

Results of Directional Survey

API number:	30-025-41138		
OGRID:		Operator:	MURCHISON OIL & GAS INC
		Property:	JACKSON UNIT # 19H

surface	ULSTR:	N	21	T	24S	R	33E
				200	FSL	1670	FWL

BH Loc	ULSTR:	C	21	T	24S	R	33E
15750	MD	11093.1	TVD	292	FNL	1671	FWL
				4988	FSL		

Top Perf/OH	ULSTR:	N	21	T	24S	R	33E
11350	MD	11099.8	TVD	590	FSL	1692	FWL

Bot Perf/OH	ULSTR:	C	21	T	24S	R	33E
15670	MD	11094.7	TVD	4908	FSL	1671	FWL

	MD	N/S	E/W	VD
	11340	380.20	21.10	11099.7
TOP PERFS/OH	11350	390.17	21.52	11099.83
	11371	411.10	22.40	11100.10
	15627	4664.60	0.60	11095.70
BOT PERFS/OH	15670	4707.60	0.82	11094.69
	15704	4741.60	1.00	11093.90

NEXT TO LAST	15742	4779.60	1.20	11093.20
LAST READING	15750	4787.60	1.20	11093.10
TD	15750	4787.60	1.20	11093.10

Surface Location	200	FS	1670	FW
Projected BHL	4988	FS	1671	FW
Location of				
Top Perfs/OH	590	FS	1692	FW
Bottom Perfs/OH	4908	FS	1671	FW

SUMMARY of Subsurface Locations

Surface Location	N-21-24S-33E	200	FS	1670	FW	Vert. Depth
Top Perfs/OH	N-21-24S-33E	590	FS	1692	FW	11099.83
Bottom Perfs/OH	C-21-24S-33E	4908	FS	1671	FW	11094.69
Projected TD	C-21-24S-33E	4988	FS	1671	FW	11093.10

APR 07 2014

 MURCHISON OIL & GAS, INC.

HOBBS OCD
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RECEIVED

Murchison Oil and Gas

Jackson Unit Section 21

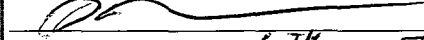
Jackson Unit 19H

Survey: Jackson Unit 19H

MOJO Standard Survey

20 December, 2013

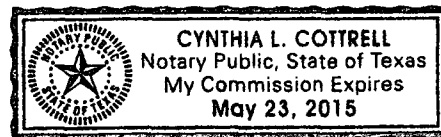
This survey is correct to the best of my knowledge and is supported by actual field data.

 (Signature)

Notarized this date 6th of January
2014 by Cynthia L. Cottrell Notary
Signature County of Collin State of Texas



MOJO
DIRECTIONAL CORPORATION



Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Site Jackson Unit 19H
Project:	Jackson Unit Section 21	TVD Reference:	WELL @ 3551.0usft (Original Well Elev)
Site:	Jackson Unit 19H	MD Reference:	WELL @ 3551.0usft (Original Well Elev)
Well:	Jackson Unit 19H	North Reference:	Grid
Wellbore:	Jackson Unit 19H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 19H	Database:	EDM 5000.1 Single User Db

Project	Jackson Unit Section 21		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Jackson Unit 19H		
Site Position:	Lat/Long	Northing:	436,011.67 usft
From:		Easting:	774,248.33 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 47.154 N
		Longitude:	103° 34' 49.364 W
		Grid Convergence:	0.40 °

Well	Jackson Unit 19H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 11' 47.154 N
		Longitude:	103° 34' 49.364 W
		Ground Level:	3,529.0 usft

Wellbore	Jackson Unit 19H		
Magnetics	Model Name	Sample Date	Declination
			(°)
	Dip Angle	Field Strength	
	(°)	(nT)	
	IGRF2010	10/05/2013	7.35
			60.11
			48,408

Design	Jackson Unit 19H		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
		Direction	(°)
		359.94	

Survey Program	Date	20/12/2013		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
200.0	15,750.0	Jackson Unit 19H (Jackson Unit 19H)	MWD	MWD - Standard

