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

February 10, 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
Attention: Oil and Gas Division

Case #365

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

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

Gentlemen:

In accordance with the provisions of Section 11 of the Big Eddy Unit Agreement dated April 10, 1952, we hereby submit the attached materials covering the wells listed below to support our recommendation that each of the following wells be determined to be non-commercial, and thereby, not receive participating areas.

Big Eddy Unit Well #79-Y - Morrow - located 1980' FSL and 1930' FEL, Section 21, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #79-Y - Atoka - located 1980' FSL and 1930' FEL, Section 21, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #83 - Atoka - located 1980' FWL and 990' FNL, Section 10, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #83 - Morrow - located 1980' FWL and 990' FNL, Section 10, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #85 - Morrow - located 1980' FWL and 660' FSL, Section 8, T21S-R29E, Eddy County, New Mexico.

Additional Big Eddy wells which are not submitted have not yet provided enough data to reach a conclusive determination whether such wells are commercial. We anticipate obtaining necessary data for such determinations in the very near future, and at such time as such as such data is obtained we will submit commercial determinations for such wells.

If you should have any questions regarding the data submitted for the commercial determinations on the above named wells, please contact Steve Rowland in our Midland office, whose telephone number is (915) 684-5723.

Sincerely,

JENS HANSEN
Division Landman

JH:ep

BIG EDDY UNIT NO. 79-Y

Big Eddy Unit No. 79-Y was originally completed in the Morrow formation in September, 1980. The well was acidized with 500 gallons 7 1/2% MSR and potentialed at 1305 MCFGPD. The well was put on line January 14, 1981 with a rate of 803 MCFGPD. By February 4, 1981, the rate had declined to 37 MCFGPD and the well was fractured with 44,000 gallons gel + 57,000 # of sand. After the fracture treatment the well was put back on line at 128 MCFGPD. In August, 1981, the well was re-completed from the Middle Morrow to the Upper Morrow. The Upper Morrow was acidized with 2000 gallons 7 1/2% MSR and potentialed 5847 MCFGPD. Cumulative production from the Middle and Upper Morrow was 16,537 MCFG and 128,644 MCFG respectively. The well was plugged back to the Atoka formation in April, 1982. The Atoka potentialed for 2600 MCFGPD without stimulation. The well is currently making 48 MCFG after having a 3000 gallon 15% HCl acid job performed in July, 1982.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL Big Eddy Unit 79-Y FORMATION Morrow

LOCATION J UNIT, 1980 FEET FROM S LINE & 1930 FEET FROM E LINE,

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

SPUD DATE 6-27-80 COMPLETION DATE 9-15-80 INIT. PROD. DATE 1-14-81

PERFORATION 1st Comp: 11,913', 11,915', 11,937', 11,941', 11,946', 11,991'

2nd Comp: 11,660', 11,661', 11,798', 11,800', 11,802', 11,804', 11,806', 11,808', 11,815', 11,817',

STIMULATION:

ACID 11,913'-11,991' (1st Comp) 500 gals 7 1/2 MSR

11,660'-11,817' (2nd Comp) 2000 gals 7 1/2% MSR

FRACTURE 44,000 gals, 12,000#100 mesh, 45,000# 20-40 mesh (1st Comp)

POTENTIAL CAOF 1305 MCFGPD (1st Comp) CAOF 5847 MCFGPD (2nd Comp)

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

VOLUMETRIC CALCULATION

	SANDS PERFORATED 1st	SANDS PERFORATED 2nd	FORMATION SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	320	320	
Porosity (Ø),	6.5	7	
Water saturation (Sw),	42	38	
Net thickness (h) > 6% Ø & < Sw, ft	24	24	
Temperature (T), °F	172	170	

ILLEGIBLE

Bottomhole pressure (Pi, psia) 5055

Recovery factor (RF), (Default) .8

Recoverable gas, MCF (see eq. below) 3,472,962 (2nd Comp)

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A) / Bgi where

$$Bgi = 0.03535 \frac{P}{ZT}\left(\frac{MSCF}{Cu\ Ft}\right) = 0.0 \quad \frac{5055}{.95(630)} = .299$$

PERFORMANCE DATA

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

(Cumulative production to 4 / 31 /82 : 146,269 MCF.

Initial rate (qi), P& A

Economic limit (ql), ~~30~~ -

Decline rate, dy -

Remaining (Q) = -

Ultimate recoverable 146,269

$$Q = \frac{(qi - ql)}{-\ln(1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)	COND (BBLS)
Gas sand previously produced	146,269	301
Sand perforated	- (1)	-
Sand not perforated, but potentially productive	- (2)	-
Total recoverable gas	146,269	301

(1) performance recoverable gas if available

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

Participating area size based on ratio of productive acreage and volumetrics

320 acres---minimum area is proration unit.

ILLEGIBLE

ECONOMIC

Well Cost $ 1,291,811 (to the depth of formation completed)

Recompletion Cost $ 40,000

TOTAL COST $1,331,811

(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) WFPT %] MPF

Net Gas Price = Gas Price (.845)(1-.025) - .13[3.32(1-.07) - (32-19)(.775)]
(.845)(Cond. Yield, bbls/MCF)

81 3.06(.825)-.126 +34.99(1.035)(.825-.3)(.0021)=2.44

Operating Cost $1500/Month 82 3.36(.825)-.126 = 2.65

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	-1,291,811
1981	16,537(1st Comp)	343,813	12,000	0.9325	266,521
	124,370(2nd Comp)		6,000		
			40,000 recomp cost	0.8410[illegible]	5,535
1982	4,274 (P & A)	11,326	4,500		-1,019,755
				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. Uneconomical

ILLEGIBLE

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: NM 0481

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

7. UNIT AGREEMENT NAME: BIG EDDY UNIT

8. FARM OR LEASE NAME: BIG EDDY UNIT

9. WELL NO.: 79-Y

2. NAME OF OPERATOR: PERRY R. BASS

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

10. FIELD AND POOL, OR WILDCAT: UNDES. MORROW

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 1980' FSL & 1930' FEL OF SECTION - UNIT LETTER J.
At top prod. interval reported below
At total depth

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: SEC. 21, T21S, R28E

14. PERMIT NO. — DATE ISSUED —

12. COUNTY OR PARISH: EDDY 13. STATE: N. MEX

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
6-27-80	8-12-80	9-15-80	3220.6' GL 3238.6' KB	—

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12,370'	12,250'	—	→	0-12,370	—

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 11,913' - 11,991' MORROW

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN: DLL-MSF, CN-FD

27. WAS WELL CORED: NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48#	1000.00	17½"	830 SKS CLASS "C"	NONE
8 5/8"	28#	2939.30	12¼"	937 LITE - 170 CLASS "C"	NONE
5½"	17#	12376.63 KB	7 7/8"	200 LITE - 600 CLASS "H"	NONE

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
NONE				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	11,887.21	11,853.41'

31. PERFORATION RECORD (Interval, size and number)
4" CASED GUN - .42" SSB MAGNUM SHOTS - ONE SHOT AT EACH DEPTH: 11,913', 11,915', 11,937', 11,941', 11,946', & 11,991'. SIX HOLES.

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11,913' - 11,991'	500 GALS 7½% MSR

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
9-12-80	FLOWING	SI - NOPL

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
9-16-80	9	VARIOUS	→	—	283	TRACE	∞

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
900	PKR	→	—	CAOF 1305	TRACE	—

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): SOLD

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: LOGS: DLL-MSFL, CN-FD

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

SIGNED W. J. Mueller Jr. TITLE Dist. Prod'n Clerk DATE Oct. 15, 1980

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

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 9/16/80	
Company: PERRY R. BASS		Connection: AIR			
Pool: UNDESIGNATED		Formation: LOWER MORROW		Unit: BIG EDDY UNIT	
Completion Date: 09-12-80	Total Depth: 12,370'	Plug Back T.D.: 12,250'	Elevation: 3,221' GL	Farm or Lease Name: BIG EDDY UNIT	
Csg. Size: 5-1/2" / Wt.: 17# / d: / Set At: 12,370'		Perforations: From 11,913' To 11,991'		Well No.: #79-Y	
Tbg. Size: 2-3/8" / Wt.: / d: / Set At: 11,870'		Perforations: From To		Unit: J / Sec.: 21 / Twp.: 21s / Rge.: 28e	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE GAS		Packer Set At: 11,850'		County: EDDY	
Producing Thru: TBG.	Reservoir Temp. °F: 192 @ 11,849'	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: NEW MEXICO	
L: 11,849' / H: 11,849'	Gg: .5961	% CO_2: 1.820	% N_2: .307	% H_2S:	Prover: / Meter Run: 4" / Taps: FLG.

FLOW DATA					TUBING DATA		CASING DATA		
NO.	Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					3430				64 hr.
1.	4 x 1.250	515	2.0	98	3090				1 hr.
2.	4 x 1.250	525	6.0	116	2810				1 hr.
3.	4 x 1.250	540	12.5	102	2360				1 hr.
4.	4 x 1.250	540	18.0	96	1910				1 hr.
5.	4 x 1.250	545	21.0	96	900				4 hr.

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	7.469	32.50	528.2	.9653	1.295	1.035	314
2	7.469	56.83	538.2	.9501	1.295	1.032	539
3	7.469	83.16	553.2	.9619	1.295	1.036	802
4	7.469	99.79	553.2	.9671	1.295	1.039	970
5	7.469	108.27	558.2	.9671	1.295	1.039	1052

NO.	P_t	Temp. °R	T_t	Z
1	.79	558	1.56	.933
2.	.80	576	1.61	.939
3.	.82	562	1.57	.931
4.	.82	556	1.55	.927
5	.83	556	1.55	.926

Gas Liquid Hydrocarbon Ratio: DRY Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .5961 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 671 P.S.I.A. P.S.I.A.
Critical Temperature: 358 R R

P_c P_c^2

NO	BHP^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	4209.2	3274.2	10720.1	1135.5
2	3963.2	3070.5	9427.7	2427.9
3	3447.2	2651.5	7030.6	4825.0
4	2877.2	2204.8	4861.2	6994.4
5	1570.2	1217.2	1481.6	10374.0

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.695$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.345$

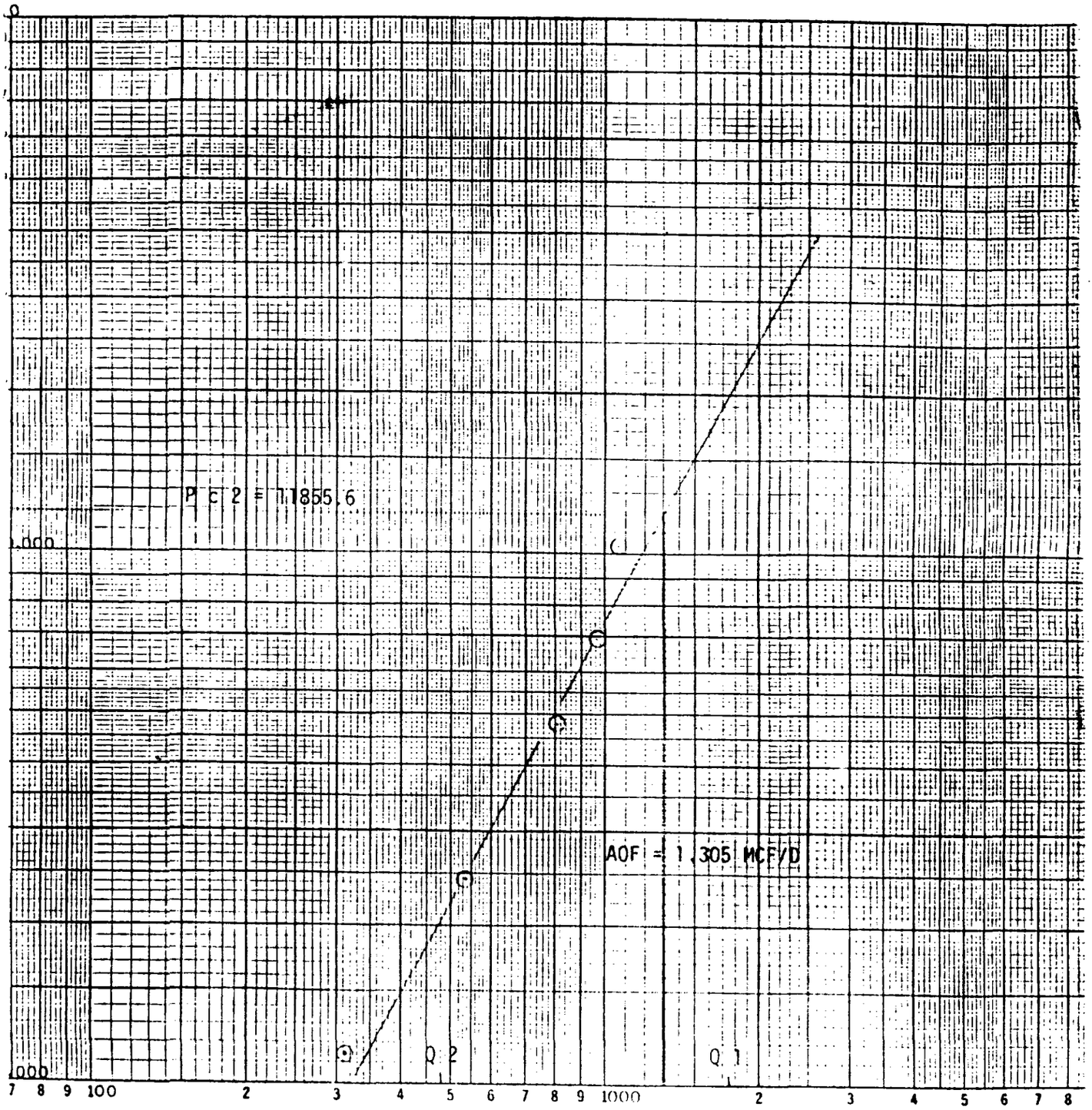
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.305$

Absolute Open Flow: SIP 4570.2 1305 Mcfd @ 15.025 Angle of Slope θ: 60.75 Slope, n: .562

Remarks: The well produced 1/2 bbl H_2O during the test.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	DAVIS SERVICES, INC.	RICK PAGAN	

COMPANY : PERRY R. BASS
LEASE : BIG EDDY UNIT
WELL NO. : 79-Y
UNIT : SEC. 21/twp. 21s/ rge. 38e
COUNTY : EDDY
STATE : NEW MEXICO
DATE : SEPTEMBER 16, 1980



Q = MCF/DAY

Q 1 = 1750; LOG OF Q 1 = 3.243038
Q 2 = 480; LOG OF Q 2 = 2.681241
N = .562
θ = 60.75°

OPERATOR'S COPY

WF

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.	NM 0486
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.	79-J
10. FIELD AND POOL, OR WILDCAT	~~BIG EDDY~~ FENTON DELAWARE MORR
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA	SEC 21 T21S R28E
12. COUNTY OR PARISH	EDDY
13. STATE	N.M

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

1b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☒ Other

2. NAME OF OPERATOR: PERRY R. BASS

3. ADDRESS OF OPERATOR: P.O. BOX 2760 MIDLAND, TEXAS 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 1980' FSL & 1930' FEL OF SECTION - UNIT "J"
At top prod. interval reported below
At total depth

JUL 7 1981

U.S. GEOLOGICAL SURVEY

FEB 14 1983

OIL CONSERVATION DIVISION
SANTA FE

14. PERMIT NO. — DATE ISSUED

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
6-27-80	8-12-80		3220.6' GL 3238.6' KB	—

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12,370'	12,250'	—	→	12,370	—

ACCEPTED FOR RECORD
PETER W. CHESTER
AUG 11 1981
U.S. GEOLOGICAL SURVEY
NEW MEXICO

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 11,660' - 11,817' MORROW (UPPER)

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN: DLL-RxO, CNL-FDC

27. WAS WELL CORED: NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	48	1000.00	17 1/2	830 SX Cl. C	NONE
8 5/8	28	2939.30	12 1/4	937 - Lite 170 Cl. C	NONE
5 1/2	17	12376.63	7 7/8	200 Lite 600 Cl. H	NONE

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
	NONE	NONE		

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8	11610	11,610

31. PERFORATION RECORD (Interval, size and number)
4" SELECT FIRE GUN JRC-SS-B2 CHARGES
SHOT AT 11660, 661, 798, 800, 802, 804, 806, 808, 815, 817

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11,660 - 11,817	2000 GAL 7 1/2% HSR

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
7-31-81	FLOWING	SHUT IN

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
7-31-81	4	VARIOUS	→	0	264	0	—

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
3233	—	→	0	5.85 MMCFPD AOF	0	—

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): SOLD

TEST WITNESSED BY: —

35. LIST OF ATTACHMENTS: LOGS PREVIOUSLY SUBMITTED

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

SIGNED Janeen Judah TITLE PETROLEUM ENGINEER DATE 8/5/81

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

WF

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 9-1

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 7-31-81	
Company: Bass Enterprises		Connection			
Pool		Formation		Unit	
Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name: Big Eddy	
Csg. Size	Wt.	d	Set At	Perforations: From To	Well No.: 79 Y
Tbg. Size: 2.375	Wt.: 4.7	d: 1.995	Set At: 11610	Perforations: From To	Unit Sec. Twp. Rge.
Type Well – Single – Bradenhead – G.G. or G.O. Multiple			Packer Set At		County: Eddy
Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. – P_a		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11590	11590	.5848	0	0	0		X	

	FLOW DATA					TUBING DATA		CASING DATA		
NO.	Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						3993	84			
1.	3.0	1.5	6.0	3.0	98	3695	83			1 Hr.
2.	3.0	1.5	6.1	7.5	80	3325	83			1 Hr.
3.	3.0	1.5	6.1	8.9	84	3237	83			1 Hr.
4.	3.0	1.5	6.1	9.6	81	3233	80			1 Hr.
5.										

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	11.13	*	445.2	.9653	1.309	1.028	637
2.	11.13	*	446.5	.9813	1.309	1.027	1645
3.	11.13	*	446.5	.9777	1.309	1.027	1953
4.	11.13	*	446.5	.9804	1.309	1.027	2104
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.66	558	1.59	.947
2.	.66	540	1.54	.938
3.	.66	544	1.55	.939
4.	.66	541	1.54	.938
5.				

Gas Liquid Hydrocarbon Ratio: None Measured Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 672 P.S.I.A. 672 P.S.I.A.
Critical Temperature: 350 R 350 R

P_c 5061.2 P_c^2 25615

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		4544.2	20650	4965
2		4316.2	18630	6985
3		4487.2	20135	5480
4		4397.2	19336	6279
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.07947$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.77913$

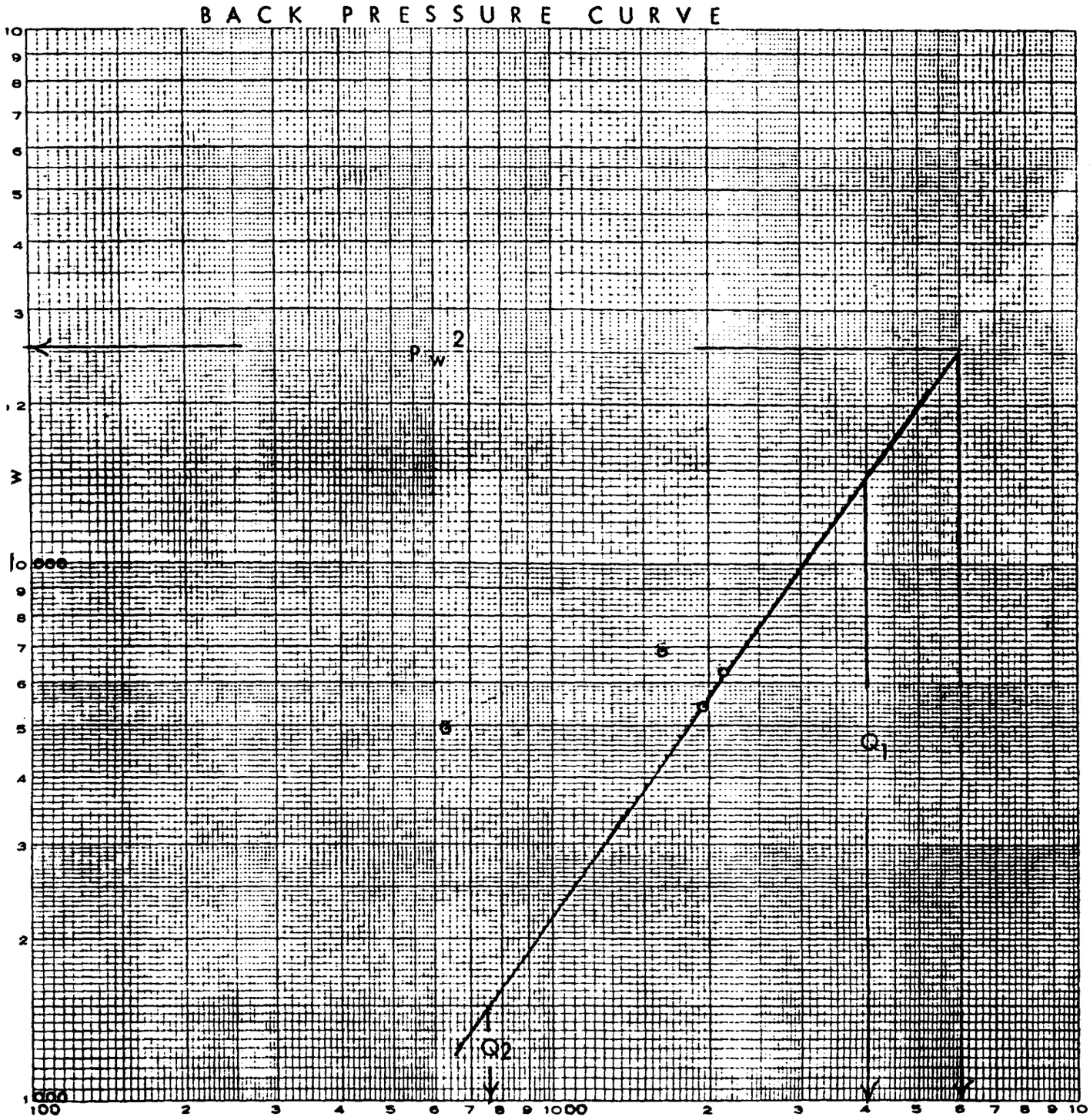
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 5847$

Absolute Open Flow: 5847 Mcfd @ 15.025 Angle of Slope θ: 54 Slope, n: .727

Remarks: Includes L-10 meter factor 2.4495

COUNTY [redacted]ly STATE New Mexico

DATE 7-31-81



AOF = 5847 MCF per DAY

Q_1 = 4000 MCF log Q_1 = 3.60206

Q_2 = 760 MCF log Q_2 = 2.88081

.72125

MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

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

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Operator	Lease	Well No.
PERRY R. BASS	BIG EDDY UNIT	79-Y

Unit Letter	Section	Township	Range	County
J	21	21 SOUTH	28 EAST	EDDY

Actual Footage Location of Well:
1,980 feet from the SOUTH line and 1,930 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3220.5	MORROW	WILDCAT	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

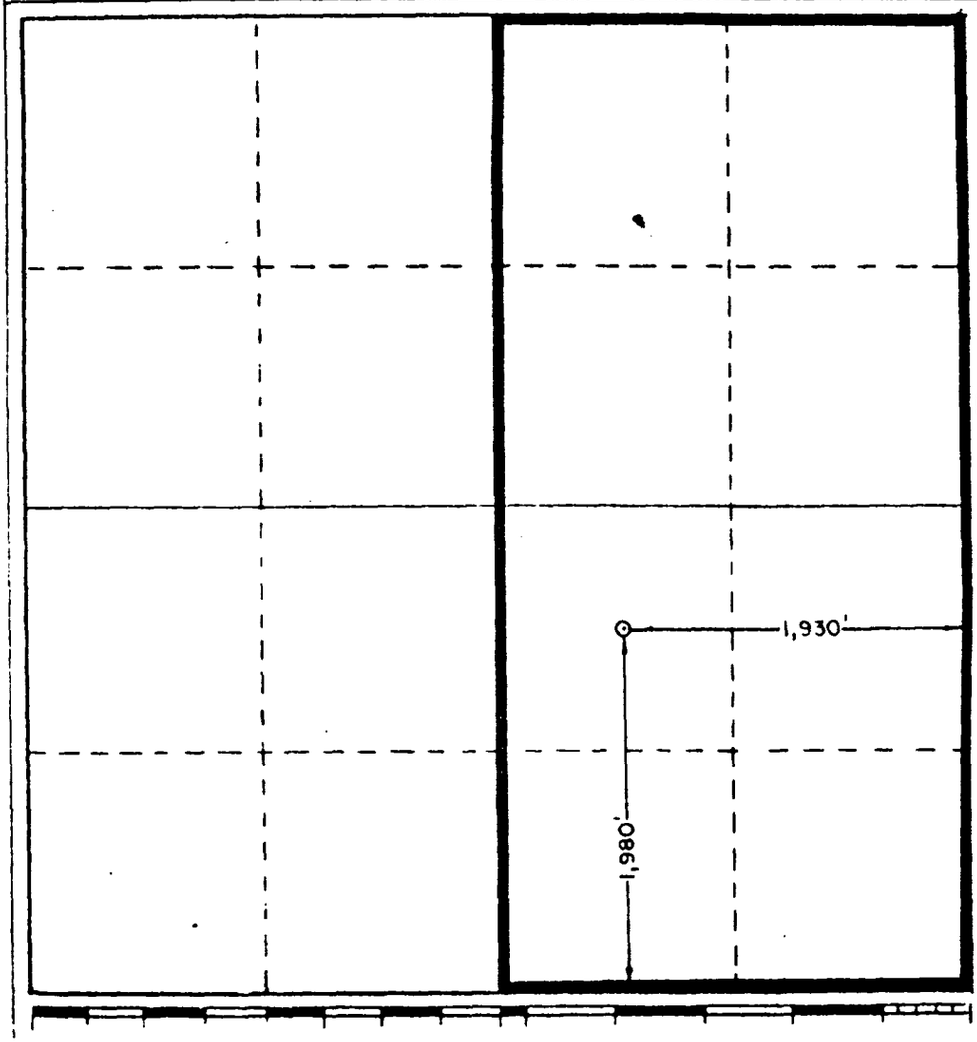
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] 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.

Name GARY GERHARD

Position SENIOR DRILLING ENGINEER

Company BASS ENTERPRISES PRODUCTION CO

Date June 24, 1980

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.

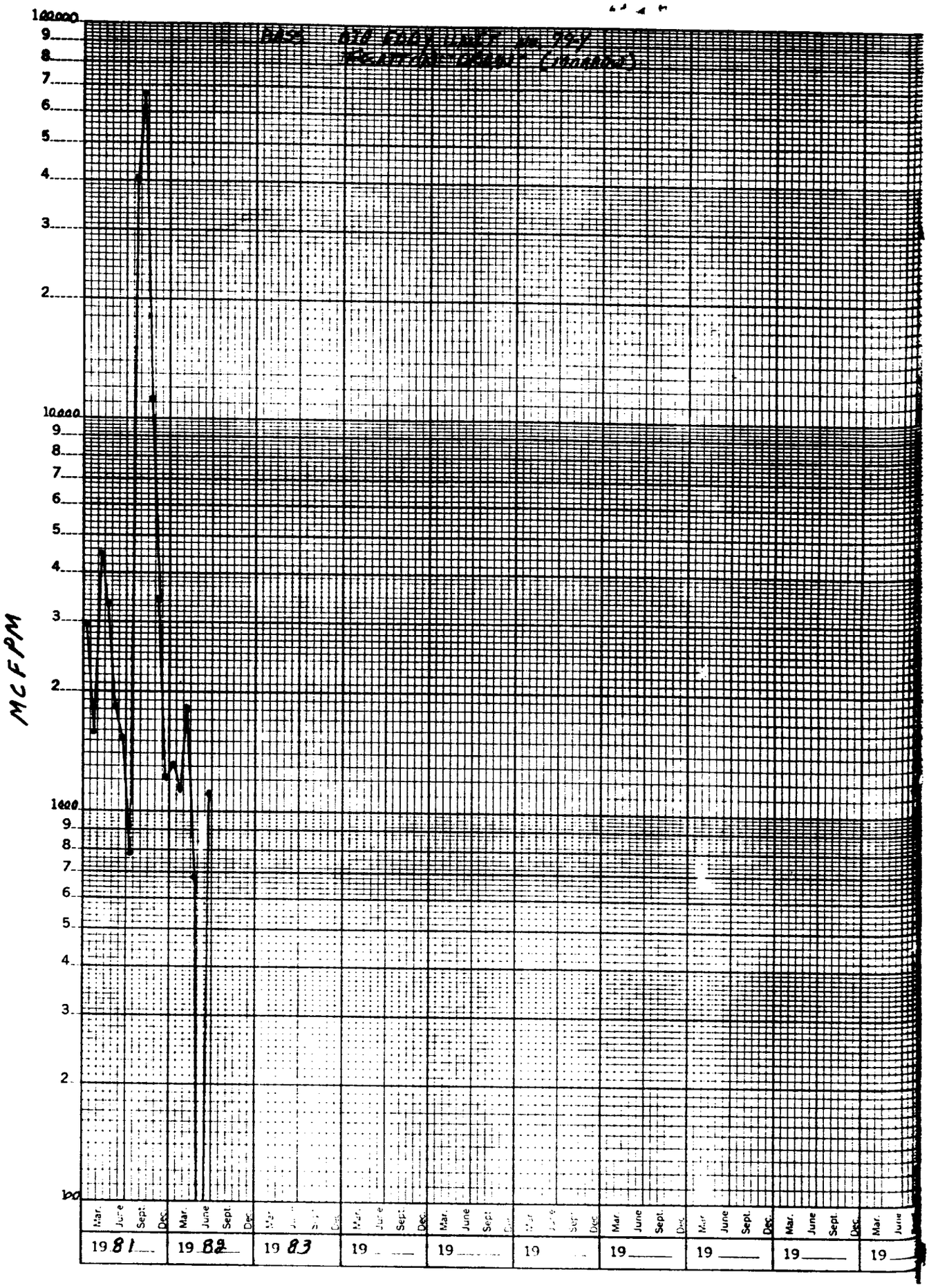
RECEIVED
JUN 25 1980
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Date Surveyed NO. JUNE 24TH 1980

Registered Professional Engineer and/or Land Surveyor

Ronald J. Eidson

Certificate No. John W. West 676



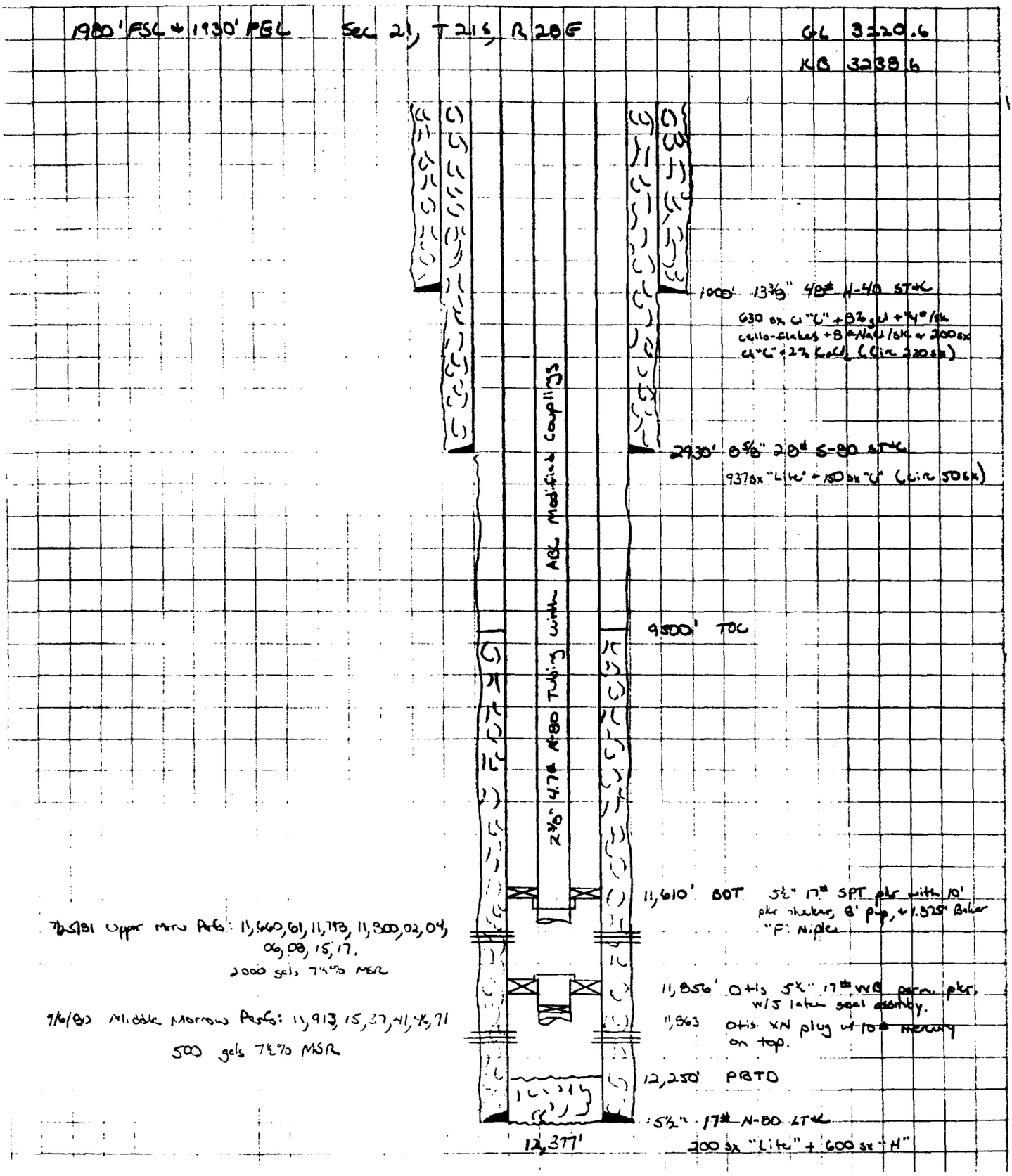
47 6840

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

BASS ENTERPRISES PRODUCTION COMPANY

PAGE NO. _____

SUBJECT	DATE	DEPARTMENT	PREPARED BY
BEU # 79-Y (After 2nd Morrow Comp.)	12/28/82	Prod	HHM



BIG EDDY UNIT NO. 79-Y

Big Eddy Unit No. 79-Y was originally completed in the Morrow formation in September, 1980. The well was acidized with 500 gallons 7 1/2% MSR and potentialed at 1305 MCFGPD. The well was put on line January 14, 1981 with a rate of 803 MCFGPD. By February 4, 1981, the rate had declined to 37 MCFGPD and the well was fractured with 44,000 gallons gel + 57,000 # of sand. After the fracture treatment the well was put back on line at 128 MCFGPD. In August, 1981, the well was re-completed from the Middle Morrow to the Upper Morrow. The Upper Morrow was acidized with 2000 gallons 7 1/2% MSR and potentialed 5847 MCFGPD. Cumulative production from the Middle and Upper Morrow was 16,537 MCFG and 128,644 MCFG respectively. The well was plugged back to the Atoka formation in April, 1982. The Atoka potentialed for 2600 MCFGPD without stimulation. The well is currently making 48 MCFG after having a 3000 gallon 15% HCl acid job performed in July, 1982.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL Big Eddy Unit 79-Y FORMATION Atoka

LOCATION J UNIT, 1980 FEET FROM S LINE & 1930 FEET FROM E LINE,

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

SPUD DATE 6-27-80 RECOMPLETION DATE 4-8-82 INIT. PROD. DATE 4-8-82

PERFORATIONS 11,182', 11,183', 11,184', 11,185', 11,186', 11,230', 11,231', 11,232', 11,233', 11,234'

STIMULATION:

ACID 3000 gals 15% HCL

FRACTURE

POTENTIAL CAOF 2600 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 (Ø), %	11	
Water saturation (Sw), %	40	
Net thickness (h) > 6% Ø & <40% Sw, ft	7	
Temperature (T), °F	181	

Bottomhole pressure (P), psia 5200

Recovery factor (RF), [illegible] .8

Recoverable gas, MCF [illegible] 1,494,059

Recoverable Gas, MCF = [illegible] where:

$$B_{gi} = 0.03535 \frac{P}{Z} \left(\frac{MSCF}{Cu\ Ft}\right) = [illegible] \frac{5200}{.99)(641)} = .290$$

PERFORMANCE [illegible]

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

(Cumulative production to 9 / 31 82 ; 11,613 MCF.

Initial rate (qi), 2000 MCF/mo

Economic limit (ql), ~~30/3~~ 1500 MCF/mo

Decline rate, dy 41

Remaining gas (Q) = 11,372 MCF

Ultimate Recoverable Gas 22,985 MCF

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-\ln\ (1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	[illegible]	[illegible]	COND (BBLS)
Gas sand previously produced	0		0
Sand perforated	22,985	(1)	0
Sand not perforated, but potentially productive	-	(2)	-
Total recoverable gas	22,985		0

(1) performance recoverable gas if available

(2) $\frac{\text{performance sand perforated}}{\text{volumetric sand perforated}}$ x volumetric sands not perforated = 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 $ 1,007,811 (to the depth of formation completed)

Recompletion Cost $ 45,500

TOTAL COST $ 1,053,311

(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)

82 (3.39)(.825)-.129=2.67

Operating Cost $1500/Month 83 (3.50)(.825)-.139=2.75

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	-1,007,811
1982	16,000	42,720	10,500 45,500-recomp.	0.9325	- 12,384
				0.81087	5,271
1983	4,000	11,000	4,500		-1,014,924
				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) disocunt factor =

discounted cash flow. Uneconomical

Form 9-330
(Rev. 5-63)

OPERATOR'S COPY

SUBMIT IN DUPLICATE*
(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

5. LEASE DESIGNATION AND SERIAL NO.: NM 0486

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☒ DIFF. RESVR. ☐ Other

7. UNIT AGREEMENT NAME: BIG EDDY UNIT

8. FARM OR LEASE NAME: BIG EDDY UNIT

2. NAME OF OPERATOR: PERRY R. BASS

9. WELL NO.: 79 Y

3. ADDRESS OF OPERATOR: P.O. BOX 2760, MIDLAND TX. 79702

10. FIELD AND POOL, OR WILDCAT: ATOKA

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 1980' FSL & 1930' FEL OF SEC. UNIT J

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

At top prod. interval reported below

At total depth

SEC. 21, T21S R28E

14. PERMIT NO. — DATE ISSUED

12. COUNTY OR PARISH: EDDY

13. STATE: N. MEXICO

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
6-27-80	8-12-80	APRIL 8, 1982	3220.6 GL 3238.6 KB	—

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12,376.63'	11,310'	SINGLE	→	ROTARY	—

24. PRODUCING INTERVAL(S), OF THIS COMPLETION — TOP, BOTTOM, NAME (MD AND TVD)*
11,182' 11,234' ATOKA

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN
NONE

27. WAS WELL CORED: NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48#	1,000.00'	17 1/2"	800 SKS. CLASS "C"	NONE
8 5/8"	28#	2939.30'	12 1/4"	937 SKS. LITE 170 SKS CL. "C"	NONE
5 1/2"	17#	12,376.63' KB	7 7/8"	700 SKS. LITE 600 SKS. CL "H"	NONE

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
NONE				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	11,069'	11,012'

31. PERFORATION RECORD (Interval, size and number)
1 9/16" SELECT FIRE GUN 5 SB 11 CHARGES
10 SHOTS 1 SHOT @ EACH DEPTH.
11,182', 11,183', 11,184', 11,185' 11,186'.
11,230', 11,231', 11,232', 11,233', 11,234'.

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11,182' – 11,234'	70 GALS. 15% NSR (GAS BOF)

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
4-8-82	FLOWING	SHUT-IN

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
4-8-82	8	VARIOUS		10	2600 - AOF	—	—

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
VAR	PACKER		—	26 MMCFD CAP	—	50°

ACCEPTED FOR RECORD
MAY 5 1982
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
SOLD

TEST WITNESSED BY

35. LIST OF ATTACHMENTS:
NONE

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

SIGNED K.T. Stallcup TITLE Production Clerk DATE 4-27-82

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

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT [redacted] ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Type Test: [X] Initial [ ] Annual [ ] Special | Test Date: 4-8-82

Company: Perry R. Bass | Connection: Natural Gas Pipeline | Unit:

Pool: Bass | Formation: Atoka

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
	12,377	11,310		Big Eddy

Csg. Size	Wt.	d	Set At	Perforations:	Well No.
5 1/2	17	4.892	12,377	From To	79Y
Tbg. Size	**Wt.**	**d**	**Set At**	**Perforations:**	**Unit Sec. Twp. Rge.**
2 3/8	4.7	1.995	11,069	From To	

Type Well – Single – Bradenhead – G.G. or G.O. Multiple	Packer Set At	County
Single	11,069	Eddy

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. – P_a	State
Tubing	281 @ 11,069		13.2	New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11,069	11,069	.68	-	-	-	-	2.900	pipe

NO.	FLOW DATA: Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI	2.900	1.625								
1.	2.900	1.625	448	3.7	70	4130	71	0		1.16
2.	2.900	1.625	448	15.7	68	3230	71	30		1.00
3.	2.900	1.625	448	21.8	70	2695	68	30		1.00
4.	2.900	1.625	463	23.1	70	2040	65	30		1.50
5.	2.900	1.625	463	21.1	72	1640	68	30		3.50

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	16.41	41.30	461	.9905	1.213	1.0477	853.12
2.	16.41	85.07	461	.9924	1.213	1.0541	1771.39
3.	16.41	98.83	461	.9905	1.213	1.0477	2041.50
4.	16.41	104.86	476	.9905	1.213	1.0477	2164.28
5.	16.41	100.22	476	.9887	1.213	1.0477	2066.45

NO.	P_t	Temp. °R	T_f	Z
1	6.19	531	1.37	0.890
2.	4.85	531	1.37	0.733
3.	4.04	528	1.37	0.670
4.	3.07	525	1.36	0.669
5	2.47	528	1.37	0.691

Gas Liquid Hydrocarbon Ratio 112.0189 Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons 50 Deg.

Specific Gravity Separator Gas .68 XXXXXXXXXX

Specific Gravity Flowing Fluid XXXXX

Critical Pressure 669 P.S.I.A. P.S.I.A.

Critical Temperature 385 R R

P_c 4820 P_c^2 23232.4

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1	17164.45	4144	17172.74	6059.66
2	10517.05	3248	10549.50	12682.90
3	7263.03	2723	7414.73	15817.67
4	4161.60	2068	4276.62	18955.78
5	2689.60	1668	2782.22	20450.18

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

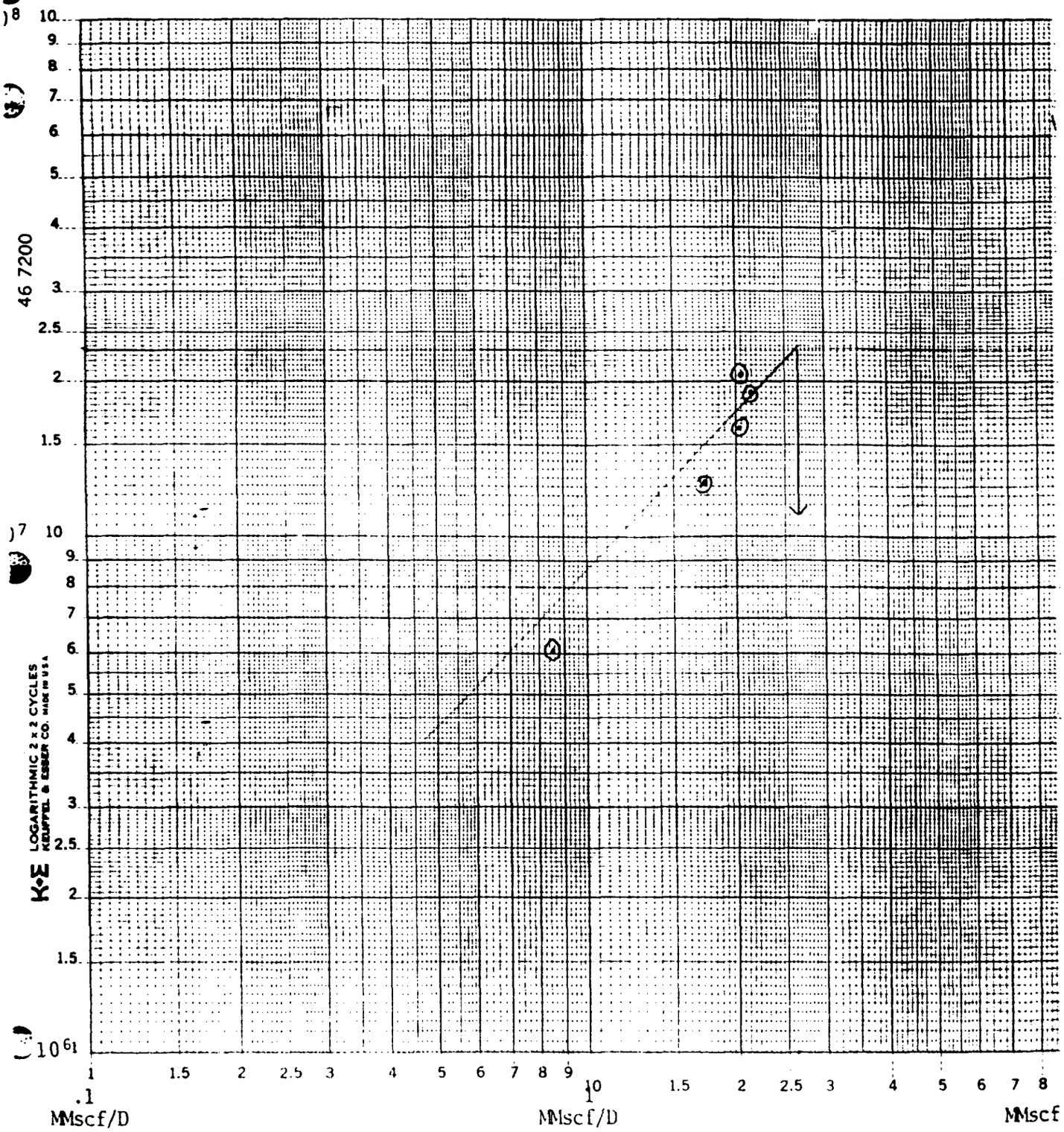
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n =$

Absolute Open Flow 2.6 MMcf Mcfd @ 15.025 | Angle of Slope θ 45° | Slope, n 1.000

Remarks:

Approved By Commission: | Conducted By: | Calculated By: | Checked By:

COMPANY: PERRY R. BASS
WELL: BIG EDDY 79Y
LOCATION: EDDY COUNTY, NEW MEXICO
FORMATION: ATOKA
DATE: 4-8-82



AOF = 2.6 MMcf Angle of Slope = 45° Slope, n = 1.000

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 14-65

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
PERRY R. BASS	BIG EDDY UNIT	79-Y

Unit Letter	Section	Township	Range	County
J	21	21 SOUTH	28 EAST	EDDY

Actual Footage Location of Well:
1,980 feet from the SOUTH line and 1,930 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3220.5	Atoka	WILDCAT	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

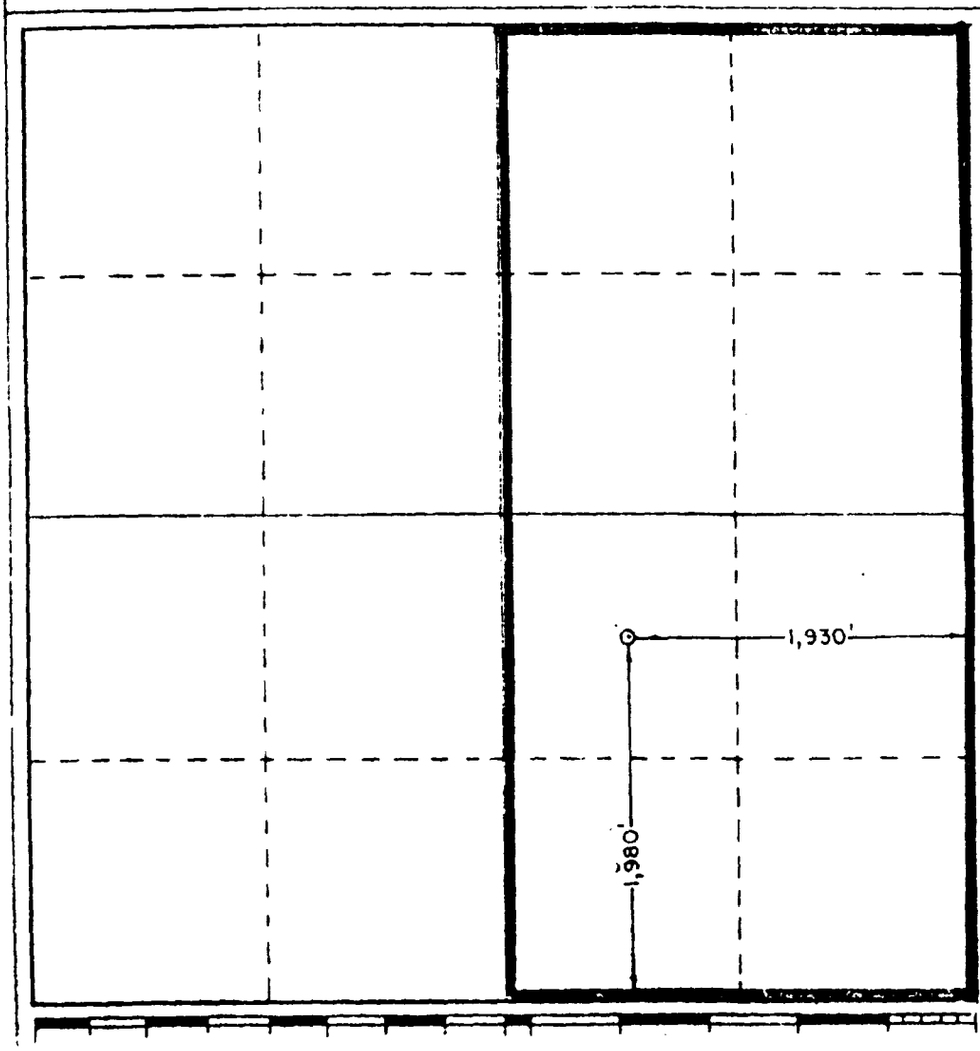
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] 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.

Name: GARY GERHARD

Position: SENIOR DRILLING ENGINEER

Company: BASS ENTERPRISES PRODUCTION CO

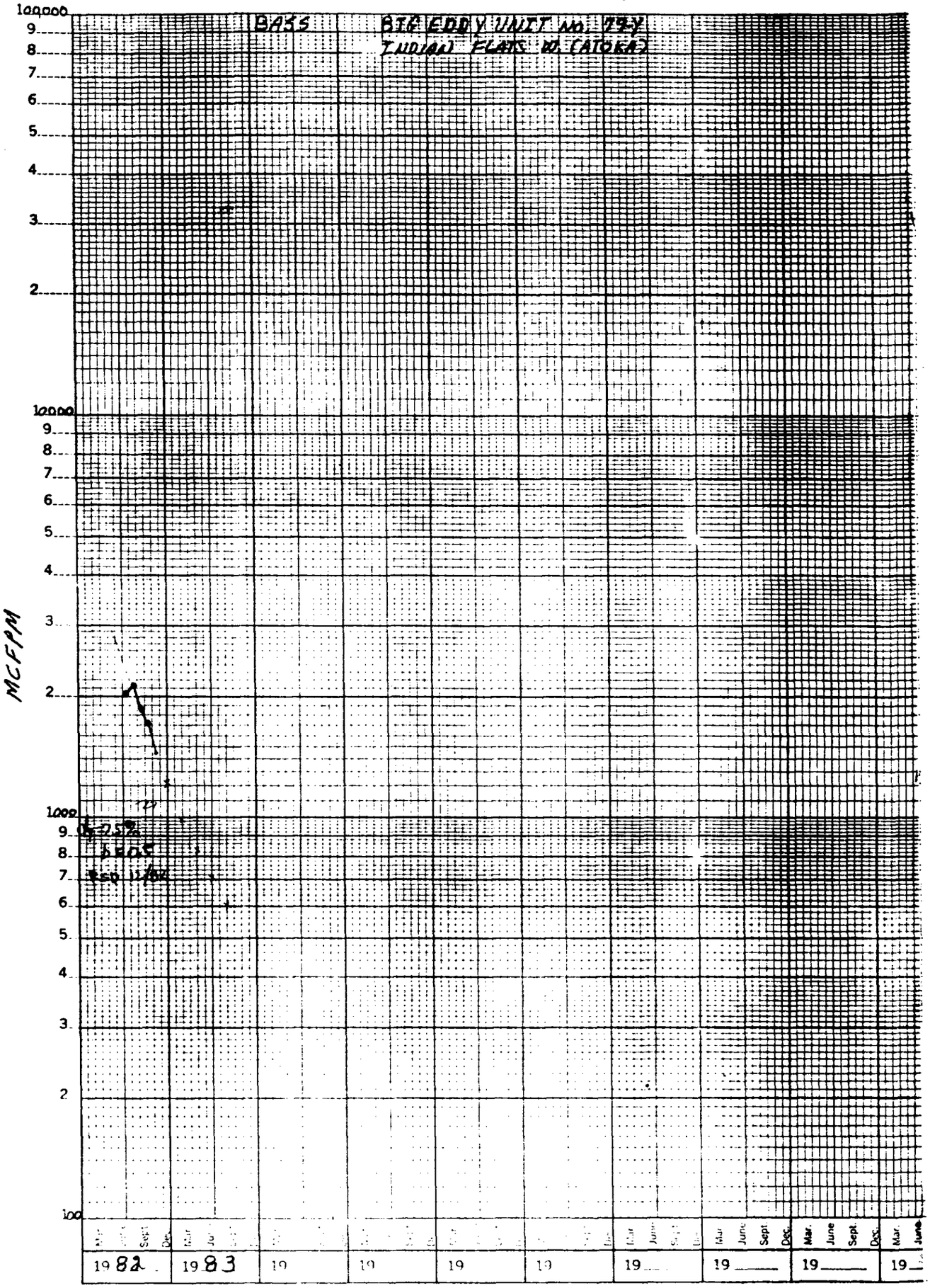
Date: 3-25-82

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: JUNE 24TH, 1980

Registered Professional Engineer and/or Land Surveyor: Ronald J. Eidson

Certificate No. John W. West 676



47 6840

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

ASS ENTERPRISES PRODUCTION COMPANY

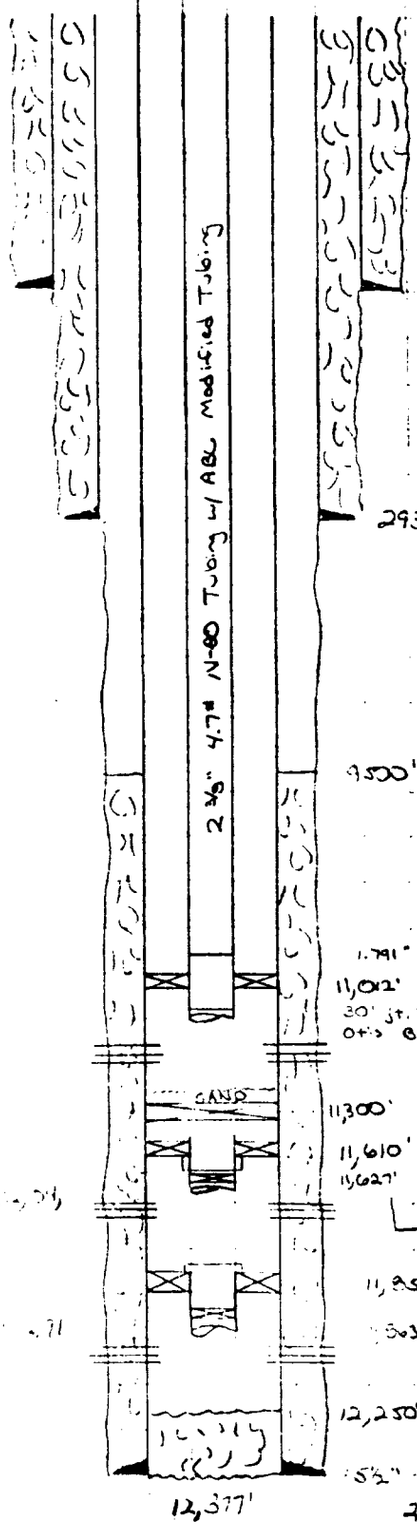
PAGE NO. _____

SUBJECT	DATE	DEPARTMENT	PREPARED BY
BEU # 79-Y (After Atoka Compl)	12/28/92	Prod	HHM

1980' FSL & 1930' FEL Sec 21, T 21S, R 28E

GL 3220.6

KB 3238.6



1000' 13 3/8" 48# H-40 ST&C

630 sx "C" + 3% gel + ¼#/sk cello-flakes + 8% NaCl/sk = 200 sx "C" + 2% CaCl (Circ 220 sx)

2930' 8 5/8" 28# S-80 ST&C

937 sx "Lite" + 150 sx "C" (Circ 50 sx)

9500' TOC

1.791" "XN" Nipple

11,042' OTIS MH-2 5½" 17# Retr. Pkr.

30' jt. Tbg.

Otis BP Running Tool

Atoka Perfs: 11,182-86, 11,233-34

SAND

11,300' OTIS "BVN" Retrievable Bridge Plug

11,610' BOT 5½ 17# SPT pkr with 10' 11,627' PBR, flow phasers, 8' pup, 1.875" Baker "F" Nipple

Baker "FWP" blanking plug w/ 10# mercury on top.

11,856' Otis 5½" 17# WB perm. pkr. w/ 5 latch seal assembly.

1.503 Otis XN plug w/ 10# mercury on top.

12,250' PBTD

5½" 17# N-80 LT&C

700 sx "Lite" + 600 sx "H"

12,377'

7/6/91 Upper Morrow Perfs: 11,960, 61, 11,993, 11,998, 12,000, 03, 15, 17.

2000 gals 7½% MCA

7/6/91 Middle Morrow Perfs: 11,973, 75, 12,011, 71

500 gals 7½% MCA

ILLEGIBLE

BIG EDDY UNIT NO. 83

Big Eddy Unit No. 83 was initially completed in the Middle Morrow in December, 1981. After the Middle Morrow was acidized with 2000 gallons 7 1/2% MS acid, it did not produce commercial quantities of gas. The well was then plugged back to the Upper Morrow where it potentialed for 4201 MCFGPD after a 3000 gallon acid job. The Upper Morrow produced 82,814 MCFG before being plugged back to the Atoka. The Atoka potentialed for 560 MCFGPD after a 2000 gallon acid job. The well is currently making 77 MCFGPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND [illegible] AREA IN FEDERAL UNITS

WELL DATA

WELL Big Eddy Unit #83 FORMATION Atoka

LOCATION C UNIT, 1980 FEET FROM W [illegible] 990 FEET FROM N LINE,

SECTION 10, RANGE 28E, TOWNSHIP 21S, [illegible] Eddy NEW MEXICO.

SPUD DATE 2-13-81 COMPLETION DATE 7-31-82 [illegible] PROD. DATE 9-17-82

PERFORATIONS 11,309', 11,311', 11,313', 11,319', 11,321', 11,335', 11,336', 11,340', 11,341'

STIMULATION:

ACID 2 Acid jobs. Each consisted of 2000 gals 15% HCl

FRACTURE

POTENTIAL CAOF 560 MCFGPD

(ATTACH COPY OF C-122. ATTACH COPY OF [illegible] OF COMPLETED WELL.)

VOLUMETRIC CALCULATIONS

	[illegible] PARAMETER	FORMATION [illegible] PENETRATED WELL [illegible] PRODUCTIVE
Area (A) [illegible] unit size, acres	320	
Porosity (Ø),	10.1	
Water saturation (Sw),	30	
Net thickness (h) [illegible]	13	
Temperature [illegible], °F	187	

ILLEGIBLE

Bottomhole pressure (P[illegible] 6176

Recovery factor (RF), [illegible] .8

Recoverable gas, MCF [illegible] 3,156,758

Recoverable gas, MCF [illegible]

$B_{gi} = 0.0352$ [illegible] $\frac{6176}{1.095\ 647} = .308$

If sufficient history [illegible], attach production rate plot.

(Cumulative production 10 / 31 /82: 7,343 MCF.

Initial rate (qi), 4500 MCF/D

Economic limit (ql), ~~AW=~~1500 MCF/D

Decline rate, dy 40

Remaining gas (Q) = 70,474 MCF

Ultimate recoverable gas 78,317 MCF

$$Q = \frac{(qi - ql)}{-\ln(\quad)}$$

Attach plat showing [illegible] unit and [illegible]

RECOVERABLE GAS			
Gas sand [illegible]	-		-
Sand perforated	78,317	(1)	0
Sand not perforated, but potentially productive	-		-
Total recoverable gas	78,317		0

(1) performance recovery per gas if available

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

Participating area size based on ratio of [illegible] and volumetrics

320 acres---minimum area is proration unit.

ILLEGIBLE

ECONOMICS

Well Cost $1,008,560

Recompletion Cost $51,000

TOTAL COST $1,059,560

(Gas Price) Net Revenue [illegible] Production Tax + [(Oil Price)(Net Revenue Interest [illegible] Production Cost ad Valorem Taxes)] - [illegible]

Net Gas [illegible] Gas Price [illegible] (.807) - [illegible]
(.845)([illegible] field, [illegible]

Operating Cost $150 [illegible]

82 2.68
83 82x1.05=2.81
84 83x1.05=2.95

BEPCO Net Income = (Gross [illegible] Net Gas Price)

YEAR	Gross GAS	Net [illegible]	OPERATING COST	[illegible] FACTOR	DISCOUNTED CASH FLOW
Zero	---	---	---	[illegible]	-1,008,560
1982	15,500	41,540	6,000 51,000 recomp	[illegible]	- 14,416
1983	28,000	78,680	18,000	[illegible]	49,204
1984	16,800	49,560	18,000	[illegible]	22,253
1985	10,100	31,310	18,000	[illegible]	8,161
1986	6,060	19,756	18,000	[illegible]	936
					- 942,422
Remainder				[illegible]	

If payout [illegible]

(BEPCO Net Income - [illegible]

discounted cash flow. Uneconomical

ILLEGIBLE

Form 9-330
(Rev. 5-63)

OPERATOR'S COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

RECEIVED
AUG 13 1982
OIL & GAS
MINERALS MGMT. SERVICE
ROSWELL, NEW MEXICO

5. LEASE DESIGNATION AND SERIAL NO.: LC-063543

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —

7. UNIT AGREEMENT NAME: BIG EDDY UNIT

8. FARM OR LEASE NAME: —

9. WELL NO.: 83

10. FIELD AND POOL, OR WILDCAT: SAND POINT - ATOKA

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: SEC. 10, T21S, R28E

12. COUNTY OR PARISH: EDDY

13. STATE: N. MEX.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☒ DIFF. RESVR. ☒ Other

2. NAME OF OPERATOR: PERRY R. BASS

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 1980' FWL & 990' FNL - UNIT LETTER C.
At top prod. interval reported below
At total depth

FEB 14 1983
OIL CONSERVATION DIV.

14. PERMIT NO. — DATE ISSUED —

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
2-13-81	3-29-81	8-2-82	3319' GL 3337' KB	—

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12,417'	11,790'	SINGLE	→	0 - 12,417'	—

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
11,309' - 11,341' ATOKA

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN
CN-FD, DLL-MSFL

27. WAS WELL CORED: NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11 3/4"	47	1071'	15"	600 'LITE' - 200 "C"	NONE
8 5/8"	28	3107'	10 5/8"	875 'LITE' - 300 "C"	NONE
5 1/2"	17	12417'	7 7/8"	200 'LITE' - 775 "H"	NONE

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
	NONE			

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	11,270'	11,236'

31. PERFORATION RECORD (Interval, size and number)
11,309' - 11,341'
JRC CHARGES (1 9/16") HOLES
NINE (9) HOLES

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11,309' - 11,341'	2000 GALS 15% HCl + 18 BALL SEALERS.

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping— size and type of pump)	WELL STATUS (Producing or shut-in)
8-7-82	FLOWING	SHUT IN

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
8-3-82	8	VAR.		0	140	0	—

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
2720#	PACKER		0	CAOF 560	0	—

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
SOLD

TEST WITNESSED BY: B.R.H. DAVIS SERVICES, INC.

35. LIST OF ATTACHMENTS
NONE - LOGS PREVIOUSLY SUBMITTED.

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

SIGNED W. R. Hurtt, Jr. TITLE Sr. Prod. Clerk DATE Aug. 11, 1982

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

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Type Test: [X] Initial [ ] Annual [ ] Special — Date of Test: 8/3/82

Company: ~~BASS ENTERPRISES~~ Henry L. Bass

Connection: NATURAL GAS PIPELINE

Pool: ATOKA

Completion Date: -	Total Depth: 12417	Plug Back TD: 11775	Unit:	Farm or Lease Name: BIG EDDY UNIT	
Csg. Size: 5 1/2	Wt.:	d:	Set At: 12417	Perforations: From 11309 To 11341	Well No.: 83
Tbg. Size: 2 3/8	Wt.:	d:	Set At: 11230	Perforations: From To	Unit: C Sec.: 10 Twp.: 21s Rge.: 28e
Type Well - Single - Bradenhead - G.G. or G.O. Multiple: SINGLE			Packer Set At: 11230		County: EDDY
Producing Thru: Tbg.	Reservoir Temp. °F: 187° 11300	Mean Annual Temp. °F: 60°	Baro. Press. - P_a: 13.2		State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11300	11300	.5916	.411	1.607			3"	Flg.

NO.	FLOW DATA: Prover Line Size	x	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							4920				24 HRS.
1.	3	x	1.000	562	1.4	72	4370				1 HR.
2.	3	x	1.000	564	2.9	82	3850				1 HR.
3.	3	x	1.000	565	5.2	89	3320				1 HR.
4.	3	x	1.000	570	9.2	89	2720				1 HR.
5.	3	x	1.000	565	12.2	91	1180				4 HRS.

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.789	28.38	575.2	.9887	1.300	1.045	183
2	4.789	40.91	577.2	.9795	1.300	1.042	260
3	4.789	54.83	578.2	.9732	1.300	1.040	346
4	4.789	73.25	583.2	.9732	1.300	1.040	462
5	4.789	83.99	578.2	.9715	1.300	1.039	528

NO.	P_t	T °R	γ_g	Z
1	.86	532	1.50	.915
2	.86	542	1.53	.921
3	.86	549	1.55	.925
4	.87	549	1.55	.924
5	.86	551	1.56	.926

Gas Liquid Hydrocarbon Ratio: DRY Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons: Deg.

Specific Gravity Separator Gas: .5916 XXXXXXXXX

Specific Gravity Flowing Fluid: XXXXX XXXXXXXXX

Critical Pressure: 672 P.S.I.A. P.S.I.A.

