



**PHILLIPS PETROLEUM COMPANY**

FARMINGTON, NEW MEXICO 87401  
5525 HWY. 64 NBU 3004

OIL CONSERVATION DIVISION  
RECEIVED

1992 AUG 5 AM 9:10

August 3, 1992

Mr. William J. LeMay  
New Mexico Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Unorthodox Well Location  
~~12641 VNE & 530 FWL~~  
Section 5, T29N, R5W  
Rio Arriba Co., New Mexico  
GF-5395

Dear Mr. LeMay:

Phillips Petroleum Company hereby requests administrative approval for an unorthodox well location for its San Juan Unit 29-5 #230. This request for unorthodox location is predicated by archeological concerns at the standard location. As you will note, this is an internal location to the unit with Phillips operating all offset acreage. The E/2 Section 5, T29N, R5W will be dedicated to this well.

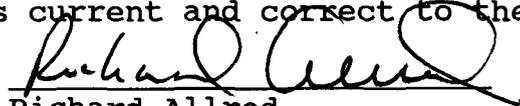
A vicinity map, area map, land map and C-102 are enclosed herewith. Your early response to this request will be greatly appreciated.

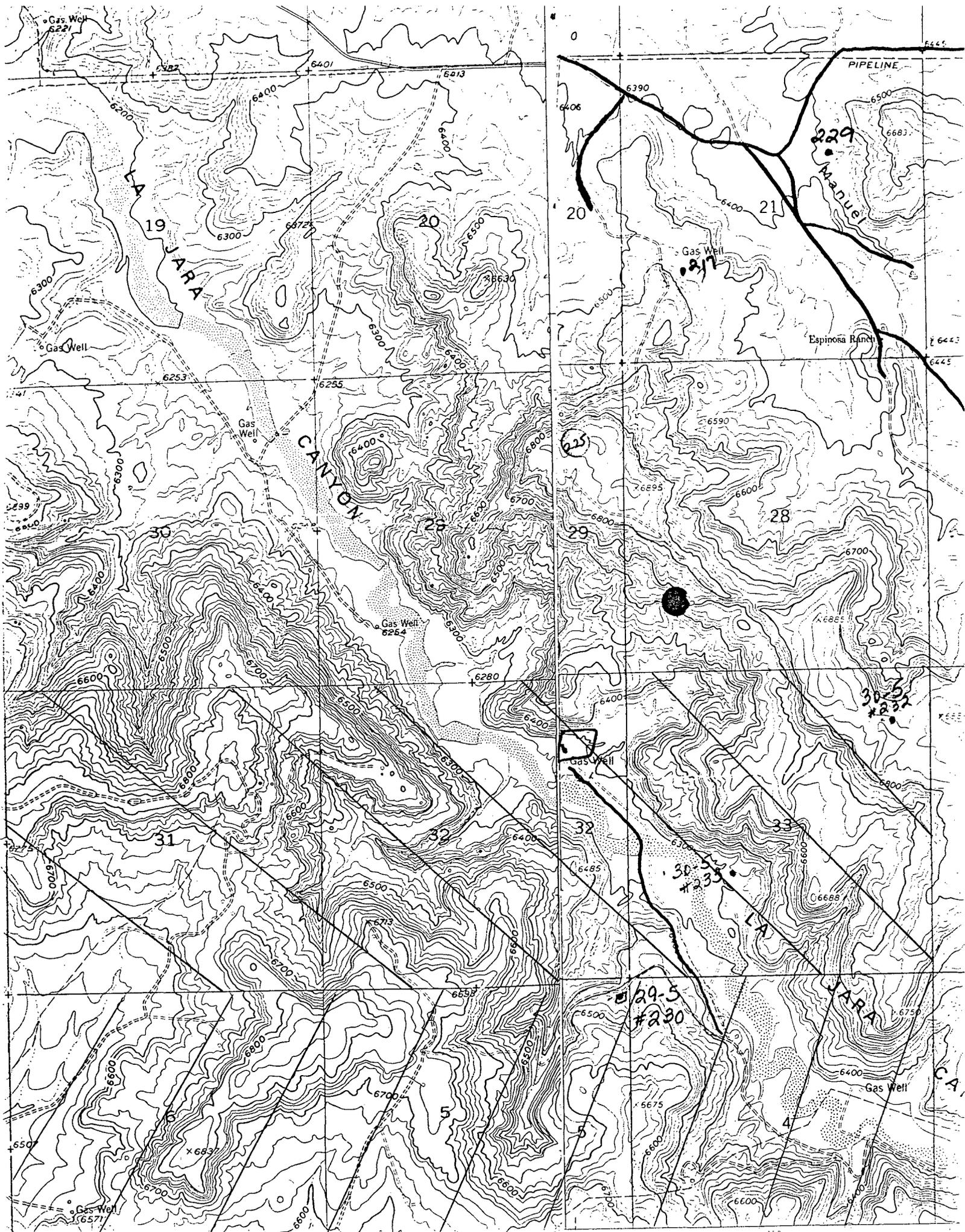
Very truly yours,

PHILLIPS PETROLEUM COMPANY

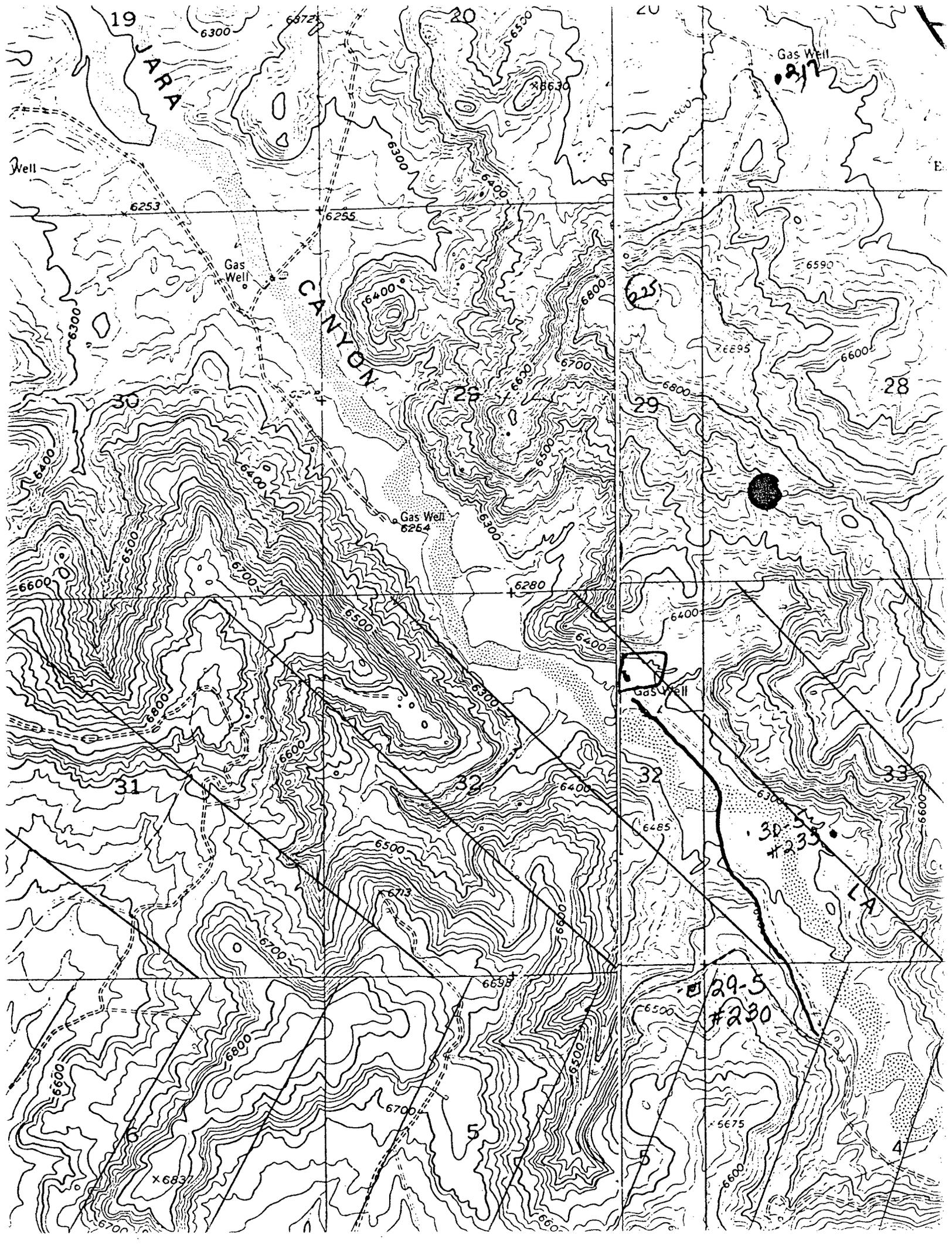
*W. Frank Hulse, III*  
W. Frank Hulse, III  
Land Specialist, CPL  
San Juan Basin  
(505) 599-3458

ATTACHMENTS  
(As Requested)  
SAN JUAN 29-5 UNIT, WELL NO. 230

- I. See APD package.
- II. See APD package.
- III. See C-102 and attached copy of topographic map.  
A. No offset operators. See topographic map.  
B. I hereby certify the information is current and correct to the best of my knowledge and ability.
- Signed:   
Name: Richard Allred  
Date: August 4, 1992
- IV. Copy of a portion of the Espinosa Ranch Quadrangle topographical map.  
A. Shown on map.  
B. Shown on map.  
C. None
- V. Enlargement of the topographic map provided.  
A. See Map  
B. None  
C. See Map  
D. None  
E. See Map.
- VI. See Archaeological Report
- VII. See Archaeological Report
- VIII. The additional expense required to drill a deviated hole to reach a standard location in an area of unknown coal gas development would make the well uneconomical to drill.
- IX. There are no offset operators. Phillips Petroleum Company is designated operator of the surrounding offset proration units.



