

CASE 6514: YATES PETROLEUM CORPORATION  
FOR DOWNHOLE COMMINGLING, EDDY COUNTY,  
NEW MEXICO

CASE NO.

65/4

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APPLICATION,  
TRANSCRIPTS,  
SMALL EXHIBITS,

ETC.



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 6514  
Order No. R-6026

APPLICATION OF YATES PETROLEUM CORPORATION  
FOR DOWNHOLE COMMINGLING, EDDY COUNTY,  
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 28, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 12th day of June, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Yates Petroleum Corporation, is the owner and operator of the Williamson BC Fed. Well No. 4, located in Unit K of Section 7, Township 20 South, Range 29 East, NMPM, Eddy County, New Mexico.

(3) That the applicant seeks authority to commingle North Burton Flats-Atoka and East Burton Flats-Morrow production within the wellbore of the above-described well.

(4) That from the North Burton Flats-Atoka zone, the subject well is capable of low marginal production only.

(5) That from the East Burton Flats-Morrow zone, the subject well is capable of low marginal production only.

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

-2-

Case No. 6514  
Order No. R-6026

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Artesia district office of the Division any time the subject well is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the well, applicant should consult with the supervisor of the Artesia district office of the Division and determine an allocation formula for each of the production zones.

IT IS THEREFORE ORDERED:

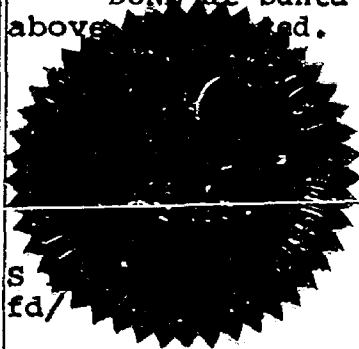
(1) That the applicant, Yates Petroleum Corporation, is hereby authorized to commingle North Burton Flats-Atoka and East Burton Flats-Morrow production within the wellbore of the Williamson BC Fed. Well No. 4 located in Unit K of Section 7, Township 20 South, Range 29 East, NMPM, Eddy County, New Mexico.

(2) That the applicant shall consult with the Supervisor of the Artesia district office of the Division and determine an allocation formula for the allocation of production to each zone in the subject well.

(3) That the operator of the subject well shall immediately notify the Division's Artesia district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove stated.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Joe D. Ramey*  
JOE D. RAMEY  
Director

S  
fd/

POTASH AREA

Diagrammatic Sketch of Proposed Dual Completion and Downhole Commingling  
YPC - Williamson BC Federal No. 4, K-7-203-29E, EDPY Co., N. Mex.

Elevation: 3270' KR = 3285' KB  
Spudded: 6-28-77  
Completed: 10-14-77 (Morrow)  
Recompleted: 5-9-78 (Atoka)

Top of Capitan Line @ 1210

Top of Delaware @ 2174

BEFORE EXAMINER STAMPS  
OIL CONSTRUCTION DIVISION

O. 2

CASE NO. 6514

Submitted by Yates

Hearing Date 3-28-79

Top of Strawn @ 10216

North Burton Flats Atoka Top of Atoka @ 10406  
Atoka flowed 900' on 1/4" Ck = 13 MMcfpd

East Burton Flats Morrow Top of Morrow 10990'  
Morrow Lime flowed 6 mcfpd  
Morrow Stringer flowed 5 mcfpd

Upper Morrow flowed 15750 mcfpd, Natural

Middle Morrow flowed 110-60' on 1/2" Ck Wet  
Estimate 110 BWPD + 130 mcfpd, Natural

Lower Morrow flowed 185' on 1/4" Ck wet, good  
Spray of Water, 4000 ppm Chlorides

12 1/2" hole to 590' KB  
12 3/8" 48" Csg set @ 590' KB, cemented  
to surface w/ 480 SX.

12 1/4" hole to 3055' KB  
8 5/8" 32" JIS Csg set @ 2925' KB cemented  
to surface w/ 2245 SX.

Top of cement @ 8600' by Temp survey

Propose to downhole commingle Atoka and  
Morrow perforations and use plunger lift to  
help unload fluids thru tubing; annulus will  
be volume chamber for gas to actuate the  
plunger. Will replace pkc w/ tbg anchor  
after retrieving bridge plug @ 10976' KB.

Perf 10792-800/32 .30" Natural Completion

Perf 11024-030/12 .34" Ttd w/ 1000g, MSA + N<sub>2</sub>

Perf 11219-221/4 .34" Ttd w/ 1000g, 10% Morrow + N<sub>2</sub>

Perf 11264-271/28 .32" Natural Completion

Perf 11387-391/16 .32" Natural Completion

Baker Lokset Pkc @ 11442' KB w/ Blanking Plug

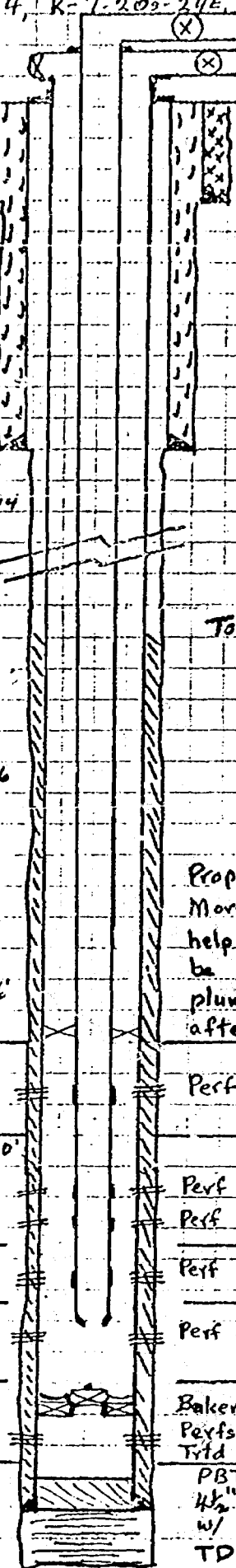
Perfs 11455-460/20 .32" & 11463-468/20 .32"

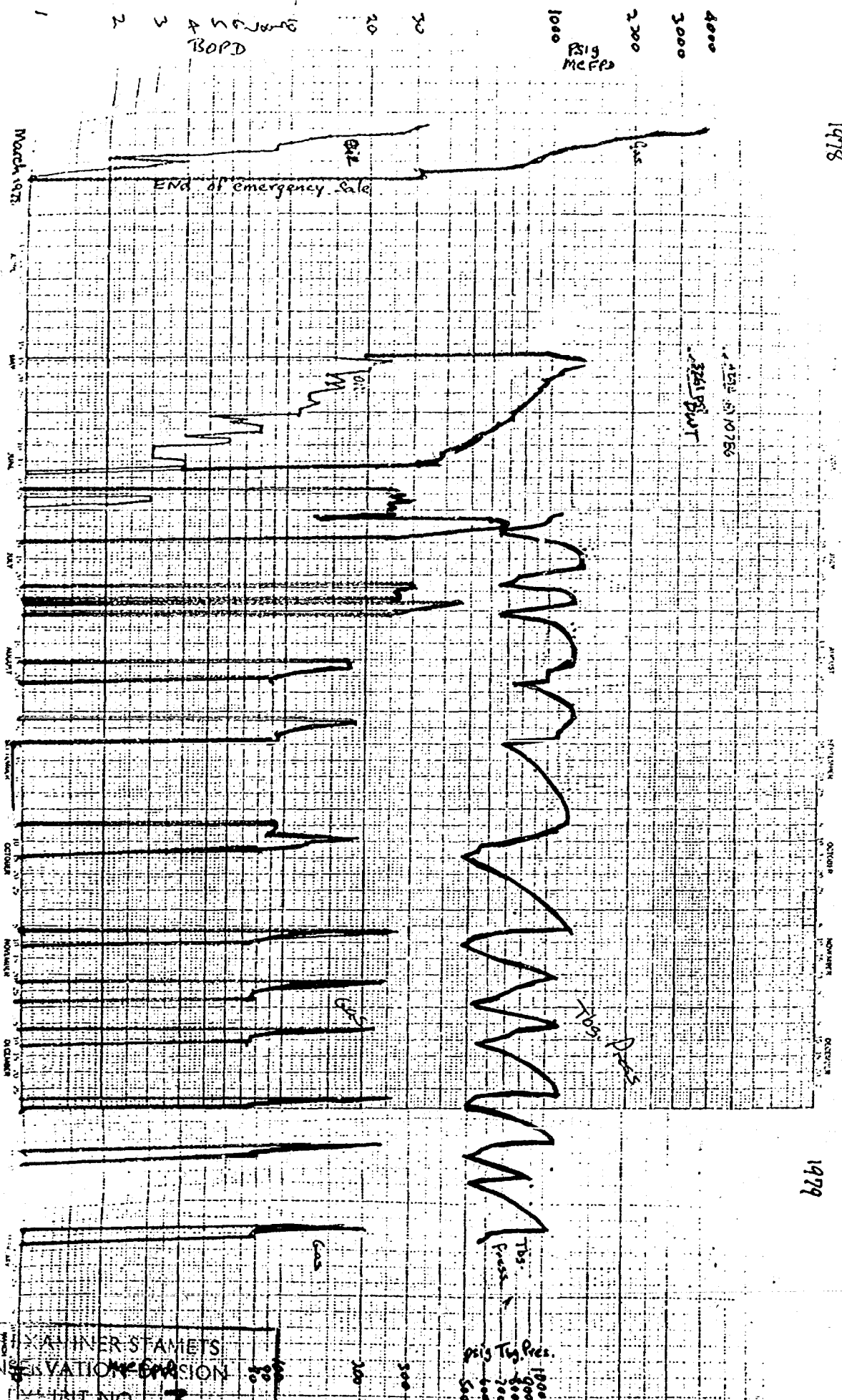
Ttd w/ 1000g, 7 1/2% MSA + N<sub>2</sub> & Ball Seals

