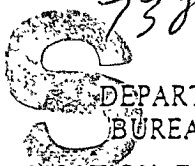


AT807-396

R-111-POTASH

HIGH CAVEKARST

OCD-ARTESIA

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

AUG 02 2007

OCD-ARTESIA

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.  
NM-860246. If Indian, Allottee or Tribe Name  
-----7. If Unit or CA Agreement, Name and No.  
-----8. Lease Name and Well No.  
CYPRESS "34" FEDERAL # 4H9. API Well No.  
30-015-3574210. Field and Pool, or Exploratory  
CEDAR CANYON-BONE SPRING11. Sec., T. R. M. or Blk. and Survey or Area  
SECTION 34 T23S-R29E12. County or Parish  
EDDY CO.  
13. State  
New Mexico14. Distance in miles and direction from nearest town or post office\*  
Approximately 9 miles East Southeast of Loving New Mexico15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)  
480'16. No. of acres in lease  
160017. Spacing Unit dedicated to this well  
120 Acres18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.  
800'19. Proposed Depth  
TVD-8025'  
MD. 10,975'20. BLM/BIA Bond No. on file  
NATION WIDE WYB-00023821. Elevations (Show whether DF, KDB, RT, GL, etc.)  
3042' GL22. Approximate date work will start\*  
WHEN APPROVED23. Estimated duration  
42-48 Days to drill

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the  
SUPO shall be filed with the appropriate Forest Service Office).4. Bond to cover the operations unless covered by an existing bond on file (see  
Item 20 above).

5. Operator certification

6. Such other site specific information and/or plans as may be required by the  
authorized officer.

Signature

Name (Printed/Typed)

Date 04/21/07

Joe T. Janica

Agent

Approved by (Signature)

/s/ Linda S.C. Rundell

Name (Printed/Typed)

/s/ Linda S.C. Rundell

Date

JUL 30 2007

STATE DIRECTOR

Office

NM STATE OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to  
conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Under 18 U.S.C. Section 1001 and Title 43 U.S.C., Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United  
States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Instructions on page 2)

SEE ATTACHED FOR  
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

DISTRICT I  
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 11520	Pool Name CEDAR CANYON-BONE SPRING
Property Code 36653	Property Name CYPRESS "34" FEDERAL	Well Number 4H
OGRID No. 17891	Operator Name POGO PRODUCING COMPANY	Elevation 3042'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	34	23 S	29 E		480	NORTH	560	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	34	23 S	29 E		1650	SOUTH	660	WEST	EDDY

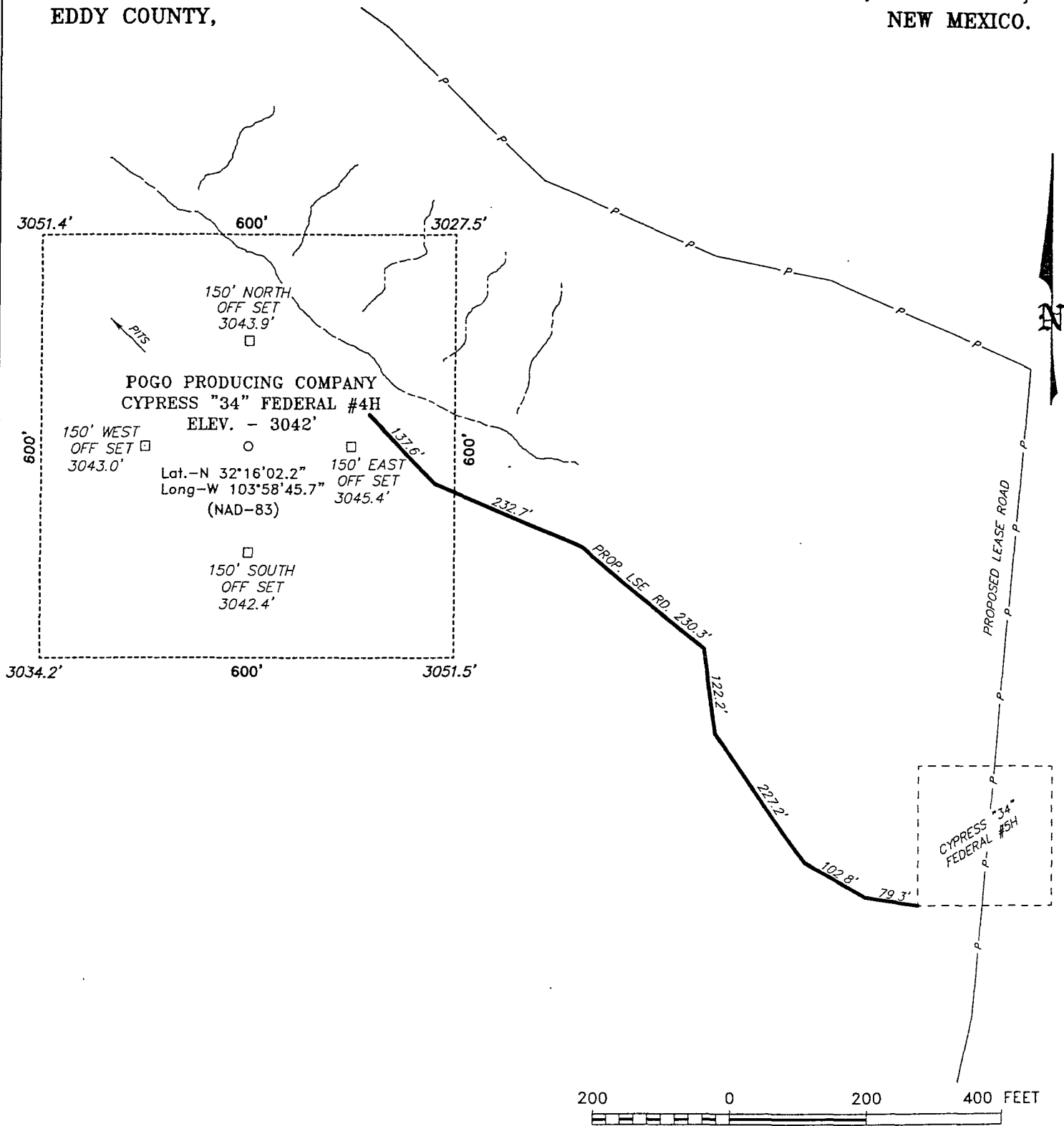
Dedicated Acres 120	Joint or Infill	Consolidation Code	Order No.
------------------------	-----------------	--------------------	-----------

