

OIL CONSERVATION DIVISION
RECEIVED



PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401
5525 HWY. 64 NBU 3004

'92 NOV 6 AM 9 21

November 3, 1992

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

Re: Unorthodox Location
San Juan 32-7 #238
518' FNL & 2313' FEL
Section 29, T32N, R7W
San Juan County, New Mexico

Dear Mr. LeMay:

Phillips Petroleum hereby requests administrative approval for an unorthodox well location for its San Juan Unit 32-7 #238, a Fruitland Coal well. The request for unorthodox location is dictated by terrain concerns at the standard location as evidenced on the enclosed topo map. The E/2 Section 29, T32N, R7W will be dedicated to this well.

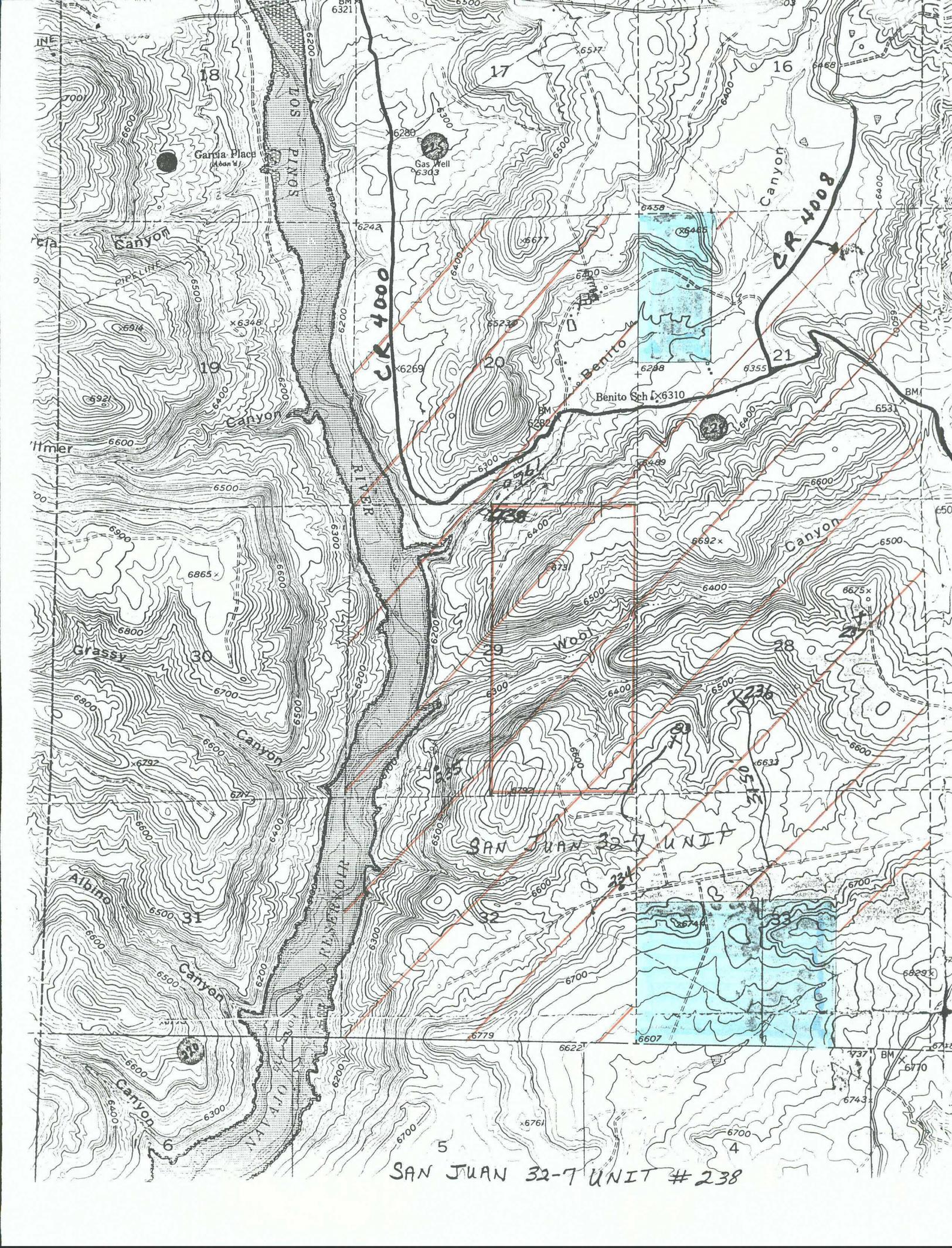
A complete package of maps, C-102, etc. are enclosed herewith. Additionally, you will find a copy of waiver request addressed to offset operators. The cross hatched (red) acreage falls within the Phillips-operated unit. The tracts highlighted in blue represent offset operator's acreage. Your early response to this request will be greatly appreciated.

Very truly yours,

PHILLIPS PETROLEUM COMPANY

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

cc: Southland Royalty Company
Pantera Energy Company



CR 4000

CR 4008

SAN JUAN 32-7 UNIT

SAN JUAN 32-7 UNIT # 238

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 B, 518' FNL & 2313' FEL
 At proposed prod. zone Same as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 20 Miles SE From Ignacio, Colorado

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
 2402 Ac

17. NO. OF ACRES ASSIGNED TO THIS WELL
 332.12 *W/E 5/2*

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

19. PROPOSED DEPTH
 3000'

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 6253' (GL Unprepared)

22. APPROX. DATE WORK WILL START*
 Upon Approval

5. LEASE DESIGNATION AND SERIAL NO.
 SF-078460
 6. IF INDIAN, ALLOTTEE OR TRIBE NAME
 7. UNIT AGREEMENT NAME
 San Juan 32-7 Unit
 8. FARM OR LEASE NAME
 9. WELL NO.
 238
 10. FIELD AND POOL, OR WILDCAT
 Basin Fruitland Coal
 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
 Sec. 29, T-32-N, R-7 -W
 12. COUNTY OR PARISH
 San Juan
 13. STATE
 NM

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	2800'	650 Sx, Circ to Surface
6-1/8"	5-1/2"	23#	2700'-2975'	*

*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. Spec. DATE 10-5-92
 L. E. ROBINSON

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Submit to Appropriate District Office
 State Lease - 4 copies
 Free Lease - 3 copies