PBTD: 11587 (Ditr. Fill collar)

4 1/2" 13.5' 11.6" H-80 csg set @ 11623' KB, cemented  
w/ 615 SX CIH & Hallite

TD: 11640 KB





1978

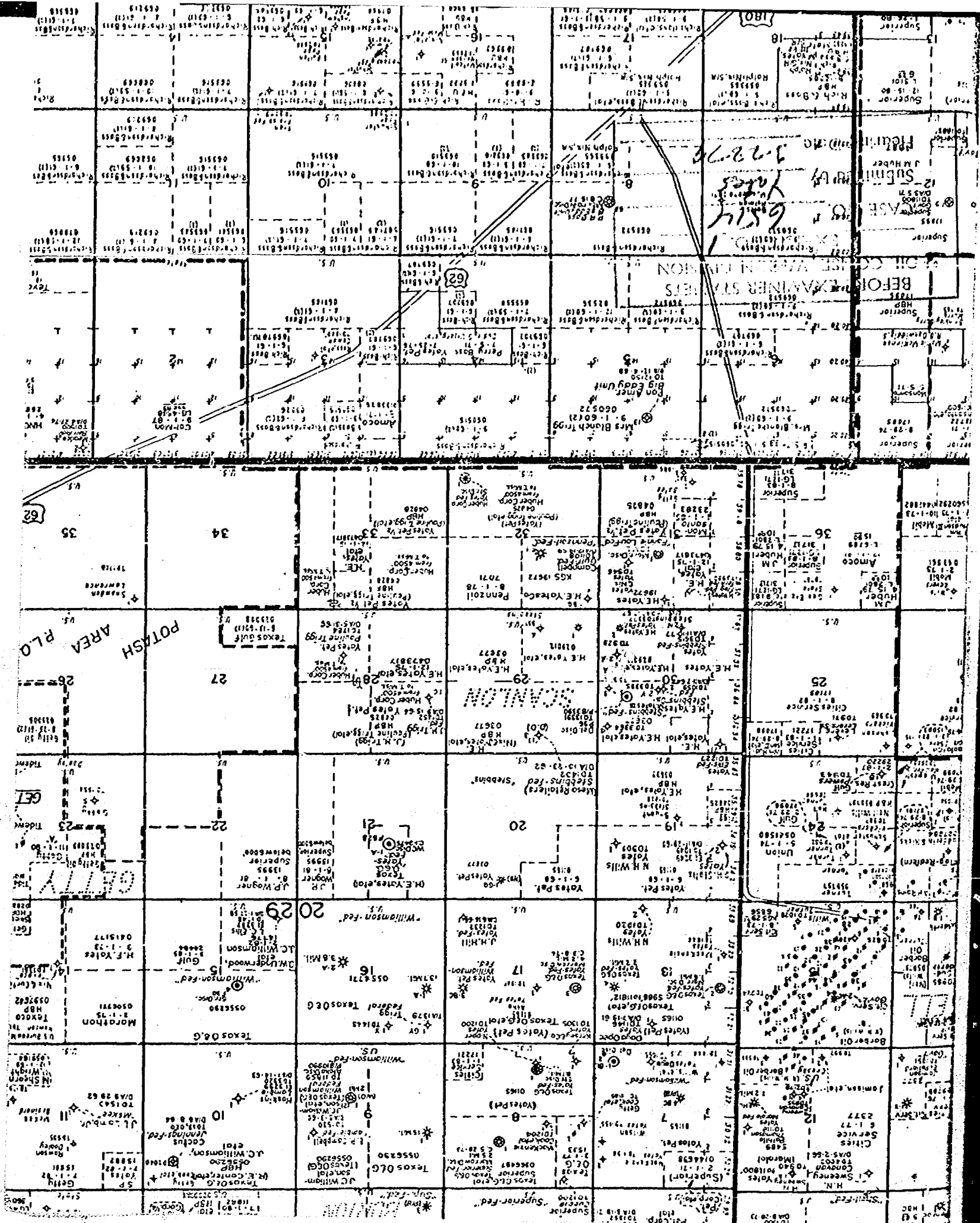
Green-Tbg Press.

WILLIAMSON BC #4  
Atoka Gas

1979

BEFORE THE ALABAMA STATE  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 3

CA E.N.O. 6514  
Submitted by Yates  
Hearing Date 3-28-79



Diagrammatic Sketch of Proposed Dual Completion and Downhole Commingling  
YPC - Williamson BC Federal No. 4, K-7-202-29E, Edvy Co., N. Mex.

Elevation: 3270' KR = 3285' KB  
Spudded: 6-28-77  
Completed: 10-14-77 (Morrow)  
Recompleted: 5-9-78 (Atoka)

Top of Capitan Line @ 1210

Top of Delaware Str 2924

BEFORE EXAMINER STAMPS  
OIL CONSERVATION DIVISION  
EXHIBIT NO. 2  
CASE NO. 6514  
Submitted by Yates  
Hearing Date 3-28-79

North Burton Flats Atoka Top of Atoka @ 10406'  
Atoka flowed 900' on 3/4" Ck = 13 MMcfpd

East Burton Flats Morrow Top of Morrow 10990'  
Morrow Line flowed 6 mcfpd  
Morrow Stringer flowed 5 mcfpd

Upper Morrow flowed 15750 mcfpd, Natural

Middle Morrow flowed 110-60' on 1/2" Ck Wet  
Estimate 110 BWPD + 130 mcfpd, Natural

Lower Morrow flowed 185' on 1/4" Ck wpt, good  
Spray of Water, 4000 ppm Chlorides

17 1/2" hole to 590' KB  
13 3/8" 48" Csg set @ 590' KB, cemented  
to surface w/ 480 sx.

12 1/4" hole to 3055' KB  
8 5/8" 32" J55 Csg set @ 2925' KB cemented  
to surface w/ 2245 sx.

Top of cement @ 8600' by Temp survey

Propose to downhole commingle Atoka and  
Morrow perforations and use plunger lift to  
help unload fluids thru tubing; annulus will  
be volume chamber for gas to activate the  
plunger. Will replace phr w/ tbg anchor  
after retrieving bridge plug @ 10976' KB.

Perf 10792-800/32 .50" Natural Completion

Perf 11024-030/12 .34" Trd w/ 1000g, MSA + N.

Perf 11219-221/4 .34" Trd w/ 1000g, 10% Morflast N.

