OCD Hobbs

HOBBS OCD

15-953

Form 3160-3
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JUL 06 2016

RECEIVED

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM65441

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

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

8. Lease Name and Well No.
MADERA 24 FEDERAL 5H (309499)

2. Name of Operator
RMR OPERATING LLC (281085)
Contact: DONNA STURDIVANT
E-Mail: donna@redmountainresources.com

9. API Well No.
30-025-43356

3a. Address
2515 MCKINNEY AVENUE SUITE 900
DALLAS, TX 75201

3b. Phone No. (include area code)
Ph: 214.871.0400 Ext: 1027
Fx: 214-871-0406

10. Field and Pool, or Exploratory
JABALINA;DELAWARE,SOUTHWE (97597)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface SWSW Lot M 25FSL 660FWL

At proposed prod. zone NWNW Lot M 330FNL 660FWL

UNORTHODOX LOCATION

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 24 T26S R34E Mer NMP

14. Distance in miles and direction from nearest town or post office*
18.5 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)
SHL: 25' FSL AND BHL 330'FNL

16. No. of Acres in Lease
1280.00

17. Spacing Unit dedicated to this well
240.00

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
SHL: 50' AND BHL 2,640' TO NEAREST WELL

19. Proposed Depth
13807' MD
~~9083 TVD~~ Removed

20. BLM/BIA Bond No. on file
NMB 000818 & 001053

21. Elevations (Show whether DF, KB, RT, GL, etc.
~~3214~~ GL 3213 9

22. Approximate date work will start
10/15/2015

23. Estimated duration
45 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	Name (Printed/Typed)	Date
(Electronic Submission)	RODNEY PAINE Ph: 214-871-0400 Ext: 1032	07/23/2015

Title
DIRECTOR OF IT

Approved by (Signature)	Name (Printed/Typed)	Date
James A. Amos		JUN 30 2016

Title	Office
FIELD MANAGER	CARLSBAD FIELD OFFICE

Application approval does not warrant or certify 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, States any false, fictitious or fraudulent statements or represent

See attached NMOCD Conditions of Approval

ce to any department or agency of the United

Additional Operator Remarks (see next page)

Ka 07/07/16

Electronic Submission #309927 verified by the BLM Well Information System
For RMR OPERATING LLC, sent to the Hobbs

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Ka

DRILLING PROGRAM

Madera 24 Fed # 5H

Surface Hole Location: 25' FSL & 660' FWL, Sec. 24, T26S, R34E, Lea Co., NM
Bottom Hole Location: 330' FNL & 660' FWL, Sec. 24 T26S, R34E, Lea Co., NM

1. **Geological Name of Surface Formation**
   a) Quaternary

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

a)	Quaternary	20'	Water
b)	Surface Fresh Water	160'	Water
c)	Surface Fresh Water	230'	Water
d)	Rustler	1105'	N/A
e)	Salado Salt	1250'	N/A
f)	Base Salt	5025'	N/A
g)	Delaware	5441'	Oil
h)	Bell Canyon	5380'	Oil
i)	Cherry Canyon	6664'	Oil
j)	Brushy Canyon	7877'	Oil
k)	Kick-off Point Brushy Canyon "D"	8605'	N/A
l)	Brushy Canyon "B"	8798'	Oil
m)	Brushy Canyon "D"	9008'	Oil
n)	Approximate Landing Depth "D"	9083' TVD	
o)	Pilot Hole TD	9403'	
p)	Total measured Depth in Lateral	13,807' MD	Oil

Pool Name: Jabalena, SW Proposed Penetration Point: 9008'

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 1110' and circulate cement back to surface. The fresh water sands will be protected by setting 9-5/8" casing at ~~5400'~~ 5340 and circulate cement back to surface. The Avalon Shale/Bone Springs will be isolated by setting 5-1/2" casing to total depth and circulating cement above base of 9-5/8" casing. All casing is new and API approved.

