

HOBBS OCD

ATS-12-500

OCD-HOBBS

JUN 19 2012

Form 3160-3
(200)

FORM APPROVED

Expires 3, 2011

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM65441
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name n/a
2. Name of Operator RMR Operating LLC		7. If Unit or CA Agreement, Name and No.
3a. Address 415 W. Wall Street Suite 1310 Midland, TX 79701		8. Lease Name and Well No. Madera 25 Federal #2H 39290
3b. Phone No. (include area code) 214.871.0400		9. API Well No. 30-025-40633
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 330' FNL & 2080' FEL At proposed prod zone 330' FSL & 2080' FEL		10. Field and Pool, or Exploratory Jabalina Southwest WCO25609526342
11. Sec., T R M. or Blk and Survey or Area Sec.25, T-26S, R-34E		C. Bone Spring
12. County or Parish Lea County		13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg unit line, if any) surface 330' bottom hole 330'	16. No. of acres in lease 640 acres	17. Spacing Unit dedicated to this well 160 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See Drilling Program # 11	19. Proposed Depth pilot hole 9350'/9028' TVD 13483' MD	20. BLM/BIA Bond No. on file NMB 000780
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3196.8 GL	22. Approximate date work will start* 07/02/2012	23. Estimated duration 35 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form.

- | | |
|--|---|
| 1 Well plat certified by a registered surveyor | 4 Bond to cover the operations unless covered by an existing bond on file (see item 20 above). |
| 2 A Drilling Plan. | 5 Operator certification |
| 3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6 Such other site specific information and/or plans as may be required by the authorized officer. |

25 Signature	Name (Printed/Typed) Tommy W. Folsom	Date 03/28/2012
Title Executive Vice President and Director of Exploration & Production		

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) Don Peterson	Date JUN 15 2012
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

*(Instructions on page 2)

K 06/20/12 Carlsbad Controlled Water Basin

CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

JUN 21 2012

Drilling Program – RMR Operating, LLC

Madera "25" Federal #2H

Surface Hole Location: 330' FNL & 2080' FEL, Unit B, Sec. 25, T26S, R34E, Lea Co. NM

Bottom Hole Location: 330' FSL & 2080' FEL, Unit O, Sec.25, T26S, R34E, Lea Co., NM

1. Geological Name of Surface Formation

a. Permian

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil and Gas

a.	Quaternary	20'	Water
b.	Surface Fresh Water	160'	Water
c.	Surface Fresh Water	230'	Water
d.	Rustler	1047'	Water
e.	Salado Salt	1250'	Salt
f.	Base Salt	5061'	N/A
g.	Delaware	5351'	Oil
h.	Bell Canyon	5395'	Oil
i.	Cherry Canyon	6618'	Oil
j.	Brushy Canyon	7831'	Oil
k.	Brushy Canyon "B"	8752'	Oil
l.	Brushy Canyon "D"	8692'	Oil
m.	Approximate Landing Depth "D"	9028' TVD	
n.	Pilot Hole TD	9350'	
o.	Total Measured Depth in Lateral	13483' MD	Oil

Pool Name: Salado Draw NE

Proposed Penetration Point: 9350'

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13-3/8" casing at 1127' and circulate cement back to surface. The fresh water sands will be protected by setting 9-5/8" casing at 5367' and circulate cement back to surface. The Delaware section will be drilled to the depth of 9350' with 8-3/4" bit. E-logs will be run to confirm the Brushy Canyon "D" section. 7" casing will be ran to 8627' and cemented in place to extend cement top 200' ± above 9-5/8" shoe. A 6-1/8" curve will be drilled to land a lateral at TVD 9050' and drilled to a total MD at 13483'. A 4-1/2 open-hole completion liner will be run with the liner hanger to be 100' above the 7" shoe. All casing is new and API approved.

Drilling Program – RMR Operating, LLC

3. Casing Program

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight	Connection	Grade
17-1/2"	0'-1127'	13-3/8"	0'-1127' 1065	54.5#	STC	J-55
12-1/4"	1127'-5367'	9-5/8"	0'-1923'	40#	LTC	N-80
12-1/4"	1127'-5367'	9-5/8"	1923'-5367' 5325	40#	LTC	HCK-55
8-3/4"	5367'-9350'	7"	0'-8627'	26#	LTC	HCP-110
6-1/8"	8627'-13483'	4-1/2"	0'-13483' MD	11.6#	BTC	HCP-110

8527 per pg 1 of this APD

Design Parameter Factors

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13-3/8"	1.6	3.6	6.7
9-5/8"	1.5	1.4	4.4
7"	1.4	1.5	2.2
4-1/2"	1.3	1.7	2.3

4. Cement Program

All cement volumes exceed 25% excess

13-3/8" Surface: **Lead:** 640 sacks ExtendaCem-CZ, mixed at 13.50 Weight, 1.75 Yield, 9.20 gps mixing water
Tail: 340 sacks HalCem - C + 2% CaCl, mixed at 14.80 Weight, 1.35 Yield, 6.39 gps mixing water.

9-5/8" 1st Intermediate: **Lead:** 1520 sacks EconCem – HLC + 5% salt + 5 pps Gilsonite, mixed at 12.90 Weight, 1.85 Yield, 9.32 gps mixing water.
Tail: 250 sacks HalCem –C, mixed at 14.80 Weight, 1.33 Yield, 6.34 gps mixing water

7" 2nd Intermediate: 1.-10bbl fresh water
~~2.-7/8" FG TBG will be ran on end of 7" to set Pilot Hole Plug~~ 2.-1000 gal Super flush 102
 3.-1000 gal Gel spacer with Red Dye
 4.-410 sacks Econocom-HLC, fluid weight 12.9 ppg, slurry yield 1.85 cubed ft. per sack, Total mixing fluid 9.43 gal per sack, Vol. 134.8 bbl. Proposed sacks 410 sks
 5.-425 sacks of HalCem-H. Fluid weight 1.7 ppg, slurry yield 1 cubic ft. per sack, Total mixing fluid 3.81 gal per sack, Vol. 75.90 bbl. Proposed sacks 425 sks

Pilot Hole Plug **Plug Back Volume:** 570 sacks set with 7: CMT job *1 sk*

Top of cement ALL casing strings

Surface 0'
 Intermediate 0'
 Production 5100'

Actual cement volumes will be adjusted based on fluid caliper and open-hole caliper log.

5. Minimum Specifications for Pressure Control Equipment

BLOWOUT PREVENTION DESIGN: The blow out prevention (BOP) system will consist of a bag type annular preventer, a double ram preventer and a rotating head. Both the Annular and Ram stack will be hydraulically operated. Both BOP systems will be rated at 5000 psi. The double ram preventer will be equipped with blind rams on top and pipe rams on bottom. The mentioned 5000 psi BOP systems will be installed on 13-3/8" casing and will be tested with independent testers before drilling out the associated casing shoe. Prior to drilling out the 9-5/8" shoe the BOP's and Annular will be tested as per BLM Drilling Operations Order #2. The rams system will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into a drilling spool below the BOP. In addition to the rams and annular, other BOP accessories include a Kelly cock, floor safety valve, choke lines and choke manifold rated at 5000 psi.

6. Auxiliary Well Control and Monitoring Equipment

- a) A Kelly cock will be in a drill string at all times
- b) A full opening drill pipe stabbing valve having the appropriate connections will be on rig floor at all times
- c) Hydrogen Sulfide detection equipment will be in operation after drilling out 13-3/8" casing shoe until the 5-1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13-3/8" shoe until total depth is reached.

7. Proposed Mud Circulation System

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0'-1127' 1095	8.4-9.0	32-34	N/C	Fresh Water
1127'-5367' 5325.10		28	N/C	Brine Water
5367'-8637'	8.9-9.3	28	N/C	Cut Brine Water
8627'-13483'	8.9-9.3	30-38	12-20	CB/ XCD Polymer

The necessary mud products for weight addition and fluid loss control will be on location at all time.

8. Logging, Coring and Testing *see COA*

- a) The open-hole electrical logging program will be run in the pilot hole. We will run GR-Neutron Density log and DLL-MSFL log from 9350' up to 5367'. We will continue to pull the GR-Neutron log from 5367' to surface.
- b) 15-20 side wall cores will be cut in the Delaware pay intervals
- c) Drill stem test will be based on geological sample shows. If drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice.

9. Potential Hazards

No abnormal pressures or temperatures are expected. A Hydrogen Sulfide contingency plan will be provided. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 5000 psi and Estimated BHT 180°

10. Anticipated Starting date and Duration of Operations

Road and location construction will begin after BLM has approved the APD. Anticipated spud date will be as soon as BLM approval and as soon as rig will be available. Move in operations and drilling is expected to take 35 days. If production casing is run then an additional 90 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

11. The surface hole of this location is 1580' from RMR Operating LLC's Madera 24 Federal #2H well. The lateral will be 100' from the surface hole location. A gyro will be run on the Madera 25 Federal #1 to locate the well bore at lateral depth to ensure the two well bores do not collide.

