

RCVD MAY 4 07
OIL CONS. DIV.

DIST. 3

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

2007 MAR 12 AM 8:00

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

| | | |
|--|---|---|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NM-32124 |
| 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 Calgary #91 |
| 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. Calgary #91 |
| 3b. Phone No. (include area code) 505-325-1821 | | 9. API Well No. 30-045- 34216 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1200' FSL & 1800' FWL, Lat. 36.25149 N At proposed prod. zone Same as above Long. 107.94000 W | | 10. Field and Pool, or Exploratory Basin Fruitland Coal |
| 14. Distance in miles and direction from nearest town or post office* Approx. 35-miles SE of Bloomfield, New Mexico | | 11. Sec., T. R. M. or Blk. and Survey or Area N Sec. 6, T23N, R10W NMPM |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1200 Feet | 16. No. of acres in lease 636.72 Acres | 17. Spacing Unit dedicated to this well W/2 - 317.20 Acres |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 750' | 19. Proposed Depth 1020 Feet | 20. BLM/BIA Bond No. On File |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL-6545' | 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 March 12, 2007 |
| Title Geologist | | |
| Approved by (Signature) <i>[Signature]</i> | Name (Printed/Typed) | Date 5/9/07 |
| Title AFM | 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)

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 840' - 864'. The interval will be fracture stimulated.

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

NMOCD

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

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

5/9/07

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. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

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

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

2007 MAR 12 AM 8:56

AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | | |
|-----------------------------------|--|---------------------------|--|
| API Number 30-045-34216 | | Pool Code 71629 | Pool Name BASIN FRUITLAND COAL |
| Property Code 3611 | Property Name CALGARY | | Well Number 91 |
| GRID No. 006515 | Operator Name DUGAN PRODUCTION CORPORATION | | Elevation 6545' |

10 Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| N | 6 | 23N | 10W | | 1200 | SOUTH | 1800 | WEST | SAN JUAN |

11 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 |
|--|---------|----------|-------|---------|-----------------|--------------------|---|----------------|--------|
| | | | | | | | | | |
| Dedicated Acres 317.20 Acres - (W/2) | | | | | Joint or Infill | Consolidation Code | Order No. RCUD MAY 4 '07 OIL CONS. DIV. DIST. 3 | | |

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

| | | | | | |
|---|--|--|--|---|--|
| <p>16</p> <p>1271.82' 1311.42' 1311.42' 1311.42'</p> <p>1316.70' 1316.70' 1316.04' 1316.70' 1316.70' 1316.70'</p> <p>LOT 4 LOT 3 LOT 2 LOT 1</p> <p>LOT 5</p> <p>DUGAN NM-32124</p> <p>LOT 6</p> <p>LOT 7</p> <p>1298.22' 1318.02' 2636.04'</p> <p>LAT: 36.25149 °N LONG: 107.94000 °W DATUM: NAD1983</p> | | | | <p>17 OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>Kurt Fagrelis</i> 3/12/07 Signature Date Kurt Fagrelis Printed Name</p> <p>18 SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Survey Date: JANUARY 4, 2007</p> <p>Signature and Seal of Professional Surveyor</p> <p>JASON C. EDWARDS NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR 15269</p> <p>JASON C. EDWARDS Certificate Number 15269</p> | |
|---|--|--|--|---|--|

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

Form C-103
May 27, 2004

| | | |
|---|--|---|
| SUNDRY 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 C-101) FOR SUCH PROPOSALS.) | | WELL API NO. 30-045- 34216 |
| 1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other | | 5. Indicate Type of Lease Federal <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/> |
| 2. Name of Operator Dugan Production Corp. | | 6. State Oil & Gas Lease No. Federal NM-32124 |
| 3. Address of Operator 709 East Murray Drive, Farmington, NM 87401 | | 7. Lease Name or Unit Agreement Name Calgary |
| 4. Well Location Unit Letter N : 1200 feet from the south line and 1800 feet from the west line Section 6 Township 23N Range 10W NMPM County San Juan | | 8. Well Number 91 |
| 11. Elevation (Show whether DR, RKB, RT, GR, etc.) GL-6545' | | 9. OGRID Number 006515 |
| Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/> | | |
| Pit type <u>Drilling</u> Depth to Groundwater <u>+100'</u> Distance from nearest fresh water well <u>+1000'</u> Distance from nearest surface water <u>+200'</u> | | |
| Pit Liner Thickness: 12 mil Below-Grade Tank: Volume bbls; 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 from approximately 840' - 864'. 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 Fagrelius TITLE Geologist DATE 3/12/2007
Kurt Fagrelius kfagrelius@duganproduction.com 505-325-1821
Type or print name E-mail address: Telephone No.

