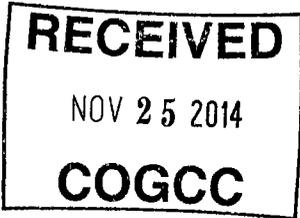




02235954

11.25.14

# 511 DOCUMENTS



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

IN THE MATTER OF THE APPLICATION OF )	CAUSE NO. 535
CONOCOPHILLIPS COMPANY FOR AN ORDER )	
VACATING ORDER NO. 535-118, VACATING )	DOCKET NO. 1412-SP-2220
ORDER NO. 535-145 IN PART, VACATING )	
ORDER NO. 535-237, VACATING ORDER NO. )	
535-313 IN PART, VACATING ORDER NO. 535- )	
393, AND ESTABLISHING AN APPROXIMATE )	
2560-ACRE UNCONVENTIONAL RESOURCE )	
UNIT IN SECTIONS 32, 33, 34 AND 35, )	
TOWNSHIP 4 SOUTH, RANGE 64 WEST, 6TH )	
P.M., WITH 460 FOOT SETBACKS FROM THE )	
URU BOUNDARIES FOR SUCH )	
UNCONVENTIONAL RESOURCE UNIT IN AN )	
UNNAMED FIELD, NIOBRARA FORMATION, )	
ARAPAHOE COUNTY, COLORADO )	

**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 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 26 day of November 2014.

Respectfully submitted,

ConocoPhillips Company

By: Jamie C. Jost

Jamie L. Jost  
Joseph M. Evers  
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-2220**

**ConocoPhillips Company**  
**Julia Browning - Land Testimony**  
Cause No. 535; Docket No. 1412-SP-2220  
Unconventional Resource Unit Application – Niobrara Formation  
Unnamed Field, Arapahoe County, Colorado

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 the Application in the above referenced docket, I am submitting ten (10) exhibits. The exhibits are attached to my sworn testimony and form the basis of the Application for an order vacating Order No. 535-118, vacating Order No. 535-145 in part, vacating Order No. 535-237, vacating Order No. 535-313 in part, vacating Order No. 535-393, and establishing a 2,560-acre unconventional resource unit (“URU”), with 460 foot setbacks from the URU boundary, for the production of oil, gas, and associated hydrocarbons from the Niobrara Formation covering certain described lands in Arapahoe County, Colorado.

Exhibit L-1: Location Map:

Exhibit L-1 is a map showing the location of the Application Lands. The Application Lands consist of approximately 2,560 acres more or less covering Sections 32 through 35, in Township 4 South, Range 64 West, 6th P.M.

Exhibit L-2: Surface Ownership Map:

Exhibit L-2 is a map showing the Surface ownership type within the Application Lands. The Application Lands consist of 100% Fee surface. There is no State or Federal surface ownership within the Application Lands.

Exhibit L-3: Mineral Ownership Map:

Exhibit L-3 is a map showing the Mineral ownership type within the Application Lands. The Application Lands consist of 100% Fee minerals. There are no State or Federal minerals within the Application Lands.

Exhibit L-4: Leasehold Ownership Map:

Exhibit L-4 is a map showing the Leasehold ownership within the Application, which is owned 100% by Applicant.

Exhibit L-5: Setback Map:

Attached as Exhibit L-5 is a map showing the Unit boundary and the proposed setbacks. The treated interval of any Horizontal well drilled within the Unit is to

be no closer than 460 feet from the boundaries of the 2,560-acre unit, and no closer than 150 feet from another horizontal wellbore in the unit unless an exception is granted by the Director.

Exhibit L-6: Existing Horizontal Well Locations:

Attached as Exhibit L-6 is a map showing the features of Exhibit L-5 as well as the locations of existing producing Horizontal wells within the Unit boundary. Any other existing Horizontal well permits that are not listed on this Exhibit will be vacated or Sundried when the new proposed wells are submitted for permitting as shown in Exhibit L-7.

Exhibit L-7: Preliminary Proposed Well Locations:

Attached as Exhibit L-7 is a map showing the features of Exhibits L-5 through L-6 as well as the locations of Applicant's preliminary proposed well within the Unit. Applicant's plans to drill as many wells as needed to efficiently and economically recover the associated hydrocarbons from the Niobrara Formation. Applicant's drill schedule is subject to adjustment and therefore Applicant shall not be committed to a particular drilling schedule or any number of preliminary proposed wells. Applicant will ultimately drill any number of wells that it feels are necessary to efficiently and economically recover the associated hydrocarbons from the Niobrara Formation.

Exhibit L-8 Preliminary Proposed Surface Locations:

Attached as Exhibit L-8 is a map showing the features of Exhibits L-5 through L-7 as well as the preliminary proposed surface location for the proposed well within the Unit.

Exhibit L-9: Topographic Map:

Attached as Exhibit L-9 is a topographic map for the proposed Unit. The contour interval of the topographic map is ten (10) feet.

Exhibit L-10: Aerial Photo Map:

Attached as Exhibit L-10 is an aerial photo map of the proposed Unit.

Description of Surface Use:

This application is limited to no more than sixteen (16) new wellpads in the URU, with no more than eight (8) new wellpads in any one (1) section unless an exception is granted by the Director or the surface owner of the lands upon which the well or associated facilities are located requests specific placement of the wellpads. Applicant is in negotiations to obtain surface use agreements with the surface owners covering

the proposed well pads and associated facilities. There are no occupied buildings within 1,000 feet of any planned pad or facility location.

Allocation of Proceeds from Existing Wells:

Applicant requests that the Commission exclude any and all existing vertical, directional or horizontal wells drilled and completed to the Niobrara Formation from the proposed URU. The records of the Commission indicate that the producing or shut-in wells drilled and completed to the Niobrara Formation in the Application lands are as follows: Tebo 32 2 Well (API No. 05-005-07177) (vertical), Tebo 32 3H Well (API No. 05-005-07178) (horizontal), the Grimm 34 4H Well (API No. 05-005-07179) (horizontal), and the Tebo 33 1H Well (API No. 05-005-07205) (horizontal). Production from the existing vertical well and horizontal wells drilled and completed to the Niobrara Formation in the Application Lands shall be allocated as follows.

(a) Production from the Tebo 32 2 Well (API No. 05-005-07177) and the Tebo 32 3H Well (API No. 05-005-07178), both located in Section 32 of the Application Lands, is currently being allocated, and will continue to be allocated, on a lease basis, specifically, an oil and gas lease covering the entirety of said Section 32, and other lands, in which Applicant is the sole leasehold owner.

(b) Production from the Tebo 33 1H Well (API No. 05-005-07205), located in Section 33 of the Application Lands, is currently being allocated in accordance with Order No. 535-393. Since the Commission entered Order No. 535-393, Applicant has acquired all of the working interest in said Section 33. A Declaration of Pooling Unit was recorded at Reception No. D3134548 on October 31, 2013 in the real property records of Arapahoe County, Colorado.

(c) Production from the Grimm 34 4H Well (API No. 05-005-07179), located in Section 34 of the Application Lands, is currently being allocated, and will continue to be allocated, in accordance with that certain Declaration of Pooling recorded at Reception No. D2122034 in the real property records of Arapahoe County, Colorado.

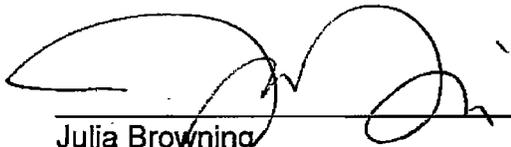
Additional Comments:

Applicant also reserves the right to submit additional documentation to respond to requests by the Commission or Commission Staff.

Based upon our examination of relevant documents, and under my direction and control, all of the interested parties included in Exhibit A attached to the Application received proper notice. As of the date of this testimony, Applicant has not received any 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.

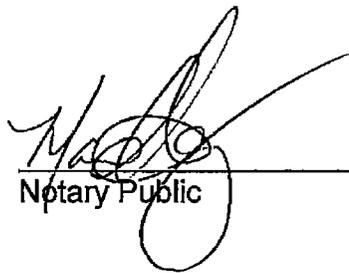
  
\_\_\_\_\_  
Julia Browning  
Landman  
ConocoPhillips Company

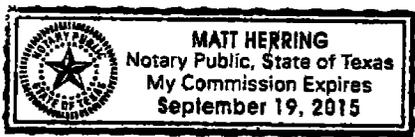
STATE OF TEXAS            )  
  ) ss.  
COUNTY OF HARRIS        )

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



Unconventional Resource Unit

Exhibit : L-1

Docket: 1412-SP-2220 Cause: 535

Location Map

2,560 acres

Location: Sections: 32-35 Township: 4S Range: 64W

30

29

28

27

26

25

31

32

33

34

35

36

4 S  
64 W

5 S  
64 W

6

5

4

3

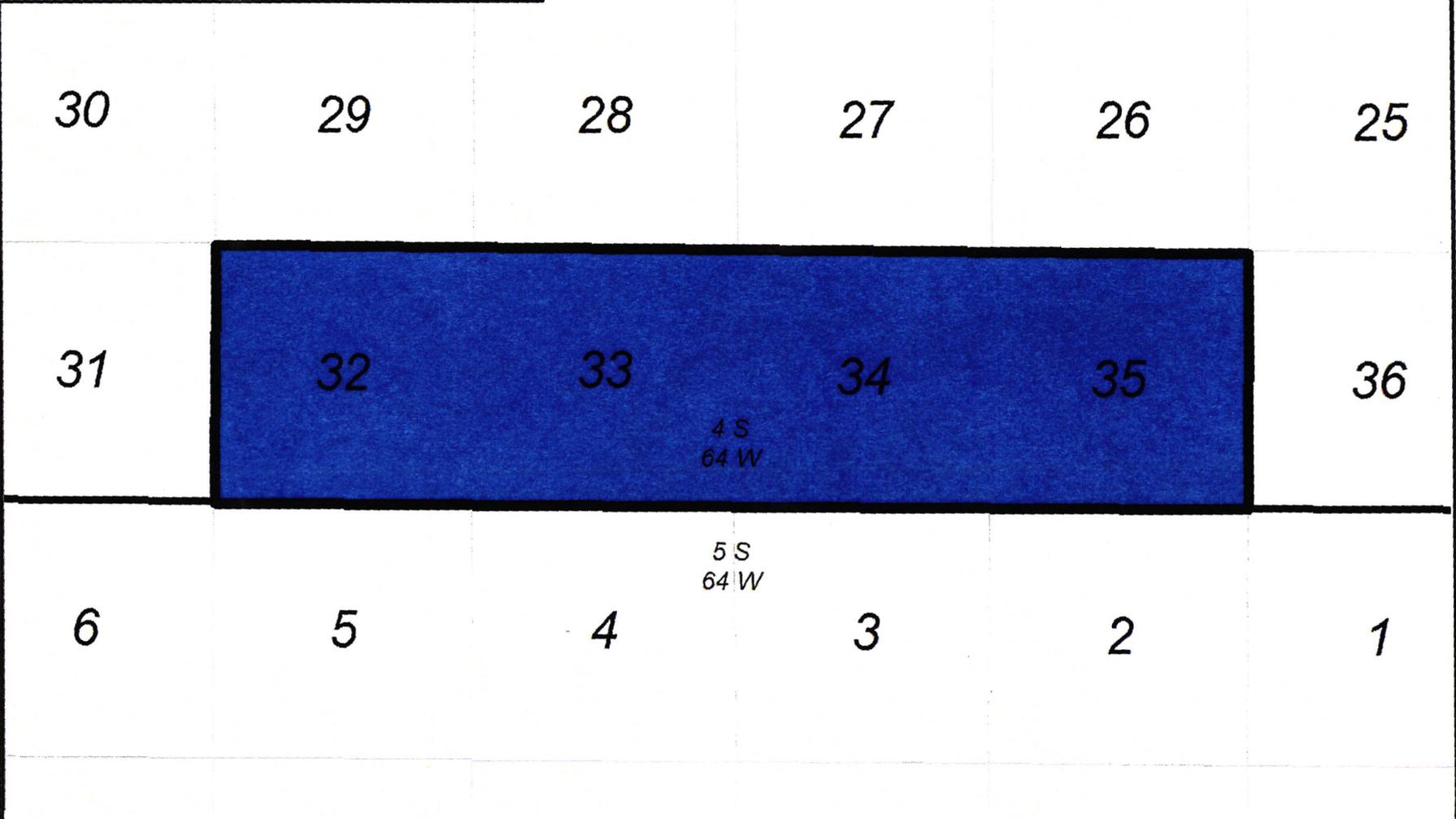
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1