State of New Mexico
 Energy, Minerals and Natural Resources Department

Form C-102
 Revised 1-1-89

OIL CONSERVATION DIVISION
 P.O. Box 2088
 Santa Fe, New Mexico 87504-2088

DISTRICT I
 P.O. Box 1985, Hobbs, NM 88240

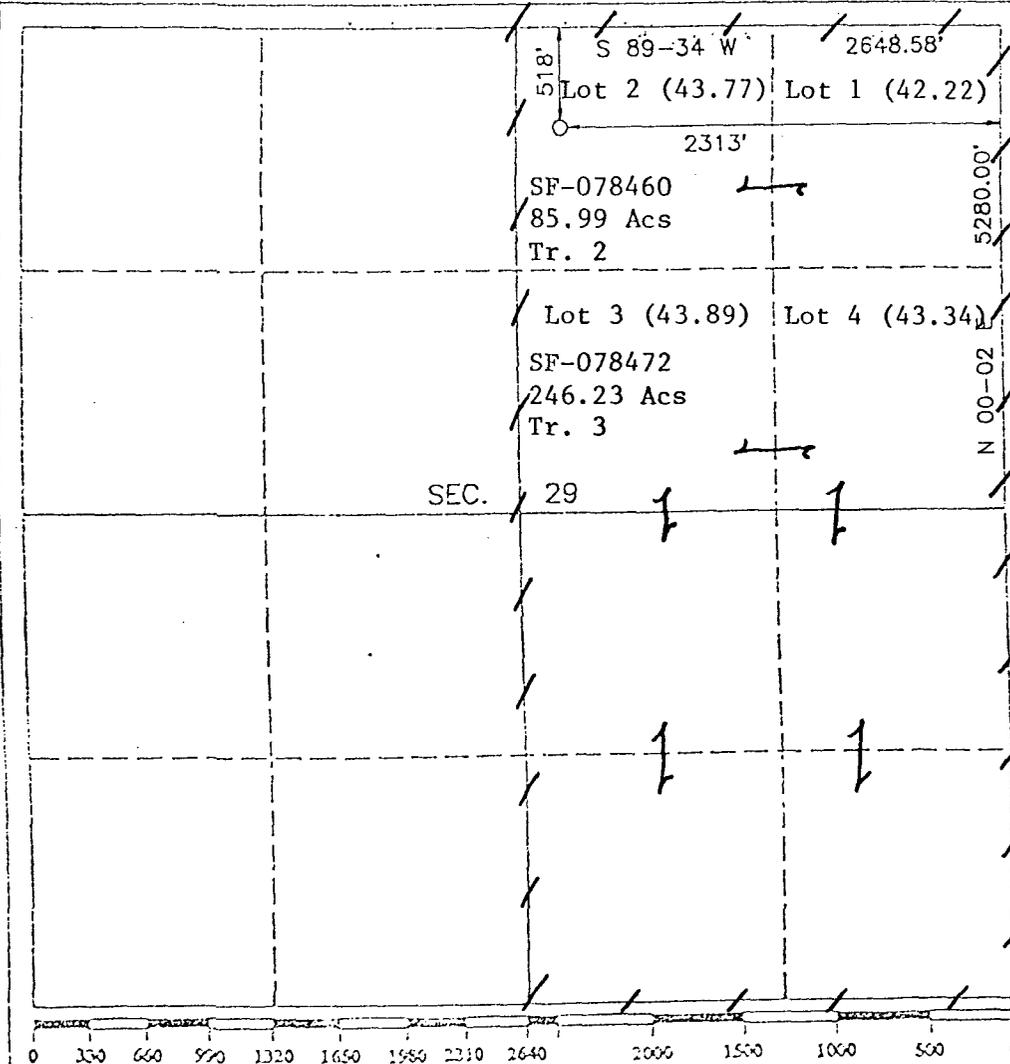
DISTRICT II
 P.O. Drawer 80, Aztec, NM 88210

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 PHILLIPS PETROLEUM		Lease SAN JUAN 32-7 UNIT		Well No. 238
Unit Letter B	Section 29	Township T.32 N.	Range R.7 W.	County SAN JUAN
Actual Footage Location of Well: 518 feet from the NORTH line and 2313 feet from the EAST line				
Ground Level Elev. 6253	Producing Formation Fruitland	Pool Basin Fruitland Coal	Dedicated Acreage: 332.12 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 interests, has been approved by the Division.



