



August 13, 2020
***De Novo* Hearing**
NMOCD Order R-21252

Case No. 20916

Commission Case No. 21275 *de novo*



Exhibit 1

Case No. 20916

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

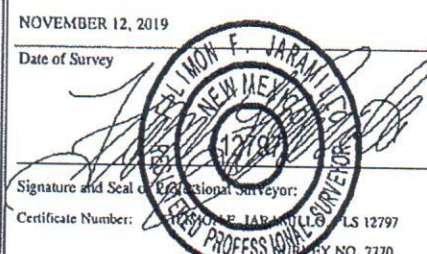
Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name					
4 Property Code		5 Property Name ASTRODOG FED COM 0809						6 Well Number 211H	
7 OGRID No. 372920		8 Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC						9 Elevation 3004.5	
10 Surface Location									
UL or lot no. D	Section 8	Township 23 S	Range 29 E	Lot Idn	Feet from the 933	North/South line NORTH	Feet from the 210	East/West line WEST	County EDDY
11 Bottom Hole Location If Different From Surface									
UL or lot no. A	Section 9	Township 23 S	Range 29 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 130	East/West line EAST	County EDDY
12 Dedicated Acres		13 Joint or Infill		14 Consolidation Code		15 Order No.			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____ E-mail Address _____					
18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. NOVEMBER 12, 2019 Date of Survey _____ Signature and Seal of Professional Surveyor:  Certificate Number: _____					

SW CORNER SEC. 8
LAT. = 32.3123728°N
LONG. = 104.0152649°W
NWSP EAST (FT)
N = 477519.37
E = 635599.40

S/4 CORNER SEC. 8
SCALED

SECTION CORNER
LAT. = 32.3124602°N
LONG. = 103.9982706°W
NWSP EAST (FT)
N = 477367.22
E = 644664.81

S/4 CORNER SEC. 9
SCALED

SE CORNER SEC. 9
LAT. = 32.3124611°N
LONG. = 103.9811277°W
NWSP EAST (FT)
N = 477584.48
E = 650145.47

NW CORNER SEC. 8
LAT. = 32.3289490°N
LONG. = 104.0156765°W
NWSP EAST (FT)
N = 482821.66
E = 639458.52

N/4 CORNER SEC. 8
LAT. = 32.3270383°N
LONG. = 104.0071330°W
NWSP EAST (FT)
N = 482862.06
E = 642095.38

SECTION CORNER
LAT. = 32.3270813°N
LONG. = 103.9985277°W
NWSP EAST (FT)
N = 482885.93
E = 644753.39

N/4 CORNER SEC. 9
SCALED

NE CORNER SEC. 9
LAT. = 32.3271460°N
LONG. = 103.9812888°W
NWSP EAST (FT)
N = 482928.63
E = 650078.15

GRID. BING. HORIZ. DIST. = 9963.95 FT

210' SURFACE LOCATION

130' BOTTOM OF HOLE

ASTRODOG FED COM 0809 211H
ELEV. = 3004.5'
LAT. = 32.3243921°N (NAD83)
LONG. = 104.0149630°W
NWSP EAST (FT)
N = 481892.13
E = 639679.66

FIRST TAKE POINT
330' FHL, 330' FWL
LAT. = 32.3260531°N
LONG. = 104.0145964°W

LAST TAKE POINT
330' FHL, 330' FWL
LAT. = 32.3262351°N
LONG. = 103.9823469°W

BOTTOM OF HOLE
LAT. = 32.3262375°N
LONG. = 103.9816996°W
NWSP EAST (FT)
N = 482595.61
E = 649952.33

W/4 CORNER SEC. 8
LAT. = 32.3198389°N
LONG. = 104.0155775°W
NWSP EAST (FT)
N = 480162.41
E = 639194.98

QUARTER CORNER
SCALED

W/4 CORNER SEC. 9
SCALED

SECTION CORNER
LAT. = 32.3270813°N
LONG. = 103.9985277°W
NWSP EAST (FT)
N = 482885.93
E = 644753.39

SW CORNER SEC. 8
LAT. = 32.3123728°N
LONG. = 104.0152649°W
NWSP EAST (FT)
N = 477519.37
E = 635599.40

S/4 CORNER SEC. 8
SCALED

SECTION CORNER
LAT. = 32.3124602°N
LONG. = 103.9982706°W
NWSP EAST (FT)
N = 477367.22
E = 644664.81

S/4 CORNER SEC. 9
SCALED

SE CORNER SEC. 9
LAT. = 32.3124611°N
LONG. = 103.9811277°W
NWSP EAST (FT)
N = 477584.48
E = 650145.47

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Santa Fe, NM 87505

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Revised August 1, 2011
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WELL LOCATION AND ACREAGE DEDICATION PLAT

