	19.818	
231.00	230.97	224.97	224.97	0.47	3.86	144.99	-45.76	-27.44	55.85	51.52	4.34	12.878 ES	
262.00	261.95	255.95	255.95	0.59	4.51	155.78	-45.76	-27.44	56.77	51.67	5.10	11.140	
292.00	291.92	285.92	285.92	0.70	5.13	152.11	-45.76	-27.44	58.10	52.27	5.83	9.963	
353.00	352.75	345.28	345.28	0.93	6.44	139.48	-46.20	-27.76	62.27	54.97	7.30	8.527	
445.00	444.28	433.26	433.15	1.27	9.24	143.45	-49.51	-30.20	73.85	64.30	9.54	7.739 SF	
536.00	534.44	518.49	518.01	1.62	14.20	150.69	-55.82	-34.85	92.45	80.77	11.68	7.918	
630.00	626.87	603.57	602.29	2.02	21.92	153.44	-65.15	-41.72	119.91	105.92	13.98	8.575	
724.00	718.61	685.25	682.64	2.45	26.10	151.72	-76.95	-50.41	154.13	139.57	14.56	10.586	
819.00	810.83	764.65	760.08	2.91	26.87	145.91	-91.05	-60.80	193.24	178.02	15.22	12.693	
913.00	901.45	839.64	832.49	3.39	26.88	148.56	-106.75	-72.35	236.85	220.98	15.86	14.929	
1,007.00	991.42	910.87	900.51	3.92	26.90	146.68	-123.76	-84.88	285.13	268.71	16.42	17.369	
1,101.00	1,081.58	983.92	969.49	4.44	26.93	151.58	-143.12	-99.14	335.64	318.78	16.86	19.909	
1,195.00	1,172.56	1,063.97	1,044.91	4.93	26.96	155.70	-164.71	-115.04	384.91	367.69	17.22	22.349	
1,289.00	1,264.08	1,144.92	1,121.19	5.40	27.01	154.36	-186.55	-131.11	432.67	415.11	17.55	24.648	
1,384.00	1,356.59	1,226.83	1,198.36	5.88	27.07	154.80	-208.64	-147.38	480.79	462.86	17.92	26.829	
1,478.00	1,448.11	1,307.88	1,274.73	6.35	27.14	152.34	-230.49	-163.48	528.39	510.08	18.31	28.857	
1,573.00	1,540.86	1,390.43	1,352.52	6.82	27.22	151.75	-252.76	-179.88	575.39	556.68	18.72	30.744	
1,667.00	1,632.86	1,472.51	1,429.85	7.27	27.30	154.56	-274.90	-196.18	621.19	602.08	19.11	32.501	
1,761.00	1,724.81	1,554.36	1,506.97	7.72	27.40	154.81	-296.97	-212.43	667.39	647.87	19.52	34.189	
1,855.00	1,816.45	1,635.53	1,583.46	8.18	27.51	154.92	-318.87	-228.56	714.77	694.81	19.96	35.818	
1,949.00	1,907.72	1,715.99	1,659.27	8.67	27.62	153.60	-340.57	-244.54	763.37	742.95	20.42	37.384	
2,044.00	1,999.54	1,796.68	1,735.29	9.18	27.74	150.92	-362.33	-260.56	813.51	792.58	20.92	38.878	
2,138.00	2,090.09	1,875.95	1,809.99	9.70	27.87	153.11	-383.71	-276.30	864.00	842.56	21.44	40.296	
2,232.00	2,180.65	1,955.18	1,884.64	10.22	28.01	152.43	-405.08	-292.04	914.56	892.60	21.96	41.655	
2,326.00	2,271.24	2,034.46	1,959.34	10.74	28.15	153.83	-426.46	-307.79	965.06	942.58	22.47	42.944	
2,420.00	2,361.89	2,113.59	2,033.91	11.26	28.30	157.97	-447.80	-323.50	1,015.78	992.81	22.98	44.207	
2,527.00	2,465.28	2,203.63	2,118.74	11.83	28.49	163.94	-472.09	-341.39	1,073.55	1,050.02	23.52	45.637	
2,622.00	2,557.29	2,283.85	2,194.33	12.33	28.66	160.91	-493.72	-357.32	1,124.37	1,100.36	24.01	46.837	
2,715.00	2,647.48	2,362.92	2,268.83	12.81	28.84	155.79	-515.05	-373.02	1,173.30	1,148.80	24.51	47.878	
2,810.00	2,739.63	2,444.13	2,345.35	13.31	29.03	151.25	-536.95	-389.15	1,222.60	1,197.55	25.05	48.805	
2,904.00	2,830.93	2,525.01	2,421.56	13.80	29.22	148.40	-558.77	-405.21	1,270.47	1,244.86	25.61	49.609	
2,999.00	2,922.99	2,606.55	2,498.39	14.30	29.43	147.33	-580.76	-421.41	1,319.17	1,292.97	26.20	50.353	
3,093.00	3,013.89	2,686.96	2,574.15	14.81	29.64	146.70	-602.44	-437.38	1,367.79	1,340.99	26.79	51.047	
3,187.00	3,104.97	2,767.81	2,650.33	15.31	29.86	145.29	-624.25	-453.44	1,415.67	1,388.27	27.39	51.679	
3,282.00	3,197.19	2,849.86	2,727.64	15.80	30.09	146.83	-646.38	-469.73	1,463.50	1,435.50	28.00	52.269	
3,376.00	3,288.43	2,930.93	2,804.03	16.29	30.32	147.47	-668.24	-485.83	1,511.04	1,482.44	28.60	52.831	
3,470.00	3,379.56	3,011.74	2,880.18	16.79	30.56	147.87	-690.04	-501.89	1,559.01	1,529.80	29.21	53.376	
3,564.00	3,470.75	3,092.73	2,956.49	17.28	30.80	146.08	-711.88	-517.97	1,606.69	1,576.87	29.82	53.880	
3,658.00	3,561.89	3,173.68	3,032.76	17.78	31.06	147.40	-733.72	-534.05	1,654.43	1,623.99	30.44	54.352	
3,752.00	3,652.73	3,253.92	3,108.37	18.29	31.31	149.15	-755.36	-549.98	1,703.34	1,672.28	31.06	54.835	
3,847.00	3,744.45	3,334.66	3,184.44	18.81	31.58	151.77	-777.13	-566.02	1,753.38	1,721.69	31.69	55.331	
3,941.00	3,835.42	3,414.79	3,259.94	19.31	31.84	152.74	-798.74	-581.93	1,802.53	1,770.23	32.30	55.807	
4,026.00	3,917.86	3,487.49	3,328.45	19.76	32.09	154.08	-818.35	-596.37	1,846.56	1,813.71	32.85	56.214	
4,130.00	4,018.80	3,576.73	3,412.53	20.30	32.40	150.23	-842.42	-614.10	1,899.97	1,866.44	33.53	56.665	
4,224.00	4,109.52	3,656.71	3,487.89	20.82	32.69	147.69	-863.99	-629.98	1,949.30	1,915.13	34.17	57.045	
4,318.00	4,199.89	3,736.18	3,562.77	21.36	32.97	147.65	-885.43	-645.77	1,999.41	1,964.59	34.82	57.414	
4,412.00	4,290.67	3,816.38	3,638.34	21.87	33.27	148.38	-907.06	-661.69	2,048.40	2,012.93	35.47	57.749	
4,507.00	4,382.62	3,897.71	3,714.97	22.38	33.57	149.74	-928.99	-677.85	2,097.47	2,061.35	36.12	58.067	
4,601.00	4,473.49	3,977.92	3,790.54	22.90	33.88	149.44	-950.62	-693.78	2,146.47	2,109.70	36.77	58.375	
4,695.00	4,564.59	4,058.48	3,866.45	23.39	34.19	151.97	-972.35	-709.78	2,194.90	2,157.49	37.41	58.667	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 15A-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,138.91	3,942.24	23.89	34.50	153.19	-994.05	-725.75	2,243.54	2,205.49	38.05	58.959	
4,883.00	4,746.85	4,219.18	4,017.87	24.39	34.82	156.10	-1,015.69	-741.69	2,292.45	2,253.76	38.69	59.254	
4,978.00	4,839.29	4,300.95	4,094.92	24.87	35.15	153.60	-1,037.75	-757.93	2,340.79	2,301.47	39.33	59.521	
5,072.00	4,931.05	4,382.64	4,171.89	25.33	35.49	151.56	-1,059.78	-774.16	2,387.28	2,347.32	39.97	59.733	
5,166.00	5,022.88	4,464.59	4,249.10	25.79	35.83	150.69	-1,081.88	-790.43	2,433.33	2,392.71	40.61	59.916	
5,260.00	5,114.46	4,546.10	4,325.90	26.26	36.17	149.80	-1,103.87	-806.62	2,480.14	2,438.87	41.27	60.097	
5,354.00	5,205.69	4,626.97	4,402.11	26.75	36.51	149.50	-1,125.68	-822.69	2,528.04	2,486.11	41.93	60.285	
5,450.00	5,298.51	4,709.01	4,479.40	27.28	36.86	148.01	-1,147.80	-838.98	2,577.87	2,535.25	42.62	60.480	
5,543.00	5,388.31	4,788.25	4,554.07	27.79	37.20	149.71	-1,169.18	-854.72	2,626.51	2,583.22	43.29	60.668	
5,637.00	5,479.24	4,868.58	4,629.76	28.29	37.56	149.69	-1,190.84	-870.67	2,675.32	2,631.35	43.97	60.848	
5,731.00	5,570.39	4,949.19	4,705.71	28.79	37.91	152.49	-1,212.58	-886.68	2,723.66	2,679.03	44.64	61.020	
5,825.00	5,661.76	5,030.06	4,781.91	29.27	38.27	153.86	-1,234.39	-902.74	2,771.58	2,726.28	45.30	61.185	
5,920.00	5,754.38	5,112.20	4,859.31	29.75	38.64	155.78	-1,256.55	-919.06	2,819.27	2,773.31	45.96	61.340	
6,014.00	5,846.19	5,193.79	4,936.19	30.21	39.01	154.68	-1,278.55	-935.26	2,865.91	2,819.29	46.62	61.478	
6,109.00	5,939.26	5,276.89	5,014.49	30.65	39.39	154.74	-1,300.97	-951.77	2,911.88	2,864.60	47.28	61.589	
6,203.00	6,031.68	5,359.87	5,092.67	31.07	39.78	153.91	-1,323.35	-968.25	2,955.95	2,908.02	47.93	61.669	
6,297.00	6,124.42	5,443.63	5,171.60	31.47	40.17	153.62	-1,345.94	-984.88	2,998.46	2,949.87	48.58	61.717	
6,392.00	6,218.59	5,529.55	5,252.55	31.83	40.57	148.76	-1,369.11	-1,001.95	3,038.74	2,989.51	49.24	61.716	
6,486.00	6,312.11	5,615.76	5,333.78	32.16	40.98	141.84	-1,392.36	-1,019.07	3,075.86	3,025.98	49.88	61.663	
6,580.00	6,405.81	5,702.58	5,415.58	32.47	41.39	150.17	-1,415.78	-1,036.31	3,111.40	3,060.88	50.52	61.587	
6,674.00	6,499.58	5,789.57	5,497.55	32.77	41.81	146.28	-1,439.24	-1,053.59	3,146.38	3,095.22	51.16	61.506	
6,768.00	6,593.40	5,871.14	5,572.23	33.06	42.20	135.74	-1,462.30	-1,071.72	3,173.60	3,116.75	51.80	61.422	
6,863.00	6,688.26	5,952.86	5,653.92	33.35	42.58	140.74	-1,485.09	-1,089.90	3,199.68	3,142.27	52.42	61.330	
6,957.00	6,782.19	6,034.68	5,736.71	33.62	42.96	147.88	-1,507.87	-1,108.06	3,184.77	3,126.81	53.04	61.238	
7,051.00	6,876.18	6,116.60	5,819.60	33.87	43.34	110.57	-1,529.66	-1,126.22	3,188.14	3,129.64	53.66	61.146	
7,145.00	6,970.17	6,198.57	5,902.59	34.10	43.72	43.02	-1,551.45	-1,144.38	3,190.28	3,131.26	54.28	61.054	
7,239.00	7,064.16	6,280.54	5,985.56	34.37	44.10	-14.08	-1,573.24	-1,162.73	3,191.19	3,131.17	54.89	60.962	
7,334.00	7,159.13	6,362.51	6,068.53	34.63	44.48	-11.80	-1,595.03	-1,180.99	3,189.84	3,129.33	55.50	60.870	
7,428.00	7,253.06	6,444.48	6,151.50	34.89	44.86	-6.35	-1,616.82	-1,199.26	3,188.34	3,127.34	56.11	60.778	
7,522.00	7,346.98	6,526.45	6,234.47	35.15	45.24	-26.90	-1,638.61	-1,217.52	3,188.06	3,126.75	56.72	60.686	
7,617.00	7,441.94	6,608.42	6,317.44	35.41	45.62	-44.84	-1,660.40	-1,235.79	3,188.17	3,126.67	57.33	60.594	
7,711.00	7,535.92	6,690.39	6,400.41	35.67	46.00	-43.63	-1,682.19	-1,254.06	3,188.80	3,126.79	57.94	60.502	
7,806.00	7,630.87	6,772.36	6,483.38	35.93	46.38	-22.13	-1,703.98	-1,272.33	3,188.50	3,125.98	58.55	60.410	
7,900.00	7,724.80	6,854.33	6,566.35	36.19	46.76	-18.09	-1,725.77	-1,290.60	3,187.34	3,124.32	59.16	60.318	
7,994.00	7,818.76	6,936.30	6,649.32	36.45	47.14	7.43	-1,747.56	-1,308.87	3,186.99	3,123.62	59.77	60.226	
8,089.00	7,913.75	7,018.27	6,732.29	36.71	47.52	30.77	-1,769.35	-1,327.14	3,187.09	3,123.54	60.38	60.134	
8,183.00	8,008.70	7,100.24	6,815.26	36.97	47.90	28.16	-1,791.14	-1,345.41	3,187.85	3,123.76	60.99	60.042	
8,278.00	8,102.68	7,182.21	6,898.23	37.23	48.28	17.32	-1,812.93	-1,363.68	3,187.73	3,122.57	61.60	59.950	
8,373.00	8,196.63	7,264.18	6,981.20	37.49	48.66	6.76	-1,834.72	-1,381.95	3,187.26	3,121.38	62.21	59.858	
8,468.00	8,290.58	7,346.15	7,064.17	37.75	49.04	-3.39	-1,856.51	-1,400.22	3,186.04	3,120.19	62.82	59.766	
8,563.00	8,384.53	7,428.12	7,147.14	38.01	49.42	-8.34	-1,878.30	-1,418.49	3,164.90	3,099.20	63.43	59.674	
8,658.00	8,478.48	7,510.09	7,230.11	38.27	49.80	-8.34	-1,900.09	-1,436.76	3,164.90	3,095.71	64.04	59.582	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 15B-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-150.38	-52.89	-30.07	61.13				
170.00	169.99	163.99	163.99	0.25	2.50	139.83	-52.89	-30.07	62.12	59.36	2.76	22.519	
231.00	230.97	224.17	224.17	0.47	3.91	143.46	-53.02	-30.15	63.44	59.09	4.35	14.599 ES	
262.00	261.95	254.12	254.11	0.59	4.64	154.20	-53.53	-30.48	64.97	59.88	5.09	12.769	
292.00	291.92	283.01	282.99	0.70	5.36	150.42	-54.41	-31.03	67.36	61.57	5.79	11.633	
353.00	352.75	341.38	341.25	0.93	7.91	137.34	-57.31	-32.85	74.46	67.12	7.33	10.153	
445.00	444.28	428.12	427.58	1.27	13.78	140.34	-64.40	-37.31	90.30	80.81	9.50	9.510 SF	
536.00	534.44	511.73	510.35	1.62	22.38	146.76	-74.37	-43.58	112.82	100.97	11.85	9.522	
630.00	626.87	594.76	591.96	2.02	33.99	148.94	-87.30	-51.71	143.94	128.94	15.01	9.591	
724.00	718.61	674.17	669.31	2.45	40.36	146.94	-102.46	-61.25	181.46	164.88	16.58	10.943	
819.00	810.83	751.22	743.59	2.91	42.33	140.90	-119.75	-72.13	223.52	205.61	17.90	12.485	
913.00	901.45	823.84	812.81	3.39	42.33	143.41	-138.37	-83.83	269.69	250.72	18.97	14.217	
1,007.00	991.42	892.72	877.63	3.92	42.35	141.49	-158.07	-96.22	320.27	300.39	19.88	16.114	
1,101.00	1,081.58	967.43	947.24	4.44	42.37	146.65	-181.04	-110.68	372.58	352.01	20.57	18.110	
1,195.00	1,172.56	1,046.42	1,020.78	4.93	42.39	151.02	-205.42	-126.01	423.53	402.53	21.00	20.172	
1,289.00	1,264.08	1,126.30	1,095.16	5.40	42.43	149.83	-230.08	-141.52	473.07	451.76	21.31	22.195	
1,384.00	1,356.59	1,207.12	1,170.42	5.88	42.47	150.31	-255.02	-157.21	523.00	501.33	21.67	24.138	
1,478.00	1,448.11	1,287.10	1,244.90	6.35	42.51	147.94	-279.71	-172.73	572.37	550.32	22.05	25.956	
1,573.00	1,540.86	1,368.61	1,320.80	6.82	42.57	147.44	-304.87	-188.56	621.17	598.73	22.44	27.679	
1,667.00	1,632.86	1,449.63	1,396.24	7.27	42.63	150.30	-329.87	-204.29	668.82	646.02	22.80	29.333	
1,761.00	1,724.81	1,530.41	1,471.45	7.72	42.70	150.55	-354.80	-219.97	716.88	693.71	23.16	30.947	
1,855.00	1,816.45	1,610.50	1,546.03	8.18	42.77	150.64	-379.53	-235.52	766.07	742.50	23.57	32.503	
1,949.00	1,907.72	1,689.88	1,619.95	8.67	42.85	149.30	-404.03	-250.93	816.41	792.39	24.02	33.983	
2,044.00	1,999.54	1,769.50	1,694.09	9.18	42.93	146.59	-428.60	-266.38	868.22	843.67	24.55	35.372	
2,138.00	2,090.09	1,847.72	1,766.92	9.70	43.02	148.80	-452.74	-281.57	920.30	895.22	25.08	36.688	
2,232.00	2,180.65	1,925.89	1,839.71	10.22	43.12	148.17	-476.87	-296.74	972.47	946.86	25.61	37.971	
2,326.00	2,271.24	2,004.11	1,912.54	10.74	43.22	149.58	-501.01	-311.93	1,024.59	998.46	26.13	39.206	
2,420.00	2,361.89	2,082.14	1,985.20	11.26	43.33	153.79	-525.10	-327.08	1,077.00	1,050.37	26.63	40.445	
2,527.00	2,465.28	2,170.84	2,067.79	11.83	43.46	159.84	-552.47	-344.29	1,136.82	1,109.69	27.13	41.908	
2,622.00	2,557.29	2,249.84	2,141.36	12.33	43.58	156.85	-576.86	-359.63	1,189.52	1,161.96	27.55	43.169	
2,715.00	2,647.48	2,327.79	2,213.94	12.81	43.71	151.74	-600.92	-374.76	1,240.23	1,212.22	28.02	44.268	
2,810.00	2,739.63	2,407.92	2,288.55	13.31	43.85	147.21	-625.65	-390.32	1,291.26	1,262.72	28.54	45.246	
2,904.00	2,830.93	2,487.78	2,362.92	13.80	43.99	144.40	-650.30	-405.82	1,340.81	1,311.73	29.09	46.097	
2,999.00	2,922.99	2,568.33	2,437.92	14.30	44.14	143.25	-675.16	-421.46	1,391.13	1,361.46	29.67	46.879	
3,093.00	3,013.89	2,647.76	2,511.88	14.81	44.29	142.65	-699.67	-436.88	1,441.32	1,411.04	30.28	47.606	
3,187.00	3,104.97	2,727.65	2,586.27	15.31	44.45	141.26	-724.33	-452.39	1,490.77	1,459.90	30.88	48.284	
3,282.00	3,197.19	2,808.73	2,661.77	15.80	44.62	142.83	-749.36	-468.13	1,540.22	1,508.75	31.48	48.934	
3,376.00	3,288.43	2,888.83	2,736.36	16.29	44.79	143.44	-774.08	-483.68	1,589.38	1,557.31	32.07	49.562	
3,470.00	3,379.56	2,968.67	2,810.70	16.79	44.97	143.84	-798.72	-499.18	1,638.95	1,606.29	32.67	50.171	
3,564.00	3,470.75	3,048.69	2,885.21	17.28	45.15	142.07	-823.42	-514.71	1,688.23	1,654.96	33.27	50.743	
3,658.00	3,561.89	3,128.68	2,959.70	17.78	45.34	143.36	-848.11	-530.24	1,737.56	1,703.68	33.88	51.286	
3,752.00	3,652.73	3,207.94	3,033.50	18.29	45.53	145.06	-872.57	-545.63	1,788.04	1,753.55	34.50	51.833	
3,847.00	3,744.45	3,287.66	3,107.72	18.81	45.72	147.72	-897.18	-561.10	1,839.69	1,804.58	35.11	52.397	
3,941.00	3,835.42	3,366.75	3,181.37	19.31	45.93	148.71	-921.59	-576.46	1,890.48	1,854.78	35.70	52.953	
4,026.00	3,917.86	3,438.50	3,248.18	19.76	46.11	150.10	-943.74	-590.39	1,936.05	1,899.83	36.23	53.443	
4,130.00	4,018.80	3,526.59	3,330.20	20.30	46.35	146.23	-970.92	-607.49	1,991.34	1,954.46	36.88	53.995	
4,224.00	4,109.52	3,605.58	3,403.76	20.82	46.57	143.58	-995.31	-622.82	2,042.23	2,004.71	37.51	54.441	
4,318.00	4,199.89	3,684.09	3,476.86	21.36	46.79	143.58	-1,019.54	-638.06	2,093.82	2,055.65	38.17	54.862	
4,412.00	4,290.67	3,763.31	3,550.63	21.87	47.01	144.38	-1,043.99	-653.44	2,144.36	2,105.55	38.80	55.262	
4,507.00	4,382.62	3,843.65	3,625.44	22.38	47.25	145.72	-1,068.78	-669.04	2,195.04	2,155.60	39.44	55.655	
4,601.00	4,473.49	3,922.86	3,699.20	22.90	47.48	145.42	-1,093.23	-684.42	2,245.62	2,205.55	40.08	56.035	
4,695.00	4,564.59	4,002.41	3,773.27	23.39	47.73	148.02	-1,117.79	-699.86	2,295.70	2,255.00	40.70	56.407	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 15B-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,081.80	3,847.20	23.89	47.97	149.19	-1,142.29	-715.27	2,346.01	2,304.70	41.32	56.782	
4,883.00	4,746.85	4,161.00	3,920.95	24.39	48.22	152.17	-1,166.74	-730.65	2,396.64	2,354.71	41.93	57.163	
4,978.00	4,839.29	4,241.70	3,996.08	24.87	48.48	149.69	-1,191.64	-746.31	2,446.76	2,404.22	42.54	57.523	
5,072.00	4,931.05	4,322.35	4,071.18	25.33	48.75	147.70	-1,216.54	-761.97	2,495.02	2,451.88	43.14	57.831	
5,166.00	5,022.88	4,403.28	4,146.54	25.79	49.01	146.80	-1,241.52	-777.68	2,542.83	2,499.07	43.76	58.107	
5,260.00	5,114.46	4,483.78	4,221.50	26.26	49.29	145.87	-1,266.36	-793.31	2,591.36	2,546.96	44.40	58.369	
5,354.00	5,205.69	4,563.66	4,295.88	26.75	49.56	145.51	-1,291.02	-808.82	2,640.90	2,595.85	45.05	58.626	
5,450.00	5,298.51	4,644.69	4,371.33	27.28	49.84	144.00	-1,316.03	-824.55	2,692.34	2,646.62	45.73	58.881	
5,543.00	5,388.31	4,722.96	4,444.22	27.79	50.12	145.70	-1,340.19	-839.74	2,742.53	2,696.14	46.39	59.123	
5,637.00	5,479.24	4,802.30	4,518.09	28.29	50.40	145.72	-1,364.67	-855.14	2,792.93	2,745.88	47.05	59.363	
5,731.00	5,570.39	4,881.89	4,592.20	28.79	50.69	148.54	-1,389.24	-870.60	2,842.93	2,795.23	47.70	59.598	
5,825.00	5,661.76	4,961.72	4,666.53	29.27	50.99	149.95	-1,413.88	-886.09	2,892.57	2,844.22	48.34	59.833	
5,920.00	5,754.38	5,042.79	4,742.02	29.75	51.29	151.91	-1,438.90	-901.83	2,942.06	2,893.08	48.98	60.065	
6,014.00	5,846.19	5,123.31	4,817.00	30.21	51.59	150.82	-1,463.75	-917.46	2,990.52	2,940.91	49.61	60.281	
6,109.00	5,939.26	5,205.34	4,893.38	30.65	51.91	150.95	-1,489.07	-933.39	3,038.37	2,988.13	50.24	60.473	
6,203.00	6,031.68	5,287.25	4,969.66	31.07	52.23	150.14	-1,514.35	-949.29	3,084.36	3,033.50	50.87	60.638	
6,297.00	6,124.42	5,369.97	5,046.68	31.47	52.55	149.91	-1,539.88	-965.35	3,128.84	3,077.36	51.48	60.775	
6,392.00	6,218.59	5,454.84	5,125.71	31.83	52.89	145.13	-1,566.08	-981.82	3,171.22	3,119.12	52.10	60.871	
6,486.00	6,312.11	5,540.07	5,205.07	32.16	53.23	138.25	-1,592.38	-998.37	3,210.47	3,157.77	52.70	60.920	
6,580.00	6,405.81	5,625.88	5,284.97	32.47	53.58	146.62	-1,618.87	-1,015.03	3,248.22	3,194.93	53.29	60.950	
6,674.00	6,499.58	5,711.84	5,365.02	32.77	53.93	142.71	-1,645.40	-1,031.72	3,285.47	3,231.59	53.88	60.977	
6,768.00	6,593.40	5,798.21	5,445.44	33.06	54.28	132.53	-1,672.06	-1,048.48	3,321.80	3,267.33	54.47	60.982	
6,863.00	6,688.26	5,884.99	5,530.44	33.35	54.63	136.97	-1,698.05	-1,065.66	3,358.71	3,294.07	55.06	61.000	
6,957.00	6,782.19	5,972.31	5,616.23	33.62	54.98	144.12	-1,724.84	-1,083.83	3,396.62	3,321.85	55.65	61.018	
7,051.00	6,876.18	6,060.82	5,702.12	33.87	55.33	146.81	-1,751.63	-1,102.01	3,434.53	3,349.74	56.24	61.036	
7,145.00	6,970.17	6,149.31	5,788.06	34.10	55.68	39.26	-1,778.42	-1,120.19	3,472.44	3,387.65	56.83	61.054	
7,239.00	7,064.16	6,237.80	5,876.05	34.35	56.03	-17.83	-1,805.21	-1,138.37	3,510.35	3,425.56	57.42	61.072	
7,333.00	7,158.15	6,326.29	5,964.04	34.60	56.38	-15.55	-1,832.00	-1,156.55	3,548.26	3,463.47	58.01	61.090	
7,427.00	7,252.14	6,414.78	6,052.03	34.85	56.73	-10.11	-1,858.79	-1,174.83	3,586.17	3,501.38	58.60	61.108	
7,521.00	7,346.13	6,503.27	6,140.02	35.10	57.08	-29.47	-1,885.58	-1,193.11	3,624.08	3,539.29	59.19	61.126	
7,615.00	7,440.12	6,591.76	6,228.01	35.35	57.43	-48.60	-1,912.37	-1,211.39	3,661.99	3,577.20	59.78	61.144	
7,709.00	7,534.11	6,680.25	6,316.00	35.60	57.78	-47.39	-1,939.16	-1,229.67	3,699.90	3,615.11	60.37	61.162	
7,803.00	7,628.10	6,768.74	6,404.00	35.85	58.13	-25.88	-1,965.95	-1,247.95	3,737.81	3,653.02	60.96	61.180	
7,897.00	7,722.09	6,857.23	6,492.00	36.10	58.48	-21.84	-1,992.74	-1,266.23	3,775.72	3,690.93	61.55	61.198	
7,991.00	7,816.08	6,945.72	6,580.00	36.35	58.83	5.58	-2,019.53	-1,284.51	3,813.63	3,728.84	62.14	61.216	
8,085.00	7,910.07	7,034.21	6,668.00	36.60	59.18	27.01	-2,046.32	-1,302.79	3,851.54	3,766.75	62.73	61.234	
8,179.00	8,004.06	7,122.70	6,756.00	36.85	59.53	24.41	-2,073.11	-1,321.07	3,889.45	3,804.66	63.32	61.252	
8,273.00	8,098.05	7,211.19	6,844.00	37.10	59.88	13.56	-2,100.00	-1,339.35	3,927.36	3,842.57	63.91	61.270	
8,367.00	8,192.04	7,300.68	6,932.00	37.35	60.23	2.99	-2,126.79	-1,357.63	3,965.27	3,880.48	64.50	61.288	
8,461.00	8,286.03	7,389.17	7,020.00	37.60	60.58	60.48	-2,153.58	-1,375.91	4,003.18	3,918.39	65.09	61.306	
8,555.00	8,380.02	7,477.66	7,108.00	37.85	60.93	37.42	-2,180.37	-1,394.19	4,041.09	3,956.30	65.68	61.324	
8,649.00	8,474.01	7,566.15	7,196.00	38.10	61.28	61.15	-2,207.16	-1,412.47	4,078.99	3,994.21	66.27	61.342	
8,743.00	8,568.00	7,654.64	7,284.00	38.35	61.63	61.27	-2,233.95	-1,430.75	4,116.90	4,032.12	66.86	61.360	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 15D-5 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	20.26	143.02	52.80	152.57				
170.00	169.99	163.99	163.99	0.25	2.50	-51.05	143.02	52.80	151.38	148.63	2.76	54.893	
231.00	230.97	223.62	223.62	0.47	3.91	-48.70	143.15	52.74	150.54	146.20	4.34	34.714	
262.00	261.95	252.92	252.92	0.59	4.63	-38.82	143.69	52.50	150.23	145.12	5.11	29.416	
292.00	291.92	281.24	281.21	0.70	5.33	-43.76	144.59	52.09	149.89	144.03	5.86	25.584	
322.81	322.66	310.25	310.19	0.81	6.32	-53.51	145.92	51.49	149.69	142.95	6.74	22.206 CC	
353.00	352.75	338.58	338.46	0.93	7.80	-60.77	147.60	50.73	149.89	142.08	7.82	19.176	
445.00	444.28	424.16	423.64	1.27	13.42	-65.97	155.00	47.40	152.66	141.32	11.35	13.452 ES	
536.00	534.44	507.41	506.08	1.62	21.80	-68.26	165.53	42.66	158.66	143.68	14.98	10.591	
630.00	626.87	591.34	588.60	2.02	33.53	-75.02	179.44	36.38	169.11	151.45	17.66	9.574 SF	
724.00	718.61	672.71	667.90	2.45	40.59	-85.84	196.08	28.89	186.52	169.77	16.75	11.136	
819.00	810.83	751.89	744.24	2.91	42.79	-99.04	215.21	20.26	213.27	198.00	15.27	13.970	
913.00	901.45	826.90	815.70	3.39	42.79	-102.67	235.98	10.91	247.47	232.26	15.21	16.271	
1,007.00	991.42	900.00	884.43	3.92	42.81	-109.28	258.67	0.68	287.88	271.51	16.37	17.588	
1,101.00	1,081.58	968.01	947.48	4.44	42.82	-110.23	281.92	-9.79	332.48	314.74	17.74	18.739	
1,195.00	1,172.56	1,036.22	1,009.75	4.93	42.85	-110.07	307.27	-21.22	378.67	359.79	18.88	20.057	
1,289.00	1,264.08	1,100.00	1,067.06	5.40	42.88	-113.14	332.80	-32.72	426.99	407.30	19.70	21.680	
1,384.00	1,356.59	1,167.03	1,126.24	5.88	42.92	-113.09	361.50	-45.65	478.71	458.27	20.44	23.415	
1,478.00	1,448.11	1,235.63	1,185.79	6.35	42.97	-116.61	392.54	-59.64	532.49	511.36	21.13	25.201	
1,573.00	1,540.86	1,313.11	1,252.89	6.82	43.04	-118.54	427.86	-75.56	587.24	565.44	21.80	26.935	
1,667.00	1,632.86	1,390.28	1,319.72	7.27	43.12	-116.44	463.03	-91.41	640.80	618.40	22.40	28.610	
1,761.00	1,724.81	1,467.63	1,386.71	7.72	43.22	-115.88	498.29	-107.30	694.06	671.05	23.00	30.171	
1,855.00	1,816.45	1,544.65	1,453.41	8.18	43.32	-115.21	533.40	-123.11	747.74	724.07	23.66	31.602	
1,949.00	1,907.72	1,621.11	1,519.63	8.67	43.43	-116.18	568.25	-138.82	802.10	777.74	24.36	32.925	
2,044.00	1,999.54	1,697.50	1,585.79	9.18	43.55	-118.32	603.07	-154.51	858.19	833.09	25.10	34.196	
2,138.00	2,090.09	1,772.65	1,650.87	9.70	43.68	-116.65	637.33	-169.95	914.20	888.36	25.84	35.376	
2,232.00	2,180.65	1,847.94	1,716.07	10.22	43.82	-118.22	671.64	-185.41	970.07	943.50	26.57	36.508	
2,326.00	2,271.24	1,923.32	1,781.36	10.74	43.97	-117.26	706.00	-200.89	1,025.87	998.59	27.28	37.599	
2,420.00	2,361.89	1,999.27	1,847.14	11.26	44.13	-114.16	740.63	-216.50	1,080.89	1,052.89	28.00	38.607	
2,527.00	2,465.28	2,087.06	1,923.17	11.83	44.34	-109.37	780.64	-234.53	1,141.65	1,112.84	28.81	39.628	
2,622.00	2,557.29	2,165.52	1,991.11	12.33	44.53	-112.72	816.40	-250.64	1,194.94	1,165.43	29.51	40.488	
2,715.00	2,647.48	2,241.75	2,057.13	12.81	44.72	-117.80	851.15	-266.30	1,248.05	1,217.89	30.17	41.369	
2,810.00	2,739.63	2,318.79	2,123.85	13.31	44.92	-122.34	886.27	-282.12	1,303.55	1,272.75	30.81	42.313	
2,904.00	2,830.93	2,394.52	2,189.44	13.80	45.14	-125.79	920.79	-297.68	1,359.20	1,327.80	31.40	43.281	
2,999.00	2,922.99	2,470.42	2,255.17	14.30	45.36	-125.59	955.38	-313.27	1,416.30	1,384.28	32.02	44.234	
3,093.00	3,013.89	2,545.07	2,319.83	14.81	45.58	-127.04	989.41	-328.60	1,473.37	1,440.73	32.64	45.141	
3,187.00	3,104.97	2,619.78	2,384.53	15.31	45.82	-128.89	1,023.47	-343.95	1,530.40	1,497.16	33.24	46.045	
3,282.00	3,197.19	2,695.53	2,450.13	15.80	46.07	-128.05	1,057.99	-359.51	1,587.73	1,553.90	33.83	46.931	
3,376.00	3,288.43	2,770.64	2,515.18	16.29	46.32	-126.93	1,092.23	-374.93	1,644.25	1,609.81	34.43	47.752	
3,470.00	3,379.56	2,845.66	2,580.15	16.79	46.58	-126.76	1,126.43	-390.34	1,700.86	1,665.81	35.05	48.525	
3,564.00	3,470.75	2,920.62	2,645.07	17.28	46.85	-128.81	1,160.60	-405.74	1,757.57	1,721.90	35.67	49.279	
3,658.00	3,561.89	2,995.48	2,709.90	17.78	47.13	-127.31	1,194.72	-421.12	1,814.41	1,778.13	36.28	50.005	
3,752.00	3,652.73	3,070.17	2,774.58	18.29	47.41	-124.70	1,228.76	-436.46	1,871.43	1,834.49	36.94	50.661	
3,847.00	3,744.45	3,145.93	2,840.19	18.81	47.71	-123.02	1,263.29	-452.02	1,928.67	1,891.05	37.62	51.264	
3,941.00	3,835.42	3,221.48	2,905.63	19.31	48.01	-122.43	1,297.73	-467.54	1,984.54	1,946.25	38.29	51.824	
4,026.00	3,917.86	3,290.20	2,965.14	19.76	48.30	-121.81	1,329.06	-481.65	2,034.52	1,995.62	38.90	52.305	
4,130.00	4,018.80	3,374.15	3,037.84	20.30	48.65	-125.31	1,367.32	-498.90	2,095.89	2,056.26	39.63	52.887	
4,224.00	4,109.52	3,448.77	3,102.47	20.82	48.97	-125.99	1,401.33	-514.22	2,152.99	2,112.68	40.31	53.405	
4,318.00	4,199.89	3,522.67	3,166.47	21.36	49.30	-126.70	1,435.02	-529.40	2,210.99	2,169.98	41.01	53.911	
4,412.00	4,290.67	3,597.17	3,231.00	21.87	49.63	-127.42	1,468.98	-544.71	2,268.27	2,226.59	41.69	54.412	
4,507.00	4,382.62	3,672.93	3,296.60	22.38	49.98	-125.77	1,503.51	-560.27	2,325.58	2,283.21	42.37	54.891	
4,601.00	4,473.49	3,747.81	3,361.45	22.90	50.33	-126.05	1,537.64	-575.65	2,382.37	2,339.31	43.05	55.334	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 15D-5 596 - OH - Plan 1 (04-08-19 DS)													Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
4,695.00	4,564.59	3,823.19	3,426.74	23.39	50.69	-124.77	1,572.01	-591.13	2,438.50	2,394.77	43.73	55.757		
4,789.00	4,655.72	3,898.95	3,492.35	23.89	51.06	-122.62	1,606.54	-606.69	2,494.13	2,449.70	44.43	56.142		
4,883.00	4,746.85	3,975.06	3,558.26	24.39	51.44	-120.85	1,641.23	-622.33	2,549.26	2,504.13	45.13	56.487		
4,978.00	4,839.29	4,052.46	3,625.29	24.87	51.82	-123.74	1,676.51	-638.22	2,604.34	2,558.51	45.83	56.832		
5,072.00	4,931.05	4,129.07	3,691.65	25.33	52.22	-126.57	1,711.43	-653.96	2,658.79	2,612.30	46.49	57.191		
5,166.00	5,022.88	4,205.56	3,757.88	25.79	52.61	-126.82	1,746.29	-669.67	2,713.42	2,666.28	47.15	57.551		
5,260.00	5,114.46	4,281.54	3,823.69	26.26	53.01	-127.04	1,780.93	-685.28	2,768.76	2,720.94	47.82	57.896		
5,354.00	5,205.69	4,356.93	3,888.98	26.75	53.41	-126.40	1,815.29	-700.76	2,824.90	2,776.38	48.52	58.223		
5,450.00	5,298.51	4,433.28	3,955.11	27.28	53.83	-127.42	1,850.10	-716.44	2,883.07	2,833.82	49.25	58.545		
5,543.00	5,388.31	4,507.10	4,019.04	27.79	54.23	-125.84	1,883.75	-731.61	2,939.60	2,889.64	49.96	58.842		
5,637.00	5,479.24	4,582.08	4,083.97	28.29	54.65	-126.65	1,917.92	-747.01	2,996.27	2,945.60	50.67	59.128		
5,731.00	5,570.39	4,657.59	4,149.37	28.79	55.07	-124.18	1,952.34	-762.52	3,052.25	3,000.86	51.39	59.395		
5,825.00	5,661.76	4,733.75	4,215.32	29.27	55.50	-123.60	1,987.06	-778.16	3,107.34	3,055.24	52.10	59.638		
5,920.00	5,754.38	4,811.36	4,282.54	29.75	55.95	-122.17	2,022.43	-794.10	3,162.13	3,109.31	52.82	59.868		
6,014.00	5,846.19	4,888.44	4,349.29	30.21	56.40	-123.47	2,057.57	-809.93	3,215.93	3,162.40	53.52	60.085		
6,109.00	5,939.26	4,966.65	4,417.03	30.65	56.86	-124.38	2,093.22	-826.00	3,269.81	3,215.59	54.22	60.307		
6,203.00	6,031.68	5,044.46	4,484.41	31.07	57.32	-125.65	2,128.68	-841.98	3,322.45	3,267.57	54.89	60.530		
6,297.00	6,124.42	5,122.69	4,552.17	31.47	57.79	-126.93	2,164.34	-858.05	3,374.32	3,318.79	55.54	60.756		
6,392.00	6,218.59	5,202.30	4,621.11	31.83	58.27	-133.05	2,200.63	-874.40	3,425.58	3,369.43	56.16	60.998		
6,486.00	6,312.11	5,281.34	4,689.57	32.16	58.75	-140.65	2,236.66	-890.64	3,475.38	3,418.65	56.73	61.257		
6,580.00	6,405.81	5,360.94	4,758.50	32.47	59.24	-132.64	2,272.94	-906.99	3,523.98	3,466.68	57.30	61.505		
6,674.00	6,499.58	5,440.94	4,827.79	32.77	59.74	-136.22	2,309.41	-923.42	3,571.83	3,513.97	57.86	61.734		
6,768.00	6,593.40	5,520.84	4,896.98	33.06	60.25	-146.69	2,345.83	-939.83	3,619.63	3,561.22	58.41	61.969		
6,863.00	6,688.26	5,601.66	4,966.98	33.35	60.76	-141.39	2,382.67	-956.43	3,667.68	3,608.71	58.96	62.202		
6,957.00	6,782.19	5,682.20	5,036.72	33.62	61.27	-134.71	2,419.38	-972.97	3,714.08	3,654.57	59.51	62.411		
7,051.00	6,876.18	5,763.09	5,106.78	33.87	61.79	-172.22	2,456.25	-989.59	3,759.42	3,699.38	60.04	62.615		
7,145.00	6,970.17	5,843.13	5,177.84	34.10	62.30	-122.92	2,902.18	-1,201.09	3,783.62	3,714.11	69.50	54.438		
7,334.00	7,159.13	7,878.12	7,113.11	34.53	69.39	65.78	2,900.53	-1,205.61	3,784.91	3,714.59	70.32	53.823		
7,428.00	7,253.06	7,972.11	7,207.07	34.73	69.50	68.09	2,899.71	-1,207.86	3,784.47	3,713.76	70.71	53.518		
7,522.00	7,346.98	8,066.10	7,301.02	34.94	69.60	73.56	2,898.89	-1,210.11	3,784.20	3,713.09	71.11	53.218		
7,556.81	7,381.78	8,100.91	7,335.83	35.02	69.64	62.38	2,898.59	-1,210.94	3,784.17	3,712.91	71.26	53.104		
7,617.00	7,441.94	8,161.10	7,395.99	35.16	69.71	35.07	2,898.07	-1,212.38	3,783.79	3,712.27	71.53	52.901		
7,711.00	7,535.92	8,255.09	7,489.95	35.38	69.83	36.28	2,897.25	-1,214.62	3,782.97	3,711.01	71.95	52.575		
7,806.00	7,630.87	8,350.08	7,584.92	35.60	69.94	57.81	2,896.42	-1,216.90	3,782.08	3,709.70	72.38	52.253		
7,900.00	7,724.80	8,444.08	7,678.88	35.82	70.05	61.87	2,895.61	-1,219.14	3,781.25	3,708.46	72.79	51.944		
7,925.88	7,750.66	8,469.95	7,704.74	35.88	70.08	69.92	2,895.38	-1,219.76	3,781.16	3,708.25	72.91	51.860		
7,994.00	7,818.76	8,538.07	7,772.84	36.04	70.17	110.73	2,894.79	-1,221.39	3,781.77	3,708.55	73.22	51.648		
8,089.00	7,913.75	8,633.06	7,867.80	36.28	70.29	108.09	2,893.96	-1,223.66	3,783.35	3,709.68	73.67	51.356		
8,278.00	8,102.68	8,822.03	8,056.71	36.74	70.52	97.18	2,892.32	-1,228.18	3,786.24	3,711.69	74.55	50.788		
8,561.00	8,385.40	9,104.95	8,339.54	37.42	70.89	86.63	2,889.86	-1,234.95	3,789.44	3,713.60	75.84	49.966		
8,930.00	8,753.68	9,473.67	8,708.14	38.30	71.39	71.76	2,886.65	-1,243.76	3,788.46	3,710.95	77.50	48.881		
8,993.00	8,816.50	9,536.60	8,771.04	38.45	71.48	71.81	2,886.10	-1,245.27	3,787.65	3,709.86	77.79	48.693		

