SURFACE USE PLAN

Phillips Petroleum Company , San Juan 32-7 Unit, Well No. 232, SE/4 SW/4, Section 08, T-31-N, R-7-W, San Juan County, New Mexico. (Lease No. SF-078996.) This plan is to accompany "Application for Permit to Drill" the subject well which is located approximately 20 miles east from Bondad, 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. 550 approximately 22 miles to Bondad, N.M.. Turn right on Highway 310 and travel approximately 16 miles to Colorado 172. Follow Highway 172 to Colorado County Road 328. Turn right and follow 328 until it changes to NM County Road 4010. The proposed location is next to the existing pad.

2. Planned Access Roads:

   A. The access road is shown on the attached map. The new location is adjacent to an existing access road and only 200' of new access road is 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. Drainage Design: The present drainage will be maintained for the existing access road. After Well No. 232 is completed, a diversion cut will be placed below the cut on the east side with drainage to the south. The SE & SW corners working side of the pad will be rounded off to save fill.

   D. Culverts, Cuts and Fills: See Cut and Fill Sketch.
   E. Surfacing Material: Natural materials at well site.
   F. Gates, Cattle Guards, Fences: As required
   G. Proposed Road: Approximately 200' of new access will be needed.

06, 660' FNL & 660' FEL of Section 28

3. Locations of Existing Wells: Well No. 17, 890' FNL & 890' FEL of Section 28

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. 232 is to run from a measurement point along the access road to a point where the access road cross the existing access road and the existing gas gathering system

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 230' X 300'.

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. The existing production equipment for Well No. 17 will be protected during pad construction and drilling operations. The cathodic protection hole will be protected with and inverted 60" culvert.

11. Other Information:

A. Terrain: See Archaeological Survey
B. Soil: See Archaeological Survey
C. Vegetation: See Archaeological Survey
D. Surface Use: See Archaeological Survey
E. Ponds and Streams: See Archaeological Survey
F. Water Wells: No water wells are located in Section 08
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.

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
A. R. Lyons	300 West Arrington, Suite 300
300 West Arrington, Suite 300	Farmington, New Mexico 87401
Farmington, New Mexico 87401	Phone: 505-599-3403
Phone: 505-599-3401	

13. Surface Ownership: The surface ownership is 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. M. Sanders — L. M. Sanders
Typed or Printed Name — Signature

August 24, 1990
Date

surf327e.lar

WATER SUPPLY SOURCE
Surface Use Plan
San Juan 32-7 Unit

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. Navajo Reservoir, SW NW SE Section 14, T-30-N, R-7-W.
2. Middle Mesa (S.J. #12) NE SW Section 5, T-30-N,R-7-W.
3. Pine River in Colorado
4. City Water, Ignacio, Colorado.

