

250 Fillmore Street, Suite 500, Denver CO, 80206

## BEFORE THE BOARD OF OIL AND GAS CONSERVATION OF THE STATE OF MONTANA

Thursday, June 10th, 2021

#### DOCKET # 57-2021, 58-2021

### APPLICATION for permits for the drilling of two (2) horizontal Bakken/Three Forks Wells

Upon the Application by Prima Exploration, Inc. for permits to drill two horizontal Bakken/Three Forks formation wells, the Bullion 1H and Bullion 2H, in the temporary spacing unit comprising all of Sections 1, 12, and 13, T26N-R59E, Richland and Roosevelt Counties, Montana, but not closer than 200' (Heel & Toe Setback) and 500' (Lateral Setback) to the exterior boundaries thereof, provided that operations for the drilling of said permitted wells commence within one year of the order issued by the Board and obtaining required Federal permits. Applicant will apply for permanent spacing within 90 days of successful well completion.

#### **CONTENTS**

Area Reference Map	Exhibit L-1
Section 13 Survey	Exhibit L-2
Support for Prima as Operator	
National Park Service Response	
Type Log	
Bakken Cross-Section	
Bakken Structure Map	
Well Plan and Implied Drainage	
Offset North Dakota Spacing and Setbacks	
Completion Plans and Implied Drainage	
Frac Modeling	
Density Study and Drainage Calculations	
Economics and Reserves	
Back Bends and Inclinations	
Access Road	

	PRIMA  Exploration inc  Exhibit L-1: Area Reference Map								
29N-57E	=	29N-58E	9N-58E 29N-59E MT		155N 104W	155N-103W		155N-102W	
28N-57E	ROOSEV 28N-58E	ELT 28N-59E		1-59E	154N 104W	154N-1C	WILL	IAMS 154N-	102W
27N-57E	27N-58E	3	271	√-59E	153N 104W	153N-1	103W	153N-	102W
26N-57E	<sup>26N-58E</sup> 753 Acre Temp two (2) Bakken / T	oorary Spac hree Forks	26N- cing Unit s Horizonta			I52N-104W	15	2N-103W	152N-102W
25N-57E	25N-58E RICHLA	<b>N</b> D	251	N-59E <b>MT</b>	1	1N-104W		in-103W KENZIE	151N-102W
24N 57E	24N-58E	24	4N-59E	24N 60E	15	0N-104W	15	i0N-103W	150N-1 <b>02</b> W
Generalized Locat of Elm Coulee E 23N 57E	Bakken Field 23N-58E	2	23N-59E	23N 60E	1	49N-104W	14	9N-103W	149N-102W



#### HORIZONTAL SECTION PLAT

PRIMA EXPLORATION INC. 250 Fillmore St, Suite 500 Denver, CO 80206

### BULLION 1H

225 feet from the north line and 275 feet from the east line (surface location Section 2)

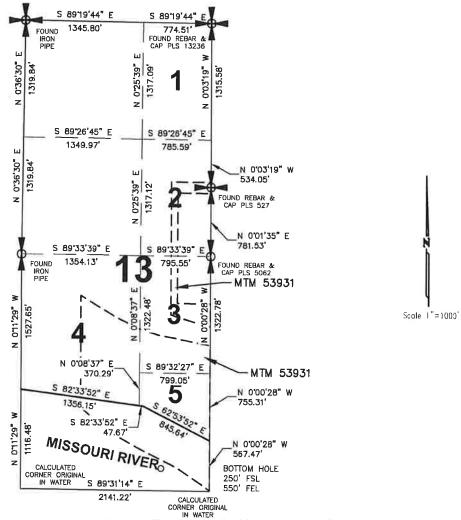
250 feet from the south line and 550 feet from the east line (bottom hole target Section 13)

Section 2, T26N, R59E - Montana Principal Meridian

Roosevelt County, Montana

Surface Owner at well site - Berry Gloria Scott

Latitude 48°02'26.99" (48.040829°) North - Longitude 104°03'12.75" (104.053542°) West (surface location Section 2)
Latitude 47°59'55.08" (47.998633°) North - Longitude 104°02'46.32" (104.046199°) West (bottom hole target Section 13)
[derived from N.G.S. O.P.U.S. Solution REF FRAME: NAD\_83 (CORS96)(EPOCH:2002.0000)]



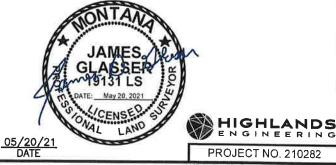
All corners shown on this plat were found in the field during Prima Exploration Inc. BULLION 1H oil well survey on May 18, 2021. Distances to all others are calculated.

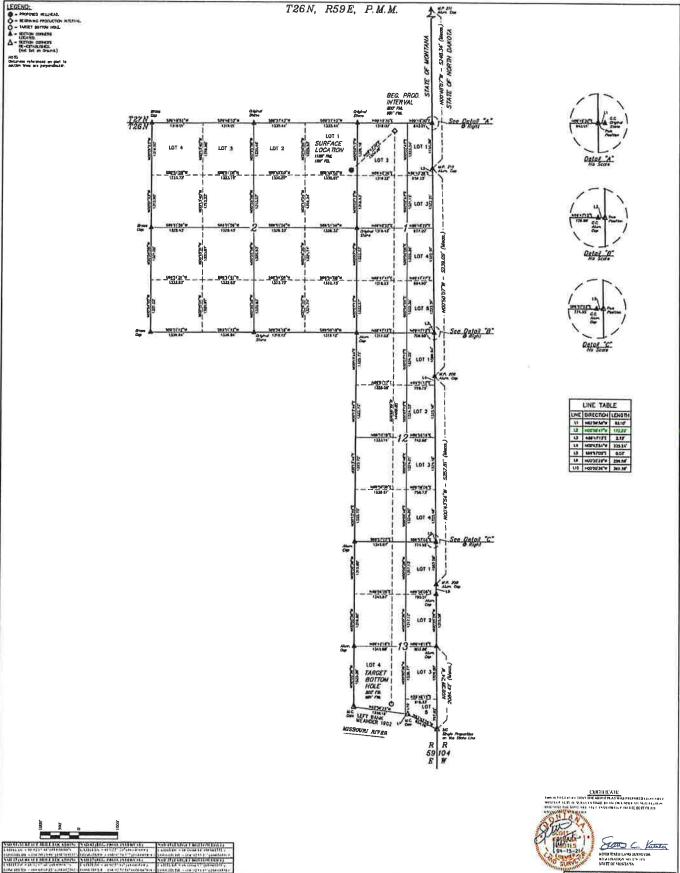
l, James D. Glasser, Professional Land Surveyor, M.T. No. 19131, do hereby certify that the well plat shown hereon was made by me, or under my direction, and is true and correct to the the best of my knowledge and belief.

#### HIGHLANDS ENGINEERING & SURVEYING, PLLC

319 24th Street East Dickinson, ND 58601 701.483.2444 office 701.483.2610 fax www.highlandseng.com

NOTE: Drawing is shown based on a local coordinate system. Distances are ground distances, International feet.





UELS, LLC
Comporate Office \* 85 Senth 108 Flui
Vernal UT M0978 \* (815) 789-1017

BASIS OF BEARINGS
BASIS OF BEARINGS AS PS OBSERVATION





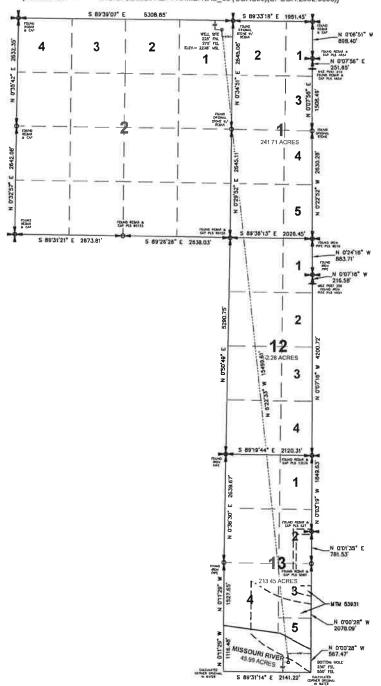


#### WELL LOCATION PLAT

PRIMA EXPLORATION INC. 250 Fillmore St, Suite 500 Denver, CO 80206 BULLION 1 H

225 feet from the north line and 275 feet from the east line (surface location Section 2)
250 feet from the south line and 550 feet from the east line (bottom hole target Section 13)
Section 2, T26N, R59E - Montana Principal Meridian
Roosevell County, Montana
Surface Owner at well site - Berry Gloria Scott
Latitude 48\*02\*26.99" (48,040829") North - Longitude 104\*03\*12.75" (104,053542") West (surface location Section 2)

Latitude 47\*5955.08\* (47.998633\*) North - Longitude 104\*02\*46.32\* (104.046199\*) West (bottom hole larget Section 13) [derived from N G S. O.P.U.S. Solution REF FRAME: NAD\_83 (CORS96)(EPOCH:2002.0000)]



NOTE: All land corners are assumed unless atherwise noted. Location shown harson is a preliminary staked location and is not an as-built.

