

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. Jicarilla Contract 148	
2. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IS INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache	
3. NAME OF OPERATOR AMOCO PRODUCTION COMPANY		7. UNIT AGREEMENT NAME	
4. ADDRESS OF OPERATOR 501 Airport Drive, Farmington, New Mexico 87401		8. FARM OR LEASE NAME Jicarilla Contract 148	
9. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1040' FSL & 790' FEL Section 14, T25N, R5W At proposed prod. zone Same		9. WELL NO. 19	
10. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 1 1/2 miles NNE of Counselor, New Mexico		10. FIELD AND POOL, OR WILDCAT Otero Chacra	
11. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 551'		11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA SE 1/4 SE 1/4 Section 14 T25N R5W	
12. NO. OF ACRES IN LEASE 2560		12. COUNTY OR PARISH Rio Arriba	
13. NO. OF ACRES ASSIGNED TO THIS WELL 160		13. STATE New Mexico	
14. PROPOSED DEPTH 4083'		14. ROTARY OR CABLE TOOLS Rotary	
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 6861' GL		15. APPROX. DATE WORK WILL START As soon as permitted	

## 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	4-1/2 (new)	10.5 # K-55	4083'	900 sx class "B" 50:50 POZ, 6% gel.
AUTHORIZED ARE				2# med tuf plug/sx and .8% FLA.
SUBJECT TO THE POLICIES WITH ATTACHED				Tail in w/75 sx class "B" Neat-circ.
"GENERAL REQUIREMENTS"				

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 filled 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 Company.



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 applicable.

APPROVED  
AS AMENDED

SIGNED NOV 18 1980 TITLE District Engineer DATE October 29, 1980  
(This space for Federal State Engineer) JAMES F. SIMS  
PERMIT NO. DISTRICT ENGINEER APPROVAL DATE

APPROVED BY ok 311 TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

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

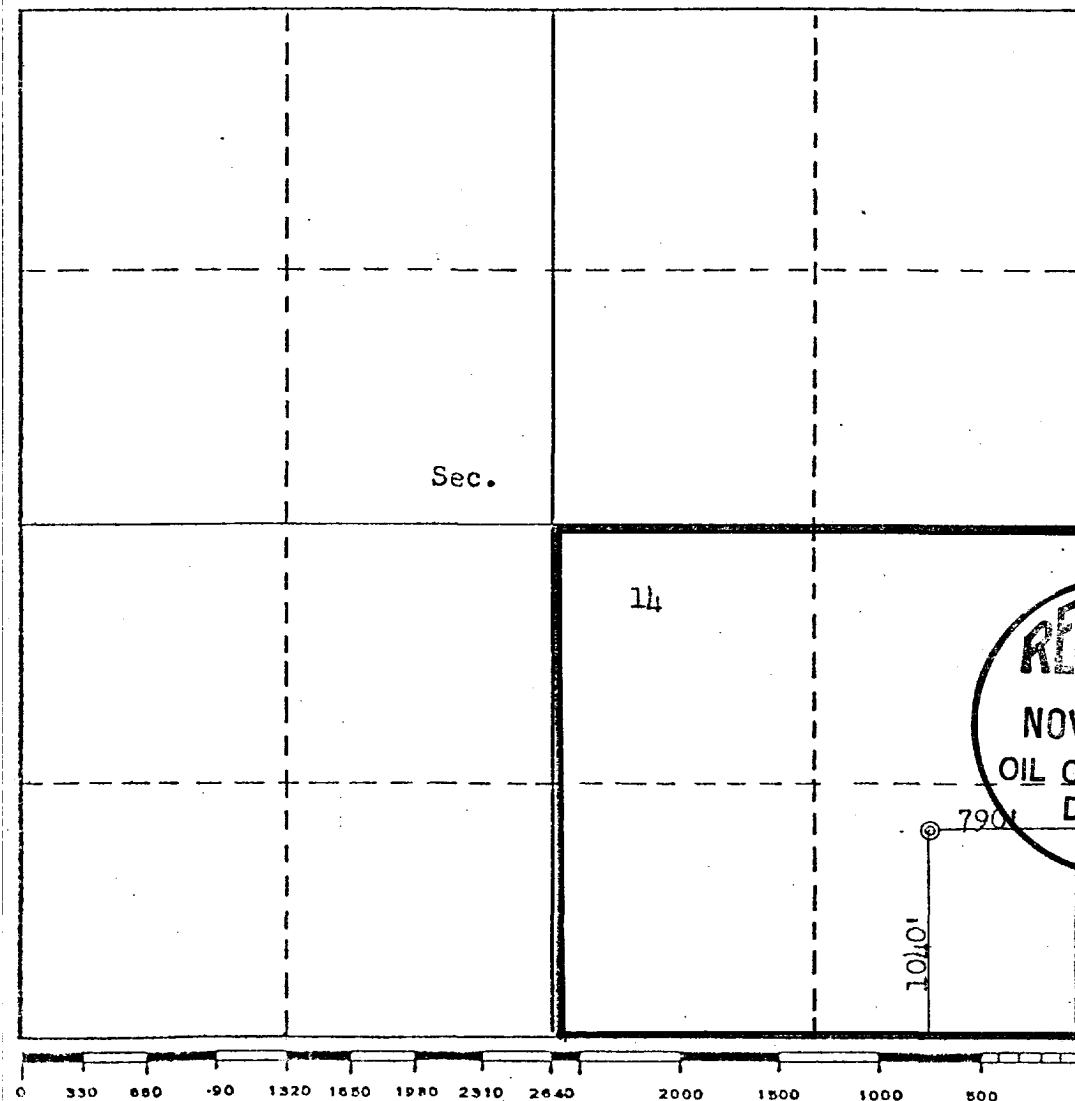
Operator <b>AMOCO PRODUCTION COMPANY</b>			Lease <b>JICARILLA CONTRACT 148</b>		Well No. <b>19</b>
Unit Letter <b>P</b>	Section <b>14</b>	Township <b>25N</b>	Range <b>5W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>1040</b> feet from the <b>South</b> line and <b>790</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6861</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 hatchure 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.