Perf 11264-271/28 .32" Natural Completion

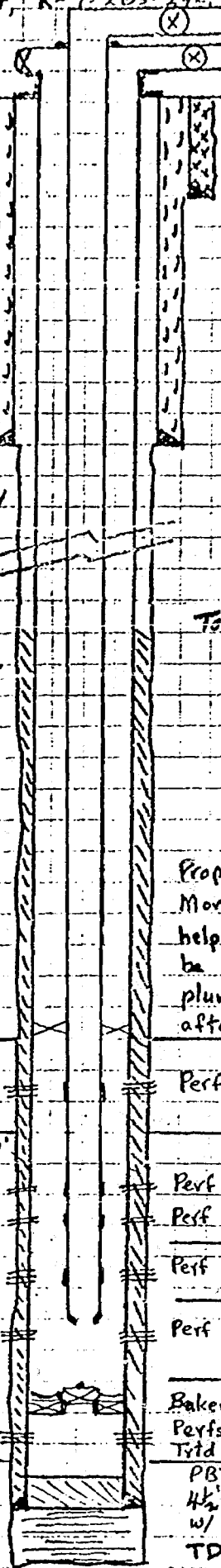
Perf 11387-391/16 .32" Natural Completion

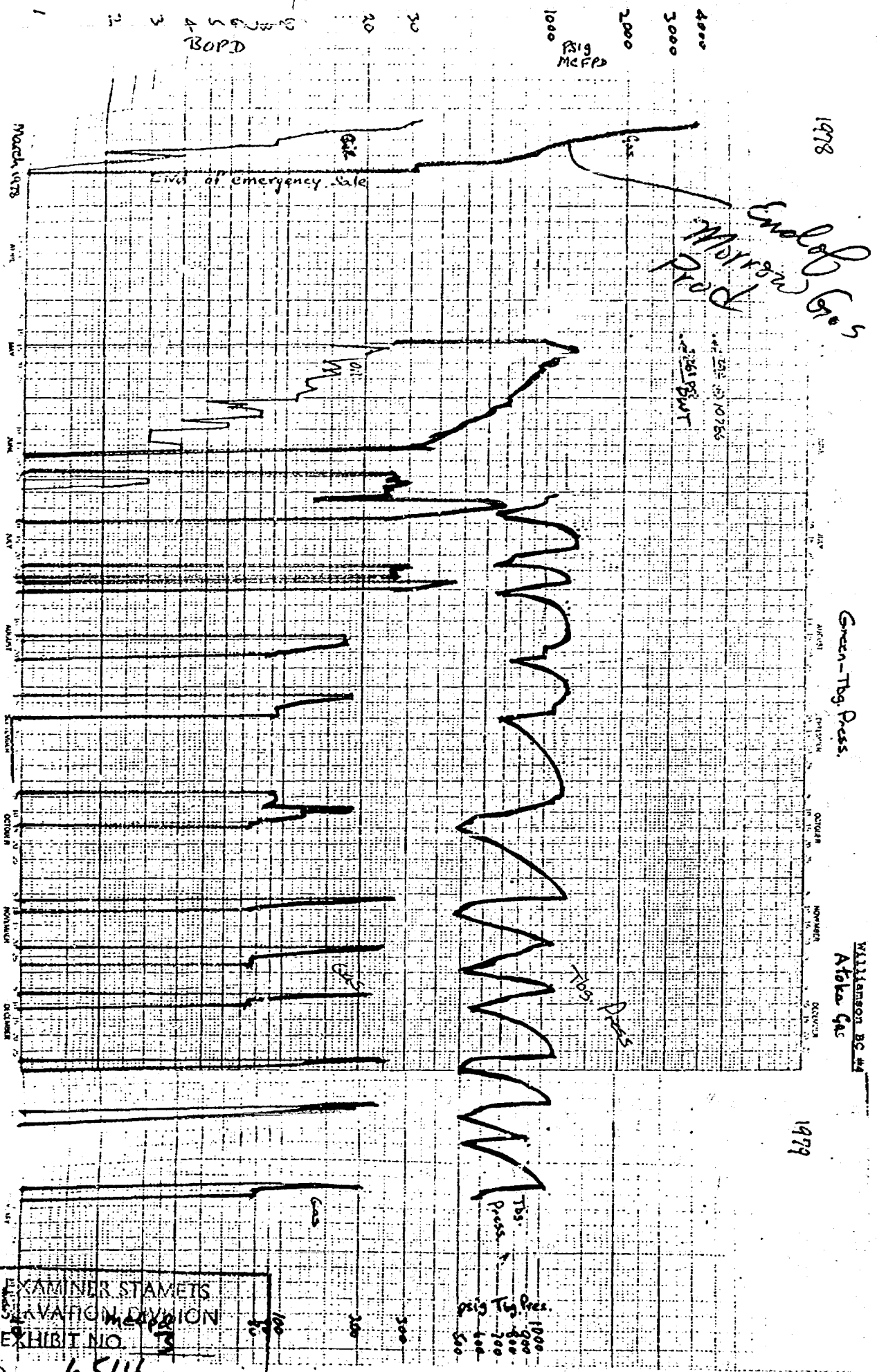
Baker Lockset Phr @ 11442' KB w/ Blanking Plug  
Perfs 11455-460/20 .32" & 11463-468/20 .32"  
Trd w/ 1000g, 7 1/2% MSA + N<sub>2</sub> & Ball Sealers.

PBTD: 11587 (Dir. Fill collar).

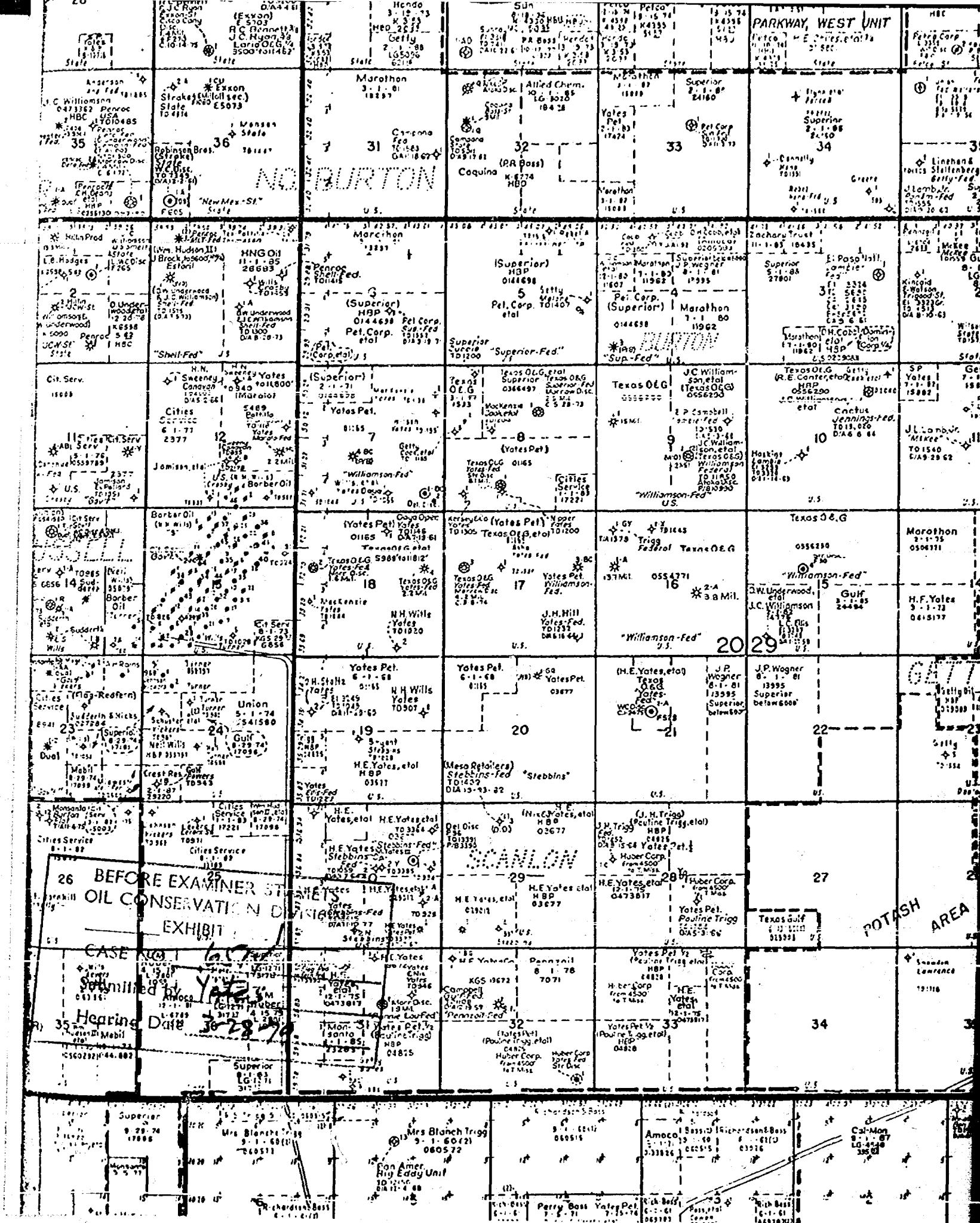
4 1/2" 13.5 # 11.6" N-80 csg. set @ 11623' KB, cemented  
w/ 615 sx. CIH & Hullite

TD: 11640 KB





BEFORE EXAMINER STAMETS  
OIL CONSERVATION DIVISION  
EXHIBIT NO. 6514  
CASE NO. 6514  
Submitted by Yates  
Hearing Date 3-22-79



# Diagrammatic Sketch of Proposed Dual Completion and Downhole Commingleing

YPC - Williamson BC Federal No. 4, K-7-20s-29E, Eddy Co., N. Mex.

