

ATS-07-325
EA-07-583

OCD-ARTESIA

Form 3160-3
(April 2004)

Month - Year
MAY 8 2007
OCD - ARTESIA, NM

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

HIGH CAVEKARST
SECRETARY'S POTASH

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

5. Lease Serial No.
NMNM 02860

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2. Name of Operator
BEPCO, L. P.

3a. Address P. O. Box 2760
Midland, TX 79702

3b. Phone No. (include area code)
432-683-2277

4. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface SESW, UL N, 800' FSL, 2280' FWL, Lat N32.212472, Lon W103.922139
At proposed prod. zone Same CARLSBAD CONTROLLED WATER BASIN

7. If Unit or CA Agreement, Name and No.
NMNM 71016

8. Lease Name and Well No.
Poker Lake Unit #289

9. API Well No.

10. Field and Pool, or Exploratory
Nash Draw (Dela, BS, Avalon Sd)

11. Sec., T. R. M. or Blk. and Survey or Area

Sec 18, T24S, R30E, MER NMP

14. Distance in miles and direction from nearest town or post office*
14 Miles East of Malaga, NM

12. County or Parish
Eddy County

13. State
NM

15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)
800'

16. No. of acres in lease
2520.68

17. Spacing Unit dedicated to this well
40

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.
1030'

19. Proposed Depth
7550' MD

20. BLM/BIA Bond No. on file
NM 2204

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3145' GL

22. Approximate date work will start*
04/15/2007

23. Estimated duration
14 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
Annette Childers
Title
Administrative Assistant

Name (Printed/Typed)
Annette Childers

Date
2-26-2007

Approved by (Signature)
Buschardt
Title
STATE DIRECTOR

Name (Printed/Typed)

Date
APR 25 2007

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 1 YEAR

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)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

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 St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources DepartmentForm C-102
Revised October 12, 2006

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	Pool Name
	47545	Nash Draw (Dela/Bone Spring/Avalon Sd)
Property Code	Property Name	Well Number
02860	POKER LAKE UNIT	289
OGRID No.	Operator Name	Elevation
001801	BEPCO, L.P.	3145'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	18	24 S	30 E		800	SOUTH	2280	WEST	EDDY

