## BASS ENTERPRISES PRODUCTION CO.

201 MAIN ST.

FORT WORTH, TEXAS 76102-3131 817/390-8400

November 9, 2006

Bureau of Land Management Roswell District Office 2909 W. 2<sup>nd</sup> Street Roswell, New Mexico 88201 Attn: Ms. Alexis Swoboda New Mexico State Land Office Commissioner of Public Lands 310 Old Santa Fe Trail Santa Fe, New Mexico 87501 Attention: Mr. Pete Martinez New Mexico Oil Conservation Division 1220 St. Francis Santa Fe, New Mexico 87505 Attention: William Jones

Re: Fourth Revision Delaware "C" Participating Area Poker Lake Unit Eddy County, New Mexico

## Gentlemen:

BEPCO, L.P., as Unit Operator of the Poker Lake Unit Agreement, pursuant to the provisions of Section 11, thereof, respectfully submits for your approval the selection of the following described lands to comprise the Fourth Revision to the Participating Area for the Delaware "C" Formation in the Poker Lake Unit consisting of a total 6,284.82 acres containing the above tract more as shown on Exhibit "A" and more specifically described on Exhibit "B".

In support of this application the following numbered items are attached hereto and made part hereof.

- 1. An ownership map (Exhibit "A") depicting the boundaries of the proposed unit area and the proposed Fourth Revision for the Delaware "C" Formation.
- 2. A schedule (Exhibit "B") identifying the lands entitled to participate in the unitized substances produced from the Delaware "C" Formation with the percentage of participation of each lease or tract indicated thereon.
- 3. Geological and engineering report with accompanying geological maps supporting and justifying the selection of the participating area.

This proposed initial participating area is predicated upon the knowledge and information first obtained upon the completion of the Unit Well No. 217 located at 1,650' FSL and 660 FEL of Section 19, T24S-R30E on April 5, 2005. BEPCO, L.P. respectfully requests your approval of the hereinabove selection of lands to constitute the Fourth Revision to the Delaware "C" Participating Area to be effective April 1, 2005. Thank you very much for your cooperation in this regard and should you require additional information concerning same, please don't hesitate to contact the undersigned.

ACCEPTED AND AGREE this	day of	, 2006.
BUREAU OF LAND MANAGEMENT		
By:		
COMMISSIONER OF PUBLIC LANDS	S	
By:		
NEW MEXICO OIL CONSERVATION	DIVISION	

Sincerely,

Forest K. Naylor

By:\_\_\_\_\_

# Exhibit "B"

# FOURTH REVISION TO INITIAL DELAWARE "C" PARTICIPATING AREA POKER LAKE FEDERAL UNIT EDDY COUNTY NEW MEXICO

13-B	13-A	=======================================	φ	Tract No.
NM-07686	NM-03075	NM-02864	NM-02860	Lease No.
Sec. 6: T24S-R30E Lot 1 (40.72)	Sec. 6: T24S-R30E NE/4 NW/4 (40.00)	Sec. 31: T23S-R30E SE/4 (160.00)	Sec: 17: T24S-R30E  NW/4 NW/4 (40.00)  W/2 SW/4 (80.00)  Sec. 18: T24S-R30E  E/2 (320.00)  E/2 W/2 (160.00)  Lot 1 (39.91)  Lot 2 (39.96)  Lot 3 (40.02)  Lot 4 (40.07)  Sec: 19: T24S-R30E  Lot 1 (40.12)  Lot 2 (40.16)  Lot 3 (40.20)  Lot 4 (40.24)  E/2 W/2 (160.00)  Sec: 20: T24S-R30E  W/2 W/2 (160.00)	Description
40.72	40.00	160.00	1,560.68	Participating Acres
0.65%	0.64%	2.55%	24.83%	Percentage of Participation
Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%	Working Interest Owner

(5)					
52	46	44	43	42	8
LC-069627-A	LC-069005	LC-068545	LC-068431	LC-068430	NM-05912
Sec. 30: T24S-R30E Lot 1 (40.28) Lot 2 (40.31) Lot 3 (40.35) Lot 4 (40.38) E/2 W/2 (160.00)	Sec. 24: T24S-R29E E/2 (320.00)	Sec. 6: T24S-R30E Lot 2 (40.58) Lot 3 (40.42) Lot 4 (40.28) E/2 (320.00) SE/4 NW/4 (40.00) E/2 SW/4 (80.00) Sec. 7: T24S-R30E Lot 1 (40.16) Lot 2 (40.08) Lot 3 (39.92) NW/4 SW/2 (40.00) E/2 W/2 (160.00)	Sec: 8 T24S-R30E W/2 W/2 (160.00)	Sec. 5: T24S-R30E Lot 2 (39.92) Lot 3 (39.96 Lot 4 (39.98) S/2 NW/4 (80.00) SW/4 NE/4 (40.00) W/2 SW/4 (80.00)	Sec. 12: T24S-R29E SE/4 (160.00) Sec. 13: T24S-R29E E/2 (320.00)
1,282.12	320.00	1201.44	160.00	319.86	480.00
20.40%	5.09%	19.11%	2.55%	5.09%	7.64%
Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%