BLUE HACHURE MARKS - 29-5 UNIT RED HACHURE MARKS - 30-5 UNIT (BOTH PHILLIPS OPERATED)



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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  SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR

Phillips Petroleum Company

3. ADDRESS OF OPERATOR

5525 Hwy 64 NBU 3004, Farmington, NM 87401

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

At surface Unit A, 388' FNL & 179' FEL

At proposed prod. zone Same as above

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

Approx. 25 miles east from Blanco

16. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE  
322.24

17. NO. OF ACRES ASSIGNED TO THIS WELL  
320 E/2

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH  
3300'

20. ROTARY OR CABLE TOOLS  
Rotary

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

6425' (GL Unprepared)

22. APPROX. DATE WORK WILL START\*

Upon Approval

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#, K-55	250'	250 Sx, Circ to Surface
8-3/4"	7"	23#, K-55	3120'	650 Sx, Circ to Surface
6-1/8"	5-1/2"	23#	3020'-3295'	*

\*If the coal is clefted a 5-1/2", 23#, P-110 liner will be run in the open hole without being cemented.

Mud Program and BOP Equipment: See Attached

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 any.

24. SIGNED L. E. Robinson TITLE Sr. Drlg. & Prod. Engr. DATE May 28, 1992

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

**OIL CONSERVATION DIVISION**

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

**DISTRICT I**

P.O. Box 1980, Hobbs, NM 88240

**DISTRICT II**

P.O. Drawer DD, Artesia, NM 88210

**DISTRICT III**

1000 Rio Brazos Rd., Aztec, NM 87410

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

All Distances must be from the outer boundaries of the section

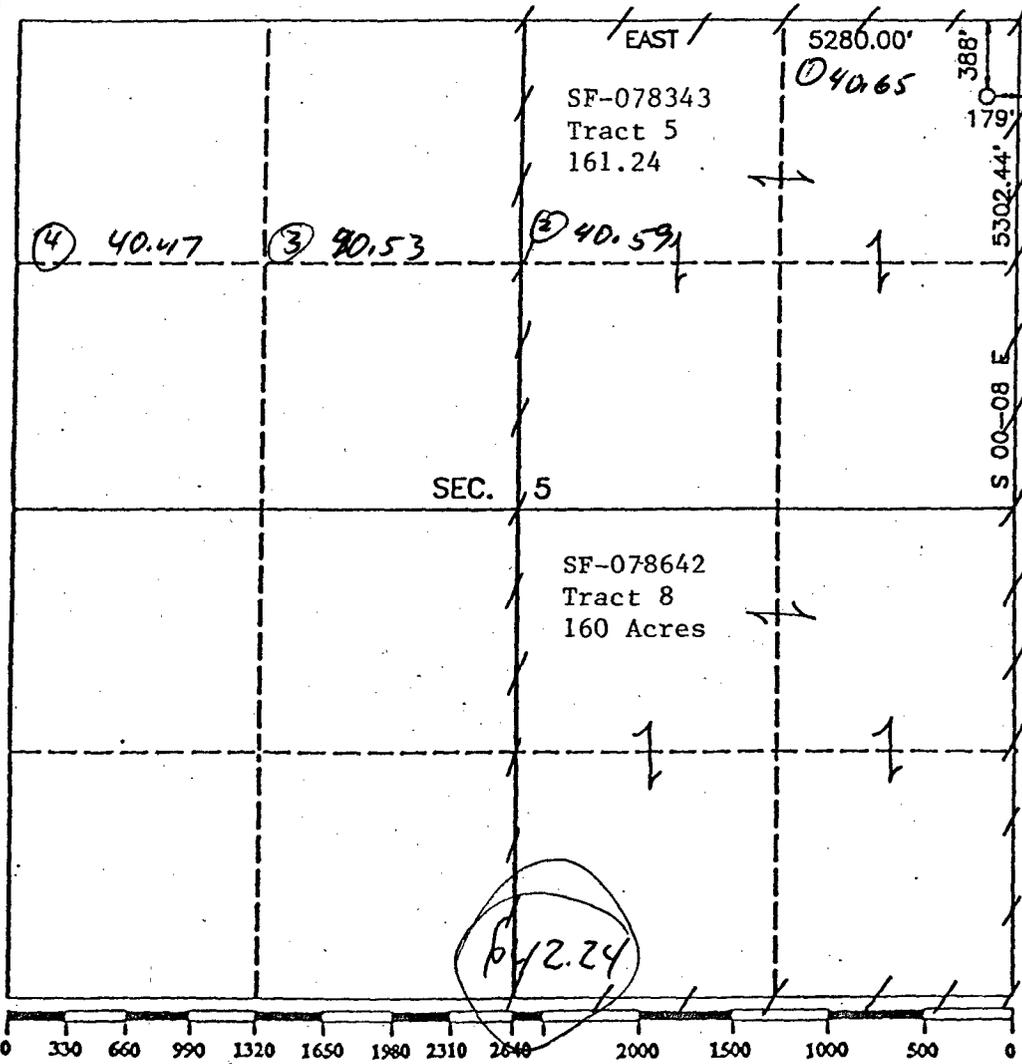
Operator <b>PHILLIPS PETROLEUM</b>		Lease <b>SAN JUAN 29-5 UNIT</b>		Well No. <b>230</b>
Unit Letter <b>A</b>	Section <b>5</b>	Township <b>T.29 N.</b>	Range <b>R.5 W.</b>	County <b>RIO ARRIBA</b>
Actual Footage Location of Well: <b>388</b> feet from the <b>NORTH</b> line and <b>179</b> feet from the <b>EAST</b> line				
Ground level Elev. <b>6425</b>	Producing Formation <b>Fruitland</b>	Pool <b>Basin Fruitland Coal</b>		Dedicated Acreage: <b>320</b> Acres

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest 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 interest, has been approved by the Division.



**OPERATOR CERTIFICATION**

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

Signature: *L. E. Robinson*

Printed Name: **L. E. Robinson**

Position: **Sr. Drlg. & Prod. Engr.**

Company: **Phillips Petroleum Company**

Date: **May 28, 1992**

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes or 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: **APR 11 1992**

Signature & Seal of Professional Surveyor: *Roy A. Rush*

Certificate No.: **8894**

COMPANY: PHILLIPS PETROLE.

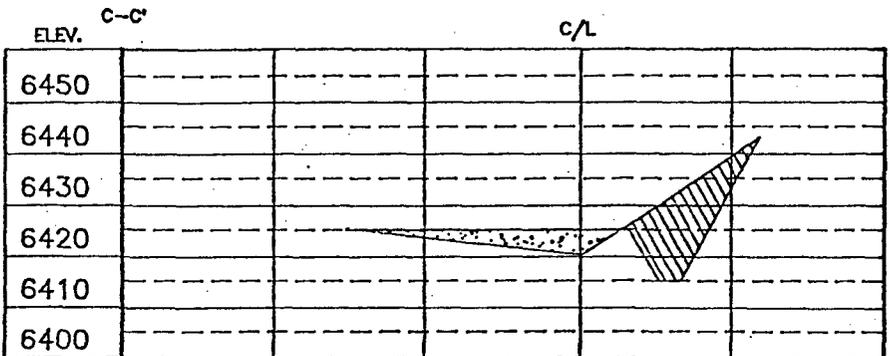
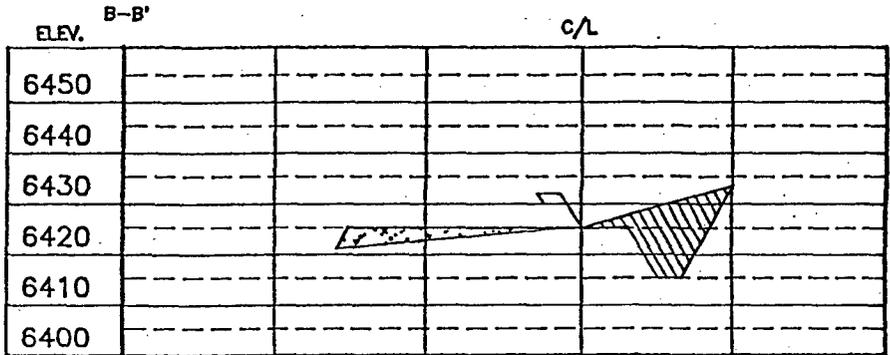
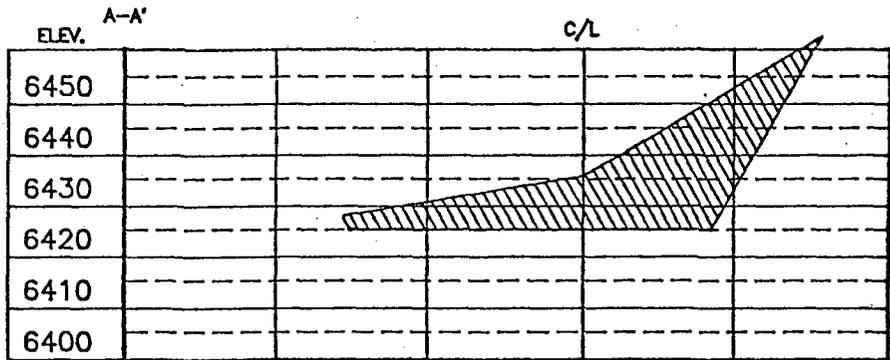
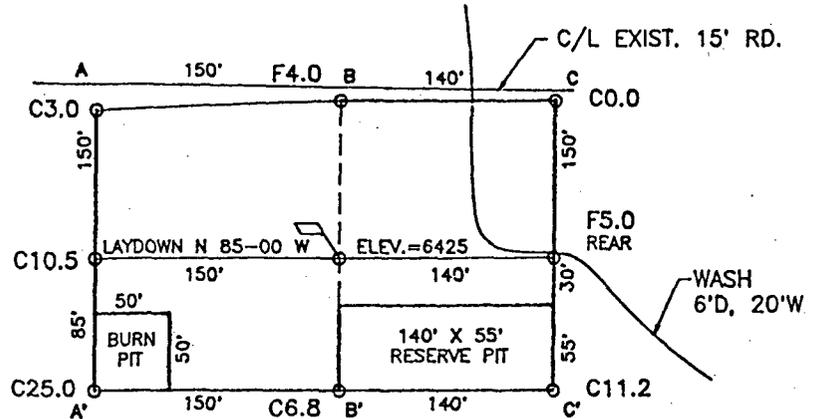
LEASE: SAN JUAN 29-5 UNIT NO. 230