For State Use Only

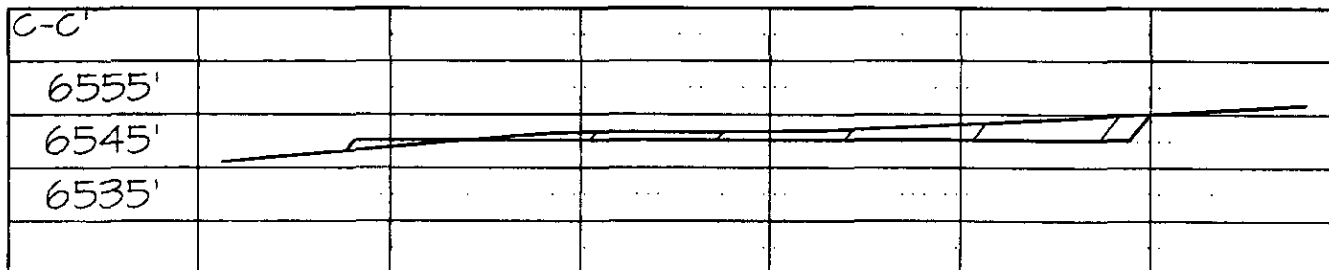
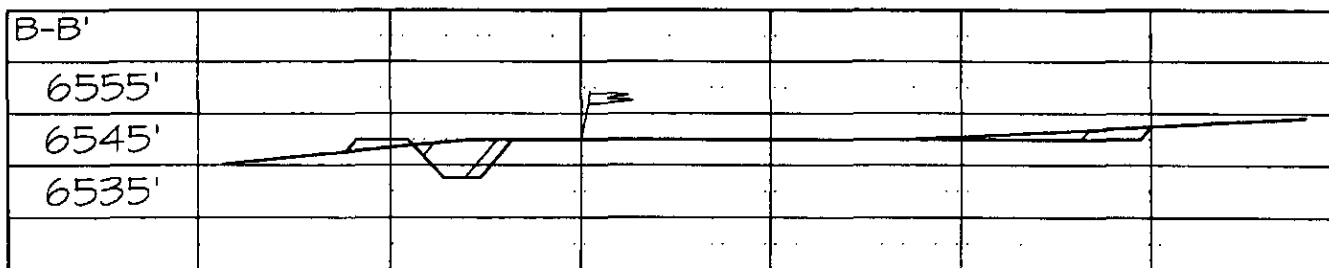
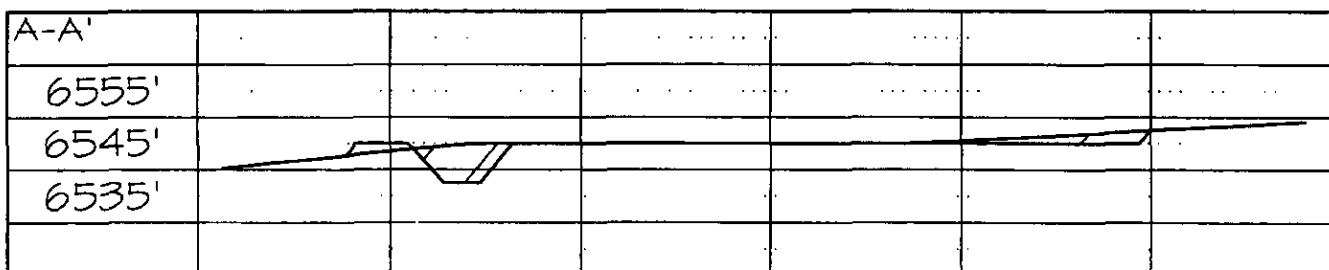
