

BASS ENTERPRISES PRODUCTION CO.

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

#365

March 28, 1984

BUREAU OF LAND MANAGEMENT  
P. O. Box 1397  
Roswell, New Mexico 88201

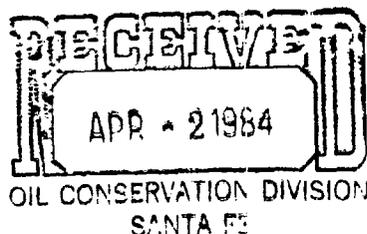
Attention: Al Collar

COMMISSIONER OF PUBLIC LANDS  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87504-1148

Attention: Ray Graham

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

Attention: Joe Ramey



RE: First Amendment to the 1984  
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 to add the following well to the 1984 Plan of Development:

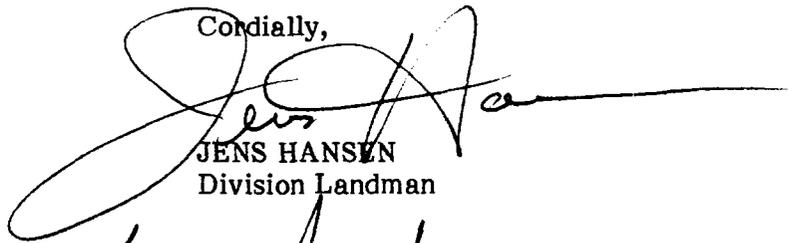
Big Eddy Unit Well No. 101 - Located 2,280' FNL & 1980' FWL,  
Section 27, T20S-R31E - 5,820' Cherry Canyon Delaware Test.

This well was submitted as the Rodke #3 and you have agreed to change the name in the Application for Permit to Drill.

Bureau of Land Management  
Commissioner of Public Land  
New Mexico Oil Conservation Division  
March 28, 1984  
Page 2

If this proposed Amendment to the 1984 Plan of Development for the Big Eddy Unit meets with your approval, please so indicate by signing the appropriate space provided below and return one copy of this letter to us for our records.

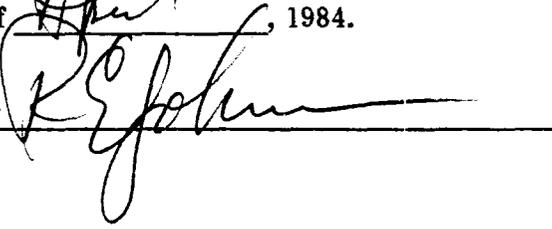
Cordially,



JENS HANSEN  
Division Landman

JH:jh

AGREED TO AND ACCEPTED this 16 day of April, 1984.

By 

# State of New Mexico



JIM BACA  
COMMISSIONER

## Commissioner of Public Lands

April 9, 1984

Bass Enterprises Production Company  
201 Main Street  
Fort Worth, Texas 76102

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148  
Express Mail Delivery User:  
310 Old Santa Fe Trail  
Santa Fe, New Mexico 87501

Re: First Amendment to the 1984  
Plan of Development for the  
Big Eddy Unit Agreement  
Eddy County, New Mexico

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date approved your First Amendment to the 1984 Plan of Development for the Big Eddy Unit Area, Eddy County, New Mexico. Such amended plan provides for the additional drilling of the Unit Well No. 101 to test the Cherry Canyon Delaware formation. 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 of your amended plan 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  
BLM-Roswell, New Mexico Attention: Mr. Armando Lopez



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

TONEY ANAYA  
GOVERNOR

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

November 15, 1983

21-365

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

Attention: Jens Hansen

Re: Application for the  
Approval of the First  
Revision of the A. H.  
Participating Area for  
the Morrow Formation  
Big Eddy Unit Well #70  
1980' FEL and 660' FNL,  
Section 26, T21S-R28E  
Eddy County, NM

Dear Mr. Hansen:

The above referenced submittal has been approved by the New Mexico Oil Conservation Division effective this date. Such approval is contingent upon like approval by the New Mexico Commissioner of Public Lands and the Bureau of Land Management.

Sincerely,

ROY E. JOHNSON  
Petroleum Geologist

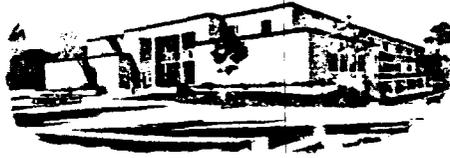
REJ/dp

cc: Commissioner of Public Lands - Santa Fe  
Bureau of Land Management - Albuquerque  
OCD District Office - Artesia

State of New Mexico



JIM BACA  
COMMISSIONER



365

Commissioner of Public Lands

December 6, 1983

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

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

Re: 1984 Plan of Development  
Big Eddy Unit  
Eddy County, New Mexico

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date approved your 1984 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico. Such plan proposes to drill the Unit Well Nos. 98, 99 and 100. 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:  
FLOYD O. PRANDO, Assistant Director  
Oil and Gas Division  
AC 505/827-5744

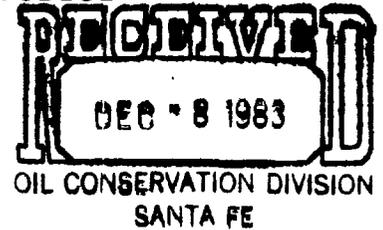
JB/FOP/pm  
encls.

cc:           OCD-Santa Fe, New Mexico  
              BLM-Albuquerque, New Mexico  
              BLM-Roswell, New Mexico



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Roswell District Office  
P. O. Box 1397  
Roswell, New Mexico 88201



IN REPLY  
REFER TO:

Big Eddy Unit

December 6, 1983

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

Gentlemen:

An approved copy of your 1984 plan of development submitted in behalf of Perry R. Bass, unit operator for the Big Eddy unit area, Eddy County, New Mexico, was approved on this date subject to like approval by the appropriate state official.

Such plan proposes to drill wells Nos. 98, 99, and 100 to test the Bone Spring. One approved copy is enclosed.

Sincerely yours,

(ORIG. SGD.) ARMANDO A. LOPEZ

District Manager

Acting

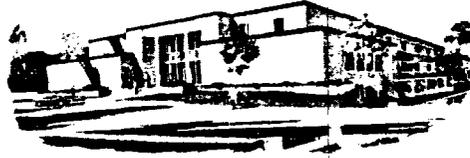
Enclosure

cc: ✓ NMOCD, Santa Fe, (ltr. only)  
Commissioner of Public Lands, Santa Fe (ltr. only)



JIM BACA  
COMMISSIONER

State of New Mexico



Commissioner of Public Lands

November 9, 1983

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

#365

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

Re: Second 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 Second 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 a location to be determined by the establishment of a drilling island to a depth necessary to test the Morrow Formation.

Please note that your First Amendment to the 1983 Plan of Development provided for the location of the well No. 91 to be changed from Section 30 to Section 6, Township 21 South, Range 28 East.

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

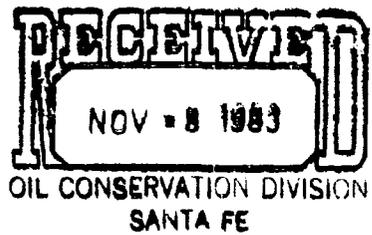
JB/RDG/pm  
encls.

cc: OCD-Santa Fe, New Mexico  
BLM-Albuquerque, New Mexico  
BLM-Roswell, New Mexico

BASS ENTERPRISES PRODUCTION CO.