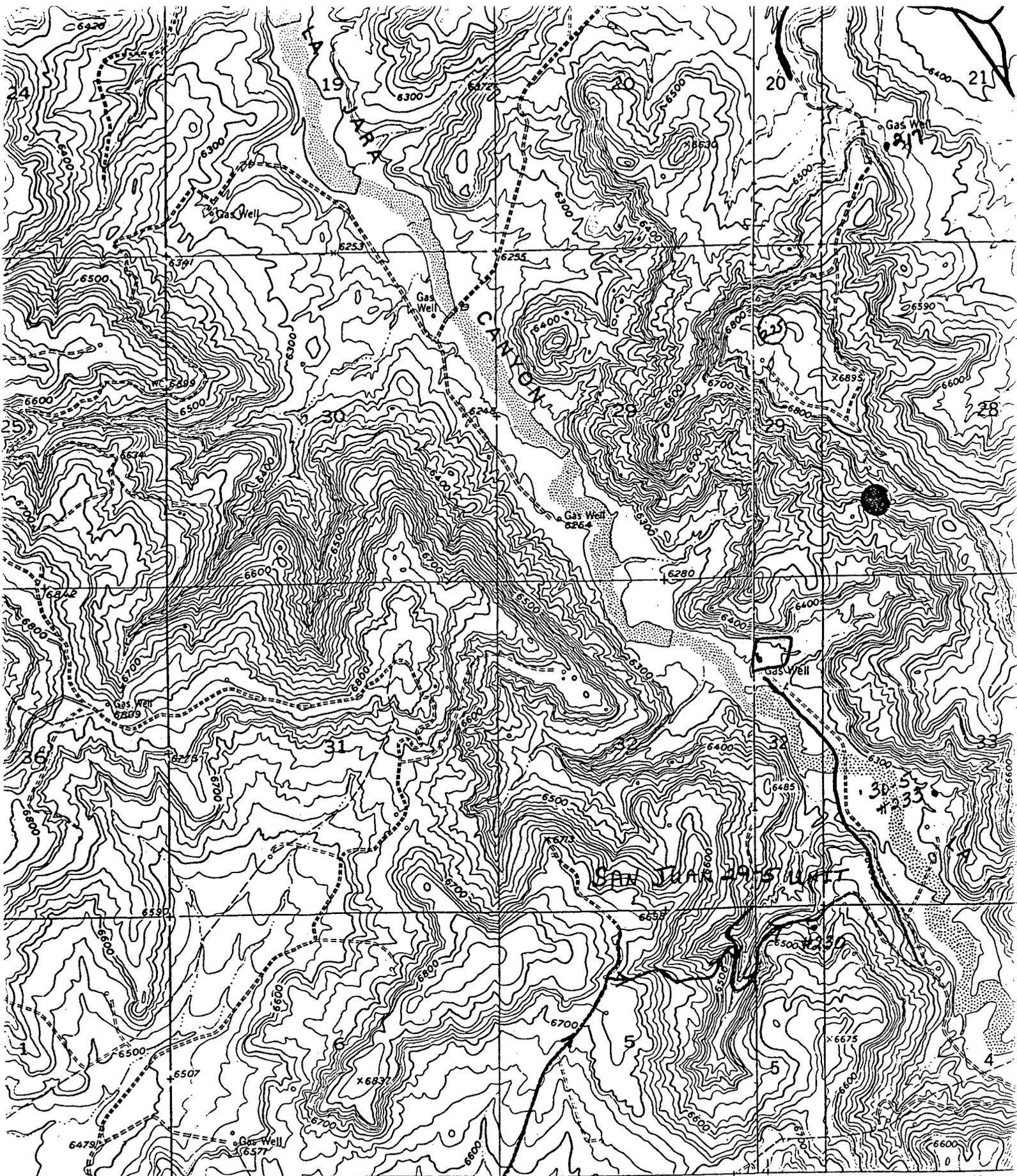
FOOTAGE: 388 FNL, 179 FEL

SEC.: 5 TWN: T.29 N. RNG: R.5 W. NMPM

ELEVATION: 6425

NOT TO SCALE





R. 6 W. R. 5 W. 286 INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1983 107° 17' 20" 287000m. E. 289

ROAD CLASSIFICATION

Light-duty ..... Unimproved dirt =====

UBERNADOR  
4557 III NE

## SURFACE USE PLAN

Phillips Petroleum Company , San Juan 29-5 Unit , Well No. 230 , NE/4 NE/4,  
Section 7, T-29-N, R-5-W, Rio Arriba County, New Mexico. (Federal Lease No. NM-  
078343.)

This plan is to accompany "Application for Permit to Drill" the subject well which is located approximately 25 miles east from Blanco, New Mexico. The following is a discussion of pertinent information concerning the possible effect which the proposed drilling well may have on the environment of the well and road sites and surrounding acreage. A copy will be posted on the derrick floor so that all contractors and sub-contractors will be aware of all items of this plan.

### 1. Existing Roads:

- A. To reach the proposed location, start from Farmington, N.M. take N.M. 64 approximately 49 miles to Gobernador. Turn left on Hwy 527 (Sims Mesa Road to approximately the 3.5 mile marker. Turn right and stay on road approximately 1 mile and take left and go approx. .8 mi., then take right and go approx. .6 miles to location on left.

### 2. Planned Access Roads:

- A. Location is by road, no new access needed. All existing roads used to access the proposed location shall be maintained in the same or better condition than presently found. The access road is to be classified "Temporary Resource Road."
- B. Turnouts: None.
- C: Culverts, Cuts and Fills: 2:1 Cut and Fill Slopes.
- D: Surfacing Material: Natural materials at well site.
- E: Gates, Cattle Guard, Fences: As required
- F: Proposed Road: No new access road is needed.
- G: Drainage: Diversion on South above draining both East & West. Closed Loop System will be used. Line pump on completion.

### 3. Locations of Existing Wells: None

4. Locations of Tank Batteries, Production Facilities, Production Gathering, and Service Lines: In the event of production, production facilities will be located on the drill pad. The actual placement of this equipment will be determined when the well's production characteristics can be evaluated after completion. To protect livestock and wildlife, the reserve pit will be fenced with wire mesh. The condensate tanks will be enclosed by a dike. Upon completion of drilling, the location and surrounding area will be cleared of debris.

The flow-line from Well No. 230 is to run from a measurement point on the pad to a point in the existing road. A diagram of the production facilities will be submitted after final placement.

5. Water Supply Source: Will be provided by the drilling contractor and trucked to the drilling site. See Attachment No. 1 - WATER SUPPLY SOURCE.

6. Source of Construction Materials:

No additional construction materials will be required to build the proposed location. The dirt from the pit will be back-sloped and saved for use when the pit is rehabilitated.

7. Methods for Handling Waste Disposal:

A. The drill cuttings, fluids and completion fluids will be placed in the reserve pit. The reserve pit will be fenced with wire mesh on three sides away from the pad during drilling and the fourth side fenced as soon as the rig moves out. The reserve pit will be back filled, leveled and contoured so as to prevent any materials being carried into the watershed.. Upon completion, the pad will be leveled, contoured, and re-seeded with the appropriate seed mixture.

B. All garbage and trash will be placed in specially constructed wire mesh containers. Upon cleanup, the refuse in the containers will be hauled to an approved landfill site.

All produced water will be collected in tanks until hauled to an approved disposal system, or separate disposal applications will be submitted for appropriate approval.

8. Ancillary Facilities: None

9. Well Site Layout: Attached sketch shows the relative location and dimensions of the well pad, mud pit, reserve pit, and trash pit. Location will be 235' X 290'.

10. Plans for Restoration of Surface:

Pit will be back filled and levelled as soon as practical to original condition. If well is productive, drilling pad will remain as well service pad. If dry hole, the pad will be ripped per regulations. Commencement of rehabilitation operations will immediately follow removal of drilling and completion equipment from location and rehabilitation of the surface is planned to be completed within 60 days from commencement. Pit dirt will be saved to be used during restoration of the pit area.

11. Other Information:

A. Terrain: See Archaeological Survey

B. Soil: See Archaeological Survey

C. Vegetation: See Archaeological Survey

D. Surface Use: See Archaeological Survey

Surface Use Plan—San Juan 29-5 Unit Well No. 230

Page: 3

- E. Ponds and Streams: See Archaeological Survey
- F. Water Wells: No water wells are located in Section 5
- G. Residences and Buildings: There are no occupied residences or buildings within one quarter of a mile of the proposed well location.
- H. Arroyos, Canyons, etc.: See Archaeological Survey
- I. Well Sign: Sign identifying and locating the well will be maintained at drill site with the spudding of the well.
- J. Archaeological Resources: See Archaeological Survey. No cultural resources encountered. No archaeological protection necessary.

