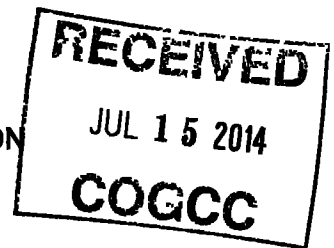




BEFORE THE OIL AND GAS CONSERVATION COMMISSION  
OF THE STATE OF COLORADO



IN THE MATTER OF THE APPLICATION OF  
CONOCOPHILLIPS COMPANY FOR AN  
ORDER TO ESTABLISH AN EXPLORATORY  
1280-ACRE DRILLING AND SPACING UNIT  
AND ESTABLISHING WELL LOCATION RULES  
FOR THE NIOBRARA FORMATION IN  
SECTION 19, TOWNSHIP 4 SOUTH, RANGE  
63 WEST, 6<sup>TH</sup> P.M., AND SECTION 24,  
TOWNSHIP 4 SOUTH, RANGE 64 WEST, 6<sup>TH</sup>  
P.M. AN UNNAMED FIELD, ARAPAHOE  
COUNTY, COLORADO

CAUSE NO. 535

DOCKET NO. 1407-SP-2090

**REQUEST FOR RECOMMENDATION OF  
APPROVAL OF APPLICATION WITHOUT A HEARING**

ConocoPhillips Company ("Applicant"), by and through its undersigned attorneys, hereby requests pursuant to Rule 511.a. of the Rules of Regulations of the Colorado Oil and Gas Conservation Commission for the Director to recommend approval of its May 29, 2014, verified application ("Application") and the supporting exhibits without a hearing.

Applicant requests that the above-captioned matter be approved based upon: (i) the merits of the Application, and (ii) Applicant's sworn written testimony verifying sufficient facts along with exhibits that adequately support the relief requested in the Application. To Applicant's information and belief, no protests were timely filed in this matter.

WHEREFORE, Applicant requests that its request for a recommendation for approval of its Application without a hearing be granted.

DATED this 15<sup>th</sup> day of July, 2014.

Respectfully submitted,

ConocoPhillips Company

By: *Jamie L. Jost*

Jamie L. Jost

James P. Parrot

Jost & Shelton Energy Group, P.C.

Attorneys for Applicant

1675 Larimer Street, Suite 420

Denver, CO 80202

(720) 379-1812

# **ConocoPhillips Company**

**Cause No. 535  
Docket No. 1407-SP-2090**

**ConocoPhillips Company  
Diane Schaenen - Land Testimony  
Cause 535; Docket No. 1407-SP-2090  
Drilling and Spacing Unit Application – Niobrara Formation  
Unnamed Field, Arapahoe County, Colorado**

**July 2014 Colorado Oil and Gas Conservation Commission Hearing**

My name is Diane Schaenen, and I am currently employed as a Staff Landman for ConocoPhillips Company ("Applicant"). I have over thirty-five (35) years of experience as a landman, have been employed since 2011 with ConocoPhillips, and have worked directly with the properties that are the subject of this matter.

In support of Applicant's Application and my sworn testimony herein, I am submitting six (6) exhibits. This testimony and exhibits provide the supporting basis for approval of the Applicant's request for an order a) to vacate Order No. 535-244, and b) to establish an approximate 1280-acre exploratory drilling and spacing unit and c) to authorize up to two (2) horizontal wells in order to efficiently and economically recover the oil, gas and associated hydrocarbons from the Niobrara Formation underlying the following lands ("Application Lands"):

**Township 4 South, Range 63 West, 6<sup>th</sup> P.M.**  
Section 19: All

**Township 4 South, Range 64 West, 6<sup>th</sup> P.M.**  
Section 24: All

1,280 acres, more or less, Arapahoe County, Colorado

**Exhibit A-1: Leasehold Ownership Map:**

Exhibit A-1 is a map showing the location of the Application Lands and the leasehold ownership. The Application Lands consist of 100% FEE mineral interest. The following parties own leasehold or unleased mineral interests in the Application Lands:

<b><u>INTEREST OWNER(S)</u></b>	<b><u>UNIT WI</u></b>
ConocoPhillips Company	97.2478%
Mark A. & Carrie J. Keimig (UMI)	2.7522%
<b>TOTAL:</b>	<b><u>100.000000%</u></b>

**Exhibit A-2: Mineral Ownership Map:**

Exhibit A-4 is a map showing the surface ownership of the Application Lands, which is owned in fee. The Applicant is working to secure an agreement with the surface owner.

**Exhibit A-3: Property Location Plat:**

Attached as Exhibit A-3 is a Property Location Plat. The Applicant will conform to its statement that the treated perforation of the well(s) within the Niobrara Formation will not be closer than 460 feet from the boundaries of the 1280 acre drilling and spacing unit and not less than 960 feet from the treated interval of another well within the unit.

**Exhibit A-4: Surface Ownership Map:**

Exhibit A-4 is a map showing the surface ownership of the Application Lands, which is owned in FEE.

**Exhibit A-5: Topographic Map:**

Exhibit A-5 is a map showing the topography of the Application Lands. Approval of the Application for a drilling and spacing unit would allow for a less impactful surface development plan.

**Exhibit A-6: Interested Parties:**

Attached as Exhibit A-6 are interested parties within the Application Lands. Based upon our examination of relevant documents all of the interested parties received proper notice. As of the date of this testimony, the Applicant is not aware of any unresolved protests or objections to the Application.

**Affirmation**

The matters described herein were all conducted under my direction and control. I hereby swear that to the best of my knowledge and belief, all of the matters set forth herein and in the exhibits are true, correct, and accurate.



Diane Schaefer  
Staff Landman  
ConocoPhillips Company

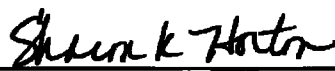
STATE OF TEXAS            )  
  ) ss.  
COUNTY OF HARRIS        )

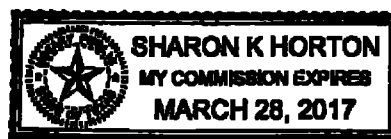
The foregoing instrument was subscribed and sworn to before me this 11<sup>th</sup> day of July, 2014, by Diane Schaefer, Rockies Business Unit, Niobrara Land, Staff Landman for ConocoPhillips Company.

Witness my hand and official seal.

[SEAL]

My commission expires: March 28, 2017

  
\_\_\_\_\_  
Notary Public



**Smoky Hill 20-24 1H**

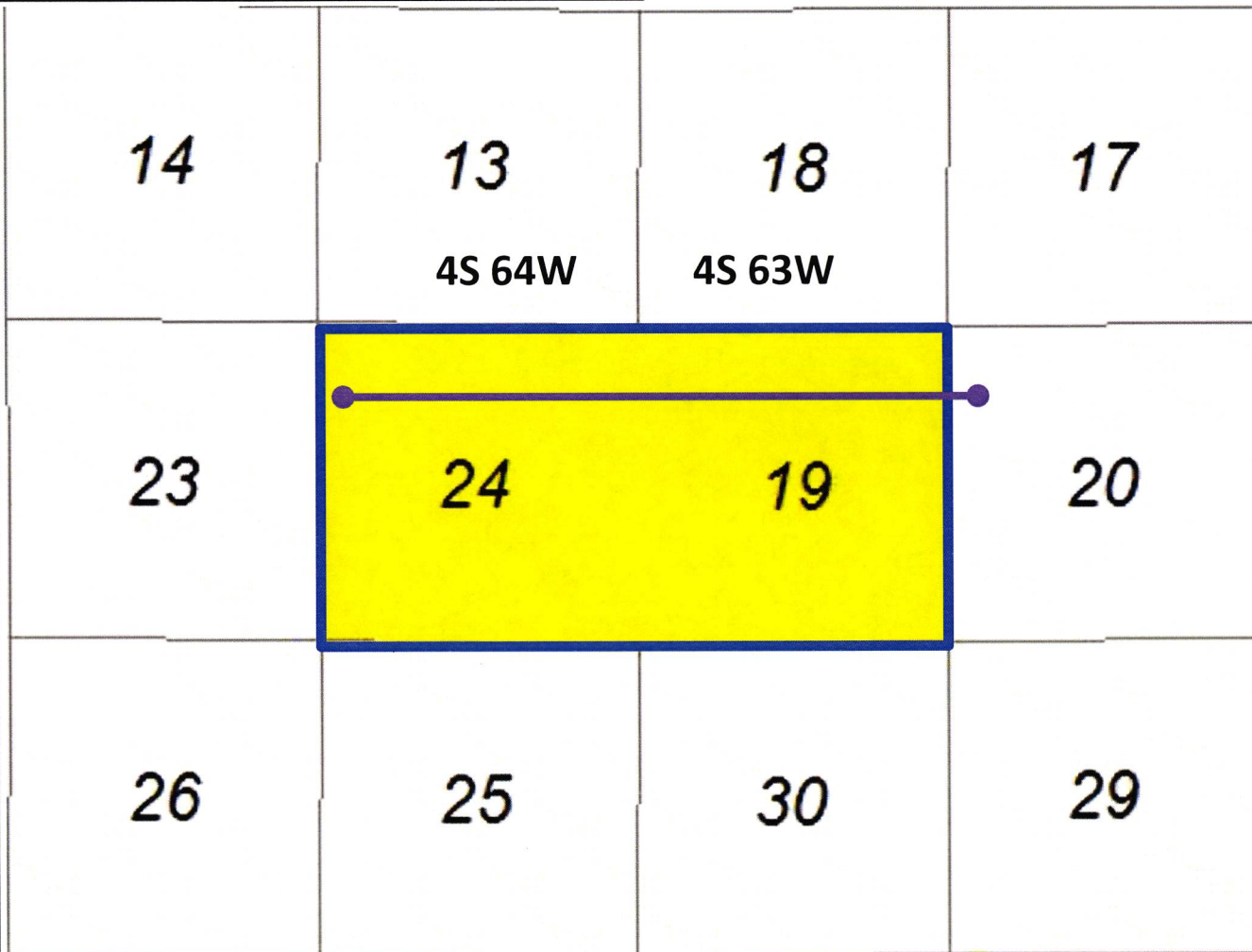
Exhibit : A-1

Docket: 1407-SP-2090 Cause: 585

Leasehold Ownership Map

Smoky Hill 20-24 1H

Location: Section: 20-(24) Township: 4S Range: 63W (64W)