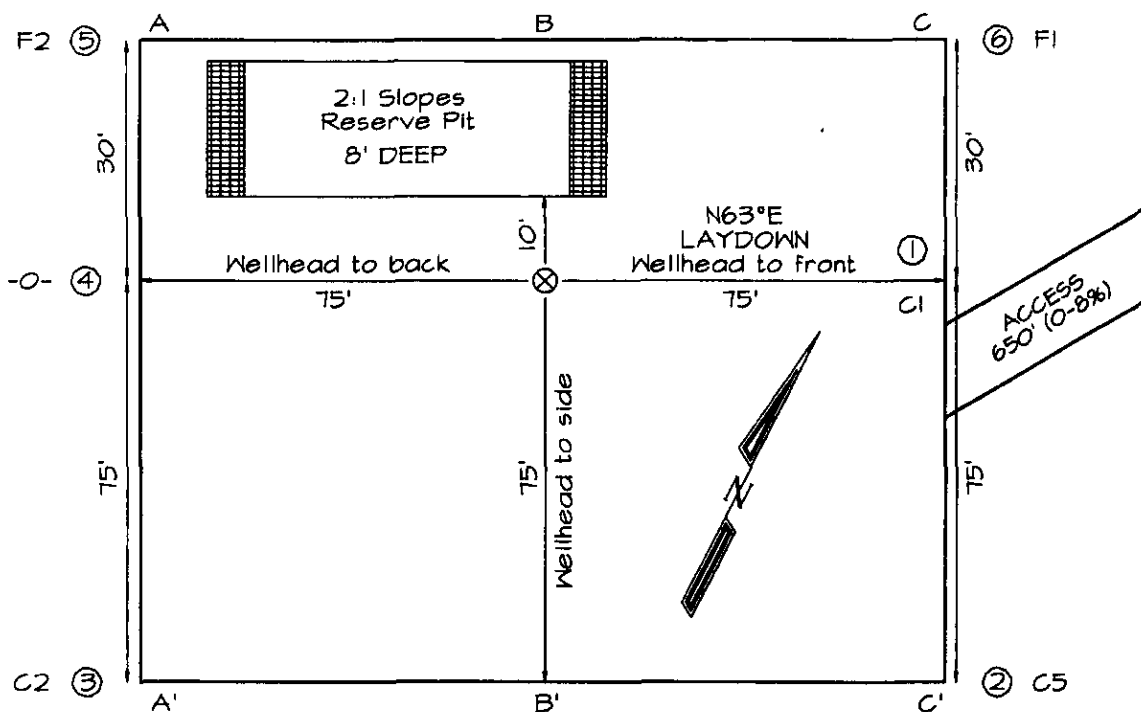
APPROVED BY: [Signature] TITLE **DEPUTY OIL & GAS INSPECTOR, DIST. 23** DATE **MAY 09 2007**
Conditions of Approval (if any):

