

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

INFILL

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

2320' FNL and 1800' FWL, Section 21, T28N, R12W

At proposed prod. zone

Same

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

8.5 miles Southeast of Farmington, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest dty. unit line, if any)

1800'

16. NO. OF ACRES IN LEASE

2536.94

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

2800'

19. PROPOSED DEPTH

6500'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

w/ 320

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DE, RL, GR, etc.)

5544' GL

22. APPROX. DATE WORK WILL START*

As soon as permitted

PROPOSED CASING AND CEMENTING PROGRAM

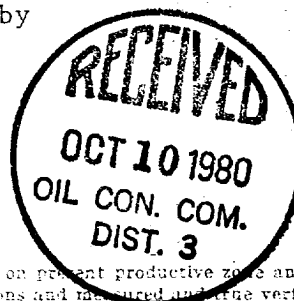
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8" (New)	24# K-55	300'	315 sx Class "B" w/2% CaCl2-circ.
7-7/8"	4-1/2" (New)	10.5# K-55	6500'	Stage 1-360 sx Class "B" 50:50
			relative	POZ 6% gel, 2# med tuf plug/sx,
				and 0.8% FLA. Tail in w/ 100 sx
				Class "B" Neat-circ.

This application to drill an Infill Basin Dakota well is pursuant to Order No. R-1670-V approved by the NMOC on May 22, 1979. This well will qualify under Section 103 of the Natural Gas Policy Act under Order No. R-1670-V. The gas from this well is dedicated to El Paso Natural Gas

Application for an unorthodox location has been approved by the Santa Fe Office of the NMOC.

RECEIVED

SEP 10 1980

U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

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 prevention program, if any.

SIGNED R. A. DunningTITLE District EngineerDATE September 17, 1980

(This space for Federal or State office use)

PERMIT NO.

APPROVED
AS AMENDED

APPROVAL DATE

APPROVED BY

JAMES F. SIMS
DISTRICT ENGINEER

TITLE

DATE

NSC-1223

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

Operator AMOCO PRODUCTION COMPANY			Lease GALLEGOS CANYON UNIT		Well No. 228E
Unit Letter F	Section 21	Township 28N	Range 12W	County San Juan	

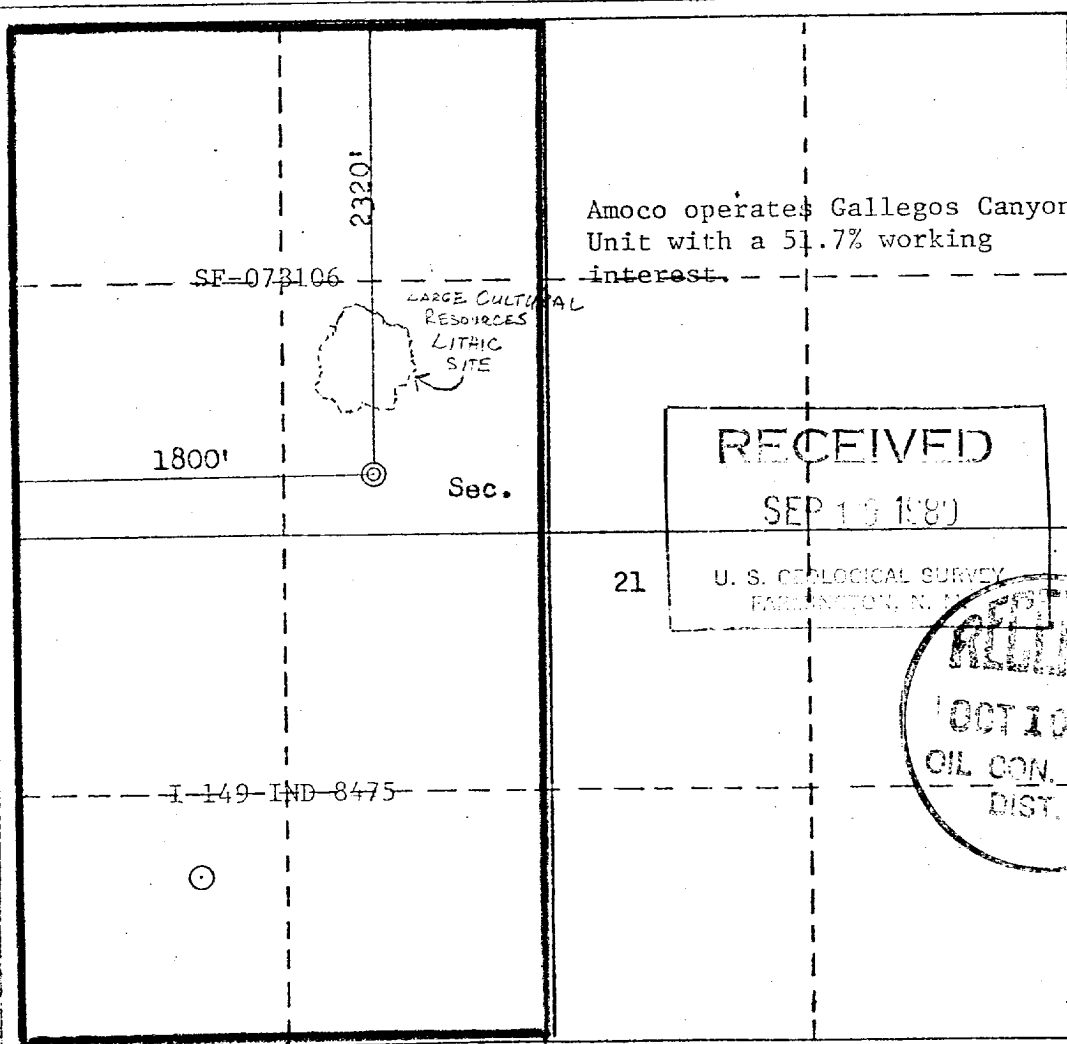
Actual Footage Location of Well: 2320 feet from the North line and 1800 feet from the West line					
Ground Level Elev. 5544	Producing Formation Dakota	Pool Basin Dakota	Dedicated Acreage: 320 Acres		

