

MAR 16 1993

Case  
365

Bass Enterprises Production Co.  
Attention: Jens Hansen  
First City Bank Tower  
201 Main Street  
Fort Worth, Texas 76102

Gentlemen:

An ~~approved~~ copy of your amended 1983 Plan of Development for the ~~Big Eddy Unit~~ area, Eddy County, New Mexico is enclosed. Such plan, proposing to move the Big Eddy Unit well #91 from section 30 to section 6, T. 21 S., R. 28 E., and to defer drilling the #98, #99, #100, and #101 Big Eddy Unit wells, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

(ORIG. SGN.) JAMES W. SHELTON

FOR Gene F. Daniel  
Deputy Minerals Manager  
Oil and Gas

Enclosure

cc:  
Comm of Public Lands  
NMOCD



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
OIL CONSERVATION DIVISION

TONEY ANAYA  
GOVERNOR

March 21, 1983

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

Bass Enterprises Production  
Company  
First City Bank Tower  
201 Main Street  
Fort Worth, Texas 76102

365

Attention: Jens Hansen

Re: James Ranch  
Big Eddy  
Poker Lake Units  
1983 Plans of Development

Enclosed please find an approved copy of the material referenced above. Such approval is contingent upon like approval by the Commissioner of Public Lands and the United States Minerals Management Service.

Sincerely,

A handwritten signature in cursive script, appearing to read "Roy E. Johnson".  
ROY E. JOHNSON  
Petroleum Geologist

REJ/dp

cc: Commissioner of Public Lands - Santa Fe  
Minerals Management Service - Albuquerque  
OCD District Office - Hobbs and Artesia

BASS ENTERPRISES PRODUCTION CO.

FIRST CITY BANK TOWER  
201 MAIN ST.  
FORT WORTH, TEXAS 76102  
817/390-8400

March 14, 1983

MINERALS MANAGEMENT SERVICE  
P. O. Box 26124  
Albuquerque, New Mexico 87125

COMMISSIONER OF PUBLIC LANDS  
P. O. Box 1148  
Santa Fe, New Mexico 87501

NEW MEXICO OIL CONSERVATION DIVISION  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: First Amendment to the  
1983 Plan of Development for the  
Big Eddy Unit  
Eddy County, New Mexico

Gentlemen:

In accordance with the terms and provisions of Section 10 of the Big Eddy Unit Agreement dated April 10, 1952, which provides that the Plan of Development may be modified when necessary to meet changing conditions, we propose the following changes to the 1983 Plan of Development.

Big Eddy Unit Well #91 - The 1983 Plan of Development provides that this well is to be drilled in Section 30, T21S-R28E, to a depth of 12,000' to test the Morrow Formation. We request that this well location be moved to 660' FNL and 1980' FWL in Section 6, T21S-R28E, for the drilling of an 11,600' Morrow Test Well.

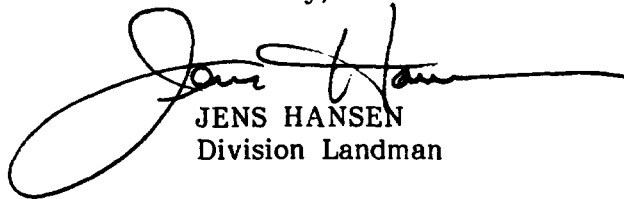
Due to current gas marketing problems, we request that the following wells be deferred and drilled under future Plans of Development:

Big Eddy Unit Well #98 - Morrow Test  
Big Eddy Unit Well #99 - Morrow Test  
Big Eddy Unit Well #100 - Morrow Test  
Big Eddy Unit Well #101 - Morrow Test

Mineral Management Service  
Commissioner of Public Lands  
New Mexico Oil Conservation Division  
March 14, 1983  
Page 2

If this proposed amendment to the 1983 Plan of Development for the Big Eddy Unit meets with your approval, please so indicate by signing in the appropriate space provided below and return one (1) copy of this letter to us for our records.

Sincerely,



JENS HANSEN  
Division Landman

JH:ep

AGREED AND ACCEPTED this \_\_\_\_\_ day of \_\_\_\_\_, 1983.

MINERALS MANAGEMENT SERVICE

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COMMISSIONER OF PUBLIC LANDS

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NEW MEXICO OIL CONSERVATION DIVISION



BASS ENTERPRISES PRODUCTION CO.

FIRST CITY BANK TOWER

201 MAIN ST.

FORT WORTH, TEXAS 76102

817/390-8400

March 14, 1983

MINERALS MANAGEMENT SERVICE

P. O. Box 26124

Albuquerque, New Mexico 87125

COMMISSIONER OF PUBLIC LANDS

P. O. Box 1148

Santa Fe, New Mexico 87501

NEW MEXICO OIL CONSERVATION DIVISION

P. O. Box 2088

Santa Fe, New Mexico 87501

Re: First Amendment to the  
1983 Plan of Development for the  
Big Eddy Unit  
Eddy County, New Mexico

Gentlemen:

In accordance with the terms and provisions of Section 10 of the Big Eddy Unit Agreement dated April 10, 1952, which provides that the Plan of Development may be modified when necessary to meet changing conditions, we propose the following changes to the 1983 Plan of Development.

Big Eddy Unit Well #91 - The 1983 Plan of Development provides that this well is to be drilled in Section 30, T21S-R28E, to a depth of 12,000' to test the Morrow Formation. We request that this well location be moved to 660' FNL and 1980' FWL in Section 6, T21S-R28E, for the drilling of an 11,600' Morrow Test Well.

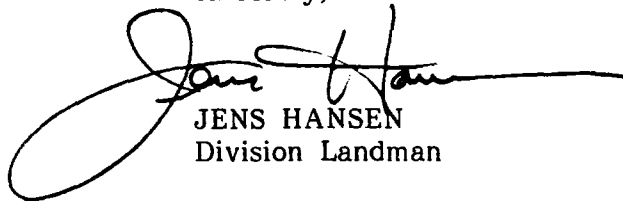
Due to current gas marketing problems, we request that the following wells be deferred and drilled under future Plans of Development:

Big Eddy Unit Well #98 - Morrow Test  
Big Eddy Unit Well #99 - Morrow Test  
Big Eddy Unit Well #100 - Morrow Test  
Big Eddy Unit Well #101 - Morrow Test

Mineral Management Service  
Commissioner of Public Lands  
New Mexico Oil Conservation Division  
March 14, 1983  
Page 2

If this proposed amendment to the 1983 Plan of Development for the Big Eddy Unit meets with your approval, please so indicate by signing in the appropriate space provided below and return one (1) copy of this letter to us for our records.

Sincerely,



JENS HANSEN  
Division Landman

JH:ep

AGREED AND ACCEPTED this \_\_\_\_\_ day of \_\_\_\_\_, 1983.


MINERALS MANAGEMENT SERVICE

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COMMISSIONER OF PUBLIC LANDS

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NEW MEXICO OIL CONSERVATION DIVISION



BASS ENTERPRISES PRODUCTION CO.

