

US ROCKIES WATTENBERG PLANNING



Project: WELD-NAD83-UTMFT13N
Site: 2N-65W-16 Cook 15-16HZ Pad
Well: Cook 2G-16HZ
Wellbore: Cook 2G-16HZ
Design: PDD Actual Surveys

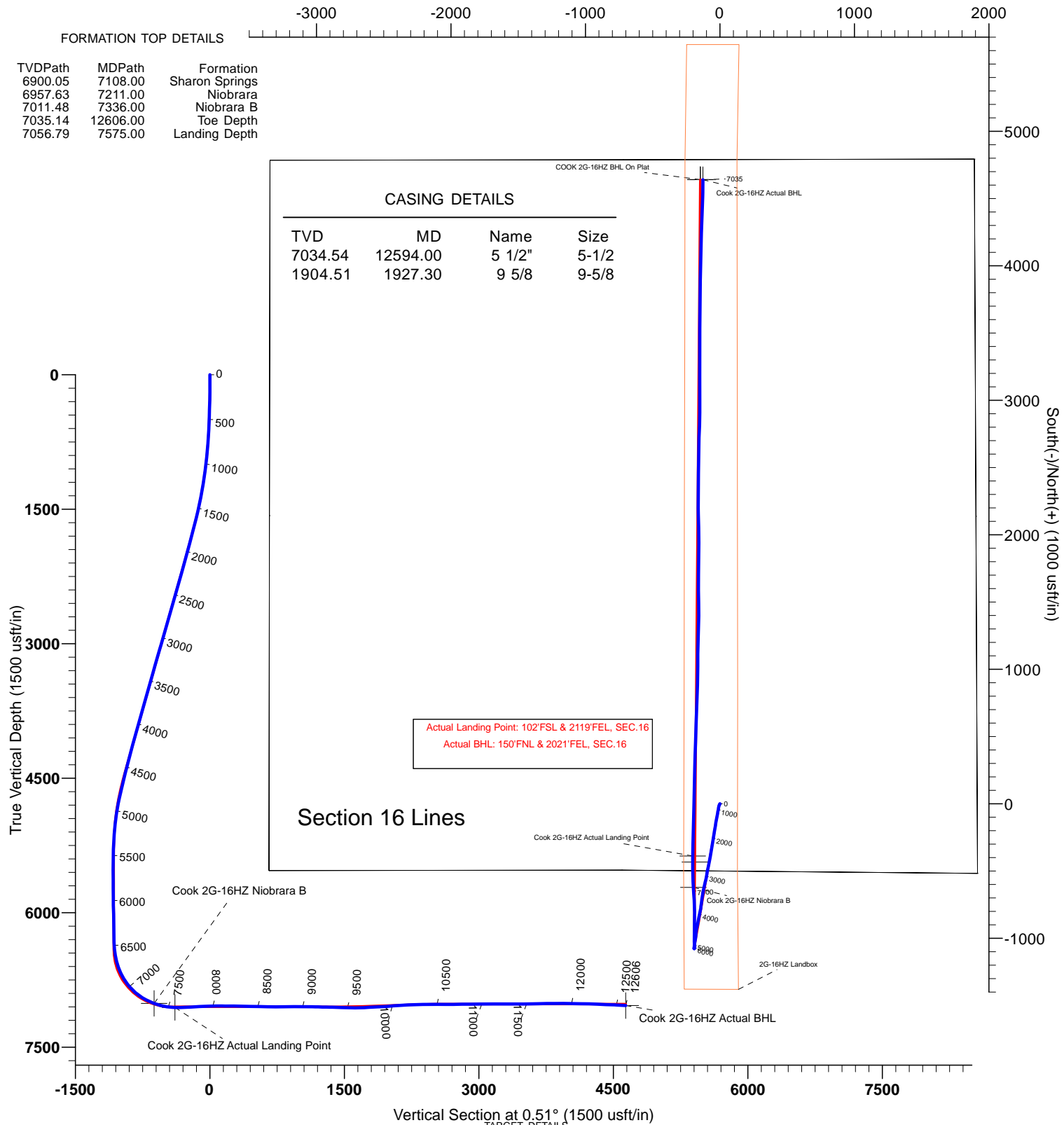
West(-)/East(+) (1000 usft/in)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6900.05	7108.00	Sharon Springs
6957.63	7211.00	Niobrara
7011.48	7336.00	Niobrara B
7035.14	12606.00	Toe Depth
7056.79	7575.00	Landing Depth