Critical Temperature: 354 °R °R

P_c 4933.2 P_c^2 24336.5

NO	BHP	P_t^2	$P_c^2 - P_t^2$	$\frac{P_c^2}{P_c^2 - P_w^2}$
1	5828.2	4724.4	22320.2	2016.3
2	5073.2	4063.1	16508.4	7828.1
3	4535.2	3601.7	12971.9	11364.6
4	3829.2	3010.1	9060.8	15275.7
5	1869.2	1467.4	2153.2	22183.3

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.097 $= \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.060

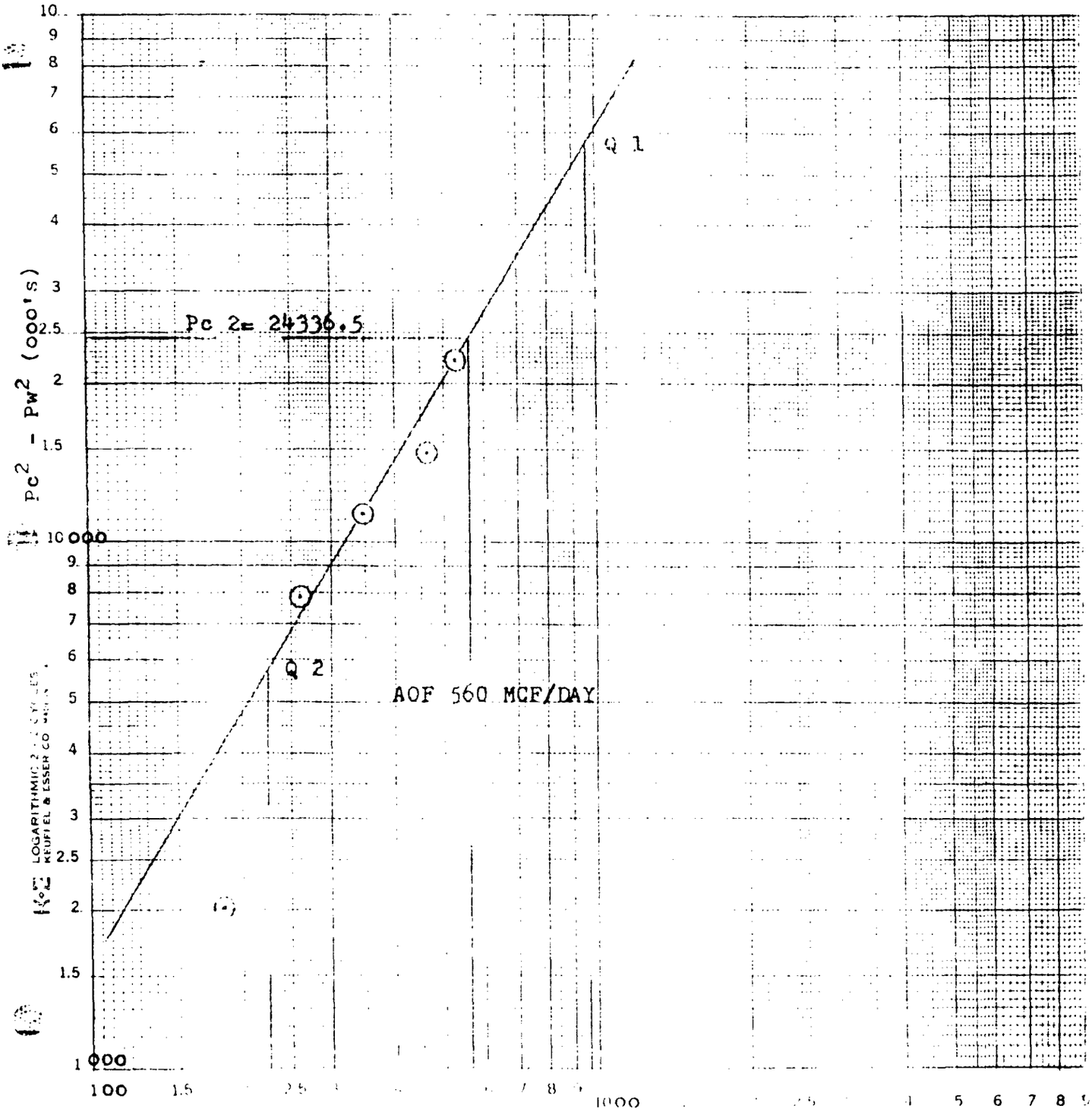
$= \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = .560

Absolute Open Flow: 6254.2 Mcfd @ 15.025 psia S.I.P. 560 Angle of Slope: 57.75° Slope, n: .630

Remarks:

Approved By Commission: Conducted By: DAVIS SERVICES INC Calculated By: RICK RAGAN Checked By:

COMPANY : BASS ENTERPRISES
LEASE : BIG EDDY UNIT
WELL NO. : #83
UNIT : C/SEC. 10/TWP.21S/RGE.28E
COUNTY : EDDY
STATE : NEW MEXICO
DATE : AUGUST 3, 1982



Q = MCF /DAY
Q 1 LOG 960= 2.982271
Q 2 LOG 225= 2.352183
N= .630

Form C-102
Supersedes C-128
Effective 10-1-78

WELL LOCATION AND ACREAGE DEDICATION PLAT

Perry R. Bass			83
C	10	21 South	Eddy
660 feet from the North		1980 feet from the West	
Ground Level Elev. 3319	Producing Formation Morrow	Pool Sand Point Morrow	Dedicated Acreage 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

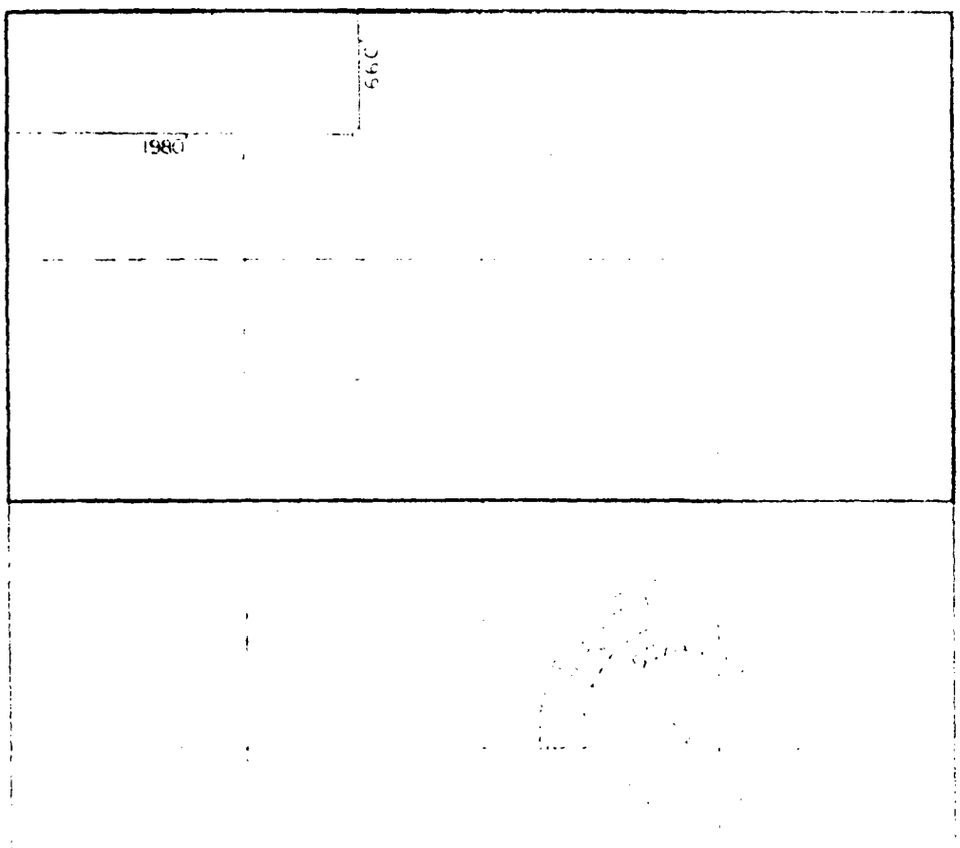
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] 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.



Mike Waygood

Mike Waygood

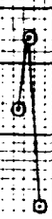
Engineering Assistant

Perry R. Bass

11-20-80

ILLEGIBLE

BASS BLUEBODY UNIT NO. 63
SAND POINT ATOKA



MCFPM

1 9 8 7 6 5 4 3 2 1000 9 8 7 6 5 4 3 2 100 9 8 7 6 5 4 3 2 10

Mar. June Sept. | Mar. June Sept. | Mar. June Sept. | Mar. June Sept. | Mar. June Sept. | Mar. June Sept. | Mar. June Sept. | Mar. June Sept. Dec. | Mar. June Sept. Dec. | Mar. June Sept.

19 82 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19

47 6840

K+E 10 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO MADE IN U.S.A.

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Operator: Perry R. Bass			Lease: Big [illegible]	
Well No.: C	Sec.: 10	Twp.: 21 South	Rge.: 25 [illegible]	County: Eddy
Unit Letter:	Feet From The: 660 North		Feet From The: 1980 West	
Ground Level Elev.: 3319	Producing Formation: Morrow		Pool: Sand Point Morrow	Dedicated Acreage: 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

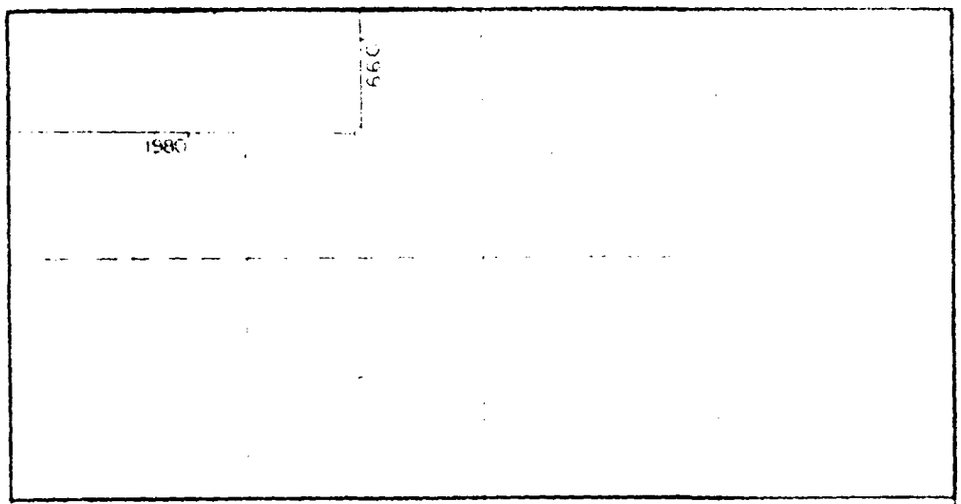
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] 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.



Mike Waygood

Mike Waygood

Engineering Assistant

Perry R. Bass

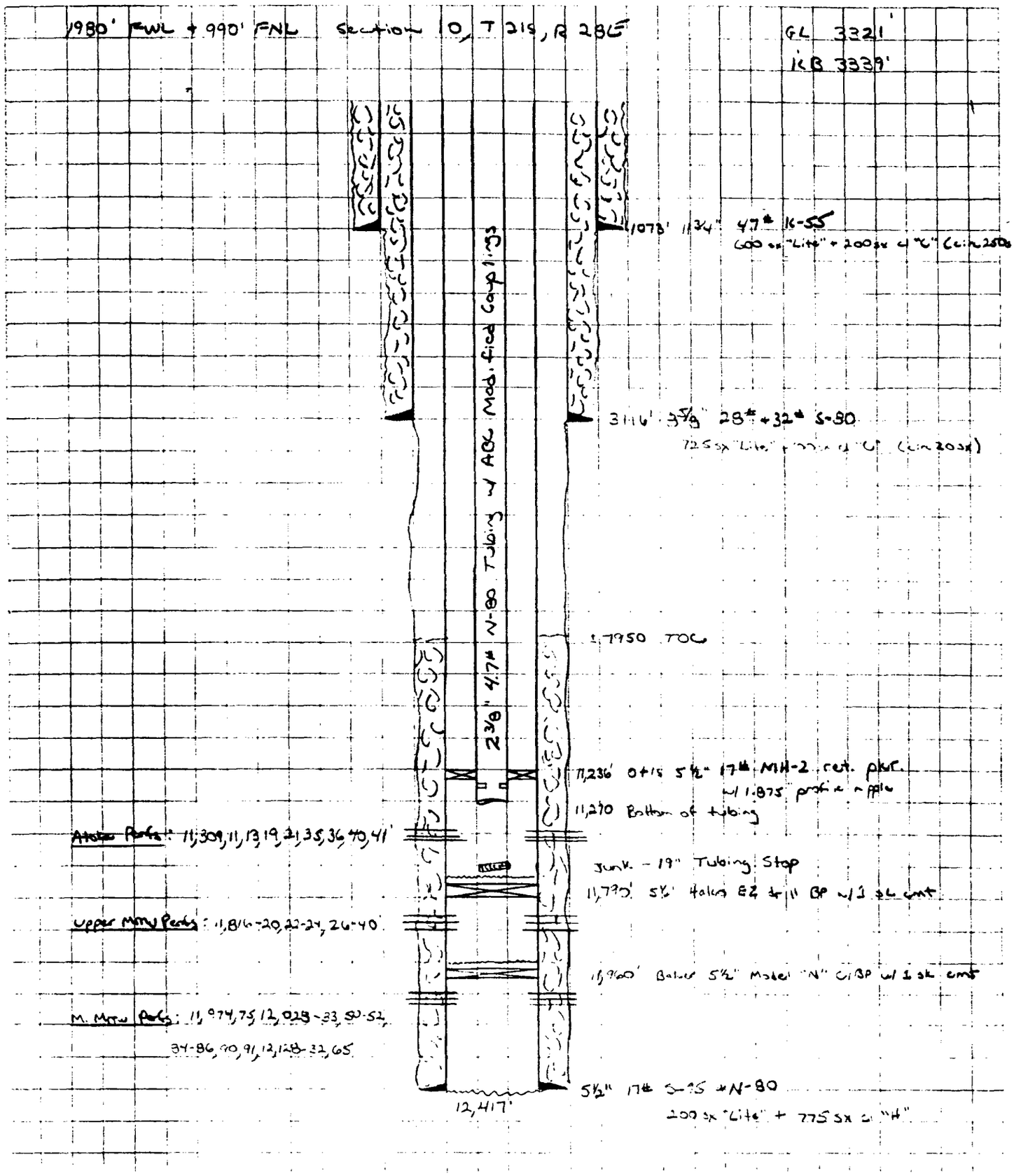
11-20-80

ILLEGIBLE

BASS ENTERPRISES PRODUCTION COMPANY

PAGE NO. _____

SUBJECT	DATE	DEPARTMENT	PREPARED BY
BEU #83	12/29/82	Prod	HHM



BIG EDDY UNIT NO. 83

Big Eddy Unit No. 83 was initially completed in the Middle Morrow in December, 1981. After the Middle Morrow was acidized with 2000 gallons 7 1/2% MS acid, it did not produce commercial quantities of gas. The well was then plugged back to the Upper Morrow where it potentialed for 4201 MCFGPD after a 3000 gallon acid job. The Upper Morrow produced 82,814 MCFG before being plugged back to the Atoka. The Atoka potentialed for 560 MCFGPD after a 2000 gallon acid job. The well is currently making 77 MCFGPD.

ILLEGIBLE

WORKSHEET FOR COMMERCIAL DETERMINATION AND [illegible] AREA IN FEDERAL UNITS

WELL [illegible]

WELL Big Eddy Unit #83 [illegible] Morrow

LOCATION C UNIT, 1980 FEET FROM W [illegible] 990 FEET FROM N [illegible],

SECTION 10, RANGE 28E, TOWNSHIP 21S, [illegible] Eddy [illegible].

SPUD DATE 2-13-81 [illegible] DATE 5-19-81 [illegible] DATE 9-3-81

PERFORATIONS 11,974', 11,975', 12,028'-12,033', 12,050'-12,052', 12,084'-12,086', 12,090', 12,091', 12,128'-12,132', 12,165' (1st Comp) 11,816'-11,820', 11822'-11,824', 11,826'-11,840' (2nd Comp)

STIMULATION:

ACID 2000 gals 7 1/2% MS acid (1st Comp)

3000 gals 7 1/2% MS acid (2nd Comp)

FRACTURE

POTENTIAL CAOF 4201 MCFGPD (2nd Comp)

(ATTACH COPY OF C-122. ATTACH COPY OF WELLBORE [illegible] OF COMPLETED WELL.)

VOLUMETRIC CALCULATIONS

	[illegible]	[illegible]
Area (A) [illegible] unit size, acres	320	
Porosity (φ), %	6.4	
Water saturation (Sw), %	28	
Net thickness (h) [illegible], ft	16	
Temperature (T), °F	191	

ILLEGIBLE

Bottomhole pressure 5087

Recovery 8

Recovery 2,236,296

Recovery . . . . . .

$$Z = 0.035.0 \left(\frac{\quad}{\quad}\right) \frac{5087}{1.017\ 651} = .272$$

If suff . . . . . .

(Cumulat . . . . . 8 31 2 82,814 . . .

Initia . . . P & A .

Econom . . . .
Decline . . . -
Remainin . . . -
Ultimate . . . 82,814 . . .

Attach plat showing . . . and . . .

RECOVERABLE GAS		PRO (PRO.)
Gas sand . . . ously . . .	-	-
Sand per . . . :	82,814	63
Sand not . . . , . . . by producer	-	-
Total . . . recoverable	82,814	63

(1) perfo . . . . . .

(2) perfo . . . sand . . . volum . . . .

Particip . . . .

320 . . . .

ILLEGIBLE

Well Co[illegible] 1,123,203 [illegible]

Recomplet[illegible] $ 0

TOTAL CO[illegible] $ 1,123,203

(Gas Pr[illegible] Revenue [illegible] (Oil Price) [illegible] Valorem Taxes) [illegible]

Net Gas [illegible]
(.845) [illegible]

81 3.22(.83) -.126 +34(.83-.3x.965)(.0015)= 2.57

Operati[illegible] $150 [illegible] 82 3.38(.83) -.126 +0 = 2.68

BEPCO Net [illegible] = (Gross [illegible]

YEAR	[illegible] GAS	Net [illegible]	OPERATING COST	[illegible] FACTOR	DISCOUNTED CASH FLOW
Zero				[illegible]	-1,123,203
1981	40,177	103,255	6,000	[illegible]	90,690
1982	42,637	114,267	12,000	[illegible]	82,925
					- 949,588
				[illegible]	
				[illegible]	
				[illegible]	
Remainder				[illegible]	

If pa[illegible]

(BEPCO [illegible]

[illegible] Flow. Uneconomical

ILLEGIBLE

Form 9-330
(Rev. 5-63)

OPERATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR
PERRY R. BASS

3. ADDRESS OF OPERATOR
Box 2760, MIDLAND, TX

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface 1980' FWL & 990' FNL - UNIT LETTER C.
At top prod. interval reported below
At total depth

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

5. LEASE DESIGNATION AND SERIAL NO.
LC. 063543

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.
83

10. FIELD AND POOL, OR WILDCAT
SAND POINT MORROW

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
SEC. 10, T21S, R28E

12. COUNTY OR PARISH
EDDY

13. STATE
N. MEX.

14. PERMIT NO.

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
FEB. 3, 1981	MAR. 29, 1981	MAY 19, 1981	3314' GL 3337' KB	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12,417'	11,960'	SINGLE Comp.	→	0-12,417'	—

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
11,816' – 11,840' MORROW

25. WAS DIRECTIONAL SURVEY MADE
NO

26. TYPE ELECTRIC AND OTHER LOGS RUN
CN-FD, DLL-MSFL

27. WAS WELL CORED
NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11 3/4"	47	1071'	15"	600 'LITE' & 200 "C"	NONE
8 5/8"	28	3107'	10 5/8"	875 'LITE' & 300 "C"	NONE
5 1/2"	17	12417'	7 7/8"	200 'LITE' & 775 "H"	NONE

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
NONE				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8	PACKER @	11,752'

31. PERFORATION RECORD (Interval, size and number)
ONE(1) JET SHOT @ EACH DEPTH: 11,816, 17', 18, 19', 20', 22', 23', 24', 26', 27', 28', 29', 30', 31' 32', 33', 34', 35', 36' 37', 38', 39' & 40'. TWENTY THREE (23) HOLES.

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11,816'-11,840'	3000 GALS 7½% MS

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
	FLOWING	SI - WOPL

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
MAY 11, 1981	4	VAR.		—	545	8	—

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
2875	PACKER		—	3268	48	—

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
SOLD

TEST WITNESSED BY
DAVIS SERVICES INC.

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

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

SIGNED _____ TITLE _____ ILLEGIBLE

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

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Type test: [X] Initial [ ] Annual [ ] Special — Test Date: 5-11-81

Company: Perry R. Bass	Connection: Air		
Pool: Undesignated	Formation: Morrow		Unit: C
Completion Date: 5-11-81	Total Depth: ~~12800~~ 12,417'	Plug Back TD: 11960	Elevation:	Farm or Lease Name: Big Eddy Unit
Csg. Size: 5 ½ / Wt.: 17 / d: / Set At: ~~12800~~ 12417'	Perforations: From 11816 To 11840	Well No.: # 83
Tbg. Size: 2 3/8 / Wt.: / d: / Set At: 11752	Perforations: From To	Unit: C / Sec.: 10 / Twp.: 21s / Rge.: 28e
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single Gas Well	Packer Set At: 11752	County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 191° 11722	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	$\%CO_2$	$\%N_2$	$\%H_2S$	Prover	Meter Run	Taps
11722	11722	.6022	.704	1.780			4"	Flg.

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					3800				72 Hrs.
1.	4 X 1.500	520	6.0	85	3575				1 Hr.
2.	4 X 1.500	535	13.5	88	3375				1 Hr.
3.	4 X 1.500	540	21.0	80	3280				1 Hr.
4.	4 X 1.500	560	44.0	65	2875				1 Hr.
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	10.84	56.56	533.2	.9768	1.289	1.040	803
2	10.84	86.03	548.2	.9741	1.289	1.040	1218
3	10.84	107.78	553.2	.9813	1.289	1.043	1541
4	10.84	158.81	573.2	.9952	1.289	1.050	2319
5							

NO.	P_t	Temp. °R	T_r	Z
1	.79	545	1.52	.925
2	.82	548	1.53	.924
3	.82	540	1.51	.920
4	.85	525	1.47	.907
5				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .6022
Specific Gravity Flowing Fluid:
Critical Pressure: 671 P.S.I.A. P.S.I.A.
Critical Temperature: 356 R R

NO	BHP	P_t^2	P_c^2	$P_c^2 - P_w^2$
1	4971.2	3927.6	15426.1	811.2
2	4712.2	3707.0	13741.5	2495.8
3	4463.2	3513.9	12347.8	3889.5
4	3960.2	3078.5	9477.2	6760.1
5				

*4029.6 16237.3

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 2.402 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.811

$\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 4.201

Absolute Open Flow: 4,201 Mcfd @ Angle of Slope: Slope (n): .678

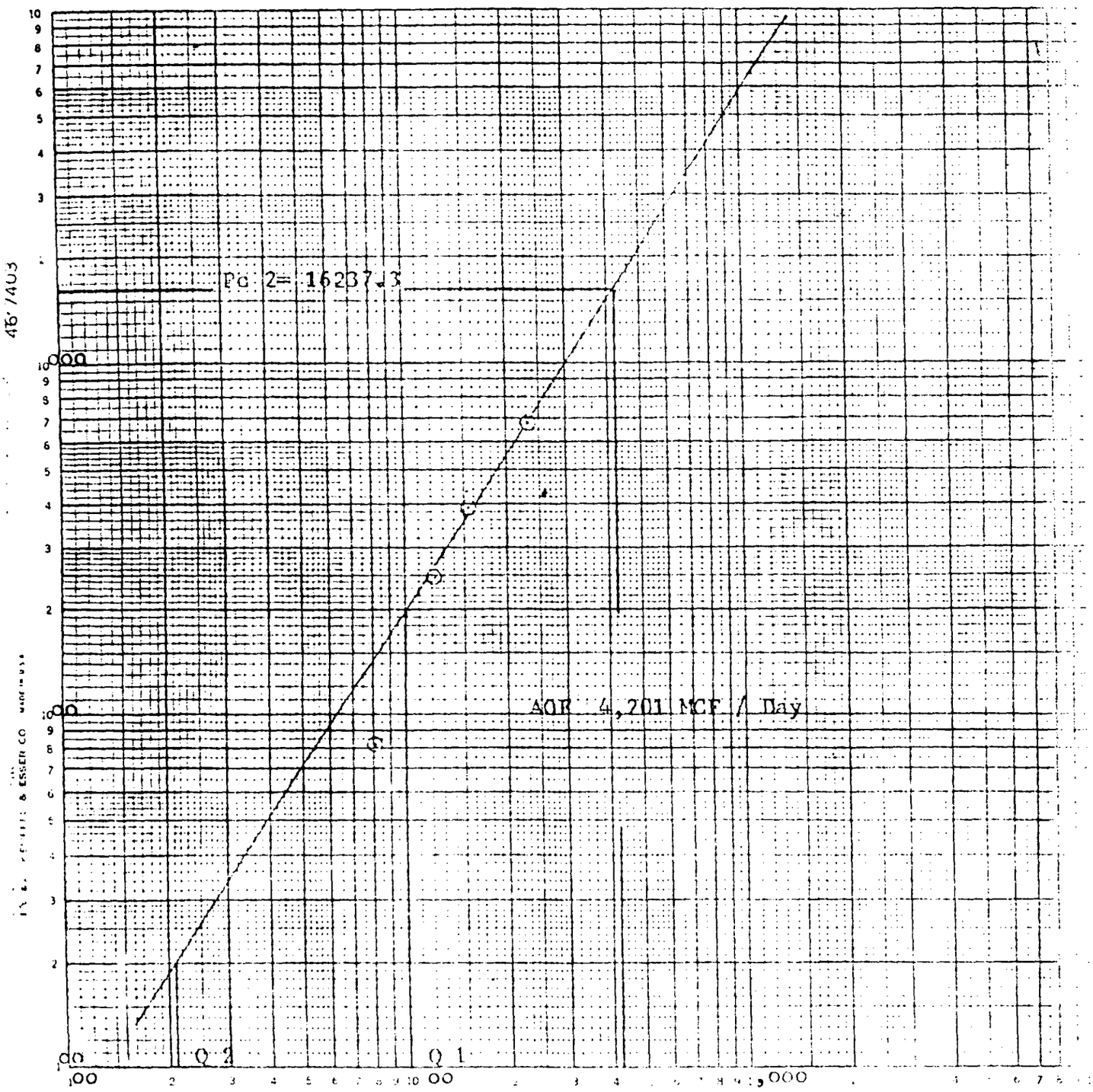
Remarks: The well produced 8 bbls. of H 2 0 during the test.

* Calculated from Bottom Hole Pressures.

Approved By Commission: Conducted By: Calculated By:

ILLEGIBLE

Company : ~~Bass Enterprises~~ Perry R. Bass
Lease : Big Eddy UNIT
Well No. : # 83
Unit : C /sec.10/twp.21s/rge.28e
County : Eddy
State : New Mexico
Date : May 11,1981



Q= MCF /DAY

Q 1= 1000;Log of Q 1= 3.000000
Q 2= 210;Log of Q 2= 2.322219

N = .678
θ = 56°

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-12
Effective 1-1-65

All distances must be from the outer boundaries of the section

Operator: Perry R. Bass		Lease: Big Eddy Unit		Well No.: 83
Unit Letter: C	Section: 10	Township: 21 South	Range: [illegible]	County: Eddy
Actual Footage Location: 660 feet from the North line and 1980 feet from the West line				
Ground Level Elev.: 3319	Producing Formation: Morrow	Pool: Sand Point Morrow		Dedicated Acreage: 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

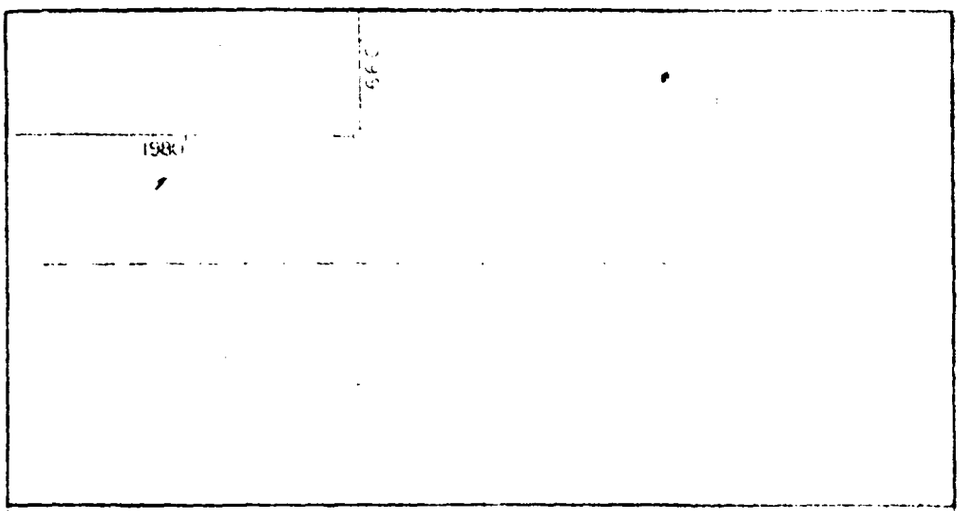
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] 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.



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

Mike Waygood

Name: Mike Waygood

Position: Engineering Assistant

Company: Perry R. Bass

Date: 11-20-80

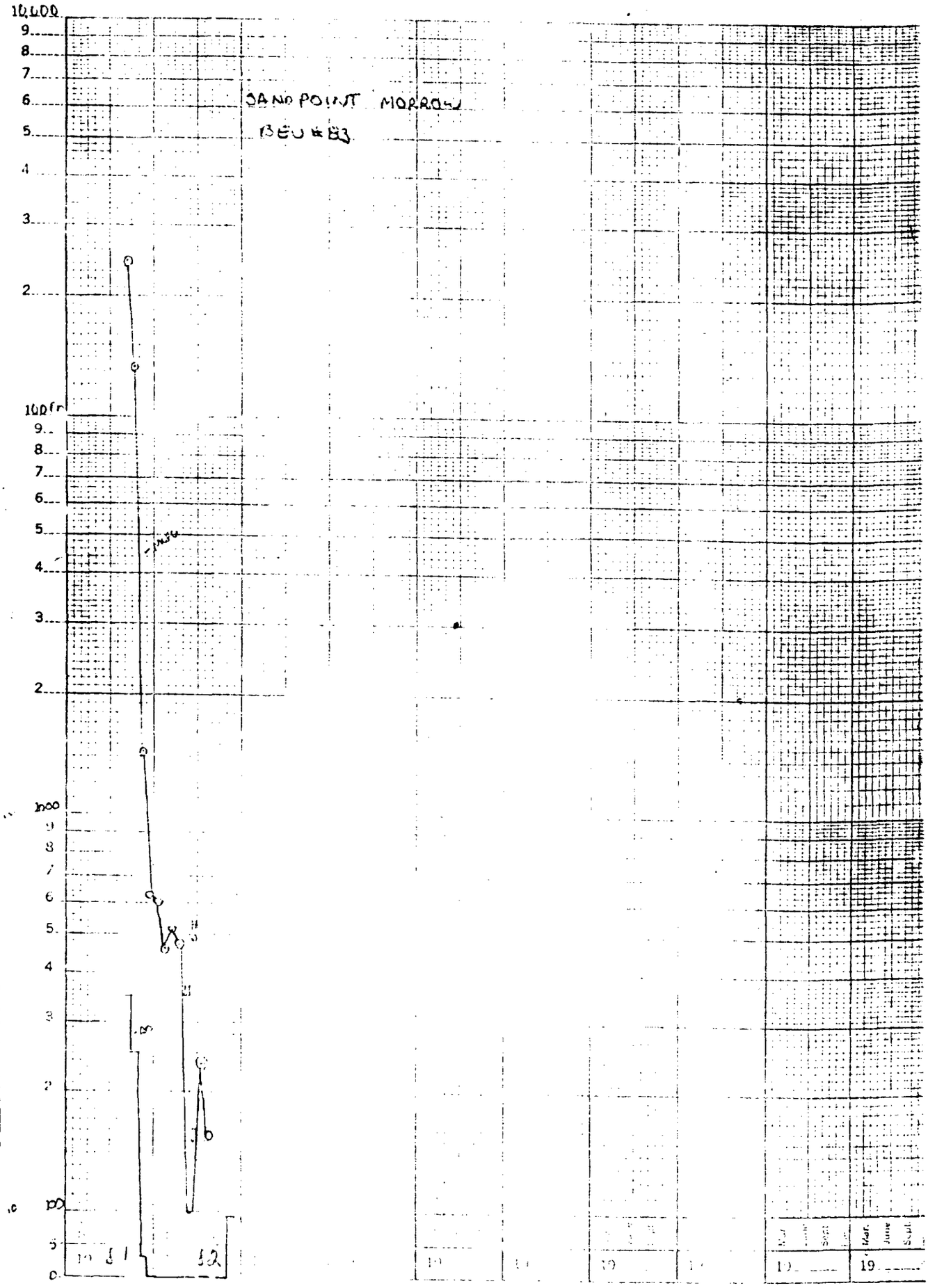
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

ILLEGIBLE



ILLEGIBLE

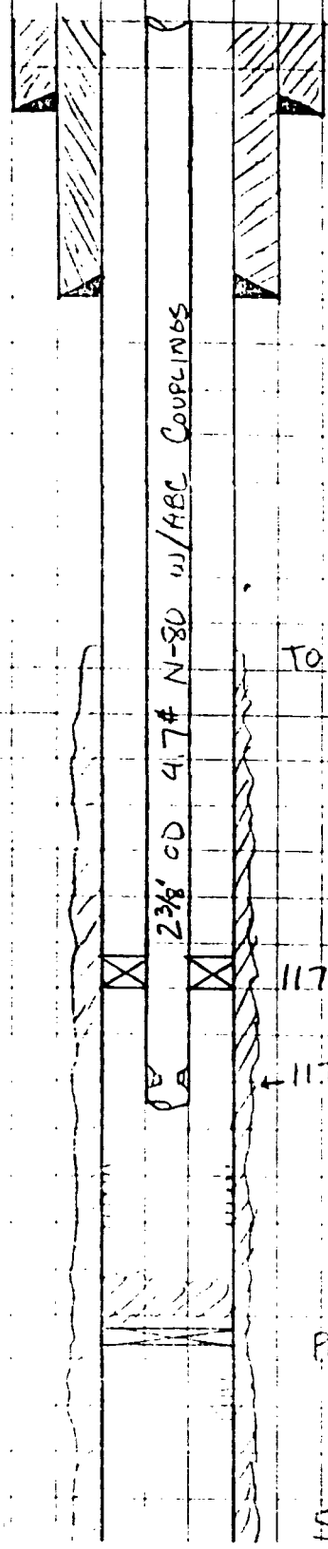
SS ENTERPRISES PRODUCTION COMPANY

PAGE NO. _____

SUBJECT	DATE	DEPARTMENT	PREPARED BY
WELLBORE SKETCH *	10/28/81	PRODUCTION	LJT

ELEVATION: K.B. 3339'
G.L. 3321'

BIG EDDY UNIT No. 83
SAND POINT MORROW



1073' 11 3/4" 47# K-55 ST+C

3116' 8 5/8" 28# + 32# S-80 + K55 ST+C cmtd w/ 725 SX HOWCO LITE + 200 SX CLASS C TAILED 100 SX

TOC AT ± 7950

11753' OTIS 5½" MH-2 13-17# PACKER

11791' OTIS X-TYPE PROFILE NIPPLE 1.875 ID

PBTD 11960'

5½" 17# S-95 + N-80 cmtd w/

* PRIOR TO ATOKA RECOMPLETION

PER MORROW PERFS
11816-840 1 SPF
11821, 25 DID NOT FIRE
(23 SHOTS)

MIDDLE MORROW PERFS
11974-12165 1 SPF
(22 SHOTS)

BIG EDDY UNIT NO. 85

Big Eddy Unit No. 85 was completed in the Morrow interval during July, 1981. After a 4700 gallon acid job the well potentialed for 1379 MCFGPD. The well was put on line in November, 1981, at a rate of 1100 MCFGPD. By May, 1982, the rate had declined to 155 MCFGPD and the well was fractured with 165,482 gallons gel and 257,000 # sand. The well is currently flowing 516 MCFGPD after cleaning up.

WORKSHEET FOR COMMERCIAL DETERMINATION AND [illegible] GAS IN FEDERAL UNITS

WELL DATA

WELL Big Eddy Unit #85 [illegible] Morrow

LOCATION N UNIT, 1980 FEET FROM W [illegible] 660 FEET FROM S LINE,

SECTION 8, RANGE 29E, TOWNSHIP 21S [illegible] Eddy NEW MEXICO.

SPUD DATE 5-28-81 COMPLETION DATE 7-13-81 [illegible] 11-2-81

PERFORATION: 12,365', 12,366', 12,417', 12,418', 12,421', 12,422', 12,447', 12,448', 12,456', 12,459', 12,463', 12,466', 12,515', 12,516'

STIMULATION:

ACID 4700 gals 7 1/2% MSR-100

FRACTURE 165,482 gals + 35,000 gals CO2 W/ 257,500 # sd.

POTENTIAL CAOF 1,379 MCFGPD

(ATTACH COPY OF C-122. ATTACH COPY OF SCHEMATIC OF COMPLETED WELL.)

[illegible] DIAGRAMMATIC SKETCH [illegible]

Area (Acres) proration unit [illegible]	320
Porosity (%)	7
Water saturation (Sw)	30
Net thickness (h)	30
Temperature (T), °F	199

ILLEGIBLE

Bottomhole pressure (Pi, psia) 5180

Recovery factor (RF), (assumed) .8

Recoverable gas, MCF (See eq. below) 4,442,367

Recoverable Gas, MCF = (43,560)(ϕ)(1-Sw)(Pi / Bgi), where

$$Bgi = 0.03535 \frac{P}{zT}\left(\frac{MSCF}{Cu\ Ft}\right) = \frac{(5180)}{1.026(659)} = .271$$

PERFORMANCE

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

(Cumulative production to 10 / 31 / 2) 163,302 MCF

Initial rate (qi), 15000 MCFD

Economic limit (ql), 1500 MCFD

Decline rate, dy 35

Remaining gas (Q) = 376,059 MCF

Ultimate Recoverable Gas 539,361 MCF

$$Q = \frac{(qi - ql)}{-\ln(1-d_y)}$$

Attach plat showing proration unit and ownership of leases.

RECOVERABLE GAS	MCF	OIL (BBLS)
Gas sand previously perforated	-	-
Sand perforated	539,361	122
Sand not perforated, but potentially productive	-	-
Total recoverable gas	539,361	122

(1) performance recoverable gas if available

(2) performance sand perforated / volumetric sand perforated × volumetric sand not perforated = performance sand not perforated

Participating area size based on ratio of performance to volumetric and volumetric

320 acres---minimum area is prorated unit.

ILLEGIBLE

ECONOMI[illegible]

Well Cost $ 1,206,818 [illegible]

Recompletion Cost $ 0

TOTAL COST $ 1,206,818

(Gas Pri[illegible] Net Reven[illegible] Price)[illegible] Taxes)[illegible] [illegible]

Net Gas [illegible] (.845)[illegible]

81 3.29(.845)(.974)-.126+33(.845-.3)(.94)(.0018)=2.61
Operati[illegible] 82 3.44(.845)(.974)-.129+33(.845-.275)(.94)(.0001)=2.70

BEPCO Net [illegible]

YEAR	GROSS GAS	NET [illegible]	OPERATING COST	[illegible] FACTOR	DISCOUNTED CASH FLOW
Zero	---	---	---	[illegible]	-1,206,818
1981	59,799	156,075	3000	[illegible]	142,743
1982	133,000	359,100	18,000 304,500 frac	[illegible]	29,678
1983	86,500	243,930	18,000	[illegible]	159,306
1984	56,200	165,790	18,000	[illegible]	90,616
1985	36,500	112,420	18,000	[illegible]	50,341
					-734,134
Remainder				[illegible]	

If payout [illegible]

(BEPCO Net [illegible]

[illegible] Uneconomical

ILLEGIBLE

OPERATOR'S COPY

7

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: NM-02946

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER

7. UNIT AGREEMENT NAME: Big Eddy Unit

8. FARM OR LEASE NAME: Big Eddy Unit

9. WELL NO.: 85

2. NAME OF OPERATOR: Perry R. Bass

3. ADDRESS OF OPERATOR: Box 2760, Midland, TX 79702

10. FIELD AND POOL, OR WILDCAT: Crow Flats Lane Morrow

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
At surface: 1980' FWL & 660' FSL - Unit Letter N.
At top prod. interval reported below
At total depth

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 8, T21S, R29E

14. PERMIT NO. — DATE ISSUED —

12. COUNTY OR PARISH: Eddy

13. STATE: N. Mex

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
5-28-81	7-13-81	8-14-81	3366' GL 3382' KB	—

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
12,800'	12,755'	—	→	0'-12,800'	—

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
12,365'-12,516' Middle Morrow

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN
CN-FD, DI-SFL & DL-MSFL

27. WAS WELL CORED: Yes

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11 3/4"	42#	755'	15"	475 SKS "LIGHT"	NONE
8 5/8"	32# & 28#	3300'	11"	1900 "LITE" & 250 "C"	NONE
5 1/2"	17#	12800'	7 7/8"	745 SKS CLASS "H"	NONE

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
	None			

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	12,286'	12,286'

31. PERFORATION RECORD (Interval, size and number)
12,365'-12,516': Four-Fan Holes, 4" Gun.

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
12,365'-12,516'	4,500 GALS 7½% MSR-100 + ADDITIVES AND 48 BALL SEALERS.

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
8-14-81	Flowing	SI - WOPL

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
8-18-81	3½	Various		0	88	—	—

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
2480	Packer		—	MCF 1,379	—	—

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

TEST WITNESSED BY: Wells Services, Inc.

35. LIST OF ATTACHMENTS
Two Each of Above Logs.

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

SIGNED W. F. Wuntz, Jr. TITLE Sr. Prod. Clerk DATE Dec. 2 1981

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

RECEIVED
FEB 15 1983
OIL CONSERVATION DIVISION
SANTA FE

ILLEGIBLE

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Type Test: [X] Initial [ ] Annual [ ] Special — Test Date: 8-18-81

Company: PERRY R. BASS	Connection: air	
Pool: GOLDEN LANE	Formation: Middle Morrow	
Completion Date: 8-14-81	Total Depth: 12800	Plug Back TD: 12750
Elevation: 3384 KB	Unit: Big Eddy Unit	
Csg. Size: 5 1/2 / Wt.: 17# / d: / Set At: 12800	Perforations: From 12465 To 12516	Well No.: 85
Tbg. Size: 2 3/8 / Wt.: 4.7# / d: / Set At: 12279	Perforations: From To	Unit: N / Sec.: 8 / Twp.: 21S / Rge.: 29E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 12279	County: Eddy
Producing Thru: Tbg.	Reservoir Temp. °F: 199° 12490	Mean Annual Temp. °F: 60°
Baro. Press. – Pa: 13.2	State: N.M.	
L: 12490 / H: 12490	Gg: .6155	% CO_2: 1.493
% N_2: 2.683	% H_2S:	Prover:
Meter Run: 4"	Taps: Flg.	

FLOW DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F
SI						
1.	4	X	1.000	475	2.5	100
2.	4	X	1.000	475	13.0	108
3.	4	X	1.000	480	27.0	104
4.	4	X	1.000	480	36.0	94
5.						

NO.	TUBING DATA Press. p.s.i.g.	TUBING DATA Temp. °F	CASING DATA Press. p.s.i.g.	CASING DATA Temp. °F	Duration of Flow
SI	3890				48 hrs.
1.	3450				30 min.
2.	3160				1 hr.
3.	2760				1 hr.
4.	2480				1 hr.
5.					

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.753	34.94	488.2	.9636	1.274	1.031	210
2	4.753	79.67	488.2	.9568	1.274	1.030	475
3	4.753	115.40	493.2	.9602	1.274	1.031	692
4	4.753	133.25	493.2	.9688	1.274	1.033	807
5							

NO.	P_t	Temp. °R	T_r	Z
1	.73	560	1.58	.940
2	.73	568	1.60	.943
3	.73	564	1.59	.941
4	.73	554	1.56	.937
5				

Gas Liquid Hydrocarbon Ratio: dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .6155 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX XXXXXXXXXX
Critical Pressure: 672 P.S.I.A. P.S.I.A.
Critical Temperature: 354 R R

P_c 3903.2 P_c^2 15235.0

NO.	*BHP	P_w	P_w^2	$P_c^2 - P_w^2$
1	4561.2	3506.5	12295.5	2939.5
2	4283.2	3276.5	10735.6	4499.4
3	3806.2	2891.3	8359.5	6875.5
4	3501.2	2649.5	7019.8	8215.2
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.854 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.708

(3) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.379

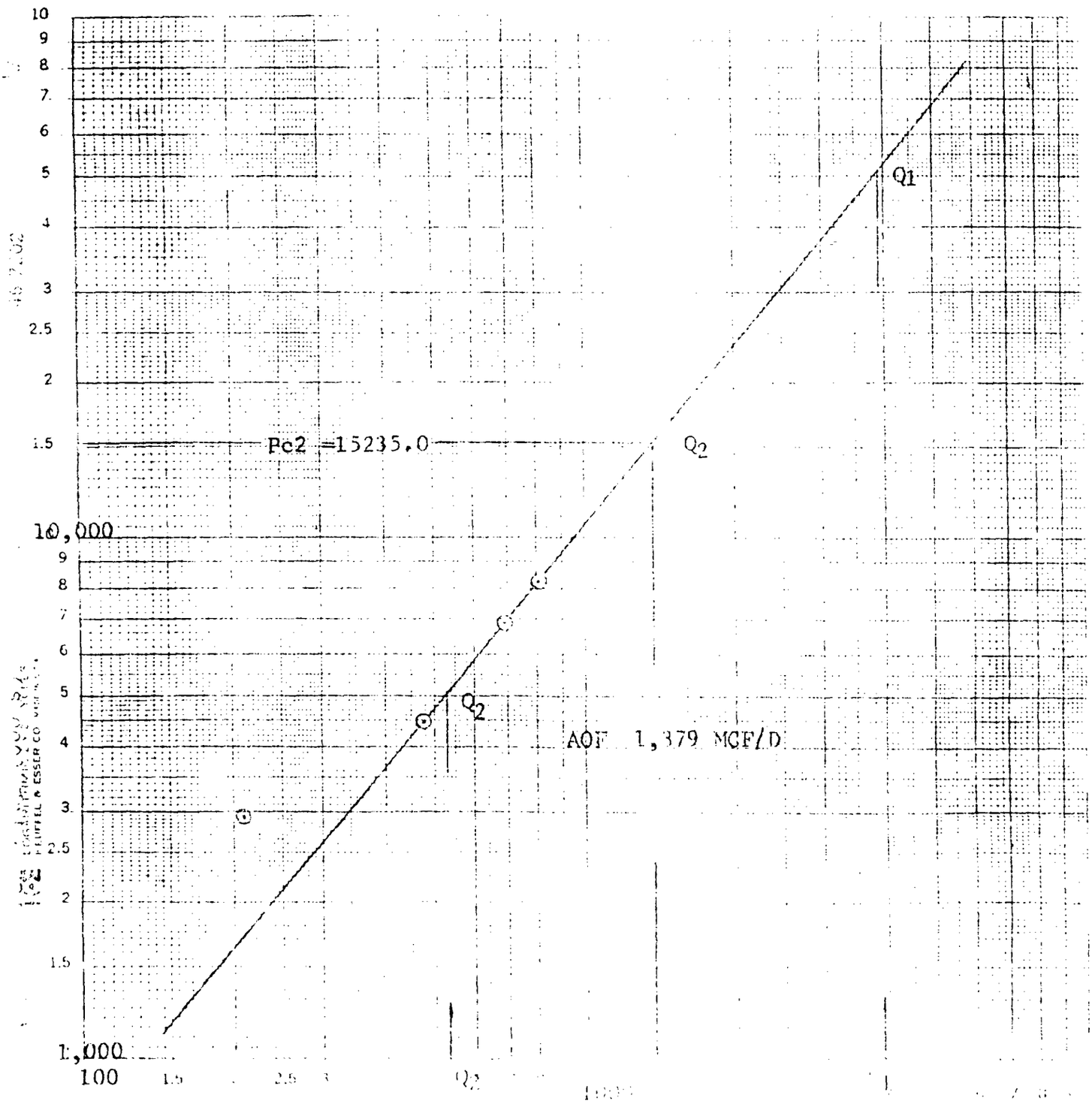
Absolute Open Flow: 1,379 Mcfd @ Pressure Base: 49° Specific Gravity: .867

Remarks: *Bottom-hole pressures taken at 12490 ft.

ILLEGIBLE

Calculated By: Davis Services, Inc. Checked By: Rick Pagan

Company : [illegible]
Lease : Big Eddy [illegible]
Well # : 35
Unit : Sec. 8/Twsp. 21 S/Rge. 29 E
County : Eddy
State : New Mexico
Date : August 15, 1981



ILLEGIBLE

Q [illegible]
Q1 = 5900 [illegible]
Q2 = 540 [illegible]
n = .807

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

RECEIVED
FEB 14 1983
OIL CONSERVATION DIVISION
SANTA FE

Operator	Lease	Well No.
PERRY R. BASS	BIG [illegible]	85

Unit Letter	Section	Township	Range
N	8	21 SOUTH	

Actual Footage Location of Well:
660 feet from the SOUTH line and 1, [illegible] feet from the [illegible] line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
3366.1	Morrow	Golden Lane Morrow	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

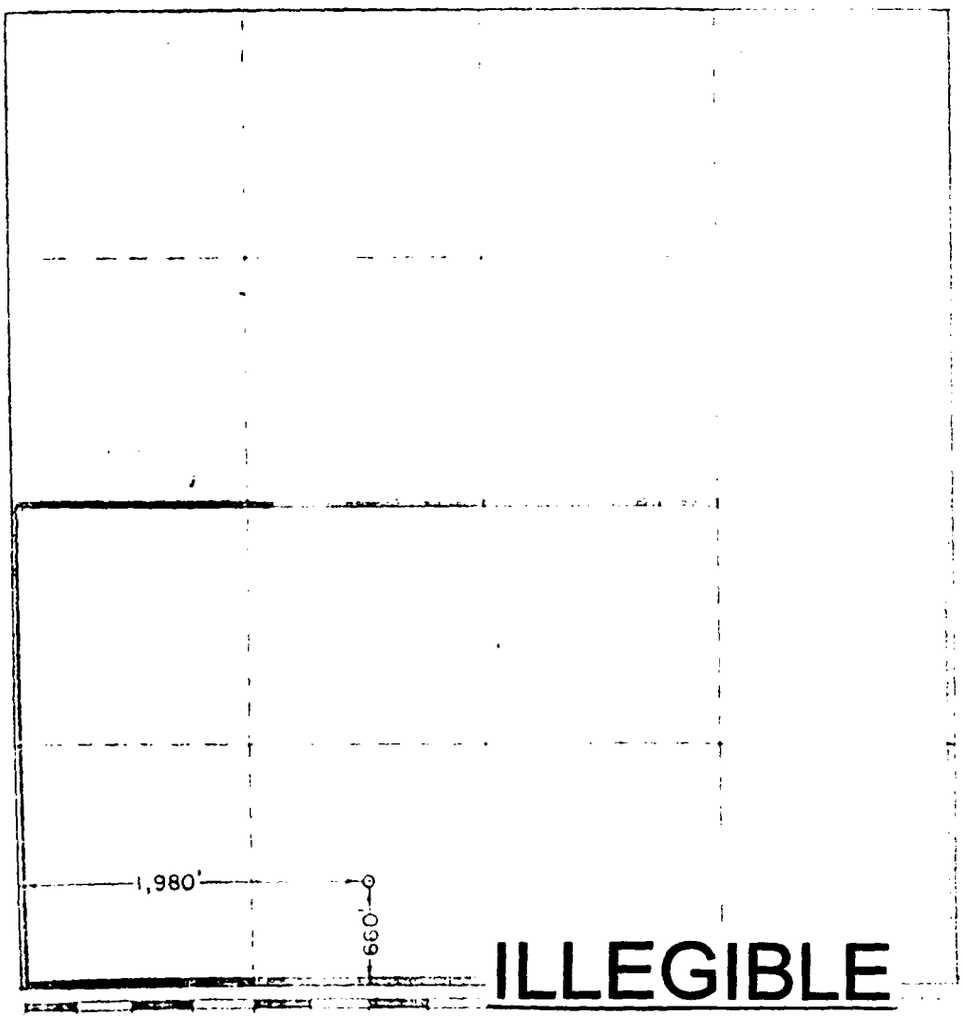
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] 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.



ILLEGIBLE

CERTIFICATION

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

Stephen Smith

Stephen Smith

Engineering Assistant

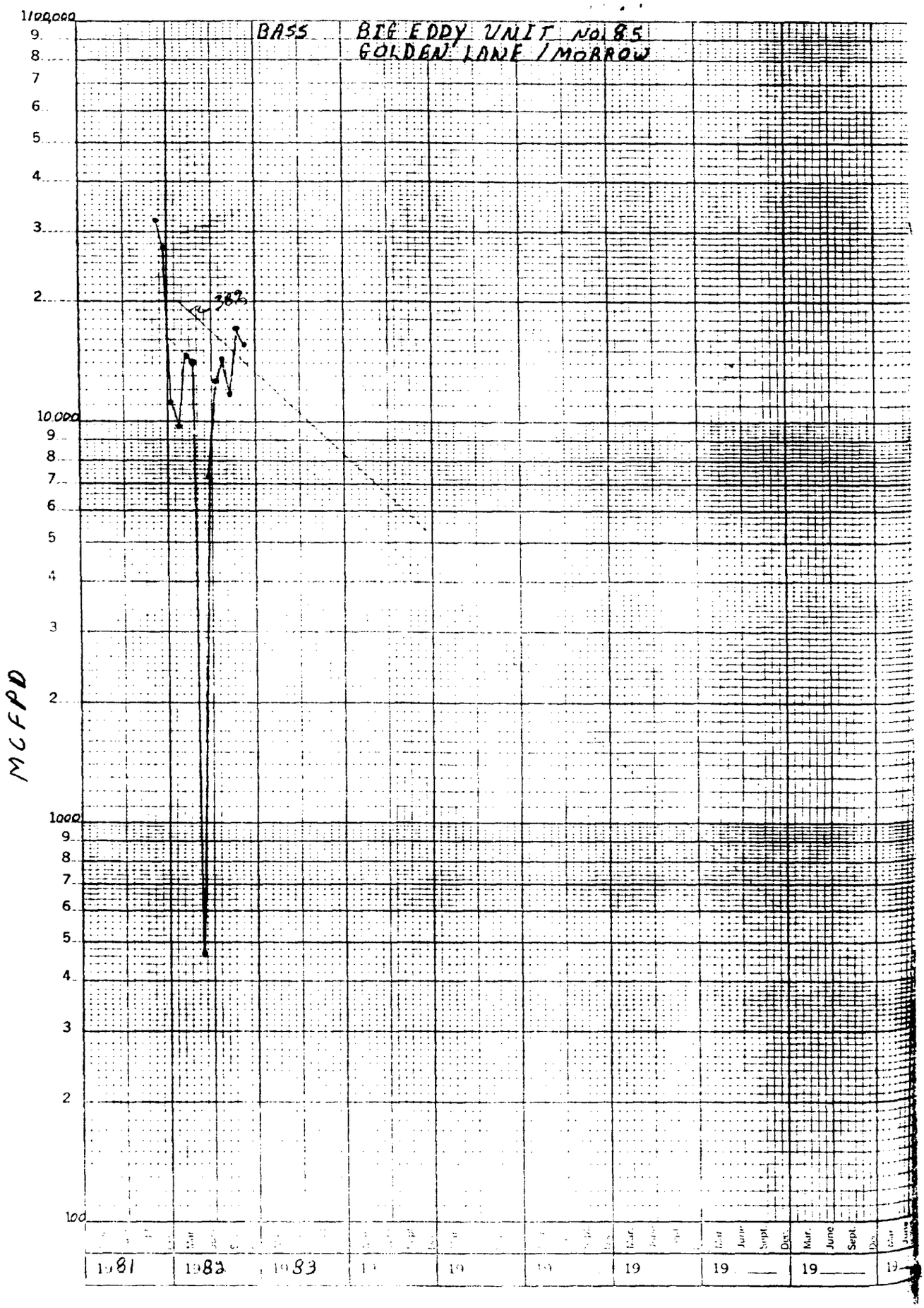
Bass Enterprises Prod. Co.

December 31, 1980

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
DECEMBER 16TH, 1980

Registered Professional Engineer and/or Land Surveyor
Ronald J. Eidson



47 6840

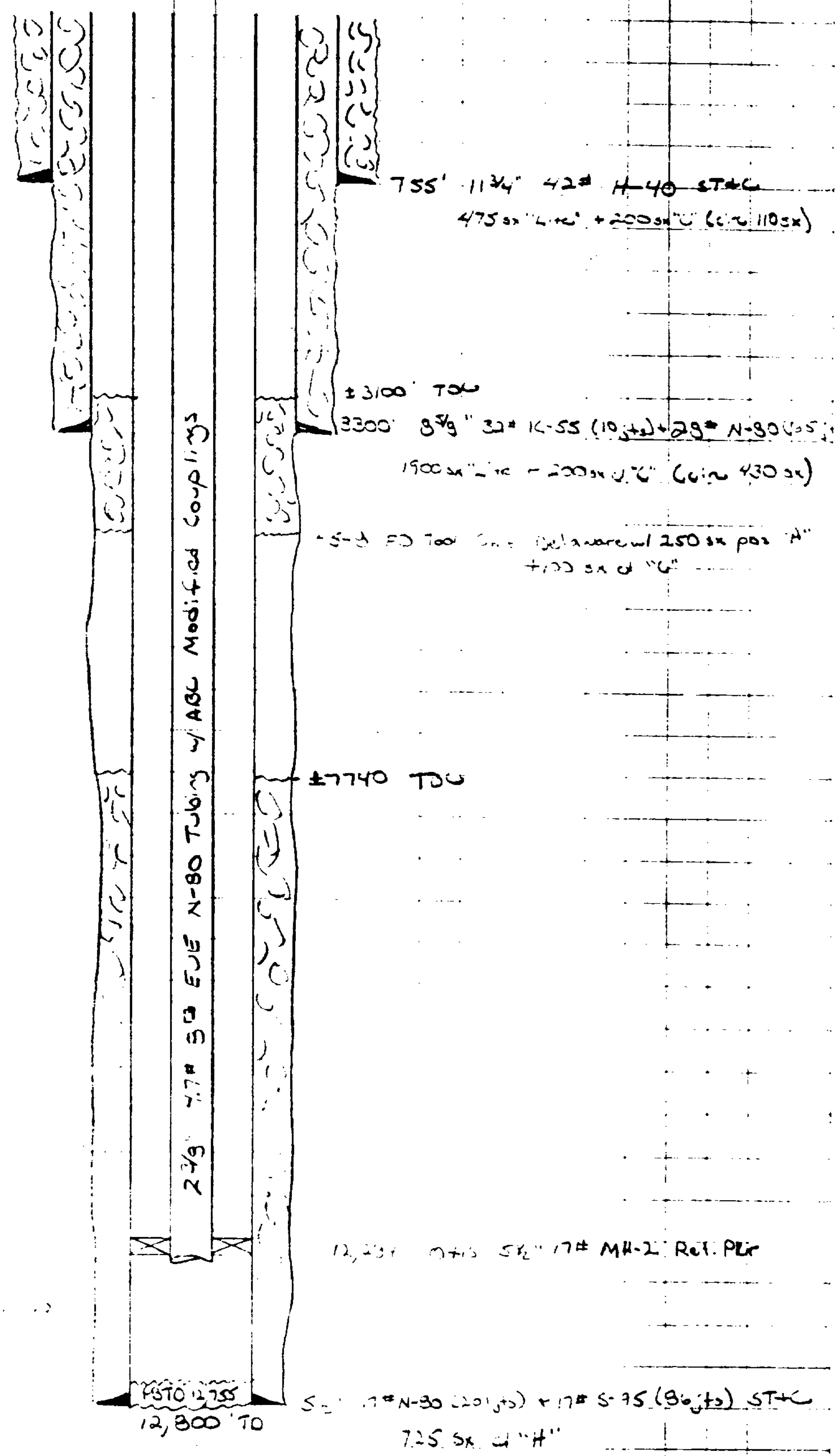
K·E 20 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

BASS ENTERPRISES PRODUCTION COMPANY

PAGE NO. ______

SUBJECT	DATE	DEPARTMENT	PREPARED BY
BEU #85	12/27/82	Prod	HHM

660' FSL + 1980' FWL   Sec. 9, T21S, R29E   GL 3366.1



ILLEGIBLE

United States Department of the Interior

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

IN REPLY
REFER TO:

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

365

Gentlemen:

Your application of May 27, 1980, requesting approval of the Morrow "D" participating area, Big Eddy Unit Agreement, Eddy county, New Mexico, was approved on this date by the Deputy Minerals Manager, Oil and Gas, Albuquerque, New Mexico, effective as of December 1, 1979.

The initial revision adds 320 acres described as the E½ of section 23, T. 21 S., R. 28 E., Eddy County, New Mexico.

The area is based upon completion of well No. 76 with A.O.F. of 750 MCF/D in 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,

Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

Enclosures

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

United States Department of the Interior

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

RECEIVED
JAN 27 1983
OIL CONSERVATION DIVISION
SANTA FE

IN REPLY
REFER TO:

JAN 21 1983

Case #365

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

Gentlemen:

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

The initial participating area contains 320 acres of land which consists of the E½ section 23, T. 21 S., R. 28 E., Eddy County, New Mexico. This initial area is based upon information contributed by Well #76 with an after frac gauge of 750 MCF/D, located in the SW¼NE¼ section 23, T. 21 S., R. 28 E., in Eddy County, New Mexico.

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,

/s/ Gene F. Daniel
Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

Enclosures

cc:
NMOCD, Santa Fe

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

505 MARQUETTE AVENUE, N.W., SUITE 815
ALBUQUERQUE, NEW MEXICO 87102

IN REPLY
REFER TO:

JAN 04 1982

case #365

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

Gentlemen:

Your application of December 11, 1981 requesting approval of the initial area of the Morrow "G" formation participating area of the **Big Eddy Unit Agreement**, Eddy County, New Mexico, was **approved** on this date by the Deputy Minerals Manager, Oil and Gas, Albuquerque, New Mexico, effective as of December 1, 1979.

The initial area adds 320 acres described as the N½ section 8, T. 21 S., R. 29 E., Eddy County, New Mexico, this information contributed by well #73 with an A.O.F. 1829 MCF/D.

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.) JOE G. LARA~~
(ORIG. SGD.) JAMES M. SHELTON

FOR Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

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

United States Department of the Interior

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

IN REPLY
REFER TO:

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

Gentlemen:

In response to your two letters dated February 27, 1981, concerning Big Eddy Wells #71 and #74 being incapable of producing in commercial quantities from the Atoka formation, we concur with your assessment. Therefore, the two wells will not be assigned a participating area, in accordance with section 11 of the **Big Eddy Unit Agreement** dated April 10, 1952.

Sincerely yours,

/s/ Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

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

United States Department of the Interior

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

IN REPLY
REFER TO:

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

Gentlemen:

Your application of November 16, 1981, requesting approval of the non-commercial wells has been completed and we concur with your findings. Listed below are the non-commercial wells.

Big Eddy Unit Well #65 Well-Morrow - located 1980' FWL and 660' FNL, section 31, T. 21 N., R. 28 E., Eddy County, New Mexico.

Big Eddy Unit Well #65-Atoka - located 1980' FWL and 660' FNL, section 31, T. 21 S., R. 28 E., Eddy County, New Mexico.

Big Eddy Unit Well #64-Strawn - located 1980' FWL and 660' FSL, section 33, T. 21 S., R. 28 E., Eddy County, New Mexico.

Big Eddy Unit Well #66-Morrow - located 2130' FWL and 1980' FSL, section 25, T. 21 S., R. 28 E., Eddy County, New Mexico.

Big Eddy Unit Well #68-Morrow - located 1980' FSL and 1780' FWL, section 10, T. 22 S., R. 28 E., Eddy County, New Mexico.

Big Eddy Unit Well #71-Atoka - located 1980' FWL and 1980'FNL, section 7, T. 22 S., R. 29 E., Eddy County, New Mexico.

Big Eddy Unit Well #74-Atoka - located 660' FNL and 1980' FEL, section 25, T. 21 S., R. 28 E., Eddy County, New Mexico.

Big Eddy Unit Well #80-Morrow - located 2538' FNL and 660' FEL, section 3, T. 21 S., R. 28 E., Eddy County, New Mexico.

Sincerely yours,

/s/ Armando A. Miller
For Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

cc:
Comm. of Public Lands
NMOCD

STATE OF NEW MEX...
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

December 28, 1982

BASS ENTERPRISES PRODUCTION CO.
First City Bank Tower
201 Main Street
Ft. Worth, Texas 76102

Case 365

ATTENTION: Jens Hansen

RE: 1983 Plan of Development
for Big Eddy, James Ranch,
and Poker Lake Federal Units

Dear Sir:

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 U. S. Minerals Management Service.

Sincerely,

Roy E. Johnson

Roy E. Johnson
Petroleum Geologist

REJ/dp

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

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

December 6, 1982

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

Case #365

COMMISSIONER OF PUBLIC LANDS
P. O. Box 1148
Santa Fe, New Mexico 87501
Attention: Ray Graham

File Copy

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

Re: 1983 Plan of Development
Big Eddy Unit
Eddy County, New Mexico

Gentlemen:

In accordance with Section 10 of the Big Eddy Unit Agreement dated April 10, 1952, Perry R. Bass, Operator of said Unit hereby submits a Plan of Development for the Big Eddy Unit for the year 1983.

History of Past Development - We refer to our previous Plans of Development for a detailed description of the operations conducted in this Unit in prior years.

1982 Activity - the following are results of wells drilled during the year 1982, and wells drilled prior to 1982, the results of which were not included in the 1982 Plan of Development.

Big Eddy Unit Well #70 - located 660' FNL and 1980' FEL, Section 26, T21S-R28E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,635' and plugged back to a depth of 12,575'. The Well was perforated between the depths of 12,096' and 12,259' and is currently **producing from the Morrow Formation.**

Big Eddy Unit Well #84 - located 1980' FEL and 1980' FNL, Section 18, T21S-R29E, Eddy County, New Mexico. This well was drilled to a total depth of 12,725' and perforated between the depths of 11,967' and 12,423'. The **Well is currently shutin pending additional stimulation to the Morrow Formation.**

Big Eddy Unit Well #87 - located 1980' FSL and 1980' FWL, Section 28, T21S-R28E, Eddy County, New Mexico. This Well as drilled to a total depth 12,401' and plugged back to a depth of 12,328'. The Well was perforated between the depths of 11,933' and 12,126' and is currently **producing from the Morrow Formation.**

Big Eddy Unit Well #88 - located 1980' FSL and 660' FWL, Section 18, T22S-R29E, Eddy County, New Mexico. This Well was drilled to a total depth of 13,060' and plugged and abandoned as a dry hole.

Big Eddy Unit Well #89 - located 660' FNL and 1980' FEL, Section 16, T20S-R31E, Eddy County, New Mexico. This Well was drilled to a total depth of 13,075' and was plugged and abandoned as a dry hole.

Big Eddy Unit Well #92 - located 1980' FSL and 660' FWL, Section 14, T21S-R28E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,519' and plugged back to a depth of 12,225'. The Well was perforated between the depths of 11,383' and 11,494' and was completed in the Atoka Formation and is currently shutin waiting on pipeline.

