

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

| | | | | | |
|---|--|--|--|--|--|
| 1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> | | | 5. LEASE DESIGNATION AND SERIAL NO. 30-039-22522 | | |
| b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/> | | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache | | |
| 2. NAME OF OPERATOR AMOCO PRODUCTION COMPANY | | | 7. UNIT AGREEMENT NAME Jicarilla Contract 146 | | |
| 3. ADDRESS OF OPERATOR 501 Airport Drive, Farmington, New Mexico 87401 | | | 8. FARM OR LEASE NAME Jicarilla Contract 146 | | |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1600' FSL and 1780' FEL, Section 3, T25N, R5W At proposed prod. zone Same | | | 9. WELL NO. 39 | | |
| 11. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 16 miles Northeast of Counselor, New Mexico | | | 10. FIELD AND POOL, OR WILDCAT Gonzales Mesaverde Otero Chacra | | |
| 13. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 134' | | | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA NW/4, SE/4, Section 3, T25N, R5W | | |
| 14. NO. OF ACRES IN LEASE 2557.2 | | | 12. COUNTY OR PARISH Rio Arriba | | |
| 15. PROPOSED DEPTH 5386' | | | 13. STATE New Mexico | | |
| 16. NO. OF ACRES ASSIGNED TO THIS WELL 160 + 160 | | | 22. APPROX. DATE WORK WILL START As soon as permitted | | |
| 21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6605' GL | | | | | |

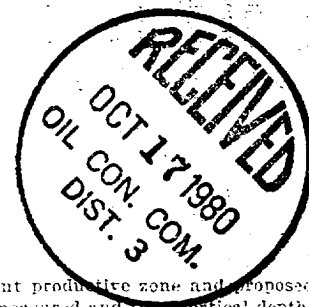
PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|----------------|-----------------|---------------|---|
| 12-1/4" | 8-5/8" (New) | 24# K-55 | 300' | 315 sx Class "B" w/2% CaCl2-circ |
| 7-7/8" | 5-1/2" (New) | 15.5# K-55 | 5386' | Stage 1: 365 sx Class "B" Neat-circ |
| | | | | Stage 2: 550 sx CI B 65:35 POZ, 6% gel, 2% med tuf plug/sx and .8% FLA. |
| | | | | Tail in w/100 sx CI B Neat-circ. |

Amoco proposes to drill the above dual well to further develop the Otero Chacra/Gonzales Mesaverde reserves. The well will be drilled to the surface casing point using native mud. The well will then be drilled to TD with a low solids nondispersed mud system. Completion design will be based on open hole logs. A copy of all logs will be filed upon completion. Additional information required by NTL-6 for the application to drill and a multi-point surface use plan are attached.

The gas from this well is not dedicated to a gas sales contract.

Set DV tool at 3900'.



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.

SIGNED W. L. Peterson TITLE District Engineer DATE October 3, 1980

(This space for Federal or State office use)

| | |
|--|--|
| PERMIT NO. | APPROVED AS AMENDED |
| APPROVED BY CONDITIONS OF APPROVAL IF ANY | <u>W. L. Peterson</u> DISTRICT ENGINEER |