Elevation: 3270' KB = 3285' KB  
Spudded: 6-28-77  
Completed: 10-14-77 (Morrow)  
Recompleted: 5-9-78 (Atoka)

Top of Capitan Line @ 1210

Top of Delaware Sd @ 2974

Top of Wolfcamp @ 9106

BEFORE EXAMINER STAMPS  
CIL CONSERVATION DIVISION

EXHIBIT NO. 2

CASE NO. 6514

Submitted by Yates

Hearing Date 3-28-79 Top of Strawn @ 10226

North Burton Flats Atoka Top of Atoka @ 10406

Atoka flowed 900' on 1/4" Ck = 13 Mcf/d

East Burton Flats Morrow Top of Morrow 10990

Morrow Line flowed 6 Mcf/d

Morrow Stringer flowed 5 Mcf/d

Upper Morrow flowed 15750 Mcf/d, Natural

Middle Morrow Flowed 110-60' on 1/2" Ck Wet  
Estimate 110 BWPD + 130 Mcf/d, Natural

Lower Morrow flowed 185' on 1/4" Ck wpt, good  
Spray of Water, 4000 ppm Chlorides

17 1/2" hole to 590' KB  
13 3/8" 48" Csg set @ 590' KB, cement  
to surface w/ 1180 SX.

12 1/4" hole to 3055' KB  
8 5/8" 32" Jcs Csg set @ 3055' KB cmtd  
to surface w/ 2245 SX.

Top of cement @ 8600' by Temp survey

Propose to downhole commingle Atoka and  
Morrow perforations and use plunger lift to  
help unload fluids thru tubing, annulus will  
be volume chamber for gas to actuate the  
plunger. Will replace plr w/ tbg anchor  
after retrieving bridge plug @ 10976' KB.

Perf 10792-800/32 50" Natural Completion

Perf 11024-030/12 34" Ttd w/ 1000g, MSA + N<sub>2</sub>

Perf 11219-221/4 34" Ttd w/ 1000g, 10% Morfla + N<sub>2</sub>

Perf 11264-271/28 32" Natural Completion

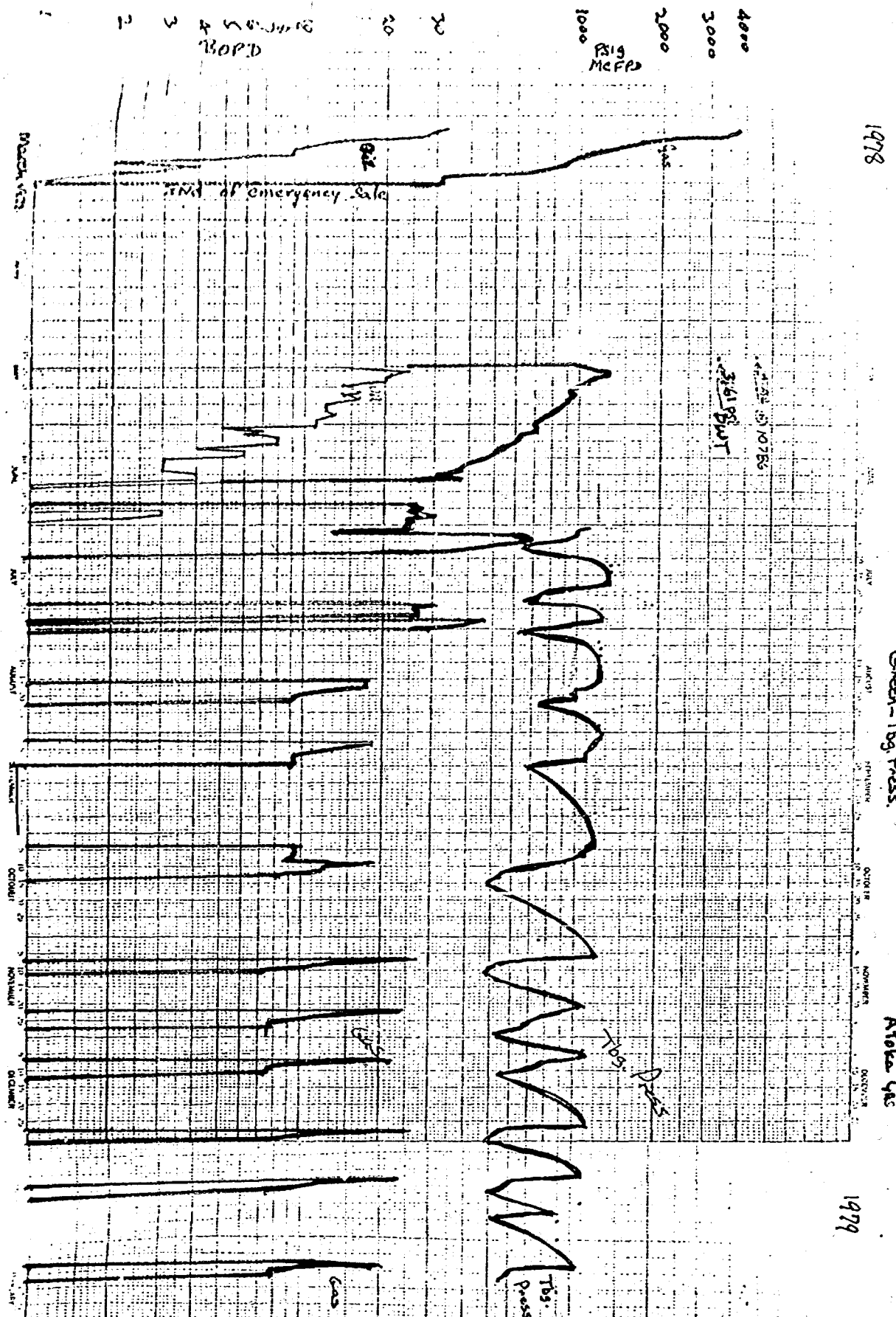
Perf 11387-391/16 32" Natural Completion

Baker Lockset Plr @ 11442' KB w/ Blanking Plug  
Perfs 11455-460/20 32" & 11463-468/20 32"  
Ttd w/ 1000g, 7 1/2% MSA + N<sub>2</sub> & Ball Sealers

PBTD: 11587 (Diff. Fill collar).

4 1/2" 13.5' 11.6" N-80 csg set @ 11623' KB, cmtd  
w/ 615 SX Cl H & Hallite

TD: 11640 KB



BEFORE EXAMINER STAMETS  
OIL CONSERVATION DIVISION  
EXHIBIT No. 6514  
CASE NO. 6514  
Submitted by Yates  
Hearing Date 3-28-79

Green-Tbg Press.

Williamson BC #  
Atoka Gas

Dan Nutter

Maier Peter Corp.

down-hole communicating

Williamson BC Fed # 4

Unit K, 7 - 205 - 29E Eddy

commingle N. Burton Fls  
Alaska E. Burton Fls  
horizon

called in by Jack Carson  
4:10 pm 3/6/79

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
STATE LAND OFFICE BUILDING  
OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
28 March 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Corpor- ) CASE  
ation for downhole commingling, Eddy ) 6514  
County, New Mexico. )

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation  
Division:

Lynn Teschendorf, Esq.  
Legal Counsel for the Division  
State Land Office Bldg.  
Santa Fe, New Mexico 87503

For the Applicant:

Joel Carson, Esq.  
LOSEE, CARSON & DICKERSON P.A.  
Artesia, New Mexico

SALLY WALTON ILOYD  
CERTIFIED SHORTHAND REPORTER  
2020 Plaza Blanca (505) 471-2462  
Santa Fe, New Mexico 87501

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# I N D E X

EDDIE MAHFOOD

|                                  |   |
|----------------------------------|---|
| Direct Examination by Mr. Carson | 3 |
| Cross Examination by Mr. Stamets | 7 |

# E X H I B I T S

|                                             |   |
|---------------------------------------------|---|
| Applicant Exhibit One, Map                  | 4 |
| Applicant Exhibit Two, Sketch               | 4 |
| Applicant Exhibit Three, Production History | 4 |
| Applicant Exhibit Four, Log                 | 5 |

SALLY WALTON BOYD  
CERTIFIED SHORTHAND REPORTER  
3029 Plaza Blanca (SOS) 471-2462  
Santa Fe, New Mexico 87501

1 MR. STAMETS: Call next Case 6514.

2 MS. TESCHENDORF: Case 6514. Application  
3 of Yates Petroleum Corporation for downhole commingling,  
4 Eddy County, New Mexico.

