

DHC

7/8/96
1323

**Amoco Exploration and Production
U.S.A. Operations Group**

Permian Basin Business Unit

501 WestLake Park Boulevard
Post Office Box 4891
Houston, Texas 77210

Kevin L. James
Operations Manager, Special Assets JOMT

June 5, 1996

Division Director
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

**Re: Exception to Rule 303A
(Rule 303C Downhole Commingling)
Owen B #1
Unit M, Section 34, T 21 S, R 37 E
Proposed Pools: Blinebry and Drinkard**

Amoco respectfully requests administrative approval to downhole commingle the Drinkard and the Blinebry in the Owen B Well #1. The information required by Rule 303.C is attached.

Waste will not occur as a result of the proposed commingling. In fact, we believe that the best way to prevent waste is by commingling the Drinkard and the Blinebry as discussed below. Currently, the Owen B #1 is in the Drinkard formation and is near depletion. We could consider only a Blinebry completion, but we are cognizant of the fact that both these zones are low pressure zones and that a Blinebry recompletion may be uneconomic in the future when pressure is near sales pressure. Thus, to maximize production and prevent waste, we seek to produce both zones by commingling them.

There is no difference in royalty ownership in the Drinkard and the Blinebry zones and Amoco is 100% working interest owner. Thus, correlative rights will not be in jeopardy as a result of commingling. There is not a significant difference in bottomhole pressures between the Drinkard and the Blinebry, as described in section f of the attached required data. Thus, waste as a result of crossflow between zones will not occur.

As mentioned above, the Owen B #1 is currently in the Drinkard formation. The Owen B #1 has never been completed in the Blinebry. Thus, we cannot submit a production plot

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production plot for the Blinebry, we are submitting a resume of the well's history and a prognostication for the future.

The resume of historical information is attached. The prognostication for the future is described here. We have examined the geology in the area surrounding the Owen B #1. We believe the Drinkard and the Blinebry to be reasonably continuous in the area surrounding the Owen B #1. Due to this continuity, it seems plausible that the Owen B #1 will exhibit similar behavior in the Blinebry as nearby offsets, especially if the offsets are direct offsets. There are offsets to the Owen B #1 in the Blinebry zone. Therefore, our prognostication for the future production from the Owen B #1 is based on the assumed behavior from nearby offsets.

Directly to the East of the Owen B #1 is the Owen B #4 well. The Owen B #4 produces from the Blinebry formation. We have included the Dwights production plot for the Owen B #4 as support for the production and decline rate we expect to see from the Blinebry zone in the Owen B #1.

If you have questions, please call Mike Mackow at (713) 366-3254.

Yours very truly,



Kevin James
/HMM

Attachments

cc: Jim Collier - 6.158 WL1
Tom Tullos - 17.166 WL1

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Owen B #1

DOWNHOLE COMMINGLING - REQUIRED DATA

In order to obtain administrative approval for downhole commingling, we have enclosed the following data pursuant to Rule 303 C:

a. Name and address of operator:

Amoco Exploration and Production
U.S.A. Operations Group
Permian Basin Business Unit
501 WestLake Park Boulevard
Post Office Box 4891
Houston, Texas 77210

b. Lease name, well number, well locations, name of commingled pools:

Lease : Owen B
Well : #1
Location : M : Section 34, Township 21S, Range 37E
Pools : Drinkard: Blinebry

c. Plat

A plat of the area showing acreage is enclosed.

d. Form C-116 showing 24-hour productivity test from each zone:

We elect to use the option granted in Rule 303 C Part 2(e) which allows us to submit a prognostication for the future instead of current production for production from the Blinebry Zone of the Owen B #1. The information required for the Drinkard zone is attached. Also attached is the C-116 information for the Blinebry zone in the Owen B #4 well.

e. Production decline curves:

We elect to use the option granted in Rule 303 C Part 2(e) which allows us to submit a prognostication for the future for the Blinebry zone and have attached the required curve for the Drinkard zone. Also attached is the decline curve for the Blinebry producer Owen B #4.

f. Bottom-hole pressures:

| | |
|-----------|----------------------|
| Owen B #1 | (Drinkard) : 250 psi |
| Owen B #4 | (Blinebry) : 180 psi |

g. Description of fluid characteristics:

Both zones are dry gas zones and there is no expected compatibility problems.

h. Computation showing that value of the commingled production:

The mixture will not affect our gas contract prices and, thus, the value of the commingled zone will not be less than the individual zones.

i. Formula for the allocation of production:

Owen B #1 proposed commingled stream based on offset production:
50% Blinebry (170 mcf Blinebry / 340 mcf total)
50% Drinkard (170 mcf Drinkard / 340 mcf total)

Oil production from the Owen B #1 and 4 is 2 BOPD each and oil production from the Owen B #1 shall also be allocated at 50/50.

j. Statement that all offset operators have been notified of the proposed commingling:

By copy of this letter, we are notifying the offset operators of this proposed commingling.