**Leasehold Ownership**

 **Fee Surface Ownership**

Prepared by Lance  
Young

**Smoky Hill 20-24 1H**

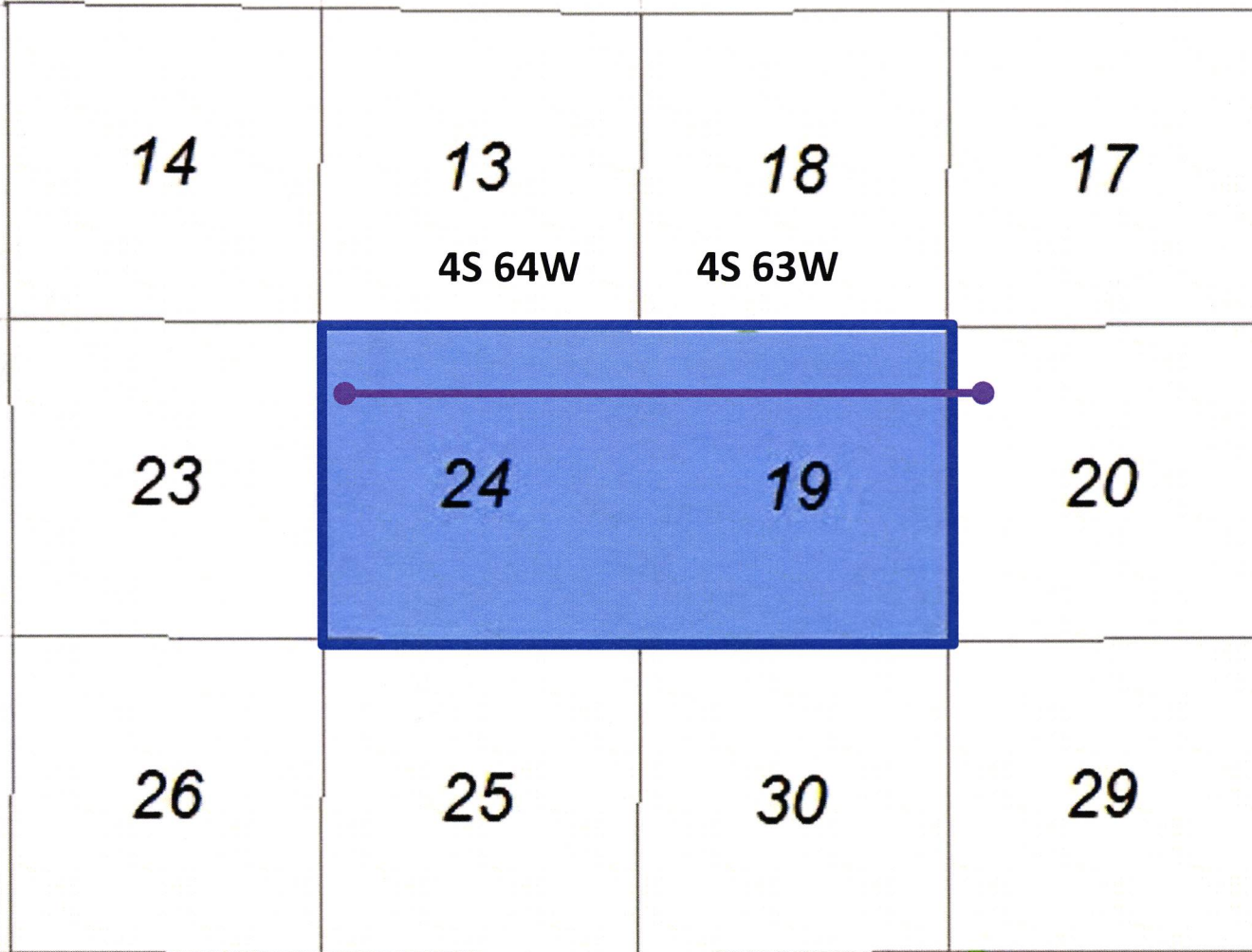
Exhibit : A-2

Docket: 1407-SP-2090 Cause: 585

Mineral Ownership Map

Smoky Hill 20-24 1H

Location: Section: 20-(24) Township: 4S Range: 63W (64W)



**Mineral Ownership**

 Fee Mineral Ownership

Prepared by Lance  
Young

# Smoky Hill 20-24 1H

Exhibit : A-3

Docket: 1407-SP-2090 Cause: 585

Property Location Plat

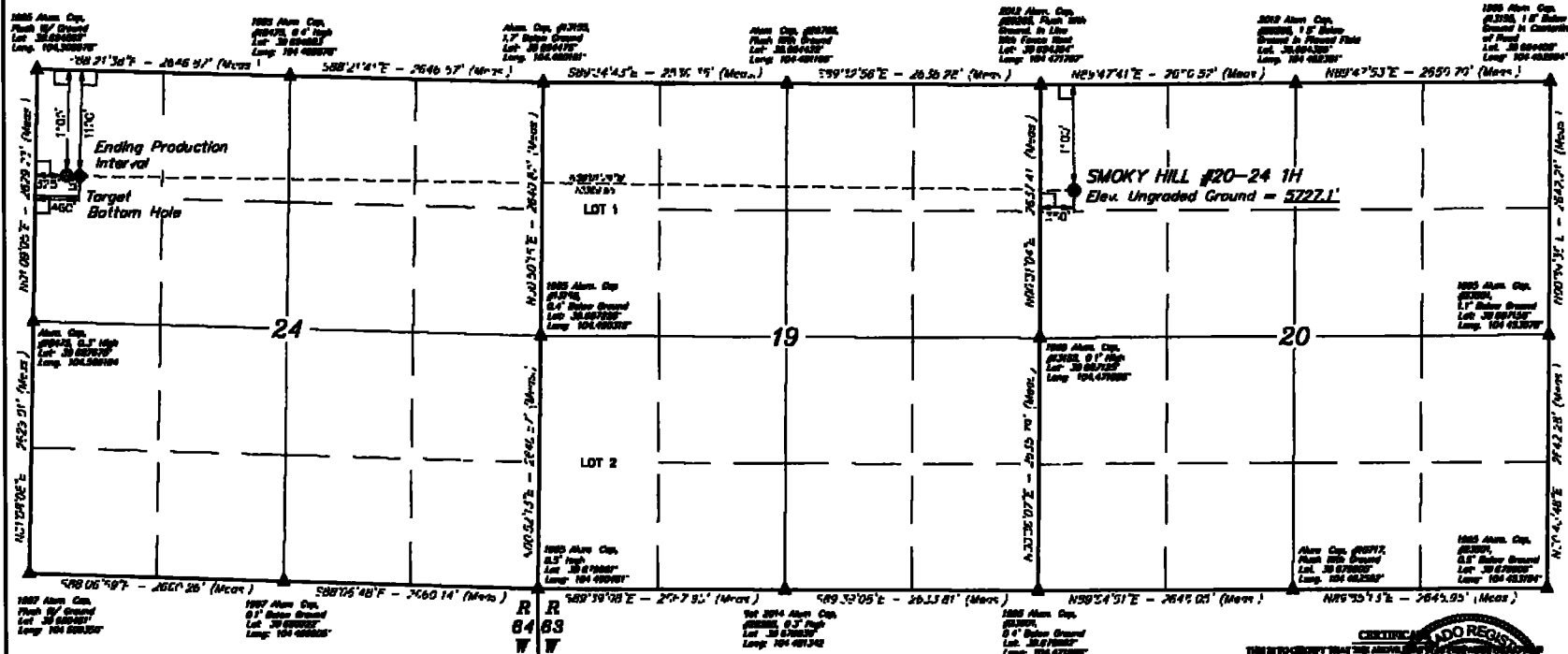
Smoky Hill 20-24 1H

Location: Section: 20-(24) Township: 4S Range: 63W (64W)

T4S, R63W, 6th P.M.

ConocoPhillips Company

SMOKY HILL #20-24 1H  
NW 1/4 NW 1/4 SECTION 24, T4S, R63W, 6th P.M.  
ARAPAHOE COUNTY, COLORADO

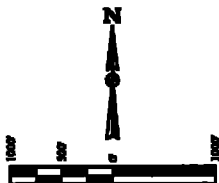


LINE TABLE		
LINE	DIRECTION	LENGTH
1	N 89° 21' 30" W	158.07'

BASE OF BEARINGS  
BASE OF BEARINGS IS A G.P.E. OBSERVATION  
BENCHMARK #74 LOCATED ON THE SECTION LINE BETWEEN  
SECTIONS 12 & 13, T5S, R64W, 6th P.M. TAKEN FROM 1908  
PUBLISHED DATUM BY THE UNITED STATES DEPARTMENT OF  
THE INTERIOR, GEOLOGICAL SURVEY AS BEING 684.41 FEET.