NOTE: Drawing is shown based on a local coordinate system. Distances are ground distances, international feet.

JAMES D. GLASSER 05/18/21

Surveyed by M.T.P.L.S. #19131

Vertical Control Datum Used Sea-Level Datum of NAVD 88 Based on elevation derived from OPUS Solution on GPS Base Station (Base) in the SEY,NEY, of Section 27, T26N, R59E, Montana P.M. located S06\*01'48"W a distance of 2459.94' from the northeast corner of said Section 27 being at 2107 17' Elevation MSL

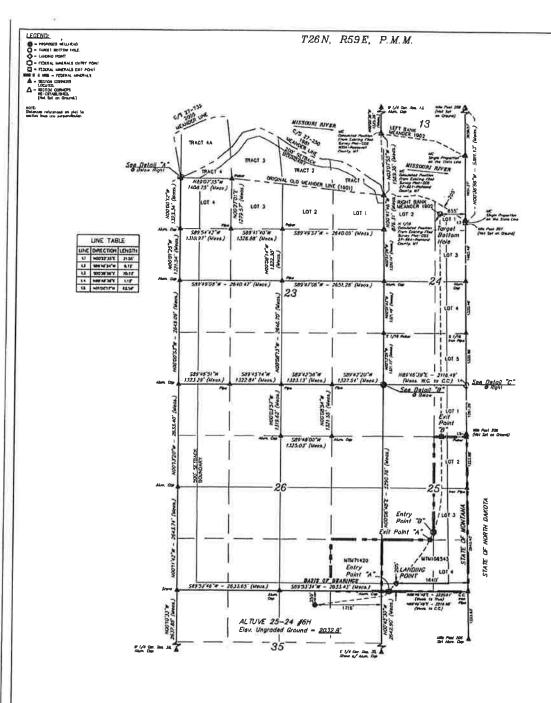
HIGHLANDS ENGINEERING & SURVEYING, PLLC 319 24th Street East Dicklinson, ND 58601 701,483,2444 office 701,483,2510 fax www.highlandseng.com

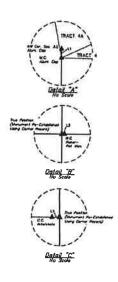
I, James D. Glasser, Professional Land Surveyor, M.T. No. 19131, do hereby certify that the well plot shown hereon was made by me, or under my direction, and is true and correct to the the best of my knowledge and belief.



HIGHLANDS PROJECT NO. 210282

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## RECEIVED

OCT 1.5 2020

THE PROPOSED TANCET BOTTOM HOLE FOR THIS WELL BEARS NO ASSOCIAGE 1915 237 FROM THE PROPOSED LANDING POINT AND THE PROPOSED LANDING POINT AND THE PROPOSED WALL HEAD.

ORILL PAINT HAS SEEN CONCECCONSERVATION \* BILLINGS 97 KRAKEN OPENATION, LEC



SORT C STATES

KRAKEN OPERATING, LLC

NW 1/4 NE 1/4, SECTION 15, T26N, R59E, P.M.M. RICHLAND COUNTY, MONTANA WELL LOCATION PLAT



UELS, LLC
Corporate Office \* 85 South 100 East
Variant, UT 84078 \* (4)55 789-1017





From:

Joshua Wilke

To:

Sean Gallagher

Cc:

Andrew Albrecht; KC Homiston

Subject:

SECTION 13 SURVEY

Date:

Friday, June 4, 2021 10:19:52 AM

Attachments:

image001.png

Sean.

Below please find Highlands Engineering's response as it relates to the spacing unit in question, and more specifically the south line of section 13-T26N-R59E Roosevelt County, Montana.

#### General overview response

As an engineering and land surveying company we are tasked with providing well packages that display the public land survey system with regards to spacing units. Our well packages are used as part of the application for permit to drill. Our well packages showing section breakdowns do not technically change surface acreages or change lease acreages. We provide a certified land survey document demonstrating those spacing units using land survey practices for purposes of determining and locating items such as the surface hole, horizontal drilling path, setbacks, bottom hole target, etc. In the case of Section 13 and the Missouri River interfering with the linear confines of the section, it is common practice to calculate and display the section corners and section lines through and into the river. If the intent of another operator is to drill into section 13 but stop short of the river with their well path, for some reason, we would not dispute the need or the requirement to show the calculated or projected section lines and section corners along the south line of section 13. We (Highlands) would most likely still show the full breakdown in that scenario. The current Bullion well packages show both of the proposed bottom holes at 250' from the south line of Section 13, we show those calculated corners and section lines for this purpose.

#### Technical response

Section 13 was drawn based on the 1902 original survey plat of township 26 north, range 59 east in Roosevelt County, Montana. Corners of section 13 found in the field include the northwest corner being an iron pipe, the northeast corner being a rebar and cap placed by professional land surveyor number 13236, the west quarter corner being an iron pipe, and the east quarter corner being a rebar and cap placed by professional land surveyor number 5062. The NW corner of section 7, township 152 north, range 104 west in North Dakota being a rebar and cap placed by professional land surveyor number 527 was found and used as well in the northeast quarter of section 13. In order to calculate the south line of section 13 as depicted on said original survey plat, section corners south of the Missouri river were located and single proportionate calculation was utilized to calculate the southeast and southwest corners of section 13, which are within the Missouri river. The corners found were the southwest corner of section 24, township 26 north, range 59 east and the southwest corner of said section 7, township 152 north, range 104 west in North Dakota. Using the chain distances on said 1902 original survey plat of township 26 north, range 59 east of Montana and the 1902 original survey plat of township 152 north, range 104 west of North Dakota, the southeast and southwest corners of section 13 were calculated. Once the southeast and southwest corners of section 13 were determined, the meander corners of the Missouri River as they intersect the west and east section lines of section 13 were prorated based on the chain distances on said original survey plats. The meander bearing and distances in the original field notes were used to

determine the north bank of the Missouri river thru section 13. The resulting plat gives the dimensions of the northwest quarter, lots 1, 2, 3, 4 and 5 of section 13 as well as the Missouri river within section 13, that are proportionate to the original survey plat relative to the monuments found in our field survey.

Let us know if you have any questions.

Thanks and have a great day!

#### Josh Wilke

Highlands Engineering & Surveying, PLLC 319 24th Street East Dickinson, ND 58601 701-483-2444 (o) 701-260-2645 (c) 701-483-2610 (f) josh.wilke@highlandseng.com



From:

Joshua Wilke

To:

Sean Gallagher

Subject:

FW: [EXTERNAL] Re: SECTION 13-26-59 Tuesday, May 25, 2021 10:35:54 AM

Date: Attachments:

image001.png

FYI, from Blaise Lodermeier at the BLM.

Thanks and have a great day!

#### Josh Wilke

Highlands Engineering & Surveying, PLLC 319 24th Street East Dickinson, ND 58601 701-483-2444 (o) 701-260-2645 (c) 701-483-2610 (f) josh.wilke@highlandseng.com



From: Lodermeier, Blaise J <bloderme@blm.gov>

Sent: Friday, May 21, 2021 8:13 AM

To: Joshua Wilke <josh.wilke@highlandseng.com>

Cc: Andrew Albrecht <andrew.albrecht@highlandseng.com>

Subject: Re: [EXTERNAL] Re: SECTION 13-26-59

Josh,

I will first note that both plats appear to be using different procedures for restoring the original MC between secs 13 and 14 and MC. I am not validating any procedures for restoration of lost corners. Additionally, I have not reviewed or implying anything related to the movement of the river.

As to the question of whether the 1902 bank as shown on Uintah plat or the "linear" confines as shown on Bullion plat is correct for the south line of sec. 13...

As the original survey gives measurement for the "linear" confines for the SW cor. of sec. 13 it would appear the Bullion plat is correct. (not reviewing procedure).

However, the Uintah plat appears to use the meander line for the spacing (200') from the meander line rather than the "linear" confines. Effectively excluding the area covered by the original river bed from the spacing unit.

This seems reasonable to me, but I am not the approving official for whether this is appropriate for drainage.