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  
**MAY 28, 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 are true and correct to the best of my knowledge and belief.

**NOV 19 1980**  
**OIL CON. COM.**  
**DIST. 3**

Date Surveyed  
**May 28, 1980**  
Registered Professional Engineer  
and/or Land Surveyor

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

Certificate No.  
**3950**

SUPPLEMENTAL INFORMATION TO FORM 9-331C  
JICARILLA CONTRACT 148 No.19  
1040'FSL & 790' FEL, 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	2553 '	4321 '
Kirtland	2753 '	4121 '
Fruitland	2933 '	3941 '
Pictured Cliffs	3113 '	3761 '
Chacra (if present)	3993 '	2881 '
Mesaverde [ Cliff House	'	'
Point Lookout	'	'
Gallup	'	'
Dakota	'	'
TD	4083 '	2791 '

Estimated KB elevation: 6874 ,

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

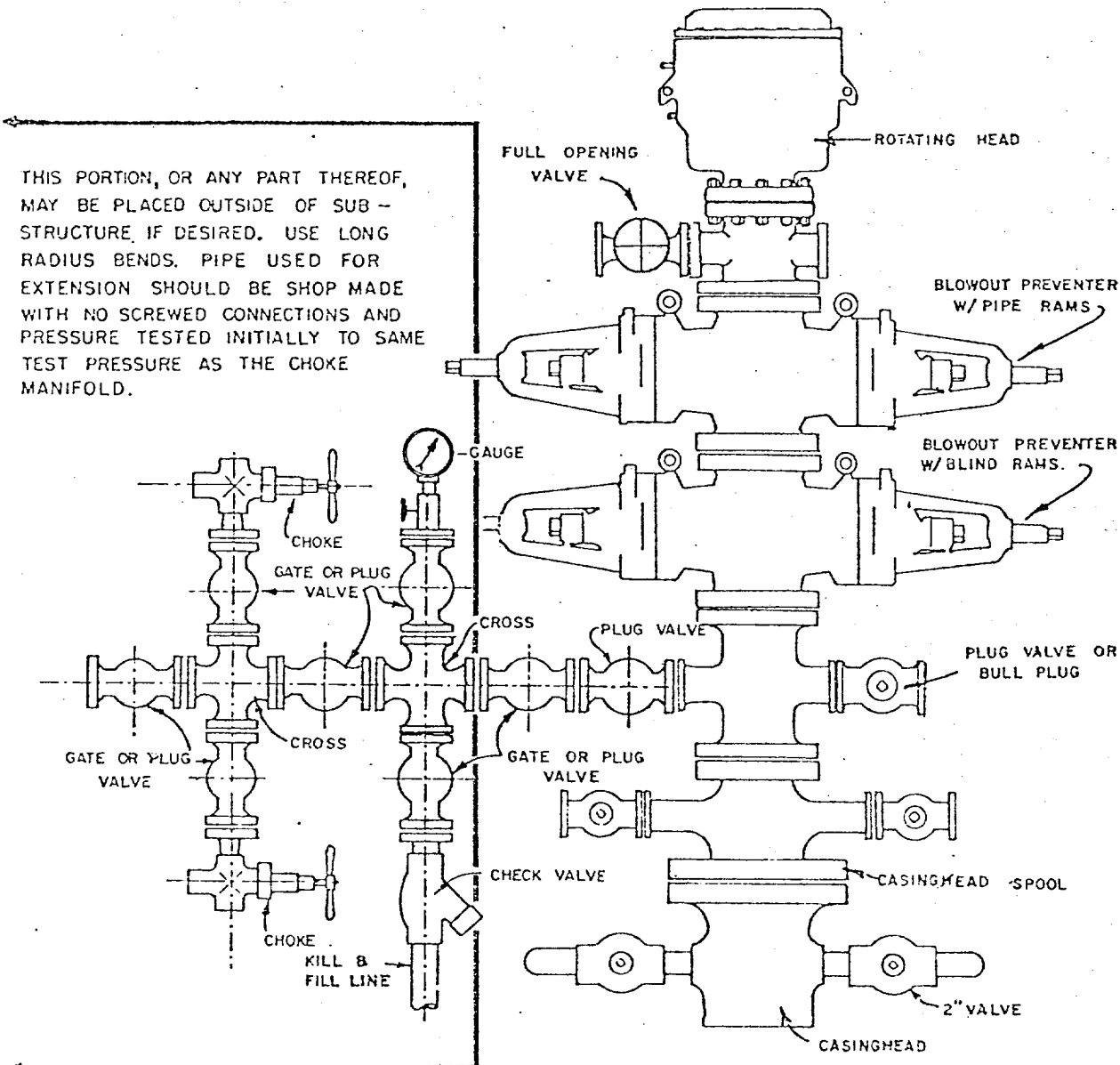
Completion design will be based on these logs. No cores or drill stem tests will be taken.

Operations will commence when permitted and last approximately 3 weeks.

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 148 NO. 19  
1040' FSL & 790' FEL, SECTION 14, T25N, R5W  
RIO ARRIBA COUNTY, NEW MEXICO

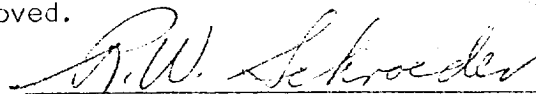
1. The attached topographic map shows the proposed route to the location.
2. It will be necessary to build an access road approximately 500 feet in length and 20 feet wide. Road to be bar ditched on two sides.
3. Existing oil and gas wells within a one-mile radius of our proposed well have been spotted on the lease road map.
4. There are tanks and facilities located at Jicarilla Contract 148 No. 2, approximately 500 feet north.
5. Water will be hauled from Tapacito Water Hole.
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 5-foot cut will be made on east 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 canyon bottom with northwesterly drainage and sandstone outcrops, with soil a sandy loam, vegetation consists of sagebrush Indian ricegrass, greasewood, 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.

