

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

2007 MAR 22 10:57

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
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 #90-S
3b. Phone No. (include area code) 505-325-1821		9. API Well No. 30-045-34215
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1200' FSL & 1000' FEL, Lat. 36.25156 N At proposed prod. zone Same as above Long. 107.93173 W		10. Field and Pool, or Exploratory Basin Fruitland Coal
11. Sec., T. R. M. or Blk. and Survey or Area P Sec. 6, T23N, R10W 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 Bloomfield, New Mexico	15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 1000 Feet	16. No. of acres in lease 636.72 Acres
17. Spacing Unit dedicated to this well E/2 - 319.52 Acres	18. Distance from proposed location* to nearest well, drilling completed, applied for, on this lease, ft. Approx. 700'	19. Proposed Depth 1065 Feet
20. BLM/BIA Bond No. On File	21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL-6568'	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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- 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 5/4/07
Title AFM	Office PFO	

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 890' - 914'. The interval will be fracture stimulated.

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

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

NMOCD

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 8:57

☐ AMENDED REPORT
RECEIVED

210

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-34215		Pool Code 71629	Pool Name BASIN FRUITLAND COAL
Property Code 3611	Property Name CALGARY		Well Number 90S
GRID No. 006515	Operator Name DUGAN PRODUCTION CORPORATION		Elevation 6568'

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
P	6	23N	10W		1200	SOUTH	1000	EAST	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
¹² Dedicated Acres 319.52 Acres - (E/2)					¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. RCUD MAY 4 2007 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

¹⁶ 1271.82' 1316.70' LOT 4	1311.42' LOT 3	1311.42' LOT 2	1311.42' LOT 1	¹⁷ 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. Signature: <i>Kurt Fagrelus</i> Date: 3/12/07 Printed Name: Kurt Fagrelus
1316.04' LOT 5	DUGAN NM-32124			1314.72'
2633.40' LOT 6	6			1314.72'
1298.22' LOT 7	LAT: 36.25156° N LONG: 107.93173° W DATUM: NAD1983			1314.72'
2636.04'			1000'	1200'

¹⁸ 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 10, 2007
Signature and Seal of Professional Surveyor


JASON C. EDWARDS
Certificate Number 15269

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- 34215
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 P : 1200 feet from the south line and 1000 feet from the east line Section 6 Township 23N Range 10W NMPM County San Juan		8. Well Number 90-S
11. Elevation (Show whether DR, RKB, RT, GR, etc.) GL-6568'		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 +100' Distance from nearest fresh water well +1000' Distance from nearest surface water +200'		
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:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: Reserve pit for drilling (lined) <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

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 890' - 914'. The interval will be fracture stimulated.

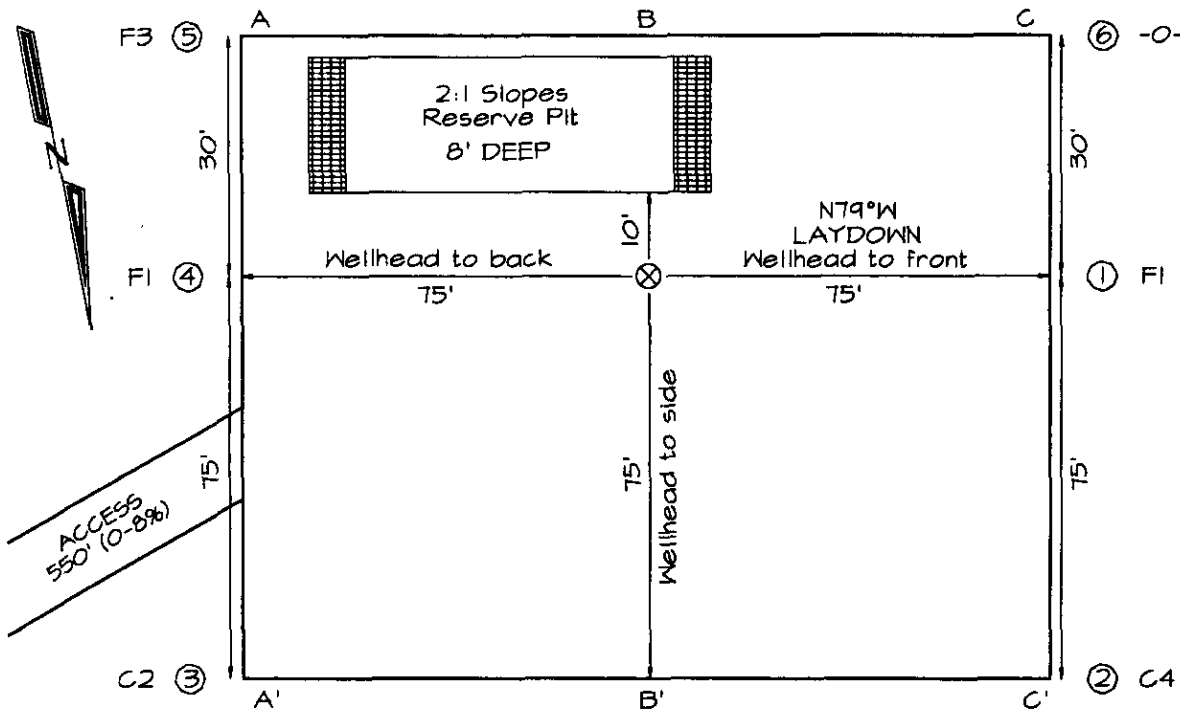
I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Kurt Fagrelius TITLE Geologist DATE 3/12/2007
Type or print name Kurt Fagrelius E-mail address: kfagrelius@duganproduction.com Telephone No. 505-325-1821

