

Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1.a. TYPE OF WORK

DRILL ☒DEEPEN ☐

2001 MAR 13 PM 3:44

b. TYPE OF WELL

Oil ☐Well ☐Gas ☐Well ☒Other ☐SINGLE ☐ZONE ☒MULTIPLE ☐ZONE ☐

2. Name of Operator

Dugan Production Corp.

3. Address and Telephone No.

P.O. Box 420, Farmington, NM 87499 (505) 325-1821

LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface 790' FSL & 1850' FEL

At proposed prod. zone

same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approx. 2 miles west of Hwy 170 & Twin Mounds By-Pass

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any)

790'

16. NO. OF ACRES IN LEASE

483.88

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160 SE

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.approx. 3700'
from DPC's
Jiggs #1

19. PROPOSED DEPTH

1215'

20. ROTARY OR CABLE TOOLS

Rotary

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

5513' GL

22. APPROX. DATE WORK WILL START*

ASAP

23. PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADES, SIZES OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|-------------------------|-----------------|---------------|-----------------------------|
| 9-7/8" | 7" | 20# | 120' | 70 cu.ft. circ. to surf. — |
| 6-1/4" | 4 1/2" | 10.5# | 1215' — | 179 cu.ft. circ. to surf. — |

A water based gel-mud will be used to drill surface and production casing hole. Standard 2,000 psi BOP will be used to drill production hole. The Pictured Cliffs Sandstone will be completed from approximately 1095'-1105'. The interval will be fractured.

This action is subject to technical and procedural review pursuant to 43 CFR 3163.3 and appeal pursuant to 43 CFR 3163.4.

APPROVED FOR THE BUREAU OF LAND MANAGEMENT
BY: [Signature] DATE: 3/6/2001

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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



Title Geologist

Date 3/6/2001

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APR - 6 2001

Approved by



Title

Date

*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.

APPROVED

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | |
|-----------------------------------------|------------------------------------------------------------|---------------------------------|-----------------------------------------------------------|
| ¹ API Number 30 045 30591 | | ² Pool Code 78160 | ³ Pool Name Harper Hill Fruitland Sand - PC |
| ⁴ Property Code 3758 | ⁵ Property Name MAYRE | | ⁶ Well Number 4R |
| ⁷ CGRID No. 006515 | ⁸ Operator Name DUGAN PRODUCTION CORPORATION | | ⁹ Elevation 5513 |

¹⁰ Surface Location

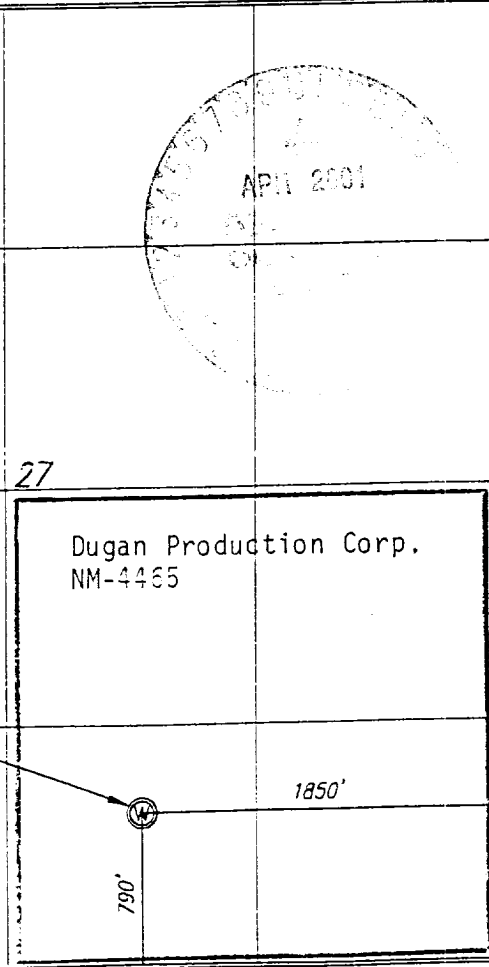
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| 0 | 27 | 30N | 14W | | 790 | SOUTH | 1850 | EAST | SAN JUAN |

