

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

2005 SEP 22 AM 10 27

5. Lease Serial No.

NM-096799

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

Cartwright Com #90

9. API Well No.

30-045-33349

10. Field and Pool, or Exploratory

Basin Fruitland Coal

11. Sec., T., R., M., or Blk. and Survey or Area

A Sec. 19, T23N, R10W

12. County or Parish

San Juan

13. State

NM

17. Spacing Unit dedicated to this well

E/2-320 acres

20. BLM/BIA Bond No. on file

On file

23. Estimated duration

3-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

Kurt Fagrelus

Name (Printed/Typed)

KURT FAGRELIUS

Date

9-21-05

Title

GEOLOGIST

Approved by (Signature)

Jim Lovelace

Name (Printed/Typed)

Date

1/26/06

Title

Asst. Dir. M

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.

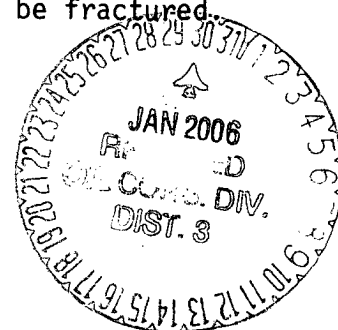
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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 610' - 640'. 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

NMOC



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

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

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

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

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

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

2005 SEP 22 AM 10 27

☐ AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-33349</b>		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code <b>35398</b>	*Property Name CARTWRIGHT COM		*Well Number 90
*OGRID No. 006515	*Operator Name DUGAN PRODUCTION CORPORATION		*Elevation 6451'

<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
A	19	23N	10W		900	NORTH	1105	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 320.0 Acres - (E/2)	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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

<sup>16</sup> 1345.74'  LOT 1	1337.82'	1337.49'	1337.49'	<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  <i>Kurt Fagrelus</i> Signature Kurt Fagrelus Printed Name Geology Title Sept. 21, 2005 Date
LOT 2				<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: JULY 28, 2005 Signature and Seal of Professional Surveyor   JASON C. EDWARDS Certificate Number 15269
LOT 3				
LOT 4				
1337.82'	1344.42'	2689.50'		

Submit 3 Copies To Appropriate District Office  
District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
March 4, 2004

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO.	30-045-33349
5. Indicate Type of Lease	Federal <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	Federal NM-096799
7. Lease Name or Unit Agreement Name	Cartwright Com
8. Well Number	90
9. OGRID Number	006515
10. Pool name or Wildcat	Basin Fruitland Coal

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	
2. Name of Operator	Dugan Production Corp.
3. Address of Operator	Dugan Production Corp.
4. Well Location Unit Letter <u>A</u> : <u>900</u> feet from the <u>north</u> line and <u>1105</u> feet from the <u>east</u> line Section <u>19</u> Township <u>23N</u> Range <u>10W</u> NMPM County <u>San Juan</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) G.L. 6451'	
Pit or Below-grade Tank Application (For pit or below-grade tank closures, a form C-144 must be attached) <u>&gt;100'</u>	
Pit Location: UL <u>A</u> Sect <u>19</u> Twp <u>23N</u> Rng <u>10W</u> Pit type <u>Drilling</u> Depth to Groundwater <u>610'</u> Distance from nearest fresh water well <u>&gt;1000'</u>	
Distance from nearest surface water <u>450'</u> Below-grade Tank Location UL _____ Sect _____ Twp _____ Rng _____ ; _____ feet from the _____ line and _____ feet from the _____ line	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

- PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐  
OTHER: Reserve pit for drilling (lined) ☒

SUBSEQUENT REPORT OF:

- REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐  
CASING TEST AND CEMENT JOB ☐  
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

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 610' - 640'. The interval will be fractured.

Federal lease, pits will be constructed and abandoned as per BLM and NMOCD guidelines.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒ a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Kurt Fagarelius TITLE Geology DATE 9-22-2005

Type or print name Kurt Fagarelius E-mail address: \_\_\_\_\_ Telephone No. 325-1821

