

Results of Directional Survey

API number:	30-025-41167		
OGRID:		Operator:	MURCHISON OIL & GAS INC
		Property:	JACKSON UNIT # 16H

surface	ULSTR:	B	15	T	24S	R	33E
				200	FNL	2485	FEL

BH Loc	ULSTR:	O	15	T	24S	R	33E
15875	MD	11180.0	TVD	281	FSL	2192	FEL
				4999	FNL		

Top Perf/OH	ULSTR:	B	15	T	24S	R	33E
11400	MD	11169.8	TVD	527	FNL	2234	FEL

Bot Perf/OH	ULSTR:	O	15	T	24S	R	33E
15800	MD	11180.5	TVD	356	FSL	2195	FEL
				4924	FNL		

	MD	N/S	E/W	VD
	11395	-321.80	250.50	11169.1
TOP PERFS/OH	11400	-326.69	251.32	11169.83
	11426	-352.10	255.60	11173.60
	15726	-4650.10	288.00	11180.60
BOT PERFS/OH	15800	-4724.03	290.33	11180.46
	15831	-4755.00	291.30	11180.40

NEXT TO LAST	15831	-4755.00	291.30	11180.40	D
LAST READING	15875	-4799.00	292.70	11180.00	D
TD	15875	-4799.00	292.70	11180.00	D

Surface Location	200	FN	2485	FE
Projected BHL	4999	FN	2192	FE
Location of				
Top Perfs/OH	527	FN	2234	FE
Bottom Perfs/OH	4924	FN	2195	FE

SUMMARY of Subsurface Locations

Surface Location	B-15-24S-33E	200	FN	2485	FE	Vert. Depth
Top Perfs/OH	B-15-24S-33E	527	FN	2234	FE	11169.83
Bottom Perfs/OH	O-15-24S-33E	4924	FN	2195	FE	11180.46
Projected TD	O-15-24S-33E	4999	FN	2192	FE	11180.00

MAY 05 2014

 MURCHISON OIL & GAS, INC.

Murchison Oil and Gas

Jackson Unit Section 15

Jackson Unit 16H

HOBBS OCD

MAR 17 2014

RECEIVED

Survey: Jackson Unit 16H

MOJO Standard Survey

02 March, 2014

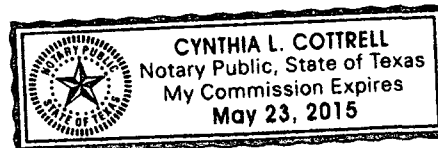
This survey is correct to the best of my knowledge and is supported
by actual field data.



(Signature)

Notarized this date 3rd of MARCH, 2014

Cynthia L. Cottrell
Notary Signature County of Collin State of Texas



Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Jackson Unit 16H
Project:	Jackson Unit Section 15	TVD Reference:	RKB @ 3633.3usft
Site:	Jackson Unit 16H	MD Reference:	RKB @ 3633.3usft
Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	Database:	EDM 5000.1 Single User Db

Project	Jackson Unit Section 15		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Jackson Unit 16H		
Site Position:		Northing:	446,202.12 usft
From:	Lat/Long	Easting:	780,574.64 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 13' 27.546 N
		Longitude:	103° 33' 34.890 W
		Grid Convergence:	0.41 °

Well	Jackson Unit 16H					
Well Position	+N/-S	0.0 usft	Northing:	446,202.12 usft	Latitude:	32° 13' 27.546 N
	+E/-W	0.0 usft	Easting:	780,574.64 usft	Longitude:	103° 33' 34.890 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,611.3 usft	

Wellbore	Jackson Unit 16H				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	09/04/2013	7.36	60.14	48.435

Design	Jackson Unit 16H		
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	(°)
		181.00	

Survey Program	Date 02/03/2014		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	15,875.0	Jackson Unit 16H (Jackson Unit 16H)	MWD
			MWD - Standard