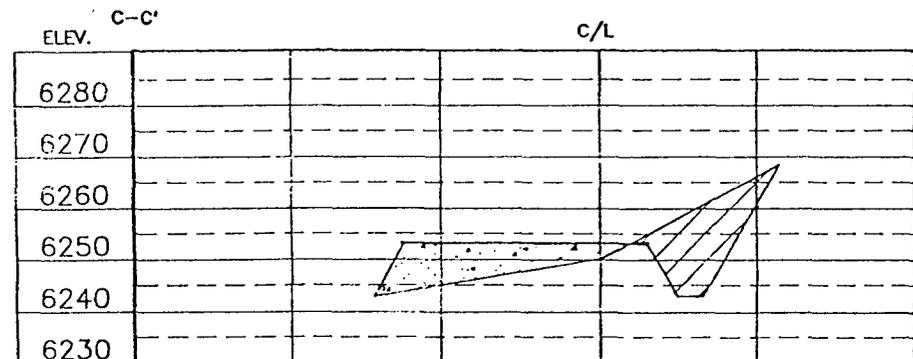
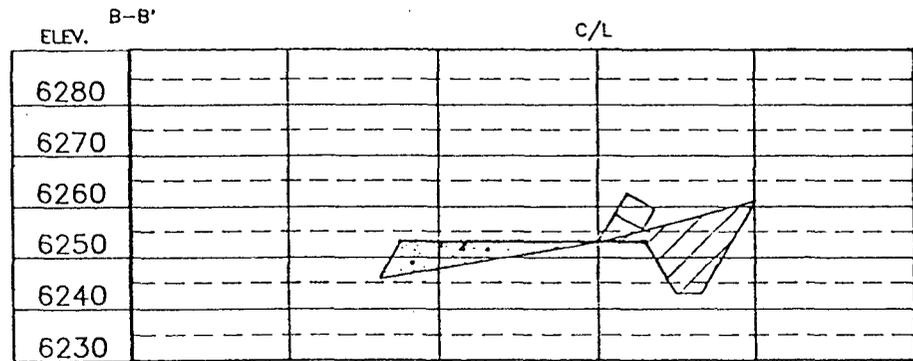
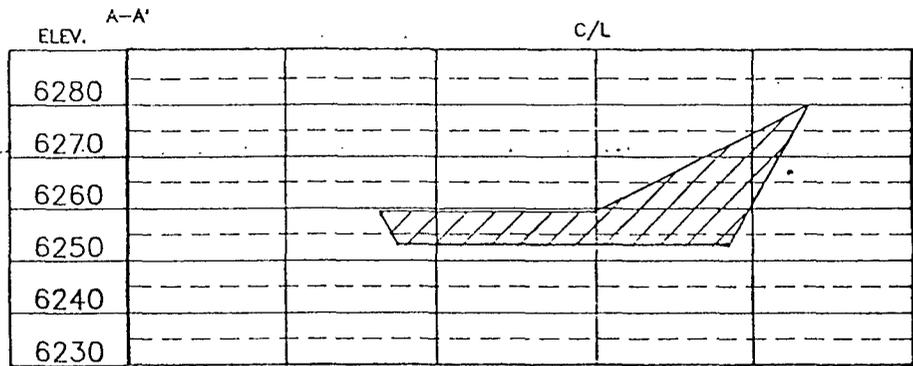
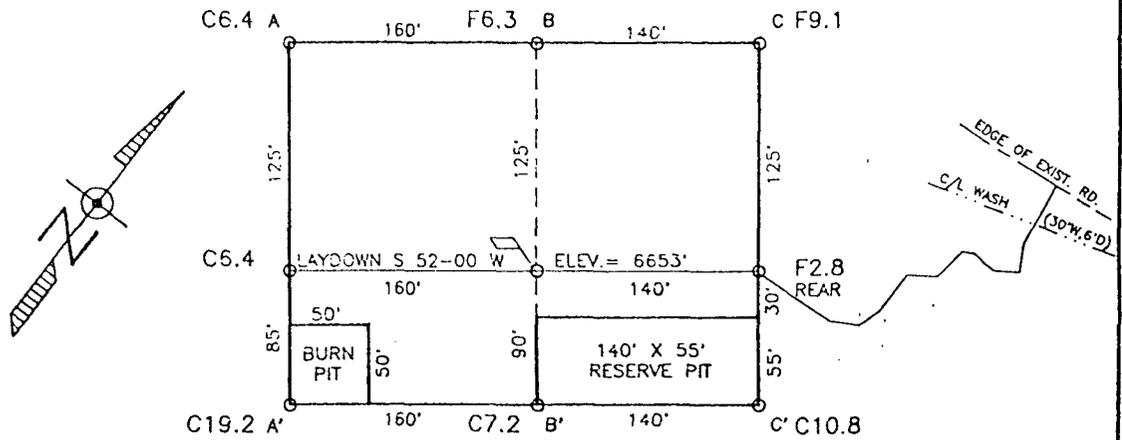
OPERATOR CERTIFICATION
 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature: *L.E. Robinson*
 Printed Name: **L.E. Robinson**
 Position: **Sr. Drlg & Prod Engr Spec**
 Company: **Phillips Petroleum Company**
 Date: **October 5, 1992**

SURVEYOR CERTIFICATION
 I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

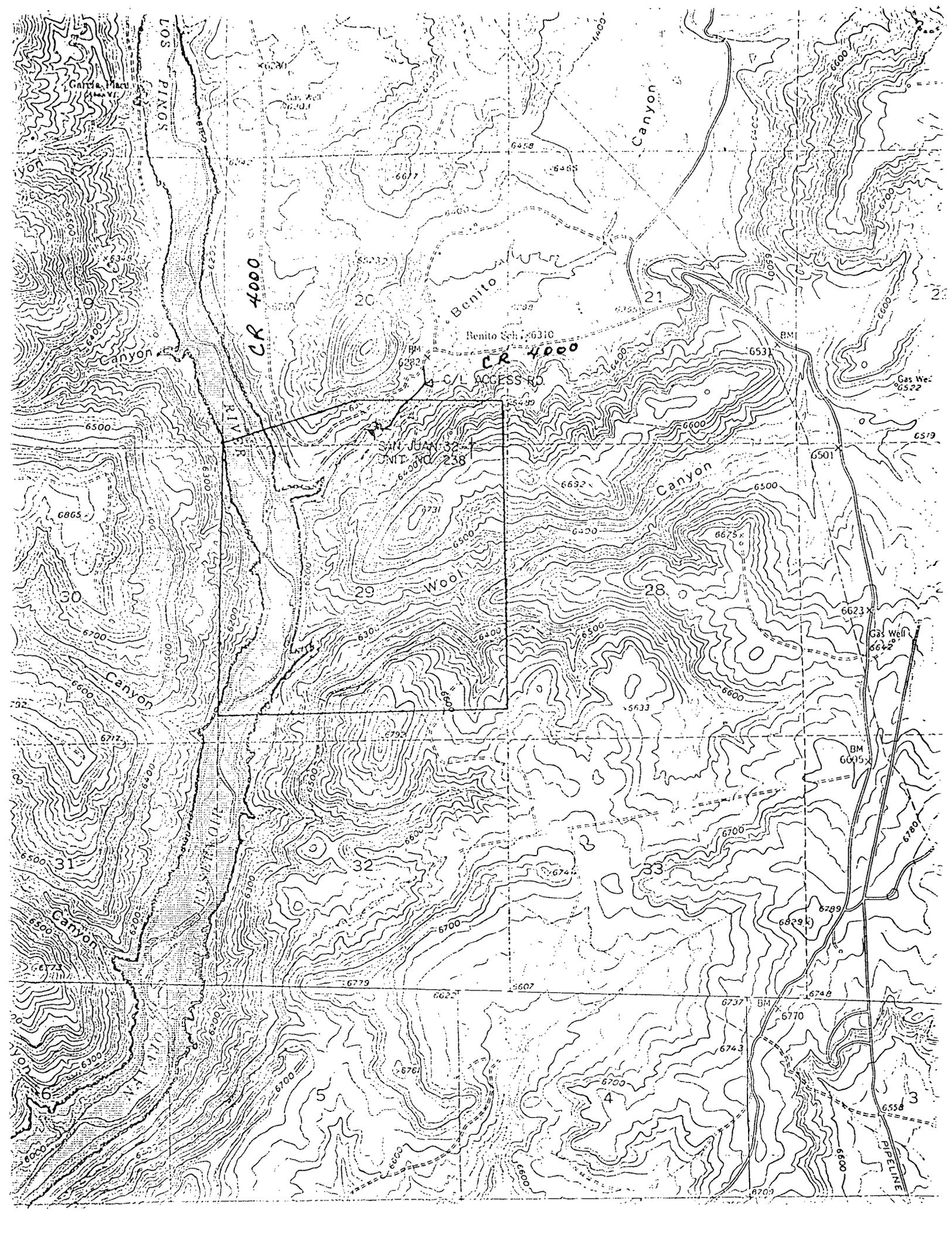
Date Surveyed: **SEPTEMBER 1992**
 Signature & Seal of Professional Surveyor: *Roy A. Rush*
 Certificate No.: **8894**

