



# PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762  
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP

September 29, 1990

Non-Standard Location Request  
San Juan 32-7 Unit, Well No. 218  
San Juan County, New Mexico

State of New Mexico  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87504-2088

Attention: Mr. William J. LeMay, Director

Gentlemen:

RECEIVED  
OCT 3 1990  
OIL CON. DIV  
DIST. 3

Phillips Petroleum Company respectfully requests an exception to Rule 7 of the Basin Fruitland Coal Gas Pool Rules for a non-standard location, for the subject well, due to the topographical conditions in the southwest quarter of Section 5, and various archaeological sites near or around the proposed location. This request can be approved administratively under the provisions of Rule 8 of the Basin Fruitland Coal Gas Pool Rules.

This is a Federal Lease with both the minerals and the surface use managed by the United States Department of the Interior, Bureau of Land Management, Farmington Resource Area. The staked location was agreed upon by Bill Liess, Surface Inspector, BLM; Paul Colbert, Wildlife Biologist, BLM, and Gail Bearden, Phillips Petroleum Company employee. The staked location is 109' to near the south line of Section 5. The 320-acre proration unit is within the San Juan 32-7 Unit, and Phillips Petroleum Company operates all the offsetting proration units. There are no existing wells or access roads within the staking window in the southwest quarter of Section 5.

1. Complete APD packet dated September 20, 1990, with all necessary attachments.
2. Archaeological report prepared by La Plata Archaeological Consultants.
3. A copy of a portion of the Burnt Mesa Quadrangle topographical map showing Section 5.
4. A certified statement that the information is current and correct.

Mr. William J. LeMay, Director  
Non-Standard Location Request  
San Juan 32-7 Unit, Well No. 218  
San Juan County, New Mexico  
September 29, 1990  
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The above attachments will provide all of the information requested in Mr. W. J. LeMay's memorandum dated March 21, 1990. If any additional information is required, please contact me at the letterhead address or telephone (915) 368-1488.

Sincerely,

A handwritten signature in cursive script, appearing to read "L. M. Sanders".

L. M. Sanders, Supervisor  
Regulation and Proration

LMS:jh  
SJ32-7.218

Attachments

cc: United States Department of the Interior  
Bureau of Land Management - Farmington, New Mexico  
Oil Conservation Division - Aztec, New Mexico

**ATTACHMENTS**  
(As Requested)  
**SAN JUAN 32-7 UNIT, WELL NO. 218**

- I. The APD package.
- II. See APD package.
- III. See C-102 and attached copy of topographic map.  
A. Information on topographic map.  
B. I hereby certify the information is current and correct to the best of my knowledge and ability.  
Signed: *L. M. Sanders*  
Name: L. M. Sanders  
Date: September 29, 1990
- IV. Copy of a portion of the Burnt Mesa Quadrangle topographical map.  
A. Shown on map.  
B. Shown on map.  
C. There are no existing wells located in the southwest quarter of Section 5 to use as a twin location.
- V. Enlargement of the topographic map provided.  
A. Within the window, the terrain varies in elevation from 6400' to more than 6700'. To clear the archaeological sites and find enough room to build a drilling pad would require enormous cuts and fills.  
B. The proposed access road will be approximately 2400' in length and is laid out in an area that will minimize surface damage. The proposed location and access road is within the BLM Wildlife Area, and this was also a consideration in staking the proposed location and access road.  
C. BLM Wildlife Area. (Same as "B" above.)  
D. See Archaeological Report.  
E. Described above.
- VI. See Archaeological Report.
- VII. See Surface Use Plan in APD packet.
- 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. Phillips Petroleum Company operates the offset proration units; therefore, no notices to offset operators is necessary.

## SURFACE USE PLAN

Phillips Petroleum Company , San Juan 32-7 Unit, Well No. 218, SW/4 SW/4, Section 05, 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. There will be 2400' of new access.

### 2. Planned Access Roads:

- A. The access road is shown on the attached map. The new location will exit from an existing access road and will require approximately 2400' of new access. 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. 218 is completed, a diversion cut will be placed below the cut on the west side with drainage to the south. Round off the NW corner to save fill.
- D. Culverts, Cuts and Fills: A 24" culvert will be installed at the access entrance. See Cut and Fill Sketch.
- E. Surfacing Material: Natural materials at well site.
- F. Gates, Cattle Guards, Fences: The new access will need to have a wing fence and a gate will need to be installed.
- G. Proposed Road: Approximately 2400' of new access will be required.

### 3. Locations of Existing Wells: Well NO. 18, 2225' FSL & 400' FEL \_\_\_\_\_

- 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

Surface Use Plan--San Juan 32-7 Unit Well No. 218.

Page: 2.

completion of drilling, the location and surrounding area will be cleared of debris. The flow-line from Well No. 218 will follow the proposed access road to the tie-in point where the new access exits from the existing road.