See COA

3. Casing Program

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight	Connection	Grade
17-1/2"	0' – 1110' 5340'	13-3/8"	0'-1110' 5340'	48#	STC	H-40
12-1/4"	1110' – ~~5400'~~	9-5/8"	0' – ~~5400'~~	40#	LTC	HCK-55
8-3/4"	5400' – ~~9403' Pilot Hole. Plan to plugback and use an open-hole whipstock set at 8606'~~ → Removed					
8-3/4"	0' – 8600'	5-1/2"	0' – 8600'	17#	LTC	HCP-110
8-3/4"	8600' – 13807'	5-1/2"	0' –13,807' MD	17#	BTC	HCP-110

Design Parameter Factors

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13-3/8" 48# H-40 STC	1.65	3.70	6.71
9-5/8" 40# HCK-55 LTC	1.51	1.25	2.92
5-1/2" 17# HCP-110 LTC	1.75	2.49	1.91
5-1/2" 17# HCP-110 LTC	1.92	2.74	6.19

4. Cement Program

Surface volume is 100% excess, Intermediate 50% excess, Production at least 25% excess

13-3/8" Surface: **Lead:** 455 sacks ExtendaCem – CZ, mixed at 13.50 Weight, 1.75 Yield, 9.20 gps mixing water
Tail: 550 sacks HalCem - C + 2% CaCl, mixed at 14.80 Weight, 1.35 Yield, 6.39 gps mixing water

9-5/8" Intermediate: **Lead:** 1300 sacks EconCem – HLC + 5% salt + 5 pps Gilsonite, mixed at 12.90 Weight, 1.85 Yield, 9.32 gps mixing water
Tail: 430 sacks HalCem – C, mixed at 14.80 weight, 1.33 Yield, 6.34 gps mixing water

5-1/2" Production: **First Stage**

See COA

Cement Slurry: 610 sxs Versacem H, yld 2.31 ft3/sx

DV Tool at 8300'

Lead: 340 sxs Econocem H, yld 1.98 ft3/sx.
Tail: 1445 sacks Versacem H, yld 1.20 ft3/sx

Top of cement ALL casing strings

Surface	0'
Intermediate	0'
Production	4800'

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 drill string at all times.

b) A full opening drill pipe stabbing valve having the appropriate connections will be on the 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

See COA

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0' – 1110' 5340'	8.4 – 9.0	32-34	N/C	Fresh Water
1110 – ~~5400~~'	10	28	N/C	Brine Water
~~5400~~' – 8200'	8.9 – 9.3	28	N/C	Cut Brine Water
8200' – 13747.26'	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

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 9403' up to 5350'. We will continue to pull the GR-Neutron log from 5350' 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

See COA

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 3800 psi and Estimated BHT 135º.

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.

NOVA MUD

Drilling Fluids Program

Madera 24 Fed #5H

Sec. 24, T-26-S, R-34-E,
Lea County, NM

RMR Operating, LLC

2515 McKinney Ave., Ste. 900

Dallas, TX 75201

Mr. Ross Pearson
Drilling Engineer

"The Nova Difference"

P.O. Box 2703 Hobbs, NM 88241 800-530-8786
www.novaservices.com

7/1/2015

Mr. Ross Pearson

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

RE: Madera 24 Fed #5H (13,965' - Brushy Canyon)

Dear Ross,

We appreciate the opportunity to present our ideas for your upcoming prospect located in Sec. 24, T-26-S, R-34-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 $54,056 based on 27 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,

Jason Moore
Sales Representative

"The Nova Difference"
Commitment to Service

Recommended Drilling Fluids Program

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

Projected Mud Properties

INTERVAL: 0 - 1,110'		17.5" hole		1,110' TVD	13.375" csg		1 drill bits	2 days
Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %	
0-1,110'	SPUD	8.4-9.6	32-34	N/C	10.0	3-6K	3-8	
INTERVAL: 1,110 - 5,400'		**12.25" hole**		**5,400' TVD**	**9.625" csg**		1 drill bits	5 days
Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %	
1,110-5,400'	BR	10.0	28	N/C	10.0	186K	.5-.75	
INTERVAL: 5,400 - 9,403'		**8.75" hole**		**9,403' TVD**			2 drill bits	8 days
Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %	
5,400-9,403'	CB	8.6-9.0	28	N/C	10.0	40-90K	.5-.75	
INTERVAL: 8,606 - 13,807'		**8.75" hole**		**9,083' TVD**	**5.5" csg**		3 drill bits	12 days
Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %	
8,606-9,100'	CB	8.6-9.0	28	N/C	10.0	40-100K	.5-.75	
9,100-13,807'	CB/POLY	8.7-9.3	32-34	15-20cc	10.0	40-100K	.75-3.0	

