

Results of Directional Survey

API number:	30-025-41139		
OGRID:		Operator:	MURCHISON OIL & GAS INC
		Property:	JACKSON UNIT # 20H

surface	ULSTR:	O	21	T 24S	R 33E
				200 FSL	2290 FEL

BH Loc	ULSTR:	B	21	T 24S	R 33E
15732	MD	11103.9	TVD	291 FNL	2279 FEL
				4989 FSL	

Top Perf/OH	ULSTR:	O	21	T 24S	R 33E
11340	MD	11112.0	TVD	598 FSL	2257 FEL

Bot Perf/OH	ULSTR:	B	21	T 24S	R 33E
15660	MD	11103.5	TVD	338 FNL	2279 FEL
				4942 FSL	

	MD	N/S	E/W	VD
	11335	393.20	33.30	11111.8
TOP PERFS/OH	11340	398.20	33.43	11112.03
	11365	423.20	34.10	11113.20
	12625	4681.70	10.60	11103.20
BOT PERFS/OH	15660	4742.18	10.80	11103.50
	15686	4742.70	10.80	11103.50

NEXT TO LAST	15686	4742.70	10.80	11103.50
LAST READING	15732	4788.70	11.30	11103.90
TD	15732	4788.70	11.30	11103.90

Surface Location	200	FS	2290	FE
Projected BHL	4989	FS	2279	FE
Location of				
Top Perfs/OH	598	FS	2257	FE
Bottom Perfs/OH	4942	FS	2279	FE

SUMMARY of Subsurface Locations

Surface Location	O-21-24S-33E	200	FS	2290	FE	Vert. Depth
Top Perfs/OH	O-21-24S-33E	598	FS	2257	FE	11112.03
Bottom Perfs/OH	B-21-24S-33E	4942	FS	2279	FE	11103.50
Projected TD	B-21-24S-33E	4989	FS	2279	FE	11103.90

APR 14 2014



Job Number: SVMO-140011
 Company: Murchison Oil & Gas
 Lease/Well: Jackson Unit 20H
 Location: Lea County, NM
 Rig Name: Nabors #M29
 RKB: 22'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 6.95°
 Grid: East To Grid North
 File name: S:\2014SU-1\MURCHI-1\MOJACUNI-1\20H.SVY
 Date/Time: 09-Jan-14 / 16:50
 Curve Name: Surface - 5108' M.D. (Rate Gyro)

HOBBS OCD

MAR 17 2014

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WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .19
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 5108 MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
 Josh Arias 1/9/14
 MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.39	70.47	100.00	.11	.32	.11	.34	70.47	.39
200.00	.47	57.02	200.00	.45	.99	.45	1.08	65.42	.13
300.00	.29	33.88	299.99	.88	1.47	.89	1.72	58.99	.23
400.00	.22	86.92	399.99	1.10	1.80	1.11	2.11	58.51	.24
500.00	.51	59.86	499.99	1.34	2.38	1.35	2.73	60.65	.33
600.00	.56	39.44	599.99	1.94	3.08	1.95	3.64	57.77	.20
700.00	.45	25.61	699.98	2.67	3.56	2.68	4.45	53.09	.16
800.00	.22	22.00	799.98	3.20	3.80	3.22	4.97	49.85	.23
900.00	.18	84.47	899.98	3.40	4.03	3.41	5.27	49.85	.21

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1000.00	.21	82.36	999.98	3.44	4.36	3.45	5.55	51.79	.03
1100.00	.28	74.22	1099.98	3.53	4.78	3.54	5.94	53.58	.08
1200.00	.27	66.77	1199.98	3.69	5.23	3.70	6.40	54.84	.04
1300.00	.38	93.51	1299.98	3.76	5.78	3.78	6.89	56.96	.18
1400.00	.58	86.97	1399.97	3.76	6.62	3.79	7.61	60.36	.21
1500.00	.43	101.79	1499.97	3.71	7.49	3.74	8.36	63.62	.20
1600.00	.37	100.64	1599.97	3.58	8.17	3.61	8.92	66.35	.06
1700.00	.37	129.59	1699.96	3.31	8.74	3.34	9.35	69.24	.18
1800.00	.35	160.88	1799.96	2.82	9.09	2.85	9.52	72.77	.20
1900.00	.62	177.24	1899.96	1.99	9.21	2.02	9.43	77.81	.30
2000.00	.66	182.54	1999.95	.87	9.21	.90	9.26	84.58	.07
2100.00	.58	187.90	2099.95	-.20	9.12	-.17	9.12	91.27	.10
2200.00	.61	195.59	2199.94	-1.22	8.91	-1.19	8.99	97.78	.09
2300.00	.58	212.54	2299.94	-2.16	8.49	-2.13	8.76	104.25	.18
2400.00	.66	234.31	2399.93	-2.92	7.75	-2.89	8.28	110.63	.25
2500.00	.91	241.68	2499.92	-3.63	6.59	-3.61	7.52	118.88	.27
2600.00	1.03	247.71	2599.91	-4.35	5.05	-4.33	6.67	130.71	.16
2700.00	1.20	254.23	2699.89	-4.97	3.22	-4.96	5.92	147.13	.21
2800.00	1.26	259.51	2799.87	-5.46	1.13	-5.46	5.57	168.34	.13
2900.00	1.45	269.11	2899.84	-5.68	-1.22	-5.68	5.81	192.12	.30
3000.00	1.40	276.06	2999.81	-5.57	-3.70	-5.58	6.69	213.59	.18
3100.00	1.29	283.62	3099.78	-5.18	-6.01	-5.20	7.93	229.26	.21
3200.00	1.23	293.05	3199.75	-4.49	-8.09	-4.52	9.25	240.97	.22
3300.00	1.09	303.58	3299.73	-3.54	-9.87	-3.58	10.49	250.25	.25
3400.00	1.09	308.53	3399.72	-2.43	-11.41	-2.46	11.66	257.99	.09
3500.00	1.07	320.15	3499.70	-1.12	-12.75	-1.16	12.80	265.00	.22
3600.00	1.08	322.13	3599.68	.34	-13.93	.30	13.93	271.42	.04
3700.00	1.16	309.03	3699.66	1.73	-15.29	1.68	15.39	276.44	.27
3800.00	1.30	291.22	3799.64	2.77	-17.13	2.72	17.36	279.20	.41

