

Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.

NM-10561

6. IF INDIAN, ALLOTTED OR TRIBE NAME

7. UNIT AGREEMENT NAME

3591

8. FARM OR LEASE NAME, WELL NO.

Big Field #6

9. API Well No.

30-045- 30917 Btm

10. FIELD AND POOL, OR WILDCAT

Harper Hill FR Sand PC

11. SEC., T., R., M., OR BLK.
AND SURVEY OR AREA

Unit I

Sec. 15, T30N, R14W

12. COUNTY OR PARISH

San Juan

13. STATE

NM

1a. TYPE OF WORK

DRILL

☒

DEEPEN

☐

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 1850' FSL & 660' FEL (NE/4 SE/4)

At proposed prod. zone

same

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

5 miles north of Farmington, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.

(Also to nearest drig. unit line, if any)

660'

16. NO. OF ACRES IN LEASE

1397.16

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160 (SE/4)

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

2700'

19. PROPOSED DEPTH

1800'

20. ROTARY OR CABLE TOOLS

Rotary

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

6034' 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
8-3/4"	7"	20#	120'	70 cu.ft. circ. to surf.
6 1/4"	4 1/2"	10.5#	1800'	275 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 1674'-1684'. The interval will be fractured.

This action is subject to review and
procedural review pursuant to 43 CFR 3105.3
and appeal pursuant to 43 CFR 3105.4.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

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 Kurt Fagrellius Title Geologist Date 11/7/01
Kurt Fagrellius

(This space for Federal or State office use)

PERMIT NO. _____

APPROVAL DATE 4/22/02

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:

Approved by

/s/ David J. Mankiewicz Title AFM

Date

APR 22 2002

*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.

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30 045 30917		*Pool Code 78150	*Pool Name HARPER HILL FRUITLAND SAND PICTURED CLIFFS
*Property Code 3591	*Property Name BIG FIELD		*Well Number 6
*CGRID No. 006515	*Operator Name DUGAN PRODUCTION CORPORATION		*Elevation 6034'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County
I	15	30N	14W		1850	SOUTH	660	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 160 Acres (SE/4)					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

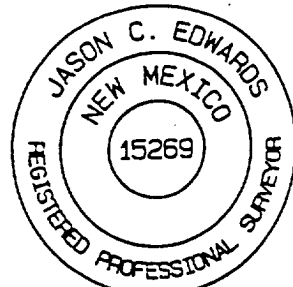
<div>16</div> <div>5304.42'</div> <div>5280.00'</div> <div>15</div> <div>DUGAN PRODUCTION CORP.</div> <div>NM-10561</div> <div>660'</div> <div>1850'</div> <div>5305.74'</div>	<div>17 OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</div> <div><u>Kurt Fagrelus</u></div> <div>Signature</div> <div>Kurt Fagrelus</div> <div>Printed Name</div> <div>Geologist</div> <div>Title</div> <div>November 7, 2001</div> <div>Date</div>
	<div>18 SURVEYOR CERTIFICATION</div> <div>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.</div> <div>Date of Survey: OCTOBER 4, 2001</div> <div>Signature and Seal of Professional Surveyor</div> <div></div> <div><u>JASON C. EDWARDS</u></div> <div>Certificate Number 15269</div>

Exhibit E. DUGAN PRODUCTION CORPORATION BIG FIELD #2

1850' FSL & 660' FEL, SECTION 15, T30N, R14W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

