V-Door West SW
Restrict pad to north +0150ft

OCD-ARTESIA 7042

FEB - 2 2009

ATS-09-120 LM

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

162

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work ☑ DRILL ☐ REENTER	5. Lease Serial No. ~~NM~~ NM 02862 11-13-08 DM
1b. Type of Well ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☑ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator **BOPCO, L. P.** 260737	7. If Unit or CA Agreement, Name and No
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, 600' FSL, 2200' FWL, Lat N32.183128, Lon W103.869975** At proposed prod zone **1650' FNL, 330' FWL, Lat N32.191353, Lon W103.876033**	8. Lease Name and Well No. **Poker Lake Unit #300H**
	9. API Well No. 30-015-36950
	10. Field and Pool, or Exploratory **Nash Draw (Dela, BS Avalon Sd)** #47545
	11. Sec., T R M or Blk and Survey or Area **Sec 27, 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 drlg unit line, if any) **440'**	16. No of acres in lease **2880** 17. Spacing Unit dedicated to this well **160**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft **2252'**	19. Proposed Depth ~~10,650'~~ **MD / 7560' TVD** 16926 20. BLM/BIA Bond No on file **COB000050**
21. Elevations (Show whether DF, KDB, RT, GL, etc.) **3352' GL**	22. Approximate date work will start* **02/15/2009** 23. Estimated duration **38 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	Name *(Printed/Typed)* **Annette Childers**	Date 11-5-08
Title **Administrative Assistant**		
Approved by *(Signature)* /s/ Don Peterson	Name *(Printed/Typed)* /s/ Don Peterson	Date JAN 28 2009
Title FOR FIELD MANAGER	Office 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)

Portions of horizontal may be unorthodox.

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

ENTERED

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA
FEB – 2 2009

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

5 Lease Serial No.
NMLC 02862

6 If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No

1. Type of Well
☑ Oil Well ☐ ☐ Gas Well ☐☐ ☐ Other

8 Well Name and No.
Poker Lake Unit #300H

2 Name of Operator **BOPCO, L. P.**

9 API Well No
30-015-36950

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

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

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

4 Location of Well *(Footage, Sec, T., R., M., or Survey Description)*

Surface: SESW, 600' FSL, 2200' FWL, Sec 27, T24S, R30E, Lat N32.183128, Lon W103.869975
BHL: SESW, 1650' FNL, 330' FWL, Sec 27, T24S, R30E, Lat N32.191353, Lon W103.876033

11 County or Parish, State
Eddy County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☑ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA Required subsequent reports shall be filed within 30 days following completion of the involved operations If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

BOPCO request approval to change the surface casing setting depth from 750' to 555'. This change is the result of new geologic information received from Jerry Vent with BLM on 11/19/08.

BOPCO L.P. Bond # on file: COB000050

14 I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Annette Childers

Title **Administrative Assistant**

Signature Annette Childers

Date 11-25-08

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by **/s/ Don Peterson**

FOR Title FIELD MANAGER

Date JAN 28 2009

Conditions of approval, if any, are attached Approval of this notice 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

Office CARLSBAD FIELD OFFICE

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)

Surface casing to be set into the Rustler below all fresh water sands.
Production casing will be cemented using Halliburton acid soluble cement system in lateral hole with TOC at approximately 3,415' (approximately 500' into intermediate casing).
Drilling procedure, BOP diagram, anticipated tops attached.

This well is located outside the Secretary's Potash area. There are no potash leases within 1 mile of the location.

Both surface and bottom hole location are orthodox.

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a subsidiary of BOPCO, L.P., 201 Main Street, Ft. Worth, TX, 76102. Bond No. CO000050 (Nationwide).

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 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
30-015-36950	47545	Nash Draw (Delaware, Bone Spring, Avalon Sd)

Property Code	Property Name	Well Number
306403	POKER LAKE UNIT	300H

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3352'

Surface Location

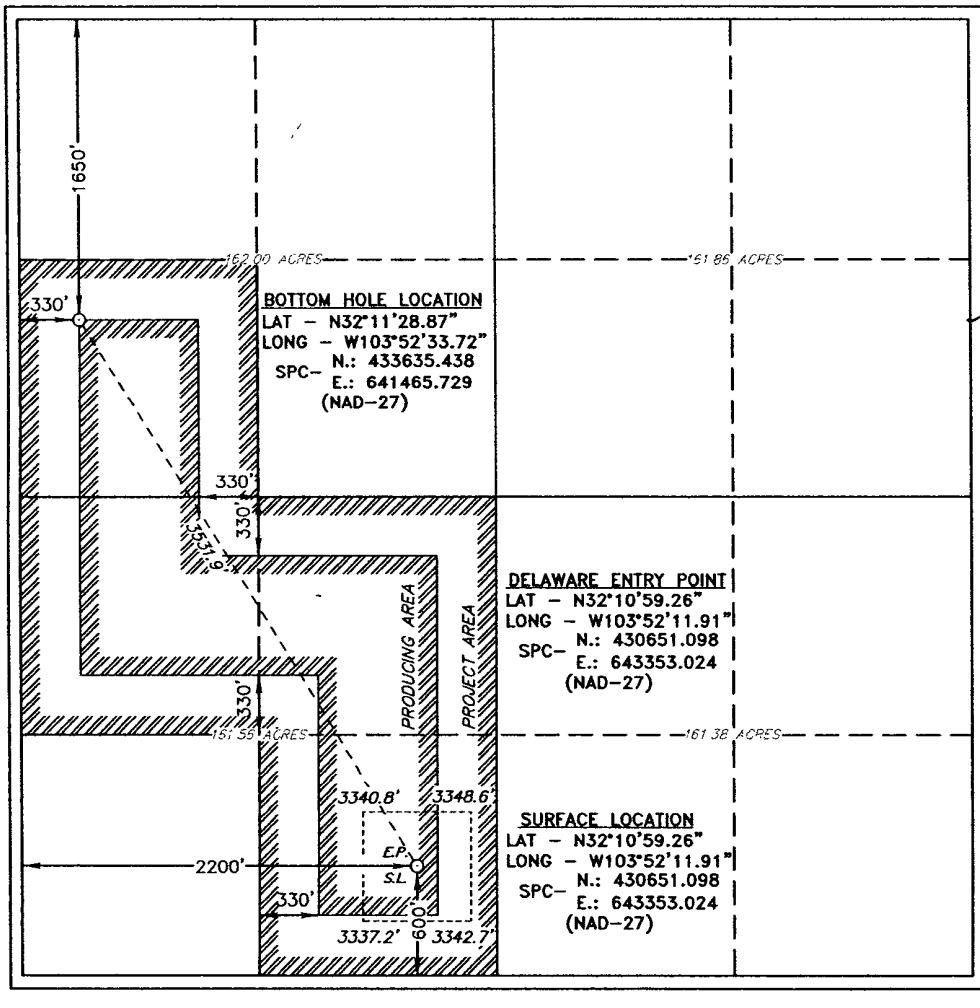
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	27	24 S	30 E		600	SOUTH	2200	WEST	EDDY

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
E	27	24 S	30 E		1650	NORTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160	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



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.

Signature Date 11/4/08

Gary E. Gerhard
Printed Name

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.

SEPTEMBER 30, 2008
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

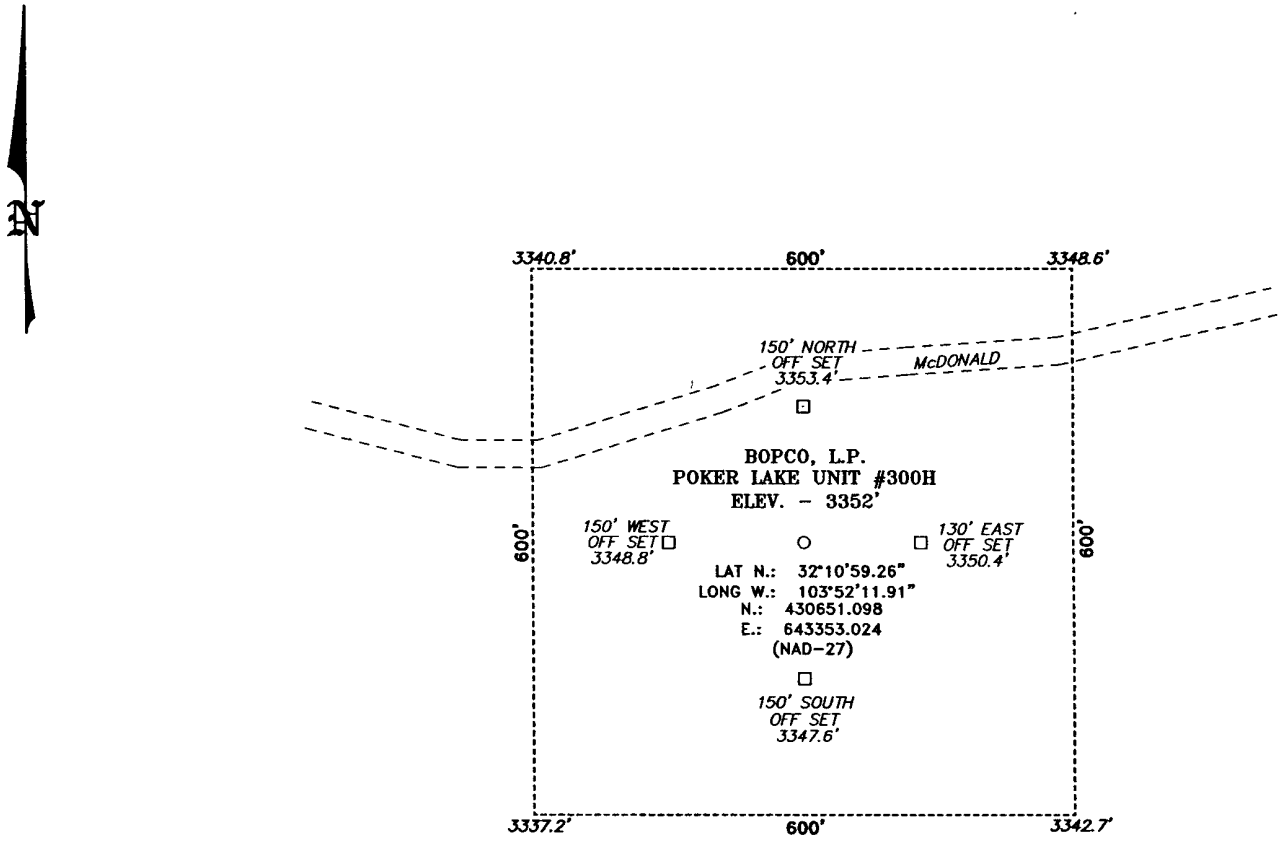
W.O. Number: 22168

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 27, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, **NEW MEXICO.**



200 0 200 400 FEET

SCALE: 1" = 200'

DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF STATE HWY 128 AND TWIN WELLS ROAD, GO SOUTHERLY ON TWIN WELLS FOR 10.0 MILES TO McDONALD, ON McDONALD GO WEST 0.5 MILES TO PROPOSED LOCATION.