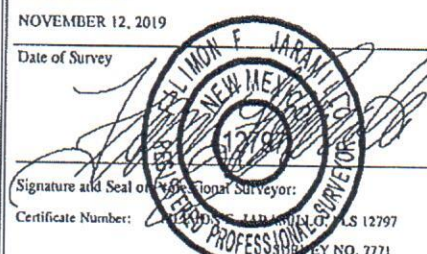
1 API Number		2 Pool Code		3 Pool Name	
4 Property Code		5 Property Name ASTRODOG FED COM 0809			6 Well Number 212H
7 GRID No. 372920		8 Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC			9 Elevation 3004.5

10 Surface Location									
UL or lot no. D	Section 8	Township 23 S	Range 29 E	Lot Idn	Feet from the 951	North/South line NORTH	Feet from the 219	East/West line WEST	County EDDY

11 Bottom Hole Location If Different From Surface									
UL or lot no. A	Section 9	Township 23 S	Range 29 E	Lot Idn	Feet from the 1122	North/South line NORTH	Feet from the 130	East/West line EAST	County EDDY

12 Dedicated Acres		13 Joint or Infill		14 Consolidation Code		15 Order No.	
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____ E-mail Address _____					
18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. NOVEMBER 12, 2019 Date of Survey _____ Signature and Seal of Professional Surveyor:  Certificate Number: _____					

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name ASTRODOG FED COM 0809	
⁷ OGRID No. 372920	⁸ Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC	
		⁶ Well Number 215H
		⁹ Elevation 3005.5

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	8	23 S	29 E		1545	NORTH	200	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	9	23 S	29 E		1914	NORTH	130	EAST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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¹⁶ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature _____ Date _____
Printed Name _____
E-mail Address _____

¹⁸ SURVEYOR CERTIFICATION

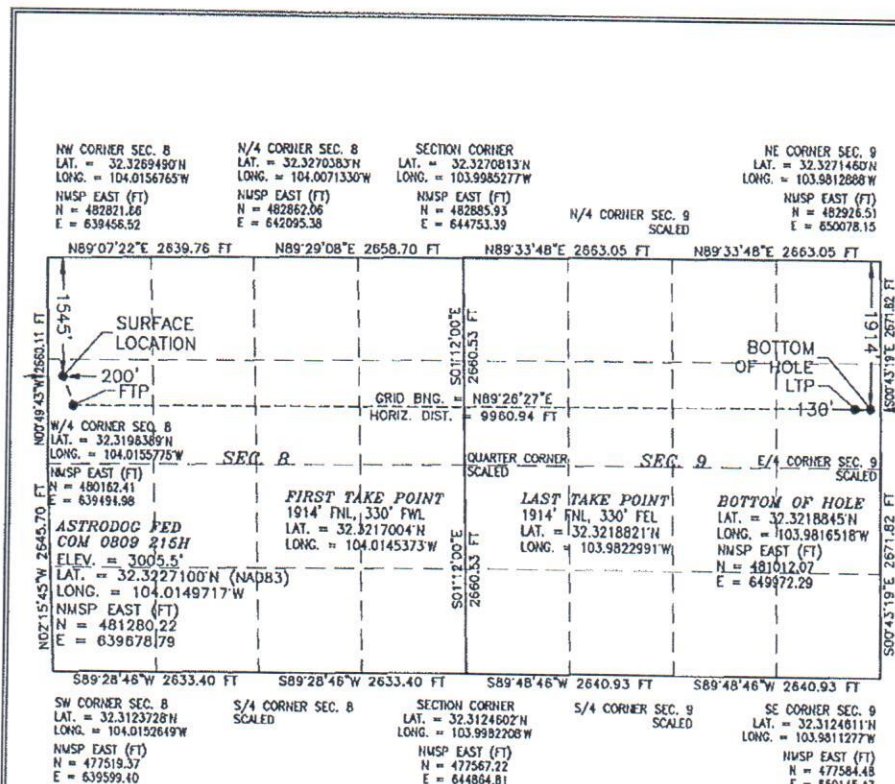
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 12, 2019