Recommended Drilling Fluids Program

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
0' - 1,105'	Surface Conglomerates	Red Bed, Red sandstone, FW sands	Swelling, mud rings, differential sticking
1,105' - 1,110'	Rustler	Anhydrite	Casing seat
1,110' - 3,060'	Rustler	Anhydrite w/sand stringers, Limestone	
1,250' - 5,025'	Salt	Salt	Hole dissolution, key seats, hole cleaning, deviation
5,025' - 5,397'	Salt, Base	Salt, limestone base	
5,397' - 5,400'	Lamar	Deleware Mountain Group, Limestone	Casing seat
5,400' - 5,441'	Lamar	Lime	
5,441' - 6,664'	Delaware	Sand	Seepage
6,664' - 7,877'	Cherry Canyon	Sand	
7,877' - 8,798'	Brushy Canyon	Sand	
8,798' - 8,945'	Brushy Canyon B	Sand	
8,945' - 9,008'	Brusjy Canyon C	Sand	
9,008' - 9,157'	Brushy Canyon D	Sand	
9,157' - 9,243'	Brushy Canyon E	Sand	
9,243' - 9,403'	Brushy Canyon F	Sand	

Recommended Drilling Fluids Program

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

INTERVAL: 0' - 1,110'	17.5" hole	1,110' TVD	13.375" csg	1 drill bits		2 days
Product	**Function**	**Treatment**	**Unit Size**	**Usage**	**Unit Price**	**Total Price**
Caustic Soda	pH additive	.5 ppb	50 #	10	$36.85	$368.50
Fiber Seal	LCM, sealant	As needed	40 #	10	$13.34	$133.40
Fresh Gel	Viscosifier	10-12 ppb	50 #	120	$5.25	$630.00
Ground Paper	Seepage and sweeps	1-3 sacks per 100 feet	30 #	15	$11.04	$165.60
Pallets	Storage aid		1 each	5	$18.00	$90.00
Plastic	Storage aid	1roll for tarp	1 roll	1	$75.00	$75.00
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 #	15	$16.80	$252.00
				Interval Total:		$2,264.50

Projected Mud Properties

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
0' - 1,110'	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' - 1,105'	Surface Conglomerates	Red Bed, Red sandstone, FW sands	Swelling, mud rings, differential sticking
1,105' - 1,110'	Rustler	Anhydrite	Casing seat

Interval Notes for 0' - 1,110'

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.

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*: 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.**

Recommended Drilling Fluids Program

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

INTERVAL: 1,110' - 5,400'	12.25" hole	5,400' TVD	9.625" csg	1 drill bits		5 days
Product	**Function**	**Treatment**	**Unit Size**	**Usage**	**Unit Price**	**Total Price**
Caustic Soda	pH additive	.25 ppb	50 #	20	$36.85	$737.00
Fiber Seal	LCM, sealant	As needed	40 #	20	$13.34	$266.80
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	30 #	10	$11.04	$110.40
PHPA/MF-55	Flocculant, hole sweep	1 gal. slug as needed for sweep	5 gal.	10	$96.25	$962.50
Salt Gel	Hole sweep	18-20 ppb in sweeps	50 #	220	$10.40	$2,288.00
					Interval Total:	$4,364.70

Projected Mud Properties

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
1,110' - 5,400'	BR	10.0	28	N/C	10.0	186K	.5-.75		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
1,110' - 3,060'	Rustler	Anhydrite w/sand stringers, Limestone	
1,250' - 5,025'	Salt	Salt	Hole dissolution, key seats, hole cleaning, deviation
5,025' - 5,397'	Salt, Base	Salt, limestone base	
5,397' - 5,400'	Lamar	Deleware Mountain Group, Limestone	Casing seat

Interval Notes for 1,110' - 5,400'

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.