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

October 31, 1983



BUREAU OF LAND MANAGEMENT  
P. O. Box 1449  
Santa Fe, New Mexico 87501

COMMISSIONER OF PUBLIC LANDS  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87504-1148

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

Re: Application for the Approval  
of the First Revision of the  
A. H. Participating Area  
for the Morrow Formation  
Big Eddy Unit Well #70  
1980' FEL and 660' FNL,  
Section 26, T21S-R28E  
Eddy County, New Mexico

Gentlemen:

Under our letter dated February 11, 1983, we submitted an application to establish a separate participating area for the referenced well for the Morrow Formation. Our application was denied for the reason that it is your position the Big Eddy Unit Well #70 is producing from a pool or zone which should be combined with the Morrow "D" Participating Area. Accordingly, Bass Brothers Enterprises, Inc., as unit operator for the Big Eddy Unit Agreement dated April 10, 1952, approved by the Regional Conservation Manager of the United States Geological Survey, pursuant to the provisions of Section 11 thereof, respectfully submits for your approval the selection of the following described land to constitute the First Revision of the Morrow "D" Participating Area, to wit:

N/2 Section 26, T21S-R28E, Eddy County, New Mexico and containing 320 acres of land.

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

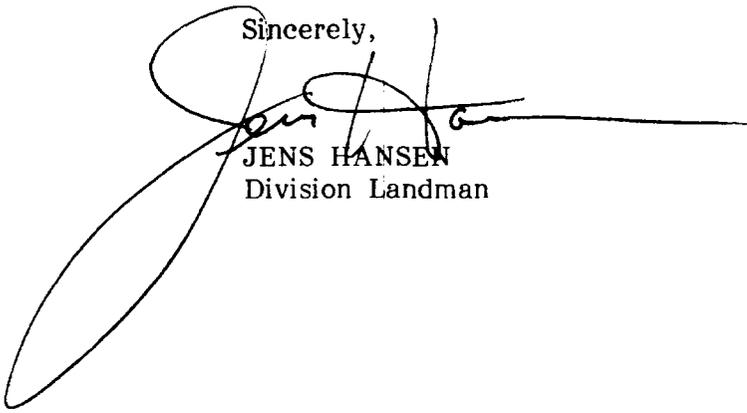
- (1) Ownership map showing thereon the boundary of the unit area, the participating area as heretofore established or revised, and the boundary of the proposed revision herein.

- (2) A schedule showing the lands entitled to participation in the unitized substances produced from the Morrow Formation with the percentage of participation of each lease or tract indicated thereon.
- (3) A geological and engineering report with accompanying maps supporting and justifying the proposed selection of the first revision of the participating area.

This proposed First Revision of the Participating Area as predicated from the knowledge and information first obtained upon completion in paying quantities and the terms of the Unit Agreement on February 12, 1982, of Unit Well #70 in the NW/4 NE/4 Section 26, T21S-R28E, with an initial production of gas from the Morrow Formation at a depth of of 12,096'-12,259'. The effective date of this First Revision shall be February 12, 1982, pursuant to Section 11 of the Unit Agreement.

Consequently, applicant respectfully requests your approval of the hereinabove selection of lands to constitute the First Revision of the Participating Area to be effective February 12, 1982.

Sincerely,



JENS HANSEN  
Division Landman

JH:ep  
Enclosures

BASS ENTERPRISES PRODUCTION CO.

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

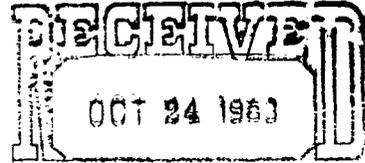
# 365

October 17, 1983

BUREAU OF LAND MANAGEMENT  
P. O. Box 1449  
Santa Fe, New Mexico 87501

COMMISSIONER OF PUBLIC LANDS  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico 87504-1148

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



OIL CONSERVATION DIVISION  
SANTA FE

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

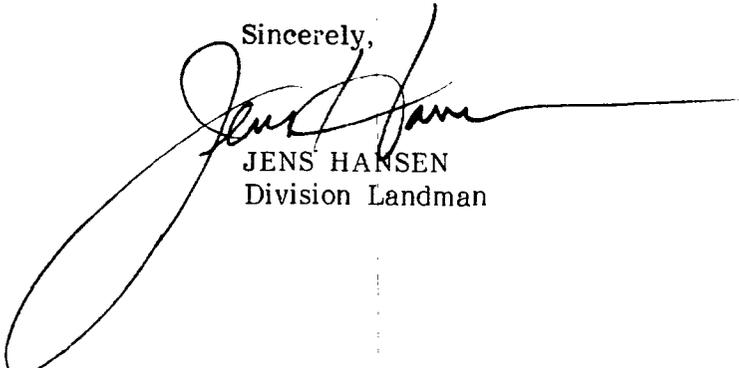
Gentlemen:

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 change to the 1983 Plan of Development for the referenced unit for your review and approval.

Big Eddy Unit #91 - Under the First Amendment to the 1983 Plan of Development, this well was scheduled to be drilled in Section 30, T21S-R28E, to a depth of 12,000' to test the Morrow Formation. We request that we be allowed to change this location for the Big Eddy Unit Well #91 to a location to be determined by the establishment of a drilling island, and when such drilling island is established, the well will be drilled to a depth necessary to test the Morrow Formation.

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

Bureau of Land Management  
Commissioner of Public Lands  
New Mexico Oil Conservation Division  
October 17, 1983  
Page 2

AGREED TO AND ACCEPTED this 24<sup>th</sup> day of Oct, 1983.

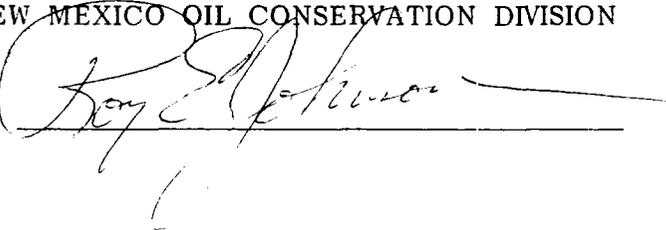
BUREAU OF LAND MANAGEMENT

By \_\_\_\_\_

COMMISSIONER OF PUBLIC LANDS

By \_\_\_\_\_

NEW MEXICO OIL CONSERVATION DIVISION

By 

State of New Mexico

#365



JIM BACA  
COMMISSIONER

## Commissioner of Public Lands

June 13, 1983

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

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

Re: Application for Approval of the  
Morrow "J" Participating Area  
Big Eddy Unit Area,  
Eddy County, New Mexico

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date approved the Morrow "J" Participating Area for the Big Eddy Unit Area, Eddy County, New Mexico. The Morrow "J" Participating Area is 320.00 acres described as the S/2 of Section 28, Township 21 South, Range 28 East and is based upon the completion of the Well No. 87. The effective date is March 22, 1982.