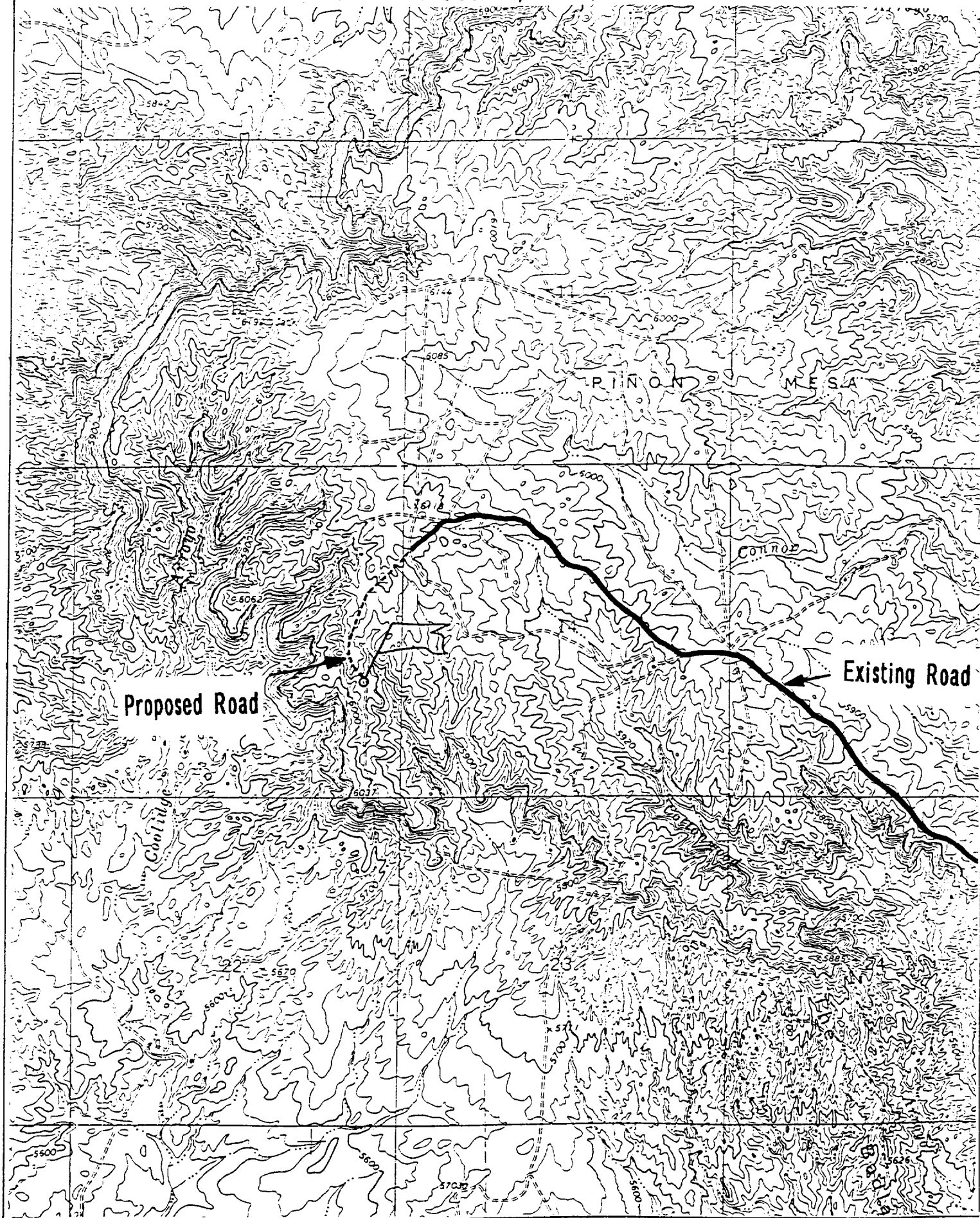


EXHIBIT B
OPERATIONS PLAN
Big Field #6

APPROXIMATE FORMATION TOPS:

Ojo Alamo/McDermott - surface
Kirtland - 200'
Fruitland - 1365'
Pictured Cliffs - 1674'

Total Depth - 1800'

LOGGING PROGRAM: Run cased hole CNL-CDL

Catch samples every 10 feet from 1500 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>
8-3/4"	7"	20#	±120'	J-55
6-1/4"	4-1/2"	10.5#	±1800'	J-55

Plan to drill a 8-3/4" 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 175 cu.ft. 2% Lodense with 1/4# celloflake/sx followed by 100 cu.ft. Class "B" with 1/4# celloflake/sx.
Total cement slurry for production stage is 275 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	Mark Brown 327-3632
John Alexander 325-6927	John Roe 326-1034