Form 3160–3
(July 1989)
(formerly 9–331C)

CONTACT R[illegible]VING
OFFICE FC[illegible]MBER
OF COPIES REQUIRED
(Other instructions on reverse side)

30-015-27602

BLM Roswell District
Modified Form No.
NM060-3160-2

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

BUREAU OF LAND MANAGEMENT
RECEIVED
APR 21 1993
ROSWELL, N.M.

RECEIVED
JUL 2 7 1993
O. C. D.
ARTESIA, OFFICE

1a. TYPE OF WORK	DRILL ☒ DEEPEN ☐ PLUG BACK ☐
b. TYPE OF WELL	OIL WELL ☒ GAS WELL ☐ OTHER SINGLE ZONE ☐ MULTIPLE ZONE ☐
2. NAME OF OPERATOR	Strata Production Company ✓
3a. Area Code & Phone No.	505-622-1127
3. ADDRESS OF OPERATOR	P. O. Box 1030, Roswell, New Mexico 88202-1030
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*) At surface	850' FSL & 1964' FEL
At proposed prod. zone	
5. LEASE DESIGNATION AND SERIAL NO.	NM-17589
6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
7. UNIT AGREEMENT NAME	Nash Unit
8. FARM OR LEASE NAME	Nash Unit
9. WELL NO.	#12
10. FIELD AND POOL, OR WILDCAT	Nash Draw Brushy Canyon
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA	O Section 12-23S-29E
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*	9.5 miles east of Loving, New Mexico
12. COUNTY OR PARISH	Eddy
13. STATE	NM
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	500'
16. NO. OF ACRES IN LEASE	200 Lse/5123 Unit
17. NO. OF ACRES ASSIGNED TO THIS WELL	40.00
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	1350'
19. PROPOSED DEPTH	7200'
20. ROTARY OR CABLE TOOLS	Rotary
21. ELEVATIONS (Show whether DF, RT, GR, etc.)	2993' GR
22. APPROX. DATE WORK WILL START*	July 1, 1993

23.

PROPOSED CASING AND CEMENTING PROGRAM

HOLE SIZE	CASING SIZE	WEIGHT/FOOT	GRADE	THREAD TYPE	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48#	H-40	8 RD STC	300'	Circ to surface
12 1/4"	8 5/8"	24#	J-55	8 RD STC	3000'	Circ to surface
7 7/8"	5 1/2"	17#	J-55	8 RD LTC	7200'	Tie back to 600' above base of 8 5/8 casing

Strata Production Company proposes to drill to a depth sufficient to test the Delaware formation. If productive, 5 1/2" casing will be set. If non-productive, the well will be plugged and abandoned in a manner consistent with Federal Regulations. Specific programs as set out in Onshore Oil and Gas Order #1 are outlined in the following attachments:

Location and Elevation Plat
Hole Prognosis
Surface Use and Operating Plan
Exhibit "A" Equipment Description
Exhibit "B" Planned Access Roads
Exhibit "C" One Mile Radius Map
Exhibit "D" Drilling Rig Layout Plan

[illegible] SUBJECT TO
[illegible] REQUIREMENTS AND
[illegible] STIPULATIONS
[illegible]

ID-1
7-30-93
NL & API

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 Carol J. Garcia TITLE Production Supervisor DATE 4/20/93

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

APPROVED BY /s/ Kathy Eaton TITLE Actg State Director DATE 7-16-93

CONDITIONS OF APPROVAL, IF ANY:

*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

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator STRATA PRODUCTION			Lease NASH UNIT		Well No. 12
Unit Letter O	Section 12	Township 23 SOUTH	Range 29 EAST NMPM	County EDDY COUNTY, NM	
Actual Footage Location of Well: 1964 feet from the EAST line and 850 feet from the SOUTH line					
Ground level Elev. 2993.	Producing Formation DELAWARE		Pool NASH DRAW BRUSHY CANYON		Dedicated Acreage: 40.00 Acres