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Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	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	-3,633.3	0.0	0.0	0.0	0.00	446,202.12	780,574.64	
100.0	0.64	167.36	100.0	-3,533.3	-0.5	0.1	0.5	0.64	446,201.57	780,574.76	
200.0	0.73	177.01	200.0	-3,433.3	-1.7	0.3	1.7	0.15	446,200.39	780,574.91	
300.0	0.70	196.38	300.0	-3,333.3	-2.9	0.1	2.9	0.24	446,199.17	780,574.78	
400.0	0.85	179.45	400.0	-3,233.3	-4.3	0.0	4.3	0.27	446,197.84	780,574.61	
500.0	0.94	187.79	500.0	-3,133.3	-5.8	-0.1	5.8	0.16	446,196.29	780,574.51	
600.0	0.50	190.98	600.0	-3,033.3	-7.1	-0.3	7.1	0.44	446,195.05	780,574.31	
700.0	0.64	171.03	699.9	-2,933.4	-8.1	-0.3	8.1	0.24	446,194.07	780,574.32	
800.0	0.57	170.72	799.9	-2,833.4	-9.1	-0.2	9.1	0.07	446,193.02	780,574.48	
900.0	0.48	191.26	899.9	-2,733.4	-10.0	-0.2	10.0	0.21	446,192.12	780,574.48	
1,000.0	0.37	210.62	999.9	-2,633.4	-10.7	-0.4	10.7	0.18	446,191.43	780,574.24	
1,100.0	0.12	236.02	1,099.9	-2,533.4	-11.0	-0.7	11.0	0.27	446,191.10	780,573.98	
1,200.0	0.10	174.93	1,199.9	-2,433.4	-11.2	-0.7	11.2	0.11	446,190.95	780,573.90	
1,278.4	0.13	172.22	1,278.3	-2,355.0	-11.3	-0.7	11.3	0.04	446,190.79	780,573.92	
Rustler											
1,300.0	0.14	171.69	1,299.9	-2,333.4	-11.4	-0.7	11.4	0.04	446,190.74	780,573.93	
1,328.0	0.08	207.37	1,327.9	-2,305.4	-11.4	-0.7	11.4	0.31	446,190.69	780,573.93	
13 3/8"											
1,400.0	0.21	296.68	1,399.9	-2,233.4	-11.4	-0.9	11.4	0.31	446,190.71	780,573.78	
1,500.0	0.58	301.06	1,499.9	-2,133.4	-11.1	-1.4	11.1	0.37	446,191.05	780,573.19	
1,600.0	0.72	318.67	1,599.9	-2,033.4	-10.3	-2.3	10.4	0.24	446,191.78	780,572.34	
1,700.0	0.73	319.57	1,699.9	-1,933.4	-9.4	-3.1	9.4	0.02	446,192.74	780,571.51	
1,800.0	0.56	324.76	1,799.9	-1,833.4	-8.5	-3.8	8.6	0.18	446,193.62	780,570.82	
1,900.0	0.51	309.97	1,899.9	-1,733.4	-7.8	-4.4	7.9	0.15	446,194.31	780,570.19	
2,000.0	0.76	315.03	1,999.9	-1,633.4	-7.1	-5.3	7.1	0.26	446,195.06	780,569.38	
2,100.0	0.59	301.06	2,099.9	-1,533.4	-6.3	-6.2	6.4	0.24	446,195.80	780,568.47	
2,200.0	0.93	312.70	2,199.9	-1,433.4	-5.5	-7.2	5.6	0.37	446,196.61	780,567.44	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Jackson Unit 16H
Project:	Jackson Unit Section 15	TVD Reference:	RKB @ 3633.3usft
Site:	Jackson Unit 16H	MD Reference:	RKB @ 3633.3usft
Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	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)	
2,300.0	1.04	317.76	2,299.9	-1,333.4	-4.3	-8.4	4.4	0.14	446,197.84	780,566.23	
2,400.0	1.07	305.23	2,399.9	-1,233.4	-3.1	-9.8	3.2	0.23	446,199.05	780,564.86	
2,500.0	0.98	318.42	2,499.8	-1,133.5	-1.9	-11.1	2.1	0.25	446,200.22	780,563.53	
2,600.0	1.22	317.36	2,599.8	-1,033.5	-0.5	-12.4	0.7	0.24	446,201.65	780,562.24	
2,700.0	0.85	324.69	2,699.8	-933.5	0.9	-13.5	-0.7	0.39	446,203.04	780,561.09	
2,800.0	0.83	330.57	2,799.8	-833.5	2.2	-14.3	-1.9	0.09	446,204.27	780,560.30	
2,900.0	0.39	335.45	2,899.8	-733.5	3.1	-14.8	-2.8	0.44	446,205.21	780,559.81	
3,000.0	0.21	1.57	2,999.8	-633.5	3.6	-15.0	-3.3	0.22	446,205.70	780,559.67	
3,100.0	0.15	47.34	3,099.8	-533.5	3.9	-14.9	-3.6	0.15	446,205.98	780,559.77	
3,200.0	0.15	87.66	3,199.8	-433.5	4.0	-14.6	-3.7	0.10	446,206.07	780,560.00	
3,300.0	0.20	101.35	3,299.8	-333.5	3.9	-14.3	-3.7	0.06	446,206.04	780,560.30	
3,400.0	0.42	66.24	3,399.8	-233.5	4.0	-13.8	-3.8	0.28	446,206.15	780,560.81	
3,500.0	0.44	58.69	3,499.8	-133.5	4.4	-13.2	-4.2	0.06	446,206.50	780,561.47	
3,600.0	0.58	43.75	3,599.8	-33.5	4.9	-12.5	-4.7	0.19	446,207.07	780,562.15	
3,700.0	0.55	27.53	3,699.8	66.5	5.7	-11.9	-5.5	0.16	446,207.86	780,562.72	
3,800.0	0.36	36.52	3,799.8	166.5	6.4	-11.5	-6.2	0.20	446,208.54	780,563.13	
3,900.0	0.33	49.06	3,899.8	266.5	6.9	-11.1	-6.7	0.08	446,208.98	780,563.53	
4,000.0	0.29	114.10	3,999.8	366.5	6.9	-10.7	-6.8	0.34	446,209.06	780,563.98	
4,100.0	0.34	126.55	4,099.8	466.5	6.7	-10.2	-6.5	0.08	446,208.78	780,564.45	
4,200.0	0.31	122.22	4,199.8	566.5	6.3	-9.7	-6.2	0.04	446,208.46	780,564.92	
4,300.0	0.51	107.84	4,299.8	666.5	6.1	-9.1	-5.9	0.22	446,208.18	780,565.57	
4,400.0	1.13	92.08	4,399.7	766.4	5.9	-7.7	-5.8	0.65	446,208.01	780,566.98	
4,500.0	1.71	84.74	4,499.7	866.4	6.0	-5.2	-5.9	0.61	446,208.11	780,569.45	
4,600.0	1.56	87.55	4,599.7	966.4	6.2	-2.3	-6.1	0.17	446,208.30	780,572.30	
4,700.0	1.46	91.16	4,699.6	1,066.3	6.2	0.3	-6.2	0.14	446,208.34	780,574.93	
4,800.0	1.67	92.45	4,799.6	1,166.3	6.1	3.0	-6.2	0.21	446,208.25	780,577.66	
4,900.0	1.69	98.48	4,899.6	1,266.3	5.9	5.9	-6.0	0.18	446,207.97	780,580.57	

