COMPARATIVE ECONOMICS FOR DEVELOPMENT OF LEA BONE SPRINGS POOL

40-ACRE SPACING VS. 80-ACRE SPACING

Minimum Area Expected to be Productive			800 Acres
Wells Required with 40 Acre Spacing			20 Wells
Wells Required with 80 Acre Spacing			10 Wells
Investment @ $225,000 per well			
For 40 Acre Spacing (20 Wells)			$4,500,000
For 80 Acre Spacing (10 Wells)			$2,250,000
Investment for Dual Completion @ $25,000 per Well			
For 40 Acre Spacing (20 Wells)			$ 500,000
For 80 Acre Spacing (10 Wells)			$ 250,000
Ultimate Reserves			
Oil			812,800 bbls.
Gas @ 2000 cu. ft. per bbl.			1,625,600 MCF
W.I. Net Operating Income Per Gross Bbl. of Oil Produced Including Income from Gas Produced With Oil			
Value			
Bbl. of oil			$ 2.77
2000 cu. ft. of gas			0.20
Total Gross Value			$ 2.97
Costs			
Severance & Advalorem Taxes	$0.21		
Royalty	0.37		
Lifting Costs	0.24		
			$ 0.82
Net Operating Income per Gross Bbl.			$ 2.15
W.I. Total Net Operating Income			
812,800 x $2.15/bbl.			$1,747,520
Net Loss for 40-Acre Spacing			$2,752,480
Net Loss per Well	$137,624		
Net Loss for 80-Acre Spacing			$ 502,480
Net Loss per Well	$ 50,248		
Net Profit for Dual Completion for 40-Acre Spacing			$1,247,520
Net Profit per Well	$ 62,376		
Profit to Investment Ratio		2.50 to 1	
Net Profit for Dual Completion for 80-Acre Spacing			$1,497,520
Net Profit per Well	$149,752		
Profit to Investment Ratio		5.99 to 1	

NMOCC Case No. 2119

Ohio Exhibit No. 10

Date _____

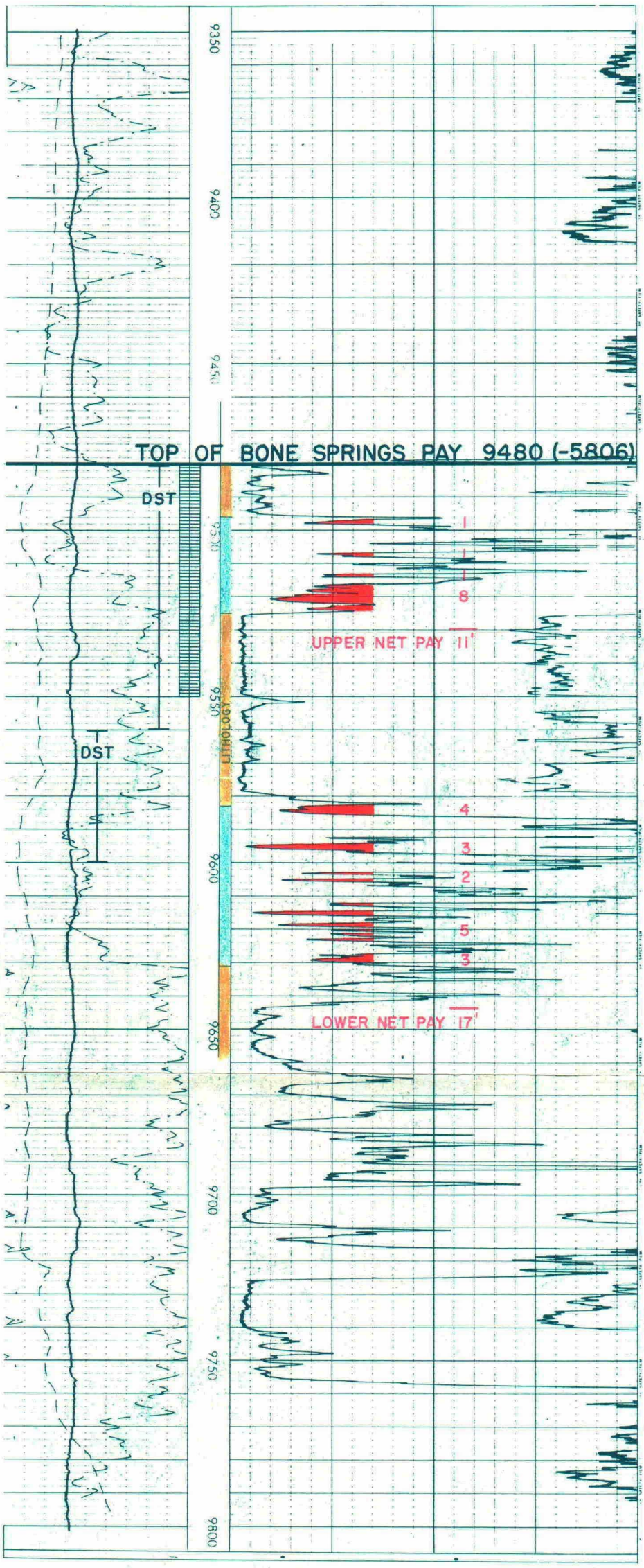
OHIO OIL COMPANY

LEA UNIT FEDERAL WELL NO. 1

ELEV. 3674

NW/4 SW/4 SEC. 12, T-20-S, R-34-E

FORXO LOG OF BONE SPRINGS PAY



DST 9480-9560 Open 3 hrs. GTS 20 min. OTS 1-2/3 hrs. F est 20 BO 1st hr. F to tank 22.88 BO in 1 hr. (549 BOPD). FTP 125#, GOR 2030, Gty 42.9°. 45 min ISIP 3980#, IFP 420#, FFP 1060#.

