

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-2337
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. Contact: KURT FAGRELIUS E-Mail: kfagrellius@duganproduction.com		7. If Unit or CA Agreement, Name and No.
3a. Address 709 EAST MURRAY DRIVE FARMINGTON, NM 87401	3b. Phone No. (include area code) Ph: 505.325.1821 Fx: 505.327.4613	8. Lease Name and Well No. CHACO 5
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESE 720FSL 1035FEL 36.20160 N Lat, 107.43000 W Lon At proposed prod. zone		9. API Well No. 30045 32272
10. Field and Pool, or Exploratory POTWIN PICTURED CLIFFS		11. Sec., T., R., M., or Blk. and Survey or Area p Sec 6 T24N R8W Mer NMP SME: BLM
12. County or Parish SAN JUAN	13. State NM	
14. Distance in miles and direction from nearest town or post office* APPROX. 30-MILES SOUTHEAST OF BLOOMFIELD, N.M.	15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 720	16. No. of Acres in Lease 962.11
17. Spacing Unit dedicated to this well 160.00 SW 4	18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROX. 4.000 FEET	19. Proposed Depth 2000 MD
20. BLM/BIA Bond No. on file	21. Elevations (Show whether DF, KB, RT, GL, etc.) 6688 GL	22. Approximate date work will start 05/06/2004
23. Estimated duration 7-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 Fagrellius</i>	Name (Printed/Typed) KURT FAGRELIUS	Date 04/05/2004
Title GEOLOGIST		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 9/29/04
Title AFM	Office FFO	

Application approval does not warrant or certify 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.

Additional Operator Remarks:

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 Pictured Cliffs Sandstone will be completed from approximately 1850' - 1870'. The interval will be fractured.

NMOC

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 3045-32272		*Pool Code 83000	*Pool Name Potwin Pictured Cliffs
*Property Code 3616	*Property Name CHACO		*Well Number 5
*GRID No. 006515	*Operator Name DUGAN PRODUCTION CORPORATION		*Elevation 6688'

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	24N	8W		720	SOUTH	1035	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 160.0 acres (SE/4)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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 1267.86' 1308.78' LOT 4	1310.10' LOT 3	2620.20' LOT 2	1379.40' LOT 1
1308.78' LOT 5			1306.80'
2616.90' LOT 6			2613.60'
1342.44' LOT 7			

6
DUGAN 100%
NM-2337

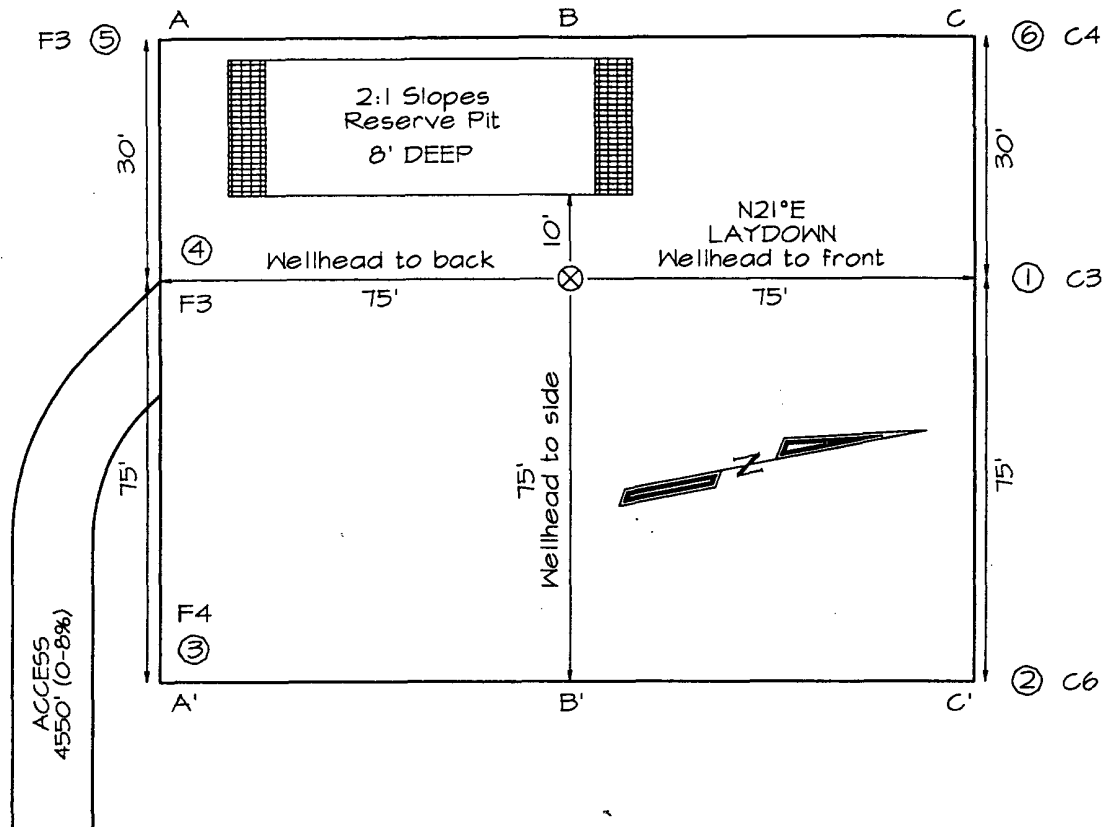
1035'
720'