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Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	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)
5,000.0	1.39	102.84	4,999.5	1,366.2	5.4	8.6	-5.5	0.32	446,207.48	780,583.21
5,100.0	1.22	108.48	5,099.5	1,466.2	4.8	10.8	-4.9	0.21	446,206.88	780,585.41
5,186.0	0.99	122.94	5,185.5	1,552.2	4.1	12.3	-4.3	0.42	446,206.18	780,586.90
5,238.8	0.99	127.07	5,238.3	1,605.0	3.5	13.0	-3.8	0.13	446,205.66	780,587.64
Delaware										
5,260.0	0.99	128.72	5,259.5	1,626.2	3.3	13.3	-3.5	0.13	446,205.43	780,587.93
9 5/8"										
5,336.0	1.00	134.60	5,335.5	1,702.2	2.4	14.3	-2.7	0.13	446,204.56	780,588.92
5,431.0	1.20	149.90	5,430.4	1,797.1	1.0	15.4	-1.3	0.37	446,203.12	780,590.01
5,528.0	1.20	149.80	5,527.4	1,894.1	-0.8	16.4	0.5	0.00	446,201.36	780,591.03
5,622.0	1.10	139.30	5,621.4	1,988.1	-2.3	17.5	2.0	0.25	446,199.82	780,592.11
5,717.0	1.00	146.40	5,716.4	2,083.1	-3.7	18.5	3.4	0.17	446,198.44	780,593.16
5,809.0	1.30	158.00	5,808.4	2,175.1	-5.3	19.4	5.0	0.41	446,196.81	780,594.00
5,906.0	1.20	157.90	5,905.3	2,272.0	-7.3	20.2	6.9	0.10	446,194.84	780,594.79
6,000.0	1.40	141.40	5,999.3	2,366.0	-9.1	21.2	8.7	0.45	446,193.04	780,595.88
6,094.0	1.20	155.40	6,093.3	2,460.0	-10.9	22.4	10.5	0.40	446,191.24	780,597.01
6,187.0	0.90	152.90	6,186.3	2,553.0	-12.4	23.1	12.0	0.33	446,189.71	780,597.74
6,239.0	0.77	178.88	6,238.3	2,605.0	-13.1	23.3	12.7	0.76	446,189.00	780,597.94
Cherry Canyon										
6,282.0	0.80	202.90	6,281.3	2,648.0	-13.7	23.2	13.3	0.76	446,188.43	780,597.83
6,377.0	1.10	283.50	6,376.3	2,743.0	-14.1	22.0	13.7	1.32	446,188.03	780,596.68
6,471.0	1.50	308.90	6,470.2	2,836.9	-13.1	20.2	12.7	0.74	446,189.02	780,594.85
6,566.0	1.60	307.50	6,565.2	2,931.9	-11.5	18.2	11.2	0.11	446,190.61	780,592.83
6,660.0	1.50	297.20	6,659.2	3,025.9	-10.2	16.1	9.9	0.31	446,191.97	780,590.69
6,756.0	1.40	300.40	6,755.1	3,121.8	-9.0	13.9	8.7	0.13	446,193.13	780,588.56
6,851.0	1.70	306.80	6,850.1	3,216.8	-7.6	11.8	7.3	0.36	446,194.57	780,586.43
6,946.0	1.70	309.50	6,945.1	3,311.8	-5.8	9.6	5.6	0.08	446,196.31	780,584.22