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

DUGAN PRODUCTION CORPORATION CALGARY #90S
1200' FSL & 1000' FEL, SECTION 6, T23N, R10W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6568'

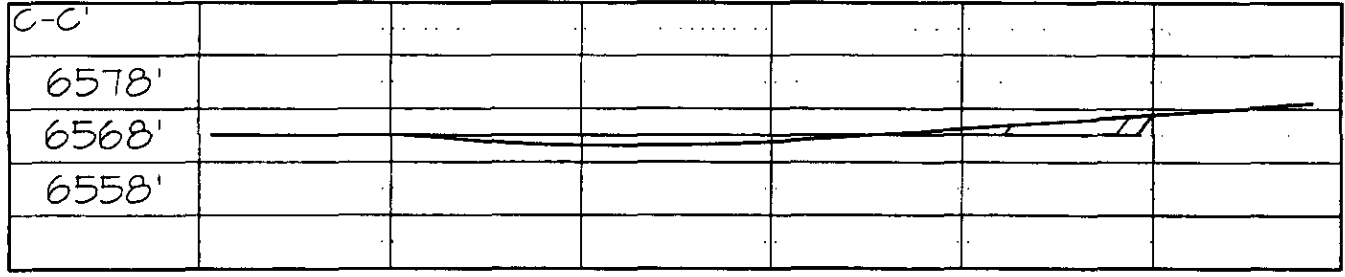
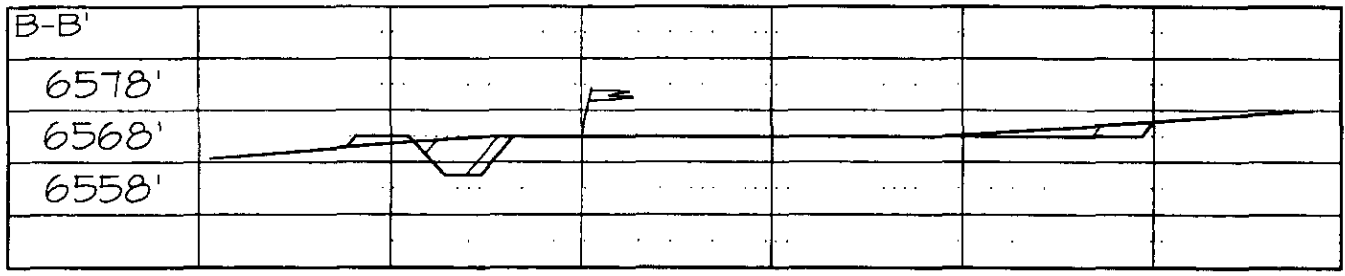
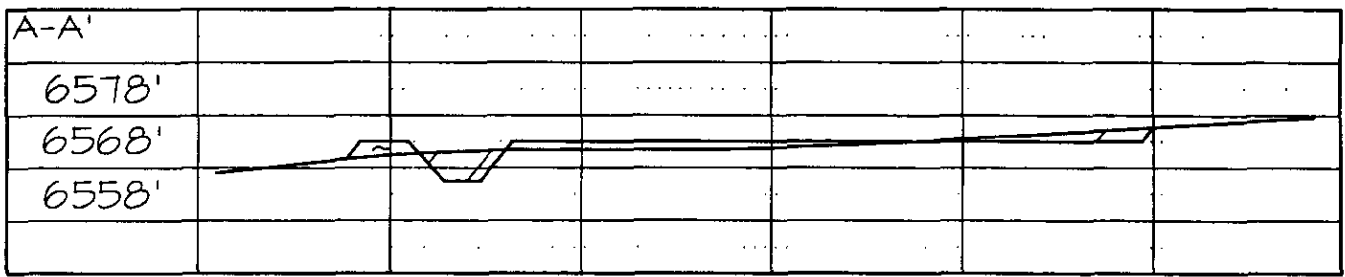
PLAT 3.