watsup4.lar

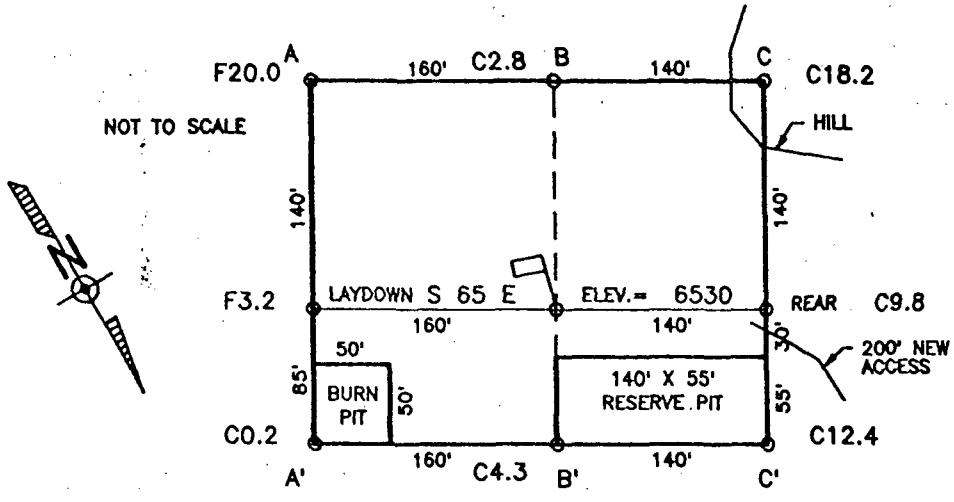
COMPANY: PHILLIPS PETROLEUM

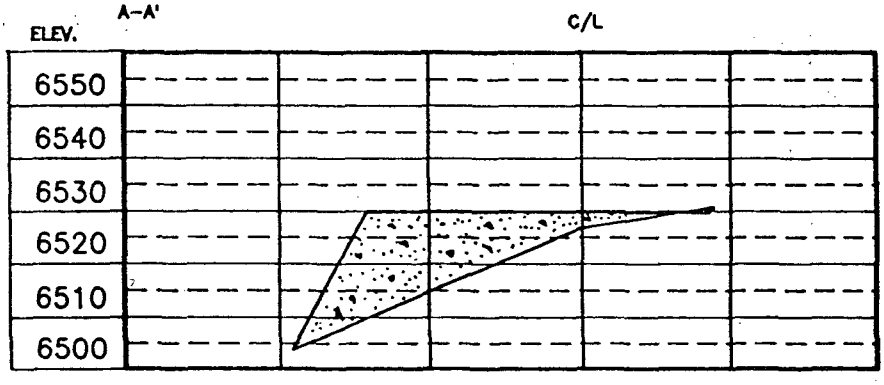
LEASE: SAN JUAN 32-7 UNIT NO.232

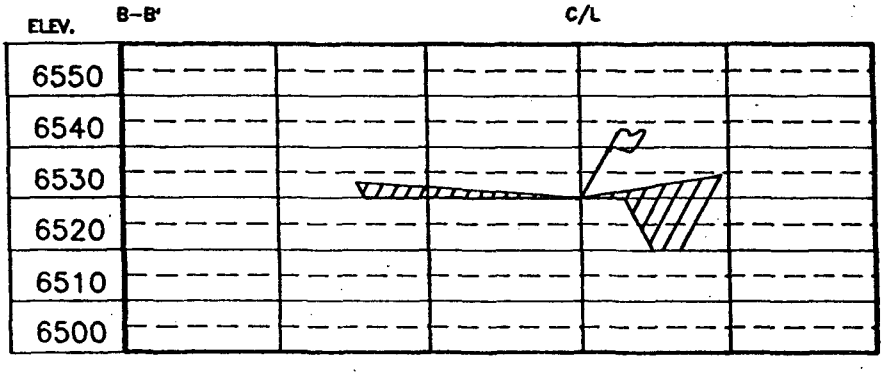
FOOTAGE: 1064 FSL, 2191 FWL

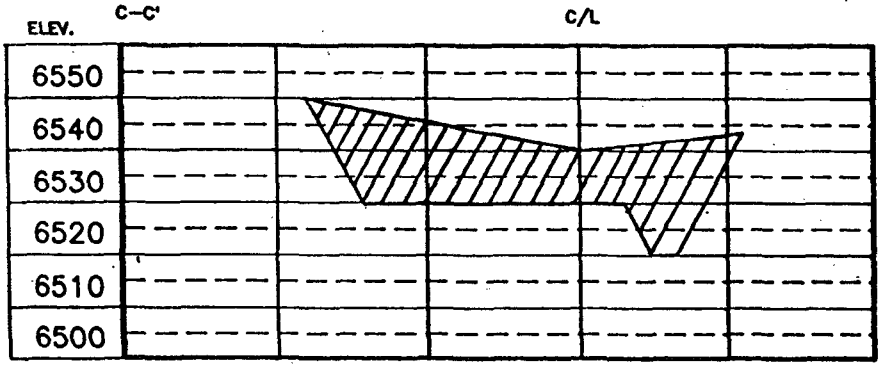
SEC.: 8 TWN: T.31 N. RNG: R.7 W. NMPM