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7,040.0	1.50	303.60	7,039.0	3,405.7	-4.2	7.5	4.1	0.28	446,197.87	780,582.12
7,136.0	1.50	303.60	7,135.0	3,501.7	-2.9	5.4	2.8	0.00	446,199.26	780,580.02
7,231.0	1.20	298.80	7,230.0	3,596.7	-1.7	3.5	1.6	0.34	446,200.43	780,578.12
7,326.0	1.30	289.40	7,324.9	3,691.6	-0.8	1.6	0.8	0.24	446,201.27	780,576.23
7,420.0	1.30	292.50	7,418.9	3,785.6	-0.1	-0.4	0.1	0.07	446,202.03	780,574.24
7,514.0	1.40	286.10	7,512.9	3,879.6	0.6	-2.5	-0.6	0.19	446,202.76	780,572.15
7,599.4	1.67	296.45	7,598.3	3,965.0	1.5	-4.6	-1.4	0.45	446,203.60	780,570.03
Brushy Canyon										
7,609.0	1.70	297.40	7,607.9	3,974.6	1.6	-4.9	-1.5	0.45	446,203.73	780,569.78
7,704.0	1.00	299.60	7,702.8	4,069.5	2.7	-6.8	-2.5	0.74	446,204.79	780,567.81
7,798.0	0.50	238.20	7,796.8	4,163.5	2.9	-7.9	-2.7	0.93	446,204.97	780,566.75
7,892.0	0.70	158.80	7,890.8	4,257.5	2.1	-8.0	-2.0	0.83	446,204.22	780,566.61
7,987.0	0.70	170.90	7,985.8	4,352.5	1.0	-7.7	-0.9	0.16	446,203.11	780,566.91
8,082.0	0.90	186.20	8,080.8	4,447.5	-0.3	-7.7	0.5	0.31	446,201.79	780,566.92
8,177.0	0.80	163.80	8,175.8	4,542.5	-1.7	-7.6	1.8	0.36	446,200.42	780,567.03
8,271.0	1.00	168.50	8,269.8	4,636.5	-3.1	-7.3	3.3	0.23	446,198.98	780,567.37
8,366.0	1.00	155.70	8,364.8	4,731.5	-4.7	-6.8	4.8	0.23	446,197.41	780,567.88
8,461.0	0.60	47.40	8,459.8	4,826.5	-5.1	-6.1	5.2	1.39	446,197.00	780,568.59
8,555.0	0.80	75.50	8,553.8	4,920.5	-4.6	-5.1	4.7	0.42	446,197.49	780,569.58
8,650.0	0.70	54.00	8,648.7	5,015.4	-4.1	-3.9	4.2	0.31	446,198.00	780,570.69
8,745.0	0.30	20.60	8,743.7	5,110.4	-3.5	-3.4	3.6	0.50	446,198.57	780,571.25
8,840.0	0.80	46.10	8,838.7	5,205.4	-2.9	-2.8	2.9	0.57	446,199.27	780,571.82
8,934.0	0.90	40.80	8,932.7	5,299.4	-1.8	-1.9	1.9	0.14	446,200.28	780,572.77
9,029.0	0.80	51.50	9,027.7	5,394.4	-0.9	-0.9	0.9	0.20	446,201.26	780,573.78
9,109.6	0.88	36.58	9,108.3	5,475.0	0.0	0.0	0.0	0.29	446,202.11	780,574.59
Bone Spring										
9,123.0	0.90	34.40	9,121.7	5,488.4	0.2	0.1	-0.2	0.29	446,202.28	780,574.71

