

DIST. 3

Form 3160-3  
(April 2004)

UNITED STATES JUN 27 PM 3 05  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER NM

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-33025
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. Hugh Lake # 91-S
3b. Phone No. (include area code) 505-325-1821		9. API Well No. 30-045-33824
4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface 1645' FNL & 1130' FEL, Lat. 36.53443 N. At proposed prod. zone Same as above Long. 108.11183 W.		10. Field and Pool, or Exploratory Basin Fruitland Coal
11. Sec., T. R. M. or Blk. and Survey or Area H Sec. 33, T27N, R12W NMPM		12. County or Parish San Juan
13. State NM		
14. Distance in miles and direction from nearest town or post office* Approx. 20-miles SE of Farmington, NM 87401		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1130 Feet	16. No. of acres in lease 640.0 Acres	17. Spacing Unit dedicated to this well E/2-320 Acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 800	19. Proposed Depth 1330 Feet	20. BLM/BIA Bond No. on file NM0140
21. Elevations (Show whether DF, KDB, RT, GL, etc.) GL-5849'	22. Approximate date work will start* ASAP	23. Estimated duration 6-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 June 26, 2006
Title Geology		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) [Signature]	Date 8/29/07
Title [Signature]		

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 1166' - 1180'. The interval will be fracture stimulated.

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

NMOC 9-4-07

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

RCVD AUG 30 '07

☐ AMENDED REPORT  
OIL CONS. DIV.

WELL LOCATION AND ACREAGE DEDICATION PLAT DIST. 3

*API Number <b>30-045-33824</b>		*Pool Code <b>71629</b>	*Pool Name <b>BASIN FRUITLAND COAL</b>
*Property Code <b>24278</b>	*Property Name <b>HUGH LAKE</b>		*Well Number <b>91S</b>
*OGRID No <b>006515</b>	*Operator Name <b>DUGAN PRODUCTION CORPORATION</b>		*Elevation <b>5849'</b>

<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
H	33	27N	12W		1645	NORTH	1130	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 <b>320.0 Acres - (E/2)</b>					<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

<div><p>16</p><p>LAT: 36.53443°N LONG: 108.11183°W DATUM: NAD1983</p><p>DUGAN NM-33025</p></div>	<div><p><sup>17</sup> OPERATOR CERTIFICATION</p><p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p><p><i>Kurt Fagrelus</i> Signature</p><p>Kurt Fagrelus Printed Name</p><p>Geology Title</p><p>May 28, 2006 Date</p></div>
	<div><p><sup>18</sup> 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>Date of Survey: APRIL 24, 2006</p><p>Signature and Seal of Professional Surveyor</p><div><p><b>JASON C. EDWARDS</b> Certificate Number 15269</p></div></div>

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  
May 27, 2004

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

WELL API NO.	30-045-
5. Indicate Type of Lease	Federal XX STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	Federal NM-33025
7. Lease Name or Unit Agreement Name	Hugh Lake
8. Well Number	#91-S
9. OGRID Number	006515
10. Pool name or Wildcat	Basin Fruitland Coal

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)

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 709 East Murray Drive, Farmington, NM

4. Well Location Unit Letter H : 1645 feet from the north line and 1130 feet from the east line Section 33 Township 27N Range 12W NMPM County San Juan
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11. Elevation (Show whether DR, RKB, RT, GR, etc.) GL-5849'
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Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/>
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 bbls; Construction Material Synthetic

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

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/> OTHER Reserve pit for drilling (lined) <input checked="" type="checkbox"/>	SUBSEQUENT REPORT OF: REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/> CASING/CEMENT JOB <input type="checkbox"/> OTHER: <input type="checkbox"/>
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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 1166' - 1178'. The interval will be fracture stimulated.

RCVD AUG 30 '07  
OIL CONS. DIV.  
DIST. 3

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 May 28, 2006  
Type or print name Kurt Fagrelus E-mail address: kfagrelus@duganproduction.com Telephone No. 505-325-1821

For State Use Only

Deputy Oil & Gas Inspector,  
District #3

APPROVED BY: [Signature] TITLE \_\_\_\_\_ DATE SEP 04 2007  
Conditions of Approval (if any): \_\_\_\_\_

**EXHIBIT B**  
**OPERATIONS PLAN**  
Hugh Lake #91-S

**APPROXIMATE FORMATION TOPS:**

Ojo Alamo	94'		
Kirtland	200'	Pictured Cliffs	1180'
Fruitland	780'	<b>Total Depth</b>	<b>1330'</b>

Catch samples every 10 feet from 1150 feet to 1330 feet.