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3900.00	1.63	272.28	3899.61	3.24	-19.61	3.18	19.88	279.38	.58
4000.00	1.82	267.25	3999.56	3.22	-22.62	3.15	22.85	278.11	.24
4100.00	1.94	270.20	4099.51	3.15	-25.90	3.07	26.09	276.94	.15
4200.00	1.63	274.97	4199.46	3.28	-29.01	3.18	29.19	276.45	.34
4300.00	1.10	276.51	4299.43	3.51	-31.38	3.41	31.58	276.39	.53
4400.00	.58	131.76	4399.43	3.28	-31.96	3.18	32.12	275.87	1.61
4500.00	1.79	127.85	4499.40	1.99	-30.34	1.89	30.41	273.75	1.21
4600.00	2.17	129.43	4599.34	-.17	-27.65	-.26	27.65	269.64	.38
4700.00	3.36	128.85	4699.22	-3.21	-23.90	-3.29	24.12	262.34	1.19
4800.00	4.01	127.14	4799.02	-7.16	-18.83	-7.22	20.15	249.18	.66
4900.00	3.77	126.09	4898.79	-11.21	-13.39	-11.25	17.46	230.07	.25
5000.00	2.97	119.34	4998.61	-14.42	-8.48	-14.44	16.72	210.45	.89
5100.00	2.97	107.68	5098.48	-16.47	-3.75	-16.48	16.89	192.82	.60
Last Survey Depth Recorded									
5108.00	2.96	109.82	5106.47	-16.61	-3.36	-16.62	16.94	191.43	1.39

 MURCHISON OIL & GAS, INC.

Murchison Oil and Gas

Jackson Unit Section 21
Jackson Unit 20H

HOBBS OCD

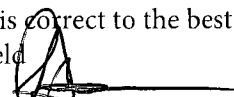
FEB 13 2014

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Survey: Jackson Unit 20H

MOJO Standard Survey

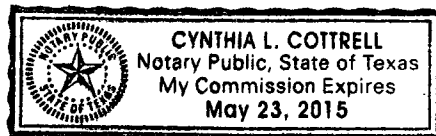
23 January, 2014

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

Notarized this date 3rd of February,
2014. 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 20H
Project:	Jackson Unit Section 21	TVD Reference:	RKB @ 3552.0usft
Site:	Jackson Unit 20H	MD Reference:	RKB @ 3552.0usft
Well:	Jackson Unit 20H	North Reference:	Grid
Wellbore:	Jackson Unit 20H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 20H	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 20H		
Site Position:		Northing:	436,018.30 usft
From:	Lat/Long	Easting:	775,566.72 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 47.128 N
		Longitude:	103° 34' 34.021 W
		Grid Convergence:	0.40 °

Well	Jackson Unit 20H			
Well Position	+N/-S	0.0 usft	Northing:	436,018.30 usft
	+E/-W	0.0 usft	Easting:	775,566.72 usft
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft
			Latitude:	32° 11' 47.128 N
			Longitude:	103° 34' 34.021 W
			Ground Level:	3,530.0 usft

Wellbore	Jackson Unit 20H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/05/2013	7.35	60.11	48,409

Design	Jackson Unit 20H				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	0.19	

Survey Program	Date 23/01/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	15,732.0	Jackson Unit 20H (Jackson Unit 20H)	MWD	MWD - Standard

