

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER ☐

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

KLM Oil & Gas Inc.

3. ADDRESS OF OPERATOR

Box 151 McLouth, KS 66054

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface

1650 FSL & 1710 FWL
At proposed prod. zone

OIL CON. DIV.,
DIST. 3

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

Location is 17 miles North of Cuba, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT. 811
(Also to nearest drilg. unit line, if any)

16. NO. OF ACRES IN LEASE

1120

17. NO. OF ACRES ASSIGNED
TO THIS WELL

640

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED, 40
OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

6900

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, BT, GR, etc.)

7347 (G.L.)

This action is subject to technical and
procedural review pursuant to 43 CFR 3160.3
and appeal pursuant to 43 CFR 3160.4

22. APPROX. DATE WORK WILL START*

August 1, 1991

23. PROPOSED CASING AND CEMENTING PROGRAM

DRILLING AND CEMENTING PROGRAMS ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
GENERAL REQUIREMENTS

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	MD	SETTING DEPTH	TVD	"GENERAL REQUIREMENTS"
17 1/2"	13 3/8"	48# H-40	300	300	415 cu ft-circ to surface	
12 1/4"	9 5/8"	36# J-55	5700	5700	Stage 1: 1263 cu ft-circ to DV	
-	-	-	-	-	Stage 2: 1409 cu ft-circ to surface	
8 1/2"	5 1/2"	15.5# K-55	8964	6710	Slotted liner-uncemented	

Propose to spud in the San Jose Formation. Drill a 17 1/2" hole to a TD of 300'. Run and cement 13 3/8" surface casing with cement returns to surface. WOC 12 hours. Pressure test to 1500 psi for 30 minutes. Drill a vertical 12 1/4" hole through the base of the lower Gallup formation with fresh water mud to a TD of 6900'. Run electric logs. Plug back to a TVD of 5900', run and cement 9 5/8" intermediate casing in two stages with cement returns to surface. WOC 12 hours and pressure test to 3,000 psi for 30 minutes. Kick off drill an 8 1/2" hole with a build angle of 10°/100 ft. in a N40°E direction until a maximum angle of 90° (horizontal) is achieved using air/foam. Then, drill approximately 1975' of horizontal hole maintaining a N40°E direction a long the Niobrara "c" sand. No abnormal pressures or poisonous gases are anticipated. Run a mud logging unit while drilling this interval. Run a porosity log at TD. An uncemented 5 1/2" slotted production liner will be run to measured depth TD. The liner will be cemented if the wells natural flow capacity indicates the need for fracture stimulation.
Surface ownership is fee.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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 and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Robert E. Fische

TITLE

Agent for KLM Oil & Gas

DATE

7/11/91

(This space for Federal or State office use)

