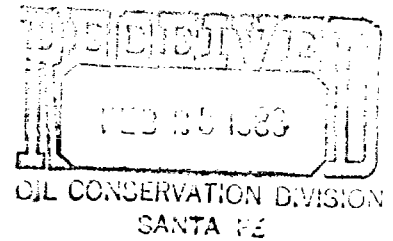


BASS ENTERPRISES PRODUCTION CO.

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 "J" Participating Area
Big Eddy Unit No. 87
1980' FSL and 1980' FWL
Section 28, 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 "J" Participating Area for the Morrow Producing Zone or Formation, to-wit:

S/2 of Section 28, 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 "J" 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.

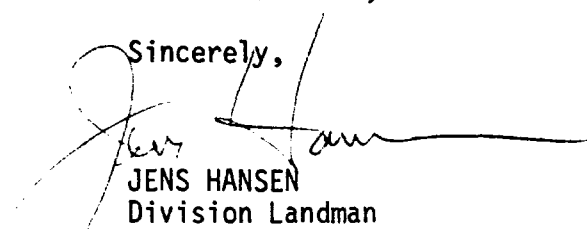
BUREAU OF LAND MANAGEMENT
COMMISSIONER OF PUBLIC LANDS
NEW MEXICO OIL CONSERVATION DIVISION
February 11, 1983
Page Two

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.

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 March 22, 1982, of Unit Well No. 87, in the NE/4 of SW/4, Section 28, T21S-R28E, with an initial production of gas from the Morrow Formation at a depth of 11,993' through 12,126'. The effective date of the initial area shall be March 22, 1982, 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 "J" Participating Area, to be effective March 22, 1982.

Sincerely,



JENS HANSEN
Division Landman

JH:dw
Attachments

BIG EDDY UNIT NO. 87

Big Eddy Unit No. 87 has had its only completion in the Morrow formation. The well was completed in March, 1982, for a potential of 5041 MCFGPD without stimulation. The well put on line in May, 1982, at a rate of 2829 MCFGPD. The well is currently producing 1087 MCFGPD + 1 BCPD after being acidized with 3000 gallons 7 1/2% MSR in November, 1982.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL Big Eddy Unit #87

FORMATION Morrow

LOCATION K UNIT, 1980 FEET FROM S LINE & 1980 FEET FROM W LINE,

SECTION 28, RANGE 28E, TOWNSHIP 21S, COUNTY Eddy NEW MEXICO.

SFUD DATE 1-11-82 COMPLETION DATE 3-22-82 INIT. PROD. DATE 5-10-82

PERFORATIONS 11,933', 11,934', 11,937', 11,955', 11,958', 12,003', 12,004', 12,018',
12,028', 12,030', 12,038', 12,040', 12,043', 12,083', 12,095', 12,097', 12,126'

STIMULATION:

ACID None

3000 gallons 7 1/2% MSR (11-23-82)

FRACTURE

POTENTIAL CAOF 5041 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	320	
Porosity (ϕ), %	7.6	
Water saturation (S_w), %	20	
Net thickness (h) > 6% ϕ & 140 S_w , ft	39	
Temperature (T), °F	192	

ILLEGIBLE

Bottomhole pressure (P), psia 5242

Recovery factor (RF), (RD assumed) .8

Recoverable gas, MCF (See eq. below) 7,298,021

Recoverable Gas, MCF = (43,560)(D)(1-Sw)(A) X (1)(1.1) (1.029) (5242)

$$Bg_i = 0.03535 \frac{P}{ZT} \left(\frac{HSCF}{Cu Ft} \right) = 0.03535 \frac{(5242)}{(1.029)(652)} = .276$$

PERFORMANCE DATA

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

(Cumulative production to 10 / 31 /82 : 289,876 MCF.

Initial rate (qi), 31,000 MCF/mo

Economic limit (ql), 3000 1500 MCF/mo

Decline rate, dy 63

Remaining gas (Q) = 468,860 MCF

Ultimate Recoverable Gas 758,736 MCF

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

Attach plot showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)	COND. (BBL/S)
Gas sand previously produced	-	-
Sand perforated	758,736 (1)	1350
Sand not perforated, but potentially productive	- (2)	-
Total recoverable gas	758,736	1350

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ILLEGIBLE

ECONOMIC

Well Cost \$ 1,336,581 (to the depth of formation completed)

Recompletion Cost \$ -

TOTAL COST \$ 1,336,581

(Gas Price)(Net Revenue Interest)(1-Ad Valorem Taxes) - Production Tax + [(Oil Price)(Net Revenue Interest)(Cond. Yield, bbl/Mcf G)(1-Production and Ad Valorem Taxes)] - [(Oil Price - Base Price) WFPI %] NPV

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 3.53(.825)(.975)-.129+32.1(.825-275)(.94)(.004)=2.
83 3.63(.825)(.975)-.139+32(.825-.25)(.94)(.001)=2.80

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	-1,336,581
1982	344,000	956,320	12,000	0.9425	880,578
1983	240,000	672,000	18,000	0.81087	530,309
					<u>74,306</u>
				0.70511	
				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

ILLEGIBLE

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(See other in-
structions on
reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

5. LEASE DESIGNATION AND SERIAL NO.

NM 0486

6. IF INDIAN, ALIEN, OR TRIBE NAME

7. UNIT AGREEMENT NAME

BIG EDDY UNIT

8. FARM OR LEASE NAME

BIG EDDY UNIT

9. WELL NO.

87

10. FIELD AND FLOW, OR WILDCAT

BASS MORROW GAS

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

SEC. 28, T21S, R28E

12. COUNTY OR PARISH

EDDY

13. STATE

N. MEXICO

14. PERMIT NO.

DATE ISSUED

15. DATE SPUDDED

16. DATE T.D. REACHED

17. DATE COMPL. (Ready to prod.)

18. ELEVATION (OF RKB, RT, GR, ETC.)

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD

21. PLUG BACK T.D., MD & TVD

22. IF MULTIPLE COMPL. HOW MANY?

23. INTERVALS DELETED BY

24. PRODUCING INTERVAL(S) OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)

25. WAS DIRECTIONAL SURVEY MADE

26. TYPE ELECTRIC AND OTHER LOGS RUN

27. WAS WELL CORED

28. CASING RECORD (Report all strings set in well)

29. LINER RECORD

30. PERFORATION RECORD (Interval, size and numl.)

31. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

32. PRODUCTION

33. DATE FIRST PRODUCTION

34. DISPOSITION OF GAS (S, L, used for fuel, vented, etc.)

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

TITLE

DATE

U.S. GEOLOGICAL SURVEY

POSWELL, NE

(See instructions and spaces for Additional Data on Reverse Side)