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Offset Operator List

Amerada Hess Corporation
Attn: Land Department
1201 Louisiana, Ste. 700
Houston, Texas 77002

Chevron USA Inc.
Attn: Land Department
P.O. Box 1150
Midland, Texas 79705

Exxon Corporation
Attn: Land Department
P.O. Box 1600, ML-4
Midland, Texas 79702

Mobil E & P U S INC.
Attn: Land Department
P.O. Box 633
Midland, Texas 79702

Hendrix John H Corporation, Oil OPR
Attn: Land Department
P.O. Box 3040
110 N Marienfeld STE 400
Midland, Texas 79702

[illegible]

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.

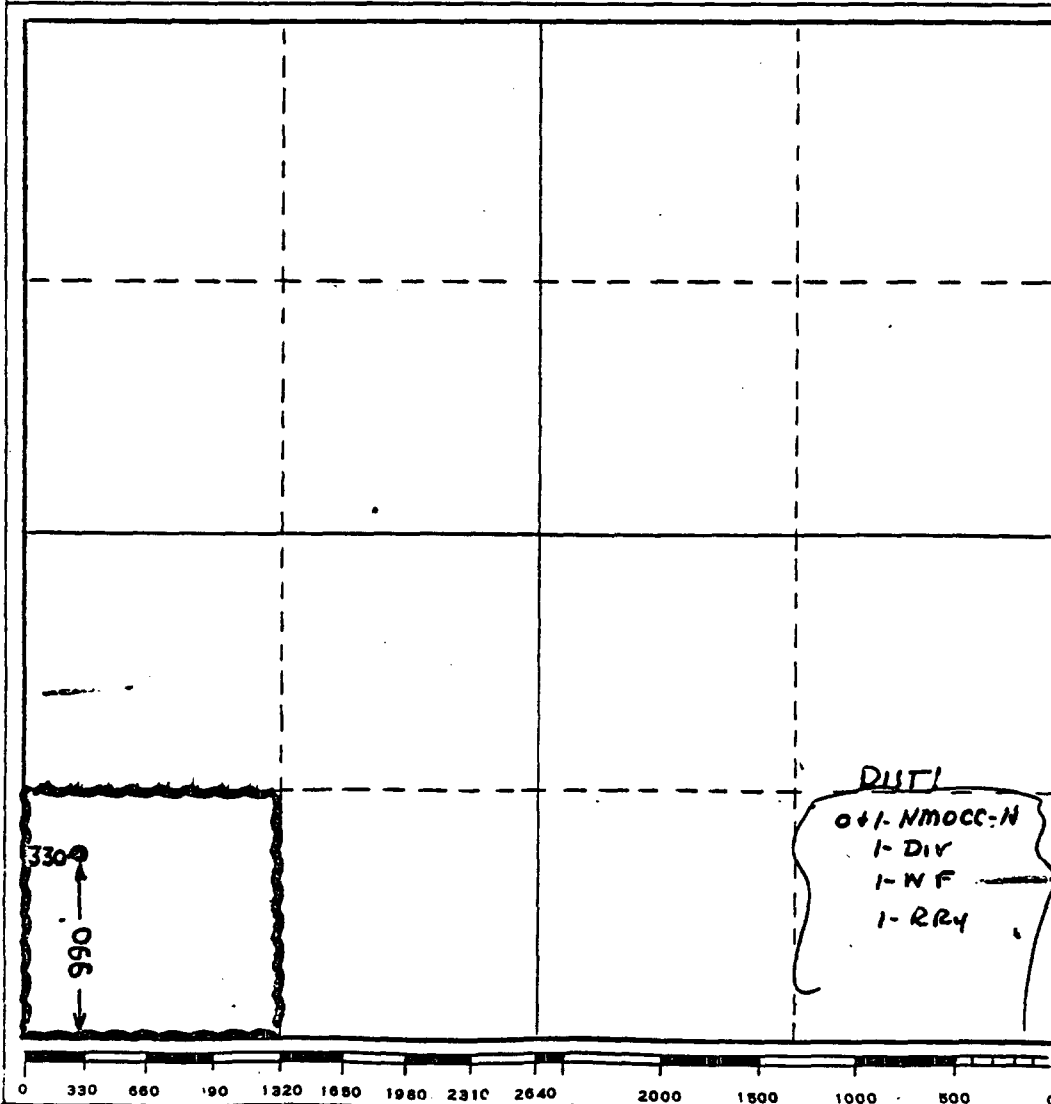
| | | | | | |
|--|--|-------------------------|-------------------------|---------------------------------------|----------------------|
| Operator Amoco Production Company, | | | Lease OWEN B | | Well No. 1 |
| Unit Letter M | Section 34 | Township 21-S | Range 37-E | County LEA | |
| Actual Footage Location of Well: 990 feet from the SOUTH line and 330 feet from the WEST line | | | | | |
| Ground Level Elev. 3450 DF | Producing Formation DRINKARD | | Pool DRINKARD | Dedicated Acreage: 40 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 _____