APPROVAL DATE

TITLE

DATE

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

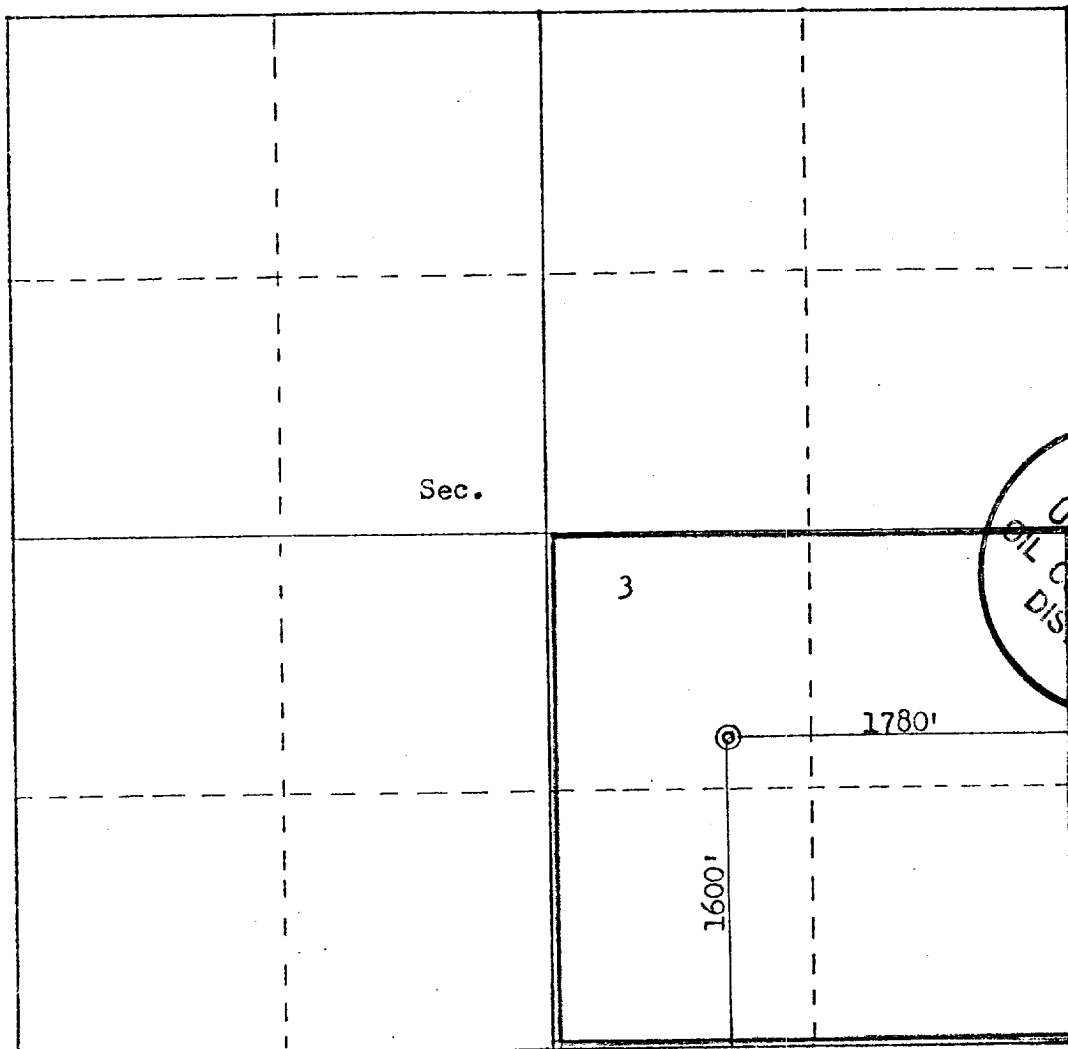
| | | | | | |
|--|--|------------------------|--|--|-----------------------|
| Operator AMOCO PRODUCTION COMPANY | | | Lease JICARILLA CONTRACT 146 | | Well No. 39 |
| Unit Letter J | Section 3 | Township 25N | Range 5W | County Rio Arriba | |
| Actual Footage Location of Well: 1600 feet from the South line and 1780 feet from the East line | | | | | |
| Ground Level Elev. 6605 | Producing Formation Chacra/Mesaverde | | Pool Otero Chacra/Gonzales Mesaverde | Dedicated Acreage: 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.



Scale: 1"=1000'

CERTIFICATION

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

R.A. Downey

Name

R.A. DOWNEY

Position

DISTRICT ENGINEER

Company

AMOCO PRODUCTION COMPANY

Date

SEPTEMBER 5, 1980

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

July 29, 1980

Registered Professional Engineer and Land Surveyor

Fred B. Kern Jr.
Fred B. Kern Jr.

Certificate No.

3950

SUPPLEMENTAL INFORMATION TO FORM 9-331C

JICARILLA CONTRACT 146 NO. 39
1600' FSL & 1780' FEL, SECTION 3, T25N, R5W
RIO ARRIBA COUNTY, NEW MEXICO

The geologic name of the surface formation is the Tertiary San Jose.