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Jackson Unit 16H
Project:	Jackson Unit Section 15	TVD Reference:	RKB @ 3633.3usft
Site:	Jackson Unit 16H	MD Reference:	RKB @ 3633.3usft
Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	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)	
9,218.0	1.30	4.80	9,216.7	5,583.4	1.8	0.6	-1.9	0.72	446,203.97	780,575.22	
9,224.6	1.29	4.02	9,223.3	5,590.0	2.0	0.6	-2.0	0.30	446,204.11	780,575.23	
Avalon Shale											
9,313.0	1.20	352.70	9,311.7	5,678.4	3.9	0.5	-3.9	0.30	446,206.03	780,575.19	
9,408.0	1.10	334.00	9,406.7	5,773.4	5.7	0.0	-5.7	0.41	446,207.83	780,574.66	
9,502.0	0.50	294.20	9,500.6	5,867.3	6.7	-0.7	-6.7	0.83	446,208.81	780,573.89	
9,597.0	0.90	235.50	9,595.6	5,962.3	6.4	-1.7	-6.4	0.81	446,208.56	780,572.90	
9,691.0	0.90	226.00	9,689.6	6,056.3	5.5	-2.9	-5.5	0.16	446,207.63	780,571.76	
9,786.0	1.20	194.90	9,784.6	6,151.3	4.0	-3.7	-4.0	0.67	446,206.15	780,570.96	
9,881.0	1.30	208.70	9,879.6	6,246.3	2.1	-4.4	-2.0	0.33	446,204.24	780,570.19	
9,977.0	0.90	210.90	9,975.6	6,342.3	0.5	-5.4	-0.4	0.42	446,202.64	780,569.28	
10,072.0	0.60	266.90	10,070.6	6,437.3	-0.1	-6.2	0.3	0.79	446,201.97	780,568.40	
10,167.0	1.00	217.40	10,165.6	6,532.3	-0.8	-7.2	1.0	0.80	446,201.29	780,567.40	
10,169.7	1.00	217.14	10,168.3	6,535.0	-0.9	-7.3	1.0	0.16	446,201.25	780,567.37	
1st Bone SpringmSand											
10,262.0	1.00	215.90	10,260.5	6,627.2	-2.2	-8.2	2.3	0.02	446,199.96	780,566.41	
10,356.0	1.00	210.00	10,354.5	6,721.2	-3.5	-9.1	3.7	0.11	446,198.58	780,565.52	
10,451.0	0.90	220.80	10,449.5	6,816.2	-4.8	-10.0	5.0	0.22	446,197.30	780,564.62	
10,545.0	0.80	208.30	10,543.5	6,910.2	-6.0	-10.8	6.1	0.22	446,196.16	780,563.82	
10,598.0	0.80	191.30	10,596.5	6,963.2	-6.6	-11.1	6.8	0.45	446,195.47	780,563.58	
10,642.0	0.79	181.06	10,640.5	7,007.2	-7.2	-11.1	7.4	0.32	446,194.87	780,563.51	
7"											
10,663.0	0.80	176.20	10,661.5	7,028.2	-7.5	-11.1	7.7	0.32	446,194.58	780,563.52	
10,700.0	1.10	181.20	10,698.5	7,065.2	-8.2	-11.1	8.3	0.84	446,193.96	780,563.53	
10,731.0	7.10	191.00	10,729.4	7,096.1	-10.3	-11.5	10.5	19.42	446,191.78	780,563.16	
10,763.0	12.30	193.40	10,760.9	7,127.6	-15.6	-12.6	15.8	16.30	446,186.52	780,561.99	
10,796.0	12.50	176.80	10,793.2	7,159.9	-22.6	-13.3	22.8	10.78	446,179.54	780,561.37	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Jackson Unit 16H
Project:	Jackson Unit Section 15	TVD Reference:	RKB @ 3633.3usft
Site:	Jackson Unit 16H	MD Reference:	RKB @ 3633.3usft
Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	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)
10,827.0	14.10	147.20	147.20	10,823.4	7,190.1	-29.1	-11.0	29.3	22.30	446,173.00	780,563.61
10,859.0	18.20	129.60	129.60	10,854.1	7,220.8	-35.6	-5.1	35.7	19.82	446,166.54	780,569.58
10,890.0	23.20	123.80	123.80	10,883.1	7,249.8	-42.1	3.7	42.0	17.41	446,160.05	780,578.39
10,906.7	25.36	120.89	120.89	10,898.3	7,265.0	-45.7	9.5	45.6	14.84	446,156.39	780,584.18
2nd Bone Spring Sand											
10,922.0	27.40	118.60	118.60	10,912.0	7,278.7	-49.1	15.5	48.8	14.84	446,153.01	780,590.10
10,953.0	31.60	118.00	118.00	10,939.0	7,305.7	-56.3	28.9	55.8	13.58	446,145.78	780,603.53
10,984.0	35.40	116.50	116.50	10,964.9	7,331.6	-64.2	44.1	63.4	12.54	446,137.96	780,618.75
11,016.0	40.00	116.70	116.70	10,990.2	7,356.9	-72.9	61.6	71.8	14.38	446,129.20	780,636.24
11,048.0	44.40	116.60	116.60	11,013.9	7,380.6	-82.6	80.8	81.1	13.75	446,119.56	780,655.45
11,079.0	48.70	119.40	119.40	11,035.2	7,401.9	-93.1	100.7	91.4	15.34	446,108.98	780,675.30
11,111.0	50.50	125.80	125.80	11,055.9	7,422.6	-106.3	121.2	104.1	16.23	446,095.85	780,695.80
11,142.0	54.10	131.20	131.20	11,074.9	7,441.6	-121.5	140.3	119.1	18.02	446,080.57	780,714.96
11,174.0	57.80	135.80	135.80	11,092.8	7,459.5	-139.8	159.5	137.0	16.60	446,062.32	780,734.16
11,206.0	61.70	141.90	141.90	11,109.0	7,475.7	-160.6	177.7	157.5	20.48	446,041.50	780,752.31
11,237.0	65.60	146.50	146.50	11,122.7	7,489.4	-183.1	193.9	179.7	18.30	446,018.98	780,768.54
11,269.0	69.10	151.20	151.20	11,135.0	7,501.7	-208.4	209.2	204.7	17.41	445,993.71	780,783.79
11,300.0	72.00	155.80	155.80	11,145.4	7,512.1	-234.6	222.2	230.7	16.83	445,967.56	780,796.82
11,331.0	74.10	159.90	159.90	11,154.4	7,521.1	-262.0	233.4	257.9	14.35	445,940.10	780,807.99
11,363.0	76.40	163.80	163.80	11,162.6	7,529.3	-291.4	243.0	287.1	13.80	445,910.70	780,817.62
11,395.0	80.00	168.50	168.50	11,169.1	7,535.8	-321.8	250.5	317.4	18.25	445,880.30	780,825.11
11,426.0	83.20	172.40	172.40	11,173.6	7,540.3	-352.1	255.6	347.5	16.17	445,850.07	780,830.19
11,457.0	87.70	175.80	175.80	11,176.1	7,542.8	-382.8	258.7	378.2	18.17	445,819.34	780,833.36
11,489.0	89.40	177.60	177.60	11,176.9	7,543.6	-414.7	260.6	410.1	7.74	445,787.41	780,835.21
11,520.0	88.60	178.30	178.30	11,177.4	7,544.1	-445.7	261.7	441.1	3.43	445,756.43	780,836.31
11,552.0	88.60	177.90	177.90	11,178.2	7,544.9	-477.7	262.7	473.0	1.25	445,724.46	780,837.37
11,584.0	89.60	179.30	179.30	11,178.7	7,545.4	-509.7	263.5	505.0	5.38	445,692.48	780,838.16

