

Results of Directional Survey

API number:	30-025-40976		
OGRID:		Operator:	MURCHISON OIL & GAS INC
		Property:	MOGI 9 STATE COM # 2H

surface	ULSTR:	O	09	T 24S	R 33E
				200 FSL	1980 FEL

BH Loc	ULSTR:	B	09	T 24S	R 33E
15780	MD	11203.0	TVD	337 FNL	2293 FEL
				4943 FSL	

Top Perf/OH	ULSTR:	O	09	T 24S	R 33E
11330	MD	11173.5	TVD	511 FSL	2076 FEL

Bot Perf/OH	ULSTR:	B	09	T 24S	R 33E
15700	MD	11201.4	TVD	417 FNL	2289 FEL
				4863 FSL	

	MD	N/S	E/W	VD
	11311	292.90	-93.50	11167.1
TOP PERFS/OH	11330	310.59	-95.99	11173.51
	11343	322.70	-97.70	11177.90
	15620	4583.50	-304.80	11199.70
BOT PERFS/OH	15700	4663.40	-308.70	11201.35
	15780	4743.30	-312.60	11203.00

NEXT TO LAST	15620	4583.50	-304.80	11199.70
LAST READING	15780	4743.30	-312.60	11203.00
TD	15780	4743.30	-312.60	11203.00

Surface Location	200	FS	1980	FE
Projected BHL	4943	FS	2293	FE
Location of				
Top Perfs/OH	511	FS	2076	FE
Bottom Perfs/OH	4863	FS	2289	FE

SUMMARY of Subsurface Locations

Surface Location	O-09-24S-33E	200	FS	1980	FE	Vert. Depth
Top Perfs/OH	O-09-24S-33E	511	FS	2076	FE	11173.51
Bottom Perfs/OH	B-09-24S-33E	4863	FS	2289	FE	11201.35
Projected TD	B-09-24S-33E	4943	FS	2293	FE	11203.00

DEC 03 2013

Murchison Oil and Gas

Jackson Unit Section 9
MOGI 9 State Com 2H

HOBBS OCD

SEP 17 2013

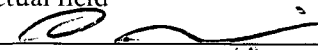
RECEIVED

Survey: MOGI 9 State Com 2H

MOJO Standard Survey

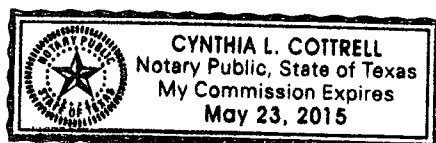
12 August, 2013

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

data.  (Signature)

Notarized this date 12th of August,
2013. Cynthia L. Cottrell Notary

Signature County of Collin State of Texas



Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well MOGI 9 State Com 2H
Project:	Jackson Unit Section 9	TVD Reference:	WELL @ 3637.6usft (Original Well Elev)
Site:	MOGI 9 State Com 2H	MD Reference:	WELL @ 3637.6usft (Original Well Elev)
Well:	MOGI 9 State Com 2H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 2H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 2H	Database:	EDM 5000.1 Single User Db

Project	Jackson Unit Section 9		
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Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	MOGI 9 State Com 2H		
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Site Position:		Northing:	446,577.28 usft	Latitude:	32° 13' 31.595 N
From:	Lat/Long	Easting:	775,802.19 usft	Longitude:	103° 34' 30.414 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	MOGI 9 State Com 2H				
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Well Position	+N/-S	0.0 usft	Northing:	446,577.28 usft	Latitude:	32° 13' 31.595 N
	+E/-W	0.0 usft	Easting:	775,802.19 usft	Longitude:	103° 34' 30.414 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,615.6 usft

Wellbore	MOGI 9 State Com 2H				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	29/01/2013	7.39	60.15	48,453

Design	MOGI 9 State Com 2H			
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	355.76	

Survey Program	Date 12/08/2013			
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From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	15,780.0	MOGI 9 State Com 2H (MOGI 9 State Com	MWD	MWD - Standard