 Application Lands

Prepared by Jace  
McKenzie

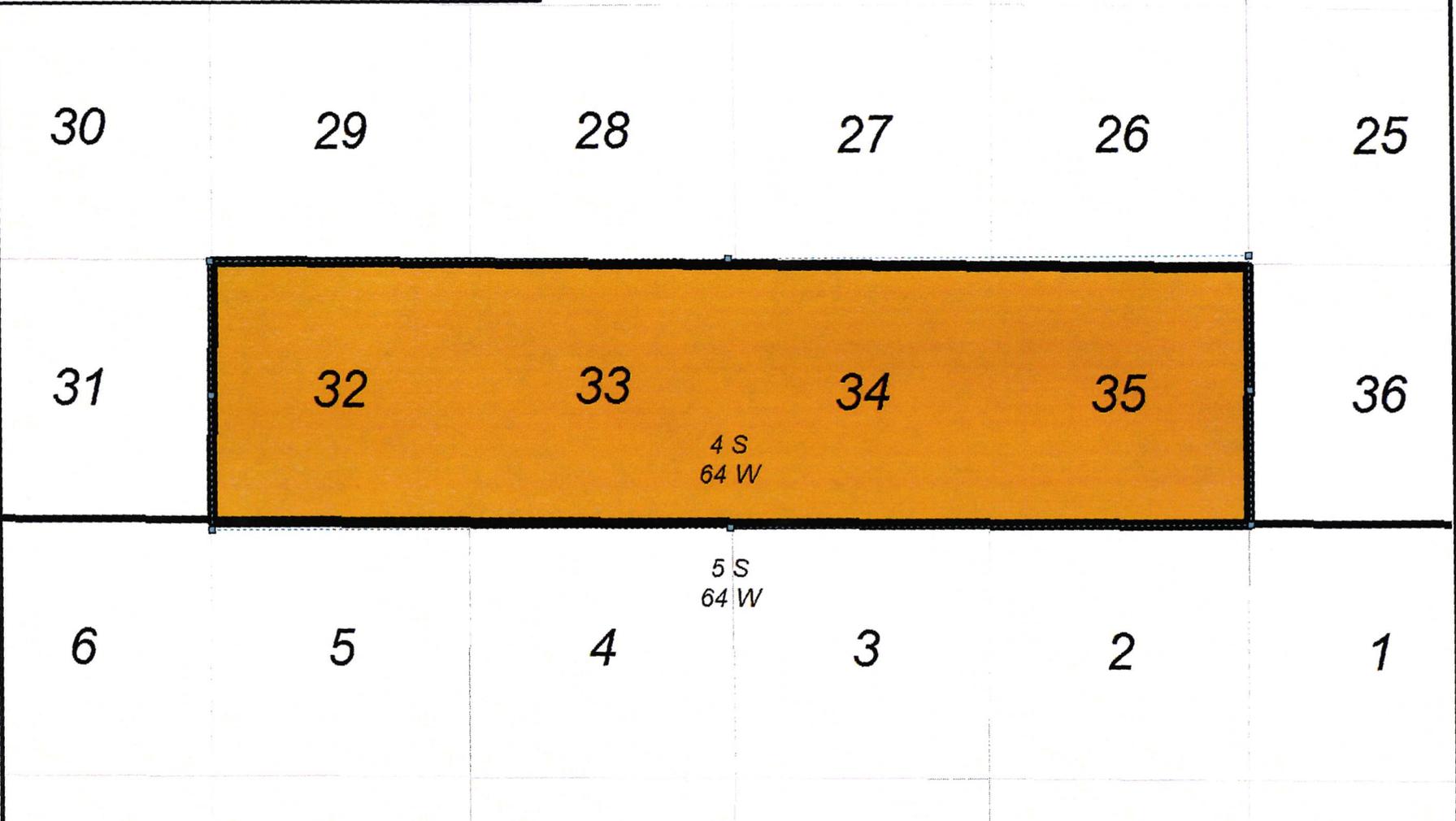
Unconventional Resource Unit  
Exhibit : L-2  
Docket:1412-SP-2220 Cause: 535  
Surface Ownership Map  
2,560 acres  
Location: Sections: 32-35 Township: 4S Range: 64W



 Application Lands  
 Fee Surface

Prepared by Jace McKenzie

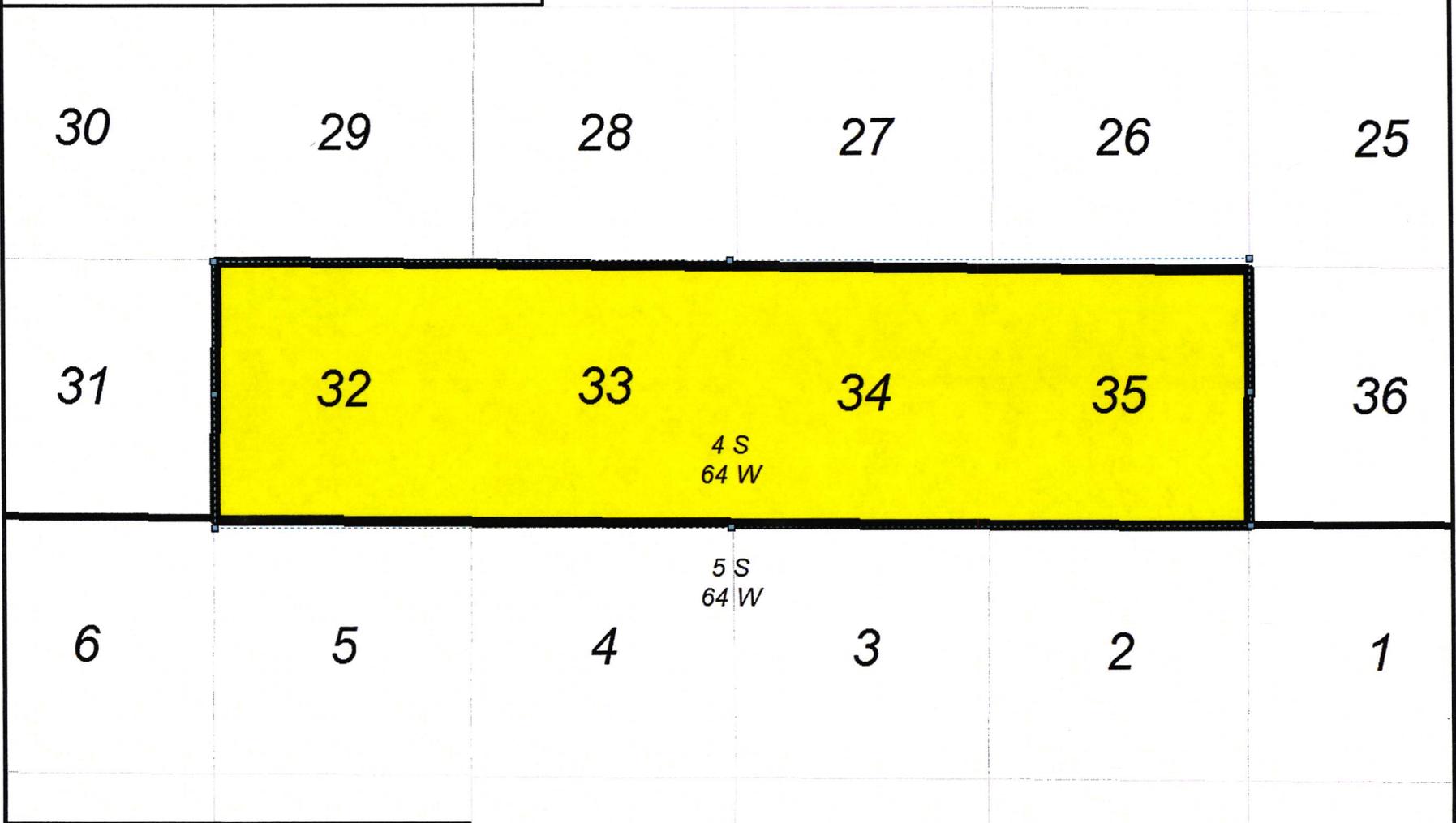
Unconventional Resource Unit  
Exhibit : L-3  
Docket:1412-SP-2220 Cause: 535  
Mineral Ownership Map  
2,560 acres  
Location: Sections: 32-35 Township: 4S Range: 64W



 Application Lands  
 Fee Minerals

Prepared by Jace McKenzie

Unconventional Resource Unit  
Exhibit : L-4  
Docket:1412-SP-2220 Cause: 535  
Leasehold Ownership Map  
2,560 acres  
Location: Sections: 32-35 Township: 4S Range: 64W



 Application Lands  
 100% ConocoPhillips WI

Prepared by Jace McKenzie

Unconventional Resource Unit

Exhibit : L-5

Docket:1412-SP-2220 Cause: 535

Setbacks Map

2,560 acres

Location: Sections: 32-35 Township: 4S Range: 64W

30

29

28

27

26

25

31

32

33

34

35

36

4 S  
64 W

5 S  
64 W

6

5

4

3

2

1

 Application Lands

 460 FT Setback

Prepared by Jace  
McKenzie

Unconventional Resource Unit

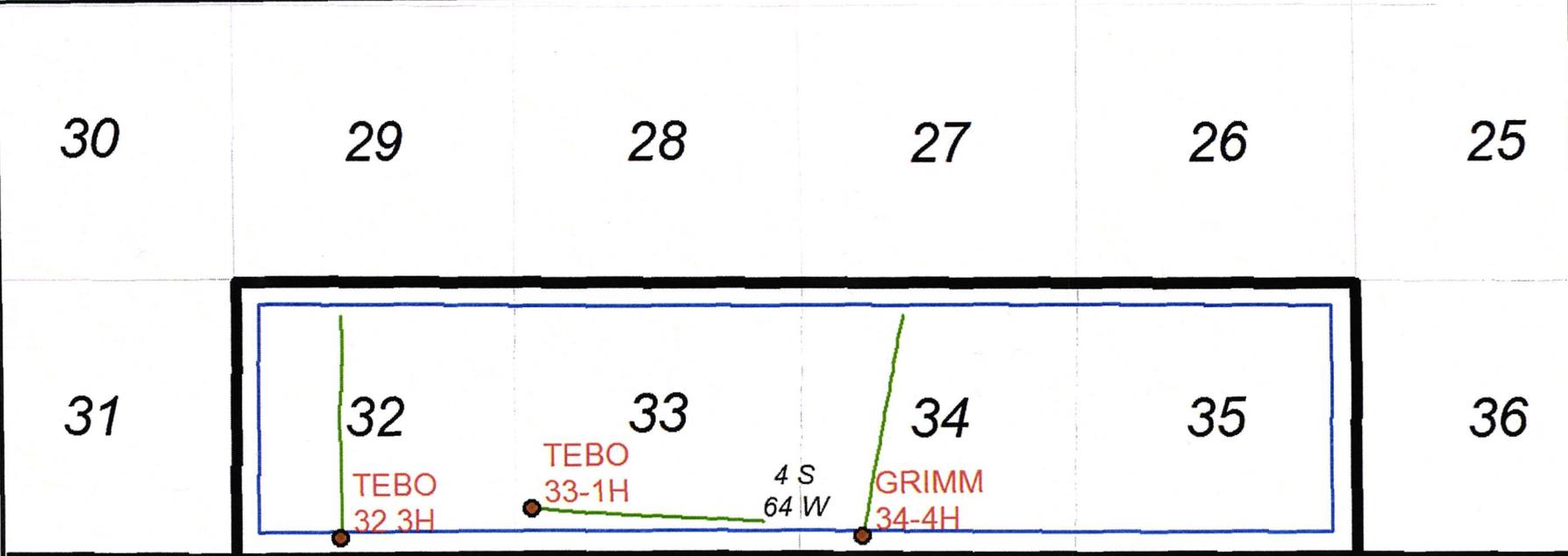
Exhibit : L-6

Docket:1412-SP-2220 Cause: 535

Existing Horizontal Wells Map

2,560 acres

Location: Sections: 32-35 Township: 4S Range: 64W



- Application Lands
- 460 FT Setback
- Surface Hole Location (Existing)
- Horizontal Wellbore (Existing)

