ATS-07-418

760

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

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HIGH CAVEKARST

APPLICATION FOR PERMIT TO DRILL OR REENTER

JUN 14 2007

OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

1a. Type of work: [XX] DRILL [ ] REENTER	5. Lease Serial No. NM-85893
1b. Type of Well: [XX] Oil Well [ ] Gas Well [ ] Other [XX] Single Zone [ ] Multiple Zone	6. If Indian, Allotee or Tribe Name ----------
2. Name of Operator POGO PRODUCING COMPANY (RICHARD WRIGHT 432-685-8140) 17891	7 If Unit or CA Agreement, Name and No. ----------
3a. Address P.O. BOX 10340. MIDLAND, TEXAS 79702-7340	8. Lease Name and Well No. 16648 CEDAR CANYON"21" FEDERAL #6H
3b. Phone No. (include area code) 432-685-8100	9. API Well No. 30-015-35662
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 1980' FNL & 330' FWL SECTION 21 T24S-R29E EDDY CO. At proposed prod. zone HORIZNTAL WELL EOH 1980' FNL & 330' FEL SEC.21	10. Field and Pool, or Exploratory East PIERCE CROSSING-BONE SPRING
	11. Sec., T. R. M. or Blk. and Survey or Area SECTION 21 T24S-R29E
14. Distance in miles and direction from nearest town or post office* Approximately 5 miles Southeast of Malaga New Mexico	12. County or Parish EDDY CO. / 13. State New Mexico
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'	16. No. of acres in lease 320 / 17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2100'	19. Proposed Depth MD-12,016' TVD-7700' / 20. BLM/BIA Bond No. on file ~~NMB-000122~~ NMB000238
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2930' GL	22. Approximate date work will start* WHEN APPROVED / 23. Estimated duration 40-45 Days

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.

25. Signature Joe T. Janica	Name (Printed/Typed) Joe T. Janica	Date 05/03/07
Title Agent		
Approved by (Signature) /s/ James Stovall	Name (Printed/Typed)	Date JUN 11 2007
Title FIELD MANAGER	Office BLM-CARLSBAD FIELD 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

Title 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)

CARLSBAD CONTROLLED WATER BASIN

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DISTRICT I
1625 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

OIL CONSERVATION DIVISION

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

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	50371 9647	PIERCE CROSSING-BONE SPRING, East

Property Code	Property Name	Well Number
	CEDAR CANYON "21" FEDERAL	6H

OGRID No.	Operator Name	Elevation
17891	POGO PRODUCING COMPANY	2930'

Surface Location

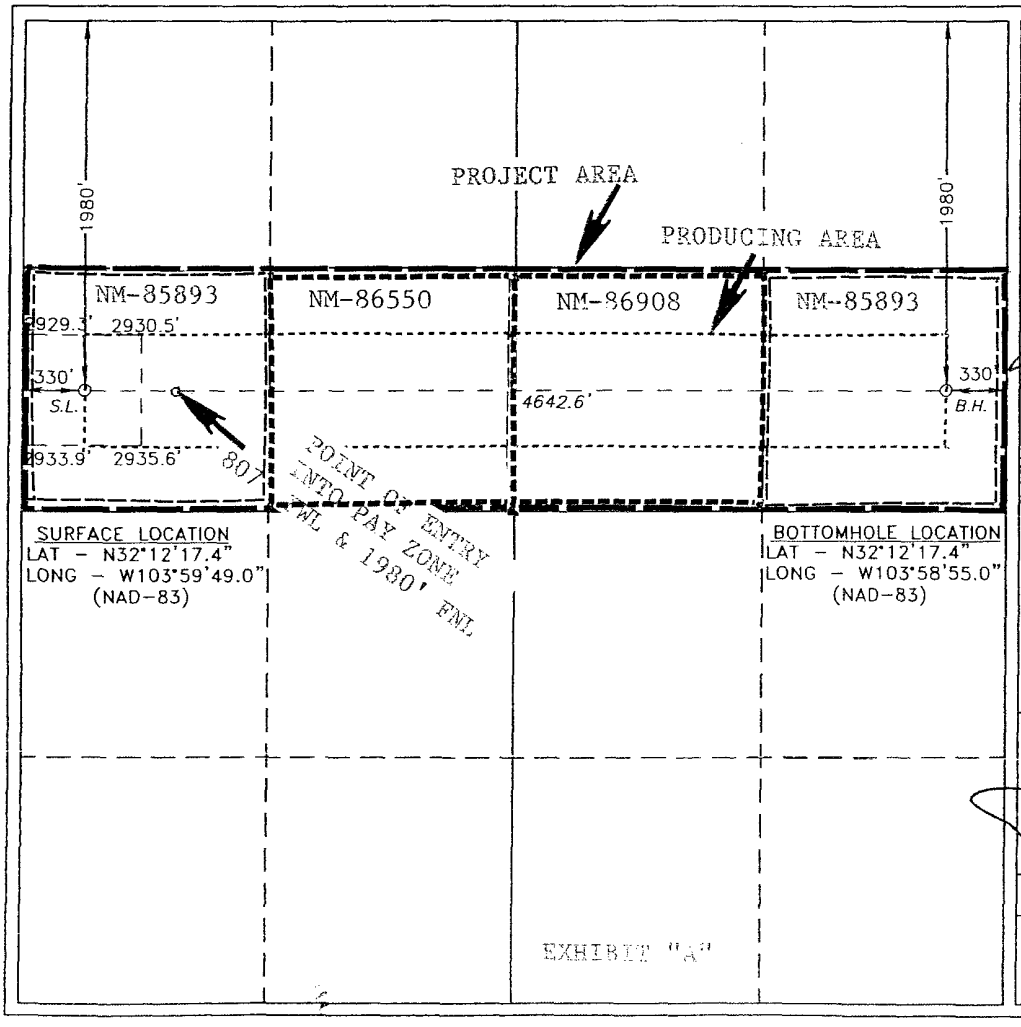
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	21	24 S	29 E		1980	NORTH	330	WEST	EDDY

