

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF-078860
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other: CBM <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. Indian, Allottee or Tribe Name
2. Name of Operator DUGAN PRODUCTION CORP.		7. If Unit or CA Agreement, Name and No.
3a. Address 709 EAST MURRAY DRIVE FARMINGTON, NM 87401		8. Lease Name and Well No. LARGO/FEDERAL 3741
3b. Phone No. (include area code) Ph: 505.325.1821 Fx: 505.327.4613		9. API Well No. 30045 31407
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NESE 1850FSL 790FEL 36.17510 N Lat, 107.44020 W Lon. At proposed prod. zone		10. Field and Pool, or Exploratory BASIN FRUITLAND COAL
14. Distance in miles and direction from nearest town or post office* APPROX. 3-MILES NORTH OF NAGEEZI TRADING POST		11. Sec., T., R., M., or Blk. and Survey or Area Sec 24 T24N R9W Mer NMP I
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 2560.00	12. County or Parish SAN JUAN
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 2,800'	19. Proposed Depth 1910 MD	13. State NM
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6875 GL	22. Approximate date work will start 06/14/2003	17. Spacing Unit dedicated to this well 320.00 s/2
		20. BLM/BIA Bond No. on file
		23. Estimated duration 5-DAYS

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Kurt Fagrelus</i>	Name (Printed/Typed) KURT FAGRELIUS	Date 02/10/2003
Title GEOLOGIST		
Approved by (Signature) <i>David J. Mankiewicz</i>	Name (Printed/Typed)	APR 16 2003
Title	Office	

Application approval does not warrant or certify 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, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

## Additional Operator Remarks:

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 Fruitland coal will be completed from approximately 1780'-1790'. The interval will be fractured.

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

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and appeal pursuant to 43 CFR 3165.4

NMOCD

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, 1993  
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 <b>30-045-31407</b>		*Pool Code <b>71629</b>	*Pool Name <b>BASIN FRUITLAND COAL</b>
*Property Code <b>3741</b>	*Property Name <b>LARGO (FED) B</b>		*Well Number <b>91</b>
*GRID No. <b>006515</b>	*Operator Name <b>DUGAN PRODUCTION CORPORATION</b>		*Elevation <b>6875</b>

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	24	24N	9W		1850	SOUTH	790	EAST	SAN JUAN

<sup>11</sup> 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
<sup>12</sup> Dedicated Acres <b>320.0 ACRES - (S/2)</b>					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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>2679.60'</div> <div>2647.92'</div> <div>RECEIVED</div> <div>2003 FEB 13 PM 2:30</div> <div>070 EASTERN NM</div>	<div>2645.94'</div> <div>2647.92'</div> <div>2647.92'</div> <div>5303.76'</div>	<div>2645.94'</div> <div>2647.92'</div> <div>2647.92'</div> <div>5303.76'</div>	<div>2645.94'</div> <div>2647.92'</div> <div>2647.92'</div> <div>5303.76'</div>
	<div>24</div> <div>DUGAN 100%</div> <div>SF-078860</div>		
<div>2647.92'</div> <div>2647.92'</div> <div>5303.76'</div>		<div>2645.94'</div> <div>2647.92'</div> <div>2647.92'</div> <div>5303.76'</div>	<div>2645.94'</div> <div>2647.92'</div> <div>2647.92'</div> <div>5303.76'</div>

<sup>17</sup> OPERATOR CERTIFICATION

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

*Kurt Fagrelus*

Signature  
Kurt Fagrelus

Printed Name  
Geologist

Title  
02/12/2003

Date

<sup>18</sup> 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 belief.

Survey Date: JANUARY 31, 2003

Signature and Seal of Professional Surveyor

JASON C. EDWARDS

NEW MEXICO

15269

REGISTERED PROFESSIONAL SURVEYOR

*JASON C. EDWARDS*

Certificate Number 15269

**EXHIBIT B**  
**OPERATIONS PLAN**  
*Largo Federal B #91*

**APPROXIMATE FORMATION TOPS:**

Ojo Alamo	1068'
Kirtland	1170'
Fruitland	1525'
Pictured Cliffs	1780'
<b>Total Depth</b>	<b>1910'</b>

Catch samples every 10 feet from 1700 feet to total depth.

**LOGGING PROGRAM:**

Run cased hole GR-CCL-CNL from total depth to surface.

**CASING PROGRAM:**

<u>Hole</u> <u>Size</u>	<u>Casing</u> <u>Size</u>	<u>Wt./ft.</u>	<u>Setting</u> <u>Depth</u>	<u>Grade and</u> <u>Condition</u>
9-7/8"	7"	20#	120'	J-55
6-1/4"	4-1/2"	10.5#	1910'	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 the Fruitland Coal. 4-1/2", 10.5#, J-55 production casing will be run and cemented. Cased hole GR-CCL-CNL 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:**

Surface: Cement to surface with 70 cf Class B + 2% CaCl<sub>2</sub>.  
Circulate to surface.

Production Stage-Cement with 200 cf 2% lodense with  
1/4# celloflake/sx followed by 100 cf Class "B" with  
1/4# celloflake/sx.  
Total cement slurry for production stage is 300 cf  
Circulate cement 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"x4-1/2" casing head, 1000# WP, tested to 2000#.

Huber 4-1/2"x2-7/8" tubing head, 1000# WP, tested to 2000#.

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

(Exhibit D)

Annular 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.

**Contacts:**

Dugan Prod.Corp. Office & Radio Dispatch: 325-1821

Mark Brown	327-3632 (H)
	320-8247 (M)

Kurt Fagrelus	325-4327 (H)
	320-8248 (M)

John Alexander	325-6927 (H)
	320-1935 (M)