Company:		Murchison Oil and Gas				Local Co-ordinate Reference:			Site Jackson Unit 20H		
Project:		Jackson Unit Section 21				TVD Reference:			RKB @ 3552.0usft		
Site:		Jackson Unit 20H				MD Reference:			RKB @ 3552.0usft		
Well:		Jackson Unit 20H				North Reference:			Grid		
Wellbore:		Jackson Unit 20H				Survey Calculation Method:			Minimum Curvature		
Design:		Jackson Unit 20H				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	-3,552.0	0.0	0.0	0.0	0.00	436,018.30	775,566.72	
100.0	0.39	70.47	100.0	-3,452.0	0.1	0.3	0.1	0.39	436,018.42	775,567.04	
200.0	0.47	57.02	200.0	-3,352.0	0.5	1.0	0.5	0.13	436,018.75	775,567.71	
300.0	0.29	33.88	300.0	-3,252.0	0.9	1.5	0.9	0.23	436,019.19	775,568.19	
400.0	0.22	86.92	400.0	-3,152.0	1.1	1.8	1.1	0.24	436,019.41	775,568.53	
500.0	0.51	59.86	500.0	-3,052.0	1.3	2.4	1.3	0.33	436,019.64	775,569.10	
600.0	0.56	39.44	600.0	-2,952.0	1.9	3.1	1.9	0.20	436,020.24	775,569.80	
700.0	0.45	25.61	700.0	-2,852.0	2.7	3.6	2.7	0.16	436,020.97	775,570.28	
800.0	0.22	22.00	800.0	-2,752.0	3.2	3.8	3.2	0.23	436,021.51	775,570.52	
900.0	0.18	84.47	900.0	-2,652.0	3.4	4.0	3.4	0.21	436,021.70	775,570.75	
1,000.0	0.21	82.36	1,000.0	-2,552.0	3.4	4.4	3.4	0.03	436,021.74	775,571.09	
1,100.0	0.28	74.22	1,100.0	-2,452.0	3.5	4.8	3.5	0.08	436,021.83	775,571.50	
1,197.0	0.27	67.00	1,197.0	-2,355.0	3.7	5.2	3.7	0.04	436,021.98	775,571.94	
Rustler											
1,200.0	0.27	66.77	1,200.0	-2,352.0	3.7	5.2	3.7	0.04	436,021.99	775,571.96	
1,263.0	0.33	85.72	1,263.0	-2,289.0	3.8	5.6	3.8	0.18	436,022.06	775,572.27	
13 3/8"											
1,300.0	0.38	93.51	1,300.0	-2,252.0	3.8	5.8	3.8	0.18	436,022.06	775,572.50	
1,400.0	0.58	86.97	1,400.0	-2,152.0	3.8	6.6	3.8	0.21	436,022.07	775,573.34	
1,500.0	0.43	101.79	1,500.0	-2,052.0	3.7	7.5	3.7	0.20	436,022.02	775,574.21	
1,600.0	0.37	100.64	1,600.0	-1,952.0	3.6	8.2	3.6	0.06	436,021.88	775,574.90	
1,700.0	0.37	129.59	1,700.0	-1,852.0	3.3	8.7	3.3	0.18	436,021.62	775,575.46	
1,800.0	0.35	160.88	1,800.0	-1,752.0	2.8	9.1	2.8	0.20	436,021.12	775,575.81	
1,900.0	0.62	177.24	1,900.0	-1,652.0	2.0	9.2	2.0	0.30	436,020.29	775,575.94	
2,000.0	0.66	182.54	2,000.0	-1,552.0	0.9	9.2	0.9	0.07	436,019.18	775,575.94	
2,100.0	0.58	187.90	2,099.9	-1,452.1	-0.2	9.1	-0.2	0.10	436,018.10	775,575.84	
2,200.0	0.61	195.59	2,199.9	-1,352.1	-1.2	8.9	-1.2	0.09	436,017.09	775,575.63	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Site Jackson Unit 20H
Project:	Jackson Unit Section 21	TVD Reference:	RKB @ 3552.0usft
Site:	Jackson Unit 20H	MD Reference:	RKB @ 3552.0usft
Well:	Jackson Unit 20H	North Reference:	Grid
Wellbore:	Jackson Unit 20H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 20H	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	0.58	212.54	2,299.9	-1,252.1	-2.2	8.5	-2.1	0.18	436,016.15	775,575.22	
2,400.0	0.66	234.31	2,399.9	-1,152.1	-2.9	7.8	-2.9	0.25	436,015.38	775,574.48	
2,500.0	0.91	241.68	2,499.9	-1,052.1	-3.6	6.6	-3.6	0.27	436,014.67	775,573.31	
2,600.0	1.03	247.71	2,599.9	-952.1	-4.3	5.1	-4.3	0.16	436,013.95	775,571.78	
2,700.0	1.20	254.23	2,699.9	-852.1	-5.0	3.2	-5.0	0.21	436,013.33	775,569.94	
2,800.0	1.26	259.51	2,799.9	-752.1	-5.5	1.1	-5.5	0.13	436,012.84	775,567.85	
2,900.0	1.45	269.11	2,899.8	-652.2	-5.7	-1.2	-5.7	0.30	436,012.62	775,565.50	
3,000.0	1.40	276.06	2,999.8	-552.2	-5.6	-3.7	-5.6	0.18	436,012.73	775,563.02	
3,100.0	1.29	283.62	3,099.8	-452.2	-5.2	-6.0	-5.2	0.21	436,013.13	775,560.71	
3,200.0	1.23	293.05	3,199.8	-352.2	-4.5	-8.1	-4.5	0.22	436,013.81	775,558.63	
3,300.0	1.09	303.58	3,299.7	-252.3	-3.5	-9.9	-3.6	0.25	436,014.76	775,556.85	
3,400.0	1.09	308.53	3,399.7	-152.3	-2.4	-11.4	-2.5	0.09	436,015.88	775,555.32	
3,500.0	1.07	320.15	3,499.7	-52.3	-1.1	-12.7	-1.2	0.22	436,017.19	775,553.97	
3,600.0	1.08	322.13	3,599.7	47.7	0.3	-13.9	0.3	0.04	436,018.65	775,552.80	
3,700.0	1.16	309.03	3,699.7	147.7	1.7	-15.3	1.7	0.27	436,020.03	775,551.43	
3,800.0	1.30	291.22	3,799.6	247.6	2.8	-17.1	2.7	0.41	436,021.08	775,549.59	
3,900.0	1.63	272.28	3,899.6	347.6	3.2	-19.6	3.2	0.58	436,021.54	775,547.11	
4,000.0	1.82	267.25	3,999.6	447.6	3.2	-22.6	3.1	0.24	436,021.52	775,544.10	
4,100.0	1.94	270.20	4,099.5	547.5	3.2	-25.9	3.1	0.15	436,021.45	775,540.82	
4,200.0	1.63	274.97	4,199.5	647.5	3.3	-29.0	3.2	0.34	436,021.58	775,537.71	
4,300.0	1.10	276.51	4,299.4	747.4	3.5	-31.4	3.4	0.53	436,021.81	775,535.34	
4,400.0	0.58	131.76	4,399.4	847.4	3.3	-32.0	3.2	1.61	436,021.59	775,534.77	
4,500.0	1.79	127.85	4,499.4	947.4	2.0	-30.3	1.9	1.21	436,020.29	775,536.38	
4,600.0	2.17	129.43	4,599.3	1,047.3	-0.2	-27.6	-0.3	0.38	436,018.13	775,539.07	
4,700.0	3.36	128.85	4,699.2	1,147.2	-3.2	-23.9	-3.3	1.19	436,015.09	775,542.82	
4,800.0	4.01	127.14	4,799.0	1,247.0	-7.2	-18.8	-7.2	0.66	436,011.14	775,547.89	
4,900.0	3.77	126.09	4,898.8	1,346.8	-11.2	-13.4	-11.3	0.25	436,007.09	775,553.33	

