

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM-21454	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Jack A. Cole		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR P. O. Box 919, Farmington, New Mexico 87401		8. FARM OR LEASE NAME Alamos Canyon	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 850' FSL, 1850' FEL At proposed prod. zone Same		9. WELL NO. 13	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 10 miles Southwest of Counselor Trading Post, N. M.		10. FIELD AND POOL, OR WILDCAT Wildcat <i>Under Chacra</i>	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 850'		11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA Sec. 4-T21N-R6W N.M.P.M.	
16. NO. OF ACRES IN LEASE 1040		12. COUNTY OR PARISH Sandoval	
17. NO. OF ACRES ASSIGNED TO THIS WELL 160		13. STATE N.M.	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 3000'		14. ROTARY OR CABLE TOOLS Rotary	
19. PROPOSED DEPTH 1600'		22. APPROX. DATE WORK WILL START* 6/1/81	
20. ELEVATIONS (Show whether DF, RT, GR, etc.) 6844' GL			

## 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	85'	100 sacks
7 7/8"	4 1/2"	ARE 10.50	1600'	250 sacks

WITH ATTACHED

This action is subject to administrative appeal pursuant to 30 CFR 290.

All producing intervals in Chacra Formation will be perforated and stimulated as necessary.

## EXHIBITS

- |   |                                |
|---|--------------------------------|
| "A" Location and Elevation Plat.        | "E" Access Road to Location.   |
| "B" Ten Point Compliance Program.       | "F" Radius Map of Field        |
| "C" Blowout Preventer Diagram.          | "G" Drill Rig Layout.          |
| "D" Multi-Point Requirements for A.P.D. | "H" Fracturing Program Layout. |

The gas from this well is not committed.  
The SE/4, Section 4 is dedicated to this well

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. FOR: JACK A. COLE  
ORIGINAL SIGNED BY  
SIGNED: EWELE N. WALSH  
Ewele N. Walsh, P. E.  
(This space for Federal or State office use)