Estimated tops of important geologic markers and potential water, oil, or gas bearing formations:

| <u>FORMATION</u> | <u>DEPTH</u> | <u>ELEVATION</u> |
|---------------------|---------------------|------------------|
| Ojo Alamo | 2350' | 4629' |
| Kirtland | 2525' | 4094' |
| Fruitland | 2721' | 3898' |
| Pictured Cliffs | 2881' | 3738' |
| Chacra (if present) | 3785' | 2834' |
| Mesaverde | Cliff House 4546' | 2073' |
| | Point Lookout 5100' | 1519' |
| Gallup | ' | ' |
| Dakota | ' | ' |
| TD | 5386' | 1233' |

Estimated KB elevation: 6619'

Drilling fluid to TD will be a fresh water, low solids non-dispersed mud system. Open hole logging program will include logs from TD to below surface casing:

DIL-SP-GR: Surf-TD
FDC-CNL-GR: Surf-TD
GR: 0-2000'

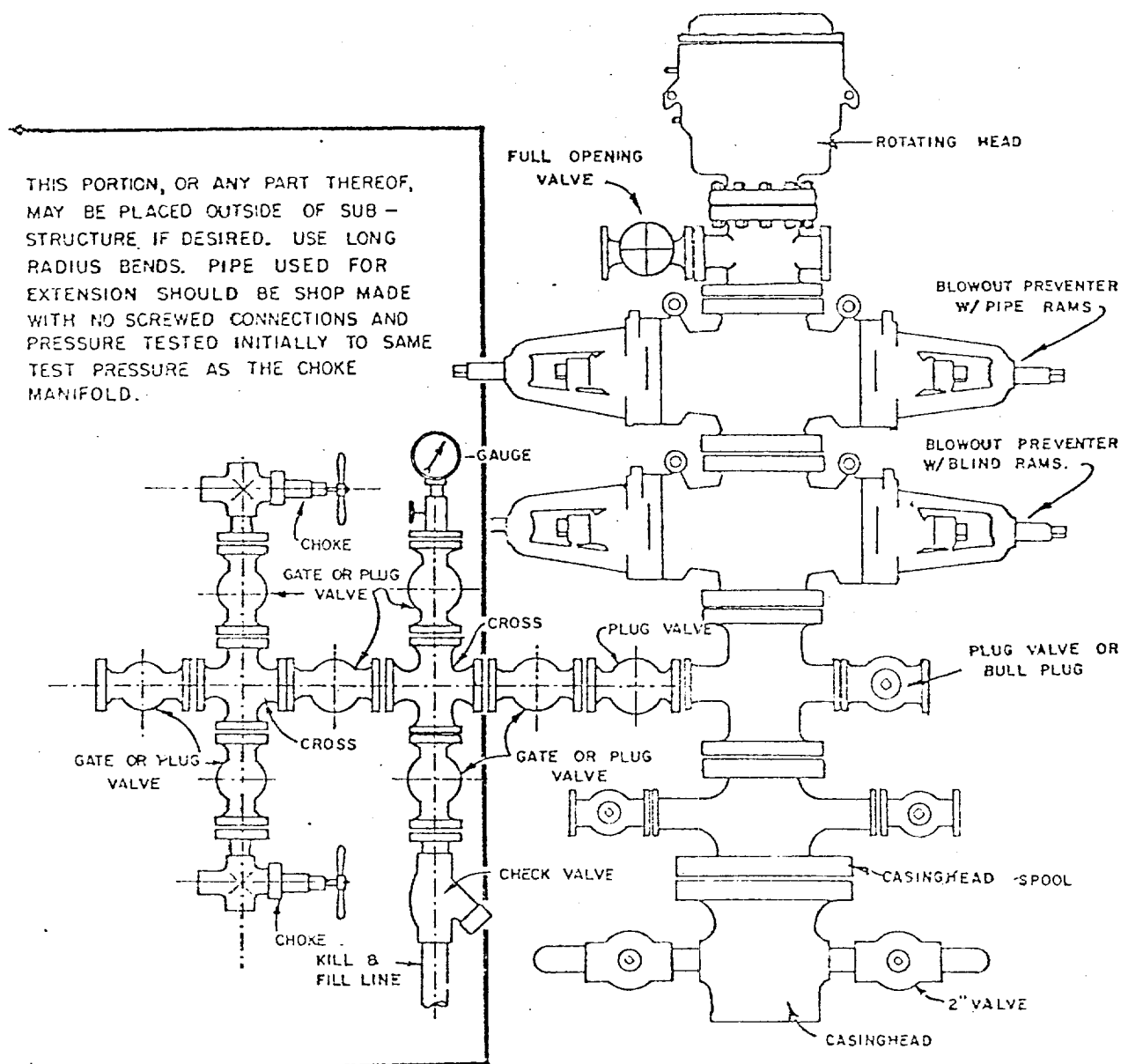
Completion design will be based on these logs. No cores or drill stem tests will be taken.

