



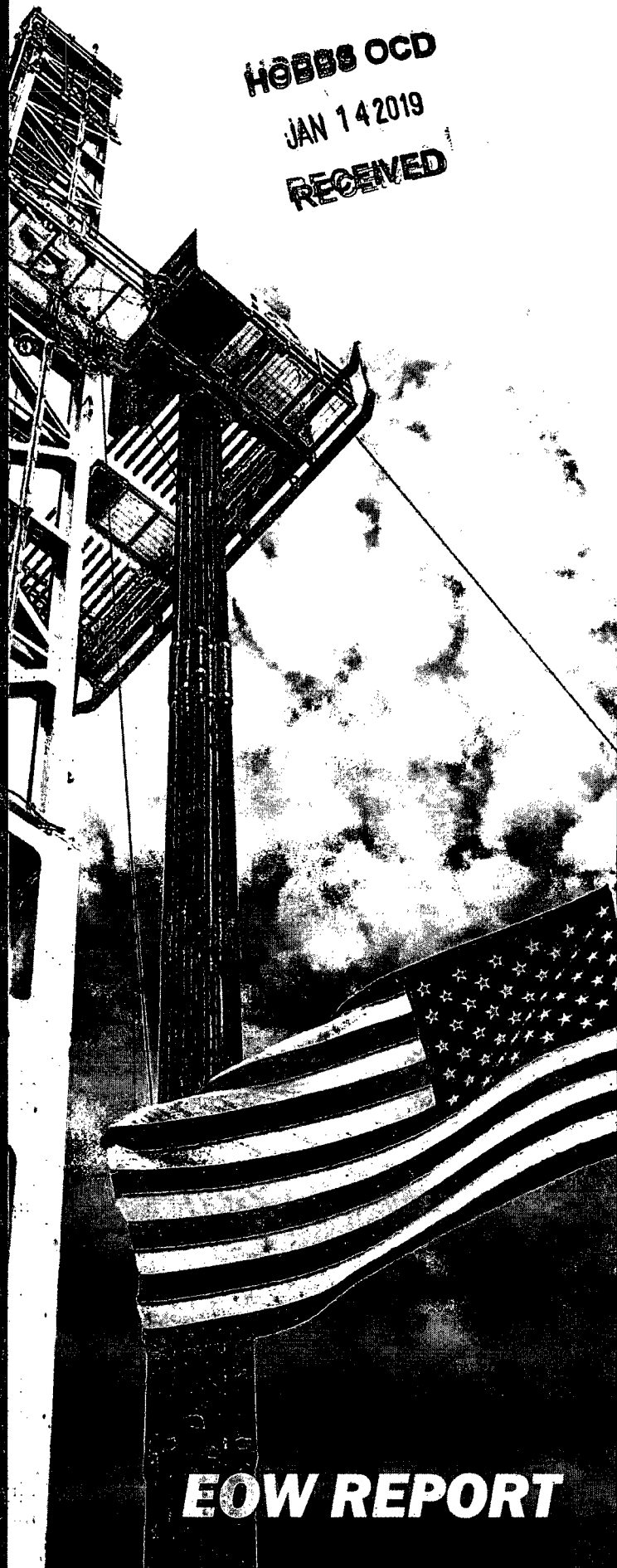
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Breitburn Operating

Encore M State #23
Lea County, New Mexico
Nabors M10

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EOW REPORT



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Breitburn Operating

Lea County, New Mexico (NAD 83)

Encore M State #23

Encore M State #23

Wellbore #1

Design: Surveys

Standard Survey Report

26 October, 2018





MS Directional Survey Report



Company:	Breitburn Operating	Local Co-ordinate Reference:	Well Encore M State #23
Project:	Lea County, New Mexico (NAD 83)	TVD Reference:	22' KB + 3359' GL @ 3381.00usft (Nabors M10)
Site:	Encore M State #23	MD Reference:	22' KB + 3359' GL @ 3381.00usft (Nabors M10)
Well:	Encore M State #23	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 Conroe Db

Project	Lea County, New Mexico (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Well	Encore M State #23				
Well Position	+N/-S	0.00 usft	Northing:	499,685.60 usft	Latitude: 32° 22' 6.323 N
	+E/-W	0.00 usft	Easting:	897,686.70 usft	Longitude: 103° 10' 45.012 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level: 3,359.00 usft
Grid Convergence:	0.618 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2018	10/12/2018	6.694	60.212	47,964.75

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

Survey Program	Date 10/26/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
83.00	1,200.00	MS Gyro (Wellbore #1)	IS-GYRO-DROP	MEMS RATE GYRO	
1,262.00	7,634.00	MS MWD (Wellbore #1)	MWD	OWSG MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83.00	1.48	59.44	82.99	0.55	0.92	0.55	1.78	1.78	0.00
173.00	1.40	61.46	172.96	1.66	2.89	1.66	0.11	-0.09	2.24
264.00	1.38	60.13	263.94	2.74	4.82	2.74	0.04	-0.02	-1.46
354.00	1.38	59.86	353.91	3.82	6.69	3.82	0.01	0.00	-0.30
445.00	1.36	59.07	444.88	4.93	8.57	4.93	0.03	-0.02	-0.87
534.00	1.30	59.17	533.86	5.99	10.34	5.99	0.07	-0.07	0.11
628.00	1.09	60.44	627.84	6.98	12.03	6.98	0.23	-0.22	1.35
722.00	0.94	57.47	721.82	7.83	13.46	7.83	0.17	-0.16	-3.16
818.00	0.94	53.27	817.81	8.73	14.76	8.73	0.07	0.00	-4.38
913.00	0.99	54.98	912.80	9.66	16.05	9.66	0.06	0.05	1.80
1,009.00	0.89	52.73	1,008.78	10.59	17.33	10.59	0.11	-0.10	-2.34
1,104.00	0.83	59.03	1,103.77	11.39	18.50	11.39	0.12	-0.06	6.63
1,200.00	0.82	54.84	1,199.76	12.14	19.66	12.14	0.06	-0.01	-4.36
Final MS Gyro - 1200.00' MD - Tie-In to MS Gyro - 1200.00' MD									



MS Directional Survey Report



Company:	Breitburn Operating	Local Co-ordinate Reference:	Well Encore M State #23
Project:	Lea County, New Mexico (NAD 83)	TVD Reference:	22' KB + 3359' GL @ 3381.00usft (Nabors M10)
Site:	Encore M State #23	MD Reference:	22' KB + 3359' GL @ 3381.00usft (Nabors M10)
Well:	Encore M State #23	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 Conroe Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,262.00	0.60	341.90	1,261.76	12.71	19.92	12.71	1.39	-0.35	-117.65
1,450.00	0.90	321.60	1,449.74	14.80	18.70	14.80	0.21	0.16	-10.80
1,638.00	1.20	288.20	1,637.71	16.57	15.91	16.57	0.36	0.16	-17.77
1,827.00	1.40	304.60	1,826.67	18.50	12.13	18.50	0.22	0.11	8.68
2,015.00	1.30	328.90	2,014.62	21.63	9.14	21.63	0.31	-0.05	12.93
2,204.00	0.60	323.20	2,203.59	24.26	7.44	24.26	0.37	-0.37	-3.02
2,392.00	0.40	330.10	2,391.58	25.62	6.52	25.62	0.11	-0.11	3.67
2,580.00	0.70	233.60	2,579.58	25.50	5.27	25.50	0.45	0.16	-51.33
2,768.00	0.80	226.00	2,767.56	23.91	3.40	23.91	0.07	0.05	-4.04
2,956.00	0.80	232.70	2,955.54	22.20	1.41	22.20	0.05	0.00	3.56
3,144.00	0.80	227.90	3,143.52	20.53	-0.60	20.53	0.04	0.00	-2.55
3,333.00	0.50	241.90	3,332.51	19.26	-2.31	19.26	0.18	-0.16	7.41
3,521.00	0.60	239.30	3,520.50	18.37	-3.88	18.37	0.05	0.05	-1.38
3,709.00	0.60	259.20	3,708.49	17.68	-5.69	17.68	0.11	0.00	10.59
3,898.00	0.70	235.10	3,897.48	16.83	-7.61	16.83	0.15	0.05	-12.75
4,086.00	0.50	253.60	4,085.47	15.95	-9.34	15.95	0.15	-0.11	9.84
4,274.00	0.70	247.30	4,273.46	15.27	-11.19	15.27	0.11	0.11	-3.35
4,462.00	0.30	226.30	4,461.45	14.49	-12.60	14.49	0.23	-0.21	-11.17
4,647.00	0.70	242.90	4,646.44	13.64	-13.96	13.64	0.23	0.22	8.97
4,836.00	0.80	243.80	4,835.43	12.53	-16.17	12.53	0.05	0.05	0.48
5,024.00	0.80	239.00	5,023.41	11.27	-18.47	11.27	0.04	0.00	-2.55
5,212.00	0.80	224.20	5,211.39	9.66	-20.51	9.66	0.11	0.00	-7.87
5,400.00	0.80	228.70	5,399.37	7.85	-22.41	7.85	0.03	0.00	2.39
5,589.00	0.80	236.70	5,588.36	6.26	-24.51	6.26	0.06	0.00	4.23
5,777.00	0.60	232.20	5,776.34	4.93	-26.38	4.93	0.11	-0.11	-2.39
5,965.00	0.60	273.70	5,964.33	4.39	-28.14	4.39	0.23	0.00	22.07
6,154.00	0.70	249.90	6,153.32	4.06	-30.21	4.06	0.15	0.05	-12.59
6,342.00	0.70	246.00	6,341.31	3.20	-32.34	3.20	0.03	0.00	-2.07
6,530.00	0.80	268.70	6,529.29	2.70	-34.70	2.70	0.17	0.05	12.07
6,719.00	0.90	226.40	6,718.27	1.65	-37.10	1.65	0.33	0.05	-22.38
6,907.00	0.90	213.10	6,906.25	-0.61	-38.97	-0.61	0.11	0.00	-7.07
7,096.00	1.00	192.30	7,095.22	-3.46	-40.13	-3.46	0.19	0.05	-11.01
7,284.00	1.00	218.50	7,283.20	-6.35	-41.51	-6.35	0.24	0.00	13.94
7,634.00	1.00	218.50	7,633.14	-11.13	-45.31	-11.13	0.00	0.00	0.00
Projection to TD-7634.00' MD									



MS Directional
Survey Report



Company:	Breitburn Operating	Local Co-ordinate Reference:	Well Encore M State #23
Project:	Lea County, New Mexico (NAD 83)	TVD Reference:	22' KB + 3359' GL @ 3381.00usft (Nabors M10)
Site:	Encore M State #23	MD Reference:	22' KB + 3359' GL @ 3381.00usft (Nabors M10)
Well:	Encore M State #23	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 Conroe Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,200.00	1,199.76	12.14	19.66	Final MS Gyro - 1200.00' MD
1,200.00	1,199.76	12.14	19.66	Tie-In to MS Gyro - 1200.00' MD
7,634.00	7,633.14	-11.13	-45.31	Projection to TD-7634.00' MD

Daily Report Tuesday, October 16, 2018
(1 of 10)



Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitbart Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Holler
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$9,000.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cummulative Cost: \$9,000.00	Night MWD: N/A

Drilling Summary				Drilling Parameters					
Start Depth: 1,220	End Depth: 1,220	Below Rotary Hours: 0.00	Circulating Hours: 0.00		Min	Max		Min	Max
Total Footage: 0.00	Total Drilled Hours: 0.00	Avg. Total ROP: 0.00	Percent Drilled: 0.00%	WOB:	N/A	N/A	SPP Off Bottom:	N/A	N/A
Rotating Footage: 0.00	Rotary Hours: 0.00	Avg. Rotary ROP: 0.00	Percent Rotary: 0.00%	Pick Up:	N/A	N/A	SPP On Bottom:	N/A	N/A
Sliding Footage: 0.00	Sliding Hours: 0.00	Avg. Sliding ROP: 0.00	Percent Sliding: 0.00%	Slack Off:	N/A	N/A	Delta Pressure:	N/A	N/A
				Rot. Off Bottom:	N/A	N/A	Flow Rate:	N/A	N/A
				Bottom Hole Temp.:	N/A	N/A	SPM:	N/A	N/A

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 1,200	Incl. In: 0.82	Azm. In: 54.84	MD Out: 1,200	Incl. Out: 0.82	Azm. Out: 54.84
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BHA's	General Comments
	Will be on stand-by until we pick up directional tool.

24 Hours Summary	Next 24 Hours Plan
Arrive on location, Unload and strap directional tools, Stand-by for drilling surface.	Stand-by, Casing and cement operations

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Stand-by	00:00	24:00	24.00	1,220	1,220	Stand-by for drilling surface

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Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitburn Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Holler
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$3,000.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cummulative Cost: \$12,000.00	Night MWD: N/A

Drilling Summary

Start Depth: 1,220	End Depth: 1,220	Below Rotary Hours: 0.00	Circulating Hours: 0.00
Total Footage: 0.00	Total Drilled Hours: 0.00	Avg. Total ROP: 0.00	Percent Drilled: 0.00%
Rotating Footage: 0.00	Rotary Hours: 0.00	Avg. Rotary ROP: 0.00	Percent Rotary: 0.00%
Sliding Footage: 0.00	Sliding Hours: 0.00	Avg. Sliding ROP: 0.00	Percent Sliding: 0.00%

Drilling Parameters

	Min	Max		Min	Max
WOB:	N/A	N/A	SPP Off Bottom:	N/A	N/A
Pick Up:	N/A	N/A	SPP On Bottom:	N/A	N/A
Slack Off:	N/A	N/A	Delta Pressure:	N/A	N/A
Rot. Off Bottom:	N/A	N/A	Flow Rate:	N/A	N/A
Bottom Hole Temp.:	N/A	N/A	SPM:	N/A	N/A

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 1,200	Incl. In: 0.82	Azm. In: 54.84	MD Out: 1,200	Incl. Out: 0.82	Azm. Out: 54.84
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BHA's

General Comments

We will remain on stand-by until we pick up directional tools.

24 Hours Summary

Stand-by, Drilling surface, Casing and cement operations

Next 24 Hours Plan

Finish casing and cement operations, Nipple up and test Bop's, Pick up directional tools.