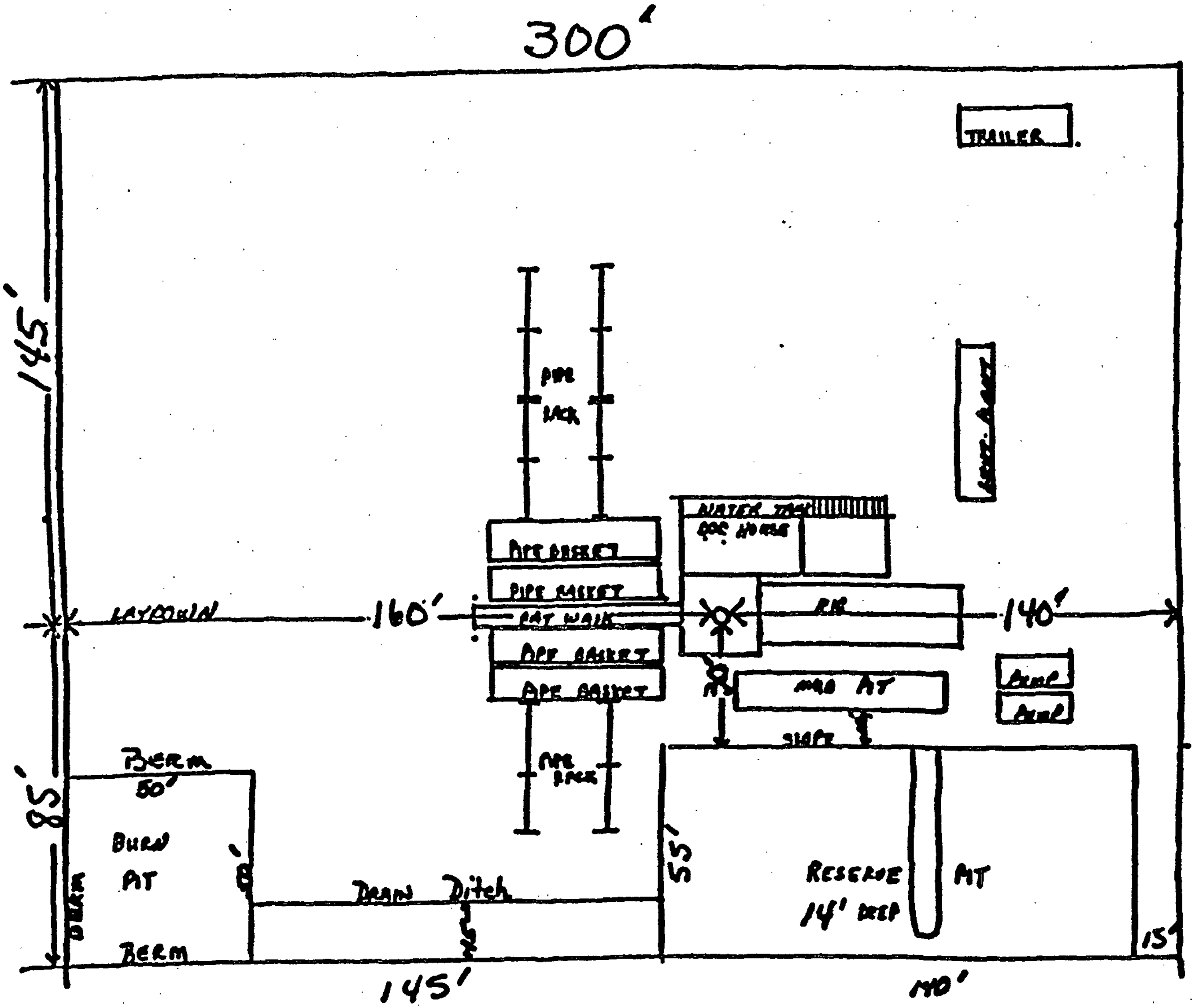
ELEVATION: 6530

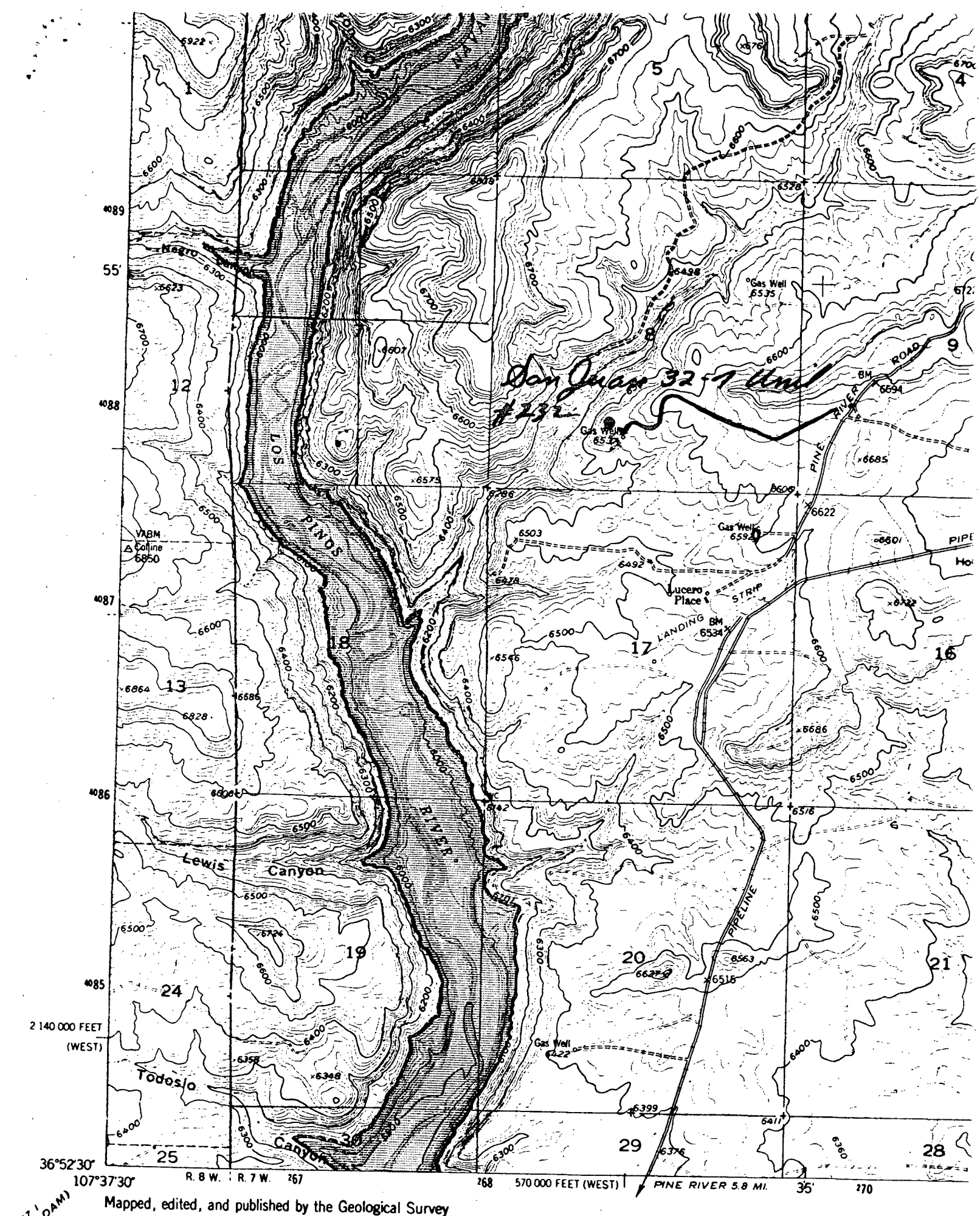









300'
TRAILER
145'
PIPE RACK
WATER TANK
DOG HOUSE
PIPE BASKET
PIPE BASKET
LAYDOWN
160'
CAT WALK
RIG
140'
PIPE BASKET
PIPE BASKET
MUD PIT
SLOPE
BERM
50'
85'
BURN PIT
BERM
BERM
PIPE RACK
DRAIN Ditch
55'
RESERVE PIT
14' DEEP
15'
145'
140'