Big Eddy Unit Well #93 - 1980' FSL and 1980' FWL, Section 36, T21S-R28E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,750' and plugged back to a depth of 12,710'. The Well was perforated between the depths of 12,343' and 12,439' and is currently producing from the Morrow Formation.

Big Eddy Unit Well #94 - located 1980' FNL and 660' FWL, Section 20, T21S-R29E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,810' and was perforated between the depths of 12,326' and 12,541'. We are currently attempting a completion in the Morrow Formation, the results of which will appear in the 1984 Plan of Development.

Big Eddy Unit Well #95 - located 660' FNL and 1980' FEL, Section 33, T21S-R28E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,450' and was perforated between the depths of 11,865' and 12,059'. We are currently attempting a completion in the Morrow Formation, the results of which will appear on the 1984 Plan of Development.

Big Eddy Unit Well #96 - located 1980' FSL and 660' FWL, Section 16, T22S-R29E, Eddy County, New Mexico. This Well was drilled to a total depth of 13,375' and was plugged and abandoned as a dry hole.

Big Eddy Unit Well #97 - located 1980' FNL and 1980' FWL, Section 35, T21S-R29E, Eddy County, New Mexico. This Well was drilled to a total depth of 13,422' and was perforated between the depths of 12,918' and 13,066'. We are currently attempting a completion in the Morrow Formation, the results of which will appear in the 1984 Plan of Development.

Participating Areas

We will submit during the year 1983 recommendations for commercial determinations for the above listed Wells when sufficient production data is available.

Future Development

We plan to drill the following test wells during the year 1983 at the following locations:

Big Eddy Unit Well #91 - Section 30, T21S-R28E - **12,000' Morrow Test.**

Big Eddy Unit Well #98 - Section 20, T21S-R30E - **13,400' Morrow Test.**

Big Eddy Unit Well #99 - Section 31, T21S-R29E - **12,600' Morrow Test.**

Big Eddy Unit Well #100 - Section 11, T22S-R28E - **12,500' Morrow Test.**

Big Eddy Unit Well #101 - Section 5, T21S-R28E - **11,800' Morrow Test.**

Offset Obligations

Appropriate and adequate measures will be taken to prevent drainage of unitized substances from the lands subject to the Big Eddy Unit or pursuant to applicable regulations.

Additional Development

This Plan of Development shall constitute the drilling obligation of the Unit Operator under the terms of the Big Eddy Unit Agreement for the period ending December 31, 1983.

Modifications

In accordance with the terms and provisions of the Big Eddy Unit Agreement, this Plan of Development may be modified from time to time because of changing conditions.

Effective Date

This Plan of Development shall be effective January 1, 1983.

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

Sincerely,

JENS HANSEN
Division Landman

JH:ep

AGREED TO AND ACCEPTED this _____ day of _____, 1982.

MINERAL MANAGEMENT SERVICE

By _____

AGREED TO AND ACCEPTED THIS _____ day of _____, 1982.

COMMISSIONER OF PUBLIC LANDS

By _____

AGREED TO AND ACCEPTED this 21st day of December, 1982.

NEW MEXICO OIL CONSERVATION DIVISION

By Roy E Johnson

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

December 6, 1982

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

COMMISSIONER OF PUBLIC LANDS
State of New Mexico
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 Plan of Development for
Big Eddy, James Ranch and
Poker Lake Federal Units

Gentlemen:

Enclosed for your review and approval are our Plans of Development for the year 1983 for the referenced Units. As you are aware, each year the number of wells we submit for drilling in each of the Units are based on prevailing conditions and the opportunities resulting for the geological information gained from the previous years drilling program. Accordingly, we have planned our drilling program for 1983 giving careful consideration to, among other things, (1) current problems with the contracting and marketing of gas and (2) gas discoveries made during 1982 which will provide important production information during the year 1983 for 1984 development. As a result, we trust our 1983 Plans of Development for the Big Eddy, James Ranch and Poker Lake Federal Units will be acceptable to you.

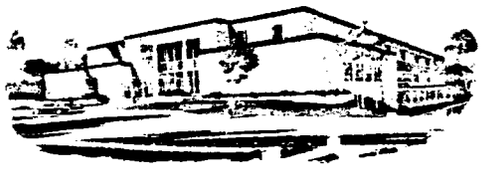
If you should have any questions, please contact me at your convenience.

Sincerely,

JENS HANSEN
Division Landman

JH:ep
Enclosures

State of New Mexico



Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, N. M. 87504-1148

December 13, 1982

365

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

Re: 1983 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 1983 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico. Such plan proposes do drill the Big Eddy Unit Wells Nos. 91, 98, 99, 100 and 101 to test the Morrow formation. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the 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,

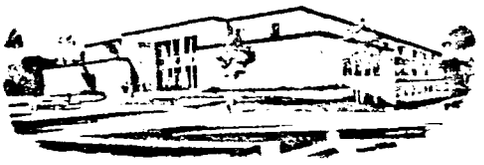
ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY: _____

FLOYD O. PRANDO, Assistant Director
Oil and Gas Division
AC 505/827-5744

AJA/FOP/pm
encls.
cc: OCD-Santa Fe, New Mexico
USMMS-Albuquerque, New Mexico
Administration

State of New Mexico



Commissioner of Public Lands

June 28, 1982

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Re: Second Amendment to the
1982 Plan of Development for the
Big Eddy Unit
Eddy County, New Mexico

365

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date approved your Second Amendment to the 1982 Plan of Development for the Big Eddy Unit area. Such amendment proposes to deffer the drilling of the well Nos. 91 and 98 to be drilled under the 1983 Plan of Development at the same locations and to the same depths. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the United States Minerals Management Service.

Enclosed is one approved copy for your files.

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

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
FLOYD O. PRANDO, Assistant Director
Oil and Gas Division
AC 505/827-2748

AJA/FOP/pm
encls.
cc: OCD-Santa Fe, New Mexico
USMMS-Albuquerque, New Mexico
Administration

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
SOUTH CENTRAL REGION
505 MARQUETTE AVENUE, N.W., SUITE 815
ALBUQUERQUE, NEW MEXICO 87102

IN REPLY
REFER TO:

JUN 25 1982

Bass Enterprises Production Company
Attention: Jens Hansen
Fort Worth National Bank Building
Fort Worth, Texas 76102

Gentlemen:

An approved copy of your amended 1982 plan of development for the Poker Lake and Big Eddy Units, Eddy County, New Mexico, is enclosed.

The second amendment to the 1982 plan of development for the Big Eddy Unit proposes to defer the drilling of the Big Eddy Unit Wells #91 and #98 until 1983. The first amendment to the 1982 plan of development for the Poker Lake Unit proposes to drill two additional wells, the Poker Lake Unit Wells #58 and #59.

The amended plan of development for the two units was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

(ORIG. SGD.) JAMES W. SHELTON

for Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

Enclosure

cc:
Comm. of Public Lands
NMOCD

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
SOUTH CENTRAL REGION
505 MARQUETTE AVENUE, N.W., SUITE 815
ALBUQUERQUE, NEW MEXICO 87102

IN REPLY
REFER TO:

25 JUN 1982

Bass Enterprises Production Company
Attention: Jens Hansen
Fort Worth National Bank Building
Fort Worth, Texas 76102

365

Gentlemen:

An approved copy of your amended 1982 plan of development for the Big Eddy unit area, Eddy County, New Mexico, is enclosed. Such plan, proposing to move the location of the Big Eddy Unit Well #95 from section 29, T. 22 S., R. 29 E., to section 33, T. 21 S., R. 28 E., N.M.P.M., Eddy County, New Mexico, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

(ORIG. SGD.) JAMES W. SHELTON

FOR Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

Enclosure

cc:
Comm. of Public Lands
NMOCD

State of New Mexico

Commissioner of Public Lands

May 12, 1982

ALEX J. ARMIJO
COMMISSIONER

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

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

365

Re: First Amendment to the
1982 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 1982 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico. Such plan provides for the change of location of your Well No. 95 from Section 29, Township 22 South, Range 29 East to a location 660' FNL and 1980' FEL in Section 33, Township 21 South, Range 28 East, Eddy County, New Mexico. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the United States Minerals Management Service.

Enclosed is one approved copy for your files.

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

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
FLOYD O. PRANDO, Assistant Director
Oil and Gas Division
AC 505/827-2748

AJA/RDG/pm
encls.
cc: OCD-Santa Fe, New Mexico
USMMS-Albuquerque, New Mexico
Administration

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

MAY 10 1982

May 5, 1982

UNITED STATES GEOLOGICAL SURVEY
P. O. Box 26124
Albuquerque, New Mexico 88201

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

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

Re: First Amendment to the
1981 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 1982 Plan of Development for your review and approval.

Big Eddy Unit Well #95 - Our 1982 Plan of Development provides for the drilling of this Well in Section 29, T22S-R29E, to be drilled to a depth sufficient to test the Morrow Formation. Based on geological information received from several previous wells, we are requesting this Well be moved to a location 660' FNL and 1980' FEL in Section 33, T21S-R28E, Eddy County, New Mexico.

If this proposed Amendment to the 1982 Plan of Development 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

cc: George Weems
Jim Pullig
George Hillis

AGREED TO AND ACCEPTED this the 3rd day of June, 1982.

W. Perry Pearce
NMOCD

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

June 4, 1982

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

Bass Enterprises Production Co.
Fort Worth National Bank Bldg.
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: First Amendment, 1982 Plan of Development for the Big Eddy Unit, Eddy County

Dear Mr. Hansen:

Enclosed please find an approved copy of your First Amendment to the 1982 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico.

This approval is subject to like approval by the Minerals Management Service and the Commissioner of Public Lands for the State of New Mexico.

Sincerely,

W. PERRY PEARCE
General Counsel

WPP/dr

cc: Commissioner of Public Lands
Minerals Management Service

United States Department of the Interior
GEOLOGICAL SURVEY
South Central Region
P. O. Box 26124
Albuquerque, New Mexico 87125

JAN 20 1982

365

Bass Enterprises Production Company
Attention: Jens Hansen
Fort Worth National Bank Building
Fort Worth, Texas 76102

Gentlemen:

An approved copy of your 1982 plan of development for the Big Eddy unit area, Eddy County, New Mexico is enclosed. Such plan, proposing the drilling of eight Morrow test wells, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

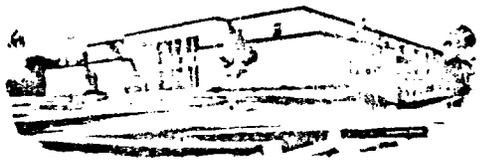
(ORIG. SGD.) JAMES W. SHELTON

FOR Gene F. Daniel
Deputy Conservation Manager
Oil and Gas

Enclosure

NMOCD, Santa Fe

State of New Mexico



Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

January 5, 1982

Bass Enterprises Production Co.
Fort Worth National Bank Bldg.
Fort Worth, Texas 76102

365

Re: Initial Participating Area for the
Morrow "E" 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 Participating Area for the Morrow "E" Formation in the Big Eddy Unit Area, Eddy County, New Mexico. The Initial Morrow "E" Participating Area is 320.00 acres described as the S/2 of Section 9, Township 22 South, Range 28 East, and is based on the completion of the Unit Well No. 77.

Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files.

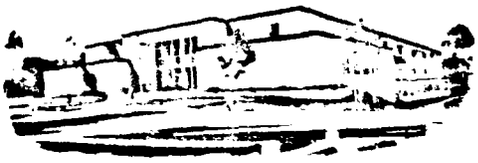
Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division
AC 505/827-2748

AJA/RDG/pm
encls.
cc: OCD-Santa Fe, New Mexico
USGS-Albuquerque, New Mexico

State of New Mexico



Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

December 30, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Bldg.
Fort Worth, Texas 76102

2,65

Re: Initial Participating Area for the
Morrow "D" 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 Participating Area for the Morrow "D" Formation in the Big Eddy Unit Area, Eddy County, New Mexico. The Initial Morrow "D" Participating Area is 320.00 acres described as the E/2 of Section 23, Township 21 South, Range 28 East, and is based on the completion of the Unit Well No. 76.

Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files.

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division
AC 505/827-2748

AJA/RDG/pm
encls.
cc: OCD-Santa Fe, New Mexico
USGS-Albuquerque, New Mexico

State of New Mexico

Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

December 30, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Re: 1982 Plan of Development
Big Eddy Unit Agreement
Eddy County, New Mexico

365

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public has this date approved your 1982 Plan of Development for the Big Eddy Unit Agreement, Eddy County, New Mexico. Such Plan proposes the drilling of the Unit Wells Nos. 91, 92, 93, 94, 95, 96, 97 and 98 and will test the Morrow Formation. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved instrument for your files.

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

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division
AC 505/827-2748

AJA/RDG/pm
encls.
cc: OCD-Santa Fe, New Mexico
USGS-Albuquerque, New Mexico

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

December 15, 1981

UNITED STATES GEOLOGICAL SURVEY
P. O. Box 26124
Albuquerque, New Mexico 87125

365

COMMISSIONER OF PUBLIC LANDS
P. O. Box 1148
Santa Fe, New Mexico 87501
Attention: Ray Graham

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

Re: 1982 Plan of Development
Big Eddy Unit
Eddy County, New Mexico

Gentlemen:

In accordance with Section 10 of the Big Eddy Unit dated April 10, 1952, Perry R. Bass, Operator of said Unit, hereby submits a Plan of Development for the Big Eddy Unit for the year 1982.

History of Past Development - We refer to our previous Plans of Development for a detailed description on this Unit.

1981 Activity- the following are the results of Wells drilled during the year 1981, and Wells drilled prior to 1981, but not included in the 1981 Plan of Development.

Big Eddy Unit Well #70 - located 660' FNL and 1980' FEL, Section 26, T21S-R28E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,627', and is being completed in the Morrow Formation. The results of this Well will appear in this section in the 1983 Plan of Development.

Big Eddy Unit Well #78 - located 2310' FSL and 1980' FEL, Section 35, T20S-R30E, Eddy County, New Mexico. This Well was drilled to a total depth of 13,024' and was plugged and abandoned on February 9, 1981, as a dry hole.

Big Eddy Unit Well #81 - this Well is located in Section 35, T21S-R28E, Eddy County, New Mexico, and was drilled to the Delaware Formation. Since it has been determined that the Formation in which this Well was completed is not a unitized formation under the Big Eddy Unit Agreement, same was not submitted for a Commerical Determination.

Big Eddy Unit Well #82 - located 760' FEL and 1980' FSL, Section 10, T22S-R28E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,729' and was completed in the Morrow Formation as a gas well with the perforation interval being 12,191'-12,386'. This Well is currently shutin waiting on pipeline.

Big Eddy Unit Well #83 - located 1980' FWL and 660' FNL, Section 10, T21S-R28E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,417' and was completed in the Morrow Formation as a gas well, with perforation interval being 11,816'-11,840'. This Well is currently producing.

Big Eddy Unit Well #84 - located 1980' FEL and 1980' FNL, Section 18, T21S-R29E, Eddy County, New Mexico. We are currently drilling this Well to a projected depth of 12,650' to test the Morrow Formation. The results of this Well will appear in this section in the 1983 Plan of Development.

Big Eddy Unit Well #85 - located 660' FSL and 1980' FWL, Section 8, T21S-R29E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,800' and was completed in the Morrow Formation as a gas well with the perforation interval being 12,365'-12,516'. The Well is currently producing.

Big Eddy Unit Well #86 - located 660' FWL and 1980' FNL, Section 9, T21S-R28E, Eddy County, New Mexico. This Well was drilled to a total depth of 12,180' and was plugged and abandoned on May 24, 1981 as a dry hole.

Big Eddy Unit Well #87 - located 1980' FSL and 1980' FWL, Section 28, T21S-R28E, Eddy County, New Mexico. We anticipate commencing operations for the drilling of this Well to a projected depth of 12,600' to test the Morrow Formation. The results of this Well will appear in this section in the 1983 Plan of Development.

Big Eddy Unit Well #88 - located 1980' FSL and 660' FWL, Section 18, T22S-R29E, Eddy County, New Mexico. We anticipate commencing the drilling of this Well before the end of the year, to a projected depth of 12,950' to test the Morrow Formation. The results of this Well will appear in this section in the 1983 Plan of Development.

Big Eddy Unit Well #89 - located 660' FNL and 1980' FEL, Section 16, T20S-R31E, Eddy County, New Mexico. We are currently drilling this Well to a projected depth of 13,000' to test the Morrow Formation. The results of this Well will appear in this section in the 1983 Plan of Development.

Big Eddy Unit Well #90 - located 1980' FSL and 2240' FWL, Section 4, T22S-R29E, Eddy County, New Mexico. This Well was drilled to a total depth of 13,360' and was plugged and abandoned as a dry hole.

We are still attempting to secure permits for drilling of the Rodke #3, which is located 1980' FNL and 1980' FWL, Section 27, T20S-R31E, Eddy County, New Mexico, and the Big Eddy #52 located 1980' FSL and 990' FEL, Section 27, T20S-R31E, Eddy County, New Mexico.

Participating Areas

We will submit during the year 1982 recommendation for Commercial or Non-Commercial Determinations in Participating Areas for the above listed Wells when sufficient production data for such Determinations is available.

Future Development

We plan to drill the following tests during the year 1982, at the following tentative locations.

Big Eddy Unit Well #91 - Section 19, T21S-R28E - Morrow Test.

Big Eddy Unit Well #92 - Section 14, T21S-R28E - Morrow Test.

Big Eddy Unit Well #93 - Section 36, T21S-R28E - Morrow Test.

Big Eddy Unit Well #94 - Section 20, T21S-R29E - Morrow Test.

Big Eddy Unit Well #95 - Section 29, T22S-R29E - Morrow Test.

Big Eddy Unit Well #96 - Section 16, T22S-R29E - Morrow Test.

Big Eddy Unit Well #97 - Section 35, T21S-R29E - Morrow Test.

Big Eddy Unit Well #98 - Section 29, T21S-R30E - Morrow Test.

Offset Obligations

Appropriate and adequate measures will be taken to prevent drainage of unitized substances from land subject to the Big Eddy Unit Agreement or pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided by the Unit Agreement.

Additional Development

This Plan of Development shall constitute the drilling obligations of the Unit Operator under the terms of the Big Eddy Unit Agreement for the period ending December 31, 1982, however, due to problems in obtaining drilling rigs and unanticipated drilling problems which may be encountered, the actual drilling of one or more of these Wells may encroach in the year 1983.

Modifications

It is understood that this Plan of Development may be modified from time to time to meet changing conditions.

Effective Date

This Plan of Development shall be effective January 1, 1982.

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

Sincerely,

JENS HANSEN
Division Landman

JH:ep

AGREED TO AND ACCEPTED this _____ day of _____, 1981.

UNITED STATES GEOLOGICAL SURVEY

By _____

AGREED TO AND ACCEPTED this _____ day of _____, 1981.

COMMISSIONER OF PUBLIC LANDS

By _____

AGREED TO AND ACCEPTED this 12 day of Jan, 1982

NEW MEXICO OIL CONSERVATION DIVISION

By _____

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

December 10, 1981

UNITED STATES GEOLOGICAL SURVEY
P. O. Box 26124
Albuquerque, New Mexico 87125

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

365

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

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

Gentlemen:

Bass Enterprises Production Co., as unit operator for the Big Eddy Unit Agreement, pursuant to the provisions of Section 11, respectfully submits for your approval the selection of the following described lands to constitute the Initial Participating Area for the Morrow "E" producing zone or formation, to wit:

S/2 Section 9, T22S-R28E, Eddy County, New Mexico, containing 320 acres.

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 Participating Area.

(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.

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 18, 1980, of Unit Well No. 77, in the NE/4

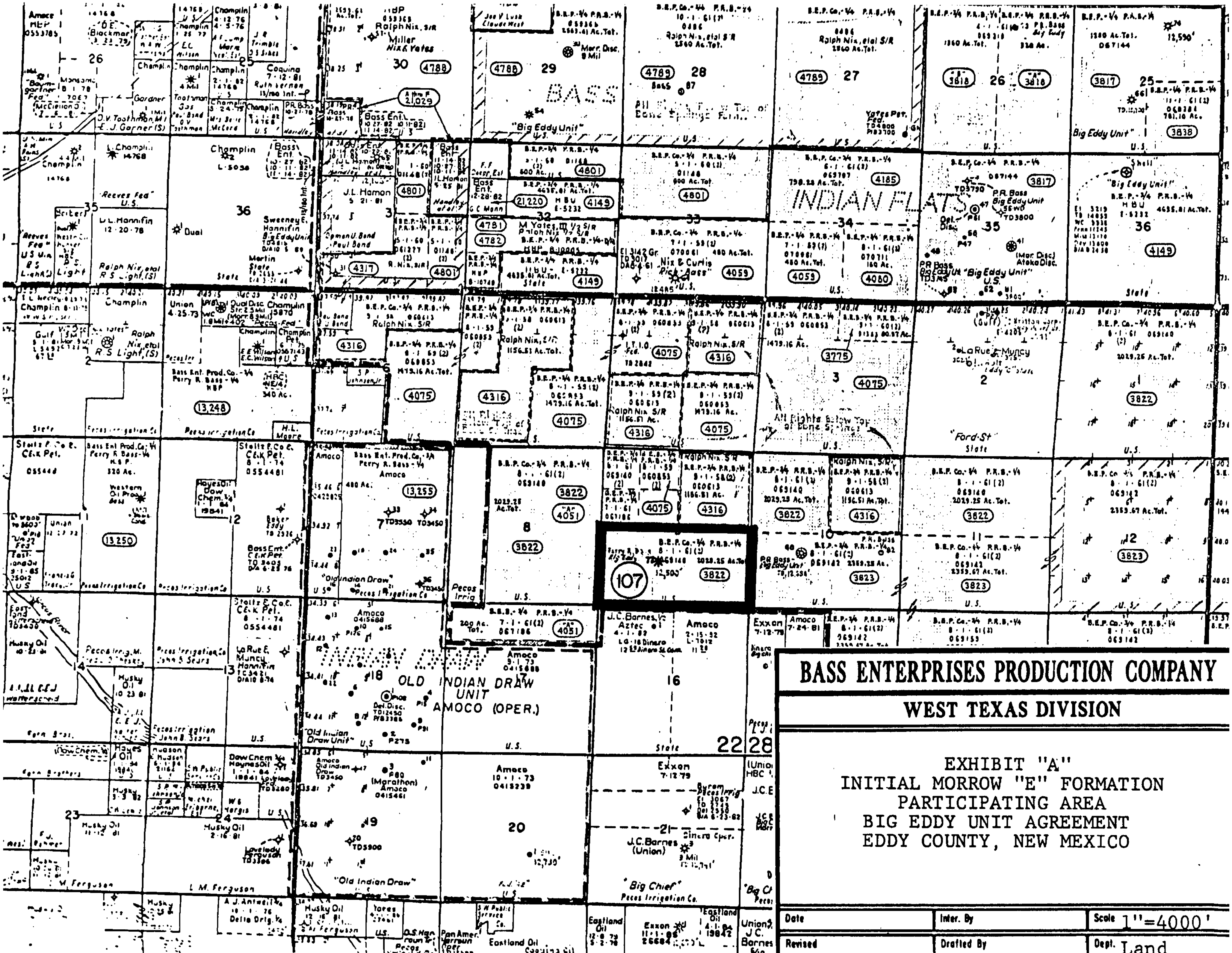
SW/4, Section 9, T22S-R28E, with an initial production of gas from the Morrow Formation at a depth of 11,984 to 12,097 feet. The effective date of this initial area shall be April 1, 1980, pursuant to Section 11 of the Unit Agreement.

Consequently, applicant respectfully requests your approval of the hereinabove selection of lands to constitute the Initial Morrow "E" Participating Area, to be effective April 1, 1980.

Sincerely,

JENS HANSEN
Division Landman

JH:ep



BASS ENTERPRISES PRODUCTION COMPANY

WEST TEXAS DIVISION

EXHIBIT "A"
INITIAL MORROW "E" FORMATION
PARTICIPATING AREA
BIG EDDY UNIT AGREEMENT
EDDY COUNTY, NEW MEXICO

Date	Inter. By	Scale 1"=4000'
Revised	Drafted By	Dept. Land

EXHIBIT "B"
INITIAL MORROW "E" FORMATION
PARTICIPATING AREA
BIG EDDY UNIT AGREEMENT
EDDY COUNTY, NEW MEXICO

Tract No.	Lease No. Type of Land	Description	Participating Acres	Percentage of Participation	Working Interest Owners
107	LC-069140-A	T22S-R28E Sec. 9: S/2	320.00	100.00	Bass Enterprises Production Co. & Perry R. Bass
			320.00	100.00	
	Total Federal Lands		320.00	100.00	
	Total State Lands		0.00	0.00	
	Total Patented Lands		0.00	0.00	
			320.00	100.00	

BIG EDDY UNIT NO. 77

Big Eddy Unit No. 77 had its initial and only completion in the Morrow formation. After 4000 gallons 7-1/2% MSR acid, the well potentialed at 3.315 MMCFPD. The well is presently making 1.342 MMCFPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 77 FORMATION MORROW

LOCATION K UNIT, 1980 FEET FROM W LINE & 1650 FEET FROM S LINE,

SECTION 9, RANGE 28E, TOWNSHIP 22S, COUNTY EDDY NEW MEXICO.

SPUD DATE 12/26/79 COMPLETION DATE 3/18/80 INIT. PROD. DATE 6/9/80

PERFORATIONS 11,984', 11,986', 11,999', 12,002', 12,006', 12,049', 12,054', 12,057; 12,076', 12,097', JRC SSB II changes will be shot per foot

STIMULATION:

ACID 12,270'-12,283' 2,000 gallons 7 1/2% MSR

11,984'-12,097 2,000 gallons 7 1/2% MSR

FRACTURE

POTENTIAL 3,315 MCFPD CAOF

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

VOLUMETRIC CALCULATION

	FORMATION	
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	320	
Porosity (Ø), %	8.5	
Water saturation (Sw), %	25	
Net thickness (h) > 6% Ø & ≤ 40% Sw, ft	42	
Temperature (T), °F	170	

Bottomhole pressure (P), psia 5,174

Recovery factor (RF), (80% assumed) 8

Recoverable gas, MCF (See eq. below) 9,554,485

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A)(h)(RF)(Bgi) where

$$Bgi = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu\ Ft}\right) = 0.03535 \frac{(5174)}{(.9)(630)} = .32$$

PERFORMANCE DATA

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

(Cumulative production to 6 / 30 /81; 846,990 MCF.

Current rate (qi), 48,000 MCF/mo

Economic limit (ql), 3000 MCF/mo

Decline rate, dy 60 %

Remaining gas (Q) = 589,332 MCF

Ultimate Recoverable Gas 1,436,323 MCF

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-\ln\ (1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)	COND (BBLS)
Gas sand previously produced	0	0
Sand perforated	1,436,323 (1)	209
Sand not perforated, but potentially productive	0 (2)	0
Total recoverable gas	1,436,323	209

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ECONOMIC

*Well Cost $ 1,111,035 (to the depth of formation completed)

Recompletion Cost $ 0

TOTAL COST $ 1,111,035

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + {(Oil Price) (Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac}

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).7)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

$2.03/MCF

**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	20% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
zero	---	---	---	1.0000	-1,111,035
1980	566,243	1,149,776	14,000	0.9129	1,036,850
1981	280,747 Through 5/81	569,916	10,000	0.7607	425,928
198				0.6339	
198				0.5283	
198				0.4402	
Remainder				0.3669	
					+ 351,743

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

ECONOMICAL

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-1
Revised 9

Type Test: [x] Initial [ ] Annual [ ] Special				Test Date: 3-18-80	
Company: Perry R. Bass		Connection: Natural Gas Pipeline Company of America			
Pool: Undesignated		Formation: Morrow		Unit: Big Eddy Unit	
Completion Date: March 18, 1980	Total Depth: 12,500'	Plug Back TD: 12,190'	Elevation: 3112.7' KB	Farm or Lease Name: Big Eddy Unit	
Csg. Size: 5½" / Wt.: 17# / d: / Set At: 12,500'		Perforations: From 11,984' To 12,097'		Well No.: 77	
Tbg. Size: 2 3/8" / Wt.: 4.7# / d: / Set At: 11,900		Perforations: From Open To Ended		Unit: K / Sec.: 9 / Twp.: 22S / R.: 28	
Type Well – Single – Bradenhead – G.C. or G.O. Multiple: Single		Packer Set At: 11,900'		County: Eddy	
Producing Thru: Tubing	Reservoir Temp. °F: 161 @ 11,850	Mean Annual Temp. °F:	Baro. Press. – P_a: 13.2	State: New Mexico	

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11,900		.603	.49	.94	Trace		X	

NO.	FLOW DATA: Prover Line Size x Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					4115	64			
1.	4" x .750"	420	11	82	3985	58			1 h
2.	4" x .750"	425	22	86	3922	60			1 h
3.	4" x 1.500"	480	8	70	3522	62			1 h
4.	4" x 1.500"	480	19	85	3237	62			1 h
5.	4" x 1.500"	480	29	80	2815	58			1.75

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	2.661	69.030	433.2	.9795	1.288	1.032	239
2	2.661	98.186	438.2	.9759	1.288	1.031	339
3	10.84	62.814	493.2	.9905	1.288	1.040	903
4	10.84	96.803	493.2	.9768	1.288	1.035	1,366
5	10.84	119.594	493.2	.9813	1.288	1.038	1,701

NO.	P_t	Temp. °R	T_f	Z
1	.647	542	1.527	.939
2	.654	546	1.538	.941
3	.736	530	1.493	.924
4	.736	545	1.535	.933
5	.736	540	1.521	.929

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl
A.P.I. Gravity of Liquid Hydrocarbons: None Produced °
Specific Gravity Separator Gas: .603 XXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 670 P.S.I.A. P.S.I
Critical Temperature: 355 °R

P_c _____ P_c^2 _____

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		5079.2	25798	1151
2		5023.2	25233	1716
3		4586.2	21033	5916
4		4202.2	17658	9291
5		3709.2	13758	13191

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{26,949}{9,291}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.4267$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3,315$

Absolute Open Flow: 3,315 Mcfd @ 15.025 | Angle of Slope θ: 50° | Slope, n: .8325

Remarks: Test run by Tom Hansen Co., Inc.

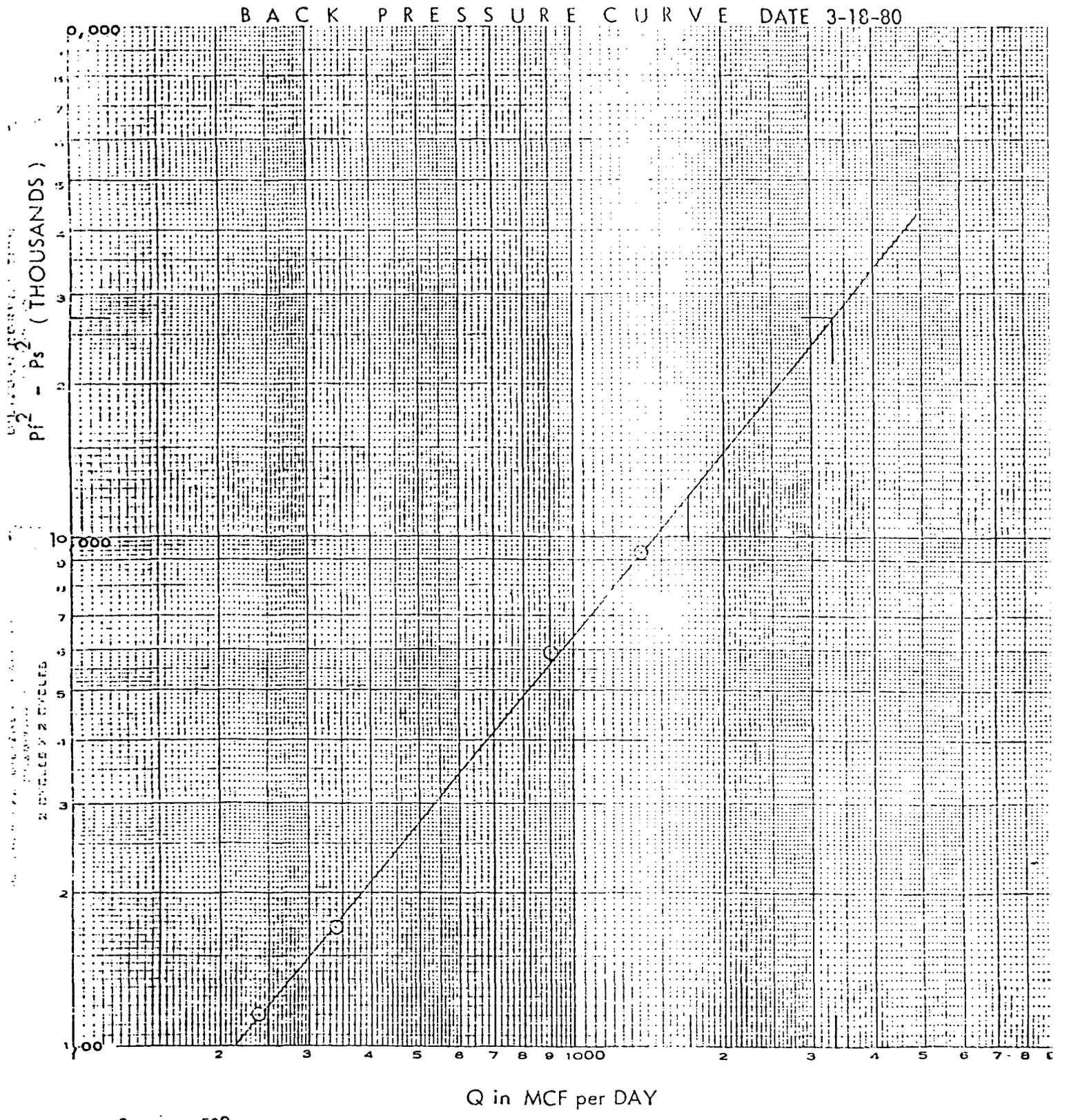
ILLEGIBLE

Approved By Commission: | Conducted By: | By:

LEASE Big Eddy Unit WELL 77

FORMATION Morrow

COUNTY Eddy STATE New M



0 = 50°

n = .8325

AOF = 3,315

RASS ENTERPRISES PROD

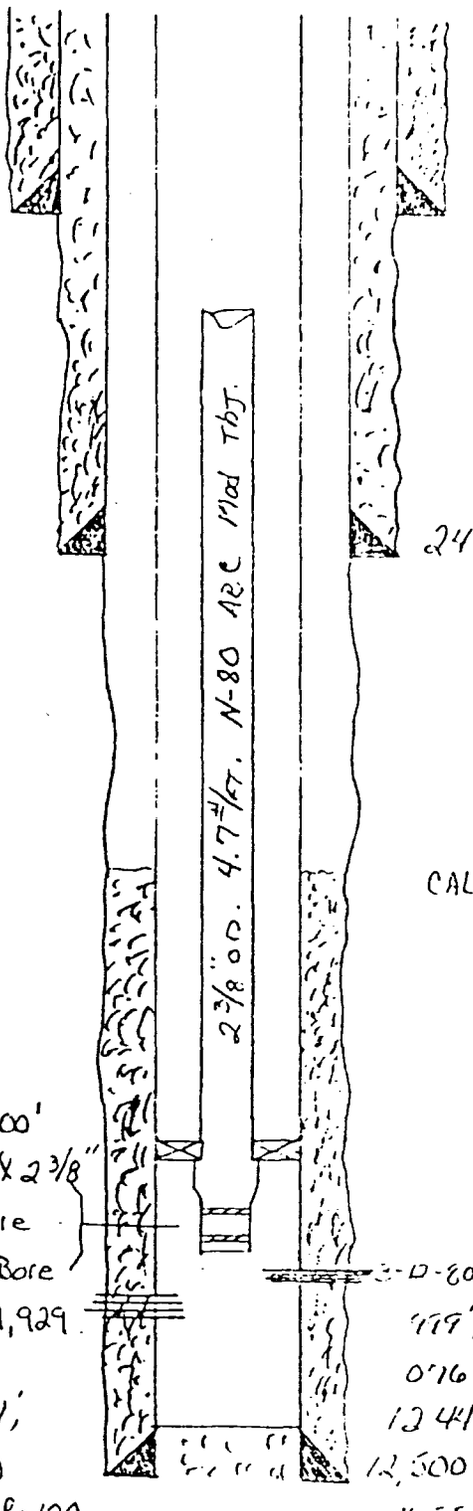
WELL BORE DIAGRAM

5-1-80 SDS

BIG EDDY UNIT NO. 71
EDDY COUNTY, NEW MEXICO

ELEV: 3094.7 GL
3112.7 RKB

SPUD: 12-26-79
COMP: 3-18-80



315' – 11¾" O.D. 42#/FT. H-40
CMTD. W/240 SX.

2478' – 8⅝" OD 28#/FT. S-80
CMTD. W/750 SX.

CALCULATED TOC @ 8400'

PERMANENT PKR. @ 11,900'
OTIS "WB" PKR @ 11,910', 10' Pup 3½" X 2⅜"
X-over, 8'-2⅜" sub. Otis 1.875 Bore
X-Nipple. 8'-2⅜" sub. Otis 1.875 Bore
"XN" Nipple w/1.791 BORE No Go. @ 11,929'
3/1/80 LOWER MORROW PERFS
1 JSP INTERVAL 12,270', 12,271',
12,277', 12,279', 12,283' (5 shots)
ACIDIZED w/2000 gal. 7½% MSR-100
(3-5-80)

3-10-80 MIDDLE MORROW PERFS 11,984', 9[illegible]
999', 12,002', 006', 049', 054', 05
076', 097'. (10 shots. ACIDIZED w/[illegible]
12,410' PBTD (7½% MSR-100
12,500 – 5½ OD. 17#/FT. N-80, S-95
K-55 LT&C csg. CMTD. W/300 SX.
HOWCO LITE; 1100 SX CLASS "H".

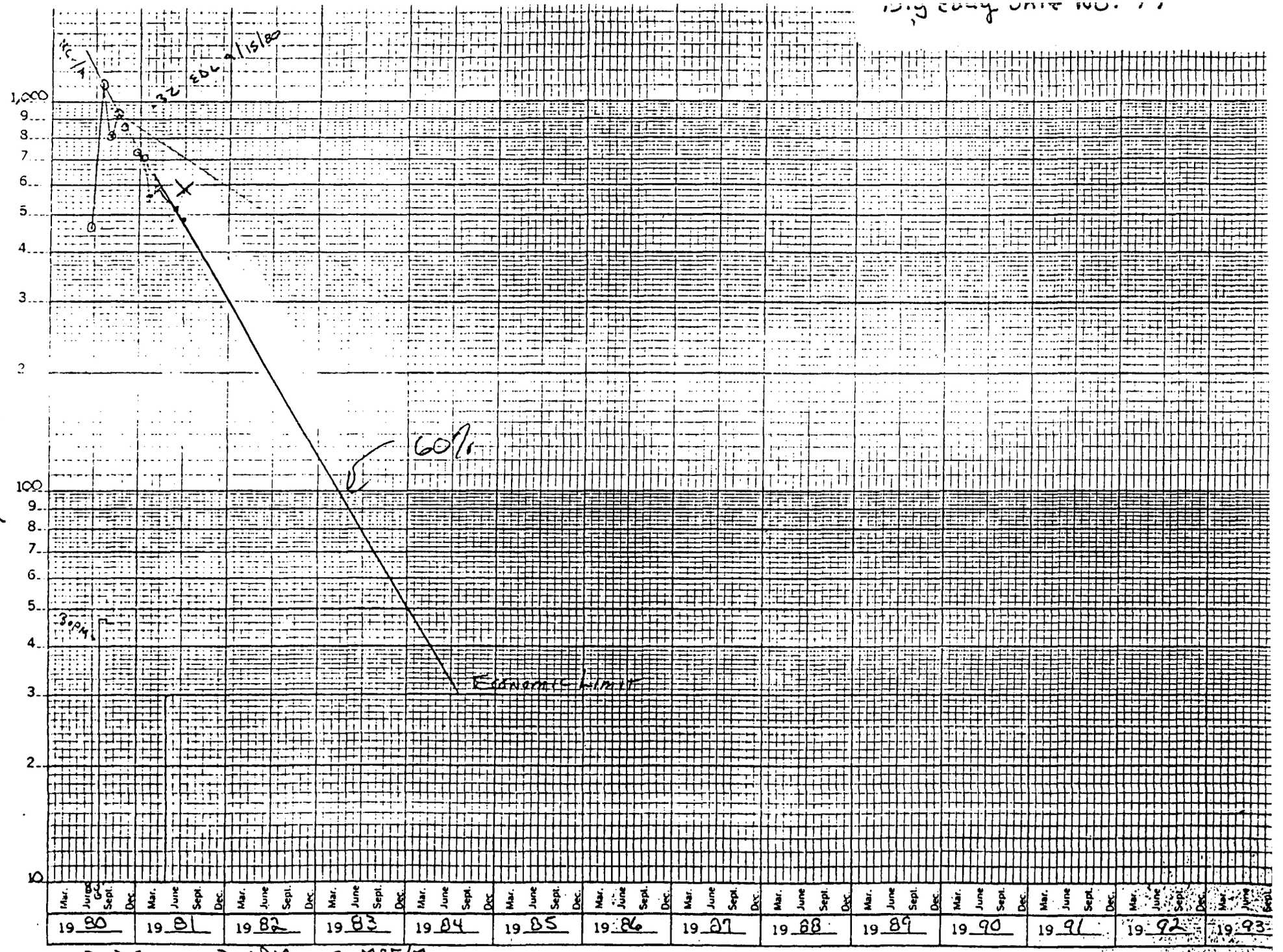
FIELD: Southwest Indian Ft. Basin COUNTY:

OPERATOR:

LEASE: Big Eddy Unit # 77 BTY. NO.

WELLS:

	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.
Jan.						
Feb.						
March						
April						
May						
June	1	0		46,306	46306	0
July	1	0		111,027	157333	0
August	1	47		80,755	238088	0
Sept.	1	46		92,524	330612	0
Oct.	1	0		86,731	417343	0
Nov.		0		76,304	493647	114
Dec.		0		72,596	566243	109
Yearly Total						
1981						
Jan.	1	0		66844	633087	0
Feb.	1	0		56,013	689100	0
March	1	0		57,986	747086	0
April	1	0		51,497		77
May	1	30		48,407		73
June						
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						
Jan.						
Feb.						
March						
April						
May						
June						
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						


BOPM ; BWPM
1,000
100
10
60%
Economic limit
3 BOPM
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
— BOPM --- BWPM ⊖ MCF/Mo.

71

K

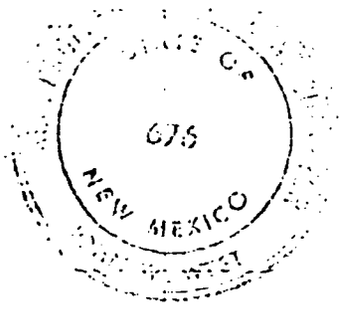
Eddy

320

Morrow

WILDCAT

Unit



1980

ILLEGIBLE

Gene Young

GENE YOUNG

Engineer Assistant

Perry R. Bass

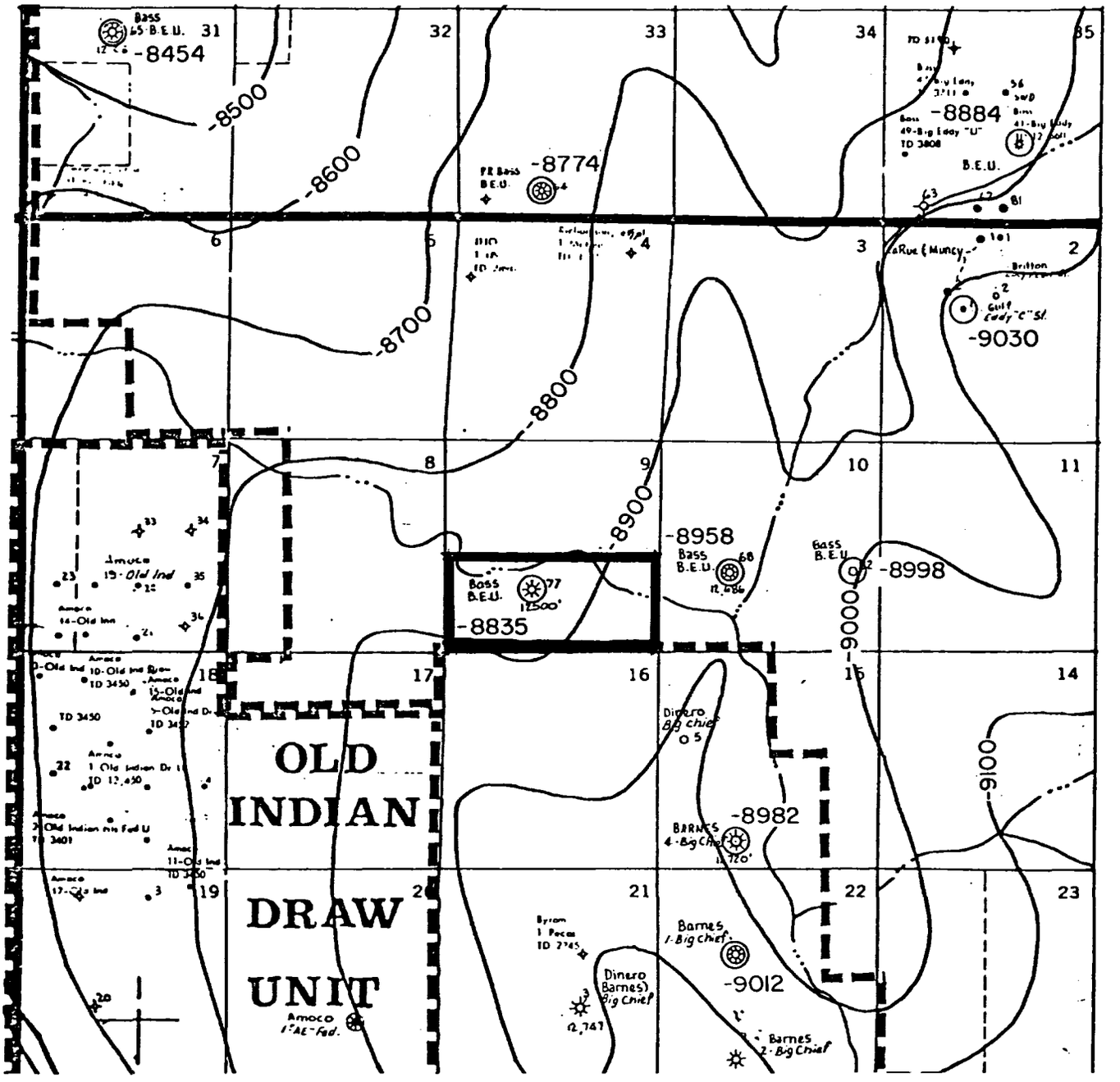
June 5, 1979

5 - 24 - 79

STRUCTURE MAP : TOP MIDDLE MORROW

Proposed 320 acre Morrow "E" Participating Area

Scale - 1" = 4,000'



G.A.H. 12/81

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

November 16, 1981

UNITED STATES GEOLOGICAL SURVEY
P. O. Box 26124
Albuquerque, New Mexico 87125

365

COMMISSIONER OF PUBLIC LANDS
P. O. Box 1148
Santa Fe, New Mexico 87501
Attention: Ray Graham

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

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

Gentlemen:

In accordance with with the provisions of Section 11 of the Big Eddy Unit Agreement dated April 10, 1952, we hereby submit the attached materials covering the Wells listed below to support our recommendation that such following Wells be determined to be non-commerical and thereby not receive Participating Areas, and be produced on a lease basis.

Big Eddy Unit Well #65 Well-Morrow - located 1980' FWL and 660' FNL, Section 31, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #65-Atoka - located 1980' FWL and 660' FNL, Section 31, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #64-Strawn - located 1980' FWL and 660' FSL, Section 33, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #66-Morrow - located 2130' FWL and 1980' FSL, Section 25, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #68-Morrow - located 1980' FSL and 1780' FWL, Section 10, T22S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #71-Atoka - located 1980' FWL and 1980' FNL, Section 7, T22S-R29E, Eddy County, New Mexico.

Big Eddy Unit Well #74-Atoka - located 660' FNL and 1980' FEL, Section 25, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #80-Morrow - located 2538' FNL and 660' FEL, Section 3, T21S-R28E, Eddy County, New Mexico.

Big Eddy Unit Well #65 which was completed in the Morrow and Atoka Formations, is now completed and producing from the Strawn Formation. The Big Eddy Unit Well #79-Y, located 1980' FSL and 1930' FEL, Section 21, T21S-R28E, Eddy County, New Mexico, was completed in the Morrow Formation. At the present time, we have not accumulated a sufficient production history in which to determine whether the aforementioned Wells are commercial. We anticipate obtaining the necessary data in the very near future.

If you should have any questions regarding the data submitted for the Commercial Determinations on the above named Wells, please contact Steve Rowland in our Midland Office, whose telephone number is (915) 684-5723.

Sincerely,

JENS HANSEN
Division Landman

JH:ep

BIG EDDY UNIT NO. 65

Big Eddy Unit No. 65 was originally completed in the Morrow formation in September, 1979. The Morrow was acidized with 2500 gallons 7-1/2% MSR acid and potentialed at 1.573 MMCFPD. The Morrow produced a cumulative of 130 MMCF. The well was then recompleted to the Atoka in January, 1981. The Atoka was acidized with 3500 gallons 7-1/2% MSR acid and potentialed at 540 MCFPD. The Atoka produced a cumulative of 5.7 MMCF. The well is presently completed in the Strawn formation. After 2500 gallons 20% MSR 100 acid, the well potentialed at 15.5 MMCFPD and is presently making 280 MCFPD and 26 BOPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 65 FORMATION MORROW

LOCATION 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 9/79 INIT. PROD. DATE 9/79

PERFORATIONS 11,631', 11,633', 11,634', 11,635', 11,648', 11,650', 11,691', 11,694', 11,695', 11,708', 11,719', 11,721', 11,723, 11,725', 11,727', 11,728', 11,729', 11,762', 11,765', 11,771'

STIMULATION:

ACID with 2,500 gallons 7 1/2% MSR acid

FRACTURE 24,000 gallons gelled water, 4,000# 100 mesh sand and 18,500# 20-40 mesh sand

POTENTIAL CAOF 1,573 MCFPD

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

VOLUMETRIC CALCULATION

	FORMATION	
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	320	
Porosity (Ø), %	7	
Water saturation (Sw), %	25	
Net thickness (h) >6% Ø & <40% Sw, ft	17	
Temperature (T), °F	170	

Bottomhole pressure (P), psia 5,200

Recovery factor (RF), (80 assumed) .8

Recoverable gas, MCF (See eq. below) 3,184,828

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A)(n)(RF)(Bgi) where

$$Bgi = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu\ Ft}\right) = 0.03535 \frac{(5200)}{(.92)(630)} = .32$$

PERFORMANCE DATA

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

(Cumulative production to 12 / 31 /81 ; 130,180 MCF.

Current rate (qi), _____ MCF/mo

Economic limit (ql), 3000 MCF/mo

Decline rate, dy _____ %

Remaining gas (Q) = _____ MCF

Ultimate Recoverable Gas _____ MCF

Depleted

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-\ln\ (1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)		COND (BBLS)
Gas sand previously produced	130,180		57
Sand perforated	0	(1)	0
Sand not perforated, but potentially productive	0	(2)	0
Total recoverable gas	130,180		57

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ECONOMIC

*Well Cost $ 1,031,314 (to the depth of formation completed)

Recompletion Cost $ 0

TOTAL COST $ 1,031,314

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + (Oil Price)(Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac)

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).75)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

$2.84/MCF → $2.17/MCF

**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	20% DISCOUNT FACTOR		DISCOUNTED CASH FLOW
zero	---	---	---	0	1.0000	1,031,314
1979	83,887	182,034	8,000	1	0.9129	158,876
1980	46,293	100,456	24,000	2	0.7607	58,160
198					0.6339	
198					0.5283	
198					0.4402	
Remainder					0.3669	
						- 814,278

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

UNECONOMICAL

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual — 5-29-79

Company: Perry R. Bass — Connection: None

Pool: Undesignated — Formation: Morrow — Unit: Big Eddy Unit

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
5-29-79	12,108	12,024	3149 KB	Big Eddy

Csg. Size	Wt.	d	Set At	Perforations	Well No.
5½	17		12024	From 11638 To 11770	65
Tbg. Size	Wt.	d	Set At	Perforations	Unit / Sec. / Twp. / R
2 3/8	4.7		11420	From -- To --	C / 31 / 21S / 28

Type Well – Single – Bradenhead – G.G. or G.O. Multiple	Packer Set At	County
Single	11,420	Eddy

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Barometer Press. – P_a	State
Tubing	191 @ 11447	68	13.2	New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11,420	11,420	.65	0	0	0	0	4.026	Flange

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							3702				
1.	4.026		1.0	240	14	90	3469	72	Packer		60 Min.
2.	4.026		1.0	330	19	116	3414	74	in		60 Min.
3.	4.026		1.0	332	28	120	3345	75	Well		60 Min.
4.	4.026		1.0	620	38	110	1829	76			60 Min.
5.	4.026		1.0	625	48	88	1461	74			60 Min.

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.753	59.54	253.2	.9723	1.240	1.023	349
2	4.753	80.75	343.2	.9583	1.240	1.027	468
3	4.753	98.31	345.2	.9469	1.240	1.028	577
4	4.753	155.12	633.2	.9551	1.240	1.031	918
5	4.753	175.02	638.2	.9741	1.240	1.057	1062

NO.	P_t	Temp. °R	T_t	Z
1	.38	550	1.47	.955
2	.51	576	1.53	.948
3	.52	580	1.55	.947
4	.95	570	1.52	.906
5	.95	548	1.46	.895

Gas Liquid Hydrocarbon Ratio ____ Mcf/

A.P.I. Gravity of Liquid Hydrocarbons ____ °

Specific Gravity Separator Gas .65 — XXXXXXXXX

Specific Gravity Flowing Fluid XXXXX

Critical Pressure 670 P.S.I.A. — P.S.I.

Critical Temperature 375 °R

P_c 4892.2 P_c^2 23934

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		4603.2	21189	2745
2		4132.2	17075	6859
3		3773.2	14237	9697
4		3249.2	10557	13377
5		2818.2	7943	15991

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.4967 $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.4808

AOF = $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1573

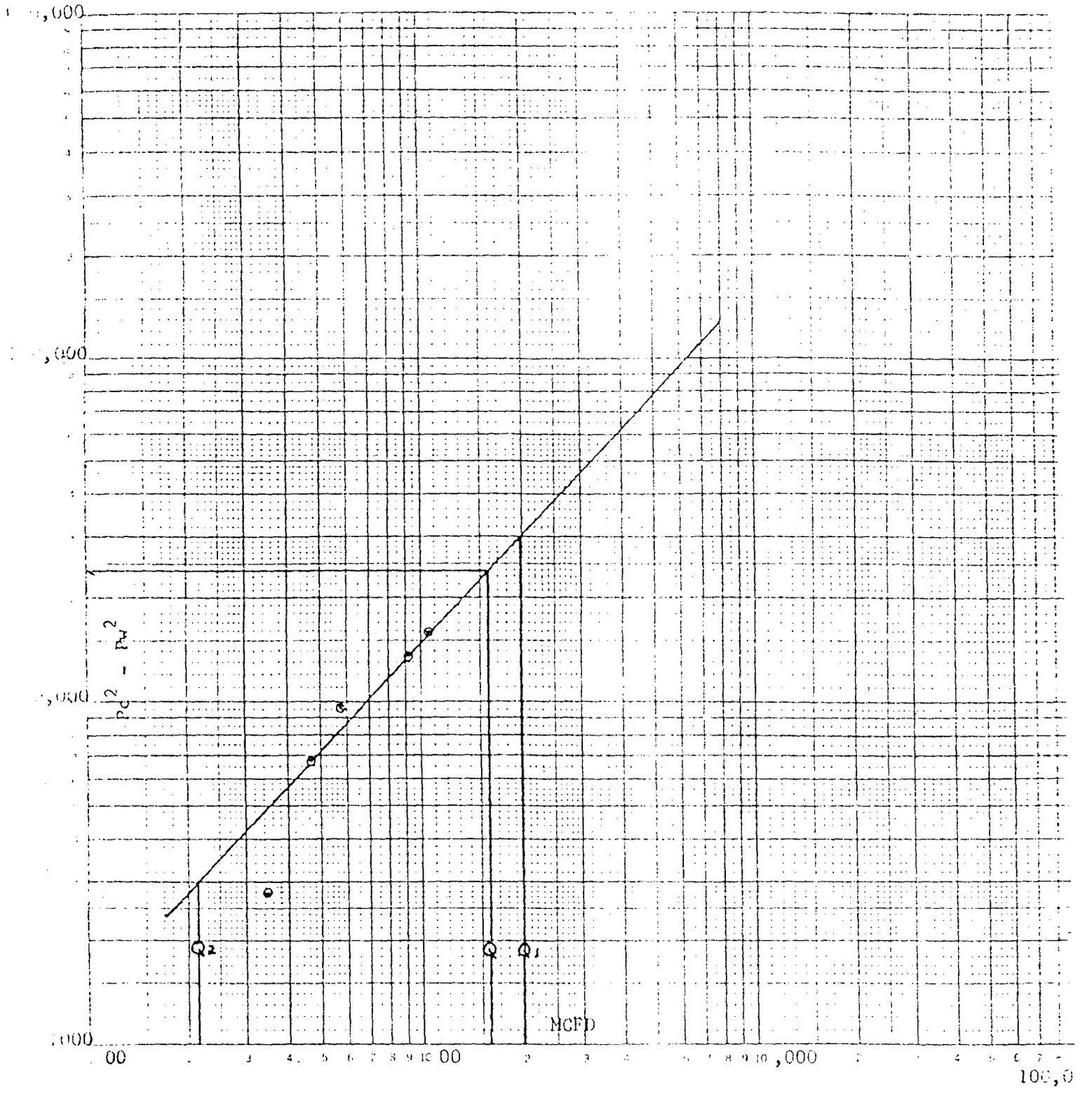
Absolute Open Flow 1573 Mcfd — Angle of Slope 46° — Slope, n .97

Remarks: Pw Substituted for Pt measured with Amerada Instrument No. 37209 - 0-7300 Element

Approved by Commission: — Conducted By: Pyle — Calculated By:

ILLEGIBLE

PERRY R. BASS
Big Eddy 65
Absolute Open Flow Test
5-29-79



ILLEGIBLE

Q_1 = 1,980 Log Q_1 = 3.29667

Q_2 = 210 Log Q_2 = 2.32222

n = .97445

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

FEB 2 [illegible]

Form C-102
Supersedes
Effective

All distances must be from the outer boundaries of the Section

Operator		Lease	Well No.
Perry R. Bass		Big Eddy Unit	65
Unit Letter	Section	Township	Range	County
C	31	21 S	[illegible]	Eddy

Actual Footage Location of Well:
660 feet from the North line and 1980 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3132.4 GL	Atoka	Undesignated	316 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

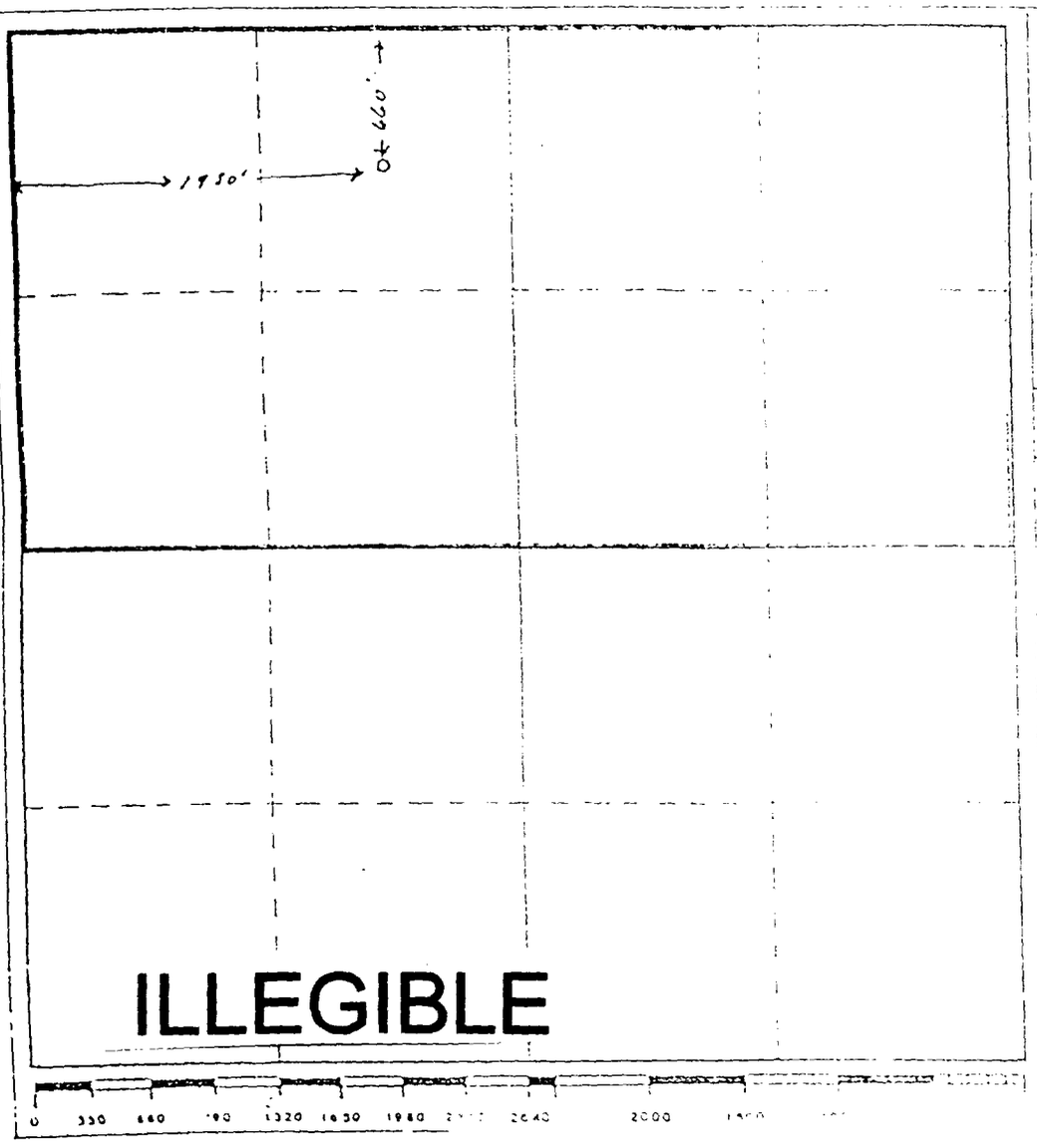
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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, forced-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.



ILLEGIBLE

CERTIFICATION

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

H. F. Wurtz, Jr.

Name
H. F. Wurtz, Jr.

Position
Senior Production Clerk

Company
Perry R. Bass

Date
February 25, 1982

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

Registered Professional Engineer and/or Land Surveyor

Certificate No.

FIELD: E. CARLSBAD MORROW Wolfcamp COUNTY:

OPERATOR:

LEASE: BIG EDDY UNIT #65 BTY. NO. WELLS:

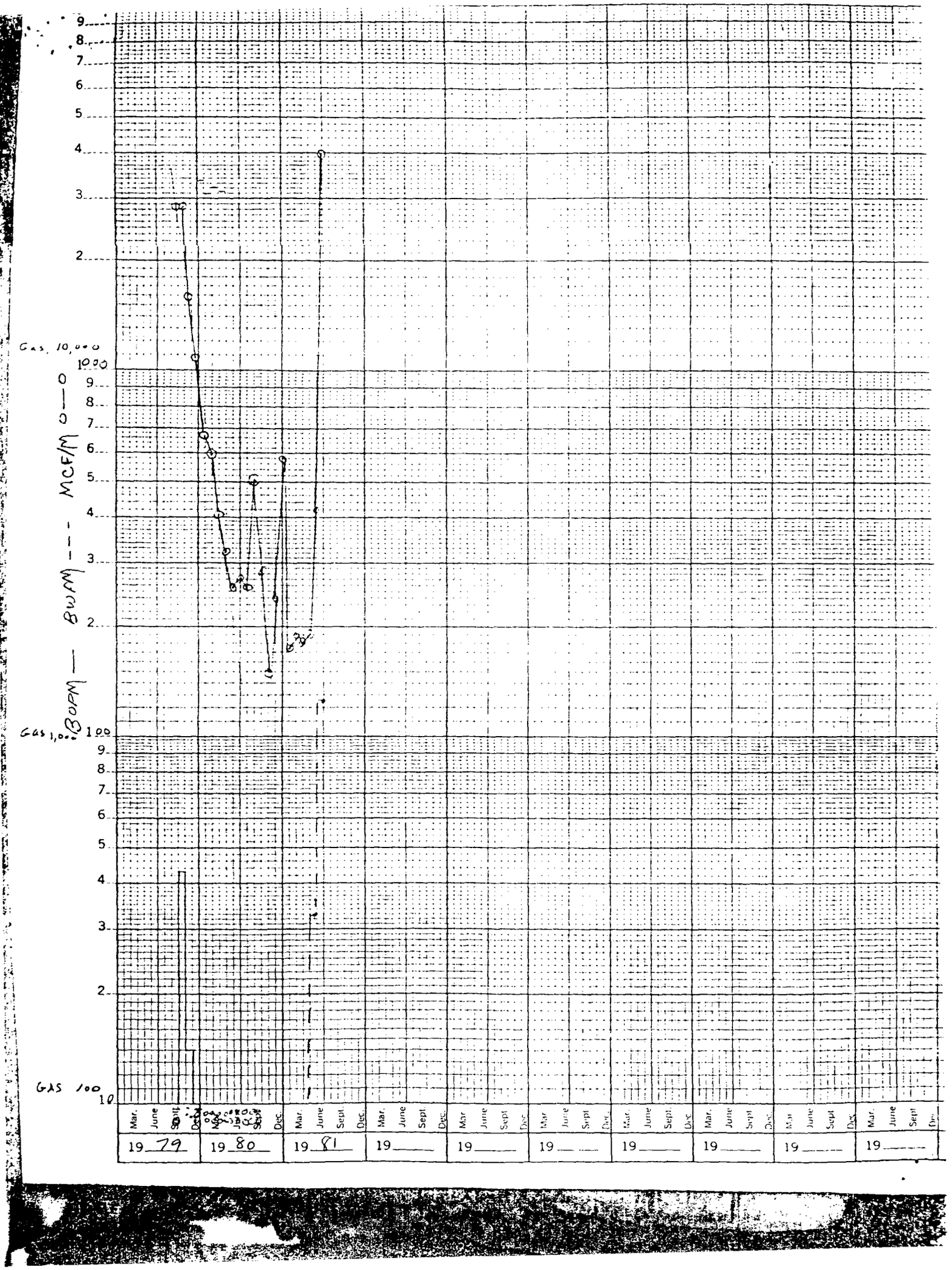
FIELD GAS OIL CONTACT: FIELD OIL WATER CONTACT:

1979	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.
Jan.						
Feb.						
March						
April						
May						
June						
July						
August						
Sept.		0		28,410		0
Oct.		43		27,558		0
Nov.	1	14	14	15,944		0
Dec.	1	0	14	10,977		0
Yearly Total		14	57	26,919	83,887	0

1980						
Jan.	1	0	14	6654		0
Feb.	1	0	14	9337		0
March	1	0	14	10755		0
April	1	0	57	8750	103,754	0
May	1	0		8444		0
June	1	0		7972		0
July	1	0		7571		0
August	1	0		7180		0
Sept.	1	0		2535		0
Oct.	1	0		1505		0
Nov.	1	0		2431		4
Dec.	1	0		5933		9
Yearly Total						

1981						
Jan.	1	0		1255		0
Feb.	1	0		1880		0
March	1	0		1822		0
April	1	0		1092		2
May	1	331		4172		6
June	1	1024		14,873		22
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						

ILLEGIBLE


Gas 10,000
1000
MCF/M — BURN — BOPM
Gas 1,000
100
GAS 100
10
Mar. June Sept. Dec.
19 79
19 80
19 81
19 19 19 19 19 19 19 19

WF

BASS ENTERPRISES PRODUCTION COMPANY

PAGE NO. ____

SUBJECT	DATE	DEPARTMENT	PREPARED BY
WELL SKETCH	5-[illegible]-81		SDS

BIG EDDY UNIT #65
EAST CARLSBAD ATOKA

ELEV: 3131.4' GL
3149 RKB

SPUD: 3-8-79
COMP: 5-22-79
PLUG BACK: 1-17-81

498' - 11¾" ODCSA 42#, H-40, ST&C
CMTD. w/ 300 sx. Circ. 30 sxs.