President, Walsh Engr. & Production Corp.  
TITLE  
DATE 2/16/81

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

APPROVED  
AS AMENDED

MAR 24 1981  
James F. Sims  
DISTRICT ENGINEER

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

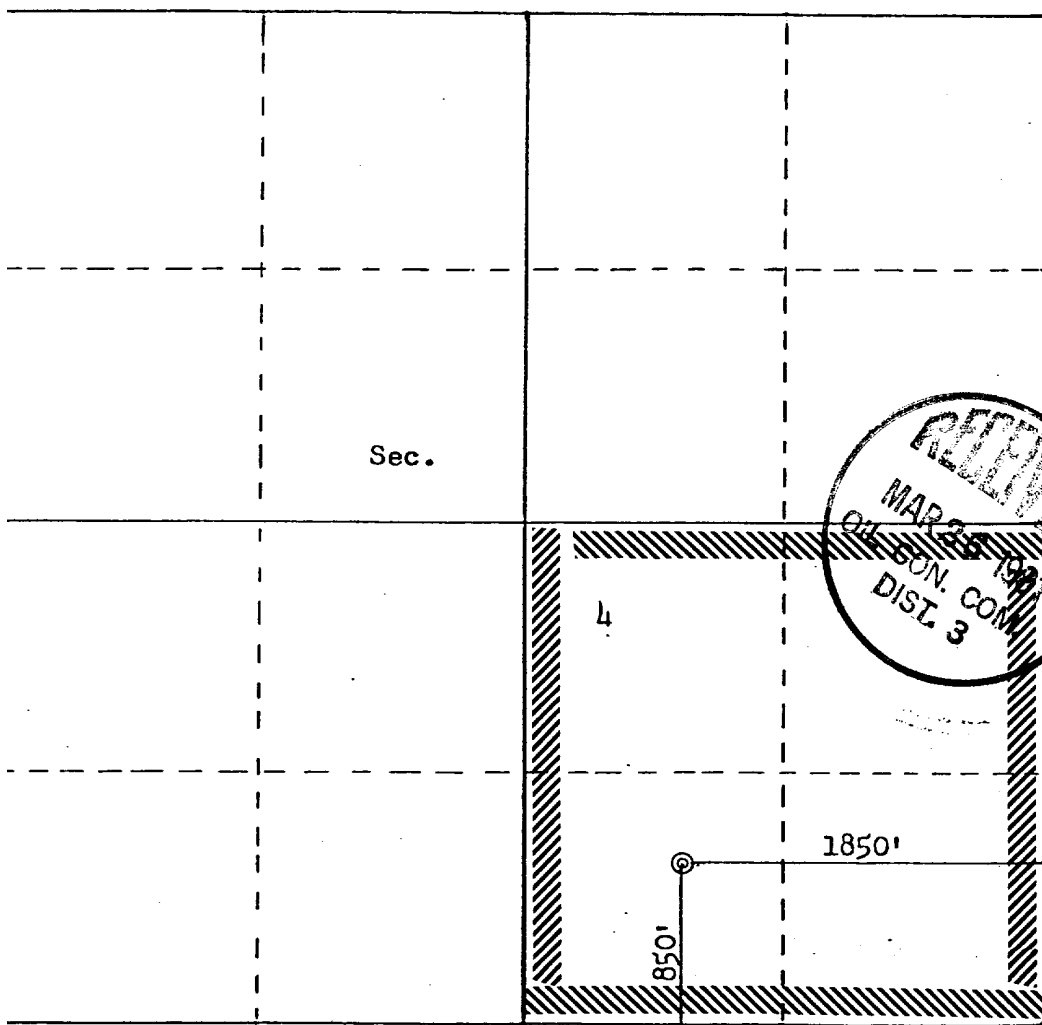
Operator <b>JACK A. COLE</b>		Lease <b>ALAMOS CANYON</b>		Well No. <b>13</b>
Unit Letter <b>0</b>	Section <b>4</b>	Township <b>21N</b>	Range <b>6W</b>	County <b>Sandoval</b>
Actual Footage Location of Well: <b>850</b> feet from the <b>South</b> line and <b>1850</b> feet from the <b>East</b> line				
Ground Level Elev. <b>6844</b>	Producing Formation <b>Chacra</b>	Pool <b>Undesignated Chacra</b>	Dedicated Acreage <b>160</b> 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.



Scale: 1"=1000'

<b>CERTIFICATION</b>	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
FOR: <b>JACK A. COLE</b> <b>ORIGINAL SIGNED BY</b> <b>EWELL N. WALSH</b>	
Name	<b>Ewell N. Walsh, P. E.</b> <b>President</b>
Position	<b>Walsh Engineering &amp; Prod. Corp</b>
Company	<b>2/16/81</b>
Date	
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	<b>December 11, 1980</b>
Registered Professional Engineer and Land Surveyor <b>Fred B. Kerr, Jr.</b>	
Certificate No.	<b>3550</b>
<b>KERR, JR.</b>	

EXHIBIT "B"

TEN-POINT COMPLIANCE PROGRAM

OF NTL-6 APPROVAL OF OPERATIONS

Attached to Form 9-331C

JACK A. COLE  
ALAMOS CANYON NO. 13  
850'FSL, 1850'FEL, Sec. 4-T21N-R6W  
Sandoval County, New Mexico

1. The Geologic Surface Formation  
Tertiary Wasatch - San Jose

2. Estimated Tops of Important Geologic Markers

Ojo Alamo	410'
Fruitland Shale	610'
Pictured Cliffs	930'
Lewis	1110'
Chacra	1360'
Mesa Verde	1710'

3. Estimated Depths of Anticipated Water, Oil, Gas or Minerals

Ojo Alamo, Water  
Pictured Cliffs, Water  
Chacra, Gas  
Mesa Verde, Water

4. The Proposed Casing Program

<u>Hole Size</u>	<u>Interval</u>	<u>Section Length</u>	<u>Size (OD)</u>	<u>Weight, Grade and Joint</u>	<u>New or Used</u>
12 $\frac{1}{4}$ "	85'	85'	8-5/8"	24# K-55 8 round ST&C	New
6 $\frac{1}{2}$ "	85'-T.D.	1600'	4-1/2"	9.50 K-55 8 round ST&C	New

Sacks Class "B", 3½ CaCl<sub>2</sub> & 1/4 lb. Flocele per sack.