5 MR. CARSON: Mr. Examiner, my name is Joel  
6 Carson, Losee, Carson and Dickerson, P. A., Artesia, New  
7 Mexico, appearing on behalf of the applicant. I have one  
8 witness, Mr. Eddie Mahfood, who was previously sworn in  
9 Case Number 6511.

10 MR. STAMETS: The witness is still sworn  
11 and qualified.

12  
13 EDDIE MAHFOOD

14 being called as a witness and having been previously sworn  
15 upon his oath, testified as follows, to-wit:

16  
17 DIRECT EXAMINATION

18 BY MR. CARSON:

19 Q Mr. Mahfood, would you state the purpose of  
20 this application?

21 A The Williamson BC No. 4 is presently com-  
22 pleted in the Atoka and is not able to sustain flow. In  
23 the month of February we produced it only one time and it  
24 flowed for about three or four days before it went off the  
25 line and has been shut-in since then.

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Santa Fe, New Mexico 87501

1 Q I'll refer you to Applicant's Exhibit Number  
2 One and ask you to identify that.

3 A Exhibit Number One is a lease ownership  
4 map, showing the location of the Williamson BC No. 4 and  
5 the dedicated south half.

6 Q I refer you to Applicant's Exhibit Number  
7 Two and ask you to identify that.

8 A That's a cross section -- I'm sorry, it's  
9 a diagrammatic sketch of the proposed dual completion, down-  
10 hole commingling of the Williamson BC No. 4.

11 We see one, two, three, four, five sets of  
12 perforations we propose to commingle together.

13 The first set will be the North Burton Flats  
14 Atoka, from which it is producing at this time.

15 The East Burton Flats Morrow, there's four  
16 sets of perforations above that plug. We know that  
17 this well will flow gas and salt water. It will not buck  
18 the line pressure. And we propose to experiment with --  
19 it either gets compressed air plunger lift to lift this  
20 water out of there, but we need some additional gas to go  
21 along with it, and this would be a good opportunity to  
22 finish draining the Atoka gas.

23 Q I'll refer you to Applicant's Exhibit  
24 Number Three and ask you to explain that exhibit.

25 A Exhibit Three is a production history of

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Santa Fe, New Mexico 87501

1 the Williamson BC No. 4.

2 In '78 we had less than a month of emergency  
3 sale and in May of '78 until the present time we're in a  
4 continuous sale.

5 The red is the production of gas and we see  
6 a very rapid decline. The green is the tubing pressure.  
7 We see where we have to stopcock the well to produce it.  
8 Every time you open it pressure drops down to near line  
9 pressure, it's nine, eight, it dropped to somewhere in be-  
10 tween 500 and 700. We shut the well in it will build back  
11 up, first 1300 and at 1250, and the last time we shut it in  
12 it was just a little over 1000 pounds.

13 So there is still considerable reserves  
14 left. I say considerable, relatively considerable reserves  
15 left in the Atoka but we are unable to produce it at the  
16 line pressure.

17 Q I refer you to Applicant's Exhibit Number  
18 Four and ask you to explain that exhibit.

19 A Exhibit Four is an electric log. The CNL  
20 density log is on the left and the DLL log is on the right.  
21 Again, the orange denotes the pay zones. The yellow  
22 separates the RXL from the DLL log.

23 Q Mr. Mahfood, were these exhibits all pre-  
24 pared by you or under your supervision?

25 A Yes, sir.

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3020 Plaza Blanca (3rd) 471-2462  
Santa Fe, New Mexico 87501

1 Q I'd like to refer you back to Applicant's  
2 Exhibit Number Two and ask you to explain in a little more  
3 detail the mechanics of how you propose to dual complete  
4 this well and downhole -- with your downhole commingling.

5 A Okay. At the present time we have a bridge  
6 plug above the Morrow and below the Atoka pay. We propose  
7 to pull that bridge plug. The tubing is anchored on the  
8 packer at the present time. We propose to pull that packer  
9 and to run the tubing back in with the tubing anchor rather  
10 than a packer, and install plunger lift equipment in there.

11 We'll swab the well in and see if the  
12 plunger will operate or if we have too much water for the  
13 plunger to operate.

14 If we have too much water to operate, then  
15 we will have to get us a compressor and use a compressor.  
16 If we use a compressor we will run a packer back in the  
17 well where the tubing anchor is indicated, by the "X".

18 Q Now, Mr. Mahfood, how will you allocate the  
19 production from this well?

20 A I would -- that is going to be a problem.  
21 I haven't given that any thought yet, but we'll work it out  
22 with the district superintendent.

23 We'll have to see what the Morrow can do.  
24 We don't know for sure how much gas we can get from the  
25 Morrow.

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Santa Fe, New Mexico 87501

1 Q Okay, but this -- this first you'll have  
2 to see what the Morrow can do in order to establish a  
3 program.

4 A Yes. That is correct.

5 Q Okay. Is this well -- did you say it pro-  
6 duced liquids?

7 A The Atoka produced no liquids but the Morrow  
8 will produce considerable oil and water.

9 MR. CARSON: I have no further questions of  
10 this witness.

11 A We know this from drill stem tests about  
12 the Morrow.

13 CROSS EXAMINATION

14 BY MR. STAMETS:

15 Q I take it the Morrow zones in this well have  
16 not produced?  
17

18 A They've been tested but they have not been  
19 produced to sales.

20 Q Okay. Now you've got a shut-in pressure on  
21 the Atoka that looks like about 1000 pounds. How does that  
22 compare to the Morrow pressure?

23 A I have no shut-in pressure on the Morrow  
24 because it's making so much water. We do know that we were  
25 able to shut it in and open it up and it would flow, so it

1 must have built up some pressure; how much I don't know.

2 Q You don't have any flow information on the  
3 drill stem tests?

4 A This was tested through perforations and  
5 it flowed, let's see -- let me back up a minute, now.

6 We did flow the Morrow for awhile, apparently.  
7 Looks like it flowed 15-million a day naturally, upper  
8 Morrow perforation, 11, 264 to 271.

9 But the rest of the Morrow, that's almost  
10 depleted, the 264 to 271, 11,264 to 271 was depleted, but  
11 the zone below that, the 387 to 391, flowed 110 barrels a  
12 day water with an estimated 130 Mcf a day gas. This level  
13 flowed.

14 Q What about the other upper perforations in  
15 the Morrow, 11,024 to 11,221? Were those produced along  
16 with that other Morrow?

17 A No, they were tested separately. The  
18 11,024 to 30 gave up 6 Mcf a day and the 11,290 to 221  
19 flowed 5 Mcf a day.

20 Q Is this the current installation in this  
21 well? Is that what's depicted on this exhibit?

22 A No, sir. This is a proposed installation.  
23 The current installation has a bridge plug above all Morrow  
24 perforations, and there's a packer at approximately 10,750.  
25 The retrievable bridge plug is at 10,976. I've indicated

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2010 Plaza Blanca (505) 411-2402  
Santa Fe, New Mexico 87501

- 1 that on this diagram.
- 2 Q Did you give us a reason why the two upper
- 3 Morrow perforations were not produced?
- 4 A Too small a -- 5 and 6, that would be 11 --
- 5 11,000 a day.
- 6 Q Just not enough gas to fool with?
- 7 A Right.
- 8 Q Now, you indicated the zone had produced
- 9 15-million natural, had been produced. Do you have the
- 10 production records on that, similar to your Exhibit Number
- 11 Three?
- 12 A It's on Exhibit Three.
- 13 Q I thought Exhibit Three was the Atoka zone
- 14 and not Morrow.
- 15 A That is what I told you. That is correct.
- 16 But that must be in error.
- 17 Let me see, when was this first completed?
- 18 The Morrow was completed in '77 and the recompletion was in
- 19 May of '78, so anything prior to May of '78 would have been
- 20 Morrow completion.
- 21 Q Everything since the end of May of '77 --
- 22 A Since the 9th of May.
- 23 Q Since the 9th of May.
- 24 A Is Atoka.
- 25 Q Okay, now you show on the lefthand side

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CERTIFIED SHORTHAND REPORTER  
3030 Plaza Blanca (SOS) 411-2402  
Santa Fe, New Mexico 87501

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the end of the emergency sale in March of '78.