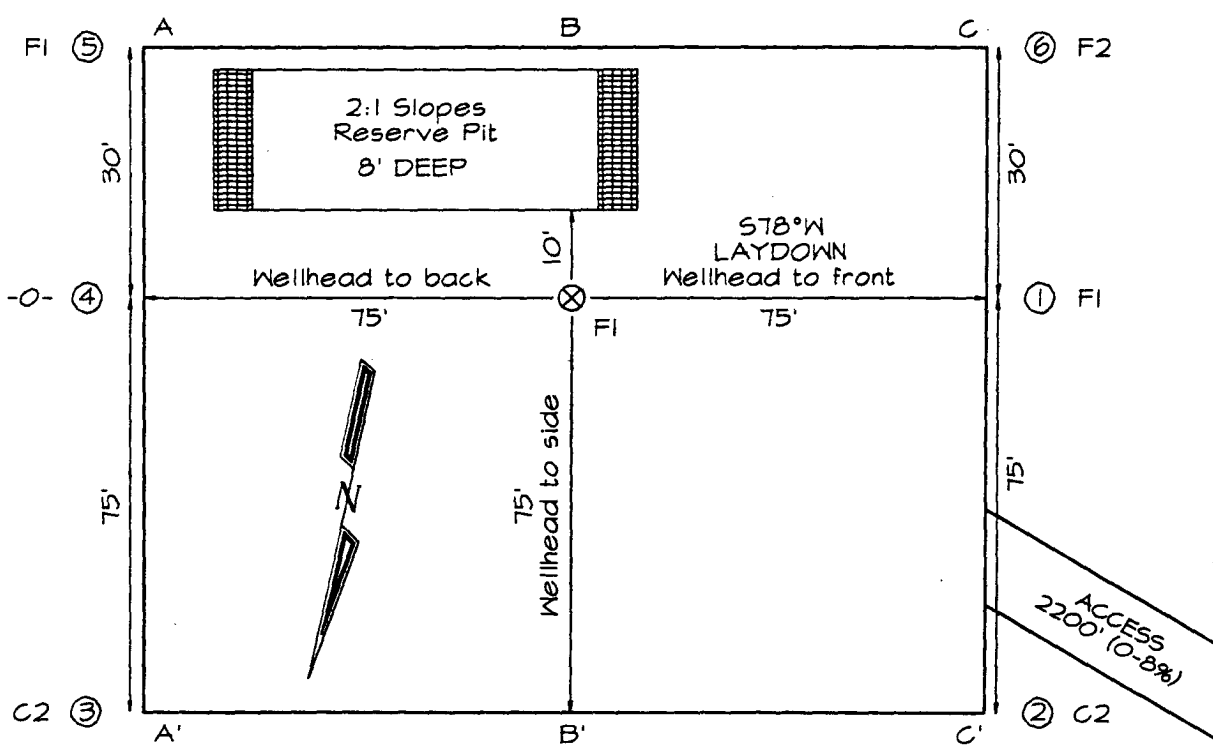
(This space for State use)

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 4 DATE JAN 30 2006  
Conditions of approval, if any:

DUGAN PRODUCTION CORPORATION CARTWRIGHT COM #90  
 900' FNL & 1105' FEL, SECTION 19, T23N, R10W, NMPM  
 SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6451'

LATITUDE: 36°13'01"  
 LONGITUDE: 107°55'55"  
 DATUM: NAD1927

PLAT NOTE:  
 \*SURFACE OWNER\*  
 Bureau of Land  
 Management



A-A'						
6462'						
6452'						
6442'						

B-B'						
6462'						
6452'						
6442'						

C-C'						
6462'						
6452'						
6442'						

Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction

**EXHIBIT B**  
**OPERATIONS PLAN**  
Cartwright Com #90

**APPROXIMATE FORMATION TOPS:**

Kirtland	Surface	Pictured Cliffs	640'
Fruitland	270'	<b>Total Depth</b>	<b>790'</b>

Catch samples every 10 feet from 550 feet to TD.

**LOGGING PROGRAM:**

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

**CASING PROGRAM:**

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./ft.</u>	<u>Setting Depth</u>	<u>Grade and Condition</u>
12-1/4"	8-5/8"	24#	120'	J-55
7"	5-1/2"	14#	790'	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" hole to total depth with gel-water mud program to test the Fruitland Coal. 5-1/2", 14#, 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 60 cf 2%Lodense with  
1/4# celloflake/sx followed by 40 cf Class "B" with  
1/4# celloflake/sx.  
Total cement slurry for production stage is 100 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 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#.

