Form 316.-3 (November 1983) (formerly 9-331C)

SUBMIT IN T. . ICATE

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985 (Other instructions on reverse side) **UNITED STATES** DEPARTMENT OF THE INTERIOR

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK  1. TIPE OF WORL  DRILL & DEEPEN D PLUG BACK  TIPE OF WELL  OAR DOTHER  ONEL DOTH		5. LEASE DESIGNATION AND SERIAL NO.				
DELLE DEPEN DELLE DEPEN PLUG BACK:  THE OF WELL  OTHER SAME OF CREATES  NAME OF CREATES  NA	APPLICATION	N FOR PERMIT	TO DRILL, DEEP	PEN. OR PLUG I	BACK	NM 70335  6. IF INDIAN, ALLOTTED OR TRIBE NAME
O'LL N ONLY OTHER STATE SOUR NICE SOUR NICE SOUR STATE OF PARM OR LEAST NAME  Phillips Petroleum Company  ADDIES OF OFFEATOR  4001 Penbrook St., Odessa, Texas 79762	. TYPE OF WORK					
Philips Petroleum Company  Philips Petroleum Company  Adolf Penbrook St., Odessa, Texas 79762  Livingston Ridge  Nectors of Will Report Rection dearly and in accordance with any State requipments of 1991  Location of Will Report Rection dearly and in accordance with any State requipments of 1991  Location of Will Report Rection dearly and in accordance with any State requipments of 1991  Location of Will Report Rection dearly and in accordance with any State requipments of 1991  Location of Rection Rectio	DR b. tipe of well		DEEPEN [	PLUG BA	CK 🗌	7. UNIT AGREEMENT NAME
PRINTED PROTORES NO. 00 CASES N	OIL X C				LE 🗌	8. FARM OR LEASE NAME
ADDRESS OF CREATION  4001 Penbrook St., Odessa, Texas 79762  4001 Penbrook St., Odessa, Texas 79762  410. File And Pool, Os Wildows  At wire of Unit C, 660' FNL & 1980' FWL  At proposed prod some  Unit C, 660' FNL & 1980' FWL  APPENDIX OF CREATION OF THE AND DISCUSS OF THE APPENDIX OF						Livingston Ridge
4001 Penbrook St., Odessa, Texas 79762  LOCATION OF WALL (Report location clearly and in accordance with any State requipements)   1991   Cabin Lake (Delaware and proposed prof. one Unit C, 660' FNL & 1980' FWL   ARTS   180   Cabin Lake (Delaware and proposed prof. one Unit C, 660' FNL & 1980' FWL   ARTS   180   Cabin Lake (Delaware and proposed prof. one Unit C, 660' FNL & 1980' FWL   ARTS   180   Cabin Lake (Delaware and proposed prof. one Unit C, 660' FNL & 1980' FWL   ARTS   180   Cabin Lake (Delaware and proposed prof. one of the cabin Lake (Delaware and the cabin Lake		coleum Company				9. WELL NO.
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AND PROPOSED FOR SETUR. Sec. 1, T-22-S, R-30-1  DIRTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*  12. COUNTY OR FAMISH 13. STATE  22. mi. East of Carlsbad, NM  DISTANCE FOR NEODWARD  16. NO. OF ACRES IN LEASE  17. NO. OF ACRES ASSIGNED  TO THIS WELL  18. PROPOSED DEFTN  19. PROPOSED DESTNING AND CEMENTING PROGRAM  11. NO. OF ACRES ASSIGNED  TO THIS WELL  12. OF ROLL  13. STATE  13. STATE  14. Sec. 1, T-22-S, R-30-1  17. NO. OF ACRES ASSIGNED  TO THIS WELL  TO THIS WELL  17. NO. OF ACRES ASSIGNED  TO THIS WELL  TO THIS WELL  18. DO FALLS SHOWED  TO THIS WELL  TO THIS WELL  19. PROPOSED DEFTN  20. ROTART OR CARLE TOULS  120. ROTART OR CARLE TOULS  1320  PROPOSED CASING AND CEMENTING PROGRAM  SILE OF ROLL  SILE OF ROLL  SILE OF ROLL  SILE OF ROLL  SILE OF CASING  WEIGHT FER FOOT  SITTING DEFTN  13-3/8"  48\$ 475'  550 sk C-Circ. to surface  12-1/4"  8-5/8"  24\$ 3700'  1200 sk C-Circ. to surface  17-7/8"  5-1/2"  15.5\$ 14\$ 7700'  900 sk C TOC 3500'  USE MUD ADDITIVES AS NEEDED FOR CONTROL.  BOP EQUIPMENT FIGURE 7-9 or 7-10 (see attached schematic)  DRILLING PERMIT ISSUED 6-19-90 EXPIRED. THIS APPICATION TO  REINSTATE PERMIT TO DRILL.  ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive some and proposed sew productive. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowouter propers.  ASSISTANT, THE REGULation and Proration  DATE 9-6-91	Unit (	C, 660' FNL & 1	980' FWL	*		11. SEC., T., R., M., OR BLE.
DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR FORT OFFICE*  22 mi. East of Carlsbad, NM  DISTANCE FROM PROPORED CARLSBAD, NM  DISTANCE FROM PROPORED DESCRIPE, T. (1806 to Berefet Grig. shall line. if any, 660' 320.48  DISTANCE FROM PROPORED CONTROL (2007)  DISTANCE FROM PROPORED CONTROL (2007)  TO THIS SERVING TO THIS SERVING TO THIS SERVING AND CEMENTAIN PROPORED CARLS TOOLS (2007)  ROTATION ON ON THIS MARKS. T. (1320) 7700 ROTATION OR APPLIED TO NEAREST WILL BRILLING. CONFIDENCE CARING. AND CEMENTING PROGRAM  BILE OF NOLE SIZE OF CABING WEIGHT FER FOOT SETTING DEPTH QUANTITY OF CEMENT (17-1/2" 13-3/8" 48\$ 475' 650 sk C-Circ. to surface 12-1/4" 8-5/8" 24\$ 3700' 1200 sk C-Circ. to surface 12-1/4" 8-5/8" 24\$ 3700' 1200 sk C-Circ. to surface 12-1/4" 8-5/8" 24\$ 3700' 900 sk C TOC 3500'  USE MUD ADDITIVES AS NEEDED FOR CONTROL.  BOP EQUIPMENT FIGURE 7-9 or 7-10 (see attached schematic)  DRILLING PERMIT ISSUED 6-19-90 EXPIRED. THIS APPICATION TO REINSTATE FERMIT TO DRILL.  ABOVE SPACE DESCRIBE PROPORED PROGRAM: If proposal is to deepen or plug back, give data on present productive some and proposed new productive. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout retter program. If any.  ASSISTANT, Regulation and Provation DATE 9-6-91  (This skeeper Pederal or State office use)	At proposed prod. zon	unit C. 660'	FNL & 1980' FW		ice.	
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	BIGNED PL	1/pilez	D.		roratio	n 9-6-91
PERMIT NO APPROVAL DATE	(This space for Feder	ál or State office use)				
	PERMIT NO.	· ·		APPROVAL DATE		

### INSTRUCTIONS

cedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. number of copies to be submitted, particularly with regard to local, area, or regional proregulations. Any necessary special instructions concerning the use of this form and the Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and tions, as indicated, on all types of lands and leases for appropriate action by either a GENERAL: This form is designed for submitting proposals to perform certain well opera-

land should be described in accordance with Federal requirements. Consult local State ITEM 4: If there are no applicable State requirements, locations on Federal or Indian State or Federal regulations concerning subsequent work proposals or reports on the well. tion or to a new reservoir, use this form with appropriate notations. Consult applicable ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface loca-

roads to, and the surveyed location of, the well, and any other required information, should land or lease description. A plat, or plats, separate or on this reverse side, showing the ITEM 14: Meeded only when location of well cannot readily be found by road from the or Federal office for specific instructions.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for be furnished when required by Federal or State agency offices.

cerning approval of the proposal before operations are started. ITEM 22: Consult applicable Federal or State regulations, or appropriate officials, consubsurface location of hole in any present or objective production zone.

### NOTICE

nished the following information in connection with information required by this applica-The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be fur-

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR Part 3160.

PRINCIPAL PURPOSE: The information is to be used to process and evaluate your

Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory (4)(5) Information from the record and or the record will be transferred to appropriate proposed operation on surface and subsurface water and other environmental impects. the Federal or Indian resources encountered. (2) The review of procedures and equipment and the projected impact on the land involved. (3) The evaluation of the effects of ROUTINE USES: (1) The analysis of the applicant's proposal to discover and extract application for permit to drill, deepen, or plug back an oil or gas well.

closure of the information is mandatory only if the lessee elects to initiate drilling opera-EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disinvestigations or prosecutions, as well as routine regulatory responsibility.

tion on an oil and gas lease,

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq) requires us to inform you

This information is being collected to allow evaluation of the technical, safety, and en-:1eU1

and gas leases. vironmental factors involved with drilling for cil and/or gas on l'ederal and Indian oil

Response to this request is mandatory only if the lessee elects to initiate drilling opera-

This information will be used to analyze and approve applications.

tions on an oil and gas lease.