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

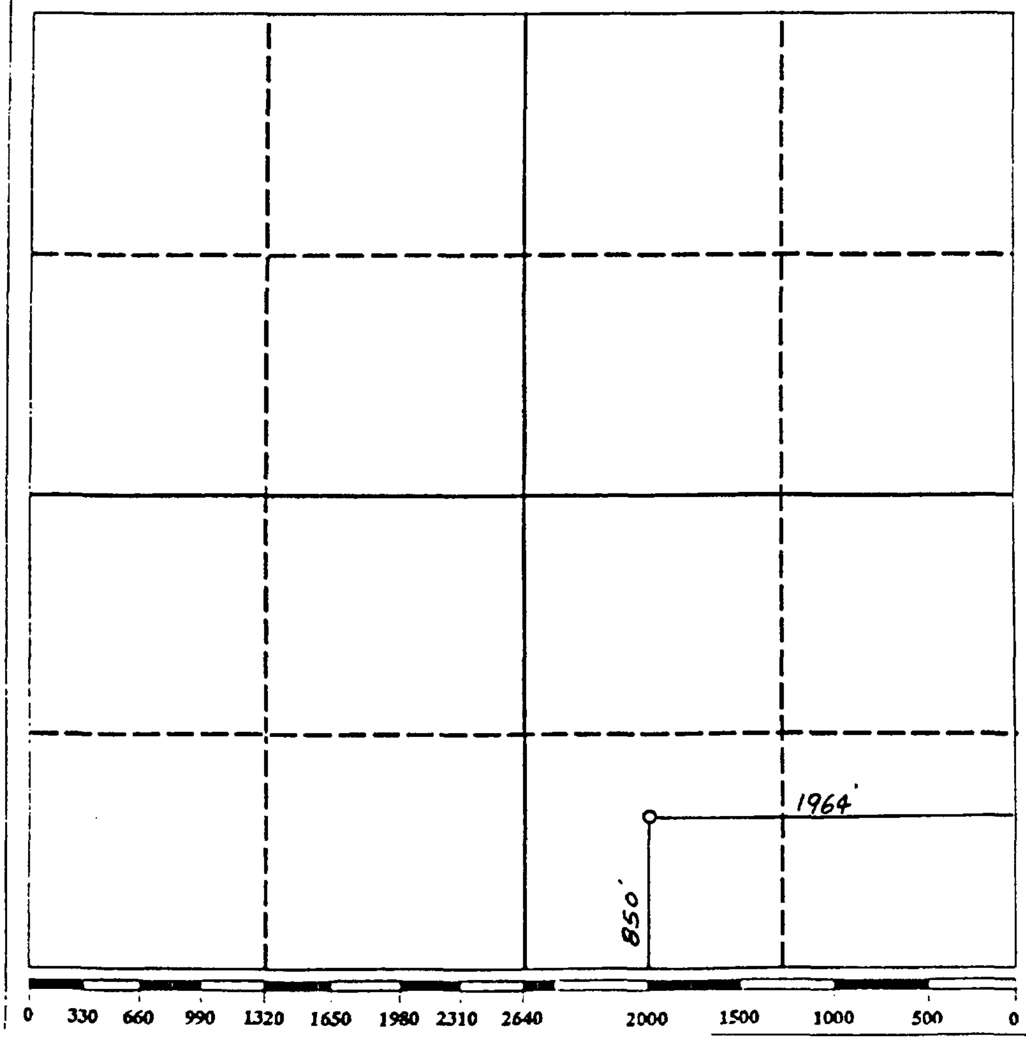
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the 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 neccessary. ____________

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.



OPERATOR CERTIFICATION

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

Signature Carol J. Garcia

Printed Name Carol J. Garcia

Position Production Supervisor

Company Strata Production Company

Date April 20, 1993

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 supervison, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
OCTOBER 1, 1992

Signature & Seal of Professional Surveyor

5412

Certificate No.
NM PE&PS NO 5412

HOLE PROGNOSIS
APPLICATION FOR PERMIT TO DRILL
STRATA PRODUCTION COMPANY
NASH UNIT #12 WELL
850' FSL & 1964' FEL
SECTION 12-23S-29E
EDDY COUNTY, NEW MEXICO

In conjunction with Form 3160-3, Application for Permit to Drill, Strata Production Company submits the following items in accordance with Onshore Oil and Gas Order Numbers 1 and 2, and all other applicable federal and state regulations.