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 Unitization (Gallegos Canyon Unit)

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

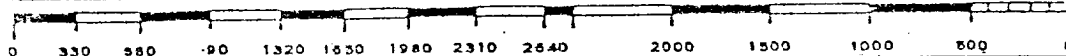
Company
AMOCO PRODUCTION COMPANY

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 is true and correct to the best of my knowledge and belief.

Date Surveyed
May 20, 1980
Registered Professional Engineer and/or Land Surveyor
Fred B. Kern Jr.
Fred B. Kern Jr.

Certificate No..
3950



SUPPLEMENTAL INFORMATION TO FORM 9-331C

GALLEGOS CANYON UNIT NO. 228E
2320' FNL & 1800' FWL, SECTION 21, T28N, R12W
SAN JUAN COUNTY, NEW MEXICO

The geologic name of the surface formation is the Tertiary Ojo Alamo.

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	'	'
Kirtland	187 '	5365 '
Fruitland	937 '	4615 '
Pictured Cliffs	1287 '	4265 '
Chacra (if present)	'	'
Mesaverde	Cliff House 3077 '	2475 '
	Point Lookout 3747 '	1805 '
Gallup	4927 '	625 '
Dakota	5827 '	- 275 '
TD	6500 '	- 948 '

Estimated KB elevation: 5552 '

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:

SP-GR-Induction
FDC-CNL-GR

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

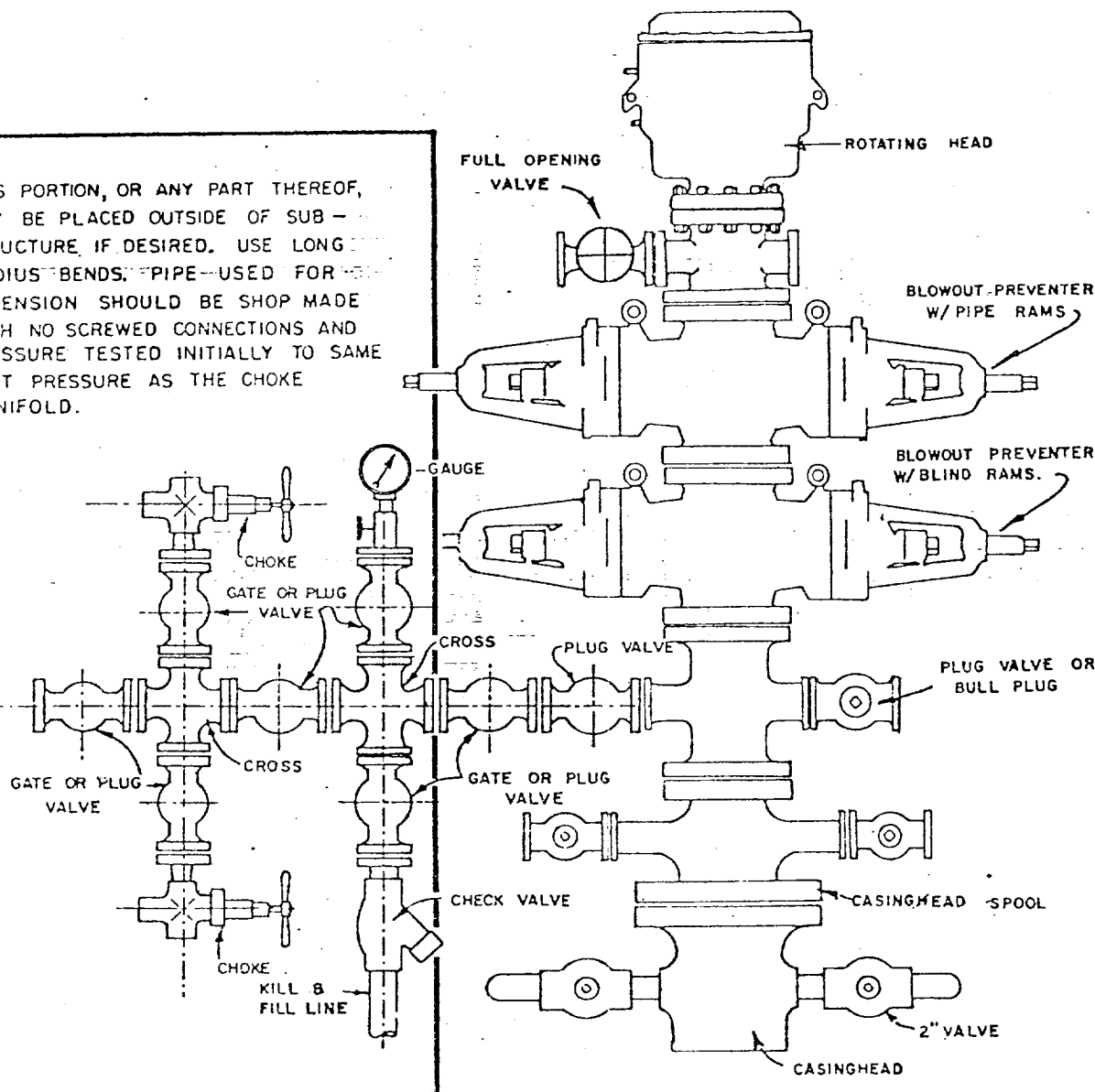
Operations will commence when permitted and last approximately 3 weeks.

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.

THIS PORTION, OR ANY PART THEREOF, MAY BE PLACED OUTSIDE OF SUB-STRUCTURE IF DESIRED. USE LONG RADIUS BENDS. PIPE USED FOR EXTENSION SHOULD BE SHOP MADE WITH NO SCREWED CONNECTIONS AND PRESSURE TESTED INITIALLY TO SAME TEST PRESSURE AS THE CHOKE MANIFOLD.



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

GALLEGOS CANYON UNIT NO. 228E
2320' FNL & 1800' FWL, SECTION 21, T28N, R12W
SAN JUAN 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 is a 380-barrel tank and facilities located at Gallegos Canyon Unit Well No. 228, one-half mile southwest.
5. Water will be hauled from the San Juan River.
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 top 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 an uneven terrain with sandy loam soil; vegetation consists of sagebrush and native grasses.