Our approval is sbject 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  
OGAC-Santa Fe, New Mexico  
BLM-Albuquerque, New Mexico  
BLM-Roswell, New Mexico

State of New Mexico



JIM BACA  
COMMISSIONER



Commissioner of Public Lands

June 10, 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: Application for Approval of the  
Morrow "I" Participating Area  
Big Eddy Unit Area,  
Eddy County, New Mexico

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date approved the Morrow "I" Participating area for the Big Eddy Unit Area, Eddy County, New Mexico. The Morrow "I" Participating Area is 320.00 acres described as the E/2 of Section 10, Township 22 South, Range 28 East and is based upon the completion of the unit well No. 82. The effective date is October 20, 1981.

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  
BLM-Roswell, New Mexico  
OGAC-Santa Fe, New Mexico

State of New Mexico



JIM BACA  
COMMISSIONER



Commissioner of Public Lands

June 13, 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: Application for Approval of the  
Morrow "K" Participating Area  
Big Eddy Unit Area,  
Eddy County, New Mexico

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date approved the Morrow "K" Participating Area for the Big Eddy Unit Area, Eddy County, New Mexico. The Morrow "K" Participating Area is 320.00 acres described as the S/2 of Section 36, Township 21 South, Range 28 East and is based upon the completion of the unit well No. 93. The effective date is June 19, 1982.

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  
              OGAC-Santa Fe, New Mexico  
              BLM-Albuquerque, New Mexico  
              BLM-Roswell, New Mexico

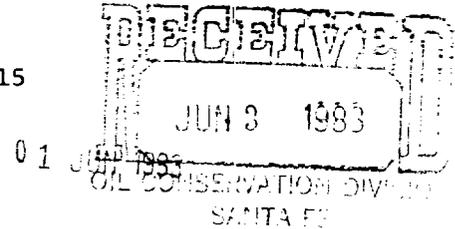


IN REPLY  
REFER TO:

# United States Department of the Interior

BUREAU OF LAND MANAGEMENT

505 Marquette Avenue N.W., Suite 815  
Albuquerque, New Mexico 87102



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

Gentlemen:

Your application of February 11, 1983, requesting approval of the Morrow "J" participating area, Big Eddy Unit, Eddy County, New Mexico, was approved on same date by the Assistant District Manager for Minerals, Albuquerque, New Mexico, effective March 22, 1982.

This area adds 320 acres described as S $\frac{1}{2}$  section 28 T. 21 S., R. 28 E., N.M.P.M., and contributing to this area is the completion of well No. 87 with initial potential of 5,041 MCFGPD.

If future drilling demonstrates that all Morrow wells produce from a common reservoir, then all of these participating areas will be combined into one Morrow participating area.

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,

James W. Shelton  
Assistant District Manager  
for Minerals

Enclosures

CC:  
BLM, Santa Fe  
Comm. of Pub. Lands, Santa Fe  
NMOCD, Santa Fe ✓  
District Supr., Roswell --w/encl.  
Roswell Acctg. --w/encl.

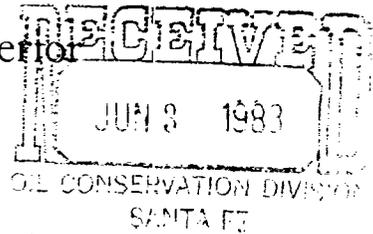


IN REPLY  
REFER TO:

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

505 Marquette Avenue N.W., Suite 815  
Albuquerque, New Mexico 87102



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

Gentlemen:

Your application of February 11, 1983, requesting approval of the initial Morrow "K" participating area, Big Eddy Unit, Eddy County, New Mexico, was approved on same date by the Assistant District Manager for Minerals, Albuquerque, New Mexico, effective June 19, 1982.

This area adds 320 acres described as S $\frac{1}{2}$  section 36, T. 21 S., R. 28 E., N.M.P.M., and contributing to this area is the completion of well No. 93 with initial potential of 2,304 MCFGPD and 1.4 BCPD.

If future drilling demonstrates that all Morrow wells produce from a common reservoir, then all of these participating areas will be combined into one Morrow participating area.

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,

James W. Shelton  
Assistant District Manager  
for Minerals

Enclosures

CC:  
BLM, Santa Fe  
Comm. of Pub. Lands, Santa Fe  
NMOCD, Santa Fe ✓  
District Supr., Roswell--w/encl.  
Roswell Acctg.--w/encl.

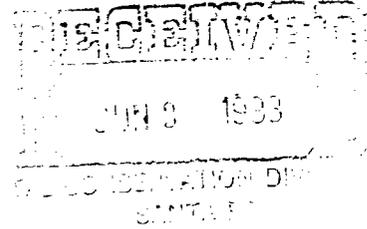


IN REPLY  
REFER TO:

# United States Department of the Interior

BUREAU OF LAND MANAGEMENT

505 Marquette Avenue N.W., Suite 815  
Albuquerque, New Mexico 87102



JUN 1983

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

Gentlemen:

Your application of February 11, 1983, requesting approval of the initial Morrow "H" participating area, Big Eddy Unit, Eddy County, New Mexico, cannot be approved. In accordance with section 11 of the unit agreement, we recommend that the Morrow "D" participating area be expanded to include the N $\frac{1}{2}$  section 26, T. 21 S., R. 28 E., which was the proposed Morrow "H" participating area because our geologic review indicates that these wells are producing from the same Morrow reservoir.

A subsequent application for the first expansion of the Morrow "D" participating area should be submitted to the Roswell District Office for their review and approval.

Your unapproved application for the Morrow "H" participating area is enclosed.

Sincerely yours,

(ORIGINAL OF JAMES W. SHELTON)

James W. Shelton  
Assistant District Manager  
for Minerals

Enclosure

cc:

BLM, Santa Fe  
Comm. of Pub. Lands, Santa Fe  
NMOCD, Santa Fe ✓  
District Supr., Roswell  
Roswell Acctg.  
AOD-PAB-LAC, Denver

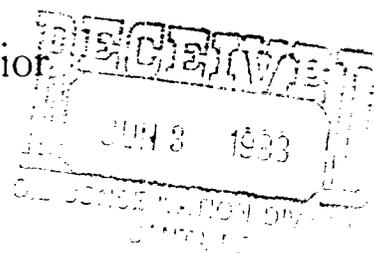


IN REPLY  
REFER TO:

# United States Department of the Interior

BUREAU OF LAND MANAGEMENT

505 Marquette Avenue N.W., Suite 815  
Albuquerque, New Mexico 87102



6 JUN 1983

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

Gentlemen:

Your application of February 11, 1983, requesting approval of the initial Morrow "I" participating area, Big Eddy Unit, Eddy County, New Mexico, was approved on same date by the Assistant District Manager for Minerals, Albuquerque, New Mexico, effective October 20, 1981.

This area adds 320 acres described as E $\frac{1}{2}$  section 10, T. 22 S., R. 28 E., N.M.P.M., and contributing to this area is the completion of well No. 82 with initial potential of 3,775 MCFGPD.

If future drilling demonstrates that all Morrow wells produce from a common reservoir, then all of these participating areas will be combined into one Morrow participating area.

