

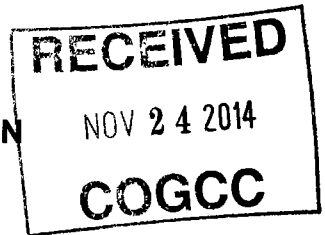


02235967

11.24.14

511 DOCUMENTS

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 VACATE PORTIONS OF ORDER
NO. 535-155 AND TO ESTABLISH AN
APPROXIMATE 1280-ACRE DRILLING AND
SPACING UNIT WITH WELL LOCATION
RULES FOR THE NIOBRARA FORMATION IN
SECTIONS 34 AND 35, TOWNSHIP 5 SOUTH,
RANGE 64 WEST, 6TH P.M., AN UNNAMED
FIELD, ARAPAHOE COUNTY, COLORADO

Cause No. 535

Docket No. 1412-SP-2213

**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 October 16, 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 the 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 24 day of November, 2014.

Respectfully submitted,

CONOCOPHILLIPS COMPANY

By: 
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. 1412-SP-2213

ConocoPhillips Company
Julia Browning - Land Testimony
Cause No. 535; Docket No. 1412-SP-2213
Drilling and Spacing Unit Application – Niobrara Formation
Unnamed Field, Arapahoe County, Colorado

December 2014 Colorado Oil and Gas Conservation Commission Hearing

My name is Julia Browning, and I am currently employed as a Landman for ConocoPhillips Company ("Applicant"). I graduated from the University of Oklahoma in 2009 with a degree in Business Administration. I have over 5 years of experience in oil and gas land work and I am familiar with the lands subject to, and matters set forth in, the verified application ("Application").

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 to establish an approximate 1280-acre drilling and spacing unit, with a 460-foot setback from the unit boundary only as to the eastern boundary of the unit, and 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 5 South, Range 64 West, 6th P.M.
Section 34: All
Section 35: All

1280 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 50% fee mineral interest and 50% state mineral interest. The following parties own leasehold or unleased mineral interests in the Application Lands:

<u>INTEREST OWNER(S)</u>	<u>UNIT WI</u>
ConocoPhillips Company	100%
Other Working Interest Owners	0%
TOTAL:	100.000000%

Exhibit A-2: Mineral Ownership Map:

Exhibit A-2 is a map showing the mineral ownership of the Application Lands, which is owned in fee and state.

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 approximate 1280-acre drilling and spacing unit and not less than 150 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 and state.

Exhibit A-5: Topographic Map:

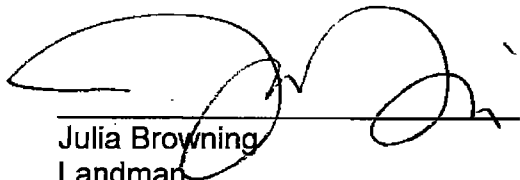
Exhibit A-5 is a map showing the topography of the Application Lands. Approval of the Application for a drilling and spacing unit would allow for a less impactful surface development plan.

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.



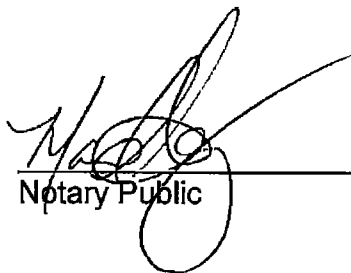
Julia Browning
Landman
ConocoPhillips Company

STATE OF TEXAS)
) ss.
COUNTY OF HARRIS)

The foregoing instrument was subscribed and sworn to before me this ____ day of November, 2014, by Julia Browning, Landman, Rockies Business Unit, Niobrara Land, for ConocoPhillips Company.

Witness my hand and official seal.