Hope this helps, -Blaise

Blaise J. Lodermeier Cadastral Surveyor Bureau of Land Management Montana/Dakotas State Office 5001 Southgate Drive Billings, MT 59101 O-(406) 896-5128 C-(406) 647-1609

From: Joshua Wilke < josh.wilke@highlandseng.com>

Sent: Thursday, May 20, 2021 4:08 PM

To: Lodermeier, Blaise J < bloderme@blm.gov>

Cc: Andrew Albrecht <andrew.albrecht@highlandseng.com>

**Subject:** [EXTERNAL] Re: SECTION 13-26-59

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Blaise,

Anyway you could just drop a couple lines on why these are both accurately depicting different portraits of the proposal per our earlier phone conversation?

Josh Wilke

Highlands Engineering & Surveying, PLLC

319 24<sup>th</sup> Street East

Dickinson, ND 58601

Office (701)483-2444

Cell (701)260-2645

Fax (701)483-2610

Email: josh.wilke@highlandseng.com

On Apr 27, 2021, at 1:39 PM, Joshua Wilke < <a href="mailto:josh.wilke@highlandseng.com">josh.wilke@highlandseng.com</a>> wrote: Blaise,

We have some varying opinions on a couple sets of plats drawn up in section 13, T26N, R59E in Roosevelt County, Montana between Highlands Engineering and Uintah. We are hoping you can clarify how the section should be drawn in this case or if there is something we are missing that Uintah has used to draw theirs differently.

We show the river in the plat while Uintah does not show the Missouri River.

See attach Uintah package compared to our Bullion well package.

To our knowledge there has not been a supplemental plat for this section with any resulting changes to the river, so we drew the river as it is shown on the original plat.

Can you please clarify if the south section line of Section 13 is the edge of the river as Uintah shows or if it is the section line resulting from the calculated corners in the river as we show.

Thanks and have a great day!

Josh Wilke
Highlands Engineering & Surveying, PLLC
319 24th Street East
Dickinson, ND 58601
701-483-2444 (o)
701-260-2645 (c)
701-483-2610 (f)
josh.wilke@highlandseng.com<mailto:josh.wilke@highlandseng.com>
[300dpi\_FullColor]



<1451\_001 (002).pdf> <BULLION 1H, 2H WELL PACKAGE 4-14-21.pdf>



### Exhibit L-3 Prima and Its Supporters

Party	Working Interest	Est Net Acres
Prima	18.02%	135.77
Equinor/Grayson Mill	16.51%	124.39
Slawson	3.91%	29.46
Total	38.44%	289.62

May 28, 2021

Montana Board of Oil and Gas Conservation 2535 St. Johns Avenue Billings, MT 59102 c/o Prima Exploration, Inc. 250 Fillmore Street, Suite 500 Denver, CO 80206

RE: Support of Operator - Prima in Docket 57-2021/58-2021

It has come to the attention of Grayson Mill Energy, LLC and Grayson Mill Williston, LLC, both of 1160 Dairy Ashford Road, Suite 140, Houston, TX 77079, Phone 832-271-8050, (collectively "Grayson Mill") that Bison Oil and Gas III, LLC ("Bison") submitted Docket No. 57-2021 to the Montana Board of Oil and Gas Conservation (the "Board") applying for a permit to drill a horizonal well in the Bakken/Three Forks formation covering the following lands ("Lands"):

#### Township 26 North, Range 59 East, M.P.M

Section 1: All;

Section 12: All;

Section 13: All;

Roosevelt and Richland Counties, Montana

Prima has submitted competing Docket No. 58-2021, applying for permits to drill two horizonal wells in the Bakken/Three Forks formation covering the same Lands.

As a working interest owner in the Lands and throughout the Williston Basin, Grayson Mill is familiar with Prima's capabilities and experience operating in the Williston Basin.

Grayson Mill has concerns and reservations regarding more than one operator conducting operations in the Lands. Grayson Mill believes that Prima is best qualified to develop the Lands in an orderly and geologically driven manner that will promote maximum efficient recovery, protect correlative rights, and prevent waste.

Accordingly, Grayson Mill, based on a cursory review of county records, is the owner of an estimated 16.51% working interest in the Lands and does hereby support Prima as the sole operator of the Lands and requests that the Board deny Bison's application(s) for any permit to drill submitted under Docket 57-2021 or under Docket 58-2021.

Respectfully,

Grayson Mill Energy, LLC

#### CERTIFICATE OF SERVICE

By: **8888** 

MONTANA BOARD OF OIL & GAS CONSERVATION 2535 St. Johns Avenue Billings, Montana 59102 Via Fax (406) 655-6015 and First Class Mail

BISON OIL & GAS III, LLC 518 17th Street Suite 1800 Denver, Colorado 80202

PRIMA EXPLORATION, INC. 250 Fillmore, Suite 500 Denver, CO 80212

May 28, 2021

Montana Board of Oil and Gas Conservation 2535 St. Johns Avenue Billings, MT 59102 c/o Prima Exploration, Inc. 250 Fillmore Street, Suite 500 Denver, CO 80206

RE: Support of Operator – Prima in Docket 57-2021/58-2021

It has come to the attention of Equinor Energy LP of 300 Bridge Point Parkway, Building 2, Suite 100, Austin, TX 78730, Phone 1-866-697-0454, ("Equinor") that Bison Oil and Gas III, LLC ("Bison") submitted Docket No. 57-2021 to the Montana Board of Oil and Gas Conservation (the "Board") applying for a permit to drill a horizonal well in the Bakken/Three Forks formation covering the following lands ("Lands"):

Township 26 North, Range 59 East, M.P.M.

Section 1: All; Section 12: All; Section 13: All;

Roosevelt and Richland Counties, Montana

Prima has submitted competing Docket No. 58-2021, applying for permits to drill two horizonal wells in the Bakken/Three Forks formation covering the same Lands.

As a working interest owner in the Lands and throughout the Williston Basin, Equinor is familiar with Prima's capabilities and experience operating in the Williston Basin.

Equinor has concerns and reservations regarding more than one operator conducting operations in the Lands. Equinor believes that Prima is best qualified to develop the Lands in an orderly and geologically driven manner that will promote maximum efficient recovery, protect correlative rights, and prevent waste.

Accordingly, Equinor Energy LP, based on a cursory review of county records, is the owner of an estimated **16.51%** working interest in the Lands and does hereby support Prima as the sole operator of the Lands and requests that the Board deny Bison's application(s) for any permit to drill submitted under Docket 57-2021 or under Docket 58-2021.

Respectfully,

Equinor Energy LP

Date:

#### **CERTIFICATE OF SERVICE**

This is to certify that the foregoing was duly served by mail upon the following attorneys of record at their respective addresses on the 21 day of 2021

Ву: 25

MONTANA BOARD OF OIL & GAS CONSERVATION 2535 St. Johns Avenue Billings, Montana 59102 Via Fax (406) 655-6015 and First Class Mail

BISON OIL & GAS III, LLC 518 17th Street Suite 1800 Denver, Colorado 80202

PRIMA EXPLORATION, INC. 250 Fillmore, Suite 500 Denver, CO 80212



June 1, 2021

MONTANA BOARD OF OIL & GAS CONSERVATION 2535 St. Johns Avenue Billings, Montana 59102 Via Fax (406) 652-5305 and First Class Mail

BISON OIL & GAS III, LLC 518 17th Street Suite 1800 Denver, Colorado 80202

PRIMA EXPLORATION, INC. 250 Fillmore, Suite 500 Denver, CO 80206

RE: Support of Operator - Prima

Ladies and Gentlemen,

Enclosed is a signed letter from Slawson Exploration Company, Inc. in support of Prima Exploration, Inc.'s Protest of Application for Permit to Drill by Bison Oil & Gas III, LLC.

Respectfully,

Slawson Exploration Company, Inc.

By: 74mPxx Kurt M. Petersen, Vice President June 1, 2021



June 1, 2021

Montana Board of Oil and Gas Conservation 2535 St. Johns Avenue Billings, MT 59102 c/o Prima Exploration, Inc. 250 Fillmore Street, Suite 500 Denver, CO 80206

RE: Support of Operator - Prima in Docket 57-2021/58-2021

It has come to the attention of Slawson Exploration Company, Inc. of 1675 Broadway, Suite 1600, Denver, CO 80202, Phone 303.592.8880 ("Slawson") that Bison Oil and Gas III, LLC ("Bison") submitted Docket No. 57-2021 to the Montana Board of Oil and Gas Conservation (the "Board") applying for a permit to drill a horizonal well in the Bakken/Three Forks formation covering the following lands ("Lands"):

Township 26 North, Range 59 East, M.P.M.

Section 1: All; Section 12: All; Section 13: All:

Roosevelt and Richland Counties, Montana

Prima has submitted competing Docket No. 58-2021, applying for permits to drill two horizonal wells in the Bakken/Three Forks formation covering the same Lands.

As a working interest owner in the Lands and throughout the Williston Basin, Slawson is familiar with Prima's capabilities and experience operating in the Williston Basin.