Prepared by Jace McKenzie

Unconventional Resource Unit

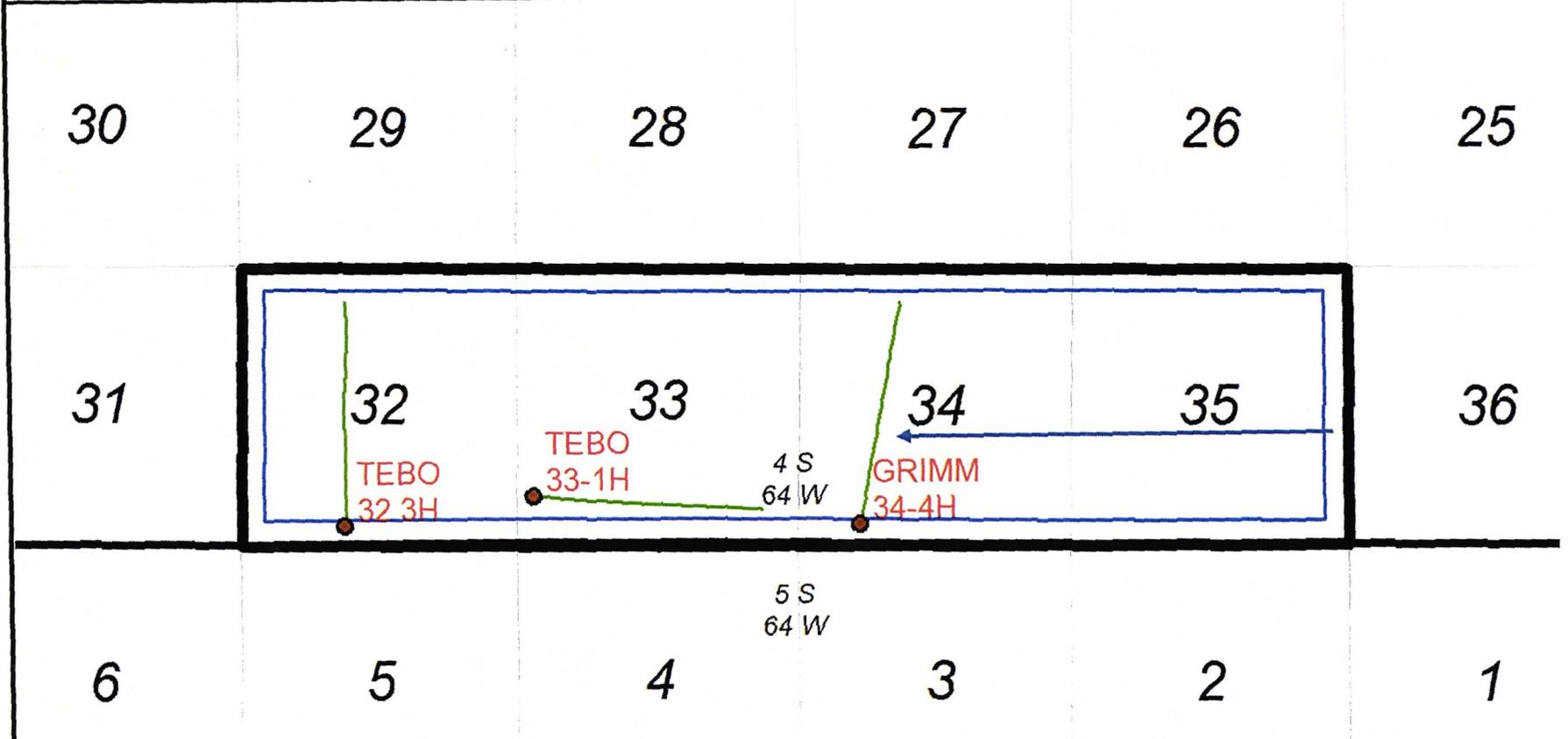
Exhibit : L-7

Docket:1412-SP-2220 Cause: 535

Proposed Horizontal Wells Map

2,560 acres

Location: Sections: 32-35 Township: 4S Range: 64W



- Application Lands
- 460 FT Setback
- Surface Hole Location (Existing)
- Horizontal Wellbore (Existing)
- Proposed Horizontal

Prepared by Jace McKenzie

Unconventional Resource Unit

Exhibit : L-8

Docket:1412-SP-2220 Cause: 535

Proposed Surface Locations Map

2,560 acres

Location: Sections: 32-35 Township: 4S Range: 64W

30

29

28

27

26

25

31

32

33

34

35

36

TEBO  
32 3H

TEBO  
33-1H

4 S  
64 W

GRIMM  
34-4H

5 S  
64 W

6

5

4

3

2

1

- Application Lands
- 460 FT Setback
- Surface Hole Location (Existing)
- Horizontal Wellbore (Existing)
- Proposed Horizontal
- Proposed Well Pad

