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8-17-17

## **511 Documents**

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**AUG 17 2017**

**COGCC**

# **Fifth Creek Energy Operating Company, LLC**

Cause No. 421

Docket No. 170900557

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

IN THE MATTER OF THE APPLICATION OF )	CAUSE NO. 421
FIFTH CREEK ENERGY OPERATING )	
COMPANY, LLC FOR AN ORDER )	DOCKET NO. 170900557
AUTHORIZING ADDITIONAL WELLS IN SIX (6) )	
APPROXIMATE 1,280-ACRE DRILLING AND )	TYPE: ADDITIONAL WELLS
SPACING UNITS ESTABLISHED FOR )	
SECTIONS 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, )	
29 AND 30, TOWNSHIP 11 NORTH, RANGE 63 )	
WEST, 6TH P.M., FOR PRODUCTION FROM )	
THE NIOBRARA FORMATION, HEREFORD )	
FIELD, WELD COUNTY, COLORADO. )	

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

Fifth Creek Energy Operating Company, LLC ("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 July 13, 2017, 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 17<sup>th</sup> day of August 2017.

Respectfully submitted,

**FIFTH CREEK ENERGY OPERATING COMPANY, LLC**

By: 

Jamie L. Jost  
Kelsey Wasylenky  
Jost Energy Law, P.C.  
Attorney for Applicant  
1401 17<sup>th</sup> St., Suite 370  
Denver, Colorado 80202  
(720) 446-5620

**Fifth Creek Energy Operating Company, LLC  
Teale Stone - Land Testimony**

Cause No. 421; Docket No. 170900557  
Increased Density – Niobrara Formation  
Wattenberg Field, Weld County, Colorado

September 2017 Colorado Oil and Gas Conservation Commission Hearing

My name is Teale Stone, and I am currently employed as a Senior Landman at Fifth Creek Energy Operating Company, LLC ("Applicant"). I have over five years of professional 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 authorize an additional seven (7) horizontal wells, for a total of fifteen (15) horizontal wells, in each of six (6) approximate 1,280-acre drilling and spacing units established by Order No. 421-86 for Sections 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18, Township 11 North, Range 63 West, 6th P.M., for the efficient and economic development of oil, gas and associated hydrocarbons from the Niobrara Formation underlying the below-described lands.

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 19: All

Section 30: All

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

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 20: All

Section 29: All

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

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 21: All

Section 28: All

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

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 22: All

Section 27: All

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

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 23: All

Section 26: All

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



Township 11 North, Range 63 West, 6<sup>th</sup> P.M.  
Section 24: All  
Section 25: All  
1,280 acres, more or less, Weld County, Colorado

Exhibit 1: Leasehold Ownership Map:

Exhibit 1 is a map showing the location of the Application Lands and the leasehold ownership. Upon information and belief, the following parties own leasehold or unleased mineral interests in the Application Lands:

Clear Creek Fund I-A, LP  
8 North, LLC

Exhibit 2: Mineral Ownership Map:

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

Exhibit 3: Property Location Plat:

Attached as Exhibit 3 is a Property Location Plat. The Applicant will conform to its statement that the treated perforation of the Wells within the Niobrara Formation will not be closer than 300 feet from the unit boundaries of the 1,280.00-acre drilling and spacing unit and not less than 150 feet from the treated interval of another well within the unit.

Exhibit 4: Surface Ownership Map:

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

Exhibit 5: Topographic Map:

Exhibit 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 6: Interested Parties:

Attached as Exhibit 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.

Teale Stone

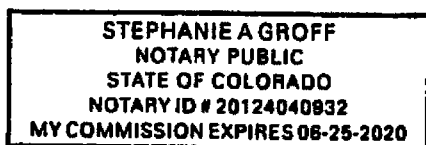
Teale Stone  
Senior Landman  
Fifth Creek Energy Operating Company, LLC

STATE OF COLORADO                    )  
  ) ss.  
COUNTY OF ARAPAHOE                )

The foregoing instrument was subscribed and sworn to before me this 1<sup>st</sup> day of August 2017, by Teale Stone, Senior Landman for Fifth Creek Energy Operating Company, LLC.

Witness my hand and official seal.

[SEAL]



My commission expires: June 22, 2020

Stephanie A Groff

Notary Public

# Teale Philip Stone

---

1850 Bassett Street #401  
Denver, CO 80202  
(918) 694-3231 teale.stone@gmail.com

## EDUCATION

**B.S. in Business Administration – 2011**  
**UNIVERSITY OF DENVER**

Major: Management through the Daniels College of Business

- Dean's List
- Academic All Conference (Soccer)

**Petroleum Land Management Certificate – Expected 2017**  
**UNIVERSITY OF DENVER**

**CASCIA HALL PREPARATORY SCHOOL - 2007**  
Tulsa, Oklahoma

## EXPERIENCE

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### **Fifth Creek Energy Operating Company, LLC**

Denver, Colorado

Senior Landman

**March 2017 – Present**

- Oversee all Land Operation tasks, including but not limited to managing brokers, ordering and curing title, clearing surface locations for drill sites, assisting in acquisitions, and planning for all future development.

### **BILL BARRETT CORPORATION**

Denver, Colorado

Landman I – Uinta Basin and DJ Basin

**August 2014 to March 2017**

- Nearly 5 years of professional in house land experience with a primary focus in the Rocky Mountain Region (Utah, Colorado, Wyoming and New Mexico).
- Prepare and present Uinta Basin and DJ Basin Asset Status Reports directly to Senior Management on a weekly basis.
- Perform aspects of title research, fee and federal leasing, purchasing fee working interests and aid in the maintenance of multiple drilling prospects throughout the Uinta and DJ Basin.
- Operations Land Lead on BBC's recent divestiture of over 120,000 net acres in the Uinta Basin which closed in July of 2016.
- Source and evaluate potential acquisitions and acreage swaps of all sizes within the DJ Basin.
- Negotiate and draft JOAs, acquire various surface and subsurface contracts from fee mineral owners, Bureau of Land Management, and Bureau of Indian Affairs.
- Extensive work dealing with Exploration Development Agreements, Joint Development Agreements and Farmout Agreements throughout BBC's assets in the Uinta and DJ Basin
- Calculate Net Revenue Interests, Gross Working Interests, and Acreage Totals for multiple drilling prospects throughout the Uinta and DJ Basin.
- Manage all Operated and Non-Operated Wells still owned by BBC within the Uinta Basin.
- Point of contact for multiple attorneys and coordinating the ordering of Drilling and Division Order Title Opinions.
- Manage two field brokerage firms to direct leasing efforts, help with Surface Use Agreements and Right of Ways across Public, Private, BIA, and Division of Wildlife lands.
- Testified before the Utah Division of Oil, Gas and Mining several times regarding Compulsory Force Pooling and various Spacing Orders.
- Maintain and manage company owned surface property throughout the Uinta Basin. Recently started assisting on the DJ Basin Surface Team.
- Certified Registered Landman with the AAPL. Seeking RPL Certificate in 2017.

### **BILL BARRETT CORPORATION**

Denver, Colorado

Land Technician I & II – Uinta Basin

**March 2012 to August 2014**

- Help manage various assets within the Uinta Basin

# Teale Philip Stone

---

1850 Bassett Street #401

Denver, CO 80202

(918) 694-3231 [teale.stone@gmail.com](mailto:teale.stone@gmail.com)

- Help draft Operating Agreements, AFE's, Fee Assignments, and Leases & Assignments for the Bureau of Indian Affairs
- Performance of regular data entry tasks (Oildex, Wellview, and Excalibur)
- Proficient in Microsoft Excel

## **KROENKE SPORTS & ENTERTAINMEN**

**October 2011 – March 2012**

Denver, Colorado

### Marketing Team

- In game marketing before, during and after all sporting events located at the Pepsi Center
- Promoted Altitude Sports Network

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## COMMUNITY SERVICE/LEADERSHIP

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### **2014 ENGEN CLASS GRADUATE**

- Colorado Oil and Gas Association sponsored group for Young Professionals in Energy
- Currently serving as board member for the program.

