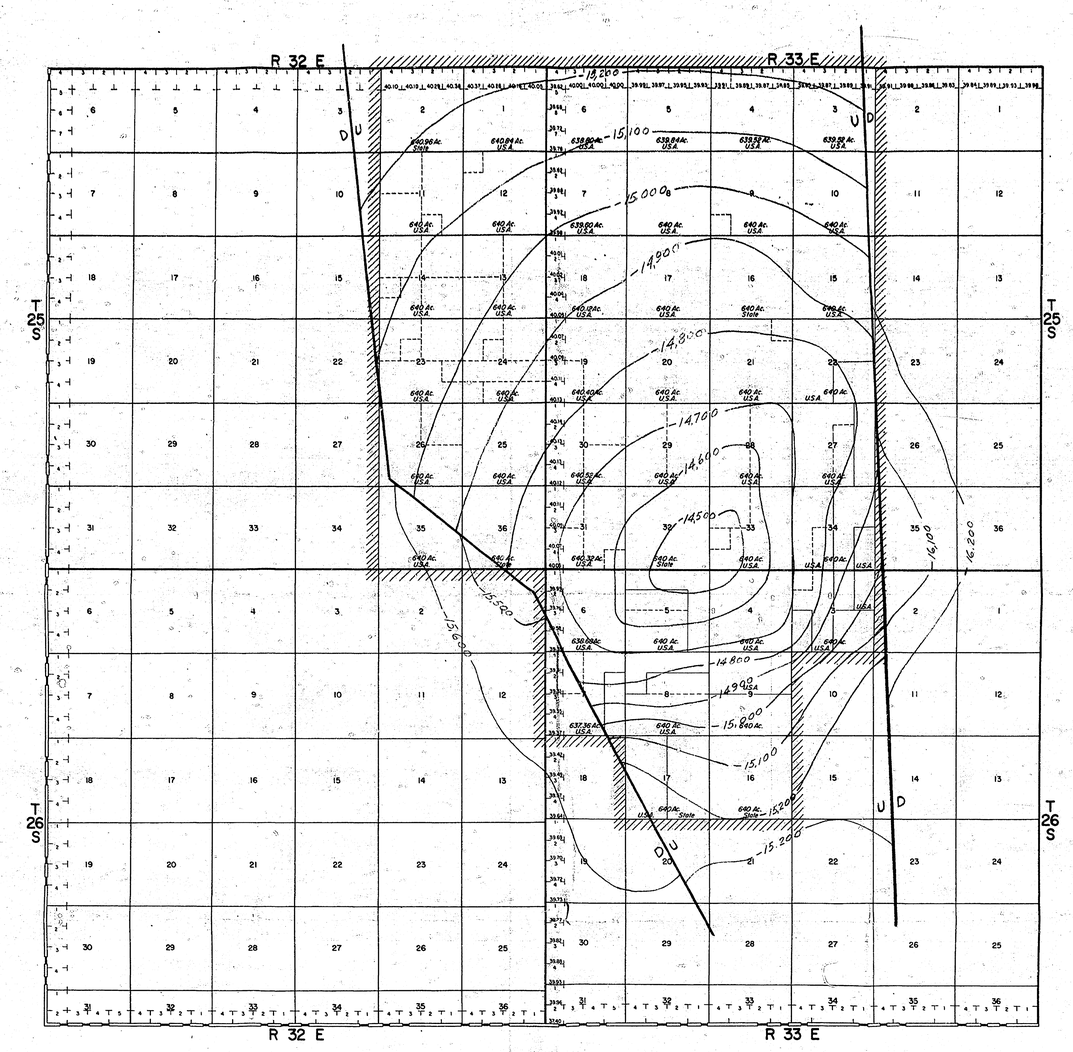
Case No.
3158-
3159

Large Exhibits

V.R.N.C.F. MICROGRAPHICS

BEST AVAILABLE COPY



RED HILLS UNIT
Townships 25 and 26 South
Ranges 32 and 33 East
Lea County, New Mexico

Proposed 18,000' Devonian Test
Devonian Horizon
C.I. – 100'
September 10, 1962

EXHIBIT C
Unit Outline

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 9
Case No. 2155-54

W.R.H.C.P. MICROGRAPHICS
BEST AVAILABLE COPY

EXHIBIT

THE PURE OIL CO.

