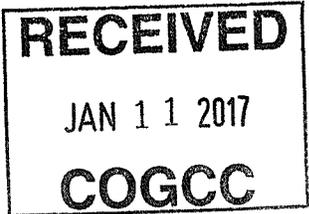




02187430

1-1-17

511 Documents



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

IN THE MATTER OF THE PROMULGATION AND) CAUSE NO. 112
ESTABLISHMENT OF FIELD RULES TO GOVERN)
OPERATIONS IN THE FRUITLAND COAL) DOCKET NO. 170100081
FORMATION, IGANCIC-BLANCO FIELD, LA PLATA)
COUNTY, COLORADO) TYPE: POOLING

REQUEST FOR RECOMMENDATION OF
APPROVAL OF APPLICATION WITHOUT A HEARING

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

Applicant requests that the above-captioned matter be approved without a hearing based upon the merits of the Application and Applicant's sworn written testimony and exhibits supporting the relief requested in the Application.

DATED this 9th day of January, 2017.

Respectfully submitted,

SPENCER LEGAL LLC

By: 

Elizabeth Y. Spencer
PO Box 11041
Denver, Colorado 80211
(303) 872-0120
liz@spencerlegal.net

ATTORNEYS FOR APPLICANT

BP America Production Company

Written Testimony and Exhibits for:

Cause No. 112

Docket No. 170100081

January 30 and 31, 2017

Colorado Oil & Gas Conservation Commission Hearing

**Written Testimony of Scott Hammond
Senior Landman, San Juan North
BP America Production Company**

**Before the Colorado Oil & Gas Conservation Commission
January 30 & 31 2017
Cause No. 112
Docket No. 170100081**

I. Introduction & Summary

My name is Scott Hammond, and I am currently Senior Landman, San Juan North, for BP America Production Company ("BP" or "Applicant"). I have approximately 35 years of experience as a landman and have been employed for 9 years with Applicant. I have worked directly with the property that is the subject of this matter. My resume is included herewith as Exhibit A.

I am submitting this sworn testimony and the following exhibits in support of BP's December 1, 2016 application in the above-referenced docket ("Application") pertaining to the East Sauls Creek 26 2 Unit, located on the following lands:

Township 35 North, Range 6 West, N.M.P.M.
Section 26: S½
Section 27: SE¼

La Plata County, Colorado (hereafter "Application Lands").

Figure 1, below, is a map that shows the Application Lands.

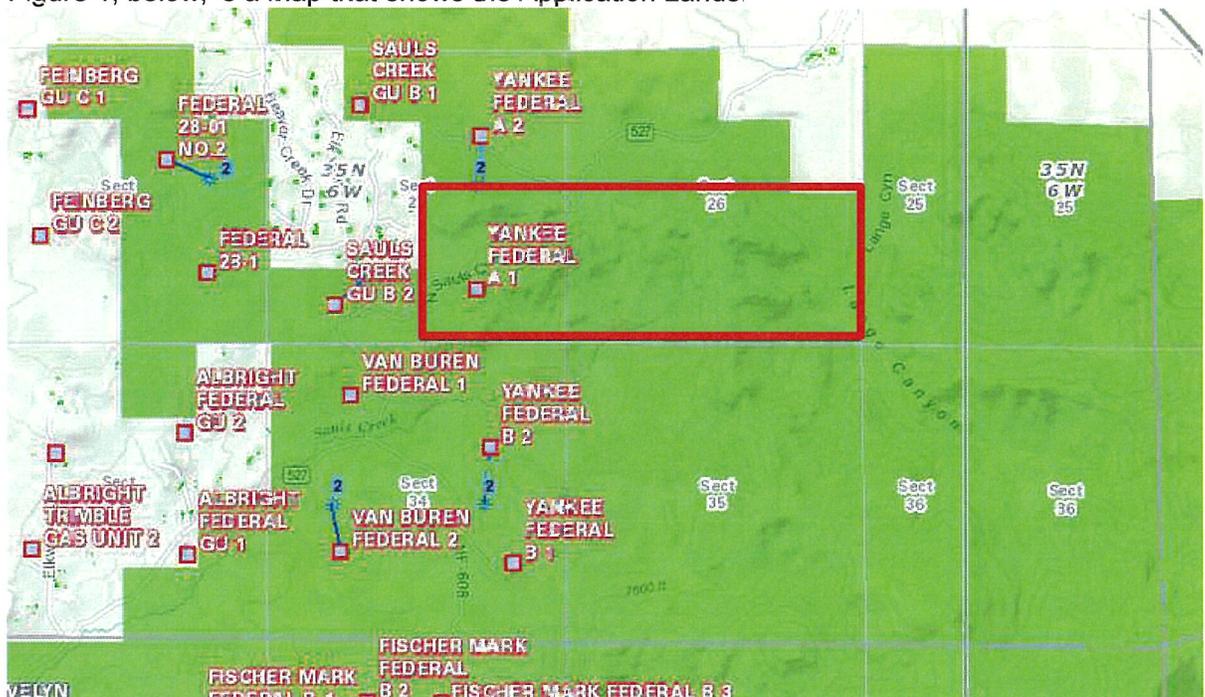


Figure 1 - Application Lands

BP's Application seeks to:

1) Establish an approximate 480-acre drilling and spacing unit, limited to and for the sole purpose of drilling the East Sauls Creek 26 2-1 Well, (API No. Pending), and East Sauls Creek 26 2-2 Well, (API No. Pending) (together "Wells"), that overlays existing 320-acre drilling and spacing units underlying the Application Lands, for the production of oil, gas and associated hydrocarbons from the Fruitland Coal Formation;

2) Require that the productive interval of the wellbores be located no closer than 660 feet from the boundaries of the proposed unit and no closer than 150 feet from any other producing well in the Fruitland Coal Formation, except that there shall be no setback between the proposed Wells and no internal section line setbacks;

3) Exclude any existing or future wells, producing from the Fruitland Coal Formation, from the approximate 480-acre drilling and spacing unit and allocate production in existing or future wells according to the drilling and spacing unit in which the existing or future well is drilled;

4) Pool all interests in the approximate 480-acre drilling and spacing unit, for the development and operation of the Fruitland Coal Formation;

5) Subject any non-consenting interests to the cost recovery provisions of §34-60-116(7), C.R.S., effective as of the earlier of the date of the Application, or the date that any of the costs specified in §34-60-116(7)(b), C.R.S., are first incurred for the drilling of the East Sauls Creek 26 2-1 Well, (API No. Pending), and East Sauls Creek 26 2-2 Well, (API No. Pending).

II. Notice

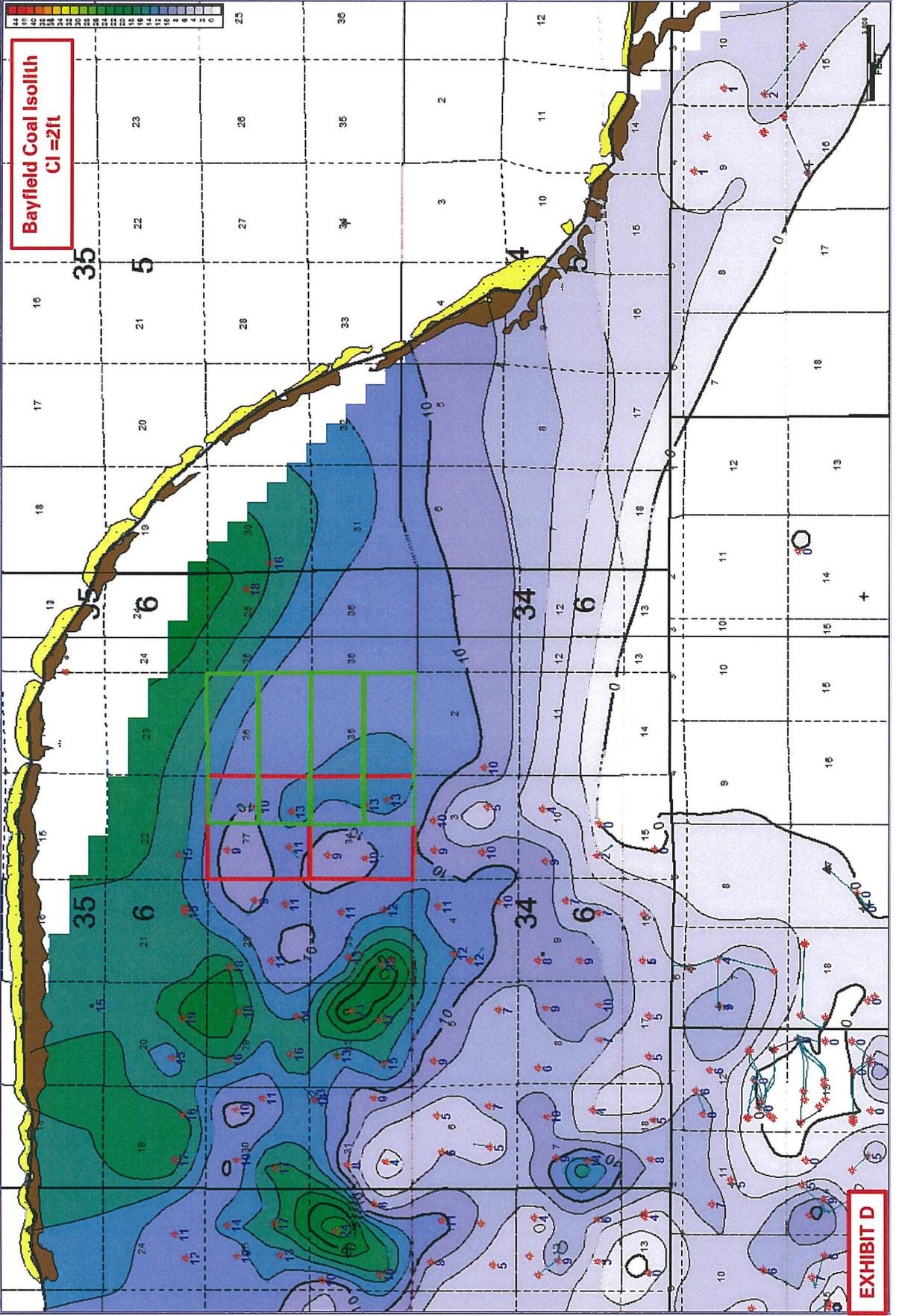
Exhibit B shows the list of interested parties who received notice of the Application at least 35 days in advance of the Commission hearing as required by Rule 507.a.(1). Specifically, the list is comprised of "owners within the proposed drilling unit or within the existing drilling unit to be affected by the applications," R. 507.b.(1) (spacing); "those persons who own any interest in the mineral estate of the tracts to be pooled, except owners of an overriding royalty interest," R. 507.b.(2) (involuntary pooling); and, "owners of contiguous or cornering tracts who may be affected by [a] change [in setbacks]," R. 507.b.(4) (setback reduction). In addition, notice was provided to the local governmental designee of La Plata County, the Colorado Department of Public Health and Environment, the Colorado Parks and Wildlife, and to the Bureau of Land Management pursuant to Rule 507.b.(6).

Each individual party listed on Exhibit B was mailed a copy of the Application and Notice of Hearing in this matter as required by COGCC Rule 507.a. Pursuant to Section 34-60-108(4), C.R.S. a copy of the Notice of Hearing in this matter was mailed, postage prepaid, to the last known mailing address of each person to be given notice, and the Notice of Hearing was published in the *Denver Daily Journal* and *The Durango Herald* in La Plata County at least 10 days prior to hearing.