FIRST CITY BANK TOWER  
201 MAIN ST.  
FORT WORTH, TEXAS 76102  
817/390-8400

March 15, 1983

MINERALS MANAGEMENT SERVICE  
P. O. Box 26124  
Albuquerque, New Mexico 87125  
Attention: Gene Daniel

COMMISSIONER OF PUBLIC LANDS  
P. O. Box 1148  
Santa Fe, New Mexico 87501

NEW MEXICO OIL CONSERVATION DIVISION  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: 1983 Plans of Development  
Big Eddy Unit  
James Ranch Unit  
Poker Lake Unit  
Eddy and Lea Counties, New Mexico

Gentlemen:

Several months ago you approved our 1983 Plans of Development for the referenced Federal Units which provide for five (5) Morrow Tests in the Big Eddy Unit, one (1) Morrow Test in the James Ranch Unit and one (1) Morrow Test in the Poker Lake Unit.

In 1982, Bass Enterprises Production Co. drilled 14 test wells in the referenced Units at an approximate cost of \$22,356,033 and completed nine gas wells and one oil well. At the time our 1983 Plans of Development were submitted to you for approval, we were simultaneously offering most of the gas wells we completed in 1982 to gas purchasers for the marketing of gas. Subsequent to obtaining approval of our 1983 Plans of Development, we were advised by the gas purchasers that due to softness in their resale market, they would be unable to purchase gas from nine of our gas wells which are currently shut-in and will remain shut-in until conditions in the gas market improve. At present, Big Eddy Wells #84, #92, #94, #95, #97 and Poker Lake Unit Wells #52, #53, #58 and #59 are indefinitely shut-in waiting on pipeline connections.

The Poker Lake Unit Well #53 has been shut-in since June 4, 1982, awaiting price redetermination (deep, deregulated gas) from the purchaser, Natural Gas Pipeline Company, with the remainder of the above-named wells being shut-in since June 1982. Even though six (6) of the wells were drilled on acreage dedicated under long-term gas contracts, the purchaser, Natural Gas Pipeline Company, has refused to take the gas during the election period provided under the gas contract;

Minerals Management Service  
Commissioner of Public Lands  
New Mexico Oil Conservation Division  
March 15, 1983  
Page 2

and, as a result, well-head connections have not been made. The other major interstate purchasers, Northern, El Paso and Transwestern, are not currently contracting for new gas at any price. We are continuing to search for a gas market; however, the onerous terms which are being offered are prohibitive for additional drilling and development.

These nine shut-in gas wells represent an investment of approximately \$19,703,495 to Bass and other working interest owners in these wells. Without a foreseeable return on our investment, we will bear approximately \$197,000 per month (12% per annum) discount on our investment. When added to the projected cost of drilling and completing the wells under the 1983 Plans of Development, Bass and other working interest owners will have approximately \$31,000,000 invested in shut-in gas wells at a discount cost of approximately \$310,000 per month. In addition, our long term gas purchaser, Natural Gas Pipeline Company, has requested that the gas price under existing contracts be re-negotiated, which will further negatively affect our return on investment.

Most of the oil and gas operators operating in Southeastern New Mexico are experiencing this same problem which is manifesting in a substantial decrease in drilling activity, especially gas exploration below 10,000'. The New Mexico Oil and Gas Association recently reported a 45.3% decrease in rig activity from January 1982, to January 1983, and an additional 27.2% decrease from January 1983, to March 1, 1983. These percentages translated into the number of active rigs result in 128 active rigs in January 1982, and 51 active rigs on March 1, 1983.

The drilling history of Southeastern New Mexico confirms that when marketing and pricing incentives have been present, the oil and gas industry has conducted aggressive exploration and development programs. Bass has been no exception by conducting an aggressive drilling program in the referenced Units when marketing and pricing conditions have provided adequate incentives. For example, the increased gas price for deep gas has provided the opportunity to drill the deep Morrow wells in the Poker Lake Unit which exceed \$3,000,000 in cost to drill and complete. Since 1977, Bass and other working interest owners in these Units have invested approximately \$81,000,000 by drilling 61 new wells and further investing in 24 existing wells. Of this amount, approximately \$79,500,000 has been spent on the 61 new wells and \$1,500,000 on the 24 existing wells. Of these amounts, Bass has borne in excess of 95% of the costs. (see attached chart)

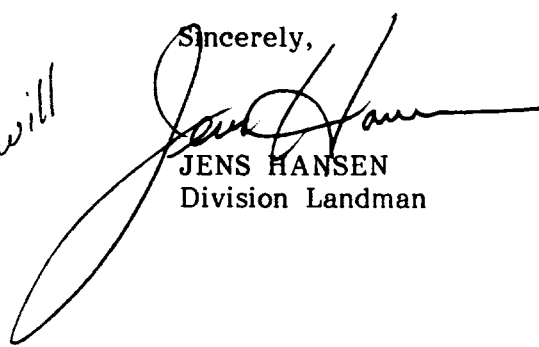
Due to the conditions described above, Bass is submitting herewith for your approval amended Plans of Development for the referenced Units. These amended Plans request a decrease in drilling activity by deferring four (4) Morrow wells and changing one (1) Morrow Test to a Delaware Test. If the proposed

Minerals Managements Service  
Commissioner of Public Lands  
New Mexico Oil Conservation Division  
March 15, 1983  
Page 3

amendments to the 1983 Plans of Development are approved, one (1) well will be drilled in each Unit in 1983 (two Morrow and one Delaware test), and will defer the remaining wells until conditions improve, allowing an opportunity for a return on investment.

Therefore, Bass respectfully submits for your approval the attached amended Plans of Development for the referenced Units for the year 1983. We are hopeful that conditions will improve in the near future and provide Bass with adequate incentives to again conduct aggressive drilling programs in these Units. We will appreciate your consideration in this matter.

