

DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II

611 S. First St., Artesia, N.M. 88210
Phone: (505) 748-1283 Fax: (505) 748-9720

DISTRICT III

1000 Rio Bravos Rd., Antec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 478-3460 Fax: (505) 478-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

☒ AS-DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35515		² Pool Code 98175	³ Pool Name BETONNIE TSOSIE WASH UNIT MANCOS OIL POOL
⁴ Property Code 325179	⁵ Property Name BETONNIE TSOSIE WASH UNIT		⁶ Well Number 108H
⁷ OGRID No. 371838	⁸ Operator Name DJR OPERATING, LLC		⁹ Elevation 6905'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	11	23N	8W		341'	SOUTH	182'	WEST	SAN JUAN

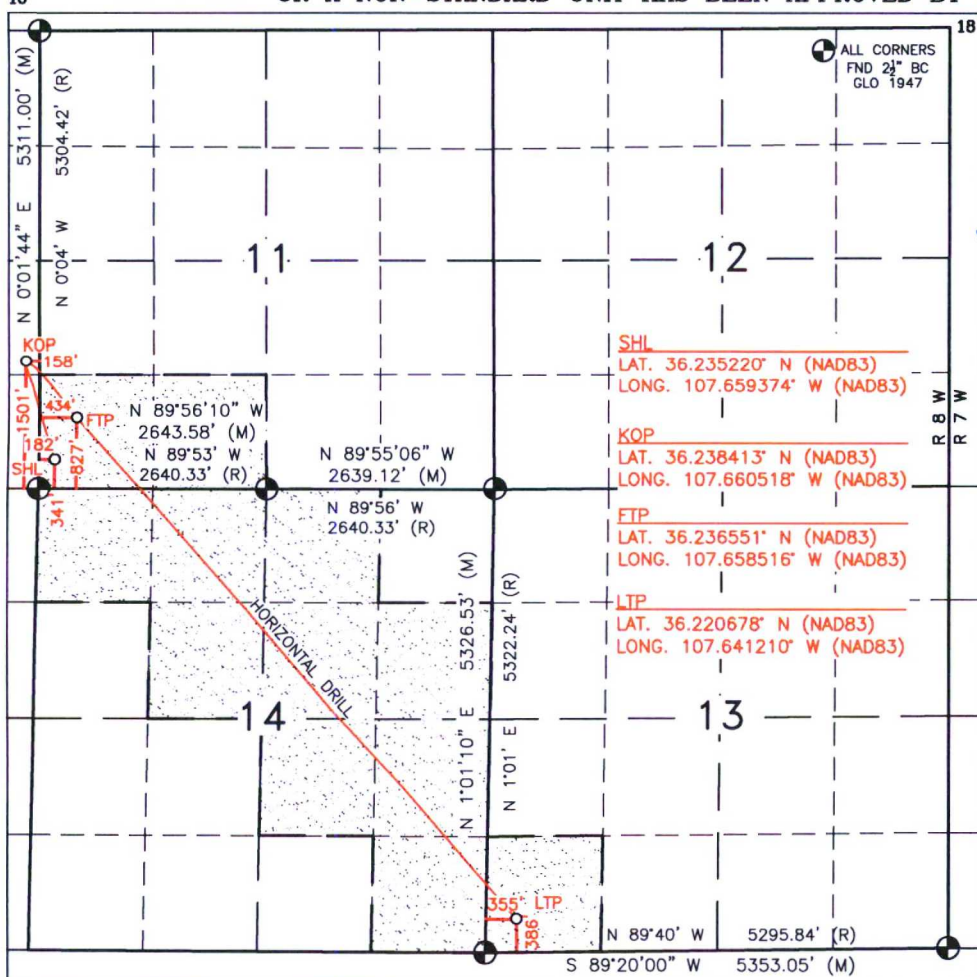
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	13	23N	8W		386'	SOUTH	355'	WEST	SAN JUAN

¹² Dedicated Acres SW/SW & SE/SW SEC 11 (80 ACRES), NW/NW, NE/NW, SE/NW, NW/NE, SW/NE, SE/NE, NW/SE, NE/SE, & SE/SE SEC 14 (360 ACRES), & SW/SW SEC 13 (40 ACRES) = 480 ACRES TOTAL	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13930A - 13,137 ACRES (UNDIVIDED)
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

[Signature] 08/15/2019
Signature Date

Shaw-Marie N. Ford

Printed Name

sford@djrlc.com

E-mail Address

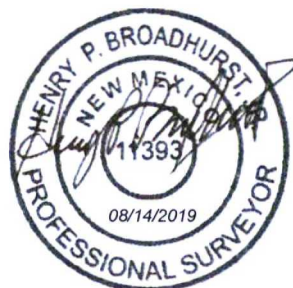
SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

AUGUST 1, 2019

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number 11393

A

8-16-19 NMOC Reid

32

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35515	² Pool Code 98175	³ Pool Name BETONNIE TSOSIE WASH UNIT MANCOS OIL POOL
⁴ Property Code 316771	⁵ Property Name BETONNIE TSOSIE WASH UNIT	⁶ Well Number 108H
⁷ OGRID No. 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 6905'

¹⁰ Surface Location

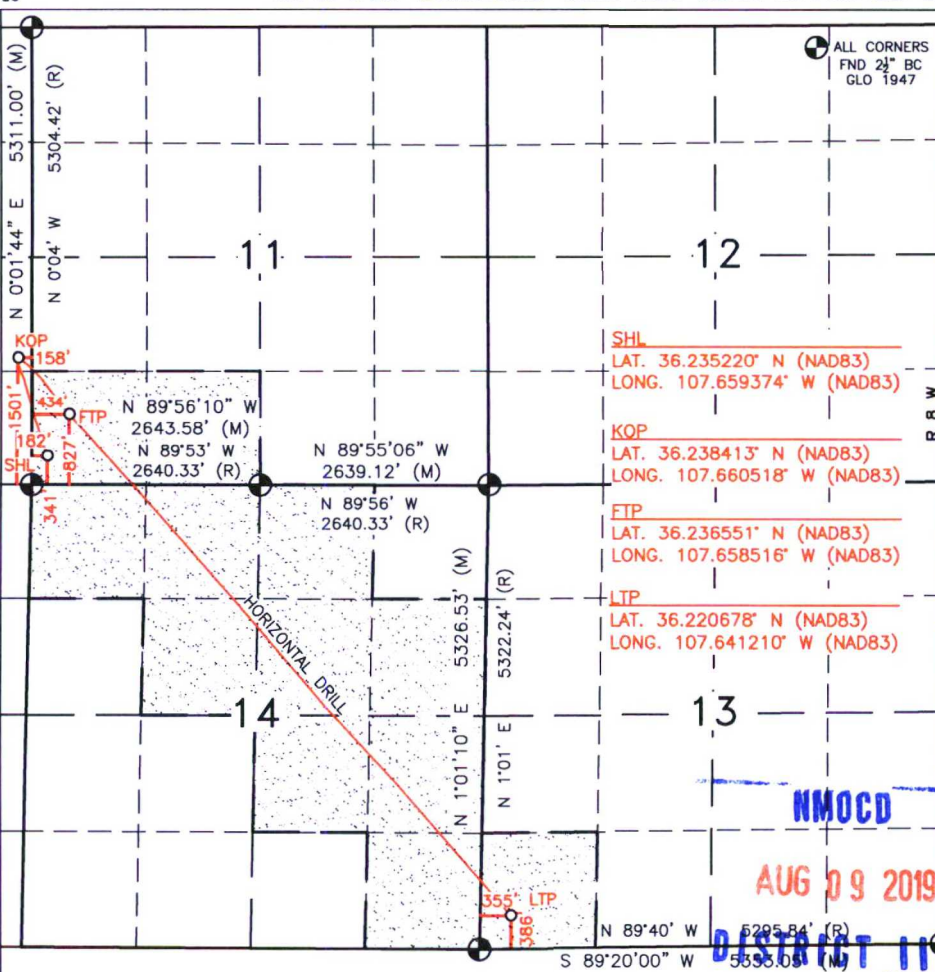
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹² Dedicated Acres SW/SW & SE/SW SEC 11 (80 ACRES), NW/NW, NE/NW, SE/NW, NW/NE, SW/NE, SE/NE, NW/SE, NE/SE, & SE/SE SEC 14 (360 ACRES), & SW/SW SEC 13 (40 ACRES) = 480 ACRES TOTAL	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13930A - 13,137 ACRES (UNDIVIDED)
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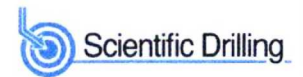
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



¹⁷ OPERATOR CERTIFICATION	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
Signature <i>Shaw Ford</i>	Date 8/5/19
Printed Name Shaw Ford	
E-mail Address sford@djrlc.com	
¹⁸ SURVEYOR CERTIFICATION	
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.	
AUGUST 1, 2019	
Date of Survey	
Signature and Seal of Professional Surveyor:	
Certificate Number	11393

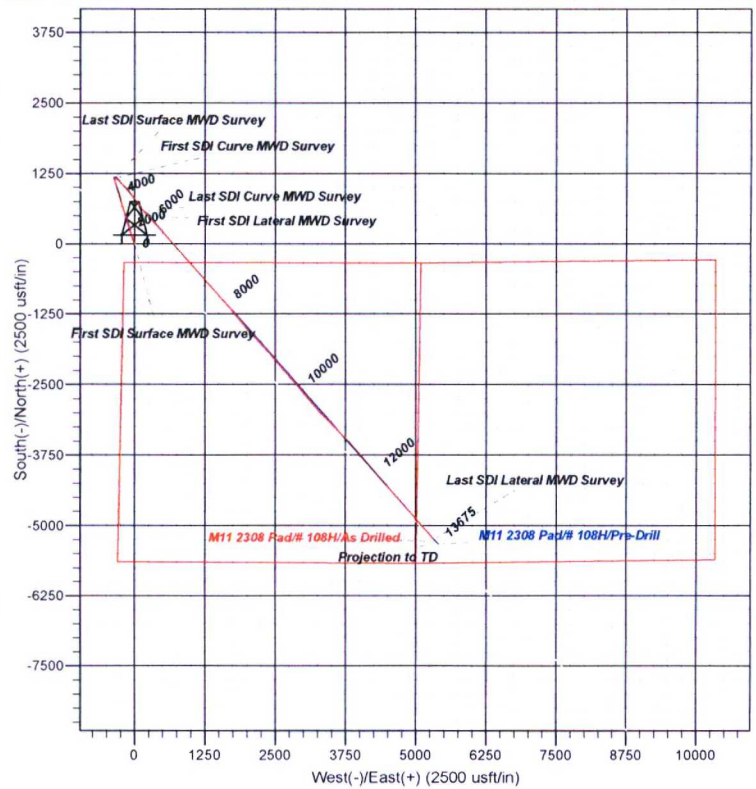
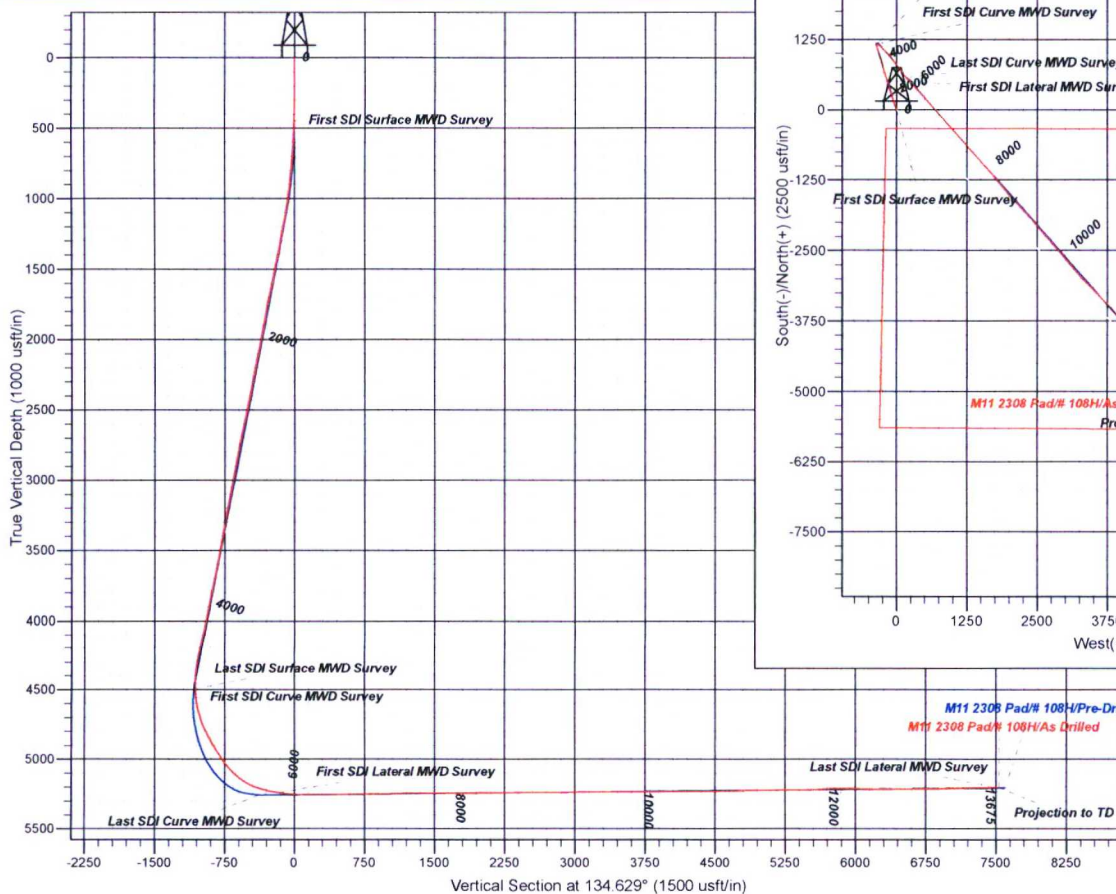


Company Name: DJR Operating
Project: Bettonie Tsoie Unit
Site: M11 2308 Pad
Well: # 108H
Wellbore: Original drilling



WELL DETAILS: # 108H

+N/-S	+E/-W	GL 6905' & RKB 14' @ 6919.00usft (Aztec 920) 6905.00	Northing	Easting	Latitude	Longitude
0.00	0.00		1904964.30	2774393.43	36.2352200	-107.6593740



Design: As Drilled (# 108H/Original drilling)
Created By: Janie Collins Date: 11.45, July 29 2019

PROJECT DETAILS: Bettonie Tsoie Unit
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Local North: True



DJR Operating

Betonne Tsoie Unit
M11 2308 Pad
108H

Original drilling

Design: As Drilled

Standard Survey Report

29 July, 2019

NMOCB
AUG 09 2019
DISTRICT III



www.scientificdrilling.com



Scientific Drilling

Directional Survey Certification

2948 I-70 Business Loop
Grand Junction, CO 81504
(970)-245-9447 Fax (970)-245-9454

Operator	DJR Operating
Well Name & No.	M11 2308 108H
County & State	San Juan, NM
SDI Job No.	OP.019865
Rig	Aztec 920

I, Janie Collins, having personal knowledge of all the facts, hereby
certify that the attached directional survey run from a measured depth of 445 feet to a
measured depth of 13,675 feet is true and correct as determined from all available records.


Signature

29-Jul-19
Date

Janie Collins

Colorado District Well Planner
Scientific Drilling International



Scientific Drilling, Intl Survey Report



Company: DJR Operating
Project: Betonnie Tsosie Unit
Site: M11 2308 Pad
Well: # 108H
Wellbore: Original drilling
Design: As Drilled

Local Co-ordinate Reference: Well # 108H
TVD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
MD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Project	Betonnie Tsosie Unit		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	M11 2308 Pad				
Site Position:		Northing:	1,904,963.10 usft	Latitude:	36.2352166
From:	Lat/Long	Easting:	2,774,400.51 usft	Longitude:	-107.6593500
Position Uncertainty:	0.00 usft	Slot Radius:	16.00 in	Grid Convergence:	0.10 °

Well	# 108H					
Well Position	+N/-S	0.00 usft	Northing:	1,904,964.30 usft	Latitude:	36.2352200
	+E/-W	0.00 usft	Easting:	2,774,393.43 usft	Longitude:	-107.6593740
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,905.00 usft

Wellbore	Original drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/5/2019	8.77	62.80	49,428

Design	As Drilled				
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	134.629	

Survey Program		Date	7/29/2019	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
14.00	381.00	Survey #1 (Original drilling)	INCLINOMETER	Inclination Only : < 3 degrees
445.00	4,683.00	Survey #2 - Surface MWD Survey (Original)	MWD+HDGM	OWSG MWD + HDGM
4,746.00	5,850.00	Survey #3 - Curve MWD Survey (Original)	MWD+HDGM	OWSG MWD + HDGM
5,962.00	13,675.00	Survey #4 - Lateral MWD Survey (Original)	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	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14.00	0.00	0.000	14.00	0.00	0.00	0.00	0.00	0.00	0.00
190.00	0.50	0.000	190.00	0.00	0.00	0.00	0.28	0.28	0.00
381.00	0.40	0.000	381.00	0.00	0.00	0.00	0.05	-0.05	0.00
445.00	1.68	345.050	444.99	0.91	-0.24	-0.81	2.03	2.00	-23.36
First SDI Surface MWD Survey									
506.00	3.55	342.800	505.92	3.57	-1.03	-3.25	3.07	3.07	-3.69
566.00	5.01	344.110	565.75	7.87	-2.30	-7.16	2.44	2.43	2.18



Scientific Drilling, Intl
Survey Report



Company: DJR Operating
Project: Betonnies Tsosie Unit
Site: M11 2308 Pad
Well: # 108H
Wellbore: Original drilling
Design: As Drilled

Local Co-ordinate Reference: Well # 108H
TVD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
MD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

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)
627.00	6.68	346.790	626.43	13.89	-3.84	-12.49	2.77	2.74	4.39
688.00	6.75	345.470	687.02	20.81	-5.55	-18.57	0.28	0.11	-2.16
749.00	7.80	343.060	747.52	28.24	-7.65	-25.29	1.79	1.72	-3.95
809.00	9.38	342.270	806.85	36.79	-10.33	-33.20	2.64	2.63	-1.32
869.00	9.96	342.140	866.00	46.39	-13.41	-42.13	0.97	0.97	-0.22
931.00	11.35	342.460	926.93	57.31	-16.89	-52.28	2.24	2.24	0.52
992.00	13.11	342.880	986.54	69.65	-20.74	-63.69	2.89	2.89	0.69
1,053.00	14.70	342.580	1,045.75	83.64	-25.09	-76.62	2.61	2.61	-0.49
1,113.00	16.14	340.840	1,103.59	98.78	-30.11	-90.83	2.52	2.40	-2.90
1,174.00	17.57	340.110	1,161.97	115.45	-36.02	-106.74	2.37	2.34	-1.20
1,235.00	18.15	339.760	1,220.03	133.02	-42.44	-123.66	0.97	0.95	-0.57
1,296.00	17.79	341.000	1,278.05	150.75	-48.76	-140.61	0.86	-0.59	2.03
1,358.00	19.03	342.170	1,336.88	169.33	-54.94	-158.06	2.09	2.00	1.89
1,419.00	18.07	341.120	1,394.71	187.75	-61.05	-175.34	1.67	-1.57	-1.72
1,479.00	18.27	342.710	1,451.72	205.53	-66.86	-191.97	0.89	0.33	2.65
1,541.00	18.62	344.090	1,510.53	224.33	-72.46	-209.16	0.90	0.56	2.23
1,602.00	18.95	342.510	1,568.28	243.14	-78.10	-226.40	0.99	0.54	-2.59
1,661.00	19.64	341.460	1,623.97	261.68	-84.14	-243.71	1.31	1.17	-1.78
1,722.00	20.17	340.520	1,681.32	281.31	-90.90	-262.32	1.01	0.87	-1.54
1,783.00	18.96	342.850	1,738.80	300.70	-97.33	-280.51	2.36	-1.98	3.82
1,844.00	17.97	341.430	1,796.66	319.09	-103.25	-297.65	1.78	-1.62	-2.33
1,905.00	17.87	342.740	1,854.70	336.95	-109.02	-314.30	0.68	-0.16	2.15
1,968.00	17.60	342.100	1,914.71	355.24	-114.82	-331.28	0.53	-0.43	-1.02
2,032.00	17.22	343.180	1,975.78	373.52	-120.54	-348.18	0.78	-0.59	1.69
2,095.00	19.18	345.340	2,035.62	392.46	-125.85	-365.27	3.29	3.11	3.43
2,158.00	19.88	345.040	2,095.00	412.82	-131.24	-383.41	1.12	1.11	-0.48
2,221.00	19.38	343.830	2,154.34	433.21	-136.91	-401.77	1.02	-0.79	-1.92
2,284.00	18.27	342.340	2,213.96	452.66	-142.82	-419.64	1.92	-1.76	-2.37
2,347.00	18.79	341.290	2,273.70	471.68	-149.07	-437.45	0.98	0.83	-1.67
2,411.00	18.21	340.520	2,334.39	490.87	-155.71	-455.66	0.98	-0.91	-1.20
2,474.00	18.05	341.360	2,394.26	509.39	-162.12	-473.23	0.49	-0.25	1.33
2,537.00	19.59	344.710	2,453.90	528.83	-168.02	-491.09	2.99	2.44	5.32
2,600.00	20.06	345.720	2,513.16	549.49	-173.47	-509.48	0.92	0.75	1.60
2,663.00	20.21	345.180	2,572.31	570.48	-178.92	-528.10	0.38	0.24	-0.86
2,727.00	20.60	344.910	2,632.30	592.04	-184.68	-547.35	0.63	0.61	-0.42
2,790.00	19.88	344.140	2,691.40	613.04	-190.49	-566.24	1.22	-1.14	-1.22
2,853.00	18.48	342.210	2,750.91	632.86	-196.47	-584.41	2.44	-2.22	-3.06
2,916.00	18.60	342.490	2,810.64	651.95	-202.54	-602.14	0.24	0.19	0.44
2,979.00	18.25	343.780	2,870.41	671.00	-208.32	-619.64	0.85	-0.56	2.05
3,043.00	17.45	342.250	2,931.33	689.76	-214.05	-636.90	1.45	-1.25	-2.39
3,106.00	17.13	343.620	2,991.48	707.66	-219.54	-653.38	0.82	-0.51	2.17
3,169.00	18.25	345.300	3,051.50	726.10	-224.66	-669.98	1.95	1.78	2.67
3,232.00	18.33	345.450	3,111.32	745.23	-229.65	-686.97	0.15	0.13	0.24