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Site: MOGI 9 State Com 2H		MD Reference: WELL @ 3637.6usft (Original Well Elev)			
Well: MOGI 9 State Com 2H		North Reference: Grid			
Wellbore: MOGI 9 State Com 2H		Survey Calculation Method: Minimum Curvature			
Design: MOGI 9 State Com 2H		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	-3,637.6	0.0	0.0	0.0	0.00	446,577.28	775,802.19	
100.0	0.63	305.57	100.0	-3,537.6	0.3	-0.4	0.4	0.63	446,577.60	775,801.74	
200.0	0.61	284.20	200.0	-3,437.6	0.8	-1.4	0.9	0.23	446,578.05	775,800.78	
300.0	0.38	289.44	300.0	-3,337.6	1.0	-2.2	1.2	0.23	446,578.30	775,799.95	
400.0	0.72	265.30	400.0	-3,237.6	1.1	-3.2	1.3	0.40	446,578.35	775,799.01	
500.0	0.77	286.94	500.0	-3,137.6	1.2	-4.4	1.5	0.28	446,578.50	775,797.74	
600.0	0.52	265.21	600.0	-3,037.6	1.4	-5.5	1.8	0.35	446,578.66	775,796.65	
700.0	0.45	265.10	700.0	-2,937.6	1.3	-6.4	1.8	0.07	446,578.59	775,795.81	
800.0	0.43	263.21	800.0	-2,837.6	1.2	-7.1	1.7	0.02	446,578.51	775,795.04	
900.0	0.37	268.83	900.0	-2,737.6	1.2	-7.8	1.7	0.07	446,578.46	775,794.35	
1,000.0	0.33	259.60	1,000.0	-2,637.6	1.1	-8.5	1.7	0.07	446,578.40	775,793.74	
1,100.0	0.30	201.38	1,100.0	-2,537.6	0.8	-8.8	1.5	0.31	446,578.10	775,793.36	
1,200.0	0.20	263.44	1,200.0	-2,437.6	0.6	-9.1	1.2	0.27	446,577.84	775,793.09	
1,300.0	0.10	158.66	1,300.0	-2,337.6	0.5	-9.2	1.1	0.25	446,577.74	775,792.95	
1,400.0	0.36	284.23	1,400.0	-2,237.6	0.4	-9.5	1.2	0.43	446,577.73	775,792.68	
1,500.0	0.38	331.73	1,500.0	-2,137.6	0.8	-10.0	1.6	0.30	446,578.10	775,792.22	
1,600.0	0.78	349.78	1,599.9	-2,037.7	1.8	-10.3	2.5	0.43	446,579.06	775,791.94	
1,700.0	0.57	334.39	1,699.9	-1,937.7	2.9	-10.6	3.7	0.28	446,580.18	775,791.60	
1,800.0	0.77	341.09	1,799.9	-1,837.7	4.0	-11.0	4.8	0.21	446,581.27	775,791.17	
1,900.0	0.47	348.46	1,899.9	-1,737.7	5.0	-11.3	5.8	0.31	446,582.30	775,790.87	
2,000.0	0.61	342.53	1,999.9	-1,637.7	5.9	-11.6	6.8	0.15	446,583.21	775,790.63	
2,100.0	0.71	0.50	2,099.9	-1,537.7	7.1	-11.7	7.9	0.23	446,584.34	775,790.47	
2,200.0	0.42	359.63	2,199.9	-1,437.7	8.0	-11.7	8.9	0.29	446,585.33	775,790.48	
2,300.0	0.53	325.24	2,299.9	-1,337.7	8.8	-12.0	9.7	0.30	446,586.07	775,790.21	
2,400.0	0.41	353.60	2,399.9	-1,237.7	9.5	-12.3	10.4	0.26	446,586.81	775,789.91	
2,500.0	0.66	325.06	2,499.9	-1,137.7	10.4	-12.7	11.3	0.36	446,587.64	775,789.54	
2,600.0	0.40	307.63	2,599.9	-1,037.7	11.0	-13.3	12.0	0.30	446,588.32	775,788.93	

Company: Murchison Oil and Gas		Local Co-ordinate Reference: Well MOGI 9 State Com 2H	
Project: Jackson Unit Section 9		TVD Reference: WELL @ 3637.6usft (Original Well Elev)	
Site: MOGI 9 State Com 2H		MD Reference: WELL @ 3637.6usft (Original Well Elev)	
Well: MOGI 9 State Com 2H		North Reference: Grid	
Wellbore: MOGI 9 State Com 2H		Survey Calculation Method: Minimum Curvature	
Design: MOGI 9 State Com 2H		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)	
2,700.0	0.60	308.19	2,699.9	-937.7	11.6	-13.9	12.6	0.20	446,588.86	775,788.24	
2,800.0	0.41	310.94	2,799.9	-837.7	12.1	-14.6	13.2	0.19	446,589.42	775,787.56	
2,900.0	0.68	331.39	2,899.9	-737.7	12.9	-15.2	14.0	0.33	446,590.17	775,787.01	
3,000.0	0.66	349.42	2,999.9	-637.7	14.0	-15.6	15.1	0.21	446,591.26	775,786.62	
3,100.0	0.47	356.19	3,099.9	-537.7	15.0	-15.7	16.1	0.20	446,592.24	775,786.48	
3,200.0	0.71	343.60	3,199.9	-437.7	16.0	-15.9	17.1	0.27	446,593.24	775,786.28	
3,300.0	0.75	353.45	3,299.9	-337.7	17.2	-16.2	18.3	0.13	446,594.48	775,786.03	
3,400.0	0.56	19.39	3,399.9	-237.7	18.3	-16.1	19.4	0.35	446,595.59	775,786.12	
3,500.0	0.59	48.76	3,499.8	-137.8	19.1	-15.5	20.2	0.29	446,596.40	775,786.67	
3,600.0	0.56	52.12	3,599.8	-37.8	19.7	-14.7	20.8	0.05	446,597.03	775,787.44	
3,700.0	0.60	43.52	3,699.8	62.2	20.4	-14.0	21.4	0.10	446,597.71	775,788.19	
3,800.0	0.38	27.80	3,799.8	162.2	21.1	-13.5	22.0	0.26	446,598.39	775,788.70	
3,900.0	0.33	19.14	3,899.8	262.2	21.7	-13.2	22.6	0.07	446,598.95	775,788.95	
4,000.0	0.20	94.82	3,999.8	362.2	21.9	-13.0	22.8	0.34	446,599.21	775,789.22	
4,100.0	0.28	83.08	4,099.8	462.2	21.9	-12.6	22.8	0.09	446,599.23	775,789.64	
4,200.0	0.40	86.16	4,199.8	562.2	22.0	-12.0	22.8	0.12	446,599.28	775,790.23	
4,300.0	0.31	72.51	4,299.8	662.2	22.1	-11.4	22.9	0.12	446,599.38	775,790.84	
4,400.0	1.06	87.32	4,399.8	762.2	22.2	-10.2	22.9	0.76	446,599.51	775,792.02	
4,500.0	1.44	110.13	4,499.8	862.2	21.8	-8.1	22.4	0.62	446,599.12	775,794.12	
4,600.0	1.75	121.82	4,599.8	962.2	20.6	-5.6	21.0	0.45	446,597.88	775,796.60	
4,700.0	2.29	125.57	4,699.7	1,062.1	18.6	-2.7	18.8	0.56	446,595.91	775,799.52	
4,800.0	2.79	131.22	4,799.6	1,162.0	15.9	0.8	15.8	0.56	446,593.15	775,802.98	
4,900.0	3.55	132.52	4,899.4	1,261.8	12.2	4.9	11.8	0.76	446,589.45	775,807.09	
5,000.0	3.52	137.17	4,999.3	1,361.7	7.8	9.3	7.1	0.29	446,585.11	775,811.46	
5,100.0	2.71	141.89	5,099.1	1,461.5	3.7	12.8	2.8	0.85	446,581.00	775,815.00	
5,112.0	2.50	138.50	5,111.1	1,473.5	3.3	13.2	2.3	2.17	446,580.58	775,815.35	
5,303.0	1.40	113.90	5,302.0	1,664.4	-0.8	18.1	-2.1	0.71	446,576.51	775,820.25	