Slawson has concerns and reservations regarding more than one operator conducting operations in the Lands. Slawson believes that Prima is best qualified to develop the Lands in an orderly and geologically driven manner that will promote maximum efficient recovery, protect correlative rights, and prevent waste.

Accordingly, Slawson, based on a cursory review of county records, is the owner of an estimated 3.91% working interest in the Lands and does hereby support Prima as the sole operator of the Lands and requests that the Board deny Bison's application(s) for any permit to drill submitted under Docket 57-2021 or under Docket 58-2021.

Respectfully,

Slawson Exploration Company, Inc.

Kurt M. Petersen, Vice President

June 1, 2021

#### CERTIFICATE OF SERVICE

This is to certify that the foregoing was duly served by mail upon the following attorneys of record at their respective addresses on the 1st day of June, 2021.

By: Kurt M. Petersen

MONTANA BOARD OF OIL & GAS CONSERVATION 2535 St. Johns Avenue Billings, Montana 59102 Via Fax (406) 652-5305 and First Class Mail

BISON OIL & GAS III, LLC 518 17th Street Suite 1800 Denver, Colorado 80202

PRIMA EXPLORATION, INC. 250 Fillmore, Suite 500 Denver, CO 80206



#### Exhibit L-4: National Park Service Response

From:

Ross, Wendy H

To: Cc: Sean Gallagher; Sexton, Chad L.

Subject:

Hart, Alice M

Re: [EXTERNAL] RE: U.S. National Park Service Letter concerning Prima Exploration, Inc. APD (Bullion 1H & 2H) - Roosevelt County, MT

Date:

Wednesday, May 26, 2021 10:28:49 AM

Hi Sean-

I just wanted to drop you a note of gratitude for Prima's responsiveness in relocating potential well locations to a less visible site that does not impact the Fort Union Trading Post NHS viewshed. I appreciate your willingness to work with us and I view this action as a win/win for the NPS. We support preservation of our nation's natural and cultural resources while recognizing the importance of energy development to our nation.

Don't hesitate to reach out any time you would like to work with us to lessen the impact of similar proposals.

Thanks again,

Wendy

From: Sean Gallagher <sgallagher@primaex.com>

**Sent:** Wednesday, May 26, 2021 8:46 AM **To:** Sexton, Chad L. < Chad\_Sexton@nps.gov>

Cc: Ross, Wendy H < Wendy Ross@nps.gov>; Hart, Alice M <alice hart@nps.gov>

Subject: RE: [EXTERNAL] RE: U.S. National Park Service Letter concerning Prima Exploration, Inc. APD

(Bullion 1H & 2H) - Roosevelt County, MT

#### Chad,

Attached is the formal letter reflecting what's captured in the below email moving the location. The letter will be placed in today's mail.

Thanks again,

Sean

From: Sexton, Chad L. <Chad\_Sexton@nps.gov>

Sent: Monday, May 24, 2021 8:32 AM

To: Sean Gallagher < sgallagher@primaex.com>

Cc: Ross, Wendy H < Wendy\_Ross@nps.gov>; Hart, Alice M <alice\_hart@nps.gov>

Subject: RE: [EXTERNAL] RE: U.S. National Park Service Letter concerning Prima Exploration, Inc. APD

(Bullion 1H & 2H) - Roosevelt County, MT

Sean,

Thank you and Prima Exploration, Inc. for working with the National Park Service to help preserve the historic viewshed of Fort Union Trading Post National Historic Site. If you have any questions or

concerns related to development near Fort Union Trading Post National Historic Site or the three units of Theodore Roosevelt National Park in the future please contact me directly. Again I wish to thank you for your time and attention to these development scenarios. Have a great day.

#### Chad L. Sexton

Management Assistant Geographic Information Systems Analyst Theodore Roosevelt National Park 315 2<sup>nd</sup> Avenue, P.O. Box 7 Medora, ND 58645-0007 (701) 623-4730 ext. 1436 Chad Sexton@nps.gov

From: Sean Gallagher < sgallagher@primaex.com>

**Sent:** Friday, May 21, 2021 16:01

To: Sexton, Chad L. < Chad Sexton@nps.gov>; mtogpub@mt.gov

**Cc:** Ross, Wendy H < <u>Wendy\_Ross@nps.gov</u>>; Hart, Alice M < <u>alice\_hart@nps.gov</u>>; pebrown@mt.gov; billpeterson@nd.gov; Jones, Benjamin < <u>BJones@mt.gov</u>>

Subject: [EXTERNAL] RE: U.S. National Park Service Letter concerning Prima Exploration, Inc. APD

(Bullion 1H & 2H) - Roosevelt County, MT

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

#### Chad,

We are wanted to let you know that we have moved the surface locations of the wells as requested by the NPS. The surface hole of the horizontal wells have been relocated to the north in Section 2 of 26N-59E out of the viewshed and away from Ft. Union Trading Post. Prima will not be moving forward with a saltwater disposal well at this time.

Accordingly, we will be requesting that Montana Board of Oil and Gas Conservation Dockets 59-2021 and 60-2021 scheduled on June 10, 2021, be dismissed due to us not moving forward with these permits in Section 13 & 14 of 26N-59E.

Although Prima has a legal right to develop it's mineral leasehold regardless of surface location, we were able to accommodate NPS on this occasion. We will continue to engage with stakeholders in community such as NPS, while balancing the need for energy development. Thanks for engaging with us throughout the process.

Sincerely,

Sean Gallagher

Land Manager



250 Fillmore St., Suite 500 Denver, CO 80206 P: 303,755,568 L x1,05 C: 720,402,4858

sgallagher@primaex.com

From: Sexton, Chad L. < Chad Sexton@nps.gov>

Sent: Tuesday, April 20, 2021 10:32 AM

To: mtogpub@mt.gov

Cc: Sean Gallagher <sgallagher@primaex.com>; Ross, Wendy H <Wendy Ross@nps.goy>; Hart, Alice

M <alice hart@nps.gov>; pebrown@mt.gov; billpeterson@nd.gov; Jones, Benjamin

<<u>BJones@mt.gov</u>>

Subject: U.S. National Park Service Letter concerning Prima Exploration, Inc. APD (Bullion 1H & 2H) -

Roosevelt County, MT

Montana Board of Oil and Gas Conservation.

Please see attached letter and viewshed analyses from the U.S. National Park Service pertaining to an APD filed from Prima Exploration, Inc. for proposed well sites located in the SW1/4 NW1/4 of Section 13 in T.26N., R59E., M.P.M., Roosevelt County, Montana. The National Park Service requests the opportunity for a public hearing before the Montana Board of Oil and Gas Conservation pursuant to rule 36.22.601 of the Administrative Rules of Montana. Please note this letter is also being forwarded to Prima Exploration, Inc.

#### Chad L. Sexton

Management Assistant Geographic Information Systems Analyst Theodore Roosevelt National Park 315 2<sup>nd</sup> Avenue, P.O. Box 7 Medora, ND 58645-0007 (701) 623-4730 ext. 1436 Chad Sexton@nps.gov



May 25, 2021

Theodore Roosevelt National Park Attn: Wendy Ross, Superintendent Post Office Box 7 Medora, North Dakota 58645

RE: Applications to Drill ("APDs") in Section 13 & 14, 26N-69E

Dear Ms. Ross:

Thank you for your letter dated April 26, 2021. Based upon feedback from the National Park Surface ("NPS") and other stakeholders in the community, we are wanted to let you know that we have moved the surface locations of the wells as requested. Although we provided public notice and staked these APDs, the surface hole of the horizontal wells have been relocated to the north in Section 2 of 26N-59E out of the viewshed and away from Ft. Union Trading Post. Furthermore, Prima will not be moving forward with a saltwater disposal well at this time.

Consequently, we will be requesting that Montana Board of Oil and Gas Conservation Dockets 59-2021 and 60-2021 scheduled on June 10, 2021, be withdrawn or dismissed due to us not moving forward with these APDs in Section 13 & 14 of 26N-59E at the present time.

Although Prima believes it has a legal right to develop its mineral leasehold regardless of surface location, we were able to accommodate NPS on this occasion. We will continue to engage with stakeholders in community such as NPS, while balancing the need for energy development. Thanks for engaging with us throughout the process.