My commission expires: 9-19-2015



Notary Public

White 5-64 34-35

Exhibit : A-1

Docket:1412-SP-2213 Cause: 585

Leasehold Ownership Map

White 5-64 34-35

Location: Section: 34-35 Township: 5S Range: 64W

28

27

26

25

33

34

35

36

4

3

2

1

Leasehold Ownership



Majority Ownership

Prepared by Julia
Browning

White 5-64 34-35

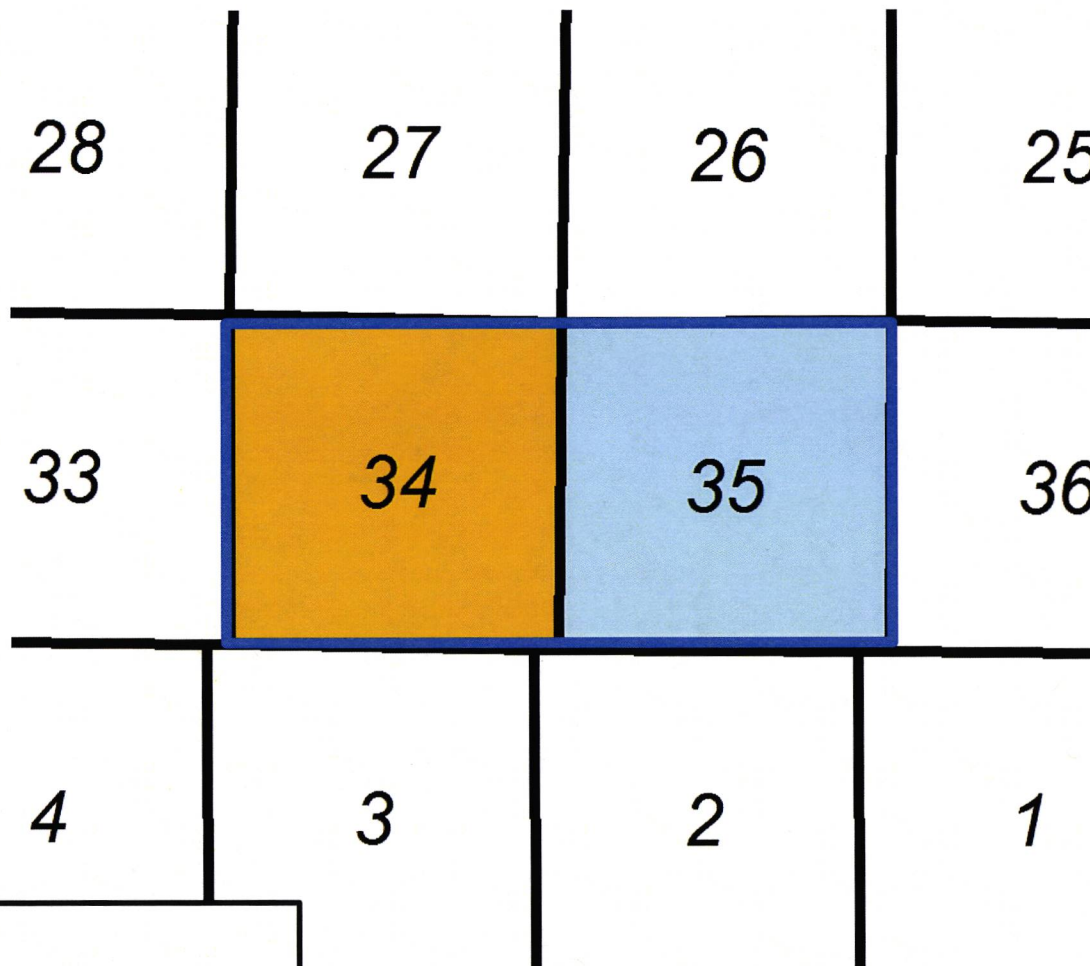
Exhibit : A-2

Docket:1412-SP-2213 Cause: 585

Mineral Ownership Map

White 5-64 34-35

Location: Section: 34-35 Township: 5S Range: 64W



Mineral Ownership

 State Mineral Ownership

 Fee Mineral Ownership

Prepared by Julia
Browning

White 5-64 34-35

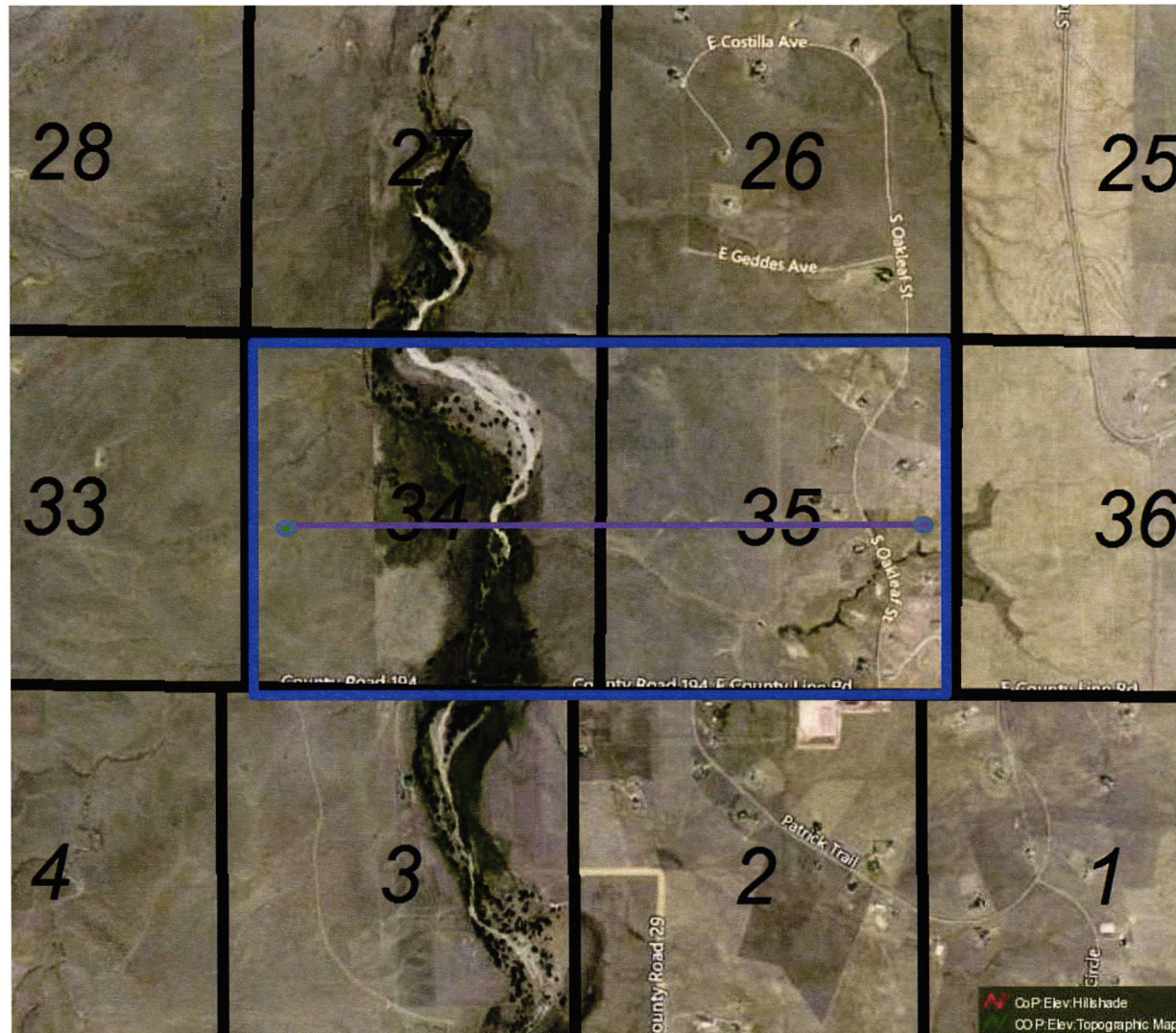
Exhibit : A-3

Docket:1412-SP-2213 Cause: 585

Property Location Map

White 5-64 34-35

Location: Section: 34-35 Township: 5S Range: 64W



Prepared by Julia
Browning

White 5-64 34-35

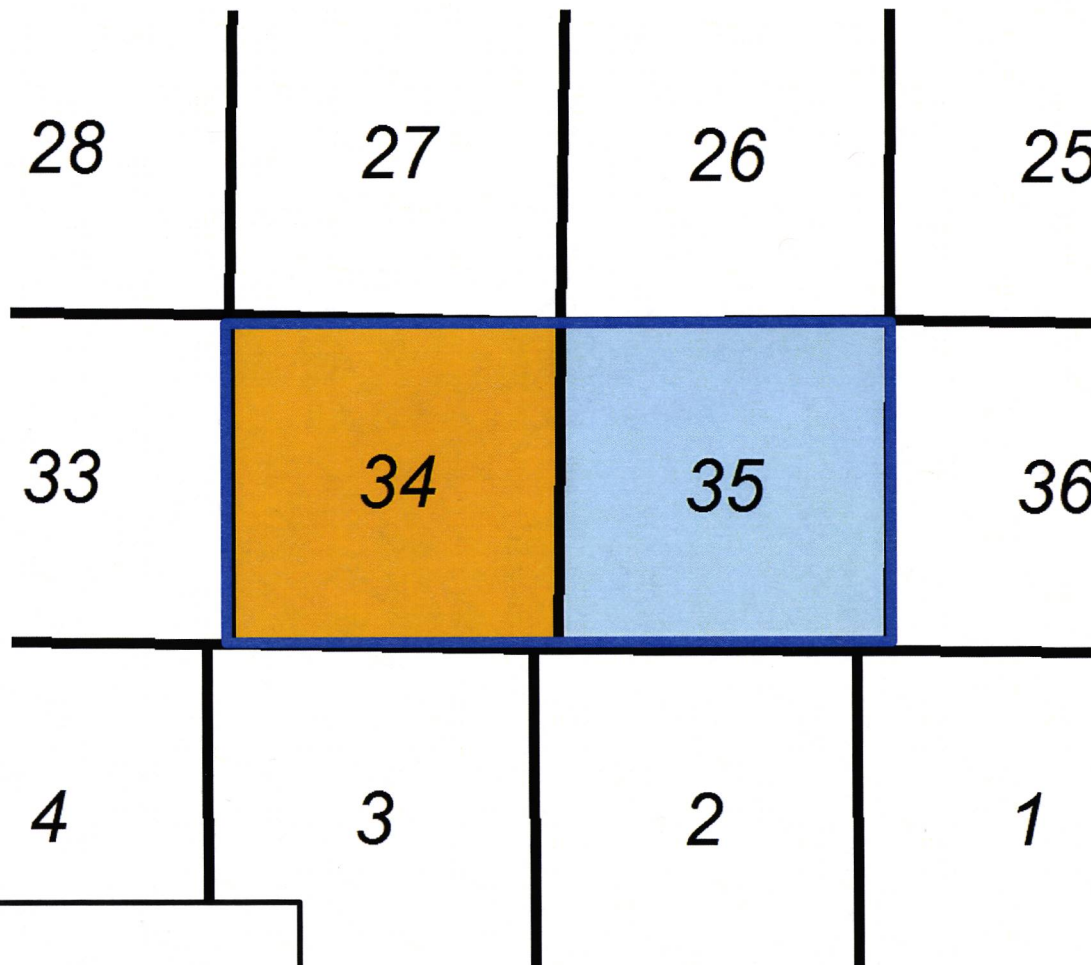
Exhibit : A-4

Docket:1412-SP-2213 Cause: 585

Surface Ownership Map

White 5-64 34-35

Location: Section: 34-35 Township: 5S Range: 64W



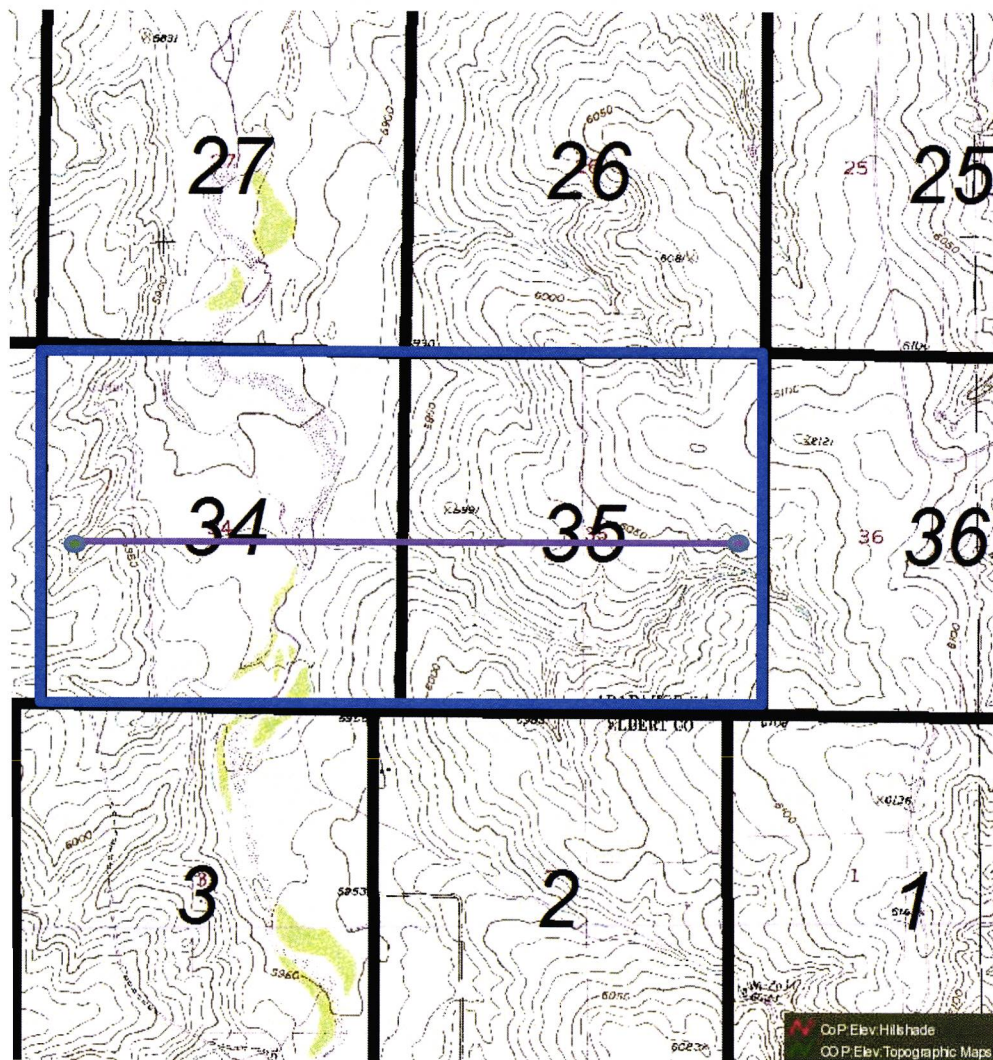
Mineral Ownership

 State Surface Ownership

 Fee Surface Ownership

Prepared by Julia
Browning

64W



Prepared by Julia
Browning

ConocoPhillips Company

Geoscience Testimony

Spacing Application

Niobrara Formation

Colorado Oil and Gas Conservation Commission Hearing

Cause No. 535

Docket No. 1412-SP-2212

Township 05 South, Range 64 West, Sections 26-27

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 5 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 5 South, Range 64 West, 6th P.M.

Section 26: All

Section 27: All

Arapahoe County, Colorado

The Niobrara Formation is a Cretaceous sequence of chinks, 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 is sections 26 and 27, township 64 south, range 5 west, 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 20' 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 280-300'. Local depositional variations in thickness are minimal and rarely exceed 20' to 25'. The Niobrara Formation is shown to thicken gradually to the south in this area.

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

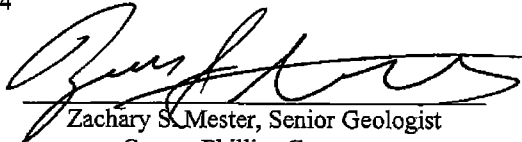
- The Niobrara is productive in the area
- The Niobrara is fairly uniform in thickness and is continuous throughout the area.