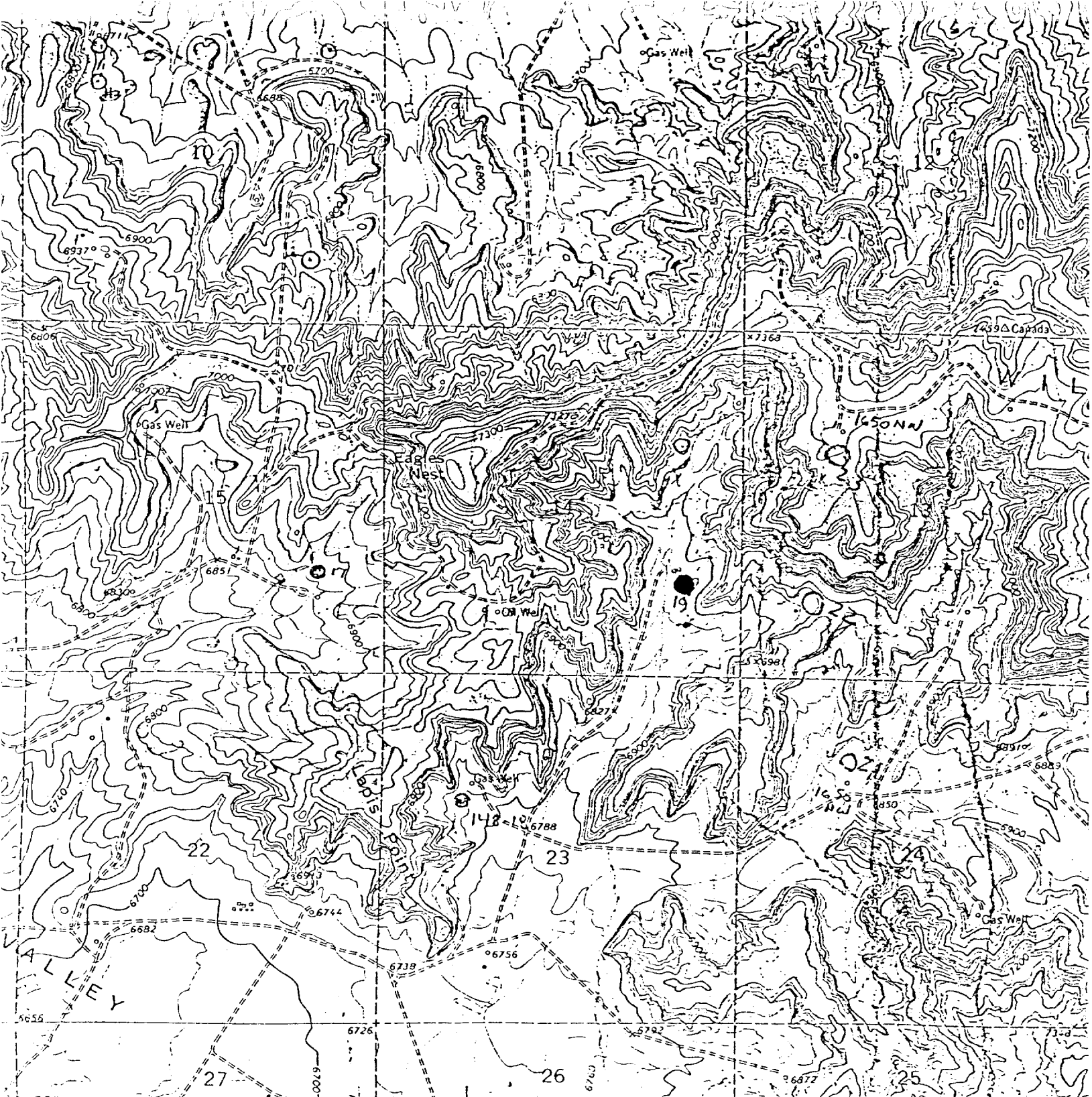
12. Operator's Representative: R. W. Schroeder  
Phone: Office: 505-325-8841; Home: 505-325-6164  
Address: 501 Airport Drive, Farmington, NM 87401

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 27, 1980



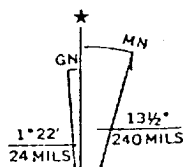
R. W. Schroeder, District Superintendent



289 290 291 292 10 11 15 19 22 23 25 26 27

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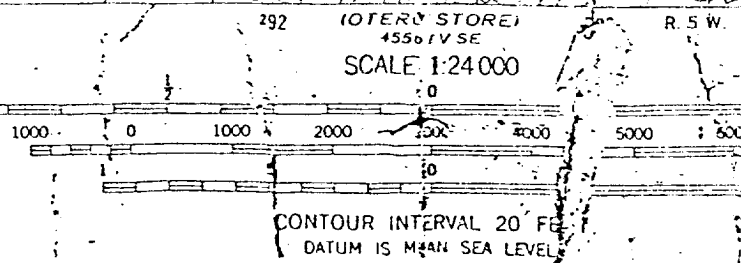
Central zone