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,

James W. Shelton  
Assistant District Manager  
for Minerals

Enclosures

cc:  
BLM, Santa Fe  
Comm. of Pub. Lands, Santa Fe  
NMOCD, Santa Fe ✓  
District Supr., Roswell--w/encl.  
Roswell Acctg.--w/encl.



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

TONEY ANAYA  
GOVERNOR

March 30, 1983

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5000

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

365  
Re: Application for Approval of  
the Morrow "H", "I", "J", "K"  
Participating Areas, Big Eddy  
Units Nos. 70, 82, 87, and 93  
  
Application for approval of the  
"B" Participating Area - Strawn  
formation, Big Eddy Unit No. 65  
  
Application for Approval of the  
Participating Area - Morrow  
formation - Poker Lake Unit No.  
49, Eddy County, NM

Dear Mr. Hansen:

The above referenced submittals have been approved by the New Mexico Oil Conservation Division effective this date. Such approval is contingent upon like approval by the New Mexico Commissioner of Public Lands and the United States Minerals Management Service.

Sincerely,

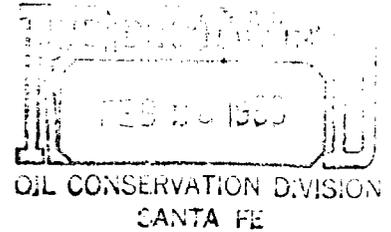
ROY E. JOHNSON  
Petroleum Geologist

REJ/dp

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

**BASS ENTERPRISES PRODUCTION CO.**

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



February 11, 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 Morrow "H" Participating Area  
Big Eddy Unit No. 70  
1980' FEL and 660' FNL  
Section 26, 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 "H" Participating Area for the Morrow Producing Zone or Formation, to-wit:

N/2 of Section 26, T21S-R28E, Eddy County, New Mexico, and containing 320 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 "H" Participating Area.
- (2) A schedule showing the lands entitled to participation and the unitized substances produced from the Morrow Formation, with the percentage of participation of each lease or tract indicated.

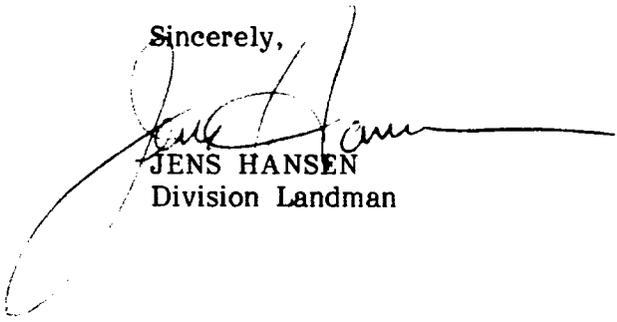
Applicant is submitting separately in triplicate a geological and engineering report with accompanying geologic maps supporting and justifying the proposed selection of the Participating Area.

Bureau of Land Management  
Commissioner of Public Lands  
New Mexico Oil Conservation Division  
February 11, 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 December 14, 1981, of Unit Well No. 70, in the NW/4 of NE/4, Section 26, T21S-R28E, with an initial production of gas from the Morrow Formation at a depth of 12,096' through 12,259'. The effective date of the initial area shall be December 14, 1981, pursuant to Section 11 of the Unit Agreement.

Consequently, Applicant respectfully requests your approval of the hereinabove selection of lands to constitute the initial Morrow "H" Participating Area, to be effective December 14, 1981.

Sincerely,



JENS HANSEN  
Division Landman

JH:ep  
Enclosures

BIG EDDY UNIT NO. 70

Big Eddy Unit No. 70 has had its only completion in the Morrow formation. This well was completed without stimulation in December, 1981, and potentialled at 6077 MCFGPD. This well is currently producing 658 MCFGPD + 1 BCPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND REGULATORY AREA IN FEDERAL UNITS

WELL DATA

WELL Big Eddy Unit #70 FORMATION Morrow  
 LOCATION B UNIT, 1980 FEET FROM E LINE & 660 FEET FROM N LINE,  
 SECTION 26, RANGE 28E, TOWNSHIP 21S, COUNTY Eddy NEW MEXICO.  
 SPUD DATE 10-1-81 COMPLETION DATE 12-14-81 BILL. PROD. DATE 2-12-82  
 PERFORATIONS 12,096', 12,099', 12,106', 12,110', 12,192', 12,194', 12,196',  
12,198', 12,207', 12,208', 12,255', 12,257', 12,259'

STIMULATION:

ACID Natural

FRACTURE

POTENTIAL CAOF 6,077 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>8.6</u>	
Water saturation ( $S_w$ ), %	<u>29</u>	
Net thickness (h) > 6% $\phi$ & 140% $S_w$ , ft	<u>28</u>	
Temperature (T), °F	<u>194</u>	

Bottomhole pressure (P), psia 5140  
 Recovery factor (RF), (%) assumed) .8  
 Recoverable gas, MCF (as of eq. below) 5,166,685  
 Recoverable Gas, MCF = (1.025)(Q)(1-RF)

$$Bg_i = 0.03535 \frac{1}{P} \left( \frac{P \cdot \text{MCF}}{10^6 \text{ Cu Ft}} \right) = 0.03535 \frac{5140}{1.025} 654 = .271$$

PERFORMANCE INDEX

PPC=672 PPC=7.65 z = 1.025  
 PTC=354 PTC=1.85

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

(Cumulative production to 10 / 31 / 62 : 337,096 MCF)

Initial rate (q<sub>i</sub>), 25,500 MCF/day  
 Economic limit (q<sub>l</sub>), 3000 1500 MCF/day  
 Decline rate, dy 55  
 Remaining gas (Q) = 360,673 MCF  
 Ultimate Recoverable Gas 697,769 MCF

$$Q = (q_i - q_l) \frac{12 \text{ mo/yr}}{-\ln(1-dy)}$$

Attach plot showing proration unit and participating area.

<u>RECOVERABLE GAS</u>		<u>(10 / 31 / 62)</u>	
Gas sand previously produced	-	-	-
Sand perforated	697,769	(1)	1047
Sand not perforated, but potentially productive	-	(1)	-
Total recoverable gas	697,769	-	1047

(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 \$1,163,830 (to the depth of formation completed)

Recompletion Cost \$ -

TOTAL COST \$ 1,163,830

(Gas Price)(Net Revenue Interest)(1-Ad Valorem Taxes) - Production Tax + [(Oil Price)(Net Revenue Interest)(Cond. Yield, bbl/MCF)(1 - Production and Ad Valorem Taxes)] - [(Oil Price - Base Price) WFPI %] 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 82 3.46(.345)-.129+32.04(.845-.275)(.965)(.0015)=2.82  
83 82x1.05=2.96

BEPCO Net Income = (Gross Gas)(Net Gas Price)

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	15% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
Zero	---	---	---	1.0000	-1,163,830
1982	380,000	1,071,600	15,000	0.9325	985,279
1983	171,000	506,160	18,000	0.81087	395,834
				0.70511	<u>217,283</u>
				0.61314	
				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

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See other instructions on reverse side)

Form approved. Budget Bureau No. 42-R355.6.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] DRY [ ] Other [ ]
1b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESTOR. [ ] Other DEC 21 1981

