Form 3160-3 (July 1992)

# **UNITED STATES** DEPARTMENT OF THE INTERIOR

SUBMIT IN TRIPLICATE\* OCD-ARPHASIS Juctions on side)

FORM APPROVED OMB NO. 1004-0136

H-06-06

Expires: February 28, 1995

To B Hunt

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5.	LEASE DESIGNATION AND SERIAL	NO.
	NM-29234	

BUREAU OF LAN	NM-29234							
APPLICATION FOR PER	6. IF INDIAN, ALLOTTEE O	R TRIBE NAME						
1a. TYPE OF WORK DRILL X DEEPEN SECRETARY'S POTAS						T. UNIT AGREEMENT NAM	E	
b. TYPE OF WELL OIL WELL A WELL OTHER  2. NAME OF OPERATOR Pogo Producing Company  3. ADDRESS AND TELEPHONE NO. P. O. Box 10340, Midland, T  4. LOCATION OF WELL (Report location clearly and in accordance At surface 1980' FSL & 660' FW At proposed prod. zone	e with any State requirer	/ 340 ments.*)	GLE K	VU/ ~	ENED	8. FARM OR LEASE NAME, SUNDANCE "9 9. API WELL NO. 10. FIELD AND POOL, OR 11. SEC., T., R., M., OR BLI AND SURVEY OR AREA Section 9,	"Federal #6  34999  WILDCAT  VARIABLE  WEST	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TO						12. COUNTY OR PARISH	13. STATE	
20 miles east of Loving, NM						Eddy	NM	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT (Also to nearest drig. unit line, if any)  66	0'	4	FACRES IN LEASE 40		TO THIS		40	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  13	20'		0SED DEPTH 8500 *		20. ROTARY Rot			
21. ELEVATIONS (Show whether DF, RT, GR, etc.)	3481 <b>'</b> GL					22. approx. date wor when appr	oved	
23.	PROPOSED CAS	SING AND	CEMENTING PR	ROGRAM	CARLS	BAD CONTROLLE	dwater basin	
SIZE OF HOLE GRADE, SIZE OF CASING	WEIGHT PER FO	тоот	SETTING DEI	PTH		QUANTITY OF CEMENT		
17-1/2 13-3/8	54.5		<del>-550</del> -	765	Suffi	cient to circ	ulateWITNESS	

4100 8500

AFTER SETTING PRODUCTION CASING, PAY ZONE WILL BE PERFORATED STIMULATED AS NECESSARY.

SEE ATTACHED FOR:

SUPPLEMENTAL DRILLING DATA

BOP SKETCH

SURFACE USE AND OPERATIONS PLAN

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

Sufficient to circulate

0 01/1 11/1				
IGNED CASHY MILL	title_	Sr. Eng Tech	DATE	04/28/06
This space for Federal or State office use)	)			
ERMIT NO.		APPROVAL DATE		

/s/ Linda S. C. Rundell

STATE DIRECTOR

JUN 2 2 2006

TITLE \*See Instructions On Reverse Side

Submit () Appropriate
District Office
State Lease - 4 copies
For Lease - 3 copies

## State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102 Revised 1-1-89

DISTRICT I P.O. Box 1980, Hobbs, NM 88240

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT II P.O. Drawer DD, Artesia, NM 88210

WELL LOCATION AND ACREAGE DEDICATION PLAT

DISTRICT III
1000 Rio Brazos R4., Axteo, NM 87418

All Distances must be from the outer boundaries of the section

Jon			11				Well No.
Operator	POGO PRODUC	CING CO.	lease	SUNDANCE	9 FED		Wen 146.
Unit Letter	Section	Township	Range			County	-
L	9	24 SOUTH	1	31 EAST	NMPM		EDDY
Actual Footage Loc	cation of Well:						
1980 100	t trem the SO	UTH line and	660		feet from	the WES	line
Ground Level Elev			Pool	1 0	<b>^</b>		Dedicated Acreage:
3481	Delaw	ARE	J Dane	Dunes:	DelAWAG	IF, W	40 Acres
1. Outline the a	creage dedicated to	the subject well by colored a	pencil or hacl	ure marks on the	he plat below.	· ′ S3	88 <i>18</i>
2. If more than	one lease is dedica	ated to the well, outline each	and identify	the ownership	thereof (both	as to working	ng interest and royalty).
	one lease of differ orce-pooling, etc.?	ent ownership is dedicated to	o the well, ha	we the interest	of all owners	been consol	idated by communitization,
Yes Yes	No No	If answer is "yes" type	of consolidati	ao			
if answer is no this form necess		nd tract descriptions which l	have actually	been consolidat	ed. (Use reve	orse side of	
		the well unit all interest rd unit, eliminating such in					nitization, forced-pooling,
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	MAN MERCHANI			62500		Certificate	GAD L 90 MS. 7977
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## SURFACE USE AND OPERATIONS PLAN