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.

Surface Use Plan—San Juan 32-7 Unit Well No. 218.

Page: 3.

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 05
- 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  
Typed or Printed Name

  
Signature

September 20, 1990  
Date

surf327z.lar

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

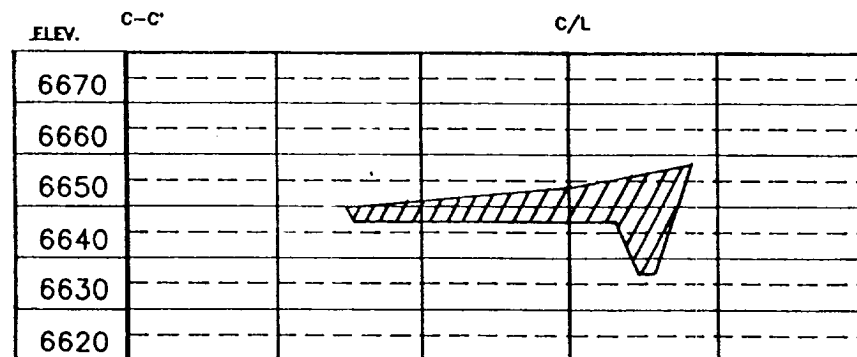
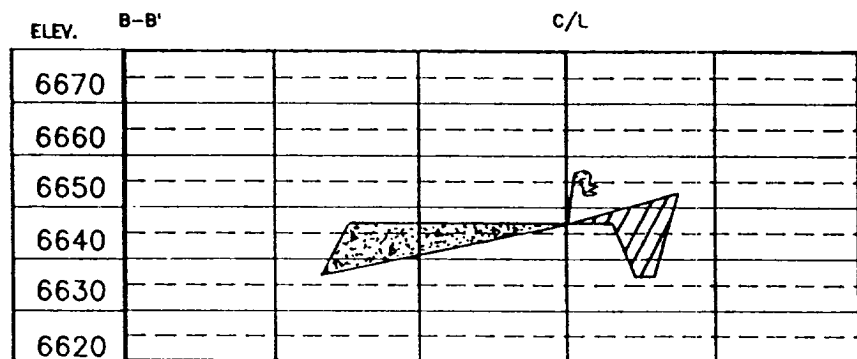
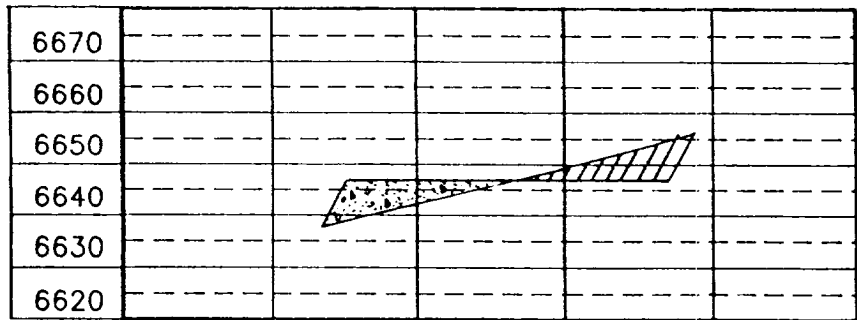
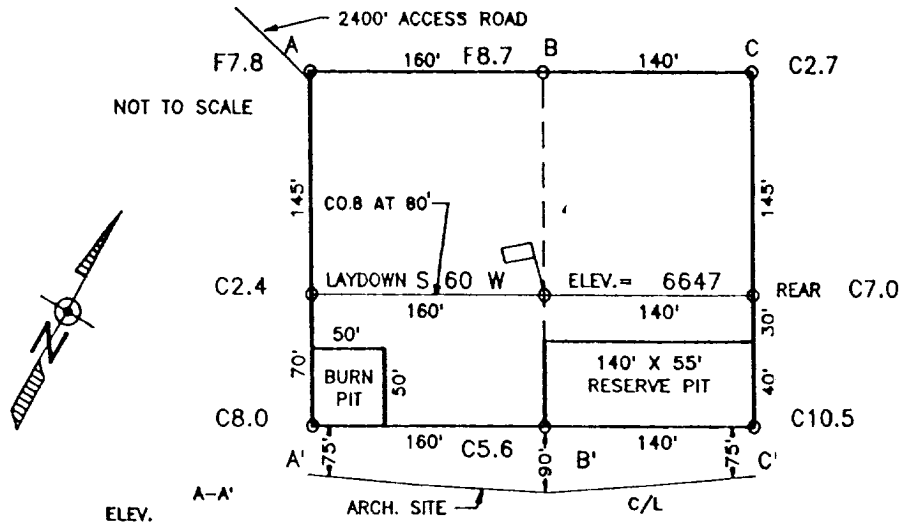
Attachment No. 1

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.