**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)

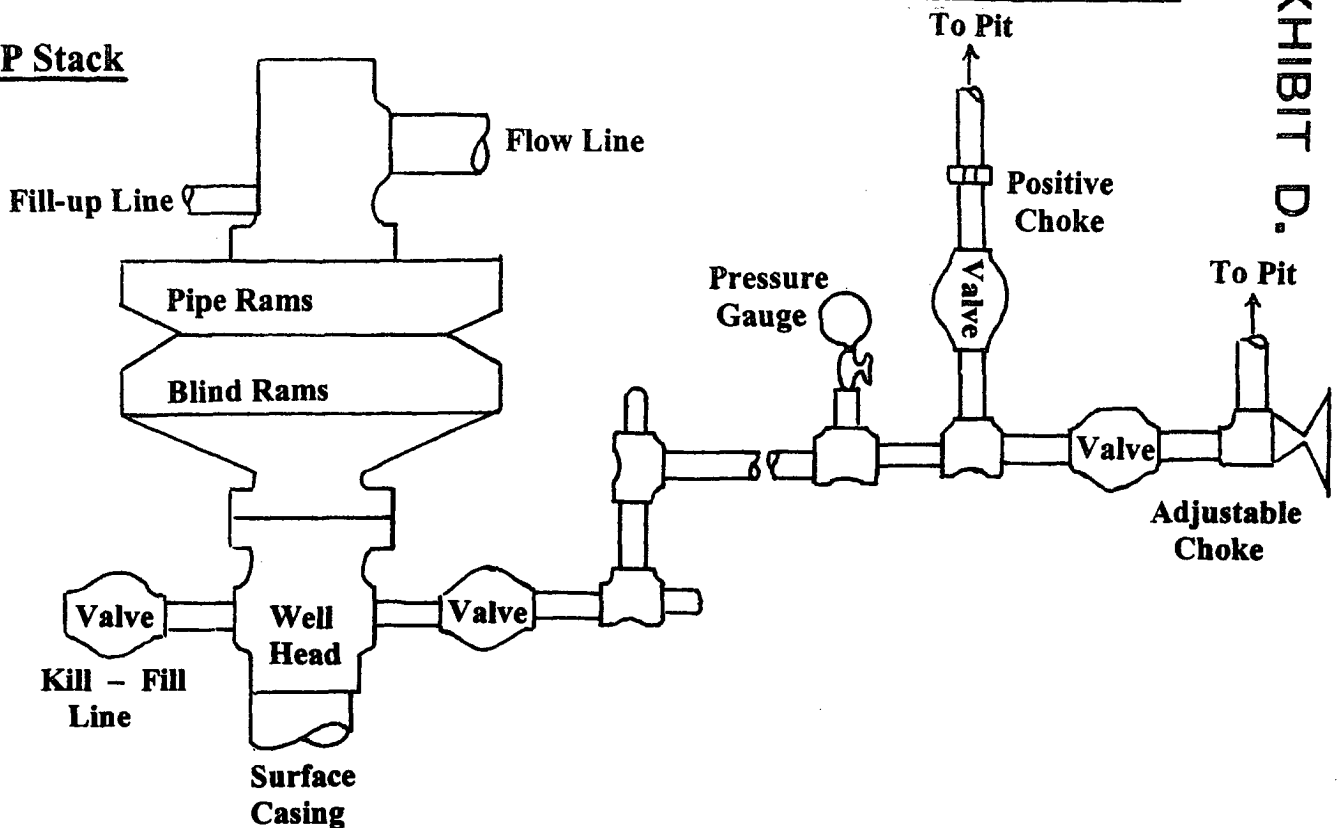
Kurt Fagrelus	325-4327 (H)
	320-8248 (M)

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

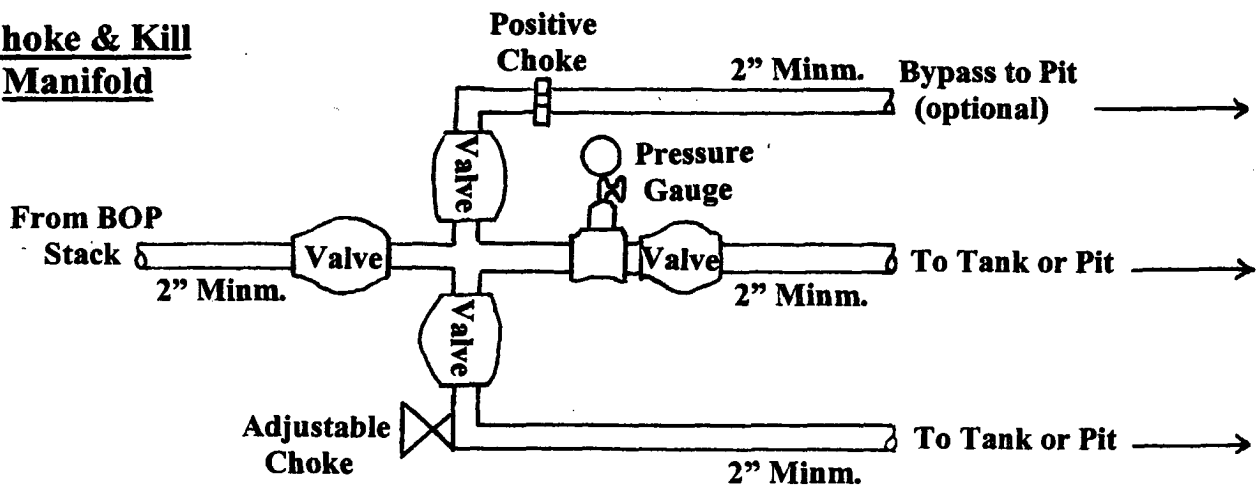
# Well Control Equipment Schematic for 2,000 psi BOP

EXHIBIT D.

## BOP Stack



## Choke & Kill Manifold



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

DUGAN PRODUCTION CORP.  
CARTWRIGHT COM #90