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Form 3160-3
(April 2004)

APR 08 2011

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Farmington Field Office
Bureau of Land Management

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NOO-C-14-20-7312
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 Navajo Allotted
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. St. Louis Com #90
3b. Phone No. (include area code) 505-325-1821		9. API Well No. 30-045-35278
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1150' FNL & 1450' FEL Lat. 36.24529 N At proposed prod. zone Same as above Long. 107.89764 W		10. Field and Pool, or Exploratory Basin Fruitland Coal
11. Sec., T. R. M. or Blk. and Survey or Area B Sec. 9, T23N, R10W NMPM		12. County or Parish San Juan
14. Distance in miles and direction from nearest town or post office* Approx. 35-miles SE of Farmington, New Mexico		13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1450'-Feet	16. No. of acres in lease 160.0-Acres	17. Spacing Unit dedicated to this well 320.0 Acres - (N/2)
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 1400'	19. Proposed Depth 1095'-Feet	20. BLM/BIA Bond No. On File
21. Elevations (Show whether DF, KDB, RT, GL, etc.) G.L. 6599'-Feet	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 4-8-2011
Title Geologist		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFM	Date 4/16/12
Title AFM	Office FED	

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 perforated from approximately 918 - 944 feet.
The interval will be fracture stimulated.

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

NMOCD
A

BLM'S 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".