Operations will commence when permitted and last approximately 3 weeks.

Amoco's standard blowout prevention will be employed (see attached drawing).

In the past, drilling in this area has shown that no abnormal pressures, temperatures, nor hydrogen sulfide gas will be encountered.

1. Blowout Preventers and Master Valve to be fluid operated, and all fittings must be in good condition.
2. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is being drilled through.
3. Nipple above Blowout Preventer shall be same size or larger than BOP being drilled through.
4. All fittings to be flanged.
5. Omsco or comparable safety valve must be available on rig floor at all times with proper connection or sub. The I.D. of safety valve should be as great as I.D. of tool joints of drill pipe, or at least as great as I.D. of drill collars.



BLOWOUT PREVENTER HOOKUP

API Series # 900

EXHIBIT D-4

OCTOBER 16, 1969

Operation of BOP by closing both pipe and blind rams will be tested each trip or, on long bit runs, pipe rams will be closed once each 24 hours.

MULTI-POINT SURFACE USE PLAN

JICARILLA CONTRACT 146 NO. 39
1600' FSL & 1780' FEL, SECTION 3, T25N, R5W
RIO ARriba COUNTY, NEW MEXICO

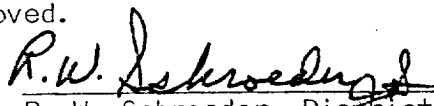
1. The attached topographic map shows the proposed route to the location.
2. It will not be necessary to build any access road.
3. Existing oil and gas wells within a one-mile radius of our proposed well have been spotted on the lease road map.
4. There is a 380-barrel tank and facilities located at Jicarilla Contract 146 Well No. 17, approximately one-fourth mile north.
5. Water will be hauled from Tapacito Wash.
6. No construction materials will be hauled in for this location.
7. A 125' by 125' pit will be built on location to hold all drilling waste. Upon completion of the well, pit will be fenced and waste and liquids left to dry, then pit will be filled and leveled. If any liquids remain, they will be hauled away prior to back filling.
8. There are neither airstrips nor camps in the vicinity.
9. The well site layout, reserve, burn and trash pits are shown on the attached Drill Site Specification Sheet. A 3-foot cut will be made on north corner.
10. Restoration of the surface will be accomplished by cleaning up and leveling upon completion of the well. Reseeding of the site will be carried out as instructed by the Bureau of Indian Affairs.
11. The general topography is a hilly terrain with slope to the northwest, and alluvial deposits, with sandy clay-adobe soil; vegetation consists of brome and sagebrush.