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 26 and 27 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 25 day of Nov, 2014


Zachary S. Mester, Senior Geologist
ConocoPhillips Company

STATE OF TEXAS

)

)ss.

COUNTY OF HARRIS

)

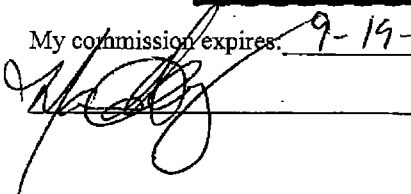
Nov The foregoing instrument was subscribed and sworn to before me this 25 day of
_____, 2014 by Zachary S. Mester, a geologist for ConocoPhillips Company.

Witness my hand and official seal.

[SEAL]



My commission expires: 9-19-2015



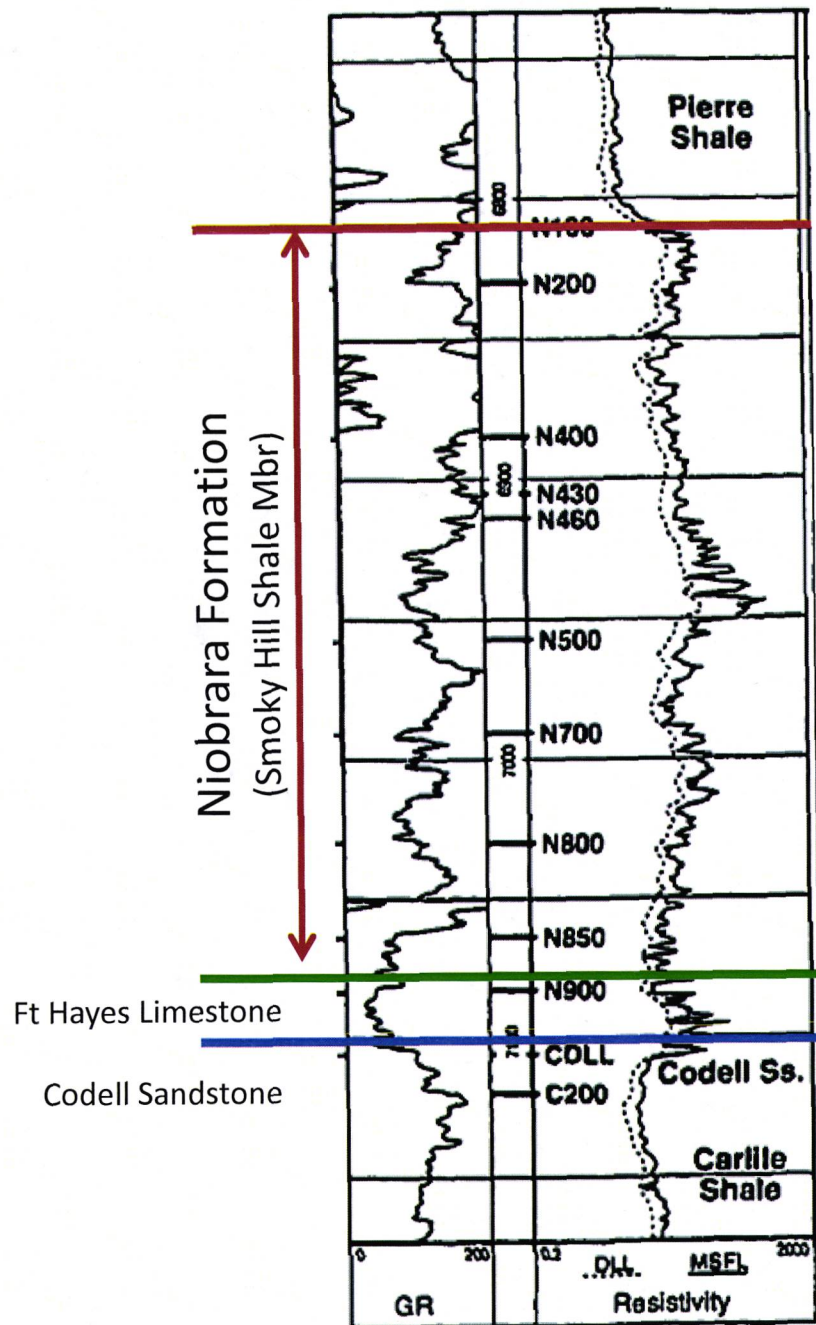
Notary Public

Experience

- | | | |
|-------------------|---|---------------|
| 02.2014 – Present | ConocoPhillips Company | Houston, TX |
| | <ul style="list-style-type: none">• 2014-Present: Senior Geologist, Niobrara Implementation Team, Rockies Business Unit | |
| 09.2012 - 02.2014 | StatOil Oil and Gas, LLP | Austin, TX |
| | <ul style="list-style-type: none">• 2012-2014 – Geologist, Geo-Operations Team, Bakken Business Unit | |
| 04-2011 – 09.2012 | Border To Border Exploration, LLC | Austin, TX |
| | <ul style="list-style-type: none">• 2011-2012 – Geologist, Exploration Team | |
| 01-2010-04-2011 | Canrig Drilling Technology | Anchorage, AK |
| | <ul style="list-style-type: none">• 2010-2011 – Well-Site Geologist | |