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Well:	Jackson Unit 19H	North Reference:	Grid
Wellbore:	Jackson Unit 19H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 19H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.0	0.00	0.00	0.0	-3,551.0	0.0	0.0	0.0	0.00	436,011.67	774,248.33	
200.0	0.21	109.55	200.0	-3,351.0	-0.1	0.3	-0.1	0.10	436,011.55	774,248.67	
400.0	0.28	91.94	400.0	-3,151.0	-0.3	1.2	-0.3	0.05	436,011.41	774,249.51	
600.0	0.09	151.84	600.0	-2,951.0	-0.4	1.7	-0.4	0.12	436,011.25	774,250.07	
800.0	0.06	18.60	800.0	-2,751.0	-0.5	1.8	-0.5	0.07	436,011.22	774,250.18	
1,000.0	0.22	305.02	1,000.0	-2,551.0	-0.1	1.6	-0.1	0.11	436,011.54	774,249.90	
1,200.0	0.28	255.59	1,200.0	-2,351.0	0.0	0.8	0.0	0.11	436,011.63	774,249.11	
Rustler											
1,263.0	0.16	274.72	1,263.0	-2,288.0	-0.1	0.5	-0.1	0.22	436,011.60	774,248.87	
13 3/8"											
1,400.0	0.21	22.89	1,400.0	-2,151.0	0.2	0.4	0.2	0.22	436,011.85	774,248.78	
1,600.0	0.24	29.45	1,600.0	-1,951.0	0.9	0.8	0.9	0.02	436,012.55	774,249.13	
1,800.0	0.47	352.11	1,800.0	-1,751.0	2.1	0.9	2.1	0.16	436,013.73	774,249.22	
2,000.0	0.36	292.51	2,000.0	-1,551.0	3.1	0.2	3.1	0.21	436,014.78	774,248.53	
2,200.0	0.34	341.15	2,200.0	-1,351.0	3.9	-0.6	3.9	0.14	436,015.58	774,247.75	
2,400.0	0.43	320.82	2,400.0	-1,151.0	5.1	-1.2	5.1	0.08	436,016.73	774,247.09	
2,600.0	0.08	342.35	2,600.0	-951.0	5.8	-1.8	5.8	0.18	436,017.44	774,246.57	
2,800.0	0.12	107.46	2,800.0	-751.0	5.8	-1.6	5.8	0.09	436,017.51	774,246.73	
3,000.0	0.47	129.96	3,000.0	-551.0	5.3	-0.8	5.3	0.18	436,016.92	774,247.56	
3,200.0	0.26	119.68	3,200.0	-351.0	4.5	0.3	4.5	0.11	436,016.17	774,248.58	
3,400.0	0.75	123.47	3,400.0	-151.0	3.6	1.7	3.6	0.25	436,015.23	774,250.07	
3,600.0	0.69	107.03	3,599.9	48.9	2.5	4.0	2.5	0.11	436,014.15	774,252.31	
3,800.0	0.25	111.83	3,799.9	248.9	2.0	5.5	2.0	0.22	436,013.64	774,253.87	
4,000.0	0.44	179.39	3,999.9	448.9	1.0	6.0	1.0	0.21	436,012.71	774,254.28	
4,200.0	0.59	17.96	4,199.9	648.9	1.2	6.3	1.2	0.51	436,012.92	774,254.61	
4,400.0	1.94	70.52	4,399.9	848.9	3.4	9.8	3.3	0.82	436,015.03	774,258.11	
4,600.0	2.31	90.85	4,599.7	1,048.7	4.4	17.0	4.4	0.42	436,016.10	774,265.34	

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Project:	Jackson Unit Section 21	TVD Reference:	WELL @ 3551.0usft (Original Well Elev)
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Well:	Jackson Unit 19H	North Reference:	Grid
Wellbore:	Jackson Unit 19H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 19H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
4,800.0	3.91	101.52	4,799.4	1,248.4	3.0	27.7	3.0	0.85	436,014.67	774,276.05	
5,000.0	3.55	110.68	4,999.0	1,448.0	-0.5	40.2	-0.6	0.35	436,011.12	774,288.52	
5,116.0	2.87	106.71	5,114.8	1,563.8	-2.7	46.3	-2.7	0.62	436,009.02	774,294.67	
5,124.0	2.81	107.69	5,122.8	1,571.8	-2.8	46.7	-2.8	1.00	436,008.90	774,295.04	
Delaware											
5,137.0	2.71	109.39	5,135.8	1,584.8	-3.0	47.3	-3.0	1.00	436,008.71	774,295.64	
9 5/8"											
5,179.0	2.40	115.80	5,177.8	1,626.8	-3.7	49.0	-3.7	1.00	436,007.99	774,297.36	
5,242.0	2.20	112.80	5,240.7	1,689.7	-4.7	51.3	-4.8	0.37	436,006.95	774,299.67	
5,337.0	1.40	89.70	5,335.7	1,784.7	-5.4	54.2	-5.5	1.12	436,006.25	774,302.51	
5,431.0	0.70	276.60	5,429.7	1,878.7	-5.3	54.8	-5.4	2.23	436,006.32	774,303.09	
5,527.0	0.50	261.30	5,525.7	1,974.7	-5.3	53.8	-5.4	0.27	436,006.33	774,302.09	
5,621.0	2.20	281.10	5,619.6	2,068.6	-5.1	51.6	-5.1	1.85	436,006.61	774,299.91	
5,716.0	2.00	275.10	5,714.6	2,163.6	-4.6	48.1	-4.6	0.31	436,007.11	774,296.47	
5,811.0	2.20	282.90	5,809.5	2,258.5	-4.0	44.7	-4.1	0.37	436,007.66	774,293.04	
5,905.0	1.80	284.90	5,903.5	2,352.5	-3.2	41.5	-3.3	0.43	436,008.45	774,289.86	
6,000.0	1.90	269.50	5,998.4	2,447.4	-2.9	38.5	-2.9	0.53	436,008.82	774,286.84	
6,095.0	1.90	277.20	6,093.4	2,542.4	-2.7	35.4	-2.7	0.27	436,009.00	774,283.70	
6,122.0	1.90	276.63	6,120.3	2,569.3	-2.6	34.5	-2.6	0.07	436,009.11	774,282.82	
Cherry Canyon											
6,189.0	1.90	275.20	6,187.3	2,636.3	-2.3	32.3	-2.4	0.07	436,009.34	774,280.61	
6,283.0	1.60	270.60	6,281.3	2,730.3	-2.2	29.4	-2.2	0.35	436,009.49	774,277.74	
6,378.0	1.90	270.80	6,376.2	2,825.2	-2.1	26.5	-2.2	0.32	436,009.53	774,274.84	
6,472.0	1.70	278.00	6,470.2	2,919.2	-1.9	23.6	-2.0	0.32	436,009.74	774,271.90	
6,567.0	1.90	267.90	6,565.1	3,014.1	-1.8	20.6	-1.8	0.39	436,009.88	774,268.93	
6,662.0	1.60	278.20	6,660.1	3,109.1	-1.7	17.7	-1.7	0.46	436,010.01	774,266.05	
6,757.0	1.50	280.50	6,755.0	3,204.0	-1.2	15.2	-1.3	0.12	436,010.43	774,263.51	
6,852.0	1.40	278.40	6,850.0	3,299.0	-0.8	12.8	-0.9	0.12	436,010.83	774,261.14	

