

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. 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 155		
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache		
SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			7. UNIT AGREEMENT NAME		
2. NAME OF OPERATOR Amoco Production Company			8. FARM OR LEASE NAME Jicarilla Gas Com "C"		
3. ADDRESS OF OPERATOR 501 Airport Drive, Farmington, NM 87401			9. WELL NO. 1E		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface F 1560' FNL & 1770' FWL, Section 32, T26N, R5W At proposed prod. zone Same			10. FIELD AND POOL, OR WILDCAT Basin Dakota		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 24 miles NW of Counselor, New Mexico			11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SE/4 NW/4 Sec. 32 T26N, R5W		
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1560'		16. NO. OF ACRES IN LEASE 2477.56	12. COUNTY NEW MEXICO 13. STATE Rio Arriba New Mexico		
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2300'		19. PROPOSED DEPTH 7450'	17. NO. OF ACRES ASSIGNED TO THIS WELL N/320		
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6578' GL		20. ROTARY OR CABLE TOOLS Rotary		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"	8-5/8"	24#	300'	300 sx.
7-7/8"	4-1/2"	10.5#	7450'	1853 sx.

The above well is being drilled to further develop the Basin Dakota Field. The well will be drilled with a low solids non-dispersed mud system. Completion design will be based on open hole logs. Copy of all logs will be filed upon completion. The gas from this well is dedicated to Northwest Pipeline.

Additional information required by NTL-6 for the application to drill and a Multi-Point Surface Use Plan are attached.

This application to drill an Infill Basin Dakota well is pursuant to Order No. R-1670-V approved by the NMOCC on May 22, 1979. This well will qualify under Section 103 of the Natural Gas Policy Act under Order No. R-1670-V. Attached is a copy of the order and the U.S. Department of the Interior letter of February 22, 1979.

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. If proposal is to install a preventer program, if any.

24. SIGNED B. E. Jacobell TITLE District Engineer DATE May 31, 1979

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

U. S. GEOLOGICAL SURVEY
BUREAU OF OIL & GAS

*See Instructions On Reverse Side

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-102
Revised 10-1-78

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

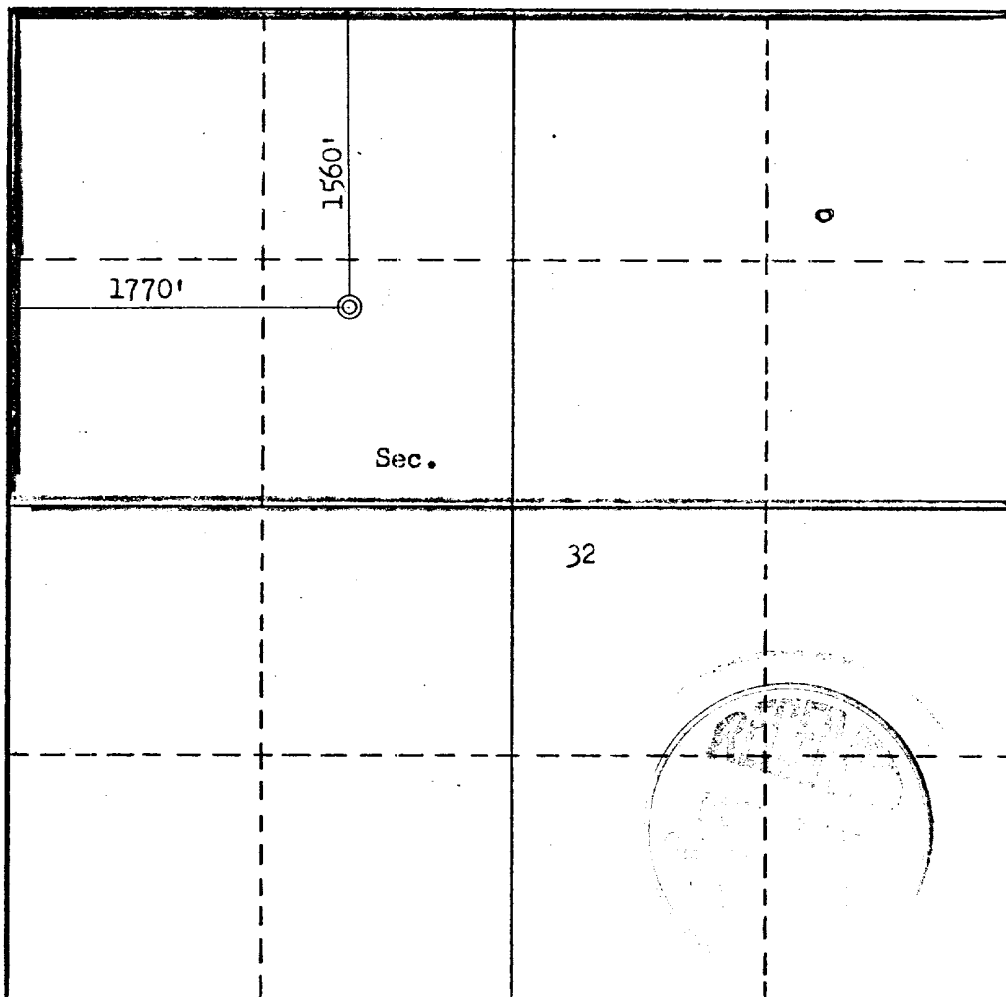
Operator AMOCO PRODUCTION COMPANY			Lease JICARILLA GAS COM "C"		Well No. 1E
Unit Letter F	Section 32	Township 26N	Range 5W	County Rio Arriba	
Actual Footage Location of Wells: 1560 feet from the North line and 1770 feet from the West line					
Ground Level Elev. 6578	Producing Formation Dakota		Pool 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 _____