APPROVED
AS AMENDED

Approval of this action goes

APPROVAL DATE

Not warrant that the applicant
APPROVED BY
holds legal or equitable rights

TITLE

NMOOD

or title to this lease." DD 2000

Hold a copy of this

See Instructions On Reverse Side

SEP 03 1991
AREA MANAGER

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Azusa, NM 88210

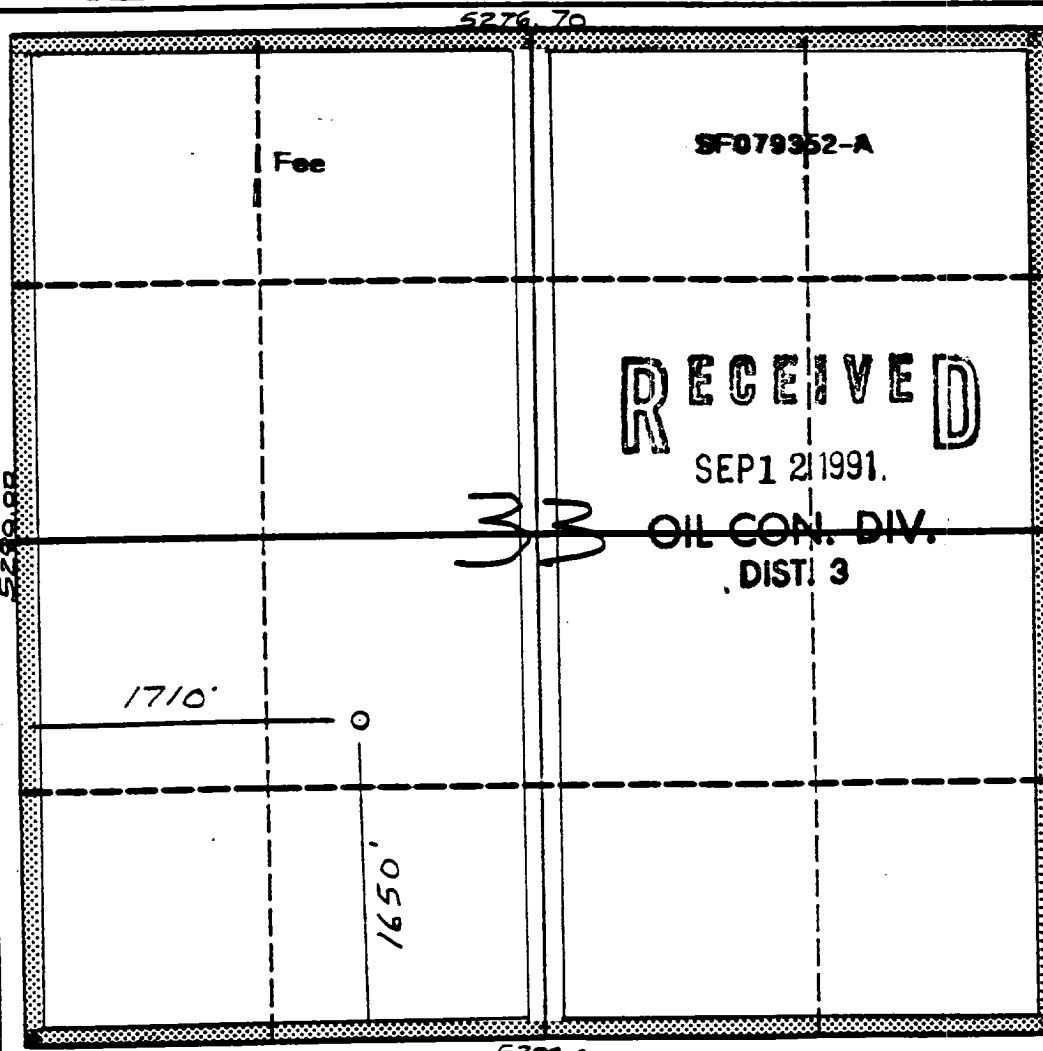
DISTRICT III
1000 Rio Rancho Rd., Azusa, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator KLM Oil & Gas		Lease Browning Federal		Well No. 33-1
Unit Letter K	Section 33	Township 24 North	Range 1 West	County Rio Arriba
Actual Footage Location of Well: 1650 feet from the South line and 1710 feet from the West line				
Ground Level Elev. 7347'	Proven Formation Gallup	Foot West Puerto Chiquito-Mancos	Dedicated Acreage 640 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or ink on the plot below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communication, assignment, force-pooling, etc.?
☒ Yes ☐ No If answer is "yes" type of consolidation **Communication**
If answer is "no" list the owners and trust arrangements which have actually been consolidated. (Use reverse side of this form if necessary).
No allowable will be assigned to the well until all interests have been consolidated (by communication, assignment, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature *Robert E. Fielder*
Printed Name **Robert E. Fielder**
Position **Agent**
Company **KLM Oil & Gas Inc.**
Date **7/11/91**

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 knowledge and belief. **6-26-91**

Date Surveyed *[Signature]*
Signature of Surveyor *[Signature]*
Professional Surveyor
NEW MEXICO
6857
REGISTERED LAND SURVEYOR
Neale Edwards

KLM Oil & Gas
 Browning Federal #33-1
 1650' FSL - 1710' FWL
 Section 33, T24N, R1W, NMPM
 Rio Arriba Co., New Mexico

Field: West Puerto Chiquito - Mancos

Elevation: 7347' GL

Geology:

Formation Tops:	Pilot (Vertical) Hole:	MD	TVD
		-----	-----
San Jose -	Surface	Surface	Surface
Ojo Alamo -	2660'	2660'	2660'
Pictured Cliffs -	2935'	2935'	2935'
Lewis -	3036'	3036'	3036'
Chacra -	4020'	4020'	4020'
Cliff House -	4800'	4800'	4800'
Menefee -	4920'	4920'	4920'
Point Lookout -	5325'	5325'	5325'
Mancos -	5500'	5500'	5500'
Niobrara -	6012'	6012'	6012'
Gallup -	6500'	6500'	6500'
Mancos L -	6850'	6850'	6850'
Total Depth -	6900'	6900'	6900'

Horizontal Section:

Kick-off Point	6137'	6137'
End of Build	7037'	6710'
End of Horizontal	8964'	6710'

Logging Program: A GR-SP-DIL will be run from TVD of 6900 to surface casing shoe in the vertical section of hole. A compensated neutron/density, borehole compensation sonic will be run from TVD to top of Mancos Formation. A dipmeter may be run from TVD to the top of Mancos Formation. 30' cutting samples will be collected from the surface casing shoe to 4100' and 10' samples will be collected from 4101' to TD in the vertical section. A mud logging unit will be used from 3000' to TD in the vertical section and during drilling of the horizontal section.