NO ALLOWABLE WILL BE ASSIGNED  
OR A FUTURE

TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
CARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Joe T Janica</i> Signature Date Joe T Janica 04/21/07 Printed Name Agent</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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 belief.</p> <p>APRIL 11, 2007</p> <p>Date Surveyed Signature &amp; Seal of Professional Surveyor W.O. No. 17986 Certificate No. Gary L. Jones 7977 BASIN SURVEYS</p>
--	--

SECTION 34, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM 0.7 MILES WEST OF MILE MARKER 5 OF STATE HWY 128 (JCT. OF STATE HWY 128 AND CO. RD. 793-RAWHIDE), GO SOUTH ON CO. RD. 793 FOR 3.5 MILES TO THE END OF PAVEMENT, THENCE GO WEST 3.6 MILES TO LEASE ROAD, ON LEASE ROAD GO SOUTH 0.6 MILES THENCE SOUTHEAST 0.3 MILES TO GOODNIGHT "27" #1 WELL THENCE SOUTH TO PROPOSED LOCATION.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 17986

Drawn By: J. SMALL

Date: 04-12-2007

Disk: JMS 17986W

Survey Date: 04-11-2007

Sheet 1 of 1 Sheets

**POGO PRODUCING CO.**

REF: CYPRESS "34" FEDERAL #4H / Well Pad Topo

THE CYPRESS "34" FEDERAL #4H LOCATED 480' FROM THE NORTH LINE AND 560' FROM THE WEST LINE OF SECTION 34, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

**SURFACE CASING:**

17 ½" HOLE DRILLED W/ FRESH WATER. SET 13 3/8" 48 # H-40 CASING @ 550 ft. CMT'D W/ 450 SKS 65:35:6 (C:POZ:GEL) TAILED W/ 200 SKS "C" W/ 2% CACL2. CMT CIRCULATED TO SURFACE.

**INTERMEDIATE CASING:**

NIPPLE UP 3K BOP EQUIPMENT

11 " HOLE DRILLED W/ BRINE WATER. SET 9 5/8" CASING @ 3000'. CMT W/ 800 SKS 65:35:6 (C:POZ:GEL) + 5% NACL. TAILED W/ 200 SKS "C" W/ 2% CACL2. CMT CIRCULATED TO SURFACE. CMT LEAD SLURRY ADJUSTED AFTER RUNNING FLUID CALIPER.

CASING PROGRAM = 3000 9 5/8" 36# J-55 LTC

**PRODUCTION CASING:**

NIPPLE UP 3K BOP EQUIPMENT. DRILL 8 ½" HOLE THROUGH CURVE TO ± 8123. CHANGE HOLE SIZE TO 7 7/8" & COMPLETE LATERAL TO ± 11,118'. RUN 5 ½" 17# N-80 CASING TO TOTAL DEPTH. STAGE TOOL @ 4500' & 2500'. CEMENT 1<sup>ST</sup> STAGE W/ ± 1800 SKS PREMIUM PLUS MIXED @ 14.1 PPG. 2<sup>ND</sup> STAGE CMT'D W/ 650 SKS PREMIUM PLUS MIXED @ 14.1 PPG. 3<sup>RD</sup> STAGE CMT'D W/ 650 SKS PREMIUM PLUS LIGHT FOLLOWED BY 100 SKS PP MIXED @ 14.8 PPG. TOC CIRCULATED.

CASING PROGRAM = 5 ½ INCH 17# N-80 LTC & BTC

# APPLICATION TO DRILL

POGO PRODUCING COMPANY  
CYPRESS "34" FEDERAL # 4  
UNIT "D" SECTION 34  
T23S-R29E EDDY CO. NM

In response to questions asked under Section II of Bulletin NTL-6, the following information on the above well is provided for your information.

1. LOCATION: 480' FNL & 560' FWL SECTION 34 T23S-R29E EDDY CO. NM
2. ELEVATION ABOVE SEA LEVEL: 3042' GL.
3. GEOLOGIC NAME OF SURFACE FORMATION: Quaternary Aeolian Deposits.
4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.
5. PROPOSED DRILLING DEPTH: 8025' TVD MD-10,975'

## 6. ESTIMATED TOPS OF GEOLOGICAL MARKERS:

Basal Anhydrite	2936'	Brushy Canyon	5288'
Delaware Lime	3160'	Bone Spring	6918'
Delaware Sand	3190'	1st Bone Spring Sd.	7917'
Cherry Canyon	4040'	1st Bone Spring Pay	8025'

## 7. POSSIBLE MINERAL BEARING FORMATION:

Brushy Canyon	Oil
Bone Spring	Oil

## 8. CASING PROGRAM:

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade
26"	0-40	20"	NA	NA	NA	Conductor
17½"	0-550'	13 3/8"	48#	8-R	ST&C	H-40
12¼"	0-3000'	9 5/8"	36#	8-R	ST&C	J-55
8½"/7 7/8"	3000-10,975'	5½"	17#	8-R	LT&C/BTC	N-80

