

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

30-045-~~27563~~
Form approved. 27563
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

1. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. UNIT AGREEMENT NAME	
2. NAME OF OPERATOR Meridian Oil Inc.		8. FARM OR LEASE NAME Howell E	
3. ADDRESS OF OPERATOR PO Box 4289, Farmington, NM 87499		9. WELL NO. 7125	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 435' N, 1555' E		10. FIELD AND POOL, OR WILDCAT Blanco Mesa Verde	
11. SEC., T., R., W., OR BLK. AND SURVEY OR AREA Sec. 14, T-30-N, R-08-W		12. COUNTY OR PARISH San Juan	
13. STATE NM		14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 3 miles from Abes Store	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any) 435'		16. NO. OF ACRES IN LEASE 284.20	
17. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 58'		18. PROPOSED DEPTH 5415' TVD	
19. ROTARY OR CABLE TOOLS Rotary		20. APPROX. DATE WORK WILL START* 10/1/78	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5802' GL		22. QUANTITY OF CEMENT See operations plan	
23. PROPOSED CASING AND CEMENTING PROGRAM See operations plan			

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 Howell E (NM-012708)		Well No. 2 R
Unit Letter B	Section 14	Township 30 North	Range 8 West	County San Juan	
Actual Footage Location of Well: 435 feet from the North line and 1555 feet from the East line					
Ground level Elev. 5802'	Producing Formation Mesa Verde		Pool Blanco	Dedicated Acreage: 284.20 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or because 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 _____
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 interest, has been approved by the Division.

* Non-standard due to terrain.

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
9-8-89

Date

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
Neale C. Edwards

Signature of Seal of Professional Surveyor

REGISTERED LAND SURVEYOR
Certificate No. 6857

RECEIVED

DEC 29 1989

OIL CON. DIV
DIST. 3

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

Operations Plan

Howell E #2R

I. Location: 435' FNL, 1555' FEL, Sec. 14, T-30-N, R-8-W
San Juan County, New Mexico

Field: Blanco Mesa Verde

Elevation: 6344' Graded Ground Level

NOTE: All depths are true vertical depth unless otherwise noted.

II. Geology:

A. Formation Tops: (TVD)

San Jose	Surface	Chacra	3442
Ojo Alamo	1612	Int. Casing Point	4142
Kirtland	1693	Mesa Verde	4242
Fruitland	2389	Menefee	4595
Pictured Cliffs	2708	Point Lookout	4913
Lewis	2827	Total Depth	5415

B. Logging Program: Mud logs from 2300' to Intermediate Total Depth.

III. Drilling:

A. Mud Program: Mud from surface to Intermediate Total Depth. The well will be drilled vertically to a kick off point depth of 3421', there the well will deviate to 68° at 8°/100' directly south. At a depth of 4085' TVD (4271' MD), the angle of 68° will be maintained for 150' to a depth of 4142' TVD (4421' MD). At this point, intermediate casing will be set (9 5/8", 40#, N-80).

B. Intermediate Hole Table:

<u>True Vert. Depth (FT)</u>	<u>Measured Depth (FT)</u>	<u>Direction True North</u>	<u>Horizontal Displacement</u>	<u>Hole Size</u>	<u>Notes</u>
0					
500'	500'	0	0	17 1/2"	Set 13 3/8", 48#, H-40; drill out with 12 1/4" bit.
3421'	3421'	0	0	12 1/4"	Kick off point, TOOH w/12 1/4" bit, pick up 8 3/4", 8°/100' build assembly.
3421'	3421'	0	0	8 3/4"	Kick off point.
4085'	4271'	180°	448	8 3/4"	Deviate to 68° @ 8°/100'.

B. Intermediate Hole Table (Continued):

<u>True Vert. Depth (FT)</u>	<u>Measured Depth (FT)</u>	<u>Direction True North</u>	<u>Horizontal Displacement</u>	<u>Hole Size</u>	<u>Notes</u>
4142'	4421'	180°	587	8 3/4"	Drill 150' @ 68°, TOOH.
4142'	4421'			12 1/4"	Open hole to 12 1/4".
4142'	4421'	180°	587	12 1/4"	Run & cement 9 5/8", 40#, N-80.