Sincerely,

Brian Law

Vice President - Operations



**Exhibit G-1: Type Log** 

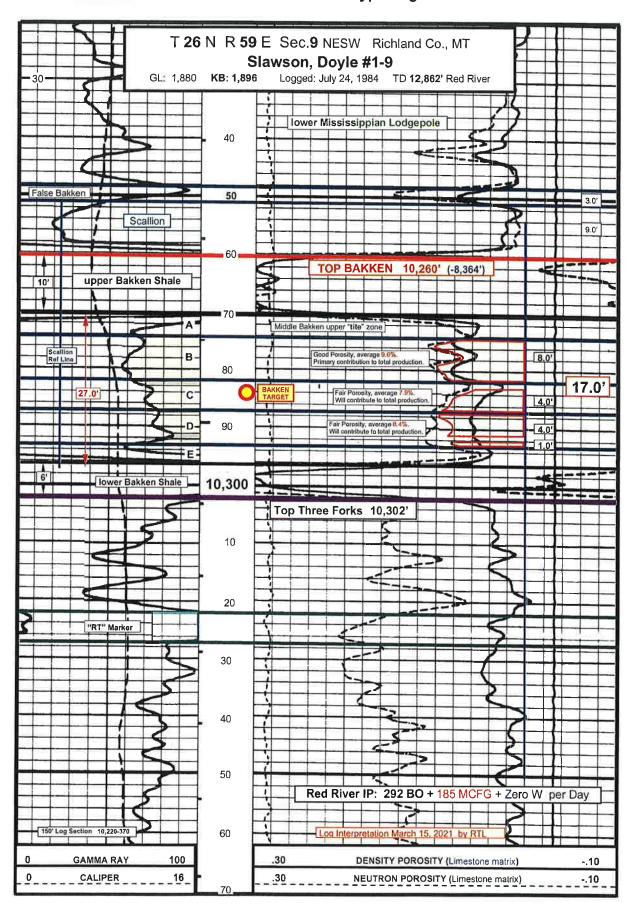
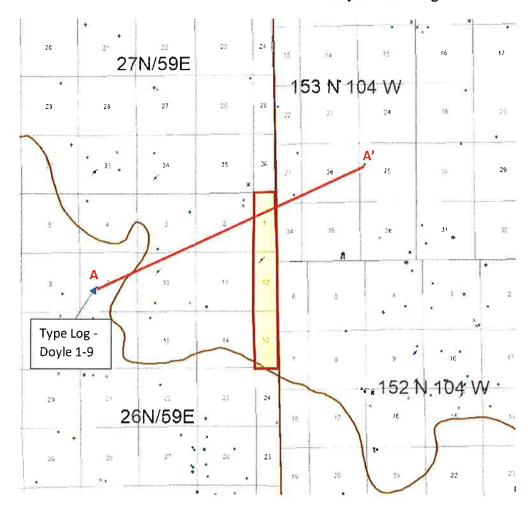




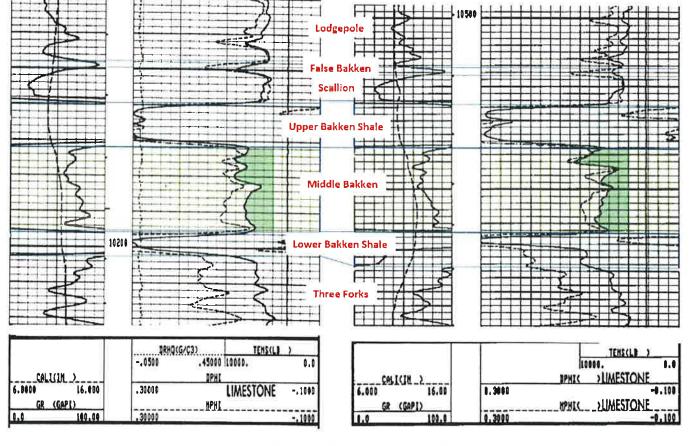
Exhibit G-2: Cross-Section Across Subject DSU - Page 1



- Map showing cross-section across subject DSU
- Distance between cross-section wells is ~ 5.2 miles
- Lack of Bakken penetrations with available logs in the area, however this cross-section displays the change in Bakken geology across this distance



Exhibit G-2: Cross-Section Across Subject DSU - Page 2



A: Doyle 1-9 1,450' FWL, 2,175' FSL 9-26N-59E	<b>←</b> ~5.2 Miles -	→ A': Nordell 1-25-1D 1	L.975' FNL. 660' FWL 25-153N-104W
---	-----------------------	-------------------------	-----------------------------------

Exhibit G-2 Table 1: Bakken Attributes								
Well		Thickness, Feet Qua						
Name	Upper Bakken Shale	Middle Bakken	Lower Bakken Shale	Phi-H				
Doyle 1-9	13	23	6	1.235				
Nordell 1-25-1D	12	24	10	1.059				

- Above cross-section and table show uniform thickness across the subject area
- Slight degradation in porosity going from west to east
- No indication of significant change in geology across the subject area



Exhibit G-3: Structure Map - Top of Bakken Shale, CI 10'

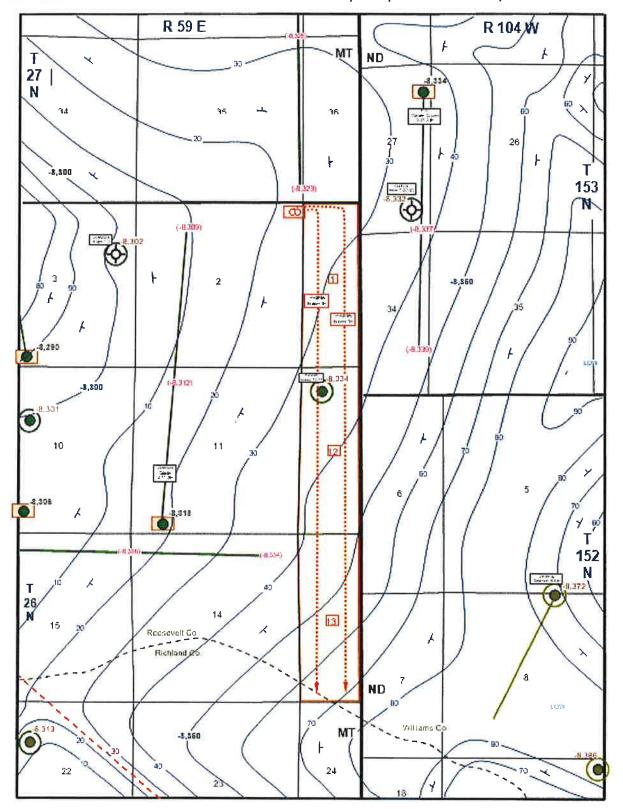
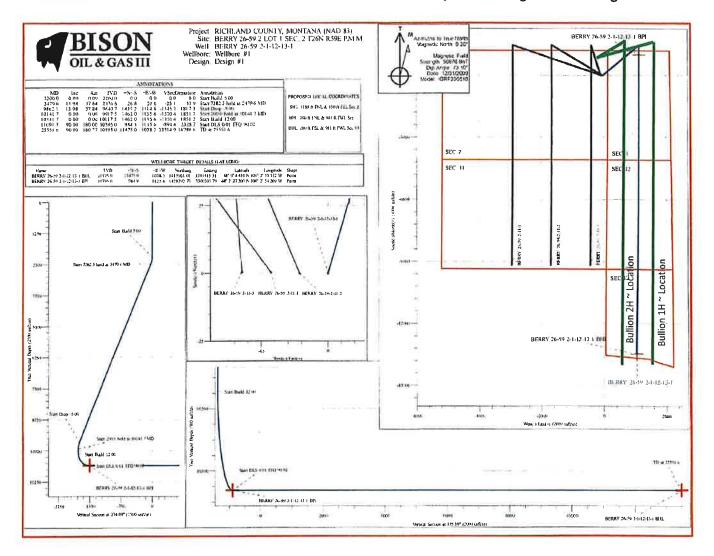




Exhibit E-1: Bison Well Plans and Implied Drainage Radius - Page 1



- Above directional plat taken from Bison's Berry 26-59 2-1-12-13-1 permit application for the subject lands
- Additional plats from permit applications for the offset Berry horizontal wells, as shown on the same plat above, were used to compile well spacing and implied drainage radius as shown on page 2 of this exhibit
- Green locations represent Prima's Bullion 1H and 2H proposed Permit approximate locations, and are also included on page 2 of this exhibit



Exhibit E-1: Bison Well Plans and Implied Drainage Radius - Page 2

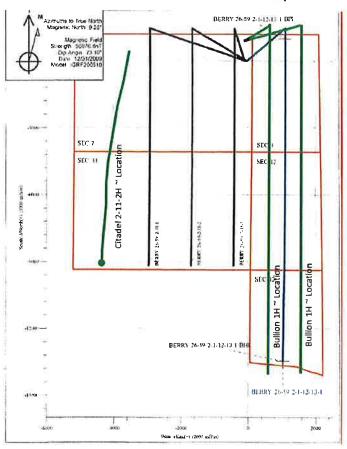


Exhibit E-1, Table 1: Proposed and Existing Well Spacing and Implied Drainage Radius								
Well	Bottom	Hole Location	Distance from	Offset Wells, Ft	Implied Drainage Radius, Ft			
Name	Footage	From Section	West	East	West	East		
Berry 2-1-12-13-1	981	FWL	1,494	1,570*	981**	1,070**		
Berry 2-11-3	513	FEL	1,265	1,494	632.5	513**		
Berry 2-11-2	1,778	FEL	1,273	1,265	636.5	632.5		
Berry 2-11-1	2,250	FWL	989***	1,273	494.5	636.5		
Citadel 2-11-2H	1,651	FWL	N/A	989***	N/A	494.5		
Bullion 1H	550	FEL	1,042	N/A	521	550		
Bullion 2H	550	FWL	1,063	1,042	550	521		