Recommended Drilling Fluids Program

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

INTERVAL: 5,400' - 9,403'	8.75" hole	9,403' TVD		2 drill bits		8 days
Product	**Function**	**Treatment**	**Unit Size**	**Usage**	**Unit Price**	**Total Price**
Caustic Soda	pH additive	As needed	50 #	30	$36.85	$1,105.50
CSF	LCM, sealant	6-15 ppb	25 #	15	$28.60	$429.00
Fiber Seal	LCM, sealant	6-15 ppb	40 #	15	$13.34	$200.10
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	30 #	40	$11.04	$441.60
PHPA/MF-55	Hole sweep, flocculant	1 gal. slug as needed for sweep	5 gal.	12	$96.25	$1,155.00
Salt Gel	Hole sweep	18-20 ppb in sweeps	50 #	290	$10.40	$3,016.00
White Starch	Filtrate control and wall cake enhancer	3-4 ppb	50 #	10	$32.76	$327.60
					Interval Total:	$6,674.80

Projected Mud Properties

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
5,400' - 9,403'	CB	8.6-9.0	28	N/C	10.0	40-90K	.5-.75		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
5,400' - 5,441'	Lamar	Lime	
5,441' - 6,664'	Delaware	Sand	Seepage
6,664' - 7,877'	Cherry Canyon	Sand	
7,877' - 8,798'	Brushy Canyon	Sand	
8,798' - 8,945'	Brushy Canyon B	Sand	
8,945' - 9,008'	Brusjy Canyon C	Sand	
9,008' - 9,157'	Brushy Canyon D	Sand	
9,157' - 9,243'	Brushy Canyon E	Sand	
9,243' - 9,403'	Brushy Canyon F	Sand	

Interval Notes for 5,400' - 9,403'

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 (40-50) Salt Gel pills for logging operations. Add White Starch at 3-4ppb into the viscous pill used for spotting to firm the filter cake and add lubricity for logging operations.

Plug back the pilot hole to approximatley 8,606' and set an open-hole whipstock.

Recommended Drilling Fluids Program

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

INTERVAL: 8,606' - 13,807'	8.75" hole	9,083' TVD	5.5" csg	3 drill bits	12 days	
Product	**Function**	**Treatment**	**Unit Size**	**Usage**	**Unit Price**	**Total Price**
Caustic Soda	pH additive	.25 ppb	50 #	25	$36.85	$921.25
Defoamer	Defoamer	As needed	5 gal.	5	$62.70	$313.50
Graphite	Lubricant	1-4 ppb in sweeps	50 #	120	$43.92	$5,270.40
INC-9001	Biocide	As needed	5 gal.	12	$116.64	$1,399.68
PAC-R	Filtrate control	.5 ppb or as needed	50 #	20	$184.80	$3,696.00
Slicker 555G	Lubricant	As needed	55 gal.	8	$810.00	$6,480.00
Soda Ash	Calcium remover	As needed	50 #	40	$16.80	$672.00
STC (biocide)	Biocide	As needed	5 gal.	12	$98.80	$1,185.60
Xanthan Gum	Hole sweep, viscosifier	.75 -1.0 ppb in pills	25 #	60	$176.40	$10,584.00
					Interval Total:	**$30,522.43**

Projected Mud Properties

Depth	Mud Type	M W - ppg	Vis	Fil	pH	Cl - ppm	Sol %		
8,606' - 9,100'	CB	8.6-9.0	28	N/C	10.0	40-100K	.5-.75		
9,100' - 13,807'	CB/POLY	8.7-9.3	32-34	15-20cc	10.0	40-100K	.75-3.0		

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
8,606' - 8,798'	Brushy Canyon	Sand	
8,798' - 8,945'	Brushy Canyon B	Sand	
8,945' - 9,008'	Brushy Canyon C	Sand	
9,008' - 9,083'	Brushy Canyon D	Sand	

Interval Notes for 8,606' - 13,807'

Kick off the whipstock with the existing system fluid.

Adjust the pH to 10.0 with Caustic.

Use Xanthan Gum pills (40-45) viscosity to sweep the hole and add a measure of lubricity.

Should torque/drag become an issue, add 1-3% by volume of lubricant and 1-4 ppb of graphite to the pills for added lubricity.

As drilling progresses, it may become necessary to keep the pills in the system to gradually mud up the system for more lubricity.

Should a mud up be needed we suggest reducing the filtrate with PAC-R to enhance the properties of the system.

Biocide will be needed to prevent bacteria growth.

Use fine to medium LCM's only as needed for seepage control.

We would suggest increasing the concentration of lubricant at total depth and spotting lubrication pill in the curve prior to casing operations.

