



## **Drilling Fluids Program**

**Madera 25 Fed #5H**

**Sec. 25, 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](http://www.novaservices.com)

7/3/2015

Mr. Ross Pearson

RMR Operating, LLC

2515 McKinney Ave., Ste. 900

Dallas, TX 75201

RE: Madera 25 Fed #5H (16,474' - Brushy Canyon)

Dear Ross,

We appreciate the opportunity to present our ideas for your upcoming prospect located in **Sec. 25, 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 \$66,318 based on 31 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**

Midland, TX

Hobbs, NM

Oklahoma City, OK

The data and recommendations provided herein shall not be construed as authorizing the infringement of any valid patent and are made without assumption of liability by Nova Mud, Inc. or its agents and are statements of opinion only. Oral and written statements are opinions only and may be rejected by the user.



## Recommended Drilling Fluids Program

RMR Operating, LLC \* Madera 25 Fed # 5H \* Sec. 25, 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 |  |
| Depth                     | Mud Type | M W - ppg   | Vis   | Fil        | pH   | CI - 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 |  |
| Depth                     | Mud Type | M W - ppg   | Vis   | Fil        | pH   | CI - 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 |  |
| Depth                     | Mud Type | M W - ppg   | Vis   | Fil        | pH   | CI - ppm    | Sol %   |              |  |
| 5,400-9,403'              | CB       | 8.6-9.0     | 28    | N/C        | 10.0 | 40-90K      | .5-.75  |              |  |
| INTERVAL: 8,538 - 16,262' |          | 8.75" hole  |       | 9,110' TVD |      | 5.5" csg    |         | 3 drill bits |  |
| Depth                     | Mud Type | M W - ppg   | Vis   | Fil        | pH   | CI - ppm    | Sol %   |              |  |
| 8,538-9,100'              | CB       | 8.6-9.0     | 28    | N/C        | 10.0 | 40-100K     | .5-.75  |              |  |
| 9,100-16,262'             | 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 25 Fed # 5H \* Sec. 25, 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                 | Delaware Mountain Group, Limestone    | Casing seat                                           |
| 5,400' - 5,451' | Lamar                 | Lime                                  |                                                       |
| 5,451' - 6,674' | Delaware              | Sand                                  | Seepage                                               |
| 6,674' - 7,887' | Cherry Canyon         | Sand                                  |                                                       |
| 7,887' - 8,808' | Brushy Canyon         | Sand                                  |                                                       |
| 8,808' - 8,955' | Brushy Canyon B       | Sand                                  |                                                       |
| 8,955' - 9,018' | Brushy Canyon C       | Sand                                  |                                                       |
| 9,018' - 9,167' | Brushy Canyon D       | Sand                                  |                                                       |
| 9,167' - 9,253' | Brushy Canyon E       | Sand                                  |                                                       |
| 9,253' - 9,403' | Brushy Canyon F       | Sand                                  |                                                       |



## Recommended Drilling Fluids Program

RMR Operating, LLC \* Madera 25 Fed # 5H \* Sec. 25, 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        | 1 roll 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:       |                    |                                  |            |             |              | <b>\$2,264.50</b> |

### 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 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.**



## Recommended Drilling Fluids Program

RMR Operating, LLC \* Madera 25 Fed # 5H \* Sec. 25, 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:           |                        |                                 |            |            |              | <u>\$4,364.70</u> |

### 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 25 Fed # 5H \* Sec. 25, 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' - 5,451' | Lamar           | Lime      |                  |
| 5,451' - 6,674' | Delaware        | Sand      | Seepage          |
| 6,674' - 7,887' | Cherry Canyon   | Sand      |                  |
| 7,887' - 8,808' | Brushy Canyon   | Sand      |                  |
| 8,808' - 8,955' | Brushy Canyon B | Sand      |                  |
| 8,955' - 9,018' | Brushy Canyon C | Sand      |                  |
| 9,018' - 9,167' | Brushy Canyon D | Sand      |                  |
| 9,167' - 9,253' | Brushy Canyon E | Sand      |                  |
| 9,253' - 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 approximately 8,538' and set an open-hole whipstock.



## Recommended Drilling Fluids Program

RMR Operating, LLC \* Madera 25 Fed # 5H \* Sec. 25, T-26-S, R-34-E,  
Lea County, NM

| INTERVAL: 8,538' - 16,262' |                         | 8.75" hole            | 9,110' TVD | 5.5" csg | 3 drill bits | 16 days            |
|----------------------------|-------------------------|-----------------------|------------|----------|--------------|--------------------|
| Product                    | Function                | Treatment             | Unit Size  | Usage    | Unit Price   | Total Price        |
| Caustic Soda               | pH additive             | .25 ppb               | 50 #       | 30       | \$36.85      | \$1,105.50         |
| Defoamer                   | Defoamer                | As needed             | 5 gal.     | 8        | \$62.70      | \$501.60           |
| 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 #       | 25       | \$184.80     | \$4,620.00         |
| Slicker 555G               | Lubricant               | As needed             | 55 gal.    | 16       | \$810.00     | \$12,960.00        |
| Soda Ash                   | Calcium remover         | As needed             | 50 #       | 50       | \$16.80      | \$840.00           |
| 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 #       | 80       | \$176.40     | \$14,112.00        |
| Interval Total:            |                         |                       |            |          |              | <b>\$41,994.78</b> |

