

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

MAY 04 2010

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-25433
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If 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. Sixteen G'S #90S
3b. Phone No. (Include area code) 505-325-1821		9. API Well No. 30-045-35143
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1290' FNL & 660' FWL Lat. 36.33228 N dot At proposed prod. zone Same as above Long. 107.83704 W		10. Field and Pool, or Exploratory Basin Fruitland Coal
11. Sec., T. R. M. or Blk. and Survey or Area Sec. 7, T24N, R9W NMPM		12. County or Parish San Juan
13. State NM		14. Distance in miles and direction from nearest town or post office* Approx. 35-miles SE of Farmington, New Mexico
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660-Feet	16. No. of acres in lease 480.96 Acres	17. Spacing Unit dedicated to this well 320.64 Acres - (N/2)
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 750'	19. Proposed Depth 1920-Feet	20. BLM/BIA Bond No. On File NM-0140
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL-6862'	22. Approximate date work will start* ASAP	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.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 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). | 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 Fagrelus	Date 1/6/2010
Title Geologist		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFM	Date 6/14/2010
Title AFM	Office FFO	

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, 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.

\*(Instructions on page 2)

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 1755 - 1770'. The interval will be fracture stimulated.

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

NMOCD

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

JUN 22 2010

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

District I  
1625 N. French Dr., Hobbs, NM 88240

District II  
1301 W. Grand Avenue, Artesia, NM 88210

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

District IV  
1220 S. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised October 12, 2005  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

1220 South St. Francis  
Santa Fe, NM 87505

MAY 04 2010

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-35143</b>	*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code <b>3838</b>	*Property Name SIXTEEN G'S	*Well Number 90S
*GRID No. 006515	*Operator Name DUGAN PRODUCTION CORPORATION	*Elevation 6862'

<sup>10</sup> Surface Location

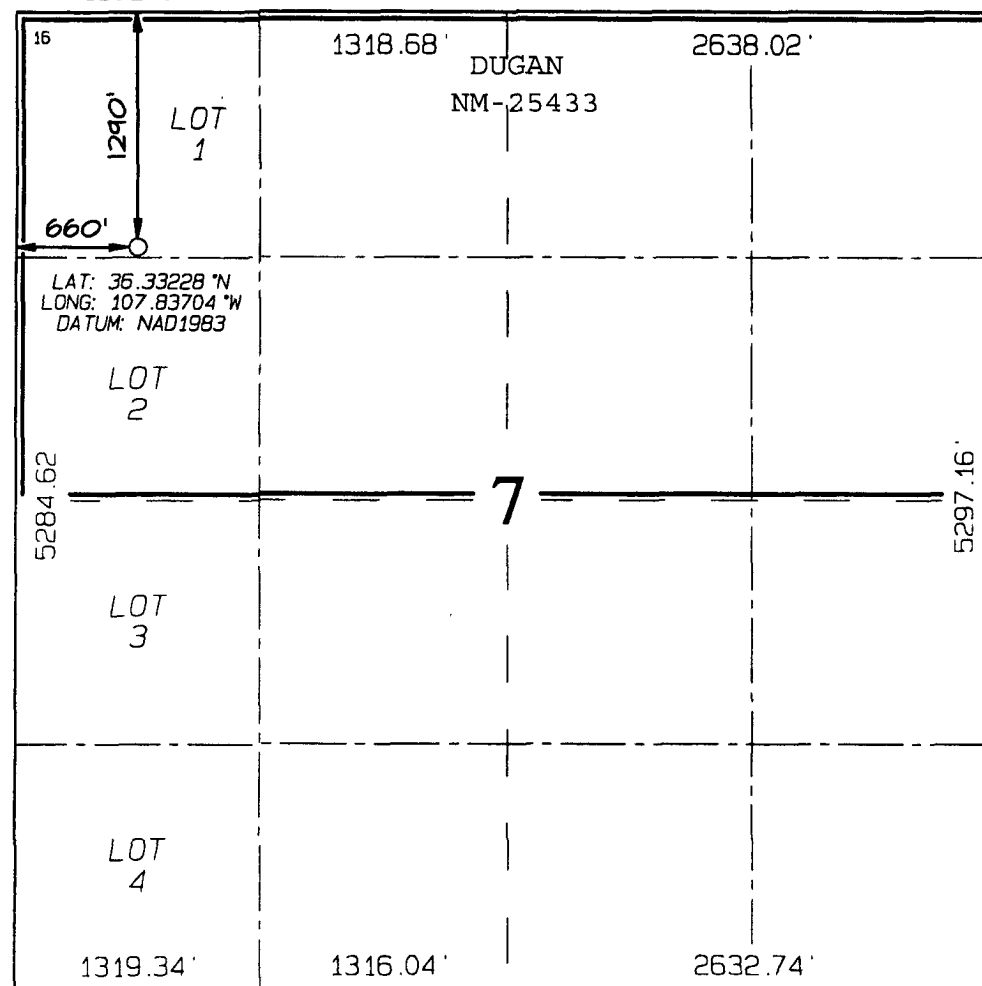
UL or lot no. D	Section 7	Township 24N	Range 9W	Lot Idn	Feet from the 1290	North/South line NORTH	Feet from the 660	East/West line WEST	County SAN JUAN
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<sup>11</sup> Bottom Hole Location If Different From Surface