East Saul's Creek Area: "Bayfield" Coal Isolith



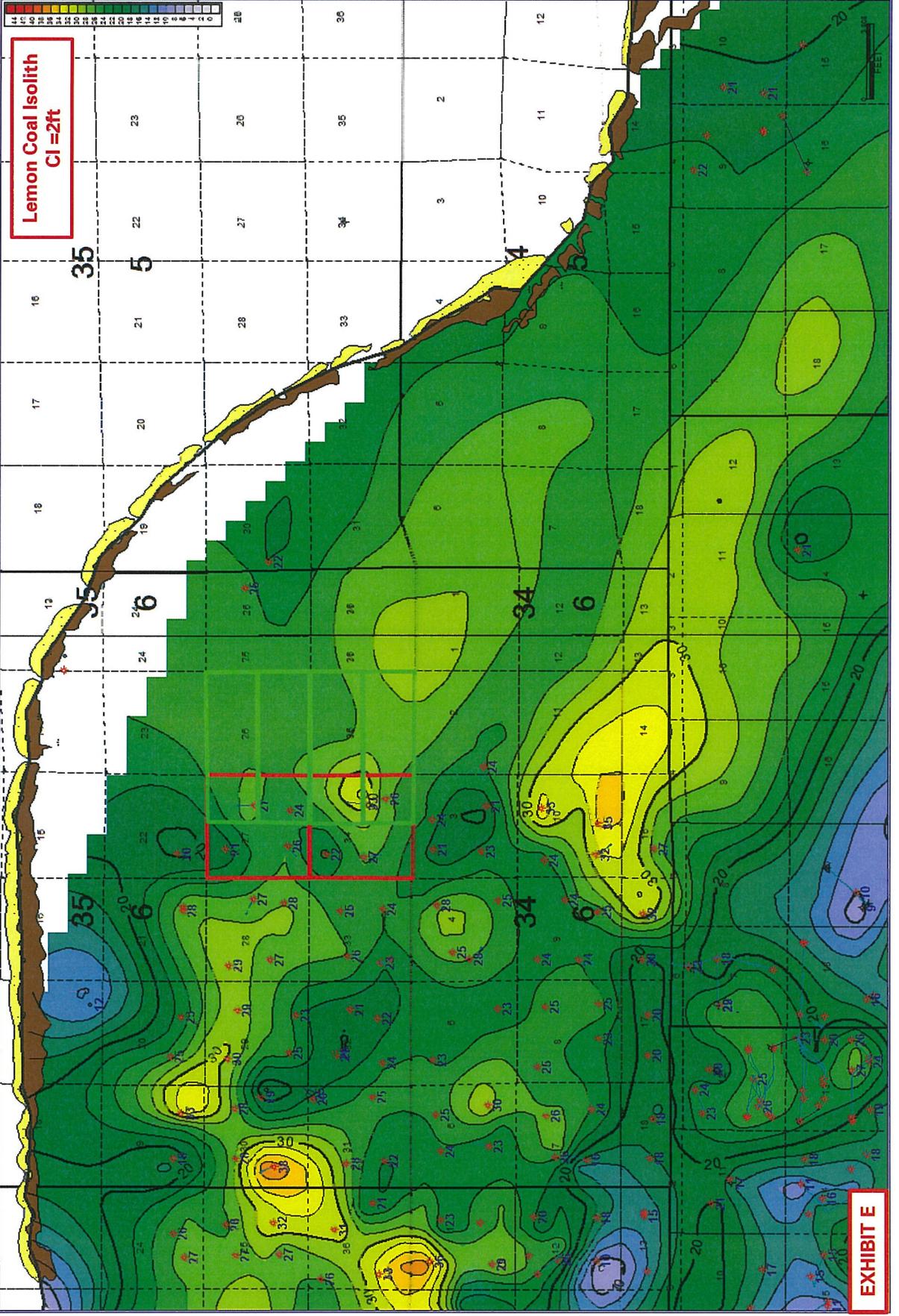
US Lower 48 onshore



East Saul's Creek Area: "Lemon" Coal Isolith



US Lower 48 onshore



East Saul's Creek Area: "Lower Lemon" Coal Isolith



US Lower 48 onshore

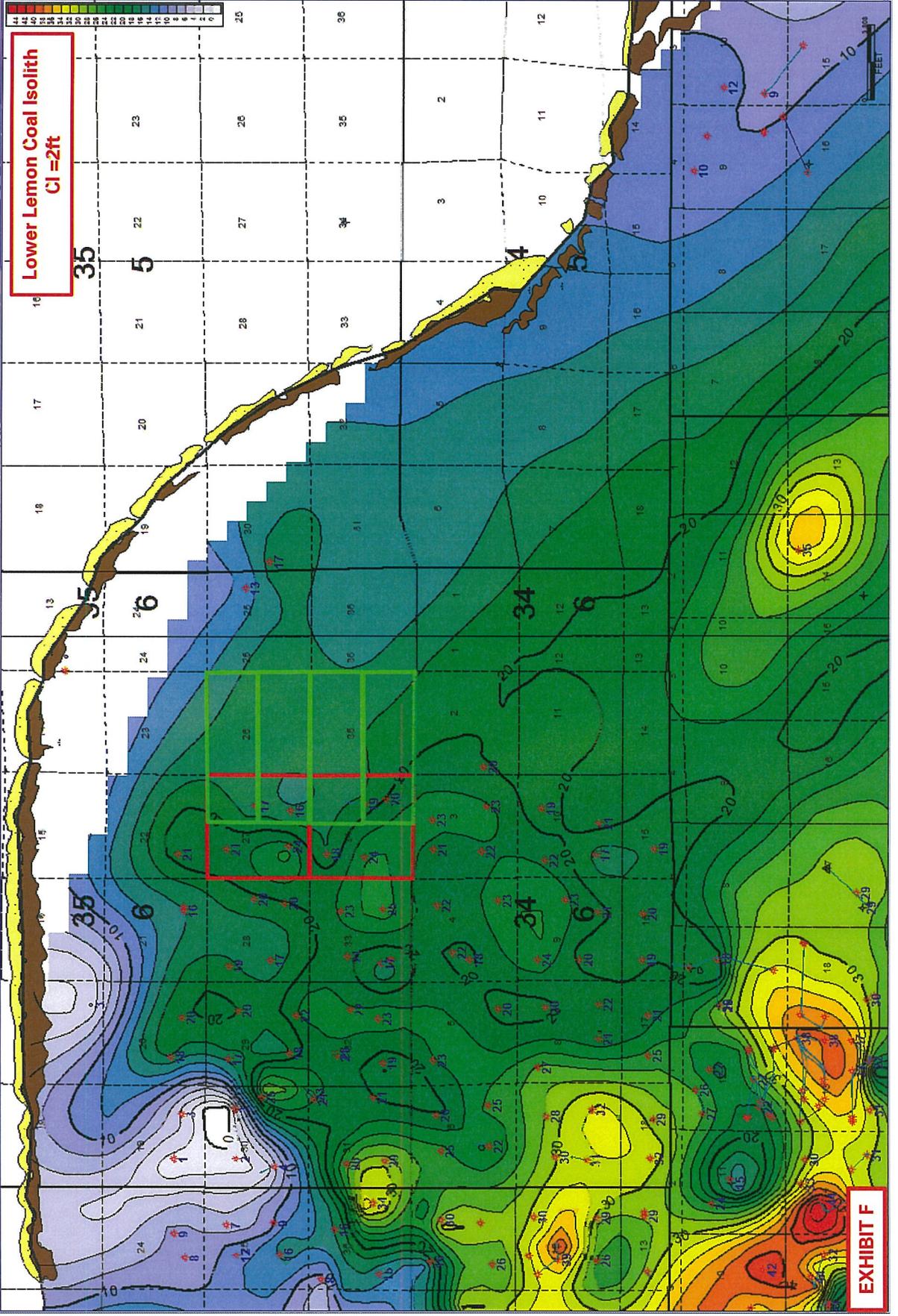
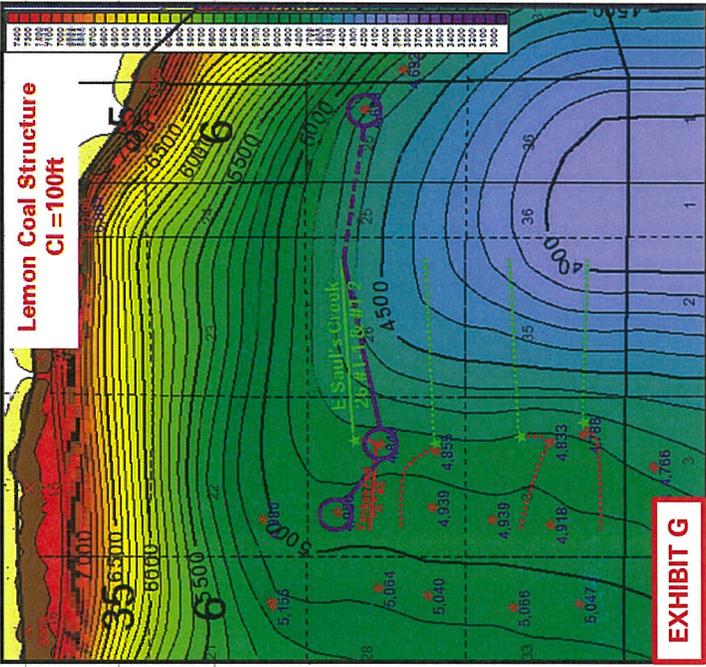
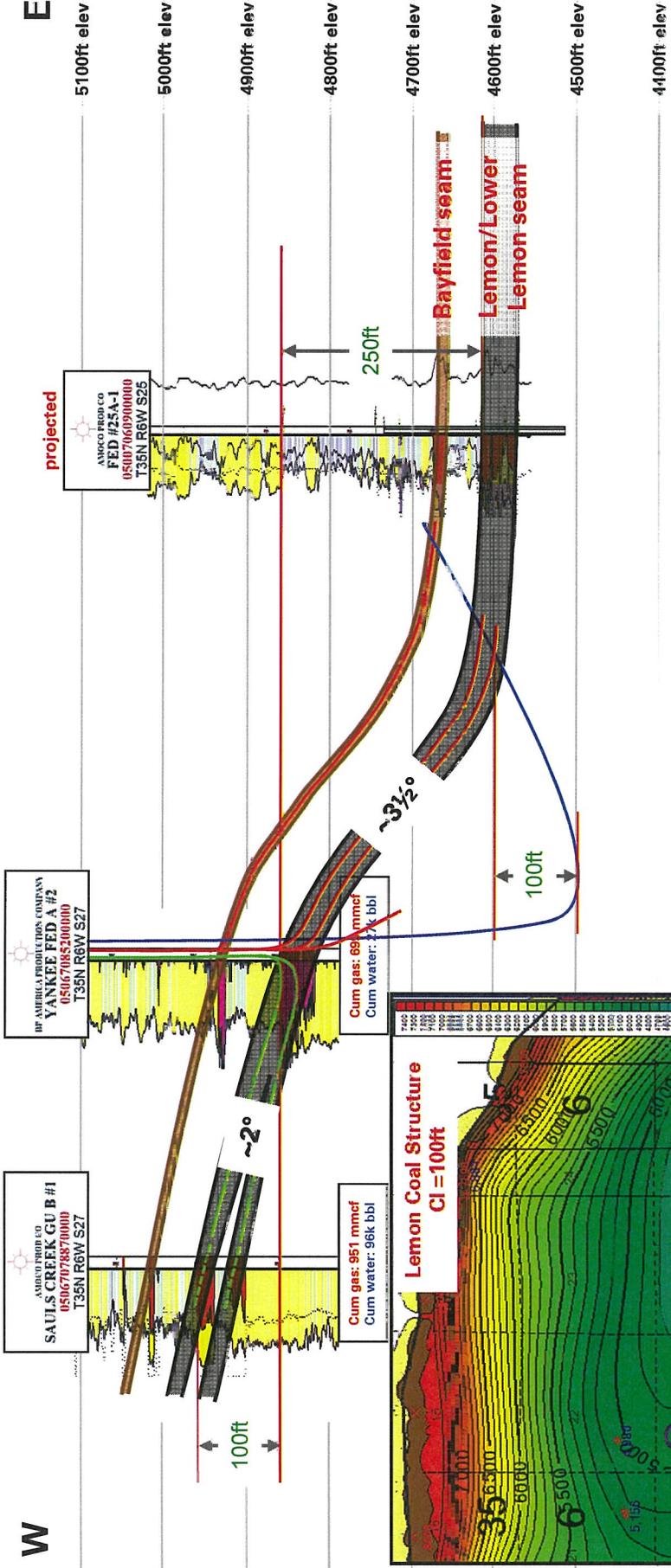
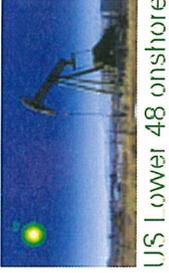


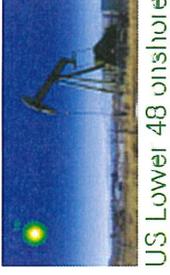
EXHIBIT F

Yankee Federal "A" #2 Horizontal Sideracks E Saul's Creek 26 #1-1 & #1-2

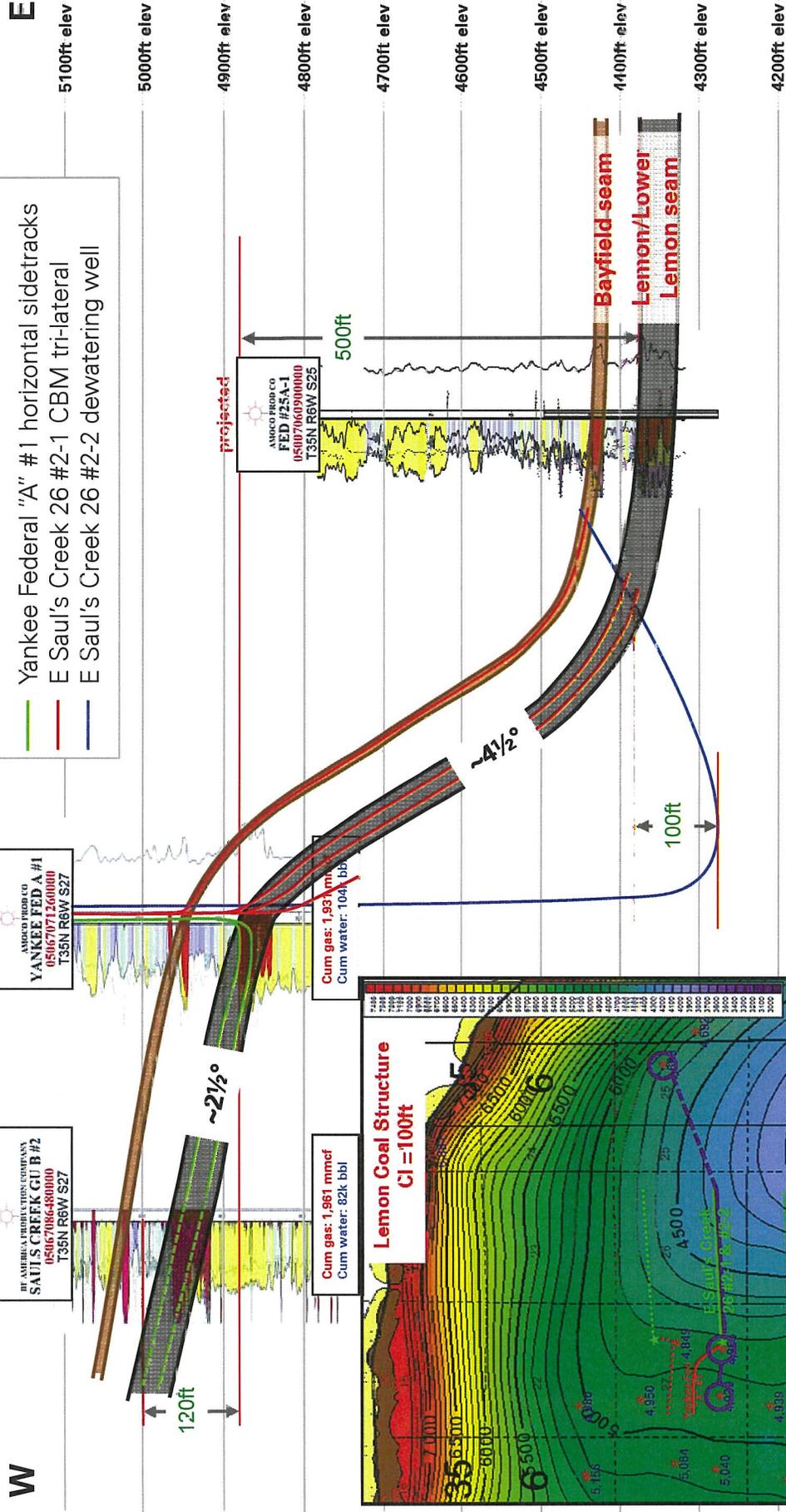


- Yankee Federal "A" #2 horizontal sideracks
- E Saul's Creek 26 #1-1 CBM tri-lateral
- E Saul's Creek 26 #1-2 dewatering well

Yankee Federal "A" #1 Horizontal Sidetacks E Saul's Creek 26 #2-1 & #2-2



US Lower 48 onshore



- E**
- Yankee Federal "A" #1 horizontal sidetracks
 - E Saul's Creek 26 #2-1 CBM tri-lateral
 - E Saul's Creek 26 #2-2 dewatering well

AMOCO PROD CO
YANKEE FED. A #1
(05406701713240000)
T35N R6W S27

DE AMERICA PRODUCTIONS COMPANY
SAULS CREEK GU B #2
(054067086480000)
T35N R6W S27

AMOCO PROD CO
FED #25A-1
(054007060900000)
T35N R6W S25

Cum gas: 1,981 mmcf
Cum water: 82k bbl

Cum gas: 1,931 mmcf
Cum water: 104k bbl

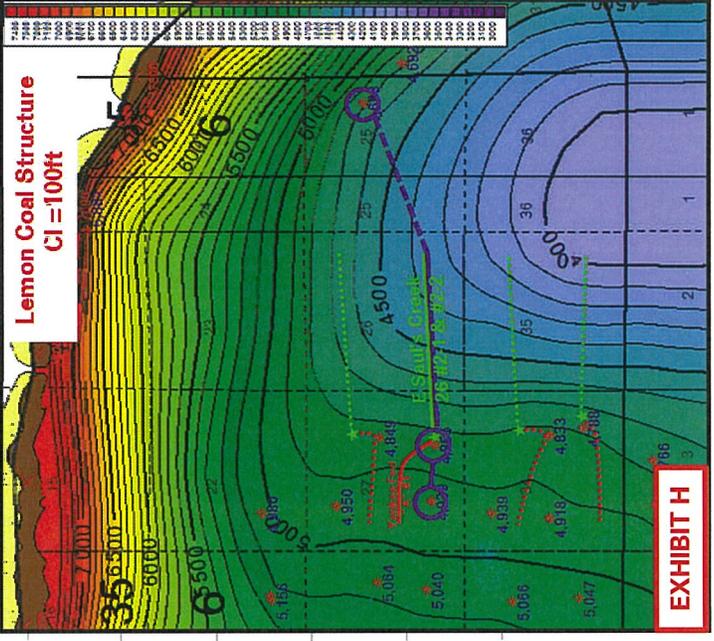
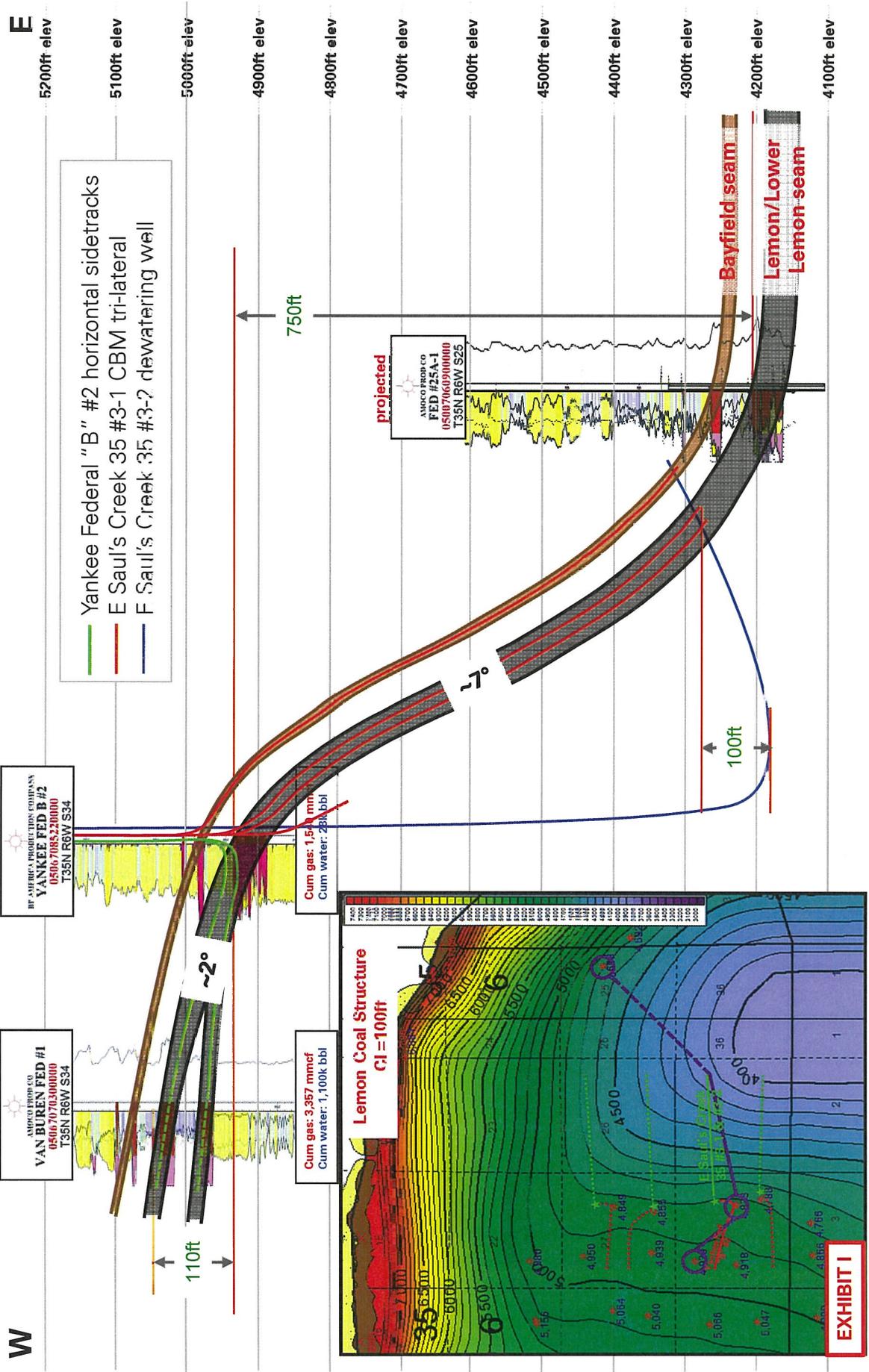
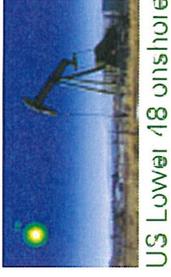
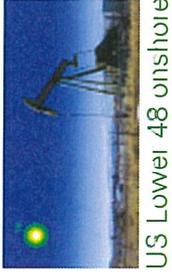


EXHIBIT H

Yankee Federal "B" #2 Horizontal Sidetracks E Saul's Creek 35 #3-1 & #3-2



Yankee Federal "B" #1 Horizontal Sidetracks E Saul's Creek 35 #4-1 & #4-2 (NEW)