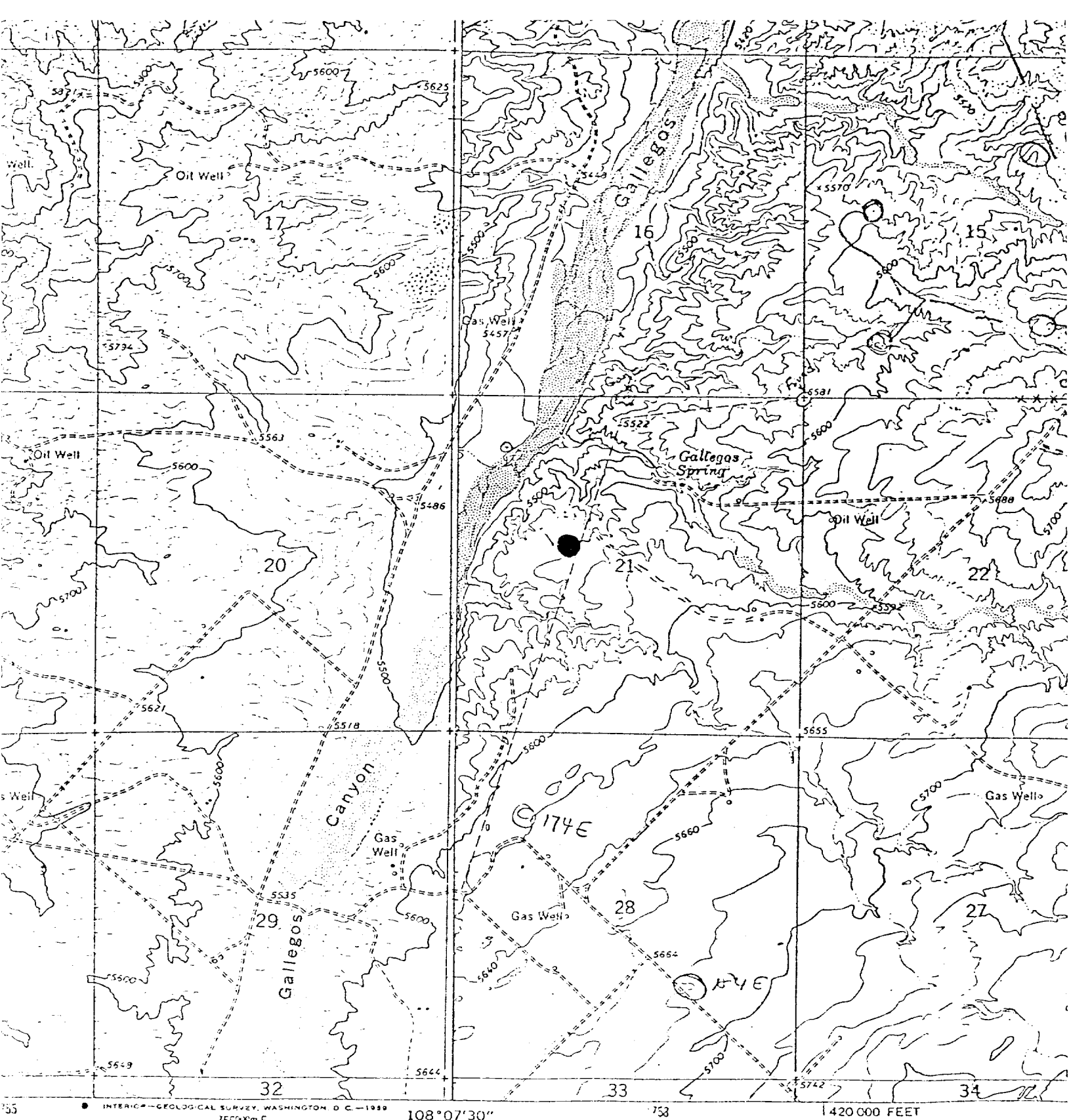
Representatives of the U. S. Geological Survey's Farmington Office, NAPI, and the Bureau of Indian Affairs' Window Rock office inspected the site with Amoco personnel. Cultural resources inspection was conducted by an archaeologist from Salmon Ruins.