CASING DETAILS

TVD	MD	Name	Size
7034.54	12594.00	5 1/2"	5-1/2
1904.51	1927.30	9 5/8	9-5/8



Actual Landing Point: 102°FSL & 2119°FEL, SEC.16
 Actual BHL: 150°FNL & 2021°FEL, SEC.16

Section 16 Lines

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Cook 2G-16HZ Niobrara B	7011.48	-620.35	-197.39	14574652.87	1733458.20	40.131116	-104.667132	Point
Cook 2G-16HZ Actual BHL	7035.14	4640.47	-126.64	14579913.92	1733509.21	40.145563	-104.666879	Point
Cook 2G-16HZ Actual Landing Point	7056.79	-387.11	-202.48	14574886.09	1733452.24	40.131757	-104.667150	Point



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WELD-NAD83-UTMFT13N

2N-65W-16 Cook 15-16HZ Pad

Cook 2G-16HZ

Cook 2G-16HZ

Design: PDD Actual Surveys

Standard Survey Report

13 November, 2015

PDD Survey Report

Company: US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference: Well Cook 2G-16HZ
Project: WELD-NAD83-UTMFT13N	TVD Reference: 4884'GL + 25'KB @ 4909.00usft (H&P 307)
Site: 2N-65W-16 Cook 15-16HZ Pad	MD Reference: 4884'GL + 25'KB @ 4909.00usft (H&P 307)
Well: Cook 2G-16HZ	North Reference: True
Wellbore: Cook 2G-16HZ	Survey Calculation Method: Minimum Curvature
Design: PDD Actual Surveys	Database: EDM 5000.1 Single User Db

Project WELD-NAD83-UTMFT13N	
Map System: Universal Transverse Mercator (US Survey Feet)	System Datum: Mean Sea Level
Geo Datum: North American Datum 1983	
Map Zone: Zone 13N (108 W to 102 W)	

Site 2N-65W-16 Cook 15-16HZ Pad, centered on 2N			
Site Position:	Northing: 14,575,319.30 usft	Latitude: 40.132945	
From: Lat/Long	Easting: 1,733,613.79 usft	Longitude: -104.666567	
Position Uncertainty: 0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.21 °	

Well Cook 2G-16HZ			
Well Position	+N/-S 0.00 usft	Northing: 14,575,273.95 usft	Latitude: 40.132820
	+E/-W 0.00 usft	Easting: 1,733,653.26 usft	Longitude: -104.666426
Position Uncertainty	3.28 usft	Wellhead Elevation: 0.00 usft	Ground Level: 4,884.00 usft

Wellbore Cook 2G-16HZ					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/23/2015	8.29	66.72	52,612

Design PDD Actual Surveys				
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	0.51

Survey Program		Date 11/13/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
104.00	1,876.00	SDI MWD Surveys (Cook 2G-16HZ)	APC_ISCWSA REV 2 MWD	Fixed:v2:standard declination
1,994.00	12,511.00	PDD MWD+IFR Surveys (Cook 2G-16HZ)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination

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
104.00	0.44	312.72	104.00	0.27	-0.29	0.27	0.42	0.42	0.00
194.00	0.36	274.90	194.00	0.53	-0.83	0.52	0.30	-0.09	-42.02
283.00	1.19	191.07	282.99	-0.35	-1.29	-0.37	1.35	0.93	-94.19
390.00	1.95	209.17	389.95	-3.03	-2.39	-3.05	0.84	0.71	16.92
480.00	2.45	202.87	479.88	-6.14	-3.88	-6.18	0.62	0.56	-7.00
570.00	2.75	203.96	569.79	-9.89	-5.50	-9.94	0.34	0.33	1.21
660.00	3.53	193.17	659.66	-14.56	-7.01	-14.62	1.08	0.87	-11.99
750.00	4.17	191.11	749.45	-20.47	-8.27	-20.54	0.73	0.71	-2.29
840.00	4.82	190.79	839.17	-27.39	-9.61	-27.48	0.72	0.72	-0.36

PDD
Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Cook 2G-16HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	4884'GL + 25'KB @ 4909.00usft (H&P 307)
Site:	2N-65W-16 Cook 15-16HZ Pad	MD Reference:	4884'GL + 25'KB @ 4909.00usft (H&P 307)
Well:	Cook 2G-16HZ	North Reference:	True
Wellbore:	Cook 2G-16HZ	Survey Calculation Method:	Minimum Curvature
Design:	PDD Actual Surveys	Database:	EDM 5000.1 Single User 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)	
930.00	5.73	190.34	928.79	-35.53	-11.13	-35.63	1.01	1.01	-0.50	
1,021.00	6.97	190.45	1,019.23	-45.43	-12.94	-45.54	1.36	1.36	0.12	
1,111.00	8.49	189.68	1,108.41	-57.35	-15.05	-57.48	1.69	1.69	-0.86	
1,201.00	9.23	189.98	1,197.34	-71.00	-17.42	-71.16	0.82	0.82	0.33	
1,291.00	10.05	191.63	1,286.07	-85.81	-20.25	-85.98	0.96	0.91	1.83	
1,381.00	11.05	190.42	1,374.54	-101.98	-23.40	-102.18	1.14	1.11	-1.34	
1,471.00	12.41	190.32	1,462.66	-119.98	-26.69	-120.21	1.51	1.51	-0.11	
1,561.00	13.17	189.65	1,550.43	-139.60	-30.14	-139.86	0.86	0.84	-0.74	
1,651.00	14.26	190.33	1,637.86	-160.61	-33.85	-160.91	1.22	1.21	0.76	
1,741.00	15.17	189.11	1,724.91	-183.15	-37.70	-183.47	1.07	1.01	-1.36	
1,831.00	15.81	187.82	1,811.64	-206.92	-41.23	-207.28	0.81	0.71	-1.43	
1,876.00	15.38	189.83	1,854.98	-218.87	-43.08	-219.25	1.53	-0.96	4.47	
1,994.00	14.20	190.31	1,969.07	-248.53	-48.35	-248.95	1.01	-1.00	0.41	
2,088.00	15.49	189.21	2,059.93	-272.27	-52.42	-272.72	1.40	1.37	-1.17	