<sup>\*</sup>Assumes ND offset location will come at 500' spaced setback boundary

Avg DSU width for sections 2&11 is ~5,301'

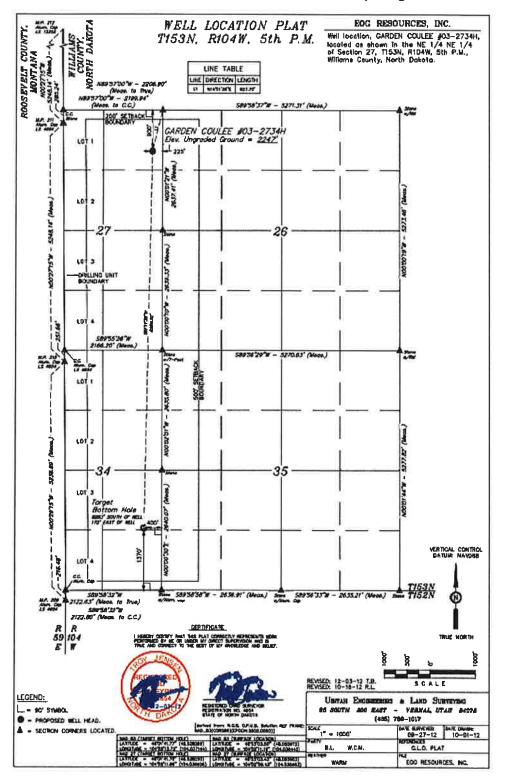
Avg DSU width for sections 1&12&13 is ~2,051', with Southern Width of 2,142'

- Implied Drainage Radius per Bison's proposed locations indicates a wide range of drainage
- Implied Drainage suggests offset Berry 2-11-3 and ND locations will drain into subject lands
- Implied Drainage per Bison's proposed locations suggests stranded reserves in subject lands
- As such, Prima believes its proposed permits are superior in protecting correlative rights

<sup>\*\*</sup>Assumes that Bison is planning on drainage to stay within DSU boundaries

<sup>\*\*\*</sup>Avg distance along borehole as Citadel is not a straight N/S lateral

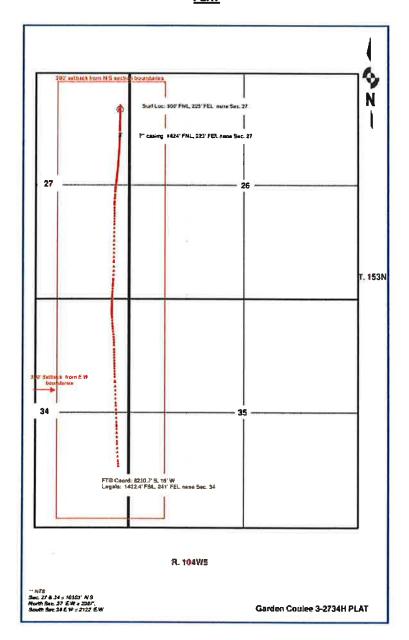
Exploration, INC. Exhibit E-2: Direct Offset North Dakota Spacing and Set-Back – Page 1



East Offset ND Survey showing Section 34 width of 2,122' on the southern end



# EXPLORATION, INC. Exhibit E-2: Direct Offset North Dakota Spacing and Set-Back — Page 2 PLAT



- East Offset ND Plat as drilled for Garden Coulee 3-2734H Bakken well
- BHL is 241' FEL for a 2,122' wide section, leaving 1,881' west of the BHL in the DSU
- Setback of 500' as spaced from the section line, boundary of subject DSU
- This leaves 1,381' between the BHL of the Garden Coulee well and the setback, which is within 61' of ideal well spacing(see exhibit E-5)
- Indicates boundary well likely to be developed, at distance of ~ 500' from subject DSU
- To protect correlative rights, the subject DSU should be developed with a well along the ~ 500' setback from the ND boundary line
- As such, Prima believes its proposed permits are superior in protecting correlative rights

#### Exhibit E-3: Frac Design Uniformity vs Implied Drainage Radius

Bison Oil & Gas III



Rev 1

#### PROJECT OBJECTIVE

Perforate and Stimulate the Bakken formation with 73 stages

- Shoot stage #1, 7 guns, 4 spf (Perfs & Toe Sleeves)
- 4 well zipper frac
- 1,500 lbs/ft
- 25 bbls/ft
- 200' stage spacing
- 10 gun Perf design
- 100 mesh pumped in design
- Target treating rate = 70 90 bpm
- 14 pumps on missile, 3 pumps for pumpdown
- Target FR set point = 0.5 1 gpt
- Target treating pressure = 8,000 11,500 psi
- 15k psi iron
- Liberty's burst disks set for 11.5k psl and 12k psi
- Trucks kickout at 11.25k psi
- 2 fuel tanks on location with containment included
- Above completion plan taken from Bison's Berry 26-59 2-1-12-13-1 Permit Application
- Additional completion plans from offset Bison applications included in Table 1 below

	Exhibit E-3, Table 1: Submitted Completion Plan Details								
Well		Submitted Completion Plan Details							
Name	#/Ft	Sand	BBL/Ft	Stage Length	Clusters	Treat Rate	FR	<b>Treat Pressure</b>	
Berry 2-1-12-13-1	<b>1,50</b> 0	100 Mesh	25	200'	10	70-90 BPM	0.5-1 gpt	8,000-11,500#	
Berry 2-11-3	1,500	100 Mesh	25	206'	10	70-90 BPM	0.5-1 gpt	8,000-11,500#	
Berry 2-11-2	1,500	100 Mesh	25	205'	10	70-90 BPM	0.5-1 gpt	8,000-11,500#	
Berry 2-11-1	<b>1,</b> 500	100 Mesh	25	205	10	70-90 BPM	0.5-1 gpt	8,000-11,500#	
Bullion 1H	1,500	100 Mesh	25	167'	10	80 BPM	0.5-1 gpt	Max 9,300#	
Bullion 2H	<b>1,</b> 500	100 Mesh	25	167'	10	80 BPM	0.5-1 gpt	Max 9,300#	

- Above table shows uniform completion plans across all four Bison proposal wells
- Above table shows similar completion plans with Prima's Bullion proposal wells
- Completion plan closely resembles proven high productivity techniques in the area
- Uniform completion plans across all wells should indicate uniform drainage radius
- Exhibit E-1 has established that the implied drainage by Bison's well spacings is not uniform
- Bison's Berry 2-11-3 proposed location is to be 513' from the subject DSU boundary
- Bison's Berry 2-1-12-13-1 proposed location in the subject DSU is 981' from the boundary
- With uniform completions, the Berry 2-11-3 is either going to drain into the subject DSU, and/or the Berry 2-1-12-13 is going to fail to drain the subject DSU
- Exhibit E-5 shows both: The Berry 2-11-3 will drain into the subject DSU, AND the Berry 2-1-12-13 will fail to drain the subject DSU
- As such, Prima believes its proposed permits are superior in protecting correlative rights



Exhibit E-4: Frac Modeling and Maximum Propped Half-length

Design	Cluster#	Propped Half-Length (ft)	Propped Height (ft)	Fracture Conductivity (md-ft)
	1	329	330	1.4
	2	263	323	1.4
	3	186	339	1.5
25 bbl/ft	4	108	72	1.1
1,500 lb/ft	5	0	0	0
167 ft stage	6	0	0	0
100 mesh	7	110	73	3.4
	8	187	340	0.5
	9	264	324	1.6
10	330	330	1.6	
Average	XI A STATE	178	213	1.3

- Frac modeling by Prima's service provider for proven highly productive technique in subject area
- Maximum propped half-length of <u>330</u><sup>'</sup>

Design	Cluster #	Propped Half-Length (ft)	Propped Height (ft)	Fracture Conductivity (md-ft)
	1	471	351	0.6
	2	389	357	0.7
	3	322	336	0.7
25 bbl/ft	4	142	86	0.6
1,500 lb/ft	5	0	0	0
167 ft stage	6	0	0	0
100 mesh	7 -	142	86	2.4
	8	323	337	0.2
	9	391	357	0.8
	10	473	352	0.7
Average		265	226	0.7

