Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-043-20456

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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

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

2. NAME OF OPERATOR: Jack A. Cole

3. ADDRESS OF OPERATOR: P. O. Box 191, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1080/N and 1110/E Sec. 7-T21N-R6W
A
At proposed prod. zone: Same

5. LEASE DESIGNATION AND SERIAL NO.: NM33383

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Alamos Canyon

9. WELL NO.: 3

10. FIELD AND POOL, OR WILDCAT: Wildcat Chacra

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 7-21N-6W

12. COUNTY OR PARISH: Sandoval

13. STATE: N. M.

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 15 miles SW Counselors, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 1110 ft.

16. NO. OF ACRES IN LEASE: 600

17. NO. OF ACRES ASSIGNED TO THIS WELL: 160

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: None

19. PROPOSED DEPTH: 2200

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6764 Gr.

22. APPROX. DATE WORK WILL START*: February 1, 1980

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4	8 5/8	24.0	~~75~~ 120	Circulate
6 3/4	4 1/2	10.5	2200	~~100~~ 150 sacks CIRCULATE

It is proposed to drill to TD of 2200'. Run ES-Ind and GR-Density logs, run 4 1/2" casing to TD. Perforate casing opposite Chacra sand and sand-water frac treat down casing; run 1" tubing to 2000' and complete as Chacra natural gas well.

Gas is not dedicated to pipeline. ~~APPROVAL VALID FOR 90 DAYS UNLESS DRILLING COMMENCED, 5-5-80~~

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OIL CON. COM.
DIST. 3

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 Jack A. Cole TITLE Operator DATE December 12, 1979

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED AS AMENDED
FEB 1980
James F. Sims
JAMES F. SIMS
DISTRICT ENGINEER

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

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

ah Frank

*See Instructions On Reverse Side

State

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
JACK A. COLE	ALAMOS CANYON	3

Unit Letter	Section	Township	Range	County
A	7	21N	6W	Sandoval

Actual Footage Location of Well:
1080 feet from the North line and 1110 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6764	Chacra	Wildcat	160 ✓ Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

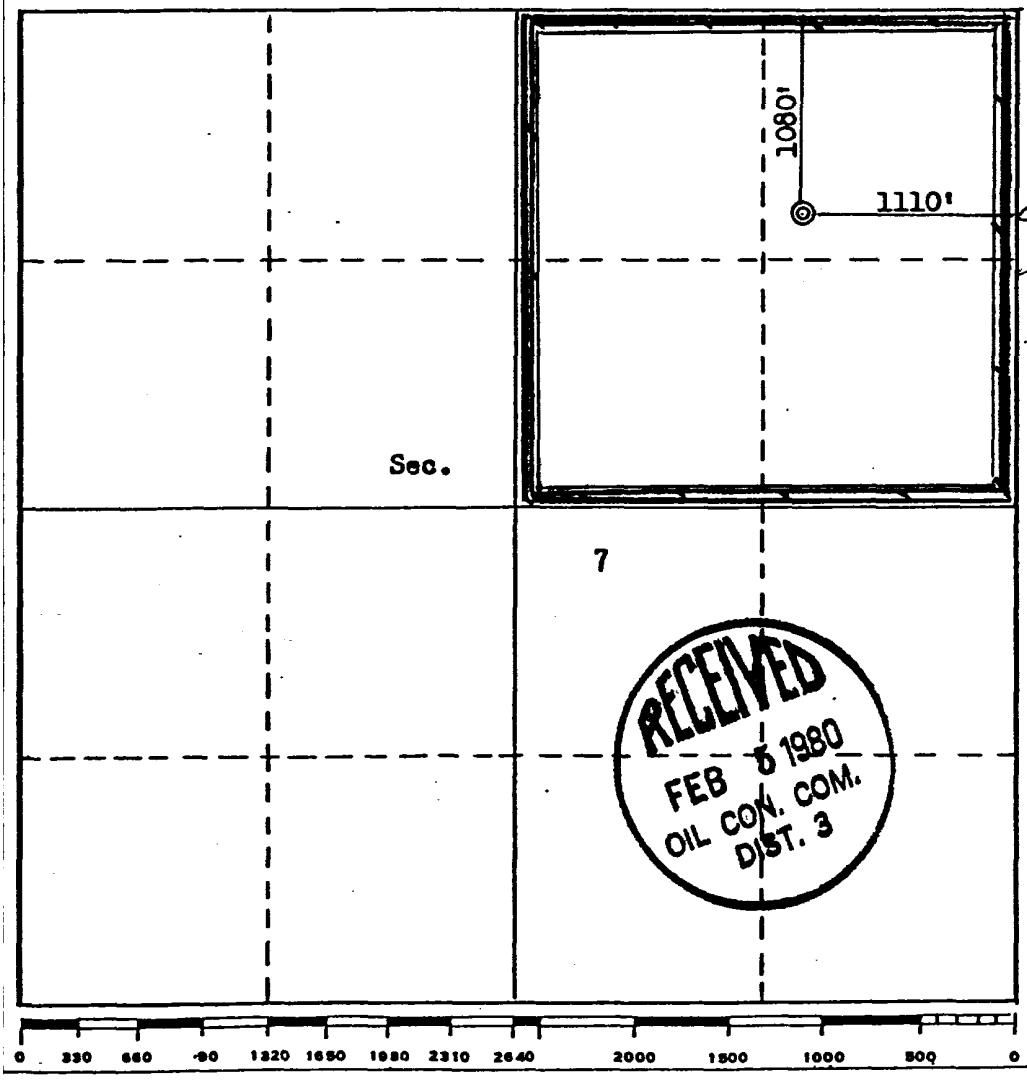
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions 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 communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