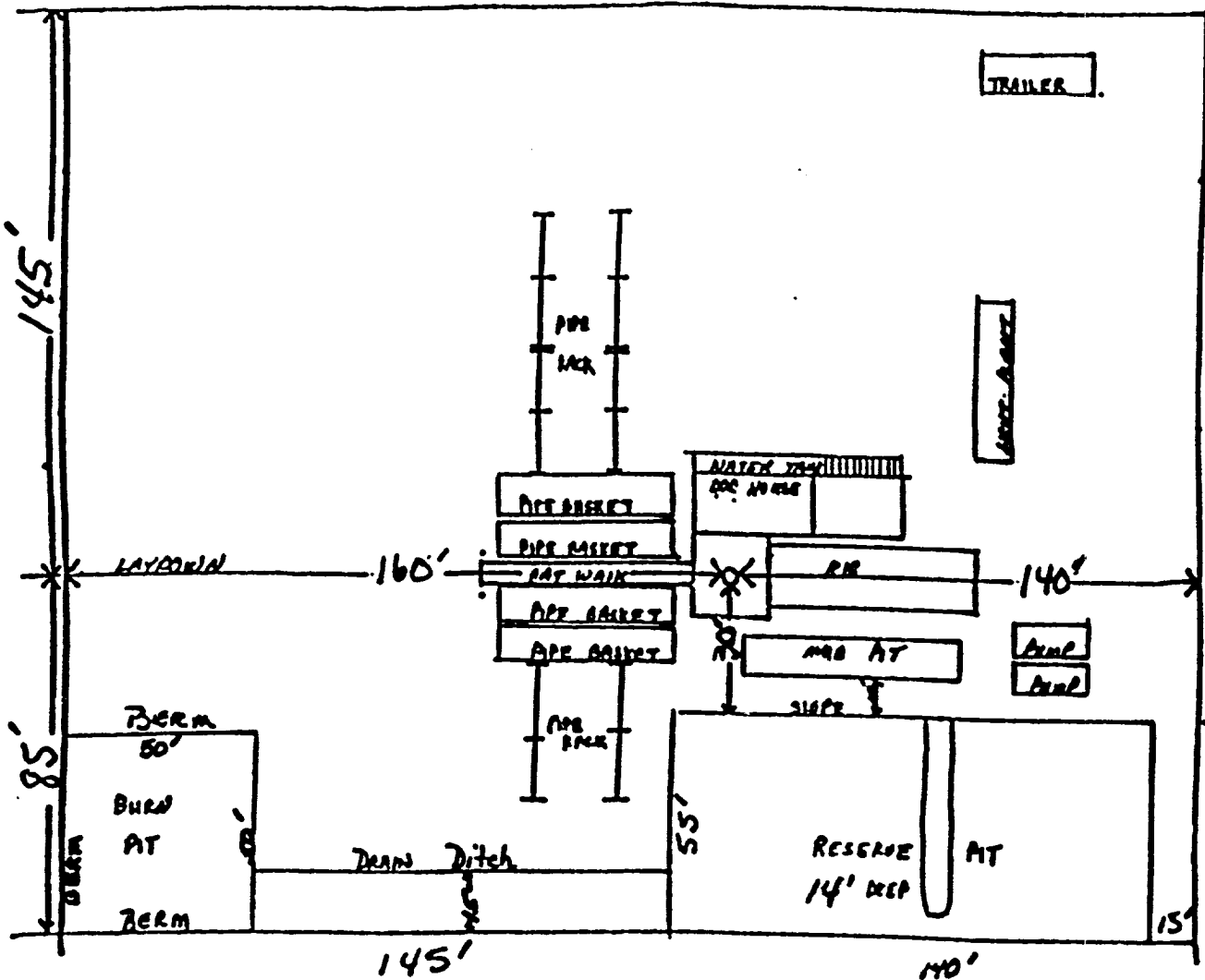
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COMPANY: PHILLIPS PETROLEUM  
 LEASE: SAN JUAN 32-7 UNIT NO.218  
 FOOTAGE: 681 FSL, 1311 FWL  
 SEC.: 5 TWN: T.31 N. RNG: R.7 W. NMPM  
 ELEVATION: 6647





300'



PHILLIPS PETROLEUM COMPANY

Preliminary  
9-18-90

Well Name: San Juan 32-7 Unit Well No. 218

DRILLING PROGNOSIS

1. Location of Proposed Well: 681' FSL & 1311' FWL, Section 5, T-31-N,  
R-7-W, San Juan County

2. Unprepared Ground Elevation: 6647,

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

4. Type of drilling tools will be rotary.

5. Proposed drilling depth is 3400'

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

<u>Ojo Alamo -</u>	<u>2270'</u>	<u>Base Coal -</u>	<u>3344'</u>
<u>Kirtland -</u>	<u>2425'</u>	<u>Picture Cliffs -</u>	<u>3458'</u>
<u>Fruitland -</u>	<u>3210'</u>	<u>Int. Csg. -</u>	<u>3240'</u>
<u>Top Coal -</u>	<u>3260'</u>	<u>T.D.</u>	<u>3400'</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 - 2270' - 2425'  
Oil: None  
Gas: Fruitland Coal - 3260' - 3344'