## APPLICATION TO DRILL

POGO PRODUCING COMPANY  
 CYPRESS "34" FEDERAL # 4  
 UNIT "D" SECTION 34  
 T23S-R29E EDDY CO. NM

9. CASING CEMENTING & SETTING DEPTH:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Set 550' of 13 3/8" 48# H-40 ST&C casing. Cement with 450 Sx. of 65/35 Class "C" POX/GEL, tail in with 200 Sx. Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 3000' of 9 5/8" 36# J-55 ST&C casing. Cement with 800 Sx. of 65/35/6 Class "C" POZ/GEL + 5% NaCl, tail in with 200 Sx. of Class "C" cement + 2% CaCl <sub>2</sub> + 1/2# Flo-cale /Sx. Circulate cement to surface.
5 1/2"	Production	Set 10,975' of 5 1/2" 17# N-80 LT&C & BTC casing. Cement in 3 stages with DV Tools at 4500±' & 2500±'. Cement 1st stage with 1800 Sx. of Premium Plus cement mixed @ 14.1 PPG, cement 2nd stage with 650 Sx. of Premium Plus cement mixed @ 14.1PPG, cement 3rd stage with 650 Sx. of Premium Plus cement, tail in with 100 Sx. of premium Plus cement mixed @ 14.8 PPG, circulate cement to surface.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 series 3000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nipped up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once each 24 Hr. period and the blind rams will be operated when the drill pipe is out of on trips. Full opening stabbing valve and upper kelly cock will be available in case if needed. Exhibit "E-1" shows a hydraulically operated closing unit and a 3" 3000 PSI choke manifold with adjustable chokes. No abnormal pressures or temperatures are expected while drilling this well. No problems in offset wells.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-550'	8.4-8.7	29-32	NC	Fresh water Spud mud use paper to control seepage
550-3000'	10.0-10.2	29-36	NC	Brine water use paper to control seepage, and high viscosity sweeps to clean hole.
3000-10,975'	9.6-10.0	32-40	NC*	Cut Brine use high viscosity sweeps to clean hole. If WL is required to maintain hole go to a Polymer mud system to control water loss

\* Water Loss may have to be controlled in order to run casing, run logs and any tests.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing, viscosity, and water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

POGO PRODUCING COMPANY  
CYPRESS "34" FEDERAL # 4  
UNIT "D" SECTION 34  
T23S-R29E EDDY CO. NM

12. LOGGING, CORING, AND TESTING PROGRAM:

A. Open hole logs: Run Dual Laterolog, CNL, LDT, Gamma Ray, Caliper from 7550'± back to 9 5/8" casing shoe. Run Gamma Ray, Neutron from 9 5/8" casing shoe back to surface.

B. No DST's or cores are planned at this time.

C. Mud logger will be rigged up on hole at 6900'±.

13. POTENTIAL HAZARDS:

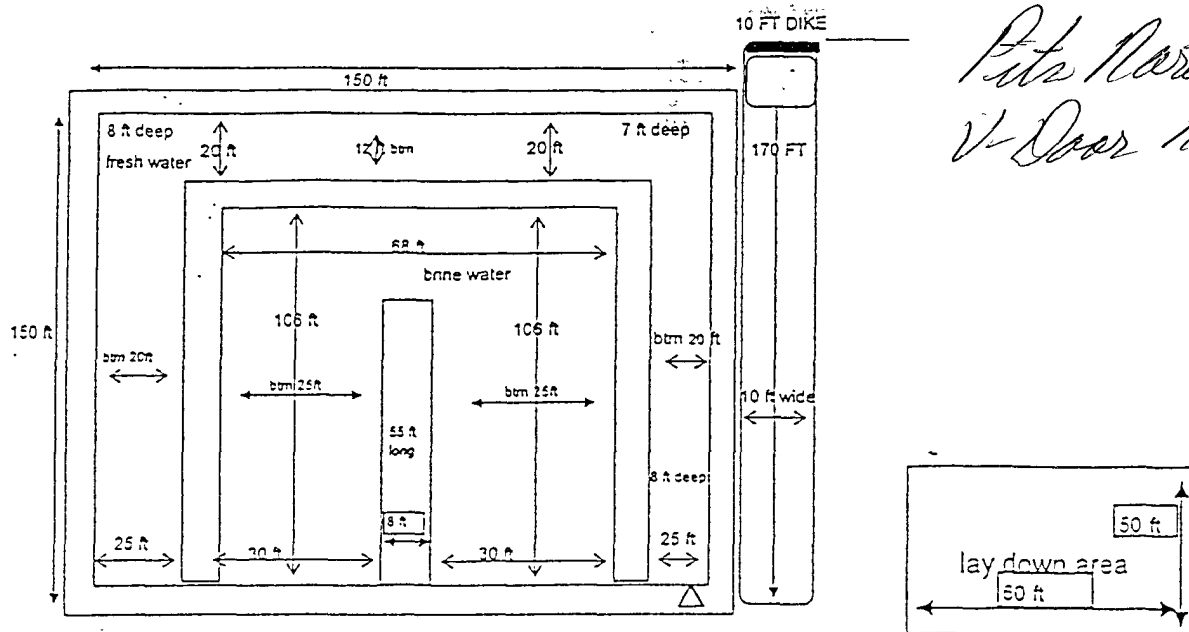
No abnormal pressures or temperatures are expected. There is no known presence of H<sup>2</sup>S in this area. If H<sup>2</sup>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3800 PSI, and Estimated BHT 180°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