A. That is correct.

Q And that was the end of the gas production?

A. That was the end of the gas production from the Morrow, also.

Q From the Morrow or from the Atoka?

A. No, that would be from the Morrow.

Q And that would be reflected in the Commission records --

A. Yes, sir.

Q -- I presume.

MR. STAMETS: Any other questions of the witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd  
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the examiner hearing of Case No. 6514 heard by me on 3-28 1972  
Richard D. Ham, Examiner  
Oil Conservation Division

SALLY WALTON BOYD  
CERTIFIED SHORTHAND REPORTER  
3020 Plaza Blanca (SOS) 471-2462  
Santa Fe, New Mexico 87502

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
STATE LAND OFFICE BUILDING  
OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
28 March 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Corpor-  
ation for downhole commingling, Eddy  
County, New Mexico.

CASE  
6514

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation  
Division:

Lynn Teschendorf, Esq.  
Legal Counsel for the Division  
State Land Office Bldg.  
Santa Fe, New Mexico 87503

For the Applicant:

Joel Carson, Esq.  
LOSEE, CARSON & DICKERSON P.A.  
Artesia, New Mexico

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## EDDIE MAHFOOD

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1 MR. STAMETS: Call next Case 6514.

2 MS. TESCHENDORF: Case 6514. Application  
3 of Yates Petroleum Corporation for downhole commingling,  
4 Eddy County, New Mexico.

5 MR. CARSON: Mr. Examiner, my name is Joel  
6 Carson, Losee, Carson and Dickerson, P. A., Artesia, New  
7 Mexico, appearing on behalf of the applicant. I have one  
8 witness, Mr. Eddie Mahfood, who was previously sworn in  
9 Case Number 6511.

10 MR. STAMETS: The witness is still sworn  
11 and qualified.

12  
13 EDDIE MAHFOOD

14 being called as a witness and having been previously sworn  
15 upon his oath, testified as follows, to-wit:

16  
17 DIRECT EXAMINATION

18 BY MR. CARSON:

19 Q Mr. Mahfood, would you state the purpose of  
20 this application?

21 A The Williamson BC No. 4 is presently com-  
22 pleted in the Atoka and is not able to sustain flow. In  
23 the month of February we produced it only one time and it  
24 flowed for about three or four days before it went off the  
25 line and has been shut-in since then.

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1 Q I'll refer you to Applicant's Exhibit Number  
2 One and ask you to identify that.

3 A Exhibit Number One is a lease ownership  
4 map, showing the location of the Williamson BC No. 4 and  
5 the dedicated south half.

6 Q I refer you to Applicant's Exhibit Number  
7 Two and ask you to identify that.

8 A That's a cross section -- I'm sorry, it's  
9 a diagrammatic sketch of the proposed dual completion, down-  
10 hole commingling of the Williamson BC No. 4.

11 We see one, two, three, four, five sets of  
12 perforations we propose to commingle together.

13 The first set will be the North Burton Flats  
14 Atoka, from which it is producing at this time.

15 The East Burton Flats Morrow, there's four  
16 sets of perforations above that plug. We know that  
17 this well will flow gas and salt water. It will not buck  
18 the line pressure. And we propose to experiment with --  
19 it either gets compressed air plunger lift to lift this  
20 water out of there, but we need some additional gas to go  
21 along with it, and this would be a good opportunity to  
22 finish draining the Atoka gas.

23 Q I'll refer you to Applicant's Exhibit  
24 Number Three and ask you to explain that exhibit.

25 A Exhibit Three is a production history of

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1 the Williamson BC No. 4.

2 In '78 we had less than a month of emergency  
3 sale and in May of '78 until the present time we're in a  
4 continuous sale.

5 The red is the production of gas and we see  
6 a very rapid decline. The green is the tubing pressure.  
7 We see where we have to stopcock the well to produce it.  
8 Every time you open it pressure drops down to near line  
9 pressure, it's nine, eight, it dropped to somewhere in be-  
10 tween 500 and 700. We shut the well in it will build back  
11 up, first 1300 and at 1250, and the last time we shut it in  
12 it was just a little over 1000 pounds.

13 So there is still considerable reserves  
14 left. I say considerable, relatively considerable reserves  
15 left in the Atoka but we are unable to produce it at the  
16 line pressure.

17 Q I refer you to Applicant's Exhibit Number  
18 Four and ask you to explain that exhibit.

19 A Exhibit Four is an electric log. The CNL  
20 density log is on the left and the DLL log is on the right.  
21 Again, the orange denotes the pay zones. The yellow  
22 separates the RXL from the DLL log.

23 Q Mr. Mahfood, were these exhibits all pre-  
24 pared by you or under your supervision?

25 A Yes, sir.

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1 Q I'd like to refer you back to Applicant's  
2 Exhibit Number Two and ask you to explain in a little more  
3 detail the mechanics of how you propose to dual complete  
4 this well and downhole -- with your downhole commingling.

5 A Okay. At the present time we have a bridge  
6 plug above the Morrow and below the Atoka pay. We propose  
7 to pull that bridge plug. The tubing is anchored on the  
8 packer at the present time. We propose to pull that packer  
9 and to run the tubing back in with the tubing anchor rather  
10 than a packer, and install plunger lift equipment in there.

11 We'll swab the well in and see if the  
12 plunger will operate or if we have too much water for the  
13 plunger to operate.

14 If we have too much water to operate, then  
15 we will have to get us a compressor and use a compressor.  
16 If we use a compressor we will run a packer back in the  
17 well where the tubing anchor is indicated, by the "X".

18 Q Now, Mr. Mahfood, how will you allocate the  
19 production from this well?

20 A I would -- that is going to be a problem.  
21 I haven't given that any thought yet, but we'll work it out  
22 with the district superintendent.

23 We'll have to see what the Morrow can do.  
24 We don't know for sure how much gas we can get from the  
25 Morrow.

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1 Q Okay, but this -- this first you'll have  
2 to see what the Morrow can do in order to establish a  
3 program.

4 A Yes. That is correct.

5 Q Okay. Is this well -- did you say it pro-  
6 duced liquids?

7 A The Atoka produced no liquids but the Morrow  
8 will produce considerable oil and water.

9 MR. CARSON: I have no further questions of  
10 this witness.

11 A We know this from drill stem tests about  
12 the Morrow.

13 CROSS EXAMINATION

14 BY MR. STAMETS:

15 Q I take it the Morrow zones in this well have  
16 not produced?

17 A They've been tested but they have not been  
18 produced to sales.

19 Q Okay. Now you've got a shut-in pressure on  
20 the Atoka that looks like about 1000 pounds. How does that  
21 compare to the Morrow pressure?

22 A I have no shut-in pressure on the Morrow  
23 because it's making so much water. We do know that we were  
24 able to shut it in and open it up and it would flow, so it  
25

1 must have built up some pressure; how much I don't know.

2 Q You don't have any flow information on the  
3 drill stem tests?

4 A This was tested through perforations and  
5 it flowed, let's see -- let me back up a minute, now.

6 We did flow the Morrow for awhile, apparently.  
7 Looks like it flowed 15-million a day naturally, upper  
8 Morrow perforation, 11, 264 to 271.

9 But the rest of the Morrow, that's almost  
10 depleted, the 264 to 271, 11,264 to 271 was depleted, but  
11 the zone below that, the 387 to 391, flowed 110 barrels a  
12 day water with an estimated 130 Mcf a day gas. This level  
13 flowed.

14 Q What about the other upper perforations in  
15 the Morrow, 11,024 to 11,221? Were those produced along  
16 with that other Morrow?

17 A No, they were tested separately. The  
18 11,024 to 30 gave up 6 Mcf a day and the 11,290 to 221  
19 flowed 5 Mcf a day.

20 Q Is this the current installation in this  
21 well? Is that what's depicted on this exhibit?

22 A No, sir. This is a proposed installation.  
23 The current installation has a bridge plug above all Morrow  
24 perforations, and there's a packer at approximately 10,750.  
25 The retrievable bridge plug is at 10,976. I've indicated

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1 that on this diagram.

