Form 3160-3
(September 2001)

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
2003 AUG -6 AM 10:42
070 Farmington, NM

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.	SF-047039-A
6. If Indian, Allottee or Tribe Name	NA
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. Heard Com 20 1A
2. Name of Operator: Koch Exploration Company LLC 12807	9. API Well No. 30045 31824
3a. Address: PO Box 489, Aztec, NM 87410	3b. Phone No. (include area code): (505) 334-9111
4. Location of Well (Report location clearly and in accordance with any State requirements*): At surface 715' FSL & 985' FEL; At proposed prod. zone 715' FSL & 985' FEL	10. Field and Pool, or Exploratory: Basin Fruitland Coal; 11. Sec., T., R., M., or Blk. and Survey or Area: S20, T28N, R10W (P)
14. Distance in miles and direction from nearest town or post office*: 6 3/4 miles southeast of Bloomfield, NM	12. County or Parish: San Juan; 13. State: NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) NA	16. No. of Acres in lease: 640; 17. Spacing Unit dedicated to this well: 320 E/2
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. NA	19. Proposed Depth: 2231'; 20. BLM/BIA Bond No. on file: 400 GH 0471
21. Elevations (Show whether DF, KDB, RT, GL, etc.): 6101 GL	22. Approximate date work will start*: September 15, 2003; 23. Estimated duration: 30 days

MAR 2004
OIL CONS. DIV.
DIST. 3

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall 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 shall 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 authorized officer.

25. Signature: John Clark	Name (Printed/Typed): John Clark	Date: 8/6/03
Title: District Superintendent		
Approved by (Signature): /s/ David J. Mankiewicz	Name (Printed/Typed):	Date: MAR - 4 2004
Title	Office	

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 reverse)

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

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

NMOCD

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
811 South First, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised Febuary 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

¹API Number	²Pool Code	³Pool Name
30-045-31824	71629	Basin Fruitland Coal

⁴Property Code	⁵Property Name	⁶Well Number
18434	HEARD COM 20	1A
⁷OGRID No.	⁸Operator Name	⁹Elevation
12807	KOCH EXPLORATION	6101

¹⁰Surface Location

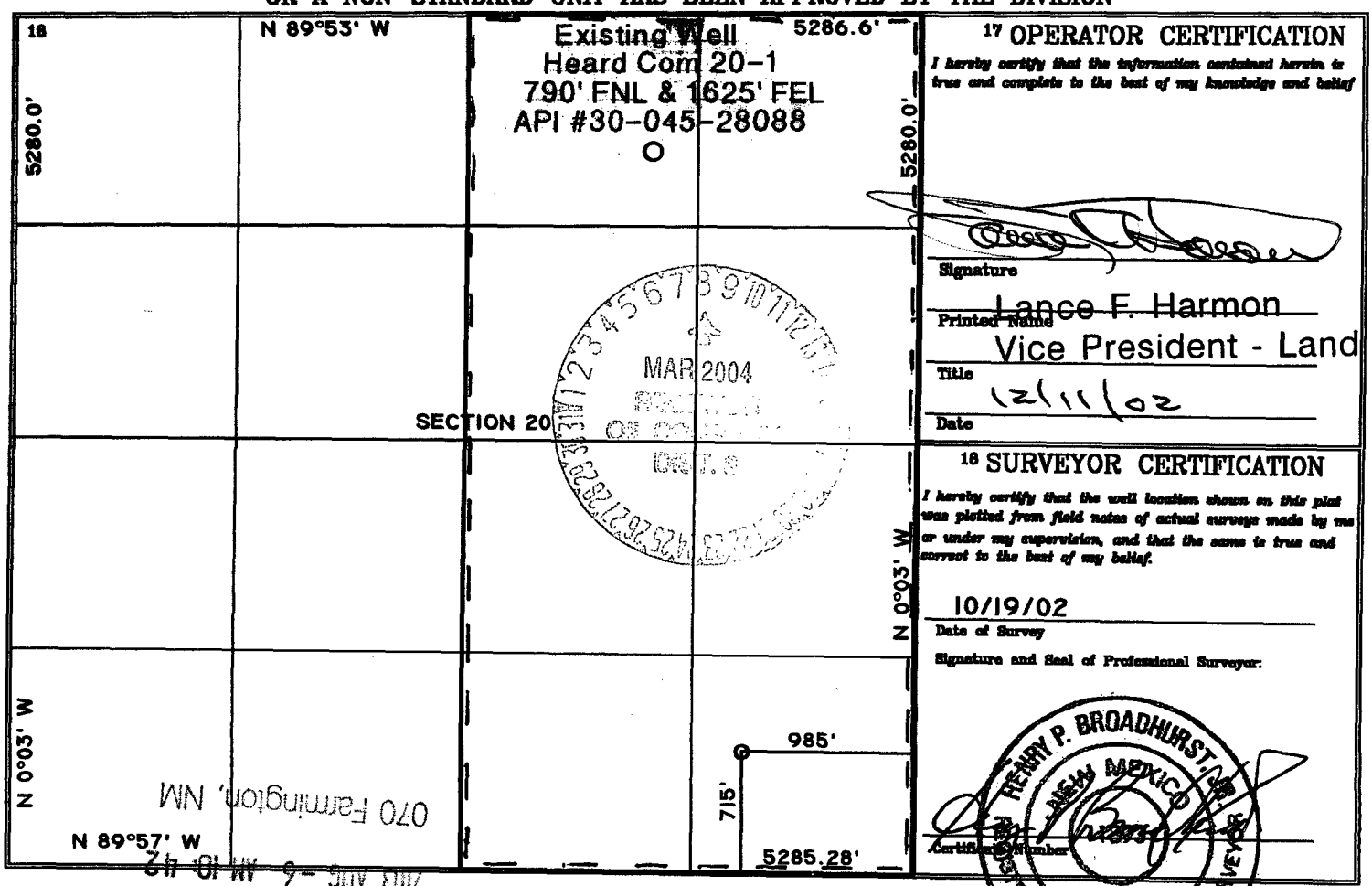
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	20	28 N	10 W		715	SOUTH	985	EAST	SAN JUAN

