

RCVD FEB21'07

OIL CONS. DIV.

DIST. 3

Form 3160-3  
(April 2004)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

2006 OCT 19 PM 2 58

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-15654
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. Twiddlebug Com #90
3b. Phone No. (include area code) 505-325-1821		9. API Well No. 30-045-34016
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1235' FNL & 785' FWL, Lat. 36.28822 N. At proposed prod. zone Same as above Long. 107.88990 W.		10. Field and Pool, or Exploratory Basin Fruitland Coal
11. Sec., T. R. M. or Blk. and Survey or Area D Sec. 27, T24N, R10W NMPM		
12. Distance in miles and direction from nearest town or post office* Approx. 35-miles SE of Bloomfield, NM		12. Country or Parish San Juan
13. State NM		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 785 Feet	16. No. of acres in lease 1398.22 Acres	17. Spacing Unit dedicated to this well N/2-320.0 Acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 2,700'	19. Proposed Depth 1345'	20. BLM/BIA Bond No. on file On File
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL-6678'	22. Approximate date work will start* ASAP	23. Estimated duration 7-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 10-19-2006
Title Geology		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 2/24/07
Title ATM	Office FTO	

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)

NOTIFY AZTEC OGD 24 hrs  
IN TIME TO WITNESS

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 1170' - 1190'. The interval will be fracture stimulated.

NMOCD

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

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

District II  
PO Drawer DD, 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 <b>30-045-34016</b>		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code <b>36332</b>	*Property Name TWIDDLEBUG COM		*Well Number 90
*OGRID No. 006515	*Operator Name DUGAN PRODUCTION CORPORATION		*Elevation 6678'

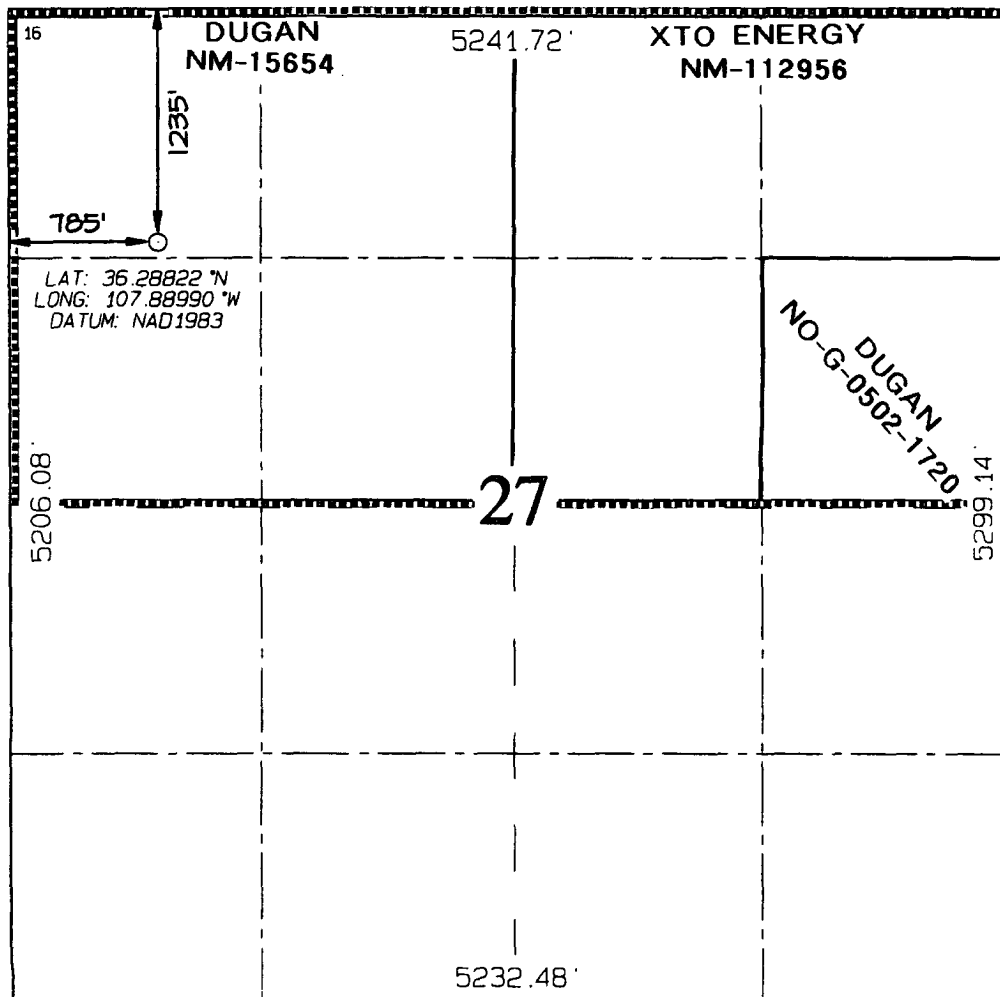
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idh	Feet from the	North/South line	Feet from the	East/West line	County
D	27	24N	10W		1235	NORTH	785	WEST	SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idh	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 320.0 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