2,183.00	14.79	187.93	2,151.63	-296.80	-56.12	-297.29	0.82	-0.74	-1.35	
2,277.00	16.20	188.64	2,242.22	-321.65	-59.75	-322.17	1.51	1.50	0.76	
2,372.00	16.39	187.71	2,333.40	-348.03	-63.54	-348.58	0.34	0.20	-0.98	
2,466.00	16.90	193.91	2,423.47	-374.44	-68.60	-375.03	1.96	0.54	6.60	
2,560.00	16.39	190.70	2,513.53	-400.73	-74.35	-401.38	1.12	-0.54	-3.41	
2,654.00	16.11	188.24	2,603.78	-426.67	-78.68	-427.36	0.79	-0.30	-2.62	
2,749.00	16.59	193.82	2,694.94	-452.89	-83.81	-453.62	1.73	0.51	5.87	
2,843.00	16.20	191.71	2,785.12	-478.76	-89.68	-479.54	0.76	-0.41	-2.24	
2,938.00	16.00	189.43	2,876.39	-504.65	-94.51	-505.47	0.70	-0.21	-2.40	
3,032.00	15.69	189.12	2,966.82	-529.98	-98.65	-530.84	0.34	-0.33	-0.33	
3,127.00	16.90	193.03	3,058.01	-556.12	-103.80	-557.02	1.72	1.27	4.12	
3,221.00	16.90	193.21	3,147.95	-582.73	-110.00	-583.69	0.06	0.00	0.19	
3,316.00	16.31	191.71	3,238.98	-609.24	-115.86	-610.24	0.77	-0.62	-1.58	
3,410.00	15.69	191.41	3,329.34	-634.62	-121.06	-635.67	0.67	-0.66	-0.32	
3,505.00	16.50	190.84	3,420.62	-660.46	-126.13	-661.56	0.87	0.85	-0.60	
3,599.00	15.91	188.90	3,510.88	-686.30	-130.64	-687.44	0.85	-0.63	-2.06	
3,694.00	15.29	188.02	3,602.38	-711.57	-134.40	-712.74	0.70	-0.65	-0.93	
3,788.00	16.39	187.93	3,692.81	-736.98	-137.96	-738.18	1.17	1.17	-0.10	
3,882.00	15.69	186.00	3,783.15	-762.76	-141.12	-763.98	0.94	-0.74	-2.05	
3,977.00	15.80	191.63	3,874.59	-788.20	-145.07	-789.46	1.61	0.12	5.93	
4,071.00	15.10	191.01	3,965.20	-812.75	-149.99	-814.06	0.77	-0.74	-0.66	
4,166.00	16.59	190.70	4,056.59	-838.23	-154.87	-839.57	1.57	1.57	-0.33	
4,260.00	16.50	191.63	4,146.69	-864.49	-160.05	-865.88	0.30	-0.10	0.99	
4,355.00	15.21	191.41	4,238.08	-889.92	-165.24	-891.35	1.36	-1.36	-0.23	
4,449.00	14.31	191.01	4,328.97	-913.41	-169.89	-914.89	0.96	-0.96	-0.43	
4,544.00	14.00	192.42	4,421.09	-936.16	-174.61	-937.67	0.49	-0.33	1.48	
4,638.00	13.69	185.03	4,512.37	-958.34	-178.03	-959.89	1.91	-0.33	-7.86	
4,733.00	13.30	185.74	4,604.74	-980.41	-180.11	-981.98	0.45	-0.41	0.75	
4,827.00	13.01	185.52	4,696.28	-1,001.70	-182.21	-1,003.29	0.31	-0.31	-0.23	

