SUBMIT IN TRIPLICATE*

(Other instructions on reverse side) 5. LEASE DESIGNATION AND SERIAL NO.

Form approved. Budget Bureau No. 42-R1425.

| UNITED STATES | | | | | |
|---------------|----|-----|----------|--|--|
| DEPARTMENT | OF | THE | INTERIOR | | |

GEOLOGICAL SURVEY

| GLOLOGICAL SULVET | | | | <u>Jicarilla Contract 146</u> |
|---|--|-----------------------------------|--------------|---|
| APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK | | | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME |
| In. Type of work | | | | Jicarilla Apache 7. UNIT AGREEMENT NAME |
| DRILL 🗵 | DEEPEN | PLUG BAG | CK 📋 | 7. UNIT AGREEMENT NAME |
| OIL GAS WELL OT | | SINGLE X MULTIP | LE | 8. FARM OR LEASE NAME |
| WELL L.J. WELL L.J. OT 2. NAME OF OPERATOR | THER | ZONE 🔯 ZONE | | Jicarilla Contract 146 |
| AMOCO PRODUCTIO | N COMPANY | | | 9. WELL NO. |
| C. ADDRESS OF OPERATOR | | <i>i</i> | | 30 |
| 501 Airport Dri | ve, Farmington, | New Mexico 87401 | | 10. FIELD AND POOL, OR WILDCAT |
| 4. LOCATION OF WELL (Report location clearly At surface | | | | Otero Chacra |
| 880' FNL and 16 | 30' FWL, Section | on 9, T25N, R5W | | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA |
| At proposed prod. zone | | | | NE/4, NW/4, Section 9, |
| Same 14. DISTANCE IN MILES AND DIRECTION FR | OM NEAREST TOWN OR POS | ST OFFICE* | | T25N, R5W 12. COUNTY OR PARISH 13. STATE |
| 15 miles North | Northeast of Co | ounselor, New Mexico | | Rio Arriba New Mexico |
| 15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST | 11011110031 01 00 | 16. NO. OF ACRES IN LEASE | 17. No. 6 | F ACRES ASSIGNED |
| PROPERTY OR LEASE LINE, FT. (Also to bearest drig, unit line, if any | ., 880' | 2557.20 | TOT | HIS WELL |
| 18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLET | | 19. PROPOSED DEPTH | 20. ROTA | RY OR CABLE TOOLS |
| OR APPLIED FOR, ON THIS LEASE, FT. | 825 | 3917' | | Rotary |
| 21. ELEVATIONS (Show whether DF, RT, GR, | etc.) | | | 22. APPROX. DATE WORK WILL START* |
| 6724 ' GL | | | | As soon as permitted |
| 23. | PROPOSED CASI | NG AND CEMENTING PROGRA | M | |
| SIZE OF HOLE SIZE OF CASE | i | OOT SETTING DEPTH | <u> </u> | QUANTITY OF CEMENT |
| 12-1/4" 8-5/8" (N | | | | Class "B" w/2° CaCl2-cire |
| 11111 7-7/8" - 1-401/2"ARE | The instantian | -55 39171 | 830 sx | : Class "B" 50:50 POZ,6% ge |
| BOTH THE PROPERTY AND ATTACHE | د با اد استم | no to a iministrative | | tuf plug/sx and 0.8% FLA |
| AMESO proposes to drill t | appleal pursuant to | SU GRE 290. | | n w/75 sx Class "B" Neat- |
| the Otero Chacra reserves | The wall will | o turther develop | circ. | |
| the surface casing point | | | | |
| then be drilled to TD wit | _ | | | |
| system. Completion desig | | | | |
| logs. A copy of all logs | | | | |
| Additional information re | | | | OFFIFE |
| cation to drill and a mul | ti-point surfac | e use plan are | | |
| attached. | | | | |
| The gas from this well is | dedicated to E | I Paso Natural | | AUG |
| Das. | | | | OIL CO 9 1980 |
| | | | | DION COM |
| | | | | OIL CON COM. |
| . ABOVE SPACE OFFICIANT PROPOSED PROGES | Are If proposal is to due | nou or play hook give lote on pr | ionané nauti | |
| ome. If proposal is to drill or deepen di | rectionally, give pertinen | t data on subsurface locations an | d measured | l and true vertical depths. Give blowout |
| reventer program, if any. | | | | |
| PAR | | District Essina | | |
| SIGNED A. T. Chi Men | Du. Tr | ELE DISTRICT ENGINE | 36L | DATE July 21, 1980 |
| (This space for Federal or State office | use) | | | |
| PERMIT NO. | | ATTITION AT MARKS | | |
| | | | | |
| APPROVED BY June Wem | (A. 7) | P(.:: | | DATE |
| conditions of theroval, be any: | | | | |
| | A service of the serv | | | |
| 1 4 | | | | |
| ol Sac | | | | |
| ~ | | MIMOCO | | |