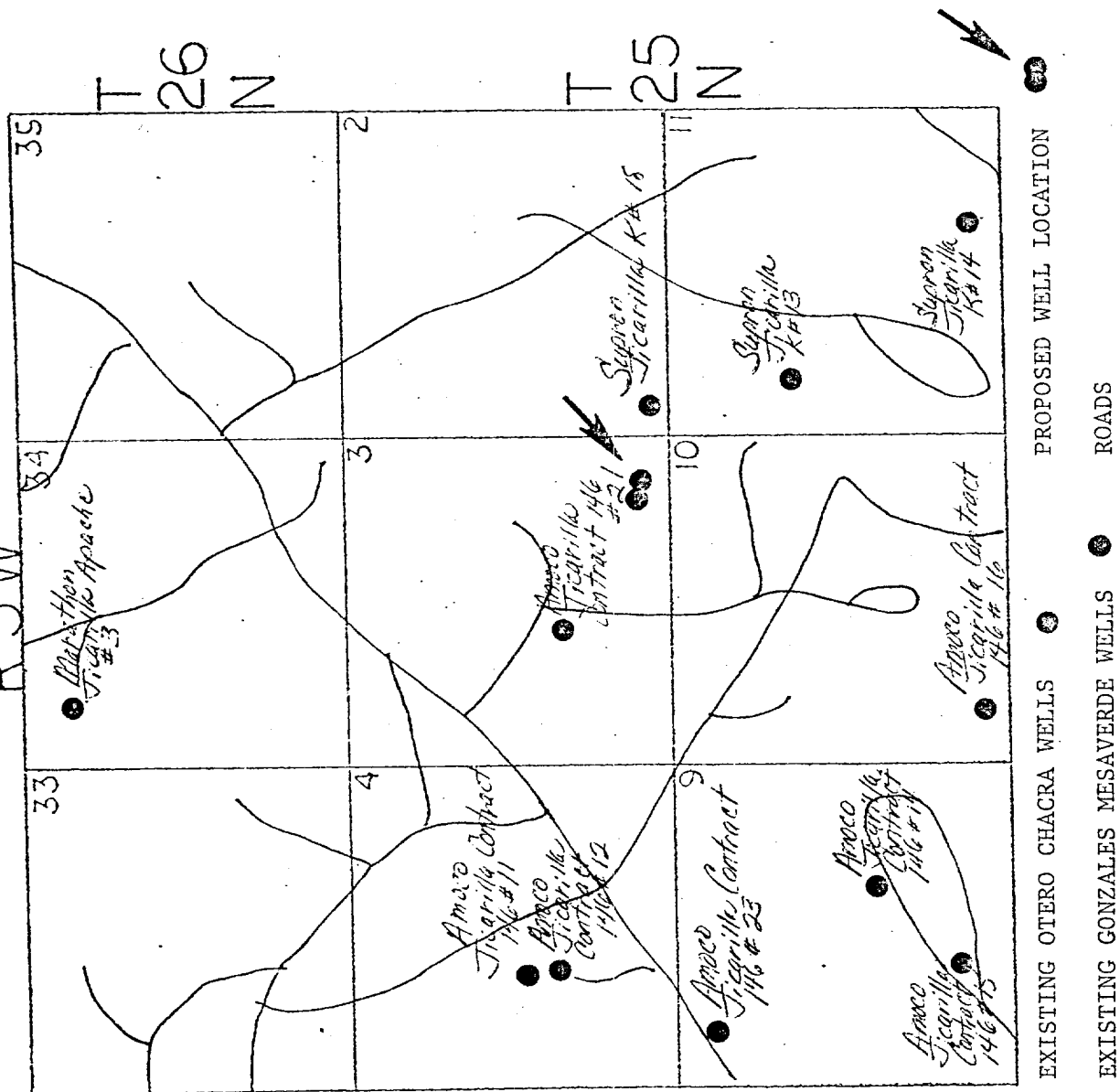
Representatives of the U. S. Geological Survey's Farmington Office and the Jicarilla Tribe's Dulce Office inspected the site with Amoco personnel. Cultural resources inspection was conducted by an archaeologist from San Juan College.