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
H	21	24 S	29 E		1980	NORTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Joe T. Janica
Signature

Date
05/03/07

Joe T. Janica
Printed Name
Agent

SURVEYOR CERTIFICATION

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

APRIL 24, 2007
Date Surveyed

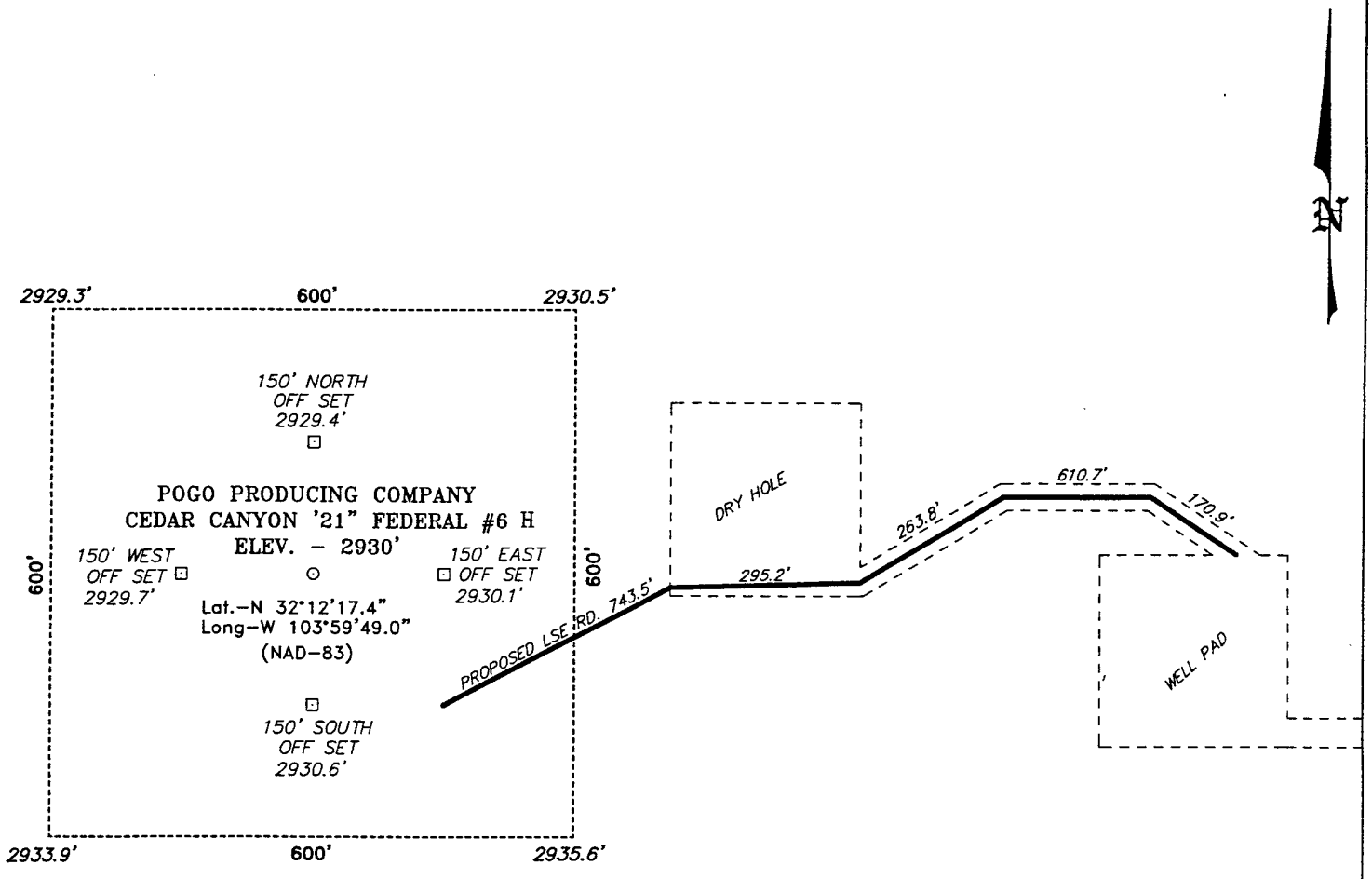
Signature & Seal of Professional Surveyor

W.O. No. 18045

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 21, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM MALAGA, GO EAST ON CO. RD. 720 FOR 1.3 MILES; THENCE TURN SOUTH ONTO CO. RD. 746 AND GO EAST FOR 7.6 MILES THENCE TURN WEST ON LEASE ROAD AND FOLLOW TO WELL LOCATION AND PROPOSED LEASE ROAD.

