

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL ☒ 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: 980'N, 2175'E

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OF BUREAU OF LAND MANAGEMENT
11 miles NNW from Gobernador, NM FARMINGTON RESOURCE AREA

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any) 980'

18. NO. OF ACRES IN LEASE
19. PROPOSED DEPTH 9050'

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6322' GL

23. DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED PROPOSED Casing and CEMENTING PROGRAM.

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20"	133 #	500'	1550 cf. circulated
17 1/2"	13 3/8"	61&68#	3600'	3686 cf-2 st; circ surf
12 1/4"	9 5/8"	40.0#	6030'	1300 cf-circ liner
8 3/4"	7"	23.0#	9050'	1350 cf-circ liner

Drill and test a 9050' 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
SEP 15 1989
OIL CON. DIV.

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. SIGNER: [Signature] TITLE: Regulatory Affairs DATE: 06-14-89

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____
CONDITIONS OF APPROVAL, IF ANY:

APPROVED
AS AMENDED
SEP 13 1989
[Signature]
AREA MANAGER

*See Instructions On Reverse Side

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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 (NM-012735) <u>SUD</u>			Well No. 301		
Unit Letter E			Section 6			Township 30 North		
Range 6 West			County Rio Arriba			NMPM		
Actual Footage Location of Well: 980 feet from the North line and 2175 feet from the East line								
Ground level Elev. 6322'			Producing Formation Entrada			Pool SUD MORRISON-BLUFF- Undesignated		
Dedicated Acreage 319.65			Acres			N/A		

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 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.

RECEIVED

JUN 14 1989

BUREAU OF LAND MANAGEMENT
FARMINGTON RESOURCE AREA

OPERATOR CERTIFICATION

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

Signature Peggy Bradfield

Printed Name
Regulatory Affairs

Position
Meridian Oil Inc.

Company
6-14-89

Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes 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 5-24-89

Signature of Seeker Neale C. Edwards

Professional Surveyor

Certificate No. 6857

6857

Operations Plan
San Juan 31-6 Unit #301

Location: 980'N, 2175'E, Sec. 6, T-30-N, R-6-W, Rio Arriba Co., NM

Formation: Morrison/Entrada Wildcat Disposal Well Elevation: 6322'GL

I. Geology:

A. Formation Tops:	Surface	San Jose	Point Lookout	5525'
	Ojo Alamo	2248'	Mancos	5931'
	Kirtland	2381'	Gallup	6179'
	Fruitland	2859'	Greenhorn	7530'
	Pic.Cliffs	3160'	Graneros	7582'
	Lewis	3484'	Dakota	7685'
	Chacra	4175'	Morrison	7943'
	Mesa Verde	5231'	Todilto	8729'
	Menefee	5085'	Entrada	8782'
			Chinle	9005'
			Total Depth	9050'

B. Logging Program:

NEU-GR - TD to surface; IE-FDC-CNL - TD-6030'; sidewall cores of prospective injection zones; mudlogger from TD to 7820'. Natural Gauges @ 5175', 5230', 5515', 5900', 6030', 7500', 7575', 7680', 7820'

II. Drilling

A. Mud Program:

1. 26" surface hole: 0 - 500' spud mud
2. 17 1/2" intermediate hole: 500' - 3600' fresh water based mud system
3. 12 1/4" drilling liner: 3600' - 6030' air drilling
4. 8 3/4" long string: 6030' - 9050' air drilling through the Dakota to \pm 7820'. 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 - San Juan 31-6 Unit #301

III. Casing Program:

<u>A. Hole Size</u>	<u>Csg. Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Interval</u>
26"	20"	133.0#	K-55	0-500'
17 1/2"	13 3/8"	61.0#&68.0#	K-55	0-3600'
12 1/4"	9 5/8"	40.0#	N-80	3450-6030'
8 3/4"	7"	23.0#	N-80	0-9050'

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 $\pm 2350'$. 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 with packoff 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:

8100' of 3 1/2", 9.3#, J-55 8rd tubing (internally coated) with a 7" x 4 1/2" Otis Model "WB" production packer and Otis Model "PR" 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 1315 sacks Class "B" neat with 1/4# cello-flake/sack and 3% calcium chloride (1550 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 500 sacks of 65/35 Class "B" Pozmix with 6% gel, 2% calcium chloride, and 1/2 cu.ft. perlite/sack. Tail in with 225 sacks class "B" with 2% calcium chloride, 1/4#/sack flocele (1235 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.

Operations Plan - San Juan 31-6 Unit #301

13 3/8" intermediate - (cont'd)

Second stage - cement with 1210 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 (2453 cu.ft. of slurry, 50% 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.