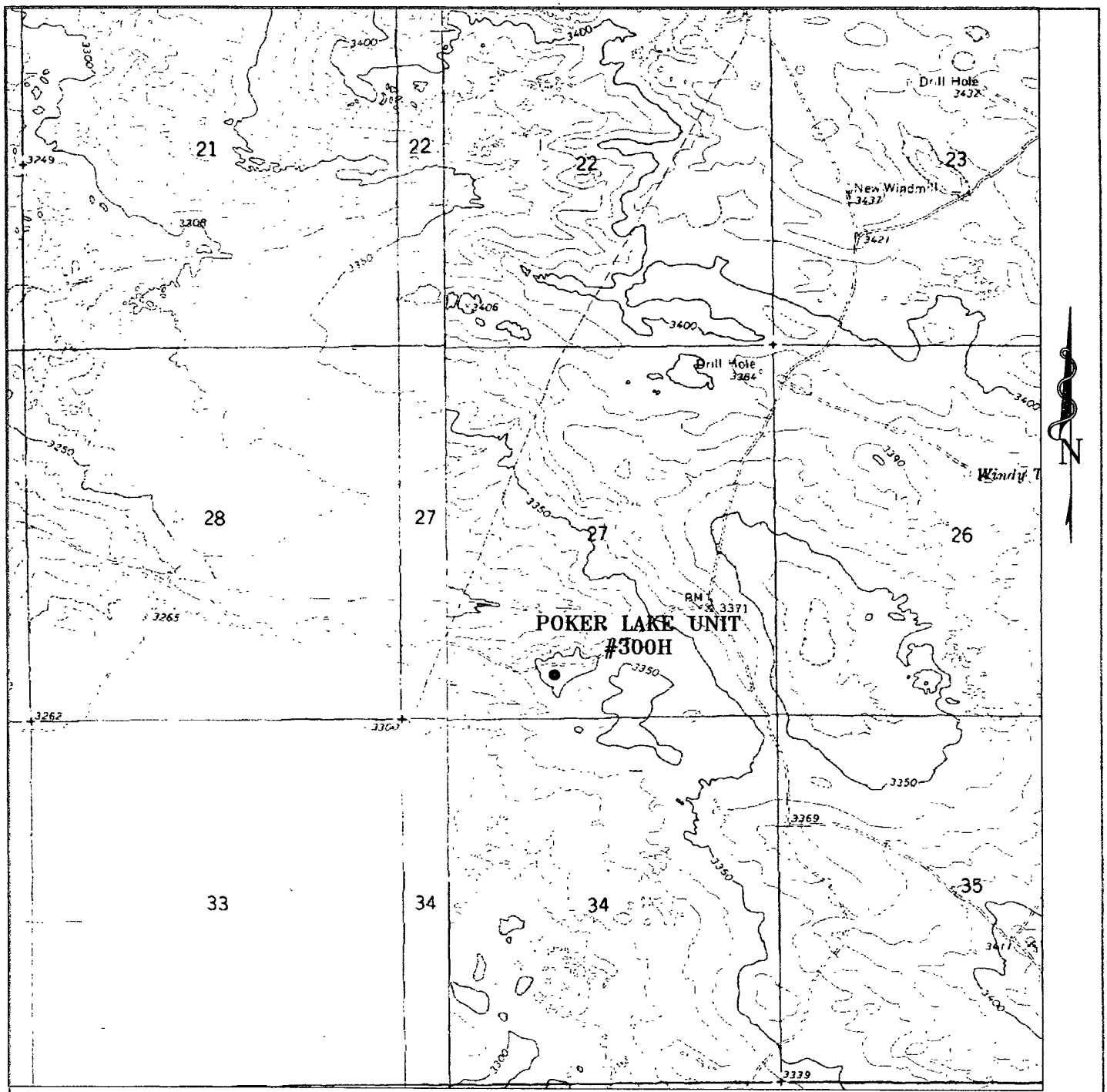
BOPCO, L.P.

REF: POKER LAKE UNIT #300H / WELL PAD AND TOPO

THE POKER LAKE UNIT #300H LOCATED 600' FROM THE SOUTH LINE AND 2200' FROM THE WEST LINE OF SECTION 27, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 20468	Drawn By: J. SMALL		
Date: 10-01-2008	Disk: 20468 JMS	Survey Date: 09-30-2008	Sheet 1 of 1 Sheets

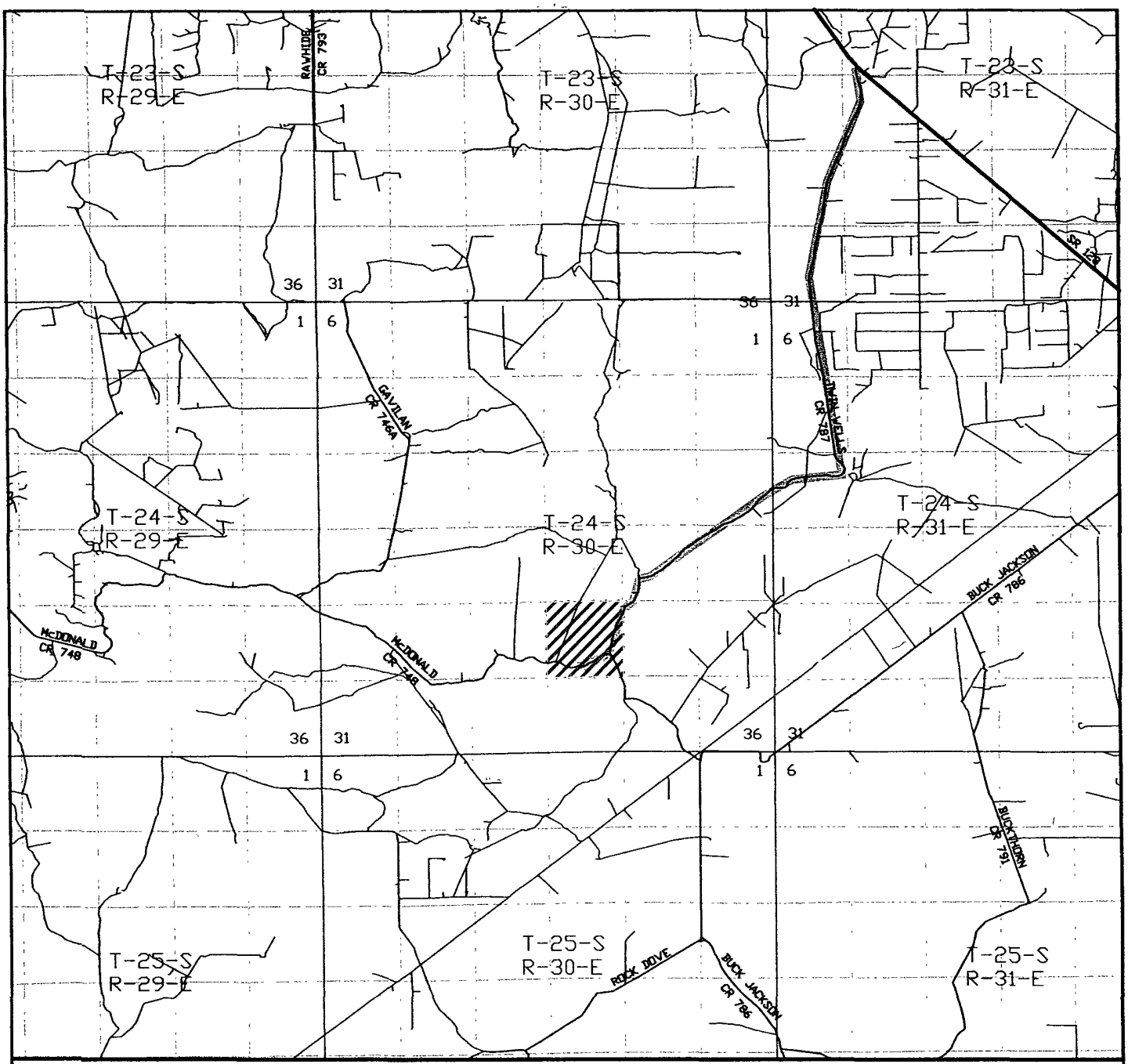


POKER LAKE UNIT #300H
600' FSL and 2200' FWL
Section 27, Township 24 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W O Number	JMS 20468
Survey Date	09-30-2008
Scale	1" = 2000
Date	10-01-2008

BOPCO, L.P.



POKER LAKE UNIT #300H
600' FSL and 2200' FWL
Section 27, Township 24 South, Range 30 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
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number:	JMS 20468
Survey Date:	09-30-2008
Scale:	1" = 2 MILES
Date:	10-01-2008

BOPCO, L.P.

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: Poker Lake Unit #300H
LEGAL DESCRIPTION - SURFACE: 600' FSL, 2200' FWL, Section 27, T24S, R30E, Eddy County, NM.
BHL: 1650' FNL, 330' FWL, Section 27, T24S, R30E, 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 3365' (estimated)
GL ~~3345'~~ 3352 per G. Gerhard 12-29-08 mwl

FORMATION	ESTIMATED TOP FROM KB TVD	MD	ESTIMATED SUB-SEA TOP	BEARING
T/Rustler	1772'	1772'	+ 1600'	Barren
B/Rustler	2142'	2142'	+ 1230'	Barren
T/Salt	2172'	2172'	+ 1200'	Barren
B/Salt	3832'	3832'	- 460'	Barren
T/Lamar Lime	3902'	3902'	- 530'	Barren
T/Ramsey	3937'	3937'	- 565'	Oil/Gas
T/Lower Cherry Canyon	6037'	6037'	- 2665'	Oil/Gas
KOP (Kick Off Point)	7409'	7409'	- 4037'	N/A
T/Lower Brushy Canyon	7557'	7557'	- 4185'	Oil/Gas
EOC Target	7559'	7712'	- 4227'	Oil/Gas
Bone Spring Lime	7747'	7747'	- 4375'	Oil/Gas
Avalon Sand	7857'	7857'	- 4485'	Oil/Gas
TD (Pilot Hole)	7949'	7949'	- 4579'	Oil/Gas
TD Horizontal Hole	7559'	~~11,049'~~ 10926	- 4188'	Oil/Gas

POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	Hole Size	PURPOSE	CONDITION
20"	0'- 60'	24"	Conductor	Contractor Discretion
13-3/8", 48#, H-40, 8RD, ST&C See COA	0' - ~~750'~~	17-1/2"	Surface	New
9-5/8", 36#, J-55, 8RD, LT&C + sundry	0' - 3922'	12-1/4"	Intermediate	New
5-1/2", 17#, HCP-110, 8RD, LT&C 11/25/08	0' - 7150'	8-3/4"	Production	New
5-1/2", 17#, ~~HCP-110~~ P-110, Ultra Flush JT	7150' - ~~11,049'~~ 10926	8-3/4"	Production	New

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
13-3/8", 48#, H-40, 8RD, ST&C	10.67	2.34	2.82
9-5/8", 36#, J-55, 8RD, LT&C	3.69	1.14	1.12
5-1/2", 17#, HCP-110, 8RD, LT&C	3.33	2.07	3.16
5-1/2", 17#, HCP-110, Ultra Flush Jt	2.38	2.07	3.16

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure a that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PROTECTIVE CASING

Tension — A 1.6 design factor utilizing the effects of buoyancy (10 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

PRODUCTION CASING

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (3529 psig) on top of the maximum anticipated packer fluid gradient. Backup on production strings will be formation pore pressure. The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

The blowout preventer equipment will be as shown in Diagram #2 and will consist of a double ram type preventer (3000 psi WP) and a bag type (Hydril) annular preventer (3000 psi WP). The same BOPE will be installed on the surface casinghead and on all subsequent casing strings. The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. when installed on the surface casinghead will be hydro-tested to 200 psig & ~~1000~~ psig with the rig mud pump. The BOPE when rigged up on the intermediate casing spool will be tested to 3000 psig by independent tester. In addition to the high pressure test, a low pressure (200 psig) test will be required.

See COA

These tests will be performed:

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.

POINT 5: MUD PROGRAM

See COA

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 750'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10.0
750' - 3922'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5
3922' - 7409'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0
7409' - 11,049'	FW/Gel/Starch	8.7 – 9.0	28-36	NC	NC	<100	9.5 – 10.0

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated.

B) LOGGING

Run #1: PEX (GR-CNL/LDT-AIT) from TD of pilot hole 7949' to base of intermediate casing at 3922'.
Run #2: GR with MWD during drilling of build and horizontal portions of 8-3/4" hole.

C) CONVENTIONAL CORING

None anticipated.