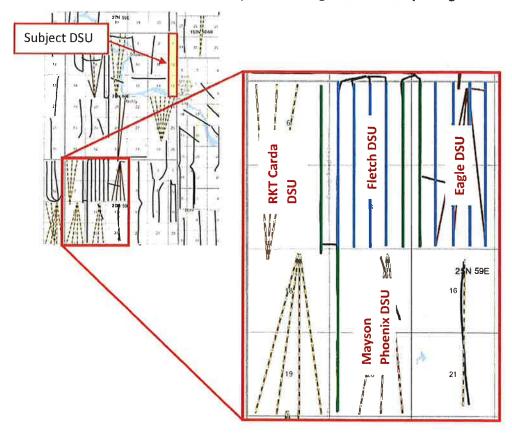
Same design, but asked service provider to adjust geophysical data to the extreme of their ranges to promote lateral fracture growth and maximize propped half-length. Maximum propped half-length of 473'

Design	Cluster #	Propped Half-Length (ft)	Propped Height (ft)	Fracture Conductivity (md-ft)		
	1	548	419	0.5		
	2	469	436	0.5		
	3	344	285	0.7		
38 bbl/ft	4	151	62	0.5		
1,500 lb/ft	5	0	0	0		
167 ft stage	6	0	0	0		
100 mesh	7	151	62	2.4		
	8	345	286	0.2		
	9	470	436	0.5		
	10	549	419	0.5		
Average		302	241	0.6		

- Altered design to maximize propped half-length. Service company indicated this would be done with increased fluid volumes well above normal practices. Maximum propped half-length of <u>549</u>'
- Results show that Bison's offset proposed location will have a propped half-length near to the boundary of the subject DSU, but the subject DSU proposal will have a propped half-length several hundred feet short of the boundary
- As such, Prima believes its proposed permits are superior in protecting correlative rights



Exhibit E-5: Density and Drainage Radius Study - Page 1



- Above shows subject area modern development with parent and child wells drilled in 2018 and 2019
- Green paths are parent wells
- Blue paths are child wells. Note the Eagle paths indicate as drilled the base map does not have survey data

Exhibit E-5 Table 1: Parent/Child Relationships for Offset Modern Kraken Completions									
Well	Parent/Child	BHL	Distance From Parent/Child	West Offset	East Offset	#/Ft	BBL/Ft		
Mayson Phoenix 17-20-1H	Parent	534' FWL	N/A	N/A	N/A	1,527	22.77		
RKT Carda 7-6-1H	Parent	544' FEL	1,068	N/A	1,058	1,527	22.96		
Fletch 5-8-1H	Parent	544' FEL	1,040	1,040	1,123	1,500	20.31		
Eagle 4-9-2H	Parent	579' FWL	946	1,123	946	1,600	21.31		
Eagle 4-9-3H	Child	1,525' FWL	946	946	1,105	1,521	23.75		
Eagle 4-9-4H	Child	2,530' FWL	N/A	1,105	1,070	1,524	23.8		
Eagle 4-9-5H	Child	1,580' FEL	N/A	1,070	1,036	1,524	23.49		
Eagle 4-9-6H	Child	544' FEL	N/A	1,036	N/A	1,537	23.68		
Fletch 5-8-2H	Child	524' FWL	1,068	1,068	1,079	1,017	23.81		
Fletch 5-8-3H	Child	1,603' FWL	N/A	1,079	1,022	1,019	24.23		
Fletch 5-8-4H	Child	2,665' FEL	N/A	1,022	1,081	1,018	23.94		
Fletch 5-8-5H	Child	1,584' FEL	1,043	1,081	1,040	1,019	24.52		
			Average Offset:	1,0	57				

Assumes Uniform 5,280' Wide Sections

Mayson Phoenix and RKT Carda wells originally had no offsets and are the basis for the no-offsets well group Parent wells all utilized modern high performing completion designs

Child wells utilized modern high performing completion designs with varying proppant loading by DSU

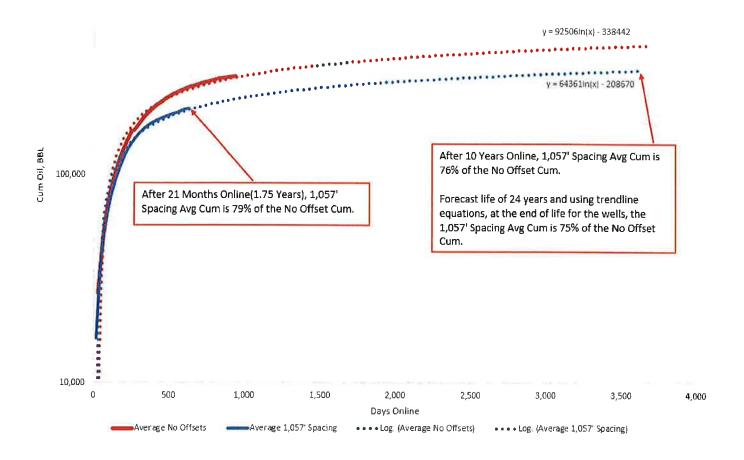
Regardless of proppant loading, child wells impacted parent wells at the density they were drilled



#### Exhibit E-5: Density and Drainage Radius Study - Page 2

Kraken No Offset vs 1,057' Spacing Density Study

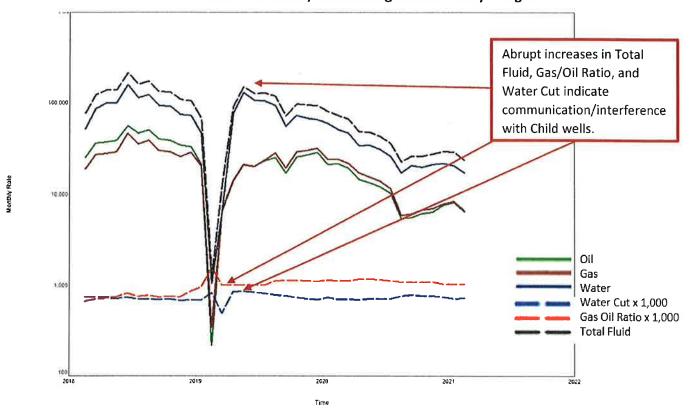
1,000,000



- Above chart shows cumulative oil through time for the study area with no offsets vs 1,057' spacing
- Forecasting forward 24 years shows ultimate recoveries for 1,057' spacing are 75% that of no offsets
- 1,057' spacing is ~ 5 wells per 5,280' wide standard DSU
- Multiplying 5 wells by 75% results in 3.75 wells for interference free development, or 1,408' spacing
- Cannot drill fractions of wells, so must round up to 4 wells to fully drain a 5,280' wide DSU, or 1,320' spacing
- Subject DSU northern and southern line width averages to 2,051.34'
- This is wider than the 1,408' spacing and 704' calculated drainage radius
- Thus, more than one well will be required to drain the DSU
- With interference occurring with two wells, the two wells should be spaced as far apart as reasonable
- With offset permit applications and setbacks of ~ 500' from the subject DSU boundary, and the established setback boundary for the subject DSU being 500', these wells should be placed near to the DSU setbacks



Exhibit E-5: Density and Drainage Radius Study - Page 3



- Above is a Summary Curve of RKT Carda 7-6-1H, Fletch 5-8-1H, and Eagle 4-9-2H Parent Wells
- Child ~ 1,057' offsets completed in 1Q 2019, corresponding with the down-time shown above
- Total Fluid increased nearly 50% from the prior full month in December 2018 to the first full month post-Child development, indicating communication and impact at 1,057' density
- Gas/Oil Ratio increased by over 25% from prior to Child well development, indicating significant pressure draw down and increased gas coming out of solution, due to communication and impact at 1,057' density
- Water Cut increased by 10% from prior to Child well development, indicating communication with offset completions at 1,057' density
- This demonstrates that with the offset applications and setbacks of ~ 500', the subject DSU will be drained by offset development
- Bison's Berry 2-11-3 application will drain into the subject DSU
- Bison's Berry 2-1-12-13-1 application will not drain the subject DSU
- · As such, Prima believes its proposed permits are superior in protecting correlative rights

#### **Exhibit E-6: Reserves and Economics Summary**

## RESERVES and ECONOMICS SUMMARY for TWO (2) BAKKEN HORIZONTAL WELLS

by PRIMA EXPLORATION, INC.

Within a Permanent 753.42 Acre Spacing Unit Comprised of... All of Sections 1, 12 &13 T26N R59E Richland County, Montana

#### RESERVOIR ASSUMPTIONS and CALCULATED OIL IN PLACE

(based on extensive log, sample and model studies of the project area and the most recent well data)

Average reservoir thickness = 17.0'

Average porosity = 9.1%

Average water saturation = 25% (Oil Saturation = 75%)

Volumetrically calculated pore space for a 753.42 acre drainage area = 9,042,265 Barrels.