### **AAPL**

- Registered Landman

### **UNIVERSITY OF DENVER SOCCER**

- Team Captain
- NCAA Tournament Appearances 2008 and 2010

### **CAMBUUR SOCCER CLUB**

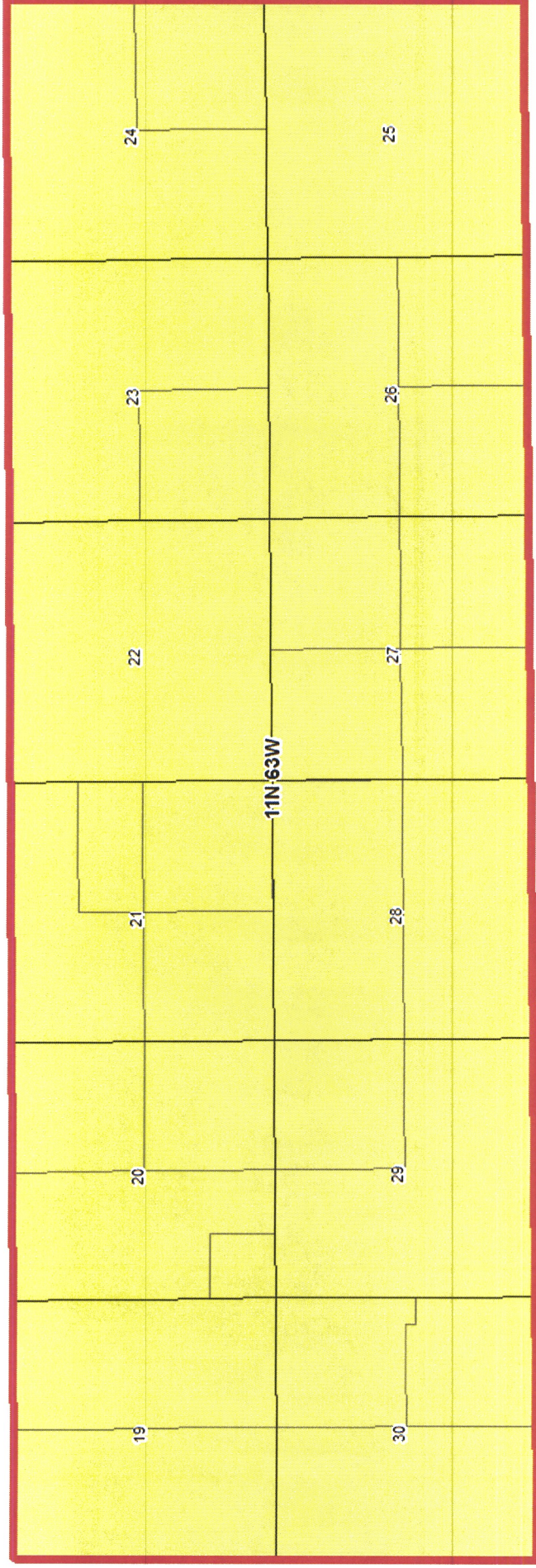
- Played for Professional Soccer Team located in Leeuwarden, Netherlands in 2008

### **YOU CAN PLAY PROJECT**

- Manager of College Operations. Served as the liaison between the organization, various College and Universities, and the NCAA. "You Can Play" is a Community Service/Non-Profit Organization visit [youcanplayproject.org](http://youcanplayproject.org) for more information.