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Well:	MOGI 9 State Com 2H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 2H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 2H	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)	
5,400.0	1.50	117.60	5,399.0	1,761.4	-1.8	20.3	-3.3	0.14	446,575.44	775,822.45	
5,496.0	0.90	159.10	5,494.9	1,857.3	-3.1	21.6	-4.7	1.06	446,574.16	775,823.84	
5,594.0	1.00	181.70	5,592.9	1,955.3	-4.7	21.9	-6.3	0.39	446,572.58	775,824.09	
5,690.0	1.00	186.70	5,688.9	2,051.3	-6.4	21.8	-8.0	0.09	446,570.91	775,823.96	
5,786.0	1.00	187.90	5,784.9	2,147.3	-8.0	21.6	-9.6	0.02	446,569.25	775,823.75	
5,883.0	0.80	272.30	5,881.9	2,244.3	-8.8	20.8	-10.4	1.26	446,568.44	775,822.96	
5,980.0	0.90	287.20	5,978.9	2,341.3	-8.6	19.4	-10.0	0.25	446,568.69	775,821.55	
6,077.0	1.00	291.60	6,075.9	2,438.3	-8.1	17.8	-9.4	0.13	446,569.23	775,820.04	
6,174.0	1.00	290.70	6,172.8	2,535.2	-7.4	16.3	-8.6	0.02	446,569.84	775,818.46	
6,272.0	1.00	285.80	6,270.8	2,633.2	-6.9	14.6	-8.0	0.09	446,570.38	775,816.84	
6,368.0	1.00	284.10	6,366.8	2,729.2	-6.5	13.0	-7.4	0.03	446,570.81	775,815.22	
6,465.0	1.10	281.20	6,463.8	2,826.2	-6.1	11.3	-6.9	0.12	446,571.19	775,813.48	
6,561.0	1.00	280.10	6,559.8	2,922.2	-5.8	9.6	-6.5	0.11	446,571.52	775,811.76	
6,658.0	1.20	282.60	6,656.8	3,019.2	-5.4	7.7	-6.0	0.21	446,571.89	775,809.93	
6,755.0	1.10	286.80	6,753.7	3,116.1	-4.9	5.9	-5.3	0.13	446,572.38	775,808.05	
6,853.0	1.30	291.80	6,851.7	3,214.1	-4.2	3.9	-4.5	0.23	446,573.07	775,806.12	
6,950.0	1.30	289.30	6,948.7	3,311.1	-3.4	1.9	-3.6	0.06	446,573.84	775,804.06	
7,047.0	1.10	283.60	7,045.7	3,408.1	-2.9	-0.1	-2.9	0.24	446,574.42	775,802.11	
7,142.0	1.10	288.10	7,140.7	3,503.1	-2.4	-1.8	-2.2	0.09	446,574.92	775,800.36	
7,240.0	1.10	286.70	7,238.6	3,601.0	-1.8	-3.6	-1.5	0.03	446,575.48	775,798.56	
7,336.0	1.20	283.10	7,334.6	3,697.0	-1.3	-5.5	-0.9	0.13	446,575.97	775,796.70	
7,433.0	1.10	275.10	7,431.6	3,794.0	-1.0	-7.4	-0.4	0.19	446,576.29	775,794.79	
7,530.0	1.20	276.60	7,528.6	3,891.0	-0.8	-9.3	-0.1	0.11	446,576.49	775,792.85	
7,627.0	1.30	278.50	7,625.6	3,988.0	-0.5	-11.4	0.3	0.11	446,576.77	775,790.75	
7,724.0	1.80	240.40	7,722.5	4,084.9	-1.1	-13.9	-0.1	1.15	446,576.18	775,788.34	
7,821.0	1.00	176.10	7,819.5	4,181.9	-2.7	-15.1	-1.6	1.69	446,574.58	775,787.07	
7,918.0	1.20	155.60	7,916.5	4,278.9	-4.5	-14.6	-3.4	0.45	446,572.81	775,787.55	