500 gallons mud flush followed by 150 sacks 65-35 Pozmix  
1/4 lbs. Gilsonite per sack followed by 100 sacks 50-50  
lbs. Gilsonite and 6 lbs. salt per sack.

Minimum Specifications for Pressure Control

Schematic diagram of the blowout preventer equipment.  
Hydraulically tested to the full working pressure after  
any use under pressure. Pipe rams will be operationally  
checked each period, as will blind rams each time pipe is pulled  
Such checks of BOP will be noted on daily drilling reports.

Will include floor safety valve, and choke manifold  
Equivalent to the BOP stack.

Characteristics of the Proposed Circulating Muds

Gel-chemical with adequate stocks of sorptive agents on  
in the event of spills of fuel and oil in the surface. Heavier  
addition to be added if pressure requires.

<u>Type</u>	<u>Weight/Gal.</u>	<u>Viscosity (Sec.)</u>	<u>Water Loss</u>	<u>Additives</u>
Mud	9.5	50	N.C.	Lime
base	9.2	35	6.0	CMC & Starch

Equipment to be Used

to be used at the bit.

will be monitored visually.

will be on the floor to be stabbed into the drill  
if it is not in the string.

ing and Coring Programs to be Followed

S and CNL-FDC

e

ormal Pressures or Temperatures

es or temperatures have been noted or reported in  
e area nor at the depths anticipated in this well.  
e expected is 300 psig.

or other hazardous fluids or gases have been found,  
o exist at these depths in the area.

g Date and Duration of the Operations

rting date is set for June 1, 1981 or as soon as  
ination and approval of drilling requirements.  
e completed within Ten days.

# Diagram

JACK A. COLE  
ALAMOS CANYON NO. 13  
850' FSL, 1850' FEL, Sec. 4-T21N-R6W  
Sandoval County, New Mexico

