Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-039-22520

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 [ ] MULTIPLE ZONE [X]

2. NAME OF OPERATOR: AMOCO PRODUCTION COMPANY

3. ADDRESS OF OPERATOR: 501 Airport Drive, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 930' FSL and 1660' FEL, Section 4, T25N, R5W
At proposed prod. zone: Same

5. LEASE DESIGNATION AND SERIAL NO.: Jicarilla Contract 146

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Jicarilla Apache

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Jicarilla Contract 146

9. WELL NO.: 11E

10. FIELD AND POOL, OR WILDCAT: Otero Chacra-Gonzales MV / Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SW/4, SE/4, Section 4, T25N, R5W

12. COUNTY OR PARISH: Rio Arriba — 13. STATE: New Mexico

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 16 miles North Northeast of Counselor, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
980'	2557.2	Cha/160 MV 160/~~320~~ Dak 5/320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
1876'	7529'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6726' GL

22. APPROX. DATE WORK WILL START*: As soon as permitted

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8" (New)	32.3# H-40	300'	240 sx Class B w/2% CaCl2-circ
8-3/4"	7" (New)	23.0# N-80	7529'	Stage 1: 310 sx Cl B 50:50 POZ, 6% gel, 2# med tuf plug/sx and .8% FLA. Tail in w/150 sx Cl B Neat-circ
				Stage 2: 750 sx Cl B 65:35 POZ, 6% gel, 2# med tuf plug/sx and .8% FLA. Tail in w/100 sx Cl B Neat-circ

Amoco proposes to drill the above dual well to further develop the Otero Chacra-Gonzales MV/Basin Dakota reserves. The Otero Chacra and Gonzales Mesaverde will be commingled and dually completed with the Basin Dakota. 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 non-dispersed 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 the Chacra/Mesaverde is dedicated to El Paso Natural Gas Co and from the Dakota to Northwest Pipeline Co.

Set centralizers through Dakota, Mesaverde and Chacra.

Set DV tool at 5200'.

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OCT 2 19[illegible]
U.S. [illegible]

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 [signature] TITLE District Engineer DATE October 1, 1980

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED
AS AMENDED
OCT 1 1980
JAMES F. SIMS
DISTRICT ENGINEER

RECEIVED
OCT 15 1980
OIL CON. COM.
DIST. 3

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

Form C-107
Revised 10-1-7

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

Operator	Lease	Well No.
AMOCO PRODUCTION COMPANY	JICARILLA CONTRACT 146	11E

Unit Letter	Section	Township	Range	County
O	4	25N	5W	Rio Arriba

Actual Footage Location of Well:
930 feet from the South line and 1660 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
6726	Chacra-Mesaverde/Dakota	Otero Chacra-Gonzales MV/ Basin Dakota	160/320 Acres