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 320.64 Acres - (N/2)					<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

1332.54'



<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, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

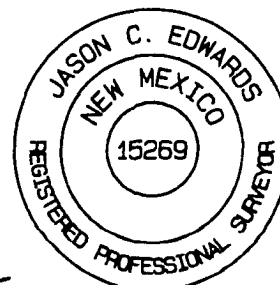
*Kurt Fagrelis* 7-1-2009  
Signature Date  
Kurt Fagrelis  
Printed Name

<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

Date of Survey: APRIL 17, 2009

Signature and Seal of Professional Surveyor



*Jason C. Edwards*  
Certificate Number 15269

**EXHIBIT B**  
**OPERATIONS PLAN**  
Sixteen G'S #90-S

**APPROXIMATE FORMATION TOPS:**

Ojo Alamo	985'
Kirtland	1110'
Fruitland	1450'
Pictured Cliffs	1770'
<b>Total Depth</b>	<b>1920'</b>

Catch samples every 10 feet from 1650-feet to total depth.

**LOGGING PROGRAM:**

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

**CASING PROGRAM:**

Hole Size	Casing Size	Wt./ft.	Setting Depth	Grade and Condition
12-1/4"	8-5/8"	24#	120'	J-55
7-7/8"	5-1/2"	15.5#	1920'	J-55

Plan to drill a 12-1/4" hole and set 120' of 8-5/8" OD, 24#, J-55 surface casing. Then plan to drill a 7-7/8" hole to total depth with gel-water mud program to test the Fruitland Coal. 5-1/2", 15.5#, 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 75-cf Class B + 2% CaCl<sub>2</sub>.  
Circulate to surface.

Production Stage- Cement w/160-sx Premium Lite FM 3% BWOC Calcium Chloride + 0.25 lbs/sx Celloflake + 5 lbs/sk LCM-1 + 0.4% BWOC FL-52 + 8% BWOC Bentonite + 0.4% BWOC Sodium Metasilicate + 112.3% fresh water (12.1 lb/gal, 2.13 cu ft/sx - 341-cu ft slurry). Tail w/163-sx Type III cement + 1 lb/sk Calcium Chloride + 0.25 lb/sx Celloflake + 0.2% BWOC FL-52 + 59% fresh water (14.6 lb/gal, 1.38 cu ft/sx-225-cu ft slurry).

Total cement slurry for production stage is 566-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 useable 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, pressure, slurry density, and slurry volume for the cement job. The log will be sent to the BLM after completion of the job.

**Maximum Anticipated Bottom Hole Pressure** - 300 psi.

**Drilling Fluid** - will be fresh water with bentonite 8.9#/gal.

**WELLHEAD EQUIPMENT:**

Huber 8-5/8"x5-1/2" casing head, 1000# WP, tested to 2000#.  
Huber 5-1/2"x2-7/8" tubing head, 1000# WP, tested to 2000#.

**Blow-Out Preventer Equipment (BOPE): 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 adjustable 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.

Working pressure for all BOPE will be 2,000 psi or greater.

Will test BOPE (blind rams, pipe rams, choke manifold and surface casing) separately. Each test will include a low pressure test to 250-psig held for five minutes and a high pressure test to 800-psig held for thirty minutes (with no more than a 10-percent pressure drop during the duration of the tests). If a 10-percent or greater pressure drop occurs; a packer will be run to isolate the surface casing and BOPE to locate the source of the leak.