☒ Initial ☐ Annual ☐ Special		Date: 3-23-82	
Company: Bass Enterprises		Location: Air	
Well: Morrow		Well No.:	
Completion Date: 3-19-82	Total Length: 12401	Depth: 12328	Elevation: 3182.5 GL
Csg. Size: 5 1/2	Val: 17	Set At: 12401	Perforations: From 11933 To 12126
Trg. Size: 2 3/8	n/80	Set At: 11890	Perforations: From To
Type Well - Single - Hydratehead - G.G. or G.O. Multiple		Produced Gas: 11890	
Single gas		Country: Eddy	
Producing Time: Tbg.	Reservoir Temp. °F: 192	Mean Annual Temp. °F: 11890	State: N.M.
L: 11890	H: 11890	Gg: .5973	% CO ₂ : 1.050
		% H ₂ : .164	% H ₂ S:
		Prover:	Meter Run: 4"
			Tag: Flg.

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Critice Size	Press. p.s.i.g.	Diff. In.	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
1.	4 X 1.500			660	2.0	66	4080				45 min
2.	4 X 1.500			660	4.0	76	3874				45 min
3.	4 X 1.500			660	10.0	110	3810				45 min
4.	4 X 1.500			620	16.0	88	3750				1 hr.
5.	4 X 1.500			640	24.0	94	3525				4 hr.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_a P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super. Factor Fpv	Rate of Flow Q, bbl/d
1.	10.84	36.69	673.2	.9943	1.294	1.058	541
2.	10.84	51.89	673.2	.9850	1.294	1.054	756
3.	10.84	82.05	673.2	.9551	1.294	1.042	1145
4.	10.84	100.65	633.2	.9741	1.294	1.047	1440
5.	10.84	125.21	653.2	.9688	1.294	1.044	1776

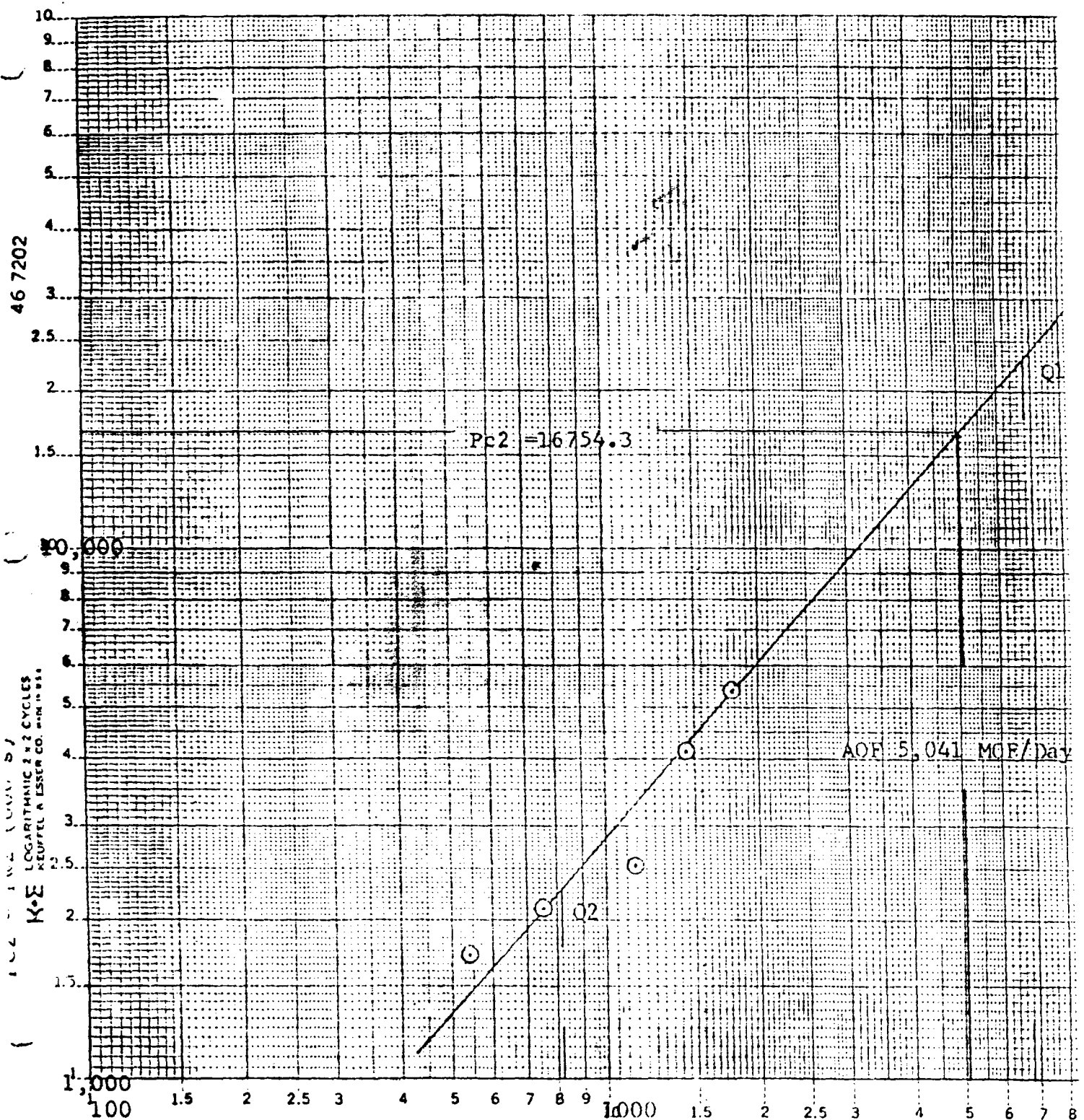
NO.	η	Temp. °F	T _r	Z	Gas-Liquid Hydrocarbon Ratio	A.P.G. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Liquid	Critical Pressure	Critical Temperature
1.	1.00	526	1.47	.894	83.137	53.9 @ 60°	.5973	XXXXXX	671	358
2.	1.00	536	1.50	.901				XXXXXX		
3.	1.00	570	1.59	.921						
4.	.94	548	1.53	.913						
5.	.97	554	1.55	.918						

