

Case No.

383

Application, Transcript,
Small Exhibits, Etc.

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

TRANSCRIPT OF PROCEEDINGS

CASE NO. 383

July 15, 1952
Regular Hearing

OF OIL CONSERVATION COMMISSION
JUL 23 1952

ADA DEARNLEY & ASSOCIATES
COURT REPORTERS
ROOM 12, CROMWELL BLDG.
PHONES 7-8645 AND 5-8546
ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

JULY 15, 1952

In the Matter of:

Tide Water Associated Oil Company's
application for permission to dually
complete its State "E" no. 2 Well,
Eunice Pool, SE SE 16-21S-36E, Lea
County (oil from Grayburg-San Andres
and gas from the Yates-Seven Rivers).

Case No. 383

(Notice of Publication read by Mr. Graham.)

MR. HOLLOWAY: I am J. B. Holloway, authorized rep-
resentative of Tide Water Associated Oil Company, in the southern
southwestern states, including New Mexico. I expect I will be
the only witness so I suggest I be sworn here.

MR. J. B. HOLLOWAY,
having been first duly sworn, testified as follows:

"With the exception of the different mineral ownership, this
application for permission to dually complete our State "E"
No. 2 well located in the center of SE/4 SE/4 of Section 16,
Township 21 South, Range 36 East, Eunice Pool, Lea County, is
identical in principle to a similar application made last month
under Case No. 375".

I might offer an exhibit for reference here. I believe
you have a map. This has the wells colored on that are producing
from the gas and also an exhibit of a typical duall completion

ADA DEARNLEY & ASSOCIATES
COURT REPORTERS
ROOM 12, CROMWELL BLDG.
PHONES 7-9645 AND 5-9546
ALBUQUERQUE, NEW MEXICO

as we expect it to be. We have no electric or radioactivity log of this well. We just superimposed one and have drawn on it the packer settings and expected perforations and producing zone just for generalized exhibit.

"Tide Water Associated Oil Company completed this well on May 18, 1936, which originally and presently is producing oil from the Grayburg-San Andres formation from open hole interval 3827 feet (the bottom of 7" casing) to 3906 feet, ^{total} (the/depth of well). An intermediate string of 9-5/8" casing was set and cemented at 1579 feet.

The well was drilled prior to the time of the general use of electric logging, however, the driller's log shows gas zones were penetrated at several intervals commencing at 3180 feet, which zones are now identified in this area as being the Yates-Seven Rivers formation.

The only well in the area producing from the Yates-Seven Rivers formation and on which an electric log was run that we have a copy of is Skelly Oil Company's State "B" well No. 7, located approximately 4650 feet northwest of our well. Skelly's well is producing gas from the Yates-Seven Rivers formation from open hole interval 2995-3480 feet.

It is our opinion that it is practical and economically feasible to dually complete our State "E" No. 2 well in such manner that the Grayburg-San Andres formation would continue to be produced through the tubing, and gas from the Yates-Seven Rivers zones through the annulus between the tubing and casing,

ADA DEARNLEY & ASSOCIATES
COURT REPORTERS
ROOM 12, CROMWELL BLDG.
PHONES 7-9645 AND 5-9546
ALBUQUERQUE, NEW MEXICO

with no communication between the two producing formations.

If granted permission to dually complete the well, we propose before doing so to test the 7" casing with 1500 pounds pressure by running a retrievable cement retainer equipped with a perforation above and bull plug below, to a depth below 3000 feet and test casing above that depth. A radioactivity log would then be run through gas section to enable us to identify possible productive gas zones. The casing would then be perforated opposite the most permeable zones. Dual completion would be effected by setting a Baker Model "D" retainer production packer at approximately 3700 feet, and tubing run through the packer for production of the lower zone, or Grayburg-San Andres formation. The well is presently equipped for pumping, which would be changed to gas-lift to eliminate tubing vibration and possibly cause packer leakage.

We further propose that prior to the time the well is dually completed, to furnish the Commission, for its approval, a copy of the radioactivity log showing the location and extent of each separate stratum yielding production above the casing shoe and the vertical footage location of the proposed perforations; and further upon the actual dual completion of the well we shall submit to the Commission a diagrammatic sketch of the mechanical installation which was used to complete and produce the seal between the producing formations, together with a special report of production, gas-oil ratio and reservoir pressure determination of each producing zone immediately

ADA DEARNLEY & ASSOCIATES
COURT REPORTERS
ROOM 12, CROMWELL BLDG.
PHONES 7-9645 AND 5-9546
ALBUQUERQUE, NEW MEXICO

following completion, and further to comply with any order of the Commission which to the Commission seems necessary for the prevention of waste or protection of correlative rights.