12. Operator's Representatives: Field personnel who can be contacted concerning compliance of the "Surface Use Plan" is as follows:

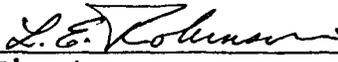
Production and Drilling	or	R. A. Allred
R. G. Flesher		5525 Hwy 64 NBU 3004
5525 Hwy 64 NBU 3004		Farmington, New Mexico 87401
Farmington, New Mexico 87401		Phone: 505-599-3403
Phone: 505-599-3401		

13. Surface Ownership: Federal

14. Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the drill site 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 Phillips Petroleum Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

L. E. Robinson  
Typed or Printed Name

  
Signature.

May 28, 1992  
Date

su295230.jgb

PHILLIPS PETROLEUM COMPANY

Preliminary  
5-28-92

Well Name: San Juan 29-5 Unit Well No. 230

DRILLING PROGNOSIS

1. Location of Proposed Well: 388' FNL & 179' FEL, Section 5, T-29-N, R-5-W, Rio Arriba County

2. Unprepared Ground Elevation: 6425'.

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

4. Type of drilling tools will be rotary.

5. Proposed drilling depth is 3300'.

6. The estimated tops of important geologic markers are as follows:

<u>Ojo Alamo -</u>	<u>2600'</u>	<u>Base Coal -</u>	<u>3280'</u>
<u>Kirtland -</u>	<u>2740'</u>	<u>Picture Cliffs -</u>	<u>3300'</u>
<u>Fruitland -</u>	<u>3035'</u>	<u>Int. Csg. -</u>	<u>3120'</u>
<u>Top Coal -</u>	<u>3140'</u>	<u>T.D.</u>	<u>3295'</u>

7. The estimated depths at which anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Water: Ojo Alamo - 2600'-2740'  
 Oil: None  
 Gas: Fruitland Coal - 3140'-3280'

8. The proposed casing program is as follows:

Surface String 9-5/8", 36#, K-55 @ 250'  
 Intermediate String 7", 23#, K-55 @ 3120  
 Liner \* 5-1/2", 23#, P-110 or 15.5#, K-55 @ 3020'- 3295'

9. Cement Program:

Surface String = 250 sxs (295 cu ft) CL "B" W/3% CaCl<sub>2</sub> & 1/4# Cele-Flake/sk or quantity sufficient to circulate cement to surface.

Intermediate String = Lead cmt. 500 sxs (1035 cu ft) Cl "B" 65/35 POZ w/12% Gel & 1/4# Cele-Flake/sx.

Intermediate String (Continued)

Tail. 150 sxs (177 cu ft) Cl "B" w/1/4# Cele-Flake/sk.

Centralizer Program:

Surface: Centralizer at 10' above shoe. Top of 2nd Joint. Top of 4th Joint.

Intermediate: Centralizer at 10' above shoe. Top of 2nd Jt., Top of 4th Jt.  
Top of 6th Jt., Top of 8th Jt.

Turbulator at 1 Jt. below Ojo Alamo  
Turbulator at top of next joint.  
Turbulator at top of next joint.

Liner =

\* If the coal is clefted a 5-1/2" 23#, P-110 liner will be run in the open hole without being cemented.

- 10. The minimum specifications for pressure control equipment which are to be used, a schematic diagram thereof showing sizes, pressure ratings (or) API series and the testing procedure and testing frequency are enclosed within the APD packet .
- 11. The proposed mud program is enclosed within the APD packet.
- 12. The testing, logging, and coring programs are as follows:  
D.S.T.'s or cores: None  
Logs: GR-D-N-NGT-ML  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- Special Tests: None
- 13. Anticipate no abnormal pressures or temperatures to be encountered or any other potential hazards such as Hydrogen Sulfide Gas. Low risk H<sub>2</sub>S equipment will be used.
- 14. The anticipated starting date is immediately upon approval with duration of operations for approximately 30 days thereafter.

DP295230.jgb

Revised 5/30/90

## BLOWOUT PREVENTER REQUIREMENTS

Well Name: San Juan 29-5 Unit Well No. 230

- I. Blowout preventer equipment, installation, testing and responsibilities will be in accordance with Phillips Petroleum Company's Blowout Preventer Standards.
- II. Figure No. 7-9 or 7-10 (Drawing Attached): Casing String 9 5/8" surface BOP Size 10"; Working Pressure 3,000 psi.
- III. Equipment to be furnished by Contractor:
  - A. Ram Type BOPs:
    1. No. Required 2
    2. Acceptable Manufacturers & Types
      - a. Cameron Iron Works: QRC; F; SS; U
      - b. Shaffer Tool Works: B; E; LWS; LWP
      - c. Hydril
  - B. Annular Type BOPs:
    1. No. Required None
    2. Acceptable Manufacturers & Types
      - a. Hydril - GK
      - b. Shaffer - Spherical
      - c. Cameron - D
  - C. Preventer Operating Equipment
    1. Hydraulic Pump - air, steam or electrically operated of sufficient volume and pressure capacity to close the largest ram type preventer in less than 30 seconds. Electrically operated pump must be equipped with explosion proof motor and controls.
    2. Manifold with a control valve for each preventer.
    3. A Hydril or equivalent regulator for each annular type preventer.
    4. Accumulator of sufficient volume and pressure capacity to close all preventers in the assembly without recharging. If the pump in C.1. is incapable of recharging the accumulator in excess of 1500 psi, a separate pump capable of this is to be furnished.
    5. Remote control panel with a station for each preventer control valve.
    6. Steel piping to connect hydraulic closing units to preventers.
    7. Choke manifold with seamless steel piping and flanged or clamp hub connections. Choke manifold assembly and piping sizes as specified, on the attached drawing. All working lines, except hydraulic closing lines, shall have flanged or clamp hub connections to preventers, spools and casing heads.
    8. Full opening drill string safety valve (I.D. equal or larger

## Blowout Preventer Requirements

Page 2

### III. C. (continued)

- than I. D. of tool joint in use). Working pressure to equal or exceed specified BOP working pressure. O.D. and configuration such that valve can be run in the hole with adequate clearance.
9. Full opening upper Kelly cock. Working pressure to equal or exceed specified BOP working pressure.
  10. Hydraulic pump of sufficient pressure rating to test preventer assembly to rated working pressure with necessary hose and fittings to connect the pump to drill pipe box or safety valve pin.
  11. Drilling spool for use with single ram type preventers or with dual ram type preventers which do not have outlets between the rams.
  12. Two valves on each side of drilling spool or dual preventers, one side for choke manifold connection and the other for kill line connection.
  13. Hand wheels and extensions for manual operation of the ram type preventers. U-joints, extension guides, working platform(s) as necessary.
  14. A 1" - 5000 PSI WP plug valve on the closing side of the annular type preventer using a XXE 1" x 4" nipple.
  15. Flowlines from choke manifold to pits.
  16. Pressure gauge with pressure range at least equivalent to BOP WP.

### IV. Equipment to be Furnished by Phillips:

- A. Test plug to seat in casing head.
- B. Remote controlled chokes, if installed.
- C. Casinghead with valves on outlets.
- D. Inside blowout preventer, if required.
- E. Mud-gas separator, if required, and necessary piping.

### V. Location of Equipment & Controls:

- A. Remote control panel on the rig floor adjacent to drillers position and stairway exit from the floor.
- B. Accumulator-Hydraulic Control Valve Unit to be placed minimum of 50 feet from wellbore in easily accessible location.
- C. Choke Manifold located 5 feet or more from the BOPs with minimum number of turns in the run.
- D. Manual closing facilities installed so handwheels are outside the substructures in unobstructed location. U-joints, extension

## Blowout Preventer Requirements

Page 3

### V. (Continued)

- guides and working platforms installed as necessary for proper and safe operation.
- E. Choke Manifold connection, where possible, is to be made between the two bottom ram type preventers through use of a drilling spool or by connecting between rams of dual type units with outlets so installed.
1. On dual type preventers where outlets are not installed between rams, connection is to be made to a drilling spool installed between the ram type and annular type preventers.
- F. Position and Type Rams will be as shown on the attached drawing.
- G. Fill up line to be tied into the bell nipple above annular preventers.
- H. Safety Valve, open with connections and/or subs available to fit any tool joint in use, shall be on the rig floor at all times.

### VI. Testing

- A. Initial Installation Test  
Immediately after installation, each component part of the blowout preventer assembly including choke lines, valves and closing facilities will be tested individually by steps as outlined in the Blowout Preventer Testing Procedure section of Phillips' Blowout Preventer Standards. The test pressure will be at the working pressure specified in Item II. All components must be satisfactorily tested before drilling out.
- B. Ram Change or Repair Test
1. After each ram change or when any component part of the preventer assembly, including lines and valves, is disturbed, the disturbed portion is to be tested to working pressure specified in Item II.
  2. Installation of casing rams is not required for running casing.
- C. Weekly Pressure Test  
The first trip out of the hole after 12:01 AM, Tuesday, weekly test will be performed as outlined in the Blowout Preventer Testing Procedure which includes testing the entire assembly with water to 1/2 the specified working pressure for 10 minutes. The Kelly cock and safety valve are to be tested to the specified working pressure. The weekly test is not required where the test falls within three days after the initial installation test. Upper kelly cock valve with handle available.
- D. Operational Test  
Each preventer unit is to be closed and opened on each trip or

## Blowout Preventer Requirements

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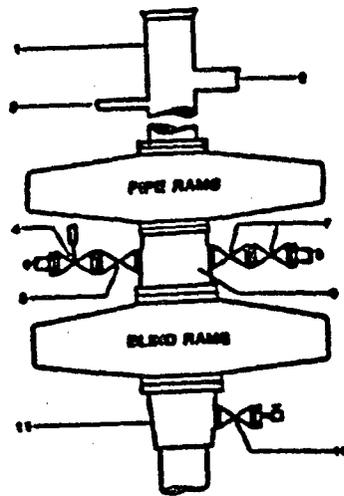
### VI. D. (continued)

at least once each 48 hours (trip is not required just to actuate blind rams or pipe rams that do not fit top section of tapered string).