Prepared by Jace  
McKenzie

Unconventional Resource Unit

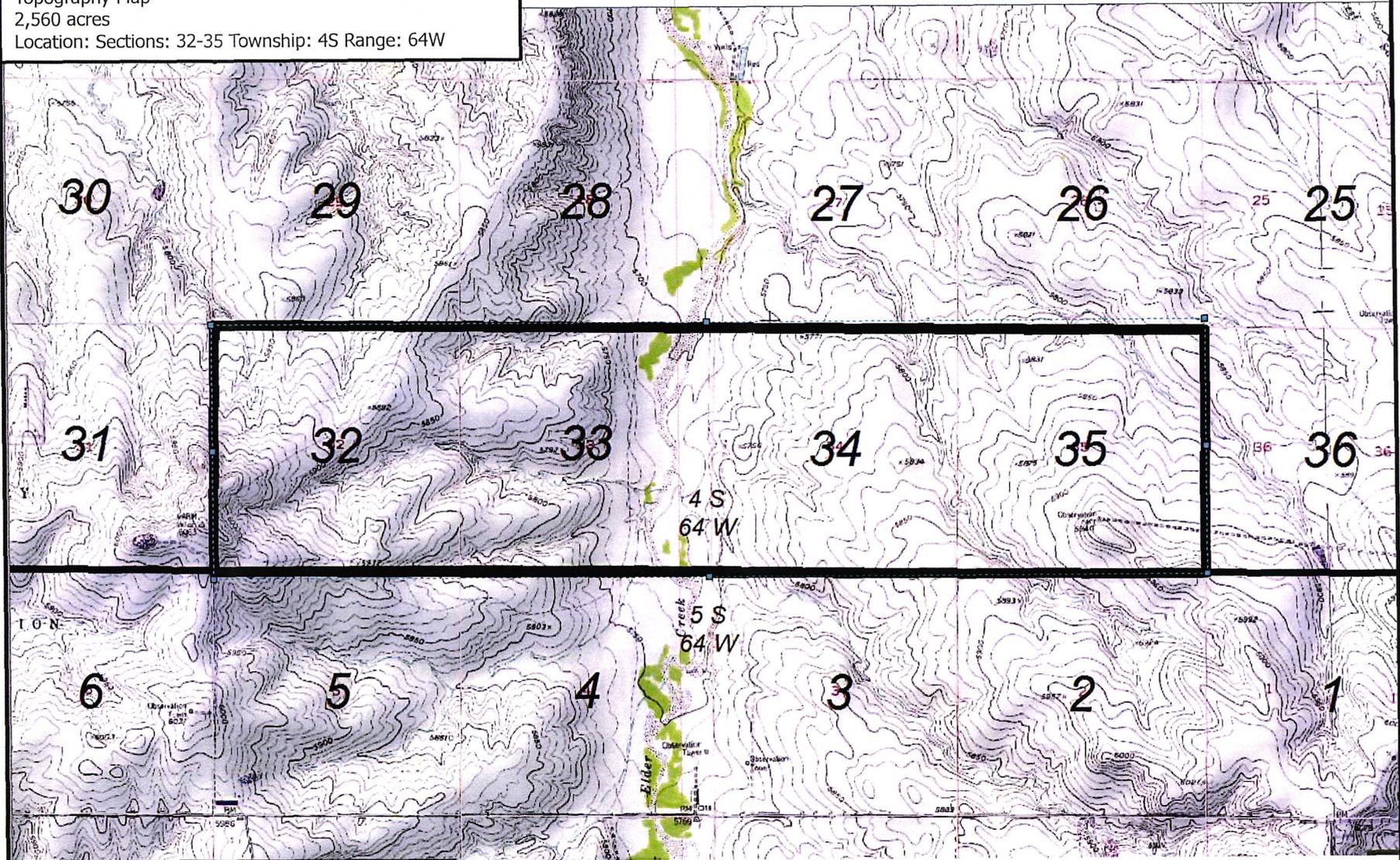
Exhibit : L-9

Docket:1412-SP-2220 Cause: 535

Topography Map

2,560 acres

Location: Sections: 32-35 Township: 4S Range: 64W



Application Lands

Prepared by Jace  
McKenzie

Unconventional Resource Unit

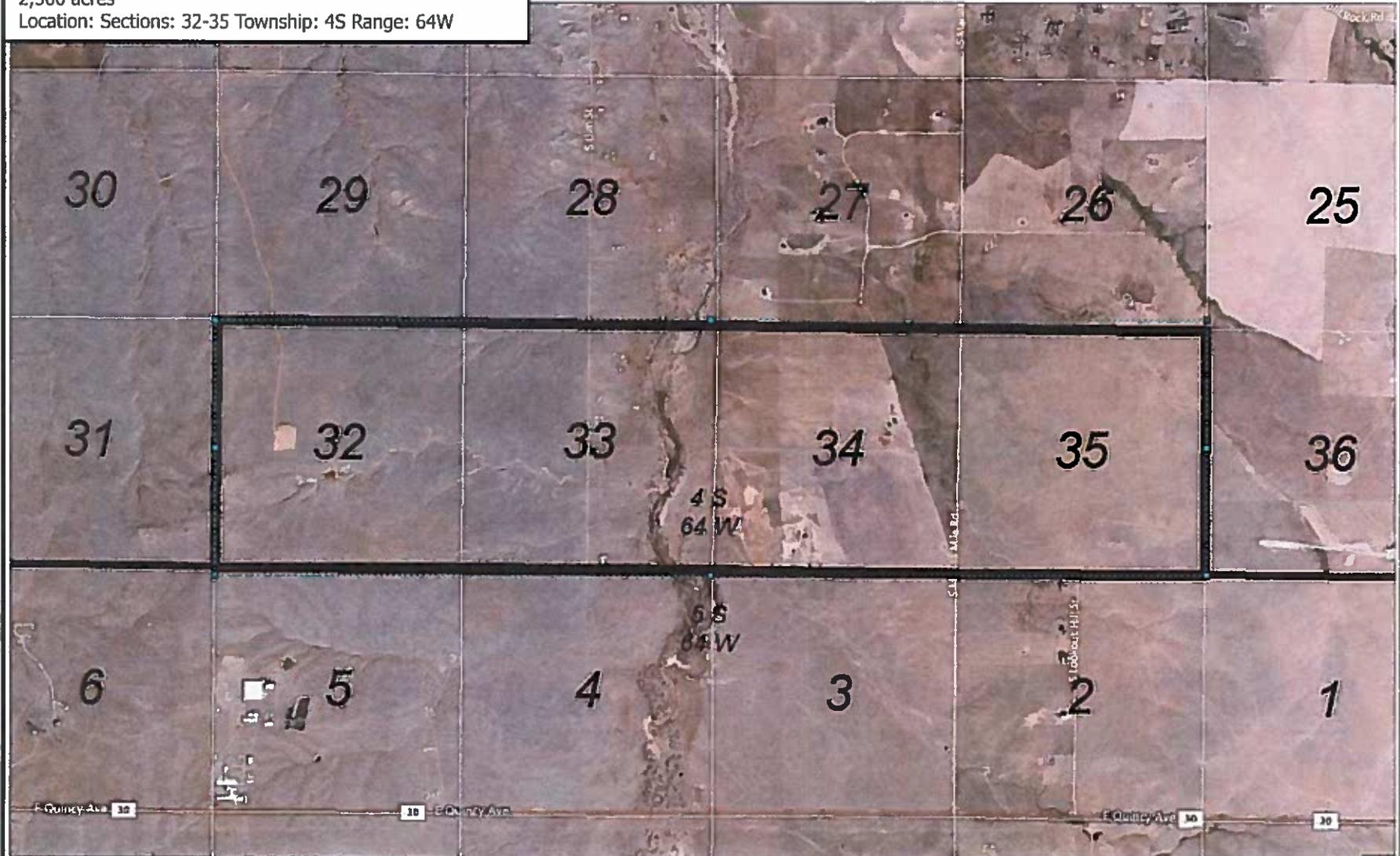
Exhibit : L-10

Docket:1412-SP-2220 Cause: 535

Aerial Map

2,560 acres

Location: Sections: 32-35 Township: 4S Range: 64W



 Application Lands

Prepared by Jace  
McKenzie

**ConocoPhillips Company**

**Geoscience Testimony**

**Spacing Application**

**Niobrara Formation**

Colorado Oil and Gas Conservation Commission Hearing

Cause No. 535

Docket No. 1412-SP-2220

Township 4 South, Range 64 West, Sections 32-35

Arapahoe County

My name is Kristie Ramlal, and I am currently employed as a Geologist for ConocoPhillips Company. I received a Bachelor's degree in Petroleum Geoscience from The University of the West Indies (2009) and a Master's Degree in Geological Sciences from The University of Texas at Austin (2013). I have 1.5 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 seven (7) 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 2,560 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 64 West

Section 32: All

Section 33: All

Section 34: All

Section 35: 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 seven 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 Adams and Arapahoe Counties. 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 that ConocoPhillips is requesting consideration for approval from the Oil and Gas Conservation Commission to establish a 2,560 acre drilling and spacing unit for the Niobrara formation in order to drill horizontal wells in this section. The area covers sections 32, 33, 34 and 35, Township 4 South, Range 64 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 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 monoclinical 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 Hays Limestone, contoured in 10' increments. Thickness values are posted on each contour line. In the spacing area, total Niobrara thickness averages around 320'. 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.

Exhibit No. G-7                      Unconventional Resource Unit Locator Map with nearby Wells

Exhibit No. G-7 is a map that displays the Sections 32, 33, 34, and 35 over which the 2,560 acre drilling and spacing unit is to be established. The map also shows the planned location of the Yampa 35-34 3H well. There are several existing short wells oriented north-south and east-west in the aforementioned sections, which create inconsistencies in the placement of new wells. Based on the information we have, it would be economic to develop longer east-west oriented lateral wells across multiple sections.

All seven (7) 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 2560 acre drilling and spacing unit for sections 32, 33, 34 and 35 in this area.



**Type Log**  
**Andrau Enterprises**  
**#13 Owl Creek**  
**NW NW Sec. 29 T7N R64W**  
**Weld County, CO**  
 (Modified from Longman et al., 1998)

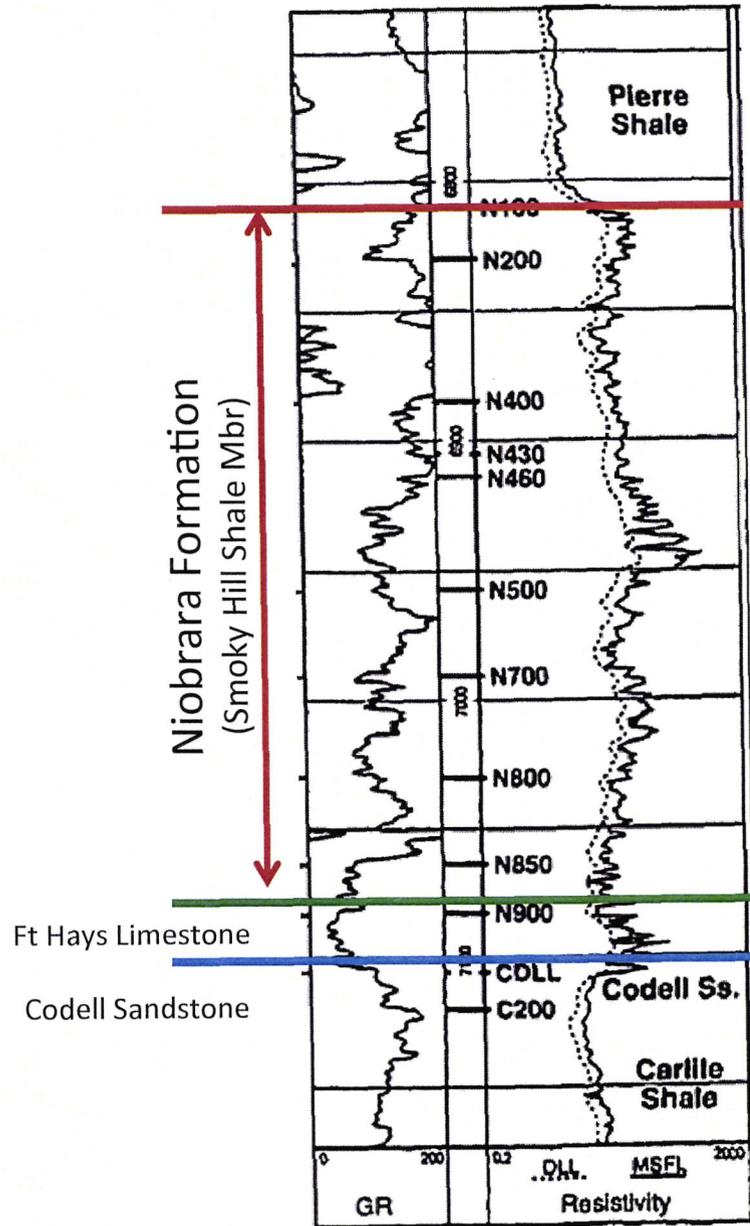
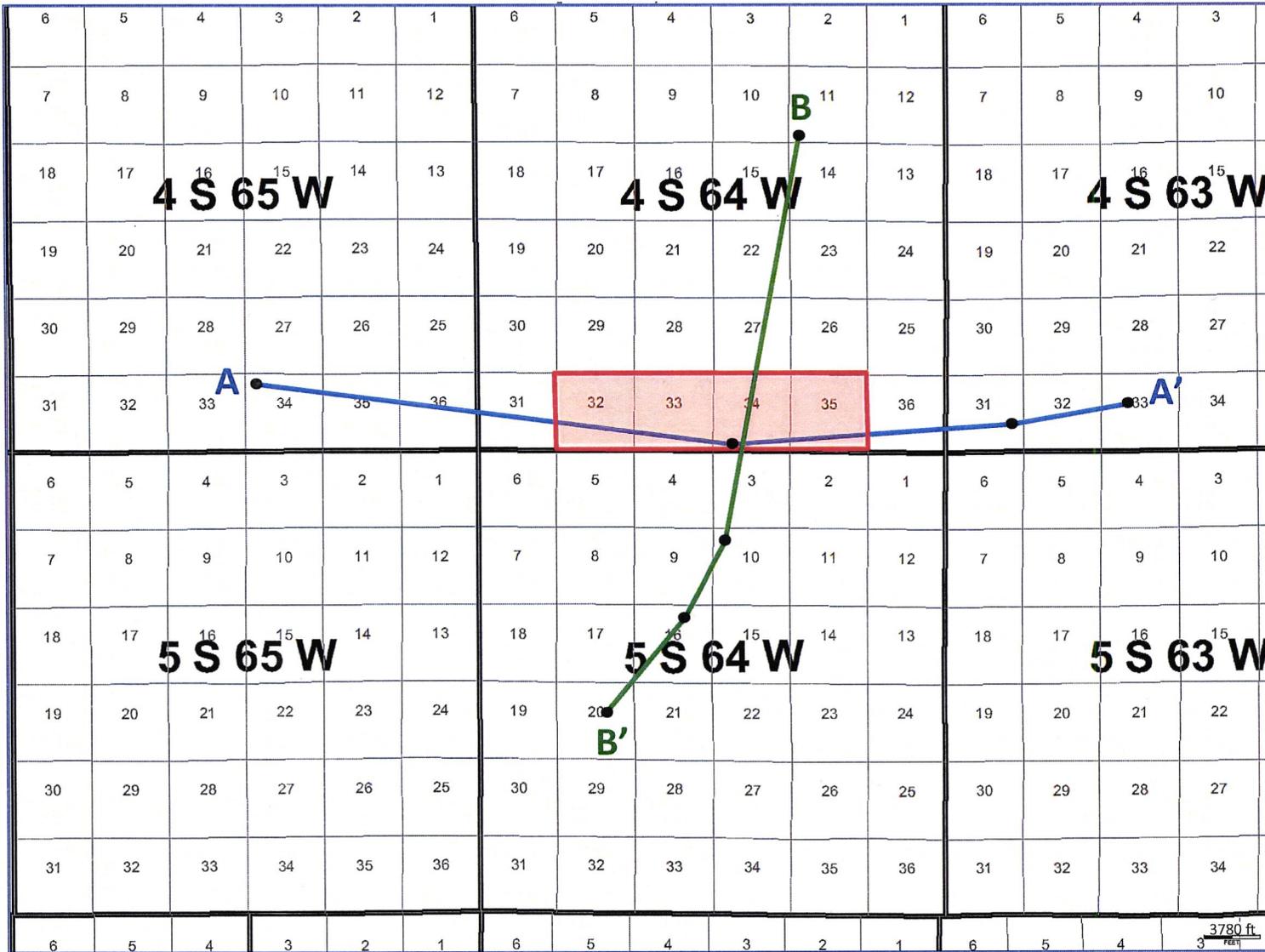