If we are permitted to recomplete the well in the manner here proposed, it will save the use of approximately 77 tons of critical steel in addition to \$27,000-\$30,000 which is the estimated difference between drilling a new well and the proposed dual completion."

MR. HOLLOWAY: I believe that is all. I have a photostatic copy of our company's well log of the well. It was drilled so long ago that I do not have in my file a copy of the completion report that must have been filed with the Commission.

MR. GRAHAM: You're familiar with the general type of the order heretofor issued by the Commission in the case?

A Yes.

MR. GRAHAM: And are prepared to conform with the practices?

A Oh, we are, yes, sir. I rather modeled this application following those requirements that I did know the Commission had, for dual completions.

(Marked Holloway's Exhibits No. 1, 2 & 3, Case No. 383 for identification.)

MR. SPURRIER: Do you offer these exhibits 1, 2 & 3 in evidence?

A Yes.

MR. SPURRIER: Without objections they will be received. Any question of this witness? Is there any objection to Tide Water's proposal? If no further questions the witness may be excused.

(Witness excused.)

Any further comment in the case? The case will be taken under advisement. We will move on to Case 384.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

I HEREBY CERTIFY that the foregoing and attached transcript of hearing in Case No. 383 before the Oil Conservation Commission, State of New Mexico, at Santa Fe, on July 15, 1952, is a true and correct record of the same to the best of my knowledge, skill and ability.

DATED at Albuquerque, New Mexico, this _____ day of July, 1952.

REPORTER

ADA DEARNLEY & ASSOCIATES
COURT REPORTERS
ROOM 12, CROMWELL BLDG.
PHONES 7-9645 AND 5-9546
ALBUQUERQUE, NEW MEXICO

TITLE NO. **B-2330**

WELL RECORD

WELL NO. 2 State E

ELEV. 3608
AUTH. NO 2452

DESCRIPTION	State E			AUTH. NO.	2452
LOCATION	660' North of the South and 660' West of the East line	SEC.	16	TWP.	21
	Lea			RNG.	36

RIG COMMENCED 4/2/36
RIG CONTRACTOR Fox Rig & Lumber Company
COUNTY
COMPLETED 4/7/36

RIG CONTRACTOR
 DRILLING COMMENCED
 4/12/36
 Fox Rig & Lumber Company
 COMPLETED
 4/7/36

DRILLING COMMENCED	4/12/36	COMPLETED	5/18/36
DRILLING CONTRACTOR	H.W. Bass Drilling Company		

PRICE PER FOOT, \$ 5.35

CASING AND TUBING RECORD

[illegible][illegible]

RECORD OF SAND AND OIL SHOWINGS

Well	3561'	3580'	3650'	3689'	3790'	3810'
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						

PRODUCTION FIRST 24 HOURS-NATURAL 6216

AFTER SHOT

GRAVITY 35.6

COMMENCED PRODUCING Went on allowable 6/1/36 SUBSEQUENT HISTORY

When completed it would not flow natural, with 750# gas pressure turned in the tubing, flowed 20-bbls per hour. Was treated with 2000-gallons of acid on the 5/20/36, and it flowed 259-bbls per hour.

FORMATION RECORD

Caliche & Sand	61
Sand	259
Red Bed & Sand	295
Red Bed	431
Red Rock & Shale	680
Red Rock & Shells	830
Red Bed & Shale	1005
Red Bed & Shells	1425
Anhydrite	1485
Anhydrite	1510
Red Rock & Anhydrite	1560
Salt	1580
Anhydrite	1582
Salt	1595
Shale & Anhydrite Shells	1759
Anhydrite	1794
Salt	1825
Anhydrite & Shale	1950
Anhydrite	1977
Anhydrite	2000
Potash	2010
Salt	2096
Salt, Anhydrite & Shells	2364
Anhydrite	2385
Salt	2597
Anhydrite	2415
Salt	2545
Anhydrite	2557
Salt & Anhydrite Shells	2653
Anhydrite	2675
Salt	2710
Anhydrite	2730
Anhydrite	2952
Lime & Anhydrite	2997
Brown Lime	3062
Lime	3085
Sandy Lime	3105
Brown & Grey Lime	3130
Brown Lime (Gas)	3180
Brown & Grey Lime	3204
Lime	3395
Anhydrite	3419
Lime	3469
Lime	3561
Lime	3689
Sandy Lime	3723
Lime	3790
Sandy Lime (Gas)	3810
Lime	3815
Lime	3820
Sandy Brown Lime	3848
Lime	3860
Brown Sandy Lime	3888
Lime	3890
Sandy Lime - - -TD	3906

Case 583

JUL 26 1932

With the exception of the different mineral ownership, this application for permission to dually complete our State "E" No. 2 well located in the center of SE/4 SE/4 of Section 16, Township 21 South, Range 36 East, Eunice Pool, Lea County, is identical in principle to a similar application made last month under Case No. 375.