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Well:	Jackson Unit 19H	North Reference:	Grid
Wellbore:	Jackson Unit 19H	Survey Calculation Method:	Minimum Curvature
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Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
6,947.0	1.40	275.30	6,945.0	3,394.0	-0.6	10.5	-0.6	0.08	436,011.10	774,258.84
7,042.0	1.70	275.10	7,039.9	3,488.9	-0.3	8.0	-0.3	0.32	436,011.34	774,256.28
7,138.0	2.20	233.70	7,135.9	3,584.9	-1.3	5.0	-1.3	1.52	436,010.37	774,253.37
7,232.0	2.30	202.60	7,229.8	3,678.8	-4.1	2.9	-4.1	1.29	436,007.56	774,251.20
7,326.0	2.20	181.10	7,323.8	3,772.8	-7.7	2.1	-7.7	0.90	436,004.02	774,250.44
7,421.0	0.50	234.70	7,418.7	3,867.7	-9.7	1.7	-9.7	2.05	436,001.95	774,250.06
7,516.0	0.30	4.70	7,513.7	3,962.7	-9.7	1.4	-9.7	0.77	436,001.96	774,249.74
7,581.0	0.16	11.99	7,578.7	4,027.7	-9.5	1.4	-9.5	0.22	436,002.22	774,249.78
Brushy Canyon										
7,611.0	0.10	22.10	7,608.7	4,057.7	-9.4	1.5	-9.4	0.22	436,002.29	774,249.80
7,706.0	0.20	270.80	7,703.7	4,152.7	-9.3	1.3	-9.3	0.27	436,002.37	774,249.66
7,800.0	0.80	248.80	7,797.7	4,246.7	-9.5	0.6	-9.5	0.66	436,002.13	774,248.89
7,895.0	0.90	214.70	7,892.7	4,341.7	-10.4	-0.5	-10.4	0.53	436,001.28	774,247.84
7,990.0	0.70	212.40	7,987.7	4,436.7	-11.5	-1.2	-11.5	0.21	436,000.17	774,247.11
8,085.0	0.40	165.00	8,082.7	4,531.7	-12.3	-1.4	-12.3	0.55	435,999.36	774,246.88
8,179.0	0.30	206.40	8,176.7	4,625.7	-12.8	-1.5	-12.8	0.28	435,998.83	774,246.86
8,274.0	0.90	258.90	8,271.7	4,720.7	-13.2	-2.3	-13.2	0.80	435,998.46	774,246.01
8,369.0	0.90	248.50	8,366.7	4,815.7	-13.6	-3.7	-13.6	0.17	435,998.04	774,244.59
8,464.0	1.30	257.10	8,461.7	4,910.7	-14.1	-5.5	-14.1	0.45	435,997.53	774,242.84
8,558.0	0.90	297.30	8,555.6	5,004.6	-14.0	-7.2	-14.0	0.90	435,997.63	774,241.15
8,653.0	0.70	326.80	8,650.6	5,099.6	-13.2	-8.2	-13.2	0.47	435,998.46	774,240.17
8,748.0	1.00	48.20	8,745.6	5,194.6	-12.2	-7.9	-12.2	1.19	435,999.49	774,240.47
8,843.0	0.70	63.90	8,840.6	5,289.6	-11.4	-6.7	-11.4	0.40	436,000.30	774,241.61
8,937.0	0.20	14.60	8,934.6	5,383.6	-11.0	-6.2	-11.0	0.63	436,000.71	774,242.16
9,032.0	0.30	118.80	9,029.6	5,478.6	-10.9	-5.9	-10.9	0.42	436,000.75	774,242.42
9,101.0	0.41	67.47	9,098.6	5,547.6	-10.9	-5.5	-10.9	0.47	436,000.76	774,242.81
Bone Spring										