Drilling Fluids Program

Madera 25 #2H

**Sec. 25, T-26-S, R-34-E,
Lea County, NM**

RMR Operating, LLC

2515 McKinney Ave., Ste. 900

Dallas, TX 75201

Mr. Tommy Folsom

V.P. of Operations

"The Nova Difference"



RMR Operating, LLC * Madera 25 # 2H * Sec. 25, T-26-S, R-34-E, Lea County, NM

INTERVAL: 0 - 1,127'		17.5" hole	3 days	13.375" csg	1 drill bits	
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Caustic Soda	pH additive	.5 ppb	50 #	10	\$37.40	\$374.00
Fiber Seal	LCM, sealant	As needed	40 #	10	\$14.79	\$147.90
Fresh Gel	Viscosifier	10-12 ppb	50 #	120	\$5.00	\$600.00
Ground Paper	Seepage and sweeps	1-3 sacks per 100 feet	30 #	15	\$10.40	\$156.00
Pallets	Storage aid		1 each	5	\$18.00	\$90.00
Plastic	Storage aid	1roll for tarp	1 roll	1	\$60.00	\$60.00
Shrink Wrap	Storage aid	Cover mud	1 each	25	\$22.00	\$550.00
Soda Ash	Calcium remover	1 sack per 15 sacks of bentonite	50 #	10	\$15.00	\$150.00
Interval Total:					<u>\$2,127.90</u>	

Projected Mud Properties

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
0-1,127'	SPUD	8.4-9.6	32-34	N/C	10.0	3-6K	3-8		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
0' - 1,013'	Surface Conglomerates	Red Bed, Red sandstone, FW sands	Swelling, mud rings, differential sticking
1,013' - 1,127'	Rustler	Anhydrite	Casing seat

Interval Notes for 0 - 1,127

Spud with a conventional Fresh Gel/Soda Ash/Caustic slurry using Fresh Water.

Maintain the viscosity as needed to clean the hole. Use Ground Paper sweeps periodically to control seepage and aid in hole cleaning. Use the jet and dilute method of solids control to keep the weight below 9.4 ppg. **(Some Red Bed may be encountered that will tend to raise viscosities. The Jet and Dilute method of solids control should be used to keep properties in the specified range).**

Should losses occur add 6-12 ppb of various LCM's to the system or mix viscous (40-50) Fresh Gel pills containing LCM to regain returns. Should several attempts fail we would recommend dry drilling to total depth and sweeping the hole with viscous pills or polymers.

NOTE: A comprehensive corrosion program is recommended on this project. Nova Mud, Inc. carries a full line of chemicals and can provide coupons and service.

NOTE 2: For closed systems we recommend lower initial volumes to allow for dilution. The reduction of sweeps to necessary only, lowering of equipment discharges to below fluid level to reduce foaming and tandem shakers to accommodate volumes and increase productivity of solids control equipment.

INTERVAL: 1,127 - 5,351'		12.25" hole	6 days	9.625" csg	1 drill bits	
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Caustic Soda	pH additive	.25 ppb	50 #	20	\$37.40	\$748.00
Fiber Seal	LCM, sealant	As needed	40 #	20	\$14.79	\$295.80
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	30 #	10	\$10.40	\$104.00
PHPA/MF-55	Flocculant, hole sweep	1 gal. slug as needed for sweep	5 gal.	10	\$103.25	\$1,032.50
Salt Gel	Hole sweep	18-20 ppb in sweeps	50 #	220	\$10.40	\$2,288.00
Interval Total:					\$4,468.30	

Projected Mud Properties

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
1,127-5,351'	BR	10.0	28	N/C	10.0	186K	.5-.75		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
1,127' - 3,060'	Rustler	Anhydrite w/sand stringers, Limestone	
3,060' - 3,520'	Salt	Salt	Hole dissolution, key seats, hole cleaning, deviation
3,520' - 4,870'	Salt, Base	Salt, limestone base	
4,870' - 5,313'	Castile	Limestone	
5,313' - 5,351'	Lamar	Deleware Mountain Group, Limestone	Casing seat

Interval Notes for 1,127 - 5,351

Drill out from surface with Brine.

Adjust the pH to 10.0 with Caustic.

Use Ground Paper sweeps periodically to control seepage and enhance hole cleaning.

Viscous (50-60) Salt Gel pills may be necessary to clean the hole.

Small amounts of PHPA should be used as needed to flocculate fine drill solids and to clean the hole.

Add 6-10 ppb of various fibrous LCM's to the viscous pills to control more severe losses.

At total depth sweep and spot viscous (50-60) Salt Gel pills to ensure a clean hole for logging and/or casing operations.

INTERVAL: 5,351 - 9,350'		8.75" hole	14 days	7" csg	1 drill bits	
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
CSF	LCM, sealant	6-15 ppb	25 #	20	\$34.32	\$686.40
Fiber Seal	LCM, sealant	6-15 ppb	40 #	20	\$14.79	\$295.80
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	30 #	40	\$10.40	\$416.00
Lime	pH additive	.5 ppb	50 #	50	\$7.04	\$352.00
PHPA/MF-55	Hole sweep, flocculant	1 gal. slug as needed for sweep	5 gal.	12	\$103.25	\$1,239.00
Salt Gel	Hole sweep	18-20 ppb in sweeps	50 #	290	\$10.40	\$3,016.00
Interval Total:						\$6,005.20

Projected Mud Properties

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
5,351-9,350'	CB	8.6-9.0	28	N/C	10.0	40-90K	.5-.75		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
5,351' - 6,568'	Lamar	Lime	
5,353' - 6,568'	Ramsey	Sand	Seepage
6,568' - 7,793'	Cherry Canyon	Sand	Seepage
7,793' - 8,313'	Brushy Canyon	Sand	
8,313' - 8,743'	Brushy Canyon Lower A Pay	Sand	
8,743' - 8,958'	Brushy Canyon B	Sand	
8,958' - 9,350'	Brushy Canyon D	Sand	Total Depth Pilot Hole

Interval Notes for 5,351 - 9,350

Drill out from intermediate casing with Cut Brine.

Adjust the pH to 10.0 with Caustic.

Maintain the weight with additions of Brine and/or Fresh Water.

Continue to use Ground Paper pills to clean the hole and control seepage.

Small amounts of PHPA may be used for sweeps and to flocculate fine drill solids.

Use viscous (50-60) Salt Gel pills as needed to clean the hole.

Should losses occur add 6-15 ppb of various LCM's to the pills to regain returns.

Sweep and spot viscous (50-60) Salt Gel pills prior to logging, setting kick off plug and running 7" casing.

Plan is to drill to 9,350' plug back to 8,550' and set 7" casing at 8,550'.

INTERVAL: 8,550 - 13,483'		6.125" hole	16 days	4.5" csg	4 drill bits	
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Caustic Soda	pH additive	.25 ppb	50 #	25	\$37.40	\$935.00
Defoamer	Defoamer	As needed	5 gal.	5	\$69.35	\$346.75
Flozan	Hole sweep, viscosifier	.75 -1.0 ppb in pills	25 #	85	\$179.34	\$15,243.90
Graphite	Lubricant	1-4 ppb in sweeps	50 #	110	\$42.70	\$4,697.00
INC-9001	Biocide	As needed	5 gal	20	\$146.88	\$2,937.60
PAC-R	Filtrate control	.5 ppb or as needed	50 #	30	\$190.40	\$5,712.00
Slicker 555	Lubricant	As needed	55 gal.	8	\$1,000.00	\$8,000.00
Soda Ash	Calcium remover	As needed	50 #	80	\$15.00	\$1,200.00
STC (biocide)	Biocide	As needed	5 gal.	20	\$104.50	\$2,090.00

Interval Total: **\$41,162.25****Projected Mud Properties**

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
8,550-9,050'	CB	8.6-9.0	28	N/C	10.0	40-100K	.5-.75		
9,050-13,483'	CB/POLY	8.7-9.3	36-40	15-12cc	10.0	40-100K	.75-3.0		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
9,028' - 9,028'	Brushy Canyon D	Sand	Horizontal Target

Interval Notes for 8,550 - 13,483

Drill out from 7" and kick off with the existing system treating as needed for cement contamination.

Kick off just out from under 7" (8,646') and begin the curve at a build rate of 15 degrees/100' to be lateral by 9,028' TVD and 9,246' MD.

Adjust the pH to 10.0 with Caustic. Lower the total hardness to less than 200 ppm with Soda Ash. Biocide will be needed to combat bacteria growth.

At 65 degrees of inclination or 9,050 MD begin the mud up. Add Xanthan Gum to achieve a 36-40 viscosity and use PAC to lower the filtrate to 15-12cc or less. Adjust the viscosity and filtrate as needed. Some Defoamer may be needed to prevent aeration of the pumps.

Periodically use higher viscosity pills built from the active system to aid in hole cleaning. To aid in torque reduction, we suggest adding 1-3% by volume of a metal plating lubricant and 1-4 ppb of graphite to the pills. Should torque become excessive, it may be necessary to increase the concentration of lubrication in the entire system.

Continue with viscous pills as needed and use high rpm, high gpm clean out cycles to improve hole cleaning.

At total depth of lateral we recommend spotting a lubrication pill across the curve to ease casing placement.

After packer assembly is in place displace the hole with 2% by volume KCL solution. We have not included the cost of the KCL fluid in the estimate.

Drilling Fluids Product Usage Estimate

RMR Operating, LLC * Madera 25 # 2H * Sec. 25, T-26-S, R-34-E, Lea County, NM

<u>Product</u>	<u>Discounted Retail Cost</u>	<u>Unit Size</u>	<u>Usage</u>	<u>Product Cost</u>
Caustic Soda	\$37.40	50 #	55	\$2,057.00
CSF	\$34.32	25 #	20	\$686.40
Defoamer	\$69.35	5 gal.	5	\$346.75
Fiber Seal	\$14.79	40 #	50	\$739.50
Flozan	\$179.34	25 #	85	\$15,243.90
Fresh Gel	\$5.00	50 #	120	\$600.00
Graphite	\$42.70	50 #	110	\$4,697.00
Ground Paper	\$10.40	30 #	65	\$676.00
INC-9001	\$146.88	5 gal.	20	\$2,937.60
Lime	\$7.04	50 #	50	\$352.00
PAC-R	\$190.40	50 #	30	\$5,712.00
Pallets	\$18.00	1 each	5	\$90.00
PHPA/MF-55	\$103.25	5 gal.	22	\$2,271.50
Plastic	\$60.00	1 roll	1	\$60.00
Salt Gel	\$10.40	50 #	510	\$5,304.00
Shrink Wrap	\$22.00	1 each	25	\$550.00
Slicker 555	\$1,000.00	55 gal.	8	\$8,000.00
Soda Ash	\$15.00	50 #	90	\$1,350.00
STC (biocide)	\$104.50	5 gal.	20	\$2,090.00

<u>Totals</u>		Materials Cost:	\$53,764
Bits	7	Trucking Cost:	\$8,500
Days	39	Sales Tax/Product @ 6.88%	\$3,699
Mud	\$66,547	Sales Tax/Trucking @ 6.88%	\$585
		Estimated Total Mud	\$66,547



NOVA MUD, Inc.