APR 30 2012 CA

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

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

☐ AMENDED REPORT

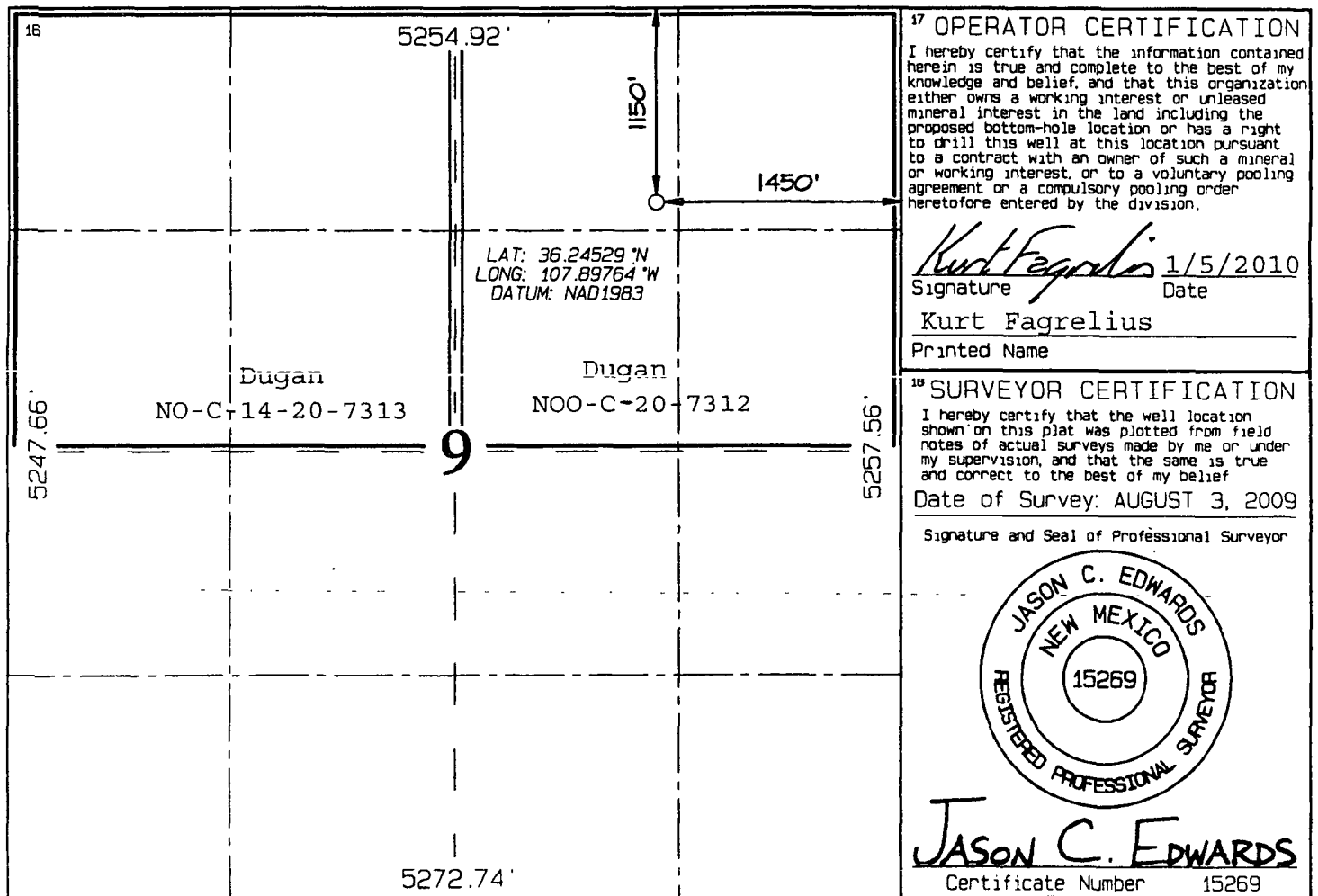


EXHIBIT B
OPERATIONS PLAN
St. Louis Com #90

APPROXIMATE FORMATION TOPS:

Ojo Alamo	125'
Kirtland	210'
Fruitland	635'
Pictured Cliffs	945'
Total Depth	1095'

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:

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#	1095'	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.

CEMENTING PROGRAM:

Surface: Cement to surface with 75-cf Class B + 2% CaCl₂.
Circulate to surface.

Production Stage- Cement w/160-sx Premium Lite FM 3% BWOC
Calcium Chloride + 0.25 lbs/sx Celloflake + 5 lbs/sk
LCM-1 + 0.4% BWOC FL-52 + 8% BWOC Bentonite + 0.4%
BWOC Sodium Metasilicate + 112.3% fresh water (12.1
lb/gal, 2.13 cu ft/sx - 175-cu ft slurry). Tail
w/163-sx Type III cement + 1 lb/sk Calcium Chloride +
0.25 lb/sx Celloflake + 0.2% BWOC FL-52 + 59% fresh
water (14.6 lb/gal, 1.38 cu ft/sx-115-cu ft slurry).

Total cement slurry for production stage is 290-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 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.

Maximum Anticipated Bottom Hole Pressure - 300 psi.

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

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#.

Blow-Out Preventer Equipment (BOPE): 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 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.