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9,126.0	0.50	57.70	9,123.6	5,572.6	-10.8	-5.3	-10.8	0.47	436,000.86	774,242.99	
9,222.0	0.20	57.10	9,219.6	5,668.6	-10.5	-4.8	-10.5	0.31	436,001.17	774,243.48	
Avalon Shale											
9,317.0	0.30	248.50	9,314.6	5,763.6	-10.5	-4.9	-10.5	0.52	436,001.17	774,243.39	
9,412.0	1.10	219.60	9,409.6	5,858.6	-11.3	-5.8	-11.3	0.89	436,000.38	774,242.58	
9,506.0	1.50	208.80	9,503.6	5,952.6	-13.1	-6.9	-13.1	0.50	435,998.60	774,241.41	
9,602.0	1.00	169.30	9,599.6	6,048.6	-15.0	-7.4	-15.0	1.01	435,996.68	774,240.96	
9,700.0	0.70	61.50	9,697.5	6,146.5	-15.5	-6.7	-15.5	1.41	435,996.12	774,241.64	
9,795.0	0.90	141.60	9,792.5	6,241.5	-15.9	-5.7	-15.9	1.10	435,995.82	774,242.62	
9,889.0	1.20	160.30	9,886.5	6,335.5	-17.4	-4.9	-17.4	0.48	435,994.31	774,243.41	
9,984.0	2.00	188.20	9,981.5	6,430.5	-19.9	-4.8	-19.9	1.15	435,991.73	774,243.51	
10,078.0	3.10	199.90	10,075.4	6,524.4	-24.0	-5.9	-23.9	1.29	435,987.72	774,242.41	
10,128.0	3.31	196.30	10,125.3	6,574.3	-26.6	-6.8	-26.6	0.58	435,985.06	774,241.54	
1st Bone Spring Sand											
10,172.0	3.50	193.50	10,169.2	6,618.2	-29.1	-7.5	-29.1	0.58	435,982.54	774,240.87	
10,267.0	3.50	197.70	10,264.1	6,713.1	-34.7	-9.0	-34.7	0.27	435,976.96	774,239.31	
10,361.0	3.20	204.20	10,357.9	6,806.9	-39.8	-11.0	-39.8	0.51	435,971.83	774,237.37	
10,456.0	3.10	194.60	10,452.8	6,901.8	-44.7	-12.7	-44.7	0.56	435,966.93	774,235.63	
10,551.0	2.30	182.60	10,547.7	6,996.7	-49.1	-13.4	-49.1	1.03	435,962.54	774,234.90	
10,580.0	0.90	179.60	10,576.6	7,025.6	-49.9	-13.5	-49.9	4.83	435,961.73	774,234.87	
10,619.0	0.44	114.79	10,615.6	7,064.6	-50.3	-13.3	-50.3	2.09	435,961.36	774,235.01	
7"											
10,629.0	0.50	90.10	10,625.6	7,074.6	-50.3	-13.2	-50.3	2.09	435,961.34	774,235.09	
10,677.0	1.50	70.30	10,673.6	7,122.6	-50.1	-12.4	-50.1	2.17	435,961.55	774,235.89	
10,709.0	5.50	25.10	10,705.6	7,154.6	-48.6	-11.4	-48.6	14.28	435,963.08	774,236.93	
10,740.0	11.00	12.10	10,736.2	7,185.2	-44.3	-10.1	-44.3	18.62	435,967.32	774,238.19	
10,772.0	16.40	8.90	10,767.3	7,216.3	-36.9	-8.8	-36.9	17.03	435,974.78	774,239.53	