PDD
Survey Report

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Design:	PDD Actual Surveys	Database:	EDM 5000.1 Single User Db

Survey										
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4,922.00	10.79	190.84	4,789.23	-1,021.08	-184.91	-1,022.69	2.60	-2.34	5.60	
5,016.00	9.30	190.92	4,881.79	-1,037.19	-188.00	-1,038.82	1.59	-1.59	0.09	
5,111.00	6.59	187.01	4,975.87	-1,050.14	-190.12	-1,051.79	2.91	-2.85	-4.12	
5,205.00	5.41	192.42	5,069.35	-1,059.82	-191.73	-1,061.48	1.39	-1.26	5.76	
5,300.00	4.11	179.01	5,164.03	-1,067.59	-192.64	-1,069.27	1.79	-1.37	-14.12	
5,394.00	2.20	190.22	5,257.88	-1,072.74	-192.90	-1,074.41	2.13	-2.03	11.93	
5,489.00	0.90	179.01	5,352.84	-1,075.28	-193.21	-1,076.96	1.40	-1.37	-11.80	
5,583.00	0.31	109.92	5,446.84	-1,076.10	-192.96	-1,077.78	0.89	-0.63	-73.50	
5,677.00	0.59	60.13	5,540.84	-1,075.95	-192.30	-1,077.62	0.49	0.30	-52.97	
5,772.00	0.59	77.62	5,635.83	-1,075.60	-191.40	-1,077.26	0.19	0.00	18.41	
5,866.00	0.70	79.20	5,729.83	-1,075.39	-190.36	-1,077.04	0.12	0.12	1.68	
5,961.00	0.70	76.43	5,824.82	-1,075.15	-189.23	-1,076.79	0.04	0.00	-2.92	
6,055.00	1.01	1.41	5,918.81	-1,074.18	-188.65	-1,075.82	1.14	0.33	-79.81	
6,150.00	1.21	11.74	6,013.79	-1,072.36	-188.42	-1,074.00	0.30	0.21	10.87	
6,244.00	0.90	350.51	6,107.78	-1,070.66	-188.34	-1,072.30	0.53	-0.33	-22.59	
6,339.00	1.01	4.92	6,202.76	-1,069.09	-188.39	-1,070.73	0.28	0.12	15.17	
6,433.00	1.10	13.63	6,296.75	-1,067.39	-188.11	-1,069.02	0.20	0.10	9.27	
6,528.00	4.40	359.43	6,391.63	-1,062.86	-187.93	-1,064.49	3.52	3.47	-14.95	
6,622.00	10.50	355.30	6,484.79	-1,050.71	-188.67	-1,052.34	6.51	6.49	-4.39	
6,717.00	17.60	356.62	6,576.89	-1,027.71	-190.23	-1,029.36	7.48	7.47	1.39	
6,811.00	23.60	359.12	6,664.84	-994.68	-191.36	-996.34	6.45	6.38	2.66	
6,905.00	31.60	2.33	6,748.08	-951.19	-190.64	-952.85	8.65	8.51	3.41	
7,000.00	40.61	1.41	6,824.75	-895.29	-188.87	-896.94	9.50	9.48	-0.97	
7,094.00	49.51	359.21	6,891.09	-828.83	-188.61	-830.48	9.61	9.47	-2.34	
7,189.00	59.00	357.63	6,946.53	-751.85	-190.79	-753.52	10.08	9.99	-1.66	
7,283.00	64.89	356.92	6,990.72	-669.03	-194.75	-670.73	6.30	6.27	-0.76	
7,378.00	72.21	356.84	7,025.43	-580.80	-199.56	-582.55	7.71	7.71	-0.08	
7,472.00	80.61	358.81	7,047.50	-489.58	-203.00	-491.37	9.16	8.94	2.10	
7,567.00	88.41	1.54	7,056.59	-395.10	-202.69	-396.89	8.69	8.21	2.87	
7,661.00	91.51	1.72	7,056.65	-301.15	-200.02	-302.92	3.30	3.30	0.19	
7,756.00	93.59	0.53	7,052.43	-206.27	-198.16	-208.02	2.52	2.19	-1.25	
7,850.00	93.11	1.32	7,046.93	-112.44	-196.64	-114.19	0.98	-0.51	0.84	
7,945.00	91.70	2.20	7,042.95	-17.57	-193.72	-19.30	1.75	-1.48	0.93	
8,039.00	90.80	1.41	7,040.90	76.36	-190.76	74.65	1.27	-0.96	-0.84	
8,134.00	88.89	0.62	7,041.15	171.33	-189.08	169.64	2.18	-2.01	-0.83	
8,228.00	90.01	1.41	7,042.06	265.31	-187.42	263.63	1.46	1.19	0.84	
8,323.00	88.60	2.11	7,043.21	360.26	-184.50	358.60	1.66	-1.48	0.74	
8,417.00	89.31	2.11	7,044.92	454.18	-181.04	452.55	0.76	0.76	0.00	
8,511.00	88.30	1.23	7,046.88	548.12	-178.30	546.51	1.42	-1.07	-0.94	
8,606.00	89.00	2.20	7,049.12	643.05	-175.46	641.46	1.26	0.74	1.02	
8,700.00	89.79	1.94	7,050.11	736.98	-172.06	735.42	0.88	0.84	-0.28	
8,795.00	91.00	2.20	7,049.46	831.91	-168.63	830.38	1.30	1.27	0.27	
8,889.00	90.49	0.84	7,048.24	925.87	-166.14	924.35	1.55	-0.54	-1.45	