COMPANY: PHILLIPS PETROLEUM
 LEASE: SAN JUAN 32-7 UNIT NO. 238
 FOOTAGE: 518 FNL, 2313 FEL
 SEC.: 29 TWN: T.32 N. RNG: R.7 W. NMPM
 ELEVATION: 6253'

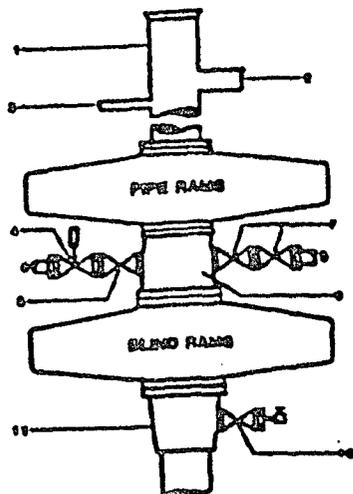


Daggett Surveying, Inc.

3539 E. 30th Street Suite No. 78 Ph. (505) 328-1772
 Farmington, New Mexico 87401



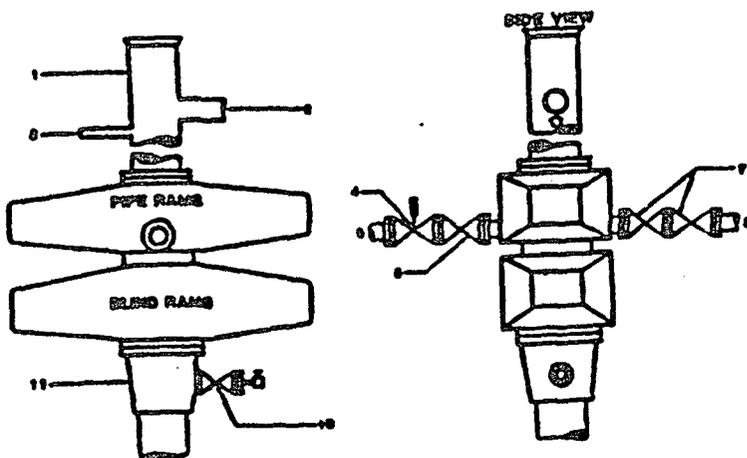
ALTERNATIVE



1. BELL NECKLE
2. FLOW LINE
3. FILL-UP LINE
4. 2" PE PRESSURE OPERATED CHOKE LINE VALVE
5. 2" PE GATE VALVE
6. 2" PE CHOKE LINE TO MANIFOLD
7. 2" PE GATE VALVE
8. 2" PE KILL LINE
9. DRILLING SPOOL
10. 2" OR 1.5" PE 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 NECKLE
2. FLOW LINE
3. FILL-UP LINE
4. 2" PE PRESSURE OPERATED CHOKE LINE VALVE
5. 2" PE GATE VALVE
6. 2" PE CHOKE LINE TO MANIFOLD
7. 2" PE GATE VALVE
8. 2" PE KILL LINE
9. 2" OR 1.5" PE 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)



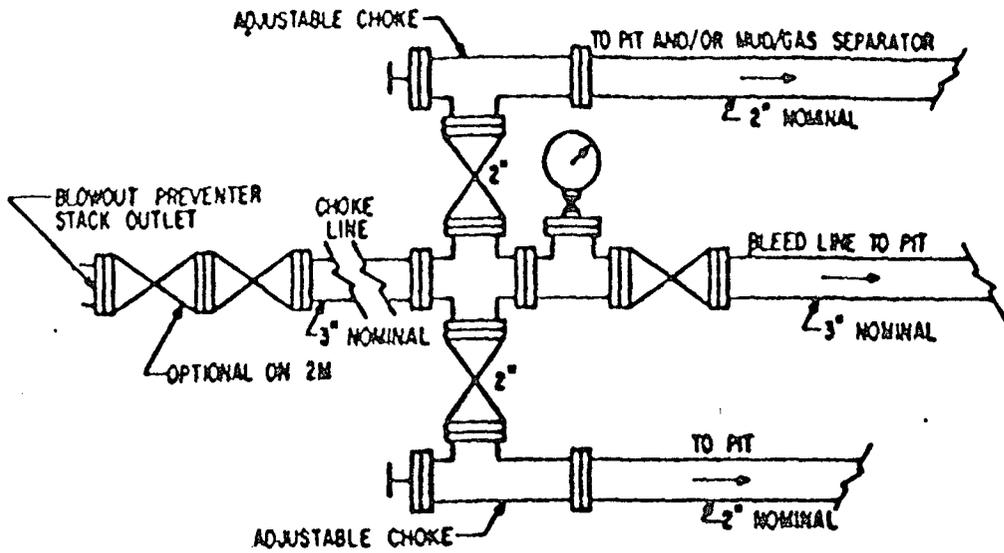


FIG. 3.A.1
 TYPICAL CHOKE MANIFOLD ASSEMBLY
 FOR 2M AND 3M RATED WORKING
 PRESSURE SERVICE - SURFACE INSTALLATION

SURFACE USE PLAN

Phillips Petroleum Company , San Juan 32-7 Unit , Well No. 238 , NW/4 NE/4, Section 29, T-32-N, R-7-W, San Juan County, New Mexico. (Federal Lease No. SF-078460.)

This plan is to accompany "Application for Permit to Drill" the subject well which is located approximately 20 miles SE from Ignacio, Colorado. 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 Aztec on Hwy 550 and go right on Navajo Dam Road approximately 20 miles and turn left on Hwy 511. Go to La Boca Ranch and turn right. Go approx. 4 miles on CR 4000. Location is across from Benito School. Access is marked.

2. Planned Access Roads:

- A. New Access is approximately 1960' 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: 3:1 Cut and Fill. 18" culvert on wash below 1600' marker & on wash @ 1300' marker. Crown & ditch access. Need low water crossing @ 100' marker.
- D: Surfacing Material: Natural materials at well site.
- E: Gates, Cattle Guard, Fences: As required
- F: Proposed Road: See Cut and Fill Sketch.
- G: Drainage: Diversion on East draining North & South & on South draining West. Stockpile trees on South.

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. 238 is to run from a measurement point on the pad to a point on 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 210' 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.