<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  
Geology

Title  
10-19-2006

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

Date of Survey: MAY 9, 2006

Signature and Seal of Professional Surveyor



**JASON C. EDWARDS**  
Certificate Number 15269

Submit this form to the appropriate NMOC District Office.  
District Office  
1000 S. 1st Street, Suite 100  
Albuquerque, NM 87102  
Tel: 505-241-2000  
Fax: 505-241-2001  
E-mail: nmoc@nmt.org

State of New Mexico  
Bureau of Geology and Mineral Resources  
NEW MEXICO CONSERVATION DIVISION  
Oil and Gas Division  
Sundries, Reports and Permits

Form OGD-1  
Rev. 07-2006

WELL - NAME  
30-045- **34016**  
FEDERAL TYPE **Federal XX**  
FEDERAL NM-15654

7. Lease Name or Unit Agreement Name  
**Twiddlebug Com**  
8. Well Number **#90**  
9. OGRID Number **006515**  
10. Pool name or Wildcat  
**Basin Fruitland Coal**

SUNDRIES, NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM OGD-101) FOR SUCH PROPOSALS.)  
1. Type of Well: Oil Well ☐ Gas Well ☐ Other ☒  
2. Name of Operator **Dugan Production Corp.**  
3. Address of Operator **709 East Murray Drive, Farmington, NM**  
4. Well Location  
Unit Letter **D** : **1235** feet from the **north** line and **785** feet from the **west** line  
Section **27** Township **24N** Range **10W** NMPM County **San Juan**  
11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
**GL-6678'**

Pit or Below-grade Tank Application ☒ or Closure ☐  
Pit type **Drilling** Depth to Groundwater **+100'** Distance from nearest fresh water well **+1000'** Distance from nearest surface water **+200'**  
Pit Liner Thickness: **12** mil Below-Grade Tank: Volume **bbbls** Construction Material **Synthetic**

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 COMPL ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: Reserve pit for drilling (lined) ☒

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. The interval will be fracture stimulated.

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 NMOC guidelines ☒ a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Kurt Fagrelus TITLE Geology DATE 10-19-2006

Type or print name Kurt Fagrelus E-mail address: kfagrelus@duganproduction.com Telephone No. \_\_\_\_\_

For State Use Only

DEPUTY OIL & GAS INSPECTOR, DIST. **2**

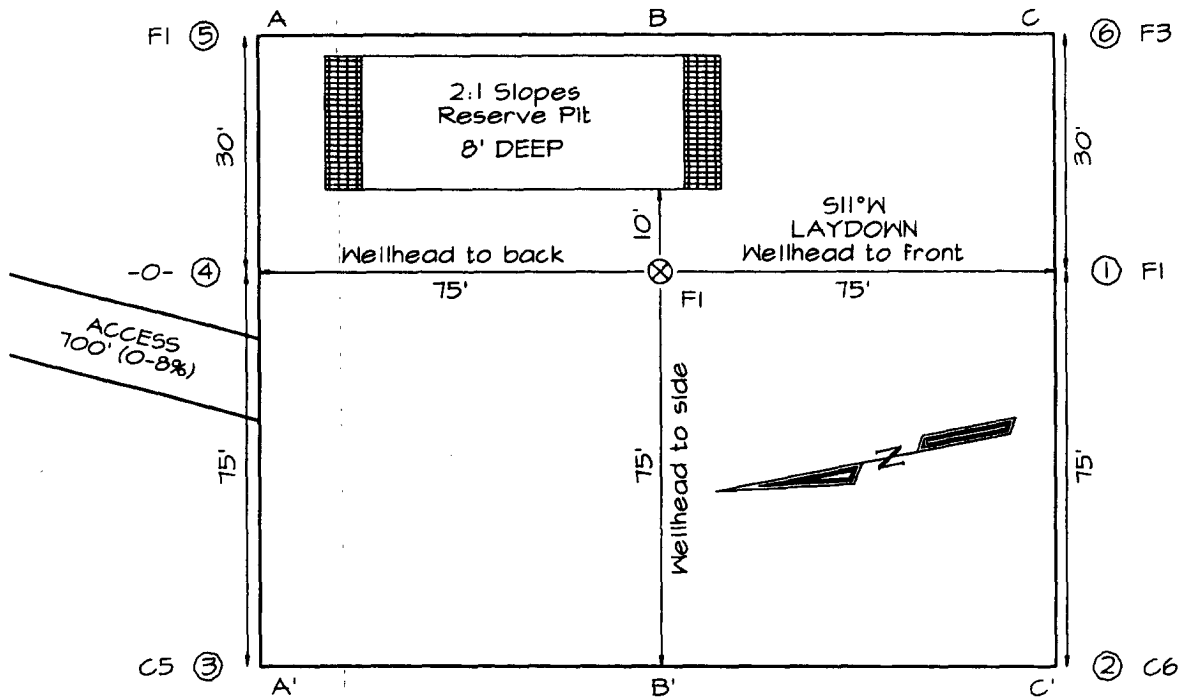
APPROVED BY: [Signature] TITLE \_\_\_\_\_ DATE FEB 23 2007