Tide Water Associated Oil Company completed this well on May 18, 1936, which originally and presently is producing oil from the Grayburg-San Andres formation from open hole interval 3827 feet (the bottom of 7" casing) to 3906 feet. (the total depth of well). An intermediate string of 9-5/8" casing was set and cemented at 1579 feet.

The well was drilled prior to the time of the general use of electric logging, however, the driller's log shows gas zones were penetrated at several intervals commencing at 3180 feet, which zones are now identified in this area as being the Yates-Seven Rivers formation.

The only well in the area producing from the Yates-Seven Rivers formation and on which an electric log was run that we have a copy of is Skelly Oil Company's State "B" well No. 7, located approximately 4650 feet northwest of our well. Skelly's well is producing gas from the Yates-Seven Rivers formation from open hole interval 2995-3480 feet.

It is our opinion that it is practical and economically feasible to dually complete our State "E" No. 2 well in such manner that the Grayburg-San Andres formation would continue to be produced through the tubing, and gas from the Yates-Seven Rivers zones through the annulus between the tubing and casing, with no communication between the two producing formations.

If granted permission to dually complete the well, we propose before doing so to test the 7" casing with 1500 pounds pressure by running a retrievable

cement retainer equipped with a perforation above and bull plug below, to a depth below 3000 feet and test casing above that depth. A radioactivity log would then be run through gas section to enable us to identify possible productive gas zones. The casing would then be perforated opposite the most permeable zones. Dual completion would be effected by setting a Baker Model "D" retainer production packer at approximately 3700 feet, and tubing run through the packer for production of the lower zone, or Grayburg-San Andres formation. The well is presently equipped for pumping, which would be changed to gas-lift to eliminate tubing vibration and possibly cause packer leakage.

We further propose that prior to the time the well is dually completed, to furnish the Commission, for its approval, a copy of the radioactivity log showing the location and extent of each separate stratum yielding production above the casing shoe and the vertical footage location of the proposed perforations; and further upon the actual dual completion of the well, we shall submit to the Commission a diagrammatic sketch of the mechanical installation which was used to complete and produce the seal between the producing formations, together with a special report of production, gas-oil ratio and reservoir pressure, determination of each producing zone immediately following completion, and further to comply with any order of the Commission which to the Commission seems necessary for the prevention of waste or protection of correlative rights.

If we are permitted to recomplete the well in the manner here proposed, it will save the use of approximately 77 tons of critical steel in addition to \$27,000-\$30,000 which is the estimated difference between drilling a new well and the proposed dual completion.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF THE STATE OF NEW
MEXICO FOR THE PURPOSE OF CONSIDERING:

383
CASE NO. ~~342~~
ORDER NO. R-~~102~~ 180

THE APPLICATION OF TIDEWATER ASSOCIATED
OIL COMPANY FOR AN ORDER AUTHORIZING
THE DUAL COMPLETION (GAS-OIL) OF THEIR
NO. 2, ~~STATE "E" WELL~~ STATE "E" WELL,
LOCATED IN THE SE/4 SE/4 SECTION 16,
TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM,
LEA COUNTY, NEW MEXICO, IN THE EUNICE
POOL.

ORDER OF THE COMMISSION

BY THE COMMISSION

This cause came on for hearing at ~~10~~ ^{July 15} a. m., on ~~February 21~~, 1952, at
Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico,
hereinafter referred to as the "Commission."

~~March~~ ^{August}
NOW, on this ~~20th~~ day of ~~March~~, 1952, the Commission, a quorum being
present, having considered the testimony adduced and the exhibits received at
said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice has been
Commission has been given.

(2) That applicant's State "E", No. 2 Well, SESE, Section 16, Township
21 South, Range 36 East, NMPM, Lea County, New Mexico, was completed ~~in~~ in
May, 1936 as an oil well in the Grayburg-San Andres pay in the Eunice Pool,
bottomed at 3906 and produced from the open hole interval 3827-3906, having
drilled through the Yates-Seven Rivers Gas zone (3180-3250).