NO.	BHP	P _w	P _e	P _e ² - P _w ²	(1) $\frac{P_e^2}{P_e^2 - P_w^2} =$	(2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n =$
1.	4929.2	3877.1	15031.9	1722.4	3.112	2.838
2.	4763.2	3826.5	14642.1	2112.2		
3.	4558.2	3770.8	14218.9	2535.4	5.041	
4.	4534.2	3550.7	12607.5	4146.8		
5.	4489.2	3372.0	11370.4	5383.9		

5268 S.I.P.		5,041		Angle of Slope θ = 47.5		Slope, n = .919	
Remarks: Produced 5.2 bbls. of distillate during the test.							
Approved By: _____		Conducted By: _____		Collected By: _____		Checked By: _____	
Davis Services, Inc		Rick Pagan					

ILLEGIBLE

10



Q1 = 6800; Log of Q1 = 3.832509
Q2 = 820; Log of Q2 = 2.913814

$$\begin{aligned} N &= .919 \\ \theta &= 47.5^\circ \end{aligned}$$

100-111

PERSON

K

1980

3182.5'

Morrow

Bass Morrow Gas

320

- 1 Outline the act
- 2 If more than one interest and

- 3 If more than one dated by com

[X] Yes

Unit

If answer is "No",
this form if no
No allowable w
forced-pooling
tion.

Stephen Smith

Stephen Smith

Engineering Assistant

Perry R. Bass

September 18, 1981

1980

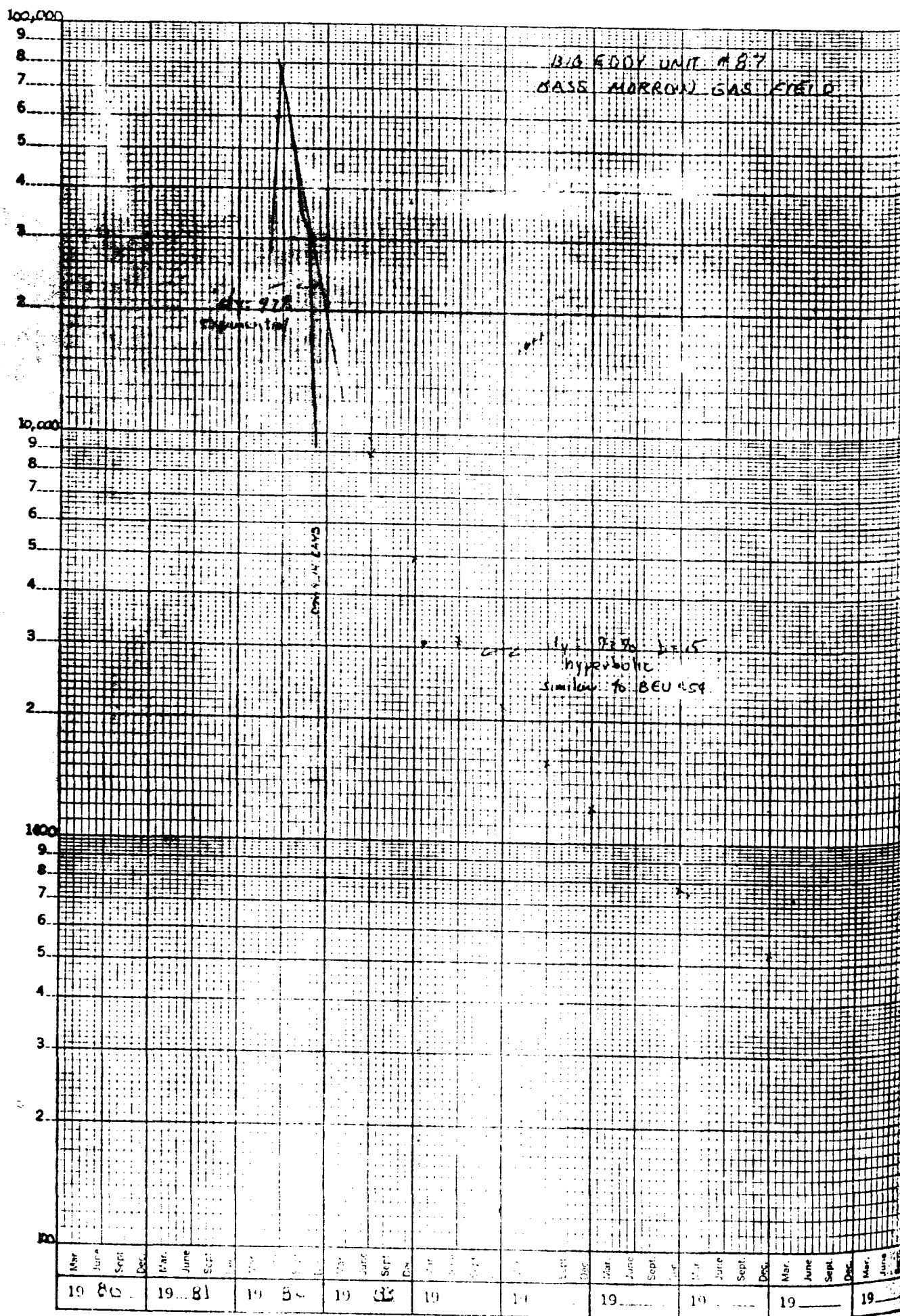
ILLEGIBLE

No. 2232

the well location
from field
the same
the test of my

, 1981

Stephen Smith



SUBJECT

Bio Entry 1/07 87

DATE

DEPARTMENT

PREPARED BY

LDA

ELEV: 3182.5' CL

3200.5' RKT

SPUD: 1-11-82

Comp:

1980' FSL & 1980' FSL

SEC. 28, T21S, R3E

1/2" N-80, LTRC, CSg, CMTO w/ 200 SX CLASS "H"

DV TOOL 2836

11 3/4" 42" 11 3/4" STFC, CSg, CMTO w/ 300 SX CLASS "H" LITE AND TAILED w/ 300 SX CLASS "C" (CIRC. 250 SX)