## LEGEND:

- 6" S.W.C.
- PROPOSED WELLHEAD
- PRODUCTION INTERVAL
- TARGET BOTTOM HOLE
- ▲ SECTION CORNERS LOCATED



SECTION 19	SECTION 20	SECTION 24
1. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	1. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	1. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
2. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	2. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	2. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
3. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	3. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	3. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
4. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	4. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	4. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
5. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	5. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	5. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
6. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	6. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	6. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
7. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	7. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	7. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
8. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	8. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	8. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
9. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	9. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	9. BOUNDARY LINE BETWEEN SECTIONS 24 & 19
10. BOUNDARY LINE BETWEEN SECTIONS 19 & 20	10. BOUNDARY LINE BETWEEN SECTIONS 20 & 24	10. BOUNDARY LINE BETWEEN SECTIONS 24 & 19

FOOT = 1.2



Uta, LLC  
Corporate Office: 55 South 200 East  
Vernal, UT 84076 • (435) 780-1817

SURVEYED BY: DARRIN SHANES D.M.S.	DATE: 03-05-14
DRAWN BY: J.E.	DATE: 03-05-14
SCALE: 1" = 100'	REVISION: 00-00-00

WELL LOCATION PLAT

Prepared by Lance Young



**Smoky Hill 20-24 1H**

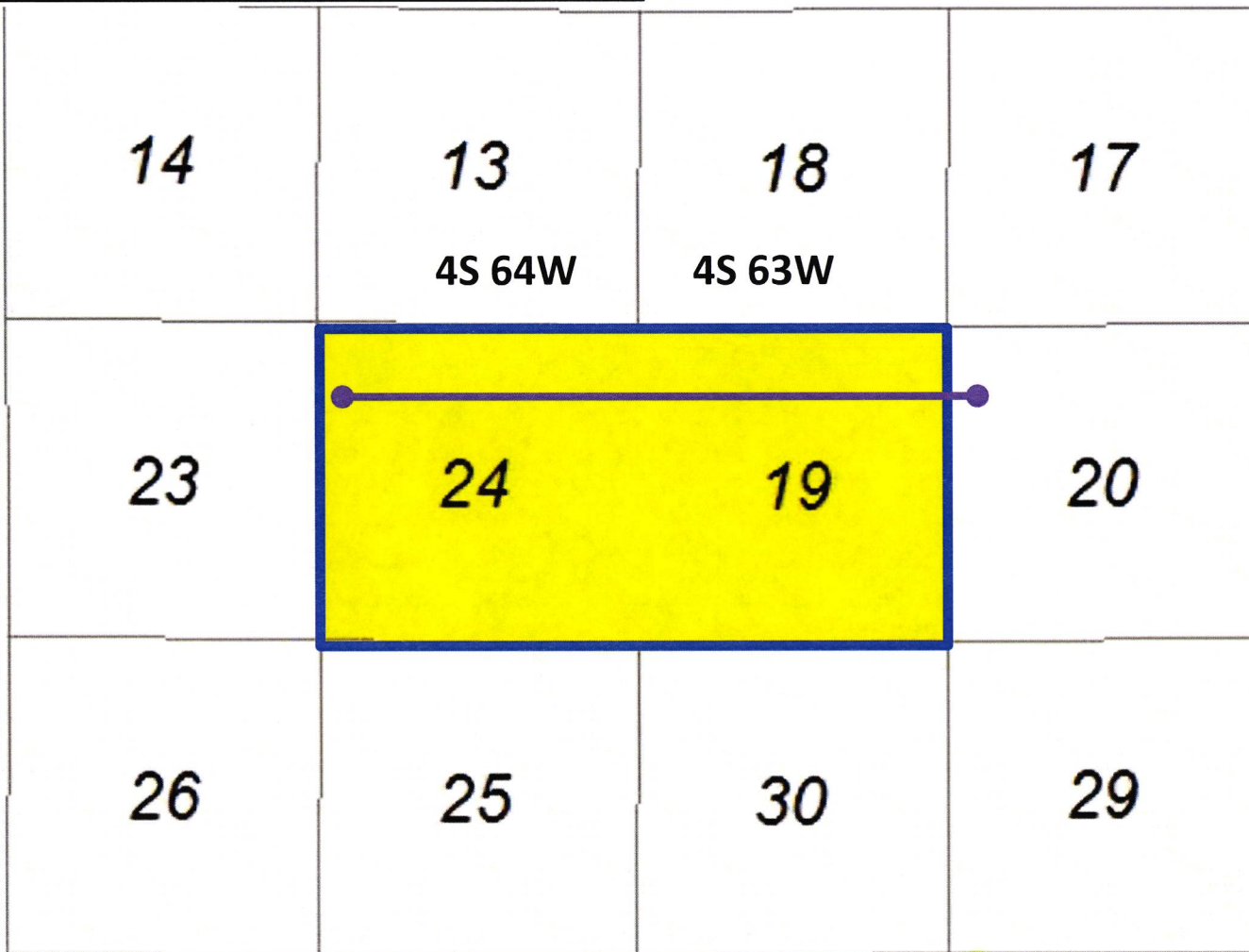
Exhibit : A-4

Docket: 1407-SP-2090 Cause: 585

Surface Ownership Map

Smoky Hill 20-24 1H

Location: Section: 20-(24) Township: 4S Range: 63W (64W)



**Surface Ownership**



**Majority Ownership**

Prepared by Lance  
Young

Smoky Hill 20-24 1H

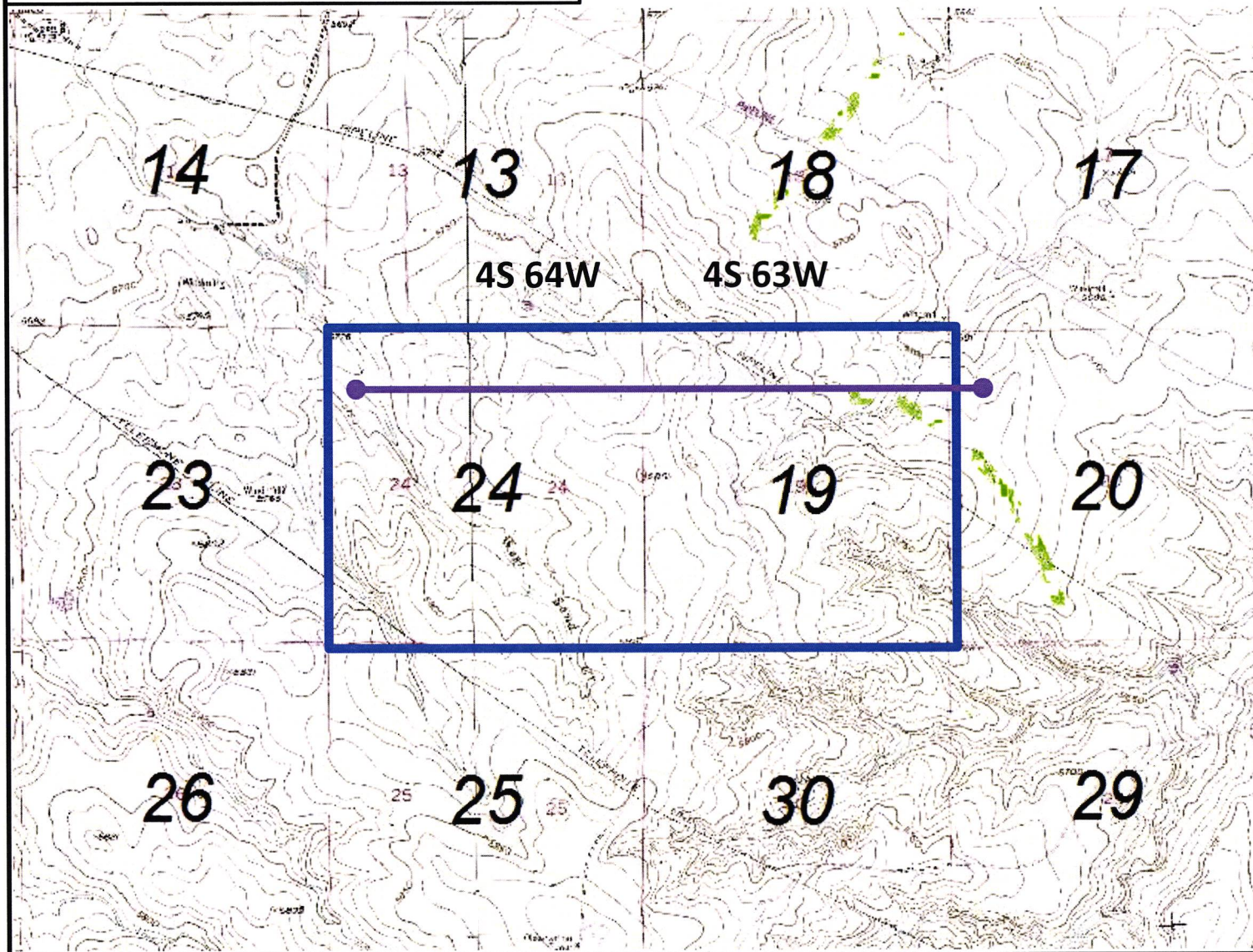
Exhibit : A-5

Docket: 1407-SP-2090 Cause: 585

Topographic Map

Smoky Hill 20-24 1H

Location: Section: 20-(24) Township: 4S Range: 63W (64W)



Prepared by Lance  
Young

**Exhibit A-6  
Interested Party List  
Smoky Hill 19-24 1H**

**Harvey Howard Halstead  
1001 S County Road 129  
Bennett, CO 80102**

**Anadarko Land Corp.  
Anadarko E&P Company LP  
P.O. Box 173779  
Denver, CO 80217-3779**

**Erick Marshall Ricke  
P O Box 338  
Bennett, CO 80102-0338**

**James T Rheinheimer & Tamra K  
Rheinheimer  
1275 S County Road 121  
Bennett, CO 80102**

**Theresia Pauline Cavanaugh  
1441 E. 105th  
Northglenn, CO 80233**

**Pamco Investment Corp  
5520 Blue Sage Dr.  
Littleton, CO 80123**

**Troy R Leonard & Tara Leonard, JTS  
1156 S. Split Rock Rd  
Bennett, CO 80102**

**Ronn M Johnson  
1258 S Split Rock Rd  
Bennett, CO 80102**

**Michael A Valencia  
1145 S Split Rock Rd  
Bennett, CO 80102**

**Pat & Cheryl L Taylor  
1303 S Split Rock Rd  
Bennett, CO 80102**

**Kenneth Randy Rester Jr & Loretta  
Rester  
1350 S Split Rock Rd  
Bennett, CO 80102**

**Curtis A Rule & Martha R Rule  
1375 S. Schumaker Rd.  
Bennett, CO 80102**

**Michael R & Tamara S Campfield  
1475 S Schumaker Rd  
Bennett, CO 80102**

**Cynthia V Thomas  
1506 S Split Rock Rd  
Bennett, CO 80102**

**Lawrence C Thomas  
1506 S Split Rock Rd  
Bennett, CO 80102**

**John J Murphy & Debbie M Murphy  
1845 E. Crestline Circle  
Aurora, CO 80015**

**Phillip J Hartzell  
1601 S Split Rock Rd  
Bennett, CO 80102**

**Kelly A & Tamara S Uhl  
1691 S Split Rd  
Bennett, CO 80102**

**Edward L Tate & Donna Raelene Tate  
1692 S Split Rock Rd  
Bennett, CO 80102**

**Sonja Spiegel  
7158 W Roxbury Ave  
Littleton, CO 80128**

**Mark A & Carrie J Keimig  
40950 E. Colorado Ave.  
Bennett, CO 80102-8415**

**Tom Schreiner  
Energy Liaison  
Colorado Parks and Wildlife  
Northeast Regional Office  
6060 Broadway  
Denver, CO 80216**

**Kent Kuster  
Colorado Department of Public Health &  
Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530**

**Diane Kocis  
Arapahoe County Public Works and  
Development  
6924 South Lima Street  
Centennial, CO 80112**

**ConocoPhillips Company**

**Geoscience Testimony**

**Spacing Application**

**Niobrara Formation**

**Colorado Oil and Gas Conservation Commission Hearing**

**Cause No. 535**

**Docket No. 1407-SP-2090**

**Township 4 South, Range 63 West, Section 19 & Township 4 South, Range 64 West, Section 24**

**Arapahoe County**

My name is Zachary S. Mester, and I am currently employed as a Senior Geologist for ConocoPhillips Company. I received a Bachelor's degree in Geology from Florida Atlantic University (2007) and a Master's Degree in Geology from Florida Atlantic University (2011). I have 4 years of experience in the oil and gas industry.

