AT5-12-497

HOBBS OCD
JUN 19 2012
RECEIVED

Form 3160-3
(200)

FORM APPROVED
OMB No. 1004-013
Expires 3, 200

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NM 93223

6 If Indian, Allotee or Tribe Name
n/a

7 If Unit or CA Agreement, Name and No

1a. Type of work. ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8 Lease Name and Well No.
Madera 19 Federal #2H 309498

2 Name of Operator
RMR Operating, LLC. 281085

9 API Well No.
30-025-40631

3a. Address **415 W. Wall Street Suite 1310**
Midland, TX 79701

3b Phone No. *(include area code)*
214.871.0400

10. Field and Pool, or Exploratory
~~Jabalina Southwest~~ WC-025 G-09 S263426C 97947 Bone Spring

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **330' FSL & 660' FWL**
At proposed prod. zone **330' FNL & 660' FWL**

11. Sec., T. R. M. or Blk and Survey or Area
Sec.19, T-26S, R-35E

14 Distance in miles and direction from nearest town or post office*
18 miles southwest of Jal, NM

12 County or Parish
Lea County

13. State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)
surface 330'
bottom hole 330'

16 No. of acres in lease
645.6
~~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
surface 1330' from Madera 24 federal #2H

19. Proposed Depth
pilot hole 9350'/9063'tvd
13521' MD

20 BLM/BIA Bond No. on file
NMB 000780

21 Elevations (Show whether DF, KDB, RT, GL, etc.)
3184.3 GL

22 Approximate date work will start*
10/18/2012

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.
2 A Drilling Plan
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)
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25 Signature [signature] Name *(Printed/Typed)* **Tommy W. Folsom** Date **03/08/2012**

Title **Executive Vice President and Director of Exploration & Production**

Approved by *(Signature)* /s/ Don Peterson Name *(Printed/Typed)* /s/ Don Peterson Date JUN 19 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)

KZ 06/20/12

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

JUN 21 2012

Drilling Program – RMR Operating, LLC

Madera "19" Federal #2H

Surface Hole Location: 330' FSL & 660' FWL, Unit M, Sec. 19, T26S, R35E, Lea Co. NM
Bottom Hole Location: 330' FNL & 660' FWL, Unit D, Sec.19, T26S, R35E, 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'	Water
f.	Base Salt	5025'	N/A
g.	Delaware	5331'	Oil
h.	Bell Canyon	5373'	Oil
i.	Cherry Canyon	6599'	Oil
j.	Brushy Canyon	7822'	Oil
k.	Brushy Canyon "B"	8902'	Oil
l.	Brushy Canyon "D"	8970'	Oil
m.	Approximate Landing Depth "D"	9063' TVD	
n.	Pilot Hole TD	9350'	
o.	Total Measured Depth in Lateral	13521' 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 1125' and circulate cement back to surface. The fresh water sands will be protected by setting 9-5/8" casing at 5331' 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 100' ± above 9-5/8" shoe. A 6-1/8" curve will be drilled to land a lateral at TVD 9063' and drilled to a total MD at 13521'. A 4-1/2 open-hole completion liner will be run with the liner hanger to be 100' about the 7" shoe. All casing is new and API approved.

3. Casing Program

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight	Connection	Grade
17-1/2"	0'-1125'	13-3/8"	0'-1125'	54.5#	STC	J-55
12-1/4"	1125'-5331'	9-5/8"	0'-1866"	40#	LTC	N-80
12-1/4"	1125'-5331'	9-5/8"	1866'-5331'	40#	LTC	HCK-55
8-3/4"	5331'-9350'	7"	0'-8627'	26#	LTC	HCP-110
6-1/8"	8627'-13521'	4-1/2"	~~0~~ 8527'-13483' MD	11.6#	BTC	HCP-110

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~~ ~~2.-1000 gal Super flush 102~~
on end of 7" to set Pilot Hole Plug 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 ft³/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'-2000' 1126	8.4-9.0	32-34	N/C	Fresh Water
2000'-5367'	10	28	N/C	Brine Water
5367'-8637'	8.9-9.3	28	N/C	Cut Brine Water
8627'-13521'	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 times.

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.

Drilling Fluids Program

Madera 19 #2H

Sec. 19, T-26-S, R-35-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"

NOVA MUD INCORPORATED

NOVA MUD, Inc.

P.O. Box 2703 Hobbs, NM 88241 800-530-8786
1004 Big Spring, Suite. 215, Midland, TX 79701 432-570-6663
6000 NW 138th St, Suite 102, Oklahoma City, OK 73134

3/9/2012

Mr. Tommy Folsom
RMR Operating, LLC
2515 McKinney Ave., Ste. 900
Dallas, TX 75201

RE: Madera 19 #2H (13,521 MD' - Brushy Canyon)

Dear Tommy,

We appreciate the opportunity to present our ideas for your upcoming prospect, located in Sec. 19, T-26-S, R-35-E, of Lea County, NM.

This program has been designed to economically provide sufficient hole stability and adequate formation evaluation with minimum damage to your producing formation.

Our mud cost for this well under normal drilling conditions is approximately $66,547 based on 39 drilling days. Severe lost circulation, water flows, fishing jobs, pressure or other unforeseen drilling hazards could alter this estimate.

We thank you for the opportunity to be of service to you on this well and we look forward to working with you in the future. Please don't hesitate to call should you have any questions or comments.

Sincerely,

Dale S. Welch
Technical Advisor

"The Nova Difference"

A Commitment to Service

RMR Operating, LLC * Madera 19 # 2H * Sec. 19, T-26-S, R-35-E, Lea County, NM

INTERVAL: 0 - 1,125'	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:	**$2,127.90**

Projected Mud Properties

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
0-1,125'	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' - 1,125'	Rustler	Anhydrite	Casing seat

Interval Notes for 0 - 1,125

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 soilds 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.**

RMR Operating, LLC * Madera 19 # 2H * Sec. 19, T-26-S, R-35-E, Lea County, NM

INTERVAL: 1,125 - 5,331'	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 %		
1,125-5,331'	BR	10.0	28	N/C	10.0	186K	.5-.75		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
1,125' - 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' - 5,331'	Lamar	Deleware Mountain Group, Limestone	Casing seat

Interval Notes for 1,125 - 5,331

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.