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 21A-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	20.25	136.00	50.18	145.08				
170.00	169.99	163.99	163.99	0.25	2.50	-51.08	136.00	50.18	143.89	141.13	2.76	52.175	
231.00	230.97	224.97	224.97	0.47	3.86	-48.73	136.00	50.18	142.94	138.60	4.34	32.959	
262.00	261.95	255.95	255.95	0.59	4.51	-38.73	136.00	50.18	142.17	137.08	5.09	27.905	
292.00	291.92	285.92	285.92	0.70	5.13	-43.48	136.00	50.18	141.05	135.22	5.83	24.195	
353.00	352.75	343.64	343.64	0.93	6.42	-59.77	136.44	50.41	138.91	131.66	7.25	19.159	
405.97	405.49	392.96	392.92	1.12	7.58	-61.60	137.99	51.24	138.31	129.86	8.45	16.377 CC	
445.00	444.28	429.28	429.18	1.27	9.09	-63.01	139.85	52.24	138.53	129.09	9.43	14.686	
536.00	534.44	513.89	513.44	1.62	13.81	-62.64	146.55	55.82	140.76	128.93	11.83	11.902 ES	
630.00	626.87	600.00	598.77	2.02	21.76	-66.36	156.73	61.27	145.41	130.07	15.34	9.480	
724.00	718.61	687.55	684.89	2.45	26.83	-74.27	170.55	68.66	154.13	135.49	18.64	8.269	
819.00	810.83	774.14	769.28	2.91	27.56	-84.92	187.63	77.80	169.17	148.66	20.51	8.249 SF	
913.00	901.45	858.65	850.71	3.39	27.57	-86.67	207.52	88.45	189.14	167.20	21.93	8.624	
1,007.00	991.42	941.90	929.88	3.92	27.60	-91.49	230.22	100.59	213.17	190.00	23.17	9.199	
1,101.00	1,081.58	1,024.02	1,006.80	4.44	27.63	-90.45	255.56	114.15	240.47	216.42	24.04	10.001	
1,195.00	1,172.56	1,105.09	1,081.46	4.93	27.67	-87.98	283.41	129.05	269.42	244.95	24.47	11.011	
1,289.00	1,264.08	1,184.38	1,153.11	5.40	27.73	-88.70	313.34	145.07	300.89	276.27	24.62	12.220	
1,384.00	1,356.59	1,265.78	1,225.24	5.88	27.80	-86.72	346.59	162.86	335.61	310.86	24.75	13.562	
1,478.00	1,448.11	1,352.69	1,301.89	6.35	27.90	-88.17	382.72	182.19	370.97	345.95	25.02	14.828	
1,573.00	1,540.86	1,440.23	1,379.09	6.82	28.02	-88.26	419.11	201.66	407.36	382.06	25.29	16.106	
1,667.00	1,632.86	1,526.88	1,455.50	7.27	28.15	-84.88	455.13	220.94	443.21	417.64	25.57	17.336	
1,761.00	1,724.81	1,613.75	1,532.11	7.72	28.29	-83.31	491.24	240.26	478.62	452.73	25.90	18.482	
1,855.00	1,816.45	1,700.82	1,608.90	8.18	28.45	-81.93	527.44	259.63	513.78	487.45	26.33	19.511	
1,949.00	1,907.72	1,788.00	1,685.78	8.67	28.63	-82.24	563.68	279.02	548.86	521.99	26.87	20.427	
2,044.00	1,999.54	1,871.60	1,759.10	9.18	28.82	-83.72	598.88	298.37	585.20	557.77	27.43	21.335	
2,138.00	2,090.09	1,958.42	1,835.08	9.70	29.03	-81.72	635.59	318.76	621.23	593.14	28.09	22.118	
2,232.00	2,180.65	2,045.33	1,911.15	10.22	29.26	-82.56	672.35	339.17	657.04	628.28	28.76	22.848	
2,326.00	2,271.24	2,132.27	1,987.24	10.74	29.50	-81.27	709.11	359.58	692.78	663.35	29.44	23.534	
2,420.00	2,361.89	2,219.58	2,063.65	11.26	29.76	-77.93	746.03	380.08	727.60	697.48	30.12	24.157	
2,527.00	2,465.28	2,319.64	2,151.23	11.83	30.07	-72.87	788.35	403.58	765.42	734.55	30.87	24.792	
2,622.00	2,557.29	2,408.59	2,229.08	12.33	30.36	-75.31	825.97	424.47	798.66	767.13	31.53	25.328	
2,715.00	2,647.48	2,495.11	2,304.81	12.81	30.66	-79.49	862.56	444.79	832.64	800.45	32.19	25.868	
2,810.00	2,739.63	2,582.85	2,381.60	13.31	30.98	-83.25	899.66	465.39	868.98	836.10	32.88	26.432	
2,904.00	2,830.93	2,669.11	2,457.10	13.80	31.30	-86.02	936.14	485.65	906.24	872.68	33.56	27.007	
2,999.00	2,922.99	2,756.06	2,533.19	14.30	31.64	-85.81	972.91	506.06	944.47	910.19	34.28	27.551	
3,093.00	3,013.89	2,842.00	2,608.42	14.81	31.98	-86.87	1,009.25	526.24	982.54	947.51	35.03	28.047	
3,187.00	3,104.97	2,927.72	2,683.44	15.31	32.34	-88.34	1,045.51	546.37	1,021.08	985.31	35.77	28.545	
3,282.00	3,197.19	3,014.30	2,759.21	15.80	32.71	-87.39	1,082.12	566.70	1,060.14	1,023.63	36.51	29.040	
3,376.00	3,288.43	3,100.12	2,834.32	16.29	33.09	-86.29	1,118.41	586.85	1,098.44	1,061.20	37.24	29.493	
3,470.00	3,379.56	3,186.03	2,909.52	16.79	33.47	-86.00	1,154.74	607.03	1,136.55	1,098.55	38.01	29.904	
3,564.00	3,470.75	3,271.82	2,984.60	17.28	33.87	-87.68	1,191.02	627.17	1,174.95	1,136.18	38.77	30.304	
3,658.00	3,561.89	3,357.56	3,059.65	17.78	34.28	-86.27	1,227.28	647.31	1,213.44	1,173.89	39.55	30.682	
3,752.00	3,652.73	3,443.62	3,134.96	18.29	34.69	-83.99	1,263.67	667.52	1,251.26	1,210.89	40.37	30.998	
3,847.00	3,744.45	3,530.93	3,211.38	18.81	35.13	-82.30	1,300.60	688.02	1,288.70	1,247.49	41.21	31.273	
3,941.00	3,835.42	3,617.51	3,287.16	19.31	35.56	-81.61	1,337.21	708.35	1,325.28	1,283.26	42.03	31.535	
4,026.00	3,917.86	3,695.88	3,355.75	19.76	35.96	-80.83	1,370.35	726.75	1,358.16	1,315.40	42.75	31.768	
4,130.00	4,018.80	3,791.55	3,439.48	20.30	36.46	-83.87	1,410.81	749.22	1,398.90	1,355.26	43.64	32.054	
4,224.00	4,109.52	3,877.69	3,514.88	20.82	36.92	-84.64	1,447.24	769.45	1,436.50	1,391.99	44.50	32.278	
4,318.00	4,199.89	3,963.71	3,590.17	21.36	37.39	-85.19	1,483.62	789.64	1,474.36	1,428.96	45.40	32.473	
4,412.00	4,290.67	4,049.68	3,665.41	21.87	37.86	-85.64	1,519.98	809.83	1,512.37	1,466.10	46.27	32.688	
4,507.00	4,382.62	4,136.67	3,741.54	22.38	38.34	-84.15	1,556.76	830.26	1,550.55	1,503.43	47.12	32.903	
4,601.00	4,473.49	4,222.85	3,816.97	22.90	38.83	-84.34	1,593.21	850.50	1,588.09	1,540.10	47.99	33.092	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 21A-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error: 0.00 usft	
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
4,695.00	4,564.59	4,309.11	3,892.46	23.39	39.32	-82.99	1,629.68	870.75	1,625.43	1,576.59	48.84	33.282	
4,789.00	4,655.72	4,395.63	3,968.19	23.89	39.82	-81.11	1,666.27	891.07	1,662.13	1,612.45	49.69	33.452	
4,883.00	4,746.85	4,482.43	4,044.16	24.39	40.33	-79.26	1,702.98	911.45	1,698.18	1,647.64	50.54	33.599	
4,978.00	4,839.29	4,570.04	4,120.84	24.87	40.85	-81.67	1,740.03	932.02	1,734.80	1,683.43	51.38	33.767	
5,072.00	4,931.05	4,656.29	4,196.32	25.33	41.36	-84.01	1,776.50	952.28	1,771.97	1,719.80	52.18	33.962	
5,166.00	5,022.88	4,742.32	4,271.62	25.79	41.88	-84.18	1,812.88	972.48	1,809.63	1,756.66	52.97	34.163	
5,260.00	5,114.46	4,828.35	4,346.91	26.26	42.41	-84.36	1,849.27	992.68	1,847.40	1,793.61	53.80	34.340	
5,354.00	5,205.69	4,914.43	4,422.26	26.75	42.93	-83.83	1,885.67	1,012.89	1,885.14	1,830.48	54.66	34.488	
5,450.00	5,298.51	5,002.31	4,499.17	27.28	43.48	-84.76	1,922.83	1,033.53	1,923.78	1,868.20	55.58	34.613	
5,543.00	5,388.31	5,087.48	4,573.71	27.79	44.01	-83.35	1,958.85	1,053.53	1,961.12	1,904.64	56.48	34.721	
5,637.00	5,479.24	5,173.64	4,649.13	28.29	44.56	-83.95	1,995.29	1,073.76	1,998.69	1,941.31	57.38	34.830	
5,731.00	5,570.39	5,259.94	4,724.66	28.79	45.11	-81.67	2,031.78	1,094.03	2,035.95	1,977.68	58.27	34.941	
5,825.00	5,661.76	5,346.43	4,800.36	29.27	45.66	-80.97	2,068.36	1,114.34	2,072.70	2,013.56	59.13	35.051	
5,920.00	5,754.38	5,433.93	4,876.94	29.75	46.22	-79.51	2,105.37	1,134.88	2,109.55	2,049.56	59.99	35.168	
6,014.00	5,846.19	5,520.48	4,952.69	30.21	46.78	-80.55	2,141.96	1,155.21	2,146.03	2,085.21	60.81	35.288	
6,109.00	5,939.26	5,607.70	5,029.02	30.65	47.35	-81.13	2,178.85	1,175.69	2,183.31	2,121.68	61.62	35.429	
6,203.00	6,031.68	5,693.72	5,104.32	31.07	47.92	-82.11	2,215.23	1,195.89	2,220.60	2,158.21	62.39	35.591	
6,297.00	6,124.42	5,779.41	5,179.31	31.47	48.49	-83.07	2,251.46	1,216.01	2,258.34	2,195.21	63.12	35.777	
6,392.00	6,218.59	5,865.30	5,254.48	31.83	49.06	-88.66	2,287.79	1,236.18	2,297.34	2,233.54	63.80	36.009	
6,486.00	6,312.11	5,949.39	5,328.08	32.16	49.62	-95.84	2,323.35	1,255.92	2,337.09	2,272.68	64.41	36.284	
6,580.00	6,405.81	6,033.14	5,401.38	32.47	50.18	-87.98	2,358.76	1,275.59	2,376.92	2,311.93	64.98	36.577	
6,674.00	6,499.58	6,116.86	5,474.65	32.77	50.75	-91.26	2,394.17	1,295.25	2,416.53	2,350.99	65.54	36.868	
6,768.00	6,593.40	6,200.39	5,548.26	33.06	51.32	-99.65	2,429.62	1,314.92	2,444.23	2,373.28	66.10	37.163	
6,863.00	6,688.26	6,298.43	5,621.27	33.35	51.89	-94.91	2,465.07	1,334.24	2,444.16	2,372.70	66.66	37.463	
6,957.00	6,782.19	6,392.26	5,695.07	33.62	52.46	-88.00	2,499.52	1,353.56	2,443.61	2,371.68	67.22	37.768	
7,051.00	6,876.18	6,486.45	5,772.26	33.84	53.03	-119.30	2,533.97	1,372.85	2,443.26	2,370.94	67.78	38.073	
7,145.00	6,970.17	6,574.46	5,849.72	34.06	53.60		2,568.42	1,391.93	2,443.27	2,370.89	68.34	38.378	
7,239.00	7,064.16	6,668.43	5,922.07	34.28	54.17		2,602.87	1,411.43	2,443.89	2,370.33	68.90	38.683	
7,333.00	7,158.15	6,756.43	5,994.32	34.50	54.74		2,637.32	1,430.72	2,444.50	2,370.58	69.46	38.988	
7,427.00	7,252.14	6,844.43	6,061.07	34.72	55.31		2,671.77	1,449.01	2,445.34	2,371.06	70.02	39.293	
7,521.00	7,346.13	6,932.43	6,127.82	34.94	55.88		2,706.22	1,467.30	2,445.34	2,371.06	70.58	39.598	
7,615.00	7,440.12	7,020.43	6,194.57	35.16	56.45		2,740.67	1,485.59	2,445.13	2,370.46	71.14	39.903	
7,709.00	7,534.11	7,104.43	6,265.32	35.38	57.02		2,775.12	1,503.88	2,444.00	2,368.95	71.70	40.208	
7,803.00	7,628.10	7,194.43	6,336.07	35.59	57.59		2,809.57	1,522.17	2,443.48	2,368.05	72.26	40.513	
7,897.00	7,722.09	7,284.43	6,406.82	35.80	58.16		2,844.02	1,540.46	2,443.48	2,368.04	72.82	40.818	
7,991.00	7,816.08	7,374.43	6,477.57	35.82	57.07	105.96	2,878.47	1,558.75	2,443.61	2,367.80	73.38	41.123	
8,085.00	7,910.07	7,464.43	6,548.32	36.04	57.21	154.81	2,912.92	1,577.04	2,444.25	2,368.03	73.94	41.428	
8,179.00	8,004.06	7,554.43	6,619.07	36.26	57.34	152.15	2,947.37	1,595.33	2,445.05	2,368.40	74.50	41.733	
8,273.00	8,102.68	7,644.43	6,689.82	36.47	57.62	141.21	2,981.82	1,613.62	2,447.60	2,370.10	75.06	42.038	
8,367.00	8,200.30	7,734.43	6,760.57	36.74	58.06	130.62	3,016.27	1,631.91	2,450.20	2,375.49	75.62	42.343	
8,461.00	8,300.30	7,824.43	6,831.32	37.00	58.64	115.77	3,050.72	1,650.20	2,453.46	2,383.22	76.18	42.648	
8,555.00	8,400.30	7,914.43	6,902.07	37.26	59.22		3,085.17	1,669.49	2,456.71	2,386.51	76.74	42.953	
8,649.00	8,500.30	8,004.43	6,972.82	37.52	59.79		3,119.62	1,688.78	2,459.96	2,389.80	77.30	43.258	
8,743.00	8,600.30	8,094.43	7,041.57	37.78	60.37		3,154.07	1,708.07	2,463.21	2,393.09	77.86	43.563	
8,837.00	8,700.30	8,184.43	7,112.32	38.04	60.94		3,188.52	1,727.36	2,466.46	2,396.38	78.42	43.868	
8,931.00	8,800.30	8,274.43	7,183.07	38.30	61.52		3,222.97	1,746.65	2,469.71	2,399.67	78.98	44.173	
9,025.00	8,900.30	8,364.43	7,253.82	38.56	62.09		3,257.42	1,765.94	2,472.96	2,402.96	79.54	44.478	
9,119.00	9,000.30	8,454.43	7,323.57	38.82	62.67		3,291.87	1,785.23	2,476.21	2,406.25	80.10	44.783	
9,213.00	9,100.30	8,544.43	7,393.32	39.08	63.24		3,326.32	1,804.52	2,479.46	2,409.54	80.66	45.088	
9,307.00	9,200.30	8,634.43	7,463.07	39.34	63.82		3,360.77	1,823.81	2,482.71	2,412.83	81.22	45.393	
9,401.00	9,300.30	8,724.43	7,532.82	39.60	64.39		3,395.22	1,843.10	2,485.96	2,416.12	81.78	45.698	
9,495.00	9,400.30	8,814.43	7,602.57	39.86	64.97		3,429.67	1,862.39	2,489.21	2,419.41	82.34	46.003	
9,589.00	9,500.30	8,904.43	7,672.32	40.12	65.54		3,464.12	1,881.68	2,492.46	2,422.70	82.90	46.308	
9,683.00	9,600.30	8,994.43	7,742.07	40.38	66.12		3,498.57	1,900.97	2,495.71	2,425.99	83.46	46.613	
9,777.00	9,700.30	9,084.43	7,811.82	40.64	66.69		3,533.02	1,920.26	2,498.96	2,429.28	84.02	46.918	
9,871.00	9,800.30	9,174.43	7,881.57	40.90	67.27		3,567.47	1,939.55	2,502.21	2,432.57	84.58	47.223	
9,965.00	9,900.30	9,264.43	7,951.32	41.16	67.84		3,601.92	1,958.84	2,505.46	2,435.86	85.14	47.528	
10,059.00	10,000.30	9,354.43	8,021.07	41.42	68.42		3,636.37	1,978.13	2,508.71	2,439.15	85.70	47.833	
10,153.00	10,100.30	9,444.43	8,090.82	41.68	68.99		3,670.82	1,997.42	2,511.96	2,442.44	86.26	48.138	
10,247.00	10,200.30	9,534.43	8,160.57	41.94	69.57		3,705.27	2,016.71	2,515.21	2,445.73	86.82	48.443	
10,341.00	10,300.30	9,624.43	8,230.32	42.20	70.14		3,739.72	2,036.00	2,518.96	2,449.02	87.38	48.748	
10,435.00	10,400.30	9,714.43	8,300.07	42.46	70.72		3,774.17	2,055.29	2,522.21	2,452.31	87.94	49.053	
10,529.00	10,500.30	9,804.43	8,369.82	42.72	71.29		3,808.62	2,074.58	2,525.46	2,455.60	88.50	49.358	
10,623.00	10,600.30	9,894.43	8,439.57	42.98	71.87		3,843.07	2,093.87	2,528.71	2,458.89	89.06	49.663	
10,717.00	10,700.30	9,984.43	8,509.32	43.24	72.44		3,877.52	2,113.16	2,531.96	2,462.18	89.62	49.968	
10,811.00	10,800.30	10,074.43	8,579.07	43.50	73.02		3,911.97	2,132.45	2,535.21	2,465.47	90.18	50.273	
10,905.00	10,900.30	10,164.43	8,648.82	43.76	73.59		3,946.42	2,151.74	2,538.46	2,468.76	90.74	50.578	
11,000.00	11,000.30	10,254.43	8,718.57	44.02	74.17		3,980.87	2,171.03	2,541.71	2,472.05	91.30	50.883	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 21B-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	20.24	128.98	47.56	137.60				
170.00	169.99	163.99	163.99	0.25	2.50	-51.12	128.98	47.56	136.40	133.64	2.76	49.458	
231.00	230.97	224.97	224.97	0.47	3.86	-48.79	128.98	47.56	135.44	131.11	4.34	31.232	
262.00	261.95	255.95	255.95	0.59	4.51	-38.82	128.98	47.56	134.68	129.59	5.09	26.435	
292.00	291.92	285.92	285.92	0.70	5.13	-43.58	128.98	47.56	133.56	127.73	5.83	22.911	
353.00	352.75	346.75	346.75	0.93	6.38	-60.09	128.98	47.56	130.90	123.60	7.30	17.929	
445.00	444.28	435.97	435.97	1.27	8.26	-64.10	129.27	47.72	126.90	117.42	9.47	13.395	
536.00	534.44	521.05	520.97	1.62	10.60	-64.72	132.36	49.37	125.11	113.47	11.64	10.752	
554.66	552.87	538.50	538.38	1.70	11.35	-65.62	133.40	49.93	125.05	112.92	12.13	10.307 CC	
630.00	626.87	608.84	608.43	2.02	14.44	-69.85	139.03	52.95	126.05	111.92	14.13	8.924 ES	
724.00	718.61	696.43	695.24	2.45	17.36	-79.13	149.21	58.41	131.66	115.40	16.26	8.098 SF	
819.00	810.83	784.43	781.84	2.91	17.49	-91.00	162.95	65.79	144.09	126.85	17.23	8.361	
913.00	901.45	870.63	865.88	3.39	17.51	-93.59	179.81	74.84	161.86	143.77	18.09	8.949	
1,007.00	991.42	955.83	948.02	3.92	17.54	-98.92	199.74	85.53	183.91	165.04	18.87	9.748	
1,101.00	1,081.58	1,040.21	1,028.29	4.44	17.58	-97.88	222.64	97.82	208.93	189.45	19.48	10.724	
1,195.00	1,172.56	1,123.83	1,106.63	4.93	17.64	-95.14	248.40	111.64	235.00	215.10	19.90	11.809	
1,289.00	1,264.08	1,205.92	1,182.21	5.40	17.72	-95.49	276.60	126.77	263.17	242.98	20.19	13.035	
1,384.00	1,356.59	1,290.63	1,258.86	5.88	17.83	-93.13	308.37	143.83	294.33	273.83	20.51	14.354	
1,478.00	1,448.11	1,378.87	1,338.44	6.35	17.97	-94.26	341.95	161.85	326.06	305.12	20.94	15.574	
1,573.00	1,540.86	1,467.79	1,418.64	6.82	18.13	-94.02	375.80	180.01	358.72	337.34	21.38	16.781	
1,667.00	1,632.86	1,555.82	1,498.04	7.27	18.30	-90.35	409.30	197.99	390.82	369.00	21.82	17.913	
1,761.00	1,724.81	1,644.06	1,577.62	7.72	18.50	-88.60	442.88	216.01	422.54	400.24	22.30	18.948	
1,855.00	1,816.45	1,732.45	1,657.34	8.18	18.72	-87.12	476.52	234.07	454.14	431.29	22.85	19.877	
1,949.00	1,907.72	1,820.90	1,737.12	8.67	18.96	-87.36	510.19	252.13	485.82	462.36	23.46	20.708	
2,044.00	1,999.54	1,910.13	1,817.60	9.18	19.22	-88.93	544.15	270.35	518.40	494.26	24.14	21.475	
2,138.00	2,090.09	1,998.82	1,897.57	9.70	19.49	-86.98	577.90	288.49	550.63	525.77	24.86	22.149	
2,232.00	2,180.65	2,089.69	1,978.95	10.22	19.80	-87.61	612.47	309.45	582.32	556.72	25.60	22.743	
2,326.00	2,271.24	2,178.19	2,057.95	10.74	20.13	-86.03	646.14	330.89	613.82	587.50	26.33	23.317	
2,420.00	2,361.89	2,267.02	2,137.23	11.26	20.47	-82.39	679.92	352.41	644.37	617.31	27.06	23.815	
2,527.00	2,465.28	2,368.73	2,228.02	11.83	20.89	-77.01	718.61	377.04	677.23	649.35	27.89	24.286	
2,622.00	2,557.29	2,459.13	2,308.70	12.33	21.27	-79.24	752.99	398.94	706.03	677.41	28.62	24.669	
2,715.00	2,647.48	2,547.13	2,387.25	12.81	21.66	-83.25	786.47	420.25	735.70	706.35	29.35	25.069	
2,810.00	2,739.63	2,636.46	2,466.98	13.31	22.07	-86.85	820.44	441.89	767.70	737.59	30.10	25.503	
2,904.00	2,830.93	2,724.35	2,545.43	13.80	22.49	-89.41	853.87	463.18	800.68	769.83	30.85	25.954	
2,999.00	2,922.99	2,812.98	2,624.53	14.30	22.92	-89.13	887.58	484.64	834.69	803.05	31.63	26.386	
3,093.00	3,013.89	2,900.59	2,702.73	14.81	23.36	-90.01	920.91	505.86	868.61	836.18	32.44	26.779	
3,187.00	3,104.97	2,988.01	2,780.76	15.31	23.81	-91.33	954.16	527.04	903.01	869.78	33.23	27.172	
3,282.00	3,197.19	3,076.30	2,859.56	15.80	24.27	-90.20	987.74	548.42	937.85	903.82	34.03	27.559	
3,376.00	3,288.43	3,163.80	2,937.66	16.29	24.74	-89.01	1,021.02	569.62	971.99	937.16	34.83	27.906	
3,470.00	3,379.56	3,251.39	3,015.84	16.79	25.22	-88.59	1,054.33	590.83	1,005.96	970.31	35.65	28.218	
3,564.00	3,470.75	3,338.86	3,093.91	17.28	25.70	-90.17	1,087.60	612.02	1,040.23	1,003.76	36.47	28.521	
3,658.00	3,561.89	3,426.30	3,171.95	17.78	26.20	-88.66	1,120.86	633.20	1,074.60	1,037.29	37.30	28.807	
3,752.00	3,652.73	3,514.01	3,250.24	18.29	26.70	-86.34	1,154.22	654.44	1,108.34	1,070.17	38.17	29.037	
3,847.00	3,744.45	3,602.97	3,329.64	18.81	27.22	-84.52	1,188.06	675.99	1,141.66	1,102.60	39.06	29.229	
3,941.00	3,835.42	3,691.15	3,408.35	19.31	27.74	-83.74	1,221.60	697.35	1,174.12	1,134.19	39.93	29.405	
4,026.00	3,917.86	3,770.96	3,479.59	19.76	28.22	-82.85	1,251.96	716.68	1,203.24	1,162.53	40.71	29.560	
4,130.00	4,018.80	3,868.41	3,566.56	20.30	28.81	-85.83	1,289.02	740.28	1,239.40	1,197.74	41.65	29.754	
4,224.00	4,109.52	3,956.21	3,644.93	20.82	29.35	-86.66	1,322.42	761.55	1,272.94	1,230.38	42.56	29.910	
4,318.00	4,199.89	4,043.90	3,723.20	21.36	29.89	-87.13	1,355.77	782.79	1,306.80	1,263.30	43.50	30.044	
4,412.00	4,290.67	4,131.54	3,801.42	21.87	30.44	-87.44	1,389.10	804.01	1,340.75	1,296.35	44.40	30.195	
4,507.00	4,382.62	4,220.20	3,880.56	22.38	31.00	-85.91	1,422.83	825.49	1,374.81	1,329.50	45.31	30.344	
4,601.00	4,473.49	4,308.03	3,958.95	22.90	31.55	-86.06	1,456.23	846.76	1,408.28	1,362.07	46.22	30.471	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 21B-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error: 0.00 usft	
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
4,695.00	4,564.59	4,395.92	4,037.40	23.39	32.12	-84.57	1,489.66	868.05	1,441.52	1,394.41	47.11	30.599	
4,789.00	4,655.72	4,484.05	4,116.06	23.89	32.69	-82.70	1,523.18	889.40	1,474.12	1,426.11	48.01	30.707	
4,883.00	4,746.85	4,572.43	4,194.94	24.39	33.26	-80.73	1,556.80	910.80	1,506.04	1,457.13	48.91	30.795	
4,978.00	4,839.29	4,661.63	4,274.56	24.87	33.84	-83.07	1,590.73	932.41	1,538.47	1,488.68	49.79	30.901	
5,072.00	4,931.05	4,749.50	4,352.99	25.33	34.42	-85.30	1,624.15	953.69	1,571.48	1,520.85	50.64	31.035	
5,166.00	5,022.88	4,837.17	4,431.24	25.79	35.00	-85.45	1,657.50	974.93	1,605.00	1,553.52	51.48	31.177	
5,260.00	5,114.46	4,924.85	4,509.50	26.26	35.59	-85.62	1,690.85	996.16	1,638.66	1,586.31	52.35	31.302	
5,354.00	5,205.69	5,012.59	4,587.81	26.75	36.18	-85.11	1,724.22	1,017.42	1,672.32	1,619.07	53.25	31.403	
5,450.00	5,298.51	5,102.16	4,667.76	27.28	36.78	-86.04	1,758.29	1,039.11	1,706.84	1,652.63	54.21	31.487	
5,543.00	5,388.31	5,188.98	4,745.25	27.79	37.37	-84.59	1,791.31	1,060.14	1,740.18	1,685.04	55.14	31.557	
5,637.00	5,479.24	5,276.79	4,823.63	28.29	37.96	-85.11	1,824.71	1,081.41	1,773.70	1,717.62	56.08	31.628	
5,731.00	5,570.39	5,364.72	4,902.11	28.79	38.56	-82.77	1,858.15	1,102.71	1,806.88	1,749.88	57.00	31.700	
5,825.00	5,661.76	5,452.82	4,980.74	29.27	39.17	-81.99	1,891.66	1,124.04	1,839.53	1,781.63	57.90	31.769	
5,920.00	5,754.38	5,541.92	5,060.27	29.75	39.78	-80.45	1,925.55	1,145.63	1,872.21	1,813.42	58.79	31.844	
6,014.00	5,846.19	5,630.05	5,138.93	30.21	40.39	-81.44	1,959.07	1,166.97	1,904.56	1,844.90	59.66	31.924	
6,109.00	5,939.26	5,718.89	5,218.22	30.65	41.00	-81.90	1,992.86	1,188.49	1,937.67	1,877.16	60.51	32.023	
6,203.00	6,031.68	5,806.52	5,296.44	31.07	41.61	-82.81	2,026.19	1,209.72	1,970.82	1,909.50	61.32	32.142	
6,297.00	6,124.42	5,893.83	5,374.37	31.47	42.22	-83.63	2,059.40	1,230.86	2,004.41	1,942.32	62.09	32.283	
6,392.00	6,218.59	5,981.39	5,452.52	31.83	42.83	-89.04	2,092.70	1,252.07	2,039.23	1,976.42	62.81	32.468	
6,486.00	6,312.11	6,067.17	5,529.09	32.16	43.44	-96.09	2,125.33	1,272.85	2,074.86	2,011.40	63.46	32.694	
6,580.00	6,405.81	6,152.60	5,605.34	32.47	44.04	-88.10	2,157.83	1,293.54	2,110.58	2,046.50	64.08	32.935	
6,674.00	6,499.58	6,237.98	5,681.55	32.77	44.64	-91.32	2,190.30	1,314.22	2,146.11	2,081.43	64.69	33.177	
6,768.00	6,593.40	6,300.00	5,759.73	33.06	45.18	-99.51	2,226.24	1,335.73	2,179.50	2,110.37	65.28	33.428	
6,863.00	6,688.26	6,394.03	5,849.59	33.35	45.72	-94.84	2,260.08	1,357.24	2,180.69	2,110.94	65.85	33.688	
6,957.00	6,782.19	6,488.96	5,949.49	33.62	46.26	-87.96	2,293.33	1,378.75	2,180.16	2,109.93	66.42	33.948	
7,041.33	6,866.51	6,573.22	6,037.73	33.84	46.78	-120.32	2,326.65	1,399.26	2,179.79	2,109.16	67.00	34.208	
7,051.00	6,876.18	6,583.89	6,047.39	33.87	46.79	-125.39	2,385.57	1,434.80	2,179.80	2,109.12	70.68	30.841	
7,145.00	6,970.17	6,678.82	6,147.33	34.10	47.43	166.95	2,384.81	1,432.72	2,179.93	2,108.83	71.10	30.660	
7,334.00	7,159.13	7,765.84	7,170.27	34.53	49.70	109.79	2,383.28	1,428.53	2,180.36	2,108.48	71.88	30.332	
7,428.00	7,253.06	7,859.82	7,264.23	34.73	49.85	112.11	2,382.53	1,426.45	2,180.95	2,108.70	72.25	30.186	
7,522.00	7,346.98	7,953.81	7,358.19	34.94	49.99	117.60	2,381.77	1,424.37	2,181.77	2,109.15	72.62	30.043	
7,617.00	7,441.94	8,048.81	7,453.16	35.16	50.13	79.12	2,381.00	1,422.26	2,181.54	2,108.53	73.02	29.878	
7,711.00	7,535.92	8,142.80	7,547.13	35.38	50.28	80.36	2,380.24	1,420.18	2,180.40	2,106.99	73.42	29.699	
7,803.32	7,628.19	8,235.11	7,639.41	35.60	50.43	101.56	2,379.50	1,418.13	2,179.86	2,106.06	73.80	29.536	
7,806.00	7,630.87	8,237.79	7,642.09	35.60	50.43	101.90	2,379.48	1,418.07	2,179.86	2,106.05	73.81	29.532	
7,900.00	7,724.80	8,331.78	7,736.05	35.82	50.58	105.99	2,378.72	1,415.99	2,179.98	2,105.78	74.20	29.379	
7,994.00	7,818.76	8,425.78	7,830.02	36.04	50.73	154.84	2,377.96	1,413.90	2,180.60	2,105.98	74.61	29.225	
8,089.00	7,913.75	8,520.76	7,924.98	36.28	50.89	152.18	2,377.19	1,411.80	2,181.38	2,106.33	75.05	29.066	
8,278.00	8,102.68	8,709.74	8,113.91	36.74	51.20	141.23	2,375.67	1,407.61	2,183.89	2,107.98	75.91	28.769	
8,561.00	8,385.40	8,992.65	8,396.74	37.42	51.69	130.65	2,373.39	1,401.34	2,190.45	2,113.28	77.16	28.387	
8,930.00	8,753.68	9,361.35	8,765.33	38.30	52.34	115.82	2,370.41	1,393.16	2,199.64	2,120.89	78.75	27.933	
8,993.00	8,816.50	9,424.27	8,828.24	38.45	52.46	115.89	2,369.91	1,391.77	2,201.18	2,122.16	79.01	27.858	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 21C-8 596 - OH - Plan 1 (04-08-19 DS)													Offset Site Error: 0.00 usft	
Survey Program: 0-INC+TREND, 601-MWD+HDM													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.00	0.00	0.00	0.00	20.28	121.85	45.03	130.04					
170.00	169.99	163.99	163.99	0.25	2.50	-51.11	121.85	45.03	128.84	126.08	2.76	46.717		
231.00	230.97	224.97	224.97	0.47	3.86	-48.81	121.85	45.03	127.88	123.55	4.34	29.489		
262.00	261.95	255.95	255.95	0.59	4.51	-38.85	121.85	45.03	127.12	122.03	5.09	24.951		
292.00	291.92	285.92	285.92	0.70	5.13	-43.64	121.85	45.03	126.01	120.18	5.83	21.614		
353.00	352.75	346.75	346.75	0.93	6.38	-60.25	121.85	45.03	123.35	116.05	7.30	16.895		
445.00	444.28	438.28	438.28	1.27	8.25	-64.64	121.85	45.03	119.04	109.53	9.51	12.517		
536.00	534.44	527.06	527.06	1.62	10.08	-66.38	122.00	45.15	114.04	102.36	11.68	9.762		
630.00	626.87	615.69	615.62	2.02	11.89	-72.95	124.58	47.23	110.95	97.20	13.75	8.071		
650.18	646.60	634.75	634.64	2.11	12.13	-75.36	125.55	48.02	110.81	96.77	14.03	7.897 CC, ES		
724.00	718.61	704.66	704.27	2.45	12.98	-83.68	130.37	51.92	112.68	97.61	15.08	7.474 SF		
819.00	810.83	794.75	793.58	2.91	12.99	-96.71	139.51	59.30	121.12	105.52	15.61	7.761		
913.00	901.45	883.73	881.15	3.39	13.01	-99.98	151.74	69.17	134.64	118.49	16.14	8.340		
1,007.00	991.42	972.38	967.58	3.92	13.05	-105.54	167.07	81.55	151.88	135.18	16.69	9.098		
1,101.00	1,081.58	1,060.81	1,052.79	4.44	13.10	-104.00	185.45	96.40	171.14	153.91	17.22	9.937		
1,195.00	1,172.56	1,148.89	1,136.48	4.93	13.18	-100.30	206.78	113.63	190.33	172.62	17.71	10.748		
1,289.00	1,264.08	1,235.78	1,217.71	5.40	13.29	-99.45	230.75	132.99	210.86	192.70	18.16	11.614		
1,384.00	1,356.59	1,321.88	1,296.75	5.88	13.43	-95.88	257.31	154.45	234.24	215.65	18.59	12.602		
1,478.00	1,448.11	1,406.39	1,372.75	6.35	13.59	-95.38	286.05	177.66	260.48	241.46	19.01	13.699		
1,573.00	1,540.86	1,494.35	1,450.99	6.82	13.81	-93.32	317.32	202.92	289.31	269.81	19.50	14.836		
1,667.00	1,632.86	1,582.74	1,529.61	7.27	14.06	-88.16	348.74	228.30	318.18	298.16	20.02	15.894		
1,761.00	1,724.81	1,671.33	1,608.41	7.72	14.34	-85.20	380.24	253.73	347.06	326.49	20.57	16.873		
1,855.00	1,816.45	1,760.18	1,687.44	8.18	14.66	-82.76	411.82	279.25	376.02	354.85	21.17	17.762		
1,949.00	1,907.72	1,849.22	1,766.64	8.67	14.99	-82.21	443.48	304.81	405.13	383.30	21.83	18.562		
2,044.00	1,999.54	1,939.21	1,846.68	9.18	15.36	-83.13	475.46	330.65	435.07	412.52	22.54	19.298		
2,138.00	2,090.09	2,028.34	1,925.96	9.70	15.75	-80.65	507.15	356.25	464.63	441.34	23.30	19.944		
2,232.00	2,180.65	2,114.13	2,002.34	10.22	16.14	-81.10	537.78	380.48	494.15	470.14	24.01	20.580		
2,326.00	2,271.24	2,199.43	2,078.71	10.74	16.54	-79.79	569.11	401.97	524.56	499.82	24.74	21.203		
2,420.00	2,361.89	2,288.63	2,158.65	11.26	16.96	-76.43	602.02	423.97	554.20	528.67	25.54	21.703		
2,527.00	2,465.28	2,390.74	2,250.15	11.83	17.47	-71.31	639.69	449.16	586.13	559.69	26.43	22.173		
2,622.00	2,557.29	2,481.47	2,331.45	12.33	17.94	-73.69	673.17	471.55	614.15	586.92	27.23	22.555		
2,715.00	2,647.48	2,569.83	2,410.63	12.81	18.41	-77.83	705.77	493.35	643.06	615.04	28.01	22.955		
2,810.00	2,739.63	2,659.54	2,491.02	13.31	18.89	-81.58	738.87	515.48	674.24	645.41	28.83	23.389		
2,904.00	2,830.93	2,747.83	2,570.14	13.80	19.39	-84.28	771.44	537.26	706.43	676.80	29.63	23.841		
2,999.00	2,922.99	2,836.86	2,649.92	14.30	19.89	-84.19	804.29	559.22	739.54	709.07	30.47	24.274		
3,093.00	3,013.89	2,924.89	2,728.80	14.81	20.40	-85.22	836.77	580.94	772.51	741.19	31.32	24.667		
3,187.00	3,104.97	3,012.71	2,807.50	15.31	20.92	-86.68	869.17	602.61	805.99	773.83	32.16	25.062		
3,282.00	3,197.19	3,101.42	2,886.99	15.80	21.45	-85.68	901.90	624.49	839.95	806.94	33.00	25.451		
3,376.00	3,288.43	3,189.33	2,965.77	16.29	21.99	-84.63	934.33	646.18	873.20	839.36	33.85	25.799		
3,470.00	3,379.56	3,277.32	3,044.62	16.79	22.53	-84.34	966.80	667.89	906.24	871.54	34.70	26.113		
3,564.00	3,470.75	3,365.20	3,123.37	17.28	23.08	-86.01	999.22	689.57	939.58	904.01	35.57	26.419		
3,658.00	3,561.89	3,453.05	3,202.09	17.78	23.63	-84.63	1,031.63	711.24	973.01	936.57	36.43	26.706		
3,752.00	3,652.73	3,541.17	3,281.06	18.29	24.20	-82.45	1,064.15	732.99	1,005.72	968.39	37.33	26.940		
3,847.00	3,744.45	3,630.53	3,361.13	18.81	24.77	-80.72	1,097.11	755.03	1,037.97	999.72	38.25	27.135		
3,941.00	3,835.42	3,719.10	3,440.50	19.31	25.35	-80.03	1,129.79	776.88	1,069.44	1,030.29	39.15	27.316		
4,026.00	3,917.86	3,799.26	3,512.33	19.76	25.87	-79.19	1,159.37	796.66	1,097.69	1,057.74	39.95	27.476		
4,130.00	4,018.80	3,897.13	3,600.04	20.30	26.52	-82.25	1,195.48	820.80	1,132.81	1,091.88	40.93	27.676		
4,224.00	4,109.52	3,985.34	3,679.08	20.82	27.10	-83.18	1,228.02	842.57	1,165.28	1,123.42	41.86	27.836		
4,318.00	4,199.89	4,073.44	3,758.03	21.36	27.69	-83.72	1,260.53	864.30	1,198.00	1,155.17	42.82	27.975		
4,412.00	4,290.67	4,161.49	3,836.93	21.87	28.29	-84.09	1,293.01	886.02	1,230.89	1,187.14	43.76	28.131		
4,507.00	4,382.62	4,250.56	3,916.75	22.38	28.89	-82.64	1,325.88	908.00	1,263.92	1,219.24	44.68	28.286		
4,601.00	4,473.49	4,338.79	3,995.81	22.90	29.49	-82.85	1,358.43	929.77	1,296.35	1,250.74	45.62	28.419		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 21C-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,695.00	4,564.59	4,427.08	4,074.93	23.39	30.09	-81.41	1,391.00	951.55	1,328.59	1,282.06	46.53	28.552	
4,789.00	4,655.72	4,515.60	4,154.25	23.89	30.70	-79.61	1,423.66	973.39	1,360.20	1,312.75	47.45	28.667	
4,883.00	4,746.85	4,604.36	4,233.79	24.39	31.32	-77.68	1,456.41	995.28	1,391.13	1,342.76	48.37	28.763	
4,978.00	4,839.29	4,693.94	4,314.07	24.87	31.94	-80.04	1,489.46	1,017.38	1,422.63	1,373.36	49.27	28.876	
5,072.00	4,931.05	4,782.19	4,393.15	25.33	32.55	-82.29	1,522.02	1,039.16	1,454.77	1,404.64	50.13	29.018	
5,166.00	5,022.88	4,870.25	4,472.06	25.79	33.17	-82.48	1,554.51	1,060.88	1,487.43	1,436.44	51.00	29.167	
5,260.00	5,114.46	4,958.33	4,550.98	26.26	33.78	-82.70	1,587.01	1,082.61	1,520.17	1,468.29	51.88	29.299	
5,354.00	5,205.69	5,046.46	4,629.96	26.75	34.40	-82.26	1,619.52	1,104.36	1,552.83	1,500.03	52.81	29.407	
5,450.00	5,298.51	5,136.45	4,710.60	27.28	35.04	-83.23	1,652.72	1,126.56	1,586.26	1,532.49	53.78	29.498	
5,543.00	5,388.31	5,223.67	4,788.76	27.79	35.66	-81.83	1,684.90	1,148.07	1,618.54	1,563.81	54.73	29.574	
5,637.00	5,479.24	5,311.89	4,867.81	28.29	36.28	-82.38	1,717.45	1,169.84	1,651.00	1,595.32	55.68	29.652	
5,731.00	5,570.39	5,400.21	4,946.96	28.79	36.91	-80.08	1,750.04	1,191.63	1,683.16	1,626.55	56.61	29.731	
5,825.00	5,661.76	5,488.69	5,026.25	29.27	37.54	-79.32	1,782.68	1,213.46	1,714.83	1,657.30	57.53	29.808	
5,920.00	5,754.38	5,578.18	5,106.43	29.75	38.18	-77.81	1,815.70	1,235.53	1,746.58	1,688.15	58.43	29.891	
6,014.00	5,846.19	5,666.68	5,185.74	30.21	38.81	-78.81	1,848.35	1,257.37	1,778.04	1,718.73	59.31	29.978	
6,109.00	5,939.26	5,755.89	5,265.69	30.65	39.45	-79.28	1,881.27	1,279.38	1,810.29	1,750.11	60.17	30.085	
6,203.00	6,031.68	5,843.90	5,344.55	31.07	40.09	-80.19	1,913.74	1,301.09	1,842.66	1,781.67	60.99	30.211	
6,297.00	6,124.42	5,931.58	5,423.12	31.47	40.72	-81.01	1,946.09	1,322.72	1,875.55	1,813.77	61.77	30.361	
6,392.00	6,218.59	6,302.96	5,767.63	31.83	43.01	-85.68	2,060.13	1,398.98	1,905.66	1,840.61	65.05	29.296	
6,486.00	6,312.11	6,830.75	6,288.28	32.16	44.73	-93.11	2,122.95	1,440.99	1,915.91	1,849.13	66.79	28.687	
6,580.00	6,405.81	6,955.41	6,412.92	32.47	44.92	-85.46	2,122.67	1,440.01	1,915.57	1,848.27	67.29	28.466	
6,674.00	6,499.58	7,050.18	6,507.67	32.77	45.06	-89.40	2,121.98	1,438.11	1,914.58	1,846.75	67.83	28.225	
6,750.00	6,576.33	7,126.81	6,584.29	33.01	45.17	-97.43	2,121.42	1,436.57	1,914.27	1,846.00	68.26	28.042	
6,768.00	6,593.40	7,143.87	6,601.34	33.06	45.20	-99.71	2,121.29	1,436.22	1,914.28	1,845.92	68.36	28.003	
6,863.00	6,688.26	7,238.61	6,696.06	33.35	45.34	-95.01	2,120.60	1,434.31	1,914.25	1,845.37	68.88	27.791	
6,957.00	6,782.19	7,332.44	6,789.87	33.62	45.48	-88.14	2,119.91	1,432.42	1,913.77	1,844.40	69.37	27.587	
7,033.26	6,858.44	7,408.64	6,866.05	33.82	45.60	-116.43	2,119.35	1,430.89	1,913.47	1,843.73	69.74	27.437	
7,051.00	6,876.18	7,426.37	6,883.78	33.87	45.63	-125.58	2,119.22	1,430.53	1,913.48	1,843.66	69.83	27.403	
7,145.00	6,970.17	7,520.34	6,977.73	34.10	45.78	166.76	2,118.53	1,428.64	1,913.69	1,843.44	70.25	27.239	
7,334.00	7,159.13	7,709.33	7,166.68	34.53	46.08	109.61	2,117.15	1,424.83	1,914.27	1,843.22	71.05	26.943	
7,428.00	7,253.06	7,803.32	7,260.64	34.73	46.23	111.93	2,116.46	1,422.94	1,914.92	1,843.49	71.42	26.811	
7,522.00	7,346.98	7,897.30	7,354.60	34.94	46.39	117.43	2,115.77	1,421.04	1,915.80	1,844.00	71.80	26.683	
7,617.00	7,441.94	7,992.30	7,449.58	35.16	46.55	78.97	2,115.07	1,419.13	1,915.64	1,843.44	72.20	26.533	
7,711.00	7,535.92	8,086.29	7,543.55	35.38	46.71	80.20	2,114.38	1,417.24	1,914.56	1,841.96	72.61	26.370	
7,798.02	7,622.89	8,173.30	7,630.54	35.58	46.86	100.70	2,113.75	1,415.48	1,914.08	1,841.11	72.98	26.229	
7,806.00	7,630.87	8,181.28	7,638.52	35.60	46.87	101.76	2,113.69	1,415.32	1,914.09	1,841.08	73.01	26.217	
7,900.00	7,724.80	8,275.27	7,732.48	35.82	47.03	105.86	2,113.00	1,413.43	1,914.27	1,840.87	73.40	26.079	
7,994.00	7,818.76	8,369.26	7,826.45	36.04	47.20	154.72	2,112.31	1,411.53	1,914.95	1,841.14	73.82	25.941	
8,089.00	7,913.75	8,464.25	7,921.42	36.28	47.37	152.05	2,111.61	1,409.62	1,915.81	1,841.55	74.26	25.798	
8,278.00	8,102.68	8,653.23	8,110.35	36.74	47.71	141.11	2,110.23	1,405.81	1,918.46	1,843.32	75.13	25.534	
8,561.00	8,385.40	8,936.13	8,393.19	37.42	48.23	130.55	2,108.15	1,400.11	1,925.21	1,848.81	76.40	25.198	
8,930.00	8,753.68	9,304.79	8,761.77	38.30	48.94	115.79	2,105.45	1,392.69	1,934.66	1,856.65	78.01	24.800	
8,993.00	8,816.50	9,367.71	8,824.67	38.45	49.06	115.88	2,104.99	1,391.42	1,936.24	1,857.96	78.28	24.735	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 22A-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	20.27	114.83	42.41	122.56				
170.00	169.99	163.99	163.99	0.25	2.50	-51.16	114.83	42.41	121.34	118.59	2.76	44.000	
231.00	230.97	224.46	224.46	0.47	3.94	-48.81	114.83	42.57	120.44	116.04	4.41	27.336	
262.00	261.95	254.83	254.82	0.59	4.69	-38.58	114.83	43.20	119.89	114.64	5.25	22.834	
292.00	291.92	284.22	284.19	0.70	5.41	-42.89	114.83	44.27	119.13	113.06	6.07	19.629	
353.00	352.75	342.43	342.30	0.93	7.83	-57.98	115.19	47.55	117.87	109.37	8.50	13.869	
379.20	378.84	367.19	367.00	1.02	9.04	-58.34	115.74	49.30	117.77	108.15	9.62	12.243 CC	
445.00	444.28	429.40	428.93	1.27	13.12	-59.27	118.19	54.61	118.41	105.40	13.02	9.097	
536.00	534.44	515.36	514.15	1.62	21.16	-56.81	124.12	64.06	120.88	101.96	18.92	6.389	
630.00	626.87	603.97	601.42	2.02	32.19	-58.43	133.33	76.36	124.74	98.04	26.69	4.673 ES	
724.00	718.61	692.27	687.59	2.45	38.64	-64.29	145.59	91.17	131.43	99.45	31.98	4.110 SF	
819.00	810.83	780.77	772.99	2.91	39.21	-73.29	160.95	108.55	143.31	109.60	33.70	4.252	
913.00	901.45	867.39	855.45	3.39	39.22	-73.87	178.94	127.97	159.19	124.25	34.94	4.556	
1,007.00	991.42	952.95	935.66	3.92	39.24	-77.73	199.53	149.46	178.45	142.45	36.00	4.957	
1,101.00	1,081.58	1,040.52	1,016.48	4.44	39.27	-75.78	223.15	173.54	200.81	164.13	36.68	5.475	
1,195.00	1,172.56	1,131.83	1,100.51	4.93	39.32	-72.72	248.21	198.98	223.09	186.05	37.04	6.023	
1,289.00	1,264.08	1,223.03	1,184.45	5.40	39.37	-73.22	273.23	224.40	245.57	208.35	37.22	6.598	
1,384.00	1,356.59	1,315.17	1,269.25	5.88	39.43	-71.65	298.52	250.07	268.49	231.03	37.45	7.169	
1,478.00	1,448.11	1,406.29	1,353.11	6.35	39.50	-73.37	323.52	275.46	291.42	253.67	37.75	7.720	
1,573.00	1,540.86	1,498.13	1,437.63	6.82	39.59	-73.59	348.72	301.05	315.48	277.47	38.01	8.301	
1,667.00	1,632.86	1,588.95	1,521.22	7.27	39.68	-70.38	373.64	326.36	339.34	301.12	38.21	8.880	
1,761.00	1,724.81	1,679.91	1,604.94	7.72	39.78	-69.04	398.61	351.71	362.68	324.21	38.47	9.429	
1,855.00	1,816.45	1,771.09	1,688.86	8.18	39.90	-67.98	423.63	377.12	385.39	346.55	38.85	9.921	
1,949.00	1,907.72	1,862.42	1,772.91	8.67	40.02	-68.57	448.69	402.57	407.64	368.28	39.36	10.357	
2,044.00	1,999.54	1,954.71	1,857.85	9.18	40.16	-70.52	474.01	428.29	430.13	390.12	40.01	10.751	
2,138.00	2,090.09	2,046.10	1,941.96	9.70	40.30	-68.91	499.09	453.75	452.03	411.30	40.73	11.098	
2,232.00	2,180.65	2,137.55	2,026.13	10.22	40.45	-69.95	524.19	479.24	473.72	432.27	41.44	11.430	
2,326.00	2,271.24	2,229.01	2,110.30	10.74	40.62	-68.94	549.28	504.72	495.37	453.22	42.15	11.753	
2,420.00	2,361.89	2,320.67	2,194.67	11.26	40.79	-65.74	574.44	530.27	516.15	473.33	42.82	12.053	
2,527.00	2,465.28	2,425.37	2,291.02	11.83	41.00	-60.71	603.17	559.44	538.22	494.71	43.51	12.370	
2,622.00	2,557.29	2,518.35	2,376.60	12.33	41.19	-63.13	628.68	585.35	557.64	513.57	44.07	12.652	
2,715.00	2,647.48	2,609.05	2,460.07	12.81	41.39	-67.36	653.57	610.63	578.15	533.50	44.65	12.949	
2,810.00	2,739.63	2,701.33	2,545.00	13.31	41.60	-71.22	678.89	636.34	600.72	555.45	45.27	13.269	
2,904.00	2,830.93	2,792.28	2,628.71	13.80	41.82	-73.98	703.85	661.69	624.45	578.55	45.90	13.605	
2,999.00	2,922.99	2,884.09	2,713.21	14.30	42.05	-74.21	729.05	687.27	648.84	602.26	46.58	13.928	
3,093.00	3,013.89	2,974.91	2,796.79	14.81	42.28	-75.31	753.97	712.58	673.06	625.75	47.31	14.226	
3,187.00	3,104.97	3,065.56	2,880.23	15.31	42.53	-76.85	778.85	737.84	697.90	649.89	48.01	14.536	
3,282.00	3,197.19	3,157.12	2,964.49	15.80	42.78	-75.92	803.97	763.35	723.26	674.56	48.69	14.853	
3,376.00	3,288.43	3,247.81	3,047.95	16.29	43.04	-75.06	828.86	788.62	747.98	698.61	49.37	15.149	
3,470.00	3,379.56	3,338.58	3,131.49	16.79	43.30	-74.86	853.76	813.92	772.42	722.34	50.08	15.424	
3,564.00	3,470.75	3,429.25	3,214.95	17.28	43.58	-76.60	878.65	839.19	797.18	746.40	50.78	15.698	
3,658.00	3,561.89	3,519.92	3,298.39	17.78	43.86	-75.35	903.53	864.45	822.01	770.51	51.50	15.961	
3,752.00	3,652.73	3,610.81	3,382.04	18.29	44.15	-73.40	928.47	889.78	845.93	793.67	52.27	16.185	
3,847.00	3,744.45	3,702.89	3,466.79	18.81	44.45	-71.68	953.74	915.44	869.26	816.21	53.05	16.385	
3,941.00	3,835.42	3,794.09	3,550.73	19.31	44.76	-71.02	978.76	940.85	892.02	838.23	53.80	16.582	
4,026.00	3,917.86	3,876.58	3,626.65	19.76	45.04	-70.15	1,001.40	963.84	912.53	858.08	54.44	16.762	
4,130.00	4,018.80	3,977.36	3,719.40	20.30	45.40	-73.28	1,029.05	991.92	938.19	882.96	55.23	16.987	
4,224.00	4,109.52	4,068.32	3,803.12	20.82	45.72	-74.52	1,054.01	1,017.27	961.81	905.78	56.04	17.164	
4,318.00	4,199.89	4,159.24	3,886.80	21.36	46.06	-75.08	1,078.97	1,042.61	985.49	928.58	56.90	17.319	
4,412.00	4,290.67	4,250.09	3,970.41	21.87	46.40	-75.35	1,103.89	1,067.92	1,009.57	951.86	57.71	17.493	
4,507.00	4,382.62	4,341.95	4,054.95	22.38	46.75	-74.01	1,129.10	1,093.52	1,033.82	975.32	58.50	17.672	
4,601.00	4,473.49	4,432.91	4,138.67	22.90	47.10	-74.29	1,154.06	1,118.87	1,057.48	998.18	59.30	17.832	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 22A-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,695.00	4,564.59	4,523.90	4,222.40	23.39	47.46	-72.76	1,179.03	1,144.22	1,081.10	1,021.03	60.07	17.997	
4,789.00	4,655.72	4,615.04	4,306.28	23.89	47.82	-71.13	1,204.04	1,169.62	1,104.10	1,043.26	60.83	18.150	
4,883.00	4,746.85	4,706.34	4,390.32	24.39	48.19	-69.10	1,229.10	1,195.06	1,126.43	1,064.83	61.59	18.288	
4,978.00	4,839.29	4,798.49	4,475.13	24.87	48.58	-71.40	1,254.38	1,220.74	1,149.44	1,087.12	62.32	18.444	
5,072.00	4,931.05	4,889.35	4,558.75	25.33	48.96	-73.53	1,279.31	1,246.06	1,173.37	1,110.37	63.01	18.623	
5,166.00	5,022.88	4,980.05	4,642.22	25.79	49.35	-73.81	1,304.20	1,271.33	1,197.86	1,134.17	63.69	18.807	
5,260.00	5,114.46	5,070.81	4,725.76	26.26	49.74	-74.12	1,329.11	1,296.62	1,222.26	1,157.83	64.43	18.972	
5,354.00	5,205.69	5,161.67	4,809.38	26.75	50.14	-73.83	1,354.04	1,321.94	1,246.36	1,181.14	65.21	19.112	
5,450.00	5,298.51	5,306.04	4,943.18	27.28	50.76	-75.02	1,392.06	1,360.55	1,269.92	1,203.31	66.62	19.063	
5,543.00	5,388.31	5,502.14	5,130.44	27.79	51.46	-74.27	1,432.67	1,401.79	1,286.09	1,217.72	68.37	18.810	
5,637.00	5,479.24	5,702.36	5,326.74	28.29	52.00	-75.76	1,460.02	1,429.56	1,294.76	1,224.92	69.85	18.537	
5,731.00	5,570.39	5,900.61	5,524.08	28.79	52.37	-74.97	1,472.74	1,442.48	1,295.74	1,224.74	71.00	18.249	
5,825.00	5,661.76	6,038.43	5,661.88	29.27	52.55	-75.26	1,473.69	1,443.24	1,290.41	1,218.41	72.00	17.923	
5,920.00	5,754.38	6,135.05	5,758.48	29.75	52.65	-74.58	1,473.13	1,441.72	1,284.08	1,211.06	73.02	17.584	
6,014.00	5,846.19	6,226.47	5,849.89	30.21	52.75	-76.51	1,472.55	1,440.12	1,278.19	1,204.16	74.02	17.267	
6,109.00	5,939.26	6,319.18	5,942.58	30.65	52.86	-77.50	1,471.96	1,438.51	1,273.10	1,198.11	74.99	16.977	
6,203.00	6,031.68	6,411.27	6,034.65	31.07	52.96	-79.14	1,471.38	1,436.90	1,268.87	1,192.99	75.89	16.721	
6,297.00	6,124.42	6,503.72	6,127.08	31.47	53.07	-80.35	1,470.79	1,435.29	1,265.44	1,188.72	76.73	16.493	
6,392.00	6,218.59	6,597.65	6,220.99	31.83	53.18	-85.90	1,470.19	1,433.65	1,263.21	1,185.73	77.48	16.303	
6,486.00	6,312.11	6,690.98	6,314.31	32.16	53.29	-93.30	1,469.60	1,432.02	1,262.46	1,184.31	78.15	16.155	
6,580.00	6,405.81	6,784.53	6,407.85	32.47	53.41	-85.73	1,469.01	1,430.38	1,261.85	1,183.10	78.75	16.023	
6,674.00	6,499.58	6,878.17	6,501.47	32.77	53.53	-89.78	1,468.41	1,428.75	1,261.00	1,181.67	79.33	15.896	
6,735.80	6,561.25	6,939.77	6,563.06	32.96	53.60	-96.05	1,468.02	1,427.67	1,260.80	1,181.10	79.69	15.820	
6,768.00	6,593.40	6,971.88	6,595.17	33.06	53.65	-100.20	1,467.82	1,427.11	1,260.85	1,180.97	79.88	15.784	
6,863.00	6,688.26	7,066.64	6,689.91	33.35	53.77	-95.59	1,467.21	1,425.46	1,260.98	1,180.55	80.42	15.680	
6,957.00	6,782.19	7,160.49	6,783.74	33.62	53.89	-88.80	1,466.62	1,423.82	1,260.64	1,179.72	80.92	15.579	
7,020.13	6,845.30	7,223.57	6,846.82	33.78	53.97	-110.91	1,466.22	1,422.72	1,260.44	1,179.22	81.22	15.519	
7,051.00	6,876.18	7,254.43	6,877.67	33.87	54.01	-126.29	1,466.02	1,422.18	1,260.48	1,179.12	81.36	15.492	
7,145.00	6,970.17	7,348.41	6,971.63	34.10	54.14	166.02	1,465.42	1,420.54	1,260.81	1,179.04	81.77	15.419	
7,334.00	7,159.13	7,537.40	7,160.59	34.53	54.40	108.88	1,464.22	1,417.24	1,261.56	1,179.07	82.49	15.293	
7,428.00	7,253.06	7,631.38	7,254.55	34.73	54.53	111.25	1,463.63	1,415.60	1,262.28	1,179.47	82.81	15.243	
7,522.00	7,346.98	7,725.36	7,348.51	34.94	54.67	116.78	1,463.03	1,413.96	1,263.23	1,180.10	83.13	15.195	