8. The proposed casing program is as follows:

Surface String 9-5/8", 36#, K-55 @ 250'  
Intermediate String 7", 23#, K-55 @ 3240'  
Liner \* 5-1/2", 23#, P-110 or 15.5#, K-55 @ 3140'-3400'

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.

San Juan 32-7 Unit Well No. 218

Page 2.

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

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Special Tests: None

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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.

drlpr191.lar

Revised 5/30/90

PROPOSED MUD PROGRAM  
 San Juan 32-7 Unit  
 Well No. 218  
 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	8-10CC	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

## BLOWOUT PREVENTER REQUIREMENTS

Well Name: San Juan 32-7 Unit No. 218

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- 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)

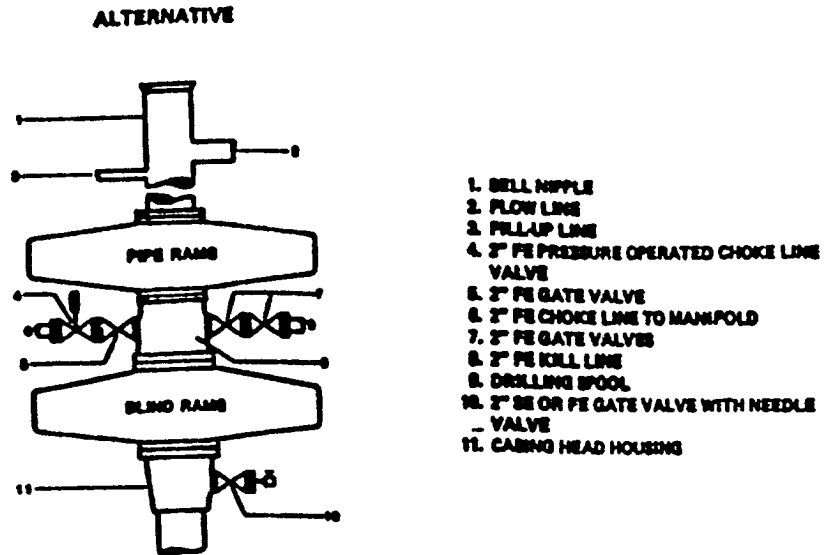
at least once each 48 hours (trip is not required just to actuate blind rams or pipe rams that do not fit top section of tapered string).