Scientific Drilling, Intl

Survey Report



Company: DJR Operating
Project: Bettonie Tsoie Unit
Site: M11 2308 Pad
Well: # 108H
Wellbore: Original drilling
Design: As Drilled

Local Co-ordinate Reference: Well # 108H
TVD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
MD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

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)
3,295.00	17.19	343.940	3,171.31	763.77	-234.72	-703.60	1.95	-1.81	-2.40
3,358.00	17.30	345.050	3,231.48	781.77	-239.71	-719.80	0.55	0.17	1.76
3,422.00	18.74	347.860	3,292.34	801.01	-244.33	-736.60	2.63	2.25	4.39
3,484.00	18.60	348.010	3,351.08	820.42	-248.48	-753.19	0.24	-0.23	0.24
3,548.00	18.08	347.840	3,411.83	840.11	-252.69	-770.02	0.82	-0.81	-0.27
3,611.00	18.03	346.150	3,471.73	859.14	-257.08	-786.51	0.84	-0.08	-2.68
3,674.00	17.86	343.680	3,531.66	877.87	-262.13	-803.27	1.24	-0.27	-3.92
3,737.00	18.05	341.280	3,591.60	896.39	-267.98	-820.44	1.21	0.30	-3.81
3,800.00	18.37	340.760	3,651.44	915.01	-274.38	-838.07	0.57	0.51	-0.83
3,863.00	18.10	340.690	3,711.28	933.62	-280.89	-855.78	0.43	-0.43	-0.11
3,926.00	19.29	341.010	3,770.95	952.69	-287.51	-873.89	1.90	1.89	0.51
3,989.00	19.30	340.460	3,830.41	972.34	-294.38	-892.58	0.29	0.02	-0.87
4,053.00	18.30	340.320	3,891.00	991.77	-301.30	-911.16	1.56	-1.56	-0.22
4,115.00	18.66	340.240	3,949.80	1,010.27	-307.93	-928.88	0.58	0.58	-0.13
4,179.00	19.76	340.620	4,010.24	1,030.11	-314.98	-947.83	1.73	1.72	0.59
4,241.00	20.19	341.020	4,068.51	1,050.12	-321.94	-966.84	0.73	0.69	0.65
4,304.00	19.47	340.270	4,127.77	1,070.28	-329.02	-986.04	1.21	-1.14	-1.19
4,368.00	18.73	340.120	4,188.25	1,089.98	-336.12	-1,004.93	1.16	-1.16	-0.23
4,431.00	18.42	341.570	4,247.97	1,108.94	-342.70	-1,022.94	0.88	-0.49	2.30
4,493.00	16.72	341.940	4,307.07	1,126.71	-348.57	-1,039.59	2.75	-2.74	0.60
4,557.00	13.39	343.570	4,368.87	1,142.58	-353.52	-1,054.26	5.24	-5.20	2.55
4,620.00	8.48	9.840	4,430.74	1,154.17	-354.79	-1,063.31	10.92	-7.79	41.70
4,683.00	8.27	63.210	4,493.16	1,160.79	-349.94	-1,064.52	11.91	-0.33	84.71
Last SDI Surface MWD Survey									
4,746.00	11.98	99.780	4,555.23	1,161.73	-339.44	-1,057.70	11.49	5.89	58.05
First SDI Curve MWD Survey									
4,809.00	17.46	116.510	4,616.16	1,156.39	-324.52	-1,043.33	10.93	8.70	26.56
4,873.00	23.10	129.020	4,676.20	1,144.19	-306.15	-1,021.69	11.07	8.81	19.55
4,936.00	29.60	131.440	4,732.62	1,126.09	-284.86	-993.82	10.46	10.32	3.84
4,999.00	33.89	131.850	4,786.19	1,104.06	-260.10	-960.73	6.82	6.81	0.65
5,062.00	38.28	131.910	4,837.09	1,079.29	-232.48	-923.67	6.97	6.97	0.10
5,125.00	41.12	134.080	4,885.56	1,051.84	-203.07	-883.45	5.02	4.51	3.44
5,188.00	43.53	134.880	4,932.13	1,022.12	-172.81	-841.04	3.92	3.83	1.27
5,251.00	45.26	137.550	4,977.15	990.29	-142.33	-796.99	4.04	2.75	4.24
5,314.00	47.62	140.400	5,020.57	955.85	-112.39	-751.48	4.98	3.75	4.52
5,377.00	51.21	143.390	5,061.55	918.19	-82.91	-704.04	6.74	5.70	4.75
5,440.00	57.14	145.760	5,098.41	876.57	-53.35	-653.77	9.89	9.41	3.76
5,503.00	62.22	145.820	5,130.21	831.61	-22.78	-600.43	8.06	8.06	0.10
5,566.00	66.59	144.360	5,157.42	785.04	9.74	-544.57	7.24	6.94	-2.32
5,629.00	72.27	143.360	5,179.54	737.43	44.52	-486.37	9.14	9.02	-1.59
5,693.00	75.48	142.450	5,197.32	688.40	81.60	-425.54	5.20	5.02	-1.42
5,756.00	78.78	141.350	5,211.35	640.08	119.49	-364.62	5.51	5.24	-1.75
5,819.00	81.48	139.860	5,222.15	592.12	158.88	-302.90	4.88	4.29	-2.37
5,850.00	82.01	139.400	5,226.60	568.75	178.75	-272.34	2.25	1.71	-1.48



Scientific Drilling, Intl
Survey Report



Company: DJR Operating
Project: Bettonie Tsosie Unit
Site: M11 2308 Pad
Well: # 108H
Wellbore: Original drilling
Design: As Drilled

Local Co-ordinate Reference: Well # 108H
TVD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
MD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

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)
Last SDI Curve MWD Survey									
5,962.00	85.06	138.030	5,239.21	485.13	252.17	-161.35	2.98	2.72	-1.22
First SDI Lateral MWD Survey									
6,024.00	84.68	137.590	5,244.75	439.38	293.64	-99.69	0.94	-0.61	-0.71
6,088.00	87.01	137.750	5,249.39	392.20	336.62	-35.96	3.65	3.64	0.25
6,151.00	89.06	139.010	5,251.55	345.13	378.44	26.87	3.82	3.25	2.00
6,214.00	90.67	139.120	5,251.70	297.54	419.72	89.68	2.56	2.56	0.17
6,277.00	90.70	138.400	5,250.94	250.17	461.24	152.51	1.14	0.05	-1.14
6,340.00	90.10	137.540	5,250.50	203.37	503.42	215.40	1.66	-0.95	-1.37
6,404.00	89.83	136.980	5,250.54	156.37	546.86	279.33	0.97	-0.42	-0.88
6,467.00	89.46	138.150	5,250.93	109.87	589.36	342.25	1.95	-0.59	1.86
6,529.00	90.24	138.730	5,251.10	63.48	630.50	404.11	1.57	1.26	0.94
6,592.00	90.44	138.380	5,250.72	16.26	672.19	466.96	0.64	0.32	-0.56
6,655.00	90.24	137.740	5,250.35	-30.60	714.30	529.84	1.06	-0.32	-1.02
6,718.00	89.83	136.830	5,250.31	-76.89	757.04	592.78	1.58	-0.65	-1.44
6,781.00	89.80	137.580	5,250.51	-123.12	799.84	655.71	1.19	-0.05	1.19
6,845.00	90.70	138.290	5,250.23	-170.63	842.71	719.60	1.79	1.41	1.11
6,908.00	91.55	138.740	5,249.00	-217.81	884.44	782.44	1.53	1.35	0.71
6,971.00	91.68	137.940	5,247.22	-264.86	926.30	845.29	1.29	0.21	-1.27
7,033.00	90.23	138.520	5,246.19	-311.10	967.59	907.15	2.52	-2.34	0.94
7,096.00	90.37	139.000	5,245.86	-358.47	1,009.12	969.99	0.79	0.22	0.76
7,160.00	89.97	138.230	5,245.67	-406.49	1,051.43	1,033.83	1.36	-0.63	-1.20
7,222.00	90.91	139.050	5,245.19	-453.02	1,092.40	1,095.68	2.01	1.52	1.32
7,284.00	91.98	139.690	5,243.63	-500.06	1,132.76	1,157.45	2.01	1.73	1.03
7,347.00	90.74	139.090	5,242.13	-547.87	1,173.75	1,220.21	2.19	-1.97	-0.95
7,409.00	90.23	138.280	5,241.61	-594.43	1,214.68	1,282.05	1.54	-0.82	-1.31
7,472.00	89.50	137.400	5,241.76	-641.13	1,256.97	1,344.95	1.81	-1.16	-1.40
7,536.00	89.80	138.100	5,242.15	-688.51	1,300.00	1,408.85	1.19	0.47	1.09
7,599.00	89.03	137.990	5,242.79	-735.35	1,342.11	1,471.74	1.23	-1.22	-0.17
7,662.00	90.23	139.020	5,243.20	-782.54	1,383.85	1,534.59	2.51	1.90	1.63
7,725.00	90.98	139.330	5,242.53	-830.21	1,425.04	1,597.39	1.29	1.19	0.49
7,788.00	89.73	137.240	5,242.14	-877.23	1,466.95	1,660.26	3.87	-1.98	-3.32
7,851.00	89.36	137.150	5,242.64	-923.45	1,509.76	1,723.19	0.60	-0.59	-0.14
7,914.00	90.00	139.390	5,242.99	-970.46	1,551.69	1,786.06	3.70	1.02	3.56
7,977.00	90.03	140.090	5,242.98	-1,018.54	1,592.41	1,848.81	1.11	0.05	1.11
8,039.00	90.27	140.120	5,242.82	-1,066.11	1,632.17	1,910.52	0.39	0.39	0.05
8,102.00	90.07	139.340	5,242.63	-1,114.18	1,672.89	1,973.27	1.28	-0.32	-1.24
8,165.00	89.63	139.120	5,242.79	-1,161.89	1,714.03	2,036.07	0.78	-0.70	-0.35
8,228.00	89.97	141.250	5,243.01	-1,210.28	1,754.37	2,098.77	3.42	0.54	3.38
8,291.00	90.77	142.350	5,242.61	-1,259.78	1,793.33	2,161.27	2.16	1.27	1.75
8,353.00	91.14	141.620	5,241.57	-1,308.62	1,831.51	2,222.75	1.32	0.60	-1.18
8,416.00	91.14	141.200	5,240.32	-1,357.86	1,870.79	2,285.30	0.67	0.00	-0.67
8,479.00	90.13	140.100	5,239.62	-1,406.57	1,910.74	2,347.95	2.37	-1.60	-1.75
8,542.00	90.20	140.570	5,239.44	-1,455.07	1,950.95	2,410.64	0.75	0.11	0.75



Scientific Drilling, Intl

Survey Report



Company: DJR Operating
Project: Bettonnie Tsoie Unit
Site: M11 2308 Pad
Well: # 108H
Wellbore: Original drilling
Design: As Drilled

Local Co-ordinate Reference: Well # 108H
TVD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
MD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

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)
8,605.00	89.46	139.060	5,239.63	-1,503.19	1,991.60	2,473.38	2.67	-1.17	-2.40
8,667.00	90.81	138.570	5,239.48	-1,549.85	2,032.42	2,535.21	2.32	2.18	-0.79
8,730.00	90.60	137.160	5,238.71	-1,596.57	2,074.68	2,598.10	2.26	-0.33	-2.24
8,792.00	90.20	136.250	5,238.27	-1,641.69	2,117.20	2,660.06	1.60	-0.65	-1.47
8,855.00	90.91	136.710	5,237.66	-1,687.37	2,160.58	2,723.02	1.34	1.13	0.73
8,918.00	90.34	136.680	5,236.98	-1,733.21	2,203.79	2,785.98	0.91	-0.90	-0.05
8,981.00	90.03	137.350	5,236.77	-1,779.30	2,246.74	2,848.92	1.17	-0.49	1.06
9,044.00	90.77	138.030	5,236.33	-1,825.89	2,289.15	2,911.83	1.60	1.17	1.08
9,106.00	90.67	138.220	5,235.55	-1,872.05	2,330.53	2,973.71	0.35	-0.16	0.31
9,169.00	91.01	138.480	5,234.63	-1,919.12	2,372.39	3,036.57	0.68	0.54	0.41
9,232.00	90.24	138.010	5,233.94	-1,966.11	2,414.35	3,099.44	1.43	-1.22	-0.75
9,295.00	90.17	138.790	5,233.72	-2,013.22	2,456.17	3,162.30	1.24	-0.11	1.24
9,355.00	90.71	139.750	5,233.26	-2,058.69	2,495.32	3,222.10	1.84	0.90	1.60
9,416.00	89.93	139.130	5,232.92	-2,105.03	2,534.98	3,282.89	1.63	-1.28	-1.02
9,477.00	90.20	138.760	5,232.85	-2,151.03	2,575.05	3,343.71	0.75	0.44	-0.61
9,537.00	89.53	138.240	5,232.99	-2,195.97	2,614.80	3,403.58	1.41	-1.12	-0.87
9,598.00	90.37	138.730	5,233.04	-2,241.64	2,655.24	3,464.44	1.59	1.38	0.80
9,659.00	90.27	139.120	5,232.70	-2,287.63	2,695.31	3,525.26	0.66	-0.16	0.64
9,721.00	89.46	138.380	5,232.85	-2,334.24	2,736.19	3,587.10	1.77	-1.31	-1.19
9,782.00	90.07	138.600	5,233.10	-2,379.92	2,776.62	3,647.96	1.06	1.00	0.36
9,844.00	89.80	138.620	5,233.17	-2,426.43	2,817.61	3,709.81	0.44	-0.44	0.03
9,905.00	90.54	139.240	5,232.99	-2,472.42	2,857.69	3,770.64	1.58	1.21	1.02
9,966.00	89.83	138.650	5,232.79	-2,518.42	2,897.75	3,831.47	1.51	-1.16	-0.97
10,027.00	90.27	139.060	5,232.74	-2,564.35	2,937.89	3,892.30	0.99	0.72	0.67
10,088.00	90.13	139.970	5,232.52	-2,610.75	2,977.49	3,953.08	1.51	-0.23	1.49
10,150.00	90.27	139.990	5,232.31	-2,658.23	3,017.36	4,014.81	0.23	0.23	0.03
10,211.00	89.90	139.990	5,232.22	-2,704.95	3,056.58	4,075.54	0.61	-0.61	0.00
10,272.00	91.38	140.900	5,231.53	-2,751.98	3,095.42	4,136.22	2.85	2.43	1.49
10,332.00	90.57	140.220	5,230.51	-2,798.31	3,133.53	4,195.89	1.76	-1.35	-1.13
10,394.00	90.40	139.360	5,229.99	-2,845.65	3,173.56	4,257.64	1.41	-0.27	-1.39
10,455.00	89.66	138.970	5,229.96	-2,891.81	3,213.44	4,318.44	1.37	-1.21	-0.64
10,516.00	89.26	138.100	5,230.53	-2,937.51	3,253.83	4,379.30	1.57	-0.66	-1.43
10,577.00	90.00	137.420	5,230.93	-2,982.67	3,294.84	4,440.21	1.65	1.21	-1.11
10,638.00	90.37	136.790	5,230.73	-3,027.36	3,336.36	4,501.15	1.20	0.61	-1.03
10,699.00	89.87	134.690	5,230.60	-3,071.05	3,378.93	4,562.13	3.54	-0.82	-3.44
10,760.00	91.28	134.050	5,229.99	-3,113.70	3,422.53	4,623.13	2.54	2.31	-1.05
10,821.00	91.01	135.450	5,228.77	-3,156.63	3,465.84	4,684.11	2.34	-0.44	2.30
10,883.00	91.21	135.660	5,227.57	-3,200.89	3,509.25	4,746.09	0.47	0.32	0.34
10,944.00	91.51	135.390	5,226.12	-3,244.40	3,551.97	4,807.07	0.66	0.49	-0.44
11,005.00	91.51	134.850	5,224.51	-3,287.61	3,595.00	4,868.05	0.88	0.00	-0.89
11,066.00	91.61	135.320	5,222.85	-3,330.79	3,638.05	4,929.02	0.79	0.16	0.77
11,128.00	90.67	136.160	5,221.62	-3,375.19	3,681.31	4,991.00	2.03	-1.52	1.35
11,188.00	88.36	135.480	5,222.13	-3,418.21	3,723.12	5,050.98	4.01	-3.85	-1.13



Scientific Drilling, Intl
Survey Report



Company: DJR Operating
Project: Bettonie Tsoie Unit
Site: M11 2308 Pad
Well: # 108H
Wellbore: Original drilling
Design: As Drilled

Local Co-ordinate Reference: Well # 108H
TVD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
MD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

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)
11,248.00	90.87	136.240	5,222.53	-3,461.26	3,764.90	5,110.96	4.37	4.18	1.27
11,309.00	91.74	137.120	5,221.14	-3,505.63	3,806.74	5,171.90	2.03	1.43	1.44
11,370.00	90.94	139.310	5,219.71	-3,551.10	3,847.37	5,232.76	3.82	-1.31	3.59
11,431.00	90.64	138.390	5,218.87	-3,597.03	3,887.51	5,293.59	1.59	-0.49	-1.51
11,492.00	90.17	136.860	5,218.44	-3,642.09	3,928.62	5,354.50	2.62	-0.77	-2.51
11,553.00	89.93	137.750	5,218.39	-3,686.92	3,969.98	5,415.43	1.51	-0.39	1.46
11,614.00	90.34	139.070	5,218.24	-3,732.54	4,010.47	5,476.30	2.27	0.67	2.16
11,676.00	91.44	139.230	5,217.28	-3,779.44	4,051.02	5,538.10	1.79	1.77	0.26
11,737.00	91.54	139.500	5,215.70	-3,825.71	4,090.73	5,598.87	0.47	0.16	0.44
11,798.00	91.95	139.950	5,213.84	-3,872.23	4,130.15	5,659.60	1.00	0.67	0.74
11,860.00	91.21	138.800	5,212.13	-3,919.27	4,170.50	5,721.36	2.21	-1.19	-1.85
11,921.00	90.81	138.520	5,211.05	-3,965.06	4,210.79	5,782.20	0.80	-0.66	-0.46
11,983.00	90.44	139.780	5,210.38	-4,011.95	4,251.34	5,844.00	2.12	-0.60	2.03
12,044.00	90.30	140.120	5,209.98	-4,058.65	4,290.59	5,904.74	0.60	-0.23	0.56
12,105.00	89.83	139.970	5,209.91	-4,105.41	4,329.76	5,965.47	0.81	-0.77	-0.25
12,166.00	89.06	139.410	5,210.50	-4,151.92	4,369.22	6,026.22	1.56	-1.26	-0.92
12,228.00	88.76	138.410	5,211.68	-4,198.64	4,409.96	6,088.04	1.68	-0.48	-1.61
12,288.00	88.49	138.900	5,213.12	-4,243.67	4,449.58	6,147.87	0.93	-0.45	0.82
12,349.00	88.82	139.240	5,214.56	-4,289.74	4,489.54	6,208.67	0.78	0.54	0.56
12,409.00	90.64	140.170	5,214.84	-4,335.50	4,528.34	6,268.43	3.41	3.03	1.55
12,472.00	90.67	139.600	5,214.12	-4,383.68	4,568.93	6,331.17	0.91	0.05	-0.90
12,534.00	90.34	138.940	5,213.57	-4,430.66	4,609.38	6,392.96	1.19	-0.53	-1.06
12,597.00	90.07	138.350	5,213.35	-4,477.95	4,651.01	6,455.80	1.03	-0.43	-0.94
12,659.00	90.10	138.010	5,213.25	-4,524.16	4,692.35	6,517.68	0.55	0.05	-0.55
12,721.00	90.00	136.620	5,213.20	-4,569.73	4,734.38	6,579.62	2.25	-0.16	-2.24
12,783.00	90.94	137.310	5,212.69	-4,615.05	4,776.69	6,641.56	1.88	1.52	1.11
12,846.00	90.54	138.490	5,211.88	-4,661.79	4,818.92	6,704.45	1.98	-0.63	1.87
12,909.00	89.76	139.160	5,211.71	-4,709.21	4,860.40	6,767.28	1.63	-1.24	1.06
12,971.00	89.56	139.030	5,212.08	-4,756.06	4,900.99	6,829.09	0.38	-0.32	-0.21
13,035.00	89.73	139.670	5,212.48	-4,804.62	4,942.69	6,892.87	1.03	0.27	1.00
13,097.00	90.91	139.530	5,212.13	-4,851.83	4,982.87	6,954.64	1.92	1.90	-0.23
13,160.00	91.45	139.410	5,210.83	-4,899.71	5,023.80	7,017.40	0.88	0.86	-0.19
13,223.00	91.68	138.930	5,209.11	-4,947.36	5,064.97	7,080.18	0.84	0.37	-0.76
13,285.00	91.31	138.190	5,207.50	-4,993.82	5,105.99	7,142.01	1.33	-0.60	-1.19
13,348.00	91.07	137.600	5,206.19	-5,040.55	5,148.23	7,204.89	1.01	-0.38	-0.94
13,411.00	90.80	138.500	5,205.16	-5,087.40	5,190.33	7,267.77	1.49	-0.43	1.43
13,473.00	90.81	138.610	5,204.29	-5,133.87	5,231.37	7,329.62	0.18	0.02	0.18
13,535.00	91.11	138.140	5,203.25	-5,180.21	5,272.55	7,391.48	0.90	0.48	-0.76
13,598.00	91.51	137.450	5,201.81	-5,226.86	5,314.86	7,454.37	1.27	0.63	-1.10
13,621.00	91.54	137.330	5,201.20	-5,243.78	5,330.42	7,477.33	0.54	0.13	-0.52
Last SDI Lateral MWD Survey									
13,675.00	91.54	137.330	5,199.75	-5,283.47	5,367.01	7,531.25	0.00	0.00	0.00
Projection to TD									