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
[Signature]
Position
ADMINISTRATIVE ASSISTANT
Company
Amoco Production Company

Date
JUN 7 1974

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.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

GAS-OIL RATIO TEST

May 10

| | | | | | | | | | | | | | | |
|----------------------|---------------------|--------------------------|----------|---|----|---------------------------|------------|----------------------------------|-----------------|-------------------|----------------------|-----------|------------|----------------------|
| Operator | | Amoco Production Company | | Pool Drinkard | | County Eddy County, NM | | | | | | | | |
| Address | | 77210 | | TYPE OF TEST - (X) | | Completion | | Special | | | | | | |
| P.O. Box | 4891 Houston, Texas | 77210 | | Scheduled <input checked="" type="checkbox"/> | | Length of Test Hours | | Special <input type="checkbox"/> | | | | | | |
| LEASE NAME | | WELL NO. | LOCATION | | | DATE OF TEST | CHOKE SIZE | TBG. PRESS. | DAILY ALLOWABLE | PROD. DURING TEST | GAS RAT. CU.FT./BBL. | | | |
| | | | U | S | T | R | | | | WATER BBLs. | GRAV. OIL | OIL BBLs. | GAS M.C.F. | GAS RAT. CU.FT./BBL. |
| State E Tract 27 | | 1 | N | 18 | 21 | 37 | 2/26/96 | P | | 24 | 1 | 6 | 90 | 15000 |
| DHC#429 Oil Gas | | | | | | | | | | | | | | |
| Drinkard 61% 31% | | | | | | | | | | | | | | |
| Blaineby 39% 69% | | | | | | | | | | | | | | |
| Owen B | | > 1 | M | 34 | 21 | 37 | 1/8/96 | P | | 24 | 4 | 2 | 170 | 85000 |
| DHC#410 | | 2 | L | 34 | 21 | 37 | 2/6/96 | P | | 24 | 3 | 2 | 475 | 237500 |
| Drinkard 42% 27% | | | | | | | | | | | | | | |
| Tubb 58% 73% | | > 4 | N | 34 | 21 | 37 | 2/7/96 | P | | 24 | 4 | 2 | 170 | 85000 |
| Southland Royalty A | | 1 | G | 9 | 21 | 37 | 2/7/96 | P | | 24 | 2 | 5.9 | 467 | 79152 |
| DHC#R7537 | | | | | | | | | | | | | | |
| Drinkard 42.5% 21.6% | | | | | | | | | | | | | | |
| Blaineby 44.5% 44.8% | | | | | | | | | | | | | | |
| Tubb 13.0% 33.6% | | | | | | | | | | | | | | |

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.
Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 F.
Specific gravity base will be 0.60.
Report casing pressure in lieu of tubing pressure for any well producing through casing.

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

Karen Ellis

Signature
Karen Ellis
Sr. Staff Assistant

Printed name and title

Date
5/3/96
713-366-2170
Telephone No.

(See Rule 301, Rule 1116 & appropriate pool rules.)