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 29
- 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

L. E. Robinson
Signature.

October 5, 1992
Date

PHILLIPS PETROLEUM COMPANY

PRELIMINARY

Well Name: San Juan 32-7 Unit Well No. 238

DRILLING PROGNOSIS

1. Location of Proposed Well: 518' FNL & 2313' FEL, Section 29, T-32-N,R-7-W San Juan County
2. Unprepared Ground Elevation: 6253'.
3. The geologic name of the surface formation is San Jose.
4. Type of drilling tools will be rotary.
5. Proposed drilling depth is 3000'.
6. The estimated tops of important geologic markers are as follows:

<u>Ojo Alamo - 1850'</u>	<u>Base Coal - 2940'</u>
<u>Kirtland - 2075'</u>	<u>Picture Cliffs - 3010'</u>
<u>Fruitland - 2710'</u>	<u>Int. Csg. - 2800'</u>
<u>Top Coal - 2820'</u>	<u>T.D. 2975'</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 - 1850' - 2075'
 Oil: None
 Gas: Fruitland Coal 2820'-2940'

8. The proposed casing program is as follows:

Surface String 9-5/8", 36#, K-55 @ 250'
 Intermediate String 7", 23#, K-55 @ 2800'
 Liner * 5-1/2", 23#, P-110 or 15.5#, J-55 @ 2700'-2975'

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.

San Juan 32-7 Unit Well No. 238.

Page 2.

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 H₂S equipment will be used.
14. The anticipated starting date is immediately upon approval with duration of operations for approximately 30 days thereafter.

sj327238.jgb

BLOWOUT PREVENTER REQUIREMENTS

Well Name: San Juan 32-7 Unit Well No. 238

- 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

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

Page 4

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.

PROPOSED MUD PROGRAM
 SAN JUAN 32-7 UNIT
 Well No. 238
 San Juan 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 CaCO₃ & Polymer, low solids. Mud Wt. 9.5 to 10.0 PPG, as necessary
 Start mud up 100' above Fruitland

WATER SUPPLY SOURCE
Surface Use Plan
San Juan 32-7 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 PROPOSED
SAN JUAN 32-7 UNIT NO. 238 WELL PAD AND ACCESS ROAD
SAN JUAN COUNTY, NEW MEXICO**

LAC REPORT 9246c

by

Maureen Cavanaugh

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

New Mexico Cultural Resource Use Permit No. 19-2920-92-L

September 20, 1992

Prepared For:

**Phillips Petroleum
5525 Highway 64 NBU 3004
Farmington, New Mexico 87401**

INTRODUCTION

The archaeological survey of Phillips Petroleum's San Juan 32-7 Unit No. 238 well pad and access road was conducted by personnel of La Plata Archaeological Consultants on September 2 and 3, 1992. The fieldwork was conducted by Maureen Cavanaugh and Steve Fuller administered the project. The survey was conducted at the request of Mr. Richard Allred of Phillips Petroleum, and Mr. Gary Clark accompanied the archaeologist during the fieldwork phase of the project. Personnel of Daggett Surveying staked the proposed well location.

The project is on land administered by the, BLM's Farmington Resource Area, and is in San Juan County, New Mexico (Figure 1). All work was conducted under the authority of New Mexico Cultural Resource Use Permit No. 19-2920-92-L issued to La Plata Archaeological Consultants.

The area was surveyed for a well pad and access road proposed by Phillips Petroleum. The well pad will measure approximately 300 by 235 ft. Approximately 1960 ft of new access will be required. A total of 14.2 acres was intensively surveyed for the well pad (7.4 ac) and access road (6.8 ac). Two new archaeological sites and 1 isolated occurrence were found. Both sites are considered ineligible for nomination to the National Register 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. Only three sites, LA4263, LA4264, and LA54172 have been recorded within 0.5 mile of the proposed project area (Fig. 1a, BLM copy only). The closest site, LA4263, is 1500 ft west of the project area and will not be affected by the proposed action.

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 that were no farther than 15 m or 50 ft apart. The proposed new access exits the center rear of the location and goes northwest along an old road for 1600 ft and then veers to the north for 360 ft to intersect with the Benito Canyon road. A 1960- by 150 ft corridor (6.8 ac) was surveyed for the access road. The extent of the surveyed area is illustrated on Figure 1.