2. NAME OF OPERATOR: PERRY R. BASS

3. ADDRESS OF OPERATOR: Box 2760, MIDLAND, TX 79702-2760

4. LOCATION OF WELL: At surface 1980' FFL + 660' FNL OF SECTION UNIT 1288 B
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO. LC-069219

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME BIG EDDY UNIT

8. FARM OR LEASE NAME BIG EDDY UNIT

9. WELL NO. 70

10. FIELD AND POOL, OR WILDCAT UNDES. MORROW

11. SEC., T., R., N., OR BLOCK AND SURVEY OR AREA SEC. 26, T. 21S, R. 28E

14. PERMIT NO. OIL CONSERVATION DIVISION SANTA FE
12. COUNTY OR PARISH EDDY
13. STATE N. MEX.

15. DATE SPUDDED 10-1-81
16. DATE T.D. REACHED 11-11-81
17. DATE COMPL. (Ready to prod.) 12-14-81
18. ELEVATIONS (DF, RKB, RT, CR, ETC.) 3214' GL 3237' KB
19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 12,635
21. PLUG, BACK T.D., MD & TVD 12,575'
22. IF MULTIPLE COMPL., HOW MANY? SINGLE
23. INTERVALS DRILLED BY ROTARY TOOLS 10'-12,635'

24. PRODUCING INTERVAL(S), OF THIS COMPLETION: TOP, BOTTOM, NAME (MD AND TVD) 12,096'-12,259' MORROW
25. WAS DIRECTIONAL SURVEY MADE NO

26. TYPE ELECTRIC AND OTHER LOGS RUN DLL-MSFL & CNFO
27. WAS WELL CORED YES

28. CASING RECORD (Report all strings set in well)
Table with columns: CASING SIZE, WEIGHT, LB./FT., DEPTH SET (MD), HOLE SIZE, CEMENTING RECORD, AMOUNT FULLED

29. LINER RECORD
30. TUBING RECORD
Table with columns: SIZE, TOP (MD), BOTTOM (MD), BACKS CEMENT, SCREEN (MD), SIZE, DEPTH SET (MD), PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)
4" SAFETY FIRE GUN - ONE (1) SHOT AT EACH DEPTH: 12,096', 12,099', 12,106', 12,110', 12,142', 12,190', 12,196', 12,198', 12,207', 12,255', 12,257' & 12,254'. 13 SHOTS
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.
None - came in natural

33. PRODUCTION
DATE FIRST PRODUCTION DEC. 14, 1981
PRODUCTION METHOD FLOWING
WELL STATUS (Producing or shut-in) ST - WIPL
DATE OF TEST 12-14-81
HOURS TESTED 7hr - 45min
CHOKE SIZE VAR.
PROD'N. FOR TEST PERIOD 1
OIL-BBL. 1093
GAS-MCF. 1093
WATER-BBL. NONE
GAS-OIL RATIO 1093
FLOW. TUBING PRESS. 7570
CASING PRESSURE PACKER
CALCULATED 24-HOUR RATE 1
OIL-BBL. 1
GAS-MCF. 6.077
WATER-BBL. NONE
OIL GRAVITY-API (CORR.) 47.0

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TO BE SOLD.
TEST WITNESSED BY

35. LIST OF ATTACHMENTS TWO (2) EACH ADJUC LOGS.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records
SIGNED H. J. Murty, Jr. TITLE Sr. Prod. Clerk DATE Dec. 23, 1981

\*(See Instructions and Spaces for Additional Data on Reverse Side)

Type well <input checked="" type="checkbox"/> Partial <input type="checkbox"/> Annual <input type="checkbox"/> <span style="float:right">12-14-81</span>	
Company <b>Bass, PERRY K.</b> <span style="float:right">Air</span>	
Field <b>Indian Flats</b> <span style="float:right">Morrow</span>	
Completion Date <b>12-12-81</b>	Total Length <b>12635</b>
Perforation <b>12575</b>	Volume <b>3218.6 GL</b>
Well No. <b>70</b>	Unit <b>Big Eddy Unit</b>
Well Size <b>5 1/2</b>	Set At <b>12635</b>
Perforation <b>From 12096 To 12259</b>	Well No. <b>70</b>
Perforation <b>2 3/8</b>	Set At <b>12055</b>
Perforation <b>4 1/2</b>	Perforation <b>From To</b>
Unit <b>B</b>	Sec. <b>26</b>
Twp. <b>21s</b>	Rge. <b>28e</b>
Type Well - <b>Single gas</b>	
Factor Set At <b>12055</b>	
County <b>Eddy</b>	
Date <b>NM</b>	
Producing Form <b>Tbg.</b>	Reservoir Temp. <b>194° 12045</b>
Mean Annual Temp. <b>60°</b>	Basic Pressure <b>13.2</b>
<b>*12045</b>	<b>12045</b>
<b>.593</b>	<b>1.133</b>
<b>.341</b>	<b>4"</b>
<b>Flg.</b>	

FLOW DATA					TEMP. DATA		PRESS. DATA		Location of Flow
NO.	Flow Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. In. H <sub>2</sub> O	Temp. °F	Press. p.s.i.g.	Temp. °F	
51							3920		72 hrs.
1.	4 X 1.750			480	2.0	98	3830		45 min.
2.	4 X 1.750			480	21.0	112	3600		1 hr.
3.	4 X 2.250			480	17.0	80	3180		1 hr.
4.	4 X 2.250			490	26.0	90	2910		1 hr.
5.	4 X 2.250			485	32.0	98	2570		4 hrs.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor Ft.	Gravity Factor F <sub>g</sub>	Super Comp. Factor, F <sub>sc</sub>	Rate of Flow Q, Mgd
1	14.93	31.41	493.2	.9653	1.299	1.031	606
2	14.93	101.77	493.2	.9535	1.299	1.028	1935
3	25.64	91.57	493.2	.9813	1.299	1.036	3100
4	25.64	114.38	503.2	.9723	1.299	1.035	3834
5	25.64	126.26	498.2	.9653	1.299	1.031	4185

NO.	P <sub>1</sub>	Temp. °F	T <sub>1</sub>	Z	Gas-Liquid Hydrocarbon Ratio	Method
1	.73	558	1.58	.940	1085.979	
2	.73	572	1.62	.946	47 @ 60	
3	.73	540	1.53	.931	.593	
4	.75	550	1.55	.934	672	
5	.74	558	1.58	.940	354	