DV TOOL @ 1164'
CMT. w/ 200 sx HOWCO LITE TAILED WITH 100 sxs CLASS "C" circ. 26 sxs.

2870' - 8⅝" ODCSA 24 & 28# S-80 & K-55 ST&C CMTD. w/ 300 sxs HOWCO LITE, TAILED 100 sxs CLS "C" circ. 60 sxs through tool.

Tag	2229.15
ess Csg	2866.10
8rd Csg	4578.66
ess Csg	1184.39
ess Csg	1799.67
ess Box X LT&C 8rd Pin	34.78
Box X Buttress Pin	40.86
ess X LT&C 8rd Pin	41.54

TOC @ 1808'

2⅜" OD 4.7# N-80 w/ ABC MOD CPL.

OTIS Packer @ 10,469'

PBTD 10,850'

Straddle Perfs 10,549' - 10,668' (25 shots)

1-17-81 ATOKA PERFS @ 10,992' - 11,372'

½ ft.³ CMT ON TOP OF PKR

OTIS 5½" Perma Drill PKR 2.75" ID @ 11,420'

11,441' - OTIS "X" NIPPLE 1.875" profile

11,450' - OTIS "XN" NIPPLE 1.875" profile
1.791 NO-GO. (WITH "XX" PLUG 1-14-81)

5-11-79 Acid Morrow @ 11,630' - 11,770'

PBTD @ 12,054'

12,109' - 5½" ODCSA 17# N-80 BUTTRESS CMTD. w/ 200 sxs Lite & 300 sxs. Cls. "H"

TD 12,109'

BIG EDDY UNIT NO. 65

Big Eddy Unit No. 65 was originally completed in the Morrow formation in September, 1979. The Morrow was acidized with 2500 gallons 7-1/2% MSR acid and potentialed at 1.573 MMCFPD. The Morrow produced a cumulative of 130 MMCF. The well was then recompleted to the Atoka in January, 1981. The Atoka was acidized with 4500 gallons 7-1/2% MSR acid and potentialed at 540 MCFPD. The Atoka produced a cumulative of 5.7 MMCF. The well is presently completed in the Strawn formation. After 2500 gallons 20% MSR 100 acid, the well potentialed at 15.5 MMCFPD and is presently making 280 MCFPD and 26 BCPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 65 FORMATION ATOKA

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 1/81 INIT. PROD. DATE 1/24/81

PERFORATIONS 10,990', 10,991', 11,151', 11,155', 11,159', 11,253', 11,259', 11,347', 11,372'

STIMULATION:

ACID 10,990'-11,372' with 4,500 gallons 7 1/2% MSR acid

FRACTURE

POTENTIAL CAOF 540 MCFPD

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

VOLUMETRIC CALCULATION

	FORMATION	
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres		
Porosity (Ø), %		
Water saturation (Sw), %		
Net thickness (h) > 6% Ø & ≤ 40% Sw, ft		
Temperature (T), °F		

Bottomhole pressure (P), psia _____

Recovery factor (RF), (80. assumed) _____

Recoverable gas, MCF (See eq. below) _____

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A)(h)(RF)(Bgi) where

$$Bgi = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu\ Ft}\right) = 0.03535 \frac{(\quad)}{(\quad)(\quad)}$$

PERFORMANCE DATA

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

(Cumulative production to Depleted /_____/8 ; 5,695 MCF.

Currentrate (qi),_____MCF/mo

Economic limit (ql), 3000 MCF/mo Depleted

Decline rate, dy _____%

Remaining gas (Q) = _____MCF

Ultimate Recoverable Gas _____MCF

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-\ln\ (1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)	COND (BBLS)
Gas sand previously produced	0	0
Sand perforated	0 (1)	0
Sand not perforated, but potentially productive	0 (2)	0
Total recoverable gas	5,695	0

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ECONOMIC

*Well Cost $ 996,356 (to the depth of formation completed)

Recompletion Cost $ 0

TOTAL COST $ 996,356

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + {(Oil Price)(Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac}

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).7)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	20% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
zero	---	---	---	1.0000	- 996,356
1981	5,695	12,358	8,000	0.9129	3,978
198				0.7607	
198				0.6339	
198				0.5283	
198				0.4402	
Remainder				0.3669	
					- 992,378

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

UNECONOMICAL

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 7-1-67

Type Test: [X] Initial [ ] Annual [ ] Special — Date: 1-20-81

Company: PERRY R. BASS	Connection: AIR	
Pool: EAST CARLSBAD	Formation: ATOKA	Unit: C

Completion Date	Total Depth	Plug Back TD	Elevation	Unit or Farm Name
1-17-81	12108	11450	3131 GL	BIG EDDY UNIT

Csg. Size	Wt.	d	Set At	Perforations	Well No.
5½	17#		12021	From 10990 To 11372	# 65

Tbg. Size	Wt.	d	Set At	Perforations	Unit	Sec.	Twp.	Rge.
2 3/8	4.7 n/80		11420	From		C	31	21s 28e

Type Well – Single – Bradenhead – G.G. or G.O. Multiple	Packer Set At	County
SINGLE GAS WELL	10,850	EDDY

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Barometric Pressure – Pa	State
TUBING	183° 10850	60°	13.2	NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
10919	10919	.5992	.891	1.390			4"	FLANGE

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					1720				72 hrs.
1.	4 X .500	440	2.0	58	1650				45 min.
2.	4 X 1.000	440	2.0	49	1545				1 hr.
3.	4 X 1.000	450	7.0	39	1220				1 hr.
4.	4 X 1.000	454	12.0	50	710				1 hr.
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	1.182	30.11	453.2	1.002	1.292	1.041	48
2	4.753	30.11	453.2	1.011	1.292	1.044	195
3	4.753	56.94	463.2	1.021	1.292	1.040	375
4	4.753	74.88	467.2	1.010	1.292	1.045	485
5							

NO.	P_t	Temp. °R	T_t	Z
1	.68	518	1.45	.923
2	.68	509	1.42	.917
3	.69	499	1.39	.909
4	.70	510	1.42	.915
5				

Gas Liquid Hydrocarbon Ratio: dry Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons: Deg.

Specific Gravity Separator Gas: .5992 XXXXXXXX

Specific Gravity Flowing Fluid: XXXXX

Critical Pressure: 671 P.S.I.A. P.S.I.A.

Critical Temperature: 358 °R °R

P_c * 1779.1 P_c^2 3165.1

NO	BHP	P_w	P_w^2	$P_c^2 - P_w^2$
1	2186.2	1707.8	2916.5	248.6
2	2018.2	1578.4	2491.3	673.8
3	1576.2	1240.0	1537.7	1627.4
4	881.2	702.4	493.3	2671.8
5	2280.2	S.I.P.		

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.185 (3) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.114

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = .540

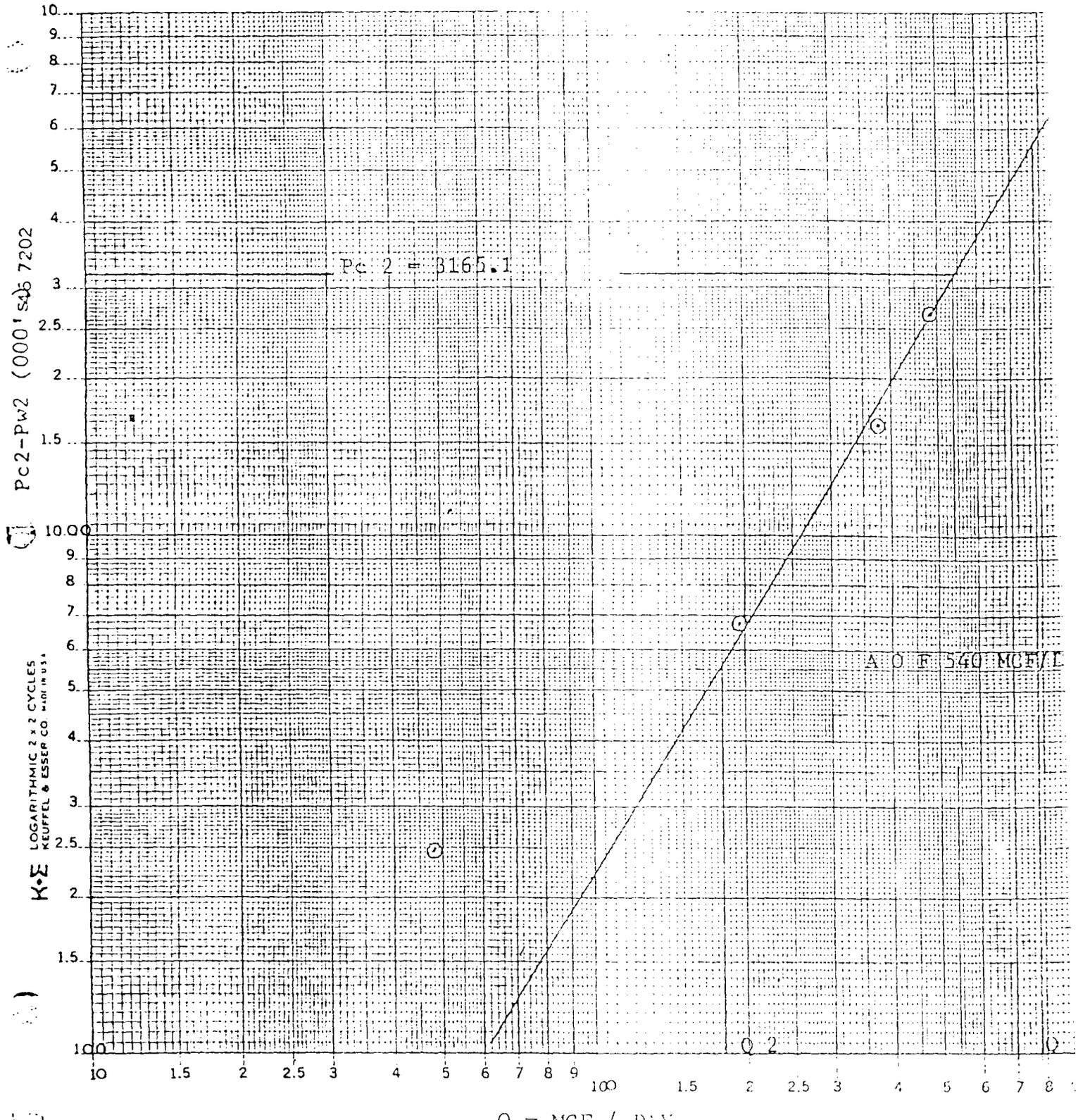
Absolute Open Flow: 540 Mcfd @ 15.025 Angle of Slope θ: 57.5 Slope, n: .637

Remarks: * CALCULATED FROM BOTTOM-HOLE PRESSURE TAKEN AT 10,919 feet.

ILLEGIBLE

Approved By Commission:	Conducted By:	Calculated By:
	DAVIS SERVICES INC. RICK PAGAN	

COMPANY : PERRY R. BASS
LEASE : BIG EDDY UNIT
WELL NO. : # 65
UNIT : C /sec.31/twp.21s/rge.28e
COUNTY : EDDY
STATE : NEW MEXICO
DATE : JANUARY 20, 1981



Q = MCF / DAY

Q 1= 780; LOG OF Q 1= 2.892095

Q 2= 180; LOG OF Q 2= 2.255273

N = .637

θ = 57.5°

ILLEGIBLE

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-
Effective 1-

All distances must be from the outer boundaries of the Section

Operator			Lease	Well No.
Perry R. Bass				65
Unit Letter	Section	Township	Range	County
C	31	21 S		Eddy

Actual Footage Location of Well:
660 feet from the North line and 1980 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3132.4 GL	Atoka	To be Prorated	316 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

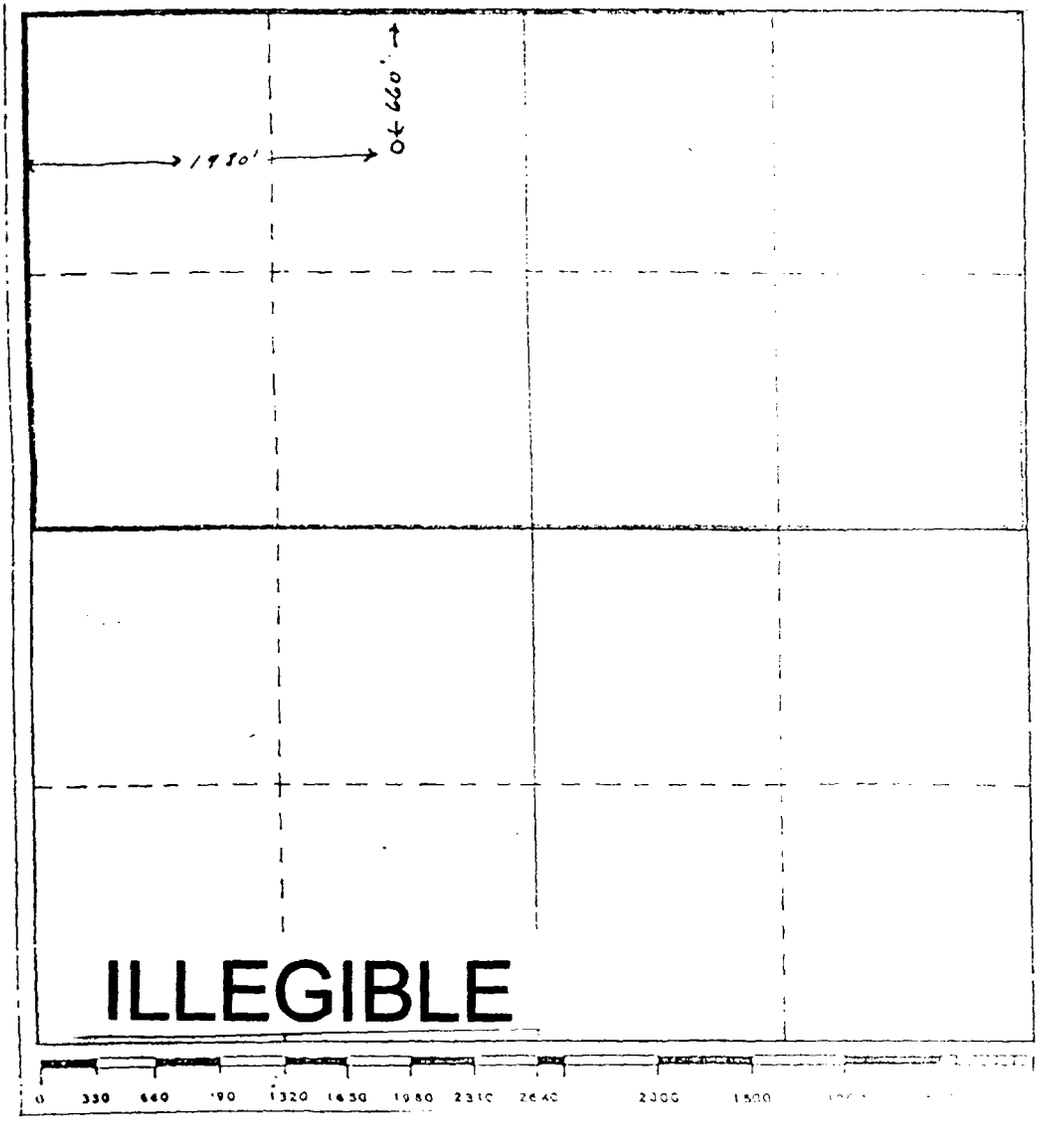
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

XX 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.

H. F. Wurtz, Jr.

Name: H. F. Wurtz, Jr.

Position: Senior Production Clerk

Company: Perry R. Bass

Date: February 25, 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

Registered Professional Engineer and/or Land Surveyor

Certificate No.

FIELD: E. LAKESBAD MORROW [illegible] COUNTY: _____

OPERATOR: _____

LEASE: BIG EDDY UNIT #65 BTY. NO. _____ WELLS: _____

FIELD GAS OIL CONTACT: _____ FIELD OIL WATER CONTACT: _____

1979	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.
Jan.						
Feb.						
March						
April						
May						
June						
July						
August						
Sept.		0		3,410		0
Oct.		43		2,558		0
Nov.	1	14	57	15,971		0
Dec.	1	0	57	10,977		0
Yearly Total		14	57	26,919	83,887	0

1980						
Jan.	1	0	14	6054		0
Feb.	1	0	14	4937		0
March	1	0	14	4955		0
April	1	0	57	3220	103,754	0
May	1	0		2405		0
June	1	0		2470		0
July	1	0		2571		0
August	1	0		2450		0
Sept.	1	0		2235		0
Oct.	1	0		1505		0
Nov.	1	0		2431		4
Dec.	1	0		5933		9
Yearly Total						

1981						
Jan.	1	0		1755		2
Feb.	1	0		1880		0
March	1	0		1822		0
April	1	0		1092		2
May	1	331		4172		6
June	1	1024		14,373		22
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						

ILLEGIBLE

BASS ENTERPRISES PRODUCTION COMPANY

SUBJECT

Well Sketch

PAGE NO.

PREPARED BY

SDS

BIG EDDY UNIT

EAST CARLSBAD

ELEV: 3131.4' GL

3149 RKB

DV TOOL @ 1164'

CMT. W/200 SX HOWCO LITE TAILED

WITH 100 SXS CLASS "C" CIRC. 26 SXS.

C Csg	2229.15
tress Csg	2866.10
&C 8rd Csg	4578.66
tress Csg	1184.39
tress Csg	1799.67
tress Box X LT&C 8rd Pin	34.78
C Box X Buttress Pin	40.86
tress X LT&C 8rd Pin	41.54

2 3/8" OD 4.7# N-80 w/ AEC MOD CPL.

Otis Packer @ 10,429'

PBTD 10,850'

½ ft.³ CMT ON TOP OF PKR

Otis 5½" Perma Drill PKR 2.75" ID @ 11,420'

5-11-79 Perf Morrow @ 11,630'-11,770'

PBTD @ 12,024'

TD 12,104'

RUE: 3-8-79

COMP: 5-20-79

FWG SHUT: 1-17-81

1798'- 11¾" 42# H-40, ST&C CMTD. W/ 300 SX. CIRC. 20 SXS.

2870'- 8⅝" 00CSA 24 & 28# S-80 & K-55 ST&C CMTD. W/ 200 SXS HOWCO LITE TAILED 100 SXS CLS "C" CIRC. 60 SXS through tool.

TOC @ 7600'

Morrow PERFS 10,599'- 10,668' (25 SHOT

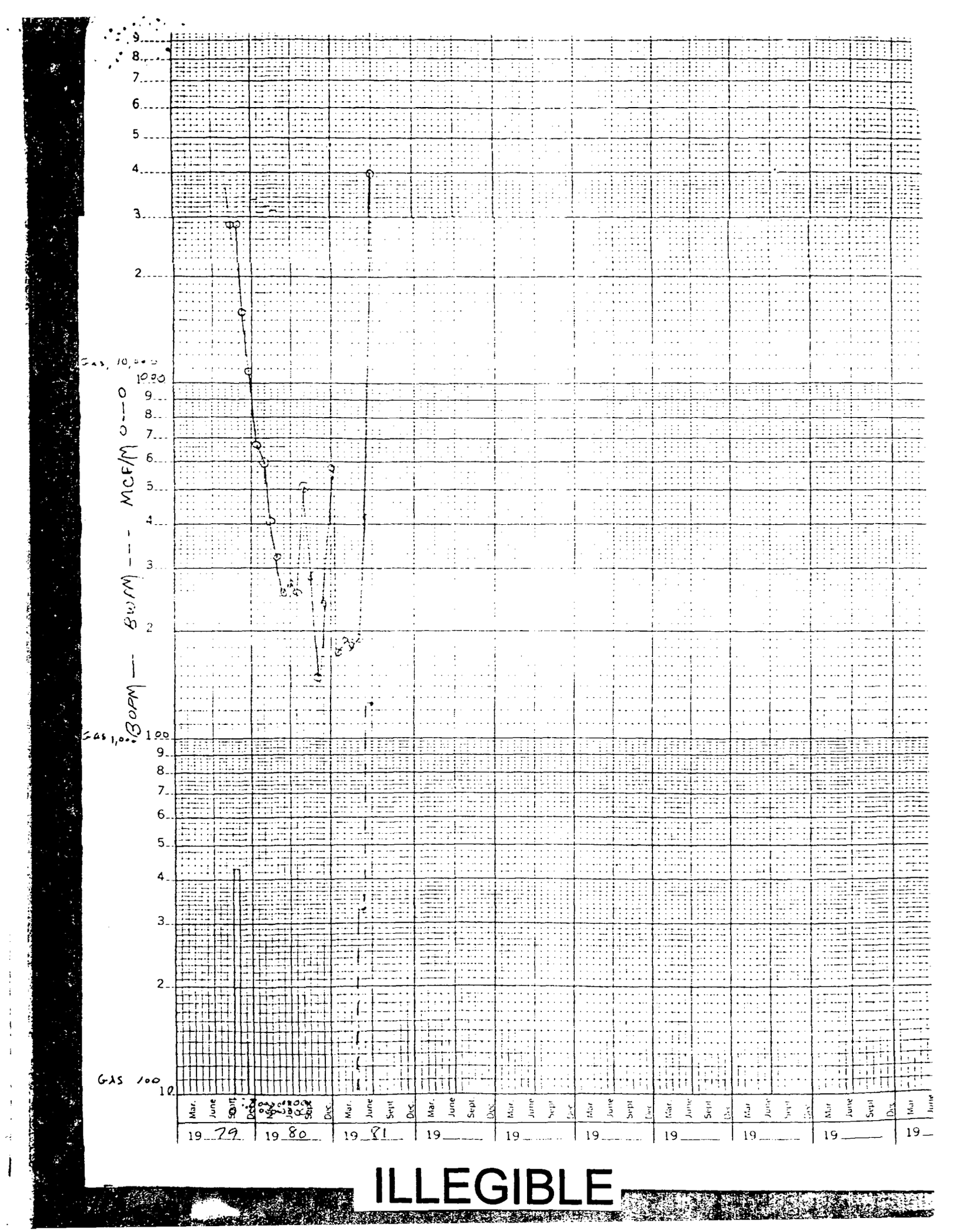
1-17-81 ATOKA PERFS @ 10,992'- 11,312'

11,411'- OTIS 'X' NIPPLE 1.875" profile

11,450'- OTIS 'XN' NIPPLE 1.875" profile 1.791 NO-GO. (WITH 'XX' PLUG IN

11,485'- 5½" 00CSA 17# N-80 BUTTRESS CMTD. W/ 200 SXS. Lite & 300 SXS. CL. "H"

ILLEGIBLE


Gas, 10,000 — MCF/M — Water — BOPM — Gas 1,000
Gas 100
Mar. June Sept Dec.
19 79
19 80
19 81
19 ____

ILLEGIBLE

BIG EDDY UNIT NO. 64

Big Eddy Unit No. 64 had its initial and only completion in the Strawn horizon. The well was acidized with 3000 gallons 20% MSR acid and potentialed at 1.628 MMCFPD. The well was placed on line at 550 MCFPD and 20 BCPD. The present production is 150 MCFPD and 8 BCPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 64 FORMATION STRAWN

LOCATION N UNIT, 1980 FEET FROM W LINE & 660 FEET FROM S LINE,

SECTION 33, RANGE 28E, TOWNSHIP 21S, COUNTY EDDY NEW MEXICO.

SPUD DATE 5/15/80 COMPLETION DATE 7/12/80 INIT. PROD. DATE 11/3/80

PERFORATIONS 10,904', 10,905', 10,906', 10,907', 10,908', 10,909', 10,910'

STIMULATION:

ACID 3,000 gallons 20% MSR acid

FRACTURE

POTENTIAL CAOF 1,628 MCFPD

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

VOLUMETRIC CALCULATION

	FORMATION	
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	320	
Porosity (Ø), %	2	
Water saturation (Sw), %	60	
Net thickness (h) >6% Ø & <40% Sw, ft	6	
Temperature (T), °F	165	

Bottomhole pressure (P), psia 5,663

Recovery factor (RF), (80% assumed) .8

Recoverable gas, MCF (See eq. below) 192,696

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A)(h)(RF)(Bgi) where

$$Bgi = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu\ Ft}\right) = 0.03535 \frac{(5663)}{(.9)(625)} = .36$$

PERFORMANCE DATA

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

(Cumulative production to 6 / 30 /81; 65,256 MCF.

Current rate (qi), 4,000 MCF/mo

Economic limit (ql), 3000 MCF/mo

Decline rate, dy 72 %

Remaining gas (Q) = 9,427 MCF

Ultimate Recoverable Gas 74,683 MCF

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-\ln (1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)		COND (BBLS)
Gas sand previously produced	0		0
Sand perforated	74,683	(1)	3,247
Sand not perforated, but potentially productive	0	(2)	0
Total recoverable gas	74,683		3,247

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ECONOMIC

*Well Cost $ 1,150,432 (to the depth of formation completed)

Recompletion Cost $ 0

TOTAL COST $ 1,150,432

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + {(Oil Price)(Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac}

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).7)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

$3.20/MCF and .004 BBl/MCF → $2.98

**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST		20% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
zero	---	---	---	0	1.0000	1,150,432
1980	30,252	96,805	4,000	1	0.9129	84,722
1981	40,431	129,379	24,000	2	0.7607	80,162
1982	4,000	12,800	4,000	3	0.6339	5,578
198				4	0.5283	
198				5	0.4402	
Remainder				6	0.3669	
						-979,970

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

UNECONOMICAL

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special — Test Date: 07-15-80

Company: BASS ENTERPRISES	Connection: AIR	
Pool: UNDESIGNATED	Formation: STRAWN	Unit
Completion Date: 07-12-80	Total Depth:	Plug Back TD: 12359 — Elevation: KB 3166 — Farm or Lease Name: BIG EDDY
Csg. Size: 5½ — Wt.: 17# — d: — Set At: 12485 — Perforations: From 10904 To 10910 — Well No.: # 64		
Tbg. Size: 2 3/8 — Wt.: 4.7 — d: — Set At: 10804 — Perforations: From — To — Unit: — Sec.: 33 — Twp.: 21s — Rge.: 28e		
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE	Packer Set At: 10804	County: EDDY
Producing Thru: TBG.	Reservoir Temp. °F: 182° 10800	Mean Annual Temp. °F: 60 — Barom. Press. – P_a: 13.2 — State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
10800	10800	.666	.658	1.042			4"	FLG.

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					3625				72 HR.
1.	4 X 1.000	400	2.0	114	3400				1 HR.
2.	4 X 1.000	400	4.0	118	3320				1 HR.
3.	4 X 1.000	440	17.0	120	2810				1 HR.
4.	4 X 1.000	480	26.0	98	2000				4 HR.
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.753	28.75	413.2	.9518	1.225	1.033	165
2	4.753	40.65	413.2	.9485	1.225	1.033	232
3	4.753	87.77	453.2	.9469	1.225	1.034	500
4	4.753	113.24	493.2	.9653	1.225	1.043	664
5							

NO.	P_t	Temp. °R	T_r	Z
1	.62	574	1.50	.937
2	.62	578	1.51	.938
3	.68	580	1.52	.935
4	.74	558	1.46	.919
5				

Gas Liquid Hydrocarbon Ratio: 21.455 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 41 @ 60 Deg.
Specific Gravity Separator Gas: .666 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .817
Critical Pressure: 669 P.S.I.A. 665 P.S.I.A.
Critical Temperature: 382 R 431 R

P_c* 4351.3 P_c^2 18934.0

NO	BHP	P_w	P_w^2	$P_c^2 - P_w^2$
1	5453.2	4280.2	18319.8	614.2
2	5407.2	4240.8	17984.3	949.7
3	5106.2	3977.3	15818.6	3115.4
4	4208.2	3212.9	10323.0	8611.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 6.078 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 3.255

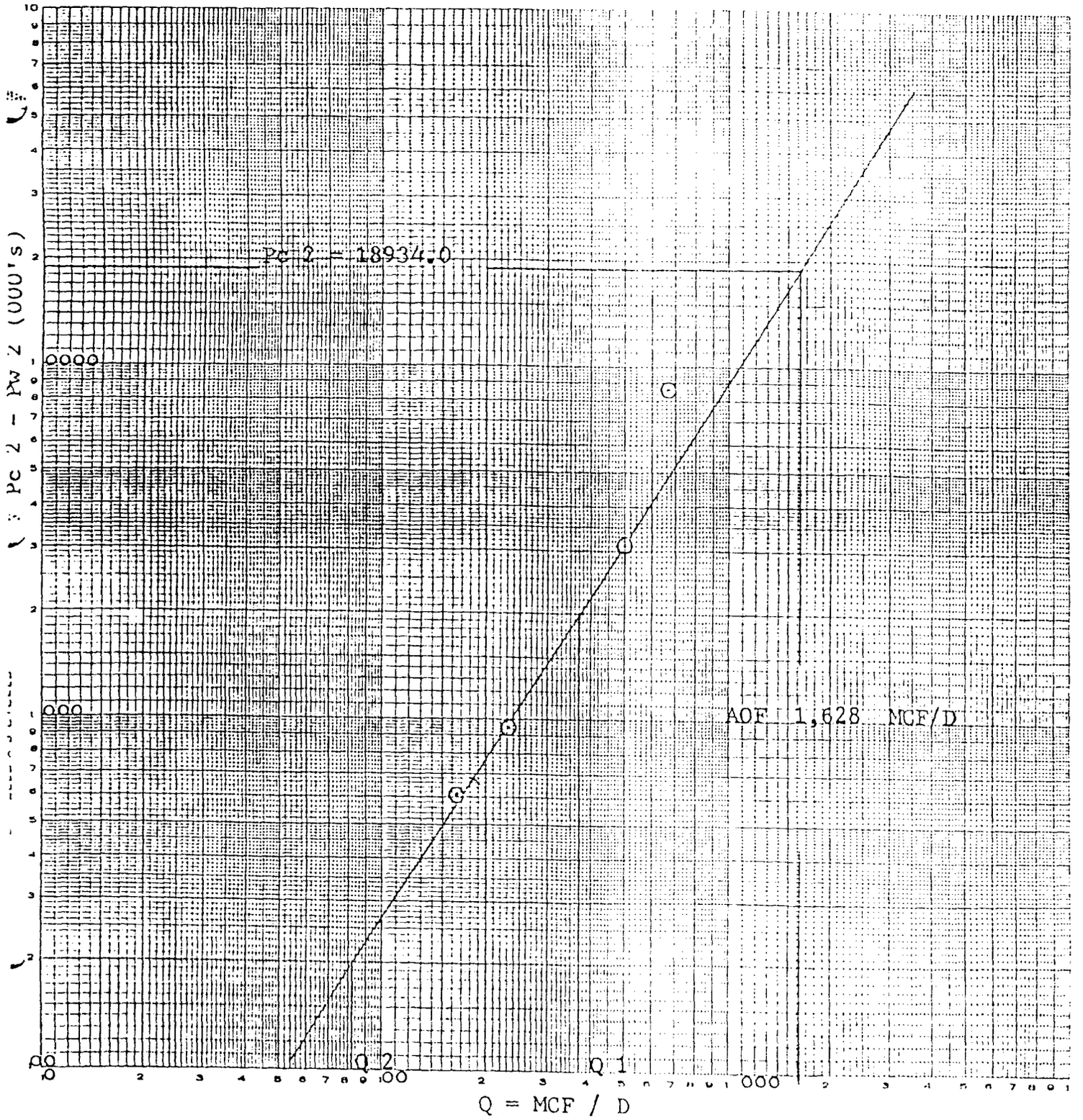
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.628

Absolute Open Flow: 1,628 Mcfd @ 15.025 — Angle of Slope θ: 56.75 — Slope, n: .654

Remarks: THE WELL PRODUCED 22.7 BBLS. OF H 2 0 and 6.9 BBLS. OF DISTILLATE DURING THE TEST.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	DAVIS SERVICES INC.	RICK PAGAN	

COMPANY : BASS ENTERPRISES & PRODUCTION
LEASE : BIG EDDY
WELL NO. : # 64
UNIT : /sec.33/ twp.21s/ rge. 28e
COUNTY : EDDY
STATE : NEW MEXICO
DATE : JULY 15,1980

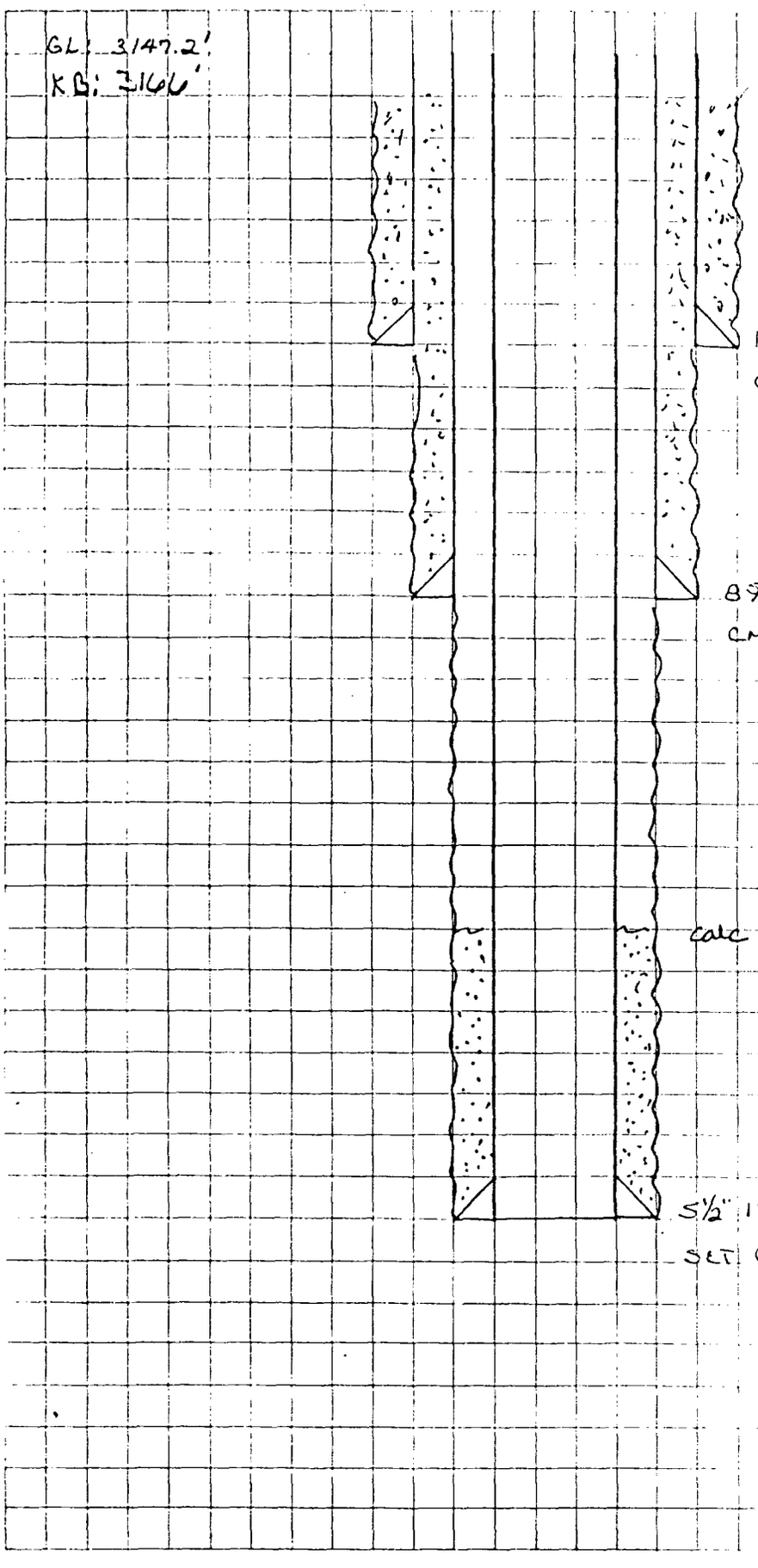


Q 1 = 370; LOG OF Q 1= 2.568202
Q 2 = 82; LOG OF Q 2= 1.913814
N = .654

BASS ENTERPRISES PRODUCTION COMPANY

PAGE NO. _____

SUBJECT	DATE	DEPARTMENT	PREPARED BY
Big Eddy Unit #64	7/7/80	Prod.	DAJ



FIELD: Eddy Undesignated Strawn COUNTY:

OPERATOR:

LEASE: Big Eddy Unit # 64 BTY. NO.

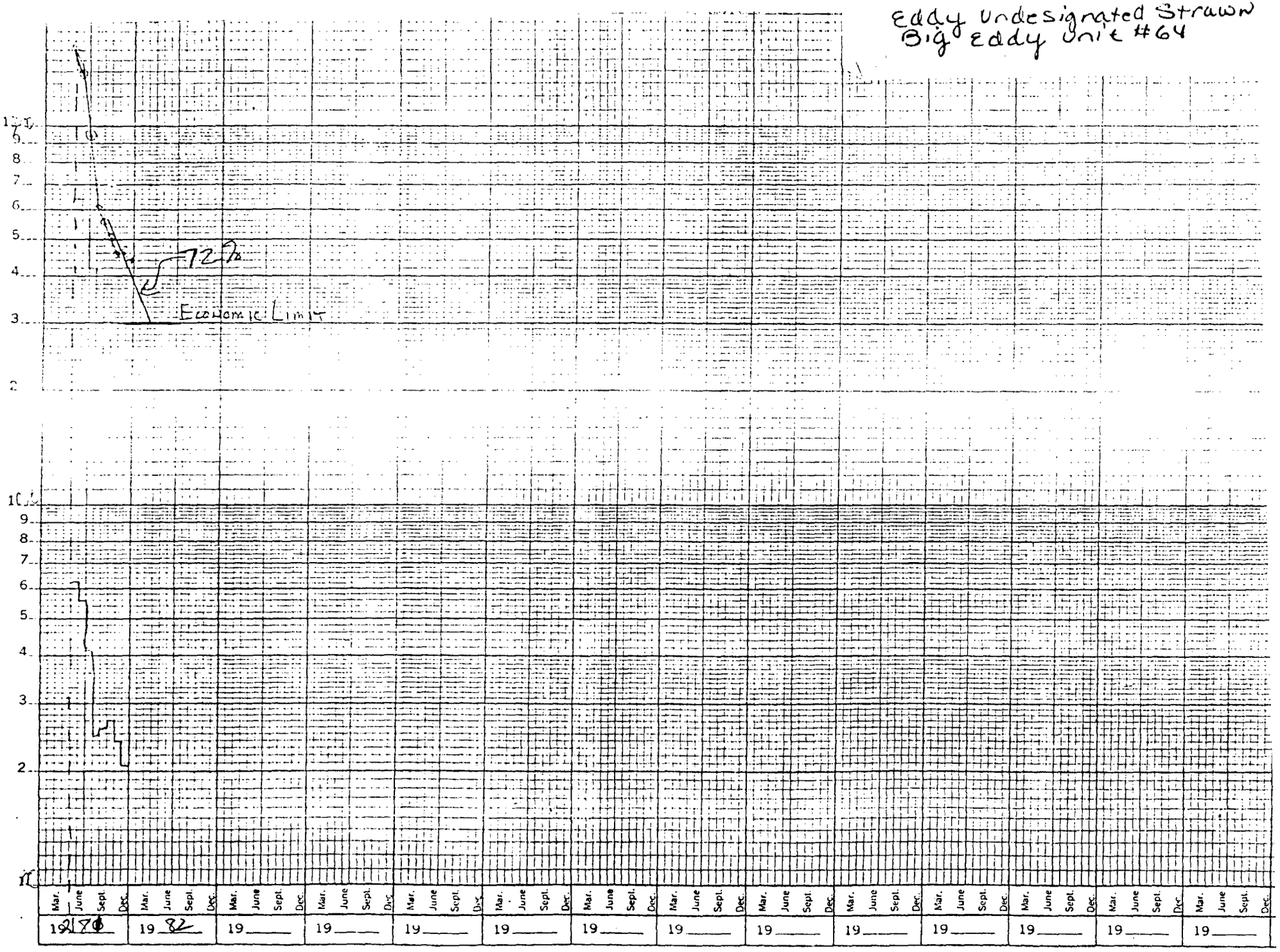
WELLS:

1980	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.
Jan.						
Feb.						
March						
April						
May						
June						
July						
August						
Sept.						
Oct.						
Nov.		623		16309		1646
Dec.		573		13943		21
Yearly Total						

1981						
Jan.	1	417		9049		0
Feb.	1	248		6176		0
March	1	259		5575		0
April	1	273		5095		8
May	1	240		4682		7
June	1	204		4427	65256	7
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						

Jan.						
Feb.						
March						
April						
May						
June						
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						

Eddy Undesignated Strawn
Big Eddy Unit #64



NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Perry R. Bass	Bi Teddy Unit	64

Unit Letter	Section	Township	Range	County
N	33	21 South	28 East	Eddy

Actual Footage Location of Well:
660 feet from the South line and 1980 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
3147.2	Strawn	Wildcat	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

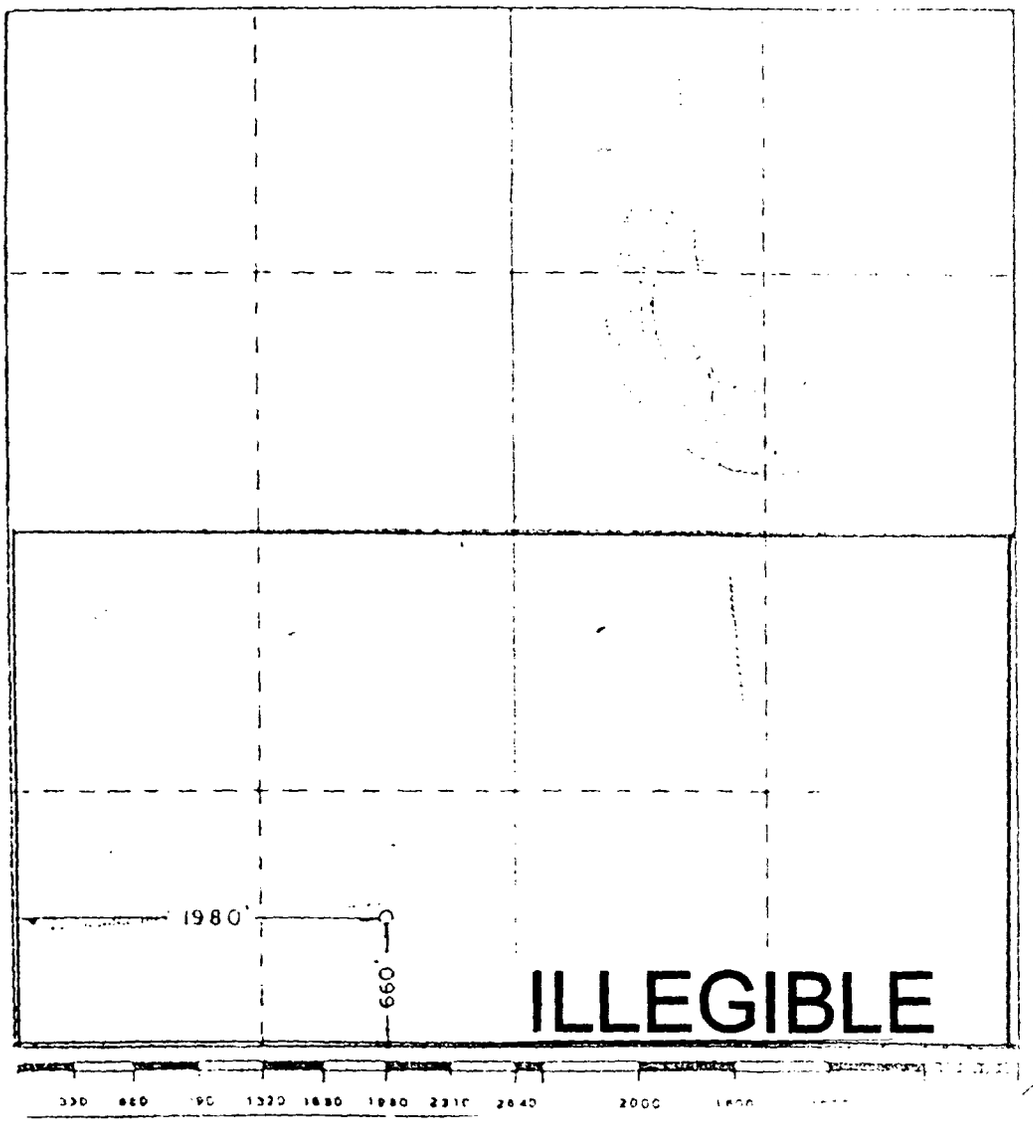
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.

Gary Gerhard

Name: Gary Gerhard

Position: Senior Drilling Engineer

Company: Bass Enterprises Prod. Co.

Date: August 6,1980

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: Dec. 7, 1979

Registered Professional Engineer and/or Land Surveyor: John W. West

Certificate No. 676

BIG EDDY UNIT NO. 66

Big Eddy Unit No. 66 had its initial and only completion in the Morrow formation. After the well was acidized with 1000 gallons 7-1/2% MSR acid and fractured with 10,000 gallons gelled water and 7750# of 20-40 mesh sand, the well potentialed at 959 MCFPD. The well was placed on line at 780 MCFPD in August, 1979, and presently is making 165 MCFPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 66 FORMATION MORROW

LOCATION K UNIT, 2130 FEET FROM W LINE & 1980 FEET FROM S LINE,

SECTION 25, RANGE 28E, TOWNSHIP 21S, COUNTY EDDY NEW MEXICO.

SPUD DATE 10/18/78 COMPLETION DATE 4/6/79 INIT. PROD. DATE 8/9/79

PERFORATIONS 12270', 12272', 12274', 12276', 12278', 12280' (1 hole each)

STIMULATION:

ACID 12270'-12280' with 1000 gallons 7-1/2%

FRACTURE 12270'-12280' with 10,000 gallons water + 7750 lbs 20-40 sand

POTENTIAL CAOF 959 MCFPD

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

VOLUMETRIC CALCULATION

	FORMATION	
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	320	
Porosity (Ø), %	6	
Water saturation (Sw), %	22	
Net thickness (h) > 6% Ø & <40% Sw, ft	10	
Temperature (T), °F	175	

Bottomhole pressure (P), psia 5187

Recovery factor (RF), (80% assumed) .80

Recoverable gas, MCF (See eq. below) 1639 MMCF

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A)(h)(RF)(Bgi) where

$$Bgi = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu\ Ft}\right) = 0.03535 \frac{(5187)}{(.92)(635)} = .314$$

PERFORMANCE DATA

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

(Cumulative production to 6 / 30 /81; 286,140 MCF.

Current rate (qi), 8400 MCF/mo

Economic limit (ql), 3000 MCF/mo

Decline rate, dy 55 %

Remaining gas (Q) = 81,000 MCF

Ultimate Recoverable Gas 367,140 MCF

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-\ln\ (1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)		COND (BBLS)
Gas sand previously produced	0		0
Sand perforated	367,140	(1)	734
Sand not perforated, but potentially productive	0	(2)	0
Total recoverable gas	367,140		734

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ECONOMIC

*Well Cost $ 1,174,469 (to the depth of formation completed)

Recompletion Cost $ 0

TOTAL COST $ 1,174,469

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + {(Oil Price)(Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac}

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).7)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

$3.05/MCF and .002 Bbl/MCF → $2.36/MCF after expenses

**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	20% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
zero	---	---	---	1.0000	-1,174,469
1979	101,557	239,675	10,000	0.9129	209,670
1980	148,533	350,538	24,000	0.7607	248,397
1981	63,650	150,214	24,000	0.6339	80,007
1982	10,000	23,600	6,000	0.5283	9,298
198				0.4402	
Remainder				0.3669	
					- 627,097

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

UNECONOMICAL

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-1
Revised

RECEIVED
APR 19 1979
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual — 4-6-79

Company: Perry R. Bass

Connection: Not yet connected.

Pool: ~~Wildcat~~ Undesignated Morrow

Formation: Morrow

Completion Date: 4-6-79

Total Depth: 12,700'

Plug Back TD: 12300'

Elevation: 3217' GL, 3235' KB

Unit Letter: C

Perforations: One (1) hole @ ea. From depth: 12,270', 12,272', 12,272', 12,274', 12,276', 12,278' & 12,280'

Artesia, Office: Big Eddy

Lease or Unit Name: Big Eddy Unit

Well No.: 66

Unit	Sec.	Twp.	R
K	25	21S	2

Csg. Size: 5½" | Wt.: 17# | d: | Set At: 12,685'

Tbg. Size: 2 3/8 | Wt.: 4.7 | d: | Set At: 12100-

Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single

Packer Set At: 12100

County: Eddy

Producing Thru: Tbg.

Reservoir Temp. °F: 182 @ 12100

Mean Annual Temp. °F: 71

Pb: 13.2

State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
		.6204	0	0	0		3.826	

FLOW DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F
SI						
1.	4"		1.25	523.2	6	75
2.	4"		1.25	493.2	12	90
3.	4"		1.25	372.2	19	86
4.	4"		1.25	388.2	16	85
5.						

TUBING DATA

Press. p.s.i.g.	Temp. °F
3842	71
2543	72
1857	73
1582	74
1319	76

CASING DATA

Press. p.s.i.g.	Temp. °F	Dura. of Flow
		60 Mi
		60 Mi
		60 Mi
		60 Mi

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	7.483	56.03	523.2	.9858	1.270	1.047	550
2.	7.483	76.93	493.2	.9723	1.270	1.039	739
3.	7.483	84.09	372.2	.9759	1.270	1.030	803
4.	7.483	78.81	388.2	.9768	1.270	1.031	754
5.							

NO.	P_t	Temp. °R	T_r	Z
1	.78	535	1.47	.912
2.	.74	550	1.51	.926
3.	.56	546	1.50	.943
4.	.58	545	1.49	.941
5.				

Gas Liquid Hydrocarbon Ratio: None Mcf/bbl

A.P.I. Gravity of Liquid Hydrocarbons: ° Deg.

Specific Gravity Separator Gas: .6204 XXXXXXXX

Specific Gravity Flowing Fluid: XXXXX

Critical Pressure: 671 P.S.I.A. P.S.I.

Critical Temperature: 365 R

P_c 5186.2 P_c^2 26897

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		3821.2	14602	12295
2		2958.2	8751	18146
3		2421.2	5862	21215
4		2130.2	4538	22359
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.27

$\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.1938

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 959

Absolute Open Flow: 959 Mcfd @ 15.025

Angle of Slope θ: 53.5

Slope, n: .74

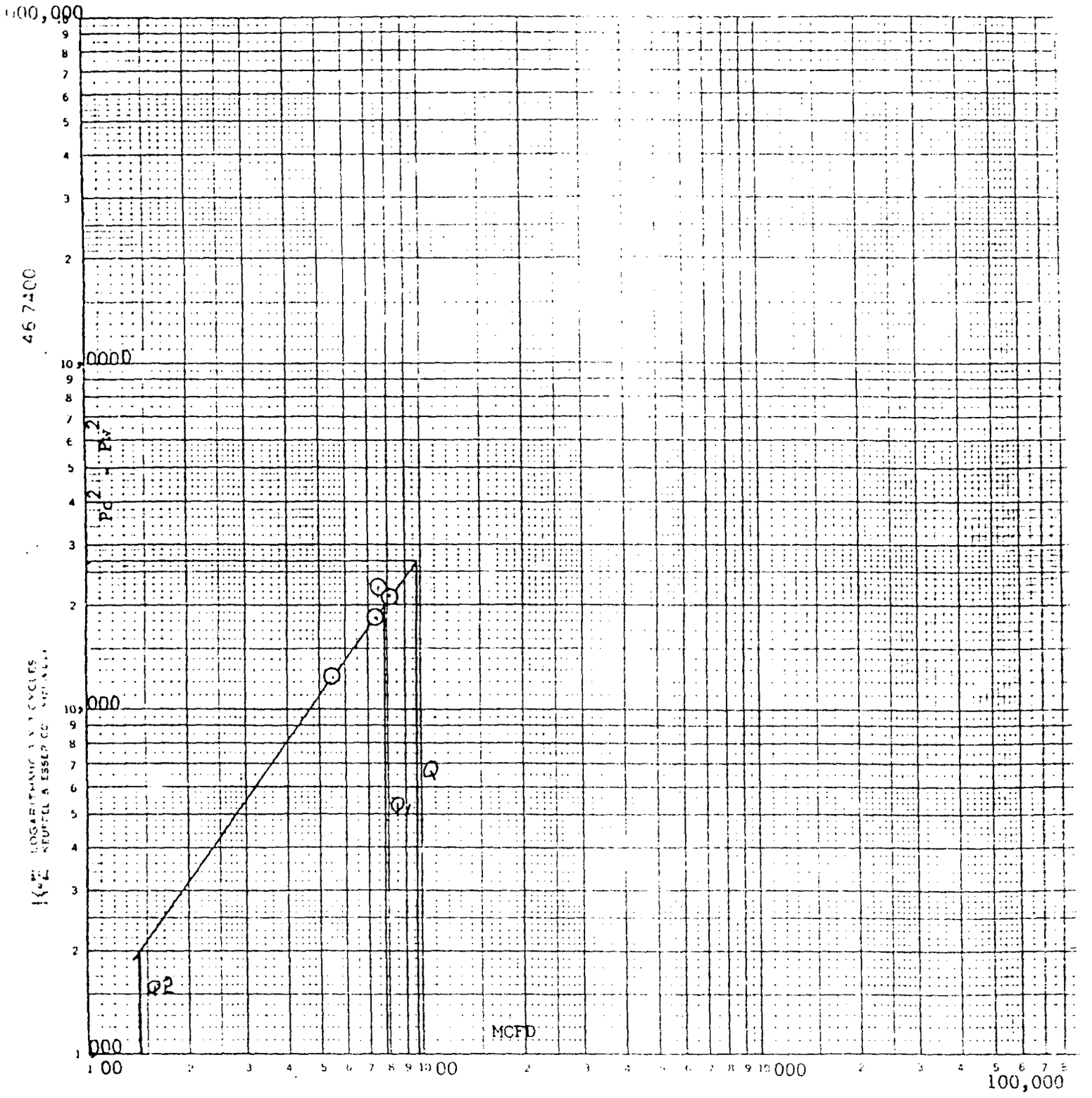
Remarks: Absolute Open Flow Calculated on 3rd Rate

PW Substituted for Pt - Measured with Amerada Instrument No. 37485 0 - 6000# Element

Approved by Commission:	Conducted By:	Calculated By:	Checked By:
	Pyle	Morgan	Spruell

ILLEGIBLE

BASS ENTERPRISES PRODUCTION (
Big Eddy Unit 66
Absolute Open Flow
4-6-79



$Q_1 = 780$ Log $Q_1 = 2.89209$

$Q_2 = 142$ Log $Q_2 = 2.15229$

N = .73980

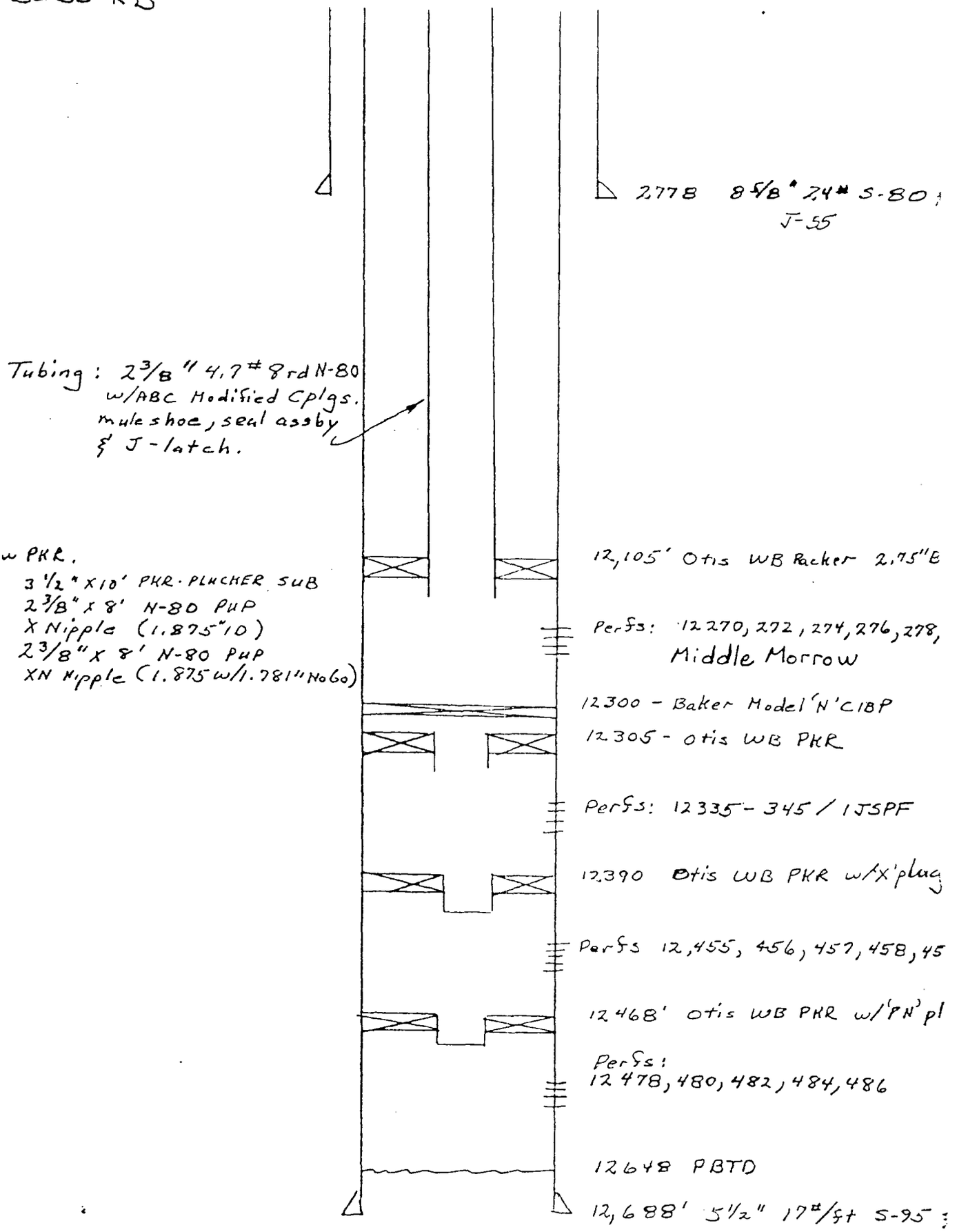
Q = 959 MCFD

Big Eddy Unit #66

As of 4-2-79

3235' kB

JFG 4/2/79



COUNTY:

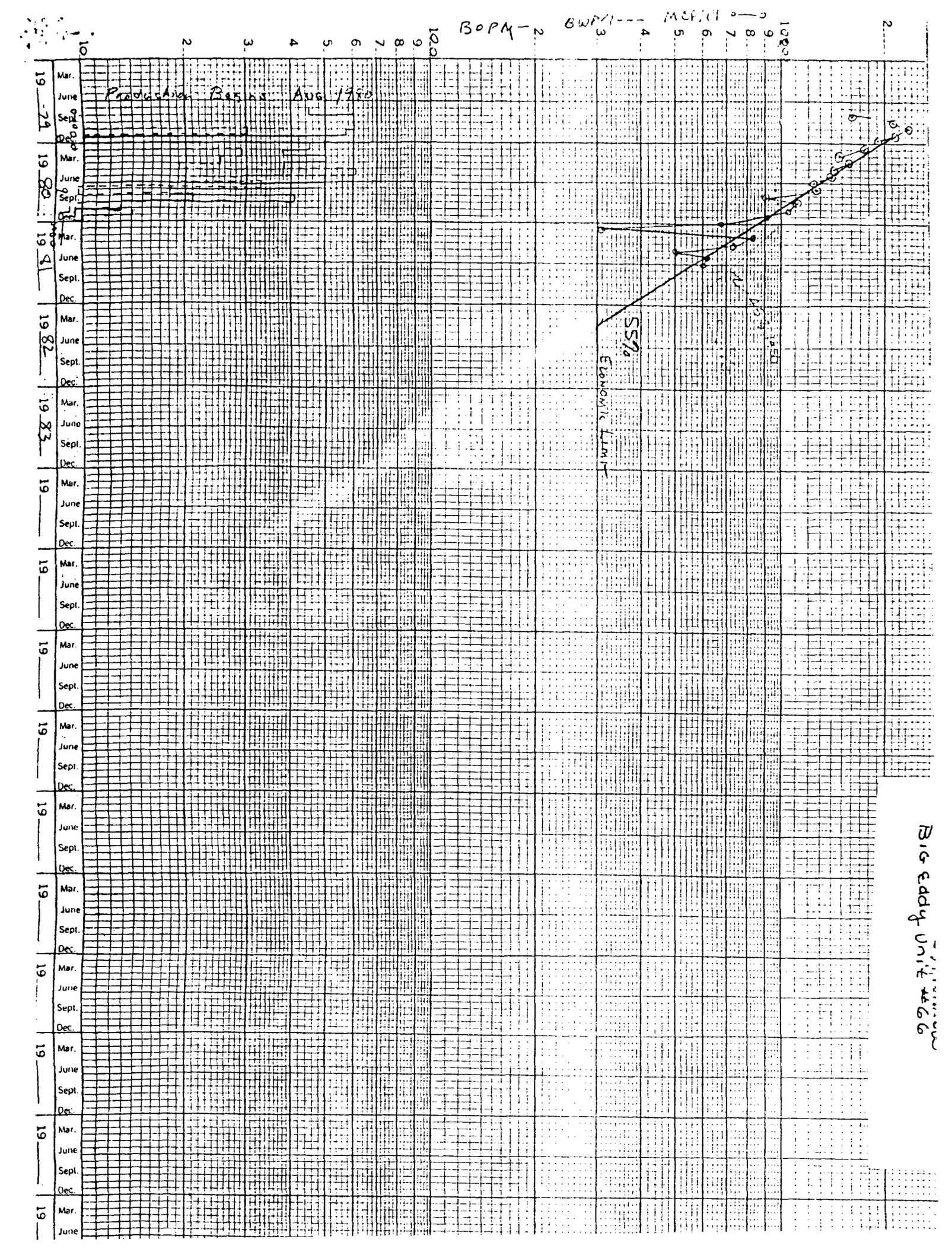
OPERATOR:

LEASE: BIG EDDY UNIT #66 BTY. NO. WELLS:

FIELD GAS OIL CONTACT: FIELD OIL WATER CONTACT:

	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.	C
1979							
Jan.							
Feb.							
March							
April							
May							
June							
July							
August	1	45		16,002		0	
Sept.	1	60		21,322		0	
Oct.	1	60		25,527		6	
Nov.	1	57		21,499		30	
Dec.	1	0	222	19,207	40,706	0	
Yearly Total		~~57~~	387	"	101,557	30	
1980							
Jan.	1	45		17,607		0	30
Feb.	1	38		14,858		19	59
March	1	50		15,973		25	84
April	1	38	~~558~~	14,019	164,014	19	10
May	1	0		14012		61	
June	1	29		12647		19	
July	1	50		12470		33	
August	1	18		9000		9	
Sept.	1	41		11,075		21	
Oct.	1	13		10,781		0	
Nov.	1	7		9265		14	
Dec.	1	0		6826		10	
Yearly Total				148,533			
1981							
Jan.	1	0		3128		0	
Feb.	1	0		8217		0	
March	1	0		7431		0	
April	1	0		5039		8	
May	1	0		6141		9	
June	1	7		6094		9	
July							
August							

ILLEGIBLE



Big Eddy Unit #66

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Perry R. Bass	Fed.	66

Unit Letter	Section	Township	Range	County
K	25	21 South	28 East	Eddy

Actual Footage Location of Well:
1980 feet from the South line and 2130 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3214.7	MORROW	WILDCAT	320

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

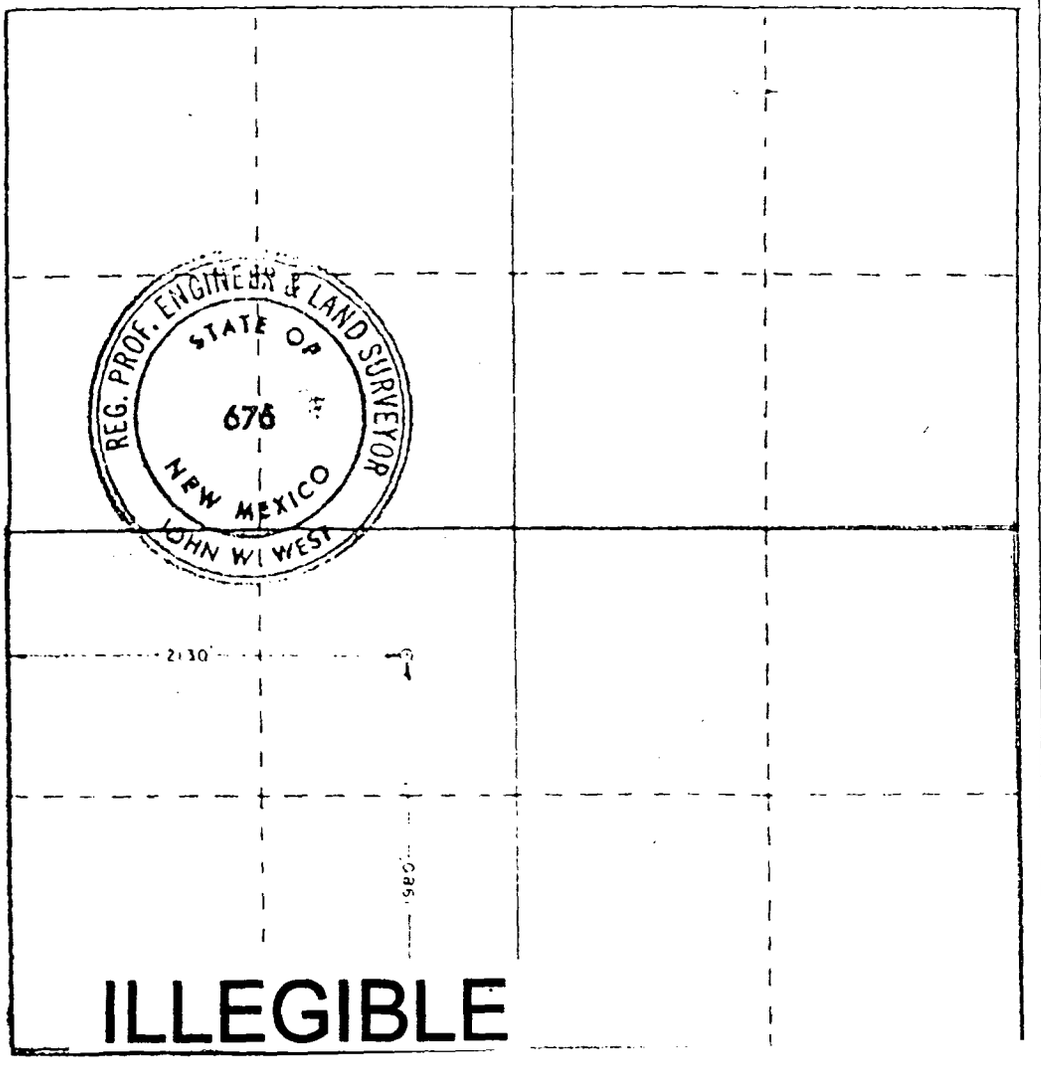
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



ILLEGIBLE

CERTIFICATION

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

Name: Gene Young

Position: ENGINEER ASSISTANT

Company: BASS ENTERPRISES PROD. CO.