P.O. Box 2703 Hobbs, NM 88241 800-530-8786
 1004 Big Spring, Ste. 215, Midland, TX 79701 432-570-6663
 3600 NW 138th St, Ste 102, Oklahoma City, OK 73134

With service price list for RMR Operating, LLC; Dallas, TX - Effective 3/8/2012

<u>Product</u>	<u>Unit Size</u>	<u>Price</u>	<u>Product</u>	<u>Unit Size</u>	<u>Price</u>
<u>Basic Materials</u>			<u>Drilling Chemicals</u>		
Barite	100 #	\$17.50	MF-1	2 #	\$16.80
Barite-Bulk	1 ton	\$297.50	Nova Sweep	15 #	\$104.00
Barite-Super Sack(NE-ONLY)	3000 lb	\$574.13	PHPA/MF-55	5 gal.	\$103.25
Calcium Carbonate	50 #	\$8.58	Pipe Free	55 gal.	\$1,280.00
Caustic Soda	50 #	\$37.40	Poly Stick	1 each	\$15.05
Flozan	25 #	\$179.34	RF-Foam 107	55 gal	\$1,066.00
Fresh Gel	50 #	\$5.00	SAPP	50 #	\$95.52
Fresh Gel	100 #	\$9.92	Silicone Defoamer	5 gal.	\$81.74
Fresh Gel-Bulk	1 ton	\$220.00	Slicker 555	55 gal.	\$1,000.00
Lime	50 #	\$7.04	Soap Stick	1 each	\$15.05
PAC-R	50 #	\$190.40	Sodium Bicarbonate	50 #	\$32.50
PAC-SL	50 #	\$197.20	Soltex	50 #	\$102.60
Salt	50 #	\$6.93	STC (biocide)	5 gal.	\$104.50
Salt Gel	50 #	\$10.40	<u>Equipment Rentals/Services/Storage Aids</u>		
Soda Ash	50 #	\$15.00	Mixing Charge	1 bbl.	\$8.00
Soda Ash	100 #	\$30.00	Mud Engineer	24 hr.	\$850.00
White Starch	50 #	\$27.30	Mud Engineer	4 hr.	\$0.00
Yellow Starch	50 #	\$18.27	Pallets	1 each	\$18.00
<u>Corrosion Chemicals</u>			Plastic	1 roll	\$60.00
Filming Amine	1 gal.	\$13.60	Portable Mud Plant	24 hr.	\$525.00
H2S Scavenger	1 gal.	\$18.70	Shrink Wrap	1 each	\$22.00
Oxygen Scavenger	1 gal.	\$14.45	<u>Lost Circulation Material</u>		
Scale Inhibitor	1 gal.	\$14.45	Cedar Plug	40 #	\$9.90
<u>Drilling Chemicals</u>			Cotton Seed Hulls	50 #	\$13.50
Aluminum Tristearate	50 #	\$90.00	CSC	25 #	\$34.32
Benex	2 #	\$18.00	CSF	25 #	\$34.32
Caustic Potash (KOH)	50 #	\$66.00	Fiber Seal	40 #	\$14.79
CLS	50 #	\$40.00	Ground Paper	30 #	\$10.40
DCS Drilling Surfactant	5 gal.	\$68.20	LCF-Blend	25 lb	\$29.25
Defoamer	5 gal.	\$69.35	Magma Fiber	30 #	\$30.25
Desco	25 #	\$51.00	Mica	50 #	\$12.54
Drilling Beads	50 #	\$162.00	Nova Fiber	30 #	\$29.25
Gluteraldehyde	55 gal.	\$2,376.00	Nut Plug	50 #	\$25.50
Gluteraldehyde	5 gal.	\$216.00	<u>Oil Mud Additives</u>		
Graphite	50 #	\$42.70	Calcium Chloride-50	50 #	\$30.00
INC-9001	5 gal.	\$146.88	Calcium Chloride-80	80 #	\$46.00
INC-9001	55 gal.	\$1,663.20	OBM Dispersing Wetting Agent	5 gal.	\$197.00
KCL	50 #	\$30.10	OBM FW Gel	50 #	\$129.00
Lignite	50 #	\$16.34	OBM Primary Emulsifier	55 gal.	\$930.00



NOVA MUD, Inc.

P.O. Box 2703 Hobbs, NM 88241 800-530-8786
1004 Big Spring, Ste. 215, Midland, TX 79701 432-570-6663
3600 NW 138th St, Ste 102, Oklahoma City, OK 73134

With service price list for RMR Operating, LLC; Dallas, TX - Effective 3/8/2012

<u>Product</u>	<u>Unit Size</u>	<u>Price</u>	<u>Product</u>	<u>Unit Size</u>	<u>Price</u>
<u>Oil Mud Additives</u>					
OBM Rheological Modifier	55 gal.	\$900.00			
OBM Secondary Emulsifier	55 gal.	\$1,130.00			
OBM SW Gel	50 #	\$245.00			
OBM Wetting Agent	5 gal.	\$130.00			
OBM-Gilsonite	50 #	\$80.00			
Rig Wash	55 gal.	\$580.00			
SOBM Dispersing Wetting Agent	55 gal.	\$1,400.00			
SOBM Primary Emulsifier	55 gal.	\$950.00			
SOBM Rheological Modifier	55 gal.	\$940.00			
SOBM Secondary Emulsifier	55 gal.	\$1,190.00			
SOBM Wetting Agent	5 gal	\$140.00			

DRILLING MUD RECAP



OPERATOR: RMR OPERATING, LLC
WELL NAME: MADERA 24 FED. # 2-H
LOCATION: BECKHAM RANCH
SEC-TWP-RGE: S.24- T26S- R34E
COUNTY: LEA
STATE: N.M.

CONTRACTOR: WESTERN DRILLING
RIG NUMBER: 3
SPUD DATE: 10/25/2011
FINISH DATE: 12/23/2011
TOTAL DEPTH: 13800
ENGINEER(S): JASON TYLER

Drilling Mud
Base Fluid
Water

Page: 1

CASING RECORD			DRILL PIPE AND COLLARS			MUD SYSTEM		SOLIDS CONTROL EQUIPMENT				PUMP SPECIFICATIONS			
SIZE	TOP @	SET @	SIZE	ID	LENGTH	TYPE	INTERVAL	BRAND / TYPE	INTERVAL	BRAND / TYPE	INTERVAL	NO	TYPE	SIZE	EFF
13.375	0	1132	4	3.34	13074	FRESH/NATIVE	0-1132	CLOSED LOOP	0-13800			1	EMSCO D-1000	5 X 18	90
9.625	0	5290	4	2.25625	642	CUT-BRINE	1132-5290			ADVANCED SOLIDS	0-13800	2	EMSCO D-1000	5 X 18	90
7	0	8538				CUT BRINE	5290-8538	LINEAR SHAKER	0-13800	AUGER TANK	0-13800	3			
4.5	8400	13600	4.75	2.25	84	C. BR./POLYMER	8538-13800			CENTRIFUGE	0-13800	4			
								LINEAR SHAKER	0-13800	CENTRIFUGE	0-13800				

NO	DATE	TIME	DEPTH feet	MUD WEIGHT lb/gal	FUNNEL VISCOSITY sec/qt	PV	YP	GEL STRENGTHS 10 sec/10 min	FILTRATION				RETORT			SAND %	pH	FILTRATE ANALYSIS					OIL EMULSIONS	
									API ml	CAKE 32nd	HTHP	CAKE 32nd	SOLID %	OIL %	WATER %			PM mg/L	PL mg/L	ML mg/L	CHLORIDES mg/L	CALCIUM mg/L	LIME ppb	G/W RATIO
1	10/23/2011	11:00 AM	0																					

Remarks: Currently rigging up Western rig # 3. (No sample on location.)

2	10/25/2011	9:45 AM	0	8.353	28							0	0	99.9	0	8	0	0.3	750	240					
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Remarks: Rigged up Western # 3, currently preping to mix spud mud in suction using fresh water, fresh gel, and lime slurry to drill 17 1/2" surface hole.

3	10/26/2011	12:45 PM	645	9.05	30	3	3	4	116	2		32	5.2	0	94.7	TRC	9	0	0.02	0.2	1400	400			
3	10/26/2011	1:15 PM		9.9	33	5	9	7	96	3		32	11.3	0	88.6	TRC	9	0	0.03	0.2	1600	800			

Remarks: Spud 17 1/2" surface hole, mudding up suction to 40 visc., using fresh water, fresh gel, lime slurry. Currently drilling at 30-60 fph, using dual linear shakers. ((Com Rep wants 35 visc, in active, no electric stirrer working, visc, falling out.

4	10/27/2011	9 30 AM	982	10.25	36	5	17	13	14	66	2		32	13.6	0	86.2	TRC	9	0.02	0.05	0.18	2400	880																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</
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Remarks: Now running survey. While drilling, getting 15-40 fph. Co. Rep. let active system viscosity to 36 visc. from native redbed. Not running fresh water to keep visc. 32-34, and weight below 9.3 ppg. (Rig had no mud scales, Do now).

5	10/28/2011	9:15 AM	1132	9.95	28							0	0	88.2	0	7	0	0.2	178000	2000				
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Remarks: Td'd 17 1/2" surface hole at 1,132', pumped fresh gel sweep. T.O.H., ran 13 3/8", 54.5 ppg casing to 1,132' and cemented same. Currently W.O.C. on surface casing. ((On trip out, tight at 398', red bed)).