Scientific Drilling, Intl
Survey Report



Company: DJR Operating
Project: Betonnies Tsosie Unit
Site: M11 2308 Pad
Well: # 108H
Wellbore: Original drilling
Design: As Drilled

Local Co-ordinate Reference: Well # 108H
TVD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
MD Reference: GL 6905' & RKB 14' @ 6919.00usft (Aztec 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Grand Junction District

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
445.00	444.99	0.91	-0.24	First SDI Surface MWD Survey
4,683.00	4,493.16	1,160.79	-349.94	Last SDI Surface MWD Survey
4,746.00	4,555.23	1,161.73	-339.44	First SDI Curve MWD Survey
5,850.00	5,226.60	568.75	178.75	Last SDI Curve MWD Survey
5,962.00	5,239.21	485.13	252.17	First SDI Lateral MWD Survey
13,621.00	5,201.20	-5,243.78	5,330.42	Last SDI Lateral MWD Survey
13,675.00	5,199.75	-5,283.47	5,367.01	Projection to TD

Checked By: _____ Approved By: _____ Date: _____



DJR Operating DJR, Betonnie Tsosie Unit

End of Well Report for M11 2308 Pad, # 108H

Job Number: OP-019865	Region:	Lease/Block:	Company Rep. #1: James Retherford
Customer: DJR Operating	Field: DJR	API No.:	Company Rep. #2: Mark Hagelburger
Well Name: # 108H	Project: Betonnie Tsosie Unit	Start Date: Sunday, July 14, 2019	Geologist:
Rig Name:	Structure: M11 2308 Pad	End Date: Monday, July 22, 2019	Directional Supervisor: Charles Paladino

Drilling Summary				Pump Details							
Start Depth: 381.00ft	End Depth: 13,675.00ft	Below Rotary Hours: 150.75hrs	Circulating Hours: 69.58hrs	#	Model	Liner Size (")	Liner Rating (%)	Volume Efficiency (%)	Vol. per Stroke (gal(US))	Maximum Pressure (psi)	Maximum Flow (gpm(US))
Total Depth Drilled: 13,294.00ft	Total Drilled Hours: 54.52hrs	Ave. Total ROP: 243.85ft/hr	Percent Drilling: 36.16%								
Total Rotating: 10,887.00ft	Rotating Hours: 38.50hrs	Ave. Rotating ROP: 282.78ft/hr	Percent Rotating: 81.89%								
Total Sliding: 2,407.00ft	Sliding Hours: 16.02hrs	Ave. Sliding ROP: 150.28ft/hr	Percent Sliding: 18.11%								

Drilling Parameters - Original drilling, Intermediate						Bit Record - Original drilling, Intermediate			
	Min	Max		Min	Max	Bit Number: 1	Description: Hughes PDC AT505F w/ 6x13's		
WOB (lbf)	8	20	SPP Off Bottom (psi)	350	1950	Manufacturer:	TFA:	Jets:	
Pick Up (lbf)	38	92	SPP On Bottom (psi)	650	2770	Baker Hughes	0.778in ²	6 x 13	
Slack Off (lbf)	38	80	Delta Pressure (psi)	300	820	Model:	Bit Diameter:	Bit Hours:	
Rot. Off Bottom (lbf)	38	88	Flow Rate (gpm/US)	320	553	AT505F	8 3/4"	12.47Hrs.	
Bottom Hole Temp (°F)	104.0	104.0	Pump Rate (SPM)	110	190	Type:	IADC#:	Bit Footage:	
Rotary Speed (RPM)	55	55	Motor Speed (RPM)	160	332	8 3/4" PDC	516	4,164.00ft	
Surface Torque (ft-lbs)	4500	6300				Serial Number:	Condition:		
						7161362	Broken Teeth and Cutters		
						Grade:	Reason for pulling out of hole:		
						1,2	Finished Intermediate / Change for Curve Motor/Bit		

Motor Properties - Original drilling, Intermediate											
Description: 4/5, 7.0, 1.75 FBH		Motor Type: 6 1/2" Motor		Manufacturer: SDI		Model: Titan		Serial Number: 6491		Lobe/Stage: 4:5/7.0	
Mud Type: WBM		Stabilizer Type:				Rubber Type: NBHR				Fit Type: .0004	
Pad OD: 7 3/16"		NB Stabilizer: 0		Bit to Bend: 4.44ft		Bend Angle: 1.75°		Pressure Drop: 0psi		Rev. Rate: 0.50Rev/gal(US)	
Motor Footage: 4,164.00ft		Below Rotary Hours: 29.08hrs		Circulating Hours: 16.25hrs		Rotating Footage: 3,478.00ft		Rotating Hours: 10.07hrs		Sliding Footage: 686.00ft	
Proposed Build Rate: 2.50°/100ft		Actual Build Rate: 6.00°/100ft		Date/Time In: 7/14/2019 11:25 AM		Date/Time Out: 7/15/2019 4:30 PM		Number of Stalls: 0		Stall Duration: 0.00mins	
Motor Failed: No		Condition: Good, Drained									
										Rotor Jet: 032's	
										Sliding Hours: 2.40hrs	
										Extended Motor: No	

Drillstring Components - Original drilling, Intermediate (BHA #1)										
Item #	Description	Vendor	Serial No.	Outside Diameter (")	Inside Diameter (")	Linear Weight (lbs/ft)	Component Weight (lbf)	Top Connection	Length (ft)	Total Length (ft)
1	Hughes PDC AT505F w/ 6x13's	Baker Hughes	7161362	8 3/4	0	0.00	0	4 1/2 REG	1.00	1.00
2	4/5, 7.0, 1.75 FBH	SDI	6491	6 1/2	1	0.00	0	4 1/2 XH	27.16	28.16
3	6 1/2" NMFP	SDI	125-308F	6 7/16	3 1/4	0.00	0	4 1/2 XH	9.74	37.90
4	6 1/2" Flex NMDC	SDI	122-1054F	6 7/16	3 1/4	0.00	0	4 1/2 XH	30.88	68.78
5	6 1/2" HOS	SDI	8-966	6 5/16	3 1/4	0.00	0	4 1/2 XH	2.52	71.30
6	6 1/2" GAP	SDI	69-736	6 7/16	2 7/8	0.00	0	4 1/2 XH	4.82	76.12
7	6 1/2" NMDC	SDI	122-260	6 1/8	3 1/4	0.00	0	4 1/2 XH	29.43	105.55
8	6 1/2" NMDC	SDI	15-088	6 1/8	3 1/4	0.00	0	4 1/2 XH	29.14	134.69

Drilling Parameters - Original drilling, Curve						Bit Record - Original drilling, Curve			
	Min	Max		Min	Max	Bit Number: 2	Description: NOV PDC TKC56 w/ 5x14's		
WOB (lbf)	15	50	SPP Off Bottom (psi)	2100	2350	Manufacturer:	TFA:	Jets:	
Pick Up (lbf)	140	158	SPP On Bottom (psi)	2800	3000	NOV	0.752in ²	5 x 14	
Slack Off (lbf)	90	92	Delta Pressure (psi)	650	750	Model:	Bit Diameter:	Bit Hours:	
Rot. Off Bottom (lbf)	110	118	Flow Rate (gpm/US)	500	500	TKC56	8 3/4"	6.70Hrs.	
Bottom Hole Temp (°F)	133.0	133.0	Pump Rate (SPM)	169	169	Type:	IADC#:	Bit Footage:	
Rotary Speed (RPM)	30	30	Motor Speed (RPM)	250	280	8 3/4" PDC	516	1,358.00ft	
Surface Torque (ft-lbs)	12600	12600				Serial Number:	Condition:		
						A245022	No Dull Characteristics		
						Grade:	Reason for pulling out of hole:		
						1,1	Landed Curve		

End of Well Report for M11 2308 Pad, # 108H
Motor Properties - Original drilling, Curve

Description: 4/5, 7.0, 2.25 FBH	Motor Type: 6 1/2" Motor	Manufacturer: SDI	Model: Titan	Serial Number: 6906	Lobe/Stage: 4:5/7.0
Mud Type: Water based	Stabilizer Type:		Rubber Type: NBHR	Fit Type:	
Pad OD: 7 1/4"	NB Stabilizer: 0	Bit to Bend: 4.44ft	Bend Angle: 2.25°	Pressure Drop: 0psi	Rev. Rate: 0.50Rev/gal(US)
Motor Footage: 1,358.00ft	Below Rotary Hours: 34.08hrs	Circulating Hours: 12.47hrs	Rotating Footage: 410.00ft	Rotating Hours: 2.40hrs	Sliding Footage: 948.00ft
Proposed Build Rate: 9.00"/100ft	Actual Build Rate: 11.00"/100ft	Date/Time In: 7/15/2019 8:10 PM	Date/Time Out: 7/17/2019 6:15 AM	Number of Stalls: 0	Stall Duration: 0.00mins
Motor Failed: No	Condition: Good, Drained				Extended Motor: No

Drillstring Components - Original drilling, Curve (BHA #2)

Item #	Description	Vendor	Serial No.	Outside Diameter (")	Inside Diameter (")	Linear Weight (lbs/ft)	Component Weight (lbf)	Top Connection	Length (ft)	Total Length (ft)
1	NOV PDC TKC56 w/ 5x14's	NOV	A245022	8 3/4	0	0.00	0	4 1/2 REG	0.77	0.77
2	4/5, 7.0, 2.25 FBH	SDI	6906	6 1/2	1	0.00	0	4 1/2 XH	26.46	27.23
3	6 1/2" NMFP	SDI	125-308F	6 7/16	3 1/4	0.00	0	4 1/2 XH	9.74	36.97
4	6 1/2" Flex NMDC	SDI	122-1054F	6 7/16	3 1/4	0.00	0	4 1/2 XH	30.88	67.85
5	6 1/2" HOS	SDI	8-966	6 5/16	3 1/4	0.00	0	4 1/2 XH	2.52	70.37
6	6 1/2" GAP	SDI	69-736	6 7/16	2 7/8	0.00	0	4 1/2 XH	4.82	75.19
7	6 1/2" NMDC	SDI	122-260	6 1/8	3 1/4	0.00	0	4 1/2 XH	29.43	104.62
8	6 1/2" NMDC	SDI	15-088	6 1/8	3 1/4	0.00	0	4 1/2 XH	29.14	133.76
9	24 jts DP	RIG	RIG	4 1/2	0	0.00	0	4 1/2 XH	757.20	890.96
10	60 jts HWDP	RIG	RIG	4 1/2	0	0.00	0	4 1/2 XH	1,823.66	2,714.62

Drilling Parameters - Original drilling, Lateral

	Min	Max		Min	Max
WOB (lbf)	15	28	SPP Off Bottom (psi)	1150	1950
Pick Up (lbf)	110	140	SPP On Bottom (psi)	1800	2550
Slack Off (lbf)	20	73	Delta Pressure (psi)	300	825
Rot. Off Bottom (lbf)	20	84	Flow Rate (gpm(US))	200	300
Bottom Hole Temp (°F)	102.0	102.0	Pump Rate (SPM)	68	103
Rotary Speed (RPM)	20	60	Motor Speed (RPM)	182	303
Surface Torque (ft-lbs)	5500	14500			

Bit Record - Original drilling, Lateral

Bit Number: 3	Description: Baker Hughes PDC DD505T
Manufacturer: Baker Hughes	TFA: 0.982in²
Model: DD505T	Bit Diameter: 6 1/8"
Type: PDC	IADC#: 516
Serial Number: 5289540	Condition: Chipped Teeth and Cutters
Grade: 1,3	Reason for pulling out of hole: TD
	Jets: 5 x 16
	Bit Hours: 35.35Hrs.
	Bit Footage: 7,857.01ft

Motor Properties - Original drilling, Lateral

Description: 5" Hunting 6/7 8.0 FBH 1.83	Motor Type: Motor	Manufacturer: Hunting	Model: Dirt Dart	Serial Number: 201	Lobe/Stage: 6/7/8.0
Mud Type: WBM	Stabilizer Type: N/A		Rubber Type: NBHR	Fit Type: .005	
Pad OD: 5 1/4"	NB Stabilizer: 0	Bit to Bend: 5.00ft	Bend Angle: 1.83°	Pressure Drop: 0psi	Rev. Rate: 0.81Rev/gal(US)
Motor Footage: 7,857.01ft	Below Rotary Hours: 87.58hrs	Circulating Hours: 42.23hrs	Rotating Footage: 7,084.01ft	Rotating Hours: 26.03hrs	Sliding Footage: 773.00ft
Proposed Build Rate: 9.79"/100ft	Actual Build Rate: 0.00"/100ft	Date/Time In: 7/18/2019 1:40 AM	Date/Time Out: 7/21/2019 5:15 PM	Number of Stalls: 0	Stall Duration: 0.00mins
Motor Failed: No	Condition: DIRTY				Extended Motor: No

Motor Discussion

MOTOR DRAINED NORMAL

Drillstring Components - Original drilling, Lateral (BHA #3)

Item #	Description	Vendor	Serial No.	Outside Diameter (")	Inside Diameter (")	Linear Weight (lbs/ft)	Component Weight (lbf)	Top Connection	Length (ft)	Total Length (ft)
1	Baker Hughes PDC DD505T w/ 5x16's	Baker Hughes	5289540	6 1/8	0	0.00	0	3 1/2 REG	0.95	0.95
2	5" Hunting 6/7 8.0 FBH 1.83	Hunting	201	5	1	0.00	0	3 1/2 IF	29.80	30.75
3	5 1/2" Stabilizer	SDI	DR 20357	4 3/4	2 3/4	0.00	0	3 1/2 IF	4.75	35.50
4	NMDC Pony	SDI	17-367	4 11/16	2 11/16	0.00	0	3 1/2 IF	9.74	45.24
5	NMDC	SDI	121-667	4 3/4	2 11/16	0.00	0	3 1/2 IF	30.93	76.17
6	Hang Off Sub	SDI	8-996	4 5/8	2 3/4	0.00	0	3 1/2 IF	2.00	78.17
7	Gap Sub	SDI	69-295	4 3/4	2 7/16	0.00	0	3 1/2 IF	4.30	82.47
8	NMDC	SDI	121-660	4 3/4	2 11/16	0.00	0	3 1/2 IF	31.06	113.53

End of Well Report for M11 2308 Pad, # 108H
Drillstring Components - Original drilling, Lateral (BHA #3)

Item #	Description	Vendor	Serial No.	Outside Diameter (")	Inside Diameter (")	Linear Weight (lbs/ft)	Component Weight (lbf)	Top Connection	Length (ft)	Total Length (ft)
9	NMDC	SDI	121-388	4 11/16	2 11/16	0.00	0	3 1/2 IF	31.01	144.54
10	Cross Over	SD	DR-40678	4 7/8	2 11/16	0.00	0	XT-39	2.54	147.08
11	4" DP (74 JTS)	RIG	RIG	4	0	0.00	0	XT 39	2,354.67	2,501.75
12	Agitator	NOV	W1775536-1	4 13/16	0	0.00	0	XT 39	22.57	2,524.32
13	4" DP (219 JTS)	RIG	RIG	4	0	0.00	0	XT 39	6,875.33	9,399.65
14	4" HWDP (102 JTS)	RIG	RIG	4	0	0.00	0	XT 39	3,100.00	12,499.65
15	4" DP (44 JTS)	RIG	RIG	4	0	0.00	0	XT 39	1,390.00	13,889.65

