

Results of Directional Survey

API number:	30-025-41581		
OGRID:		Operator:	MURCHISON OIL & GAS INC
		Property:	MOGI 9 STATE COM # 5H

surface	ULSTR:	N	09	T 24S	R 33E
				200 FSL	1725 FWL

BH Loc	ULSTR:	C	09	T 24S	R 33E
15152	MD	10387.0	TVD	248 FNL	1666 FWL
				5032 FSL	

Top Perf/OH	ULSTR:	N	09	T 24S	R 33E
10610	MD	10349.2	TVD	493 FSL	1722 FWL

Bot Perf/OH	ULSTR:	C	09	T 24S	R 33E
15022	MD	10391.4	TVD	377 FNL	1674 FWL
				4903 FSL	

	MD	N/S	E/W	VD
	10607	289.80	-2.60	10348.9
TOP PERFS/OH	10610	292.79	-2.59	10349.19
	10639	321.70	-2.50	10352.00
	14930	4610.50	-47.20	10392.80
BOT PERFS/OH	15022	4702.50	-50.88	10391.35
	15025	4705.50	-51.00	10391.30

NEXT TO LAST	15142	4822.20	-58.00	10387.30
LAST READING	15152	4832.10	-58.70	10387.00
TD	15152	4832.10	-58.70	10387.00

Surface Location	200	FS	1725	FW
Projected BHL	5032	FS	1666	FW
Location of				
Top Perfs/OH	493	FS	1722	FW
Bottom Perfs/OH	4903	FS	1674	FW

SUMMARY of Subsurface Locations

Surface Location	N-09-24S-33E	200	FS	1725	FW	Vert. Depth
Top Perfs/OH	N-09-24S-33E	493	FS	1722	FW	10349.19
Bottom Perfs/OH	C-09-24S-33E	4903	FS	1674	FW	10391.35
Projected TD	C-09-24S-33E	5032	FS	1666	FW	10387.00

AUG 05 2014

District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88346
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy, Minerals and Natural Resources

Revised August 1, 2011

HOBBS OGD
JUN 09 2014

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-41581
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator MURCHISON OIL & GAS, INC.		6. State Oil & Gas Lease No.
3. Address of Operator 1100 MIRA VISTA BLVD., PLANO, TX 75093		7. Lease Name or Unit Agreement Name MOGI 9 STATE COM
4. Well Location Unit Letter N : 200 feet from the S line and 1725 feet from the W line Section 9 Township 24S Range 33E NMPM LEA County		8. Well Number 005H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3608' GR		9. OGRID Number 15363
		10. Pool name or Wildcat TRIPLE X; BONE SPRING, WEST

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: PERFORATIONS ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

04/14 - 19/14: Frac w/Baker 16 stage system from 10,610'-15,022'; used 3,817,134 lbs sand, 79,127 bbls treated water & 1,971 bbls acid.

04/21 - 22/14: Milled out ports & circ hole clean. Started flowing well back at 12 PM; turned well over to production.

Spud Date: 3/03/2014

Rig Release Date: 04/04/2014

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Michael S. Daugherty TITLE EVP & COO DATE 06/05/2014

Type or print name Michael S. Daugherty E-mail address: mdaugherty@jdmii.com PHONE: 972-931-0700

For State Use Only

APPROVED BY: [Signature] TITLE _____ DATE 06/01/14
Conditions of Approval (if any):

FRAC DISCLOSURE IN WELL FILE. MGS

Submit To Appropriate District Office
Two Copies

District I
1625 N. French Dr., Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBBS OGD

JUN 09 2014

RECEIVED

State of New Mexico
Energy, Minerals and Natural Resources

Oil Conservation Division
220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-105
July 17, 2008

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

4. Reason for filing:

☒ **COMPLETION REPORT** (Fill in boxes #1 through #31 for State and Fee wells only)

☐ **C-144 CLOSURE ATTACHMENT** (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)

7. Type of Completion:

☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER

8. Name of Operator
MURCHISON OIL & GAS, INC.

10. Address of Operator
1100 MIRA VISTA BLVD., PLANO, TX 75093

12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	N	9	24S	33E		200	S	1725	W	LEA
BH:	C	9	24S	33E		330	N	1707	W	LEA

13. Date Spudded 03/03/2014 14. Date T.D. Reached 03/30/2014 15. Date Rig Released 04/04/2014 16. Date Completed (Ready to Produce) 04/22/2014 17. Elevations (DF and RKB, RT, GR, etc.) 3608' GR

18. Total Measured Depth of Well 15,152' 19. Plug Back Measured Depth 20. Was Directional Survey Made? YES 21. Type Electric and Other Logs Run Gamma Ray

22. Producing Interval(s), of this completion - Top, Bottom, Name
10610' MD - 15022' MD 1ST BONE SPRING SAND

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13.375	54.5	1308'	16	570sx/ CL C	
9.625	40	5207'	12.25	1775 sx/ CL C	
5.5	17	15142'	8.5	1980 sx/ CL H&C	

24. LINER RECORD **25. TUBING RECORD**

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number)
10610' TO 15022' - 16 STAGE SYSTEM

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
10610'-15022'	3,817,134 lbs sand, 79,127 bbls treated water & 1,971 bbls acid

28. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping - Size and type pump)	Well Status (Prod. or Shut-in)
05/01/2014	FLOWING	PRODUCING

Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
05/15/2014	24	60/64	24hr	1003	952	2936	949

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)
NA	425		1003	952	2936	44.6

29. Disposition of Gas (Sold, used for fuel, vented, etc.)
Sold

30. Test Witnessed By

31. List Attachments

32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.

33. If an on-site burial was used at the well, report the exact location of the on-site burial:
Currently drying cuttings; on-site burial not yet completed.

Latitude Longitude NAD 1983

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature *Michael S. Daugherty* Printed Name: Michael S. Daugherty Title: EVP & COO Date: 06/05/14

E-mail Address: mdaugherty@idmii.com

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn A"
T. Salt	T. Ranger Lake	T. Kirtland	T. Penn. "B"
B. Salt	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House	T. Leadville
T. Queen	T. Silurian	T. Menefee	T. Madison
T. Grayburg	T. Montoya	T. Point Lookout	T. Elbert
T. San Andres	T. Simpson	T. Mancos	T. McCracken
T. Glorieta	T. Rustler: 1,227'	T. Gallup	T. Ignacio Otzte
T. Paddock	T. Delaware Sd: 5,198'	Base Greenhorn	T. Granite
T. Blinebry	T. Cherry Canyon: 6,148'	T. Dakota	
T. Tubb	T. Brushy Canyon: 7,542'	T. Morrison	
T. Drinkard	T. Bone Spring: 9,095'	T. Todilto	
T. Abo	T. Avalon Shale: 9,242'	T. Entrada	
T. Wolfcamp	T. 1 st Bone Sd: 10,201'	T. Wingate	
T. Penn	T.	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

OIL OR GAS SANDS OR ZONES

No. 1: from 10610' TO 15022' MD
 No. 2, from.....to.....
 No. 3, from.....to.....
 No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology
0	1227	1227	Sand, orange shale				
1227	5198	3971	anhydrite, halite, dolomite, limestone, sand				
5198	9095	3897	sand, silt, black shale, limestone				
9095	9242	147	limestone, black shale, silt				
9242	10201	959	sand, silt, limestone				
10201	TD		sand, silt, limestone				

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-9720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
X AMENDED REPORT

