

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

36-639-22574

5. LEASE DESIGNATION AND SERIAL NO.  
Jicarilla Contract 148

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
Jicarilla Contract 148

9. WELL NO.  
24

10. FIELD AND POOL, OR WILDCAT  
Otero Chacra

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
NW/4, NW/4, Section 14  
T25N, R5W

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

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

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
DRILL  DEEPEN  PLUG BACK

1b. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

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  
945' FNL and 935' FWL, Section 14, T25N, R5W  
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
Same  
15 miles Northeast of Counselor, New Mexico

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest prop. unit line, if any)  
935'

16. NO. OF ACRES IN LEASE  
2560

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.  
47'

19. PROPOSED DEPTH  
4213'

20. ROTARY OR CABLE TOOLS  
Rotary

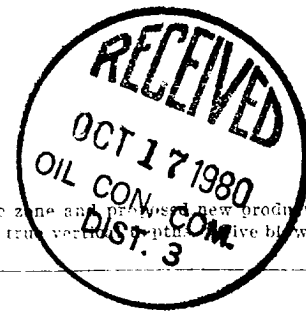
21. ELEVATIONS (Show whether DE, RT, GZ, etc.)  
7601' GZ

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING LENGTH	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"	4-1/2" (New)	10.5#K-55	4213'	950 sx Cl B 50:50 PCZ, 6% gel, 2# med tuf plug/sx and .8% FLA. Tail in w/100 sx Cl B Near-circ

Amoco proposes to drill the above well to further develop the Otero Chacra 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 dedicated to El Paso Natural Gas Co.



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

(This space for use by the State or State City)

PERMIT NO. AE AMENDED APPROVAL DATE

APPROVED BY [Signature] TITLE DISTRICT ENGINEER DATE OCT 16 1980

OIL CONSERVATION DIVISION

P. O. BOX 2088

Form C-102  
Revised 10-1-78

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

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

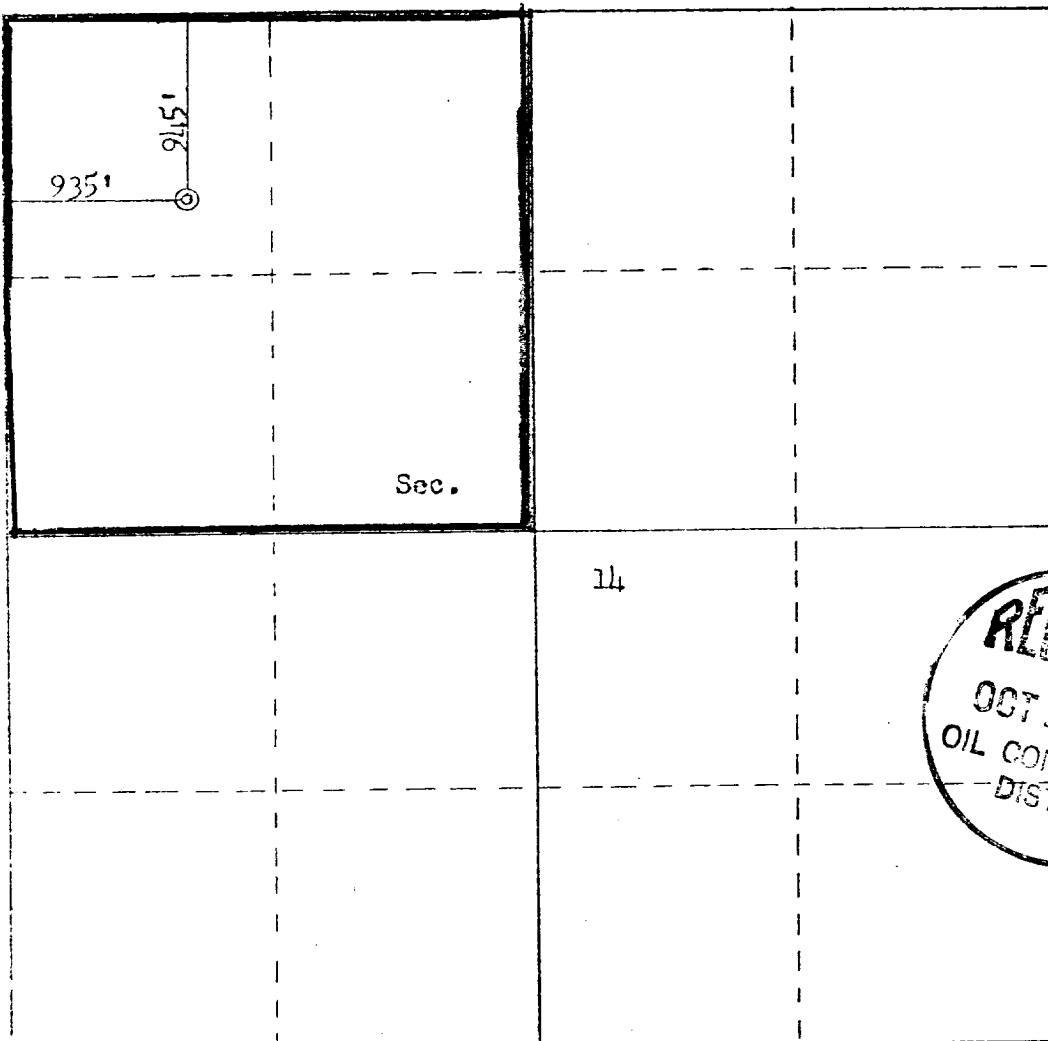
Operator <b>AMOCO PRODUCTION COMPANY</b>		Lease <b>JICARILLA CONTRACT 148</b>		Well No. <b>24</b>
Unit Letter <b>D</b>	Section <b>14</b>	Township <b>25N</b>	Range <b>5W</b>	County <b>Rio Arriba</b>
Actual Footage Location of Well:				
<b>945</b> feet from the <b>North</b> line and		<b>935</b> feet from the <b>West</b> line		
Ground Level Elev. <b>7001</b>	Producing Formation <b>Chacra</b>	Pool <b>Otero 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'