Drilling:

Contractor: Bayless Drilling Co.

Toolpusher:

Operator's Representative:

Mud Program: 0 - 300' : Spud mud of gel and lime.
300' - 6900' TVD: PHPA polymer/drispac freshwater, low solids mud. Mud wt. 8.7 ppg - 9.0 ppg, as necessary to control well. 35-65 sec/qt. viscosity. 6-8 cc water loss.

Start mud up 100' above Fruitland.

Deviated Section:

6137' - 8964' MD: Air - Inhibited foam.

Materials:

Casing Program:

<u>Hole Size</u>	<u>Depth Set</u>	<u>Casing Size</u>	<u>WT. & Grade</u>
17 1/2"	300' TVD	13 3/8"	48# , H-40
12 1/4"	3950' TVD	9 5/8"	36# , J-55
12 1/4"	4920' TVD	9 5/8"	40# , J-55
12 1/4"	5700' TVD	9 5/8"	40# , N-80
8 1/2"	6710' TVD	5 1/2"	15.5# , K-55

Float Equipment:

13 3/8" surface casing - Texas Pattern Guide Shoe. Threadlock shoe and bottom joint of casing. Centralize bottom joint and every fourth joint to surface.

9 5/8" intermediate casing - Cement Nose Guide Shoe. Self fill float collar run one joint above shoe. DV tool run at 3000'. Threadlock shoe, float and three bottom joints of casing and DV tool. Centralize: 5 bottom joints of casing every 4th joint to DV tool, the joints below and above DV tool. One (turbolizer) each joint across Ojo Alamo and one centralizer every fourth joint to surface. Run two cement baskets below the DV tool.

PROPERTY MANAGEMENT & CONSULTING, INC.

4301 WILSHIRE

FARMINGTON, NEW MEXICO 87401

RECEIVED
BLM

July 29, 1991

31 AUG 12 PM 4:05

018 FARMINGTON, N.M.

Bureau of Land Management
1235 La Plata Hwy.
Farmington, NM 87401

Dear Sirs:

In regards to the KLM, Browning Federal 33-1, the whipstock plug cementing program is as follows; Depth = 6037' - 6337'. 175 ft³ total plug volume. The slurry consists of 175 sxs class G + 0.5% Friction Reducer + 10% Silica Sand + 0.1% retarder.

In regards to the cementing program for the 5 1/2" liner we do not anticipate the need to fracture stimulate this well. Our objective is to intersect several natural fractures thus eliminating the need to stimulate. If for some unforeseen reason, fracture stimulation becomes an option; the liner will be cemented with the following slurry. 308 ft³ total volume, 245 sxs saltbond II + 30% salt + 0.5 gl/sx friction reducer + 0.1% extender + 0.02 gl/sx Defoamer.

Volume of cement cannot be determined at this time due to the unknown amount of 5 1/2" liner to be run. Specific cementing recommendations will be cleared through the BLM office prior to running and cementing a 5 1/2" liner.

Plug from TD to 6845' plus 100 ft excess

Sincerely, *Jeffrey J. Albers*

Property Management & Consulting, Inc.

Jeffrey Albers

JA/al

Materials :Cont.

5 1/2" slotted production liner - Uncemented. The liner will be cemented if the wells natural flow capacity indicates the need for fracture stimulation. Centralizer program will be designed for adequate pipe stand off.