Exhibit: G-1  
 Cause No. #####  
 Docket No. #####



 2560 Application Lands

Exhibit: G-2  
Cause No. #####  
Docket No. #####

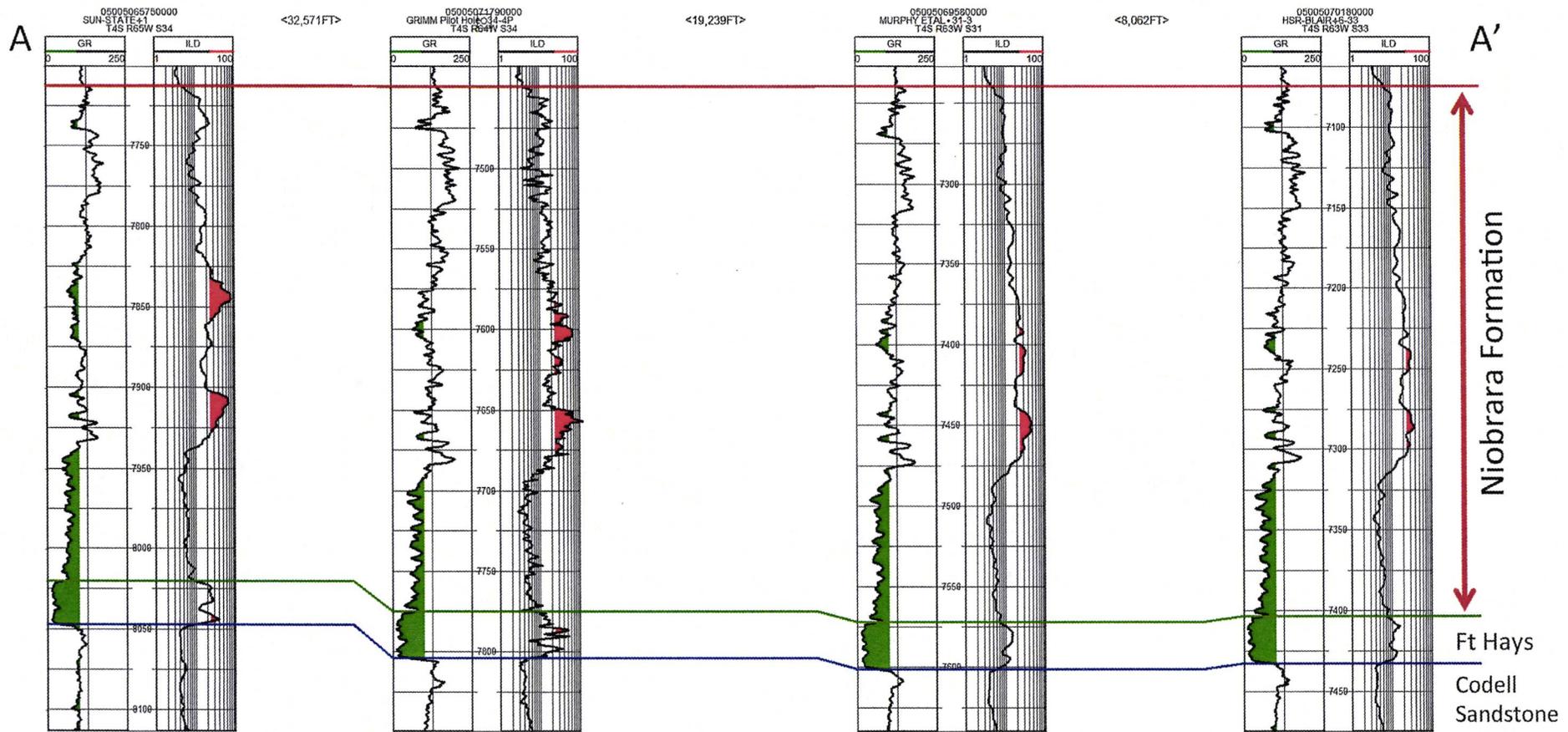


Exhibit: G-3  
Cause No. #####  
Docket No. #####

<b>ConocoPhillips Company</b>	
West-East Cross Section Yampa 4-64 35-34 3H	
Horizontal Scale = 989.6 Vertical Scale = 12.5 Vertical Exaggeration = 79.2x	
LOG CURVES	
0 250	GR (GAP1) CUTOFF = 100.00
1 100	ILD (OHMM) CUTOFF = 25.00
UWI	
Well Name	Well Number
Scale 1/8" = 100'	

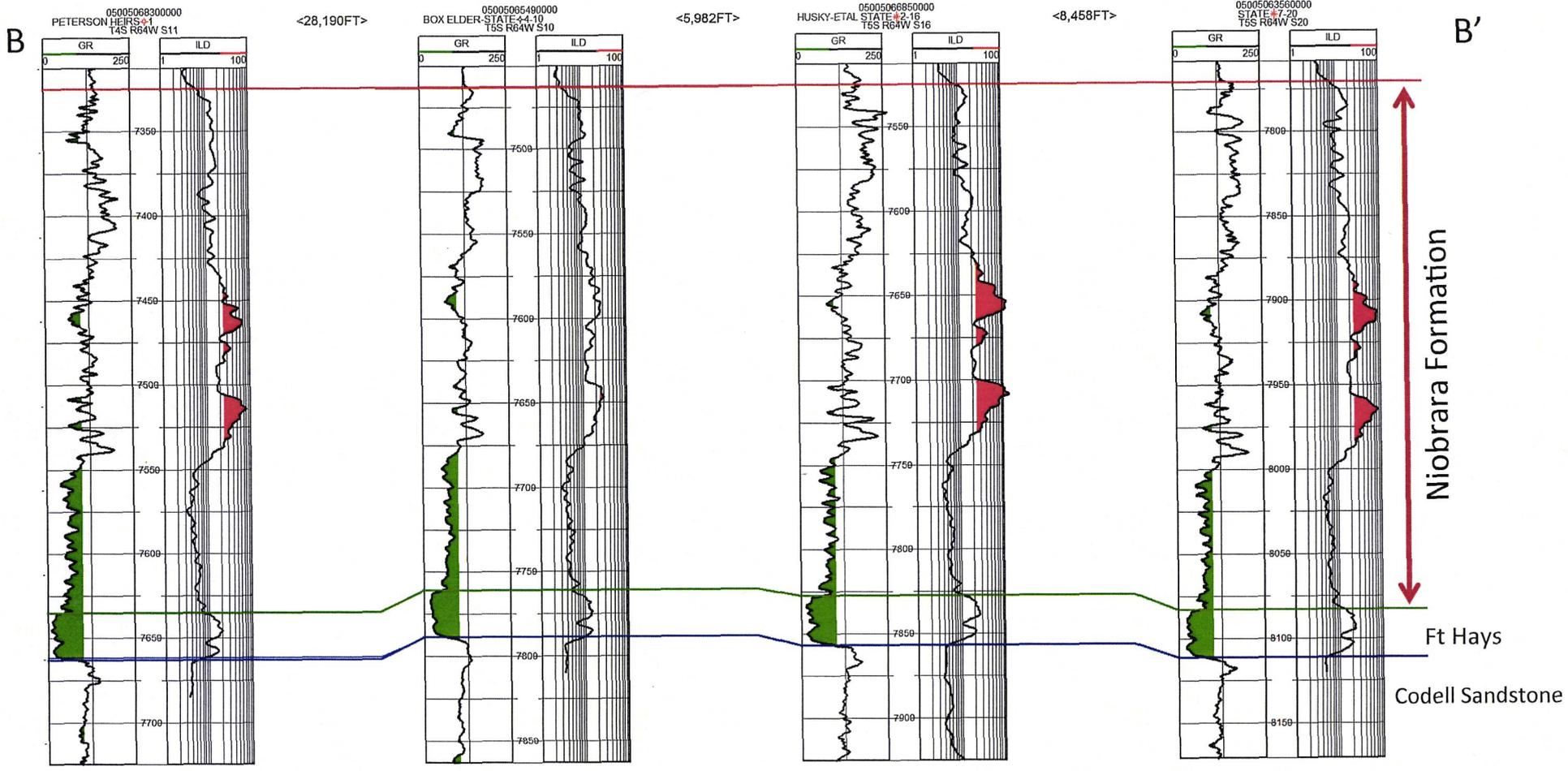
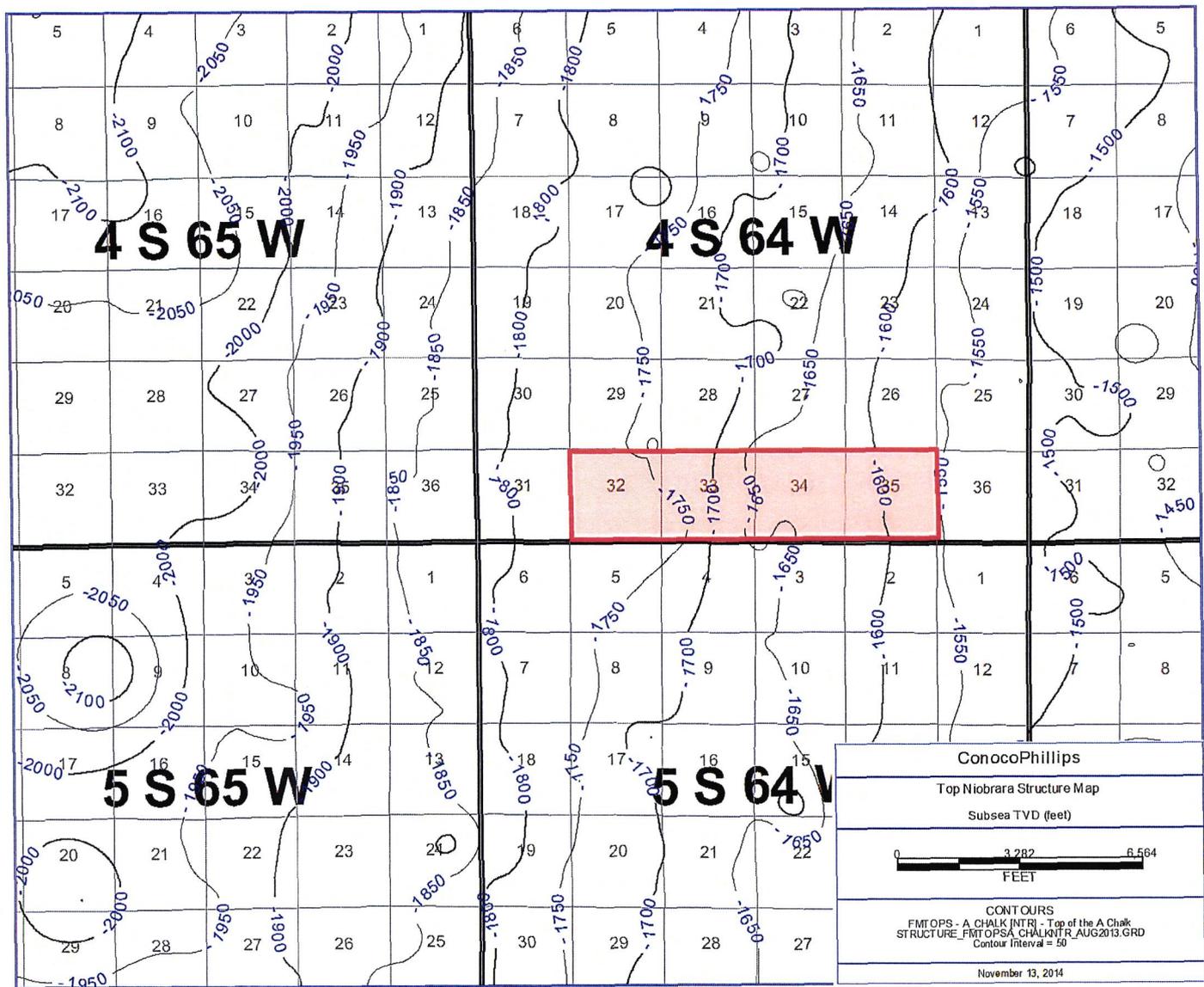