Company: Murchison Oil and Gas			Local Co-ordinate Reference:					Site Jackson Unit 20H			
Project: Jackson Unit Section 21								TVD Reference: RKB @ 3552.0usft			
Site: Jackson Unit 20H								MD Reference: RKB @ 3552.0usft			
Well: Jackson Unit 20H								North Reference: Grid			
Wellbore: Jackson Unit 20H								Survey Calculation Method: Minimum Curvature			
Design: Jackson Unit 20H								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	2.97	119.34	4,998.6	1,446.6	-14.4	-8.5	-14.4	0.89	436,003.89	775,558.25	
5,100.0	2.97	107.68	5,098.5	1,546.5	-16.5	-3.7	-16.5	0.60	436,001.83	775,562.97	
5,108.0	2.96	109.82	5,106.5	1,554.5	-16.6	-3.4	-16.6	1.39	436,001.70	775,563.37	
5,140.0	2.92	114.54	5,138.4	1,586.4	-17.2	-1.8	-17.2	0.77	436,001.08	775,564.88	
Delaware											
5,153.0	2.90	116.50	5,151.4	1,599.4	-17.5	-1.2	-17.5	0.77	436,000.79	775,565.48	
9 5/8"											
5,228.0	2.90	127.90	5,226.3	1,674.3	-19.5	2.0	-19.5	0.77	435,998.78	775,568.68	
5,323.0	3.10	124.60	5,321.2	1,769.2	-22.5	6.0	-22.4	0.28	435,995.85	775,572.69	
5,418.0	1.40	148.70	5,416.1	1,864.1	-24.9	8.7	-24.9	2.01	435,993.40	775,575.40	
5,512.0	1.00	191.90	5,510.1	1,958.1	-26.7	9.1	-26.7	1.02	435,991.61	775,575.83	
5,701.0	0.60	219.00	5,699.1	2,147.1	-29.1	8.1	-29.0	0.29	435,989.23	775,574.87	
5,890.0	1.20	223.10	5,888.0	2,336.0	-31.3	6.2	-31.3	0.32	435,987.02	775,572.89	
5,984.0	0.90	317.90	5,982.0	2,430.0	-31.5	5.0	-31.4	1.66	435,986.84	775,571.73	
6,079.0	1.40	306.60	6,077.0	2,525.0	-30.2	3.6	-30.2	0.58	435,988.09	775,570.29	
6,151.0	1.28	309.29	6,149.0	2,597.0	-29.2	2.2	-29.2	0.18	435,989.13	775,568.96	
Cherry Canyon											
6,269.0	1.10	314.90	6,267.0	2,715.0	-27.5	0.4	-27.5	0.18	435,990.76	775,567.14	
6,459.0	2.60	354.20	6,456.9	2,904.9	-22.0	-1.3	-22.0	0.99	435,996.34	775,565.41	
6,648.0	2.10	5.10	6,645.7	3,093.7	-14.3	-1.4	-14.3	0.35	436,004.05	775,565.29	
6,838.0	1.00	7.50	6,835.6	3,283.6	-9.1	-0.9	-9.1	0.58	436,009.16	775,565.81	
7,026.0	1.00	21.00	7,023.6	3,471.6	-6.0	-0.1	-6.0	0.13	436,012.32	775,566.61	
7,215.0	0.70	4.40	7,212.6	3,660.6	-3.3	0.6	-3.3	0.20	436,015.01	775,567.29	
7,405.0	0.60	13.40	7,402.6	3,850.6	-1.2	0.9	-1.2	0.08	436,017.14	775,567.61	
7,572.0	0.76	52.77	7,569.6	4,017.6	0.4	2.0	0.4	0.29	436,018.66	775,568.70	
Brushy Canyon											
7,593.0	0.80	56.20	7,590.6	4,038.6	0.5	2.2	0.5	0.29	436,018.82	775,568.93	

Company:	Murchison Oil and Gas						Local Co-ordinate Reference:		Site Jackson Unit 20H		
Project:	Jackson Unit Section 21						TVD Reference:		RKB @ 3552.0usft		
Site:	Jackson Unit 20H						MD Reference:		RKB @ 3552.0usft		
Well:	Jackson Unit 20H						North Reference:		Grid		
Wellbore:	Jackson Unit 20H						Survey Calculation Method:		Minimum Curvature		
Design:	Jackson Unit 20H						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)	
7,782.0	0.60	211.80	7,779.6	4,227.6	0.4	2.8	0.4	0.72	436,018.72	775,569.51	
7,972.0	1.00	186.10	7,969.5	4,417.5	-2.1	2.1	-2.1	0.28	436,016.22	775,568.81	
8,161.0	1.00	157.90	8,158.5	4,606.5	-5.2	2.5	-5.2	0.26	436,013.05	775,569.25	
8,351.0	1.10	154.20	8,348.5	4,796.5	-8.4	3.9	-8.4	0.06	436,009.88	775,570.67	
8,540.0	1.20	160.20	8,537.4	4,985.4	-11.9	5.4	-11.9	0.08	436,006.38	775,572.13	
8,729.0	0.90	139.80	8,726.4	5,174.4	-14.9	7.0	-14.9	0.25	436,003.38	775,573.76	
8,918.0	1.00	155.80	8,915.4	5,363.4	-17.6	8.7	-17.5	0.15	436,000.75	775,575.39	
9,103.0	1.49	180.75	9,100.3	5,548.3	-21.4	9.3	-21.4	0.39	435,996.87	775,576.02	
Bone Spring											
9,107.0	1.50	181.10	9,104.3	5,552.3	-21.5	9.3	-21.5	0.39	435,996.77	775,576.02	
9,201.0	2.80	199.60	9,198.3	5,646.3	-24.9	8.5	-24.9	1.55	435,993.38	775,575.23	
9,229.0	2.86	207.29	9,226.2	5,674.2	-26.2	8.0	-26.2	1.37	435,992.11	775,574.68	
Avalon Shale											
9,295.0	3.20	223.30	9,292.2	5,740.2	-29.0	5.9	-29.0	1.37	435,989.30	775,572.66	
9,390.0	2.70	235.80	9,387.0	5,835.0	-32.2	2.3	-32.2	0.85	435,986.12	775,568.99	
9,483.0	1.60	206.40	9,480.0	5,928.0	-34.6	-0.1	-34.6	1.64	435,983.72	775,566.60	
9,578.0	0.30	5.10	9,575.0	6,023.0	-35.5	-0.7	-35.5	1.98	435,982.78	775,566.03	
9,673.0	0.60	13.80	9,670.0	6,118.0	-34.8	-0.6	-34.8	0.32	435,983.51	775,566.17	
9,862.0	2.00	13.60	9,858.9	6,306.9	-30.6	0.5	-30.6	0.74	435,987.68	775,567.18	
10,052.0	1.70	7.60	10,048.8	6,496.8	-24.6	1.6	-24.6	0.19	435,993.70	775,568.34	
10,138.0	1.65	8.79	10,134.8	6,582.8	-22.1	2.0	-22.1	0.07	435,996.19	775,568.69	
1st Bone Spring Sand											
10,240.0	1.60	10.30	10,236.7	6,684.7	-19.3	2.5	-19.3	0.07	435,999.04	775,569.17	
10,429.0	1.10	20.40	10,425.7	6,873.7	-15.0	3.6	-15.0	0.29	436,003.34	775,570.28	
10,574.0	0.80	68.50	10,570.7	7,018.7	-13.3	5.0	-13.3	0.57	436,005.01	775,571.71	
10,614.0	0.56	74.37	10,610.6	7,058.6	-13.1	5.4	-13.1	0.62	436,005.17	775,572.15	
7"											
10,642.0	0.40	82.60	10,638.6	7,086.6	-13.1	5.7	-13.1	0.62	436,005.22	775,572.38	