# Exhibit 1

## Leasehold Ownership



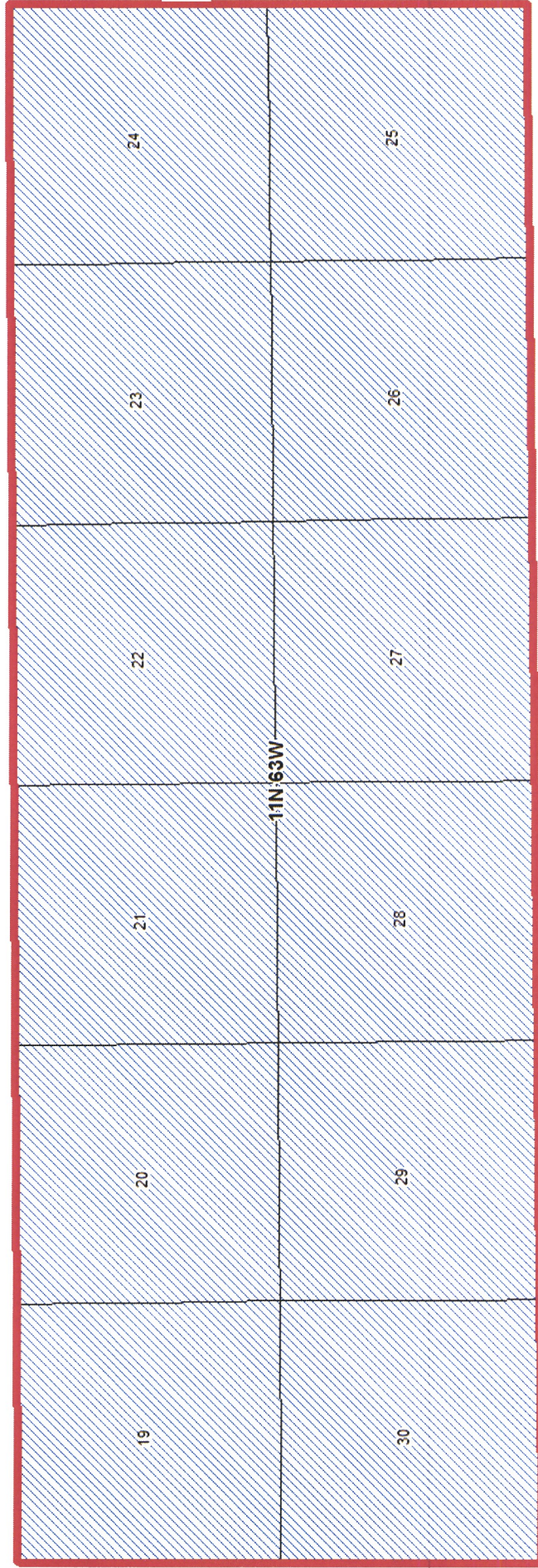
Fee Leasehold


Application Lands



## Exhibit 2

### Mineral Ownership

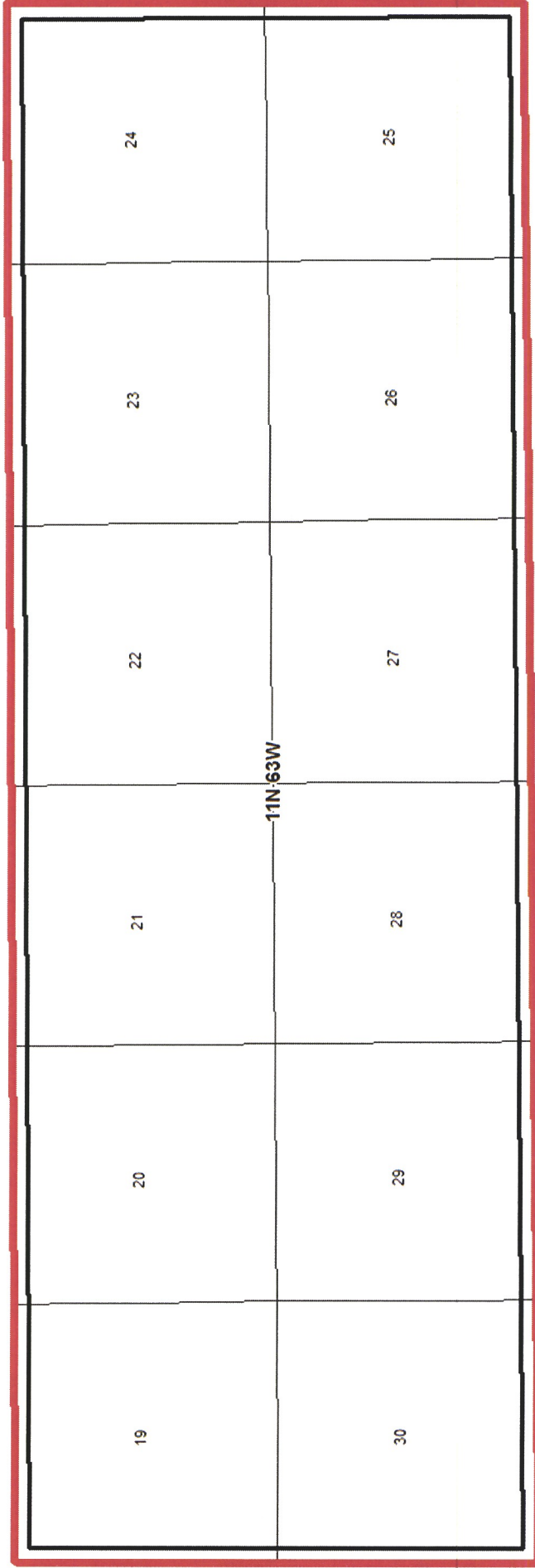


 Fee Minerals

 Application Lands

# Exhibit 3

## Property Location Plat



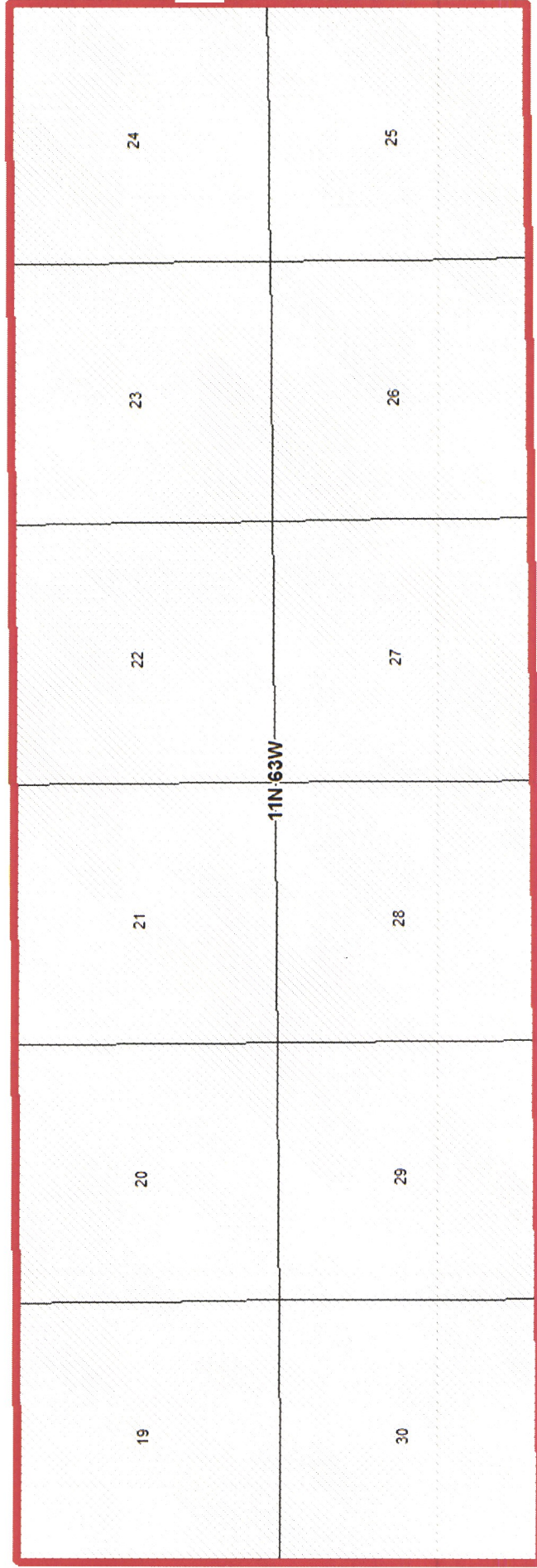
300' Setback

Application Lands



# Exhibit 4

## Surface Ownership

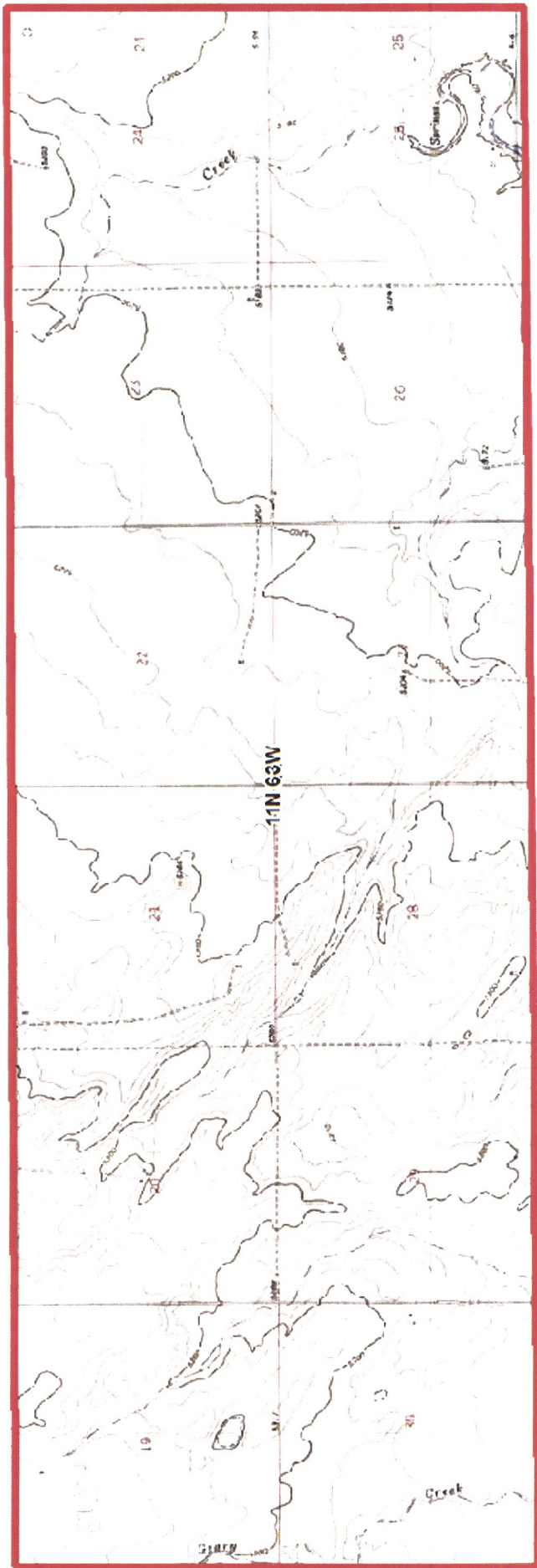


- ☐ Fee Surface
- ☐ Application Lands



# Exhibit 5

## Topography



 Application Lands

**Exhibit 6**  
**ID - T11N-R63W - 6 Southern Units**

8 NORTH LLC  
370 17TH ST SUITE 5300  
DENVER, CO 802020000

ASPEN LEAF LLC  
P O BOX 1488  
MUSTANG, OK 730640000

B H C H MINERAL LTD  
P O BOX 1817  
SAN ANTONIO, TX 782961817

BONNIE J ARNOLD  
4800 TABOR ST APT 147  
WHEAT RIDGE, CO 800332112

BRENT A OSWALD  
1304 YORKSHIRE DR  
AUSTIN, TX 787230000

BUFFALO HOLDINGS LLC  
P O BOX 2158  
DENVER, CO 802010000

CENTENNIAL MINERAL HOLDINGS LLC  
SUITE 200 5950 CEDAR SPRINGS ROAD  
DALLAS, TX 752350000

CHARLES W & PATTY N BROWN LLC  
P O BOX 587  
MARLOW, OK 730550000

CLARA MARKUS  
P O BOX 144  
SUGAR CITY, CO 810760000

DELORES J WORNER 2009 TR  
4085 DELAVAN ROAD  
DELAVAN, IL 617340000

DOUBLE EAGLE ENERGY  
ROCKIES LLC  
1401 BALLINGER ST NO 203  
FORT WORTH, TX 761020000

FIFTH CREEK ENERGY OPERATING  
COMPANY LLC  
5251 DTC PARKWAY SUITE 420  
GREENWOOD VILLAGE, CO 80110

FREDERICKSBURG ROYALTY LTD  
PO BOX 1481  
SAN ANTONIO, TX 782951481

GILBERT MINERAL LLP  
68 INDIGO WAY  
CASTLE ROCK, CO 801080000

JESSE L WHITE  
JLW INVESTMENT LLC  
351 GLENCOE ST  
DENVER, CO 802200000

JH PETROLEUM LLC  
P O BOX 621128  
LITTLETON, CO 801621128

JOHN C GLENN  
602 CHURCH DRIVE  
INMAN, KS 675460000

JOYCE SEAL  
2607 ZEPHYR DRIVE  
COLORADO SPGS, CO 809203826

JUDY L HODGES  
609 ASPEN DR  
COLORADO SPGS, CO 809110000

KAREN R HALEY TRUSTEE KAREN R  
HALEY REVOCABLE TRUST  
5685 SOUTH BELLAIRE COURT  
GREENWOOD VILLA, CO 801210000

KELLY V OSWALD  
5638 SANFORD RD  
HOUSTON, TX 770960000

LARRY J KING  
9637 WEST OHIO  
LAKEWOOD, CO 802280000

LEMON CREEK OIL & GAS LTD  
P O BOX 192199  
DALLAS, TX 752198514

LOIS GARDNER INDIVIDUALLY  
935 LAKESIDE COURT  
GRAND JUNCTION, CO 815060000

LORENZ FAMILY TRUST  
FREDRICK L LORENZ TSTEE  
8331 BARKLEY DRIVE  
LINCOLN, NE 685160000

LOUANNE TIMM & PAUL W TIMM  
29451 W CR 130  
GROVER, CO 807290000

LOUIS A OSWALD III TSTE OF OSWALD  
FAMILY TRUST DTD 4-27-98  
P O BOX 280969  
LAKEWOOD, CO 802280969

LOUIS A OSWALD JR AND  
MARY G OSWALD  
13939 BRETAGNE DR  
HOUSTON, TX 770150000

MARIANA L ROSSI TRUST  
LARRY J ROSSI CO-TRUSTEE  
9481 WEST WESLEY DRIVE  