(2-19-82)

CORE #1 - 11,700' - 11,718'

MORROW

(2-22-82)

CORE #2 - 11,718' - 11,735'

M. MORROW

11 3/4" 42" 11 3/4" STFC, CSg, CMTO w/ 150 SX CLASS "H" LITE AND TAILED w/ 250 SX CLASS "C" (1ST STAGE) CMTO w/ 150 SX PRESET LITE AND TAILED w/ 100 SX CLASS "C" (2ND STAGE) CIRC. 100 SX

8400' EST. TFC

MIDDLE MORROW 11,735' - 11,755'
94', 937', 955', 958', 12,003', 004',
026', 030', 038', 040', 045',
85', 095', 097', 12,126' (17 holes)
4" CSg, 900' w/ SS8-II class

11 3/4" - 11 3/4" "BD" PERMANENT PACKER (SS 17#)
w/ 31 1/2" per packer, 2 1/2" 18" pup, 1.875" Baker "F" nipple,
2 1/2" 18" pp, 1.875" Baker "F" nipple, machine

12,401' FIELD
12,401' - 5 1/2", 66 STS 17# 5-75, 247 STS.
17# N-80, LTRC, CSg, CMTO w/ 200 SX PRESET LITE AND TAILED w/ 850 SX CLASS "H"

ILLEGIBLE

EXHIBIT "B"
MORROW "J" PARTICIPATING AREA

Tract #	Lease #	Description of Participating Lands	Participating Acres	% of Lease Ownership	% of Unit Ownership
3	NM-0486	S/2 Section 28, T21S-R28E, Eddy County, New Mexico	320	BEPCo. - 7.5 PRB - 2.5 San Jose - 67.5 PRB, Inc. - 22.5	7.5 2.5 67.5 22.5

Insert

Color Page/Photo

Here

BASS ENTERPRISES PRODUCTION CO.

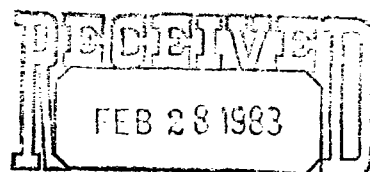
FIRST CITY BANK TOWER

201 MAIN ST.

FORT WORTH, TEXAS 76102

817/390-8400

February 11, 1983



OIL CONSERVATION DIVISION
SANTA FE

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 "K" Participating Area
Big Eddy Unit No. 93
1980' FSL and 1980' FWL
Section 36, 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 "K" Participating Area for the Morrow Producing Zone or Formation, to-wit:

S/2 of Section 36, 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 "K" 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.

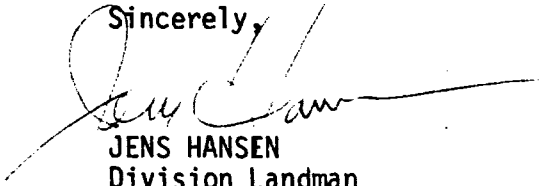
BUREAU OF LAND MANAGEMENT
COMMISSIONER OF PUBLIC LANDS
NEW MEXICO OIL CONSERVATION DIVISION
February 11, 1983
Page Two

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.

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 June 19, 1982, of Unit Well No. 93, in the NE/4 of SW/4, Section 36, T21S-R28E, with an initial production of gas from the Morrow Formation at a depth of 12,343' through 12,439'. The effective date of the initial area shall be June 19, 1982, 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 "K" Participating Area, to be effective June 19, 1982.

Sincerely,



JENS HANSEN
Division Landman

JH:dw
Attachments

BIG EDDY UNIT NO. 93

Big Eddy Unit No. 93 has had its only completion in the Morrow formation. After a 1620 gallon acid job in June, 1982, the well potentialled for 2945 MCFGPD. The well is currently making 2304 MCFGPD + 1.4 BCPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTIAL LEASE AREA IN FEDERAL UNITS

WELL DATA

WELL Big Eddy Unit No. 93 FORMATION Morrow
 LOCATION K UNIT, 1980 FEET FROM S LINE & 1980 FEET FROM W LINE,
 SECTION 36, RANGE 28E, TOWNSHIP 21S, COUNTY Eddy NEW MEXICO.
 SPUD DATE 3-7-82 COMPLETION DATE 6-19-82 INIT. PROD. DATE 9-29-82
 PERFORATIONS 12,343', 12,345', 12,347', 12,349', 12,435', 12,437', 12,439'

STIMULATION:

ACID 1620 gals 7 1/2% MSR-100

FRACTURE

POTENTIAL CAOF 2945 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 (ϕ), %	<u>6.7</u>	
Water saturation (S_w), %	<u>21.4</u>	
Net thickness (h) > 6% ϕ & 140% S_w , ft	<u>8</u>	
Temperature (T), °F	<u>196</u>	

Bottomhole pressure (P), psia 5198
 Recovery factor (RF), (80% assumed) .8
 Recoverable gas, MCF (see eq. below) 1,277,862
 Recoverable Gas, MCF = (43,560)(0)(1-Sw)(R) n = 0.0001 where

$$B_{gi} = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu Ft} \right) = 0.03535 \frac{(5198)}{(1.03)(656)} = .272$$

PERFORMANCE DATA

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

(Cumulative production to 10 / 31 / 82 : 88,487 MCF.