HOBBS OCD

APR 25 2014

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-41581		² Pool Code 96674	³ Pool Name TRIPLE X; BONE SPRING, WEST
⁴ Property Code 39680	⁵ Property Name MOGI 9 STATE COM		⁶ Well Number 5H
⁷ OGRID No. 15363	⁸ Operator Name MURCHISON OIL & GAS, INC.		⁹ Elevation 3607.5

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	9	24 S	33 E		200	SOUTH	1725	WEST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	9	24 S	33 E		330	NORTH	1707	WEST	LEA

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
---	-------------------------------	----------------------------------	-------------------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

S89°44'58"W 2641.47 FT S89°46'50"W 2641.12 FT 1707' NW CORNER SEC. 9 LAT. = 32°14'21.945"N LONG. = 103°35'08.865"W W/4 CORNER SEC. 9 LAT. = 32°13'55.826"N LONG. = 103°35'08.854"W SW CORNER SEC. 9 LAT. = 32°13'29.702"N LONG. = 103°35'08.843"W 1725' N89°44'57"E 2639.61 FT N89°44'44"E 2642.23 FT SO025°11'E 2640.03 FT SO025°09'E 2640.53 FT DO024°52'W 2638.98 FT DO024°30'W 2639.95 FT 330' BOTTOM OF HOLE LAT. = 32°14'18.634"N LONG. = 103°34'49.008"W NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) IN DEGREES MINUTES DECIMAL SECONDS FORMAT. BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST (NAD83) COORDINATES MODIFIED TO SURFACE. MOGI "9" STATE COM #5H ELEV. = 3607.5' LAT. = 32°13'31.637"N (NAD83) LONG. = 103°34'48.766"W 200' SURFACE LOCATION S/4 CORNER SEC. 9 LAT. = 32°13'29.634"N LONG. = 103°34'38.121"W SE CORNER SEC. 9 LAT. = 32°13'29.565"N LONG. = 103°34'07.368"W		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order previously entered by the division. <i>Michael S. Daugherty</i> 4/21/14 Signature Date Michael S. Daugherty Printed Name mdaugherty@jdmii.com E-mail Address ¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. APR 27 2014 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor Certificate Number: FIDELON F. JARAMILLO, PLS 12797 SURVEY NO. 2426A
--	--	---

 MURCHISON OIL & GAS, INC.

HOBBS OCD

APR 25 2014

RECEIVED

Murchison Oil and Gas

Jackson Unit Section 9

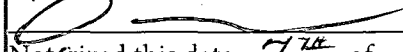
MOGI 9 State Com 5H

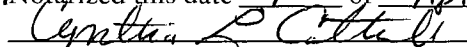
Survey: MOGI 9 State Com 5H

MOJO Standard Survey

04 April, 2014

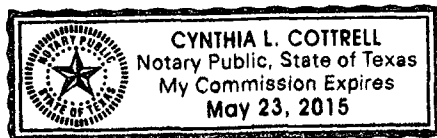
This survey is correct to the best of my knowledge and is supported
by actual field data.

 (Signature)
Notarized this date 7th of April, 2014


Notary Signature County of Collin State of Texas



MOJO
DIRECTIONAL CORPORATION



Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well MOGI 9 State Com 5H
Project:	Jackson Unit Section 9	TVD Reference:	WELL @ 3629.5usft (Original Well Elev)
Site:	MOGI 9 State Com 5H	MD Reference:	WELL @ 3629.5usft (Original Well Elev)
Well:	MOGI 9 State Com 5H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 5H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 5H	Database:	EDM 5000.1 Single User Db

Project	Jackson Unit Section 9		
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 5H		
Site Position:		Northing:	446,570.44 usft
From:	Lat/Long	Easting:	774,225.73 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 13' 31.637 N
		Longitude:	103° 34' 48.766 W
		Grid Convergence:	0.40 °

Well	MOGI 9 State Com 5H			
Well Position	+N/-S	0.0 usft	Northing:	446,570.44 usft
	+E/-W	0.0 usft	Easting:	774,225.73 usft
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft
			Latitude:	32° 13' 31.637 N
			Longitude:	103° 34' 48.766 W
			Ground Level:	3,607.5 usft

Wellbore	MOGI 9 State Com 5H				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	30/12/2013	7.28	60.12	48,360

Design	MOGI 9 State Com 5H				
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	359.51	