**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"	5-1/2"	14#	1330'	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 120 cf 2% Lodense with  
1/4# celloflake/sx followed by 100 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

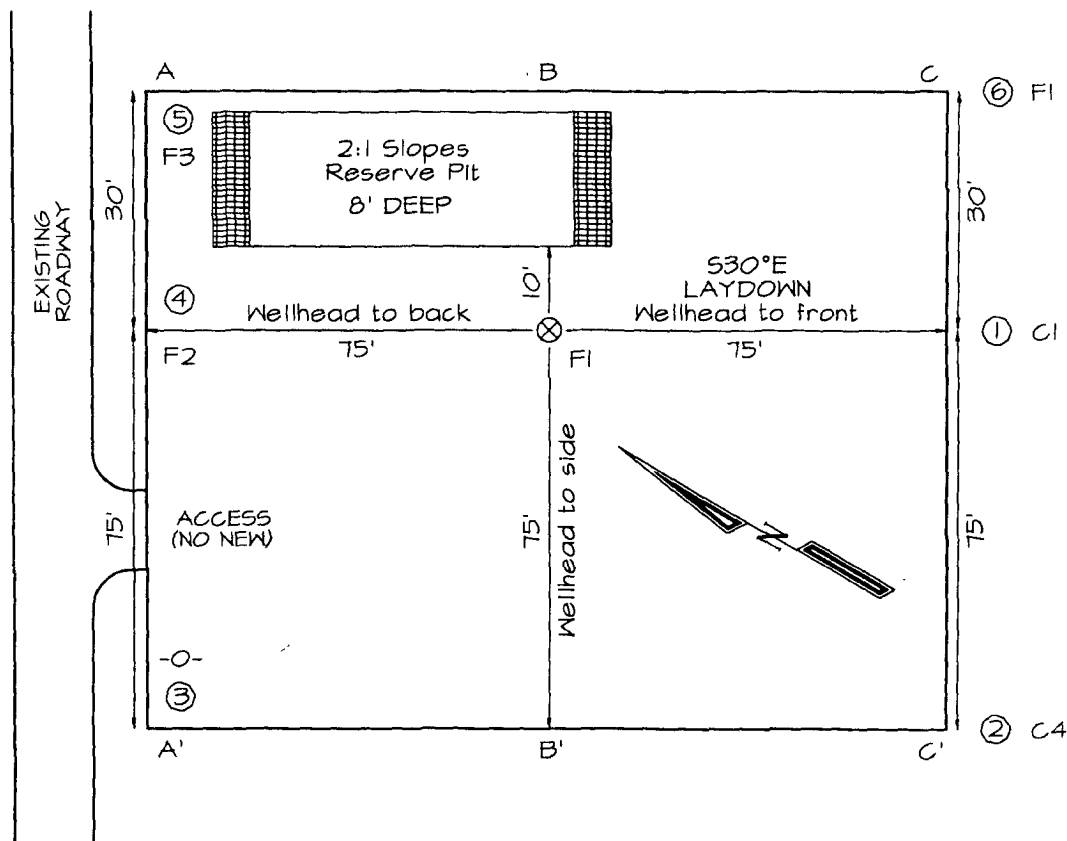
Mark Brown	327-3632 (H)
	320-8247 (M)

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

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

**DUGAN PRODUCTION CORPORATION HUGH LAKE #91S**  
**1645' FNL & 1130' FEL, SECTION 33, T27N, R12W, NMPM**  
**SAN JUAN COUNTY, NEW MEXICO ELEVATION: 5849'**