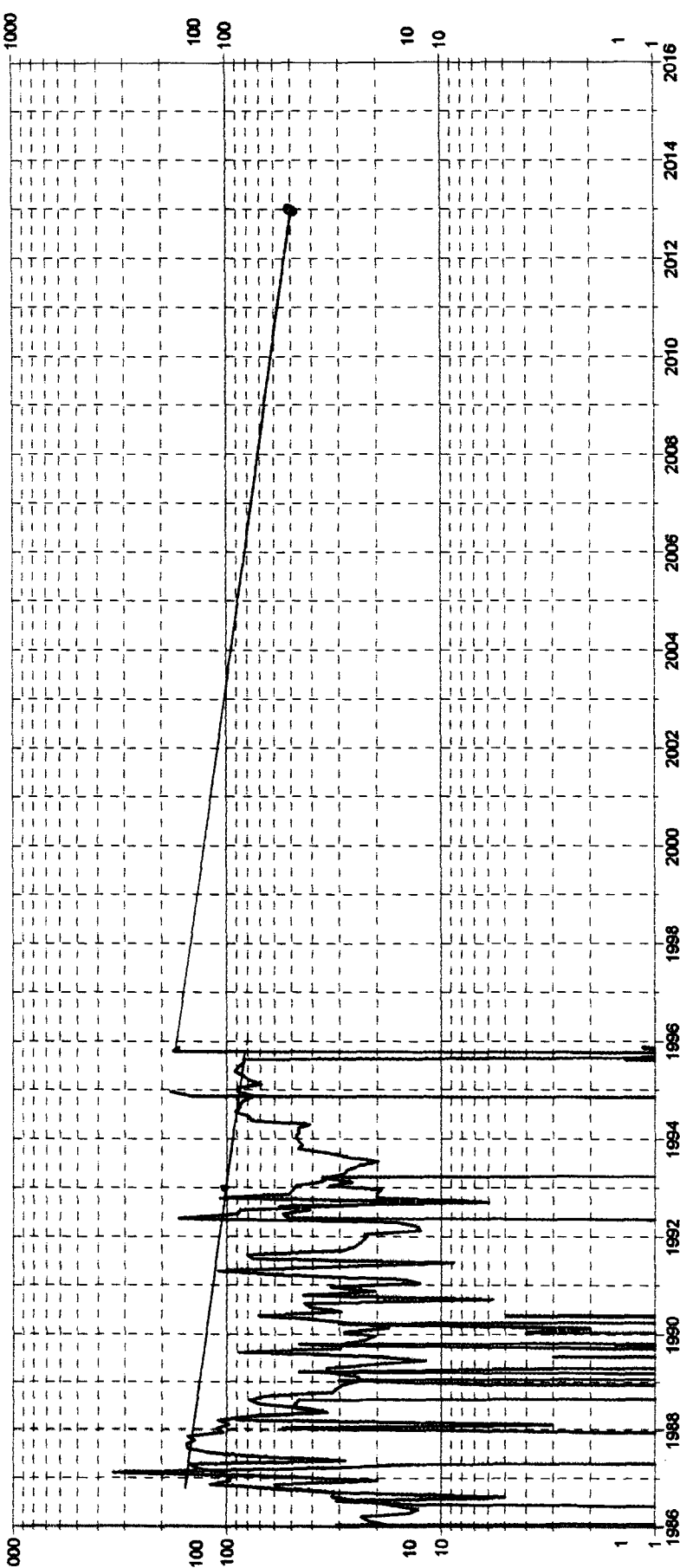
Dwights

1000 Lease: OWEN B 000001

Retrieval Code: 150,025,21S37E34N00D

1000

1000



County: LEA

Field: DRINKARD (DRINKARD) DR

Reservoir: DRINKARD

Operator: AMOCO PRODUCTION CO

State: NM

Oil Cum: 107527 bbl

Gas Cum: 1598 mmcf

Location: 34M 21S 37E

F.P. Date: N/A

Water (bbl/mo)

Gas (mcf/day)

Date: 04/15/96

Well Count

Oil (bbl/day)

$$a = \frac{\ln\left(\frac{q_i}{q}\right)}{t} = \frac{\ln\left(\frac{100}{80}\right)}{3} = 7.4\%$$