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

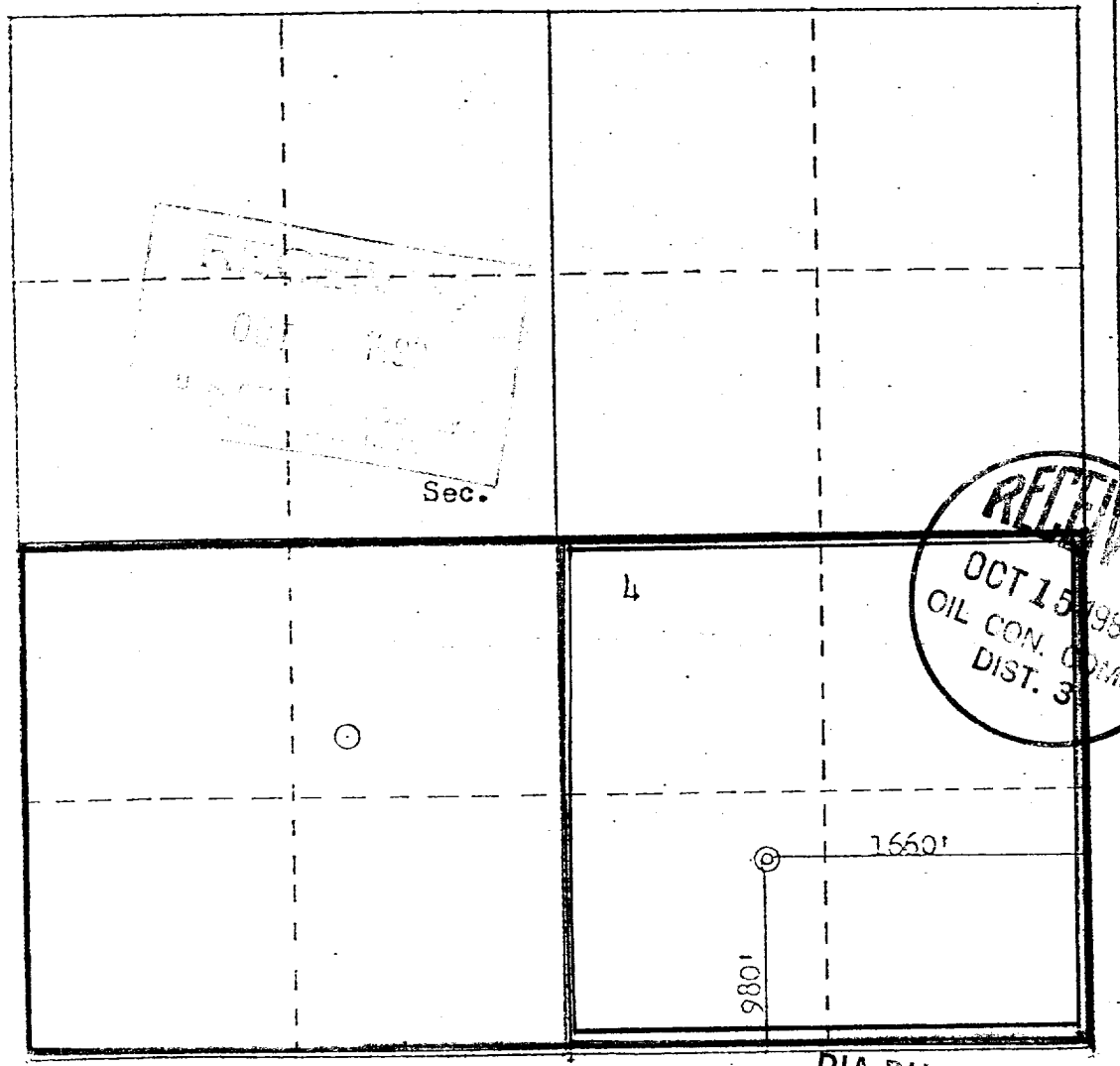
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



RECEIVED
OCT 15 1980
OIL CON. COM.
DIST. 3

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. Kerr Jr.

Certificate No. 3950

REGISTERED

SUPPLEMENTAL INFORMATION TO FORM 9-331C

JICARILLA CONTRACT 146 NO. 11E
980' FSL & 1660' FEL, SECTION 4, 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		2429'	4310'
Kirtland		2584'	4155'
Fruitland		2805'	3934'
Pictured Cliffs		2986'	3753'
Chacra (if present)		3849'	2890'
Mesaverde	Cliff House	4639'	2100'
	Point Lookout	5139'	1600'
Gallup		6329'	+ 410'
Dakota		7179'	- 440'
TD		7529'	- 790'

Estimated KB elevation: 6739'

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: 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 4 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.