RMR Operating, LLC * Madera 19 # 2H * Sec. 19, T-26-S, R-35-E, Lea County, NM

INTERVAL: 5,331 - 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 %		
5,331-9,350'	CB	8.6-9.0	28	N/C	10.0	40-90K	.5-.75		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
5,331' - 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 5,331 - 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'.

RMR Operating, LLC * Madera 19 # 2H * Sec. 19, T-26-S, R-35-E, Lea County, NM

INTERVAL: 8,550 - 13,521'	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		
9,050-13,521'	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
9,063' - 9,063'	Brushy Canyon D	Sand	Horizontal Target

Interval Notes for 8,550 - 13,521

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

Kick off just out from under 7" (8,681') and begin the curve at a build rate of 15 degrees/100' to be lateral by 9,063' TVD and 9,281' 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 torqued 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 19 # 2H * Sec. 19, T-26-S, R-35-E, Lea County, NM

Product	Discounted Retail Cost	Unit Size	Usage	Product Cost
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

Totals	
Bits	**7**
Days	**39**
Mud	**$66,547**

Materials Cost:		$53,764
Trucking Cost:		$8,500
Sales Tax/Product @	6.88%	$3,699
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

Product	Unit Size	Price
Basic Materials		
Barite	100 #	$17.50
Barite-Bulk	1 ton	$297.50
Barite-Super Sack(NE-ONLY)	3000 lb	$574.13
Calcium Carbonate	50 #	$8.58
Caustic Soda	50 #	$37.40
Flozan	25 #	$179.34
Fresh Gel	50 #	$5.00
Fresh Gel	100 #	$9.92
Fresh Gel-Bulk	1 ton	$220.00
Lime	50 #	$7.04
PAC-R	50 #	$190.40
PAC-SL	50 #	$197.20
Salt	50 #	$6.93
Salt Gel	50 #	$10.40
Soda Ash	50 #	$15.00
Soda Ash	100 #	$30.00
White Starch	50 #	$27.30
Yellow Starch	50 #	$18.27
Corrosion Chemicals		
Filming Amine	1 gal.	$13.60
H2S Scavenger	1 gal.	$18.70
Oxygen Scavenger	1 gal.	$14.45
Scale Inhibitor	1 gal.	$14.45
Drilling Chemicals		
Aluminum Tristearate	50 #	$90.00
Benex	2 #	$18.00
Caustic Potash (KOH)	50 #	$66.00
CLS	50 #	$40.00
DCS Drilling Surfactant	5 gal.	$68.20
Defoamer	5 gal.	$69.35
Desco	25 #	$51.00
Drilling Beads	50 #	$162.00
Gluteraldehyde	55 gal.	$2,376.00
Gluteraldehyde	5 gal.	$216.00
Graphite	50 #	$42.70
INC-9001	5 gal.	$146.88
INC-9001	55 gal.	$1,663.20
KCL	50 #	$30.10
Lignite	50 #	$16.34

Product	Unit Size	Price
Drilling Chemicals		
MF-1	2 #	$16.80
Nova Sweep	15 #	$104.00
PHPA/MF-55	5 gal.	$103.25
Pipe Free	55 gal.	$1,280.00
Poly Stick	1 each	$15.05
RF-Foam 107	55 gal	$1,066.00
SAPP	50 #	$95.52
Silicone Defoamer	5 gal.	$81.74
Slicker 555	55 gal.	$1,000.00
Soap Stick	1 each	$15.05
Sodium Bicarbonate	50 #	$32.50
Soltex	50 #	$102.60
STC (biocide)	5 gal.	$104.50
Equipment Rentals/Services/Storage Aids		
Mixing Charge	1 bbl.	$8.00
Mud Engineer	24 hr.	$850.00
Mud Engineer	4 hr.	$0.00
Pallets	1 each	$18.00
Plastic	1 roll	$60.00
Portable Mud Plant	24 hr.	$525.00
Shrink Wrap	1 each	$22.00
Lost Circulation Material		
Cedar Plug	40 #	$9.90
Cotton Seed Hulls	50 #	$13.50
CSC	25 #	$34.32
CSF	25 #	$34.32
Fiber Seal	40 #	$14.79
Ground Paper	30 #	$10.40
LCF-Blend	25 lb	$29.25
Magma Fiber	30 #	$30.25
Mica	50 #	$12.54
Nova Fiber	30 #	$29.25
Nut Plug	50 #	$25.50
Oil Mud Additives		
Calcium Chloride-50	50 #	$30.00
Calcium Chloride-80	80 #	$46.00
OBM Dispersing Wetting Agent	5 gal.	$197.00
OBM FW Gel	50 #	$129.00
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

Product	Unit Size	Price	Product	Unit Size	Price
Oil Mud Additives					
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

NOVA MUD INCORPORATED

OPERATOR	RMR OPERATING, LLC	CONTRACTOR:	WESTERN DRILLING
WELL NAME	MADERA 24 FED # 2-H	RIG NUMBER	3
LOCATION	BECKHAM RANCH	SPUD DATE	10/25/2011
SEC-TWP-RGE	S 24- T26S- R34E	FINISH DATE	12/23/2011
COUNTY	LEA	TOTAL DEPTH	13800
STATE	N M.	ENGINEER(S)	JASON TYLER