CERTIFICATION

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

*R.A. Downey*

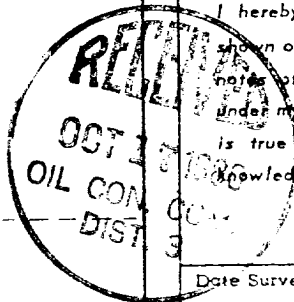
Name  
**R.A. DOWNEY**

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.*  
**Fred B. Kerr Jr.**

Certificate No.  
**3950**

SUPPLEMENTAL INFORMATION TO FORM 9-331C

JICARILLA CONTRACT 148 NO. 24  
 945' FNL & 935' FWL, SECTION 14, 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	2700'	4312'
Kirtland	2882'	4130'
Fruitland	3054'	3958'
Pictured Cliffs	3243'	3769'
Chacra (if present)	4133'	2879'
Mesaverde	[ Cliff House Point Lookout	' '
Gallup	'	'
Dakota	'	'
TD	4213'	2799'

Estimated KB elevation: 7012'

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'

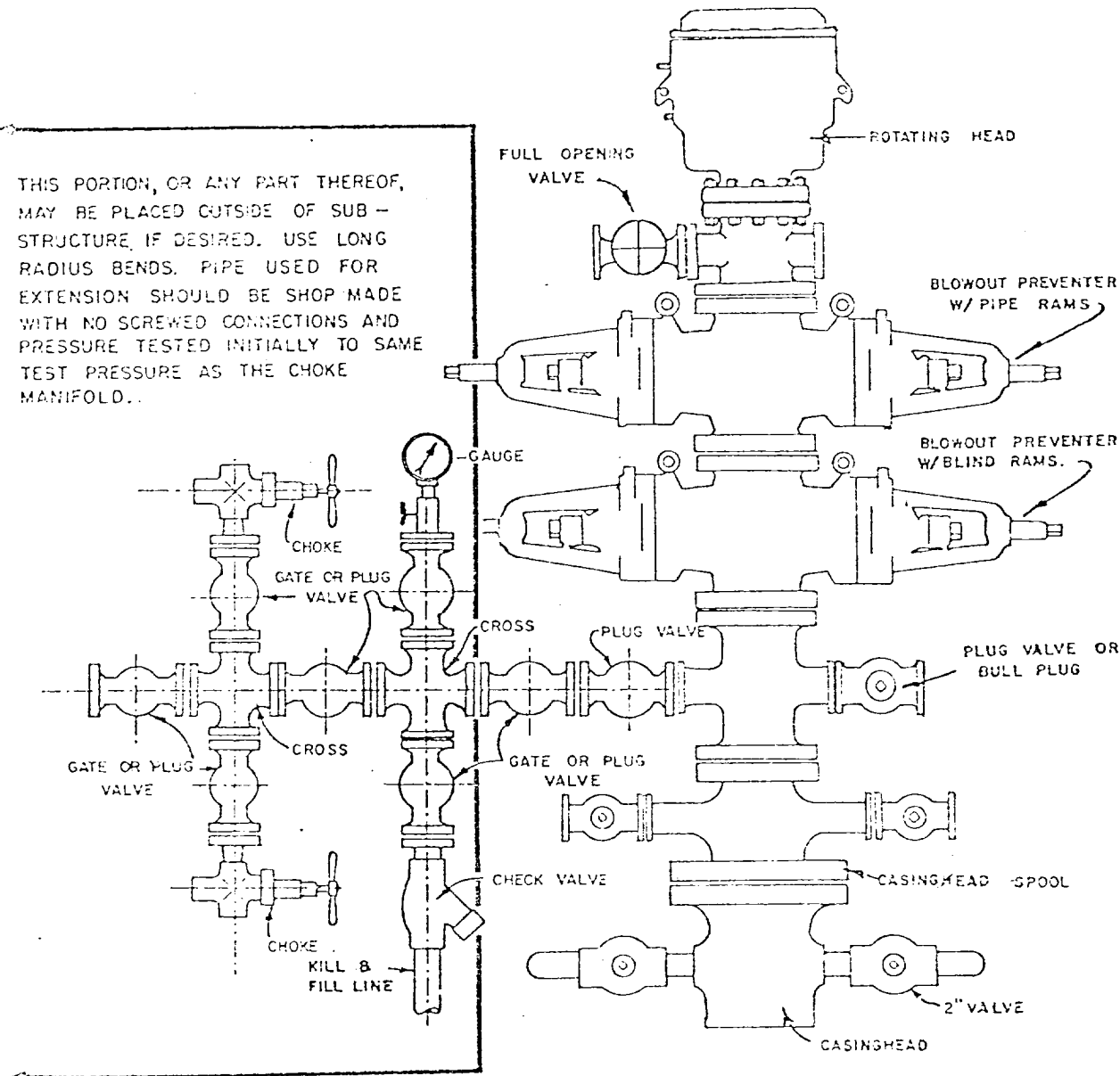
Completion design will be based on these logs. No cores or drill stem tests will be taken.

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 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 148 NO. 24  
945' FNL & 935' FWL, SECTION 14, 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 are 380-barrel tanks and facilities located at Jicarilla Contract 148 Well No. 10, approximately three-fourths mile south.
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 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.
11. The general topography is a broken terrace top with northwesterly drainage, sandstone outcrops, with a sandy clay loam soil; vegetation consists of pinon and cedar trees, sagebrush, rabbitbrush, and native grasses.