¹¹Bottom 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

¹²Dedicated Acres	¹³Joint or Infill	¹⁴Consolidation Code	¹⁵Order 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



¹⁷OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature

Printed Name: Lance F. Harmon

Title: Vice President - Land

Date: 12/11/02

¹⁸SURVEYOR 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: 10/19/02

Signature and Seal of Professional Surveyor:

HENRY P. BROADHURST, JR. NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR

Certificate Number

070 Farmington, NM

RECEIVED

Heard Com 20 #1A
Sec. 20, T28N, R10W, 715' FSL & 985 FEL
San Juan Co., New Mexico
Lease SF 047039A

Drilling Program

1) **Geological name of surface formation -**
Estimated tops of important geological markers:

San Jose	Surface
Ojo	993'
Kirtland Shale	1157'
Fruitland Coal	1719'
Pict. Cliffs	2111'
TD	2231'

2) **Estimated depths at which oil, gas, water, and mineral bearing formation will be found:**

Fresh Water	0' to 1157'
Salt Water	1158' to 1719'
Oil and Gas	1720' to 2231'

3) **Pressure Control Equipment:**
   a. 10-inch 900 series or 2,000 psi test double gate hydraulic with 4-1/2" pipe rams and 10-inch series 900 hydril above 10-inch series casinghead and cross spool with flanged outlets. See BOP diagram at **Exhibit F-1** for drawing of choke lines, kill lines and choke manifold. Procedures will include waiting on cement 12 hours, nipple up blowout preventer (BOP) assembly and test to 750 psi maximum. The production casinghead pressure rating will be 3,000 psi or greater.
   b. Type of BOP rams: Blind rams and pipe rams are used as shown on the BOP diagram at **Exhibit F-1**. Occasionally, the position of the rams is reversed depending on the drilling contractor's methods.
   c. The choke manifold and header will have 2-inch choke outlets, a 2-inch straight through the line with 2-inch adjustable chokes installed. The inlet line will be a 2-inch line. All of the above are rated at 2,000 psi working pressure (WP). The choke manifold and header system will have manual control valves; no hydraulic valves will be installed. Casing testing procedure – Surface casing will be tested at 750 psi with 750 psi maximum after cementing in place and before drilling out of shoe. Production casing will be tested to +/- 3,000 psi after cementing in place and after drilling to the required depth. Anticipated frac pressure 2500# (not to exceed wellhead pressure ratings).
   d. Hydraulic controls to close the BOPs are located on the rig floor; the hydraulic remote control is located in the bottom doghouse. There will be no manual controls on the BOP.
   e. BOP testing procedures and frequency:

      1. Hydril (3,000WP) will be tested to 750 psi maximum.

2. Double ram BOPs will be tested to 750 psi maximum.
3. BOPs will be tested upon installation, after casing is run and on each bit trip.

f. Casinghead connections will be 2-inch; these outlets will usually be bull plugged during drilling operations. No pumping through these connections is allowed except in emergency to keep from wearing out the head.

g. The drilling spool will be a series 900 2,000 psi WP with a 2-inch kill line and a 2-inch outlet.

4) Proposed Casing Program:

Surface Casing Program:

Surface Casing	12 ¼" hole	8 5/8"	24.0#	J-55 STC	New
Production Casing	6 3/4" hole	4 ½"	10.5#	J-55 LTC	New

Proposed setting depth, amount and type of cement including additives:

8 5/8" Surface Casing – Surface to 150' – Cement with 105 sks Class B(15.6 ppg, slurry yield 1.18 cf/sk) Cement + 2% bwoc Calcium Chloride + .25 lbs/sk Cello Flake. Cement Properties: Volume: 123.9.1 cf., includes 100% excess. Three (3) centralizers will be run on the bottom 3 joints, starting at the shoe joint.

4 ½" Production Casing – Surface to 2231' – Cement volumes will be adjusted to actual setting depths:
Lead with 191 sks Class B (12.5 ppg, slurry Yield 2.09 cf/sk) + 2% Sodium Metasillicate +.25 lb/sk Cello Flake + 3pps Gilsonite. Volume: 398.52 cf., includes 50% excess.
Tail with 60.14 sks Class B Cement (14.5 ppg, slurry Yield 1.55 cf/sk) + 4% Bentonite Gel + .25 lb/sk Cello Flake + 2% CaCl. Volume: 93.217cf. includeds 35% excess. Volumes will be adjusted to setting depth. Three (3) centralizers will be run on the bottom three joints, then every 10th joint thereafter or (+ or-) 400' and turbolators to impact a swirling action will be placed just below and into the base of the Ojo Alamo.

5) Mud Program:

0' – 150' – Spud mud and water treated with gel lime.
150' – 2231' – Lime mud, water and polymer.

6) Testing, Logging, and Coring Program:

No drill stem tests or cores will be taken.

Logging: Open hole – Triple Combo, 2,231' to surface or cased hole log as below. Production Casing – First Run – Gamma Ray – Casing Collar Locator – Cement Bond Log. (If cement circulates to surface, no CBL will be run.) Second Run – Gamma Ray – Gas Spectrum Log; or Gamma Ray-DIL, Density Neutron Porosity Caliper, if open hole log was not run