LATITUDE: 36.25156° N
LONGITUDE: 107.93173° 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 #90-S

APPROXIMATE FORMATION TOPS:

Ojo Alamo	Surface
Kirtland	10'
Fruitland	550'
Pictured Cliffs	915'
Total Depth	1065'

Catch samples every 10 feet from 850 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#	1065'	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 105 cf 2% lodense with
1/4# celloflake/sx followed by 65 cf Class "B" with
1/4# celloflake/sx.
Total cement slurry for production stage is 170 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)

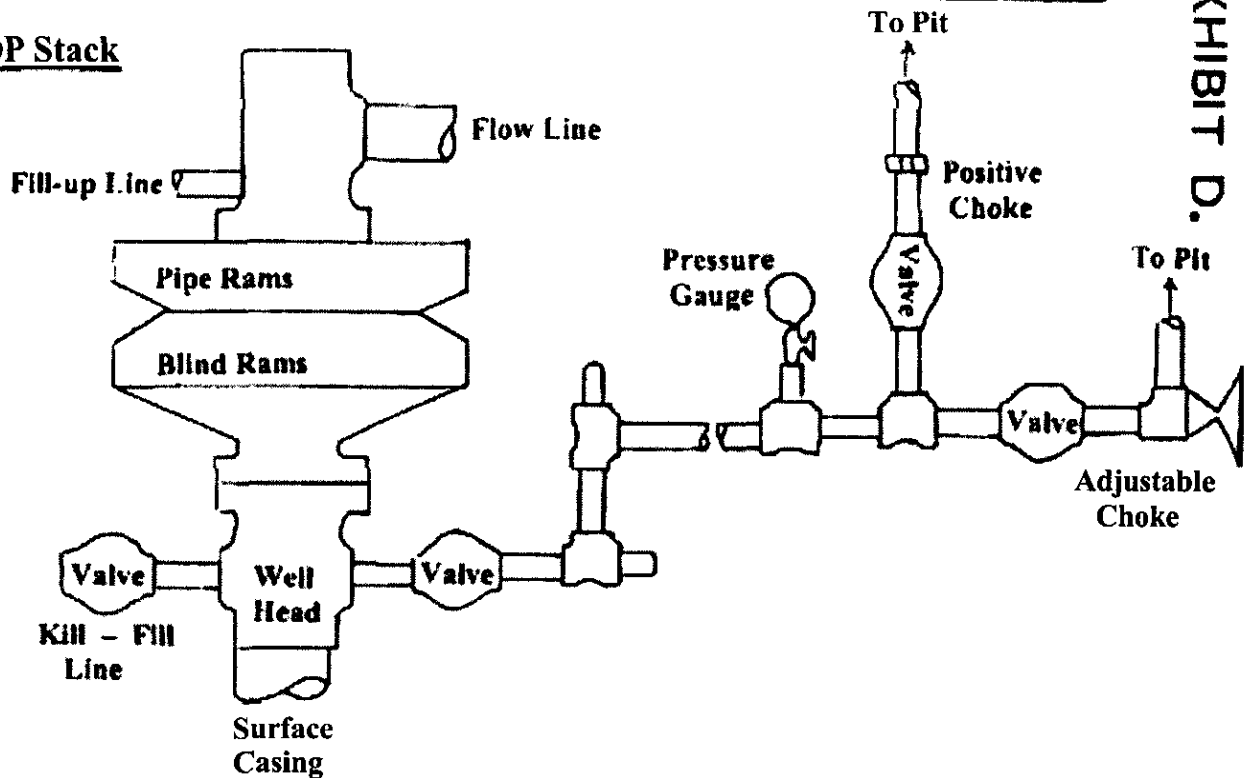
Kurt Fagrelus	325-4327 (H)
	320-8248 (M)

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

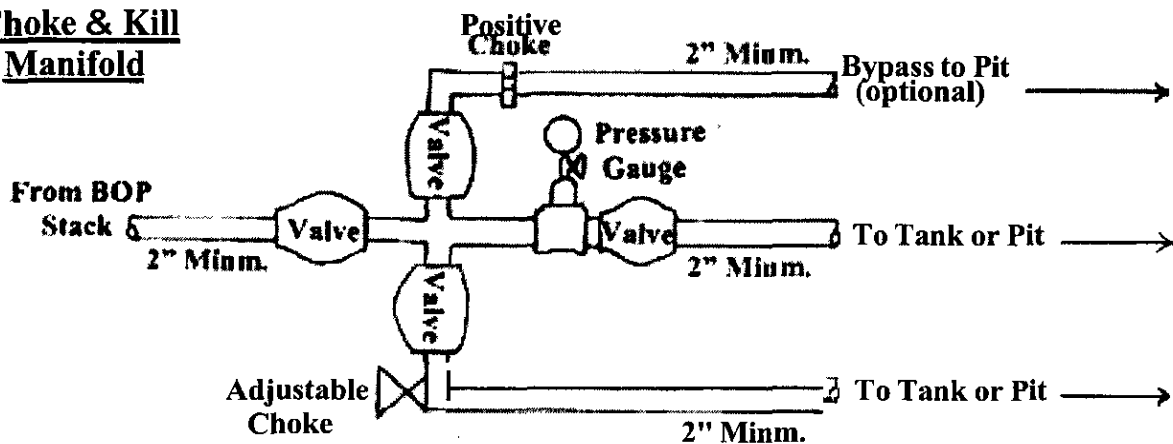
Well Control Equipment Schematic for 2,000 psi BOP

EXHIBIT D.

BOP Stack



Choke & Kill Manifold



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

DUGAN PRODUCTION CORP.

CALGARY #90-S