7,617.00	7,441.94	7,820.35	7,443.49	35.16	54.80	78.34	1,462.43	1,412.30	1,263.15	1,179.67	83.49	15.130	
7,711.00	7,535.92	7,914.34	7,537.47	35.38	54.94	79.59	1,461.83	1,410.66	1,262.16	1,178.31	83.85	15.053	
7,792.09	7,616.97	7,995.42	7,618.53	35.57	55.06	99.26	1,461.31	1,409.25	1,261.75	1,177.60	84.15	14.994	
7,806.00	7,630.87	8,009.33	7,632.44	35.60	55.08	101.17	1,461.23	1,409.00	1,261.76	1,177.56	84.20	14.985	
7,900.00	7,724.80	8,103.31	7,726.40	35.82	55.22	105.30	1,460.63	1,407.36	1,262.02	1,177.48	84.54	14.928	
7,994.00	7,818.76	8,197.31	7,820.38	36.04	55.36	154.18	1,460.03	1,405.72	1,262.78	1,177.87	84.91	14.872	
8,089.00	7,913.75	8,292.30	7,915.35	36.28	55.51	151.51	1,459.43	1,404.07	1,263.74	1,178.42	85.32	14.811	
8,278.00	8,102.68	8,481.27	8,104.30	36.74	55.80	140.58	1,458.23	1,400.77	1,266.57	1,180.45	86.12	14.708	
8,561.00	8,385.40	8,764.16	8,387.13	37.42	56.26	130.10	1,456.43	1,395.83	1,273.56	1,186.33	87.23	14.600	
8,930.00	8,753.68	9,132.78	8,755.69	38.30	56.87	115.57	1,454.09	1,389.39	1,283.29	1,194.72	88.57	14.489	
8,993.00	8,816.50	9,195.68	8,818.58	38.45	56.98	115.71	1,453.69	1,388.30	1,284.92	1,196.14	88.78	14.473	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 22B-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	20.31	107.81	39.89	115.11				
170.00	169.99	163.99	163.99	0.25	2.50	-51.17	107.81	39.89	113.88	111.12	2.76	41.294	
231.00	230.97	224.97	224.97	0.47	3.86	-48.93	107.81	39.89	112.93	108.59	4.34	26.040	
262.00	261.95	255.95	255.95	0.59	4.51	-39.01	107.81	39.89	112.17	107.07	5.09	22.016	
292.00	291.92	285.92	285.92	0.70	5.13	-43.87	107.81	39.89	111.06	105.23	5.83	19.050	
353.00	352.75	346.05	346.05	0.93	6.49	-60.39	107.80	40.45	108.57	101.18	7.40	14.673	
445.00	444.28	435.43	435.32	1.27	9.31	-63.03	107.96	44.59	105.47	95.00	10.48	10.068	
536.00	534.44	522.29	521.85	1.62	14.04	-61.60	110.39	51.69	103.89	88.89	15.01	6.924	
596.81	594.35	580.40	579.53	1.88	18.89	-63.24	113.57	57.99	103.59	84.29	19.30	5.366 CC	
630.00	626.87	612.11	610.91	2.02	21.18	-64.35	115.82	61.96	103.69	82.30	21.38	4.849	
724.00	718.61	700.00	697.45	2.45	25.69	-71.13	123.98	74.88	106.45	80.62	25.82	4.122 ES, SF	
819.00	810.83	792.56	787.74	2.91	25.70	-80.84	135.60	91.52	114.30	87.57	26.73	4.276	
913.00	901.45	881.67	873.66	3.39	25.71	-81.65	149.70	110.46	126.13	98.63	27.49	4.587	
1,007.00	991.42	970.12	957.78	3.92	25.74	-85.43	166.48	132.03	141.12	112.96	28.16	5.012	
1,101.00	1,081.58	1,062.16	1,044.50	4.44	25.79	-83.08	185.66	156.18	157.81	129.06	28.75	5.488	
1,195.00	1,172.56	1,154.81	1,131.79	4.93	25.84	-79.51	204.98	180.50	173.51	144.32	29.19	5.944	
1,289.00	1,264.08	1,247.40	1,219.02	5.40	25.91	-79.53	224.29	204.81	189.19	159.65	29.54	6.405	
1,384.00	1,356.59	1,340.95	1,307.16	5.88	25.99	-77.59	243.80	229.37	205.25	175.34	29.91	6.862	
1,478.00	1,448.11	1,433.48	1,394.33	6.35	26.08	-78.95	263.10	253.66	221.46	191.14	30.32	7.304	
1,573.00	1,540.86	1,526.82	1,482.26	6.82	26.19	-78.74	282.56	278.16	238.67	207.96	30.71	7.772	
1,667.00	1,632.86	1,619.13	1,569.23	7.27	26.31	-75.09	301.82	302.39	255.70	224.64	31.06	8.232	
1,761.00	1,724.81	1,711.55	1,656.30	7.72	26.44	-73.47	321.09	326.66	272.23	240.79	31.44	8.658	
1,855.00	1,816.45	1,804.13	1,743.52	8.18	26.58	-72.24	340.40	350.96	288.26	256.35	31.91	9.034	
1,949.00	1,907.72	1,896.80	1,830.83	8.67	26.73	-72.78	359.72	375.29	303.94	271.47	32.47	9.361	
2,044.00	1,999.54	1,990.44	1,919.05	9.18	26.90	-74.78	379.25	399.87	319.92	286.79	33.13	9.657	
2,138.00	2,090.09	2,083.14	2,006.38	9.70	27.08	-73.19	398.58	424.21	335.45	301.61	33.84	9.912	
2,232.00	2,180.65	2,175.87	2,093.75	10.22	27.27	-74.24	417.92	448.55	350.76	316.20	34.56	10.150	
2,326.00	2,271.24	2,268.61	2,181.12	10.74	27.46	-73.23	437.26	472.90	366.03	330.75	35.27	10.377	
2,420.00	2,361.89	2,361.51	2,268.64	11.26	27.68	-69.96	456.63	497.28	380.37	344.39	35.98	10.572	
2,527.00	2,465.28	2,467.50	2,368.50	11.83	27.93	-64.80	478.74	525.11	394.96	358.23	36.73	10.753	
2,622.00	2,557.29	2,561.63	2,457.18	12.33	28.16	-67.16	498.37	549.82	407.68	370.31	37.37	10.909	
2,715.00	2,647.48	2,653.56	2,543.79	12.81	28.40	-71.34	517.54	573.95	421.66	383.65	38.01	11.092	
2,810.00	2,739.63	2,747.21	2,632.02	13.31	28.66	-75.17	537.07	598.54	437.63	398.93	38.69	11.310	
2,904.00	2,830.93	2,839.61	2,719.07	13.80	28.92	-77.85	556.34	622.80	454.83	415.46	39.37	11.552	
2,999.00	2,922.99	2,932.91	2,806.97	14.30	29.19	-78.14	575.80	647.29	472.71	432.61	40.10	11.788	
3,093.00	3,013.89	3,025.20	2,893.92	14.81	29.47	-79.20	595.04	671.52	490.54	449.68	40.86	12.006	
3,187.00	3,104.97	3,117.38	2,980.76	15.31	29.76	-80.71	614.27	695.71	508.96	467.36	41.60	12.235	
3,282.00	3,197.19	3,210.49	3,068.49	15.80	30.06	-79.67	633.68	720.16	527.79	485.45	42.33	12.468	
3,376.00	3,288.43	3,302.70	3,155.36	16.29	30.36	-78.81	652.91	744.37	546.04	502.98	43.06	12.680	
3,470.00	3,379.56	3,394.96	3,242.28	16.79	30.68	-78.56	672.15	768.59	564.03	520.21	43.82	12.873	
3,564.00	3,470.75	3,487.16	3,329.14	17.28	31.00	-80.26	691.38	792.79	582.34	537.77	44.57	13.065	
3,658.00	3,561.89	3,579.34	3,415.99	17.78	31.33	-79.01	710.61	816.99	600.73	555.40	45.34	13.250	
3,752.00	3,652.73	3,671.69	3,502.99	18.29	31.66	-77.12	729.86	841.23	618.27	572.12	46.15	13.397	
3,847.00	3,744.45	3,765.17	3,591.06	18.81	32.01	-75.34	749.36	865.77	635.14	588.16	46.98	13.519	
3,941.00	3,835.42	3,857.75	3,678.28	19.31	32.36	-74.64	768.66	890.08	651.44	603.66	47.78	13.635	
4,026.00	3,917.86	3,941.48	3,757.17	19.76	32.69	-73.70	786.13	912.06	666.04	617.56	48.48	13.739	
4,130.00	4,018.80	4,043.82	3,853.59	20.30	33.09	-76.83	807.47	938.93	684.50	635.16	49.34	13.874	
4,224.00	4,109.52	4,136.21	3,940.63	20.82	33.46	-78.24	826.74	963.18	701.75	651.56	50.19	13.982	
4,318.00	4,199.89	4,228.55	4,027.62	21.36	33.84	-78.81	845.99	987.42	719.14	668.05	51.09	14.076	
4,412.00	4,290.67	4,320.85	4,114.58	21.87	34.22	-78.99	865.24	1,011.65	736.86	684.91	51.94	14.186	
4,507.00	4,382.62	4,414.18	4,202.51	22.38	34.61	-77.67	884.71	1,036.15	754.60	701.82	52.79	14.296	
4,601.00	4,473.49	4,506.58	4,289.56	22.90	35.01	-77.96	903.97	1,060.41	771.86	718.23	53.64	14.391	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 22B-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,695.00	4,564.59	4,599.00	4,376.63	23.39	35.41	-76.30	923.25	1,084.67	789.01	734.55	54.46	14.487	
4,789.00	4,655.72	4,691.54	4,463.81	23.89	35.82	-74.72	942.55	1,108.96	805.51	750.23	55.29	14.570	
4,883.00	4,746.85	4,784.19	4,551.11	24.39	36.23	-72.57	961.87	1,133.29	821.32	765.21	56.11	14.638	
4,978.00	4,839.29	4,877.75	4,639.25	24.87	36.65	-74.81	981.38	1,157.85	837.67	780.77	56.90	14.721	
5,072.00	4,931.05	4,970.09	4,726.24	25.33	37.07	-76.82	1,000.64	1,182.09	854.97	797.31	57.66	14.827	
5,166.00	5,022.88	5,062.32	4,813.14	25.79	37.49	-77.07	1,019.87	1,206.30	872.83	814.42	58.42	14.942	
5,260.00	5,114.46	5,154.59	4,900.07	26.26	37.92	-77.40	1,039.11	1,230.52	890.67	831.46	59.21	15.042	
5,354.00	5,205.69	5,246.92	4,987.05	26.75	38.35	-77.16	1,058.37	1,254.76	908.29	848.23	60.05	15.125	
5,450.00	5,298.51	5,341.23	5,075.90	27.28	38.80	-78.29	1,078.03	1,279.52	926.23	865.27	60.96	15.194	
5,543.00	5,388.31	5,432.61	5,161.99	27.79	39.23	-76.94	1,097.09	1,303.51	943.46	881.61	61.86	15.253	
5,637.00	5,479.24	5,525.00	5,249.03	28.29	39.68	-77.38	1,116.36	1,327.76	960.77	898.03	62.74	15.313	
5,731.00	5,570.39	5,617.43	5,336.12	28.79	40.13	-75.04	1,135.64	1,352.03	977.85	914.24	63.61	15.374	
5,825.00	5,661.76	5,748.30	5,460.34	29.27	40.73	-74.18	1,161.20	1,384.21	993.20	928.37	64.83	15.321	
5,920.00	5,754.38	5,896.53	5,604.02	29.75	41.32	-72.95	1,183.79	1,412.65	1,003.71	937.62	66.08	15.188	
6,014.00	5,846.19	6,043.59	5,748.91	30.21	41.77	-74.70	1,199.30	1,432.17	1,009.23	942.05	67.18	15.024	
6,109.00	5,939.26	6,191.18	5,895.82	30.65	42.13	-75.96	1,207.84	1,442.92	1,010.47	942.35	68.13	14.833	
6,203.00	6,031.68	6,323.02	6,027.61	31.07	42.37	-78.03	1,209.59	1,445.09	1,007.79	938.86	68.93	14.621	
6,297.00	6,124.42	6,421.69	6,126.27	31.47	42.51	-79.46	1,209.13	1,443.85	1,004.26	934.55	69.71	14.406	
6,392.00	6,218.59	6,515.59	6,220.15	31.83	42.65	-85.18	1,208.48	1,442.05	1,001.76	931.33	70.44	14.222	
6,486.00	6,312.11	6,608.90	6,313.45	32.16	42.79	-92.71	1,207.83	1,440.26	1,000.82	929.74	71.08	14.080	
6,580.00	6,405.81	6,702.44	6,406.96	32.47	42.93	-85.25	1,207.18	1,438.47	1,000.06	928.39	71.67	13.953	
6,674.00	6,499.58	6,796.07	6,500.57	32.77	43.07	-89.41	1,206.52	1,436.67	999.09	926.85	72.24	13.830	
6,745.34	6,570.78	6,867.17	6,571.65	32.99	43.18	-96.91	1,206.03	1,435.31	998.82	926.16	72.66	13.747	
6,768.00	6,593.40	6,889.76	6,594.25	33.06	43.22	-99.93	1,205.87	1,434.88	998.84	926.06	72.79	13.723	
6,863.00	6,688.26	6,984.51	6,688.98	33.35	43.36	-95.41	1,205.21	1,433.06	998.88	925.56	73.33	13.622	
6,957.00	6,782.19	7,078.35	6,782.80	33.62	43.51	-88.68	1,204.55	1,431.26	998.48	924.65	73.83	13.524	
7,026.30	6,851.48	7,147.61	6,852.04	33.80	43.63	-113.69	1,204.07	1,429.94	998.23	924.06	74.17	13.459	
7,051.00	6,876.18	7,172.29	6,876.71	33.87	43.67	-126.22	1,203.90	1,429.46	998.26	923.98	74.28	13.438	
7,145.00	6,970.17	7,266.26	6,970.67	34.10	43.82	166.06	1,203.24	1,427.66	998.53	923.82	74.71	13.366	
7,334.00	7,159.13	7,455.25	7,159.62	34.53	44.13	108.89	1,201.92	1,424.04	999.18	923.70	75.48	13.238	
7,428.00	7,253.06	7,549.23	7,253.58	34.73	44.30	111.27	1,201.27	1,422.24	999.84	924.01	75.83	13.185	
7,522.00	7,346.98	7,643.22	7,347.54	34.94	44.46	116.82	1,200.61	1,420.44	1,000.74	924.55	76.19	13.135	
7,617.00	7,441.94	7,738.21	7,442.52	35.16	44.62	78.37	1,199.95	1,418.62	1,000.60	924.03	76.57	13.068	
7,711.00	7,535.92	7,832.20	7,536.49	35.38	44.79	79.62	1,199.30	1,416.82	999.55	922.59	76.96	12.988	
7,796.68	7,621.55	7,917.87	7,622.14	35.58	44.94	99.96	1,198.70	1,415.18	999.09	921.78	77.31	12.923	
7,806.00	7,630.87	7,927.19	7,631.46	35.60	44.96	101.21	1,198.63	1,415.00	999.10	921.75	77.35	12.917	
7,900.00	7,724.80	8,021.18	7,725.43	35.82	45.13	105.36	1,197.98	1,413.20	999.30	921.58	77.72	12.858	
7,994.00	7,818.76	8,115.17	7,819.40	36.04	45.30	154.23	1,197.32	1,411.40	1,000.01	921.89	78.12	12.801	
8,089.00	7,913.75	8,210.16	7,914.37	36.28	45.48	151.54	1,196.66	1,409.58	1,000.91	922.36	78.55	12.742	
8,278.00	8,102.68	8,399.14	8,103.31	36.74	45.83	140.59	1,195.34	1,405.96	1,003.63	924.23	79.40	12.641	
8,561.00	8,385.40	8,682.03	8,386.14	37.42	46.38	130.13	1,193.37	1,400.54	1,010.46	929.85	80.61	12.535	
8,930.00	8,753.68	9,050.69	8,754.72	38.30	47.11	115.71	1,190.80	1,393.47	1,019.98	937.87	82.11	12.423	
8,993.00	8,816.50	9,113.59	8,817.61	38.45	47.24	115.88	1,190.36	1,392.27	1,021.58	939.23	82.35	12.405	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 22C-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	20.28	100.88	37.27	107.72				
170.00	169.99	163.99	163.99	0.25	2.50	-51.24	100.88	37.27	106.48	103.72	2.76	38.611	
231.00	230.97	224.97	224.97	0.47	3.86	-49.05	100.88	37.27	105.53	101.20	4.34	24.335	
262.00	261.95	255.95	255.95	0.59	4.51	-39.16	100.88	37.27	104.77	99.68	5.09	20.565	
292.00	291.92	285.92	285.92	0.70	5.13	-44.05	100.88	37.27	103.66	97.83	5.83	17.782	
353.00	352.75	346.75	346.75	0.93	6.38	-61.02	100.88	37.27	101.05	93.75	7.30	13.840	
445.00	444.28	437.90	437.90	1.27	8.32	-66.10	100.88	37.65	96.98	87.41	9.58	10.125	
536.00	534.44	527.04	526.94	1.62	9.91	-66.92	101.00	41.46	92.75	81.23	11.52	8.051	
630.00	626.87	617.74	617.31	2.02	10.44	-71.89	103.07	48.94	89.41	76.96	12.45	7.183	
681.84	677.52	667.94	667.14	2.26	10.45	-77.00	105.32	54.56	88.76	76.07	12.69	6.996 CC, ES	
724.00	718.61	708.86	707.64	2.45	10.45	-80.79	107.74	59.90	89.18	76.30	12.88	6.923 SF	
819.00	810.83	801.22	798.53	2.91	10.49	-91.88	115.13	74.51	93.85	80.50	13.35	7.029	
913.00	901.45	892.59	887.57	3.39	10.54	-93.38	125.05	92.38	102.12	88.25	13.87	7.364	
1,007.00	991.42	983.78	975.37	3.92	10.61	-97.23	137.52	113.58	112.94	98.50	14.44	7.822	
1,101.00	1,081.58	1,076.56	1,063.86	4.44	10.72	-94.11	151.97	137.46	124.81	109.75	15.06	8.288	
1,195.00	1,172.56	1,169.93	1,152.87	4.93	10.84	-89.66	166.57	161.55	135.13	119.45	15.68	8.616	
1,289.00	1,264.08	1,263.25	1,241.84	5.40	10.99	-88.80	181.16	185.64	145.12	128.82	16.31	8.900	
1,384.00	1,356.59	1,357.54	1,331.74	5.88	11.17	-86.10	195.90	209.98	155.51	138.56	16.95	9.173	
1,478.00	1,448.11	1,450.82	1,420.67	6.35	11.37	-86.76	210.49	234.05	166.23	148.62	17.61	9.439	
1,573.00	1,540.86	1,544.95	1,510.41	6.82	11.60	-85.75	225.21	258.35	177.83	159.55	18.27	9.731	
1,667.00	1,632.86	1,638.06	1,599.18	7.27	11.85	-81.33	239.76	282.38	189.26	170.33	18.92	10.001	
1,761.00	1,724.81	1,731.24	1,688.02	7.72	12.12	-79.09	254.33	306.43	200.30	180.71	19.59	10.226	
1,855.00	1,816.45	1,824.54	1,776.97	8.18	12.40	-77.44	268.92	330.51	211.02	190.73	20.29	10.401	
1,949.00	1,907.72	1,917.93	1,866.00	8.67	12.71	-77.70	283.52	354.61	221.56	200.53	21.03	10.534	
2,044.00	1,999.54	2,012.29	1,955.96	9.18	13.04	-79.59	298.27	378.97	232.52	210.68	21.83	10.649	
2,138.00	2,090.09	2,105.68	2,045.00	9.70	13.38	-77.90	312.87	403.07	243.16	220.50	22.66	10.729	
2,232.00	2,180.65	2,199.10	2,134.06	10.22	13.74	-78.86	327.48	427.19	253.57	230.07	23.51	10.787	
2,326.00	2,271.24	2,292.53	2,223.13	10.74	14.10	-77.78	342.09	451.30	263.92	239.56	24.36	10.834	
2,420.00	2,361.89	2,386.06	2,312.30	11.26	14.49	-74.37	356.71	475.44	273.30	248.09	25.22	10.838	
2,527.00	2,465.28	2,492.68	2,413.96	11.83	14.94	-69.00	373.38	502.96	282.13	255.95	26.17	10.779	
2,622.00	2,557.29	2,587.36	2,504.22	12.33	15.35	-71.17	388.18	527.40	289.67	262.65	27.01	10.723	
2,715.00	2,647.48	2,679.91	2,592.46	12.81	15.76	-75.19	402.65	551.28	298.59	270.75	27.84	10.725	
2,810.00	2,739.63	2,774.27	2,682.42	13.31	16.18	-78.87	417.41	575.64	309.43	280.73	28.70	10.782	
2,904.00	2,830.93	2,867.47	2,771.27	13.80	16.61	-81.35	431.98	599.69	321.58	292.03	29.55	10.882	
2,999.00	2,922.99	2,961.59	2,861.01	14.30	17.05	-81.61	446.70	623.99	334.42	303.98	30.44	10.987	
3,093.00	3,013.89	3,054.70	2,949.78	14.81	17.50	-82.56	461.25	648.02	347.30	315.96	31.34	11.081	
3,187.00	3,104.97	3,147.73	3,038.47	15.31	17.95	-83.95	475.80	672.03	360.76	328.53	32.24	11.191	
3,282.00	3,197.19	3,241.72	3,128.08	15.80	18.41	-82.75	490.49	696.29	374.52	341.40	33.13	11.306	
3,376.00	3,288.43	3,334.77	3,216.80	16.29	18.87	-81.79	505.04	720.31	387.77	353.76	34.01	11.401	
3,470.00	3,379.56	3,427.87	3,305.55	16.79	19.33	-81.45	519.60	744.34	400.78	365.86	34.92	11.478	
3,564.00	3,470.75	3,520.91	3,394.26	17.28	19.80	-83.06	534.15	768.35	414.10	378.28	35.82	11.561	
3,658.00	3,561.89	3,613.95	3,482.96	17.78	20.27	-81.73	548.69	792.37	427.51	390.78	36.73	11.640	
3,752.00	3,652.73	3,707.10	3,571.76	18.29	20.75	-79.86	563.26	816.41	440.11	402.44	37.67	11.683	
3,847.00	3,744.45	3,801.35	3,661.62	18.81	21.24	-78.01	577.99	840.73	451.99	413.35	38.64	11.699	
3,941.00	3,835.42	3,894.67	3,750.59	19.31	21.73	-77.24	592.58	864.82	463.31	423.74	39.57	11.709	
4,026.00	3,917.86	3,979.06	3,831.05	19.76	22.17	-76.18	605.78	886.60	473.37	432.97	40.40	11.718	
4,130.00	4,018.80	4,082.25	3,929.42	20.30	22.71	-79.27	621.91	913.23	486.27	444.86	41.41	11.743	
4,224.00	4,109.52	4,175.43	4,018.26	20.82	23.21	-80.78	636.48	937.28	498.60	456.22	42.38	11.765	
4,318.00	4,199.89	4,268.56	4,107.05	21.36	23.71	-81.36	651.04	961.32	511.13	467.74	43.39	11.780	
4,412.00	4,290.67	4,361.68	4,195.83	21.87	24.21	-81.46	665.60	985.36	523.91	479.55	44.36	11.810	
4,507.00	4,382.62	4,455.82	4,285.58	22.38	24.71	-80.11	680.32	1,009.66	536.64	491.32	45.32	11.840	
4,601.00	4,473.49	4,549.01	4,374.43	22.90	25.22	-80.38	694.89	1,033.71	548.95	502.66	46.29	11.859	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 22C-8 596 - OH - Plan 1 (04-08-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 501-MWD+HDM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,695.00	4,564.59	4,642.22	4,463.29	23.39	25.72	-78.60	709.46	1,057.77	561.11	513.87	47.24	11.879	
4,789.00	4,655.72	4,735.51	4,552.23	23.89	26.23	-77.02	724.05	1,081.84	572.60	524.42	48.18	11.885	
4,883.00	4,746.85	4,828.88	4,641.25	24.39	26.74	-74.75	738.64	1,105.94	583.39	534.27	49.12	11.878	
4,978.00	4,839.29	4,923.18	4,731.15	24.87	27.26	-76.87	753.39	1,130.28	594.62	544.59	50.03	11.885	
5,072.00	4,931.05	5,016.32	4,819.95	25.33	27.78	-78.71	767.95	1,154.32	606.84	555.93	50.91	11.920	
5,166.00	5,022.88	5,109.37	4,908.66	25.79	28.29	-78.88	782.50	1,178.34	619.62	567.84	51.78	11.967	
5,260.00	5,114.46	5,202.47	4,997.42	26.26	28.81	-79.16	797.06	1,202.37	632.41	579.73	52.68	12.005	
5,354.00	5,205.69	5,295.61	5,086.22	26.75	29.32	-78.94	811.62	1,226.41	645.04	591.42	53.62	12.029	
5,450.00	5,298.51	5,390.74	5,176.91	27.28	29.85	-80.10	826.49	1,250.96	657.94	603.31	54.63	12.044	
5,543.00	5,388.31	5,482.91	5,264.79	27.79	30.37	-78.74	840.90	1,274.75	670.28	614.67	55.61	12.053	
5,637.00	5,479.24	5,576.09	5,353.63	28.29	30.89	-79.13	855.47	1,298.80	682.63	626.04	56.59	12.063	
5,731.00	5,570.39	5,669.31	5,442.50	28.79	31.41	-76.73	870.05	1,322.86	694.72	637.18	57.54	12.073	
5,825.00	5,661.76	5,762.57	5,531.41	29.27	31.94	-75.69	884.63	1,346.93	706.35	647.88	58.47	12.080	
5,920.00	5,754.38	5,856.82	5,621.26	29.75	32.47	-73.90	899.36	1,371.26	717.92	658.54	59.38	12.091	
6,014.00	5,846.19	5,946.32	5,736.21	30.21	33.09	-74.81	916.27	1,399.16	727.83	667.33	60.50	12.031	
6,109.00	5,939.26	6,039.52	5,825.62	30.65	33.63	-75.30	929.67	1,421.29	734.88	673.33	61.55	11.940	
6,203.00	6,031.68	6,129.51	5,915.24	31.07	34.07	-76.73	939.01	1,436.71	738.96	676.49	62.47	11.829	
6,297.00	6,124.42	6,223.99	6,005.24	31.47	34.43	-78.11	944.40	1,445.60	740.31	677.02	63.29	11.697	
6,392.00	6,218.59	6,318.05	6,101.25	31.83	34.70	-84.07	945.88	1,448.05	739.56	675.56	64.00	11.555	
6,486.00	6,312.11	6,412.29	6,191.49	32.16	34.89	-91.81	945.52	1,447.04	738.76	674.11	64.65	11.427	
6,580.00	6,405.81	6,506.46	6,286.63	32.47	35.07	-84.55	944.82	1,445.13	737.83	672.58	65.26	11.306	
6,674.00	6,499.58	6,599.07	6,381.23	32.77	35.24	-88.88	944.12	1,443.21	736.73	670.88	65.85	11.188	
6,768.00	6,593.40	6,693.76	6,475.89	33.06	35.42	-99.56	943.42	1,441.29	736.37	669.96	66.42	11.087	
6,863.00	6,688.26	6,788.50	6,571.61	33.35	35.60	-95.19	942.72	1,439.35	736.33	669.36	66.98	10.994	
6,957.00	6,782.19	6,882.33	6,667.42	33.62	35.78	-88.59	942.02	1,437.43	735.87	668.37	67.50	10.901	
7,051.00	6,876.18	6,976.26	6,761.33	33.87	35.97	-126.21	941.32	1,435.51	735.61	667.62	67.98	10.820	
7,145.00	6,970.17	7,070.23	6,856.27	34.10	36.16	166.02	940.62	1,433.59	735.83	667.40	68.44	10.752	
7,239.00	7,064.16	7,164.22	6,951.26	34.33	36.34	108.82	939.21	1,429.72	736.40	667.13	69.27	10.631	
7,333.00	7,158.15	7,258.21	7,046.25	34.56	36.52	111.22	938.51	1,427.79	737.02	667.36	69.66	10.580	
7,427.00	7,252.14	7,352.20	7,141.24	34.79	36.70	111.22	937.81	1,425.87	737.87	667.82	70.05	10.533	
7,521.00	7,346.13	7,446.19	7,236.23	35.02	36.88	78.35	937.10	1,423.92	737.69	667.22	70.47	10.468	
7,615.00	7,440.12	7,540.18	7,331.22	35.25	37.06	79.60	936.40	1,422.00	736.60	665.71	70.90	10.390	
7,709.00	7,534.11	7,634.17	7,426.21	35.48	37.24	100.45	935.73	1,420.17	736.10	664.81	71.29	10.325	
7,803.00	7,628.10	7,728.16	7,521.20	35.71	37.42	101.20	935.09	1,418.24	735.61	664.79	71.32	10.321	
7,897.00	7,722.09	7,822.15	7,616.19	35.94	37.60	105.37	934.39	1,416.31	735.12	664.54	71.73	10.265	
7,991.00	7,816.08	7,916.14	7,711.18	36.17	37.78	154.24	933.68	1,414.38	734.63	664.77	72.16	10.212	
8,085.00	7,910.07	8,010.13	7,806.17	36.40	37.96	151.52	933.00	1,412.45	734.14	665.17	72.63	10.159	
8,179.00	8,004.06	8,104.12	7,901.16	36.63	38.14	140.53	932.31	1,410.52	733.65	666.89	73.54	10.069	
8,273.00	8,098.05	8,198.11	7,996.15	36.86	38.32	130.12	931.62	1,408.59	733.16	667.26	74.86	9.981	
8,367.00	8,192.04	8,292.10	8,091.14	37.09	38.50	115.91	930.93	1,406.66	732.67	667.26	76.51	9.888	
8,461.00	8,286.03	8,386.09	8,186.13	37.32	38.68	116.13	930.24	1,404.73	732.18	667.26	76.78	9.873	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 22D-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	20.26	93.86	34.65	100.23				
170.00	169.99	163.99	163.99	0.25	2.50	-51.31	93.86	34.65	98.99	96.23	2.76	35.894	
231.00	230.97	224.97	224.97	0.47	3.86	-49.16	93.86	34.65	98.04	93.70	4.34	22.607	
262.00	261.95	255.95	255.95	0.59	4.51	-39.30	93.86	34.65	97.28	92.19	5.09	19.095	
292.00	291.92	285.92	285.92	0.70	5.13	-44.24	93.86	34.65	96.18	90.35	5.83	16.498	
353.00	352.75	346.75	346.75	0.93	6.38	-61.38	93.86	34.65	93.58	86.28	7.30	12.817	
445.00	444.28	438.28	438.28	1.27	8.25	-67.11	93.86	34.65	89.52	80.01	9.51	9.413	
536.00	534.44	527.90	527.90	1.62	10.10	-70.82	93.94	34.84	85.13	73.40	11.73	7.260	
630.00	626.87	619.49	619.41	2.02	11.88	-79.44	95.30	38.10	82.00	68.13	13.87	5.911	
672.37	668.27	660.98	660.79	2.21	12.26	-85.21	96.46	40.91	81.57	67.11	14.46	5.642 CC	
724.00	718.61	711.81	711.37	2.45	12.64	-91.61	98.36	45.49	82.15	67.08	15.08	5.449 ES, SF	
819.00	810.83	805.87	804.57	2.91	12.65	-105.03	103.24	57.22	86.64	71.09	15.55	5.570	
913.00	901.45	899.46	896.55	3.39	12.68	-107.92	109.83	73.09	93.63	77.59	16.05	5.835	
1,007.00	991.42	993.41	987.94	3.92	12.73	-112.53	118.18	93.18	101.70	85.12	16.58	6.134	
1,101.00	1,081.58	1,087.22	1,078.40	4.44	12.80	-109.54	127.71	116.11	109.14	91.99	17.15	6.364	
1,195.00	1,172.56	1,181.04	1,168.85	4.93	12.89	-105.21	137.28	139.14	114.22	96.49	17.73	6.441	
1,289.00	1,264.08	1,274.85	1,259.28	5.40	13.00	-104.33	146.85	162.17	118.37	100.04	18.33	6.459	
1,384.00	1,356.59	1,369.65	1,350.67	5.88	13.13	-101.54	156.52	185.43	122.79	103.85	18.94	6.482	
1,478.00	1,448.11	1,463.43	1,441.08	6.35	13.27	-101.94	166.08	208.45	127.62	108.05	19.57	6.521	
1,573.00	1,540.86	1,558.14	1,532.38	6.82	13.44	-100.39	175.74	231.70	132.99	112.78	20.21	6.580	
1,667.00	1,632.86	1,651.82	1,622.69	7.27	13.62	-95.32	185.30	254.69	138.03	117.19	20.84	6.622	
1,761.00	1,724.81	1,745.54	1,713.04	7.72	13.82	-92.55	194.86	277.70	142.79	121.30	21.49	6.645	
1,855.00	1,816.45	1,839.33	1,803.46	8.18	14.04	-90.54	204.42	300.72	147.59	125.43	22.16	6.659	
1,949.00	1,907.72	1,933.17	1,893.93	8.67	14.27	-90.62	214.00	323.75	152.60	129.73	22.87	6.672	
2,044.00	1,999.54	2,028.00	1,985.34	9.18	14.52	-92.51	223.67	347.03	158.36	134.73	23.63	6.703	
2,138.00	2,090.09	2,121.82	2,075.78	9.70	14.78	-90.90	233.24	370.06	164.13	139.73	24.41	6.725	
2,232.00	2,180.65	2,215.65	2,166.24	10.22	15.05	-91.92	242.81	393.09	169.66	144.46	25.20	6.733	
2,326.00	2,271.24	2,309.49	2,256.71	10.74	15.34	-90.90	252.38	416.12	175.09	149.09	26.00	6.734	
2,420.00	2,361.89	2,403.39	2,347.23	11.26	15.63	-87.54	261.95	439.17	179.48	152.66	26.81	6.694	
2,527.00	2,465.28	2,510.34	2,450.33	11.83	15.99	-82.20	272.86	465.42	182.34	154.61	27.74	6.574	
2,622.00	2,557.29	2,605.31	2,541.89	12.33	16.31	-84.35	282.55	488.73	184.38	155.82	28.55	6.458	
2,715.00	2,647.48	2,698.23	2,631.46	12.81	16.64	-88.27	292.03	511.54	187.87	158.51	29.36	6.400	
2,810.00	2,739.63	2,793.06	2,722.88	13.31	16.98	-91.76	301.70	534.82	193.21	163.02	30.19	6.400	
2,904.00	2,830.93	2,886.80	2,813.25	13.80	17.33	-93.91	311.26	557.83	199.85	168.85	31.01	6.445	
2,999.00	2,922.99	2,981.50	2,904.54	14.30	17.69	-94.03	320.92	581.07	207.34	175.48	31.86	6.508	
3,093.00	3,013.89	3,075.17	2,994.85	14.81	18.05	-94.81	330.47	604.06	215.10	182.38	32.72	6.573	
3,187.00	3,104.97	3,168.81	3,085.11	15.31	18.42	-95.96	340.02	627.05	223.30	189.72	33.58	6.650	
3,282.00	3,197.19	3,263.43	3,176.33	15.80	18.81	-94.43	349.67	650.27	231.60	197.16	34.44	6.725	
3,376.00	3,288.43	3,357.08	3,266.61	16.29	19.19	-93.26	359.23	673.26	239.46	204.16	35.30	6.784	
3,470.00	3,379.56	3,450.76	3,356.92	16.79	19.58	-92.73	368.78	696.25	247.16	211.00	36.17	6.833	
3,564.00	3,470.75	3,544.40	3,447.20	17.28	19.97	-94.14	378.33	719.24	255.16	218.12	37.04	6.888	
3,658.00	3,561.89	3,638.04	3,537.47	17.78	20.38	-92.65	387.88	742.22	263.28	225.36	37.93	6.942	
3,752.00	3,652.73	3,731.74	3,627.79	18.29	20.78	-90.78	397.44	765.22	270.82	231.98	38.84	6.973	
3,847.00	3,744.45	3,826.50	3,719.14	18.81	21.20	-88.87	407.11	788.48	277.61	237.85	39.77	6.981	
3,941.00	3,835.42	3,920.29	3,809.57	19.31	21.61	-88.03	416.67	811.50	283.73	243.05	40.68	6.975	
4,026.00	3,917.86	4,005.13	3,891.35	19.76	21.99	-86.83	425.32	832.32	288.96	247.47	41.49	6.964	
4,130.00	4,018.80	4,108.88	3,991.37	20.30	22.46	-89.81	435.91	857.79	295.90	253.41	42.48	6.965	
4,224.00	4,109.52	4,202.59	4,081.70	20.82	22.89	-91.45	445.46	880.79	303.23	259.81	43.42	6.983	
4,318.00	4,199.89	4,296.24	4,171.99	21.36	23.32	-92.09	455.02	903.78	311.02	266.62	44.40	7.006	
4,412.00	4,290.67	4,389.92	4,262.30	21.87	23.75	-92.09	464.57	926.77	318.78	273.44	45.34	7.031	
4,507.00	4,382.62	4,484.62	4,353.59	22.38	24.20	-90.68	474.23	950.02	326.28	280.00	46.28	7.050	
4,601.00	4,473.49	4,578.35	4,443.94	22.90	24.64	-90.93	483.79	973.02	333.49	286.27	47.22	7.062	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 22D-8 596 - OH - Plan 1 (04-09-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,695.00	4,564.59	4,672.09	4,534.31	23.39	25.08	-88.98	493.35	996.03	340.37	292.22	48.15	7.069	
4,789.00	4,655.72	4,765.87	4,624.73	23.89	25.53	-87.37	502.92	1,019.05	346.56	297.48	49.08	7.061	
4,883.00	4,746.85	4,859.71	4,715.19	24.39	25.98	-84.96	512.49	1,042.08	352.02	302.01	50.01	7.039	
4,978.00	4,839.29	4,954.51	4,806.58	24.87	26.43	-86.90	522.16	1,065.35	357.62	306.70	50.92	7.023	
5,072.00	4,931.05	5,048.21	4,896.91	25.33	26.89	-88.44	531.72	1,088.35	364.07	312.27	51.80	7.028	
5,166.00	5,022.88	5,141.87	4,987.20	25.79	27.34	-88.38	541.27	1,111.34	371.08	318.40	52.67	7.045	
5,260.00	5,114.46	5,235.55	5,077.51	26.26	27.80	-88.51	550.82	1,134.34	378.30	324.73	53.57	7.062	
5,354.00	5,205.69	5,329.26	5,167.85	26.75	28.26	-88.26	560.38	1,157.34	385.60	331.10	54.50	7.075	
5,450.00	5,298.51	5,424.95	5,260.10	27.28	28.73	-89.44	570.14	1,180.83	393.29	337.81	55.48	7.088	
5,543.00	5,388.31	5,517.66	5,349.47	27.79	29.19	-88.09	579.60	1,203.58	400.67	344.22	56.45	7.098	
5,637.00	5,479.24	5,611.38	5,439.82	28.29	29.65	-88.41	589.16	1,226.58	407.88	350.47	57.41	7.104	
5,731.00	5,570.39	5,705.13	5,530.19	28.79	30.12	-85.92	598.72	1,249.60	414.69	356.33	58.36	7.106	
5,825.00	5,661.76	5,798.90	5,620.60	29.27	30.59	-84.71	608.28	1,272.61	420.87	361.59	59.28	7.100	
5,920.00	5,754.38	5,893.67	5,711.96	29.75	31.06	-82.71	617.95	1,295.88	426.74	366.55	60.19	7.090	
6,014.00	5,846.19	5,987.42	5,802.33	30.21	31.53	-83.26	627.51	1,318.89	432.54	371.47	61.07	7.083	
6,109.00	5,939.26	6,082.08	5,893.58	30.65	32.01	-82.87	637.16	1,342.12	438.83	376.90	61.93	7.086	
6,203.00	6,031.68	6,175.61	5,983.75	31.07	32.48	-82.93	646.70	1,365.08	445.49	382.76	62.73	7.102	
6,297.00	6,124.42	6,270.61	6,075.35	31.47	32.96	-82.51	656.36	1,388.31	452.68	389.18	63.50	7.129	
6,392.00	6,218.59	6,374.42	6,176.37	31.83	33.44	-86.53	665.52	1,410.36	459.76	395.50	64.26	7.154	
6,486.00	6,312.11	6,477.88	6,278.19	32.16	33.85	-92.73	672.54	1,427.26	466.20	401.26	64.94	7.179	
6,580.00	6,405.81	6,581.99	6,381.49	32.47	34.21	-84.39	677.46	1,439.10	470.75	405.19	65.55	7.181	
6,674.00	6,499.58	6,686.40	6,485.65	32.77	34.50	-88.15	680.22	1,445.74	472.94	406.81	66.13	7.151	
6,768.00	6,593.40	6,788.86	6,588.08	33.06	34.74	-98.83	680.84	1,447.22	473.81	407.11	66.70	7.104	
6,863.00	6,688.26	6,886.46	6,685.67	33.35	34.93	-94.69	680.42	1,446.07	474.00	406.75	67.25	7.048	
6,957.00	6,782.19	6,980.66	6,779.84	33.62	35.11	-88.34	679.67	1,444.01	473.45	405.67	67.78	6.985	
7,036.48	6,861.65	7,060.07	6,859.24	33.83	35.26	-118.53	679.04	1,442.27	473.12	404.93	68.19	6.938	
7,051.00	6,876.18	7,074.59	6,873.74	33.87	35.29	-126.13	678.92	1,441.95	473.13	404.87	68.26	6.931	
7,145.00	6,970.17	7,168.55	6,967.68	34.10	35.48	165.98	678.17	1,439.89	473.31	404.59	68.71	6.888	
7,334.00	7,159.13	7,357.54	7,156.62	34.53	35.86	108.71	676.66	1,435.73	473.78	404.24	69.54	6.813	
7,428.00	7,253.06	7,451.53	7,250.58	34.73	36.05	111.16	675.91	1,433.67	474.35	404.42	69.92	6.784	
7,522.00	7,346.98	7,545.51	7,344.54	34.94	36.24	116.78	675.16	1,431.61	475.15	404.84	70.31	6.758	
7,617.00	7,441.94	7,640.51	7,439.51	35.16	36.44	78.35	674.40	1,429.52	474.93	404.20	70.72	6.715	
7,711.00	7,535.92	7,734.50	7,533.48	35.38	36.64	79.59	673.65	1,427.45	473.79	402.65	71.14	6.660	
7,804.33	7,629.20	7,827.83	7,626.78	35.60	36.84	101.00	672.90	1,425.40	473.24	401.69	71.55	6.614	
7,806.00	7,630.87	7,829.50	7,628.45	35.60	36.84	101.22	672.89	1,425.37	473.24	401.68	71.56	6.613	
7,900.00	7,724.80	7,923.48	7,722.41	35.82	37.04	105.44	672.14	1,423.30	473.35	401.39	71.96	6.578	
7,994.00	7,818.76	8,017.48	7,816.38	36.04	37.25	154.30	671.38	1,421.24	473.98	401.59	72.39	6.547	
8,089.00	7,913.75	8,112.47	7,911.34	36.28	37.45	151.51	670.62	1,419.15	474.79	401.93	72.85	6.517	
8,278.00	8,102.68	8,301.44	8,100.27	36.74	37.87	140.44	669.11	1,415.00	477.32	403.56	73.76	6.472	
8,561.00	8,385.40	8,584.35	8,383.10	37.42	38.52	130.11	666.85	1,408.79	483.87	408.81	75.06	6.446	
8,930.00	8,753.68	8,953.05	8,751.69	38.30	39.38	116.32	663.91	1,400.69	493.09	416.41	76.68	6.431	
8,993.00	8,816.50	9,015.96	8,814.59	38.45	39.53	116.65	663.40	1,399.31	494.66	417.71	76.95	6.429	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 23B-8 596 - OH [479837] - Plan 3 (05-03-19 DN)													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDDGM													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
170.00	169.99	169.99	169.99	0.25	0.38	180.00	0.00	0.00	1.69	1.06	0.63	2.678 CC		
231.00	230.97	231.02	231.02	0.47	0.59	-179.01	0.03	0.25	2.92	1.85	1.07	2.740		
262.00	261.95	262.06	262.05	0.59	0.70	-174.06	0.13	1.00	3.23	1.95	1.29	2.511		
292.00	291.92	292.11	292.07	0.70	0.81	174.08	0.30	2.20	3.61	2.11	1.50	2.401		
353.00	352.75	353.21	353.05	0.93	1.04	151.25	0.82	6.09	4.42	2.48	1.94	2.274		
445.00	444.28	445.38	444.71	1.27	1.38	140.17	2.11	15.60	4.70	2.07	2.62	1.792		
465.44	464.57	465.85	465.00	1.34	1.46	136.74	2.47	18.31	4.68	1.90	2.78	1.684		
536.00	534.44	536.48	534.74	1.62	1.73	117.95	3.96	29.30	5.09	1.75	3.35	1.522		
630.00	626.87	630.45	626.82	2.02	2.13	96.71	6.46	47.87	7.39	3.24	4.15	1.781		
724.00	718.61	724.38	718.04	2.45	2.57	81.75	9.46	70.06	10.16	5.16	5.00	2.032		
819.00	810.83	819.37	810.21	2.91	3.04	74.42	12.53	92.84	10.82	4.91	5.91	1.832		
913.00	901.45	913.34	901.38	3.39	3.50	88.13	15.58	115.37	10.06	3.16	6.90	1.459 Level 3		
954.48	941.22	954.78	941.59	3.62	3.71	97.47	16.92	125.31	9.98	2.66	7.32	1.364 Level 3		
1,007.00	991.42	1,007.22	992.47	3.92	3.98	112.39	18.62	137.88	10.25	2.52	7.73	1.326 Level 3		
1,101.00	1,081.58	1,101.13	1,083.59	4.44	4.45	134.22	21.66	160.40	12.03	3.71	8.32	1.445 Level 3		
1,195.00	1,172.56	1,195.12	1,174.79	4.93	4.94	137.69	24.70	182.94	13.21	4.02	9.18	1.438 Level 3		
1,289.00	1,264.08	1,289.10	1,265.98	5.40	5.42	128.82	27.74	205.47	13.22	2.95	10.27	1.288 Level 3		
1,327.54	1,301.64	1,327.63	1,303.36	5.60	5.62	125.51	28.99	214.71	13.13	2.39	10.74	1.223 Level 2		
1,384.00	1,356.59	1,384.08	1,358.13	5.88	5.91	121.62	30.82	228.25	13.31	1.92	11.40	1.168 Level 2		
1,478.00	1,448.11	1,478.07	1,449.33	6.35	6.40	112.86	33.86	250.79	13.43	0.94	12.49	1.076 Level 2		
1,573.00	1,540.86	1,573.04	1,541.47	6.82	6.89	101.54	36.94	273.56	12.90	-0.74	13.64	0.946 Level 1		
1,606.68	1,573.80	1,606.69	1,574.13	6.98	7.06	97.12	38.03	281.63	12.79	-1.24	14.02	0.912 Level 1		
1,667.00	1,632.86	1,666.97	1,632.61	7.27	7.38	88.38	39.98	296.08	13.17	-1.45	14.62	0.901 Level 1		
1,761.00	1,724.81	1,760.90	1,723.76	7.72	7.86	76.21	43.02	318.61	14.83	-0.49	15.32	0.968 Level 1		
1,855.00	1,816.45	1,854.87	1,814.93	8.18	8.35	71.61	46.06	341.14	16.70	0.60	16.10	1.037 Level 2		
1,949.00	1,907.72	1,948.86	1,906.13	8.67	8.84	71.30	49.10	363.68	18.00	0.94	17.07	1.055 Level 2		
2,044.00	1,999.54	2,043.85	1,998.29	9.18	9.34	74.08	52.18	386.45	18.21	-0.01	18.22	1.000 Level 1		
2,081.13	2,035.33	2,080.97	2,034.31	9.38	9.53	77.89	53.38	395.35	18.13	-0.58	18.71	0.969 Level 1		
2,138.00	2,090.09	2,137.81	2,089.46	9.70	9.83	84.29	55.22	408.98	18.34	-1.10	19.44	0.944 Level 1		
2,232.00	2,180.65	2,231.77	2,180.63	10.22	10.32	91.47	58.26	431.52	19.10	-1.44	20.54	0.930 Level 1		
2,326.00	2,271.24	2,325.73	2,271.80	10.74	10.81	99.42	61.31	454.05	20.26	-1.25	21.51	0.942 Level 1		
2,420.00	2,361.89	2,419.68	2,362.96	11.26	11.30	107.69	64.35	476.58	22.63	0.21	22.42	1.009 Level 2		
2,527.00	2,465.28	2,526.58	2,466.68	11.83	11.86	113.85	67.81	502.21	27.22	3.71	23.51	1.158 Level 2		
2,622.00	2,557.29	2,621.48	2,558.76	12.33	12.36	110.18	70.88	524.96	31.57	7.04	24.53	1.287 Level 3		
2,715.00	2,647.48	2,714.44	2,648.96	12.81	12.84	104.87	73.89	547.25	34.30	8.79	25.51	1.344 Level 3		
2,810.00	2,739.63	2,809.43	2,741.13	13.31	13.34	100.64	76.97	570.03	35.36	8.86	26.51	1.334 Level 3		
2,904.00	2,830.93	2,903.43	2,832.33	13.80	13.83	97.38	80.01	592.57	35.00	7.50	27.50	1.273 Level 3		
2,999.00	2,922.99	2,998.42	2,924.50	14.30	14.33	97.81	83.08	615.35	34.06	5.59	28.46	1.196 Level 2		
3,093.00	3,013.89	3,092.40	3,015.69	14.81	14.82	99.46	86.13	637.89	32.97	3.60	29.37	1.123 Level 2		
3,187.00	3,104.97	3,186.38	3,106.88	15.31	15.31	99.57	89.17	660.42	31.33	1.04	30.28	1.034 Level 2		
3,282.00	3,197.19	3,281.36	3,199.04	15.80	15.81	101.07	92.24	683.20	29.48	-1.77	31.25	0.943 Level 1		
3,376.00	3,288.43	3,375.35	3,290.23	16.29	16.30	102.14	95.29	705.73	28.02	-4.19	32.20	0.870 Level 1		
3,470.00	3,379.56	3,469.34	3,381.43	16.79	16.79	103.71	98.33	728.27	26.85	-6.26	33.11	0.811 Level 1		
3,564.00	3,470.75	3,563.33	3,472.62	17.28	17.29	103.12	101.37	750.81	25.36	-8.66	34.02	0.745 Level 1		
3,658.00	3,561.89	3,657.31	3,563.81	17.78	17.78	106.00	104.42	773.35	23.81	-11.06	34.87	0.683 Level 1		
3,737.19	3,638.45	3,736.49	3,640.64	18.21	18.19	110.87	106.98	792.33	23.28	-12.15	35.44	0.657 Level 1		
3,752.00	3,652.73	3,751.29	3,655.00	18.29	18.27	112.06	107.46	795.88	23.30	-12.21	35.51	0.656 Level 1		
3,847.00	3,744.45	3,846.27	3,747.16	18.81	18.77	118.40	110.53	818.66	23.80	-12.26	36.07	0.660 Level 1		
3,941.00	3,835.42	3,940.27	3,838.36	19.31	19.26	120.81	113.58	841.20	24.53	-12.30	36.83	0.666 Level 1		
4,026.00	3,917.86	4,025.27	3,920.83	19.76	19.71	121.46	116.33	861.58	25.12	-12.60	37.72	0.666 Level 1		
4,130.00	4,018.80	4,129.26	4,021.74	20.30	20.25	117.66	119.70	886.51	25.23	-13.59	38.82	0.650 Level 1		
4,164.64	4,052.33	4,163.90	4,055.35	20.50	20.43	117.83	120.82	894.82	25.16	-13.91	39.07	0.644 Level 1		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 23B-8 596 - OH [479837] - Plan 3 (05-03-19 DN)													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
4,224.00	4,109.52	4,223.23	4,112.92	20.82	20.74	120.70	122.74	909.05	25.41	-13.76	39.17	0.649	Level 1	
4,318.00	4,199.89	4,317.17	4,204.06	21.36	21.24	127.99	125.78	931.57	26.23	-12.77	39.00	0.673	Level 1	
4,412.00	4,290.67	4,411.14	4,295.25	21.87	21.73	132.80	128.82	954.11	26.38	-12.77	39.15	0.674	Level 1	
4,462.87	4,339.93	4,462.01	4,344.60	22.15	21.99	135.02	130.47	966.30	26.24	-13.13	39.37	0.667	Level 1	
4,507.00	4,382.62	4,506.13	4,387.41	22.38	22.23	136.99	131.90	976.88	26.35	-13.19	39.54	0.666	Level 1	
4,601.00	4,473.49	4,600.12	4,478.61	22.90	22.72	139.92	134.94	999.42	26.88	-12.97	39.85	0.674	Level 1	
4,695.00	4,564.59	4,694.12	4,569.81	23.39	23.21	143.09	137.98	1,021.96	26.93	-13.54	40.47	0.665	Level 1	
4,721.63	4,590.46	4,720.75	4,595.65	23.54	23.35	143.35	138.85	1,028.35	26.86	-13.88	40.74	0.659	Level 1	
4,789.00	4,655.72	4,788.11	4,661.01	23.89	23.70	144.42	141.03	1,044.50	27.34	-13.99	41.33	0.661	Level 1	
4,883.00	4,746.85	4,882.11	4,752.21	24.39	24.20	145.49	144.07	1,067.04	28.16	-14.25	42.41	0.664	Level 1	
4,978.00	4,839.29	4,977.09	4,844.38	24.87	24.69	140.19	147.15	1,089.81	27.90	-15.94	43.85	0.636	Level 1	
5,072.00	4,931.05	5,071.06	4,935.55	25.33	25.19	134.47	150.19	1,112.35	26.20	-19.22	45.42	0.577	Level 1	
5,166.00	5,022.88	5,165.02	5,026.72	25.79	25.68	129.92	153.23	1,134.88	24.03	-23.03	47.06	0.511	Level 1	
5,260.00	5,114.46	5,259.00	5,117.91	26.26	26.17	127.34	156.27	1,157.41	22.50	-25.84	48.34	0.465	Level 1	
5,354.00	5,205.69	5,353.00	5,209.11	26.75	26.67	128.48	159.32	1,179.95	21.81	-27.20	49.02	0.445	Level 1	
5,395.36	5,245.71	5,394.36	5,249.24	26.98	26.88	129.56	160.66	1,189.87	21.79	-27.31	49.10	0.444	Level 1	
5,450.00	5,298.51	5,448.98	5,302.24	27.28	27.17	131.80	162.42	1,202.97	21.85	-27.17	49.02	0.446	Level 1	
5,543.00	5,388.31	5,541.96	5,392.46	27.79	27.66	138.27	165.43	1,225.26	22.39	-26.42	48.81	0.459	Level 1	
5,637.00	5,479.24	5,635.95	5,483.66	28.29	28.15	141.30	168.48	1,247.80	22.75	-26.19	48.94	0.465	Level 1	
5,684.62	5,525.41	5,683.57	5,529.86	28.55	28.40	143.35	170.02	1,259.22	22.72	-26.46	49.18	0.462	Level 1	
5,731.00	5,570.39	5,729.95	5,574.86	28.79	28.64	144.71	171.52	1,270.34	22.75	-26.81	49.56	0.459	Level 1	
5,825.00	5,661.76	5,823.94	5,666.06	29.27	29.13	143.93	174.56	1,292.88	22.41	-28.41	50.82	0.441	Level 1	
5,920.00	5,754.38	5,918.92	5,758.22	29.75	29.63	140.64	177.64	1,315.65	21.48	-31.35	52.82	0.407	Level 1	
6,014.00	5,846.19	6,012.88	5,849.38	30.21	30.13	132.60	180.68	1,338.18	20.29	-35.02	55.31	0.367	Level 1	
6,109.00	5,939.26	6,107.79	5,941.47	30.65	30.62	121.44	183.75	1,360.94	18.50	-40.00	58.50	0.316	Level 1	
6,203.00	6,031.68	6,201.61	6,032.51	31.07	31.12	102.71	186.79	1,383.44	16.88	-44.92	61.81	0.273	Level 1	
6,243.01	6,071.11	6,241.52	6,071.23	31.24	31.32	92.57	188.08	1,393.01	16.65	-45.91	62.57	0.266	Level 1	
6,297.00	6,124.42	6,295.33	6,123.45	31.47	31.61	76.78	189.82	1,405.87	17.24	-44.92	62.16	0.277	Level 1	
6,392.00	6,218.59	6,390.42	6,216.39	31.83	32.06	49.86	192.51	1,425.76	20.19	-38.76	58.95	0.343	Level 1	
6,486.00	6,312.11	6,484.96	6,309.67	32.16	32.46	29.24	194.56	1,440.97	23.27	-32.90	56.17	0.414	Level 1	
6,580.00	6,405.81	6,579.87	6,403.95	32.47	32.81	30.54	196.00	1,451.62	25.24	-29.77	55.01	0.459	Level 1	
6,674.00	6,499.58	6,674.90	6,498.79	32.77	33.10	26.35	196.81	1,457.62	24.49	-30.80	55.29	0.443	Level 1	
6,768.00	6,593.40	6,769.58	6,593.45	33.06	33.36	20.15	196.99	1,459.02	20.36	-36.29	56.65	0.359	Level 1	
6,863.00	6,688.26	6,864.56	6,688.41	33.35	33.57	35.86	196.60	1,457.96	15.16	-44.87	60.03	0.253	Level 1	
6,957.00	6,782.19	6,958.43	6,782.25	33.62	33.77	65.15	195.69	1,455.46	11.90	-53.66	65.57	0.182	Level 1	
7,025.84	6,851.01	7,027.15	6,850.92	33.80	33.92	59.65	194.76	1,452.90	11.45	-56.25	67.69	0.169	Level 1, ES, SF	
7,051.00	6,876.18	7,052.28	6,876.03	33.87	33.97	53.46	194.42	1,451.96	11.49	-56.25	67.74	0.170	Level 1	
7,145.00	6,970.17	7,146.20	6,969.87	34.10	34.17	4.77	193.13	1,448.42	12.47	-53.57	66.04	0.189	Level 1	
7,334.00	7,159.13	7,335.14	7,158.66	34.53	34.58	-37.65	190.54	1,441.30	14.80	-48.90	63.70	0.232	Level 1	
7,428.00	7,253.06	7,429.14	7,252.59	34.73	34.79	-34.80	189.25	1,437.76	14.81	-49.20	64.01	0.231	Level 1	
7,495.91	7,320.90	7,497.05	7,320.44	34.88	34.94	-30.89	188.32	1,435.21	14.59	-49.66	64.24	0.227	Level 1	
7,522.00	7,346.98	7,523.14	7,346.51	34.94	35.00	-28.34	187.96	1,434.22	14.62	-49.58	64.20	0.228	Level 1	
7,617.00	7,441.94	7,618.13	7,441.42	35.16	35.21	-65.28	186.66	1,430.64	15.82	-48.46	64.28	0.246	Level 1	
7,711.00	7,535.92	7,712.11	7,535.32	35.38	35.43	-63.64	185.37	1,427.10	17.96	-46.69	64.65	0.278	Level 1	
7,806.00	7,630.87	7,807.10	7,630.24	35.60	35.64	-42.41	184.07	1,423.53	19.21	-45.99	65.20	0.295	Level 1	
7,900.00	7,724.80	7,901.10	7,724.16	35.82	35.86	-38.93	182.78	1,419.99	19.56	-46.25	65.81	0.297	Level 1	
7,994.00	7,818.76	7,995.08	7,818.07	36.04	36.08	13.44	181.49	1,416.45	20.37	-45.05	65.41	0.311	Level 1	
8,089.00	7,913.75	8,090.04	7,912.95	36.28	36.31	16.99	180.19	1,412.87	22.06	-42.32	64.38	0.343	Level 1	
8,278.00	8,102.68	8,278.98	8,101.74	36.74	36.76	15.69	177.60	1,405.75	24.39	-38.75	63.14	0.386	Level 1	
8,561.00	8,385.40	8,561.93	8,384.46	37.42	37.44	17.72	173.72	1,395.10	23.62	-38.78	62.40	0.379	Level 1	
8,930.00	8,753.68	8,930.80	8,753.04	38.30	38.37	18.22	168.66	1,381.20	16.27	-47.07	63.34	0.257	Level 1	
8,961.50	8,785.09	8,961.79	8,784.00	38.37	38.44	19.93	168.23	1,380.03	15.29	-47.85	63.14	0.242	Level 1	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 23B-8 596 - OH [479837] - Plan 3 (05-03-19 DN)												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,993.00	8,816.50	8,961.79	8,784.00	38.45	38.44	19.93	168.23	1,380.03	35.03	1.59	33.45	1.047	Level 2