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Design: MOGI 9 State Com 2H		Database: EDM 5000.1 Single User Db	

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8,014.0	0.80	143.20	8,012.5	4,374.9	-5.9	-13.8	-4.9	0.47	446,571.36	775,788.37	
8,111.0	0.80	136.60	8,109.5	4,471.9	-7.0	-13.0	-6.0	0.09	446,570.32	775,789.24	
8,207.0	0.80	150.50	8,205.4	4,567.8	-8.0	-12.2	-7.1	0.20	446,569.25	775,790.03	
8,304.0	0.70	154.60	8,302.4	4,664.8	-9.2	-11.6	-8.3	0.12	446,568.13	775,790.61	
8,400.0	0.80	147.70	8,398.4	4,760.8	-10.3	-11.0	-9.4	0.14	446,567.03	775,791.22	
8,497.0	0.80	152.40	8,495.4	4,857.8	-11.4	-10.3	-10.6	0.07	446,565.86	775,791.90	
8,593.0	0.70	150.80	8,591.4	4,953.8	-12.5	-9.7	-11.8	0.11	446,564.75	775,792.50	
8,785.0	0.80	157.40	8,783.4	5,145.8	-14.8	-8.6	-14.1	0.07	446,562.49	775,793.58	
8,977.0	0.80	154.90	8,975.4	5,337.8	-17.2	-7.5	-16.6	0.02	446,560.04	775,794.67	
9,073.0	1.20	148.90	9,071.4	5,433.8	-18.7	-6.7	-18.2	0.43	446,558.57	775,795.47	
9,169.0	1.40	145.90	9,167.3	5,529.7	-20.5	-5.5	-20.1	0.22	446,556.74	775,796.65	
9,264.0	1.60	145.50	9,262.3	5,624.7	-22.6	-4.1	-22.2	0.21	446,554.69	775,798.05	
9,399.0	1.50	142.60	9,397.3	5,759.7	-25.6	-2.0	-25.3	0.09	446,551.73	775,800.19	
9,495.0	0.80	179.00	9,493.2	5,855.6	-27.2	-1.2	-27.1	1.02	446,550.06	775,800.97	
9,592.0	1.00	172.90	9,590.2	5,952.6	-28.7	-1.1	-28.6	0.23	446,548.55	775,801.08	
9,688.0	1.00	182.70	9,686.2	6,048.6	-30.4	-1.0	-30.2	0.18	446,546.88	775,801.15	
9,784.0	1.00	220.30	9,782.2	6,144.6	-31.9	-1.6	-31.7	0.67	446,545.40	775,800.56	
9,880.0	1.90	262.40	9,878.2	6,240.6	-32.7	-3.7	-32.4	1.39	446,544.55	775,798.45	
9,977.0	2.00	276.70	9,975.1	6,337.5	-32.7	-7.0	-32.1	0.51	446,544.54	775,795.17	
10,072.0	1.60	294.20	10,070.1	6,432.5	-32.0	-9.9	-31.2	0.71	446,545.27	775,792.31	
10,168.0	1.50	271.70	10,166.0	6,528.4	-31.4	-12.4	-30.4	0.64	446,545.86	775,789.84	
10,264.0	1.50	274.30	10,262.0	6,624.4	-31.3	-14.9	-30.1	0.07	446,545.99	775,787.33	
10,360.0	1.80	273.90	10,358.0	6,720.4	-31.1	-17.6	-29.7	0.31	446,546.19	775,784.57	
10,456.0	1.50	274.60	10,453.9	6,816.3	-30.9	-20.4	-29.3	0.31	446,546.39	775,781.81	
10,553.0	1.00	228.90	10,550.9	6,913.3	-31.3	-22.3	-29.6	1.11	446,545.94	775,779.91	
10,650.0	2.10	298.00	10,647.9	7,010.3	-31.1	-24.5	-29.2	2.04	446,546.22	775,777.70	
10,716.0	4.20	317.00	10,713.8	7,076.2	-28.7	-27.2	-26.6	3.51	446,548.55	775,774.99	