# W MEXICO OIL CONSERVATION COMM ON WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102 Supersedes C-128 Effective 14-65

All distances must be from the outer boundaries of the Section. Operator Well No. PHILLIPS PETROLEUM COMPANY Livingston Ridge Unit Letter Section 30-E Actual Footage Location of Wells feet from the feet from the line Ground Level Elev. Producing Formation Dedicated Acreage: Delaware Cabin Lake (Delaware) 3308' 40 Acres 1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc? Yes If answer is "yes," type of consolidation. If answer is "ano," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)\_ No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission. CERTIFICATION C · B Α 660 I hereby certify that the information con-1980 tained herein is true and complete to the my knowledge and belief. J. L. Maples E Η Asst., Regulation & Proration Phillips Petroleum Co. Date 5/21/90 Κ T 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. P <u> April 2, 1990</u> Date Surveyed Richard B. Duniven Registered Professional Engineer 4882

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### SURFACE USE PLAN

Phillips Petroleum Company, <u>Livington Ridge</u> Lease, Well No. <u>8</u>, <u>660' FNL & 1980' FWL</u>, Section <u>1</u>, T-<u>22</u>-S, R-<u>30</u>-E, <u>Eddy</u> County, New Mexico. (Fed Lease No. <u>70</u>335.)

This plan is to accompany "Application for Permit to Drill" the subject well which is located approximately 22 miles east of Carlsbad. 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 subcontractors will be aware of all items of this plan.

Planned Access Roads  A. To run west to east to planned road  B. Turnouts: None C. Drainage Design: New road will have center line to side line slope D. Culverts, Cuts and Fills: None E. Surfacing Material: Caliche well pad and roads. F. Gates, Cattleguards, Fences: None G. Proposed Road: The proposed road is centerline staked.  Locations of Existing wells: None  Locations of Tank Batteries, Production Facilities, Production Gathering, and Service Lines: The present tank battery is located Section 1, T-22-S, R-30-E  Flow line from Well No. 8 to run alongside proposed access roadway.  Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11  B. Caliche pit is located on Federal pit from Section 11	Ex	isting Roads
A. To run west to east to planned road  B. Turnouts: None C. Drainage Design: New road will have center line to side line slope D. Culverts, Cuts and Fills: None E. Surfacing Material: Caliche well pad and roads. F. Gates, Cattleguards, Fences: None G. Proposed Road: The proposed road is centerline staked.  Locations of Existing wells: None  Locations of Tank Batteries, Production Facilities, Production Gathering, and Service Lines: The present tank battery is located—Section 1, T-22-S, R-30-E  Flow line from Well No. 8 to run alongside proposed access roadway.  Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11	Α.	None
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Slope  D. Culverts, Cuts and Fills: None E. Surfacing Material: Caliche well pad and roads. F. Gates, Cattleguards, Fences: None G. Proposed Road: The proposed road is centerline staked.  Locations of Existing wells: None  Locations of Tank Batteries, Production Facilities, Production Gathering, and Service Lines: The present tank battery is located—Section 1, T-22-S, R-30-E  Flow line from Well No. 8 to run alongside proposed access roadway.  Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11	В.	Turnouts: None
D. <u>Culverts, Cuts and Fills: None</u> E. <u>Surfacing Material</u> : Caliche well pad and roads. F. <u>Gates, Cattleguards, Fences: None</u> G. <u>Proposed Road</u> : The proposed road is centerline staked. <u>Locations of Existing wells: None</u> <u>Locations of Tank Batteries, Production Facilities, Production Gathering, and Service Lines: The present tank battery is located - Section 1, T-22-S, R-30-E  Flow line from Well No. <u>8</u> to run alongside proposed access roadway.  <u>Water Supply Source: Hauled</u> <u>Source of Construction Materials</u>  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11</u>	С.	
<ul> <li>E. Surfacing Material: Caliche well pad and roads.</li> <li>F. Gates, Cattleguards, Fences: None</li> <li>G. Proposed Road: The proposed road is centerline staked.</li> <li>Locations of Existing wells: None</li> <li>Locations of Tank Batteries, Production Facilities, Production Gathering, and Service Lines: The present tank battery is located - Section 1, T-22-S, R-30-E</li> <li>Flow line from Well No. 8 to run alongside proposed access roadway.</li> <li>Water Supply Source: Hauled</li> <li>Source of Construction Materials</li> <li>A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11</li> </ul>	n	
F. Gates, Cattleguards, Fences: None G. Proposed Road: The proposed road is centerline staked.  Locations of Existing wells: None  Locations of Tank Batteries, Production Facilities, Production Gathering, and Service Lines: The present tank battery is located - Section 1, T-22-S, R-30-E  Flow line from Well No. 8 to run alongside proposed access roadway.  Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11		Surfacing Material: Caliche well pad and roads
G. Proposed Road: The proposed road is centerline staked.  Locations of Existing wells: None  Locations of Tank Batteries, Production Facilities, Production Gathering, and Service Lines: The present tank battery is located - Section 1, T-22-S, R-30-E  Flow line from Well No. 8 to run alongside proposed access roadway.  Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11		Gates, Cattleguards, Fences: None
Locations of Tank Batteries, Production Facilities, Production  Gathering, and Service Lines: The present tank battery is located -  Section 1, T-22-S, R-30-E  Flow line from Well No. 8 to run alongside proposed access roadway.  Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11	G.	Proposed Road: The proposed road is centerline staked.
Section 1, T-22-S, R-30-E  Flow line from Well No. 8 to run alongside proposed access roadway.  Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11	Lo	cations of Existing wells: None
Section 1, T-22-S, R-30-E  Flow line from Well No. 8 to run alongside proposed access roadway.  Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11	Lo	cations of Tank Batteries, Production Facilities, Production
Flow line from Well No. <u>8</u> to run alongside proposed access roadway. <u>Water Supply Source</u> : <u>Hauled</u> <u>Source of Construction Materials</u> A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11	<u>Ga</u>	thering, and Service Lines: The present tank battery is located -
Water Supply Source: Hauled  Source of Construction Materials  A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11	F1	OW line from Well No. 8 to run alongside proposed access roadway
A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11		· · · · · · · · · · · · · · · · · · ·
A. Caliche for surfacing the new road and well pads will be obtained from Federal pit from Section 11	Wa	ter Supply Source: Hauled
obtained from Federal pit from Section 11	<u>So</u>	urce of Construction Materials
Federal pit from Section 11	Α.	obtained from
	_	Federal pit from Section 11

### 7. Methods for Handling Waste Disposal

Will be put in separate waste pits and covered with minimum of 2' backfill. (See sketch.) If well is productive, maintenance waste will be placed in special trash cans and hauled away periodically. 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 250 X 250.
- Plans for Restoration of Surface: Pit will be backfilled and levelled as soon as practical to original condition. If well is productive, caliche pad will remain as well service pad. If dry hole, pads and access roads 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.
- 11. Other Information:
  - Terrain: See Archaeological Survey
  - В. Soil: See Archaeological Survey
  - Vegetation: <u>See Archaeological Survey</u> Surface Use: <u>Possible grazing</u> С.
  - D.
  - Ponds and Streams: Ε. None
  - Water Wells: None
  - G. Residences and Buildings: 4 miles west of drill site
  - Arroyos. Canyons, etc.: None Η.
  - Well Sign: Sign identifying and locating the well will be Ι. maintained at drill site with the spudding of the well.
  - J. Archaeological Resources: See Archaeological Survey
- Operator's Representative: Field personnel who can be contacted concerning compliance of the "Surface Use Plan" is as follows:

Production and Drilling P. D. Appel 4001 Penbrook Street Odessa, Texas 79762 Phone: 915-367-1411

or

D. J. Fisher 1625 West Marland Hobbs. New Mexico 88240 Phone: 505-393-5121

13. 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 subcontractors in conformity with this plan and the terms and conditions under which it is approved.

> J. L. Maples, Assistant Regulation and Proration

(915) 367-1411

May 14, 1990 Date

REGPRO: JMAPL: ridge8.use

PROPOSED MUD PROGRAM

# LIVINGSTON RIDGE WELL NO. 8

	5700' - 7700'	3700' - 5700'	475' - 3700'	Surf - 475'	DEPTH
	8.5-9.0 ppg	8.3-9.5 ppg	10.0 ppg	8.3-9.0 ppg	MUD WEIGHT
•	32-38 sec/1000 cc	28-36 sec/1000 cc	29-32 sec/1000 cc	28-36 sec/1000 cc	VISCOSITY
-	20 cc or less	1	1	ì	FLUID LOSS
	I	ı	Saturated	ı	CL PPM
-	I	ı	ŀ	ı	% SOLIDS
	Gel/Drispac Plus		Native Solids	Native Solids	% SOLIDS ADDITIVES

Remarks: Use DBX dripped into flowline 10-15' upstream from lower end if extra settling of solids is desired while circulating the reserve.