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1950. Field check 1954

PHILLIPS PETROLEUM COMPANY

Preliminary
8-15-90

Well Name: San Juan 32-7 Unit Well No. 232

DRILLING PROGNOSIS

1. Location of Proposed Well: 1064' FSL & 2191' FWL, Section 8, T-31-N, R-7-W, San Juan County

2. Unprepared Ground Elevation: 6530'.

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

4. Type of drilling tools will be rotary.

5. Proposed drilling depth is 3260'.

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

Ojo Alamo -	2285'	Base Coal -	3235'
Kirtland -	2400'	Picture Cliffs -	3303'
Fruitland -	2980'	Int. Csg. -	3053'
Top Coal -	3072'	T.D.	3260'

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 - 2285'
Oil: None
Gas: Fruitland Coal - 3072'

8. The proposed casing program is as follows:

Surface String 9-5/8", 36#, K-55 @ 250'
Intermediate String 7", 23#, K-55 @ 3053
Liner * 5-1/2", 23#, P-110 or 15.5#, K-55 @2953'- 3260'

9. Cement Program:
Surface String = 250 sxs (295 cu ft) CL "B" W/3% CaCl2 & 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-

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.

Flake/sk
Liner =
* If the coal is cleated a 5-1/2" 23#, P-110 liner will be run in the open hole without being cemented.
* If the coal is not cleated the well will be stimulated and a 5-1/2", 15.5#, J-55 liner will be run.

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_2S equipment will be used.

14. The anticipated starting date is immediately upon approval with duration of operations for approximately 30 days thereafter.

PROPOSED MUD PROGRAM
SAN JUAN 32-7 UNIT
WELL NO. 232
SAN JUAN COUNTY

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS	CL-PPM	% SOLIDS	ADDITIVES
0-250 Ft.	Spud Mud Lima and Gel					Bentonite
250-3000 Ft.	8.0-9.0 PPG	45-65 Sec/Qt	8-10 CC	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 CaCo3 & Polymer, low solids. Mud Wt. 9.5 to 10.0 PPG, as necessary to control well.

Start mud up 100' above Fruitland.

regpro/lsand/mudprog.3

BLOWOUT PREVENTER REQUIREMENTS

Well Name: San Juan 32-7 Unit No. 232

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 than I.D. of tool joint in use). Working pressure to equal or exceed specified BOP working pressure. O.D. and

III. C. (continued)

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 one 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 and 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 five 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 guides and working platforms installed as necessary for proper and safe operation.

V. (continued)

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 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.

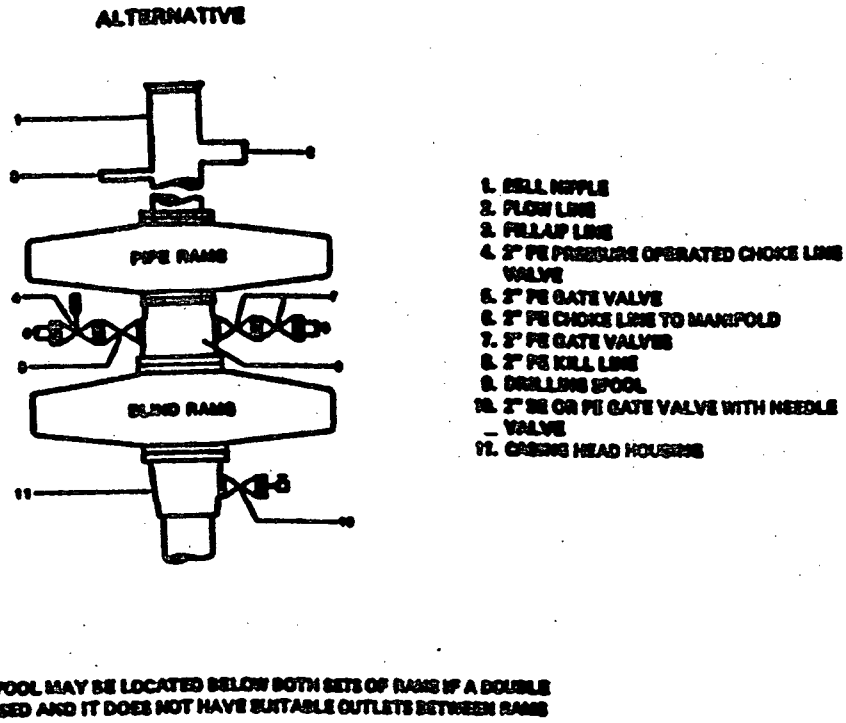
D. Operational Test
Each preventer unit is to be closed and opened on each trip or at least once each 48 hours (trip is not required just to actuate blind rams or pipe rams that do not fit top section of tapered string).

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.