Company: Murchison Oil and Gas		Local Co-ordinate Reference: Well MOGI 9 State Com 2H	
Project: Jackson Unit Section 9		TVD Reference: WELL @ 3637.6usft (Original Well Elev)	
Site: MOGI 9 State Com 2H		MD Reference: WELL @ 3637.6usft (Original Well Elev)	
Well: MOGI 9 State Com 2H		North Reference: Grid	
Wellbore: MOGI 9 State Com 2H		Survey Calculation Method: Minimum Curvature	
Design: MOGI 9 State Com 2H		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)	
10,798.0	9.10	331.26	10,795.2	7,157.6	-20.8	-32.4	-18.4	6.26	446,556.44	775,769.82	
10,829.0	15.20	336.66	10,825.5	7,187.9	-15.0	-35.2	-12.3	19.99	446,562.32	775,767.02	
10,862.0	20.60	336.26	10,856.9	7,219.3	-5.7	-39.2	-2.8	16.37	446,571.62	775,762.97	
10,894.0	22.70	335.20	10,886.6	7,249.0	5.1	-44.1	8.3	6.68	446,582.38	775,758.11	
10,926.0	25.70	340.90	10,915.8	7,278.2	17.3	-48.9	20.8	11.87	446,594.54	775,753.25	
10,958.0	30.30	344.00	10,944.1	7,306.5	31.6	-53.4	35.4	15.07	446,608.87	775,748.75	
10,991.0	34.10	345.80	10,972.0	7,334.4	48.6	-58.0	52.7	11.88	446,625.84	775,744.19	
11,022.0	37.60	346.80	10,997.1	7,359.5	66.2	-62.3	70.6	11.45	446,643.48	775,739.90	
11,055.0	40.80	347.50	11,022.7	7,385.1	86.5	-66.9	91.2	9.79	446,663.82	775,735.26	
11,087.0	44.00	350.10	11,046.3	7,408.7	107.7	-71.1	112.7	11.40	446,684.98	775,731.09	
11,118.0	48.00	353.40	11,067.8	7,430.2	129.8	-74.3	134.9	15.00	446,707.04	775,727.91	
11,151.0	51.70	353.80	11,089.1	7,451.5	154.8	-77.1	160.1	11.25	446,732.10	775,725.10	
11,183.0	55.70	353.40	11,108.0	7,470.4	180.4	-80.0	185.9	12.54	446,757.73	775,722.22	
11,215.0	59.70	354.10	11,125.1	7,487.5	207.3	-82.9	212.9	12.64	446,784.61	775,719.28	
11,248.0	63.30	353.50	11,140.9	7,503.3	236.1	-86.0	241.9	11.03	446,813.43	775,716.15	
11,279.0	65.10	352.60	11,154.4	7,516.8	263.9	-89.4	269.7	6.37	446,841.14	775,712.77	
11,311.0	68.00	351.50	11,167.1	7,529.5	292.9	-93.5	299.0	9.60	446,870.21	775,708.71	
11,343.0	72.40	352.20	11,177.9	7,540.3	322.7	-97.7	329.1	13.90	446,900.00	775,704.44	
11,375.0	77.60	353.10	11,186.2	7,548.6	353.4	-101.7	359.9	16.48	446,930.65	775,700.49	
11,406.0	78.00	352.90	11,192.8	7,555.2	383.4	-105.4	390.2	1.44	446,960.72	775,696.80	
11,470.0	80.40	352.10	11,204.8	7,567.2	445.8	-113.6	452.9	3.95	447,023.05	775,688.59	
11,502.0	84.50	354.50	11,209.0	7,571.4	477.3	-117.3	484.6	14.81	447,054.54	775,684.90	
11,534.0	85.80	355.70	11,211.7	7,574.1	509.0	-120.0	516.5	5.52	447,086.31	775,682.17	
11,566.0	88.80	357.60	11,213.2	7,575.6	540.9	-121.9	548.5	11.09	447,118.22	775,680.31	
11,664.0	90.20	355.50	11,214.0	7,576.4	638.7	-127.8	646.4	2.58	447,216.03	775,674.41	
11,760.0	90.60	353.70	11,213.4	7,575.8	734.3	-136.8	742.4	1.92	447,311.59	775,665.38	
11,856.0	90.40	353.60	11,212.5	7,574.9	829.7	-147.4	838.3	0.23	447,407.00	775,654.76	