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CERTIFICATION

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

Name: Jack A. Cole

Position: Operator

Company:

Date: December 12, 1979

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.

Date Surveyed: December 4, 1979

Registered Professional Engineer and/or Land Surveyor: Fred B. Kerr Jr.

Certificate No. 3950

REGISTERED LAND SURVEYOR
FRED B. KERR, JR.

JACK A. COLE
PETROLEUM GEOLOGIST
P.O. BOX 191
FARMINGTON, NEW MEXICO 87401
(505) 325 - 1415

December 12, 1979

United States Department of Interior
Geological Survey-Durango District
P. O. Box 1809
Durango, Colorado 81301

Reference: 13 Point Environmental Program - Jack A. Cole - Alamos Canyon #3, 1080/N and 1110/E Sec. 7-T21N-R6W, Sandoval County, New Mexico

Gentlemen:

In compliance with governmental requirements, I hereby respectfully submit the following environmental data to accompany the application for permit to drill the above referenced test well.

1. Access to location from N.M. Highway 44, turn right at Counselors, New Mexico, on main road. Travel south approximately 12 miles and turn left approximately 3 miles, all on existing roads.

2. Existing road to be utilized to within ¼ mile of drillsite from which point a minimum width graded access road to be prepared to drillsite.

3. Well location as shown on attached survey plat and map.

4. Lateral road to well location as described in Item 2.

5. If gas production established, adequate production facilities to be installed immediately west of wellsite to accommodate a pipeline connection.

6. Water will be trucked to location from nearest source, a water hole located in NW¼, Sec. 16-T21N-R6W via existing roads.

7. A reserve pit will be utilized for waste disposal. Trash will be buried 4 feet below surface.

8. No camps are planned.

9. No airstrips are planned.

10. Location layout indicated on attached plat as furnished by Aztec Drilling Company.

11. Following drilling, mud pits to be fenced and allowed to dry, then filled with surface soil previously evacuated. Location, except for wellhead site and production equipment, to be restored to original condition as much as practicable.

