State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David R. Catanach Division Director
Oil Conservation Division

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 4-25-15
Well information;
Operator Dugan, Well Name and Number Helsinki Com #90

API# 30-045-35685, Section 9, Township 23 (N)/S, Range 10 E/(W)

Conditions of Approval:
(See the below checked and handwritten conditions)

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- o Hold C-104 for directional survey & "As Drilled" Plat
- o Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Charlie Perrin
NMOCD Approved by Signature

2-8-2016
Date

1220 South St. Francis Drive • Santa Fe, New Mexico 87505
Phone (505) 476-3460 • Fax (505) 476-3462 • www.emnrd.state.nm.us/ocd

OIL CONS. DIV DIST. 3

RECEIVED

APR 27 2015

JAN 29 2016

Farmington Field Office
Bureau of Land Management

Form 3160-3
(March 2012)

FORM APPROVED
OMB No 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NM-36951

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

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

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. Helsinki Com #90

2. Name of Operator Dugan Production Corp.

9. API Well No. 30-045-35685

3a. Address 709 East Murray Drive, Farmington, New Mexico 87401

3b. Phone No. (include area code) 505-325-1821

10. Field and Pool, or Exploratory Basin Fruitland Coal

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface 1100' FSL & 1400' FWL Lat. 36.23701 N, Long. 107.90595 W NAD 1983
At proposed prod. zone Same as above.

11. Sec., T. R. M. or Blk. and Survey or Area N Sec. 9, T23N, R10W NMPM

14. Distance in miles and direction from nearest town or post office* Approx. 40-miles southeast of Bloomfield, New Mexico

12. County or Parish San Juan

13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
1100-Feet	960-Acres	S/2 - 320.0 Acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19. Proposed Depth	20. BLM/BIA Bond No. on file
1700-ft.	1050-ft.	~~On File~~ NM0140
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
6569-GL	ASAP	5-days

KP

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, must 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 must 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 BLM.

25. Signature	Name (Printed Typed)	Date
Kurt Fagrelius	Kurt Fagrelius	4-25-2015

Title Vice President

Approved by (Signature)	Name (Printed Typed)	Date
/s/ Stephen Mantiecco		1/27/16
Title AFM	Office FFO	

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.

(Continued on page 2)

*(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 850' - 865'. The interval will be fracture stimulated.

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

IMPS APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

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

NMOCD

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

☐ AMENDED REPORT

RECEIVED

APR 27 2015

Farmington Field Office
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-045-35685	71629	BASIN FRUITLAND COAL

4 Property Code	5 Property Name	6 Well Number
315909	HELSINKI COM	90

7 OGRID No.	8 Operator Name	9 Elevation
006515	DUGAN PRODUCTION CORPORATION	6569'

10 Surface Location

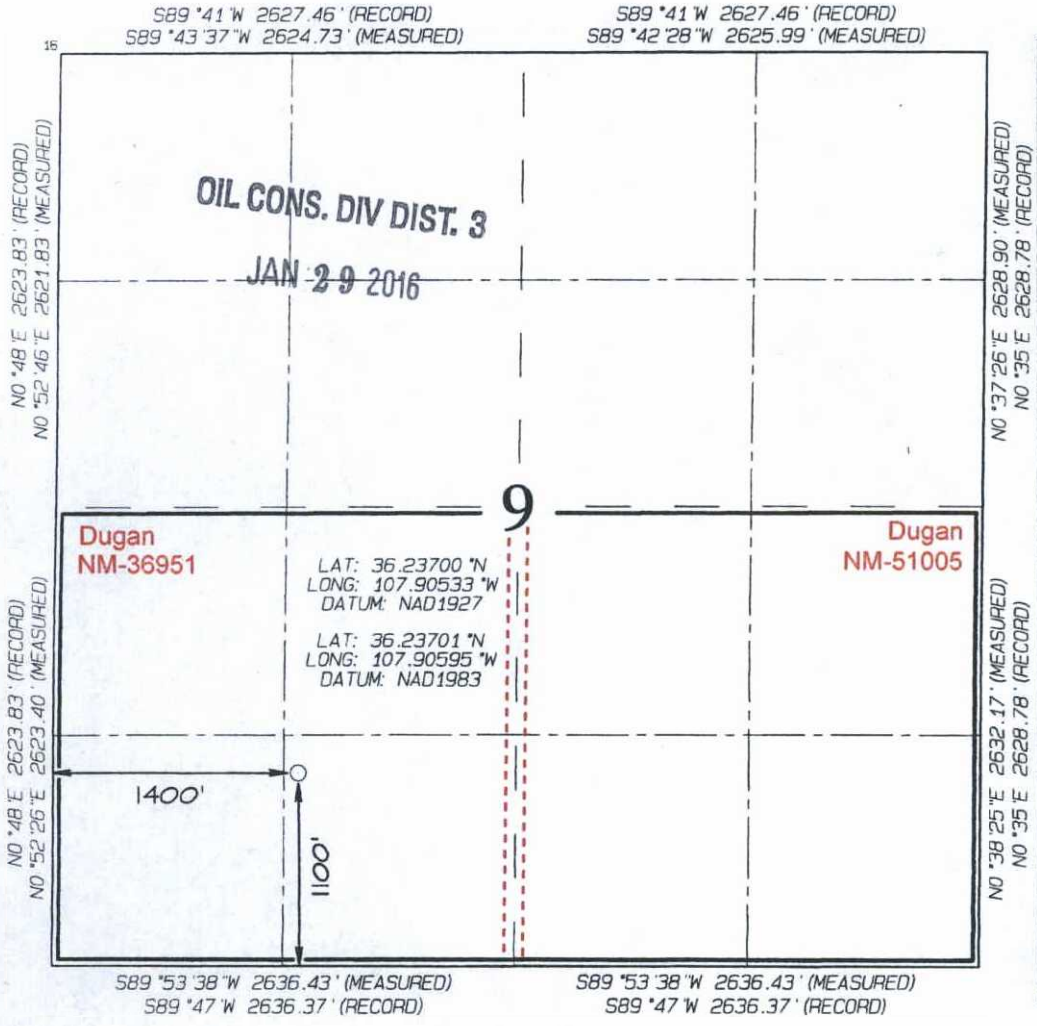
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	9	23N	10W		1100	SOUTH	1400	WEST	SAN JUAN