Company: Murchison Oil and Gas		Local Co-ordinate Reference: Well MOGI 9 State Com 2H			
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Site: MOGI 9 State Com 2H		MD Reference: WELL @ 3637.6usft (Original Well Elev)			
Well: MOGI 9 State Com 2H		North Reference: Grid			
Wellbore: MOGI 9 State Com 2H		Survey Calculation Method: Minimum Curvature			
Design: MOGI 9 State Com 2H		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)	
11,950.0	90.10	353.80	11,212.1	7,574.5	923.1	-157.7	932.3	0.38	447,500.43	775,644.44	
12,046.0	89.60	353.70	11,212.4	7,574.8	1,018.6	-168.2	1,028.2	0.53	447,595.86	775,633.99	
12,141.0	91.40	351.70	11,211.5	7,573.9	1,112.8	-180.3	1,123.1	2.83	447,690.08	775,621.92	
12,238.0	91.30	351.30	11,209.3	7,571.7	1,208.7	-194.6	1,219.8	0.42	447,785.99	775,607.59	
12,334.0	90.40	350.50	11,207.8	7,570.2	1,303.5	-209.8	1,315.4	1.25	447,880.77	775,592.41	
12,428.0	89.70	350.50	11,207.8	7,570.2	1,396.2	-225.3	1,409.0	0.74	447,973.48	775,576.89	
12,525.0	88.70	350.00	11,209.1	7,571.5	1,491.8	-241.7	1,505.6	1.15	448,069.07	775,560.47	
12,622.0	89.60	351.30	11,210.6	7,573.0	1,587.5	-257.5	1,602.2	1.63	448,164.76	775,544.71	
12,719.0	90.60	355.30	11,210.4	7,572.8	1,683.8	-268.8	1,699.1	4.25	448,261.08	775,533.40	
12,816.0	91.00	359.40	11,209.0	7,571.4	1,780.7	-273.3	1,796.0	4.25	448,357.95	775,528.92	
12,913.0	90.60	358.90	11,207.7	7,570.1	1,877.6	-274.7	1,892.8	0.66	448,454.93	775,527.48	
13,010.0	90.90	359.40	11,206.4	7,568.8	1,974.6	-276.2	1,989.6	0.60	448,551.91	775,526.04	
13,106.0	90.10	359.00	11,205.6	7,568.0	2,070.6	-277.5	2,085.5	0.93	448,647.89	775,524.70	
13,202.0	90.50	0.10	11,205.1	7,567.5	2,166.6	-278.2	2,181.2	1.22	448,743.89	775,523.94	
13,299.0	89.80	359.80	11,204.8	7,567.2	2,263.6	-278.3	2,278.0	0.79	448,840.88	775,523.86	
13,396.0	91.50	0.10	11,203.7	7,566.1	2,360.6	-278.4	2,374.7	1.78	448,937.87	775,523.77	
13,493.0	90.40	359.80	11,202.1	7,564.5	2,457.6	-278.5	2,471.4	1.18	449,034.86	775,523.69	
13,590.0	88.40	358.80	11,203.1	7,565.5	2,554.6	-279.7	2,568.2	2.31	449,131.84	775,522.50	
13,686.0	90.70	0.50	11,203.9	7,566.3	2,650.5	-280.3	2,664.0	2.98	449,227.83	775,521.92	
13,782.0	92.50	2.90	11,201.2	7,563.6	2,746.5	-277.4	2,759.4	3.12	449,323.74	775,524.76	
13,879.0	90.50	2.00	11,198.6	7,561.0	2,843.3	-273.3	2,855.7	2.26	449,420.61	775,528.91	
13,976.0	90.60	1.50	11,197.7	7,560.1	2,940.3	-270.3	2,952.2	0.53	449,517.56	775,531.87	
14,072.0	90.00	1.00	11,197.2	7,559.6	3,036.2	-268.2	3,047.8	0.81	449,613.53	775,533.96	
14,168.0	89.80	0.30	11,197.4	7,559.8	3,132.2	-267.1	3,143.4	0.76	449,709.53	775,535.05	
14,265.0	89.20	359.40	11,198.2	7,560.6	3,229.2	-267.4	3,240.2	1.12	449,806.52	775,534.80	
14,362.0	88.70	358.70	11,200.0	7,562.4	3,326.2	-269.0	3,337.0	0.89	449,903.49	775,533.19	
14,459.0	91.40	359.00	11,199.9	7,562.3	3,423.2	-270.9	3,433.8	2.80	450,000.46	775,531.25	

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Site:	MOGI 9 State Com 2H	MD Reference:	WELL @ 3637.6usft (Original Well Elev)
Well:	MOGI 9 State Com 2H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 2H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 2H	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)	
14,653.0	91.10	358.70	11,195.7	7,558.1	3,617.1	-274.8	3,627.5	0.22	450,194.38	775,527.35	
14,750.0	89.10	359.40	11,195.5	7,557.9	3,714.1	-276.4	3,724.3	2.18	450,291.36	775,525.74	
14,847.0	90.30	358.80	11,196.0	7,558.4	3,811.1	-278.0	3,821.2	1.38	450,388.34	775,524.22	
14,944.0	90.30	358.60	11,195.5	7,557.9	3,908.0	-280.2	3,918.0	0.21	450,485.31	775,522.02	
15,041.0	91.10	357.80	11,194.3	7,556.7	4,005.0	-283.2	4,015.0	1.17	450,582.26	775,518.97	
15,137.0	90.20	358.60	11,193.2	7,555.6	4,100.9	-286.2	4,110.9	1.25	450,678.20	775,515.96	
15,233.0	89.20	357.90	11,193.7	7,556.1	4,196.9	-289.2	4,206.8	1.27	450,774.16	775,513.03	
15,330.0	88.30	357.60	11,195.9	7,558.3	4,293.8	-293.0	4,303.7	0.98	450,871.06	775,509.22	
15,427.0	89.80	357.80	11,197.5	7,559.9	4,390.7	-296.9	4,400.6	1.56	450,967.96	775,505.33	
15,524.0	89.40	357.80	11,198.2	7,560.6	4,487.6	-300.6	4,497.5	0.41	451,064.89	775,501.60	
15,620.0	88.80	357.20	11,199.7	7,562.1	4,583.5	-304.8	4,593.5	0.88	451,160.78	775,497.42	
15,780.0	88.80	357.20	11,203.0	7,565.4	4,743.3	-312.6	4,753.4	0.00	451,320.56	775,489.60	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
5,217.0	5,216.0	9 5/8"	9-5/8	12-1/4	
1,300.0	1,300.0	13 3/8"	13-3/8	17-1/2	
15,766.0	11,202.7	4 1/2"	4-1/2	7-1/2	
10,765.0	10,762.5	7"	7	7-1/2	

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Well:	MOGI 9 State Com 2H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 2H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 2H	Database:	EDM 5000.1 Single User Db

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Dip (°)	
10,927.3	10,917.0	1st Bone Spring Sand	0.00	
9,110.6	9,109.0	Bone Spring	0.00	
9,251.7	9,250.0	Avalon Shale	0.00	
6,183.2	6,182.0	Cherry Canyon	0.00	
10,925.1	10,915.0	2nd Bone Spring Sand	0.00	
7,559.4	7,558.0	Brushy Canyon	0.00	
5,213.0	5,212.0	Delaware	0.00	
1,260.0	1,260.0	Rustler	0.00	