The Mud Engineer shall include on each test report the materials used for the previous 24 hr. period. Twice weekly mail copies of the test reports to:

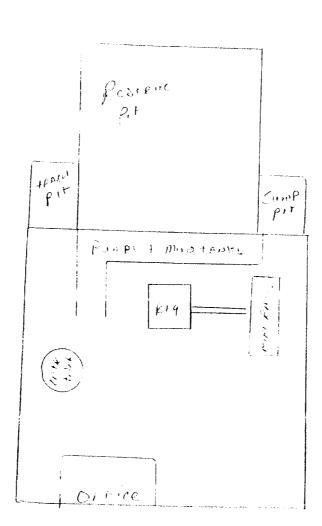
A. C. Sewell 4001 Penbrook Odessa, Texas 79762

Send two copies of the Well Recap (Final Cost & Engineering Summaries) to A. C. Sewell at the above address.



EXPLORATION AND PRODUCTION GROUP





180 May 120

### PHILLIPS PETROLEUM COMPANY Livington Ridge Well No. 8 Eddy County, New Mexico

### DRILLING PROGNOSIS

1.	Location of Propos	ed Well:	660' FNL & R-30-E, Ed	1980' FWL, Sectio dy County, New Mex	n 1, T-22-S, ico		
2.	Unprepared Ground	Unprepared Ground Elevation: 3308' (Unprepared)					
3.	The geologic name Survey	of the su	urface forma	tion is <u>See Archae</u>	ological		
4.	Type of drilling t	ools will:	l be <u>rotary.</u>				
5.	Proposed drilling	depth is	7700'.				
6.	The estimated tops	of impor	rtant geclog	ic markers are as	follows:		
	Rustler Salado Delaware Mt. Cherry Canyon	315 620 3780 4600	<u>) '</u>	Brushy Canyon Bone Springs	5980° 7650°		
7.	The estimated dept mineral bearing for follows:	hs at whi rmations	ich anticipa are expecte	ted water, oil, ga d to be encountere	s, or other d are as		
	Oil:		y Canyon				
8.	The proposed casin	g program	n is as foll	ows:			
	Surface String <u>13</u> Intermediate Strin Production String	3/8", 48 g <u>8-5/8"</u> 5-1/2",	3#, set at 4 ', 24#, set 14#, 15.5#	75' at 3700'. set at 7700'.			
9.	Cement Program: Surface String - <u>C</u>	ement to	surface wit	h 650 sacks Class	C cement.		
	Intermediate Strin Production String 3500'.	g = <u>Cemen</u> = <u>Cement</u>	nted to surf with 900 sa	ace with 1200 sack cks C - estimated	s Class C. top of cement		

Livington Ridge Well No. 8 Eddy County, New Mexico Page 2

- 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 attached.
- 11. The proposed mud program is attached (see Drilling Specialties mud letter).
- 12. The testing, logging, and coring programs are as follows:

D.S.T.'s or cores None

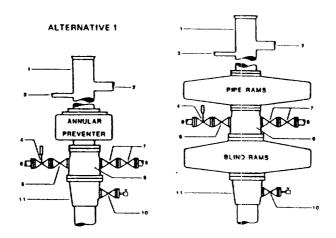
Logs DIL-TD-3700±
Neutron Density TD - 3700'
Neutron Gamma Ray 0-TD
Dipmeter - Selective
Special Tests: None

- 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.
- 15. Water Supply: <u>Hauled</u>
- 16. Caliche for road and pad construction to be obtained from  $\frac{\text{Federal pit}}{\text{from Section 11.}}$

REGPRO: JMAPL: ridge8.dpr

### FIELD PRACTICES AND STANDARDS

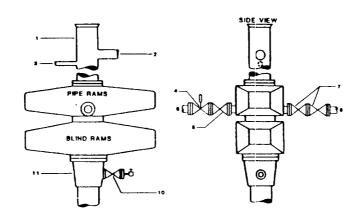
### **ALTERNATIVE 2**



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

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

Figure 7-9. Standard Hydraulic Blowout Preventer Assembly (2 M or 3 M Working Pressure) Alternative 1



- 1. BELL NIPPLE
- 3. FILL-UP LINE
- 4. 2" FE PRESSURE-OPERATED CHOKE LINE

- 5. 2" FE GATE VALVE 6. 2" FE CHOKE LINE TO MANIFOLD
- 7. 2" FE GATE VALVES
- 8. 2" FE KILL LINE
- 10. 2" SE OR FE GATE VALVE WITH NEEDLE

11. CASING HEAD HOUSING

Figure 7-10. Standard Hydraulic Blowout Preventer Assembly (2 M or 3 M Working Pressure) Alternative 3 (without Drilling Spool)

Well Control 4 January/83



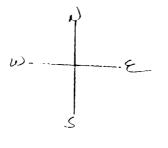
## PHILLIPS PETROLEUM COMPANY

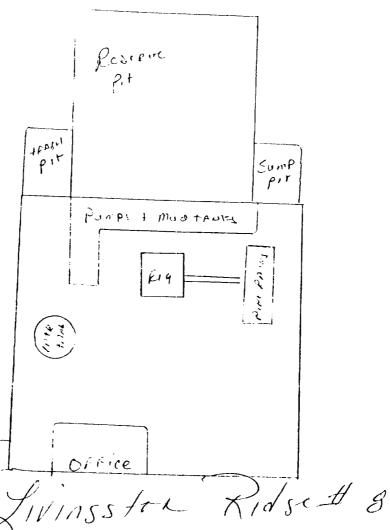
HOBBS, NEW MEXICO 88240 1625 WEST MARLAND

EXPLORATION AND PRODUCTION GROUP

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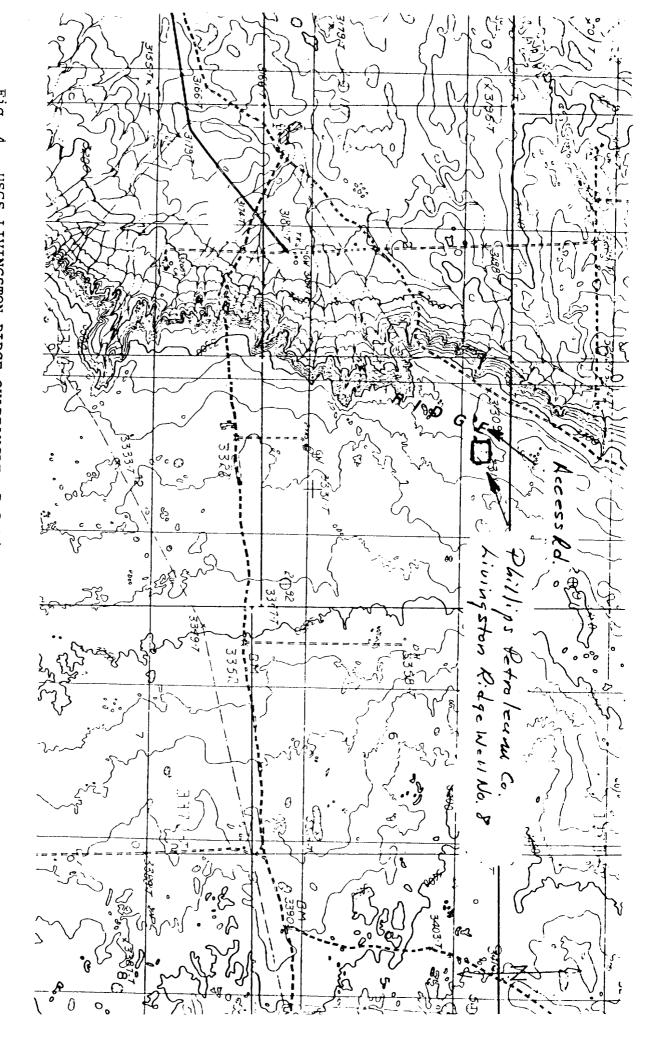
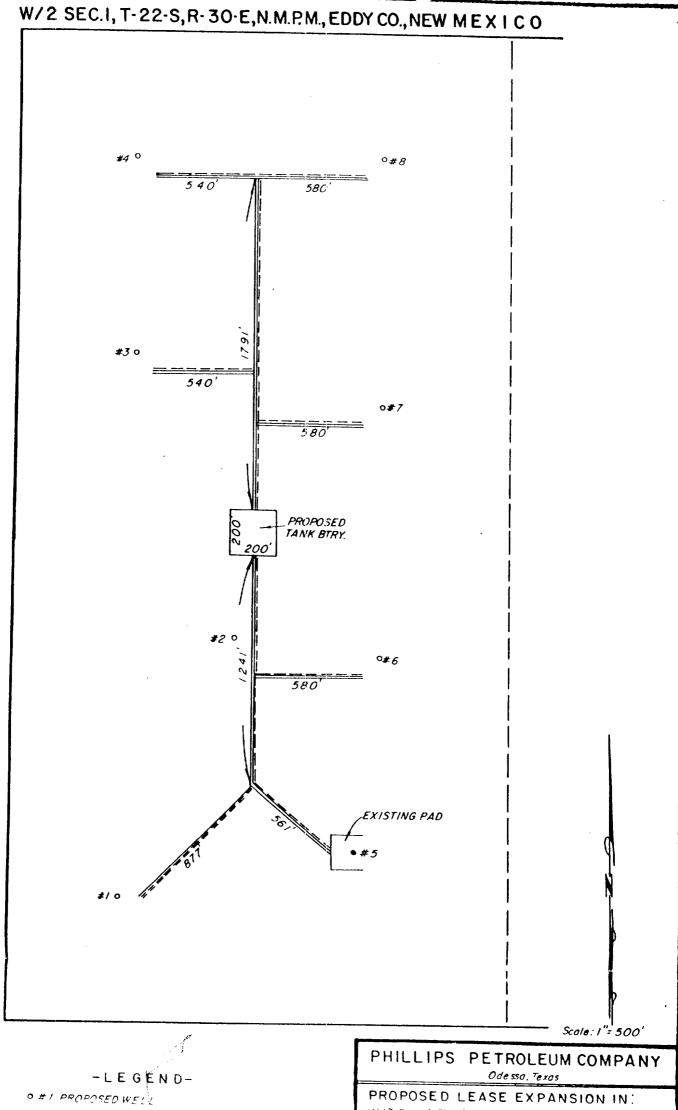