2 Q Did you give us a reason why the two upper  
3 Morrow perforations were not produced?

4 A Too small a -- 5 and 6, that would be 11  
5 11,000 a day.

6 Q Just not enough gas to fool with?

7 A Right.

8 Q Now, you indicated the zone had produced  
9 15-million natural, had been produced. Do you have the  
10 production records on that, similar to your Exhibit Number  
11 Three?

12 A It's on Exhibit Three.

13 Q I thought Exhibit Three was the Atoka zone  
14 and not Morrow.

15 A That is what I told you. That is correct.  
16 But that must be in error.

17 Let me see, when was this first completed?  
18 The Morrow was completed in '77 and the recompletion was in  
19 May of '78, so anything prior to May of '78 would have been  
20 Morrow completion.

21 Q Everything since the end of May of '77 --

22 A Since the 9th of May.

23 Q Since the 9th of May.

24 A Is Atoka.

25 Q Okay, now you show on the lefthand side

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the end of the emergency sale in March of '78.

A. That is correct.

Q. And that was the end of the gas production?

A. That was the end of the gas production from the Morrow, also.

Q. From the Morrow or from the Atoka?

A. No, that would be from the Morrow.

Q. And that would be reflected in the Commission records --

A. Yes, sir.

Q. -- I presume.

MR. STAMETS: Any other questions of the witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

## REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. \_\_\_\_\_ heard by me on \_\_\_\_\_ 19\_\_\_\_.

\_\_\_\_\_, Examiner  
Oil Conservation Division

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CASE 6509: Application of Harvey E. Yates Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new gas pool in the Yates formation for its Depco Federal Well No. 1 located in Unit D of Section 19, Township 18 South, Range 29 East, Eddy County, New Mexico, and for promulgation of special pool rules, including provision for 80-acre gas well spacing.

CASE 6430: (Continued from February 28, 1979, Examiner Hearing)

Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir or in the alternative a new onshore production well determination for its State 22 Well No. 1 located in Unit P of Section 22, Township 18 South, Range 35 East, Queen formation, Lea County, New Mexico.

CASE 6482: (Continued from February 28, 1979, Examiner Hearing)

Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir or in the alternative a new onshore production well determination for its Mobil 27 State Well No. 1 located in Unit A of Section 27, Township 18 South, Range 35 East, Queen formation, Lea County, New Mexico.

CASE 6072: (Continued from March 14, 1979, Examiner Hearing)

In the matter of Case 6072 being reopened pursuant to the provisions of Order No. R-5643 which order created the Travis-Upper Pennsylvanian Pool, Eddy County, New Mexico, with provisions for 80-acre spacing. All interested parties may appear and show cause why the Travis-Upper Pennsylvanian Pool should not be developed on 40-acre spacing units.

CASE 6492: (Continued from March 14, 1979, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the NE/4 NW/4 of Section 13, Township 27 South, Range 25 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6510: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location for the Wolfcamp through Mississippian formations of its Rio Pecos Federal "KO" Well No. 1, to be located 660 feet from the North line and 1300 feet from the East line of Section 28, Township 18 South, Range 27 East, Eddy County, New Mexico, the E/2 of said Section 28 to be dedicated to the well.

CASE 6511: Application of Yates Petroleum Corporation for a dual completion and downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Tom Brown "GO" Com. Well No. 1 located in Unit C of Section 22, Township 17 South, Range 26 East, Kennedy Farms Field, Eddy County, New Mexico, to produce gas from the Lower Morrow formation through tubing and to commingle and produce the Starn and Upper Morrow zones in the annulus of said well.

CASE 6512: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Hilliard "BF" Federal Well No. 2, to be located 330 feet from the North line and 2310 feet from the West line of Section 14, Township 21 South, Range 22 East, to test the Wolfcamp through Mississippian formations, Eddy County, New Mexico, the W/2 of said Section 14 to be dedicated to the well.

CASE 6513: Application of Yates Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Morrow production in the wellbore of its Stebbins GQ Fed. Well No. 1 located in Unit B of Section 20, Township 20 South, Range 29 East, East Burton Flats Field, Eddy County, New Mexico.

CASE 6514: Application of Yates Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of North Burton Flats-Atoka and East Burton Flats-Morrow production in the wellbore of its Williamson BC Fed. Well No. 4 located in Unit K of Section 7, Township 20 South, Range 29 East, Eddy County, New Mexico.

BEFORE THE OIL CONSERVATION DIVISION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF :  
YATES PETROLEUM CORPORATION FOR DOWN- :  
HOLE COMMINGLING, EDDY COUNTY, :  
NEW MEXICO :

CASE NO. 6514

APPLICATION

COMES NOW YATES PETROLEUM CORPORATION, by its attorneys,  
and in support hereof, respectfully states:

1. That applicant is the operator of the Wolfcamp and Pennsylvanian systems at a location in Unit K, Section 7, Township 20 South, Range 29 East, N.M.P.M., Eddy County, New Mexico, upon which it has drilled its Williamson "BC" No. 4 Federal Well. This well is located within the boundaries of the North Burton Flats Atoka and the East Burton Flats Morrow Pools.

2. That applicant has completed said well in the North Burton Flats Atoka formation at a depth of 10,792 feet to 10,800 feet and proposes to commingle said formation with the East Burton Flats Morrow formation at a depth of 11,024 feet to 11,271 feet.

3. That the downhole commingling of said well is feasible in accordance with good conservation practices and will otherwise prevent waste and protect correlative rights.

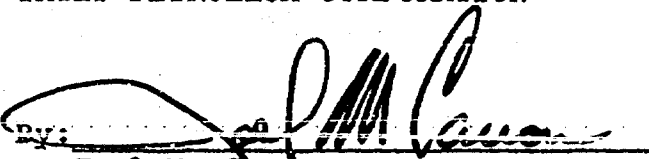
WHEREFORE, applicant prays:

A. That this application be set for hearing before an examiner and that notice of said hearing be given as required by law.

B. That upon hearing the Division enter its order granting permission to applicant to commingle downhole its Williamson "BC" No. 4 Federal Well for the production of gas from the Atoka and Morrow formations.

C. And for such other relief as may be just in the premises.

YATES PETROLEUM CORPORATION

By: 

Joel M. Carson

LOSEE, CARSON & DICKERSON, P.A.  
P. O. Drawer 239  
Artesia, New Mexico 88210

Attorneys for Applicant

Diagrammatic Sketch of Proposed Dual Completion and Downhole Commingling  
 YPC- Williamson BC Federal No. 4, K-7-200-29E, Eddy Co., N. Mex.

Elevation: 3270' SK = 3285' KB  
 Spudded: 6-28-77  
 Completed: 10-14-77 (Morrow)  
 Recompleted: 5-9-78 (Atoka)

Top of Capitán Line @ 1210

Top of Delaware St @ 2924

Top of Wolfcamp @ 9106

Top of Strawn @ 10326

North Burton Flats, Atoka Top of Atoka @ 10406  
 Atoka flowed 900' on 3/4" ck, 12 mcfpd

East Burton Flats, Morrow Top of Morrow @ 10990  
 Morrow Line flowed 6 mcfpd  
 Morrow Stringer flowed 5 mcfpd

Upper Morrow flowed 15750 mcfpd, Natural

Middle Morrow flowed 110-60' on 1/2" ck Wet  
 Estimate 110 BWPD + 130 mcfpd, Natural

Lower Morrow flowed 185' on 1/4" ck wpt, good  
 Spray of Water, 4000 ppm Chlorides

17 1/2" hole to 590' KB  
 13 3/8" 48" csg set @ 590' KB, cemented  
 to surface w/ 480 SX.

12 1/4" hole to 3055' KB  
 8 5/8" 32" Jrs csg set @ 2925' KB cemented  
 to surface w/ 2245 SX.

Top of cement @ 8600' by Temp survey

Propose to downhole commingle Atoka and  
 Morrow perforations and use plunger lift to  
 help unload fluids thru tubing, annulus will  
 be volume chamber for gas to actuate the  
 plungers. Will replace plr w/ tbg anchor  
 after retrieving bridge plug @ 10976' KB.