## **FOR**

# POGO PRODUCING COMPANY SUNDANCE "9" FEDERAL, WELL # 6 1980' FSL & 660' FWL of SECTION 9, T-24S, R-31E EDDY COUNTY, NEW MEXICO

LOCATED: 20 miles east southeast of Loving, New Mexico.

FEDERAL LEASE NUMBER: NM-29234

LEASE DATE: November 1, 1985

ACRES IN LEASE: 40

RECORD LESSEE: Pogo Producing Company

SURFACE OWNERSHIP: Federal.

GRAZING PERMITTEE: J.R. Engineering

P.O. Box 12237

Odessa, Texas 79768 (915) 362-0373

POOL: Wildcat (Delaware)

POOL RULES: Statewide. 40 acres for oil.

EXHIBITS: A. Road Map

B. Plat showing Existing wells and Existing roads

C. Drilling Rig Layout

D. Topo Plat

## EXISTING ROADS

A. Exhibit "A" is a portion of a road map showing the location of the proposed well as staked. The proposed well site can be reached by going south of Carlsbad on 285 towards Loving. Turn left on highway 31, go to Jal, New Mexico turn-off on highway 128. Turn right and go 12.8 miles east to blacktop on right. Turn right and go 3.3 miles south to Pogo Producing Company's Sundance "9" Federal # 3. From this well, keep going south another 2600'. The proposed location will be 500' to the east.

B. Exhibit "B" shows existing pertinent roads in the vicinity of the proposed reentry. Existing roads are color coded.

## PLANNED ACCESS ROADS:

- A. <u>Length and Width:</u> The planned access road will be 12' wide and approximately 500' long. See Exhibit "B".
- B. Surfacing Material: Caliche. Compacted and watered.
- C. Maximum Grade: Approximately one percent.
- D. Turnouts: Not needed.
- E. <u>Drainage Design:</u> The access road will be crowned so the water will run off to the sides.
- F. Culverts: None needed.
- G. Cuts and Fills: None necessary.
- H. Gates and Cattle Guards: Not needed. No fences involved.

## 3. LOCATION OF EXISTING WELLS:

A. Existing wells in the immediate area are shown on Exhibit "B".

## 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. Production from this well will be delivered to a lease tank battery located on the well pad of well No. 3. The flowline will be 3" SDR-7 polyethylene pipe laid on the ground and extend, as shown on Exhibit "B", west and then north along archeologically approved road. Anticipated flow line pressure is about 60 psi.

### LOCATION AND TYPE OF WATER SUPPLY:

A. It is not planned that a water well will be drilled. Water necessary for drilling operations will be purchased and trucked to the well site, or will be moved to the well site by a temporary pipeline laid on the ground alongside existing and proposed roads.

## 6. SOURCE OF CONSTRUCTION MATERIAL:

A. Caliche needed for construction work will be taken, if present, from a pit opened on-site within the 400' X 450' work area. Otherwise, caliche will be taken from an existing pit located on Federal land in the NE1/4NE1/4 of Section 4, T-24S, R-31E, Eddy County, New Mexico, and will be trucked to the well site over existing and proposed roads. Location of caliche pit is shown on Exhibit "A".

## 7. <u>METHODS OF HANDLING WASTE MATERIAL:</u>

- A. Drill cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
- C. All trash, junk, and other waste material will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill.
- D. Water produced during test will be disposed of in the drilling pits.
- E. Oil produced during tests will be stored in test tanks until sold.