Initial rate (qi), 60,000 MCF/day

Economic limit (ql), 2000 1500 MCF/day

Decline rate, dy 65

Remaining gas (Q) = 668,685 MCF

Ultimate Recoverable Gas 757,172 MCF

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

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	PERFORMING SAND	PROD (DRLS)
Gas sand previously produced	-	-
Sand perforated	757,172	(1) 262
Sand not perforated, but potentially productive	-	(2) -
Total recoverable gas	757,172	262

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ILLEGIBLE

ECONOMIC

Well Cost \$ 1,213,342 (to the depth of formation completed)

Recompletion Cost \$ -

TOTAL COST \$ 1,213,342

(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 82 3.53(.855)(.975) - .139 + 32.1(.855-.275)(.94)(.0001) = 2.8

BEPCO Net Income = (Gross Gas)(Net Gas Price) 83 82x .05=2.95

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	15% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
Zero	---	---	---	1.0000	-1,213,342
1982	205,000	576,050	4500	0.9325	571,550
1983	453,600	1,338,120	18,000	0.81087	1,070,446
				0.70511	+ 428,654
				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

OIL AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2038

SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	
TYPE OF WELL	

TYPE OF COMPLETION

NEW ☒ WORK OVER ☐OIL WELL ☐GAS WELL ☒DRY ☐OTHER ☐DEEPEN ☐PLUG BACK ☐DIFF. RESV. ☐OTHER ☐

Name of Operator

LENNY R. BASS

Address of Operator

P.O. Box 2760, MIDLAND TX. 79702

Location of Well

WELL LETTER K LOCATED 1980 FEET FROM THE SOUTH LINE AND 1980 FEET FROMWEST LINE OF SEC. 36 TWP. 21S RGE. 28E NMPM

Date Spudded

3-7-82

16. Date T.D. Reached

4-29-82

17. Date Compl. (Ready to Prod.)

6-19-82

18. Elevations (DF, RKB, RT, GR, etc.)

3196.2' GL

19. Elev. Casinghead

Total Depth

12,750'

21. Plug Back T.D.

12,710'

22. If Multiple Compl., How Many

—

23. Intervals Drilled By

0' TO 12,750'

Rotary Tools

Cable Tools

Producing Interval(s), of this completion — Top, Bottom, Name

12,343'-12,439' MIDDLE HORROR (INDIAN FLATS HORROR)

25. Was Directional or More

NO

Type Electric and Other Logs Run

ALL-MSFL, CNL-FDC

27. Was Well Cored

NO

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11 3/4"	42 #	398'	15"	SSB S.N. CLASS "C" W/ADD.	NONE
8 7/8"	32 # 28"	3450'	11"	1750 SY. LITE ECLC W/ADD.	NONE
5 1/2"	17 #	12,750'	7 7/8"	800 SX P.S. LITE ECLC W/ADD.	NONE

LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
NONE					2 3/8"	12,250'	12,250'

Fracturation Record (Interval, size and number)

12,343, 45, 47, 49. - 12,435, 37, 39, 7 SHOTS

4" SSB PREMIUM CHARGES. 1 SHOT EA. INTERVAL

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
12,343, - 12,439	1620 GAL 7 1/2% NSR-11

PRODUCTION

First Production		Production Method (Flowing, gas lift, pumping — Size and type pump)					Well Status (Prod. or Shut-in)	
		Flowing					Shut in	
Time of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas — Oil Ratio	
6-16-82	8	VAR	→	0	335	0	—	
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Cor)		
290	PACKER	→	0	1005	0	0		

Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

List of Attachments

ABOVE LOGS

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED

J. H. H. H. H. H.

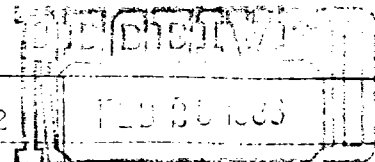
TITLE

J. H. H. H. H. H.

DATE

June 28, 1982

ILLEGIBLE



Type Well: ☒ Initial ☐ Annual		Date: 6-16-82		Well No: 12250	
Company: PERRY R. BASS		Fluid: AIR		Oil Conservation Division	
Test: MORROW		Well Name: SANTA FE K		Unit: BIG EDDY UNIT	
Completion Date: 6-14-82		Test Length: 12764		Flow Rate: 12710 3196.2 GL	
Casing Size: 5 1/2		Well ID: 12764		Perforations: 12343 to 12439	
Tubing Size: 2 3/8		Well ID: 12250		Perforations: From To	
Type Well - Single - Protectors - S.G. or G.O. Multiple: SINGLE GAS				Pressure: 12250	
Producing Time: TBG.		Reservoir Temp. °F: 196 - 12250		Mean Annual Temp. °F: 60°	
Bore Press. - P _g : 13.2		State: NEW MEXICO		County: EDDY	
L: 12250		H: 12250		G _g : .5901	
% CO ₂ : 1.200		% N ₂ : 1.459		% H ₂ S:	
Prover:		Meter Run: 4"		Type: FLG.	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	x	Orifice Size	Press. p.s.i.g.	DHL. in.	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	of Flow
51							4000				48 HRS.
1.	4 x	1.750		290	1.5	100	3735				1 HR.
2.	4 x	1.750		290	3.0	102	3625				1 HR.
3.	4 x	1.750		290	5.0	94	3475				1 HR.
4.	4 x	1.750		300	7.0	82	3375				1 HR.
5.	4 x	1.750		280	14.0	60	3020				4 HRS.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Factor F _g	Flow Factor F _l	Flow Factor F _g	Rate of Flow Q, Mgd
1	14.93	21.33	303.2	.9636	1.302	1.020	407
2	14.93	30.16	303.2	.9619	1.302	1.019	575
3	14.93	38.94	303.2	.9688	1.302	1.021	749
4	14.93	46.82	313.2	.9795	1.302	1.023	912
5	14.93	64.07	293.2	1.000	1.302	1.025	1277

FLUID PROPERTIES							
NO.	ρ _l	Temp. °F	γ _l	γ _g	Gas-Liquid Hydrocarbon Ratio	Method	Notes
1	.45	560	1.58	.962			
2	.45	562	1.59	.963			
3	.45	554	1.56	.960			
4	.47	542	1.53	.955			
5	.44	520	1.47	.931			