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 23C-8 596 - OH [481437] - Final (H&P 330)												Offset Site Error:	0.00 usft
Survey Program: 110-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-160.49	-7.12	-2.52	9.65				
170.00	169.99	164.02	164.02	0.25	0.35	136.72	-7.04	-2.36	8.56	7.96	0.60	14.261 CC, ES	
231.00	230.97	225.08	225.08	0.47	0.57	143.89	-6.76	-1.91	9.24	8.20	1.04	8.899	
262.00	261.95	256.11	256.10	0.59	0.68	156.04	-6.53	-1.51	9.74	8.47	1.26	7.715	
292.00	291.92	286.15	286.14	0.70	0.79	153.68	-6.25	-0.96	10.54	9.06	1.48	7.123	
353.00	352.75	347.26	347.21	0.93	1.01	144.00	-5.71	1.15	12.55	10.63	1.92	6.530	
445.00	444.28	439.28	439.10	1.27	1.34	151.98	-4.88	5.96	16.46	13.87	2.59	6.352	
536.00	534.44	530.59	530.17	1.62	1.68	161.23	-3.65	12.38	21.98	18.72	3.26	6.746	
630.00	626.87	625.21	624.23	2.02	2.03	163.28	-2.17	22.41	29.18	25.23	3.96	7.374	
724.00	718.61	719.31	717.39	2.45	2.40	159.45	-1.48	35.73	37.23	32.56	4.67	7.965	
819.00	810.83	815.13	811.80	2.91	2.79	152.86	-1.67	52.05	44.70	39.29	5.41	8.261	
913.00	901.45	909.31	904.04	3.39	3.20	153.89	-3.04	70.97	52.15	45.98	6.18	8.444	
1,007.00	991.42	1,003.65	996.06	3.92	3.63	150.91	-5.22	91.63	60.52	53.54	6.97	8.679	
1,101.00	1,081.58	1,097.86	1,087.82	4.44	4.08	153.52	-6.73	112.95	67.43	59.65	7.78	8.664	
1,195.00	1,172.56	1,192.51	1,179.92	4.93	4.53	154.48	-7.29	134.76	71.41	62.79	8.62	8.284	
1,289.00	1,264.08	1,287.53	1,272.17	5.40	5.00	150.23	-6.95	157.54	72.53	63.05	9.49	7.645	
1,309.22	1,283.79	1,307.78	1,291.80	5.51	5.10	149.74	-6.75	162.50	72.51	62.83	9.68	7.492	
1,384.00	1,356.59	1,382.68	1,364.51	5.88	5.48	148.63	-5.38	180.43	72.80	62.44	10.37	7.022	
1,478.00	1,448.11	1,475.00	1,454.56	6.35	5.92	146.10	-2.90	200.61	74.01	62.83	11.18	6.618	
1,573.00	1,540.86	1,569.38	1,547.00	6.82	6.36	145.76	-0.63	219.49	75.47	63.49	11.97	6.303	
1,667.00	1,632.86	1,663.44	1,639.03	7.27	6.81	147.07	0.48	238.92	76.52	63.71	12.82	5.971	
1,761.00	1,724.81	1,756.49	1,729.87	7.72	7.26	144.85	0.01	259.01	78.60	64.87	13.73	5.724	
1,855.00	1,816.45	1,850.60	1,821.75	8.18	7.72	142.84	-1.13	279.36	82.57	67.90	14.67	5.629	
1,949.00	1,907.72	1,945.67	1,914.54	8.67	8.18	140.72	-1.30	300.08	87.00	71.43	15.57	5.588	
2,044.00	1,999.54	2,042.44	2,008.73	9.18	8.67	138.52	-0.16	322.22	90.71	74.26	16.45	5.514	
2,138.00	2,090.09	2,136.88	2,100.68	9.70	9.14	141.74	2.86	343.56	94.01	76.77	17.24	5.452	
2,232.00	2,180.65	2,230.97	2,192.46	10.22	9.59	143.13	7.29	363.77	97.18	79.22	17.96	5.412	
2,326.00	2,271.24	2,324.46	2,283.72	10.74	10.04	146.46	11.90	383.52	100.51	81.85	18.65	5.388	
2,420.00	2,361.89	2,417.94	2,375.10	11.26	10.49	151.68	16.61	402.71	104.71	85.36	19.35	5.410	
2,527.00	2,465.28	2,523.82	2,478.75	11.83	10.97	158.13	22.62	423.44	110.14	89.98	20.16	5.463	
2,622.00	2,557.29	2,616.79	2,570.13	12.33	11.39	156.67	27.85	439.76	116.03	95.18	20.85	5.565	
2,715.00	2,647.48	2,710.95	2,662.71	12.81	11.81	153.75	32.95	456.08	121.11	99.61	21.50	5.633	
2,810.00	2,739.63	2,806.85	2,756.63	13.31	12.26	150.70	36.71	475.07	124.51	102.28	22.22	5.603	
2,904.00	2,830.93	2,902.57	2,849.78	13.80	12.74	147.67	38.13	497.06	125.80	102.73	23.07	5.454	
2,907.16	2,834.01	2,905.77	2,852.88	13.81	12.76	147.62	38.15	497.85	125.80	102.70	23.10	5.447	
2,999.00	2,922.99	2,998.22	2,941.92	14.30	13.27	145.09	36.40	522.62	126.54	102.43	24.10	5.250	
3,093.00	3,013.89	3,093.40	3,032.59	14.81	13.82	140.74	31.96	551.19	127.25	101.91	25.34	5.022	
3,103.96	3,024.51	3,104.19	3,042.83	14.87	13.89	140.11	31.41	554.55	127.24	101.75	25.49	4.991	
3,187.00	3,104.97	3,186.06	3,120.69	15.31	14.38	135.57	27.27	579.53	127.45	100.81	26.64	4.784	
3,282.00	3,197.19	3,280.74	3,210.94	15.80	14.93	133.03	22.71	607.77	127.96	99.99	27.98	4.574	
3,376.00	3,288.43	3,376.41	3,301.69	16.29	15.52	129.44	18.06	637.68	128.51	99.09	29.42	4.368	
3,470.00	3,379.56	3,470.79	3,390.69	16.79	16.12	125.04	13.59	668.78	129.20	98.27	30.93	4.177	
3,564.00	3,470.75	3,565.91	3,480.46	17.28	16.73	118.98	10.27	700.04	129.37	96.94	32.42	3.990	
3,590.35	3,496.31	3,592.06	3,505.18	17.42	16.89	118.22	9.58	708.55	129.31	96.49	32.82	3.940	
3,658.00	3,561.89	3,659.27	3,568.83	17.78	17.31	116.44	7.88	730.08	129.68	95.86	33.82	3.834	
3,752.00	3,652.73	3,752.00	3,656.92	18.29	17.89	115.36	5.77	758.96	131.71	96.58	35.13	3.749	
3,847.00	3,744.45	3,846.00	3,746.32	18.81	18.47	114.69	2.75	787.84	135.94	99.51	36.43	3.732	
3,941.00	3,835.42	3,940.19	3,835.82	19.31	19.06	112.35	-0.70	816.98	141.05	103.32	37.73	3.738	
4,026.00	3,917.86	4,026.39	3,917.67	19.76	19.60	110.41	-2.87	843.90	145.08	106.18	38.90	3.729	
4,130.00	4,018.80	4,129.43	4,015.91	20.30	20.22	104.13	-4.83	874.96	149.42	109.21	40.22	3.716	
4,224.00	4,109.52	4,223.00	4,105.41	20.82	20.78	101.04	-6.36	902.18	152.91	111.57	41.34	3.699	
4,318.00	4,199.89	4,313.19	4,191.38	21.36	21.33	99.71	-9.08	929.31	157.53	115.10	42.43	3.713	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 23C-8 596 - OH [481437] - Final (H&P 330)												Offset Site Error:	0.00 usft
Survey Program: 110-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,412.00	4,290.67	4,405.56	4,279.17	21.87	21.91	98.13	-13.84	957.62	163.90	120.35	43.55	3.764	
4,507.00	4,382.62	4,499.71	4,368.85	22.38	22.48	97.59	-19.11	985.83	171.17	126.50	44.66	3.832	
4,601.00	4,473.49	4,594.48	4,459.47	22.90	23.05	96.19	-24.21	1,013.07	178.57	132.80	45.77	3.902	
4,695.00	4,564.59	4,691.25	4,552.31	23.39	23.61	97.07	-28.27	1,040.04	185.16	138.28	46.87	3.950	
4,789.00	4,655.72	4,784.22	4,641.98	23.89	24.13	97.82	-31.55	1,064.36	191.82	143.94	47.88	4.006	
4,883.00	4,746.85	4,880.16	4,734.51	24.39	24.67	99.65	-34.64	1,089.53	198.93	150.00	48.93	4.066	
4,978.00	4,839.29	4,972.88	4,823.57	24.87	25.20	96.10	-37.44	1,115.16	205.85	155.94	49.91	4.124	
5,072.00	4,931.05	5,071.01	4,918.27	25.33	25.75	92.92	-40.02	1,140.73	211.40	160.47	50.94	4.150	
5,166.00	5,022.88	5,167.52	5,011.36	25.79	26.29	90.98	-40.80	1,166.19	214.85	162.93	51.92	4.138	
5,260.00	5,114.46	5,261.33	5,101.72	26.26	26.82	89.29	-41.01	1,191.37	217.66	164.77	52.88	4.116	
5,354.00	5,205.69	5,358.59	5,195.65	26.75	27.36	88.82	-40.51	1,216.58	219.61	165.71	53.90	4.074	
5,450.00	5,298.51	5,452.67	5,286.25	27.28	27.89	87.28	-39.59	1,241.91	220.98	166.04	54.93	4.023	
5,543.00	5,388.31	5,537.15	5,367.34	27.79	28.38	88.36	-40.70	1,265.54	224.60	168.75	55.86	4.021	
5,637.00	5,479.24	5,632.22	5,458.22	28.29	28.95	87.32	-43.43	1,293.34	230.20	173.30	56.90	4.046	
5,731.00	5,570.39	5,723.93	5,545.85	28.79	29.51	88.76	-46.06	1,320.24	236.32	178.46	57.86	4.085	
5,825.00	5,661.76	5,815.81	5,634.57	29.27	30.01	89.59	-50.06	1,343.77	243.99	185.20	58.79	4.150	
5,920.00	5,754.38	5,917.36	5,733.50	29.75	30.52	91.50	-54.19	1,366.27	251.47	191.62	59.85	4.201	
6,014.00	5,846.19	6,012.67	5,826.76	30.21	30.98	90.84	-56.54	1,385.80	257.24	196.45	60.79	4.231	
6,109.00	5,939.26	6,113.70	5,926.20	30.65	31.42	91.38	-57.95	1,403.54	261.41	199.67	61.74	4.234	
6,203.00	6,031.68	6,208.99	6,020.33	31.07	31.82	91.14	-58.22	1,418.38	264.07	201.49	62.59	4.219	
6,297.00	6,124.42	6,305.20	6,115.62	31.47	32.19	91.20	-58.03	1,431.61	265.85	202.47	63.39	4.194	
6,392.00	6,218.59	6,401.50	6,211.50	31.83	32.52	87.07	-57.65	1,440.46	266.36	202.24	64.12	4.154	
6,486.00	6,312.11	6,494.43	6,304.17	32.16	32.81	80.70	-57.59	1,447.32	266.06	201.29	64.76	4.108	
6,580.00	6,405.81	6,593.69	6,403.29	32.47	33.08	89.26	-56.82	1,452.37	265.05	199.69	65.36	4.055	
6,674.00	6,499.58	6,691.05	6,500.61	32.77	33.35	86.88	-54.58	1,452.97	262.71	196.76	65.95	3.984	
6,768.00	6,593.40	6,782.10	6,591.64	33.06	33.55	78.18	-52.73	1,451.91	260.05	193.56	66.49	3.911	
6,863.00	6,688.26	6,876.95	6,686.47	33.35	33.78	84.26	-51.27	1,451.68	257.79	190.78	67.02	3.847	
6,957.00	6,782.19	6,971.96	6,781.47	33.62	34.01	92.15	-49.30	1,451.23	255.64	188.12	67.52	3.786	
7,051.00	6,876.18	7,060.91	6,870.39	33.87	34.21	55.48	-48.44	1,449.76	254.35	186.39	67.97	3.742	
7,145.00	6,970.17	7,154.80	6,964.26	34.10	34.42	-11.55	-48.43	1,447.76	253.50	185.10	68.40	3.706	
7,289.90	7,115.05	7,296.95	7,106.32	34.43	34.73	-63.50	-47.81	1,442.55	251.50	182.50	69.01	3.645	
7,334.00	7,159.13	7,337.57	7,146.89	34.53	34.82	-67.75	-48.50	1,440.86	251.80	182.64	69.17	3.641	
7,428.00	7,253.06	7,429.82	7,239.01	34.73	35.01	-65.28	-50.97	1,436.69	252.99	183.44	69.55	3.638 SF	
7,522.00	7,346.98	7,522.04	7,331.06	34.94	35.21	-59.54	-54.05	1,431.93	254.59	184.67	69.92	3.641	
7,617.00	7,441.94	7,616.00	7,424.79	35.16	35.41	-97.42	-57.82	1,426.48	257.99	187.69	70.30	3.670	
7,711.00	7,535.92	7,709.26	7,517.73	35.38	35.60	-95.28	-61.75	1,419.89	262.61	191.94	70.67	3.716	
7,806.00	7,630.87	7,804.30	7,612.31	35.60	35.79	-72.58	-65.53	1,411.39	266.59	195.56	71.03	3.753	
7,900.00	7,724.80	7,898.18	7,705.58	35.82	35.99	-67.18	-69.02	1,401.23	269.86	198.51	71.35	3.782	
7,994.00	7,818.76	7,990.62	7,797.37	36.04	36.18	-16.73	-72.61	1,391.01	273.20	201.58	71.62	3.815	
8,089.00	7,913.75	8,086.09	7,892.36	36.28	36.38	-17.81	-76.69	1,382.33	276.90	204.97	71.94	3.849	
8,278.00	8,102.68	8,271.25	8,076.77	36.74	36.79	-26.66	-85.92	1,368.53	284.31	211.76	72.55	3.919	
8,561.00	8,385.40	8,552.87	8,357.14	37.42	37.43	-35.08	-101.48	1,347.11	293.79	220.17	73.61	3.991	
8,930.00	8,753.68	8,912.68	8,714.71	38.30	38.25	-48.58	-127.02	1,316.39	310.41	235.47	74.94	4.142	
8,993.00	8,816.50	8,969.00	8,770.62	38.45	38.38	-48.54	-131.89	1,311.58	314.09	239.05	75.03	4.186	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 23D-8 596 - OH - Plan 1 (04-12-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-160.01	-14.15	-5.14	16.20				
170.00	169.99	163.99	163.99	0.25	2.50	133.82	-14.15	-5.14	16.17	13.42	2.76	5.864 CC	
231.00	230.97	224.97	224.97	0.47	3.86	140.06	-14.15	-5.14	17.26	12.92	4.34	3.979 ES	
262.00	261.95	255.95	255.95	0.59	4.51	152.18	-14.15	-5.14	18.13	13.03	5.10	3.558	
292.00	291.92	285.92	285.92	0.70	5.13	150.07	-14.15	-5.14	19.43	13.60	5.83	3.332	
353.00	352.75	346.75	346.75	0.93	6.38	141.96	-14.15	-5.14	23.06	15.75	7.30	3.156 SF	
445.00	444.28	438.65	438.65	1.27	8.33	151.64	-14.23	-4.76	30.67	21.11	9.56	3.209	
536.00	534.44	530.27	530.17	1.62	11.03	158.52	-15.09	-0.81	39.35	27.14	12.21	3.223	
630.00	626.87	625.11	624.59	2.02	14.79	158.10	-16.97	7.80	49.66	34.19	15.47	3.211	
724.00	718.61	720.22	718.72	2.45	16.77	152.46	-19.86	21.02	60.08	42.79	17.29	3.475	
819.00	810.83	816.73	813.43	2.91	16.79	143.16	-23.81	39.10	68.65	50.78	17.87	3.842	
913.00	901.45	912.40	906.27	3.39	16.82	141.53	-28.73	61.61	76.03	57.49	18.53	4.102	
1,007.00	991.42	1,006.12	996.57	3.92	16.87	136.35	-34.09	86.14	83.77	64.51	19.26	4.349	
1,101.00	1,081.58	1,099.73	1,086.76	4.44	16.93	137.02	-39.44	110.64	91.32	71.32	20.00	4.567	
1,195.00	1,172.56	1,193.25	1,176.86	4.93	17.01	136.22	-44.79	135.13	97.91	77.07	20.84	4.698	
1,289.00	1,264.08	1,286.71	1,266.90	5.40	17.11	130.44	-50.14	159.60	103.84	82.14	21.69	4.786	
1,384.00	1,356.59	1,381.17	1,357.90	5.88	17.22	126.93	-55.54	184.33	110.27	87.77	22.50	4.900	
1,478.00	1,448.11	1,474.67	1,447.99	6.35	17.35	121.20	-60.89	208.81	116.97	93.71	23.26	5.029	
1,573.00	1,540.86	1,569.19	1,539.04	6.82	17.49	117.05	-66.29	233.55	123.11	99.11	24.00	5.130	
1,667.00	1,632.86	1,662.63	1,629.07	7.27	17.65	116.05	-71.64	258.01	129.44	104.74	24.70	5.240	
1,761.00	1,724.81	1,756.03	1,719.05	7.72	17.82	113.25	-76.98	282.47	136.83	111.45	25.38	5.392	
1,855.00	1,816.45	1,849.46	1,809.06	8.18	18.01	111.16	-82.32	306.93	145.28	119.24	26.04	5.579	
1,949.00	1,907.72	1,942.93	1,899.11	8.67	18.21	108.55	-87.67	331.40	154.38	127.66	26.72	5.778	
2,044.00	1,999.54	2,037.46	1,990.18	9.18	18.43	105.51	-93.07	356.15	163.55	136.11	27.43	5.961	
2,138.00	2,090.09	2,130.98	2,080.29	9.70	18.65	107.05	-98.42	380.63	172.94	144.77	28.17	6.139	
2,232.00	2,180.65	2,224.48	2,170.37	10.22	18.89	106.00	-103.77	405.11	182.56	153.64	28.92	6.313	
2,326.00	2,271.24	2,317.98	2,260.44	10.74	19.14	106.85	-109.12	429.59	192.24	162.56	29.67	6.478	
2,420.00	2,361.89	2,411.36	2,350.41	11.26	19.40	109.97	-114.46	454.04	202.86	172.42	30.44	6.665	
2,527.00	2,465.28	2,517.41	2,452.58	11.83	19.71	114.42	-120.53	481.80	216.71	185.42	31.30	6.924	
2,622.00	2,557.29	2,611.51	2,543.24	12.33	20.00	110.99	-125.91	506.44	229.31	197.26	32.06	7.153	
2,715.00	2,647.48	2,703.81	2,632.17	12.81	20.29	105.73	-131.19	530.60	240.17	207.36	32.81	7.320	
2,810.00	2,739.63	2,798.30	2,723.20	13.31	20.60	101.04	-136.59	555.34	249.60	216.00	33.60	7.429	
2,904.00	2,830.93	2,891.92	2,813.39	13.80	20.91	97.70	-141.95	579.85	257.54	223.16	34.38	7.491	
2,999.00	2,922.99	2,986.60	2,904.62	14.30	21.24	96.56	-147.36	604.64	265.00	229.81	35.19	7.530	
3,093.00	3,013.89	3,080.32	2,994.91	14.81	21.57	95.54	-152.72	629.17	272.20	236.18	36.02	7.556	
3,187.00	3,104.97	3,174.07	3,085.23	15.31	21.91	93.77	-158.08	653.72	278.85	242.00	36.85	7.567	
3,282.00	3,197.19	3,268.81	3,176.50	15.80	22.26	94.44	-163.50	678.52	285.45	247.77	37.68	7.576	
3,376.00	3,288.43	3,362.53	3,266.79	16.29	22.61	94.64	-168.86	703.06	292.37	253.87	38.50	7.593	
3,470.00	3,379.56	3,456.24	3,357.08	16.79	22.97	94.56	-174.22	727.59	299.53	260.19	39.35	7.613	
3,564.00	3,470.75	3,549.97	3,447.38	17.28	23.34	92.50	-179.58	752.13	306.39	266.20	40.19	7.624	
3,658.00	3,561.89	3,643.71	3,537.69	17.78	23.72	93.35	-184.94	776.67	313.17	272.13	41.04	7.631	
3,752.00	3,652.73	3,737.41	3,627.96	18.29	24.10	94.96	-190.30	801.20	320.66	278.74	41.92	7.649	
3,847.00	3,744.45	3,832.03	3,719.12	18.81	24.49	97.03	-195.71	825.98	329.09	286.26	42.82	7.685	
3,941.00	3,835.42	3,925.61	3,809.27	19.31	24.88	97.63	-201.07	850.48	337.94	294.24	43.70	7.733	
4,026.00	3,917.86	4,010.19	3,890.76	19.76	25.23	98.42	-205.90	872.62	346.19	301.70	44.49	7.782	
4,130.00	4,018.80	4,113.72	3,990.51	20.30	25.68	94.68	-211.83	899.73	355.73	310.28	45.44	7.828	
4,224.00	4,109.52	4,207.40	4,080.76	20.82	26.08	92.82	-217.18	924.25	363.46	317.10	46.36	7.840	
4,318.00	4,199.89	4,301.10	4,171.03	21.36	26.49	92.81	-222.54	948.78	370.85	323.55	47.31	7.839	
4,412.00	4,290.67	4,394.81	4,261.32	21.87	26.91	93.07	-227.90	973.32	378.15	329.92	48.23	7.841	
4,507.00	4,382.62	4,489.50	4,352.54	22.38	27.33	94.16	-233.32	998.11	385.80	336.65	49.15	7.850	
4,601.00	4,473.49	4,583.17	4,442.79	22.90	27.75	93.82	-238.68	1,022.63	393.61	343.54	50.07	7.861	
4,695.00	4,564.59	4,676.81	4,533.00	23.39	28.18	95.60	-244.03	1,047.15	401.68	350.70	50.97	7.880	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 23D-8 596 - OH - Plan 1 (04-12-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,770.39	4,623.15	23.89	28.61	96.63	-249.38	1,071.65	410.44	358.56	51.88	7.912	
4,883.00	4,746.85	4,863.89	4,713.24	24.39	29.04	98.83	-254.73	1,096.12	419.93	367.14	52.78	7.956	
4,978.00	4,839.29	4,958.37	4,804.26	24.87	29.48	96.16	-260.14	1,120.86	429.37	375.70	53.67	8.000	
5,072.00	4,931.05	5,051.90	4,894.37	25.33	29.92	93.65	-265.48	1,145.35	437.79	383.26	54.53	8.029	
5,166.00	5,022.88	5,145.46	4,984.51	25.79	30.36	92.42	-270.84	1,169.84	445.74	390.36	55.38	8.049	
5,260.00	5,114.46	5,239.08	5,074.71	26.26	30.81	91.35	-276.19	1,194.35	453.54	397.29	56.26	8.062	
5,354.00	5,205.69	5,332.75	5,164.95	26.75	31.26	91.06	-281.55	1,218.88	461.28	404.12	57.17	8.069	
5,450.00	5,298.51	5,428.44	5,257.14	27.28	31.72	89.80	-287.02	1,243.93	468.95	410.82	58.14	8.066	
5,543.00	5,388.31	5,521.14	5,346.45	27.79	32.17	91.29	-292.32	1,268.20	476.45	417.36	59.09	8.063	
5,637.00	5,479.24	5,614.81	5,436.69	28.29	32.62	91.05	-297.68	1,292.72	484.27	424.24	60.04	8.066	
5,731.00	5,570.39	5,708.44	5,526.90	28.79	33.08	93.32	-303.04	1,317.23	492.52	431.55	60.97	8.078	
5,825.00	5,661.76	5,801.99	5,617.03	29.27	33.54	94.17	-308.39	1,341.73	501.40	439.53	61.88	8.103	
5,920.00	5,754.38	5,896.46	5,708.04	29.75	34.01	95.48	-313.79	1,366.46	510.82	448.05	62.77	8.138	
6,014.00	5,846.19	5,990.82	5,798.96	30.21	34.47	94.03	-319.18	1,391.13	520.21	456.57	63.64	8.174	
6,109.00	5,939.26	6,094.07	5,899.27	30.65	34.94	93.68	-324.38	1,414.95	528.49	463.93	64.56	8.186	
6,203.00	6,031.68	6,196.59	6,000.04	31.07	35.34	92.95	-328.40	1,433.33	534.87	469.46	65.41	8.177	
6,297.00	6,124.42	6,299.12	6,101.69	31.47	35.68	92.93	-331.25	1,446.40	539.42	473.22	66.20	8.149	
6,392.00	6,218.59	6,402.54	6,204.79	31.83	35.96	88.65	-332.95	1,454.16	541.84	474.93	66.90	8.099	
6,486.00	6,312.11	6,503.74	6,305.95	32.16	36.19	82.59	-333.46	1,456.48	541.80	474.27	67.52	8.024	
6,544.81	6,370.72	6,560.79	6,362.99	32.36	36.29	87.63	-333.57	1,456.16	541.46	473.60	67.86	7.979	
6,580.00	6,405.81	6,594.90	6,397.10	32.47	36.35	91.41	-333.74	1,455.71	541.58	473.52	68.06	7.957	
6,674.00	6,499.58	6,687.76	6,489.94	32.77	36.51	88.60	-334.40	1,453.88	542.18	473.60	68.59	7.905	
6,768.00	6,593.40	6,781.44	6,583.60	33.06	36.67	79.32	-335.10	1,451.97	542.29	473.19	69.09	7.849	
6,819.43	6,644.76	6,832.73	6,634.88	33.21	36.76	82.39	-335.48	1,450.93	542.21	472.85	69.36	7.817	
6,863.00	6,688.26	6,876.18	6,678.32	33.35	36.84	84.97	-335.80	1,450.04	542.26	472.67	69.59	7.792	
6,957.00	6,782.19	6,970.02	6,772.13	33.62	37.01	92.59	-336.50	1,448.13	542.79	472.73	70.06	7.747	
7,051.00	6,876.18	7,063.95	6,866.04	33.87	37.18	55.62	-337.19	1,446.22	543.14	472.64	70.50	7.704	
7,145.00	6,970.17	7,157.92	6,959.98	34.10	37.35	-11.71	-337.89	1,444.31	543.00	472.07	70.92	7.656	
7,334.00	7,159.13	7,346.91	7,148.93	34.53	37.71	-68.75	-339.29	1,440.46	542.46	470.74	71.72	7.564	
7,428.00	7,253.06	7,440.89	7,242.89	34.73	37.89	-66.62	-339.99	1,438.54	541.78	469.68	72.10	7.514	
7,522.00	7,346.98	7,534.87	7,336.85	34.94	38.07	-61.33	-340.68	1,436.63	540.87	468.38	72.49	7.462	
7,561.80	7,386.76	7,574.67	7,376.65	35.03	38.15	-74.43	-340.98	1,435.82	540.70	468.04	72.65	7.442	
7,617.00	7,441.94	7,629.87	7,431.83	35.16	38.26	-99.88	-341.39	1,434.69	541.02	468.13	72.89	7.422	
7,711.00	7,535.92	7,723.86	7,525.80	35.38	38.44	-98.68	-342.08	1,432.78	542.10	468.80	73.30	7.396	
7,806.00	7,630.87	7,818.86	7,620.77	35.60	38.63	-77.27	-342.79	1,430.84	542.57	468.86	73.71	7.361	
7,900.00	7,724.80	7,912.84	7,714.73	35.82	38.83	-73.39	-343.49	1,428.93	542.36	468.25	74.11	7.318	
7,994.00	7,818.76	8,006.84	7,808.71	36.04	39.02	-24.55	-344.18	1,427.02	541.69	467.15	74.53	7.268	
8,089.00	7,913.75	8,101.83	7,903.67	36.28	39.21	-27.05	-344.89	1,425.08	540.85	465.88	74.97	7.214	
8,278.00	8,102.68	8,290.80	8,092.60	36.74	39.61	-37.85	-346.29	1,421.23	538.24	462.40	75.84	7.097	
8,561.00	8,385.40	8,573.70	8,375.44	37.42	40.22	-48.81	-348.38	1,415.47	531.46	454.33	77.13	6.891	
8,930.00	8,753.68	8,942.37	8,744.02	38.30	41.04	-65.24	-351.12	1,407.96	522.09	443.30	78.78	6.627	
8,993.00	8,816.50	9,005.29	8,806.92	38.45	41.18	-65.57	-351.58	1,406.68	520.57	441.51	79.06	6.585	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 24A-8 596 - OH - Plan 1 (04-12-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-160.10	-21.17	-7.67	23.30				
170.00	169.99	163.99	163.99	0.25	2.50	132.27	-21.17	-7.67	23.62	20.86	2.76	8.564	
231.00	230.97	224.97	224.97	0.47	3.86	137.55	-21.17	-7.67	24.66	20.33	4.34	5.687 ES	
262.00	261.95	255.95	255.95	0.59	4.51	149.22	-21.17	-7.67	25.51	20.41	5.10	5.006	
292.00	291.92	285.92	285.92	0.70	5.13	146.64	-21.17	-7.67	26.77	20.94	5.83	4.591	
353.00	352.75	346.75	346.75	0.93	6.38	137.28	-21.17	-7.67	30.20	22.90	7.30	4.135	
445.00	444.28	438.28	438.28	1.27	8.25	146.46	-21.17	-7.67	37.55	28.04	9.51	3.948 SF	
536.00	534.44	528.81	528.80	1.62	10.12	157.44	-21.25	-7.46	48.35	36.64	11.71	4.128	
630.00	626.87	623.14	623.06	2.02	11.75	160.59	-22.62	-3.97	62.36	48.75	13.62	4.579	
724.00	718.61	717.88	717.41	2.45	11.98	157.22	-25.71	3.89	77.04	62.96	14.08	5.471	
819.00	810.83	814.23	812.82	2.91	12.00	149.52	-30.61	16.34	90.37	75.91	14.46	6.249	
913.00	901.45	909.94	906.80	3.39	12.03	149.35	-37.21	33.12	102.79	87.90	14.89	6.904	
1,007.00	991.42	1,005.81	999.92	3.92	12.08	144.38	-45.54	54.31	114.72	99.33	15.38	7.458	
1,101.00	1,081.58	1,100.44	1,090.73	4.44	12.16	143.77	-55.26	79.03	124.54	108.57	15.97	7.797	
1,195.00	1,172.56	1,193.39	1,179.75	4.93	12.27	142.20	-65.06	103.94	133.18	116.55	16.63	8.008	
1,289.00	1,264.08	1,286.25	1,268.68	5.40	12.40	136.04	-74.84	128.83	141.40	124.09	17.31	8.169	
1,384.00	1,356.59	1,380.12	1,358.57	5.88	12.56	132.21	-84.73	153.98	150.51	132.50	18.01	8.359	
1,478.00	1,448.11	1,473.05	1,447.56	6.35	12.74	126.17	-94.53	178.89	160.17	141.47	18.71	8.563	
1,573.00	1,540.86	1,567.01	1,537.54	6.82	12.94	121.93	-104.43	204.07	169.49	150.07	19.42	8.728	
1,667.00	1,632.86	1,659.89	1,626.49	7.27	13.16	121.02	-114.22	228.96	179.06	158.93	20.13	8.896	
1,761.00	1,724.81	1,752.70	1,715.37	7.72	13.40	118.27	-124.00	253.84	189.84	169.00	20.84	9.109	
1,855.00	1,816.45	1,845.53	1,804.27	8.18	13.66	116.07	-133.78	278.71	201.91	180.34	21.57	9.361	
1,949.00	1,907.72	1,938.40	1,893.20	8.67	13.93	113.19	-143.57	303.60	214.87	192.54	22.32	9.626	
2,044.00	1,999.54	2,032.36	1,983.18	9.18	14.23	109.70	-153.47	328.78	228.15	205.04	23.11	9.872	
2,138.00	2,090.09	2,125.32	2,072.20	9.70	14.54	110.78	-163.26	353.70	241.75	217.82	23.92	10.106	
2,232.00	2,180.65	2,218.24	2,161.19	10.22	14.86	109.35	-173.06	378.60	255.60	230.85	24.74	10.330	
2,326.00	2,271.24	2,311.15	2,250.16	10.74	15.20	109.85	-182.85	403.50	269.53	243.95	25.58	10.538	
2,420.00	2,361.89	2,403.90	2,338.99	11.26	15.55	112.74	-192.62	428.36	284.40	257.98	26.42	10.766	
2,527.00	2,465.28	2,509.14	2,439.76	11.83	15.96	117.06	-203.71	456.56	303.04	275.68	27.37	11.074	
2,622.00	2,557.29	2,602.48	2,529.15	12.33	16.33	113.54	-213.55	481.57	319.89	291.69	28.20	11.342	
2,715.00	2,647.48	2,694.12	2,616.91	12.81	16.71	108.20	-223.21	506.13	334.95	305.92	29.04	11.536	
2,810.00	2,739.63	2,788.02	2,706.83	13.31	17.11	103.43	-233.10	531.30	348.72	318.82	29.90	11.662	
2,904.00	2,830.93	2,881.11	2,795.98	13.80	17.51	100.06	-242.91	556.25	360.98	330.22	30.76	11.734	
2,999.00	2,922.99	2,975.31	2,886.18	14.30	17.93	98.75	-252.84	581.49	372.87	341.22	31.66	11.778	
3,093.00	3,013.89	3,068.56	2,975.49	14.81	18.35	97.63	-262.67	606.48	384.49	351.93	32.56	11.808	
3,187.00	3,104.97	3,161.86	3,064.84	15.31	18.78	95.79	-272.50	631.49	395.55	362.09	33.46	11.821	
3,282.00	3,197.19	3,256.15	3,155.13	15.80	19.22	96.47	-282.43	656.76	406.60	372.23	34.37	11.832	
3,376.00	3,288.43	3,349.41	3,244.44	16.29	19.66	96.61	-292.26	681.75	417.93	382.66	35.27	11.851	
3,470.00	3,379.56	3,442.65	3,333.72	16.79	20.11	96.48	-302.09	706.74	429.52	393.34	36.18	11.873	
3,564.00	3,470.75	3,535.92	3,423.05	17.28	20.56	94.40	-311.92	731.73	440.82	403.73	37.09	11.885	
3,658.00	3,561.89	3,629.21	3,512.38	17.78	21.02	95.20	-321.75	756.73	452.04	414.03	38.01	11.893	
3,752.00	3,652.73	3,722.42	3,601.65	18.29	21.48	96.66	-331.57	781.72	464.03	425.07	38.95	11.912	
3,847.00	3,744.45	3,816.53	3,691.77	18.81	21.95	98.65	-341.49	806.94	476.99	437.07	39.92	11.950	
3,941.00	3,835.42	3,909.55	3,780.85	19.31	22.42	99.21	-351.29	831.87	490.31	449.46	40.85	12.002	
4,026.00	3,917.86	3,993.62	3,861.36	19.76	22.85	100.03	-360.15	854.40	502.58	460.89	41.69	12.055	
4,130.00	4,018.80	4,096.55	3,959.93	20.30	23.38	96.27	-371.00	881.98	517.05	474.34	42.72	12.105	
4,224.00	4,109.52	4,189.74	4,049.17	20.82	23.86	94.19	-380.82	906.96	529.31	485.62	43.69	12.116	
4,318.00	4,199.89	4,282.98	4,138.46	21.36	24.35	94.05	-390.64	931.94	541.25	496.57	44.68	12.113	
4,412.00	4,290.67	4,376.23	4,227.76	21.87	24.84	94.30	-400.47	956.93	553.06	507.41	45.66	12.113	
4,507.00	4,382.62	4,470.42	4,317.96	22.38	25.33	95.33	-410.40	982.18	565.26	518.63	46.63	12.123	
4,601.00	4,473.49	4,563.60	4,407.19	22.90	25.83	94.92	-420.22	1,007.15	577.59	529.99	47.60	12.134	
4,695.00	4,564.59	4,656.73	4,496.38	23.39	26.32	96.76	-430.03	1,032.11	590.16	541.60	48.56	12.154	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 24A-8 596 - OH - Plan 1 (04-12-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,789.00	4,655.72	4,749.76	4,585.46	23.89	26.82	97.73	-439.83	1,057.04	603.41	553.90	49.51	12.188	
4,883.00	4,746.85	4,842.68	4,674.45	24.39	27.32	99.99	-449.63	1,081.94	617.39	566.93	50.46	12.235	
4,978.00	4,839.29	4,936.57	4,764.36	24.87	27.83	97.39	-459.52	1,107.11	631.34	579.94	51.40	12.284	
5,072.00	4,931.05	5,029.56	4,853.41	25.33	28.34	95.04	-469.32	1,132.03	644.21	591.91	52.30	12.318	
5,166.00	5,022.88	5,122.60	4,942.51	25.79	28.85	93.90	-479.12	1,156.96	656.59	603.39	53.20	12.342	
5,260.00	5,114.46	5,215.72	5,031.69	26.26	29.36	92.86	-488.94	1,181.92	668.86	614.73	54.13	12.358	
5,354.00	5,205.69	5,308.89	5,120.91	26.75	29.87	92.53	-498.76	1,206.89	681.11	626.03	55.08	12.365	
5,450.00	5,298.51	5,404.09	5,212.08	27.28	30.39	91.19	-508.79	1,232.40	693.42	637.33	56.09	12.363	
5,543.00	5,388.31	5,496.31	5,300.39	27.79	30.90	92.61	-518.51	1,257.11	705.42	648.34	57.08	12.359	
5,637.00	5,479.24	5,589.49	5,389.62	28.29	31.42	92.37	-528.33	1,282.09	717.78	659.72	58.06	12.362	
5,731.00	5,570.39	5,682.60	5,478.79	28.79	31.94	94.66	-538.14	1,307.04	730.54	671.51	59.03	12.376	
5,825.00	5,661.76	5,775.60	5,567.85	29.27	32.46	95.59	-547.94	1,331.96	743.92	683.95	59.98	12.403	
5,920.00	5,754.38	5,869.49	5,657.76	29.75	32.98	97.00	-557.83	1,357.12	757.85	696.94	60.91	12.442	
6,014.00	5,846.19	5,962.34	5,746.69	30.21	33.50	95.67	-567.62	1,382.01	771.69	709.88	61.81	12.484	
6,109.00	5,939.26	6,075.32	5,855.73	30.65	34.08	95.34	-578.42	1,409.48	784.26	721.39	62.87	12.474	
6,203.00	6,031.68	6,188.75	5,966.76	31.07	34.59	94.53	-588.87	1,430.97	794.04	730.20	63.84	12.438	
6,297.00	6,124.42	6,302.59	6,079.38	31.47	35.00	94.39	-592.91	1,446.34	801.11	736.40	64.71	12.380	
6,392.00	6,218.59	6,417.65	6,194.00	31.83	35.34	89.95	-596.51	1,455.49	805.09	739.63	65.46	12.298	
6,486.00	6,312.11	6,529.57	6,305.86	32.16	35.60	83.67	-597.59	1,458.23	805.64	739.54	66.10	12.187	
6,537.64	6,363.57	6,578.91	6,355.21	32.33	35.69	87.86	-597.68	1,457.98	805.39	738.99	66.41	12.128	
6,580.00	6,405.81	6,619.37	6,395.65	32.47	35.76	92.20	-597.86	1,457.48	805.56	738.91	66.65	12.087	
6,674.00	6,499.58	6,711.76	6,488.03	32.77	35.92	89.11	-598.52	1,455.67	806.25	739.07	67.18	12.002	
6,768.00	6,593.40	6,805.45	6,581.69	33.06	36.09	79.56	-599.22	1,453.77	806.40	738.71	67.69	11.913	
6,817.15	6,642.48	6,854.46	6,630.70	33.21	36.18	82.37	-599.58	1,452.77	806.34	738.38	67.95	11.866	
6,863.00	6,688.26	6,900.19	6,676.41	33.35	36.26	84.97	-599.92	1,451.85	806.39	738.19	68.20	11.824	
6,957.00	6,782.19	6,994.02	6,770.22	33.62	36.43	92.39	-600.61	1,449.94	806.91	738.22	68.68	11.748	
7,051.00	6,876.18	7,087.95	6,864.13	33.87	36.60	55.30	-601.31	1,448.03	807.24	738.10	69.14	11.676	
7,145.00	6,970.17	7,181.92	6,958.08	34.10	36.78	-12.11	-602.00	1,446.12	807.08	737.52	69.56	11.602	
7,334.00	7,159.13	7,370.91	7,147.03	34.53	37.14	-69.18	-603.40	1,442.28	806.54	736.16	70.37	11.461	
7,428.00	7,253.06	7,464.90	7,240.99	34.73	37.32	-67.00	-604.09	1,440.38	805.86	735.10	70.76	11.389	
7,522.00	7,346.98	7,558.88	7,334.95	34.94	37.51	-61.66	-604.79	1,438.47	804.96	733.81	71.15	11.314	
7,561.71	7,386.67	7,598.59	7,374.65	35.03	37.59	-74.71	-605.08	1,437.66	804.79	733.47	71.32	11.284	
7,617.00	7,441.94	7,653.87	7,429.92	35.16	37.70	-100.19	-605.49	1,436.54	805.11	733.56	71.56	11.251	
7,711.00	7,535.92	7,747.87	7,523.89	35.38	37.89	-98.98	-606.18	1,434.63	806.19	734.22	71.97	11.201	
7,806.00	7,630.87	7,842.86	7,618.86	35.60	38.08	-77.53	-606.89	1,432.70	806.66	734.27	72.39	11.143	
7,900.00	7,724.80	7,936.85	7,712.83	35.82	38.27	-73.59	-607.58	1,430.79	806.46	733.67	72.80	11.078	
7,994.00	7,818.76	8,030.84	7,806.80	36.04	38.47	-24.75	-608.28	1,428.88	805.78	732.56	73.22	11.005	
8,089.00	7,913.75	8,125.83	7,901.77	36.28	38.67	-27.29	-608.98	1,426.95	804.94	731.28	73.67	10.927	
8,278.00	8,102.68	8,314.80	8,090.70	36.74	39.07	-38.13	-610.38	1,423.11	802.32	727.77	74.55	10.762	
8,561.00	8,385.40	8,597.71	8,373.53	37.42	39.68	-48.99	-612.47	1,417.37	795.55	719.70	75.86	10.488	
8,930.00	8,753.68	8,966.38	8,742.12	38.30	40.51	-64.99	-615.19	1,409.88	786.16	708.64	77.52	10.141	
8,993.00	8,816.50	9,029.29	8,805.02	38.45	40.66	-65.21	-615.66	1,408.60	784.63	706.83	77.80	10.085	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 24B-8 596 - OH - Plan 1 (04-12-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-159.95	-28.19	-10.29	30.60				
170.00	169.99	163.99	163.99	0.25	2.50	131.64	-28.19	-10.29	31.11	28.35	2.76	11.279	
231.00	230.97	224.97	224.97	0.47	3.86	136.36	-28.19	-10.29	32.14	27.80	4.34	7.410 ES	
262.00	261.95	255.95	255.95	0.59	4.51	147.75	-28.19	-10.29	32.97	27.87	5.10	6.470	
292.00	291.92	285.92	285.92	0.70	5.13	144.84	-28.19	-10.29	34.20	28.37	5.83	5.866	
353.00	352.75	346.75	346.75	0.93	6.38	134.53	-28.19	-10.29	37.52	30.22	7.30	5.137	
445.00	444.28	438.28	438.28	1.27	8.25	142.59	-28.19	-10.29	44.52	35.01	9.51	4.681 SF	
536.00	534.44	528.44	528.44	1.62	10.07	153.57	-28.19	-10.29	55.01	43.33	11.69	4.708	
630.00	626.87	621.19	621.19	2.02	11.73	159.68	-28.25	-10.18	70.66	56.96	13.71	5.156	
724.00	718.61	715.10	715.03	2.45	12.50	159.05	-29.90	-7.27	88.49	73.65	14.84	5.965	
819.00	810.83	810.77	810.35	2.91	12.52	153.13	-33.91	-0.17	105.67	90.47	15.20	6.950	
913.00	901.45	905.98	904.67	3.39	12.54	154.34	-40.23	11.00	122.34	106.75	15.60	7.844	
1,007.00	991.42	1,001.52	998.57	3.92	12.58	150.52	-48.90	26.31	138.77	122.74	16.03	8.659	
1,101.00	1,081.58	1,097.38	1,091.78	4.44	12.64	151.12	-59.90	45.77	152.79	136.28	16.50	9.257	
1,195.00	1,172.56	1,192.79	1,183.32	4.93	12.73	149.59	-73.13	69.15	163.60	146.54	17.06	9.591	
1,289.00	1,264.08	1,285.13	1,271.12	5.40	12.85	142.94	-87.20	94.02	173.20	155.52	17.68	9.795	
1,384.00	1,356.59	1,378.22	1,359.63	5.88	12.99	138.66	-101.39	119.11	184.18	165.84	18.34	10.041	
1,478.00	1,448.11	1,470.38	1,447.27	6.35	13.16	132.20	-115.44	143.95	196.14	177.12	19.02	10.315	
1,573.00	1,540.86	1,563.61	1,535.91	6.82	13.35	127.67	-129.66	169.08	208.03	188.33	19.71	10.556	
1,667.00	1,632.86	1,655.75	1,623.52	7.27	13.57	126.61	-143.71	193.92	220.31	199.91	20.40	10.798	
1,761.00	1,724.81	1,747.79	1,711.04	7.72	13.80	123.70	-157.74	218.73	234.01	212.90	21.11	11.087	
1,855.00	1,816.45	1,839.84	1,798.56	8.18	14.05	121.27	-171.78	243.54	249.28	227.46	21.83	11.420	
1,949.00	1,907.72	1,931.92	1,886.12	8.67	14.33	118.07	-185.82	268.36	265.72	243.15	22.57	11.771	
2,044.00	1,999.54	2,025.10	1,974.72	9.18	14.62	114.21	-200.03	293.48	282.79	259.43	23.36	12.107	
2,138.00	2,090.09	2,117.29	2,062.38	9.70	14.93	114.95	-214.08	318.33	300.28	276.12	24.16	12.430	
2,232.00	2,180.65	2,209.44	2,149.99	10.22	15.26	113.23	-228.13	343.17	318.08	293.11	24.97	12.737	
2,326.00	2,271.24	2,301.56	2,237.59	10.74	15.60	113.47	-242.18	368.00	336.00	310.20	25.80	13.024	
2,420.00	2,361.89	2,393.49	2,324.99	11.26	15.96	116.18	-256.20	392.78	354.86	328.23	26.63	13.325	
2,527.00	2,465.28	2,497.68	2,424.06	11.83	16.37	120.39	-272.08	420.86	378.00	350.43	27.57	13.711	
2,622.00	2,557.29	2,590.08	2,511.92	12.33	16.76	116.76	-286.17	445.77	398.83	370.43	28.40	14.044	
2,715.00	2,647.48	2,680.87	2,598.25	12.81	17.15	111.31	-300.02	470.24	417.85	388.62	29.22	14.298	
2,810.00	2,739.63	2,773.98	2,686.78	13.31	17.55	106.43	-314.21	495.34	435.73	405.65	30.08	14.485	
2,904.00	2,830.93	2,866.36	2,774.62	13.80	17.97	103.01	-328.30	520.24	452.09	421.15	30.94	14.612	
2,999.00	2,922.99	2,959.87	2,863.53	14.30	18.40	101.56	-342.56	545.44	468.21	436.38	31.83	14.710	
3,093.00	3,013.89	3,052.45	2,951.56	14.81	18.84	100.36	-356.67	570.40	484.06	451.33	32.73	14.791	
3,187.00	3,104.97	3,145.11	3,039.67	15.31	19.28	98.47	-370.80	595.38	499.34	465.72	33.62	14.851	
3,282.00	3,197.19	3,238.75	3,128.70	15.80	19.73	99.14	-385.08	620.62	514.63	480.11	34.53	14.906	
3,376.00	3,288.43	3,331.35	3,216.74	16.29	20.19	99.22	-399.20	645.57	530.18	494.76	35.42	14.967	
3,470.00	3,379.56	3,423.92	3,304.76	16.79	20.66	99.05	-413.31	670.53	546.01	509.68	36.33	15.029	
3,564.00	3,470.75	3,516.53	3,392.83	17.28	21.13	96.94	-427.44	695.49	561.56	524.32	37.24	15.079	
3,658.00	3,561.89	3,609.17	3,480.91	17.78	21.60	97.70	-441.56	720.46	577.04	538.89	38.16	15.122	
3,752.00	3,652.73	3,701.71	3,568.90	18.29	22.08	99.04	-455.67	745.41	593.34	554.25	39.10	15.176	
3,847.00	3,744.45	3,795.09	3,657.69	18.81	22.58	101.01	-469.91	770.58	610.68	570.62	40.06	15.246	
3,941.00	3,835.42	3,887.37	3,745.43	19.31	23.07	101.53	-483.98	795.45	628.29	587.30	40.99	15.328	
4,036.00	3,917.86	3,970.75	3,824.71	19.76	23.51	102.37	-496.69	817.92	644.41	602.59	41.82	15.408	
4,130.00	4,018.80	4,072.87	3,921.81	20.30	24.06	98.56	-512.26	845.45	663.60	620.75	42.84	15.488	
4,224.00	4,109.52	4,165.36	4,009.76	20.82	24.57	96.33	-526.37	870.38	680.21	636.40	43.81	15.526	
4,318.00	4,199.89	4,257.93	4,097.78	21.36	25.07	96.12	-540.48	895.33	696.57	651.76	44.81	15.546	
4,412.00	4,290.67	4,350.51	4,185.80	21.87	25.59	96.38	-554.60	920.29	712.74	666.96	45.78	15.570	
4,507.00	4,382.62	4,444.01	4,274.71	22.38	26.10	97.38	-568.86	945.49	729.31	682.57	46.74	15.602	
4,601.00	4,473.49	4,536.49	4,362.65	22.90	26.62	96.92	-582.96	970.42	745.99	698.28	47.71	15.635	
4,695.00	4,564.59	4,628.91	4,450.52	23.39	27.14	98.81	-597.05	995.33	762.87	714.21	48.67	15.676	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 24B-8 596 - OH - Plan 1 (04-12-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis					Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,721.20	4,538.27	23.89	27.66	99.72	-611.12	1,020.21	780.44	730.82	49.62	15.730	
4,883.00	4,746.85	4,813.35	4,625.89	24.39	28.18	102.03	-625.17	1,045.05	798.72	748.15	50.56	15.796	
4,978.00	4,839.29	4,906.46	4,714.42	24.87	28.72	99.47	-639.37	1,070.14	816.98	765.48	51.50	15.865	
5,072.00	4,931.05	4,998.72	4,802.15	25.33	29.24	97.21	-653.44	1,095.01	834.07	781.67	52.40	15.917	
5,166.00	5,022.88	5,091.06	4,889.95	25.79	29.77	96.08	-667.52	1,119.90	850.67	797.37	53.30	15.959	
5,260.00	5,114.46	5,183.49	4,977.83	26.26	30.31	95.04	-681.61	1,144.82	867.21	812.98	54.23	15.992	
5,354.00	5,205.69	5,275.97	5,065.76	26.75	30.84	94.65	-695.71	1,169.74	883.79	828.60	55.18	16.015	
5,450.00	5,298.51	5,370.47	5,155.63	27.28	31.39	93.26	-710.12	1,195.22	900.57	844.38	56.19	16.027	
5,543.00	5,388.31	5,462.02	5,242.67	27.79	31.93	94.65	-724.08	1,219.90	916.92	859.75	57.18	16.037	
5,637.00	5,479.24	5,554.50	5,330.61	28.29	32.47	94.42	-738.18	1,244.82	933.66	875.50	58.16	16.054	
5,731.00	5,570.39	5,646.90	5,418.46	28.79	33.01	96.72	-752.27	1,269.73	950.76	891.64	59.13	16.080	
5,825.00	5,661.76	5,739.16	5,506.18	29.27	33.55	97.71	-766.34	1,294.60	968.44	908.37	60.07	16.121	
5,920.00	5,754.38	5,832.27	5,594.72	29.75	34.10	99.18	-780.54	1,319.70	986.67	925.67	61.00	16.174	
6,014.00	5,846.19	5,924.37	5,682.29	30.21	34.65	97.90	-794.58	1,344.52	1,004.74	942.83	61.91	16.229	
6,109.00	5,939.26	6,017.43	5,770.78	30.65	35.20	97.60	-808.77	1,369.61	1,022.64	959.84	62.80	16.284	
6,203.00	6,031.68	6,130.07	5,878.29	31.07	35.84	96.37	-825.29	1,398.81	1,039.51	975.65	63.85	16.279	
6,297.00	6,124.42	6,260.11	6,004.50	31.47	36.47	95.75	-840.67	1,426.00	1,053.06	988.10	64.96	16.211	
6,392.00	6,218.59	6,393.19	6,135.55	31.83	37.01	90.87	-851.99	1,446.02	1,062.53	996.61	65.92	16.119	
6,486.00	6,312.11	6,525.75	6,267.36	32.16	37.41	84.13	-858.78	1,458.02	1,067.32	1,000.63	66.69	16.003	
6,580.00	6,405.81	6,658.22	6,399.73	32.47	37.72	92.48	-861.05	1,462.03	1,068.74	1,001.41	67.33	15.873	
6,674.00	6,499.58	6,746.82	6,488.32	32.77	37.88	89.16	-861.29	1,461.39	1,069.07	1,001.21	67.86	15.755	
6,768.00	6,593.40	6,837.95	6,579.43	33.06	38.03	79.46	-861.94	1,459.58	1,069.20	1,000.83	68.37	15.638	
6,813.09	6,638.42	6,882.91	6,624.38	33.20	38.11	81.99	-862.30	1,458.62	1,069.15	1,000.53	68.61	15.583	
6,863.00	6,688.26	6,932.68	6,674.14	33.35	38.19	84.76	-862.69	1,457.55	1,069.21	1,000.33	68.88	15.523	
6,957.00	6,782.19	7,026.50	6,767.94	33.62	38.35	92.09	-863.42	1,455.53	1,069.74	1,000.38	69.36	15.422	
7,051.00	6,876.18	7,120.43	6,861.84	33.87	38.52	54.95	-864.15	1,453.51	1,070.09	1,000.28	69.82	15.328	
7,145.00	6,970.17	7,214.40	6,955.78	34.10	38.69	-12.51	-864.89	1,451.49	1,069.96	999.72	70.24	15.233	
7,334.00	7,159.13	7,403.39	7,144.72	34.53	39.03	-69.57	-866.37	1,447.43	1,069.49	998.45	71.04	15.054	
7,428.00	7,253.06	7,497.37	7,238.69	34.73	39.20	-67.37	-867.10	1,445.41	1,068.86	997.44	71.42	14.965	
7,522.00	7,346.98	7,591.36	7,332.65	34.94	39.38	-61.99	-867.84	1,443.39	1,068.01	996.20	71.81	14.873	
7,559.52	7,384.48	7,628.88	7,370.15	35.03	39.45	-74.19	-868.13	1,442.58	1,067.86	995.89	71.97	14.838	
7,617.00	7,441.94	7,686.36	7,427.62	35.16	39.55	-100.50	-868.58	1,441.35	1,068.21	996.00	72.21	14.793	
7,711.00	7,535.92	7,780.35	7,521.59	35.38	39.73	-99.28	-869.32	1,439.33	1,069.33	996.71	72.62	14.725	
7,806.00	7,630.87	7,875.34	7,616.55	35.60	39.92	-77.81	-870.06	1,437.28	1,069.84	996.81	73.03	14.649	
7,900.00	7,724.80	7,969.33	7,710.52	35.82	40.10	-73.84	-870.80	1,435.26	1,069.69	996.26	73.43	14.567	
7,994.00	7,818.76	8,063.33	7,804.49	36.04	40.29	-24.99	-871.53	1,433.24	1,069.06	995.20	73.85	14.475	
8,089.00	7,913.75	8,158.31	7,899.45	36.28	40.48	-27.55	-872.27	1,431.20	1,068.25	993.95	74.30	14.378	
8,278.00	8,102.68	8,347.29	8,088.38	36.74	40.86	-38.39	-873.75	1,427.14	1,065.71	990.53	75.18	14.176	
8,561.00	8,385.40	8,630.19	8,371.21	37.42	41.45	-49.18	-875.97	1,421.06	1,059.07	982.61	76.46	13.851	
8,930.00	8,753.68	8,998.88	8,739.80	38.30	42.24	-64.94	-878.85	1,413.13	1,049.85	971.74	78.10	13.442	
8,993.00	8,816.50	9,061.80	8,802.70	38.45	42.37	-65.09	-879.34	1,411.78	1,048.34	969.96	78.38	13.375	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 24C-8 596 - OH - Plan 1 (04-12-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-159.73	-35.21	-13.01	38.01				
170.00	169.99	163.99	163.99	0.25	2.50	131.40	-35.21	-13.01	38.63	35.88	2.76	14.008	
231.00	230.97	224.97	224.97	0.47	3.86	135.76	-35.21	-13.01	39.65	35.32	4.34	9.143 ES	
262.00	261.95	255.95	255.95	0.59	4.51	146.95	-35.21	-13.01	40.48	35.38	5.10	7.944	
292.00	291.92	285.92	285.92	0.70	5.13	143.81	-35.21	-13.01	41.70	35.87	5.83	7.152	
353.00	352.75	346.75	346.75	0.93	6.38	132.80	-35.21	-13.01	44.94	37.64	7.30	6.154	
445.00	444.28	438.28	438.28	1.27	8.25	139.87	-35.21	-13.01	51.70	42.19	9.51	5.435	
536.00	534.44	528.57	528.57	1.62	10.11	150.27	-35.34	-12.84	61.82	50.10	11.72	5.275 SF	
630.00	626.87	621.91	621.83	2.02	11.69	153.90	-37.52	-9.88	76.32	62.66	13.66	5.587	