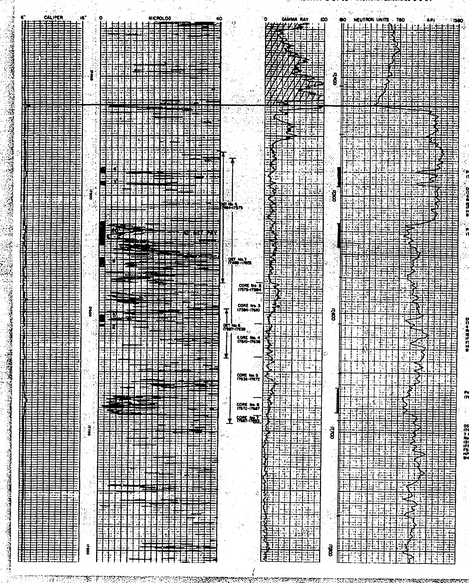
RED HILLS UNIT NO. 1

SW/4 SW/4 SE/4 SEC. 32 - T-25-S - R-33-E

LEA COUNTY, NEW MEXICO

SILURO-DEVONIAN PAY ZONE

Spudded 2-24-63 Production Established 9-3-64

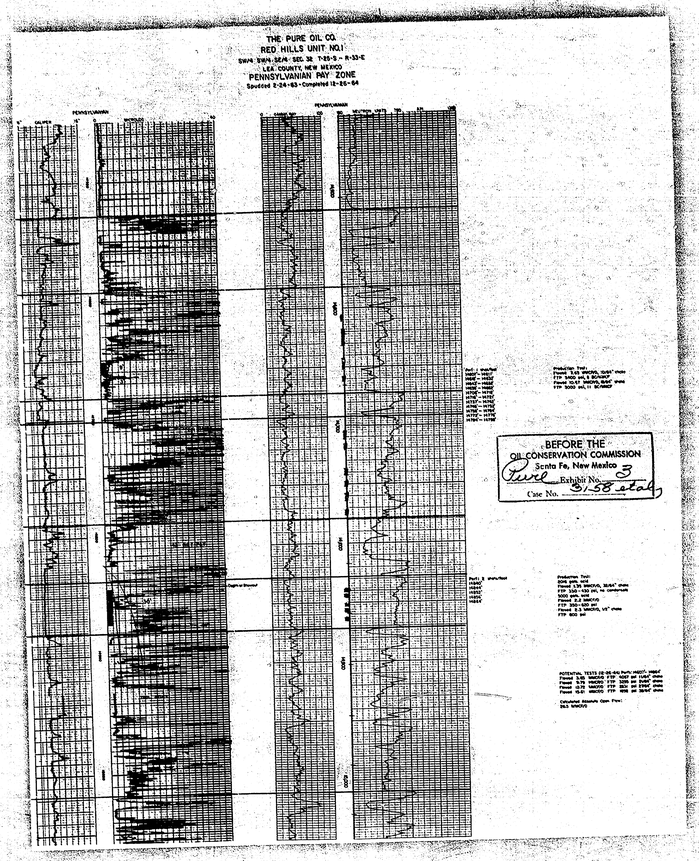


PRODUCTION DATA

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 4
Case No. 3158 etal

V.N.M.C.F. MICROGRAPHICS

BEST AVAILABLE COPY



W.R.M.C.F. MICROGRAPHICS
BEST AVAILABLE COPY

EXHIBIT

THE PURE OIL CO.