DST 9560-9600 Open 4 hrs. GTS 2 hrs. F 28.65 BO in 1-3/4 hrs. (391 BOPD). GOR 2006, Gty 41.3°. FTP 1135-155. 1 hr ISIP 4060#, IFP 800#, Max FP 1600#, FFP 900#, 30 min FSIP 3800#.

NMOCC CASE NO. 2119

OHIO EXHIBIT NO. 7

DATE.

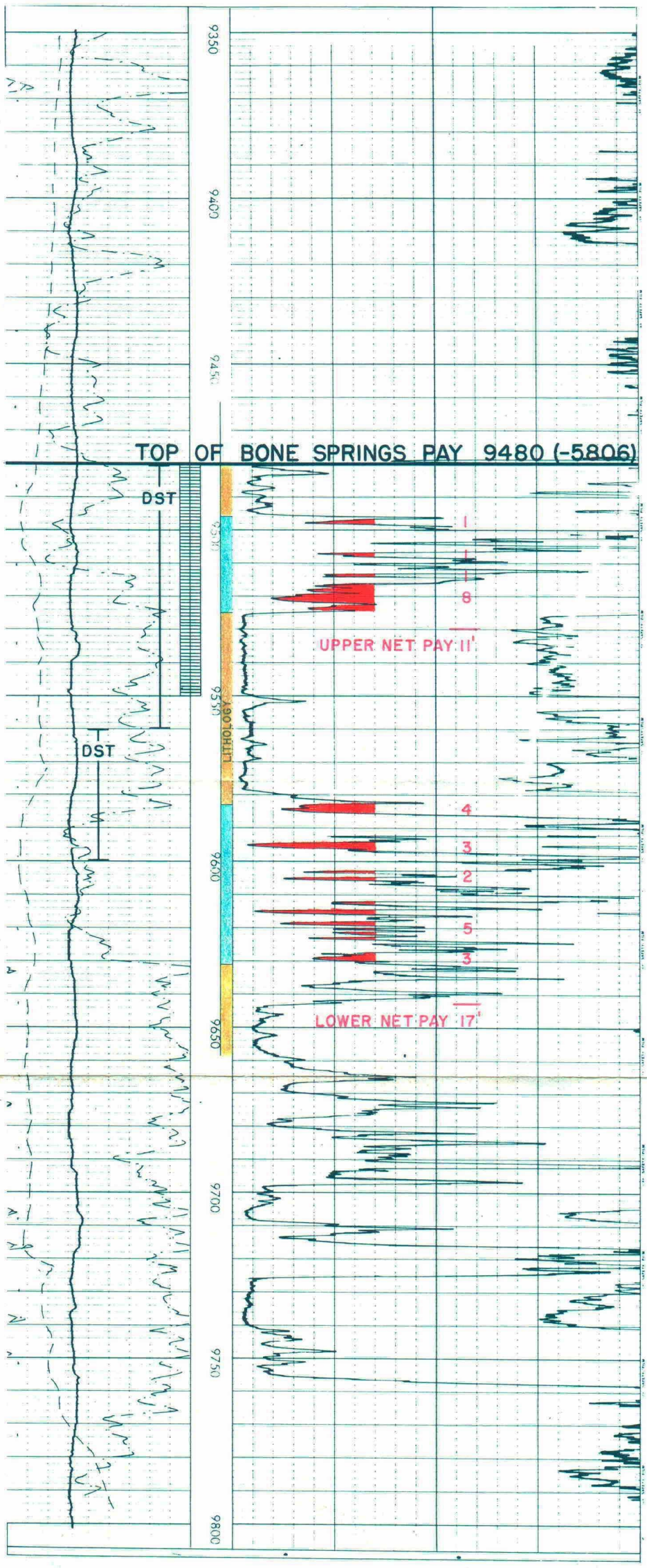
OHIO OIL COMPANY

LEA UNIT FEDERAL WELL NO. 1

ELEV. 3674

NW/4 SW/4 SEC. 12, T-20-S, R-34-E

FORXO LOG OF BONE SPRINGS PAY



DST 9480-9560 Open 3 hrs. GTS 20 min. OTS 1-2/3 hrs. F est 20 BO 1st hr. F to tank 22.88 BO in 1 hr. (549 BOPD). FTP 125#, GOR 2030, Gty 42.9°. 45 min ISIP 3980#, IFP 420#, FFP 1060#.

DST 9560-9600 Open 4 hrs. GTS 2 hrs. F 28.65 BO in 1-3/4 hrs. (391 BOPD). GOR 2006, Gty 41.3°. FTP 1135-155. 1 hr ISIP 4060#, IFP 800#, Max FP 1600#, FFP 900#, 30 min FSIP 3800#.

NMOCC CASE NO. 2119

OHIO EXHIBIT NO. 7

DATE.

LEA BONE SPRINGS POOL

PERTINENT DATA

1. Location of Field:

Approximately 14 miles west-southwest of Monument, New Mexico, Section 12, T-20-S, R-34-E, Lea County

2. Completion Data Lea Unit Well No. 1:

a.	Formation	Bone Springs
b.	Top of Bone Springs	8183 (-4509)
c.	Top of Bone Springs Pay	9480 (-5806)
d.	Completion Date	10-9-60
e.	Perforated Interval	9480-9550
f.	Treatment	None
g.	Initial Potential Test	
	(1) Potential (BOPD)	214
	(2) Choke Size (in.)	1/2
	(3) GOR (CF/B)	1817
	(4) Casing Pressure (psig)	pkr.
	(5) Tubing Pressure (psig)	100

3. Reservoir Fluid Characteristics:

a.	Saturation Pressure	Unknown
b.	Formation Volume Factor	1.95 est.
c.	Solution GOR (CF/B)	1817
d.	Oil Gravity (^{o}API @ 60^{o}F)	42