LAKEWOOD, CO 802270000

MARK T COX III PARTNERSHIP  
ELIZABETH J COX, SOLE  
SURVIVING PARTNER  
P O BOX 47  
CHEYENNE, WY 820030047

MCPAHON ENERGY PARTNERS LP  
4545 S MONACO ST NO 144  
DENVER, CO 802370000

MEADER RANCH INC  
CHARLES P MEADER, PRESIDENT  
65009 WCR 67  
GROVER, CO 807290000

OLD WEST TOURS PMB 1989  
110 E CENTER STREET  
MADISON, SD 570422908

PHYLLIS SWETNAM  
64151 N RAMONA RD  
MONTROSE, CO 814030000

RICHARD W MANN AND  
LAURILLA J MANN  
23510 STATE HIGHWAY 257  
MILLIKEN, CO 805430000

SCOTT W TIMM & STEPHANIE TIMM  
59970 W CR 67  
GROVER, CO 807290000

SSALJD INVESTMENT GROUP LLC  
P O BOX 621128  
LITTLETON, CO 801621128

SUE KING & LARRY KING  
9637 W OHIO AVE  
LAKEWOOD, CO 802260000

TANYA T WAHLERT & JEFF WAHLERT  
31530 W CR 128  
GROVER, CO 807290000

TOFTE ENERGY PARTNERS  
LIMITED PARTNERSHIP  
P O BOX 4221  
CASPER, WY 826040000

TOM DEAKINS & DONNA DEAKINS  
531 CR 174  
CRAIG, CO 816250000

BEULAH L CREEK  
LORRAINE A HOWARD POA  
12802 E 31ST AVE  
AURORA, CO 800111807

LARRY W PEVLER & S IRENE PEVLER  
61497 WCR 63  
GROVER, CO 807290000

PAUL W TIMM & LOUANNE TIMM &  
SCOTT TIMM AND STEPHANIE TIMM  
29541 WCR 130  
GROVER, CO 807290000

ARDATH A PEARSON AND  
NICHOLAS PEARSON  
P O BOX 1977  
OVERGAARD, AZ 859331977

BARBARA L RICHARDSON AND  
CLEMENT G RICHARDSON, JR,TTES OF  
THE 1999 CLEMENT G RICHARDSON  
& BARBARA L RICHARDSON FMLY TR  
DTD 4/29/99;  
16629 TORO HLS CT  
SALINAS, CA 939080000

COBANK FCBSUCCESSOR TO US  
AGBANK FCB  
245 N WACO ST  
WICHITA, KS 672020000

DALE A AYARS AND  
MARY FRANCES AYARS  
3023 W 109TH PL  
WESTMINSTER. CO 800316825

J & M CROSS TRUST  
OLLIE RUTH CROSS TSTEE  
328 CLAY RD  
GRENADA, MS 389010000

KENYON K AYARS AND  
NORMA J AYARS  
63546 WCR 67  
GROVER, CO 807290000

SUZANNE R HARPER  
725 MADISON ST  
SANTA CLARA, CA 950500000

ACO VENTURES LLC  
P O BOX 753  
ARNAUDVILLE, LA 705120000

ALBERT GOODIS TSTE  
ALBERT GOODIS REVOCABLE  
LIVING TRUST 4-4-00  
111 WATER ROCK CIRCLE  
WAYNESVILLE, NC 287860000

ARNOLD GLEIT  
4301 NORTH OCEAN BLVD APT 506A  
BOCA RATON, FL 334310000

BAMBI FERNANDEZ 2004 TRUST  
1637 EDMONTON AVE  
SUNNYVALE, CA 940875202

BANKIM PATEL AND HEMMA PATEL  
9162 CEDAR RIDGE DR  
GRANITE BAY, CA 957460000

BARBARA R BUCK TSTE  
BARBARA R BUCK TR DTD 5-29-06  
111 WATER ROCK CIRCLE  
WAYNESVILLE, NC 287860000

CASEY E HARLESS AND  
NICHOLE M HARLESS  
15573 E 109TH AVE  
COMMERCE CITY, CO 800229867

CHARLES EVANS  
3028 CALLE DE LAREDO  
LAS VEGAS, NV 891020000

CHARLES FULLER  
CHARLES FULLER 2006 TRUST  
MORGAN STANLEY 101-088923-066  
101 CALIFORNIA ST 3RD FLOOR  
SAN FRANCISCO, CA 941110000