US Lower 48 onshore

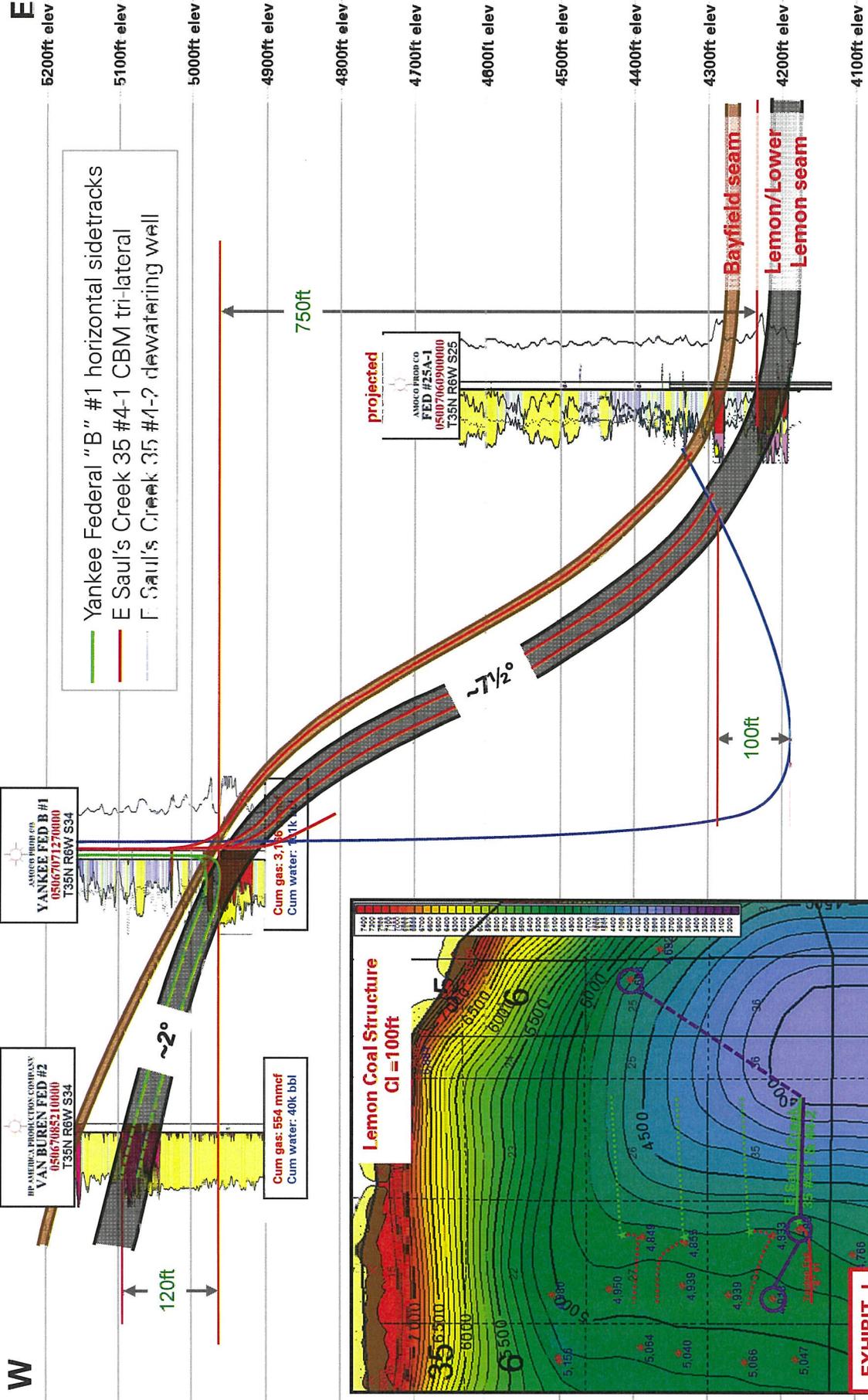


EXHIBIT J

Exhibit K

Geoscience Witness – David Schoderbek

Education

- BS, Geology, New Mexico Institute of Mining & Technology, 1981
- MS, Geology, University of Houston, 1991

Work Experience

- Senior Geologist, BP Americas, 2016-present
- Geological Operations Supervisor, ConocoPhillips L48, 2013-2015
- Gas Hydrates Director, ConocoPhillips Alaska, 2009-2012
- CBM/Unconventional Reservoirs Team Lead, ConocoPhillips Canada, 2006-2008
- Geologist/geophysicist/CBM Team Lead, Burlington Resources Canada, 2002-2005
- Geophysicist/geologist, Meridian Oil/Burlington Resources 1988-2001
- Gulf Oil/Chevron USA, 1981-1987

III. Testimony in Support of Request for Spacing

The requested overlay drilling and spacing unit allows efficient horizontal development within the constraints of topography and surface occupancy restrictions while minimizing environmental impact. Portions of the Application Lands, including the proposed surface locations, are located in a rugged area within the San Juan National Forest managed by the United States Forest Service (“USFS”). Road construction is also prohibited by the USFS on a portion of the Application Lands. Figure 2, below, illustrates the topography and roadless areas.

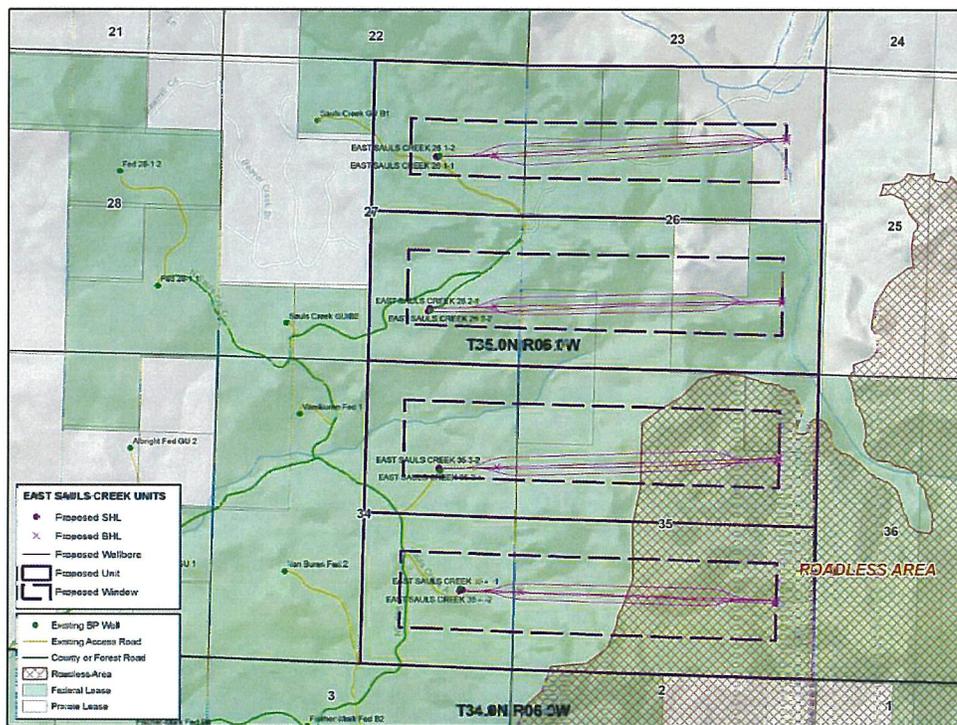


Figure 2 - Topography/Roadless Area

The Application Lands have been previously spaced. Figure 3 below, shows an outline of spaced areas underlying the Application Lands. Federal minerals comprise all of the Application Lands and existing Communitization Agreements (“CAs”) govern the allocation of production for certain wells currently producing in these established 320-acre drilling and spacing units. Because the BLM prohibits vacating these existing CAs, Applicant seeks to overlay the 480-acre drilling and spacing unit requested in the Application so that it can pursue horizontal development in units larger than 320-acres.

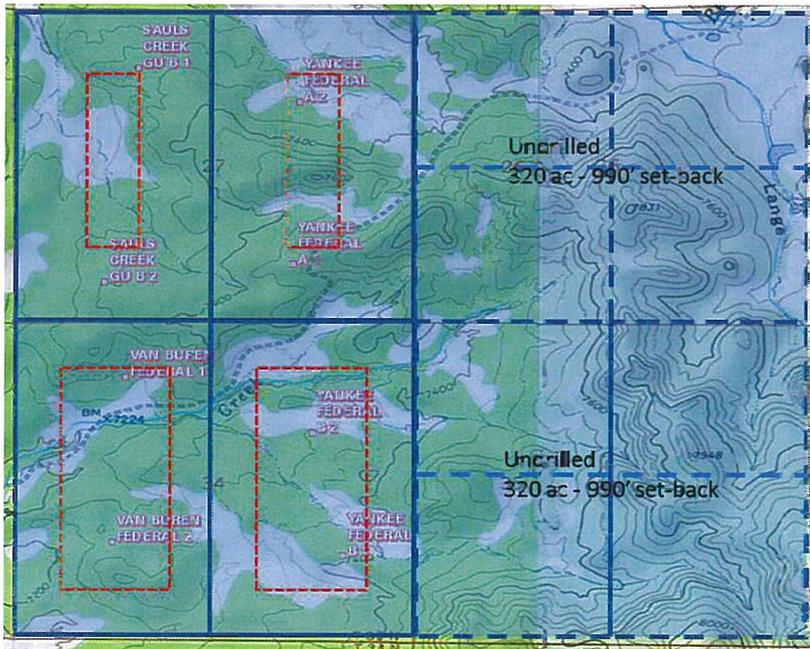


Figure 3- Existing Drilling Spacing Units / Spaced Areas

Finally, the requested spacing configuration allows horizontal development with minimal environmental impact. The proposed horizontal wells will extend eastward from existing surface locations thereby minimizing surface damage and disturbance.

Exhibit C shows the drilling window to be established by the Application and the proposed locations and well bore paths for the East Sauls Creek 26 2-1 Well and East Sauls Creek 26 2-2 Well.

Exhibit D shows the leasehold ownership of the Application Lands. Applicant owns an undivided 91.67% leasehold interest in the Application Lands.

Exhibit E shows the nature of the mineral ownership of the Application Lands. The mineral ownership in the Application Lands is comprised of 100% federal lands.

Exhibit F shows the surface ownership within the Application Lands. The surface ownership within the Application Lands is comprised of 100% federal lands.

The above testimony and exhibits show that Applicant is authorized to establish the 480-acre drilling and spacing unit. Further the 480-acre drilling and spacing unit will limit environmental impacts by minimizing surface damage, prevent waste, avoid the drilling of unnecessary wells, and protect correlative rights.

IV. Testimony in Support of Pooling

Applicant also requests an order to pool all interests in the 480-acre drilling and spacing unit sought by the Application and subject any non-consenting interests to the cost recovery provisions of §34-60-116(7) C.R.S., effective as of the earlier of the date of the Application, or the date that any of the costs specified in §34-60-116(7)(b), C.R.S., are first incurred for the drilling of the Wells.

Exhibits G-1 and G-2 are the Well Location Plats that show the location of the Wells to be drilled on the Application Lands.

Exhibit H is an example of the offer letter sent to working interest owners pursuant to Rule 530. The letters were sent to the last known address of these parties at least 35 days prior to the hearing on this matter. The letter offered the parties the opportunity to participate in the drilling and completion operations of the Wells by paying a proportionate share of such costs.

There are no unleased mineral owners located within the 480-acre drilling and spacing unit.

Exhibit I-1 and I-2 are each an Authority for Expenditure ("AFE") which was sent by Applicant to the working interest owners for each of the Wells. Each AFE is a fair and reasonable estimate of the costs of the drilling and completion operations of each respective Well.

The above testimony and exhibits show that Applicant has served proper notice on all interested parties, has complied with Rule 530, and that entry of a pooling order is just and reasonable pursuant to § 34-60-116, C.R.S.

V. Federal and Local Government Approval

Applicant is currently in discussions regarding the Application with La Plata County. The surface locations for the Wells are located on federal lands. Therefore, Applicant does not expect an intervention as the Application does not implicate lands subject to La Plata County's jurisdiction.

Likewise, Applicant has received positive feedback from the Bureau of Land Management regarding the Application. If/when Applicant receives a letter in support of the Application, Applicant will forward it to the COGCC accordingly.

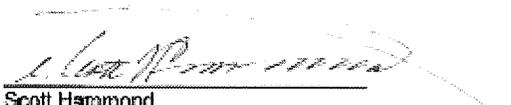
VI. Conclusion

Based on the foregoing testimony and supporting exhibits, BP respectfully requests approval of the Application.

Affirmation

The matters described herein were all conducted under my direction and control. I hereby swear and that the preceding testimony and supporting exhibits are true and correct to the best of my knowledge and belief that they were prepared by me or under my supervision.

This 9th day of January, 2017.



Scott Hammond
Senior Landman, San Juan North
BP America Production Company

Exhibit A

Land Witness – Scott Hammond

Education:

- BBA, The University of Texas at Austin, 1973

Work Experience:

- Senior Land Negotiator, BP America Production Company, 9 years
- Land Manager, Jones Energy, 4 years
- Senior Land Negotiator, St. Mary Energy, 2 years
- Contract Land Negotiator, Vastar Resources, Inc., 5 years
- Landman, District Landman, Division Manager, Tom Brown, Inc., 15 years

Certifications:

- Registered Landman, through American Association of Professional Landmen

Exhibit B

EXCK inc
5410 North Santa Fe Ave, Suite B
Oklahoma City, Oklahoma 73116-9120

BP America Production Company
737 N. Eloridge Parkway
Houston, Texas 77079

John F. Van Tassel
PO Box 805
Bayfield CO 8112

John Pecor
Bureau of Land Management
Tres Rios Field Office
29211 Highway 184
Dolores, CO 81323

Kent Kuster
Colorado Department of Health and Environment
4300 Cherry Creek Drive South
Denver CO 80246-1530

JDH Resources, LLC
5242 Oak Hollow Drive
Morrison, CO 80465

Catamount Royalty Partners
PO Box 22084
Denver, CO 80222
3200 Cherry Creek So. Drive
Denver, CO 80209

Life Royalties, Ltd.
3207 West 4th Street
Fort Worth, TX 76107

Hershner LLC
2788 South Langley Court
Denver CO 80201

Von Roedke Irrevocable Trust
PO Box 3766
Albuquerque NM 87109

Patricia McDonald Chandler Trust
457 Seventeenth Street, Suite 1210
Denver, CO 80202

Collis F. Chandler, III
457 Seventeenth Street, Suite 1210
Denver, CO 80202

Deputy State Director, Mineral Resources
BLM Colorado State Office
2850 Youngfield Street
Lakewood, CO 80215-7093

Petrox Resources LLC
39858 Highway 13
PO Box 2600
Mackay, CO 81641

Scott M. and Gloria D. Lamberth
37 Langham LN
Livingston, TX 77351

Brenna Kampf, Planner II
La Plata County Planning Dept.
1060 East 2nd Ave.
Durango, CO 81301

Jon Holst
Southwest Region Office
Energy Liaison - Colorado Parks and Wildlife
415 Turner Drive
Durango, CO 81303

Frontier Land and Exploration
3400 Menaul Blvd, NE #448
Albuquerque, NM 87112

Gloria J. Dayhuff, widow and heir
Estate of Donald E. Dayhuff
2143 Pinon Drive
Engle, CO 80516

EP Energy E&P Company, LP
1001 Louisiana Street, Suite 2400
Houston, Texas 77002

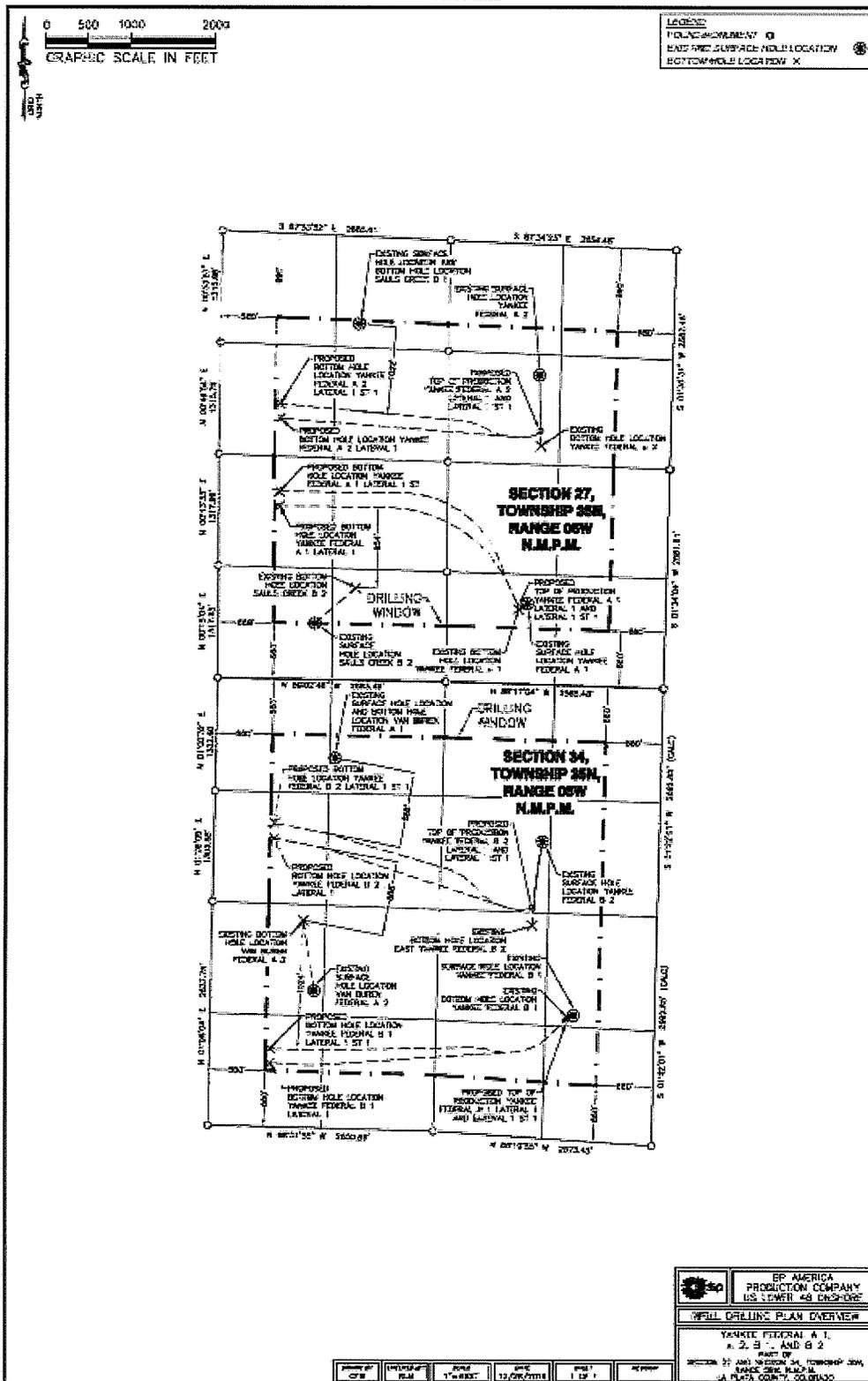
Scott R. Ridd
457 Seventeenth Street, Suite 1210
Denver, CO 80202