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Stand-by	00:00	24:00	24.00	1,220	1,220	Stand-by for Drilling Surface and Casing/ Cement operations

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Daily Report Thursday, October 18, 2018

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Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitburn Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Hollier
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$6,900.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cumulative Cost: \$18,900.00	Night MWD: N/A

Drilling Summary

Start Depth: 1,220	End Depth: 1,220	Below Rotary Hours: 0.00	Circulating Hours: 0.00
Total Footage: 0.00	Total Drilled Hours: 0.00	Avg. Total ROP: 0.00	Percent Drilled: 0.00%
Rotating Footage: 0.00	Rotary Hours: 0.00	Avg. Rotary ROP: 0.00	Percent Rotary: 0.00%
Sliding Footage: 0.00	Sliding Hours: 0.00	Avg. Sliding ROP: 0.00	Percent Sliding: 0.00%

Drilling Parameters

	Min	Max		Min	Max
WOB:	N/A	N/A	SPP Off Bottom:	N/A	N/A
Pick Up:	N/A	N/A	SPP On Bottom:	N/A	N/A
Slack Off:	N/A	N/A	Delta Pressure:	N/A	N/A
Rot. Off Bottom:	N/A	N/A	Flow Rate:	N/A	N/A
Bottom Hole Temp.:	N/A	N/A	SPM:	N/A	N/A

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 1,200	Incl. In: 0.82	Azm. In: 54.84	MD Out: 1,200	Incl. Out: 0.82	Azm. Out: 54.84
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BHA's

12 1/4" Bit, 7 3/4" 7 3/4" X 9 5/8" Hybrid 4/5, 5.3 Motor, 8" Stabilizer, 8" Float Sub, #1 8" Shock Sub, 8" Drill Collar, 8" Muleshoe, 8" Drill Collar, 8" Stabilizer, 8" X-Over, 6 1/2" Drill Collar, 6 1/4" Jars, 6 1/2" Drill Collar, 6 11/16" X-Over,

General Comments

Daily Report: 10/18/18 MSMO-56998 Breitburn Operating Encore M State #23 Nabors M10 Lea County, New Mexico
 Drillers on Location: John Hornsby / Jarrod Hollier Current Activity: TIH Prev. 24 hr. Stand-by, Drilling Surface, Casing and cement operations. Pick up Bha # 1 Daily Cost: \$ 6,900 Cum. Cost: \$ 18/900 Estimated Finish Date: 10-26-18 Projected TD Depth: 7,600' Guidance Company: MSG Magnetic Declination: 6.7 Current Depth: 1,220' Feet Left to Drill: 6,380 Depth at Last Survey: Gyro Survey @ 1,200' Current Inc.: 0.82° Current Azm.: 54.84° Current Temp.: N/A Above / Below: 12' North Left / Right: 20' East Motor Yield: N/A DLNL: N/A Vert. Sect.: N/A Last Casing Depth: 1,220' Next Projected Casing Depth: 4,500' LGS: % N/A Motors on Location: In Hole: 96D262D 4/5 5.3 Adj @ 1.50° 11 1/4" NBS .000 Fit, Stator 4.105, Rotor 4.105 Clean On Rack: 96D308D 4/5 5.3 Adj @ 1.50° 11 1/4" NBS .027 INT, Stator 4.084, Rotor 4.111 Dirty on Rack: None Motors & Tools Needed: None

24 Hours Summary

Stand-by for casing and cement operations then pick up directional assembly Bha # 1.

Next 24 Hours Plan

TIH and drill out float equipment. Displace hole with brine water and drill vertical intermediate section.

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Stand-by	00:00	19:30	19.50	1,220	1,220	Stand-by for casing and cement operations
Assembling BHA	19:30	24:00	4.50	1,220	1,220	Assembling BHA # 1

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Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitbart Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Hollier
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$6,900.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cumulative Cost: \$25,800.00	Night MWD: N/A

Drilling Summary

Start Depth: 1,220	End Depth: 1,624	Below Rotary Hours: 23.28	Circulating Hours: 10.18
Total Footage: 404.00	Total Drilled Hours: 7.60	Avg. Total ROP: 53.16	Percent Drilled: 31.62%
Rotating Footage: 387.00	Rotary Hours: 7.00	Avg. Rotary ROP: 55.29	Percent Rotary: 95.79%
Sliding Footage: 17.00	Sliding Hours: 0.60	Avg. Sliding ROP: 28.33	Percent Sliding: 4.21%

Drilling Parameters

	Min	Max		Min	Max
WOB:	10	37	SPP Off Bottom:	500	1475
Pick Up:	90	105	SPP On Bottom:	700	1800
Slack Off:	90	105	Delta Pressure:	125	325
Rot. Off Bottom:	90	105	Flow Rate:	402	750
Bottom Hole Temp.:	0	69.5	SPM:	96	180

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 1,200	Incl. In: 0.82	Azm. In: 54.84	MD Out: 1,450	Incl. Out: 0.90	Azm. Out: 321.60
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BHA's

12 1/4" Bit , 7 3/4" 7 3/4" X 9 5/8" Hybrid 4/5, 5.3 Motor , 8" Stabilizer , 8" Float Sub ,
#2 8" Shock Sub , 8" Drill Collar , 8" Muleshoe , 8" Drill Collar , 8" Stabilizer , 8" X-Over
6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 11/16" X-Over ,
12 1/4" Bit , 7 3/4" 7 3/4" X 9 5/8" Hybrid 4/5, 5.3 Motor , 8" Stabilizer , 8" Float Sub ,
#1 8" Shock Sub , 8" Drill Collar , 8" Muleshoe , 8" Drill Collar , 8" Stabilizer , 8" X-Over
6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 11/16" X-Over ,

General Comments

Daily Report: 10/19/18 MSMO-56998 Breitbart Operating Encore M State #23 Nabors M10 Lea County, New Mexico
Drillers on Location: John Hornsby / Jarrod Hollier Current Activity: Drilling vertical intermediate hole section with MSE. Prev. 24 hr. Pick up Bha # 1 TIH, Drill out shoe track. Drill 340' of new hole with slow ROP. We decided to pooh and inspect our pdc bit. Our bit was damaged so we changed it out for a new one and started drilling again. Daily Cost: \$ 6,900 Cum. Cost: \$ 25,800 Estimated Finish Date: 10-26-18 Projected TD Depth: 7,600' Guidance Company: MSG Magnetic Declination: 6.7 Current Depth: 1624' Feet Left to Drill: 5,976 Depth at Last Survey: 1638' Current Inc.: 1.2° Current Azm.: 288.2° Current Temp.: 92.9 Above / Below: 16.57' North Left / Right: 15.91' East Motor Yield: 6.7 DLNL: N/A Vert. Sect.: N/A Last Casing Depth: 1,220' Next Projected Casing Depth: 4,500' LGS: % N/A Motors on Location: In Hole: 96D262D 4/5 5.3 Adj @ 1.50° 11 1/2" NBS .000 Fit, Stator 4.105, Rotor 4.105 D&C Hrs 10.5 Clean On Rack: 96D308D 4/5 5.3 Adj @ 1.50° 11 1/2" NBS .027 INT, Stator 4.084, Rotor 4.111 Dirty on Rack: None

24 Hours Summary

TIH w/ bha # 1, Tag cement and displaced with 10.0 ppg brine water, Drilled shoe track, Drilling ahead in Vertical Intermediate section with slow ROP. Pooh to check and change out bit.

Next 24 Hours Plan

Continue drilling our vertical intermediate hole section.

Mud Checks

Date	Time	Type	Weight	Viscosity	PV	YP	Temperature	% Water	% Oil	% LGS	Comments
19/Oct/2018	08:00	Brine	9.7	30	1	1	45	90.8	0	0.45	N/A

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
TIH	00:00	02:45	2.75	1,220	1,220	TIH
Rig Service-Inhole	02:45	03:30	0.75	1,220	1,220	Install rotating head
TIH	03:30	04:00	0.50	1,220	1,220	Tag cement at 1117'
Other	04:00	05:30	1.50	1,220	1,220	Preparing to displace, filling tanks with brine water.
Drilling Cement	05:30	05:40	0.17	1,220	1,220	Drilling Cement F/1,117' T/1,130'
Other	05:40	07:45	2.08	1,220	1,220	Building volume in mud tanks
Drilling Cement	07:45	10:00	2.25	1,220	1,220	Drilling Cement and shoe track
Rotating	10:00	10:30	0.50	1,220	1,230	(WOB=18;GPM=402;RPM=30;DP=125)
Other	10:30	10:40	0.17	1,230	1,230	FIT Test
Rotating	10:40	11:10	0.50	1,230	1,249	(WOB=18;GPM=402;RPM=30;DP=125)
Rotating	11:10	12:40	1.50	1,249	1,348	(WOB=30;GPM=550;RPM=60;DP=250)
Rig repair	12:40	13:00	0.33	1,348	1,348	Rig repair, Working on mud pumps
Sliding	13:00	13:05	0.10	1,348	1,355	(WOB=15;GPM=460;TFO=M240;DP=225)
Rig repair	13:05	13:20	0.25	1,355	1,355	Rig repair working on mud pumps
Rotating	13:20	13:40	0.33	1,355	1,376	(WOB=30;GPM=426;RPM=60;DP=300)
Rig repair	13:40	14:00	0.33	1,376	1,376	Change out shaker screens
Rotating	14:00	14:40	0.67	1,376	1,416	(WOB=30;GPM=426;RPM=60;DP=300)
Rotating	14:40	16:50	2.17	1,416	1,540	(WOB=35;GPM=750;RPM=75;DP=250)
Sliding	16:50	17:20	0.50	1,540	1,550	(WOB=37;GPM=750;TFO=M220;DP=250)
Rotating	17:20	17:50	0.50	1,550	1,560	(WOB=37;GPM=750;RPM=75;DP=250)
Circulating	17:50	18:00	0.17	1,560	1,560	Circulating for bit trip. Slow ROP
POOH	18:00	20:00	2.00	1,560	1,560	POOH - Bit damaged
Assembling BHA	20:00	20:45	0.75	1,560	1,560	Change out Ultrater PDC Bits, Bit is DBR
TIH	20:45	23:00	2.25	1,560	1,560	TIH
Rotating	23:00	23:49	0.83	1,560	1,624	(WOB=10;GPM=750;RPM=70;DP=325)

Rig repair	23:49	24:00	0.18	1,624	1,624	Top drive faulted out.
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Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitbart Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Hollier
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$6,900.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cumulative Cost: \$32,700.00	Night MWD: N/A

Drilling Summary

Start Depth: 1,624	End Depth: 4,048	Below Rotary Hours: 24.02	Circulating Hours: 23.85
Total Footage: 2,424.00	Total Drilled Hours: 23.85	Avg. Total ROP: 101.64	Percent Drilled: 99.31%
Rotating Footage: 2,397.00	Rotary Hours: 23.18	Avg. Rotary ROP: 103.39	Percent Rotary: 98.89%
Sliding Footage: 27.00	Sliding Hours: 0.67	Avg. Sliding ROP: 40.50	Percent Sliding: 1.11%

Drilling Parameters

	Min	Max		Min	Max
WOB:	15	35	SPP Off Bottom:	1000	1900
Pick Up:	105	150	SPP On Bottom:	1400	2550
Slack Off:	100	140	Delta Pressure:	225	700
Rot. Off Bottom:	105	145	Flow Rate:	500	750
Bottom Hole Temp.:	69.5	117.2	SPM:	120	180

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 1,450	Incl. In: 0.90	Azm. In: 321.60	MD Out: 3,898	Incl. Out: 0.70	Azm. Out: 235.10
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BHA's

12 1/4" Bit , 7 3/4" 7 3/4" X 9 5/8" Hybrid 4/5, 5.3 Motor , 8" Stabilizer , 8" Float Sub ,
#2 8" Shock Sub , 8" Drill Collar , 8" Muleshoe , 8" Drill Collar , 8" Stabilizer , 8" X-Over
6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 11/16" X-Over ,

General Comments

Daily Report: 10/20/18 MSMO-56998 Breitbart Operating Encore M State #23 Nabors
M10 Lea County, New Mexico
Drillers on Location: John Hornsby / Jarrod Hollier Current Activity: Drilling vertical
intermediate hole section with MSE. Sliding as needed. Prev. 24 hr.: Drilling vertical
intermediate hole section. Daily Cost: \$ 6,900 Cum. Cost: \$ 32,700 Estimated Finish Date:
10-26-18 Projected TD Depth: 7,600' Guidance Company: MSG Magnetic Declination: 6.7
Current Depth: 4048' Feet Left to Drill: 3,552' Depth at Last Survey: 3898' Current Inc.:
0.7° Current Azm.: 235.10 ° Current Temp.: 115.4 Above / Below: 16.8' North Left / Right:
7.6' West Motor Yield: 7.0 DLNL: N/A Vert. Sect.: N/A Last Casing Depth: 1,220' Next
Projected Casing Depth: 4,500' LGS: % 4.13 Motors on Location: In Hole: 96D262D 4/5
5.3 Adj @ 1.50° 11 3/4" NBS .000 Fit, Stator 4.105, Rotor 4.105 D&C Hrs 32.5 Clean On
Rack: 96D308D 4/5 5.3 Adj @ 1.50° 11 3/4" NBS .027 INT, Stator 4.084, Rotor 4.111 Dirty
on Rack: None Motors & Tools Needed: None

24 Hours Summary

Drilling ahead in intermediate section.

Next 24 Hours Plan

Drilling vertical intermediate hole section

Mud Checks

Date	Time	Type	Weight	Viscosity	PV	YP	Temperature	% Water	% Oil	% LGS	Comments
20/Oct/2018	13:15	Brine	10.05	29	1	1	82	88.5	0	0.15	N/A

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Rotating	00:00	01:40	1.67	1,624	1,875	(WOB=15;GPM=750;RPM=70;DP=625)
Rotating	01:40	03:00	1.35	1,875	2,100	(WOB=20;GPM=750;RPM=70;DP=600)
Rotating	03:00	03:50	0.83	2,100	2,193	(WOB=25;GPM=750;RPM=70;DP=675)
Sliding	03:50	04:10	0.33	2,193	2,202	(WOB=15;GPM=750;TFO=M150;DP=225)
Other	04:10	04:20	0.17	2,202	2,202	Mud pumps shut down - Recycle
Sliding	04:20	04:25	0.08	2,202	2,208	(WOB=15;GPM=750;TFO=M150;DP=225)
Rotating	04:25	06:25	2.00	2,208	2,485	(WOB=25;GPM=750;RPM=70;DP=675)
Sliding	06:25	06:40	0.25	2,485	2,497	(WOB=22;GPM=750;TFO=M200;DP=375)
Rotating	06:40	08:00	1.35	2,497	2,640	(WOB=22;GPM=750;RPM=70;DP=650)
Rotating	08:00	10:10	2.15	2,640	2,860	(WOB=25;GPM=750;RPM=70;DP=650)
Rotating	10:10	15:35	5.42	2,860	3,400	(WOB=30;GPM=750;RPM=75;DP=700)
Rotating	15:35	16:50	1.25	3,400	3,500	(WOB=30;GPM=750;RPM=75;DP=700)
Rotating	16:50	18:20	1.50	3,500	3,635	(WOB=35;GPM=750;RPM=65;DP=500)
Rotating	18:20	20:45	2.42	3,635	3,818	(WOB=35;GPM=750;RPM=50;DP=500)
Rotating	20:45	21:00	0.25	3,818	3,832	(WOB=25;GPM=500;RPM=50;DP=500)
Rotating	21:00	22:15	1.25	3,832	3,890	(WOB=22;GPM=500;RPM=50;DP=400)
Rotating	22:15	22:20	0.08	3,890	3,900	(WOB=35;GPM=750;RPM=50;DP=600)
Rotating	22:20	24:00	1.67	3,900	4,048	(WOB=35;GPM=750;RPM=50;DP=650)

Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitburn Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Hollier
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$6,900.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cummulative Cost: \$39,600.00	Night MWD: N/A

Drilling Summary

Start Depth: 4,048	End Depth: 4,531	Below Rotary Hours: 9.00	Circulating Hours: 6.33
Total Footage: 483.00	Total Drilled Hours: 5.00	Avg. Total ROP: 96.60	Percent Drilled: 20.83%
Rotating Footage: 483.00	Rotary Hours: 5.00	Avg. Rotary ROP: 96.60	Percent Rotary: 100.00%
Sliding Footage: 0.00	Sliding Hours: 0.00	Avg. Sliding ROP: 0.00	Percent Sliding: 0.00%

Drilling Parameters

	Min	Max		Min	Max
WOB:	25	30	SPP Off Bottom:	1900	1900
Pick Up:	150	150	SPP On Bottom:	2450	2600
Slack Off:	140	140	Delta Pressure:	550	700
Rot. Off Bottom:	145	145	Flow Rate:	750	750
Bottom Hole Temp.:	117.2	117.2	SPM:	180	180

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 3,898	Incl. In: 0.70	Azm. In: 235.10	MD Out: 4,462	Incl. Out: 0.30	Azm. Out: 226.30
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BHA's

12 1/4" Bit , 7 3/4" 7 3/4" X 9 5/8" Hybrid 4/5, 5.3 Motor , 8" Stabilizer , 8" Float Sub ,
#2 8" Shock Sub , 8" Drill Collar , 8" Muleshoe , 8" Drill Collar , 8" Stabilizer , 8" X-Over
6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 11/16" X-Over .