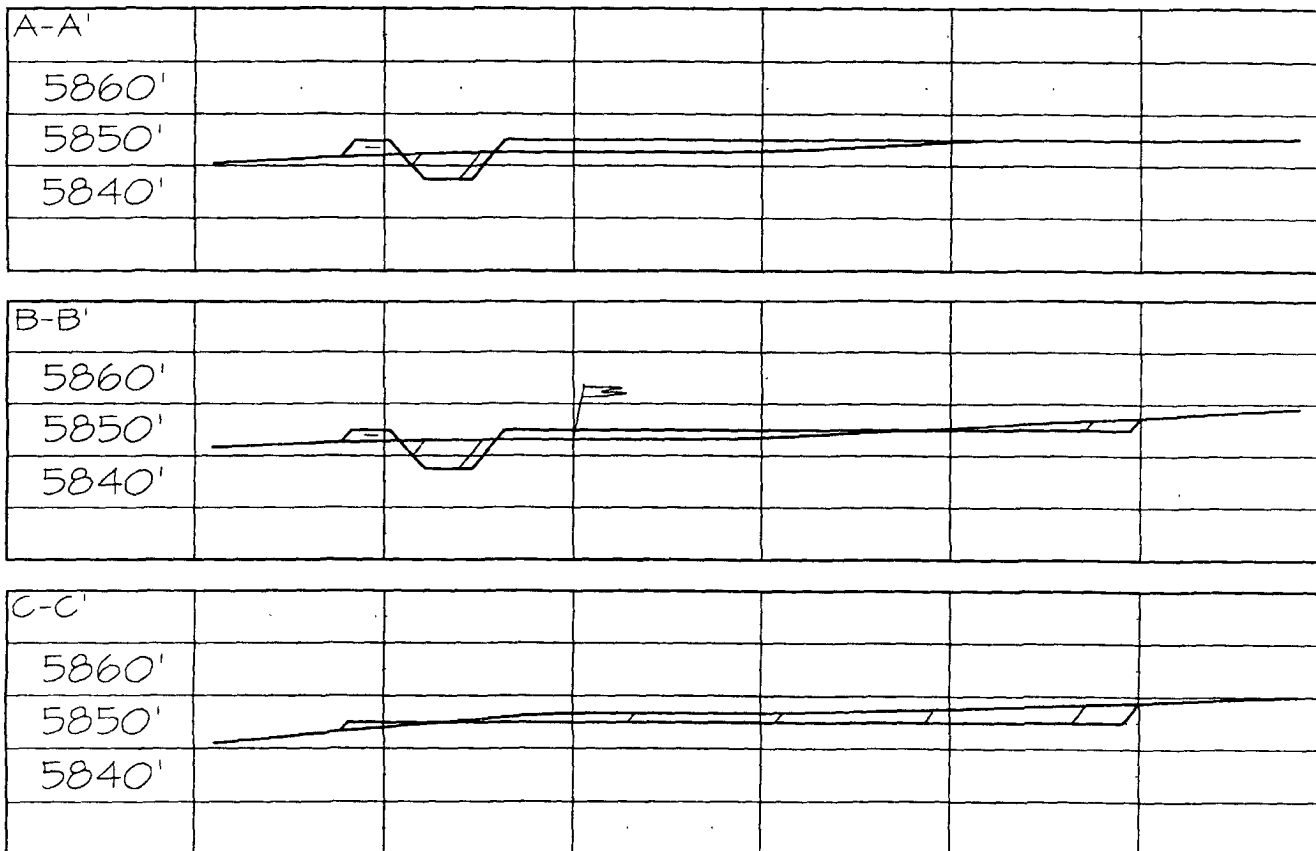
**PLAT 3.**



**LATITUDE: 36.53443° N**  
**LONGITUDE: 108.11183° W**  
 DATUM: NAD1983

PLAT NOTE:

\*SURFACE OWNER\*  
 Navajo Tribal Trust

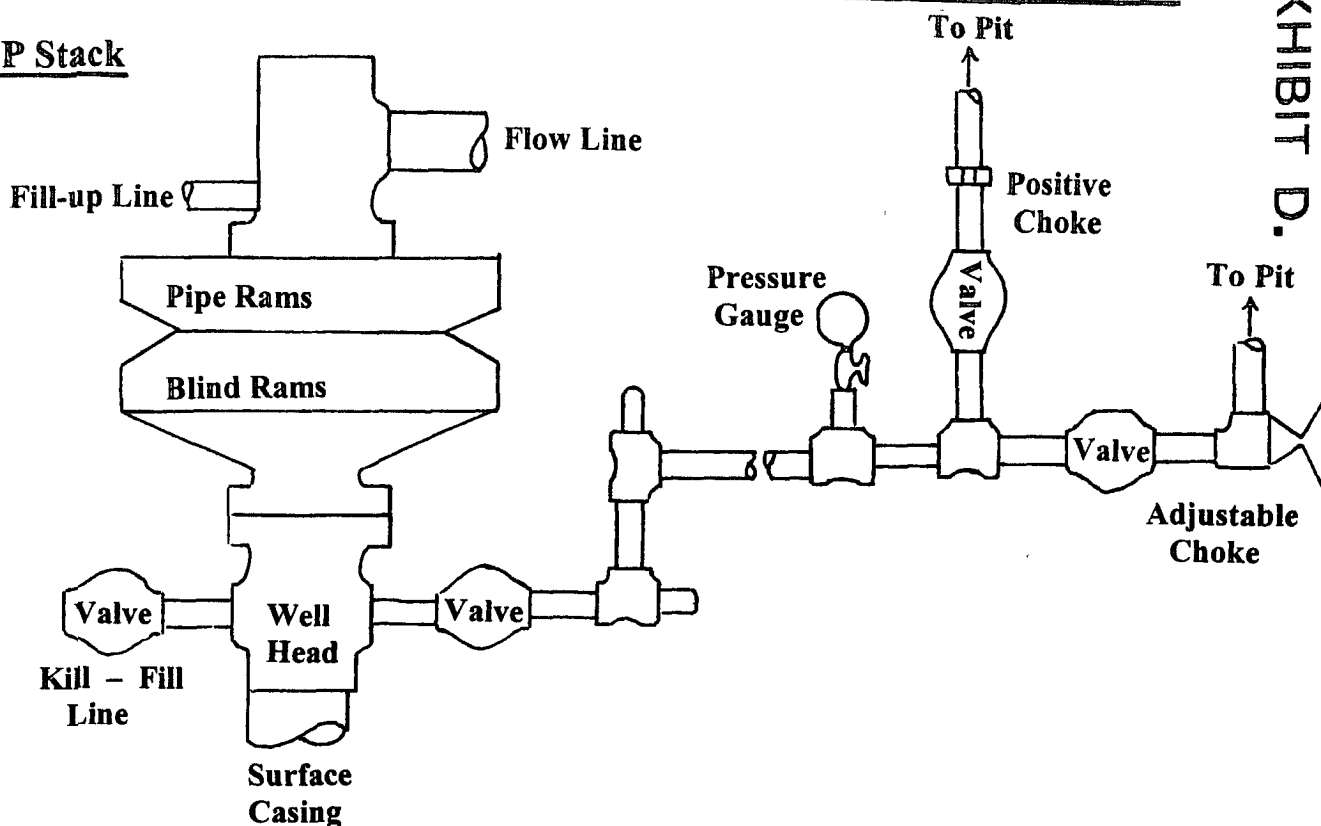


Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction

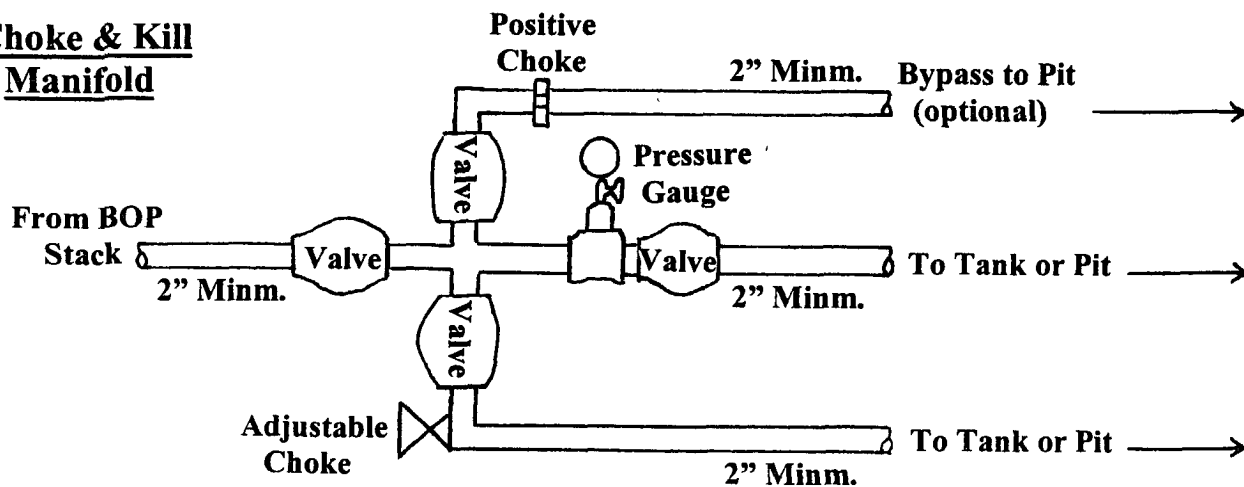
# Well Control Equipment Schematic for 2,000 psi BOP

EXHIBIT D.

## BOP Stack



## Choke & Kill Manifold



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

DUGAN PRODUCTION CORP.  
HUGH LAKE #91-S