



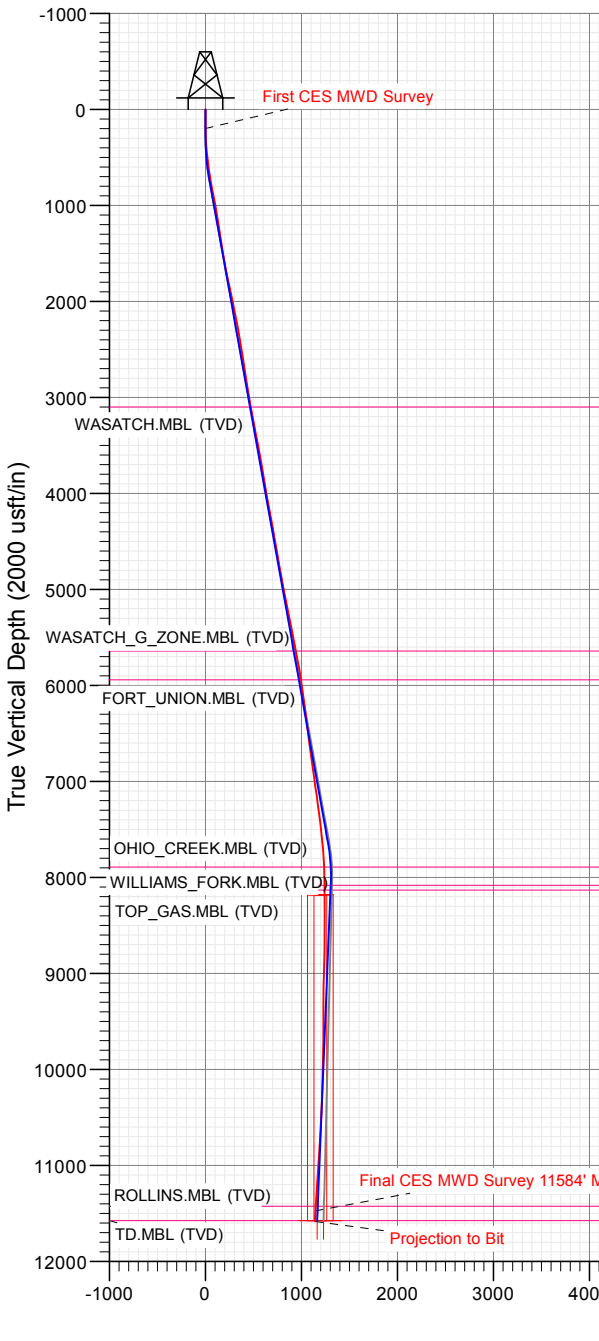
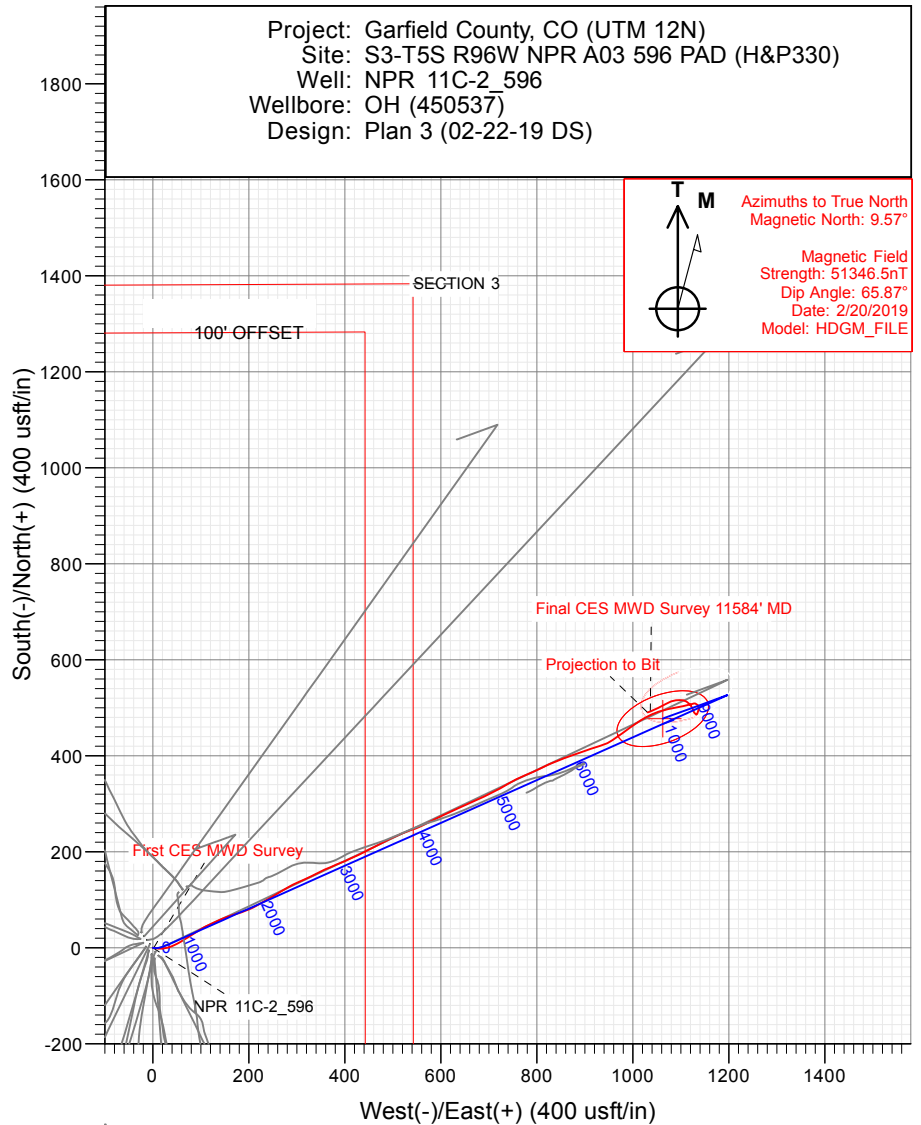
SECTION DETAILS