Sincerely,

  
JENS HANSEN  
Division Landman

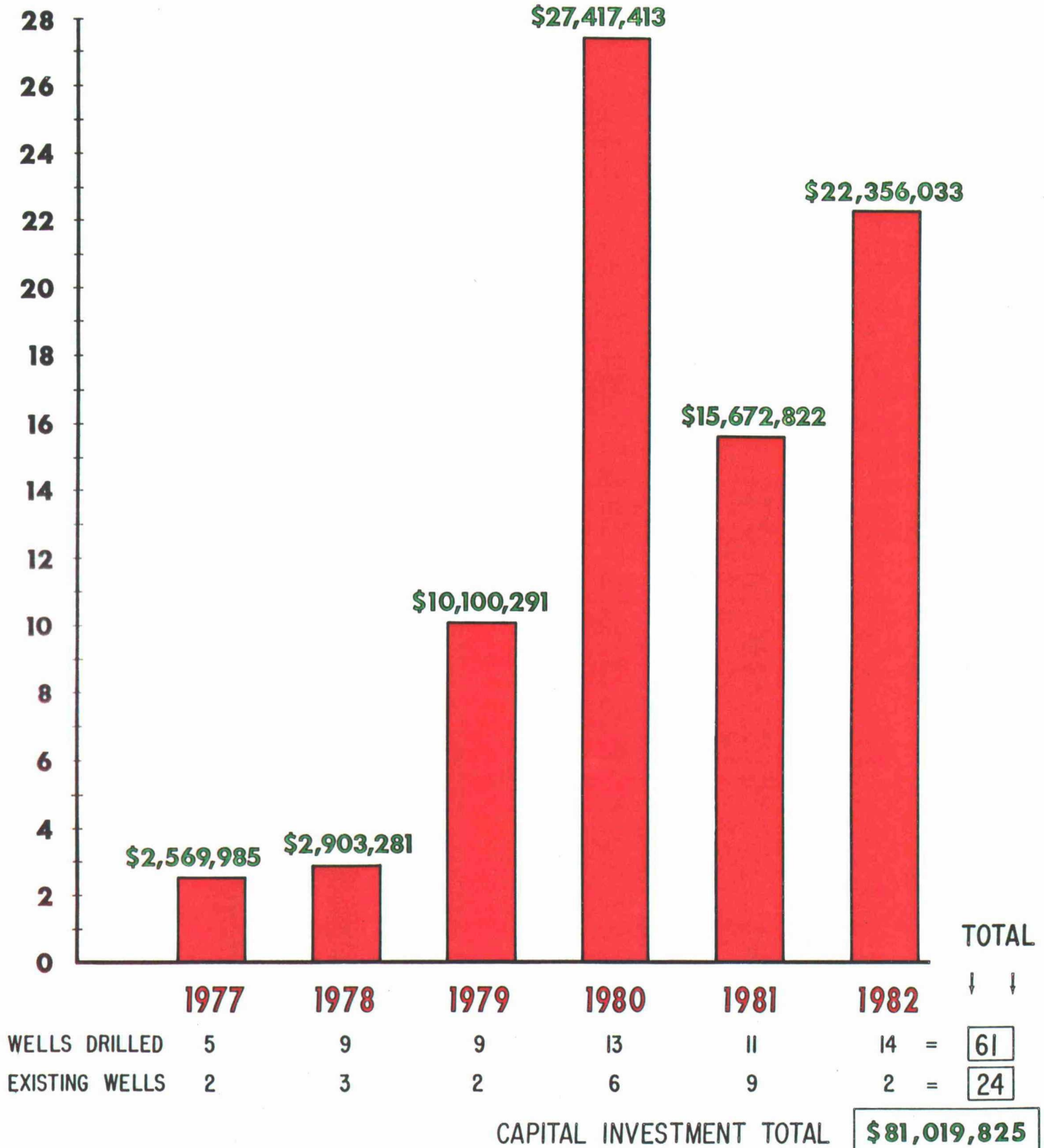
JH:ep

*From Conversation w/ Jens  
it is apparent that MMS will  
give approval.*

# CAPITAL INVESTMENT

BIG EDDY, POKER LAKE & JAMES RANCH FEDERAL UNITS  
EDDY & LEA COUNTIES, NEW MEXICO

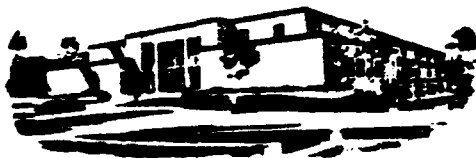
MILLIONS  
OF  
DOLLARS





JIM BACA  
COMMISSIONER

State of New Mexico



Commissioner of Public Lands

February 28, 1983

RECEIVED

MAR 8 1983

LAND DEPARTMENT

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

Bass Enterprises Production Co.  
First City Bank Tower, 201 Main St.  
Fort Worth, Texas 76102

Re: Commercial Determinations for  
Big Eddy Unit Wells, Big Eddy Unit  
Eddy County, New Mexico

ATTENTION: Mr. Jens Hansen

Gentlemen"

This office is in receipt of your letter dated February 10, 1983, wherein, as of operator of the Big Eddy Unit, Eddy County, New Mexico, you have requested that the following wells be determined to be non-commercial and thereby not receive Participating Areas, and be produced on a lease basis.

Big Eddy Unit Well No. 79-Y - Morrow - located 1980' FSL and 1930' FEL, Section 21, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well No. 79-Y - Atoka - located 1980' FSL and 1930' FEL, Section 21, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well No. 83 - Atoka - located 1980' FWL and 990' FNL, Section 10, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well No. 83 - Morrow - located 1980' FWL and 990' FNL, Section 10, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well No. 85 - Morrow - located 1980' FWL and 660' FSL, Section 8, T21S-R29E, Eddy County, New Mexico.

This office concurs with your determination that these wells are not capable of producing unitized substances in paying quantities from their respective formations and should be produced on a lease basis. Our concurrence is subject to like approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.

Very truly yours,

JIM BACA  
COMMISSIONER OF PUBLIC LANDS

BY:

*Ray D. Graham*  
RAY D. GRAHAM, Director  
Oil and Gas Division  
AC 505/827-5744

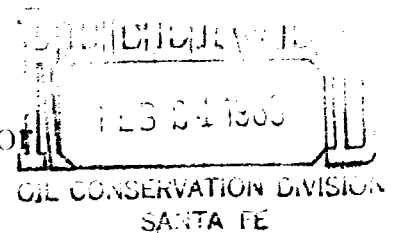
JB/RDG/pm



IN REPLY  
REFER TO:

# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
505 MARQUETTE AVENUE, N.W., SUITE 815  
ALBUQUERQUE, NEW MEXICO 87102



22 FEB 1983

Bass Enterprises Production Company  
First City Bank Tower  
201 Main  
Fort Worth, Texas 76102

Gentlemen:

Your application of December 11, 1981 requesting approval of the initial participating area for the Morrow "F" formation, Big Eddy Unit Area, Eddy County, New Mexico, in accordance with section 11 of the Big Eddy Unit Agreement dated April 10, 1952, was approved by the Deputy Minerals Manager, Oil and Gas, Albuquerque, New Mexico, effective as of August 1, 1979.

The first addition to the unit includes Lots 17 through 24 of section 3, T. 21 S., R. 28 E., Eddy County, New Mexico, and containing 320.0 acres of land. This is based upon information contributed by Well #72 located 1980 feet FSL and 1980 feet FEL section 3, T. 21 S., R. 28 E., Eddy County, New Mexico, N.M.P.M., and completed on July 13, 1979 for an after frac gauge of 2279 MCF/D from the Morrow formation.

Copies of the approved application are being distributed to the appropriate Federal offices and three approved copies are enclosed. You are requested to furnish the State of New Mexico and other interested parties with appropriate evidence of this approval.

Sincerely yours,

(ORIG. SGD.) JAMES W. SHELTON

FOR Gene F. Daniel  
Deputy Minerals Manager  
Oil and Gas

Enclosures

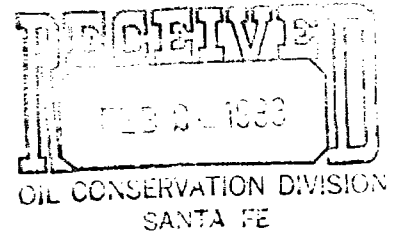
cc:  
NMOCD, Santa Fe  
Comm. of Public Lands, Santa Fe



IN REPLY  
REFER TO:

## United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
505 MARQUETTE AVENUE, N.W., SUITE 815  
ALBUQUERQUE, NEW MEXICO 87102



22 FEB 1983

Bass Enterprises Production Company  
First City Bank Tower  
201 Main  
Fort Worth, Texas 76102

Gentlemen:

Your application of December 10, 1981 requesting approval of the initial participating area for the Atoka formation, **Big Eddy Unit Area**, Eddy County, New Mexico, in accordance with section 11 of the Big Eddy Unit Agreement dated April 10, 1952 was approved by the Deputy Minerals Manager, Oil and Gas, Albuquerque, New Mexico, effective as of August 1, 1979.