Date: 24 August 1978

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: August 19, 1978

Registered Professional Engineer and/or Land Surveyor

N. L. [illegible]

BIG EDDY UNIT NO. 68

Big Eddy Unit No. 68 had its initial and only completion in the Morrow formation. After 3500 gallons 7-1/2% MSR acid and 22,500 gallons gelled water with 7500# 100 mesh sand and 16,250# 20-40 mesh sand, the well potentialed at 1.239 MMCFPD. The well was placed on line at 550 MCFPD in December, 1979, and presently is making 400 MCFPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 68 FORMATION MORROW

LOCATION K UNIT, 1980 FEET FROM S LINE & 1780 FEET FROM W LINE,

SECTION 10, RANGE 28E, TOWNSHIP 22S, COUNTY EDDY NEW MEXICO.

SPUD DATE 12/29/78 COMPLETION DATE 6/4/79 INIT. PROD. DATE 4/20/79

PERFORATIONS 11,966', 11,969', 12,125', 12,126', 12,127', 12,128', 12,129', 12,130', 12,131', 12,214', 12,215', w/JRC SSB II charges

STIMULATION:

ACID 12,389'-12,509', 1,500 gallons 7 1/2% MS acid

11,966'-12,215', 2,000 gallons 7 1/2% MS acid

FRACTURE 11,966'-12,215', 22,500 gallons gelled water with 7500# 100 mesh sand and 16,250# 20-40 mesh sand

POTENTIAL CAOF 1,239 MCFPD

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

VOLUMETRIC CALCULATION

	FORMATION	
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	320	
Porosity (Ø), %	8	
Water saturation (Sw), %	18	
Net thickness (h) >6% Ø & < 40% Sw, ft	15	
Temperature (T), °F	170	

ECONOMIC

*Well Cost $ 1,139,280 (to the depth of formation completed)

Recompletion Cost $ 0

TOTAL COST $ 1,139,280

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + {(Oil Price)(Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac}

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).7)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

$3.02/MCF and .0004 BBl/MCF → 2.31 $/MCF
**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST		20% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
zero	---	---	---	0	1.0000	1,139,280
1979	4,208	9,720	2,000	1	0.9129	7,048
1980	200,480	463,109	24,000	2	0.7607	334,030
1981	130,966	302,531	24,000	3	0.6339	176,561
1982	66,000	152,460	24,000	4	0.5283	67,865
1983	11,000	20,910	6,000	5	0.4402	6,563
Remainder				6	0.3669	
						-547,213

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

UNECONOMICAL

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-65

Type Test: [X] Initial [ ] Annual — 5-4-79

Company: Perry R. Bass	Connection: None		
Pool: Wildcat	Formation: Morrow		Unit: Big Eddy Unit
Completion Date: 5-3-79	Total Depth: 12,652	Plug Back TD: 12,300	Farm or Lease Name: Big Eddy Unit
Csg. Size: 5½ / Wt.: 17 / d: / Set At: 12,652	Perforations: From 11,966 To 12,215		Well No.: 68
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: / Set At: 11,900	Perforations: From To		Unit: K / Sec.: 31 / Twp.: 21S / Rge.: 28E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 11,900		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 194 @ 11937	Mean Annual Temp. °F: 68	Barometer Press. Pa: 13.2
			State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11,900	11,900	.62	None	None	None	None	4.026	Flange

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							3456				
1.	4.026	=	.625	305	10	72	3263	70			60 Min.
2.	4.026		.625	550	37	85	2820	74			60 Min.
3.	4.026		.625	640	45	85	2662	73			60 Min.
4.	4.026		.625	530	75	85	2306	74			60 Min.
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	1.845	56.41	318.2	.9887	1.270	1.028	134
2.	1.845	134.25	563.2	.9768	1.270	1.044	321
3.	1.845	171.45	653.2	.9768	1.270	1.052	413
4.	1.845	201.85	543.2	.9768	1.270	1.043	482
5.							

NO.	P_t	Temp. °R	T_r	Z
1	.47	532	1.45	.946
2.	.84	545	1.49	.917
3.	.97	545	1.49	.904
4.	.81	545	1.49	.919
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.

Specific Gravity Separator Gas .62 XXXXXXXXXX

Specific Gravity Flowing Fluid XXXXX

Critical Pressure 671 P.S.I.A. _____ P.S.I.A.

Critical Temperature 365 R _____ R

P_c 5227.2 P_c^2 27324

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		5072.2	25727	1597
2		4597.2	21134	6190
3		4408.2	19432	7892
4		4168.2	17373	9951
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.7459$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.57$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1239

Absolute Open Flow 1239 Mcfd @ 15.025

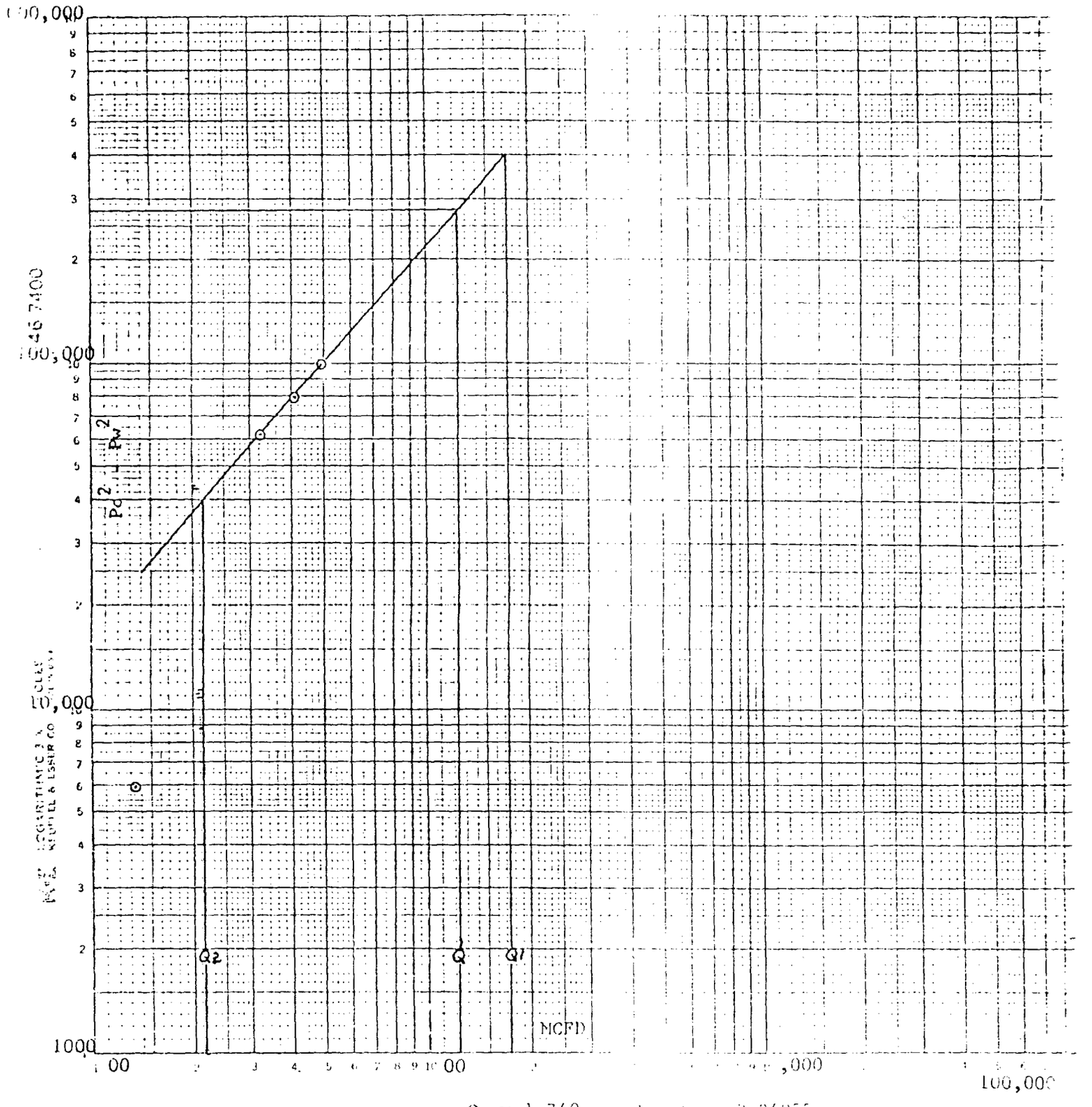
Angle of Slope _____ 47.5 Slope, n .91

Remarks: PW Substituted for Pt Measured with Amerada Instrument No. 40091
0 - 6000# Element

Approved By Commission: _____ Conducted By: _____

ILLEGIBLE

PERRY R. BASS
Big Eddy No. 68
Absolute Open Flow Test
5-4-79



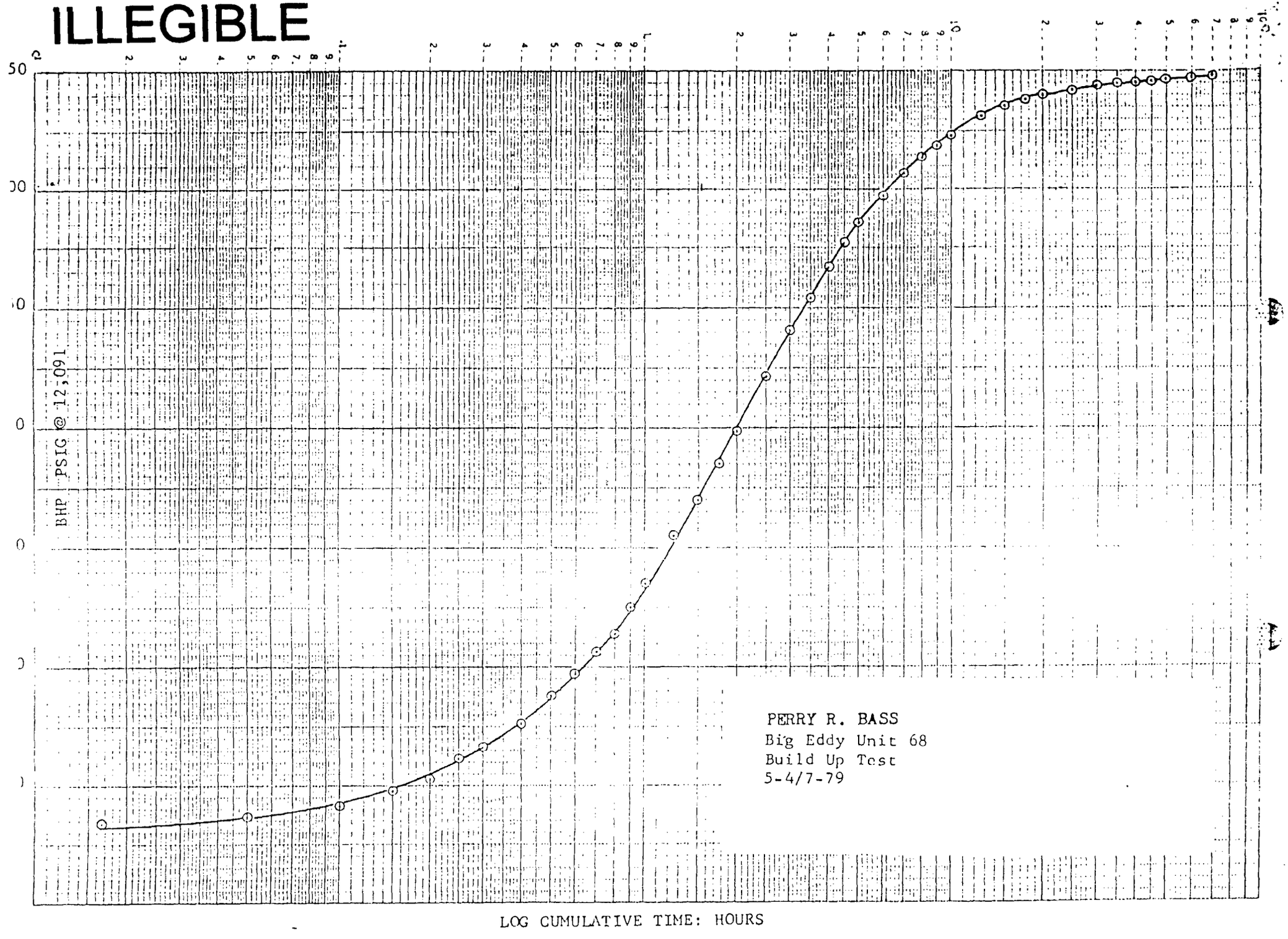
ILLEGIBLE

Q_1 = 1,740 Log Q_1 = 3.24055

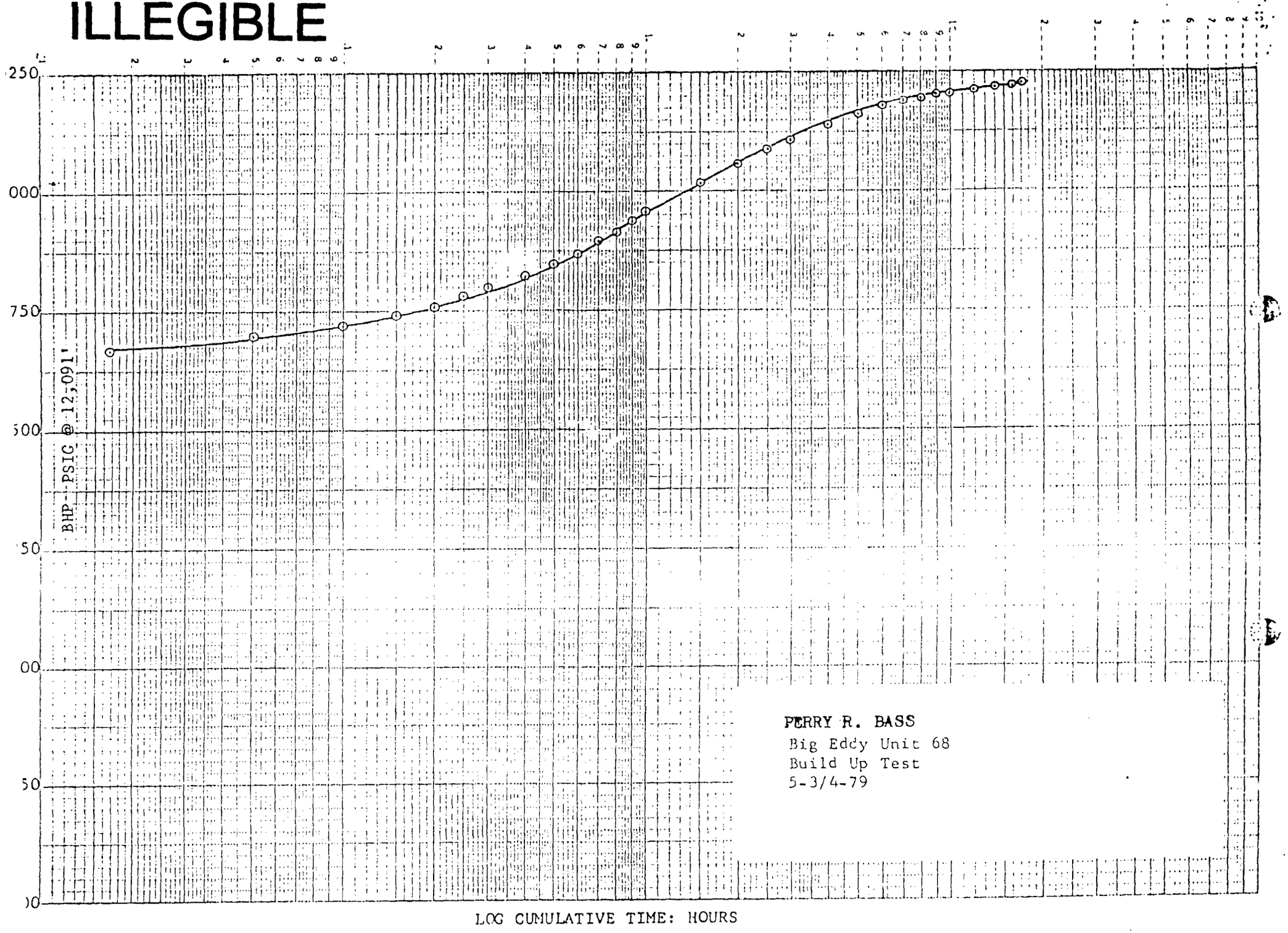
Q_2 = 215 Log Q_2 = 2.33244

n = .91

ILLEGIBLE

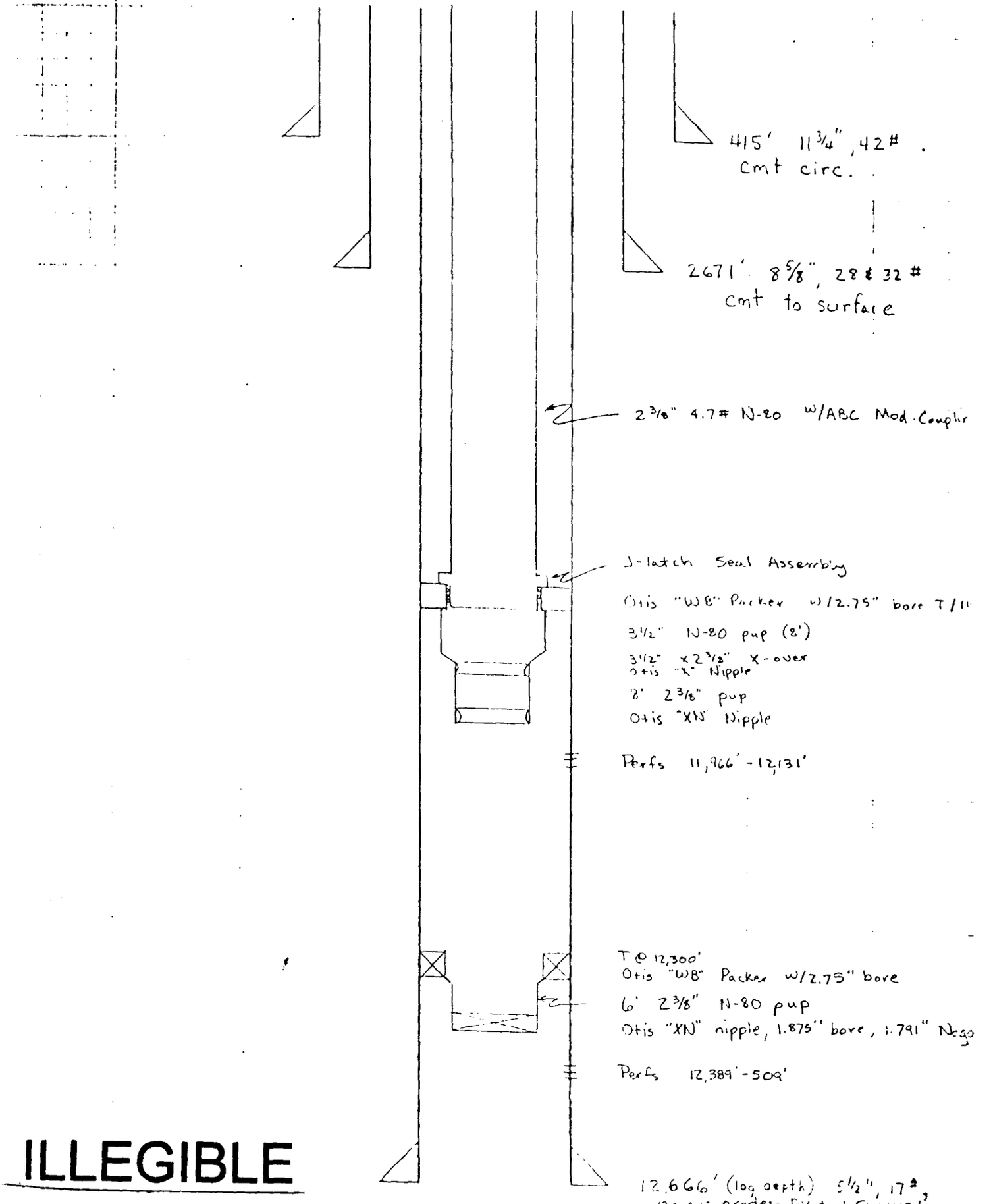

BHP PSIG @ 12:09
PERRY R. BASS
Big Eddy Unit 68
Build Up Test
5-4/7-79
LOG CUMULATIVE TIME: HOURS

ILLEGIBLE


250
000
750
500
50
00
50
)0
BHP - PSIG @ 12,091'
LOG CUMULATIVE TIME: HOURS
PERRY R. BASS
Big Eddy Unit 68
Build Up Test
5-3/4-79

Big Eddy Unit Well [illegible]

Elev: 3112 GL
3130 KB



ILLEGIBLE

FIELD: Southwest Loving Flat Morrow COUNTY:

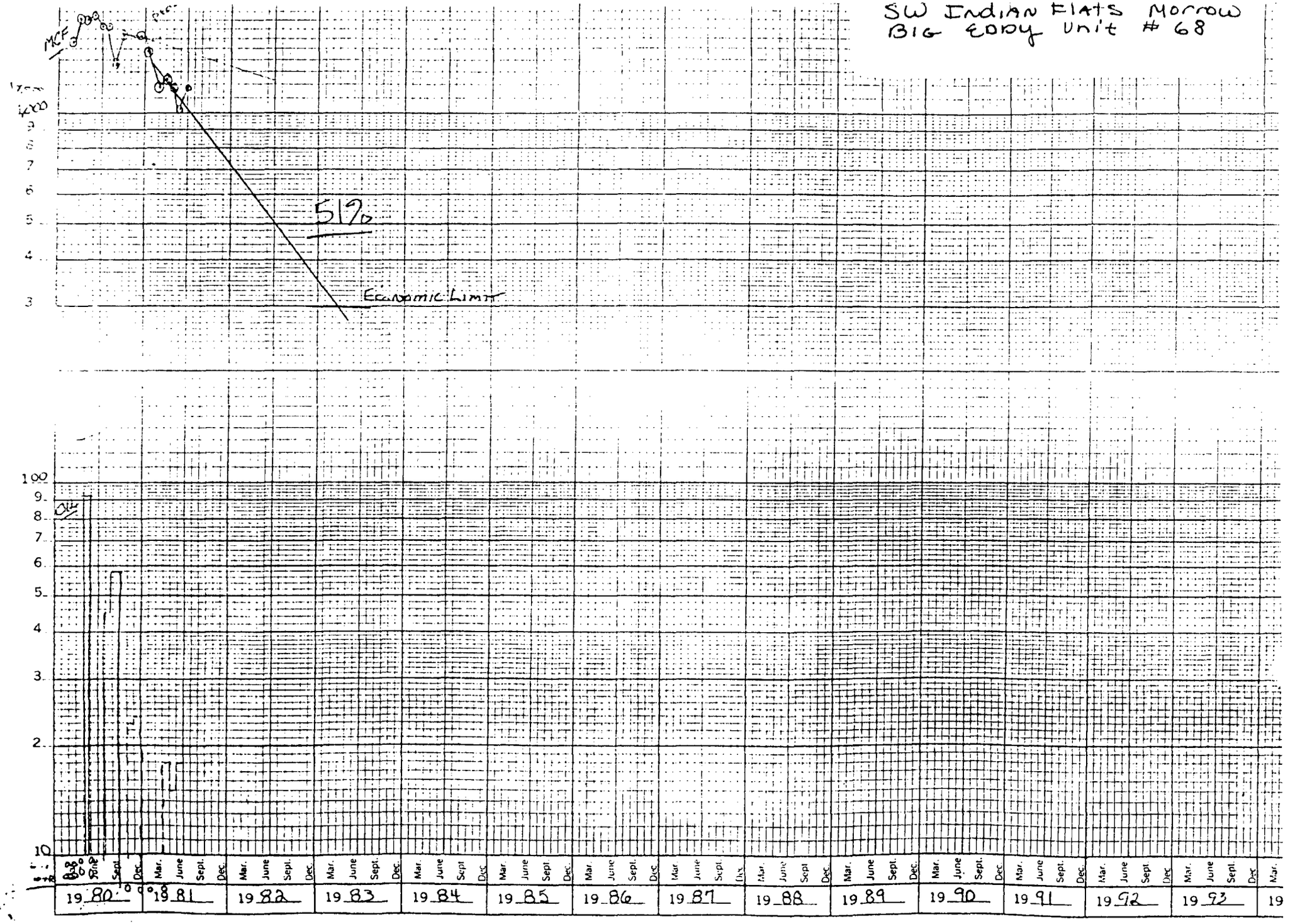
OPERATOR:

LEASE: Big Eddy Unit BTY. NO.

WELLS: # 6-8

	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.	
1979							
Jan.							
Feb.							
March							
April							
May							
June							
July							
August							
Sept.							
Oct.							
Nov.	0	0		0		0	
Dec.	1	0		4208		0	
Yearly Total							
1980							
Jan.	1	0		16,484	20,697	186	
Feb.	1	0		15,979	36,671	0	
March	1	0		18,412	55,083	0	
April	1	0		18,112	73,195	0	
May	1	0		18357		93	
June	1	0		17245		0	
July	1	0		17290		0	
August	1	47		13390		0	
Sept.	1	58		16,591		0	
Oct.	1	0		16,822		0	
Nov.		0		15,630		23	
Dec.		0		16,168		24	
Yearly Total				200,480	204,686		
1981							
Jan.	1	0		14806		0	
Feb.	1	0		11,906		0	
March	1	0		12,494		0	
April	1	0		11,943		18	
May	1	0		10,358		16	
June	1	0		11,883	73390	18	
July							
August							
Sept.							
Oct.							
Nov.							
Dec.							
Yearly Total							

SW INDIAN FLATS MORROW
BIG EDDY Unit # 68



NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-1...
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Perry R. Bass	Big Eddy Unit	68

Unit Letter	Section	Township	Range	County
K	10	22 South	28 East	Eddy

Actual Footage Location of Well:
1980 feet from the South line and 1720 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
3114.8	WILDCAT		320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

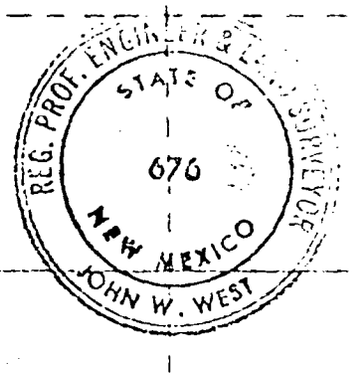
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



ILLEGIBLE

330 660 990 1320 1650 1980 2310 2640

CERTIFICATION

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

Name: Gene A. Young

Position: GENE A. Young

Company: Engineer Assistant

Date: Perry R. Bass

10-24-78

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: October 12, 1978

Registered Professional Engineer and/or Land Surveyor: John W. West

Certificate No. John W. West 676

BIG EDDY UNIT NO. 71

Big Eddy Unit No. 71 had its initial and only completion in the Atoka formation. After 2000 gallons 15% HCl and 32,850 gallons gelled water with 35,000# 100 mesh sand and 11,000# 20-40 mesh sand, the well potentialed at 542 MCFPD. The well was placed on line at 125 MCFPD. The well is presently shut-in.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 71 FORMATION ATOKA

LOCATION F UNIT, 1980 FEET FROM W LINE & 1980 FEET FROM N LINE,

SECTION 7, RANGE 29E, TOWNSHIP 22S, COUNTY EDDY NEW MEXICO.

SPUD DATE 10/18/79 COMPLETION DATE 1/14/80 INIT. PROD. DATE

PERFORATIONS 11542', 11550', 11555', 11562', 11568', 11635 1/2', 11638'

STIMULATION:

ACID 11542'-11638' with 2000 gallons 15% HCl & 10 Ball Sealers

FRACTURE 11542'-11638' with 782 bbl. of gelled water, 35000# 100 mesh sand and 11000# 20/40 sand

POTENTIAL CAOF 542 MCFPD

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

VOLUMETRIC CALCULATION

	FORMATION	
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	320	
Porosity (Ø), %	3	
Water saturation (Sw), %	31	
Net thickness (h) >6% Ø & <40% Sw, ft	19	
Temperature (T), °F	150	

Bottomhole pressure (P), psia 6123

Recovery factor (RF), (80% assumed) .8

Recoverable gas, MCF (See eq. below) 1,622,757

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A)(h)(RF)(Bgi) where

$$Bgi = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu\ Ft}\right) = 0.03535 \frac{(6123)}{(.95)(610)} = .37$$

PERFORMANCE DATA

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

(Cumulative production to 6 / 30 /81 ; 18788 MCF.

Current rate (qi), _____ MCF/mo

Economic limit (ql), 3000 MCF/mo Depleted

Decline rate, dy _____ %

Remaining gas (Q) = _____ MCF

Ultimate Recoverable Gas _____ MCF

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-ln\ (1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)		COND (BBLS)
Gas sand previously produced	0		0
Sand perforated	18788	(1)	0
Sand not perforated, but potentially productive	0	(2)	0
Total recoverable gas	18788		0

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ECONOMIC

*Well Cost $ 940,248 (to the depth of formation completed)

Recompletion Cost $ 0

TOTAL COST $ 940,248

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + {(Oil Price)(Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac}

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).7)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

$3.21/MCF and 0 BBl /MCF → 42.44/MCF

**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	20% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
zero	---	---	---	1.0000	-940,248
1980	11,668	28,469	8,000	0.9129	18,686
1981	7,120	17,373	12,000	0.7607	4,087
198				0.6339	
198				0.5283	
198				0.4402	
Remainder				0.3669	
					-917,475

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

UNECONOMICAL

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-12
Revised 9-

Type Test: [X] Initial [ ] Annual			Test Date: 1-17-80
Company: Perry R. Bass	Connection: Not connected.		NM 03302
Pool: Wildcat	Formation: Strawn		Unit: Big Eddy Unit
Completion Date: Jan. 14, 1980	Total Depth: 13,060'	Plug Back TD: 12,962'	Elevation: 3308' KB
Farm or Lease Name: Big Eddy Unit			
Csg. Size: 5 1/2" Wt.: 17# d: Set At: 13,060	Perforations: From 11,542 To 11,638		Well No.: 71
Tbg. Size: 2 3/8" Wt.: 4.7# d: Set At: 11,461	Perforations: From Open Ended To		Unit: F Sec.: 7 Twp.: 22S Rge.: 29
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 11,461		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 180	Mean Annual Temp. °F:	Baro. Press. – P_a: 13.2
State: New Mexico			

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11,542		.634	.71	1.25	0		X	

NO.	FLOW DATA: Prover Line Size	x	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							4468	61			
1.	4"	x	1"	30	43	79	3715	74			1 Hr.
2.	4"	x	1"	90	62	80	3234	73			1 Hr.
3.	4"	x	1"	90	46	75	2662	75			1 Hr.
4.	4"	x	1"	90	50	75	2322	75			1 Hr.
5.	4"	x	1 1/2"	140	4	77	334	66			4 Hrs.

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.753	43.100	43.2	.9822	1.256	1.004	254
2	4.753	79.990	103.2	.9813	1.256	1.008	472
3	4.753	68.900	103.2	.9859	1.256	1.009	409
4	4.753	71.833	103.2	.9859	1.256	1.009	427
5	10.84	24.755	153.2	.9840	1.256	1.013	147

NO.	P_t	Temp. °R	T_r	Z
1	.064	539	1.47	.992
2	.153	540	1.48	.984
3	.153	535	1.46	.983
4	.153	535	1.46	.983
5	.228	537	1.47	.974

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: None Produced Deg.
Specific Gravity Separator Gas: .634 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 673 P.S.I.A. _____ P.S.I.A.
Critical Temperature: 366 R _____ R

P_f 5882.2 P_f^2 34,600

NO	P_t^2	P_s	P_s^2	$P_f^2 - P_s^2$
1		5036.2	25,363	9,237
2		4442.2	19,733	14,867
3		3741.2	13,997	20,603
4		3312.2	10,971	23,629
5		948.2	899	33,701

(1) $\frac{P_f^2}{P_f^2 - P_s^2} = \frac{34,600}{9,237}$ $\left[\frac{P_f^2}{P_f^2 - P_s^2}\right]^n = 2.143$

Absolute Open Flow: $\left[\frac{P_f^2}{P_f^2 - P_s^2}\right]^{.589} = 544$ Mcfd @ 15.025

542 Mcfd @ 15.025 | Angle of Slope θ: 59.5 | Slope, n: .589

Remarks: ILLEGIBLE

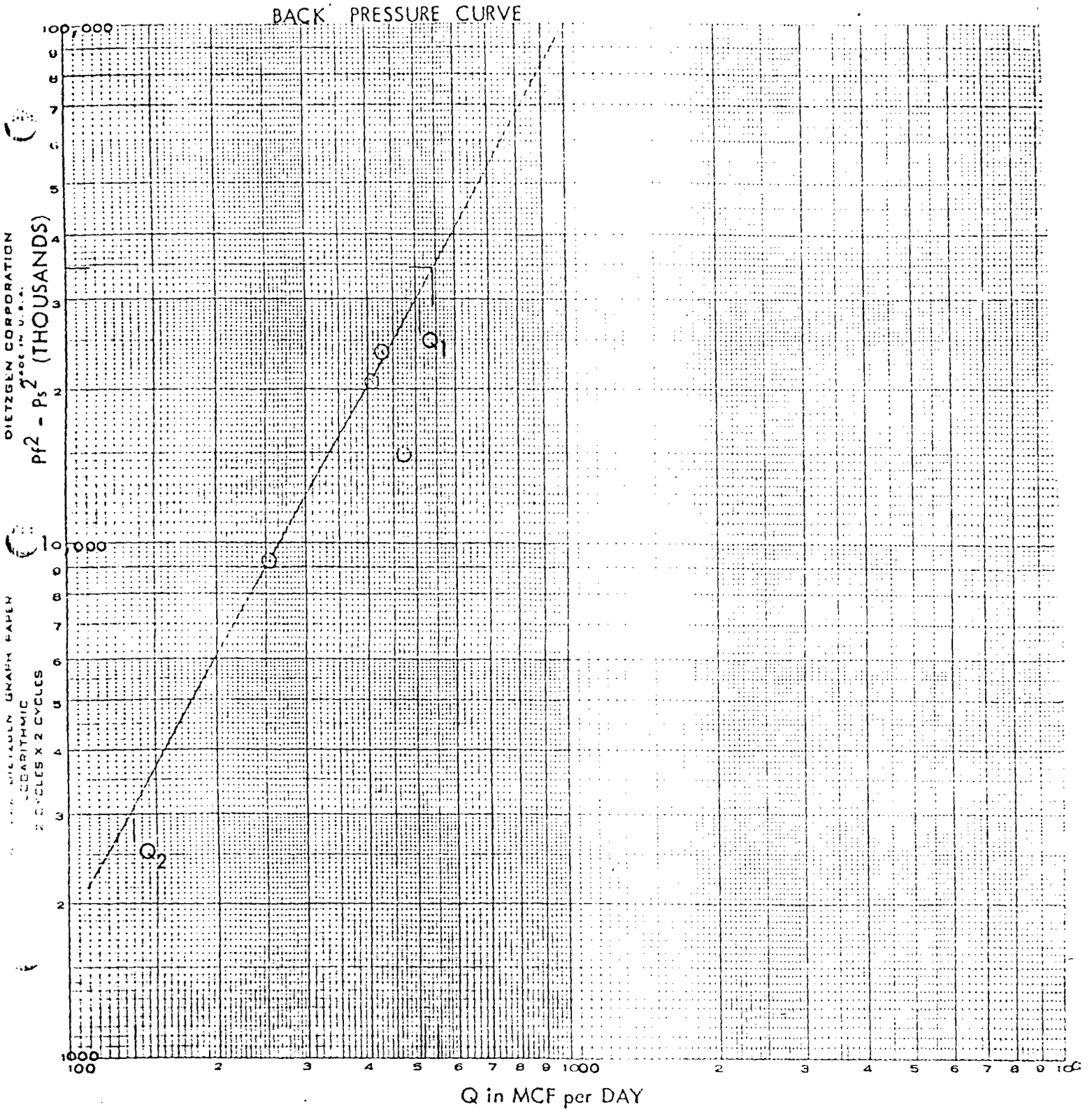
Approved By Commission: Conducted By:

LEASE Big Eddy Unit WELL 71

COUNTY Eddy STATE New Mexico

DATE 1-17-80

BACK PRESSURE CURVE



θ = 59.5

n = .589

AOF = 542 MCF/DAY

Q_1 = 510 MCFD; Log Q_1 = 2.70757

Q_2 = 135 MCFD; Log Q_2 = 2.13033

n = .57724

ILLEGIBLE

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the Section

Perry R. Bass		Eddy Unit		71
F	7	22 South		Eddy
1980	North	1980		West
3295.0	Morrow	Wildcat		320

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

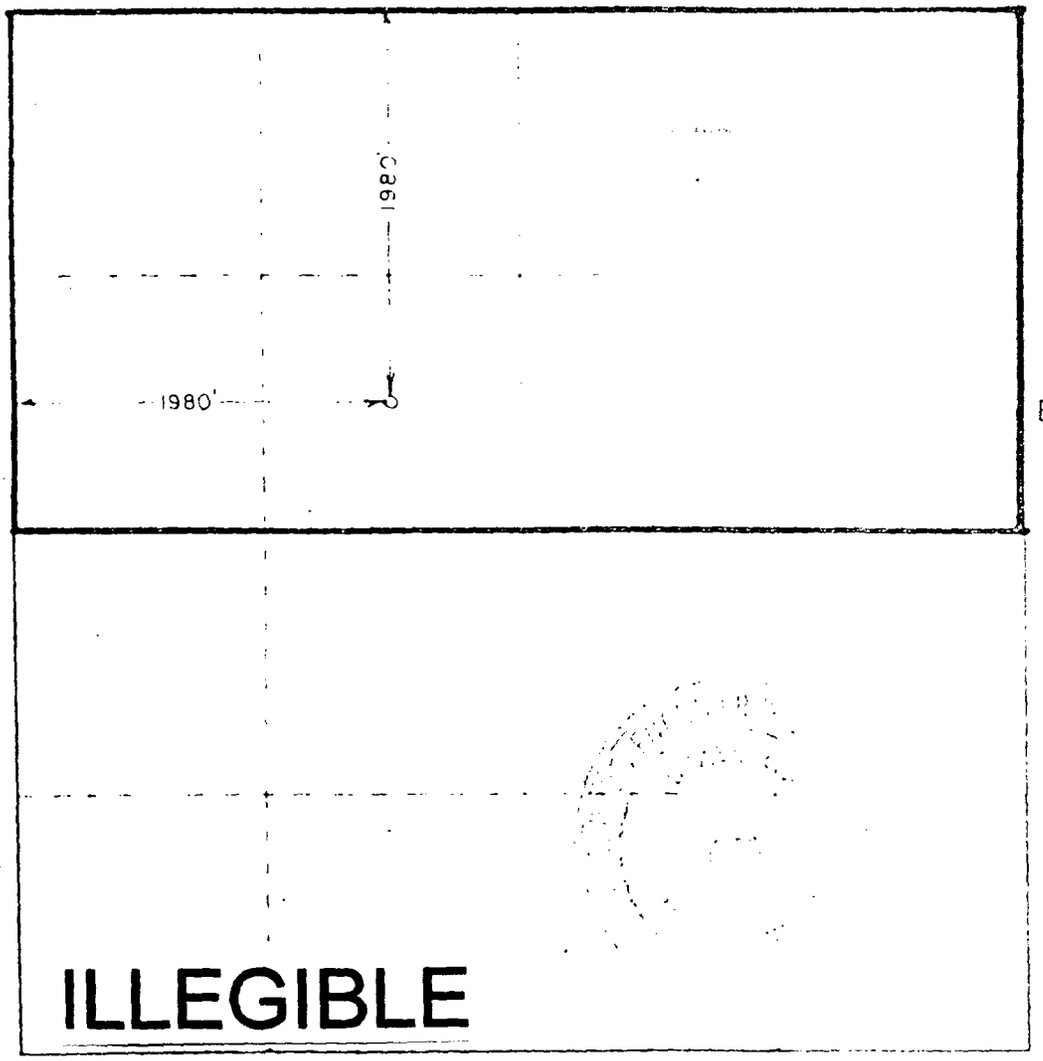
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] 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.



Gary C. Gerhard

Gary Gerhard

Senior Drilling Engineer

Bass Enterprises Production C

August 30, 1979

June 7, 1979

ILLEGIBLE

FIELD: Quahada Ridge, SW / Atoka COUNTY:

OPERATOR:

LEASE: Big Eddy Unit #71 BTY. NO.

WELLS:

	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.
1980						
Jan.						
Feb.						
March						
April						
May						
June						
July						
August	Quahada Ridge STRAWN					
Sept.	1	0		2939		42
Oct.	1	0		3851		0
Nov.	1	0		2652		4
Dec.	1	0		2226		3
Yearly Total						
1981	ATOKA					
Jan.	1	0		635		0
Feb.	1	0		1089		0
March	1	0		2003		0
April	1	0		1123		2
May		0		1368		2
June	1	0		907		1
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						
Jan.						
Feb.						
March						
April						
May						
June						
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						

19 Mar June Sept Dec
19 Mar June Sept Dec
19 Mar June Sept Dec
19 Mar June Sept Dec
19 Mar June Sept Dec
19 Mar June Sept Dec
19 Mar June Sept Dec
19 Mar June Sept Dec
19 Mar June Sept Dec
19 Mar June Sept Dec
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BASS ENTERPRISES PRODUCTION COMPANY

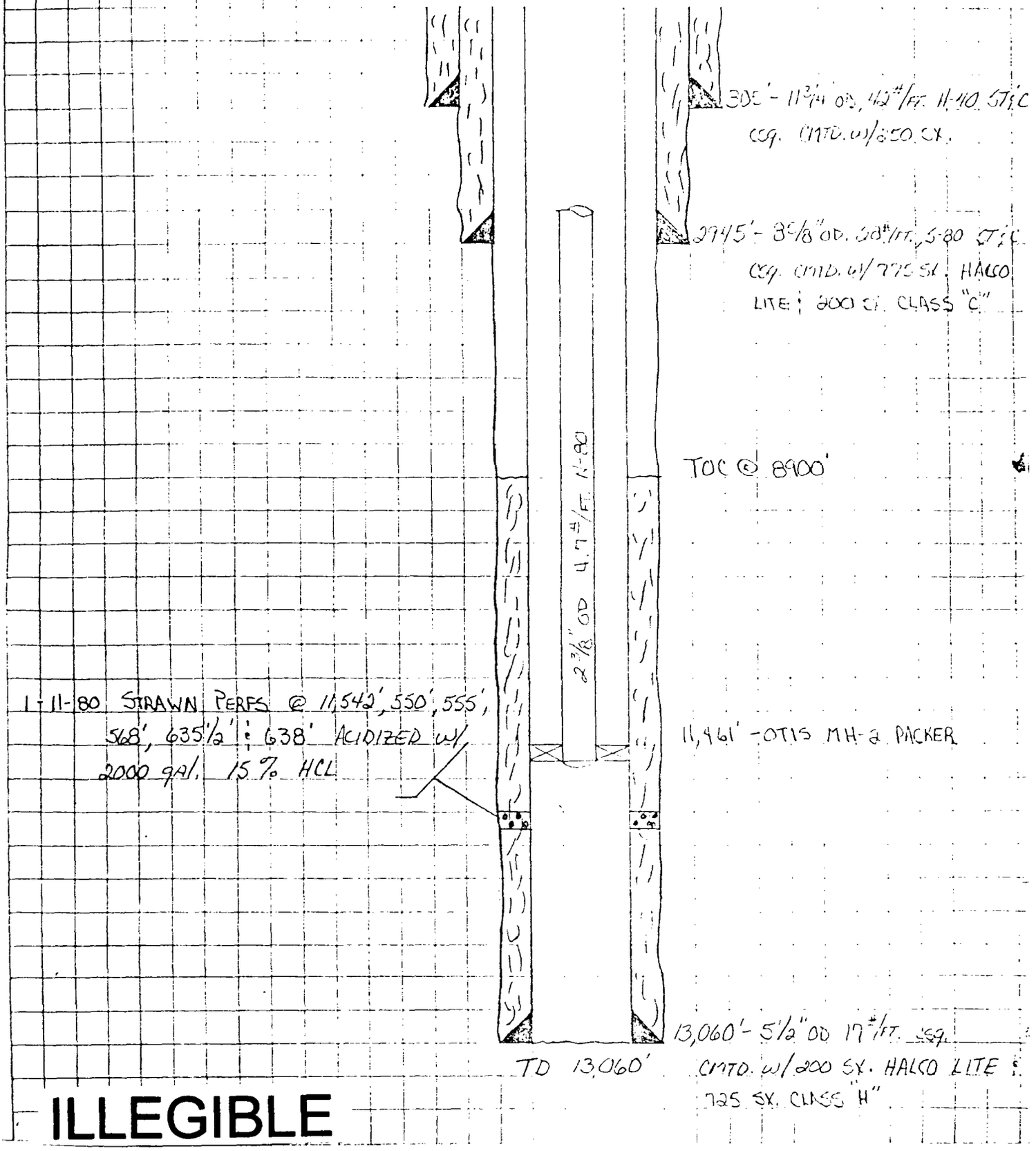
PAGE NO ____

SUBJECT	DATE	DEPARTMENT	PREPARED BY
WELL BORE DIAGRAM	[illegible] 80		CDS

ELEV: 3295' GL
3308' KB

BIG EDDY UNIT No. 71
EDDY COUNTY, NEW MEXICO

SPUD: 10-19-'79
COMP: 1-11-80



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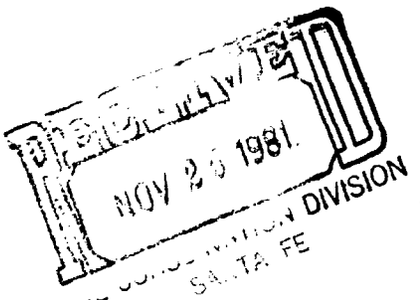


BIG EDDY UNIT NO. 74

Big Eddy Unit No. 74 had its initial and only completion in the Atoka formation. After 1900 gallons 7-1/2% MSR acid and 30,000 gallons MS gel with 25,000# sand fracture treatment, the well potentialed at 6.482 MMCFPD. The well was placed on line at 1.94 MMCFPD and is presently making 50 MCFPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 74 FORMATION ATOKA

LOCATION B UNIT, 660 FEET FROM N LINE & 1980 FEET FROM E LINE,

SECTION 25, RANGE 28E, TOWNSHIP 21S, COUNTY EDDY NEW MEXICO.

SPUD DATE 2/22/80 COMPLETION DATE 5/9/80 INIT. PROD. DATE 7/7/80

PERFORATIONS 11,468', 11,474', 11,480', 11,615', 11,616' two jet shots per foot

STIMULATION:

ACID 11,468'-11,616', 100 gallons solvent and 900 gallons 7 1/2% MS acid

1,000 gallons 7 1/2% MS and 20 balls

FRACTURE 11,468'-11,616' with 30,000 gallons MS Gel with CO_2 and 31,000#

20-40 sand and 4,000# 100 mesh

POTENTIAL CAOF 6,482 MCFPD

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

VOLUMETRIC CALCULATION

	FORMATION	
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE
Area (A) proration unit size, acres	320	
Porosity (Ø), %	6.5	
Water saturation (Sw), %	40	
Net thickness (h) >6% Ø & <40% Sw, ft	12	
Temperature (T), °F	165	

Bottomhole pressure (P), psia 6,208

Recovery factor (RF), (80% assumed) .8

Recoverable gas, MCF (See eq. below) 1,722,216

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A)(h)(RF)(Bgi) where

$$Bgi = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu\ Ft}\right) = 0.03535 \frac{(6208)}{(.98)(625)} = .33$$

PERFORMANCE DATA

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

(Cumulative production to 6 / 30 /81 ; 164,238 MCF.

Current rate (qi), presently making below economic limit MCF/mo

Economic limit (ql), 3000 MCF/mo

Decline rate, dy >100% %

Remaining gas (Q) = 0 MCF

Ultimate Recoverable Gas 164,238 MCF

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-\ln\ (1-dy)}$$

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)	COND (BBLS)
Gas sand previously produced	0	0
Sand perforated	164,238 (1)	474
Sand not perforated, but potentially productive	0 (2)	0
Total recoverable gas	164,238	474

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ECONOMIC

*Well Cost $ 1,101,717 (to the depth of formation completed)

Recompletion Cost $ 0

TOTAL COST $ 1,101,717

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + {(Oil Price)(Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac}

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).7)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

$3.12/MCF and .0002 Bbl/MCF → $2.38

**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	20% DISCOUNT FACTOR		DISCOUNTED CASH FLOW
zero	---	---	---	0	1.0000	-1,107,717
198 0	141,076	335,761	12,000	1	0.9129	295,561
198 1	23,162	55,126	12,000	2	0.7607	32,806
198				3	0.6339	
198				4	0.5283	
198				5	0.4402	
Remainder				6	0.3669	
						- 779,350

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

UNECONOMICAL

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-58

Type Test: [x] Initial [ ] Annual [ ] Special		Date of Test: 5-13-80	
Company: Perry R. Bass	Connection: None		
Pool: Indian Flats	Formation: Atoka		Unit: Big Eddy Unit
Completion Date: 5-13-80	Total Depth: 12,580'	Plug Back T.D.: 12,545'	Elevation: 3236' KB
Csg. Size: 5½" / Wt.: 17# / d: / Set At: 12,590'	Perforations: From 11,468 To 11,616		Farm or Lease Name: Big Eddy Unit / Well No.: 74
Tbg. Size: 2 3/8" / Wt.: 4.7# / d: / Set At: 11,655'	Perforations: From To		Unit: B / Sec.: 25 / Twp.: 21S / Rge.: 28E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 11,395'		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 198 @ 11402	Mean Annual Temp. °F: 68	Baro. Press. – P_a: 13.2 / State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
		.618	0	0	0		4.026	Flange

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							4906	68			
1.	4.026		1.50	125	3.0	82	4825	74	Packer in		60
2.	4.026		1.50	140	6.0	97	4802	75	Well		60
3.	4.026		1.50	515	9.5	91	4588	76			60
4.	4.026		1.50	520	15.0	86	4489	76			60
5.	4.026		1.50	529	35.0	90	4135	75			60

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	10.84	20.36	138.2	.9795	1.270	1.011	278
2	10.84	30.32	153.2	.9662	1.270	1.012	408
3	10.84	70.84	528.2	.9715	1.270	1.042	987
4	10.84	89.43	533.2	.9759	1.270	1.042	1252
5	10.84	137.76	542.2	.9723	1.270	1.043	1923

NO.	P_t	Temp. °R	T_r	Z
1	.21	542	1.48	.978
2	.23	557	1.53	.976
3	.79	551	1.51	.921
4	.79	546	1.50	.921
5	.81	550	1.51	.919

Gas Liquid Hydrocarbon Ratio: 52604 to 1 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 52.6 Deg.
Specific Gravity Separator Gas: .618 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 671 P.S.I.A. ____ P.S.I.A.
Critical Temperature: 365 °R ____ °R

P_c 6182.2 P_c^2 38220

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		6093.2	37127	1073
2		6050.2	36605	1615
3		5800.2	33642	4578
4		5674.2	32197	6023
5		5327.2	28379	9841

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.8838$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.371$

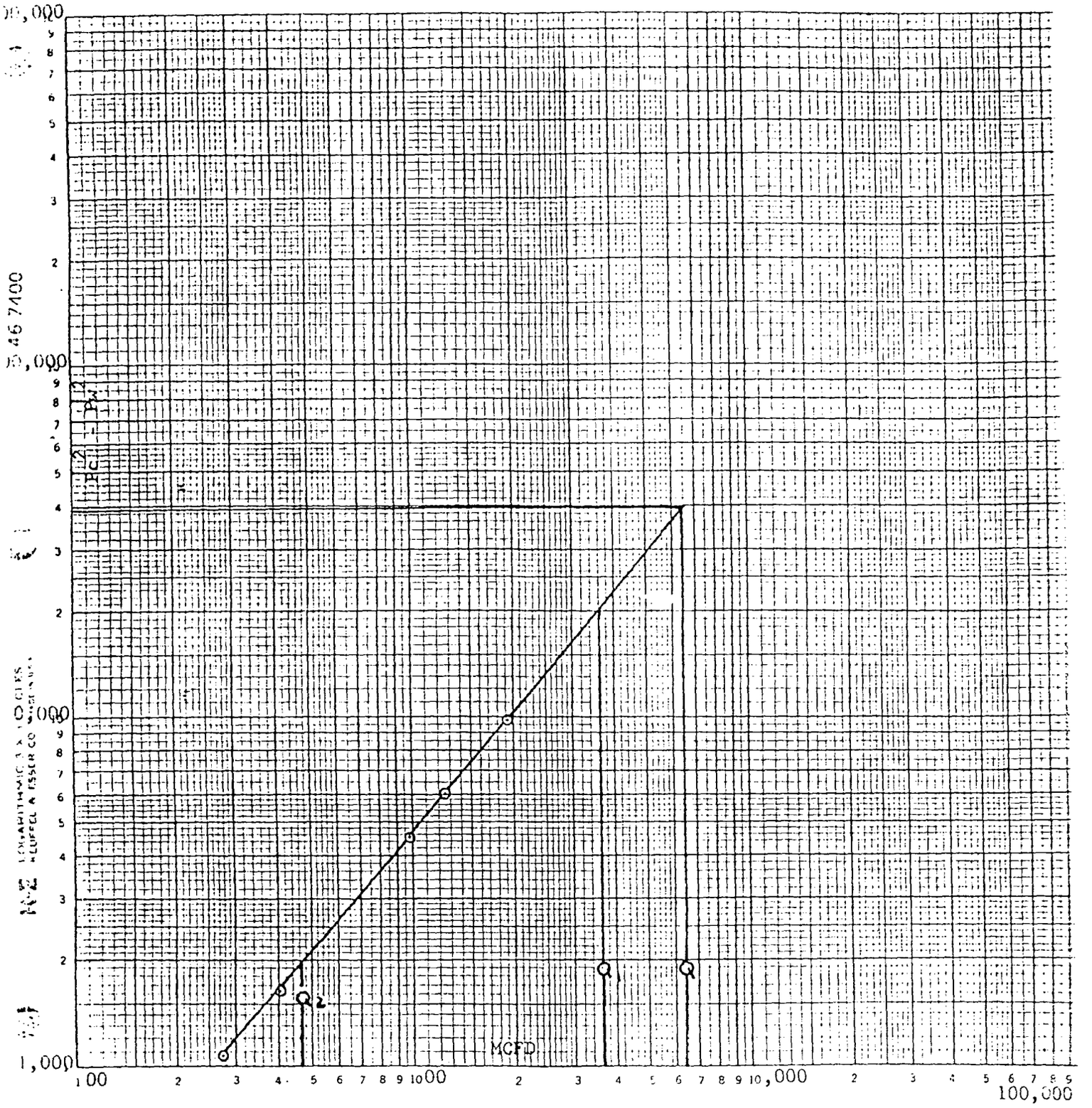
$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 6482$

Absolute Open Flow: 6482 Mcfd @ 15.025 | Angle of Slope θ: 48 | Slope, n: .8947

Remarks: Pw Substituted for Pc - Measured with Amerada Instrument No. 34683 - 0-6300# Element

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Lambert	Spruell	Pyle

Gary R. Bass
Eddy Unit No. 74
Absolute Open Flow Test
5-13-80



$Q_1 = 3,625$ Log $Q_1 = 3.55931$

$Q_2 = 462$ Log $Q_2 = 2.66464$

.8947

$Q = 6482$ MCFD

WELL BORE DIAGRAM

4/15/80

SDS

BIG EDDY UNIT No. 14

INDIAN FLATS ATOKA GAS

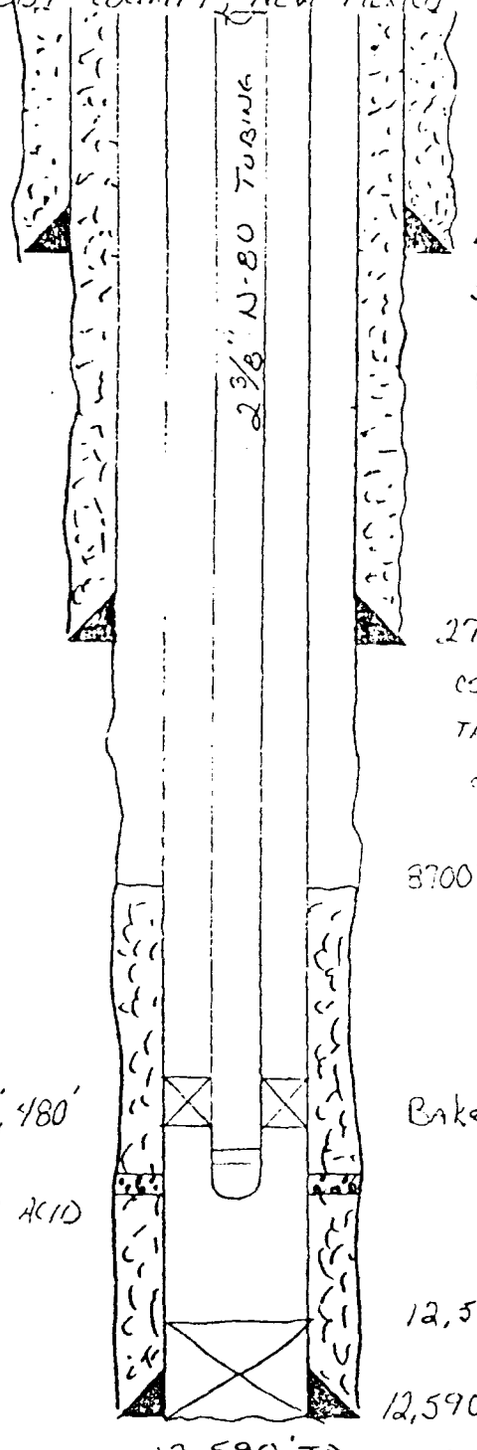
660' FNL & 1980' FEL Sec. 25 T21S, R28E

EDDY COUNTY, NEW MEXICO

ELEV: 3218' GL

SPUD: 2/22/80

COMP. 5/9/80



11" csg.
405' - 11 3/4", 42 #/FT., H-40 ST&C csg. CMTD. W/ 350 SX. CLASS "C" (DID NOT CIRCULATE) Pumped 100 SX down ANNULUS NO CIRCULATION.

2772' - 8 5/8" OD, 28 #/FT., S-90 ST&C csg. CMTD W/ 200 SX THICKSET TAILED W/200 SX CLASS "C" CIRC. OUT 350 SX.

8300' TOC CALC.

8-80 ATOKA PERFS @ 11,468', 474', 480' 1,615', 616' 2 SPF (10 shots) ACIDIZED W/ 1000 GAL. 7½% MSR ACID

Baker Lokset pkr @ 11,395'

12,545' PBTD

12,590' - 5½" OD, 17 #/FT.; S-95 & N-80 csg. CMTD. W/ 200 SX. HAL. LITE. 925 SX. CLASS "H".

12,590' TD

FIELD: Indian Flats Delaware COUNTY:

OPERATOR:

LEASE: Big Eddy Unit #74 BTY. NO.

WELLS:

	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.
Jan.						
Feb.						
March						
April						
May						
June						
July	1	252		58 227		0
August	1	160		48,406		0
Sept.	1	46		28,159		28
Oct.	1	6		3488		0
Nov.	1	0		41		0
Dec.	1	0		2755		4
Yearly Total						

1981

Jan.	1	0		2508		0
Feb.	1	0		2,114		0
March	1	0		6,859		0
April	1	0		6,290		9
May	1	10		4059		6
June	1	0		1332		2
July						
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						

Jan.						
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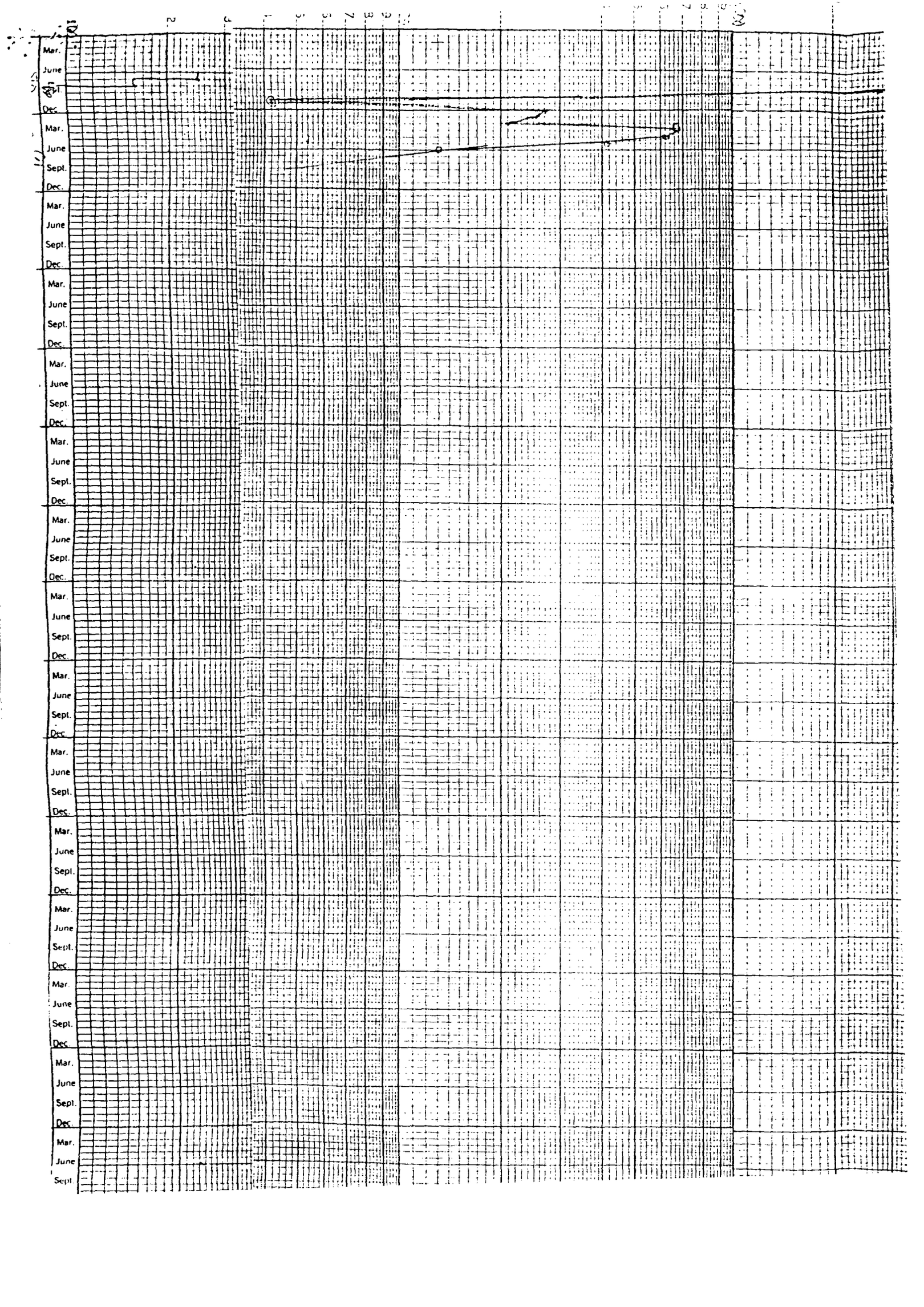
August						
Sept.						
Oct.						
Nov.						
Dec.						
Yearly Total						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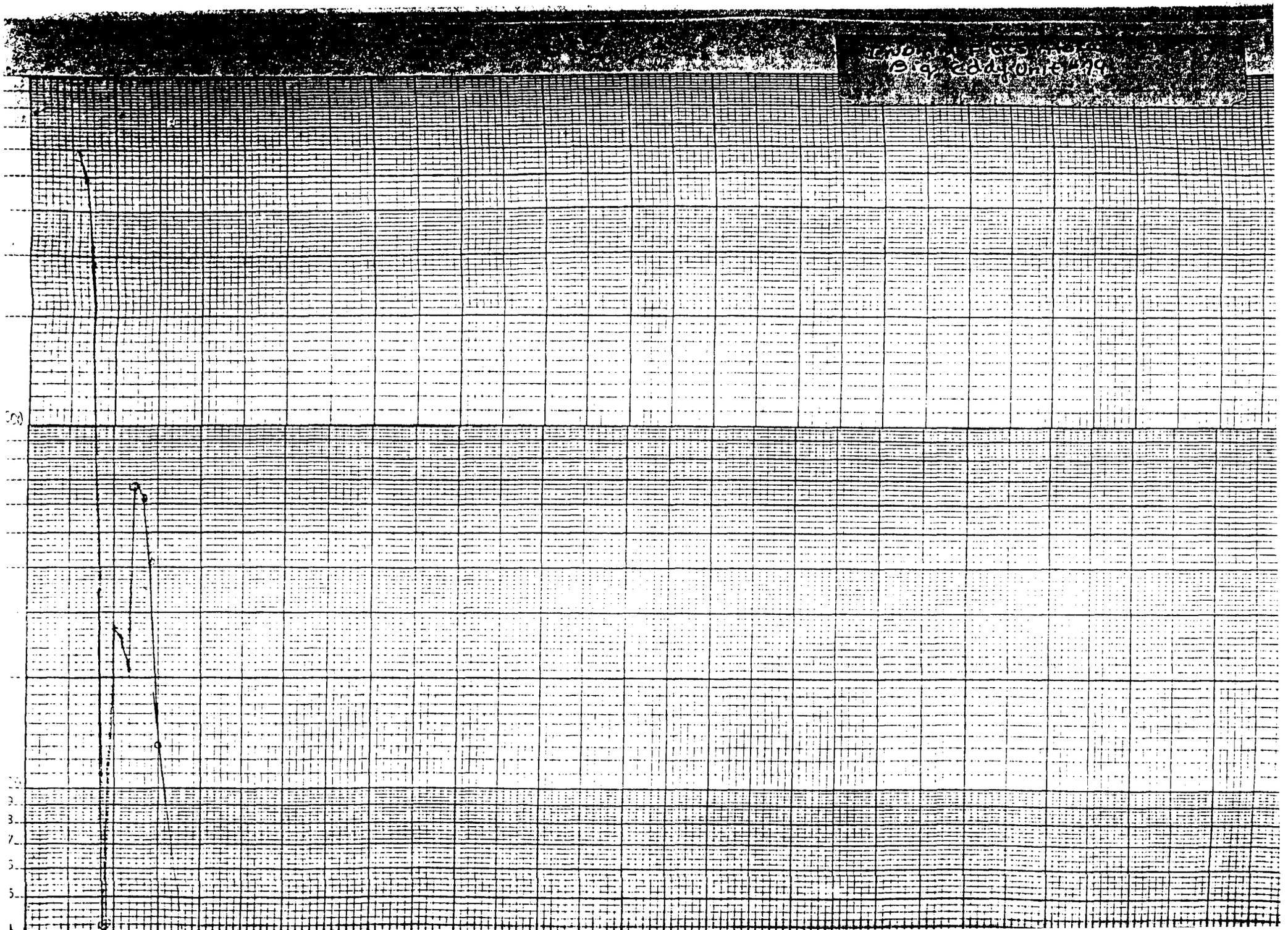


- AMENDED -

Perry R. Bass		Signal Unit	74
B	25	21 South	28 East Eddy
660	North	1980	East
3218.0	Atoka ✓	Indian Flats	320 Acres

1 Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

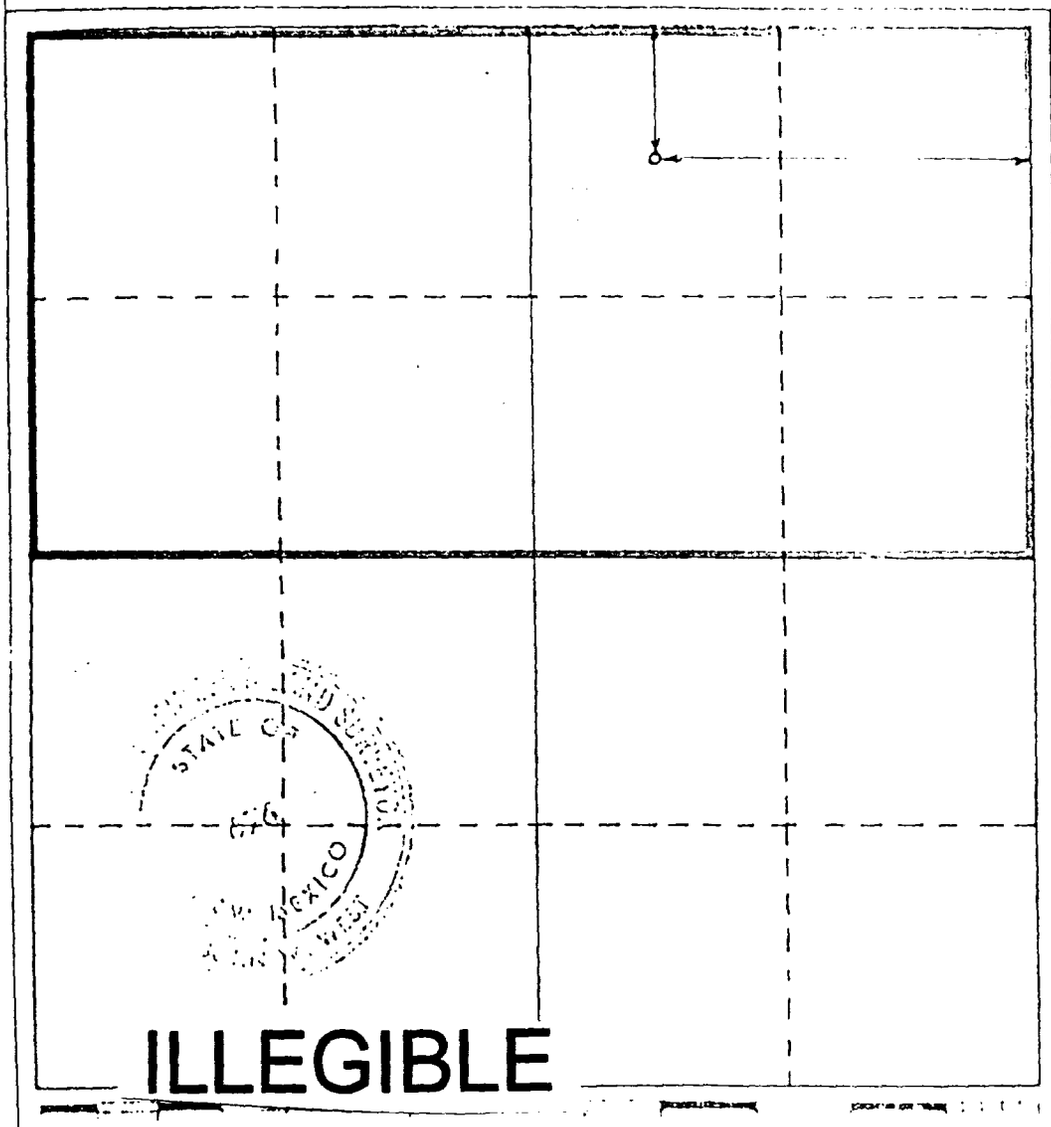
2 If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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, force-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



ILLEGIBLE

Ken Lester

Ken Lester

Production Clerk

Bass Enterprises Prod Co

7/11/80

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.