UTM  
DE

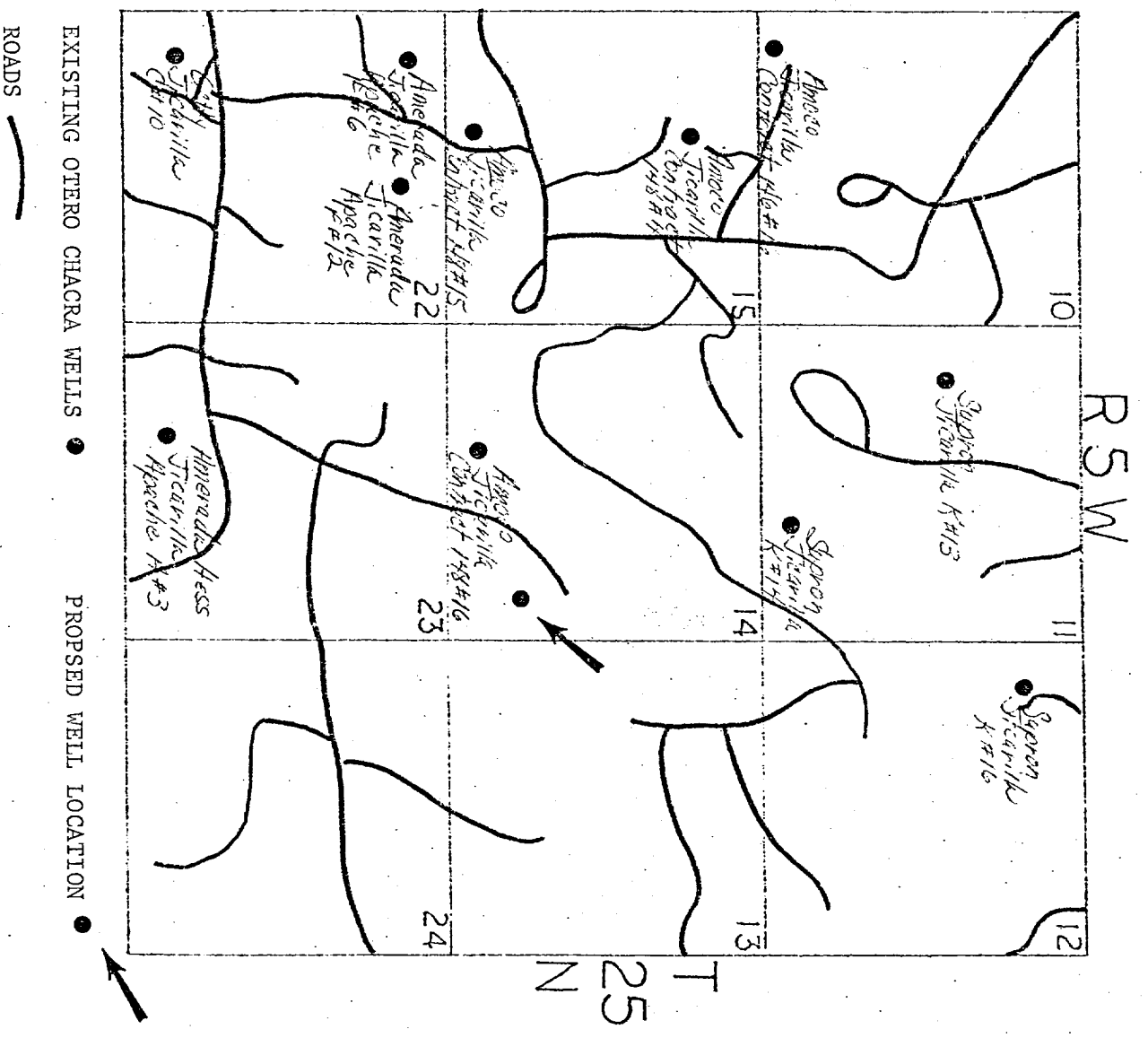
Vicinity Map for  
AMOCO PRODUCTION COMPANY #19 JICARILLA CONTRACT 148  
1040' FSL 790' FEL Sec. 14-T25N-R5W  
RIO ARriba COUNTY, NEW MEXICO