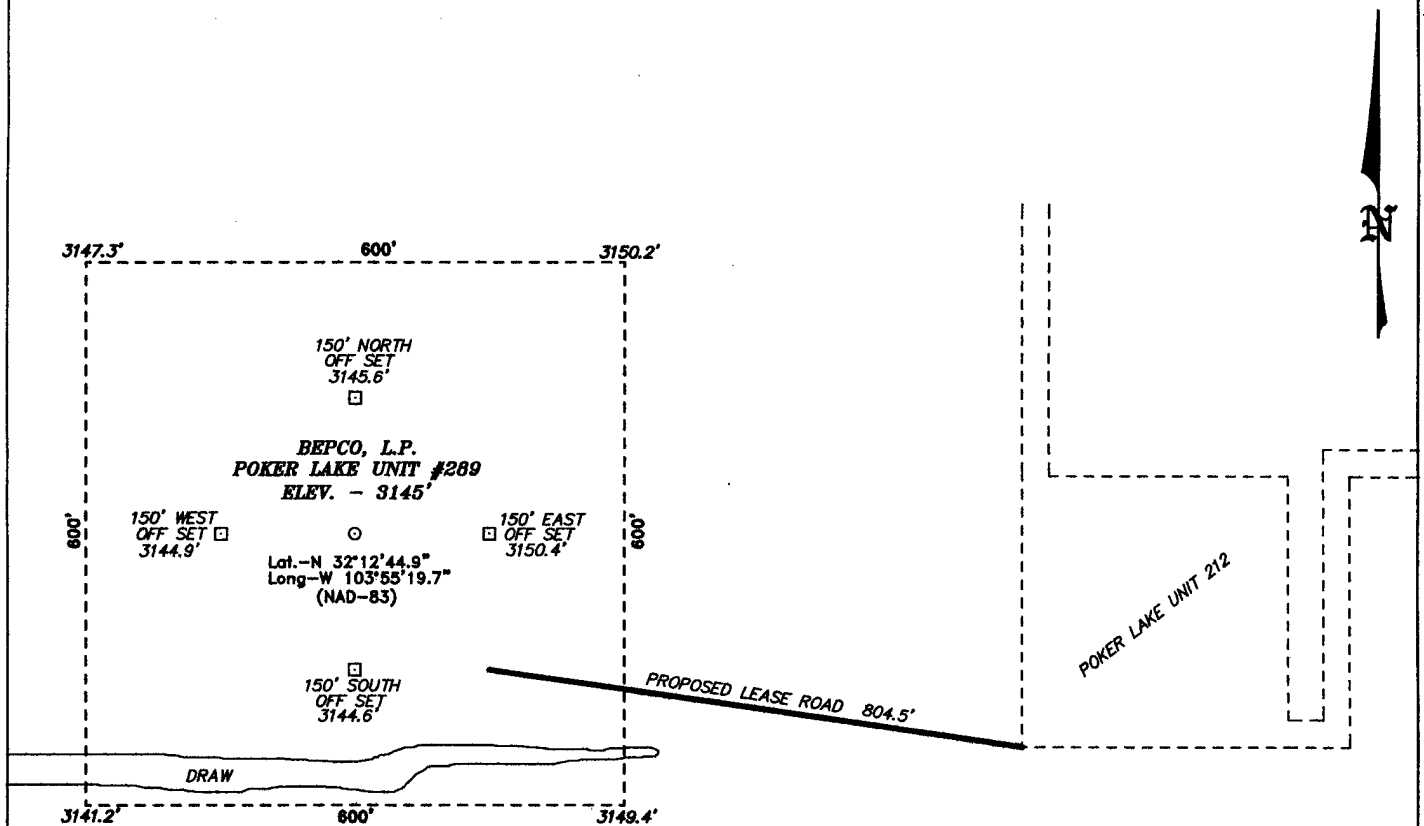
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
40	N								

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

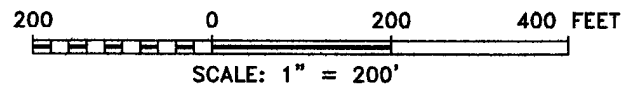
<p>LOT 1 39.91 ACRES</p> <p>LOT 2 39.96 ACRES</p> <p>LOT 3 40.08 ACRES</p> <p>LOT 4 40.07 ACRES</p> <p>80.00 ACRES</p> <p>160.00 ACRES</p> <p>2280'</p> <p>3147.3'</p> <p>3150.2'</p> <p>3141.2'</p> <p>3149.4'</p> <p>LAT - N32°12'44.9" LONG - W103°55'19.7" (NAD-83)</p>	<p>OPERATOR CERTIFICATION</p> <p>I 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>Gary E. Gerhard</i> 2/22/07 Signature Date</p> <p>Gary E. Gerhard Printed Name</p> <p>SURVEYOR CERTIFICATION</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>JANUARY 04, 2007 Date Surveyed</p> <p><i>[Signature]</i> Signature of Professional Surveyor</p> <p>7977 Professional Surveyor No.</p> <p>7806 Professional Surveyor No.</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>
---	---

SECTION 18, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF STATE HWY 128 AND CO. RD. 793 (RAWHIDE), PROCEED SOUTH ON CO. RD. 793 11.2 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 0.4 MILES PAST #213 TANK BATTERY TO THE 212 AND PROPOSED LEASE ROAD.



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

W.O. Number: 17606

Drawn By: J. SMALL

Date: 01-08-2007

Disk: 17606W JMS

BEPCO, L.P.

REF: POKER LAKE UNIT #289 / WELL PAD AND TOPO

THE POKER LAKE UNIT No. 289 LOCATED 800'
FROM THE SOUTH LINE AND 2280' FROM THE WEST LINE OF
SECTION 18, TOWNSHIP 24 SOUTH, RANGE 30 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 01-04-2007

Sheet 1 of 1 Sheets

**EIGHT POINT DRILLING PROGRAM
BEPCO, L.P.**

NAME OF WELL: Poker Lake Unit #289

LEGAL DESCRIPTION - SURFACE: 800' FSL & 2280' FWL, Section 18, T-24-S, R-30-E, Eddy County, New Mexico.