4. Reservoir Characteristics:

		Dolomite	Sand
a.	Porosity (%)	3.05	10.2
b.	Permeability (md)	4.39	0.25
c.	Water Saturation (%)	30.0 est.	30.0 est.
d.	Net Pay (ft.)	28	19
e.	Reservoir Temperature (^{o}F)	142	
f.	Original Reservoir Press. (psig)	3983 @ -5840	
g.	Probable Reservoir Mechanism	Solution Gas	

NMOCC Cas No. 2119

Ohio Exhibit No. 6

Date _____

RECOVERABLE OIL RESERVE

LEA BONE SPRINGS POOL

DOLOMITE INTERVAL:

Basic Data

Porosity	-3.05% (core analysis #2 well)
Permeability	-4.39 md (core analysis #2 well)
Net Pay	- 28 ft. (Log #1 well)
Water Saturation	- 30% (estimated)
Recovery Factor	- 20% (estimated)
Formation Volume Factor	- 1.95 (estimated)

Volumetric Calculation

$$\frac{\text{7758 Bbl/Acre-foot x Porosity x (1-Water Saturation) x Net Pay x Recovery Factor}}{\text{Formation Volume Factor}}$$

$$\frac{(7758)(0.0305)(0.70)(28)(0.20)}{1.95} = 476 \text{ bbl/acre}$$

SAND INTERVAL

Basic Data

Porosity	- 10.2% (core analysis #2 well)
Permeability	- 0.25 md (core analysis #2 well)
Net Pay	- 19 ft. (core analysis #2 well)
Water Saturation	- 30% (estimated)
Recovery Factor	- 10% (estimated)
Formation Volume Factor	- 1.95 (estimated)

Volumetric Calculations

$$\frac{\text{7758 Bbl/Acre-foot x Porosity x (1-Water Saturation) x Net Pay x Recovery Factor}}{\text{Formation Volume Factor}}$$

$$\frac{(7758)(0.102)(0.70)(19)(0.10)}{1.95} = 540 \text{ bbl/acre}$$

TOTAL BONE SPRINGS INTERVAL:

Zone Total = 476 + 540 = 1016 bbl/acre

NMOCC Case No. 2119

Ohio Exhibit No. 9

Date _____

CORE ANALYSIS

LEA UNIT WELL NO. 2

BONE SPRINGS PAY

LOWER DOLOMITE INTERVAL 9607-9648

W/PERMEABILITY EQUAL TO OR GREATER THAN 0.1 MILLIDARCY

Depth Interval	Footage	Permeability md.	Porosity %
9607.6-09.1	1.5	1.0	2.8
09.1-10.8	1.7	0.2	1.4
13.7-15.6	1.9	1.8	2.4
15.6-17.0	1.4	10.0	2.7
17.0-18.0	1.0	0.2	2.9
21.0-22.5	1.5	23.0	5.9
22.5-23.7	1.2	6.6	3.1
23.7-25.2	1.5	2.8	2.3
25.2-26.5	1.3	2.3	3.3
28.0-29.5	1.5	2.1	6.1
32.3-34.0	1.7	6.1	2.4
34.0-36.0	2.0	0.7	2.0
44.5-45.5	1.0	0.1	3.2
Net Pay	19.2 ft.		
Weighted Average		4.39 md.	3.05%

CORE ANALYSIS

LEA UNIT WELL NO. 2

BONE SPRINGS PAY

LOWER SAND INTERVAL 9565-9607

W/PERMEABILITY EQUAL TO OR GREATER THAN 0.1 MILLIDARCY

Depth Interval	Footage	Permeability md.	Porosity %
9566.0-67.0	1.0	0.3	9.6
72.0-73.0	1.0	0.1	9.3
75.0-76.0	1.0	0.3	10.3
76.0-77.0	1.0	0.6	14.5
77.0-78.0	1.0	0.4	13.3
79.0-80.0	1.0	0.1	8.6
80.0-81.0	1.0	0.1	8.0
81.0-82.0	1.0	0.1	7.1
82.0-83.0	1.0	0.1	8.3
83.0-84.0	1.0	0.1	9.6
84.0-85.0	1.0	0.1	10.4
85.0-86.0	1.0	0.4	14.9
86.0-87.0	1.0	0.4	11.5
94.0-95.0	1.0	0.1	6.0
95.0-96.0	1.0	0.1	7.5
96.0-97.0	1.0	0.1	8.0
97.0-98.0	1.0	0.4	12.5
98.0-99.0	1.0	0.6	12.8
99.0-00.0	1.0	0.4	10.8
Net Pay	19.0 ft.		
Weighted Average		0.25 md.	10.2%

COMPARATIVE ECONOMICS FOR DEVELOPMENT OF LEA BONE SPRINGS POOL

40-ACRE SPACING VS. 80-ACRE SPACING

Minimum Area Expected to be Productive		800 Acres
Wells Required with 40 Acre Spacing		20 Wells
Wells Required with 80 Acre Spacing		10 Wells
Investment @ $225,000 per well		
For 40 Acre Spacing (20 Wells)		$4,500,000
For 80 Acre Spacing (10 Wells)		$2,250,000
Investment for Dual Completion @ $25,000 per Well		
For 40 Acre Spacing (20 Wells)		$ 500,000
For 80 Acre Spacing (10 Wells)		$ 250,000
Ultimate Reserves		
Oil		812,800 bbls.
Gas @ 2000 cu. ft. per bbl.		1,625,600 MCF
W.I. Net Operating Income Per Gross Bbl. of Oil Produced Including Income from Gas Produced With Oil		
Value		
Bbl. of oil		$ 2.77
2000 cu. ft. of gas		0.20
Total Gross Value		$ 2.97
Costs		
Severance & Advalorem Taxes	$0.21	
Royalty	0.37	
Lifting Costs	0.24	
		$ 0.82
Net Operating Income per Gross Bbl.		$ 2.15
W.I. Total Net Operating Income		
812,800 x $2.15/bbl.		$1,747,520
Net Loss for 40-Acre Spacing		$2,752,480
Net Loss per Well	$137,624	
Net Loss for 80-Acre Spacing		$ 502,480
Net Loss per Well	$ 50,248	
Net Profit for Dual Completion for 40-Acre Spacing		$1,247,520
Net Profit per Well	$ 62,376	
Profit to Investment Ratio	2.50 to 1	
Net Profit for Dual Completion for 80-Acre Spacing		$1,497,520
Net Profit per Well	$149,752	
Profit to Investment Ratio	5.99 to 1	