Conditions of Approval (if any): \_\_\_\_\_

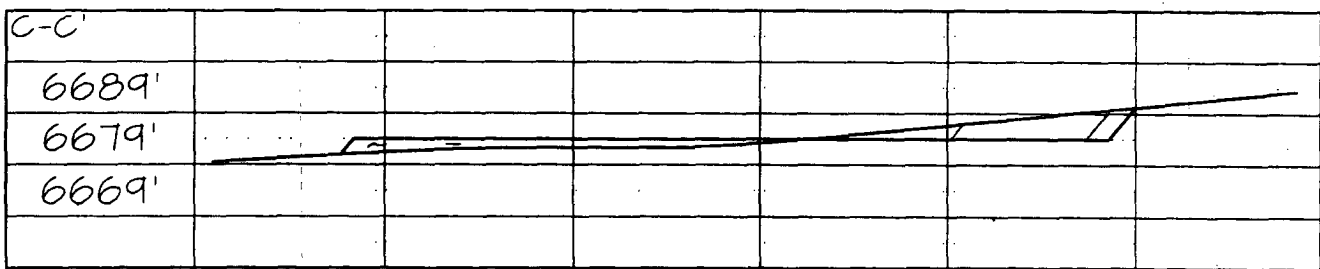
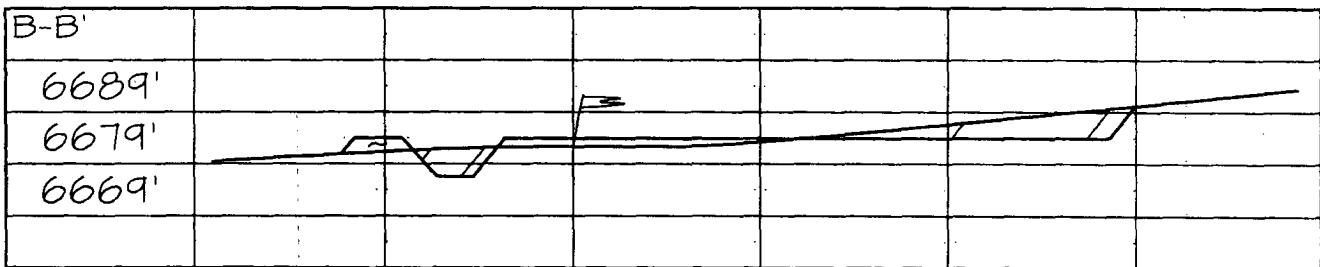
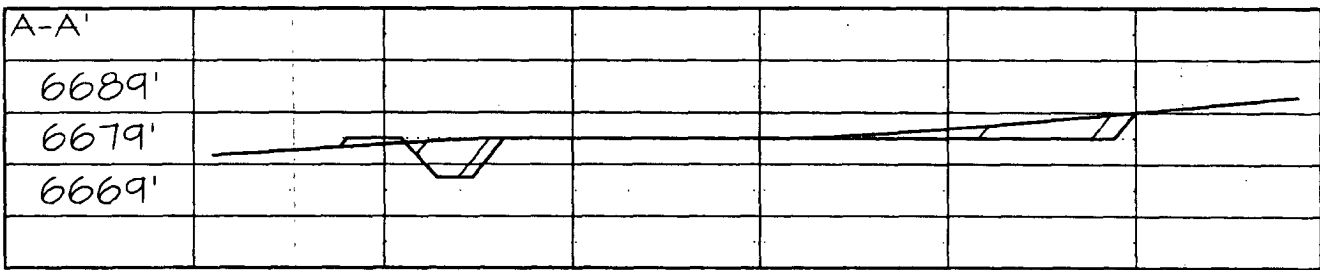
**DUGAN PRODUCTION CORPORATION TWIDDLEBUG COM #90**  
**1235' FNL & 785' FWL, SECTION 27, T24N, R10W, NMPM**  
**SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6678'**

PLAT 3.