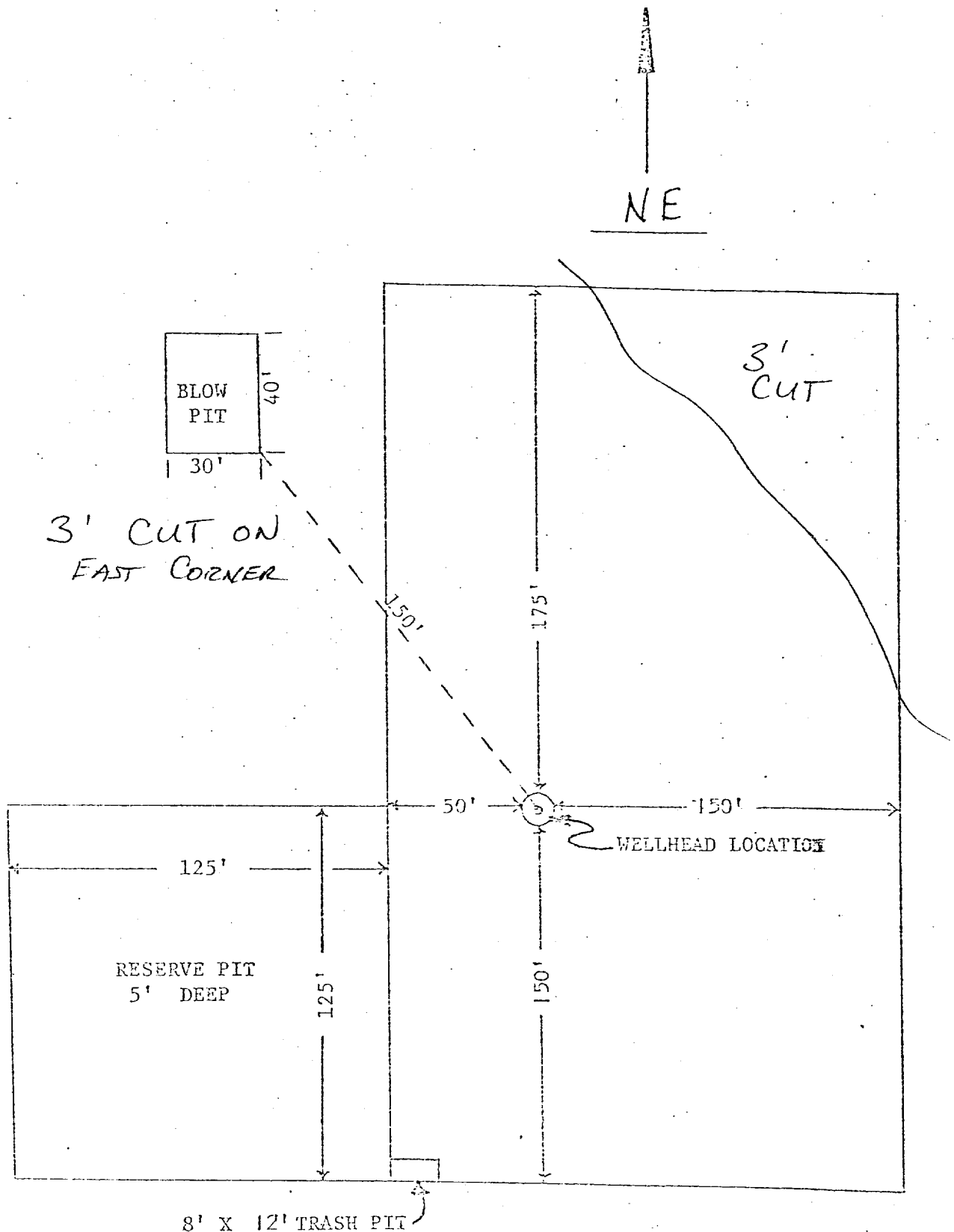
12. Operator's Representative: R. W. Schroeder
Phone: Office: 505-325-8841; Home: 505-325-6164
Address: 501 Airport Drive, Farmington, NM 87401

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 AMOCO PRODUCTION COMPANY and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

Date October 1, 1980


R. W. Schroeder, District Superintendent





APPROXIMATELY 1.2 ACRES

| | |
|----------------------------------|---------------|
| Amoco Production Company | SCALE: 1"=50' |
| DRILLING LOCATION SPECIFICATIONS | |
| JICARILLA CONTRACT 146 #39 | DRG. NO. |