Survey Program	Date 04/04/2014				
From	To	Survey (Wellbore)	Tool Name	Description	
(usft)	(usft)				
100.0	15,152.0	MOGI 9 State Com 5H (MOGI 9 State Com	MWD	MWD - Standard	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well MOGI 9 State Com 5H
Project:	Jackson Unit Section 9	TVD Reference:	WELL @ 3629.5usft (Original Well Elev)
Site:	MOGI 9 State Com 5H	MD Reference:	WELL @ 3629.5usft (Original Well Elev)
Well:	MOGI 9 State Com 5H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 5H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 5H	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	-3,629.5	0.0	0.0	0.0	0.00	446,570.44	774,225.73	
100.0	0.42	349.69	100.0	-3,529.5	0.4	-0.1	0.4	0.42	446,570.80	774,225.66	
200.0	0.44	317.34	200.0	-3,429.5	1.0	-0.4	1.0	0.24	446,571.44	774,225.34	
300.0	0.12	253.29	300.0	-3,329.5	1.3	-0.8	1.3	0.40	446,571.70	774,224.98	
400.0	0.37	336.72	400.0	-3,229.5	1.5	-1.0	1.5	0.38	446,571.96	774,224.75	
500.0	0.38	266.72	500.0	-3,129.5	1.8	-1.4	1.8	0.43	446,572.24	774,224.29	
600.0	0.22	325.90	600.0	-3,029.5	1.9	-1.9	2.0	0.33	446,572.38	774,223.85	
700.0	0.45	272.14	700.0	-2,929.5	2.1	-2.4	2.1	0.37	446,572.55	774,223.35	
800.0	0.26	206.90	800.0	-2,829.5	1.9	-2.9	2.0	0.41	446,572.37	774,222.86	
900.0	0.08	9.55	900.0	-2,729.5	1.8	-3.0	1.8	0.34	446,572.23	774,222.77	
1,000.0	0.23	259.21	1,000.0	-2,629.5	1.8	-3.1	1.9	0.27	446,572.27	774,222.58	
1,100.0	0.25	172.61	1,100.0	-2,529.5	1.6	-3.3	1.6	0.33	446,572.01	774,222.41	
1,200.0	0.24	64.56	1,200.0	-2,429.5	1.4	-3.1	1.5	0.40	446,571.88	774,222.63	
1,227.0	0.18	52.60	1,227.0	-2,402.5	1.5	-3.0	1.5	0.27	446,571.94	774,222.71	
Rustler											
1,300.0	0.14	338.77	1,300.0	-2,329.5	1.6	-3.0	1.7	0.27	446,572.09	774,222.77	
1,307.0	0.14	340.85	1,307.0	-2,322.5	1.7	-3.0	1.7	0.07	446,572.10	774,222.77	
13 3/8"											
1,400.0	0.17	4.25	1,400.0	-2,229.5	1.9	-3.0	1.9	0.07	446,572.35	774,222.74	
1,500.0	0.71	15.24	1,500.0	-2,129.5	2.7	-2.8	2.7	0.54	446,573.10	774,222.91	
1,600.0	0.41	350.97	1,600.0	-2,029.5	3.6	-2.7	3.6	0.38	446,574.05	774,223.02	
1,700.0	0.66	27.19	1,700.0	-1,929.5	4.5	-2.5	4.5	0.41	446,574.91	774,223.23	
1,800.0	0.31	328.54	1,800.0	-1,829.5	5.2	-2.4	5.2	0.56	446,575.66	774,223.35	
1,900.0	0.29	61.46	1,900.0	-1,729.5	5.6	-2.3	5.6	0.44	446,576.01	774,223.43	
2,000.0	0.40	327.78	2,000.0	-1,629.5	6.0	-2.3	6.0	0.51	446,576.42	774,223.47	
2,100.0	0.22	34.35	2,100.0	-1,529.5	6.4	-2.3	6.5	0.37	446,576.88	774,223.39	
2,200.0	0.60	337.90	2,200.0	-1,429.5	7.1	-2.4	7.1	0.51	446,577.52	774,223.30	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well MOGI 9 State Com 5H
Project:	Jackson Unit Section 9	TVD Reference:	WELL @ 3629.5usft (Original Well Elev)
Site:	MOGI 9 State Com 5H	MD Reference:	WELL @ 3629.5usft (Original Well Elev)
Well:	MOGI 9 State Com 5H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 5H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 5H	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	0.27	41.88	2,300.0	-1,329.5	7.7	-2.5	7.8	0.54	446,578.18	774,223.26
2,400.0	0.59	14.62	2,400.0	-1,229.5	8.4	-2.2	8.4	0.37	446,578.86	774,223.55
2,500.0	0.64	346.69	2,500.0	-1,129.5	9.5	-2.2	9.5	0.30	446,579.90	774,223.55
2,600.0	0.70	22.04	2,599.9	-1,029.6	10.6	-2.1	10.6	0.41	446,581.01	774,223.65
2,700.0	1.03	353.87	2,699.9	-929.6	12.0	-1.9	12.0	0.53	446,582.47	774,223.78
2,800.0	0.90	15.59	2,799.9	-829.6	13.7	-1.8	13.7	0.39	446,584.12	774,223.90
2,900.0	1.31	16.26	2,899.9	-729.6	15.5	-1.3	15.5	0.41	446,585.97	774,224.43
3,000.0	0.97	51.80	2,999.9	-629.6	17.2	-0.3	17.2	0.77	446,587.59	774,225.42
3,100.0	0.97	36.57	3,099.9	-529.6	18.4	0.9	18.3	0.26	446,588.79	774,226.59
3,200.0	0.17	256.04	3,199.9	-429.6	19.0	1.2	19.0	1.11	446,589.44	774,226.95
3,300.0	0.87	280.47	3,299.9	-329.6	19.1	0.3	19.1	0.72	446,589.54	774,226.06
3,400.0	0.92	242.61	3,399.9	-229.6	18.9	-1.1	18.9	0.58	446,589.31	774,224.60
3,500.0	1.11	219.60	3,499.8	-129.7	17.8	-2.5	17.8	0.45	446,588.19	774,223.27
3,600.0	1.45	187.10	3,599.8	-29.7	15.8	-3.2	15.8	0.79	446,586.19	774,222.49
3,700.0	1.82	197.14	3,699.8	70.3	13.0	-3.9	13.0	0.47	446,583.42	774,221.87
3,800.0	1.58	208.95	3,799.7	170.2	10.3	-5.0	10.3	0.42	446,580.70	774,220.73
3,900.0	1.41	193.69	3,899.7	270.2	7.9	-6.0	7.9	0.43	446,578.29	774,219.77
4,000.0	1.50	190.46	3,999.7	370.2	5.4	-6.5	5.4	0.12	446,575.81	774,219.24
4,100.0	1.12	200.68	4,099.6	470.1	3.2	-7.1	3.2	0.44	446,573.61	774,218.66
4,200.0	1.10	182.69	4,199.6	570.1	1.3	-7.5	1.4	0.35	446,571.74	774,218.27
4,300.0	1.39	196.56	4,299.6	670.1	-0.8	-7.8	-0.8	0.42	446,569.62	774,217.88
4,400.0	1.18	166.98	4,399.6	770.1	-3.0	-8.0	-2.9	0.69	446,567.45	774,217.77
4,500.0	2.47	130.44	4,499.5	870.0	-5.4	-6.1	-5.3	1.68	446,565.05	774,219.64
4,600.0	2.41	137.93	4,599.4	969.9	-8.4	-3.0	-8.3	0.32	446,562.09	774,222.69
4,700.0	2.61	132.91	4,699.3	1,069.8	-11.5	0.0	-11.5	0.30	446,558.98	774,225.76
4,800.0	2.86	132.99	4,799.2	1,169.7	-14.7	3.5	-14.7	0.25	446,555.73	774,229.26
4,900.0	2.81	136.67	4,899.1	1,269.6	-18.2	7.0	-18.3	0.19	446,552.24	774,232.76

Company:		Murchison Oil and Gas				Local Co-ordinate Reference:			Well MOGI 9 State Com 5H		
Project:		Jackson Unit Section 9				TVD Reference:			WELL @ 3629.5usft (Original Well Elev)		
Site:		MOGI 9 State Com 5H				MD Reference:			WELL @ 3629.5usft (Original Well Elev)		
Well:		MOGI 9 State Com 5H				North Reference:			Grid		
Wellbore:		MOGI 9 State Com 5H				Survey Calculation Method:			Minimum Curvature		
Design:		MOGI 9 State Com 5H				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	2.60	131.12	4,999.0	1,369.5	-21.5	10.4	-21.6	0.34	446,548.97	774,236.15	
5,066.0	2.24	130.87	5,064.9	1,435.4	-23.3	12.5	-23.4	0.55	446,547.14	774,238.26	
5,198.0	2.38	134.09	5,196.8	1,567.3	-26.9	16.4	-27.0	0.14	446,543.54	774,242.18	
Delaware											
5,200.0	2.38	134.14	5,198.8	1,569.3	-27.0	16.5	-27.1	0.14	446,543.49	774,242.24	
9 5/8"											
5,216.0	2.40	134.50	5,214.8	1,585.3	-27.4	17.0	-27.6	0.14	446,543.02	774,242.71	
5,310.0	0.80	100.00	5,308.8	1,679.3	-28.9	19.0	-29.1	1.91	446,541.53	774,244.76	
5,404.0	0.60	17.10	5,402.8	1,773.3	-28.6	19.8	-28.7	1.00	446,541.88	774,245.56	
5,499.0	1.80	3.70	5,497.7	1,868.2	-26.6	20.1	-26.8	1.29	446,543.85	774,245.80	
5,594.0	0.40	199.00	5,592.7	1,963.2	-25.4	20.1	-25.6	2.30	446,545.02	774,245.79	
5,688.0	0.70	228.50	5,686.7	2,057.2	-26.1	19.5	-26.3	0.43	446,544.33	774,245.25	
5,783.0	0.60	352.80	5,781.7	2,152.2	-26.0	19.0	-26.2	1.21	446,544.44	774,244.75	
5,876.0	0.70	335.60	5,874.7	2,245.2	-25.0	18.7	-25.2	0.23	446,545.44	774,244.46	
5,971.0	0.40	265.60	5,969.7	2,340.2	-24.5	18.2	-24.7	0.71	446,545.95	774,243.89	
6,066.0	1.00	238.60	6,064.7	2,435.2	-25.0	17.1	-25.1	0.70	446,545.49	774,242.85	
6,148.0	0.58	37.17	6,146.7	2,517.2	-25.0	16.8	-25.1	1.89	446,545.44	774,242.49	
Cherry Canyon											
6,160.0	0.80	41.00	6,158.7	2,529.2	-24.9	16.8	-25.0	1.89	446,545.56	774,242.58	
6,255.0	0.80	79.70	6,253.7	2,624.2	-24.3	17.9	-24.4	0.56	446,546.17	774,243.67	
6,349.0	1.20	260.40	6,347.7	2,718.2	-24.3	17.6	-24.5	2.13	446,546.13	774,243.34	
6,443.0	0.60	246.50	6,441.7	2,812.2	-24.7	16.2	-24.8	0.67	446,545.77	774,241.92	
6,538.0	0.50	249.50	6,536.7	2,907.2	-25.0	15.3	-25.1	0.11	446,545.42	774,241.08	
6,632.0	0.40	269.10	6,630.7	3,001.2	-25.2	14.6	-25.3	0.19	446,545.28	774,240.36	
6,727.0	0.50	253.50	6,725.7	3,096.2	-25.3	13.9	-25.4	0.17	446,545.15	774,239.63	
6,821.0	0.20	226.40	6,819.7	3,190.2	-25.5	13.4	-25.6	0.36	446,544.92	774,239.12	
6,916.0	0.60	46.60	6,914.7	3,285.2	-25.3	13.6	-25.4	0.84	446,545.15	774,239.36	