D) CEMENT ← See COA

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
SURFACE: Lead: 0 – 450' (100% excess Circ to surface)	375	450	EconoCem HLC + 2.7 #/sk Salt	10.14	12.8	1.87
Tail: 450' – 750' (100% excess)	340	300	HalCem "C" + 2% $CaCl_2$	6.37	14.8	1.35
INTERMEDIATE: Lead: 0' – 3422' (100% excess Circ to surface)	750	3422	EconoCem HLC + 2.87 #/sk Salt	10.29	12.8	1.89
Tail: 3422' – 3922' (100% excess)	260	500	HalCem "C" + 1% $CaCl_2$	6.29	14.8	1.35

D) CEMENT - Cont'd...

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
PRODUCTION: Lead: 3422' - 7100' (50% excess circ to surface)	530	3678	Halco Tuned Lite	14.40	9.7	3.13
Tail 7100' – 10,936' (50% excess)	475	3826	Premium Plus Acid Soluble + 10 #/sk Silicate 50/50 Blend + 0.7% Halad-344 + 0.3% HR-601 + 0.25 #/sk D-AIR-3000	11.34	15.0	2.62

E) DIRECTIONAL DRILLING

See COA →

BOPCO, L.P. plans to drill out the 9-5/8" intermediate casing with a 8-3/4" bit to a TVD of approximately 7950' at which point open hole logs will be run. The 8-3/4" hole will be plugged back approximately 7100'. At this depth a 8-3/4" directional hole will be initiated at an azimuth of 327.69', building angle at 12.00°/100' to a max of 90.75° at a TVD of 7600' (MD 7879'). This 90.75° angle will be maintained to a MD of 10,926' or TVD of 7560'.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 3384 psi (max) or MWE of 8.4 ppg is expected. Lost circulation may exist in the Delaware Section from 3900'-7747' TVD. No H_2S 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

39 days drilling operations

14 days completion operations

Gary E. Gerhard

GEG/mac
November 5, 2008

BEPCO, L.P.

Eddy Co. New Mexico (Nad 27)
Poker Lake Unit #300H
Poker Lake Unit #300H
Lateral #1

Plan: Plan #1a

Standard Planning Report

31 October, 2008

Database:	EDM 2003.14 Server Db	**Local Co-ordinate Reference:**	Site Poker Lake Unit #300H
Company:	BEPCO, L.P.	**TVD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Project:	Eddy Co New Mexico (Nad 27)	**MD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Site:	Poker Lake Unit #300H	**North Reference:**	Grid
Well:	Poker Lake Unit #300H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Plan #1a		

Project	Eddy Co. New Mexico (Nad 27)		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Poker Lake Unit #300H				
Site Position:		**Northing:**	430,651.10 ft	**Latitude:**	32° 10' 59 253 N
From:	Map	**Easting:**	643,353 02 ft	**Longitude:**	103° 52' 11 926 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0 25 °

Well	Poker Lake Unit #300H					
Well Position	**+N/-S**	0.00 ft	**Northing:**	430,651.10 ft	**Latitude:**	32° 10' 59 253 N
	+E/-W	0 00 ft	**Easting:**	643,353.02 ft	**Longitude:**	103° 52' 11.926 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	3,373 00 ft	**Ground Level:**	3,352.00 ft

Wellbore	Lateral #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	10/24/2008	8 02	60.17	48,848

Design	Plan #1a				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	7,122.50
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0 00	0.00	327.69	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
7,122 50	0.00	0.00	7,122 50	0 00	0 00	0.00	0 00	0.00	0 00	
7,878.88	90.75	327 69	7,599 99	408.90	-258.59	12.00	12 00	0.00	327 69	
10,926 37	90.75	327 69	7,560 00	2,984.34	-1,887 29	0 00	0 00	0 00	0.00	PBHL#1[PLU#300H]

Black Viper Energy

Planning Report

Database:	EDM 2003.14 Server Db	**Local Co-ordinate Reference:**	Site Poker Lake Unit #300H
Company:	BEPCO, L.P.	**TVD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Project:	Eddy Co. New Mexico (Nad 27)	**MD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Site:	Poker Lake Unit #300H	**North Reference:**	Grid
Well:	Poker Lake Unit #300H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Plan #1a		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,122 50	0 00	0.00	7,122.50	0 00	0.00	0 00	0 00	0 00	0.00
KOP Build 12°/100' :: TFO 327.69									
7,140.00	2 10	327 69	7,140 00	0.27	-0.17	0 32	12 00	12.00	0 00
7,170.00	5 70	327 69	7,169.92	1.99	-1.26	2.36	12.00	12 00	0.00
7,200 00	9.30	327.69	7,199.66	5.30	-3.35	6.28	12.00	12.00	0.00
7,230.00	12.90	327.69	7,229.09	10.18	-6 44	12.05	12.00	12 00	0 00
7,260 00	16 50	327 69	7,258 11	16.62	-10.51	19.66	12 00	12 00	0.00
7,290 00	20.10	327.69	7,286 59	24 57	-15 54	29 08	12.00	12 00	0 00
7,320.00	23 70	327 69	7,314.42	34 03	-21 52	40 26	12.00	12 00	0 00
7,350.00	27 30	327.69	7,341 49	44 94	-28.42	53.17	12 00	12 00	0.00
7,380 00	30 90	327.69	7,367.70	57 27	-36.22	67 76	12 00	12.00	0 00
7,410.00	34 49	327 69	7,392 94	70.96	-44.88	83 96	12 00	12 00	0 00
7,440 00	38.09	327.69	7,417.12	85 97	-54 37	101.72	12 00	12 00	0 00
7,470 00	41 69	327 69	7,440 13	102.23	-64.65	120.96	12 00	12 00	0.00
7,500 00	45.29	327 69	7,461.89	119 68	-75 68	141.60	12 00	12.00	0 00
7,530.00	48.89	327.69	7,482.31	138.25	-87 43	163 57	12 00	12 00	0 00
7,560 00	52.49	327 69	7,501 31	157 86	-99.83	186.78	12 00	12 00	0 00
7,590.00	56.09	327 69	7,518.82	178.45	-112 85	211.14	12.00	12 00	0 00
7,620 00	59.69	327.69	7,534 76	199.92	-126 43	236 54	12 00	12 00	0 00
7,650 00	63 29	327 69	7,549.08	222.20	-140.52	262.90	12.00	12 00	0 00
7,670 75	65.78	327.69	7,558 00	238.03	-150 53	281.63	12 00	12 00	0 00
Lower Brushy Canyon									
7,680 00	66 89	327.69	7,561 71	245.19	-155 06	290.11	12 00	12 00	0 00
7,710.00	70 49	327 69	7,572.62	268.81	-169.99	318 05	12 00	12.00	0 00
7,711.30	70 65	327 69	7,573.05	269.85	-170 65	319 28	12.00	12 00	0.00
EOC Hold 90.75° INC :: 327.69° AZI									
7,740.00	74 09	327 69	7,581.74	292.96	-185.27	346 62	12.00	12.00	0 00
7,770.00	77 69	327.69	7,589.05	317 54	-200 81	375.71	12.00	12 00	0.00
7,800 00	81 29	327 69	7,594 53	342.47	-216.58	405 20	12 00	12.00	0 00
7,830.00	84 89	327.69	7,598.13	367 64	-232.49	434.98	12 00	12.00	0 00
7,860 00	88.49	327.69	7,599.87	392.94	-248 50	464.93	12.00	12 00	0.00
7,878 88	90.75	327 69	7,599.99	408.90	-258.59	483.80	12 00	12.00	0 00
7,890 00	90.75	327 69	7,599.85	418 30	-264 53	494.92	0.00	0.00	0 00
7,920 00	90.75	327 69	7,599 45	443.65	-280 56	524 92	0 00	0 00	0 00
7,950 00	90 75	327 69	7,599 06	469.00	-296.60	554.92	0 00	0 00	0 00
7,980.00	90 75	327.69	7,598.67	494 36	-312 63	584.92	0.00	0 00	0 00
8,010 00	90.75	327.69	7,598 27	519.71	-328 66	614 91	0 00	0 00	0 00
8,040 00	90 75	327 69	7,597.88	545 06	-344.70	644 91	0 00	0 00	0 00
8,070 00	90 75	327 69	7,597.49	570 42	-360 73	674.91	0.00	0 00	0 00
8,100 00	90 75	327.69	7,597 09	595.77	-376.76	704.91	0 00	0.00	0.00
8,130 00	90 75	327 69	7,596 70	621.12	-392.80	734.90	0 00	0.00	0 00
8,160 00	90 75	327.69	7,596 30	646.48	-408.83	764.90	0 00	0 00	0.00
8,190 00	90 75	327.69	7,595.91	671.83	-424 86	794 90	0.00	0.00	0 00
8,220.00	90.75	327 69	7,595 52	697.18	-440 90	824 90	0.00	0.00	0.00
8,250 00	90 75	327 69	7,595.12	722 53	-456.93	854.89	0.00	0 00	0 00
8,280.00	90 75	327 69	7,594.73	747 89	-472 96	884.89	0.00	0.00	0 00
8,310 00	90 75	327 69	7,594 34	773.24	-489.00	914.89	0 00	0.00	0.00
8,340 00	90.75	327 69	7,593.94	798 59	-505.03	944 89	0 00	0 00	0.00
8,370 00	90 75	327 69	7,593.55	823 95	-521.06	974.88	0.00	0 00	0.00
8,400.00	90 75	327 69	7,593 15	849.30	-537 10	1,004.88	0.00	0 00	0.00
8,430 00	90.75	327 69	7,592.76	874.65	-553.13	1,034.88	0 00	0.00	0.00
8,460.00	90 75	327 69	7,592.37	900 01	-569.16	1,064.87	0.00	0 00	0 00
8,490.00	90 75	327.69	7,591.97	925.36	-585 20	1,094 87	0.00	0.00	0.00