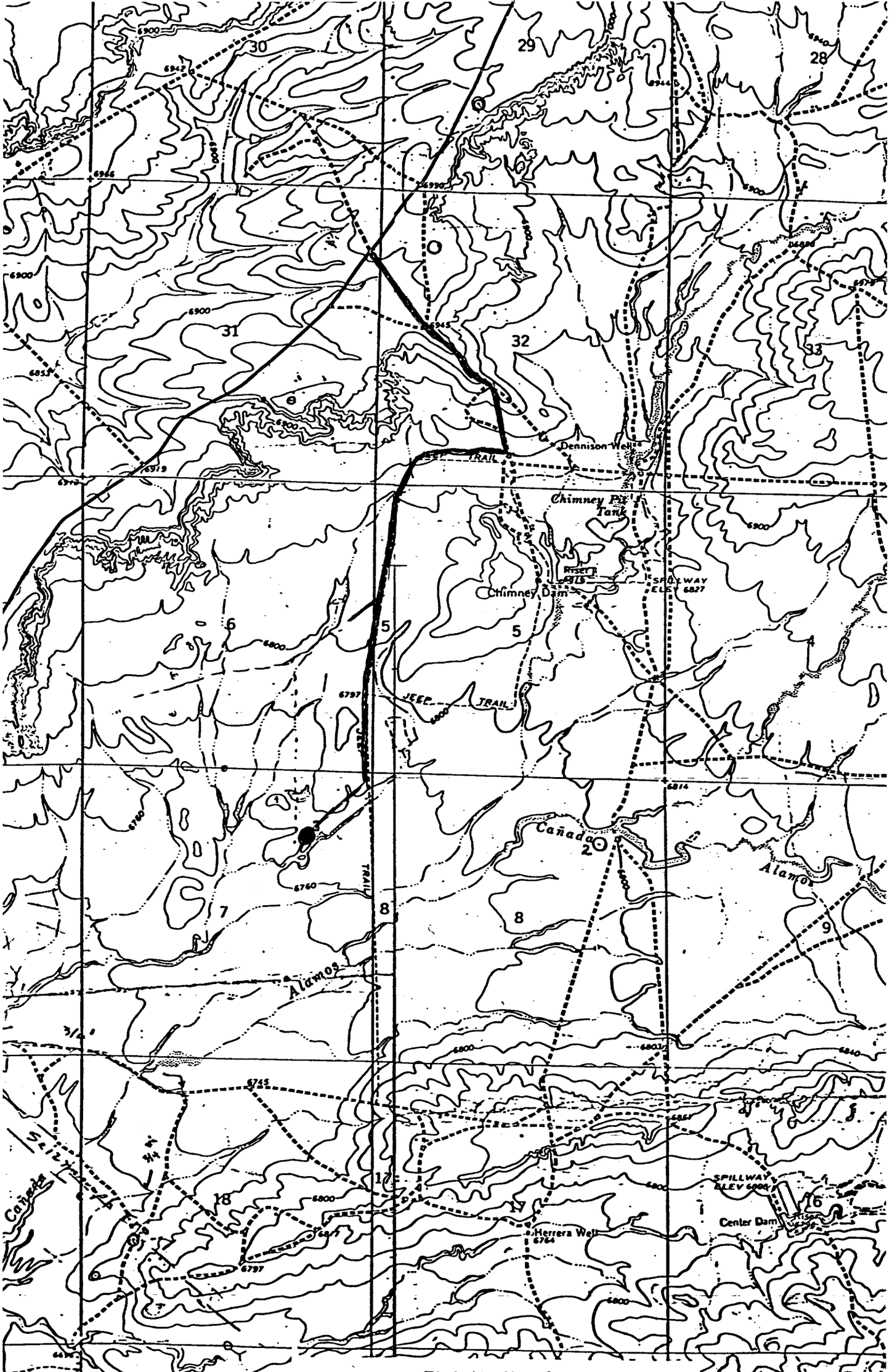
12. The location is located in an area of relatively flat topography. No major rivers are in the immediate vicinity.

13. Three sides of reserve pit shall be fenced during drilling operations and the fourth side to be fenced after rig moves.

Very truly yours,

Jack A. Cole

JAC:njs



Vicinity Map for
JACK A. COLE #3 ALAMOS CANYON
1080'FNL 1110'FEL Sec 7-T21N-R6W
SANDOVAL COUNTY, NEW MEXICO

JACK A. COLE
PETROLEUM GEOLOGIST
P.O. BOX 191
FARMINGTON, NEW MEXICO 87401
(505) 325 - 1415

JACK A. COLE
ALAMOS CANYON #3
1080/N and 1110/E Sec. 7-T21N-R6W
Sandoval County, New Mexico

Seven Point Well Control Program

1. Surface Casing.
   See Application for Permit to Drill.

2. Spools and Flanges.
   A. Surface Casing - 10", Series 600, 1500 psi W.P.
   B. Production, 10", Series 600, 1500 psi W.P.
   C. Tubing Head - Series 600, 1500 psi W.P.