Petrocap Catamount LLC
2602 McKinney Ave, Suite 400
Dallas, Texas 75204

LoneTree Energy & Associates LLC
3 West Dry Creek Cr.
Littleton, CO 80120

Catamount Energy Partners, LLC
1801 Broadway Suite 1000
Denver, CO 80202

Exhibit C



LEGEND
 POLYLINE SYMBOL: END PRODUCTION WELL LOCATION
 END PRODUCTION WELL LOCATION
 BOTTOM HOLE LOCATION X

0 500 1000 2000
 GRAPHIC SCALE IN FEET

**SECTION 27,
 TOWNSHIP 26N,
 RANGE 06W
 N.M.P.M.**

**SECTION 34,
 TOWNSHIP 26N,
 RANGE 06W
 N.M.P.M.**

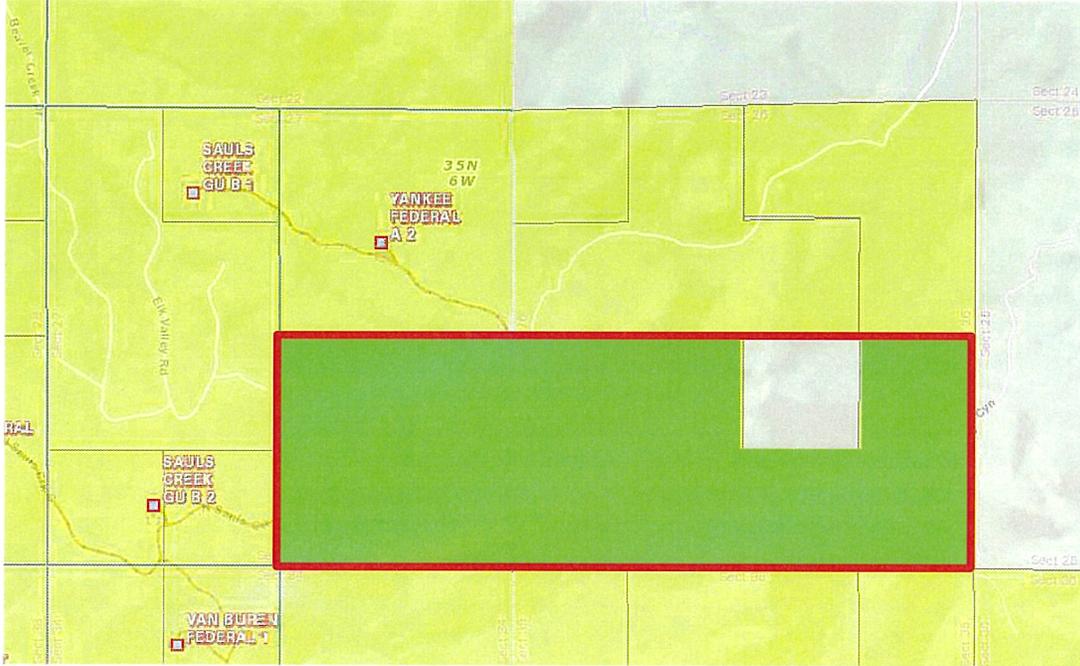
EP AMERICA PRODUCTION COMPANY 100 S.W. 4th St. DORSET, ALA. 36525	
WELL DRILLING PLAN OVERVIEW	
YANKEE FEDERAL A 1, A 2, B 1, AND B 2	
PART OF SECTION 27 AND SECTION 34, TOWNSHIP 26N, RANGE 06W, RANGE 06W, N.M.P.M. LA BATA COUNTY, COLORADO	
SHEET NO. 001	SHEET TOTAL 1 OF 1
DATE 12/09/2018	TIME 1:12:11

PROJECT	DATE	TIME	USER	STATUS
001	12/09/2018	1:12:11		

Exhibit D

Applicant's Leasehold Ownership within the Application Lands

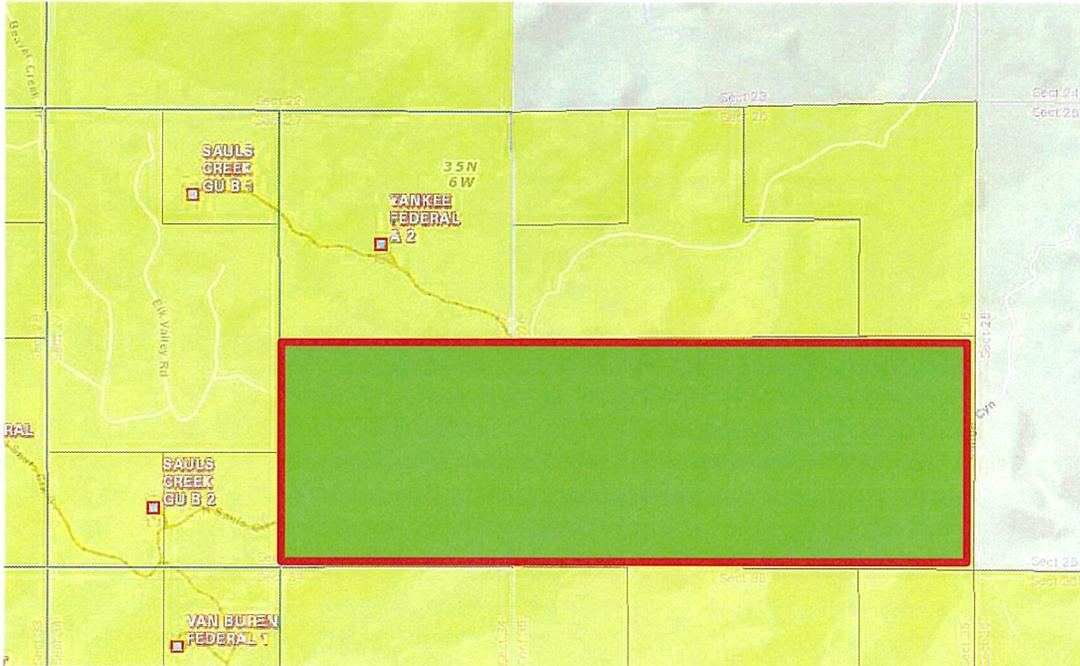
35N-6W



	East Sauls Creek 26.2 Unit Outline	480-acres
	Applicant's Leasehold Ownership	440-acres (91.67%)
	Others	40-acres (8.33%)

Exhibit E
Mineral Ownership within the Application Lands

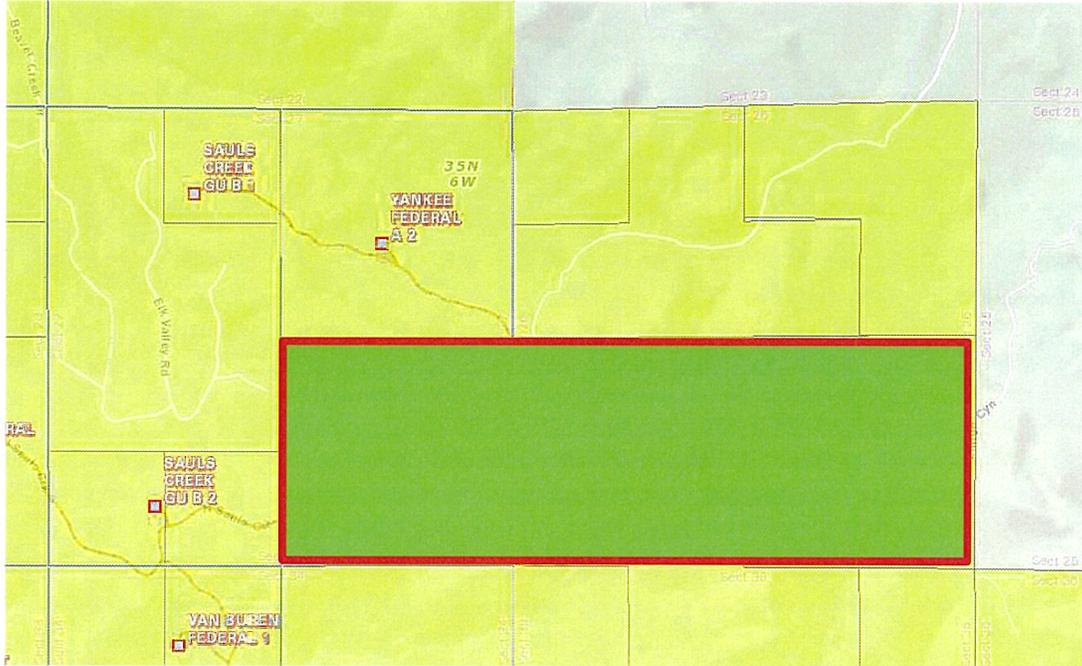
35N-6W



	East Sauls Creek 26 2 Unit Outline	480-acres
	Federal Lands	480-acres (100%)
	Fee Lands	0-acre (0%)

Exhibit F
Surface Ownership within the Application Lands

35N-6W



	East Sauls Creek 26 2 Unit Outline	480-acres
	Federal Lands	480-acres (100%)
	Fee Lands	0-acres (0%)

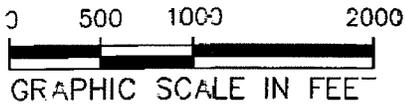
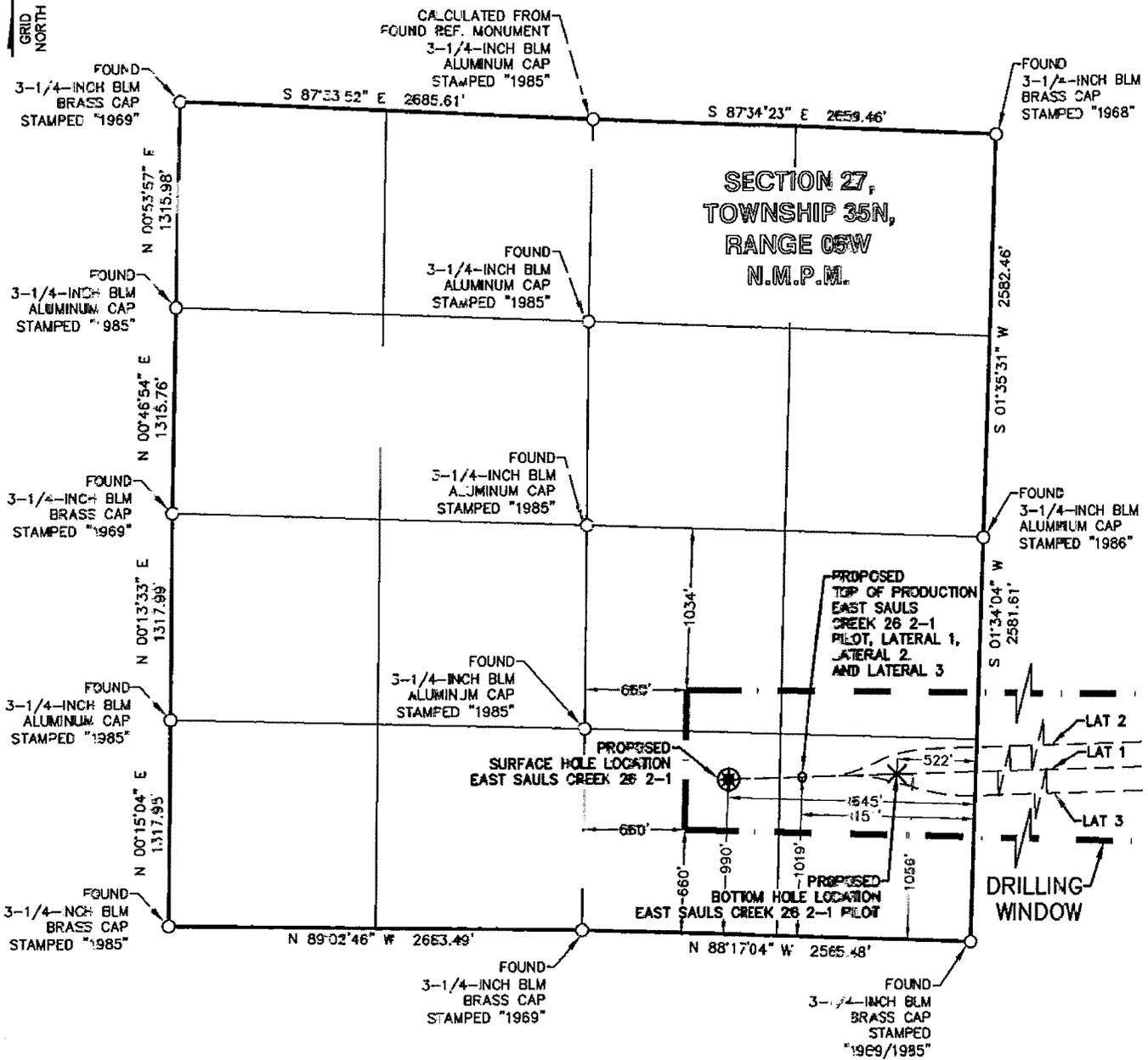


Exhibit G-1

LEGEND

- FOUND MONUMENT O
- PROPOSED SURFACE HOLE LOCATION ⊗
- PROPOSED BOTTOM HOLE LOCATION X



SURVEY NOTES

1. SEE SHEET 3 OF 3 FOR COORDINATE TABLE, SURVEY NOTES, AND SURVEYOR'S CERTIFICATE.



BP AMERICA
PRODUCTION COMPANY
US LOWER 48 ONSHORE

WELL LOCATION PLAT

EAST SAULS CREEK 26 2-1
PART OF
SECTION 26 AND SECTION 27, TOWNSHIP 35N,
RANGE 06W, N.M.P.M.
LA PLATA COUNTY, COLORADO

DRAWN BY CFW/RLM	CHECKED BY RL	SCALE 1"=1000	DATE 12/14/2016	SHEET 1 OF 3	REVISION
---------------------	------------------	------------------	--------------------	-----------------	----------

0 500 1000 2000

GRAPHIC SCALE IN FEET

LEGEND

FOUND MONUMENT O

PROPOSED SURFACE HOLE LOCATION ⊗

PROPOSED BOTTOM HOLE LOCATION X

GRID NORTH

FOUND
3-1/4-INCH BLM
BRASS CAP
STAMPED "1966"

FOUND
3-1/4-INCH USFS
BRASS CAP
STAMPED "1977"

FOUND
3-1/4-INCH BLM
BRASS CAP
STAMPED "1969"

N 89°18'35" E 2635.30'

N 89°42'56" E 2519.80'

**SECTION 26,
TOWNSHIP 35N,
RANGE 06W
N.M.P.M.**

S 00°40'14" W
1314.26'

FOUND
3-1/4-INCH BLM
BRASS CAP
STAMPED "1989"

N 01°35'31" E 2682.45'

FOUND
3-1/4-INCH BLM
ALUMINUM CAP
STAMPED "1989"

S 00°36'26" W
1315.72'

FOUND
3-1/4-INCH BLM
ALUMINUM CAP
STAMPED "1986"

FOUND
3-1/4-INCH BLM
BRASS CAP
STAMPED "1986"

FOUND
3-1/4-INCH BLM
ALUMINUM CAP
STAMPED "1986"

N 01°34'04" E
2581.81'

**DRILLING
WINDOW**

**PROPOSED
BOTTOM HOLE LOCATION
EAST SAULS CREEK 26 2-1
LATERAL 1, LATERAL 2,
AND LATERAL 3**

1034'

S 01°48'00" W
2697.00'

N 88°46'39" W 2592.82'

N 88°35'21" W 2591.77'

FOUND
3-1/4-INCH BLM
BRASS CAP
STAMPED
"1969/1985"

FOUND
3-1/4-INCH BLM
ALUMINUM CAP
STAMPED "1986"

FOUND
3-1/4-INCH BLM
ALUMINUM CAP
STAMPED "1986"

**PROPOSED
BOTTOM HOLE LOCATION
EAST SAULS CREEK 26 2-1 PILOT**

LAT 2

LAT 1

LAT 3

660'

710'

660'

1318'

660'



**BP AMERCA
PRODUCTION COMPANY
US LOWER 48 ONSHORE**

WELL LOCATION PLAT

EAST SAULS CREEK 26 2-1
PART OF
SECTION 26 AND SECTION 27, TOWNSHIP 35N,
RANGE 06W, N.M.P.M.
LA PLATA COUNTY, COLORADO

DRAWN BY
CFW/RLM

CHECKED BY
RLT

SCALE
1"=1000'

DATE
12/14/2015

SHEET
2 OF 3

REVISION

EAST SAULS CREEK 26 2-1 WELLBORE DISTANCES	
SHL TO TOP	495'
TOP TO BHL PILOT	639'
TOP TO BHL LATERAL 1	5,649'
TOP TO BHL LATERAL 2	5,691'
TOP TO BHL LATERAL 3	5,689'

EAST SAULS CREEK 26 2-1	CSZ MAG'83	NAC'83	TIES	SEC / TWP / RANG	ELEVATION
PROPOSED SURFACE HOLE LOCATION 'SHL'	N (Y) = 1,225,165.69' E (X) = 2,414,617.47'	LAT. = 37.26773682°N LON. = 107.51175565°W	FSL = 990' FEL = 1645'	SEC 27, TWP 35N, RANG 06W	EXISTING GROUND 7465.93'
PROPOSED TOP OF PRODUCTION (TCP) PILOT, LAT 1, LAT 2, AND LAT 3	N (Y) = 1,225,180.92' E (X) = 2,415,111.77'	LAT. = 37.26780541°N LON. = 107.51005747°W	FSL = 1019' FEL = 1151'	SEC 27, TWP 35N, RANG 06W	PROPOSED GRADE 7466.59'
PROPOSED BOTTOM HOLE LOCATION 'BHL', PILOT	N (Y) = 1,225,198.28' E (X) = 2,415,741.67'	LAT. = 37.26785275°N LON. = 107.50729474°W	FSL = 1058' FEL = 522'	SEC 27, TWP 35N, RANG 06W	
PROPOSED BOTTOM HOLE LOCATION 'BHL', LAT 1	N (Y) = 1,225,342.94' E (X) = 2,420,749.45'	LAT. = 37.26658430°N LON. = 107.49040055°W	FSL = 1318' FEL = 710'	SEC 26, TWP 35N, RANG 06W	
PROPOSED BOTTOM HOLE LOCATION 'BHL', LAT 2	N (Y) = 1,225,342.94' E (X) = 2,420,749.45'	LAT. = 37.26658430°N LON. = 107.49040055°W	FSL = 1318' FEL = 710'	SEC 26, TWP 35N, RANG 06W	
PROPOSED BOTTOM HOLE LOCATION 'BHL', LAT 3	N (Y) = 1,225,342.94' E (X) = 2,420,749.45'	LAT. = 37.26658430°N LON. = 107.49040055°W	FSL = 1318' FEL = 710'	SEC 26, TWP 35N, RANG 06W	

SURVEY NOTES

1. BEARING BASIS FOR THIS SURVEY IS BASED ON THE NORTH AMERICAN DATUM OF 1983, COLORADO STATE PLANE COORDINATE SYSTEM, COLORADO SOUTH, ZONE 0503.
2. ELEVATION BASIS FOR THIS SURVEY IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12A).
3. SURVEYED IN THE FIELD ON 10/10/2016.
4. BEARINGS AND DISTANCE SHOWN ARE MEASURED IN THE FIELD UNLESS OTHERWISE NOTED.
5. ALL MEASURED DISTANCES SHOWN ARE GRID USING A COMBINED SCALE FACTOR 0.99964480.
6. GPS INSTRUMENT OPERATOR: KENNETH E. REA
7. GPS PDOP VALUE: 2.0

SURVEYOR'S CERTIFICATE

I, ROBERT L. TRUDEAUX, A PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM AN ACTUAL SURVEY PERFORMED BY ME OR UNDER MY DIRECT RESPONSIBILITY, SUPERVISION AND CHECKING, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF BASED ON THE STANDARDS OF CARE OF PROFESSIONAL LAND SURVEYORS PRACTICING IN THE STATE OF COLORADO. THIS DOES NOT REPRESENT A LAND SURVEY PLAT, IMPROVEMENT SURVEY PLAT, OR MONUMENTED LAND SURVEY AS DEFINED BY COLORADO REVISED STATUTES 38-51-102 AND CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP. THIS SURVEY IS NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.



 bp	BP AMERICA PRODUCTION COMPANY US LOWER 48 ONSHORE
WELL LOCATION P_LAT	
EAST SAULS CREEK 26 2-1 PART OF SECTION 26 AND SECTION 27, TOWNSHIP 35N, RANGE 06W, N.M.P.M. LA PLATA COUNTY, COLORADO	

DRAWN BY CFW/RLM	CHECKED BY RLT	SCALE N/A	DATE 12/14/2016	SHEET 3 OF 3	REVISION
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0 500 1000 2000

GRAPHIC SCALE IN FEET

Exhibit 3-2

LEGEND

FOUND MONUMENT O

PROPOSED SURFACE HOLE LOCATION ⊗

PROPOSED BOTTOM HOLE LOCATION X

GRID NORTH

CALCULATED FROM FOUND REF. MONUMENT
3-1/4-INCH BLM ALUMINUM CAP
STAMPED "1985"

FOUND
3-1/4-INCH BLM BRASS CAP
STAMPED "1969"

S 87°33'52" E 2685.61'

S 87°34'23" E 2658.46'

FOUND
3-1/4-INCH BLM BRASS CAP
STAMPED "1968"

SECTION 27,
TOWNSHIP 35N,
RANGE 06W
N.M.P.M.