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	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	350.00	3.00	95.00	349.95	-0.23	2.61	3.00	95.00	2.28	
4	440.00	3.00	95.00	439.83	-0.64	7.30	0.00	0.00	6.40	
5	695.18	10.14	65.96	693.22	7.94	34.51	3.00	-39.90	34.73	
6	7759.06	10.14	65.96	7646.76	514.50	1170.29	0.00	0.00	1278.35	
7	8097.06	0.00	0.00	7983.00	526.65	1197.53	3.00	180.00	1308.18	
8	8213.39	2.33	250.00	8099.30	525.84	1195.31	2.00	250.00	1305.82	
9	11693.96	2.33	250.00	11577.00	477.51	1062.53	0.00	0.00	1164.90	NPR 11C-2_596_PBHL v2

Plan 3 (02-22-19 DS)
NPR 11C-2_596
GL+KB @ 8361.00usft (Original Well Elev)
Ground @ 8331.00
NPR 11C-2_596 Wellbore US
Well NPR 11C-2_596, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
TD	No Target (Freehand)	65.80	Slot		0.00	0.00		0.00
Name		TVD	+N/-S	+E/-W	Latitude	Longitude		
NPR 11C-2_596_PBHL		11577.00	527.51	1112.53	39.649058	-108.143481		
NPR 11C-2_596_PBHL v2		11577.00	477.51	1062.53	39.648921	-108.143658		

Project: Garfield County, CO (UTM 12N)
Site: S3-T5S R96W NPR A03 596 PAD (H&P330)
Well: NPR 11C-2_596
Wellbore: OH (450537)
Design: Plan 3 (02-22-19 DS)



FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
3100.00	3140.15	WASATCH.MBL (TVD)
5643.00	5723.50	WASATCH_G_ZONE.MBL (TVD)
5943.00	6028.26	FORT_UNION.MBL (TVD)
7893.00	8007.02	OHIO_CREEK.MBL (TVD)
8083.00	8197.08	TOP_GAS.MBL (TVD)
8133.00	8247.11	WILLIAMS_FORK.MBL (TVD)
11427.00	11543.83	ROLLINS.MBL (TVD)
11577.00	11693.96	TD.MBL (TVD)

WELL DETAILS: NPR 11C-2_596

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14410492.40	2443456.10	39.647611	-108.147430



Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 11C-2_596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Site:	S3-T5S R96W NPR A03 596 PAD (H&P330)	MD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Well:	NPR 11C-2_596	North Reference:	True
Wellbore:	OH (450537)	Survey Calculation Method:	Minimum Curvature
Design:	Survey (H&P 330)	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	S3-T5S R96W NPR A03 596 PAD (H&P330)				
Site Position:		Northing:	14,410,524.00 usft	Latitude:	39.647700
From:	Map	Easting:	2,443,431.60 usft	Longitude:	-108.147513
Position Uncertainty:	3.28 usft	Slot Radius:	13-3/16"	Grid Convergence:	1.82 °