Database:	EDM 2003.14 Server Db	**Local Co-ordinate Reference:**	Site Poker Lake Unit #300H
Company:	BEPCO, L.P.	**TVD Reference:**	KB Elev @ 3373 00ft (KB Elevation)
Project:	Eddy Co. New Mexico (Nad 27)	**MD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Site:	Poker Lake Unit #300H	**North Reference:**	Grid
Well:	Poker Lake Unit #300H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Plan #1a		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,520.00	90.75	327.69	7,591 58	950.71	-601 23	1,124.87	0 00	0.00	0 00
8,550 00	90.75	327.69	7,591.19	976 07	-617 26	1,154.87	0.00	0.00	0 00
8,580.00	90.75	327 69	7,590.79	1,001 42	-633.30	1,184.86	0.00	0 00	0 00
8,610.00	90 75	327.69	7,590.40	1,026.77	-649.33	1,214 86	0.00	0 00	0 00
8,640.00	90 75	327 69	7,590.00	1,052.12	-665.36	1,244 86	0.00	0.00	0.00
8,670.00	90 75	327 69	7,589.61	1,077 48	-681 40	1,274.86	0 00	0 00	0.00
8,700.00	90 75	327.69	7,589.22	1,102.83	-697.43	1,304.85	0 00	0 00	0 00
8,730 00	90.75	327.69	7,588.82	1,128.18	-713.46	1,334 85	0.00	0.00	0 00
8,760.00	90.75	327.69	7,588.43	1,153.54	-729.50	1,364 85	0.00	0 00	0 00
8,790.00	90.75	327 69	7,588.04	1,178.89	-745 53	1,394.85	0 00	0 00	0 00
8,820.00	90.75	327.69	7,587 64	1,204.24	-761.56	1,424 84	0.00	0 00	0 00
8,850.00	90.75	327 69	7,587 25	1,229 60	-777 60	1,454 84	0.00	0 00	0.00
8,880 00	90.75	327 69	7,586 86	1,254.95	-793 63	1,484.84	0 00	0 00	0 00
8,910.00	90 75	327.69	7,586.46	1,280 30	-809 66	1,514.84	0.00	0 00	0 00
8,940.00	90.75	327 69	7,586 07	1,305 66	-825.70	1,544 83	0.00	0 00	0 00
8,970 00	90.75	327.69	7,585 67	1,331.01	-841 73	1,574 83	0 00	0 00	0.00
9,000.00	90.75	327 69	7,585.28	1,356 36	-857 76	1,604 83	0 00	0 00	0.00
9,030.00	90 75	327 69	7,584 89	1,381 71	-873.80	1,634.83	0 00	0 00	0.00
9,060.00	90.75	327 69	7,584 49	1,407.07	-889.83	1,664.82	0.00	0 00	0 00
9,090 00	90.75	327 69	7,584 10	1,432.42	-905 86	1,694 82	0.00	0 00	0 00
9,120.00	90.75	327 69	7,583 71	1,457.77	-921.90	1,724 82	0 00	0 00	0 00
9,150 00	90.75	327.69	7,583 31	1,483.13	-937.93	1,754.82	0.00	0.00	0 00
9,180.00	90.75	327.69	7,582.92	1,508 48	-953 96	1,784.81	0.00	0.00	0 00
9,210.00	90.75	327 69	7,582 52	1,533.83	-970.00	1,814.81	0.00	0 00	0 00
9,240.00	90.75	327 69	7,582 13	1,559.19	-986 03	1,844 81	0 00	0 00	0 00
9,270.00	90.75	327.69	7,581.74	1,584 54	-1,002 06	1,874 80	0 00	0.00	0 00
9,300 00	90.75	327 69	7,581 34	1,609.89	-1,018.10	1,904.80	0 00	0 00	0 00
9,330.00	90 75	327 69	7,580 95	1,635 25	-1,034.13	1,934.80	0.00	0 00	0 00
9,360.00	90 75	327.69	7,580 56	1,660.60	-1,050.16	1,964 80	0 00	0 00	0 00
9,390 00	90.75	327.69	7,580.16	1,685 95	-1,066 20	1,994 79	0 00	0 00	0.00
9,420.00	90.75	327 69	7,579 77	1,711.30	-1,082 23	2,024.79	0.00	0 00	0 00
9,450.00	90.75	327 69	7,579 37	1,736.66	-1,098.26	2,054.79	0.00	0 00	0 00
9,480.00	90.75	327 69	7,578.98	1,762.01	-1,114.29	2,084.79	0 00	0 00	0 00
9,510 00	90.75	327 69	7,578.59	1,787.36	-1,130 33	2,114 78	0 00	0.00	0.00
9,540.00	90.75	327.69	7,578.19	1,812.72	-1,146 36	2,144 78	0 00	0.00	0.00
9,570.00	90.75	327 69	7,577 80	1,838.07	-1,162.39	2,174.78	0.00	0.00	0.00
9,600 00	90 75	327 69	7,577 41	1,863.42	-1,178.43	2,204.78	0.00	0 00	0 00
9,630 00	90 75	327 69	7,577 01	1,888.78	-1,194.46	2,234.77	0.00	0 00	0.00
9,660 00	90 75	327 69	7,576.62	1,914.13	-1,210.49	2,264.77	0.00	0 00	0.00
9,690.00	90.75	327.69	7,576.23	1,939.48	-1,226.53	2,294.77	0.00	0.00	0 00
9,720 00	90 75	327.69	7,575 83	1,964 84	-1,242 56	2,324 77	0 00	0 00	0 00
9,750.00	90.75	327 69	7,575 44	1,990.19	-1,258.59	2,354.76	0.00	0.00	0 00
9,780 00	90.75	327 69	7,575 04	2,015.54	-1,274.63	2,384.76	0.00	0 00	0 00
9,810.00	90 75	327.69	7,574 65	2,040.90	-1,290.66	2,414.76	0.00	0 00	0.00
9,840 00	90 75	327 69	7,574.26	2,066.25	-1,306.69	2,444 76	0.00	0 00	0.00
9,870 00	90 75	327 69	7,573.86	2,091.60	-1,322 73	2,474.75	0.00	0 00	0.00
9,900.00	90.75	327.69	7,573.47	2,116 95	-1,338.76	2,504 75	0.00	0.00	0 00
9,930.00	90.75	327.69	7,573.08	2,142 31	-1,354 79	2,534 75	0.00	0.00	0 00
9,960.00	90.75	327.69	7,572.68	2,167 66	-1,370 83	2,564.75	0 00	0 00	0 00
9,990.00	90.75	327.69	7,572 29	2,193 01	-1,386.86	2,594 74	0 00	0.00	0.00
10,020 00	90.75	327 69	7,571.89	2,218 37	-1,402 89	2,624 74	0.00	0 00	0.00
10,050.00	90.75	327 69	7,571.50	2,243.72	-1,418.93	2,654.74	0.00	0 00	0.00
10,080.00	90.75	327 69	7,571.11	2,269.07	-1,434 96	2,684 74	0.00	0 00	0 00
10,110.00	90.75	327 69	7,570.71	2,294.43	-1,450.99	2,714 73	0.00	0 00	0.00

Database:	EDM 2003.14 Server Db	**Local Co-ordinate Reference:**	Site Poker Lake Unit #300H
Company:	BEPCO, L.P.	**TVD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Project:	Eddy Co. New Mexico (Nad 27)	**MD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Site:	Poker Lake Unit #300H	**North Reference:**	Grid
Well:	Poker Lake Unit #300H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Plan #1a		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,140.00	90.75	327.69	7,570.32	2,319 78	-1,467 03	2,744 73	0 00	0.00	0.00
10,170.00	90.75	327.69	7,569 93	2,345.13	-1,483.06	2,774 73	0.00	0 00	0 00
10,200.00	90.75	327.69	7,569.53	2,370 49	-1,499.09	2,804.72	0 00	0.00	0.00
10,230.00	90.75	327.69	7,569 14	2,395.84	-1,515.13	2,834.72	0.00	0 00	0 00
10,260.00	90.75	327.69	7,568.74	2,421 19	-1,531 16	2,864 72	0 00	0.00	0 00
10,290 00	90.75	327 69	7,568 35	2,446.54	-1,547.19	2,894 72	0.00	0 00	0.00
10,320.00	90.75	327.69	7,567.96	2,471.90	-1,563 23	2,924.71	0 00	0.00	0 00
10,350 00	90.75	327.69	7,567.56	2,497.25	-1,579.26	2,954.71	0.00	0 00	0.00
10,380.00	90.75	327.69	7,567.17	2,522 60	-1,595 29	2,984 71	0 00	0.00	0 00
10,410.00	90.75	327.69	7,566 78	2,547.96	-1,611.33	3,014.71	0 00	0 00	0.00
10,440 00	90.75	327.69	7,566 38	2,573.31	-1,627 36	3,044 70	0 00	0 00	0 00
10,470 00	90 75	327.69	7,565 99	2,598.66	-1,643 39	3,074 70	0.00	0 00	0 00
10,500.00	90.75	327.69	7,565 60	2,624 02	-1,659 43	3,104 70	0 00	0 00	0 00
10,530.00	90.75	327.69	7,565.20	2,649.37	-1,675.46	3,134.70	0.00	0 00	0 00
10,560.00	90.75	327.69	7,564.81	2,674 72	-1,691.49	3,164 69	0 00	0 00	0 00
10,590 00	90.75	327.69	7,564 41	2,700.08	-1,707 53	3,194 69	0 00	0 00	0.00
10,620 00	90.75	327.69	7,564 02	2,725 43	-1,723 56	3,224 69	0 00	0 00	0 00
10,650.00	90.75	327.69	7,563.63	2,750 78	-1,739.59	3,254.69	0.00	0 00	0 00
10,680 00	90 75	327 69	7,563 23	2,776.13	-1,755 63	3,284.68	0 00	0 00	0.00
10,710.00	90.75	327.69	7,562.84	2,801.49	-1,771 66	3,314.68	0 00	0 00	0.00
10,740.00	90 75	327.69	7,562.45	2,826.84	-1,787.69	3,344 68	0.00	0.00	0 00
10,770.00	90.75	327.69	7,562.05	2,852.19	-1,803 73	3,374 68	0.00	0 00	0.00
10,800 00	90.75	327.69	7,561 66	2,877.55	-1,819.76	3,404 67	0.00	0.00	0 00
10,830.00	90.75	327.69	7,561.26	2,902.90	-1,835 79	3,434.67	0.00	0 00	0.00
10,860.00	90.75	327.69	7,560 87	2,928.25	-1,851.83	3,464 67	0.00	0.00	0.00
10,890 00	90.75	327.69	7,560.48	2,953 61	-1,867.86	3,494 67	0.00	0 00	0.00
10,920.00	90 75	327.69	7,560 08	2,978.96	-1,883.89	3,524 66	0.00	0.00	0 00
10,926 37	90.75	327.69	7,560.00	2,984.34	-1,887.29	3,531.03	0 00	0 00	0.00

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL#1[PLU#300H] - plan hits target - Point	0 00	0 00	7,560 00	2,984.34	-1,887.29	433,635 44	641,465.73	32° 11' 28 866 N	103° 52' 33 738 W
HL[PLU#300H] - plan misses by 7122.50ft at 7122.50ft MD (7122.50 TVD, 0 00 N, 0.00 E) - Rectangle (sides W4,620.00 H1,980.00 D0.00)	0 00	0.00	0 00	0.00	0.00	430,651.10	643,353.02	32° 10' 59.253 N	103° 52' 11 926 W
LL[PLU#300H] - plan misses by 7122 50ft at 7122.50ft MD (7122.50 TVD, 0 00 N, 0.00 E) - Rectangle (sides W5,280.00 H2,640.00 D0.00)	0.00	0.00	0.00	0.00	0.00	430,651.10	643,353 02	32° 10' 59 253 N	103° 52' 11.926 W

Database:	EDM 2003.14 Server Db	**Local Co-ordinate Reference:**	Site Poker Lake Unit #300H
Company:	BEPCO, L.P.	**TVD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Project:	Eddy Co. New Mexico (Nad 27)	**MD Reference:**	KB Elev @ 3373.00ft (KB Elevation)
Site:	Poker Lake Unit #300H	**North Reference:**	Grid
Well:	Poker Lake Unit #300H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Plan #1a		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,938 00	3,938 00	Delaware Sands		0.00	
7,670.75	7,558.00	Lower Brushy Canyon		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
7,122 50	7,122.50	0.00	0.00	KOP Build 12°/100' :: TFO 327 69
7,711.30	7,573 05	269 85	-170.65	EOC Hold 90 75° INC :: 327.69° AZI

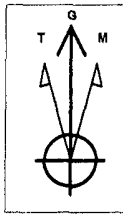
Project: Eddy Co. New Mexico (Nad 27)
Site: Poker Lake Unit #300H
Well: Poker Lake Unit #300H
Wellbore: Lateral #1
Plan: Plan #1a (Poker Lake Unit #300H/Lateral #1)

BLACK VIPER ENERGY SERVICES, LTD.