17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.
Kurt Fagrelis
Signature
Kurt Fagrelis
Printed Name
Geologist
Title
4/3/2004
Date

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 of Survey: **JUNE 3, 2003**
Signature and Seal of Professional Surveyor
JASON C. EDWARDS
15269
REGISTERED PROFESSIONAL SURVEYOR
NEW MEXICO
Certificate Number 15269

DUGAN PRODUCTION CORPORATION CHACO #5
720' FSL & 1035' FEL, SECTION 6, T24N, R8W, NMPM
SAN JUAN COUNTY, NEW MEXICO ELEVATION: 6688'

PLAT 3.



LATITUDE: 36°20'16"
LONGITUDE: 107°43'00"
 DATUM: NAD1927

PLAT NOTE:

SURFACE OWNER
 Bureau of Land
 Management

A-A'						
6698'						
6688'						
6678'						

B-B'						
6698'						
6688'						
6678'						

C-C'						
6698'						
6688'						
6678'						

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
Chaco #5

APPROXIMATE FORMATION TOPS:

Ojo Alamo	1165'
Kirtland	1240'
Fruitland	1500'
Pictured Cliffs	1850'
Total Depth	2000'

Catch samples every 10 feet from 1750 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>
9-7/8"	7"	20#	120'	J-55
6-1/4"	4-1/2"	10.5#	2000'	J-55

Plan to drill a 9-7/8" hole and set 120' of 7" OD, 20#, J-55 surface casing. Then plan to drill a 6-1/4" hole to total depth with gel-water mud program to test the Fruitland Sandstone and Pictured Cliffs Sandstone. 4-1/2", 10.5#, 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 70 cf Class B + 2% CaCl₂.
Circulate to surface.

Production Stage-Cement with 200 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 300 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 7"x4-1/2" casing head, 1000# WP, tested to 2000#.