Well	NPR 11C-2_596					
Well Position	+N/-S	0.00 usft	Northing:	14,410,492.40 usft	Latitude:	39.647611
	+E/-W	0.00 usft	Easting:	2,443,456.10 usft	Longitude:	-108.147430
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	8,331.00 usft

Wellbore	OH (450537)				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	2/20/2019	9.57	65.87	51,346.50000000

Design	Survey (H&P 330)				
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	65.80

Survey Program	Date	3/4/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
200.00	11,693.00	CES MWD Survey (OH (450537))	MWD+HDGM	OWSG MWD + HDGM	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.06	93.14	199.99	-0.10	1.85	1.64	0.53	0.53	First CES MWD Survey
230.00	1.58	93.23	229.98	-0.14	2.54	2.26	1.73	1.73	
292.00	2.86	100.79	291.93	-0.48	4.91	4.28	2.11	2.06	
384.00	5.19	94.99	383.70	-1.27	11.31	9.80	2.57	2.53	
476.00	6.37	87.17	475.23	-1.38	20.55	18.18	1.54	1.28	
569.00	7.38	74.25	567.57	0.50	31.46	28.90	1.98	1.09	
663.00	9.14	65.20	660.59	5.27	44.05	42.33	2.32	1.87	
755.00	9.76	60.10	751.35	12.22	57.44	57.40	1.13	0.67	
849.00	10.59	57.20	843.87	20.87	71.61	73.87	1.04	0.88	
944.00	11.69	57.55	937.08	30.76	87.07	92.03	1.16	1.16	
1,038.00	10.28	58.34	1,029.35	40.28	102.24	109.77	1.51	-1.50	
1,132.00	9.05	66.95	1,122.02	47.57	116.19	125.48	2.02	-1.31	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 11C-2_596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Site:	S3-T5S R96W NPR A03 596 PAD (H&P330)	MD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Well:	NPR 11C-2_596	North Reference:	True
Wellbore:	OH (450537)	Survey Calculation Method:	Minimum Curvature
Design:	Survey (H&P 330)	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 (°/100u)	Formations / Comments
1,225.00	8.26	64.23	1,213.96	53.34	128.93	139.47	0.96	-0.85	
1,319.00	8.48	66.43	1,306.96	59.05	141.37	153.15	0.41	0.23	
1,413.00	9.27	70.03	1,399.83	64.41	154.84	167.63	1.03	0.84	
1,508.00	10.06	73.46	1,493.49	69.38	169.98	183.48	1.03	0.83	
1,602.00	9.98	71.00	1,586.05	74.37	185.55	199.73	0.46	-0.09	
1,696.00	10.68	65.90	1,678.53	80.58	201.21	216.56	1.22	0.74	
1,790.00	11.73	61.24	1,770.74	88.73	217.53	234.79	1.47	1.12	
1,885.00	12.52	59.39	1,863.62	98.62	234.86	254.65	0.93	0.83	
1,979.00	11.87	60.36	1,955.50	108.59	252.03	274.40	0.73	-0.69	
2,073.00	11.29	59.57	2,047.58	118.04	268.37	293.17	0.64	-0.62	
2,167.00	11.43	60.10	2,139.74	127.34	284.38	311.59	0.19	0.15	
2,261.00	10.55	65.37	2,232.02	135.57	300.28	329.46	1.42	-0.94	
2,355.00	10.28	66.60	2,324.47	142.49	315.80	346.45	0.37	-0.29	
2,449.00	10.20	63.17	2,416.97	149.57	330.92	363.15	0.65	-0.09	
2,543.00	9.10	63.09	2,509.64	156.69	344.98	378.89	1.17	-1.17	
2,638.00	8.48	67.22	2,603.53	162.81	358.13	393.40	0.93	-0.65	
2,732.00	8.26	66.51	2,696.53	168.18	370.72	407.08	0.26	-0.23	
2,826.00	8.88	67.13	2,789.48	173.69	383.60	421.09	0.67	0.66	
2,939.00	9.05	67.04	2,901.10	180.55	399.81	438.69	0.15	0.15	
3,093.00	10.42	63.96	3,052.88	191.39	423.48	464.72	0.95	0.89	
3,187.00	10.37	64.40	3,145.33	198.78	438.75	481.67	0.10	-0.05	
3,282.00	10.81	63.09	3,238.72	206.50	454.40	499.12	0.53	0.46	
3,376.00	10.28	61.06	3,331.13	214.55	469.60	516.28	0.69	-0.56	
3,470.00	11.34	64.49	3,423.46	222.59	485.29	533.88	1.32	1.13	
3,565.00	10.99	63.35	3,516.66	230.67	501.81	552.27	0.44	-0.37	
3,659.00	10.24	69.85	3,609.06	237.57	517.66	569.55	1.50	-0.80	
3,754.00	9.89	69.94	3,702.59	243.28	533.25	586.12	0.37	-0.37	
3,848.00	8.53	69.33	3,795.38	248.51	547.36	601.13	1.45	-1.45	
3,942.00	9.93	63.26	3,888.16	254.62	561.12	616.18	1.81	1.49	
4,037.00	9.89	63.96	3,981.74	261.88	575.77	632.52	0.13	-0.04	
4,131.00	9.62	62.91	4,074.39	269.00	590.01	648.43	0.34	-0.29	
4,225.00	11.16	64.49	4,166.84	276.50	605.21	665.37	1.67	1.64	
4,320.00	10.72	64.84	4,260.11	284.21	621.51	683.40	0.47	-0.46	
4,414.00	10.15	66.16	4,352.56	291.28	637.00	700.42	0.66	-0.61	
4,509.00	9.80	67.39	4,446.12	297.77	652.12	716.87	0.43	-0.37	
4,603.00	10.06	66.69	4,538.72	304.10	667.04	733.08	0.30	0.28	
4,698.00	9.84	64.14	4,632.29	310.92	681.97	749.49	0.52	-0.23	
4,792.00	9.36	64.32	4,724.97	317.74	696.09	765.16	0.51	-0.51	
4,887.00	10.46	60.89	4,818.55	325.28	710.58	781.48	1.31	1.16	
4,981.00	10.02	60.62	4,911.05	333.44	725.16	798.12	0.47	-0.47	
5,076.00	11.78	61.59	5,004.34	342.11	740.90	816.02	1.86	1.85	
5,170.00	11.34	62.65	5,096.43	350.92	757.54	834.82	0.52	-0.47	
5,265.00	11.87	66.78	5,189.49	359.06	774.82	853.92	1.04	0.56	
5,453.00	10.85	64.84	5,373.80	374.21	808.60	890.94	0.58	-0.54	
5,548.00	10.24	64.67	5,467.20	381.63	824.33	908.32	0.64	-0.64	
5,642.00	11.29	68.54	5,559.55	388.57	840.45	925.87	1.36	1.12	
5,737.00	10.90	70.03	5,652.77	395.04	857.54	944.12	0.51	-0.41	
5,831.00	10.55	69.68	5,745.13	401.06	873.97	961.57	0.38	-0.37	
5,925.00	9.67	70.73	5,837.67	406.65	889.49	978.02	0.96	-0.94	
6,020.00	9.62	70.47	5,931.32	411.94	904.50	993.88	0.07	-0.05	
6,114.00	8.31	72.67	6,024.17	416.59	918.39	1,008.45	1.44	-1.39	
6,209.00	7.52	71.08	6,118.27	420.65	930.82	1,021.46	0.86	-0.83	
6,303.00	6.86	70.29	6,211.53	424.54	941.93	1,033.18	0.71	-0.70	