Drilling Mud Base Fluid
Water

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 API ml	CAKE 32nd	HTHP	CAKE 32nd	RETORT SOLID S %	OIL %	WATER %	SAN D %	pH	FILTRATE ANALYSIS Pm	Pf	Mf	CHLORIDES mg/L	CALCIU M mg/L	LIME ppb	OIL EMULSIONS O / W RATIO		ELECTRICAL STABILITY volts	LCM ppb
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					
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	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	9	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 acitve, 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					
4	10/27/2011	10:00 AM		9 95	28									0	0	88 2	0	7		0	0 22	178000	2480					
Remarks	Now running survey While drilling, getting 15-40 fph Co Rep let active system viscosify 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					
Remarks	Td'd 17 1/2" surface hole at 1,132', pumped fresh gel sweep T O H , ran 13 3/8", 54.5 ppf 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					
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					
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					
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					
Remarks	T I H with overshot (fishing tools), screwed into fish at 2,748' T O H , retneved 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					

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

NOVA MUD INCORPORATED

OPERATOR:	RMR OPERATING, LLC	CONTRACTOR:	WESTERN DRILLING
WELL NAME	MADERA 24 FED # 2-H	RIG NUMBER	3
LOCATION	BECKHAM RANCH	SPUD DATE	10/25/2011
SEC-TWP-RGE	S 24- T26S- R34E	FINISH DATE	12/23/2011
COUNTY	LEA	TOTAL DEPTH	13800
STATE	N M	ENGINEER(S)	JASON TYLER

Drilling Mud Base Fluid
Water

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 API ml	FILTRATION CAKE 32nd	FILTRATION HTHP	FILTRATION CAKE 32nd	RETORT SOLID S %	RETORT OIL %	RETORT WATER %	SAN D %	pH	FILTRATE ANALYSIS Pm	Pf	Mf	CHLORIDES mg/L	CALCIU M mg/L	LIME ppb	OIL EMULSIONS O / 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 presurre 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	Tripped in hole with an 8 3/4" bit, using cut brine T I H and hit hard spot at 5297', and bit quit drilling. Tripped out of hole and made two fishing trips 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

NOVA MUD INCORPORATED

OPERATOR	RMR OPERATING, LLC	CONTRACTOR:	WESTERN DRILLING
WELL NAME	MADERA 24 FED # 2-H	RIG NUMBER	3
LOCATION	BECKHAM RANCH	SPUD DATE	10/25/2011
SEC-TWP-RGE	S 24- T26S- R34E	FINISH DATE	12/23/2011
COUNTY.	LEA	TOTAL DEPTH	13800
STATE	N M	ENGINEER(S)	JASON TYLER

Drilling Mud Base Fluid
Water

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 API ml	FILTRATION CAKE 32nd	FILTRATION HTHP	FILTRATION CAKE 32nd	RETORT SOLIDS %	RETORT OIL %	RETORT WATER %	SAND %	pH	FILTRATE ANALYSIS Pm	Pf	Mf	CHLORIDES mg/L	CALCIUM mg/L	LIME ppb	OIL EMULSIONS O / W RATIO		ELECTRICAL STABILITY volts	LCM ppb
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		0 05	0 2	52000	1440					
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		0 3	0 4	79000	1840					
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		0 18	0 25	69000	720					
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	1 4	0 8	1 5	71000	80	0 156				
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	1 3	0 6	1 2	71000	80	0 182				
Remarks	Drilled curve to 9,050' (Inc @ 9,000'=54 96 deg), and rig 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 00AM	9147	9 1	35	8	10	9	15	14	1		32	1	0	94 3	TRC	11	1 4	0 5	1 2	72000	120	0 234				
Remarks	Currently slide drilling in curve at 7'/hr Dev/ 67 3 @ 9096'																											
28	12/10/2011	10 00AM	9236	9 2	36	7	10	10	15	8	1		32	0 9	0	93.6	TRC	11	1 3	0 5	1	83000	120	0 208				
Remarks	Tripped out for new bit and motor Tripped in hole, and resumed drilling Currently slide drilling at 10'/hr																											
29	12/11/2011	8 00AM	9396	9 2	36	6	12	10	17	8	1		32	0 9	0	93 6	TRC	11	1 3	0 5	1	84000	80	0 208				
Remarks	Drilling ahead in lateral hole at 8'/hr																											
30	12/12/2011	10 00AM	10348	9 55	36	8	10	9	16	12	1		32	3 5	0	91 1	TRC	10	1 1	0 6	0 8	82000	120	0 13				
Remarks	Drilling lateral at 75'/hr Fluid density increase due to drilled solids and holes in shakeer screens Recommeded to co rep that shaker screens needed to be replaced, and centrifuge should be run to help reduce solids																											
31	12/13/2011	10 00AM	11202	9 4	37	9	9	10	17	14 6	1		32	2.5	0	92 2	TRC	10	1 2	0 5	1 2	80000	200	0 182				
Remarks	Currently drilling ahead in lateral section at 70'/hr																											

DRILLING MUD RECAP

NOVA MUD INCORPORATED

OPERATOR:	RMR OPERATING, LLC	CONTRACTOR.	WESTERN DRILLING
WELL NAME	MADERA 24 FED # 2-H	RIG NUMBER.	3
LOCATION	BECKHAM RANCH	SPUD DATE	10/25/2011
SEC-TWP-RGE	S 24- T26S- R34E	FINISH DATE	12/23/2011
COUNTY	LEA	TOTAL DEPTH	13800
STATE	N M	ENGINEER(S)	JASON TYLER

Drilling Mud Base Fluid
Water

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 mn		FILTRATION API ml	CAKE 32nd	HTHP	CAKE 32nd	RETORT SOLID S %	OIL %	WATER %	SAN D %	pH	FILTRATE ANALYSIS Pm	Pf	Mf	CHLORIDES mg/L	CALCIU M mg/L	LIME ppb	OIL EMULSIONS 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				
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	11	18	8	1		32	2 2	0	92 2	TRC	10	1	0 2	0 75	85000	200	0 208				2
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				
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				
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				
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				
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				
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				
Remarks	Tripped out of hole, and are now running 4 1/2" liner on drillpipe																											
41	12/23/2011		13800																									
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 19 Federal
#2H
OH