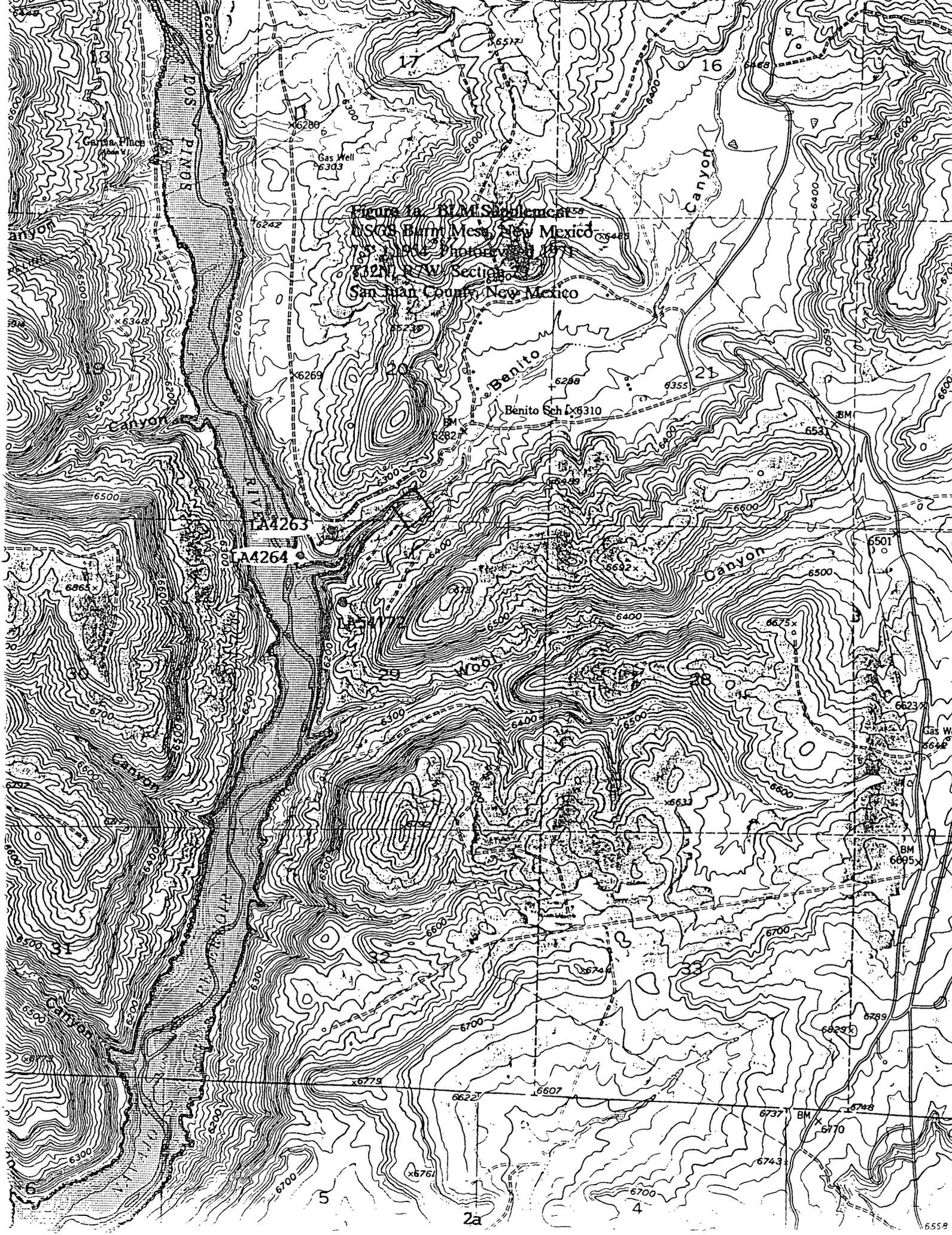


Figure 2a. B.M. Supplement to
USGS Banito Mesa, New Mexico
Photorevised 1971
832N, E-W Section
San Juan County, New Mexico

LA4263

LA4264

ENVIRONMENT

The proposed SJ 32-7 No. 238 well pad is 1200 ft northeast of the confluence of Benito Canyon and Navajo Reservoir, and is on the first terrace on the southeast side of the Benito Canyon drainage. The canyon drainage in this area is entrenched in a 60-ft-deep by 150-ft-wide sandstone canyon. The area surveyed for the site varies from quite flat in the center to a steep colluvial slope covered with massive detached boulders. Sage brush covers the flatter area, while colluvial slopes have a pinyon-juniper forest. Gambel oak grows along steep cobble-covered slopes in the entrenched portion of the Benito Canyon drainage. Other plants in the survey area include mountain mahogany, prickly pear, narrow leaf yucca, broom snakeweed, and rice grass. Soils vary from sandy to quite clayey, and there are numerous scattered river cobbles, with cobble concentrations on the bluff overlooking the Benito Canyon drainage. A side drainage comes off the colluvial slope to the southeast and cuts across the north side of the surveyed area, just north of the. This side drainage flows along bedrock just above the confluence with the Benito Canyon drainage.

PROJECT LOCATION AND DESCRIPTION

Project Name: Phillips Petroleum's San Juan 32-7 Unit No. 238 well pad and access road.

Legal Description: T32N, R7W, Section 29, NW¼ NW¼ NE¼. Quarter sections were defined by aligning the template on the east side of the section, with the template corners placed on the northeast and southeast corners of the section. The actual footage of the location is 518 FNL, 2313 FEL; San Juan County, New Mexico, (see Fig. 2, well plat)

Elevation: 6253 ft

Map Reference: U.S.G.S. Burnt Mesa, New Mexico, 7.5' (1954, photorevised 1971)

Land Jurisdiction: Bureau of Land Management, Farmington Resource Area

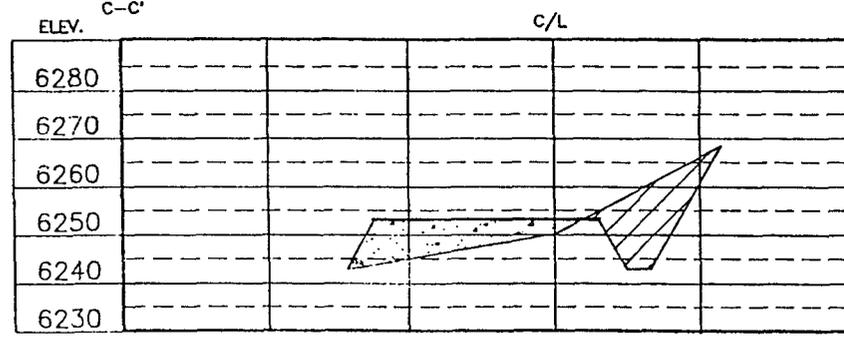
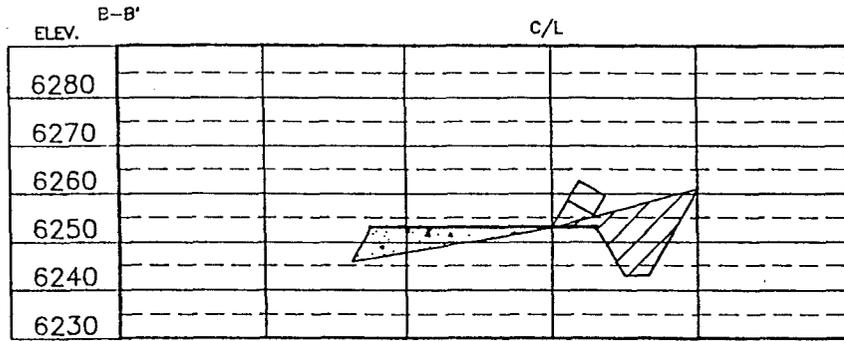
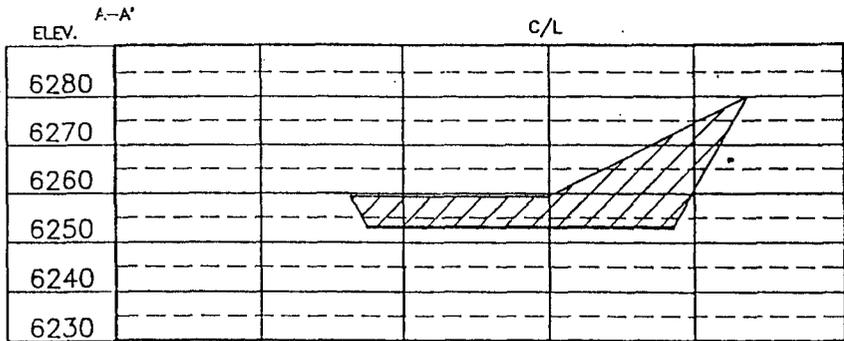
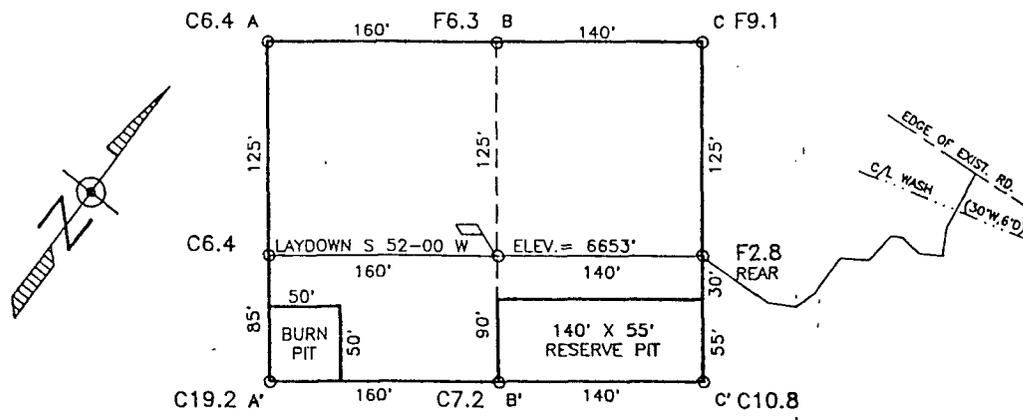
Project Area: The well pad will measure about 300 by 235 ft., and 1960 ft of new access is required. Access will be from the Benito Canyon road.