Formation Volume Factor = 1.4

Stock Tank Barrels of Oil In Place = 4,844,070 STBOIP

#### RECOVERABLE RESERVES

(based on extensive studies of the Bakken in Elm Coulee Field )

Expected Recovery Factor = 18%
Expected Recovery = 871,933 STBO
Each Well is expected to drain 50% of the spacing unit,
Recovery per Well = 435,966 BO + 568,568 MCFG
Initial GOR = 800-1,200 SCF/STB

#### **ECONOMIC ASSUMPTIONS**

(based on economic parameters as June, 2021)

Initial Capital Cost = \$9,000,000

Lease Operating Expense = \$12,500/month + \$0.60/BW

Oil Price = \$60.00/barrel less \$6 Deduct (using variable, internal price deck)

Gas Price = \$2.50/MCFG less \$1.50 Deduct (using variable, internal price deck)

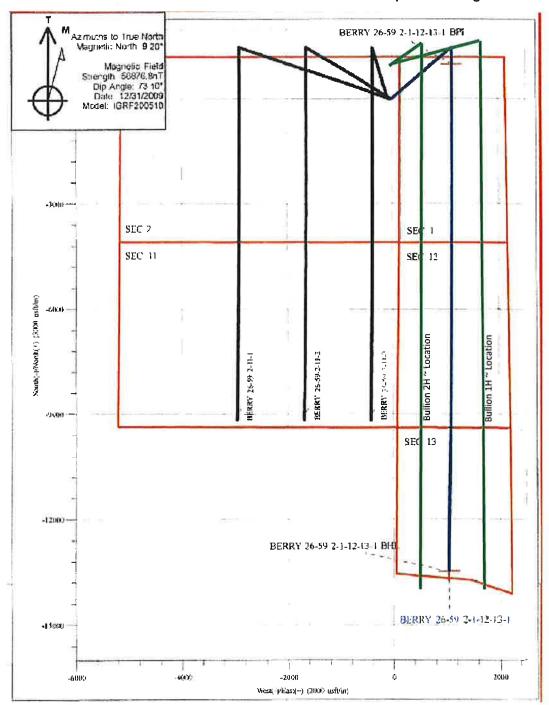
Estimated Initial Production Rate = 26,340 BO/Month,

#### **ANTICIPATED ECONOMICS**

Before Tax Rate of Return = 35.08% Before Tax Payout = 1.5 years Before Tax Income to Investment = 1.58/1

- Above demonstrates that even with interference within the subject DSU from drilling two wells, the wells would be economic investments
- Coupled with the demonstration that two wells are needed to drain the DSU,
   Prima believes its proposed permits are superior in protecting correlative rights

Exhibit E-7: Back Bend and Inclination Comparison - Page 1



- Above plat shows Bison's directional plats with Prima's submitted permit directional overlaying
- Note Bison's surface location is nearly 1,000' south of Prima's surface location
- Note the significantly reduced backbend compared to the proposed Bison location



30.00

#### Exhibit E-7: Back Bend and Inclination Comparison - Page 2

Wellbore Inclination vs Kickout Distance

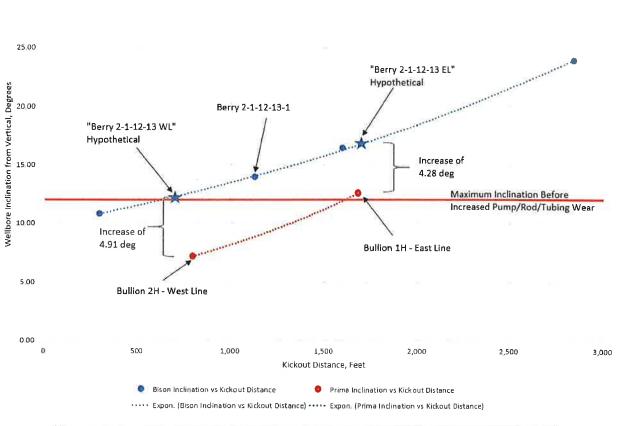


Exhibit E-7 Table 1: Wellbore Inclination vs Kickout				
Permit Applications	SHL from North Line	Entry Point Kickout(E/W)	Backbend Footage(N)	Inclination
Berry 2-1-12-13-1	1,188	1,131	1,462	13.98
Berry 2-11-3	1,188	<b>29</b> 5	1,445	10.83
Berry 2-11-2	1,188	1,600	1,464	16.44
Berry 2-11-1	1,188	2,845	1,464	23.93
Berry 2-1-12-13 WL*	1,188	706	1,462	12.10
Berry 2-1-12-13 EL*	1,188	1,701	1,462	16.90
Bullion 1	225	1,685	604**	12,62
Bullion 2	225	795	606**	7.19

<sup>\*</sup> Hypothetical Bison wells for proper locations to protect correlative rights

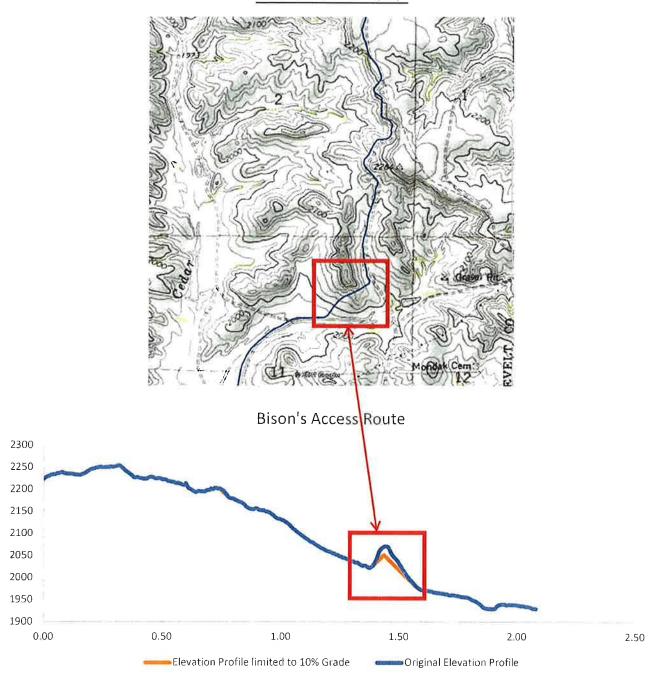
- Above chart is based on Inclination data in the above Table 1
- Hypothetical west-line "WL" and east-line "EL" locations from Bison pad are included
- In all cases, Prima's surface location is superior to Bison's, reducing back bend and inclination
- Back bend increases risk and costs during the drilling and completion phase
- Inclination increases risk and cost during the production phase, prevents utilization or rod pump lift, and thus shortens the economic life of the wells and lowers the recovery of reserves
- Bison's application thus increases cost and reduces recovery
- As such, Prima believes its proposed permits are superior in protecting correlative rights

<sup>\*\*</sup>Prima's backbends are minimal, significantly reducing doglegs, torque/drag/etc, and risk



#### Exhibit E-8: Access Road Concerns - Page 1

#### **Bison's Access Route**



- Above Topo Map and Elevation Profile show Bison's proposed access route
- The route diverts from existing two-track and crests a steep ridge as shown in the red box
- Maximum grade of 10% and 24 ft wide access are recommended for oilfield equipment and traffic
- Bison's proposed route would require the ridge to be cut down by 27 feet
- Bison's proposed route would require the removal of 5,580 cubic yards of landscape
- Bison's proposal increases environmental and safety risk, significantly alters the landscape, and increases costs

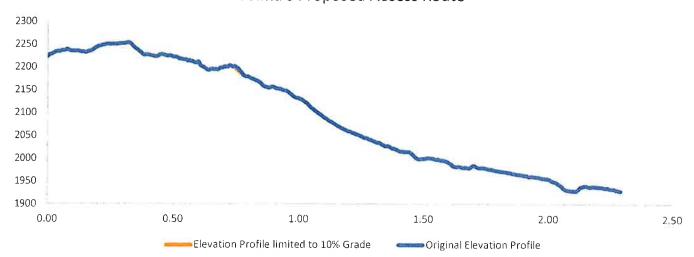


#### Exhibit E-8: Access Road Concerns - Page 2

#### **Prima's Proposed Access Route**



Prima's Proposed Access Route



- Above Topo Map and Elevation Profile show Prima's proposed access route
- The route follows the existing two-track
- Dirt removal of 315 cubic yards required to maintain 10% grade and 24 ft wide access
- Significantly lower environmental and landscape impact
- Significantly lower risk and likely lower cost