### Projected Mud Properties

| Depth            | Mud Type | M W - ppg | Vis   | Fil     | pH   | Cl - ppm | Sol %   |  |  |
|------------------|----------|-----------|-------|---------|------|----------|---------|--|--|
| 8,538' - 9,100'  | CB       | 8.6-9.0   | 28    | N/C     | 10.0 | 40-100K  | .5-.75  |  |  |
| 9,100' - 16,262' | 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 |
|-----------------|-----------------|-----------|------------------|
| 8,538' - 8,798' | Brushy Canyon   | Sand      |                  |
| 8,808' - 8,955' | Brushy Canyon B | Sand      |                  |
| 8,955' - 9,018' | Brushy Canyon C | Sand      |                  |
| 9,018' - 9,110' | Brushy Canyon D | Sand      |                  |

### Interval Notes for 8,538' - 16,262'

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 25 Fed # 5H \* Sec. 25, 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        |
|                           |                        |                                 |            |            | <b>Interval Total:</b> | <b>\$4,364.70</b> |

| 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: 8,538' - 16,262' |                         | 8.75" hole            | 9,110' TVD | 5.5" csg | 3 drill bits | 16 days     |
|----------------------------|-------------------------|-----------------------|------------|----------|--------------|-------------|
| Product                    | Function                | Treatment             | Unit Size  | Usage    | Unit Price   | Total Price |
| Caustic Soda               | pH additive             | .25 ppb               | 50 #       | 30       | \$36.85      | \$1,105.50  |
| Defoamer                   | Defoamer                | As needed             | 5 gal.     | 8        | \$62.70      | \$501.60    |
| 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 #       | 25       | \$184.80     | \$4,620.00  |
| Slicker 555G               | Lubricant               | As needed             | 55 gal.    | 16       | \$810.00     | \$12,960.00 |
| Soda Ash                   | Calcium remover         | As needed             | 50 #       | 50       | \$16.80      | \$840.00    |
| 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 #       | 80       | \$176.40     | \$14,112.00 |
| Interval Total:            |                         |                       |            |          | \$41,994.78  |             |

## Interval Drilling Fluids Cost Estimate

RMR Operating, LLC \* Madera 25 Fed # 5H \* Sec. 25, T-26-S, R-34-E,  
Lea County, NM

Price List Effective 7/3/2015

| <u>Totals</u> |          |                            |                 |
|---------------|----------|----------------------------|-----------------|
| Bits          | 7        | Materials Cost:            | \$55,299        |
| Days          | 31       | Trucking Cost:             | \$6,750         |
| Mud           | \$66,318 | Sales Tax/Product @ 6.88%  | \$3,805         |
|               |          | Sales Tax/Trucking @ 6.88% | \$464           |
|               |          | <b>Estimated Total Mud</b> | <b>\$66,318</b> |



## Drilling Fluids Product Usage Estimate

RMR Operating, LLC \* Madera 25 Fed # 5H \* 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   | \$36.85                       | 50 #             | 90           | \$3,316.50          |
| CSF            | \$28.60                       | 25 #             | 15           | \$429.00            |
| Defoamer       | \$62.70                       | 5 gal.           | 8            | \$501.60            |
| 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 #             | 25           | \$4,620.00          |
| 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.          | 16           | \$12,960.00         |
| Soda Ash       | \$16.80                       | 50 #             | 65           | \$1,092.00          |
| STC (biocide)  | \$98.80                       | 5 gal.           | 12           | \$1,185.60          |
| White Starch   | \$32.76                       | 50 #             | 10           | \$327.60            |
| Xanthan Gum    | \$176.40                      | 25 #             | 80           | \$14,112.00         |

### Price List Effective 7/3/2015

**Totals**

**Bits** 7  
**Days** 31  
**Mud** \$66,318

Materials Cost: \$55,299  
 Trucking Cost: \$6,750  
 Sales Tax/Product @ 6.88% \$3,805  
 Sales Tax/Trucking @ 6.88% \$464

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**Estimated Total Mud \$66,318**



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**Product price list for RMR Operating, LLC; Dallas, TX - Effective 7/3/2015**  
**Mud Program for Madera 25 Fed #5H - 7/3/2015**