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.

B. E. Fackrell

Name

B. E. FACKRELL

Position

DISTRICT ENGINEER

Company

AMOCO PRODUCTION COMPANY

Date

MAY 10, 1979

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 10, 1979

Registered Professional Engineer
and/or Land Surveyor 3350

Fred B. Fackrell, Jr.

Certificate No.

3950

SUPPLEMENTAL INFORMATION TO FORM 9-331C
 REQUIRED BY NTL-6
 JICARILLA GAS COM "C" NO. 1E
 1560' FNL & 1770' FWL, SECTION 32-T26N-R5W
 RIO ARriba COUNTY, NEW MEXICO

The geologic name of the surface formation is the Tertiary San Jose.

The estimated tops of important geological formations bearing hydrocarbons are:

<u>FORMATION</u>	<u>DEPTH</u>	<u>ELEVATION</u>
Pictured Cliffs	2900	+3678
Mesaverde	3600	+2978
Dakota	7100	- 522
TD	7450	- 872

Estimated KB Elevation: 6591'

<u>EST. DEPTH</u>	<u>CSG. SIZE</u>	<u>WEIGHT</u>	<u>HOLE SIZE</u>	<u>SACKS CEMENT - TYPE</u>
300'	8-5/8"	24#	12-1/4"	300 sx class "B" neat
7450'	4-1/2"	10.5#	7-7/8"	1653 sx class "B" 50:50 poz 200 sx class "B" neat