POINT 1: ESTIMATED FORMATION TOPS

(See No. 2 Below)

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3162' (est) GL 3145'

<u>FORMATION</u>	<u>ESTIMATED TOP FROM KB</u>	<u>ESTIMATED SUBSEA TOP</u>	<u>BEARING</u>
T/Rustler	312'	+2850'	
B/Rustler	612'	+2550'	Barren
T/Salt	642'	+2520'	Barren
B/Salt	3187'	-25'	Barren
T/Lamar	3400'	-238'	Oil/Gas
T/Bone Spring	7202'	-4040'	Oil/Gas
T/Avalon	7267'	-4105'	Oil/Gas
TD	7550'	-4388'	

POINT 3: CASING PROGRAM

<u>TYPE</u>	<u>INTERVALS</u>	<u>Hole Size</u>	<u>PURPOSE</u>	<u>CONDITION</u>
16"	0' - 40'	20"	Conductor	Contractor Discretion
8-5/8", 32#, J-55, LT&C	0' - 632'	12-1/4"	Surface	New
5-1/2", 15.5#, J-55, LT&C	0' - 6300'	7-7/8"	Production	New
5-1/2", 17#, J-55, LT&C	6300' - 7550'	7-7/8"	Production	New

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

A BOPE equivalent to requirements of Onshore Oil & Gas Order No. 2 – 3000 psi system (Diagram 1) will be nipped up on the surface casing head. The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. when installed on the surface casing head will be hydro-tested to 70% of internal yield pressure of casing or 1000 psi whichever is less with the rig pump.

- a) Upon installation
- b) After any component changes
- c) Fifteen days after a previous test
- d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip.

Surface casing to be set into the Rustler below all fresh water sands.

Production casing will be cemented using DS Litecrete w/TOC 500' above uppermost pay.

Drilling procedure, BOP diagram, anticipated tops and surface plans attached.

This well is located ^{inside} ~~outside~~ the Secretary's Potash area and outside the R-111 Potash area. There are no potash leases within 1 mile of the location.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 642'	FW Spud Mud	8.5 - 9.2	38-70	NC	NC	NC	10.0
642' - 5600'	Brine Water	9.8 -10.2	28-30	NC	NC	NC	9.5 - 10.5
5600' - TD	BW/Diesel	8.8 - 9.0	40	8	2	<100 cc	9.5 - 10.5

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION**A) TESTING**

None anticipated.

B) LOGGING

GR-CNL-LDT-AIT from TD to base of Salt (+/- 3187').
GR-CNL-CAL from base of Salt to surface.

C) CONVENTIONAL CORING

None anticipated.

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT ³ /SX	W/L
SURFACE:							
Lead 0 - 332' (100% excess circ to surface)	150	332	35:65 Poz Class "C" + 6% D20 + 3% S1 + 5 pps D24 + 0.125 pps D130	10.27	12.6	1.98	NC
Tail 332' - 632' (100% excess)	180	300	Class "C" + 2% S1	6.33	14.8	1.34	NC
PRODUCTION:							
Lead 2900' - 6000' (50% excess)	350	3100	Litecrete 39/61 (D961/ D124) + 2% bwob D153 + 0.05gps D604AM + 0.03 gps DM45 + 2ppg D24 + 0.04gpsD801	9.825	10.2	2.37	<400
Tail 6000' - 7550' (50% excess)	190	1550	Litecrete 39/61 (D961/ D124) + 2% bwob D153 + 0.05gps D604AM + 0.03 gps DM45 + 2ppg D24 + 0.04gpsD801	7.335	10.5	2.04	<400

E) DIRECTIONAL DRILLING

No directional services anticipated.

see COA

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3285 psi (max) or MWE of 8.7 ppg is expected. Lost circulation may exist in the Delaware Section from 3400-7202'. No H₂S is anticipated.

