Form 3160
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE

FORM APPROVED
OMB NO. 1004-0136

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM - 013642

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ]

7. UNIT AGREEMENT NAME:

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER SINGLE ZONE [X] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME, WELL NO.: Gardner 5-A 5658

2. NAME OF OPERATOR: Koch Exploration Company

9. API WELL NO.: 30-045-30280

3. ADDRESS AND TELEPHONE NO.: 20 E. Greenway Plaza Houston, TX 77046

10. FIELD AND POOL, OR WILDCAT: Blanco Mesa Verde

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: ~~NW/4 SE/4~~ O Sec 26-T32N-R9W
At proposed prod. zone: 787 FSL & 1,625 FEL

11. SEC., T., R., M., OR BLK AND SURVEY OR AREA: O Sec 26 T32N-R9W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

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. NO. OF ACRES ASSIGNED TO THIS WELL
765'	2,264.04	322.24 S/2
18. DISTANCE FROM PROPOSED* LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR ON THE LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
2,650'	6,200 MD	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6,538' GR

22. APPROXIMATE DATE WORK WILL START*: 7/1/2000

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8" J-55	36.0	200' +/-	to surface
8 3/4"	7" J-55	23.0	3,700' +/-	to surface
6 1/4"	4 1/2" J-55	10.5	3,600' - 6,200'	~~2,500'~~ 2600'

(See attached)

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured ant true

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SIGNED: Kelly Olsedas by [illegible] TITLE: Senior Engineer DATE: 6/22/00

(This space for Federal or State office use)

PERMIT NO: APPROVAL DATE:

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:

APPROVED BY: /s/ Jim Lovato TITLE: DATE: JUL 31 2000

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

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

NMOCD

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

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

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

DISTRICT IV
PO Box 2088, 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

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

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-30280	72319	Blanco Mesa Verde

[4] Property Code	[5] Property Name	[6] Well Number
5658	GARDNER	5A

[7] OGRID No.	[8] Operator Name	[9] Elevation
12807	KOCH EXPLORATION	6538'

[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
O	26	32-N	9-W		787	SOUTH	1625	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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
322.24 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

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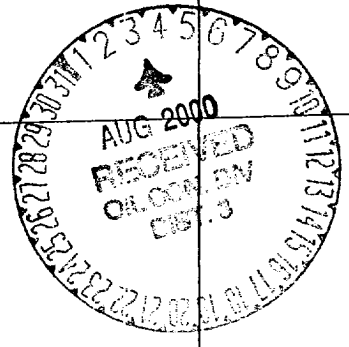

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NM-013642

LAT. 36°57'01" N.
LONG. 107°44'47"W.

1625'

787'

FD. BLM BRASS CAP 1966

S 88-18-38 W — 5357.60'

FD. BLM BRASS CAP 1966

N 02-10-00 E (G.L.O.) 5281.50'

17 OPERATOR CERTIFICATION

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

Signature

Rolf A. Orodas
Printed Name

Sr. Engineer
Title

6/15/00
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.

ROBERT A. RUSH
NEW MEXICO
8894
REGISTERED PROFESSIONAL LAND SURVEYOR

5/16/2000
Date of Survey

Signature and Seal of Professional Surveyor

8894
Certificate Number

KOCH EXPLORATION

GARDNER 5A

SE/4 SEC. 26, T-32-N, R-9-W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
787 FSL, 1625 FEL