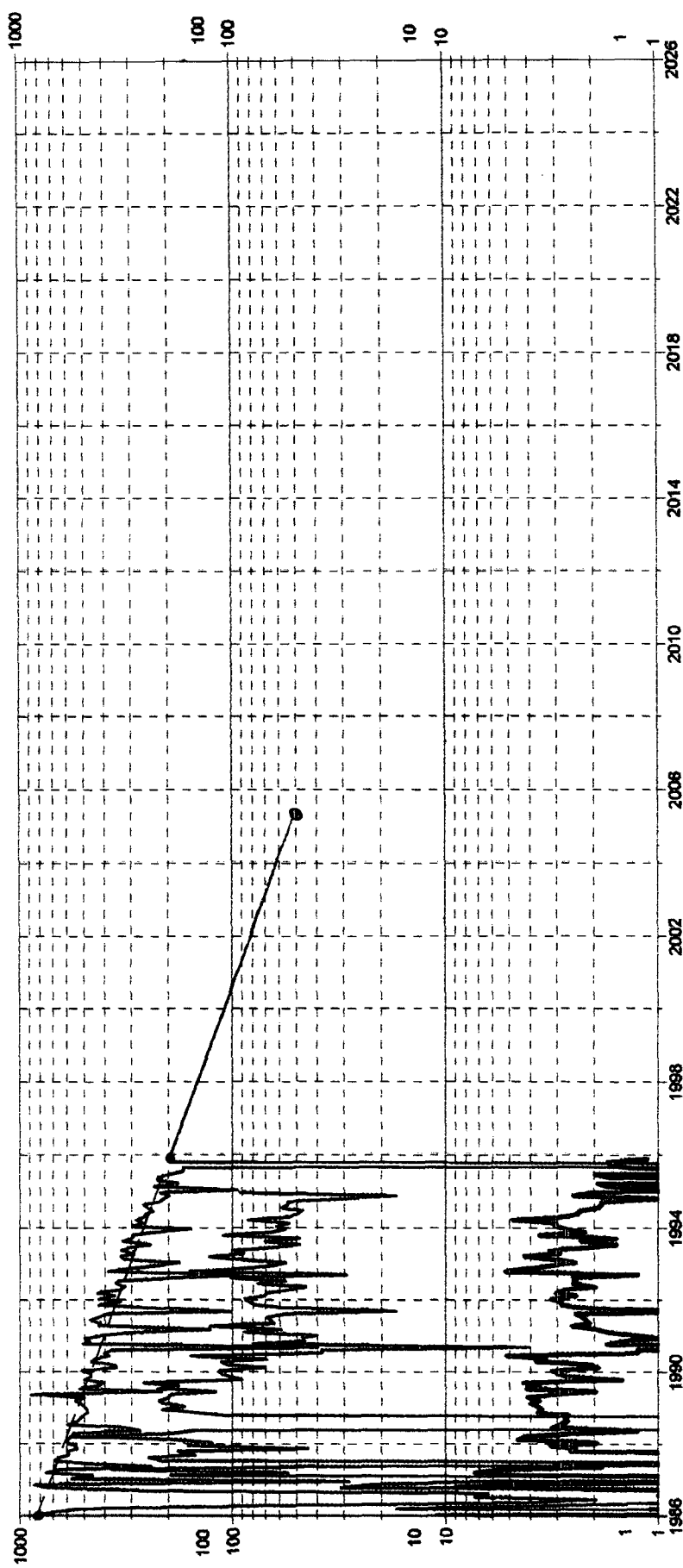
$$D = 7.9\%/year$$

Dwights

1000 Lease: OWEN B 000004

Retrieval Code: 160,025,21S37E34N00B

1000



County: LEA

Field: BLINEBRY (BLINEBRY) BL

Reservoir: BLINEBRY

Operator: AMOCO PRODUCTION CO

State: NM

Oil Cum: 71876 bbl

Gas Cum: 9854 mmcf

Location: 34N 21S 37E

F.P. Date: N/A

Water (bbl/mo)

Gas (mcf/day)

Date: 04/15/98

Well Count

Oil (bbl/day)

$$a = \frac{\ln(\frac{200}{6})}{t} = \frac{\ln(\frac{200}{200})}{10} = 14\%$$

$$D = 13\%/\text{year}$$

History of Owen B Well No. 1 (990' FSL x 330' FWL) in Unit Letter M of SECTION 34, T21S, R37E in Lea County, New Mexico Elevation @ DF = 3450' 40 acres are dedicated to this flowing oil well.