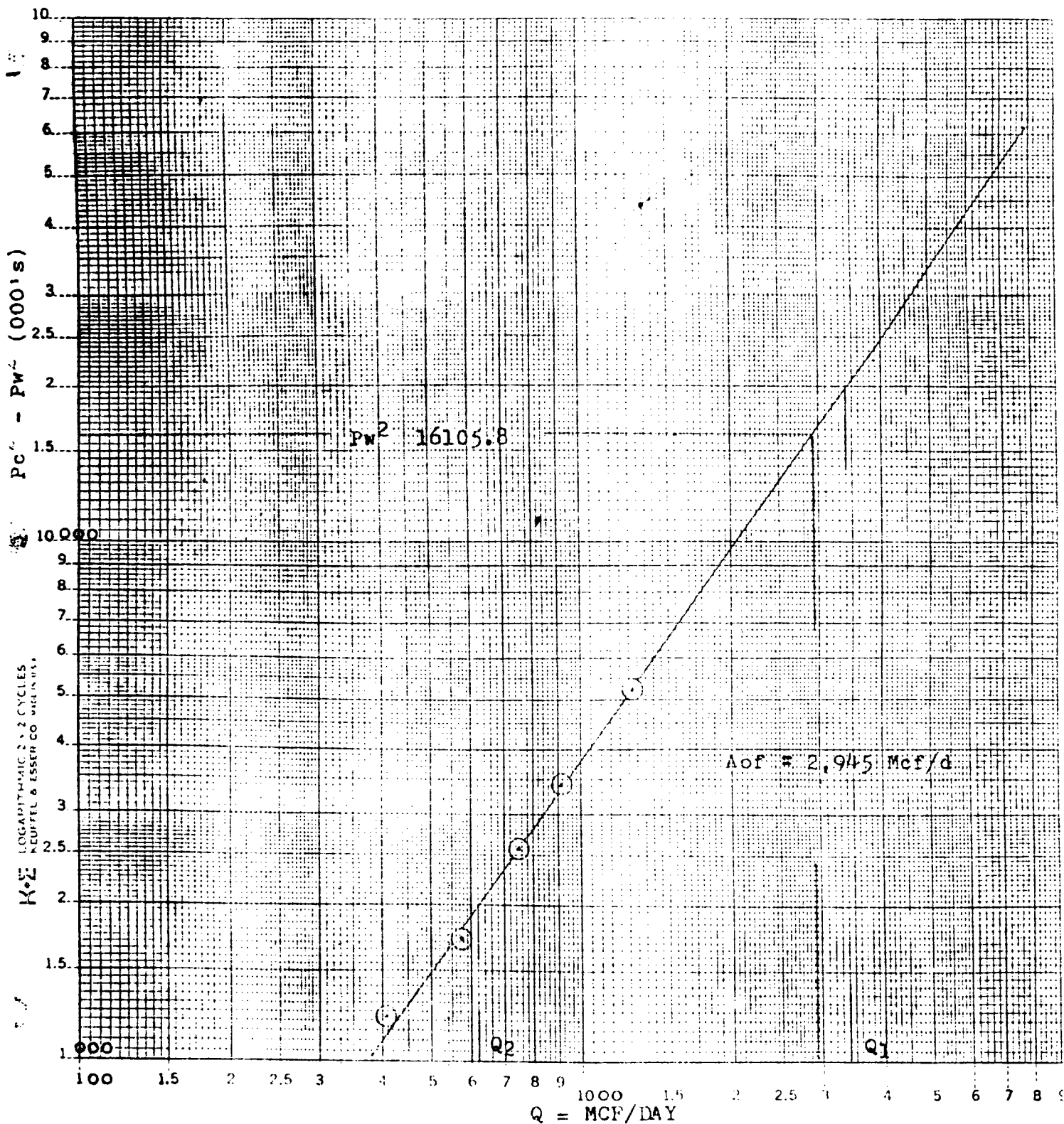
HYDRODYNAMIC CALCULATIONS							
NO.	BHP	P _w	P _g	P _g - P _w	(1) $\frac{P_g^2}{P_g^2 - P_w^2}$	(2) $\left[\frac{P_g^2}{P_g^2 - P_w^2} \right]^n$	Notes
1	4913.2	3858.8	14890.2	1215.6	3.097	2.306	
2	4836.2	3793.3	14389.8	1216.0			
3	4711.2	3687.7	13598.9	2506.9			
4	4564.2	3564.0	12702.3	3403.5			
5	4251.2	3302.4	10905.6	5200.2			

5257.2 S.I.P.		2,945		Angle of Slope: 53.5°		Slope: 739	
Absolute Open Flow				Slope: 739			

ILLEGIBLE

Approved By: _____	Checked By: _____	Company: DAVIS SERVICES, INC.	Operator: RICK PAGAN
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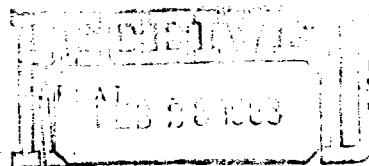
LEASE : BIG EDDY UNIT
 WELL NO.: # 93
 UNIT : K - sec. 36/twp. 21s / 28e
 COUNTY : EDDY
 STATE : NEW MEXICO
 DATE : 6-16-82



Q1 LOG 3400 = 3.531479
 Q2 LOG 620 = 2.792392
 N = .739
 θ = 53.50

NEW MEXICO OIL CONSERVATION
WELL LOCATION AND ACREAGE

All data here must be from the state



Form O-102
Supersedes O-101
Effective 1-1-75

OIL CONSERVATION DIVISION
SANTA FE

93

Perry R. Bass

Well Letter

K

County

36

Section

10

Range

10N

Acres Per Acre Location

1980

South

10E

10N

10E

Well Elev.
3196.2'