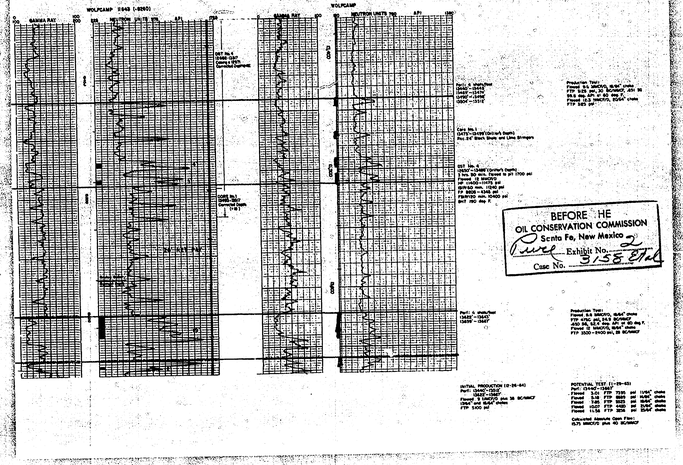
RED HILLS UNIT NO.1

SW/4 SW/4 SE/4 Sec.32 T-23-S R-33-E

Lea Co, New Mexico

Spudded: 9-24-63 — Initial Production 12-28-64
Potential Test 1-29-65

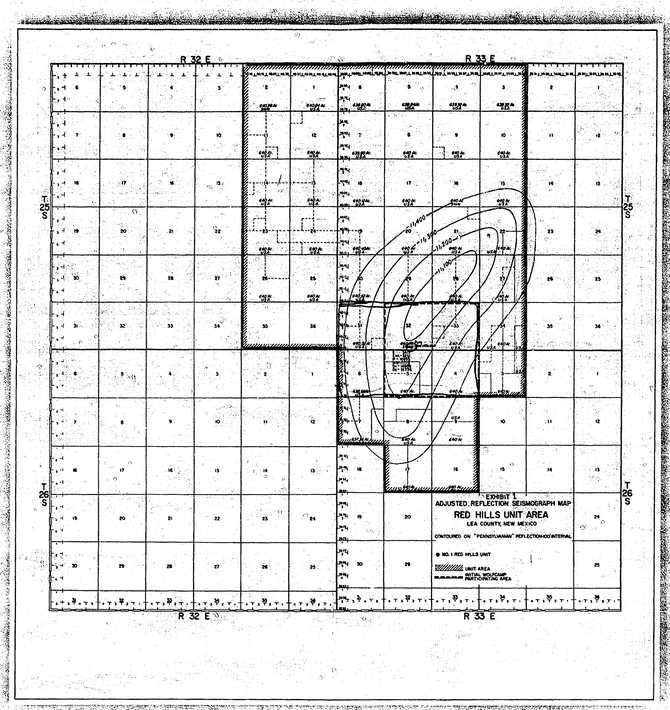
WOLFCAMP PAY ZONE



BEFORE HE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Exhibit No. 2
Case No. 3155 Rec'd

W.N.M.C.P. MICROGRAPHICS

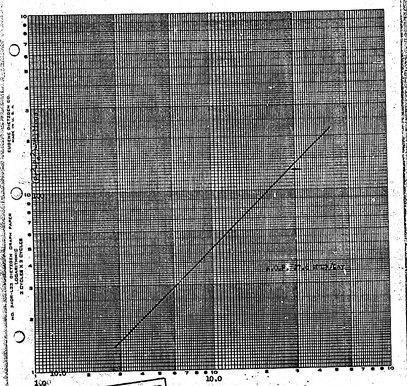
BEST AVAILABLE COPY



V.H.M.C.F. MICROGRAPHICS
BEST AVAILABLE COPY

$P_{f^2} = 131.0 \times 10^6$
$P_s = 54.3 \times 10^6$

Measured flow rate
9.6 MM/day



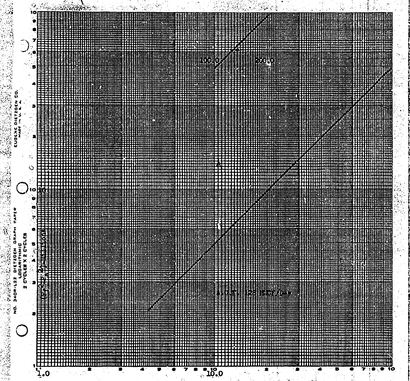
Red Hills
Wolfcamp

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 3182 3183
11/24/64

W.N.M.C.F. MICROGRAPHICS
BEST AVAILABLE COPY

$P_i^2 = 61.55 \times 10^6$

$P_s^2 = 57.25 \times 10^6$ 8.8 MMCF/Acre



MCF Per Day

Red Hills
Pennsylvanian

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 3158-3159

11/24/64

W.R.M.C.F. MICROGRAPHICS

BEST AVAILABLE COPY

Fractional Distillation Analysis Results Summary

Petroleum Analytical Laboratory Service, Inc.