Interval Drilling Fluids Cost Estimate

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

INTERVAL: 0' - 1,110'	17.5" hole	1,110' TVD	13.375" csg	1 drill bits	2 days

Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Caustic Soda	pH additive	.5 ppb	50 #	10	$36.85	$368.50
Fiber Seal	LCM, sealant	As needed	40 #	10	$13.34	$133.40
Fresh Gel	Viscosifier	10-12 ppb	50 #	120	$5.25	$630.00
Ground Paper	Seepage and sweeps	1-3 sacks per 100 feet	30 #	15	$11.04	$165.60
Pallets	Storage aid		1 each	5	$18.00	$90.00
Plastic	Storage aid	1roll for tarp	1 roll	1	$75.00	$75.00
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 #	15	$16.80	$252.00
				Interval Total:		$2,264.50

INTERVAL: 1,110' - 5,400'	12.25" hole	5,400' TVD	9.625" csg	1 drill bits	5 days

Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Caustic Soda	pH additive	.25 ppb	50 #	20	$36.85	$737.00
Fiber Seal	LCM, sealant	As needed	40 #	20	$13.34	$266.80
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	30 #	10	$11.04	$110.40
PHPA/MF-55	Flocculant, hole sweep	1 gal. slug as needed for sweep	5 gal.	10	$96.25	$962.50
Salt Gel	Hole sweep	18-20 ppb in sweeps	50 #	220	$10.40	$2,288.00
				Interval Total:		$4,364.70

INTERVAL: 5,400' - 9,403'	8.75" hole	9,403' TVD		2 drill bits	8 days

Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Caustic Soda	pH additive	As needed	50 #	30	$36.85	$1,105.50
CSF	LCM, sealant	6-15 ppb	25 #	15	$28.60	$429.00
Fiber Seal	LCM, sealant	6-15 ppb	40 #	15	$13.34	$200.10
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	30 #	40	$11.04	$441.60
PHPA/MF-55	Hole sweep, flocculant	1 gal. slug as needed for sweep	5 gal.	12	$96.25	$1,155.00
Salt Gel	Hole sweep	18-20 ppb in sweeps	50 #	290	$10.40	$3,016.00
White Starch	Filtrate control and wall cake enhancer	3-4 ppb	50 #	10	$32.76	$327.60
				Interval Total:		$6,674.80

INTERVAL: 8,606' - 13,807'	8.75" hole	9,083' TVD	5.5" csg	3 drill bits	12 days

Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Caustic Soda	pH additive	.25 ppb	50 #	25	$36.85	$921.25
Defoamer	Defoamer	As needed	5 gal.	5	$62.70	$313.50
Graphite	Lubricant	1-4 ppb in sweeps	50 #	120	$43.92	$5,270.40
INC-9001	Biocide	As needed	5 gal.	12	$116.64	$1,399.68
PAC-R	Filtrate control	.5 ppb or as needed	50 #	20	$184.80	$3,696.00
Slicker 555G	Lubricant	As needed	55 gal.	8	$810.00	$6,480.00
Soda Ash	Calcium remover	As needed	50 #	40	$16.80	$672.00
STC (biocide)	Biocide	As needed	5 gal.	12	$98.80	$1,185.60
Xanthan Gum	Hole sweep, viscosifier	.75 -1.0 ppb in pills	25 #	60	$176.40	$10,584.00
				Interval Total:		$30,522.43

Interval Drilling Fluids Cost Estimate

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

Price List Effective 7/3/2015

Totals	
Bits	7
Days	27
Mud	$54,056

Materials Cost:		$43,826
Trucking Cost:		$6,750
Sales Tax/Product @	6.88%	$3,015
Sales Tax/Trucking @	6.88%	$464
Estimated Total Mud		**$54,056**

Drilling Fluids Product Usage Estimate

RMR Operating, LLC * Madera 24 Fed # 5H * Sec. 24, T-26-S, R-34-E,
Lea County, NM