Company: Murchison Oil and Gas						Local Co-ordinate Reference:			Site Jackson Unit 20H		
Project: Jackson Unit Section 21						TVD Reference:			RKB @ 3552.0usft		
Site: Jackson Unit 20H						MD Reference:			RKB @ 3552.0usft		
Well: Jackson Unit 20H						North Reference:			Grid		
Wellbore: Jackson Unit 20H						Survey Calculation Method:			Minimum Curvature		
Design: Jackson Unit 20H						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)	
10,674.0	0.50	129.50	10,670.6	7,118.6	-13.2	5.9	-13.1	1.16	436,005.14	775,572.60	
10,705.0	1.40	353.20	10,701.6	7,149.6	-12.9	5.9	-12.8	5.79	436,005.43	775,572.66	
10,737.0	7.40	1.10	10,733.5	7,181.5	-10.4	5.9	-10.4	18.80	436,007.88	775,572.65	
10,768.0	12.40	4.40	10,764.1	7,212.1	-5.1	6.2	-5.1	16.23	436,013.20	775,572.95	
10,800.0	17.80	5.50	10,794.9	7,242.9	3.2	7.0	3.2	16.90	436,021.50	775,573.68	
10,801.0	17.94	5.54	10,795.9	7,243.9	3.5	7.0	3.5	13.91	436,021.81	775,573.71	
2nd Bone Spring Sand											
10,831.0	22.10	6.50	10,824.1	7,272.1	13.7	8.1	13.7	13.91	436,032.02	775,574.80	
10,863.0	25.00	3.90	10,853.4	7,301.4	26.4	9.2	26.5	9.62	436,044.75	775,575.94	
10,895.0	29.40	1.90	10,881.9	7,329.9	41.1	9.9	41.1	14.04	436,059.35	775,576.66	
10,926.0	33.80	3.60	10,908.3	7,356.3	57.3	10.7	57.3	14.48	436,075.57	775,577.45	
10,958.0	37.50	3.90	10,934.3	7,382.3	75.9	12.0	75.9	11.58	436,094.18	775,578.67	
10,990.0	40.30	4.20	10,959.2	7,407.2	95.9	13.4	96.0	8.77	436,114.22	775,580.09	
11,020.0	44.00	3.70	10,981.4	7,429.4	116.0	14.8	116.0	12.38	436,134.30	775,581.48	
11,052.0	47.90	5.00	11,003.6	7,451.6	138.9	16.5	139.0	12.53	436,157.23	775,583.23	
11,084.0	51.30	5.10	11,024.4	7,472.4	163.2	18.7	163.3	10.63	436,181.50	775,585.38	
11,116.0	55.10	5.30	11,043.6	7,491.6	188.7	21.0	188.8	11.89	436,207.01	775,587.70	
11,147.0	59.50	5.60	11,060.3	7,508.3	214.7	23.5	214.7	14.22	436,232.98	775,590.18	
11,179.0	64.50	5.50	11,075.3	7,523.3	242.8	26.2	242.9	15.63	436,261.09	775,592.91	
11,210.0	69.40	3.70	11,087.4	7,535.4	271.2	28.5	271.3	16.68	436,289.51	775,595.19	
11,242.0	74.40	3.10	11,097.4	7,545.4	301.6	30.3	301.7	15.73	436,319.87	775,596.99	
11,273.0	79.30	1.90	11,104.4	7,552.4	331.7	31.6	331.8	16.25	436,350.01	775,598.30	
11,303.0	83.10	1.40	11,109.0	7,557.0	361.3	32.4	361.4	12.77	436,379.64	775,599.15	
11,335.0	86.80	1.70	11,111.8	7,559.8	393.2	33.3	393.3	11.60	436,411.50	775,600.02	
11,365.0	88.10	1.50	11,113.2	7,561.2	423.2	34.1	423.3	4.38	436,441.46	775,600.85	
11,397.0	90.80	0.60	11,113.5	7,561.5	455.1	34.7	455.3	8.89	436,473.45	775,601.44	
11,429.0	92.70	359.10	11,112.5	7,560.5	487.1	34.6	487.2	7.56	436,505.43	775,601.36	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Site Jackson Unit 20H
Project:	Jackson Unit Section 21	TVD Reference:	RKB @ 3552.0usft
Site:	Jackson Unit 20H	MD Reference:	RKB @ 3552.0usft
Well:	Jackson Unit 20H	North Reference:	Grid
Wellbore:	Jackson Unit 20H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 20H	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)	
11,492.0	92.10	359.00	11,109.9	7,557.9	550.1	33.6	550.2	0.97	436,568.37	775,600.31	
11,556.0	89.60	359.00	11,108.9	7,556.9	614.0	32.5	614.1	3.91	436,632.35	775,599.20	
11,651.0	89.00	358.30	11,110.1	7,558.1	709.0	30.2	709.1	0.97	436,727.31	775,596.96	
11,746.0	90.30	357.90	11,110.7	7,558.7	804.0	27.1	804.0	1.43	436,822.26	775,593.81	
11,841.0	89.30	357.10	11,111.0	7,559.0	898.9	22.9	898.9	1.35	436,917.16	775,589.66	
11,935.0	88.50	356.50	11,112.8	7,560.8	992.7	17.7	992.7	1.06	437,011.00	775,584.42	
12,030.0	88.90	357.10	11,115.0	7,563.0	1,087.5	12.4	1,087.6	0.76	437,105.82	775,579.12	
12,126.0	89.10	358.10	11,116.6	7,564.6	1,183.4	8.4	1,183.4	1.06	437,201.72	775,575.10	
12,220.0	91.00	0.40	11,116.5	7,564.5	1,277.4	7.1	1,277.4	3.17	437,295.71	775,573.87	