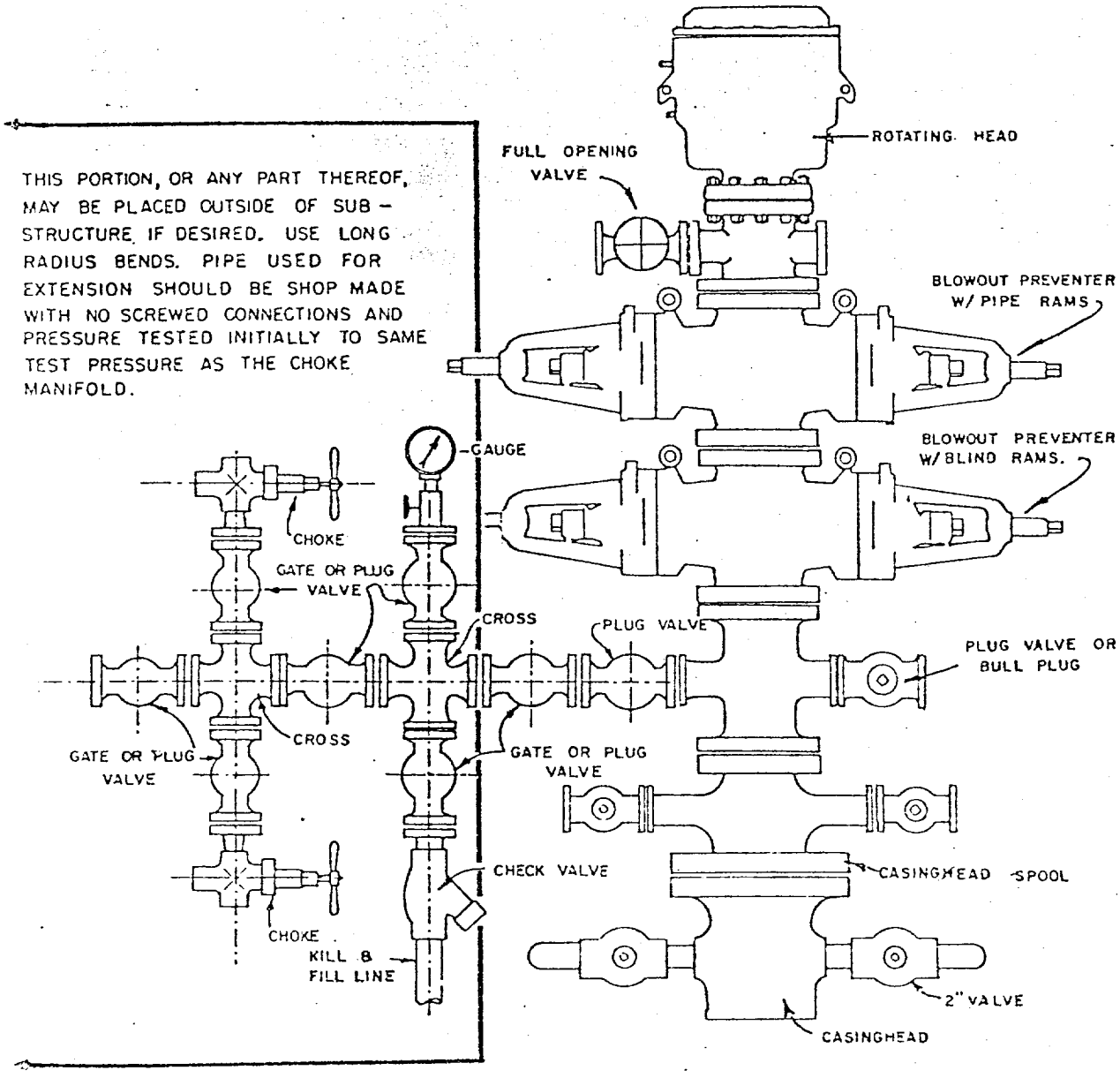
1. Blowout Preventers and Master Valve to be fluid operated, and all fittings must be in good condition.

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. 11E
980' FSL & 1660' FEL, SECTION 4, 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 build an access road approximately 200 feet in length, 20 feet wide, and bar ditched one side.

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. 11, approximately one-half mile west.

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. An 8-foot cut will be made on north 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.

11. The general topography is a rolling slope with northeasterly drainage, with sandy clay loam soil; vegetation consists of pinon, juniper, sagebrush and native grasses.

    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.