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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320.0 Acres - (S/2)			

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



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.

Kurt Fagrelius 2/16/2015
Signature Date

Kurt Fagrelius
Printed Name

kfagrelius@duganproduction.com
E-mail Address

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.

Date Revised: SEPTEMBER 22, 2014
Date of Survey: JULY 31, 2014

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

B. Well Pad – is shown on **Exhibit 6**.

1. Any trees greater than 3-inches in diameter will be cut at ground level, de-limbed and the trunks will be stacked at a location accessible to wood gatherers. Remaining stumps will be buried in cut slopes and limbs will be chipped and used as surface mulch during interim reclamation activity. There are no trees that need to be cut.

   After removal of any trees and prior to ground disturbance, remaining brush will be brush-hogged to ground level.

2. Following removal of all vegetation, the topsoil (uppermost 6" of soil) will be removed and stockpiled for future interim or final reclamation use. Topsoil may contain chipped mulch but will not include stumps or limbs.

3. Construction materials for well pad will be obtained on-site. If additional material is needed, it will be obtained from existing private or approved permitted sources and will be transported to the construction site with trucks over existing roads in the area.

   The maximum cut will be 1-feet on the south corner (#6) and there will be 1-foot of fill on the north corner (3).

4. As determined during the onsite inspection on March 12, 2015, the following best management practices will be done: **Surface equipment will be painted "Covert Green", a culvert and a low water crossing will be required as described in 6.A.7. above.**

5. Construction equipment could include a chain saw, brush hog, maintainer, excavator and a dozer.

C. Pipeline – is described in **4.B. above and shown on Exhibit 4a and 4b.**

1. Any trees greater than 3-inches in diameter will be cut at ground level, de-limbed and the trunks will be stacked at a location accessible to wood gatherers. Remaining stumps will be buried in cut slopes and limbs will be chipped and used as surface mulch during interim reclamation activity. There are no trees that need to be cut.

   After removal of any trees and prior to ground disturbance, remaining brush will be brush-hogged to ground level.

2. Following removal of all vegetation, topsoil (uppermost 6" of soil) will be removed and stockpiled for future interim or final reclamation use. Topsoil may contain chipped mulch but will not include stumps or limbs.

3. Construction materials for pipeline will be obtained on-site. If additional material is needed, it will be obtained from existing private or approved permitted sources and will be transported to the construction site with trucks over existing roads in the area.

7. Methods for Handling Wastes –

✓ A. Closed loop drilling system will be used to contain all liquids and solids waste associated with drilling operations is shown in **Exhibit 7**.

1. System will be designed and maintained to prevent contamination of fresh water and protect wildlife, public health and the environment.

2. Stockpile top-soil prior to leveling well pad and digging depression. The top-soil will be kept separate from sub-soil and used as a final cover for interim or final

EXHIBIT B.