(3) That although recent experiments tend to show that mechanical packers
and other devices are ordinarily available for successful dual/multiple completions
of oil - gas wells, the Commission is unconvinced of the soundness, as a waste-
prevention practice, of such dual/multiple completions as a general practice in
New Mexico without specific controls over each such project.

IT IS THEREFORE ORDERED:

That the applicant herein, Tidewater Associated Oil Company, be, and it
hereby is authorized to dually complete and produce its State "E", Well. No. 2
SE SE, Section 16, Township 21 South, Range 36 East, NMPM, Lea County, New
Mexico, in such a manner that gas from the Yates-Seven Rivers formation may be
produced through the annular space between the casing and the tubing, and oil
from the Grayburg-San Andres formation through the tubing by proper perforations
and installation of a proper Packer or packers;

PROVIDED, HOWEVER, That subject well shall be completed, and there-
after produced, in such a manner that there will be no commingling within the
well bore, either within or outside the casing, of gas, oil and gas, or oil pro-
duced from either or both of the separate strata, and,

PROVIDED FURTHER, That said subject well for dual completion and
production shall be equipped in such a way that reservoir pressures may be
determined separately for each of the two specified strata, and further, be
equipped with all necessary connections required to permit recording meters
to be installed and used, at any time, as may be required by the Commission or
its representatives, in order that natural gas, oil, or oil and gas from each
separate stratum may be accurately measured and the gas-oil ratio thereof
determined, and,

PROVIDED FURTHER, That the operator applicant shall make any and
all tests, including segregation tests, but not excluding other tests and/or
determinations at any convenient time and in such manner as deemed necessary
by the Commission; the original and all subsequent tests shall be witnessed by
representatives of the Commission and by representatives of offset operators,
if any there be, at their election, and the results of each test properly attested
to by the applicant herein and all witnesses, and shall be filed with the Com-
mission within ten (10) days after the completion of such test, and,

PROVIDED FURTHER, That upon the actual dual completion of such
subject well, applicant shall submit to the Commission a diagrammatic sketch
of the mechanical installation which was actually used to complete and produce
the seal between the strata, and a special report of production, gas/oil ratio
and reservoir pressure determination of each producing zone or stratum
immediately following completion.

IT IS FURTHER ORDERED, That jurisdiction of this cause is hereby
retained by the Commission for such further order or orders as may seem
necessary or convenient for the prevention of waste and/or protection of
correlative rights; upon failure of applicant to comply with any requirement of
this order after proper notice and hearing, the Commission may terminate the
authority hereby granted and require ^{applicant} of its successors and assignees to limit
its activities to regular single-zone production in the interests of conservation.

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

OIL CONSERVATION COMMISSION - Signed by: Edwin L. Mechem, Chairman;
Guy Shepard, Member; R. R. Spurrier, Secretary.

Case 383

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF THE STATE OF NEW
MEXICO FOR THE PURPOSE OF CON-
SIDERING:

CASE NO. 383
ORDER NO. R-180

THE APPLICATION OF TIDEWATER ASSOCIATED
OIL COMPANY FOR AN ORDER AUTHORIZING
THE DUAL COMPLETION (GAS-OIL) OF THEIR
NO. 2 STATE "E" WELL, LOCATED IN THE SE/4
SE/4 SECTION 16, TOWNSHIP 21 SOUTH, RANGE
36 EAST, NMPM, LEA COUNTY, NEW MEXICO,
IN THE EUNICE POOL.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a. m. , on July 15, 1952,
at Santa Fe, New Mexico, before the Oil Conservation Commission of
New Mexico, hereinafter referred to as the "Commission."

NOW, on this ^{xh}5 day of August, 1952, the Commission, a quorum
being present, having considered the testimony adduced and the exhibits
received at said hearing, and being fully advised in the premises,

FINDS:

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

(2) That applicant's State "E", No. 2 Well, SESE, Section 16,
Township 21 South, Range 36 East, NMPM, Lea County, New Mexico,
was completed in May, 1936 as an oil well in the Grayburg-San Andres
pay in the Eunice Pool, bottomed at 3906 and produced from the open
hole interval 3827-3906, having drilled through the Yates-Seven Rivers
Gas zone (3180-3250).

(3) That although recent experiments tend to show that
mechanical packers and other devices are ordinarily available for success-
ful dual/multiple completions of oil - gas wells, the Commission is
unconvinced of the soundness, as a waste-prevention practice, of such
dual/multiple completions as a general practice in New Mexico without
specific controls over each such project.