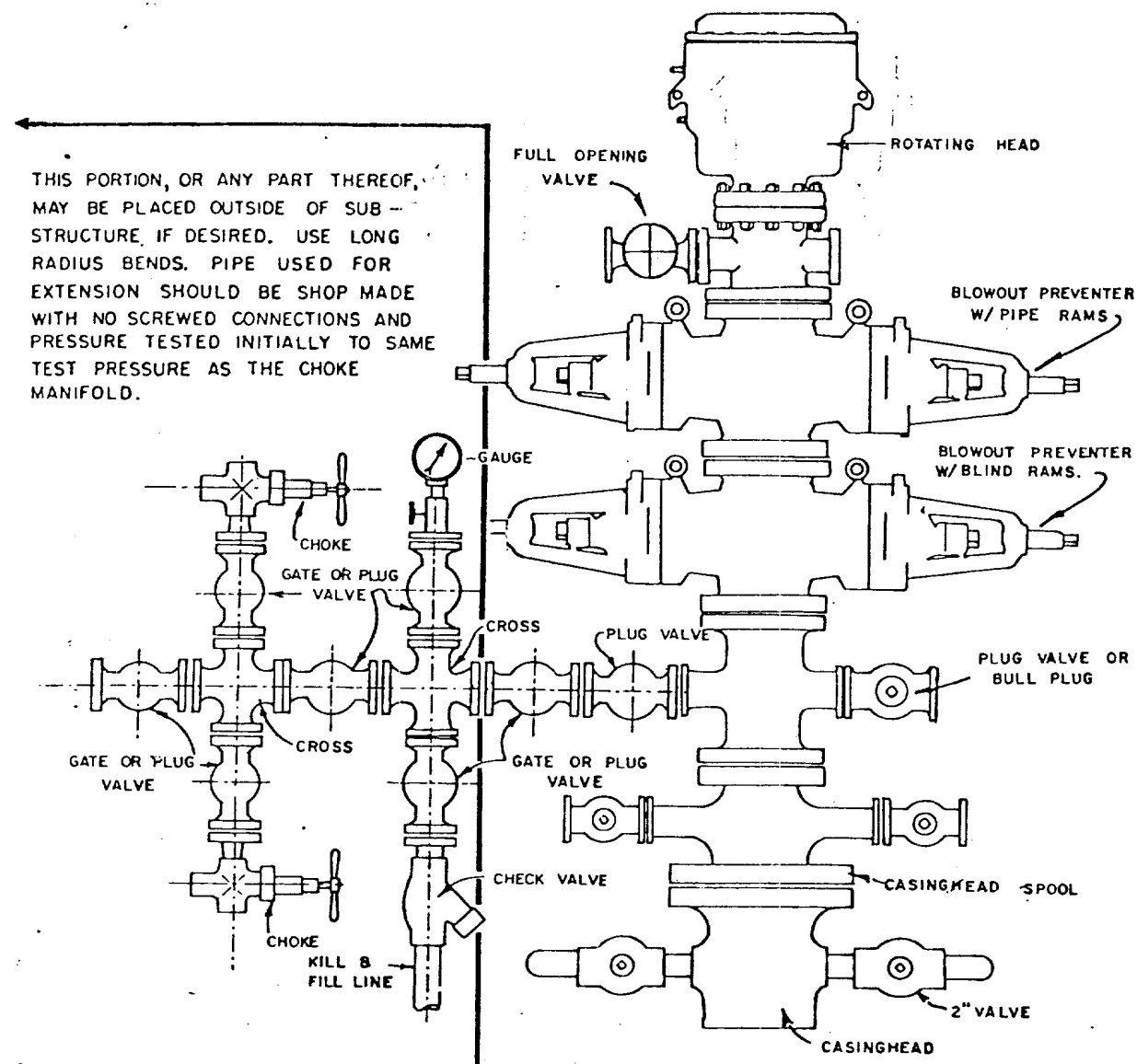
Amoco's standard blowout prevention will be employed; see attached drawing of our blowout preventer design.

Drilling fluid to TD will be a low solids non-dispersed mud system.

Amoco plans to run the following logs: Induction-Electric and Density-Gamma Ray from TD to 300'; Induction and Density from TD to 300'. No Cores or Drill stem Tests will be taken.

In the past, drilling in this area has shown that no abnormal pressures, temperatures, nor hydrogen sulfide gas will be encountered.