Education

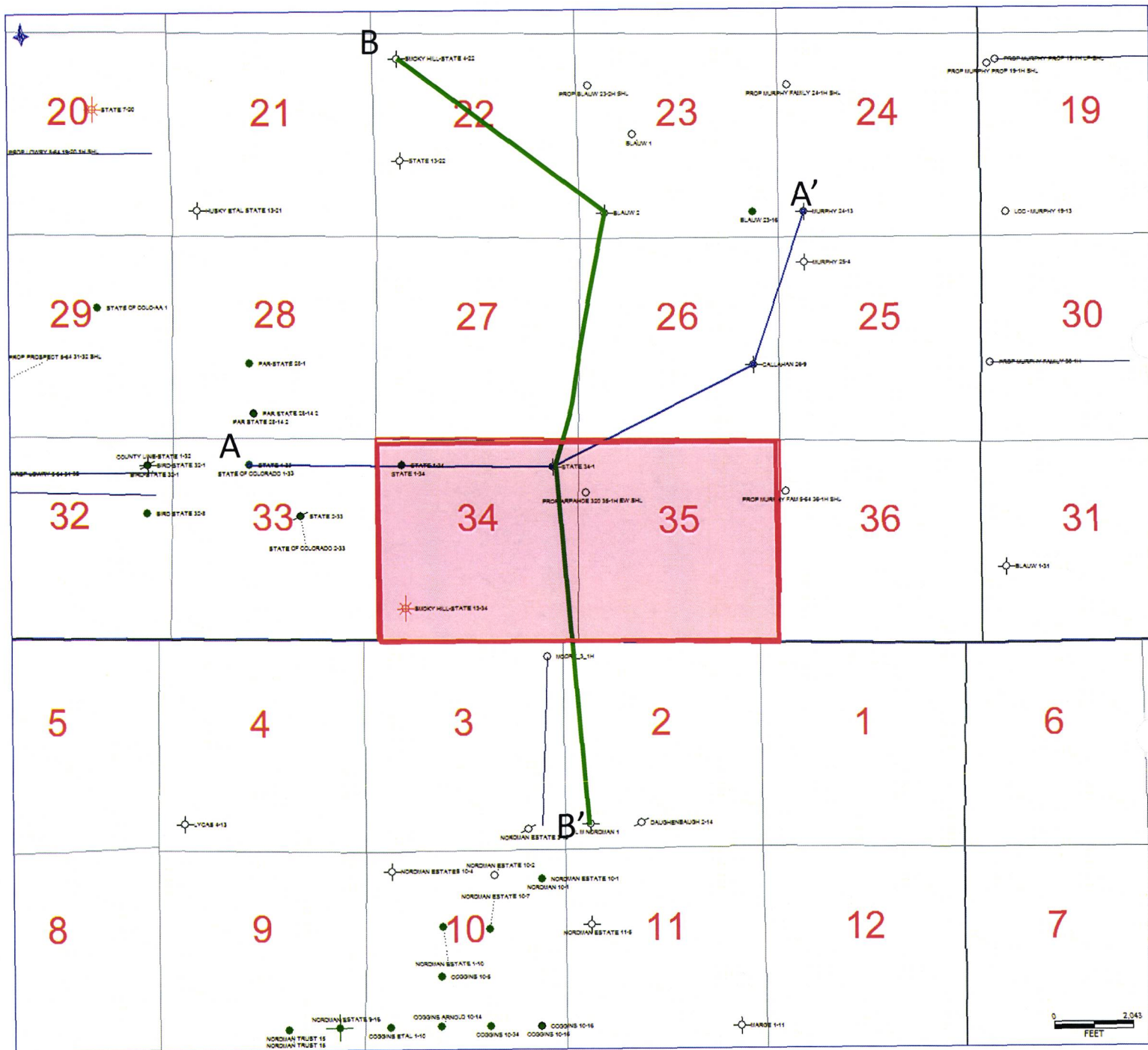
- | | | |
|----------------------------------|-----------------------------|----------------|
| 2008-2011
Masters - Geology | Florida Atlantic University | Boca Raton, FL |
| 2004-2007
Bachelors - Geology | Florida Atlantic University | Boca Raton, FL |