P. O. Box 388 Phone EM 6-2866

ODESSA, TEXAS

No. _____
Run No. 7687
DATE OF RUN 10-20-64
Date Secured 10-20-64

A Sample of GAS, FROM RED HILLS UNIT #1,PERM GAS, 14097-16798 TEST #2. Flow rate 8.8 MMCF
Secured from Pure Oil Company
At Midland, Texas Secured by C.E. Speight
Sampling conditions Press. 175psi on container. Time 11:30AM Date 10-19-64
Temp.

FRACTIONAL DISTILLATION

Percentage Composition

	MOL%	LIQ.%
Carbon Dioxide	0.80	
Air		
Nitrogen	0.72	
Oxygen		
Hydrogen sulf.	exert to lead acetate	
Hydrogen		
Methane	97.66	
Ethane	0.50	
Propane	0.23	
Butanes		
Iso-Butane	0.04	
N-Butane	0.05	
Pentanes		
Iso-Pentane		
N-Pentane		
Hexanes		
Heptanes		
TOTAL	100.00%	

Calc. Sp. Gr. .572
Calc. A.P.I.
Calc. Vapor Press. lb/Sq. in.
Sp. Gr.
Mol. Wt.

Liquid Content

Method	G.P.M.
Based on Analysis (Butanes)	0.029
Based on Analysis (Pentanes & Heavier)	
Based on Analysis (Propane)	0.063
Based on Analysis (Ethane)	

Heating Value

Method	Gal.	British Thermal Units Per Cu. Ft. at 14.65 p.s.i. at 60 °F Dry Basis	Wet Basis
Based on % Composition		1003	985

Run by H. Barry Checked by T.M. Simpson Approved by:

Additional Data and Remarks

Ex 58 thru 50 11/2 y/ea

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
CASE NO. 3002 EXHIBIT NO. 52

11/24/64

W.N.M.C.P. MICROGRAPHICS

BEST AVAILABLE COPY

Fractional Distillation Analysis Results Summary

No. 7696

Petroleum Analytical Laboratory Service, Inc.

Run No. 7696
DATE OF RUN 10-21-64
Date Secured 10-20-64

P. O. Box 388 Phone EM 6-2866
ODESSA, TEXAS

A Sample of PENN LIQUID, FROM RED HILLS UNIT #1, 14607-14788 TEST #6'.
Secured from Pure Oil Company
At Midland, Texas
Secured by C.E. Speight
Time 9:30AM Date 10-19-64
Sampling conditions Pres. 115psi on contain
Temp. 100°F

FRACTIONAL DISTILLATION

Percentage Composition

	MOL%	LIQ.%
Carbon Dioxide		
Air		
Nitrogen		
Oxygen		
Hydrogen sulf.		
Hydrogen		
Methane	1.17	0.32
Ethane	0.48	0.20
Propane	0.44	0.19
Butanes		
Iso-Butane	0.10	0.05
N-Butane	0.44	0.22
Pentanes		
Iso-Pentane	0.77	0.44
N-Pentane	0.52	0.31
Hexanes +	3.26	2.09
Heptanes +	92.82	96.18
TOTAL	100.00%	100.00%

Calc. Sp. Gr.
Calc. A.P.I.
Calc. Vapor Pressure lb./Sq. In.
Sp. Gr. 60°F/60°F .7895
Mol. Wt. 60°F 166.7

Liquid Content

Method	G.P.M.
Based on Analysis (Butanes)	
Based on Analysis (Pentanes & Heavier)	
Based on Analysis (Propanes)	
Based on Analysis (Ethane)	

Heating Value

Method	Gal.	British Thermal Units Per Cu. Ft. at 14.65 p.s.i. at 60 °F Dry Basis	Wet Basis
Based on % Composition			

Run by H. Berry Checked by T.M. Simpson Approved by

Additional Data and Remarks

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appl. EXHIBIT NO. 5B
CASE NO. 3142 - 3143

11/24/64

N.M.M.C.F. MICROGRAPHICS
BEST AVAILABLE COPY

PALS

Fractional Distillation Analysis Results Summary

No. 7754

Petroleum Analytical Laboratory Service, Inc.