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

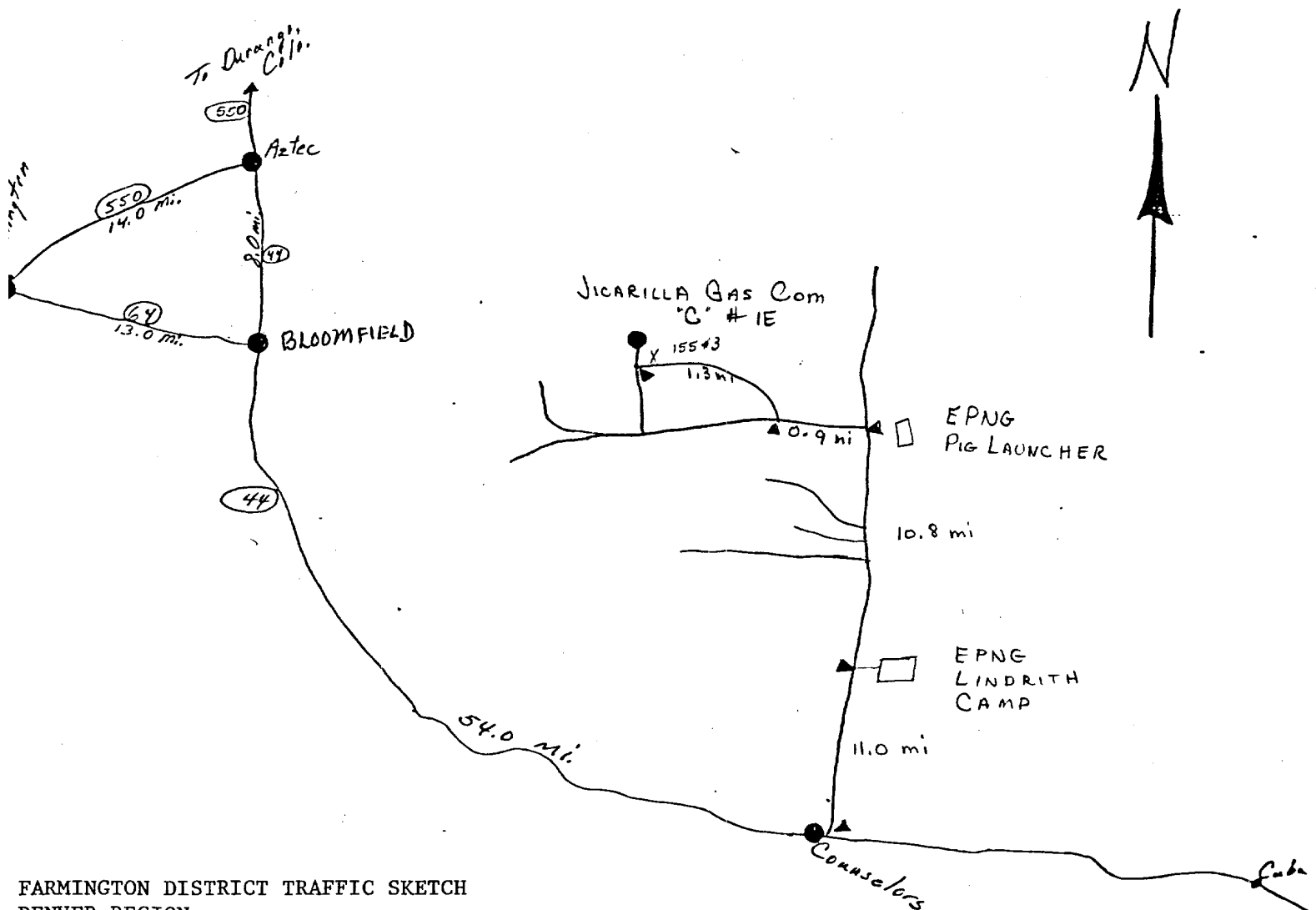