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

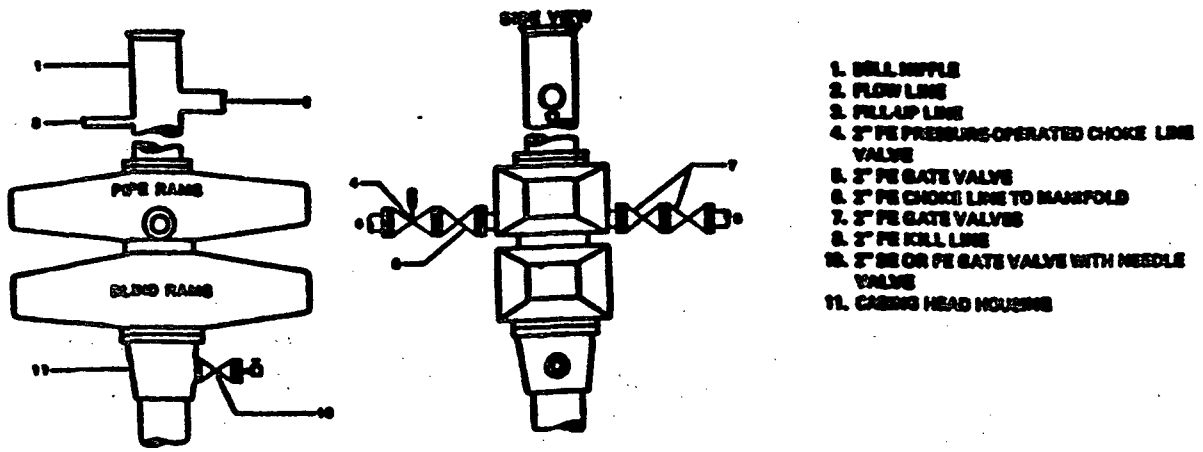


Figure 7-10. Standard Hydraulic Blowout Preventer Assembly
3 M Working Pressure Alternative 3 (without Drilling Spool)

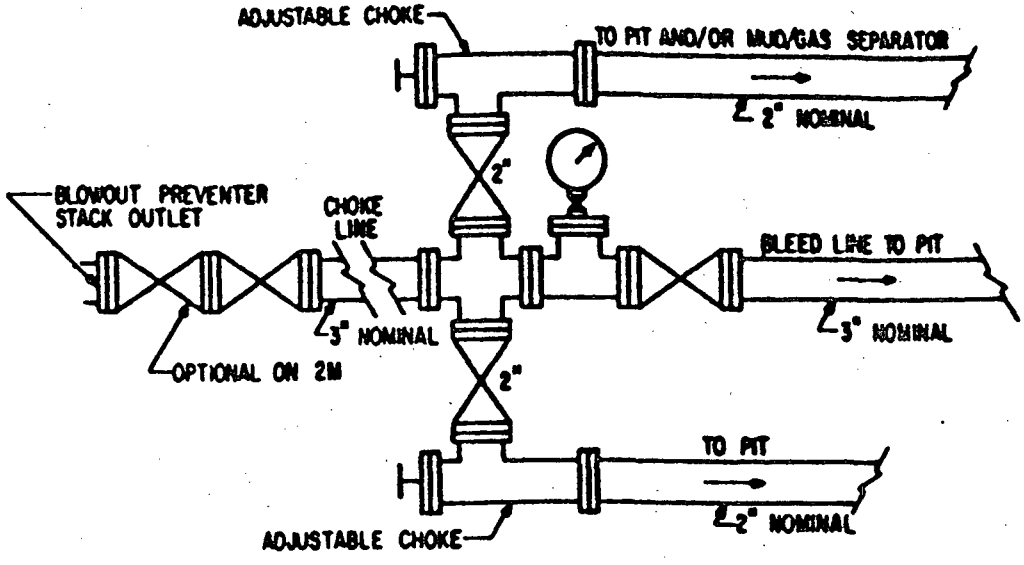
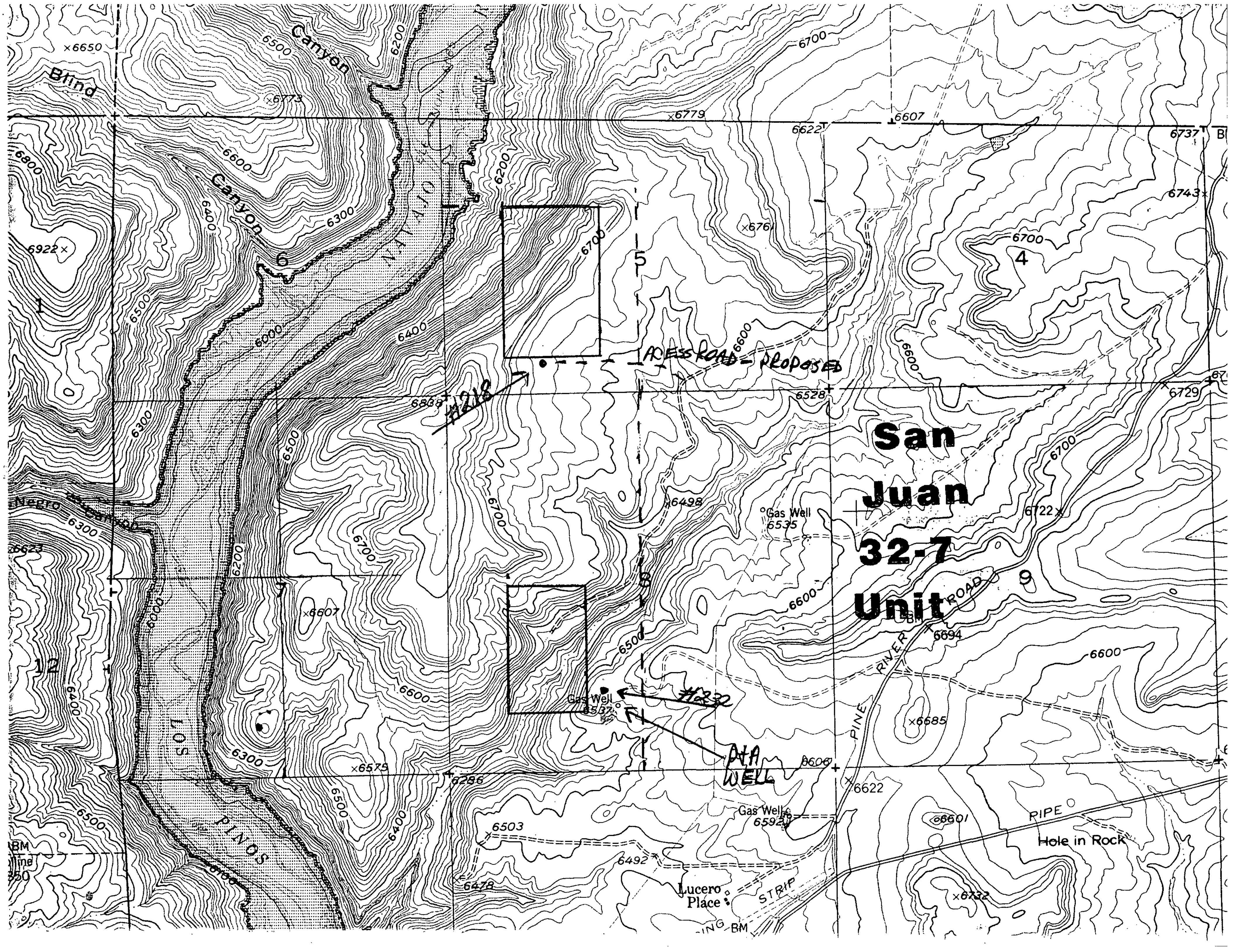