I have worked directly with the properties and lands that are subject of this matter.

In support of Applicant's application and my sworn testimony herein, I am submitting six (6) exhibits. The exhibits are attached to my sworn testimony and form the basis for the Applicant's request to gain approval for establishing an approximate 1280 acre drilling and spacing unit for the production of oil, gas and associated hydrocarbons from the Niobrara formation underlying the following lands ("Application Lands")

Township 4 South, Range 63 West, 6<sup>th</sup> P.M.

Section 19: All

Township 4 South, Range 64 West, 6<sup>th</sup> P.M.

Section 24: All

Arapahoe County, Colorado

The Niobrara Formation is a Cretaceous sequence of chalks, marls, limestones, and shales that were deposited in the Western Interior Seaway. This formation is regionally extensive and found throughout most of the Rocky Mountain Region and is in the subsurface throughout the Denver-Julesburg Basin. It is my conclusion that the Niobrara Formation underlies the Application Lands to be spaced.

The six geologic exhibits herein were prepared and presented as follows:

Exhibit No. G-1                      Niobrara Type Log

Exhibit No. G-1 is the Type Log used for this area. The log is from Andrau Enterprises' #13 Owl Creek, located in Section 29, Township 29 North, Range 64 West. This log was originally published by Longman et al. (1998) and is widely used throughout literature and industry as an established type log for this part of the Denver-Julesburg Basin. Displayed on this log are typical Gamma Ray and Resistivity curves associated with modern open-hole logging of the Niobrara in this area. Scales of each are posted at the bottom of the log. The targeted interval is the Smoky Hill Shale Member of the Niobrara formation, which is regionally defined as the upper member of the Niobrara formation, above the Ft Hayes Limestone. The Niobrara top is identified as the upper red line on the log. The base of the Niobrara is defined as the top of the Ft Hayes Limestone Sandstone (green line). The log exhibits a gamma ray and resistivity signature similar to logs derived from the Niobrara producers in nearby Arapahoe County. An increased resistivity measurement is commonly used as a proxy for hydrocarbon presence in the reservoir.



**Exhibit No. G-2**

**Spacing Locator and Cross Section Line Indicator Map**

Exhibit No. G-2 displays the drilling and spacing units ConocoPhillips is requesting consideration for approval from the Oil and Gas Conservation Commission to establish a 1280 acre drilling and spacing unit for the Niobrara formation in order to drill horizontal wells in this section. The area Township 4 South, Range 63 West, Section 19 & Township 4 South, Range 64 West, Section 24, in Arapahoe County, Colorado. This area is represented on the map as a red filled rectangle. The location of the cross sections displayed in Exhibits G-3 and G-4 are identified as blue and green lines, respectively, on the map.

**Exhibit No. G-3**

**Cross Section A-A'**

Exhibit No. G-3 is a cross section of wells in the area which comprises the drilling and spacing unit, showing the Niobrara section. The cross section extends generally from west (A) to east (A') and is hung on the top of the Niobrara. The formation annotation on this cross section is consistent with that of the type log shown in Exhibit No. G-1. All the logs display gamma ray and resistivity curves. Resistivity measurements above 25 ohms are shaded red and are shown as an indication for the likely presence of hydrocarbons in the reservoir. Logs on the cross section exhibit resistivity measurements comparable to productive Niobrara wells located in Arapahoe County.

**Exhibit No. G-4**

**Cross Section B-B'**

Exhibit No. G-4 is a cross section of wells in the area which comprises the drilling and spacing unit, showing the Niobrara section. The cross section extends generally from north (B) to south (B') and is hung on the top of the Niobrara. The formation annotation on this cross section is consistent with that of the type log shown in Exhibit No. G-1. All the logs display gamma ray and resistivity curves. Resistivity measurements above 25 ohms are shaded red and are shown as an indication for the likely presence of hydrocarbons in the reservoir. Logs on the cross section exhibit resistivity measurements comparable to productive Niobrara wells located in Arapahoe County.

**Exhibit No. G-5**

**Niobrara Top SubSea Structure**

Exhibit No. G-5 shows the top subsea structure of the top Niobrara contoured in 50' intervals. Niobrara subsea values are posted on the bold contour lines at 100' intervals. This map reflects the regional monoclonal dip to the west existing in this area.

**Exhibit No. G-6**

**Niobrara Gross Thickness Isopach**

Exhibit No. G-6 shows the gross thickness from the top of the Niobrara to the top of the Ft Hayes Limestone, contoured in 10' increments. Thickness values are posted on each contour line. In the spacing area, total Niobrara thickness averages around 330'. Local depositional variations in thickness are minimal and rarely exceed 10' to 15'. The Niobrara Formation is shown to thicken gradually to the north in this area.

All six (6) Exhibits are intended to help illustrate:

- The Niobrara is productive in the area
- The Niobrara is fairly uniform in thickness and is continuous throughout the area.

The geologic attributes described above, in conjunction with the engineering testimony submitted for this hearing, demonstrate the viability of establishing a 1280 acre drilling and spacing program for sections 19 and 24 in this area.

**Affirmation**

The matters described herein were conducted under my direction and control. To the best of my knowledge and belief, all of the matters set forth herein and in the exhibits are true, correct and accurate.

Dated this 2nd day of July, 2014

  
\_\_\_\_\_  
Zachary S. Mester, Senior Geologist  
ConocoPhillips Company

STATE OF TEXAS

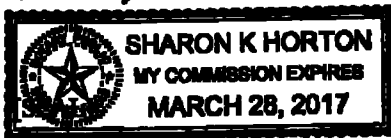
)  
)ss.

COUNTY OF HARRIS

)

The foregoing instrument was subscribed and sworn to before me this 2nd day of July, 2014 by Zachary S. Mester, a geologist for ConocoPhillips Company.

Witness my hand and official seal.



My commission expires: March 28, 2017

Sharon K Horton

Notary Public

**Mester, Zachary S.**

---

**Experience**

- |                          |  |                    |
|--------------------------|--|--------------------|
| <b>02.2014 – Present</b> | <b>ConocoPhillips Company</b>  | <b>Houston, TX</b> |
|                          | <ul style="list-style-type: none"><li>• <b>2014-Present: Senior Geologist, Niobrara Implementation Team, Rockies Business Unit</b></li></ul> |                    |
| <b>09.2012 - 02.2014</b> | <b>StatOil Oil and Gas, LLP</b>  | <b>Austin, TX</b>  |
|                          | <ul style="list-style-type: none"><li>• <b>2012-2014 – Geologist, Geo-Operations Team, Bakken Business Unit</b></li></ul>                    |                    |
| <b>04-2011 – 09.2012</b> | <b>Border To Border Exploration, LLC</b>   | <b>Austin, TX</b>  |
|                          | <ul style="list-style-type: none"><li>• <b>2011-2012 – Geologist, Exploration Team</b></li></ul>   |                    |

**Education**

- |                            |                                    |                       |
|----------------------------|------------------------------------|-----------------------|
| <b>2008-2011</b>           | <b>Florida Atlantic University</b> | <b>Boca Raton, FL</b> |
| <b>Masters - Geology</b>   |                                    |                       |
| <b>2004-2007</b>           | <b>Florida Atlantic University</b> | <b>Boca Raton, FL</b> |
| <b>Bachelors - Geology</b> |                                    |                       |



## Type Log

Andrau Enterprises

#13 Owl Creek

NW NW Sec. 29 T7N R64W

Weld County, CO

(Modified from Longman et al., 1998)