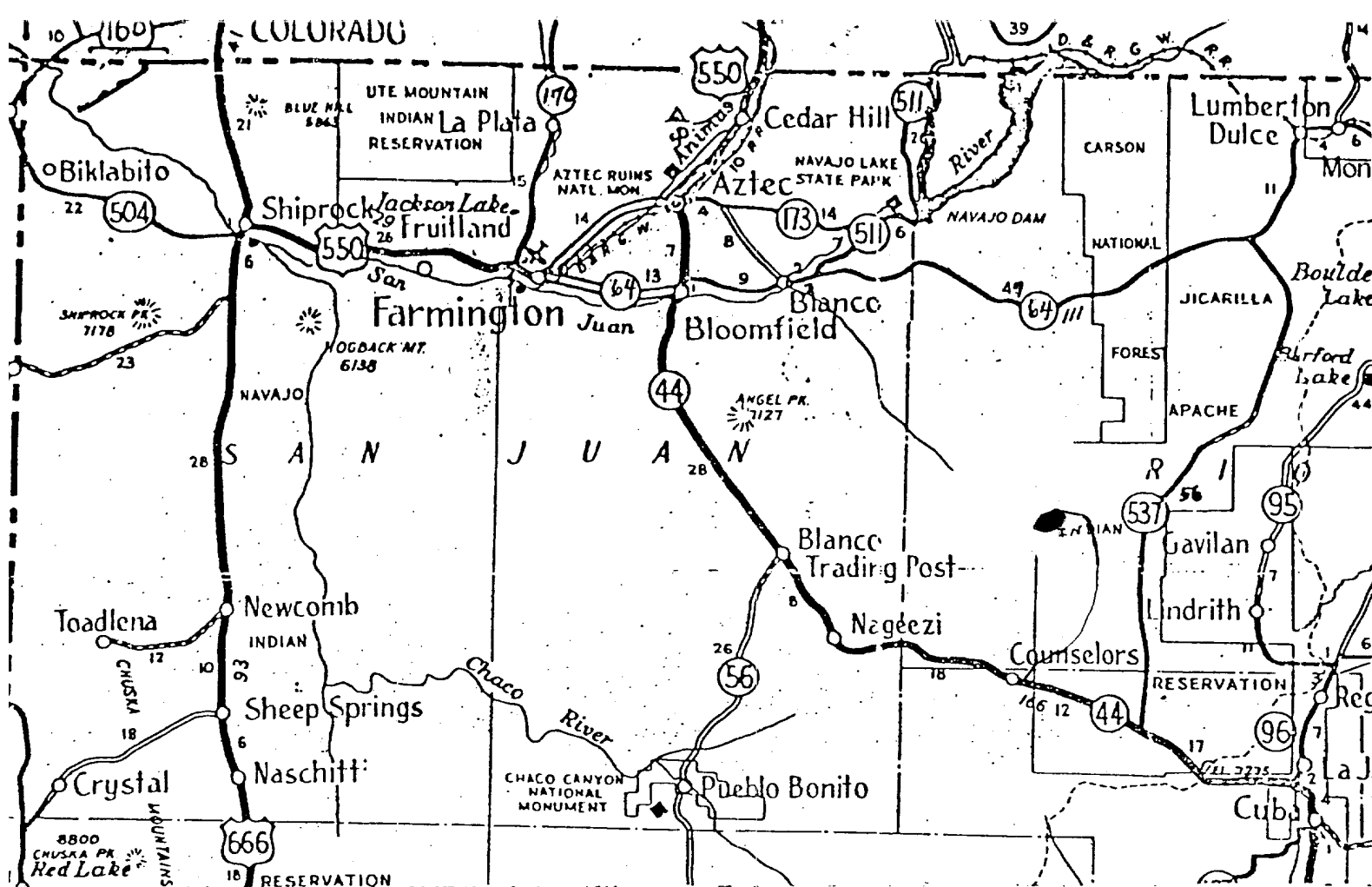
MULTI-POINT SURFACE USE PLAN