		62	55	
Total Federal Land Total State Land Total Fee Lands		E-5229-1 (State)	LC-070175-A	
5,964.82 Acres ( 94.91%) 320.00 Acres ( 5.09%) 0.00 Acres <b>6,284.82 Acres</b>	Totals	Sec. 31: T23S-R30E E/2 SW/4 (80.00) Sec. 32: T23S-R30E W/2 W/2 (160.00) E/2 SW/4 (80.00)	Sec. 1: T24S-R29E SE/4, E/2 NE/4 (240.00) Sec. 12: T24S-R29E NE/4 (160.00)	E/2 (320.00) Sec. 31: T24S-R30E Lot 1 (40.35) Lot 2 (40.25) Lot 3 (40.15) Lot 4 (40.05) E/2 W/2 (160.00) E/2 (320.00)
	6,284.82	320.00	400.00	
	100.00%	5.09%	6.36%	
		Bass Enterprises Production Co 100%	Bass Enterprises Production Co 100%	

## BEPCO, L.P. POKER LAKE UNIT (DELAWARE "C") PARTICIPATING AREA PROPOSED FOURTH REVISION

## **GEOLOGICAL ATTACHMENTS**

- 1. <u>Type Log</u>: PLU No. 207 (Section 18-T24S-R30E)
- 2. <u>Wireline Logs & Mudlogs</u>: Database for 19 wells including porosity, resistivity, and mudlogs covering producing zones
- 3. <u>Well Database Key Map:</u> Base map illustrating wells submitted for Poker Lake Delaware "C" Participating Area Fourth Revision
- 4. <u>Base Map Existing Wells</u>: Base map illustrating Poker Lake Delaware "C" PA wells with logging and completion date
- 5. <u>Structure Map</u>: Top Lower Brushy Canyon "8A"
- 6. Net Pay Isopach Map: Lower Brushy Canyon "W" Sand >9% porosity
- 7. Net Pay Isopach Map: Lower Brushy Canyon "Y" Sand >9% porosity
- 8. Net Pay Isopach Map: Lower Brushy Canyon "Z" Sand >9% porosity
- 9. Net Pay Isopach Map: Avalon Sand >9% porosity
- 10. <u>Composite Net Pay Isopach Map</u>: Lower Brushy Canyon "W", "Y", "Z" plus Avalon Sands critical contour @ 23' >9% porosity

## **INTRODUCTION**

This is the proposed Fourth Revision to the existing Poker Lake Unit Delaware "C" Participating Area. Included in this package are updated maps as well as copies of wireline logs and mudlogs on 19 wells drilled within the outline of the proposed revised Participating Area and three recent wells in the present PA bordering the proposed revised area. The data provided herein supplements the existing database presented in the Initial Participating Area and the First, Second, and Third Revisions.

## **GEOLOGICAL SETTING**

The Delaware sands described in this proposal were deposited as part of the initial phase of basin filling during a sea level low stand and occur as basin-floor submarine fan complexes. Stacked channel sequences of reservoir quality sandstones are commonly separated by thin impermeable siltstones that act as top and lateral seals. The trapping mechanism is primarily stratigraphic, related to lateral porosity pinchouts with a subtle structural influence.

## **PETROPHYSICS**

Based upon production experience from the Delaware in the Poker Lake Unit, James Ranch Unit, and elsewhere, the Lower Brushy Canyon is oil-bearing and productive at a density porosity cut-off of  $\geq 9\%$  (sandstone matrix at 2.66 gm/cc). Porous zones are considered pay if calculated water saturations are 65% or less. Mudlogs are considered to be an important tool for the recognition of pay, particularly in areas of borderline wet/non-wet zones. Unfortunately, the drilling mud presently employed in the field (emulsion mud -65% saltwater/35% diesel) tends to mask hydrocarbon shows in the samples.