PROJECT DETAILS: Eddy Co. New Mexico (Nad 27)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001

System Datum: Ground Level



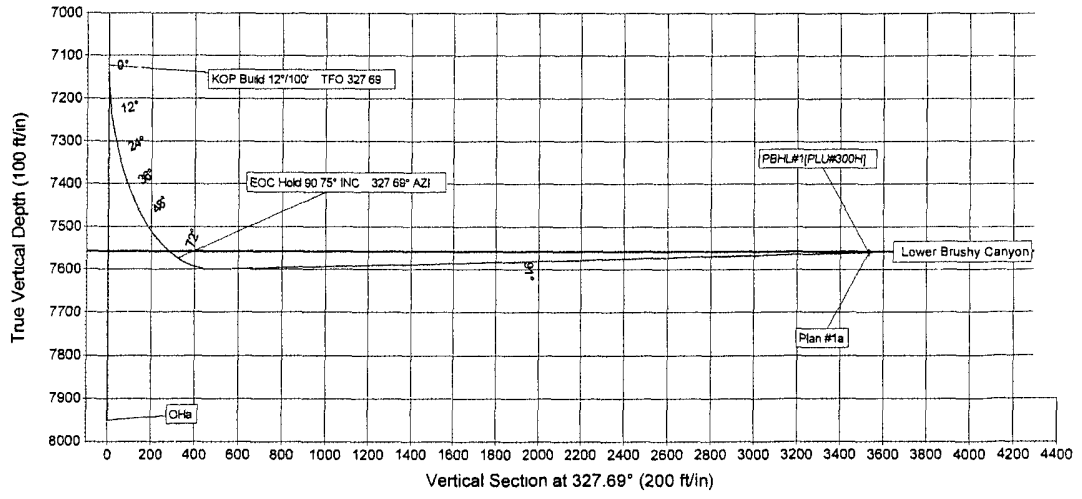
Azimuths to Grid North
True North: -0.25°
Magnetic North: 7.78°
Magnetic Field
Strength: 48847.6nT
Dip Angle: 60.17°
Date: 10/24/2008
Model: IGRF200510

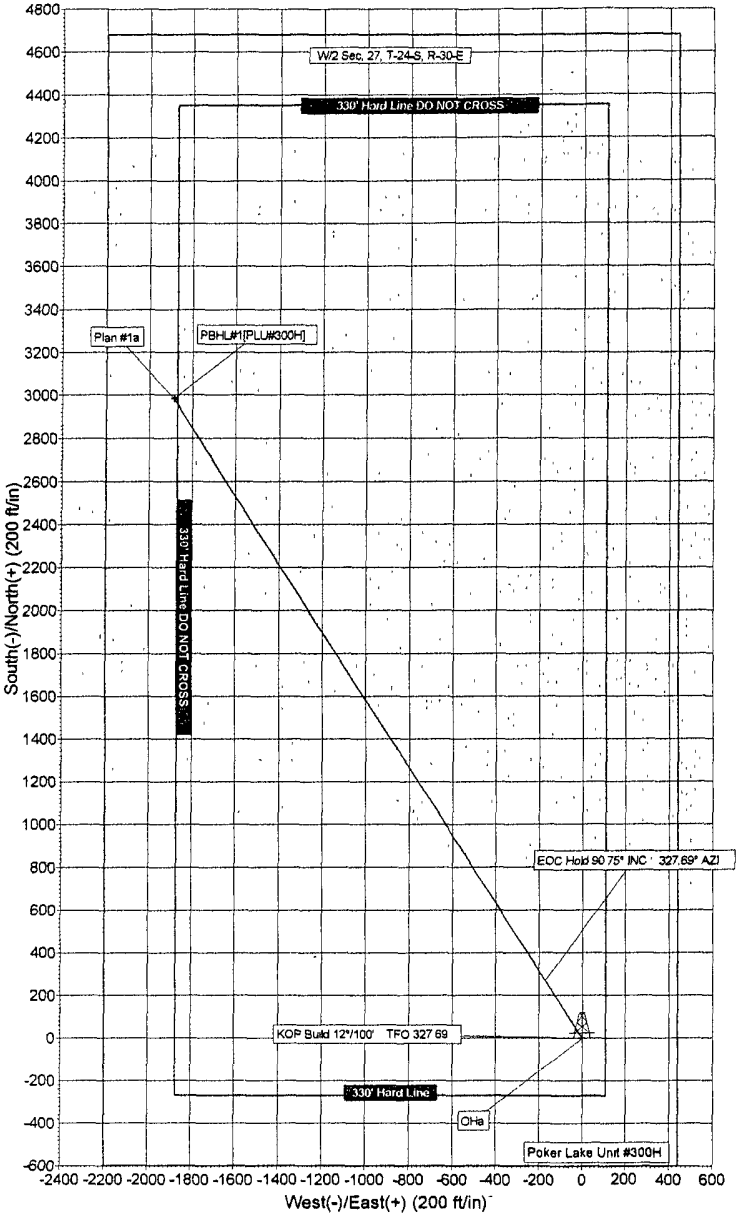
ANNOTATIONS

TVD	MD	Annotation
7122.50	7122.50	KOP Build 12°/100' TFO 327.69
7573.05	7711.30	EOC Hold 90.75° INC : 327.69° AZI

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	7122.50	0.00	0.00	7122.50	0.00	0.00	0.00	0.00	0.00	
2	7878.88	90.75	327.69	7599.99	408.90	-258.59	12.00	327.69	483.80	
3	10926.37	90.75	327.69	7560.00	2984.34	-1887.29	0.00	0.00	3531.03	PBHL#1[PLU#300H]



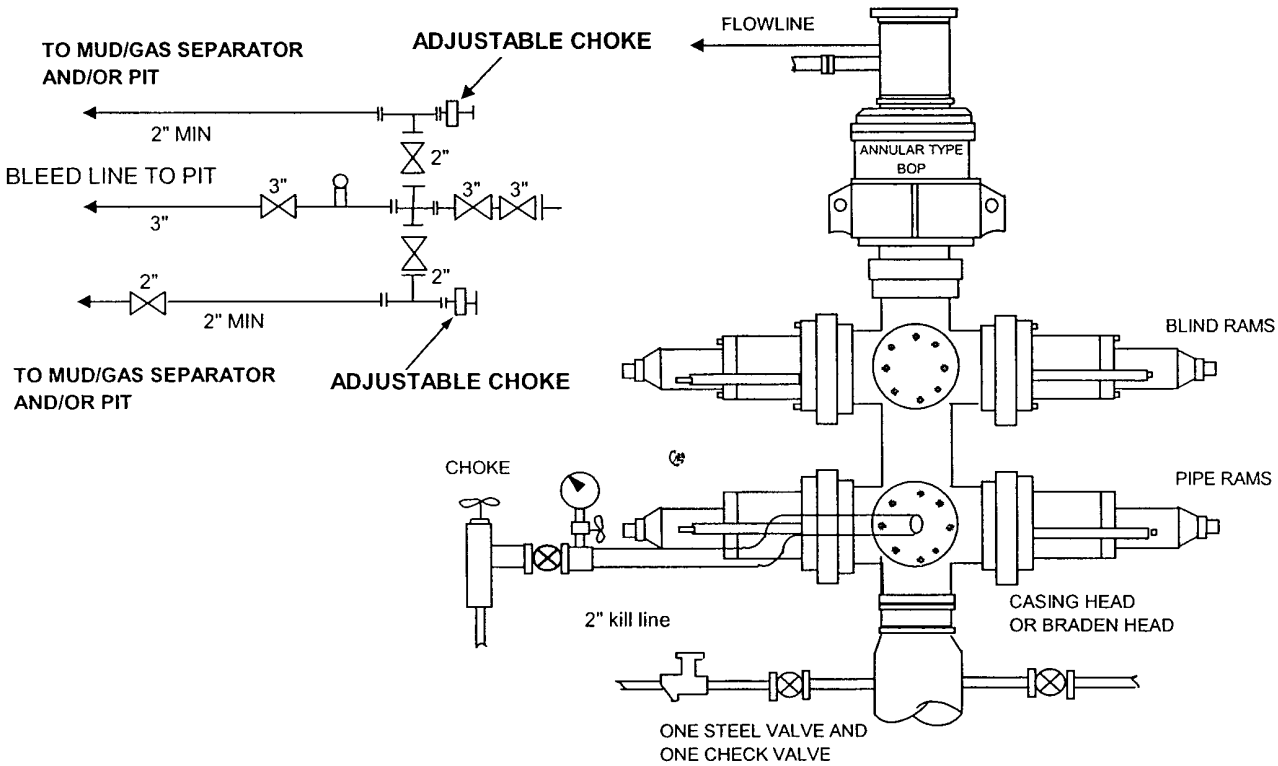


1a

Plan: Plan #1a (Poker Lake Unit #300H/Lateral #1)
Created By: Heather Vannoy Date: October 31, 2008

BEPCO, L. P.
3-M WP BOPE WITH 3-M WP ANNULAR

3 M CHOKE MANIFOLD EQUIPMENT-CONFIGURATION MAY VARY



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

A. One double gate Blowout preventer with lower pipe rams and upper blind rams, 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 mininum of one inch in diameter.

D. The available closing pressure shall be at least 15% in excess of that required with suffficient 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 BOPs.

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. Chokes must be adjustable. Choke spool may be used between rams.

DIAGRAM 2

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: Poker Lake Unit #300H

LEGAL DESCRIPTION - SURFACE: 600' FSL, 2200' FWL, Section 27, T24S, R30E, Eddy County, NM.
BHL: 1650' FNL, 330' FWL, Section 27, T24S, R30E, Eddy County, New Mexico.

POINT 1: EXISTING ROADS

A) Proposed Well Site Location:

See Exhibit "A" & "C".

B) Existing Roads:

From Carlsbad, New Mexico, go 8 miles south on Hwy 285 to Hwy 31. Turn north and go 7 miles on Hwy 31. Turn east on Hwy 128 and go to the junction of Twin Wells Road and Hwy 128. Turn south for 10 miles to intersection of McDonald road. On McDonald road, turn west (right) for 0.5 miles to proposed location.

C) Existing Road Maintenance or Improvement Plan:

See Exhibit "E"

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location:

B) Width

12' wide

C) Maximum Grade

Grade to match existing topography or as per BLM requirements.

D) Turnout Ditches

As required by BLM stipulations

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

Exhibits "A" indicates existing wells within the surrounding area.

POINT 4: LOCATION OF EXISTING OR PROPOSED FACILITIES

A) No existing facilities within one mile owned or controlled by leasee/operator.

B) New Facilities in the Event of Production:

New production facilities will be built at Poker Lake Unit #300H well pad. A separator/treater along with 2-7/8" flowline will be located on the wellpad. A 2-7/8" gas line will follow existing roads which have been arch cleared. Initially a gas engine will be used to power pumping unit. See Exhibit "C".

C) Rehabilitation of Disturbed Areas Unnecessary for Production:

Following the construction, those access areas required for continued production will be graded to provide drainage and minimize erosion. The areas unnecessary for use will be graded to blend in with the surrounding topography (see Point 10)

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

A) Location and Type of Water Supply

Fresh water will be hauled from Johnson Station 50 miles east of Carlsbad, New Mexico or other commercial facilities. Brine water will be hauled from commercial facilities.

B) Water Transportation System

Water hauling to the location will be over the existing and proposed roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

A) Materials

On-site caliche will be used. If this is not sufficient, caliche will be hauled from a BLM approved pit.

B) Land Ownership

Federally Owned

C) Materials Foreign to the Site

No construction materials foreign to this area are anticipated for this drill site.

D) Access Roads

See Exhibits "B" & "C".

POINT 7: METHODS FOR HANDLING WASTE MATERIAL

A) Cuttings

Cuttings will be contained in the roll off bins and hauled to CRI for disposal.

B) Drilling Fluids

Drilling fluids will be contained in the steel pits, frac tanks and hauled to licensed disposal facilities.

C) Produced Fluids

Water production will be contained in the steel pits.

Hydrocarbon fluid or other fluids that may be produced during testing will be retained in test tanks. Prior to cleanup operations, any hydrocarbon material in the reserve pit will be removed by skimming or burning as the situation would dictate.

D) Sewage

Current laws and regulations pertaining to the disposal of human waste will be complied with.

E) Garbage

Portable containers will be utilized for garbage disposal during the drilling of this well.

F) Cleanup of Well Site

Upon release of the drilling rig, the surface of the drilling pad will be graded to accommodate a completion rig if electric log analysis indicate potential productive zones. Reasonable cleanup will be performed prior to the final restoration of the site.

POINT 8: ANCILLARY FACILITIES

None required.

POINT 9: WELL SITE LAYOUT

A) Rig Orientation and Layout

Exhibit "D" shows the dimensions of the well pad, closed loop system, and the location of major rig components. Only minor leveling of the well site will be required. No significant cuts or fills will be necessary.

B) Locations of Access Road

See Exhibits "B" and "C".

C) Lining of the Pits

No reserve pits - closed loop system.