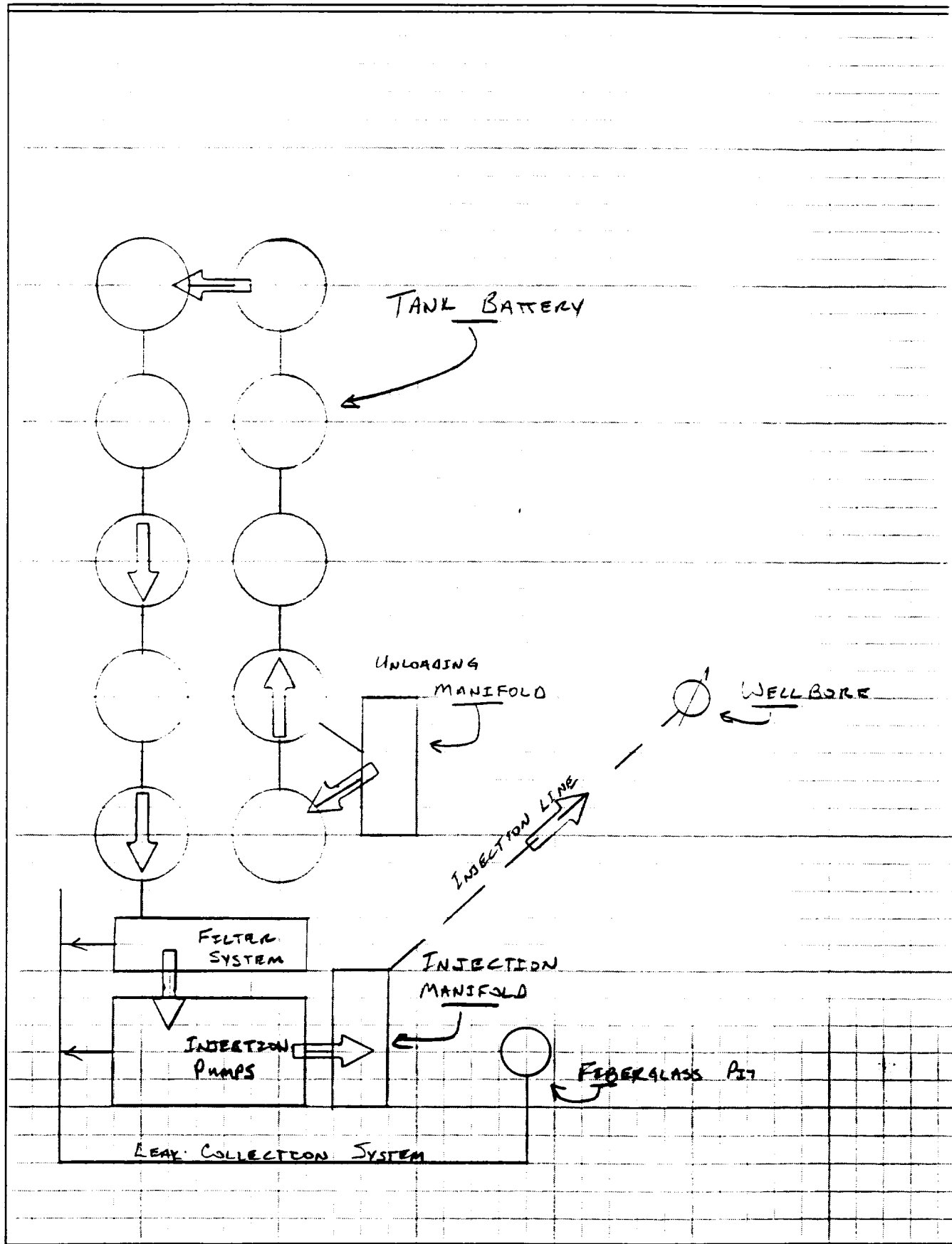
9 5/8" liner - lead with 750 sacks of 50/50 Class "B" Pozmix with 2% gel, 10% salt, 1% Halad-9, 1/4#/sack flocele. Tail in with 210 sacks Class "B" with 1/4#/sack flocele, and 0.4% Halad-22A (1320 cu.ft. of slurry, 70% excess to circulate liner). WOC 12 hours. Test casing to 1200 psi for 30 minutes.

7" long string - lead with 600 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 (1350 cu.ft. of slurry, 200% excess to circulate to bottom of 9 5/8" liner). Run temperature survey at 8 hours. WOC 18 hours.

MERIDIAN OIL CO.
ENGINEERING CALCULATION

Sheet: _____ of _____
Date: _____
By: _____
File: _____

PROJECTED INJECTION FACILITIES



4571 NE
BURNT MESA

278000m. E.

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[illegible]