Plan: Plan #2

Pathfinder X & Y Report

07 March, 2012

PATHFINDER®
A Schlumberger Company

Company:	RMR Operating LLC.	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County NAD 83	**TVD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Site:	Madera 19 Federal	**MD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**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 19 Federal

Site Position:		**Northing:**	373,129.190 usft	**Latitude:**	32° 1' 20.902 N
From:	Map	**Easting:**	826,569.100 usft	**Longitude:**	103° 24' 46.760 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.49 °

Well #2H

Well Position	**+N/-S**	0.0 usft	**Northing:**	373,129.190 usft	**Latitude:**	32° 1' 20.902 N
	+E/-W	0.0 usft	**Easting:**	826,569.100 usft	**Longitude:**	103° 24' 46.760 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,184.3 usft

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	3/1/2012	7.40	60.03	48,482

Design Plan #2

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	359.49

Survey Tool Program **Date** 3/7/2012

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.0	13,521.0	Plan #2 (OH)		

Company:	RMR Operating LLC.	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County NAD 83	**TVD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Site:	Madera 19 Federal	**MD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**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)
0.0	0.00	0.00	0.0	-3,206.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
100.0	0.00	0.00	100 0	-3,106.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
200.0	0.00	0.00	200.0	-3,006.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
300.0	0.00	0.00	300.0	-2,906.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
400.0	0.00	0.00	400 0	-2,806.3	0.0	0.0	0 0	0.00	373,129 19	826,569.10
500.0	0.00	0.00	500.0	-2,706.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
600.0	0.00	0.00	600.0	-2,606.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
700.0	0.00	0.00	700.0	-2,506.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
800.0	0.00	0.00	800.0	-2,406.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
900.0	0.00	0.00	900.0	-2,306.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,000.0	0.00	0.00	1,000.0	-2,206.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,100.0	0.00	0.00	1,100.0	-2,106.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,200.0	0.00	0.00	1,200.0	-2,006.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,300.0	0.00	0.00	1,300.0	-1,906.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,400.0	0.00	0.00	1,400.0	-1,806.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,500.0	0.00	0.00	1,500.0	-1,706.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,600.0	0.00	0.00	1,600.0	-1,606.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,700.0	0.00	0.00	1,700.0	-1,506.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,800.0	0.00	0.00	1,800.0	-1,406.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
1,900.0	0.00	0.00	1,900.0	-1,306.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,000.0	0.00	0.00	2,000.0	-1,206.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,100.0	0.00	0.00	2,100.0	-1,106.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,200.0	0.00	0.00	2,200.0	-1,006.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,300.0	0.00	0.00	2,300.0	-906.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,400.0	0.00	0.00	2,400.0	-806.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,500.0	0.00	0.00	2,500.0	-706.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,600.0	0.00	0.00	2,600.0	-606.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10

Company:	RMR Operating LLC.	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County NAD 83	**TVD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Site:	Madera 19 Federal	**MD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**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)
2,700.0	0.00	0.00	2,700.0	-506.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,800.0	0.00	0.00	2,800.0	-406.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
2,900.0	0.00	0.00	2,900.0	-306.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,000.0	0.00	0.00	3,000.0	-206.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,100.0	0.00	0.00	3,100.0	-106.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,200.0	0.00	0.00	3,200.0	-6.3	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,300.0	0.00	0.00	3,300.0	93.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,400.0	0.00	0.00	3,400.0	193.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,500.0	0.00	0.00	3,500.0	293.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,600.0	0.00	0.00	3,600.0	393.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,700.0	0.00	0.00	3,700.0	493.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,800.0	0.00	0.00	3,800.0	593.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
3,900.0	0.00	0.00	3,900.0	693.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,000.0	0.00	0.00	4,000.0	793.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,100.0	0.00	0.00	4,100.0	893.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,200.0	0.00	0.00	4,200.0	993.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,300.0	0.00	0.00	4,300.0	1,093.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,400.0	0.00	0.00	4,400.0	1,193.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,500.0	0.00	0.00	4,500.0	1,293.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,600.0	0.00	0.00	4,600.0	1,393.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,700.0	0.00	0.00	4,700.0	1,493.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,800.0	0.00	0.00	4,800.0	1,593.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
4,900.0	0.00	0.00	4,900.0	1,693.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,000.0	0.00	0.00	5,000.0	1,793.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,100.0	0.00	0.00	5,100.0	1,893.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,200.0	0.00	0.00	5,200.0	1,993.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,300.0	0.00	0.00	5,300.0	2,093.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10

Company:	RMR Operating LLC.	**Local Co-ordinate Reference:**	Well #2H
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Site:	Madera 19 Federal	**MD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**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	2,193.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,500.0	0.00	0.00	5,500.0	2,293.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,600.0	0.00	0.00	5,600.0	2,393.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,700.0	0.00	0.00	5,700.0	2,493.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,800.0	0.00	0.00	5,800.0	2,593.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
5,900.0	0.00	0.00	5,900.0	2,693.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,000.0	0.00	0.00	6,000.0	2,793.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,100.0	0.00	0.00	6,100.0	2,893.7	0 0	0.0	0.0	0.00	373,129.19	826,569.10
6,200.0	0.00	0.00	6,200.0	2,993.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,300.0	0.00	0.00	6,300.0	3,093.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,400.0	0.00	0.00	6,400.0	3,193.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,500.0	0.00	0.00	6,500.0	3,293.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,600.0	0.00	0.00	6,600.0	3,393.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,700.0	0.00	0.00	6,700.0	3,493.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,800.0	0.00	0.00	6,800.0	3,593.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
6,900.0	0.00	0.00	6,900.0	3,693.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,000.0	0.00	0.00	7,000.0	3,793.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,100.0	0.00	0.00	7,100.0	3,893.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,200.0	0.00	0.00	7,200.0	3,993.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,300.0	0.00	0.00	7,300.0	4,093.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,400.0	0.00	0.00	7,400.0	4,193.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,500.0	0.00	0.00	7,500.0	4,293.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,600.0	0.00	0.00	7,600.0	4,393.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,700.0	0.00	0.00	7,700.0	4,493.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,800.0	0.00	0.00	7,800.0	4,593.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
7,900.0	0.00	0.00	7,900.0	4,693.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
8,000.0	0.00	0.00	8,000.0	4,793.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10