12,315.0	90.40	0.70	11,115.4	7,563.4	1,372.4	8.1	1,372.4	0.71	437,390.69	775,574.78	
12,409.0	89.20	0.00	11,115.7	7,563.7	1,466.4	8.6	1,466.4	1.48	437,484.69	775,575.35	
12,504.0	91.00	1.70	11,115.5	7,563.5	1,561.4	10.0	1,561.4	2.61	437,579.67	775,576.76	
12,599.0	90.20	0.80	11,114.6	7,562.6	1,656.3	12.1	1,656.4	1.27	437,674.64	775,578.83	
12,694.0	90.90	1.30	11,113.6	7,561.6	1,751.3	13.9	1,751.4	0.91	437,769.62	775,580.58	
12,788.0	90.10	0.40	11,112.8	7,560.8	1,845.3	15.2	1,845.3	1.28	437,863.60	775,581.97	
12,883.0	91.00	1.10	11,111.9	7,559.9	1,940.3	16.5	1,940.3	1.20	437,958.59	775,583.21	
12,978.0	90.50	0.00	11,110.7	7,558.7	2,035.3	17.4	2,035.3	1.27	438,053.58	775,584.13	
13,074.0	89.60	0.40	11,110.6	7,558.6	2,131.3	17.7	2,131.3	1.03	438,149.57	775,584.46	
13,168.0	89.20	0.10	11,111.6	7,559.6	2,225.3	18.1	2,225.3	0.53	438,243.57	775,584.87	
13,262.0	88.40	359.40	11,113.5	7,561.5	2,319.2	17.7	2,319.3	1.13	438,337.54	775,584.46	
13,356.0	90.20	0.30	11,114.7	7,562.7	2,413.2	17.5	2,413.3	2.14	438,431.53	775,584.21	
13,450.0	90.50	0.50	11,114.1	7,562.1	2,507.2	18.1	2,507.3	0.38	438,525.53	775,584.87	
13,545.0	90.30	359.90	11,113.4	7,561.4	2,602.2	18.5	2,602.3	0.67	438,620.53	775,585.20	
13,640.0	89.50	359.70	11,113.6	7,561.6	2,697.2	18.1	2,697.3	0.87	438,715.52	775,584.87	
13,735.0	90.60	0.00	11,113.5	7,561.5	2,792.2	17.9	2,792.3	1.20	438,810.52	775,584.62	
13,830.0	89.70	359.50	11,113.3	7,561.3	2,887.2	17.5	2,887.3	1.08	438,905.52	775,584.21	
13,925.0	89.60	359.70	11,113.9	7,561.9	2,982.2	16.8	2,982.3	0.24	439,000.52	775,583.54	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Site Jackson Unit 20H
Project:	Jackson Unit Section 21	TVD Reference:	RKB @ 3552.0usft
Site:	Jackson Unit 20H	MD Reference:	RKB @ 3552.0usft
Well:	Jackson Unit 20H	North Reference:	Grid
Wellbore:	Jackson Unit 20H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 20H	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)	
14,019.0	91.20	359.60	11,113.2	7,561.2	3,076.2	16.2	3,076.2	1.71	439,094.51	775,582.97	
14,114.0	90.70	359.00	11,111.6	7,559.6	3,171.2	15.1	3,171.2	0.82	439,189.49	775,581.81	
14,208.0	89.90	358.80	11,111.1	7,559.1	3,265.2	13.3	3,265.2	0.88	439,283.47	775,580.01	
14,302.0	90.90	359.70	11,110.5	7,558.5	3,359.2	12.1	3,359.2	1.43	439,377.46	775,578.77	
14,397.0	90.80	359.60	11,109.1	7,557.1	3,454.1	11.5	3,454.2	0.15	439,472.44	775,578.19	
14,490.0	89.20	359.40	11,109.1	7,557.1	3,547.1	10.7	3,547.1	1.73	439,565.44	775,577.38	
14,585.0	89.00	358.90	11,110.6	7,558.6	3,642.1	9.3	3,642.1	0.57	439,660.41	775,575.97	
14,679.0	88.80	358.50	11,112.4	7,560.4	3,736.1	7.1	3,736.1	0.48	439,754.37	775,573.84	
14,773.0	89.10	359.90	11,114.1	7,562.1	3,830.0	5.8	3,830.0	1.52	439,848.34	775,572.53	
14,868.0	90.40	0.60	11,114.5	7,562.5	3,925.0	6.2	3,925.0	1.55	439,943.34	775,572.94	
14,962.0	89.80	359.80	11,114.3	7,562.3	4,019.0	6.5	4,019.0	1.06	440,037.34	775,573.27	
15,057.0	89.40	358.50	11,115.0	7,563.0	4,114.0	5.1	4,114.0	1.43	440,132.32	775,571.86	
15,152.0	90.20	359.00	11,115.3	7,563.3	4,209.0	3.1	4,209.0	0.99	440,227.30	775,569.79	
15,246.0	91.00	0.10	11,114.3	7,562.3	4,303.0	2.3	4,303.0	1.45	440,321.29	775,569.05	
15,341.0	92.50	2.20	11,111.4	7,559.4	4,397.9	4.2	4,397.9	2.72	440,416.22	775,570.96	
15,435.0	92.40	1.90	11,107.4	7,555.4	4,491.8	7.6	4,491.8	0.34	440,510.07	775,574.32	
15,530.0	91.40	0.90	11,104.3	7,552.3	4,586.7	9.9	4,586.7	1.49	440,604.99	775,576.64	
15,625.0	89.90	359.90	11,103.2	7,551.2	4,681.7	10.6	4,681.7	1.90	440,699.98	775,577.30	
15,686.0	89.50	0.60	11,103.5	7,551.5	4,742.7	10.8	4,742.7	1.32	440,760.97	775,577.57	
15,732.0	89.50	0.60	11,103.9	7,551.9	4,788.7	11.3	4,788.7	0.00	440,806.97	775,578.05	
5 1/2"											