CIRRUS MINERALS LLC  
330 MARSHALL ST STE 1200  
SHREVEPORT, LA 711010000

CRAIG EMMANUEL  
P O BOX 86  
LARAMIE, WY 820370086

DALE N THORP  
14 AUTUMN WAY  
UNIONVILLE, CT 60850000

DANIEL VAN ZEE  
10565 W 26TH AVE  
WHEAT RIDGE, CO 802150000

DENIS M DESMOND TRUSTEE  
THE DESMOND FAMILY LIVING TR  
111 HIDDEN VALLEY DRIVE  
JOPLIN, MO 648045061

FAMILY TREE CORPORATION  
P O BOX 260498  
LAKEWOOD, CO 802260000

FREDERICK H J & RITA ANN WYEN  
LIVING TRUST AGREEMENT  
2564 MIDDLE URBANA RD  
SPRINGFIELD, OH 455028215

FREDERICK J MURRELL  
11023 GATEWOOD DR S-103  
BRADENTON, FL 342110000

FRONTROW INVESTMENTS LLC  
809 BERGWACHT PLACE  
COUPEVILLE, WA 982390000

HYDROCARBON MINERALS II LLC  
P O BOX 2157  
BRIDGEVIEW, IL 604550000

JAMES S WITHERELL TRUST  
DATED 06/17/1997  
JAMES S WITHERELL TRUSTEE  
2610 DEEP CUT ROAD  
WOODSTOCK, IL 600989743

JONATHAN EVERETT VAN ZEE  
1933 E 164TH PLACE  
THORNTON, CO 806020000

KATHRYN VANCE ERNEMANN  
127 NE MCALISTER RD  
BURLESON, TX 760280000

KEITH M FOSTER AND  
LISA M FOSTER  
13824 W AMHERST WAY  
LAKEWOOD, CO 802280000

KENNETH C JERABEK  
13307 S 208TH DR  
BUCKEYE, AZ 853260000

LAWRENCE E NAUMAN II  
P O BOX 189  
RELIANCE, WY 829430000

MAP2009-OK  
PO BOX 248833  
OKLAHOMA CITY, OK 731248833

MARCEIL MALAK  
7444 MEINERS RD  
LEDBETTER, TX 789460000

MARIEMOUNT PROPERTIES INC  
VAN OLIVER  
3501 HANOVER ST  
DALLAS, TX 752257435

MARK A HOUGH AND  
ANA M HOUGH  
22021 N 65TH AVE  
GLENDALE, AZ 853100000

MARK VAN ZEE  
2214 SMITH DR  
LONGMONT, CO 805010000

MARKER INVESTMENTS LLC  
5008 AUGUSTA ST  
HOUSTON, TX 770077206

MARY A DAWSON TSTE  
DAVID D DAWSON AND MARY  
DAWSON TRUST  
312 TANGLE WOOD LANE  
HIGHLAND VILL, TX 750770000

MILDRED HOLEMAN  
P O BOX 10008  
HOUSTON, TX 772060008

MURRAY A LEWIS  
4181 SOUTHPOINT DR E SUITE 400  
JACKSONVILLE, FL 322160000

O P LEONARD JR INVESTMENT CO LTD  
P O BOX 1718  
FORT WORTH, TX 761010000

RDMB HOLDINGS INC  
3106 DRUID HILL DR  
DES MOINES, IA 503150000

ROY E BUCEK AND VERA C BUCEK  
REVOCABLE LIVING TRUST  
103 UPTON AVE  
SCHULENBURG, TX 789560000

SAMUEL W MCWHORTER  
2411 SOCARRO  
CARLSBAD, NM 882200000

SARAH DICKSON AND  
KEITH MATHIS  
8332 FM 230  
LOVELADY, TX 758510000

TED KENNEDY  
3948 RANCHERO DR  
ANN ARBOR, MI 481080000

THOMAS J BUCKLEY  
2310 ROYAL OAKS DR  
MANSFIELD, TX 760635314

VIPAL PATEL  
2772 CARRADALE DR  
ROSEDALE, CA 956610000

VLADIMIR SENKOV AND  
KRISTINA SENKOV  
232 LITTLEFIELD RD  
BOXBOROUGH, MA 01900000

WICAGPI TRUST BY WILLIAM N  
GILLESPIE TRUSTEE  
531 ROSARITA DR  
FULLERTON, CA 928351860

WILLIAM L JONES  
P O BOX 534  
PALESTINE, TX 758020534

WILLIAM T VOGT JR SOUTH TOWER  
800 N SHORELINE SUITE 2550  
CORPUS CHRISTI, TX 784010000

ALEXIS ELIZABETH FERRIS  
1405 TENNYSON ST  
DENVER, CO 802040000

CLAUDIA SPRINGER  
275 AIDEN STREET  
HEPPNER, OR 97834

CORA AMANDA JESSOP  
AKA IRENE E JESSOP  
ZELMA KAY SUTTON POA  
903 CAHILL DR  
CHEYENNE, WY 820010000

GERALD L FRERICHES  
834 NORTH HEWITT AVE  
HASTINGS, NE 689010000

HELEN BURBACH  
35744 WCR 130  
GROVER, CO 807090000

HOWARD W JESSOP &  
ELEANOR ELAINE JESSOP  
P O BOX 837  
PINE BLUFFS, WY 820820000

JAMES THOMAS FERRIS  
1240 S BALSAM ST  
DENVER, CO 802320000

JAMILIE LISA FYNBOH  
2726 S OSCEOLA WAY  
DENVER, CO 802360000

JIMMY DALE JESSOP AND  
SHIRLEE ANN JESSOP  
504 E 5TH ST  
VINTON, IA 523490000

JO A STILL AKA JOANN STILL  
912 CAHILL DR  
CHEYENNE, WY 820010000

JOHN L FRERICHES  
PO BOX 384  
CAIRO, NE 688240000

LILY MARIE SCHEIB  
4809 ANGELINE LN  
MASON, OH 450400000

LONNY D FRERICHES  
131 E 5TH ST  
HASTINGS, NE 689015229

LUELLA MAE DUNAFON  
9625 SE PARDEE  
PORTLAND, OR 972660000

MARK LAND CO LLP  
3302 CREEK SIDE DRIVE  
OSHKOSH, WI 549040000

NAJLA ZAHIA FERRIS  
8165 W 19TH AVE  
LAKEWOOD, CO 802140000

PHILLIP L JESSOP SR  
AKA PHILLIP JESSOP  
P O BOX 642  
OMAHA, NE 681010642

ROCKY W KERKMAN  
1519 N WILLOW  
AVOCA, IA 515210000

RODNEY A KERKMAN &  
STACY A KERKMAN  
229 E GRAHAM AVE  
COUNCIL BLUFFS, IA 515036670

ALEXIS ELIZABETH FERRIS  
1405 TENNYSON ST  
DENVER, CO 802040000

ALVEENA DIANE PONCE  
6545 S ARBUTUS CIRCLE APT 1226  
LITTLETON, CO 801270000

ALVIN L WALKER &  
BERNICE R WALKER  
27110 115TH ST  
TREVOR, WI 531790000

DARRELL W ANDERSON  
856 SOUTH QUIVAS ST  
DENVER, CO 802230000

DORRIS KINDVALL  
1522 CONSTITUTION BLVD #279  
SALINAS, CA 939050000

EMILY DOUGLASS AS PERS REPR  
OF THE BILLY JOE DOUGLASS EST  
938 SILVER LEAF PL  
LOVELAND, CO 805383316

GENE WALKER  
P O BOX 2625  
LONGMONT, CO 805020000

GLENDIA RAMIREZ  
3503 DAHLIA STREET  
EVANS, CO 806200000

IRMA ANDERSON  
2021 CHURCH STREET APT D26  
ALAMOSA, CO 811010000

JACK CANON INDIVIDUALLY  
AND AS HEIR TO THE ESTATE OF  
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CHRISTINE BURBACH  
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FREDERICK, CO 805307096

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1699 L 1/4 ROAD  
FRUITA, CO 815210000

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CHELSEA THORP  
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AND ERIC SHIRLEY TSTES  
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& SHAWN MILTON GLANVILLE TTEES  
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JANE K HARMER TRUSTEES OF  
THE HARMER FAMILY REVOC LVNG  
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SALLY COOPERRIDER (NIXON)  
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STATE OF COLORADO, ACTING BY AND  
THROUGH THE STATE BOARD OF LAND  
COMMISSIONERS  
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**Fifth Creek Energy Operating Company, LLC**  
**Benjamin C Burke - Geology Testimony**  
Cause No. 421; Docket No. 170900557  
Increased Density – Niobrara Formation  
Wattenberg Field, Weld County, Colorado

September 2017 Colorado Oil and Gas Conservation Commission Hearing

My name is Benjamin C. Burke, and I am currently employed as the Geoscience Manager for Fifth Creek Energy Operating Company, LLC ("Applicant"). I earned a Bachelors of Arts in Geology from Bowdoin College, a Masters of Business Administration from Texas A&M University, and a PhD in Earth Sciences from Dartmouth College. I have 14 years of private sector geoscience experience, 12 of which is in the oil and gas industry. I am familiar with the lands described, and the matters set forth in, the verified application ("Application") subject to the above-referenced docket.

In support of Applicant's Application and my sworn testimony herein, I am submitting five (5) exhibits. This testimony and exhibits provide the supporting basis for approval of the Applicant's request for an order to authorize an additional seven (7) horizontal wells, for a total of fifteen (15) horizontal wells, in each of six (6) approximate 1,280-acre drilling and spacing units established by Order No. 421-86 for Sections 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18, Township 11 North, Range 63 West, 6th P.M., for the efficient and economic development of oil, gas and associated hydrocarbons from the Niobrara Formation underlying the below-described lands.

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 19: All

Section 30: All

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

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 20: All

Section 29: All

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

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 21: All

Section 28: All

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

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 22: All

Section 27: All

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

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.

Section 23: All  
Section 26: All  
1,280 acres, more or less, Weld County, Colorado

Township 11 North, Range 63 West, 6<sup>th</sup> P.M.  
Section 24: All  
Section 25: All  
1,280 acres, more or less, Weld County, Colorado

1. Exhibit G-1 – Structure Contour Map – Top Niobrara with offset well locations  
Exhibit G-1 is a structure map constructed on the top of the Niobrara Formation. The contour interval of the map is 25 feet. The Niobrara is gently dipping to the west in the mapped area.
2. Exhibit G-2 – Isopach Map – Niobrara with offset well locations  
Exhibit G-2 is an isopach map of the Niobrara Formation measured in feet. The contour interval of Niobrara thickness is 10 feet. Total thickness across the Application Lands ranges from approximately 230-260 feet.
3. Exhibit G-3 – Cross Section showing Niobrara section.  
Exhibit G-3 is a cross section that includes the entire Niobrara Formation. This cross section and the isopach maps show the Niobrara intervals to be present and continuous throughout the Application Lands.
4. Exhibit G-4 – Hereford Field Type Log.  
Exhibit G-4 is a type log showing the Formations and Members of the Cretaceous-aged lithology present in the Lamotta 5-01M (05-123-30556). The Lamotta well is located in Section 1, 11N 63W and has wireline logs that are typical of the geology of the Hereford Field. The wireline logs shown in the type section are the gamma ray, deep resistivity, and density porosity.
5. Exhibit G-5 – Offset Well Locations  
Exhibit G-5 shows well locations on and in the vicinity of the Application Lands, according to the COGCC reference base map as of August 3, 2017.

The stratigraphy, geochemistry, and pressure data reviewed show that the additional wells in the Niobrara are necessary to adequately and economically recover the oil, gas and associated hydrocarbons from the Niobrara Formation.

Dated this 14<sup>th</sup> day of August 2017



## 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.

Benjamin B. Baker

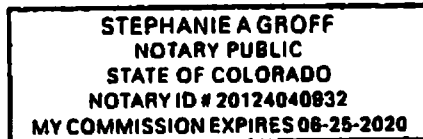
**Benjamin C. Burke**  
**Geoscience Manager**  
**Fifth Creek Energy Operating Company, LLC**

STATE OF COLORADO )  
 ) ss.  
COUNTY OF Arapahoe )

The foregoing instrument was subscribed and sworn to before me this 14<sup>th</sup> day of August, 2017, by Benjamin C. Burke, Geoscience Manager for Fifth Creek Energy Operating Company, LLC.

**Witness my hand and official seal.**

[SEAL]