General Comments

Daily Report: 10/21/18 MSMO-56998 Breitburn Operating Encore M State #23 Nabors M10 Lea County, New Mexico
Drillers on Location: John Hornsby / Jarrod Hollier Current Activity: Standby for casing and cementing operations Prev. 24 hr.: Drilling vertical intermediate hole section with MSE. Sliding as needed. We drilled to a total depth of 4531' Daily Cost: \$ 6,900 Cum. Cost: \$ 39,600.00 Estimated Finish Date: 10-26-18 Projected TD Depth: 7,600' Guidance Company: MSG Magnetic Declination: 6.7 Current Depth: 4,531' Feet Left to Drill: 3,069' Depth at Last Survey: 4,462' Current Inc.: 0.3° Current Azm.: 226.3° Current Temp.: 118.1 Above / Below: 14.4' North Left / Right: 12.6' West Motor Yield: 7.0 DLNL: N/A Vert. Sect.: N/A Last Casing Depth: 1,220' Next Projected Casing Depth: 4,531' LGS: % 4.13 Motors on Location: In Hole: 96D262D 4/5 5.3 Adj @ 1.50° 11 1/4" NBS .000 Fit, Stator 4.105, Rotor 4.105 D&C Hrs 37.5 Clean On Rack: 96D308D 4/5 5.3 Adj @ 1.50° 11 1/4" NBS .027 INT, Stator 4.084, Rotor 4.111 Dirty on Rack: None

24 Hours Summary

Drilling vertical intermediate hole section to a total depth of 4,531', Circulated prior to pooh for casing and cement operations, Pooh, Laid down BHA #2, Went on stand-by for casing and cement operations.

Next 24 Hours Plan

Stand-by for casing and cement operations

Mud Checks

Date	Time	Type	Weight	Viscosity	PV	YP	Temperature	% Water	% Oil	% LGS	Comments
21/Oct/2018	00:00	Brine	10.1	30	0	0	0	0	0	0	N/A

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Rotating	00:00	01:40	1.67	4,048	4,216	(WOB=30;GPM=750;RPM=50;DP=650)
Rotating	01:40	02:00	0.33	4,216	4,256	(WOB=25;GPM=750;RPM=50;DP=550)
Rotating	02:00	05:00	3.00	4,256	4,531	(WOB=27;GPM=750;RPM=50;DP=700)
Circulating	05:00	06:20	1.33	4,531	4,531	Circulating prior to pooh for casing and cement operations
POOH	06:20	09:00	2.67	4,531	4,531	POOH
Break Down BHA	09:00	11:00	2.00	4,531	4,531	Break Down BHA
Stand-by	11:00	24:00	13.00	4,531	4,531	Stand-by for casing and cement operations

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Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitburn Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Hollier
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$18,942.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cummulative Cost: \$58,542.00	Night MWD: N/A

Drilling Summary

Start Depth: 4,531	End Depth: 4,531	Below Rotary Hours: 7.58	Circulating Hours: 2.75
Total Footage: 0.00	Total Drilled Hours: 0.00	Avg. Total ROP: 0.00	Percent Drilled: 0.00%
Rotating Footage: 0.00	Rotary Hours: 0.00	Avg. Rotary ROP: 0.00	Percent Rotary: 0.00%
Sliding Footage: 0.00	Sliding Hours: 0.00	Avg. Sliding ROP: 0.00	Percent Sliding: 0.00%

Drilling Parameters

	Min	Max		Min	Max
WOB:	N/A	N/A	SPP Off Bottom:	N/A	N/A
Pick Up:	N/A	N/A	SPP On Bottom:	N/A	N/A
Slack Off:	N/A	N/A	Delta Pressure:	N/A	N/A
Rot. Off Bottom:	N/A	N/A	Flow Rate:	N/A	N/A
Bottom Hole Temp.:	N/A	N/A	SPM:	N/A	N/A

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 4,462	Incl. In: 0.30	Azm. In: 226.30	MD Out: 4,462	Incl. Out: 0.30	Azm. Out: 226.30
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BHA's

8 3/4" Bit , 6 3/4" Mpack 6 3/4, 7/8, 6.4 Fxd @ 1.50° W/ 8 1/4" NBS Motor , 6 3/4" #3 Stabilizer , 6 3/4" Muleshoe , 6 3/4" Drill Collar , 6 3/4" Stabilizer , 6 3/4" X-Over , 6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 3/4" X-Over ,
12 1/4" Bit , 7 3/4" 7 3/4" X 9 5/8" Hybrid 4/5, 5.3 Motor , 8" Stabilizer , 8" Float Sub , #2 8" Shock Sub , 8" Drill Collar , 8" Muleshoe , 8" Drill Collar , 8" Stabilizer , 8" X-Over , 6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 11/16" X-Over ,

General Comments

Daily Report: 10/22/18 MSMO-56998 Breitburn Operating Encore M State #23 Nabors M10 Lea County, New Mexico
Drillers on Location: John Hornsby / Jarrod Hollier Current Activity: Testing casing Prev. 24 hr.: Standby for casing operations. Daily Cost: \$ 18,392.00 Cum. Cost: \$ 57,992.00
Estimated Finish Date: 10-26-18 Projected TD Depth: 7,600' Guidance Company: MSG
Magnetic Declination: 6.7 Current Depth: 4,531' Feet Left to Drill: 3,069' Depth at Last Survey: 4,462' Current Inc.: .3° Current Azm.: 226.3° Current Temp.: 118.1 Above / Below: 14.4 North Left / Right: 12.6' West Motor Yield: N/A DLNL: N/A Vert. Sect.: N/A Last Casing Depth: 4,529' Next Projected Casing Depth: 7,600' LGS: % 4.56 Motors on Location: In Hole: 67D1722SBR: 7/8 6.4; FXD 1.5°; 8 1/4" IB NBS D&C Hrs 25 Clean On Rack: 67D16769SB: 7/8 6.4; FXD 1.5°; 8 1/4" IB NBS Dirty on Rack: None Motors & Tools Needed: None

24 Hours Summary

Stand-by for casing and cement operations, Picked up BHA #3, TIH, Drilled out DV Tool and shoe track,

Next 24 Hours Plan

Drilling vertical production hole utilizing MSE procedures. Sliding as needed.

Mud Checks

Date	Time	Type	Weight	Viscosity	PV	YP	Temperature	% Water	% Oil	% LGS	Comments
22/Oct/2018	00:00	Brine	10.2	0	0	0	0	0	0	0	N/A

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Stand-by	00:00	15:15	15.25	4,531	4,531	Stand-by, Casing and cement and casing operations
Assembling BHA	15:15	16:20	1.10	4,531	4,531	Assembling BHA
MWDRun	16:20	16:25	0.08	4,531	4,531	Test MWD Tool
Other	16:25	17:15	0.83	4,531	4,531	Finished making up BHA #3
TIH	17:15	19:30	2.25	4,531	4,531	TIH to DV tool 3012'
Circulating	19:30	20:00	0.50	4,531	4,531	Circulating
Other	20:00	20:30	0.50	4,531	4,531	Test Casing
Drilling Cement	20:30	22:00	1.50	4,531	4,531	Drilling DV Tool 3012'-3015' and chase down to 3050'
TIH	22:00	22:45	0.75	4,531	4,531	TIH to 4419'
Circulating	22:45	23:30	0.75	4,531	4,531	Circulating
Other	23:30	24:00	0.50	4,531	4,531	Test Casing

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Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitburn Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Hollier
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$6,900.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cummulative Cost: \$65,442.00	Night MWD: N/A

Drilling Summary

Start Depth: 4,531	End Depth: 7,065	Below Rotary Hours: 24.03	Circulating Hours: 23.53
Total Footage: 2,534.00	Total Drilled Hours: 21.77	Avg. Total ROP: 116.42	Percent Drilled: 90.57%
Rotating Footage: 2,534.00	Rotary Hours: 21.77	Avg. Rotary ROP: 116.42	Percent Rotary: 100.00%
Sliding Footage: 0.00	Sliding Hours: 0.00	Avg. Sliding ROP: 0.00	Percent Sliding: 0.00%

Drilling Parameters

	Min	Max		Min	Max
WOB:	10	35	SPP Off Bottom:	900	1650
Pick Up:	145	210	SPP On Bottom:	1100	2200
Slack Off:	140	195	Delta Pressure:	200	550
Rot. Off Bottom:	140	200	Flow Rate:	400	550
Bottom Hole Temp.:	0	119	SPM:	95	132

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 4,462	Incl. In: 0.30	Azm. In: 226.30	MD Out: 6,907	Incl. Out: 0.90	Azm. Out: 213.10
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BHA's

8 3/4" Bit , 6 3/4" Mpack 6 3/4, 7/8, 6.4 Fxd @ 1.50° W/ 8 1/4" NBS Motor , 6 3/4" #3 Stabilizer , 6 3/4" Muleshoe, 6 3/4" Drill Collar , 6 3/4" Stabilizer , 6 3/4" X-Over , 6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 3/4" X-Over ,

General Comments

Daily Report: 10/23/18 MSMO-56998 Breitburn Operating Encore M State #23 Nabors M10 Lea County, New Mexico
Drillers on Location: John Hornsby / Jarrod Hollier Current Activity: Drilling vertical production hole utilizing MSE procedures to a depth of 7065'. Prev. 24 hr.: Pick up Directional tools Bha #3, Drill Shoe track then production hole. Daily Cost: \$ 6,900 Cum. Cost: \$ 65,442 Estimated Finish Date: 10-25-18 Projected TD Depth: 7,600' Guidance Company: MSG Magnetic Declination: 6.7 Current Depth: 7,065' Feet Left to Drill: 535' Depth at Last Survey: 7,096' Current Inc.: 1.0° Current Azm.: 192.3° Current Temp.: 119 Above / Below: 3.47' South Left / Right: 40.14' West Motor Yield: N/A DLNL: N/A Vert. Sect.: N/A Last Casing Depth: 4,529' Next Projected Casing Depth: 7,600' LGS: % 4.56 Motors on Location: In Hole: 67D1722SBR: 7/8 6.4; FXD 1.5°; 8 1/4" IB NBS D&C Hrs 25 Clean On Rack: 67D16769SB: 7/8 6.4; FXD 1.5°; 8 1/4" IB NBS Dirty on Rack: None Motors & Tools Needed: None

24 Hours Summary

Drilled our shoe track, FIT, Drilling vertical production hole utilizing MSE procedures to a depth of 7065'

Next 24 Hours Plan

Drill production hole to 7600'. Pooh and lay down directional tools.

Mud Checks

Date	Time	Type	Weight	Viscosity	PV	YP	Temperature	% Water	% Oil	% LGS	Comments
23/Oct/2018	00:00	Fresh Water	8.8	0	0	0	0	0	0	0	N/A

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Drilling Cement	00:00	01:05	1.10	4,531	4,531	Drilling Shoe track f/ 4419' - V4531'
Rotating	01:05	01:20	0.25	4,531	4,555	(WOB=10; GPM=400; RPM=50; DP=200)
Circulating	01:20	02:00	0.67	4,555	4,555	Circulating
Other	02:00	02:30	0.50	4,555	4,555	FIT
Rotating	02:30	03:45	1.25	4,555	4,615	(WOB=10; GPM=400; RPM=50; DP=200)
Rotating	03:45	04:30	0.75	4,615	4,672	(WOB=20; GPM=500; RPM=60; DP=300)
Rotating	04:30	04:50	0.33	4,672	4,700	(WOB=25; GPM=500; RPM=60; DP=450)
Rotating	04:50	08:15	3.42	4,700	5,075	(WOB=22; GPM=550; RPM=50; DP=550)
Rotating	08:15	11:20	3.08	5,075	5,480	(WOB=22; GPM=550; RPM=50; DP=550)
Rotating	11:20	15:55	4.60	5,480	6,075	(WOB=30; GPM=550; RPM=50; DP=550)
Rotating	15:55	17:00	1.08	6,075	6,230	(WOB=35; GPM=550; RPM=50; DP=550)
Rotating	17:00	20:15	3.25	6,230	6,635	(WOB=30; GPM=500; RPM=50; DP=400)
Rotating	20:15	24:00	3.75	6,635	7,065	(WOB=30; GPM=500; RPM=50; DP=450)

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Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitburn Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Hollier
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$6,900.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cummulative Cost: \$72,342.00	Night MWD: N/A

Drilling Summary

Start Depth: 7,065	End Depth: 7,525	Below Rotary Hours: 24.02	Circulating Hours: 22.27
Total Footage: 460.00	Total Drilled Hours: 6.10	Avg. Total ROP: 75.41	Percent Drilled: 25.40%
Rotating Footage: 460.00	Rotary Hours: 6.10	Avg. Rotary ROP: 75.41	Percent Rotary: 100.00%
Sliding Footage: 0.00	Sliding Hours: 0.00	Avg. Sliding ROP: 0.00	Percent Sliding: 0.00%

Drilling Parameters

	Min	Max		Min	Max
WOB:	5	30	SPP Off Bottom:	300	1500
Pick Up:	210	210	SPP On Bottom:	400	1950
Slack Off:	195	195	Delta Pressure:	50	500
Rot. Off Bottom:	200	200	Flow Rate:	330	500
Bottom Hole Temp.:	119.9	120.7	SPM:	80	120

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 6,907	Incl. In: 0.90	Azm. In: 213.10	MD Out: 7,284	Incl. Out: 1.00	Azm. Out: 218.50
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BHA's

8 3/4" Bit , 6 3/4" Mpack 6 3/4, 7/8, 6.4 Fxd @ 1.50" W/ 8 1/4" NBS Motor , 6 3/4" #3 Stabilizer , 6 3/4" Muleshoe , 6 3/4" Drill Collar , 6 3/4" Stabilizer , 6 3/4" X-Over , 6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 3/4" X-Over ,

General Comments

Daily Report: 10/24/18 MSMO-56998 Breitburn Operating Encore M State #23 Nabors M10 Lea County, New Mexico
Drillers on Location: John Hornsby / Jarrod Hollier Current Activity: Pumping LCM attempting to establish full returns. Prev. 24 hr.: Drilling vertical production hole utilizing MSE procedures. Daily Cost: \$ 6,900 Cum. Cost: \$ 72,342.00 Estimated Finish Date: 10-25-18 Projected TD Depth: 7,600' Guidance Company: MSG Magnetic Declination: 6.7 Current Depth: 7,428' Feet Left to Drill: 172' Depth at Last Survey: 7284' Current Inc.: 1.0 ° Current Azm.: 218.5 ° Current Temp.: 120.7° Above / Below: 6.35' South Left / Right: 41.51' West Motor Yield: N/A DLNL: N/A Vert. Sect.: N/A Last Casing Depth: 4,529' Next Projected Casing Depth: 7,600' LGS: % 4.56 Motors on Location: In Hole: 67D1722SBR: 7/8 6.4; FXD 1.5"; 8 1/4" IB NBS D&C Hrs 47 Clean On Rack: 67D16769SB: 7/8 6.4; FXD 1.5"; 8 1/4" IB NBS Dirty on Rack: None Motors & Tools Needed: None

24 Hours Summary

Drilling vertical production hole to 7428' and pumping LCM trying to establish returns. Drilled ahead to 7,525' and the decision was made to pull 5 stands and circulate LCM sweeps to try and fix lost return issues.