FOUND
3-1/4-INCH BLM ALUMINUM CAP
STAMPED "1985"

N 00°53'57" E
1315.98'

FOUND
3-1/4-INCH BLM ALUMINUM CAP
STAMPED "1985"

S 01°35'31" W 2582.46'

N 00°46'54" E
1315.76'

FOUND
3-1/4-INCH BLM ALUMINUM CAP
STAMPED "1985"

FOUND
3-1/4-INCH BLM BRASS CAP
STAMPED "1969"

N 00°13'33" E
1317.99'

PROPOSED
TOP OF PRODUCTION
EAST SAULS CREEK 26 2-2

DRILLING WINDOW

FOUND
3-1/4-INCH BLM ALUMINUM CAP
STAMPED "1985"

FOUND
3-1/4-INCH BLM ALUMINUM CAP
STAMPED "1985"

FOUND
3-1/4-INCH BLM ALUMINUM CAP
STAMPED "1986"

N 00°18'04" E
1317.95'

PROPOSED
SURFACE HOLE LOCATION
EAST SAULS CREEK 26 2-2

FOUND
3-1/4-INCH BLM BRASS CAP
STAMPED "1985"

N 89°02'46" W 2683.49'

N 88°17'04" W 2565.45'

FOUND
3-1/4-INCH BLM BRASS CAP
STAMPED "1969"

FOUND
3-1/4-INCH BLM BRASS CAP
STAMPED "1969/1985"

SURVEY NOTES

1. SEE SHEET 3 OF 3 FOR COORDINATE TABLE,
SURVEY NOTES, AND SURVEYOR'S CERTIFICATE.

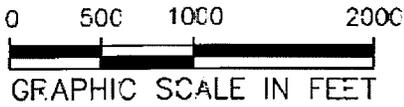


BP AMERICA
PRODUCTION COMPANY
US LOWER 48 ONSHORE

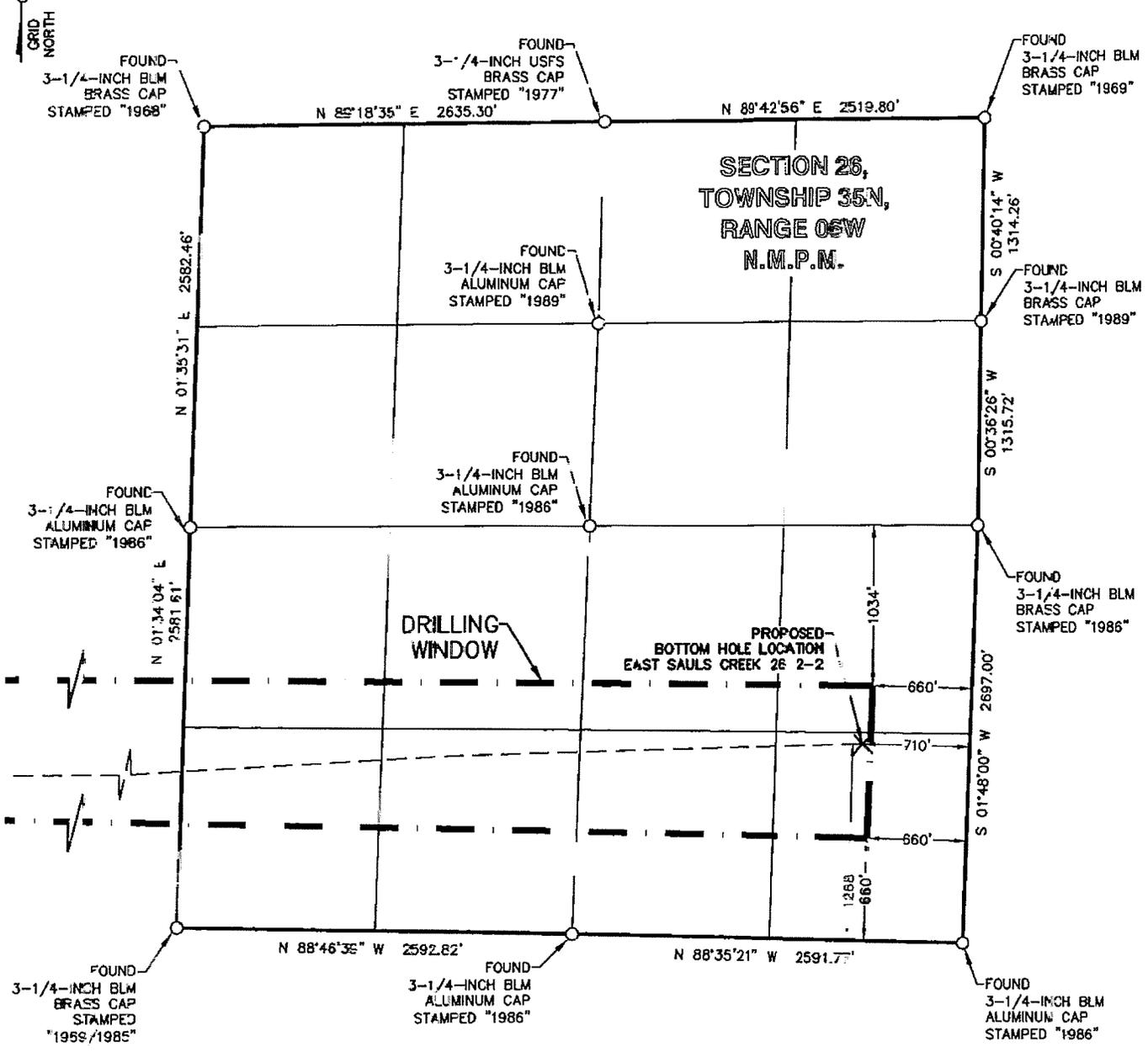
WELL LOCATION FLAT

EAST SAULS CREEK 26 2-2
PART OF
SECTION 26 AND SECTION 27, TOWNSHIP 35N,
RANGE 06W, N.M.P.M.,
LA PLATA COUNTY, COLORADO

DRAWN BY CFW/RLM	CHECKED BY RLT	SCALE 1"=1000'	DATE 12/02/2018	SHEET 1 OF 3	REVISION
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LEGEND
 FOUND MONUMENT O
 PROPOSED SURFACE HOLE LOCATION ⊗
 PROPOSED BOTTOM HOLE LOCATION X



	BP AMERICA PRODUCTION COMPANY US LOWER 48 ONSHORE	
	WELL LOCATION PLAT	
EAST SAULS CREEK 26 2-2 PART OF SECTION 26 AND SECTION 27, TOWNSHIP 35N, RANGE 06W, N.M.P.M. LA PLATA COUNTY, COLORADO		

DRAWN BY CFW/RLM	CHECKED BY RLT	SCALE 1"=1000'	DATE 12/02/2016	SHEET 2 OF 3	REVISION
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EAST SAULS CREEK 26 2-2 WELLBORE DISTANCES	
SHL TO TOP	0'
TCP TO BHL	6.160'

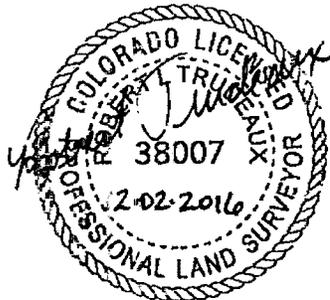
EAST SAULS CREEK 26 2-2	CSZ NAD83	NAD83	TIES	SEC / TWP / RNG	ELEVATION
PROPOSED SURFACE HOLE LOCATION (SHL)	N (Y) = 1,225,111.60' E (X) = 2,414,591.20'	LAT. = 37.26758877°N LON. = 107.54184067°W	FSL = 935' FEL = 1670'	SEC 27, TWP 35N, RNG 06W	EXISTING GROUND 7465.34'
PROPOSED TOP OF PRODUCTION (TOP)	N (Y) = 1,225,111.60' E (X) = 2,414,591.20'	LAT. = 37.26758877°N LON. = 107.54184067°W	FSL = 935' FEL = 1670'	SEC 27, TWP 35N, RNG 06W	PROPOSED GRADE 7466.59'
PROPOSED BOTTOM HOLE LOCATION (BHL)	N (Y) = 1,225,292.98' E (X) = 2,420,747.68'	LAT. = 37.26844698°N LON. = 107.49070225°W	FSL = 1268' FEL = 710'	SEC 26, TWP 35N, RNG 06W	

SURVEY NOTES

1. BEARING BASIS FOR THIS SURVEY IS BASED ON THE NORTH AMERICAN DATUM OF 1983, COLORADO STATE PLANE COORDINATE SYSTEM, COLORADO SOUTH, ZONE 0503.
2. ELEVATION BASIS FOR THIS SURVEY IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID12A).
3. SURVEYED IN THE FIELD ON 10/19/2016.
4. BEARINGS AND DISTANCE SHOWN ARE MEASURED IN THE FIELD UNLESS OTHERWISE NOTED.
5. ALL MEASURED DISTANCES SHOWN ARE GRID USING A COMBINED SCALE FACTOR 0.99964480.
6. GPS INSTRUMENT OPERATOR: KENNETH E. REA
7. GPS PDOP VALUE: 2.0

SURVEYOR'S CERTIFICATE

I, ROBERT L. TRUDEAUX, A PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM AN ACTUAL SURVEY PERFORMED BY ME OR UNDER MY DIRECT RESPONSIBILITY, SUPERVISION AND CHECKING, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF BASED ON THE STANDARDS OF CARE OF PROFESSIONAL LAND SURVEYORS PRACTICING IN THE STATE OF COLORADO. THIS DOES NOT REPRESENT A LAND SURVEY PLAT, IMPROVEMENT SURVEY PLAT, OR MONUMENTED LAND SURVEY AS DEFINED BY COLORADO REVISED STATUTES 38-51-102 AND CANNOT BE RELIED UPON TO DETERMINE OWNERSHIP. THIS SURVEY IS NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.



 bp	BP AMERICA PRODUCTION COMPANY US LOWER 48 ONSHORE
WELL LOCATION PLAT	
EAST SAULS CREEK 26 2-2 PART OF SECTION 26 AND SECTION 27, TOWNSHIP 35N, RANGE 06W, N.M.P.M. LA PLATA COUNTY, COLORADO	

DRAWN BY CFW/RLM	CHECKED BY RLT	SCALE N/A	DATE 12/02/2016	SHEET 3 OF 3	REVISION
---------------------	-------------------	--------------	--------------------	-----------------	----------



Exhibit F

BP America Production Company

US Lower 48 Onshore
737 N. Eldridge Parkway, 12.173C
Houston, Texas 77079

L. Scott Hammond
Senior Land Negotiator
Email: scott.hammond@bp.com

Date

VIA FEDEX

EXOK Inc.
5410 North Santa Fe Ave, Suite B
Oklahoma City, Oklahoma 73116-9120

Re: Well Proposal Letter
NWSE of Sec.26-35N-6W
La Plata and Archuleta Counties, Colorado

Gentlemen:

Pursuant to the Spacing and Pooling Application it recently filed with the Colorado Oil and Gas Conservation Commission ("COGCC"), BP America Production Company ("BP") proposes to drill two (2) horizontal wells, the East Sauls Creek 26 2-1 Well and the East Sauls Creek 26 2-2 Well ("Wells"), during the second quarter or early third quarter of 2017. BP has filed its Application with the COGCC to form a 480-acre Overlay Unit consisting of the SE 1/4 of Section 27 and the S/2 of Section 26, Township 35 North, Range 6 West, N.M.P.M. (NUL), La Plata and Archuleta Counties, Colorado ("Unit") for the purpose of drilling the Wells. Our intent with this letter is to provide you with notice pursuant to COGCC Rule 530.

The East Sauls Creek 26 2-1 Well is designed as a multi-lateral well targeting three (3) seams of the Fruitland Coal. The expected geologic structure of the coal in this area will most likely result in drilling toe-down oriented laterals. We anticipate toe-down laterals will consequently result in the risk of diminished, long-term de-watering capability and reduced reserve recovery. We designed the 26 2-2 Well to minimize these risks.

As proposed, the East Sauls Creek 26 2-2 Well will have a single lateral that will be drilled so that it nearly intersects each lateral drilled in the East Sauls Creek 26 2-1 Well at the toe. This two (2) well system is designed to allow gravity separation to occur at the toe of the intersected laterals, thereby providing access for water to be pumped up the ESC 26 2-2 Well's cased and cemented wellbore and gas to be produced up the multi-laterals drilled in the ESC 26 2-1 well bore.

EXOK Inc.

Date January 6, 2017

We will drill the Wells from an existing BP-operated pad located in the SW/SE of Sec.27. This will result in minimal surface disturbance and substantial cost savings.

A search of the county records revealed that EXOK, Inc. ("EXOK") owns a federal oil and lease covering the NW/SE of Sec.26-35N-6W ("Subject Interest"). EXOK has the right to participate in the Wells with the Subject Interest for its proportionate working interest in BP's 480-acre Overlay Unit, subject to its execution of a mutually agreed upon Operating Agreement. In this regard, we are providing general well information and cost estimates for the Wells. This well information and the cost estimates are provided to assist in your evaluation. However, please note that this data is subject to change.

East Sauls Creek 25 2-1 Well (multi-lateral, horizontal well)

PS-HL: SW/SE Sec.27-T35N-R6W

PBHL: SE/SE Sec. 26-T35N-R6W

Est. spud: June 2017

Est. 8/8ths Drilling and Completion Cost: \$ 2,453,396

Objective Formation: Fruitland Coal (Bayfield, Lemon, Lower Lemon)

MD: 8,392'

TVD (top @ pilot): Bayfield 2,395'

Lemon 2,500'

Lower Lemon 2,530'

East Sauls Creek 26 2-2 Well (single-lateral, de-watering service well)

PSHL SW/SE Sec.27-35N-R6W

PBHL: SE/SE Sec.26-T35N-R8W

Est. spud: July 2017

Est. 8/8ths Drilling and Completion Cost: \$ 1,781,755

Objective Formation: Fruitland Coal

MD: 9,107'

TVD: 3,311'

Please indicate your election to this proposal by checking the appropriate box on page four (4) of this letter and by signing and returning one (1) original of this letter to the attention of the undersigned at the letterhead address. We will forward our proposed Operating Agreement upon receipt of EXOK's participation election. BP considers that both Wells combined are act as a single production system. Should EXOK elect to participate in this proposal, its election will be considered an election to participate in the both the East Sauls Creek 25 1-1 Well and the East Sauls Creek 26 1-2 Well.

EXOK Inc.

Date

Page three-(3)

Finally, please note that your election to this proposal must be received within 35 days of delivery of this letter as provided under Rule 530 of the Rules of the COGCC. Should you fail to respond to this letter or do not otherwise make a timely election, BP will proceed with pursuing statutory pooling of the East Sauls Creek 26 2-1 Well and East Sauls Creek 26 2-2 Well. The Subject Interest may be statutorily pooled by the COGCC pursuant to C.R.S. § 34-60-116.

Thank you for your attention to this matter. Should you have general questions about this proposal, please feel free to contact Scott Hammond via email at Scott.Hammond@BP.com or by telephone at (832) 619.2550. You should direct technical questions by telephone to Chris Sandoz at (832) 619-6423.

Sincerely,

... Scott Hammond

EXOK inc.

Date

PLEASE SELECT ONE OF THE FOLLOWING OPTIONS:

Elect to participate in both the East Sauls Creek 26 2-1 Well and the East Sauls Creek 26 2-2 Well as to our proportionate working interest, subject to the execution of a mutually agreeable Operating Agreement.

Choose not to participate as a working interest owner in the East Sauls Creek 26 2-1 Well and East Sauls Creek 26 2-2 Well. By choosing this option, we understand that the Subject Interest may become subject to the provisions of the Application for Spacing and Pooling BP filed with the COGCC on December 1, 2016, and may be statutorily pooled by the COGCC pursuant to C.R.S. § 34-60-116

EXOK INC.

AGREED TO AND ACCEPTED this
_____ day of _____ 201__

By: _____

Name: _____

Its: _____

Exhibit I-



SAP ID: _____

BP AMERICA PRODUCTION CO.