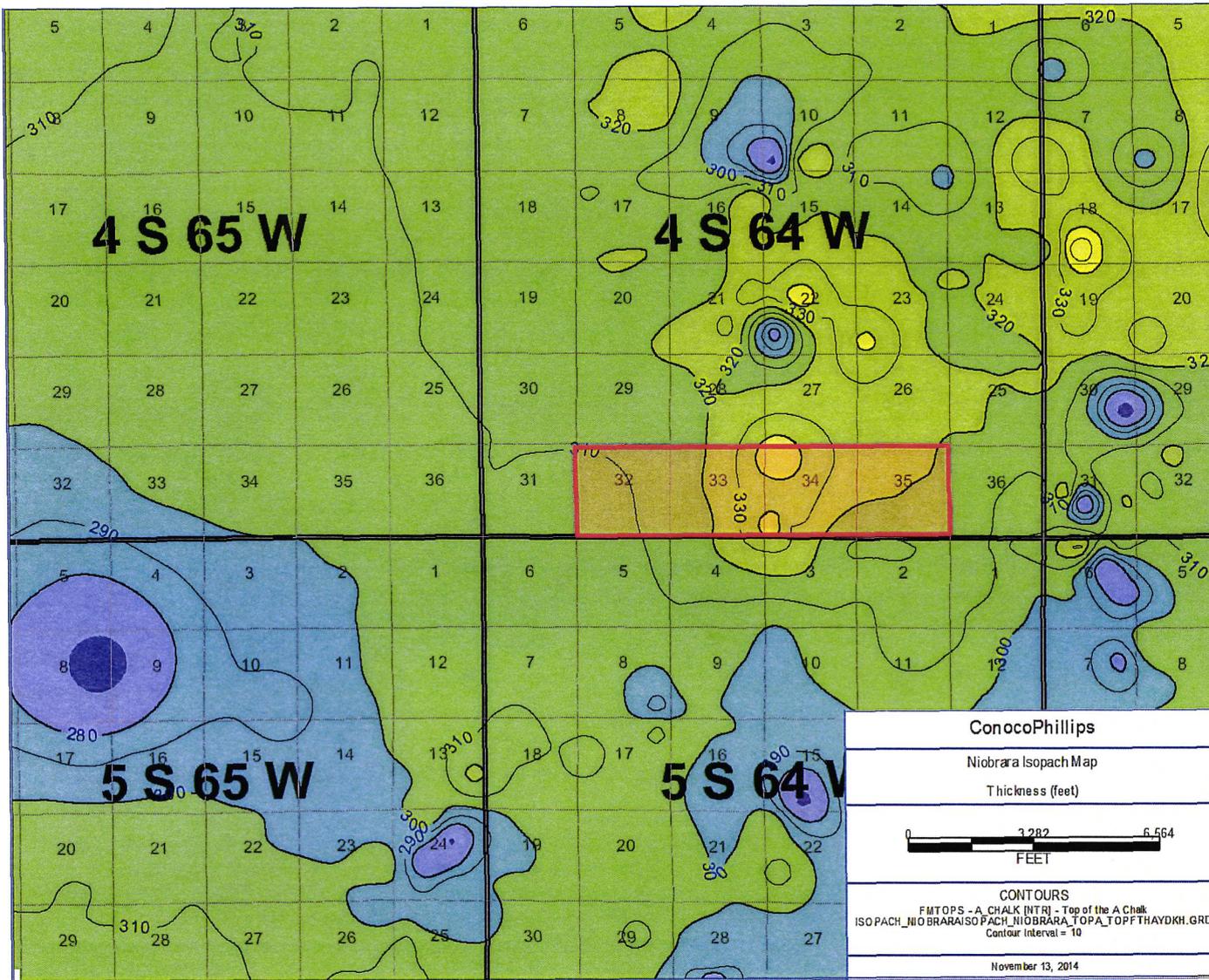
Exhibit: **G-4**  
Cause No. #####  
Docket No. #####

<b>ConocoPhillips Company</b>	
North-South Cross Section Yampa 4-64 35-34 3H	
Horizontal Scale = 812.0 Vertical Scale = 12.5 Vertical Exaggeration = 65.0x	
LOG CURVES	
0 250 GR (GAPI) CUTOFF = 100.00	1 100 ILD (OHMM) CUTOFF = 25.00
<small>UWI</small> <small>Well Name</small> ● <small>Well Number</small> <small>Plan/Map/Doc</small>	



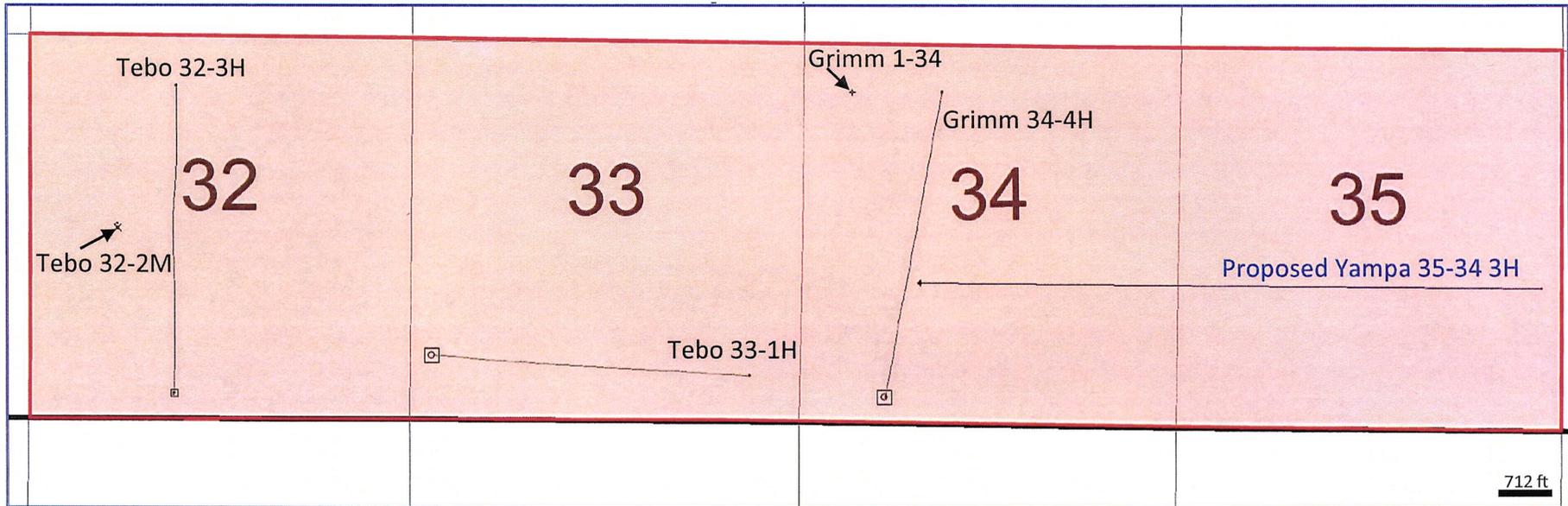
 2560 Application Lands

Exhibit: G-5  
Cause No. #####  
Docket No. #####



 2560 Application Lands

Exhibit: **G-6**  
Cause No. **####**  
Docket No. **####**



 2560 Application Lands

Exhibit: G-7  
Cause No. #####  
Docket No. #####

**Engineering Testimony – Stephanie LaCour**

Cause No. 535

Docket No. 1412-SP-2220

Niobrara Formation

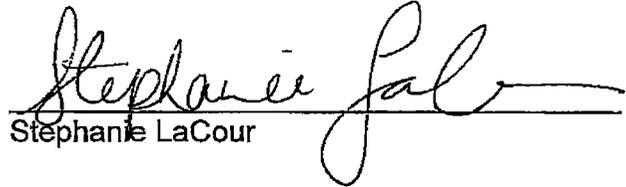
Arapahoe County, Colorado

December 2014 Colorado Oil and Gas Conservation Commission Hearing

In support of the Verified Application of ConocoPhillips in Cause No. 535, Docket 1412-SP-2220 (the Application), **Stephanie LaCour, Reservoir Implementation 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 8 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 shows a base map of the proposed four-section URU with existing horizontal wells. Please note the existing North-South oriented wells in section 32 and 34. These wells were drilled in the early exploration phase before ConocoPhillips determined the optimal orientation of East-West. ConocoPhillips has no plans to drill additional North-South oriented wells in either section. In addition, due to the location of the two N-S oriented wells, E-W oriented laterals within either of the 640 spacing units are limited in lateral length and would not meet the economic hurdle rate for ConocoPhillips. Therefore, the creation of a URU in these sections would allow ConocoPhillips to optimally develop the remaining resources in the four sections and therefore promote efficient drainage, protect correlative rights, and prevent waste.
- c. Exhibit E-3 is a summary of my conclusions relevant to this Application.
  1. ConocoPhillips has no plans to drill North-South oriented laterals in Sections 32 or 34 or Township 4 South Range 64 West.
  2. Drilling East-West laterals within Sections 32 and 34 do not meet the ConocoPhillips economic limits due to short lateral length constrained by existing N-S wells.
  3. The proposed 4 section URU allows ConocoPhillips to optimally develop the remaining resources in the four sections and therefore promote efficient drainage, protect correlative rights, and prevent waste. The reserves under the Application Lands could not be fully and economically recovered without the establishment of the unit set forth in this Docket.

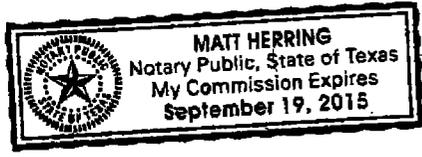
I reserve the right to modify or supplement this testimony and the attached exhibits prior to the December 2014 COGCC hearing.

  
Stephanie LaCour

Subscribed to and sworn to before me this 24<sup>th</sup> day of Nov, 2014, by Stephanie LaCour, Reservoir Engineer.

Notary Public 

My Commission Expires: 9-19-15



# Resume

**Stephanie C. LaCour**  
Primary Contact Number: 979-236-8477  
Email: [Stephanie.C.LaCour@cop.com](mailto:Stephanie.C.LaCour@cop.com)

## CAREER OBJECTIVE

Desire to be challenged by roles of increasing scope and complexity that continue to broaden my technical skills while leveraging my leadership skills to improve the productivity and performance of my work group.

## SUMMARY

Approximately seven years of experience in the oil and gas industry with the last four years focused on reservoir engineering. Recent experience entails leadership and coordination of budget, well planning, full field development planning, and more. Possess strong analytical skills, learn quickly, and easily establish strong working relationships with others. This enables me to understand complex issues, frame solutions, and effectively influence others to achieve personal and team goals.

## PROFESSIONAL EXPERIENCE

### **CONOCOPHILLIPS**

Houston, Texas 2007 – Present

#### **Senior Reservoir Engineer Niobrara Implementation**

- Implementation RE for Eastern area - Led cross functional team throughout work flow processes to propose new projects, develop drillable inventory, and execute team objectives through first production and beyond.
- Long Term Development Planning – Organized preliminary assumptions for asset to use in kick starting the long term well planning process.
- Work Flow lead for Post TD - Continuous evaluation of the process and team work flow to identify areas for improvement. Introduced a tool to effectively communicate changes to plans to the entire asset and to smooth the process of handing projects over to operations.
- URE Develop and Optimize Core Team Member – Participate in regular meetings and leverage knowledge sharing from participating into the asset team.
- Pad strategy and design team – Led team in multiple efforts to design pads for specific projects as well as development planning needs.
- Other Involvement includes Member MCBU/RBU Activities Committee – Lead for the RBU Family Picnic which took place in Q2, Texas A&M Recruiting since initial hire in 2007, and L48 Philanthropy Committee – Lead for annual volunteer event at Brookwood Community since 2008.

#### **Senior Reservoir Engineer L48 Exploration**

- Exploration lead for Development Scenario Planning Team – Collaborated with broader team to understand the range of appraisal scenarios for Niobrara. Work led to ELT decision of 1 rig appraisal strategy implemented in 2013. Delivered on short timelines and met all deadlines. Kick started the evaluation of Wellspring for the development team to utilize.
- Budget/LRP – Managed budget and financial reviews for Niobrara. Utilized results of development scenario planning work to refine and ultimately arrive at 2013 LRP assumptions.
- Completed an industry analysis for Niobrara to help understand well performance in the area and recommend new type curves.
- Assisted team in various tasks to evaluate an acreage capture business opportunity with a tight deadline to prepare a proposal for L48 Exploration management.
- Completed a reservoir model for Northeast Echo Springs to evaluate the number of frac stages on well performance and understand the setback limits in order to develop a proposal for reducing setbacks and maximizing lateral length.

#### **Senior Reservoir Engineer Bossier Development Team**

- Team lead for Upper Bossier Recompletion Study - Developed the recompletion strategy for Bossier by leading the team in an evaluation of uphole potential. Performed correlations based on open-hole logs, cross sections, ML shows, petrophysical properties, etc. Identified trends and similarities and grouped recompletion prospects into nine ranked categories. Resulted in 41 potential economic recompletion targets in the Upper Bossier Sands and included 24 of the projects in the 2012 Long Range Plan (LRP).
- Integrated Production Modeling Suite (IPM) – Created reservoir models for entire Sayell field and updated on a semi-annual basis. Used models to determine compression strategy, optimization opportunities on competitive wells, compression cost savings, etc. Used results to develop an asset depletion plan.

**Exhibit E – 1**  
**Cause # 535**  
**Docket # 1412-SP-2220**

# Resume Cont.

- Annual reserve forecasting in Oil Field Manager and Eekete RTA to populate Reserves Management System (RMS).
- Budget coordinator for 2011 and 2012- Maintained budget and developed probabilistic ranges to review with asset team each update in order to gain alignment amongst groups.
- County property tax assessment of Bossier- Reviewed analyses with tax assessor in Austin and achieved 76% reduction in the negotiable volume and a savings of \$1.2MM for 2010.