## **COMPLETIONS**

The majority of the completions in the Poker Lake Unit Delaware "C" Participating Area have been in the Lower Brushy Canyon, the interval between the Lower Brushy Canyon "8A" and the Bone Spring. However, other zones have been completed in wells in the Fourth Revision Area, including the Lower Cherry Canyon, Brushy Canyon, and Avalon. A list of the zones perforated to date in the subject wells is as follows:

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LCC = Lower Cherry Canyon
BC = Brushy Canyon
LBC = Lower Brushy Canyon
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PLU No. 214 LBC ("Z"), Avalon
             BC, LBC ("W", "Y", "Z"), Avalon
PLU No. 215
             BC, LBC ("Y", "Z"), Avalon
PLU No. 216
             LCC, BC, LBC ("Y", "Z")
PLU No. 217
             LCC, BC, LBC ("Z"), Avalon
PLU No. 218
             LBC ("W"), Avalon
PLU No. 219
             LCC, LBC ("Y", "Z"), Avalon
PLU No. 221
             LBC ("Y", "Z"), Avalon
PLU No. 222
             BC, LBC ("Y", "Z")
PLU No. 227
             LBC ("Y", "Z"), Avalon
PLU No. 231
             LCC, LBC ("Z"), Avalon
PLU No. 232
             LBC ("Y", "Z"), Avalon
PLU No. 235
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PLU No. 236 LBC ("Y", "Z"), Avalon PLU No. 237 LBC ("Y", "Z"), Avalon PLU No. 241 LBC ("Y"), Avalon PLU No. 247 LBC ("W", "Y", "Z") PLU No. 251H Completing LBC PLU No. 264 LBC ("W", "Z"), Avalon

The Lower Brushy Canyon continues to be the primary reservoir interval illustrated in this application. Small perforated intervals are typically located in the middle of porous sections within the Lower Brushy Canyon. Large fracture stimulation treatments are subsequently performed to communicate all reservoir zones within the Lower Brushy Canyon section. In the area of the proposed Fourth Revision, the primary productive sands within the Lower Brushy Canyon are the "W", "Y", and "Z" Sands. The maps included with this application illustrate the distribution of pay within these three major Lower Brushy Canyon Sands, as well as that within the underlying Avalon Sand, which is typically commingled with the Lower Brushy Canyon.

The Lower Brushy Canyon "Y" Sand fairway, the major pay interval in the northern part of the field, continues to the south through the southern part of the proposed Fourth Revision Area. It thins to the west, which is compensated for by the thickening of the "W" Sand in that direction. The recently drilled PLU No. 264, a step-out to the west of the "Y" Sand fairway in the northern part of the field, contained 53' of porosity >9% in the "W" Sand, the greatest amount of "W" pay found to date in the field. This thickening of "W" Sand pay, in conjunction with potential uphole Delaware pay, makes the Poker Lake Federal Unit west of the present Delaware "C" Participating Area prospective for Delaware development.

Delaware production has been established immediately offsetting the proposed Fourth revision to the west by two recent Yates wells. The Yates Jester BFJ Federal No. 1 contains 26' of porosity >9% in the Lower Brushy Canyon, and was completed with an IP of 103 BOPD + 48 MCFD + 314 BWPD from perfs in the Lower Brushy Canyon and Brushy Canyon. The Yates Corral Draw AQH Federal No. 2 contains 9' of porosity >9% in the Lower Brushy Canyon, and was completed with an IP of 93 BOPD + 21 MCFD + 47 BWPD from perfs in the Lower Brushy Canyon, Brushy Canyon, and Lower Cherry Canyon. Another well in the area, although not completed as a producer, demonstrates the probability of commercial production in the proposed area. In the southern part of the western extension of the proposed Fourth revision the PLU No. 74, drilled in 1991 to the Atoka, logged a Lower Brushy Canyon section containing 29' of porosity >9%. Oil to the pits was reported when this section was drilled, but the zone was not tested and the well was plugged and abandoned. If this well were drilled today it would have been tested and most likely completed in the Lower Brushy Canyon.

To the south, pay within the Lower Brushy Canyon generally thins, making it of increasing importance to complete wells in several zones, including sands above and below the Lower Brushy Canyon. In this southern area the commingling of pay from

several different sands can be critical to establishing commercial production. Wells within the proposed Fourth Revision Area have tested economic rates from the underlying Avalon Sand; completions have also been made by commingling the Middle Brushy Canyon with the Lower Brushy Canyon. In addition, behind-pipe potential has been identified and tested in shallower Delaware sands, including the Lower Cherry Canyon. Several wells (PLU Nos. 217, 218, 221, and 232) have been completed in the Lower Cherry Canyon subsequent to the initial completion and production testing of the Lower Brushy Canyon/Avalon. Other Delaware zones also appear to have recompletion potential.