## PLAN VIEW - CHOKE MANIFOLD

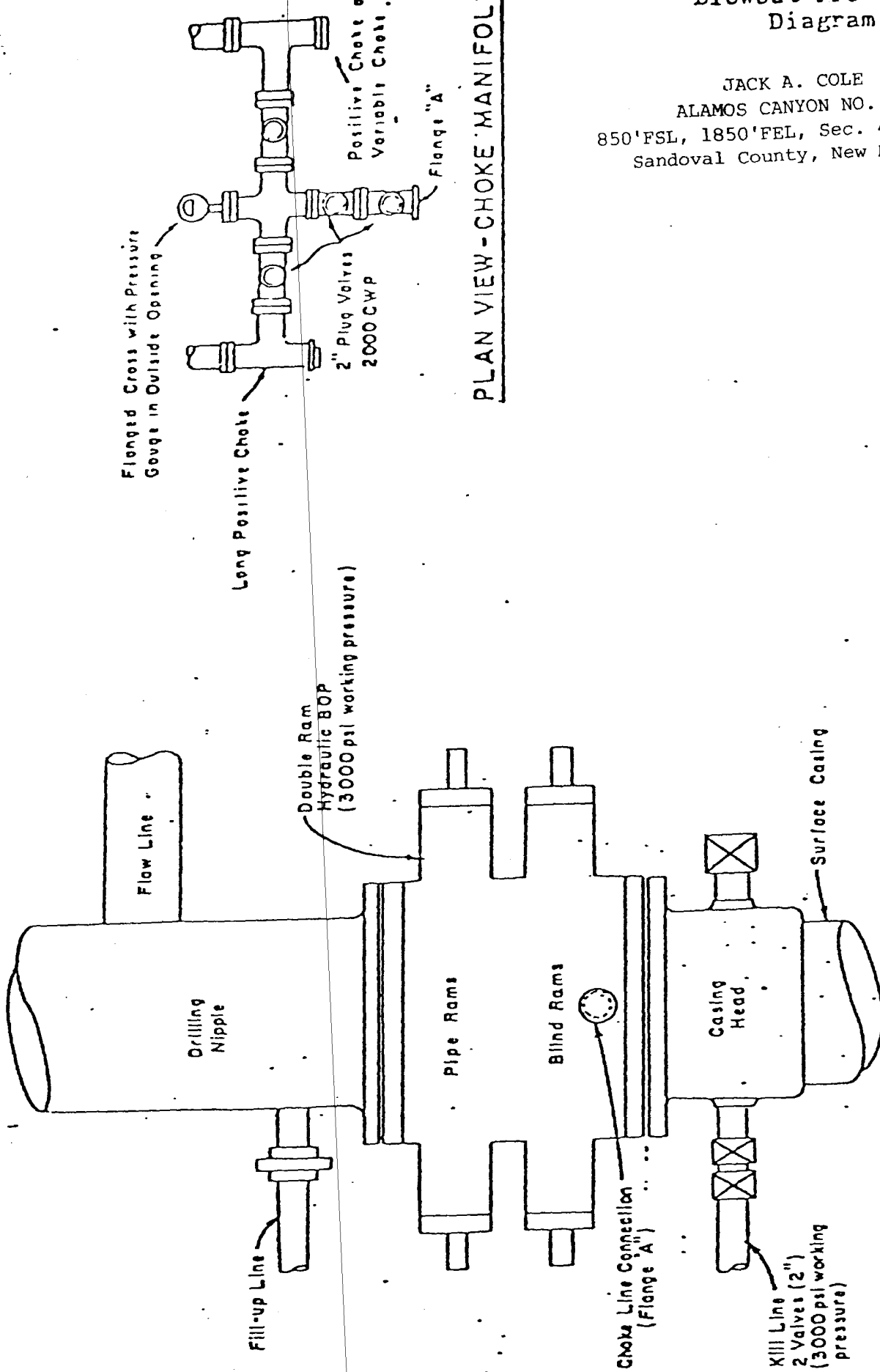


EXHIBIT "D"

MULTI-POINT REQUIREMENTS TO ACCOMPANY A.P.D.

Attached to Form 9-331C

JACK A. COLE  
ALAMOS CANYON NO. 13  
850'FSL, 1850'FEL, Sec. 4-T21N-R6W  
Sandoval County, New Mexico

1. Existing Roads

A. The proposed well site and elevation plat is shown as EXHIBIT "A".

B. Directions:

South from Bloomfield, N.M. in Highway 44 to Counselors Trading Post. Turn right onto dirt road for approximately 9 1/2 miles. Turn left approximately 1 1/2 miles to location.

C. All roads to location are indicated  
Existing roads will be improved.

D. Exploratory wells, existing roads:

N/A

E. Development wells, existing roads:

See Exhibit "E"

F. Improvement and maintenance:

Existing roads need no improvement. Access road will be improved and maintenance will be performed as required.

2. Planned Access Roads

Exhibit "E". Access road, 1/2 mile, will have maximum width of 20'. No turnouts, no culverts, no gates, cattleguards or fence cuts. Surfacing material will be native soil

3. Location of Existing Wells

For all existing wells within one mile radius of development well, see EXHIBIT "F".

(1) There are no water wells within a one mile radius of this location.

(2) There is one abandoned well in this one mile radius.

**Walsh** ENGINEERING & PRODUCTION CORP.

- (4) There are no disposal wells.
- (5) There are no wells presently being drilled.
- (6) There are no producing wells within this one mile radius.
- (7) There is one shut-in wells.
- (8) There are no injection wells.
- (9) There are no monitoring or observation wells for other uses.