Company: Murchison Oil and Gas Project: Jackson Unit Section 21 Site: Jackson Unit 19H Well: Jackson Unit 19H Wellbore: Jackson Unit 19H Design: Jackson Unit 19H			Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:					Site Jackson Unit 19H WELL @ 3551.0usft (Original Well Elev) WELL @ 3551.0usft (Original Well Elev) Grid Minimum Curvature EDM 5000.1 Single User Db			
Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
10,792.0	19.17	8.97	10,786.4	7,235.4	-30.9	-7.9	-30.9	13.87	435,980.81	774,240.47	
2nd Bone Spring Sand											
10,803.0	20.70	9.00	10,796.7	7,245.7	-27.2	-7.3	-27.1	13.87	435,984.52	774,241.06	
10,835.0	25.80	7.20	10,826.1	7,275.1	-14.7	-5.5	-14.6	16.09	435,997.02	774,242.82	
10,867.0	30.20	6.00	10,854.3	7,303.3	0.3	-3.8	0.3	13.86	436,011.94	774,244.53	
10,898.0	33.70	5.80	10,880.6	7,329.6	16.6	-2.1	16.6	11.30	436,028.26	774,246.22	
10,930.0	36.90	6.30	10,906.8	7,355.8	35.0	-0.2	35.0	10.04	436,046.64	774,248.17	
10,962.0	39.70	6.20	10,931.9	7,380.9	54.7	2.0	54.7	8.75	436,066.36	774,250.33	
10,993.0	43.90	5.40	10,955.0	7,404.0	75.2	4.1	75.2	13.66	436,086.91	774,252.41	
11,025.0	48.20	4.90	10,977.2	7,426.2	98.2	6.1	98.2	13.48	436,109.85	774,254.47	
11,056.0	51.00	4.10	10,997.3	7,446.3	121.7	8.0	121.7	9.24	436,133.38	774,256.32	
11,088.0	54.40	3.50	11,016.7	7,465.7	147.1	9.7	147.1	10.73	436,158.78	774,258.01	
11,120.0	57.70	3.30	11,034.5	7,483.5	173.6	11.3	173.6	10.33	436,185.27	774,259.58	
11,151.0	59.80	3.70	11,050.6	7,499.6	200.0	12.9	200.0	6.86	436,211.72	774,261.20	
11,183.0	64.10	3.70	11,065.6	7,514.6	228.2	14.7	228.2	13.44	436,239.90	774,263.02	
11,215.0	70.00	2.50	11,078.1	7,527.1	257.6	16.3	257.6	18.76	436,269.31	774,264.61	
11,246.0	75.80	2.00	11,087.2	7,536.2	287.2	17.4	287.2	18.77	436,298.90	774,265.77	
11,277.0	81.40	2.00	11,093.4	7,542.4	317.6	18.5	317.6	18.06	436,329.26	774,266.83	
11,309.0	84.70	2.50	11,097.2	7,546.2	349.3	19.7	349.3	10.43	436,361.00	774,268.08	
11,340.0	86.20	2.50	11,099.7	7,548.7	380.2	21.1	380.2	4.84	436,391.87	774,269.42	
11,371.0	92.10	2.50	11,100.1	7,549.1	411.1	22.4	411.1	19.03	436,422.82	774,270.77	
11,403.0	93.10	2.70	11,098.7	7,547.7	443.1	23.9	443.1	3.19	436,454.75	774,272.22	
11,435.0	91.30	2.60	11,097.5	7,546.5	475.0	25.4	475.0	5.63	436,486.70	774,273.70	
11,466.0	89.90	2.90	11,097.1	7,546.1	506.0	26.9	506.0	4.62	436,517.66	774,275.19	
11,498.0	89.50	2.30	11,097.3	7,546.3	538.0	28.3	537.9	2.25	436,549.62	774,276.64	
11,561.0	89.60	1.10	11,097.8	7,546.8	600.9	30.2	600.9	1.91	436,612.59	774,278.51	
11,656.0	89.30	1.40	11,098.7	7,547.7	695.9	32.3	695.9	0.45	436,707.57	774,280.58	

Company: Murchison Oil and Gas		Local Co-ordinate Reference:				Site Jackson Unit 19H			
Project: Jackson Unit Section 21		TVD Reference:				WELL @ 3551.0usft (Original Well Elev)			
Site: Jackson Unit 19H		MD Reference:				WELL @ 3551.0usft (Original Well Elev)			
Well: Jackson Unit 19H		North Reference:				Grid			
Wellbore: Jackson Unit 19H		Survey Calculation Method:				Minimum Curvature			
Design: Jackson Unit 19H		Database:				EDM 5000.1 Single User Db			