Run No. 7754
DATE OF RUN 11-6-64
Date Secured 11-6-64

P.O. Box 388 Phone EM 6-2866

ODESSA, TEXAS

RED HILLS UNIT #1

A Sample of SEPARATOR OFF GAS, HIGH STAGE, FLOW RATE 9.4 MMCF, WELFCAMP

Secured from The Pure Oil Company Secured by L.L. Harmon 13,659-13,667

At Midland, Texas Time 8:00PM Date 11-3-64

Sampling conditions Press. 1008psi
Temp. 72°F

FRACTIONAL DISTILLATION

Percentage Composition

	MOL%	LIQ.%
Carbon Dioxide	0.20	
Air		
Nitrogen	0.55	
Oxygen		
Hydrogen sulf.	meet bo lead acetate	
Hydrogen		
Methane	87.31	
Ethane	7.80	
Propane	2.53	
Butanes		
Iso Butane	0.46	
N Butane	0.61	
Pentanes		
Iso Pentane	0.18	
N Pentane	0.13	
Hexanes +	0.17	
Heptanes		
TOTAL	100.00%	

Calc. Sp. Gr. .648
Calc. A.P.I.
Calc. Vapor Press. Lb./Sq. In.
Sp. Gr.
Mol. Wt.

Liquid Content

Method	G.P.M.
Based on Analysis (Butanes)	0.335
Based on Analysis (Pentanes & Heavier)	0.191
Based on Analysis (Propanes)	0.694
Based on Analysis (Ethane)	

Heating Value

British Thermal Units Per Cu. Ft. at 14.65 p.s.i. at 60 °F

Method	Gal.	Dry Basis	Wet Basis
Based on % Composition		1141	1121

Run by Simpson & Berry Checked by Approved by J. M. Simpson

Additional Data and Remarks

H_2S	.004
RSH	.004
RSR	.001
RSSR	.001
Total	.010

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Hearing EXHIBIT NO. 12
CASE NO. 327

11/24/64

W.N.M.C.P. MICROGRAPHICS

BEST AVAILABLE COPY

Fractional Distillation Analysis Results Summary

No. 7758
Run No. 7758

Petroleum Analytical Laboratory Service, Inc.

P. O. Box 388 — Phone EM 6-2866
ODESSA, TEXAS

DATE OF RUN 11/8/64
Date Secured 11/4/64

RED HILL UNIT. #1 13,622-13,643
A Sample of #2 LIQUID LOWER WOLFCAMP 13,659-13667 24.9 BBL/MCF. Taken 11/3/64
Secured from The Pure Oil Company
At Midland, Texas
Secured by J.L. H & BJB
Sampling conditions Press. 1025 # Temp. 78°F Time 2:00PM Date 11/3/64 Atmos. 69°F.

FRACTIONAL DISTILLATION

Percentage Composition

	MOL%	LIQ.%
Carbon Dioxide		
Air		
Nitrogen		
Oxygen		
Hydrogen sulf.		
Hydrogen		
Methane	11.32	5.04
Ethane	11.02	7.36
Propane	11.11	7.96
Butanes		
Iso-Butane	4.91	4.18
N-Butane	7.38	6.06
Pentanes		
Iso-Pentane	5.00	4.76
N-Pentane	4.88	4.60
Hexanes	10.56	11.29
Heptanes	11.93	14.42
OCTANES +	21.69	34.33
TOTAL	100.00	100.00

Calc. Sp. Gr.
Calc. A.P.I.
Calc. Vapor Press. Lb./Sq. In.
Sp. Gr. C-8s .7689
Mol. Wt. C-8s 147.2

Liquid Content

Method	G.P.M.
Based on Analysis (Butanes)	
Based on Analysis (Pentanes & Heavier)	
Based on Analysis (Propane)	
Based on Analysis (Ethane)	