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Site Jackson Unit 20H
Project:	Jackson Unit Section 21	TVD Reference:	RKB @ 3552.0usft
Site:	Jackson Unit 20H	MD Reference:	RKB @ 3552.0usft
Well:	Jackson Unit 20H	North Reference:	Grid
Wellbore:	Jackson Unit 20H	Survey Calculation Method:	Minimum Curvature
Design:	Jackson Unit 20H	Database:	EDM 5000.1 Single User Db

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,263.0	1,263.0	13 3/8"	13-3/8	16	
10,614.0	10,610.6	7"	7	7-1/2	
5,153.0	5,151.4	9 5/8"	9-5/8	12-1/4	
15,732.0	11,103.9	5 1/2"	5-1/2	6-1/8	

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Dip (°)	
7,572.0	7,569.6	Brushy Canyon	0.00	
9,103.0	9,100.3	Bone Spring	0.00	
1,197.0	1,197.0	Rustler	0.00	
10,138.0	10,134.8	1st Bone Spring Sand	0.00	
10,801.0	10,795.9	2nd Bone Spring Sand	0.00	
9,229.0	9,226.2	Avalon Shale	0.00	
6,151.0	6,149.0	Cherry Canyon	0.00	
5,140.0	5,138.4	Delaware	0.00	

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,038.0	10,994.1	128.7	15.7	Cross South Hard boundary @11038MD
15,692.0	11,103.6	4,748.7	10.9	Cross North Hard Boundary @15692MD

Checked By: _____	Approved By: _____	Date: _____
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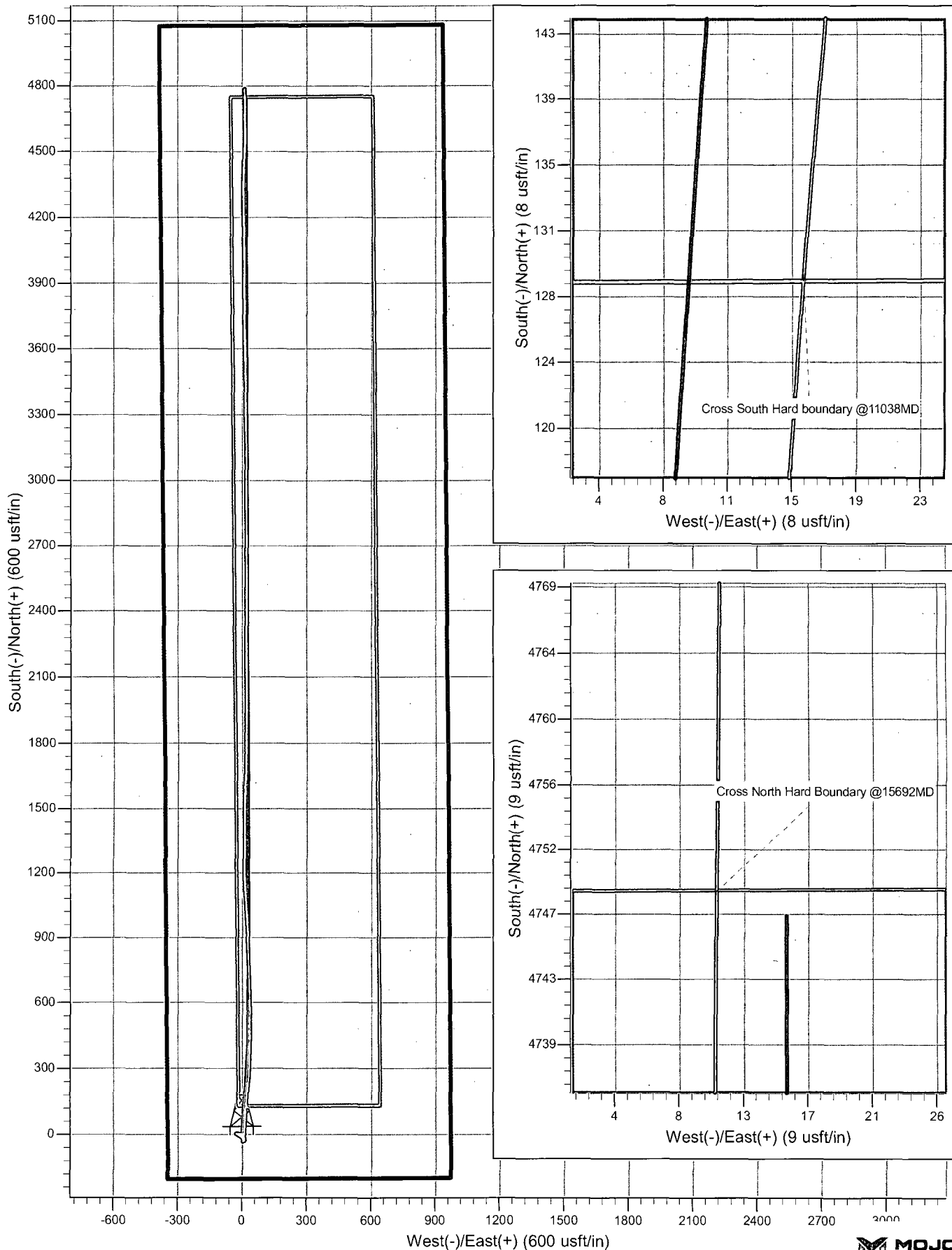
Project: Jackson Unit Section 21
 Site: Jackson Unit 20H
 Well: Jackson Unit 20H
 Wellbore: Jackson Unit 20H
 Design: Jackson Unit 20H

 MURCHISON OIL & GAS, INC.