JICARILLA GAS COM "C" NO. 1E
1560' FNL & 1770' FWL, SECTION 32, T26N, R5W
RIO ARriba COUNTY, NEW MEXICO

1. The attached road map and sketch show the proposed route to the location and distances from towns.
2. Approximately 300 feet of new road 20 feet wide and bar ditched on one side will be built.
3. Existing oil and gas wells within a one-mile radius of our proposed well have been spotted on the vicinity map.
4. An existing well is located nearby and the pipeline is located 300 feet north.
5. Water will be hauled from Tapacito Wash.
6. No construction materials will be hauled in for this location.
7. A 150' x 150' pit will be built on location to hold all drilling waste. Upon completion of well, all waste and liquid will be pumped out and fluids will be bladed into roads.
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 the west side of the location.
10. Restoration of the surface will be accomplished by cleaning up and leveling upon completion of the well. Drilling mud will be hauled away and the reserve pit back filled. Reseeding of the site will be carried out as detailed in the attached seeding plan.
11. The general topography is a rolling mesa top of sandy clay-type loam with vegetation of yucca, sagebrush, native grasses and pinon and juniper trees.

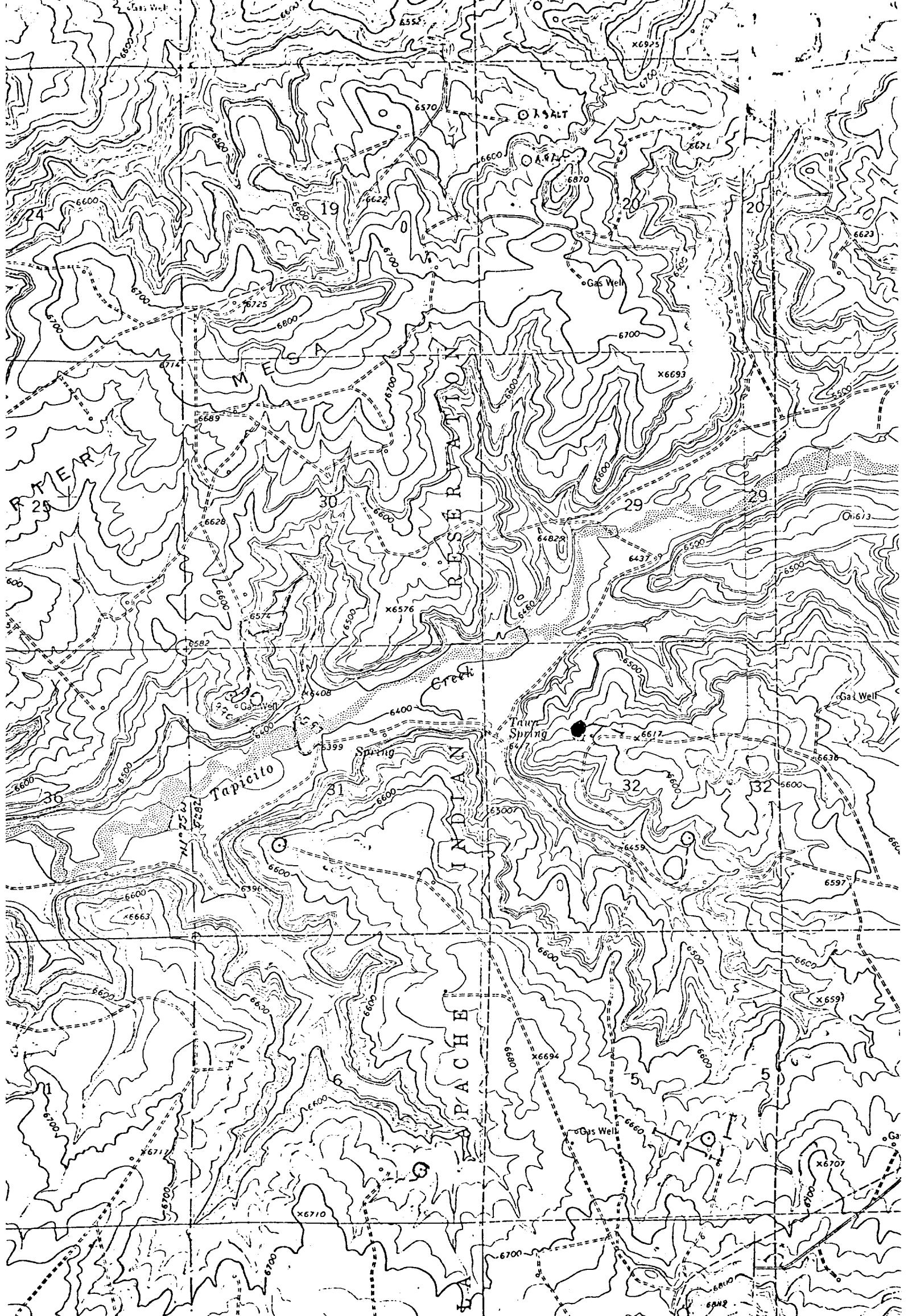
Representatives of the U. S. Geological Survey's Durango Office (Don Englishman) and the Jicarilla Tribe's Dulce Office (Gary Vicenti) inspected the site with Amoco personnel. Cultural resources inspection was conducted by Terry Knight, Archaeologist from San Juan College.