Operations Plan
Surface Use Plan
Helsinki Com #90
Lease #NM-36951
SESW of Section 9, T23N, R10W
1100' FSL and 1400' FWL
San Juan County, New Mexico

1. APPROXIMATE FORMATION TOPS:

Ojo Alamo	50'
Kirtland	125'
Fruitland	540'
Pictured Cliffs	860'
Total Depth	**1050'**

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

2. LOGGING PROGRAM:

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

3. CASING PROGRAM:

Hole Size	Casing Size	Wt./ft.	Setting Depth	Grade and Condition
12-1/4"	8-5/8"	24#	120'	J-55
7-7/8"	5-1/2"	15.5#	1050'	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 7-7/8" hole to total depth with gel-water mud program to test the Fruitland Coal. 5-1/2", 15.5#, 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.

4. CEMENTING PROGRAM:

Surface: Cement to surface with 75-sks (98.25-cu.ft) Type III cement w/2% bwoc $CaCl_2$ + 0.25-lbs/sk Celloflake + 53.6% fresh water (15.00-lbs/gal, 1.31-cu.ft/sk). Circulate cement to surface.

Production Stage- Cement w/100-sks Premium Lite FM + 8% bwoc Bentonite + 3% bwoc Calcium Chloride + 0.25-lbs/sk cello flake + 5-lbs/sack LCM-1 + 0.4% bwoc Sodium Metasilicate + 0.4% bwoc FL-52A + 112.3% fresh water (12.1-lbs/gal, 2.13-cu.ft/ft - 213-cu.ft slurry). Tail w/88-sks Type III Cement + 1% bwoc Calcium Chloride + 0.25 lbs/sk Cello flake + 0.2% bwoc FL-52A + 59% fresh water

(14.6-lbs/gal, 1.38-cu.ft/ft - 121-cu.ft).
Total slurry for the job - 334-cu.ft.
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 useable 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, pressure, slurry density, and slurry volume for the cement job. The log will be sent to the BLM after completion of the job.

5. **Maximum Anticipated Bottom Hole Pressure** - 300 psi.

6. **Drilling Fluid** - will be fresh water with bentonite 8.9#/gal.

7. **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#.

8. **Blow-Out Preventer Equipment (BOPE): Exhibit 8.**
   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 adjustable 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.

Working pressure for all BOPE will be 2,000 psi or greater. Will test BOPE (blind rams, pipe rams, choke manifold and surface casing) separately. Each test will include a low pressure test to 250-psig held for five minutes and a high pressure test to 800-psig held for

thirty minutes (with no more than a 10-percent pressure drop during the duration of the tests). If a 10-percent or greater pressure drop occurs; a packer will be run to isolate the surface casing and BOPE to locate the source of the leak.

9. **Contacts:** Dugan Prod.Corp. Office & Radio Dispatch: (505) 325-1821

Gerald Wright	Kurt Fagrelius	John Alexander
(505)632-5150 (H)	(505)325-4327 (H)	(505)325-6927 (H)
(505)330-9585 (M)	(505)320-8248 (M)	(505)320-1935 (M)

EXHIBIT 2.

Directions from the Intersection of US Hwy 550 & US Hwy 64

in Bloomfield, NM to Dugan Production Corporation Helsinki Com #90

1100' FSL & 1400' FWL, Section 9, T23N, R10W, N.M.P.M., San Juan County, NM

Latitude: 36.23701°N Longitude: 107.90595°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 27.9 miles to State Hwy #57 @ Mile Marker 123.4;

Go Right (South-westerly) on State Hwy #57 for 3.1 miles to fork in road;

Go Left (South-westerly) remaining on State Hwy #57 for 2.6 miles to fork in road;

Go Right (Westerly) on County Road #7635 for 0.9 miles to fork in road;