**LATITUDE: 36.28822° N**  
**LONGITUDE: 107.88990° W**  
 DATUM: NAD1983



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



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 A**  
**DEVELOPMENTAL PLAN**

Twiddlebug Com #90

Lease #NM-15654

Township 24 North, Range 10 West, NMPM

Section 27, 1235' FNL - 785' FWL

San Juan County, New Mexico

1. Existing roads are shown on Exhibit E.  
Plan to improve and maintain existing roads as required.
2. Planned access road(s) are shown on Exhibit E.
  - A. New or reconstructed road(s), if any, were centerline flagged at the time of location staking. 700' of new road construction is needed.
3. Location of existing wells is shown on Exhibit F.
4. Location of Existing and/or Proposed Facilities:
  - A. Existing facilities owned or controlled by Lessee/Operator are shown on Exhibit F.
  - B. New facilities, in the event of production, are shown on Exhibit F. Construction materials and methods: Materials obtained on site; anticipated new production facilities are shown on Plat #1. Protective measures and devices to protect livestock and wildlife: As required.
  - C. Plan for rehabilitation of disturbed areas no longer needed for operations after construction completed: As required.
  - D. Pipeline will follow proposed road and will be 2092.8 feet in length (Plat 2). A 2" water and 4" gas pipeline will be constructed.
5. Location and Type of Water Supply:
  - A. Location and type of water supply: Produced water.
  - B. Method of transporting water: Water truck.
  - C. Water well is not to be drilled on lease.
6. Source of Construction Materials:
  - A. Materials are to be obtained on site.
  - B. These materials are to be used as follows: Level location, build pits (Plat 3).
7. Methods for Handling Waste Disposal:
  - A. Waste materials will be contained/disposed of as follows:
    - 1) Cuttings: Reserve pit.
    - 2) Drilling fluids: Reserve pit.

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

**APPROXIMATE FORMATION TOPS:**

Ojo Alamo	405'
Kirtland	490'
Fruitland	895'
Pictured Cliffs	1195'
<b>Total Depth</b>	<b>1345'</b>

Catch samples every 10 feet from 1100 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>
12-1/4"	8-5/8"	24#	120'	J-55
7"	5-1/2"	14#	1345'	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 135 cf 2% lodense with  
1/4# celloflake/sx followed by 85 cf Class "B" with  
1/4# celloflake/sx.  
Total cement slurry for production stage is 220 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)