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Jackson Unit 16H
Project:	Jackson Unit Section 15	TVD Reference:	RKB @ 3633.3usft
Site:	Jackson Unit 16H	MD Reference:	RKB @ 3633.3usft
Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	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)
11,615.0	89.60	179.70	11,178.9	7,545.6	-540.7	263.8	536.0	1.29	445,661.48	780,838.43
11,647.0	90.70	181.00	11,178.9	7,545.6	-572.6	263.6	568.0	5.32	445,629.48	780,838.23
11,679.0	90.40	181.50	11,178.6	7,545.3	-604.6	262.9	600.0	1.82	445,597.49	780,837.53
11,710.0	90.80	180.80	11,178.2	7,544.9	-635.6	262.3	631.0	2.60	445,566.50	780,836.91
11,742.0	90.00	181.50	11,178.0	7,544.7	-667.6	261.6	663.0	3.32	445,534.51	780,836.27
11,773.0	89.80	180.80	11,178.1	7,544.8	-698.6	261.0	694.0	2.35	445,503.52	780,835.65
11,837.0	89.60	181.00	11,178.4	7,545.1	-762.6	260.0	758.0	0.44	445,439.53	780,834.64
11,932.0	88.70	182.10	11,179.8	7,546.5	-857.6	257.4	852.9	1.50	445,344.58	780,832.07
12,027.0	91.00	178.60	11,180.1	7,546.8	-952.5	256.9	947.9	4.41	445,249.60	780,831.49
12,121.0	91.00	178.80	11,178.4	7,545.1	-1,046.5	259.0	1,041.8	0.21	445,155.64	780,833.62
12,215.0	91.00	178.60	11,176.8	7,543.5	-1,140.5	261.1	1,135.7	0.21	445,061.68	780,835.76
12,310.0	90.30	179.10	11,175.7	7,542.4	-1,235.4	263.0	1,230.7	0.91	444,966.71	780,837.66
12,405.0	89.80	178.40	11,175.6	7,542.3	-1,330.4	265.1	1,325.6	0.91	444,871.74	780,839.74
12,499.0	89.60	180.10	11,176.1	7,542.8	-1,424.4	266.3	1,419.5	1.82	444,777.75	780,840.97
12,594.0	89.50	181.00	11,176.8	7,543.5	-1,519.4	265.4	1,514.5	0.95	444,682.77	780,840.05
12,689.0	88.90	180.90	11,178.2	7,544.9	-1,614.4	263.8	1,609.5	0.64	444,587.79	780,838.48
12,784.0	89.90	180.90	11,179.2	7,545.9	-1,709.3	262.4	1,704.5	1.05	444,492.81	780,836.99
12,878.0	89.70	181.40	11,179.5	7,546.2	-1,803.3	260.5	1,798.5	0.57	444,398.83	780,835.10
12,973.0	89.30	182.30	11,180.3	7,547.0	-1,898.3	257.4	1,893.5	1.04	444,303.89	780,832.03
13,067.0	90.80	181.20	11,180.2	7,546.9	-1,992.2	254.5	1,987.5	1.98	444,209.94	780,829.16
13,163.0	90.90	181.90	11,178.8	7,545.5	-2,088.2	251.9	2,083.5	0.74	444,113.99	780,826.57
13,257.0	90.30	180.80	11,177.8	7,544.5	-2,182.1	249.7	2,177.5	1.33	444,020.02	780,824.35
13,351.0	89.90	180.60	11,177.7	7,544.4	-2,276.1	248.6	2,271.5	0.48	443,926.03	780,823.20
13,447.0	90.00	179.70	11,177.8	7,544.5	-2,372.1	248.3	2,367.4	0.94	443,830.04	780,822.95
13,541.0	90.30	179.70	11,177.5	7,544.2	-2,466.1	248.8	2,461.4	0.32	443,736.04	780,823.45
13,636.0	90.60	178.10	11,176.8	7,543.5	-2,561.1	250.6	2,556.3	1.71	443,641.07	780,825.27
13,731.0	89.50	177.60	11,176.7	7,543.4	-2,656.0	254.2	2,651.2	1.27	443,546.14	780,828.83

