submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. **Type of Well**
GAS

RECEIVED
JUL 17 1992
OIL CON. DIV.
DIST. 3

5. **Lease Number**
NM-027
6. **If Indian, All. or Tribe Name**
7. **Unit Agreement Name**

2. **Name of Operator**
Meridian Oil Inc.

8. **Well Name & Number**
Knauff #1
9. **API Well No.**

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. **Location of Well, Footage, Sec., T, R, M**
790'FNL, 990'FEL Sec.13, T-27-N, R-10-W, NMPM

10. **Field and Pool**
Basin Frt Coal
Fulcher Kutz PC
11. **County and State**
San Juan Co, NM

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

Type of Submission	Type of Action	
_x_ Notice of Intent	___ Abandonment	___ Change of Plans
	___ Recompletion	___ New Construction
___ Subsequent Report	___ Plugging Back	___ Non-Routine Fracturing
	___ Casing Repair	___ Water Shut off
___ Final Abandonment	___ Altering Casing	___ Conversion to Injection
	__x Other -	

13. **Describe Proposed or Completed Operations**

It is intended to complete the Fruitland Coal formation in the existing Pictured Cliffs wellbore and produce the two formations via downhole commingling according to the attached procedure and wellbore diagrams. This downhole commingle was approved by the New Mexico Oil Conservation Division June 26, 1992.

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

Signed Peggy Bradfield (KAS) Title Regulatory Affairs Date 7/2/92

(This space for Federal or State Office use)
APPROVED BY _____ Title _____ Date APPROVED
CONDITION OF APPROVAL, if any: JUL 14 1992