Wellhead Equipment:

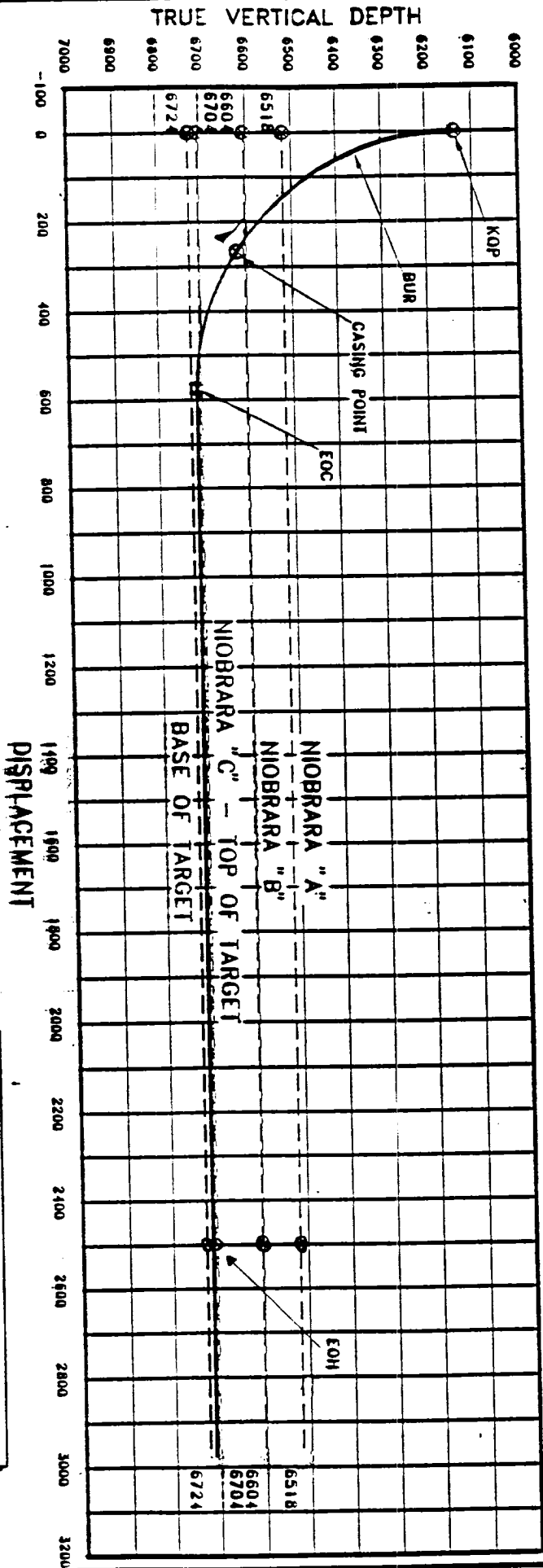
13 3/8" X 12" 3000 casing head with 9 5/8" automatic slips.
12" 3000 X 10" 3000 casing spool.
10" 3000 X 6" 3000 tubing head with a 2 7/8" EUE tubing hanger.

Cement Program:

13 3/8" surface casing - 360 sacks (415 cuft) of Class G w/2% CaCl₂ and 1/4# per sack cellophane flake. 100% excess to circulate to surface. WOC 12 hours. Pressure test to 1200 psi for 30 minutes prior to drilling surface shoe.

9 5/8" intermediate casing-DV tool at 3000+'.
Stage 1: 460 sacks (837 cuft) of 35/65 poz "G" with 6% gel, 1% CaCl₂, and 1/4 lb/sack cellophane flake. Followed by 370 sacks (426 cuft) Class "G". 50% excess to circulate to DV tool. WOC and circulate between stages for six (6) hours.
Stage 2: 650 sacks (1177 cuft) of 35/65 poz "G" with 6% gel and 1/4 lb/sack cellophane flake. Followed by 200 sacks (232 cuft) Class "G" with 1/4 #/sack cellophane flake. 50% excess to circulate to surface. WOC 12 hours. Run temperature survey after 8 hours if cement does not circulate. Pressure test to 2400 psi for 30 minutes prior to drilling out of intermediate casing.

KLM EXPLORATION COMPANY
BROWNING FEDERAL 33-1
RIO ARriba COUNTY, NEW MEXICO
PROPOSED VERTICAL PROFILE
AZIMUTH 9° 40' DECARES



DEPTH ARE REFERENCED TO BK9 7320' ELEVATION.