Next 24 Hours Plan

Attempt to establish returns and drill to 7600' TD. Pooh and lay out directional tools.

Mud Checks

Date	Time	Type	Weight	Viscosity	PV	YP	Temperature	% Water	% Oil	% LGS	Comments
24/Oct/2018	00:00	Fresh Water	8.6	45	0	0	0	0	0	0	N/A

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Rotating	00:00	00:30	0.50	7,065	7,120	(WOB=30;GPM=500;RPM=50;DP=450)
Rotating	00:30	02:40	2.17	7,120	7,341	(WOB=30;GPM=500;RPM=50;DP=450)
Rotating	02:40	02:50	0.17	7,341	7,350	(WOB=30;GPM=500;RPM=50;DP=450) No Returns.
Rotating	02:50	03:00	0.17	7,350	7,374	(WOB=8;GPM=400;RPM=50;DP=50) No Returns
Rotating	03:00	04:00	1.00	7,374	7,431	(WOB=5;GPM=350;RPM=50;DP=100) No Returns
Circulating	04:00	06:40	2.67	7,431	7,431	Pumping LCM, Trying to regain return.
Rotating	06:40	08:45	2.10	7,431	7,525	(WOB=20;GPM=330;RPM=50;DP=500)
POOH	08:45	10:00	1.25	7,525	7,525	Prepare to pooh to condition mud and pump LCM Sweeps for lost circulation. Pulled 5 stands
Circulating	10:00	12:00	2.00	7,525	7,525	Circulating and condition mud with LCM to try and fix lost returns issues.
POOH	12:00	12:30	0.50	7,525	7,525	Pulled another 5 stands to circulate higher up the hole
Circulating	12:30	24:00	11.50	7,525	7,525	Pumping LCM Sweeps & building pit volume

Job Number: MSMO-56998	State: New Mexico	Company Man: N/A	Lead Directional: John Hornsby (SDS)
Customer: Breitbart Operating LP	County/Parish: Lea	Coordinator: John McKay	Night Directional: Jarrod Holler
Well Name: Encore M State #23	Field: Wolfcamp Shale	Daily Cost: \$6,900.00	Lead MWD: N/A
Rig Name: Nabors M10	API #: N/A	Cummulative Cost: \$79,242.00	Night MWD: N/A

Drilling Summary

Start Depth: 7,525	End Depth: 7,634	Below Rotary Hours: 22.75	Circulating Hours: 6.50
Total Footage: 109.00	Total Drilled Hours: 2.25	Avg. Total ROP: 48.44	Percent Drilled: 9.38%
Rotating Footage: 109.00	Rotary Hours: 2.25	Avg. Rotary ROP: 48.44	Percent Rotary: 100.00%
Sliding Footage: 0.00	Sliding Hours: 0.00	Avg. Sliding ROP: 0.00	Percent Sliding: 0.00%

Drilling Parameters

	Min	Max		Min	Max
WOB:	25	27	SPP Off Bottom:	560	700
Pick Up:	210	210	SPP On Bottom:	1000	1200
Slack Off:	195	195	Delta Pressure:	440	500
Rot. Off Bottom:	200	200	Flow Rate:	315	350
Bottom Hole Temp.:	120.7	120.7	SPM:	75	84

Last Casing	Top: 0.00	Shoe: 1,221.00	ID: 0	OD: 13 3/8
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Surveys	MD In: 7,284	Incl. In: 1.00	Azm. In: 218.50	MD Out: 7,284	Incl. Out: 1.00	Azm. Out: 218.50
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BHA's

8 3/4" Bit , 6 3/4" Mpack 6 3/4, 7/8, 6.4 Fxd @ 1.50" W/ 8 1/4" NBS Motor , 6 3/4" #3 Stabilizer , 6 3/4" Muleshoe , 6 3/4" Drill Collar , 6 3/4" Stabilizer , 6 3/4" X-Over , 6 1/2" Drill Collar , 6 1/4" Jars , 6 1/2" Drill Collar , 6 3/4" X-Over ,

General Comments

Job Complete, All Necessary paperwork is in sharefiles and job folder, All tools shipped except 2 stabilizers that were left for company man to run on their dummy run.

24 Hours Summary

Pump LCM to regain full returns and drill our production hole 1/7,525' 1/7,634'. Spot a 350 bbl pill and pooh to casing shoe. Monitor well before pooh to lay out directional tools.

Next 24 Hours Plan

Job Complete, All Necessary paperwork is in sharefiles and job folder, All tools shipped except 2 stabilizers that were left for company man to run on their dummy run.

Mud Checks

Date	Time	Type	Weight	Viscosity	PV	YP	Temperature	% Water	% Oil	% LGS	Comments
25/Oct/2018	00:00	Fresh Water	8.5	29	0	0	0	0	0	0	N/A

Activity Code	Start Time	End Time	Hours	Start Depth	End Depth	Comments
Circulating	00:00	01:00	1.00	7,525	7,525	Pumping LCM Sweeps & building pit volume
TIH	01:00	01:30	0.50	7,525	7,525	TIH
Rotating	01:30	02:30	1.00	7,525	7,575	(WOB=25;GPM=315;RPM=70;DP=440)
Rotating	02:30	03:45	1.25	7,575	7,634	(WOB=27;GPM=350;RPM=65;DP=500)
Circulating	03:45	06:00	2.25	7,634	7,634	Circulating-Pumping 350 bbl LCM pill , Prior to pooh
POOH	06:00	07:40	1.67	7,634	7,634	POOH to shoe to monitor well
Circulating	07:40	08:40	1.00	7,634	7,634	Circulating monitoring well for losses
POOH	08:40	11:45	3.08	7,634	7,634	POOH
Break Down BHA	11:45	13:00	1.25	7,634	7,634	Break Down BHA
Other	13:00	24:00	11.00	7,634	7,634	Job Complete, All Necessary paperwork is in sharefiles and job folder, All tools shipped except 2 stabilizers that were left for company man to run on their dummy run.

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MSMO-56998: BHA #1 Performance Report



Customer: Brelburn Operating LP	Well Name: Encore M State #23	Rig Name: Nabors M10
County/Parish: Lea	Target Formation: N/A	Company Man: N/A
Field: Wolfcamp Shale	BHA Type: Steerable Assembly	Lead Directional: John Hornsby (SDS)

BHA Performance Summary

Start Date: 18/Oct/2018 - 19:30	Start Depth: 1,220	Slide Footage: 17	Rotate Footage: 323
End Date: 19/Oct/2018 - 20:00	End Depth: 1,560	Slide Hours: 0.60	Rotate Hours: 6.17
Total Time: 24.52	Total Footage: 340	Slide %: 5.00%	Rotate %: 95.00%
Below RKB Hours: 20.02	Avg. Total ROP: 50.25	Avg. Slide ROP: 28.33	Avg. Rotate ROP: 52.38
Circ. Only Hours: 0.17	Reason to POOH: Reached a depth of 1,560' BHA #1 (This BHA) and Rop slowed down to 20' hr, Several attempts were made changing perimeters to make it drill better but were unsuccessful, Pooh to change bit, WE RE-RAN EVERYTHING FROM THIS BHA ON BHA #2 EXCEPT BIT.		

Drilling Parameters	Min	Max		Min	Max		Min	Max
SPP Off Bottom:	500	1350	WOB:	15	37	Flow Rate:	402	750
SPP On Bottom:	700	1600	Pick Up:	90	105	SPM:	96	180
Rot Off Bottom:	90	105	Slack Off:	90	105	Diff Pressure:	125	300

Motor Specs

Size: 7 3/4	Lobes: 4/5	Stages: 5.30	Bend": 1.50	RPG: 0.25	Pad OD: 9 7/8	Bit to Bend: 7.13	NB Stab: 11.75	Max. Diff: 1,195.00	Rotor Jet: N/A
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Mud Data

Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Vis: 30	30	PV: 1	1	MW: 9.7	9.7	% LGS: 0.45	0.45	Chlor: 144500	144500	Oil: 0	0	pH: 10	10		
T: 45	45	YP: 1	1	WL: 90.8	90.8	Solids: 9.2	9.2	Gas: 0	0						

Pumps MFG

Model	Type	Liner	GPS	Efficiency %
1 HH HHF1600	Triplex	0	0	95 %
2 HH HHF1600	Triplex	0	0	95 %

Bit Data

Manufacturer: N/A	Model: N/A	Type: N/A
ITFA: 1.74	Pressure Drop: 141.26	IADC#: N/A

Sensor Offsets

MWD: 82.00	Sonic: N/A	Gamma: N/A	DNSS: N/A	Resist: N/A	Type: Conventional
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Bit IADC Code

IR: 0	OR: 0	Dull: N/A	Loc: N/A	BS: N/A	G: N/A	ODL: N/A
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Surveys

Incl. In: 0.82	Azm. In: 54.84	Incl. Out: 0.9	Azm. Out: 321.6
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Description

BHA#1 (17/Oct/2018)

Performance

Motor has no stalls and had no visual wear on bit trip, Re-Ran this whole BHA for BHA #2 Per Company Man. We will have all the total hrs and footages for this BHA when we TD Intermediate with BHA #2

BHA Components

#	Description	S/N	ID	OD	Length	Sum	Top Conn.	Btm. Conn.	FNL	FNOD
1	12 1/4" Ultrerra CF516, Jets: 7-18s	41641	0	12 1/4	1.00	1.00	6 5/8 Regular Pin	0	0.00	0.00
2	7 3/4" X 9 5/8" Hybrid 4/5, 5.3	96D262D	0	7 3/4	30.66	31.66	6 5/8 Regular Box	6 5/8 Regular Box	0.00	0.00
3	12 1/4" Steel String Stabilizer	ADS12725	2 15/16	8	7.62	39.28	6 5/8 Regular Box	6 5/8 Regular Pin	3.77	8.00
4	Float Sub	DR28839	3 1/4	8	3.30	42.58	6 5/8 Regular Box	6 5/8 Regular Pin	0.00	8.00
5	Shock Sub	Rental	2 1/2	8	13.16	55.74	6 5/8 Regular Box	6 5/8 Regular Pin	1.72	8.13
6	Pony Collar	ADS8093	2 7/8	8	9.51	65.25	6 5/8 Regular Box	6 5/8 Regular Pin	0.00	8.06
7	UBHO Sub	9231	3	8	3.04	68.29	6 5/8 Regular Box	6 5/8 Regular Pin	0.00	8.00
8	30" Slick NMDC	DR36452	3 5/16	8	29.50	97.79	6 5/8 Regular Box	6 5/8 Regular Pin	2.71	8.13
9	12 1/4" Steel String Stabilizer	ADS12688	2 7/8	8	7.64	105.43	6 5/8 Regular Box	6 5/8 Regular Pin	3.33	8.00
10	6 5/8 Reg Pin X 4 1/2 XH Box	DR38221	2 7/8	8	4.03	109.46	6 5/8 XH Box	6 5/8 Regular Pin	1.85	6.50
11	12 JTS of 6 1/2" Drill Collars	Rig	2 13/16	6 1/2	356.73	466.19	4 1/2 XH Box	6 5/8 XH Pin	2.00	6.50
12	Drilling Jars	6751754	3	6 1/4	32.23	498.42	4 1/2 XH Box	4 1/2 XH Pin	3.01	6.25
13	3 JTS of 6 1/2" Drill Collars	Rig	2 13/16	6 1/2	89.20	587.62	4 1/2 XH Box	4 1/2 XH Pin	2.00	6.50
14	4 1/2 XH Pin X 4 1/2 IF Box	DR5382	2 15/16	6 11/16	3.12	590.74	4 1/2 IF Box	4 1/2 XH Pin	0.00	6.69

4 1/2 XH Pin X 4 1/2 IF Box
I.D: 2 15/16
O.D: 6 11/16
Length: 3.12

3 JTS of 6 1/2" Drill Collars
I.D: 2 13/16
O.D: 6 1/2
Length: 89.20

Drilling Jars
I.D: 3
O.D: 6 1/4
Length: 32.23

12 JTS of 6 1/2" Drill Collars
I.D: 2 13/16
O.D: 6 1/2
Length: 356.73

6 5/8 Reg Pin X 4 1/2 XH Box
I.D: 2 7/8
O.D: 8
Length: 4.03

12 1/4" Steel String Stabilizer
I.D: 2 7/8
O.D: 8
Length: 7.64

30" Slick NMDC
I.D: 3 5/16
O.D: 8
Length: 29.50

UBHO Sub
I.D: 3
O.D: 8
Length: 3.04

Pony Collar
I.D: 2 7/8
O.D: 8
Length: 9.51

Shock Sub
I.D: 2 1/2
O.D: 8
Length: 13.16

Float Sub
I.D: 3 1/4
O.D: 8
Length: 3.30

12 1/4" Steel String Stabilizer
I.D: 2 15/16
O.D: 8
Length: 7.62

7 3/4" X 9 5/8" Hybrid 4/5, 5.3
I.D: 0
O.D: 7 3/4
Length: 30.66

12 1/4" Ultrerra CF516, Jets: 7-18s
I.D: 0
O.D: 12 1/4
Length: 1.00

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MSMO-56998: BHA #2 Performance Report



Customer: Breitburn Operating LP	Well Name: Encore M State #23	Rig Name: Nabors M10
County/Parish: Lea	Target Formation: N/A	Company Man: N/A
Field: Wolfcamp Shale	BHA Type: Steerable Assembly	Lead Directional: John Hornsby (SDS)