Company:	RMR Operating LLC.	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County NAD 83	**TVD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Site:	Madera 19 Federal	**MD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**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)
8,100.0	0.00	0.00	8,100.0	4,893.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
8,200.0	0.00	0.00	8,200.0	4,993.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
8,300.0	0.00	0.00	8,300.0	5,093.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
8,400.0	0.00	0.00	8,400.0	5,193.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
8,500.0	0.00	0.00	8,500.0	5,293.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
8,600.0	0.00	0.00	8,600.0	5,393.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
8,681.0	0.00	0.00	8,681.0	5,474.7	0.0	0.0	0.0	0.00	373,129.19	826,569.10
8,700.0	2.85	359.49	8,700.0	5,493.7	0.5	0.0	0.5	15.00	373,129.66	826,569.10
8,725.0	6.60	359.49	8,724.9	5,518.6	2.5	0.0	2.5	15.00	373,131.72	826,569.08
8,750.0	10.35	359.49	8,749.6	5,543.3	6.2	-0.1	6.2	15.00	373,135.40	826,569.04
8,775.0	14.10	359.49	8,774.1	5,567.8	11.5	-0.1	11.5	15.00	373,140.70	826,569.00
8,800.0	17.85	359.49	8,798.1	5,591.8	18.4	-0.2	18.4	15.00	373,147.58	826,568.94
8,825.0	21.60	359.49	8,821.6	5,615.3	26.8	-0.2	26.8	15.00	373,156.01	826,568.86
8,850.0	25.35	359.49	8,844.5	5,638.2	36.8	-0.3	36.8	15.00	373,165.97	826,568.77
8,875.0	29.10	359.49	8,866.8	5,660.5	48.2	-0.4	48.2	15.00	373,177.40	826,568.67
8,900.0	32.85	359.49	8,888.2	5,681.9	61.1	-0.5	61.1	15.00	373,190.27	826,568.56
8,925.0	36.60	359.49	8,908.7	5,702.4	75.3	-0.7	75.3	15.00	373,204.51	826,568.43
8,950.0	40.35	359.49	8,928.3	5,722.0	90.9	-0.8	90.9	15.00	373,220.06	826,568.30
8,975.0	44.10	359.49	8,946.8	5,740.5	107.7	-1.0	107.7	15.00	373,236.85	826,568.15
9,000.0	47.85	359.49	8,964.2	5,757.9	125.6	-1.1	125.6	15.00	373,254.83	826,567.99
9,025.0	51.60	359.49	8,980.3	5,774.0	144.7	-1.3	144.7	15.00	373,273.90	826,567.82
9,050.0	55.35	359.49	8,995.2	5,788.9	164.8	-1.5	164.8	15.00	373,293.98	826,567.64
9,075.0	59.10	359.49	9,008.8	5,802.5	185.8	-1.6	185.8	15.00	373,315.00	826,567.46
9,100.0	62.85	359.49	9,020.9	5,814.6	207.7	-1.8	207.7	15.00	373,336.85	826,567.26
9,125.0	66.60	359.49	9,031.6	5,825.3	230.3	-2.0	230.3	15.00	373,359.45	826,567.06
9,150.0	70.35	359.49	9,040.7	5,834.4	253.5	-2.2	253.5	15.00	373,382.70	826,566.86
9,175.0	74.10	359.49	9,048.4	5,842.1	277.3	-2.5	277.3	15.00	373,406.51	826,566.65