Activity Breakdown

Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
Original drilling, Intermediate									
14 Jul 2019	10:45	11:25	0.67	381.00	381.00			Change BHA	M/U BHA #1
14 Jul 2019	11:25	11:55	0.50	381.00	381.00			Tripping In	
14 Jul 2019	11:55	12:30	0.58	381.00	381.00			Drill Cement and/or Float Equipment	
14 Jul 2019	12:30	12:42	0.20	381.00	436.00	55.00	275.00	Rotating	
14 Jul 2019	12:42	12:48	0.10	436.00	436.00			Connection (drilling)	
14 Jul 2019	12:48	12:50	0.03	436.00	448.00	12.00	360.00	Sliding	
14 Jul 2019	12:50	12:59	0.15	448.00	497.00	49.00	326.67	Rotating	
14 Jul 2019	12:59	13:05	0.10	497.00	497.00			Survey & Connection	
14 Jul 2019	13:05	13:07	0.03	497.00	509.00	12.00	360.00	Sliding	
14 Jul 2019	13:07	13:11	0.07	509.00	557.00	48.00	720.00	Rotating	
14 Jul 2019	13:11	13:17	0.10	557.00	557.00			Survey & Connection	
14 Jul 2019	13:17	13:18	0.02	557.00	567.00	10.00	600.00	Sliding	
14 Jul 2019	13:18	13:22	0.07	567.00	618.00	51.00	765.00	Rotating	
14 Jul 2019	13:22	13:27	0.08	618.00	618.00			Survey & Connection	
14 Jul 2019	13:27	13:28	0.02	618.00	628.00	10.00	600.00	Sliding	
14 Jul 2019	13:28	13:32	0.07	628.00	678.00	50.00	750.00	Rotating	
14 Jul 2019	13:32	13:37	0.08	678.00	678.00			Survey & Connection	
14 Jul 2019	13:37	13:41	0.07	678.00	740.00	62.00	930.00	Rotating	
14 Jul 2019	13:41	13:46	0.08	740.00	740.00			Survey & Connection	
14 Jul 2019	13:46	13:47	0.02	740.00	750.00	10.00	600.00	Sliding	
14 Jul 2019	13:47	13:51	0.07	750.00	800.00	50.00	750.00	Rotating	
14 Jul 2019	13:51	13:56	0.08	800.00	800.00			Survey & Connection	
14 Jul 2019	13:56	13:57	0.02	800.00	810.00	10.00	600.00	Sliding	
14 Jul 2019	13:57	14:03	0.10	810.00	861.00	51.00	510.00	Rotating	
14 Jul 2019	14:03	14:10	0.12	861.00	861.00			Survey & Connection	
14 Jul 2019	14:10	14:11	0.02	861.00	869.00	8.00	480.00	Sliding	
14 Jul 2019	14:11	14:18	0.12	869.00	921.00	52.00	445.72	Rotating	
14 Jul 2019	14:18	14:24	0.10	921.00	921.00			Survey & Connection	
14 Jul 2019	14:24	14:25	0.02	921.00	933.00	12.00	720.00	Sliding	
14 Jul 2019	14:25	14:29	0.07	933.00	983.00	50.00	750.00	Rotating	
14 Jul 2019	14:29	14:38	0.15	983.00	983.00			Survey & Connection	
14 Jul 2019	14:38	14:39	0.02	983.00	995.00	12.00	720.00	Sliding	
14 Jul 2019	14:39	14:42	0.05	995.00	1,044.00	49.00	980.00	Rotating	
14 Jul 2019	14:42	14:48	0.10	1,044.00	1,044.00			Survey & Connection	
14 Jul 2019	14:48	14:49	0.02	1,044.00	1,055.00	11.00	660.00	Sliding	
14 Jul 2019	14:49	14:54	0.08	1,055.00	1,104.00	49.00	588.00	Rotating	
14 Jul 2019	14:54	15:03	0.15	1,104.00	1,104.00			Survey & Connection	
14 Jul 2019	15:03	15:04	0.02	1,104.00	1,115.00	11.00	660.00	Sliding	
14 Jul 2019	15:04	15:08	0.07	1,115.00	1,165.00	50.00	750.00	Rotating	
14 Jul 2019	15:08	15:17	0.15	1,165.00	1,165.00			Survey & Connection	
14 Jul 2019	15:17	15:18	0.02	1,165.00	1,176.00	11.00	660.00	Sliding	
14 Jul 2019	15:18	15:26	0.13	1,176.00	1,225.00	49.00	367.50	Rotating	
14 Jul 2019	15:26	15:36	0.17	1,225.00	1,225.00			Survey & Connection	
14 Jul 2019	15:36	15:37	0.02	1,225.00	1,235.00	10.00	600.00	Sliding	
14 Jul 2019	15:37	15:45	0.13	1,235.00	1,287.00	52.00	390.00	Rotating	
14 Jul 2019	15:45	15:51	0.10	1,287.00	1,287.00			Survey & Connection	
14 Jul 2019	15:51	15:52	0.02	1,287.00	1,297.00	10.00	600.00	Sliding	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
14 Jul 2019	15:52	16:02	0.17	1,297.00	1,348.00	51.00	306.00	Rotating	
14 Jul 2019	16:02	16:09	0.12	1,348.00	1,348.00			Survey & Connection	
14 Jul 2019	16:09	16:13	0.07	1,348.00	1,370.00	22.00	330.00	Sliding	
14 Jul 2019	16:13	16:18	0.08	1,370.00	1,410.00	40.00	480.00	Rotating	
14 Jul 2019	16:18	16:23	0.08	1,410.00	1,410.00			Survey & Connection	
14 Jul 2019	16:23	16:32	0.15	1,410.00	1,470.00	60.00	400.00	Rotating	
14 Jul 2019	16:32	16:39	0.12	1,470.00	1,470.00			Survey & Connection	
14 Jul 2019	16:39	16:42	0.05	1,470.00	1,484.00	14.00	280.00	Sliding	
14 Jul 2019	16:42	16:51	0.15	1,484.00	1,531.00	47.00	313.33	Rotating	
14 Jul 2019	16:51	16:59	0.13	1,531.00	1,531.00			Survey & Connection	
14 Jul 2019	16:59	17:01	0.03	1,531.00	1,546.00	15.00	450.00	Sliding	
14 Jul 2019	17:01	17:17	0.27	1,546.00	1,592.00	46.00	172.50	Rotating	
14 Jul 2019	17:17	17:21	0.07	1,592.00	1,592.00			Survey & Connection	
14 Jul 2019	17:21	17:23	0.03	1,592.00	1,602.00	10.00	300.00	Sliding	
14 Jul 2019	17:23	17:34	0.18	1,602.00	1,653.00	51.00	278.18	Rotating	
14 Jul 2019	17:34	17:35	0.02	1,653.00	1,653.00			Survey & Connection	
14 Jul 2019	17:35	17:52	0.28	1,653.00	1,713.00	60.00	211.77	Rotating	
14 Jul 2019	17:52	18:02	0.17	1,713.00	1,713.00			Survey & Connection	
14 Jul 2019	18:02	18:11	0.15	1,713.00	1,773.00	60.00	400.00	Rotating	
14 Jul 2019	18:11	18:19	0.13	1,773.00	1,773.00			Survey & Connection	
14 Jul 2019	18:19	18:21	0.03	1,773.00	1,783.00	10.00	300.00	Sliding	
14 Jul 2019	18:21	18:30	0.15	1,783.00	1,834.00	51.00	340.00	Rotating	
14 Jul 2019	18:30	18:35	0.08	1,834.00	1,834.00			Survey & Connection	
14 Jul 2019	18:35	18:44	0.15	1,834.00	1,896.00	62.00	413.33	Rotating	
14 Jul 2019	18:44	18:54	0.17	1,896.00	1,896.00			Survey & Connection	
14 Jul 2019	18:54	18:57	0.05	1,896.00	1,911.00	15.00	300.00	Sliding	
14 Jul 2019	18:57	19:03	0.10	1,911.00	1,957.00	46.00	460.00	Rotating	
14 Jul 2019	19:03	19:08	0.08	1,957.00	1,957.00			Survey & Connection	
14 Jul 2019	19:08	19:11	0.05	1,957.00	1,974.00	17.00	340.00	Sliding	
14 Jul 2019	19:11	19:18	0.12	1,974.00	2,020.00	46.00	394.29	Rotating	
14 Jul 2019	19:18	19:24	0.10	2,020.00	2,020.00			Survey & Connection	
14 Jul 2019	19:24	19:28	0.07	2,020.00	2,050.00	30.00	450.00	Sliding	
14 Jul 2019	19:28	19:35	0.12	2,050.00	2,083.00	33.00	282.86	Rotating	
14 Jul 2019	19:35	19:42	0.12	2,083.00	2,083.00			Survey & Connection	
14 Jul 2019	19:42	19:48	0.10	2,083.00	2,116.00	33.00	330.00	Sliding	
14 Jul 2019	19:48	19:53	0.08	2,116.00	2,146.00	30.00	360.00	Rotating	
14 Jul 2019	19:53	20:00	0.12	2,146.00	2,146.00			Survey & Connection	
14 Jul 2019	20:00	20:10	0.17	2,146.00	2,209.00	63.00	378.00	Rotating	
14 Jul 2019	20:10	20:17	0.12	2,209.00	2,209.00			Survey & Connection	
14 Jul 2019	20:17	20:28	0.18	2,209.00	2,272.00	63.00	343.64	Rotating	
14 Jul 2019	20:28	20:35	0.12	2,272.00	2,272.00			Survey & Connection	
14 Jul 2019	20:35	20:45	0.17	2,272.00	2,336.00	64.00	384.00	Rotating	
14 Jul 2019	20:45	20:51	0.10	2,336.00	2,336.00			Survey & Connection	
14 Jul 2019	20:51	20:55	0.07	2,336.00	2,351.00	15.00	225.00	Sliding	
14 Jul 2019	20:55	21:05	0.17	2,351.00	2,399.00	48.00	288.00	Rotating	
14 Jul 2019	21:05	21:09	0.07	2,399.00	2,399.00			Survey & Connection	
14 Jul 2019	21:09	21:20	0.18	2,399.00	2,462.00	63.00	343.64	Rotating	
14 Jul 2019	21:20	21:26	0.10	2,462.00	2,462.00			Survey & Connection	
14 Jul 2019	21:26	21:29	0.05	2,462.00	2,477.00	15.00	300.00	Sliding	
14 Jul 2019	21:29	21:36	0.12	2,477.00	2,525.00	48.00	411.43	Rotating	
14 Jul 2019	21:36	21:43	0.12	2,525.00	2,525.00			Survey & Connection	
14 Jul 2019	21:43	21:47	0.07	2,525.00	2,550.00	25.00	375.00	Sliding	
14 Jul 2019	21:47	21:58	0.18	2,550.00	2,588.00	38.00	207.27	Rotating	
14 Jul 2019	21:58	22:03	0.08	2,588.00	2,588.00			Survey & Connection	
14 Jul 2019	22:03	22:13	0.17	2,588.00	2,651.00	63.00	378.00	Rotating	
14 Jul 2019	22:13	22:18	0.08	2,651.00	2,651.00			Survey & Connection	
14 Jul 2019	22:18	22:27	0.15	2,651.00	2,715.00	64.00	426.67	Rotating	
14 Jul 2019	22:27	22:34	0.12	2,715.00	2,715.00			Survey & Connection	
14 Jul 2019	22:34	22:44	0.17	2,715.00	2,778.00	63.00	378.00	Rotating	
14 Jul 2019	22:44	22:49	0.08	2,778.00	2,778.00			Survey & Connection	
14 Jul 2019	22:49	22:59	0.17	2,778.00	2,841.00	63.00	378.00	Rotating	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
14 Jul 2019	22:59	23:05	0.10	2,841.00	2,841.00			Survey & Connection	
14 Jul 2019	23:05	23:18	0.22	2,841.00	2,905.00	64.00	295.39	Rotating	
14 Jul 2019	23:18	23:22	0.07	2,905.00	2,905.00			Survey & Connection	
14 Jul 2019	23:22	23:26	0.07	2,905.00	2,923.00	18.00	270.00	Sliding	
14 Jul 2019	23:26	23:34	0.13	2,923.00	2,968.00	45.00	337.50	Rotating	
14 Jul 2019	23:34	23:38	0.07	2,968.00	2,968.00			Survey & Connection	
14 Jul 2019	23:38	23:49	0.18	2,968.00	3,031.00	63.00	343.64	Rotating	
14 Jul 2019	23:49	23:55	0.10	3,031.00	3,031.00			Survey & Connection	
14 Jul 2019	23:55	00:05	0.17	3,031.00	3,094.00	63.00	378.00	Rotating	
15 Jul 2019	00:05	00:13	0.13	3,094.00	3,094.00			Survey & Connection	
15 Jul 2019	00:13	00:20	0.12	3,094.00	3,114.00	20.00	171.43	Sliding	
15 Jul 2019	00:20	00:30	0.17	3,114.00	3,157.00	43.00	258.00	Rotating	
15 Jul 2019	00:30	00:36	0.10	3,157.00	3,157.00			Survey & Connection	
15 Jul 2019	00:36	00:40	0.07	3,157.00	3,182.00	25.00	375.00	Sliding	
15 Jul 2019	00:40	00:48	0.13	3,182.00	3,220.00	38.00	285.00	Rotating	
15 Jul 2019	00:48	00:54	0.10	3,220.00	3,220.00			Survey & Connection	
15 Jul 2019	00:54	01:04	0.17	3,220.00	3,283.00	63.00	378.00	Rotating	
15 Jul 2019	01:04	01:09	0.08	3,283.00	3,283.00			Survey & Connection	
15 Jul 2019	01:09	01:19	0.17	3,283.00	3,347.00	64.00	384.00	Rotating	
15 Jul 2019	01:19	01:24	0.08	3,347.00	3,347.00			Survey & Connection	
15 Jul 2019	01:24	01:29	0.08	3,347.00	3,373.00	26.00	312.00	Sliding	
15 Jul 2019	01:29	01:37	0.13	3,373.00	3,410.00	37.00	277.50	Rotating	
15 Jul 2019	01:37	01:42	0.08	3,410.00	3,410.00			Survey & Connection	
15 Jul 2019	01:42	01:48	0.10	3,410.00	3,435.00	25.00	250.00	Sliding	
15 Jul 2019	01:48	01:57	0.15	3,435.00	3,473.00	38.00	253.33	Rotating	
15 Jul 2019	01:57	02:00	0.05	3,473.00	3,473.00			Survey & Connection	
15 Jul 2019	02:00	02:13	0.22	3,473.00	3,536.00	63.00	290.77	Rotating	
15 Jul 2019	02:13	02:18	0.08	3,536.00	3,536.00			Survey & Connection	
15 Jul 2019	02:18	02:30	0.20	3,536.00	3,599.00	63.00	315.00	Rotating	
15 Jul 2019	02:30	02:36	0.10	3,599.00	3,599.00			Survey & Connection	
15 Jul 2019	02:36	02:40	0.07	3,599.00	3,619.00	20.00	300.00	Sliding	
15 Jul 2019	02:40	02:49	0.15	3,619.00	3,662.00	43.00	286.67	Rotating	
15 Jul 2019	02:49	02:55	0.10	3,662.00	3,662.00			Survey & Connection	
15 Jul 2019	02:55	03:07	0.20	3,662.00	3,725.00	63.00	315.00	Rotating	
15 Jul 2019	03:07	03:15	0.13	3,725.00	3,725.00			Survey & Connection	
15 Jul 2019	03:15	03:18	0.05	3,725.00	3,742.00	17.00	340.00	Sliding	
15 Jul 2019	03:18	03:28	0.17	3,742.00	3,788.00	46.00	276.00	Rotating	
15 Jul 2019	03:28	03:45	0.28	3,788.00	3,788.00			Lubricate Rig	
15 Jul 2019	03:45	03:49	0.07	3,788.00	3,788.00			Survey & Connection	
15 Jul 2019	03:49	03:54	0.08	3,788.00	3,806.00	18.00	216.00	Sliding	
15 Jul 2019	03:54	04:05	0.18	3,806.00	3,851.00	45.00	245.46	Rotating	
15 Jul 2019	04:05	04:11	0.10	3,851.00	3,851.00			Survey & Connection	
15 Jul 2019	04:11	04:16	0.08	3,851.00	3,868.00	17.00	204.00	Sliding	
15 Jul 2019	04:16	04:24	0.13	3,868.00	3,915.00	47.00	352.50	Rotating	
15 Jul 2019	04:24	04:30	0.10	3,915.00	3,915.00			Survey & Connection	
15 Jul 2019	04:30	04:37	0.12	3,915.00	3,945.00	30.00	257.14	Sliding	
15 Jul 2019	04:37	04:45	0.13	3,945.00	3,978.00	33.00	247.50	Rotating	
15 Jul 2019	04:45	04:50	0.08	3,978.00	3,978.00			Survey & Connection	
15 Jul 2019	04:50	05:03	0.22	3,978.00	3,978.00			Downlink	Talk to EM Tool
15 Jul 2019	05:03	05:15	0.20	3,978.00	4,041.00	63.00	315.00	Rotating	
15 Jul 2019	05:15	05:24	0.15	4,041.00	4,041.00			Survey & Connection	
15 Jul 2019	05:24	05:29	0.08	4,041.00	4,066.00	25.00	300.00	Sliding	
15 Jul 2019	05:29	05:37	0.13	4,066.00	4,104.00	38.00	285.00	Rotating	
15 Jul 2019	05:37	05:42	0.08	4,104.00	4,104.00			Circulate and/or Condition Mud	
15 Jul 2019	05:42	05:50	0.13	4,104.00	4,104.00			Survey & Connection	
15 Jul 2019	05:50	05:59	0.15	4,104.00	4,134.00	30.00	200.00	Sliding	
15 Jul 2019	05:59	06:03	0.07	4,134.00	4,146.00	12.00	180.00	Rotating	
15 Jul 2019	06:03	06:08	0.08	4,146.00	4,146.00			Circulate and/or Condition Mud	Wash out on stand pipe
15 Jul 2019	06:08	07:02	0.90	4,146.00	4,146.00			Short Trip Out	
15 Jul 2019	07:02	08:00	0.97	4,146.00	4,146.00			Circulate and/or Condition Mud	Circulate on 2"
15 Jul 2019	08:00	08:26	0.43	4,146.00	4,146.00			Short Trip In	