6	10/30/2011	8:45 AM	1344	9.6	29							1	0	90.7	TRC	11	0.1	0.15	125000	2240				
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Remarks: Drilled out from under surface with an 12 1/4" pdc bit with mud motor. Currently drilling at 10-50'/hr., using cut brine water (adding brine), circulating closed loop system. ((Drilled out with fresh / native fluid as per Co. Rep))

7	11/1/2011	8:45 AM	2295	10	28							0.1	0	87.7	TRC	10	0.12	0.25	184000	2400				
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Remarks: Drilled to 2,295', and are currently T.O.H. for bit. Weight increased from 9.6 ppg to 10 ppg due to drilling salt zone.

8	11/3/2011	9:20 AM	2778	10.05	28							0.1	0	87.6	TRC	10	0.1	0.22	186000	2560				
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Remarks: Drilled to 2,295', T.O.H., T.I.H. and screwed back into fish. T.O.H., change BHA. T.I.H. with bit # 3 and mud motor. Drilled to 2,778', mud motor twisted off. T.O.H., currently W.O. Fisherman.

9	11/5/2011	12:45 PM	3655	10	28							0.1	0	87.9	TRC	9	0.3	0.2	182000	1600				
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Remarks: T.I.H. with overshot (fishing tools), screwed into fish at 2,748'. T.O.H., retrieved fish. T.I.H. with pdc and mud motor. Currently drilling at 15-25 fph, hole taking 5-8 bph, adding paper to combat seepage.

10	11/7/2011	1:20 PM	4086	10.1	29							0.7	0	87.2	TRC	10	0.05	0.2	184000	2000				
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Remarks: Drilled to 3,695', T.O.H. for bit & motor. T.I.H. with bit # 5 and mud motor. Currently drilling at 8-10 fph. Seeping 10-15 bph to formation.

DRILLING MUD RECAP



OPERATOR: RMR OPERATING, LLC
WELL NAME: MADERA 24 FED. # 2-H
LOCATION: BECKHAM RANCH
SEC-TWP-RGE: S 24- T26S- R34E
COUNTY: LEA
STATE: N.M.

CONTRACTOR: WESTERN DRILLING
RIG NUMBER: 3
SPUD DATE: 10/25/2011
FINISH DATE: 12/23/2011
TOTAL DEPTH: 13800
ENGINEER(S): JASON TYLER

Drilling Mud
Base Fluid
Water

Page: 2

CASING RECORD			DRILL PIPE AND COLLARS			MUD SYSTEM		SOLIDS CONTROL EQUIPMENT				PUMP SPECIFICATIONS			
SIZE	TOP @	SET @	SIZE	ID	LENGTH	TYPE	INTERVAL	BRAND / TYPE	INTERVAL	BRAND / TYPE	INTERVAL	NO.	TYPE	SIZE	EFF.
13.375	0	1132	4	3.34	13074	FRESH/NATIVE	0-1132	CLOSED LOOP	0-13800			1	EMSCO D-1000	5 X 18	90
9.625	0	5290	4	2.25625	642	CUT-BRINE	1132-5290			ADVANCED SOLIDS	0-13800	2	EMSCO D-1000	5 X 18	90
7	0	8538				CUT BRINE	5290-8538	LINEAR SHAKER	0-13800	AUGER TANK	0-13800	3			
4.5	8400	13600	4.75	2.25	84	C. BR./POLYMER	8538-13800			CENTRIFUGE	0-13800	4			
								LINEAR SHAKER	0-13800	CENTRIFUGE	0-13800				

NO.	DATE	TIME	DEPTH feet	MUD WEIGHT lb/gal	FUNNEL VISCOSITY sec/qt	PV	YP	GEL STRENGTHS 10 sec/10 min	API ml	FILTRATION			RETORT			SAND %	pH	FILTRATE ANALYSIS					OIL EMULSIONS				
										CAKE 32nd	HITH	CAKE 32nd	SOLID %	OIL %	WATER %			Pm	Pp	Mf	CHLORIDES mg/L	CALCIU M mg/L	LIME ppb	G/W RATIO	ELECTRICAL STABILITY volts	LCM ppb	
11	11/9/2011	9:00 AM	4099	10.05	29									0.4	0	87.5	TRC	9.5		0.04	0.19	183000	2960				
Remarks T.O.H. to casing shoe to make rig repairs. Rig was down for a day and a half. T.I.H. to bottom with no problems. Resumed drilling with pdc and mud motor at 40-70 fph.																											
12	11/11/2011	9 30 AM	4409	10.15	29									1.4	0	87.1	TRC	10		0.1	0.8	174000	5200				
Remarks. Drilled to 4367', and tripped out for new bit. T.I.H., and are currently drilling at 13/hr.																											
13	11/13/2011	9:00 AM	4928	10 15	29									1.4	0	86.7	TRC	9		0 05	1.3	181000	7500				
Remarks: Drilled to 4928' and lost pump pressure. Currently tripping out of hole to look for hole, or cracked drillpipe/or drillcollar																											
14	11/15/2011	2:30 PM	5290	10.05	29									0.5	0	87.5	TRC	10		0.1	0.25	181000	2480				
Remarks Made trip over last 48 hrs, at 4,894' with no problems. Drilled to 5,290', Td on 12 1/4" intermediate hole, pumped 60 visc. salt gel sweep around. Currently T.O.H. to run 9 5/8" casing.																											
15	11/17/2011	1:30 PM	5290	8.35	28									0	0	99.9	0	7		0	0 25	400	200				
Remarks Ran 9 5/8" casing to 5,290' and cementd same. Currently jetting brine from steel pits and testing B.O.P.																											
16	11/19/2011	12:00 PM		9.45	28									0.9	0	91.8	TRC	9.5		0.05	0.1	110000	2200				
Remarks Trpped in hole with an 8 3/4" bit, using cut brine. T.I.H. and hit hard spot at 5297', and bit quit drilling. Trpped out of hole and made two fishing trps for junk. Currently making third run to fish for junk																											
17	11/21/2011	12:30 PM	5430	9.4	29									1.3	0	92.1	TRC	10		0.05	0.1	100000	2320				
Remarks: Tripped out of hole for new bit. Will pick up reamer's and new B.H.A.																											
18	11/23/2011	1 45 PM	6665	9	28									0.2	0	95	TRC	10		0.1	0.2	73000	2160				
Remarks: Drilling at 20-100'/hr. circulating closed loop system.																											
19	11/25/2011	1 45 PM	8060	9.05	28									0.1	0	94 5	TRC	11		0.1	0.2	82000	2400				
Remarks: Drilling at 20-35'/hr. Running advanced solids control to keep water clean / clear.																											
20	11/27/2011	1:30 PM	8746	9	29									0.3	0	95.1	TRC	10.5		0.2	0.35	70000	1850				
Remarks Drilling at 15-25 fph, pumping 50 sec./viscosity salt gel sweep around, in expectations of Td'ing pilot hole at 9,250'.																											
21	11/29/2011	2:00 PM	9234	8.85	28									0.2	0	95.9	TRC	10		0.1	0.2	59000	1600				

Remarks: Drilling at 15-25 fph, pumping 50 visc. salt gel sweep around, in expectations of Td'ing pilot hole at 9,250'.

DRILLING MUD RECAP



OPERATOR: RMR OPERATING, LLC
WELL NAME: MADERA 24 FED. # 2-H
LOCATION: BECKHAM RANCH
SEC-TWP-RGE: S.24- T26S- R34E
COUNTY: LEA
STATE: N.M.

CONTRACTOR: WESTERN DRILLING
RIG NUMBER: 3
SPUD DATE: 10/25/2011
FINISH DATE: 12/23/2011
TOTAL DEPTH: 13800
ENGINEER(S): JASON TYLER

Drilling Mud
Base Fluid
Water

Page. 3

CASING RECORD			DRILL PIPE AND COLLARS			MUD SYSTEM		SOLIDS CONTROL EQUIPMENT				PUMP SPECIFICATIONS			
SIZE	TOP @	SET @	SIZE	ID	LENGTH	TYPE	INTERVAL	BRAND / TYPE	INTERVAL	BRAND / TYPE	INTERVAL	NO	TYPE	SIZE	EFF
13.375	0	1132	4	3.34	13074	FRESH/NATIVE	0-1132	CLOSED LOOP	0-13800			1	EMSCO D-1000	5 X 18	90
9.625	0	5290	4	2.25625	642	CUT-BRINE	1132-5290			ADVANCED SOLIDS	0-13800	2	EMSCO D-1000	5 X 18	90
7	0	8538				CUT BRINE	5290-8538	LINEAR SHAKER	0-13800	AUGER TANK	0-13800	3			
4.5	8400	13600	4.75	2.25	84	C. BR./POLYMER	8538-13800			CENTRIFUGE	0-13800	4			
								LINEAR SHAKER	0-13800	CENTRIFUGE	0-13800				

NO.	DATE	TIME	DEPTH feet	MUD WEIGHT lb/gal	FUNNEL VISCOSITY sec/qt	PV	YP	GEL STRENGTHS 10 sec/10 min	FILTRATION				RETORT				pH	FILTRATE ANALYSIS					OIL EMULSIONS		
									API ml	CAKE 32nd	HITP	CAKE 32nd	SOLID %	OIL %	WATER %	SAND %		Pm	Pf	Mf	CHLORIDES mg/L	CALCIUM M mg/L	LIME ppt	G/W RATIO	ELECTRICAL STABILITY volts
22	12/1/2011	2.15 PM	9250	8.85	28								0.5	0	96.1	TRC	9		0.1	0.2	52000	1600			
22	12/1/2011	3.00 PM		10.05	28								0.2	0	87.8	0	7		0	0.15	182000	1760			

Remarks: Td'd 8 3/4" pilot hole at 9,250'. Swept hole with 50 visc. salt gel sweep. T.O.H. Log pilot hole (Loggers Td=9,252'). T.I.H. Circulate, L D D.S. and ran 7" casing to 8,538'. Currently circulating, waiting on cement trucks to cement casing.