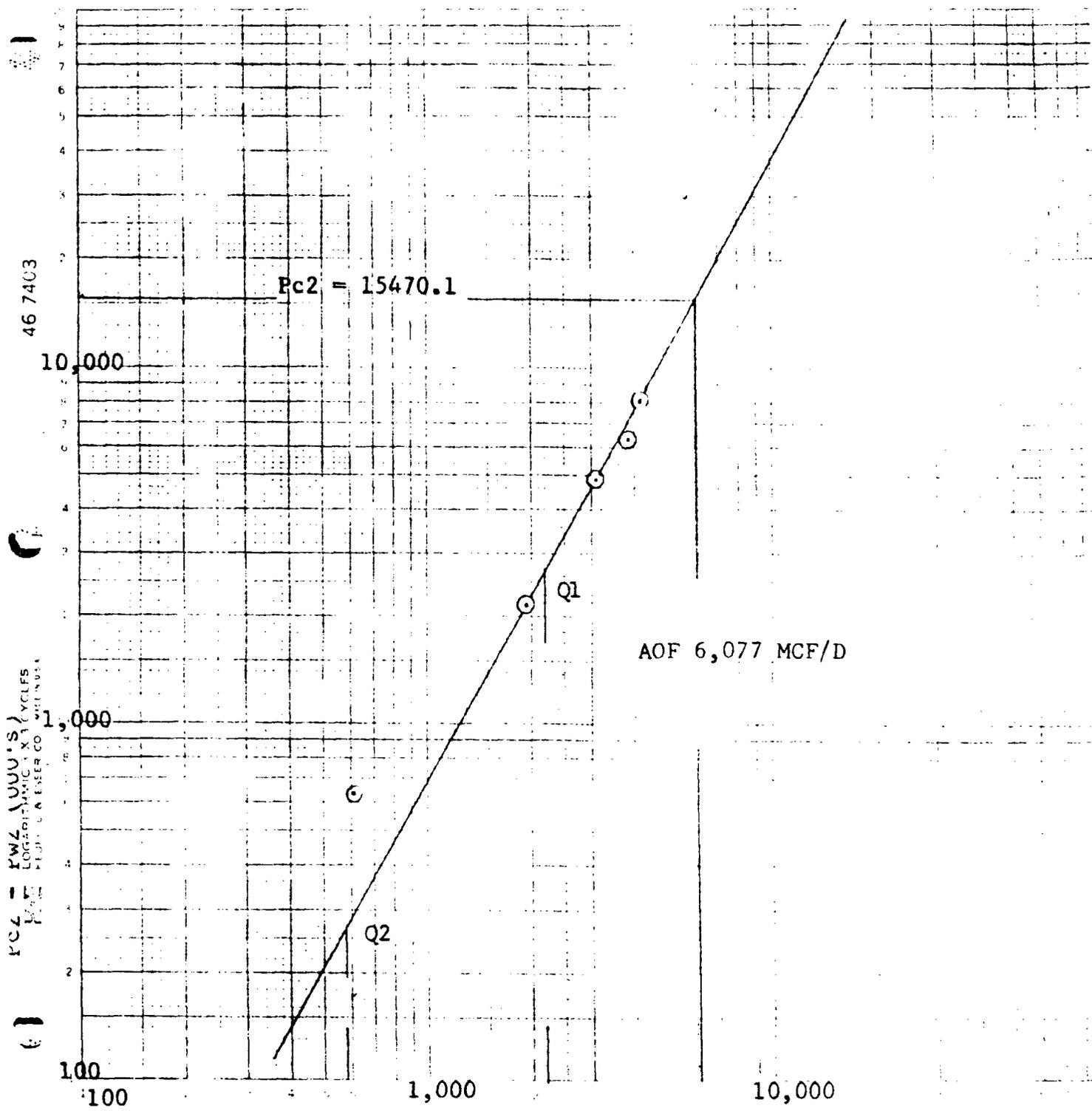
  

NO.	*BHP	Q	P <sub>1</sub>	P <sub>2</sub>	(1) $\frac{P_2^2}{P_1^2 - P_2^2}$	(2) $\left[ \frac{P_2^2}{P_1^2 - P_2^2} \right]^n$
1	4960.2	3850.2	14824.0	646.1	1.905	1.452
2	4655.2	3646.6	13297.4	2172.7		
3	4193.2	3258.9	10620.4	44849.7	6.077	
4	3893.2	3012.8	9077.2	6392.9		
5	3519.2	2710.6	7347.2	8122.9		

5075.2 S.I.P.	6,077	60°	.579
Remarks: <b>Produced 1 bbl. distillate during the test.</b>			
* Pressures taken from a bottom-hole instrument set at 12045 ft.			
Approved by	Checked by	Calculated by	Entered by
	Davis Services, Inc.	Rick Pagan	

WELL NO: : 70  
 UNIT : B/sec. 26/t'p. 21s/Rge. 28e  
 COUNTY : EDDY  
 STATE : NEW MEXICO  
 DATE : 12-14-81



Q = MCF/D  
 Q1 = 2200; Log of Q1 = 3.342423  
 Q2 = 580; Log of Q2 = 2.763428  
 N = .579  
 θ = 60°

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form O-111  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

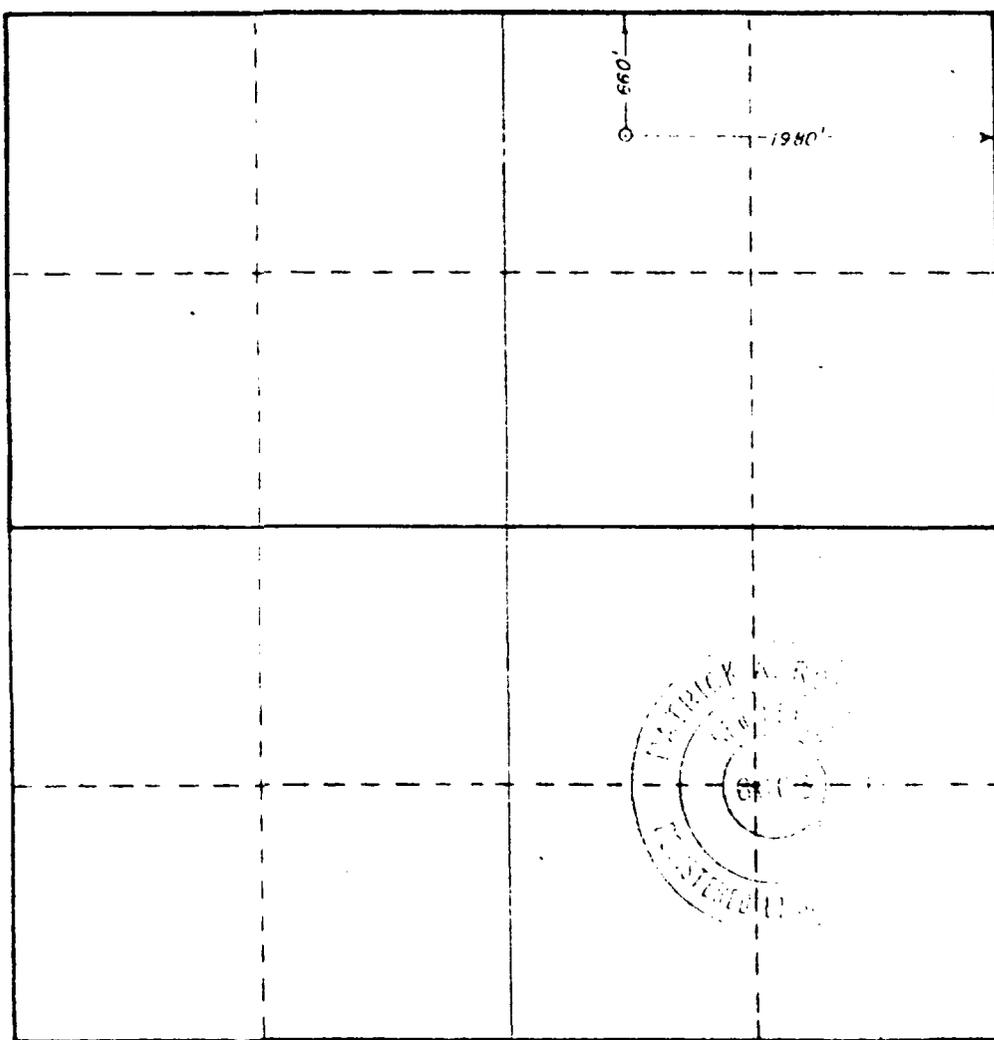
Operator <b>PERRY R. BASS</b>		Lease <b>BIG EDDY UNIT</b>		OIL CONSERVATION DISTRICT <b>SANTA FE</b>		Well No. <b>70</b>
Tract Letter <b>B</b>	Section <b>26</b>	Township <b>21 SOUTH</b>	Range <b>28 EAST</b>	County <b>EDDY</b>		
Actual Footage Location of Well:						
<b>660</b>		feet from the	<b>NORTH</b>	line and	<b>1980</b>	feet from the
					<b>EAST</b>	line
Ground Level Elev. <b>3218.6</b>	Producing Formation <b>MORROW</b>		Pool <b>INDIAN FLATS</b>		Dedicated Acreage: <b>320</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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.