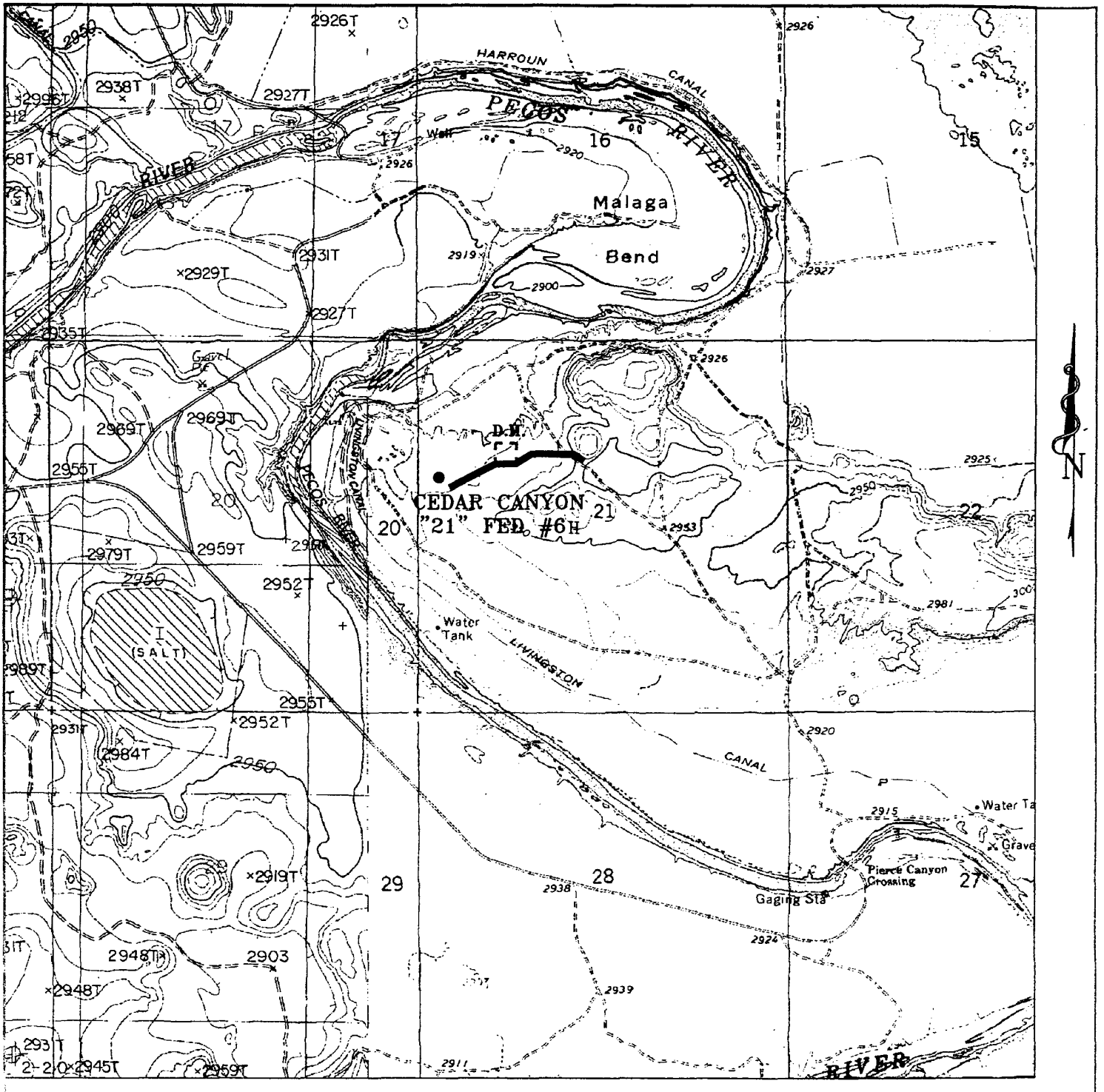
POGO PRODUCING CO.

REF: CEDAR CANYON "21" FEDERAL 6H / Well Pad Topo

THE CEDAR CANYON "21" FEDERAL #6 LOCATED 1980' FROM THE NORTH LINE AND 330' FROM THE WEST LINE OF SECTION 21, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 18046	Drawn By: J. SMALL		
Date: 04-25-2007	Disk: JMS 18046W	Survey Date: 04-24-2007	Sheet 1 of 1 Sheets



CEDAR CANYON "21" FEDERAL #6H
Located at 1980' FNL and 330' FWL
Section 21, Township 24 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	JMS 18046T
Survey Date:	04-24-2007
Scale:	1" = 2000'
Date:	04-25-2007

POGO PRODUCING COMPANY

SURFACE CASING:
17 ½" HOLE DRILLED W/ FRESH WATER. SET 13 3/8" 48 # H-40 CASING @ 500 ft. CMT'D W/ APPROXIMATELY 350 SKS 65:35:6 (C:POZ:GEL) TAILED W/ 200 SKS "C" W/ 2% CACL2. CMT CIRCULATED TO SURFACE.

See COA

INTERMEDIATE CASING:
NIPPLE UP 3K BOP EQUIPMENT. TEST CASING TO 850 PSI FOR 30 MINUTES. DRILL 12¼" HOLE W/ BRINE WATER. SET 9 5/8" CASING @ 2850'. 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 = 2850 9 5/8" 40# J-55 LTC

PRODUCTION CASING:
NIPPLE UP 3K BOP EQUIPMENT. DRILL 8 ½ " HOLE TO KOP ± 7223'. RUN GYRO. P/U DIRECTIONAL TOOLS. DRILL 8 ½" HOLE THROUGH CURVE TO ± 7970 MD. CHANGE HOLE SIZE TO 7 7/8" & CONTINUE DRILLING LATERAL. RUN 5 ½" 17# N-80 CASING TO TOTAL DEPTH OF ± 12,016'. CEMENT W/ ± 1000 SKS PREMIUM PLUS W/ 8 PPS GILSONITE MIXED @ 14.1 PPG. TOC ESTIMATED @ 2500' FS.