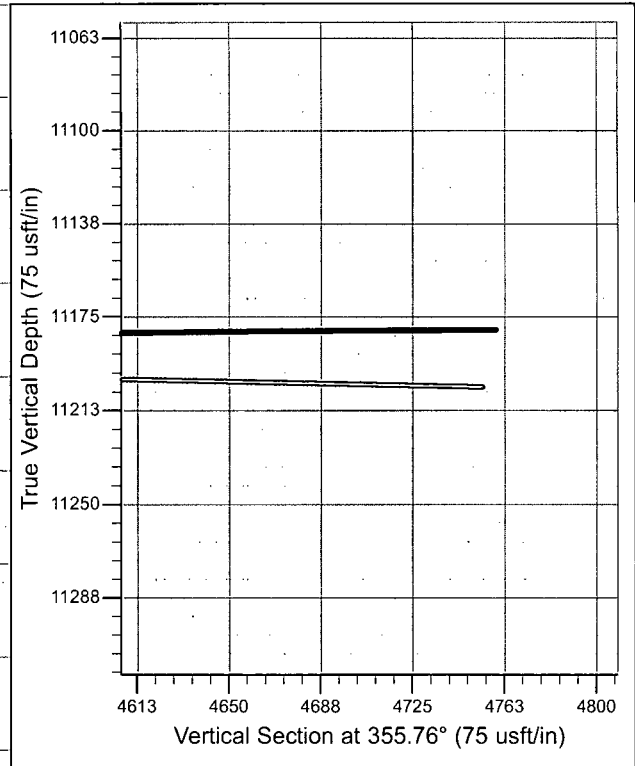
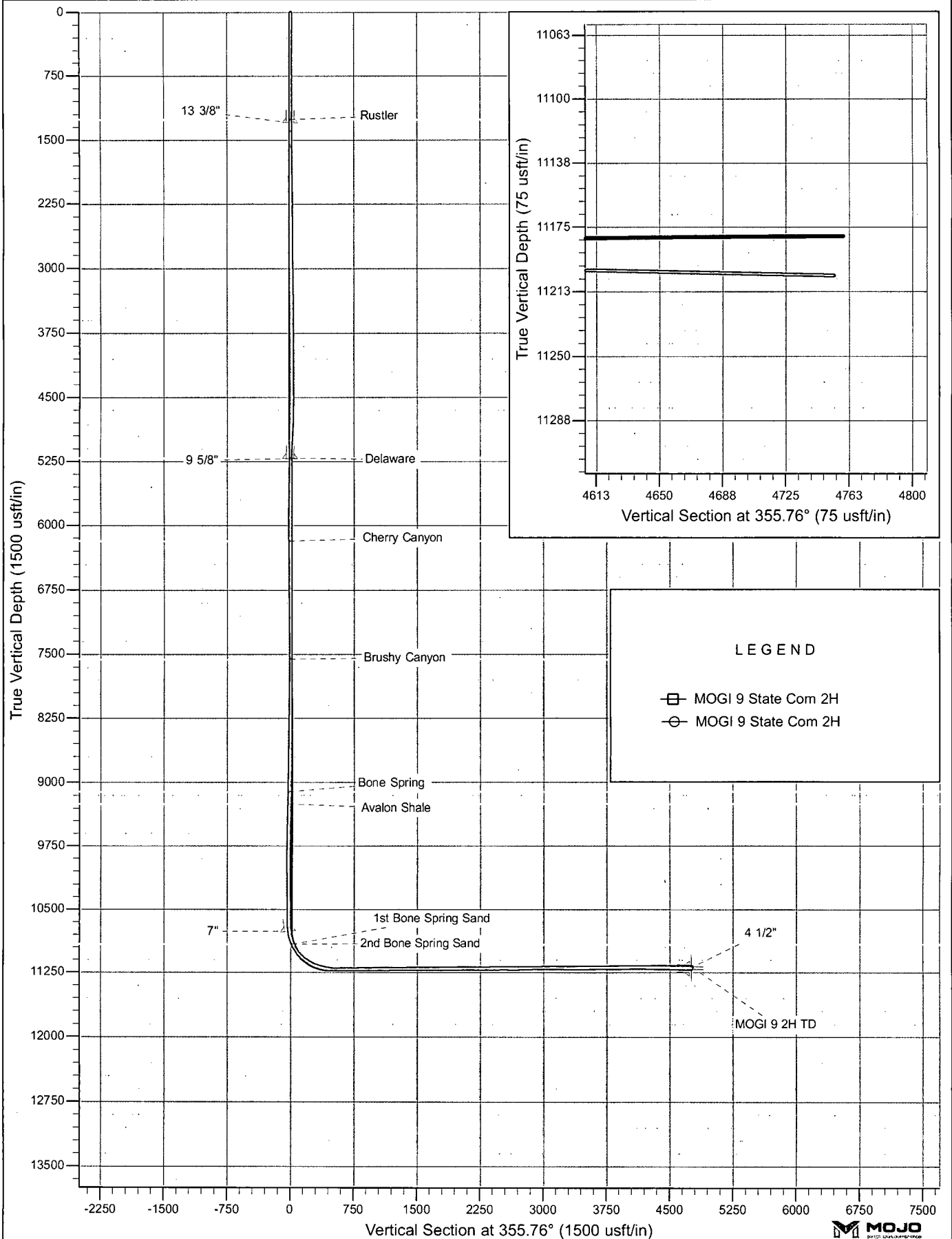
Checked By: _____	Approved By: _____	Date: _____
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Project: Jackson Unit Section 9
 Site: MOGI 9 State Com 2H
 Well: MOGI 9 State Com 2H
 Wellbore: MOGI 9 State Com 2H
 Design: MOGI 9 State Com 2H