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

Magnetic Field
 Strength: 48409.0nT
 Dip Angle: 60.11°
 Date: 07/05/2013
 Model: IGRF2010



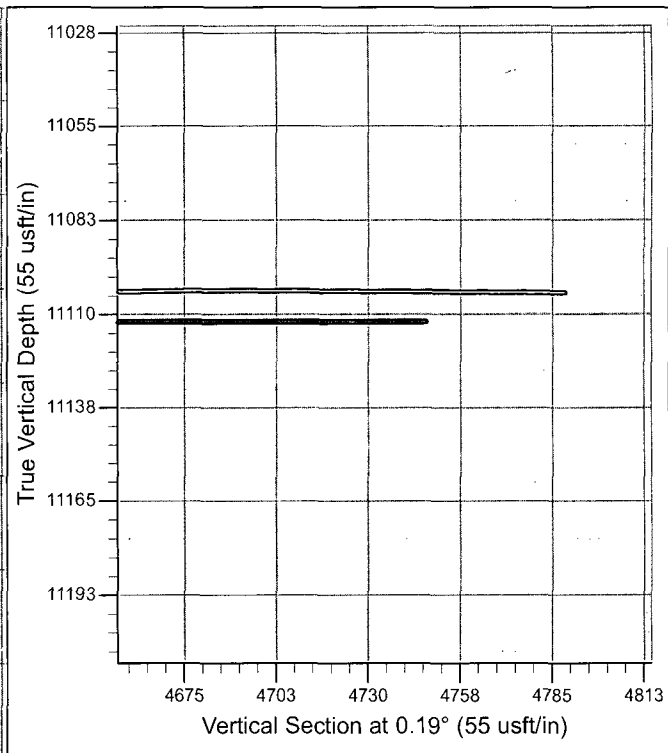
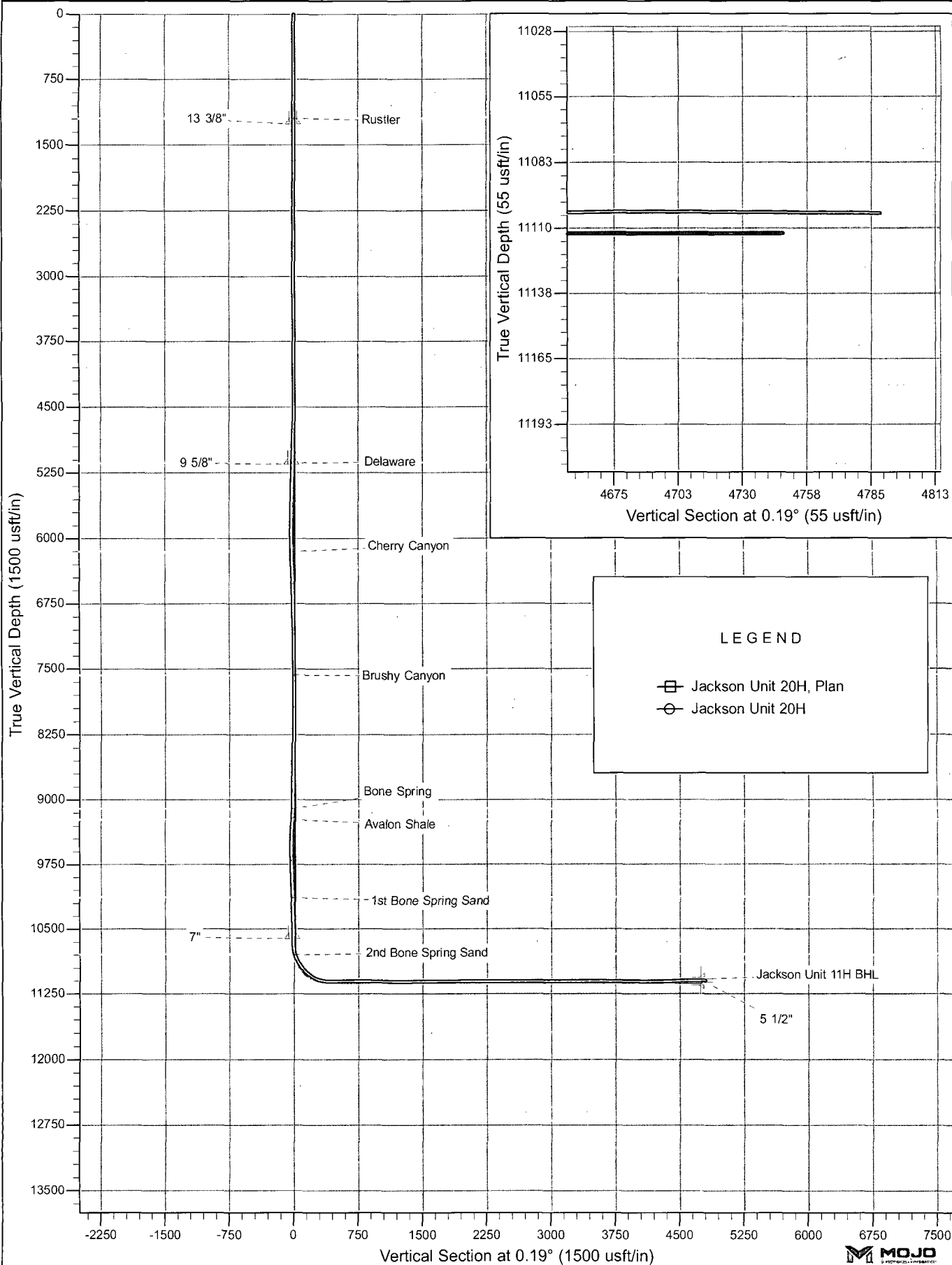
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LEGEND

-  Jackson Unit 20H, Plan
-  Jackson Unit 20H