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

APPLICATION TO DRILL

POGO PRODUCING COMPANY
CEDAR CANYON "21" FEDERAL #6H
UNIT "E" SECTION 21
T24S-R29E EDDY CO. NM

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

1. LOCATION: 1980' FNL & 330' FWL SECTION 21 T24S-R29E EDDY CO.NM

2. ELEVATION ABOVE SEA LEVEL: 2930' GL

3. GEOLOGIC NAME OF SURFACE FORMATION: Quaternery 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: MD-12,016' TVD-7700'

6. ESTIMATED TOPS OF GELOOGICAL MARKERS:

Basal Anhydrite	2745'	Manzanita	4630'±
Delaware Lime	2946'	Brushy Canyon	5054'
Bell Canyon	2974'	Bone Spring	6706'
Cherry Canyon	3829'	1st Bone Spring	7667'

7. POSSIBLE MINERAL BEARING FORMATION:

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"	0-500'	13 3/8"	48#	8-R	ST&C	H-40
12¼"	0-2850'	9 5/8"	40#	8-R	LT&C	J-55
8½" & 7 7/8"	0-12,016'	5½"	17#	8-R & BT	LT&C	N-80

APPLICATION TO DRILL

POGO PRODUCING COMPANY
CEDAR CANYON "21" FEDERAL #6H
UNIT "E" SECTION 21
T24S-R29E EDDY CO. NM

9. CASING CEMENTING & SETTING DEPTHS:

20"	Conductor	Set 40' of 20" conductor and cement to surface with Redi-mix.
13 3/8"	Surface	Set 500' of 13 3/8" 48# H-40 ST&C casing. Cement with 350 Sx. of 65/35/6 Class "C" POZ/GEL, tail in with 200 Sx. of Class "C" cement + ¼# Flocele/Sx, + 2% CaCl, Circulate cement to surface.
9 5/8"	Intermediate	Set 2850' of 9 5/8" 40# J-55 ST&C casing. Cement with 800 Sx. of 65/35/6 Class "C" POZ/GEL + 5% Salt, tail in with 200 Sx. of Class "C" cement + 2% CaCl, circulate cement to surface.
5½"	Production	Set 12,016' of 5½" 17# N-80 LT&C & BTC casing. Cement with 1000 Sx. of Class "H" Premium Plus cement + 8 PPS GilsoniteMixed at 14.1 PPG, estimate top of cement 2500' from 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 nippled up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once each day and the blind rams will be operated when the drill pipe is out of the hole on trips. Full opening stabbing valve and kelly cock will be available for use if needed. Exhibit "E-1" shows a hydraucally operated closing unit and a 3" 5000 PSI working pressure choke manifold with dual adjustable chokes. No abnormal perssures or temperatures are expected in this well while drilling.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-500'	8.4-8.7	29-32	NC	Fresh water Spud Mud add paper to control seepage.
500-2850'	10.0-10.2	29-36	NC	Brine water add paper to control seepage, use high viscosity sweeps to clean hole.
2850-12,016'	9.2-9.8	29-38	NC*	Cut brine use high viscosity sweeps to clean hole. If water loss is required for water loss go to a Polyner system.

* Water loss may have to be controled to evaluate formation if this becomes necessary reduce WL 8-10 cc.

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 the viscosity and/or the water loss may have to be adjusted to meet these needs.