Company:		Murchison Oil and Gas				Local Co-ordinate Reference:			Well MOGI 9 State Com 5H.		
Project:		Jackson Unit Section 9				TVD Reference:			WELL @ 3629.5usft (Original Well Elev)		
Site:		MOGI 9 State Com 5H				MD Reference:			WELL @ 3629.5usft (Original Well Elev)		
Well:		MOGI 9 State Com 5H				North Reference:			Grid		
Wellbore:		MOGI 9 State Com 5H				Survey Calculation Method:			Minimum Curvature		
Design:		MOGI 9 State Com 5H				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)	
7,010.0	0.70	40.80	7,008.7	3,379.2	-24.5	14.4	-24.6	0.13	446,545.92	774,240.10	
7,105.0	0.70	48.90	7,103.6	3,474.1	-23.7	15.2	-23.8	0.10	446,546.74	774,240.91	
7,200.0	0.40	62.60	7,198.6	3,569.1	-23.2	15.9	-23.3	0.34	446,547.28	774,241.64	
7,294.0	0.10	348.20	7,292.6	3,663.1	-22.9	16.2	-23.1	0.41	446,547.51	774,241.92	
7,390.0	0.20	151.70	7,388.6	3,759.1	-23.0	16.3	-23.1	0.31	446,547.44	774,241.98	
7,485.0	0.10	157.00	7,483.6	3,854.1	-23.2	16.4	-23.4	0.11	446,547.22	774,242.09	
7,542.0	0.28	166.14	7,540.6	3,911.1	-23.4	16.4	-23.5	0.31	446,547.04	774,242.14	
Brushy Canyon											
7,581.0	0.40	167.70	7,579.6	3,950.1	-23.6	16.5	-23.8	0.31	446,546.82	774,242.20	
7,676.0	0.30	183.50	7,674.6	4,045.1	-24.2	16.5	-24.3	0.15	446,546.24	774,242.25	
7,771.0	0.20	201.10	7,769.6	4,140.1	-24.6	16.4	-24.7	0.13	446,545.84	774,242.18	
7,866.0	0.40	212.70	7,864.6	4,235.1	-25.0	16.2	-25.2	0.22	446,545.41	774,241.94	
7,962.0	0.50	221.90	7,960.6	4,331.1	-25.6	15.7	-25.8	0.13	446,544.81	774,241.48	
8,057.0	0.40	194.60	8,055.6	4,426.1	-26.3	15.4	-26.4	0.25	446,544.18	774,241.12	
8,153.0	0.60	170.90	8,151.6	4,522.1	-27.1	15.4	-27.2	0.30	446,543.36	774,241.11	
8,248.0	0.40	205.50	8,246.6	4,617.1	-27.9	15.3	-28.0	0.37	446,542.57	774,241.05	
8,343.0	0.90	198.50	8,341.6	4,712.1	-28.9	14.9	-29.0	0.53	446,541.57	774,240.67	
8,439.0	1.00	202.20	8,437.6	4,808.1	-30.4	14.4	-30.5	0.12	446,540.08	774,240.11	
8,535.0	1.50	190.20	8,533.6	4,904.1	-32.4	13.8	-32.5	0.59	446,538.06	774,239.57	
8,630.0	1.80	193.20	8,628.5	4,999.0	-35.1	13.3	-35.2	0.33	446,535.39	774,239.01	
8,726.0	2.60	194.30	8,724.5	5,095.0	-38.6	12.4	-38.7	0.83	446,531.81	774,238.13	
8,822.0	6.30	180.60	8,820.2	5,190.7	-46.0	11.8	-46.1	3.98	446,524.43	774,237.54	
8,917.0	8.50	171.80	8,914.4	5,284.9	-58.2	12.8	-58.3	2.60	446,512.27	774,238.48	
9,013.0	7.30	175.30	9,009.5	5,380.0	-71.3	14.3	-71.4	1.35	446,499.17	774,240.00	
9,095.0	4.82	178.81	9,091.0	5,461.5	-79.9	14.8	-80.0	3.06	446,490.53	774,240.49	
Bone Spring											
9,109.0	4.40	179.80	9,104.9	5,475.4	-81.0	14.8	-81.2	3.06	446,489.40	774,240.51	