23	12/3/2011	1:00 PM	8538	8.85	29							0.5	0	96.1	TRC	9	52000	1440					
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Remarks: Over last 24 hr, cemented 7" casing at 8,538'. Changed out pump liners to 5". Currently testing B.O.P. Suggesting to drill out with existing fluid, using polymer sweeps, until mud up point.

24	12/5/2011	12:30 PM	8651	9.1	29							0.5	0	94.3	TRC	13	79000	1840					
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Remarks: After testing B.O.P., picked up 4" drill pipe T.I.H. and dressed cement off from (8,495'= tag point, cement) to 8,651' (kick off point) T.O.H. and currently picking up curve assembly. Drilled out with existing fluid in pits=cut brine

25	12/7/2011	12:00 PM	8913	9.05	28							0.7	0	94.7	TRC	12	69000	720					
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25	12/7/2011	7:55 PM	8975	9.05	36	7	8	4	6	17.6	1	32	0.6	0	94.7	TRC	12	71000	80	0.156				
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Remarks: At 8,651', started time drilling, kicking off cement. Currently drilling, building curve. Rotating at 15-25 fph, started mud up @ 45 degs, using soda ash/ flozan (xcd), & pac f/ 36 visc. & 15 cc filtrate. (No losses reported)

26	12/8/2011	9:30 AM	9050	9.05	39	8	11	4	6	14	1	32	0.7	0	94.6	TRC	12	71000	80	0.182				
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Remarks: Drilled curve to 9,050' (Inc. @ 9,000'=54.96 deg), and ng is currently T.O.H. to check bit due to slow ROP. ROP slowed to 6 fph. (Added 4 sxs dris pac to lower filtrate to <15 cc.)

27	12/9/2011	11:00 AM	9147	9.1	35	8	10	9	15	14	1	32	1	0	94.3	TRC	11	72000	120	0.234				
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Remarks: Currently slide drilling in curve at 7'/hr. Dev/ 67.3 @ 9096'.

28	12/10/2011	10:00 AM	9236	9.2	36	7	10	10	15	8	1	32	0.9	0	93.6	TRC	11	83000	120	0.208				
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Remarks: Tripped out for new bit and motor. Trnpped in hole, and resumed drilling. Currently slide drilling at 10'/hr.

29	12/11/2011	8:00 AM	9396	9.2	36	6	12	10	17	8	1	32	0.9	0	93.6	TRC	11	84000	80	0.208				
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Remarks: Drilling ahead in lateral hole at 8'/hr.

30	12/12/2011	10:00 AM	10348	9.55	36	8	10	9	16	12	1	32	3.5	0	91.1	TRC	10	82000	120	0.13				
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Remarks: Drilling lateral at 75'/hr. Fluid density increase due to drilled solids and holes in shaker screens. Recommended to co. rep. that shaker screens needed to be replaced, and centrifuge should be run to help reduce solids.

31	12/13/2011	10:00 AM	11202	9.4	37	9	9	10	17	14.6	1	32	2.5	0	92.2	TRC	10	80000	200	0.182				
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Remarks: Currently drilling ahead in lateral section at 70'/hr.

DRILLING MUD RECAP



OPERATOR: RMR OPERATING, LLC
WELL NAME: MADERA 24 FED. # 2-H
LOCATION: BECKHAM RANCH
SEC-TWP-RGE: S.24- T26S- R34E
COUNTY: LEA
STATE: N.M.

CONTRACTOR: WESTERN DRILLING
RIG NUMBER: 3
SPUD DATE: 10/25/2011
FINISH DATE: 12/23/2011
TOTAL DEPTH: 13800
ENGINEER(S): JASON TYLER

Drilling Mud
Base Fluid
Water

Page: 4

CASING RECORD			DRILL PIPE AND COLLARS			MUD SYSTEM		SOLIDS CONTROL EQUIPMENT				PUMP SPECIFICATIONS			
SIZE	TOP @	SET @	SIZE	ID	LENGTH	TYPE	INTERVAL	BRAND / TYPE	INTERVAL	BRAND / TYPE	INTERVAL	NO.	TYPE	SIZE	EFF.
13.375	0	1132	4	3.34	13074	FRESH/NATIVE	0-1132	CLOSED LOOP	0-13800			1.	EMSCO D-1000	5 X 18	90
9.625	0	5290	4	2.25625	642	CUT-BRINE	1132-5290			ADVANCED SOLIDS	0-13800	2.	EMSCO D-1000	5 X 18	90
7	0	8538				CUT BRINE	5290-8538	LINEAR SHAKER	0-13800	AUGER TANK	0-13800	3.			
4.5	8400	13600	4.75	2.25	84	C. BR./POLYMER	8538-13800			CENTRIFUGE	0-13800	4.			
								LINEAR SHAKER	0-13800	CENTRIFUGE	0-13800				

NO.	DATE	TIME	DEPTH feet	MUD WEIGHT lb/gal	FUNNEL VISCOSITY sec/qt	PV	YP	GEL STRENGTHS 10 sec/10 min	FILTRATION			RETORT			SAND %	pH	FILTRATE ANALYSIS					OIL EMULSIONS				
									API ml	CAKE 32nd	HTHP	CAKE 32nd	SOLID -%	OIL %			WATER %	Pm	Pl	ML	CHLORIDES mg/L	CALCIU M mg/L	LIME ppb	O/W RATIO	ELECTRICAL STABILITY volts	LCM ppb
32	12/14/2011	10 00AM	11804	9.4	38	11	11	11	19	11	1	32	2.5	0	92.2	TRC	11	1.2	0.5	1.4	81000	80	0.182			

Remarks: Drilling ahead at 45'/hr. at 11804'.

33	12/15/2011	11:00AM	12250	9.65	42	11	15	13	21	10	1	32	4.1	0	90.4	TRC	11	1.2	0.5	1.35	83000	120	0.182			
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Remarks: On connection at 12250', had trouble getting back on bottom. Laid down 1 jt., and reamed kelly down. Picked up d p. and reamed to bottom. Pumped sweep. and motor failed. Currently T.O.H. for new bit/motor.

34	12/16/2011	2 00PM	12685	9.4	40	10	11	18	8	1		32	2.2	0	92.2	TRC	10	1	0.2	0.75	85000	200	0.208			2
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Remarks: Lost appx. 200 bbl. mud to hole at 12600', due to high fluid wt. Changed out shaker screens, and began building new vol. Mixed two ppb. lcm to mud to slow/stop loss to wellbore.

35	12/17/2011	8:00AM	13151	9.5	40	7	12	9	15	7	1	32	2.9	0	91.4	TRC	11	1.1	0.3	0.7	85000	160	0.208			
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Remarks: Currently slide drilling in lateral at 25'/hr. No loss to hole noted with 9.5 #/gal. density noted at 13151'.

36	12/18/2011	6:00AM	13800	9.45	40	7	11	10	16	8	1	32	2.6	0	91.8	TRC	8.5	0.6	0.3	0.6	85000	200	0.078			
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Remarks: T.D. lateral at 13800'. Pumped sweep, and are currently circulating for 4 hr. prior to T.O.H. to lay down dirc. tools, and pick up reamers.

37	12/19/2011	11 00AM	13800	9.4	40	9	13	10	16	7	1	32	2.2	0	92.2	TRC	11	0.75	0.3	0.65	85000	200	0.117			
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Remarks: Circulated for 3 hr., and tripped out. Picked up reamers, and are currently tripping in hole to make reamer run.

38	12/20/2011	2:00PM	13800	9.4	40	10	11	10	16	5	1	32	2.2	0	92.2	TRC	11	0.6	0.3	0.55	85000	200	0.078			
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Remarks: Reamed to 13800' with a few tight spots from 9500'-11800'. Made 20 std. short trip, and are currently tripping back in hole to ream to 13800'

39	12/21/2011	8:00AM	13800	9.2	40	9	13	10	14	8	1	32	0.8	0	93.6	TRC	11	0.6	0.3	0.5	85000	200	0.078			
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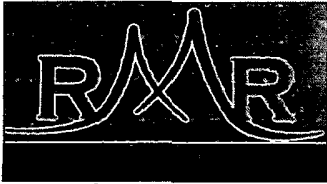
Remarks: Reamed to t.d., and are currently circulating at 13800', prior to tripping out for casing operations.

40	12/22/2011	9:30AM	13800	9.3	41	10	10	9	12	8.4	1	32	1.6	0	92.8	TRC	10	0.4	0.2	0.45	85000	200	0.052			
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Remarks: Tripped out of hole, and are now running 4 1/2" liner on drillpipe.

41	12/23/2011		13800																						
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Remarks: Ran 4 1/2" liner to 13600' with no problems. Top set liner at 8400'. Currently rigging down.



RMR Operating LLC.

