

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
BLM

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK PLUG BACK	5. LEASE NUMBER SF 080636
1b. TYPE OF WELL GAS	6. IF INDIAN, ALL. OR TRIBE NAME STON, N.M.
2. OPERATOR MERIDIAN OIL INC.	7. UNIT AGREEMENT NAME HUERFANO UNIT
3. ADDRESS & PHONE NO. OF OPERATOR P.O. BOX 4289 FARMINGTON, NM 87499 (505) 326-9700	8. FARM OR LEASE NAME HUERFANO UNIT
4. LOCATION OF WELL 1650' FSL, 1090' FEL	9. WELL NO. 219
14. DISTANCE IN MILES FROM NEAREST TOWN	10. FIELD, POOL, OR WILDCAT ANGEL PEAK GALLUP
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE.	11. SEC. T. R. M OR BLK SECTION 29, T26N, R10W
16. ACRES IN LEASE	12. COUNTY SAN JUAN
17. ACRES ASSIGNED TO WELL 320.00	13. STATE N.M.
18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL DR. COMPL., OR APPLIED FOR ON THIS LEASE.	20. ROTARY OR CABLE TOOLS
21. ELEVATIONS (DF, FT, GR, ETC.) 6571' GR	22. APPROX. DATE WORK WILL START

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JUL 17 1991
OIL CON. DIV.

23. PROPOSED CASING AND CEMENTING PROGRAM

*SEE OPERATIONS PLAN

24. AUTHORIZED BY: Donna Bradfield (SHL)
REGULATORY AFFAIRS

6-27-91

DATE
APPROVED

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE JUL 15 1991

NOTE: THIS FORMAT IS ISSUED IN LIEU OF US BLM FORM 3160-3.
(NO ADDITIONAL DIRT WORK WILL BE REQUIRED)

AREA MANAGER
FARMINGTON RESOURCE AREA

Hold 6-10-91 FOR 154-3036

NMOCO

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

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BLM

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Meridian Oil Inc.			Lease Heurfano Unit		Well No. 219
Unit Letter I	Section 29	Township 26 North	Range 10 West	County San Juan	
Actual Footage Location of Well: 1650 feet from the South line and 1090 feet from the East line					
Ground level Elev. 6571'		Producing Formation Gallup		Pool Angel Peak	Dedicated Acreage: 320 Acres

- Outline the acreage dedicated to the subject well by colored pencil or machine marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☒ Yes ☐ No If answer is "yes" type of consolidation unitization
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

Not re-surveyed, prepared
from a plat by David O.
Vilven, dated 6-25-71.

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature Peggy Bradfield

Printed Name Peggy Bradfield

Position Regulatory Affairs

Company Meridian Oil Inc.

Date 6-27-91

Date 6-27-91

Date 6-27-91

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed 6-27-91

Signature [Signature]

Professional Surveyor [Signature]

Signature [Signature]

Professional Surveyor [Signature]

Signature [Signature]

Professional Surveyor [Signature]

Signature [Signature]

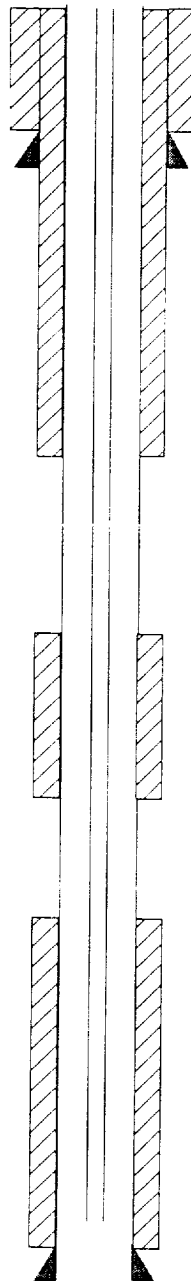
Professional Surveyor [Signature]

HUERFANO UNIT #219

WELLBORE DIAGRAMS

BEFORE W/O

AFTER W/O



8.625' 24# CSG SET @ 207'

FRUITLAND 1549'

PC 1918'

DV TOOL @ 2103'

TOC 3249'

CLIFF HOUSE 3464'

DV TOOL @ 4605'

TOC 5130'

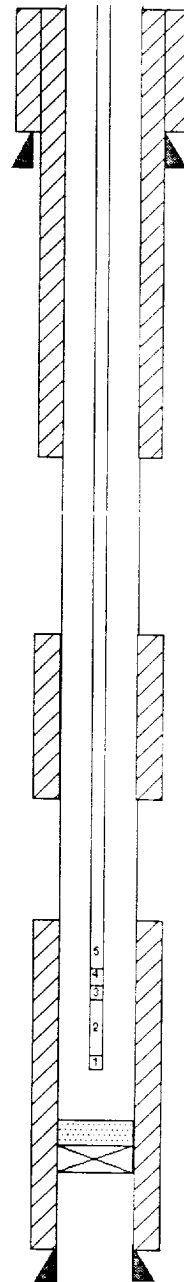
GALLUP 5468'

GRANEROS 6375'

DAKOTA 6472'

2-3/8" 4.7# TBG SET @ 6558'

4.5' 10.5# CSG SET @ 6634'



TBG RUN ORDER

- 1) 1/2" TAPPED BULLPLUG
- 2) 1 JOINT 2-3/8" TBG
- 3) 3' PERF. SUB @ 5772'
- 4) SEATING NIPPLE
- 5) 2-3/8" TBG TO SURFACE

10 SX (12 CF) CMT PLUG
CIBP @ 6420'

RECOMPLETION PROCEDURE
HUERFANO UNIT #219

****NO WORK IS TO BE PERFORMED OR EQUIPMENT TO BE LOCATED OFF APPROVED WELL PAD****

1. Prepare location for workover. Set tanks and fill with water.
2. MOL and RU. NU BOP with flow tee and stripping head, and test. NU blowlines. Load hole with 2% KCl water.
3. TOOH with tubing. TIH with 4-1/2" casing scraper to 6420'. TOOH. TIH with CIBP and set at 6420'. TIH with 4-1/2" packer on 2 joints of tubing. Pressure test CIBP to 3800 psi. TOOH with packer.