## 8. ANCILLARY FACILITIES:

A. None necessary.

## 9. WELL SITE LAYOUT:

- A. Exhibit "C" shows relative location and dimensions of the well pad, mud pits, reserve pit and the location of major drilling rig components.
- B. Clearing and levelling of the well site will be required.
- C. The pad and pit area is staked and flagged.

## 10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and the location will be cleaned of all trash and junk to leave the well site in an as aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids will be fenced until the pits are dry.
- C. After abandonment, all equipment, trash and junk will be removed and the well site will be cleaned. Any special rehabilitation and/or special revegatation requirements of the surface management agency will be complied with and will be accomplished as rapidly as possible.

### 11. OTHER INFORMATION:

- A. <u>Topography</u>: The land surface in the area is undulating and duny. In the immediate area of the well site, land slope is to the northeast.
- B. Soil: Top soil at the well site is sand.
- C. <u>Flora and Fauna:</u> The vegatative cover is moderate and includes mesquite, shinnery oak, yucca, weeds and range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove and quail.
- D. Ponds and Streams: There are no rivers, ponds, takes or streams in the area.
- E. <u>Residences and Other Structures</u>: There are no occupied dwellings or other structures within a mile of the proposed well site.

- F. <u>Archaeological, Historical, and Cultural Sites:</u> An archeological reconnaissance is to be accomplished and a report furnished.
- G. Land Use: Grazing and wildlife habitat.
- H. Surface Ownership: Federal

# 12. OPERATOR'S REPRESENTATIVE:

Richard L. Wright
Division Operations Manager.
Pogo Producing Company
P.O. Box 10340
Midland, Texas 79702
432-685-8100

# 13. CERTIFICATION:

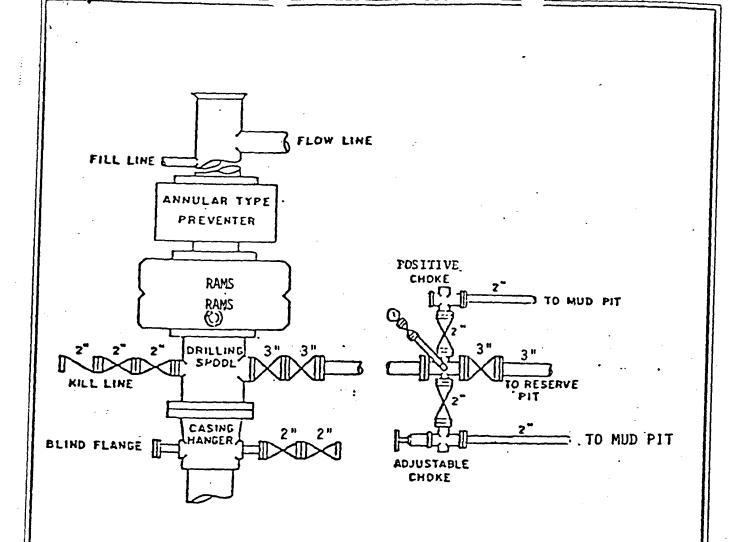
4-28-06

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently 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 Pogo Producing Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 19 U.S.C. 1001 for the filing of a false statement.

Date:

Richard L. Wright

**Division Operations Manager** 



BOP STACK

3000 PSI WORKING PRESSURE

BOP ARRANGEMENT

## SUPPLEMENTAL DRILLING DATA

## POGO PRODUCING COMPANY SUNDANCE "9" FEDERAL WELL NO. 6

1. SURFACE FORMATION:

Quaternary.

## 2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Rustler Anhydrite	550'
Delaware	4100'
Cherry Canyon	5000'
Brushy Canyon	6300'

### 3. ANTICIPATED POSSIBLE HYDROCARBON BEARING ZONE:

Brushy Canyon

Oil

### 4. PROPOSED CASING AND CEMENTING PROGRAM:

CASING SIZE	<u>SETTII</u> FROM	NG DEPTH TO	WEIGHT	GRADE	JOINT
13 3/8"	0	-550 765 '	54.5#	J-55	STC
8 5/8"	0	1000'	32#	J-55	STC
u	1000'	2200'	24#	J-55	STC
14	2200'	4100'	32#	J-55	STC
5 1/2"	0	1000'	17#	J-55	LTC
μ	1000	6000'	15.5#	J-55	LTC
1)	6000'	8500'	17#	N-80	LTC

## MINIMUM DESIGN FACTORS:

Collapse 1.125 Burst 1.1 Tension 1.7

<sup>13 3/8&</sup>quot; casing is to be set at approximately 550' in 17-1/2" hole. Casing to be cemented with 300 sacks of Light cement tailed in with 200 sacks of Class "C", 2% CaCl. Cement to circulate.

