30-045-26970

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: SF-078596

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Pump Canyon SWD

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: ~~Wildcat~~ Mc Cracken Entrada

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 7, T-30-N, R- 8-W NMPM

12. COUNTY OR PARISH: San Juan | 13. STATE: NM

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] OTHER SWD SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Meridian Oil Inc.

3. ADDRESS OF OPERATOR: PO Box 4289, Farmington, NM 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1725'S, 1850'E
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 10 miles from Navajo Dam, NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 1725'

16. NO. OF ACRES IN LEASE: Unit

17. NO. OF ACRES ASSIGNED TO THIS WELL:

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1070'

19. PROPOSED DEPTH: 8535'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5972'GL

22. APPROX. DATE WORK WILL START*:

SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20"	133.0#	500'	1500 cf.circulated
17 1/2"	13 3/8"	61&68#	3075'	3210 cf-2 st;circ.surf
12 1/4"	9 5/8"	40#	2940-5540	1060 cf-circ.liner top
8 3/4"	7"	23#	8535'	680 cf- circ.liner

Drill and test an 8535' wildcat disposal well. The zones of interest will be tested for disposal potential.

BOP's will be inspected and operated daily, and pressure tests will be conducted as required.

RECEIVED
JUL 14 1988
OIL CON. DIV.
DIST. 3

Subject to NMOCD approval

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED: [signature] TITLE: ~~Drilling Clerk~~ DATE: ~~06-08-88~~

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

"Approval of this action does not warrant that the applicant holds legal or equitable rights or title to this lease."

NMOCC

APPROVED AS AMENDED

AREA MANAGER

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-1
Effective 1-1-6

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
MERIDIAN OIL INC.	PUMP CANYON SWD (SF-078596)	1

Unit Letter	Section	Township	Range	County
J	7	30 NORTH	8 WEST	SAN JUAN

Actual Footage Location of Well:
1725 feet from the SOUTH line and 1850 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
5972	Morrison/Entrada	~~Wildcat~~	Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