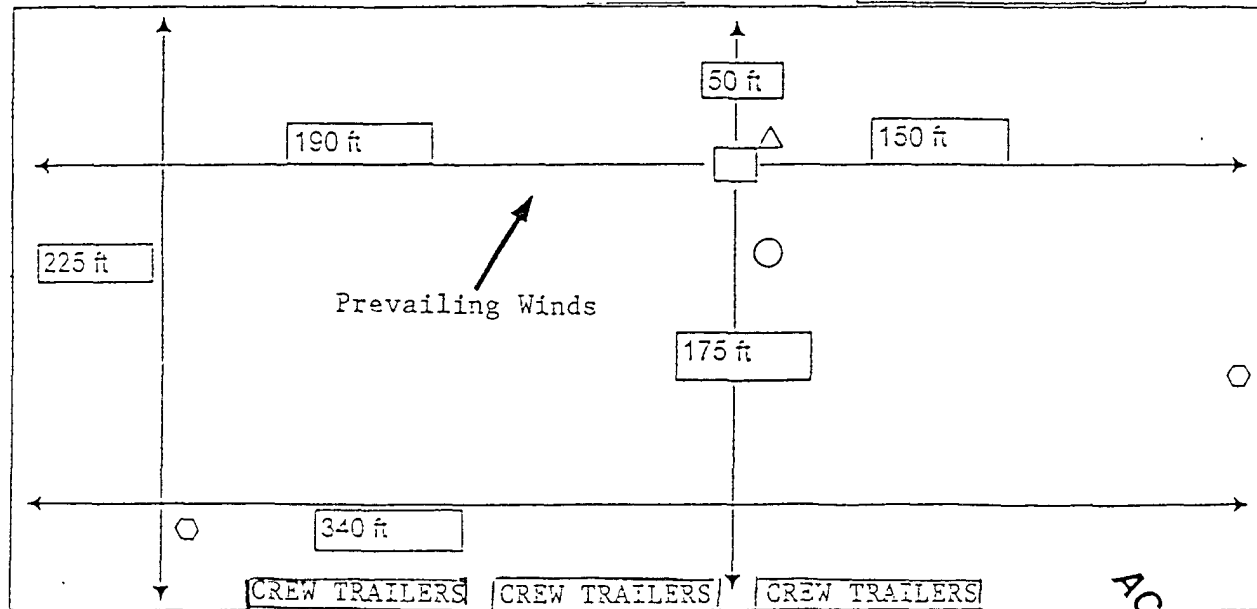
Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take 40-45 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The Bone Spring formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialized as an oil well.



*Pits Northwest  
V-Door Northeast*

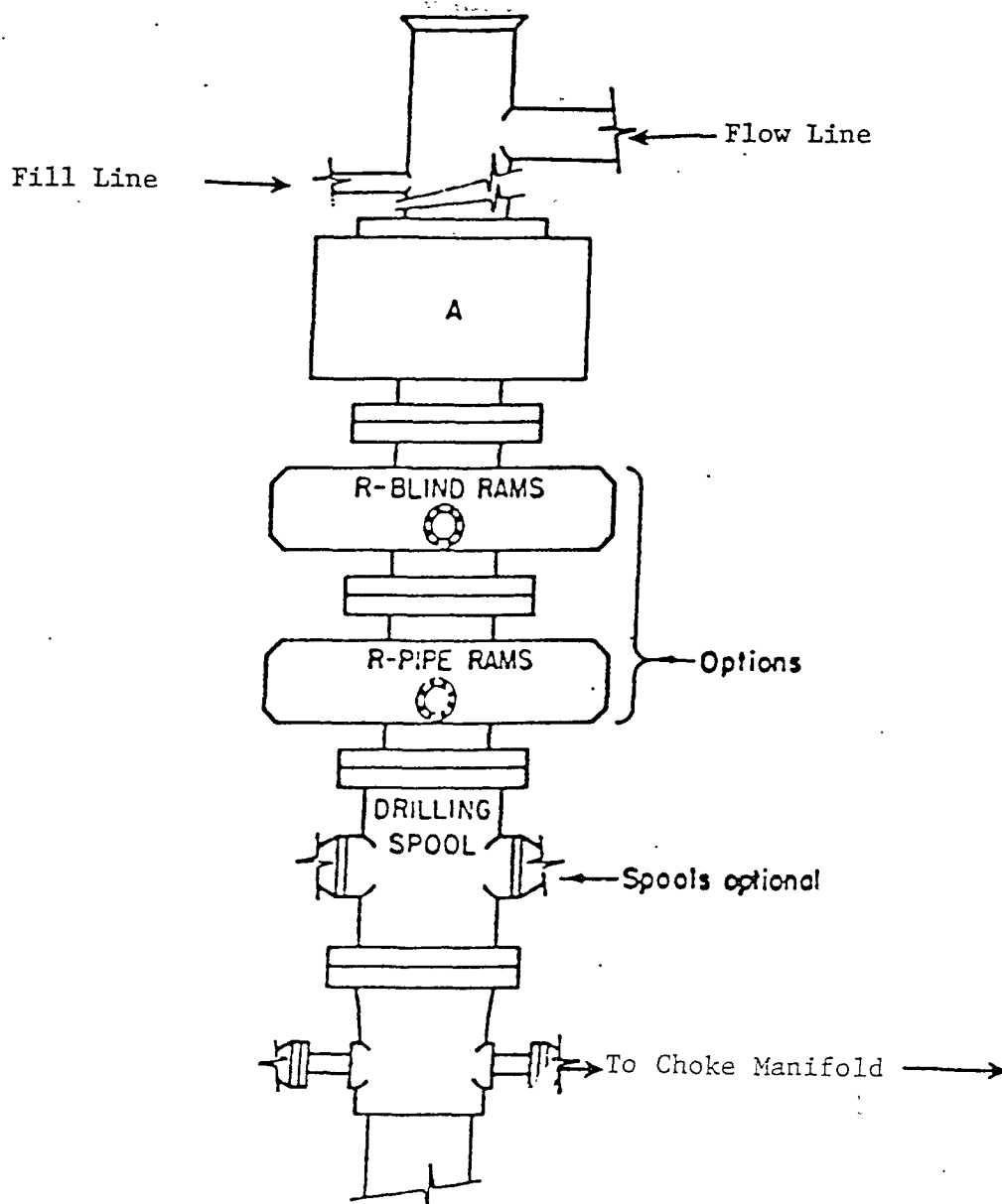


- Wind Direction Indicators  
(wind sock or streamers)
- H2S Monitors  
(alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote BOP Closing Unit
- Sign and Condition Flags