POINT 10: PLANS FOR RESTORATION OF THE SURFACE

A) Reserve Pit Cleanup - Not applicable

The pits will be fenced immediately after construction and shall be maintained until they are backfilled. Previous to backfill operations, any hydrocarbon material on the pits' surfaces shall be removed. The fluids and solids contained in the pits shall be backfilled with soil excavated from the site and soil adjacent to the reserve pits. The restored surface of the pits shall be contoured to prevent impoundment of surface water flow. Water-bars will be constructed as needed to prevent excessive erosion. Topsoil, as available, shall be placed over the restored surface in a uniform layer. The area will be seeded according to the Bureau of Land Management stipulations during the appropriate season following restoration.

B) Restoration Plans - Production Developed

Those areas not required for production will be graded to blend with the surrounding topography. Topsoil, as available, will be placed upon those areas and seeded. The portion of the site required for production will be graded to minimize erosion and provide access during inclement conditions. Following depletion and abandonment of the site, restoration procedures will be those that follow under Item C.

C) Restoration Plans - No Production Developed

With no production developed, the entire surface disturbed by construction of the well site will be restored. The site will be contoured to blend with the surrounding topography and provide drainage of surface water. The topsoil, as available, shall be replaced in a uniform layer and seeded according to the Bureau of Land Management's stipulations.

D) Rehabilitation's Timetable

Upon completion of drilling operations, the initial cleanup of the site will be performed as soon as weather and site conditions allow economic execution of the work.

POINT 11: OTHER INFORMATION

A) Terrain

Slightly rolling hills.

B) Soil

Caliche and sand.

C) Vegetation

Sparse, primarily grasses and mesquite with very little grass.

D) Surface Use

Primarily grazing.

E) Surface Water

There are no ponds, lakes, streams or rivers within several miles of the wellsite.

F) Water Wells

There are five existing water wells approximately 1-1/2 miles away from the proposed well. There is one existing water well in the SW quarter of section 21, T24S, R30E, and four water wells in section 23, T24S, R30E. (See Exhibit "A")

G) Residences and Buildings

None in the immediate vicinity.

H) Historical Sites

None observed.

I) Archeological Resources

A search of BLM records by Boone Archeological indicate no know archeological sites will be impacted by those drilling operations. Any location or construction conflicts will be resolved before construction begins.

J) Surface Ownership

The well site is on federally owned land. There will be no new access roads required for this location.

K) Well signs will be posted at the drilling site.

L) Open Pits

All pits containing liquid or mud will be fenced and bird-netted.

POINT 12: OPERATOR'S FIELD REPRESENTATIVE

(Field personnel responsible for compliance with development plan for surface use).

DRILLING
William R. Dannels
Box 2760
Midland, Texas 79702
(432) 683-2277

PRODUCTION
Dean Clemmer
3104 East Green Street
Carlsbad, New Mexico 88220
(575) 887-7329

Steve Johnson
Box 2760
Midland, Texas 79702
(432) 683-2277

11/4/08
Date

Gary E. Gerhard

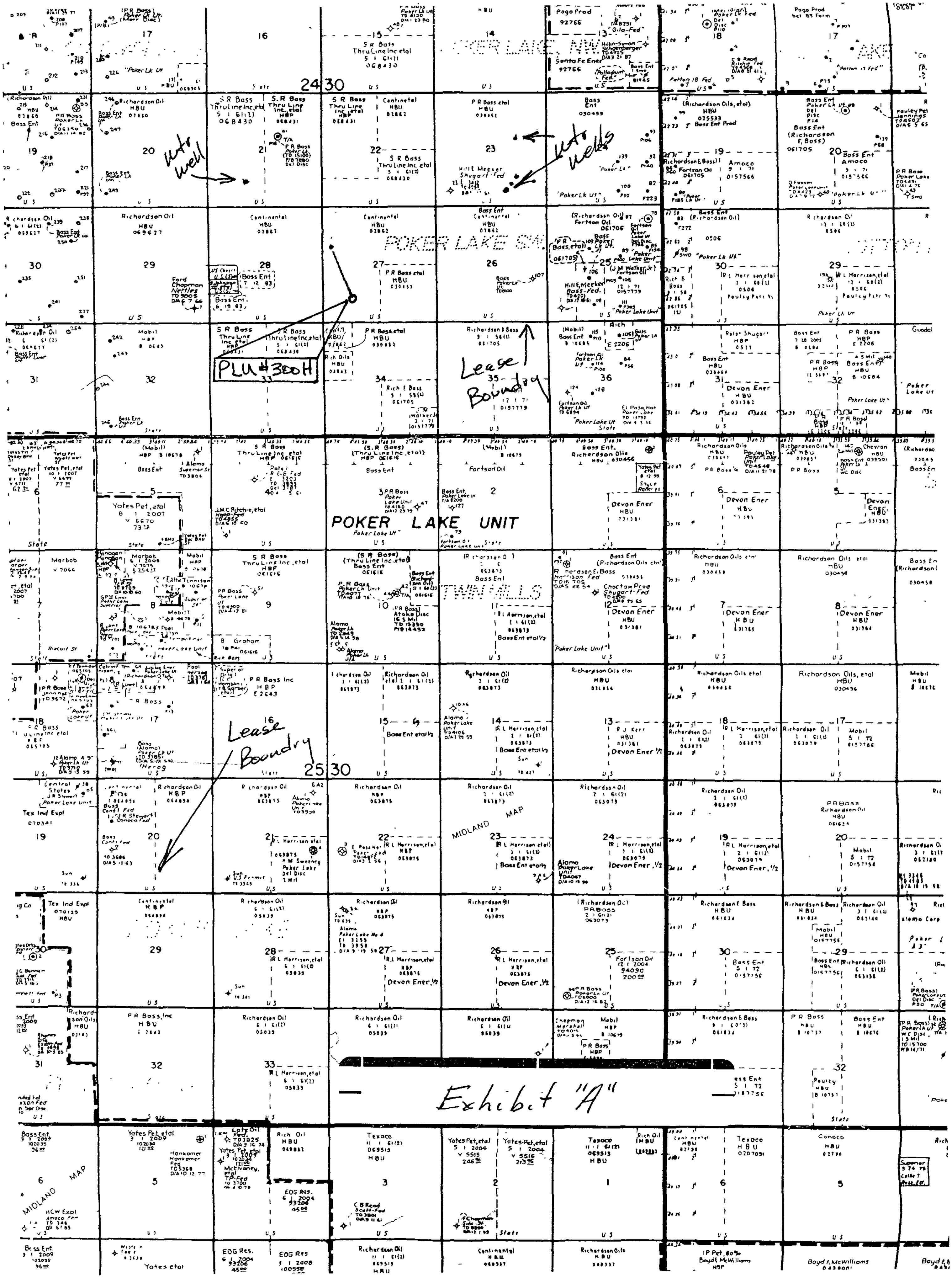
GEG/mac

OPERATOR 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 the plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by BOPCO, L.P. and it's contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

11/4/08
Date

Gary E. Gerhard
Gary E. Gerhard

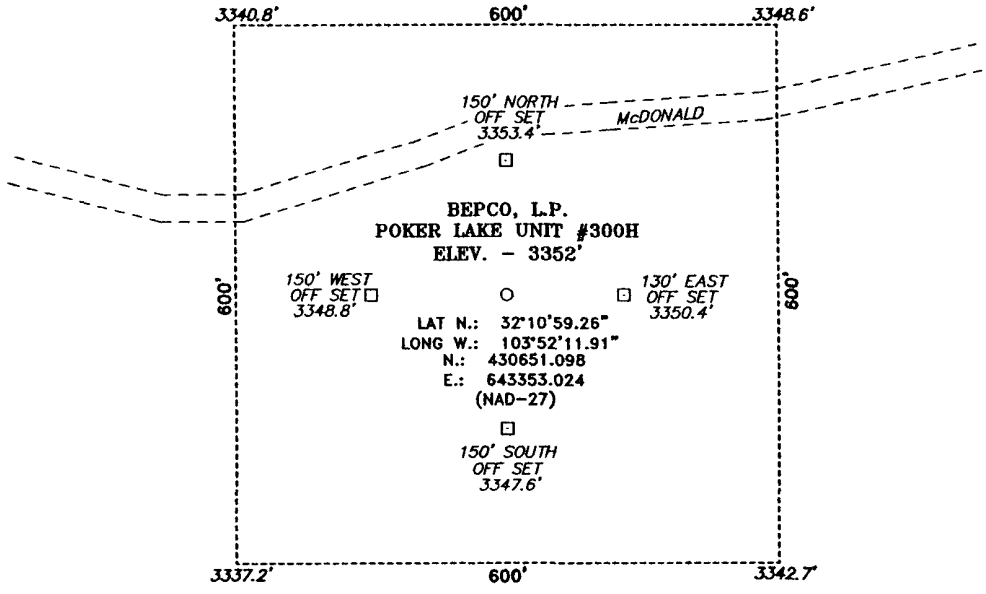


wtr well
wtr wells
PLU #300H
Lease Boundry
Lease Boundry
POKER LAKE UNIT
Poker Lake Unit
Exhibit "A"
MIDLAND MAP
MIDLAND MAP
24 30
25 30