### 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.

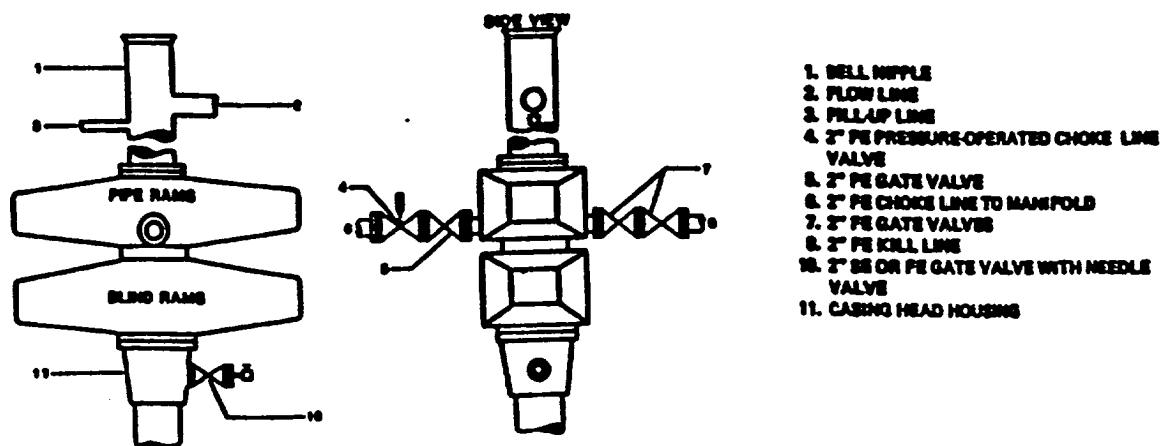


# FIELD PRACTICES AND STANDARDS

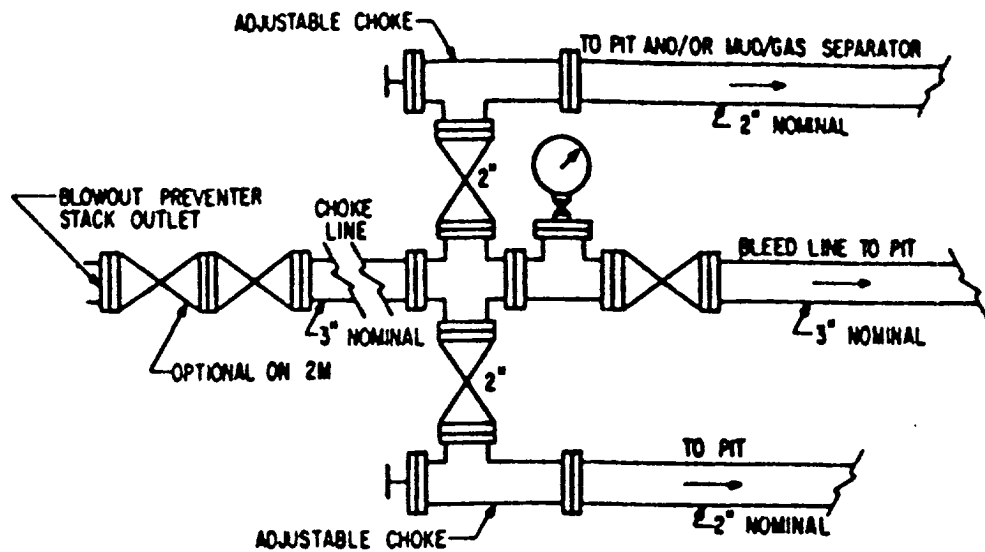


NOTE: THE DRILLING SPOOL MAY BE LOCATED BELOW BOTH SETS OF RAMS IF A DOUBLE PREVENTER IS USED AND IT DOES NOT HAVE SUITABLE OUTLETS BETWEEN RAMS

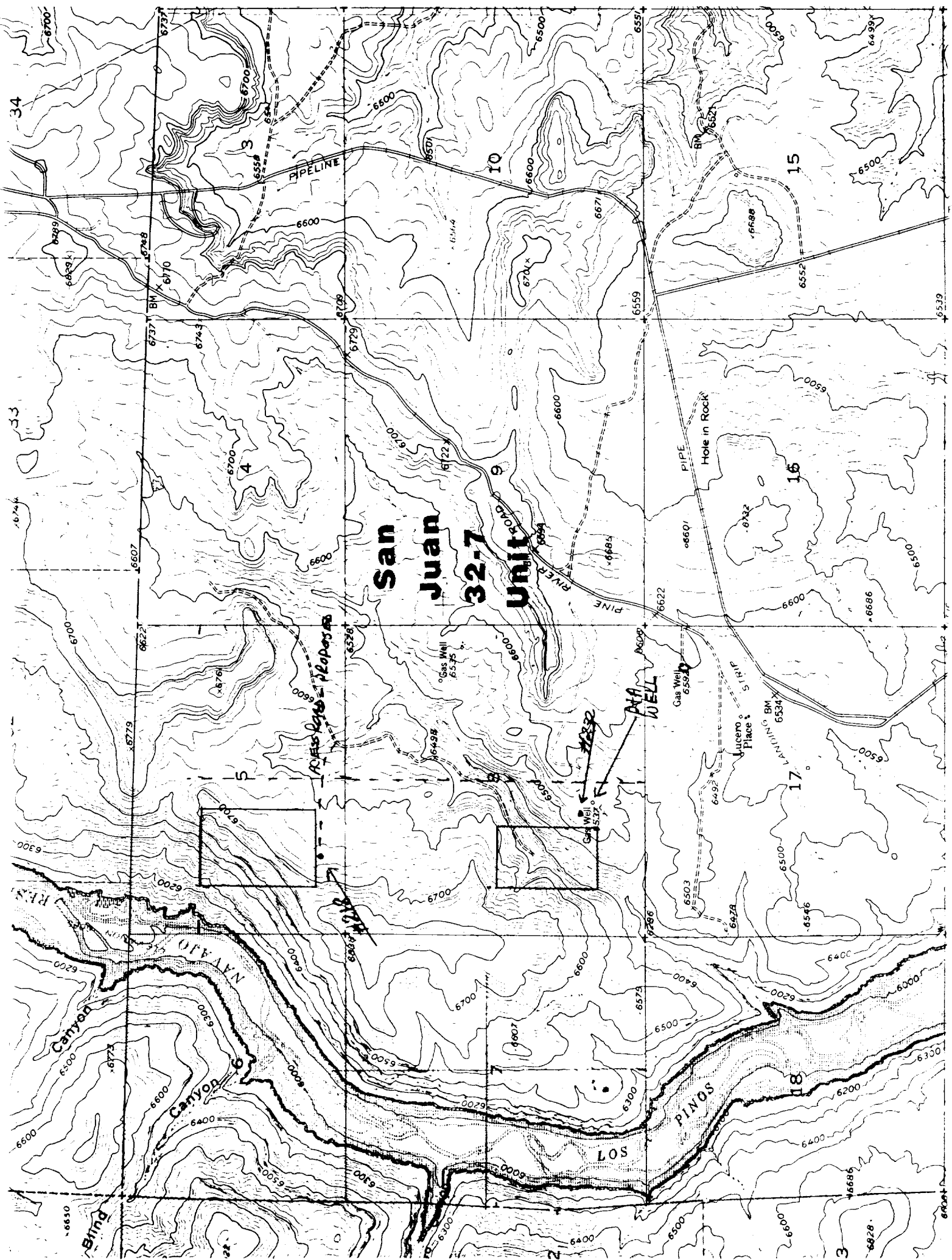
**Figure 7-9. Standard Hydraulic Blowout Preventer Assembly  
3 M Working Pressure Alternative 1**