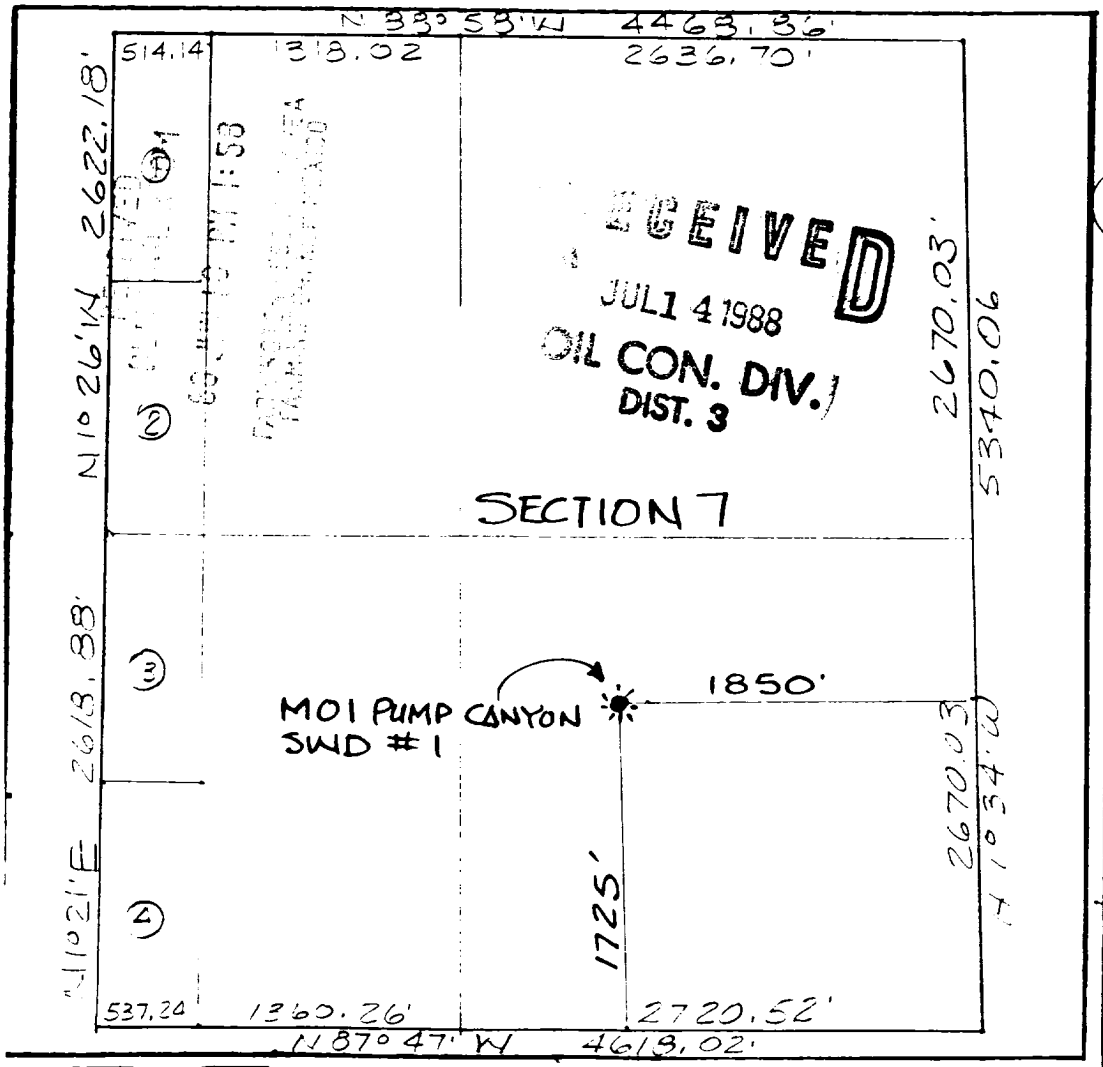
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

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, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: Peggy Bradfield
Position: Drilling Clerk
Company: Meridian Oil Inc.
Date: 6-9-88

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.

NEALE C. EDWARDS
NEW MEXICO
LAND SURVEYOR

MAY 20, 1988
Date Surveyed

Registered Professional Engineer and/or Land Surveyor

NEALE C. EDWARDS

Certificate No.

Operations Plan
Pump Canyon SWD #1

Location: 1725'S, 1850'E, Sec. 7, T-30-N, R-8-W, San Juan Co., NM

Formation: Morrison/Entrada Wildcat Disposal Well Elevation: 5972'GL

I. Geology:

A. Formation Tops:

Surface	San Jose	Point Lookout	4987'
Ojo Alamo	1450'	Mancos	5438'
Kirtland	1650'	Gallup	6284'
Fruitland	2388'	Greenhorn	7035'
Pic.Cliffs	2753'	Graneros	7072'
Lewis	2910'	Dakota	7139'
Chacra	3436'	Morrison	7390'
Mesa Verde	4385'	Todilto	8211'
Menefee	4602'	Entrada	8286'
		Total Depth	8535'

B. Logging Program:
GR-Neutron: TD - surface.
Induction-Density: TD - intermediate casing
± 15 sidewall cores across injection interval
Mud loggers from Dakota to TD
Natural gauges at 3400', 4380', 4610', 4980', 5440', 6280', 7030', 7080', 7135' and 7250'.

II. Drilling

A. Mud Program:

1. 26" surface hole: 0 - 500' spud mud
2. 17 1/2" intermediate hole: 500' - 3075' fresh water based mud system
3. 12 1/4" drilling liner: 3075' - 5540' natural gas
4. 8 3/4" long string: 5540' - 8535' natural gas through the Dakota to ± 7360'. Fresh water based mud system to TD.