Fig. 4. USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1;24,000, ishowing PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. (1980' FWL, and access road, Section 1, T22S, R30E, NMPM, Eddy County, NM 1985, Prov. Ed., 8, 660' FNL,



92090SED 185 9040

W/2 Sec.I, Tr.D. 2-South , R-30-East , N. M. P.M. Eddy County , New Mexico



# NMAS

## New Mexico Archaeological Services, Inc.

P.O. Box 1341 Carlsbad, New Mexico 88221-1341 (505) 887-7646 • FAX (505) 885-2587

3 May 1990

Reconnaissance Excavation Analysis Explanation

CurationMr. Wes Stinson
PHILLIPS PETROLEUM COMPANY
1625 West Marland
Hobbs, New Mexico 88240

Dear Mr. Stinson:

Enclosed please find NMAS' Archaeological Clearance Report for PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well Nos. 4, 6, 7 and 8 and their associated access roads in Eddy County, New Mexico. Three isolated manifestations (IM) were recorded on the Livingston Ridge Well No. 4 survey. Two isolated manifestations (IM) were recorded during the Livingston Ridge Well No. 7 survey. No cultural properties were recorded during the Livingston Ridge Well Nos. 6 and 8 surveys. Clearance is suggested for these locations and their associated access roads.

If you have any questions pertaining to this report, please call my office. Thank you for asking NMAS to do these surveys.

Yours sincerely,

Dr. J. Loring Haskell Principal Investigator

Enclosure

cc: Mr. George Ruebelmann, BLM, Carlsbad

as

### Archaeological Clearance Report

for

### PHILLIPS PETROLEUM COMPANY

Livingston Ridge Well No. 4 and Access Road Livingston Ridge Well No. 6 Livingston Ridge Well No. 7 and Access Road Livingston Ridge Well No. 8 and Access Road

Submitted

Ву

Dr. J. Loring Haskell

Prepared

Ву

Dr. J. Loring Haskell
Principal Investigator
New Mexico Archaeological Services, Inc.
Carlsbad, New Mexico
3 May 1990

Permit Number: NMAS-2920-90-J

Report Number: NMAS-1990-06-MY

### ABSTRACT

New Mexico Archaeological Services, Inc., representing PHILLIPS PETROLEUM COMPANY, undertook a Class III survey of Bureau of Land Management land scheduled to be impacted by the construction of four drill locations and their associated access roads. Field work was conducted under sunny, partly cloudy conditions with moderate easterly winds throughout the day. Each location will measure 400 X 40 ft (actual area surveyed 4.44 acres). The Livingston Ridge Well No. 4 access road will measure 100 X 4700 ft (actual area surveyed 10.78 acres). The Livingston Ridge Well No. 6 location will be situated next to a lease road. Livingston Ridge Well No. 7 access road will measure 100 X 580 ft (actual area surveyed 1.33 acres). The Livingston Ridge Well No. 8 access road will measure 100 X 580 ft (actual area surveyed 1.33 acres). Total surveyed acreage 31.20 acres. They will be situated in Section 1, T22S, R30E, NMPM, Eddy County, New Mexico. Three isolated manifestations (IM) were recorded during the Livingston Ridge Well No. 4 survey. Two isolated manifestations (IM) were recorded during the Livingston Ridge Well No. 7 survey. No cultural properties were recorded during the Livingston Ridge Well Nos. 6 and 8 surveys. Clearance is suggested for these locations and their associated roads.

### Introduction

On 30 April and 1 May 1990, New Mexico Archaeological Services, Inc., (NMAS), Carlsbad, (Permit Number: 14-2920-90-J), undertook for PHILLIPS PETROLEUM COMPANY, four archaeological surveys of federal land administered by the Bureau of Land Management in Eddy County, New Mexico. Reconnoitered areas will be impacted by the construction of four drill locations and their associated access roads. These surveys were undertaken by Dr. Haskell.

# Survey Technique

For these investigations, PHILLIPS PETROLEUM COMPANY's proposed locations were reconnoitered for evidence of man's past activities by walking them it in series of 8.0 m wide, close interval (15° or less), zigzag transects. In addition, an added zone extending 20 ft on each side of the staked 400 X 400 ft locations, and lying outside the bounds of their proposed work areas, were reconnoitered by a similar means. The access roads were walked in two, 15 m wide transects. Lath and/or flags are considered to be the center of the proposed roads. Methodologically, these procedures served to promote optimal conditions for the visual examination of the areas to be impacted by construction-related activities. Field work was conducted under sunny, partly cloudy conditions with moderate winds throughout the day. Ground visibility ranges between 75 and 85%. Field time five hours.

Livingston Ridge Federal Well No. 4

### Location

The proposed location will measure 400 X 400 ft (actual

area surveyed 4.44 acres) on federal land and will be situated 660 ft from the north line and 660 ft from the west line.

Section 1, T22S, R30E, NMPM, Eddy County, NM Thus it will be situated in the:

NW NW NW NW , Section 1, T22S, R30E, NMPM, Eddy County, NM

The associated access road will measure approximately  $100 \times 4700$  ft (actual area surveyed 10.79 acres) and will be situated in the:

```
NW\(\frac{1}{4}\)NW\(\frac{1}{4}\), Section 1, T22S, R30E, NMPM, Eddy County, NM NE\(\frac{1}{4}\)NW\(\frac{1}{4}\), Section 1, T22S, R30E, NMPM, Eddy County, NM SE\(\frac{1}{4}\)NW\(\frac{1}{4}\), Section 1, T22S, R30E, NMPM, Eddy County, NM SE\(\frac{1}{4}\)SW\(\frac{1}{4}\), Section 1, T22S, R30E, NMPM, Eddy County, NM SE\(\frac{1}{4}\)SW\(\frac{1}{4}\), Section 1, T22S, R30E, NMPM, Eddy County, NM
```

Map Reference: USGS LIVINGSTON REDGE QUADRANGLE, 7.5 Minute Series, 1985, Prov. Ed.

### Level of Previous Impact

The proposed location is crossed on the southeast by a fence line and on the west by a two-track road. The road will cross two, two-track roads.

### Environmental Setting

PHILLIPS PETROLEUM COMPANY's proposed location, situated on an aeolian surface, will be located immediately east of Livingston Ridge. Minor dunes, to 0.35 m in height, are characterisitic of the surface. Areal soils fall within the Typic Torripsamment subgroup. Rills and minor gullies braid the coeval surface and discharge to the west-southwest over the Livingston Ridge escarpment. Water, in the form of seeps and springs, occurs along the base of the escarpment and elsewhere to the west within the Nash Draw catchment. Elevation si 3307 ft. Slope is 1°.

Aspect is west, northwest and southwest (150°).

The desert scrub formation is made up of javelina bush, mesquite, allthorn, desert sumac, purple prickly pear, Christmas cholla, Englemann prickly pear, pitaya, feather dalea, range ratany, prickle-leaf dogweed, poverty threeawn, mesa dropseed, and fluff grass.

### Cultural Resources

Prefield: 27 April 1990, Section 1 (two archaeological sites), T22S, R30E, Arita K. Slate.

NM-06-4683 is situated within 4400 ft of the proposed location.

NM-06-4682, incorrectly located, is within 700 ft of the proposed location.

During the course of this survey, three isolated manifestations (IM) were recorded.

### Isolated Manifestation (IM)

IM 1, consisting of three pieces of fire-cracked caliche, is situated on an aeolian surface at a point 2200 ft south of the northernmost point of the road and 18 ft east of the center of the road. There is no evidence of additional remains. Associated plants include mesquite, plains yucca, mesa dropseed, and poverty threeawn. It is situated in the:

NWINWINEISWI, Section 1, T22S, R30E, NMPM, Eddy County, NM
Map Reference: USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series,
1985, Prov. Ed.