Company:		Murchison Oil and Gas				Local Co-ordinate Reference:			Well MOGI 9 State Com 5H		
Project:		Jackson Unit Section 9				TVD Reference:			WELL @ 3629.5usft (Original Well Elev)		
Site:		MOGI 9 State Com 5H				MD Reference:			WELL @ 3629.5usft (Original Well Elev)		
Well:		MOGI 9 State Com 5H				North Reference:			Grid		
Wellbore:		MOGI 9 State Com 5H				Survey Calculation Method:			Minimum Curvature		
Design:		MOGI 9 State Com 5H				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)	
9,204.0	1.70	203.80	9,199.8	5,570.3	-86.0	14.2	-86.1	3.08	446,484.47	774,239.95	
9,242.0	1.94	204.18	9,237.8	5,608.3	-87.1	13.7	-87.2	0.63	446,483.37	774,239.46	
Avalon Shale											
9,299.0	2.30	204.60	9,294.7	5,665.2	-89.0	12.9	-89.1	0.63	446,481.45	774,238.59	
9,395.0	5.60	187.60	9,390.5	5,761.0	-95.4	11.4	-95.5	3.61	446,475.05	774,237.17	
9,490.0	7.00	188.60	9,484.9	5,855.4	-105.7	10.0	-105.8	1.48	446,464.73	774,235.69	
9,585.0	6.20	181.30	9,579.3	5,949.8	-116.6	9.0	-116.6	1.22	446,453.88	774,234.71	
9,681.0	5.90	176.50	9,674.8	6,045.3	-126.7	9.2	-126.7	0.61	446,443.77	774,234.89	
9,777.0	4.70	190.70	9,770.4	6,140.9	-135.5	8.7	-135.5	1.84	446,434.98	774,234.46	
9,839.0	4.60	199.00	9,832.2	6,202.7	-140.3	7.5	-140.4	1.10	446,430.13	774,233.18	
9,873.0	3.70	199.70	9,866.1	6,236.6	-142.6	6.6	-142.7	2.65	446,427.81	774,232.37	
9,905.0	1.10	196.20	9,898.0	6,268.5	-143.9	6.2	-143.9	8.13	446,426.54	774,231.93	
9,937.0	2.60	18.00	9,930.0	6,300.5	-143.5	6.3	-143.6	11.56	446,426.94	774,232.07	
9,970.0	6.40	8.60	9,962.9	6,333.4	-141.0	6.8	-141.0	11.69	446,429.47	774,232.58	
10,001.0	10.60	3.00	9,993.6	6,364.1	-136.4	7.3	-136.5	13.79	446,434.03	774,232.99	
10,033.0	14.10	358.60	10,024.8	6,395.3	-129.6	7.3	-129.6	11.32	446,440.87	774,233.05	
10,065.0	17.50	355.30	10,055.6	6,426.1	-120.9	6.8	-120.9	10.99	446,449.56	774,232.56	
10,097.0	21.30	354.00	10,085.8	6,456.3	-110.3	5.8	-110.3	11.95	446,460.14	774,231.55	
10,129.0	25.00	353.50	10,115.2	6,485.7	-97.8	4.5	-97.8	11.58	446,472.64	774,230.18	
10,160.0	28.80	353.90	10,142.9	6,513.4	-83.9	2.9	-83.9	12.27	446,486.58	774,228.64	
10,192.0	32.80	355.50	10,170.3	6,540.8	-67.5	1.4	-67.6	12.76	446,502.89	774,227.15	
10,201.0	34.04	355.80	10,177.8	6,548.3	-62.6	1.0	-62.6	13.87	446,507.84	774,226.77	
1st Bone Spring											
10,224.0	37.20	356.50	10,196.5	6,567.0	-49.2	0.1	-49.2	13.87	446,521.20	774,225.87	
10,256.0	42.50	356.70	10,221.1	6,591.6	-28.8	-1.1	-28.8	16.57	446,541.66	774,224.66	
10,288.0	48.60	356.70	10,243.5	6,614.0	-6.0	-2.4	-6.0	19.06	446,564.46	774,223.35	
10,320.0	54.30	357.90	10,263.4	6,633.9	19.0	-3.6	19.0	18.05	446,589.44	774,222.18	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well MOGI 9 State Com 5H
Project:	Jackson Unit Section 9	TVD Reference:	WELL @ 3629.5usft (Original Well Elev)
Site:	MOGI 9 State Com 5H	MD Reference:	WELL @ 3629.5usft (Original Well Elev)
Well:	MOGI 9 State Com 5H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 5H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 5H	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)
10,352.0	59.70	359.00	10,280.9	6,651.4	45.8	-4.3	45.9	17.12	446,616.26	774,221.46
10,383.0	64.90	0.20	10,295.3	6,665.8	73.3	-4.5	73.3	17.12	446,643.70	774,221.28
10,415.0	70.10	0.00	10,307.5	6,678.0	102.8	-4.4	102.8	16.26	446,673.25	774,221.33
10,447.0	73.40	0.70	10,317.5	6,688.0	133.2	-4.2	133.2	10.52	446,703.64	774,221.51
10,479.0	75.90	1.10	10,326.0	6,696.5	164.0	-3.7	164.1	7.90	446,734.49	774,222.00
10,511.0	76.90	1.40	10,333.5	6,704.0	195.1	-3.1	195.2	3.26	446,765.58	774,222.68
10,543.0	79.50	0.40	10,340.1	6,710.6	226.5	-2.6	226.5	8.68	446,796.90	774,223.17
10,575.0	82.70	359.70	10,345.0	6,715.5	258.1	-2.5	258.1	10.23	446,828.51	774,223.19
10,607.0	83.40	0.00	10,348.9	6,719.4	289.8	-2.6	289.8	2.38	446,860.27	774,223.11
10,639.0	85.40	0.40	10,352.0	6,722.5	321.7	-2.5	321.7	6.37	446,892.12	774,223.22
10,671.0	89.10	0.00	10,353.5	6,724.0	353.6	-2.4	353.6	11.63	446,924.08	774,223.33
10,702.0	90.30	0.20	10,353.7	6,724.2	384.6	-2.3	384.6	3.92	446,955.08	774,223.39
10,734.0	89.80	0.20	10,353.7	6,724.2	416.6	-2.2	416.6	1.56	446,987.08	774,223.50
10,765.0	89.50	0.60	10,353.9	6,724.4	447.6	-2.0	447.6	1.61	447,018.07	774,223.72
10,829.0	90.10	1.40	10,354.1	6,724.6	511.6	-0.9	511.6	1.56	447,082.06	774,224.83
10,924.0	87.60	0.20	10,356.0	6,726.5	606.6	0.4	606.6	2.92	447,177.03	774,226.16
11,019.0	89.00	0.20	10,358.8	6,729.3	701.5	0.8	701.5	1.47	447,271.98	774,226.49
11,114.0	91.10	359.50	10,358.7	6,729.2	796.5	0.5	796.5	2.33	447,366.98	774,226.24
11,210.0	91.10	0.40	10,356.9	6,727.4	892.5	0.4	892.5	0.94	447,462.96	774,226.16
11,305.0	90.40	359.30	10,355.6	6,726.1	987.5	0.2	987.5	1.37	447,557.95	774,225.91
11,400.0	89.80	0.00	10,355.5	6,726.0	1,082.5	-0.4	1,082.5	0.97	447,652.94	774,225.33
11,495.0	90.10	359.10	10,355.6	6,726.1	1,177.5	-1.1	1,177.5	1.00	447,747.94	774,224.58
11,591.0	89.20	359.10	10,356.1	6,726.6	1,273.5	-2.7	1,273.5	0.94	447,843.92	774,223.08
11,686.0	90.40	358.40	10,356.5	6,727.0	1,368.5	-4.7	1,368.4	1.46	447,938.90	774,221.00
11,782.0	89.10	358.60	10,356.9	6,727.4	1,464.4	-7.2	1,464.4	1.37	448,034.86	774,218.49
11,875.0	89.60	357.90	10,358.0	6,728.5	1,557.4	-10.1	1,557.4	0.92	448,127.81	774,215.65
11,971.0	89.00	357.40	10,359.1	6,729.6	1,653.3	-14.0	1,653.3	0.81	448,223.72	774,211.71