724.00	718.61	715.28	714.83	2.45	11.77	151.12	-42.41	-3.26	92.92	78.83	14.09	6.595	
819.00	810.83	809.88	808.52	2.91	11.79	143.67	-50.12	7.17	109.50	95.01	14.49	7.557	
913.00	901.45	903.46	900.47	3.39	11.82	143.74	-60.44	21.14	126.46	111.53	14.93	8.468	
1,007.00	991.42	996.77	991.19	3.92	11.87	139.11	-73.39	38.66	144.32	128.88	15.44	9.349	
1,101.00	1,081.58	1,089.72	1,080.39	4.44	11.95	139.21	-88.89	59.64	161.42	145.42	16.00	10.090	
1,195.00	1,172.56	1,181.43	1,167.32	4.93	12.06	137.78	-106.25	83.13	177.66	161.06	16.60	10.703	
1,289.00	1,264.08	1,272.76	1,253.78	5.40	12.20	131.94	-123.74	106.81	193.87	176.66	17.21	11.265	
1,384.00	1,356.59	1,365.09	1,341.18	5.88	12.37	128.52	-141.43	130.74	211.20	193.36	17.84	11.839	
1,478.00	1,448.11	1,456.51	1,427.73	6.35	12.56	122.99	-158.94	154.43	229.05	210.57	18.48	12.394	
1,573.00	1,540.86	1,549.02	1,515.30	6.82	12.79	119.41	-176.65	178.41	246.70	227.56	19.14	12.892	
1,667.00	1,632.86	1,640.46	1,601.86	7.27	13.03	119.28	-194.17	202.11	264.53	244.74	19.79	13.368	
1,761.00	1,724.81	1,731.78	1,688.31	7.72	13.29	117.20	-211.65	225.78	283.49	263.03	20.45	13.860	
1,855.00	1,816.45	1,823.06	1,774.73	8.18	13.58	115.48	-229.14	249.44	303.65	282.51	21.15	14.359	
1,949.00	1,907.72	1,914.37	1,861.16	8.67	13.88	112.91	-246.62	273.10	324.64	302.77	21.87	14.842	
2,044.00	1,999.54	2,006.76	1,948.62	9.18	14.21	109.52	-264.32	297.05	346.03	323.38	22.65	15.278	
2,138.00	2,090.09	2,098.16	2,035.14	9.70	14.55	110.69	-281.82	320.74	367.63	344.18	23.45	15.678	
2,232.00	2,180.65	2,189.50	2,121.61	10.22	14.91	109.38	-299.32	344.41	389.49	365.23	24.26	16.053	
2,326.00	2,271.24	2,280.82	2,208.06	10.74	15.28	109.98	-316.81	368.08	411.43	386.34	25.09	16.399	
2,420.00	2,361.89	2,371.90	2,294.28	11.26	15.66	113.06	-334.25	391.69	434.29	408.37	25.92	16.756	
2,527.00	2,465.28	2,475.07	2,391.95	11.83	16.11	117.71	-354.01	418.43	461.99	435.14	26.85	17.206	
2,622.00	2,557.29	2,566.56	2,478.56	12.33	16.53	114.45	-371.53	442.14	486.85	459.17	27.67	17.593	
2,715.00	2,647.48	2,656.52	2,563.72	12.81	16.94	109.29	-388.76	465.46	509.77	481.28	28.49	17.893	
2,810.00	2,739.63	2,748.85	2,651.12	13.31	17.38	104.66	-406.44	489.39	531.59	502.25	29.34	18.116	
2,904.00	2,830.93	2,840.52	2,737.90	13.80	17.83	101.50	-424.00	513.15	551.84	521.64	30.20	18.274	
2,999.00	2,922.99	2,933.31	2,825.74	14.30	18.28	100.17	-441.77	537.20	571.82	540.74	31.09	18.395	
3,093.00	3,013.89	3,025.20	2,912.72	14.81	18.75	99.16	-459.37	561.01	591.47	559.49	31.98	18.492	
3,187.00	3,104.97	3,117.18	2,999.80	15.31	19.22	97.44	-476.99	584.85	610.55	577.67	32.88	18.568	
3,282.00	3,197.19	3,210.15	3,087.81	15.80	19.70	98.31	-494.79	608.95	629.68	595.89	33.78	18.640	
3,376.00	3,288.43	3,302.07	3,174.82	16.29	20.18	98.52	-512.40	632.77	648.99	614.31	34.68	18.715	
3,470.00	3,379.56	3,393.95	3,261.80	16.79	20.67	98.51	-529.99	656.59	668.58	632.99	35.59	18.788	
3,564.00	3,470.75	3,485.89	3,348.84	17.28	21.17	96.54	-547.60	680.42	687.86	651.37	36.50	18.847	
3,658.00	3,561.89	3,577.85	3,435.89	17.78	21.67	97.41	-565.22	704.25	707.08	669.66	37.41	18.898	
3,752.00	3,652.73	3,669.68	3,522.82	18.29	22.17	98.81	-582.80	728.05	727.08	688.73	38.36	18.956	
3,847.00	3,744.45	3,762.30	3,610.50	18.81	22.69	100.91	-600.54	752.06	748.15	708.83	39.31	19.030	
3,941.00	3,835.42	3,853.82	3,697.14	19.31	23.20	101.55	-618.07	775.78	769.44	729.19	40.25	19.117	
4,026.00	3,917.86	3,936.51	3,775.42	19.76	23.66	102.52	-633.91	797.21	788.89	747.81	41.08	19.203	
4,130.00	4,018.80	4,037.81	3,871.31	20.30	24.24	98.81	-653.31	823.47	812.13	770.03	42.10	19.290	
4,224.00	4,109.52	4,129.59	3,958.19	20.82	24.76	96.56	-670.88	847.26	832.42	789.35	43.07	19.328	
4,318.00	4,199.89	4,221.43	4,045.13	21.36	25.29	96.42	-688.47	871.06	852.45	808.39	44.06	19.346	
4,412.00	4,290.67	4,313.30	4,132.10	21.87	25.82	96.81	-706.07	894.87	872.30	827.26	45.04	19.369	
4,507.00	4,382.62	4,406.08	4,219.93	22.38	26.36	97.86	-723.84	918.92	892.58	846.57	46.00	19.402	
4,601.00	4,473.49	4,497.84	4,306.80	22.90	26.90	97.47	-741.41	942.70	912.91	865.94	46.97	19.435	
4,695.00	4,564.59	4,589.54	4,393.60	23.39	27.44	99.49	-758.97	966.47	933.44	885.51	47.92	19.477	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 24C-8 596 - OH - Plan 1 (04-12-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,681.08	4,480.26	23.89	27.98	100.43	-776.51	990.19	954.63	905.76	48.87	19.533	
4,883.00	4,746.85	4,772.45	4,566.75	24.39	28.52	102.87	-794.00	1,013.88	976.53	926.71	49.82	19.601	
4,978.00	4,839.29	4,864.80	4,654.18	24.87	29.07	100.41	-811.69	1,037.81	998.42	947.67	50.75	19.673	
5,072.00	4,931.05	4,956.36	4,740.85	25.33	29.62	98.28	-829.23	1,061.54	1,019.08	967.43	51.65	19.729	
5,166.00	5,022.88	5,048.02	4,827.62	25.79	30.17	97.23	-846.78	1,085.30	1,039.24	986.69	52.56	19.774	
5,260.00	5,114.46	5,139.75	4,914.46	26.26	30.72	96.24	-864.35	1,109.08	1,059.35	1,005.87	53.48	19.808	
5,354.00	5,205.69	5,231.53	5,001.34	26.75	31.27	95.86	-881.93	1,132.86	1,079.52	1,025.09	54.44	19.831	
5,450.00	5,298.51	5,325.31	5,090.12	27.28	31.84	94.49	-899.89	1,157.17	1,100.00	1,044.56	55.44	19.841	
5,543.00	5,388.31	5,416.15	5,176.11	27.79	32.39	95.91	-917.29	1,180.71	1,119.95	1,063.52	56.43	19.848	
5,637.00	5,479.24	5,507.91	5,262.98	28.29	32.95	95.76	-934.86	1,204.50	1,140.30	1,082.89	57.41	19.863	
5,731.00	5,570.39	5,599.58	5,349.76	28.79	33.51	98.13	-952.42	1,228.26	1,160.99	1,102.61	58.37	19.889	
5,825.00	5,661.76	5,691.10	5,436.39	29.27	34.07	99.21	-969.94	1,251.98	1,182.22	1,122.90	59.32	19.929	
5,920.00	5,754.38	5,783.47	5,523.83	29.75	34.63	100.77	-987.64	1,275.92	1,204.00	1,143.75	60.25	19.983	
6,014.00	5,846.19	5,874.83	5,610.32	30.21	35.19	99.58	-1,005.13	1,299.60	1,225.56	1,164.40	61.16	20.039	
6,109.00	5,939.26	5,967.18	5,697.75	30.65	35.76	99.41	-1,022.82	1,323.54	1,246.93	1,184.89	62.05	20.096	
6,203.00	6,031.68	6,058.54	5,784.23	31.07	36.32	98.35	-1,040.32	1,347.21	1,267.70	1,204.80	62.90	20.155	
6,297.00	6,124.42	6,149.83	5,870.65	31.47	36.89	97.73	-1,057.80	1,370.87	1,288.06	1,224.35	63.71	20.217	
6,392.00	6,218.59	6,280.16	5,994.71	31.83	37.65	92.48	-1,081.50	1,402.94	1,307.01	1,242.15	64.86	20.153	
6,486.00	6,312.11	6,439.18	6,149.21	32.16	38.42	85.15	-1,103.78	1,433.10	1,320.40	1,254.34	66.06	19.989	
6,580.00	6,405.81	6,601.33	6,309.38	32.47	39.03	92.93	-1,118.56	1,453.09	1,329.04	1,262.00	67.03	19.827	
6,674.00	6,499.58	6,764.87	6,472.49	32.77	39.46	89.36	-1,125.23	1,462.13	1,333.12	1,265.35	67.77	19.671	
6,768.00	6,593.40	6,875.16	6,582.78	33.06	39.67	79.55	-1,125.72	1,462.34	1,332.96	1,264.65	68.32	19.512	
6,828.46	6,653.77	6,931.20	6,638.81	33.24	39.77	82.86	-1,126.02	1,461.52	1,332.77	1,264.13	68.64	19.417	
6,863.00	6,688.26	6,964.36	6,671.96	33.35	39.82	84.73	-1,126.27	1,460.82	1,332.83	1,264.00	68.83	19.365	
6,957.00	6,782.19	7,058.19	6,765.76	33.62	39.98	92.01	-1,127.02	1,458.77	1,333.37	1,264.05	69.31	19.237	
7,051.00	6,876.18	7,152.12	6,859.66	33.87	40.14	54.83	-1,127.77	1,456.71	1,333.73	1,263.96	69.77	19.117	
7,145.00	6,970.17	7,246.08	6,953.60	34.10	40.30	-12.65	-1,128.52	1,454.65	1,333.60	1,263.40	70.19	18.999	
7,334.00	7,159.13	7,435.07	7,142.54	34.53	40.62	-69.72	-1,130.02	1,450.52	1,333.15	1,262.16	70.99	18.779	
7,428.00	7,253.06	7,529.06	7,236.50	34.73	40.79	-67.50	-1,130.77	1,448.46	1,332.54	1,261.17	71.37	18.671	
7,522.00	7,346.98	7,623.04	7,330.46	34.94	40.96	-62.11	-1,131.52	1,446.40	1,331.71	1,259.95	71.75	18.559	
7,558.81	7,383.77	7,659.85	7,367.26	35.03	41.03	-74.04	-1,131.81	1,445.60	1,331.56	1,259.65	71.91	18.517	
7,617.00	7,441.94	7,718.04	7,425.43	35.16	41.13	-100.61	-1,132.28	1,444.32	1,331.92	1,259.77	72.16	18.459	
7,711.00	7,535.92	7,812.03	7,519.40	35.38	41.30	-99.39	-1,133.03	1,442.27	1,333.05	1,260.49	72.57	18.370	
7,806.00	7,630.87	7,907.03	7,614.37	35.60	41.48	-77.90	-1,133.78	1,440.19	1,333.58	1,260.61	72.97	18.275	
7,900.00	7,724.80	8,001.01	7,708.33	35.82	41.66	-73.92	-1,134.53	1,438.13	1,333.45	1,260.08	73.37	18.173	
7,994.00	7,818.76	8,095.01	7,802.30	36.04	41.84	-25.06	-1,135.28	1,436.07	1,332.82	1,259.03	73.79	18.061	
8,089.00	7,913.75	8,190.00	7,897.26	36.28	42.02	-27.64	-1,136.04	1,434.00	1,332.03	1,257.79	74.24	17.943	
8,278.00	8,102.68	8,378.97	8,086.18	36.74	42.39	-38.49	-1,137.54	1,429.86	1,329.51	1,254.40	75.11	17.700	
8,561.00	8,385.40	8,661.88	8,369.02	37.42	42.95	-49.25	-1,139.79	1,423.67	1,322.92	1,246.52	76.40	17.316	
8,930.00	8,753.68	9,030.58	8,737.61	38.30	43.72	-64.87	-1,142.73	1,415.60	1,313.74	1,235.71	78.03	16.836	
8,993.00	8,816.50	9,093.49	8,800.51	38.45	43.85	-64.99	-1,143.23	1,414.22	1,312.24	1,233.93	78.31	16.758	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 24D-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-159.81	-42.24	-15.53	45.40				
170.00	169.99	163.99	163.99	0.25	2.50	131.00	-42.24	-15.53	46.09	43.33	2.76	16.712	
231.00	230.97	224.97	224.97	0.47	3.86	135.12	-42.24	-15.53	47.10	42.76	4.34	10.861 ES	
262.00	261.95	255.95	255.95	0.59	4.51	146.18	-42.24	-15.53	47.92	42.82	5.10	9.404	
292.00	291.92	285.92	285.92	0.70	5.13	142.88	-42.24	-15.53	49.13	43.30	5.83	8.426	
353.00	352.75	346.75	346.75	0.93	6.38	131.36	-42.24	-15.53	52.31	45.00	7.30	7.162	
445.00	444.28	438.13	438.13	1.27	8.30	137.28	-42.49	-15.25	58.90	49.33	9.56	6.158	
536.00	534.44	528.21	528.12	1.62	10.86	144.21	-45.13	-12.35	68.87	56.40	12.47	5.522	
630.00	626.87	620.85	620.36	2.02	14.59	145.15	-50.82	-6.09	83.37	66.80	16.57	5.031 SF	
724.00	718.61	713.00	711.60	2.45	16.47	140.94	-59.46	3.40	100.63	81.80	18.83	5.344	
819.00	810.83	805.87	802.82	2.91	16.48	132.58	-71.15	16.25	118.65	99.42	19.23	6.169	
913.00	901.45	897.23	891.64	3.39	16.51	132.15	-85.55	32.08	137.91	118.25	19.67	7.013	
1,007.00	991.42	987.79	978.55	3.92	16.55	127.43	-102.62	50.85	159.07	138.94	20.13	7.902	
1,101.00	1,081.58	1,077.46	1,063.34	4.44	16.62	127.95	-122.24	72.42	180.91	160.33	20.58	8.791	
1,195.00	1,172.56	1,167.86	1,148.17	4.93	16.71	127.59	-143.28	95.54	203.08	182.09	20.99	9.675	
1,289.00	1,264.08	1,258.19	1,232.93	5.40	16.83	122.80	-164.29	118.65	225.22	203.84	21.38	10.535	
1,384.00	1,356.59	1,349.51	1,318.61	5.88	16.97	120.26	-185.54	142.01	248.20	226.41	21.80	11.387	
1,478.00	1,448.11	1,439.95	1,403.48	6.35	17.13	115.58	-206.59	165.14	271.32	249.08	22.25	12.197	
1,573.00	1,540.86	1,531.50	1,489.38	6.82	17.31	112.80	-227.89	188.56	294.16	271.45	22.71	12.954	
1,667.00	1,632.86	1,621.98	1,574.28	7.27	17.51	113.38	-248.94	211.70	317.04	293.87	23.17	13.683	
1,761.00	1,724.81	1,712.32	1,659.04	7.72	17.73	111.89	-269.96	234.81	340.87	317.21	23.66	14.406	
1,855.00	1,816.45	1,802.60	1,743.76	8.18	17.97	110.64	-290.97	257.90	365.63	341.42	24.21	15.103	
1,949.00	1,907.72	1,892.90	1,828.48	8.67	18.23	108.44	-311.98	280.99	390.98	366.16	24.82	15.753	
2,044.00	1,999.54	1,984.28	1,914.23	9.18	18.51	105.33	-333.24	304.37	416.57	391.07	25.50	16.335	
2,138.00	2,090.09	2,074.67	1,999.04	9.70	18.80	106.75	-354.27	327.49	442.21	415.99	26.22	16.864	
2,232.00	2,180.65	2,164.99	2,083.79	10.22	19.10	105.70	-375.29	350.59	468.10	441.14	26.96	17.363	
2,326.00	2,271.24	2,255.29	2,168.52	10.74	19.43	106.51	-396.30	373.69	494.05	466.34	27.71	17.830	
2,420.00	2,361.89	2,345.32	2,252.99	11.26	19.76	109.83	-417.25	396.71	520.92	492.46	28.46	18.302	
2,527.00	2,465.28	2,447.21	2,348.60	11.83	20.16	114.77	-440.95	422.78	553.21	523.91	29.30	18.881	
2,622.00	2,557.29	2,537.55	2,433.37	12.33	20.52	111.75	-461.98	445.88	582.17	552.13	30.04	19.382	
2,715.00	2,647.48	2,626.45	2,516.78	12.81	20.89	106.78	-482.66	468.62	609.08	578.31	30.77	19.792	
2,810.00	2,739.63	2,717.76	2,602.46	13.31	21.28	102.30	-503.91	491.98	634.96	603.41	31.55	20.125	
2,904.00	2,830.93	2,808.48	2,687.59	13.80	21.68	99.31	-525.01	515.18	659.23	626.89	32.33	20.389	
2,999.00	2,922.99	2,900.34	2,773.78	14.30	22.10	98.02	-546.39	538.68	683.23	650.08	33.15	20.608	
3,093.00	3,013.89	2,991.31	2,859.14	14.81	22.52	97.14	-567.56	561.95	706.82	672.82	34.00	20.792	
3,187.00	3,104.97	3,082.40	2,944.61	15.31	22.95	95.53	-588.75	585.25	729.85	695.02	34.83	20.953	
3,282.00	3,197.19	3,174.48	3,031.01	15.80	23.40	96.53	-610.18	608.80	753.00	717.33	35.67	21.109	
3,376.00	3,288.43	3,265.49	3,116.41	16.29	23.85	96.81	-631.35	632.08	776.28	739.77	36.51	21.262	
3,470.00	3,379.56	3,356.46	3,201.77	16.79	24.30	96.88	-652.52	655.35	799.80	762.44	37.36	21.405	
3,564.00	3,470.75	3,447.50	3,287.19	17.28	24.77	95.00	-673.70	678.63	823.03	784.81	38.22	21.533	
3,658.00	3,561.89	3,538.57	3,372.64	17.78	25.24	95.93	-694.89	701.93	846.17	807.08	39.09	21.647	
3,752.00	3,652.73	3,629.47	3,457.94	18.29	25.72	97.34	-716.04	725.18	870.07	830.08	39.99	21.759	
3,847.00	3,744.45	3,721.12	3,543.93	18.81	26.20	99.53	-737.37	748.62	895.05	854.15	40.90	21.882	
3,941.00	3,835.42	3,811.66	3,628.89	19.31	26.69	100.25	-758.43	771.78	920.24	878.44	41.79	22.019	
4,026.00	3,917.86	3,893.46	3,705.64	19.76	27.13	101.31	-777.47	792.70	943.21	900.62	42.59	22.148	
4,130.00	4,018.80	3,993.69	3,799.69	20.30	27.68	97.66	-800.79	818.34	970.77	927.22	43.56	22.287	
4,224.00	4,109.52	4,084.53	3,884.92	20.82	28.19	95.35	-821.92	841.57	994.93	950.44	44.49	22.364	
4,318.00	4,199.89	4,175.44	3,970.23	21.36	28.70	95.26	-843.08	864.82	1,018.81	973.35	45.45	22.414	
4,412.00	4,290.67	4,266.39	4,055.57	21.87	29.21	95.75	-864.24	888.09	1,042.52	996.13	46.39	22.473	
4,507.00	4,382.62	4,358.24	4,141.75	22.38	29.74	96.82	-885.61	911.58	1,066.73	1,019.40	47.32	22.541	
4,601.00	4,473.49	4,449.06	4,226.97	22.90	30.26	96.46	-906.74	934.81	1,090.93	1,042.68	48.26	22.606	
4,695.00	4,564.59	4,539.81	4,312.12	23.39	30.79	98.59	-927.86	958.02	1,115.34	1,066.17	49.18	22.681	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 24D-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,630.38	4,397.10	23.89	31.31	99.52	-948.93	981.19	1,140.41	1,090.32	50.09	22.767	
4,883.00	4,746.85	4,720.74	4,481.89	24.39	31.84	102.06	-969.96	1,004.30	1,166.18	1,115.18	51.00	22.864	
4,978.00	4,839.29	4,812.09	4,567.61	24.87	32.38	99.69	-991.21	1,027.67	1,192.00	1,140.10	51.90	22.967	
5,072.00	4,931.05	4,902.70	4,652.62	25.33	32.92	97.67	-1,012.30	1,050.84	1,216.57	1,163.80	52.77	23.055	
5,166.00	5,022.88	4,993.43	4,737.76	25.79	33.46	96.65	-1,033.41	1,074.05	1,240.64	1,187.00	53.63	23.131	
5,260.00	5,114.46	5,084.24	4,822.97	26.26	34.01	95.67	-1,054.54	1,097.28	1,264.63	1,210.10	54.53	23.192	
5,354.00	5,205.69	5,175.09	4,908.21	26.75	34.56	95.28	-1,075.68	1,120.51	1,288.67	1,233.22	55.46	23.237	
5,450.00	5,298.51	5,267.93	4,995.32	27.28	35.12	93.91	-1,097.28	1,144.26	1,313.10	1,256.66	56.44	23.266	
5,543.00	5,388.31	5,357.84	5,079.69	27.79	35.67	95.35	-1,118.20	1,167.26	1,336.85	1,279.45	57.40	23.290	
5,637.00	5,479.24	5,448.67	5,164.92	28.29	36.22	95.26	-1,139.33	1,190.49	1,361.06	1,302.70	58.36	23.322	
5,731.00	5,570.39	5,539.39	5,250.04	28.79	36.78	97.67	-1,160.44	1,213.70	1,385.60	1,326.30	59.30	23.366	
5,825.00	5,661.76	5,629.93	5,335.00	29.27	37.34	98.83	-1,181.51	1,236.86	1,410.70	1,350.48	60.22	23.425	
5,920.00	5,754.38	5,721.31	5,420.74	29.75	37.90	100.46	-1,202.77	1,260.23	1,436.38	1,375.26	61.13	23.499	
6,014.00	5,846.19	5,811.69	5,505.55	30.21	38.46	99.34	-1,223.80	1,283.35	1,461.80	1,399.79	62.01	23.575	
6,109.00	5,939.26	5,903.07	5,591.29	30.65	39.03	99.28	-1,245.06	1,306.72	1,487.08	1,424.20	62.87	23.653	
6,203.00	6,031.68	5,993.49	5,676.13	31.07	39.60	98.32	-1,266.10	1,329.85	1,511.70	1,448.01	63.69	23.734	
6,297.00	6,124.42	6,083.86	5,760.93	31.47	40.16	97.85	-1,287.13	1,352.96	1,535.92	1,471.44	64.48	23.819	
6,392.00	6,218.59	6,175.09	5,846.53	31.83	40.73	92.95	-1,308.36	1,376.30	1,559.54	1,494.32	65.22	23.912	
6,486.00	6,312.11	6,373.18	6,035.39	32.16	41.83	85.42	-1,348.38	1,420.29	1,578.97	1,512.11	66.87	23.614	
6,580.00	6,405.81	6,589.02	6,246.95	32.47	42.72	93.05	-1,376.76	1,451.49	1,591.46	1,523.25	68.21	23.333	
6,674.00	6,499.58	6,809.01	6,466.06	32.77	43.30	89.44	-1,388.98	1,464.93	1,596.94	1,527.85	69.10	23.111	
6,768.00	6,593.40	6,924.20	6,581.25	33.06	43.49	79.60	-1,389.52	1,465.00	1,596.78	1,527.14	69.63	22.931	
6,824.93	6,650.25	6,976.22	6,633.27	33.23	43.57	82.69	-1,389.81	1,464.20	1,596.61	1,526.67	69.94	22.828	
6,863.00	6,688.26	7,012.77	6,669.81	33.35	43.63	84.74	-1,390.10	1,463.42	1,596.67	1,526.53	70.15	22.762	
6,957.00	6,782.19	7,106.60	6,763.60	33.62	43.77	91.98	-1,390.85	1,461.35	1,597.22	1,526.58	70.63	22.613	
7,051.00	6,876.18	7,200.52	6,857.50	33.87	43.91	54.77	-1,391.61	1,459.27	1,597.58	1,526.50	71.08	22.475	
7,145.00	6,970.17	7,294.49	6,951.44	34.10	44.06	-12.72	-1,392.36	1,457.20	1,597.45	1,525.95	71.51	22.340	
7,334.00	7,159.13	7,483.48	7,140.38	34.53	44.36	-69.81	-1,393.88	1,453.03	1,597.02	1,524.73	72.29	22.091	
7,428.00	7,253.06	7,577.46	7,234.34	34.73	44.52	-67.57	-1,394.64	1,450.95	1,596.42	1,523.76	72.66	21.970	
7,522.00	7,346.98	7,671.45	7,328.30	34.94	44.67	-62.17	-1,395.39	1,448.88	1,595.59	1,522.56	73.04	21.847	
7,558.45	7,383.41	7,707.90	7,364.74	35.02	44.73	-73.96	-1,395.68	1,448.07	1,595.45	1,522.26	73.19	21.800	
7,617.00	7,441.94	7,766.45	7,423.27	35.16	44.83	-100.67	-1,396.15	1,446.78	1,595.82	1,522.38	73.43	21.732	
7,711.00	7,535.92	7,860.44	7,517.24	35.38	44.99	-99.44	-1,396.91	1,444.71	1,596.95	1,523.12	73.83	21.629	
7,806.00	7,630.87	7,955.43	7,612.21	35.60	45.15	-77.95	-1,397.67	1,442.61	1,597.49	1,523.26	74.23	21.519	
7,900.00	7,724.80	8,049.42	7,706.17	35.82	45.32	-73.95	-1,398.43	1,440.53	1,597.36	1,522.74	74.63	21.405	
7,994.00	7,818.76	8,143.42	7,800.14	36.04	45.48	-25.10	-1,399.18	1,438.46	1,596.75	1,521.71	75.04	21.279	
8,089.00	7,913.75	8,238.40	7,895.10	36.28	45.65	-27.68	-1,399.95	1,436.36	1,595.96	1,520.48	75.48	21.145	
8,278.00	8,102.68	8,427.38	8,084.02	36.74	45.99	-38.54	-1,401.46	1,432.19	1,593.45	1,517.11	76.34	20.873	
8,561.00	8,385.40	8,710.29	8,366.85	37.42	46.51	-49.28	-1,403.74	1,425.95	1,586.88	1,509.28	77.60	20.450	
8,930.00	8,753.68	9,078.99	8,735.45	38.30	47.22	-64.82	-1,406.70	1,417.81	1,577.73	1,498.54	79.19	19.923	
8,993.00	8,816.50	9,141.90	8,798.35	38.45	47.35	-64.92	-1,407.21	1,416.42	1,576.22	1,496.77	79.46	19.837	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 25A-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDMG												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-159.88	-49.26	-18.05	52.80				
170.00	169.99	163.99	163.99	0.25	2.50	130.71	-49.26	-18.05	53.55	50.79	2.76	19.417	
231.00	230.97	224.97	224.97	0.47	3.86	134.66	-49.26	-18.05	54.55	50.22	4.34	12.579 ES	
262.00	261.95	255.95	255.95	0.59	4.51	145.62	-49.26	-18.05	55.36	50.27	5.10	10.866	
292.00	291.92	285.92	285.92	0.70	5.13	142.19	-49.26	-18.05	56.56	50.73	5.83	9.701	
353.00	352.75	346.25	346.25	0.93	6.46	129.75	-49.67	-17.67	59.89	52.51	7.38	8.117	
445.00	444.28	436.92	436.80	1.27	9.40	131.76	-52.86	-14.72	67.42	56.84	10.57	6.376	
536.00	534.44	526.20	525.67	1.62	14.90	135.73	-59.08	-8.96	78.59	62.43	16.16	4.863	
630.00	626.87	617.53	616.07	2.02	22.64	135.09	-68.59	-0.16	94.83	71.00	23.84	3.979 SF	
724.00	718.61	707.88	704.79	2.45	26.89	130.32	-81.11	11.42	114.47	86.37	28.10	4.074	
819.00	810.83	798.51	792.87	2.91	26.90	121.81	-96.74	25.89	135.51	107.16	28.36	4.779	
913.00	901.45	887.22	878.01	3.39	26.92	121.51	-115.00	42.78	158.38	129.76	28.62	5.534	
1,007.00	991.42	974.66	960.71	3.92	26.96	117.24	-135.81	62.05	183.78	154.90	28.88	6.363	
1,101.00	1,081.58	1,062.34	1,042.40	4.44	27.00	118.70	-159.21	83.70	210.69	181.66	29.03	7.258	
1,195.00	1,172.56	1,151.63	1,125.32	4.93	27.07	119.63	-183.51	106.18	238.09	209.01	29.08	8.189	
1,289.00	1,264.08	1,240.84	1,208.17	5.40	27.15	115.90	-207.79	128.65	265.38	236.29	29.10	9.121	
1,384.00	1,356.59	1,331.03	1,291.94	5.88	27.25	114.16	-232.33	151.36	293.28	264.08	29.19	10.046	
1,478.00	1,448.11	1,420.37	1,374.90	6.35	27.36	110.21	-256.64	173.85	321.01	291.63	29.37	10.929	
1,573.00	1,540.86	1,510.83	1,458.92	6.82	27.48	108.09	-281.26	196.63	348.42	318.85	29.57	11.782	
1,667.00	1,632.86	1,600.23	1,541.95	7.27	27.62	109.23	-305.59	219.15	375.77	346.00	29.77	12.621	
1,761.00	1,724.81	1,689.47	1,624.83	7.72	27.78	108.18	-329.87	241.62	403.91	373.88	30.03	13.450	
1,855.00	1,816.45	1,778.64	1,707.64	8.18	27.95	107.27	-354.13	264.07	432.80	402.41	30.39	14.241	
1,949.00	1,907.72	1,867.80	1,790.44	8.67	28.13	105.34	-378.40	286.52	462.13	431.27	30.85	14.978	
2,044.00	1,999.54	1,958.05	1,874.26	9.18	28.33	102.41	-402.96	309.25	491.61	460.19	31.42	15.645	
2,138.00	2,090.09	2,047.31	1,957.16	9.70	28.54	104.00	-427.25	331.73	521.03	488.97	32.05	16.254	
2,232.00	2,180.65	2,136.50	2,039.99	10.22	28.76	103.14	-451.52	354.18	550.67	517.97	32.70	16.840	
2,326.00	2,271.24	2,225.66	2,122.80	10.74	29.00	104.10	-475.78	376.64	580.37	547.02	33.35	17.400	
2,420.00	2,361.89	2,314.51	2,205.32	11.26	29.25	107.58	-499.96	399.01	610.99	576.99	34.01	17.966	
2,527.00	2,465.28	2,414.99	2,298.64	11.83	29.54	112.73	-527.30	424.31	647.57	612.85	34.72	18.652	
2,622.00	2,557.29	2,504.06	2,381.36	12.33	29.81	109.88	-551.54	446.74	680.34	645.00	35.33	19.254	
2,715.00	2,647.48	2,591.78	2,462.83	12.81	30.09	105.04	-575.41	468.83	710.99	675.03	35.96	19.774	
2,810.00	2,739.63	2,681.96	2,546.58	13.31	30.39	100.68	-599.95	491.54	740.69	704.06	36.62	20.226	
2,904.00	2,830.93	2,771.61	2,629.84	13.80	30.70	97.82	-624.34	514.11	768.73	731.44	37.29	20.615	
2,999.00	2,922.99	2,862.41	2,714.17	14.30	31.03	96.54	-649.05	536.98	796.53	758.52	38.01	20.955	
3,093.00	3,013.89	2,952.34	2,797.69	14.81	31.36	95.76	-673.53	559.62	823.86	785.09	38.76	21.254	
3,187.00	3,104.97	3,042.42	2,881.35	15.31	31.70	94.23	-698.04	582.30	850.65	811.14	39.50	21.533	
3,282.00	3,197.19	3,133.47	2,965.91	15.80	32.05	95.33	-722.82	605.23	877.60	837.35	40.24	21.807	
3,376.00	3,288.43	3,223.46	3,049.49	16.29	32.41	95.65	-747.30	627.89	904.63	863.64	40.98	22.072	
3,470.00	3,379.56	3,313.39	3,133.01	16.79	32.78	95.79	-771.78	650.54	931.89	890.15	41.75	22.322	
3,564.00	3,470.75	3,403.41	3,216.61	17.28	33.16	93.97	-796.27	673.21	958.86	916.34	42.52	22.553	
3,658.00	3,561.89	3,493.46	3,300.25	17.78	33.54	94.94	-820.78	695.88	985.74	942.45	43.30	22.767	
3,752.00	3,652.73	3,583.31	3,383.69	18.29	33.94	96.34	-845.23	718.51	1,013.35	969.23	44.12	22.969	
3,847.00	3,744.45	3,673.86	3,467.79	18.81	34.34	98.60	-869.87	741.31	1,042.06	997.10	44.96	23.178	
3,941.00	3,835.42	3,763.30	3,550.86	19.31	34.75	99.37	-894.21	763.83	1,070.94	1,025.17	45.77	23.397	
4,026.00	3,917.86	3,844.10	3,625.89	19.76	35.13	100.52	-916.19	784.18	1,097.26	1,050.77	46.49	23.601	
4,130.00	4,018.80	3,943.12	3,717.86	20.30	35.59	96.90	-943.14	809.11	1,128.93	1,081.56	47.37	23.830	
4,224.00	4,109.52	4,032.90	3,801.24	20.82	36.02	94.52	-967.57	831.72	1,156.77	1,108.54	48.24	23.981	
4,318.00	4,199.89	4,122.76	3,884.70	21.36	36.46	94.07	-992.02	854.35	1,184.33	1,135.19	49.14	24.099	
4,412.00	4,290.67	4,212.67	3,968.20	21.87	36.90	95.44	-1,016.49	876.99	1,211.74	1,161.73	50.01	24.228	
4,507.00	4,382.62	4,303.46	4,052.52	22.38	37.36	96.14	-1,041.20	899.85	1,239.69	1,188.81	50.88	24.366	
4,601.00	4,473.49	4,393.22	4,135.88	22.90	37.81	95.79	-1,065.62	922.45	1,267.59	1,215.84	51.75	24.495	
4,695.00	4,564.59	4,482.90	4,219.17	23.39	38.27	98.01	-1,090.03	945.03	1,295.70	1,243.10	52.60	24.633	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 25A-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,572.37	4,302.26	23.89	38.74	98.93	-1,114.37	967.56	1,324.47	1,271.02	53.45	24.780	
4,883.00	4,746.85	4,661.61	4,385.14	24.39	39.21	101.56	-1,138.66	990.04	1,353.92	1,299.62	54.30	24.935	
4,978.00	4,839.29	4,751.83	4,468.94	24.87	39.69	99.25	-1,163.21	1,012.76	1,383.47	1,328.35	55.12	25.098	
5,072.00	4,931.05	4,841.37	4,552.09	25.33	40.17	97.31	-1,187.57	1,035.30	1,411.75	1,355.83	55.92	25.246	
5,166.00	5,022.88	4,931.05	4,635.38	25.79	40.65	96.31	-1,211.98	1,057.89	1,439.53	1,382.82	56.72	25.382	
5,260.00	5,114.46	5,020.81	4,718.75	26.26	41.14	95.33	-1,236.40	1,080.49	1,467.24	1,409.69	57.55	25.497	
5,354.00	5,205.69	5,110.61	4,802.14	26.75	41.64	94.92	-1,260.84	1,103.10	1,494.97	1,436.56	58.42	25.591	
5,450.00	5,298.51	5,202.38	4,887.37	27.28	42.15	93.54	-1,285.81	1,126.21	1,523.16	1,463.82	59.35	25.666	
5,543.00	5,388.31	5,291.25	4,969.91	27.79	42.65	95.00	-1,310.00	1,148.59	1,550.56	1,490.30	60.26	25.731	
5,637.00	5,479.24	5,381.01	5,053.27	28.29	43.16	94.96	-1,334.42	1,171.19	1,578.45	1,517.28	61.17	25.804	
5,731.00	5,570.39	5,470.66	5,136.53	28.79	43.67	97.40	-1,358.82	1,193.77	1,606.68	1,544.62	62.06	25.889	
5,825.00	5,661.76	5,560.11	5,219.61	29.27	44.18	98.62	-1,383.16	1,216.29	1,635.46	1,572.53	62.93	25.989	
5,920.00	5,754.38	5,650.38	5,303.44	29.75	44.70	100.32	-1,407.72	1,239.02	1,664.86	1,601.08	63.78	26.104	
6,014.00	5,846.19	5,739.66	5,386.36	30.21	45.22	99.24	-1,432.02	1,261.50	1,693.95	1,629.35	64.60	26.221	
6,109.00	5,939.26	5,829.95	5,470.21	30.65	45.75	99.28	-1,456.59	1,284.24	1,722.95	1,657.54	65.41	26.341	
6,203.00	6,031.68	5,919.30	5,553.20	31.07	46.28	98.40	-1,480.90	1,306.74	1,751.26	1,685.08	66.17	26.464	
6,297.00	6,124.42	6,008.63	5,636.16	31.47	46.81	98.05	-1,505.21	1,329.23	1,779.15	1,712.25	66.90	26.594	
6,392.00	6,218.59	6,098.86	5,719.96	31.83	47.34	93.30	-1,529.77	1,351.95	1,806.47	1,738.90	67.57	26.734	
6,486.00	6,312.11	6,190.56	5,805.12	32.16	47.89	86.32	-1,554.72	1,375.04	1,832.36	1,764.16	68.20	26.866	
6,580.00	6,405.81	6,512.60	6,113.01	32.47	49.46	93.33	-1,623.06	1,438.29	1,852.60	1,782.00	70.60	26.241	
6,674.00	6,499.58	6,852.54	6,450.04	32.77	50.39	89.53	-1,652.99	1,465.98	1,861.20	1,789.26	71.94	25.870	
6,768.00	6,593.40	6,982.43	6,579.92	33.06	50.59	79.69	-1,653.83	1,466.22	1,861.08	1,788.59	72.49	25.673	
6,823.12	6,648.45	7,032.09	6,629.58	33.23	50.66	82.66	-1,654.11	1,465.45	1,860.92	1,788.13	72.79	25.566	
6,863.00	6,688.26	7,070.38	6,667.86	33.35	50.71	84.79	-1,654.41	1,464.63	1,860.99	1,787.98	73.01	25.491	
6,957.00	6,782.19	7,164.20	6,761.66	33.62	50.83	92.00	-1,655.15	1,462.57	1,861.53	1,788.03	73.49	25.329	
7,051.00	6,876.18	7,258.13	6,855.56	33.87	50.96	54.77	-1,655.90	1,460.52	1,861.88	1,787.94	73.94	25.181	
7,145.00	6,970.17	7,352.09	6,949.50	34.10	51.09	-12.73	-1,656.65	1,458.47	1,861.75	1,787.39	74.36	25.038	
7,334.00	7,159.13	7,541.09	7,138.43	34.53	51.35	-69.83	-1,658.15	1,454.34	1,861.30	1,786.18	75.12	24.778	
7,428.00	7,253.06	7,635.07	7,232.40	34.73	51.48	-67.58	-1,658.90	1,452.28	1,860.69	1,785.22	75.47	24.654	
7,522.00	7,346.98	7,729.06	7,326.36	34.94	51.61	-62.17	-1,659.65	1,450.23	1,859.86	1,784.03	75.83	24.527	
7,558.82	7,383.79	7,765.88	7,363.17	35.03	51.67	-74.11	-1,659.94	1,449.42	1,859.71	1,783.74	75.98	24.478	
7,617.00	7,441.94	7,824.05	7,421.33	35.16	51.75	-100.67	-1,660.40	1,448.15	1,860.07	1,783.86	76.21	24.407	
7,711.00	7,535.92	7,918.05	7,515.29	35.38	51.89	-99.45	-1,661.15	1,446.10	1,861.20	1,784.61	76.60	24.298	
7,806.00	7,630.87	8,013.04	7,610.26	35.60	52.03	-77.95	-1,661.91	1,444.02	1,861.73	1,784.75	76.98	24.184	
7,900.00	7,724.80	8,107.03	7,704.23	35.82	52.18	-73.95	-1,662.65	1,441.96	1,861.60	1,784.24	77.36	24.065	
7,994.00	7,818.76	8,201.02	7,798.19	36.04	52.32	-25.10	-1,663.40	1,439.91	1,860.97	1,783.22	77.76	23.934	
8,089.00	7,913.75	8,296.01	7,893.16	36.28	52.47	-27.68	-1,664.16	1,437.83	1,860.18	1,781.99	78.18	23.792	
8,278.00	8,102.68	8,484.99	8,082.08	36.74	52.77	-38.55	-1,665.66	1,433.70	1,857.66	1,778.63	79.02	23.508	
8,561.00	8,385.40	8,767.90	8,364.91	37.42	53.23	-49.28	-1,667.91	1,427.52	1,851.06	1,770.83	80.24	23.070	
8,930.00	8,753.68	9,136.59	8,733.51	38.30	53.85	-64.76	-1,670.84	1,419.46	1,841.88	1,760.13	81.75	22.531	
8,993.00	8,816.50	9,199.51	8,796.41	38.45	53.96	-64.85	-1,671.34	1,418.08	1,840.36	1,758.36	82.00	22.443	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 25B-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-159.83	-56.28	-20.67	60.26				
170.00	169.99	163.99	163.99	0.25	2.50	130.58	-56.28	-20.67	61.04	58.29	2.76	22.134	
231.00	230.97	224.58	224.58	0.47	3.92	134.25	-56.40	-20.57	62.12	57.74	4.38	14.189 ES	
262.00	261.95	255.08	255.07	0.59	4.66	144.63	-56.90	-20.17	63.24	58.03	5.21	12.136	
292.00	291.92	284.55	284.52	0.70	5.40	140.23	-57.74	-19.50	64.94	58.91	6.03	10.765	
353.00	352.75	344.35	344.21	0.93	8.06	125.29	-60.54	-17.26	69.65	61.02	8.62	8.075	
445.00	444.28	434.13	433.55	1.27	14.35	124.45	-67.47	-11.71	79.39	64.96	14.43	5.500	
536.00	534.44	522.11	520.58	1.62	23.83	126.87	-77.44	-3.74	93.17	70.34	22.83	4.081	
630.00	626.87	611.62	608.44	2.02	35.61	125.64	-90.78	6.94	112.51	79.44	33.06	3.403 SF	
724.00	718.61	700.00	694.31	2.45	42.34	120.96	-107.09	19.99	135.58	96.79	38.78	3.496	
819.00	810.83	787.74	778.51	2.91	42.35	112.74	-126.33	35.40	160.45	121.57	38.87	4.127	
913.00	901.45	873.48	859.61	3.39	42.36	112.86	-148.03	52.76	187.41	148.41	39.00	4.805	
1,007.00	991.42	957.60	937.88	3.92	42.38	109.18	-172.06	72.00	217.19	178.07	39.13	5.551	
1,101.00	1,081.58	1,044.60	1,017.79	4.44	42.42	111.64	-198.93	93.50	248.59	209.51	39.09	6.360	
1,195.00	1,172.56	1,132.66	1,098.63	4.93	42.46	113.64	-226.20	115.33	280.44	241.58	38.86	7.217	
1,289.00	1,264.08	1,220.65	1,179.39	5.40	42.52	110.77	-253.46	137.14	312.16	273.59	38.57	8.093	
1,384.00	1,356.59	1,309.61	1,261.06	5.88	42.59	109.65	-281.01	159.20	344.34	305.93	38.41	8.964	
1,478.00	1,448.11	1,397.74	1,341.95	6.35	42.67	106.26	-308.31	181.04	376.16	337.78	38.38	9.801	
1,573.00	1,540.86	1,487.01	1,423.90	6.82	42.76	104.64	-335.96	203.17	407.65	369.29	38.36	10.627	
1,667.00	1,632.86	1,575.23	1,504.88	7.27	42.86	106.21	-363.29	225.05	439.01	400.67	38.34	11.450	
1,761.00	1,724.81	1,663.26	1,585.68	7.72	42.97	105.48	-390.56	246.87	471.06	432.66	38.40	12.267	
1,855.00	1,816.45	1,751.20	1,666.41	8.18	43.09	104.79	-417.80	268.67	503.73	465.11	38.61	13.046	
1,949.00	1,907.72	1,839.13	1,747.12	8.67	43.22	103.04	-445.03	290.47	536.72	497.75	38.97	13.773	
2,044.00	1,999.54	1,928.15	1,828.83	9.18	43.36	100.23	-472.61	312.54	569.83	530.36	39.47	14.437	
2,138.00	2,090.09	2,016.18	1,909.64	9.70	43.51	101.94	-499.87	334.36	602.77	562.72	40.06	15.049	
2,232.00	2,180.65	2,104.13	1,990.37	10.22	43.67	101.21	-527.12	356.16	635.94	595.29	40.65	15.645	
2,326.00	2,271.24	2,192.06	2,071.08	10.74	43.84	102.27	-554.35	377.96	669.17	627.93	41.25	16.224	
2,420.00	2,361.89	2,279.63	2,151.46	11.26	44.01	105.87	-581.48	399.67	703.32	661.48	41.84	16.811	
2,527.00	2,465.28	2,378.59	2,242.30	11.83	44.23	111.18	-612.13	424.20	743.91	701.46	42.45	17.524	
2,622.00	2,557.29	2,466.30	2,322.82	12.33	44.43	108.46	-639.30	445.95	780.25	737.28	42.97	18.159	
2,715.00	2,647.48	2,552.75	2,402.17	12.81	44.63	103.72	-666.07	467.38	814.41	770.92	43.49	18.727	
2,810.00	2,739.63	2,641.68	2,483.80	13.31	44.85	99.44	-693.62	489.43	847.70	803.64	44.06	19.241	
2,904.00	2,830.93	2,730.16	2,565.02	13.80	45.08	96.68	-721.03	511.36	879.31	834.69	44.63	19.703	
2,999.00	2,922.99	2,819.80	2,647.30	14.30	45.32	95.40	-748.79	533.58	910.71	865.45	45.26	20.122	
3,093.00	3,013.89	2,908.58	2,728.80	14.81	45.57	94.69	-776.29	555.59	941.57	895.64	45.93	20.499	
3,187.00	3,104.97	2,997.53	2,810.45	15.31	45.82	93.22	-803.85	577.65	971.92	925.33	46.59	20.862	
3,282.00	3,197.19	3,087.46	2,892.99	15.80	46.09	94.40	-831.70	599.94	1,002.47	955.24	47.23	21.224	
3,376.00	3,288.43	3,176.31	2,974.56	16.29	46.37	94.74	-859.22	621.97	1,033.06	985.18	47.88	21.574	
3,470.00	3,379.56	3,265.10	3,056.06	16.79	46.65	94.93	-886.73	643.98	1,063.87	1,015.31	48.56	21.908	
3,564.00	3,470.75	3,353.99	3,137.66	17.28	46.94	93.17	-914.26	666.02	1,094.39	1,045.15	49.24	22.226	
3,658.00	3,561.89	3,442.92	3,219.28	17.78	47.23	94.16	-941.80	688.06	1,124.82	1,074.88	49.93	22.526	
3,752.00	3,652.73	3,531.61	3,300.70	18.29	47.54	95.54	-969.28	710.05	1,155.94	1,105.26	50.68	22.809	
3,847.00	3,744.45	3,620.97	3,382.72	18.81	47.85	97.86	-996.96	732.20	1,188.20	1,136.75	51.45	23.095	
3,941.00	3,835.42	3,709.20	3,463.71	19.31	48.17	98.68	-1,024.29	754.08	1,220.59	1,168.41	52.18	23.392	
4,026.00	3,917.86	3,788.90	3,536.87	19.76	48.47	99.89	-1,048.97	773.83	1,250.09	1,197.27	52.82	23.667	
4,130.00	4,018.80	3,886.60	3,626.56	20.30	48.84	96.29	-1,079.24	798.05	1,285.66	1,232.06	53.61	23.984	
4,224.00	4,109.52	3,975.21	3,707.90	20.82	49.18	93.84	-1,106.68	820.02	1,317.01	1,262.61	54.40	24.210	
4,318.00	4,199.89	4,063.92	3,789.32	21.36	49.53	93.82	-1,134.16	842.01	1,348.07	1,292.82	55.25	24.402	
4,412.00	4,290.67	4,152.69	3,870.80	21.87	49.88	94.48	-1,161.66	864.02	1,379.00	1,322.95	56.04	24.605	
4,507.00	4,382.62	4,242.31	3,953.07	22.38	50.25	95.57	-1,189.42	886.24	1,410.50	1,353.67	56.83	24.819	
4,601.00	4,473.49	4,330.90	4,034.39	22.90	50.62	95.24	-1,216.86	908.20	1,441.92	1,384.29	57.63	25.021	
4,695.00	4,564.59	4,419.41	4,115.63	23.39	50.99	97.54	-1,244.27	930.14	1,473.55	1,415.15	58.40	25.232	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - NPR 25B-8 596 - OH - Plan 1 (04-11-19 DS)												Offset Site Error:	0.00 usft
Survey Program: 0-INC+TREND, 601-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,789.00	4,655.72	4,507.68	4,196.66	23.89	51.37	98.44	-1,271.61	952.02	1,505.82	1,446.65	59.17	25.450	
4,883.00	4,746.85	4,595.70	4,277.45	24.39	51.76	101.14	-1,298.88	973.84	1,538.77	1,478.83	59.94	25.673	
4,978.00	4,839.29	4,684.69	4,359.14	24.87	52.15	98.88	-1,326.44	995.91	1,571.87	1,511.20	60.68	25.905	
5,072.00	4,931.05	4,773.05	4,440.25	25.33	52.55	97.02	-1,353.81	1,017.81	1,603.68	1,542.30	61.38	26.126	
5,166.00	5,022.88	4,861.58	4,521.51	25.79	52.96	96.02	-1,381.23	1,039.76	1,635.00	1,572.91	62.09	26.334	
5,260.00	5,114.46	4,950.18	4,602.85	26.26	53.37	95.04	-1,408.68	1,061.73	1,666.23	1,603.40	62.84	26.517	
5,354.00	5,205.69	5,038.82	4,684.21	26.75	53.79	94.60	-1,436.14	1,083.70	1,697.48	1,633.85	63.63	26.676	
5,450.00	5,298.51	5,129.41	4,767.37	27.28	54.22	93.20	-1,464.20	1,106.16	1,729.26	1,664.76	64.50	26.811	
5,543.00	5,388.31	5,217.14	4,847.89	27.79	54.64	94.68	-1,491.37	1,127.91	1,760.13	1,694.78	65.35	26.934	
5,637.00	5,479.24	5,305.74	4,929.22	28.29	55.07	94.68	-1,518.81	1,149.87	1,791.53	1,725.33	66.20	27.064	
5,731.00	5,570.39	5,394.21	5,010.43	28.79	55.51	97.15	-1,546.22	1,171.80	1,823.27	1,756.25	67.02	27.205	
5,825.00	5,661.76	5,482.46	5,091.45	29.27	55.95	98.43	-1,573.55	1,193.68	1,855.55	1,787.73	67.82	27.361	
5,920.00	5,754.38	5,571.51	5,173.18	29.75	56.39	100.18	-1,601.14	1,215.76	1,888.49	1,819.90	68.59	27.533	
6,014.00	5,846.19	5,659.58	5,254.03	30.21	56.84	99.14	-1,628.42	1,237.59	1,921.08	1,851.74	69.34	27.706	
6,109.00	5,939.26	5,748.67	5,335.81	30.65	57.30	99.27	-1,656.01	1,259.68	1,953.62	1,883.56	70.06	27.884	
6,203.00	6,031.68	5,836.86	5,416.76	31.07	57.76	98.45	-1,683.33	1,281.54	1,985.44	1,914.70	70.74	28.066	
6,297.00	6,124.42	5,925.04	5,497.70	31.47	58.22	98.21	-1,710.64	1,303.40	2,016.83	1,945.46	71.38	28.256	
6,392.00	6,218.59	6,014.16	5,579.50	31.83	58.69	93.60	-1,738.25	1,325.49	2,047.69	1,975.74	71.95	28.461	
6,486.00	6,312.11	6,102.35	5,660.46	32.16	59.16	86.74	-1,765.56	1,347.36	2,077.07	2,004.63	72.45	28.671	
6,580.00	6,405.81	6,190.22	5,741.12	32.47	59.63	94.64	-1,792.78	1,369.14	2,106.49	2,033.60	72.90	28.896	
6,674.00	6,499.58	6,274.10	5,822.97	32.77	60.02	89.54	-1,815.40	1,467.28	2,125.03	2,048.44	73.59	27.747	
6,768.00	6,593.40	7,049.71	6,578.53	33.06	62.25	79.72	-1,917.73	1,468.59	2,124.99	2,047.83	77.16	27.539	
6,824.02	6,649.34	7,100.00	6,628.81	33.23	62.30	82.72	-1,918.02	1,467.78	2,124.85	2,047.38	77.47	27.427	
6,863.00	6,688.26	7,136.91	6,665.71	33.35	62.34	84.80	-1,918.31	1,466.98	2,124.92	2,047.23	77.69	27.352	
6,957.00	6,782.19	7,230.74	6,759.51	33.62	62.44	91.99	-1,919.07	1,464.92	2,125.46	2,047.28	78.18	27.186	
7,051.00	6,876.18	7,324.66	6,853.41	33.87	62.54	54.75	-1,919.82	1,462.86	2,125.82	2,047.19	78.62	27.038	
7,145.00	6,970.17	7,418.63	6,947.35	34.10	62.65	-12.77	-1,920.57	1,460.79	2,125.69	2,046.65	79.03	26.896	
7,334.00	7,159.13	7,607.62	7,136.29	34.53	62.86	-69.87	-1,922.08	1,456.64	2,125.25	2,045.48	79.77	26.644	
7,428.00	7,253.06	7,701.60	7,230.25	34.73	62.97	-67.62	-1,922.83	1,454.57	2,124.64	2,044.55	80.10	26.526	
7,522.00	7,346.98	7,795.59	7,324.21	34.94	63.08	-62.21	-1,923.58	1,452.51	2,123.81	2,043.38	80.43	26.406	
7,558.60	7,383.56	7,832.19	7,360.80	35.02	63.13	-74.06	-1,923.88	1,451.70	2,123.67	2,043.10	80.57	26.359	
7,617.00	7,441.94	7,890.59	7,419.18	35.16	63.20	-100.70	-1,924.34	1,450.42	2,124.03	2,043.24	80.79	26.290	
7,711.00	7,535.92	7,984.58	7,513.15	35.38	63.31	-99.48	-1,925.10	1,448.36	2,125.17	2,044.01	81.16	26.184	
7,806.00	7,630.87	8,079.57	7,608.12	35.60	63.43	-77.98	-1,925.86	1,446.27	2,125.70	2,044.18	81.53	26.074	
7,900.00	7,724.80	8,173.56	7,702.08	35.82	63.55	-73.97	-1,926.61	1,444.20	2,125.57	2,043.70	81.88	25.961	
7,994.00	7,818.76	8,267.56	7,796.05	36.04	63.67	-25.11	-1,927.36	1,442.14	2,124.95	2,042.69	82.26	25.833	
8,089.00	7,913.75	8,362.54	7,891.01	36.28	63.79	-27.71	-1,928.12	1,440.05	2,124.16	2,041.49	82.67	25.694	
8,278.00	8,102.68	8,551.52	8,079.93	36.74	64.03	-38.58	-1,929.63	1,435.90	2,121.64	2,038.16	83.48	25.415	
8,561.00	8,385.40	8,834.43	8,362.77	37.42	64.42	-49.30	-1,931.89	1,429.68	2,115.06	2,030.43	84.63	24.993	
8,930.00	8,753.68	9,203.12	8,731.36	38.30	64.93	-64.73	-1,934.84	1,421.58	2,105.89	2,019.87	86.02	24.480	
8,993.00	8,816.50	9,266.04	8,794.26	38.45	65.02	-64.81	-1,935.35	1,420.20	2,104.38	2,018.13	86.25	24.398	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - Parachute N CP02D-08 - OH - Survey												Offset Site Error:	0.00 usft
Survey Program: 105-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	31.20	515.39	312.17	610.64				
170.00	169.99	66.85	66.85	0.25	0.10	-39.72	515.65	312.18	601.50	601.15	0.35	1,704.671	
231.00	230.97	128.74	128.74	0.47	0.24	-37.02	516.21	312.27	600.87	600.15	0.71	842.141	
262.00	261.95	159.24	159.23	0.59	0.35	-26.78	516.26	312.46	600.12	599.18	0.93	642.545	
292.00	291.92	189.22	189.22	0.70	0.46	-31.17	516.37	312.66	599.01	597.85	1.15	519.728	
353.00	352.75	245.94	245.93	0.93	0.66	-46.38	516.67	313.17	596.18	594.60	1.58	377.877	
445.00	444.28	330.02	330.00	1.27	0.96	-47.50	518.23	313.84	591.66	589.44	2.22	266.624	
536.00	534.44	416.49	416.43	1.62	1.27	-44.82	520.62	314.27	585.51	582.63	2.88	203.345	
630.00	626.87	503.94	503.82	2.02	1.58	-45.96	523.91	315.15	577.01	573.43	3.57	161.409	
724.00	718.61	597.12	596.92	2.45	1.92	-51.16	527.28	316.92	567.13	562.82	4.31	131.476	