NMOCC Case No. 2119

Ohio Exhibit No. 10

Date _____

LEA BONE SPRINGS POOL

PERTINENT DATA

1. Location of Field:

   Approximately 14 miles west-southwest of Monument, New Mexico, Section 12, T-20-S, R-34-E, Lea County

2. Completion Data Lea Unit Well No. 1:

a.	Formation	Bone Springs
b.	Top of Bone Springs	8183 (-4509)
c.	Top of Bone Springs Pay	9480 (-5806)
d.	Completion Date	10-9-60
e.	Perforated Interval	9480-9550
f.	Treatment	None
g.	Initial Potential Test	
	(1) Potential (BOPD)	214
	(2) Choke Size (in.)	1/2
	(3) GOR (CF/B)	1817
	(4) Casing Pressure (psig)	pkr.
	(5) Tubing Pressure (psig)	100

3. Reservoir Fluid Characteristics:

a.	Saturation Pressure	Unknown
b.	Formation Volume Factor	1.95 est.
c.	Solution GOR (CF/B)	1817
d.	Oil Gravity (^{o}API @ 60^{o}F)	42

4. Reservoir Characteristics:

		Dolomite	Sand
a.	Porosity (%)	3.05	10.2
b.	Permeability (md)	4.39	0.25
c.	Water Saturation (%)	30.0 est.	30.0 est.
d.	Net Pay (ft.)	28	19
e.	Reservoir Temperature (^{o}F)	142	
f.	Original Reservoir Press. (psig)	3983 @ -5840	
g.	Probable Reservoir Mechanism	Solution Gas	

NMOCC Cas No. 2119

Ohio Exhibit No. 6

Date

BEFORE THE
OIL CONS. V. COMMISSION
SANTA FE, N.M.
Ohio Exhibit No. 6
CASE 2119

11-16-60

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

RECOVERABLE OIL RESERVES

LEA BONE SPRINGS POOL

Basic Data

Porosity	=	3.34% (Core Analysis #2 & #4)
Net Pay	=	16 feet (6 well average)
Water Saturation	=	30% (estimated)
Recovery Factor	=	25% (estimated)
Formation Volume Factor	=	1.50 (estimated)

Volumetric Calculations

$$\frac{7758 \text{ Bbl/acre-ft.} \times \text{Porosity} \times (1\text{-Water Saturation}) \times \text{Net Pay} \times \text{Recovery Factor}}{\text{Formation Volume Factor}}$$