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 11C-2_596
Project:	Garfield County, CO (UTM 12N)	TVD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Site:	S3-T5S R96W NPR A03 596 PAD (H&P330)	MD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Well:	NPR 11C-2_596	North Reference:	True
Wellbore:	OH (450537)	Survey Calculation Method:	Minimum Curvature
Design:	Survey (H&P 330)	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 (°/100u)	Formations / Comments
6,397.00	7.73	58.52	6,304.77	429.73	952.60	1,045.05	1.83	0.93	
6,491.00	7.65	57.46	6,397.93	436.40	963.27	1,057.51	0.17	-0.09	
6,586.00	7.73	54.03	6,492.07	443.55	973.77	1,070.02	0.49	0.08	
6,680.00	6.99	51.48	6,585.30	450.83	983.36	1,081.75	0.86	-0.79	
6,774.00	8.26	56.49	6,678.47	458.12	993.47	1,093.96	1.52	1.35	
6,869.00	7.87	55.97	6,772.53	465.53	1,004.55	1,107.10	0.42	-0.41	
6,963.00	7.82	54.65	6,865.65	472.83	1,015.10	1,119.71	0.20	-0.05	
7,058.00	8.26	63.17	6,959.72	479.65	1,026.46	1,132.87	1.34	0.46	
7,152.00	7.78	62.47	7,052.80	485.64	1,038.13	1,145.97	0.52	-0.51	
7,246.00	7.95	71.26	7,145.92	490.67	1,049.92	1,158.79	1.29	0.18	
7,341.00	8.04	75.57	7,239.99	494.43	1,062.58	1,171.88	0.64	0.09	
7,435.00	7.47	75.48	7,333.13	497.60	1,074.86	1,184.38	0.61	-0.61	
7,530.00	7.25	79.61	7,427.35	500.23	1,086.74	1,196.29	0.60	-0.23	
7,624.00	6.99	78.99	7,520.63	502.39	1,098.18	1,207.62	0.29	-0.28	
7,718.00	5.76	78.12	7,614.04	504.46	1,108.42	1,217.80	1.31	-1.31	
7,813.00	4.70	76.01	7,708.65	506.38	1,116.86	1,226.28	1.13	-1.12	
7,907.00	3.16	77.41	7,802.42	507.88	1,123.12	1,232.61	1.64	-1.64	
8,002.00	2.11	74.51	7,897.32	508.91	1,127.36	1,236.91	1.11	-1.11	
8,096.00	1.01	111.78	7,991.29	509.07	1,129.80	1,239.19	1.53	-1.17	
8,190.00	1.06	108.88	8,085.27	508.48	1,131.39	1,240.40	0.08	0.05	
8,474.00	1.36	138.85	8,369.21	505.09	1,136.10	1,243.31	0.24	0.11	
8,851.00	1.76	196.42	8,746.09	496.17	1,137.40	1,240.84	0.41	0.11	
8,945.00	1.98	202.30	8,840.04	493.28	1,136.38	1,238.72	0.31	0.23	
9,134.00	1.80	202.30	9,028.94	487.51	1,134.01	1,234.20	0.10	-0.10	
9,228.00	1.54	263.21	9,122.91	486.00	1,132.20	1,231.92	1.82	-0.28	
9,417.00	2.90	338.97	9,311.79	490.16	1,127.96	1,229.77	1.55	0.72	
9,605.00	2.55	335.20	9,499.58	498.40	1,124.50	1,229.98	0.21	-0.19	
9,793.00	2.37	322.89	9,687.41	505.29	1,120.40	1,229.07	0.30	-0.10	
9,888.00	2.33	314.80	9,782.33	508.22	1,117.85	1,227.94	0.35	-0.04	
10,076.00	2.33	301.18	9,970.17	512.89	1,111.86	1,224.40	0.29	0.00	
10,265.00	2.29	281.23	10,159.02	515.62	1,104.87	1,219.14	0.42	-0.02	
10,453.00	2.11	267.43	10,346.89	516.19	1,097.73	1,212.86	0.30	-0.10	
10,642.00	2.77	267.61	10,535.71	515.85	1,089.69	1,205.39	0.35	0.35	
10,830.00	3.52	245.20	10,723.44	513.24	1,079.92	1,195.40	0.76	0.40	
11,019.00	3.82	244.67	10,912.05	508.11	1,068.96	1,183.30	0.16	0.16	
11,301.00	3.82	241.33	11,193.42	499.58	1,052.23	1,164.55	0.08	0.00	
11,584.00	3.16	251.61	11,475.90	492.60	1,036.55	1,147.39	0.32	-0.23	Final CES MWD Survey 11584' MD
11,693.00	3.16	251.61	11,584.73	490.70	1,030.85	1,141.41	0.00	0.00	Projection to Bit