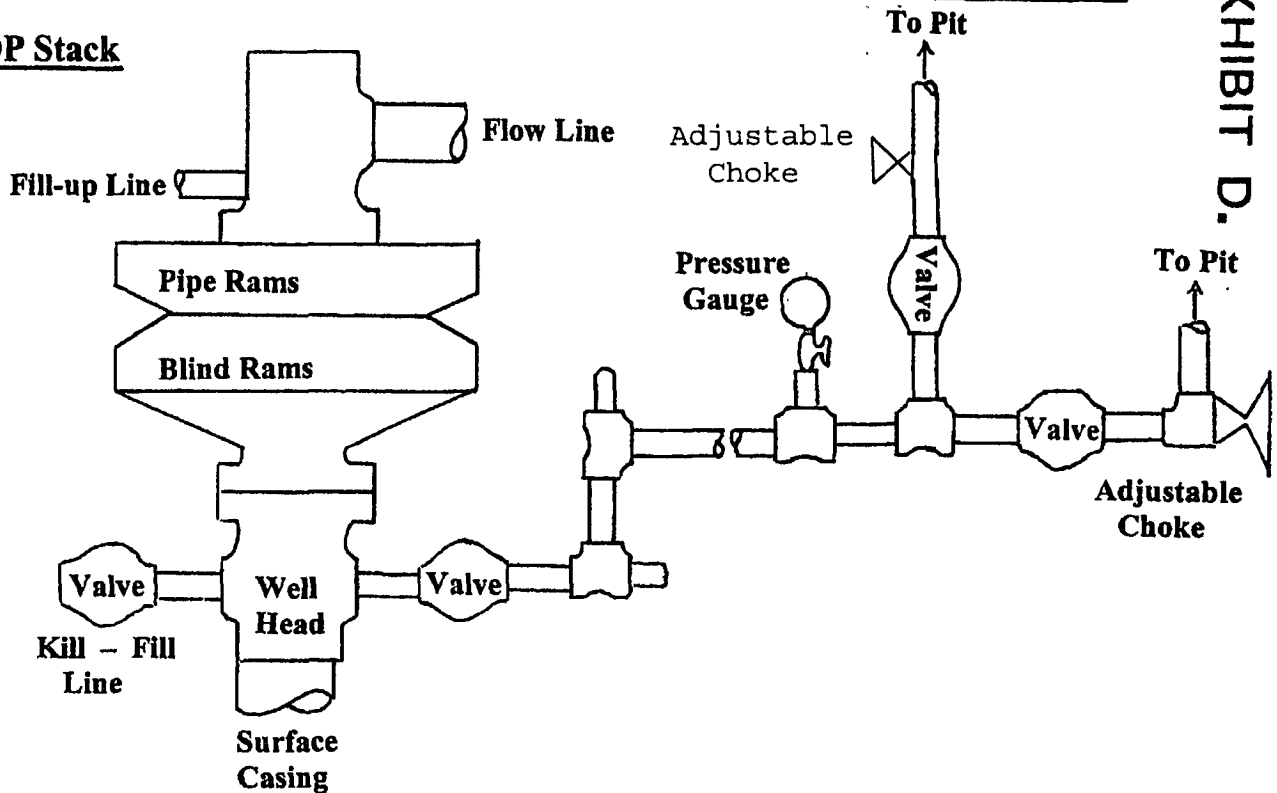
Contacts: Dugan Prod. Corp. Office & Radio Dispatch: 325-1821

<u>Mark Brown</u>	<u>Kurt Fagrelus</u>	<u>John Alexander</u>
327-3632 (H)	325-4327 (H)	325-6927 (H)
320-8247 (M)	320-8248 (M)	320-1935 (M)

Well Control Equipment Schematic for 2,000 psi BOP

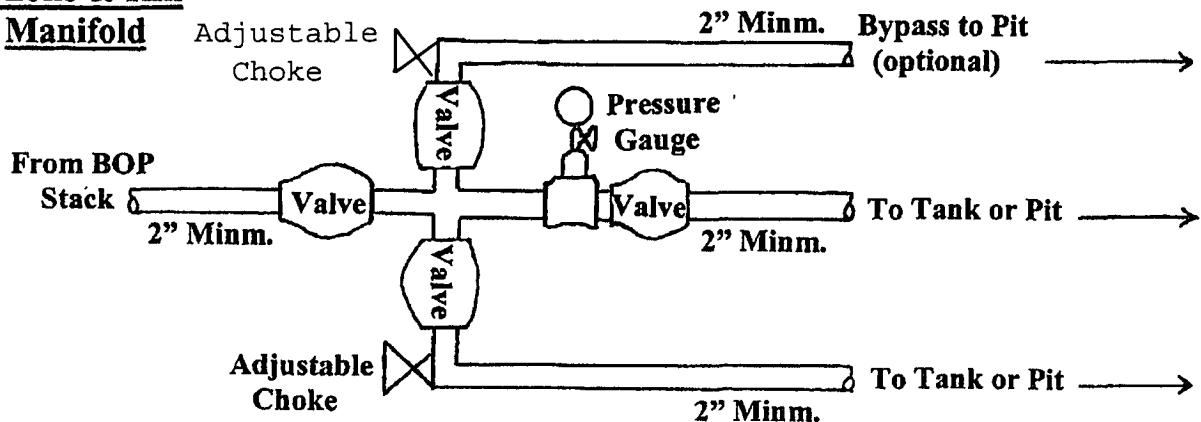
EXHIBIT D.

BOP Stack



Choke & Kill

Manifold



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

DUGAN PRODUCTION CORP.
St. Louis Com #90