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
11,750.0	88.00	0.70	11,100.9	7,549.9	789.8	34.0	789.8	1.57	436,801.52	774,282.31
11,845.0	88.40	359.20	11,103.9	7,552.9	884.8	33.9	884.8	1.63	436,896.47	774,282.22
11,940.0	89.50	359.40	11,105.7	7,554.7	979.8	32.7	979.7	1.18	436,991.45	774,281.06
12,035.0	90.70	358.70	11,105.5	7,554.5	1,074.8	31.2	1,074.7	1.46	437,086.43	774,279.49
12,129.0	89.80	358.00	11,105.1	7,554.1	1,168.7	28.5	1,168.7	1.21	437,180.39	774,276.78
12,223.0	91.50	359.40	11,104.0	7,553.0	1,262.7	26.3	1,262.7	2.34	437,274.35	774,274.65
12,317.0	90.30	358.60	11,102.5	7,551.5	1,356.7	24.7	1,356.6	1.53	437,368.33	774,273.01
12,411.0	89.60	358.00	11,102.6	7,551.6	1,450.6	21.9	1,450.6	0.98	437,462.28	774,270.22
12,506.0	90.60	359.00	11,102.5	7,551.5	1,545.6	19.4	1,545.6	1.49	437,557.25	774,267.73
12,600.0	90.30	358.30	11,101.7	7,550.7	1,639.5	17.2	1,639.5	0.81	437,651.22	774,265.52
12,695.0	90.00	357.00	11,101.5	7,550.5	1,734.5	13.3	1,734.4	1.40	437,746.14	774,261.62
12,789.0	89.80	357.50	11,101.6	7,550.6	1,828.4	8.8	1,828.3	0.57	437,840.03	774,257.11
12,884.0	90.90	359.20	11,101.0	7,550.0	1,923.3	6.0	1,923.3	2.13	437,934.98	774,254.38
12,980.0	90.80	359.30	11,099.6	7,548.6	2,019.3	4.8	2,019.3	0.15	438,030.96	774,253.12
13,074.0	91.00	0.90	11,098.1	7,547.1	2,113.3	5.0	2,113.3	1.72	438,124.95	774,253.28
13,168.0	90.90	359.90	11,096.6	7,545.6	2,207.3	5.6	2,207.3	1.07	438,218.93	774,253.94
13,262.0	90.70	359.80	11,095.3	7,544.3	2,301.2	5.4	2,301.2	0.24	438,312.92	774,253.69
13,357.0	89.70	0.70	11,094.9	7,543.9	2,396.2	5.8	2,396.2	1.42	438,407.92	774,254.11
13,451.0	90.30	0.90	11,094.9	7,543.9	2,490.2	7.1	2,490.2	0.67	438,501.91	774,255.42
13,546.0	89.70	2.10	11,094.9	7,543.9	2,585.2	9.6	2,585.2	1.41	438,596.87	774,257.91
13,641.0	89.20	2.20	11,095.9	7,544.9	2,680.1	13.1	2,680.1	0.54	438,691.80	774,261.47
13,735.0	88.80	2.00	11,097.5	7,546.5	2,774.1	16.6	2,774.0	0.48	438,785.72	774,264.92
13,829.0	88.50	1.70	11,099.7	7,548.7	2,868.0	19.6	2,868.0	0.45	438,879.65	774,267.95
13,924.0	89.40	2.20	11,101.5	7,550.5	2,962.9	22.9	2,962.9	1.08	438,974.58	774,271.18
14,018.0	89.10	2.10	11,102.7	7,551.7	3,056.8	26.4	3,056.8	0.34	439,068.50	774,274.71
14,113.0	88.50	1.80	11,104.7	7,553.7	3,151.8	29.6	3,151.7	0.71	439,163.43	774,277.94
14,208.0	89.60	1.10	11,106.2	7,555.2	3,246.7	32.0	3,246.7	1.37	439,258.38	774,280.34