IM 2, consisting of one piece of fire-cracked caliche, is situated on an aeolian surface at a point 1500 ft of the northermost point of the road and 10 ft west of center. There is no evidence of additional cultural properties. It is situated in the:

NW&SW&SE&NW&, Section 1, T22S, R30E, NMPM, Eddy County, NM

Map Reference: USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1985, Prov. Ed.

IM 3, consisting of one light gray, cryptocrystalline chert, secondary decortication flake, 43 X 37 X 13 mm with bulb, platform and 75% cortex, is situated on an aeolian landform at a point 800 ft south of the northernmost point of the road and 50 ft west of center. There is no evidence of buried remains. It is situated in the:

NWANWASEANWA, Section 1, T22S, R30E, NMPM, Eddy County, NM Map Reference: USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1985, Prov. Ed.

Land usage along Livingston Ridge was intense during

Eastern Jornada Mogollon times as well as during the Late Archaic.

Areal archaeological sites are of the special activities zone

type.

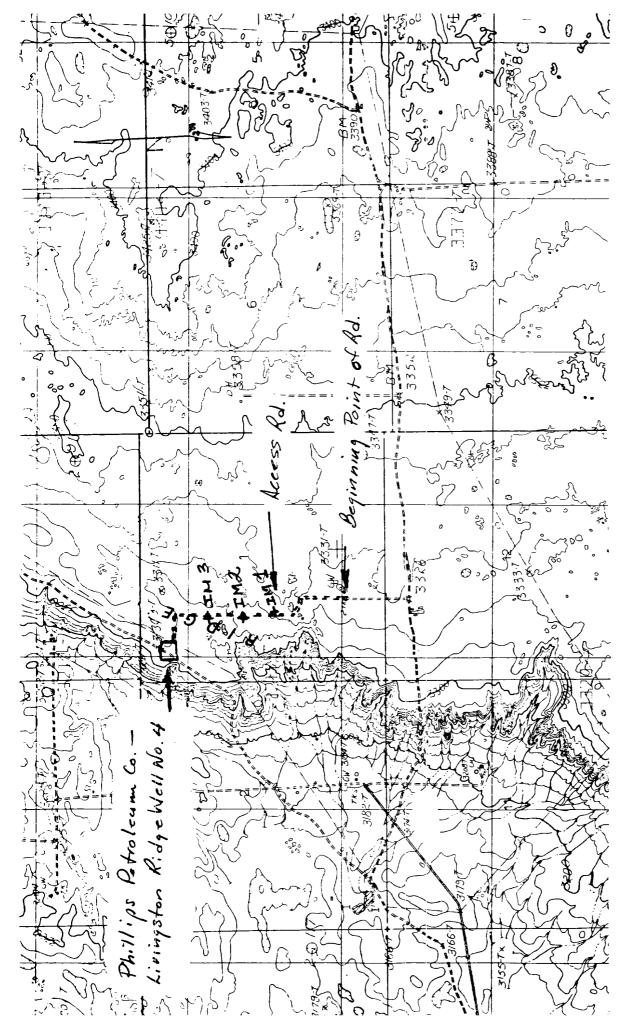
### Recommendations

NMAS recommends clearance for PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Federal Well No. 4 and its access road and suggests that work-related activities proceed in accordance with company plans (Fig. 1). Clearance, of course, is granted by the Bureau of Land Management. If additional cultural resources are encountered during construction, the BLM and NMAS should be notified immediately. Duned settings are notorious for covering and uncovering cultural properties.

### Livingston Ridge Well No. 6

### Location

The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres) on federal land and will be situated



USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1;24,000, 1985, Prov. Ed., Fig. 1. USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1;24,000, 1985, Prov. 1 showing PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. 4, 660' FNL, 660' FWL, and access road, Section 1, T22S, R30E, NMPM, Eddy County, NM

1980 ft from the south line and 1980 ft from the west line.

Section 1, T22S, R30E, NMPM, Eddy County, NM

Thus it will be situated in the:

NE¼SW¼, Section 1, T22S, R30E, NMPM, Eddy County, NM

The proposed location will be situated next to an access road on the southwest.

Map Reference: USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1985, Prov. Ed.

### Level of Previous Impact

The site of the proposed location has not been previously impacted by mechanical means.

### Environmental Setting

PHILLIPS PETROLEUM COMPANY's proposed location will be situated on an aeolian landform due east of Livingston Ridge. Locally, the coeval surface is distinguished by a system of moderate-sized, coppice dunes (1.0 to 2.0 m in height) and closed, hemipsherically shaped, deflation basins. Surficial deposits are made up of loose, non-calcareous, coarse-grained, sandy loams and loamy sands. Caliche and chert gravels commonly occur on deflated surfaces. Taxonomically, pedons fall within the Typic Torripsamment subgroup. Depositionally, the present surface is subject to aeolian processes. Water, while scarce, is available in the form of seeps and springs along the base of the Livingston Ridge. Elevation is 3307ft. Slope is 1°. Aspect is multiple (360°).

The scrub formation is made up of mesquite, sand sage, plains yucca, shinnery oak, leather-leaf croton, broom snakeweed, widow's tears, fourpoint evening primrose, poverty threeawn, sand muhly, bush muhly, mesa dropseed, and sandbur.

### Cultural Resources

Prefield: 27 April 1990, Section 1 (two archaeological sites), T22S, R30E, Arita K. Slate.

NM-06-4683 is situated within 1800 ft of the proposed location.

NM-06-4682, incorrectly located, is situated within 1650 ft of the proposed location.

No cultural properties were recorded during this survey.

Their absence is due to the scantiness of local siliceous lithic sources as well as the relatively open character of the landform itself. Areal land usage, however, was intensive during Eastern Jornada Mogollon times. Archaeological sites, should they occur, are of the special activities zone type.

### Recommendations

NMAS recommends clearance for PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. 6 and suggests that work-related activities proceed in accordance with company plans (Fig. 2). Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during construction, the BLM and NMAS should be notified immediately. Duned settings are notorious for covering and uncovering cultural properties.

Livingston Ridge Well No. 7

### Location

The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres) on federal land and will be situated 1980 ft from the north line and 1980 ft from the west line.

Section 1, T22S, R30E, NMPM, Eddy County, NM
Thus it will be situated in the:

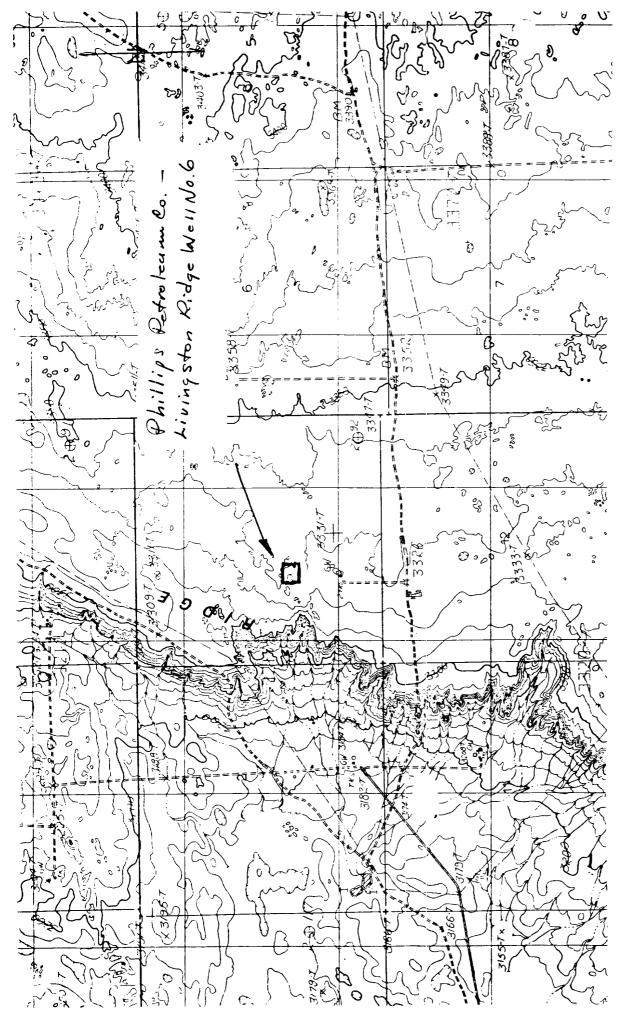


Fig. 2. USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1;24,000, 1985, Prov. Ed. showing PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. 6, 1980' FSL, 1980' FWL, Section 1, T22S, R30E, NMPM, Eddy County, NM

SEANWA, Section 1, T22S, R30E, NMPM, Eddy County, NM

The associated access road will measure approximately

100 X 580 ft (actual area surveyed 1.33 acres) and will be situated
in the:

SEANWA, Section 1, T22S, R30E, NMPM, Eddy County, NM

Map Reference: USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1985, Prov. Ed.

### Level of Previous Impact

The sites of the proposed location and access road have not been previously impacted by mechanical means.