Product	Discounted Retail Cost	Unit Size	Usage	Product Cost
Caustic Soda	$36.85	50 #	85	$3,132.25
CSF	$28.60	25 #	15	$429.00
Defoamer	$62.70	5 gal.	5	$313.50
Fiber Seal	$13.34	40 #	45	$600.30
Fresh Gel	$5.25	50 #	120	$630.00
Graphite	$43.92	50 #	120	$5,270.40
Ground Paper	$11.04	30 #	65	$717.60
INC-9001	$116.64	5 gal.	12	$1,399.68
PAC-R	$184.80	50 #	20	$3,696.00
Pallets	$18.00	1 each	5	$90.00
PHPA/MF-55	$96.25	5 gal.	22	$2,117.50
Plastic	$75.00	1 roll	1	$75.00
Salt Gel	$10.40	50 #	510	$5,304.00
Shrink Wrap	$22.00	1 each	25	$550.00
Slicker 555G	$810.00	55 gal.	8	$6,480.00
Soda Ash	$16.80	50 #	55	$924.00
STC (biocide)	$98.80	5 gal.	12	$1,185.60
White Starch	$32.76	50 #	10	$327.60
Xanthan Gum	$176.40	25 #	60	$10,584.00

Price List Effective 7/3/2015

Totals				
		Materials Cost:		$43,826
		Trucking Cost:		$6,750
Bits	**7**	Sales Tax/Product @	6.88%	$3,015
Days	**27**	Sales Tax/Trucking @	6.88%	$464
Mud	**$54,056**	**Estimated Total Mud**		**$54,056**

P.O. Box 2703 Hobbs, NM 88241 800-530-8786
www.novaservices.com

Product price list for RMR Operating, LLC; Dallas, TX - Effective 7/3/2015
Mud Program for Madera 24 Fed #5H - 7/3/2015

Product	Unit Size	Price
Basic Materials		
Barite	100 #	$16.75
Barite-Bulk	1 ton	$280.00
Calcium Carbonate	50 #	$8.80
Caustic Soda	50 #	$36.85
Fresh Gel	100 #	$10.24
Fresh Gel	50 #	$5.25
Fresh Gel-Bulk	1 ton	$209.00
Lime	50 #	$7.26
PAC-R	50 #	$184.80
PAC-SL	50 #	$185.60
Salt	50 #	$6.93
Salt Gel	50 #	$10.40
Soda Ash	100 #	$33.60
Soda Ash	50 #	$16.80
White Starch	50 #	$32.76
Xanthan Gum	25 #	$176.40
Yellow Starch	50 #	$24.57
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 #	$88.80
Bentonite Extender	2 #	$14.40
Caustic Potash (KOH)	50 #	$59.40
CLS	50 #	$40.00
Defoamer	5 gal.	$62.70
Desco	25 #	$49.30
Drilling Beads	50 #	$158.40
Drilling Surfactant	5 gal.	$66.00
Flocculant	2 #	$14.88
Foamer	55 gal	$1,066.00
Gluteraldehyde	55 gal.	$1,663.20
Gluteraldehyde	5 gal.	$151.20
Graphite	50 #	$43.92
INC-9001	55 gal.	$1,544.40
INC-9001	5 gal.	$116.64