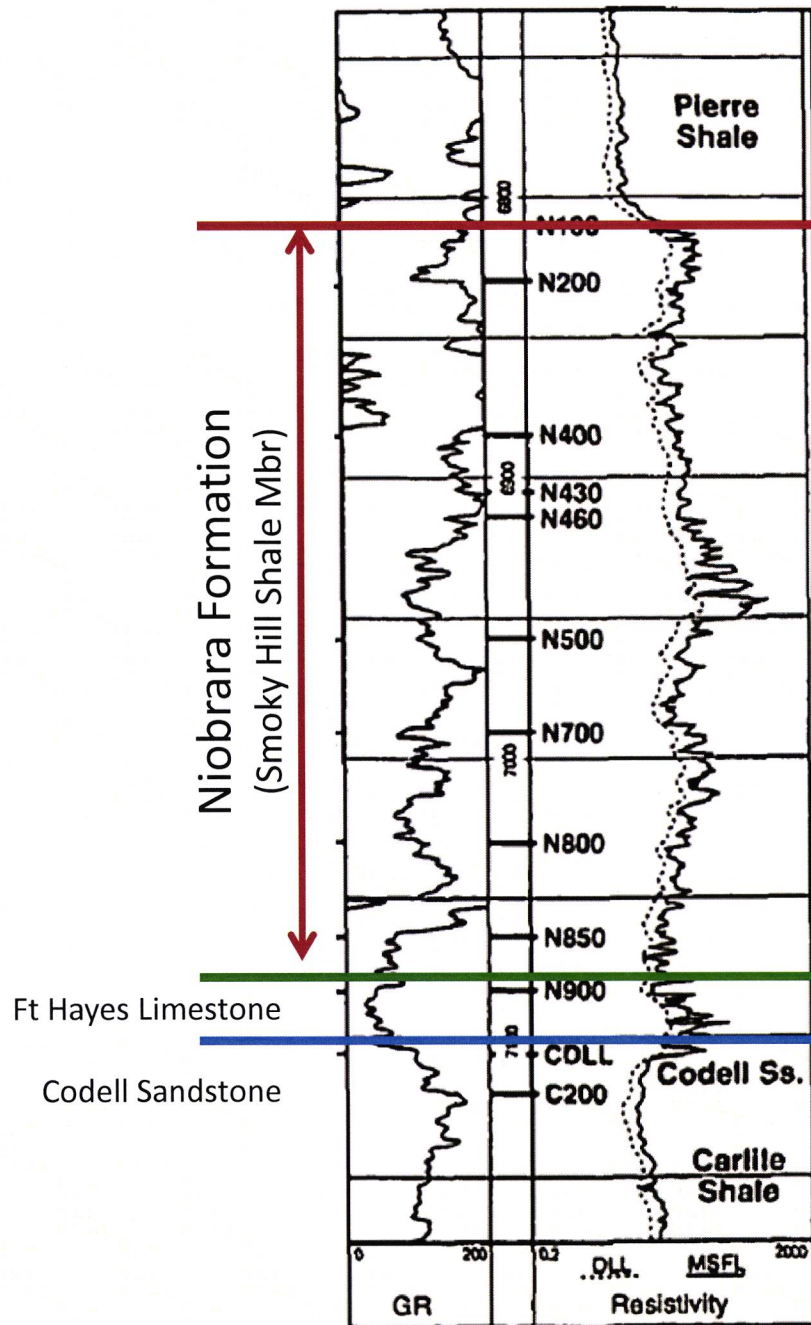
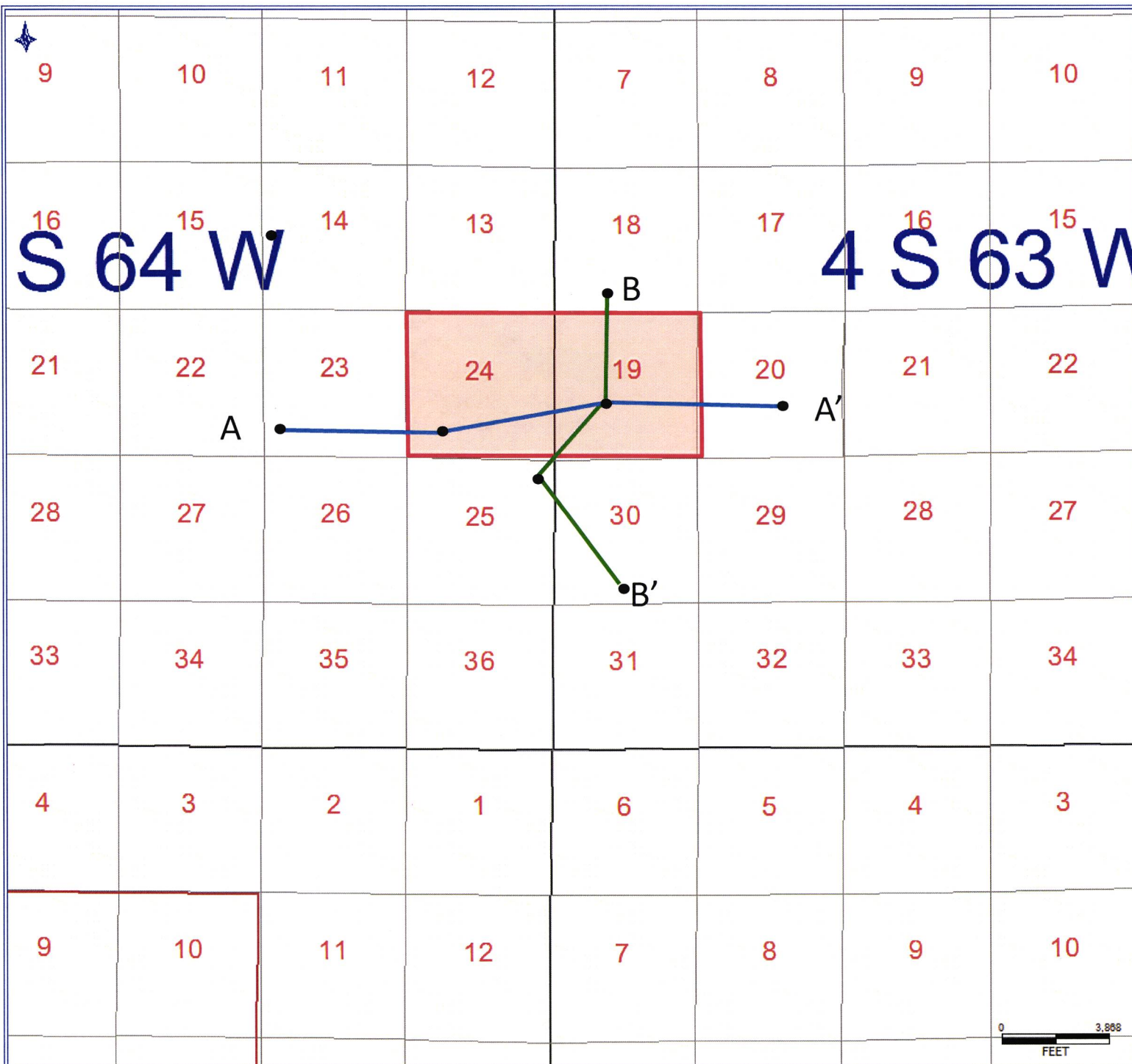