Date of Survey

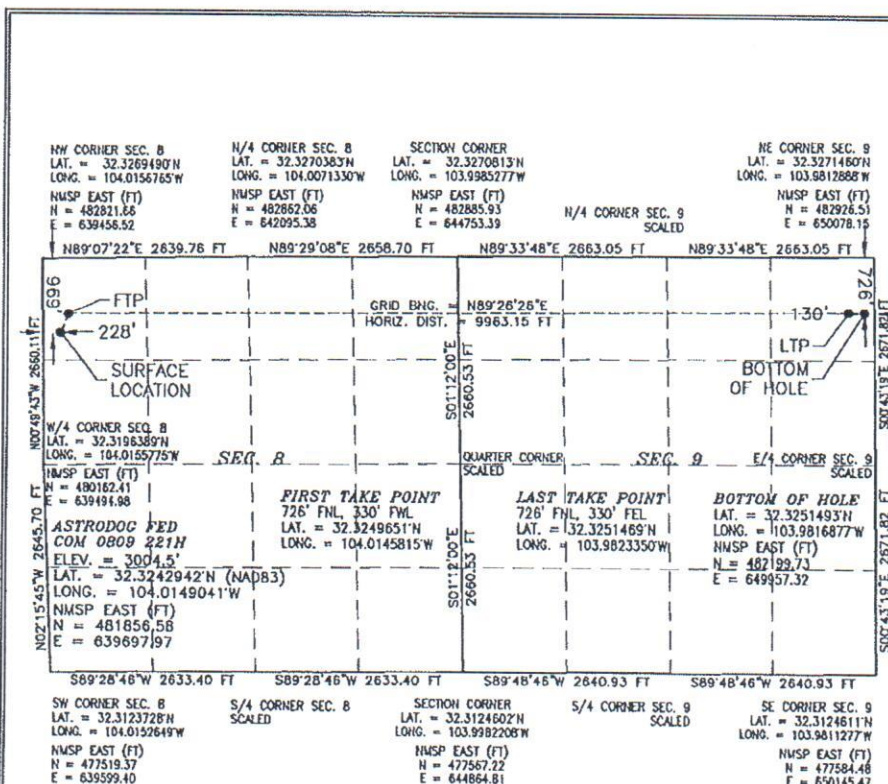
Signature and Seal of Professional Surveyor:

Certificate Number: F110508 PROFESSIONAL SURVEYOR NO. 7772



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Signature and Seal of Professional Surveyor:  F. JARAMILA
Certificate Number: 12797
Professional No. 7773



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OIL CONSERVATION DIVISION
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Santa Fe, NM 87505

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District Office

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name ASTRODOG FED COM 0809	
⁷ OGRID No. 372920	⁸ Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC	
		⁶ Well Number 222H
		⁹ Elevation 3004.5

¹⁰ Surface Location

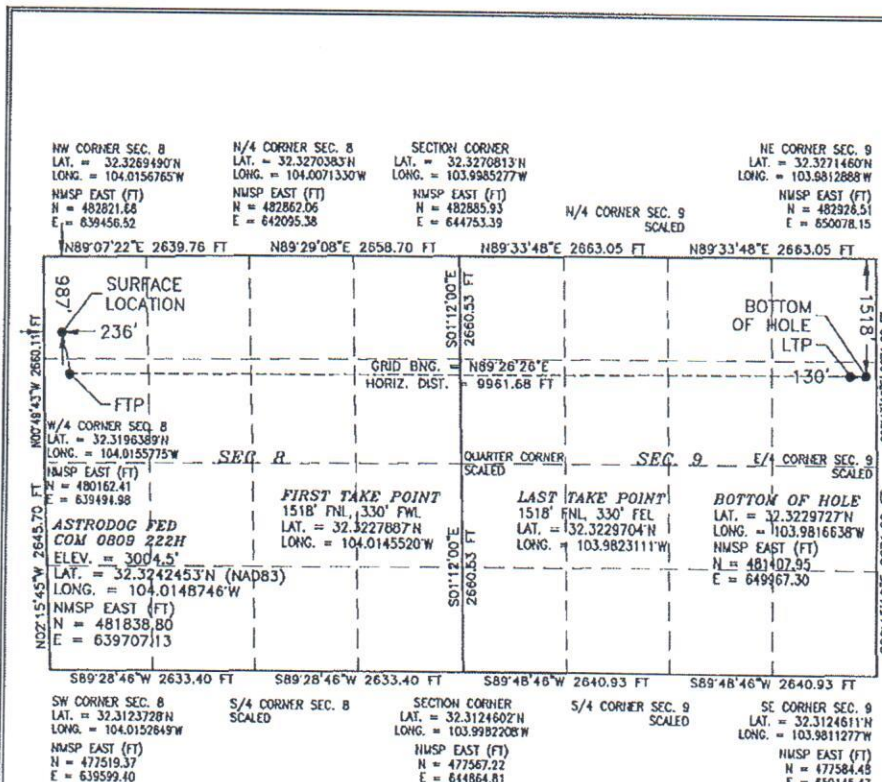
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	8	23 S	29 E		987	NORTH	236	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	9	23 S	29 E		1518	NORTH	130	EAST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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¹⁶ OPERATOR CERTIFICATION