The first addition to the unit includes Lots 17 through 24 of section 3, T. 21 S., R. 28 E., Eddy County, New Mexico, and containing 320.0 acres of land. This is based upon information contributed by Well #72 located 1980 feet FSL and 1980 feet FEL of section 3, T. 21 S., R. 28 E., Eddy County, New Mexico, N.M.P.M., and completed on July 13, 1979 for an after frac gauge of 3416 MCF/D from the Atoka formation.

Copies of the approved application are being distributed to the appropriate Federal offices and three approved copies are enclosed. You are requested to furnish the State of New Mexico and other interested parties with appropriate evidence of this approval.

Sincerely yours,

(ORIG. SGD.) JAMES W. SHELTON

FOR

Gene F. Daniel  
Deputy Minerals Manager  
Oil and Gas

Enclosures

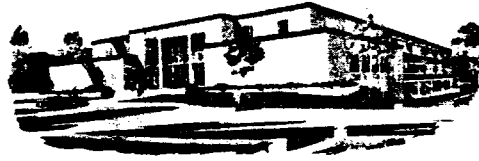
cc:

~~NMOC~~, Santa Fe  
Comm. of Public Lands, Santa Fe

# State of New Mexico



JIM BACA  
COMMISSIONER



## Commissioner of Public Lands

April 22, 1983

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

Bass Enterprises Production Co.  
First City Bank Tower  
201 Main Street  
Fort Worth, Texas 74102

Re: Application for the Approval of the  
"B" Participating Area for the  
Strawn Formation  
Big Eddy Unit Area,  
Eddy County, New Mexico

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date **approved** the Initial "B" Participating Area for the Strawn Producing Formation in the **Big Eddy Unit Area**, Eddy County, New Mexico. The Initial Strawn "B" Participating Area is 316.00 acres described as the N/2 of Section 31, Township 21 South, Range 28 East and is based upon the completion of the Unit Well No. 65.

Our approval is subject to like approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.

Enclosed is an approved copy for your files.

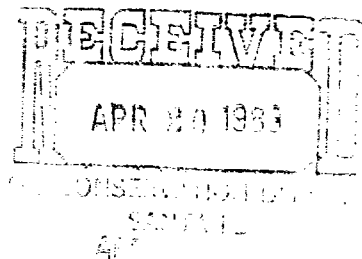
Very truly yours,

JIM BACA  
COMMISSIONER OF PUBLIC LANDS

BY:  
RAY D. GRAHAM, Director  
Oil and Gas Division  
AC 505/827-5744

JB/RDG/pm  
encls.  
cc:

OCD-Santa Fe, New Mexico  
BLM-Albuquerque, New Mexico



Bass Enterprises Production Co.  
Attention: Jens Hansen  
First City Bank Tower  
201 Main Street  
Fort Worth, Texas 76102

Dear Mr. Hansen:

Your application of February 14, 1983 requesting approval of the "B" participating area for the Strawn Formation, Big Eddy Unit, Eddy County, New Mexico, was approved on this date by the Assistant District Manager for Minerals, Albuquerque, New Mexico, effective as of May 16, 1981.

The area adds 316 acres described as N $\frac{1}{2}$  of section 31, T. 21 S., R. 28 E., N.M.P.M., and contributing to this area is the completion of well #65 with initial potential of 15501 MCFGPD.

Copies of the approved application are being distributed to the appropriate Federal offices and 3 approved copies are enclosed. You are requested to furnish the State of New Mexico and other interested parties with appropriate evidence of this approval.

Sincerely yours,

(ORIG. SGD.) JAMES W. SHELTON

FOR Assistant District Manager  
for Minerals

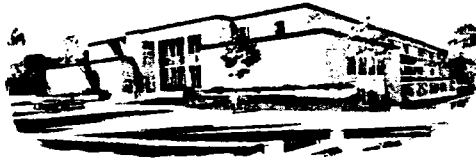
Enclosures(3)

cc:  
BLM, Santa Fe  
Comm of Pub Lands, Santa Fe  
NMOCB, Santa Fe

# State of New Mexico



JIM BACA  
COMMISSIONER



## Commissioner of Public Lands

March 18, 1983

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

Bass Enterprises Production Co.  
First City Bank Tower, 201 Main Street  
Fort Worth, Texas 76102

Re: First Amendment to the 1983  
Plan of Development for the  
**Big Eddy Unit**  
Eddy County, New Mexico

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date **approved** your First Amendment to the 1983 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico. Such amendment provides to change the drilling location of the Well No. 91 from a Morrow Well at a depth of 12,000' in Section 30, T21S-R28E, to be moved to the NW/4 of Section 6, T21S-R28E, for the drilling of an 11,600' Morrow Test Well. Your amended plan also provides for the drilling of the Well Nos. 98, 99, 100 and 101 to be deferred and drilled under a future Plan of Development. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the United States Minerals Management Service.

Enclosed is an approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

JIM BACA  
COMMISSIONER OF PUBLIC LANDS

BY:  
RAY D. GRAHAM, Director  
Oil and Gas Division  
AC 505/827-5744

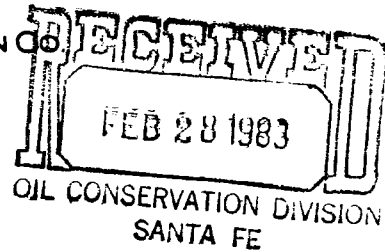
JB/RDG/pm  
encls.

cc: OCD-Santa Fe, New Mexico  
USMMS-Albuquerque, New Mexico  
Administration

BASS ENTERPRISES PRODUCTION CO.

FIRST CITY BANK TOWER  
201 MAIN ST.  
FORT WORTH, TEXAS 76102  
817/390-8400

February 14, 1983



BUREAU OF LAND MANAGEMENT  
P. O. Box 26124  
Albuquerque, New Mexico 87125

COMMISSIONER OF PUBLIC LANDS  
P. O. Box 1148  
Santa Fe, New Mexico 87501

NEW MEXICO OIL CONSERVATION DIVISION  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Application for the Approval of  
the "B" Participating Area for the  
Strawn Formation  
Big Eddy Unit No. 65  
1980' FWL and 660' FNL  
Section 31, T21S-R28E  
Eddy County, New Mexico

Gentlemen:

Bass Enterprises Production Co., as Unit Operator for the Big Eddy Unit Agreement, pursuant to provisions of Section 11 thereof, respectfully submits for your approval a selection of the following described lands to constitute the initial "B" Participating Area for the Strawn Producing Zone or Formation, to-wit:

N/2 of Section 31, T21S-R28E, Eddy County, New Mexico, and containing 316 acres of land.

In support of this Application, the following numbered items are attached hereto and made a part hereof:

- (1) An ownership map showing thereon the boundaries of the unit area and the proposed initial "B" Participating Area.
- (2) A schedule showing the lands entitled to participation and the unitized substances produced from the Strawn Formation, with the percentage of participation of each lease or tract indicated thereon.

Applicant is submitting separately in triplicate a geological and engineering report with accompanying geologic maps supporting and justifying the proposed selection of the Participating Area.

Bureau of Land Management  
Commissioner of Public Lands  
New Mexico Oil Conservation Division  
February 14, 1983  
Page 2

This proposed initial Participating Area is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Unit Agreement on May 16, 1981, of Unit Well No. 65, in the NE/4 of NW/4, Section 31, T21S-R28E, with an initial production of gas from the Strawn Formation at a depth of 10,544' through 10,668'. The effective date of the initial area shall be May 16, 1981, pursuant to Section II of the Unit Agreement.