### VII. Responsibilities

- A. Contractor is to install and test the blowout preventer assembly as specified.
- B. The driller is to check and record the accumulator pressure on the daily drilling report at the beginning of each tour.
- C. Expense of rig time and pressure testing services for initial and weekly tests will be borne by:
  - 1. Contractor while on footage contract.
  - 2. Owner while on daywork contract.

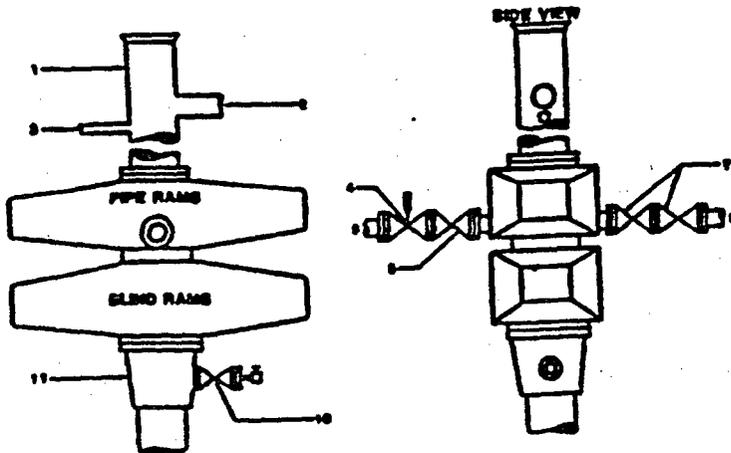
ALTERNATIVE



1. BELL NIPPLE
2. FLOW LINE
3. FILL UP LINE
4. 2" FE PRESSURE OPERATED CHOKE LINE VALVE
5. 2" FE GATE VALVE
6. 2" FE CHOKE LINE TO MANIFOLD
7. 2" FE GATE VALVES
8. 2" FE KILL LINE
9. DRILLING SPOOL
10. 2" SE OR FE GATE VALVE WITH NEEDLE VALVE
11. CASING HEAD HOUSING

NOTE: THE DRILLING SPOOL MAY BE LOCATED BELOW BOTH SETS OF RAMS IF A DOUBLE PREVENTER IS USED AND IT DOES NOT HAVE SUITABLE OUTLETS BETWEEN RAMS

Figure 7-9. Standard Hydraulic Blowout Preventer Assembly  
3 M Working Pressure Alternative 1



1. BELL NIPPLE
2. FLOW LINE
3. FILL UP LINE
4. 2" FE PRESSURE OPERATED CHOKE LINE VALVE
5. 2" FE GATE VALVE
6. 2" FE CHOKE LINE TO MANIFOLD
7. 2" FE GATE VALVES
8. 2" FE KILL LINE
9. 2" SE OR FE GATE VALVE WITH NEEDLE VALVE
11. CASING HEAD HOUSING

Figure 7-10. Standard Hydraulic Blowout Preventer Assembly  
3 M Working Pressure Alternative 3 (without Drilling Spool)



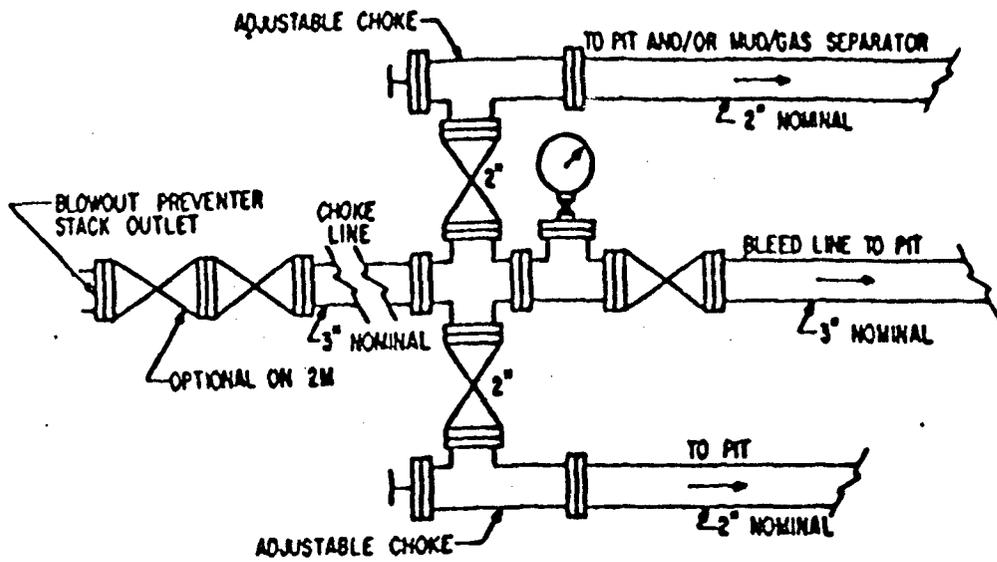


FIG. 3.A.1

**TYPICAL CHOKES MANIFOLD ASSEMBLY  
FOR 2M AND 3M RATED WORKING  
PRESSURE SERVICE – SURFACE INSTALLATION**

PROPOSED MUD PROGRAM  
 San Juan 29-5 Unit  
 Well No. 230  
 Rio Arriba County

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS	CL-PPM	% SOLIDS	ADDITIVES
0-250 Ft.	Spud Mud Lime and Gel					Bentonite
250-3000 Ft.	8.0-9.0 PPG	45-65 Sec/Qt	8-10CC	1200 PPM		Drispac Lime, Soda Ash
3000-TD	9.5-10.0 PPG	35-50 Sec/Qt	6-8CC		Low Solids	Drispac, Soda Ash Caustic Soda Bentonite

250-3000' Polymer mud and water with sweeps every 500' or less if hole conditions dictate.  
 3000'-TD Fresh water mud with CaCO<sub>3</sub> & Polymer, low solids. Mud Wt. 9.5 to 10.0 PPG, as necessary to control well.

Start mud up 100' above Fruitland

WATER SUPPLY SOURCE  
Surface Use Plan  
San Juan Unit Wells

Attachment No. 1

Depending on which drilling contractor is used, the water for drilling and completion operations will come from one of the following locations:

1. San Juan River at Blanco Bridge, NW SE SE Section 18, T-29-N, R-9-W.
2. 29-6 Waterhole in Unit L, Section 28, T-29-N, R-6-W.
3. Navajo Reservoir, SW NW SE Section 14, T-30-N, R-7-W.
4. Sims Mesa (S.J. #14) BW SW Section 35, T-31-N, R-7-W.
5. La Jara Water Hole, Unit M, Section 11, T-30-N, R-6-W.
6. Pine River
7. City of Ignacio

watsup6.jgb

**ARCHAEOLOGICAL SURVEY OF  
PHILLIPS PETROLEUM'S RELOCATED  
SJ 29-5 UNIT #230 WELL PAD  
RIO ARRIBA COUNTY, NEW MEXICO**

**LAC REPORT 9125aaa**

by

Steven L. Fuller

**LA PLATA ARCHAEOLOGICAL CONSULTANTS  
P.O. Box 783  
Dolores, Colorado 81323  
(303) 882-4933**

**New Mexico Cultural Resource Inventory Permit No. 19-2920-90-K**

**June 1, 1992**

**Prepared For:**

**Phillips Petroleum  
300 West Arrington, Suite 200  
Farmington, New Mexico 87401**

## **INTRODUCTION**

The archaeological survey of Phillips Petroleum's San Juan 29-5 Unit No. 230 relocated well pad was conducted by personnel of La Plata Archaeological Consultants on April 30, 1992. The survey for the original location was conducted in April 1991 and reported on in LAC Report 9125d. Fieldwork for the relocation was conducted by Fred Harden who was accompanied by Mr. Richard Allred of Phillips Petroleum and personnel of Daggett Land Surveying during staking of the pad. The project was administered by Steven L. Fuller of La Plata Archaeological Consultants.

The project area lies on Federal land managed by the Farmington Resource Area of the Bureau of Land Management's Albuquerque District and is within Rio Arriba County New Mexico (Figure 1). All work was conducted under the authority of New Mexico Cultural Resource Inventory Permit No. 19-2920-90-K issued to La Plata Archaeological Consultants.

The area was surveyed for a relocated well pad proposed by Phillips Petroleum. The well pad has been moved about 700 feet to the north of the original location surveyed in 1991 (LAC Report 9125d). The relocated well pad will measure approximately 300 by 235 ft and will require no new access road, as it is adjacent to an existing road. For this project, 7.4 acres were intensively surveyed. No archaeological sites or isolated finds were encountered and archaeological clearance is recommended for the relocated SJ 29-5 Unit No. 230 well pad.