3. Intermediate Casing.
   None

4. Blowout Preventers.
   Production Hole - 10", 300 psi
   Fill, kill and choke manifold - 5000 psi W.P.

5. Additional Equipment (If necessary)
   A. Kelly Cock
   B. Bit Float
   C. Degasser
   D. Pit Level Indicator
   E. Sub with Valve for drill pipe.

6. Anticipated Bottom Hole Pressure.
   1000 psi. Current mud program is for 9.2 lb./gal. mud with hydrostatic head of 1500 psi at 3000 feet. Mud weight will be increased if necessary for higher pressures.

7. Drilling fluid.
   Low solids. Low water loss.

Location Layout
Jack A. Cole
Alamos Canyon #3
Sec. 7-T21N-R6W

Aztec Well Service
Rig No. 1

JACK A. COLE
PETROLEUM GEOLOGIST
P.O. BOX 191
FARMINGTON, NEW MEXICO 87401
(505) 325 - 1415

December 12, 1979

United States Geological Survey
P. O. Box 1809
Durango, Colorado

Certification: Operator's Representative-Jack A. Cole,
P. O. Box 191, Farmington, New Mexico
(505) 325-1415 - Alamos Canyon #3

Gentlemen:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drilling site and access routes; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Jack A. Cole, and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Very truly yours,

Jack A. Cole
Operator's Representative

JACK A. COLE
PETROLEUM GEOLOGIST
P.O. BOX 191
FARMINGTON, NEW MEXICO 87401
(505) 325 - 1415

ADDENDUM TO INTENT TO DRILL APPLICATION

Jack A. Cole
Alamos Canyon No. 3
1080/N and 1110/E Sec. 7-T21N-R6W
Sandoval County, New Mexico

1. Surface casing to be changed from 70 feet to 120 feet 8 5/8", 24.0 lb/ft casing.

2. A schematic diagram of the blowout prevention equipment is enclosed. The BOP's will be hydraulically tested to the full working pressure after nippling up and after any use under pressure. Pipe rams will be operationally checked each 24 hour period as will blind rams each time pipe is pulled out of hole. Such checks of BOP equipment will be noted on daily drilling reports.

   Accessories to the BOP will include floor safety valve, and choke manifold with pressure rating equivalent to the BOP stack.

3. All casing and tubing strings will be new. The 8 5/8" surface casing will be 24.0 lb/ft, K-55 8 round ST&C. The 4 1/2" casing will be K-55 8 round ST&C.

4. The type of cement to be used is as follows:
   8 5/8" surface casing: Circulate 100 sacks of Class B, 2% $CaCl_2$.

   4 1/2" production casing: 150 sacks 50-50 pozmix, 2% gel to raise to surface.