DUGAN PRODUCTION CORPORATION CALGARY #91
1200' FSL & 1800' FWL, SECTION 6, T23N, R10W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6545'

LATITUDE: 36.25149° N
LONGITUDE: 107.94000° 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 B
OPERATIONS PLAN
Calgary #91

APPROXIMATE FORMATION TOPS:

| | |
|--------------------|--------------|
| Ojo Alamo | - - |
| Kirtland | Surface |
| Fruitland | 500' |
| Pictured Cliffs | 865' |
| Total Depth | 1020' |

Catch samples every 10 feet from 750 feet to total depth.

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# | 1020' | 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% CaCl₂.
Circulate to surface.

Production Stage-Cement with 100 cf 2% lodense with
1/4# celloflake/sx followed by 60 cf Class "B" with
1/4# celloflake/sx.
Total cement slurry for production stage is 160 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) |

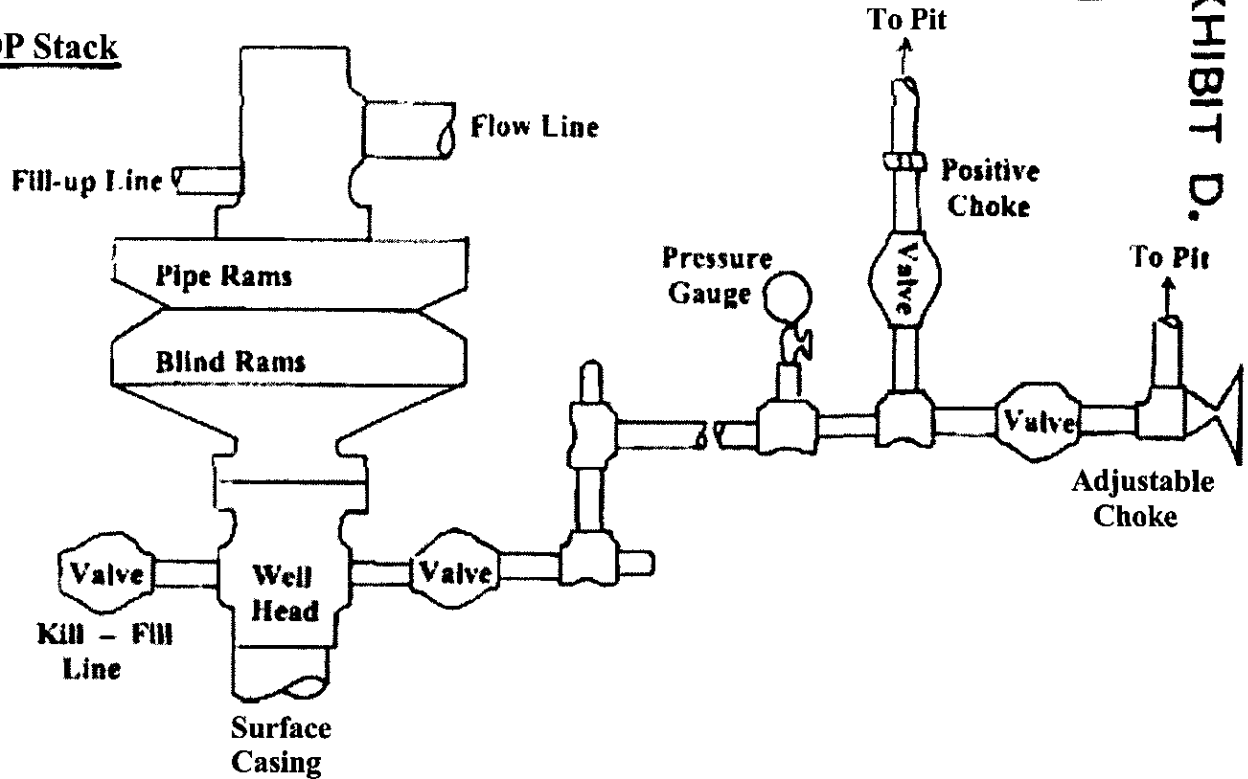
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|---------------|--------------|
| Kurt Fagrelus | 325-4327 (H) |
| | 320-8248 (M) |

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

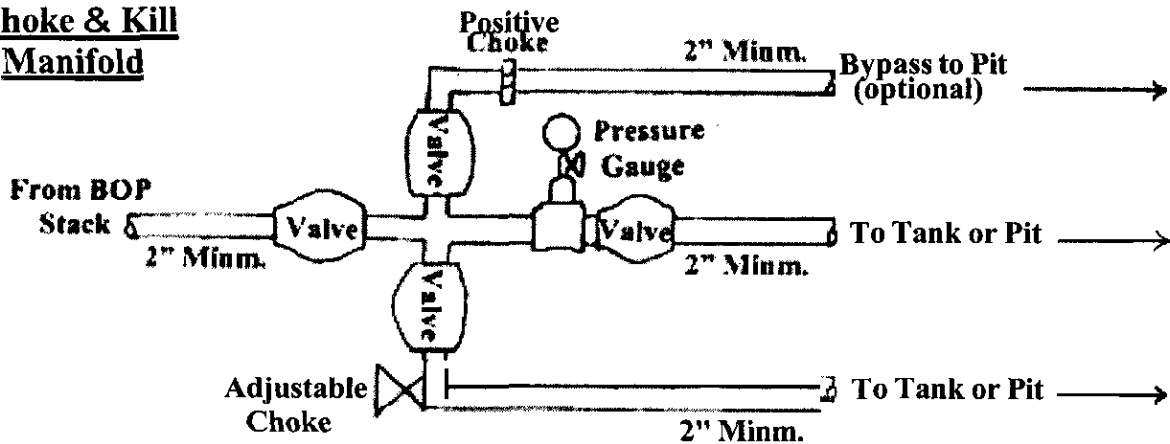
Well Control Equipment Schematic for 2,000 psi BOP

EXHIBIT D.

BOP Stack



Choke & Kill Manifold



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

DUGAN PRODUCTION CORP.
CALGARY #91