Morrow

Indian Flats

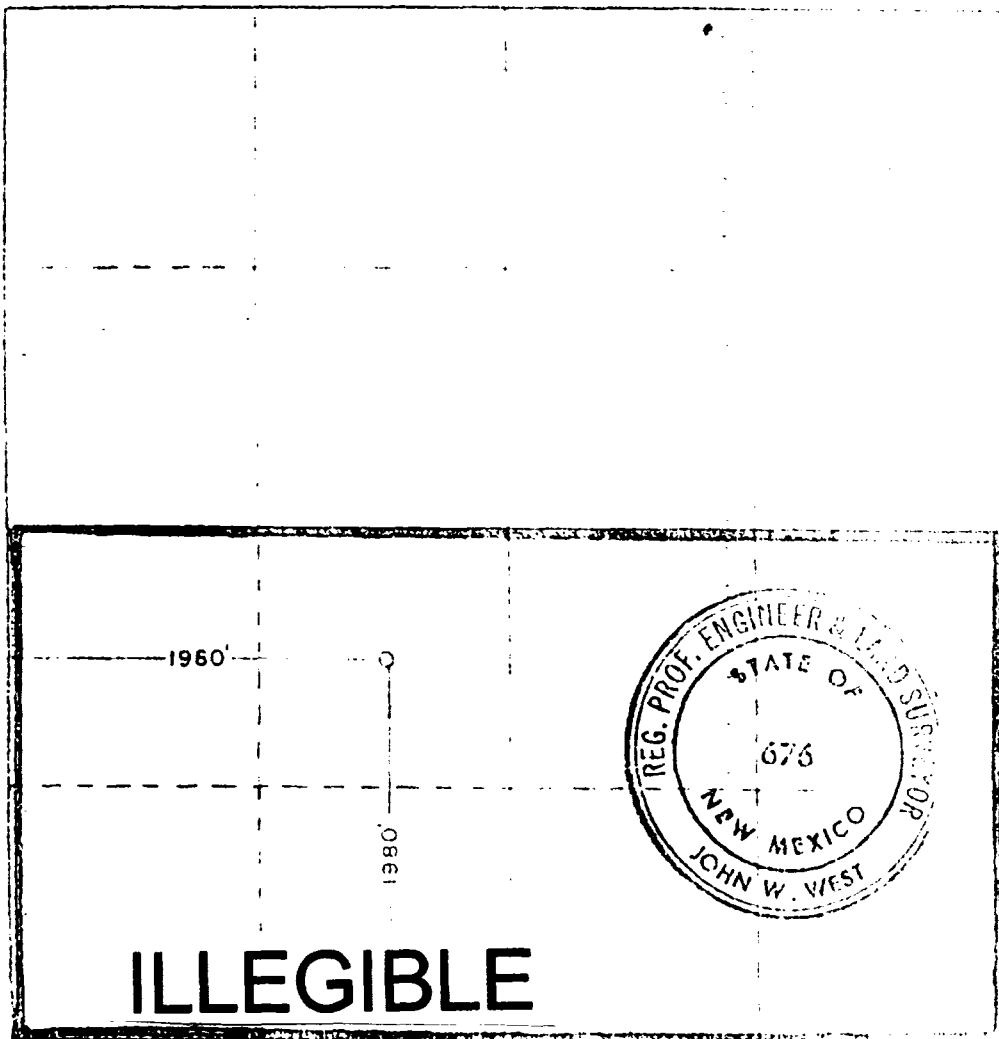
320

- 1 Outline the acreage dedicated to the subject well by owner.
- 2 If more than one lease is dedicated to the well, outline the acreage dedicated to working interest and royalty.
- 3 If more than one lease of different ownership is dedicated to the well, outline the interest of each owner in the well, as to working interest and royalty.

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

If answer is "No," list the owners and tract descriptions which have been dedicated to the well (use reverse side of this form if necessary.)

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



TESTIMONY

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

Stephen Smith

Stephen Smith

Engineering Assistant

Perry R. Bass

January 5, 1982

I hereby certify that the well location shown on this plan is plotted from field notes of a land survey made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.

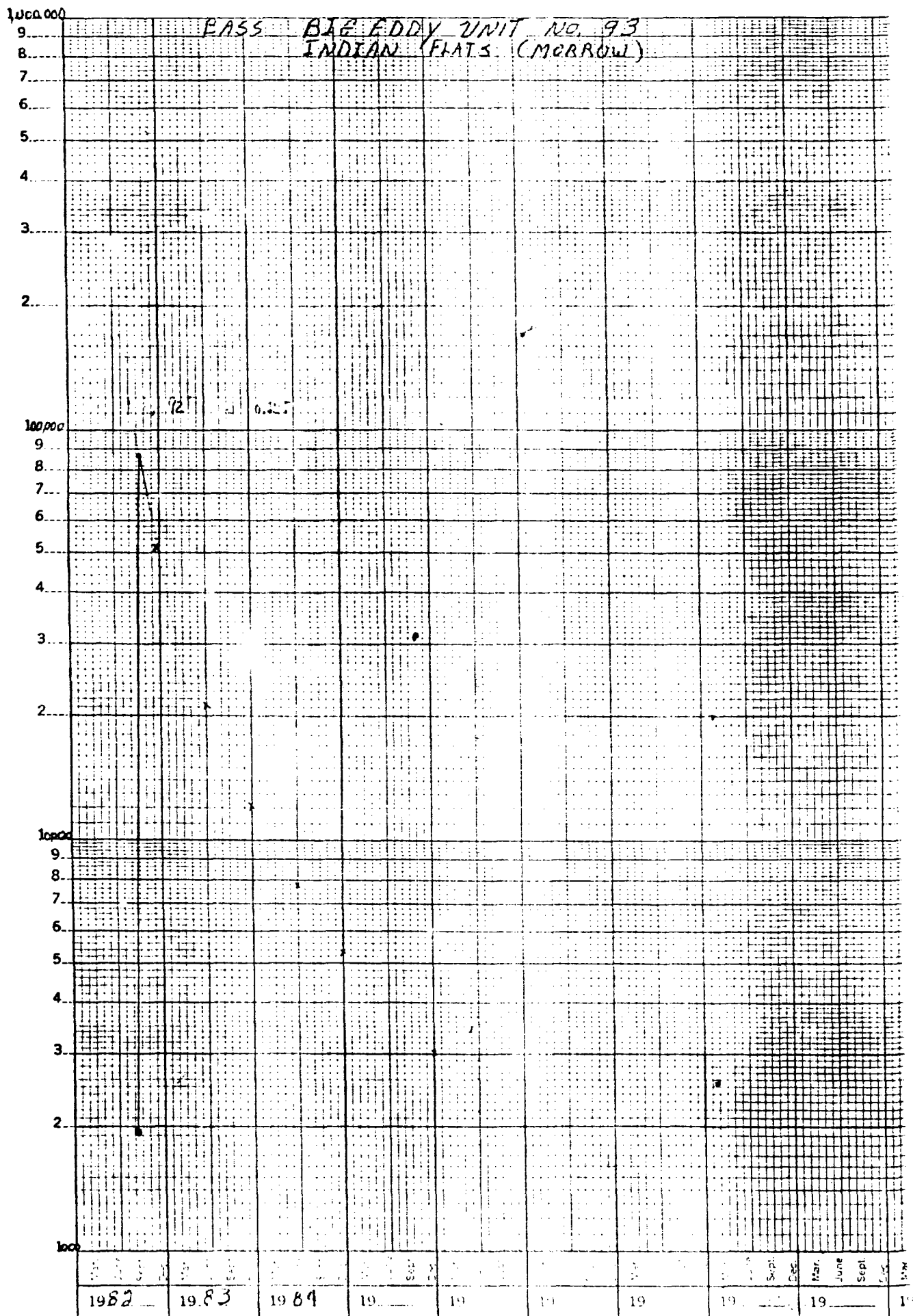
Dec 29, 1981

John W. West

JOHN W. WEST 676

47 6840

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



BASS ENTERPRISES PRODUCTION COMPANY

SUBJECT

DATE

TIME

BEU # 3

WATER

14605

ELEV. 3196.2 GL
3214.2 HLB
SPUD. 3-7-82

IN. DEWATERED
PRO. SOLUTION
TANKS, (100)
WELL CLOSURE, (100)