BHA Performance Summary

Start Date: 19/Oct/2018 - 20:00	Start Depth: 1,560	Slide Footage: 27	Rotate Footage: 2,944
End Date: 22/Oct/2018 - 15:15	End Depth: 4,531	Slide Hours: 0.67	Rotate Hours: 29.02
Total Time: 67.28	Total Footage: 2,971	Slide %: 0.91%	Rotate %: 99.09%
Below RKB Hours: 36.28	Avg. Total ROP: 100.09	Avg. Slide ROP: 40.50	Avg. Rotate ROP: 101.46
Circ. Only Hours: 1.33	Reason to POOH: Reached Intermediate casing point at 4,531'		

Drilling Parameters	Min	Max		Min	Max		Min	Max
SPP Off Bottom:	1000	1900	WOB:	10	35	Flow Rate:	500	750
SPP On Bottom:	1400	2600	Pick Up:	105	150	SPM:	120	180
Rot Off Bottom:	105	145	Slack Off:	100	140	Diff Pressure:	225	700

Motor Specs

Size:	Lobes:	Stages:	Bend°:	RPG:	Pad OD:	Bit to Bend:	NB Stab:	Max. Diff:	Rotor Jet:
7 3/4	4/5	5.30	1.50	0.25	9 7/8	7.13	11.75	1,195.00	N/A

Description: 7 3/4" X 9 5/8" Hybrid 4/5, 5.3

Mud Data

	Min	Max		Min	Max		Min	Max		Min	Max
Vis:	0	30	PV:	0	1	MW:	9.7	10.2	% LGS:	0	0.45
T°:	0	0	YP:	0	1	WL:	0	90.8	Solids:	0	11.5
									Gas:	0	0
									pH:	0	10

Type: Brine . BHT°: N/A

Pumps MFG

	Model	Type	Liner	GPS	Efficiency %
1	HH	HHF1600	Triplex	0	95 %
2	HH	HHF1600	Triplex	0	95 %

Bit Data

Manufacturer: N/A	Model: N/A	Type: N/A
TFA: 1.74	Pressure Drop: 141.26	IADC#: N/A

Jets: 18-18-18-18-18-18

Sensor Offsets

MWD: 82.00	Sonic: N/A	Gamma: N/A	DNSS: N/A	Resist: N/A	Type: Conventional
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Bit IADC Code

IR: 0	OR: 0	Dull: N/A	Loc: N/A	BS: N/A	G: N/A	ODL: N/A
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Surveys

Incl. In: 0.9	Azm. In: 321.6	Incl. Out: 0.3	Azm. Out: 226.3
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Description

BHA#2 (19/Oct/2018)

Performance

Although this is BHA #2, it's still the same BHA #1 motor and all components except the bit, So all Hrs and footage will be BHA #1&2 combined. Summarize Total Feet: 2,971 Rotary Feet: 2,944 (99.09%) Sliding Feet: 27 (0.91%) Jetting Feet: 0 (0.00%) Average ROP: 100.09 Rotary ROP: 101.46 Sliding ROP: 40.50 Jetting ROP: 0.00 Total Time: 29.68 Rotary Time: 29.02 (97.75%) Sliding Time: 0.67 (2.25%) Jetting Time: 0.00 (0.00%) General Summary Total Feet: 3,311 Rotary Feet: 3,267 (98.67%) Sliding Feet: 44 (1.33%) Jetting Feet: 0 (0.00%) Average ROP: 90.84 Rotary ROP: 92.86 Sliding ROP: 34.74 Jetting ROP: 0.00 Total Time: 36.45 Rotary Time: 35.18 (96.53%) Sliding Time: 1.27 (3.47%) Jetting Time: 0.00 (0.00%)

BHA Components

#	Description	S/N	ID	OD	Length	Sum	Top Conn.	Btm. Conn.	FNL	FNOD
1	12 1/4" Ulterra CF516, Jets: 7-18s	43083	0	12 1/4	1.00	1.00	6 5/8 Regular Pin	0	0.00	0.00
2	7 3/4" X 9 5/8" Hybrid 4/5, 5.3	96D262D	0	7 3/4	30.66	31.66	6 5/8 Regular Box	6 5/8 Regular Box	0.00	0.00
3	12 1/4" Steel String Stabilizer	ADS12725	2 15/16	8	7.62	39.28	6 5/8 Regular Box	6 5/8 Regular Pin	3.77	8.00
4	Float Sub	DR28839	3 1/4	8	3.30	42.58	6 5/8 Regular Box	6 5/8 Regular Pin	0.00	8.00
5	Shock Sub	Rental	2 1/2	8	13.16	55.74	6 5/8 Regular Box	6 5/8 Regular Pin	1.72	8.13
6	Pony Collar	ADS8093	2 7/8	8	9.51	65.25	6 5/8 Regular Box	6 5/8 Regular Pin	0.00	8.06
7	UBHO Sub	9231	3	8	3.04	68.29	6 5/8 Regular Box	6 5/8 Regular Pin	0.00	8.00
8	30' Slick NMDC	DR36452	3 5/16	8	29.50	97.79	6 5/8 Regular Box	6 5/8 Regular Pin	2.71	8.13
9	12 1/4" Steel String Stabilizer	ADS12688	2 7/8	8	7.64	105.43	6 5/8 Regular Box	6 5/8 Regular Pin	3.33	8.00
10	6 5/8 Reg Pin X 4 1/2 XH Box	DR38221	2 7/8	8	4.03	109.46	6 5/8 XH Box	6 5/8 Regular Pin	1.85	6.50
11	12 JTS of 6 1/2" Drill Collars	Rig	2 13/16	6 1/2	356.73	466.19	4 1/2 XH Box	6 5/8 XH Pin	2.00	6.50
12	Drilling Jars	6751754	3	6 1/4	32.23	498.42	4 1/2 XH Box	4 1/2 XH Pin	3.01	6.25
13	3 JTS of 6 1/2" Drill Collars	Rig	2 13/16	6 1/2	89.20	587.62	4 1/2 XH Box	4 1/2 XH Pin	2.00	6.50
14	4 1/2 XH Pin X 4 1/2 IF Box	DR5382	2 15/16	6 11/16	3.12	590.74	4 1/2 IF Box	4 1/2 XH Pin	0.00	6.69

4 1/2 XH Pin X 4 1/2 IF Box
I.D: 2 15/16
O.D: 6 11/16
Length: 3.12

3 JTS of 6 1/2" Drill Collars
I.D: 2 13/16
O.D: 6 1/2
Length: 89.20

Drilling Jars
I.D: 3
O.D: 6 1/4
Length: 32.23

12 JTS of 6 1/2" Drill Collars
I.D: 2 13/16
O.D: 6 1/2
Length: 356.73

6 5/8 Reg Pin X 4 1/2 XH Box
I.D: 2 7/8
O.D: 8
Length: 4.03

12 1/4" Steel String Stabilizer
I.D: 2 7/8
O.D: 8
Length: 7.64

30' Slick NMDC
I.D: 3 5/16
O.D: 8
Length: 29.50

UBHO Sub
I.D: 3
O.D: 8
Length: 3.04

Pony Collar
I.D: 2 7/8
O.D: 8
Length: 9.51

Shock Sub
I.D: 2 1/2
O.D: 8
Length: 13.16

Float Sub
I.D: 3 1/4
O.D: 8
Length: 3.30

12 1/4" Steel String Stabilizer
I.D: 2 15/16
O.D: 8
Length: 7.62

7 3/4" X 9 5/8" Hybrid 4/5, 5.3
I.D: 0
O.D: 7 3/4
Length: 30.66

12 1/4" Ulterra CF516, Jets: 7-18s
I.D: 0
O.D: 12 1/4
Length: 1.00

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MSMO-56998: BHA #3 Performance Report



Customer: Breitbart Operating LP	Well Name: Encore M State #23	Rig Name: Nabors M10
County/Parish: Lea	Target Formation: N/A	Company Man: N/A
Field: Wolfcamp Shale	BHA Type: Stabilized Assembly	Lead Directional: John Hornsby (SDS)

BHA Performance Summary

Start Date: 22/Oct/2018 - 15:15	Start Depth: 4,531	Slide Footage: 0	Rotate Footage: 3,103
End Date: 25/Oct/2018 - 24:00	End Depth: 7,634	Slide Hours: 0.00	Rotate Hours: 30.12
Total Time: 80.82	Total Footage: 3,103	Slide %: 0.00%	Rotate %: 100.00%
Below RKB Hours: 78.38	Avg. Total ROP: 103.03	Avg. Slide ROP: 0.00	Avg. Rotate ROP: 103.03
Circ. Only Hours: 22.33	Reason to POOH: Total Depth 7634'		

Drilling Parameters	Min	Max		Min	Max		Min	Max
SPP Off Bottom:	300	1650	WOB:	5	35	Flow Rate:	315	550
SPP On Bottom:	400	2200	Pick Up:	145	210	SPM:	75	132
Rot Off Bottom:	140	200	Slack Off:	140	195	Diff Pressure:	50	550

Motor Specs

Size: 6 3/4	Lobes: 7/8	Stages: 6.40	Bend°: 1.50	RPG: 0.28	Pad OD: 7 1/8	Bit to Bend: 4.20	NB Stab: 8.25	Max. Diff: 1,587.00	Rotor Jet: N/A
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Description: **Mpact 6 3/4, 7/8, 6.4 Fxd @ 1.50° W/ 8 1/4" NBS****Mud Data**

Min		Max	Min		Max	Min		Max	Min		Max	Min		Max
Vis:	0	45	PV:	0	0	MW:	8.5	10.2	% LGS:	0	0	Chlor:	0	0
T°:	0	0	YP:	0	0	WL:	0	0	Solids:	0	0	Gas:	0	0
												pH:	0	0

Type: **Brine, Fresh Water . BHT°: N/A****Pumps MFG**

	Model	Type	Liner	GPS	Efficiency %
1	HH	HHF1600	Triplex	0	95 %
2	HH	HHF1600	Triplex	0	95 %

Bit Data

Manufacturer: N/A	Model: N/A	Type: N/A	Jets: 18-18-18-18-18
TFA: 1.49	Pressure Drop: 92.74	IADC#: N/A	

Sensor Offsets

MWD: 53.00	Sonic: N/A	Gamma: N/A	DNSS: N/A	Resist: N/A	Type: Conventional
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Bit IADC Code

IR: 0	OR: 0	Dull: N/A	Loc: N/A	BS: N/A	G: N/A	ODL: N/A
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Surveys

Incl. In: 0.3	Azm. In: 226.3	Incl. Out: 1	Azm. Out: 218.5
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Description

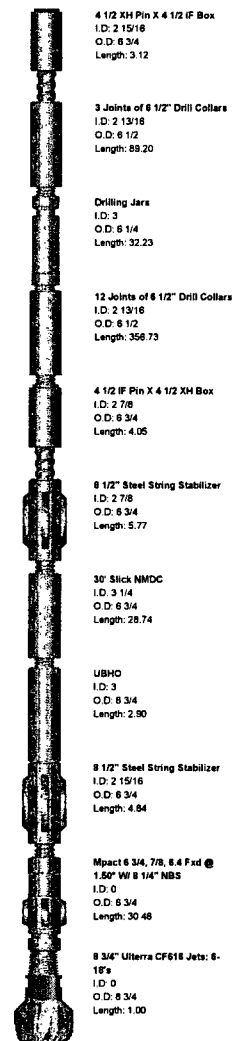
BHA #3 (22/Oct/2018)

Performance

Total Feet: 3,103 Rotary Feet: 3,103 (100.00%) Sliding Feet: 0 (0.00%)
 Jetting Feet: 0 (0.00%) Average ROP: 103.03 Rotary ROP: 103.03 Sliding
 ROP: 0.00 Jetting ROP: 0.00 Total Time: 30.12 Rotary Time: 30.12
 (100.00%) Sliding Time: 0.00 (0.00%) Jetting Time: 0.00 (0.00%)

BHA Components

#	Description	S/N	ID	OD	Length	Sum	Top Conn.	Btm. Conn.	FNL	FNOD
1	8 3/4" Ulterra CF616 Jets: 6-18's	44214	0	8 3/4	1.00	1.00	4 1/2 Regular Pin	0	0.00	0.00
2	Mpact 6 3/4, 7/8, 6.4 Fxd @ 1.50° W/ 8 1/4" NBS	67D1722SBR	0	6 3/4	30.46	31.46	4 1/2 IF Box	4 1/2 Regular Box	2.78	6.69
3	8 1/2" Steel String Stabilizer	DR17155	2 15/16	6 3/4	4.84	36.30	4 1/2 IF Box	4 1/2 IF Pin	1.97	6.75
4	UBHO	675-008	3	6 3/4	2.90	39.20	4 1/2 IF Box	4 1/2 IF Pin	0.00	6.69
5	30" Slick NMDC	DR21127	3 1/4	6 3/4	28.74	67.94	4 1/2 IF Box	4 1/2 IF Pin	0.00	6.50
6	8 1/2" Steel String Stabilizer	DR36430	2 7/8	6 3/4	5.77	73.71	4 1/2 IF Box	4 1/2 IF Pin	2.15	6.75
7	4 1/2 IF Pin X 4 1/2 XH Box	DR38962	2 7/8	6 3/4	4.05	77.76	4 1/2 XH Box	4 1/2 IF Pin	0.00	6.81
8	12 Joints of 6 1/2" Drill Collars	Rig	2 13/16	6 1/2	356.73	434.49	4 1/2 XH Box	4 1/2 XH Pin	2.00	6.50
9	Drilling Jars	6751754	3	6 1/4	32.23	466.72	4 1/2 XH Box	4 1/2 XH Pin	3.01	6.25
10	3 Joints of 6 1/2" Drill Collars	Rig	2 13/16	6 1/2	89.20	555.92	4 1/2 XH Box	4 1/2 XH Pin	2.00	6.50
11	4 1/2 XH Pin X 4 1/2 IF Box	DR5382	2 15/16	6 3/4	3.12	559.04	4 1/2 IF Box	4 1/2 XH Pin	0.00	6.69



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Mud Motor Report: BHA #1



Job Number: MSMO-56998	State: New Mexico	Fail?: No
Customer: Bretburn Operating LP	County/Parish: Lea	Lead Directional: John Hornsby (SDS)
Well Name: Encore M State #23	Field: Wolfcamp Shale	Company Man: N/A
Rig Name: Nabors M10	Location: Permian Basin	

Time and Depths (This BHA)

Date In: 18/Oct/2018	Time In: 19:30	Date Out: 19/Oct/2018	Time Out: 20:00
Hours In Hole: 20.02	Start Depth: 1,220	End Depth: 1,560	Total Drilled: 340.00
Avg. Total ROP: 50.25	Circ. Hrs. (Tot./Only): 9.35 / 0.17	Percent Slide: 5.00%	Percent Sliding Hours: 2.45%
Slide Hours: 0.60	Total Sliding: 17.00	Avg. Slide ROP: 28.33	Percent Rotary: 95.00%
Percent Rotary Hours: 25.15%	Rotary Hours: 6.17	Rotary Drilled 323.00	Avg. Rotary ROP: 52.38

Motor Data

Stall Pressure: 0	MFG: Mpact	Motor S/N: 96D262D	Pad OD: 9.875
NB Stab: 11.75	Bit to Bend: 7.13	Bent Hsg/Sub: 1.5	Lobe: 4/5
Stage: 5.3	Rev./GAL: 0.25	Rotor Jet: N/A	Act. BUR: 0.1596
Stator Clearance: 0.00	Lower Stab OD: 11.75	Upper Stab OD: N/A	Extended Motor?: No
Number of Stalls: 0	Stall Duration: 0	Prop. BUR: 6	
Description: 7 3/4" X 9 5/8" Hybrid 4/5, 5.3			

Reason POOH:

Reached a depth of 1,560' BHA #1 (This BHA) and Rop slowed down to 20' hr, Several attempts were made changing perimeters to make it drill better but were unsuccessful, Pooh to change bit, WE RE-RAN EVERYTHING FROM THIS BHA ON BHA #2 EXCEPT BIT.