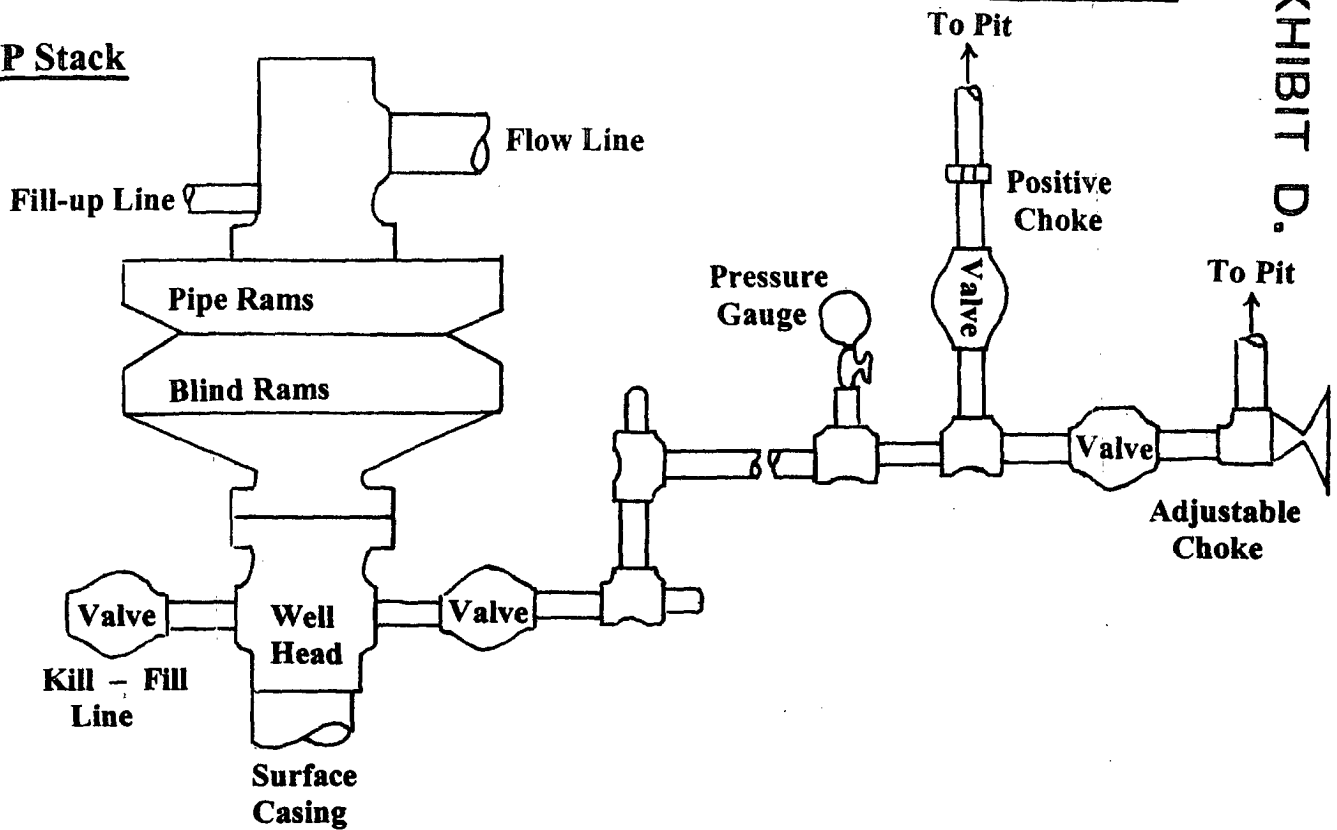
Kurt Fagrelus	325-4327 (H)
	320-8248 (M)

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

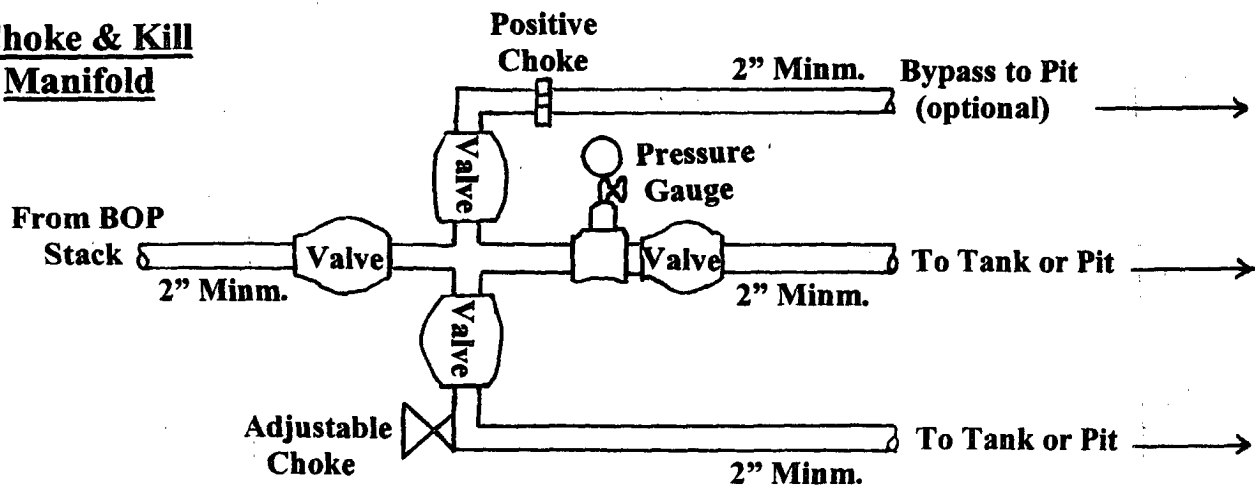
# Well Control Equipment Schematic for 2,000 psi BOP

EXHIBIT D.

## BOP Stack



## Choke & Kill Manifold



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

DUGAN PRODUCTION CORP.  
TWIDDLEBUG COM #90