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well MOGI 9 State Com 5H
Project:	Jackson Unit Section 9	TVD Reference:	WELL @ 3629.5usft (Original Well Elev)
Site:	MOGI 9 State Com 5H	MD Reference:	WELL @ 3629.5usft (Original Well Elev)
Well:	MOGI 9 State Com 5H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 5H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 5H	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)	
12,066.0	87.40	356.70	10,362.1	6,732.6	1,748.1	-18.9	1,748.2	1.84	448,318.55	774,206.83	
12,162.0	87.80	357.90	10,366.1	6,736.6	1,843.9	-23.4	1,844.0	1.32	448,414.36	774,202.31	
12,257.0	88.30	359.00	10,369.4	6,739.9	1,938.8	-26.0	1,939.0	1.27	448,509.26	774,199.74	
12,353.0	89.10	358.40	10,371.5	6,742.0	2,034.8	-28.2	2,034.9	1.04	448,605.21	774,197.56	
12,447.0	89.60	357.60	10,372.6	6,743.1	2,128.7	-31.4	2,128.9	1.00	448,699.15	774,194.28	
12,543.0	90.00	359.50	10,372.9	6,743.4	2,224.7	-33.9	2,224.9	2.02	448,795.11	774,191.86	
12,638.0	89.50	359.70	10,373.4	6,743.9	2,319.7	-34.5	2,319.9	0.57	448,890.11	774,191.19	
12,734.0	87.10	359.00	10,376.2	6,746.7	2,415.6	-35.6	2,415.8	2.60	448,986.05	774,190.10	
12,829.0	87.60	358.60	10,380.6	6,751.1	2,510.5	-37.6	2,510.7	0.67	449,080.93	774,188.12	
12,925.0	87.70	0.20	10,384.5	6,755.0	2,606.4	-38.6	2,606.6	1.67	449,176.84	774,187.11	
13,020.0	88.50	0.00	10,387.7	6,758.2	2,701.3	-38.5	2,701.6	0.87	449,271.79	774,187.28	
13,116.0	90.10	0.00	10,388.9	6,759.4	2,797.3	-38.5	2,797.6	1.67	449,367.78	774,187.28	
13,212.0	87.60	358.80	10,390.8	6,761.3	2,893.3	-39.5	2,893.5	2.89	449,463.74	774,186.27	
13,307.0	88.90	358.80	10,393.7	6,764.2	2,988.2	-41.4	2,988.5	1.37	449,558.68	774,184.28	
13,403.0	90.00	358.60	10,394.6	6,765.1	3,084.2	-43.6	3,084.5	1.16	449,654.65	774,182.11	
13,498.0	90.90	358.30	10,393.9	6,764.4	3,179.2	-46.2	3,179.4	1.00	449,749.61	774,179.54	
13,594.0	90.00	357.90	10,393.1	6,763.6	3,275.1	-49.4	3,275.4	1.03	449,845.55	774,176.35	
13,690.0	91.50	357.90	10,391.8	6,762.3	3,371.0	-52.9	3,371.4	1.56	449,941.47	774,172.84	
13,786.0	90.00	357.40	10,390.6	6,761.1	3,466.9	-56.8	3,467.3	1.65	450,037.38	774,168.90	
13,881.0	89.70	358.30	10,390.8	6,761.3	3,561.9	-60.4	3,562.3	1.00	450,132.31	774,165.34	
13,976.0	90.00	359.50	10,391.1	6,761.6	3,656.9	-62.2	3,657.3	1.30	450,227.29	774,163.51	
14,072.0	90.00	1.80	10,391.1	6,761.6	3,752.8	-61.1	3,753.2	2.40	450,323.28	774,164.60	
14,167.0	91.00	1.40	10,390.3	6,760.8	3,847.8	-58.5	3,848.2	1.13	450,418.24	774,167.26	
14,262.0	89.60	1.40	10,389.8	6,760.3	3,942.8	-56.2	3,943.1	1.47	450,513.21	774,169.58	
14,358.0	89.80	0.60	10,390.3	6,760.8	4,038.7	-54.5	4,039.1	0.86	450,609.19	774,171.25	
14,453.0	88.90	1.80	10,391.3	6,761.8	4,133.7	-52.5	4,134.0	1.58	450,704.16	774,173.24	
14,549.0	89.50	0.70	10,392.7	6,763.2	4,229.7	-50.4	4,230.0	1.31	450,800.13	774,175.33	

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well MOGI 9 State Com 5H
Project:	Jackson Unit Section 9	TVD Reference:	WELL @ 3629.5usft (Original Well Elev)
Site:	MOGI 9 State Com 5H	MD Reference:	WELL @ 3629.5usft (Original Well Elev)
Well:	MOGI 9 State Com 5H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 5H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 5H	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)	
14,644.0	88.30	1.80	10,394.5	6,765.0	4,324.6	-48.3	4,324.9	1.71	450,895.08	774,177.41	
14,739.0	90.40	1.30	10,395.6	6,766.1	4,419.6	-45.8	4,419.8	2.27	450,990.04	774,179.98	
14,835.0	91.30	359.30	10,394.2	6,764.7	4,515.6	-45.3	4,515.8	2.28	451,086.02	774,180.48	
14,930.0	90.30	358.40	10,392.8	6,763.3	4,610.5	-47.2	4,610.8	1.42	451,180.99	774,178.57	
15,025.0	91.50	357.00	10,391.3	6,761.8	4,705.5	-51.0	4,705.7	1.94	451,275.90	774,174.76	
15,106.0	92.20	356.30	10,388.7	6,759.2	4,786.3	-55.7	4,786.6	1.22	451,356.72	774,170.03	
15,142.0	92.20	356.30	10,387.3	6,757.8	4,822.2	-58.0	4,822.5	0.00	451,392.61	774,167.71	
5 1/2"											
15,152.0	92.20	356.30	10,387.0	6,757.5	4,832.1	-58.7	4,832.5	0.00	451,402.59	774,167.06	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,307.0	1,307.0	13 3/8"	13-3/8	16	
5,200.0	5,198.8	9 5/8"	9-5/8	12-1/4	
15,142.0	10,387.3	5 1/2"	5-1/2	8-1/2	

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Dip (°)	
5,198.0	5,196.8	Delaware	0.00	
7,542.0	7,540.6	Brushy Canyon	0.00	
6,148.0	6,146.7	Cherry Canyon	0.00	
10,201.0	10,177.8	1st Bone Spring	0.00	
1,227.0	1,227.0	Rustler	0.00	
9,242.0	9,237.8	Avalon Shale	0.00	
9,095.0	9,091.0	Bone Spring	0.00	

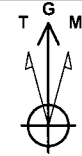
Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well MOGI 9 State Com 5H
Project:	Jackson Unit Section 9	TVD Reference:	WELL @ 3629.5usft (Original Well Elev)
Site:	MOGI 9 State Com 5H	MD Reference:	WELL @ 3629.5usft (Original Well Elev)
Well:	MOGI 9 State Com 5H	North Reference:	Grid
Wellbore:	MOGI 9 State Com 5H	Survey Calculation Method:	Minimum Curvature
Design:	MOGI 9 State Com 5H	Database:	EDM 5000.1 Single User Db

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,444.0	10,316.7	130.3	-4.3	Cross South Hard Boundary @ 10444ft MD
15,069.0	10,390.0	4,749.4	-53.4	Cross North Hard Boundary @ 15069 ftMD