Consequently, Applicant respectfully requests your approval of the hereinabove selection of lands to constitute the initial Strawn "B" Participating Area, to be effective May 16, 1981.

Sincerely,



JENS HANSEN  
Division Landman

JH:ep  
Enclosures

BIG EDDY UNIT NO. 65

Big Eddy Unit No. 65 was originally completed in the Morrow formation in September, 1979. After being acidized with 2500 gallons of 7 1/2% MSR acid the well potentialled 1573 MCFGPD. The Morrow produced a cumulative of 130,180 MCFG before being recompleted in the Atoka. The Atoka interval was acidized with 4500 gallons 7 1/2% MSR acid in January, 1981, and potentialled at 540 MCFGPD. The Atoka produced a cumulative of 5695 MCFG before being plugged back to the Strawn. The current completion in the Strawn was acidized with 2500 gallons of 20% MSR-100 acid and potentialled at 15501 MCFGPD in May, 1981. This well is currently making 244 MCFGPD with 9 BCPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL Big Eddy Unit No. 65 FORMATION Strawn  
 LOCATION C UNIT, 1980 FEET FROM W LINE & 660 FEET FROM N LINE,  
 SECTION 31, RANGE 28E, TOWNSHIP 21S, COUNTY Eddy NEW MEXICO.  
 SPUD DATE 3-3-79 COMPLETION DATE 5-15-81 INIT. PROD. DATE 5-20-81  
 PERFORATIONS 10,554', 10,560', 10,584', 10,617', 10,620', 10,630'-10,668'(1 shot/2 ft.

STIMULATION:

ACID 2500 gals 20% MSR-100 (10,554'-10,668')

FRACTURE

POTENTIAL CAOF 15501 MCFGPD

(ATTACH COPY OF C-122. ATTACH COPY OF WELLBORE SKETCH OF COMPLETED WELL.)

VOLUMETRIC CALCULATION

	SANDS PERFORATED	FORMATION SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	<u>320</u>	
Porosity ( $\phi$ ), %	<u>10</u>	
Water saturation ( $S_w$ ), %	<u>42</u>	
Net thickness (h) > 6% $\phi$ & 40% $S_w$ , ft	<u>41</u>	
Temperature (T), °F	<u>165</u>	

Bottomhole pressure (P<sub>h</sub>), psi 5591

Recovery factor (RF), % 1.8

Recoverable gas, MCF = (see below) 8,141,006

Recoverable Gas, MCF =  $(P_h - P_{wf}) \cdot Q \cdot (1 - S_w) \cdot (P_h) \cdot (1 - (P_h))$  where

$$B_{gi} = 0.03535 \cdot \frac{P_h}{P_{wf}} \cdot \left( \frac{HSCF}{Q \cdot Y_t} \right) = 0.03535 \cdot \left( \frac{5591}{1.03(625)} \right) = .307$$

#### PERFORMANCE DATA

If sufficient history exists, attach plot of production rate vs. time.

(Cumulative production to 9 / 31 / 62 = 135,334 MCF.

Initial rate (q<sub>i</sub>), 6800 MCF/day

Economic limit (q<sub>l</sub>), 1500 MCF/day

Decline rate, dy 45

Remaining gas (Q) = 106,384 MCF

Ultimate Recoverable Gas 241,718 MCF

$$Q = (q_i - q_l) \cdot \frac{1}{-dy} \cdot \ln \left( \frac{q_l}{q_i} \right)$$

Attach plot showing proration unit and participating area.

RECOVERABLE GAS	REV. (MCF)	COND (BBLs)
Gas sand previously produced	0	
Sand perforated	241,718	(1) 10,563
Sand not perforated, but potentially productive	0	(2) 0
Total recoverable gas	241,718	10,563

(1) performance recoverable gas if available

(2)  $\frac{\text{performance sand perforated}}{\text{volumetric sand perforated}} \times \frac{\text{volumetric sand not perforated}}{\text{performance sands not perforated}}$

Participating area size based on ratio of production history and volumetrics

320 acres--minimum area is proration unit.

**ILLEGIBLE**

## ECONOMIC

Well Cost \$ 842,050 (to the depth of formation completed)

Recompletion Cost \$ 48,000

TOTAL COST \$ 890,050

(Gas Price)(Net Revenue Interest)(1-Ad Valorem Taxes) - Production Tax + [(Oil Price)(Net Revenue Interest)(Cond. Yield, bbl/MCFG)(1 -Production and Ad Valorem Taxes)] - [(Oil Price - Base Price) WFPT %] NRI

Net Gas Price = Gas Price (.845)(1-.025) - .139 + [32(1-.07) - (32-19)(.775)]  
(.845)(Cond. Yield, bbls/MCF)

Operating Cost \$1500/Month 81' 3.26(.799)(.975)-.126+36.73(.94)-36.73-20(.7).799(.  
= 4.93

BEPCO Net Income = (Gross Gas)(Net Gas Price)(.187)=6.14 82' 3.68(.799)(.975)-.129+33(.94)-(33-21.63)(.725).799

83' 3.85(.799)(.975)-.139+32(.94)-(32-23.36)(.75).799  
(.187)=6.39

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	15% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
Zero	---	---	---	1.0000	-890,050
1981	70,002	345,110	13,500	0.9325	309,226
1982	85,000	521,900	18,000	0.81087	408,597
1983	47,000	300,330	18,000	0.70511	199,073
				0.61314	26,846
				0.53316	
Remainder				0.46362	

If payout is five years or less, well is considered economical.

(BEPCO Net Income - Operating Expense) discount factor =

discounted cash flow. Economical

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 9-1-77

<div style="display: flex; justify-content: space-between;"> <div> <b>Type Test</b>  <input checked="" type="checkbox"/> Initial    <input type="checkbox"/> Annual    <input type="checkbox"/> Other         </div> <div> <b>DATE</b>          FEB 28 1983       </div> </div>											
<b>Company</b> Bass Enterprises				<b>System</b> Natural Gas Pipeline				<b>Oil Conservation Division</b> SANTA FE			
<b>Field</b> East Carlsbad				<b>Formation</b> Strawn				<b>Well</b> C			
<b>Completion Date</b> 5/16/81		<b>Total Length</b>		<b>Perforations</b> 10825		<b>Production</b> 3131.4 GL		<b>Unit</b> Big Eddy Unit			
<b>C.G. Size</b> 5 1/2	<b>Wt.</b> 20&17	<b>d</b>	<b>Set At</b> 10825	<b>Perforations</b> From 10544 To 10668		<b>Well No.</b> # 65					
<b>Tub. Size</b> 2 3/8	<b>Wt.</b> 4.7	<b>d</b>	<b>Set At</b> 10510	<b>Perforations</b> From To		<b>Unit</b> C	<b>Sec.</b> 31	<b>Twp.</b> 21s	<b>Range</b> 28e		
<b>Type Well - Single - Production - G.G. or G.O. Multiple</b> Single Gas						<b>Factor Set At</b> 10510		<b>County</b> Eddy			
<b>Producing Time</b> Tubing		<b>Reservoir Temp. °F</b> 180°		<b>Mean Annual Temp. °F</b> 60°		<b>Gas Pressure - P<sub>g</sub></b> 13.2		<b>State</b> New Mexico			
<b>L</b> 10606	<b>H</b> 10606	<b>Gg</b> .6582	<b>% CO<sub>2</sub></b> .522	<b>% H<sub>2</sub></b> 1.132	<b>% H<sub>2</sub>S</b>	<b>Prover</b>	<b>Meter Run</b> 3"	<b>Flg.</b>			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h <sub>w</sub>	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							4060				24 hrs.
1.	3 x 1.750			450	6.1	69	3980				30 mins
2.	3 x 1.750			450	13.5	50	3850				1 hr.
3.	3 x 1.750			460	20.5	58	3800				45 mins
4.	3 x 1.750			460	31.2	62	3770				45 mins
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Super. Comp. Factor, F <sub>sv</sub>	Rate of Flow O. Field
1	15.61	53.16	463.2	.9915	1.233	1.047	1062
2	15.61	79.08	463.2	1.010	1.233	1.055	1622
3	15.61	98.49	473.2	1.002	1.233	1.053	2000
4	15.61	121.51	473.2	.9981	1.233	1.052	2456
5							