## Production Engineer Southeast Louisiana

- Team lead for Bay St. Elaine and Lake Pelto fields –
  - Responsible for 75 wells or 50% of the total produced volumes for Southeast Louisiana
  - Consistently led cross functional team to set goals, identify projects, and execute the team objectives.
  - Worked with operations to optimize the performance of each well. Built trust between our groups by providing operations with a tool to help optimize production within our constraints
  - Utilized BHP surveys to identify uplift potential in existing wells and other wells to restore to production
  - Completed a completion/depletion plan which identified a compression optimization project that was implemented and concept was utilized for other fields.
- Well Interventions - Identified, evaluated, prepared, and executed 54 well intervention projects in 2009 including recompletions, two thru-tubing gravel packs, coiled tubing cleanouts and milling operations, acid stimulations, and salt water disposal remedies. Provided on-site supervision and daily engineering support for all operations.
- Mentored Summer Interns - Set projects for both an office and a field intern and provided guidance and mentorship throughout the summer. Office intern ranked top intern candidate and extended one of the six full-time offers for employment
- Active safety leader – Participated in regular field safety meetings, inspections, JSA's and served as a Fire Warden for my floor.

## Development Engineer LOBO/South Texas

- Completed a rotational training program as a development engineer in four of the engineering disciplines – Used RTA to identify two infill drilling opportunities, was production engineer for in Zapata County and implemented several recompletion and workover procedures, designed two recompletions utilizing MFRAC, and spent one month on a drilling rig.

## SUMMER INTERNSHIPS

### Chevron Phillips Chemical Company - Polypropylene Business Intern – Summer 2006

- Developed a customer/contact relationship management system and created a hurricane preparedness/forward storage/inventory management plan that resulted in \$65K annual savings

### DOW Chemical Company - Plastics Technical Service and Development Intern – Summer 2005

- Designed and conducted an experiment to determine the properties of polypropylene/elastomer blends in an injection molding application. Generated technical research report and presented findings to TS&D/R&D exchange.

### ConocoPhillips Upstream Facility Engineer Intern – Summer 2004

- Built WINFLOW model, XMAP model, and excel spreadsheet which combined served as a tool for the field to optimize operating pressures and production rates

## EDUCATION

Bachelor of Chemical Engineering - Texas A&M University – December 2006

## PROFESSIONAL MEMBERSHIPS

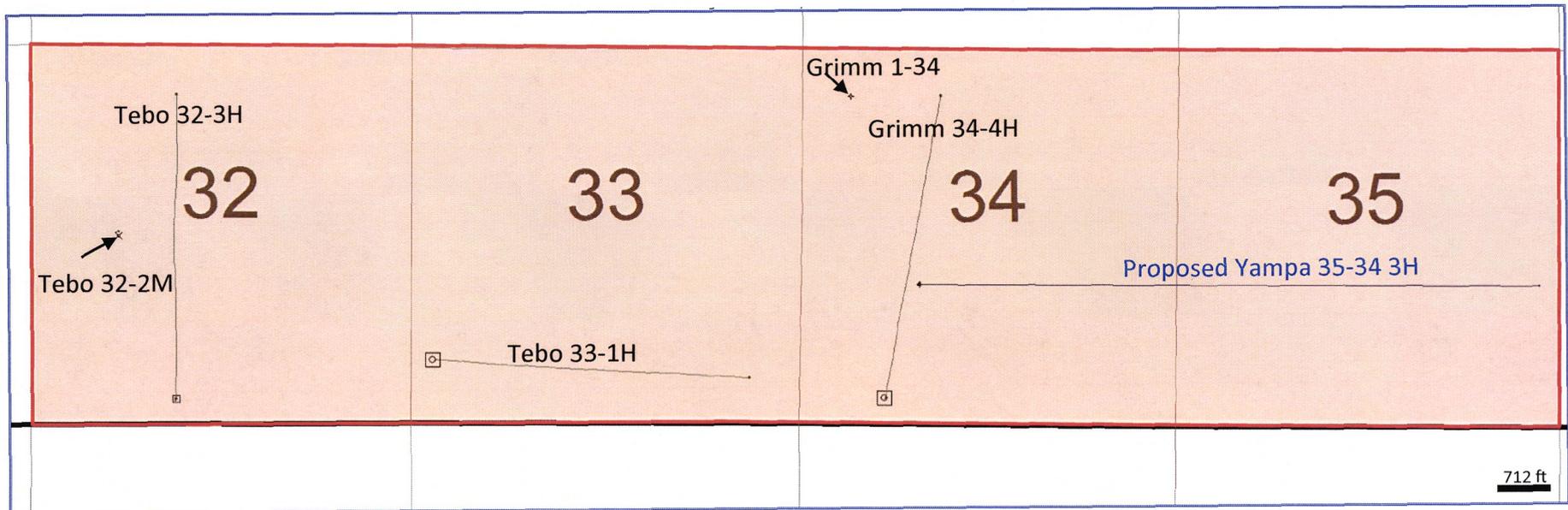
Society of Petroleum Engineers  
American Institute of Chemical Engineers

## TECHNICAL SKILLS

Microsoft Word, Microsoft Excel, Crystal Ball, Microsoft PowerPoint  
Integrated Production Modeling Suite (IPM)  
Oil Field Manager (OFM)  
Merak Peep  
Eekete RTA  
Decision Tree and Risk Analysis

Exhibit E – 1  
Cause # 535  
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# Application Lands – Base Map



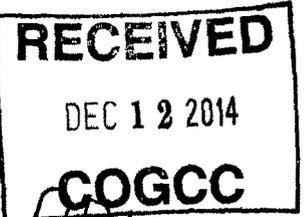
 2560 Application Lands

Exhibit E – 2  
Cause # 535  
Docket # 1412-SP-2220

## Engineering Summary

- ▶ ConocoPhillips has no plans to drill North-South oriented laterals in Sections 32 or 34 or Township 4 South Range 64 West.
- ▶ Drilling East-West laterals within Sections 32 and 34 do not meet the ConocoPhillips economic limits due to short lateral length constrained by existing N-S wells.
- ▶ The proposed 4 section URU allows ConocoPhillips to optimally develop the remaining resources in the four sections and therefore promote efficient drainage, protect correlative rights, and prevent waste. The reserves under the Application Lands could not be fully and economically recovered without the establishment of the u1412-SP-2220 nit set forth in this Docket.

Exhibit E – 3  
Cause # 535  
Docket # 1412-SP-2220



**ConocoPhillips Company**  
**Julia Browning – Supplemental Land Testimony**  
Cause No. 535; Docket No. 1412-SP-2220  
Unconventional Resource Unit Application – Niobrara Formation  
Unnamed Field, Arapahoe County, Colorado

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 the Application in the above referenced docket, I am submitting my sworn testimony, which together with my Land Testimony originally submitted in this matter form the basis of the Application for an order vacating Order No. 535-118, vacating Order No. 535-145 in part, vacating Order No. 535-237, vacating Order No. 535-313 in part, vacating Order No. 535-393, and establishing a 2,560-acre unconventional resource unit (“URU”), with 460 foot setbacks from the URU boundary, for the production of oil, gas, and associated hydrocarbons from the Niobrara Formation covering certain described lands in Arapahoe County, Colorado.

Land Issues Affecting the W $\frac{1}{2}$ W $\frac{1}{2}$  of Section 32 of the Application Lands:

ConocoPhillips acknowledges that the Tebo 32-3H appears initially to present a challenge to development of the W $\frac{1}{2}$ W $\frac{1}{2}$  of Section 32 of the Application Lands with east-to-west horizontal development. Notwithstanding initial appearances, the W $\frac{1}{2}$ W $\frac{1}{2}$  of Section 32 is best included in the Application Lands for several reasons. The adjacent lands that could otherwise be used to develop the W $\frac{1}{2}$ W $\frac{1}{2}$  of Section 32 (being Section 31 of Township 4 South, Range 64 West, 6th P.M.) are located in the Lowry Bombing Range, which does not allow for statutory pooling. So portions of Section 32 cannot necessarily be pooled with portions of Section 31. Additionally, the existence of the Tebo 32-3H does not preclude east-to-west drilling across the entirety of Section 32 in other benches and formations. So development of the resource is possible. Finally, there is always the option of plugging the Tebo 32-3H. Applicant is still assessing data in the Application Lands and surrounding area, and is not yet prepared to determine the most effective means of developing the W $\frac{1}{2}$ W $\frac{1}{2}$  of Section 32, but there are means to do so.

Number of Surface Locations:

Applicant is requesting a total of eight (8) multi-pads well pads in addition to any pads that currently exist in the Application Lands.



**RECEIVED**  
DEC 12 2014  
**COGCC**

Engineering Testimony – Clint Hutchinson

Cause No. 535

Docket No. 1412-SP-2220

Niobrara Formation

Arapahoe County, Colorado

ORIGINAL

December 2014 Colorado Oil and Gas Conservation Commission Hearing

In support of the Verified Application of ConocoPhillips in Cause No. 535, Docket 1412-SP-2220 (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 shows a base map of the proposed four-section URU with existing horizontal wells. Please note the existing North-South oriented wells in section 32 and 34. These wells were drilled in the early exploration phase before ConocoPhillips determined the optimal orientation of East-West. In addition, due to the location of the two N-S oriented wells, E-W oriented laterals within either of the 640 spacing units are limited in lateral length and would not meet the economic hurdle rate for ConocoPhillips.

An example of a potential multi-well pad surface location is also displayed on the base map in section 34; this location would allow for optimal development of the application lands with the establishment of a URU. Exact pad locations and size of pad for the URU will depend on results obtained from exploration wells.

The creation of a URU in these sections would allow ConocoPhillips to optimally develop the remaining resources in the four sections and therefore promote efficient drainage, protect correlative rights, and prevent waste.

- c. Exhibit E-3 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.
- d. Exhibit E-4 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. Using these parameters results in an estimated drainage area not greater than 407.3 acres per individual well.

- e. Exhibit E-5 shows historical production of existing horizontal wells within the Application Lands. The Grimm 34-4H and Tebo 32-3H are N-S oriented wells and the Tebo 33-1H is oriented E-W. The Tebo 33-1H, drilled in the optimal E-W orientation, has performed significantly better than both N-S wells. Drilling E-W oriented wells would increase recovery when compared to N-S oriented wells.
- f. Economics were run using completed well costs of \$12,561,525 for the "Yampa 4-64 35-34 3H" well, 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. Drilling East-West laterals within Sections 32 and 34 do not meet the ConocoPhillips economic limits due to short lateral length constrained by existing N-S wells.
  - 2. 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.
  - 3. Drilling wells in the preferred E-W orientation will deliver higher recovery than wells drilled in the N-S orientation.
  - 4. A horizontal well with a greater than 6,000 foot lateral producing from the Niobrara formation meets ConocoPhillips' economic requirements for

exploration wells.

5. The proposed 4 section URU allows ConocoPhillips to optimally develop the remaining resources in the four sections and therefore promote efficient drainage, protect correlative rights, and prevent waste. The reserves under the Application Lands could not be fully and economically recovered without the establishment of the unit set forth in this Docket.

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

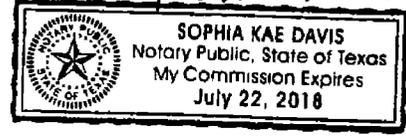
Clint Hutchinson  
Clint Hutchinson

Subscribed to and sworn to before me this 11 day of December, 2014, by Clint Hutchinson, Lead Reservoir Engineer.