819.00	810.83	685.23	684.94	2.91	2.24	-59.86	530.29	319.47	558.22	553.15	5.06	110.275	
913.00	901.45	773.16	772.75	3.39	2.55	-60.60	533.89	322.37	550.31	544.47	5.85	94.138	
1,007.00	991.42	861.46	860.89	3.92	2.88	-65.29	537.89	325.72	542.94	536.27	6.67	81.384	
1,101.00	1,081.58	946.56	945.79	4.44	3.19	-64.15	542.35	329.29	537.35	529.85	7.50	71.684	
1,195.00	1,172.56	1,032.02	1,030.99	4.93	3.50	-62.77	547.74	333.14	533.63	525.33	8.30	64.319	
1,289.00	1,264.08	1,121.54	1,120.19	5.40	3.83	-65.74	554.44	336.80	532.03	522.94	9.09	58.498	
1,384.00	1,356.59	1,218.09	1,216.38	5.88	4.19	-67.00	561.82	340.80	531.32	521.39	9.93	53.505	
1,447.01	1,417.92	1,279.14	1,277.23	6.20	4.42	-69.75	566.22	342.91	530.85	520.37	10.48	50.674 CC	
1,478.00	1,448.11	1,308.62	1,306.61	6.35	4.53	-71.12	568.40	343.99	530.96	520.22	10.74	49.429 ES	
1,573.00	1,540.86	1,398.93	1,396.58	6.82	4.86	-73.60	575.48	347.28	532.65	521.11	11.55	46.126	
1,667.00	1,632.86	1,487.78	1,485.05	7.27	5.19	-72.64	583.03	350.76	535.49	523.16	12.33	43.430	
1,761.00	1,724.81	1,579.03	1,575.85	7.72	5.54	-73.71	591.07	354.79	538.56	525.43	13.12	41.035	
1,855.00	1,816.45	1,666.69	1,663.02	8.18	5.87	-74.82	599.11	359.35	541.91	527.99	13.92	38.934	
1,949.00	1,907.72	1,753.80	1,749.49	8.67	6.21	-77.32	608.01	364.86	546.46	531.73	14.73	37.097	
2,044.00	1,999.54	1,841.79	1,836.71	9.18	6.55	-81.07	617.91	371.01	552.85	537.28	15.57	35.498	
2,138.00	2,090.09	1,928.29	1,922.29	9.70	6.89	-80.86	628.46	377.86	560.44	544.02	16.42	34.130	
2,232.00	2,180.65	2,015.62	2,008.54	10.22	7.24	-83.21	639.86	385.45	569.07	551.80	17.27	32.948	
2,326.00	2,271.24	2,107.17	2,098.84	10.74	7.61	-83.54	652.43	393.72	578.68	560.53	18.15	31.886	
2,420.00	2,361.89	2,196.16	2,186.62	11.26	7.97	-81.53	664.69	401.73	587.74	568.74	19.00	30.926	
2,527.00	2,465.28	2,286.29	2,275.15	11.83	8.35	-77.60	678.82	410.93	598.28	578.39	19.89	30.085	
2,622.00	2,557.29	2,369.87	2,356.64	12.33	8.71	-80.94	693.99	421.63	609.41	588.73	20.68	29.462	
2,715.00	2,647.48	2,451.77	2,435.95	12.81	9.08	-85.88	710.44	433.74	623.41	601.94	21.47	29.037	
2,810.00	2,739.63	2,527.73	2,509.07	13.31	9.44	-90.25	727.30	445.51	641.40	619.20	22.20	28.888	
2,904.00	2,830.93	2,598.52	2,576.61	13.80	9.78	-93.35	745.19	456.88	663.31	640.44	22.87	29.004	
2,999.00	2,922.99	2,667.78	2,642.06	14.30	10.13	-93.74	764.93	467.94	689.20	665.69	23.52	29.307	
3,093.00	3,013.89	2,736.74	2,706.56	14.81	10.49	-95.01	786.66	479.02	717.93	693.77	24.16	29.713	
3,187.00	3,104.97	2,805.83	2,770.35	15.31	10.87	-96.62	810.43	490.86	749.56	724.77	24.80	30.227	
3,282.00	3,197.19	2,875.79	2,833.80	15.80	11.27	-95.56	836.49	504.57	783.82	758.39	25.43	30.823	
3,376.00	3,288.43	2,948.50	2,898.71	16.29	11.71	-94.31	865.32	520.12	819.33	793.22	26.11	31.383	
3,470.00	3,379.56	3,041.11	2,981.17	16.79	12.29	-93.77	902.45	540.09	855.14	828.06	27.08	31.573	
3,564.00	3,470.75	3,145.32	3,074.34	17.28	12.95	-95.16	942.85	563.46	889.89	861.67	28.22	31.531	
3,658.00	3,561.89	3,239.96	3,159.31	17.78	13.56	-93.50	978.43	585.14	923.64	894.41	29.23	31.597	
3,752.00	3,652.73	3,338.81	3,248.46	18.29	14.19	-91.10	1,014.93	607.32	956.33	926.01	30.31	31.549	
3,847.00	3,744.45	3,438.08	3,338.99	18.81	14.83	-89.26	1,049.70	628.53	986.84	955.44	31.40	31.429	
3,941.00	3,835.42	3,514.03	3,407.85	19.31	15.32	-88.46	1,076.96	645.37	1,017.22	985.04	32.18	31.608	
4,026.00	3,917.86	3,587.00	3,473.68	19.76	15.81	-87.50	1,103.75	661.86	1,045.08	1,012.14	32.94	31.729	
4,130.00	4,018.80	3,680.00	3,557.24	20.30	16.44	-90.43	1,138.61	683.14	1,080.44	1,046.52	33.91	31.859	
4,224.00	4,109.52	3,777.36	3,644.64	20.82	17.10	-91.19	1,175.04	705.78	1,113.34	1,078.34	35.00	31.807	
4,318.00	4,199.89	3,872.91	3,730.82	21.36	17.75	-91.59	1,209.92	727.78	1,145.82	1,109.73	36.09	31.749	
4,412.00	4,290.67	3,971.52	3,820.24	21.87	18.42	-91.82	1,245.15	749.87	1,177.62	1,140.43	37.19	31.669	
4,507.00	4,382.62	4,072.79	3,912.75	22.38	19.09	-90.33	1,280.24	771.48	1,208.50	1,170.21	38.29	31.558	
4,601.00	4,473.49	4,163.41	3,995.50	22.90	19.70	-90.48	1,311.34	791.41	1,238.51	1,199.23	39.28	31.528	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - Parachute N CP02D-08 - OH - Survey												Offset Site Error:	0.00 usft
Survey Program: 105-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,695.00	4,564.59	4,261.89	4,085.55	23.39	20.35	-88.91	1,344.71	813.22	1,267.79	1,227.43	40.35	31.418	
4,789.00	4,655.72	4,373.89	4,188.44	23.89	21.09	-87.10	1,381.61	837.60	1,295.63	1,254.06	41.57	31.171	
4,883.00	4,746.85	4,475.57	4,282.31	24.39	21.76	-85.01	1,413.09	860.78	1,320.68	1,278.02	42.66	30.960	
4,978.00	4,839.29	4,561.37	4,361.28	24.87	22.32	-87.31	1,440.19	880.58	1,346.67	1,303.12	43.55	30.920	
5,072.00	4,931.05	4,650.77	4,443.78	25.33	22.91	-89.46	1,468.20	900.59	1,373.10	1,328.63	44.47	30.877	
5,166.00	5,022.88	4,736.91	4,523.14	25.79	23.48	-89.67	1,495.57	919.88	1,400.44	1,355.10	45.35	30.884	
5,260.00	5,114.46	4,830.46	4,609.53	26.26	24.09	-89.91	1,525.12	940.27	1,427.87	1,381.55	46.32	30.827	
5,354.00	5,205.69	4,927.53	4,699.45	26.75	24.72	-89.54	1,555.35	960.86	1,455.04	1,407.69	47.35	30.728	
5,450.00	5,298.51	5,013.10	4,778.92	27.28	25.27	-90.62	1,582.03	977.97	1,483.18	1,434.90	48.28	30.720	
5,543.00	5,388.31	5,094.15	4,854.43	27.79	25.78	-89.28	1,607.34	993.10	1,510.57	1,461.40	49.17	30.724	
5,637.00	5,479.24	5,172.68	4,927.58	28.29	26.27	-89.91	1,632.34	1,006.84	1,538.67	1,488.67	50.01	30.769	
5,731.00	5,570.39	5,246.31	4,996.09	28.79	26.73	-87.70	1,656.34	1,019.18	1,567.17	1,516.40	50.78	30.865	
5,825.00	5,661.76	5,477.18	5,214.84	29.27	28.05	-87.43	1,722.27	1,051.06	1,591.79	1,538.73	53.06	30.000	
5,920.00	5,754.38	5,598.25	5,332.03	29.75	28.65	-86.31	1,749.80	1,063.91	1,610.95	1,556.77	54.18	29.734	
6,014.00	5,846.19	5,782.77	5,512.62	30.21	29.48	-88.02	1,783.28	1,081.28	1,625.04	1,569.39	55.65	29.202	
6,109.00	5,939.26	5,894.57	5,622.85	30.65	29.93	-88.84	1,800.47	1,088.30	1,638.28	1,581.70	56.58	28.956	
6,203.00	6,031.68	6,272.34	5,999.49	31.07	31.01	-91.69	1,816.07	1,099.48	1,638.82	1,580.91	57.91	28.299	
6,297.00	6,124.42	6,375.02	6,102.01	31.47	31.22	-92.70	1,810.78	1,101.54	1,634.15	1,575.57	58.58	27.895	
6,392.00	6,218.59	6,429.65	6,156.60	31.83	31.33	-97.87	1,808.89	1,101.77	1,631.90	1,572.64	59.26	27.538	
6,409.59	6,236.07	6,439.84	6,166.79	31.90	31.36	-98.97	1,808.67	1,101.71	1,631.83	1,572.45	59.37	27.483	
6,486.00	6,312.11	6,506.44	6,233.38	32.16	31.50	-105.08	1,807.61	1,100.94	1,632.33	1,572.47	59.86	27.268	
6,580.00	6,405.81	6,595.00	6,321.92	32.47	31.70	-97.41	1,806.37	1,099.65	1,632.83	1,572.40	60.43	27.019	
6,580.42	6,406.23	6,595.00	6,321.92	32.47	31.70	-97.41	1,806.37	1,099.65	1,632.83	1,572.40	60.43	27.018	
6,674.00	6,499.58	6,691.92	6,418.82	32.77	31.92	-101.39	1,805.11	1,098.07	1,633.02	1,572.03	60.99	26.774	
6,768.00	6,593.40	6,787.51	6,514.38	33.06	32.14	-111.75	1,803.55	1,096.33	1,633.45	1,571.91	61.54	26.542	
6,863.00	6,688.26	6,883.96	6,610.80	33.35	32.36	-107.08	1,801.81	1,094.63	1,633.84	1,571.75	62.09	26.315	
6,957.00	6,782.19	6,974.66	6,701.48	33.62	32.56	-100.24	1,800.29	1,092.81	1,633.65	1,571.03	62.61	26.091	
7,051.00	6,876.18	7,070.57	6,797.35	33.87	32.79	-137.71	1,798.75	1,091.08	1,633.27	1,570.15	63.12	25.877	
7,145.00	6,970.17	7,159.64	6,886.40	34.10	33.00	154.63	1,797.37	1,089.44	1,633.19	1,569.60	63.59	25.681	
7,172.66	6,997.83	7,185.58	6,912.33	34.16	33.06	135.26	1,797.03	1,088.97	1,633.19	1,569.46	63.73	25.627	
7,334.00	7,159.13	7,341.04	7,067.76	34.53	33.44	97.50	1,795.50	1,086.28	1,633.26	1,568.74	64.52	25.315	
7,350.96	7,176.08	7,358.21	7,084.92	34.57	33.48	98.07	1,795.36	1,086.00	1,633.25	1,568.65	64.60	25.283	
7,428.00	7,253.06	7,437.30	7,164.01	34.73	33.67	99.86	1,794.63	1,084.76	1,633.33	1,568.36	64.97	25.140	
7,522.00	7,346.98	7,537.14	7,263.82	34.94	33.92	105.38	1,793.55	1,083.27	1,633.44	1,568.02	65.42	24.968	
7,617.00	7,441.94	7,639.11	7,365.78	35.16	34.17	66.93	1,791.94	1,081.84	1,632.23	1,566.34	65.89	24.771	
7,711.00	7,535.92	7,734.99	7,461.64	35.38	34.41	68.19	1,790.35	1,081.10	1,630.01	1,563.64	66.37	24.561	
7,806.00	7,630.87	7,828.59	7,555.22	35.60	34.64	89.80	1,788.80	1,080.63	1,628.16	1,561.32	66.84	24.360	
7,900.00	7,724.80	7,920.58	7,647.20	35.82	34.88	93.95	1,787.43	1,080.23	1,627.00	1,559.70	67.30	24.175	
7,994.00	7,818.76	8,020.16	7,746.77	36.04	35.13	142.84	1,785.83	1,079.67	1,626.53	1,558.76	67.78	23.998	
8,089.00	7,913.75	8,113.20	7,839.78	36.28	35.37	140.20	1,784.08	1,078.76	1,626.34	1,558.06	68.27	23.820	
8,123.79	7,948.53	8,145.82	7,872.39	36.36	35.45	136.38	1,783.50	1,078.41	1,626.27	1,557.81	68.46	23.757	
8,278.00	8,102.68	8,296.03	8,022.58	36.74	35.84	129.33	1,781.41	1,076.48	1,627.46	1,558.20	69.26	23.498	
8,561.00	8,385.40	8,569.92	8,296.43	37.42	36.56	118.90	1,777.93	1,073.43	1,631.43	1,560.72	70.71	23.071	
8,930.00	8,753.68	8,937.69	8,664.13	38.30	37.55	104.33	1,774.39	1,067.59	1,637.12	1,564.51	72.61	22.548	
8,993.00	8,816.50	8,997.88	8,724.31	38.45	37.72	104.44	1,773.87	1,066.50	1,637.98	1,565.05	72.93	22.461 SF	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - Parachute N CP07C-08 - OH - Survey												Offset Site Error:	0.00 usft
Survey Program: 112-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	31.99	515.49	321.97	615.79				
170.00	169.99	64.94	64.94	0.25	0.10	-38.92	515.79	322.10	606.81	606.46	0.35	1,728.500	
231.00	230.97	121.67	121.66	0.47	0.21	-36.21	516.54	322.41	606.50	605.83	0.68	897.085	
262.00	261.95	152.89	152.88	0.59	0.32	-25.96	516.94	322.77	606.12	605.22	0.90	673.259	
292.00	291.92	183.65	183.64	0.70	0.43	-30.37	517.41	322.97	605.30	604.18	1.12	539.635	
353.00	352.75	243.40	243.38	0.93	0.64	-45.61	518.22	323.34	602.78	601.22	1.56	386.551	
445.00	444.28	337.96	337.92	1.27	0.98	-46.80	519.62	323.97	597.82	595.58	2.24	266.570	
536.00	534.44	426.24	426.19	1.62	1.30	-44.06	520.59	324.52	590.29	587.38	2.91	202.780	
630.00	626.87	519.35	519.29	2.02	1.63	-45.27	521.88	324.75	579.32	575.69	3.63	159.691	
724.00	718.61	613.93	613.87	2.45	1.97	-50.55	523.05	324.95	566.53	562.16	4.37	129.695	
819.00	810.83	706.11	706.05	2.91	2.30	-59.57	524.28	324.99	554.47	549.34	5.13	108.141	
913.00	901.45	794.79	794.71	3.39	2.61	-60.58	525.53	325.05	542.88	536.97	5.91	91.859	
1,007.00	991.42	886.00	885.91	3.92	2.94	-65.66	526.64	325.14	531.31	524.56	6.74	78.791	
1,101.00	1,081.58	978.26	978.16	4.44	3.27	-64.92	527.93	325.32	521.16	513.57	7.59	68.643	
1,195.00	1,172.56	1,066.61	1,066.51	4.93	3.59	-63.83	528.97	325.40	511.82	503.42	8.40	60.896	
1,289.00	1,264.08	1,158.19	1,158.08	5.40	3.91	-67.16	530.15	325.41	503.91	494.70	9.21	54.715	
1,384.00	1,356.59	1,253.33	1,253.21	5.88	4.25	-68.84	531.42	325.45	496.92	486.88	10.04	49.513	
1,478.00	1,448.11	1,343.14	1,343.02	6.35	4.58	-73.34	532.37	325.35	490.78	479.93	10.85	45.253	
1,573.00	1,540.86	1,436.80	1,436.67	6.82	4.91	-76.30	533.48	325.29	486.39	474.72	11.66	41.704	
1,667.00	1,632.86	1,532.52	1,532.39	7.27	5.25	-76.01	534.17	324.90	482.35	469.88	12.47	38.693	
1,761.00	1,724.81	1,623.98	1,623.85	7.72	5.57	-77.76	534.51	324.64	478.16	464.90	13.26	36.072	
1,855.00	1,816.45	1,715.90	1,715.77	8.18	5.90	-79.83	534.86	324.29	474.36	460.30	14.06	33.737	
1,949.00	1,907.72	1,807.78	1,807.64	8.67	6.22	-83.47	535.06	323.95	471.23	456.35	14.88	31.671	
2,044.00	1,999.54	1,899.56	1,899.43	9.18	6.54	-88.54	535.26	323.44	469.76	454.05	15.72	29.888	
2,104.37	2,057.71	1,957.20	1,957.06	9.51	6.74	-89.25	535.39	323.11	469.62	453.37	16.25	28.894 CC	
2,138.00	2,090.09	1,989.63	1,989.49	9.70	6.85	-89.68	535.47	322.93	469.65	453.10	16.55	28.376 ES	
2,232.00	2,180.65	2,080.77	2,080.63	10.22	7.17	-93.49	535.64	322.33	470.68	453.31	17.38	27.087	
2,326.00	2,271.24	2,172.60	2,172.45	10.74	7.49	-95.35	535.49	321.69	472.70	454.52	18.18	25.994	
2,420.00	2,361.89	2,263.21	2,263.07	11.26	7.80	-94.86	535.21	320.93	474.97	456.00	18.97	25.038	
2,527.00	2,465.28	2,364.65	2,364.49	11.83	8.15	-92.89	535.03	320.32	476.98	457.15	19.83	24.049	
2,622.00	2,557.29	2,456.60	2,456.44	12.33	8.47	-98.21	535.35	320.07	479.76	459.16	20.60	23.294	
2,715.00	2,647.48	2,547.01	2,546.85	12.81	8.79	-105.20	535.73	320.19	484.80	463.47	21.33	22.730	
2,810.00	2,739.63	2,637.12	2,636.97	13.31	9.11	-111.62	536.35	320.37	492.77	470.72	22.05	22.344	
2,904.00	2,830.93	2,726.61	2,726.45	13.80	9.43	-116.64	537.34	320.26	503.09	480.34	22.76	22.109	
2,999.00	2,922.99	2,817.78	2,817.61	14.30	9.76	-119.30	538.35	319.86	515.49	492.03	23.46	21.972	
3,093.00	3,013.89	2,910.66	2,910.49	14.81	10.09	-122.44	539.40	319.64	529.08	504.91	24.17	21.891	
3,187.00	3,104.97	3,003.61	3,003.43	15.31	10.42	-125.91	540.43	319.98	543.04	518.17	24.86	21.842	
3,282.00	3,197.19	3,096.97	3,096.78	15.80	10.75	-126.67	541.20	320.44	557.10	531.55	25.55	21.807	
3,376.00	3,288.43	3,187.71	3,187.53	16.29	11.08	-127.60	541.86	320.79	571.27	545.06	26.21	21.795	
3,470.00	3,379.56	3,279.28	3,279.09	16.79	11.40	-129.07	542.43	320.97	586.14	559.26	26.88	21.808	
3,564.00	3,470.75	3,370.02	3,369.83	17.28	11.73	-132.45	542.78	320.99	601.55	574.01	27.53	21.850	
3,658.00	3,561.89	3,461.49	3,461.30	17.78	12.05	-132.73	543.16	320.94	617.67	589.48	28.19	21.913	
3,752.00	3,652.73	3,552.03	3,551.84	18.29	12.38	-132.29	543.54	321.00	634.50	605.66	28.84	22.000	
3,847.00	3,744.45	3,643.32	3,643.12	18.81	12.70	-131.85	544.01	321.08	651.66	622.16	29.50	22.091	
3,941.00	3,835.42	3,733.93	3,733.73	19.31	13.02	-132.56	544.52	320.94	668.30	638.15	30.14	22.169	
4,026.00	3,917.86	3,815.06	3,814.87	19.76	13.31	-132.86	544.68	320.56	683.01	652.29	30.71	22.238	
4,130.00	4,018.80	3,915.37	3,915.17	20.30	13.66	-137.70	544.72	319.88	701.67	670.26	31.41	22.341	
4,224.00	4,109.52	4,009.04	4,008.84	20.82	13.99	-140.52	544.83	319.41	720.99	688.93	32.06	22.486	
4,318.00	4,199.89	4,100.03	4,099.82	21.36	14.30	-142.12	544.86	319.28	741.63	708.92	32.71	22.674	
4,412.00	4,290.67	4,191.33	4,191.13	21.87	14.62	-143.24	544.91	319.17	761.38	728.03	33.35	22.831	
4,507.00	4,382.62	4,283.91	4,283.71	22.38	14.94	-142.94	544.62	319.01	780.68	746.70	33.98	22.974	
4,601.00	4,473.49	4,377.07	4,376.87	22.90	15.25	-144.27	544.22	318.94	800.14	765.52	34.61	23.115	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - Parachute N CP07C-08 - OH - Survey												Offset Site Error:	0.00 usft
Survey Program: 112-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,695.00	4,564.59	4,469.09	4,468.89	23.39	15.55	-143.44	544.04	319.12	818.79	783.55	35.24	23.233	
4,789.00	4,655.72	4,563.20	4,563.00	23.89	15.88	-142.84	544.05	319.79	836.85	800.96	35.89	23.316	
4,883.00	4,746.85	4,651.86	4,651.65	24.39	16.18	-141.48	544.11	320.41	854.72	818.21	36.51	23.410	
4,978.00	4,839.29	4,742.94	4,742.74	24.87	16.50	-144.77	544.21	320.82	872.07	834.93	37.14	23.480	
5,072.00	4,931.05	4,831.16	4,830.95	25.33	16.81	-147.69	544.41	320.92	889.13	851.37	37.76	23.549	
5,166.00	5,022.88	4,921.77	4,921.56	25.79	17.13	-148.91	544.57	320.83	906.46	868.07	38.39	23.612	
5,260.00	5,114.46	5,008.75	5,008.54	26.26	17.44	-150.09	544.74	320.39	925.35	886.35	39.00	23.727	
5,354.00	5,205.69	5,098.52	5,098.31	26.75	17.75	-150.65	544.93	319.67	945.95	906.31	39.63	23.867	
5,450.00	5,298.51	5,188.01	5,187.79	27.28	18.06	-152.53	545.05	318.72	968.63	928.36	40.27	24.054	
5,543.00	5,388.31	5,276.96	5,276.73	27.79	18.38	-151.67	545.11	317.48	991.35	950.45	40.90	24.238	
5,637.00	5,479.24	5,366.46	5,366.22	28.29	18.69	-152.68	545.14	316.26	1,013.75	972.21	41.53	24.408	
5,731.00	5,570.39	5,460.22	5,459.97	28.79	19.02	-150.83	545.19	315.10	1,035.21	993.02	42.20	24.532	
5,825.00	5,661.76	5,550.23	5,549.98	29.27	19.33	-150.46	545.33	314.01	1,055.68	1,012.84	42.83	24.646	
5,920.00	5,754.38	5,642.09	5,641.83	29.75	19.66	-149.40	545.46	312.85	1,075.24	1,031.76	43.48	24.729	
6,014.00	5,846.19	5,734.29	5,734.02	30.21	19.98	-151.05	545.44	311.63	1,094.01	1,049.88	44.13	24.792	
6,109.00	5,939.26	5,824.44	5,824.16	30.65	20.30	-151.84	545.25	310.27	1,112.09	1,067.33	44.75	24.849	
6,203.00	6,031.68	5,915.26	5,914.97	31.07	20.61	-153.23	544.94	308.76	1,128.76	1,083.37	45.38	24.873	
6,297.00	6,124.42	6,007.00	6,006.69	31.47	20.93	-154.25	544.74	307.14	1,144.04	1,098.02	46.01	24.864	
6,392.00	6,218.59	6,101.10	6,100.78	31.83	21.26	-159.71	544.33	305.41	1,157.04	1,110.39	46.65	24.803	
6,486.00	6,312.11	6,193.74	6,193.41	32.16	21.59	-166.92	543.80	303.64	1,167.70	1,120.43	47.27	24.702	
6,580.00	6,405.81	6,289.00	6,288.65	32.47	21.92	-159.08	543.23	301.84	1,176.40	1,128.49	47.91	24.556	
6,674.00	6,499.58	6,377.64	6,377.27	32.77	22.23	-162.94	542.54	300.02	1,184.20	1,135.71	48.49	24.421	
6,768.00	6,593.40	6,468.21	6,467.80	33.06	22.55	-173.22	541.63	297.75	1,191.80	1,142.72	49.09	24.280	
6,863.00	6,688.26	6,561.09	6,560.63	33.35	22.87	-168.42	540.49	295.18	1,199.06	1,149.37	49.70	24.128	
6,957.00	6,782.19	6,650.64	6,650.14	33.62	23.18	-161.54	539.24	292.48	1,204.92	1,154.64	50.28	23.966	
7,051.00	6,876.18	6,740.62	6,740.05	33.87	23.50	-160.98	537.98	289.36	1,209.36	1,158.51	50.85	23.781	
7,145.00	6,970.17	6,835.12	6,834.48	34.10	23.83	93.31	536.46	285.95	1,212.91	1,161.45	51.46	23.571	
7,334.00	7,159.13	7,015.98	7,015.15	34.53	24.47	36.03	532.59	278.77	1,216.70	1,164.13	52.57	23.145	
7,428.00	7,253.06	7,104.13	7,103.18	34.73	24.78	38.26	530.46	274.57	1,217.49	1,164.39	53.10	22.928	
7,522.00	7,346.98	7,197.51	7,196.41	34.94	25.11	43.66	528.22	269.87	1,218.57	1,164.89	53.68	22.702	
7,617.00	7,441.94	7,291.24	7,289.98	35.16	25.44	5.08	525.62	264.97	1,220.32	1,166.06	54.25	22.493	
7,711.00	7,535.92	7,375.17	7,373.75	35.38	25.74	6.17	523.68	260.31	1,222.55	1,167.80	54.75	22.329	
7,806.00	7,630.87	7,479.01	7,477.44	35.60	26.10	27.61	522.63	254.76	1,224.44	1,169.01	55.43	22.091	
7,900.00	7,724.80	7,612.71	7,611.06	35.82	26.58	31.70	522.29	250.41	1,224.29	1,167.95	56.33	21.733	
7,994.00	7,818.76	7,724.95	7,723.29	36.04	26.97	80.70	523.44	250.42	1,222.86	1,165.79	57.07	21.426	
8,089.00	7,913.75	7,834.48	7,832.80	36.28	27.35	78.25	525.04	251.86	1,221.73	1,163.93	57.79	21.140	
8,278.00	8,102.68	8,012.63	8,010.92	36.74	27.97	67.72	527.56	254.14	1,218.49	1,159.53	58.96	20.665	
8,561.00	8,385.40	8,306.79	8,305.01	37.42	28.98	57.81	529.48	259.60	1,208.05	1,147.17	60.88	19.843	
8,930.00	8,753.68	8,655.40	8,653.62	38.30	30.17	43.59	529.89	261.99	1,190.74	1,127.59	63.15	18.857	
8,993.00	8,816.50	8,715.86	8,714.08	38.45	30.38	43.73	529.76	261.81	1,187.49	1,123.95	63.54	18.689 SF	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - Parachute North CP01D-08 - OH - Survey 1												Offset Site Error:	0.00 usft
Survey Program: 25-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	32.83	515.55	332.68	621.51				
170.00	169.99	25.00	25.00	0.25	0.02	-38.03	515.61	332.72	614.03	613.59	0.45	1,377.748	
231.00	230.97	120.71	119.90	0.47	0.77	-35.10	518.98	337.93	616.89	615.72	1.17	526.593	
262.00	261.95	146.47	145.66	0.59	0.81	-24.85	519.49	338.27	616.72	615.39	1.33	462.746	
292.00	291.92	171.57	170.74	0.70	0.87	-29.22	520.13	338.75	616.36	614.86	1.50	410.607	
353.00	352.75	222.76	221.88	0.93	0.99	-44.31	521.75	340.39	615.55	613.69	1.86	331.212	
445.00	444.28	299.78	298.71	1.27	1.22	-45.08	524.82	344.71	614.80	612.38	2.43	253.146	
536.00	534.44	372.91	371.46	1.62	1.45	-41.71	528.31	351.33	613.92	610.90	3.01	203.723	
630.00	626.87	434.00	431.93	2.02	1.66	-41.72	532.02	359.12	612.74	609.15	3.59	170.510	
675.51	671.33	479.05	476.32	2.23	1.82	-43.73	535.44	366.06	612.21	608.27	3.95	155.066	
677.31	673.09	480.41	477.64	2.23	1.83	-43.80	535.55	366.29	612.21	608.25	3.96	154.581	CC, ES
724.00	718.61	515.45	512.02	2.45	1.96	-45.66	538.76	372.27	612.60	608.32	4.28	143.115	
819.00	810.83	592.53	587.26	2.91	2.24	-52.97	547.21	386.74	615.96	610.98	4.99	123.496	
913.00	901.45	665.13	657.65	3.39	2.58	-52.24	556.70	401.73	621.33	615.61	5.72	108.562	
1,007.00	991.42	737.03	726.60	3.92	2.95	-55.18	567.80	418.82	629.08	622.60	6.48	97.057	
1,101.00	1,081.58	807.00	792.99	4.44	3.34	-52.80	579.63	437.46	639.98	632.75	7.24	88.408	
1,195.00	1,172.56	885.03	866.09	4.93	3.82	-50.11	594.00	460.66	654.36	646.33	8.03	81.487	
1,289.00	1,264.08	957.02	932.59	5.40	4.30	-51.30	608.71	483.97	672.65	663.88	8.77	76.695	
1,384.00	1,356.59	1,036.19	1,004.94	5.88	4.85	-50.40	626.73	510.58	693.87	684.31	9.56	72.550	
1,478.00	1,448.11	1,119.69	1,080.75	6.35	5.46	-52.49	646.22	539.65	716.15	705.75	10.40	68.885	
1,573.00	1,540.86	1,200.00	1,152.97	6.82	6.09	-53.07	665.32	569.12	741.11	729.90	11.21	66.122	
1,667.00	1,632.86	1,285.00	1,228.78	7.27	6.78	-50.21	685.64	601.76	767.20	755.15	12.05	63.656	
1,761.00	1,724.81	1,375.20	1,308.71	7.72	7.54	-49.00	706.98	637.69	793.35	780.41	12.94	61.296	
1,855.00	1,816.45	1,465.82	1,407.74	8.18	8.45	-47.90	732.20	680.02	816.93	802.92	14.01	58.296	
1,949.00	1,907.72	1,573.94	1,487.22	8.67	9.16	-48.46	752.15	712.43	838.69	823.78	14.91	56.250	
2,044.00	1,999.54	1,662.36	1,566.82	9.18	9.88	-50.25	772.77	744.95	860.67	844.83	15.84	54.344	
2,138.00	2,090.09	1,754.41	1,649.63	9.70	10.63	-48.44	794.50	778.76	881.89	865.08	16.81	52.458	
2,232.00	2,180.65	1,871.72	1,755.67	10.22	11.58	-49.20	820.52	821.66	901.71	883.72	17.99	50.114	
2,326.00	2,271.24	1,952.60	1,829.06	10.74	12.22	-47.98	837.52	851.09	920.47	901.60	18.87	48.772	
2,420.00	2,361.89	2,028.27	1,897.01	11.26	12.85	-44.56	854.13	879.94	940.28	920.59	19.70	47.737	
2,527.00	2,465.28	2,123.73	1,982.33	11.83	13.67	-39.40	876.03	916.72	963.18	942.50	20.68	46.570	
2,622.00	2,557.29	2,224.21	2,072.03	12.33	14.52	-41.59	899.68	955.35	984.20	962.52	21.68	45.396	
2,715.00	2,647.48	2,332.80	2,169.67	12.81	15.42	-45.57	923.56	996.41	1,004.46	981.71	22.75	44.157	
2,810.00	2,739.63	2,427.18	2,255.09	13.31	16.20	-49.28	943.83	1,031.06	1,025.42	1,001.71	23.71	43.246	
2,904.00	2,830.93	2,513.84	2,333.14	13.80	16.91	-51.86	962.18	1,063.93	1,047.89	1,023.28	24.61	42.582	
2,999.00	2,922.99	2,605.76	2,415.90	14.30	17.68	-52.03	981.79	1,098.79	1,070.76	1,045.19	25.57	41.869	
3,093.00	3,013.89	2,701.97	2,502.68	14.81	18.47	-52.95	1,002.59	1,134.77	1,093.09	1,066.50	26.59	41.112	
3,187.00	3,104.97	2,797.14	2,589.08	15.31	19.23	-54.45	1,023.42	1,168.78	1,115.51	1,087.93	27.59	40.435	
3,282.00	3,197.19	2,882.70	2,666.64	15.80	19.92	-53.52	1,042.30	1,199.58	1,138.96	1,110.46	28.49	39.972	
3,376.00	3,288.43	2,943.00	2,721.11	16.29	20.41	-52.70	1,055.65	1,221.74	1,162.64	1,133.48	29.17	39.862	
3,470.00	3,379.56	3,030.40	2,799.21	16.79	21.21	-52.38	1,075.05	1,255.85	1,186.92	1,156.81	30.12	39.411	
3,564.00	3,470.75	3,097.37	2,857.98	17.28	21.81	-53.87	1,089.96	1,284.26	1,213.54	1,182.69	30.84	39.347	
3,658.00	3,561.89	3,175.70	2,925.73	17.78	22.56	-52.38	1,107.47	1,319.46	1,241.65	1,209.97	31.68	39.195	
3,752.00	3,652.73	3,269.55	3,006.91	18.29	23.48	-50.14	1,128.63	1,361.53	1,268.73	1,236.03	32.70	38.800	
3,847.00	3,744.45	3,364.80	3,089.62	18.81	24.41	-48.11	1,150.04	1,403.63	1,294.86	1,261.14	33.73	38.391	
3,941.00	3,835.42	3,455.24	3,168.33	19.31	25.28	-47.18	1,170.64	1,443.13	1,320.76	1,286.07	34.69	38.079	
4,026.00	3,917.86	3,571.85	3,270.62	19.76	26.36	-46.07	1,197.51	1,492.22	1,343.96	1,308.09	35.87	37.465	
4,130.00	4,018.80	3,698.28	3,383.62	20.30	27.46	-48.98	1,224.86	1,541.90	1,369.55	1,332.41	37.14	36.872	
4,224.00	4,109.52	3,790.12	3,466.13	20.82	28.24	-50.22	1,244.75	1,577.00	1,391.63	1,353.50	38.13	36.499	
4,318.00	4,199.89	3,881.67	3,548.47	21.36	29.01	-50.63	1,264.85	1,611.59	1,413.18	1,374.04	39.14	36.106	
4,412.00	4,290.67	3,972.39	3,630.19	21.87	29.76	-50.78	1,285.15	1,645.35	1,435.72	1,395.60	40.12	35.787	
4,507.00	4,382.62	4,068.13	3,716.64	22.38	30.55	-49.53	1,307.03	1,680.18	1,458.65	1,417.52	41.13	35.468	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - Parachute North CP01D-08 - OH - Survey 1												Offset Site Error:	0.00 usft
Survey Program: 25-MWD+HDGM												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,601.00	4,473.49	4,161.95	3,801.60	22.90	31.30	-49.85	1,328.84	1,713.48	1,480.70	1,438.58	42.12	35.154	
4,695.00	4,564.59	4,250.00	3,881.33	23.39	32.01	-48.32	1,348.87	1,745.02	1,502.91	1,459.87	43.04	34.917	
4,789.00	4,655.72	4,324.85	3,948.70	23.89	32.64	-46.77	1,365.61	1,773.01	1,525.30	1,481.46	43.84	34.796	
4,883.00	4,746.85	4,404.14	4,019.51	24.39	33.32	-44.69	1,383.72	1,803.76	1,548.31	1,503.65	44.65	34.673	
4,978.00	4,839.29	4,491.96	4,097.80	24.87	34.09	-46.89	1,404.17	1,837.89	1,572.94	1,527.40	45.53	34.545	
5,072.00	4,931.05	4,584.93	4,180.79	25.33	34.89	-48.96	1,426.20	1,873.54	1,598.80	1,552.35	46.45	34.419	
5,166.00	5,022.88	4,680.33	4,266.19	25.79	35.70	-49.31	1,448.97	1,909.45	1,624.95	1,577.56	47.39	34.288	
5,260.00	5,114.46	4,769.71	4,346.29	26.26	36.46	-49.69	1,470.25	1,942.90	1,650.38	1,602.08	48.30	34.173	
5,354.00	5,205.69	4,869.94	4,436.17	26.75	37.30	-49.48	1,494.30	1,980.16	1,674.97	1,625.64	49.33	33.953	
5,450.00	5,298.51	4,968.95	4,525.12	27.28	38.13	-50.54	1,516.96	2,017.28	1,698.64	1,648.26	50.38	33.716	
5,543.00	5,388.31	5,058.32	4,605.42	27.79	38.88	-49.20	1,537.43	2,050.74	1,721.24	1,669.90	51.35	33.523	
5,637.00	5,479.24	5,148.81	4,686.76	28.29	39.64	-49.63	1,558.32	2,084.45	1,744.34	1,692.03	52.31	33.347	
5,731.00	5,570.39	5,237.53	4,769.54	28.79	40.40	-47.42	1,579.51	2,114.90	1,767.17	1,713.25	53.22	32.772	
5,825.00	5,661.76	5,328.54	5,064.40	29.27	42.53	-46.83	1,604.31	2,212.44	1,780.00	1,724.18	55.81	31.893	
5,920.00	5,754.38	5,419.32	5,202.94	29.75	43.34	-45.46	1,624.44	2,248.18	1,790.48	1,733.53	56.95	31.438	
6,014.00	5,846.19	5,514.63	5,330.77	30.21	44.08	-46.54	1,679.26	2,282.05	1,799.85	1,741.88	57.97	31.048	
6,109.00	5,939.26	5,606.04	5,457.76	30.65	44.75	-46.85	1,693.76	2,312.58	1,807.78	1,748.85	58.93	30.677	
6,203.00	6,031.68	5,696.99	5,585.05	31.07	45.36	-47.84	1,708.09	2,339.74	1,815.69	1,755.85	59.84	30.343	
6,297.00	6,124.42	5,785.65	5,730.72	31.47	45.98	-48.55	1,721.82	2,365.96	1,821.71	1,760.99	60.72	30.003	
6,392.00	6,218.59	5,871.23	5,854.28	31.83	46.47	-53.67	1,732.50	2,385.70	1,828.90	1,767.42	61.48	29.747	
6,486.00	6,312.11	5,962.48	6,063.51	32.16	47.16	-60.69	1,744.34	2,411.96	1,834.65	1,772.49	62.16	29.516	
6,580.00	6,405.81	6,052.16	6,292.70	32.47	47.68	-52.88	1,747.23	2,425.78	1,834.50	1,772.02	62.48	29.361	
6,674.00	6,499.58	6,143.80	6,424.31	32.77	47.90	-56.73	1,745.42	2,427.31	1,830.14	1,767.22	62.92	29.086	
6,768.00	6,593.40	6,234.90	6,522.39	33.06	48.05	-66.92	1,743.38	2,427.84	1,825.99	1,762.52	63.46	28.772	
6,863.00	6,688.26	6,329.46	6,619.93	33.35	48.20	-62.12	1,741.50	2,427.86	1,822.25	1,758.24	64.01	28.468	
6,957.00	6,782.19	6,420.08	6,710.53	33.62	48.34	-55.10	1,739.82	2,427.80	1,818.95	1,754.40	64.55	28.180	
7,051.00	6,876.18	6,510.62	6,801.06	33.87	48.48	-92.47	1,738.41	2,427.63	1,817.06	1,752.01	65.05	27.935	
7,145.00	6,970.17	6,601.98	6,899.41	34.10	48.63	-160.07	1,737.09	2,427.22	1,816.26	1,750.76	65.49	27.732	
7,239.00	7,064.16	6,692.49	6,990.85	34.33	48.78	-142.78	1,734.76	2,422.67	1,815.45	1,749.16	66.30	27.384	
7,333.00	7,158.15	6,783.94	7,082.30	34.53	48.96	-142.83	1,734.74	2,422.63	1,815.45	1,749.15	66.30	27.382	
7,428.00	7,253.06	6,874.84	7,174.13	34.73	49.12	-145.06	1,733.71	2,418.90	1,815.82	1,749.14	66.67	27.235	
7,522.00	7,348.98	6,965.74	7,264.97	34.94	49.25	-150.50	1,732.82	2,415.78	1,816.31	1,749.17	67.13	27.055	
7,617.00	7,441.94	7,056.65	7,356.82	35.16	49.40	-112.01	1,731.90	2,412.55	1,815.68	1,748.12	67.57	26.873	
7,711.00	7,535.92	7,147.59	7,448.19	35.38	49.56	-113.23	1,730.99	2,409.20	1,813.99	1,745.99	68.00	26.675	
7,806.00	7,630.87	7,238.48	7,539.52	35.60	49.72	-134.76	1,729.92	2,405.76	1,813.10	1,744.67	68.43	26.496	
7,900.00	7,724.80	7,329.14	7,630.10	35.82	49.88	-138.81	1,728.49	2,401.90	1,812.76	1,743.94	68.82	26.340	
7,994.00	7,818.76	7,419.62	7,721.51	36.04	50.02	-172.40	1,727.36	2,398.66	1,812.04	1,742.71	69.32	26.138	
8,089.00	7,913.75	7,510.95	7,812.77	36.28	50.18	-175.11	1,726.51	2,395.16	1,811.07	1,741.24	69.84	25.933	
8,229.64	8,054.35	7,602.06	8,011.75	36.62	50.43	-175.22	1,725.33	2,389.08	1,810.29	1,739.74	70.55	25.659	
8,278.00	8,102.68	7,693.82	8,064.45	36.74	50.52	-173.80	1,724.80	2,386.71	1,810.36	1,739.57	70.79	25.574	
8,561.00	8,385.40	7,884.04	8,307.44	37.42	50.94	-162.99	1,723.44	2,376.56	1,815.05	1,742.65	72.40	25.071	
8,930.00	8,753.68	8,187.36	8,666.60	38.30	51.63	-147.82	1,726.51	2,366.42	1,832.87	1,758.59	74.27	24.677	
8,993.00	8,816.50	8,278.15	8,757.34	38.45	51.81	-147.85	1,726.92	2,363.33	1,835.94	1,761.44	74.50	24.643 SF	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - Parachute North CP11D-08 - OH - Survey												Offset Site Error:	0.00 usft
Survey Program: 124-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	30.42	515.19	302.56	605.61				
170.00	169.99	68.67	68.67	0.25	0.11	-40.52	515.42	302.43	596.31	595.96	0.36	1,660.168	
231.00	230.97	128.01	128.00	0.47	0.21	-37.85	515.99	302.10	595.51	594.83	0.68	878.197	
262.00	261.95	160.91	160.90	0.59	0.33	-27.67	516.36	301.80	594.78	593.87	0.91	653.555	
292.00	291.92	192.72	192.71	0.70	0.44	-32.13	516.67	301.38	593.55	592.41	1.14	522.152	
353.00	352.75	270.23	270.21	0.93	0.71	-47.60	516.28	300.08	589.45	587.80	1.64	358.575	
445.00	444.28	411.37	410.97	1.27	1.23	-49.23	507.73	295.99	577.29	574.78	2.51	229.550	
536.00	534.44	547.37	545.14	1.62	1.75	-47.09	487.41	287.58	554.22	550.84	3.38	163.927	
630.00	626.87	657.24	652.34	2.02	2.24	-49.15	465.21	278.45	522.54	518.38	4.16	125.618	
724.00	718.61	762.92	754.39	2.45	2.75	-55.32	439.73	268.17	485.70	480.77	4.92	98.647	
819.00	810.83	855.12	842.68	2.91	3.22	-65.45	414.70	259.29	447.08	441.42	5.65	79.086	
913.00	901.45	935.44	919.53	3.39	3.64	-67.37	392.34	252.64	409.34	402.94	6.40	63.969	
1,007.00	991.42	1,016.73	997.50	3.92	4.07	-73.73	370.15	246.60	372.88	365.68	7.20	51.804	
1,101.00	1,081.58	1,098.41	1,075.93	4.44	4.51	-74.00	348.51	239.39	338.41	330.37	8.04	42.090	
1,195.00	1,172.56	1,178.45	1,152.92	4.93	4.93	-74.75	328.26	231.09	306.23	297.33	8.90	34.402	
1,289.00	1,264.08	1,261.36	1,232.91	5.40	5.37	-81.03	308.25	222.35	277.58	267.79	9.79	28.358	
1,384.00	1,356.59	1,346.04	1,314.72	5.88	5.80	-86.83	288.09	213.96	252.14	241.40	10.73	23.491	
1,478.00	1,448.11	1,431.44	1,397.82	6.35	6.23	-95.78	269.36	208.01	232.36	220.67	11.69	19.875	
1,573.00	1,540.86	1,524.06	1,487.74	6.82	6.69	-104.17	247.66	203.29	215.17	202.52	12.65	17.013	
1,667.00	1,632.86	1,610.65	1,571.60	7.27	7.13	-109.85	226.64	198.55	201.53	187.93	13.60	14.819	
1,761.00	1,724.81	1,694.63	1,653.33	7.72	7.54	-117.90	207.69	194.85	193.55	179.05	14.50	13.348	
1,802.93	1,765.74	1,731.20	1,689.06	7.92	7.72	-121.56	200.11	193.09	192.62	177.74	14.88	12.948 CC, ES	
1,855.00	1,816.45	1,776.50	1,733.41	8.18	7.93	-126.19	191.28	190.38	194.13	178.83	15.31	12.684 SF	
1,949.00	1,907.72	1,858.66	1,813.67	8.67	8.32	-136.12	175.14	183.55	204.01	188.02	15.99	12.760	
2,044.00	1,999.54	1,944.23	1,897.30	9.18	8.73	-146.76	158.97	175.39	222.83	206.24	16.59	13.430	
2,138.00	2,090.09	2,029.87	1,980.92	9.70	9.14	-152.22	142.53	166.88	247.40	230.25	17.15	14.423	
2,232.00	2,180.65	2,113.57	2,062.54	10.22	9.55	-159.28	126.02	158.48	275.45	257.77	17.69	15.573	
2,326.00	2,271.24	2,195.78	2,142.75	10.74	9.95	-162.90	110.35	149.52	306.84	288.62	18.22	16.843	
2,420.00	2,361.89	2,278.95	2,223.63	11.26	10.36	-163.55	93.65	139.79	340.43	321.66	18.78	18.132	
2,527.00	2,465.28	2,379.38	2,320.99	11.83	10.87	-162.87	71.64	128.70	378.95	359.45	19.50	19.436	
2,622.00	2,557.29	2,466.77	2,405.58	12.33	11.32	-169.50	51.48	120.00	413.23	393.09	20.14	20.520	
2,715.00	2,647.48	2,542.55	2,478.32	12.81	11.73	-177.37	31.51	112.86	447.98	427.30	20.68	21.664	
2,810.00	2,739.63	2,610.00	2,542.39	13.31	12.12	-175.84	12.05	104.71	487.25	466.13	21.12	23.068	
2,904.00	2,830.93	2,685.25	2,613.37	13.80	12.57	-170.62	-10.54	94.06	528.46	506.77	21.69	24.361	
2,999.00	2,922.99	2,766.43	2,690.02	14.30	13.05	-167.93	-34.13	81.50	572.21	549.84	22.37	25.583	
3,093.00	3,013.89	2,836.55	2,756.20	14.81	13.47	-165.72	-54.27	70.06	617.13	594.23	22.90	26.945	
3,187.00	3,104.97	2,916.22	2,831.04	15.31	13.96	-162.81	-77.78	56.14	662.77	639.18	23.58	28.103	
3,282.00	3,197.19	3,007.85	2,917.45	15.80	14.51	-162.92	-103.81	40.30	708.01	683.58	24.43	28.986	
3,376.00	3,288.43	3,111.86	3,016.58	16.29	15.10	-162.55	-130.45	23.49	751.28	725.86	25.42	29.559	
3,470.00	3,379.56	3,203.74	3,105.00	16.79	15.59	-162.24	-151.00	9.33	793.42	767.19	26.23	30.252	
3,564.00	3,470.75	3,306.48	3,204.53	17.28	16.11	-159.98	-171.09	-6.25	834.25	807.11	27.14	30.741	
3,658.00	3,561.89	3,404.84	3,300.58	17.78	16.58	-161.10	-187.43	-19.79	872.98	845.00	27.97	31.206	
3,752.00	3,652.73	3,495.34	3,389.19	18.29	16.99	-162.89	-200.80	-32.33	912.46	883.74	28.72	31.770	
3,847.00	3,744.45	3,581.87	3,474.11	18.81	17.37	-165.29	-212.05	-44.60	952.52	923.10	29.41	32.384	
3,941.00	3,835.42	3,668.46	3,559.16	19.31	17.75	-166.21	-222.39	-57.17	991.50	961.41	30.09	32.947	
4,026.00	3,917.86	3,754.96	3,644.20	19.76	18.11	-167.47	-231.65	-70.00	1,026.10	995.33	30.77	33.345	
4,130.00	4,018.80	3,856.00	3,743.80	20.30	18.52	-163.90	-241.32	-83.96	1,066.63	1,035.08	31.55	33.806	
4,224.00	4,109.52	3,932.66	3,819.22	20.82	18.85	-161.79	-250.48	-94.12	1,105.14	1,072.98	32.16	34.366	
4,318.00	4,199.89	4,013.06	3,898.06	21.36	19.22	-161.59	-262.01	-104.93	1,145.59	1,112.77	32.82	34.905	
4,412.00	4,290.67	4,121.48	4,004.07	21.87	19.73	-161.73	-281.25	-116.91	1,183.95	1,150.20	33.75	35.085	
4,507.00	4,382.62	4,231.14	4,110.82	22.38	20.27	-162.51	-305.21	-124.09	1,219.77	1,185.07	34.70	35.155	
4,601.00	4,473.49	4,306.40	4,183.71	22.90	20.64	-161.73	-323.46	-128.22	1,255.88	1,220.52	35.36	35.521	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Offset Design S8-T5S-R96W NPR K08 596 (H&P 330) - Parachute North CP11D-08 - OH - Survey												Offset Site Error:	0.00 usft
Survey Program: 124-MWD+HDGM												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,695.00	4,564.59	4,386.13	4,260.58	23.39	21.06	163.40	-344.19	-132.54	1,291.94	1,255.88	36.06	35.831	
4,789.00	4,655.72	4,457.00	4,328.55	23.89	21.43	164.21	-363.82	-136.65	1,329.11	1,292.43	36.68	36.237	
4,883.00	4,746.85	4,534.59	4,402.68	24.39	21.85	166.25	-386.29	-141.17	1,367.16	1,329.79	37.37	36.586	
4,978.00	4,839.29	4,619.03	4,482.90	24.87	22.33	163.03	-412.22	-145.88	1,405.05	1,366.92	38.13	36.852	
5,072.00	4,931.05	4,701.00	4,560.68	25.33	22.78	160.25	-437.77	-149.95	1,441.07	1,402.20	38.86	37.082	
5,166.00	5,022.88	4,785.69	4,641.14	25.79	23.26	158.85	-463.77	-154.66	1,477.10	1,437.47	39.62	37.277	
5,260.00	5,114.46	4,869.86	4,721.14	26.26	23.73	157.50	-489.48	-159.62	1,514.38	1,473.99	40.39	37.492	
5,354.00	5,205.69	4,952.14	4,799.43	26.75	24.19	156.81	-514.29	-164.59	1,552.96	1,511.81	41.15	37.741	
5,450.00	5,298.51	5,032.45	4,875.81	27.28	24.65	154.93	-538.58	-169.62	1,593.74	1,551.85	41.89	38.044	
5,543.00	5,388.31	5,114.63	4,954.01	27.79	25.11	156.14	-563.25	-175.15	1,633.98	1,591.32	42.66	38.303	
5,637.00	5,479.24	5,189.00	5,024.77	28.29	25.53	155.65	-585.49	-180.50	1,674.57	1,631.23	43.34	38.637	
5,731.00	5,570.39	5,277.59	5,109.08	28.79	26.03	157.92	-611.85	-187.12	1,714.82	1,670.66	44.16	38.830	
5,825.00	5,661.76	5,348.97	5,177.52	29.27	26.43	158.95	-630.85	-194.24	1,754.99	1,710.21	44.78	39.187	
5,920.00	5,754.38	5,443.88	5,268.93	29.75	26.94	160.56	-653.93	-205.06	1,794.89	1,749.27	45.62	39.345	
6,014.00	5,846.19	5,548.76	5,370.47	30.21	27.48	159.26	-677.22	-217.23	1,832.99	1,786.46	46.53	39.394	
6,109.00	5,939.26	5,645.39	5,464.27	30.65	27.97	159.08	-697.79	-227.97	1,869.42	1,822.07	47.35	39.484	
6,203.00	6,031.68	5,740.04	5,556.39	31.07	28.44	158.11	-716.69	-238.74	1,903.56	1,855.43	48.13	39.553	
6,297.00	6,124.42	5,881.23	5,694.20	31.47	29.12	157.53	-743.49	-253.57	1,935.00	1,885.71	49.29	39.257	
6,392.00	6,218.59	6,026.91	5,836.93	31.83	29.80	152.39	-769.79	-266.18	1,962.39	1,911.95	50.44	38.907	
6,486.00	6,312.11	6,172.16	5,980.17	32.16	30.42	145.31	-791.88	-275.58	1,983.15	1,931.64	51.51	38.501	
6,580.00	6,405.81	6,414.86	6,221.44	32.47	31.32	153.28	-815.81	-284.33	1,997.39	1,944.37	53.02	37.673	
6,674.00	6,499.58	6,537.06	6,343.54	32.77	31.68	149.62	-820.19	-286.67	2,006.36	1,952.61	53.75	37.326	
6,768.00	6,593.40	6,660.59	6,467.02	33.06	32.04	139.60	-823.03	-288.23	2,013.26	1,958.78	54.47	36.958	
6,863.00	6,688.26	6,754.35	6,560.77	33.35	32.30	144.60	-824.05	-289.00	2,018.51	1,963.44	55.07	36.651	
6,957.00	6,782.19	6,850.10	6,656.51	33.62	32.56	151.74	-824.85	-290.07	2,022.82	1,967.15	55.67	36.337	
7,051.00	6,876.18	6,943.50	6,749.90	33.87	32.82	114.42	-825.57	-291.04	2,025.24	1,969.00	56.24	36.009	
7,145.00	6,970.17	7,031.27	6,837.66	34.10	33.06	46.87	-826.03	-292.28	2,026.61	1,969.83	56.78	35.693	
7,334.00	7,159.13	7,221.33	7,027.70	34.53	33.59	-10.24	-827.36	-295.49	2,026.48	1,968.61	57.86	35.021	
7,428.00	7,253.06	7,319.41	7,125.76	34.73	33.86	-7.96	-827.70	-296.90	2,024.17	1,965.76	58.41	34.656	
7,522.00	7,346.98	7,411.88	7,218.23	34.94	34.11	-2.50	-827.98	-298.33	2,021.81	1,962.88	58.93	34.308	
7,617.00	7,441.94	7,507.72	7,314.05	35.16	34.37	-41.00	-828.18	-299.76	2,020.65	1,961.18	59.47	33.975	
7,711.00	7,535.92	7,594.83	7,401.15	35.38	34.62	-39.79	-828.40	-301.22	2,020.43	1,960.44	59.99	33.680	
7,757.93	7,582.83	7,636.82	7,443.13	35.49	34.74	-26.24	-828.67	-301.99	2,020.25	1,960.01	60.24	33.536	
7,806.00	7,630.87	7,682.73	7,489.03	35.60	34.87	-18.30	-829.10	-302.86	2,019.68	1,959.17	60.51	33.377	
7,900.00	7,724.80	7,776.48	7,582.76	35.82	35.14	-14.27	-829.94	-304.63	2,018.18	1,957.13	61.06	33.055	
7,958.08	7,782.85	7,828.74	7,635.00	35.96	35.29	8.96	-830.34	-305.78	2,017.77	1,956.39	61.38	32.875	
7,994.00	7,818.76	7,861.64	7,667.89	36.04	35.39	34.59	-830.55	-306.61	2,017.93	1,956.35	61.58	32.771	
8,089.00	7,913.75	7,956.76	7,762.98	36.28	35.67	32.00	-831.35	-308.97	2,018.93	1,956.78	62.15	32.486	
8,278.00	8,102.68	8,138.94	7,945.09	36.74	36.21	21.16	-833.80	-313.18	2,019.51	1,956.25	63.27	31.921	
8,561.00	8,385.40	8,430.30	8,236.33	37.42	37.10	10.61	-838.34	-320.13	2,015.58	1,950.57	65.02	31.002	
8,930.00	8,753.68	8,760.84	8,566.68	38.30	38.12	-4.46	-843.49	-329.98	2,005.03	1,937.95	67.08	29.892	
8,993.00	8,816.50	8,816.33	8,622.11	38.45	38.30	-4.47	-844.71	-332.20	2,003.24	1,935.81	67.42	29.711	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 7793.00usft (H&P 330)