4. Location of Existing and/or Proposed Facilities

A. Within one mile radius of location, the following existing facilities are owned or controlled by lessee/operator:

- (1) Tank Batteries: None
- (2) Production Facilities: None
- (3) Oil Gathering Lines: None
- (4) Gas Gathering Lines: None
- (5) Injection Lines: None
- (6) Disposal Lines: None

B. If production is obtained, new facilities will be as follows:

- (1) All production facilities will be located on the pad.
- (2) All well flow lines will be buried and will be on the well site and battery site.
- (3) Drill pad will be 200 feet long and 155 feet wide.
- (4) No construction materials for battery site and pad will be necessary.
- (5) Any necessary pits will be fenced and flagged to protect livestock and wildlife.
- (6) Rehabilitation whether well is productive or dry, will be made on all unused areas in accordance with BLM stipulations.



Water Source

Water will be Chapman water hole at Escrito, N.M..

Transported by truck over existing roadways.

Well to be drilled on this lease.

Materials

Materials are needed for drilling and access to drilling location unless production is obtained. Materials will be sufficient or will be provided by contractor as needed.

Materials will be taken off Federal or Indian Lands.

Materials for construction of access roads are

Roads presently exist as shown on EXHIBIT "E".

Materials and Disposal

Drill cuttings will be buried in the reserve pit and covered.

Drill cuttings will be handled in the reserve pit.

Drill cuttings will be collected during drilling test or while making production test. Cuttings will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in drums. Spills of oil, gas, salt waters or other fluids will be cleaned up and removed.

Latrine facilities will be provided for human waste.

Flammable waste and salts and other chemicals from drilling or testing will be handled in trash. Waste will be disposed of in burn pit. Drill cuttings, drilling mud and tailings will be kept in reserve pit. Reserve pit will be fenced on three sides. North side fenced upon removal of the rig.

When drilling is out, all materials will be cleaned up and no materials will be left on location. Any dangerous open pits will be closed during drilling and kept closed until such time as they are leveled.

8. Ancillary Facilities

No air strip, camp or other facilities will be built during drilling of this well.

9. Well Site Layout

- (1) EXHIBIT "G" is the Drill Pad Layout.

Topsoil, if removal required, will be stockpiled per BLM specifications determined at time of pre-drill inspection.

- (2) EXHIBIT "G" is a plan diagram of the proposed rig and equipment reserve pit, burn and trash pit, pipe racks and mud tanks. No permanent living facilities are planned. There will be a trailer on site.

- (3) The reserve pits will not be lined. Steel mud tanks may be used during drilling operations.

10. Plans for Restoration

- (1) Backfilling, leveling and contouring are planned as soon as all pits have dried. Waste disposal and spoils materials will be buried or hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.
- (2) The soil banked material, if removal required, will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula provided by the
- (3) Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from becoming entrapped; and the fencing will be maintained until leveling and cleanup is accomplished.
- (4) The rehabilitation operations will begin as soon as possible after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation is considered best from July 15 to September 15, unless requested otherwise.

11. Other Information

- (1) Soil: Sandy Clay Loam  
Vegetation: Sage Brush, Blue grams, galletta
- (2) The primary surface use is for grazing. The surface is owned by the BLM.
- (3) The closest live water is the None
- The closest occupied dwellings - 1 mile
- There are no known archaeological, historical, or cultural heritages that will be disturbed by this drilling.
- (4) Restrictions: Operator must have all rights from surface to base of Chacra.
- (5) Drilling is planned for on or about June 1, 1981 Operations should be completed within 5 days.

12. Lessee's or Operator's Representative

Ewell N. Walsh, P.E. President  
Walsh Engineering & Production Corporation  
P. O. Box 254  
Farmington, New Mexico 87401  
Telephone: (505) 327-4892, 24 hrs.

13. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which 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.