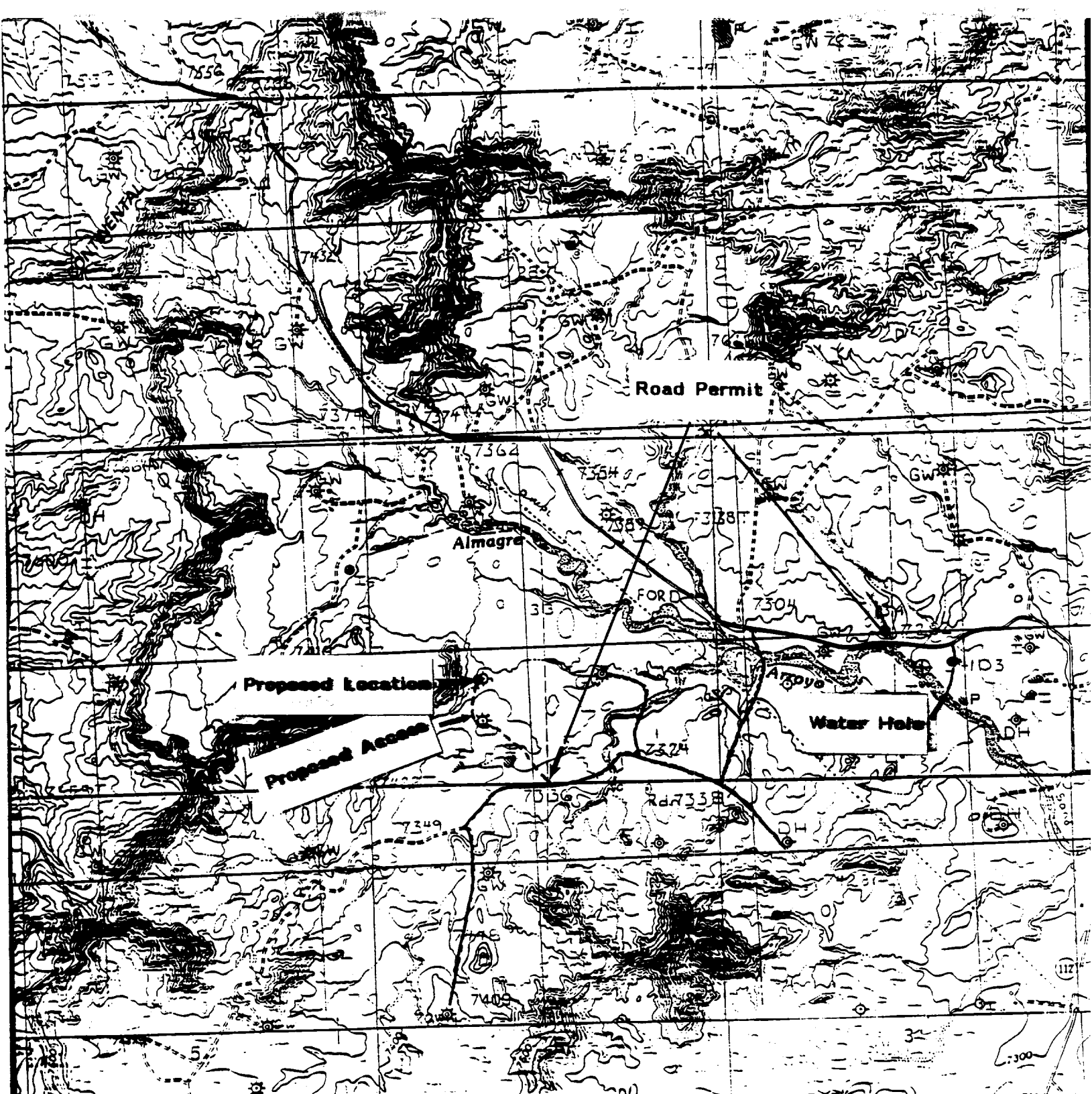


HORIZONTAL DRILLING SYSTEMS

ENSCO TECHNOLOGY COMPANY
1776 Yortlow, Suite 750, Houston, Texas 77056
Telephone: (713)961-8600 Facsimile: (713)962-0123

PROPOSED VERTICAL PROFILE
KLM EXPLORATION COMPANY
BROWNING FEDERAL 33-1
14 JUNE 91
APPROVED: [] CHECKED: [] DRAWN: CHMS M.
B00091A1

This well plot is prepared for the exclusive use of ENSCO Technology Company (ETC) and its customer, and may include highly confidential information of the customer as well as ETC Copyright and is to be used in strict confidence solely for use by ETC's customer.



VICINITY MAP

KLM Oil & Gas
Browning Federal 33-1
1650' FSL & 1710' FWL
Sec 33, T24N, R1W, NMPM
Rio Arriba County, New Mexico

Proposed location: ➡

Existing Access: ———

Proposed Access: - - - -