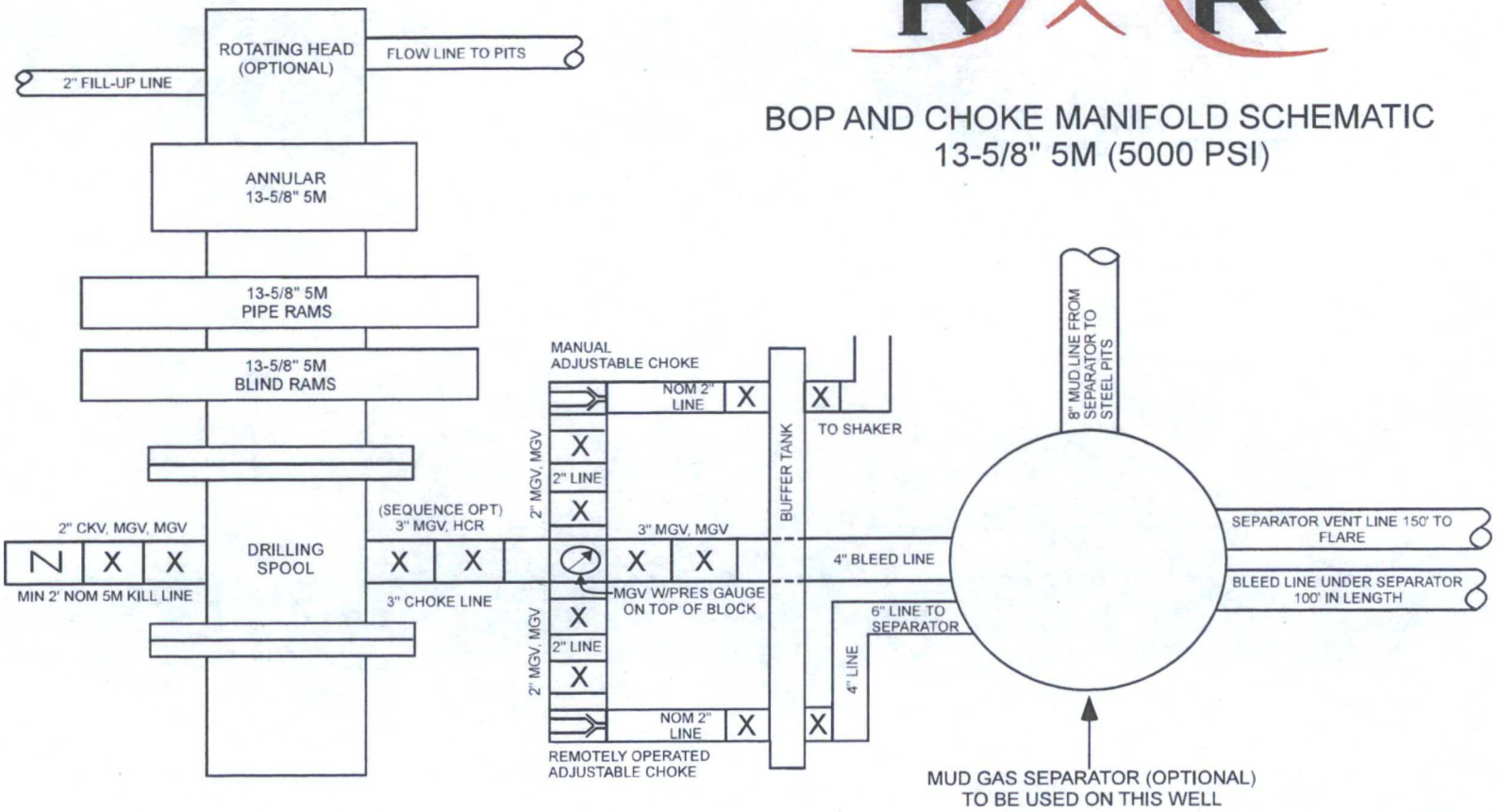
Product	Unit Size	Price
Drilling Chemicals		
KCL	50 #	$29.75
Lignite	50 #	$14.25
Nova Sweep	15 #	$123.50
PHPA/MF-55	5 gal.	$96.25
Pipe Free	55 gal.	$1,120.00
Poly Stick	1 each	$12.90
SAPP	50 #	$89.05
Silicone Defoamer	5 gal.	$79.06
Slicker 555G	55 gal.	$810.00
Soap Stick	1 each	$12.90
Sodium Bicarbonate	50 #	$35.00
Soltex	50 #	$98.55
STC (biocide)	5 gal.	$98.80
Equipment Rentals/Services/Storage Aids		
Bulk Bin/Day Rate	1 each	$75.00
Drum Disposal Charge	1 each	$30.00
Mixing Charge	1 bbl.	$8.00
Mud Engineer	4 hr.	$0.00
Mud Engineer	24 hr.	$850.00
Pallets	1 each	$18.00
Plastic	1 roll	$75.00
Portable Mud Plant	24 hr.	$525.00
Shrink Wrap	1 each	$22.00
Lost Circulation Material		
Cedar Plug	40 #	$9.36
Cotton Seed Hulls	50 #	$12.75
CSC	25 #	$28.60
CSF	25 #	$28.60
Fiber Plug	40 #	$13.34
Fiber Seal	40 #	$13.34
Ground Paper	30 #	$11.04
LCF-Blend	25 #	$29.25
Magma Fiber	30 #	$33.00
Mica	50 #	$13.30
Nova Fiber	30 #	$29.25
Nut Plug	50 #	$21.90
Sure Seal	50 #	$27.00
Torque Seal	50 #	$27.00