Notary Public SOPHIA KAE DAVIS 

My Commission Expires: JULY 22, 2018

Address: 600 N DALEY Ashford #ATR 3027A  
HOUSTON, TX 77079



# Resume

CLINT HUTCHINSON  
ConocoPhillips Company  
P.O. Box 2197 Houston, TX 77252  
Clnt.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

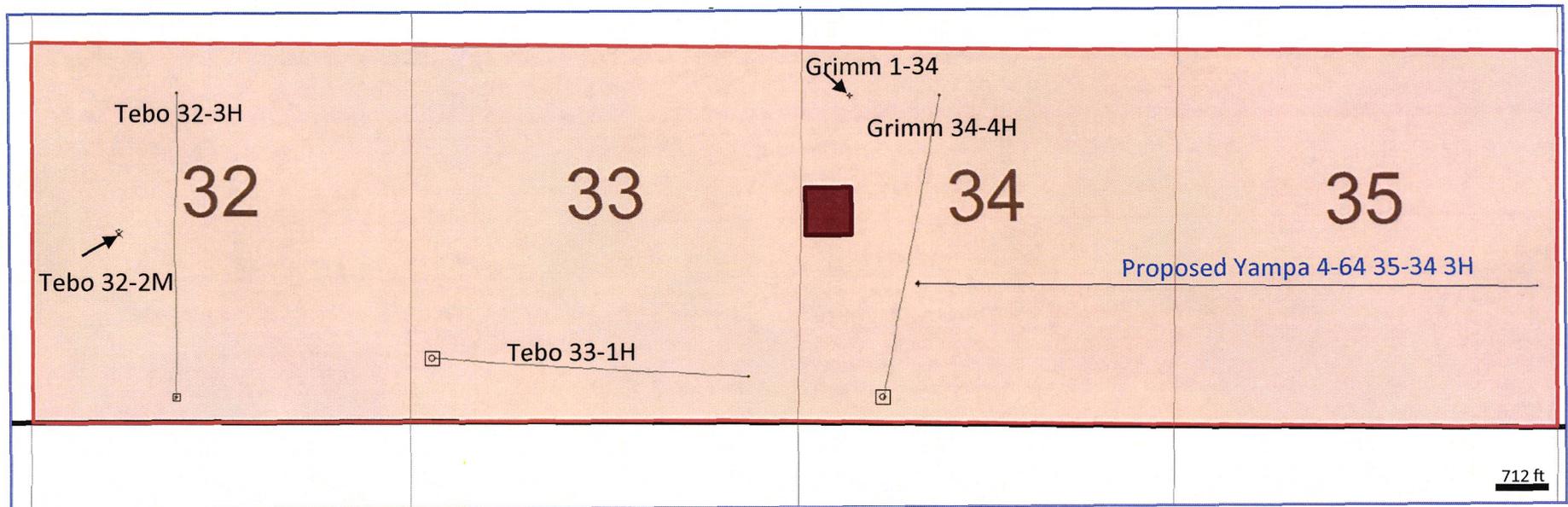
Evaluated drilling and recompletion prospects. Maintained reserve forecasts. Prepared acreage for disposition.

#### Education

1992-1996: Colorado School of Mines Golden, CO  
B.S. Petroleum Engineering

Exhibit E – 1  
Cause # 535  
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# Application Lands – Base Map



2560 Application Lands



Example of a potential multi-well pad location

Exhibit E – 2  
Cause # 535  
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# Niobrara Mid-Length Lateral Type Curve

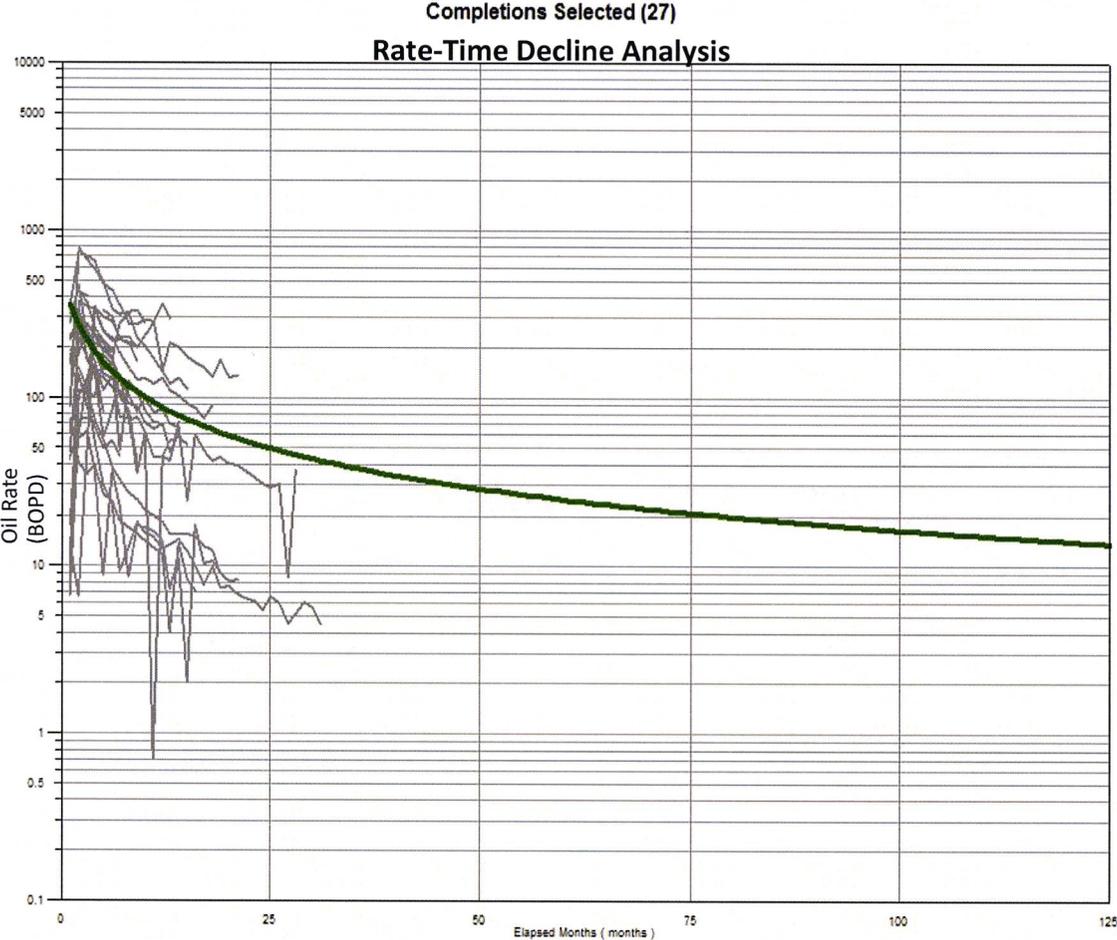


Exhibit E – 3  
Cause # 535  
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# Niobrara Mid-Length Lateral Drainage Area Calculation

## COP PARAMETERS - MID-LENGTH 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

Exhibit E – 4  
Cause # 535  
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# E-W vs N-S Well Performance

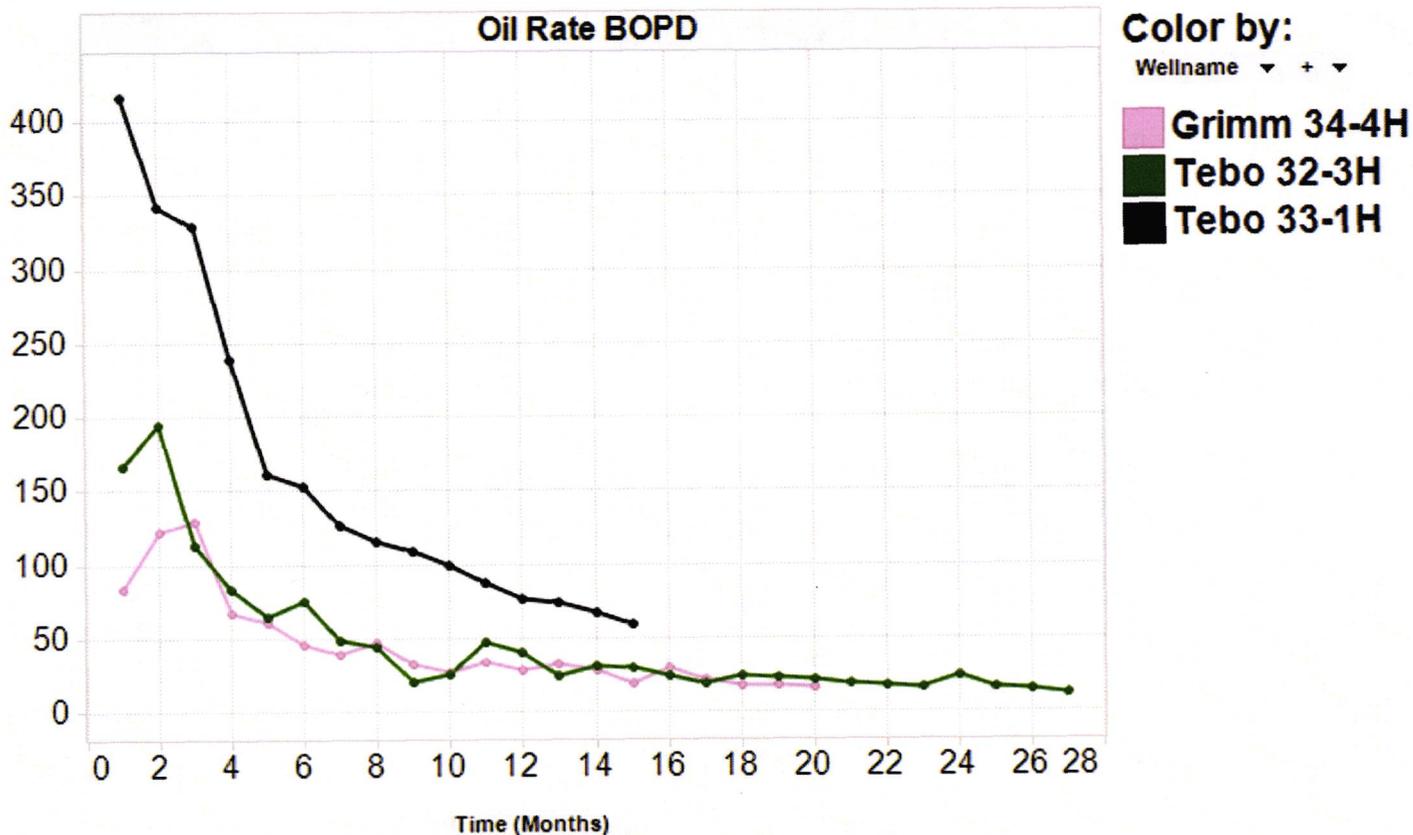
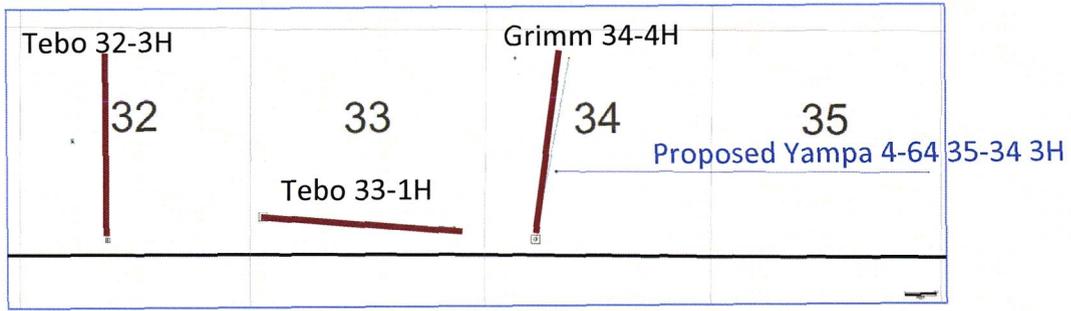


Exhibit E – 5  
Cause # 535  
Docket # 1412-SP-2220



## Engineering Summary

- ▶ Drilling East-West laterals within Sections 32 and 34 do not meet the ConocoPhillips economic limits due to short lateral length constrained by existing N-S wells.
- ▶ 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.
- ▶ Drilling wells in the preferred E-W orientation will deliver higher recovery than wells drilled in the N-S orientation.
- ▶ 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 4 section URU allows ConocoPhillips to optimally develop the remaining resources in the four sections and therefore promote efficient drainage, protect correlative rights, and prevent waste. The reserves under the Application Lands could not be fully and economically recovered without the establishment of the unit set forth in this Docket.

Exhibit E – 6  
Cause # 535  
Docket # 1412-SP-2220