OIL CONSERVATION DIVISION

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

Form C-107 Revised 10-1-78

| | All dists | nces must be from | n the cuter hounds | ottes of the Section | m. | |
|----------------------------------|--|---|--------------------|---------------------------------------|--|---|
| Operator | | | Lease | | | Well No. |
| AMOCO PRODUCT | ION COMPANY | | JICARILL | CONTRACT | 146 | 30 |
| Unit Letter Sec | tion Township | > | Range | County | | |
| C . | 9 25 | 5N | 5W | Ric | o Arriba | |
| Actual Footage Location 880 | Manth | | 1630 | · · · · · · · · · · · · · · · · · · · | 7. | |
| Ground Level Elev. | Producing Formation | line and | | feet from the | | line |
| 6724 | Chacra | 1 | otero C | hacra | De | edicated Acreage: 160 |
| | reage dedicated to thone lease is dedicate yalty). | | | | | |
| 3. If more than or dated by comm | unitization, unitizatio | ownership is de n, force-pooling "yes;" type of | g. etc? | | interests of al | l owners been consoli- |
| No allowable w | no," list the owners a essary.) | nd tract descri | ptions which h | ave actually b | ated (by commun | d. (Use reverse side of nitization, unitization, proved by the Commis- |
| | | | | | С | ERTIFICATION |
| 1630' | 880- | | 1 | | toined herein best of my kn | fy that the information con- is true and complete to the owledge and belief. Albumum |
| | Sec. | | | | Company | ENGINEER DDUCTION COMPANY |
| | | 9 | | | Digreby cert shown on this notes of actu- | My that the well location plot was plotted from field absurveys made by me or rvision and that the same officet to the best of my |
| | | | | | Date Surveyed May 21, Registered Profected/or Land Surveyed Fred B. Certificate No. | |
| 330 660 -90 1 | 320 1650 1930 2310 26 | 40 2000 | 1500 1000 | 800 0 | 3950 | To a state of the |

SUPPLEMENTAL INFORMATION TO FORM 9-331C

JICARILLA CONTRACT 146 NO. 30 880' FNL & 1630' FWL, SECTION 9, 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:

| FORMATION | DEPTH | ELEVATION |
|--|---------------|---|
| Ojo Alamo | 2437 1 | +4300 • |
| Kirtland | 2587 • | +4150 • |
| Fruitland | 2817 • | +3920 • |
| Pictured Cliffs | 2962 ' | +3775 • |
| Chacra (if present) | 2832 ' | +3905 • |
| Mesaverde Cliff House Point Lookout | † † · | . • • • • • • • • • • • • • • • • • • • |
| Gallup | 1 | 1 |
| Dakota | Ť | 1 |
| TD | 3917 • | +2820 • |

Estimated KB elevation: 6737

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:

> IND-SP-GR FDC-CNL-GR

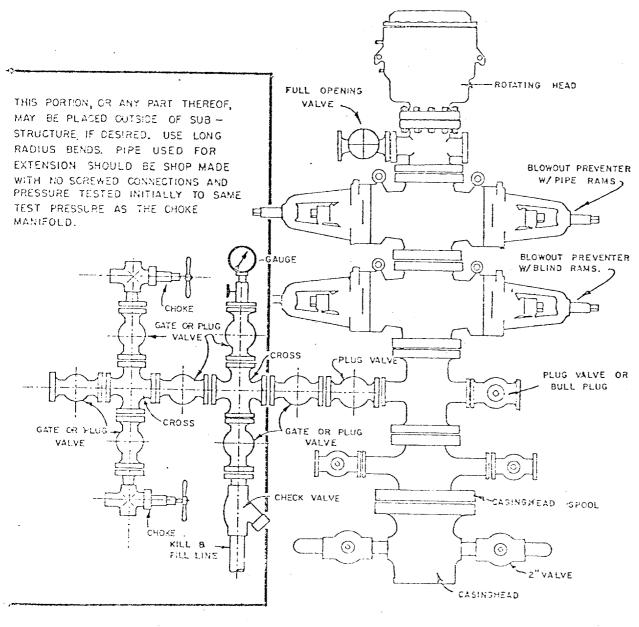
Completion design will be based on these logs. No cores or drill stem tests will be taken.