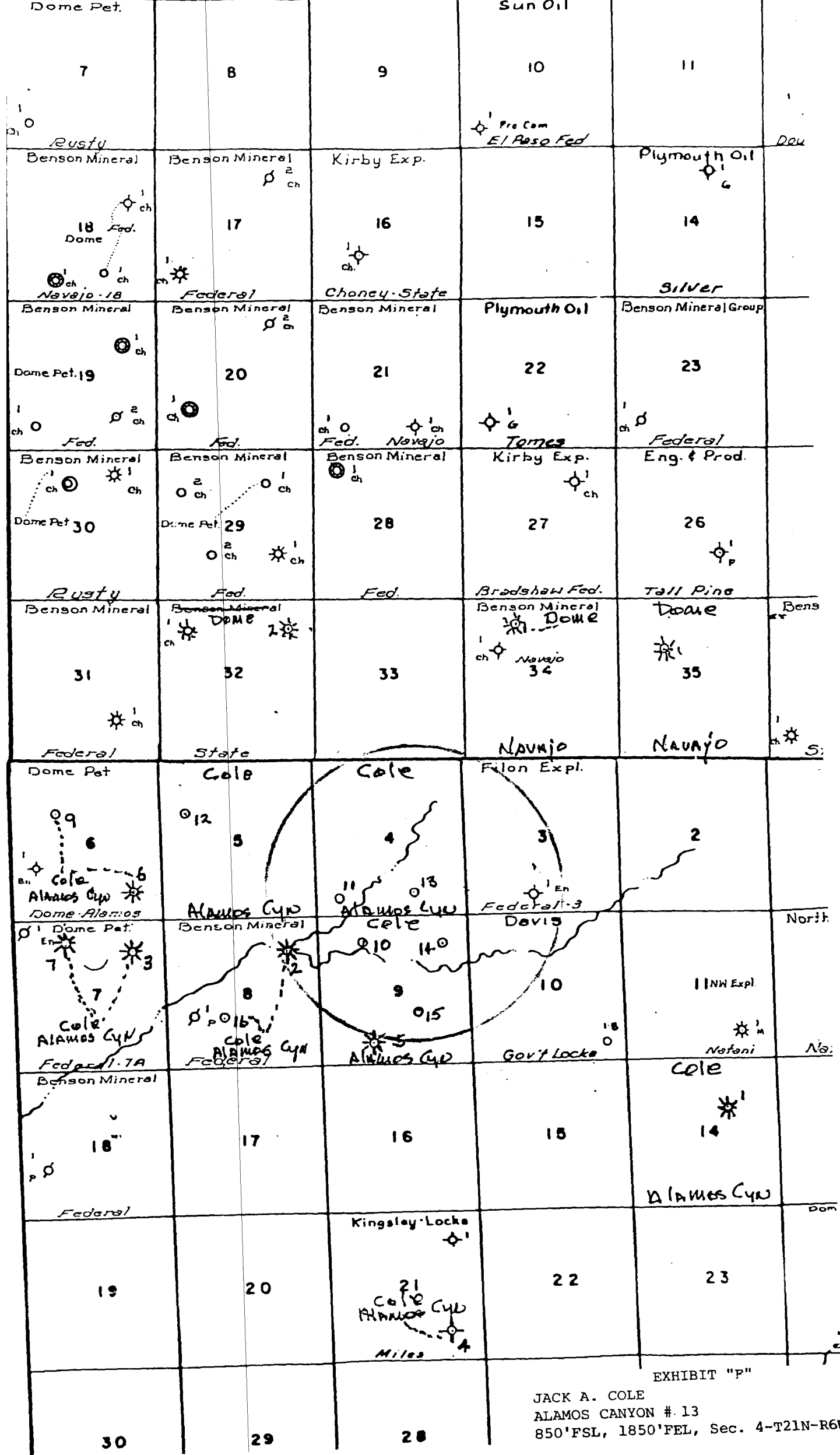
2-16-81  
Date

ORIGINAL SIGNED BY  
EWELL N. WALSH

Ewell N. Walsh, P.E.  
President  
Walsh Engineering & Production Corp.