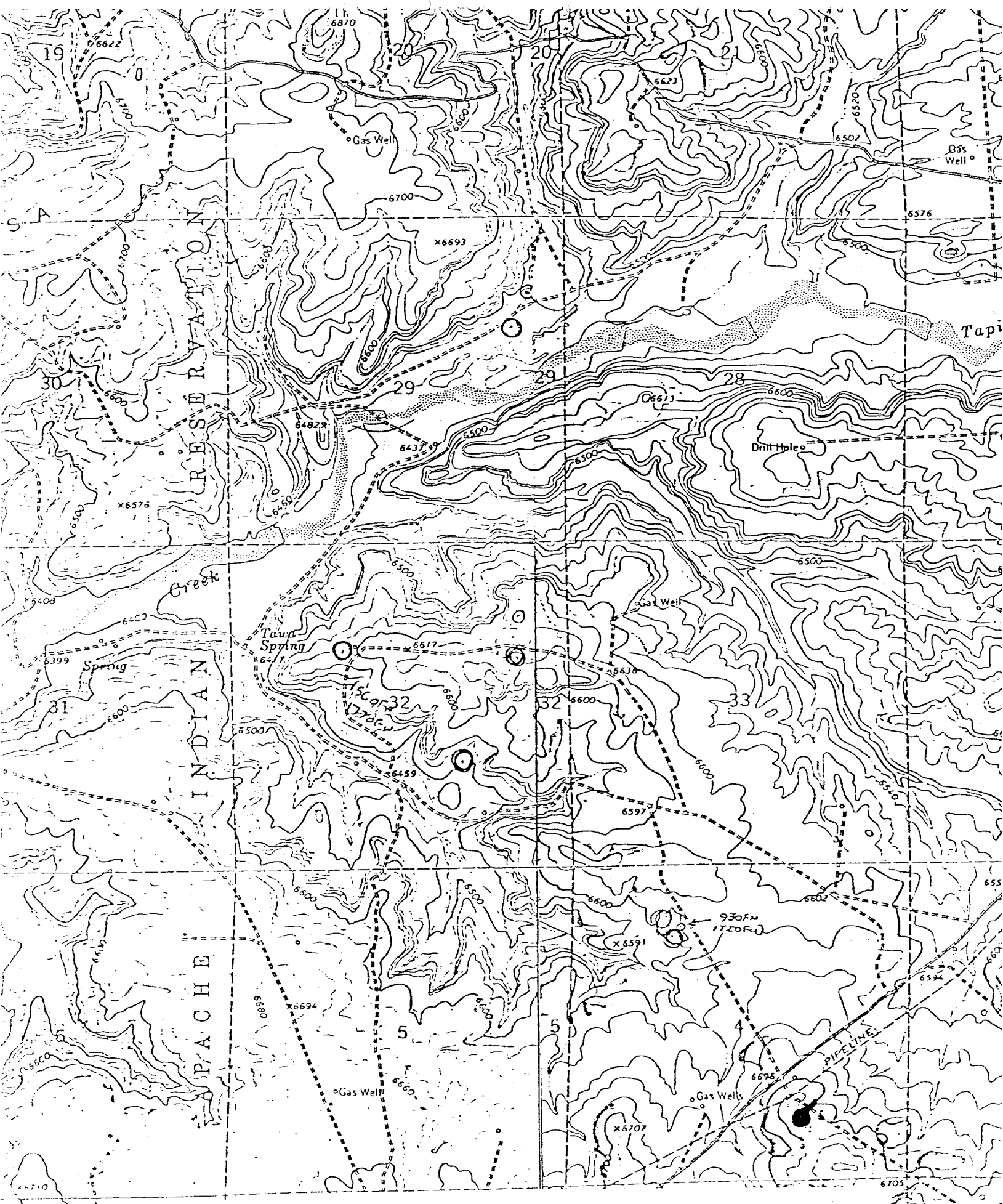
12. Operator's Representative: R. W. Schroeder
    Phone: Office: 505-325-8841; Home: 505-325-6164
    Address: 501 Airport Drive, Farmington, NM 87401