Perf 10792-800/32 "50", Natural Completion

Perf 11024-030/32 "34" Trtd w/ 1000g, MSA + N<sub>2</sub>

Perf 11219-221/4 "34" Trtd w/ 1000g, 10% Morrow + N<sub>2</sub>

Perf 11264-271/28 "32", Natural Completion

Perf 11387-391/16 "32", Natural Completion

Baker Lokset Plr @ 11442' KB w/ Blanking Plug.  
 Perfs 11455-460/20 "32" & 11463-468/20 "32"  
 Trtd w/ 1000g, 7 1/2% MSA + N<sub>2</sub> & Ball Sealers

PBTD: 11587 (Difer. Fill collar).

4 1/2" 13.5" & 11.6" N-80 csg set @ 11623' KB, cemented  
 w/ 615 SX Cl H & Hallite

TD: 11640 KB

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3. That the downhole commingling of said well is feasible in accordance with good conservation practices and will otherwise prevent waste and protect correlative rights.

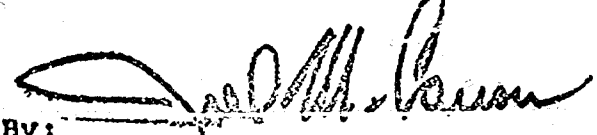
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B. That upon hearing the Division enter its order granting permission to applicant to commingle downhole its Williamson "BC" No. 4 Federal Well for the production of gas from the Atoka and Morrow formations.

C. And for such other relief as may be just in the premises.

YATES PETROLEUM CORPORATION

By: 

Joel M. Carson

LOSEE, CARSON & DICKERSON, P.A.  
P. O. Drawer 239  
Artesia, New Mexico 88210

Attorneys for Applicant

# Diagrammatic Sketch of Proposed Dual Completion and Downhole Commingling

YPC - Williamson BC Federal No. 4, K-7-200-29E, Eddy Co., N. Mex.

Elevation: 3270' GR = 3285' KB

Spudded: 6-28-77

Completed: 10-14-77 (Morrow)

Recompleted: 5-9-78 (Atoka)

Top of Capitán Line @ 1210

Top of Delaware St @ 2974

Top of Wolfcamp @ 9106

Top of Strawn @ 10226

North Burton Flats Atoka Top of Atoka @ 10406

Atoka flowed 900' on 3/4" Ck = 13 M Mcf/d

East Burton Flats Morrow Top of Morrow - 10990

Morrow Line flowed 6 Mcf/d

Morrow Stringer flowed 5 Mcf/d

Upper Morrow flowed 15750 Mcf/d, Natural

Middle Morrow flowed 110-60' on 1/2" Ck Wet  
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Top of cement @ 8600' by Temp survey

Propose to downhole commingle Atoka and Morrow perforations and use plunger lift to help unload fluids thru tubing; annulus will be volume chamber for gas to actuate the plunger. Will replace plr w/ tbg anchor after retrieving bridge plug @ 10976' KB.

Perf 10792-800/32 50" Natural Completion

Perf 11024-030/12 34" Ttd w/ 1000g MSA + N

Perf 11219-221/4 34" Ttd w/ 1000g 10% Horiz + N

Perf 11264-271/28 32" Natural Completion

Perf 11387-391/16 32" Natural Completion

Baker Lokset Plr @ 11442' KB w/ Blanking Plug

Perfs 11455-460/20 32" & 11463-468/20 32"

Ttd w/ 1000g 7 1/2% MSA + N & Ball Sealers

PB ID: 11587 (Dfr. Fill collar)

4 1/2" 13.5' 11.6" N-80 csg set @ 11623' KB, cemented

w/ 615 SX Cl H & Hdr-lite

TD: 11640' KB

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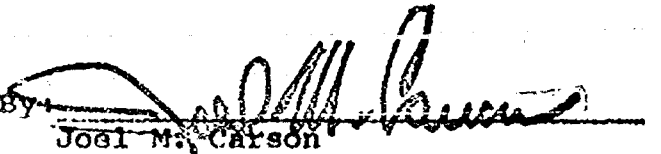
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Artesia, New Mexico 88210

Attorneys for Applicant

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Spudded: 6-28-77

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Top of Delaware SD 2974

Top of Wolfcamp @ 9106

Top of Strawn @ 10226

North Burton Flats Atoka Top of Atoka @ 10406

Atoka flowed 900' on 3/4" Ck @ 13 MMcfpd

East Burton Flats Morrow Top of Morrow @ 10990

Morrow Line flowed 6 mcfpd

Morrow Stringer flowed 5 mcfpd

Upper Morrow flowed 15750 mcfpd, Natural

Middle Morrow flowed 110-60' on 1/2" Ck Wet  
Estimate 110 BWPD + 130 mcfpd, Natural

Lower Morrow flowed 185' on 1/4" Ck wpt. good  
Spray of Water, 40000 ppm Chlorides

17 1/2" hole to 590' KB

12 3/8" 48" Csg set @ 590' KB, cemented  
to surface w/ 480 SX.

12 1/4" hole to 3055' KB

8 5/8" 32" JIS Csg set @ 2925' KB cemented  
to surface w/ 2245 SX.

Top of cement @ 8600' by Temp survey

Propose to downhole commingle Atoka and  
Morrow perforations and use plunger lift to  
help unload fluids thru tubing; annulus will  
be volume chamber for gas to activate the  
plunger. Will replace plug w/ tbg anchor  
after retrieving bridge plug @ 10976' KB.

Perf 10792-800/32 30" Natural Completion

Perf 11024-030/12 34" Ttd w/ 1000g MSA + N<sub>2</sub>

Perf 11219-221/4 34" Ttd w/ 1000g 10% Mordant + N<sub>2</sub>

Perf 11264-271/28 32" Natural Completion

Perf 11387-391/16 32" Natural Completion

Baker Lokset Plug @ 11442' KB w/ Blanking Plug

Perfs 11455-460/20 32" & 11463-468/20 32"

Ttd w/ 1000g 7 1/2% MSA + N<sub>2</sub> & Ball Sealers

PBTD: 11587 (Diff. Fill collar)

4 1/2" 13.5' & 11.6" N-80 Csg set @ 11623' KB, cemented

w/ 615 SX CI H & H-110

TD: 11640 KB

dr/

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 6514

Order No. R-6026

APPLICATION OF YATES PETROLEUM CORPORATION  
FOR DOWNHOLE COMMINGLING, EDDY  
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 28  
19 79, at Santa Fe, New Mexico, before Examiner Richard L.  
Stamets.

NOW, on this day of 19 79, the  
Division Director, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully  
advised in the premises,

FINDS:

(1) That due public notice having been given as required  
by law, the Division has jurisdiction of this cause and the  
subject matter thereof.

(2) That the applicant, Yates Petroleum Corporation, is  
the owner and operator of the Williamson BC Fed. Well No. 4,  
located in Unit K of Section 7, Township 20 South  
Range 29 East, NMPM, Eddy County, New Mexico.

(3) That the applicant seeks authority to commingle  
North Burton Flats-Atoka and East Burton Flats-Morrow production  
within the wellbore of the above-described well.

(4) That from the North Burton Flats-Atoka zone, the subject well is capable of low marginal production only.

(5) That from the Eas+ Burton Flats-Morrow zone, the subject well is capable of low marginal production only.

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Artesia district office of the Division any time the subject well is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, \_\_\_\_\_ percent of the commingled \_\_\_\_\_ production should be allocated to the North Burton Flats-Atoka zone, and \_\_\_\_\_ percent of the commingled \_\_\_\_\_ production to the East Burton Flats-Morrow zone.

(ALTERNATE)

(9) That in order to allocate the commingled production to each of the commingled zones in the wells, applicant should consult with the supervisor of the Artesia district office of the Division and determine an allocation formula for each of the production zones.

IT IS THEREFORE ORDERED:

(1) That the applicant, Yates Petroleum Corporation, is hereby authorized to commingle North Burton Flats-Atoka and East Burton Flats-Morrow production within the wellbore of the Williamson BC Fed. Well No. 4 located in Unit K of Section 7, Township 20 South, Range 29 East, NMPM, Eddy County, New Mexico.

(2) That the applicant shall consult with the Supervisor of the Artesia district office of the Division and determine an allocation formula for the allocation of production to each zone in ~~each~~ of the subject wells.

(ALTERNATE)

(2) That \_\_\_\_\_ percent of the commingled production shall be allocated to the North Burton Flats-Atoka zone and \_\_\_\_\_ percent of the commingled production shall be allocated to the East Burton Flats-Morrow zone.

(3) That the operator of the subject well shall immediately notify the Division's Artesia district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.