End of Well Report for M11 2308 Pad, # 108H
Activity Breakdown

Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
15 Jul 2019	08:26	08:32	0.10	4,146.00	4,167.00	21.00	210.00	Rotating	
15 Jul 2019	08:32	08:39	0.12	4,167.00	4,167.00			Survey & Connection	
15 Jul 2019	08:39	08:44	0.08	4,167.00	4,182.00	15.00	180.00	Sliding	
15 Jul 2019	08:44	08:54	0.17	4,182.00	4,230.00	48.00	288.00	Rotating	
15 Jul 2019	08:54	09:01	0.12	4,230.00	4,230.00			Survey & Connection	
15 Jul 2019	09:01	09:15	0.23	4,230.00	4,293.00	63.00	270.00	Rotating	
15 Jul 2019	09:15	09:21	0.10	4,293.00	4,293.00			Survey & Connection	
15 Jul 2019	09:21	09:33	0.20	4,293.00	4,356.00	63.00	315.00	Rotating	
15 Jul 2019	09:33	09:40	0.12	4,356.00	4,356.00			Survey & Connection	
15 Jul 2019	09:40	09:53	0.22	4,356.00	4,371.00	15.00	69.23	Sliding	
15 Jul 2019	09:53	10:02	0.15	4,371.00	4,413.00	42.00	280.00	Rotating	
15 Jul 2019	10:02	11:10	1.13	4,413.00	4,413.00			Circulate and/or Condition Mud	Pump down
15 Jul 2019	11:10	11:11	0.02	4,413.00	4,419.00	6.00	360.00	Rotating	
15 Jul 2019	11:11	11:18	0.12	4,419.00	4,419.00			Survey & Connection	
15 Jul 2019	11:18	11:24	0.10	4,419.00	4,434.00	15.00	150.00	Sliding	
15 Jul 2019	11:24	11:36	0.20	4,434.00	4,482.00	48.00	240.00	Rotating	
15 Jul 2019	11:36	11:42	0.10	4,482.00	4,482.00			Survey & Connection	
15 Jul 2019	11:42	11:54	0.20	4,482.00	4,545.00	63.00	315.00	Rotating	
15 Jul 2019	11:54	11:57	0.05	4,545.00	4,545.00			Deviation Survey	
15 Jul 2019	11:57	12:53	0.93	4,545.00	4,545.00			Circulate and/or Condition Mud	
15 Jul 2019	12:53	16:30	3.62	4,545.00	4,545.00			Tripping Out	
15 Jul 2019	16:30	17:15	0.75	4,545.00	4,545.00			Change BHA	L/D Motor / Bit
Original drilling, Curve									
15 Jul 2019	17:15	18:00	0.75	4,545.00	4,545.00			Change BHA	P/U Curve Motor / Bit
15 Jul 2019	18:00	20:10	2.17	4,545.00	4,545.00			Other	Slip and Cut / Rig Service
15 Jul 2019	20:10	23:20	3.17	4,545.00	4,545.00			Tripping In	
15 Jul 2019	23:20	23:26	0.10	4,545.00	4,565.00	20.00	200.00	Sliding	
15 Jul 2019	23:26	23:33	0.12	4,565.00	4,581.00	16.00	137.14	Rotating	
15 Jul 2019	23:33	23:45	0.20	4,581.00	4,608.00	27.00	135.00	Sliding	
15 Jul 2019	23:45	23:52	0.12	4,608.00	4,608.00			Survey & Connection	
15 Jul 2019	23:52	00:13	0.35	4,608.00	4,671.00	63.00	180.00	Sliding	
16 Jul 2019	00:13	00:25	0.20	4,671.00	4,671.00			Survey & Connection	
16 Jul 2019	00:25	00:39	0.23	4,671.00	4,734.00	63.00	270.00	Sliding	
16 Jul 2019	00:39	00:47	0.13	4,734.00	4,734.00			Survey & Connection	
16 Jul 2019	00:47	01:03	0.27	4,734.00	4,797.00	63.00	236.25	Sliding	
16 Jul 2019	01:03	01:10	0.12	4,797.00	4,797.00			Survey & Connection	
16 Jul 2019	01:10	01:26	0.27	4,797.00	4,860.00	63.00	236.25	Sliding	
16 Jul 2019	01:26	01:34	0.13	4,860.00	4,860.00			Survey & Connection	
16 Jul 2019	01:34	01:48	0.23	4,860.00	4,924.00	64.00	274.29	Sliding	
16 Jul 2019	01:48	01:58	0.17	4,924.00	4,924.00			Survey & Connection	
16 Jul 2019	01:58	02:09	0.18	4,924.00	4,968.00	44.00	240.00	Sliding	
16 Jul 2019	02:09	02:09	0.00	4,968.00	4,987.00	19.00	Infinity	Rotating	
16 Jul 2019	02:09	02:26	0.28	4,987.00	4,987.00			Survey & Connection	
16 Jul 2019	02:26	02:37	0.18	4,987.00	5,029.00	42.00	229.09	Sliding	
16 Jul 2019	02:37	02:45	0.13	5,029.00	5,050.00	21.00	157.50	Rotating	
16 Jul 2019	02:45	02:53	0.13	5,050.00	5,050.00			Survey & Connection	
16 Jul 2019	02:53	03:02	0.15	5,050.00	5,085.00	35.00	233.33	Sliding	
16 Jul 2019	03:02	03:12	0.17	5,085.00	5,113.00	28.00	168.00	Rotating	
16 Jul 2019	03:12	03:22	0.17	5,113.00	5,113.00			Survey & Connection	
16 Jul 2019	03:22	03:30	0.13	5,113.00	5,143.00	30.00	225.00	Sliding	
16 Jul 2019	03:30	03:40	0.17	5,143.00	5,176.00	33.00	198.00	Rotating	
16 Jul 2019	03:40	03:49	0.15	5,176.00	5,176.00			Survey & Connection	
16 Jul 2019	03:49	03:56	0.12	5,176.00	5,211.00	35.00	300.00	Sliding	
16 Jul 2019	03:56	04:10	0.23	5,211.00	5,239.00	28.00	120.00	Rotating	
16 Jul 2019	04:10	04:15	0.08	5,239.00	5,239.00			Survey & Connection	
16 Jul 2019	04:15	04:26	0.18	5,239.00	5,284.00	45.00	245.46	Sliding	
16 Jul 2019	04:26	04:33	0.12	5,284.00	5,302.00	18.00	154.29	Rotating	
16 Jul 2019	04:33	04:41	0.13	5,302.00	5,302.00			Survey & Connection	
16 Jul 2019	04:41	04:54	0.22	5,302.00	5,355.00	53.00	244.62	Sliding	
16 Jul 2019	04:54	04:58	0.07	5,355.00	5,365.00	10.00	150.00	Rotating	
16 Jul 2019	04:58	05:07	0.15	5,365.00	5,365.00			Survey & Connection	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
16 Jul 2019	05:07	05:24	0.28	5,365.00	5,428.00	63.00	222.35	Sliding	
16 Jul 2019	05:24	05:34	0.17	5,428.00	5,428.00			Survey & Connection	
16 Jul 2019	05:34	05:46	0.20	5,428.00	5,478.00	50.00	250.00	Sliding	
16 Jul 2019	05:46	05:52	0.10	5,478.00	5,491.00	13.00	130.00	Rotating	
16 Jul 2019	05:52	06:00	0.13	5,491.00	5,491.00			Survey & Connection	
16 Jul 2019	06:00	06:31	0.52	5,491.00	5,491.00			Circulate and/or Condition Mud	Target change discussion
16 Jul 2019	06:31	06:41	0.17	5,491.00	5,528.00	37.00	222.00	Sliding	
16 Jul 2019	06:41	06:49	0.13	5,528.00	5,554.00	26.00	195.00	Rotating	
16 Jul 2019	06:49	07:00	0.18	5,554.00	5,554.00			Survey & Connection	
16 Jul 2019	07:00	07:12	0.20	5,554.00	5,595.00	41.00	205.00	Sliding	
16 Jul 2019	07:12	07:19	0.12	5,595.00	5,617.00	22.00	188.57	Rotating	
16 Jul 2019	07:19	07:32	0.22	5,617.00	5,617.00			Survey & Connection	
16 Jul 2019	07:32	07:42	0.17	5,617.00	5,645.00	28.00	168.00	Sliding	
16 Jul 2019	07:42	07:54	0.20	5,645.00	5,680.00	35.00	175.00	Rotating	
16 Jul 2019	07:54	08:06	0.20	5,680.00	5,680.00			Survey & Connection	
16 Jul 2019	08:06	08:12	0.10	5,680.00	5,700.00	20.00	200.00	Sliding	
16 Jul 2019	08:12	08:28	0.27	5,700.00	5,743.00	43.00	161.25	Rotating	
16 Jul 2019	08:28	08:39	0.18	5,743.00	5,743.00			Survey & Connection	
16 Jul 2019	08:39	08:47	0.13	5,743.00	5,773.00	30.00	225.00	Sliding	
16 Jul 2019	08:47	08:59	0.20	5,773.00	5,806.00	33.00	165.00	Rotating	
16 Jul 2019	08:59	09:10	0.18	5,806.00	5,806.00			Survey & Connection	
16 Jul 2019	09:10	09:16	0.10	5,806.00	5,821.00	15.00	150.00	Sliding	
16 Jul 2019	09:16	09:32	0.27	5,821.00	5,869.00	48.00	180.00	Rotating	
16 Jul 2019	09:32	09:45	0.22	5,869.00	5,869.00			Survey & Connection	
16 Jul 2019	09:45	09:53	0.13	5,869.00	5,886.00	17.00	127.50	Sliding	
16 Jul 2019	09:53	10:00	0.12	5,886.00	5,903.00	17.00	145.71	Rotating	
16 Jul 2019	10:00	10:03	0.05	5,903.00	5,903.00			Deviation Survey	
16 Jul 2019	10:03	10:48	0.75	5,903.00	5,903.00			Circulate and/or Condition Mud	
16 Jul 2019	10:48	11:01	0.22	5,903.00	5,903.00			Short Trip Out	
16 Jul 2019	11:01	11:16	0.25	5,903.00	5,903.00			Stuck Pipe	Work motor free
16 Jul 2019	11:16	15:25	4.15	5,903.00	5,903.00			Short Trip Out	
16 Jul 2019	15:25	16:08	0.72	5,903.00	5,903.00			Lubricate Rig	
16 Jul 2019	16:08	19:30	3.37	5,903.00	5,903.00			Short Trip Out	
16 Jul 2019	19:30	00:00	4.50	5,903.00	5,903.00			Circulate and/or Condition Mud	
17 Jul 2019	00:00	06:15	6.25	5,903.00	5,903.00			Tripping Out	L/D Drill Pipe
17 Jul 2019	06:15	07:00	0.75	5,903.00	5,903.00			Change BHA	L/D BHA
17 Jul 2019	07:00	23:59	16.98	5,903.00	5,903.00			Standby	
Original drilling, Lateral									
17 Jul 2019	23:59	00:30	0.52	5,903.00	5,903.00			Test BOP	
18 Jul 2019	00:30	01:40	1.17	5,903.00	5,903.00			Change BHA	P/U BHA
18 Jul 2019	01:40	09:22	7.70	5,903.00	5,903.00			Tripping In	
18 Jul 2019	09:22	10:10	0.80	5,903.00	5,903.00			Circulate and/or Condition Mud	
18 Jul 2019	10:10	10:48	0.63	5,903.00	5,903.00			Pressure Integrity Test	Test Casing @ 1750 PSI
18 Jul 2019	10:48	11:10	0.37	5,903.00	5,903.00			Other	Change stabbing guide on top drive
18 Jul 2019	11:10	11:32	0.37	5,903.00	5,903.00			Tripping In	
18 Jul 2019	11:32	12:21	0.82	5,903.00	5,903.00			Drill Cement and/or Float Equipment	
18 Jul 2019	12:21	12:44	0.38	5,903.00	5,953.00	50.00	130.44	Rotating	
18 Jul 2019	12:44	12:54	0.17	5,953.00	5,953.00			Connection (drilling)	
18 Jul 2019	12:54	13:09	0.25	5,953.00	6,015.00	62.00	248.00	Rotating	
18 Jul 2019	13:09	13:15	0.10	6,015.00	6,015.00			Survey & Connection	
18 Jul 2019	13:15	13:26	0.18	6,015.00	6,078.00	63.00	343.64	Rotating	
18 Jul 2019	13:26	13:35	0.15	6,078.00	6,078.00			Survey & Connection	
18 Jul 2019	13:35	13:44	0.15	6,078.00	6,098.00	20.00	133.33	Sliding	
18 Jul 2019	13:44	13:52	0.13	6,098.00	6,141.00	43.00	322.50	Rotating	
18 Jul 2019	13:52	13:59	0.12	6,141.00	6,141.00			Survey & Connection	
18 Jul 2019	13:59	14:07	0.13	6,141.00	6,159.00	18.00	135.00	Sliding	
18 Jul 2019	14:07	14:16	0.15	6,159.00	6,205.00	46.00	306.67	Rotating	
18 Jul 2019	14:16	14:19	0.07	6,205.00	6,205.00			Survey & Connection	
18 Jul 2019	14:19	14:25	0.08	6,205.00	6,214.00	9.00	108.00	Sliding	
18 Jul 2019	14:25	14:36	0.18	6,214.00	6,268.00	54.00	294.55	Rotating	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
18 Jul 2019	14:36	14:39	0.07	6,268.00	6,268.00			Survey & Connection	
18 Jul 2019	14:39	14:52	0.20	6,268.00	6,331.00	63.00	315.00	Rotating	
18 Jul 2019	14:52	14:55	0.07	6,331.00	6,331.00			Survey & Connection	
18 Jul 2019	14:55	15:00	0.07	6,331.00	6,333.00	2.00	30.00	Sliding	
18 Jul 2019	15:00	15:12	0.20	6,333.00	6,394.00	61.00	305.00	Rotating	
18 Jul 2019	15:12	15:15	0.05	6,394.00	6,394.00			Survey & Connection	
18 Jul 2019	15:15	15:28	0.22	6,394.00	6,457.00	63.00	290.77	Rotating	
18 Jul 2019	15:28	15:31	0.05	6,457.00	6,457.00			Survey & Connection	
18 Jul 2019	15:31	15:40	0.15	6,457.00	6,469.00	12.00	80.00	Sliding	
18 Jul 2019	15:40	15:54	0.23	6,469.00	6,520.00	51.00	218.57	Rotating	
18 Jul 2019	15:54	15:58	0.07	6,520.00	6,520.00			Survey & Connection	
18 Jul 2019	15:58	16:05	0.12	6,520.00	6,530.00	10.00	85.71	Sliding	
18 Jul 2019	16:05	16:17	0.20	6,530.00	6,583.00	53.00	265.00	Rotating	
18 Jul 2019	16:17	16:22	0.08	6,583.00	6,583.00			Survey & Connection	
18 Jul 2019	16:22	16:36	0.23	6,583.00	6,646.00	63.00	270.00	Rotating	
18 Jul 2019	16:36	16:41	0.08	6,646.00	6,646.00			Survey & Connection	
18 Jul 2019	16:41	16:55	0.23	6,646.00	6,709.00	63.00	270.00	Rotating	
18 Jul 2019	16:55	16:59	0.07	6,709.00	6,709.00			Survey & Connection	
18 Jul 2019	16:59	17:13	0.23	6,709.00	6,772.00	63.00	270.00	Rotating	
18 Jul 2019	17:13	17:20	0.12	6,772.00	6,772.00			Survey & Connection	
18 Jul 2019	17:20	17:28	0.13	6,772.00	6,787.00	15.00	112.50	Sliding	
18 Jul 2019	17:28	17:38	0.17	6,787.00	6,835.00	48.00	288.00	Rotating	
18 Jul 2019	17:38	17:46	0.13	6,835.00	6,835.00			Survey & Connection	
18 Jul 2019	17:46	17:53	0.12	6,835.00	6,850.00	15.00	128.57	Sliding	
18 Jul 2019	17:53	18:03	0.17	6,850.00	6,898.00	48.00	288.00	Rotating	
18 Jul 2019	18:03	18:11	0.13	6,898.00	6,898.00			Survey & Connection	
18 Jul 2019	18:11	18:24	0.22	6,898.00	6,961.00	63.00	290.77	Rotating	
18 Jul 2019	18:24	18:33	0.15	6,961.00	6,961.00			Other	Check Torque
18 Jul 2019	18:33	18:39	0.10	6,961.00	6,961.00			Survey & Connection	
18 Jul 2019	18:39	18:51	0.20	6,961.00	7,024.00	63.00	315.00	Rotating	
18 Jul 2019	18:51	18:57	0.10	7,024.00	7,024.00			Survey & Connection	
18 Jul 2019	18:57	19:03	0.10	7,024.00	7,039.00	15.00	150.00	Sliding	
18 Jul 2019	19:03	19:16	0.22	7,039.00	7,087.00	48.00	221.54	Rotating	
18 Jul 2019	19:16	19:22	0.10	7,087.00	7,087.00			Survey & Connection	
18 Jul 2019	19:22	19:35	0.22	7,087.00	7,150.00	63.00	290.77	Rotating	
18 Jul 2019	19:35	19:44	0.15	7,150.00	7,150.00			Survey & Connection	
18 Jul 2019	19:44	19:58	0.23	7,150.00	7,213.00	63.00	270.00	Rotating	
18 Jul 2019	19:58	20:05	0.12	7,213.00	7,213.00			Survey & Connection	
18 Jul 2019	20:05	20:12	0.12	7,213.00	7,230.00	17.00	145.71	Sliding	
18 Jul 2019	20:12	20:25	0.22	7,230.00	7,276.00	46.00	212.31	Rotating	
18 Jul 2019	20:25	20:31	0.10	7,276.00	7,276.00			Survey & Connection	
18 Jul 2019	20:31	20:44	0.22	7,276.00	7,338.00	62.00	286.15	Rotating	
18 Jul 2019	20:44	20:51	0.12	7,338.00	7,338.00			Survey & Connection	
18 Jul 2019	20:51	20:55	0.07	7,338.00	7,346.00	8.00	120.00	Sliding	
18 Jul 2019	20:55	21:06	0.18	7,346.00	7,400.00	54.00	294.55	Rotating	
18 Jul 2019	21:06	21:12	0.10	7,400.00	7,400.00			Survey & Connection	
18 Jul 2019	21:12	21:25	0.22	7,400.00	7,463.00	63.00	290.77	Rotating	
18 Jul 2019	21:25	21:31	0.10	7,463.00	7,463.00			Survey & Connection	
18 Jul 2019	21:31	21:44	0.22	7,463.00	7,526.00	63.00	290.77	Rotating	
18 Jul 2019	21:44	22:07	0.38	7,526.00	7,526.00			Lubricate Rig	
18 Jul 2019	22:07	22:15	0.13	7,526.00	7,526.00			Survey & Connection	
18 Jul 2019	22:15	22:20	0.08	7,526.00	7,536.00	10.00	120.00	Sliding	
18 Jul 2019	22:20	22:33	0.22	7,536.00	7,589.00	53.00	244.62	Rotating	
18 Jul 2019	22:33	22:40	0.12	7,589.00	7,589.00			Survey & Connection	
18 Jul 2019	22:40	22:47	0.12	7,589.00	7,599.00	10.00	85.71	Sliding	
18 Jul 2019	22:47	23:00	0.22	7,599.00	7,652.00	53.00	244.62	Rotating	
18 Jul 2019	23:00	23:06	0.10	7,652.00	7,652.00			Survey & Connection	
18 Jul 2019	23:06	23:24	0.30	7,652.00	7,667.00	15.00	50.00	Sliding	
18 Jul 2019	23:24	23:38	0.23	7,667.00	7,715.00	48.00	205.71	Rotating	
18 Jul 2019	23:38	23:42	0.07	7,715.00	7,715.00			Survey & Connection	
18 Jul 2019	23:42	23:55	0.22	7,715.00	7,778.00	63.00	290.77	Rotating	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
18 Jul 2019	23:55	00:00	0.08	7,778.00	7,778.00			Survey & Connection	
19 Jul 2019	00:00	00:14	0.23	7,778.00	7,842.00	64.00	274.29	Rotating	
19 Jul 2019	00:14	00:18	0.07	7,842.00	7,842.00			Survey & Connection	
19 Jul 2019	00:18	00:25	0.12	7,842.00	7,852.00	10.00	85.71	Rotating	
19 Jul 2019	00:25	00:38	0.22	7,852.00	7,868.00	16.00	73.85	Sliding	
19 Jul 2019	00:38	00:52	0.23	7,868.00	7,904.00	36.00	154.29	Rotating	
19 Jul 2019	00:52	00:57	0.08	7,904.00	7,904.00			Survey & Connection	
19 Jul 2019	00:57	01:07	0.17	7,904.00	7,919.00	15.00	90.00	Sliding	
19 Jul 2019	01:07	01:20	0.22	7,919.00	7,967.00	48.00	221.54	Rotating	
19 Jul 2019	01:20	01:28	0.13	7,967.00	7,967.00			Survey & Connection	
19 Jul 2019	01:28	01:42	0.23	7,967.00	8,030.00	63.00	270.00	Rotating	
19 Jul 2019	01:42	01:49	0.12	8,030.00	8,030.00			Survey & Connection	
19 Jul 2019	01:49	02:03	0.23	8,030.00	8,093.00	63.00	270.00	Rotating	
19 Jul 2019	02:03	02:13	0.17	8,093.00	8,093.00			Survey & Connection	
19 Jul 2019	02:13	02:28	0.25	8,093.00	8,156.00	63.00	252.00	Rotating	
19 Jul 2019	02:28	02:37	0.15	8,156.00	8,156.00			Survey & Connection	
19 Jul 2019	02:37	02:43	0.10	8,156.00	8,166.00	10.00	100.00	Rotating	
19 Jul 2019	02:43	02:52	0.15	8,166.00	8,176.00	10.00	66.67	Sliding	
19 Jul 2019	02:52	03:03	0.18	8,176.00	8,219.00	43.00	234.55	Rotating	
19 Jul 2019	03:03	03:11	0.13	8,219.00	8,219.00			Survey & Connection	
19 Jul 2019	03:11	03:35	0.40	8,219.00	8,237.00	18.00	45.00	Sliding	
19 Jul 2019	03:35	03:45	0.17	8,237.00	8,282.00	45.00	270.00	Rotating	
19 Jul 2019	03:45	03:51	0.10	8,282.00	8,282.00			Survey & Connection	
19 Jul 2019	03:51	04:04	0.22	8,282.00	8,344.00	62.00	286.15	Rotating	
19 Jul 2019	04:04	04:12	0.13	8,344.00	8,344.00			Survey & Connection	
19 Jul 2019	04:12	04:25	0.22	8,344.00	8,354.00	10.00	46.15	Sliding	
19 Jul 2019	04:25	04:37	0.20	8,354.00	8,406.00	52.00	260.00	Rotating	
19 Jul 2019	04:37	04:43	0.10	8,406.00	8,406.00			Survey & Connection	
19 Jul 2019	04:43	04:57	0.23	8,406.00	8,469.00	63.00	270.00	Rotating	
19 Jul 2019	04:57	05:02	0.08	8,469.00	8,469.00			Survey & Connection	
19 Jul 2019	05:02	05:14	0.20	8,469.00	8,522.00	53.00	265.00	Rotating	
19 Jul 2019	05:14	05:21	0.12	8,522.00	8,522.00			Circulate and/or Condition Mud	Work pipe to slide
19 Jul 2019	05:21	05:32	0.18	8,522.00	8,533.00	11.00	60.00	Sliding	
19 Jul 2019	05:32	05:44	0.20	8,533.00	8,533.00			Survey & Connection	
19 Jul 2019	05:44	05:57	0.22	8,533.00	8,595.00	62.00	286.15	Rotating	
19 Jul 2019	05:57	06:03	0.10	8,595.00	8,595.00			Survey & Connection	
19 Jul 2019	06:03	06:08	0.08	8,595.00	8,618.00	23.00	276.00	Rotating	
19 Jul 2019	06:08	06:18	0.17	8,618.00	8,618.00			Circulate and/or Condition Mud	Orient Toolface / lube is starting to help
19 Jul 2019	06:18	06:30	0.20	8,618.00	8,632.00	14.00	70.00	Sliding	
19 Jul 2019	06:30	06:34	0.07	8,632.00	8,658.00	26.00	390.00	Rotating	
19 Jul 2019	06:34	06:42	0.13	8,658.00	8,658.00			Circulate and/or Condition Mud	
19 Jul 2019	06:42	06:49	0.12	8,658.00	8,658.00			Survey & Connection	
19 Jul 2019	06:49	06:59	0.17	8,658.00	8,721.00	63.00	378.00	Rotating	
19 Jul 2019	06:59	07:08	0.15	8,721.00	8,721.00			Survey & Connection	
19 Jul 2019	07:08	07:18	0.17	8,721.00	8,783.00	62.00	372.00	Rotating	
19 Jul 2019	07:18	07:31	0.22	8,783.00	8,783.00			Survey & Connection	
19 Jul 2019	07:31	07:36	0.08	8,783.00	8,819.00	36.00	432.00	Rotating	
19 Jul 2019	07:36	07:45	0.15	8,819.00	8,830.00	11.00	73.33	Sliding	
19 Jul 2019	07:45	07:50	0.08	8,830.00	8,846.00	16.00	192.00	Rotating	
19 Jul 2019	07:50	07:58	0.13	8,846.00	8,846.00			Survey & Connection	
19 Jul 2019	07:58	08:08	0.17	8,846.00	8,909.00	63.00	378.00	Rotating	
19 Jul 2019	08:08	08:18	0.17	8,909.00	8,909.00			Survey & Connection	
19 Jul 2019	08:18	08:24	0.10	8,909.00	8,919.00	10.00	100.00	Sliding	
19 Jul 2019	08:24	08:33	0.15	8,919.00	8,971.00	52.00	346.67	Rotating	
19 Jul 2019	08:33	08:44	0.18	8,971.00	8,971.00			Survey & Connection	
19 Jul 2019	08:44	08:49	0.08	8,971.00	8,984.00	13.00	156.00	Sliding	
19 Jul 2019	08:49	08:59	0.17	8,984.00	9,034.00	50.00	300.00	Rotating	
19 Jul 2019	08:59	09:11	0.20	9,034.00	9,034.00			Survey & Connection	
19 Jul 2019	09:11	09:16	0.08	9,034.00	9,045.00	11.00	132.00	Sliding	
19 Jul 2019	09:16	09:25	0.15	9,045.00	9,097.00	52.00	346.67	Rotating	
19 Jul 2019	09:25	09:35	0.17	9,097.00	9,097.00			Survey & Connection	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
19 Jul 2019	09:35	09:43	0.13	9,097.00	9,160.00	63.00	472.50	Rotating	
19 Jul 2019	09:43	09:53	0.17	9,160.00	9,160.00			Survey & Connection	
19 Jul 2019	09:53	10:00	0.12	9,160.00	9,174.00	14.00	120.00	Sliding	
19 Jul 2019	10:00	10:09	0.15	9,174.00	9,223.00	49.00	326.67	Rotating	
19 Jul 2019	10:09	10:19	0.17	9,223.00	9,223.00			Survey & Connection	
19 Jul 2019	10:19	10:27	0.13	9,223.00	9,285.00	62.00	465.00	Rotating	
19 Jul 2019	10:27	10:38	0.18	9,285.00	9,285.00			Survey & Connection	
19 Jul 2019	10:38	10:43	0.08	9,285.00	9,299.00	14.00	168.00	Sliding	
19 Jul 2019	10:43	10:51	0.13	9,299.00	9,348.00	49.00	367.50	Rotating	
19 Jul 2019	10:51	11:00	0.15	9,348.00	9,348.00			Survey & Connection	
19 Jul 2019	11:00	11:08	0.13	9,348.00	9,409.00	61.00	457.50	Rotating	
19 Jul 2019	11:08	11:11	0.05	9,409.00	9,409.00			Survey & Connection	
19 Jul 2019	11:11	11:28	0.28	9,409.00	9,470.00	61.00	215.29	Rotating	
19 Jul 2019	11:28	11:33	0.08	9,470.00	9,470.00			Survey & Connection	
19 Jul 2019	11:33	12:01	0.47	9,470.00	9,470.00			Rig Repair	
19 Jul 2019	12:01	12:12	0.18	9,470.00	9,530.00	60.00	327.27	Rotating	
19 Jul 2019	12:12	12:15	0.07	9,530.00	9,530.00			Survey & Connection	
19 Jul 2019	12:15	12:31	0.25	9,530.00	9,591.00	61.00	244.00	Rotating	
19 Jul 2019	12:31	12:37	0.10	9,591.00	9,591.00			Survey & Connection	
19 Jul 2019	12:37	12:47	0.17	9,591.00	9,604.00	13.00	78.00	Sliding	
19 Jul 2019	12:47	12:54	0.12	9,604.00	9,652.00	48.00	411.43	Rotating	
19 Jul 2019	12:54	13:04	0.17	9,652.00	9,652.00			Survey & Connection	
19 Jul 2019	13:04	13:15	0.18	9,652.00	9,713.00	61.00	332.73	Rotating	
19 Jul 2019	13:15	13:25	0.17	9,713.00	9,713.00			Survey & Connection	
19 Jul 2019	13:25	13:37	0.20	9,713.00	9,774.00	61.00	305.00	Rotating	
19 Jul 2019	13:37	13:46	0.15	9,774.00	9,774.00			Survey & Connection	
19 Jul 2019	13:46	13:54	0.13	9,774.00	9,788.00	14.00	105.00	Sliding	
19 Jul 2019	13:54	14:01	0.12	9,788.00	9,836.00	48.00	411.43	Rotating	
19 Jul 2019	14:01	14:12	0.18	9,836.00	9,836.00			Survey & Connection	
19 Jul 2019	14:12	14:17	0.08	9,836.00	9,842.00	6.00	72.00	Sliding	
19 Jul 2019	14:17	14:26	0.15	9,842.00	9,897.00	55.00	366.67	Rotating	
19 Jul 2019	14:26	14:36	0.17	9,897.00	9,897.00			Survey & Connection	
19 Jul 2019	14:36	14:43	0.12	9,897.00	9,911.00	14.00	120.00	Sliding	
19 Jul 2019	14:43	14:52	0.15	9,911.00	9,958.00	47.00	313.33	Rotating	
19 Jul 2019	14:52	14:59	0.12	9,958.00	9,958.00			Survey & Connection	
19 Jul 2019	14:59	15:08	0.15	9,958.00	10,019.00	61.00	406.67	Rotating	
19 Jul 2019	15:08	15:17	0.15	10,019.00	10,019.00			Survey & Connection	
19 Jul 2019	15:17	15:24	0.12	10,019.00	10,033.00	14.00	120.00	Sliding	
19 Jul 2019	15:24	15:33	0.15	10,033.00	10,081.00	48.00	320.00	Rotating	
19 Jul 2019	15:33	15:38	0.08	10,081.00	10,081.00			Survey & Connection	
19 Jul 2019	15:38	15:51	0.22	10,081.00	10,097.00	16.00	73.85	Sliding	
19 Jul 2019	15:51	16:03	0.20	10,097.00	10,142.00	45.00	225.00	Rotating	
19 Jul 2019	16:03	16:03	0.00	10,142.00	10,142.00			Survey & Connection	
19 Jul 2019	16:03	16:15	0.20	10,142.00	10,203.00	61.00	305.00	Rotating	
19 Jul 2019	16:15	16:26	0.18	10,203.00	10,203.00			Survey & Connection	
19 Jul 2019	16:26	16:33	0.12	10,203.00	10,215.00	12.00	102.86	Sliding	
19 Jul 2019	16:33	16:43	0.17	10,215.00	10,264.00	49.00	294.00	Rotating	
19 Jul 2019	16:43	16:49	0.10	10,264.00	10,264.00			Survey & Connection	
19 Jul 2019	16:49	17:05	0.27	10,264.00	10,276.00	12.00	45.00	Sliding	
19 Jul 2019	17:05	17:13	0.13	10,276.00	10,325.00	49.00	367.50	Rotating	
19 Jul 2019	17:13	17:23	0.17	10,325.00	10,325.00			Survey & Connection	
19 Jul 2019	17:23	17:38	0.25	10,325.00	10,386.00	61.00	244.00	Rotating	
19 Jul 2019	17:38	17:47	0.15	10,386.00	10,386.00			Survey & Connection	
19 Jul 2019	17:47	18:05	0.30	10,386.00	10,447.00	61.00	203.33	Rotating	
19 Jul 2019	18:05	18:17	0.20	10,447.00	10,447.00			Survey & Connection	
19 Jul 2019	18:17	18:29	0.20	10,447.00	10,509.00	62.00	310.00	Rotating	
19 Jul 2019	18:29	18:40	0.18	10,509.00	10,509.00			Survey & Connection	
19 Jul 2019	18:40	18:53	0.22	10,509.00	10,521.00	12.00	55.38	Sliding	
19 Jul 2019	18:53	18:59	0.10	10,521.00	10,570.00	49.00	490.00	Rotating	
19 Jul 2019	18:59	19:08	0.15	10,570.00	10,570.00			Survey & Connection	
19 Jul 2019	19:08	19:12	0.07	10,570.00	10,581.00	11.00	165.00	Rotating	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
19 Jul 2019	19:12	19:21	0.15	10,581.00	10,598.00	17.00	113.33	Sliding	
19 Jul 2019	19:21	19:30	0.15	10,598.00	10,630.00	32.00	213.33	Rotating	
19 Jul 2019	19:30	19:38	0.13	10,630.00	10,630.00			Survey & Connection	
19 Jul 2019	19:38	19:48	0.17	10,630.00	10,692.00	62.00	372.00	Rotating	
19 Jul 2019	19:48	19:55	0.12	10,692.00	10,692.00			Survey & Connection	
19 Jul 2019	19:55	19:59	0.07	10,692.00	10,703.00	11.00	165.00	Rotating	
19 Jul 2019	19:59	20:11	0.20	10,703.00	10,720.00	17.00	85.00	Sliding	
19 Jul 2019	20:11	20:16	0.08	10,720.00	10,753.00	33.00	396.00	Rotating	
19 Jul 2019	20:16	20:25	0.15	10,753.00	10,753.00			Survey & Connection	
19 Jul 2019	20:25	20:30	0.08	10,753.00	10,766.00	13.00	156.00	Rotating	
19 Jul 2019	20:30	20:42	0.20	10,766.00	10,784.00	18.00	90.00	Sliding	
19 Jul 2019	20:42	20:49	0.12	10,784.00	10,814.00	30.00	257.14	Rotating	
19 Jul 2019	20:49	20:55	0.10	10,814.00	10,814.00			Survey & Connection	
19 Jul 2019	20:55	21:07	0.20	10,814.00	10,875.00	61.00	305.00	Rotating	
19 Jul 2019	21:07	21:14	0.12	10,875.00	10,875.00			Survey & Connection	
19 Jul 2019	21:14	21:28	0.23	10,875.00	10,936.00	61.00	261.43	Rotating	
19 Jul 2019	21:28	21:39	0.18	10,936.00	10,936.00			Other	Make Break New Pipe
19 Jul 2019	21:39	21:45	0.10	10,936.00	10,936.00			Survey & Connection	
19 Jul 2019	21:45	21:55	0.17	10,936.00	10,966.00	30.00	180.00	Rotating	
19 Jul 2019	21:55	22:01	0.10	10,966.00	10,966.00			Other	Make Break New Pipe
19 Jul 2019	22:01	22:09	0.13	10,966.00	10,997.00	31.00	232.50	Rotating	
19 Jul 2019	22:09	22:15	0.10	10,997.00	10,997.00			Other	Make Break New Pipe
19 Jul 2019	22:15	22:21	0.10	10,997.00	10,997.00			Survey & Connection	
19 Jul 2019	22:21	22:32	0.18	10,997.00	11,058.00	61.00	332.73	Rotating	
19 Jul 2019	22:32	22:38	0.10	11,058.00	11,058.00			Survey & Connection	
19 Jul 2019	22:38	22:44	0.10	11,058.00	11,068.00	10.00	100.00	Rotating	
19 Jul 2019	22:44	22:52	0.13	11,068.00	11,086.00	18.00	135.00	Sliding	
19 Jul 2019	22:52	22:59	0.12	11,086.00	11,120.00	34.00	291.43	Rotating	
19 Jul 2019	22:59	23:07	0.13	11,120.00	11,120.00			Survey & Connection	
19 Jul 2019	23:07	23:18	0.18	11,120.00	11,168.00	48.00	261.82	Rotating	
19 Jul 2019	23:18	23:23	0.08	11,168.00	11,181.00	13.00	156.00	Sliding	
19 Jul 2019	23:23	23:28	0.08	11,181.00	11,181.00			Survey & Connection	
19 Jul 2019	23:28	23:35	0.12	11,181.00	11,181.00			Circulate and/or Condition Mud	SPR's
19 Jul 2019	23:35	23:45	0.17	11,181.00	11,227.00	46.00	276.00	Rotating	
19 Jul 2019	23:45	23:53	0.13	11,227.00	11,242.00	15.00	112.50	Sliding	
19 Jul 2019	23:53	00:00	0.12	11,242.00	11,242.00			Survey & Connection	
20 Jul 2019	00:00	00:11	0.18	11,242.00	11,286.00	44.00	240.00	Rotating	
20 Jul 2019	00:11	00:18	0.12	11,286.00	11,302.00	16.00	137.14	Sliding	
20 Jul 2019	00:18	00:27	0.15	11,302.00	11,302.00			Survey & Connection	
20 Jul 2019	00:27	00:40	0.22	11,302.00	11,347.00	45.00	207.69	Rotating	
20 Jul 2019	00:40	00:50	0.17	11,347.00	11,363.00	16.00	96.00	Sliding	
20 Jul 2019	00:50	00:54	0.07	11,363.00	11,363.00			Survey & Connection	
20 Jul 2019	00:54	01:08	0.23	11,363.00	11,424.00	61.00	261.43	Rotating	
20 Jul 2019	01:08	01:17	0.15	11,424.00	11,424.00			Survey & Connection	
20 Jul 2019	01:17	01:28	0.18	11,424.00	11,485.00	61.00	332.73	Rotating	
20 Jul 2019	01:28	01:37	0.15	11,485.00	11,485.00			Survey & Connection	
20 Jul 2019	01:37	01:43	0.10	11,485.00	11,498.00	13.00	130.00	Rotating	
20 Jul 2019	01:43	01:53	0.17	11,498.00	11,513.00	15.00	90.00	Sliding	
20 Jul 2019	01:53	02:00	0.12	11,513.00	11,545.00	32.00	274.29	Rotating	
20 Jul 2019	02:00	02:11	0.18	11,545.00	11,545.00			Survey & Connection	
20 Jul 2019	02:11	02:16	0.08	11,545.00	11,560.00	15.00	180.00	Rotating	
20 Jul 2019	02:16	02:25	0.15	11,560.00	11,576.00	16.00	106.67	Sliding	
20 Jul 2019	02:25	02:32	0.12	11,576.00	11,607.00	31.00	265.71	Rotating	
20 Jul 2019	02:32	02:42	0.17	11,607.00	11,607.00			Survey & Connection	
20 Jul 2019	02:42	02:47	0.08	11,607.00	11,620.00	13.00	156.00	Rotating	
20 Jul 2019	02:47	02:58	0.18	11,620.00	11,640.00	20.00	109.09	Sliding	
20 Jul 2019	02:58	03:03	0.08	11,640.00	11,668.00	28.00	336.00	Rotating	
20 Jul 2019	03:03	03:06	0.05	11,668.00	11,668.00			Survey & Connection	
20 Jul 2019	03:06	03:27	0.35	11,668.00	11,729.00	61.00	174.29	Rotating	
20 Jul 2019	03:27	03:36	0.15	11,729.00	11,729.00			Survey & Connection	
20 Jul 2019	03:36	03:42	0.10	11,729.00	11,740.00	11.00	110.00	Rotating	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
20 Jul 2019	03:42	03:50	0.13	11,740.00	11,754.00	14.00	105.00	Sliding	
20 Jul 2019	03:50	03:58	0.13	11,754.00	11,790.00	36.00	270.00	Rotating	
20 Jul 2019	03:58	04:00	0.03	11,790.00	11,790.00			Survey & Connection	
20 Jul 2019	04:00	04:16	0.27	11,790.00	11,852.00	62.00	232.50	Rotating	
20 Jul 2019	04:16	04:23	0.12	11,852.00	11,852.00			Survey & Connection	
20 Jul 2019	04:23	04:37	0.23	11,852.00	11,913.00	61.00	261.43	Rotating	
20 Jul 2019	04:37	04:45	0.13	11,913.00	11,913.00			Survey & Connection	
20 Jul 2019	04:45	05:04	0.32	11,913.00	11,975.00	62.00	195.79	Rotating	
20 Jul 2019	05:04	05:15	0.18	11,975.00	11,975.00			Circulate and/or Condition Mud	Re-Boot MWD computer
20 Jul 2019	05:15	05:25	0.17	11,975.00	11,975.00			Survey & Connection	
20 Jul 2019	05:25	05:30	0.08	11,975.00	11,985.00	10.00	120.00	Sliding	
20 Jul 2019	05:30	05:42	0.20	11,985.00	12,036.00	51.00	255.00	Rotating	
20 Jul 2019	05:42	05:53	0.18	12,036.00	12,036.00			Survey & Connection	
20 Jul 2019	05:53	05:54	0.02	12,036.00	12,038.00	2.00	120.00	Sliding	
20 Jul 2019	05:54	06:05	0.18	12,038.00	12,097.00	59.00	321.82	Rotating	
20 Jul 2019	06:05	06:17	0.20	12,097.00	12,097.00			Survey & Connection	
20 Jul 2019	06:17	06:18	0.02	12,097.00	12,099.00	2.00	120.00	Sliding	
20 Jul 2019	06:18	06:34	0.27	12,099.00	12,159.00	60.00	225.00	Rotating	
20 Jul 2019	06:34	06:43	0.15	12,159.00	12,159.00			Survey & Connection	
20 Jul 2019	06:43	06:57	0.23	12,159.00	12,220.00	61.00	261.43	Rotating	
20 Jul 2019	06:57	07:05	0.13	12,220.00	12,220.00			Survey & Connection	
20 Jul 2019	07:05	07:17	0.20	12,220.00	12,281.00	61.00	305.00	Rotating	
20 Jul 2019	07:17	07:27	0.17	12,281.00	12,281.00			Survey & Connection	
20 Jul 2019	07:27	07:33	0.10	12,281.00	12,291.00	10.00	100.00	Sliding	
20 Jul 2019	07:33	07:44	0.18	12,291.00	12,342.00	51.00	278.18	Rotating	
20 Jul 2019	07:44	07:56	0.20	12,342.00	12,342.00			Survey & Connection	
20 Jul 2019	07:56	08:08	0.20	12,342.00	12,354.00	12.00	60.00	Sliding	
20 Jul 2019	08:08	08:17	0.15	12,354.00	12,402.00	48.00	320.00	Rotating	
20 Jul 2019	08:17	08:30	0.22	12,402.00	12,402.00			Survey & Connection	
20 Jul 2019	08:30	08:38	0.13	12,402.00	12,412.00	10.00	75.00	Sliding	
20 Jul 2019	08:38	08:46	0.13	12,412.00	12,463.00	51.00	382.50	Rotating	
20 Jul 2019	08:46	08:56	0.17	12,463.00	12,463.00			Survey & Connection	
20 Jul 2019	08:56	09:07	0.18	12,463.00	12,525.00	62.00	338.18	Rotating	
20 Jul 2019	09:07	09:17	0.17	12,525.00	12,525.00			Survey & Connection	
20 Jul 2019	09:17	09:29	0.20	12,525.00	12,588.00	63.00	315.00	Rotating	
20 Jul 2019	09:29	09:38	0.15	12,588.00	12,588.00			Survey & Connection	
20 Jul 2019	09:38	09:49	0.18	12,588.00	12,650.00	62.00	338.18	Rotating	
20 Jul 2019	09:49	09:58	0.15	12,650.00	12,650.00			Survey & Connection	
20 Jul 2019	09:58	10:10	0.20	12,650.00	12,712.00	62.00	310.00	Rotating	
20 Jul 2019	10:10	10:21	0.18	12,712.00	12,712.00			Survey & Connection	
20 Jul 2019	10:21	10:35	0.23	12,712.00	12,775.00	63.00	270.00	Rotating	
20 Jul 2019	10:35	10:46	0.18	12,775.00	12,775.00			Survey & Connection	
20 Jul 2019	10:46	10:56	0.17	12,775.00	12,785.00	10.00	60.00	Sliding	
20 Jul 2019	10:56	11:07	0.18	12,785.00	12,837.00	52.00	283.64	Rotating	
20 Jul 2019	11:07	11:15	0.13	12,837.00	12,837.00			Survey & Connection	
20 Jul 2019	11:15	11:30	0.25	12,837.00	12,847.00	10.00	40.00	Sliding	
20 Jul 2019	11:30	11:42	0.20	12,847.00	12,900.00	53.00	265.00	Rotating	
20 Jul 2019	11:42	11:49	0.12	12,900.00	12,900.00			Survey & Connection	
20 Jul 2019	11:49	12:14	0.42	12,900.00	12,900.00			Lubricate Rig	
20 Jul 2019	12:14	12:27	0.22	12,900.00	12,910.00	10.00	46.15	Sliding	
20 Jul 2019	12:27	12:41	0.23	12,910.00	12,962.00	52.00	222.86	Rotating	
20 Jul 2019	12:41	12:53	0.20	12,962.00	12,962.00			Survey & Connection	
20 Jul 2019	12:53	13:00	0.12	12,962.00	12,971.00	9.00	77.14	Sliding	
20 Jul 2019	13:00	13:11	0.18	12,971.00	13,025.00	54.00	294.55	Rotating	
20 Jul 2019	13:11	13:23	0.20	13,025.00	13,025.00			Survey & Connection	
20 Jul 2019	13:23	13:31	0.13	13,025.00	13,036.00	11.00	82.50	Sliding	
20 Jul 2019	13:31	13:44	0.22	13,036.00	13,082.00	46.00	212.31	Rotating	
20 Jul 2019	13:44	13:51	0.12	13,082.00	13,088.00	6.00	51.43	Sliding	
20 Jul 2019	13:51	14:02	0.18	13,088.00	13,088.00			Survey & Connection	
20 Jul 2019	14:02	14:16	0.23	13,088.00	13,151.00	63.00	270.00	Rotating	
20 Jul 2019	14:16	14:28	0.20	13,151.00	13,151.00			Survey & Connection	