$$\frac{(7758)(1)(16)(0.0334)(.70)(.25)}{1.50} = 483 \text{ bbl/acre}$$

NMOCC Case No. 2119
Ohio Exhibit No. 5
Date 12-13-61

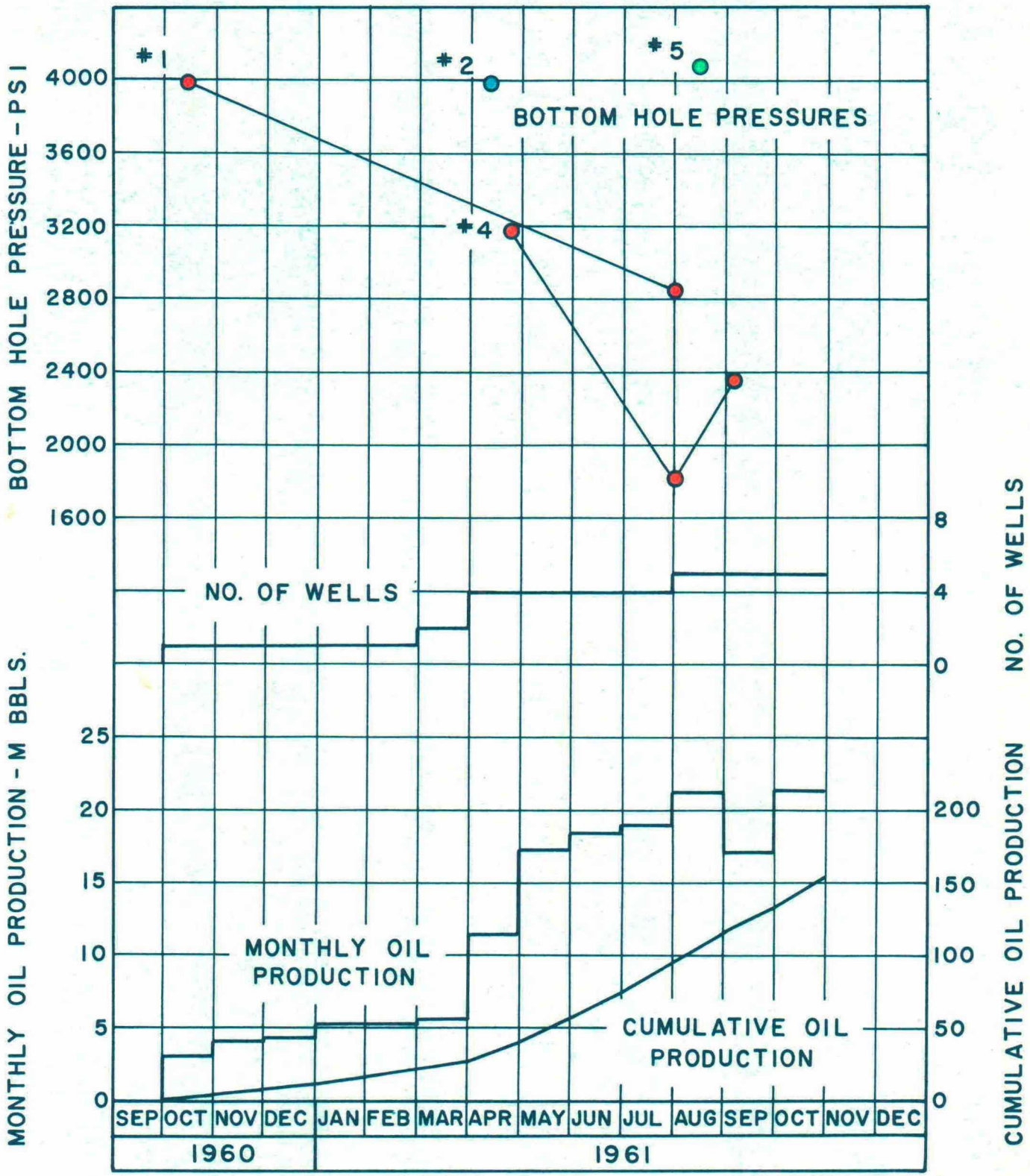
COMPARATIVE ECONOMICS FOR DEVELOPMENT OF LEA BONE SPRINGS POOL

40-ACRE SPACING VS. 80-ACRE SPACING

Proposed Participating Area		2280 Acres
Wells Required with 40-Acre Spacing		57 Wells
Wells Required with 80-Acre Spacing		29 Wells
Investment @ $225,000 per Well		
For 40-Acre Spacing (57 Wells)		$12,825,000
For 80-Acre Spacing (29 Wells)		$ 6,525,000
Investment for Dual Completion @ $25,000 per Well		
For 40-Acre Spacing (57 Wells)		$ 1,425,000
For 80-Acre Spacing (29 Wells)		$ 725,000
Ultimate Reserves		
Oil		1,101,000 bbls.
Gas @ 2000 cu. ft. per bbl.		2,202,000 MCF
W.I. Net Operating Income per Gross Bbl. of Oil Produced Including Income from Gas Produced with Oil		
Value		
Bbl. of oil		$2.81
2000 cu. ft. of gas		0.20
Total Gross Value		$3.01
Costs		
Severance & Ad valorem Taxes	$0.21	
Royalty	0.38	
Lifting Costs	0.24	
		$0.83
Net Operating Income per Gross Bbl.		$2.18
W.I. Total Net Operating Income		
1,101,000 bbls. x $2.18/bbl.		$2,400,000
Net Loss for 40-Acre Spacing		$10,425,000
Net Loss per Well	$182,895	
Net Loss for 80-Acre Spacing		$4,125,000
Net Loss per Well	$142,241	
Net Profit for Dual Completion for 40-Acre		$975,000
Net Profit per Well	$17,105	
Profit to Investment Ratio		0.68 to 1
Net Profit for Dual Completion for 80-Acre		$1,675,000
Net Profit per Well	$57,759	
Profit to Investment Ratio		2.31 to 1

NMOCC Case No. 2119
Ohio Exhibit No. 6
Date 12-13-61

PRODUCTION HISTORY GRAPH
LEA BONE SPRINGS POOL
LEA COUNTY, NEW MEXICO



NMOCC CASE NO. 2119
OHIO EXHIBIT NO. 3
DATE. 12-13-61

Case No.

2119

Large Exhibits

R 34 E

R 35 E

T 20 S

Pure
Gulf
Texaco
Cactus Drlg.
L.A & B.G. Parks
1
Texaco
Cactus Drlg.
"Featherstone Fed."
6
Martha Featherstone
2
State
"Quail - Federal"
U.S.
U.S.
U.S. Smelting
Gulf
Sinclair Ohio
Sinclair "6025"
U.S
A
EL 3667
TD 14619
BSP -5809
EL 3677
TD 14492
BSP -5808
EL 3686
TD 14501
BSP -5807
EL3676
TD14947
"Fed Lea"
U.S.
U.S. Smelting
12
Drlg & Expl.
7
Sinclair
6
EL 3667
TD 14472
BSP-5803
EL 3674
TD 14735
BSP-5806
EL 3683
TD 14476
BSP -5811
A'
7
U.S.
U.S.
J.N.Smith
Gulf
Ohio, et al
Ohio
Ohio
Sinclair Ohio
W.G. Ross Ohio
V.K. Ross Ohio
U.S.
14
13
18
Gulf
Pure
Pure
Cox & Hamon Ohio
Drlg & Expl
Sinclair Ohio
Ross
Ohio
U.S.
U.S.
U.S.
Gulf
Pure
Pure
Drlg. & Expl.
Cox & Hamon Ohio
Ohio
Pan American
C.C. Bankhead
Drlg & Expl
U.S.
23
24
19
E. A. Hanson
H. Aid, Est.
Cox & Hamon
Ohio
U.S
U.S.
State

LEGEND

- BOUNDARY OF LEA UNIT
- DUAL — BONE SPRINGS & DEVONIAN
- DUAL — BONE SPRINGS & PENN. (GAS)
- PROPOSED PARTICIPATING AREA