EXHIBIT "D"  
RIG LAY OUT PLAT

POGO PRODUCING COMPANY  
CYPRESS "34" FEDERAL #4H  
UNIT "D" SECTION 34  
T23S-R29E EDDY CO. NM





# **ARRANGEMENT SRRA**

1500 Series

5000# Working Pressure

*3m stated in plan is adequate*

EXHIBIT "E"  
SKETCH OF B.O.P. TO BE USED ON

POGO PRODUCING COMPANY  
CYPRESS "34" FEDERAL #4H  
UNIT "D" SECTION 34  
T23S-R29E EDDY CO. NM

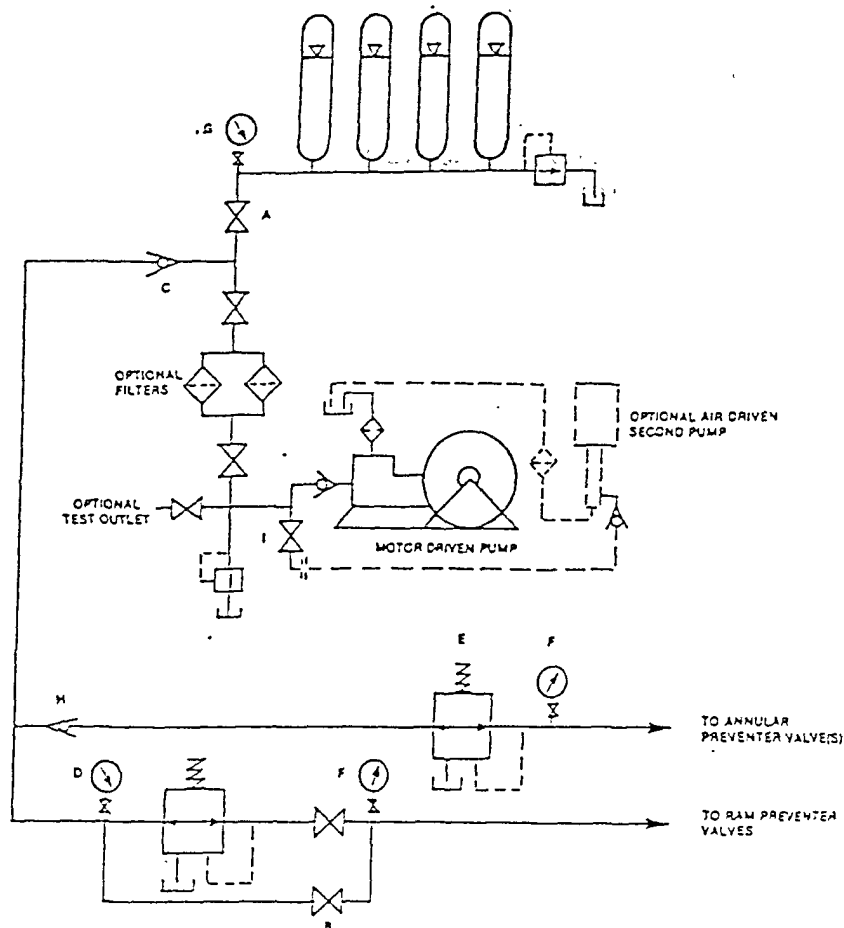


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

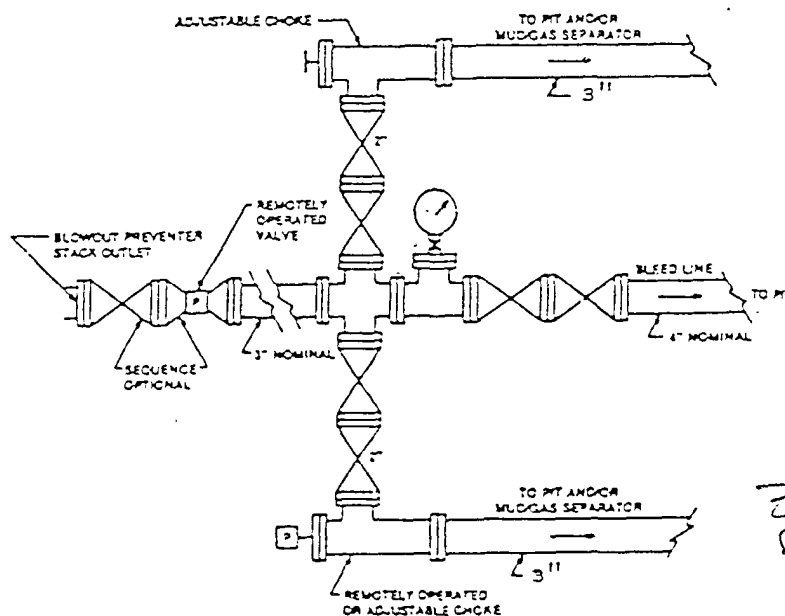


FIGURE K4-2. Typical choke manifold assembly for SM rated well pressure service - surface installation.