12. A Certification Statement by Amoco's representative is included.

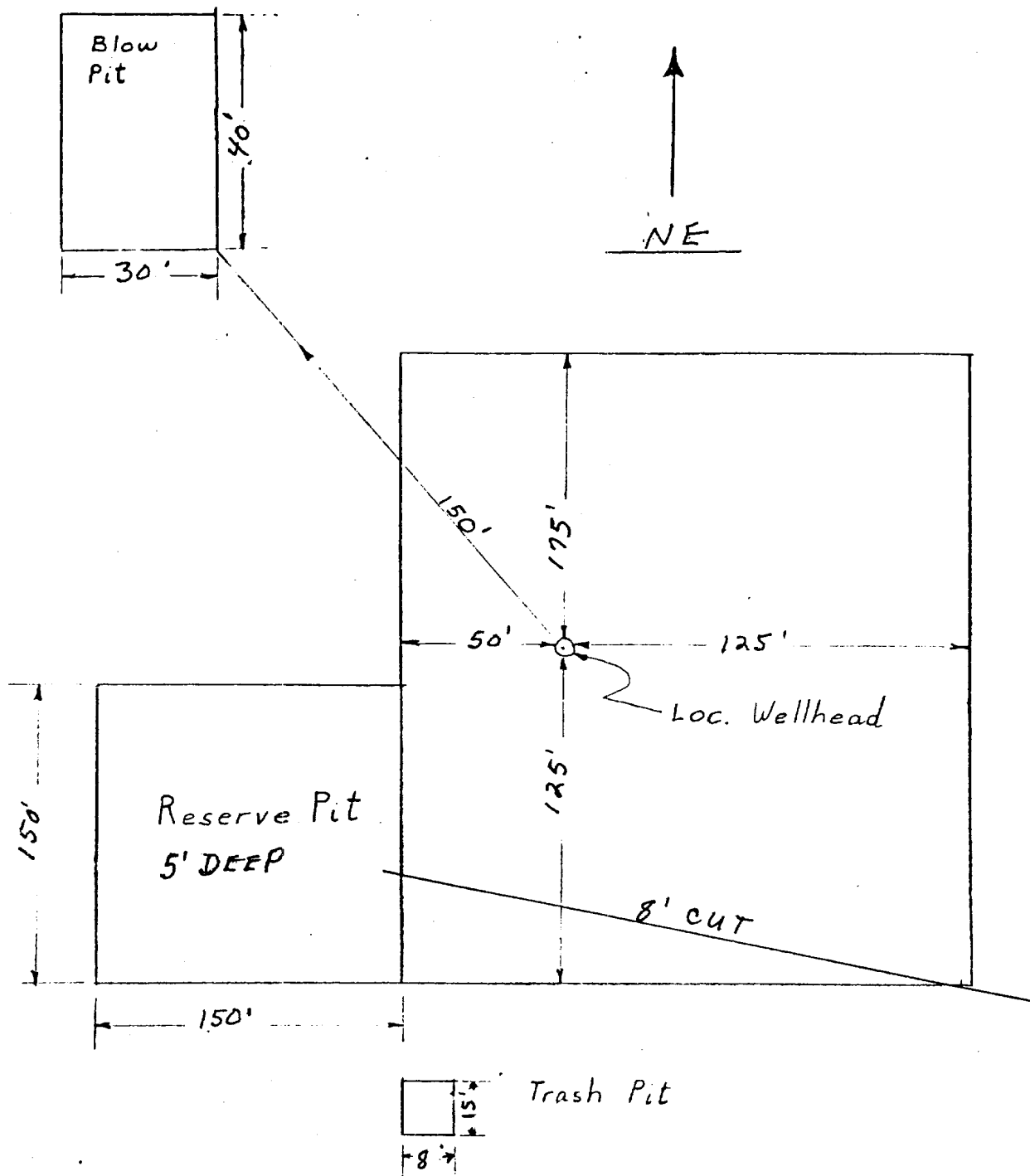


FARMINGTON DISTRICT TRAFFIC SKETCH
DENVER REGION
JICARILLA GAS COM "C" NO. 1E
RIO ARriba COUNTY, NEW MEXICO
AMOCO WI: 100%

Rail Point, Aztec - 86 miles
Mud Point, Aztec - 86 miles
Cement Point, Farmington - 91 miles



Vicinity Map for
AMOCO PRODUCTION CO. JICARILLA GAS COM "C" #1E
1560'FNL 1770'FWL Sec 32-T26N-R5W
RIO ARriba COUNTY, NEW MEXICO



APPROXIMATELY 1.2 Acres

Amoco Production Company

SCALE: NONE

DRILLING LOCATION SPECS

JICARILLA GAS COM "C" NO. 1E

DRG.
NO.

SEEDING PLAN

1. TIME:

All seeding will take place between July 1 and September 15.

2. EQUIPMENT:

Seeding will be done with a disc-type drill with two boxes for various seed sizes. The drill rows will be eight to ten inches apart. The seed will be planted not less than one-half inch deep or more than one inch deep. The seeder will be followed with a drag, packer, or roller to insure uniform coverage of the seed, and adequate compaction. Drilling will be done on the contour where possible, not up and down the slope. Where slopes are too steep for contour drilling, a "cyclone" hand seeder or similar broadcast seeder will be used. Seed will then be covered to the depth described above by whatever means is practical.

3. SPECIES TO BE PLANTED IN POUNDS PURE-LIVE-SEED PER ACRE:

CRESTED WHEATGRASS	0.7 lbs.
RUSSIAN WILD RYE	0.86 lbs.
ORCHARD GRASS	0.298 lbs.
PERENNIAL RYE GRASS	0.57 lbs.
WESTERN WHEAT GRASS	1.43 lbs.
SMOOTH BROME	1.14 lbs.
INTERMEDIATE WHEAT	0.91 lbs.
PUBESCENT WHEAT GRASS	1.09 lbs.

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 be 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.

6/1/79
Date

R. W. Schroeder District Supt.
Name and Title

Amoco Production Company's Representative:

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Form Approved.
Budget Bureau No. 42-R1424

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ gas ☒ other ☐

2. NAME OF OPERATOR
AMOCO PRODUCTION COMPANY

3. ADDRESS OF OPERATOR
501 Airport Drive Farmington, NM 87401

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
1560' FNL x 177' FWL, Section 32,
AT SURFACE: T26N, R5W
AT TOP PROD. INTERVAL: Same
AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	<input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT ,	<input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	<input type="checkbox"/>
(other) Spud & Set Casing		

5. LEASE
Jicarilla Contract 155
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Jicarilla Apache
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
Jicarilla Gas Com "C"
9. WELL NO.
10. FIELD OR WILDCAT NAME
Basin Dakota
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA SE/4 NW/4 Section 32, T26N, R5W
12. COUNTY OR PARISH
Rio Arriba
13. STATE
NM
14. API NO.
30-039-22089
15. ELEVATIONS (SHOW DF, KDB, AND WD)
6578' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Spudded 12-1/4" hole on 7/19/79. Drilled to 346'. Set 8-5/8", 24# casing at 341'. Cemented with 315 sx Class "B" Neat, 2% CaCl₂ cement.