## **PREFIELD RECORDS SEARCH**

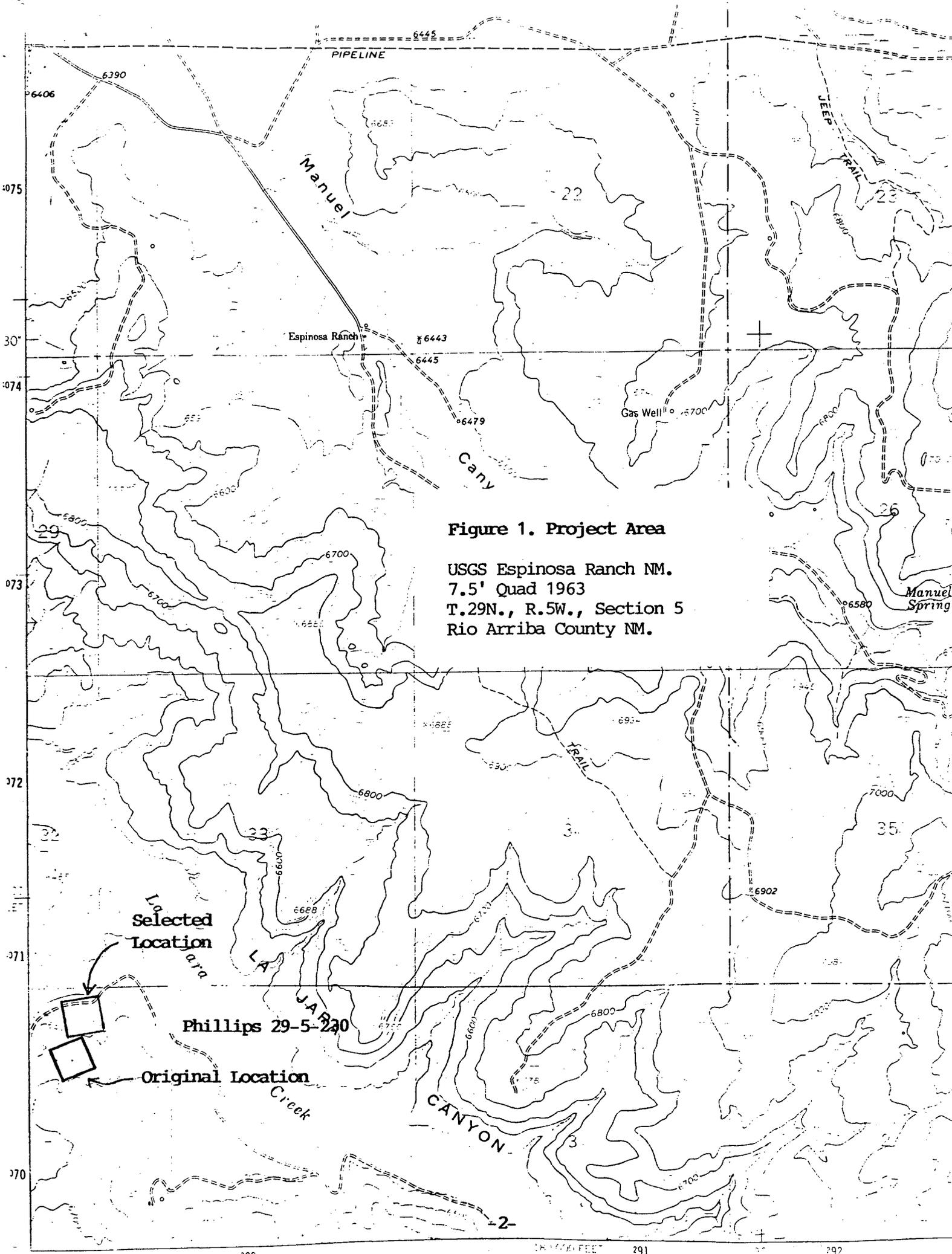
In April, the recently updated ARMS records on file at La Plata Archaeological Consultants were consulted, as well as a recent copy of the BLM data base map for this area. Survey work that has been conducted in this vicinity includes only a few well pads with associated access roads and pipelines. One previously recorded site is 700 ft to the north of the relocated well pad (Figure 1a, included with BLM copies only).

## **FIELD METHODS**

Prior to the survey, the proposed well pad was marked at the center, the four corners, and the four centerline endpoints. A 7.4-acre block (600 by 535 ft) was surveyed centered on the well center stake, which was sufficient to cover the 300- by 235-ft well pad, 50-ft construction zone, and at least a 100-ft buffer for cultural resources. The 7.4-acre block was surveyed by pedestrian transects which were no farther than 15 m or 50 ft apart. The extent of the surveyed area is illustrated on Figure 1.

## **ENVIRONMENT**

The proposed Phillips Petroleum SJ 29-5 #230 well location lies on a high bench on the south flank of La Jara Canyon. The area overlooks the sage-covered canyon floor to the north and west.



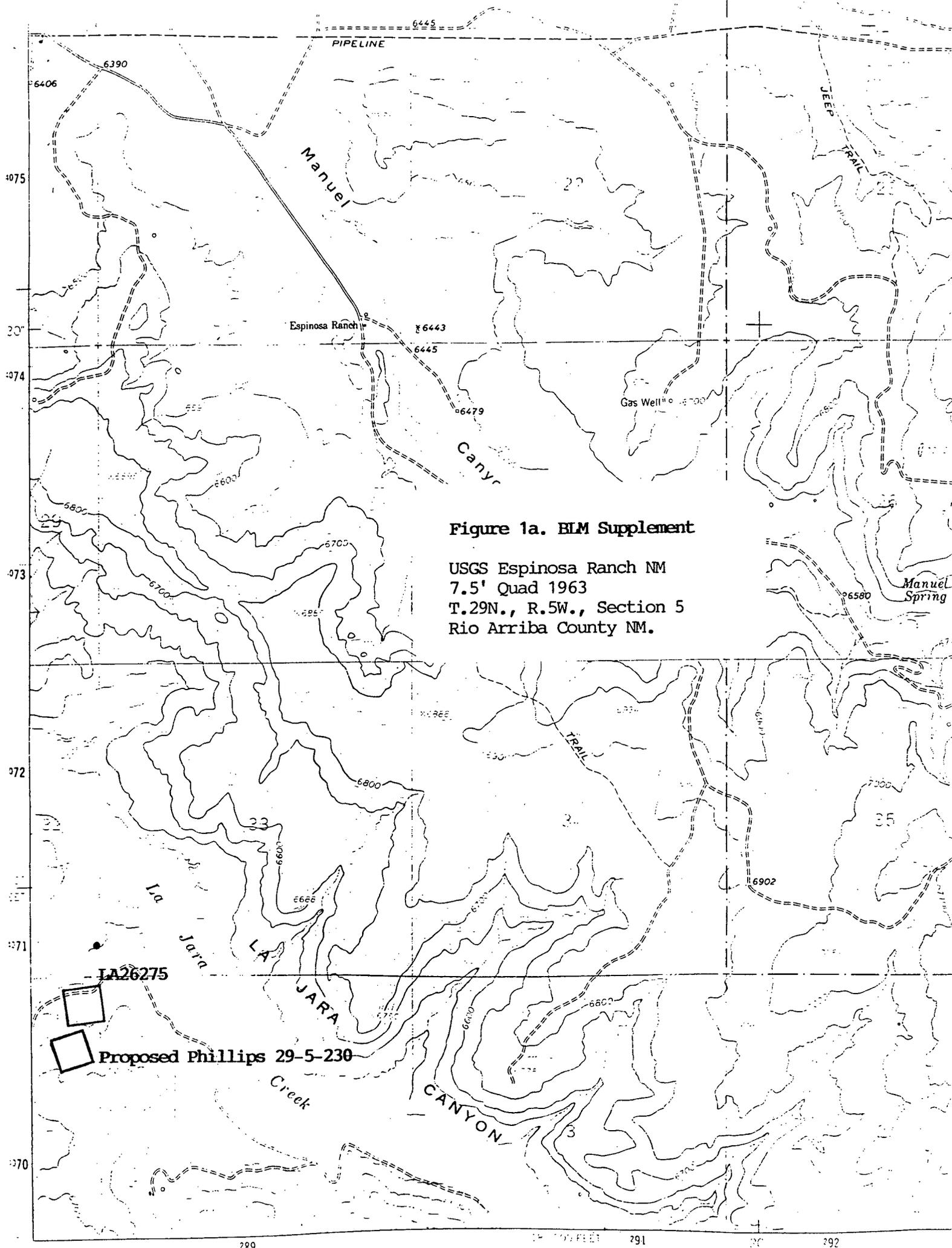
**Figure 1. Project Area**

USGS Espinosa Ranch NM.  
 7.5' Quad 1963  
 T.29N., R.5W., Section 5  
 Rio Arriba County NM.

**Selected Location**

**Phillips 29-5-230**

**Original Location**



**Figure 1a. BLM Supplement**

USGS Espinosa Ranch NM  
 7.5' Quad 1963  
 T.29N., R.5W., Section 5  
 Rio Arriba County NM.

The bench is bounded by low San Jose Formation sandstone ledges from which the shallow sandy soils on the bench are derived. Vegetation in the area is dominated by old growth pinyon-juniper woodland with occasional small sage parks. Understory vegetation is comprised of Gambel oak, mountain mahogany, sagebrush, Mormon tea, broom snakeweed, and broad leaf yucca. Lands in the immediate vicinity are currently utilized as livestock range and for development related to the extraction of natural gas reserves.