PROJECT NAME: EAST SAULS CREEK 26 2-1 AFE NUMBER: _____
 WELL FLAG IDENTIFIER: _____ FINANCIAL MEMO NO: _____
 DATE PREPARED: _____ AFE NO: _____
 OPERATOR: BP America Production Company SURFACE LOCATION: _____
 LEASE/UNIT/FACILITY: _____ BOTTOM HOLE LOC: _____
 LEASE FLAG IDENTIFIER: _____ PROPOSED TOTAL DEPTH: 8582'
 WELL NAME/NUMBER: _____ COUNTY/STATE: _____
 OPERATION CENTER: Durango, CO OPERATING FIELD: _____
 BP WORKING INTEREST: 63% HORIZON: Fruitland Coal
 JOA NUMBER: _____ ANTICIPATED START: _____

PROJECT TYPE: Select one
 Development Drilling and Completions - (reserve adding) v
 WELL TYPE: Select One
 GAS WELL (Development) v
 COMPLETION TYPE: Select one
 SINGLE COMPLETION v
 E&P Component: Select one
 E&P Development Wells v
 COMPONENT REPLACEMENT > \$5M GROSS?: Select one
 Component Replacement > \$5M Gross - No v
 FIELD TRIAL: Select one
 NO v

The East Sauls Creek 26 2-1 is designed as a multilateral well targeting several seams of the Fruitland coal of Colorado. This well is part of a two well production well system. Due to the expected geologic structure of the coal in this area, the 26 2-1 is expected to have toe-down laterals which does not lend itself to long term dewatering capability. In order to remove water from these laterals a second well, East Sauls Creek 26 2-2, is also proposed to be drilled on the same pad to nearly intersect each toe of the 26 2-1. The system is designed for water to be produced up the 26 2-2 and gas to be produced up the laterals of the 26 2-1. An existing pad will be used however new production facilities will be needed and the potential for a pipeline upsize exists.

CAPITAL	DESCRIPTION	ESTIMATED COST	
		GROSS PRODUCER	GROSS DRY HOLE
X3-26262-1-C-PRECON	Title, Permit	\$ 55,000	\$ 55,000
X3-26262-1-C-CONSTR	Location Construction Costs	\$ 105,000	\$ 105,000
X3-26262-1-C-SURF	Surface hole drilling and running surface casing.	\$ 125,505	\$ 125,505
X3-26262-1-C-INT1	Intermediate hole 1	\$ 297,655	\$ 297,655
X3-26262-1-C-INT2	Intermediate hole 2	\$ -	\$ -
X3-26262-1-C-PROD1	Production lateral drilling.	\$ 577,573	\$ 577,573
X3-26262-1-C-PROD2	Production lateral drilling.	\$ 439,769	\$ 439,769
X3-26262-1-C-PROD3	Production lateral drilling.	\$ 454,085	\$ 454,085
X3-26262-1-C-PPREP	Activities to prepare for next stimulation	\$ 2,700	\$ -
X3-26262-1-C-SITIM	all stimulation work including frac mobidemob	\$ -	\$ -
X3-26262-1-C-CLEAN1	cleanout activities	\$ -	\$ -
X3-26262-1-C-FLOW1	flowback activities	\$ -	\$ -
X3-26262-1-C-RUNCM1	Tubing installation.	\$ 60,900	\$ -
X3-26262-1-C-MECHLR	Facilities and VOC control equipment installation.	\$ 12,000	\$ -
X3-26262-1-C-MECHMA	Separators and tanks	\$ 66,320	\$ -
X3-26262-1-C-ELABR	Automation set up.	\$ 8,000	\$ -
X3-26262-1-C-CATHPRO	Cathodic protection.	\$ 4,000	\$ -
X3-26262-1-C-ELECTR	Electrification	\$ -	\$ -
X3-26262-1-C-PIPLER	ROW clearing, ditching, fabrication, boring, ROW cleanup	\$ 210,000	\$ -
X3-26262-1-C-PIPMAT	Pipe, fittings, valves, pig launchers and receivers	\$ 55,000	\$ -
X3-26262-1-C-RESTOR	Reclamation of the well pad at well location.	\$ 38,000	\$ -
X3-26262-1-C-CapOvhd	Capitalized Overhead	\$ -	\$ -
	TOTAL PROJECT COST:	\$ 2,611,407	\$ 2,054,567

PROJECT CONTACT: Nate Churchwell Reservoir Engineer 973-375-5746
 BP TITLE APPROVED: _____
 LAND LETTER: Short Form Long Form NIA
 APPROVED BY: Jemie deMahy BP West EBU Development
 Delegation of Authority

APPROVAL: YES _____ NO _____
 NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. Nonoperators should not consider these estimates as establishing any limit on the moles which will be required to perform the proposed operation. Overhead will be charged in accordance with the Joint Operating Agreement.
 COMPANY NAME / NONOPERATOR: _____
 BY: _____ DATE: _____
 BY: _____

SPECIAL REQUESTS: (i.e. template preference, additional WBS elements, special recording by Tulsa, etc.)

CCenter:	1080824075
JV #:	406729
Lease fac:	
Well Fac:	746459

FOR PROJECT CLOSE PURPOSES	
API #:	
Date of State Prod. Ready:	
TD:	
PBTD:	
Useless Footage:	0

Verify the Delegation of Authority (DOA) Yes _____ No _____ Please Initial: _____
 Verify Financial Treatment Yes _____ No _____ Please Initial: _____



Exhibit I-2

SAP NO: _____

BP AMERICA PRODUCTION CO.

PROJECT NAME: EAST SAULS CREEK 26 2-2 API NUMBER: _____
 WELL FLAG IDENTIFIER: _____ FINANCIAL MEMO NO: _____
 DATE PREPARED: _____ ARE NO: _____
 OPERATOR: BP America Production Company SURFACE LOCATION: _____
 LEASE/UNIT/FACILITY: _____ BOTTOM HOLE LOC: _____
 LEASE FLAG IDENTIFIER: _____ PROPOSED TOTAL DEPTH: 5 107'
 WELL NAME/NUMBER: _____ COUNTY/STATE: _____
 OPERATION CENTER: Durango, CO OPERATING FIELD: _____
 BP WORKING INTEREST: 63% HORIZON: Ferrillano Coal
 JOA NUMBER: _____ ANTICIPATED START: _____

PROJECT TYPE: Select one
 Development Drilling and Completions - (reserve adding) [v]
 WELL TYPE: Select One
 GAS WELL (Development) [v]
 COMPLETION TYPE: Select one
 SINGLE COMPLETION [v]
 E&P Component: Select one
 E&P Development Wells [v]
 COMPONENT REPLACEMENT > \$5M GROSS?: Select one
 Component Replacement > \$5M Gross - No [v]
 FIELD TRIAL: Select one
 NO [v]

PROJECT DESCRIPTION/COMMENTS TO NON-OPERATOR:

The East Sauls Creek 26 2-2 is designed as a single lateral well to serve in support of ~~downing~~ the multilateral East Sauls Creek 26 2-1 well. The 26 2-2 well is part of a two well production well system. Due to the expected geologic structure of the coal in this area, the 26 2-1 is expected to have toe-down laterals which does not lend itself to long-term elevating capability which will have a negative effect on the recovery of the 26 2-1. In order to remove water from these laterals this well, the East Sauls Creek 26 2-2, is proposed to be drilled on the same pad to nearly intersect each toe of the 26 2-1. The system is designed for water to be pumped up the 26 2-2 wellbore and gas to be produced up the laterals of the 26 2-1 due to gravity separation in the wellbore. An existing pad will be used however new production facilities will be needed and the potential for a pipeline upside exists.

CAPITAL	DESCRIPTION	ESTIMATED COST	
		GROSS PRODUCER	GROSS DRY HOLE
X3.00000-C:PRECEN	Title, Permit	\$ 55,000	\$ 55,000
X3.00000-C:CONSTR	Location Construction Costs	\$ 105,000	\$ 105,000
X3.00000-C:SURF	Surface hole drilling and casing surface casing.	\$ 99,833	\$ 99,833
X3.00000-C:INT1	Intermediate hole 1	\$ 304,322	\$ 304,322
X3.00000-C:INT2	Intermediate hole 2	\$ -	\$ -
X3.00000-C:PROD1	Production lateral drilling.	\$ 556,437	\$ 556,437
X3.00000-C:PROD2	Production lateral drilling.	\$ -	\$ -
X3.00000-C:PROD3	Production lateral drilling.	\$ -	\$ -
X3.00000-C:WPREP	Activities to prepare for next stimulation	\$ 41,500	\$ -
X3.00000-C:STIM	All stimulation work including frac mob/defrac	\$ 222,400	\$ -
X3.00000-C:FLOW1	Flowback activities	\$ -	\$ -
X3.00000-C:RUNGM1	Tubing installation.	\$ 207,200	\$ -
X3.00000-C:MECHLR	Facilities and VOC control equipment installation.	\$ 12,000	\$ -
X3.00000-C:MECHWA	Separators and tanks	\$ 50,045	\$ -
X3.00000-C:ELABR	Automation set up.	\$ 8,000	\$ -
X3.00000-C:CATHPR	Cathodic protection.	\$ 4,000	\$ -
X3.00000-C:ARTLF	Artificial Lift Equipment Install	\$ 88,109	\$ -
X3.00000-C:ELECTR	Electrification	\$ -	\$ -
X3.00000-C:PIFLER	ROW clearing, ditching, fabrication, boring, ROW cleanup	\$ 35,000	\$ -
X3.00000-C:PIPMAT	Pipe, fittings, valves, pig launchers and receivers	\$ 10,000	\$ -
X3.00000-C:RESTOR	Reclamation of the well pad or well location.	\$ 38,000	\$ -
X3.00000-C:CapOvhd	Capitalized Overhead	\$ -	\$ -
TOTAL PROJECT COST:		\$ 1,839,846	\$ 1,120,592

PROJECT CONTACT: Nate Churchwell SPA Reservoir Engineer 970-375-5746 DATE
 BP TITLE APPROVED: _____
 Land Negotiator
 LAMB LETTER: Short Form Long Form NIA
 APPROVED BY: Kelly Tumino Delegation of Authority Reservoir Manager West BU Development

APPROVAL: YES _____ NO _____

NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. Nonoperators should not consider these estimates as establishing any limit on the monies which will be required to perform the proposed operation. Overhead will be charged in accordance with the Joint Operating Agreement.

COMPANY NAME / NONOPERATOR: _____
 BY: _____ DATE: _____
 BY: _____

SPECIAL REQUESTS: (i.e. template preference, additional WBS elements, special recording by Title, etc.)

Center:	7800824075
JV #:	786729
Lease #/Ac:	
Well Flag:	749459

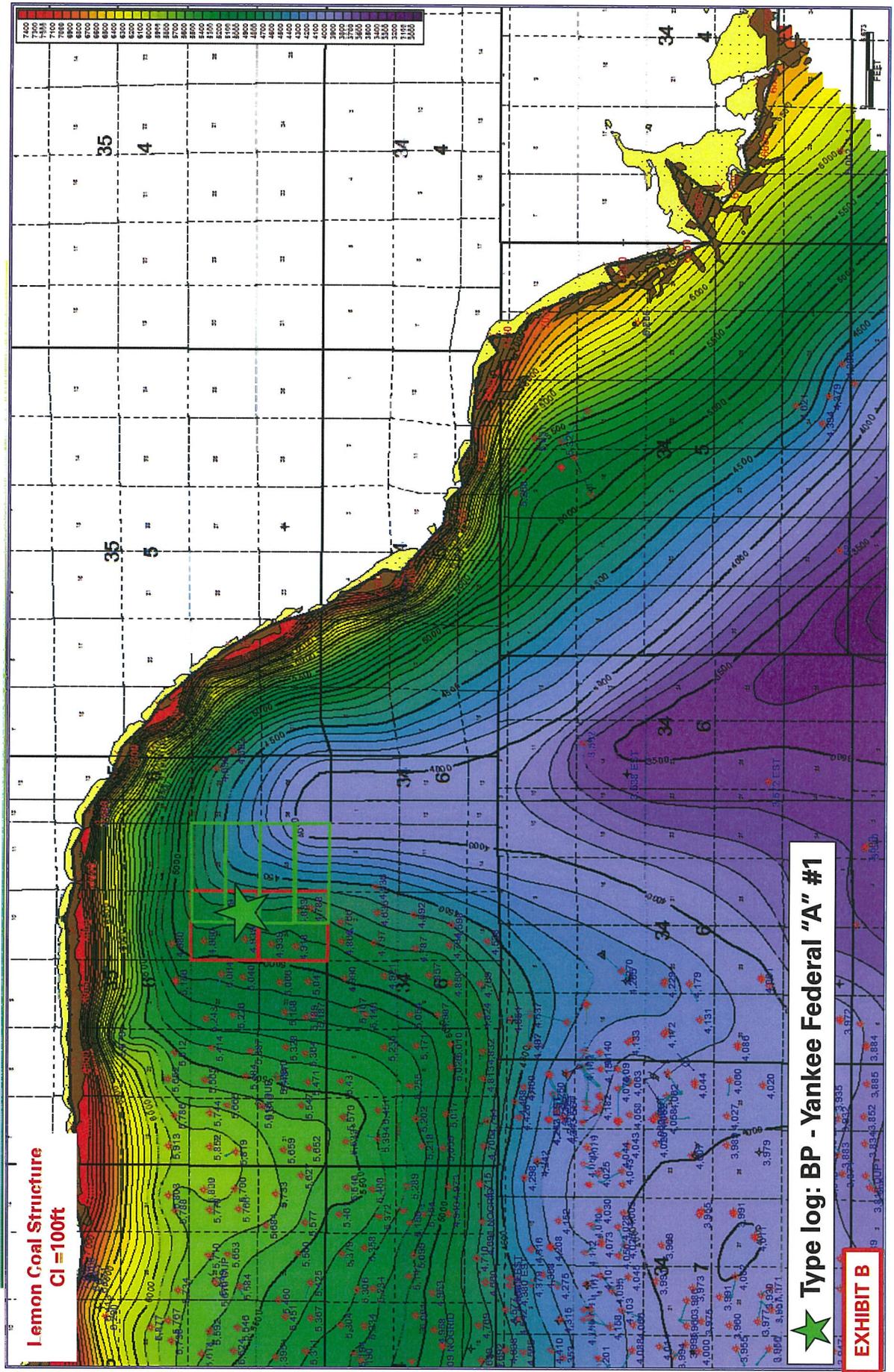
FOR PROJECT CLOSE PURPOSES
 API #: _____
 Date of State of Prod. Ready: _____
 TD: _____
 FBTD: _____
 Lease Fee: _____ 0

Verified the Delegation of Authority (DOA) Yes No Please Initial: _____
 Verified Financial Treatment Yes No Please Initial: _____

East Saul's Creek Area: Lemon Coal Structure



US Lower 48 onshore



**Written Testimony of Robert L. Moore
Reservoir Engineer
BP America Production Company**

Before the Colorado Oil & Gas Conservation Commission

January 30 & 31 2017

Cause No. 112

Docket Nos. ~~170100080~~, 170100081, 170100082, 170100084, ~~170100085~~, 170100086

My name is Robert L. Moore, and I am currently a Reservoir Engineer for BP America Production Company ("BP" or "Applicant"). I have approximately 45 years of experience as a Reservoir Engineer and have been employed for 45 years with Applicant. I have worked directly with the property that is the subject of this matter. My resume is included herewith as Exhibit A.

I am submitting this sworn testimony and the following exhibits in support of BP's December 1, 2016 applications in the above-referenced dockets ("Applications") pertaining to the East Sauls Creek 26 1, East Sauls Creek 26 2, East Sauls Creek 35 3, East Sauls Creek 35 4, Yankee Federal A, and Yankee Federal B Units, located on the following lands:

East Sauls Creek 26 1 Unit

Township 35 North, Range 6 West, N.M.P.M.

Section 26: N $\frac{1}{2}$

Section 27: NE $\frac{1}{4}$

East Sauls Creek 26 2 Unit

Township 35 North, Range 6 West, N.M.P.M.

Section 26: S $\frac{1}{2}$

Section 27: SE $\frac{1}{4}$

East Sauls Creek 35 3 Unit

Township 35 North, Range 6 West, N.M.P.M.

Section 34: NE $\frac{1}{4}$

Section 35: N $\frac{1}{2}$

East Sauls Creek 35 4 Unit

Township 35 North, Range 6 West, N.M.P.M.

Section 34: SE $\frac{1}{4}$

Section 35: S $\frac{1}{2}$

Yankee Federal A Unit

Township 35 North, Range 6 West, N.M.P.M.

Section 27: All

Yankee Federal B Unit

Township 35 North, Range 6 West, N.M.P.M.

Section 34: All

La Plata County, Colorado (hereafter "Application Lands").

Determination of Original-Gas-In-Place (OGIP)

The estimates of Original-Gas-In-Place for each of the four Sections in the area of interest were prepared using known and interpolated geologic and coalbed methane reservoir properties taken from Fruitland Coal wells drilled in and around the area.

The area of interest for this application consists of four sections in Township T35N R05W (Figure 1). Sections 27 and 34 each have four Fruitland Coal producing wells. The adjacent Sections 26 and 35 have no wells. There are two inactive Fruitland Coal wells located to the east of the area of interest that were originally drilled in the mid-1980s. One of these wells, the Federal 25A-1, is located in Section 25 of T35N R06W. The other well, the USA – Amcco COM AC 1, is located in Section 30 of T35N R05W.

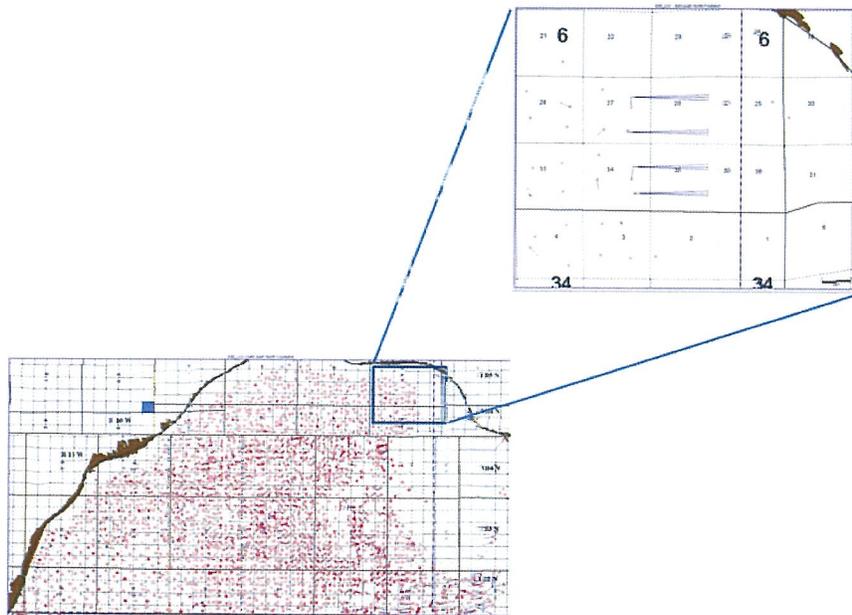


FIGURE 1

Geologic properties such as coal thickness, depth, and density were interpolated between these points of well control. Reservoir properties such as initial adsorbed gas content, original pressure and original water saturation were similarly interpolated. These geologic and reservoir parameters were input into two GEM numerical models: one model covering Sections 26 and 27 and the second covering Sections 34 and 35. Figure 1 is from the GEM model for Sections 26 and 27. It shows both reservoir structure and initial pressure values incorporated in the model grid for the three active layers representing the Bayfield, Lemon and Lower Lemon coal seams. As interpolated by the simulator, original reservoir pressure ranges from a minimum value of 1124 psia in the most updip portion of the Bayfield coal seam to a maximum of 1495 psia in the most downdip portion of the Lower Lemon coal seam.