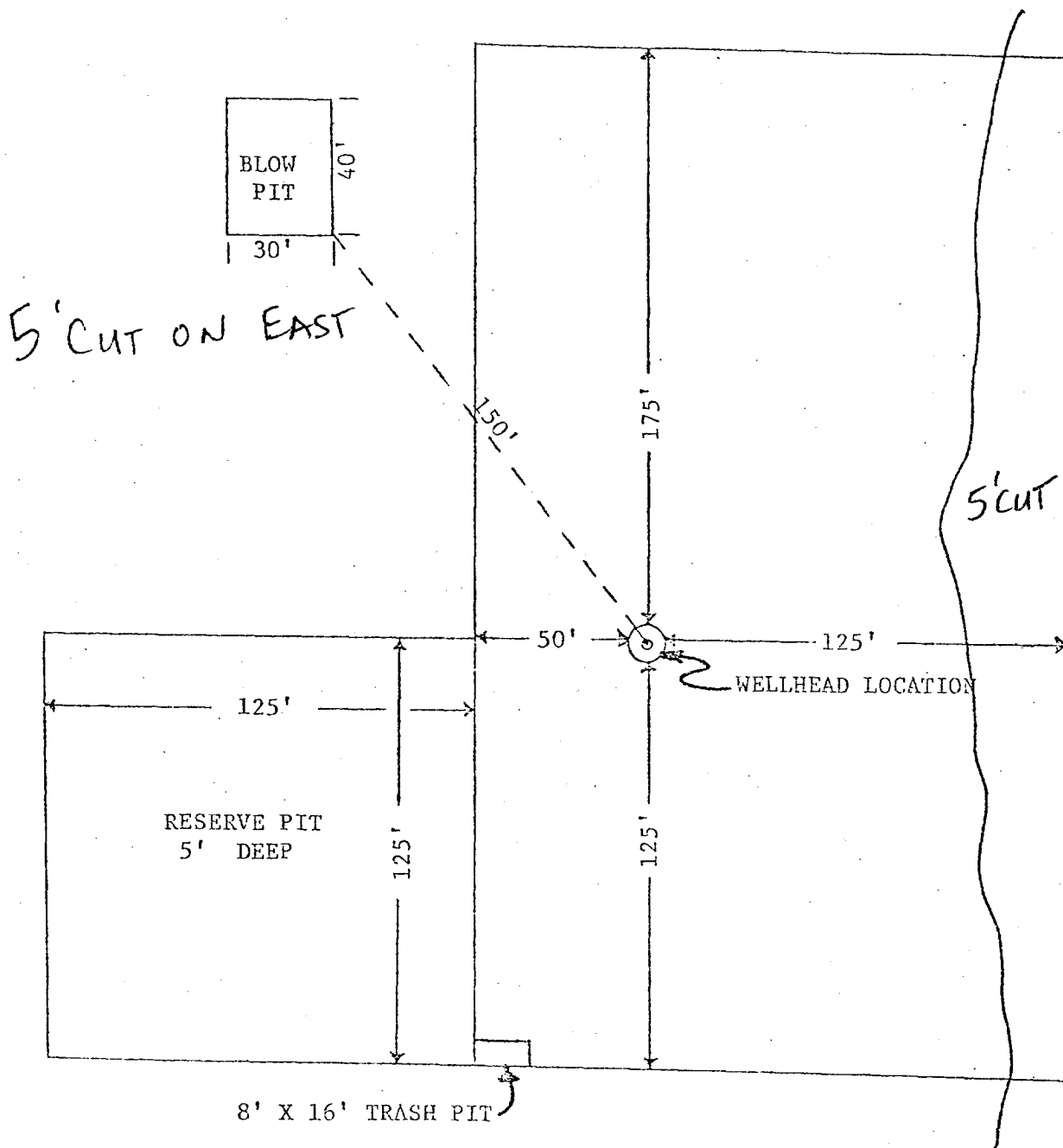
18  
148  
1850 F  
790



ALL MAP ACCURACY STANDARDS  
COLORADO 80225, OR M

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE





APPROXIMATELY 1.2 ACRES

Amoco Production Company	SCALE: 1"=50'
DRILLING LOCATION SPECIFICATIONS	
JICARILLA CONTRACT 148 #19	DRG. NO.