

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

2. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒OTHER ☐SINGLE
ZONE ☒MULTIPLE
ZONE ☐

3. NAME OF OPERATOR

AMOCO PRODUCTION COMPANY

4. ADDRESS OF OPERATOR

501 Airport Drive, Farmington, New Mexico 87401

5. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

1830' FNL x 1560' FWL Section 24, T25N, R5W
At proposed pool zone

6. STATE

7. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE

17 1/2 miles NW of Counselor, New Mexico

8. DISTANCE FROM PROPOSED

LOCATION TO EXISTENT

PROPERTY OR LEASE LINE, FT.

(Also to nearest city, unit line, if any)

1560

9. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL DRILLING, COMPLETED,

OR APPROPRIATE, ON THIS LEASE, FT.

201'

10. ELEVATIONS (Show whether DF, RT, GR, etc.)

6340' GL

11.

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% CaCl ₂ -circ.
7-7/8	4-1/2 (new)	10.5# K-55	4034'	910 sx class "B" 50:50 P.O.Z., 6% gel.
				2# med tuf plug/sx and .8% FLA.
				Tail in w/100% class "B" Neat-circ.

Amoco proposes to drill the above well to further develop the Otero Chara 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 not dedicated to a gas sales contract.

12. ABOVE SIGNATURES AND 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 prevention program, if any.

DESIGNED BY

APPROVED
AS AMENDED

TITLE District Engineer

DATE October 29, 1980

(This space for Federal or State use only)

PERMIT NO.

APPROVAL DATE

APPROVED BY

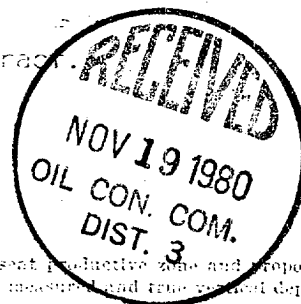
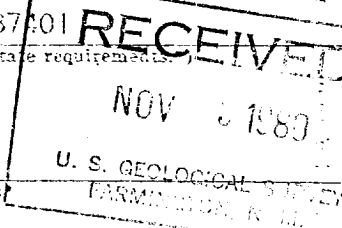
TITLE

DATE

POSITIONS OF ALL SIGNERS, IF ANY:

NOV 18 1980
JAMES F. SIMS
DISTRICT ENGINEER

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

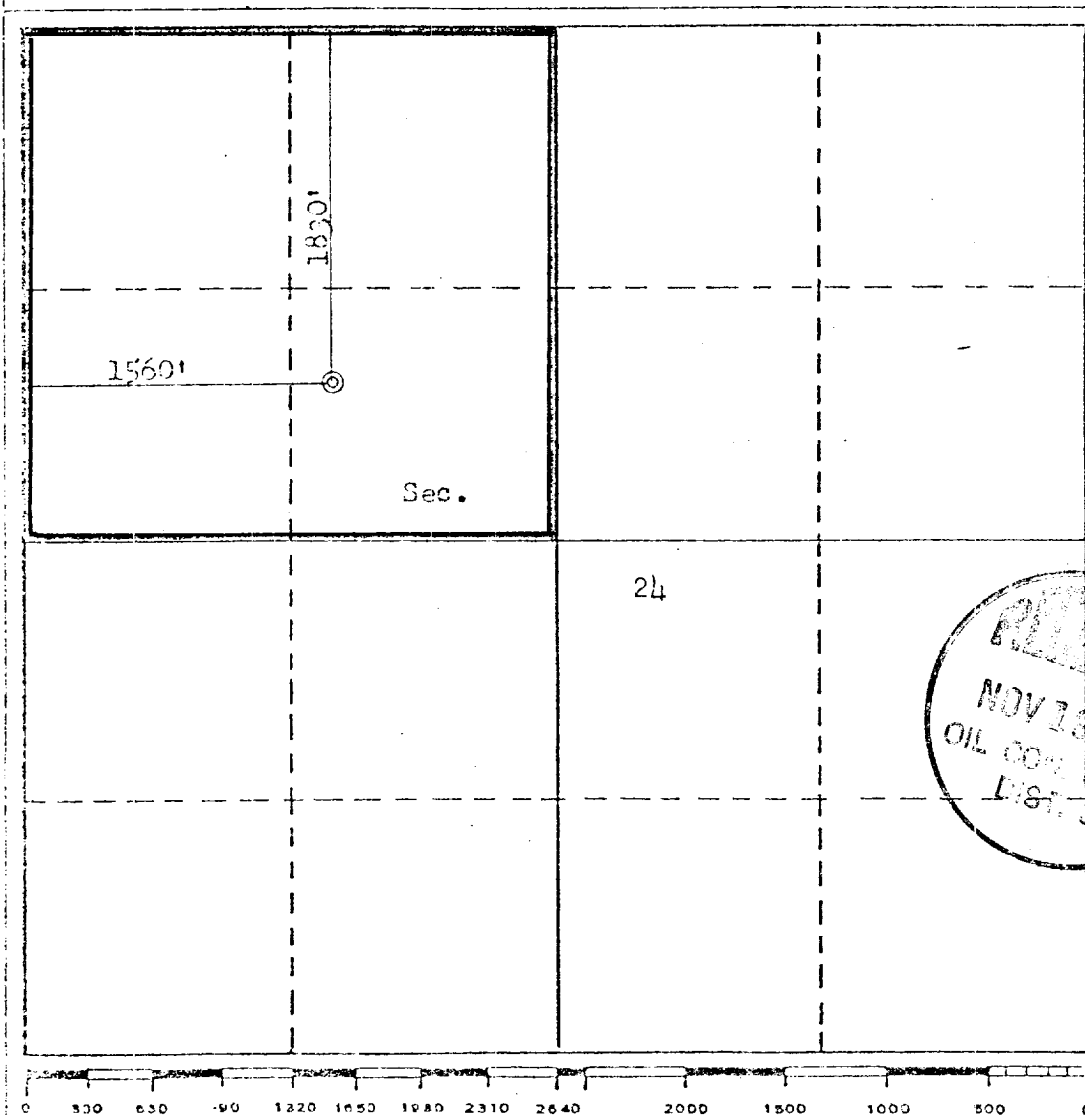
Operator AMOCO PRODUCTION COMPANY			Lease JICARILLA CONTRACT 148		Well No. 21
Unit Letter F	Section 24	Township 25N	Range 5W	County Rio Arriba	
Actual Footage Location of Well:					
1830 feet from the North line and		1560 feet from the West line			
Ground Level Elev. 6840	Producing Formation Chacra	Pool Otera Chacra	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.



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
JUNE 3, 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
May 28, 1980
Registered Professional Engineer
and/or Land Surveyor

Fred B. Kerr Jr.
Fred B. Kerr Jr.
Certification No. **KERR 111**

3950

SUPPLEMENTAL INFORMATION TO FORM 9-331C

JICARILLA CONTRACT 148 No. 21
1830' FNL & 1560' FWL, SECTION 24, 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	2504 '	4349 '
Kirtland	2704 '	4149 '
Fruitland	2884 '	3969 '
Pictured Cliffs	3064 '	3789 '
Chacra (if present)	3944 '	2909 '
Mesaverde [Cliff House	'	'
Point Lookout	'	'
Gallup	'	'
Dakota	'	'
TD	4034 '	2819 '

Estimated KB elevation: 6353 '

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:

FL-SP=GR
FCC-CNL-OR

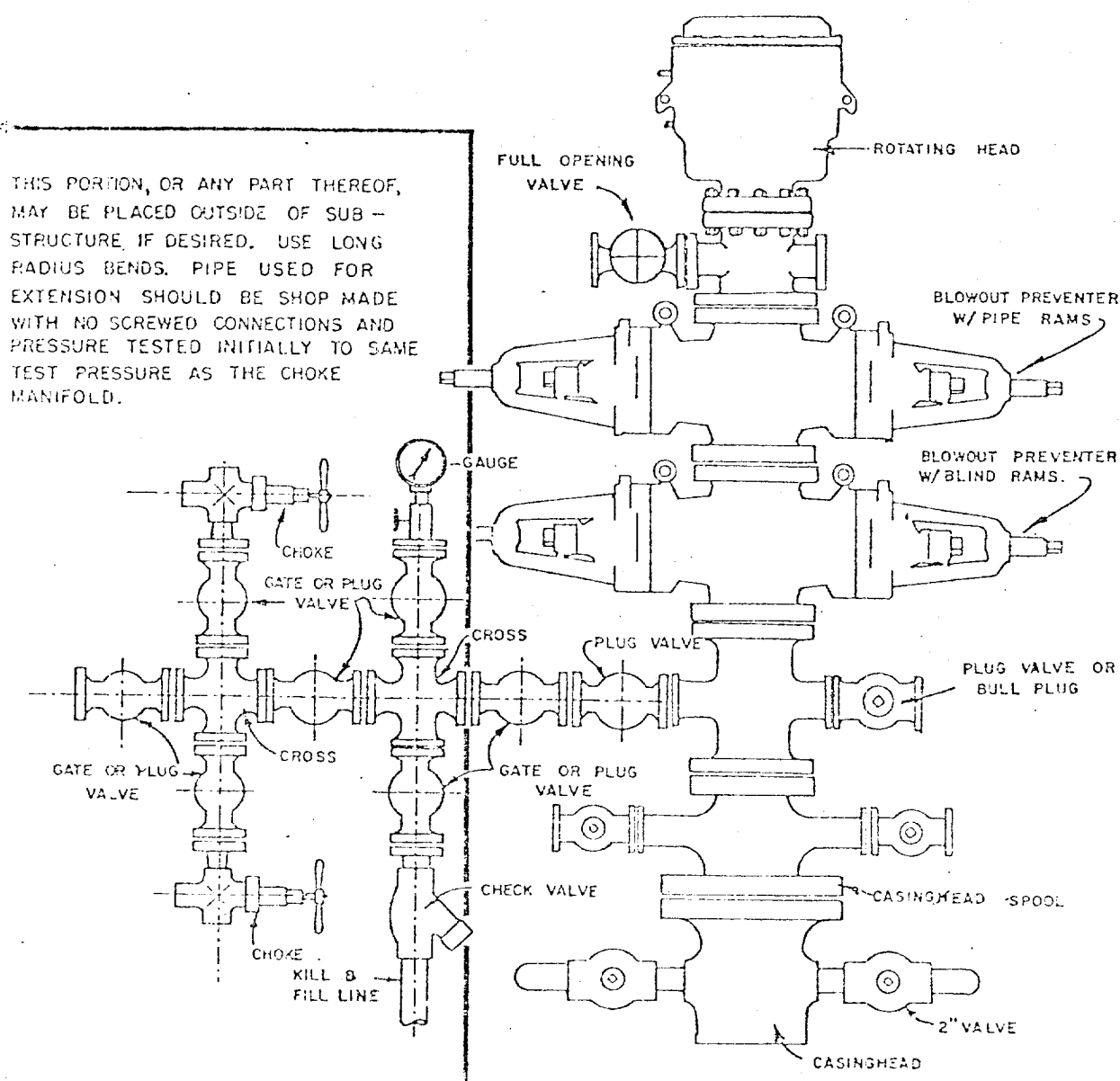
Completion design will be based on these logs. No cores or drill stem tests will be taken.

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. 21
1830' FNL & 1560' FWL, SECTION 24, 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 tanks and facilities located at Jicarilla Contract 148 No. 3, approximately 500 feet northeast.
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 2-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 westerly drainage and sandstone outcrops, with soil a sandy clay loam; vegetation consists of brome, sagebrush, greasewood, prickly pear 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: 505-325-8341; Home: 505-325-6164
Address: 501 Airport Drive, Farmington, NM 87401

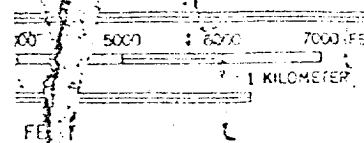
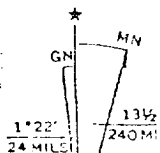
Certification: I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the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