LEA BONE SPRINGS POOL
LEA UNIT AREA
LEA COUNTY, NEW MEXICO

SCALE
1000 0 1000 2000
FEET

THE OHIO OIL COMPANY——HOUSTON, TEXAS

NMOCC CASE NO. 2119
OHIO EXHIBIT NO. 1
DATE 12-13-61

RBB

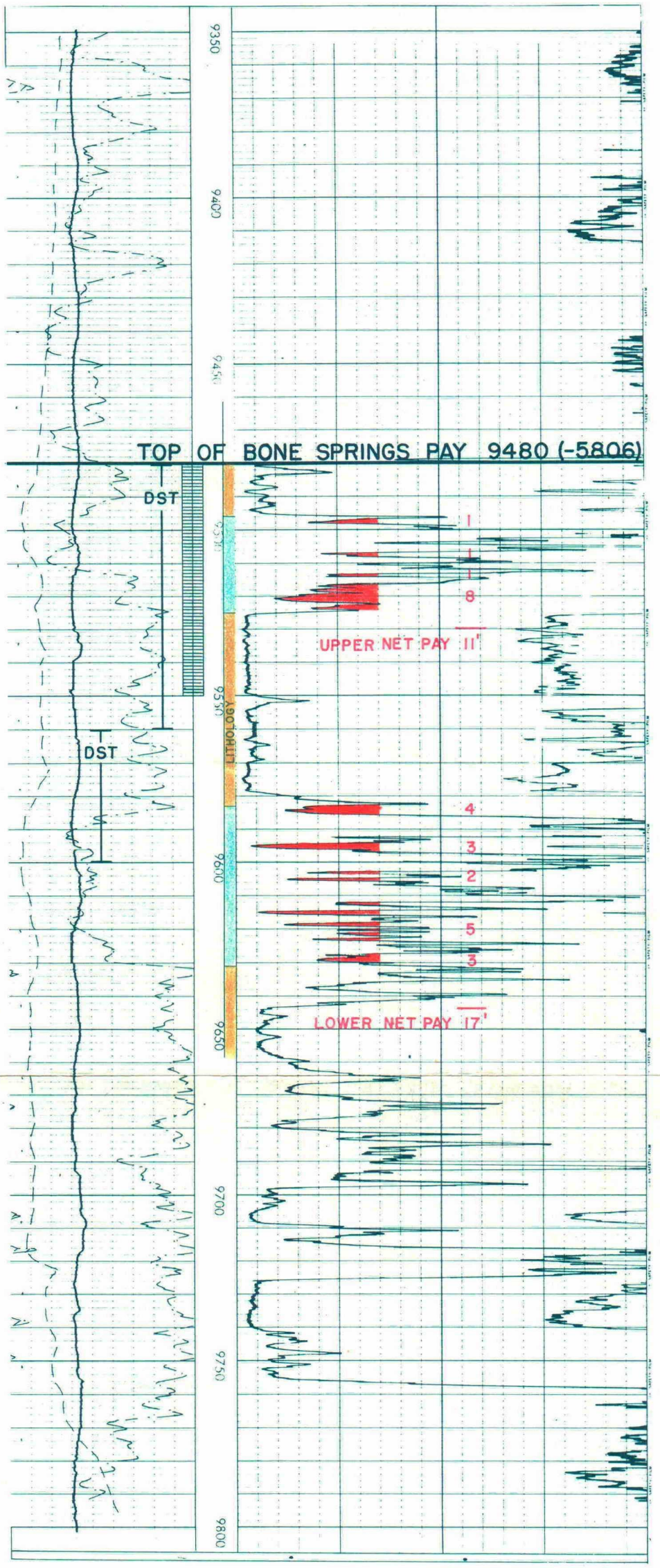
OHIO OIL COMPANY

LEA UNIT FEDERAL WELL NO. 1

ELEV. 3674

NW/4 SW/4 SEC. 12, T-20-S, R-34-E

FORXO LOG OF BONE SPRINGS PAY



DST 9480-9560 Open 3 hrs. GTS 20 min. OTS 1-2/3 hrs. F est 20 BO 1st hr. F to tank 22.88 BO in 1 hr. (549 BOPD). FTP 125#, GOR 2030, Gty 42.9°. 45 min ISIP 3980#, IFP 420#, FFP 1060#.

DST 9560-9600 Open 4 hrs. GTS 2 hrs. F 28.65 BO in 1-3/4 hrs. (391 BOPD). GOR 2006, Gty 41.3°. FTP 1135-155. 1 hr ISIP 4060#, IFP 800#, Max FP 1600#, FFP 900#, 30 min FSIP 3800#.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 1
CASE 2119

NMOCC CASE NO. 2119
OHIO EXHIBIT NO. 7
DATE. 11-16-60

COMPARATIVE ECONOMICS FOR DEVELOPMENT OF LEA BONE SPRINGS POOL

40-ACRE SPACING VS. 80-ACRE SPACING

Minimum Area Expected to be Productive		800 Acres
Wells Required with 40 Acre Spacing		20 Wells
Wells Required with 80 Acre Spacing		10 Wells
Investment @ $225,000 per well		
For 40 Acre Spacing (20 Wells)		$4,500,000
For 80 Acre Spacing (10 Wells)		$2,250,000
Investment for Dual Completion @ $25,000 per Well		
For 40 Acre Spacing (20 Wells)		$ 500,000
For 80 Acre Spacing (10 Wells)		$ 250,000
Ultimate Reserves		
Oil		812,800 bbls.
Gas @ 2000 cu. ft. per bbl.		1,625,600 MCF
W.I. Net Operating Income Per Gross Bbl. of Oil Produced Including Income from Gas Produced With Oil		
Value		
Bbl. of oil		$ 2.77
2000 cu. ft. of gas		0.20
Total Gross Value		$ 2.97
Costs		
Severance & Advalorem Taxes	$0.21	
Royalty	0.37	
Lifting Costs	0.24	
		$ 0.82
Net Operating Income per Gross Bbl.		$ 2.15
W.I. Total Net Operating Income		
812,800 x $2.15/bbl.		$1,747,520
Net Loss for 40-Acre Spacing		$2,752,480
Net Loss per Well	$137,624	
Net Loss for 80-Acre Spacing		$ 502,480
Net Loss per Well	$ 50,248	
Net Profit for Dual Completion for 40-Acre Spacing		$1,247,520
Net Profit per Well	$ 62,376	
Profit to Investment Ratio	2.50 to 1	
Net Profit for Dual Completion for 80-Acre Spacing		$1,497,520
Net Profit per Well	$149,752	
Profit to Investment Ratio	5.99 to 1	