NO.	$\eta$	Temp. °R	T <sub>r</sub>	Z	Gas Liquid Hydrocarbon Ratio	API Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
					9.998	56.2 @ 60°	.6582	.932	670	378
1	.69	529	1.40	.912						
2	.69	510	1.35	.899						
3	.71	518	1.37	.902						
4	.71	522	1.38	.904						
5										

NO.	BHR	P <sub>w</sub>	P <sub>w</sub> <sup>2</sup>	P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>
1	5546.2	3912.6	15308.8	230.6
2	5513.2	3883.4	15080.7	458.7
3	5483.2	3856.2	14870.1	669.3
4	5456.2	3831.2	14677.7	861.7
5				

$$(1) \frac{P_e^2}{P_e^2 - P_w^2} = 18.033$$

$$AOP = 0 \left[ \frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 15.501$$

$$(2) \left[ \frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 6.311$$

<b>Absolute Open Flow</b> 15,501	<b>Angle of Dip</b> 57.5°	<b>Shape n</b> .637
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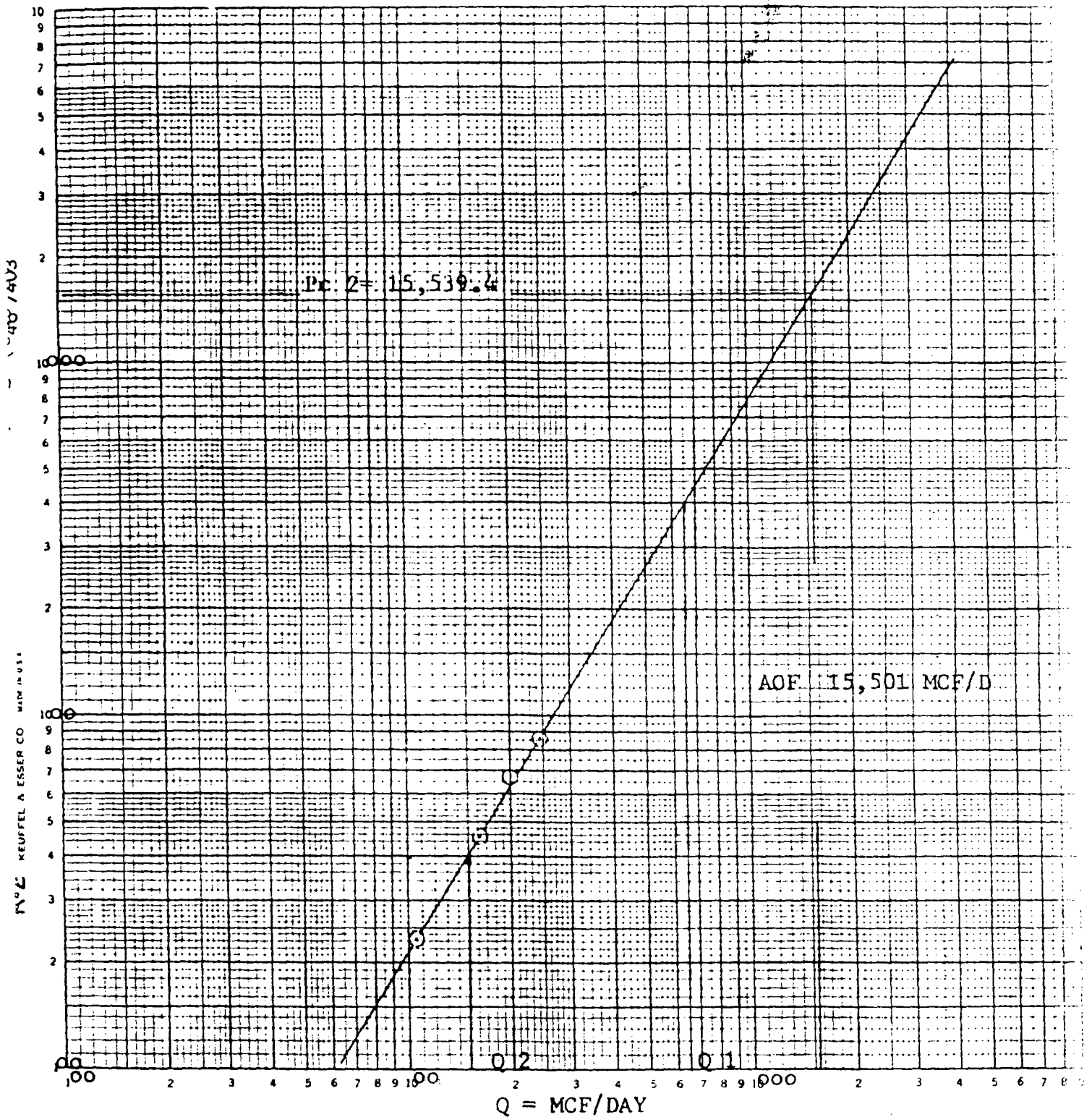
**Remarks:** The well produced 22.9 bbls. of distillate & 1.2 bbls. of H.2 O during the test.

\* Calculated from bottom-hole pressures taken @ 10606 feet.

Approved By: _____	Conducted By: _____	Collected By: _____	Checked By: _____
--------------------	---------------------	---------------------	-------------------

Davis Services Inc. Rick Pagan

Well NO. : # 65  
 Unit : C /sec. 31/twp.21s/rge. 28e  
 County : Eddy  
 State : New Mexico  
 Date : May 16, 1981



Q = MCF/DAY  
 Q 1 = 6500; Log of Q 1 = 3.812913  
 Q 2 = 1500; Log of Q 2 = 3.176091  
 N = .637  
 θ = 57.5°