Drilling Parameters		Min	Max			Min	Max			Min	Max
RPM:		30	75	WOB:		15	37	Flow Rate:		402	750
Flow Temp.°:		0	0	BHT°:		0	69.5	Pick Up:		90	105
Slack Off:		90	105	RAB:		90	105	SPM:		96	180
SPP Off:		500	1350	SPP On:		700	1600	Surface Torque:		0	6000
Delta Press.:		125	300	In Flow Temp.:		0	0	Out Flow Temp.:		0	0

Bit Record

Manufacturer: N/A	Description: N/A	Run #: 0	Type Bit: N/A
IADC#: N/A	TFA#: 1.74	Condition: N/A	Bit Drop: 41.84 - 141.26

Jets: 18-18-18-18-18-18

Formations

Rustler

BHA Performance

Motor has no stalls and had no visual wear on bit trip, Re-Ran this whole BHA for BHA #2 Per Company

Expanded Reason Pulled

Reached a depth of 1,560' BHA #1 (This BHA) and Rop slowed down to 20' hr, Several attempts were ma

Mud Data

Type	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Brine	Wt: 9.7	9.7	Vis: 30	30	WL: 90.8	90.8	PV: 1	1	T°: 45	45	% LGS: 0.45	0.45	Chlor: 144500	144500		
	Gas: 0	0	Sol: 9.2	9.2	Oil %: 0	0	YP: 1	1	pH: 10	10	BHT°: 69.5	69.5				

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Mud Motor Report: BHA #2



Job Number: MSMO-56998	State: New Mexico	Fail?: No
Customer: Brelburn Operating LP	County/Parish: Lea	Lead Directional: John Hornsby (SDS)
Well Name: Encore M State #23	Field: Wolfcamp Shale	Company Man: N/A
Rig Name: Nabors M10	Location: Permian Basin	

Time and Depths (This BHA)

Date In: 19/Oct/2018	Time In: 20:00	Date Out: 22/Oct/2018	Time Out: 15:15
Hours In Hole: 36.28	Start Depth: 1,560	End Depth: 4,531	Total Drilled: 2,971.00
Avg. Total ROP: 100.09	Circ. Hrs. (Tot./Only): 31.02 / 1.33	Percent Slide: 0.91%	Percent Sliding Hours: 0.99%
Slide Hours: 0.67	Total Sliding: 27.00	Avg. Slide ROP: 40.50	Percent Rotary: 99.09%
Percent Rotary Hours: 43.13%	Rotary Hours: 29.02	Rotary Drilled 2,944.00	Avg. Rotary ROP: 101.46

Reason POOH:

Reached intermediate casing point at 4,531'

Motor Data

Stall Pressure: 0	MFG: Impact	Motor S/N: 96D262D	Pad OD: 9.875
NB Stab: 11.75	Bit to Bend: 7.13	Bent Hsg/Sub: 1.5	Lobe: 4/5
Stage: 5.3	Rev./GAL: 0.25	Rotor Jet: N/A	Act. BUR: 0.1596
Stator Clearance: 0.00	Lower Stab OD: 11.75	Upper Stab OD: N/A	Extended Motor?: No
Number of Stalls: 0	Stall Duration: 0	Prop. BUR: 6	
Description: 7 3/4" X 9 5/8" Hybrid 4/5, 5.3			

Drilling Parameters		Min	Max		Min	Max		Min	Max
RPM:		50	75	WOB:	10	35	Flow Rate:	500	750
Flow Temp.°:		0	0	BHT°:	69.5	117.2	Pick Up:	105	150
Slack Off:		100	140	RAB:	105	145	SPM:	120	180
SPP Off:		1000	1900	SPP On:	1400	2600	Surface Torque:	0	11000
Delta Press.:		225	700	In Flow Temp.:	0	0	Out Flow Temp.:	0	0

Bit Record

Manufacturer: N/A	Description: N/A	Run #: 0	Type Bit: N/A
IADC#: N/A	TFA#: 1.74	Condition: N/A	Bit Drop: 62.78 - 141.26

Jets: 18-18-18-18-18-18

Formations

Queen / Grayburg / Penrose / Seven Rivers / Tansil / Yates / San Andres / Rustler

BHA Performance

Although this is BHA #2, it's still the same BHA #1 motor and all components except the bit. So all

Expanded Reason Pulled

Reached intermediate casing point at 4,531'

Mud Data

Type	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Brine	Wt: 9.7	10.2	Vis: 0	30	WL: 0	90.8	PV: 0	1	T°: 0	82	% LGS: 0	0.45	Chlor: 0	187000		
	Gas: 0	0	Sol: 0	11.5	Oil %: 0	0	YP: 0	1	pH: 0	10	BHT°: 117.2	117.2				

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Mud Motor Report: BHA #3



Job Number: MSMO-56998	State: New Mexico	Fail?: No
Customer: Breitburn Operating LP	County/Parish: Lea	Lead Directional: John Hornsby (SDS)
Well Name: Encore M State #23	Field: Wolfcamp Shale	Company Man: N/A
Rig Name: Nabors M10	Location: Permian Basin	

Time and Depths (This BHA)

Date In: 22/Oct/2018	Time In: 15:15	Date Out: 25/Oct/2018	Time Out: 24:00
Hours In Hole: 78.38	Start Depth: 4,531	End Depth: 7,634	Total Drilled: 3,103.00
Avg. Total ROP: 103.03	Circ. Hrs. (Tot./Only): 55.05 / 22.33	Percent Slide: 0.00%	Percent Sliding Hours: 0.00%
Slide Hours: 0.00	Total Sliding: 0.00	Avg. Slide ROP: 0.00	Percent Rotary: 100.00%
Percent Rotary Hours: 37.27%	Rotary Hours: 30.12	Rotary Drilled 3,103.00	Avg. Rotary ROP: 103.03

Reason POOH:
Total Depth 7634'

Motor Data

Stall Pressure: 0	MFG: Mpact	Motor S/N: 67D1722SBR	Pad OD: 7.125
NB Stab: 8.25	Bit to Bend: 4.20	Bent Hsg/Sub: 1.5	Lobe: 7/8
Stage: 6.4	Rev./GAL: 0.28	Rotor Jet: N/A	Act. BUR: 0.2162
Stator Clearance: 0.02	Lower Stab OD: 0	Upper Stab OD: N/A	Extended Motor?: No
Number of Stalls: 0	Stall Duration: 0	Prop. BUR: 6	

Description:
Mpact 6 3/4, 7/8, 6.4 Fxd @ 1.50" W/ 8 1/4" NBS

Drilling Parameters	Min	Max		Min	Max
RPM:	50	70	WOB:	5	35
Flow Temp.°:	0	0	BHT°:	0	120.7
Slack Off:	140	195	RAB:	140	200
SPP Off:	300	1650	SPP On:	400	2200
Delta Press.:	50	550	In Flow Temp.:	0	0
			Flow Rate:	315	550
			Pick Up:	145	210
			SPM:	75	132
			Surface Torque:	4000	11000
			Out Flow Temp.:	0	0

Bit Record

Manufacturer:	Description:	Run #:	Type Bit:
N/A	N/A	0	N/A
IADC#:	TFA#:	Condition:	Bit Drop:
N/A	1.49	N/A	0.00 - 92.74

Jets: 18-18-18-18-18

Formations

Wolfcamp / Drinkard / Fusselman / Abo / Glorieta / San Andres / Blinbry / Tubb

BHA Performance

Total Feet: 3,103 Rotary Feet: 3,103 (100.00%) Sliding Feet: 0 (0.00%) Jetting Feet: 0 (0.00%) Avera

Expanded Reason Pulled

Total Depth 7634'

Mud Data

Type	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Brine	Wt: 10.2	10.2	Vis: 0	0	WL: 0	0	PV: 0	0	T°: 0	0	% LGS: 0	0	Chlor: 0	0		
	Gas: 0	0	Sol: 0	0	Oil %: 0	0	YP: 0	0	pH: 0	0	BHT°: 120.7	120.7				
Fresh Water	Wt: 8.5	8.8	Vis: 0	45	WL: 0	0	PV: 0	0	T°: 0	0	% LGS: 0	0	Chlor: 0	0		
	Gas: 0	0	Sol: 0	0	Oil %: 0	0	YP: 0	0	pH: 0	0	BHT°: 120.7	120.7				

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Slide Sheet



Job Number: MSMO-56998	Customer: Bretburn Operating LP	State: New Mexico	County/Parish: Lea
Well Name: Encore M State #23	Rig Name: Nabors M10	Field: Wolfcamp Shale	Location: Permian Basin

Slide Report for BHA # 1

Motor Description: 7 3/4" X 9 5/8" Hybrid 4/5, 5.3 Adj @ 1.50° W/ 11 3/4" NBS - Bent Hsg/Sub: 1.5 - Bit to Bend: 7.13 - Pad O.D.: 9 7/8 - NB Stab: 11.75

Date	Mode	Start	End	Hours	Start MD	End MD	Feet	WOB (,000)	ROP	RPM TFO	Torque (,000)	Flow Rate	SPP	INC	AZM	DLS	TFO	BUR	TR
19Oct	Rotating	10:00	10:30	0.50	1,220	1,230	10	0.018	20.00	30	3	402	700	0.58	26.21	1.39	-138.31	-0.80	-95.44
19Oct	Rotating	10:40	11:10	0.50	1,230	1,249	19	0.018	38.00	30	3	402	700	0.55	359.30	1.39	-138.31	-0.55	-113.31
19Oct	Rotating	11:10	12:40	1.50	1,249	1,348	99	0.03	66.00	60	6	550	1,100	0.73	330.55	0.21	-51.98	0.15	-13.20
19Oct	Sliding	13:00	13:05	0.10	1,348	1,355	7	0.015	70.00	N/A	0	460	800	0.74	329.80	0.21	-51.98	0.15	-13.01
19Oct	Rotating	13:20	13:40	0.33	1,355	1,376	21	0.03	63.01	60	6	426	800	0.77	327.70	0.21	-51.98	0.15	-12.46
19Oct	Rotating	14:00	14:40	0.87	1,376	1,416	40	0.03	60.00	60	6	426	800	0.84	324.17	0.21	-51.98	0.16	-11.51
19Oct	Rotating	14:40	16:50	2.17	1,416	1,540	124	0.035	57.23	75	6	750	1,600	1.00	303.17	0.36	-81.23	0.11	-20.46
19Oct	Sliding	16:50	17:20	0.50	1,540	1,550	10	0.037	20.00	N/A	0	750	1,600	1.02	301.38	0.36	-81.23	0.12	-20.22
19Oct	Rotating	17:20	17:50	0.50	1,550	1,560	10	0.037	20.00	75	2.5	750	1,600	1.03	299.66	0.36	-81.23	0.12	-19.94

Summarize

Total Feet:	Rotary Feet:	Sliding Feet:	Jetting Feet:	Average ROP:	Rotary ROP:	Sliding ROP:	Jetting ROP:	Total Time:	Rotary Time:	Sliding Time:	Jetting Time:
340	323	17	0	50.25	52.38	28.33	0.00	6.77	6.17	0.60	0.00
	(95.00%)	(5.00%)	(0.00%)						(91.13%)	(8.87%)	(0.00%)

Slide Report for BHA # 2

Motor Description: 7 3/4" X 9 5/8" Hybrid 4/5, 5.3 Adj @ 1.50° W/ 11 3/4" NBS - Bent Hsg/Sub: 1.5 - Bit to Bend: 7.13 - Pad O.D.: 9 7/8 - NB Stab: 11.75

Date	Mode	Start	End	Hours	Start MD	End MD	Feet	WOB (,000)	ROP	RPM TFO	Torque (,000)	Flow Rate	SPP	INC	AZM	DLS	TFO	BUR	TR
19Oct	Rotating	23:00	23:49	0.83	1,560	1,624	64	0.01	76.80	70	5	750	1,800	1.17	290.01	0.36	-81.23	0.15	-18.15
20Oct	Rotating	00:00	01:40	1.67	1,624	1,875	251	0.015	150.60	70	8	750	2,100	1.35	310.40	0.31	111.91	-0.10	12.08
20Oct	Rotating	01:40	03:00	1.35	1,875	2,100	225	0.02	166.67	70	8	750	2,225	0.98	327.34	0.37	-175.15	-0.37	-1.84
20Oct	Rotating	03:00	03:50	0.83	2,100	2,193	93	0.025	111.60	70	9	750	2,300	0.64	323.87	0.37	-175.15	-0.37	-2.82
20Oct	Sliding	03:50	04:10	0.33	2,193	2,202	9	0.015	27.00	N/A	0	750	1,850	0.61	323.33	0.37	-175.15	-0.37	-2.98
20Oct	Sliding	04:20	04:25	0.08	2,202	2,208	6	0.015	72.03	N/A	0	750	1,850	0.60	323.30	0.11	166.68	-0.11	2.46
20Oct	Rotating	04:25	06:25	2.00	2,208	2,485	277	0.025	138.50	70	10	750	2,300	0.38	265.44	0.45	-124.57	-0.02	-69.53
20Oct	Sliding	06:25	06:40	0.25	2,485	2,497	12	0.022	48.00	N/A	0	750	2,000	0.41	258.91	0.45	-124.57	0.01	-67.80
20Oct	Rotating	06:40	08:00	1.35	2,497	2,640	143	0.022	105.93	70	6	750	2,250	0.73	230.95	0.07	-48.69	0.05	-4.42
20Oct	Rotating	08:00	10:10	2.15	2,640	2,860	220	0.025	102.33	70	6	750	2,250	0.80	229.28	0.05	93.35	0.00	3.56
20Oct	Rotating	10:10	15:35	5.42	2,860	3,400	540	0.03	99.69	75	9.5	750	2,500	0.54	240.86	0.05	-15.32	0.05	-1.55
20Oct	Rotating	15:35	16:50	1.25	3,400	3,500	100	0.03	80.00	75	9.5	750	2,500	0.59	239.55	0.05	-15.32	0.05	-1.41
20Oct	Rotating	16:50	18:20	1.50	3,500	3,635	135	0.035	90.00	65	9.5	750	2,300	0.59	251.39	0.11	99.95	-0.01	10.60
20Oct	Rotating	18:20	20:45	2.42	3,635	3,818	183	0.035	75.72	50	11	750	2,300	0.64	244.37	0.15	-82.23	0.04	-13.61
20Oct	Rotating	20:45	21:00	0.25	3,818	3,832	14	0.025	56.00	50	9	500	1,500	0.65	242.63	0.15	-82.23	0.04	-13.47
20Oct	Rotating	21:00	22:15	1.25	3,832	3,890	58	0.022	46.40	50	9	500	1,400	0.69	235.96	0.15	-82.23	0.05	-12.84
20Oct	Rotating	22:15	22:20	0.08	3,890	3,900	10	0.035	120.05	50	11	750	2,500	0.70	235.24	0.15	144.91	-0.12	6.93
20Oct	Rotating	22:20	24:00	1.67	3,900	4,048	148	0.035	88.80	50	11	750	2,550	0.54	248.79	0.15	144.91	-0.11	9.12
21Oct	Rotating	00:00	01:40	1.67	4,048	4,216	168	0.03	100.80	50	11	750	2,550	0.64	248.82	0.11	-21.42	0.11	-3.68
21Oct	Rotating	01:40	02:00	0.33	4,216	4,256	40	0.025	120.01	50	11	750	2,450	0.68	247.74	0.11	-21.42	0.11	-3.45
21Oct	Rotating	02:00	05:00	3.00	4,256	4,531	275	0.027	91.67	50	11	750	2,600	0.44	235.96	0.23	28.34	0.21	14.00