Company:	Caerus Oil & Gas	Local Co-ordinate Reference:	Well NPR 11C-2_596
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Site:	S3-T5S R96W NPR A03 596 PAD (H&P330)	MD Reference:	GL+KB @ 8361.00usft (Original Well Elev)
Well:	NPR 11C-2_596	North Reference:	True
Wellbore:	OH (450537)	Survey Calculation Method:	Minimum Curvature
Design:	Survey (H&P 330)	Database:	USA EDM 5000 Multi Users DB

Targets										
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
NPR 11C-2_596_PBF		0.00	0.00	11,577.00	477.51	1,062.53	14,411,003.44	2,444,502.92	39.648921	-108.143658
- survey misses target center by 33.97usft at 11683.85usft MD (11575.60 TVD, 490.86 N, 1031.33 E)										
- Ellipse (radii L100.00 W50.00 on 250.00 azi)										
NPR 11C-2_596_PBF		0.00	0.00	11,577.00	527.51	1,112.53	14,411,055.00	2,444,551.30	39.649058	-108.143481
- survey misses target center by 89.03usft at 11680.37usft MD (11572.12 TVD, 490.92 N, 1031.51 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)		
200.00	199.99	-0.10	1.85	First CES MWD Survey	
11,584.00	11,475.90	492.60	1,036.55	Final CES MWD Survey 11584' MD	
11,693.00	11,584.73	490.70	1,030.85	Projection to Bit	

Checked By: _____ Approved By: _____ Date: _____