NMOCD

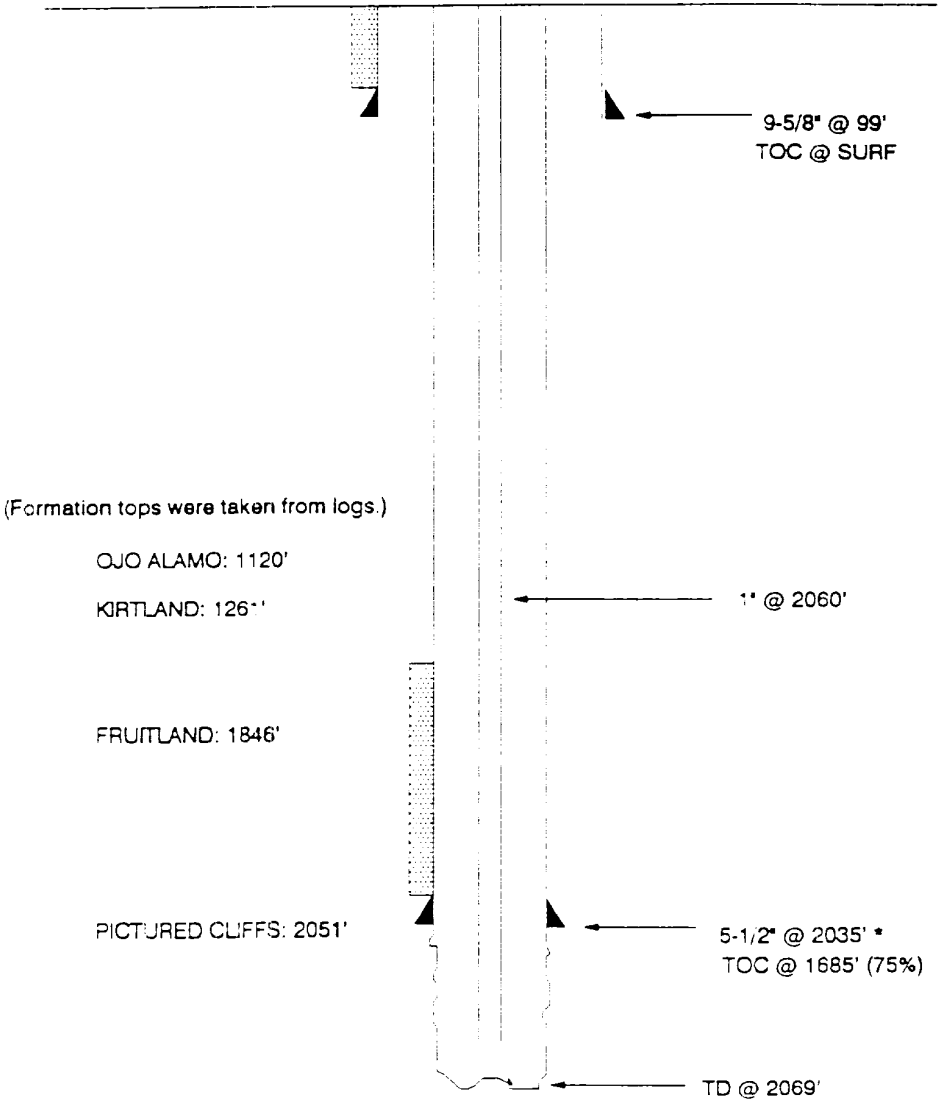
AREA MANAGER

CURRENT

KNAUFF #1

UNIT A SECTION 13 T27N R10W

SAN JUAN COUNTY, NEW MEXICO



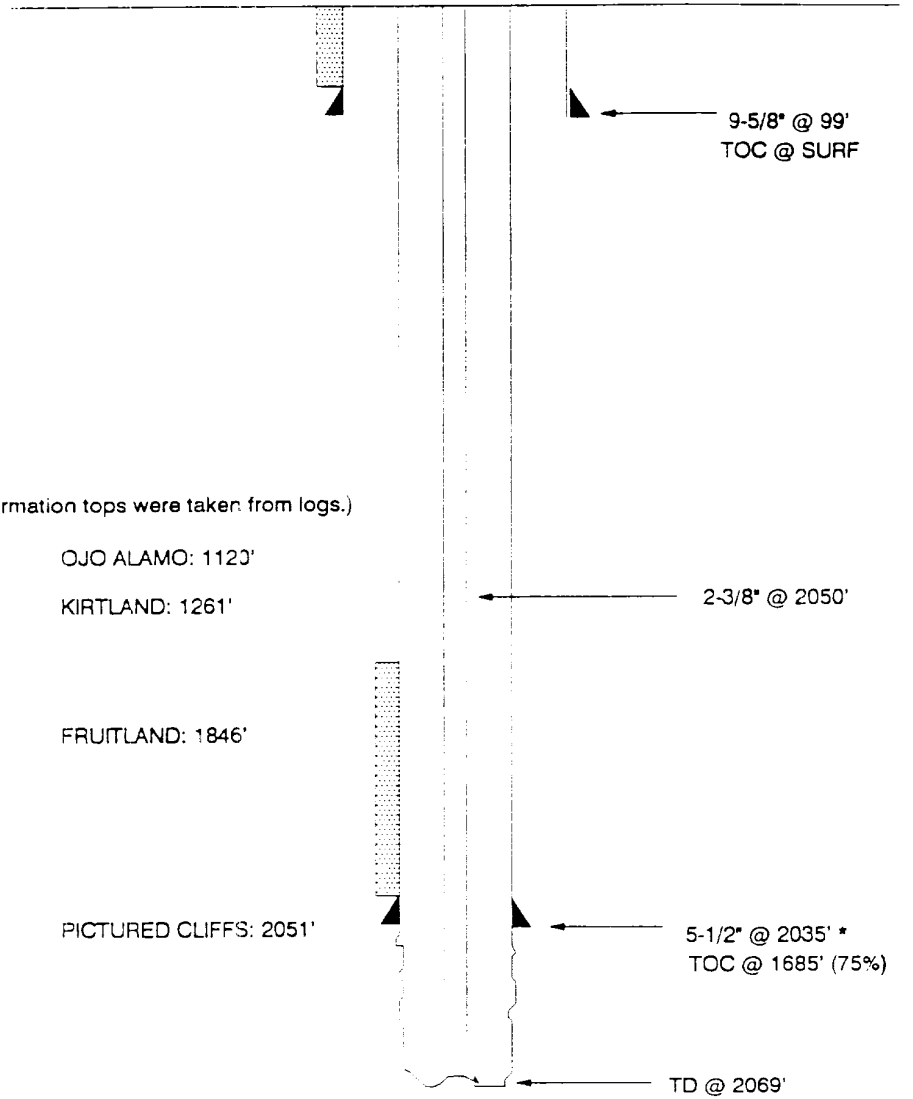
*NOTE: There is a discrepancy between the depths associated with the well file and those of the the electric logs for this well. Run a collar locator & CNL and correlate depths of csg and formations to existing logs.