Company:	RMR Operating LLC.	**Local Co-ordinate Reference:**	Well #2H
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Site:	Madera 19 Federal	**MD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
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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)
9,200.0	77.85	359.49	9,054.4	5,848.1	301.6	-2.7	301.6	15.00	373,430.76	826,566.43
9,225.0	81.60	359.49	9,058.9	5,852.6	326.2	-2.9	326.2	15.00	373,455.35	826,566.21
9,250.0	85.35	359.49	9,061.7	5,855.4	351.0	-3.1	351.0	15.00	373,480.18	826,565.99
9,275.0	89.10	359.49	9,062.9	5,856.6	376.0	-3.3	376.0	15.00	373,505.15	826,565.77
9,281.0	90.00	359.49	9,063.0	5,856.7	382.0	-3.4	382.0	15.00	373,511.14	826,565.72
9,300.0	90.00	359.49	9,063.0	5,856.7	401.0	-3.5	401.0	0.00	373,530.15	826,565.55
9,400.0	90.00	359.49	9,063.0	5,856.7	501.0	-4.4	501.0	0.00	373,630.14	826,564.67
9,500.0	90.00	359.49	9,063.0	5,856.7	600.9	-5.3	601.0	0.00	373,730.14	826,563.78
9,600.0	90.00	359.49	9,063.0	5,856.7	700.9	-6.2	701.0	0.00	373,830.13	826,562.90
9,700.0	90.00	359.49	9,063.0	5,856.7	800.9	-7.1	801.0	0.00	373,930.13	826,562.01
9,800.0	90.00	359.49	9,063.0	5,856.7	900.9	-8.0	901.0	0.00	374,030.13	826,561.13
9,900.0	90.00	359.49	9,063.0	5,856.7	1,000.9	-8.9	1,001.0	0.00	374,130.12	826,560.24
10,000.0	90.00	359.49	9,063.0	5,856.7	1,100.9	-9.7	1,101.0	0.00	374,230.12	826,559.36
10,100.0	90.00	359.49	9,063.0	5,856.7	1,200.9	-10.6	1,201.0	0.00	374,330.11	826,558.47
10,200.0	90.00	359.49	9,063.0	5,856.7	1,300.9	-11.5	1,301.0	0.00	374,430.11	826,557.58
10,300.0	90.00	359.49	9,063.0	5,856.7	1,400.9	-12.4	1,401.0	0.00	374,530.11	826,556.70
10,400.0	90.00	359.49	9,063.0	5,856.7	1,500.9	-13.3	1,501.0	0.00	374,630.10	826,555.81
10,500.0	90.00	359.49	9,063.0	5,856.7	1,600.9	-14.2	1,601.0	0.00	374,730.10	826,554.93
10,600.0	90.00	359.49	9,063.0	5,856.7	1,700.9	-15.1	1,701.0	0.00	374,830.10	826,554.04
10,700.0	90.00	359.49	9,063.0	5,856.7	1,800.9	-15.9	1,801.0	0.00	374,930.09	826,553.16
10,800.0	90.00	359.49	9,063.0	5,856.7	1,900.9	-16.8	1,901.0	0.00	375,030.09	826,552.27
10,900.0	90.00	359.49	9,063.0	5,856.7	2,000.9	-17.7	2,001.0	0.00	375,130.08	826,551.39
11,000.0	90.00	359.49	9,063.0	5,856.7	2,100.9	-18.6	2,101.0	0.00	375,230.08	826,550.50
11,100.0	90.00	359.49	9,063.0	5,856.7	2,200.9	-19.5	2,201.0	0.00	375,330.08	826,549.62
11,200.0	90.00	359.49	9,063.0	5,856.7	2,300.9	-20.4	2,301.0	0.00	375,430.07	826,548.73
11,300.0	90.00	359.49	9,063.0	5,856.7	2,400.9	-21.3	2,401.0	0.00	375,530.07	826,547.85
11,400.0	90.00	359.49	9,063.0	5,856.7	2,500.9	-22.1	2,501.0	0.00	375,630.06	826,546.96

Company:	RMR Operating LLC.	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County NAD 83	**TVD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Site:	Madera 19 Federal	**MD Reference:**	KB = 22' @ 3206.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2	**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)
11,500.0	90.00	359.49	9,063.0	5,856.7	2,600.9	-23.0	2,601.0	0.00	375,730.06	826,546.08
11,600.0	90.00	359.49	9,063.0	5,856.7	2,700.9	-23.9	2,701.0	0.00	375,830.06	826,545.19
11,700.0	90.00	359.49	9,063.0	5,856.7	2,800.9	-24.8	2,801.0	0.00	375,930.05	826,544.31
11,800.0	90.00	359.49	9,063.0	5,856.7	2,900.9	-25.7	2,901.0	0.00	376,030.05	826,543.42
11,900.0	90.00	359.49	9,063.0	5,856.7	3,000.9	-26.6	3,001.0	0.00	376,130.04	826,542.54
12,000.0	90.00	359.49	9,063.0	5,856.7	3,100.9	-27.4	3,101.0	0.00	376,230.04	826,541.65
12,100.0	90.00	359.49	9,063.0	5,856.7	3,200.8	-28.3	3,201.0	0.00	376,330.04	826,540.77
12,200.0	90.00	359.49	9,063.0	5,856.7	3,300.8	-29.2	3,301.0	0.00	376,430.03	826,539.88
12,300.0	90.00	359.49	9,063.0	5,856.7	3,400.8	-30.1	3,401.0	0.00	376,530.03	826,539.00
12,400.0	90.00	359.49	9,063.0	5,856.7	3,500.8	-31.0	3,501.0	0.00	376,630.02	826,538.11
12,500.0	90.00	359.49	9,063.0	5,856.7	3,600.8	-31.9	3,601.0	0.00	376,730.02	826,537.23
12,600.0	90.00	359.49	9,063.0	5,856.7	3,700.8	-32.8	3,701.0	0.00	376,830.02	826,536.34
12,700.0	90.00	359.49	9,063.0	5,856.7	3,800.8	-33.6	3,801.0	0.00	376,930.01	826,535.46
12,800.0	90.00	359.49	9,063.0	5,856.7	3,900.8	-34.5	3,901.0	0.00	377,030.01	826,534.57
12,900.0	90.00	359.49	9,063.0	5,856.7	4,000.8	-35.4	4,001.0	0.00	377,130.01	826,533.69
13,000.0	90.00	359.49	9,063.0	5,856.7	4,100.8	-36.3	4,101.0	0.00	377,230.00	826,532.80
13,100.0	90.00	359.49	9,063.0	5,856.7	4,200.8	-37.2	4,201.0	0.00	377,330.00	826,531.92
13,200.0	90.00	359.49	9,063.0	5,856.7	4,300.8	-38.1	4,301.0	0.00	377,429.99	826,531.03
13,300.0	90.00	359.49	9,063.0	5,856.7	4,400.8	-39.0	4,401.0	0.00	377,529.99	826,530.15
13,400.0	90.00	359.49	9,063.0	5,856.7	4,500.8	-39.8	4,501.0	0.00	377,629.99	826,529.26
13,500.0	90.00	359.49	9,063.0	5,856.7	4,600.8	-40.7	4,601.0	0.00	377,729.98	826,528.38
13,521.0	90.00	359.49	9,063.0	5,856.7	4,621.8	-40.9	4,622.0	0.00	377,751.02	826,528.19

Checked By: _____ Approved By: _____ Date: _____

Project: Lea County NAD 83
Site: Madera 19 Federal
Well: #2H
Wellbore: OH
Plan: Plan #2 (#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