Surveyed Area: A 600- by 535-ft block (7.4 acres) for well pad, 50 ft construction zone, and 100 ft buffer zone. A 1960- by 150-ft corridor (6.8 ac) was surveyed for the access road. The total area surveyed is 14.2 ac.

Results: Two new sites and one isolated occurrence were encountered. These sites and the isolated occurrence are described in Appendix A, included with BLM copies of this report.

Figure 2.

COMPANY: PHILLIPS PETROLEUM
 LEASE: SAN JUAN 32-7 UNIT NO. 238
 FOOTAGE: 518 FNL, 2313 FEL
 SEC.: 29 TWN: T.32 N. RNG: R.7 W. NMPM
 ELEVATION: 6253'



 **Daggett Surveying, Inc.**
 3539 E. 30th Street Suite No. 78 Ph. (505) 326-1772
 Farmington, New Mexico 87401

RECOMMENDATIONS

During the survey, two new archaeological sites and one isolated occurrence were encountered. Site LA89209 is not considered significant and no further protection is recommended. Site LA89210, which is avoided by 30 ft, is also not considered significant and no further protection is recommended. Given that no eligible cultural resources were encountered within the project area, archaeological clearance is recommended for the Phillips SJ 32-7 No. 238 well pad and access road.

APPENDIX A
DESCRIPTIONS OF ISOLATED OCCURRENCES AND SITES

IO 1

Description: This isolated occurrence consists of one one-hand mano fragment of fine grained sandstone, bifacially utilized. This isolated occurrence is located on a north-northwest- aspect bench on the south side of Benito Canyon. Soils in the area are sandy, and there is a sparse growth of pinyon, juniper, and sage.

LA89209

Description: The site occupies a rocky knoll on a bench immediately above the entrenched Benito Canyon drainage, on the south side of the canyon (Figure 3). The rocky knoll is formed by a cluster of several large detached boulders, with an associated river cobble deposit. Several cm of sandy sediments, derived by the erosion of the sandstone, overlie the cobbles in some parts of the knoll. In other areas, a compact reddish clayey soil is present beneath several cm of sandy sediments. The site is comprised of a concentration of 13 fire-cracked cobbles in a 75- by 50-cm area. The cobble fragments average 6 by 11 cm in size, with an additional 3 similarly sized fragments within 1.5 m of the main cluster. Three trowel tests, 15 by 15 cm in size and 10 cm deep, were placed in the burned-cobble concentration. These trowel tests showed only a reddish clayey soil, with no evidence of charcoal. Three artifacts were found north of the fire-cracked cobbles. The first is a river cobble with battered ends. This cobble measures 10 by 15 cm. The second item is a river cobble mano fragment with one utilized surface, and the third is a possible ground-cobble fragment. Four other trowel tests in the site area encountered dense deposits of large river cobbles just below the surface. The site is not considered eligible for nomination to the National Register for the following reasons: 1) the artifact assemblage is limited to three items; 2) trowel testing showed no evidence of subsurface cultural deposits; and 3) the potential for such deposits is limited by the presence of extensive deposits of river cobbles.

LA89210

Description: This undated, isolated masonry structure is at the confluence of a small side tributary with the Benito Canyon drainage (Figure 4). The structure is on the west side of the tributary, and 4 m south of where the tributary