Summarize

Total Feet:	Rotary Feet:	Sliding Feet:	Jetting Feet:	Average ROP:	Rotary ROP:	Sliding ROP:	Jetting ROP:	Total Time:	Rotary Time:	Sliding Time:	Jetting Time:
2,971	2,944	27	0	100.09	101.46	40.50	0.00	29.68	29.02	0.67	0.00
	(99.09%)	(0.91%)	(0.00%)						(97.75%)	(2.25%)	(0.00%)

Slide Report for BHA # 3

Motor Description: Mpack 6 3/4" 7/8 6.4 Fxd @ 1.50° W/ 8 1/4" NBS - Bent Hsg/Sub: 1.5 - Bit to Bend: 4.2 - Pad O.D.: 7 1/8 - NB Stab: 8.25

Date	Mode	Start	End	Hours	Start MD	End MD	Feet	WOB (,000)	ROP	RPM TFO	Torque (,000)	Flow Rate	SPP	INC	AZM	DLS	TFO	BUR	TR
23Oct	Rotating	01:05	01:20	0.25	4,531	4,555	24	0.01	96.00	50	4	400	1,100	0.50	237.98	0.23	28.34	0.21	12.56
23Oct	Rotating	02:30	03:45	1.25	4,555	4,615	60	0.01	48.00	50	4	400	1,100	0.63	241.55	0.23	28.34	0.21	9.97
23Oct	Rotating	03:45	04:30	0.75	4,615	4,672	57	0.02	76.00	60	6	500	1,600	0.71	243.03	0.05	7.17	0.05	0.53
23Oct	Rotating	04:30	04:50	0.33	4,672	4,700	28	0.025	84.01	60	8	500	1,750	0.73	243.18	0.05	7.17	0.05	0.52
23Oct	Rotating	04:50	08:15	3.42	4,700	5,075	375	0.022	109.76	50	8	550	2,000	0.79	235.00	0.11	-97.40	-0.01	-7.84
23Oct	Rotating	08:15	11:20	3.08	5,075	5,480	405	0.022	131.35	50	8	550	2,000	0.80	232.09	0.06	94.00	0.00	4.23
23Oct	Rotating	11:20	15:55	4.60	5,480	6,075	595	0.03	129.35	50	11	550	2,200	0.64	258.93	0.15	-81.85	0.04	-13.43
23Oct	Rotating	15:55	17:00	1.08	6,075	6,230	155	0.035	143.08	50	11	550	2,200	0.70	248.32	0.03	-91.95	0.00	-2.07
23Oct	Rotating	17:00	20:15	3.25	6,230	6,635	405	0.03	124.62	50	9.5	500	1,900	0.80	243.81	0.33	-102.50	0.00	-23.70
23Oct	Rotating	20:15	24:00	3.75	6,635	7,065	430	0.03	114.67	50	9.5	500	1,950	0.98	195.38	0.19	-84.40	0.05	-11.21

24Oct	Rotating	00:00	00:30	0.50	7,065	7,120	55	0.03	110.00	50	9.5	500	1,950	0.99	195.57	0.24	103.10	-0.05	13.62
24Oct	Rotating	00:30	02:40	2.17	7,120	7,341	221	0.03	102.00	50	9.5	500	1,950	N/A	N/A	N/A	N/A	N/A	N/A
24Oct	Rotating	02:40	02:50	0.17	7,341	7,350	9	0.03	53.99	50	9.5	500	1,950	N/A	N/A	N/A	N/A	N/A	N/A
24Oct	Rotating	02:50	03:00	0.17	7,350	7,374	24	0.008	143.97	50	8	400	650	N/A	N/A	N/A	N/A	N/A	N/A
24Oct	Rotating	03:00	04:00	1.00	7,374	7,431	57	0.005	57.00	50	7	350	400	N/A	N/A	N/A	N/A	N/A	N/A
24Oct	Rotating	06:40	08:45	2.10	7,431	7,525	94	0.02	44.76	50	9.5	330	1,200	N/A	N/A	N/A	N/A	N/A	N/A
25Oct	Rotating	01:30	02:30	1.00	7,525	7,575	50	0.025	50.00	70	8.5	315	1,000	N/A	N/A	N/A	N/A	N/A	N/A
25Oct	Rotating	02:30	03:45	1.25	7,575	7,634	59	0.027	47.20	65	9.5	350	1,200	N/A	N/A	N/A	N/A	N/A	N/A

Summarize

Total Feet:	Rotary Feet:	Sliding Feet:	Jetting Feet:	Average ROP:	Rotary ROP:	Sliding ROP:	Jetting ROP:	Total Time:	Rotary Time:	Sliding Time:	Jetting Time:
3,103	3,103	0	0	103.03	103.03	0.00	0.00	30.12	30.12	0.00	0.00
	(100.00%)	(0.00%)	(0.00%)						(100.00%)	(0.00%)	(0.00%)

General Summary

Total Feet:	Rotary Feet:	Sliding Feet:	Jetting Feet:	Average ROP:	Rotary ROP:	Sliding ROP:	Jetting ROP:	Total Time:	Rotary Time:	Sliding Time:	Jetting Time:
6,414	6,370	44 (0.69%)	0 (0.00%)	96.35	97.55	34.74	0.00	66.57	65.30	1.27 (1.90%)	0.00 (0.00%)
	(99.31%)								(98.10%)		

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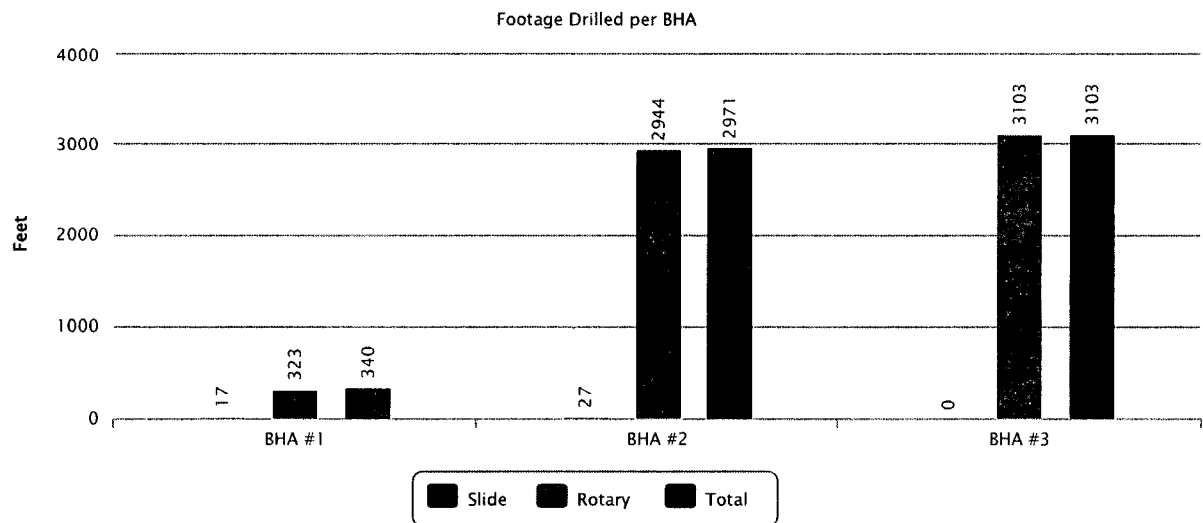
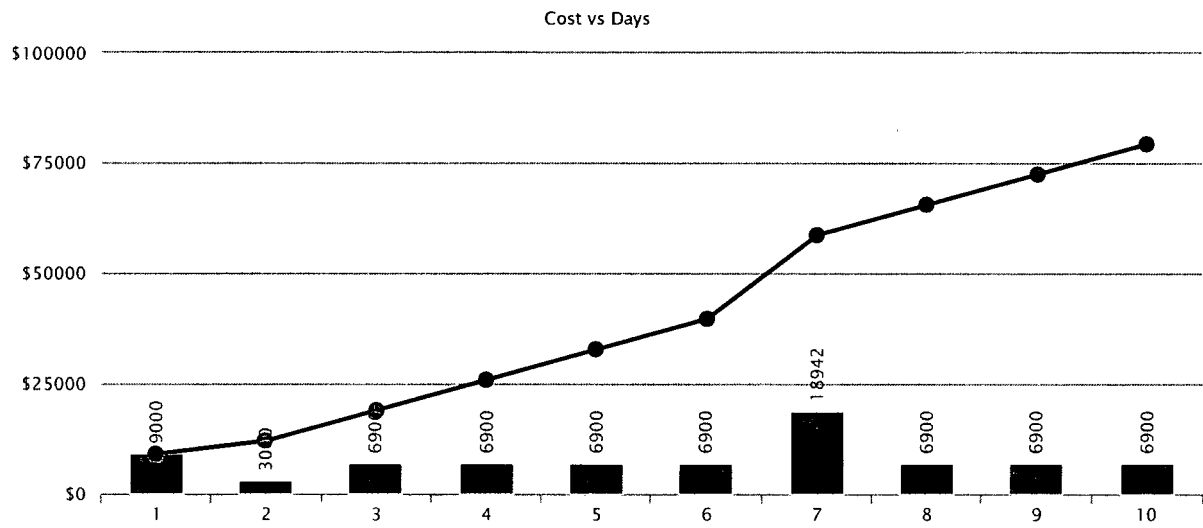
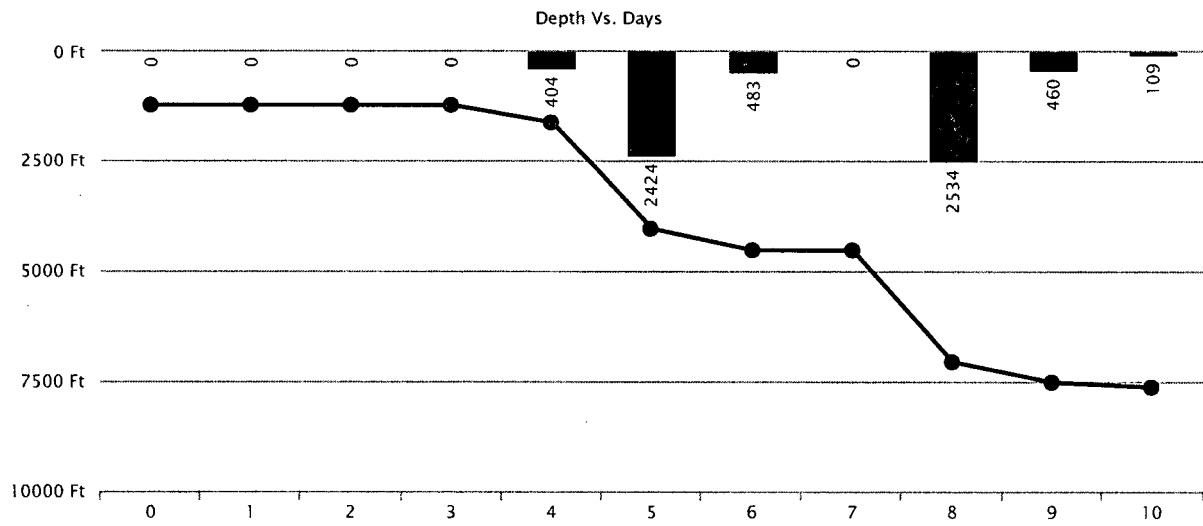
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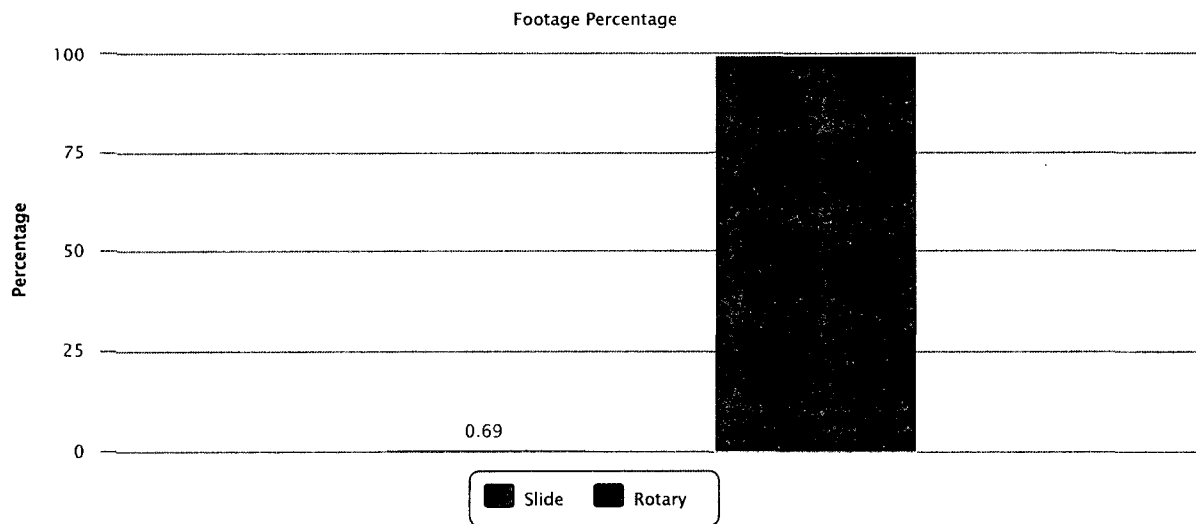
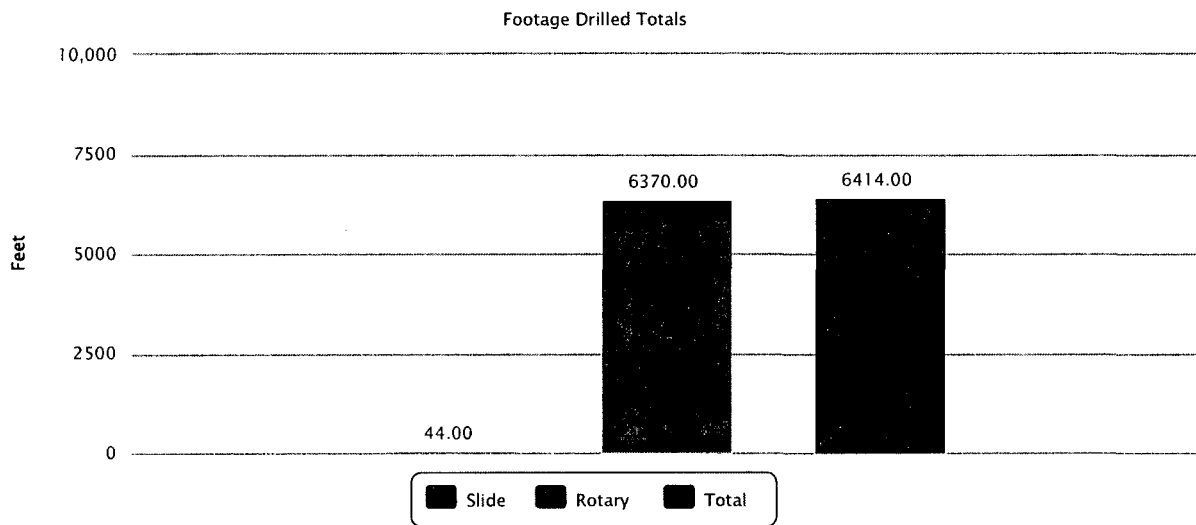
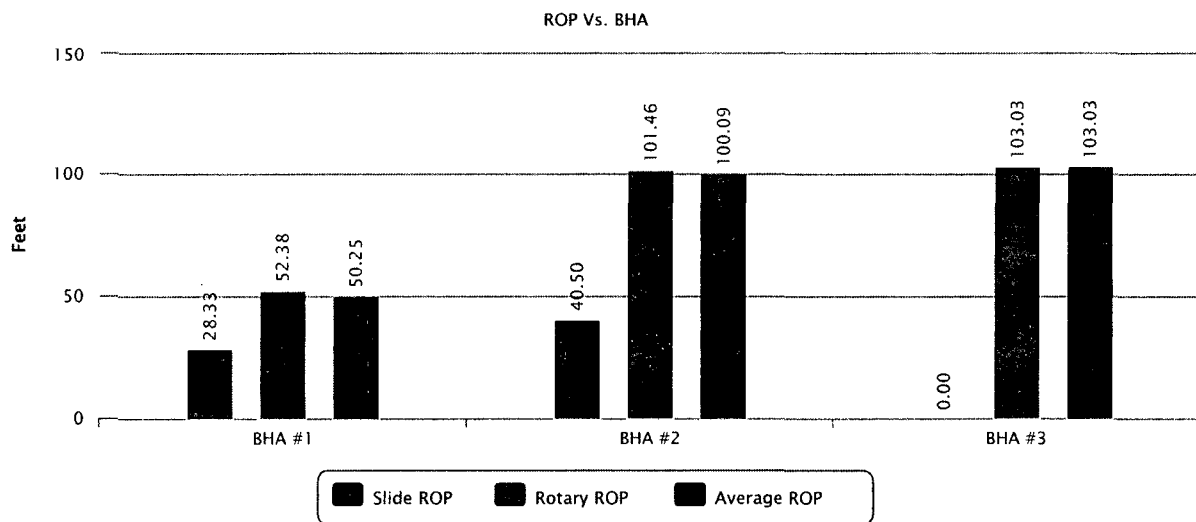