Operations will commence when permitted and last approximately 3 weeks.

Ambuo'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. 30 880' FNL & 1630' FWL, SECTION 9, T25N, R5W RIO ARRIBA COUNTY, NEW MEXICO

- 1. The attached topographic map shows the proposed route to the location.
- 2. It will be necessary to improve an existing road which is 1000 feet in length.
- 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 300-barrel tank and facilities located at Jicarilla Contract 146 Well No. 13E, 900 feet southwest.
- 5. Water will be hauled from Tapacito water holes.
- 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 4-foot cut will be made on southwest side.
- 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.
- II. The general topography is a sloping area with sandy loam type soil; vegetation consists of sagebrush, native grasses and juniper trees.

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.

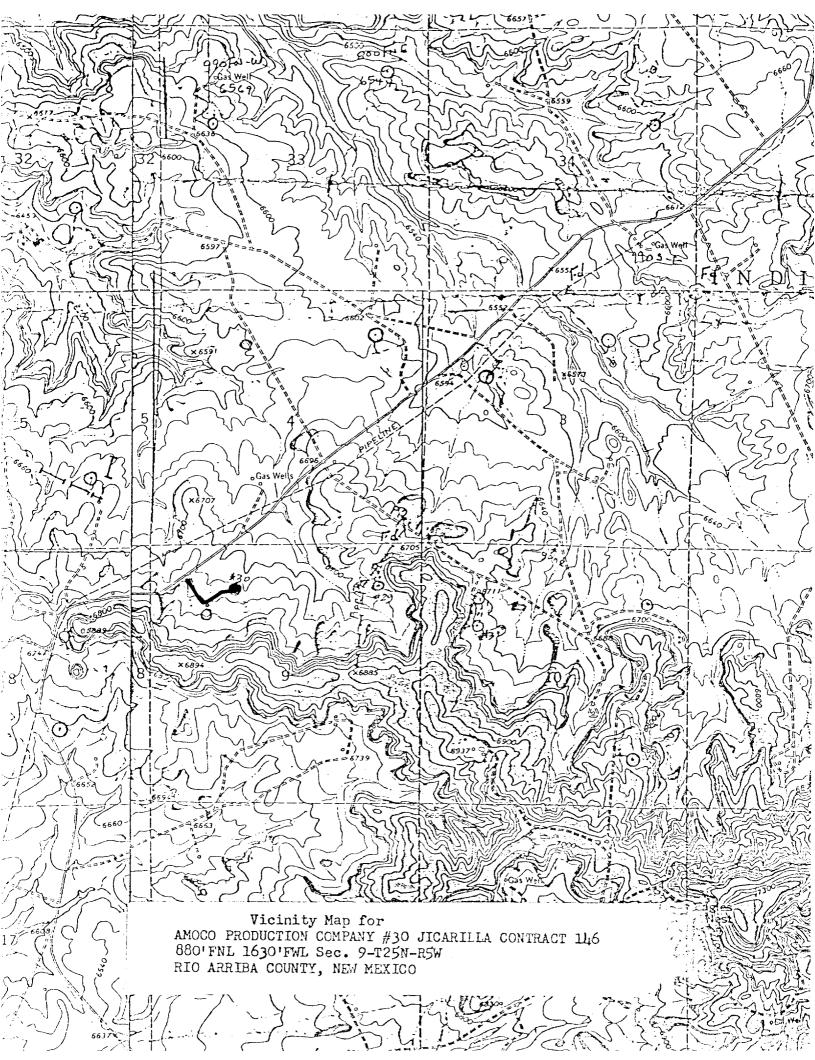
12. Operator's Representative: R. W. Schroeder