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Site Jackson Unit 19H
Project:	Jackson Unit Section 21	TVD Reference:	WELL @ 3551.0usft (Original Well Elev)
Site:	Jackson Unit 19H	MD Reference:	WELL @ 3551.0usft (Original Well Elev)
Well:	Jackson Unit 19H	North Reference:	Grid
Wellbore:	Jackson Unit 19H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 19H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
14,302.0	89.40	1.30	11,107.1	7,556.1	3,340.7	34.0	3,340.6	0.30	439,352.36	774,282.31	
14,397.0	90.60	359.80	11,107.1	7,556.1	3,435.7	34.9	3,435.6	2.02	439,447.35	774,283.22	
14,491.0	90.30	359.50	11,106.3	7,555.3	3,529.7	34.3	3,529.6	0.45	439,541.34	774,282.65	
14,586.0	89.80	359.10	11,106.2	7,555.2	3,624.7	33.2	3,624.6	0.67	439,636.33	774,281.49	
14,681.0	91.40	357.70	11,105.3	7,554.3	3,719.6	30.5	3,719.6	2.24	439,731.29	774,278.84	
14,775.0	90.40	357.30	11,103.8	7,552.8	3,813.5	26.4	3,813.5	1.15	439,825.18	774,274.74	
14,870.0	89.20	356.80	11,104.1	7,553.1	3,908.4	21.5	3,908.4	1.37	439,920.06	774,269.85	
14,964.0	90.70	357.10	11,104.2	7,553.2	4,002.2	16.5	4,002.2	1.63	440,013.92	774,264.85	
15,058.0	90.70	356.80	11,103.0	7,552.0	4,096.1	11.5	4,096.1	0.32	440,107.78	774,259.85	
15,153.0	90.10	356.80	11,102.4	7,551.4	4,191.0	6.2	4,190.9	0.63	440,202.63	774,254.54	
15,247.0	89.10	357.40	11,103.0	7,552.0	4,284.8	1.5	4,284.8	1.24	440,296.50	774,249.79	
15,342.0	89.50	358.80	11,104.2	7,553.2	4,379.8	-1.7	4,379.8	1.53	440,391.44	774,246.64	
15,437.0	92.10	1.00	11,102.9	7,551.9	4,474.7	-1.9	4,474.7	3.58	440,486.42	774,246.47	
15,532.0	92.50	0.80	11,099.1	7,548.1	4,569.7	-0.4	4,569.7	0.47	440,581.33	774,247.96	
15,627.0	91.60	0.40	11,095.7	7,544.7	4,664.6	0.6	4,664.6	1.04	440,676.26	774,248.96	
15,704.0	91.00	0.20	11,093.9	7,542.9	4,741.6	1.0	4,741.6	0.82	440,753.24	774,249.36	
15,742.0	91.00	0.20	11,093.2	7,542.2	4,779.6	1.2	4,779.6	0.00	440,791.24	774,249.49	
4 1/2" - Last Survey is a projection to bit											
15,750.0	91.00	0.20	11,093.1	7,542.1	4,787.6	1.2	4,787.6	0.00	440,799.24	774,249.52	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
10,619.0	10,615.6	7"	7	8-1/2	
1,263.0	1,263.0	13 3/8"	13-3/8	16	
5,137.0	5,135.8	9 5/8"	9-5/8	12-1/4	
15,742.0	11,093.2	4 1/2"	4-1/2	6-1/8	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Site Jackson Unit 19H
Project:	Jackson Unit Section 21	TVD Reference:	WELL @ 3551.0usft (Original Well Elev)
Site:	Jackson Unit 19H	MD Reference:	WELL @ 3551.0usft (Original Well Elev)
Well:	Jackson Unit 19H	North Reference:	Grid
Wellbore:	Jackson Unit 19H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 19H	Database:	EDM 5000.1 Single User Db

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Dip (°)	
5,124.0	5,122.8	Delaware	0.00	
1,200.0	1,200.0	Rustler	0.00	
10,128.0	10,125.3	1st Bone Spring Sand	0.00	
6,122.0	6,120.3	Cherry Canyon	0.00	
9,222.0	9,219.6	Avalon Shale	0.00	
9,101.0	9,098.6	Bone Spring	0.00	
10,792.0	10,786.4	2nd Bone Spring Sand	0.00	
7,581.0	7,578.7	Brushy Canyon	0.00	