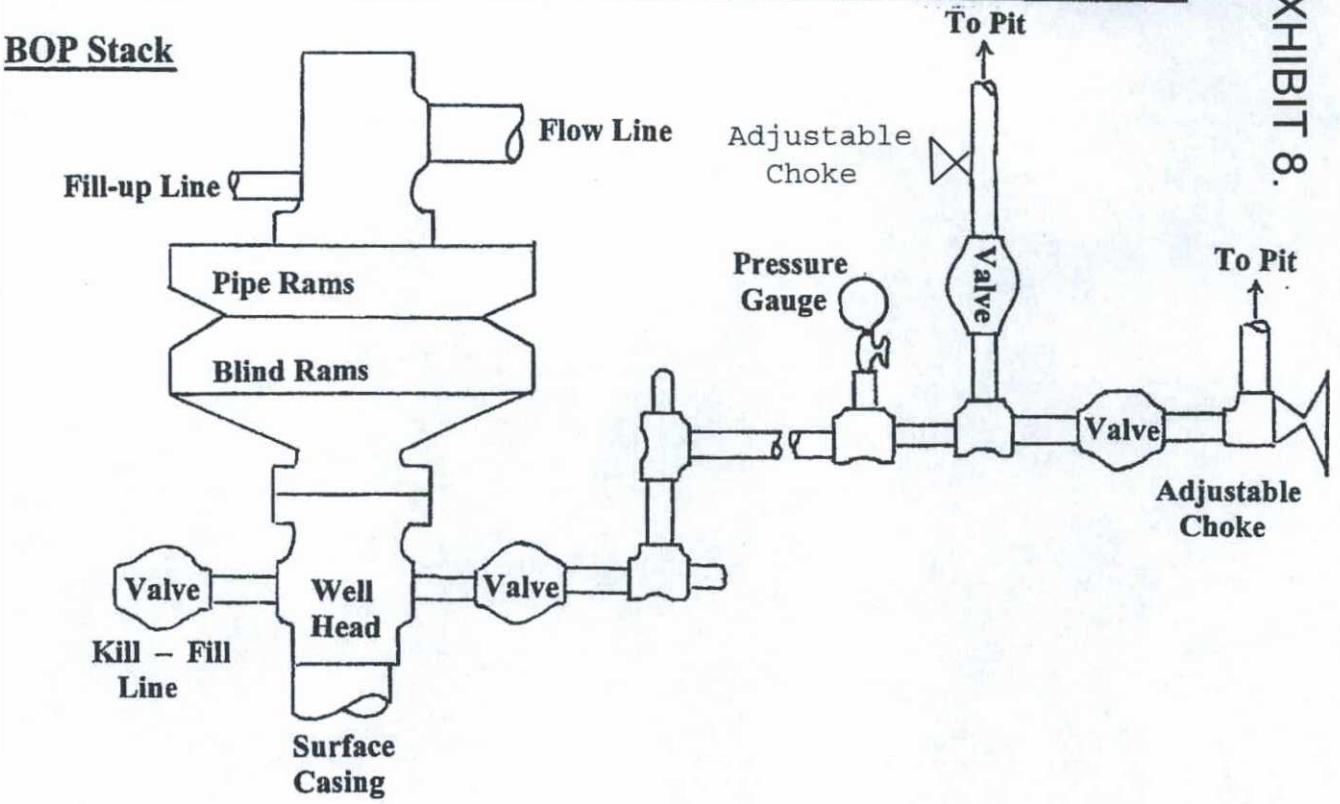
Go Left (Southerly) remaining on County Road #7635 for 3.1 miles to fork in road;

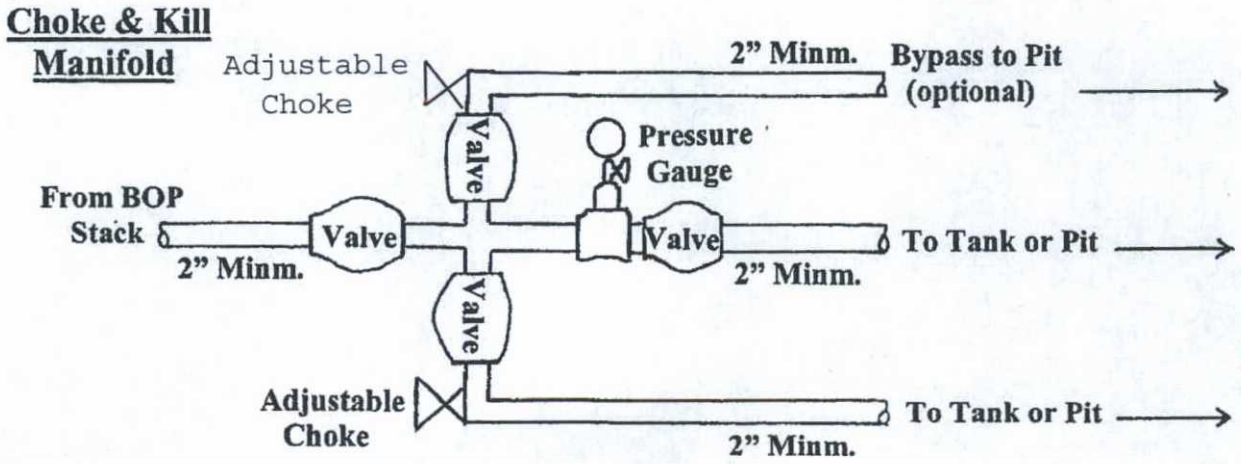
Go Right (Southerly) exiting County Road #7635 for 0.9 miles to a 4-Way intersection;

Go Straight (Southerly) for 0.3 miles to new access on right-hand side of existing roadway which continues for 1672.1' to staked Dugan Helsinki Com #90 location.

EXHIBIT 8.

Well Control Equipment Schematic for 2,000 psi BOP





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

DUGAN PRODUCTION CORP.
Helsinki Com #90