Lea County NAD 83

Madera 25 Federal

#2H

OH

Plan: Plan #3

Pathfinder X & Y Report

07 March, 2012

PATHFINDER®

A Schlumberger Company



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company:	RMR Operating LLC.	Local Co-ordinate Reference:	Well #2H
Project:	Lea County NAD 83	TVD Reference:	KB = 22' @ 3218.8usft (Original Well Elev)
Site:	Madera 25 Federal	MD Reference:	KB = 22' @ 3218.8usft (Original Well Elev)
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000.1 Single User Db

Project	Lea County NAD 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Madera 25 Federal		
Site Position:		Northing:	372,454.195 usft
From:	Lat/Long	Easting:	823,834.558 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 14.452 N
		Longitude:	103° 25' 18.587 W
		Grid Convergence:	0.48 °

Well	#2H					
Well Position	+N/-S	0.0 usft	Northing:	372,454.195 usft	Latitude:	32° 1' 14.452 N
	+E/-W	0.0 usft	Easting:	823,834.558 usft	Longitude:	103° 25' 18.587 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,196.8 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	3/1/2012	7.41	60.03	48,479

Design		Plan #3		
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.50

Survey Tool Program		Date 3/7/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	13,483.2	Plan #3 (OH)	MWD	MWD - Standard



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company: RMR Operating LLC.
Project: Lea County NAD 83
Site: Madera 25 Federal
Well: #2H
Wellbore: OH
Design: Plan #3

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #2H
KB = 22' @ 3218.8usft (Original Well Elev)
KB = 22' @ 3218.8usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned 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	-3,218.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
100.0	0.00	0.00	100.0	-3,118.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
200.0	0.00	0.00	200.0	-3,018.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
300.0	0.00	0.00	300.0	-2,918.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
400.0	0.00	0.00	400.0	-2,818.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
500.0	0.00	0.00	500.0	-2,718.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
600.0	0.00	0.00	600.0	-2,618.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
700.0	0.00	0.00	700.0	-2,518.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
800.0	0.00	0.00	800.0	-2,418.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
900.0	0.00	0.00	900.0	-2,318.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,000.0	0.00	0.00	1,000.0	-2,218.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,100.0	0.00	0.00	1,100.0	-2,118.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,200.0	0.00	0.00	1,200.0	-2,018.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,300.0	0.00	0.00	1,300.0	-1,918.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,400.0	0.00	0.00	1,400.0	-1,818.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,500.0	0.00	0.00	1,500.0	-1,718.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,600.0	0.00	0.00	1,600.0	-1,618.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,700.0	0.00	0.00	1,700.0	-1,518.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,800.0	0.00	0.00	1,800.0	-1,418.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
1,900.0	0.00	0.00	1,900.0	-1,318.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,000.0	0.00	0.00	2,000.0	-1,218.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,100.0	0.00	0.00	2,100.0	-1,118.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,200.0	0.00	0.00	2,200.0	-1,018.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,300.0	0.00	0.00	2,300.0	-918.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,400.0	0.00	0.00	2,400.0	-818.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,500.0	0.00	0.00	2,500.0	-718.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,600.0	0.00	0.00	2,600.0	-618.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company: RMR Operating LLC
Project: Lea County NAD 83
Site: Madera 25 Federal
Well: #2H
Wellbore: OH
Design: Plan #3

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #2H
KB = 22' @ 3218.8usft (Original Well Elev)
KB = 22' @ 3218.8usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned 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	0.00	0.00	2,700.0	-518.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,800.0	0.00	0.00	2,800.0	-418.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
2,900.0	0.00	0.00	2,900.0	-318.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,000.0	0.00	0.00	3,000.0	-218.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,100.0	0.00	0.00	3,100.0	-118.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,200.0	0.00	0.00	3,200.0	-18.8	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,300.0	0.00	0.00	3,300.0	81.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,400.0	0.00	0.00	3,400.0	181.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,500.0	0.00	0.00	3,500.0	281.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,600.0	0.00	0.00	3,600.0	381.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,700.0	0.00	0.00	3,700.0	481.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,800.0	0.00	0.00	3,800.0	581.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
3,900.0	0.00	0.00	3,900.0	681.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,000.0	0.00	0.00	4,000.0	781.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,100.0	0.00	0.00	4,100.0	881.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,200.0	0.00	0.00	4,200.0	981.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,300.0	0.00	0.00	4,300.0	1,081.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,400.0	0.00	0.00	4,400.0	1,181.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,500.0	0.00	0.00	4,500.0	1,281.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,600.0	0.00	0.00	4,600.0	1,381.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,700.0	0.00	0.00	4,700.0	1,481.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,800.0	0.00	0.00	4,800.0	1,581.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
4,900.0	0.00	0.00	4,900.0	1,681.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
5,000.0	0.00	0.00	5,000.0	1,781.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
5,100.0	0.00	0.00	5,100.0	1,881.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
5,200.0	0.00	0.00	5,200.0	1,981.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
5,300.0	0.00	0.00	5,300.0	2,081.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company:	RMR Operating LLC.	Local Co-ordinate Reference:	Well #2H
Project:	Lea County NAD 83	TVD Reference:	KB = 22' @ 3218.8usft (Original Well Elev)
Site:	Madera 25 Federal	MD Reference:	KB = 22' @ 3218.8usft (Original Well Elev)
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5000.1 Single User Db

Planned 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	0.00	0.00	5,400.0	2,181.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
5,500.0	0.00	0.00	5,500.0	2,281.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
5,600.0	0.00	0.00	5,600.0	2,381.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
5,700.0	0.00	0.00	5,700.0	2,481.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
5,800.0	0.00	0.00	5,800.0	2,581.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
5,900.0	0.00	0.00	5,900.0	2,681.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,000.0	0.00	0.00	6,000.0	2,781.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,100.0	0.00	0.00	6,100.0	2,881.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,200.0	0.00	0.00	6,200.0	2,981.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,300.0	0.00	0.00	6,300.0	3,081.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,400.0	0.00	0.00	6,400.0	3,181.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,500.0	0.00	0.00	6,500.0	3,281.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,600.0	0.00	0.00	6,600.0	3,381.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,700.0	0.00	0.00	6,700.0	3,481.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,800.0	0.00	0.00	6,800.0	3,581.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
6,900.0	0.00	0.00	6,900.0	3,681.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,000.0	0.00	0.00	7,000.0	3,781.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,100.0	0.00	0.00	7,100.0	3,881.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,200.0	0.00	0.00	7,200.0	3,981.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,300.0	0.00	0.00	7,300.0	4,081.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,400.0	0.00	0.00	7,400.0	4,181.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,500.0	0.00	0.00	7,500.0	4,281.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,600.0	0.00	0.00	7,600.0	4,381.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,700.0	0.00	0.00	7,700.0	4,481.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,800.0	0.00	0.00	7,800.0	4,581.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
7,900.0	0.00	0.00	7,900.0	4,681.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	
8,000.0	0.00	0.00	8,000.0	4,781.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56	



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company: RMR Operating LLC.
Project: Lea County NAD 83
Site: Madera 25 Federal
Well: #2H
Wellbore: OH
Design: Plan #3

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #2H
KB = 22' @ 3218.8usft (Original Well Elev)
KB = 22' @ 3218.8usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned 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)
8,100.0	0.00	0.00	8,100.0	4,881.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
8,200.0	0.00	0.00	8,200.0	4,981.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
8,300.0	0.00	0.00	8,300.0	5,081.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
8,400.0	0.00	0.00	8,400.0	5,181.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
8,500.0	0.00	0.00	8,500.0	5,281.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
8,600.0	0.00	0.00	8,600.0	5,381.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
8,646.0	0.00	0.00	8,646.0	5,427.2	0.0	0.0	0.0	0.00	372,454.20	823,834.56
8,650.0	0.60	179.50	8,650.0	5,431.2	0.0	0.0	0.0	15.00	372,454.17	823,834.56
8,675.0	4.35	179.50	8,675.0	5,456.2	-1.1	0.0	1.1	15.00	372,453.10	823,834.57
8,700.0	8.10	179.50	8,699.8	5,481.0	-3.8	0.0	3.8	15.00	372,450.38	823,834.59
8,725.0	11.85	179.50	8,724.4	5,505.6	-8.1	0.1	8.1	15.00	372,446.06	823,834.63
8,750.0	15.60	179.50	8,748.7	5,529.9	-14.1	0.1	14.1	15.00	372,440.13	823,834.68
8,775.0	19.35	179.50	8,772.6	5,553.8	-21.6	0.2	21.6	15.00	372,432.62	823,834.75
8,800.0	23.10	179.50	8,795.9	5,577.1	-30.6	0.3	30.6	15.00	372,423.57	823,834.82
8,825.0	26.85	179.50	8,818.5	5,599.7	-41.2	0.4	41.2	15.00	372,413.02	823,834.92
8,850.0	30.60	179.50	8,840.4	5,621.6	-53.2	0.5	53.2	15.00	372,401.00	823,835.02
8,875.0	34.35	179.50	8,861.5	5,642.7	-66.6	0.6	66.6	15.00	372,387.58	823,835.14
8,900.0	38.10	179.50	8,881.7	5,662.9	-81.4	0.7	81.4	15.00	372,372.81	823,835.27
8,925.0	41.85	179.50	8,900.8	5,682.0	-97.4	0.8	97.4	15.00	372,356.76	823,835.41
8,950.0	45.60	179.50	8,918.9	5,700.1	-114.7	1.0	114.7	15.00	372,339.48	823,835.56
8,975.0	49.35	179.50	8,935.8	5,717.0	-133.1	1.2	133.1	15.00	372,321.06	823,835.72
9,000.0	53.10	179.50	8,951.5	5,732.7	-152.6	1.3	152.6	15.00	372,301.57	823,835.89
9,025.0	56.85	179.50	8,965.8	5,747.0	-173.1	1.5	173.1	15.00	372,281.10	823,836.06
9,050.0	60.60	179.50	8,978.8	5,760.0	-194.5	1.7	194.5	15.00	372,259.74	823,836.25
9,075.0	64.35	179.50	8,990.3	5,771.5	-216.6	1.9	216.6	15.00	372,237.58	823,836.44
9,100.0	68.10	179.50	9,000.4	5,781.6	-239.5	2.1	239.5	15.00	372,214.70	823,836.64
9,125.0	71.85	179.50	9,009.0	5,790.2	-263.0	2.3	263.0	15.00	372,191.22	823,836.84



Pathfinder

Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company: RMR Operating LLC
Project: Lea County NAD 83
Site: Madera 25 Federal
Well: #2H
Wellbore: OH
Design: Plan #3