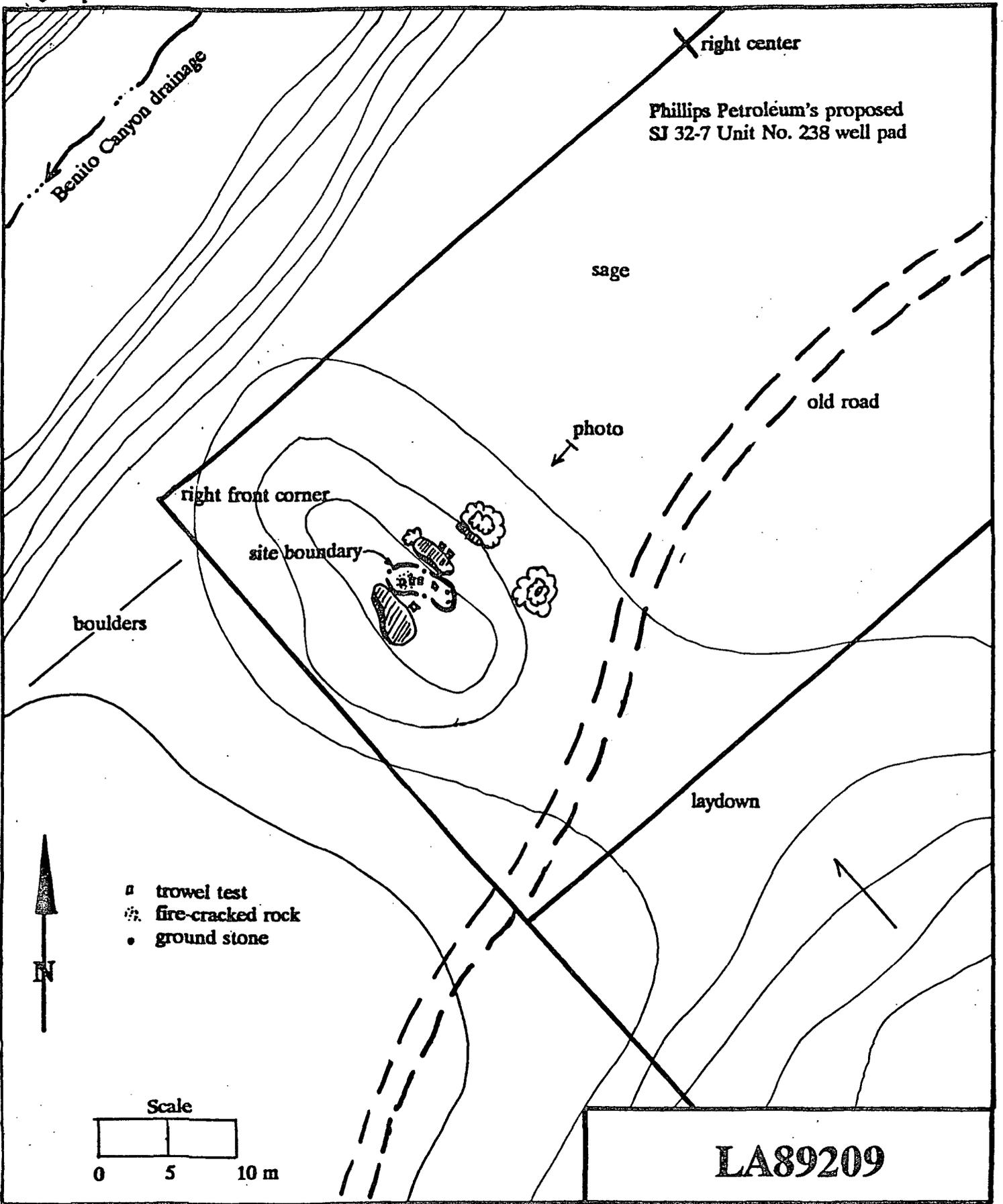


Figure 3

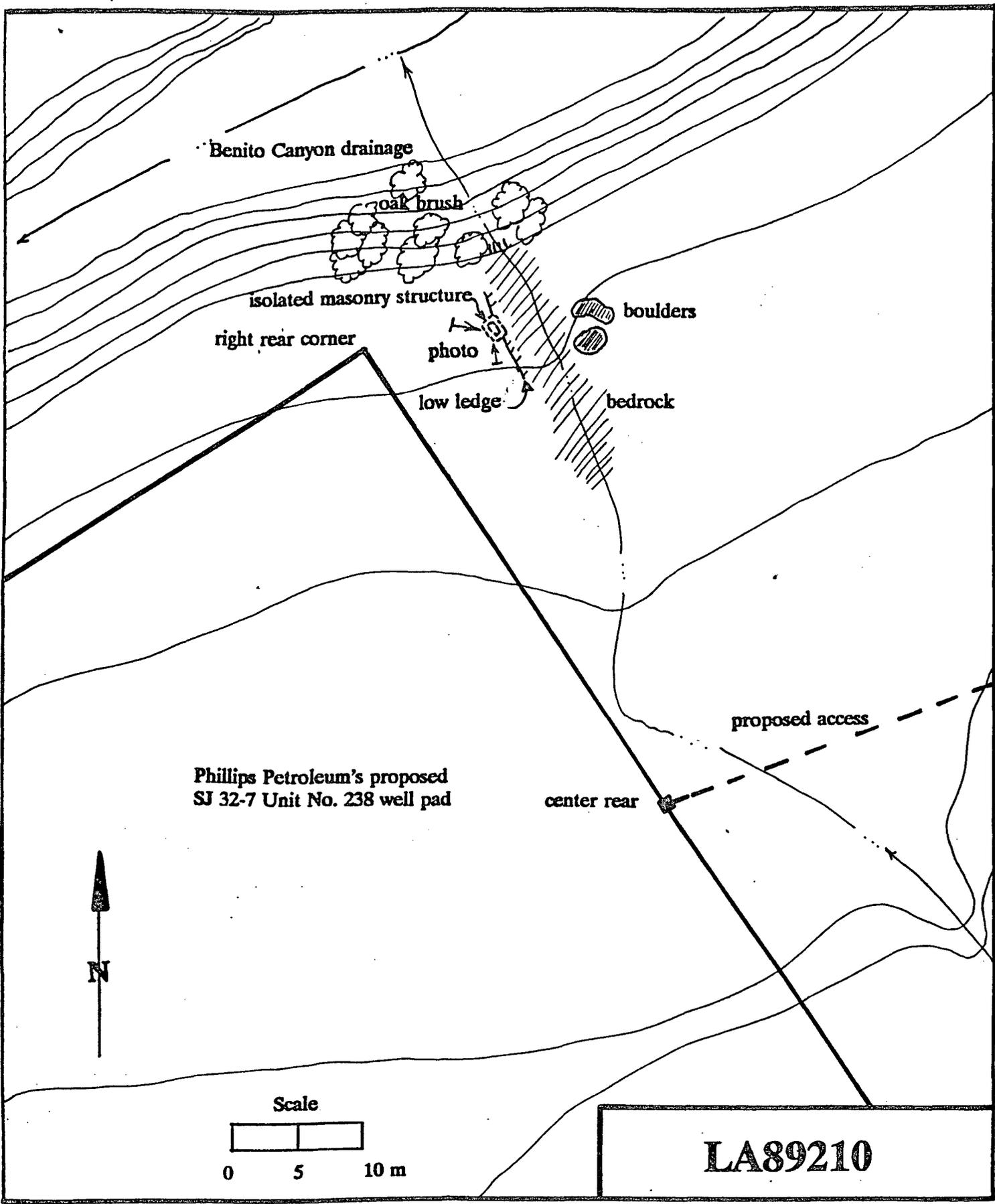


Figure 4

meets the rim of the entrenched portion of Benito Canyon. The structure walls are comprised of up to four courses of dry-laid masonry. The masonry materials are subrectangular to irregular pieces of sandstone averaging 30 by 20 by 8 cm in size. The interior of the structure is 1 by 1 m in size and is built on a small sandstone ledge that cantilevers from 60 to 90 cm out over the bedrock. The ledge is about 35 cm above the bedrock bottom of the drainage. No artifacts are associated with the structure. The structure cannot be affiliated with the prehistoric, protohistoric, or historic occupation of this locale and the lack of associated artifacts or cultural deposits limits the research potential of this site. The crude structure has no inherent value and the research potential has been exhausted by recordation. Therefore, the site is not considered eligible for nomination to the National Register of Historic Places.