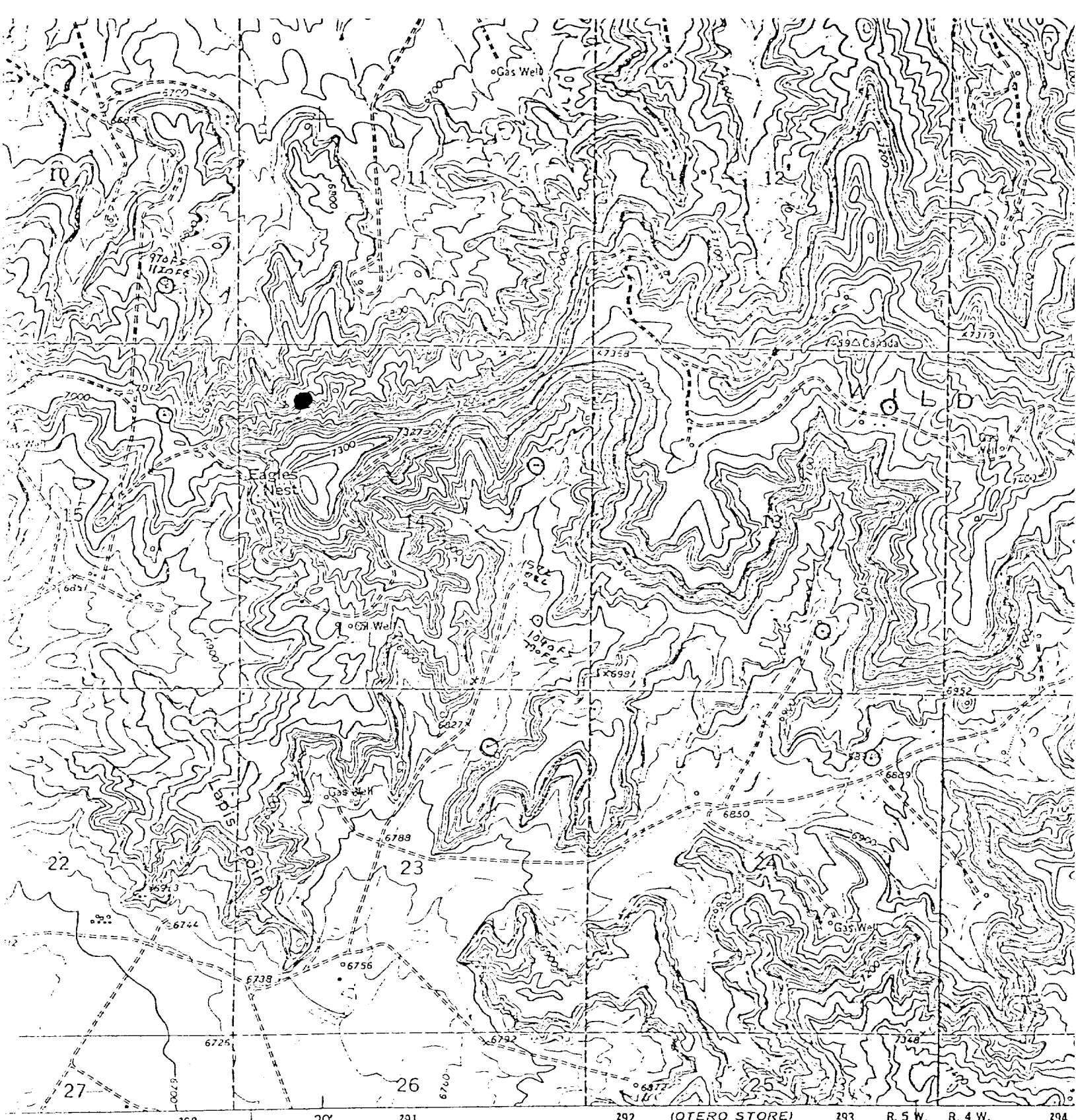
Representatives of the U. S. Geological Survey's Farmington Office and the Jicarilla Tribe's Dulce Office inspected the site with Amoco personnel. Cultural resources inspection was conducted by an archaeologist from San Juan College.

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

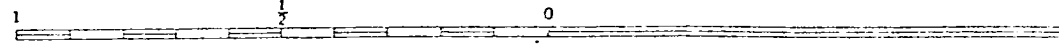
Certification: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the 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 October 1, 1980

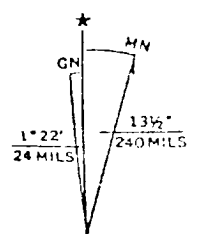
R. W. Schroeder  
R. W. Schroeder, District Superintendent