APPLICATION TO DRILL

POGO PRODUCING COMPANY
CEDAR CANYON "21" FEDERAL #6H
UNIT "E" SECTION 21
T24S-R29E EDDY CO. NM

12. LOGGING, CORING, TESTING PROGRAM:

A. Open hole logs: Dual Laterolog, LDT SNP, Gamma Ray, Caliper from TVD back to 9 5/8" casing shoe.

B. Cased hole log: Gamma Ray, Neutron from 9 5/8" casing shoe back to surface.

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

D. Mud logger will be rigged up on the hole prior to drilling into the pay.

13. POTENTIAL HAZARDS:

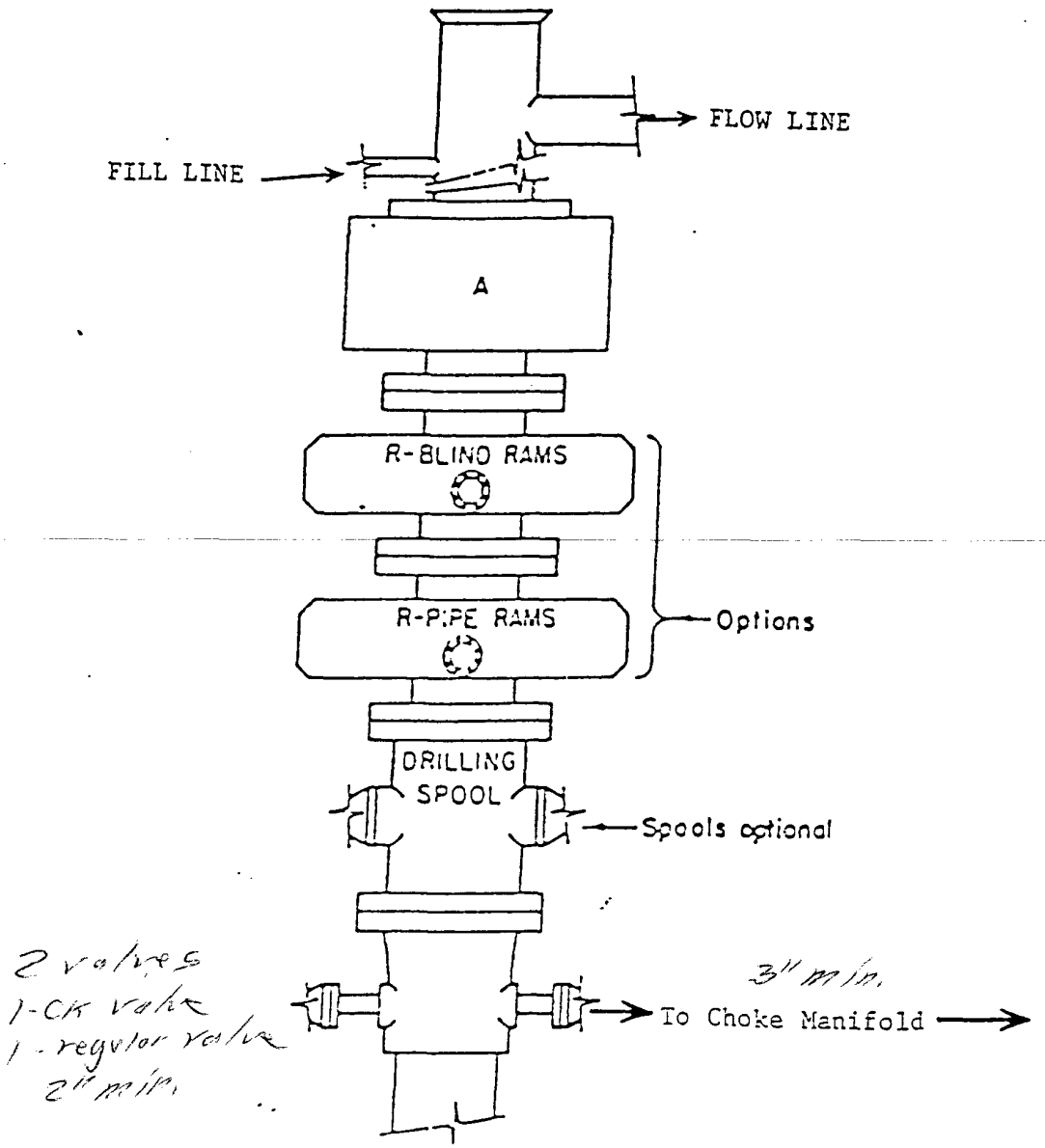
No abnormal pressures or temperatures are expected. There is no known presence of H^2S in this area. If H^2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3800 PSI, and Estimated BHT 185°.

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 potentialed as an oil well.



ARRANGEMENT SRRA

900 Series
3000 PSI WP

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

POGO PRODUCING COMPANY
CEDAR CANYON "21" FEDERAL #6 H
UNIT "E" SECTION 21
T24S-R29E EDDY CO. NM

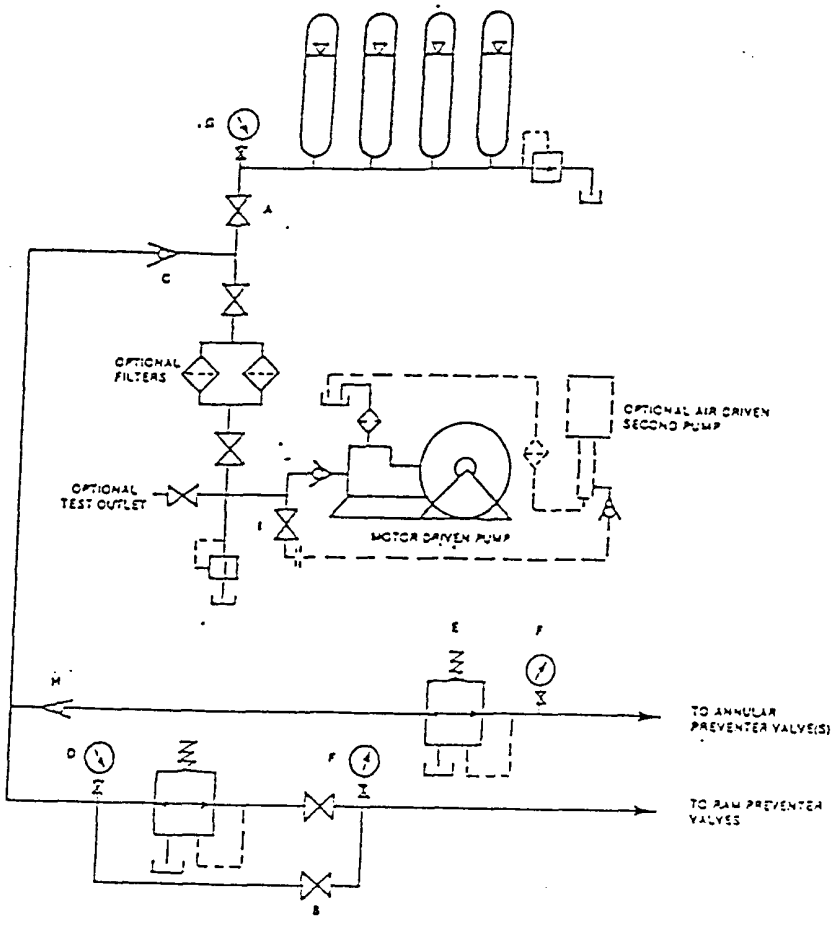


FIGURE K-1. The schematic sketch of an accumulator system shows required and optional components.