<sup>8 5/8&</sup>quot; casing is to be set at approximately 4100' in 11" hole. Casing is to be cemented with 1000 sacks of Light cement tailed in with 200 sacks of Class "C", 1% CaCl. Cement to circulate.

<sup>5 1/2&</sup>quot; casing is to be set at 8500' in 7 7/8" hole. Casing is to be cemented with 300 sx of Light cement followed by 900 sacks of Class "H" cement. Cement to tie back to 8 5/8" casing.

#### 5. PRESSURE CONTROL EQUIPMENT;

Blowout prevention equipment, while drilling the 11" hole, will be either a 3000 psi working pressure double ram type preventer or a 3000 psi working pressure annular type preventer.

Blowout prevention equipment, while drilling below the 8 5/8" casing seat, will be a 3000 psi working pressure BOP stack. A BOP sketch is attached.

6. CIRCULATING MEDIUM:

765 Surface to <del>550</del> feet:

Fresh water spud mud. Viscosity 30 to 36 as required for

hole cleaning.

165

550 feet to 4100 feet:

Brine conditioned as necessary for control of viscosity. Weight 9.8 to

10.0. PH 9 to 10. Viscosity 32 to 36.

4100 feet to T.D.:

Water based drilling fluid conditioned as necessary for control of weight, viscosity, ph and water-loss. Weight 9 to 10. Visocity

38 - 45. ph 9-10. Filtrate while drilling pay zone 6-15.

#### 7. AUXILIARY EQUIPMENT:

A mudlogging trailer will be used while drilling below Intermediate casing.

### 8. TESTING, LOGGING, AND CORING PROGRAMS:

Drill Stem tests will be made when well data indicate a test is warranted.

It is planned that electric logs will include GR-CNL- Density logs ans GR-DLL logs.

No coring is planned.

### 9. ABNORMAL PRESSURES, TEMPERTURES, OR HYDROGEN SULFIDE GAS:

None anticipated.

Expected bottom hole pressure is approximately 3500 psi.

Expected bottom hole temperture is approximately 125 degrees Fahr

#### 10. ANTICIPATED STARTING DATE:

It is planned that operations will commence upon approval of this application, with drilling and completion operations lasting about 30 days.

#### CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Pogo Producing Company Well No. 6 - Sundance 9 Federal

Location: 1980' FSL & 660' FWL sec. 9, T. 24 S., R. 31 E.

Lease: NM-29234

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at (505) 234-5972 in sufficient time for a representative to witness:

.....

A. Spudding

- B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch
- 2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 3. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.
- 4. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface; cable speed not to exceed 30 feet per minute.

#### **II. CASING:**

- 1. 13-3/8 inch surface casing should be set <u>at approximately 765 feet in the Rustler Anhydrite above the top of the Salt</u>, below usable water and circulate cement to the surface. If cement does not circulate to the surface, the BLM Carlsbad Field Office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
- 2. Minimum required fill of cement behind the <u>8-5/8</u> inch salt protection casing is <u>sufficient to circulate to the surface.</u>
- 3. Minimum required fill of cement behind the <u>5-1/2</u> inch production casing is <u>sufficient to tie back surface 200</u> <u>feet into the 8-5/8 salt protection casing se at approximately 4100 feet.</u>

#### **III. PRESSURE CONTROL:**

- 1. Before drilling below the 13-3/8 inch surface casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve. Before drilling below the 8-5/8 inch salt protection casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve.
- 2. Before drilling below the 13-3/8 inch surface casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi. Before drilling below the 8-5/8 inch salt protection casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3000 psi.
- 3. The BOPE shall be installed before drilling below the <u>8-5/8</u> inch salt protection casing and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- A. The results of the test will be reported to the BLM Carlsbad Field Office at 620 East Greene Street, Carlsbad, New Mexico 88220-6292.
- B. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- C. Testing must be done in a safe workman like manner. Hard line connections shall be required.