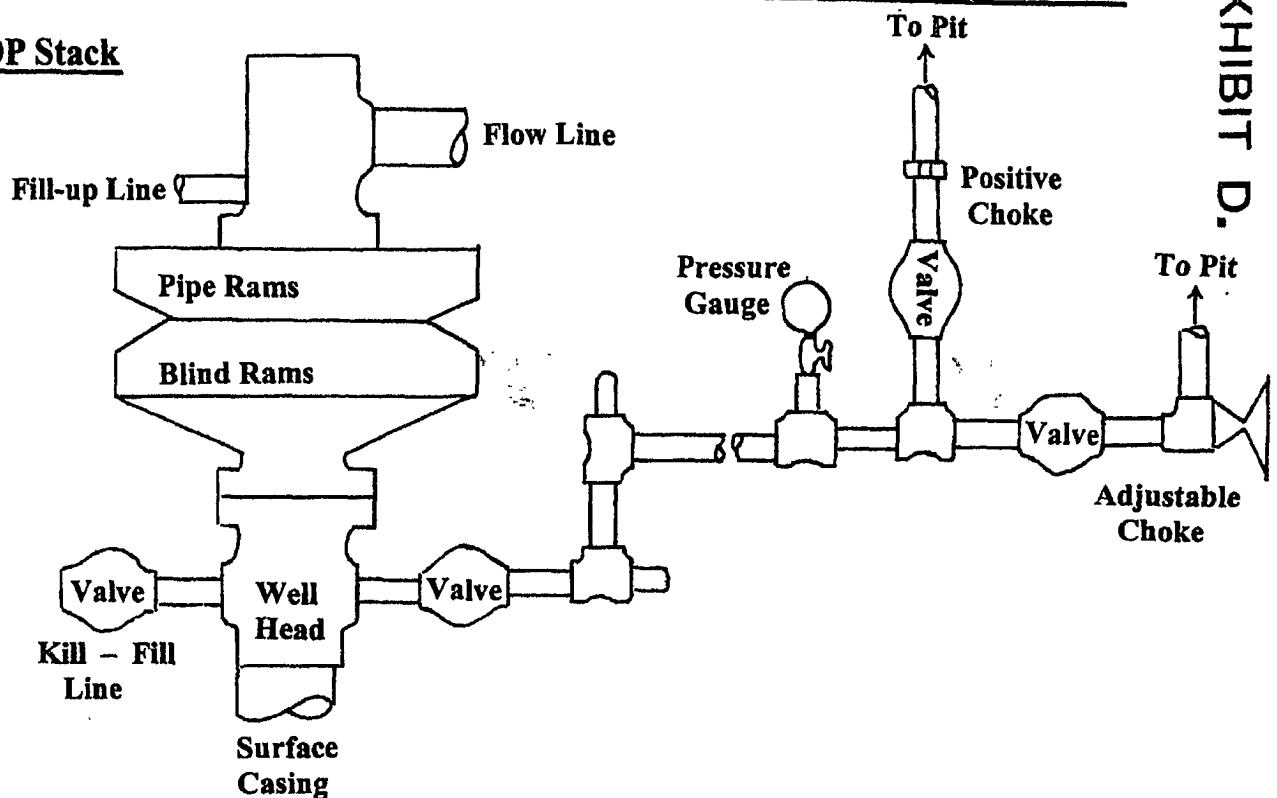
**Contacts:** Dugan Prod.Corp. Office & Radio Dispatch: 325-1821

<u>Mark Brown</u>	<u>Kurt Fagrelus</u>	<u>John Alexander</u>
327-3632 (H)	325-4327 (H)	325-6927 (H)
320-8247 (M)	320-8248 (M)	320-1935 (M)

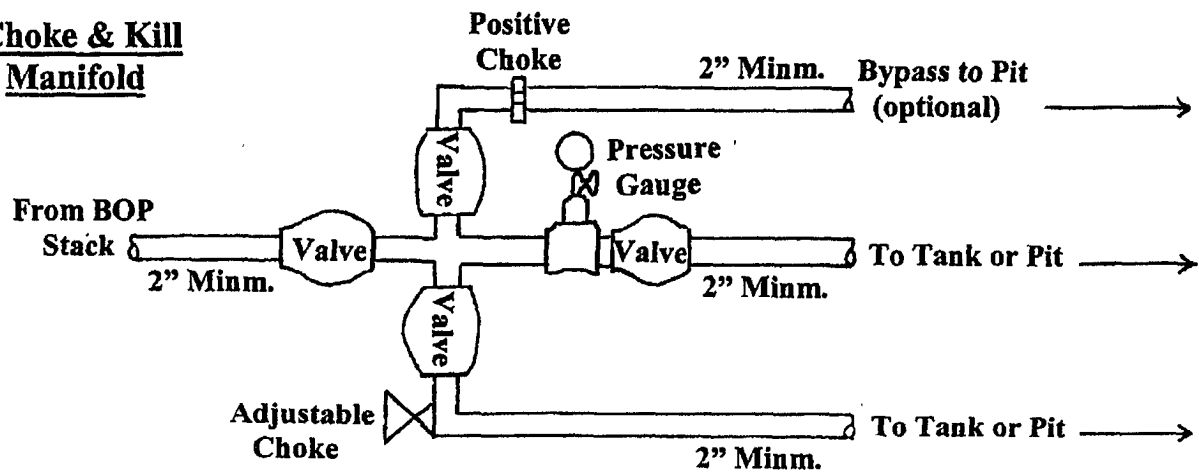
# Well Control Equipment Schematic for 2,000 psi BOP

EXHIBIT D.

## BOP Stack



## Choke & Kill Manifold



Working Pressure for all equipment is 2,000 psi or greater

DUGAN PRODUCTION CORP.

Sixteen G's #90-S