(OTERO STORE)  
4556 1/4 SE  
SCALE 1:24000

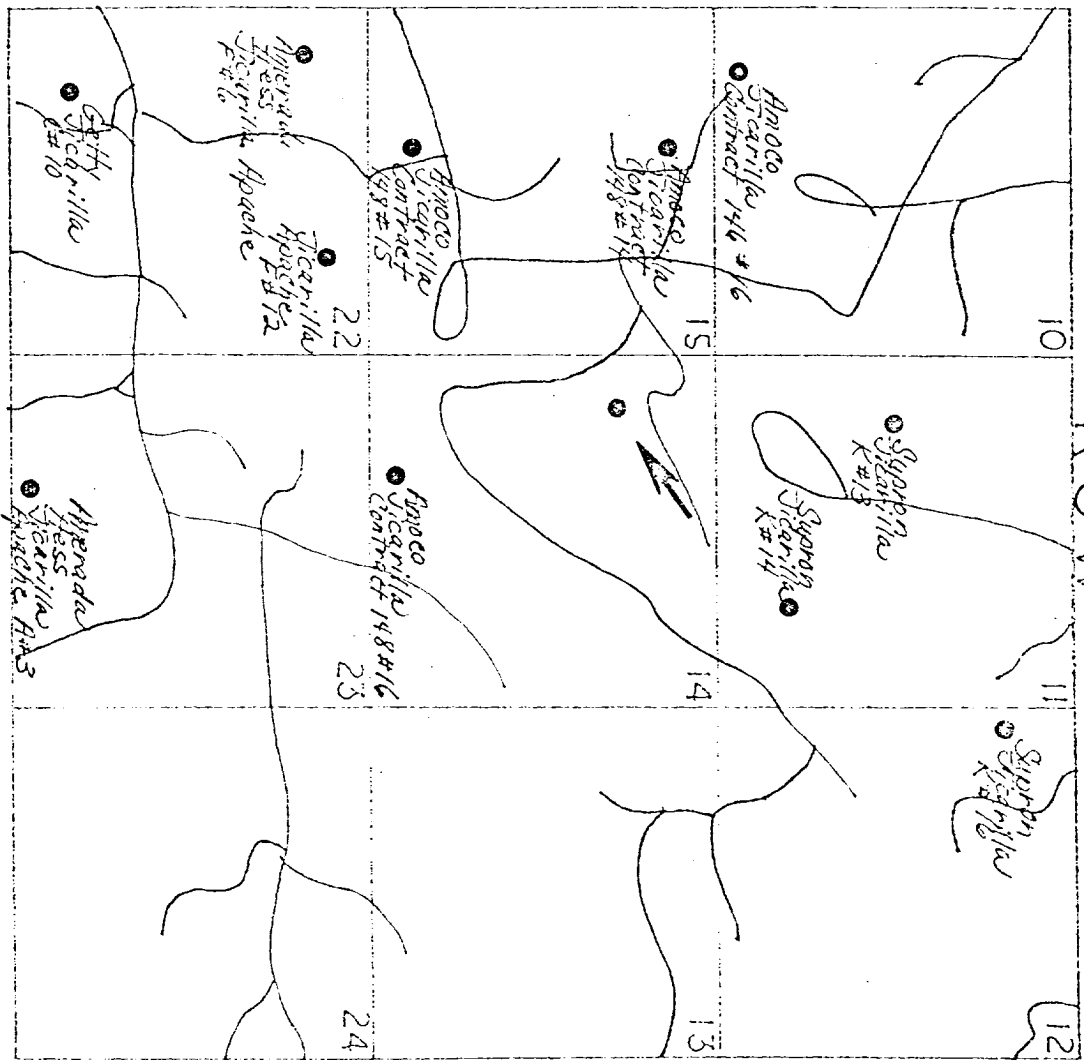


Vicinity Map for  
**AMOCO PRODUCTION CO. #24 JICARILLA CONTRACT 148**  
 945'FNL 935'FWL Sec. 14-T25N-R5W  
 RIO ARRIBA COUNTY, NEW MEXICO