C. Production Hole: Gas-Drilled Deviated - Drill out cement and shoe of 9 5/8" casing, unload hole with nitrogen, switch to gas, ensure hole is dusting, commence gas-drilling operations. Drill at 68° to Total Depth of 5415' TVD (7561' MD) with gas. At this point 5 1/2", 17#, N-80 casing will be run from Total Depth to surface.

D. Production Hole Table:

<u>True Vert. Depth (FT)</u>	<u>Measured Depth (FT)</u>	<u>Direction True North</u>	<u>Horizontal Displacement</u>	<u>Hole Size</u>	<u>Notes</u>
4142'	4421'	180°	587'	8 3/4"	Drill out cement & shoe of 9 5/8" casing. Dry hole w/N ₂ , commence gas drilling ops. @ 68°.
5415'	7561'	180°	3458'	8 3/4"	Run & cement 5 1/2", 17#, N-80.

IV. Materials

A. Casing Program:

<u>Hole Size (inches)</u>	<u>Measured Depth (Ft)</u>	<u>Casing Size (inches)</u>	<u>Weight (lbs/Ft)</u>	<u>Grade</u>
17 1/2	500	13 3/8	48	H-40
12 1/4	4421	9 5/8	40	N-80
8 3/4	7561	5 1/2	17	N-80

B. Float Equipment:

1. 13 3/8" Surface Casing - Sawtooth guide shoe.
2. 9 5/8" Intermediate Casing - Cement nose float shoe on bottom, float collar one joint off bottom, cementing stage tool set @ 2300', thirty-seven (37) centralizers spaced as follows: twenty-eight (28) every joint off bottom, one (1) joint below stage tool, four (4) every other joint above stage tool, four (4) every other joint across the Ojo Alamo.
3. 5 1/2" Production Casing - Angular port guide shoe, float collar one joint off bottom; eighty-two (82) centralizers, one every joint from the bottom.

C. Tubing 7561' of 2 7/8", 6.5#, J-55, 8rd EUE tubing with a seating nipple one joint off bottom and an expendable check valve on bottom.

D. Wellhead Equipment: 9 5/8" x 11" 2000 psi christmas tree assembly.

V. Cementing

A. 13 3/8" Surface Casing: Use 600 sxs Class "B" cement with 1/4# flocele and 3% CaCl_2 (700 cu. ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 700 psi.

B. 9 5/8" Intermediate Casing:

1. First Stage - Lead with 650 sxs of 65/35 Class "B" poz with 6% gel, 2% CaCl_2 , and 1/2 cu. ft. perlite per sack. Tail in with 100 sxs Class "B" with 2% CaCl_2 (1163 cu. ft. of slurry, 75% excess to cover stage tool @ 2300').

2. Second Stage - Lead with 230 sxs of 65/35 Class "B" poz with 6% gel, 2% CaCl_2 , and 1/2 cu. ft. perlite per sack. Tail in with 50 sxs Class "B" with 2% CaCl_2 (431 cu. ft. of slurry, 100% excess to cover the Ojo Alamo). WOC 12 hours. Test casing to 1500 psi.

C. 5 1/2" Production Casing: Lead with 100 sxs of 50/50 Class "B" poz with 2% gel, and 0.6% FLA. Tail in with 900 sxs of 50/50 Class "B" poz with 6.25# gilsonite, 1/4# flocele, and 0.6% FLA. (1350 cu. ft. of slurry, 70% excess to intermediate casing. WOC 18 hours.

VI. BOP and Tests:

A. Surface to intermediate TD - 12", 2000 psi (minimum) double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test rams to 700 psi for 30 minutes.

B. Intermediate TD to TD - 11", 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to drilling out intermediate casing, test rams to 1500 psi (minimum) for 30 minutes.