B. BOP Program:

1. 26" hole: none required
2. 17 1/2" hole: 20" 3000 psi double gate BOP with 20" 3000 psi rotating head (see Figure #BOP 1)
3. 12 1/4" hole: 13 5/8" 3000 psi double gate BOP with 13 5/8" 3000 psi rotating head (see Figure #BOP 2)
4. 8 3/4" hole: 13 5/8" 3000 psi double gate BOP with 13 5/8" 3000 psi rotating head (see Figure #BOP 2)

Operations Plan - Pump Canyon SWD #1

III. Casing Program:

A.

Hole Size	Csg. Size	Weight	Grade	Interval
26"	20"	133.0#	K-55	0-500'
17 1/2"	13 3/8"	61.0#&68.0#	K-55	0-3075'
12 1/4"	9 5/8"	40.0#	N-80	2940-5540'
8 3/4"	7"	23.0#	N-80	0-8535'

B. Float Equipment:

20" surface - cement nose float shoe equipped for inner string cementing.

13 3/8" intermediate - cement nose guide shoe, float collar and multiple stage cementer equipped for two stage cementing. Set tool for second stage at ±1650'. Ten centralizers, one every other joint off bottom for a total of five, one below and four above the stage tool every other joint.

9 5/8" liner - cement nose guide shoe, float collar and five centralizers every other joint off bottom. A 9 5/8" x 13 3/8" liner hanger will be used to isolate the top of the liner.

7" long string - cement nose guide shoe, float collar and centralizers every other joint as required to centralize casing across injection intervals.

C. Injection string:

7350' of 4 1/2", 10.5#, K-55 8rd tubing with a 7" x 4 1/2" Baker Model "FA-1" production packer and Baker Model "K" seal assembly on bottom.

D. Wellhead Equipment:

13 3/8" weld on x 7" x 4 1/2" 3000 psi xmas tree assembly single completion for standard service.

IV. Cementing:

20" surface - cement with 1270 sacks Class "B" neat with 1/4# cello-flake/sack and 3% calcium chloride (1500 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600 psi for 30 minutes.

13 3/8" intermediate -
First stage - cement with 650 sacks of 65/35 Class "B" Pozmix with 6% gel, 2% calcium chloride, and 1/2 cu.ft. perlite/sack. Tail in with 200 sacks class "B" with 2% calcium chloride, 1/4#/sack flocele (1490 cu.ft. of slurry, 50% excess to circulate to stage tool). Drop opening bomb, wait 30 minutes, open stage tool and circulate for three hours.

13 3/8" intermediate - (cont'd)
Second stage - cement with 830 sacks of 65/35 Class "B" Pozmix with 6% gel, 2% calcium chloride, and 1/2 cu.ft. perlite/sack. Tail in with 100 sacks Class "B" with 2% calcium chloride, 1/4#/sack flocele (1720 cu.ft. of slurry, 100% excess to circulate to surface). Run temperature survey at 8 hours if cement does not circulate to surface. WOC 12 hours. Test casing to 1200 psi for 30 minutes.

9 5/8" liner - lead with 730 sacks of 50/50 Class "B" Pozmix with 2% gel, 10% salt, 1% Halad-9, 1/4#/sack flocele. Tail in with 100 sacks Class "B" with 1/4#/sack flocele, and 0.4% Halad-22A (1060 cu.ft. of slurry, 30% excess to circulate liner). WOC 12 hours. Test casing to 1200 psi for 30 minutes.

7" long string - lead with 220 sacks 50/50 Premium Poz, 2% gel, 10% salt, 1% Halad-22A, 35% silica flour, 1/4#/sack flocele. Tail with 200 sacks Premium cement, 35% silica flour, 1% Halad-22A, 1/4#/sack flocele (680 cu.ft. of slurry, 50% excess to circulate to bottom of 9 5/8" liner). Run temperature survey at 8 hours. WOC 18 hours.

Pump Canyon SWD #1
NW/SE Section 7, T-30-N, R-8-W
San Juan County, New Mexico

Map #2