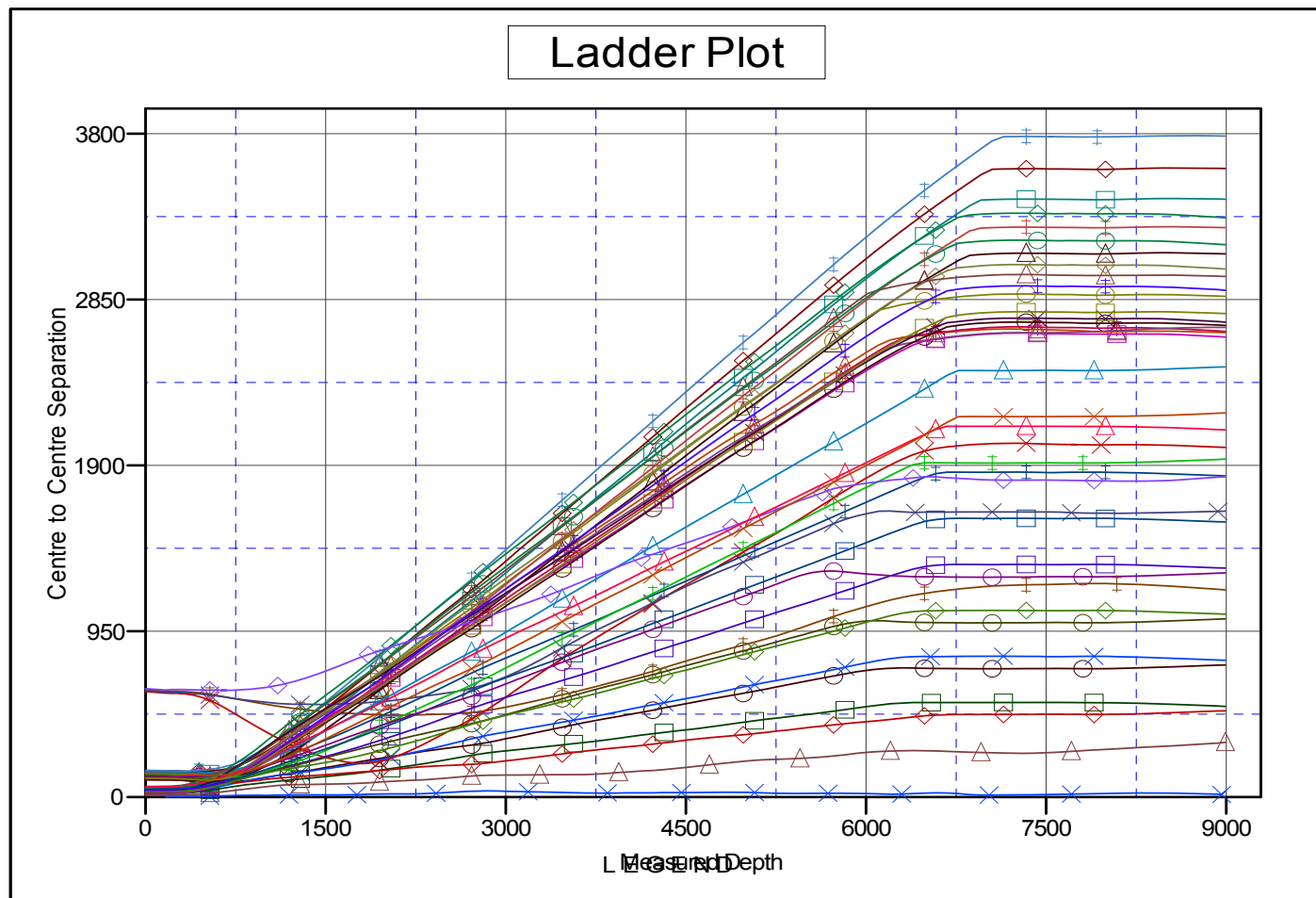
Coordinates are relative to: NPR 23B-8 596