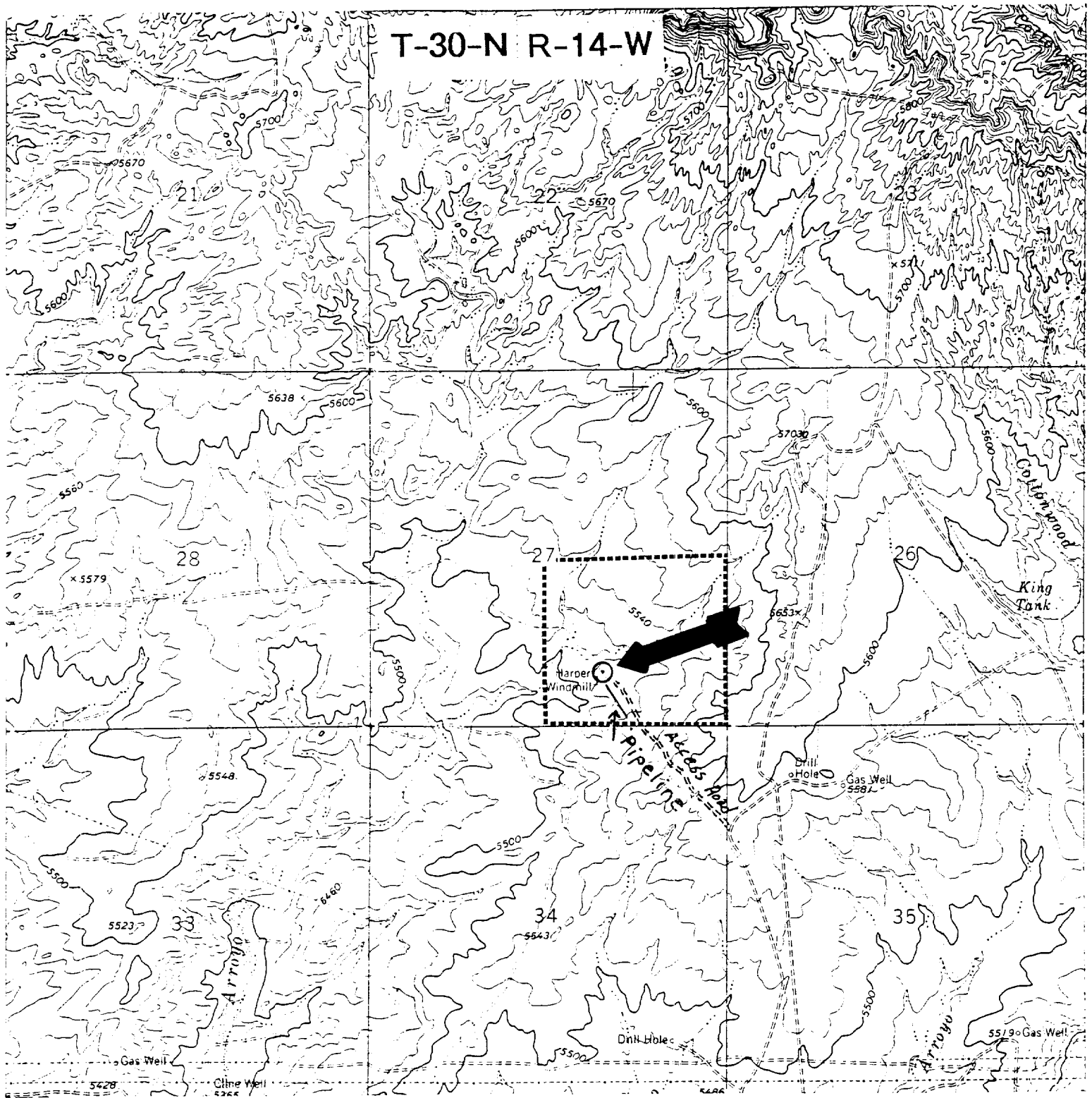
¹¹ Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |

| | | | |
|----------------------------------------------------|-------------------------------|----------------------------------|-------------------------|
| ¹² Dedicated Acres 160 SA | ¹³ Joint or Infill | ¹⁴ Consolidation Code | ¹⁵ Order No. |
|----------------------------------------------------|-------------------------------|----------------------------------|-------------------------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

| | |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>16</div> <div></div> | <div>¹⁷ OPERATOR CERTIFICATION</div> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><u>Kurt Fagrelus</u> Signature Kurt Fagrelus Printed Name Geologist Title March 6, 2001 Date</p> |
| | <div>¹⁸ SURVEYOR CERTIFICATION</div> <p>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 belief.</p> <p>JANUARY 19, 2001 Date of Survey Signature and Seal of Surveyor: <u>Edgar L. Senhoner</u> N.M. PL 5979 Certificate Number</p> |



Existing Roads

Exhibit E

Vicinity of nearest town or reference pt.
2 mi. W of Hwy 170 & Twin Mounds By-Pass

Type of surface dirt

Conditions good

Other _____

Reference map: USGS map-Youngs Lake Quad.