*3m stated in  
Plan is adequate*

EXHIBIT "E-1"  
CHOKE MANIFOLD & CLOSING UNIT

POGO PRODUCING COMPANY  
CYPRESS "34" FEDERAL #4H  
UNIT "D" SECTION 34  
T23S-R29E EDDY CO. NM

COPYRIGHT 1990 MITCHELL ENGINEERING, PO BOX 1492 GOLDEN, CO, 80402, USA (303) 273 3744

**LONG's METHOD OF SURVEY COMPUTATION****OBLIQUE CIRCULAR ARC INTERPOLATION**

0	MD OF INTERPOLATION DEPTH,(feet)
#N/A	TVD COORDINATE OF THE DEPTH (feet)
#N/A	N/S COORDINATE OF DEPTH (feet)
#N/A	E/W COORDINATE OF DEPTH (feet)

3 D DISTANCE BETWEEN STATION A AND STATION B

**DISTANCE TABLE**

STATION A	STATION B
0.00	ft

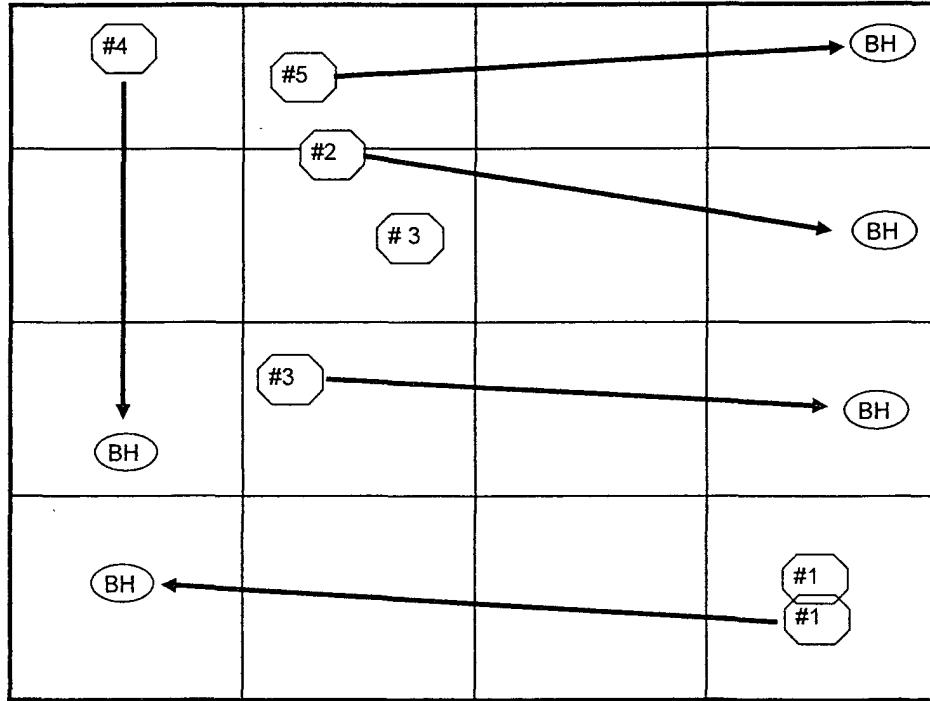
**TABLE OF SURVEY STATIONS**

Calculator =

STA #	ΔMD ft	INCL deg	AZIM deg	MD ft	TVD ft	N+S- ft	E+W- ft	DLS deg/100FT
1	TIE POINT =>	0	0	7548.00	7548.00	0.00	0.00	-
2	100	12	176.7295	7648.00	7647.27	-10.42	0.60	12.00
3	100	24	176.7295	7748.00	7742.20	-41.21	2.35	12.00
4	100	36	176.7295	7848.00	7828.65	-91.04	5.20	12.00
5	100	48	176.7295	7948.00	7902.83	-157.72	9.01	12.00
6	100	60	176.7295	8048.00	7961.50	-238.34	13.62	12.00
7	100	72	176.7295	8148.00	8002.10	-329.38	18.82	12.00
8	100	84	176.7295	8248.00	8022.85	-426.86	24.39	12.00
9	50	90	176.7295	8298.00	8025.46	-476.69	27.24	12.00
10	100	90	176.7295	8398.00	8025.46	-576.52	32.94	0.00
11	100	90	176.7295	8498.00	8025.46	-676.36	38.65	0.00
12	100	90	176.7295	8598.00	8025.46	-776.20	44.35	0.00
13	100	90	176.7295	8698.00	8025.46	-876.04	50.06	0.00
14	100	90	176.7295	8798.00	8025.46	-975.87	55.76	0.00
15	100	90	176.7295	8898.00	8025.46	-1075.71	61.47	0.00
16	100	90	176.7295	8998.00	8025.46	-1175.55	67.17	0.00
17	100	90	176.7295	9098.00	8025.46	-1275.38	72.88	0.00
18	100	90	176.7295	9198.00	8025.46	-1375.22	78.58	0.00
19	100	90	176.7295	9298.00	8025.46	-1475.06	84.29	0.00
20	100	90	176.7295	9398.00	8025.46	-1574.90	89.99	0.00
21	100	90	176.7295	9498.00	8025.46	-1674.73	95.70	0.00
22	100	90	176.7295	9598.00	8025.46	-1774.57	101.40	0.00
23	100	90	176.7295	9698.00	8025.46	-1874.41	107.11	0.00
24	100	90	176.7295	9798.00	8025.46	-1974.24	112.81	0.00
25	100	90	176.7295	9898.00	8025.46	-2074.08	118.52	0.00
26	100	90	176.7295	9998.00	8025.46	-2173.92	124.22	0.00
27	100	90	176.7295	10098.00	8025.46	-2273.76	129.93	0.00
28	100	90	176.7295	10198.00	8025.46	-2373.59	135.63	0.00
29	100	90	176.7295	10298.00	8025.46	-2473.43	141.34	0.00
30	100	90	176.7295	10398.00	8025.46	-2573.27	147.04	0.00
31	100	90	176.7295	10498.00	8025.46	-2673.10	152.75	0.00
32	100	90	176.7295	10598.00	8025.46	-2772.94	158.45	0.00
33	100	90	176.7295	10698.00	8025.46	-2872.78	164.16	0.00
34	100	90	176.7295	10798.00	8025.46	-2972.62	169.86	0.00
35	100	90	176.7295	10898.00	8025.46	-3072.45	175.57	0.00
36	77	90	176.7295	10975.00	8025.46	-3149.33	179.96	0.00
37								