## **PROJECT LOCATION AND DESCRIPTION**

**Project Name:** Phillips Petroleum's relocated San Juan 29-5 Unit No. 230 well pad

**Legal Description:** T29N, R5W, Section 5, NE1/4 NE1/4 NE1/4, NMPM; the actual footage of the location is 388 FNL, 179 FEL, Rio Arriba County, New Mexico, (refer to Fig. 2, well plat)

**Elevation:** 6425 ft

**Map Reference:** U.S.G.S. Espinosa Ranch, New Mexico, 7.5' (1963)

**Land Jurisdiction:** Bureau of Land Management, Farmington Resource Area

**Project Area:** The well pad will measure about 300 by 235 ft. No new access road will be required

**Surveyed Area:** 600- by 535-ft (7.4 acres) for well pad, 50-ft construction zone, and 100-ft buffer zone. Total acres surveyed: 7.4 acres

**Results:** No archaeological sites were encountered in the project area.

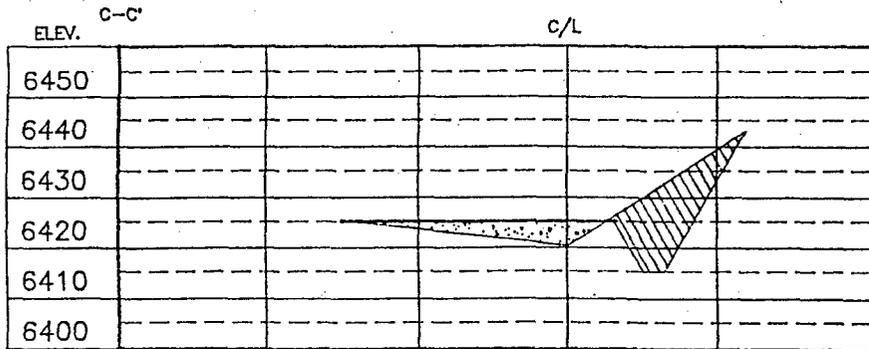
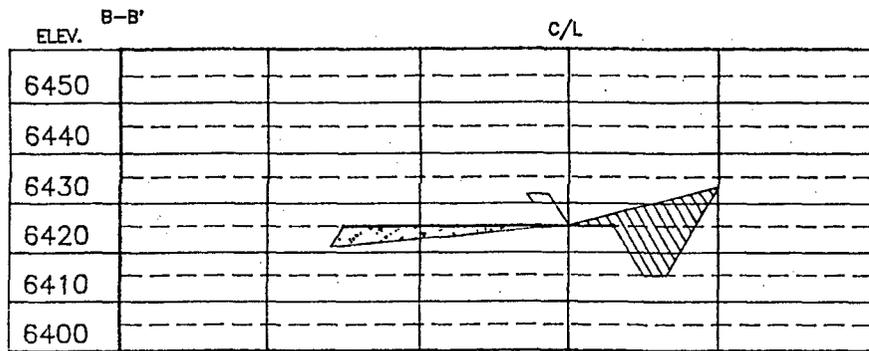
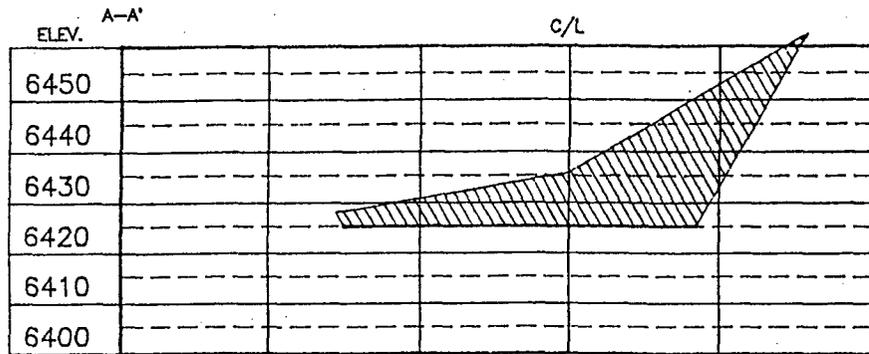
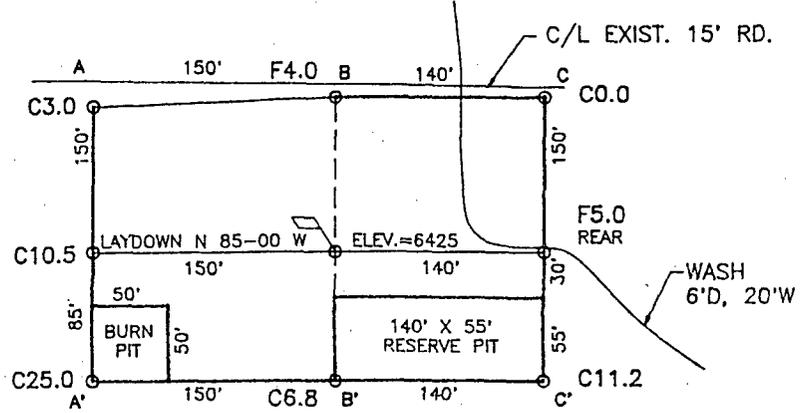
## **RECOMMENDATIONS**

Archaeological clearance is recommended for Phillips Petroleum's relocated San Juan 29-5 Unit No.230 well pad as no archaeological sites were encountered during the survey.

Figure 2. Well plat.

COMPANY: PHILLIPS PETROLEUM  
 LEASE: SAN JUAN 29-5 UNIT NO. 230  
 FOOTAGE: 388 FNL, 179 FEL  
 SEC.: 5 TWN: T.29 N. RNG: R.5 W. NMPM  
 ELEVATION: 6425

NOT TO SCALE



**Daggett Surveying, Inc.**

3089 E. 30th Street Suite No. 7B Ph. (505) 328-1778  
 Farmington, New Mexico 87401

**ARCHAEOLOGICAL SURVEY OF  
PHILLIPS PETROLEUM'S PROPOSED  
SJ 29-5 UNIT #230 WELL PAD AND ACCESS ROAD  
RIO ARriba COUNTY, NEW MEXICO**

**LAC REPORT 9125d**

by

Steven L. Fuller

**LA PLATA ARCHAEOLOGICAL CONSULTANTS  
P.O. Box 783  
Dolores, Colorado 81323  
(303) 882-4933**

**New Mexico Cultural Resource Inventory Permit No. 19-2920-90-K**

**April 29, 1991**

**Prepared For:**

**Phillips Petroleum  
300 West Arrington, Suite 200  
Farmington, New Mexico 87401**

## **INTRODUCTION**

The archaeological survey of Phillips Petroleum's San Juan 29-5 Unit #230 well pad and access road was conducted by personnel of La Plata Archaeological Consultants on April 11 and 15, 1991. Fieldwork was conducted by Tim Hovezak who was accompanied by Mr. Richard Allred of Phillips Petroleum and personnel of Daggett Land Surveying during staking of the pad. The project was administered by Steven L. Fuller of La Plata Archaeological Consultants.

The project area lies on Federal land managed by the Farmington Resource Area of the Bureau of Land Management's Albuquerque District and is within Rio Arriba County New Mexico (Figure 1). All work was conducted under the authority of New Mexico Cultural Resource Inventory Permit No. 19-2920-90-K issued to La Plata Archaeological Consultants.

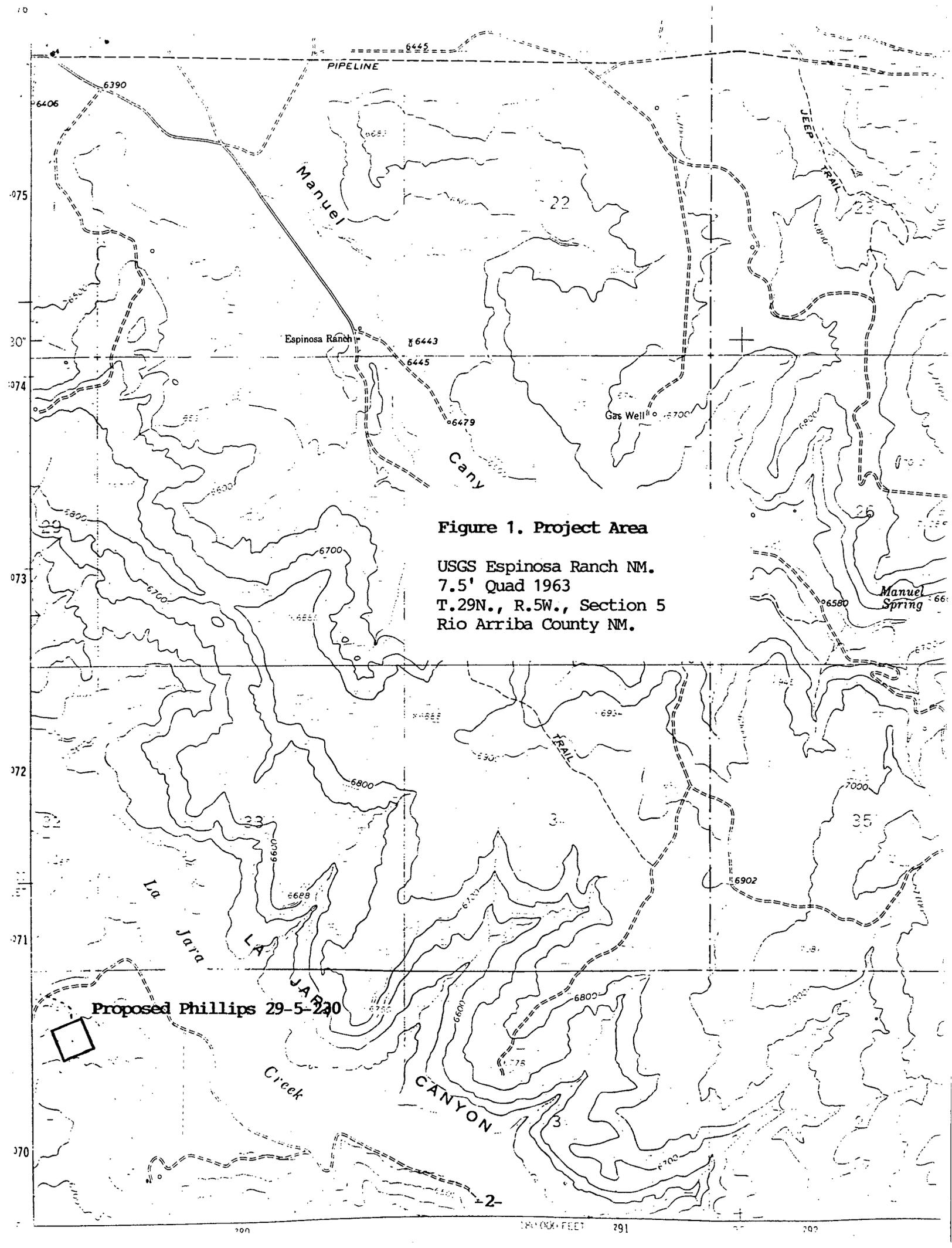
The area was surveyed for one well pad and access road proposed by Phillips Petroleum. The well pad will measure approximately 300 by 265 ft. The well will require approximately 700 ft of new access road. For this project, 10.2 acres were intensively surveyed. No archaeological sites or isolated finds were encountered and archaeological clearance is recommended for the SJ 29-5 Unit #226 well pad and access road.