P.O. Box 2703 Hobbs, NM 88241 800-530-8786
www.novaservices.com

Product price list for RMR Operating, LLC; Dallas, TX - Effective 7/3/2015
Mud Program for Madera 24 Fed #5H - 7/3/2015

Product	Unit Size	Price	Product	Unit Size	Price
Lost Circulation Material					
Ven-Fyber 201	25 #	$44.00			
Oil Mud Additives					
Bentone 990	50 #	$179.08			
Calcium Chloride-50	50 #	$28.50			
OBM Gel	50 #	$112.23			
OBM Primary Emulsifier	55 gal.	$716.10			
OBM Rheological Modifier	55 gal.	$720.00			
OBM Secondary Emulsifier	55 gal.	$858.80			
OBM WA/TWA-5	5 gal.	$122.14			
OBM WA/TWA-55	55 gal.	$1,290.00			
OBM-Gilsonite	50 #	$99.00			
Oil Absorbant	40 lb	$14.00			
Oil Mud Rental	1 bbl	$0.00			
Rig Wash	55 gal.	$551.00			
SOBM Primary Emulsifier	55 gal.	$855.00			
SOBM Rheological Modifier	55 gal.	$846.00			
SOBM Secondary Emulsifier	55 gal.	$987.70			
SOBM WA/TWA-5	5 gal.	$140.00			
SOBM WA/TWA-55	55 gal.	$1,260.00			

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

EXHIBIT #4

Closed Loop Mud System – RMR Operating, LLC

Madera "24" Federal #5H
Section 24, T26S, R34E
Lea County, New Mexico

Design

Drilling mud will circulate through a closed system consisting of steel pits on the surface, mud pumps, piping on the surface to the rotating head and return piping from the bell nipple back to the steel pits. Solids will be removed from the mud in the steel pits using for the following equipment:

1. Two (2) shale shakers will be installed with 110-250 mesh screens. These shale shakers should remove solids down to 65 micron diameter. All returning drilling mud will flow across the shale shakers.

2. A 6T4 mud cleaner will be installed to further remove solids to the 25 micron level. Drilling mud will be circulated through the mud cleaner using a 5x6x12 75hp pump. This pump will generate the optimal pressure for the mud cleaner cones to process the solids.

3. A 518 centrifuge will pick up a portion of the effluent from the mud cleaner. The centrifuge will remove solids to the 10 micron level. The centrifuge will remove solids down to the 1 micron level after adding the dewatering unit, as discussed below.

4. A dewatering unit will add polymer to the flow stream entering the centrifuge to flocculate the solids. Flocculation increases the effective particle size of the solids enhancing the performance of the centrifuge to remove solids down to the 1 micron level.

5. Roll-off bins (20 cubic yards per bin) and rails will be installed next to the steel pits so that the solids removed from the shale shakers, mud cleaner and centrifuge fall directly into a bin. Once a bin is full it is picked up by a truck and hauled to disposal. An empty bin is moved under the solids control equipment along the rail so that the solids control equipment can operating continuously.

Operation and Maintenance

Personnel dedicated exclusively to operating and maintaining the solids control equipment will be on site 24 hours per day while drilling. The solids control personnel will monitor the shale shakers, much cleaner, centrifuge, dewatering unit and all associated pumps and piping to make sure the equipment is functioning correctly. If equipment problems are identified, the solids control personnel will coordinate repair or replacement of the equipment. The solids control personnel will also monitor the level of solids in the roll-off bins and arrange for trucks to pick up the bins when they are filled.

Closure Plan

Cuttings and other solid will be hauled off to a permitted landfill according to OCD guidelines. Liquids will be re-used to the extent possible, but if liquids need to be disposed they will also be hauled to a permitted disposal facility. Liquids to be temporarily stored on site will be placed in 500 BBL "frac" tanks.

For the Madera "24" Federal Com #5H well, both solid water and liquid waste will be taken to the R360 Environmental Solutions LLC, "Halfway Facility" between Carlsbad and Hobbs, Mile Marker 66 on Carlsbad Hwy, Hobbs, NM, Facility Permit number NM1-0006.

Exhibit "D" Flex Rig/Walking Rig Location Layout
2 Well Location Pad