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. 1412-SP-2213



1280 Application
Lands

Exhibit: G-2
Cause No. 535
Docket No. 1412-SP-2213

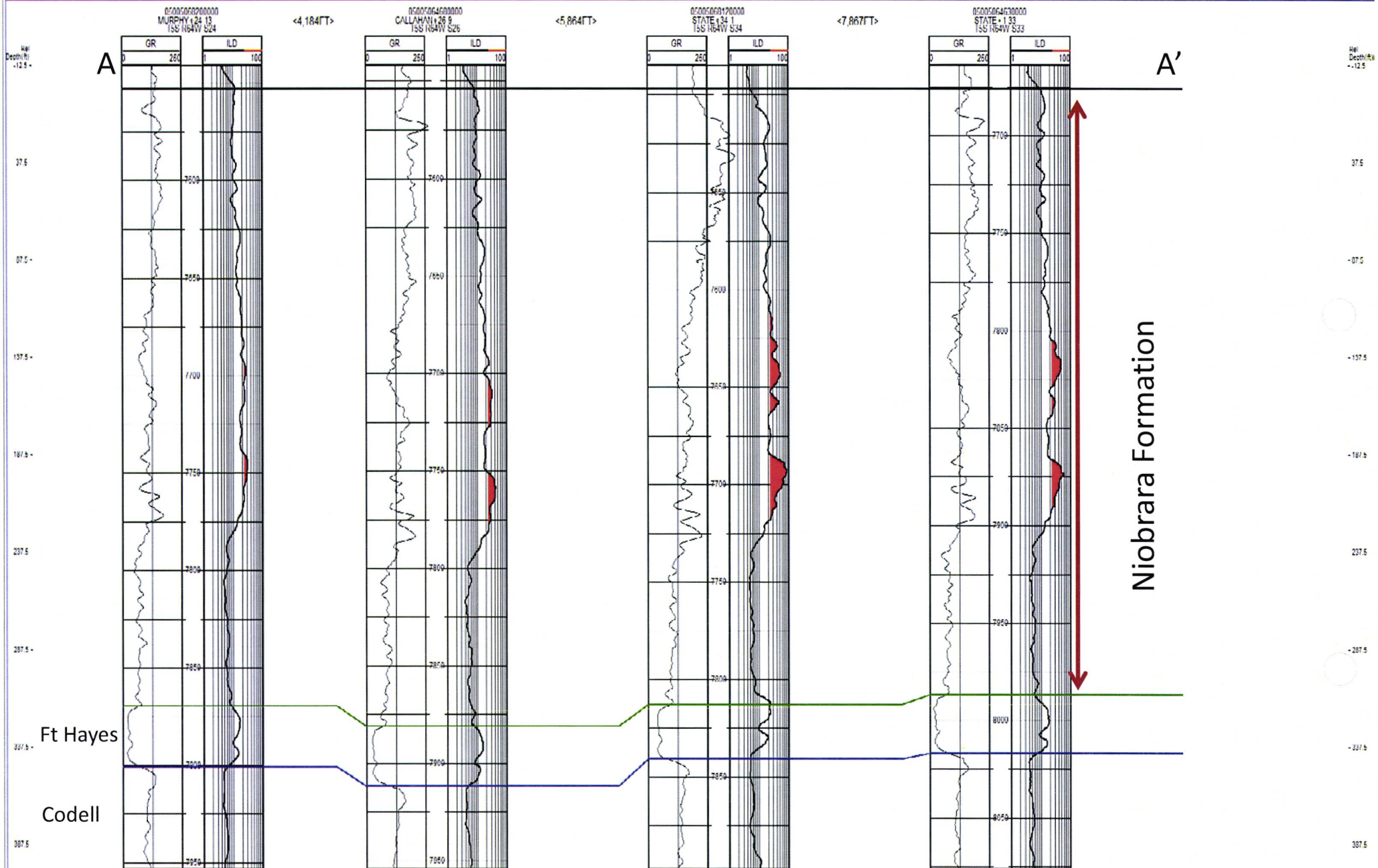
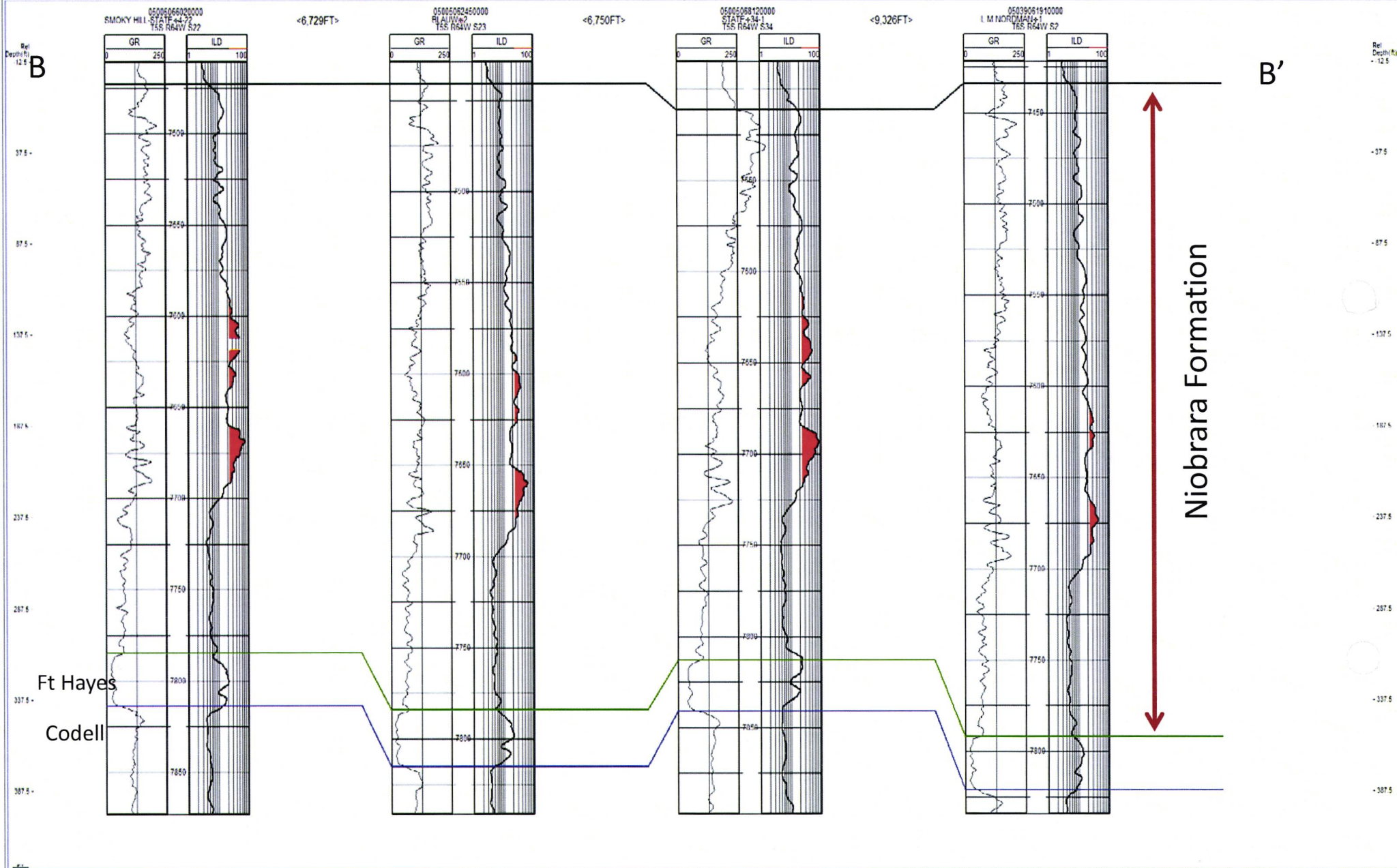
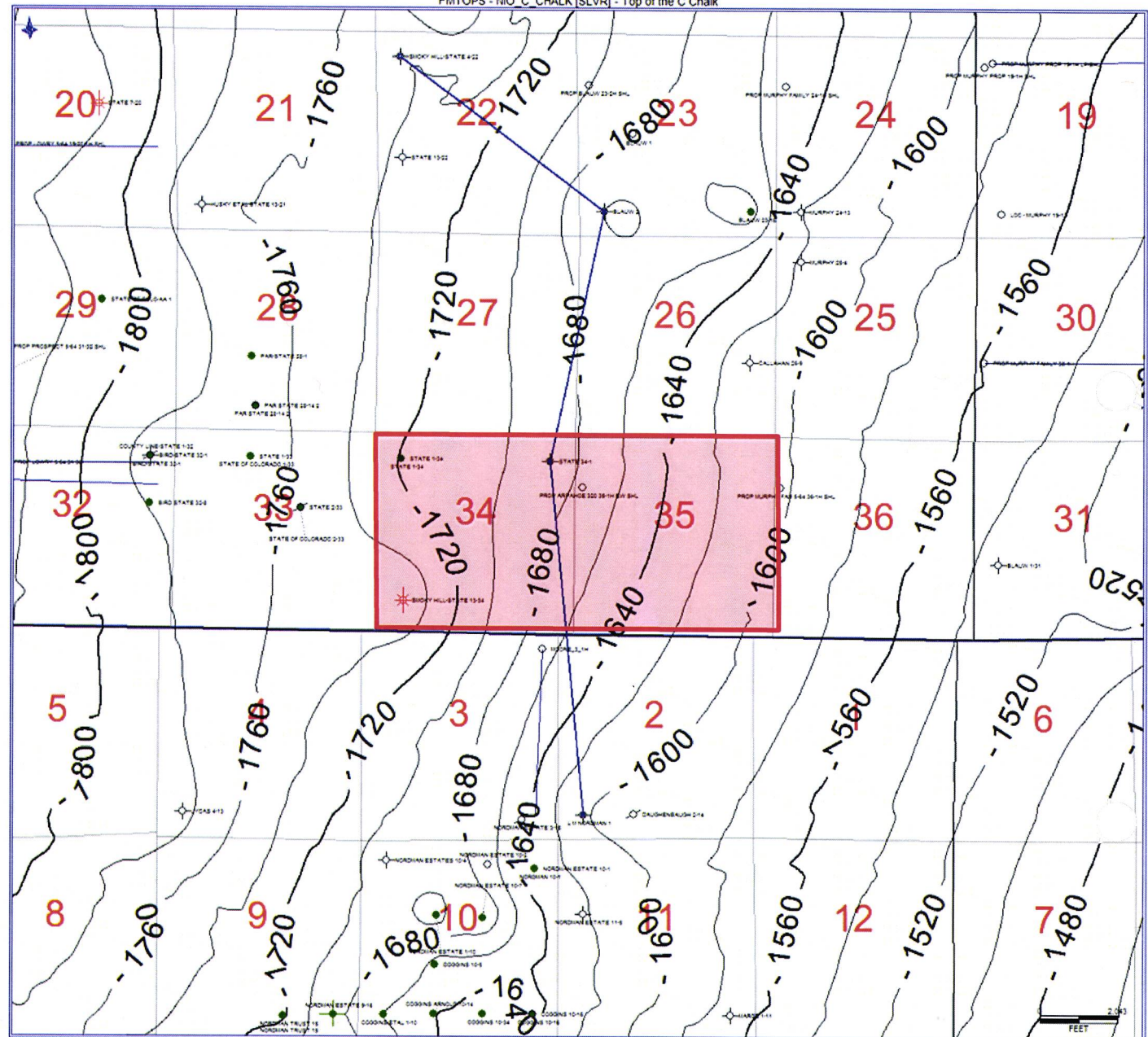