## **PREFIELD RECORDS SEARCH**

In April, the recently updated ARMS records on file at La Plata Archaeological Consultants were consulted, as well as a recent copy of the BLM data base map for this area. Survey work that has been conducted in this vicinity includes only a few well pads with associated access roads and pipelines. One previously recorded site is 1500 ft to the north (Figure 1a).

## **FIELD METHODS**

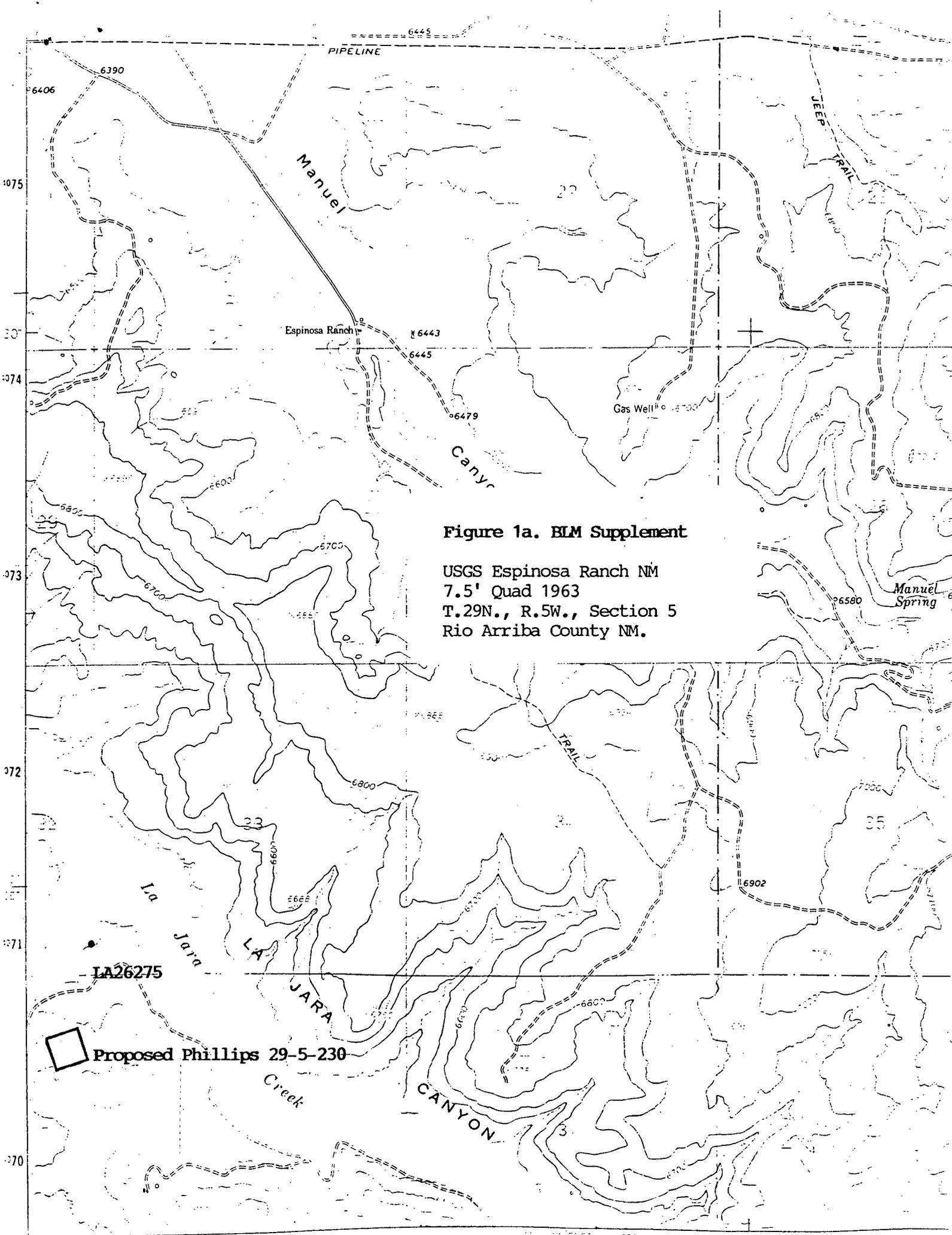
Prior to the survey, the proposed well pad was marked at the center, the four corners, and the four centerline endpoints. A 7.8-acre block (600 by 565 ft) was surveyed centered on the well center stake, which was sufficient to cover the 285- by 265-ft well pad, 50-ft construction zone, and at least a 100-ft buffer for cultural resources. An additional 150-ft wide transect for the 700 ft long (2.4 acres) access road also was surveyed. The 10.2-acre block was surveyed by pedestrian transects which were no farther than 15 m or 50 ft apart. The extent of the surveyed area is illustrated on Figure 1.



**Figure 1. Project Area**

USGS Espinosa Ranch NM.  
7.5' Quad 1963  
T.29N., R.5W., Section 5  
Rio Arriba County NM.

**Proposed Phillips 29-5-230**



**Figure 1a. BLM Supplement**

USGS Espinosa Ranch NM  
7.5' Quad 1963  
T.29N., R.5W., Section 5  
Rio Arriba County NM.

LA26275

Proposed Phillips 29-5-230

## **ENVIRONMENT**

The proposed Phillips Petroleum SJ 29-5 #230 well location lies on a high bench on the south flank of La Jara Canyon. The area overlooks the sage-covered canyon floor to the north and west. The bench is bounded by low San Jose Formation sandstone ledges from which the shallow sandy soils on the bench are derived. Vegetation in the area is dominated by old growth pinyon-juniper woodland with the exception of a small sage park at the crest of a low ridge at the crest of the bench. Understory vegetation is comprised of Gambel oak, mountain mahogany, sagebrush, Mormon tea, broom snakeweed, and broad leaf yucca. Lands in the immediate vicinity are currently utilized as livestock range and for development related to the extraction of natural gas reserves.

## **PROJECT LOCATION AND DESCRIPTION**

**Project Name:** Phillips Petroleum's San Juan 29-5 Unit #230 well pad and access road

**Legal Description:** T29N, R5W, Section 5, SE 1/4 NE 1/4 NE 1/4, NMPM; the actual footage of the location is 1205 FNL, 410 FEL, Rio Arriba County, New Mexico, (refer to Fig. 2, well plat)

**Elevation:** 6594 ft

**Map Reference:** U.S.G.S. Espinosa Ranch, New Mexico, 7.5' (1963)

**Land Jurisdiction:** Bureau of Land Management, Farmington Resource Area

**Project Area:** The well pad will measure about 300 by 285 ft. 700 ft of new access road will be required.

**Surveyed Area:** 600- by 565-ft (7.8 acres) for well pad, 50-ft construction zone, and 100-ft buffer zone. A 150-ft-wide transect 700 ft in length (2.4 acres) was surveyed for the proposed road. In all, 10.2 acres were surveyed for cultural resources.

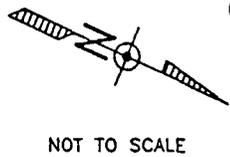
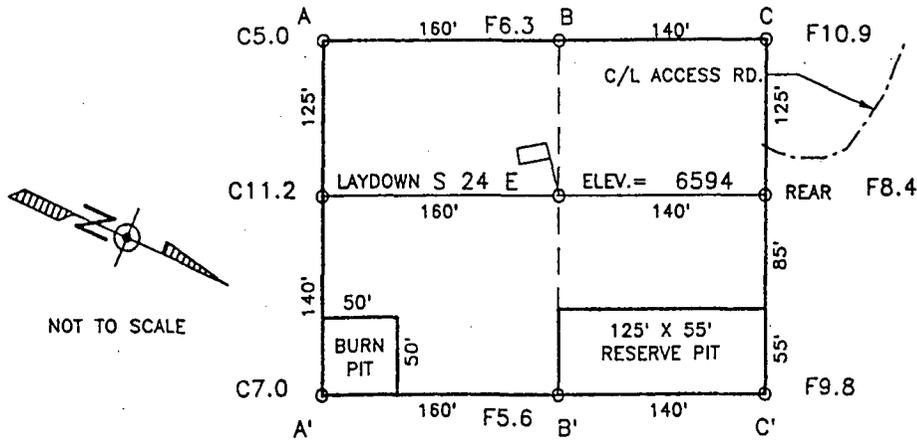
**Results:** No archaeological sites were encountered in the project area.

## **RECOMMENDATIONS**

Archaeological clearance is recommended for Phillips Petroleum's San Juan 29-5 Unit #230 well pad and access road as no archaeological sites were encountered during the survey.

Figure 2. Well pad plat.

COMPANY: PHILLIPS PETROLEUM  
 LEASE: SAN JUAN 29-5 UNIT NO.230  
 FOOTAGE: 1205 FNL, 410 FEL  
 SEC.: 5 TWN: T.29 N. RNG: R.5 W. NMPM  
 ELEVATION: 6594



A-A' C/L

ELEV.				
6620				
6610				
6600				
6590				
6580				
6570				

B-B' C/L

ELEV.				
6620				
6610				
6600				
6590				
6580				
6570				

C-C' C/L

ELEV.				
6620				
6610				
6600				
6590				
6580				
6570				