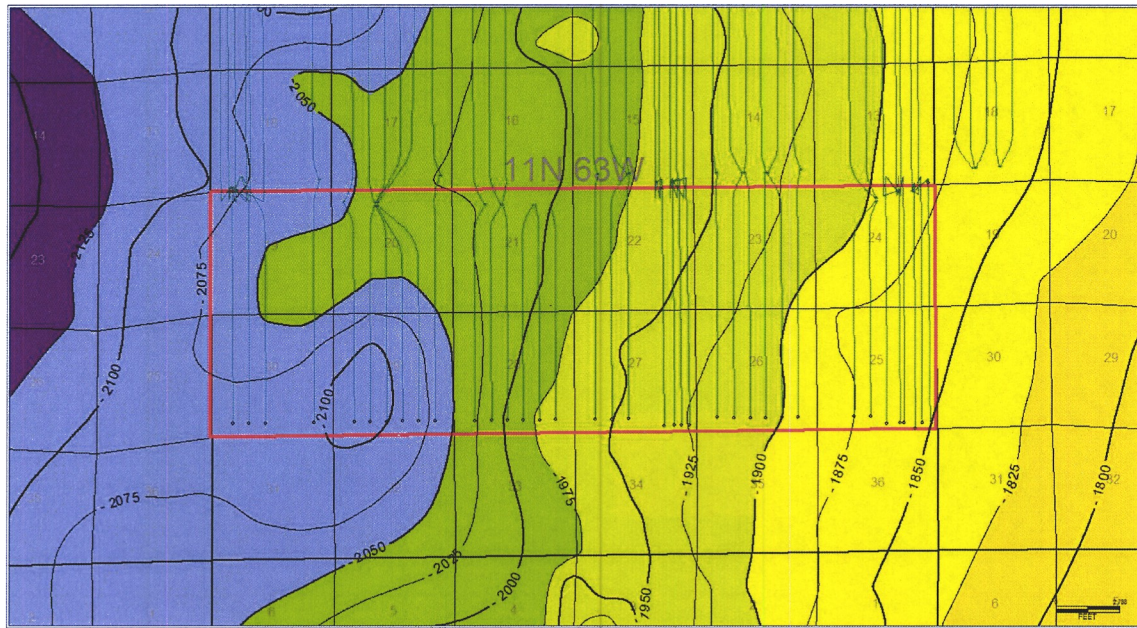
My commission expires: June 25, 2020

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

**Notary Public**

## Exhibit G-1

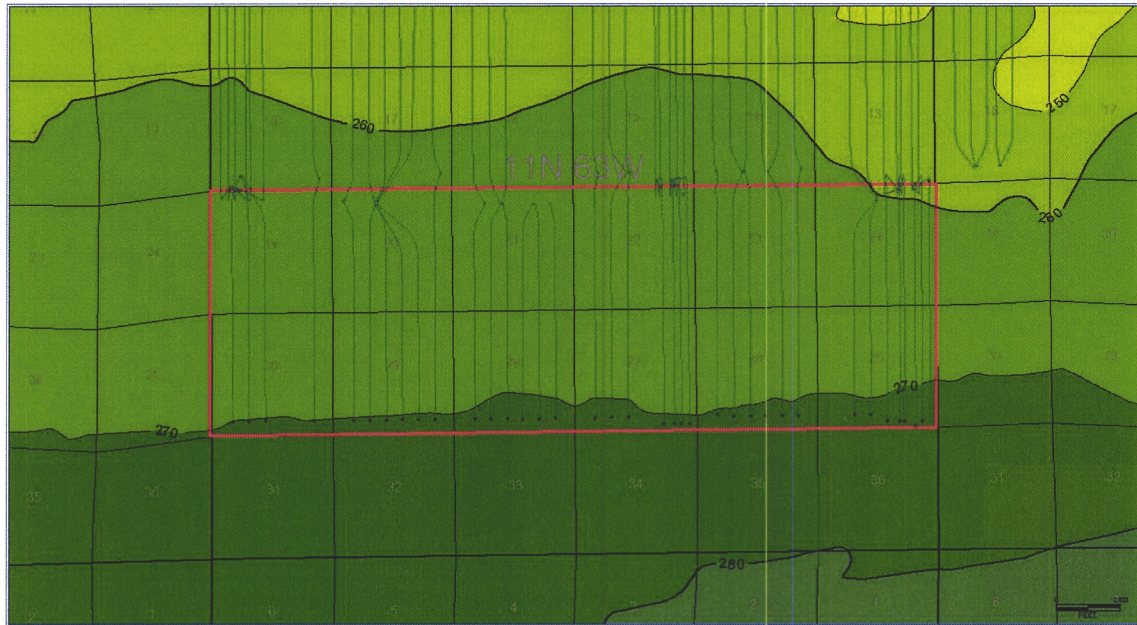
### Structure Contour Map on the top of the Niobrara Formation