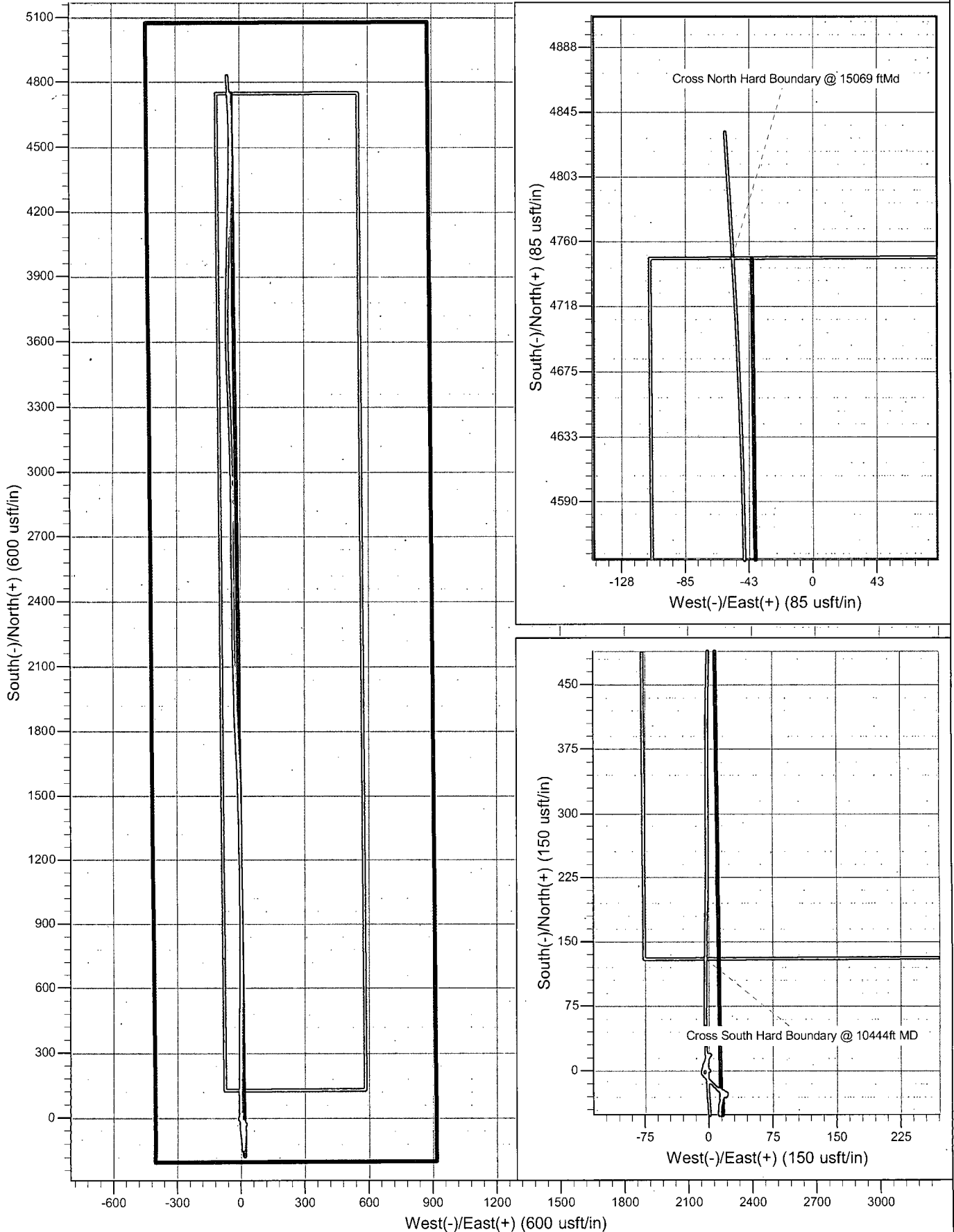
Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------

Project: Jackson Unit Section 9
 Site: MOGI 9 State Com 5H
 Well: MOGI 9 State Com 5H
 Wellbore: MOGI 9 State Com 5H
 Design: MOGI 9 State Com 5H

 MURCHISON OIL & GAS, INC.



Azimuths to Grid North
 True North: -0.40°
 Magnetic North: 6.87°
 Magnetic Field
 Strength: 48360.5nT
 Dip Angle: 60.12°
 Date: 30/12/2013
 Model: IGRF2010

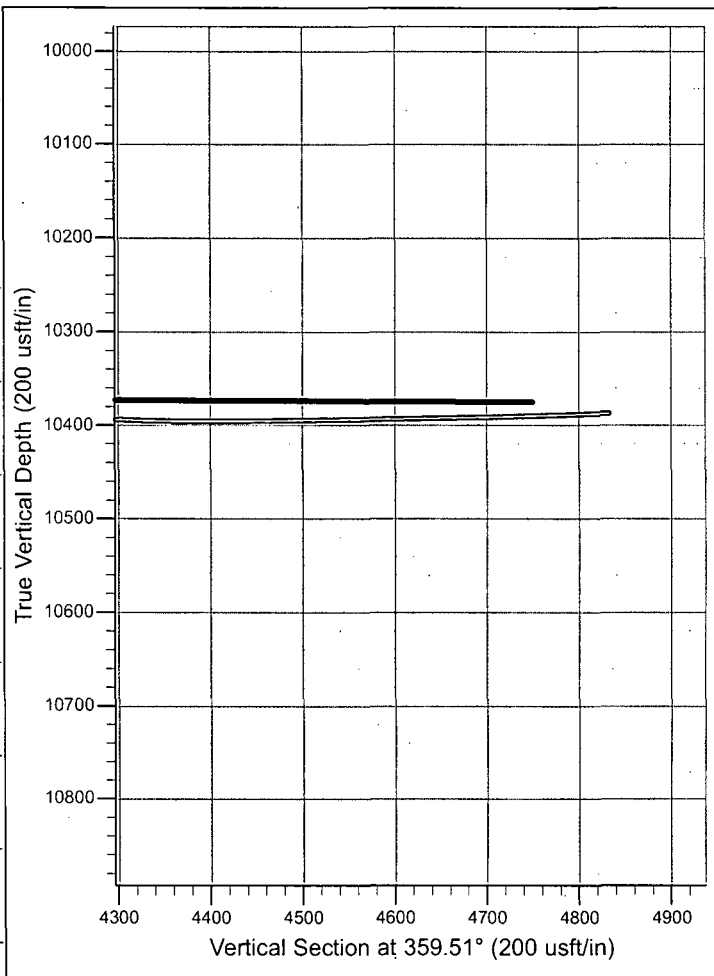
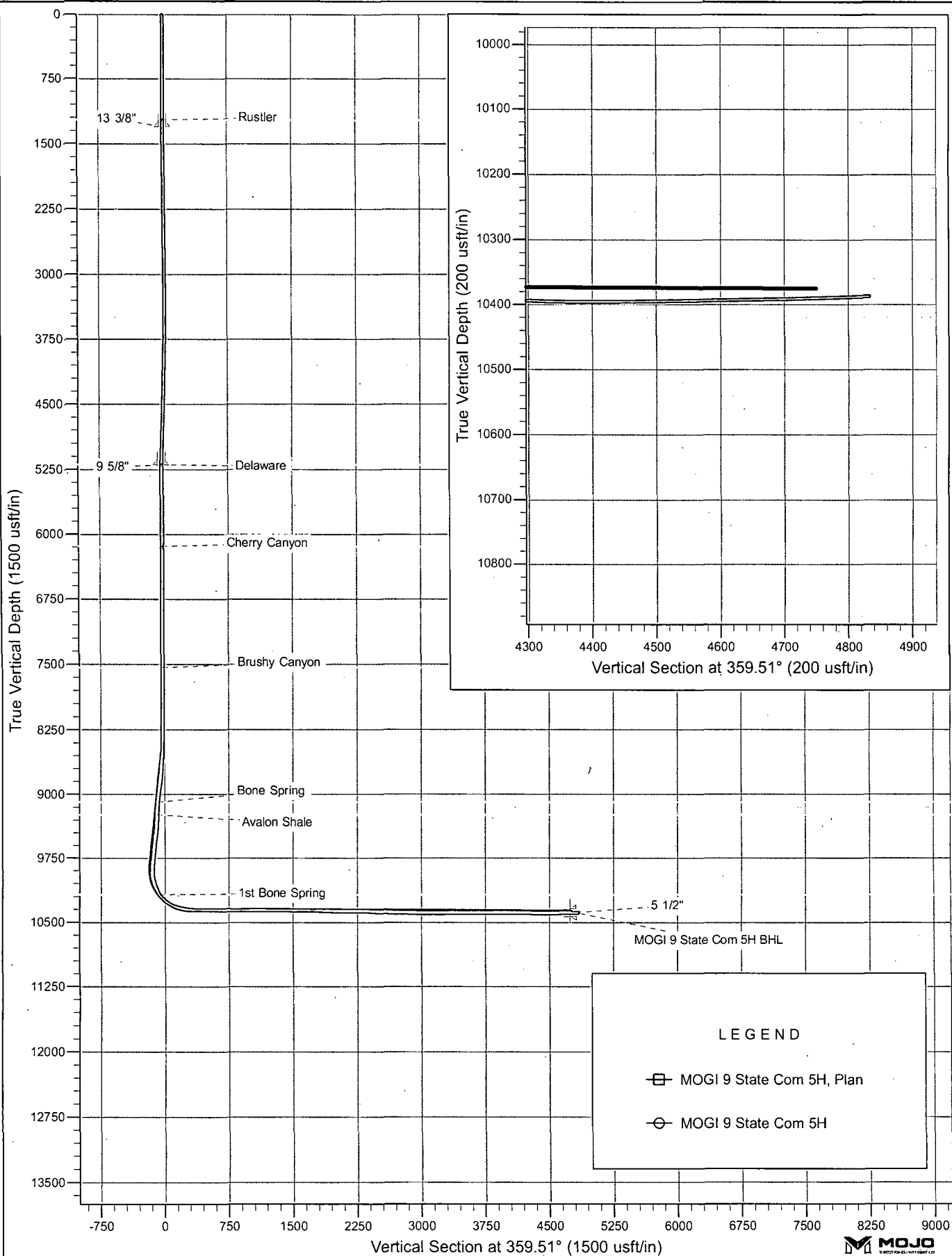