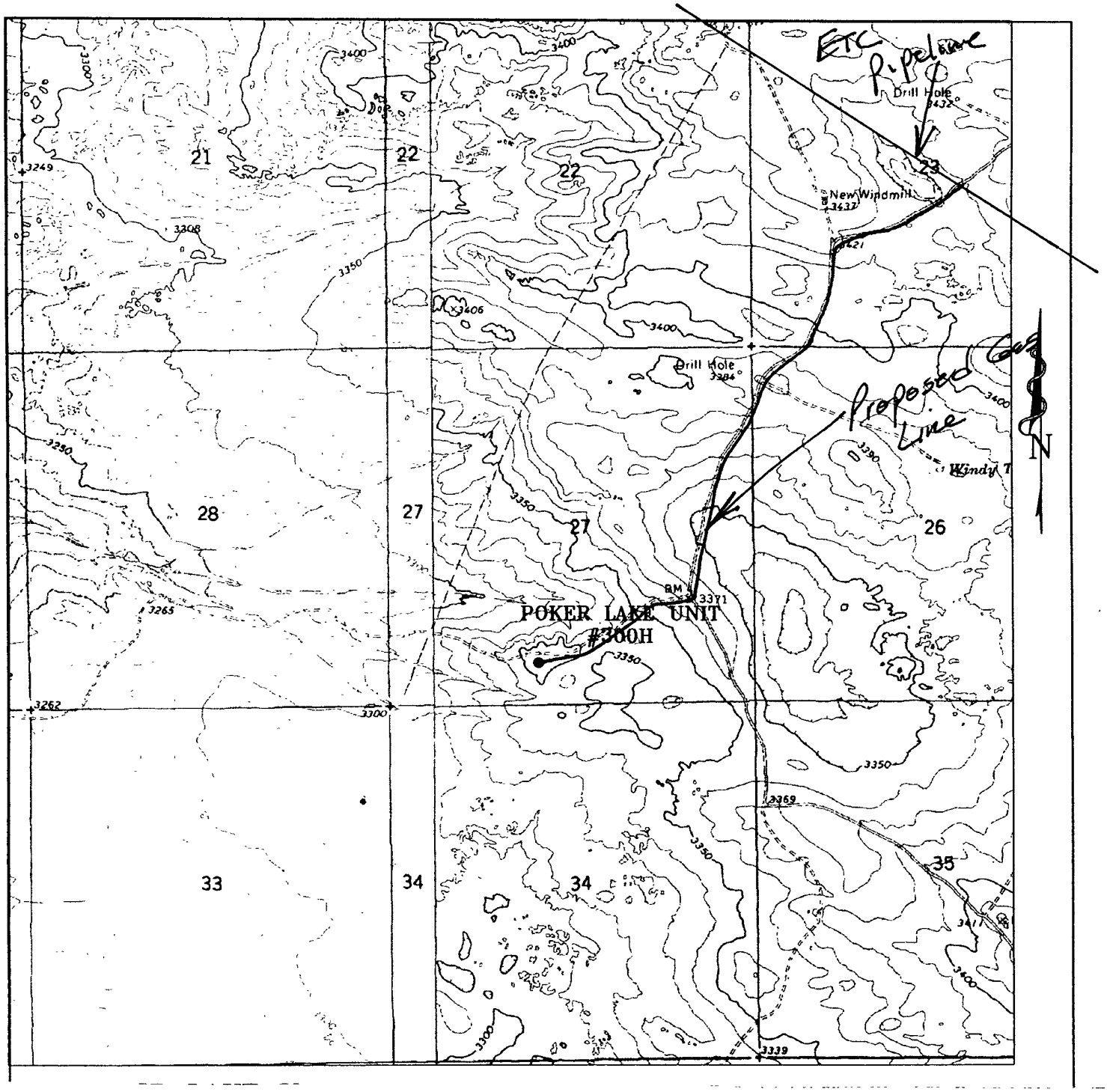
Poker Lake Unit #300-H
Exhibit B

SECTION 27, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M.,

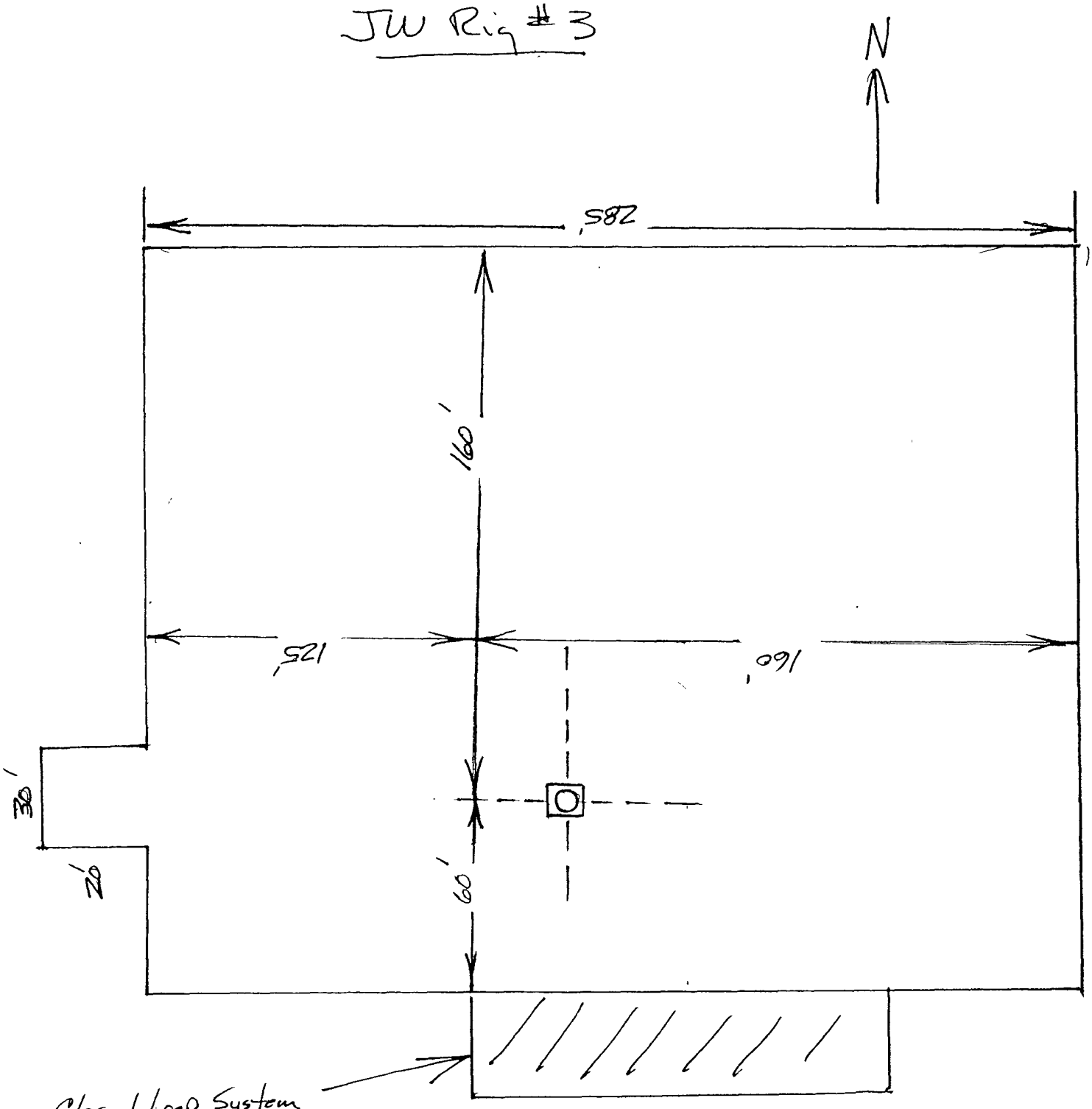
EDDY COUNTY, NEW MEXICO.



Poker Lake Unit #300-H
Exhibit C



JW Rig #3



Closed Loop System w/ Haul off bins will be located in this general area.

Closed Loop System
No Reserve Pits

Exhibit "D"

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 E. Greene St.
Carlsbad, NM 88220-6292

TAKE PRIDE IN AMERICA

In reply refer to
3162.4
NM02862

11/19/2008

BEPCO LP
Attn: Annette Childers
P O Box 2760
Midland, TX 79702

RE: 300H-POKER LAKE UNIT, LEASE NM02862
600FSL 2200FWL, SEC.27, 24, 30, EDDY, NM

Your Application for Permit to Drill (APD), for the referenced well, was received on 11/10/2008.
The APD has been reviewed pursuant to part III.B.2 of Oil and Gas Onshore Order No.1 and is found to be:

- ☑ Complete
- ☐ Incomplete in the following area(s)
  - ☐ Form 3160-3
  - ☐ Survey Plat
  - ☑ Drilling Plan (BOPE, Casing Program, etc.)
  - ☑ Surface Use Plan
  - ☐ Bonding
  - ☐ Operator Certification Statement
  - ☐ Onsite Not Performed
  - ☐ Original Signature
  - ☐ Other

BEPCO - WTD PRODUCTION
NOV 24 2008
RECEIVED

Comments: 1) A Unit Plan Of Development is needed to include this APD, it is needed prior to approval of this APD. Quidelines included. 2) Pipe specification for the 5 1/2" HCP-110 Ultra Flush Joint is required.

Please submit original and (3) copies of each of the above noted deficiencies. If you would like to know whether the Archaeological Survey Report has been filed with the BLM, call the cultural staff at (575) 234-5972. You will be notified if additional information is needed during the processing of your APD.

If you have any questions, please contact Cheryle Ryan at (575) 234-5949.

Sincerely,

Cheryle Ryan

for Don Peterson
Assistant Field Manager, Minerals

Unit Plan of Development Guidelines

1. A cover letter should be included stating that the attached is the proposed Unit POD for 2008 for BLM review and approval.

2. Plan of development or operation to be submitted annually and cover the plans for the next year. Plan is to include all drilling, completing, plug back, conversion, abandonment, and producing of unit wells, and other surface disturbing operations, and may be supplemented as necessary.

3. New annual plan is to be submitted prior to expiration of the previous plan. Plan to be submitted not later than March 1 of the calendar year for which it is applicable.

4. Modifications or additions are to be filed as supplements to the plan.

5. Routine stimulation and work over operations need not be covered by the plan of development as long as the resulting producing interval remains within the limits established for the participating area.

6. Each plan must provide for exploratory or developmental drilling to fully delineate the productive limits of the unit area or must justify the lack of drilling.

7. Up to date maps to be sent which are to include the following:
    a. Latest structural and geologic interpretations.
    b. All participating area boundaries.
    c. Field map showing all wells, flow-lines, and roads.

8. Status of all wells.

9. Summary of all operations conducted during the past year.

10. Performance graphs covering the productive life of each horizon or reservoir for which a participating area has been established.

11. Proprietary geologic information is to be submitted separately and clearly marked by the unit operator on each page – CONFIDENTIAL INFORMATION

12. Plan to be submitted in triplicate.

13. Approval of plan is required prior to work covered by plan commencing.

ULTra-FJ

A High-Strength, Flush-Joint Casing Connection

Nominal OD =	5 1/2
Nominal Weight =	17.00
Grade =	P-110

Material Parameters

Minimum Yield =	110,000	
Minimum Ultimate =	125,000	

Pipe Body

PE Weight =	16.87	
Wall thickness =	0.304	
Nominal ID =	4.892	
Drift Diameter =	4.767	
Average Pipe Body Area =	4.989	sq- inches
Yield Strength =	548,800	pounds
Tensile Strength =	623,600	pounds
Minimum Internal Yield Pressure =	10,640	psi (API)
Fracture Pressure =	14,640	psi

Connection Parameters

OD =	5.528	inches
ID (bored) =	4.889	inches
Critical Cross Section Area =	3.241	sq- inches
Yield Strength in Tension =	356,500	pounds
Tension Efficiency =	65.0%	
Fracture Strength =	391,100	pounds
Percent Pipe Body Fracture =	62.7%	
Yield Strength in Compression =	367,100	pounds
Compression Efficiency =	66.9%	
Make-Up Loss =	4.106	inches

Min. Internal Yield Pressure = 10,640 psi (API 5C3)

The Leak Resistance Limit of ULTra-FJ is:
- Internal Pressure -- API Minimum Internal Yield Pressure.
- External Pressure -- API Collapse Pressure.

	Plain-End Wt.	16.87	
	Connection Yield	357,000	
	Connection Fracture	391,000	
Set Depth	**StringWt**	**DF-Yield**	**DF-Fail**
1,000	16,870	21.16	23.18
2,000	33,740	10.58	11.59
3,000	50,610	7.05	7.73
4,000	67,480	5.29	5.79
5,000	84,350	4.23	4.64
6,000	101,220	3.53	3.86
7,000	118,090	3.02	3.31
8,000	134,960	2.65	2.90
9,000	151,830	2.35	2.58
10,000	168,700	2.12	2.32
11,000	185,570	1.92	2.11
12,000	202,440	1.76	1.93
13,000	219,310	1.63	1.78
14,000	236,180	1.51	1.66
15,000	253,050	1.41	1.55
16,000	269,920	1.32	1.45

OCTG PRODUCTS

24th Edition

LONE STAR STEEL
A Lone Star Technologies Company

Executive & General Sales Offices

P. O. Box 803546
Dallas, Texas 75380-3546
972-386-3981
fax: 972-770-6409
www.lonestarsteel.com

Sales Office

515 North Sam Houston Parkway E., Suite 400
Houston, Texas 77060-4041
281-447-8818
fax: 281-447-8933

Technical Services Department

6866 Highway 259 South
Lone Star, Texas 75668-1000
(903) 656-6981
fax: (903) 656-6987

1-800-527-4615

Belgium	0-800-1-2157
France	0-800-90-1272
Germany	0-800-000-7315
Netherlands	0-800-022-4935
United Kingdom	0-800-89-1086