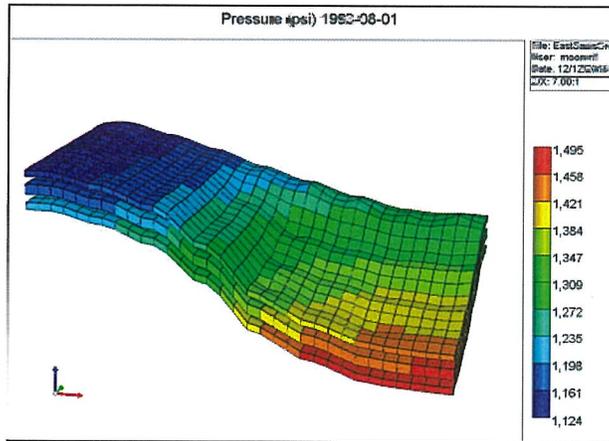


FIGURE 2

OGIP is calculated by the simulator using the equation for coalbed methane adsorbed gas-in-place. Table 1 shows the OGIP calculated for each Section in the area of interest. OGIP per section, which is mainly controlled by coal thickness, adsorption capacity, and pressure, varies within a narrow range from 32.9 to 34.5 BCF.

Sector	OGIP BSCF
T35N-R06W-26	33.4
T35N-R06W-27	32.9
T35N-R06W-34	33.8
T35N-R06W-35	34.5

TABLE 1

Well Design

Because surface access is restricted by terrain and limitations to new surface disturbance in Sections 26 and 35, BP plans to drill extended-reach, multi-lateral horizontal wells to access the resources in these sections. Four such wells will be drilled from existing surface locations in Sections 27 and 34, as shown in Figure 3 (please note that the well trajectories shown on the map are schematic only and do not represent the final directional drilling plans for these wells). Each well will have three laterals: one each in the Lower Lemon, Lemon and Bayfield coal seams.

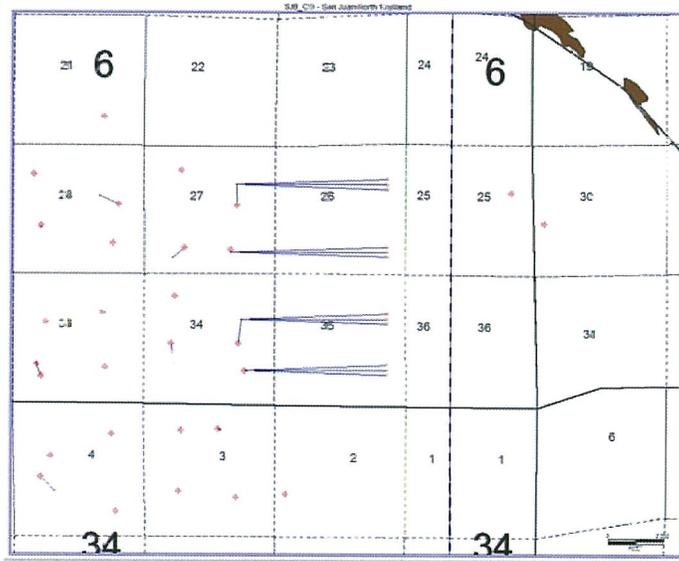


FIGURE 3

The multi-lateral wells will, by necessity, be drilled toe-down and will therefore be paired with another single-lateral well equipped with a pump for de-watering purposes. The intention is for water to gravity flow down to the toe of each lateral, where it will be collected by the de-watering well and pumped to surface. This configuration is shown in cross-section view in Figure 4.

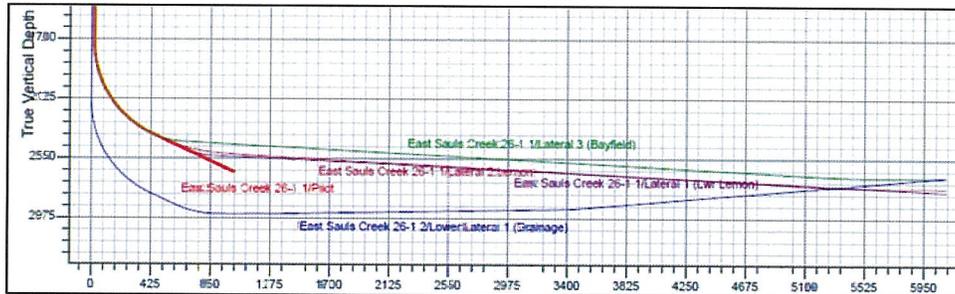


FIGURE 4

Rate and Recovery Forecast

Gas and water production forecasts for each of the four multi-lateral wells were prepared using the GEM models. The forecasts were calibrated to observed horizontal well performance in the eastern portion of the Basin. Figure 4 shows the rate forecast for the multi-lateral well to be drilled across the north half of Section 35. It is typical of the rate forecast for each of the East Sauls Creek multi-lateral wells. Each well is expected to have a peak production rate around 3.5 MMSCFD and to recover between 10 and 14 BCF depending on the continuation of operations over the next 40 years. This forecast of peak gas rate assumes that there will be no downstream restriction to production, which will require an expansion of the gas gathering system. Should the cost and logistics of such an expansion prove to be unfeasible, then the wells may be produced at restricted rates early in their lives so as not to overwhelm the gathering system.

For the example well shown, the initial water rate is forecast to be 180 BWPD declining to less than 10 BWPD in five years. Should the well be produced to the end of 2050, total gas recovery would be 13.2 BCF and water recovery would be 120,000 bbls.

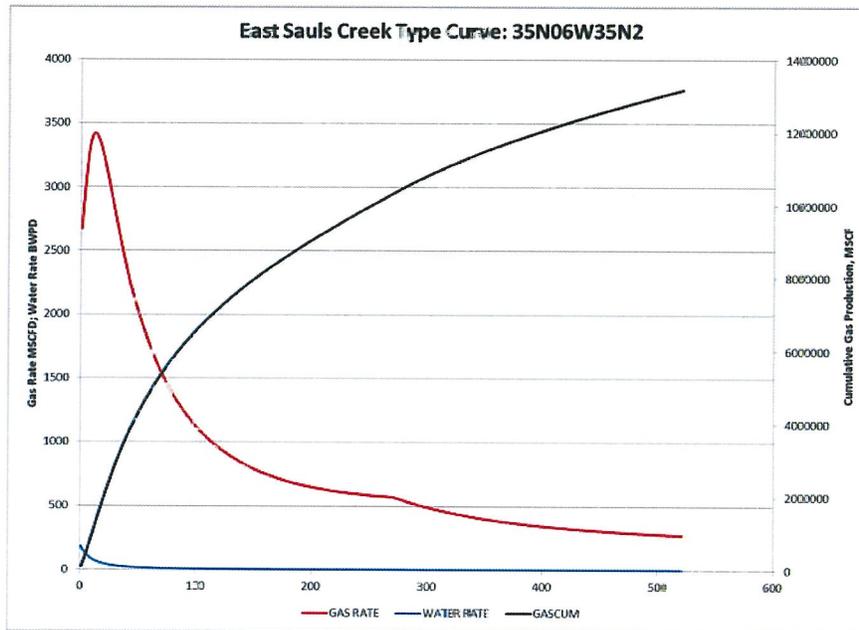


FIGURE 5

Horizontal Sidetracks

The estimated ultimate recovery for the existing wells in Sections 27 and 34 is lower than other parts of the Basin where 80-acre development has occurred. Expected ultimate recovery (to end 2060) for the group of four wells in Section 27 is 10.4 BCF for a 32% recovery of the 32.9 BCF original-gas-in-place. For Section 34, the expected ultimate recovery for the group of four wells is 16.1 BCF out of 33.8 BCF in place or 48% recovery of OGIP. We would expect recovery to be on the order of 70% of OGIP if these sections were developed on 80-acre spacing, which would require 8 new vertical wells to be drilled.

An alternative to the drilling of vertical wells is to drill horizontal laterals as sidetracks from four of the existing wells in Sections 27 and 34. This option results in a similar improvement in recovery while being more capital efficient and creating less surface disturbance compared to the option of drilling 8 new vertical wells. Figure 6 shows the configuration of the horizontal sidetracks with respect to the existing well locations. The sidetracks will be drilled from the Yankee Federal A 1 and A 2 in Section 27 and from the Yankee Federal B 1 and B 2 in Section 34. Each well will have two sidetracks; one will be placed in the Lower Lemon coal seam and one in the Lemon coal seam (the Bayfield is too thin in these Sections for horizontal development). The sidetracks are positioned to have the greatest possible offset distance from existing wells within each Section. Placing the sidetracks in this manner maximizes reservoir access while minimizing the impact the sidetracks will have on existing well production.

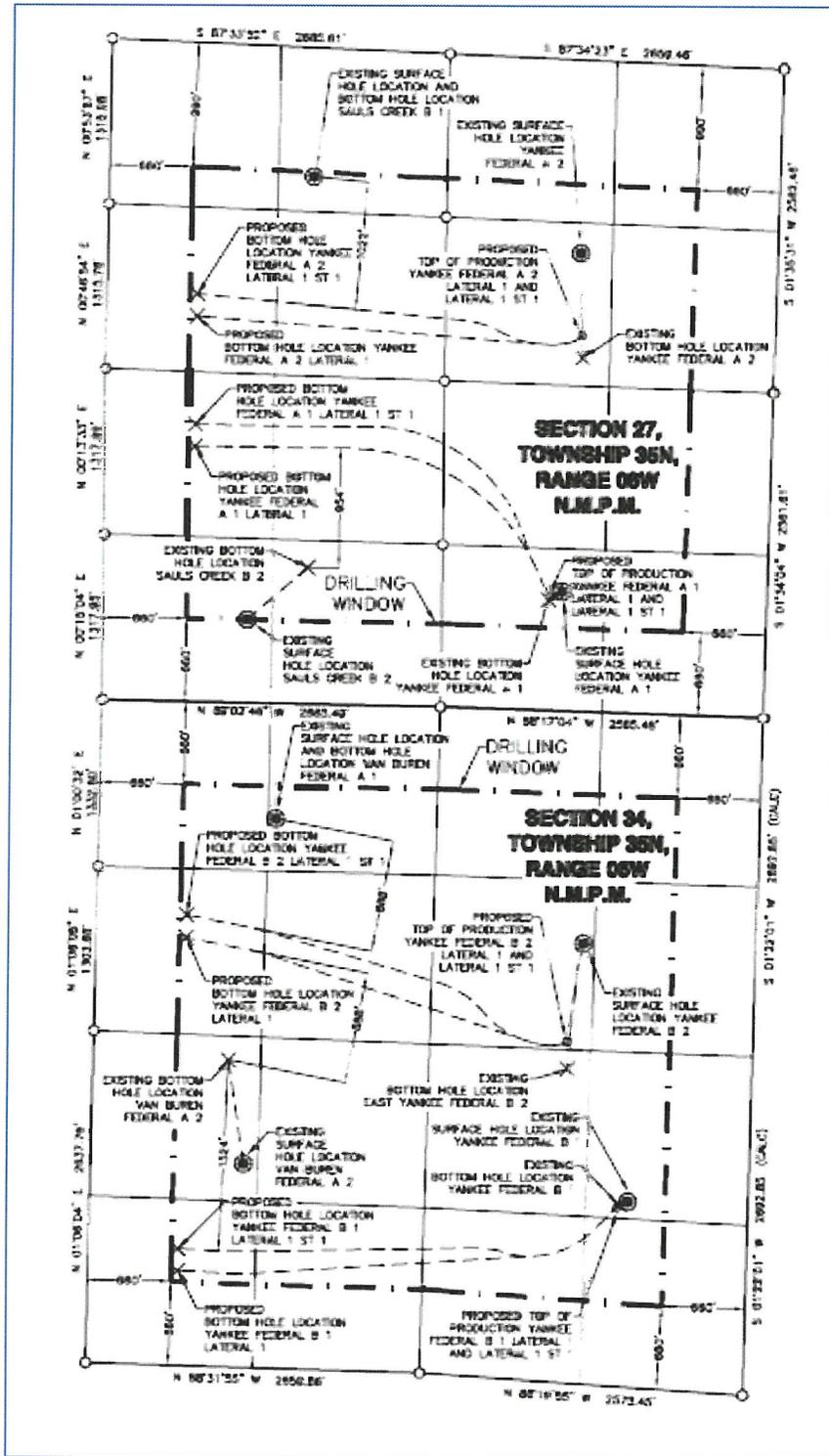


FIGURE 6

Figure 7 is the gas and water rate and cumulative gas production forecast for the Yankee Federal A 2, and is a representative type curve of the four wells to be sidetracked. Once the sidetracks are drilled and completed, the expected peak rate per well is around 2.5 MMCFD. The improvement in recovery for the Yankee Federal A 2 is an additional 6.4 BCF over what the vertical well is expected to recover by the end of 2060.

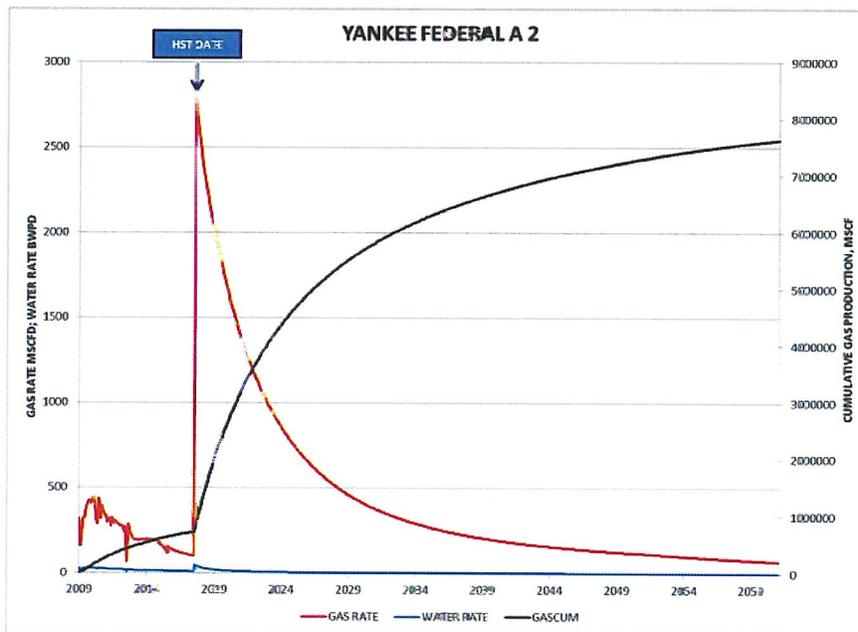


FIGURE 7

Overall, with the sidetracks, the wells in Section 27 are expected to recover 21.4 BCF (65% of OGIP), an 11.0 BCF gain over the existing well configuration. The wells in Section 34 are expected to recover 22.1 BCF (65% of OGIP) with the sidetracks in place, an improvement of 6.0 BCF over the existing well configuration.

Affirmation

The matters described herein were all conducted under my direction and control. I hereby swear that the preceding testimony and supporting exhibits are true and correct to the best of my knowledge and belief and that they were prepared by me or under my supervision.

This 9th day of January, 2017.

Robert L. Moore

Robert L. Moore
Reservoir Engineer
BP America Production Company

Exhibit A

Engineering Witness – Robert L. Moore

Education:

B. Sc. in Petroleum Engineering from the Colorado School of Mines, Golden Colorado
Graduated May, 1972

Work History:

Petroleum / Reservoir Engineer
BP America Production Company
Employment Date: July 6, 1971

**Written Testimony of David Schoderbek
Geoscientist
BP America Production Company**

**Before the Colorado Oil & Gas Conservation Commission
January 30 & 31 2017
Cause No. 112**

Docket Nos. 170100080, 170100081, 170100082, 170100084, 170100085, 170100086

My name is David Schoderbek, and I am currently a Geoscientist for BP America Production Company ("BP" or "Applicant"). I have approximately 35 years of experience as a geoscientist and have been employed for 1 year with Applicant. I have worked directly with the property that is the subject of this matter.

I am submitting this sworn testimony and the following exhibits in support of BP's December 1, 2016 applications in the above-referenced dockets ("Applications") pertaining to the East Sauls Creek 26 1, East Sauls Creek 26 2, East Sauls Creek 35 3, East Sauls Creek 35 4, Yankee Federal A, and Yankee Federal B Units, located on the following lands:

East Sauls Creek 26 1 Unit

Township 35 North, Range 6 West, N.M.P.M.
Section 26: N $\frac{1}{2}$
Section 27: NE $\frac{1}{4}$

East Sauls Creek 26 2 Unit

Township 35 North, Range 6 West, N.M.P.M.
Section 26: S $\frac{1}{2}$
Section 27: SE $\frac{1}{4}$

East Sauls Creek 35 3 Unit

Township 35 North, Range 6 West, N.M.P.M.
Section 34: NE $\frac{1}{4}$
Section 35: N $\frac{1}{2}$

East Sauls Creek 35 4 Unit

Township 35 North, Range 6 West, N.M.P.M.
Section 34: SE $\frac{1}{4}$
Section 35: S $\frac{1}{2}$

Yankee Federal A Unit

Township 35 North, Range 6 West, N.M.P.M.
Section 27: All

Yankee Federal B Unit

Township 35 North, Range 6 West, N.M.P.M.
Section 34: All

La Plata County, Colorado (hereafter "Application Lands").

Exhibit A

Exhibit A is a type log for the East Saul's Creek area, derived from BP (AMOCO) Yankee Federal "A" #1 well. The location of type-log is indicated by green star symbol on Exhibit B. Tops and bases of the informal "Bayfield," "Lemon," and "Lower Lemon" coal zones of the Fruitland Formation are highlighted. Net clean coal "pay" for each coal zone is indicated by color-fill in the depth track. Resistivity, Self-Potential (SP) and Gamma-Ray (GR) curves are labelled, as is bulk density (ρ_b) curve. Where bulk density is less than 2.0gm/cc, the area under the bulk density curve is red-filled.