Based upon additional well control and production histories, it is considered that the critical contour for commercial production in the Poker Lake Unit Delaware is the 23' contour on the composite net pay map of the Lower Brushy Canyon "W", "Y", "Z" and Avalon Sands. All wells drilled to date in the proposed Participating Area fall within this critical contour, with one exception. The Poker Lake Unit No. 235, 1980' FSL & 1930' FWL, Section 30, T24S-R30E, falls outside of this critical contour. This recent well, completed in May, 2006, has not been evaluated to be commercial as of yet. The well was perforated and fracture stimulated in the Avalon and LBC "Z" and "Y", and went on production with an initial average daily rate over a 21-day period of 31 BO + 148 MCF + 193 BW. Additional uphole potential is possible in this well in the Brushy Canyon and the Lower Cherry Canyon, which had a hydrocarbon show in samples. It is believed that the present production, with the possible addition of uphole zones, will make this well commercial even though it is below the mapped critical contour.

## PROPOSED PARTICIPATING AREA REVISION (FOURTH)

## Fourth Revision (Effective Date 04/01/05)

Continued drilling of the Delaware since the Third Participating Area revision has confirmed the extension of the productive trend upon which the Delaware "C" Participating Area is based to the south and west, through the NW/4 SW/4 Section 6, T23S-R30E, and Sections 19, 30, 31, and the W/2 NW/4 and W/2 SW/4 of Section 20, T24S-R30E. The probability of commercial production is also seen in the E/2 of Sections 1, 12, 13, and 24, T24S-R29E, the SW/4 SW/4 of Sections 6, the W/2 W/2 Section 7, and the W/2 Section 18, T24S-R30E. Confirmation of commerciality was provided by the Poker Lake Unit No. 217 (NE/4 SE/4 Section19 T24S-R30E) which was completed in the Delaware on 04/05/05. Upon completion the well tested a daily rate of 156 BO + 134 MCF + 277 BW, and has an estimated ultimate recovery of 79 MBOE. Twelve additional commercial wells have been drilled in these sections; four other wells drilled in these sections are too recent to have had commerciality established.

## Section 6, T23S-R30E

In Section 6, one well has been drilled outside of the present Participating Area, the Poker Lake Unit No. 264. This well, drilled in September of 2006, has not had a

commercial determination made as yet. A total net pay of 85' greater than 9% in the Lower Brushy Canyon and Avalon on logs indicates that this well has the reserves to be determined commercial.

## **Section 19, T24S-R30E**

In Section 19, commercial wells which have been drilled are the Poker Lake Unit Nos. 214, 215, 216, 217, 218, 221, 222, 231, 236, and 237. One well, the PLU No. 219 (NE/4 SW/4, Sec. 19), has not had a commercial determination made as yet. Initial production test data for the commercial wells in Section 19 are as follows:

**Section 19 Commercial Wells** 

Well	Comp. Date	Perforated	IP	IP	IP	EUR
		Sand	BOPD	MCFPD	BWPD	(MBOE)
PLU 214	08/22/05	LBC, Avalon	50	110	310	67
PLU 215	05/12/06	Avalon	50	420	122	79
PLU 216	05/23/05	LBC, Avalon	97	210	284	84
PLU 217	04/05/05	BC, LBC	156	134	277	79
PLU 218	07/28/05	LBC, Avalon	37	42	189	74
PLU 221	07/30/05	LBC	97	100	280	59
PLU 222	11/25/05	LBC, Avalon	94	314	272	84
PLU 231	06/23/05	LBC	164	226	350	85
PLU 236	02/26/06	LBC, Avalon	110	110	154	100
PLU 237	12/10/05	LBC, Avalon	120	200	350	62

## Section 20, T24S-R30E

In Section 20, one well has been drilled, the Poker Lake Unit No. 247. This well, drilled in May of 2006, has not had a commercial determination made as yet. A total net pay of 74' greater than 9% in the Lower Brushy Canyon and Avalon on logs indicates that this well has the reserves to be determined commercial.