POINT 8: OTHER PERTINENT INFORMATION**A) Auxiliary Equipment**

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

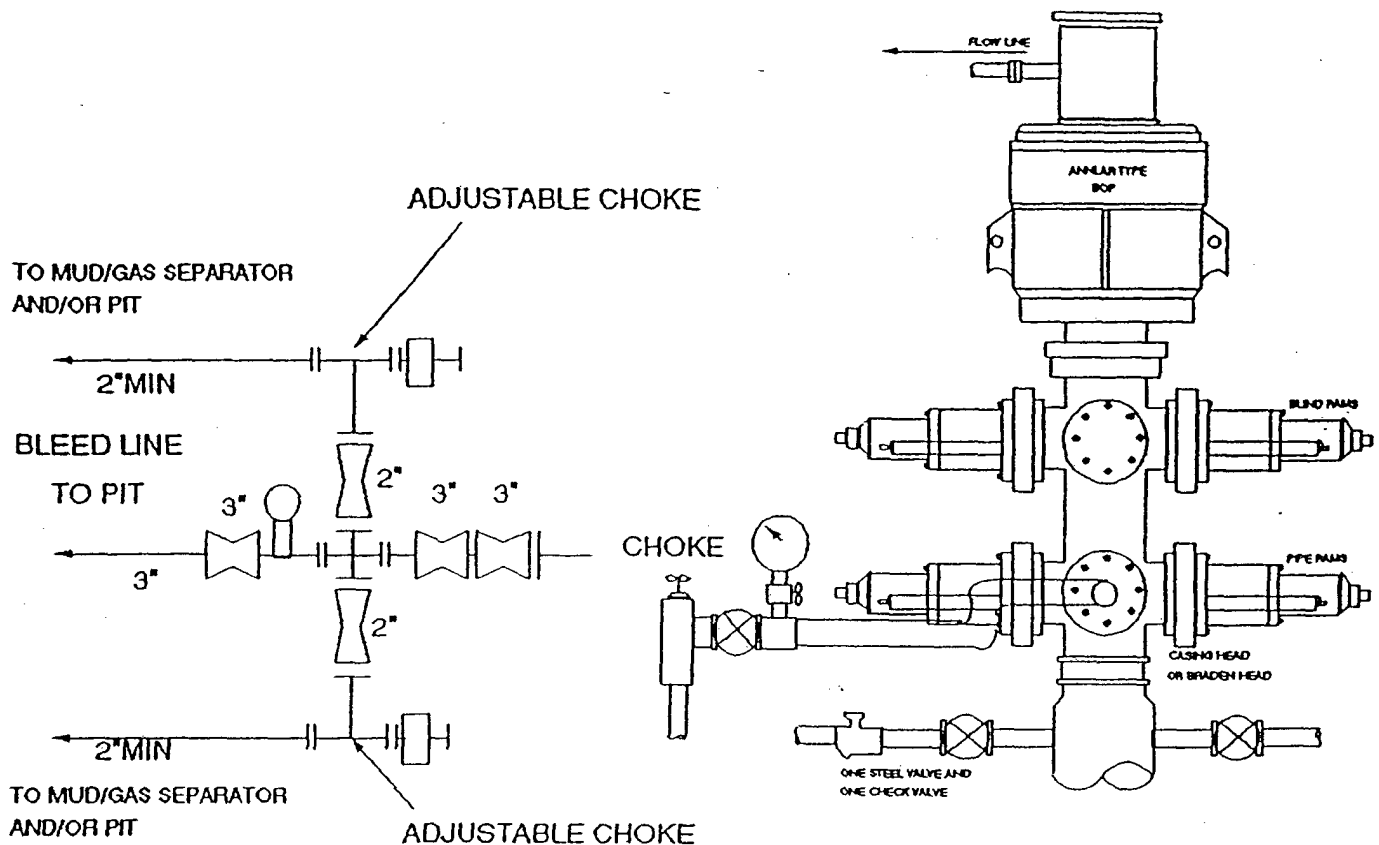
12 days drilling operations

14 days completion operations

GEG/cnt

February 23, 2007

3000 PSI WP



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- A. One double gate blowout preventer with lower rams for pipe and upper rams blind, all hydraulically controlled.
- B. Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.
- C. All connections from operating manifold to preventers to be all steel hose or tube a minimum of one inch in diameter.
- D. The available closing pressure shall be at least 15% in excess of that required with sufficient volume to operate (close, open, and re-close) the preventers.
- E. All connections to and from preventers to have a pressure rating equivalent to that of the BOP's.
- F. Manual controls to be installed before drilling cement plug.
- G. Valve to control flow through drill pipe to be located on rig floor.
- H. All chokes will be adjustable. Choke spool may be used between rams.

DIAGRAM 2

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: Poker Lake Unit #289

LEGAL DESCRIPTION - SURFACE: 800 FSL & 2280' FWL, Section 18, T-24-S, R-30-E, Eddy County, New Mexico.

POINT 1: EXISTING ROADS

A) Proposed Well Site Location:

See Exhibit A and Survey Plats

B) Existing Roads:

From the junction of State Hwy 128 and County Road 793 (Rawhide), proceed south on County Road 793 for 11.2 miles to lease road. On lease road go west 0.4 miles past PLU #213 tank battery to the PLU #212 and proceed to lease road.

C) Existing Road Maintenance or Improvement Plan:

See Exhibit B and Survey Plats.

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location:

804.5' of new road is required.

B) Width

15'

C) Maximum Grade

Grade to match existing topography or as per BLM requirements.

D) Turnout Ditches

Spaced per BLM requirements.

E) Culverts, Cattle Guards, and Surfacing Equipment

If required, culverts and cattle guards will be set per BLM Specs.

POINT 3: LOCATION OF EXISTING WELLS

Exhibit A indicates existing wells within the surrounding area.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: BEPCO,LP
Well Name & No. Poker Lake Unit # 289
Location: 880'FSL, 2280'FWL, SEC18, T24S, R30E, Eddy County, NM
Lease: NM-02860

I. DRILLING OPERATIONS REQUIREMENTS:

A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance, at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 - for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

1. Spudding
2. Cementing casing: 16 inch 8.625 inch 5.5 inch
3. BOP tests

B. A Hydrogen Sulfide (H₂S) Drilling Plan is N/A. A copy of the plan shall be posted at the drilling site.

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; cable speed not to exceed 30 feet per minute.

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 8.625 inch surface casing shall be set at above the salt, should it occur more shallow, at least 25 feet into the Rustler Anhydrite @ approximately 632 feet and cement circulated 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, which ever is greater. (This is to include the lead cement)
3. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds of compression strength, which ever is greater.
4. If cement falls back, Remedial cementing shall be completed prior to drilling out that string.

B. The minimum required fill of cement behind the 5.5 inch production casing is cement shall extend upward a minimum of 200 feet above the SHOE of the SURFACE casing string. If circulation is lost while drilling the surface casing well bore, cement on the 5.5" casing will be brought to the surface.

D. If hard band 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 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.

B. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 8.625 inch casing shall be 2000 psi.

C. 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 the 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 the test is done with a test plug and 30 minutes without a test plug.
5. A variance to test the BOP and BOPE to the reduced pressure of 1000 psi with the rig pumps is approved.

IV. Hazards:

1. Our geologist has indicated that there is high potential for High Cave / Karst potential.
2. Our geologist has indicated that there is potential for lost circulation in the Delaware and Bone Spring.

Engineering may be contacted at 505-706-2779 for variances if necessary.

FWright 3/7/07

Conditions of Approval Cave and Karst

EA#: NM-520-07-583
Lease #: NMNM-02860
BEPCO, L.P.
Poker Lake Unit # 289

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.

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.

Abandonment Cementing:

Upon well abandonment the well bore will be cemented completely from 100 feet below the bottom of the cave bearing zone to the surface.

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.