PROPOSED

KNAUFF #1

UNIT A SECTION 13 T27N R10W

SAN JUAN COUNTY, NEW MEXICO



*NOTE: There is a discrepancy between the depths associated with the well file and those of the the electric logs for this well. Run a collar locator & CNL and correlate depths of csg and formations to existing logs.

KNAUFF #1
Recommend Recompletion Procedure
Unit A Section 13 T27N R10W

1. MOL and RU. ND wellhead. NU BOP. Test operation of rams. NU two relief lines. Blow well down.

2. TOOH w/ 1904' of 1.25" tbg.

3. In preparation of first stage frac, fill 1 - 400 bbl frac tank with 2% KCL water. Filter all water to 25 microns.

4. TIH w/ 4-3/4" bit on 2-3/8" tbg and CO to TD (2069') w/ air mist.

5. Shut down air mist. After stable rate is established, take pitot gauge. Switch to a relief line with an adjustable choke and apply 60 psi back pressure. After stable rate is established, take pitot. Inform production engineering of results. TOOH.

6. RU wireline and pack-off and run GR & CNL and collar locator from 2069' - 1100'. Determine depth of casing shoe and correlate formation depths to existing log. Pick perforations from log.

7. After csg shoe depth is determined set 5-1/2" retrievable BP as close to the bottom Fruitland coal as csg shoe will allow (approx 2050'). Run CBL. Pressure test csg and BP to 1000 psi. If csg fails, isolate csg leaks and squeeze as required. If holes occur at Ojo Alamo depths (approx 1150'), contact production engineering.

8. a) If squeeze was performed, TIH w/ 4-3/4" bit on 2-3/8" tbg. Drill cmt & CO w/ water to 2050'. Pressure test csg leak repair to 1000 psi. Resq if necessary.
b) If squeeze was not performed, pressure test csg to 3000 psi. If pressure test fails, squeeze as necessary. Pressure test repair to 1000 psi.

- If csg holds 3000 psi, prepare to frac down csg.
- If csg cannot be made to hold 3000 psi, sq to hold 1000 psi and prepare to frac down frac string. TIH w/ pkr and set @ 1850'. Pressure test RBP to 4000 psi.

*****STAGE ONE*****

9. Perf lower Fruitland coal w/ 4" HSC guns w/ 9.8 gram charges. Shoot approx 2025'-45' w/ 4 SPF. Choose exact perfs from CNL.

10. TIH w/ 2-3/8" tbg and SAP tool w/ 4' spacing. Breakdown perfs with 1/2 bbl/ft at 1 BMP with 10 bbls 15% HCL. Add 0.3% quaternary amine type clay stabilizer, an inhibitor and sequestering agent to the acid. TOOH.

11. a If csg holds 3000 psi, fracture treat down csg. RU Smith Energy hydraulic tree saver. RU BJ Services for fracture treatment. Hold safety meeting with all personnel. Pressure test surface lines to 4000 psi. Fracture treat according to attached schedule at 20 BPM with 50,000 lbs of 20/40 mesh Arizona sand. Flush with 1865 gals 70 quality foam. All sand to be tagged with 0.4 mCi/1000# Ir-192 tracer. **MAXIMUM PRESSURE IS LIMITED TO 3000 PSI!** Monitor bottomhole and surface treating pressure, rate, foam quality and sand concentration with computer van.
b. If csg can only be made to hold 1000 psi, with 500 psi held on backside & recorded, fracture treat coal down 3-1/2", 9.3#, N80, Flush Jt frac string w/ pkr set @ 1850'. Pressure test surface lines to 5000 psi. Perform frac as stated in the attached treatment schedule with a Max of 4000 psi and an estimated treating pressure of 2500 psi. Flush with 665 gals 70 quality foam.