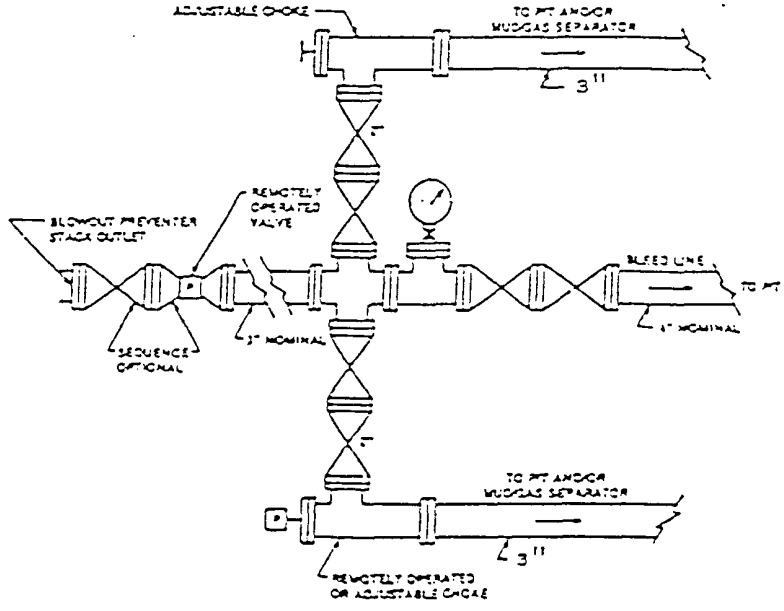


FIGURE K-2. Typical choke manifold assembly for 5M rated working pressure service — surface installation.

EXHIBIT "E-1"
CHOKE MANIFOLD & CLOSING UNIT

POGO PRODUCING COMPANY
CEDAR CANYON "21" FEDERAL #6H
UNIT "E" SECTION 21
T24S-R29E EDDY CO. NM

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety instructor to the following:

   A. Characteristics of H_2S
   B. Physical effects and hazzards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S 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_2S Detection and Alarm Systems

   A. H_2S 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_2S 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.

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 seperator will be brought into service along with H_2S scavengers if necessary.

AFE Cedar Canyon 21 Fed #6H

MITCHELL ENGINEERING PROGRAMS

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)