- 02/22/39: Spnd 18" hole. Original name was Eva Owens Well No. 1. Original operators were F. J. Danglade and J. C. Clower.
- 02/25/39: 15½" 70# CSA 130' w/100 sx in 18" hole. 8-5/8" 32# CSA 1163' without cmt in 10" hole. 7" 20# CSA 3625' w/150 sx in 8" hole.
- 04/06/39: Drilling completed. TD @ 3753'. OH @ 3625'-3753'.
- 04/10/39: First production @ 261 BOPD.
- 05/01/46: Ownership transferred to Stanolind Oil and Gas Co. and name changed to Eva Owen B #1 with plans to deepen from 3753' to 6600' in order to test Drinkard.
- 02/07/47: 5" 15# CSA 6614' w/160 sx in 6¼" hole.
- 02/08/47: Perf 6518'-6540' and 6550'-6560'.
- 02/09/47: Acd perfs w/500 gal HCL acid.
- 02/10/47: Acd perfs w/3000 gal HCL acid.
- 02/13/47: Production commenced @ 120 BOPD.
- 06/01/49: Acidize perfs 6550'-6560' w/500 gal 20% HCl.
- 09/27/49: Acidize perfs 6550'-6560 w/1000 gal 15% HCl.
- 01/12/55: Frac w/23,100 gal oil plus 34,650 lb sand.
PPWO: FLW 11 BOPD x No wtr on 16/64" CHK @ 100 TPF
PAWO: FLW 33 BOPD x No wtr on 20/64" CHK @ 150 TPF
- 10/08/61: Well recompleted from Drinkard to Paddock by setting drillable bridge plugs @ 6350' and 5400' and capping w/18' cmt then perf Paddock @ 5144'-5158" w/2 spf. Acd w/3000 gal 15% reg acid. Drinkard production on 7-9-61 was 2x0x0. Paddock production on 10-8-61 was 15x39x24.
- 06/14/62: Perf 5120'-5126' and 5130'-5134' w/4 spf and acidize all perfs w/7000 gallons. (PBD @ 5382')
PPWO: 3x3x0
PAWO: 6x72x32
- 08/23/66: Perf 5170'-5184' w/2 spf and acidize w/1000 gal
PPWO: 3x6x0
PAWO: 7x72x18
- 10/31/72: Perf 5226'-5238', 5246'-5249', 5254'-5258', and 5267'-5275' w/2 spf. Acd w/250 gal x frac w/11,000 gal x w/25,000 lb sand.

PPWO: PMP 3 BOPD x 9 BWPD
PAWO: PMP 3 BOPD x 136 BWPD

12/15/72: Well ceased to produce and was SI.

06/01/74: Well recompleted from Paddock to Drinkard by squeezing all Paddock perms w/120 sx cmt then clean out well to TD at 6614' then perf Drinkard at 6328'-6333', 6352'-6356', 6376'-6385', 6392'-6395', 6416'-6420', 6423'-6434', 6440'-6444', 6449', 6464'-6468, 6475'-6478', 6484'-6486', 6492'-6496', and 6500'-6504' w/2 spf then acidize interval 6328'-6504' w/3,000 gal 15% NE and frac w/60,000 gal and w/8,000 lb sand. 2-3/8" 4.7# tbg @ 6520' w/psa 6306'.

06/06/74: On 24 hour test well flowed 30 bo x 12 blw x 2321 mcf thru 15/64" chk at 850 psi tpf for a GOR of 77,366 cu. ft. per bbl.

~~7-5-83~~

Moved in service unit 7-5-83 and killed well with 110 bbl 2% KCL. POH and ran RBP and set 5347'. Set packer at 5037'. Established inject rate down tubing at 1-1/2 BPM with 900 psi Pressured annulus 1000 psi-OK. POH. Ran cement retainer and set at 5037'. Squeezed Paddo perms with 100 sx class C with additives. Reversed out 55 sx of cement. WOC. Drilled out cement retainer and cement to 5257'. Pressure tested squeeze 600 psi--OK. Ran tubing to 5347' and circulated clean. POH. Ran retrieving head and packer. Lowered RBP to 6278' and set packer at 6292'. Acidized with 500 gals 15% HCL and additives mixed with 2000 gals A-S. Swabbed 2-1/2 hrs. and recovered 9 BLW. POH. Ran 2-3/8" tubing and tubing landed at 6398'. Swabbed 23-1/2 hrs. and recovered 12 BO, 124 BLW, and slight show of gas. Installed plunger lift equipment 7-16-83 and began flow test. Flow tested 7 days. Last 24 hrs. recovered 64 BW, and 54 MCF. Workover completed and returned to production 7-29-83.