End of Well Report for M11 2308 Pad, # 108H

Activity Breakdown									
Date	Start Time	End Time	Hours	Start Depth (ft)	End Depth (ft)	Course Length (ft)	Rate of Penetr'n (ft/hr)	Activity	Comment
20 Jul 2019	14:28	14:42	0.23	13,151.00	13,213.00	62.00	265.71	Rotating	
20 Jul 2019	14:42	15:00	0.30	13,213.00	13,213.00			Survey & Connection	
20 Jul 2019	15:00	15:04	0.07	13,213.00	13,265.00	52.00	780.00	Rotating	
20 Jul 2019	15:04	15:10	0.10	13,265.00	13,267.00	2.00	20.00	Sliding	
20 Jul 2019	15:10	15:14	0.07	13,267.00	13,276.00	9.00	135.00	Rotating	
20 Jul 2019	15:14	15:22	0.13	13,276.00	13,276.00			Survey & Connection	
20 Jul 2019	15:22	15:33	0.18	13,276.00	13,324.00	48.00	261.82	Rotating	
20 Jul 2019	15:33	15:42	0.15	13,324.00	13,327.00	3.00	20.00	Sliding	
20 Jul 2019	15:42	15:50	0.13	13,327.00	13,339.00	12.00	90.00	Rotating	
20 Jul 2019	15:50	15:57	0.12	13,339.00	13,339.00			Survey & Connection	
20 Jul 2019	15:57	16:12	0.25	13,339.00	13,388.00	49.00	196.00	Rotating	
20 Jul 2019	16:12	16:26	0.23	13,388.00	13,398.00	10.00	42.86	Sliding	
20 Jul 2019	16:26	16:29	0.05	13,398.00	13,402.00	4.00	80.00	Rotating	
20 Jul 2019	16:29	16:37	0.13	13,402.00	13,402.00			Survey & Connection	
20 Jul 2019	16:37	16:49	0.20	13,402.00	13,458.00	56.00	280.00	Rotating	
20 Jul 2019	16:49	16:58	0.15	13,458.00	13,463.00	5.00	33.33	Sliding	
20 Jul 2019	16:58	17:09	0.18	13,463.00	13,466.00	3.00	16.36	Rotating	
20 Jul 2019	17:09	17:10	0.02	13,466.00	13,466.00			Survey & Connection	
20 Jul 2019	17:10	17:24	0.23	13,466.00	13,527.00	61.00	261.43	Rotating	
20 Jul 2019	17:24	17:35	0.18	13,527.00	13,527.00			Survey & Connection	
20 Jul 2019	17:35	17:50	0.25	13,527.00	13,589.00	62.00	248.00	Rotating	
20 Jul 2019	17:50	17:55	0.08	13,589.00	13,589.00			Survey & Connection	
20 Jul 2019	17:55	18:17	0.37	13,589.00	13,652.00	63.00	171.82	Rotating	
20 Jul 2019	18:17	18:23	0.10	13,652.00	13,652.00			Survey & Connection	
20 Jul 2019	18:23	18:31	0.13	13,652.00	13,675.00	23.00	172.50	Rotating	TD
20 Jul 2019	18:31	18:37	0.10	13,675.00	13,675.00			Survey & Connection	
20 Jul 2019	18:37	18:38	0.02	13,675.00	13,675.00			Drilling	
20 Jul 2019	18:38	20:00	1.37	13,675.00	13,675.00			Connection (drilling)	
20 Jul 2019	20:00	00:56	4.93	13,675.00	13,675.00			Short Trip Out	
21 Jul 2019	00:56	01:58	1.03	13,675.00	13,675.00			Circulate and/or Condition Mud	
21 Jul 2019	01:58	06:18	4.33	13,675.00	13,675.00			Short Trip In	
21 Jul 2019	06:18	08:26	2.13	13,675.00	13,675.00			Circulate and/or Condition Mud	
21 Jul 2019	08:26	11:38	3.20	13,675.00	13,675.00			Tripping Out	
21 Jul 2019	11:38	11:53	0.25	13,675.00	13,675.00			Rig Repair	X/O ST-80 HOSE
21 Jul 2019	11:53	15:45	3.87	13,675.00	13,675.00			Tripping Out	
21 Jul 2019	15:45	16:17	0.53	13,675.00	13,675.00			Cut/Slip Drilling Line	
21 Jul 2019	16:17	17:15	0.97	13,675.00	13,675.00			Tripping Out	L/D 50 JTS DRILL PIPE
21 Jul 2019	17:15	18:15	1.00	13,675.00	13,675.00			Change BHA	L/D BHA
21 Jul 2019	18:15	23:59	29.73	13,675.00	13,675.00			Standby	RUN CSG / CEMENT