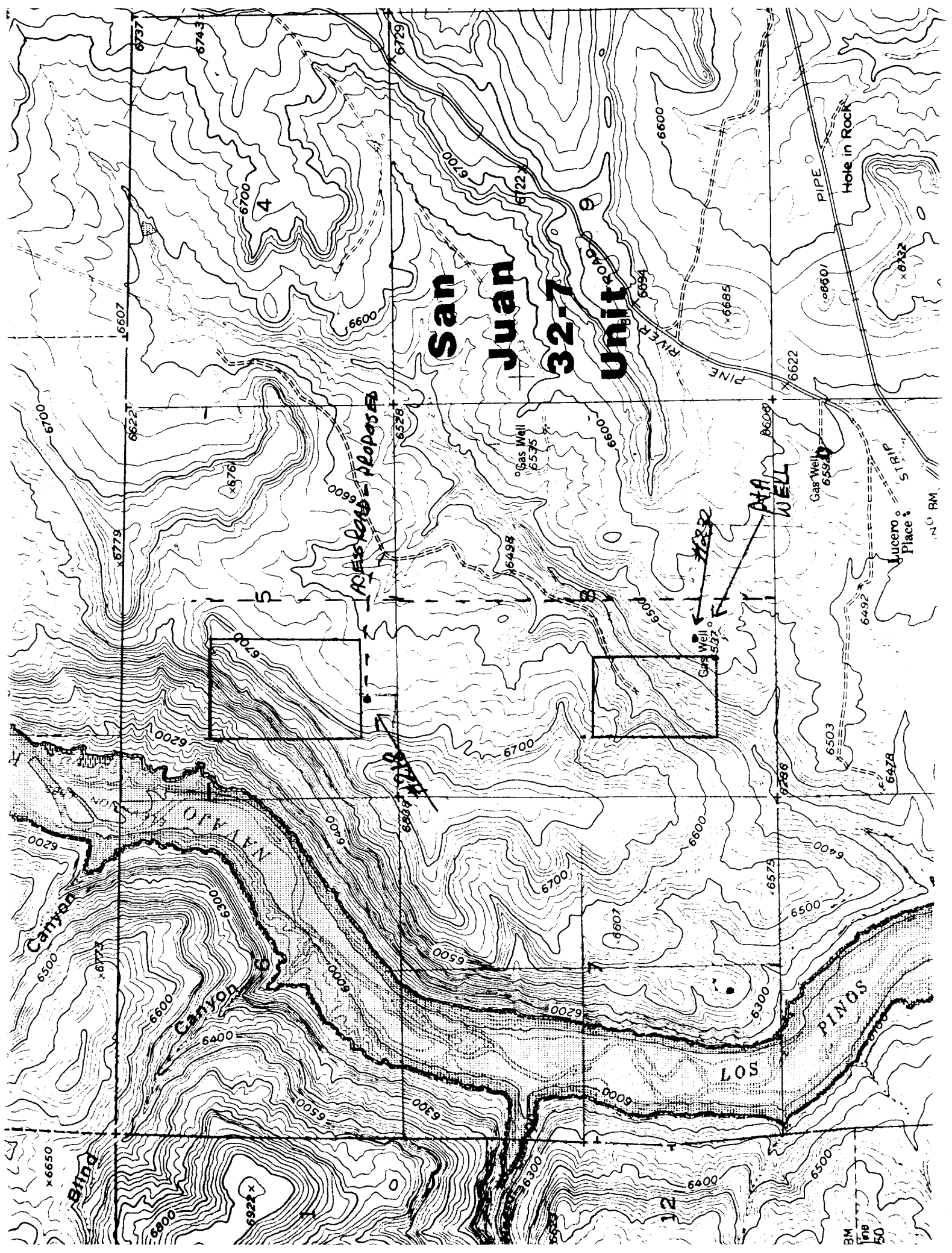


**Figure 7-10. Standard Hydraulic Blowout Preventer Assembly  
3 M Working Pressure Alternative 3 (without Drilling Spool)**