DUGAN PRODUCTION CORP - MAYRE #4R

Planned Access Road(s)

Exhibit E

Width 20' Maximum grades _____

Drainage design as required

Cuts & Fills as required

Surfacing material none

☒ Turnouts

☒ Culverts

☒ Gates

☒ Cattleguards

☒ Fence cuts

☒ Waterbars

Access Road &

Pipeline

Access road(s) do/do not cross Fed/Ind land.

EXHIBIT B
OPERATIONS PLAN

Mayre #4R

APPROXIMATE FORMATION TOPS:

| | |
|-----------------|---------|
| Ojo Alamo | surface |
| Kirtland | surface |
| Fruitland | 735' |
| Pictured Cliffs | 1095' |

| | |
|--------------------|--------------|
| Total Depth | 1215' |
|--------------------|--------------|

LOGGING PROGRAM: Run cased hole CNL-CDL

Catch samples every 10 feet from 1000 feet to total depth.

CASING PROGRAM:

| Hole <u>Size</u> | Casing <u>Size</u> | Wt./ft. | Setting <u>Depth</u> | Grade and <u>Condition</u> |
|---------------------|-----------------------|---------|-------------------------|-------------------------------|
| 9-7/8" | 7" | 20# | ±120' | J-55 |
| 6-1/4" | 4-1/2" | 10.5# | ±1215' | J-55 |

Plan to drill a 9-7/8" hole and set 120' of 7" OD, 20#, J-55 surface casing; then plan to drill a 6-1/4" hole to total depth with gel-water-mud program to test Fruitland Sand/PC Formation. 4½", 10.5# J-55 casing will be run and cemented. Cased hole CNL-CDL log will be run. Productive zone will be perforated and fractured. After frac the well will be cleaned out and production equipment will be installed.

CEMENTING PROGRAM: All volumes are contingent upon Caliper logs.

Surface: Cement with 70 cu.ft. Class "B" neat. Circulate to surface

Production Stage - Cement with 113 cu.ft. 2% Lodense with 1/4# celloflake/sx followed by 66 cu.ft. Class "B" with 1/4# celloflake/sx.
Total cement slurry for production stage is 179 cu.ft.
Circulate to surface.

An adequate spacer will be pumped ahead of the cement slurry to help prevent mud contamination of the cement. An adequate number of casing centralizers will be run through usable water zones to ensure that casing is centralized through these zones. The adequate number of centralizers will be determined based on API standards. Centralizers to impart a swirling action around the casing will be used just below and into the base of the lowest usable water zone. These devices will assist mud displacement, increase cement bonding potential and create an effective hydraulic seal. A chronological log will be kept which records the pump rate, pump pressure, slurry density, and slurry volume for the cement job. The log will be sent to the BLM after completion of the job.

WELLHEAD EQUIPMENT:

Huber 7" x 4-1/2" casing head, 1000#WP, tested to 2000#

Huber 4-1/2" x 2-7/8" tubing head, 1000# WP, tested to 2000#

BOP and Related Equipment will include for a 2000 psi system:

Annual preventer, double ram, or 2 rams with one being blind and one being a pipe ram

Kill line (2" minimum)

1 kill line valve (2" minimum)

1 choke line valve

2 chokes

Upper kelly cock valve with handle available

Safety valve and subs to fit all drill string connections in use

Pressure gauge on choke manifold

2" minimum choke line

Fill-up line

| | |
|-------------------------------------------|------------------------|
| Dugan Prod.Corp. Office & Radio Dispatch: | 325-1821 |
| | Kurt Fagrelus 325-4327 |
| John Alexander 325-6927 | Mark Brown 327-3632 |
| Sherman Dugan 327-3121 | John Roe 326-1034 |