PATHFINDER®
A Schlumberger Company

WELL DETAILS: #2H

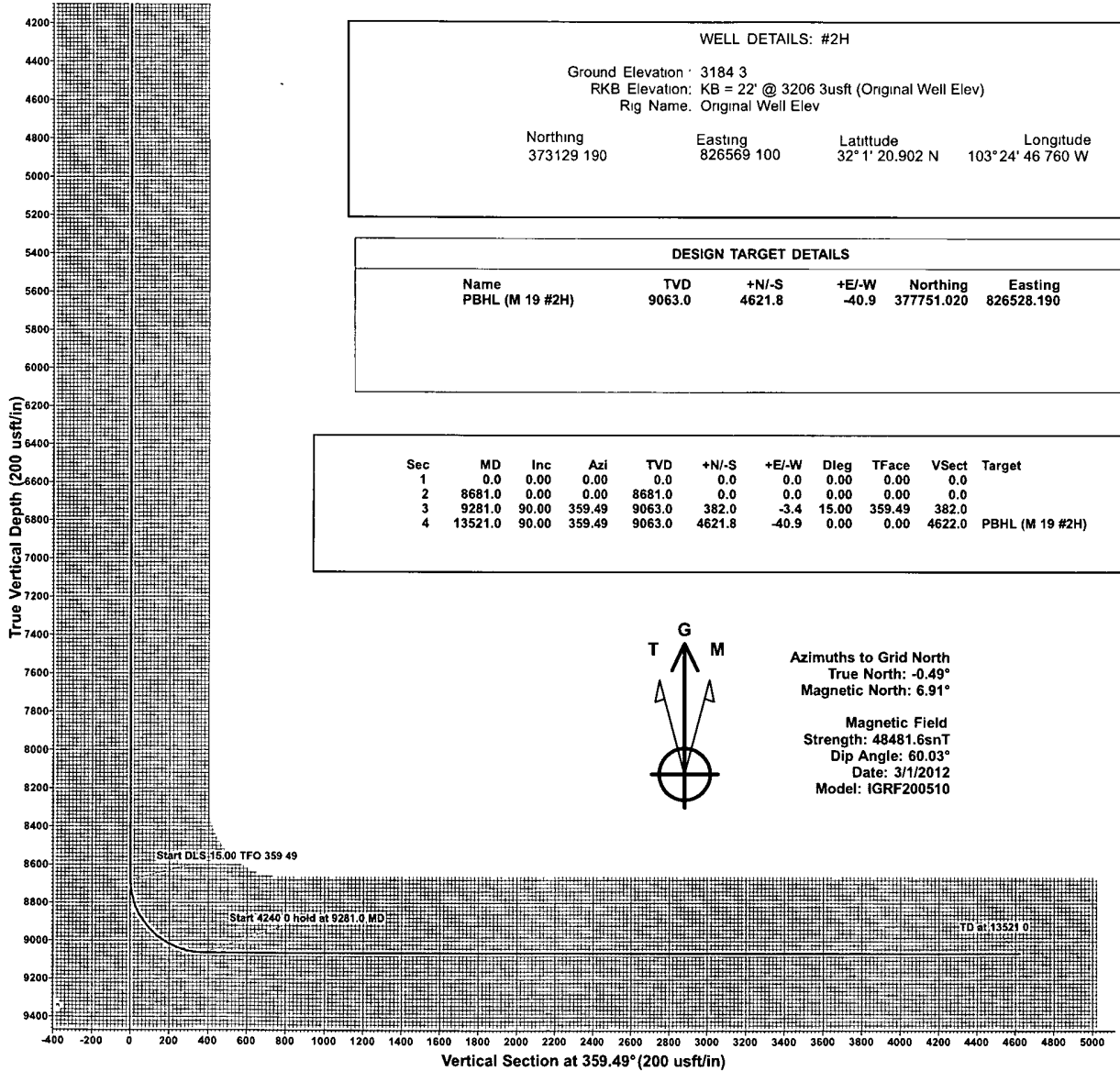
Ground Elevation: 3184 3
RKB Elevation: KB = 22' @ 3206 3usft (Original Well Elev)
Rig Name: Original Well Elev

Northing	Easting	Latitude	Longitude
373129 190	826569 100	32° 1' 20.902 N	103° 24' 46 760 W

DESIGN TARGET DETAILS

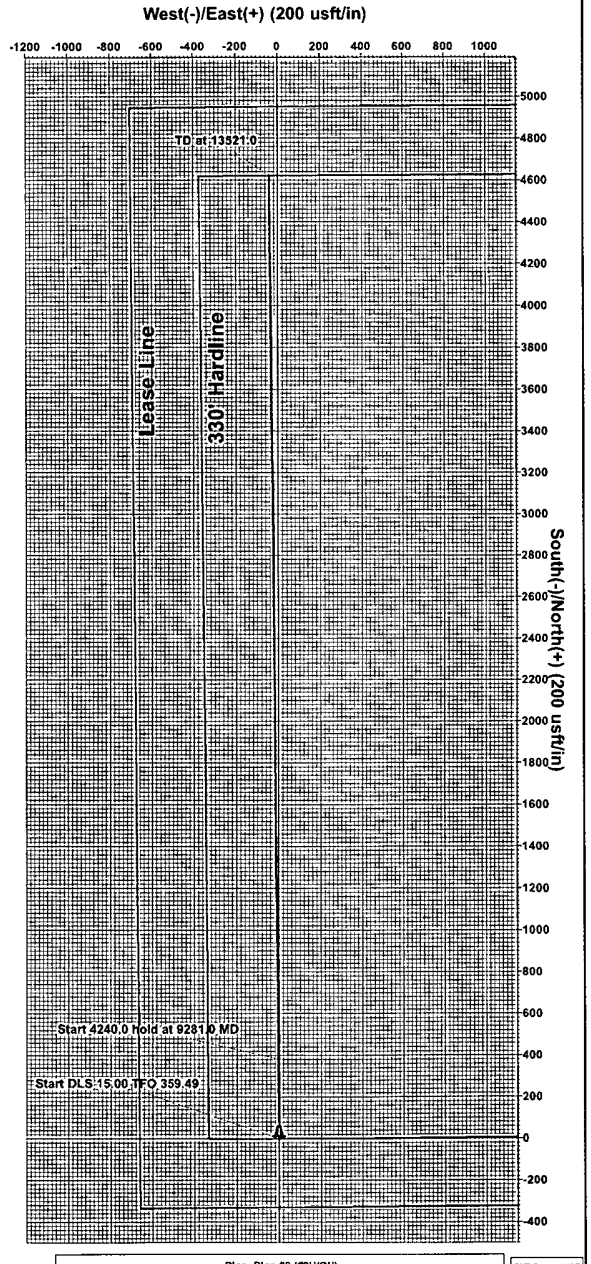
Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (M 19 #2H)	9063.0	4621.8	-40.9	377751.020	826528.190