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 10, 1980


R. W. Schroeder, District Superintendent



Maped, edited, and published by the Geological Survey

ROAD C

Vicinity Map for

AMOCO PRODUCTION COMPANY #228E GALLEGOS CANYON UNIT

2320' FNL 1800' FWL Sec. 21-T28N-R12W

SAN JUAN COUNTY, NEW MEXICO

Heavy-duty

Medium-duty

U. S. Route

10 feet based on New Mexico coordinate system,

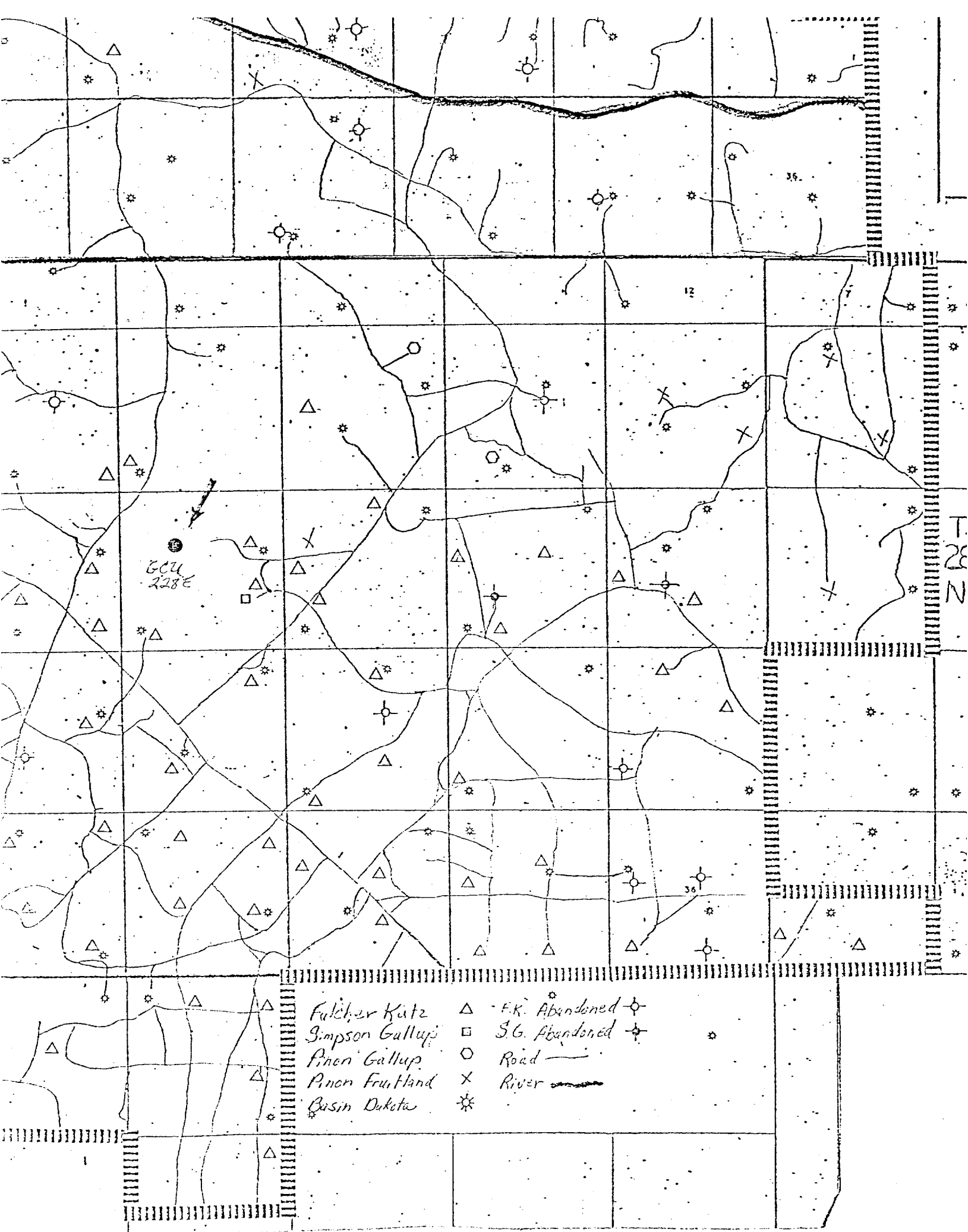
10 feet Universal Transverse Mercator grid ticks, zone 12, shown in blue