Huber 4-1/2"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

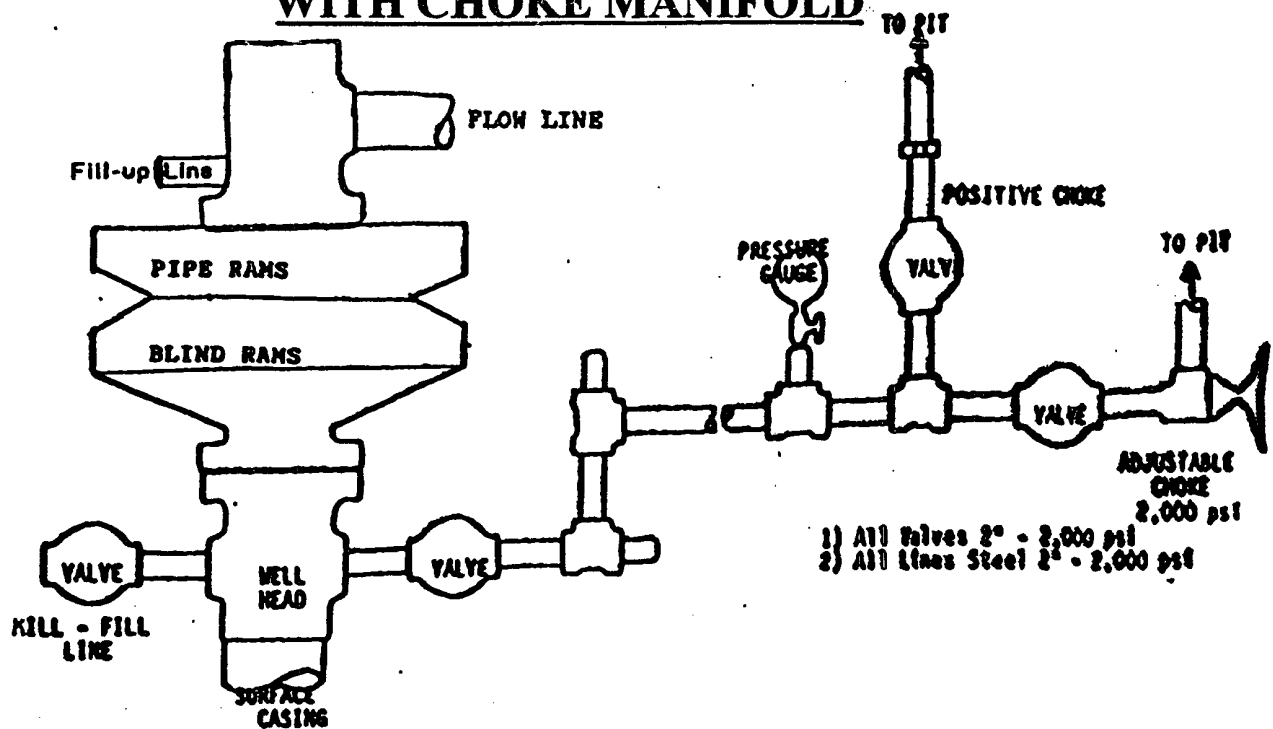
Mark Brown	327-3632 (H)
	320-8247 (M)

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

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

BOP DIAGRAM WITH CHOKE MANIFOLD

EXHIBIT D.



BOP and Related Equipment will include for a 2000 psi system:

2000 PSI DOUBLE RAM BLOWOUT PREVENTER

Kill line (2" minimum)

1 kill line valve (2" minimum)

1 choke line valve

2 chokes

Upper kelly cock valve with handle available

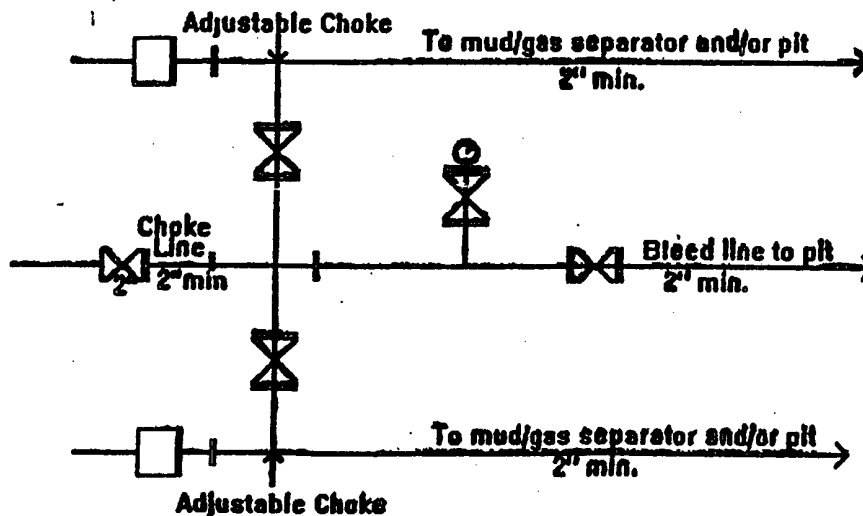
Safety valve and subs to fit all drill string connections in use

Pressure gauge on choke manifold

2" minimum choke line

Fill-up line above the uppermost preventer

BOP equipment will be tested as required in Section III A.1 of Onshore Order 2, plus a 30% safety factor.



2M Choke Manifold Equipment - Configuration May Vary

DUGAN PRODUCTION CORP.

CHACO #5