**Walsh** ENGINEERING & PRODUCTION CORP.



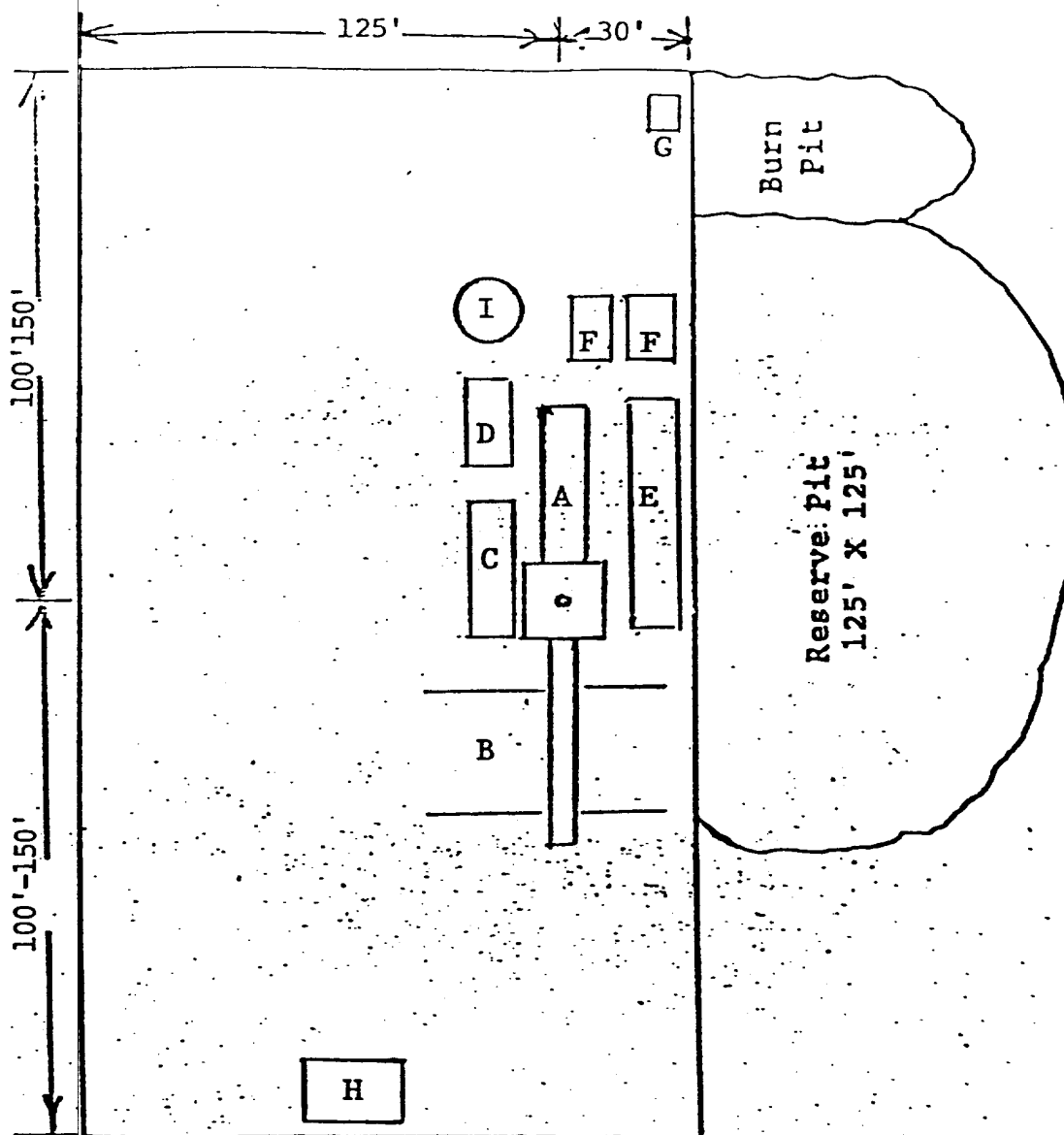


JACK A. COLE  
ALAMOS CANYON #. 13  
850'FSL, 1850'FEL, Sec. 4-T21N-R6W

# EXHIBIT "G"

## Drill Rig Layout

JACK A. COLE  
ALAMOS CANYON NO. 13  
850'FSL, 1850'FEL, Sec. 4-T21N-R6W  
Sandoval County, New Mexico



- A - Rig
- B - Piperacks
- C - Doghouse and Water Tank
- D - Fuel
- E - Mud Pit
- F - Pumps
- G - Toilet
- H - Trailer House
- I - Oil Storage

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# EXHIBIT "H"