### Environmental Setting

PHILLIPS PETROLEUM COMPANY's proposed location will be situated on a duned landform. Coppice dunes range from 0.70 to 1.50 m in height on the west to upwards of 4.0 m on the east. Interdunal areas are interconnected and subject to sheetwash. Surficial deposits, dominated by the sand separate, are made up of loose, non-calcareous, coarse-grained, sandy loams and loamy sands. Pedons are assignable to the Typic Torripsamment subgroup. The coeval surface is subject to the combined effects of colluvial- and aeolian-processes. Water is locally scarce albeit available in the form of seeps and springs along the base of Livingston Ridge to the west. Elevation is 3314 ft. Slope is 0.85°. Aspect is multiple (360°).

The scrub formation is made up of mesquite, shinnery oak, sand sage, leather-leaf croton, brocm snakeweed, sand leaf plant, Indian rush-pea, sand muhly, fluff grass, bush muhly, mesa dropseed and poverty threeawn.

### Cultural Resources

Prefield: 27 April 1990, Section 1, (two archaeological sites), T22S, R30E, Arita K. Slate.

NM-06-4683 is situated within 3400 ft of the proposed location.

NM-06-4682, incorrectly located, is situated within 1200 ft of the proposed location.

During the course of this survey, two isolated manifestations (IM) were recorded.

IM 1, consisting of one, very dark red, granular, quartzite, secondary decortication flake, 50 X 33 X 10 mm, with bulb, platform, 80% cortex and nibbled along its blade edge, is situated at a point 75 ft southwest of the northeastern corner. There is no evidence of buried remains. Associated plants include mesquite, broom snakeweed, leather-leaf croton, povety threeawn and mesa dropseed. It is situated in the:

SWANEASEANWA, Section 1, T22S, R30E, NMPM, Eddy County, NM

Map Reference: USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series,

1985, Prov. Ed.

IM 2, consisting of one, dark gray, cryptocrystalline, chert, secondary decortication flake, 40 X 22 X 10 mm, with bulb and platform, but lacking retouch, is situated at a point 125 ft north of center. Their is no evidence of buried remains. Associated plants include mesquite, broom snakeweed, leather-leaf croton and poverty threeawn. It is situated in the:

SWANEASEANWA, Section 1, T22S, R30E, NMPM, Eddy County, NM Map Reference: USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1985, Prov. Ed.

Land usage focused on hunting- and gathering activities

throughout prehistory. Areal archaeological sites are of the special activities zone type.

### Recommendations

NMAS recommends clearance for PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. 7 and its access road and suggests that work-related activities proceed in accordance with company plans (Fig. 3). Clearance, of course, is granted by the Bureau of Land Management. If additional cultural resources are encountered during construction, the BLM and NMAS should be notified immediately. Duned settings are notorious for covering and uncovering cultural properties.

Livingston Ridge Well No. 8

### Location

The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres) on federal land and will be situated 660 ft from the north line and 1980 ft from the west line.

Section 1, T22S, R30E, NMPM, Eddy County, NM Thus it will be situated in the:

NENW1, Section 1, T22S, R30E, NMPM, Eddy County, NM

The associated access road will measure approximately

100 X 580 ft (actual area surveyed 1.33 acres) and will be situated in the:

NElNWl, Section 1, T22S, R30E, NMPM, Eddy County, NM
Map Reference: USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series,
1985, Prov. ED.

### Level of Previous Impact

The sites of the proposed location and access road have not been previously impacted by mechanical means.

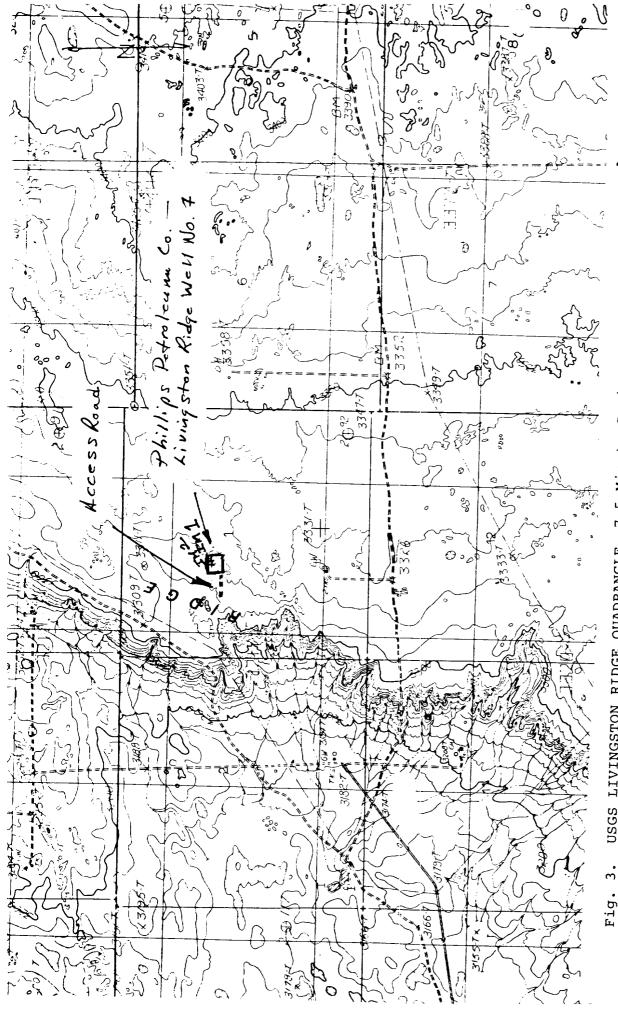
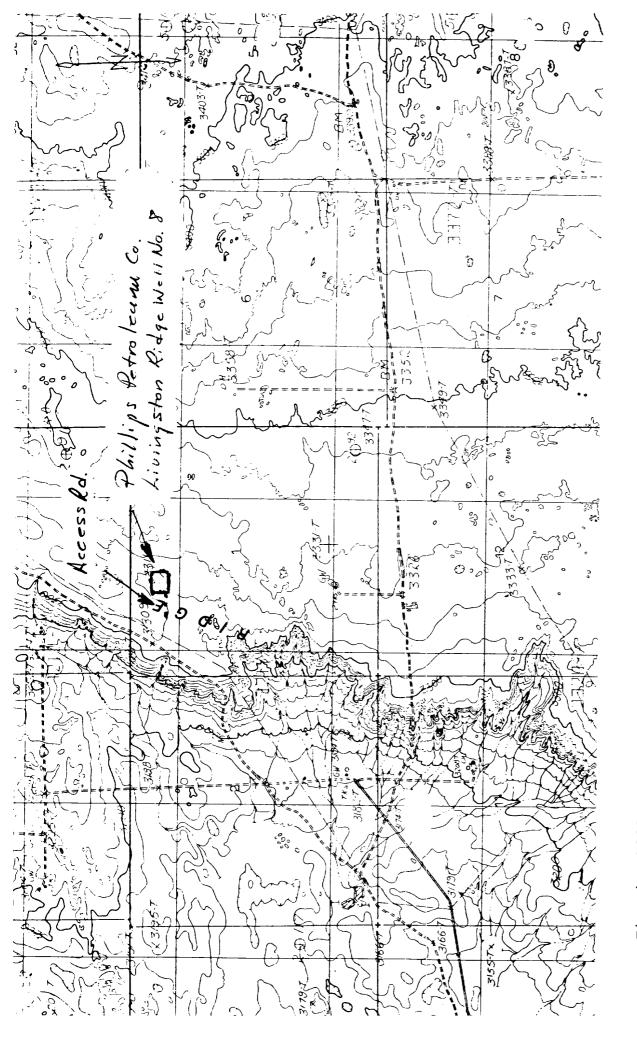


Fig. 3. USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1;24,000, 1985, Prov. Ed. showing PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. 7, 1980' FNL, 1980' FWL, and access road, Section 1, T22S, R30E, NMPM, Eddy County, NM



USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1;24,000, 1985, Prov. Ed., PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. 8, 660' FNL, Fig. 4. USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1;24,000, 1 showing PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. 1980' FWL, and access road, Section 1, T22S, R30E, NMPM, Eddy County, NM

JUN 24 1991 O. C. D. ARTESIA, OFFICE

June 21, 1991

Phillips Petroleum Company 4001 Penbrook Street Odessa, TK 79762

### Centlemen:

Your Application's for Permit to Drill, Beepen, or Plug Back (APD) for: Livingston Ridge Nos. 6, 7, and 8, Sec. 1, T 22 S., R. 30., Lease No. NM 70335, have been cancelled.

The APD is considered expired if drilling activity has not commenced within one year after approval. Should you desire to drill these wells at a later data, you will be required to re-submit the proper forms for approval.