DST #1 - 10285 10496
JUL. WOLFENBUT
DST #2 STRABLER
PACKER FAILURE
DST #3 JACKED FAILURE
DST #4 10238 10475
237) WOLFENBUT



100% S-LUTION BUREAU AT BOTTOM OF 2 1/2\"/>

100% S-LUTION BUREAU AT BOTTOM OF 2 1/2\"/>

100% S-LUTION BUREAU AT BOTTOM OF 2 1/2\"/>

100% S-LUTION BUREAU AT BOTTOM OF 2 1/2\"/>

PERES 12343, 45, 47, 49, 12435, 37, 439
7 SHOTS: MIDDLE HORIZON
CIVILIZ w/1500 GALS 7 1/2%
H.R. 100 ACFT 1250 DCF/BLN 12

ILLEGIBLE

100% S-LUTION BUREAU AT BOTTOM OF 2 1/2\"/>

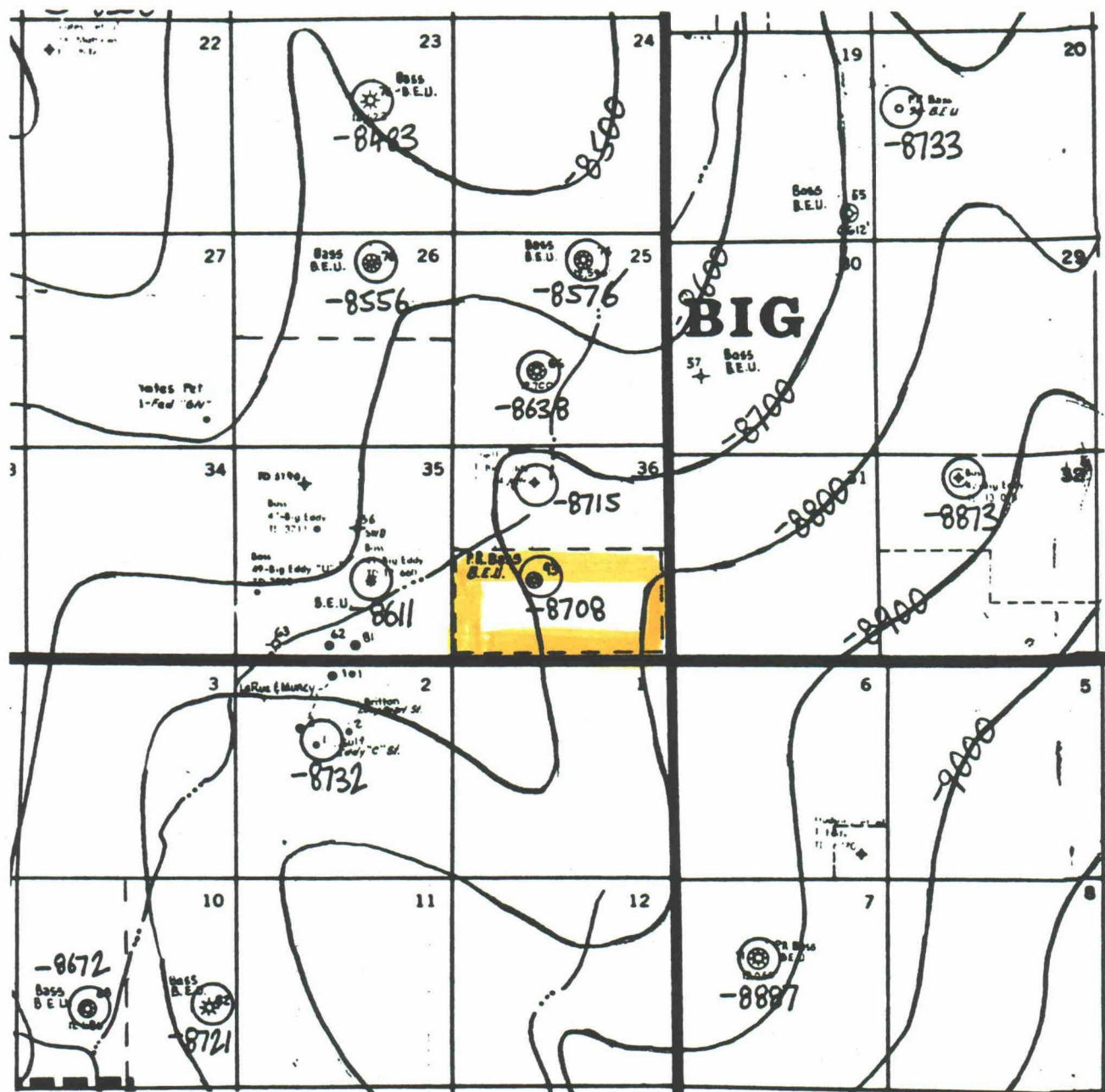
100% S-LUTION BUREAU AT BOTTOM OF 2 1/2\"/>

EXHIBIT "B"
MORROW "K" PARTICIPATING AREA

Tract #	Lease #	Description of Participating Lands	Participating Acres	% of Lease Ownership	% of Unit Ownership
179	E-5232-1	S/2 Section 36, T21S-R28E, Eddy County, New Mexico	320	BEP Co. - 7.5 PRB - 2.5 San Jose - 67.5 PRB, Inc. - 22.5	7.5 2.5 67.5 22.5

B.E.U. 93

STRUCTURE MAP: TOP MORROW



PROPOSED PARTICIPATING AREA

SCALE 1" = 4000'

G.A.H. 2/83