January 17, 1980

John W. West

John W. West 6

Registered Professional Engineer 32

BIG EDDY UNIT NO. 80

Big Eddy Unit No. 80 had its initial and only completion in the Morrow formation. After 2800 gallons 7-1/2% MSR acid and 32,000 gallons gel with 36,000# sand fracture treatment, the well potentialed at 1.256 MMCFPD. The well is presently making 180 MCFPD.

WORKSHEET FOR COMMERCIAL DETERMINATION AND PARTICIPATING AREA IN FEDERAL UNITS

WELL DATA

WELL BIG EDDY 80 FORMATION MORROW

LOCATION H UNIT, 2538 FEET FROM N LINE & 660 FEET FROM E LINE,

SECTION 3, RANGE 28E, TOWNSHIP 21S, COUNTY EDDY NEW MEXICO.

SPUD DATE 4/19/80 COMPLETION DATE 6/30/80 INIT. PROD. DATE 2/2/81

PERFORATIONS 11,834', 11,837', 11,839', 11,849', 11,852', 11,855', 11,889', 11,891', 11,893', 11,946', 11,947', 11,983', 11,985', 11,989'

STIMULATION:

ACID 11,834'-11,989' with 2,800 gallons 7 1/2% MSR-100 acid with Additives and Inhibitor and 27 Balls

FRACTURE 11,834'-11,989' with 32,000 gallons water and 16,000 pounds of 100 mesh sand and 20,000 pounds of 20-40 sand

POTENTIAL CAOF 1,256 MCFPD

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

VOLUMETRIC CALCULATION

	FORMATION		
	SANDS PERFORATED	SANDS NOT PERFORATED BUT POTENTIALLY PRODUCTIVE	
Area (A) proration unit size, acres	320	320	Lower Morrow
Porosity (Ø), %	8.5	6.5	
Water saturation (Sw), %	34	23	
Net thickness (h) > 6% Ø & < 40%Sw, ft	39	19	
Temperature (T), °F	175	178	

Bottomhole pressure (P), psia	4,870,	4,950
Recovery factor (RF), (80% assumed)	.80	.8
Recoverable gas, MCF (See eq. below)	6,953,447	3,064,667

Recoverable Gas, MCF = (43,560)(Ø)(1-Sw)(A)(h)(RF)(Bgi) where

$$Bgi = 0.03535 \frac{P}{ZT} \left(\frac{MSCF}{Cu\ Ft}\right) = 0.03535 \frac{(4870)}{(.95)(635)} \quad \begin{matrix} .95 \\ .95 \\ .285 \\ .289 \end{matrix}$$

PERFORMANCE DATA

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

(Cumulative production to 6 / 30 /81; 35,095 MCF.

Current rate (qi), 5,100 MCF/mo

Economic limit (ql), 3000 MCF/mo

Decline rate, dy 70 %

Remaining gas (Q) = 20,930 MCF

Ultimate Recoverable Gas 56,025 MCF

$$Q = \frac{(qi - ql)\ 12\ mo/yr}{-\ln\ (1-dy)}$$

6 BBl/MM

Attach plat showing proration unit and participating area.

RECOVERABLE GAS	GAS (MCF)		COND (BBLS)
Gas sand previously produced	0		0
Sand perforated	56,025	(1)	336
Sand not perforated, but potentially productive	24,692	(2)	144
Total recoverable gas	80,717		480

(1) performance recoverable gas if available

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

Participating area size based on ratio of production history and volumetrics

320 acres---minimum area is proration unit.

ECONOMIC

*Well Cost $ 1,110,720 (to the depth of formation completed)

Recompletion Cost $ 80,000

TOTAL COST $ 1,190,720

(Gas Price)(Net Revenue Interest)(1-Production and Ad Valorem Taxes) + {(Oil Price)(Net Revenue Interest)(Cond. Yield, Bbls/MCF)(1-Production and Ad Valorem Taxes) - (Oil Price - Base Excise Tax) WFPT Frac}

Net Gas Price = Gas Price (.845)(1-0.1) + (16 + (33-16).7)(0.845)(1-.1)(Cond. Yield, Bbls/MCF)

$3.06/MCF → $2.46/MCF

**Operating Cost $2000/Month

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

YEAR	GROSS GAS	BEPCO NET INCOME	OPERATING COST	20% DISCOUNT FACTOR	DISCOUNTED CASH FLOW
zero	---	---	---	1.0000	-1,190,720
1981	54,264	133,489	22,000	0.9129	101,778
1982	1,761	4,332	2,000	0.7607	1,774
1983	24,692	60,742	24,000	0.6339	23,291
1984				0.5283	
198				0.4402	
Remainder				0.3669	
					-1,063,877

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

(Bepco Net Income - Operating Expense) discount factor = discounted cash flow.

* Includes 11% of drilling cost as overhead.

** Includes $500/month as overhead.

UNECONOMICAL

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special — Test Date: 06/30/80

Company: PERRY R. BASS	Connection: AIR	
Pool:	Formation: MORROW	Unit: I

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
	12283	12227	3284.7 GL	BIG EDDY

Csg. Size	Wt.	d	Set At	Perforations	Well No.
5½		12283		From 11834 To 11989	# 80

Tbg. Size	Wt.	d	Set At	Perforations	Unit	Sec.	Twp.	Rge.
2 3/8	4.7	11777		From To	I	3	21s	28e

Type Well – Single – Bradenhead – G.G. or G.O. Multiple	Packer Set At	County
SINGLE	11470	EDDY

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. – P_a	State
TBG.	192@11798	60	13.2	NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11798	11798	.6337	2.315	.453			4 "	FLG.

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					3435				
1.	4 X .750	300	6.0	95	3320				1 HR.
2.	4 X .750	305	14.0	102	3100				1 HR.
3.	4 X .750	335	50.0	97	2560				1 HR.
4.	4 X .750	590	35.0	92	1980				1 HR.
5.	4 X .750	600	14.0	98	1000				4 HRS.

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	2.661	43.35	313.2	.9680	1.256	1.024	144
2	2.661	66.74	318.2	.9619	1.256	1.023	220
3	2.661	131.95	348.2	.9662	1.256	1.027	438
4	2.661	145.30	603.2	.9706	1.256	1.048	494
5	2.661	92.65	613.2	.9653	1.256	1.047	313

NO.	P_t	Temp. °R	T_r	Z
1.	.47	555	1.51	.953
2.	.47	562	1.53	.955
3.	.52	557	1.51	.948
4.	.90	552	1.50	.911
5.	.92	558	1.52	.913

Gas Liquid Hydrocarbon Ratio: dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .6337 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 670 P.S.I.A. P.S.I.A.
Critical Temperature: 368 R R

P_c 3448.2 P_c^2 11890.1

NO	BHP	P_w	P_w^2	$P_c^2 - P_w^2$
1	4470.2	3425.5	11733.9	156.2
2	4200.2	3200.9	10245.6	1644.5
3	3465.2	2606.4	6793.4	5096.7
4	2619.2	1961.9	3848.9	8041.2
5	1696.2	1284.8	1650.8	10239.3
SI	4616.2			

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 76.121 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 8.725

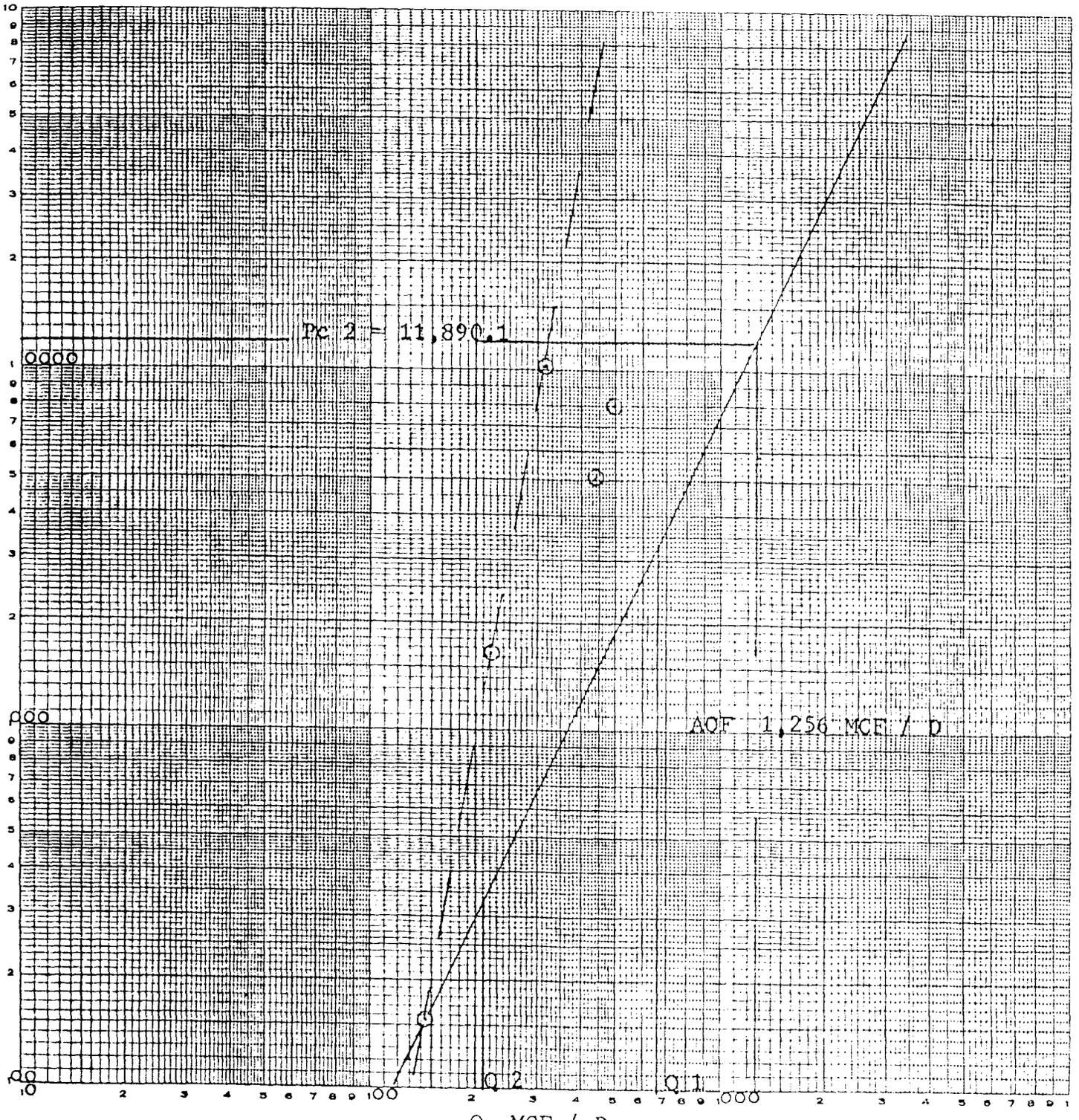
$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.256

Absolute Open Flow: 1,256 Mcfd @ 15.025 Angle of Slope θ: 63.5 Slope, n: .500

Remarks: ILLEGIBLE

Approved by Commission:	Conducted By:	Calculated By:	Checked By:
	DAVIS SERVICES INC.	RICK RAGAN	

COMPANY : BASS ENTERPRISES & PRODUCTION
LEASE : BIG EDDY UNIT
WELL NO. : # 80
UNIT : I / sec. 3/ twp. 21s/ rge. 28e
COUNTY : EDDY
STATE : NEW MEXICO
DATE : JUNE 30,1980



Q MCF / D

Q 1= 664; LOG OF Q 1 = 2.8222190
Q 2= 210; LOG OF Q 2 = 2.3222190

N = .500

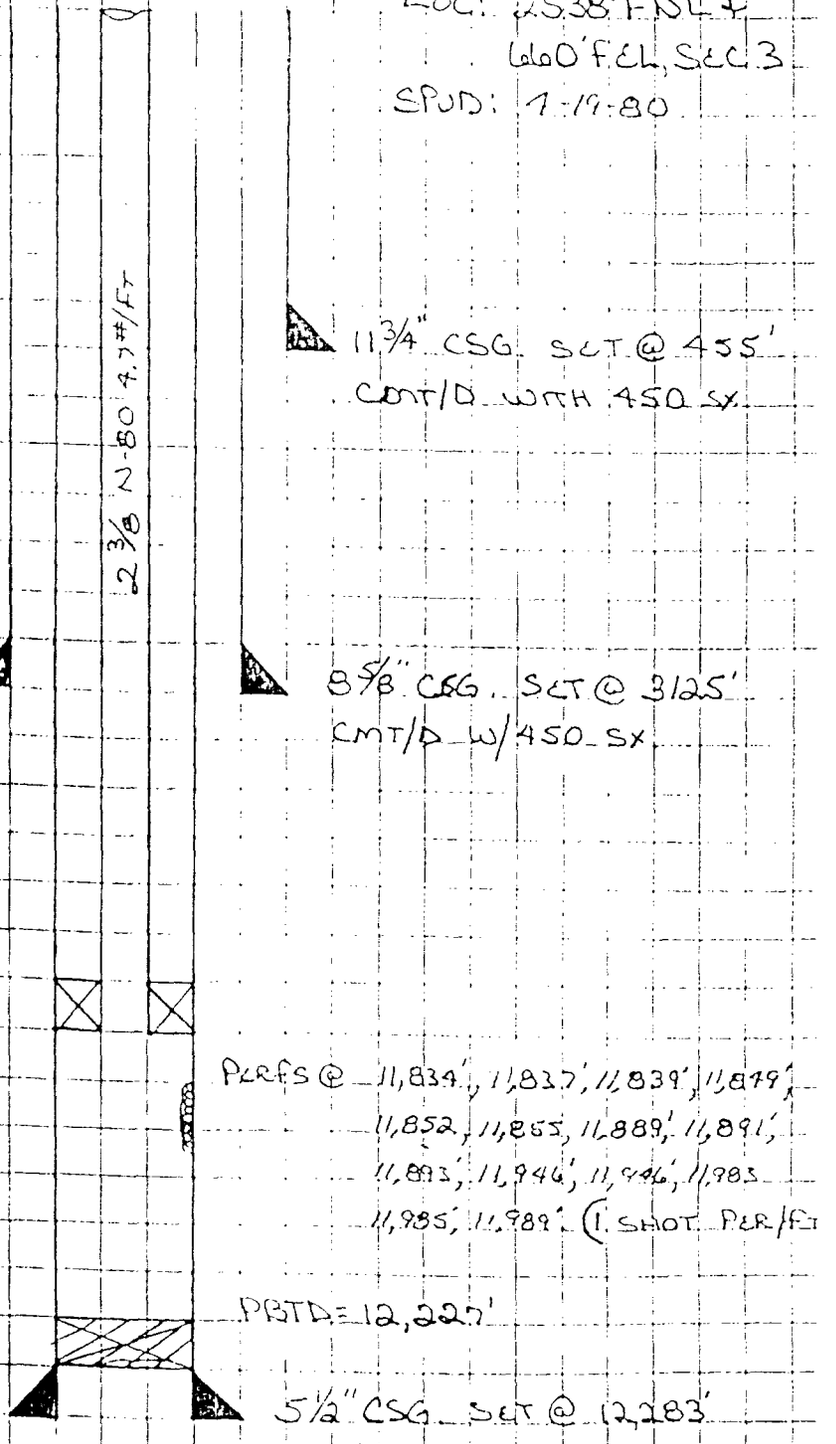
BASS ENTERPRISES PRODUCTION COMPANY

PAGE NO ____

SUBJECT	DATE	DEPARTMENT	PREPARED BY
BIG EDDY UNIT No. 80	8-12-80	PROD	DAJ

GL: 3284.7'
RKB: 3302.7'

LOC: 2538' FNL & 660' FEL, SEC 3
SPUD: 1-19-80



ILLEGIBLE

FIELD: Undesignated Morrow COUNTY:

OPERATOR:

LEASE: Big Eddy Unit BTY. NO.

WELLS: #80

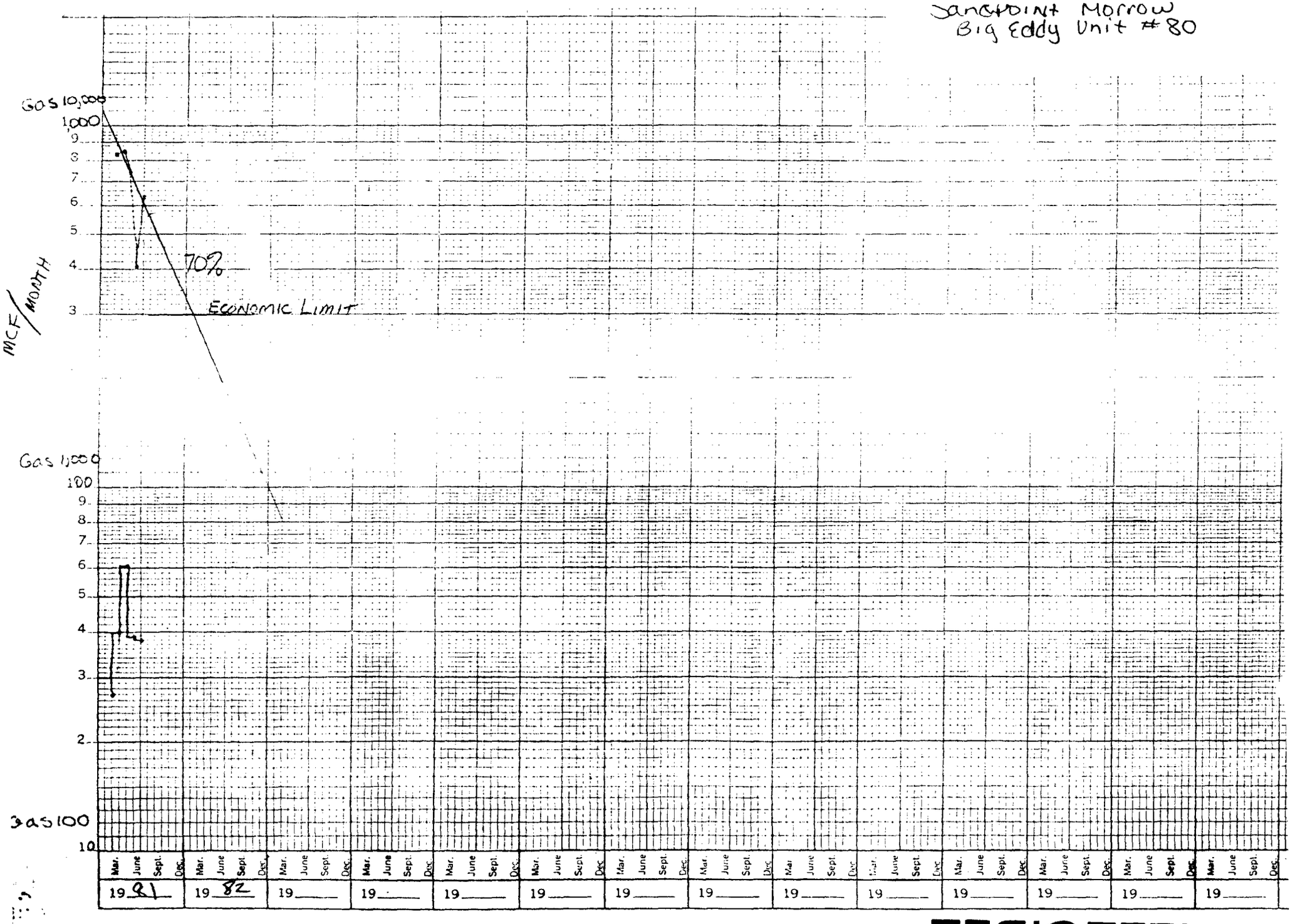
1981	Number Producing Wells	Oil Produced Bbls.	Cumulative Oil Bbls.	Gas Produced MCF	Cumulative Gas MCF	Water Produced Bbls.	Cumu Wa Bb
Jan.	-	-		-		-	
Feb.	1	27		8489		0	
March	1	40		8574		0	
April	1	61		7530		11	
May	1	39		4081		6	
June	1	38		6421		10	
July							
August							
Sept.							
Oct.							
Nov.							
Dec.							
Yearly Total							

Jan.							
Feb.							
March							
April							
May							
June							
July							
August							
Sept.							
Oct.							
Nov.							
Dec.							
Yearly Total							

Jan.							
Feb.							
March							
April							
May							
June							
July							
August							
Sept.							
Oct.							
Nov.							
Dec.							
Yearly Total							

ILLEGIBLE

Sanpoint Morrow
Big Eddy Unit #80



ILLEGIBLE

Perry R. Bass

Big Eddy

80

1 | 3 | 21 South | Eddy

660 feet from the North line and 660 feet from the East

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
3297	Morrow	Big Eddy	294.51 Acres

Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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 or otherwise?

X 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.

MAR 10 1980

U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Mike Waygood

Mike Waygood

Engineering Assistant

Bass Enterprises Production Co.

March 6, 1980

1 660

ILLEGIBLE

JOHN W. WEST 676
PATRICIA A. ROMERO 5865

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

October 19, 1981

365

Bass Enterprises Production Co.
Ft. Worth National Bank Bldg.
Ft. Worth, Texas 76102

Attention: Jens Hansen

Re: Second Amendment to the
1981 Plan of Development
for the Big Eddy Unit,
Eddy County, New Mexico

Dear Mr. Hansen:

Enclosed please find the approved 1981 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico. Such approval of the Oil Conservation Division is contingent upon like approval of the Commissioner of Public Lands and the United States Geological Survey.

Sincerely,

W. PERRY PEARCE
General Counsel

WPP/dr

cc: Commissioner of Public Lands
U. S. Geological Survey

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

September 18, 1981

UNITED STATES GEOLOGICAL SURVEY
P. O. Box 26124
Albuquerque, New Mexico 88201

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

365

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

Re: Second Amendment to the
1981 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 1981 Plan of Development for your review and approval.

Big Eddy Unit Well #87

Under Amendment Letter dated March 29, 1981, this Well was moved to a location 660' FSL and 1980' FWL Section 26, T21S-R28E, Eddy County, New Mexico, for a Morrow Test. We wish to reassign this Well number to a location 1980' FSL and 1980' FWL of Section 28, T21S-R28E, for a 12,600' Morrow Test.

Big Eddy Unit Well #84

Under the 1981 Plan of Development, this Well was located in Section 24, T21S-R28E, for a 12,700' Morrow Test. We wish to reassign this Well number to a location 1980' FNL and 1980' FEL, Section 18, T21S-R29E, for a 12,650' Morrow Test.

Big Eddy Unit Well #88

Under the 1981 Plan of Development, this Well was located in Section 13, T22S-R28E, for a 13,000 Morrow Test. We wish to reassign this Well number to a location 1980' FSL and 660' FWL in Section 18, T22S-R29E, for a 12,950' Morrow Test.

If this Proposed Amendment to the 1981 Plan of Development meets with you 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 TO AND ACCEPTED this 19 day of October, 1981.

State of New Mexico

Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

September 28, 1981

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Bass Enterprises Production Co.
Fort Worth National Bank Bldg.
Fort Worth, Texas 76102

Re: Second Amendment to the 1981
Plan of Development for the
Big Eddy Unit
Eddy County, New Mexico

365

ATTENTION: Mr. Jens Hansen

Gentlemen:

The Commissioner of Public Lands has this date approved your Second Amendment to the 1981 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico. Such plan provides for the change of location of your well No. 87 from Section 26, T21S-R28E to Section 28, T21S-R28E and Well No. 84 from Section 24, T21S-R28E to Section 18, T21S-R29E and also Well No. 88 from Section 13, T22S-R28E to Section 18, T22S-R29E to test the Morrow Formation. Our approval is subject to like approval by the United States Geological Survey.

Enclosed is one approved copy for your files.

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

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:
FLOYD O. PRANDO, Assistant Director
Oil and Gas Division
AC 505/827-2748

AJA/FOP/pm
encl.
cc: OCD-Santa Fe, New Mexico
USGS-Albuquerque, New Mexico

South Central Region
P. O. Box 26124
Albuquerque, New Mexico 87125

JUL 30 1981

365

Bass Enterprises Production Co.
Attention: Jens Hansen
Ft. Worth National Bank Bldg.
Fort Worth, Texas 76102

Gentlemen:

One approved copy of your amended 1981 plan of development for the Big Eddy unit area, Eddy County, New Mexico is enclosed. Such plan, proposing to change the location of the #87 well, was approved on this date subject to like approval by the appropriate officials of the State of New Mexico.

Sincerely yours,

(ORIG. SGD.) JAMES W. SHELTON

FOR Gene F. Daniel
Deputy Conservation Manager
Oil and Gas

Enclosure

cc:
Comm of Pub Lands, Santa Fe
NMOCD, Santa Fe
DS, Roswell (w/encl)

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

June 29, 1981

UNITED STATES GEOLOGICAL SURVEY
P. O. Box 26124
Albuquerque, New Mexico 87125
Attention: Joe Lara

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

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

Re: Big Eddy #69 Well
1980' FNL, 1980' FWL
Section 2, T22S-R28E
Eddy County, New Mexico

Gentlemen:

Gulf Oil Exploration & Production Co. drilled the Big Eddy #69 Well at the referenced location to a total depth of 12,620', which tested the Lower Morrow Formation. After the Lower Morrow was discovered to be unproductive, the Well was then completed in the Bone Springs Formation from 8,804' to 8,814'.

Gulf has advised Bass, Unit Operator, that the Well is incapable of producing in commercial quantities. Therefore, we are requesting that this Well be produced on a lease basis and to support our determination, we are enclosing well data and production information, which has been prepared by Gulf Oil Company.

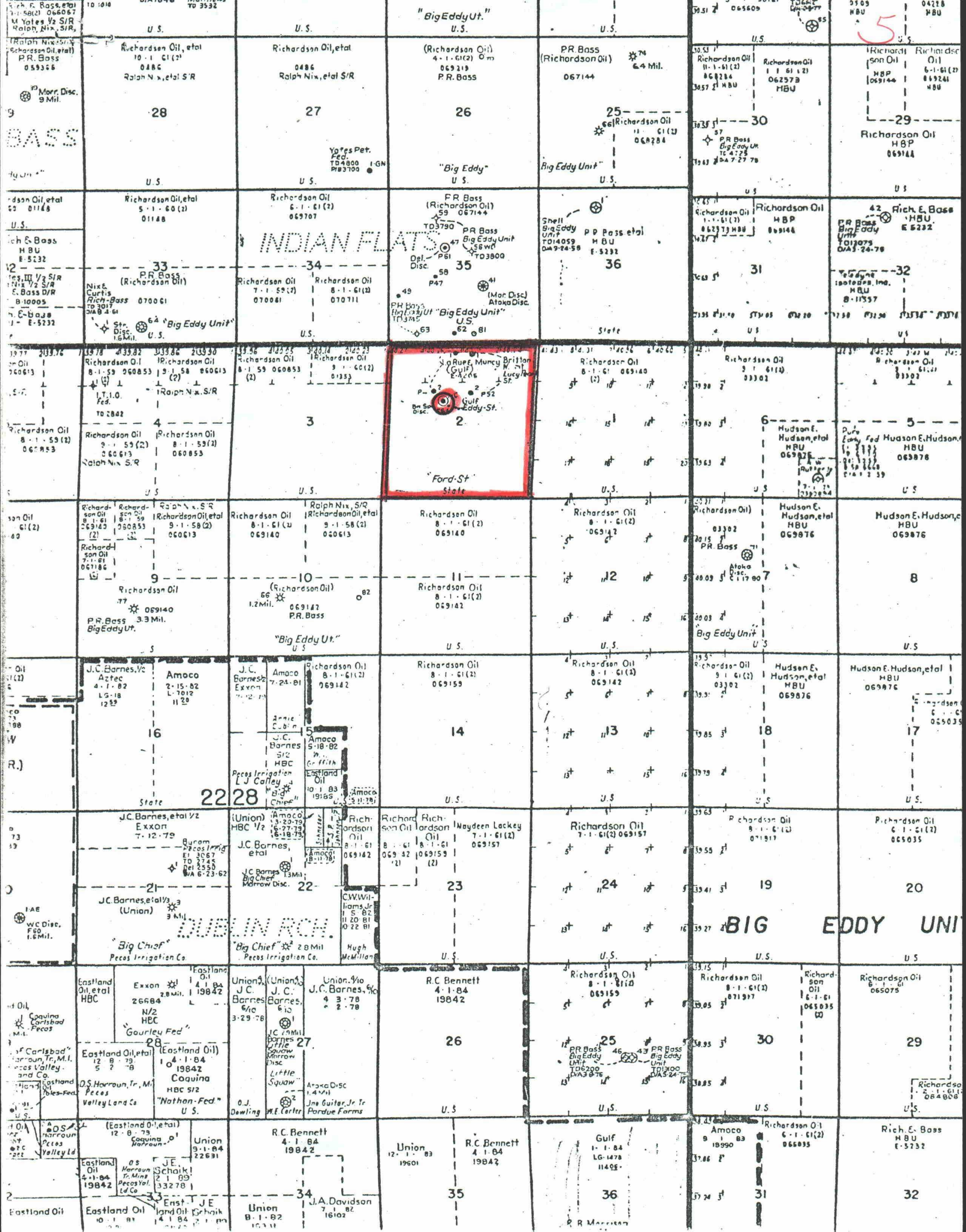
If you should need further information to make a Commercial Determination, please advise us.

Yours very truly,

JENS HANSEN
Division Landman

JH:ep
Enclosure

cc: Gulf Oil Exploration & Production Co.
P. O. Box 670
Hobbs, New Mexico 88240
Attention: R. C. Anderson


5
"Big Eddy Ut."
Richardson Oil, etal
P.R. Bass
Ralph Nix, etal S/R
(Richardson Oil)
P.R. Bass
(Richardson Oil)
28
27
26
25
30
29
Richardson Oil
HBP
Yates Pet. Fed.
"Big Eddy"
Big Eddy Unit
INDIAN FLATS
P.R. Bass
(Richardson Oil)
P R Bass
Big Eddy Unit
Shell
Big Eddy Unit
P.R. Bass etal
HBU
E-5232
33
34
35
36
31
32
Nix & Curtis
Rich-Bass
"Big Eddy Unit"
(Mor. Disc)
Atoka Disc.
Rich. E. Bass
Teledyne Isotopes, Inc.
HBU
Richardson Oil
Ralph Nix S/R
4
3
2
Gulf
Eddy-St.
"Ford-St"
State
6
5
Hudson E. Hudson, etal
HBU
069876
9
10
11
12
7
8
P.R. Bass
Big Eddy Ut.
"Big Eddy Ut."
Atoka Disc.
Big Eddy Unit
J.C. Barnes, 1/2
Aztec
Amoco
J.C. Barnes 1/2
Exxon
16
22
28
15
14
13
18
17
Pecos Irrigation
J.C. Barnes
Big Chief
Eastland Oil
J.C. Barnes, etal 1/2
Exxon
(Union)
HBC 1/2
J.C. Barnes, etal
J.C. Barnes
Big Chief
Morrow Disc.
21
22
23
24
19
20
Naydeen Lackey
C.W. Williams Jr
Hugh McMillan
J.C. Barnes, etal 1/3
(Union)
DUBLIN RCH.
"Big Chief"
Pecos Irrigation Co.
BIG EDDY UNIT
Eastland Oil, etal
HBC
Exxon
Union
J.C. Barnes
R.C. Bennett
"Gourley Fed"
Coquina
Carlsbad
Pecos
28
27
26
25
30
29
Eastland Oil, etal
(Eastland Oil)
Coquina
HBC S/2
"Nathan-Fed."
O.S. Harroun, Tr., M.I.
Pecos Valley Land Co
O.J. Dowling
Little Squaw
Atoka Disc
Joe Guitar, Jr. Tr
Pardue Farms
P.R. Bass
Big Eddy Unit
Richardson Oil
Amoco
Rich. E. Bass
HBU
E-5232
Union
R.C. Bennett
Gulf
J.E. Schaik
J.A. Davidson
33
34
35
36
31
32
Eastland Oil
Union
P.R. Morrison
U.S.

POOL Eddy "C" State #1 POOL

WELL NO: Gulf Oil WELL NO:

	OIL	GAS	WATER	DAYS		OIL	GAS	WATER	DAYS
19 80					19				
Jan.					Jan.				
Feb.					Feb.				
Mar.					Mar.				
Apr.					Apr.				
May					May				
June					June				
July					July				
Aug.					Aug.				
Sep.			543		Sep.				
Oct.	242	2590	49		Oct.				
Nov.	137	---	33		Nov.				
Dec.	99	---	60		Dec.				
Year					Year				
Cum	478	2590	685		Cum.				

	OIL	GAS	WATER	DAYS		OIL	GAS	WATER	DAYS
1981					19				
Jan.	286	224	108	17	Jan.				
Feb.	217	224	108	28	Feb.				
TOTAL	981	3038	901		Mar.				
Apr.					Apr.				
May					May				
June					June				
July					July				
Aug.					Aug.				
Sep.					Sep.				
Oct.					Oct.				
Nov.					Nov.				
Dec.					Dec.				
Year					Year				
Cum					Cum				

	OIL	GAS	WATER	DAYS		OIL	GAS	WATER	DAYS
19					19				
Jan.	Last test 10-8-80				Jan.				
Feb.	13 BOPD	2 BWPD			Feb.				
Mar.	Most Gas used on location.				Mar.				
Apr.					Apr.				
May					May				
June					June				
July					July				
Aug.					Aug.				
Sep.					Sep.				
Oct.					Oct.				
Nov.					Nov.				
Dec.					Dec.				
Year					Year				
Cum					Cum				

ILLEGIBLE

EDDY "C" STATE #1
UNDESIGNATED (BONE SPRING)

47 6740

K&E 10 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

BOPM

ACTUAL PRODUCTION

PROJECTED AVAILABILITY

GROSS PRIMARY ULTIMATE = 6200 BBL OIL

1980 1981 1982 1983 1984 1985 1986 1987 1988 1989

WAB 4/89

WELL DATA SHEET

Lease EDDY "C" STATE Well No. 1 Pool UNDES. (BONE SPRING) Date 4-9-81

Location 1980' FN & WL, SEC. 2, T22S-R28E County EDDY State NM

18.80' from KB to GL

11 3/4 " OD 42 #
Set @ 434' w/ 400 sx
Cmt. circulated? YES
TOC @ _____ by TS

8 5/8 " OD 32 #
Set @ 3706' w/ 1100 sx
Cmt. circulated? YES
TOC @ _____ by TS

PERF 5 1/2" CSG @ 8804-06', 8812-14' w/ 2 1/2" JHPF

5 1/2 "OD 15.5,17 # _____ Thd
Gr. K-55, _____ Csg
Set @ 9130 ' w/ 400 sx
Cmt. circulated? NO
TOC @ 7410' by TS

PBTD = 9090'

TD 12,690'

Date Completed DEC 11, 1980
Well GL Elev. 3157'
Prod. Formation BONE SPRING
From 8804 'to 8814
Init. Prod. 14 BOPD 0 BWPD Date
Gas Vol. _____ MCF _____ GOR
Init. Inj. _____ BWPD @ _____ psi Date
Initial Treatment
7-15-80 3000 GAL 20% HCL

Subsequent Workover or Reconditioning:

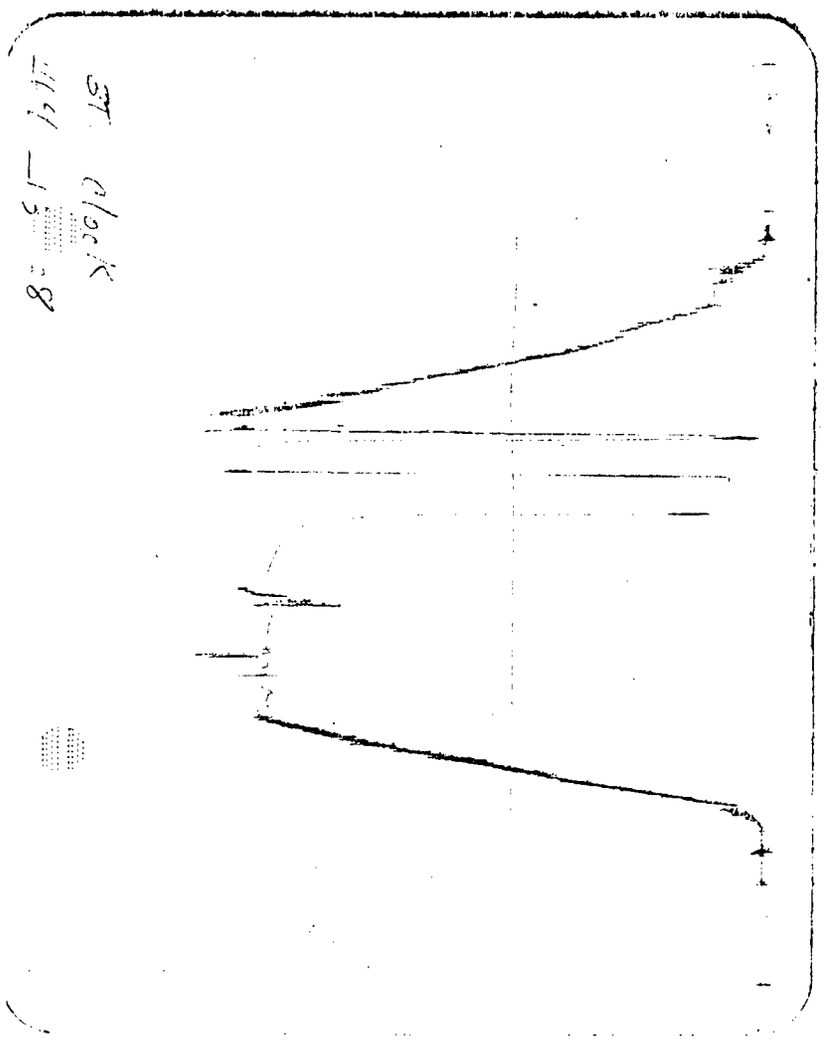
DST #1 8801-8950'
2 11,506-11,542'
3 11,500-11,595'
4 12,225-12,284'
5 12,350-12,443'
6 12,530-12,620'
7 12,525-12,620'

Pres. Inj _____ BWPD @ _____ psi, Date
Pres. Prod _____ BOPD _____ BWPD Date
Gas Vol. _____ MCF _____ GOR
Pumping FL @ _____ ' Date
Static FL @ _____ ' Date
Pump Size _____ SPM _____ SL
Well Depth by SLM _____ ' Date

Tubing & Rod Data:
2 3/8" TUBING & GUIBERSON ARROW IN HOLE

Remarks: ATOKA & MORROW WHERE ALSO DST'D WITH POOR RESULTS

DST #1



RECORDING PRESSURE GAUGE CHART

Ticket No. 279628 Date 5-27-81

Company [illegible]

Lease [illegible] Well No. 1

FIELD READINGS

Device No. 1114		24 Hr. Clock No. 13428	
B. T. Gauge Depth 9780 Ft.		Estimated Gauge Depth Temperature 141 °F	
		Thousands of Inch	Pressure P.S.I.
Initial Hydro. Mud Pressure		2.68	4205
1st	Initial Flow Pressure	.21	47
	Final Flow Pressure	.18	284
	First Closed In Pressure	2.70	4257
2nd	Initial Flow Pressure	.18	284
	Final Flow Pressure	.34	537
	Second Closed In Pressure	2.57	4050
3rd	Initial Flow Pressure		
	Final Flow Pressure		
	Third Closed In Pressure		
Final Hydro. Mud Pressure		2.60	4098

FORM 892-R4

Tester [illegible]

Printed in U.S.A.

HALLIBURTON SERVICES
A Halliburton Company

Photographic negative for this chart on file three years from date at Halliburton Duncan, Oklahoma 73533

ILLEGIBLE

1342-A

ALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W80-581

To Gulf Oil Producing & Exploration Company

Date 5-31-80

Box 670

Hobbs, New Mexico

Submitted by _____ Date Rec. 5-31-80

Well No. Eddy "C" St. #1 Depth 8,950' Formation Bone Spring

County Eddy Field W.C. Source DST #1

	Top of Recovery	Bottom of Recovery	Pit Sample
Resistivity	0.058 @ 74°F.	0.052 @ 74°F.	0.052 @ 74°F.
Specific Gravity			
pH			
Calcium (Ca)			*MPL
Magnesium (Mg)			
Chlorides (Cl)	56,000	57,000	57,000
Sulfates (SO_4)			
Bicarbonates (HCO_3)			
Soluble Iron (Fe)			
Sampler -	100% Oil API Gr. @ 60°F. - 43.0		
Middle Rec. - .	100% Oil API Gr. @ 60°F. - 43.0		

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

By W. L. Brewer
CHEMIST

cc:

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL

Gulf [illegible]

[illegible] No. 879630[illegible] [illegible] No. 1113 [illegible] Kh 9746 [illegible] 24 hr

Tested Interval [illegible] (150') Clock Factor [illegible]

Flow Period 1 Time 2 min — Closed in Period 1 Time 60 min

P	time defl	time min	log $\frac{T+\theta}{\theta}$	psi defl	P psi	ΔP	$\sqrt{T}$	ΔP^2	time defl	time min	log $\frac{T+\theta}{\theta}$	psi defl	P psi	ΔP	$\sqrt{T}$
1	0	0		.120	234				0	0		.105?	230		
2	[illegible]	2		.128	230				.017	[illegible]		.932	1600		
3									[illegible]	[illegible]		1.946	[illegible]		
4									.050	[illegible]		2.244	[illegible]		
5									.066	[illegible]		2.309	[illegible]5		
6									.083	[illegible]		2.360	[illegible]		
7									.100	[illegible]		[illegible]	[illegible]		
8									.116			[illegible]	[illegible]		
9									.133			[illegible]	[illegible]		
10									.149			[illegible]	[illegible]		
11	Ti[illegible]		Hydrostatic						.166			[illegible]	[illegible]		
12				2.130	4350				.182	55		[illegible]	[illegible]		
13	F[illegible]		Hydro[illegible]						.199	60		[illegible]	[illegible]3		
14				[illegible]	4301										
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

ILLEGIBLE

FLUID SAMPLE DATA

Sampler Pressure 700 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas 6.771
cc. Oil 400
cc. Water
cc. Mud
Tot. Liquid cc. 400
Gravity 40 ° API @ 60 °F.
Gas/Oil Ratio cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	@ °F.		ppm
Recovery Mud	@ °F.		ppm
Recovery Mud Filtrate	@ °F.		ppm
Mud Pit Sample	@ °F.	140,000	ppm
Mud Pit Sample Filtrate	@ °F.		ppm

Mud Weight 9.6 vis 28 cp

Date 5-30-80 Ticket Number 879628
Kind of Job DST #1 Halliburton District Artesia, New Mexico
Tester Marvin P. Lonon Witness James Lovell
Drilling Contractor Sharp Drlg Co Rig #32

EQUIPMENT & HOLE DATA

Formation Tested Bone Springs
Elevation Ft.
Net Productive Interval Ft.
All Depths Measured From KB (CASL)
Total Depth Ft.
Main Hole/Casing Size 7 7/8
Drill Collar Length I.D. 2.25
Drill Pipe Length I.D. 3.826
Packer Depth(s) Ft.
Depth Tester Valve Ft.

Cushion TYPE None AMOUNT Ft. Depth Back Pres. Valve None Surface Choke 1/4 Floor Manifold Bottom Choke .75

Recovered 312 Feet of Gas Cut Oil
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks Gas To Surface 6 Min into 1st CIP
Reversed Out

TEMPERATURE	Gauge No. 1114 Depth: 8780 Ft.	Gauge No. Depth: Ft.	Gauge No. 1113 Depth: 8946 Ft.	TIME
	13428 = 24 Hour Clock	Hour Clock	6728 = 24 Hour Clock	Tool 5-30-80 A.M.
Est. °F.	Blanked Off No	Blanked Off	Blanked Off Yes	Opened 0725 P.M.
Actual 141 °F.	Pressures	Pressures	Pressures	Opened 5-30-80 A.M. Bypass 1130 P.M.

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		4225				4313			
First Period Flow	Initial	47				215		—	—
	Final	284				251		05	
	Closed in	4257				4313		60	
Second Period Flow	Initial	284				305		—	—
	Final	537				611		60	
	Closed in	4250				4132		120	
Third Period Flow	Initial							—	—
	Final								
	Closed in								
Final Hydrostatic		4098				4132		—	—

Legal Location Sec. - Twp. - Rng. 2-22-28
Lease Name Eddy "C" Style
Well No. 1
Test No. 1
Tested Interval 4132' - 4150'
Field Area Wildcat
County Eddy
State New Mexico
Lease Owner/Company Name Gulf Oil Corporation

[illegible]

[illegible] No. 879628 [illegible] I.T. No. 1113 [illegible] I.T. [illegible]pth 8946' [illegible] 24 hr

Tested Interval 8800'-8960' [illegible] Clock Factor [illegible] .003326[illegible]

Flow Period 2 Time 55 min — Closed in Period 2 Time 102 min

P	time defl	time min	log $\frac{t+\theta}{\theta}$	psi defl	P psi	ΔP	√T	ΔP²	time defl	time min	log $\frac{t+\theta}{\theta}$	psi defl	P psi	ΔP	√T
1	0	[illegible]		.188	338				0	0		.356	640		
2	.020	[illegible]		.208	374				.027	8		1.762	3161		
3	.040	[illegible]		.237	426				[illegible]	16		2.013	3614		
4	.060	[illegible]		.266	479				.080	24		2.120	[illegible]		
5	.080	24		[illegible]	512				.106	32		2.169	3895		
6	.100	[illegible]		.300	540				[illegible]	40		2.200	3951		
7	[illegible]	[illegible]		.316	568				.160	48		2.222	3991		
8	[illegible]	[illegible]		.330	593				[illegible]	56		2.232	4002		
9	[illegible]	[illegible]		.340	611				[illegible]	64		[illegible]	4045		
10	[illegible]	55		[illegible]	640				[illegible]	72		[illegible]	[illegible]		
11									.266	80		2.2[illegible]	4082		
12									.293	[illegible]		2.281	[illegible]		
13									.319	96		2.28[illegible]	4111		
14									.346	104		[illegible]	4123		
15									.373	[illegible]		2.30[illegible]	4132		
16									.399	[illegible]		2.306	4142		
17									[illegible]	[illegible]		2.307	[illegible]		
18															
19															
20															
21															
22															
23															
24															
25															

ILLEGIBLE

Casing perfs _____ Bottom choke _____ Surf. temp _____ °F Ticket No. 879528

Gas gravity _____ Oil gravity _____ GOR _____

Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

Date 5-30-80 Time (a.m. / p.m.) 0725	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
5-29-80 1930					Called Out For Job
2230					On Location
5-30-80 0130					Pick Up Tools
0230					Start in Hole For DST #1
0725	—	0	—		Open Tool For 5 Min With Good Blow
0730	—	22	—		Close Tool For 60 Min With Good Blow
0736	—	—	—		Gas To Surface
0830	1/4	0	—		Open Tool For 0 Min 1/4" choke Gas to Surface
35	1/4	16	45.57		"
40	1/4	35	73.50		Pressure Increase Slowing
45	1/4	50	95.55		"
0900	1/4	65	117.60		"
10	1/4	75	132.30		Pressure Stabilized
15	1/4	75	132.30		"
0830	1/4	75	132.30		Close Tool For 120 Min Gas to Surface
1130	—	—	—		Open Bypass & Start Out of Hole

FLUID SAMPLE DATA

Sampler Pressure ________ P.S.I.G. at Surface

Recovery: Cu. Ft. Gas ________

cc. Oil ________

cc. Water ________

cc. Mud ________

Tot. Liquid cc. ________

Gravity ________ ° API @ ________ °F.

Gas/Oil Ratio ________ cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	____ @ ____ °F.		[illegible] ppm
Recovery Mud	____ @ ____ °F.		95[illegible] ppm
Recovery Mud Filtrate	____ @ ____ °F.		____ ppm
Mud Pit Sample	____ @ ____ °F.		10[illegible]750 ppm
Mud Pit Sample Filtrate	____ @ ____ °F.		____ ppm

Mud Weight ________ vis ________ cp

Date	6-11-8[illegible]	Ticket Number	[illegible]
Kind of Job	[illegible]	Halliburton District	[illegible]
Tester		Witness	
Drilling Contractor	[illegible]		

EQUIPMENT & HOLE DATA

Formation Tested [illegible]

Elevation ________ Ft.

Net Productive Interval ________ Ft.

All Depths Measured From ________

Total Depth ________ Ft.

Main Hole/Casing Size ________

Drill Collar Length ________ I.D. ________

Drill Pipe Length ________ I.D. ________

Packer Depth(s) [illegible] Ft.

Depth Tester Valve ________ Ft.

Cushion	TYPE	AMOUNT		Depth Back Pres. Valve	Surface Choke	Bottom Choke
		H2O	Ft.		[illegible]	

Recovered	4000	Feet of	Gas Cut Drlg Fluid
Recovered	[illegible]	Feet of	Gas Cut Drlg [illegible] water [illegible]
Recovered		Feet of	
Recovered		Feet of	
Recovered		Feet of	

Meas. From Tester Valve

Remarks Leak in Drill Pipe

TEMPERATURE	Gauge No. 73[illegible] Depth: Ft.		Gauge No. Depth: Ft.		Gauge No. [illegible] Depth: Ft.		TIME	
	[illegible] Hour Clock		Hour Clock		[illegible] Hour Clock		Tool	A.M.
Est. °F.	Blanked Off		Blanked Off		Blanked Off		Opened	P.M.
							Opened	A.M.
Actual °F.	Pressures		Pressures		Pressures		Bypass	P.M.
	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic	6339				6365			
First Period Flow Initial	[illegible]				1646		—	—
First Period Flow Final	[illegible]				[illegible]		5	
First Period Closed in	[illegible]				[illegible]		[illegible]	
Second Period Flow Initial	[illegible]				[illegible]		—	—
Second Period Flow Final	[illegible]				[illegible]		[illegible]	
Second Period Closed in	[illegible]				[illegible]		235	
Third Period Flow Initial							—	—
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	[illegible]				[illegible]		—	—

ILLEGIBLE

Legal Location Sec. - Twp. - Rng. | Lease Name | Well No. | Test No. 2 | Field Area | Tested Interval | County | Lease Owner/Company Name | State

-8

RECORDING PRESSURE GAUGE CHART

Date

Well No.

FIELD READINGS

	Hr. Clock No.	
th / -189 Ft.	Estimated Gauge Depth Temperature 165 °F	
	Thousands of Inch	Pressure P.S.I.
ro. ure	2.00	6339
itial Flow essure	.52	1647
al Flow essure	.53	1678
st Closed Pressure	1.96	6211
itial Flow essure	.80	2530
al Flow essure	.98	3098
ond Closed Pressure	1.90	6019
tial Flow essure		
al Flow essure		
ird Closed Pressure		
. ire	2.00	6339

RM 892-R4

S.A.

HALLIBURTON SERVICES
A Halliburton Company

Photographic negative for this chart on file three years from date at Halliburton Duncan, Oklahoma 73533

ILLEGIBLE

No. _____ I.T. No. _____ I.T. Depth _____

Tested Interval _____ Clock Factor _____

2 cP Flow Period 60 Time 2 cP Closed in Period 234 Time

P	time defl	time min	log $\frac{t+\theta}{\theta}$	psi defl	P psi	∠P	∠T	∠P²	time defl	time min	log $\frac{t+\theta}{\theta}$	psi defl	P psi	∠P	∠T
1		0		.80	3391.7					0		.926	3121.1		
2		1		.796	3378.					1		1.208	3[illegible].1		
3		2		[illegible]	3[illegible].2					2		1.2[illegible]	4[illegible].6		
4		3		.796	3[illegible].1					3		1.220	4[illegible].3		
5		4		.798	3[illegible].4					4		1.362	4[illegible].1		
6		5		.80	3[illegible].7					5		1.402	4450		
7		10		.816	3383.3					10		1.496	4[illegible].7		
8		15		.836	3456.6					20		1.6	5[illegible].4		
9		20		.856	3538.9					30		1.664	5276.2		
10		25		.874	3615.9					40		1.704	5414.8		
11		30		.894	3699.2					50		1.734	5[illegible].3		
12		35		.912	3776.1					60		1.[illegible]	5[illegible].5		
13		40		.932	3858.4					80		1.775	5707		
14		45		.946	3915.7					100		1.8[illegible]	5[illegible].9		
15		50		.96[illegible]	3[illegible].6					120		1.842	5[illegible].6		
16		55		.974	3982.9					140		1.86[illegible]	5710.		
17		60		.986	3121.1					160		1.8[illegible]	5[illegible].6		
18										180		1.88[illegible]	5[illegible].3		
19										200		1.8[illegible]	[illegible].2		
20										220		1.900	[illegible].4		
21										234		1.9[illegible]	[illegible].2		
22															
23															
24															
25															

ILLEGIBLE

No. 756941 D.T. No. 7302 D.T. Depth

Tested Interval Tight hole Gloci Factor .00335

1st Flow Period 5 Time 1st Closed in Period 59 Time

	time defl	time min	log $\frac{t+\theta}{\theta}$	psi defl	P psi	ΔP	$\overline{T}$	ΔP^2	time defl	time min	log $\frac{t+\theta}{\theta}$	psi defl	P psi	ΔP	$\overline{T}$
1		0		.542	[illegible]					0		.544	1721.6		
2		1		.538	[illegible]					1		1.202	[illegible]		
3		2		[illegible]	[illegible]					2		1.402	[illegible]		
4		3		.538	[illegible]					3		1.502	[illegible]		
5		4		.540	[illegible]					4		1.575	[illegible]		
6		5		.544	[illegible]					5		1.634	[illegible]		
7										6		1.678	[illegible]		
8										7		1.705	[illegible]		
9										8		1.730	[illegible]		
10										9		1.744	[illegible]		
11										10		1.770	[illegible]		
12										15		1.832	[illegible]		
13										20		1.872	[illegible]		
14										[illegible]		[illegible]	[illegible]		
15										[illegible]		[illegible]	[illegible]		
16										35		1.925	[illegible]		
17										40		1.938	[illegible]		
18										45		1.948	[illegible]		
19										50		1.955	[illegible]		
20										55		1.962	[illegible]		
21										59		1.966	[illegible]		
22	Initial Hydrostatic			2.012	–	6403.9									
23	Final "			2.013		6407									
24															
25															

ILLEGIBLE

Casing perfs. ______ Bottom choke .75 ______ Surf. temp ______ °F Ticket No. ______
Gas gravity ______ Oil gravity ______ GOR ______
Spec. gravity ______ Chlorides ______ ppm Res. ______ @ ______ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED ______

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
[illegible]					[illegible]
[illegible]					[illegible]
0800					Open Tool [illegible]
0805		4"			Good Blow
[illegible]		[illegible]			
0815		7"			" [illegible] 3/4 " "
0820		3"			" " No gas
0825		0"			" "
0830		0"			" "
0845		[illegible]			" " No gas
[illegible]					[illegible]
1000					Gas To Surface & Some
					of the Water Blanket
1255					Bypass
1330					Reverse out
1400					Pump Down Drlg Pipe
					Circ [illegible]
1700					pull out of Hole

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PRODUCTION TEST DATA

FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

		RESISTIVITY		CHLORIDE CONTENT
Recovery Water	@	°F.		ppm
Recovery Mud	@	°F.		ppm
Recovery Mud Filtrate	@	°F.		ppm
Mud Pit Sample	@	°F.		ppm
Mud Pit Sample Filtrate	@	°F.		ppm

Mud Weight 10.7 vis _____ sec.

Date 6-13-80 Ticket Number 757289
Kind of D.S.T. OPEN HOLE TEST Halliburton Location ARTESIA
Tester STAN MC KEE Witness J. LOVELL
Drilling Contractor SHARP DRILLING COMPANY TJH S

EQUIPMENT & HOLE DATA

Formation Tested Atoka
Elevation 3300' Ft.
Net Productive Interval 30' Ft.
All Depths Measured From Kelly Bushing
Total Depth 11595' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 686.1' I.D. 2.25"
Drill Pipe Length 10785' I.D. 3.826"
Packer Depth(s) 11494.99' - 11500.8' Ft.
Depth Tester Valve 11478' Ft.

Cushion TYPE Water AMOUNT 2000 Ft. Depth Back Pres. Valve Surface Choke 3/8" Bottom Choke 3/4"

Recovered 2000 Feet of water.
Recovered 650 Feet of gas cut drilling fluid.
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meg. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET . . .

TIGHT HOLE . . .

Q - Questionable . . .

No water blanket to surface throughout test....

TEMPERATURE	Gauge No. 991 Depth: 11483 Ft.	Gauge No. 693 Depth: 11591 Ft.	Gauge No. Depth: Ft.	TIME (00:00-24:00 hrs.)
	24 Hour Clock	24 Hour Clock	Hour Clock	Tool Opened 1631
Est. °F.	Blanked Off NO	Blanked Off YES	Blanked Off	
Actual 182 °F.	Pressures	Pressures	Pressures	Opened Bypass 2120

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		6517.6	6520.8	6585.8	6581.6-Q				
First Period	Flow Initial	1041.4	1042.0	1165.7	1100.0			—	—
	Flow Final	1040.5	1044.2	1102.1	1102.1			5	4
	Closed in	6269.0	6268.1	6313.8	6309.6			60	61
Second Period	Flow Initial	1203.8	1174.1	1241.7	1221.2			—	—
	Flow Final	1438.7	1442.4	1488.9	1487.2			74	83
	Closed in	5011.7	5011.0	5057.1	5052.8			150	160
Third Period	Flow Initial							—	—
	Flow Final								
	Closed in								
Final Hydrostatic		6456.0	6448.9-Q	6572.8	6564.8			—	—

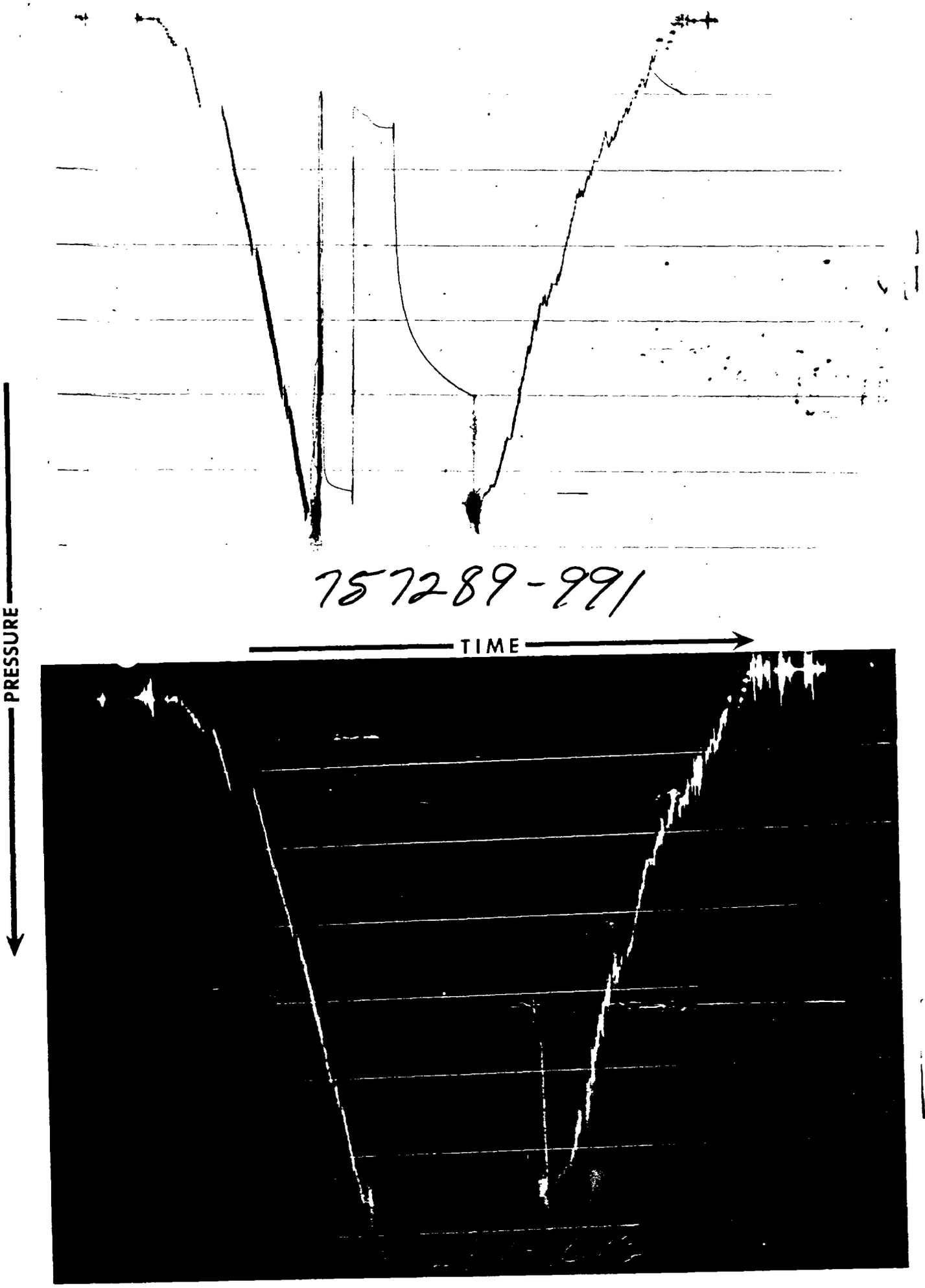
Legal Location Sec. - Twp. - Rng. 2 - 22S - 28E
Lease Name EDDY "C" STATE
Well No. 1
Test No. 3
Tested Interval 11500' - 11595'
Lease Owner/Company Name GULF OIL EXPLORATION & PRODUCTION COMPANY
Field Area WILDCAT
County EDDY
State NEW MEXICO

FORM 181—R2 — PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S 111033 75C 2/80

14



Each Horizontal Line Equal to 1000 p.s.i.

Casing perfs._____ Bottom choke .75" Surf. temp_____ °F Ticket No. 757289

Gas gravity_____ Oil gravity_____ GOR_____

Spec. gravity_____ Chlorides_____ ppm Res._____ @_____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED Floor Manifold 3/8" choke.