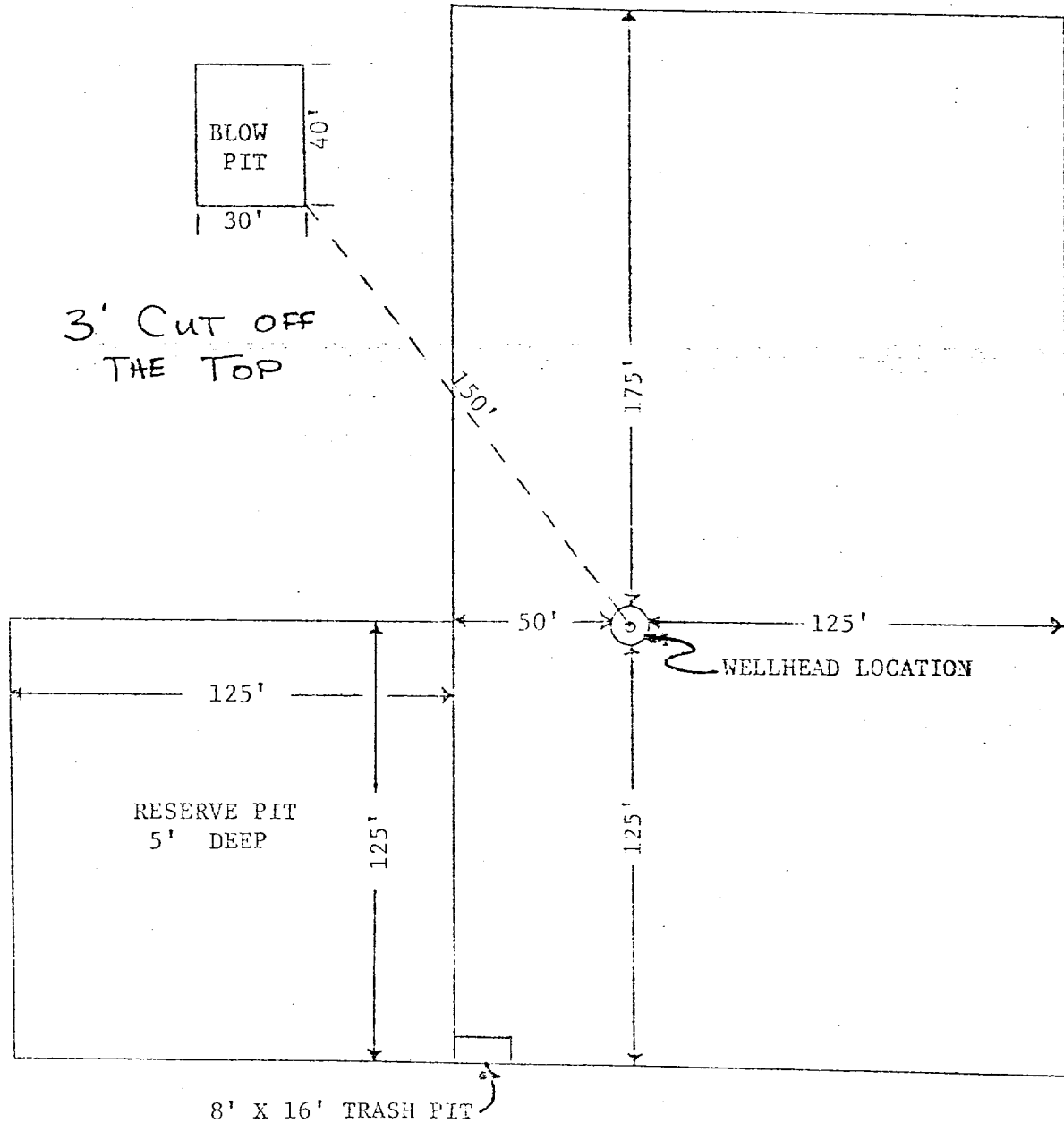
Fine red dashed lines indicate selected fence lines

FARMINGTON SOUTH, N. MEX.

N3637.5—W10807.5/7.5

UTM GRID AND DECLINATION





APPROXIMATELY 1.2 ACRES

Amoco Production Company	SCALE: 1"=50'
DRILLING LOCATION SPECIFICATIONS	
GALLEGOS CANYON UNIT # 228E	DRG. NO.