NMOCC Case No. 2119

Ohio Exhibit No. 10

Date 1-16-66

BEFORE THE
OIL CONS[illegible]
SANTA FE, [illegible]
Ohio Exhibit No. 2
CASE 2119

RECOVERABLE OIL RESERVE

LEA BONE SPRINGS POOL

DOLOMITE INTERVAL:

Basic Data

Porosity	-3.05% (core analysis #2 well)
Permeability	-4.39 md (core analysis #2 well)
Net Pay	- 28 ft. (Log #1 well)
Water Saturation	- 30% (estimated)
Recovery Factor	- 20% (estimated)
Formation Volume Factor	- 1.95 (estimated)

Volumetric Calculation

$$\frac{\text{7758 Bbl/Acre-foot x Porosity x (1-Water Saturation) x Net Pay x Recovery Factor}}{\text{Formation Volume Factor}}$$

$$\frac{(7758)(0.0305)(0.70)(28)(0.20)}{1.95} = 476 \text{ bbl/acre}$$

SAND INTERVAL

Basic Data

Porosity	- 10.2% (core analysis #2 well)
Permeability	- 0.25 md (core analysis #2 well)
Net Pay	- 19 ft. (core analysis #2 well)
Water Saturation	- 30% (estimated)
Recovery Factor	- 10% (estimated)
Formation Volume Factor	- 1.95 (estimated)

Volumetric Calculations

$$\frac{\text{7758 Bbl/Acre-foot x Porosity x (1-Water Saturation) x Net Pay x Recovery Factor}}{\text{Formation Volume Factor}}$$

$$\frac{(7758)(0.102)(0.70)(19)(0.10)}{1.95} = 540 \text{ bbl/acre}$$

TOTAL BONE SPRINGS INTERVAL:

Zone Total = 476 + 540 = 1016 bbl/acre

NMOCC Case No. 2119

Ohio Exhibit No. 9

Date 11-16-60

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
Ohio EXHIBIT No. 9
CASE 2119

CORE ANALYSIS

LEA UNIT WELL NO. 2

BONE SPRINGS PAY

LOWER SAND INTERVAL 9565-9607

W/PERMEABILITY EQUAL TO OR GREATER THAN 0.1 MILLIDARCY

Depth Interval	Footage	Permeability md.	Porosity %
9566.0-67.0	1.0	0.3	9.6
72.0-73.0	1.0	0.1	9.3
75.0-76.0	1.0	0.3	10.3
76.0-77.0	1.0	0.6	14.5
77.0-78.0	1.0	0.4	13.3
79.0-80.0	1.0	0.1	8.6
80.0-81.0	1.0	0.1	8.0
81.0-82.0	1.0	0.1	7.1
82.0-83.0	1.0	0.1	8.3
83.0-84.0	1.0	0.1	9.6
84.0-85.0	1.0	0.1	10.4
85.0-86.0	1.0	0.4	14.9
86.0-87.0	1.0	0.4	11.5
94.0-95.0	1.0	0.1	6.0
95.0-96.0	1.0	0.1	7.5
96.0-97.0	1.0	0.1	8.0
97.0-98.0	1.0	0.4	12.5
98.0-99.0	1.0	0.6	12.8
99.0-00.0	1.0	0.4	10.8
Net Pay	19.0 ft.		
Weighted Average		0.25 md.	10.2%

CORE ANALYSIS

LEA UNIT WELL NO. 2

BONE SPRINGS PAY

LOWER DOLOMITE INTERVAL 9607-9648

W/PERMEABILITY EQUAL TO OR GREATER THAN 0.1 MILLIDARCY

Depth Interval	Footage	Permeability md.	Porosity %
9607.6-09.1	1.5	1.0	2.8
09.1-10.8	1.7	0.2	1.4
13.7-15.6	1.9	1.8	2.4
15.6-17.0	1.4	10.0	2.7
17.0-18.0	1.0	0.2	2.9
21.0-22.5	1.5	23.0	5.9
22.5-23.7	1.2	6.6	3.1
23.7-25.2	1.5	2.8	2.3
25.2-26.5	1.3	2.3	3.3
28.0-29.5	1.5	2.1	6.1
32.3-34.0	1.7	6.1	2.4
34.0-36.0	2.0	0.7	2.0
44.5-45.5	1.0	0.1	3.2
Net Pay	19.2 ft.		
Weighted Average		4.39 md.	3.05%

RECOVERABLE OIL RESERVES

LEA BONE SPRINGS POOL

Basic Data

Porosity	=	3.34% (Core Analysis #2 & #4)
Net Pay	=	16 feet (6 well average)
Water Saturation	=	30% (estimated)
Recovery Factor	=	25% (estimated)
Formation Volume Factor	=	1.50 (estimated)

Volumetric Calculations

$$\frac{7758 \text{ Bbl/acre-ft.} \times \text{Porosity} \times (1\text{-Water Saturation}) \times \text{Net Pay} \times \text{Recovery Factor}}{\text{Formation Volume Factor}}$$