Exhibit B

Exhibit B is a large-scale structural map contoured on the top of the "Lemon" coal zone, integrating abundant subsurface datapoints and surface geology of the Fruitland outcrop, shown in brown; outcrops of the underlying Pictured Cliffs Sandstone are indicated by stippled yellow. Application Lands are highlighted in green for the East Saul's Creek new-drills and red for the Yankee Federal HSTs (horizontal sidetracks). Evident on the structure map is the relatively steep easterly structural dip from the currently developed lands the western third of the map toward the undrilled lands in Sections 26 & 35, T35N-R6W. The coal seams of the Fruitland Formation dip steeply into the H-D Hills Syncline, under the rugged topography of the H-D Mountains. Dominance of north-south structural strike in the Application Lands, in addition to regional stress interpretations, favor the development of north-south oriented natural fractures and coal cleats, and planned horizontal development is with east-west well bores to maximize contact with natural fractures in the subsurface.

Exhibit C

Exhibit C is a small-scale subsurface structural map contoured on the top of the "Lemon" coal zone. Application Lands are highlighted in green for the East Saul's Creek new-drills and red for the Yankee Federal HSTs (horizontal sidetracks). Also shown on this enlargement from Exhibit B are the proposed trajectories of the East Saul's Creek new-drills (green) and the Yankee Federal horizontal sidetracks (red).

Exhibits D, E, F

Exhibits D, E, and F are small-scale isolith maps summarizing the total thickness of all coal seams in the "Bayfield," "Lemon," and "Lower Lemon" coal zones, respectively. Application Lands are highlighted in green for the East Saul's Creek new-drills and red for the Yankee Federal HSTs (horizontal sidetracks). Abundant subsurface control allows confident affirmation of the two strong paleoenvironmental controls on deposition of the peat deposits from which Fruitland Coals were formed. Coal zone isolith contours are elongate in a NW-SE direction, reflecting their paleoenvironmental setting in regional peat swamps behind the contemporaneous Pictured Cliffs barrier islands along the southwest shoreline of the Cretaceous Interior Seaway. Roughly perpendicular fluvial and deltaic distributary channels, flowing from SW to NE, supplied sand to the Cretaceous shoreline and both eroded through the precursor peat deposits and also precluded their deposition.

Exhibit G

Exhibit G is a structural cross-section, oriented from west on the left-hand side to east on the right-hand side. An index map showing the location of the structural cross-section is included on the lower left-hand side of the exhibit. Vertical exaggeration is approximately 10:1, meaning that actual dips in the subsurface are only 1/10 as steep as they appear in the cross-section. No wells are present near the proposed TD locations for East Saul's Creek 26 #1-1 & 26 #1-2; logs from Fed #25 A-1 (NE/25-

T35N-R6W) are projected just over a mile into the cross-section at the appropriate structural position to affirm stratigraphic continuity of Fruitland Formation coal zones. Structural dip between the two western-most wells, from Saul's Creek GU B #1 to Yankee Fed A #2, is approximately 2°, whereas dip from between Yankee Fed A #2 and the projected TD of the East Saul's Creek 26 #1-1 & 26 #1-2 is closer to 3-1/2°. Two updip horizontal sidetracks are planned from Yankee Federal A #2 wellbore, and they are shown as green trajectories up to the left. The thickest seam in the "Bayfield" coal zone is too thin to justify a HST wellbore, but a lateral is anticipated for each of the "Lemon" and "Lower Lemon" coal zones. The four red trajectories on Exhibit G, oriented down and to the right, comprise the multiple wellbores of East Saul's Creek 26 #1-1. The shortest red trajectory represents the planned cased pilot-hole, whereas the longer three red trajectories represent laterals planned to be drilled in the thickest coal seams of the "Bayfield," "Lemon," and "Lower Lemon" coal zones. Our integrated structural interpretation indicates that coal seam targets occur approximately 250 feet deeper at TD than under East Saul's Creek 26 #1-1 surface location. The blue trajectory on Exhibit G represents East Saul's Creek 26 #1-2, a planned dewatering wellbore. The horizontal lateral portion of East Saul's Creek 26 #1-2 will be drilled in a "toe-up" orientation to dewater the three downdip "toe-down" coal seam laterals of East Saul's Creek 26 #1-1. The heel or lowest point of East Saul's Creek 26 #1-2 is planned 100ft deeper than the deepest coal seam target. The horizontal coal laterals of East Saul's Creek 26 #1-1 will be completed openhole with pre-drilled liners, while East Saul's Creek 26 #1-2 will be cased and fracture-stimulated near the toe, in proximity to intersections with the three East Saul's Creek 26 #1-1 coal laterals.

Exhibit H

Exhibit H is a structural cross-section, oriented from west on the left-hand side to east on the right-hand side. An index map showing the location of the structural cross-section is included on the lower left-hand side of the exhibit. Vertical exaggeration is approximately 10:1, meaning that actual dips in the subsurface are only 1/10 as steep as they appear in the cross-section. No wells are present near the proposed TD locations for East Saul's Creek 26 #2-1 & 26 #2-2; logs from Fed #25 A-1 (NE/25-T35N-R6W) are projected just over a mile into the cross-section at the appropriate structural position to affirm stratigraphic continuity of Fruitland Formation coal zones. Structural dip between the two western-most wells, from Saul's Creek GU B #2 to Yankee Fed A #1, is approximately 2-1/2°, whereas dip from between Yankee Fed A #1 and the projected TD of the East Saul's Creek 26 #2-1 & 26 #2-2 is closer to 4-1/2°. Two updip horizontal sidetracks are planned from Yankee Federal "A" #1 wellbore, and they are shown as green trajectories up to the left. The thickest seam in the "Bayfield" coal zone is too thin to justify a HST wellbore, but a lateral is anticipated for each of the "Lemon" and "Lower Lemon" coal zones. The four red trajectories on Exhibit H, oriented down and to the right, comprise the multiple wellbores of East Saul's Creek 26 #2-1. The shortest red trajectory represents the planned cased pilot-hole, whereas the longer three red trajectories represent laterals planned to be drilled in the thickest coal seams of the "Bayfield," "Lemon," and "Lower Lemon" coal zones. Our integrated structural interpretation indicates that coal seam targets occur approximately 500 feet deeper at TD than under East Saul's Creek 26 #2-1 surface location. The blue trajectory on Exhibit H represents East Saul's Creek 26 #2-2, a planned dewatering wellbore. The horizontal lateral portion of East Saul's Creek 26 #2-2 will be drilled in a "toe-up" orientation to dewater the three downdip "toe-down" coal seam laterals of East Saul's Creek 26 #2-1. The heel or lowest point of East Saul's Creek 26 #2-2 is planned 100ft deeper than the deepest coal seam target. The horizontal coal laterals of East Saul's Creek 26 #2-1 will be completed openhole with pre-drilled liners, while East Saul's Creek 26 #2-2 will be cased and fracture-stimulated near the toe, in proximity to intersections with the three East Saul's Creek 26 #2-1 coal laterals.

Exhibit I

Exhibit I is a structural cross-section, oriented from west on the left-hand side to east on the right-hand side. An index map showing the location of the structural cross-section is included on the lower left-hand side of the exhibit. Vertical exaggeration is approximately 10:1, meaning that actual dips in the subsurface are only 1/10 as steep as they appear in the cross-section. No wells are present near the proposed TD locations for East Saul's Creek 35 #3-1 & 35 #3-2; logs from Fed #25 A-1 (NE/25-T35N-R6W) are projected just over a mile into the cross-section at the appropriate structural position to affirm stratigraphic continuity of Fruitland Formation coal zones. Structural dip between the two western-most wells, from Van Buren Fed #1 to Yankee Fed B #2, is approximately 2°, whereas dip from between Yankee Fed B #2 and the projected TD of the East Saul's Creek 35 #3-1 & 35 #3-2 is closer to 7°. Two updip horizontal sidetracks are planned from Yankee Federal "B" #2 wellbore, and they are shown as green trajectories up to the left. The thickest seam in the "Bayfield" coal zone is too thin to justify a HST wellbore, but a lateral is anticipated for each of the "Lemon" and "Lower Lemon" coal zones. The four red trajectories on Exhibit I, oriented down and to the right, comprise the multiple wellbores of East Saul's Creek 35 #3-1. The shortest red trajectory represents the planned cased pilot-hole, whereas the longer three red trajectories represent laterals planned to be drilled in the thickest coal seams of the "Bayfield," "Lemon," and "Lower Lemon" coal zones. Our integrated structural interpretation indicates that coal seam targets occur approximately 750 feet deeper at TD than under East Saul's Creek 35 #3-1 surface location. The blue trajectory on Exhibit I represents East Saul's Creek 35 #3-2, a planned dewatering wellbore. The horizontal lateral portion of East Saul's Creek 35 #3-2 will be drilled in a "toe-up" orientation to dewater the three downdip "toe-down" coal seam laterals of East Saul's Creek 35 #3-1. The heel or lowest point of East Saul's Creek 35 #3-2 is planned 100ft deeper than the deepest coal seam target. The horizontal coal laterals of East Saul's Creek 35 #3-1 will be completed openhole with pre-drilled liners, while East Saul's Creek 35 #3-2 will be cased and fracture-stimulated near the toe, in proximity to intersections with the three East Saul's Creek 35 #3-1 coal laterals.

Exhibit J

Exhibit J is a structural cross-section, oriented from west on the left-hand side to east on the right-hand side. An index map showing the location of the structural cross-section is included on the lower left-hand side of the exhibit. Vertical exaggeration is approximately 10:1, meaning that actual dips in the subsurface are only 1/10 as steep as they appear in the cross-section. No wells are present near the proposed TD locations for East Saul's Creek 35 #4-1 & 35 #4-2; logs from Fed #25 A-1 (NE/25-T35N-R6W) are projected just over a mile into the cross-section at the appropriate structural position to affirm stratigraphic continuity of Fruitland Formation coal zones. Structural dip between the two western-most wells, from Van Buren Fed #2 to Yankee Fed B #1, is approximately 2°, whereas dip from between Yankee Fed B #1 and the projected TD of the East Saul's Creek 35 #4-1 & 35 #4-2 is closer to 7-1/2°. Two updip horizontal sidetracks are planned from Yankee Federal "B" #1 wellbore, and they are shown as green trajectories up to the left. The thickest seam in the "Bayfield" coal zone is too thin to justify a HST wellbore, but a lateral is anticipated for each of the "Lemon" and "Lower Lemon" coal zones. The four red trajectories on Exhibit J, oriented down and to the right, comprise the multiple wellbores of East Saul's Creek 35 #4-1. The shortest red trajectory represents the planned cased pilot-hole, whereas the longer three red trajectories represent laterals planned to be drilled in the thickest coal seams of the "Bayfield," "Lemon," and "Lower Lemon" coal zones. Our integrated structural interpretation indicates that coal seam targets occur approximately 750 feet deeper at TD than under East Saul's Creek 35 #4-1 surface location. The blue trajectory on Exhibit J represents East Saul's Creek 35 #4-2, a planned dewatering wellbore. The horizontal lateral portion of East Saul's Creek 35 #4-2 will be drilled in a "toe-up" orientation to dewater the three downdip "toe-down" coal seam laterals of East Saul's Creek 35 #4-1. The heel or lowest point of East Saul's

Creek 35 #4-2 is planned 100ft deeper than the deepest coal seam target. The horizontal coal laterals of East Saul's Creek 35 #4-1 will be completed open hole with pre-drilled liners, while East Saul's Creek 35 #4-2 will be cased and fracture-stimulated near the toe, in proximity to intersections with the three East Saul's Creek 35 #4-1 coal laterals.

Exhibit K

A resume is included as Exhibit K.

Affirmation

The matters described herein were all conducted under my direction and control. I hereby swear and that the preceding testimony and supporting exhibits are true and correct to the best of the my knowledge and belief and that they were prepared by me or under my supervision.

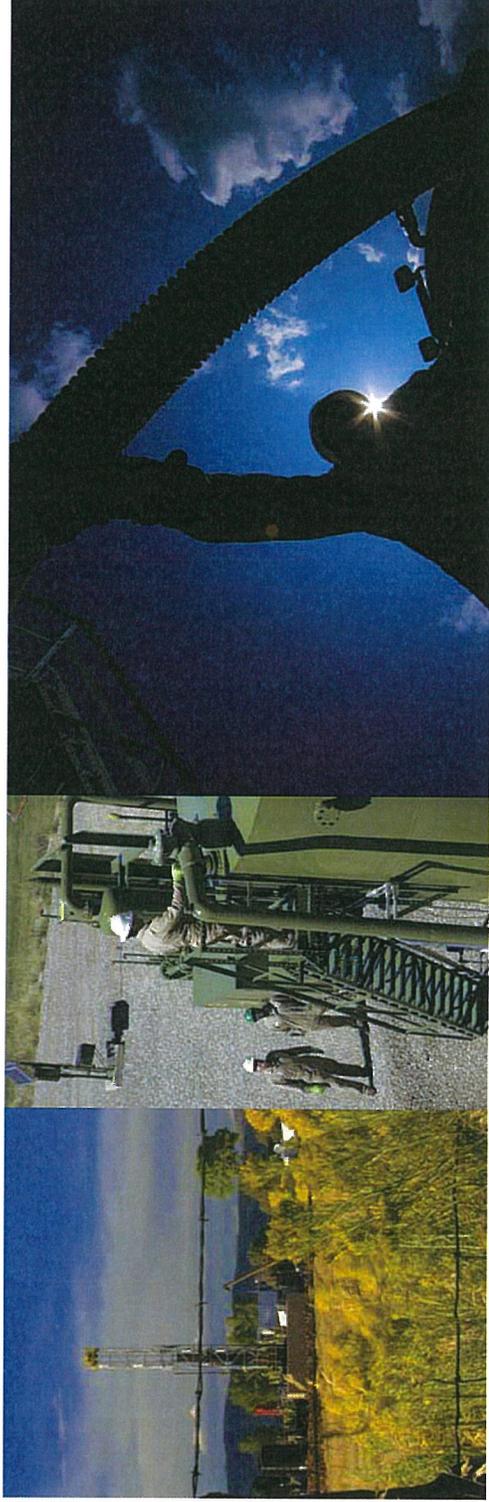
This 9th day of January, 2017.



David Schoderbek
Geoscientist
BP America Production Company



US Lower 48 onshore



East Saul's Creek Area Geoscience Exhibits for COGCC Hearing

David Schoderbek

January 2017

East Saul's Creek Area: Type Log



US Lower 48 onshore



AMOCO PROD CO

YANKEE FED A #1

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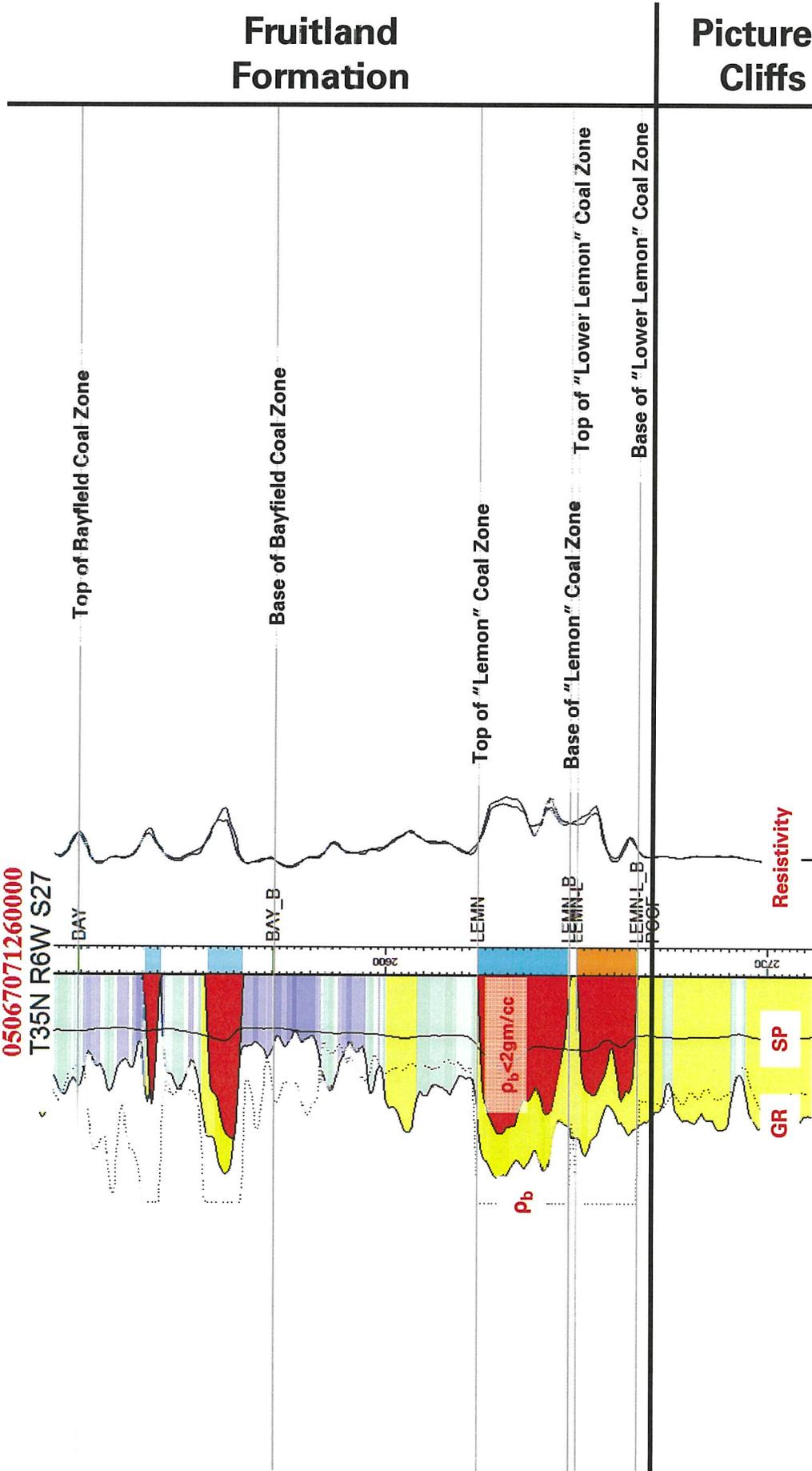


EXHIBIT A