UTM GRID AND 1953 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

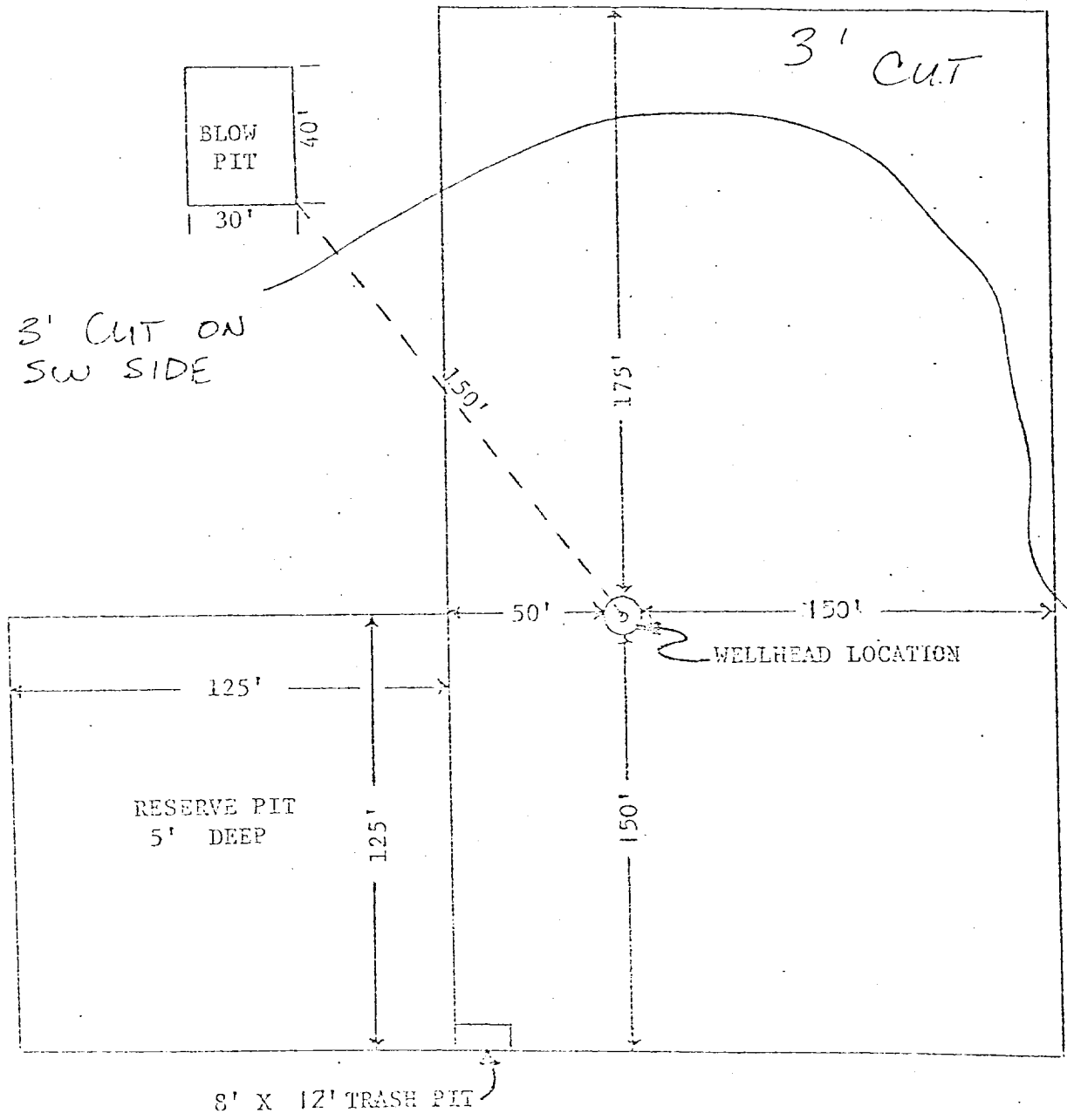
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225 OR WASHINGTON, D.C.



EXISTING OTERO CHACRA WELLS ● PROPOSED WELL LOCATION ●

ROADS —

SW



APPROXIMATELY 1.2 ACRES

Amoco Production Company		SCALE: 1"=50'
DRILLING LOCATION SPECIFICATIONS		
JICARILLA CONTRACT 148 #24		DRG. NO.