IT IS THEREFORE ORDERED:

That the applicant herein, Tidewater Associated Oil Company,
be, and it hereby is authorized to dually complete and produce its
State "E", Well No. 2 SE SE, Section 16, Township 21 South, Range 36
East, NMPM, Lea County, New Mexico, in such a manner that gas from
the Yates-Seven Rivers formation may be produced through the annular

space between the casing and the tubing, and oil from the Grayburg-San Andres formation through the tubing, by proper perforations and installation of a proper Packer or packers;

PROVIDED, HOWEVER, That subject well shall be completed, and thereafter produced, in such a manner that there will be no commingling within the well bore, either within or outside the casing, of gas, oil and gas, or oil produced from either or both of the separate strata, and,

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used, at any time, as may be required by the Commission or its representatives, in order that natural gas, oil, or oil and gas from each separate stratum may be accurately measured and the gas-oil ratio thereof determined, and,

PROVIDED FURTHER, That the operator applicant shall make any and all tests, including segregation tests, but not excluding other tests and/or determinations at any convenient time and in such manner as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of the Commission and by representatives of offset operators, if any there be, at their election, and the results of each test properly attested to by the applicant herein and all witnesses, and shall be filed with the Commission within ten (10) days after the completion of such test, and,

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas/oil ratio and reservoir pressure determination of each producing zone or stratum immediately following completion.

IT IS FURTHER ORDERED, That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after proper notice and hearing, the Commission may terminate the authority hereby granted and require applicant or its successors and assignees to limit its activities to regular single-zone production in the interests of conservation.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

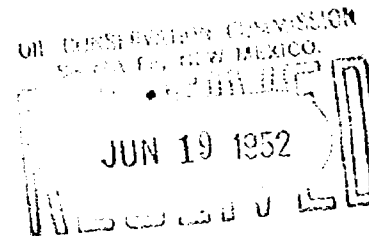
Edwin L. Mechem
EDWIN L. MECHEM, Chairman

Guy Shepard
GUY SHEPARD, Member

R. R. Spurrer
R. R. SPURRIER, Secretary

S E A L

BEFORE THE OIL CONSERVATION COMMISSION
OF THE
STATE OF NEW MEXICO



IN THE MATTER OF THE APPLICATION OF
TIDE WATER ASSOCIATED OIL COMPANY
FOR AN ORDER GRANTING PERMISSION TO
DUALY COMPLETE STATE "E" NO. 2 WELL,
EUNICE POOL, SE/4 SE/4, SECTION 16,
TOWNSHIP 21 SOUTH, RANGE 36 EAST, N.M.P.M.
LEA COUNTY, NEW MEXICO.

A P P L I C A T I O N

COMES NOW, Tide Water Associated Oil Company, a Delaware Corporation, operating in New Mexico from a field office in Hobbs, New Mexico, and respectfully represents to the Oil Conservation Commission of the State of New Mexico that on May 18, 1936, it completed State "E" Well No. 2 located in the center of SE/4 SE/4 Section 16, Township 21 South, Range 36 East, N.M.P.M., Eunice Pool, Lea County, New Mexico; that said well is presently producing oil from the Grayburg-San Andres formation from open hole interval 3827 to total depth 3906 feet; that 7" casing is set and cemented at 3827 feet; that an intermediate string of 9-5/8" casing was set and cemented at 1579 feet.

Applicant further represents that a high pressure gas zone exists in the Yates-Seven Rivers formation, present and producing in the open hole interval 2995-3480 feet in Skelly Oil Company's State "E" No. 7 located in the SW/4 NW/4 Section 16, Township 21 South, Range 36 East and from other Bradenhead or dually completed wells in the area.

Applicant further represents that it is practical and economically feasible to dually complete the State "E" No. 2 well to produce oil from the Grayburg-San Andres formation through the tubing and gas from the Yates - Seven Rivers gas zone through the tubing-casing annulus with proper packer and well head connections, and in such manner that there will be no commingling of fluids between the two reservoirs.

WHEREFORE, Applicant respectfully requests that this matter be set down for hearing on due notice, and that at such hearing it be authorized to dually complete said well in accordance with the foregoing petition and the rules and regulations of the Commission.

Attached hereto is a plat showing the location of the well proposed for dual completion and surrounding wells and leaseholds.

DONE at Houston, Texas, on this the 16th day of June, 1952.

Respectfully submitted

TIDE WATER ASSOCIATED OIL COMPANY

By: 

J. B. Holloway