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
0500					On location.
1000					Picked up tools.
1130					Started in hole with tools.
1631					Opened tool with a good blow.
1636		2			Closed tool.
1659		4	64.6		Gas to surface 23 minutes into closed in.
1736	3/8	10	85.0		Opened tool.
1741	"	11	88.4		Increase surface pressure.
1745	"	13	95.2		"
1800	"	25	136.0		"
1802	"	75	306.0		"
1805	"	102	397.80		"
1810	"	115	408.0		"
1815	"	124	472.60		"
1820	"	126	479.40		"
1825	"	126	479.40		Stabilized pressure.
1830	"	124	472.60		Decrease in surface pressure.
1835	"	120	459.00		"
1840	"	112	431.00		"
1845	"	102	397.80		"
1850	"	95	374.00		Closed tool.
2120					Pulled off bottom. Opened bypass.

Gauge No. 991			Depth 11483				Clock No. 13736			24 hour	Ticket No. 757289			
	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr
0	.0000	1042.0	.0000		1044.2	.0000	1174.7	.0000		1442.4					
1	.0140	1044.2	.0152*		6046.1	.0410**	1214.6	.0185***		3086.0					
2			.0280		6140.6	.0852	1278.7	.0525		3757.1					
3			.0394		6169.2	.1294	1380.5	.0864		4030.9					
4			.0516		6189.0	.1736	1433.6	.1204		4222.9					
5			.0637		6204.3	.2178	1442.4	.1544		4364.2					
6			.0758		6215.3	.2620	1442.4	.1883		4470.1					
7			.0879		6224.1			.2223		4565.1					
8			.1001		6232.9			.2562		4642.3					
9			.1122		6239.5			.2902		4710.8					
10			.1243		6246.1			.3242		4772.6					
11			.1365		6250.5			.3581		4830.0					
12			.1486		6257.1			.3982		4889.6					
13			.1607		6261.5			.4260		4927.1					
14			.1729		6265.9			.4600		4971.3					
15			.1850		6268.1			.4940		5011.0					
Gauge No. 693					Depth 11591			Clock No.			hour				
0	.0000	1100.0	.0000		1102.1	.0000	1221.2	.0000		1487.2					
1	.0130	1102.1	.0167*		6077.4	.0432**	1272.3	.0200***		3276.0					
2			.0301		6179.9	.0898	1327.6	.0567		3825.8					
3			.0435		6215.4	.1363	1429.7	.0934		4099.7					
4			.0568		6234.3	.1829	1480.8	.1302		4273.8					
5			.0702		6246.8	.2294	1489.3	.1669		4407.6					
6			.0836		2659.4	.2760	1487.2	.2036		4515.9					
7			.0969		6267.7			.2403		4607.2					
8			.1103		6276.1			.2770		4687.8					
9			.1237		6282.4			.3137		4760.0					
10			.1371		6288.7			.3504		4821.6					
11			.1504		6292.8			.3871		4876.8					
12			.1638		6299.1			.4238		4929.9					
13			.1772		6303.3			.4605		4974.5					
14			.1905		6307.5			.4973		5014.7					
15			.2040		6309.6			.5340		5052.8					
Reading Interval			4			14		11							Minutes

REMARKS: * - first interval is equal to 5 minutes, ** - 13 minutes, *** - 6 minutes.

FORM 182-R1—PRINTED IN U.S.A.

SPECIAL PRESSURE DATA

LITTLE'S 96873 75C 8/74

Date 2-11-80 | Ticket No. 758543
Kind of Job: Open Hole Test | District: Artesia
Tester: C. Parker | Witness: James Lovell
Drilling Contractor: Sharp #22

(Sample data section crossed out)

...Cu. Ft. Gas
cc Oil
cc Water
cc Mud
Tot. Liquid cc.
Gravity ____ °API @ ____ °F
Gas/Oil Ratio ____ cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	____ @ ____ °F	____ ppm
Recovery Mud	____ @ ____ °F	____ ppm
Recovery Mud Filtrate	____ @ ____ °F	____ ppm
Mud Pit Sample	____ @ ____ °F	[illegible] ppm
Mud Pit Sample Filtrate	____ @ ____ °F	____ ppm
Mud Weight	____ vis	____ cp

EQUIPMENT & HOLE DATA

Formation Tested: Morrow
Elevation: [illegible] Ft.
Net Productive Interval: [illegible] Ft.
All Depths Measured From: KB
Total Depth: [illegible] Ft.
Main Hole/Casing Size: [illegible]
Drill Collar Length: [illegible] I.D. [illegible]
Drill Pipe Length: [illegible] I.D. [illegible]
Packer Depth(s): 12225 & 12215 Ft.
Depth Tester Valve: [illegible] Ft.

Cushion Type: [illegible] Amount: 2000 Ft. | Depth Back Pres. Valve: NONE | Surface Choke: [illegible] | Bottom Choke: [illegible]

Recovered 5100 Feet of DRILLING FLUID & WATER BLANKET
Recovered ____ Feet of
Recovered ____ Feet of
Recovered ____ Feet of
Recovered ____ Feet of

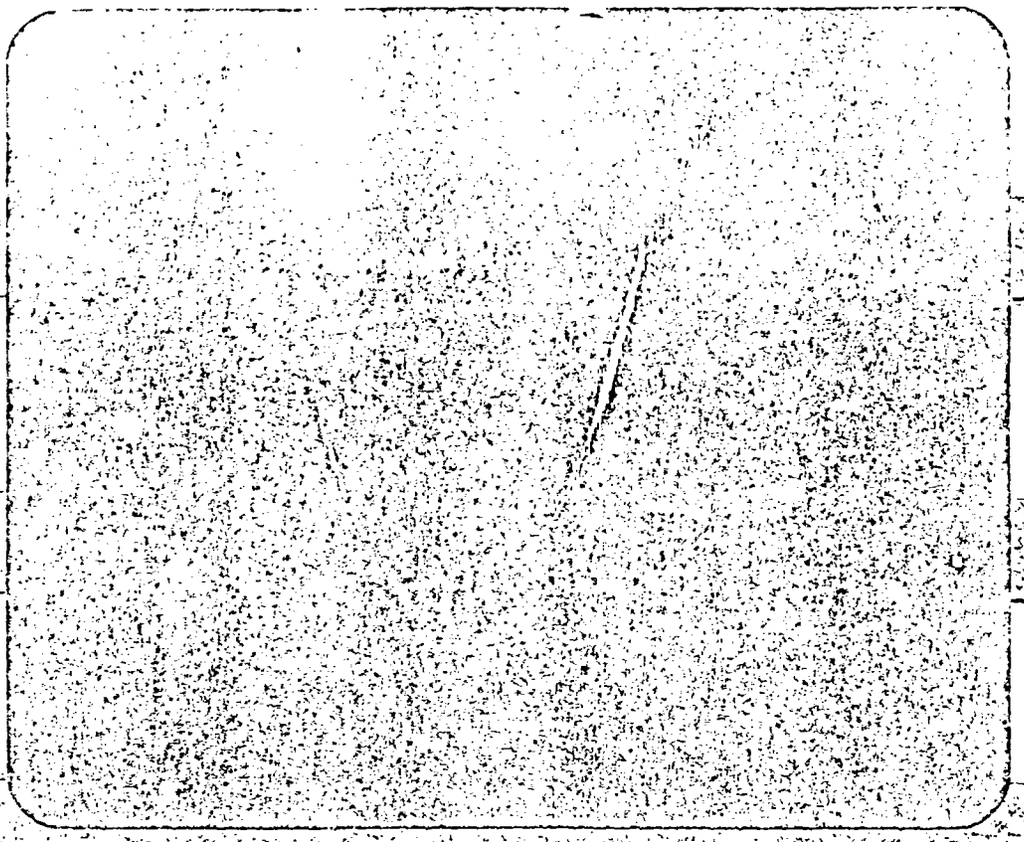
Remarks: OPEN TOOL FOR 5 MIN - CLOSE 60 - OPEN 60 CLOSE 180 MIN. HAD SLIGHT STEADY BLOW THROUGHOUT TEST - NO GAS TO SURFACE DURING TEST. GAS TO SURFACE 25 MINS INTO CLOSE IN.

TEMPERATURE	Gauge No. 7383 Depth: [illegible] Ft.		Gauge No. Depth: Ft.		Gauge No. 7382 Depth: [illegible] Ft.		TIME	
	[illegible] 24 Hour Clock		Hour Clock		[illegible] 24 Hour Clock		Tool Opened	A.M. / P.M.
°F.	Blanked Off: NO		Blanked Off		Blanked Off: YES		Opened Bypass 1942	A.M. / P.M.
Actual [illegible] °F.	Pressures		Pressures		Pressures			
	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic	[illegible]				[illegible]			
Flow Initial	1079				1179			
Flow Final	1111				1171		5	
Closed in	4241				[illegible]		60	
Flow Initial	1426				[illegible]			
Flow Final	1524				1514		60	
Closed in	[illegible]				[illegible]		180	
Flow Initial								
Flow Final								
Closed in								
Final Hydrostatic	[illegible]				[illegible]			

ILLEGIBLE

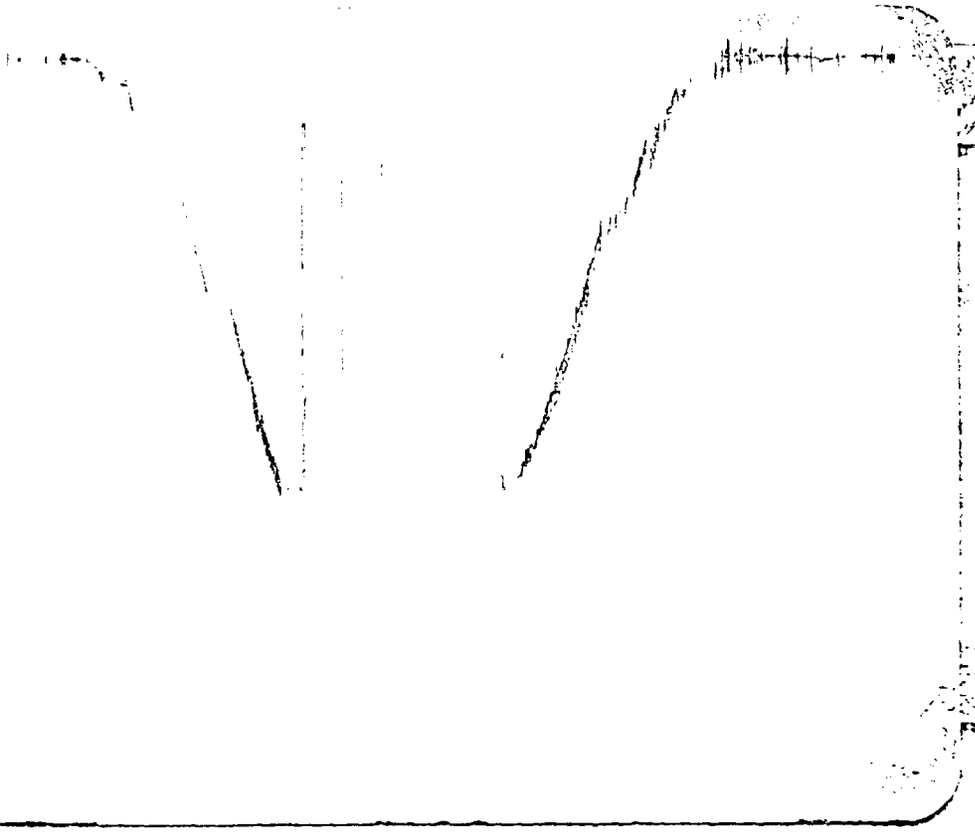
FORMATION TEST DATA

Right margin: Lease Name: [illegible] State | Well No. 1 | Test No. 1 | Tested Interval: 12225 - 12315 (?) | Field Area: Wildcat | Lease Owner/Company Name: [illegible]



Eddy 'C' St. #1
DST #4 6/21/80
12,225' - 12,284'

#7302 @ 12,280'
#7303 @ 12,207'



Gas gravity ____ Oil gravity ____ GOR ____ Ticket No. ____

Spec. gravity ____ Oil ____ BBL ____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED ____

Date 6-2-83 Time a.m. / p.m. 1408	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
1432					TOOLS ON BOTTOM
1441					TOOLS OPEN WITH
					WEAK BLOW.
1447					CLOSE TOOL
1547					OPEN TOOL WITH A
					WEAK BLOW (4" IN 5 GAL
					BUCKET) INCREASING
					TO A FAIR BLOW.
1558					OPEN ON 3/8 CHOKE
					NO GAS TO SURFACE
1642					CLOSE TOOL
1942					OPEN BYPASS
1945					PULL OFF BOTTOM

ILLEGIBLE

PRODUCTION TEST DATA

Flow Period / Time ___ min. Closed in Period / Time ___ min.

P	time defl	time min	log $\frac{t+\theta}{\theta}$	psi defl	P psi	ΔP	ΔT	ΔP^2	time defl	time min	log $\frac{t+\theta}{\theta}$	psi defl	P psi	ΔP	ΔT
1	0	0		.364	1152				0	0		.101	1269		
2	.003	1		.309	1168				.003	1		.460	1456		
3	.007	2		.328	1207				.017	2		.524	1658		
4	.017	5		.401	1269				.010	3		.524	1848		
5									.013	4		.644	2038		
6									.016	5		.696	2203		
7									.000	6		.768	2421		
8									.003	7		.826	2614		
9									.026	8		.208	2767		
10									.007	9		.918	2905		
11	Initial Build			.317	7061				.032	10		.984	3115		
12	Final Build			.210	7089				.029	15		1.066	3374		
13									.042	14		1.150	3643		
14									.052	16		1.217	3851		
15									.059	18		1.277	4042		
16									.066	20		1.318	4129		
17									.081	25		1.404	4404		
18									.092	30		1.462	4629		
19									.114	35		1.497	4741		
20									.130	40		1.531	4827		
21									.146	45		1.570	4888		
22									.163	50		1.594	4933		
23									.179	55		1.563	4962		
24															
25															

ILLEGIBLE

[illegible] 24 hr

[illegible] Interval [illegible] Clock Factor [illegible]

Flow Period [illegible] Time [illegible] min — Closed in Period 2 Time 184 min

P	time defl	time min	log (T+θ)/θ	psi defl	P psi	ΔP	T	ΔP²	time defl	time min	log (T+θ)/θ	psi defl	P psi	ΔP	T
1	0	0		.467	[illegible]				0	0		.576	1633		
2	.016	5		.457	[illegible]				.006	2		[illegible]	[illegible]		
3	.023	10		[illegible]	1410	Open [illegible]	[illegible]		.013	4		.665	2073		
4	.047	15		.458	1449				.019	6		.710	[illegible]		
5	.065	20		.462	1462				.026	8		.776	[illegible]		
6	.081	25		.466	1475				.032	10		.827	2617		
7	.098	30		.472	[illegible]				.039	12		.888	2810		
8	.114	35		.484	1522				.045	14		.937	2965		
9	.130	40		.486	1538				.052	16		.990	3144		
10	.146	45		.491	1553				.058	18		1.008	[illegible]		
11	.163	50		.502	1587				.065	20		1.077	[illegible]		
12	[illegible]	55		.510	1614				.081	25		1.162	3701		
13	.190	59		.516	[illegible]				.097	30		1.240	3930		
14									.113	35		1.298	4115		
15									.130	40		1.342	[illegible]		
16									.146	45		1.375	4361		
17									.162	50		1.400	[illegible]		
18									.178	55		1.419	[illegible]		
19	2nd CIP [illegible]								[illegible]	[illegible]		1.434	[illegible]		
20	.518	160		1.507	[illegible]				[illegible]	70		[illegible]	4617		
21	.583	180		[illegible]	4796				[illegible]	80		[illegible]	[illegible]		
22	.595	184		[illegible]	4779				.292	90		[illegible]	[illegible]		
23									.324	100		[illegible]	[illegible]		
24									.356	110		[illegible]	[illegible]		
25									[illegible]	[illegible]		[illegible]	[illegible]		

ILLEGIBLE

FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	____	@ ____	°F.	____ ppm
Recovery Mud	____	@ ____	°F.	____ ppm
Recovery Mud Filtrate	____	@ ____	°F.	____ ppm
Mud Pit Sample	____	@ ____	°F.	54,000 ppm
Mud Pit Sample Filtrate	____	@ ____	°F.	____ ppm

Mud Weight 10.7 vis ____ sec.

Date 6-24-80 Ticket Number 757292
Kind of D.S.T. OPEN HOLE Halliburton Location ARTESIA
Tester M. LEE Witness J. LOVELL
Drilling Contractor SHARP RIG # 32 DR

EQUIPMENT & HOLE DATA

Formation Tested Morrow
Elevation 3300' Ft.
Net Productive Interval 14' Ft.
All Depths Measured From Kelly Bushing 15'
Total Depth 12443' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 681' I.D. 2.25"
Drill Pipe Length 11634' I.D. 3.826"
Packer Depth(s) 12344-12350' Ft.
Depth Tester Valve 12327' Ft.

Cushion TYPE 3000' AMOUNT Water Ft. Depth Back Pres. Valve — Surface Choke 3/8" Bottom Choke .75"

Recovered 600 Feet of gas cut drilling mud
Recovered 3000 Feet of water
Recovered 60 Feet of drilling mud
Recovered Feet of No gas to surface
Recovered Feet of Leak in drill pipe

Meas. From Tester Valve

Remarks See production test data sheet

Chart from B.T. # 991 not sent for processing

TEMPERATURE	Gauge No. 991	Gauge No. 693	Gauge No.	TIME (00:00-24:00 hrs.)
	Depth: 12332 Ft.	Depth: 12439 Ft.	Depth: Ft.	
	24 Hour Clock	24 Hour Clock	Hour Clock	Tool Opened 09:40
Est. °F.	Blanked Off No	Blanked Off Yes	Blanked Off	
Actual 191 °F.	Pressures	Pressures	Pressures	Opened Bypass 14:35

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		6869		7060	6991.6				
First Period	Flow Initial	1066	CHART	1326	1304.2			—	—
	Flow Final	1070	NOT	1326	1329.7			5	4
	Closed in	2687	SENT	2919	2936.2			60	61
Second Period	Flow Initial	1123	IN	1368	1382.9			—	—
	Flow Final	1177		1432	1436.1			60	61
	Closed in	3068		3344	3320.5			180	179
Third Period	Flow Initial							—	—
	Flow Final								
	Closed in								
Final Hydrostatic		6753		6998	6991.6			—	—

Legal Location Sec. - Twp. - Rng. 2-22-28
Lease Name EDDY "C" STATE
Well No. 1
Test No. 5
Tested Interval 12350-12443'
Lease Owner/Company Name GULF OIL EXPLORATION AND PRODUCTION COMPANY
Field Area WILDCAT
County EDDY
State NEW MEXICO

FORM 181-82 – PRINTED IN U.S.A.

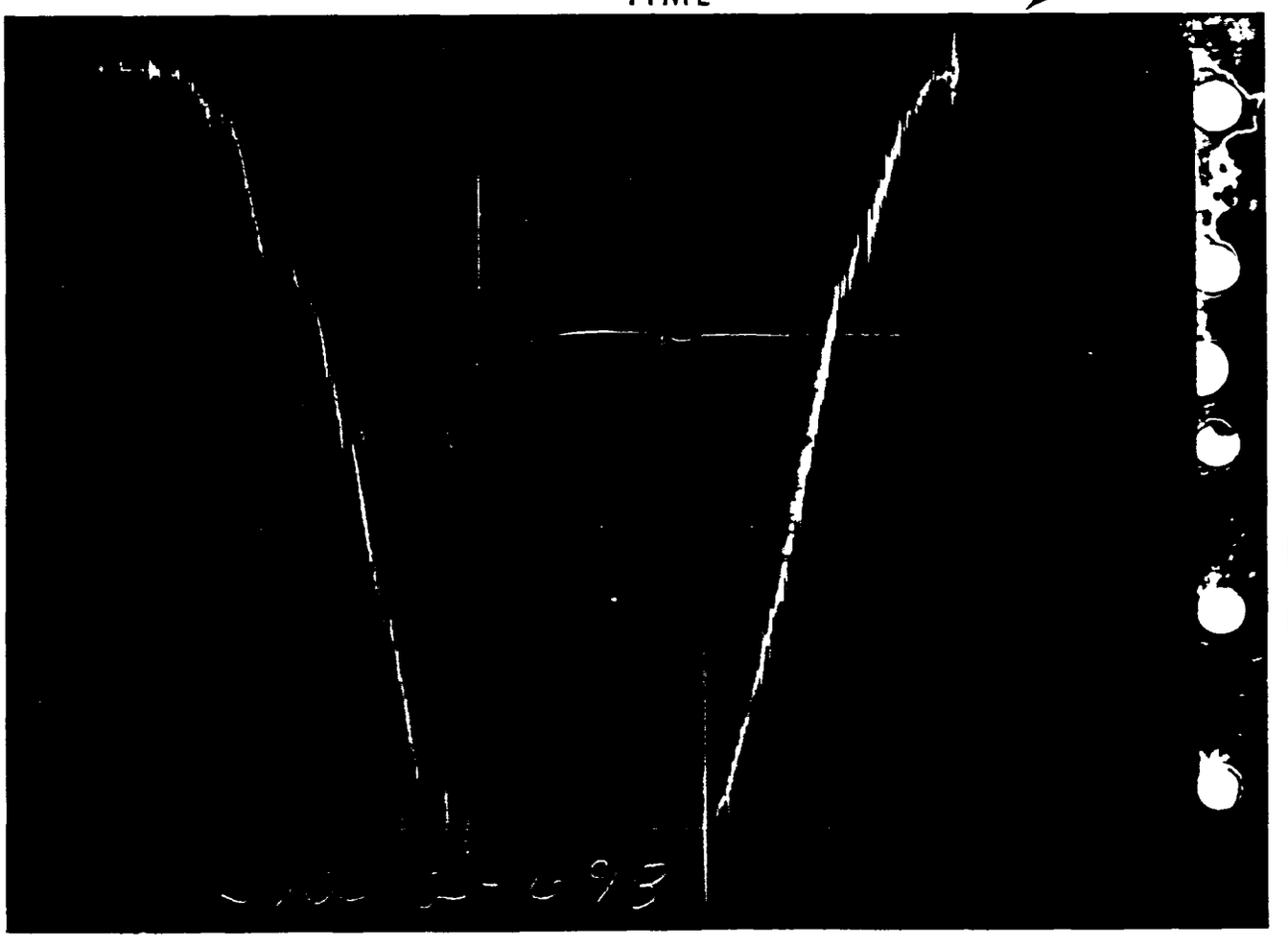
FORMATION TEST DATA

LITTLE'S 111033 75C 2/80

14

PRESSURE

TIME



Each Horizontal Line Equal to 1000 p.s.i.

Casing perfs. _____ Bottom choke .75" Surf. temp. _____ °F Ticket No. 757292

Gas gravity _____ Oil gravity _____ GOR _____

Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED Floor Manifold 3/8" choke

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
09:30					Opened tool with a weak blow
09:35					Closed tool
10:35	3/8				Opened tool with a weak blow
10:40	3/8"				Weak blow
10:50	3/8"				"
11:00	3/8				"
11:05	3/8				"
11:10	3/8				"
11:15	3/8				"
11:25	3/8				"
11:35	3/8				Closed tool
14:35					Opened by pass

RW 182-R1—PRINTED IN U.S.A.

PRODUCTION TEST DATA

LITTLE'S 96672 5M 8/74

Gauge No.	991	Depth	12332'	Clock No.	--------	24 hour	Ticket No.	757292	

	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0															
1															
2															
3															
4						CHART NOT SENT IN									
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Gauge No.	693		Depth	12439'		Clock No.	13428		hour	24			
0	.000	1304.2	.000		1329.7	.000	1382.9	.000		1436.1			
1	.014	1329.7	.0229*		1819.1	.199	1436.1	.585		3320.5			
2			.0426		2074.3								
3			.0623		2242.0								
4			.0820		2371.5								
5			.1016		2486.1								
6			.1213		2602.9								
7			.1410		2700.6								
8			.1606		2783.4								
9			.1803		2859.8								
10			.2000		2936.2								
11													
12													
13													
14													
15													
Reading Interval			6										Minutes

REMARKS: *-7 minutes

F1

FORM 188 R1—PRINTED IN U.S.A.

SPECIAL PRESSURE DATA

LITTLE'S 90473 75C 8/74

FLUID SAMPLE DATA

Date 6-26-80 | Ticket Number 756916

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

Kind of D.S.T. OPEN HOLE | Halliburton Location ARTESIA

Tester PEPPERS | Witness JAMES LOVELL

Drilling Contractor SHARP DRILLING # 32 DR

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	_____ @ _____ °F.	13125 ppm
Recovery Mud	_____ @ _____ °F.	22500 ppm
Recovery Mud Filtrate	_____ @ _____ °F.	_____ ppm
Mud Pit Sample	_____ @ _____ °F.	56,250 ppm
Mud Pit Sample Filtrate	_____ @ _____ °F.	_____ ppm
Mud Weight	11.5 vis	40 sec.

EQUIPMENT & HOLE DATA

Formation Tested Lower Morrow
Elevation 3300' Ft.
Net Productive Interval 60' Ft.
All Depths Measured From Kelly Bushing
Total Depth 12,620' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 718' I.D. 2.25"
Drill Pipe Length 11,789' I.D. 3.826"
Packer Depth(s) 12,524-12530' Ft.
Depth Tester Valve 12,514' Ft.

Cushion TYPE 3000' Water AMOUNT Ft. | Depth Back Pres. Valve | Surface Choke 3/8" | Bottom Choke .75"

Recovered 3000 Feet of water cushion
Recovered 1254 Feet of drilling fluid
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks See production test data sheet

Packer failed after 10 minutes of second flow

No gas to surface

Chart from gauge 7303 not sent in for processing.

TEMPERATURE	Gauge No. 7303 Depth: 12516 Ft.	Gauge No. 7302 Depth: 12615 Ft.	Gauge No. Depth: Ft.	TIME (00:00-24:00 hrs.)
	24 Hour Clock	24 Hour Clock	Hour Clock	Tool Opened 0815
Est. °F.	Blanked Off Yes	Blanked Off Yes	Blanked Off	
Actual 186°F.	Pressures	Pressures	Pressures	Opened Bypass 0950

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		7041.5		7070.6	7073.7				
First Period	Flow Initial	1394.4		1360.8	1310.1			—	—
	Flow Final	1362.8		1329.2	1319.6			5	7
	Closed in	4809.6		4888.2	4894.5			60	58
Second Period	Flow Initial	1362.8		1455.7	1420.8			—	—
	Flow Final	Lost packer seat			1455.7			18	10
	Closed in			Lost packer seat					
Third Period	Flow Initial							—	—
	Flow Final								
	Closed in								
Final Hydrostatic		7041.5		7070.5	7073.7			—	—

FORM 161-82 – PRINTED IN U.S.A.

FORMATION TEST DATA

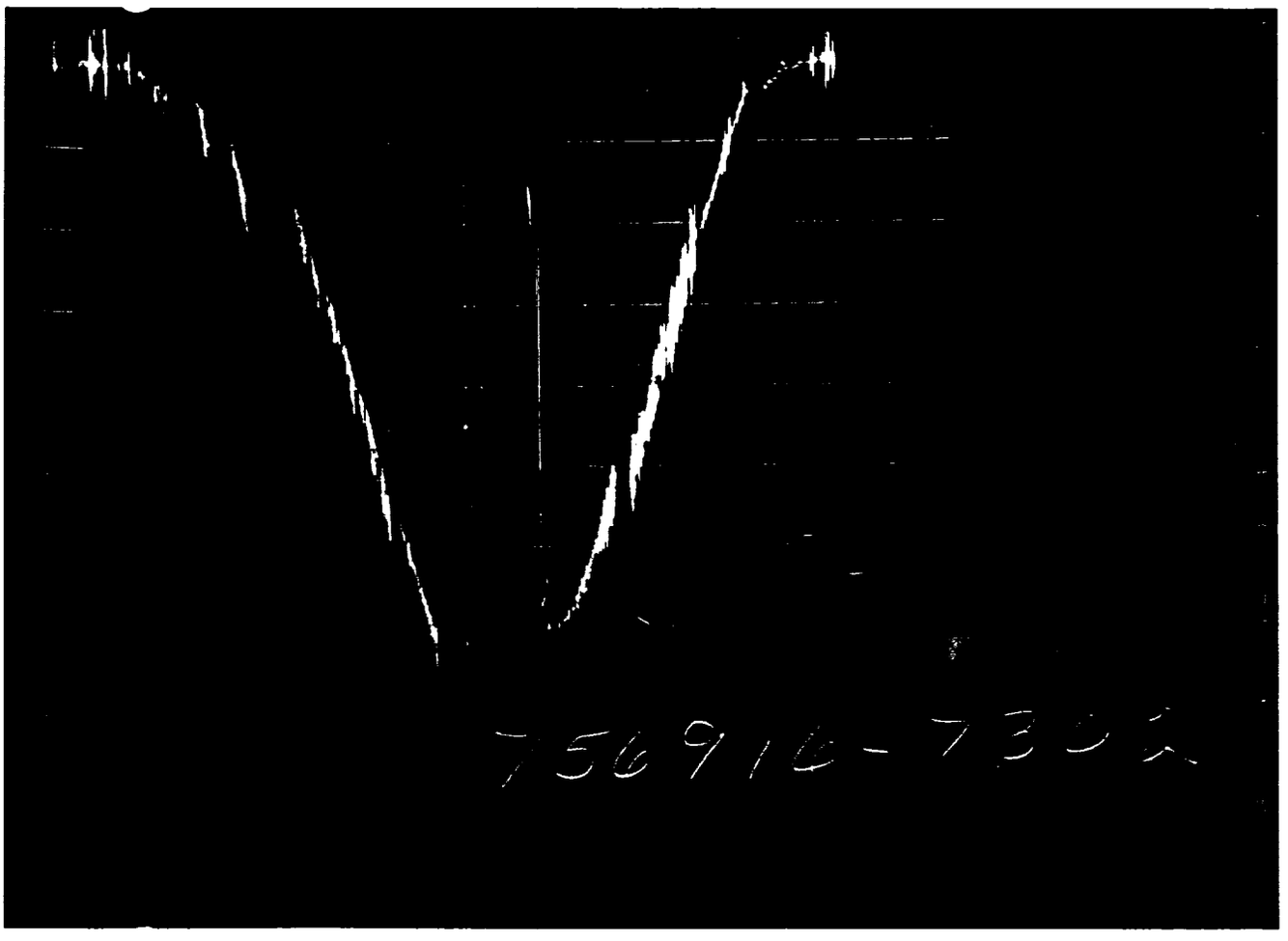
LITTLE'S 111033 75C 2/80

Legal Location Sec. - Twp. - Rng.: 2-22-28
Lease Name: EDDY "C" STATE
Well No.: 1
Test No.: 6
Tested Interval: 12,530-12,620'
Field Area: WILDCAT
County: EDDY
State: NEW MEXICO
Lease Owner/Company Name: GULF OIL EXPLORATION AND PRODUCTION COMPANY

14

PRESSURE

TIME



Each Horizontal Line Equal to 1000 p.s.i.

Casing perfs. _____ Bottom choke .87" Surf. temp. _____ °F Ticket No. 756916

Gas gravity _____ Oil gravity _____ GOR _____

Spec. gravity _____ Chlorides 56,250 ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED 6" Positive (Floor Manifold 3/8-1/2"

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
0815					Opened tool with a fair blow
0820					Closed tool, no gas
0920					Opened tool with a strong blow
0922	3/8	4			Opened on choke, no gas
0925	3/8	6 1/2			
0930	3/8	8			No gas
0938	3/8				Fluid loss-picked up and closed tool
0940	3/8				Set back down, opened tool, packer failure
0943					Closed tool and picked up
0945					Filled hole up
0950					Pulled loose, came out of hole, no gas
					to surface.
1600					Out of hole with test tools
1700					Left location
					Misrun

FORM 182-R1—PRINTED IN U.S.A.

PRODUCTION TEST DATA

LITTLE'S 96672 5M 8/74

14

Gauge No. 7303	Depth 12,516'	Clock No.	24hour	Ticket No. 756916

	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0															
1															
2															
3															
4															
5															
6				CHART NOT SENT IN FOR PROCESSING											
7															
8															
9															
10															
11															
12															
13															
14															
15															

Gauge No. 7302					Depth 12,615'			Clock No. 13428			hour 24				
0	.000	1310.1	.000		1319.6	.000	1420.8								
1	.0031	1370.2	.0066*		2452.5	.032	1455.7								
2	.0063	1354.4	.0196		3334.3										
3	.0094	1338.6	.0328		3952.2	Lost packer seat									
4	.0126	1329.1	.0459		4127.7										
5	.0157	1322.7	.0590		4319.4										
6	.0188	1319.6	.0721		4447.2										
7	.0220	1319.6	.0852		4546.3										
8			.0983		4623.0										
9			.1114		4683.7										
10			.1245		4734.8										
11			.1376		4776.3										
12			.1507		4811.5										
13			.1638		4846.6										
14			.1769		4872.2										
15			.1900		4894.5										
Reading Interval		1		4											Minutes

REMARKS: *-2 minutes

FORM 102-R1—PRINTED IN U.S.A.

SPECIAL PRESSURE DATA

LITTLE 9 98673 75C 8/74

FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

		RESISTIVITY			CHLORIDE CONTENT
Recovery Water	TOP	____	@ ____	°F.	24375 ppm
Recovery Mud		____	@ ____	°F.	____ ppm
Recovery Mud Filtrate		____	@ ____	°F.	____ ppm
Mud Pit Sample		____	@ ____	°F.	56250 ppm
Mud Pit Sample Filtrate		____	@ ____	°F.	____ ppm

Mud Weight 11.5 vis 40 sec.

Date 6-28-80 Ticket Number 756917
Kind of D.S.T. OPEN HOLE Halliburton Location ARTESIA
Tester MR. PEPPERS Witness MR. STRANGE
Drilling Contractor SHARP DRILLING COMPANY RIG #32 bc

EQUIPMENT & HOLE DATA

Formation Tested Lower Morrow
Elevation 3300' Ft.
Net Productive Interval 60' Ft.
All Depths Measured From Kelly Bushing
Total Depth 12620' Ft.
Main Hole/Casing Size 7 7/8" 2.25"
Drill Collar Length 718' I.D. 2.25"
Drill Pipe Length 11778' I.D. 3.826"
Packer Depth(s) 12519' - 12525' Ft.
Depth Tester Valve 12503' Ft.

Cushion TYPE Water AMOUNT 3000 Ft. Depth Back Pres. Valve Surface Choke FLOOR MANIFOLD Bottom Choke .75"

Recovered 3000 Feet of Water cushion
Recovered 240 Feet of Drilling fluid
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET.

Chart from gauge #7303 not sent for processing

TIGHT HOLE.....

TEMPERATURE	Gauge No. 7303 Depth: 12505' Ft.	Gauge No. 7302 Depth: 12615' Ft.	Gauge No. Depth: Ft.	TIME (00:00-24:00 hrs.)
Est. °F.	24 Hour Clock	24 Hour Clock	Hour Clock	Tool Opened 1200
Actual 186 °F.	Blanked Off No	Blanked Off Yes	Blanked Off	Opened Bypass 1605
	Pressures	Pressures	Pressures	

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		7041.5		7070.6	7076.9				
First Period	Flow Initial	1331.3	CHART NOT	1329.2	1376.5			____	____
	Flow Final	1331.3	SENT IN	1329.2	1382.9			5	4
	Closed in	5063.7	FOR	5080.4	5131.8			60	61
Second Period	Flow Initial	1331.3	PROCESSING	1329.2	1398.7			____	____
	Flow Final	1394.4		1424.1	1471.5			60	58
	Closed in	4650.8		4696.5	4718.8			120	122
Third Period	Flow Initial							____	____
	Flow Final								
	Closed in								
Final Hydrostatic		6881.8		6878.3	6961.5			____	____

Legal Location Sec. - Twp. - Rng. 2 - 22 - 28
Lease Name EDDY "C" STATE
Well No. 1
Test No. 7
Tested Interval 12525' - 12620'
Lease Owner/Company Name GULF OIL EXPLORATION AND PRODUCTION COMPANY
Field Area WILDCAT
County EDDY
State NEW MEXICO

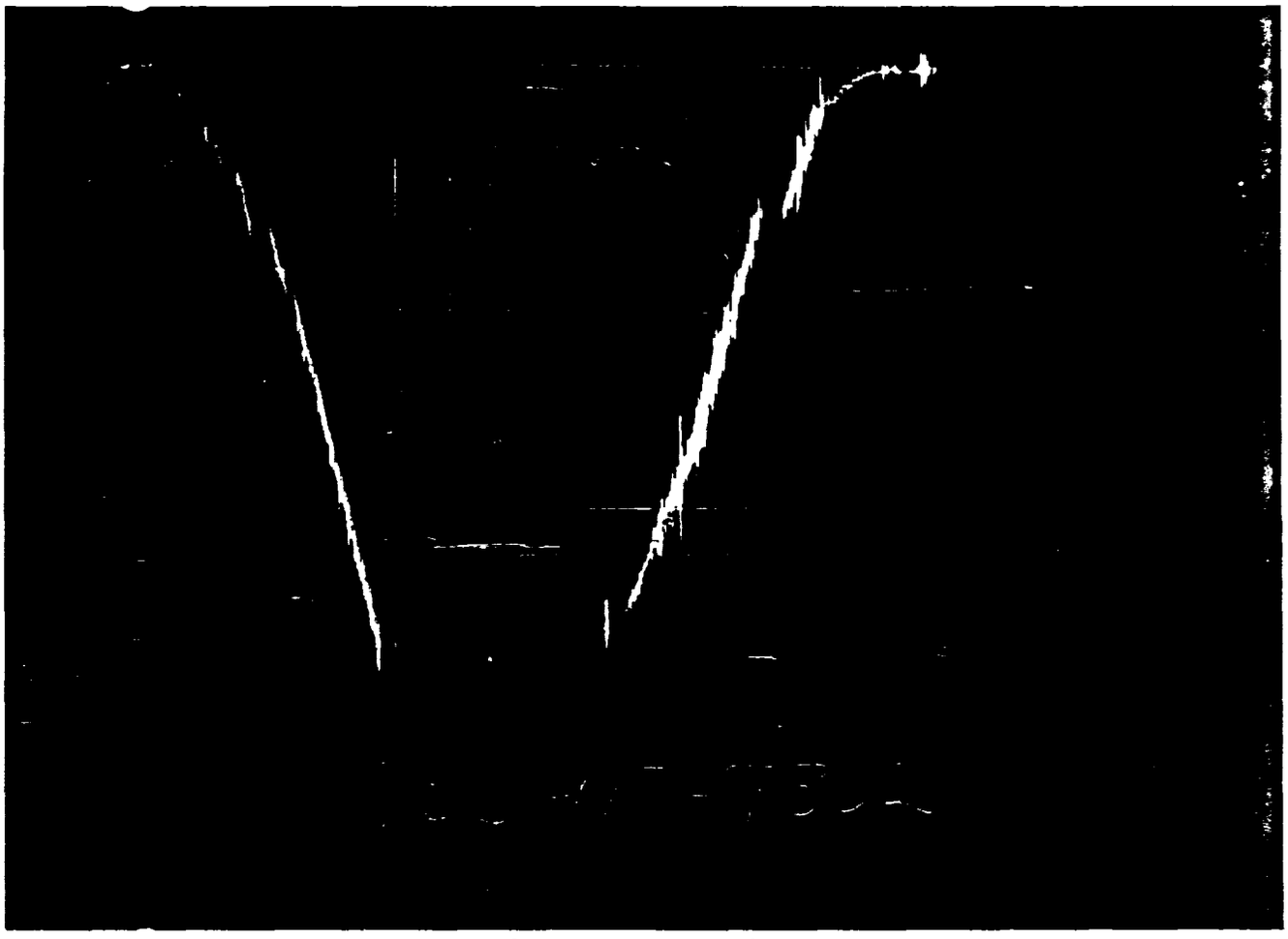
FORM 181-R2 — PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S 111033 75C 2/80

PRESSURE

TIME



Each Horizontal Line Equal to 1000 p.s.i.

Casing perfs. _____ Bottom choke .75" Surf. temp _____ °F Ticket No. 756917

Gas gravity _____ Oil gravity _____ GOR _____

Spec. gravity _____ Chlorides 56,250 ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED 6" Positive Floor Manifold

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
0445					On location
0600					Started tool in hole
1200					Opened tool with a very weak blow
1205					Closed tool
1305					Opened tool with a very weak blow
1310					
1315					Weak blow
1320					1/8" bubble hose, 1" in 5 gallon bucket
1325					
1330					Very weak blow
1335					
1345					
1350					No gas to surface
1355					
1400					
1405					Closed tool
1605					Pulled loose
0030					Left location

Gauge No.	7303	Depth	12505'	Clock No.	13736	24 hour	Ticket No.	756917

	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0															
1															
2			CHART NOT SENT IN FOR PROCESSING.....												
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Gauge No.	7302		Depth	12615'		Clock No.	13428	24 hour				
0	.0000	1376.5	.0000	1382.9	.0000	1398.7	.0000	1471.5				
1	.0140	1382.9	.0201	4351.4*	.0269	1414.5**	.0270	2601.2				
2			.0368	4661.3	.0605	1433.5	.0539	3429.9				
3			.0535	4805.1	.0941	1446.2	.0809	3799.3				
4			.0702	4894.5	.1278	1462.0	.1078	4012.7				
5			.0870	4958.4	.1614	1468.3	.1348	4166.1				
6			.1037	5000.0	.1950	1471.5	.1617	4281.1				
7			.1204	5035.3			.1887	4367.4				
8			.1371	5067.5			.2156	4437.7				
9			.1538	5086.8			.2426	4495.2				
10			.1706	5102.8			.2695	4546.3				
11			.1873	5122.1			.2965	4587.8				
12			.2040	5131.8			.3234	4626.2				
13							.3504	4658.1				
14							.3773	4686.9				
15							.4110	4718.8***				
Reading Interval			5			10		8				Minutes

REMARKS: *Interval = 6 minutes **Interval = 8 minutes ***Interval = 10 minutes

FORM 183 R1 PRINTED IN U.S.A.

SPECIAL PRESSURE DATA

LITTLE'S 95673 75C 8/74

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

April 13, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
First Amendment to
1981 Plan of Development

Gentlemen:

We hereby approve the First Amendment to the 1981 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

One approved copy of the First Amendment is returned herewith.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd
enc.

cc: U.S.G.S. - Albuquerque
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

March 20, 1981

36

UNITED STATES GEOLOGICAL SURVEY
Drawer 1857
Roswell, New Mexico 88201

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

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

E/F 3/30/81

Re: First Amendment to the
1981 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 specifically states that the Plan of Development may be modified when necessary to meet changing conditions, we propose the following change to the 1981 Plan of Development for your review and approval.

Big Eddy Unit #87 Well - The approved 1981 Plan of Development dated November 7, 1980 provides for the drilling of a 12,700' Morrow Test Well to be located in Section 19, T20S-R32E, Eddy County, New Mexico. Due to potash mining operations, our application for a permit to drill was denied. Therefore, we request that this well be changed from the above described location to a location of 660' FSL and 1980' FWL, Section 26, T21S-R28E, Eddy County, New Mexico for the drilling of a Morrow Test Well.

If this proposed amendment to the 1981 Plan of Development 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,

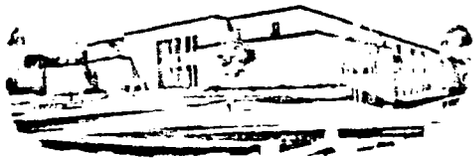
JENS HANSEN
Division Landman

JH:jen

cc: Mr. Jim Pullig

AGREED TO AND ACCEPTED this the 13th day of April, 1981.

State of New Mexico



Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

March 30, 1981

Bass Enterprises Production Company
Fort Worth National Bank Building
Fort Worth, Texas 76102

Re: First Amendment to the
1981 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 1981 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico. Such plan provides for the change of location of your Well # 87 from Section 19, T20S-R32E to Section 26, T21S-R28E, Eddy County, New Mexico. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Division.

Enclosed is one approved copy for your files.

Please remit a Three ($3.00) Dollar filing fee. In the future please submit three (3) copies of your plans of development.

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:

RAY D. GRAHAM, Director
Oil and Gas Division
AC 505-827-2748

AJA/RDG/s
encl.
cc: OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 10, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
Big Eddy Well No. 71

Gentlemen:

We hereby approve the producing of the Big Eddy Well No. 71 located in Section 7, Township 22 South, Range 29 East, Big Eddy Unit, Eddy County, New Mexico, on a lease basis with no participating area assigned to it, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd

cc: U. S. G. S. - Albuquerque
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

February 27, 1981

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 26125
Albuquerque, New Mexico 87125

365

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

STATE OF NEW MEXICO
ENERGY & MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Lease Nos. 3819 & 9990
Big Eddy Well #71
1980' FWL and 1980' FNL
Section 7 T22S-R29E
Eddy County, New Mexico

Gentlemen:

Bass Enterprises Production Co., Unit Operator of the Big Eddy Unit, recently drilled the Big Eddy Well #71 to a total depth of 13,060' and completed same in the Atoka Formation. According to data obtained from the production of this well, we have determined that the Big Eddy Well #71 is incapable of producing in commercial quantities from the Atoka Formation. Therefore, in accordance with Section 11 of the Big Eddy Unit Agreement dated April 10, 1952, we request that this well not be assigned a participating area and that same be produced on a lease basis.

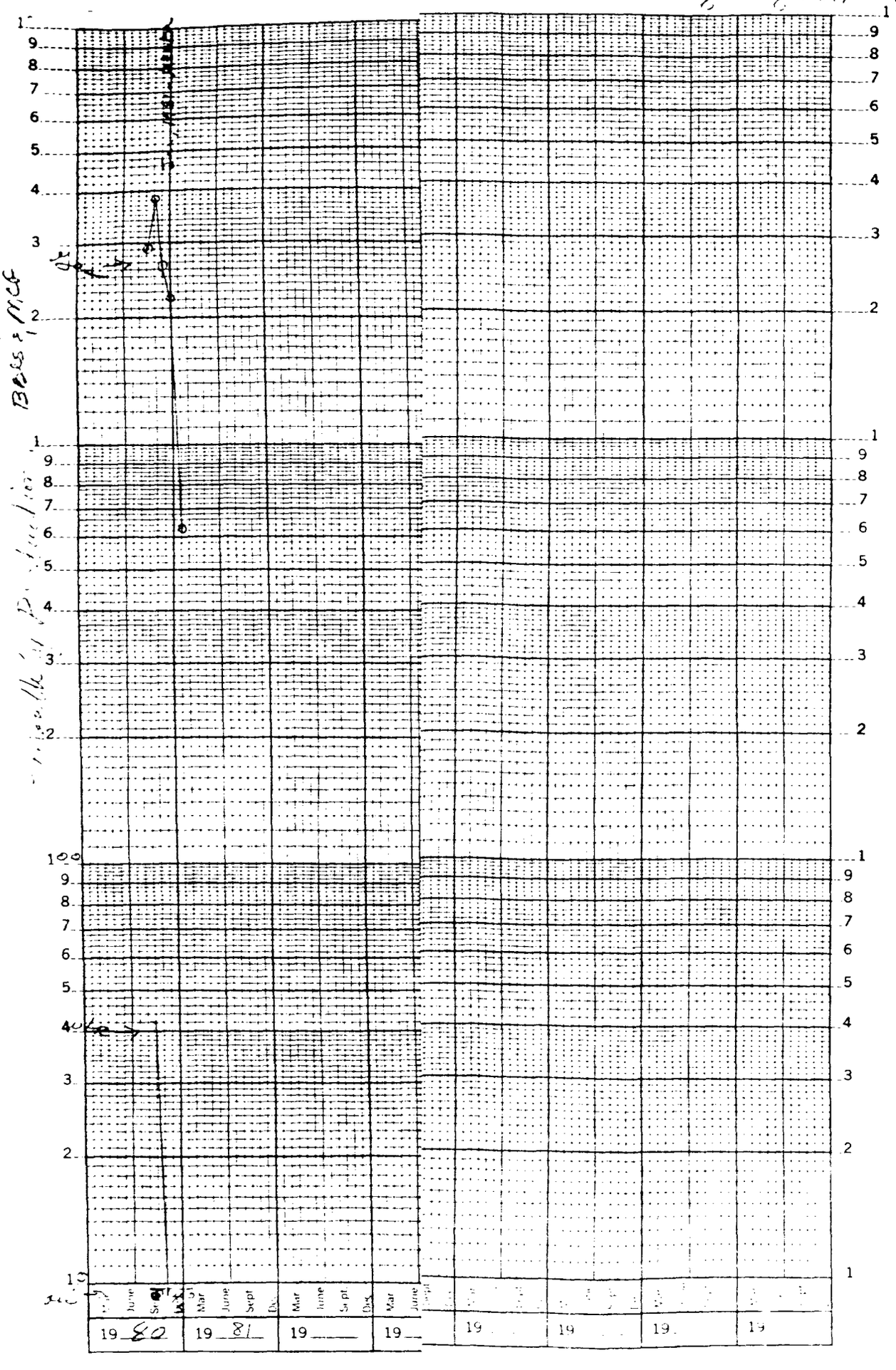
To support our application, the following are attached for your review:

1. Rate Time Graph with reserve extrapolation.
2. Plat showing the proration unit outlined in red.
3. Well Bore Diagram.

Sincerely,

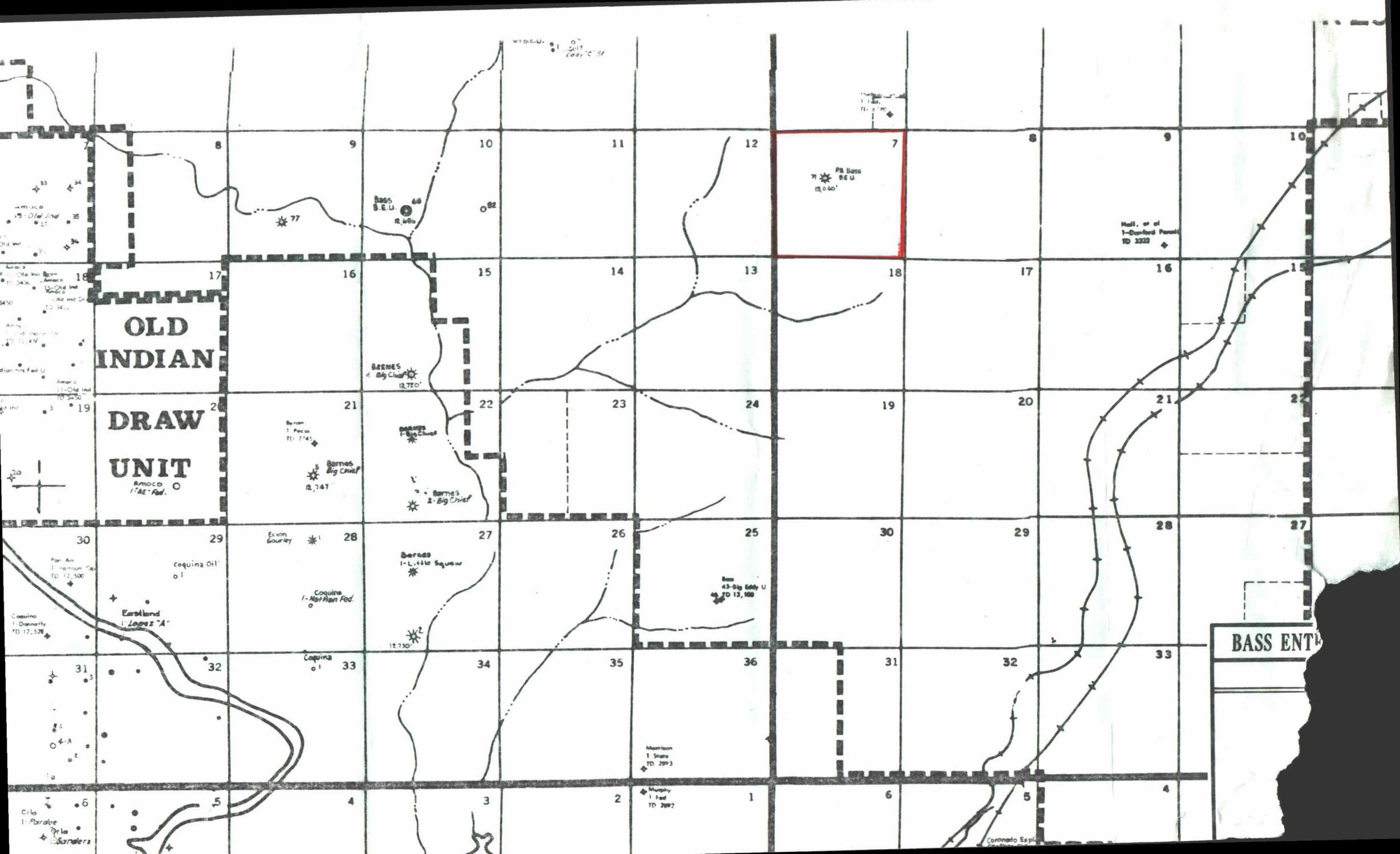
JENS HANSEN
Division Landman

JH:jen
Enclosures



47 6843

K·E 20 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO


OLD INDIAN DRAW UNIT
Amoco
Fed.
Bass B.E.U.
Pit Bass B.E.U.
13,060'
Barnes Big Chief
12,720'
Barnes 1-Big Chief
Barnes 2-Big Chief
12,747
Barnes 1-Little Squaw
12,730'
Coquina Oil
Coquina 1-Hoffman Fed.
Exxon Gourley
Eastland 1-Lopez "A"
Coquina 1-Dannerly
TD 12,520
Morrison 1 State
TD 2893
Murphy 1 Fed
TD 2892
Coronado Expl
BASS ENT

BASS ENTERPRISES PRODUCTION COMPANY

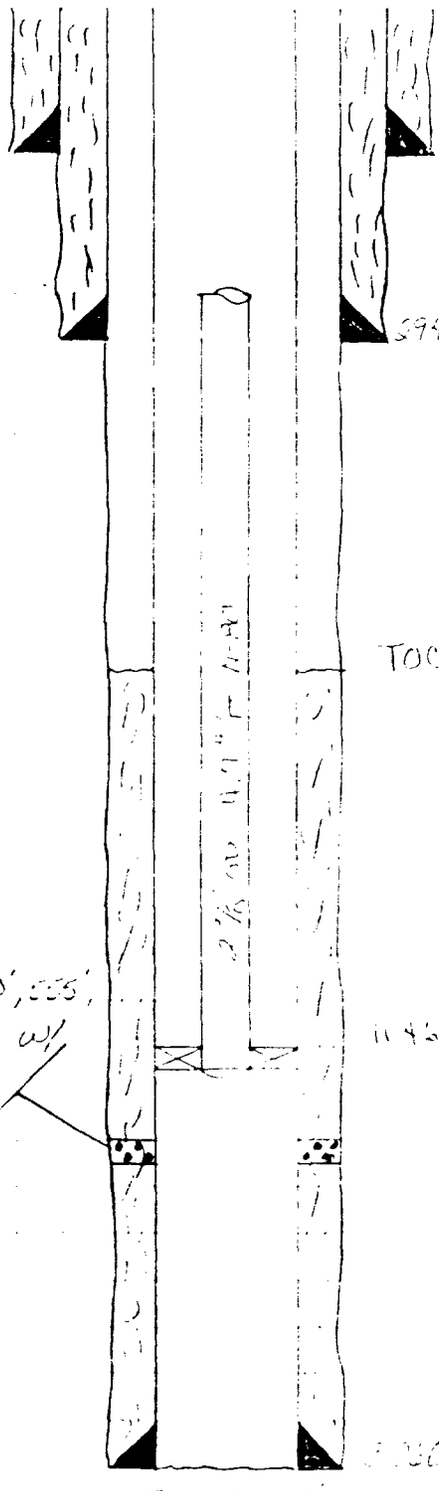
PAGE NO.

SUBJECT	DATE	DEPARTMENT	PREPARED BY
WELL BORE DIAGRAM	6-6-80		CDS

ELEV: 3295' GL
3308' KB

BIG EDDY UNIT No. 71
EDDY COUNTY, NEW MEXICO

SPUD: 10-19-'79
COMP: 1-11-80



635' - 11¾" OD, 42#/ft. H-40 ST&C
csg. CMTD. w/650 SX.

3945' - 8⅝" OD, 32#/ft., J-80 ST&C
csg. CMTD. w/770 SX. HALCO
LITE; 600 SX CLASS "C"

TOC @ 5900'

2⅜" OD, 4.7#/ft, N-80

1-11-80 STRAWN PERFS @ 11,542', 550', 555', 568', 635½' & 638' ACIDIZED W/ 2000 gal. 15% HCL

11,461 - OTIS MH & PACKER

TD 13,030'

13,030' - 5½" OD, 17#/ft. w/
CMTD. w/ HALCO LITE &
SX. CLASS "H"

ILLEGIBLE

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 4, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
Big Eddy Well #74

Gentlemen:

We hereby approve the producing of the Big Eddy Well No. 74 located in Section 25, Township 21 South, Range 28 East, Big Eddy Unit, Eddy County, New Mexico, on a lease basis with no participating area assigned to it, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd

cc: U. S. G. S. - Albuquerque
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

February 27, 1981

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 26125
Albuquerque, New Mexico 87125

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

STATE OF NEW MEXICO
ENERGY & MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Lease No. 3817
Big Eddy Well #74
660' FNL and 1980' FEL
Section 25 T21S-R28E
Eddy County, New Mexico

Gentlemen:

Bass Enterprises Production Co., Unit Operator of the Big Eddy Unit, recently drilled the Big Eddy Well #74 to a total depth of 12,590' and completed same in the Atoka Formation. According to data obtained from the production of this well, we have determined that the Big Eddy Well #74 is incapable of producing in commercial quantities from the Atoka Formation. Therefore, in accordance with Section 11 of the Big Eddy Unit Agreement dated April 10, 1952, we request that this well not be assigned a participating area and that same be produced on a lease basis.

To support our application, the following are attached for your review:

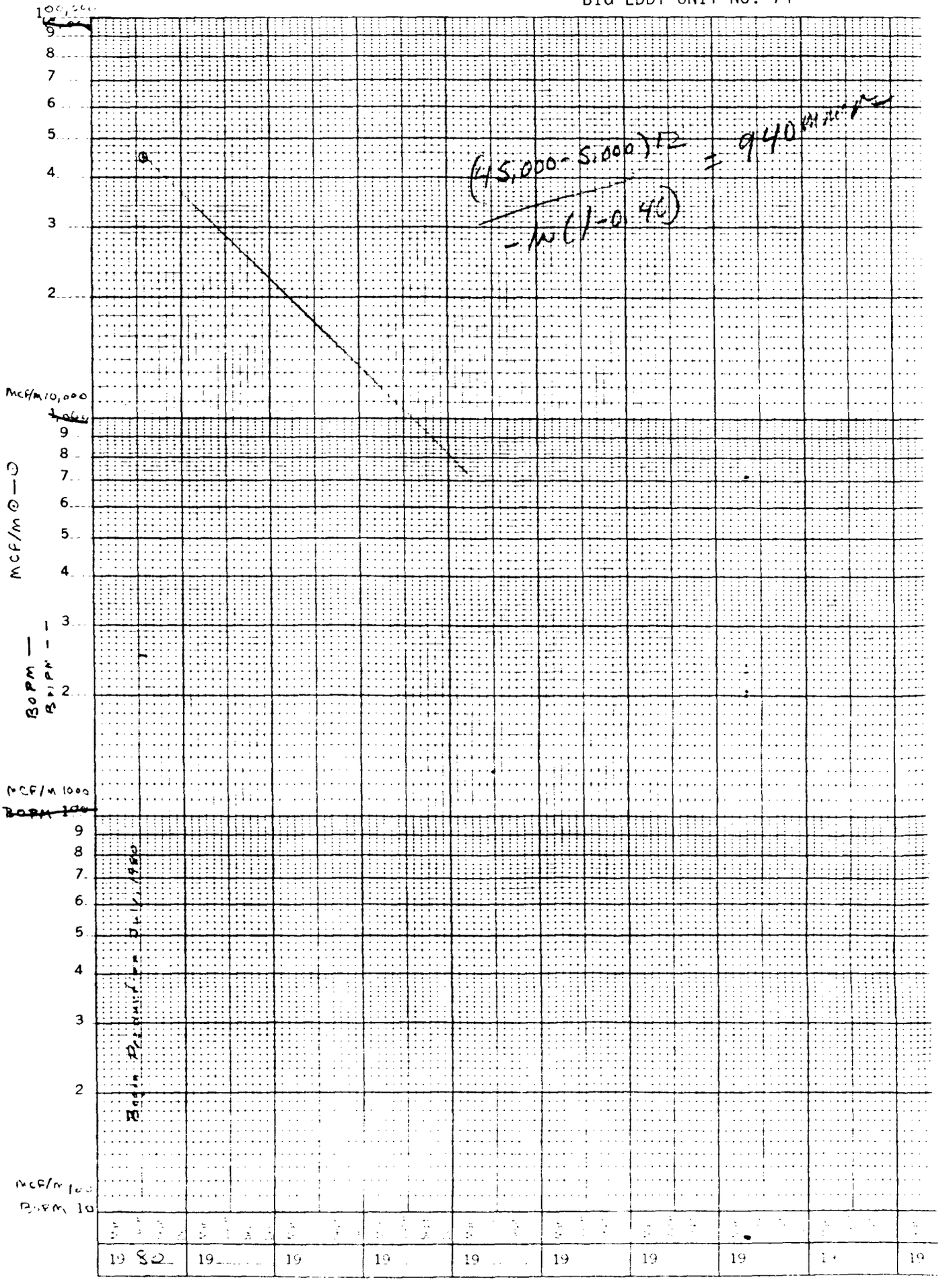
1. Rate Time Graph with reserve extrapolation.
2. Plat showing the proration unit outlined in red.
3. Well Bore Diagram.

Sincerely,

JENS HANSEN
Division Landman

JH:jen
Enclosures

BIG EDDY UNIT NO. 74



$$\frac{(45,000-5,000)^{1/2}}{-m(1-0.46)} = 940^{\text{MCF/M}}$$

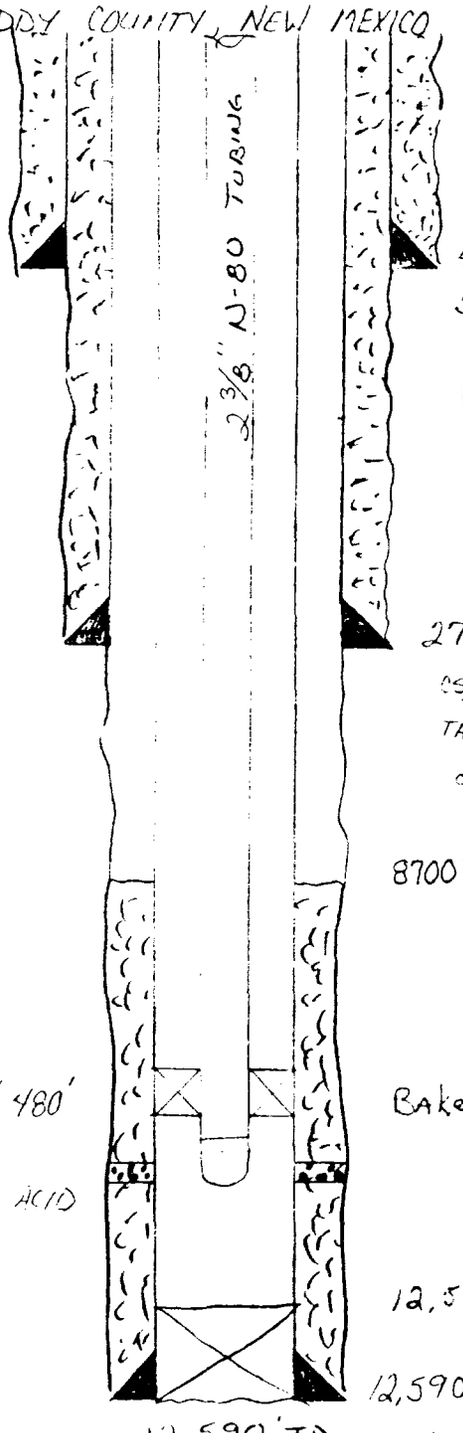
47 6843

WELL BORE DIAGRAM 4/15/80 SDS

BIG EDDY UNIT No. 114
INDIAN FLATS ATOKA GAS
660' FNL; 1980' FEL Sec. 25 T21S; R28E
EDDY COUNTY, NEW MEXICO

ELEV: 3218' GL

SPUD: 2/22/80
COMP. 5/9/80



11" csg.
405' - 11 3/4", 42 #/FT., H-40 ST&C csg. CMTD. W/ 350 SX. CLASS "C" (DID NOT CIRCULATE) Pumped 100 SX down ANNULUS NO CIRCULATION.

2772' - 8 5/8" OD, 28 #/FT., S-90 ST&C csg. CMTD W/ 200 SX THICKSET TAILED W/200 SX CLASS "C" CIRC. OUT 350 SX.

8700' TOC CALC.

5-8-80 ATOKA PERFS @ 11,468', 474', 480' 11,615', 616' 2 SPF (10 shots) ACIDIZED W/ 1000 gal. 7½% MSR ACID

Baker Lokset pkr @ 11,395'

12,545' PBTD

12,590' - 5½" OD, 17 #/FT.; S-95 & N-80 csg. CMTD W/ 200 SX. HAL. LITE. 925 SX CLASS "H".

12,590' TD

ILLEGIBLE

Insert

Color Page/Photo

Here

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 4, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
Morrow "F" and Initial
Atoka Participating Areas

Gentlemen:

We hereby approve the designation of the south 320 acres of Section 3, Township 21 South, Range 28 East, as the Morrow "F" and the Initial Atoka Participating Areas in the Big Eddy Unit, Eddy County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd

cc: U.S.G.S. - Albuquerque
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

February 27, 1981

365

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 26125
Albuquerque, New Mexico 87125

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

STATE OF NEW MEXICO
ENERGY & MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Lease No. 3816
Big Eddy Well #72
1980' FSL and 1980' FEL
Section 3 T21S-R28E
Eddy County, New Mexico

Gentlemen:

Bass Enterprises Production Co., Unit Operator of the Big Eddy Unit, recently drilled the Big Eddy Well #72 to a total depth of 12,332' and dually completed same in the Morrow and Atoka Formations. According to data obtained from the production of this well, we have determined that the Big Eddy Well #72 is capable of producing in commercial quantities from the Morrow and Atoka Formations. Therefore, in accordance with Section 11 of the Big Eddy Unit Agreement dated April 10, 1952, we request that the South 320 acres of Section 3, T21S-R28E be designated as the Morrow "F" and the Initial Atoka Participating Areas.