DISTANCE TABLE

STATION A	STATION B	
3 D DISTANCE BETWEEN STATION A AND STATION B	0.00	ft
	Calculator =	

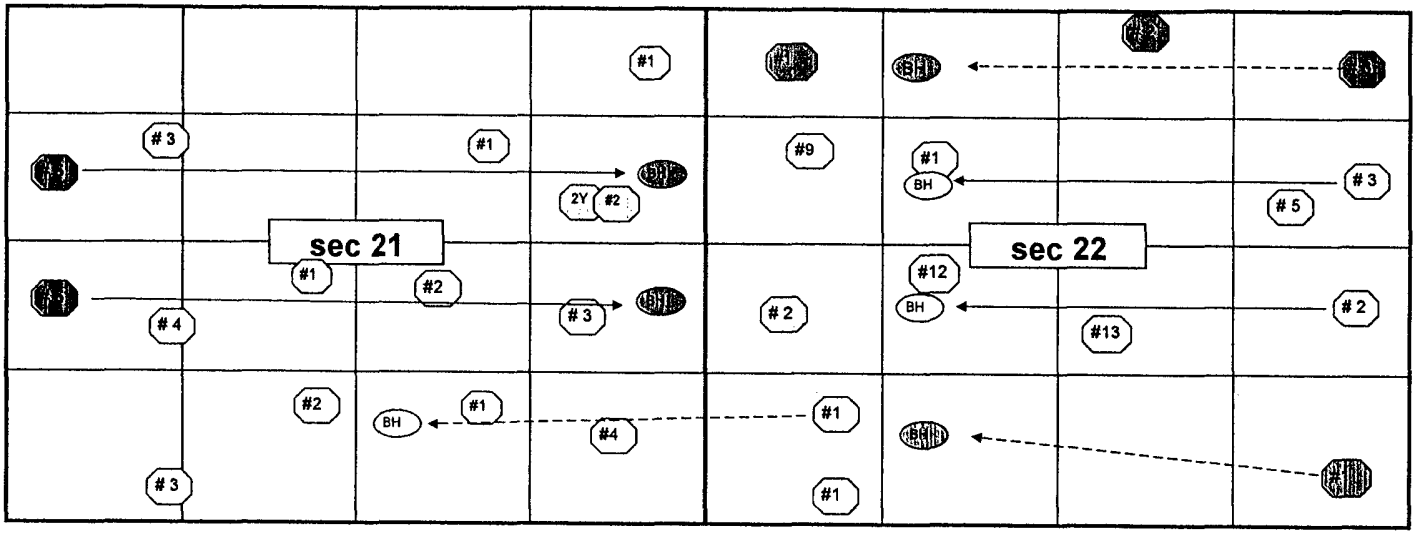
TABLE OF SURVEY STATIONS

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	7123.00	7123.00	0.00	0.00	-
2	100	12	90	7223.00	7222.27	0.00	10.43	12.00
3	100	24	90	7323.00	7317.20	0.00	41.28	12.00
4	100	36	90	7423.00	7403.65	0.00	91.19	12.00
5	100	48	90	7523.00	7477.83	0.00	157.98	12.00
6	100	60	90	7623.00	7536.50	0.00	238.73	12.00
7	100	72	90	7723.00	7577.10	0.00	329.92	12.00
8	100	84	90	7823.00	7597.85	0.00	427.56	12.00
9	50	90	90	7873.00	7600.46	0.00	477.46	12.00
10	100	88.6	90	7973.00	7601.69	0.00	577.45	1.40
11	100	88.6	90	8073.00	7604.13	0.00	677.43	0.00
12	100	88.6	90	8173.00	7606.57	0.00	777.40	0.00
13	100	88.6	90	8273.00	7609.02	0.00	877.37	0.00
14	100	88.6	90	8373.00	7611.46	0.00	977.34	0.00
15	100	88.6	90	8473.00	7613.90	0.00	1077.31	0.00
16	100	88.6	90	8573.00	7616.35	0.00	1177.28	0.00
17	100	88.6	90	8673.00	7618.79	0.00	1277.25	0.00
18	100	88.6	90	8773.00	7621.23	0.00	1377.22	0.00
19	100	88.6	90	8873.00	7623.68	0.00	1477.19	0.00
20	100	88.6	90	8973.00	7626.12	0.00	1577.16	0.00
21	100	88.6	90	9073.00	7628.56	0.00	1677.13	0.00
22	100	88.6	90	9173.00	7631.01	0.00	1777.10	0.00
23	100	88.6	90	9273.00	7633.45	0.00	1877.07	0.00
24	100	88.6	90	9373.00	7635.89	0.00	1977.04	0.00
25	100	88.6	90	9473.00	7638.33	0.00	2077.01	0.00
26	100	88.6	90	9573.00	7640.78	0.00	2176.98	0.00
27	100	88.6	90	9673.00	7643.22	0.00	2276.95	0.00
28	100	88.6	90	9773.00	7645.66	0.00	2376.92	0.00
29	100	88.6	90	9873.00	7648.11	0.00	2476.89	0.00
30	100	88.6	90	9973.00	7650.55	0.00	2576.86	0.00
31	100	88.6	90	10073.00	7652.99	0.00	2676.83	0.00
32	100	88.6	90	10173.00	7655.44	0.00	2776.80	0.00
33	100	88.6	90	10273.00	7657.88	0.00	2876.77	0.00
34	100	88.6	90	10373.00	7660.32	0.00	2976.74	0.00
35	100	88.6	90	10473.00	7662.77	0.00	3076.71	0.00
36	100	88.6	90	10573.00	7665.21	0.00	3176.68	0.00
37	100	88.6	90	10673.00	7667.65	0.00	3276.65	0.00
38	100	88.6	90	10773.00	7670.10	0.00	3376.62	0.00
39	500	88.6	90	11273.00	7682.31	0.00	3876.47	0.00
40	500	88.6	90	11773.00	7694.53	0.00	4376.32	0.00
41	243	88.6	90	12016.00	7700.47	0.00	4619.25	0.00
42								
43								

Cedar Canyon 21 Fed # 6 Horizontal

Sec 21, T-21-S, R-29-E, Eddy County, New Mexico

Sec 22, T-24-S, R-29-E, Eddy County, New Mexico



Well Name	Legal Location in 15	Depth and Strata	Current Prod Zone	Well Name	Legal Location in 15	Depth and Strata	Current Prod Zone
[redacted]	[redacted]	[redacted]	[redacted]				
Gaines 22 # 1	820 FSL & 990 FWL	DRILLING. PROPOSED 1ST BONE SPRINGS		Riverbend Fed # 3	1980 FNL & 330 FEL	TD= 10850 HORIZ 1ST BS	PROPOSED
Cedar Canyon 21# 1	660 FNL & 330 FEL	PTVD = 7730' 1ST Bone Sand	Bone production	Riverbend Fed # 2	1980 FSL & 330 FEL	TD = 10850 HORIZ 1ST BS	PROPOSED
Cedar Canyon 21# 2Y	2310 FNL & 890 FEL	TD = 5392 Delaware	Del production	Riverbend Fed # 1	1650 FNL & 1650 FWL	TD= 5500 G-3	Delaware Production
Cedar Canyon 21# 2	2310 FNL & 990 FEL	TD = 2300', P&A	Well Never Produced	Riverbend Fed # 5	2310 FNL & 860 FEL	TD= 5420 G-6,G-3, LCC	Delaware Production
Cedar Canyon 21# 3	1650 FNL & 1300 FWL	TD = 6890 Delaware. Dry hole	Well Never Produced	Riverbend Fed # 9	1650 FNL & 330 FWL	TD= 7900 1st Bone Sd,	Delaware Production
Mitchel 21 # 1	1650 FNL & 1650 FEL	TD = 8900 2nd Bone Sand	Del production	[redacted]	[redacted]	[redacted]	[redacted]
Mitchel 21 # 2	2110 FSL & 1980 FEL	TD = 7900 1st Bone Sand	Del production	[redacted]	[redacted]	[redacted]	[redacted]
Mitchel 21 # 3	1737 FSL & 929 FEL	TD = 5450 Delaware	Del production	[redacted]	[redacted]	[redacted]	[redacted]
Gaines 21 # 1	990 FSL & 1650 FEL	TD = 7850 Upper Bone Sand	Del production	[redacted]	[redacted]	[redacted]	[redacted]
Gaines 21 # 4	660 FSL & 660 FEL	TD = 5390 Delaware	Del production	Jackal 22 Fed # 1	990 FSL & 230 FWL	NOT DRILLED	NOT DRILLED
Coyote 21 # 1	2310 FSL & 2310 FWL	TD = 5372' Delaware	Del production	Jackal 22 Fed # 2	1710 FSL & 630 FWL	TD=5450 G-3,LCC	Delaware Production
Coyote 21 # 2	990 FSL & 2310 FWL	TD = 6800' Delaware	Del production	Riverbend 22 Fd # 12	2310 FSL & 1750 FWL	NOT DRILLED	NOT DRILLED
Coyote 21 # 3	330 FSL & 1300 FWL	TD = 5400' Delaware	Del production	Riverbend 22 Fd # 13	1650 FSL & 2310 FEL	NOT DRILLED	NOT DRILLED
Coyote 21 # 4	1650 FSL & 1300 FWL	TD = 5400' Delaware	Del production	[redacted]	[redacted]	[redacted]	[redacted]