| <u>Product</u>                    | <u>Unit Size</u> | <u>Price</u> | <u>Product</u>                                        | <u>Unit Size</u> | <u>Price</u> |
|-----------------------------------|------------------|--------------|-------------------------------------------------------|------------------|--------------|
| <b><u>Basic Materials</u></b>     |                  |              | <b><u>Drilling Chemicals</u></b>                      |                  |              |
| Barite                            | 100 #            | \$16.75      | KCL                                                   | 50 #             | \$29.75      |
| Barite-Bulk                       | 1 ton            | \$280.00     | Lignite                                               | 50 #             | \$14.25      |
| Calcium Carbonate                 | 50 #             | \$8.80       | Nova Sweep                                            | 15 #             | \$123.50     |
| Caustic Soda                      | 50 #             | \$36.85      | PHPA/MF-55                                            | 5 gal.           | \$96.25      |
| Fresh Gel                         | 100 #            | \$10.24      | Pipe Free                                             | 55 gal.          | \$1,120.00   |
| Fresh Gel                         | 50 #             | \$5.25       | Poly Stick                                            | 1 each           | \$12.90      |
| Fresh Gel-Bulk                    | 1 ton            | \$209.00     | SAPP                                                  | 50 #             | \$89.05      |
| Lime                              | 50 #             | \$7.26       | Silicone Defoamer                                     | 5 gal.           | \$79.06      |
| PAC-R                             | 50 #             | \$184.80     | Slicker 555G                                          | 55 gal.          | \$810.00     |
| PAC-SL                            | 50 #             | \$185.60     | Soap Stick                                            | 1 each           | \$12.90      |
| Salt                              | 50 #             | \$6.93       | Sodium Bicarbonate                                    | 50 #             | \$35.00      |
| Salt Gel                          | 50 #             | \$10.40      | Soltex                                                | 50 #             | \$98.55      |
| Soda Ash                          | 100 #            | \$33.60      | STC (biocide)                                         | 5 gal.           | \$98.80      |
| Soda Ash                          | 50 #             | \$16.80      | <b><u>Equipment Rentals/Services/Storage Aids</u></b> |                  |              |
| White Starch                      | 50 #             | \$32.76      | Bulk Bin/Day Rate                                     | 1 each           | \$75.00      |
| Xanthan Gum                       | 25 #             | \$176.40     | Drum Disposal Charge                                  | 1 each           | \$30.00      |
| Yellow Starch                     | 50 #             | \$24.57      | Mixing Charge                                         | 1 bbl.           | \$8.00       |
| <b><u>Corrosion Chemicals</u></b> |                  |              | Mud Engineer                                          | 24 hr.           | \$850.00     |
| Filming Amine                     | 1 gal.           | \$13.60      | Mud Engineer                                          | 4 hr.            | \$0.00       |
| H2S Scavenger                     | 1 gal.           | \$18.70      | Pallets                                               | 1 each           | \$18.00      |
| Oxygen Scavenger                  | 1 gal.           | \$14.45      | Plastic                                               | 1 roll           | \$75.00      |
| Scale Inhibitor                   | 1 gal.           | \$14.45      | Portable Mud Plant                                    | 24 hr.           | \$525.00     |
| <b><u>Drilling Chemicals</u></b>  |                  |              | Shrink Wrap                                           | 1 each           | \$22.00      |
| Aluminum Tristearate              | 50 #             | \$88.80      | <b><u>Lost Circulation Material</u></b>               |                  |              |
| Bentonite Extender                | 2 #              | \$14.40      | Cedar Plug                                            | 40 #             | \$9.36       |
| Caustic Potash (KOH)              | 50 #             | \$59.40      | Cotton Seed Hulls                                     | 50 #             | \$12.75      |
| CLS                               | 50 #             | \$40.00      | CSC                                                   | 25 #             | \$28.60      |
| Defoamer                          | 5 gal.           | \$62.70      | CSF                                                   | 25 #             | \$28.60      |
| Desco                             | 25 #             | \$49.30      | Fiber Plug                                            | 40 #             | \$13.34      |
| Drilling Beads                    | 50 #             | \$158.40     | Fiber Seal                                            | 40 #             | \$13.34      |
| Drilling Surfactant               | 5 gal.           | \$66.00      | Ground Paper                                          | 30 #             | \$11.04      |
| Flocculant                        | 2 #              | \$14.88      | LCF-Blend                                             | 25 #             | \$29.25      |
| Foamer                            | 55 gal.          | \$1,066.00   | Magma Fiber                                           | 30 #             | \$33.00      |
| Gluteraldehyde                    | 55 gal.          | \$1,663.20   | Mica                                                  | 50 #             | \$13.30      |
| Gluteraldehyde                    | 5 gal.           | \$151.20     | Nova Fiber                                            | 30 #             | \$29.25      |
| Graphite                          | 50 #             | \$43.92      | Nut Plug                                              | 50 #             | \$21.90      |
| INC-9001                          | 5 gal.           | \$116.64     | Sure Seal                                             | 50 #             | \$27.00      |
| INC-9001                          | 55 gal.          | \$1,544.40   | Torque Seal                                           | 50 #             | \$27.00      |





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Product price list for RMR Operating, LLC; Dallas, TX - Effective 7/3/2015

Mud Program for Madera 25 Fed #5H - 7/3/2015

| <u>Product</u>                          | <u>Unit Size</u> | <u>Price</u> | <u>Product</u> | <u>Unit Size</u> | <u>Price</u> |
|-----------------------------------------|------------------|--------------|----------------|------------------|--------------|
| <b><u>Lost Circulation Material</u></b> |                  |              |                |                  |              |
| Ven-Fyber 201                           | 25 #             | \$44.00      |                |                  |              |
| <b><u>Oil Mud Additives</u></b>         |                  |              |                |                  |              |
| 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   |                |                  |              |