# CYPRESS WELL GROUPINGS

Sec 34, T-23-S, R-29-E, Eddy County, New Mexico



Well Name	Legal Location in 34	Depth and Strata	Current Prod Zone
CYPRESS 34 FD # 5	990 FNL & 1690 FWL	PROPOSED Pogo	1ST BONE SPRINGS
CYPRESS 34 FD # 4	480 FNL & 560 FWL	PROPOSED Pogo	1ST BONE SPRINGS
CYPRESS 34 FD # 3	2100 FSL & 1650 FWL	PROPOSED Pogo	1ST BONE SPRINGS
CYPRESS 34 FD # 1	430 FSL & 660 FEL	BONE SPRINGS HORIZONTAL	1ST BONE SPRINGS
CYPRESS 34 FD # 2	1400 FNL & 1800 FWL	PROPOSED Pogo	N/A
COCHITA 34 FD # 1	660 FSL & 660 FEL	Staked Not Drilled "Devon"	8300 BS ON PERMIT
BLAKEMORE EST FD 3	1980 FNL & 2130 FWL	Staked Not Drilled "EXXON"	7000 BS ON PERMIT

02/2/2007

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
4. Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H<sub>2</sub>S present in dangerous concentration. Only emergency personnel admitted to location.
5. Well control equipment
  - A. See exhibit "E"
6. Communication
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephoned will be available at most drilling foreman's trailer or living quarters.
7. Drillstem Testing
  - A. Exhausts will be watered.
  - B. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - C. If location is near any dwelling a closed D.S.T. will be performed.

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

8. Drilling contractor supervisor will be required to be familiar with the effects  $H_2S$  has on tubular goods and other mechanical equipment.
9. If  $H_2S$  is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with  $H_2S$  scavengers if necessary.

## SURFACE USE PLAN

POGO PRODUCING COMPANY  
CYPRESS "34" FEDERAL # 4  
UNIT "D" SECTION 34  
T23S-R29E EDDY CO. NM

1. EXISTING ROADS & PROPOSED ROADS: Area maps; Exhibit "B" is a reproduction of a County General Hi-way Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.

A. Exhibit "A" shows the proposed well site as staked.

B. From Hobbs New Mexico take U.S. Hi-wqy 62-180 West toward Carlsbad New Mexico go 42± miles to WIPP Road, turn Left go 13 miles to CR 802 turn Right go 3.7± miles to State Hi-way 128, turn Right go 6± miles to Rawhide Road (CR-793) turn Left go 3.9± miles, turn Left go .3miles, turn Right go .9± miles ; turn Left go .3 miles, turn Right follow lease road 2.8± miles, turn Right (West) go 2 miles, bear Left go Northwest go 1.3± miles to Devon Energy well # 2 bear Northeast go .45 miles, turn Left go .5 miles to Pogo Cypress "34" Federal # 1, continue on new lease road Southwest .4 miles turn Northwest and North 1.5 miles to location that is on the West side of road.

C. Powerline and flowline will be follow lease road to the tank battery at Cypress "34" Federal well # 1.

2. PLANNED ACCESS ROADS: Approximately 1 mile of new road will be constructed.

A. The access roads will be crowned and ditched to a 12' wide travel surface with a 40' Right-of-Way.

B. Gradient of all roads will be less than 5.00%.

C. If turn-outs are necessary they will be constructed.

D. If needed roads will be surfaced with a minimum of 4" of caliche. This material will be obtained from a local source.

E. Center-line for new roads will be flagged. Earth-work will be will be done as field conditions require.

F. Culverts will be placed in the access road if they are necessary. The roads will be constructed to utilate low water crossings for drainage as required by topography.

3. LOCATIONS OF EXISTING WELLS IN A ONE MILE RADIUS. EXHIBIT "A-1"

A. Water wells - None known

B. Disposal wells - None known

C. Drilling wells - None known

D. Producing wells - As shown on Exhibit "A-1"

E. Abandoned wells - As shown on Exhibit "A-1"

## SURFACE USE PLAN

POGO PRODUCING COMPANY  
CYPRESS "34" FEDERAL # 4  
UNIT "D" SECTION 34  
T23S-R29E EDDY CO. NM

4. If on completion this well is a producer the operator will lay pipelines and construct powerlines along existing road R-O-W's or other existing R-O-W's.

5. LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped to location in flexible lines laid on top of the ground.

6. SOURCE OF CONSTRUCTION MATERIAL:

If possible construction material will be obtained from the excavation of drill site, if additional material is needed it will be obtained from a local source and transported over the access roads as shown on Exhibit "C".

7. METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pits.
- B. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by the supplier, including broken sacks.
- D. Waste water from living quarters will be drained into holes with a minium of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A Porto-John will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for furthred drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approve disposal site. Later pips will be broken out to speed drying. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in storage tanks and sold.

8. ANCILLARY FACILITIES:

- A. No camps or air strips will be constructed on location.



## SURFACE USE PLAN

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T23S-R29E EDDY CO. NM

### 9. WELL SITE LAYOUT:

- A. Exhibit "D" shows the proposed well site layout.
- B. This Exhibit shows the location of reserve pit, sump pits, and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pits will be unlined unless subsurface conditions encountered during pit construction indicate that a plastic liner is required to contain lateral migration.
- D. If needed the reserve pits will be lined with polyethelene. The pit liner will be no less than 12 mils thick and the liner will be extended at least 3 feet over the top of the dikes and secured in place to keep edge of liner in place.
- E. The reserve pit will be fenced on three sides and fenced with four strands of barbed wire during drilling and completion phases. The 4th side will be fenced after drilling operations are complete and the drilling rig has moved out. If the well is a producer the mud pits will remain fenced in until the mud has dried up enough to break out the pits and reclaimed according to BLM requirements.