25 ft contour intervals

## Exhibit G-2

### Isopach Map on the top of the Niobrara Formation

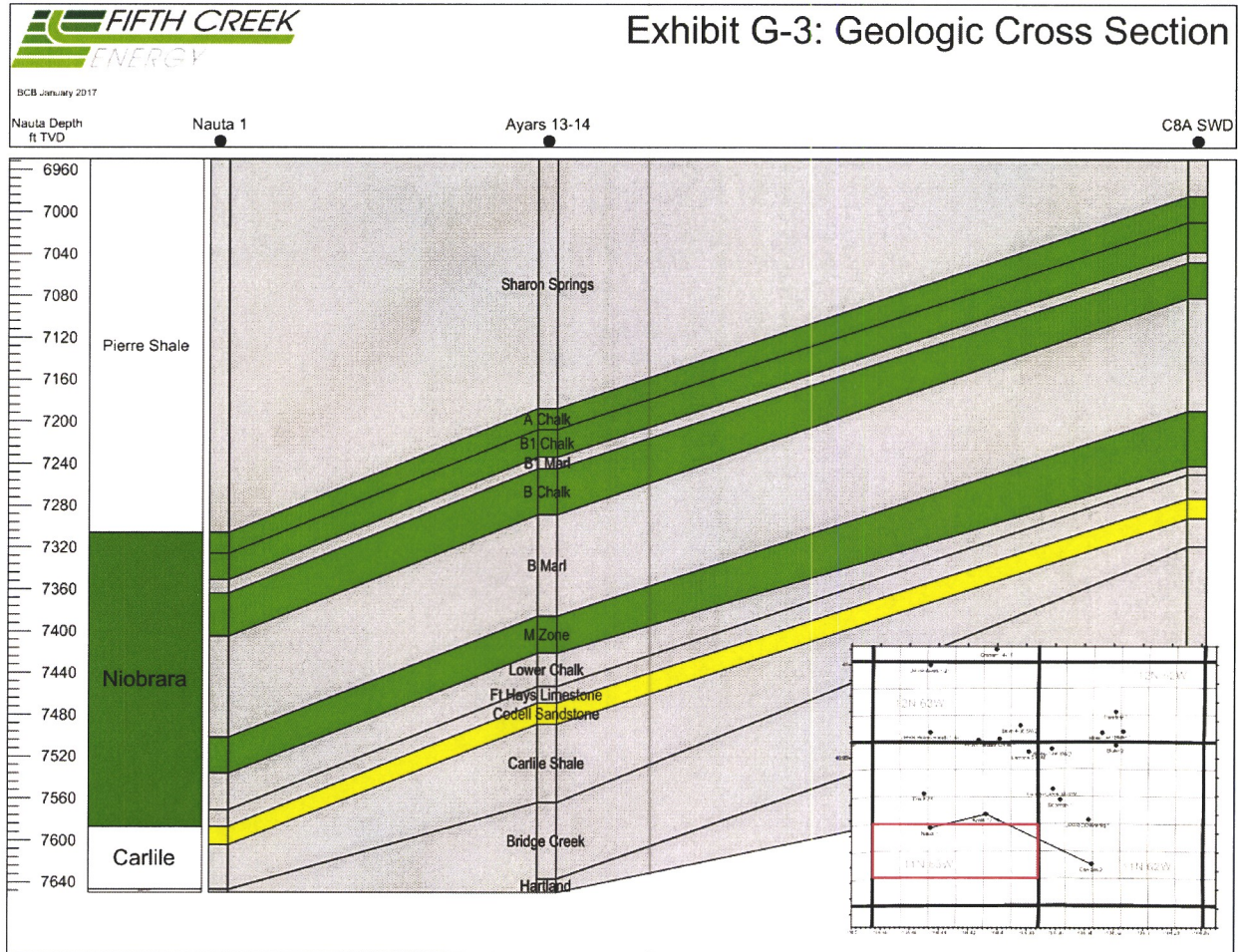


10 ft isopach intervals



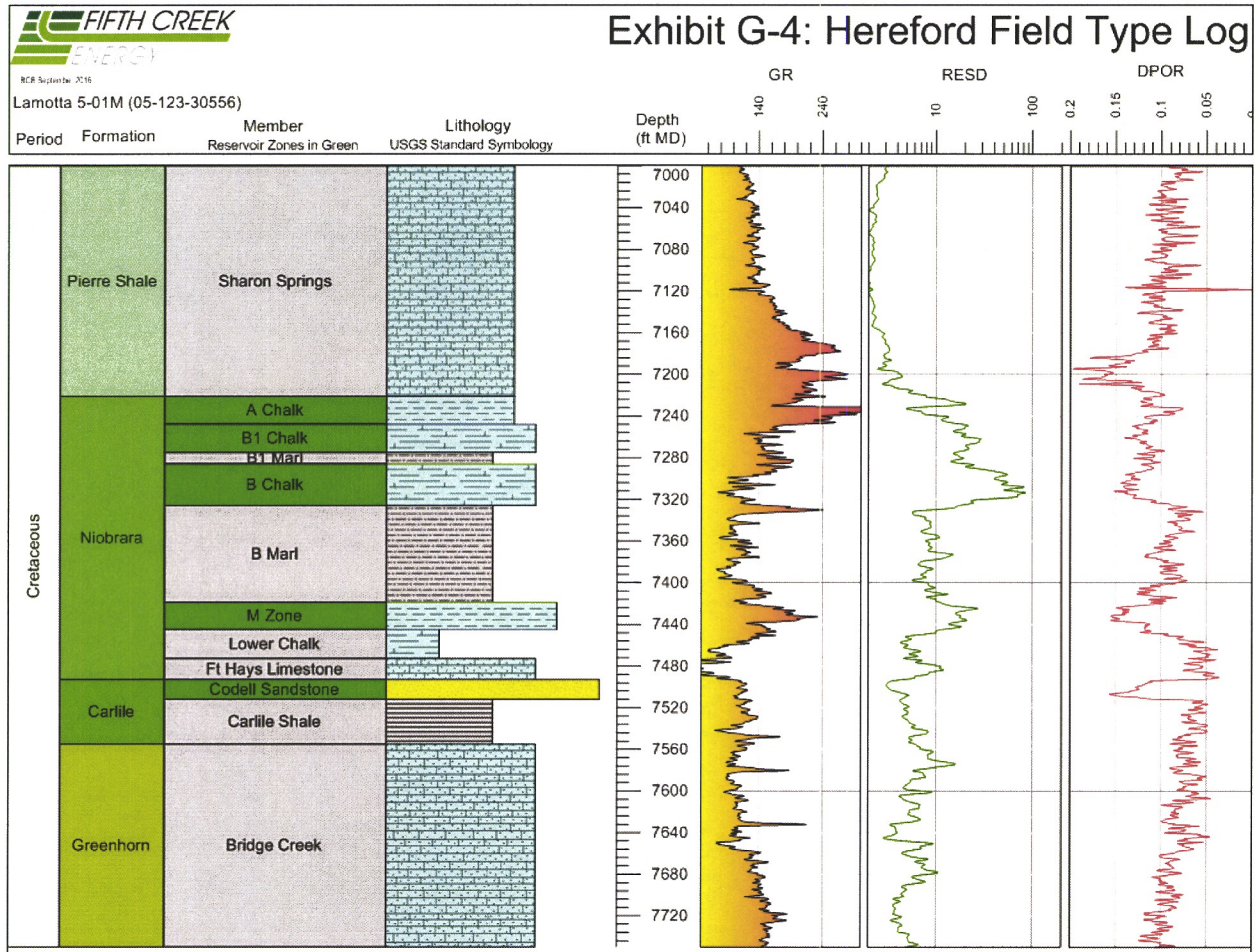
# Exhibit G-3

## Cross section showing Niobrara section



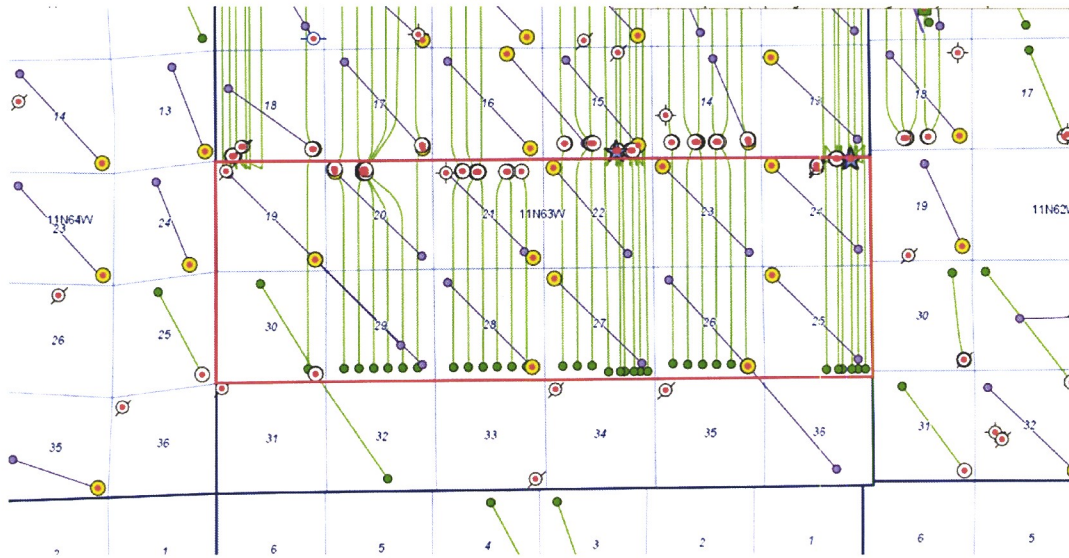
# Exhibit G-4

Type log showing formations and lithology present



## Exhibit G-5

### Offset Well Locations



COGCC GIS Well Database, retrieved August 3, 2017



**Fifth Creek Energy Operating Company, LLC**  
**Engineering Testimony – William Irwin**  
Cause No. 421  
Docket No. 170900557

**September 2017 Colorado Oil and Gas Conservation Commission Hearing**

My name is William Irwin and I am currently employed as the Engineering Advisor for Fifth Creek Energy Operating Company, LLC (“Fifth Creek”). I hold a Bachelor’s of Science in Petroleum Engineering from Montana Tech. I have 32 years of experience in oil and gas engineering. I am familiar with the lands subject to, and matters set forth in, the verified application (“Application”) subject to the above-referenced docket.

In support of Fifth Creek’s Application in the above referenced docket, I am submitting three (3) exhibits along with this sworn testimony. This Application requests an order to approve an additional seven (7) horizontal wells, for a total of fifteen (15) horizontal wells, in DSU #1, DSU #2, DSU #3, DSU #4, DSU #5 and DSU #6, to require that the productive interval of each additional proposed horizontal well in each approximate 1,280-acre drilling and spacing unit shall be no closer than 300 feet from the boundaries of the unit (regardless of the lease lines within the unit) and all horizontal wells shall be no closer than 150 feet from the productive interval of another well producing from the same source of supply within the unit, unless an exception is granted by the Director, and providing that the wells will be drilled from no more than five well pads, including the existing wellpads, in each of the six drilling and spacing units to be located within such unit or adjacent thereto, unless an exception is granted by the Director, consistent with Order No. 421-86 underlying the following lands (“Application Lands”):

Township 11 North, Range 63 West, 6th P.M.

Section 19: All

Section 30: All

(“DSU #1”)

Township 11 North, Range 63 West, 6th P.M.

Section 20: All

Section 29: All

(“DSU #2”)

Township 11 North, Range 63 West, 6th P.M.

Section 21: All

Section 28: All

(“DSU #3”)

Township 11 North, Range 63 West, 6th P.M.

Section 22: All

Section 27: All

(“DSU #4”)

Township 11 North, Range 63 West, 6th P.M.

Section 23: All

Section 26: All

("DSU #5")

Township 11 North, Range 63 West, 6th P.M.

Section 24: All

Section 25: All

("DSU #6")

### **1. Exhibit E-1 – OOIP and EUR Calculations**

Exhibit E-1 shows OOIP calculations, estimated ultimate recovery, and drainage area for fifteen Niobrara Formation wells drilled in a 1280-acre drilling and spacing unit within the underlying the Application Lands as compared to eight wells drilled in the same drilling and spacing unit. The improved recovery factor by 47% shows the drilling of up to fifteen wells will promote efficient drainage, protect correlative rights and prevent waste in a 1280-acre unit versus only drilling eight wells. These reserves would not be fully recovered without the application of horizontal well technology in a 1280-acre drilling and spacing unit.

### **2. Exhibit E-2 – Analog Well Evaluation**

Exhibit E-2 reflects an evaluation of analog 2-section lateral well results in Table A and 1-section lateral well results in Table B. Estimated ultimate recovery and associated drainage area are calculated through decline curve analysis utilizing available public data and the inclusion of one new well drill by the Fifth Creek underlying the Application Lands. The 2-section lateral analog wells have an average lateral length of 9,261' and average estimated ultimate recovery of 431,333 bbl for the Niobrara Formation, for a drainage per well of 85 acres. The 1-section lateral analog wells have an average lateral length of 4,143' and average estimated ultimate recovery of 191,000 bbl for the Niobrara Formation, for a drainage area per well of 38 acres. These estimates are within a reasonable expected range and support the Application.

### **3. Exhibit E-3 – Economic Analysis**

Economic calculations show in improved value of 50% by drilling on 1280-acre units with total of 15 wells versus not developing the resource in an efficient, scientific manner. This result leads to the conclusion that reserves will not be appropriately accessed or drained in a tight unconventional resource with only eight wells per 1280 acre spacing unit, therefore leaving reserves under-developed and creating waste.



## **Conclusions**

Based on each drilling and spacing unit area of 1,280 acres, the drainage calculations are consistent with the development of up to fifteen Niobrara horizontal wells. This testimony and attached exhibits support my conclusion that the drilling, completion, and production of up to fifteen horizontal wells within each proposed drilling and spacing unit will increase total recovery and reduce resource waste relative to an eight-well 1280-acre drilling and spacing unit. In addition, the proposed development plan can be accomplished in an economic and efficient manner while protecting correlative rights.

**Affirmation**

The matters described herein were all 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.



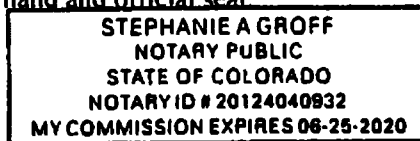
William Irwin  
Engineering Advisor  
Fifth Creek Energy Operating Company, LLC

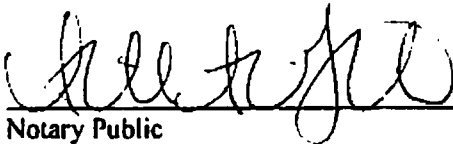
State of Colorado     )  
  ) ss.  
County of                 )

The foregoing instrument was subscribed and sworn to before me this 16<sup>th</sup> day of August, 2017, by William Irwin as Engineering Advisor for Fifth Creek Energy Operating Company, LLC.

Witness my hand and official seal

[SEAL]



  
Notary Public

My commission expires: June 25 2020

**William (Bill) L. Irwin, P.E., Senior Engineering Advisor**

Mr. Irwin has a Bachelor of Science Degree in Petroleum Engineering from Montana Tech, and over 30 years of oil industry experience. In his most recent role as Vice President of Operations with Bakken Hunter, LLC, a division of Magnum Hunter Resources Corporation (MHR), he was instrumental in developing significant Bakken and Three Forks shale oil assets; using modern unconventional resource drilling and completion techniques. These techniques include horizontal drilling and multistage hydraulic fracturing. In addition, his facilities team planned, permitted, constructed and commissioned numerous field gathering and processing facilities. These cutting edge facilities produced, in record time, a cross-border, FERC regulated gas pipeline.