Local Co-ordinate Reference:
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Survey Calculation Method:
Database:
Well #2H
KB = 22' @ 3218.8usft (Original Well Elev)
KB = 22' @ 3218.8usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned 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)
9,150.0	75.60	179.50	9,016.0	5,797.2	-287.0	2.5	287.0	15.00	372,167.23	823,837.05
9,175.0	79.35	179.50	9,021.4	5,802.6	-311.4	2.7	311.4	15.00	372,142.83	823,837.27
9,200.0	83.10	179.50	9,025.2	5,806.4	-336.1	2.9	336.1	15.00	372,118.13	823,837.48
9,225.0	86.85	179.50	9,027.4	5,808.6	-361.0	3.1	361.0	15.00	372,093.23	823,837.70
9,246.0	90.00	179.50	9,028.0	5,809.2	-382.0	3.3	382.0	15.00	372,072.24	823,837.88
9,300.0	90.00	179.50	9,028.0	5,809.2	-436.0	3.8	436.0	0.00	372,018.24	823,838.35
9,400.0	90.00	179.50	9,028.0	5,809.2	-536.0	4.7	536.0	0.00	371,918.24	823,839.22
9,500.0	90.00	179.50	9,028.0	5,809.2	-635.9	5.5	636.0	0.00	371,818.25	823,840.09
9,600.0	90.00	179.50	9,028.0	5,809.2	-735.9	6.4	736.0	0.00	371,718.25	823,840.96
9,700.0	90.00	179.50	9,028.0	5,809.2	-835.9	7.3	836.0	0.00	371,618.26	823,841.83
9,800.0	90.00	179.50	9,028.0	5,809.2	-935.9	8.1	936.0	0.00	371,518.26	823,842.70
9,900.0	90.00	179.50	9,028.0	5,809.2	-1,035.9	9.0	1,036.0	0.00	371,418.26	823,843.57
10,000.0	90.00	179.50	9,028.0	5,809.2	-1,135.9	9.9	1,136.0	0.00	371,318.27	823,844.44
10,100.0	90.00	179.50	9,028.0	5,809.2	-1,235.9	10.7	1,236.0	0.00	371,218.27	823,845.30
10,200.0	90.00	179.50	9,028.0	5,809.2	-1,335.9	11.6	1,336.0	0.00	371,118.27	823,846.17
10,300.0	90.00	179.50	9,028.0	5,809.2	-1,435.9	12.5	1,436.0	0.00	371,018.28	823,847.04
10,400.0	90.00	179.50	9,028.0	5,809.2	-1,535.9	13.4	1,536.0	0.00	370,918.28	823,847.91
10,500.0	90.00	179.50	9,028.0	5,809.2	-1,635.9	14.2	1,636.0	0.00	370,818.29	823,848.78
10,600.0	90.00	179.50	9,028.0	5,809.2	-1,735.9	15.1	1,736.0	0.00	370,718.29	823,849.65
10,700.0	90.00	179.50	9,028.0	5,809.2	-1,835.9	16.0	1,836.0	0.00	370,618.29	823,850.52
10,800.0	90.00	179.50	9,028.0	5,809.2	-1,935.9	16.8	1,936.0	0.00	370,518.30	823,851.39
10,900.0	90.00	179.50	9,028.0	5,809.2	-2,035.9	17.7	2,036.0	0.00	370,418.30	823,852.26
11,000.0	90.00	179.50	9,028.0	5,809.2	-2,135.9	18.6	2,136.0	0.00	370,318.30	823,853.13
11,100.0	90.00	179.50	9,028.0	5,809.2	-2,235.9	19.4	2,236.0	0.00	370,218.31	823,854.00
11,200.0	90.00	179.50	9,028.0	5,809.2	-2,335.9	20.3	2,336.0	0.00	370,118.31	823,854.87
11,300.0	90.00	179.50	9,028.0	5,809.2	-2,435.9	21.2	2,436.0	0.00	370,018.32	823,855.74
11,400.0	90.00	179.50	9,028.0	5,809.2	-2,535.9	22.1	2,536.0	0.00	369,918.32	823,856.61



Pathfinder
Pathfinder X & Y Report

PATHFINDER
A Schlumberger Company

Company: RMR Operating LLC.
Project: Lea County NAD 83
Site: Madera 25 Federal
Well: #2H
Wellbore: OH
Design: Plan #3

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #2H
KB = 22' @ 3218.8usft (Original Well Elev)
KB = 22' @ 3218.8usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Planned 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)
11,500.0	90.00	179.50	9,028.0	5,809.2	-2,635.9	22.9	2,636.0	0.00	369,818.32	823,857.48
11,600.0	90.00	179.50	9,028.0	5,809.2	-2,735.9	23.8	2,736.0	0.00	369,718.33	823,858.35
11,700.0	90.00	179.50	9,028.0	5,809.2	-2,835.9	24.7	2,836.0	0.00	369,618.33	823,859.22
11,800.0	90.00	179.50	9,028.0	5,809.2	-2,935.9	25.5	2,936.0	0.00	369,518.33	823,860.09
11,900.0	90.00	179.50	9,028.0	5,809.2	-3,035.9	26.4	3,036.0	0.00	369,418.34	823,860.96
12,000.0	90.00	179.50	9,028.0	5,809.2	-3,135.9	27.3	3,136.0	0.00	369,318.34	823,861.83
12,100.0	90.00	179.50	9,028.0	5,809.2	-3,235.8	28.1	3,236.0	0.00	369,218.35	823,862.70
12,200.0	90.00	179.50	9,028.0	5,809.2	-3,335.8	29.0	3,336.0	0.00	369,118.35	823,863.56
12,300.0	90.00	179.50	9,028.0	5,809.2	-3,435.8	29.9	3,436.0	0.00	369,018.35	823,864.43
12,400.0	90.00	179.50	9,028.0	5,809.2	-3,535.8	30.7	3,536.0	0.00	368,918.36	823,865.30
12,500.0	90.00	179.50	9,028.0	5,809.2	-3,635.8	31.6	3,636.0	0.00	368,818.36	823,866.17
12,600.0	90.00	179.50	9,028.0	5,809.2	-3,735.8	32.5	3,736.0	0.00	368,718.36	823,867.04
12,700.0	90.00	179.50	9,028.0	5,809.2	-3,835.8	33.4	3,836.0	0.00	368,618.37	823,867.91
12,800.0	90.00	179.50	9,028.0	5,809.2	-3,935.8	34.2	3,936.0	0.00	368,518.37	823,868.78
12,900.0	90.00	179.50	9,028.0	5,809.2	-4,035.8	35.1	4,036.0	0.00	368,418.38	823,869.65
13,000.0	90.00	179.50	9,028.0	5,809.2	-4,135.8	36.0	4,136.0	0.00	368,318.38	823,870.52
13,100.0	90.00	179.50	9,028.0	5,809.2	-4,235.8	36.8	4,236.0	0.00	368,218.38	823,871.39
13,200.0	90.00	179.50	9,028.0	5,809.2	-4,335.8	37.7	4,336.0	0.00	368,118.39	823,872.26
13,300.0	90.00	179.50	9,028.0	5,809.2	-4,435.8	38.6	4,436.0	0.00	368,018.39	823,873.13
13,400.0	90.00	179.50	9,028.0	5,809.2	-4,535.8	39.4	4,536.0	0.00	367,918.39	823,874.00
13,483.2	90.00	179.50	9,028.0	5,809.2	-4,619.0	40.2	4,619.2	0.00	367,835.19	823,874.72

Checked By: _____ Approved By: _____ Date: _____



Project: Lea County NAD 83
Site: Madera 25 Federal
Well: #2H
Wellbore: OH
Plan: Plan #3 (#2H/OH)

PROJECT DETAILS: Lea County NAD 83
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

WELL DETAILS #2H

Ground Elevation 3196.8
RKB Elevation KB = 22' @ 3218 8usft (Original Well Elev)
Rig Name Original Well Elev

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 0	0 0	372454 195	823834 558	32°11' 14.452 N	103°25' 1 8 587 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL (Madera 25 2H)	9028.0	-4619 0	40 2	367835 194	823874 722	Point