Sincerely,

Richard L. Manus Area Manager

cc: RDO
NMOCD (Artesia/Robbs)

Post FD-2 7-12-91 Exp FXI

Form 3160-3 (November 1983) (formerly 9-331C)

CONDITIONS OF APPROVAL, IF ANY :

NN OIL COMS. COMMISSION TRIPLICATES

Descriptions on

30-015-26410

UNITED STATES 88216 Other Instructions on reverse side)

Form approved.	0011
Budget Bureau No.	1004-0136
Expires August 21	1005

	DEPARTME	ENT OF THE	NTE	RIOR			Dapties Rugust	•
BUREAU OF LAND MANAGEMENT						5. LEARE DESIGNATION	AND REBIAL NO.	
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DR b. Type of well	ILL 🏻	DEEPEN		PLI	UG BAC	K 🗌	7. UNIT AGREEMENT N	IMB
01L 57 0	AR OTHER			SINGLE XX	MULTIP	rie []	S. FARM OR LEASE NAM	
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	PETROLEUM C	OMPANY					Livingston R	10ge
. ADDRESS OF OPERATOR	nbrook St., O	doggo Torro	707	()			8	
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		' FNL & 1980'		W.	11N 50	50	Sec. 1, T-22-	S, R-30-E
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(Also to nearest drig 8. DISTANCE FROM PROP TO NEAREST WELL, D	OSED LOCATION®			ROPOSED DEPTH			RY OR CABLE TOOLS	
OR APPLIED FOR, ON THE	IS LEASE, FT.	1320'	ļ	7700'			Rotary	
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B.	3306	GL <del>(unprepa</del> re					upon approv	a1
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ABOVE SPACE DESCRIBE	PROPOSED PROGRAM:	ATTACHED If proposal is to deep	pen or i	olug back, give e	data on ne	esent need	netive some and necessari	l nam naoduskimakim
ne. If proposal is to deventer program, if any	irill or deepen direct	ionally, give pertinent	t data	on subsurface lo	cations an	d measured	i and true vertical depth	B. Give blowou
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PERMIT NO.				APPROVAL DATE				
Ong. 3	ianos ly linkera	1 Alman		AMERICAN DESIGNATION			6-16	960

Form C-102 WELL LOCATION AND ACREAGE DEDICATION PLAT Supersedes C-12R Effective 14-65 All distances must be from the outer boundaries of the Section. Well No. PHILLIPS PETROLEUM COMPANY Livingston Ridge Unti Letter Section Township County 30-E Eddy Actual Factage Location of Wells feet from the North line and feet from the line Ground Level Elev. Producing Formation Dedicated Acreage: Delaware Cabin Lake (Delaware) 33081 40 Acres 1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc? Yes If answer is "yes," type of consolidation \_ No If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of

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 Commis-

C Α 660 1980'-Н G L K Ι P 500

sion.

### CERTIFICATION

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

J. L. Maples

Asst., Regulation & Proration

Phillips Petroleum Co.

Date 5/21/90

> 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 helief.

April 2, 1990

Date Surveyed

Richard B. Duniven

Registered Professional Engineer

4882

### SURFACE USE PLAN

Phillips Petroleum Company, <u>Livington Ridge</u> Lease, Well No. <u>8</u>, <u>660' FNL & 1980' FWL</u>, Section <u>1</u>, T-<u>22</u>-S, R-<u>30</u>-E, <u>Eddy</u> County, New Mexico. (Fed Lease No. <u>70335</u>.)

This plan is to accompany "Application for Permit to Drill" the subject well which is located approximately 22 miles east of Carlsbad. 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 subcontractors will be aware of all items of this plan.

Α.	None
<u> </u>	nned Access Roads
Α.	To run west to east to planned road
n	
B. C.	<u>Turnouts</u> : None <u>Drainage Design</u> : <u>New road will have center line to side line</u>
٠.	slope
D.	Culverts, Cuts and Fills: None
Ē.	Surfacing Material: Caliche well pad and roads.
F. G.	Gates, Cattleguards, Fences: None
u.	Proposed Road: The proposed road is centerline staked.
Loc	ations of Existing wells: None
Loc	ations of Tank Batteries, Production Facilities, Production
Gat	hering, and Service Lines: The present tank battery is located
<u> </u>	Section 1, T-22-S, R-30-E
FIO	w line from Well No. $ frac{8}{2}$ to run alongside proposed access roadway
Wat	er Supply Source: Hauled
_	
<u> </u>	rce of Construction Materials
Α.	Caliche for surfacing the new road and well pads will be obtained from
_	Federal pit from Section 11
В.	Caliche pit is located on <u>Federal</u> pit from Section 11

### 7. Methods for Handling Waste Disposal

Will be put in separate waste pits and covered with minimum of 2' backfill. (See sketch.) If well is productive, maintenance waste will be placed in special trash cans and hauled away periodically. 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 250 X 250.
- 10. Plans for Restoration of Surface: Pit will be backfilled and levelled as soon as practical to original condition. If well is productive, caliche pad will remain as well service pad. If dry hole, pads and access roads 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.
- 11. Other Information:

Terrain: <u>See Archaeological Survey</u>

В. Soil: See Archaeological Survey

- Vegetation: <u>See Archaeological Survey</u>
  Surface Use: <u>Possible grazing</u>
- Ponds and Streams: None Ε.
- Water Wells: None F.
- Residences and Buildings: 4 miles west of drill site G.
- Arroyos, Canyons, etc.: None Η.
- 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 Representative: Field personnel who can be contacted concerning compliance of the "Surface Use Plan" is as follows:

Production and Drilling P. D. Appel 4001 Penbrook Street Odessa, Texas 79762 Phone: 915-367-1411

or

D. J. Fisher 1625 West Marland Hobbs. New Mexico 88240 Phone: 505-393-5121

Certification: 13.

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 subcontractors in conformity with this plan and the terms and conditions under which it is approved.

> J. L. Maples, Assistant Regulation and Proration

(915) 367-1411

May 14, 1990 Date

REGPRO: JMAPL: ridge8.use

# PROPOSED MUD PROGRAM

# LIVINGSTON RIDGE WELL NO. 8

	5700' - 7700'	3700' - 5700'	475' - 3700'	Surf - 475'	DEPTH
	8.5-9.0 ppg	8.3-9.5 ppg	10.0 ppg	8.3-9.0 ppg	MUD WEIGHT
	32-38 sec/1000 cc	28-36 sec/1000 cc	<b>29-32</b> sec/1000 cc	28-36 sec/1000 cc	VISCOSITY
-	20 cc or less	ŀ	1	1	FLUID LOSS
	ı	•	Saturated	ı	CL PPM
-	1	1	1	-	% SOLIDS
	Gel/Drispac Plus		Native Solids	Native Solids	% SOLIDS ADDITIVES

Remarks: Use DBX dripped into flowline 10-15' upstream from lower end if extra settling of solids is desired while circulating the reserve.

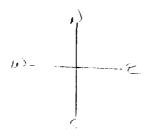
The Mud Engineer shall include on each test report the materials used for the previous 24 hr. period. Twice weekly mail copies of the test reports to:

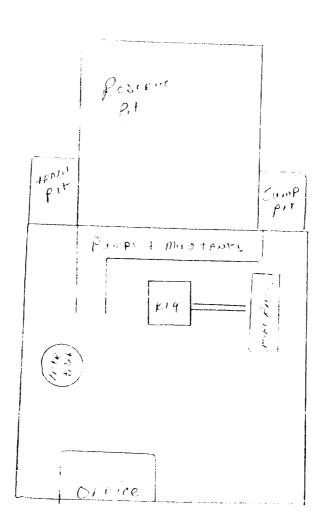
A. C. Sewell 4001 Penbrook Odessa, Texas 79762

Send two copies of the Well Recap (Final Cost & Engineering Summaries) to A. C. Sewell at the above address.



**EXPLORATION AND PRODUCTION GROUP** 





C80 1100 13.1

### PHILLIPS PETROLEUM COMPANY Livington Ridge Well No. 8 Eddy County, New Mexico

### DRILLING PROGNOSIS

1.	Location of Propo	sed Well: <u>{</u>	660' FNL & 1980' FWL, Section 1, T-22-S, R-30-E, Eddy County, New Mexico			
2.	Unprepared Ground Elevation: 3308' (Unprepared)					
3.	The geologic name Survey	of the surf	face formation is <u>See Archaeological</u>			
4.	Type of drilling	tools will b	pe <u>rotary.</u>			
5.	Proposed drilling	depth is 77	700'.			
6.	The estimated top	s of importa	ant geologic markers are as follows:			
	Rustler Salado Delaware Mt. Cherry Canyon	315° 620° 3780° 4600°	Brushy Canyon 5980' Bone Springs 7650'			
7.	The estimated depoint neral bearing for follows:	ths at which ormations ar	n anticipated water, oil, gas, or other re expected to be encountered are as			
	0il:	Brushy (	Canyon 5980'			
8.	The proposed casi	ng program i	is as follows:			
	Surface String 13 Intermediate Strin Production String	19 8-5/8 .	, set at 475' 24∯, set at 3700'. 4∯, 15.5∯ set at 7700'.			
9.	Cement Program: Surface String - <u>(</u>	Cement to su	urface with 650 sacks Class C cement.			
	Intermediate String Production String 3500°.	ng = <u>Cemente</u> = <u>Cement wi</u>	ed to surface with 1200 sacks Class C. th 900 sacks C - estimated top of cement			

- 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 attached.
- 11. The proposed mud program is attached (see Drilling Specialties mud letter).
- 12. The testing, logging, and coring programs are as follows:

D.S.T.'s or cores None

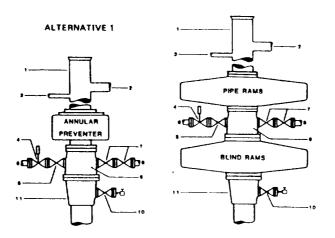
Logs DIL-TD-3700±	
Neutron Density TD - 3700'	
Neutron Gamma Ray O-TD	
Dipmeter – Selective	
Special Tests: <u>None</u>	

- 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.
- 15. Water Supply: Hauled
- 16. Caliche for road and pad construction to be obtained from  $\underline{\text{Federal pit}}$  from Section 11.