$$\frac{(7758)(1)(16)(0.0334)(.70)(.25)}{1.50} = 483 \text{ bbl/acre}$$

483
80
38,640

NMOCC Case No. 2119
Ohio Exhibit No. 5
Date 12-13-61

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

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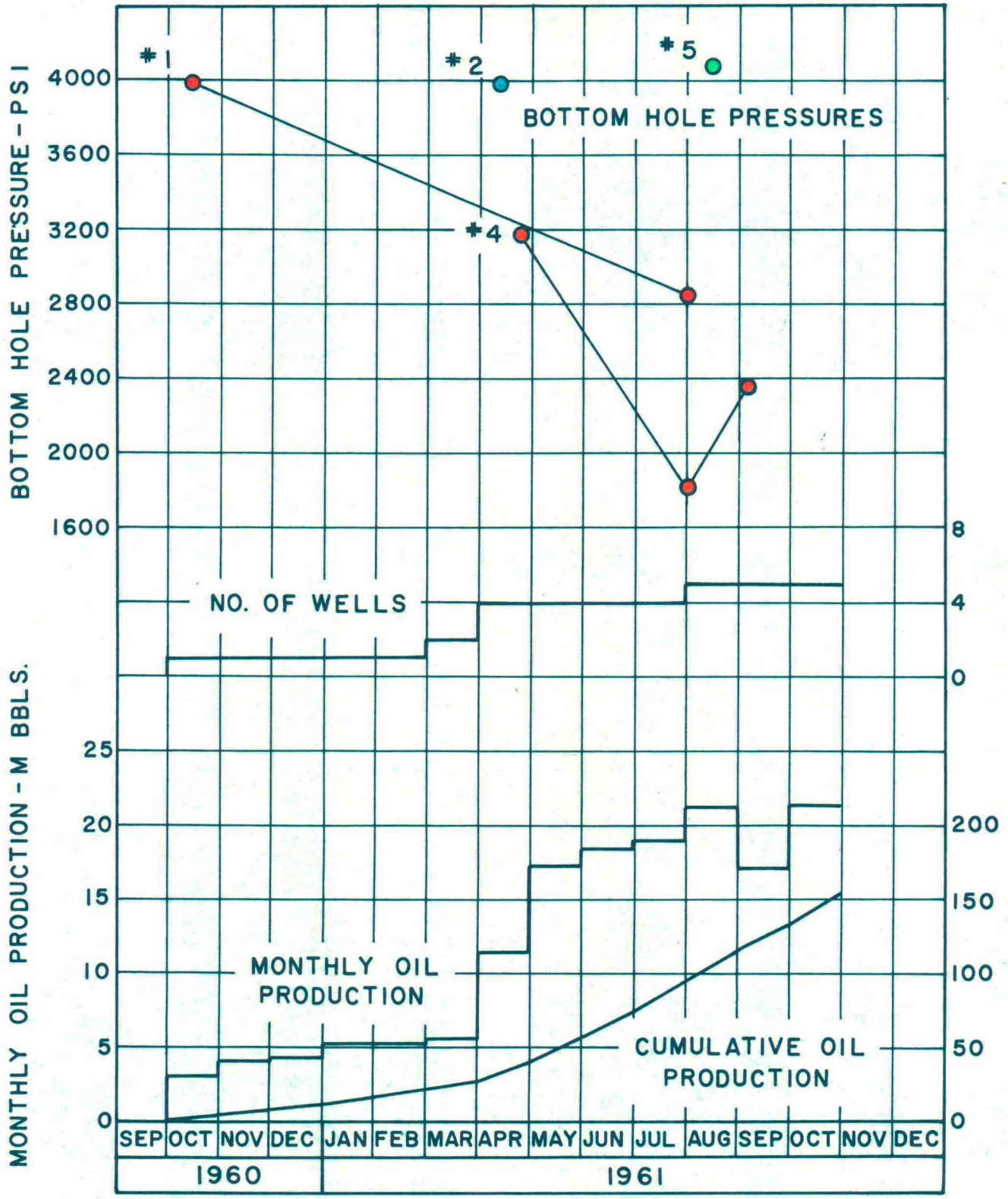
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

PRODUCTION HISTORY GRAPH
LEA BONE SPRINGS POOL
LEA COUNTY, NEW MEXICO



NMOCC CASE NO. 2119
OHIO EXHIBIT NO. 3
DATE. 12-13-61

R 34 E

R 35 E

T 20 S

Pure | Gulf | Texaco | Cactus Drlg.

L. A. & B. G. Parks — 1 — Texaco | Cactus Drlg.

"Featherstone Fed." — 6 — Martha Featherstone

"Quail - Federal"

State | U.S. | U.S.

U.S. Smelting | Gulf | Sinclair Ohio | Sinclair "6025"

A

EL 3667
TD 14619
BSP - 5809

EL 3677
TD 14492
BSP - 5808

EL 3686
TD 14501
BSP - 5807

EL 3676
TD 14947

"Fed. Lea" U.S. — 7 — Sinclair

U.S. Smelting | U.S.

EL 3667
TD 14472
BSP - 5803

EL 3674
TD 14735
BSP - 5806

EL 3683
TD 14476
BSP - 5811

A'

Drlg. & Expl.

U.S. | U.S. | J. N. Smith

Gulf | Ohio, et al | Ohio | Ohio | Sinclair Ohio

W. G. Ross Ohio | V. K. Ross Ohio

U.S. | U.S. | U.S.

Gulf | Pure | Pure | Cox & Hamon Ohio | Drlg. & Expl. | Sinclair Ohio | Ross

Ohio

U.S. | U.S. | U.S.

Gulf | Pure | Pure | Drlg. & Expl. | Cox & Hamon Ohio | Ohio | Pan American

C. C. Bankhead | Drlg. & Expl.

U.S. | U.S.

E. A. Hanson | H. Aid, Est. | Cox & Hamon | Ohio

U.S. | U.S. | State

LEGEND

- BOUNDARY OF LEA UNIT
- DUAL — BONE SPRINGS & DEVONIAN
- DUAL — BONE SPRINGS & PENN. (GAS)
- PROPOSED PARTICIPATING AREA

LEA BONE SPRINGS POOL
LEA UNIT AREA
LEA COUNTY, NEW MEXICO

SCALE
1000 0 1000 2000
FEET

THE OHIO OIL COMPANY ——— HOUSTON, TEXAS

NMOCC CASE NO. 2119
OHIO EXHIBIT NO. 1
DATE 12-13-61

RBB