*Mike Waygood*  
Mike Waygood

Name

Engineering Assistant

Position

Bass Enterprises Prod. Co.

Company

August 13, 1980

Date

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

JULY 22, 1980

Registered Professional Engineer and/or Land Surveyor

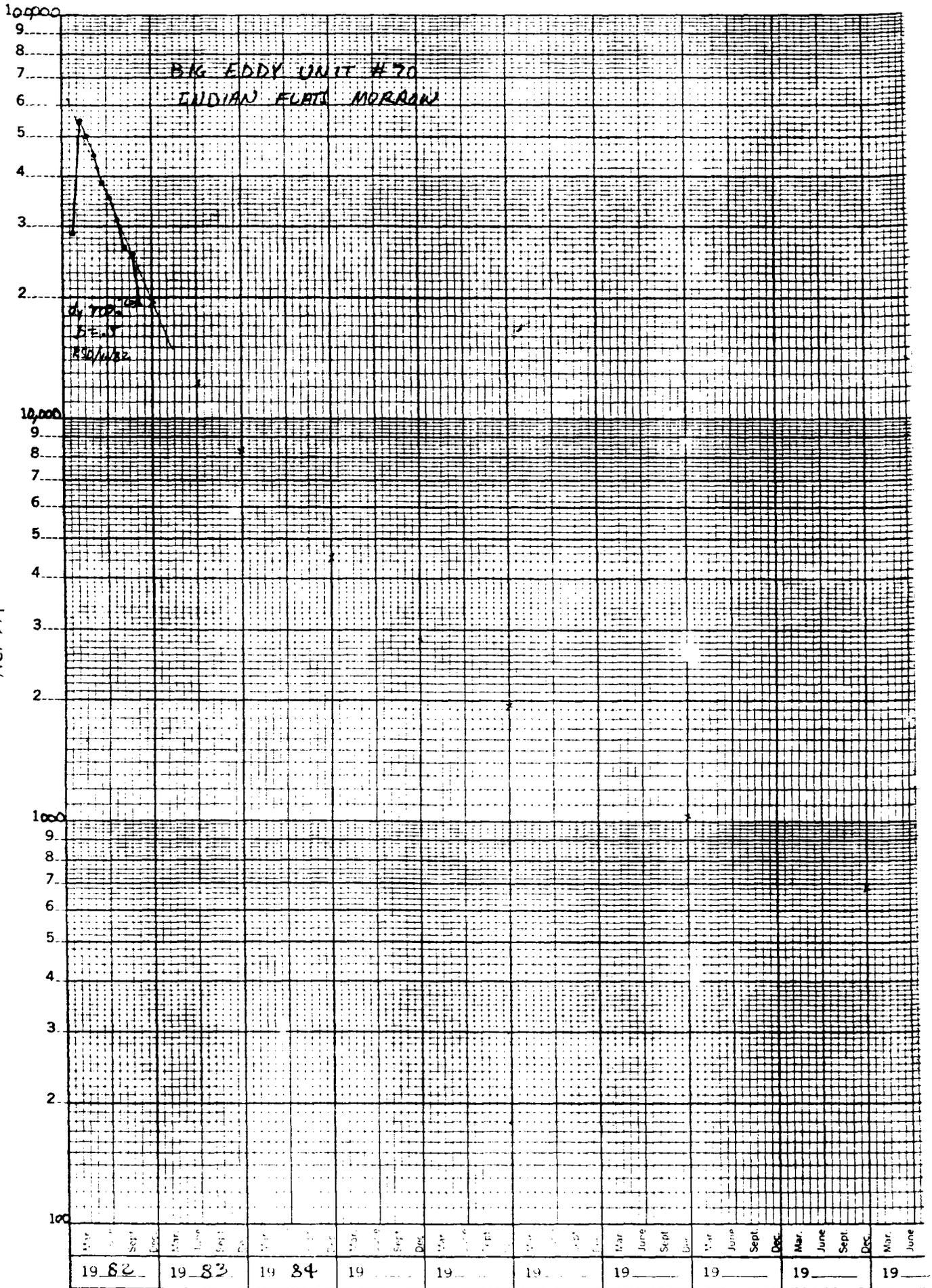
*Patrick A. Romero*

Certificate No. JOHN W. WEST 878  
PATRICK A. ROMERO 8883

47 6840

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

MCFPM



SUBJECT BEU #70	DATE 12/28/82	DEPARTMENT Prod	PREPARED BY HHM
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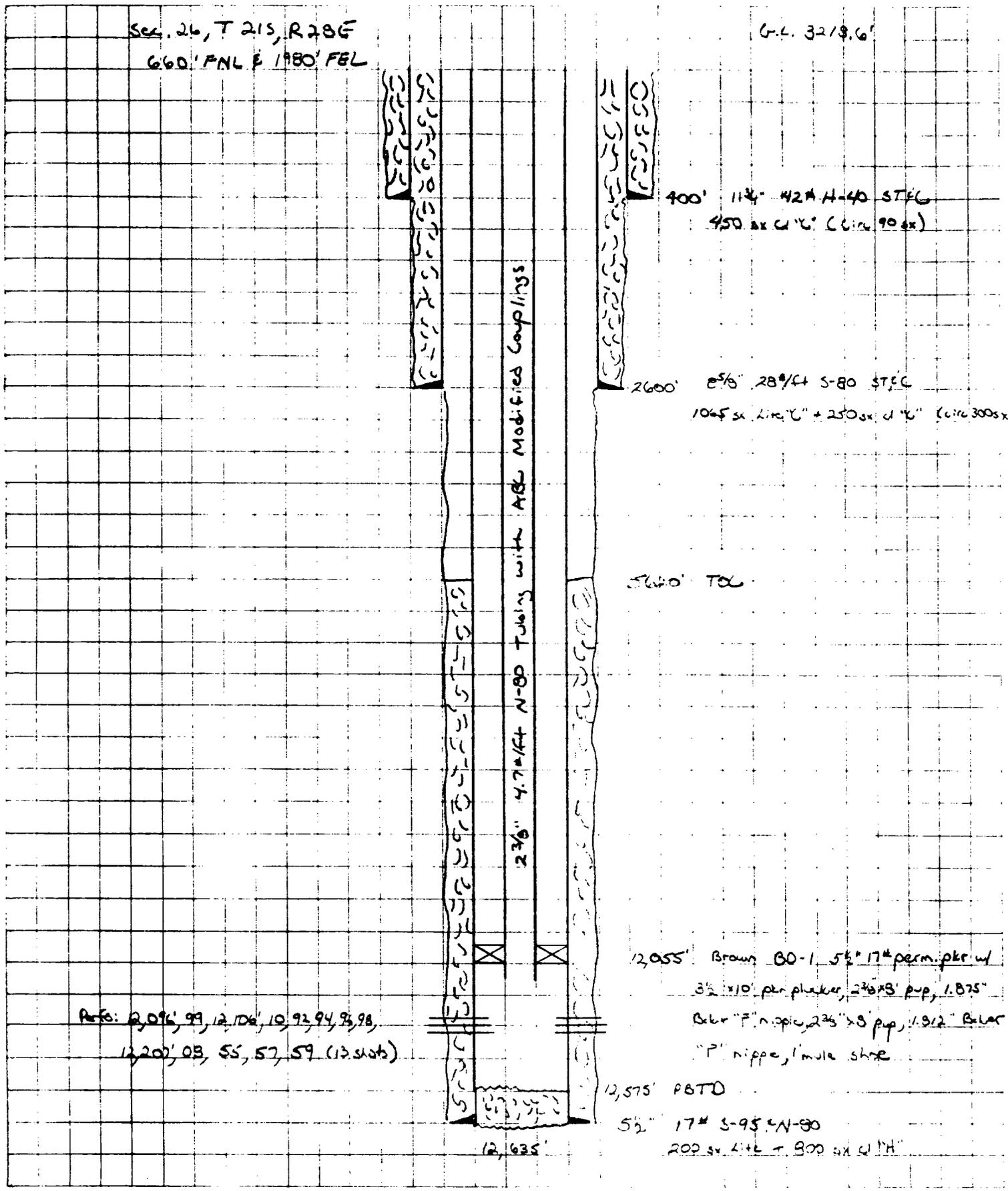