To support our application, the following are attached for your review:

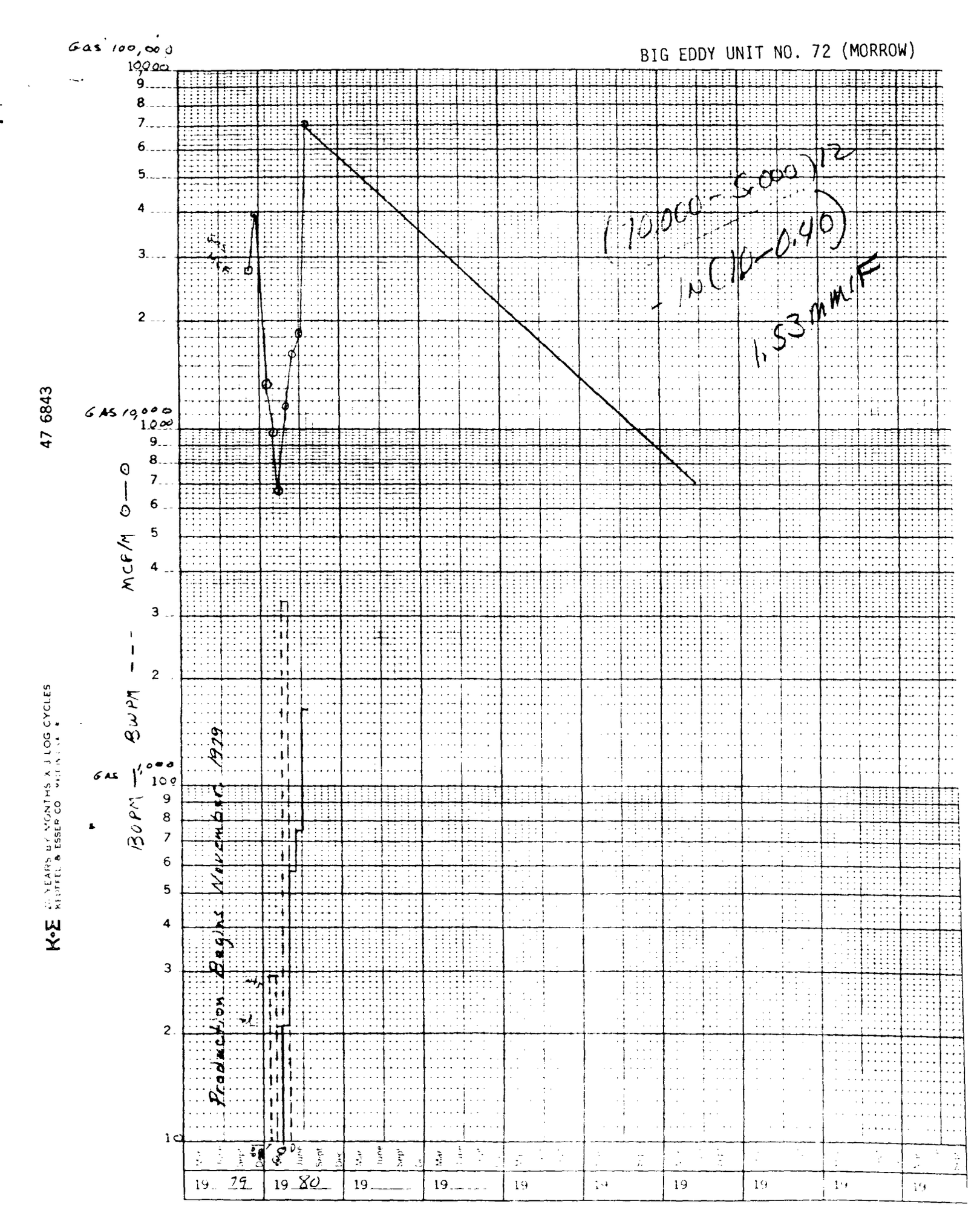
1. Rate Time Graph with reserve extrapolation.
2. Plat showing the proposed Participating Areas outlined in red.
3. Well Bore Diagram.

Sincerely,

JENS HANSEN
Division Landman

JH:jen
Enclosures

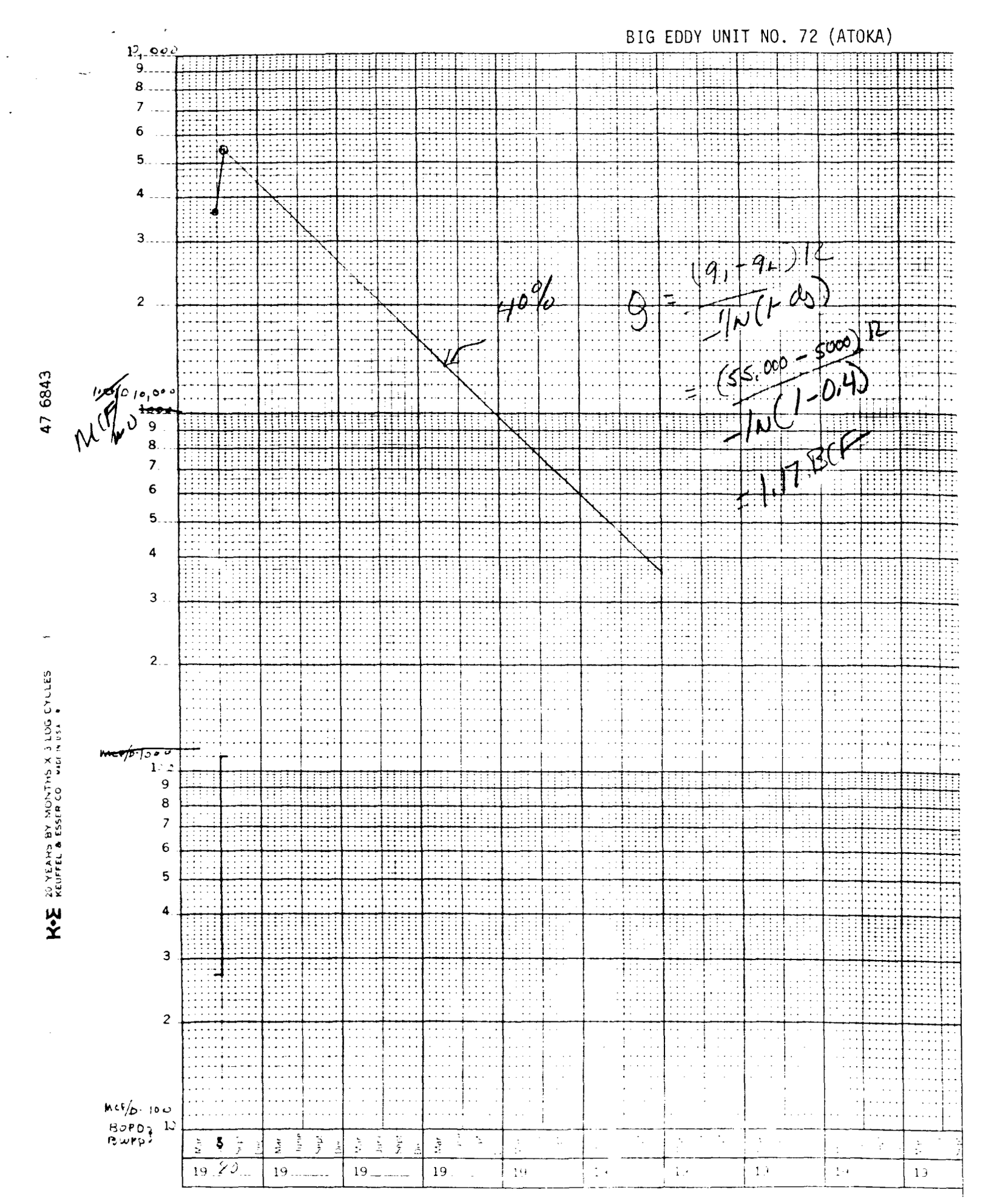
BIG EDDY UNIT NO. 72 (MORROW)



47 6843

K·E 10 YEARS BY MONTHS X 3 LOG CYCLES KEUFFEL & ESSER CO

BIG EDDY UNIT NO. 72 (ATOKA)



47 6843

K·E 20 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO MADE IN USA

BASS ENTERPRISES PRODUCTION COMPANY

SUBJECT	DATE	DEPARTMENT	PREPARED BY
BIG EDDY UNIT NO. 72	5-27-80	5-27-80	MGW

ELEV. 3272.7 GL
RKB. 3280.7

458' - 11 3/4", 42#, H-40 ST&C CSG.
CMTD w/350 SX CLASS "C".
CIRC. 33 SX.

D.V. TOOL @ 1130'

3121' - 8 5/8" 24# K-55, ST&C CSG.
CMTD w/2550 SX. CIRC 150 SX

351 JTS 2 1/16" DSS HT N-80 TBG.

351 JTS 2 1/16" DSS HT N-80 TBG.

EST. TOC 9000'.

BAKER MODEL A-5 HYDROSTATIC DUAL PACKER @ 11180.40

"F" Nipple w/1.5" ID

ATOKA PERFS @ 11265', 76, 77, 371' → 375'. 7 shots

T/OTIS "WB" PKR. @ 11600' w/ X-OVER 3 1/2 x 1.9 w/ 8' x 1.9 PUP JOINT OTIS X NIPPLE w/ 1.5 ID. 3 1/2 x 1.9 X-OVER OTIS XN NIPPLE & MULESHOE GUIDE.

MIDDLE MORROW PERFS @ 11674', 78', 912', 915', & 918' (5 SHOTS)

T/OTIS "WB" PKR. @ 12180. w/ 2.75" CORE. X-OVER 3 1/2" x 2 3/8" N-80 w/ 8' x 2 3/8" PUP. OTIS X NIPPLE 1.875 ID w/ 8' PUP. OTIS XN NIPPLE w/ 1.791 ID @ 12209'. MULESHOE GUIDE w/ PLUG @ 12209'.

LOWER MORROW PERFS @ 12216', 21', 25', 28', 32', & 39' (6 SHOTS)

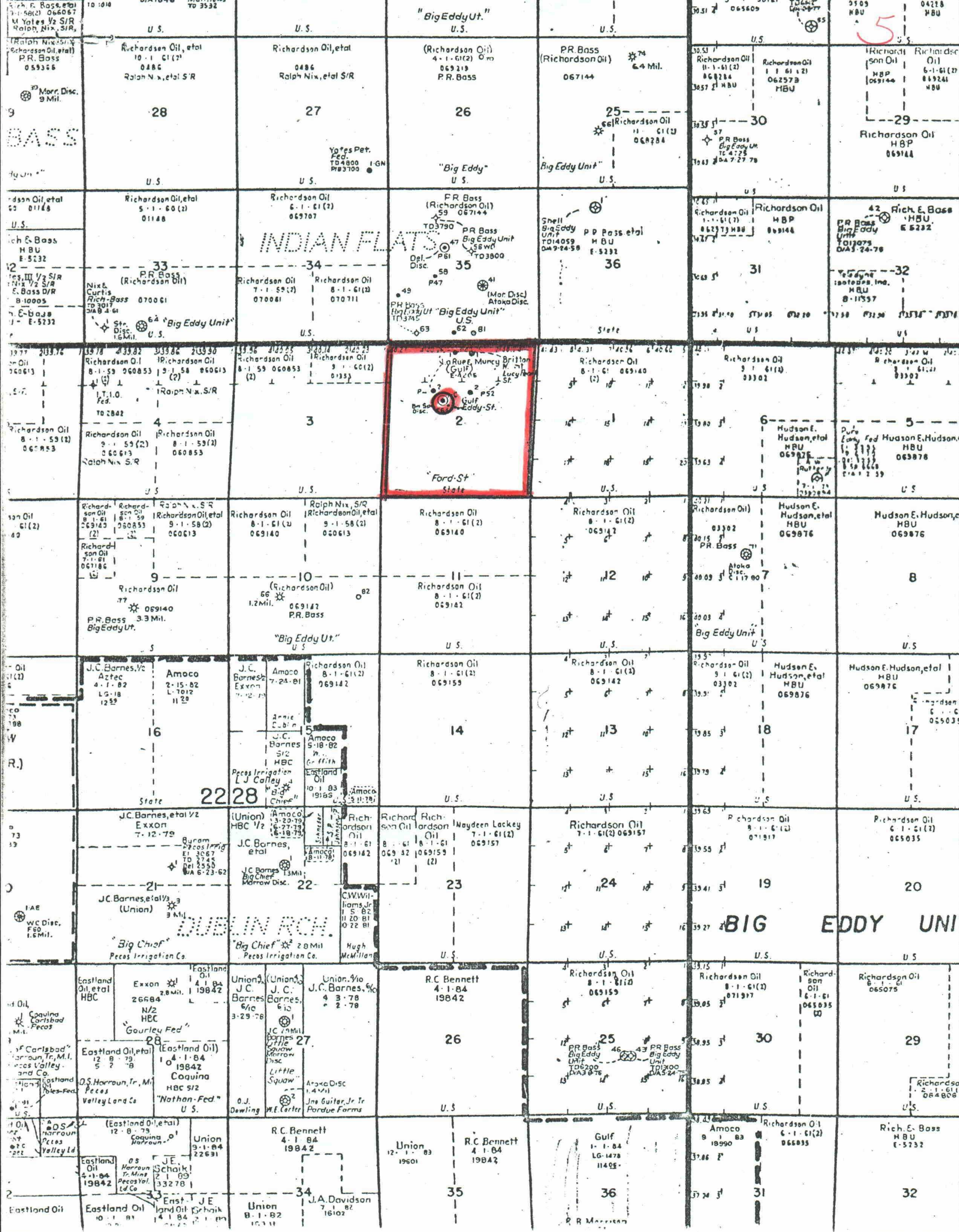
PBTD @ 12265'.

12332' 5 1/2" 20+17# CSG

TD 12332'

CMTD w/1100 SX

ILLEGIBLE


"Big Eddy Ut."
Richardson Oil, etal
Ralph Nix, etal S/R
P.R. Bass
Richardson Oil
28
27
26
25
30
29
Big Eddy Unit
INDIAN FLATS
33
34
35
36
31
32
"Big Eddy Unit"
Ruef, Muncy Britton
Gulf Eddy-St.
3
2
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6
5
"Ford-St"
State
9
10
11
12
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8
"Big Eddy Ut."
Hudson E. Hudson, etal
J.C. Barnes
Aztec
Amoco
16
15
14
13
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22
28
J.C. Barnes, etal
Exxon
21
23
24
19
20
DUBLIN RCH.
"Big Chief"
Pecos Irrigation Co.
BIG EDDY UNIT
R.C. Bennett
Eastland Oil
Coquina
"Gourley Fed"
27
26
25
30
29
"Nathan-Fed."
Union
J.E. Schaik
34
35
36
31
32
J.A. Davidson
Gulf
Amoco
Rich. E. Bass
U.S.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 4, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
Morrow "G" Participating
Area

Gentlemen:

We hereby approve the designation of the N/2 of Section 8, Township 21 South, Range 29 East as the Morrow "G" Participating Area in the Big Eddy Unit, Eddy County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd

cc: U.S.G.S. - Albuquerque
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

365

3/4/81

February 27, 1981

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 26125
Albuquerque, New Mexico 87125

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

STATE OF NEW MEXICO
ENERGY & MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Lease Nos. 3811 & 3834
Big Eddy Well #73
1980' FWL and 660' FNL
Section 8 T21S-R29E
Eddy County, New Mexico

Gentlemen:

Bass Enterprises Production Co., Unit Operator of the Big Eddy Unit, recently drilled the Big Eddy Well #73 to a total depth of 12,825' and completed same in the Morrow Formation. According to data obtained from the production of this well, we have determined that the Big Eddy Well #73 is capable of producing in commercial quantities from the Morrow Formation. Therefore, in accordance with Section 11 of the Big Eddy Unit Agreement dated April 10, 1952, we request that the N/2 of Section 8, T21S-R29E be designated as the Morrow "G" Participating Area.

To support our application, the following are attached for your review:

1. Rate Time Graph with reserve extrapolation.
2. Plat showing the proposed Participating Area outlined in red.
3. Well Bore Diagram.

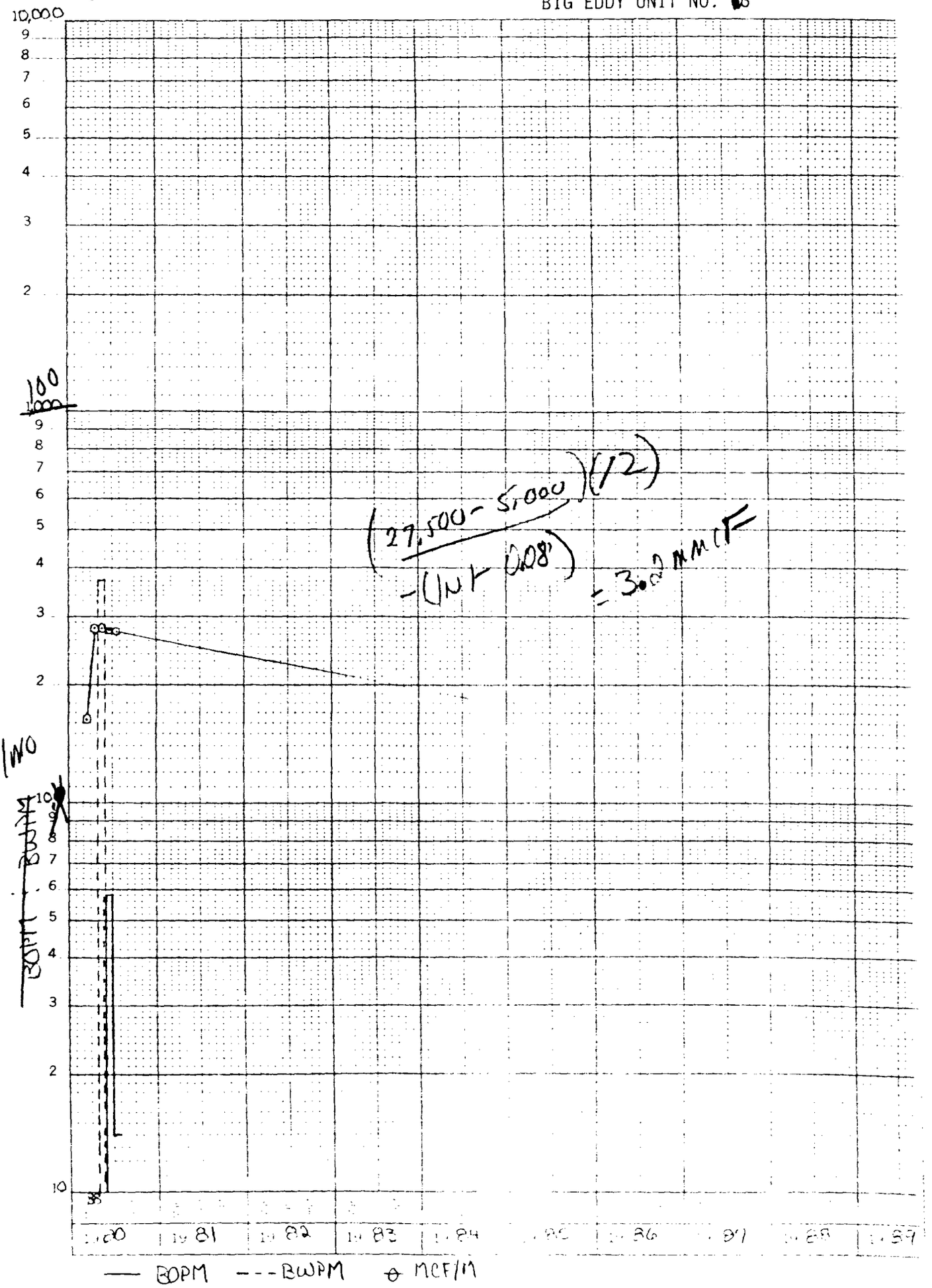
Sincerely,

JENS HANSEN
Division Landman

JH:jen
Enclosures

IN

BIG EDDY UNIT NO. 7 3



$\left(\frac{27,500 - 5,000}{\text{UNIT .008}}\right)(12) = 3.02 \text{ MMCF}$

47 6843

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

BASS ENTERPRISES PRODUCTION COMPANY

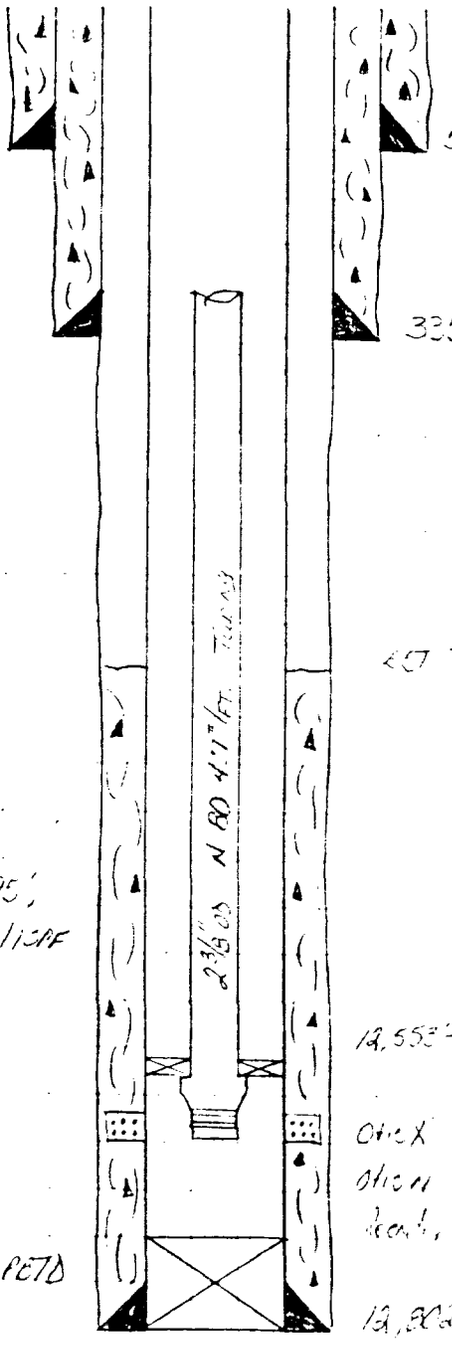
PAGE NO. —

SUBJECT	DATE	DEPARTMENT	PREPARED BY
WELL SKETCH	1-17-80		SJS

BIG EDDY UNIT No. 73
GOLDEN LANE MORROW
1980' FWL; 660' FNL Sec. 3 T19S-R28E
EDDY COUNTY, NEW MEXICO

ELEV: 3431' GL

SPUD: 8-25-79
CMPL: 6-23-'79



501' - 11 3/4" OD CSG 42 #/FT. H-40 ST;C
CMTD W/ 500 SX.

3354' - 8 5/8" OD CSG 24 & 32 #/FT. K-55 ST;C
CMTD. W/ 1175 SX Lite; 200 SX
THIXSET; 200 SX "C"

ECT TOC @ 7500'

11-7-79 Perf'd Morrow @ 12,595',
597', 620', 634', 637', 641', w/1 SPF
A/ 2000 gal. 7½% MCA A-100

12,553' - Otis WB Pkr.

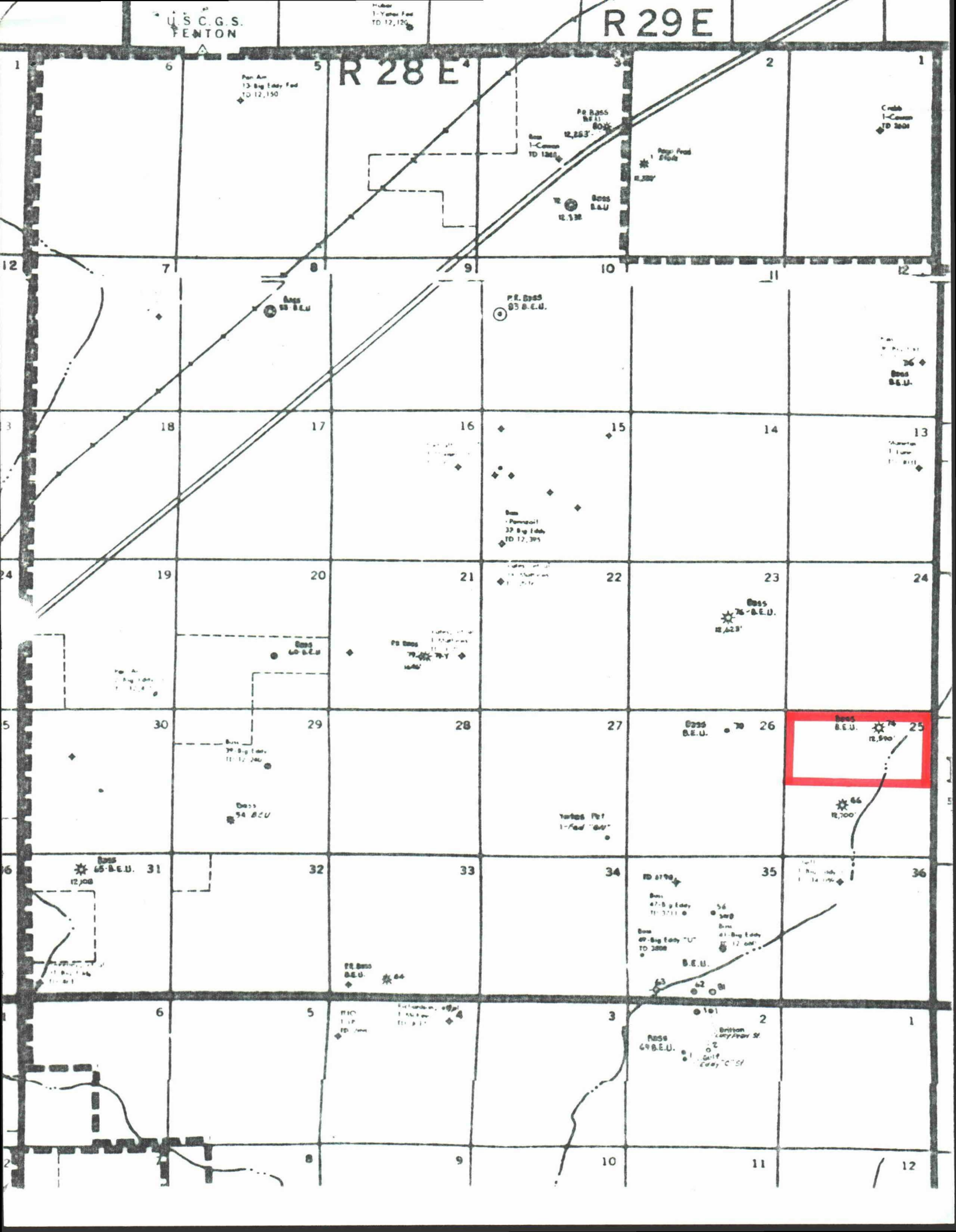
Otis X Nipple 1.875" ID @ 12,578'
Otis N Nipple 1.875" ID @
Bull plug @ 12,584'

12,749' PBTD

12,802' - 5½" OD CSG 17 #/FT. K-55 LT;C
CMTD. W/ 530 SX Lite Followed by
250 SX Class H

TD @ 12,835'

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

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 4, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
Morrow "H" Participating
Area

Gentlemen:

We hereby approve the designation of the S/2 of Section 9, Township 22 South, Range 28 East, as the Morrow "H" Participating Area in the Big Eddy Unit, Eddy County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd

cc: U.S.G.S. - Albuquerque
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

February 27, 1981

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 26125
Albuquerque, New Mexico 87125

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

STATE OF NEW MEXICO
ENERGY & MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Lease No. 3822
Big Eddy Well #77
1980' FWL and 1650' FSL
Section 9 T22S-R28E
Eddy County, New Mexico

Gentlemen:

Bass Enterprises Production Co., Unit Operator of the Big Eddy Unit, recently drilled the Big Eddy Well #77 to a total depth of 12,600' and completed same in the Morrow Formation. According to data obtained from the production of this well, we have determined that the Big Eddy Well #77 is capable of producing in commercial quantities from the Morrow Formation. Therefore, in accordance with Section 11 of the Big Eddy Unit Agreement dated April 10, 1952, we request that the S/2 of Section 9, T22S-R28E be designated as the Morrow "H" Participating Area.

To support our application, the following are attached for your review:

1. Rate Time Graph with reserve extrapolation.
2. Plat showing the proposed Participating Area outlined in red.
3. Well Bore Diagram.

Sincerely,

JENS HANSEN
Division Landman

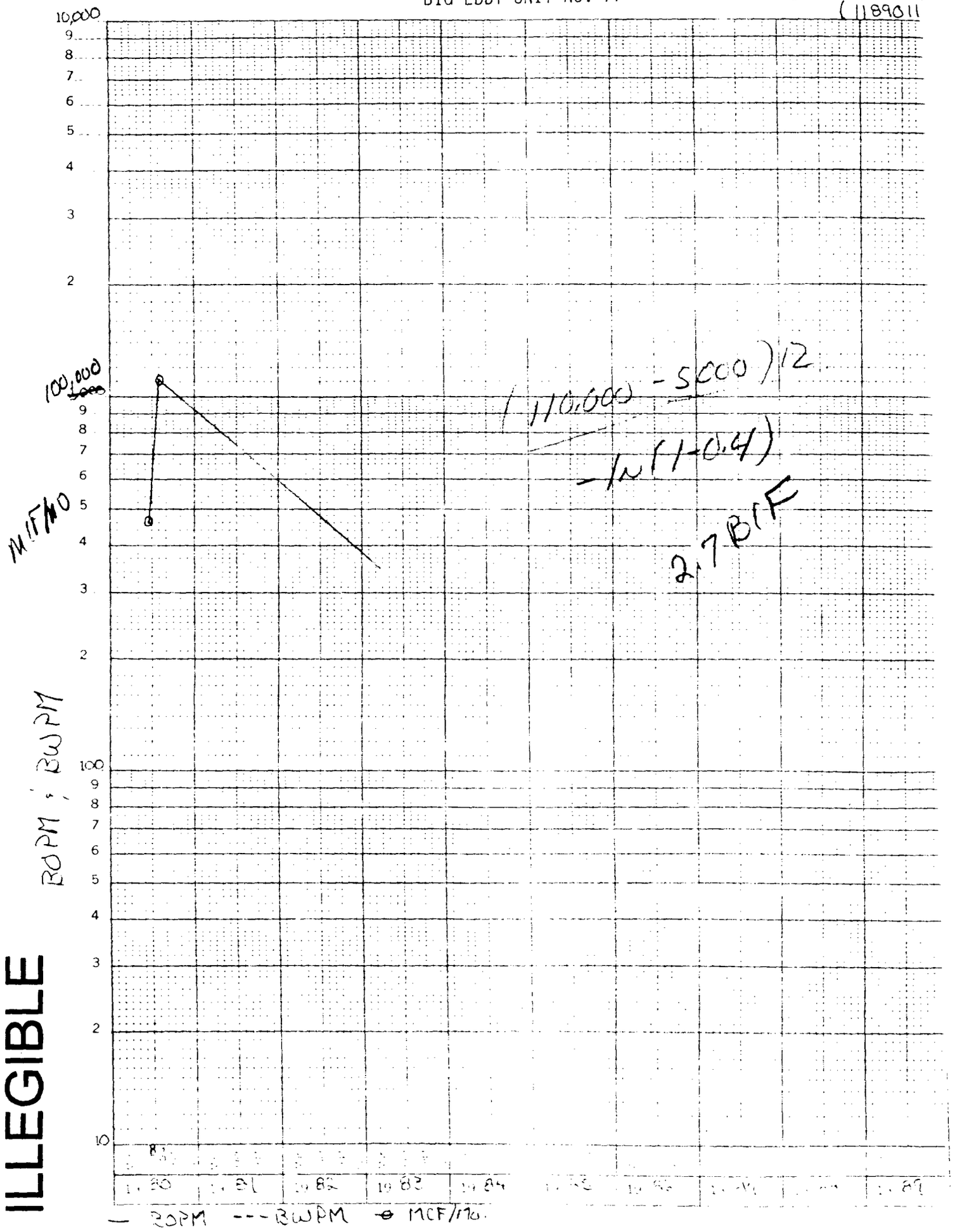
JH:jen
Enclosures

SOUTHWEST IND

BIG EDDY UNIT NO. 77

BIG EDDY UN

(189011



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4/ 6843

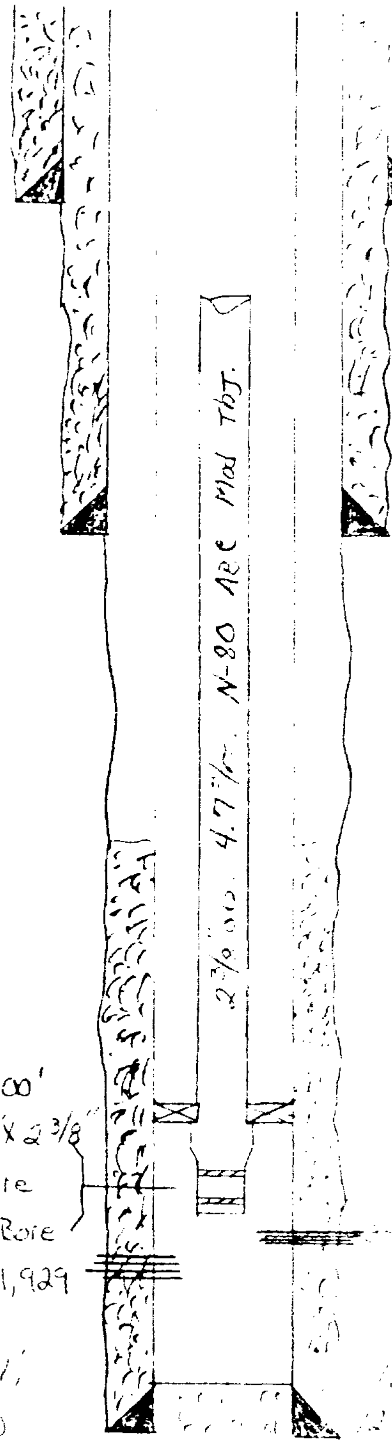
WELL BORE DIAGRAM

5-1-80 SDS

BIG EDDY UNIT NO. 77
EDDY COUNTY, NEW MEXICO

ELEV: 3094.7 GL
3112.7 RKB

SPUD: 12-26-79
COMP: 3-18-80



315' - 11 3/4" OD 42#/ft. H-40 [illegible]

2478' - 8 5/8" OD [illegible] S-80 [illegible] w/ [illegible] sx.

CALCULATED TOC @ 8400'

PERMANENT Pkr. @ 11,900'

OTIS WB Pkr @ 11,910', 10' Pup 3 1/2" X 2 3/8"

X-over, 8'-2 3/8" sub. Otis 1.875 Bore

X-Nipple. 8'-2 3/8" sub. Otis 1.875 Bore

"XN" Nipple w/1.791 BORE No Go @ 11,929

3/1/80 LOWER MORROW PERFS

1 JSP INTERVAL 12,270', 12,271', 12,277', 12,279', 12,283' (5 holes)

ACIDIZED W/2000 gal. 7 1/2% MCA-100 (3-5-80)

[illegible] PERFS 11,984', 9?6', 999', 12,005', [illegible], 049, 054', 057', 076', [illegible] ACIDIZED w/ 2000 gal [illegible] (7% MCA - [illegible])

12,410' PBTD

12,500 - [illegible] 17# [illegible] S-95 [illegible] w/ 300 sx. HOWCO LITE ; 100 sx CLASS H.

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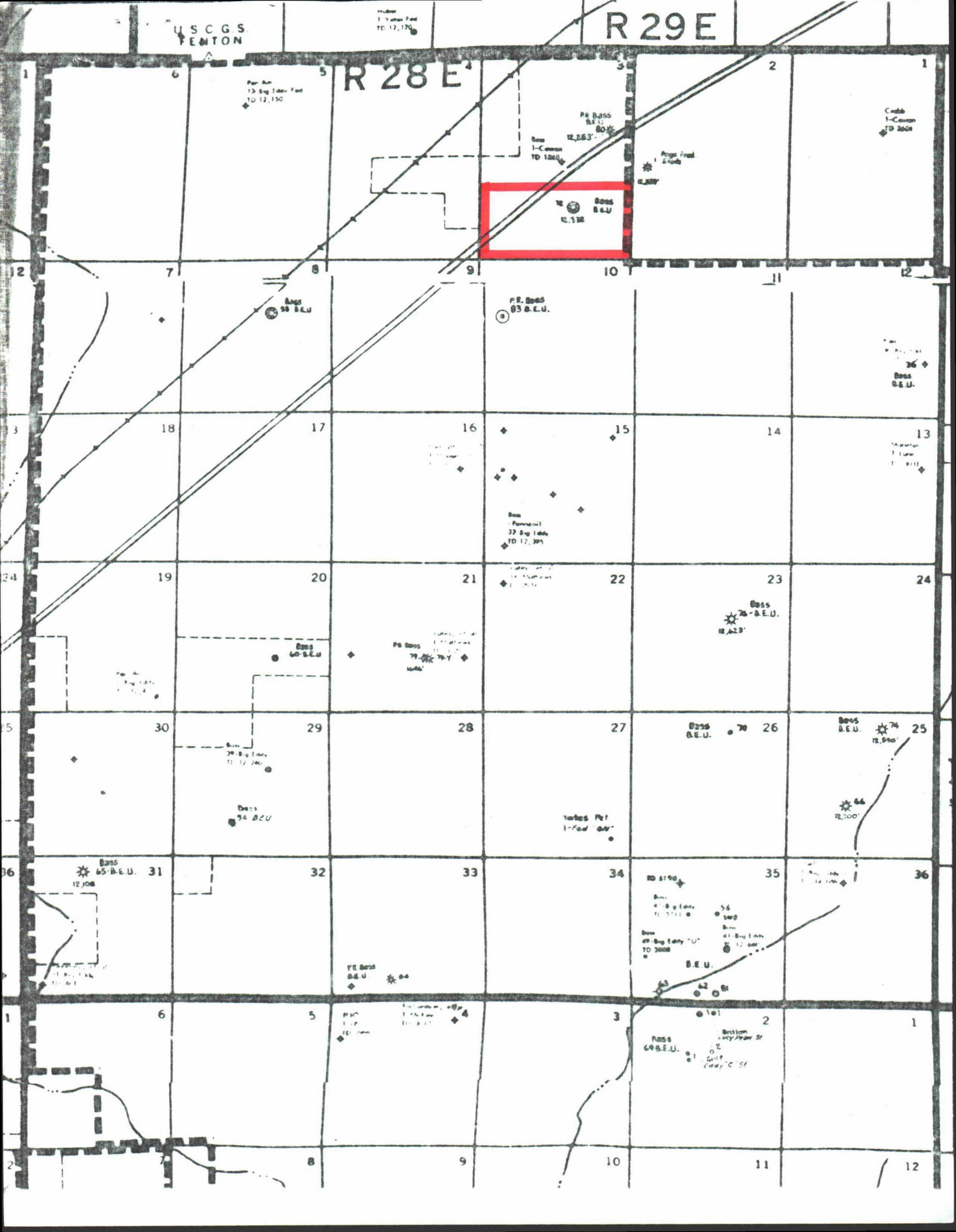
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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 4, 1981

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
Morrow "E" Participating
Area

Gentlemen:

We hereby approve the designation of the W/2 of Section 10, Township 22 South, Range 28 East, as the Morrow "E" Participating Area in the Big Eddy Unit, Eddy County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd

cc: U.S.G.S. - Albuquerque
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

February 27, 1981

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 26125
Albuquerque, New Mexico 87125

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

STATE OF NEW MEXICO
ENERGY & MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Lease No. 3823
Big Eddy Well #68
1980' FSL and 1980' FWL
Section 10, T22S-R28E
Eddy County, New Mexico

Gentlemen:

Bass Enterprises Production Co., Unit Operator of the Big Eddy Unit, recently drilled the Big Eddy Well #68 to a total depth of 12,686' and completed same in the Morrow Formation. According to data obtained from the production of this well, we have determined that the Big Eddy Well #68 is capable of producing in commercial quantities from the Morrow Formation. Therefore, in accordance with Section 11 of the Big Eddy Unit Agreement dated April 10, 1952, we request that the W/2 of Section 10, T22S-R28E be designated as the Morrow "E" Participating Area.

To support our application, the following are attached for your review:

1. Rate Time Graph with reserve extrapolation.

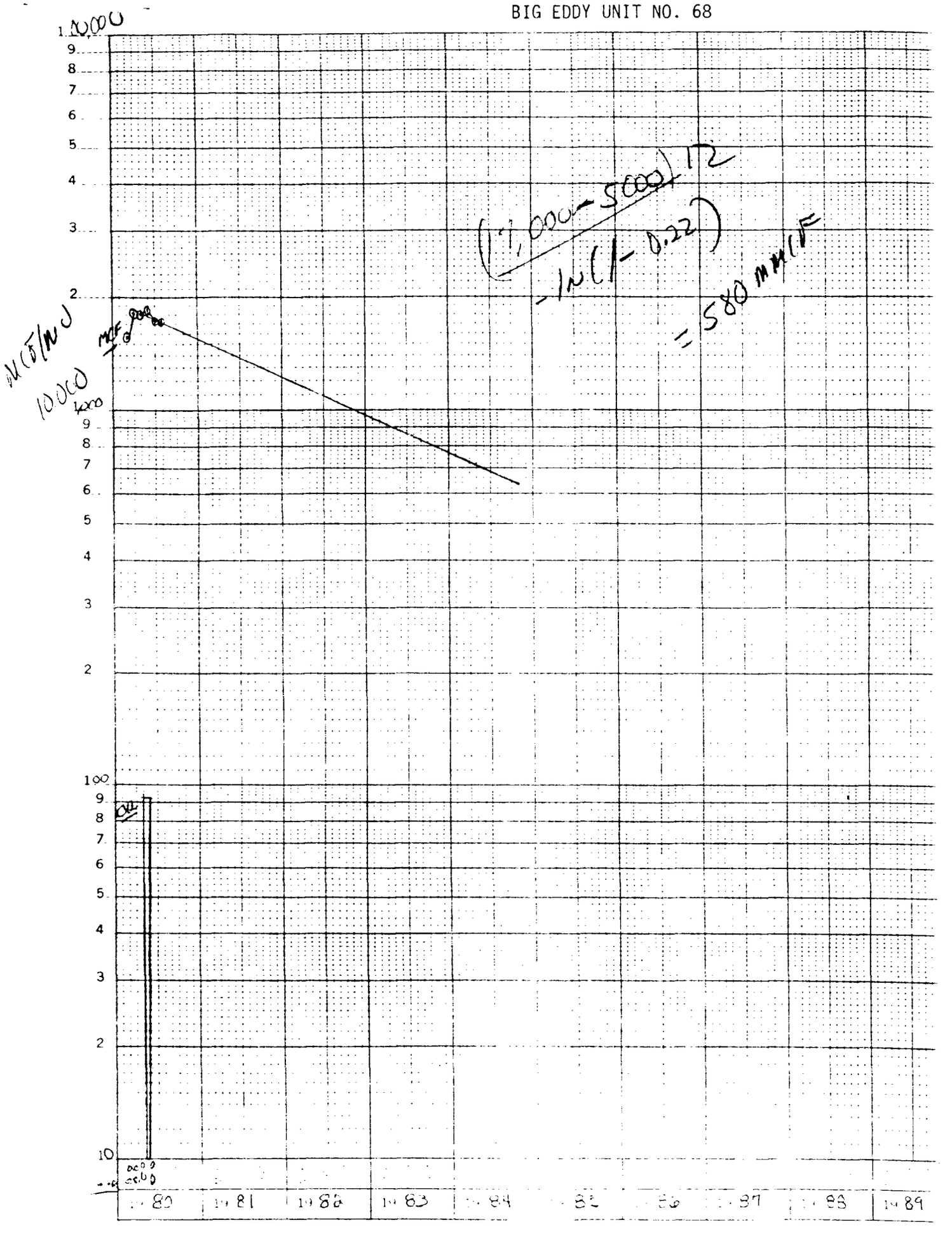
2. Plat showing the proposed Participating Area outlined in red.

Sincerely,

JENS HANSEN
Division Landman

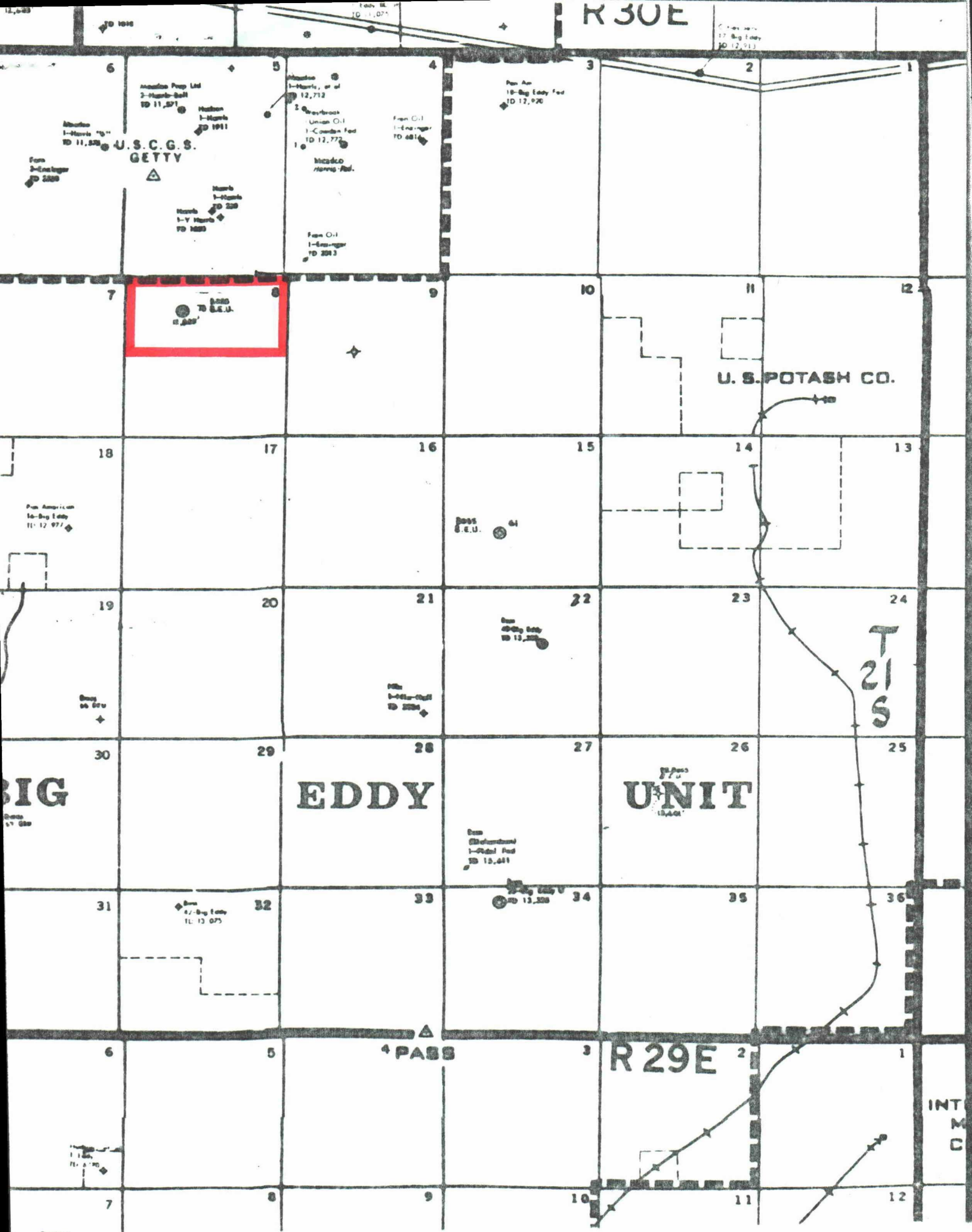
JH:jen
Enclosures

BIG EDDY UNIT NO. 68



4/ 6843

KEUFFEL & ESSER CO MADE IN USA


R30E
U.S.C.G.S.
GETTY
U. S. POTASH CO.
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EDDY
UNIT
PASS
R29E
INT

United States Department of the Interior

GEOLOGICAL SURVEY
South Central Region
P. O. Box 26124
Albuquerque, New Mexico 87125

20 JAN 1981

365

Bass Enterprises Production Company
Attention: Mr. Jens Hansen
Fort Worth National Bank Building
Fort Worth, Texas 76102

Gentlemen:

The 1981 plan of development submitted for the Big Eddy unit area, Eddy County, New Mexico, was approved on this date subject to like approval by the appropriate State officials.

Such plan proposes to drill well No. 81 to test the Delaware and wells Nos. 70, 82, 83, 84, 85, 86, 87, 88, 89 and 90 to test the Morrow formation. One approved copy is enclosed.

Sincerely yours,

Gene F. Daniel
Deputy Conservation Manager
Oil and Gas

Enclosure

cc:
NMOCD, Santa Fe (ltr only)

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

December 8, 1980

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
1981 Plan of Development

Gentlemen:

We hereby approve the 1981 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

One approved copy of the Plan of Development is returned herewith.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd
enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

November 7, 1980

United States Geological Survey
Drawer 1857
Roswell, New Mexico 88201

Commissioner of Public Lands
P. O. Box 1148
Santa Fe, New Mexico 87501

Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

35

OK
12/1/80

Re: 1981 Plan of Development
Big Eddy Unit
Eddy County, New Mexico

Gentlemen:

In accordance with Section 10 of the Big Eddy Unit Agreement dated April 10, 1952, Perry R. Bass, Operator of said Unit, hereby submits a Plan of Development for the Big Eddy Unit for the year 1981.

History of Past Development

We refer to our previous Plans of Development for a detailed description on this Unit.

1980 Activity

The following are the results of wells drilled during the year 1980 and wells drilled prior to 1980, but not included in the 1980 Plan of Development.

Big Eddy Unit #71 Well - Located 1980' FNL and 1980' FWL, Section 7, T22S-R29E. This well was listed on the 1979 Plan of Development but was not completed until 1980. This well was drilled to a total depth of 13,060' and was completed in the Atoka Formation as a gas well with the perforation interval being 11,542-11,638'. The well was potentialed for 542 MCFD and is currently producing.

Big Eddy Unit #72 Well - Located 1980' FSL and 1980' FEL, Section 3, T21S-R28E. This well was listed on the 1979 Plan of Development but was not completed until 1980. This well was drilled to a total depth of 12,332' and was completed in the

Morrow Formation as a gas well with the perforation interval being 12,216-12,232'. This interval in the Lower Morrow was depleted and the well was subsequently recompleted in the Middle Morrow and Atoka Formations as a gas well with the perforation intervals being 11,674-11,918' and 11,265-11,375', respectively. The well was potentialed for 2,279 MCFD in the Morrow and 3,416 MCFD in the Atoka and is currently producing.

Big Eddy Unit #77 Well - Located 1980' FWL and 1650' FSL, Section 9, T22S-R28E. This well was listed on the 1979 Plan of Development, but was not completed until 1980. This well was drilled to a total depth of 12,500' and was completed in the Morrow Formation as a gas well with the perforation interval being 12,270-12,283'. This well potentialed for 3,315 MCFD and is currently producing.

Big Eddy Unit #64 Well - Located 660' FSL and 1980' FWL, Section 33, T21S-R28E. This well was drilled to a total depth of 12,485' and was completed in the Strawn Formation as a gas well with the perforation interval being 10,904-10,910'. This well potentialed for 1,628 MCFD and is currently producing.

Big Eddy Unit #69 Well - Located 1980' FNL and 1980' FWL, Section 2, T22S-R28E. This well was drilled to a total depth of 12,690' and was completed in the Bone Springs Formation as an oil well with the perforation interval being 8,804-8,814'. The well potentialed for 64 BOPD.

Big Eddy Unit #70 Well - This well will be drilled 660' FNL and 1980' FEL, Section 26, T21S-R28E, to an estimated total depth of 13,000' to test the Morrow Formation. Approval was obtained from the United States Geological Survey in order to defer the drilling of this well until the year 1981 due to the drilling of the Bass Loomis Federal #1 which is being drilled to protect the Little Eddy Unit area from drainage. After the unorthodox location was obtained, Texaco elected not to operate the well and as a result, Bass assumed operations for the drilling of the well. Therefore, the results of the Big Eddy Unit Well #70 will appear under this section in the 1982 Plan of Development.

Big Eddy Unit Well #74 - Located 660' FNL and 1980' FEL, Section 25, T21S-R28E. This well was drilled to a total depth of 12,590' and was completed in the Atoka Formation as a gas well with the perforation interval being 11,468-11,616'. This well potentialed for 6,482 MCFD and is currently producing.

Big Eddy Unit Well #75 - Located 1980' FNL and 990' FWL, Section 26, T21S-R29E. This well was drilled to a total depth of 13,441' and was plugged and abandoned on August 30, 1980 as a dry hole.

Big Eddy Unit Well #78 - Located 1980' FEL and 2310' FSL, Section 35, T20S-R30E. This well will be commenced before the end of the year and be drilled to an estimated depth of 12,990' to test the Morrow Formation. The results of this well will appear in this section in the 1982 Plan of Development.

Big Eddy Unit Well #79 - Located 1980' FSL and 1980' FEL, Section 21, T21S-R28E. This well was drilled to a total depth of 1,646' and was plugged and abandoned on June 22, 1980 due to mechanical problems. The rig was skidded and the well was redrilled as the Big Eddy #79-Y Well.

Big Eddy Unit Well #79-Y-Located 1980' FSL and 1930' FEL, Section 21, T21S-R28E. This well was drilled to a total depth of 12,370' and was completed in the Morrow Formation as a gas well with the perforation interval being 11,913-11,991'. This well potentialed for 1,305 MCFD and is currently shut-in waiting on pipeline.

Big Eddy Unit Well #80 - Located 2538' FNL and 660' FEL, Section 3, T21S-R28E. This well was drilled to a total depth of 12,283' and was completed in the Morrow Formation with the perforation interval being 11,834-11,989'. This well potentialed for 1,256 MCFD and the well is currently shut-in waiting on pipeline.

We are still attempting to secure permits for the drilling of the Rodke #3, which is located 1980' FNL and 1980' FWL, Section 27, T20S-R31E, and the Big Eddy #52, located 1980' FSL and 990' FEL, Section 27, T20S-R31E.

Participating Areas

We will submit, during the year 1981, recommendations for commercial or non-commercial determinations for the above listed wells when sufficient production data for such determinations is available.

Future Developments

We plan to drill the following tests which will drill and test approximately 118,500' total feet of hole for unitized substances at the following tentative locations.

Big Eddy Unit Well #70 - Section 26, T21S-R28E - 13,000' Morrow test.

Big Eddy Unit Well #81 - Section 35, T21S-R28E - 3,800' Delaware test.

Big Eddy Unit Well #82 - Section 10, T22S-R28E - 12,500' Morrow test.

Big Eddy Unit Well #83 - Section 10, T21S-R28E - 12,300' Morrow test.

Big Eddy Unit Well #84 - Section 24, T21S-R28E - 12,700' Morrow test.

Big Eddy Unit Well #85 - Section 8, T21S-R29E - 12,800' Morrow test.

Big Eddy Unit Well #86 - Section 9, T21S-R28E - 12,300' Morrow test.

Big Eddy Unit Well #87 - Section 19, T20S-R32E - 12,700' Morrow test.

Big Eddy Unit Well #88 - Section 13, T22S-R28E - 13,000' Morrow test.

Big Eddy Unit Well #89 - Section 16, T20S-R31E - 13,000' Morrow test.

Big Eddy Unit Well #90 - Section 4, T22S-R29E - 13,300' Morrow test.

Offset Obligations

Appropriate and adequate measures will be taken to prevent drainage of unitized substances from land subject to the Big Eddy Unit Agreement, or pursuant to applicable regulations, fair and reasonable compensatory royalty will be paid as provided by the Unit Agreement.

Additional Development

This Plan of Development shall constitute the drilling obligations of the Unit Operator under the terms of the Big Eddy Unit Agreement for period ending December 31, 1981. However, due to problems in obtaining drilling rigs and unanticipated drilling problems which may be encountered, the actual drilling of one or more of these wells may encroach into the year 1982.

Modifications

It is understood that this Plan of Development may be modified from time to time to meet changing conditions.

Effective Date

This Plan of Development shall be effective January 1, 1981.

If this Plan of Development meets with your approval, please indicate by signing in the appropriate space provided below and return one copy to us for our records.

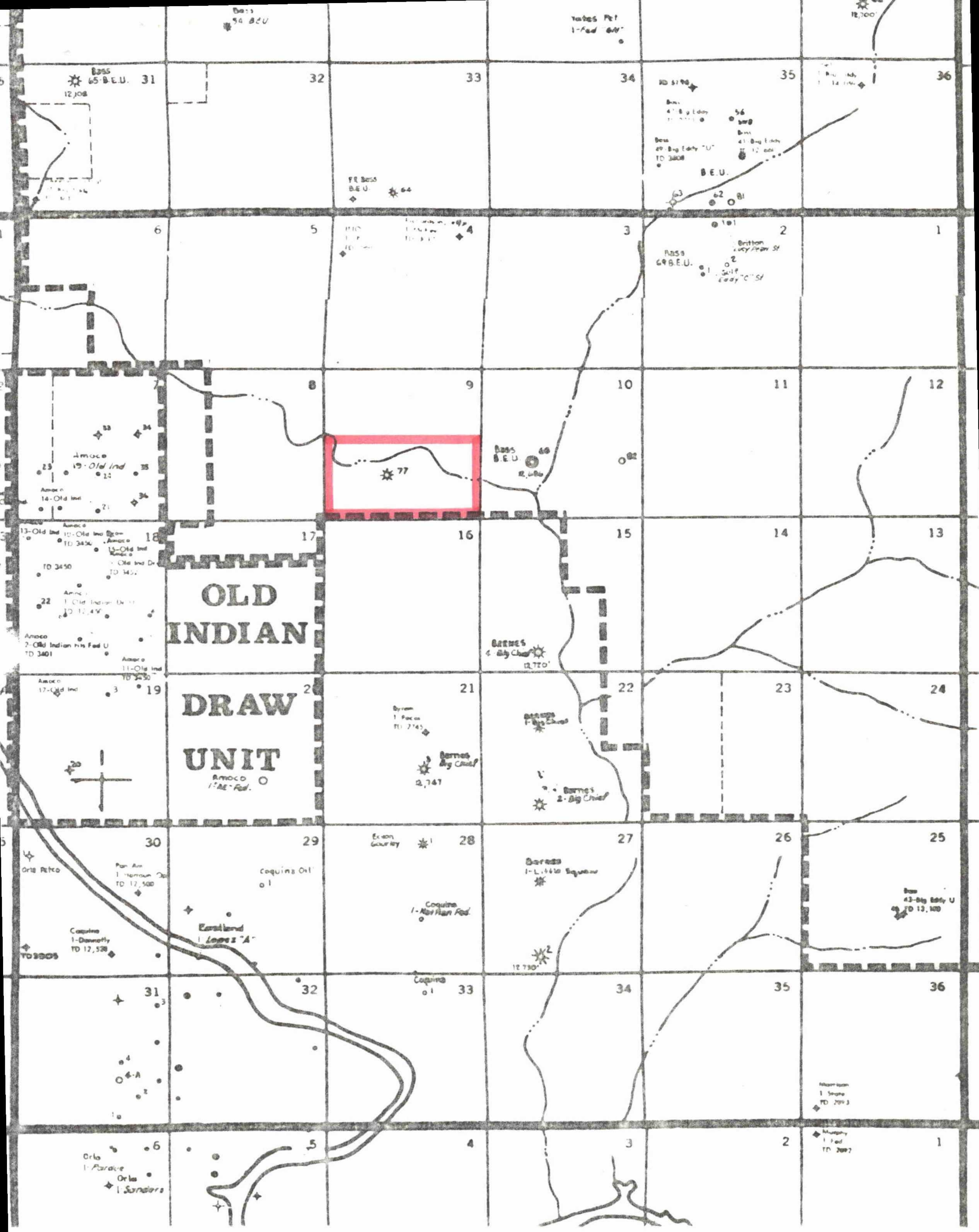
Sincerely,

Jens Hansen
Division Landman

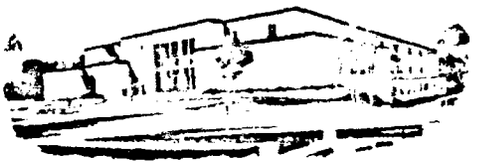
JH:vm

Agreed to and accepted this 8 day of December, 1980.

Signed by: _____


OLD INDIAN DRAW UNIT
Bass 65-B.E.U.
12,108
B.E.U.
Bass B.E.U.
Bass 69 B.E.U.
Amoco 19-Old Ind
Amoco 2-Old Indian Hls Fed U
TD 3401
Barnes 4-Big Chief
Barnes Big Chief
Barnes 2-Big Chief
12,747
Amoco 1 "AE" Fed.
Exxon Gourley
Coquina Oil
Coquina 1-Nathan Fed.
Coquina 1-Donnelly
TD 12,528
Eastland 1-Lopez "A"
Pan Am
Orla Petco
Barnes 1-L. Little Squaw
Orla 1-Pardue
Orla 1-Sanders
Coquina
Bass 43-Big Eddy U
TD 12,100

State of New Mexico



Commissioner of Public Lands

ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

November 17, 1980

365

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Re: 1981 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 Plan of Development for 1981, for the Big Eddy Unit, Eddy County, New Mexico, proposing the drilling of 11 wells during 1981. Our approval is subject to like approval by the United States Geological Survey and the New Mexico Oil Conservation Commission.

Enclosed is one approved copy for your files.

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

Very truly yours,

ALEX J. ARMIJO
COMMISSIONER OF PUBLIC LANDS

BY:

FLOYD O. PRANDO-Assistant
Director-Oil and Gas Division

AC-505-827-2748

AJA/RDG/s
encl.
cc: OCD-Santa Fe, New Mexico
USGS-Roswell, New Mexico
USGS-Albuquerque, New Mexico

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

September 24, 1980

Bass Enterprises Production Co.
Fort Worth National Bank Building
Fort Worth, Texas 76102

Attention: Jens Hansen

Re: Case No. 365
Big Eddy Unit
Second Amendment to
1980 Plan of Development

Gentlemen:

We hereby approve the Second Amendment to the 1980 Plan of Development for the Big Eddy Unit, Eddy County, New Mexico, subject to like approval by the United States Geological Survey and the Commissioner of Public Lands.

One approved copy of the Amendment is returned herewith.

Yours very truly,

JOE D. RAMEY
Director

JDR/EP/fd
enc.

cc: U.S.G.S. - Roswell
Commissioner of Public Lands

BASS ENTERPRISES PRODUCTION CO.
FORT WORTH NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

July 25, 1980

365

United States Geological Survey
Drawer 1857
Roswell, New Mexico 88201

OK
9/15/80
JH

Commissioner of Public Lands
P. O. Box 1148
Santa Fe, New Mexico 87501

Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Second Amendment to the
1980 Plan of Development
Big Eddy Unit
Eddy County, New Mexico

Gentlemen:

In accordance with the terms and provisions of Section 10 of the Big Eddy Unit Agreement, which states that the Plan of Development may be modified when necessary to meet changing conditions, we propose the following changes to the 1980 Plan of Development for your review and approval.

Big Eddy #70 Well - Under our original 1980 Plan of Development dated December 19, 1979, this well was proposed to be drilled at a location in Section 30, T21S-R28E, to be drilled to a depth sufficient in which to test the Morrow Formation. Due to additional geological and production information, we request that this well be changed from said Section 30, T21S-R28E, to a location in Section 26, T21S-R28E, Eddy County, New Mexico, for a well to be drilled to a depth sufficient to adequately test the Morrow Formation.

If this Amended Plan of Development meets with your approval, please indicate by signing in the appropriate space provided below and return one copy of this letter to us for our records.

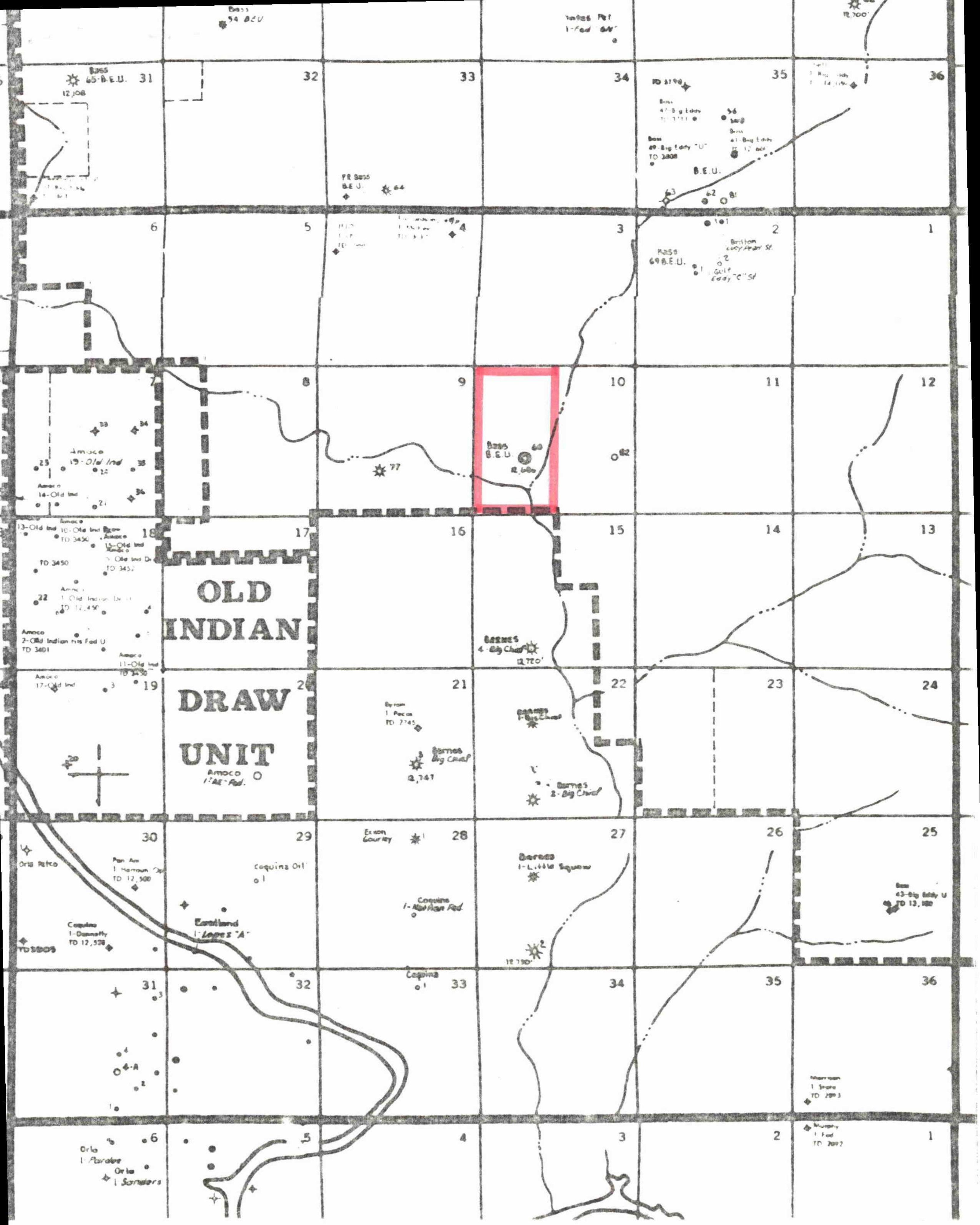
Sincerely,

Jens Hansen
Division Landman

JH:vm

Agreed to and accepted this 24th day of September, 1980.

Signed by: _____



OLD
INDIAN
DRAW
UNIT
Bass
B.E.U.
Amoco
19-Old Ind
Amoco
1-"AE" Fed.
Barnes
4-Big Chief
12,720'
Barnes
Big Chief
12,747
Barnes
2-Big Chief
Barnes
1-Little Squaw
Coquina Oil
Coquina
1-Nathan Fed.
Coquina
Eastland
1-Lopez "A"
Exxon
Gourley
Orla
1-Paraboe
Orla
1-Sanders
Coquina
1-Donnelly
TD 12,528
Pan Am
1-Harroun
TD 12,500
B.E.U.
Bass
69 B.E.U.
Bass
65-B.E.U.
12,108
FR Bass
B.E.U.