## WELL LOCATION AND ACREAGE DEDICATION PLAT

Effective 1-1-81

All distances must be from the outer boundaries of the Section

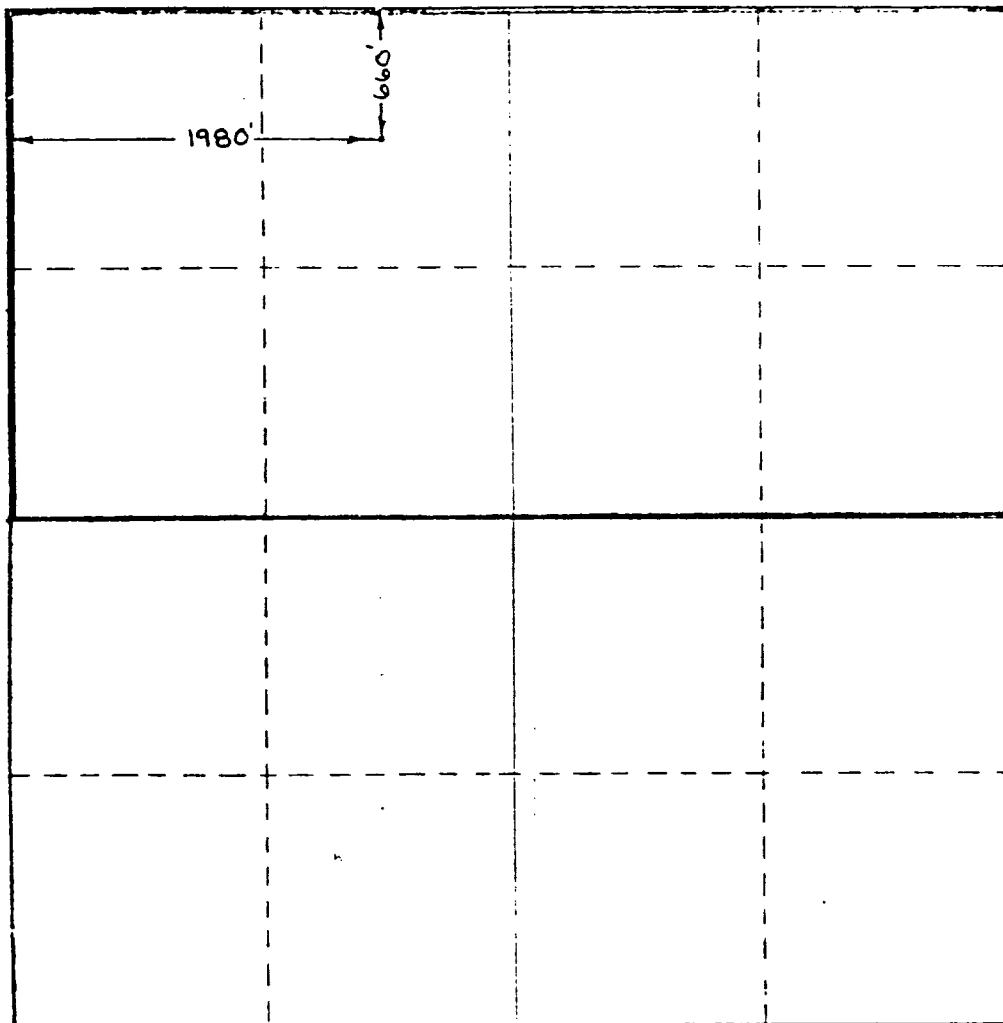
Operator <b>Perry R. Bass</b>			Lease <b>Big Eddy Unit</b>		Well No. <b>65</b>
Unit Letter <b>C</b>	Section <b>31</b>	Township <b>21S</b>	Range <b>28E</b>	County <b>Eddy</b>	
Actual Footage Location of Well: <b>660</b> feet from the <b>North</b> line and <b>1980</b> feet from the <b>West</b> line					
Ground Level Elev. <b>3132.4'</b>	Producing Formation <b>Strawn</b>	Pool <del>East of Section</del> <b>Undesignated</b>		Dedicated Acreage: <b>316</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unit

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



## CERTIFICATION

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

*David L. Davis*

Name

David L. Davis

Position

Asst. Div. Engr.

Company

Perry R. Bass

Date

April 10, 1981

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

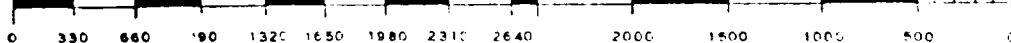
Date Surveyed

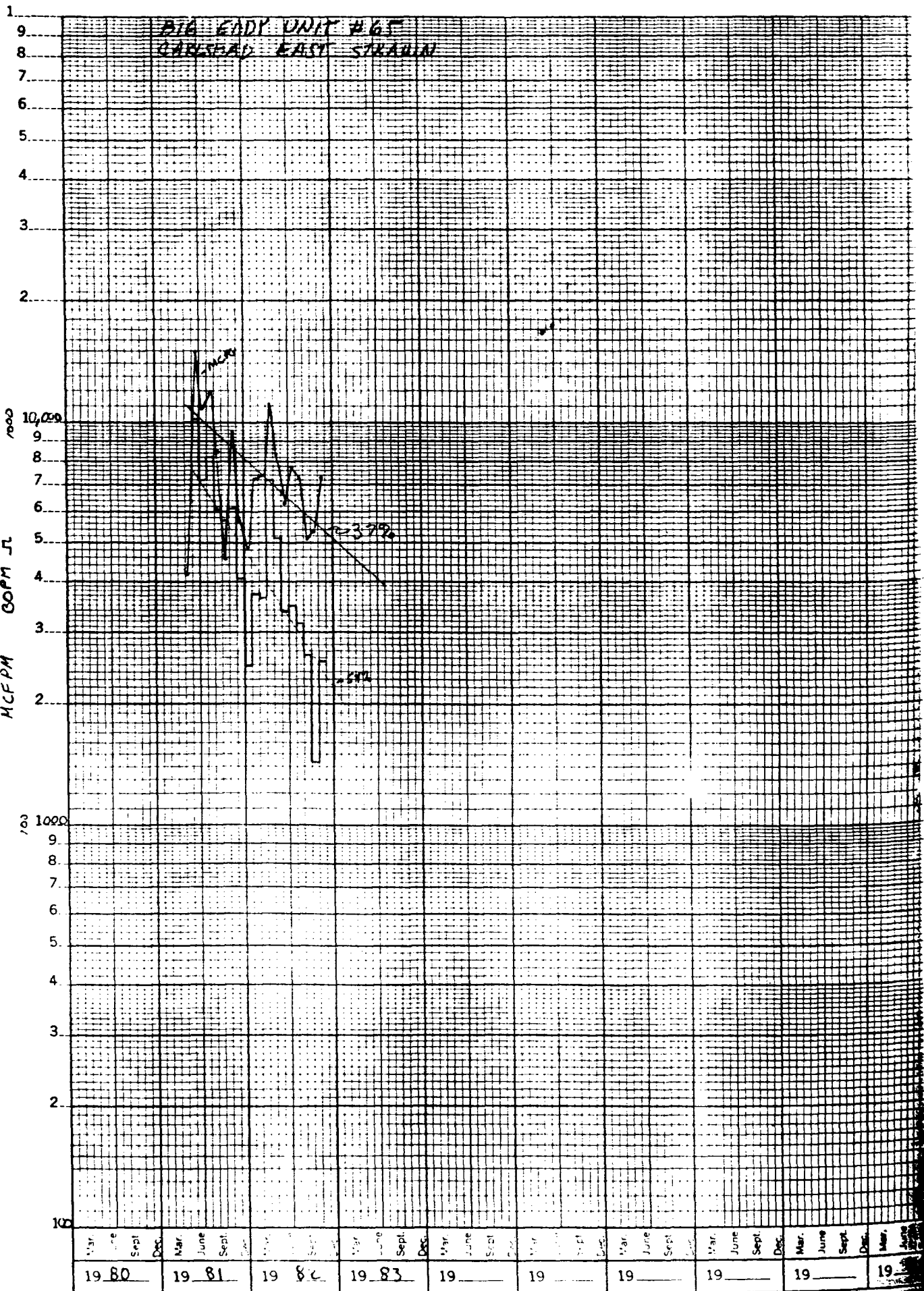
November 17, 1978

Registered Professional Engineer  
and/or Land Surveyor.