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 September 30, 1980

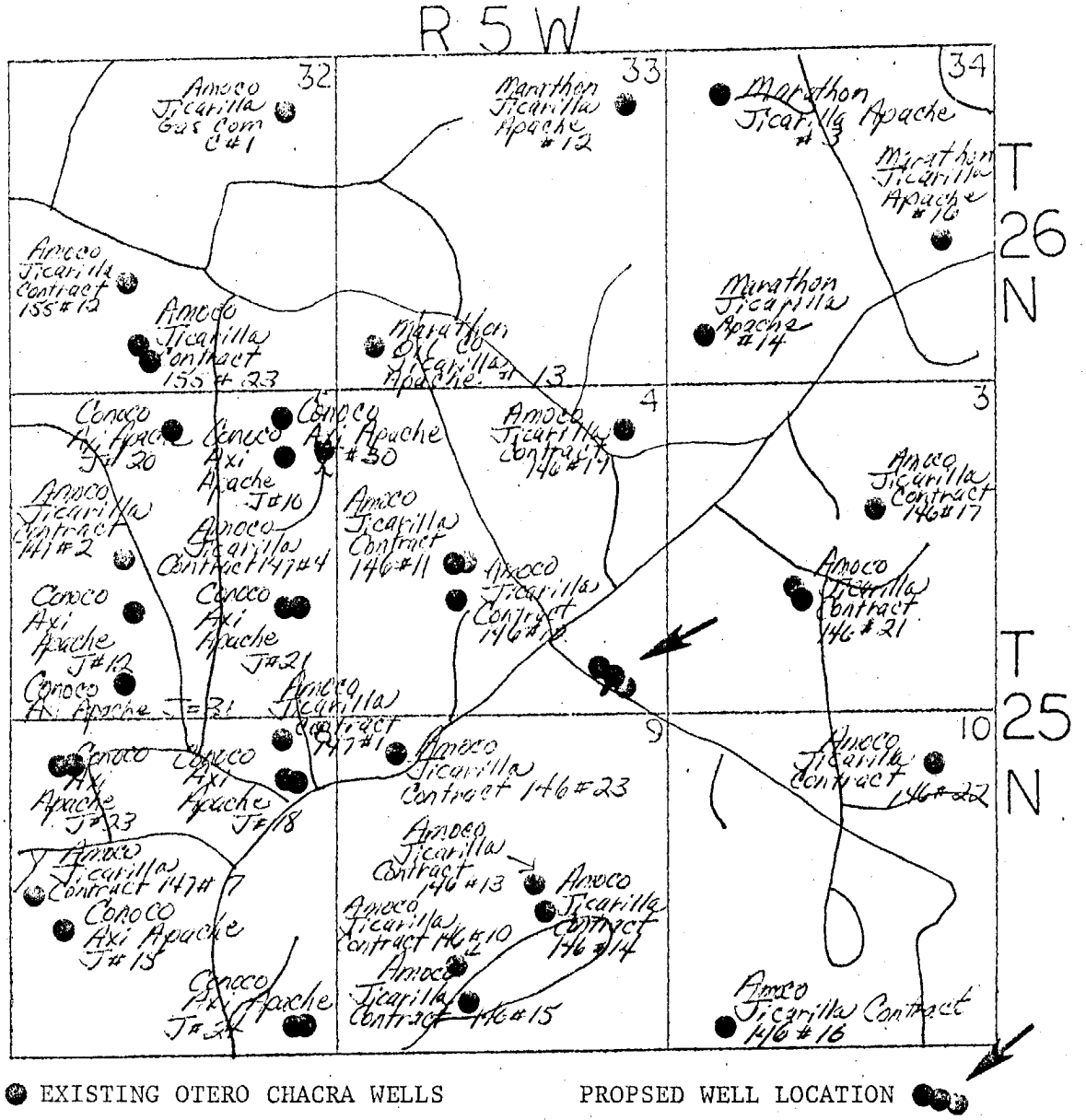
R. W. Schroeder

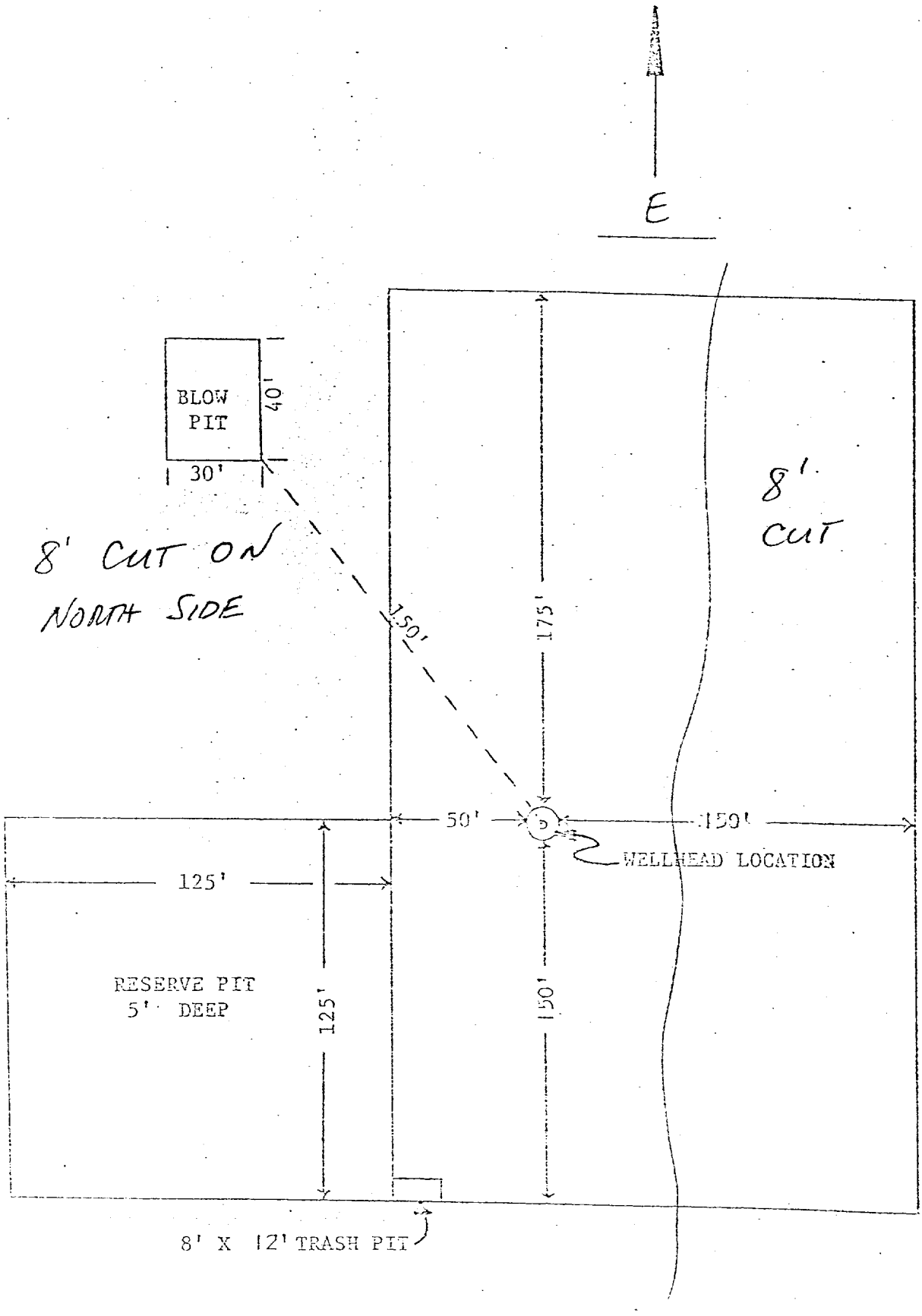
R. W. Schroeder, District Superintendent



Vicinity Map for
AMOCO PRODUCTION CO. #11E JICARILLA CONTRACT 146
980'FSL 1660'FEL Sec. 4-T25N-R5W
RIO ARRIBA COUNTY, NEW MEXICO

JICARILLA CONTRACT 146 #11E





APPROXIMATELY 1.2 ACRES

Amoco Production Company	SCALE: 1"=50'
DRILLING LOCATION SPECIFICATIONS Jicarilla Contract 146 # 11E	DRG. NO.