### 10. PLANS FOR RESTORATION OF SURFACE:

Rehabilitation of the location and reserve pits will be allowed to dry properly, fluids may be moved and disposed of in accordance with article 7-E as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any will be reshaped to the original configuration with provisions made to alleviate future erosion. In case of the well completed as a producer the drilling pad will be necessary to construct production facilities. After the area has been shaped and contoured top soil from the spoil pile will be placed over the disturbed area to the extent possible so that revegetation procedures can be accomplished to comply with the BLM specifications.

If the well is a dry hole the pad and road area will be contoured to match the existing terrain. Top soil will be spread to the extent possible and revegetation will be carried out according to the BLM specifications.

Should the well be a producer the previously noted procedures will apply to those areas which are not required for production facilities.

SURFACE USE PLAN

POGO PRODUCING COMPANY  
CYPRESS "34" FEDERAL # 4  
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11. OTHER INFORMATION:

- A. Topography consists of a series of ridge/hill slopes at the head of a major drainage trending in a West/Northwest direction. Vegetation consists of yucca, snakeweed, creosote, catclaw, and mesquite. Soils are tan/red loamy silty sands with caliche nodules and lag gravels.
- B. Surface is owned by the U.S. Department of Interior and is administered by the Bureau of Land Management. The surface is leased to ranchers for grazing of live stock.
- C. An archaeological survey will be conducted and the results will be filed with The Bureau of Land Management Carlsbad Field office in Carlsbad NM.
- D. There are no domestic dwellings near this location.

12. OPERATORS REPRESENTATIVE:

Before construction:

TIERRA EXPLORATION, INC.  
P.O. BOX 2188  
HOBBS, NEW MEXICO 88241  
JOE T. JANICA  
OFFICE PHONE 505-391-8503

During and after construction:

POGO PRODUCING COMPANY  
P.O. BOX 10340  
MIDLAND, TEXAS 79702-7340  
RICHARD WRIGHT  
OFFICE PHONE 915-685-8140

13. CERTIFICATION: 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, are true and correct, and that the work associated with the operations proposed herein will be performed by POGO PRODUCING COMPANY it's contractors/subcontractors is in the conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME : Joe T. Janica

DATE : 04/21/07

TITLE : Agent

## **Conditions of Approval Cave and Karst**

EA#: NM-080-07-0730

Lease #: NM-86024

**Pogo Producing Company**  
**Cypress 34 Fed. #3H, #4H & #5H**

### **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production.

#### **Berming:**

Any tank batteries will be constructed and bermed large enough to contain any spills that may occur.

Bermed areas will be lined with rip-stop padding to prevent tears or punctures in liners and lined with a permanent 20 mil plastic liner.

### **Cave/Karst Subsurface Mitigation**

The following stipulations will be applied to protect cave/karst and ground water concerns:

#### **Rotary Drilling with Fresh Water:**

Rotary drilling techniques in cave or karst areas will include the use of fresh water as a circulating medium in zones where caves or karst-features are expected. Use depth to the deepest expected fresh water as listed in the geologist report.

#### **Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone as identified in the geologic report.

#### **Casing:**

All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run to American Petroleum Institute and BLM standards.

#### **Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported.

Regardless of the type of drilling machinery used, if a bit drops of four feet or more and circulation losses greater than 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the BLM will be notified by

the operator. The BLM will assess the consequences of the situation and work with operator on corrective actions to resolve the problem.

**Record Keeping:**

The Operator will track customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence of absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Pogo Producing Company  
Well Name & No. 4H-Cypress "34" Federal  
Location SHL: 0480 FNL, 0560 FWL, Sec. 34, T-23-S, R-29-E, Eddy County, NM  
Location BHL: 1650 FSL, 0660 FWL, Sec. 34, T-23-S, R-29-E, Eddy County, NM  
Lease: NM-86024

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### **I. DRILLING OPERATIONS REQUIREMENTS:**

- A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:
1. Spudding well
  2. Setting and/or Cementing of all casing strings
  3. BOPE tests
- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822
- B. **Although no Hydrogen Sulfide has been reported in the area, it is always a possible hazard.**
- C. 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.
- D. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface. The logs shall be run at a speed which allows the logs to be legible and no faster than manufactures of the logging tools recommended speed. (R-111-P area only)
- E. If floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

### **II. CASING:**

- A. The 13-3/8 inch surface casing shall be set into the Rustler Anhydrite approximately 25' above the salt, at approximately 550 feet and cemented to the surface.
1. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  2. Wait on cement (WOC) time for a primary cement job will be a minimum of 24 hours in the potash area or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
  3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
  4. If cement falls back, remedial action will be done prior to drilling out that string.

**Possible lost circulation in the Delaware and Bone Spring formations.  
High cave/karst area.**

- B.** The minimum required fill of cement behind the 9-5/8 inch intermediate casing is **cement shall circulate to surface**. If cement does not circulate see A.1 thru 4.
- C.** The minimum required fill of cement behind the 5-1/2 inch production casing is **cement shall circulate to surface**. If cement does not circulate see A.1 thru 4.
- D.** Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- E.** If hardband drill pipe is rotated inside casing; returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool I joints of the drill pipe will be installed prior to continuing drilling operations.

**III. PRESSURE CONTROL: Diagrams are for 5M system, 3M system as described meets minimum requirements.**

- A.** All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2.
- B.** Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) PSI**.
- C.** Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8" intermediate casing shoe shall be **3000 (3M) PSI**.
- D.** The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - 1. The tests shall be done by an independent service company.
  - 2. The results of the test shall be reported to the appropriate BLM office.
  - 3. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - 4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53 Sec. 17. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

**Engineer on call phone: 505-706-2779**

**WWI 060807**