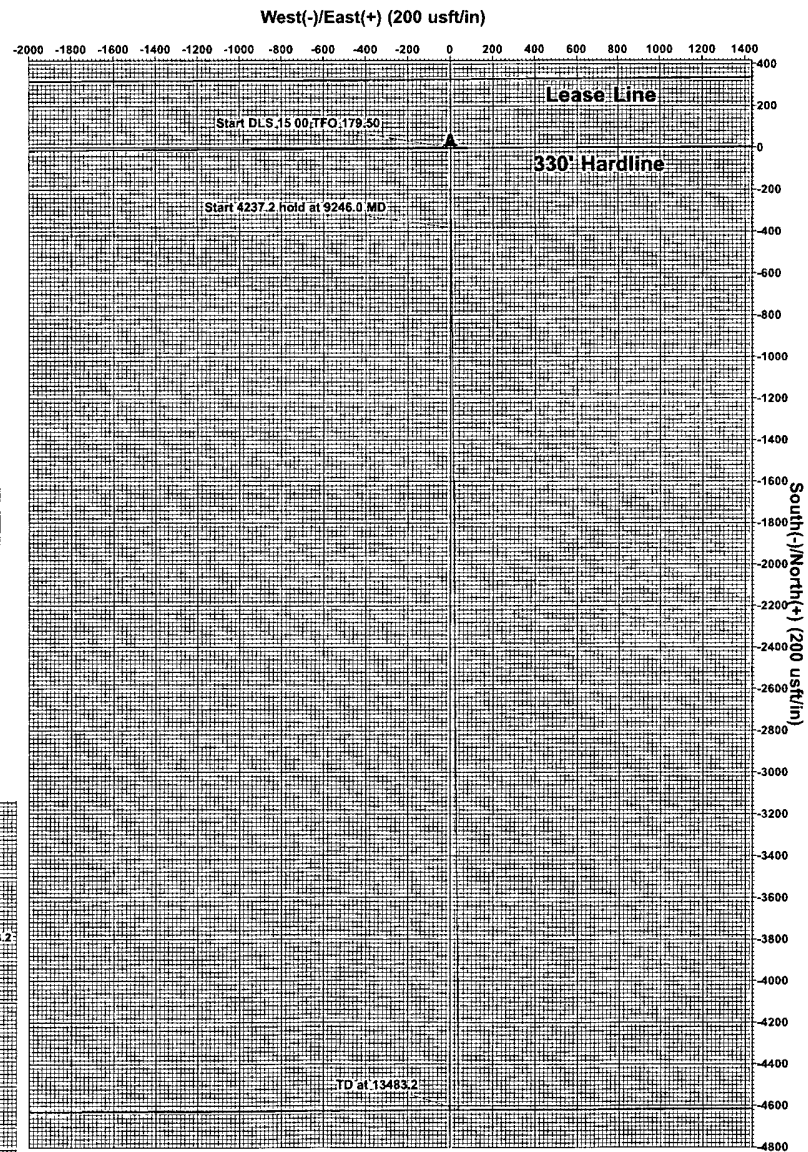
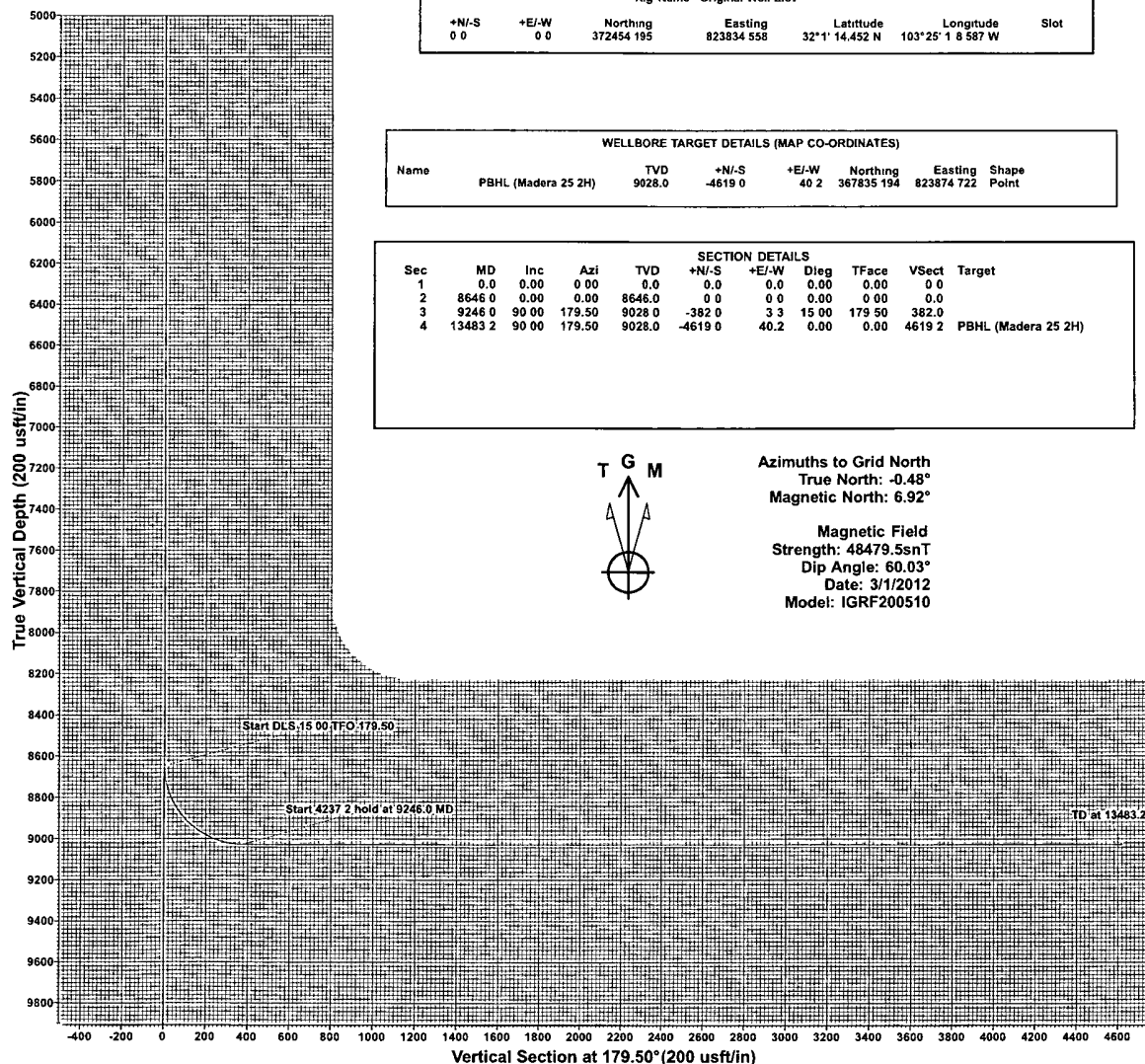
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	8646 0	0.00	0.00	8646.0	0.0	0.0	0.00	0.00	0.0	
3	9246 0	90 00	179.50	9028.0	-382 0	3 3	15 00	179 50	382.0	
4	13483 2	90 00	179.50	9028.0	-4619 0	40.2	0.00	0.00	4619 2	PBHL (Madera 25 2H)



Azimuths to Grid North
True North: -0.48°
Magnetic North: 6.92°

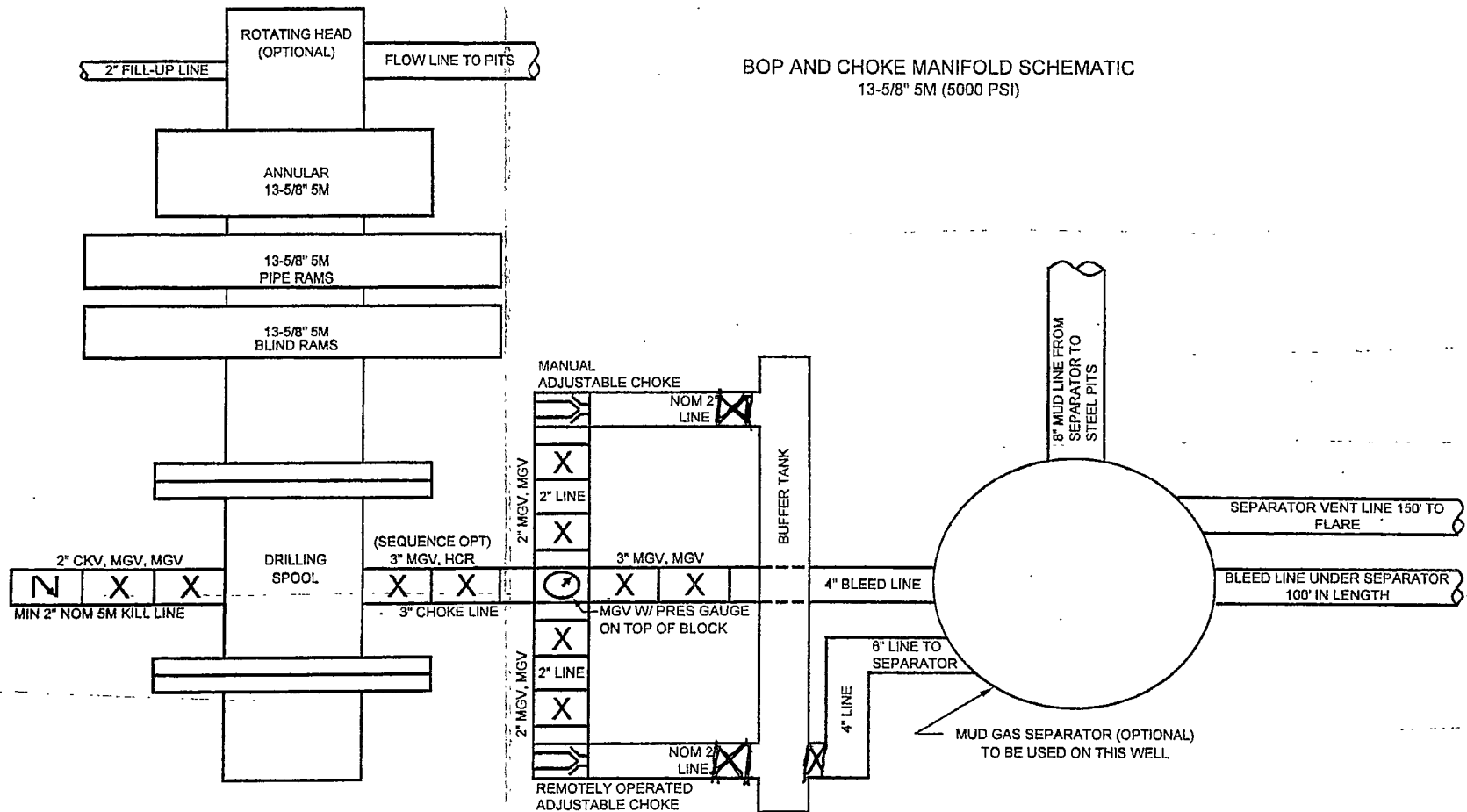
Magnetic Field
Strength: 48479.5snT
Dip Angle: 60.03°
Date: 3/1/2012
Model: IGRF200510



Plan: Plan #3 (#2H/OH)

Created By: Michael Trout Date: 14 39, March 07 2012
Checked: _____ Date: _____

RMR Operating LLC
Lea County ROAD 83
Madera 25 Federal
OH
Original Well Elev
Plan #3



NOTES

MGV - MANUAL GATE VALVE
HCR - REMOTELY OPERATED HIGH CLOSING RATIO VALVE
CKV - CHECK VALVE
LINE SIZES GIVEN IN NOMINAL DIMENSIONS

added valves
7/4/12
WMC