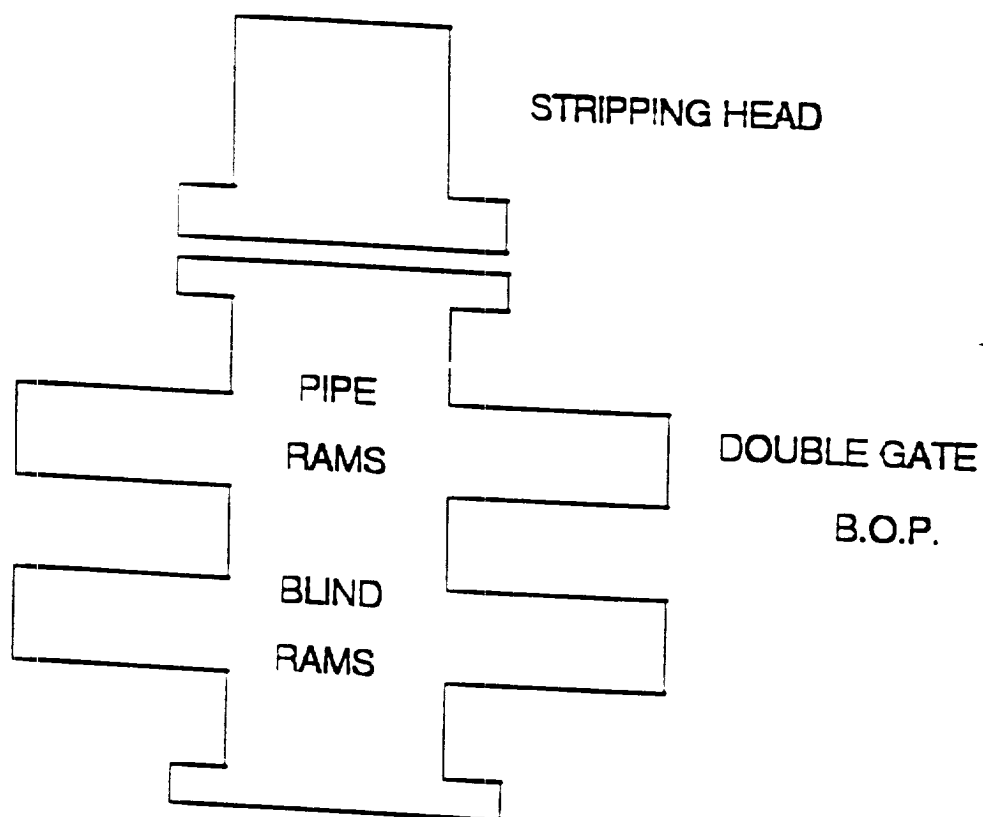
*****STAGE ONE*****

4. Perforate first stage. Shoot 2 SPF for a total of 72 holes over the following intervals: 5652-55', 5663-67', 5671-75', 5680-82', 5715-19', 5725-27, 5730-33', 5739-43', 5757-67'
5. Wash perforations with HCl acid. TIH with 4-1/2" fullbore packer on 2 joints of 2-7/8" tubing.
6. RU for fracture treatment. Hold safety meeting with all personnel. Pressure test surface lines to 4000 psi. Fracture treat first stage with nitrogen, sand, and water.

*****STAGE TWO*****

7. TOOH with packer. TIH with gauge ring. TOOH. TIH with top drillable bridge plug. Set at 5635'. TIH with 4-1/2" fullbore packer on 2 joints of 2-7/8" tubing.
8. Pressure test bridge plug to 3800 psi. Release pressure. TOOH with packer.
9. Perforate second stage. Shoot 2 SPF for a total of 78 holes over the following intervals: 5470-72', 5476-80', 5484-86', 5493-01', 5510-14', 5590-98', 5609-11', 5614-16'
10. Wash perforations with HCl acid. TIH with 4-1/2" fullbore packer on 2 joints of 2-7/8" tubing.
11. RU for fracture treatment. Hold safety meeting with all personnel. Pressure test surface lines to 4000 psi. Fracture treat second stage with nitrogen, sand, and water.
12. Clean out upper zone until sand flow stops. Drill out top drillable bridge plug. Clean out lower zone until sand flow stops.
13. TIH with 1/2" tapped 2-3/8" bullplug, 1 full joint 2-3/8" tubing, 3' perforated sub, seating nipple, and 2-3/8" tubing to surface.
14. Test well for production capacity. After production capacity has been determined, design pump assembly.

WORKOVER / RECOMPLETION B.O.P. SCHEMATIC



MINIMUM: 6" 2000 PSI DOUBLE GATE B.O.P.
MAXIMUM ANTICIPATED SHUT-IN WELLHEAD
PRESSURE IS LESS THAN 2000 PSI