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	8681.0	0.00	0.00	8681.0	0.0	0.0	0.00	0.00	0.0	
3	9281.0	90.00	359.49	9063.0	382.0	-3.4	15.00	359.49	382.0	
4	13521.0	90.00	359.49	9063.0	4621.8	-40.9	0.00	0.00	4622.0	PBHL (M 19 #2H)



Azimuths to Grid North
True North: -0.49°
Magnetic North: 6.91°

Magnetic Field
Strength: 48481.6snT
Dip Angle: 60.03°
Date: 3/1/2012
Model: IGRF200510

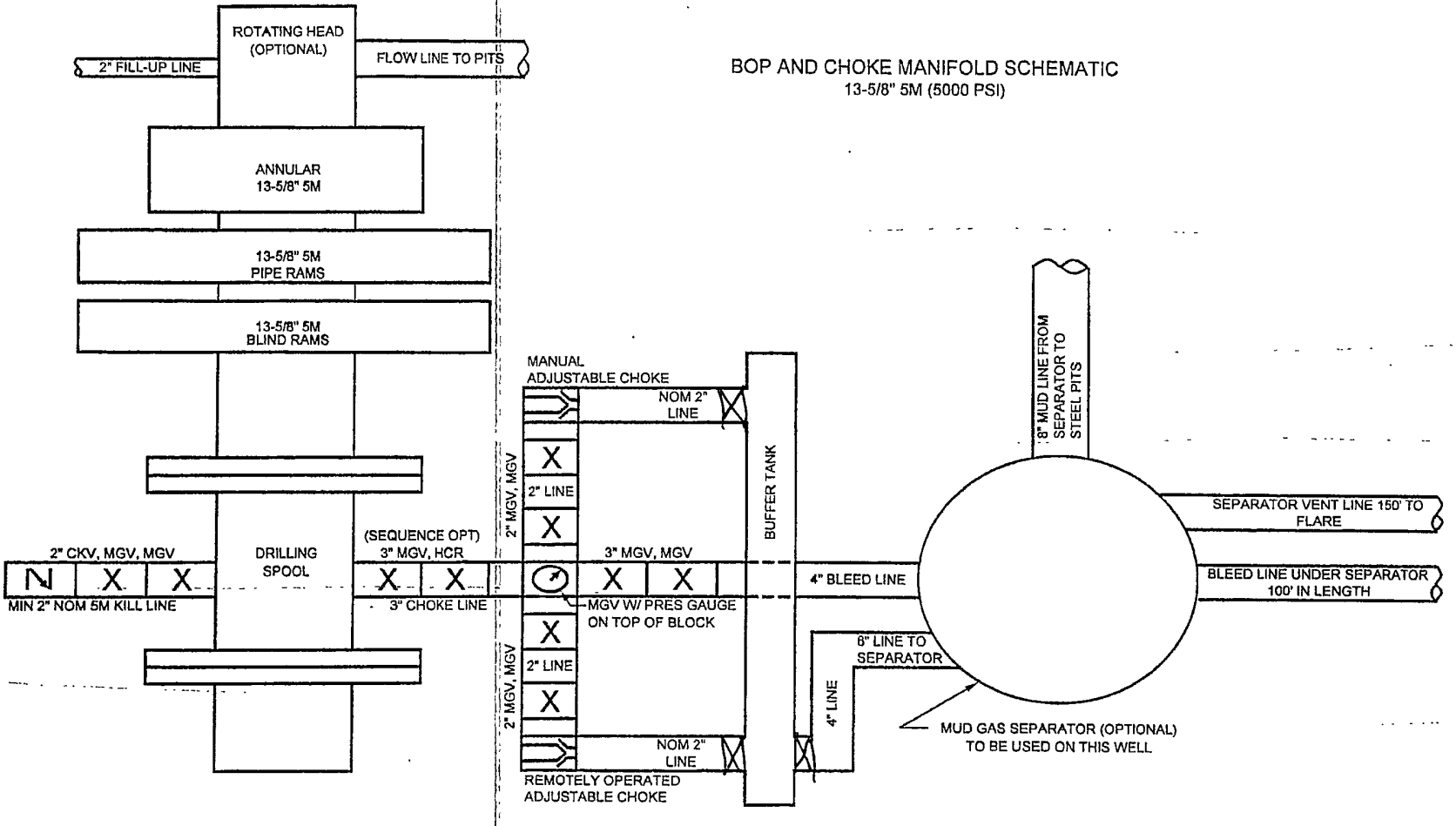


Plan Plan #2 (#2H/OH)
Created By Michael Trout Date 14 53, March 07 2012

RMR Operating, LLC
Lea County NAD 83
Madera 19 Federal
#2H
Original Well Elev
OH
Plan #2

BOP AND CHOKE MANIFOLD SCHEMATIC

13-5/8" 5M (5000 PSI)



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

Required valves

Exhibit #4