FIG. 3.A.1

TYPICAL CHOKE MANIFOLD ASSEMBLY FOR 2M AND 3M RATED WORKING PRESSURE SERVICE — SURFACE INSTALLATION


San Juan
32-7
Unit
LOS PINOS
NAVAJO
Canyon
Blind
LANDING STRIP
Lucero Place
Gas Well
PINE RIVER ROAD
PIPE
Hole in Rock
PIPELINE
BM


San Juan 32-7 Unit
#218
ACESS ROAD - PROPOSED
#232
P&A WELL
Gas Well
6537
Gas Well
6535
Gas Well
6592
Blind Canyon
Canyon
Navajo
Negro Canyon
Los Pinos
Pine River Road
Pipe
Strip
Hole in Rock
Lucero Place
BM
1
4
5
6
7
8
9
12

ARCHAEOLOGICAL SURVEY OF PHILLIPS PETROLEUM'S PROPOSED SAN JUAN 32-7 UNIT #232 WELL PAD AND ACCESS ROAD SAN JUAN COUNTY, NEW MEXICO

LAC REPORT 9046e

by

Steven L. Fuller

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

New Mexico Cultural Resource Use Permit 19-2920-90-I

August 25, 1990

Prepared For:
Phillips Petroleum
300 West Arrington, Suite 200
Farmington, New Mexico 87401

INTRODUCTION

The archaeological survey of Phillips Petroleum's San Juan 32-7 Unit #232 well pad and access road was conducted by personnel of La Plata Archaeological Consultants on July 31, 1990. The fieldwork was conducted by Fred Harden, and the project was administered by Steven Fuller. The survey was conducted at the request of Mr. Larry Sanders, of Phillips Petroleum. Mr. Drew Bates, representing Phillips Petroleum, accompanied the archaeologists during the fieldwork phase of the project. Personnel of Daggett Land Surveying staked the proposed well location.

The project is on lands administered by the Bureau of Land Management's Farmington Resource Area and is within San Juan County, New Mexico (Fig. 1). All work was conducted under the authority of New Mexico Cultural Resource Use Permit No. 19-2920-90-I issued to La Plata Archaeological Consultants.

The area was surveyed for a well pad proposed by Phillips Petroleum. The well pad will measure approximately 300 by 225 ft. Access will include 200 ft of road, mostly within the block survey area. The proposed location is situated on an abandoned well location which is served by a graded road. For this project, 7.6 acres were intensively surveyed. During the survey no archaeological sites were encountered and archaeological clearance is recommended for the project.

PREFIELD RECORDS SEARCH

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. Numerous well pad surveys were conducted within 1 mile of the proposed project area. No previously recorded sites are within 0.5 mile of the proposed project area.

FIELD METHODS

Prior to the survey, the proposed well pad was marked at the center, the four corners, and the four centerline endpoints. A 7.25-acre block (600 by 525 ft) was surveyed centered on the well center stake, which was sufficient to cover the 300- by 225-ft well pad, 50-ft construction zone, and at least a 100-ft buffer for cultural resources. The total 7.25-acre block was surveyed by pedestrian transects, which were no farther than 15 m or 50-ft apart. Access will be 200 feet of access road that branches off of an existing bladed road and a 150 foot wide corridor was surveyed for the 100 feet or so that extends beyond the block survey area. The extent of the surveyed area is illustrated on Figure 1.