CASING DIMENSIONS AND MINIMUM PERFORMANCE PROPERTIES

Size O.D. in	Nominal Weight T & C lbs/ft	Grade	Collapse Resistance psi	Internal Yield Pressure at Minimum Yield, psi				Joint Strength 1000 lbs			Body Yield 1000 lbs	Wall in	I D in.	Drift Diameter in.	
				PE	STC	LTC	BTC	STC	LTC	BTC				API	LSS
5.500	15.50	J-55*	4040	4810	4810	4810	4810	202	217	300	248	0 275	4 950	4 825	
5 500	15 50	K-55*	4040	4810	4810	4810	4810	222	239	366	248	0 275	4 950	4 825	
5.500	15.50	M-65*	4470	5690	5690	5690	5690	235	253	342	293	0.275	4 950	4.825	
5.500	17.00	J-55*	4910	5320	5320	5320	5320	229	247	329	273	0 304	4 892	4 767	
5.500	17 00	K-55*	4910	5320	5320	5320	5320	252	272	402	273	0 304	4 892	4.767	
5 500	17 00	M-65*	5510	6290	6290	6290	6290	267	287	376	323	0 304	4.892	4 767	
5.500	17 00	L-80*	6290	7740		7740	7740		338	428	397	0 304	4 892	4 767	
5.500	17.00	HCL-80*	8580	7740		7740	7740		338	443	397	0.304	4 892	4 767	
5 500	17 00	N-80*	6290	7740		7740	7740		348	446	397	0.304	4 892	4 767	
5 500	17 00	HCN-80*	8580	7740		7740	7740		356	462	397	0 304	4 892	4 767	
5.500	17.00	C-90	6740	8710		8710	8710		356	456	447	0 304	4 892	4 767	
5 500	17 00	S-95*	8580	9190		9190	9190		392	498	471	0 304	4 892	4 767	
5 500	17 00	T-95	6940	9190		9190	9190		374	480	471	0 304	4 892	4 767	
5.500	17 00	C-95*	6940	9190		9190	9190		374	480	471	0 304	4 892	4.767	
5 500	17 00	HCP-110*	8580	10640		10640	10640		445	568	546	0.304	4.892	4 767	
5.500	17 00	P-110*	7480	10640		10640	10640		445	568	546	0.304	4 892	4 767	
5.500	17.00	HCQ-125*	8580	12090		12090	12090		481	620	620	0 304	4 892	4 767	
5 500	17.00	Q-125*	7890	12090		12090	12090		481	620	620	0 304	4.892	4.767	
5 500	17 00	LS-140*	8580	13540		13540[LR]	13540		534	690	695	0.304	4 892	4 767	
5.500	20 00	M-65*	7540	7470		7470	7470		353	442	379	0 361	4 778	4 653	
5 500	20 00	L-80*	8830	9190		9190	8990		416	503	466	0 361	4 778	4.653	
5.500	20 00	HCL-80*	10630	9190		9190	8990		416	521	466	0 361	4 778	4 653	
5.500	20 00	N-80*	8830	9190		9190	8990		428	524	466	0 361	4 778	4 653	
5 500	20 00	HCN-80*	10630	9190		9190	8990		438	542	466	0 361	4 778	4 653	
5 500	20 00	C-90	9630	10340		10340	10120		438	436	525	0 361	4 778	4 653	
5.500	20 00	S-95*	10630	10910		10910	10680		482	585	554	0.361	4.778	4 653	
5.500	20 00	T-95	10010	10910		10910	10680		460	563	554	0 361	4 778	4 653	
5.500	20 00	C-95*	10010	10910		10910	10680		460	563	554	0 361	4 778	4 653	
5 500	20 00	P-110*	11100	12630		12630	12360		548	667	641	0.361	4.778	4.653	
5.500	20.00	Q-125*	12080	14360		14360[LR]	14050		592	728	729	0.361	4.778	4 653	
5 500	20.00	LS-140*	12950	16080		16080[LR]	15740		657	810	816	0 361	4 778	4 653	
5 500	20 00	V-150	13460	17230		17230[LR]	16860[LR]		701	865	874	0.361	4.778	4.653	
5.500	23.00	L-80*	11160	10560		9880	8990		489	550	530	0 415	4 670	4 545	
5 500	23 00	HCL-80*	12450	10560		9880	8990		489	550	530	0 415	4 670	4 545	
5 500	23.00	N-80*	11160	10560		9880	8990		502	579	530	0 415	4 670	4.545	
5 500	23.00	HCN-80*	12450	10560		9880	8990		514	579	530	0 415	4 670	4 545	
5 500	23.00	C-90	12380	11880		11110	10120		514	579	597	0 415	4 670	4 545	
5 500	23 00	S-95*	12940	12540		11730	10680		566	637	630	0 415	4 670	4.545	
5.500	23 00	T-95	12940	12540		11730	10680		540	608	630	0.415	4 670	4.545	
5.500	23.00	C-95*	12940	12540		11730	10680		540	608	630	0.415	4 670	4 545	
5.500	23.00	P-110*	14540	14530		13580[LR]	12360		643	724	729	0 415	4 670	4 545	
5.500	23 00	Q-125*	16070	16510		15430[LR]	14050		694	782	829	0 415	4 670	4 545	
5 500	23 00	LS-140*	17500	18490		17290[LR]	15740		771	869	928	0.415	4.670	4 545	
5 500	23 00	V-150	18390	19810		18520[LR]	16860[LR]		823	927	995	0 415	4.670	4 545	
5 500	26 00	C-90	14240	13630		11110	10120		598	579	676	0.476	4.548	4 423	
5 500	26 00	C-95*	15030	14390		11730	10680		628	608	714	0 476	4 548	4 423	
5 500	26 00	T-95	15030	14390		11730	10680		628	608	714	0 476	4.548	4 423	
5 500	26 00	P-110*	17400	16660		13580[LR]	12360		748	724	826	0 476	4.548	4 423	
5 500	26.00	Q-125*	19770	18930		15430[LR]	14050		808	782	939	0 476	4 548	4 423	
5.500	26.00	V-150	23720	22720		18520[LR]	16860[LR]		957	927	1127	0 476	4 548	4 423	

* Indicates items available from Lone Star Steel

Additional notes on Page 35

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO LP
LEASE NO.:	NM02862
WELL NAME & NO.:	300H Poker Lake Unit
SURFACE HOLE FOOTAGE:	600' FSL & 2200' FWL
BOTTOM HOLE FOOTAGE	1650' FNL & 330' FWL
LOCATION:	Section 27, T. 24 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Reporting

1. **Subsequent sundries to be filed with drilling details about spud, casing and completion work.**
2. **Completion report to be sent within 30 days of completion. Completion report to have all items completed.**

VI. CONSTRUCTION

V-DOOR WEST SOUTHWEST AND RESTRICT PAD SIZE TO THE NORTH TO 150 FT. DUE TO COUNTY ROAD.

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 4 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

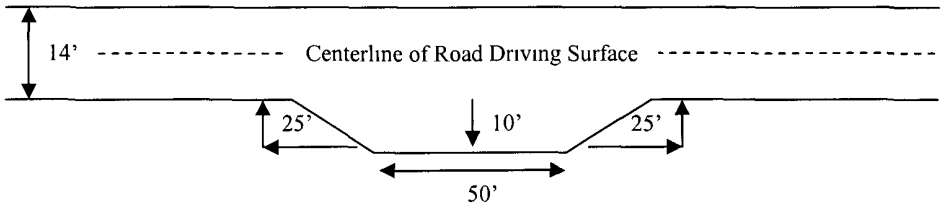
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

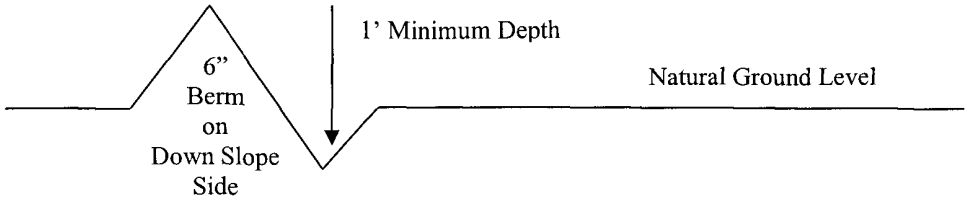


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

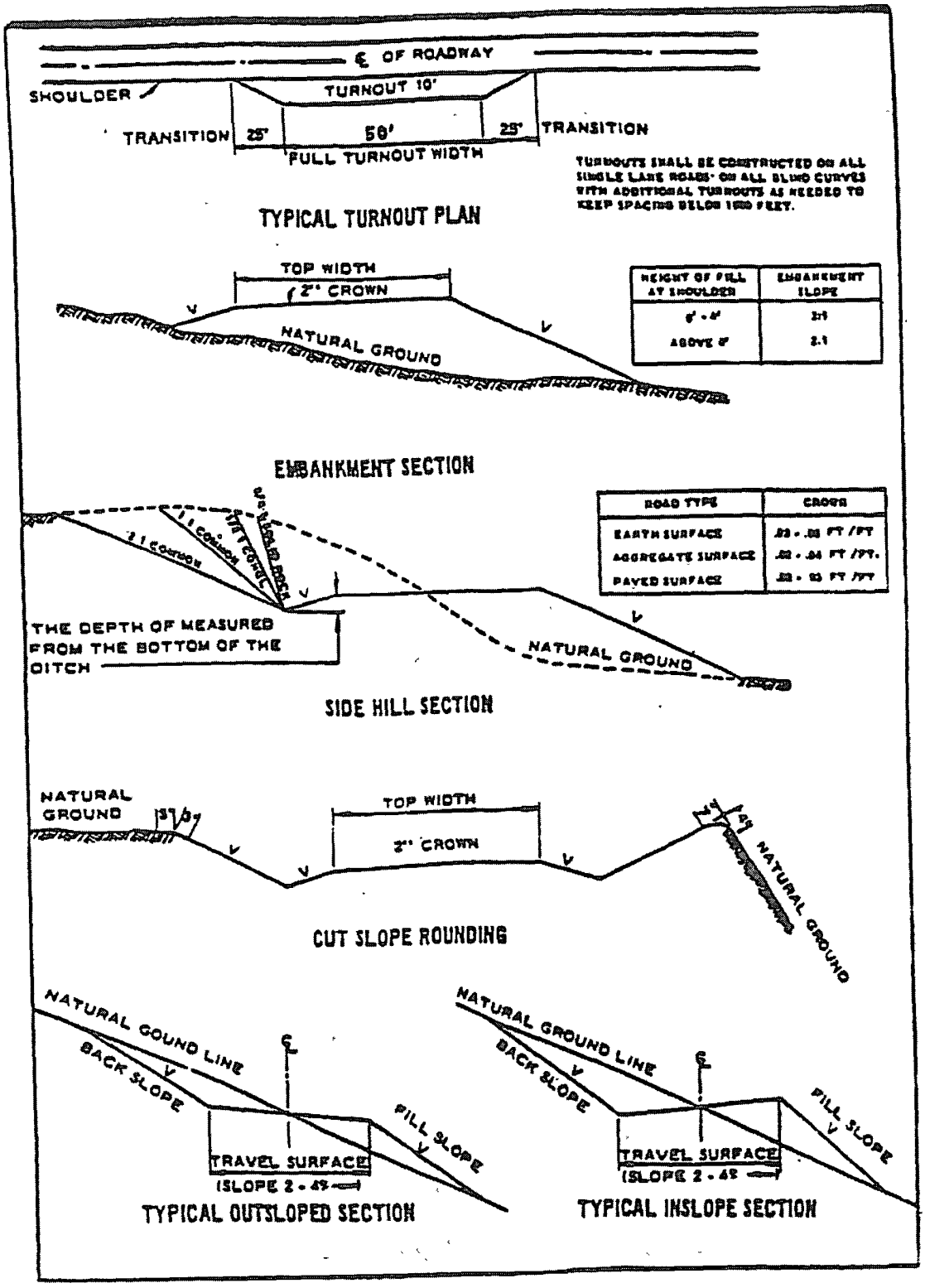
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Floor controls are required for 3M or Greater systems. These 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.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium cave/karst.
Possible lost circulation in the Delaware and Bone Spring formations.

1. The **13-3/8** inch surface casing shall be set **at approximately 555 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water mud to setting depth, brine water below.**

    a. 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.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

Pilot hole to be plugged from TD of pilot hole to kick off point. It this is not done, a 180' plug is to be set and tagged. Notify BLM about tag and record in subsequent sundry.

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    ☒ Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification.

4. 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 joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. 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 Sec. 17.

2. 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.

3. 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.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. The tests shall be done by an independent service company.

    b. The results of the test shall be reported to the appropriate BLM office.

    c. 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.

    d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. 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.

    e. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Seed Mixture 3, for Shallow Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass (*Setaria magrostachya*) 1.0	
Green Spangletop (*Leptochloa dubia*)	2.0
Side oats Grama (*Bouteloua curtipendula)*	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

(Insert Seed Mixture Here)

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.