**FIG. 3.A.1**  
**TYPICAL CHOKE MANIFOLD ASSEMBLY**  
**FOR 2M AND 3M RATED WORKING**  
**PRESSURE SERVICE – SURFACE INSTALLATION**





**ARCHAEOLOGICAL SURVEY OF  
PHILLIPS PETROLEUM'S ABANDONED AND RELOCATED  
SAN JUAN 32-7 UNIT #218  
WELL PAD AND ACCESS ROAD  
SAN JUAN COUNTY, NEW MEXICO**

**LAC REPORT 9046g**

by

Steven L. Fuller and Barbara J. Cullington

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

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

September 6, 1990

Prepared For:

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

## **INTRODUCTION**

The archaeological survey of Phillips Petroleum's abandoned and relocated San Juan 32-7 Unit #218 well pad and access road was conducted by personnel of La Plata Archaeological Consultants on July 10 and August 12, 20, and 24, 1990. The fieldwork was conducted by Fred Harden and Steve Fuller, and the project was administered by Steven Fuller. The survey was conducted at the request of Mr. Larry Sanders, of Phillips Petroleum. Various Phillip's representatives, accompanied the archaeologists during the fieldwork phases 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 an original well pad proposed by Phillips Petroleum. The area was originally examined and found to contain one avoidable archaeological site in the vicinity of the proposed well pad. The pad was moved about 1000 feet east due to topographic concerns, and a new location was staked. The second location was subsequently found to be staked on an archaeological site and the location was moved northeast about 75 feet to avoid the site. Access to the final well pad location will require 2400 ft of new access. For this project, approximately 23.65 acres were intensively surveyed. During the survey, four archaeological sites were encountered within the various survey areas. Each has been avoided and can be protected 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. Only two previously recorded sites are within 0.5 mile of the proposed project area and both lie beneath Navajo Reservoir (Figure 1a, included only with BLM copies of the report).

## **FIELD METHODS**

Prior to the survey, the original proposed well pad was marked at the center, the four corners, and the four centerline endpoints. A 7.1-acre block (600 by 515 ft) was surveyed centered on the well center stake, which was sufficient to cover the 300- by 215-ft well pad, 50-ft construction zone, and at least a 100-ft buffer for cultural resources. No access road was surveyed due to the topography and the location was moved east onto a lower bench. The second location was surveyed using the same methods and was revisited twice to resize the pad and make minor

[illegible]

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adjustments in order to avoid several sites near the final location. A 150 by 2400 foot access corridor was surveyed leading to the final location. The blocks and corridor were surveyed using pedestrian transects which were no farther than 15 m or 50-ft apart. The extent of the surveyed area is illustrated on Figure 1.

The four sites were recorded on a Laboratory of Anthropology site forms, photographed, and mapped.

## **ENVIRONMENT**

The final survey area is on a alluvial fan sloping to the east at the base of a steep sandstone cliff and is east of the Navajo Reservoir. The area is a pinyon-juniper woodland with sagebrush, serviceberry, and grasses. Soils are sheet-washed sand and are moderately deep.