## Section 30, T24S-R30E

In Section 30, commercial wells which have been drilled are the Poker Lake Unit Nos. 227 and 241. Two recent wells have not been designated commercial as yet. The PLU No. 235 (NE/4 SW/4, Sec. 19), as mentioned above, lies outside the mapped critical contour, but continued production may prove the well to be commercial. The PLU 251H (NE/4 SE/4 + SW/4 NE/4, Sec. 30), drilled in July and August of 2006, is the first horizontal well in the Nash Draw Delaware Field. This well was drilled 2,240' laterally to the northwest, staying entirely within the Lower Brushy Canyon "Y" Sand in the lateral leg. No open hole logs were run in the horizontal portion of this hole, but based on mudlog sample and gas shows as well as MWD gamma ray data, the lateral leg appears to have directly penetrated 1,000' of pay sand. A planned series of fracture stimulations along the lateral leg is expected to provide production from the Lower

Brushy Canyon pay sands above and below the wellbore. Initial production test data for the commercial wells in Section 19 are as follows:

**Section 30 Commercial Wells** 

Well	Comp. Date	Perforated Sand	IP BOPD	IP MCFPD	IP BWPD	EUR (MBOE)
PLU 227	10/18/05	BC, LBC	63	34	230	44
PLU 241	04/01/06	LBC	50	20	255	91

## Section 31, T24S-R30E

In Section 31, one commercial well has been drilled, the Poker Lake Unit No. 232. Initial production test data for the commercial wells in Section 19 are as follows:

**Section 31 Commercial Well** 

Well	Comp. Date	Perforated Sand	IP BOPD	IP MCFPD	IP BWPD	EUR (MBOE)
PLU 232	08/30/05	LBC, Avalon	52	101	222	89

We believe that this field will continue to develop to the south and west. Commingling zones above and below the usual Lower Brushy Canyon interval will be key to the development of the field to the south, where the total pay count in the Lower Brushy Canyon tends to be lower than to the north. The possibility of drilling additional horizontal wells in the Delaware section, pending the outcome of the completion of the PLU No. 251, could provide significantly higher rates/reserves per well in this area. Further development of the field will be to the west, where the Lower Brushy Canyon "W" Sand should thicken sufficiently to become the main pay in the section.

If there are any questions concerning the geology of this application, please contact Brian Pregger (817-390-8662) or George Hillis (817-390-8661) in Fort Worth. If there are any questions about the commercial determinations, please contact J. Wayne Bailey (817-390-8671).

# WELL DATABASE KEY For DELAWARE "C" PARTICIPATING AREA REVISED 10-2006

SECTION-TOWNSHIP-RANGE	WELL NAME / ORDER
Section 30-23S-30E	Gold Rush "30" Federal No. 2 Gold Rush "30" Federal No. 7
Section 31-23S-30E	Gold Rush "31" Federal No. 1 Gold Rush "31" Federal No. 2 Remuda Basin '31' State No. 3 Poker Lake Unit No. 144 Poker Lake Unit No. 145 Poker Lake Unit No. 146 Poker Lake Unit No. 149 Poker Lake Unit No. 161 Remuda Basin '31' St. Com No. 1
Section 32-23S-30E	Poker Lake Unit No. 137 Poker Lake Unit No. 140 Poker Lake Unit No. 141 Poker Lake Unit No. 165
Section 1-24S-29E	Poker Lake Unit No. 264
Section 24-24S-29E	Poker Lake Unit No. 74
Section 5-24S-30E	Poker Lake Unit No. 166 Poker Lake Unit No. 167 Poker Lake Unit No. 176
Section 6-24S-30E	Poker Lake Unit No. 150 Poker Lake Unit No. 151 Poker Lake Unit No. 152 Poker Lake Unit No. 153 Poker Lake Unit No. 154 Poker Lake Unit No. 155 Poker Lake Unit No. 156 Poker Lake Unit No. 157 Poker Lake Unit No. 184
Section 7-24S-30E	Poker Lake Unit No. 158 Poker Lake Unit No. 159 Poker Lake Unit No. 180 Poker Lake Unit No. 181 Poker Lake Unit No. 182 Poker Lake Unit No. 190
Section 8-24S-30E	Poker Lake Unit No. 59
Section 17-24S-30E	Poker Lake Unit No. 49
Section 18-24S-30E	Poker Lake Unit No. 200 Poker Lake Unit No. 212 Poker Lake Unit No. 213 Poker Lake Unit No. 226
Section 19-24S-30E	Poker Lake Unit No. 214 Poker Lake Unit No. 215 Poker Lake Unit No. 216 Poker Lake Unit No. 217 Poker Lake Unit No. 218 Poker Lake Unit No. 219 Poker Lake Unit No. 221 Poker Lake Unit No. 222 Poker Lake Unit No. 231 Poker Lake Unit No. 236 Poker Lake Unit No. 237
Section 20-24S-30E	Poker Lake Unit No. 247
Section 30-24S-30E	Poker Lake Unit No. 227 Poker Lake Unit No. 235 Poker Lake Unit No. 241 Poker Lake Unit No. 251-H
Section 31-24S-30E	Poker Lake Unit No. 232

