•Treat per the attached treatment schedule.

12. Immediately upon completion of the stimulation, flow the well to pit on 1/8" positive choke for 10 minutes. Monitor flow back pressure on square root of time vs pressure plot. SI well for 2 hours for gel break.

13. After gel break, open well through choke manifold & monitor flow. Flow @ 20 bbls/hr, or less if sand is observed. When well ceases to flow, proceed to Stage 2.

14. In preparation of second stage frac, fill 1 - 400 bbl frac tank with 2% KCL water. Filter all water to 25 microns.

Stage Two

15. If applicable, TOOH w/ frac string and pkr. Set 5-1/2" RBP @ 2010' on wireline.

16. Pressure test csg and RBP to the determined max as found in step 8 of this procedure.

17. Perf upper Fruitland coal w/ 4" HSC guns w/ 9.8 gram charges. Shoot **approx** 1935'-50', 1980'-85' w/ 4 SPF. Choose exact perfs from CNL.

18. TIH w/ 2-3/8" tbg and SAP tool w/ 4' spacing. Breakdown perfs with 1/2 bbl/ft at 1 BMP with 10 bbls 15% HCL. Add 0.3% quaternary amine type clay stabilizer, an inhibitor and sequestering agent to the acid. TOOH.

19. a) If csg holds 3000 psi, fracture treat down csg. RU Smith Energy hydraulic tree saver. RU BJ Services for fracture treatment. Hold safety meeting with all personnel. Pressure test surface lines to 4000 psi. Fracture treat according to attached schedule at 30 BPM with 50,000 lbs of 20/40 mesh Arizona sand. Flush with 1794 gals 70 quality foam. All sand to be tagged with 0.4 mCi/1000# Ir-192 tracer. **MAXIMUM PRESSURE IS LIMITED TO 3000 PSI!** Monitor bottomhole and surface treating pressure, rate, foam quality and sand concentration with computer van.
b) If csg can only be made to hold 1000 psi, with 500 psi held on backside & recorded, fracture treat coal down 3-1/2", 9.3#, N80, Flush Jt frac string w/ pkr set @ 1850'. Pressure test surface lines to 5000 psi. Perform frac as stated in the attached treatment schedule with a Max of 4000 psi and an estimated treating pressure of 2500 psi. Flush with 640 gals 70 quality foam.

•Treat per the attached treatment schedule.

20. Immediately upon completion of the stimulation, flow the well to pit on 1/8" positive choke for 10 minutes. Monitor flow back pressure on square root of time vs pressure plot. SI well for 2 hours for gel break.

21. After gel break, open well through choke manifold & monitor flow. Flow @ 20 bbls/hr, or less if sand is observed.

22. When well ceases to flow, TOOH w/ frac string & pkr (if applicable). TIH w/ 2-3/8" tbg and retrieving head and clean out upper zone until sand flow stops. Take Pitot gauge before releasing BP. Release BP set @ 2010' and TOOH.

23. TIH w/ 2-3/8" tbg and retrieving head and clean out lower zone until sand flow stops. Take Pitot gauge and gas & water samples before releasing BP. Release BP set @ 2050' and TOOH.

24. Run After-Frac-Gamma-Ray log from TD - 1100'.

25. TIH w/ 2050' of 2-3/8" tbg w/ standard seating nipple one jt off bottom. Take final Pitot gauge.

26. ND BOP and NU independent wellhead. Rig down & release rig.

2¾ expendable check valve on bottom

Pump off check valve

Approve:

J. A. Howieson

VENDORS:

Wireline:	Schlumberger	325-5006
Fracturing:	BJ Services	327-6288
RA Tagging:	Protechnics	326-7133

KAS:kas