

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

MARALO, INC.

3. Address and Telephone No.

P. O. BOX 832, MIDLAND, TX 79702 (915) 684-7441

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

**660' FSL & 660' FML
UNIT M, SECTION 10, T-22-S, R-32-E**

5. Lease Designation and Serial No.

NM-86147

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

EMERALD FEDERAL #1

9. API Well No.

30-025-31976

10. Field and Pool, or Exploratory Area

LIVINGSTON RIDGE; DELAWARE EAST

11. County or Parish, State

LEA, NM

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other **PROPOSED COMPLETION
PROCEDURE**
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

PROPOSED OPERATION: COMPLETE AS DELAWARE SAND OIL PRODUCER

- RUPU. PU & TIH w/bit, csg scrapers & 2 7/8" tbg to PBTD. "Pickle" csg & tbg by pumping 1000 gals 15% NEFE, triple inhibited, down tbg & circulating back to surface. Circulate hole w/2% KCl wtr. TOH w/ tbg scrapers, & bit.
- RU Apollo Wireline. Run GR/CBL/CCL from PBTD to TOC. Run w/1000 psi on csg. Correlate to Halliburton GR/CNL/SDL OH log run 6/8/93 for Phillips Petroleum.
- PU & TIH w/4" carrier guns, premium charges, and perforate as follows:

Zone 1: Shoot 1 SPF @ 8553, 8557, 8559, 8561, 8564, 8573, 8575, 8577, 8579, 8582' (10 total holes).

Zone 2: Shoot 1 SPF @ 8045, 8048, 8052, 8055, 8059, 8065, 8067, 8070, 8073, 8077' (10 total holes).

Zone 3: Shoot 2SPF @ 7642, 7643, 7644, 7645, 7647, 7648, 7649, 7653, 7654, 7655' (20 total holes).

Zone 4: Shoot 1 SPF @ 7269, 7273, 7281, 7287, 7294, 7300, 7312, 7316, 7323, 7331, 7337, 7345, 7350, 7361, 7372, 7376, 7382, 7391, 7395' (19 total holes).

SEE ATTACHED PAGE

14. I hereby certify that the foregoing is true and correct

Signed *Donna Owen*

Title **REGULATORY ANALYST**

Date **SEPTEMBER 19, 1994**

(This space for Federal or State office use)

(ORIG. SGD.) JOE G. LARA

Approved by
Conditions of approval, if any:

Title **PETROLEUM ENGINEER**

Date *10/21/94*

Zone 5. Set at 2 BPP @ 7140' TBP @ 1019' ± 1 ft.