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Jackson Unit 16H
Project:	Jackson Unit Section 15	TVD Reference:	RKB @ 3633.3usft
Site:	Jackson Unit 16H	MD Reference:	RKB @ 3633.3usft
Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	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)
13,825.0	89.10	177.30	11,177.8	7,544.5	-2,749.9	258.4	2,745.0	0.53	443,452.24	780,833.01
13,919.0	90.90	177.80	11,177.8	7,544.5	-2,843.9	262.4	2,838.8	1.99	443,358.33	780,837.03
14,014.0	89.50	178.00	11,177.5	7,544.2	-2,938.8	265.9	2,933.7	1.49	443,263.40	780,840.51
14,110.0	89.50	177.70	11,178.3	7,545.0	-3,034.7	269.5	3,029.6	0.31	443,167.48	780,844.11
14,204.0	89.60	176.30	11,179.1	7,545.8	-3,128.6	274.4	3,123.3	1.49	443,073.61	780,849.03
14,299.0	89.40	177.60	11,179.9	7,546.6	-3,223.4	279.5	3,218.1	1.38	442,978.76	780,854.09
14,395.0	88.70	180.90	11,181.5	7,548.2	-3,319.4	280.7	3,314.0	3.51	442,882.79	780,855.34
14,491.0	89.40	180.80	11,183.1	7,549.8	-3,415.4	279.3	3,410.0	0.74	442,786.82	780,853.92
14,586.0	88.90	180.40	11,184.5	7,551.2	-3,510.4	278.3	3,505.0	0.67	442,691.84	780,852.93
14,681.0	88.80	179.30	11,186.4	7,553.1	-3,605.3	278.5	3,599.9	1.16	442,596.86	780,853.17
14,776.0	88.80	179.50	11,188.4	7,555.1	-3,700.3	279.5	3,694.9	0.21	442,501.89	780,854.17
14,872.0	90.30	180.70	11,189.1	7,555.8	-3,796.3	279.4	3,790.9	2.00	442,405.90	780,854.00
14,968.0	90.40	180.60	11,188.6	7,555.3	-3,892.3	278.3	3,886.9	0.15	442,309.91	780,852.91
15,062.0	91.40	180.50	11,187.1	7,553.8	-3,986.3	277.4	3,980.8	1.07	442,215.93	780,852.01
15,157.0	91.40	180.40	11,184.8	7,551.5	-4,081.3	276.6	4,075.8	0.11	442,120.97	780,851.26
15,252.0	91.10	179.60	11,182.7	7,549.4	-4,176.2	276.6	4,170.8	0.90	442,025.99	780,851.26
15,347.0	90.20	179.00	11,181.6	7,548.3	-4,271.2	277.8	4,265.7	1.14	441,931.01	780,852.43
15,442.0	89.80	178.70	11,181.6	7,548.3	-4,366.2	279.7	4,360.7	0.53	441,836.03	780,854.33
15,537.0	89.90	178.30	11,181.9	7,548.6	-4,461.2	282.2	4,455.6	0.43	441,741.07	780,856.82
15,630.0	90.90	178.20	11,181.2	7,547.9	-4,554.1	285.0	4,548.5	1.08	441,648.11	780,859.66
15,726.0	89.80	178.20	11,180.6	7,547.3	-4,650.1	288.0	4,644.3	1.15	441,552.17	780,862.67
15,831.0	90.50	178.20	11,180.4	7,547.1	-4,755.0	291.3	4,749.2	0.67	441,447.22	780,865.97
15,875.0	90.50	178.20	11,180.0	7,546.7	-4,799.0	292.7	4,793.2	0.00	441,403.25	780,867.35
4 1/2"										

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Jackson Unit 16H
Project:	Jackson Unit Section 15	TVD Reference:	RKB @ 3633.3usft
Site:	Jackson Unit 16H	MD Reference:	RKB @ 3633.3usft
Well:	Jackson Unit 16H	North Reference:	Grid
Wellbore:	Jackson Unit 16H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 16H	Database:	EDM 5000.1 Single User Db

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
5,260.0	5,259.5	9 5/8"	9-5/8	12-1/4
1,328.0	1,327.9	13 3/8"	13-3/8	16
10,642.0	10,640.5	7"	7	8-1/2
15,875.0	11,180.0	4 1/2"	4-1/2	6-1/8

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Dip (°)	
1,278.4	1,278.3	Rustler	0.00	
9,224.6	9,223.3	Avalon Shale	0.00	
10,169.7	10,168.3	1st Bone SpringmSand	0.00	
6,239.0	6,238.3	Cherry Canyon	0.00	
10,906.7	10,898.3	2nd Bone Spring Sand	0.00	
9,109.6	9,108.3	Bone Spring	0.00	
5,238.8	5,238.3	Delaware	0.00	
7,599.4	7,598.3	Brushy Canyon	0.00	