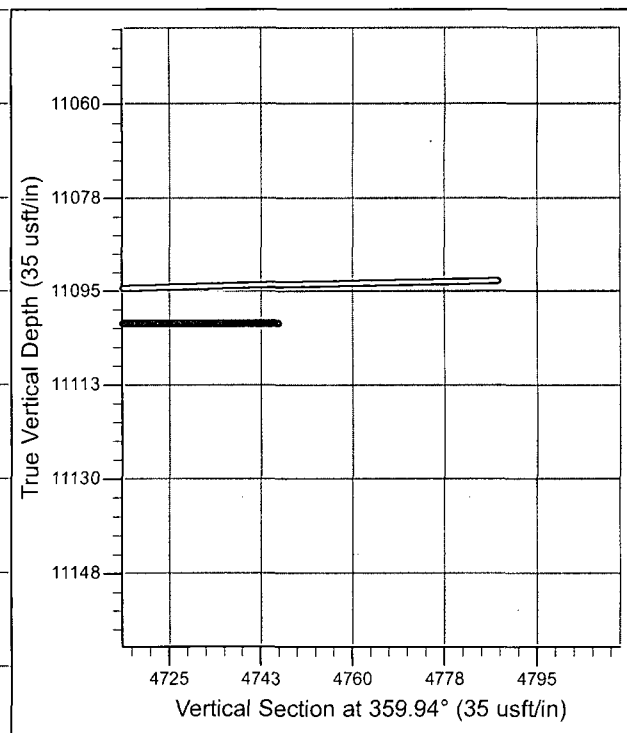
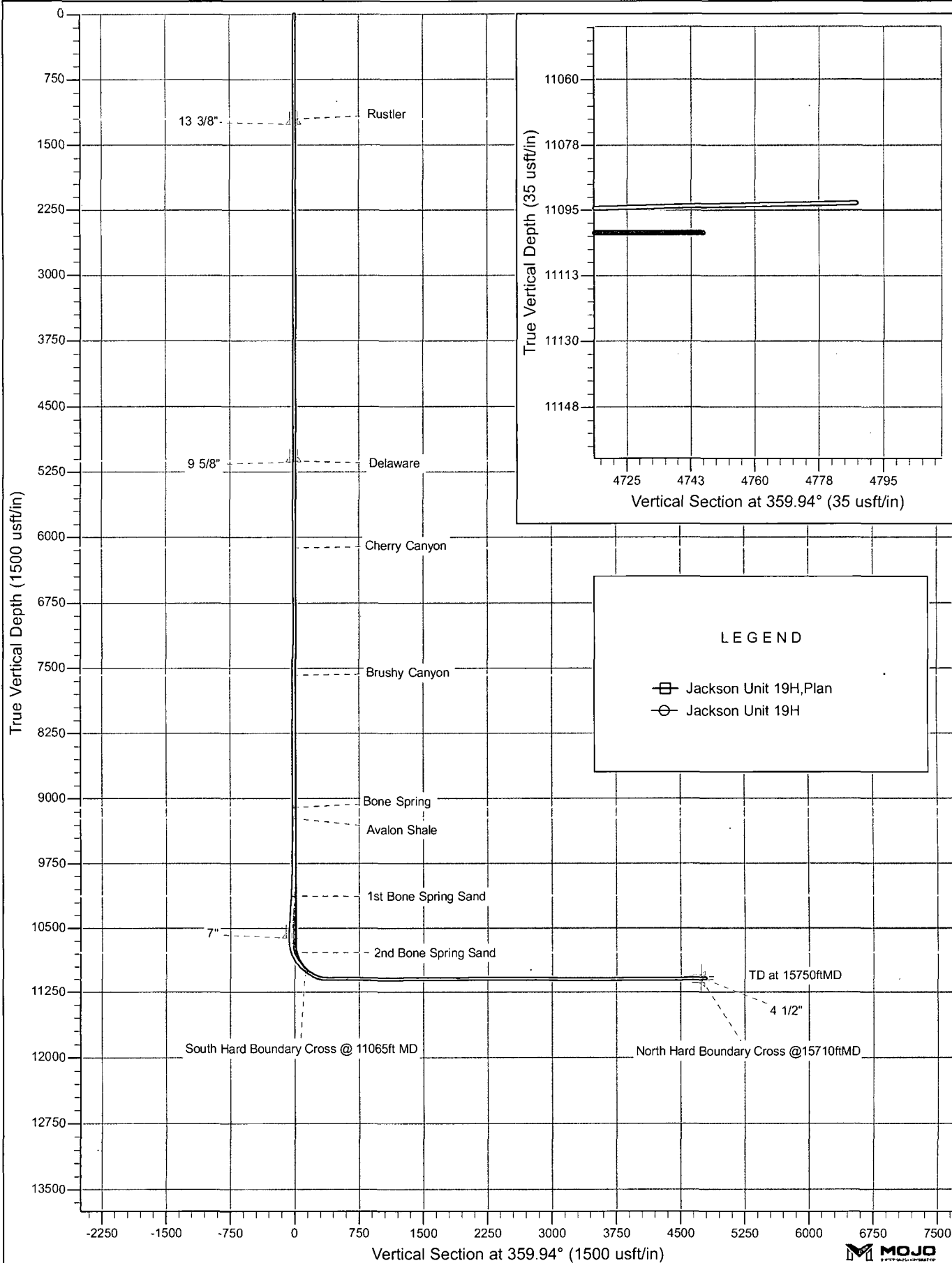
Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,065.0	11,002.9	128.7	8.5	South Hard Boundary Cross @ 11065ft MD
15,710.0	11,093.8	4,747.6	1.1	North Hard Boundary Cross @15710ftMD

Checked By: _____	Approved By: _____	Date: _____
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Project: Jackson Unit Section 21
 Site: Jackson Unit 19H
 Well: Jackson Unit 19H
 Wellbore: Jackson Unit 19H
 Design: Jackson Unit 19H



Azimuths to Grid North
 True North: -0.40°
 Magnetic North: 6.95°
 Magnetic Field
 Strength: 48407.7nT
 Dip Angle: 60.11°
 Date: 10/05/2013
 Model: IGRF2010



LEGEND

- Jackson Unit 19H, Plan
- Jackson Unit 19H

Project: Jackson Unit Section 21
Site: Jackson Unit 19H
Well: Jackson Unit 19H
Wellbore: Jackson Unit 19H
Design: Jackson Unit 19H

 **MURCHISON OIL & GAS, INC.**



Azimuths to Grid North
True North: -0.40°
Magnetic North: 6.95°

Magnetic Field
Strength: 48407.7nT
Dip Angle: 60.11°
Date: 10/05/2013
Model: IGRF2010