PDD
Survey Report

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Project:	WELD-NAD83-UTMFT13N	TVD Reference:	4884'GL + 25'KB @ 4909.00usft (H&P 307)
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Well:	Cook 2G-16HZ	North Reference:	True
Wellbore:	Cook 2G-16HZ	Survey Calculation Method:	Minimum Curvature
Design:	PDD Actual Surveys	Database:	EDM 5000.1 Single User 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)	
8,984.00	88.80	0.70	7,048.82	1,020.85	-164.86	1,019.35	1.79	-1.78	-0.15	
9,078.00	90.21	0.13	7,049.64	1,114.85	-164.18	1,113.34	1.62	1.50	-0.61	
9,173.00	88.30	1.80	7,050.87	1,209.82	-162.58	1,208.32	2.67	-2.01	1.76	
9,267.00	89.40	1.94	7,052.76	1,303.75	-159.51	1,302.27	1.18	1.17	0.15	
9,362.00	87.90	0.13	7,055.00	1,398.70	-157.80	1,397.24	2.47	-1.58	-1.91	
9,456.00	87.70	359.61	7,058.61	1,492.63	-158.01	1,491.16	0.59	-0.21	-0.55	
9,551.00	89.90	359.12	7,060.59	1,587.59	-159.06	1,586.12	2.37	2.32	-0.52	
9,645.00	92.01	0.31	7,059.03	1,681.57	-159.53	1,680.09	2.58	2.24	1.27	
9,740.00	92.30	0.70	7,055.46	1,776.50	-158.70	1,775.02	0.51	0.31	0.41	
9,834.00	93.00	0.44	7,051.11	1,870.40	-157.76	1,868.92	0.79	0.74	-0.28	
9,929.00	93.59	359.74	7,045.65	1,965.24	-157.61	1,963.76	0.96	0.62	-0.74	
10,023.00	94.89	359.03	7,038.70	2,058.97	-158.62	2,057.48	1.57	1.38	-0.76	
10,118.00	93.51	358.90	7,031.74	2,153.70	-160.33	2,152.19	1.46	-1.45	-0.14	
10,212.00	92.30	0.00	7,026.98	2,247.57	-161.23	2,246.05	1.74	-1.29	1.17	
10,307.00	90.69	0.53	7,024.50	2,342.54	-160.79	2,341.01	1.78	-1.69	0.56	
10,401.00	91.20	0.53	7,022.95	2,436.52	-159.92	2,435.00	0.54	0.54	0.00	
10,496.00	89.59	0.70	7,022.29	2,531.51	-158.90	2,529.99	1.70	-1.69	0.18	
10,590.00	90.10	0.84	7,022.55	2,625.50	-157.64	2,623.99	0.56	0.54	0.15	
10,685.00	90.80	1.80	7,021.80	2,720.47	-155.45	2,718.98	1.25	0.74	1.01	
10,779.00	90.10	2.51	7,021.06	2,814.40	-151.92	2,812.93	1.06	-0.74	0.76	
10,874.00	90.01	0.70	7,020.97	2,909.36	-149.26	2,907.91	1.91	-0.09	-1.91	
10,968.00	91.51	359.21	7,019.73	3,003.34	-149.33	3,001.89	2.25	1.60	-1.59	
11,063.00	89.79	0.70	7,018.65	3,098.33	-149.40	3,096.88	2.40	-1.81	1.57	
11,157.00	90.89	359.34	7,018.09	3,192.33	-149.37	3,190.87	1.86	1.17	-1.45	
11,251.00	89.40	359.61	7,017.85	3,286.32	-150.23	3,284.85	1.61	-1.59	0.29	
11,346.00	89.70	0.44	7,018.60	3,381.31	-150.19	3,379.84	0.93	0.32	0.87	
11,440.00	90.49	359.74	7,018.44	3,475.31	-150.04	3,473.84	1.12	0.84	-0.74	
11,535.00	90.89	1.01	7,017.30	3,570.30	-149.42	3,568.83	1.40	0.42	1.34	
11,629.00	92.10	1.41	7,014.85	3,664.25	-147.44	3,662.79	1.36	1.29	0.43	
11,723.00	90.30	0.22	7,012.88	3,758.21	-146.10	3,756.76	2.30	-1.91	-1.27	
11,818.00	89.40	0.13	7,013.13	3,853.21	-145.81	3,851.76	0.95	-0.95	-0.09	
11,912.00	90.41	0.31	7,013.28	3,947.21	-145.45	3,945.76	1.09	1.07	0.19	
12,007.00	89.31	1.80	7,013.52	4,042.19	-143.70	4,040.75	1.95	-1.16	1.57	
12,070.00	89.00	1.23	7,014.44	4,105.16	-142.03	4,103.73	1.03	-0.49	-0.90	
12,101.00	89.51	1.32	7,014.85	4,136.15	-141.34	4,134.73	1.67	1.65	0.29	
12,196.00	87.90	2.11	7,016.99	4,231.08	-138.50	4,229.68	1.89	-1.69	0.83	
12,290.00	87.40	2.33	7,020.85	4,324.93	-134.86	4,323.55	0.58	-0.53	0.23	
12,385.00	87.90	1.80	7,024.74	4,419.78	-131.44	4,418.44	0.77	0.53	-0.56	
12,479.00	87.20	1.94	7,028.76	4,513.65	-128.38	4,512.33	0.76	-0.74	0.15	
12,511.00	87.11	0.62	7,030.35	4,545.60	-127.67	4,544.28	4.13	-0.28	-4.13	
12,606.00	87.11	0.62	7,035.14	4,640.47	-126.64	4,639.16	0.00	0.00	0.00	