5. The surface formation is Tertiary Wasatch-San Jose.

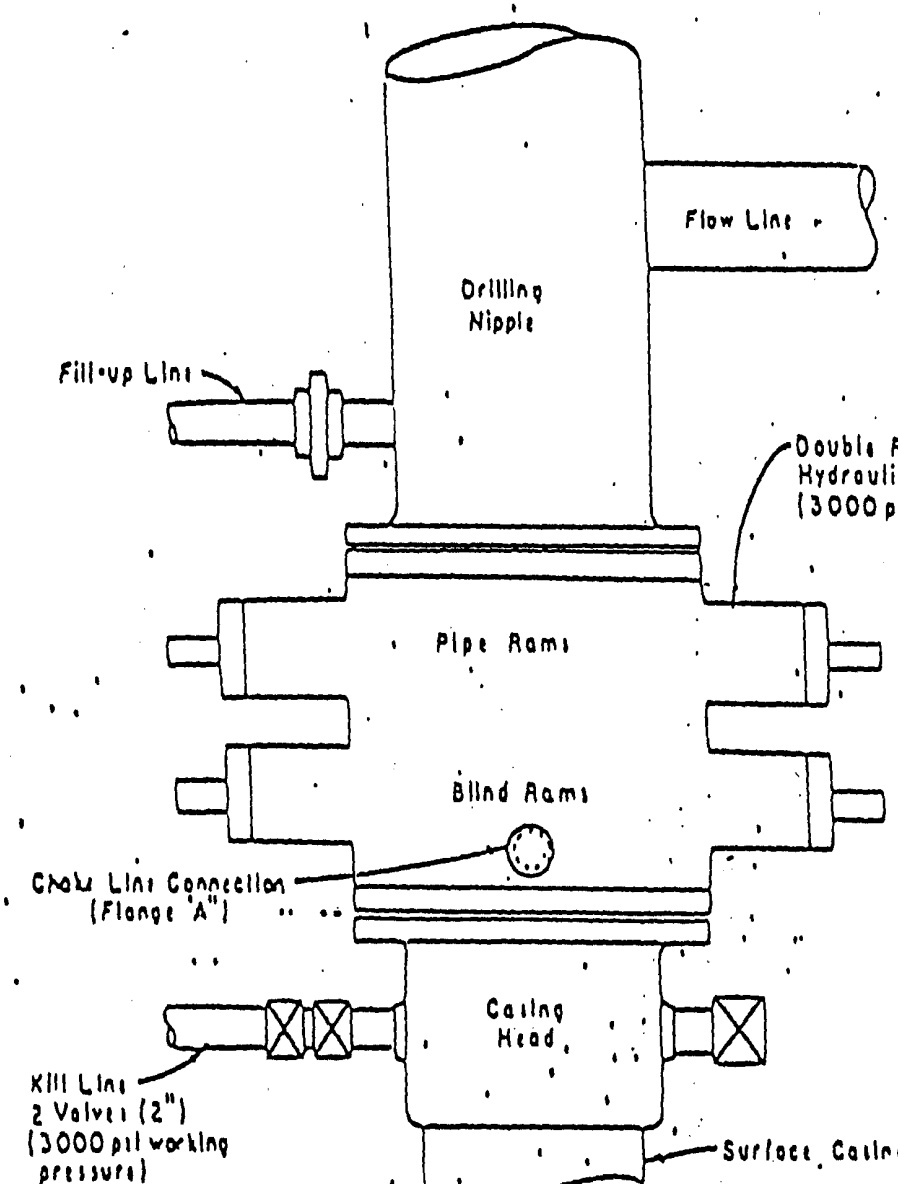
6. The estimated tops of geologic markers:

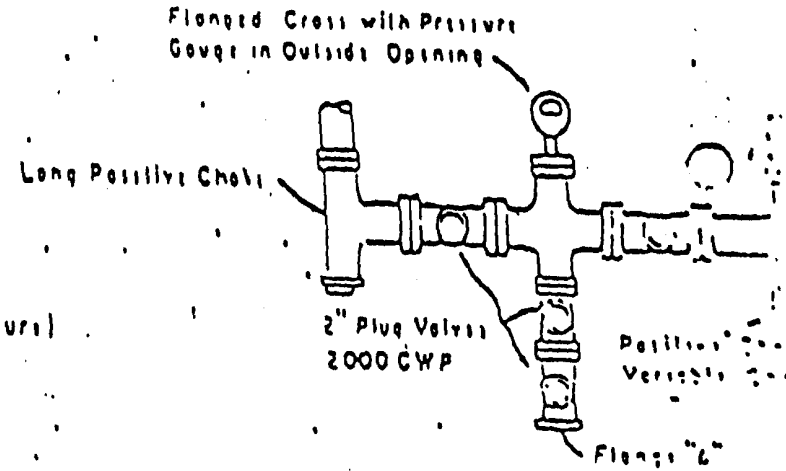
Ojo Alamo Sand	410
Fruitland Shale	610
Pictured Cliffs Sand	930
Lewis Shale	1110
Chacra Sand	1360
Mesaverde Sand	1710

7. Anticipated water zones:
   Ojo Alamo Sand
   Pictured Cliffs Sand
   Mesaverde Sand

8. Anticipated gas bearing zone:
   Chacra Sand

9. To protect the Ojo Alamo aquifer it is proposed to cement the production string from TD to the surface.





PLAN VIEW - CHOKE MANIFO

ALAMOS CANYON #3