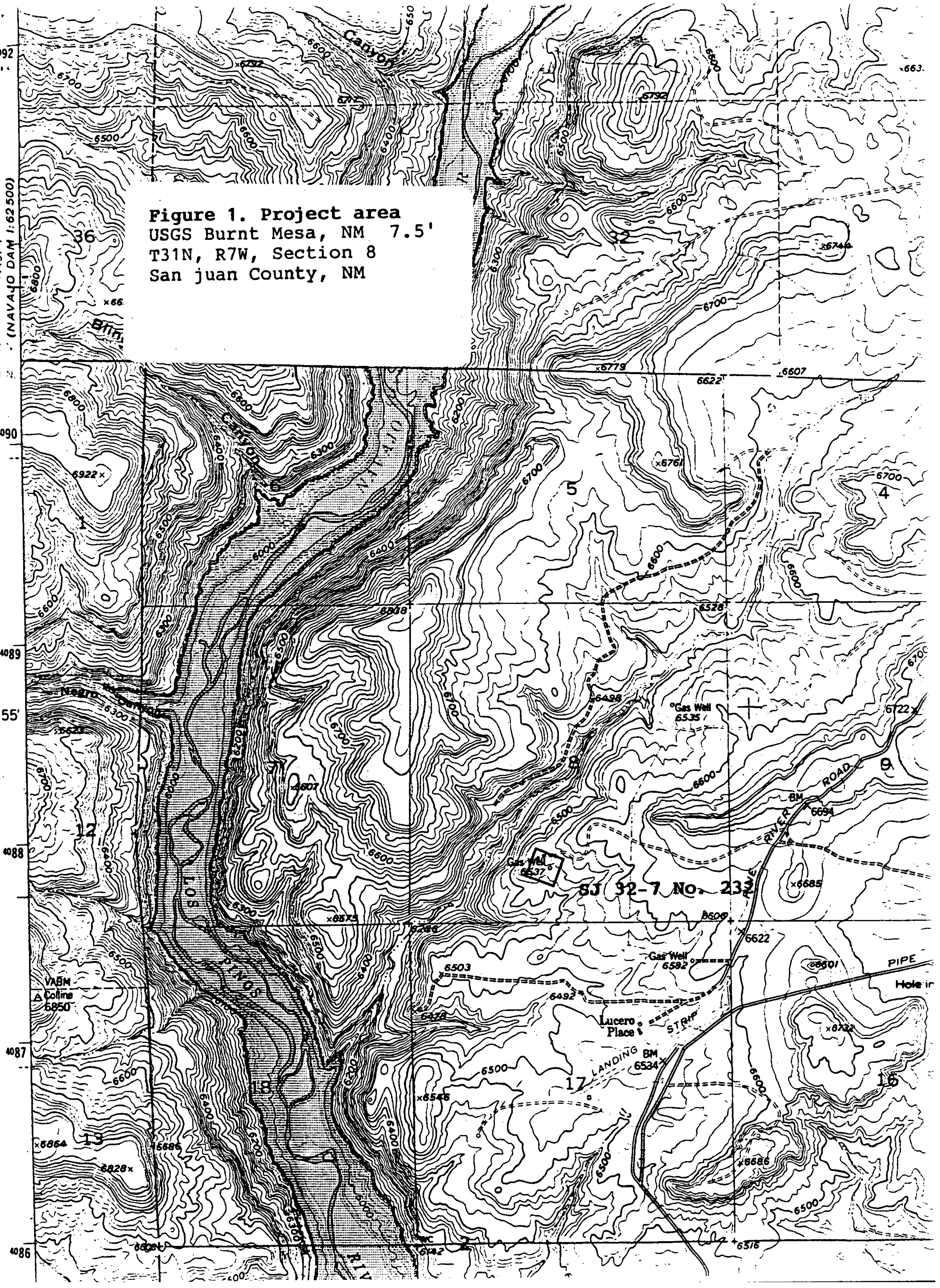


Figure 1. Project area
USGS Burnt Mesa, NM 7.5'
T31N, R7W, Section 8
San juan County, NM

ENVIRONMENT

The survey area is a rocky point that overlooks a Los Pinos river tributary to the southwest. Soils are thin and colluvial with sandstone bedrock exposed throughout the area. Much of the area is previously disturbed with rabbitbrush the dominant vegetation. Also present are some pinyon and juniper, sagebrush, bitterbrush oak and mountain mahogany.

PROJECT LOCATION AND DESCRIPTION

Project Name:	Phillips Petroleum's San Juan 32-7 Unit #232 well pad and access road.
Legal Description:	T31N, R7W, Section 8, NE 1/4 SE 1/4 SW 1/4. The actual footage of the location is 1064 FSL, 2191 FWL; San Juan County, New Mexico, (see Fig. 2, well plat).
Elevation:	6530 ft
Map Reference:	Burnt Mesa, New Mexico, 7.5' (1954, photorevised 1971)
Land Jurisdiction:	Bureau of Land Management, Farmington Resource Area
Project Area:	The well pad will measure about 300 by 225 ft. Access will require 200 ft of road that will branch off of an existing road.
Surveyed Area:	600- by 525-ft block (7.25 acres) for well pad and buffer zone. The access road extends 100 feet beyond the block survey area and a 150 foot corridor was surveyed. Total area surveyed: 7.6 acres.
Results:	No archaeological sites were recorded.

RECOMMENDATIONS

No archaeological sites were encountered in the survey for SJ 32-6 #232 well pad and archaeological clearance is recommended.