1. <u>Geologic Name of Surface Formation</u>:

Permian

2. <u>Estimated Tops of Geologic Markers</u>:

Rustler	Surface	Ramsey Sand	3190'
Top of Salt	290'	Cherry Canyon	4190'
Castille	1775'	Brushy Canyon	5246'
Salado	2820'	Bone Spring	6897'
Lamar Lime	3142'	T.D.	7200'

3. <u>Estimated Depths of Anticipated Fresh Water, Oil or Gas</u>:

Surface	150'	Fresh Water
Delaware	3142' - 6897'	Oil or Gas

No other formations are expected to produce oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13 3/8" casing at 300' and circulating cement back to surface. Any shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across the zone by inserting a cementing stage tool into the 5 1/2" production casing which will be run at TD.

4. <u>Casing Program</u>:

Hole Size	Interval	OD csg	Weight, Grade, Jt. Cond, Type
17 1/2"	0-300'	13 3/8"	48#, H-40, ST&C, New
12 1/4"	0-3000'	8 5/8"	24#, J-55, ST&C, New
7 7/8"	0-TD	5 1/2"	15# & 17#, J-55, LT&C, New

Cementing Program:

Surface Casing:	13 3/8" casing will be set at approximately 300' and cemented with approximately 500 sacks of Halliburton Premium Plus cement with 2% CaCL, 5# Gilsonite and 1/4# Flocele per sack. The amount could be adjusted depending upon the fluid caliper results, however, cement in sufficient quantities to circulate will be utilized.
Intermediate Casing:	8 5/8" casing will be set at approximately 3000' and cemented with approximately 1200 sacks of HalcoLite (Halliburton Lite cement) with 10# salt and 1/4# Kwikseal per sack, and 350 sacks Premium Plus with 5# salt. The amount could be adjusted dependent upon fluid caliper results, however, cement in sufficient quantities to circulate will be utilized.
Production Casing:	If appropriate, 5 1/2" casing will be set at Total Depth. Strata utilizes cement in sufficient quantities to bring the cement into the 8 5/8" intermediate casing. This is normally completed in two (2) stages. The first stage is normally 550 sacks 50/50 Poz with 5# salt and 1/4# Flocele per sack. The second stage normally consists of 400 sacks of 50/50 Poz with 5# salt and 1/4# Flocele per sack.

5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit "A" will consist of a double ram-type (3000 psi WP) preventer and a bag-type (hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. Both BOP's will be nippled up on the 13 3/8" surface casing and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000 psi and the hydril to 70% of rated working pressure (2100 psi).

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 3" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 3000 psi WP rating.

6. Types and Characteristics of the Proposed Mud System:

0' to 300'	Native mud consisting of fresh water and native muds are used for drilling purposes.
300' to 3000'	Brine water purchased from commercial sources will be utilized.
3000' to 4600'	Brine and fresh water purchased from commercial sources will be utilized. Salt gel will be used to build viscosity.
4600' to TD	Brine and fresh water with salt gel and starch will be used to maintain a viscosity of approximately 31 and a water loss of 15 to 25.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. <u>Auxiliary Well Control and Monitoring Equipment</u>:

A. A kelly cock will be kept in the drill string at all times.

B. A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

8. <u>Testing, Logging and Coring Program</u>:

Two (2) man Mudlogging unit from top of Delaware to TD DLL-MSFL, CNL-Density, Gamma Ray, Caliper.

Mudlogging unit will be employed from approximately 3142' (Top of Delaware) to 7200' (Total Depth). The Dual Laterolog will be run from TD back to the intermediate casing and the Compensated Neutron/Density Log will be run from TD back to surface. In some cases, Strata elects to run rotary sidewall cores from selected intervals from approximately 3142' to 7200' dependent upon logging results.

9. <u>Abnormal Conditions, Pressures, Temperatures and Potential Hazards</u>:

No abnormal pressures or temperatures are anticipated.

Loss of circulation is possible in the Delaware section of the hole, however, no major loss circulation zones have been reported in offsetting wells.

Strata has drilled and completed five (5) wells in the immediate area. To date, Hydrogen Sulfide has not been encountered. However, if Hydrogen Sulfide is encountered, a Hydrogen Sulfide alarm on the drilling rig would be activated. All personnel have had Hydrogen Sulfide training and appropriate breathing apparatus is located on site. If necessary, the well can be shut in utilizing the blow out preventer and other equipment to prevent the migration of Hydrogen Sulfide to the surface.

10. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is July 1, 1993. Once commenced, the drilling operation should be finished in approximately 20 days. If the well is productive, an additional 15 days will be required for completion and testing before a decision is made to install permanent facilities.