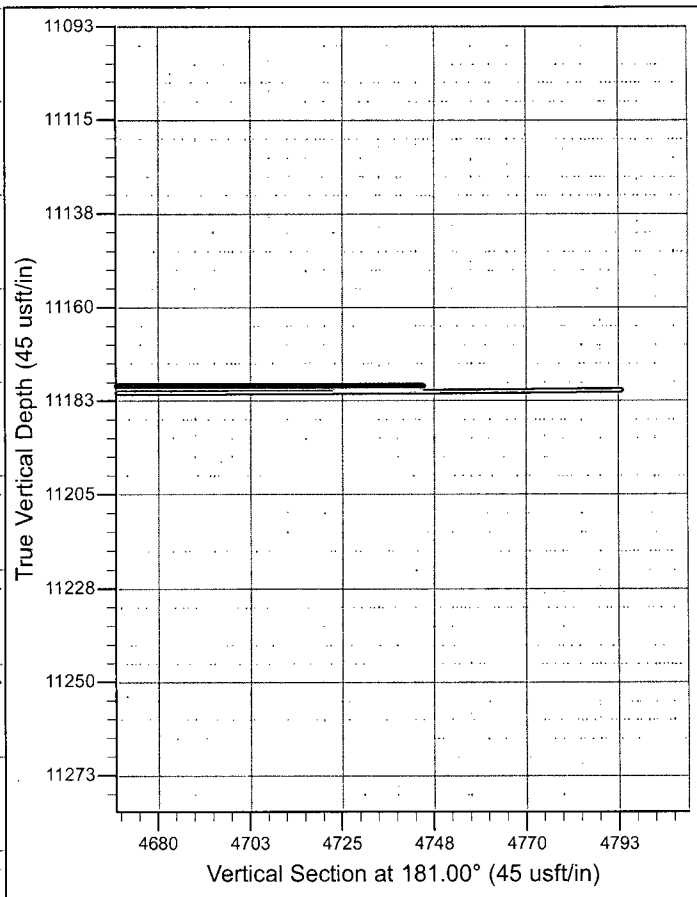
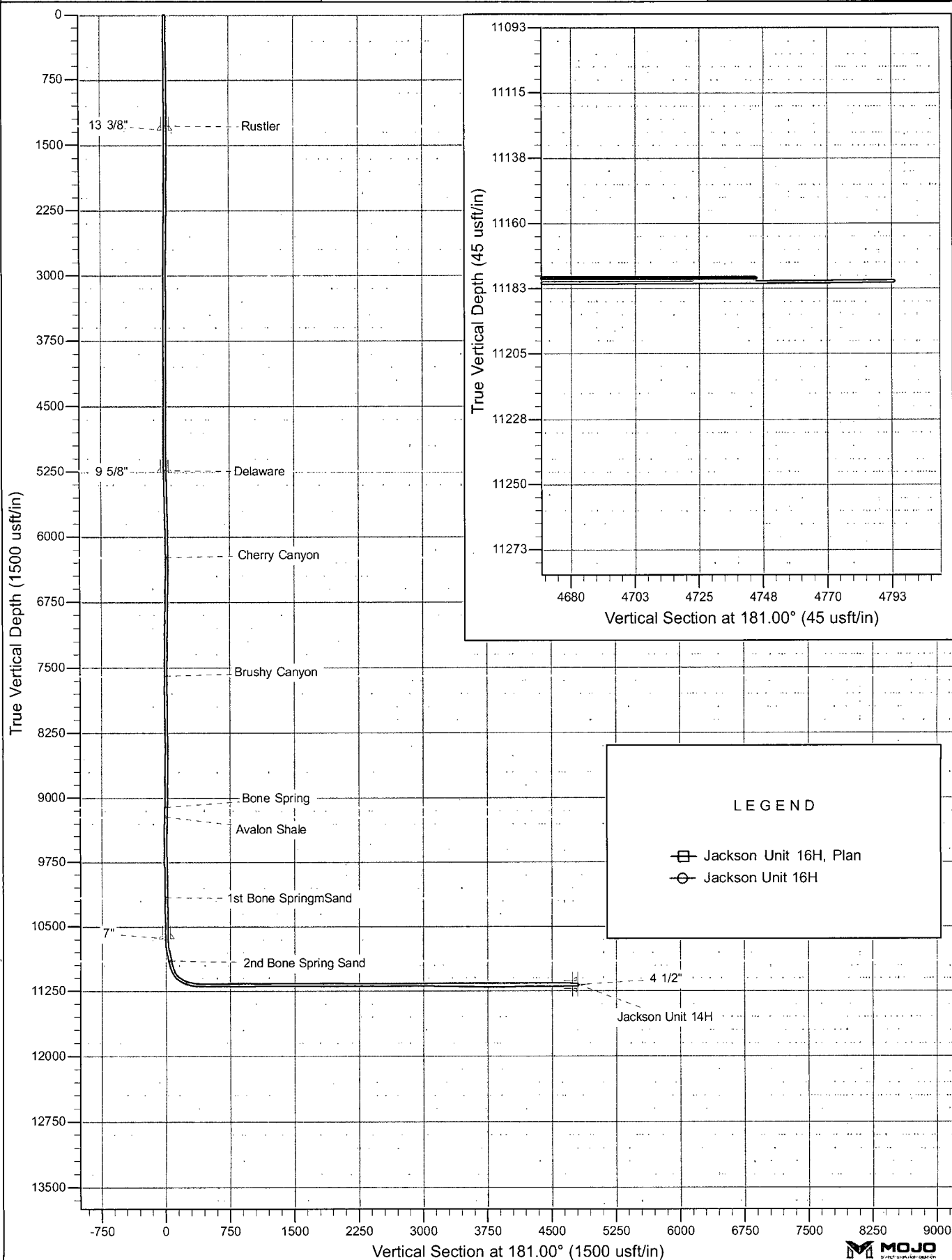
Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,186.0	11,099.1	-147.3	166.5	Cross Hard Boundary at 11186ft MD
15,825.0	11180.4	-4749.0	291.2	Cross Hard Boundary at 15825ft MD

Checked By: _____	Approved By: _____	Date: _____
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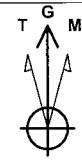
Project: Jackson Unit Section 15
 Site: Jackson Unit 16H
 Well: Jackson Unit 16H
 Wellbore: Jackson Unit 16H
 Design: Jackson Unit 16H



Azimuths to Grid North
 True North: -0.41°
 Magnetic North: 6.94°
 Magnetic Field
 Strength: 48434.7nT
 Dip Angle: 60.14°
 Date: 09/04/2013
 Model: IGRF2010



Project: Jackson Unit Section 15
Site: Jackson Unit 16H
Well: Jackson Unit 16H
Wellbore: Jackson Unit 16H
Design: Jackson Unit 16H



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.94°
Magnetic Field
Strength: 48434.7nT
Dip Angle: 60.14°
Date: 09/04/2013
Model: IGRF2010