Originally signed under  
prior application.

Certificate No.





47 6840

20 YEARS BY MONTHS X 3 LOG CYCLES  
 KEUFFEL & ESSER CO. MADE IN U.S.A.

K-E

# BASS ENTERPRISES PRODUCTION COMPANY

SUBJECT

PAGE NO.

DATE

PREPARED BY

CLS

WELL SKETCH

ELEV: 3131.4' GL  
3149 RKB

BIG EDDY UNIT  
EAST CARLSBAD AREA

WELL: 3-8-79

DATE: 5-22-79

1-1-80

BY TOOL @ 1164'

CMT. w/200 SY HOWSO LITE TILED  
WITH 100 SY CLASS "C" CMC 60 SY.

1-1-80 4 1/2" O.D. 11.40, ST/C  
CMT. 11/300 SY CMC 30 SY.

1-1-80 4 1/2" O.D. 11.40, ST/C  
CMT. 11/300 SY CMC 30 SY.

5 1/2" N-80 LT&C Cag (54)	2229.15
5 1/2" N-80 Buttress Csg (70)	2866.10
5 1/2" P-110 LT&C 8rd Csg (107)	4578.66
5 1/2" K-55 Buttress Csg (20)	1184.39
5 1/2" N-80 Buttress Csg (44)	1799.67
5 1/2" N-80 Buttress Box X LT&C 8rd Pin (4)	34.78
5 1/2" N-80 LT&C Box X Buttress Pin (4)	40.86
5 1/2" N-80 Buttress X LT&C 8rd Pin (4)	41.54

On 12. Packer @ 10,449'

PGID 10,850'

1/2 1/4" CMT. ON TOP OF PFR

ON 12. 5 1/2" PERMA DRILL PKR 2.75" ID @ 11,420'

5-11-79 Air Mover @ 11,630' - 11,770'

PGID @ 11,630'

1-1-80 4 1/2" O.D. 11.40, ST/C (25 SY)

1-1-80 4 1/2" O.D. 11.40, ST/C (25 SY)

1-1-80 4 1/2" O.D. 11.40, ST/C (25 SY)

1-1-80 4 1/2" O.D. 11.40, ST/C (25 SY)

1-1-80 4 1/2" O.D. 11.40, ST/C (25 SY)

1-1-80 4 1/2" O.D. 11.40, ST/C (25 SY)

1-1-80 4 1/2" O.D. 11.40, ST/C (25 SY)

ILLEGIBLE

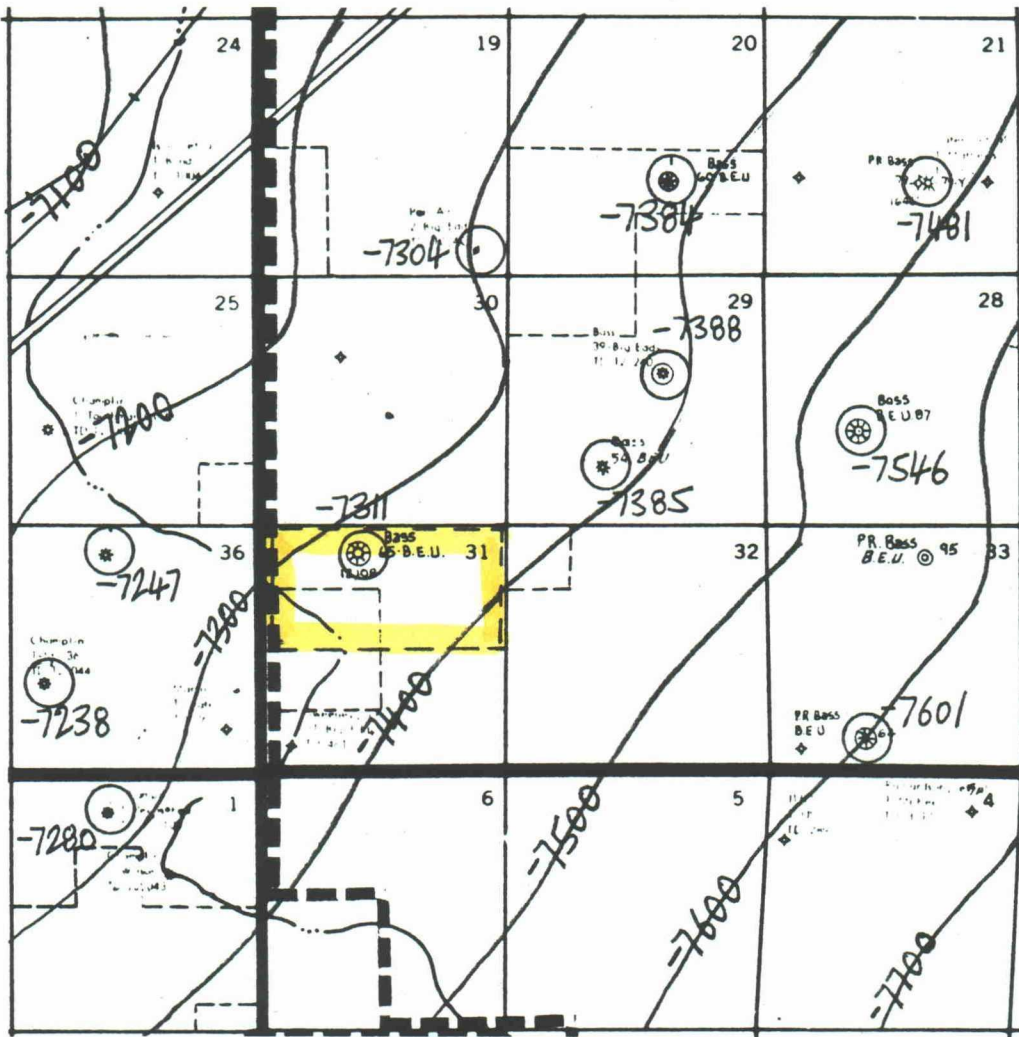
TO 11,770'

EXHIBIT "B"  
STRAWN "B" PARTICIPATING AREA

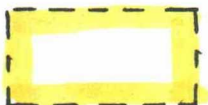
Tract #	Lease #	Description of Participating Lands	Participating Acres	% of Unit Participation	Lease Ownership %	Unit Ownership %
10	NM 01148	W/2 NE/4 Section 31, T21S-R28E	80	25.316	BEPCo. - 75% PRB - 25%	18.987 6.329
-	Fee Lands	E/2 NE/4, Lot 1 (NW/4 NW/4), NE/4 NW/4, Section 31, T21S-R28E	158.08	50.026	Dick Gaddy, et al 79.997 BEPCo. - 12.497 PRB - 4.166 Pardue Farms - 3.340	40.019 6.252 2.084 1.671
-	Fee Lands	Lot 2 (SW/4 NW/4), SE/4 NW/4, Section 31, T21S-R28E	77.92	24.658	Dick Gaddy, et al 100	24.658

# B.E.U. 65

# STRUCTURE MAP: TOP STRAWN LIME DATUM



SCALE 1" = 4000'



PROPOSED PARTICIPATING AREA

G.A.H. 2/83