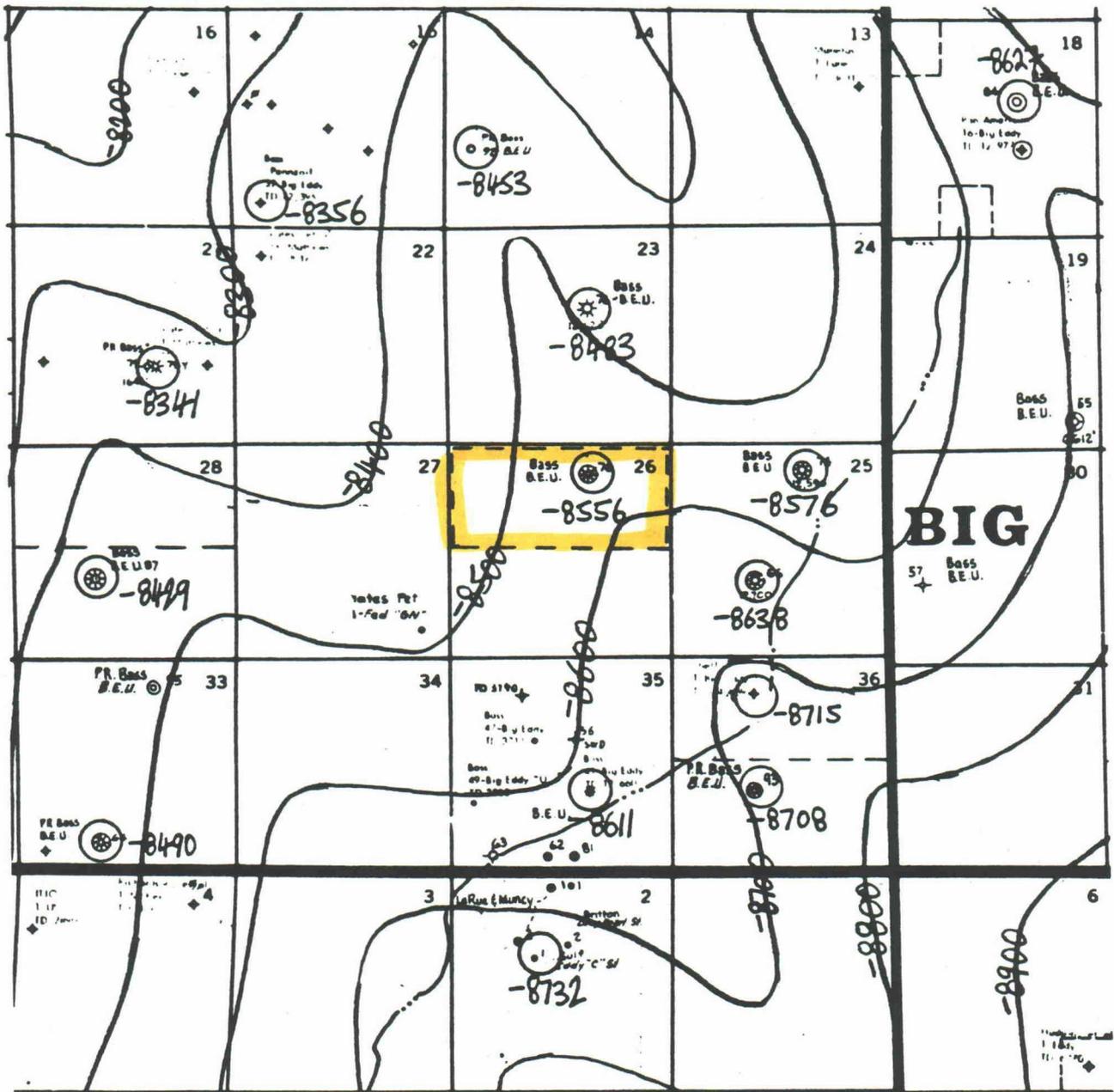


EXHIBIT "B"  
MORROW "H" PARTICIPATING AREA

Tract #	Lease #	Description of Participating Lands	Participating Acres	% of Lease Ownership	% of Unit Ownership
113-B	LC-069219	NW/4 Section 26, T21S-R28E, Eddy County, New Mexico	160	PRB, Inc. - 22.5 San Jose - 67.5 BEP Co. - 7.5 PRB - 2.5	11.25 33.75 3.75 1.25
113-A	LC-069219	NE/4 Section 26, T21S-R28E, Eddy County, New Mexico	160	BEP Co. - 7.5 PRB - 2.5 San Jose - 67.5 PRB, Inc. - 22.5	3.75 1.25 33.75 11.25

# B.E.U. 70

# STRUCTURE MAP: TOP MORROW



PROPOSED PARTICIPATING AREA

SCALE 1" = 4000'

G.A.H. 2/83