Heating Value

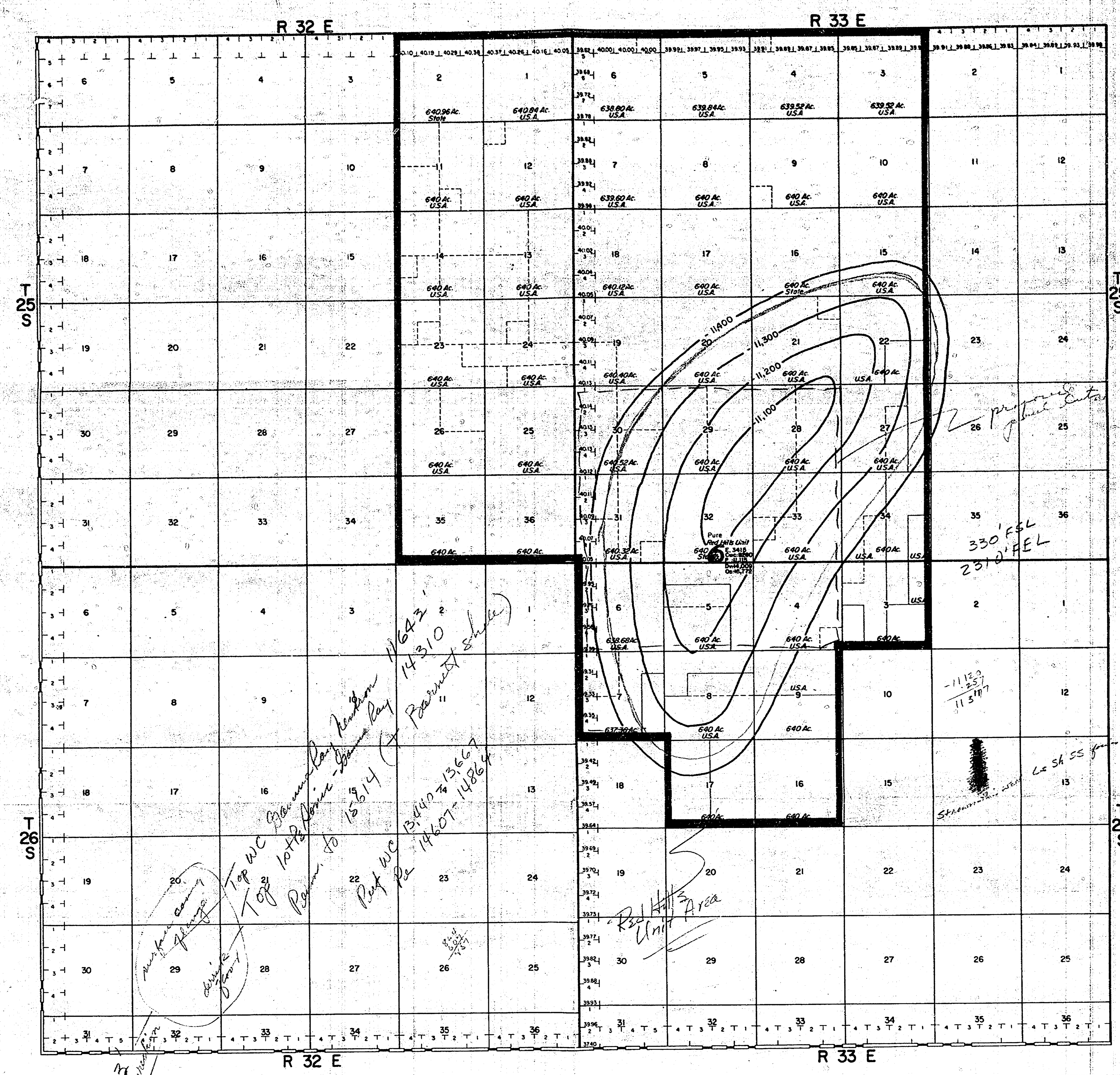
Method	Gal.	British Thermal Units Per Cu. Ft. at 14.65 p.s.i. at 60° F. Dry Basis	Wet Basis
Based on % Composition			

Run by Simpson & Berry Checked by Approved by

Additional Data and Remarks

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5d
CASE NO. 3716
11/24/64

W.N.M.C.P. MICROGRAPHICS
BEST AVAILABLE COPY



Ex 1

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Pure EXHIBIT NO. 1
CASE NO. 3158-3159
11/24/64

recommends pool limits to include Sec 32 + all 8 adjacent sections

Unit Order R-2850-

App/Ex 1
Cs 3158-3159
11/24/64

3A
3B
5A-5D
6

Red Hills Unit
Lea Co., New Mexico
PENNSYLVANIAN
(After Seismic)

C.I. = 100' Scale 1" = 3000'
G.V. Mendenhall 13 NOV. 1964

W.N.M.C.F. MICROGRAPHICS
BEST AVAILABLE COPY