Project: Jackson Unit Section 9
 Site: MOGI 9 State Com 5H
 Well: MOGI 9 State Com 5H
 Wellbore: MOGI 9 State Com 5H
 Design: MOGI 9 State Com 5H

 **MURCHISON OIL & GAS, INC.**



Azimuths to Grid North
 True North: -0.40°
 Magnetic North: 6.87°
 Magnetic Field
 Strength: 48360.5nT
 Dip Angle: 60.12°
 Date: 30/12/2013
 Model: IGRF2010



LEGEND

 MOGI 9 State Com 5H, Plan

 MOGI 9 State Com 5H



Job Number: SVMO-140304
 Company: Murchison Oil & Gas
 Lease/Well: Mogi 9 State Com 5H
 Location: Lea County, NM
 Rig Name: Nabors #M29
 RKB: 22'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 6.89°
 Grid: East To Grid North
 File name: S:\2014SU-1\MURCHI-1\MO\MOJI9STC5H.SVY
 Date/Time: 13-Mar-14 / 10:20
 Curve Name: Surface - 5066' M.D. (Rate Gyro)

HOBBS OCD

MS SURVEY

APR 25 2014

RECEIVED

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 359.51
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 5066' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
 Travis Pack 3/13/14
 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	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.42	349.69	100.00	.36	-.07	.36	.37	349.69	.42
200.00	.44	317.34	200.00	1.00	-.39	1.01	1.08	338.69	.24
300.00	.12	253.29	300.00	1.26	-.75	1.26	1.46	329.09	.40
400.00	.37	336.72	399.99	1.52	-.98	1.53	1.81	327.23	.38
500.00	.38	266.72	499.99	1.80	-1.44	1.81	2.30	321.37	.43
600.00	.22	325.90	599.99	1.94	-1.88	1.96	2.70	315.94	.33
700.00	.45	272.14	699.99	2.11	-2.38	2.13	3.18	311.64	.37
800.00	.26	206.90	799.99	1.93	-2.87	1.95	3.46	303.84	.41
900.00	.08	9.55	899.99	1.79	-2.96	1.82	3.46	301.17	.34

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	.23	259.21	999.99	1.82	-3.15	1.85	3.64	300.08	.27
1100.00	.25	172.61	1099.99	1.57	-3.32	1.60	3.67	295.32	.33
1200.00	.24	64.56	1199.99	1.44	-3.10	1.47	3.42	294.96	.40
1300.00	.14	338.77	1299.99	1.65	-2.96	1.67	3.38	299.13	.27
1400.00	.17	4.25	1399.99	1.91	-2.99	1.93	3.55	302.56	.07
1500.00	.71	15.24	1499.98	2.65	-2.82	2.68	3.87	313.32	.54
1600.00	.41	350.97	1599.98	3.61	-2.71	3.63	4.51	323.09	.38
1700.00	.66	27.19	1699.97	4.47	-2.50	4.49	5.12	330.78	.41
1800.00	.31	328.54	1799.97	5.21	-2.38	5.23	5.73	335.47	.56
1900.00	.29	61.46	1899.97	5.57	-2.30	5.59	6.02	337.56	.44
2000.00	.40	327.78	1999.97	5.98	-2.26	6.00	6.40	339.29	.51
2100.00	.22	34.35	2099.97	6.44	-2.34	6.46	6.85	340.02	.37
2200.00	.60	337.90	2199.96	7.08	-2.43	7.10	7.48	341.07	.51
2300.00	.27	41.88	2299.96	7.74	-2.47	7.76	8.12	342.31	.54
2400.00	.59	14.62	2399.96	8.41	-2.18	8.43	8.69	345.47	.37
2500.00	.64	346.69	2499.95	9.46	-2.18	9.47	9.70	347.02	.30
2600.00	.70	22.04	2599.95	10.57	-2.08	10.58	10.77	348.87	.41
2700.00	1.03	353.87	2699.94	12.03	-1.95	12.04	12.18	350.81	.53
2800.00	.90	15.59	2799.92	13.68	-1.83	13.69	13.80	352.37	.39
2900.00	1.31	16.26	2899.90	15.53	-1.30	15.54	15.58	355.22	.41
3000.00	.97	51.80	2999.88	17.15	-.31	17.15	17.15	358.95	.77
3100.00	.97	36.57	3099.87	18.35	.86	18.35	18.37	2.67	.26
3200.00	.17	256.04	3199.87	19.00	1.22	18.99	19.04	3.66	1.11
3300.00	.87	280.47	3299.86	19.10	.32	19.10	19.10	.97	.72
3400.00	.92	242.61	3399.85	18.87	-1.13	18.88	18.90	356.56	.58
3500.00	1.11	219.60	3499.84	17.75	-2.46	17.77	17.92	352.10	.45
3600.00	1.45	187.10	3599.81	15.75	-3.24	15.78	16.08	348.38	.79
3700.00	1.82	197.14	3699.77	12.98	-3.86	13.01	13.54	343.42	.47
3800.00	1.58	208.95	3799.73	10.25	-5.00	10.30	11.41	334.01	.42

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	1.41	193.69	3899.69	7.85	-5.96	7.90	9.86	322.82	.43
4000.00	1.50	190.46	3999.66	5.37	-6.49	5.43	8.42	309.62	.12
4100.00	1.12	200.68	4099.63	3.17	-7.07	3.23	7.75	294.14	.44
4200.00	1.10	182.69	4199.62	1.30	-7.46	1.36	7.57	279.85	.35
4300.00	1.39	196.56	4299.59	-.83	-7.85	-.76	7.89	263.99	.42
4400.00	1.18	166.98	4399.57	-2.99	-7.96	-2.92	8.51	249.41	.69
4500.00	2.47	130.44	4499.52	-5.39	-6.09	-5.34	8.14	228.48	1.68
4600.00	2.41	137.93	4599.43	-8.35	-3.04	-8.33	8.89	200.01	.32
4700.00	2.61	132.91	4699.33	-11.46	.03	-11.46	11.46	179.83	.30
4800.00	2.86	132.99	4799.22	-14.71	3.53	-14.74	15.13	166.52	.25
4900.00	2.81	136.67	4899.10	-18.20	7.03	-18.26	19.51	158.87	.19
5000.00	2.60	131.12	4998.98	-21.47	10.42	-21.56	23.87	154.10	.34
Last Survey Depth Recorded									
5066.00	2.24	130.87	5064.93	-23.30	12.53	-23.41	26.46	151.74	.55