4. Sonic Hammer on 2 7/8" tbg. Arrive in circulation mode, then circulate down to bottom across Zones 1, 2, 3, 4, and 5, while pumping 2% KCl wtr to breakdown all perms. TCH w/ RBP pkr. & tbg.
5. PU & TIR w/ 5" 2" RBP pkr. & 2 7/8" tbg to ± 8650'. Set RBP PU & set pkr. @ ± 8475' isolating Zone 1.
6. RU BU & frac Zone 1 perms w/ 12,500 gals Spectra-frac G-3000 + 19,500# 20/40 Ottawa sand + 7500# 20/40 resin coated sand down tbg at a rate of ± 8 BPM w/ an anticipated average treating pressure of 1900 psi. Pump as follows:
 - a.) 750 gals 7 1/2% NEFE spearhead
 - b.) 1200 gals slick 2% KCl wtr spacer
 - c.) 6250 gals gel pad
 - d.) 500 gals gel + 1 ppg 20/40 Ottawa sand
 - e.) 500 gals gel + 2 ppg 20/40 Ottawa sand
 - f.) 1000 gals gel + 3 ppg 20/40 Ottawa sand
 - g.) 1000 gals gel + 4 ppg 20/40 Ottawa sand
 - h.) 2500 gals gel + 5 ppg 20/40 Ottawa sand
 - i.) 1250 gals gel + 6 ppg 20/40 resin coated sand
 - j.) flush to top perf w/ slick 2% KCl wtr
 - k.) SION to let resin cure
7. Release pkr. Drop down and catch RBP. PU & set RBP @ ± 7750'. PU & set pkr. @ 7560' isolating Zone 2.
8. Frac Zone 2 perms w/ 14,000 gals Spectra-frac G-3000 + 21,000# 20/40 Ottawa sand + 9000# 20/40 resin coated sand down tbg at a rate of ± 8 BPM w/ an anticipated average treating pressure of 1900 psi. Pump as follows:
 - a.) 750 gals 7 1/2% NEFE spearhead
 - b.) 1200 gals slick 2% KCl wtr spacer
 - c.) 7000 gal gel pad
 - d.) 500 gals gel + 1 ppg 20/40 Ottawa sand
 - e.) 500 gals gel + 2 ppg 20/40 Ottawa sand
 - f.) 1000 gals gel + 3 ppg 20/40 Ottawa sand
 - g.) 1000 gals gel + 4 ppg 20/40 Ottawa sand
 - h.) 2500 gals gel + 5 ppg 20/40 Ottawa sand
 - i.) 1500 gals gel + 6 ppg 20/40 resin coated sand
 - j.) flush to top perf w/ slick 2% KCl wtr
 - k.) SION to let resin cure
9. Release pkr. Drop down and catch RBP. PU & set RBP @ ± 7750'. PU & set pkr. @ 7560' isolating Zone 3 perms.
10. Frac Zone 3 perms w/ 9500 gals Spectra-frac G-3000 + 14,500# 20/40 Ottawa sand + 5000# 20/40 resin coated sand down tbg at a rate of ± 8 BPM w/ an anticipated average treating pressure of 1900 psi. Pump as follows:
 - a.) 750 gals 7 1/2% NEFE spearhead
 - b.) 1200 gals slick 2% KCl wtr spacer
 - c.) 4500 gal gel pad
 - d.) 500 gals gel + 1 ppg 20/40 Ottawa sand
 - e.) 500 gals gel + 2 ppg 20/40 Ottawa sand
 - f.) 500 gals gel + 3 ppg 20/40 Ottawa sand
 - g.) 1000 gals gel + 4 ppg 20/40 Ottawa sand
 - h.) 1500 gals gel + 5 ppg 20/40 Ottawa sand
 - i.) 1000 gals gel + 6 ppg 20/40 resin coated sand
 - j.) flush to top perf w/ slick 2% KCl wtr
 - k.) SION to let resin cure
11. Release pkr. Drop down and catch RBP. PU & set RBP @ ± 7450'. PU & set pkr. @ ± 7200' isolating Zone 4.
12. Frac Zone 4 perms w/ 21,000 gals Spectra-frac G-3000 carrying 31,500# 20/40 Ottawa sand + 13,500# 20/40 resin-coated sand down tbg @ a rate of ± 10 BPM w/ an anticipated treating pressure of 2200 psi. Pump as follows:
 - a.) 750 gals 7 1/2% NEFE spearhead
 - b.) 1200 gals slick 2% KCl wtr spacer
 - c.) 10,500 gal gel pad
 - d.) 750 gals gel + 1 ppg 20/40 Ottawa sand
 - e.) 750 gals gel + 2 ppg 20/40 Ottawa sand
 - f.) 1500 gals gel + 3 ppg 20/40 Ottawa sand
 - g.) 1500 gals gel + 4 ppg 20/40 Ottawa sand
 - h.) 3750 gals gel + 5 ppg 20/40 Ottawa sand
 - i.) 2250 gals gel + 6 ppg 20/40 resin coated sand
 - j.) flush to top perf w/ slick 2% KCl wtr
 - k.) SION to let resin cure
13. Release pkr. Drop down and catch RBP. PU & set RBP @ ± 7200'. PU & set pkr. @ ± 7050' isolating Zone 5.
14. Frac Zone 5 perms w/ 9,500 gals Spectra-frac G-3000 carrying 14,500# 20/40 Ottawa sand + 6,000# 20/40 resin-coated sand down tbg @ a rate of ± 8 BPM w/ an anticipated treating pressure of 1900 psi. Pump as in step 10.
15. Release pkr. Drop down and catch RBP. Drop down and set RBP @ 8650'. PU & set pkr. @ 7050'
16. Swap test all perms. If well begins flowing, continue flowing until well dies.
17. When well dies, release pkr. and drop down & catch RBP. TCH w/ RBP pkr. & tbg.
18. Turn off pumping equipment. Set up surface facilities and observe well production.