Exhibit: G-3
Cause No. 535
Docket No. **1412-SP-2213**





1280 Application Lands

Exhibit: G-5

Cause No. 535

Docket No. 1412-SP-2213

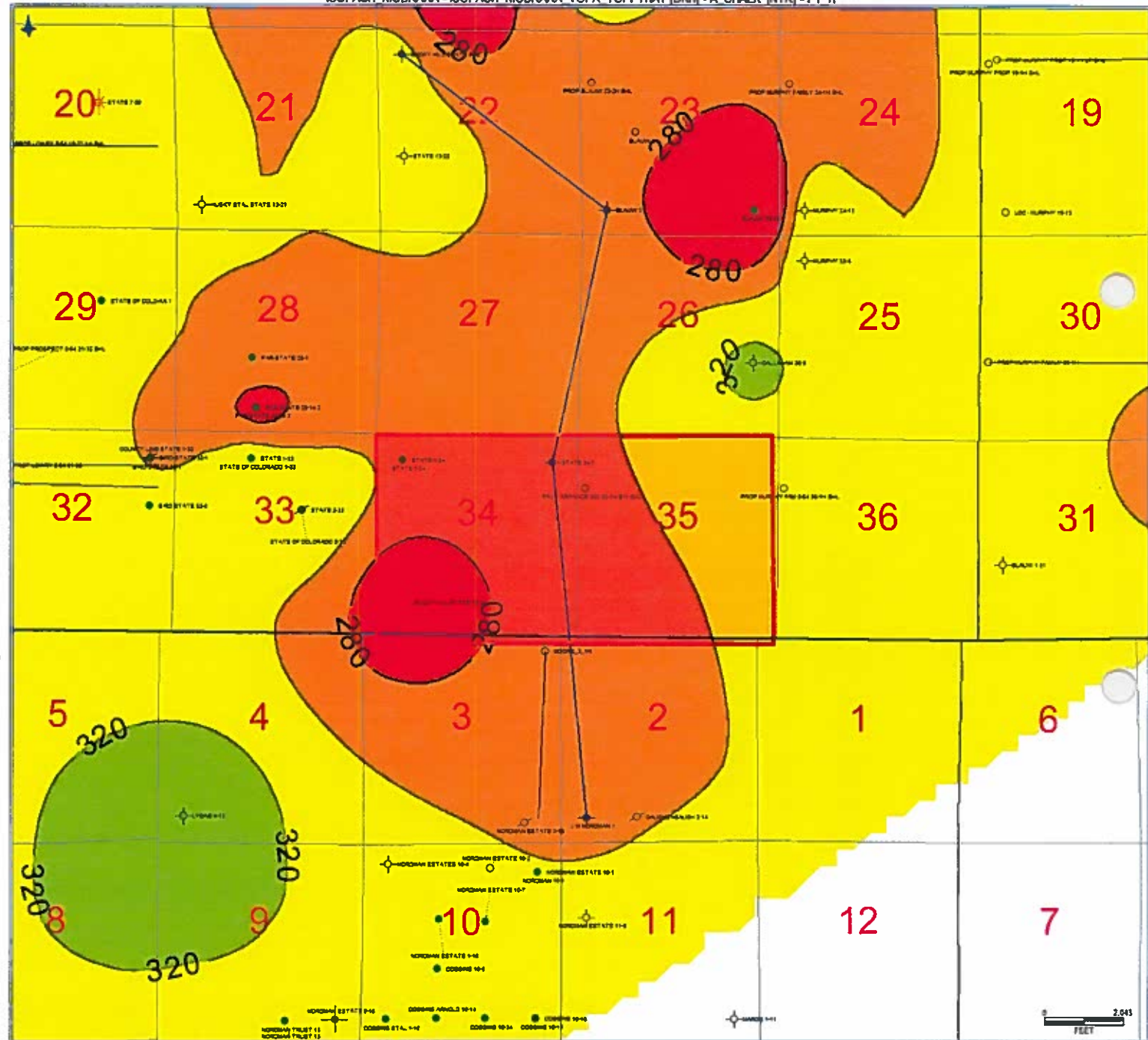
ConocoPhillips

Top Niobrara Structure Map

SubSea TVD (Feet)

Contours = 20 Ft

ISOPACH NIOBRARA - ISOPACH NIOBRARA TOPA TOPFTHAY [DGH] - A CHALK [NTR] - FT. H



1280 Application Lands

Exhibit: G-6

Cause No. 535

Docket No. 1412-SP-2213

ConocoPhillips

Niobrara Isopach Map

Thickness (Feet)

Contours = 20 Ft

Engineering Testimony – Clint Hutchinson

Cause No. 535; Docket No. 1412-SP-2213

1280 Acres Spacing Application – Niobrara Formation

Adams County

December 2014 Colorado Oil and Gas Conservation Commission Hearing

In support of the Verified Application of ConocoPhillips in Cause No. 535, Docket 1412-SP-2213 (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 \$15,850,257 for the White 5-64 34-35, 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 December 2014 COGCC hearing.

Clint Hutchinson
Clint Hutchinson

Subscribed to and sworn to before me this 24 day of November, 2014, by Clint Hutchinson, Lead Reservoir Engineer.