Figure 2, Well plat

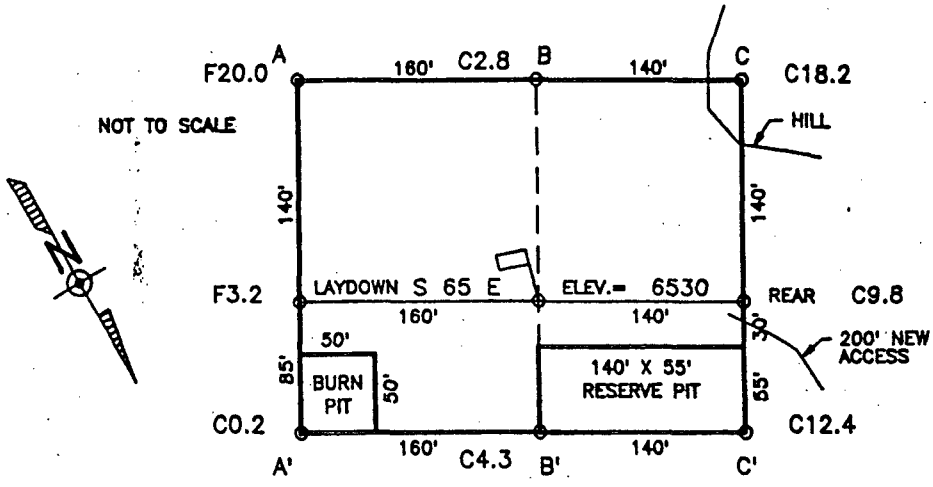
COMPANY: PHILLIPS PETROLEUM

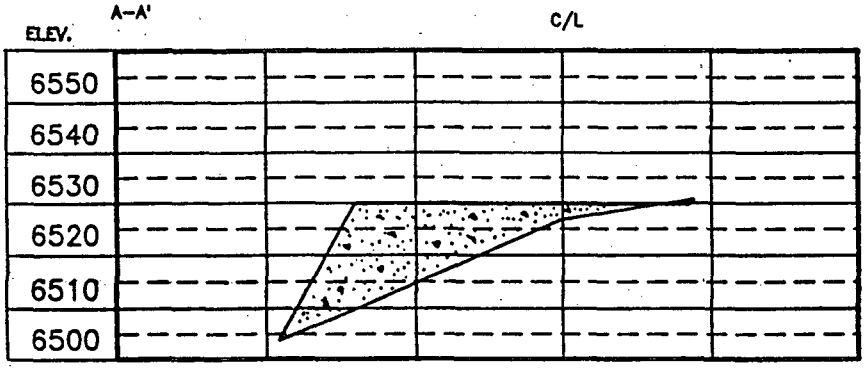
LEASE: SAN JUAN 32-7 UNIT NO.232

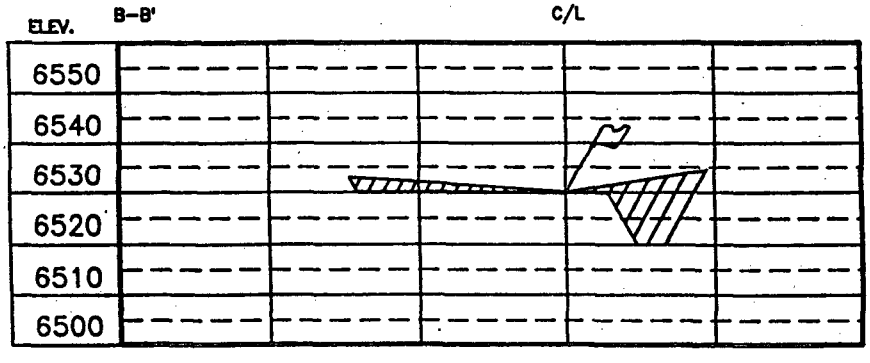
FOOTAGE: 1064 FSL, 2191 FWL

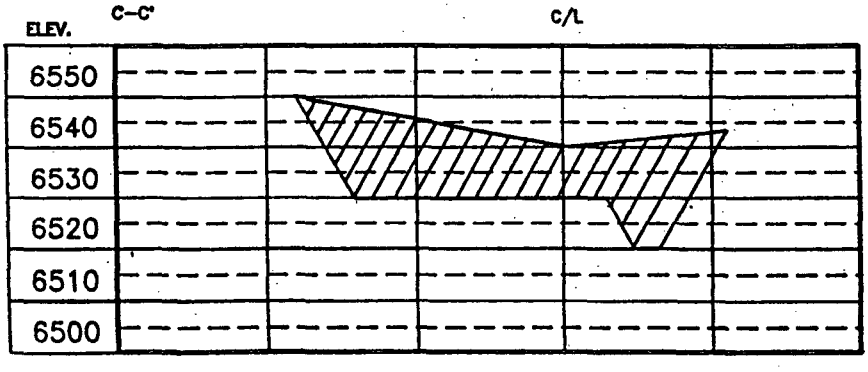
SEC.: 8 TWN: T.31 N. RNG: R.7 W. NMPM

ELEVATION: 6530









STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

GARREY CARRUTHERS
GOVERNOR

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
RECEIVED
'90 OCT 12 AM 9 30

Date: 10-5-90

ATTN: M. Stogner

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

Re: Proposed NC_____
Proposed DHC_____
Proposed NSL X
Proposed SWD_____
Proposed WFX_____
Proposed PMX_____

Gentlemen:

I have examined the application dated 10-3-90

for the Phillips Pet. Co. S.J. 32-7 Unit # 232
Operator Lease & Well No.

M-8-32N-7W and my recommendations are as follows:
Unit, S-T-R

Approve

Yours truly,

Bruce Boyle