Prior to joining the MHR, Mr. Irwin was the Founder, President, and CEO of Pinon Oil & Gas Ltd. (1997) and Red Mike Energy Inc. (2000). Both private exploration and production companies primarily operated in southern Alberta. From 2007 to 2010, he was the Vice President, Business Development and Board Advisor for Fractal Systems Inc.; an oil services company with proprietary heavy oil viscosity reduction, and partial upgrading technology.

From 1994 through 1997 he was the Operations Manager for Tidal Resources Inc. (Tidal) in Canada and North Dakota. Tidal was a leader in the implementation of horizontal drilling technology to legacy assets in North Dakota. Prior to 1994, Mr. Irwin held varying technical and management roles with Unocal Corp and Quintana Petroleum Corporation in Canada, Colorado, New Mexico, Texas, and Utah. Mr. Irwin is a registered Professional Engineer in Alberta and is an accepted professional engineering witness in North Dakota and New Mexico.

**Exhibit E-1 OOIP  
OOIP and EUR Calculations**

Date: 8/1/17

Reference Sections:

Engineer: William L. Irwin

Key Variables & Assumptions		8 Niobrara wells		15 Niobrara wells	
	Porosity ( $\phi$ )	10%	10%	10%	Median porosity for Niobrara
	Water Saturation ( $S_w$ )	75%	75%	75%	Core-based corrected saturation
	Area (A)	1280	1280	1280	Drilling and Spacing Unit acreage
	Height (h)	272	272	272	Niobrara Total Thickness (chalks & marls)
	Oil Formation Volume Factor ( $B_o$ )	1.5	1.5	1.5	bbl/STB

**Calculation Original Oil in Place**

Estimated Oil Equivalent in Place:	45,017,088	45,017,088	Bbl oil
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**Niobrara Well Performance**

Horizontal Well Count	8	15	Density of wells
Drainage area for 1 well	85	85	acres
Average EUR per well	431,333	431,333	Bbl oil
Estimated Total Oil	3,450,667	6,470,000	Bbl of oil (total 8 wells, total 15 wells)
Estimated Rf of OOIP	7.7%	14.4%	

**Comparison of Recovery Factors**

Total increased Rf	47%	Increase in Recovery factor due to increase in well density
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*Symbols, Terminology, and Equations*

$\phi$	Porosity as %	Rf	Recovery Factor, %
h	height, feet	bbl	barrel of oil, 42 gallons
A	Area, acres (1 acre is 42,560 ft <sup>2</sup> )	STB	Stock Tank Barrel
$B_o$	Oil Formation Volume Factor, bbl/STB		
$S_w$	Water Saturation as %		
OOIP	Original Oil in Place, bbls	EUR	Estimated Ultimate Recovery, BBL of oil
	OOIP = $7758 A h \phi (1-S_w) / B_o$		EUR = $7758 A (Rf) (h) \phi (1-S_w) / (B_o)$

## Exhibit E-2

## Analog Well Evaluation

Date: 8/1/17

Reference Sections:

Engineer: William L. Irwin

Table A: 2-Section Laterals

Type	Zone	API	Township	Range	Section	Lateral Length (ft)	EUR (MBO)	Net Thickness (h, ft)	Average Porosity ( $\phi$ , %)	Average Water Saturation (Sw, %)	Recovery Factor (Rf, %)	Bo (Rb/STB)	Drainage Area (A, acres)
JUBILEE 113-1609H	Niobrara	49-021-21078	13N	65W	16, 9	8,875	237,000	272	10%	75%	14.5%	1.50	46
JUBILEE 151-1034H	Niobrara	49-021-21087	13N	65W	10, 34	9,484	557,000	272	10%	75%	14.5%	1.50	109
JUBILEE 153-1034H	Niobrara	49-021-21082	13N	65W	10, 34	9,371	353,000	272	10%	75%	14.5%	1.50	69
JUBILEE 154-1034H	Niobrara	49-021-21086	13N	65W	10, 34	9,365	685,000	272	10%	75%	14.5%	1.50	134
JUBILEE 194-2311H	Niobrara	49-021-21094	13N	65W	23, 11	9,515	338,000	272	10%	75%	14.5%	1.50	66
Fox Creek 222-3422H	Niobrara	05-123-42582	12N	63W	34, 22	8,955	418,000	272	10%	75%	14.5%	1.50	82
<b>Averages</b>						<b>9,261</b>	<b>431,333</b>	<b>272</b>	<b>10%</b>	<b>75%</b>	<b>14.5%</b>	<b>1.50</b>	<b>85</b>

Table B: 1-Section Laterals

Type	Zone	API	Township	Range	Section	Lateral Length (ft)	EUR (MBO)	Net Thickness (h, ft)	Average Porosity ( $\phi$ , %)	Average Water Saturation (Sw, %)	Recovery Factor (Rf, %)	Bo (Rb/STB)	Drainage Area (A, acres)
CASPER 1-26H	Niobrara	49-021-21111	16N	65W	25	4,468	241	272	10%	75%	14.5%	1.50	47
CRITTER CREEK 21-26H	Niobrara	05-123-31796	11N	63W	26	4,655	148	272	10%	75%	14.5%	1.50	29
CRITTER CREEK 22-27H	Niobrara	05-123-31507	11N	63W	27	4,955	52	272	10%	75%	14.5%	1.50	10
CRITTER CREEK 29-02H	Niobrara	05-123-33687	11N	63W	2	3,117	60	272	10%	75%	14.5%	1.50	12
CRITTER CREEK 30-26H	Niobrara	05-123-32328	11N	63W	26	4,266	94	272	10%	75%	14.5%	1.50	18
CRITTER CREEK 34-16H	Niobrara	05-123-33103	11N	63W	16	4,736	169	272	10%	75%	14.5%	1.50	33
ELMER 8-31H	Niobrara	05-123-30584	12N	62W	31	1,827	318	272	10%	75%	14.5%	1.50	62
ELSIE 7-34H	Niobrara	05-123-30631	12N	63W	34	4,930	473	272	10%	75%	14.5%	1.50	93
FOX CREEK 1-35H	Niobrara	05-123-31385	12N	63W	35	4,669	256	272	10%	75%	14.5%	1.50	50
FOX CREEK 2-25H	Niobrara	05-123-31400	12N	63W	25	3,776	168	272	10%	75%	14.5%	1.50	33
FOX CREEK 3-26H	Niobrara	05-123-31417	12N	63W	26	3,987	247	272	10%	75%	14.5%	1.50	48
FOX CREEK 6-33H	Niobrara	05-123-31558	12N	63W	33	4,140	37	272	10%	75%	14.5%	1.50	7
ROSIE 1-35H	Niobrara	49-021-21009	16N	65W	35	4,327	225	272	10%	75%	14.5%	1.50	44
<b>Averages</b>						<b>4,143</b>	<b>191</b>	<b>272</b>	<b>10%</b>	<b>75%</b>	<b>14.5%</b>	<b>1.50</b>	<b>38</b>

$$\text{Drainage Area (acres)} = \frac{(EUR_{\text{net}} \cdot B_o)(5.615 \frac{ft^3}{bbl})}{(RF)(\phi)(1 - S_w)(h)(43,560 \frac{ft^2}{acre})}$$

Where:

RF = Recovery Factor, %

 $\phi$  = Porosity, % $S_w$  = Water Saturation, %

h = Net Thickness, ft

 $B_o$  = Oil Formation Volume Factor, RB/STB $EUR_{\text{net}}$  = Estimated Ultimate Oil Recovery, bbls

Note: 1-section lateral average drainage area calculates to roughly half of 2-section lateral - check

Exhibit E-3

Economic Analysis

Date: 8/1/17

Reference Sections:

Engineer: William L. Irwin

Key Variables & Assumptions

	Type Well 8		Type Well 15		8 wells		15 wells		
	\$		\$		\$		\$		
Capex	\$	5,800	\$	5,600	\$	46,400	\$	84,000	M\$ Pad development and shared facilities lowers cost by \$200 M\$
LOE	\$	13,000	\$	13,000	\$	13,000	\$	13,000	Monthly operating expenses per well, \$
Total Equivalent EUR		503		503		4,026		7,548	Estimated ultimate recovery, MBOE
EUR, Oil		431		431		3,451		6,470	Estimated oil recovery, Mbbls
EUR, Gas		431		431		3,451		6,470	Estimated gas recovery, Mscf (assuming 1,000 scf/bbl)
WI		100		100		100		100	Estimated Working Interest
NRI		86		86		86		86	Estimated Net Revenue Interest
Oil Price	\$	50.00	\$	50.00	\$	50.00	\$	50.00	\$/bbl, Estimated realized price, includes differential from Nymex
Gas Price	\$	3.00	\$	3.00	\$	3.00	\$	3.00	\$/Mcf, Estimated realized price, includes differential from Henry Hub
Economic Outputs									
BT NPV10	\$	2,987	\$	3,187	\$	23,896	\$	47,805	M\$, Net present value discounted at 10%
BT ROR		41%		57%		41%		57%	Rate of Return as %
Estimated Improved Value					50%				Due to improved Recovery Factor from increase in well density and pad development lowering per well cost.