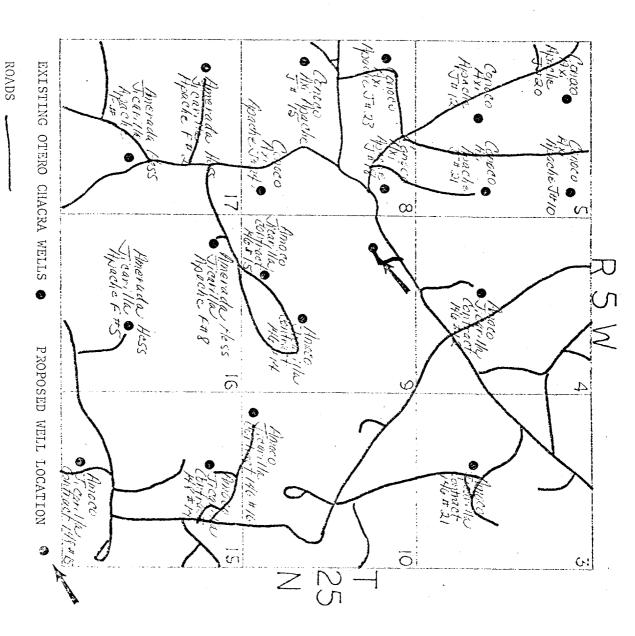
Phone: Office: 505-325-8841; Home: 505-325-6164 Address: 501 Airport Drive, Farmington, NM 87401

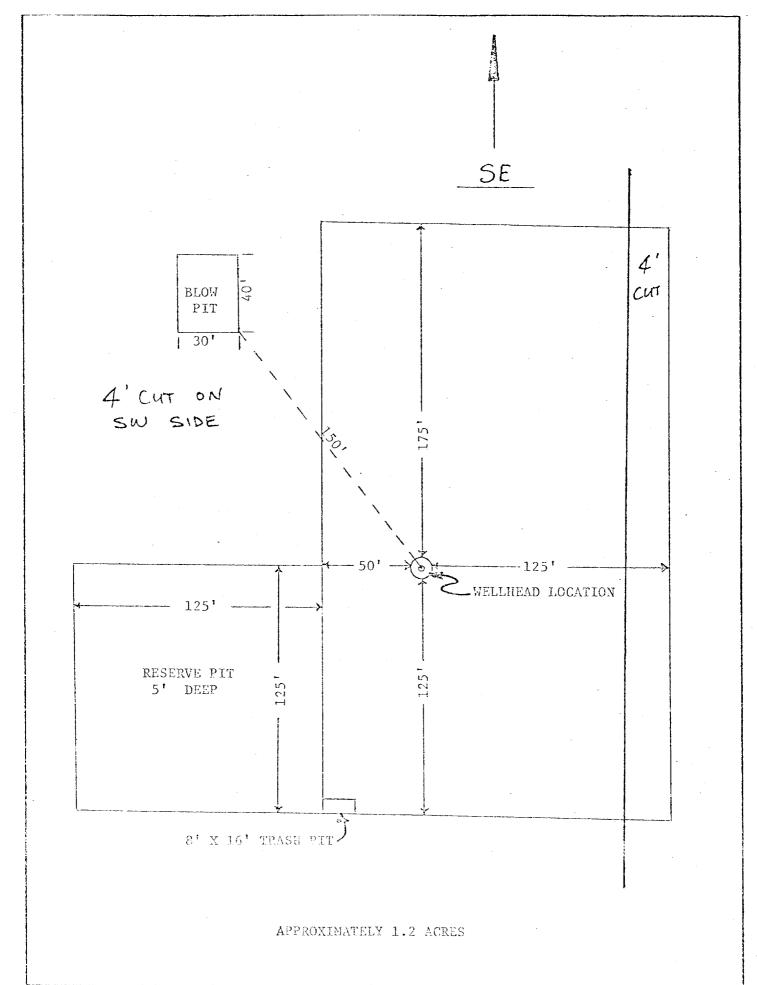
Certification: I hereby certify that I, or persons under my direct supervision, have increated the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the 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 _____ June 25, 1980

. W. Schroeder, District Superintendent







| Amoco Production Company | scale: 1"=50" |
|----------------------------------|---------------|
| DRILLING LOCATION SPECIFICATIONS | |
| 7 1 1 1 2 | DRG. NO. |