Exhibit: G-1  
Cause No. 535  
Docket No. 1407-SP-2090




 1280 Application Lands

Exhibit: G-2  
Cause No. 535  
Docket No. **1407-SP-2090**



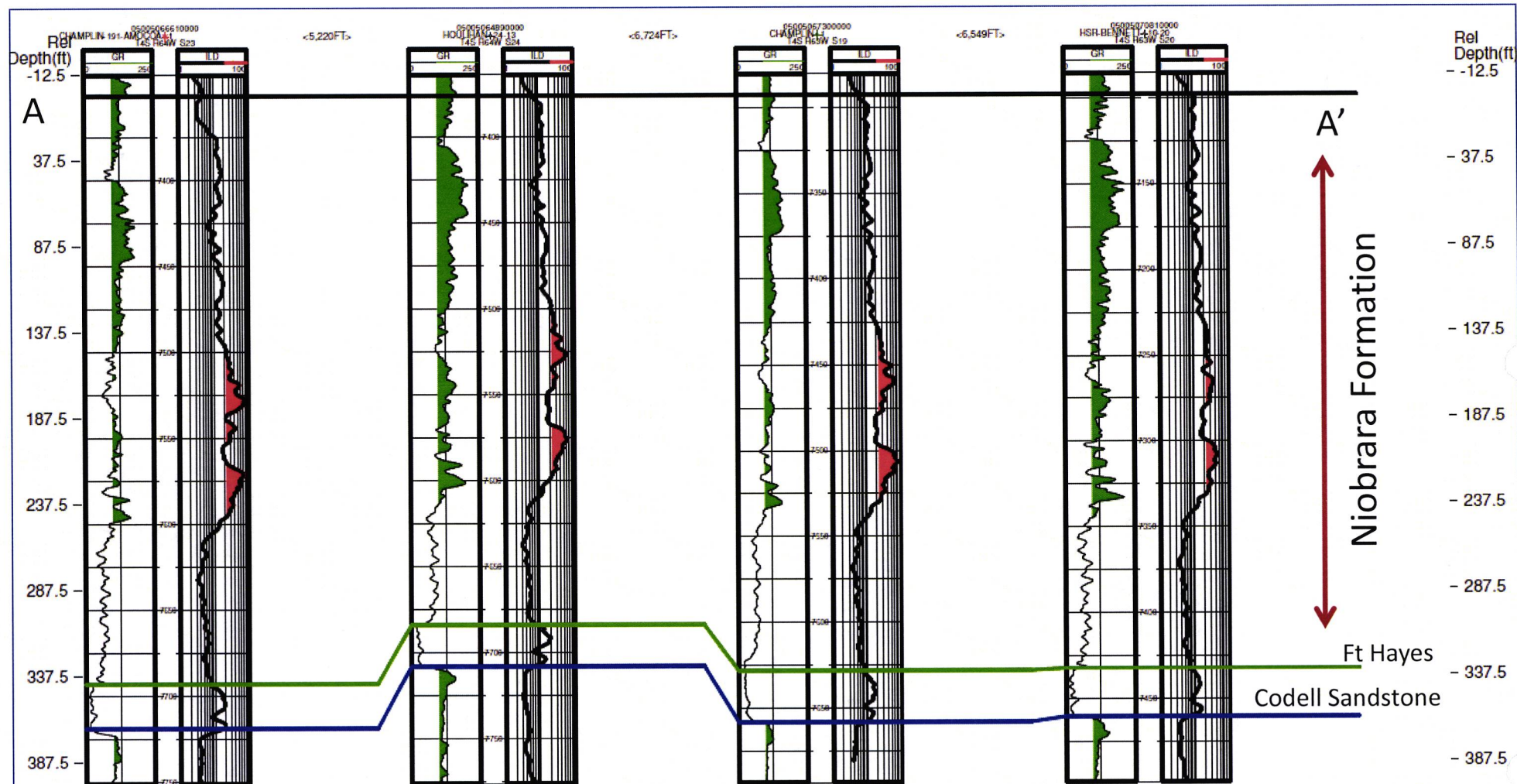


Exhibit: G-3  
Cause No. 535  
Docket No. 1407-SP-2090

**ConocoPhillips**

East-West Cross Section  
Smoky Hill 20-24

Horizontal Scale = 324.5  
Vertical Scale = 10.0  
Vertical Exaggeration = 32.4x

LOG CURVES  
GR (GAPI)  
CUTOFF = 100.00  
ILD (OHMM)  
CUTOFF = 25.00

Well Name Well Number  
This Page Only



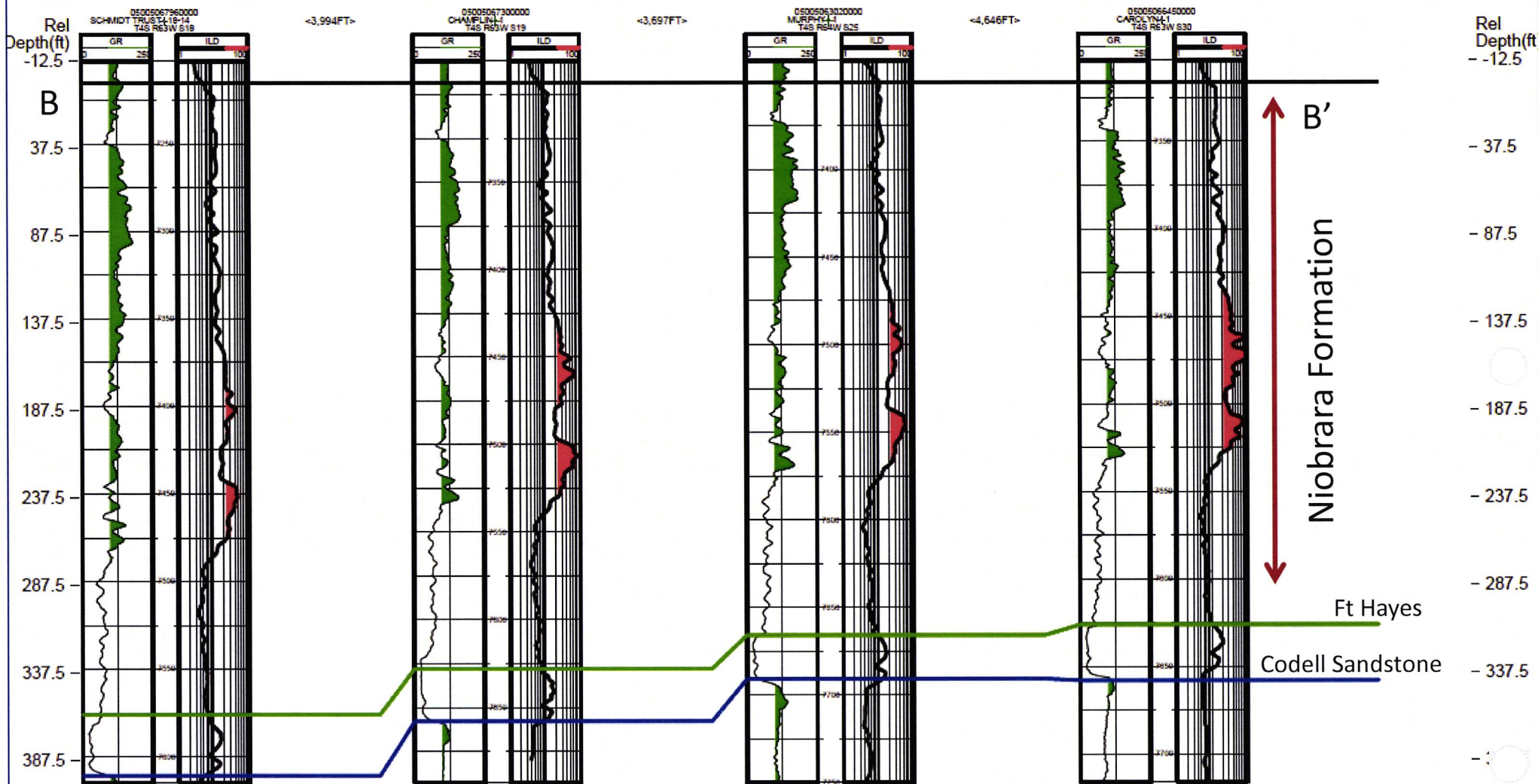


Exhibit: G-4  
Cause No. 535  
Docket No. 1407-SP-2090

ConocoPhillips

North-South Cross Section

Smoky Hill 20-24

Horizontal Scale = 239.7

Vertical Scale = 10.0

Vertical Exaggeration = 24.0x

LOG CURVES

0 250  
GR (GAPI)  
CUTOFF = 100.00

1 100  
ILD (OHMM)  
CUTOFF = 25.00

UWI

Well Name Well Number

Turn-Page-Go

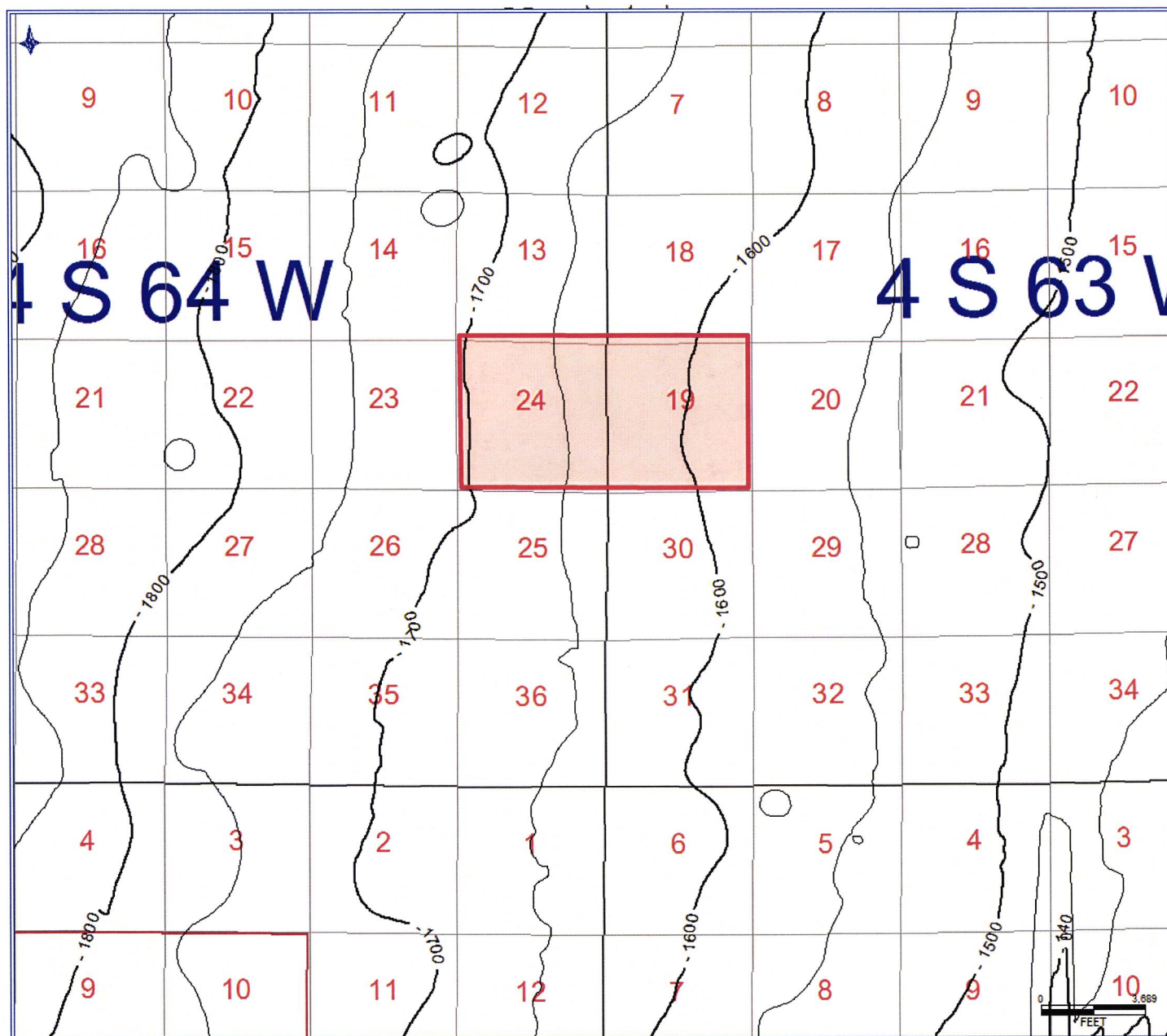


Exhibit: G-5  
Cause No. 535  
Docket No. **1407-SP-2090**

 1280 Application Lands

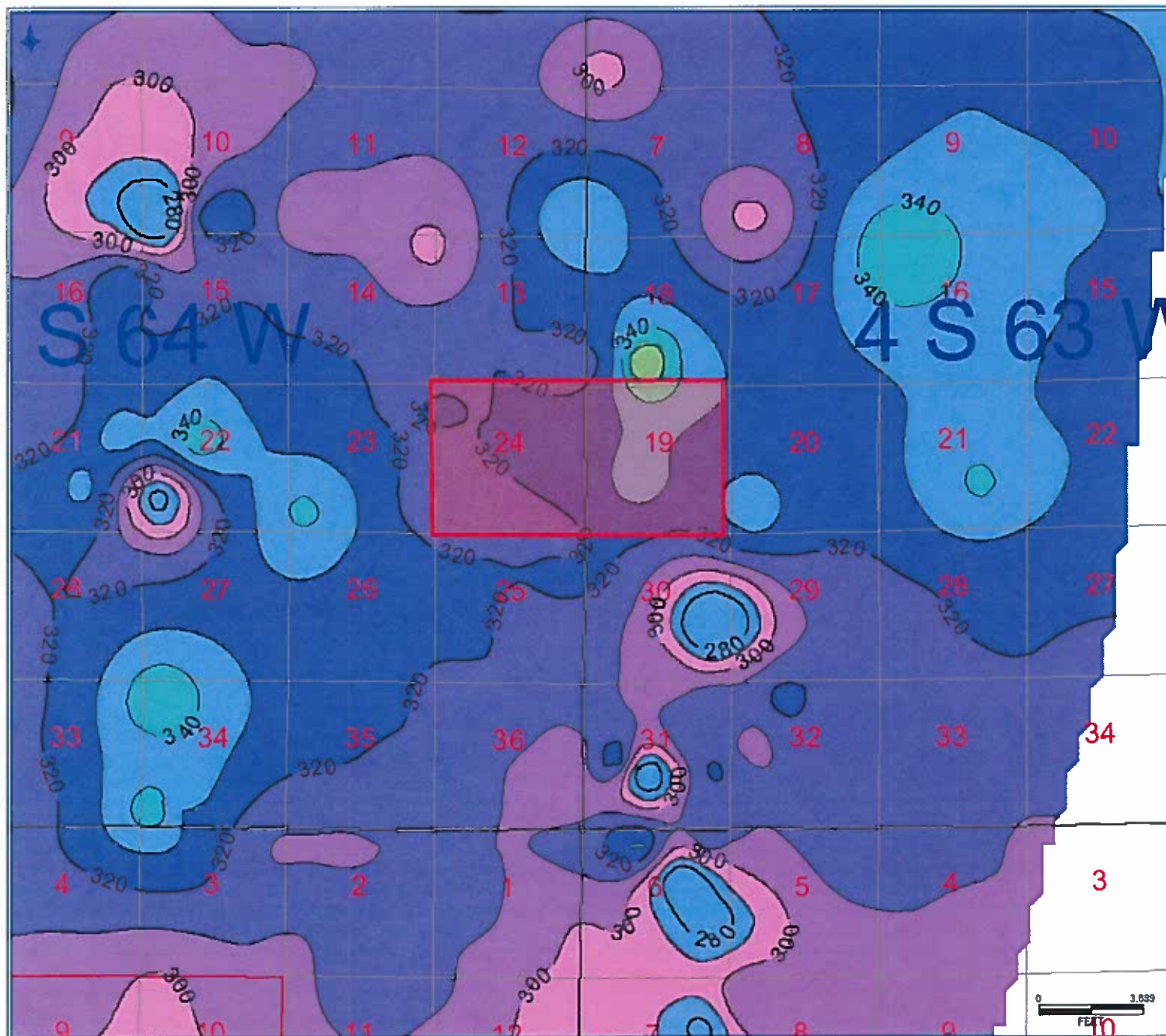


Top Niobrara Structure Map  
SubSea TVD (Feet)  
Contours = 50 Ft

July 1 2014



Exhibit: G-6  
Cause No. 535  
Docket No. 1407-SP-2090



 1280 Application Lands

  
**ConocoPhillips**

Niobrara Isopach Map  
Thickness (Feet)  
Contours = 10 Ft

July 1 2014

**Engineering Testimony – Clint Hutchinson**

**Cause No. 535; Docket No. 1407-SP-2090**

**1280 Acres Spacing Application – Niobrara Formation**

**Arapahoe County**

**July 2014 Colorado Oil and Gas Conservation Commission Hearing**

In support of the Verified Application of ConocoPhillips in Cause No. 535, Docket 1407-SP-2090 (the Application), Clint Hutchinson, Lead Reservoir Engineer, upon oath, disposes and states as follows:

- a. I am currently employed as a Reservoir Engineer at ConocoPhillips. I have knowledge of the Reservoir Engineering characteristics of the Niobrara formation underlying the Application Lands. I have over 15 years of experience in the oil and gas industry. A true and correct copy of my resume is included as Exhibit E-1. To the best of my knowledge and belief, each of these Exhibits is correct and accurate as of the date of this Verified Statement.
- b. Exhibit E-2 is a base map of the application lands.
- c. Exhibit E-3 demonstrates the additional drainage area available with a long lateral. Allowing for setbacks, the total length of two short laterals is 8,720 feet as compared to the long lateral length of 9,640 feet. The long lateral exposes an additional 920 feet of reservoir. The drilling of a long lateral would permit the recovery with horizontal wells of the resource within the 920-foot area between the two sections which would otherwise not be recovered with 640-acre spacing and 460-foot setbacks on each side of the section line. Drilling a long lateral prevents waste by recovering additional oil and gas resources.
- d. Exhibit E-4 is the type curve developed from my study of offset wells in the Wattenberg Field. This type curve represents the oil profile developed from 27 horizontal wells completed in the Niobrara formation with laterals greater than 6,000 feet in length. Estimated Ultimate Recovery (EUR) for the oil type curve is 208,163 barrels of oil.
- e. Exhibit E-5 shows the estimated drainage area for a horizontal Niobrara well on the Application Lands assuming my estimated Wattenberg oil type curve EUR of 208,163 barrels. ConocoPhillips rock and fluid parameters used in this estimate include a net pay of 40 feet, a porosity of 7.0%, a water saturation of 20%, a formation volume factor of 1.7 reservoir barrels per stock tank barrel, and a recovery factor of 5%.

The effective porosity was derived from a combination of conventional core analysis and interpretation of the bulk density from wireline logging. Bulk density was utilized as an input to a regression tied to the conventional core porosity analysis. The statistical average porosity across our targeted zone in the Niobrara is approximately 7%. The net thickness was derived by utilizing porosity and water saturation cut-offs. The porosity was derived as stated above and the water saturation was an interpretation of our target formation in the Niobrara based on Archie's equation. The statistical average water saturation and net thickness across our targeted zone is approximately 20% and 40 feet, respectively. The petrophysical parameters were statistical averages derived from our type log, the Tebo 29 1H. However, these values are somewhat consistent across acreage we have assessed. The formation volume factor was calculated from company PVT analysis.