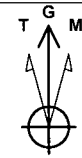
 **MURCHISON OIL & GAS, INC.**



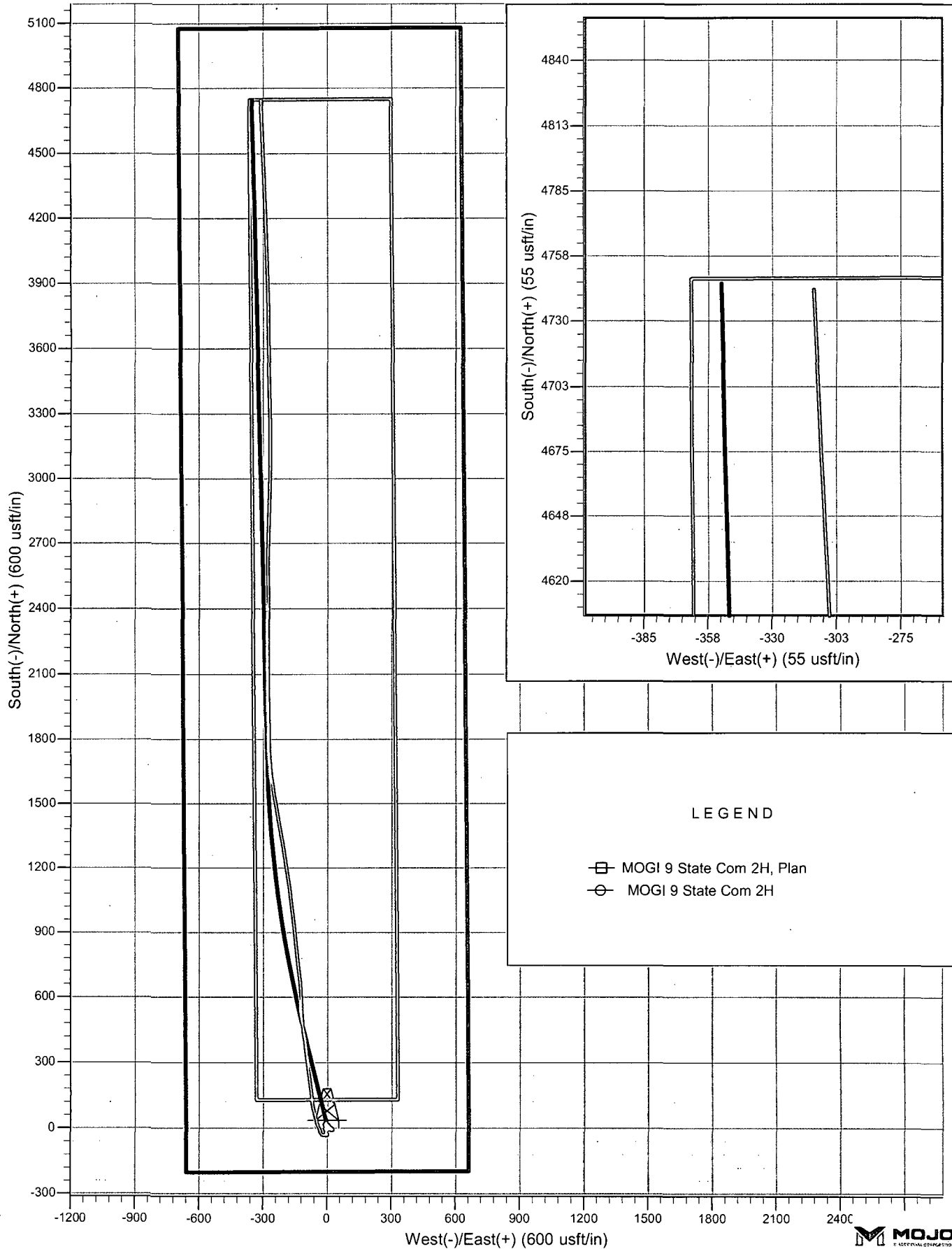
Azimuths to Grid North
 True North: -0.40°
 Magnetic North: 6.98°
 Magnetic Field
 Strength: 48452.8nT
 Dip Angle: 60.15°
 Date: 29/01/2013
 Model: IGRF2010



Project: Jackson Unit Section 9
 Site: MOGI 9 State Com 2H
 Well: MOGI 9 State Com 2H
 Wellbore: MOGI 9 State Com 2H
 Design: MOGI 9 State Com 2H



Azimuths to Grid North
 True North: -0.40°
 Magnetic North: 6.98°
 Magnetic Field
 Strength: 48452.8nT
 Dip Angle: 60.15°
 Date: 29/01/2013
 Model: IGRF2010



LEGEND

- MOGI 9 State Com 2H, Plan
- MOGI 9 State Com 2H