Slide Sheet															
Bit Depth (ft)	Survey Depth (ft)	Incl. (")	(True) Azimuth (")	Vertical Depth (ft)	Dogleg Rate ("/100ft)	Calc'd Toolface (")	Build Rate ("/100ft)	Build Seen ("/ft)	Turn Rate ("/100ft)	Slide Seen (ft)	Motor Output ("/100ft)	Motor Output ("/ft)	Slide Length (ft)	Toolface Orient (")	Rotate Length (ft)
Original drilling, Intermediate															
381.00	381.00	0.00	0.00	381.00	0.00	0.00	0.00								
497.00	445.00	1.68	345.05	444.99	2.62	-15.05	2.62	0.61		9.00	18.67	0.19	12.00	-18	104.00
557.00	506.00	3.55	342.80	505.92	3.07	-4.27	3.07	0.51	-3.69	12.00	15.60	0.16	12.00	-18	48.00
618.00	566.00	5.01	344.11	565.76	2.44	4.48	2.43	0.40	2.18	12.00	12.19	0.12	10.00	-18	51.00
678.00	627.00	6.68	346.79	626.44	2.77	10.62	2.74	0.55	4.39	10.00	16.92	0.17	10.00	-18	50.00
740.00	688.00	6.75	345.47	687.02	0.28	-66.26	0.11	0.23	-2.16	1.00	16.95	0.17			62.00
800.00	749.00	7.80	343.06	747.53	1.79	-17.40	1.72	0.38	-3.95	9.00	12.15	0.12	10.00	-10	50.00
861.00	809.00	9.38	342.27	806.85	2.64	-4.66	2.63	0.52	-1.32	10.00	15.84	0.16	10.00	0	51.00
921.00	869.00	9.96	342.14	866.00	0.97	-2.22	0.97	0.21	-0.22	9.00	6.45	0.06	8.00	0	52.00
983.00	931.00	11.35	342.46	926.93	2.24	2.59	2.24	0.46	0.52	10.00	13.91	0.14	12.00	0	50.00
1,044.00	992.00	13.11	342.88	986.54	2.89	3.10	2.89	0.52	0.69	11.00	16.02	0.16	12.00	0	49.00
1,104.00	1,053.00	14.70	342.58	1,045.75	2.61	-2.74	2.61	0.43	-0.49	12.00	13.26	0.13	11.00	0	49.00
1,165.00	1,113.00	16.14	340.84	1,103.59	2.52	-18.65	2.40	0.43	-2.90	11.00	13.75	0.14	11.00	0	50.00
1,225.00	1,174.00	17.57	340.11	1,161.97	2.37	-8.77	2.34	0.43	-1.20	11.00	13.14	0.13	11.00	15	49.00
1,287.00	1,235.00	18.15	339.76	1,220.03	0.97	-10.65	0.95	0.16	-0.57	12.00	4.92	0.05	10.00	20	52.00
1,348.00	1,296.00	17.79	341.00	1,278.05	0.86	133.85	-0.59	-0.13	2.03	9.00	5.84	0.06	10.00	40	51.00

End of Well Report for M11 2308 Pad, # 108H

Slide Sheet															
Bit Depth (ft)	Survey Depth (ft)	Incl. (°)	(True) Azimuth (°)	Vertical Depth (ft)	Dogleg Rate (°/100ft)	Calc'd Toolface (°)	Build Rate (°/100ft)	Build Seen (°/ft)	Turn Rate (°/100ft)	Slide Seen (ft)	Motor Output (°/100ft)	Motor Output (°/ft)	Slide Length (ft)	Toolface Orient (°)	Rotate Length (ft)
1,410.00	1,358.00	19.03	342.17	1,336.88	2.09	17.15	2.00	0.37	1.89	11.00	11.76	0.12	22.00	15	40.00
1,470.00	1,419.00	18.07	341.12	1,394.71	1.67	-161.31	-1.57	-0.26	-1.72	12.00	8.47	0.08			60.00
1,531.00	1,479.00	18.27	342.71	1,451.72	0.89	68.79	0.33	0.07	2.65	9.00	5.94	0.06	14.00	30	47.00
1,592.00	1,541.00	18.62	344.09	1,510.53	0.90	51.94	0.56	0.08	2.23	15.00	3.73	0.04	15.00	20	46.00
1,653.00	1,602.00	18.95	342.51	1,568.28	0.99	-57.78	0.54	0.07	-2.59	15.00	4.04	0.04	10.00	0	51.00
1,713.00	1,661.00	19.64	341.46	1,623.97	1.31	-27.19	1.17		-1.78						60.00
1,773.00	1,722.00	20.17	340.52	1,681.33	1.01	-31.57	0.87		-1.54						60.00
1,834.00	1,783.00	18.96	342.85	1,738.80	2.36	148.28	-1.98	-0.40	3.82	10.00	14.40	0.14	10.00	100	51.00
1,896.00	1,844.00	17.97	341.43	1,796.66	1.78	-156.24	-1.62		-2.33						62.00
1,957.00	1,905.00	17.87	342.74	1,854.70	0.68	104.56	-0.16	-0.04	2.15	9.00	4.61	0.05	15.00	30	46.00
2,020.00	1,968.00	17.60	342.10	1,914.71	0.53	-144.47	-0.43	-0.05	-1.02	17.00	1.96	0.02	17.00	20	46.00
2,083.00	2,032.00	17.22	343.18	1,975.78	0.78	140.14	-0.59	-0.07	1.69	18.00	2.77	0.03	30.00	25	33.00
2,146.00	2,095.00	19.18	345.34	2,035.62	3.29	20.02	3.11	0.21	3.43	30.00	6.91	0.07	33.00	20	30.00
2,209.00	2,158.00	19.88	345.04	2,095.00	1.12	-8.29	1.11	0.11	-0.48	21.00	3.37	0.03			63.00
2,272.00	2,221.00	19.38	343.83	2,154.34	1.02	-141.46	-0.79		-1.92						63.00
2,336.00	2,284.00	18.27	342.34	2,213.97	1.92	-157.28	-1.76		-2.37						64.00
2,399.00	2,347.00	18.79	341.29	2,273.70	0.98	-33.19	0.83	0.16	-1.67	11.00	5.62	0.06	15.00	20	48.00
2,462.00	2,411.00	18.21	340.52	2,334.39	0.98	-157.52	-0.91	-0.48	-1.20	4.00	15.73	0.16			63.00
2,525.00	2,474.00	18.05	341.36	2,394.27	0.49	121.87	-0.25	-0.04	1.33	12.00	2.55	0.03	15.00	50	48.00
2,588.00	2,537.00	19.59	344.71	2,453.90	2.99	36.65	2.44	0.34	5.32	15.00	12.54	0.13	25.00	40	38.00
2,651.00	2,600.00	20.06	345.72	2,513.16	0.92	36.56	0.75	0.12	1.60	13.00	4.47	0.04			63.00
2,715.00	2,663.00	20.21	345.18	2,572.31	0.38	-51.35	0.24		-0.86						64.00
2,778.00	2,727.00	20.60	344.91	2,632.30	0.63	-13.70	0.61		-0.42						63.00
2,841.00	2,790.00	19.88	344.14	2,691.41	1.22	-160.06	-1.14		-1.22						63.00
2,905.00	2,853.00	18.48	342.21	2,750.91	2.44	-156.54	-2.22		-3.06						64.00
2,968.00	2,916.00	18.60	342.49	2,810.64	0.24	36.71	0.19	0.04	0.44	11.00	1.36	0.01	18.00	40	45.00
3,031.00	2,979.00	18.25	343.78	2,870.41	0.85	131.25	-0.56	-0.16	2.05	7.00	7.68	0.08			63.00
3,094.00	3,043.00	17.45	342.25	2,931.33	1.45	-150.35	-1.25		-2.39						63.00
3,157.00	3,106.00	17.13	343.62	2,991.48	0.82	128.82	-0.51	-0.09	2.17	12.00	4.32	0.04	20.00	40	43.00
3,220.00	3,169.00	18.25	345.30	3,051.50	1.95	25.31	1.78	0.18	2.67	20.00	6.15	0.06	25.00	25	38.00
3,283.00	3,232.00	18.33	345.45	3,111.32	0.15	30.54	0.13	0.02	0.24	13.00	0.71	0.01			63.00
3,347.00	3,295.00	17.19	343.94	3,171.32	1.95	-158.72	-1.81		-2.40						64.00
3,410.00	3,358.00	17.30	345.05	3,231.49	0.55	72.05	0.17	0.03	1.76	11.00	3.15	0.03	26.00	10	37.00
3,473.00	3,422.00	18.74	347.86	3,292.35	2.63	32.46	2.25	0.17	4.39	27.00	6.23	0.06	25.00	15	38.00
3,536.00	3,484.00	18.60	348.01	3,351.08	0.24	161.14	-0.23	-0.04	0.24	13.00	1.14	0.01			63.00
3,599.00	3,548.00	18.08	347.84	3,411.83	0.82	-174.21	-0.81		-0.27						63.00
3,662.00	3,611.00	18.03	346.15	3,471.73	0.84	-96.26	-0.08	-0.01	-2.68	12.00	4.38	0.04	20.00	-20	43.00
3,725.00	3,674.00	17.86	343.68	3,531.67	1.24	-103.77	-0.27	-0.07	-3.92	8.00	9.75	0.10			63.00
3,788.00	3,737.00	18.05	341.28	3,591.60	1.21	-76.74	0.30	0.05	-3.81	12.00	6.36	0.06	17.00	-20	46.00
3,851.00	3,800.00	18.37	340.76	3,651.44	0.57	-27.17	0.51	0.06	-0.83	17.00	2.11	0.02	18.00	0	45.00
3,915.00	3,863.00	18.10	340.69	3,711.28	0.43	-175.40	-0.43	-0.05	-0.11	18.00	1.50	0.02	17.00	20	47.00
3,978.00	3,926.00	19.29	341.01	3,770.95	1.90	5.08	1.89	0.24	0.51	16.00	7.47	0.07	30.00	20	33.00
4,041.00	3,989.00	19.30	340.46	3,830.42	0.29	-87.11	0.02	0.00	-0.87	19.00	0.96	0.01			63.00
4,104.00	4,053.00	18.30	340.32	3,891.00	1.56	-177.48	-1.56	-0.27	-0.22	12.00	8.34	0.08	25.00	0	38.00
4,167.00	4,115.00	18.66	340.24	3,949.80	0.58	-4.07	0.58	0.05	-0.13	24.00	1.50	0.02	30.00	0	33.00
4,230.00	4,179.00	19.76	340.62	4,010.24	1.73	6.66	1.72	0.12	0.59	31.00	3.57	0.04	15.00	0	48.00
4,293.00	4,241.00	20.19	341.02	4,068.51	0.73	17.82	0.69	0.47	0.65	3.00	15.04	0.15			63.00
4,356.00	4,304.00	19.47	340.27	4,127.77	1.21	-160.89	-1.14		-1.19						63.00
4,419.00	4,368.00	18.73	340.12	4,188.25	1.16	-176.28	-1.16	-0.20	-0.23	12.00	6.18	0.06	15.00	20	48.00
4,482.00	4,431.00	18.42	341.57	4,247.97	0.88	124.55	-0.49	-0.07	2.30	15.00	3.71	0.04	15.00	30	48.00
4,545.00	4,493.00	16.72	341.94	4,307.07	2.75	176.42	-2.74	-1.86	0.60	3.00	56.79	0.57			63.00
Original drilling, Curve															
4,545.00	4,493.00	16.72	341.94	4,307.07	2.75	0.00	0.00								
4,608.00	4,557.00	13.39	343.57	4,368.87	5.24	173.54	-5.20	-0.91	2.55	12.00	27.97	0.28	47.00	150	16.00
4,671.00	4,620.00	8.48	9.84	4,430.74	10.92	146.97	-7.79	-0.34	41.70	47.00	14.63	0.15	63.00	120	
4,734.00	4,683.00	8.27	63.21	4,493.16	11.91	117.87	-0.33	-0.01	84.71	63.00	11.91	0.12	63.00	90	
4,797.00	4,746.00	11.98	99.78	4,555.23	11.49	78.90	5.89	0.19	58.05	63.00	11.49	0.11	63.00	40	
4,860.00	4,809.00	17.46	116.51	4,616.16	10.93	46.11	8.70	0.29	26.56	63.00	10.93	0.11	63.00	35	
4,924.00	4,873.00	23.10	129.02	4,676.20	11.07	43.55	8.81	0.29	19.55	64.00	11.07	0.11	64.00	0	
4,987.00	4,936.00	29.60	131.44	4,732.63	10.46	10.48	10.32	0.34	3.84	63.00	10.46	0.10	44.00	0	19.00
5,050.00	4,999.00	33.89	131.85	4,786.19	6.82	3.05	6.81	0.32	0.65	44.00	9.76	0.10	42.00	0	21.00