Offset Depths are relative to Offset Datum

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N

Central Meridian is -111.000000

Grid Convergence at Surface is: 1.79°



R 13A-8 596, OH [479637], Survey (H&P 330) V0	◆ NPR 22D-8 596, OH, Plan 1 (04-09-19 DS) V0	▲ NPR 12A-8 596, OH, Plan 1 (04-07-19 DS) V0
Parachute NCP07C-08, OH, Survey V0	◆ NPR 14D-8 596, OH, Plan 1 (04-09-19 DS) V0	◆ NPR 15A-8 596, OH, Plan 1 (04-11-19 DS) V0
R 11B-8 596, OH, Plan 1 (04-07-19 DS) V0	✕ NPR 23B-8 596, OH [479837], Plan 3 (05-03-19 DN) V0	◆ NPR 21C-8 596, OH, Plan 1 (04-08-19 DS) V0
R 22C-8 596, OH, Plan 1 (04-08-19 DS) V0	▲ NPR 13B-8 596, OH [479737], Survey (H&P 330) V0	◆ Parachute North CP01D-08, OH, Survey 1 V0
R 11A-8 596, OH, Plan 1 (04-07-19 DS) V0	✕ NPR 11C-8 596, OH, Plan 1 (04-07-19 DS) V0	✕ NPR 14A-8 596, OH, Plan 1 (04-09-19 DS) V0
R 24A-8 596, OH, Plan 1 (04-12-19 DS) V0	✕ Parachute NCP02D-08, OH, Survey V0	◆ NPR 24D-8 596, OH, Plan 1 (04-11-19 DS) V0
R 11D-8 596, OH, Plan 1 (04-07-19 DS) V0	▲ NPR 21A-8 596, OH, Plan 1 (04-08-19 DS) V0	▲ NPR 25B-8 596, OH, Plan 1 (04-11-19 DS) V0
R 15D-8 596, OH, Plan 1 (04-08-19 DS) V0	▲ NPR 23C-8 596, OH [481437], Final (H&P 330) V0	◆ NPR 14C-8 596, OH, Plan 1 (04-09-19 DS) V0
R 23D-8 596, OH, Plan 1 (04-12-19 DS) V0	◆ NPR 25A-8 596, OH, Plan 1 (04-11-19 DS) V0	◆ NPR 12C-8 596, OH, Plan 1 (04-07-19 DS) V0
R 13D-8 596, OH, Plan 1 (04-09-19 DS) V0	◆ NPR 24C-8 596, OH, Plan 1 (04-12-19 DS) V0	◆ NPR 22A-8 596, OH, Plan 1 (04-08-19 DS) V0
R 12B-8 596, OH, Plan 1 (04-07-19 DS) V0	◆ NPR 22B-8 596, OH, Plan 1 (04-08-19 DS) V0	✕ NPR 21B-8 596, OH, Plan 1 (04-08-19 DS) V0

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 23B-8 596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	RKB @ 7793.00usft (H&P 330)
Reference Site:	S8-T5S-R96W NPR K08 596 (H&P 330)	MD Reference:	RKB @ 7793.00usft (H&P 330)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	NPR 23B-8 596	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH [479837]	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Survey: CES MWD Survey	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 7793.00usft (H&P 330)

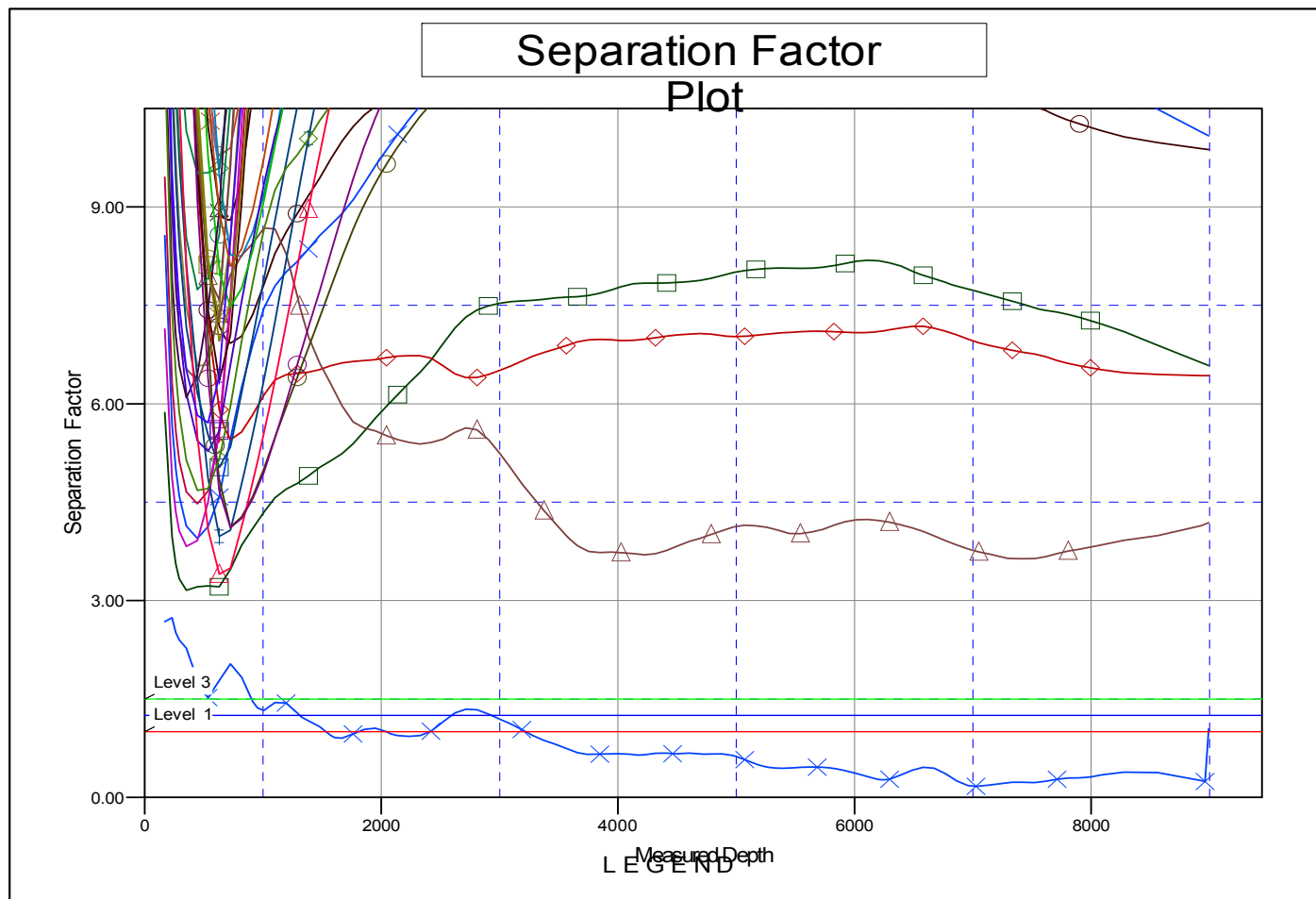
Coordinates are relative to: NPR 23B-8 596

Offset Depths are relative to Offset Datum

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N

Central Meridian is -111.000000

Grid Convergence at Surface is: 1.79°



NPR 13A-8 596, OH [479637], Survey (H&P 330) V0	NPR 22D-8 596, OH, Plan 1 (04-09-19 DS) V0	NPR 12A-8 596, OH, Plan 1 (04-07-19 DS) V0
Parachute NCP07C-08, OH, Survey V0	NPR 14D-8 596, OH, Plan 1 (04-09-19 DS) V0	NPR 15A-8 596, OH, Plan 1 (04-11-19 DS) V0
NPR 11B-8 596, OH, Plan 1 (04-07-19 DS) V0	NPR 23B-8 596, OH [479837], Plan 3 (05-03-19 DN) V0	NPR 21C-8 596, OH, Plan 1 (04-08-19 DS) V0
NPR 22C-8 596, OH, Plan 1 (04-08-19 DS) V0	NPR 13B-8 596, OH [479737], Survey (H&P 330) V0	Parachute North CP01D-08, OH, Survey 1 V0
NPR 11A-8 596, OH, Plan 1 (04-07-19 DS) V0	NPR 11C-8 596, OH, Plan 1 (04-07-19 DS) V0	NPR 14A-8 596, OH, Plan 1 (04-09-19 DS) V0
NPR 24A-8 596, OH, Plan 1 (04-12-19 DS) V0	Parachute NCP02D-08, OH, Survey V0	NPR 24D-8 596, OH, Plan 1 (04-11-19 DS) V0
NPR 11D-8 596, OH, Plan 1 (04-07-19 DS) V0	NPR 21A-8 596, OH, Plan 1 (04-08-19 DS) V0	NPR 25B-8 596, OH, Plan 1 (04-11-19 DS) V0
NPR 15D-8 596, OH, Plan 1 (04-08-19 DS) V0	NPR 23C-8 596, OH [481437], Final (H&P 330) V0	NPR 14C-8 596, OH, Plan 1 (04-09-19 DS) V0
NPR 23D-8 596, OH, Plan 1 (04-12-19 DS) V0	NPR 25A-8 596, OH, Plan 1 (04-11-19 DS) V0	NPR 12C-8 596, OH, Plan 1 (04-07-19 DS) V0
NPR 13D-8 596, OH, Plan 1 (04-09-19 DS) V0	NPR 24C-8 596, OH, Plan 1 (04-12-19 DS) V0	NPR 22A-8 596, OH, Plan 1 (04-08-19 DS) V0
NPR 12B-8 596, OH, Plan 1 (04-07-19 DS) V0	NPR 22B-8 596, OH, Plan 1 (04-08-19 DS) V0	NPR 21B-8 596, OH, Plan 1 (04-08-19 DS) V0