PDD
Survey Report

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Cook 2G-16HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	4884'GL + 25'KB @ 4909.00usft (H&P 307)
Site:	2N-65W-16 Cook 15-16HZ Pad	MD Reference:	4884'GL + 25'KB @ 4909.00usft (H&P 307)
Well:	Cook 2G-16HZ	North Reference:	True
Wellbore:	Cook 2G-16HZ	Survey Calculation Method:	Minimum Curvature
Design:	PDD Actual Surveys	Database:	EDM 5000.1 Single User Db

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Cook 2G-16HZ Niobrara - actual wellpath hits target center - Point	0.00	0.00	7,011.48	-620.35	-197.39	14,574,652.87	1,733,458.20	40.131116	-104.667132
Cook 2G-16HZ Actual Bi - actual wellpath hits target center - Point	0.00	0.00	7,035.14	4,640.47	-126.64	14,579,913.92	1,733,509.21	40.145563	-104.666879
Cook 2G-16HZ Actual Li - actual wellpath hits target center - Point	0.00	0.00	7,056.79	-387.11	-202.48	14,574,886.09	1,733,452.24	40.131757	-104.667151

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,927.30	1,904.51	9 5/8	9-5/8	13-1/2	
12,594.00	7,034.54	5 1/2"	5-1/2	8-1/2	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
7,108.00	1,991.05	Sharon Springs		0.00		
7,211.00	2,048.63	Niobrara		0.00		
7,336.00	2,102.48	Niobrara B		0.00		
12,606.00	2,126.14	Toe Depth		0.00		
7,575.00	2,147.79	Landing Depth		0.00		

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
12,606.00	7,035.14	4,640.47	-126.64	Projection to Bit	

Checked By: _____ Approved By: _____ Date: _____