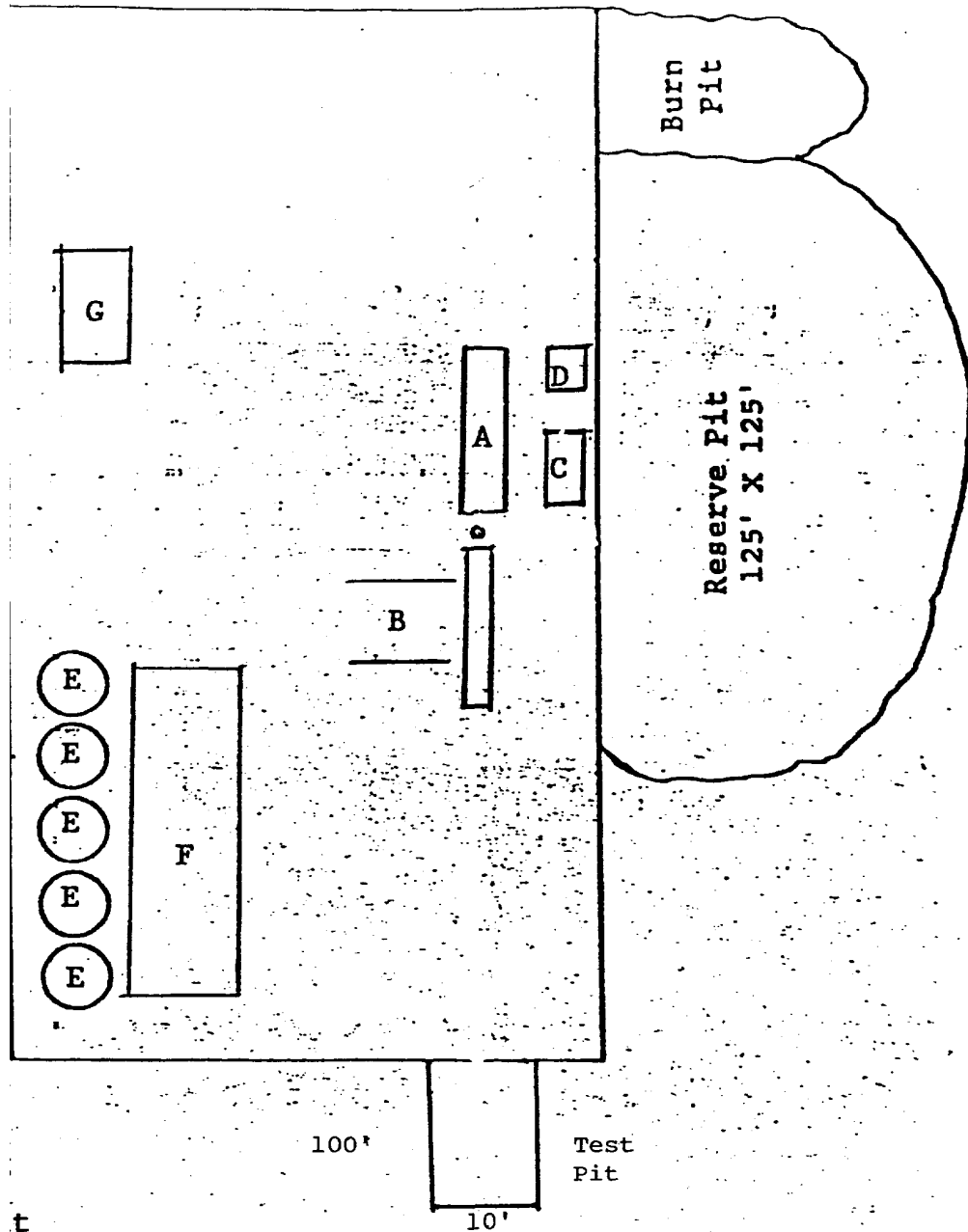
## Fracturing Program Layout

JACK A. COLE

ALAMOS CANYON NO. 13

'FSL, 1850'FEL, Sec. 4-T21N-R6W

Sandoval County, New Mexico



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