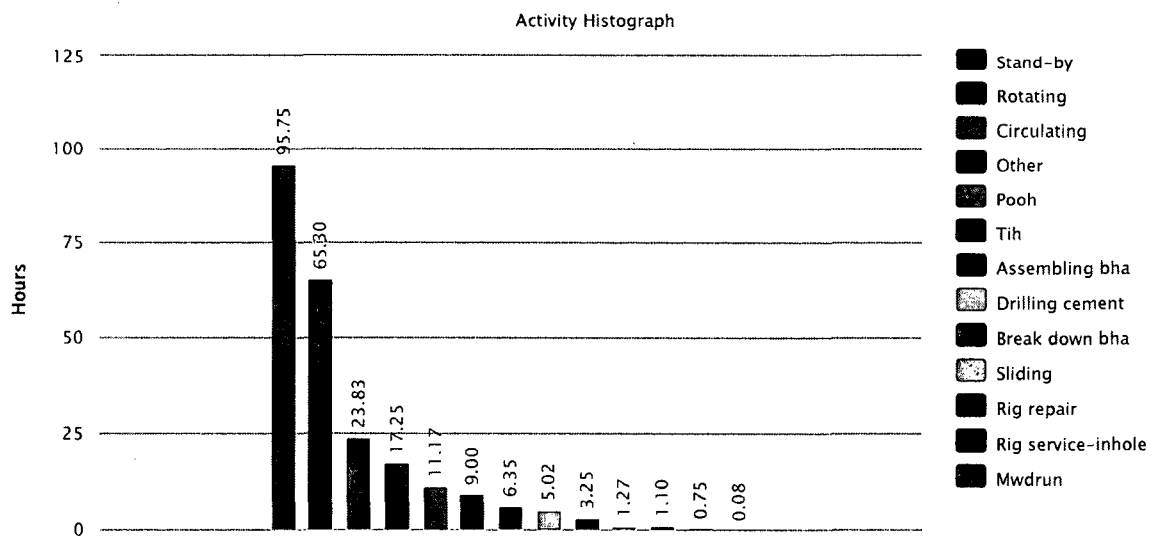
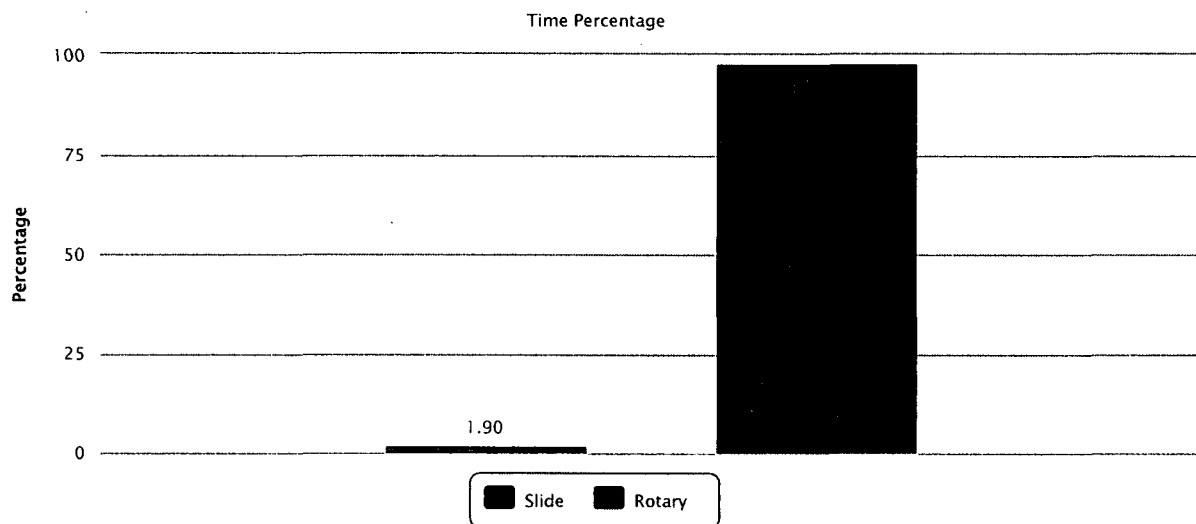
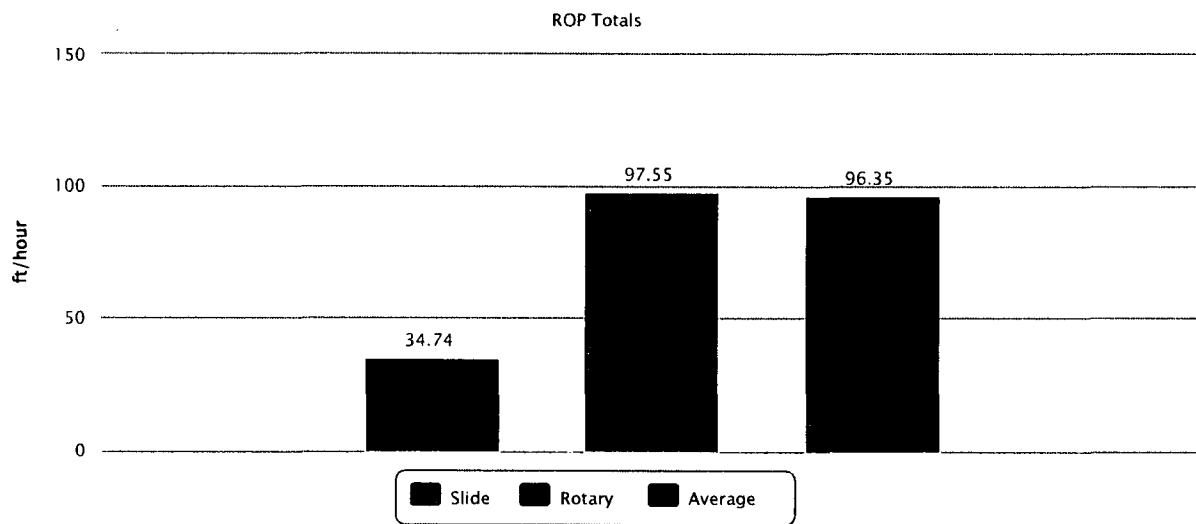
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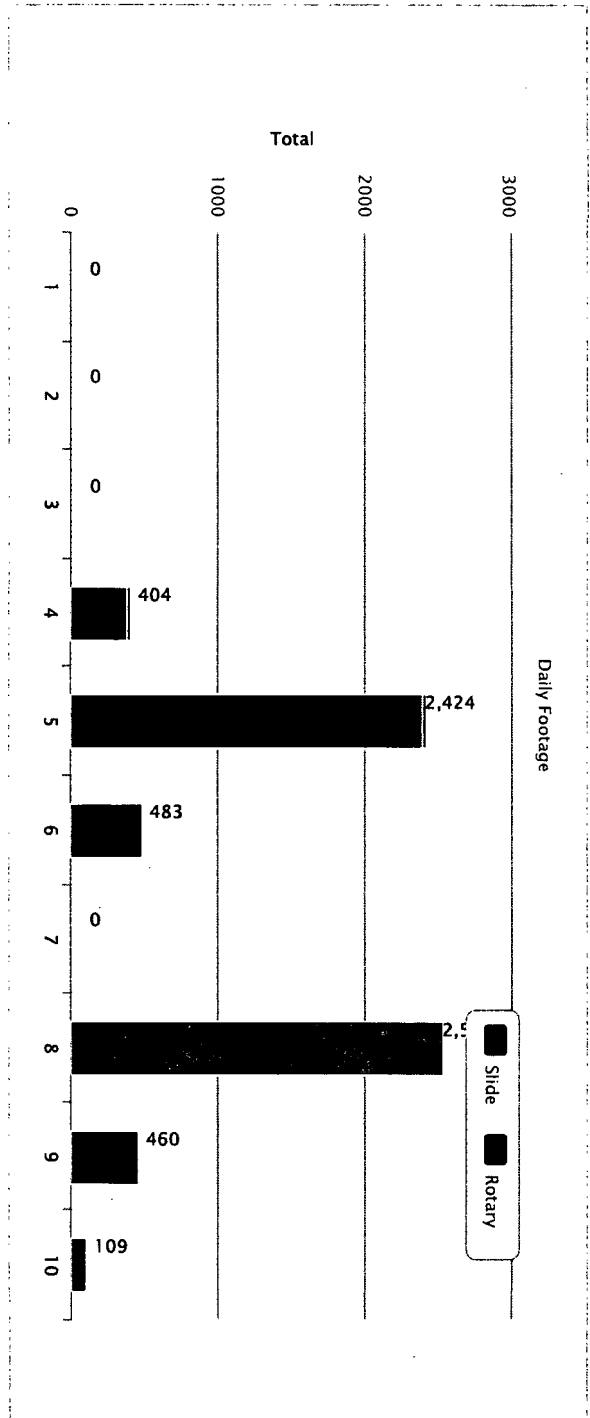
Day	BHA	Wellbore	Section	Phase	Cost Code	Charged By	Units	Unit Cost	Sub-Total
16/Oct/2018	N/A	OH	Surface	Vertical	standby for equipment +3 Hands	DAY	1	\$3,000.00	\$3,000.00
16/Oct/2018	N/A	OH	Surface	Vertical	Mob/ Demob	Each	1	\$6,000.00	\$6,000.00
17/Oct/2018	N/A	OH	Surface	Vertical	standby for equipment +3 Hands	DAY	1	\$3,000.00	\$3,000.00
18/Oct/2018	1	OH	Intermediate 01	Vertical	2DD/1MWD Day Rate	DAY	1	\$6,900.00	\$6,900.00
19/Oct/2018	1	OH	Intermediate 01	Vertical	2DD/1MWD Day Rate	DAY	1	\$6,900.00	\$6,900.00
20/Oct/2018	2	OH	Intermediate 01	Vertical	2DD/1MWD Day Rate	DAY	1	\$6,900.00	\$6,900.00
21/Oct/2018	2	OH	Intermediate 01	Vertical	2DD/1MWD Day Rate	DAY	1	\$6,900.00	\$6,900.00
22/Oct/2018	3	OH	Production	Vertical	Additional MWD Inspection/Rebuild	Each	1	\$1,250.00	\$1,250.00
22/Oct/2018	3	OH	Production	Vertical	Stabilizer Re-work	Item	2	\$978.00	\$1,956.00
22/Oct/2018	3	OH	Production	Vertical	Additional Motor Rebuild Charge	Each	1	\$2,500.00	\$2,500.00
22/Oct/2018	3	OH	Production	Vertical	Stab Cost - 7" - 8 3/4" Steel String Stab	Item	2	\$1,518.00	\$3,036.00
22/Oct/2018	3	OH	Production	Vertical	Additional Inspect/Recut/Redress	Each	6	\$550.00	\$3,300.00
22/Oct/2018	3	OH	Production	Vertical	2DD/1MWD Day Rate	DAY	1	\$6,900.00	\$6,900.00
23/Oct/2018	3	OH	Production	Vertical	2DD/1MWD Day Rate	DAY	1	\$6,900.00	\$6,900.00
24/Oct/2018	3	OH	Production	Vertical	2DD/1MWD Day Rate	DAY	1	\$6,900.00	\$6,900.00
25/Oct/2018	3	OH	Production	Vertical	2DD/1MWD Day Rate	DAY	1	\$6,900.00	\$6,900.00
Total:									\$79,242.00
\$/Ft:									\$12.35
\$/Day:									\$7,924.20

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