REGPRO: JMAPL: ridge8.dpr

### FIELD PRACTICES AND STANDARDS

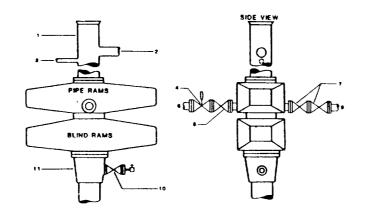
### **ALTERNATIVE 2**



- 1. BELL NIPPLE
- FLOW LINE
- 3. FILL UP LINE
- 4. 2" FE PRESSURE OPERATED CHOKE LINE VALVE
- 5. 2" FE GATE VALVE
- 6. 2" FE CHOKE LINE TO MANIFOLD 7. 2" FE GATE VALVES
- 8. 2" FE KILL LINE
- 9. DRILLING SPOOL 10. 2" SE OR FE GATE VALVE WITH NEEDLE
- 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 (2 M or 3 M Working Pressure) Alternative 1



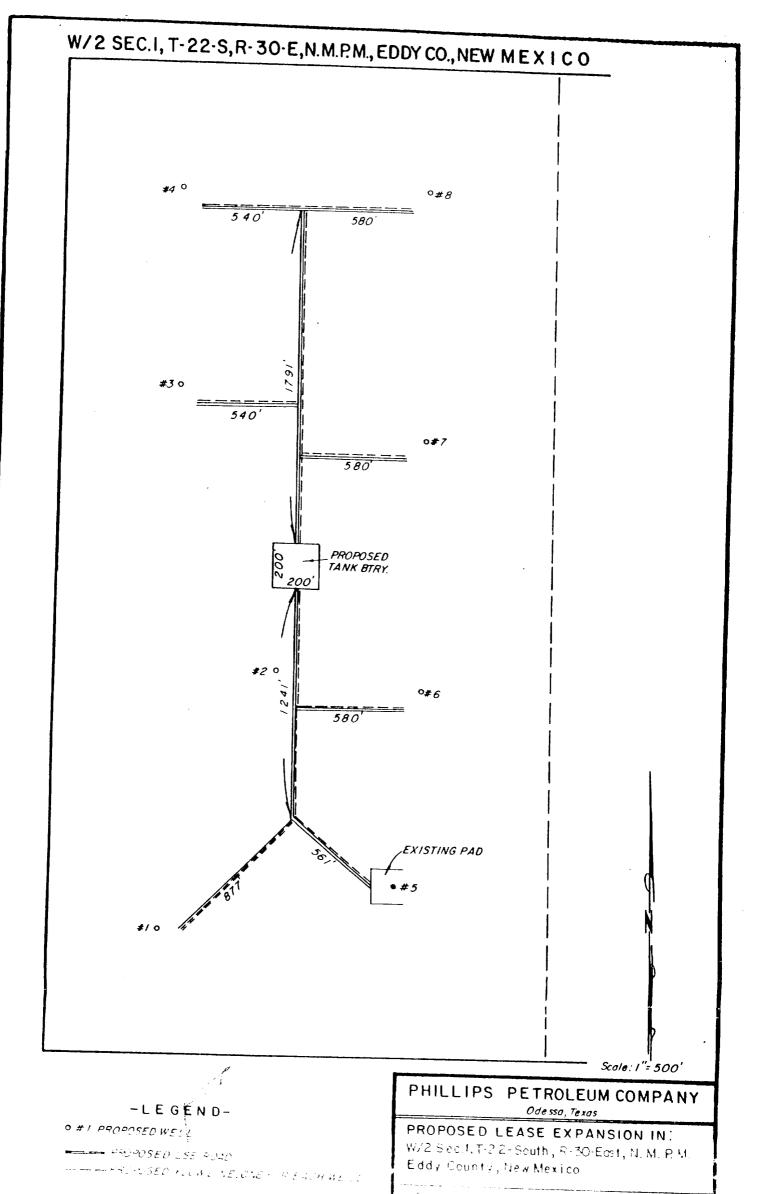
- 1. BELL NIPPLE
- FLOW LINE
- FILLUP LINE
   2" FE PRESSURE-OPERATED CHOKE LINE
   VALVE
- 5. 2" FE GATE VALVE
- 8. 2" FE CHOKE LINE TO MANIFOLD 7. 2" FE GATE VALVES
- 8. 2" FE KILL LINE 10. 2" SE OR FE GATE VALVE WITH NEEDLE
- 11. CASING HEAD HOUSING

Figure 7-10. Standard Hydraulic Blowout Preventer Assembly (2 M or 3 M Working Pressure) Alternative 3 (without Drilling Spool)

Well Control 4 January/83

Page 251 Section II





915-697-0231



Can New Pool

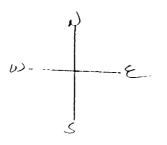
### PHILLIPS PETROLEUM COMPANY

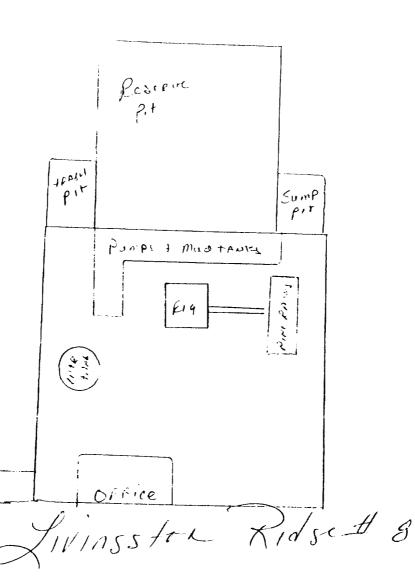
HOBBS, NEW MEXICO 88240 1625 WEST MARLAND

EXPLORATION AND PRODUCTION GROUP

JUN 11 10 211 A11 '90

CARL WE REALTH





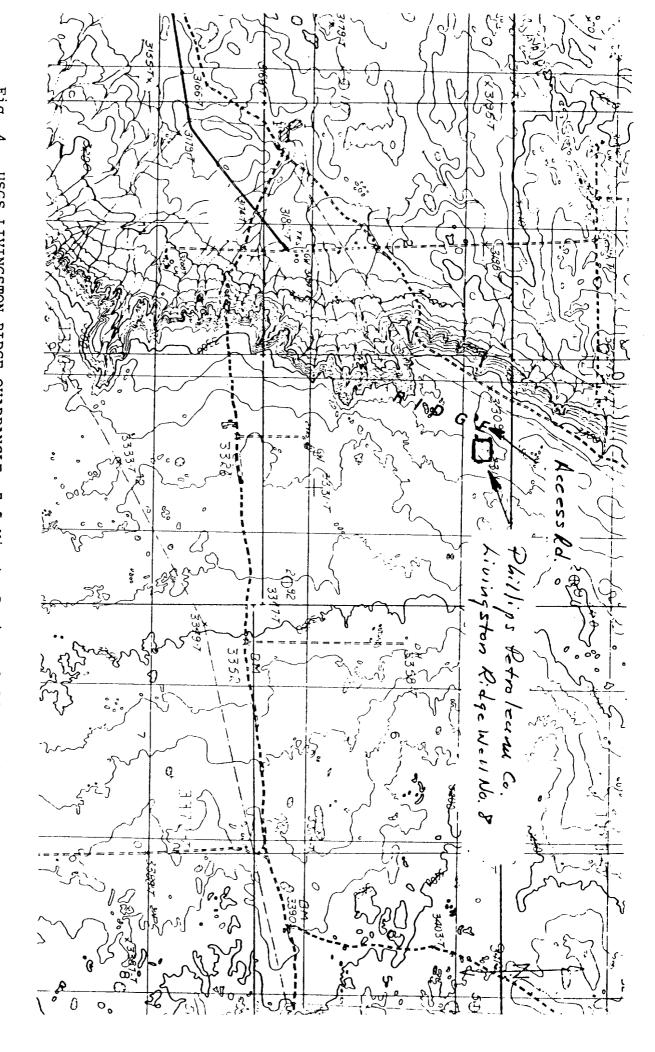


Fig. 4. USGS LIVINGSTON RIDGE QUADRANGLE, 7.5 Minute Series, 1;24,000, 1985, Prov. Ed., showing PHILLIPS PETROLEUM COMPANY's proposed Livingston Ridge Well No. 8, 660' FNL, 1980' FWL, and access road, Section 1, T22S, R30E, NMPM, Eddy County, NM