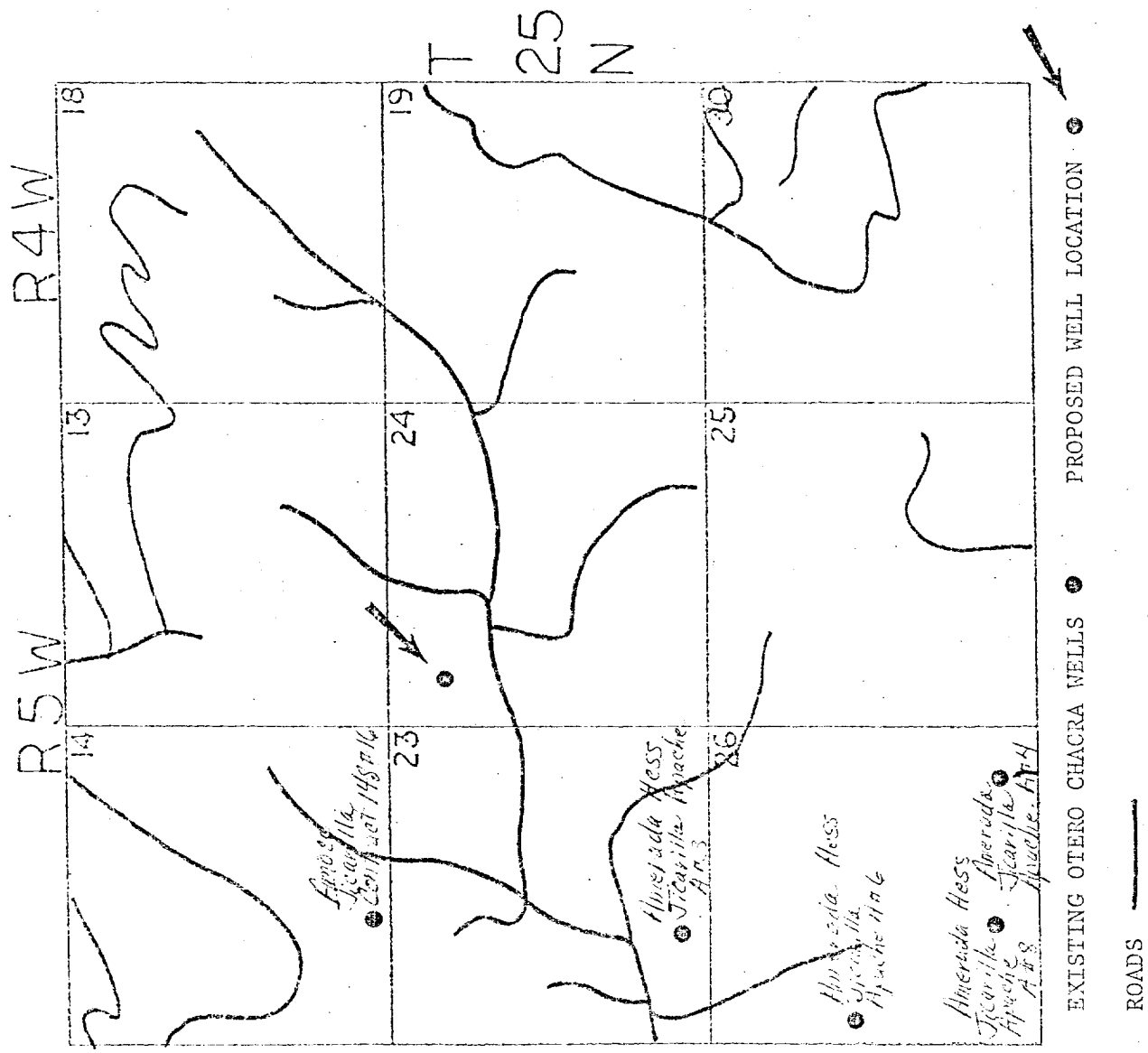


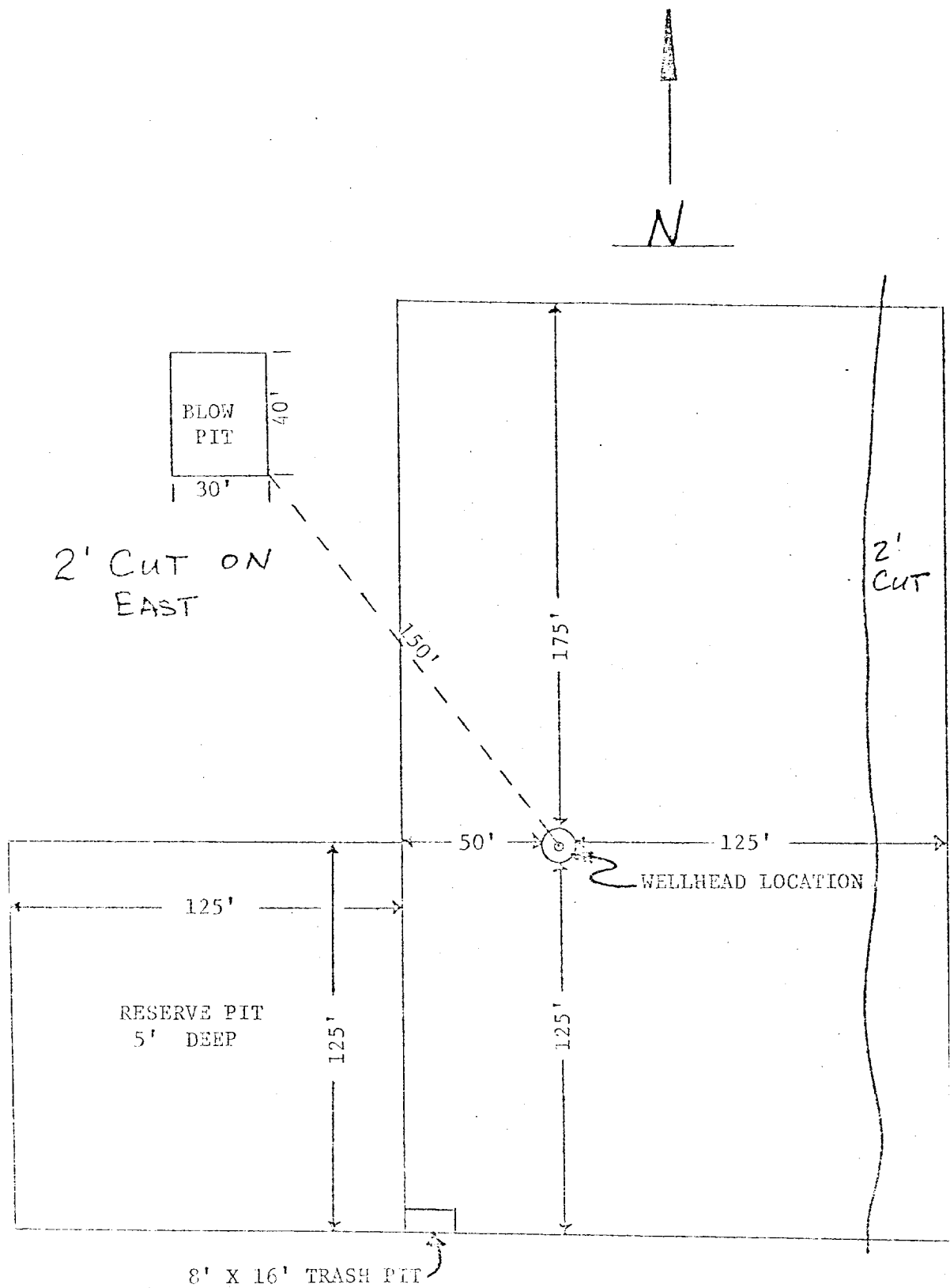
Vicinity Map for
 AMOCO PRODUCTION CO. #21 JICARILLA CONTRACT 148
 1830' FNL 1560' FWL Sec. 24-T25N-R5W
 RIO ARriba COUNTY, NEW MEXICO



UTM GRID AND 1961 MAGNETIC NORTH
 DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS





APPROXIMATELY 1.2 ACRES

Amoco Production Company	SCALE: 1"=50'
DRILLING LOCATION SPECIFICATIONS	
JICARILLA CONTRACT 148 A/G. 21	DRG. NO.