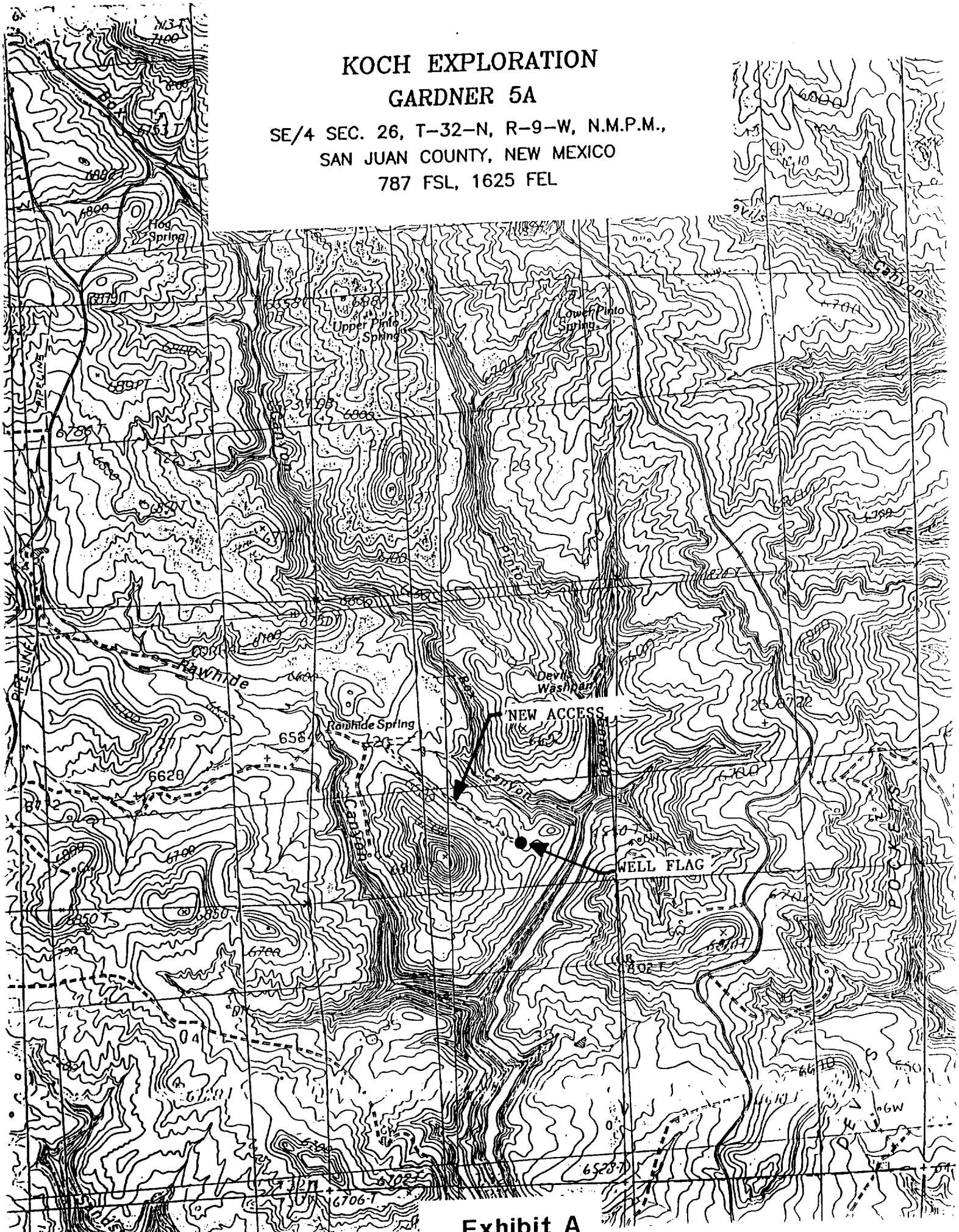

Exhibit A

Gardner 5 A
Sec 26-T32N-R9W, 765 FSL & 1580 FEL
San Juan Co., New Mexico
Lease NM-013642

Drilling Program:

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

San Jose	Surface
Nacimiento	690 feet
Ojo	1,750 feet
Kirtland Shale	1,950 feet
Fruitland Coal	3,000 feet
Picture Cliff	3,300 feet
Lewis Shale	3,600 feet
Cliff House	4,900 feet
Menefee	5,300 feet
Point Lookout	5,600 feet
Mancos	6,200 feet
TD	6,200 feet

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

Fresh Water	0 feet to 200 feet
Salt Water	201 feet to 3,000 feet
Oil and Gas	3,101 feet to 6,200 feet

3. **Pressure Control Equipment:**
   a. 10-inch 900 series or 3,000 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** 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 70% of yield of casing or 3,000 psi maximum. The production casinghead pressure rating will be 3,000 psi.
   b. Type of BOP rams: Blind rams and pipe rams are used as shown on the BOP diagram at Exhibit F. 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 3,000 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 1,000 psi maximum after cementing in place and before drilling out of shoe. Intermediate and production casing will be tested to 3,000 psi after cementing in place and after drilling to the required depth.

   d. Hydraulic controls to close the BOP's 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. Hydrill (3,000 WP) will be tested to 70% of yield of casing or 3,000 psi maximum.
2. Double ram BOPs will be tested to 70% of yield of casing or 3,000 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 3,000 psi WP with a 2-inch kill line and a 2-inch outlet.

4. **Proposed Casing Program:**

Surface Casing Program:

Surface Casing	9 5/8 inch	36.0#	J-55 STC	New
Intermediate Casing	7 inch	23.0#	J-55 STC	New
Production Casing	4 ½ inch	10.5#	J-55 LTC	New

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

9-5/8 inch Surface Casing - Surface to 240 feet –
Cement with 135 sx Class "H" with 2% $CaCl_2$ (15.6 lb/gal; 1.2 cf/sk).

7 inch Intermediate Casing – Surface to 3,700 feet -
Cement with 370 sx. 2% C-lite (15.6 16/gal, 2.06 cf/sk) followed by 120 sx neat cement tail (15.6 lb/gal, 1.18 cf/sk) to surface.

4 ½ inch production casing - 3,600 feet to 6,200 feet (TD)
Cement with 100 sx class 'H' +.25# / sk cello flake + 5#/sk gilsonite (12 lb/gal. 2.1 cf/sk)
Follow with 175 sx 50/50 Poz class 'H' + 2% bentonite + .25#/sk cello flake + 5#/sk gilsonite + .4% fluid loss additive.

5. **Mud Program:**

0 feet - 200 feet - Spud mud and water treated with gel lime.
200 feet - 3,600 feet - Lime mud, water and polymer.
3,600 feet - 6,200 feet - air, produced or fresh water, soap and polymer

6. **Testing, Logging and Coring Program:**

No drill stem tests or cores will be taken.
Logging: First Run - Gamma Ray - Casing Collar Locator - Cement Bond Log.
Second Run - Gamma Ray - Gas Spectrum Log; or Gamma Ray-DIL, Density-Neutron Porosity Caliper

7. **Expected Pressures -**

Fruitland Fm.-	600 - 700 psia
Pictured Cliffs Fm.-	800 - 1000 psia
Mesaverde Fm.-	800 - 1000 psia