The estimated drainage area is not greater than 407.3 acres per individual well. If a second optional well is drilled, total drainage area from both wells is estimated to be not greater than 814.5 acres. Thus, the proposed 1280 acre drilling and spacing units are not smaller than the maximum area that can be economically and efficiently drained by a horizontal well in the Niobrara formation within each such unit, and a second optional horizontal well in each such unit would promote efficient drainage and not result in waste.

- f. Economics were run using completed well costs of \$14,520,881 for the Smoky Hill 4-63 19-24 1H, the type curve presented in this exhibit, and ConocoPhillips operating cost assumptions. The single well economics meet the Company's requirements for exploration wells.
- g. Exhibit E-6 is a summary of my conclusions relevant to this Application.
  - 1. The drainage area of a horizontal well in the Niobrara formation of the Application Lands having a wellbore lateral of greater than 6,000 feet in length is estimated to be no greater than 407.3 acres.
  - 2. A horizontal well with a greater than 6,000 foot lateral producing from the Niobrara formation meets ConocoPhillips' economic requirements for explorations wells.
  - 3. The proposed 1280 acre drilling and spacing unit, with the requested setbacks, for a horizontal well in the Niobrara formation in the Application Lands, and authorization for an optional second such well in each unit, will promote efficient drainage, protect correlative rights, and prevent waste. The drilling of a long lateral will recover resource within the 920 foot area between the two sections which would otherwise not be recovered with 640-acre spacing and 460-foot setbacks.



I reserve the right to modify or supplement this testimony and the attached exhibits prior to the July 2014 COGCC hearing.

Clint Hutchinson  
Clint Hutchinson

Subscribed to and sworn to before me this 7<sup>th</sup> day of July, 2014, by Clint Hutchinson, Lead Reservoir Engineer.

Notary Public Sharon K Horton

My Commission Expires: March 28, 2017

Address: 600N Dairy Ashford, Houston, TX 77079



\*\*\*\*\*Exhibits E-1 through E-6 Follow on the Next Pages\*\*\*\*\*

# Resume

**CLINT HUTCHINSON**  
ConocoPhillips Company  
P.O. Box 2197 Houston, TX 77252  
Clint.L.Hutchinson@ConocoPhillips.com  
281-647-1813

**2013: Lead Reservoir Engineer – Niobrara Implementation – ConocoPhillips** Houston, TX

Responsible for providing guidance and mentorship to reservoir engineering staff. Coordinate production performance analysis and reservoir studies.

**2009-2013: Staff Reservoir Engineer – Eagle Ford Development - ConocoPhillips** Houston, TX

Responsible for ensuring the implementation of a multi-rig drilling program. Identified and prepared prospects for drilling. Prepared field development plans. Developed type curves. Performed production performance analysis. Coordinated completion studies. Performed reservoir studies. Evaluated acreage for acquisition.

**2003-2009: Staff Reservoir Engineer – South Texas Development- ConocoPhillips** Houston, TX

Responsible for ensuring the implementation of a multi-rig drilling program. Identified and prepared prospects for drilling. Performed production performance analysis. Evaluated acreage for acquisition.

**2001-2003: Reservoir Engineer – Gulf Coast Development - ConocoPhillips** Houston, TX

Evaluated drilling prospects. Prepared acreage for disposition.

**1999-1997: Reservoir Engineer – San Juan Development – Phillips Petroleum** Farmington, NM

Identified and prepared prospects for drilling. Performed performance analysis. Maintained reserve forecasts.

**1996-1999: Reservoir Engineer – Gulf Coast Development – Phillips Petroleum** Houston, TX

Evaluated drilling and recompletion prospects. Maintained reserve forecasts. Prepared acreage for disposition.

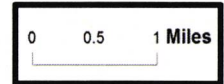
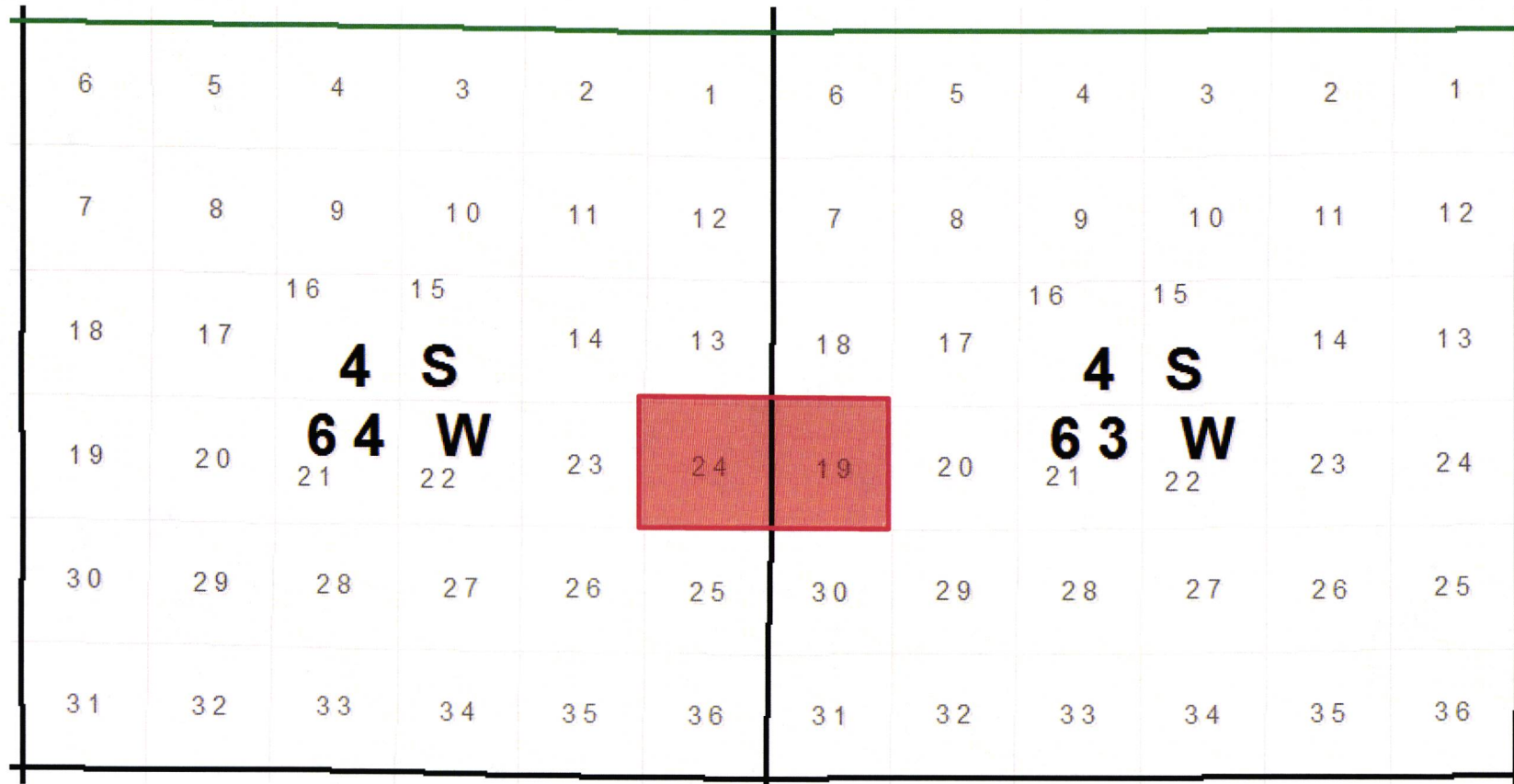
## Education