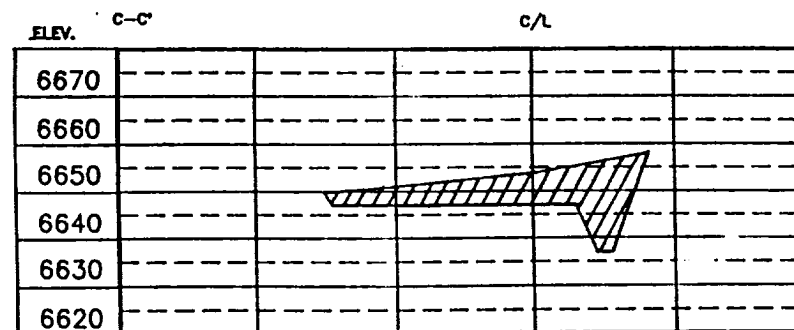
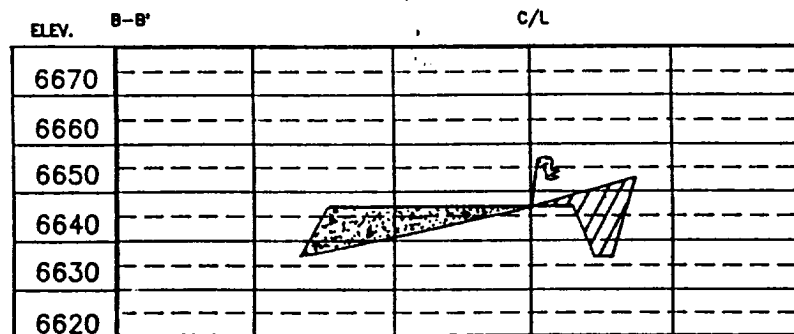
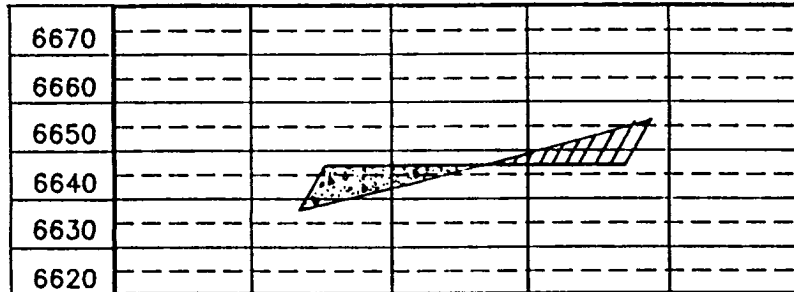
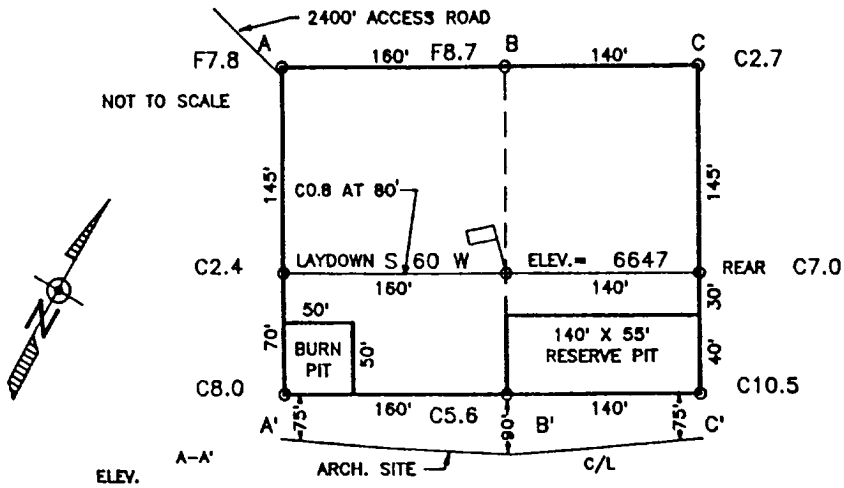
## **PROJECT LOCATION AND DESCRIPTION**

Project Name:	Phillips Petroleum's San Juan 32-7 Unit #218 well pad.
Legal Description:	T31N, R7W, Section 5, E 1/4 SW 1/4 SW 1/4. The actual footage of the location is 681 FSL, 1311 FWL; San Juan County, New Mexico, (see Fig. 2, well plat).
Elevation:	6647 ft
Map Reference:	USGS Burnt Mesa, New Mexico, 7.5' (1971)
Land Jurisdiction:	Bureau of Land Management, Farmington Resource Area
Project Area:	The well pad will measure about 300 by 215 ft. Access will require construction of 2400 ft of road.
Surveyed Area:	600- by 515-ft block (7.1 acres) for final well pad, 50 foot construction zone and 100 foot buffer zone. The well pad was moved 75 feet to avoid a site and an additional 75 by 565 ft area was examined (1.0 acre). Access will be from an existing roadway which is 2400 feet to the southeast (8.25 acres). The original well pad survey area measured about 600 by 230 feet (7.3 acres). Total area surveyed: 23.65 acres.
Results:	Four archaeological sites were recorded within the various survey areas. One site is in proximity to the abandoned well location, one is north of the final access road, and two are close to the final well location (see Appendix 1, BLM copies only).



Figure 2

COMPANY: PHILLIPS PETROLEUM  
 LEASE: SAN JUAN 32-7 UNIT NO.218  
 FOOTAGE: 681 FSL, 1311 FWL  
 SEC.: 5, TWN: T.31 N., RNG: R.7 W., NMPM  
 ELEVATION: 6647



## **RECOMMENDATIONS**

Four archaeological sites (Site LA79449, LA79258, LA79259, LA79260) were encountered within the survey area. The site-by-site management recommendations area as follows:

- LA79258: This site is 75 to 90 feet northwest of the final well location and can be protected by placing a protective fence along the edge of the pad as indicated on Figure 3.
- LA79259: This site is located approximately 80 feet north of the final access route and can be protected by placing a protective fence along the north edge of the road only during initial road clearing activities (Figure 4).
- LA79260: This site is north of the abandoned location and requires no further protection.
- LA79449: This site is located approximately 50 feet southwest of the proposed final well pad and can be protected during construction by placing a fence along the edge of the pad as indicated on Figure 6.

Given these protective recommendations, archaeological clearance is recommended for the Phillips Petroleum's final SJ 32-7 No. 218 well pad and access road.