SURFACE USE PLAN

POGO PRODUCING COMPANY
CEDAR CANYON "21" FEDERAL #6H
UNIT "E" SECTION 21
T24S-R29E EDDY CO. NM

1. EXISTING AND PROPOSED ROADS:

A. Exhibit "B" is a reporduction of a County General Hi-way map showing existing roads. Exhibit "C" is a reproduction of a USGS topographic map showing existing roads and and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. All new roads will be constructed to BLM specifications.

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

C. Directions to location: From Malaga New Mexico take CR-720 (Duarte Road) East for 1.3 for 1.3 miles, turn Right on to CR-746 (Mcdonald Road) follow road for 5.8 miles to the Pecos River, cross bridge and continue for .8+ miles bear Right go 1 mile turn Left on to lease road and follow road West for 1.3 miles, turn Left South, go 900' turn Right (West) follow road Northwest to well # 1, follow new road West past dry hole then Southwest 900'± to location.

D. Exhibit "C" shows a topographic map showing proposed powerline route and flowline route.

2. PLANNED ACCESS ROADS: Reclaim 1050±' of road and construct 800'± of new road.

A. The access roads will be crowned and sitched to a 14' wide travel surface, within a 30' R-O-W.

B. Gradient of all roads will be less than 5%.

C. Turn-outs will be constructed where necessary.

D. If require new access roads will be surface with a minimum of 4-6" of caliche. this material will be obtained from a local source.

E. Center line for new roads will be flagged, road construction will be done as field conditions require.

F. Culverts will be placed in the access road as drainage conditions require. Roads will be constructed to use low water crossings for drainage as required by the topographic conditions.

3. LOCATION OF EXISTING WELLS WITHIN 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"

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 quaters 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 furthed 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.

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 encontered 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 than12 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 completionphases. 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 furture 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
CEDAR CANYON "21" FEDERAL #6H
UNIT "E" SECTION 21
T24S-R29E EDDY CO. NM

11. OTHER INFORMATION:

A. Topography of the location is in a relatively flat plain with a slight dip to the Northwest toward The Pecos River. Going to the South there is a low relief caliche hill with shallow drainage patterns to the West.

B. Surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is used for grazing livestock and the production of oil and gas.

C. An archaeological survey will be conducted on the location and access roads. This report will be filed with The Bureau of Land Management in the Carlsbad field office.

D. There are no dwellings in the near vicinity of this location.

12. OPERATORS REPRESENTIVES:

Before construction:

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

During and after construction:

POGO PRODUCING COMPANY
P.O. BOX 10340
MIDLAND, TEXAS 79702-7340
OFFICE Ph. 432-685-8100
Mr. RICHARD WRIGHT 432-685-8140

13. CERTIFICATION: I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access roads, and that I am fimiliar 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 it's contractors/subcontractors is in compformity 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 report.

NAME : Joe T. Janica Joe T. Janica

DATE : 05/03/07

TITLE : Agent

Conditions of Approval
Cave and Karst

EA#: NM-080-07-0760
Lease #: NM-86908 & NM-85893
Pogo Producing Company
Cedar Canyon 21 Fed. #5H & #6H

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 void (bit drops) of four feet or more and circulation losses greater then 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.

Pressure Tests:
Annual pressure tests will be performed by the Operator on all casing annuli. If the test results indicated a casing failure, remedial actions approved by the BLM will be undertaken to correct the problem.

Differential Shut-off Systems:
A leak detection system and differential shut off systems will be installed for pipelines and tanks used in production or drilling.

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.	**6H-Cedar Canyon "21" Federal**
Location SHL:	**1980 FNL, 0330 FWL, Sec. 21, T-24-S, R-29-E, Eddy County, NM**
Location BHL:	**1980 FNL, 0330 FEL, Sec. 21, T-24-S, R-29-E, Eddy County, NM**
Lease:	**NM-85893**

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. 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 **a minimum of 25 feet into the Rustler Anhydrite at approximately 500 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 12 hours for a non-water basin, 18 hours for a water basin, 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 extend a minimum of 200 feet inside the intermediate casing.**

D. 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:

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 and API RP 53.

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. 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.
5. A variance to test the surface casing and BOP/BOPE to the reduced pressure of 1000 psi, but not to exceed 70% of the internal yield pressure with the rig pumps is approved.

Engineer on call phone: 505-706-2779

WWI 050907