**1992-1996: Colorado School of Mines**  
B.S. Petroleum Engineering

Golden, CO

**Exhibit E – 1**  
**Cause #535**  
**Docket #1407-SP-2090**

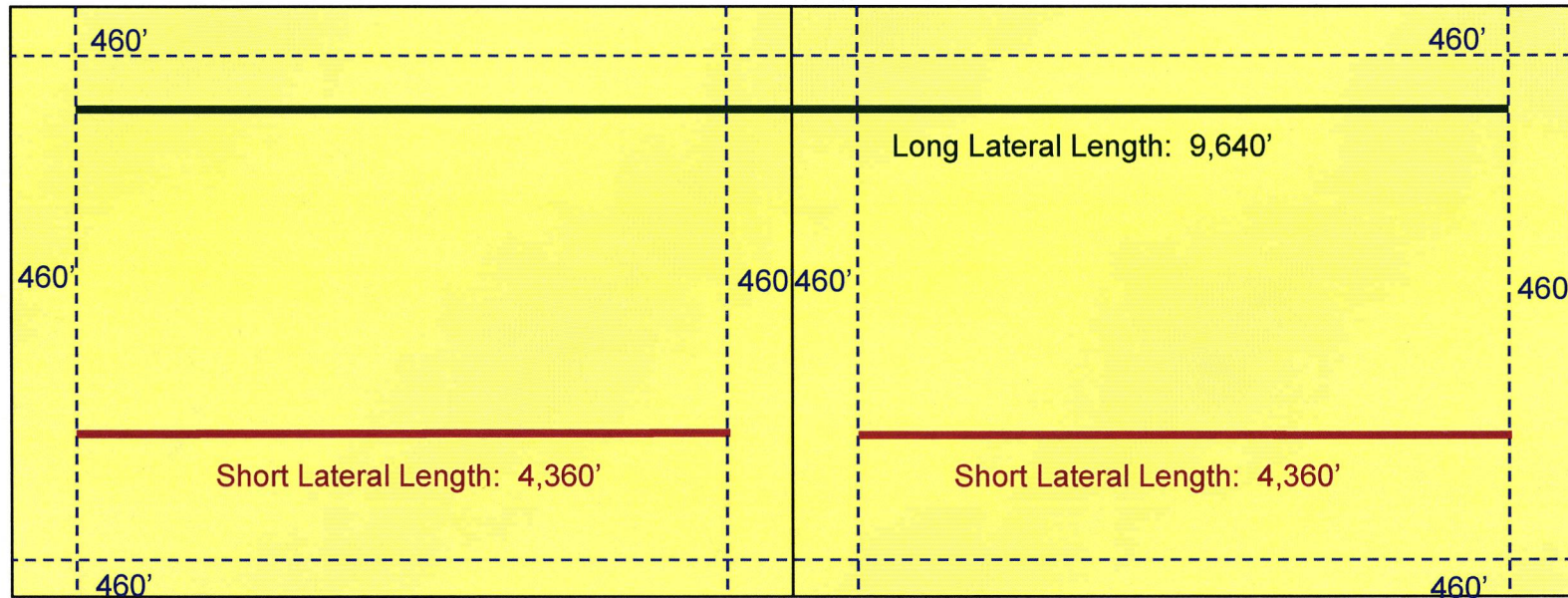
# Application Lands – Base Map



1280 Acre Application Lands

Exhibit E – 2  
Cause #535  
Docket #1407-SP-2090

# Long Laterals Contact More Reservoir Than Short Laterals



Ref: Wickstrom 18-2H Hearing  
Cause # 535  
Docket # 1305-SP-62 & 1305-UP-75

Lateral Type	Two-Section Lateral Length, ft
1 Long	9,640
2 Short	8,720
Additional length	920

Exhibit E – 3  
Cause #535  
Docket #1407-SP-2090



# Niobrara Long Lateral Type Curve

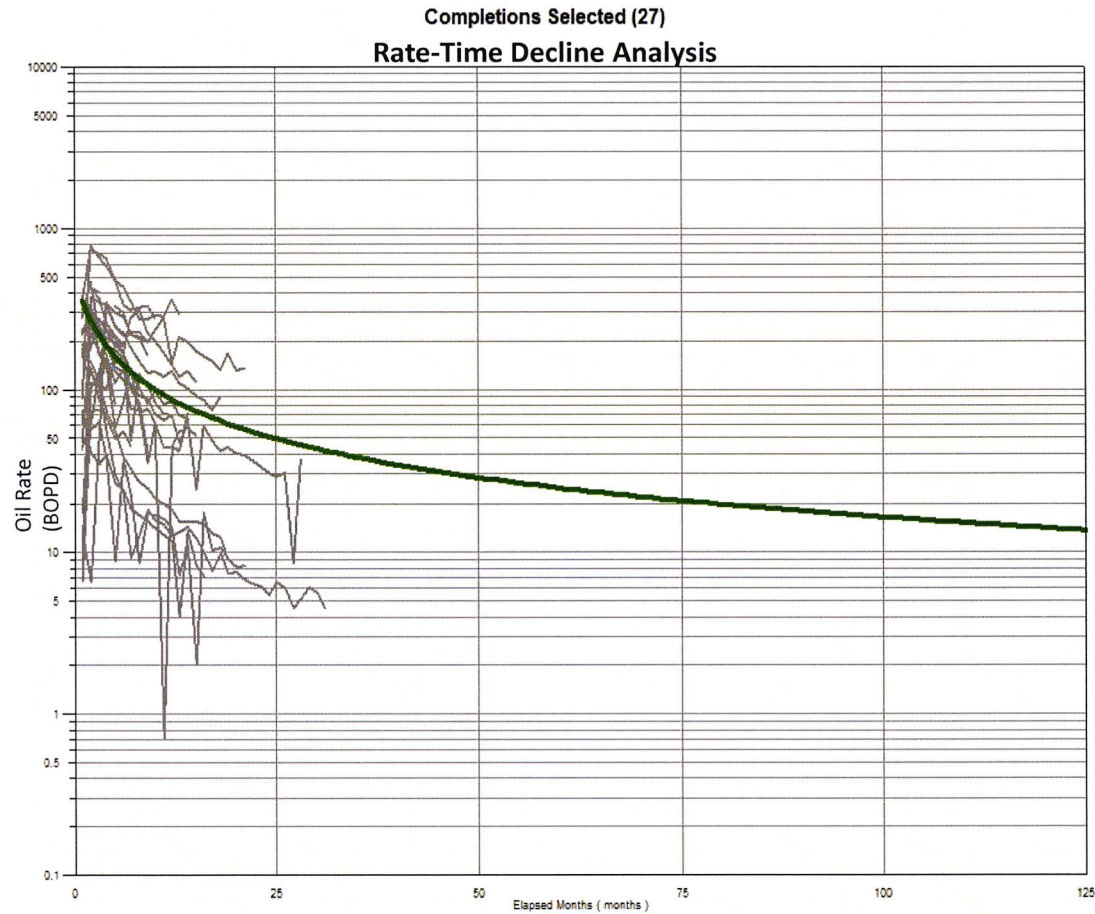


Exhibit E – 4  
Cause #535  
Docket #1407-SP-2090

# Niobrara Long Lateral Drainage Area Calculation

## COP PARAMETERS - LONG LATERAL

EUR Oil, bbls	<b>208,163.00</b>	estimated ultimate oil recovery
h, ft	<b>40</b>	net thickness
Por, fraction	<b>0.07</b>	porosity
Sw, fraction	<b>0.2</b>	water saturation
Boi, rb/stb	<b>1.7</b>	formation volume factor
RF, fraction	<b>0.05</b>	recovery factor
OOIP, stb	<b>4,163,260</b>	EUR/RF

$$\text{Drainage area, acres} = \text{OOIP} * \text{Boi} / [7758 * h * \text{Por} * (1 - \text{Sw})]$$

Drainage area	<b>407.3</b>	acres per well
	<b>814.5</b>	acres per two wells

# Engineering Summary

- The drainage area of a horizontal well in the Niobrara formation of the Application Lands having a wellbore lateral of greater than 6,000 feet in length is estimated to be no greater than 407.3 acres.
- A horizontal well with a greater than 6,000 foot lateral producing from the Niobrara formation meets ConocoPhillips' economic requirements for exploration wells.
- The proposed 1280 acre drilling and spacing unit, with the requested setbacks, for a horizontal well in the Niobrara formation in the Application Lands, and authorization for an optional second such well in each unit, will promote efficient drainage, protect correlative rights, and prevent waste. The drilling of a long lateral will recover resource within the 920 foot area between the two sections which would otherwise not be recovered with 640-acre spacing and 460-foot setbacks.

**Exhibit E – 6  
Cause #535  
Docket #1407-SP-2090**