End of Well Report for M11 2308 Pad, # 108H

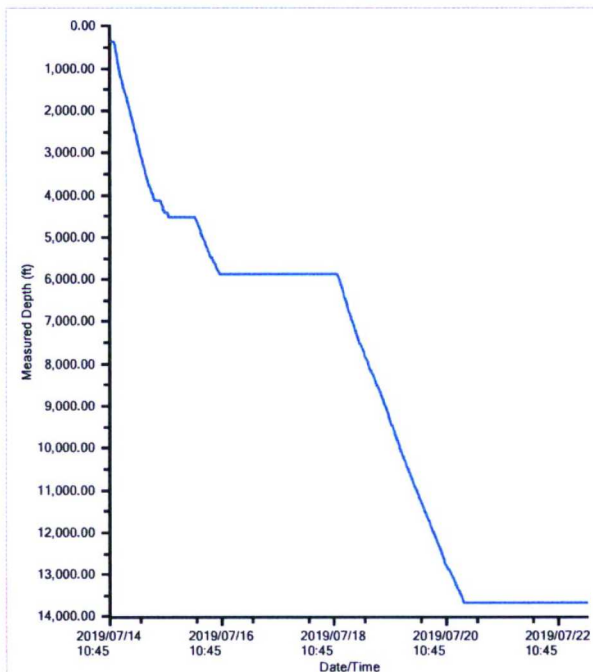
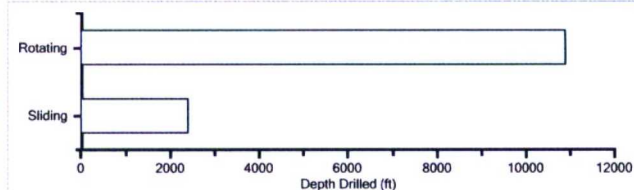
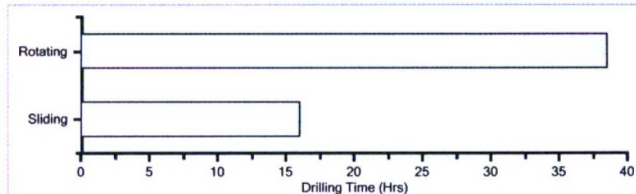
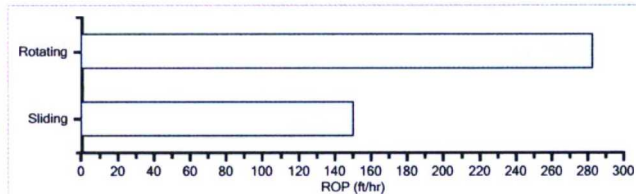
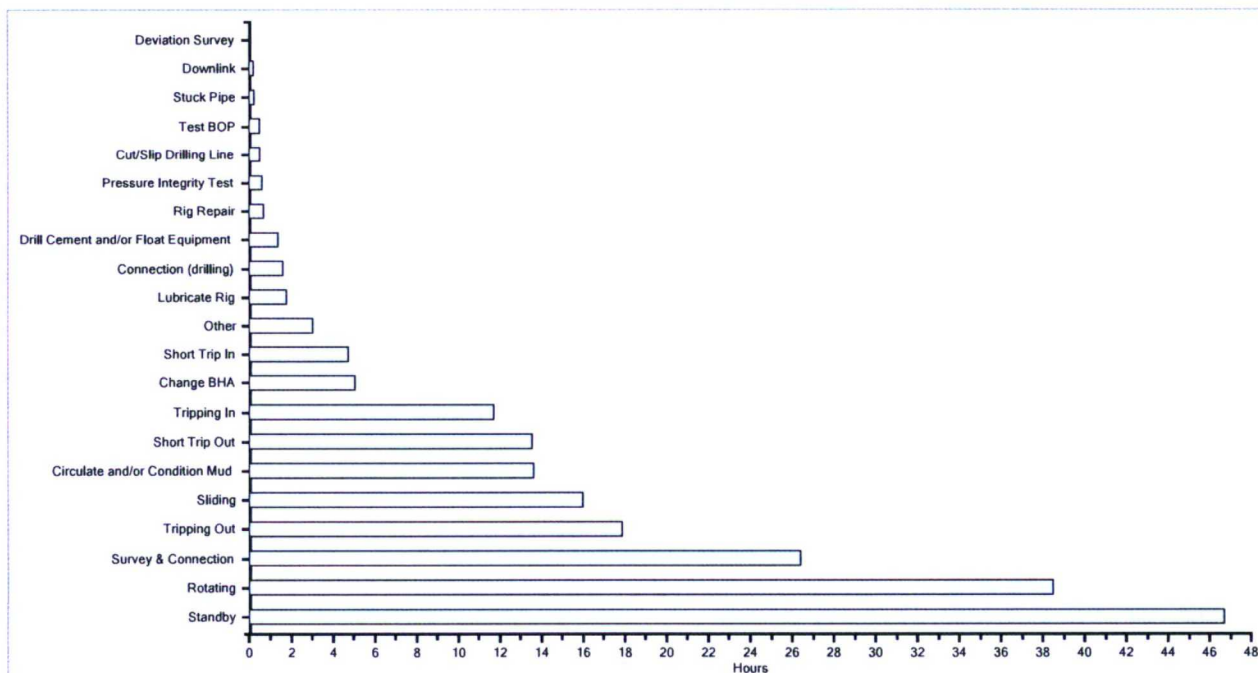
Slide Sheet															
Bit Depth (ft)	Survey Depth (ft)	Incl. (°)	(True) Azimuth (°)	Vertical Depth (ft)	Dogleg Rate (°/100ft)	Calc'd Toolface (°)	Build Rate (°/100ft)	Build Seen (°/ft)	Turn Rate (°/100ft)	Slide Seen (ft)	Motor Output (°/100ft)	Motor Output (°/ft)	Slide Length (ft)	Toolface Orient (°)	Rotate Length (ft)
5,113.00	5,062.00	38.28	131.91	4,837.09	6.97	0.49	6.97	0.34	0.10	42.00	10.45	0.10	35.00	0	28.00
5,176.00	5,125.00	41.12	134.08	4,885.56	5.02	26.86	4.51	0.27	3.44	35.00	9.03	0.09	30.00	20	33.00
5,239.00	5,188.00	43.53	134.88	4,932.13	3.92	12.90	3.83	0.26	1.27	30.00	8.23	0.08	35.00	0	28.00
5,302.00	5,251.00	45.26	137.55	4,977.15	4.04	48.16	2.75	0.16	4.24	35.00	7.27	0.07	45.00	15	18.00
5,365.00	5,314.00	47.62	140.40	5,020.57	4.98	42.18	3.75	0.17	4.52	45.00	6.97	0.07	53.00	20	10.00
5,428.00	5,377.00	51.21	143.39	5,061.55	6.74	33.30	5.70	0.22	4.75	53.00	8.01	0.08	63.00	10	
5,491.00	5,440.00	57.14	145.76	5,098.41	9.89	18.66	9.41	0.31	3.76	63.00	9.89	0.10	50.00	-15	13.00
5,554.00	5,503.00	62.22	145.82	5,130.21	8.06	0.60	8.06	0.33	0.10	50.00	10.16	0.10	37.00	-15	26.00
5,617.00	5,566.00	66.59	144.36	5,157.42	7.24	-17.09	6.94	0.39	-2.32	37.00	12.33	0.12	41.00	-25	22.00
5,680.00	5,629.00	72.27	143.36	5,179.55	9.14	-9.54	9.02	0.45	-1.59	41.00	14.04	0.14	28.00	-20	35.00
5,743.00	5,693.00	75.48	142.45	5,197.32	5.20	-15.36	5.02	0.36	-1.42	29.00	11.47	0.11	20.00	-25	43.00
5,806.00	5,756.00	78.78	141.35	5,211.35	5.51	-18.13	5.24	0.54	-1.75	20.00	17.35	0.17	30.00	-25	33.00
5,869.00	5,819.00	81.48	139.86	5,222.15	4.88	-28.66	4.29	0.30	-2.37	30.00	10.24	0.10	15.00	-60	48.00
5,903.00	5,850.00	82.01	139.40	5,226.60	2.25	-40.69	1.71	0.87	-1.48	2.00	34.93	0.35	17.00	-40	17.00
Original drilling, Lateral															
5,903.00	5,850.00	82.01	139.40	5,226.60	2.25	0.00	0.00								
6,015.00	5,962.00	85.06	138.03	5,239.21	2.98	-24.13	2.72		-1.22						112.00
6,078.00	6,024.00	84.68	137.59	5,244.75	0.94	-130.95	-0.61		-0.71						63.00
6,141.00	6,088.00	87.01	137.75	5,249.39	3.65	3.92	3.64	0.76	0.25	10.00	23.35	0.23	20.00	0	43.00
6,205.00	6,151.00	89.06	139.01	5,251.55	3.82	31.59	3.25	0.34	2.00	20.00	12.03	0.12	18.00	35	46.00
6,268.00	6,214.00	90.67	139.12	5,251.70	2.56	3.91	2.56	0.31	0.17	17.00	9.49	0.09	9.00	0	54.00
6,331.00	6,277.00	90.70	138.40	5,250.95	1.14	-87.61	0.05		-1.14						63.00
6,394.00	6,340.00	90.10	137.54	5,250.51	1.66	-124.90	-0.95	-0.98	-1.37	2.00	52.43	0.52	2.00	180	61.00
6,457.00	6,404.00	89.83	136.98	5,250.54	0.97	-115.74	-0.42		-0.88						63.00
6,520.00	6,467.00	89.46	138.15	5,250.94	1.95	107.55	-0.59	-0.12	1.86	10.00	12.27	0.12	12.00	70	51.00
6,583.00	6,529.00	90.24	138.73	5,251.10	1.57	36.64	1.26	0.23	0.94	11.00	8.84	0.09	10.00	30	53.00
6,646.00	6,592.00	90.44	138.38	5,250.72	0.64	-60.25	0.32	0.66	-0.56	1.00	40.31	0.40			63.00
6,709.00	6,655.00	90.24	137.74	5,250.35	1.06	-107.35	-0.32		-1.02						63.00
6,772.00	6,718.00	89.83	136.83	5,250.31	1.58	-114.25	-0.65		-1.44						63.00
6,835.00	6,781.00	89.80	137.58	5,250.51	1.19	92.29	-0.05	-0.01	1.19	9.00	8.34	0.08	15.00	50	48.00
6,898.00	6,845.00	90.70	138.29	5,250.24	1.79	38.27	1.41	0.18	1.11	16.00	7.16	0.07	15.00	50	48.00
6,961.00	6,908.00	91.55	138.74	5,249.00	1.53	27.89	1.35	0.56	0.71	5.00	19.23	0.19			63.00
7,024.00	6,971.00	91.68	137.94	5,247.22	1.29	-80.76	0.21		-1.27						63.00
7,087.00	7,033.00	90.23	138.52	5,246.19	2.52	158.20	-2.34	-0.53	0.94	9.00	17.35	0.17	15.00	95	48.00
7,150.00	7,096.00	90.37	139.00	5,245.86	0.79	73.74	0.22	0.08	0.76	6.00	8.33	0.08			63.00
7,213.00	7,160.00	89.97	138.23	5,245.67	1.36	-117.45	-0.63		-1.20						63.00
7,276.00	7,222.00	90.91	139.05	5,245.19	2.01	41.10	1.52	0.34	1.32	9.00	13.86	0.14	17.00	60	46.00
7,338.00	7,284.00	91.98	139.69	5,243.63	2.01	30.87	1.73	0.44	1.03	8.00	15.58	0.16			62.00
7,400.00	7,347.00	90.74	139.09	5,242.14	2.19	-154.18	-1.97	-0.51	-0.95	8.00	17.22	0.17	8.00	120	54.00
7,463.00	7,409.00	90.23	138.28	5,241.61	1.54	-122.19	-0.82		-1.31						63.00
7,526.00	7,472.00	89.50	137.40	5,241.76	1.81	-129.68	-1.16		-1.40						63.00
7,589.00	7,536.00	89.80	138.10	5,242.15	1.19	66.80	0.47	0.10	1.09	10.00	7.62	0.08	10.00	60	53.00
7,652.00	7,599.00	89.03	137.99	5,242.79	1.23	-171.87	-1.22	-0.25	-0.17	10.00	7.78	0.08	10.00	70	53.00
7,715.00	7,662.00	90.23	139.02	5,243.20	2.51	40.64	1.90	0.39	1.63	10.00	15.81	0.16	15.00	60	48.00
7,778.00	7,725.00	90.98	139.33	5,242.53	1.29	22.45	1.19	0.49	0.49	5.00	16.23	0.16			63.00
7,842.00	7,788.00	89.73	137.24	5,242.14	3.87	-120.87	-1.98		-3.32						64.00
7,904.00	7,851.00	89.36	137.15	5,242.64	0.60	-166.33	-0.59		-0.14				16.00	60	46.00
7,967.00	7,914.00	90.00	139.39	5,243.00	3.70	74.06	1.02	0.08	3.56	26.00	8.96	0.09	15.00	60	48.00
8,030.00	7,977.00	90.03	140.09	5,242.98	1.11	87.55	0.05	0.02	1.11	5.00	14.01	0.14			63.00
8,093.00	8,039.00	90.27	140.12	5,242.82	0.39	7.12	0.39		0.05						63.00
8,156.00	8,102.00	90.07	139.34	5,242.63	1.28	-104.38	-0.32		-1.24						63.00
8,219.00	8,165.00	89.63	139.12	5,242.80	0.78	-153.44	-0.70		-0.35				10.00	60	53.00
8,282.00	8,228.00	89.97	141.25	5,243.02	3.42	80.94	0.54	0.06	3.38	19.00	11.35	0.11	18.00	50	45.00
8,344.00	8,291.00	90.77	142.35	5,242.61	2.16	53.97	1.27	0.29	1.75	9.00	15.11	0.15			62.00
8,406.00	8,353.00	91.14	141.62	5,241.58	1.32	-63.11	0.60	0.13	-1.18	9.00	9.09	0.09	10.00	0	52.00
8,469.00	8,416.00	91.14	141.20	5,240.32	0.67	-90.00	0.00	0.00	-0.67	1.00	41.99	0.42			63.00
8,533.00	8,479.00	90.13	140.10	5,239.62	2.37	-132.55	-1.60		-1.75				11.00	30	53.00
8,595.00	8,542.00	90.20	140.57	5,239.44	0.75	81.53	0.11	0.02	0.75	11.00	4.32	0.04			62.00
8,658.00	8,605.00	89.46	139.06	5,239.63	2.67	-116.11	-1.17		-2.40				14.00	0	49.00
8,721.00	8,667.00	90.81	138.57	5,239.48	2.32	-19.95	2.18	0.32	-0.79	14.00	10.26	0.10			63.00
8,783.00	8,730.00	90.60	137.16	5,238.71	2.26	-98.46	-0.33		-2.24						62.00

End of Well Report for M11 2308 Pad, # 108H

Slide Sheet															
Bit Depth (ft)	Survey Depth (ft)	Incl. (°)	(True) Azimuth (°)	Vertical Depth (ft)	Dogleg Rate (°/100ft)	Calc'd Toolface (°)	Build Rate (°/100ft)	Build Seen (°/ft)	Turn Rate (°/100ft)	Slide Seen (ft)	Motor Output (°/100ft)	Motor Output (°/ft)	Slide Length (ft)	Toolface Orient (°)	Rotate Length (ft)
8,846.00	8,792.00	90.20	136.25	5,238.27	1.60	-113.73	-0.65		-1.47				11.00	0	52.00
8,909.00	8,855.00	90.91	136.71	5,237.66	1.34	32.94	1.13	0.21	0.73	11.00	7.69	0.08			63.00
8,971.00	8,918.00	90.34	136.68	5,236.98	0.91	-176.99	-0.90	-0.21	-0.05	9.00	6.34	0.06	10.00	50	52.00
9,034.00	8,981.00	90.03	137.35	5,236.77	1.17	114.83	-0.49	-0.09	1.06	11.00	6.71	0.07	13.00	70	50.00
9,097.00	9,044.00	90.77	138.03	5,236.33	1.60	42.58	1.17	0.19	1.08	13.00	7.73	0.08	11.00	30	52.00
9,160.00	9,106.00	90.67	138.22	5,235.56	0.35	117.76	-0.16	-0.33	0.31	1.00	21.47	0.21			63.00
9,223.00	9,169.00	91.01	138.48	5,234.63	0.68	37.40	0.54	0.12	0.41	9.00	4.76	0.05	14.00	70	49.00
9,285.00	9,232.00	90.24	138.01	5,233.94	1.43	-148.60	-1.22	-0.51	-0.75	5.00	18.04	0.18			62.00
9,348.00	9,295.00	90.17	138.79	5,233.72	1.24	95.13	-0.11	-0.02	1.24	10.00	7.83	0.08	14.00	60	49.00
9,409.00	9,355.00	90.71	139.75	5,233.26	1.84	60.64	0.90	0.44	1.60	4.00	27.54	0.28			61.00
9,470.00	9,416.00	89.93	139.13	5,232.92	1.63	-141.52	-1.28		-1.02						61.00
9,530.00	9,477.00	90.20	138.76	5,232.85	0.75	-53.88	0.44		-0.61						60.00
9,591.00	9,537.00	89.53	138.24	5,232.99	1.41	-142.18	-1.12		-0.87						61.00
9,652.00	9,598.00	90.37	138.73	5,233.04	1.59	30.26	1.38	0.39	0.80	7.00	13.89	0.14	13.00	45	48.00
9,713.00	9,659.00	90.27	139.12	5,232.70	0.66	104.38	-0.16	-0.05	0.64	6.00	6.71	0.07			61.00
9,774.00	9,721.00	89.46	138.38	5,232.85	1.77	-137.59	-1.31		-1.19						61.00
9,836.00	9,782.00	90.07	138.60	5,233.10	1.06	19.83	1.00	0.25	0.36	8.00	8.11	0.08	14.00	30	48.00
9,897.00	9,844.00	89.80	138.62	5,233.17	0.44	175.76	-0.44	-0.07	0.03	12.00	2.26	0.02	6.00	30	55.00
9,958.00	9,905.00	90.54	139.24	5,232.99	1.58	39.96	1.21	0.30	1.02	8.00	12.07	0.12	14.00	30	47.00
10,019.00	9,966.00	89.83	138.65	5,232.79	1.51	-140.27	-1.16	-0.39	-0.97	6.00	15.39	0.15			61.00
10,081.00	10,027.00	90.27	139.06	5,232.74	0.99	42.98	0.72	0.18	0.67	8.00	7.52	0.08	14.00	30	48.00
10,142.00	10,088.00	90.13	139.97	5,232.52	1.51	98.74	-0.23	-0.04	1.49	13.00	7.08	0.07	16.00	30	45.00
10,203.00	10,150.00	90.27	139.99	5,232.31	0.23	8.13	0.23	0.05	0.03	9.00	1.57	0.02			61.00
10,264.00	10,211.00	89.90	139.99	5,232.22	0.61	180.00	-0.61	-0.15		8.00	4.63	0.05	12.00	45	49.00
10,325.00	10,272.00	91.38	140.90	5,231.54	2.85	31.58	2.43	0.40	1.49	12.00	14.48	0.14	12.00	30	49.00
10,386.00	10,332.00	90.57	140.22	5,230.52	1.76	-139.98	-1.35	-0.66	-1.13	4.00	26.44	0.26			61.00
10,447.00	10,394.00	90.40	139.36	5,229.99	1.41	-101.18	-0.27		-1.39						61.00
10,509.00	10,455.00	89.66	138.97	5,229.96	1.37	-152.21	-1.21		-0.64						62.00
10,570.00	10,516.00	89.26	138.10	5,230.53	1.57	-114.70	-0.66	-0.19	-1.43	7.00	13.68	0.14	12.00	0	49.00
10,630.00	10,577.00	90.00	137.42	5,230.93	1.65	-42.58	1.21	0.49	-1.11	5.00	20.10	0.20	17.00	15	43.00
10,692.00	10,638.00	90.37	136.79	5,230.73	1.20	-59.57	0.61	0.07	-1.03	17.00	4.30	0.04			62.00
10,753.00	10,699.00	89.87	134.69	5,230.60	3.54	-103.39	-0.82		-3.44				17.00	15	44.00
10,814.00	10,760.00	91.28	134.05	5,229.99	2.54	-24.41	2.31	0.27	-1.05	17.00	9.11	0.09	18.00	70	43.00
10,875.00	10,821.00	91.01	135.45	5,228.77	2.34	100.90	-0.44	-0.05	2.30	18.00	7.92	0.08			61.00
10,936.00	10,883.00	91.21	135.66	5,227.57	0.47	46.39	0.32		0.34						61.00
10,997.00	10,944.00	91.51	135.39	5,226.12	0.66	-41.98	0.49		-0.44						61.00
11,058.00	11,005.00	91.51	134.85	5,224.52	0.88	-89.99	0.00		-0.89						61.00
11,120.00	11,066.00	91.61	135.32	5,222.85	0.79	77.98	0.16		0.77				18.00	90	44.00
11,181.00	11,128.00	90.67	136.16	5,221.62	2.03	138.21	-1.52	-0.17	1.35	18.00	7.00	0.07	13.00	90	48.00
11,242.00	11,188.00	88.36	135.48	5,222.13	4.01	-163.60	-3.85	-0.58	-1.13	13.00	18.52	0.19	15.00	30	46.00
11,302.00	11,248.00	90.87	136.24	5,222.53	4.37	16.85	4.18	0.55	1.27	15.00	17.48	0.17	16.00	60	44.00
11,363.00	11,309.00	91.74	137.12	5,221.14	2.03	45.31	1.43	0.18	1.44	16.00	7.73	0.08	16.00	90	45.00
11,424.00	11,370.00	90.94	139.31	5,219.72	3.82	110.04	-1.31	-0.16	3.59	16.00	14.57	0.15			61.00
11,485.00	11,431.00	90.64	138.39	5,218.88	1.59	-108.06	-0.49		-1.51						61.00
11,545.00	11,492.00	90.17	136.86	5,218.44	2.62	-107.07	-0.77		-2.51				15.00	50	45.00
11,607.00	11,553.00	89.93	137.75	5,218.39	1.51	105.09	-0.39	-0.05	1.46	15.00	6.15	0.06	16.00	70	46.00
11,668.00	11,614.00	90.34	139.07	5,218.25	2.27	72.74	0.67	0.08	2.16	16.00	8.64	0.09	20.00	55	41.00
11,729.00	11,676.00	91.44	139.23	5,217.28	1.79	8.27	1.77	0.18	0.26	20.00	5.56	0.06			61.00
11,790.00	11,737.00	91.54	139.50	5,215.70	0.47	69.67	0.16		0.44				14.00	80	47.00
11,852.00	11,798.00	91.95	139.95	5,213.84	1.00	47.64	0.67	0.10	0.74	14.00	4.35	0.04			62.00
11,913.00	11,860.00	91.21	138.80	5,212.13	2.21	-122.75	-1.19		-1.85						61.00
11,975.00	11,921.00	90.81	138.52	5,211.06	0.80	-145.01	-0.66		-0.46						62.00
12,036.00	11,983.00	90.44	139.78	5,210.38	2.12	106.36	-0.60	-0.15	2.03	8.00	16.41	0.16	10.00	90	51.00
12,097.00	12,044.00	90.30	140.12	5,209.99	0.60	112.38	-0.23	-0.11	0.56	4.00	9.19	0.09	2.00	180	59.00
12,159.00	12,105.00	89.83	139.97	5,209.92	0.81	-162.30	-0.77	-0.77	-0.25	2.00	24.67	0.25	2.00	180	60.00
12,220.00	12,166.00	89.06	139.41	5,210.51	1.56	-143.98	-1.26		-0.92						61.00
12,281.00	12,228.00	88.76	138.41	5,211.69	1.68	-106.71	-0.48		-1.61						61.00
12,342.00	12,288.00	88.49	138.90	5,213.13	0.93	118.87	-0.45	-0.13	0.82	7.00	7.99	0.08	10.00	30	51.00
12,402.00	12,349.00	88.82	139.24	5,214.56	0.78	45.85	0.54	0.11	0.56	10.00	4.74	0.05	12.00	30	48.00
12,463.00	12,409.00	90.64	140.17	5,214.84	3.41	27.07	3.03	0.50	1.55	12.00	17.03	0.17	10.00	0	51.00
12,525.00	12,472.00	90.67	139.60	5,214.12	0.91	-86.98	0.05	0.03	-0.90	3.00	19.03	0.19			62.00

End of Well Report for M11 2308 Pad, # 108H
Slide Sheet

Bit Depth (ft)	Survey Depth (ft)	Incl. (°)	(True) Azimuth (°)	Vertical Depth (ft)	Dogleg Rate (°/100ft)	Calc'd Toolface (°)	Build Rate (°/100ft)	Build Seen (°/ft)	Turn Rate (°/100ft)	Slide Seen (ft)	Motor Output (°/100ft)	Motor Output (°/ft)	Slide Length (ft)	Toolface Orient (°)	Rotate Length (ft)
12,588.00	12,534.00	90.34	138.94	5,213.57	1.19	-116.56	-0.53		-1.06						63.00
12,650.00	12,597.00	90.07	138.35	5,213.35	1.03	-114.59	-0.43		-0.94						62.00
12,712.00	12,659.00	90.10	138.01	5,213.26	0.55	-84.96	0.05		-0.55						62.00
12,775.00	12,721.00	90.00	136.62	5,213.20	2.25	-94.11	-0.16		-2.24						63.00
12,837.00	12,783.00	90.94	137.31	5,212.69	1.88	36.28	1.52	0.39	1.11	8.00	14.58	0.15	10.00	60	52.00
12,900.00	12,846.00	90.54	138.49	5,211.88	1.98	108.72	-0.63	-0.12	1.87	11.00	11.33	0.11	10.00	80	53.00
12,962.00	12,909.00	89.76	139.16	5,211.72	1.63	139.34	-1.24	-0.26	1.06	10.00	10.28	0.10	10.00	45	52.00
13,025.00	12,971.00	89.56	139.03	5,212.08	0.38	-146.98	-0.32	-0.07	-0.21	10.00	2.39	0.02	9.00	30	54.00
13,088.00	13,035.00	89.73	139.67	5,212.48	1.03	75.13	0.27	0.06	1.00	10.00	6.62	0.07	17.00	0	46.00
13,151.00	13,097.00	90.91	139.53	5,212.13	1.92	-6.77	1.90	0.55	-0.23	7.00	16.98	0.17			63.00
13,213.00	13,160.00	91.45	139.41	5,210.84	0.88	-12.53	0.86		-0.19						62.00
13,276.00	13,223.00	91.68	138.93	5,209.12	0.84	-64.38	0.37		-0.76				2.00	180	61.00
13,339.00	13,285.00	91.31	138.19	5,207.50	1.33	-116.56	-0.60	-0.61	-1.19	2.00	41.36	0.41	3.00	180	60.00
13,402.00	13,348.00	91.07	137.60	5,206.19	1.01	-112.13	-0.38	-0.26	-0.94	3.00	21.23	0.21	10.00	100	53.00
13,466.00	13,411.00	91.01	139.25	5,205.05	2.62	92.07	-0.10	-0.02	2.62	10.00	16.51	0.17	5.00	180	59.00
13,527.00	13,473.00	90.81	138.61	5,204.06	1.08	-107.35	-0.32	-0.13	-1.03	5.00	13.41	0.13			61.00
13,589.00	13,535.00	91.11	138.14	5,203.02	0.90	-57.44	0.48		-0.76						62.00
13,652.00	13,598.00	91.51	137.45	5,201.58	1.27	-59.88	0.63		-1.10						63.00
13,675.00	13,621.00	91.54	137.33	5,200.97	0.54	-75.96	0.13		-0.52						23.00
13,675.00	13,674.99	91.54	137.33	5,199.52	0.00	0.00	0.00								

End of Well Report for M11 2308 Pad, # 108H
Time vs Depth

Depth Drilled

Drilling Time

Average Rate of Penetration

Activity




End of Well Report for M11 2308 Pad, # 108H

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