Drilled 7-7/8" hole to TD and set 4-1/2", 10.5# casing. Cemented with 600 sx Class "B" cement containing 50:50 Poz with 6% gel, 2# medium tuf plug per sx and 0.8% D-60 fluid loss additive. Tailed in with 100 sx Class "B" Neat cement. Cemented the second stage with 1155 sx Class "B" Neat cement, Dowell Litepoz (50:50) with 6% gel, 2# medium tuf plug per sx and 0.8% fluid loss additive. Tailed in with 100 sx Class "B" Neat cement.

Released rig on 8/5/79.

Subsurface Safety Valve: Manu. and Type _____

18. I hereby certify that the foregoing is true and correct

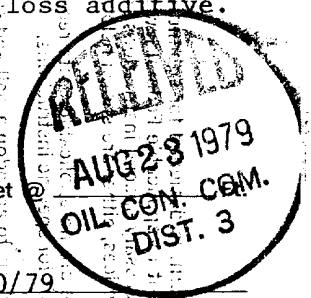
Original Signed By

SIGNED E. E. SVOBODA TITLE Dist. Adm. Supvr DATE 8/20/79

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side



AUG 22 1979

U. S. GEOLOGICAL SURVEY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ well gas ☒ well other ☐

2. NAME OF OPERATOR

Amoco Production Company

3. ADDRESS OF OPERATOR

501 Airport Drive Farmington, NM 87401

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 1560' FNL x 177' FWL, Section 32,
AT TOP PROD. INTERVAL: Same T26N, R5W
AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) Completion Procedure

5. LEASE

Jicarilla Contract 155

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Jicarilla Gas Com "C"

9. WELL NO.

1E

10. FIELD OR WILDCAT NAME

Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

SE/4 NW/4 Section 32, T26N, R5W

12. COUNTY OR PARISH

Rio Arriba

13. STATE

New Mexico

14. API NO.

30-039-22089

15. ELEVATIONS (SHOW DF, KDB, AND WD)

6578' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Completion operations commenced on 10-16-79. The total depth of well is 7500' and plug back depth is 7469'.

Displace hole with 2% KCL water and pressure tested casing.

Perforated first stage from 7248' to 7309' with 2 spf, total of 96 holes. Sand water fraced with 101,560 gallons of frac fluid and 162,000# of sand.

Perforated second stage from 7166' to 7212' with 2 spf, total of 36 holes. Sand water fraced with 55,500 gallons of frac fluid and 87,875# of sand.

Perforated third stage from 7037' to 7069' with 2 spf, total of 56 holes. Sand water fraced with 68,250 gallons of frac fluid and 104,235# of sand. Subsurface Safety Valve: Manu. and Type Set @ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED E. E. SVOBODA

TITLE Dist. Adm. Supr.

DATE 12/3/79

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

Swabbed well and released rig on 10/21/79.

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-65

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special					Test Date 11/12/79				
Company AMOCO PRODUCTION COMPANY					Connection NORTHWEST PIPELINE				
Pool BASIN					Formation DAKOTA				
Completion Date 10/21/79		Total Depth 7500		Plug Back TD 7469		Elevation 6578		Farm or Lease Name JICARILLA GAS COM C	
Csg. Size 4.500	Wt. 10.5	d 	Set At 7489	Perforations: From 7037 To 7309		Well No. 1E			
Tbg. Size 2.375	Wt. 4.7	d 1.995	Set At 7310	Perforations: From OPEN To ENDED		Unit Sec. Twp. Rye. F 32 26 5			
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE					Packer Set At NONE		County RIO ARriba		
Producing Thru TUBING		Reservoir Temp. °F #		Mean Annual Temp. °F 		Baro. Press. - P _a 		State NEW MEXICO	
L	H	Gg .&)	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI	2.375		.750				1375		1860		3 hrs.
1.							177		754		
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	12.365		189	1.000	.9608	1.022	2295
2.							
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/tbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ X X X X X X X X
3.					Specific Gravity Flowing Fluid _____ X X X X X
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

P _c 1872	P _c ² 3504384	(1) $\frac{P_c^2}{P_t^2 - P_w^2} = 1.2011$	(2) $\left[\frac{P_c^2}{P_t^2 - P_w^2} \right]^n = 1.1473$
NO. 1	P _t ²	P _w	P _w ²
1		766	587656
2			
3			
4			
5			

Absolute Open Flow _____ Mcfd @ 15.025		Angle of Slope @ .75	Slope, n _____
Remarks _____			

Approved By Commission J. J. BARNETT	Conducted By J. J. BARNETT	Calculated By J. J. BARNETT	Checked By B. E. FACKRELL
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