Notary Public

My Commission Expires:

Address:

July 22, 2018

600 N Darryl Ashton Hwy 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 #1412-SP-2213

Application Lands – Base Map

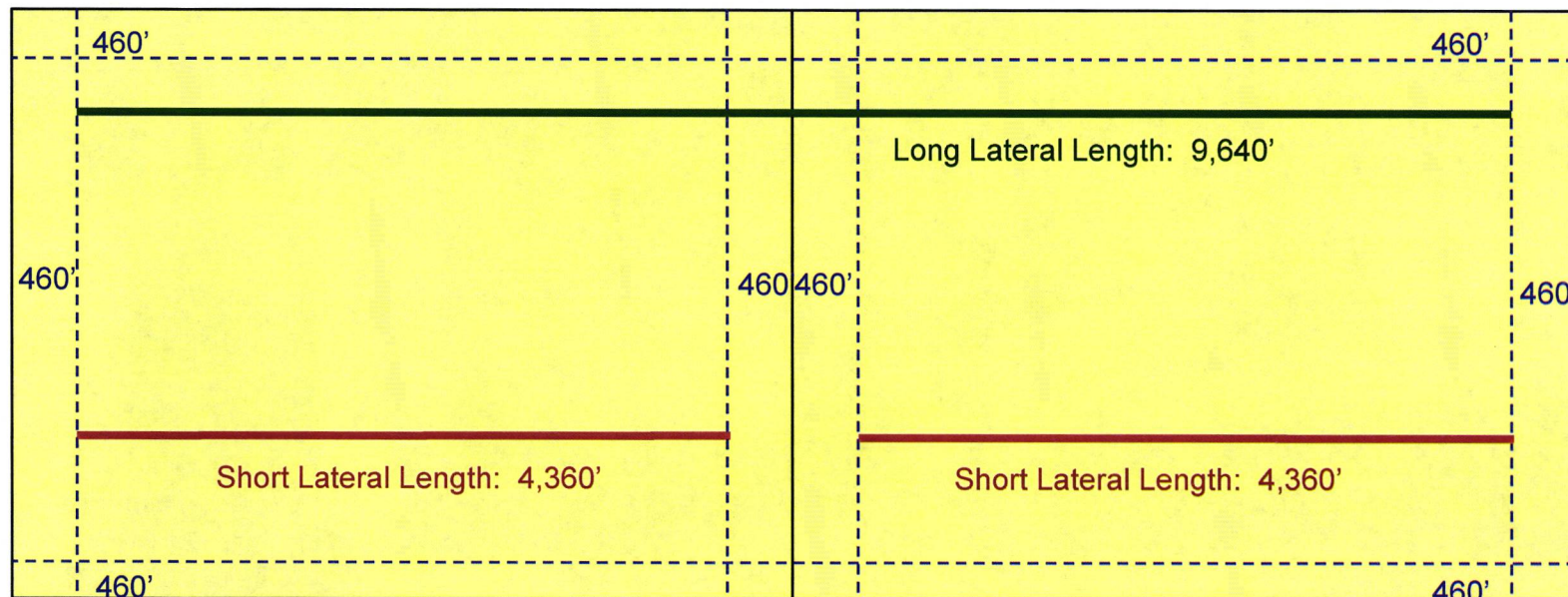
6	5	4	3	2	1
7	8	9 5	10 S	11	12
18	17	16 6 4 W	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Exhibit E – 2
Cause #535
Docket #1412-SP-2213



1280 Acre Application Lands

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 #1412-SP-2213

Niobrara Long Lateral Type Curve

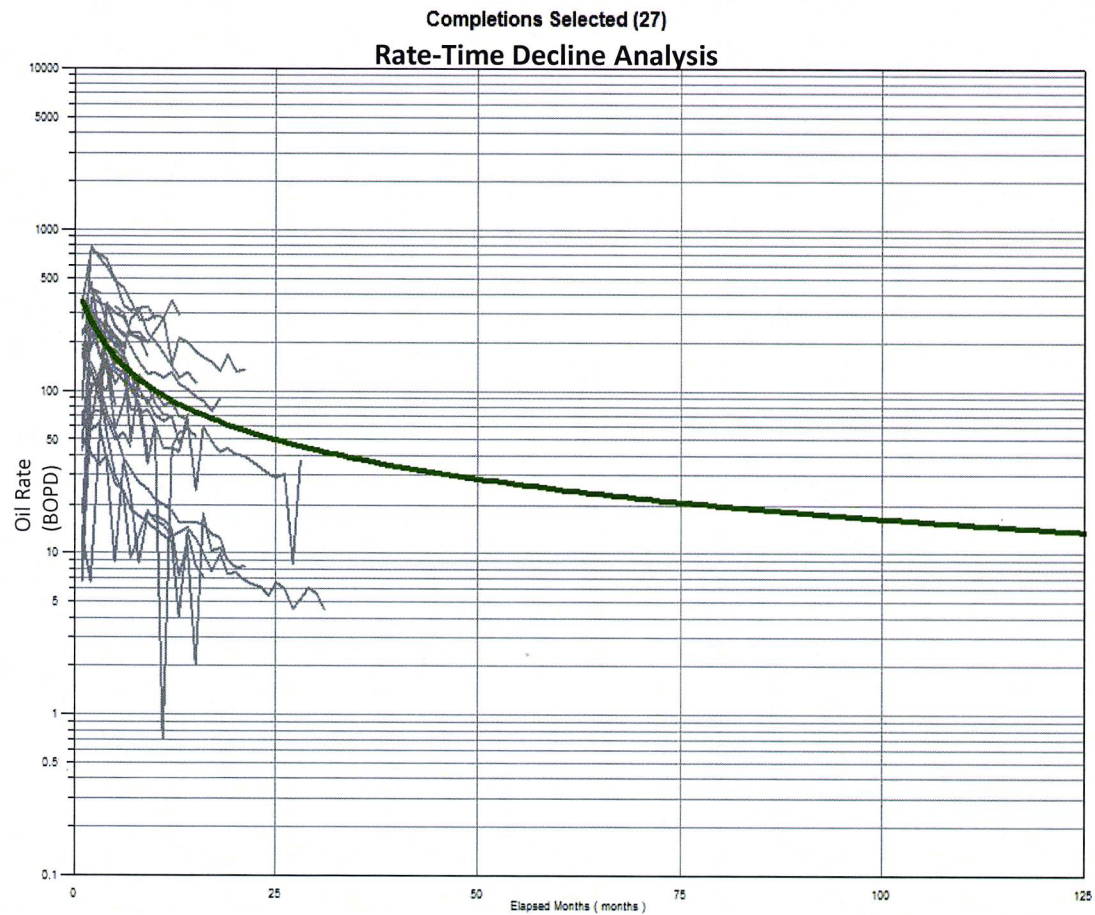


Exhibit E – 4
Cause #535
Docket #1412-SP-2213

Niobrara Long Lateral Drainage Area Calculation

COP PARAMETERS - LONG LATERAL

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

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

Drainage area	407.3	acres per well
	814.5	acres per two wells

Exhibit E – 5
Cause #535
Docket #1412-SP-2213

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 #1412-SP-2213