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Signature _____ Date _____

Printed Name _____

E-mail Address _____

¹⁷ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 12, 2019

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: 12797
Professional Surveyor No. 7774

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WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name	
4 Property Code		5 Property Name ASTRODOG FED COM 0809			
6 Well Number 225H		7 Elevation 3005.5			
8 OGRID No. 372920		9 Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC			
10 Surface Location					
UL or lot no. E	Section 8	Township 23 S	Range 29 E	Lot Idn	Feet from the 1565
North/South line NORTH		Feet from the 200		East/West line WEST	
County EDDY					
11 Bottom Hole Location If Different From Surface					
UL or lot no. H	Section 9	Township 23 S	Range 29 E	Lot Idn	Feet from the 2310
North/South line NORTH		Feet from the 130		East/West line EAST	
County EDDY					
12 Dedicated Acres		13 Joint or Infill		14 Consolidation Code	
				15 Order No.	

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

The map shows a well location (W) and a bottom hole location (B) within a section. The surface location is marked with a '200' and the bottom hole location is marked with a '130'. The map includes various corner points (NW, NE, SW, SE) and their coordinates. The well location is labeled 'ASTRODOG FED COM 0809 225H' and the bottom hole location is labeled 'BOTTOM OF HOLE LTP'. The map also shows the 'FIRST TAKE POINT' and 'LAST TAKE POINT'.

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Signature _____ Date _____

Printed Name _____

E-mail Address _____

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 12, 2019

Date of Survey _____

Signature and Seal of Registered Professional Surveyor: *ALMON F. JARAMILLO*

Certificate Number: 12797

REGISTERED PROFESSIONAL SURVEYOR NO. 7775

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name ASTRODOG FED COM 0809	
⁶ Well Number 231H	⁷ Elevation 3004.5	
⁸ OGRID No. 372920	⁹ Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC	

" Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	8	23 S	29 E		861	NORTH	174	WEST	EDDY

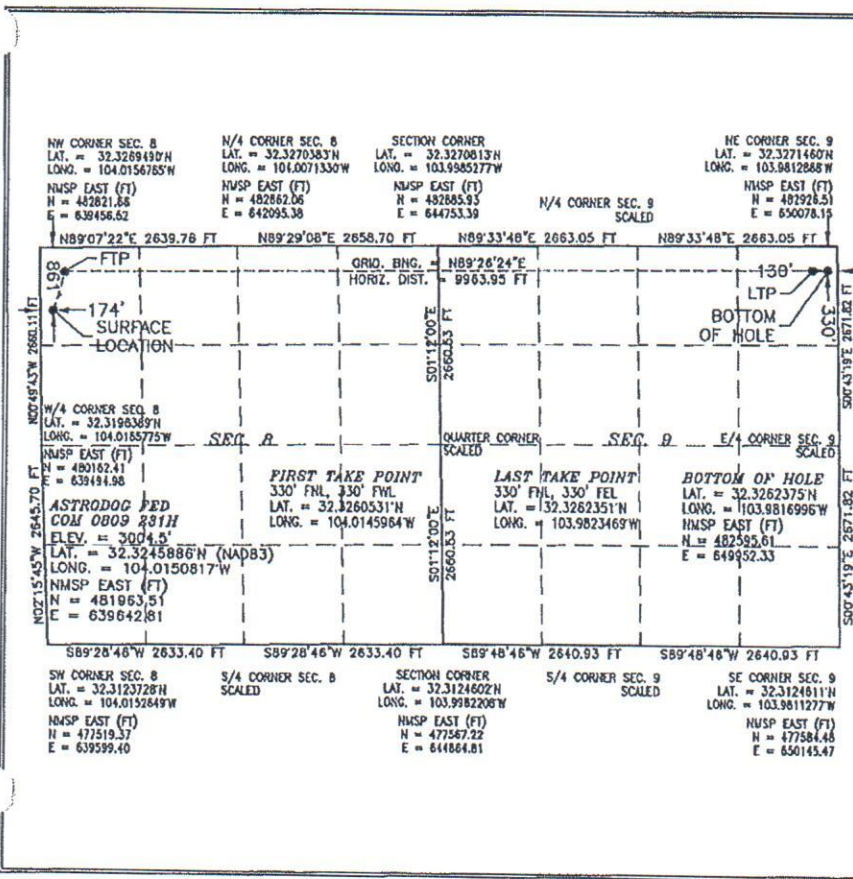
" Bottom Hole Location If Different From Surface

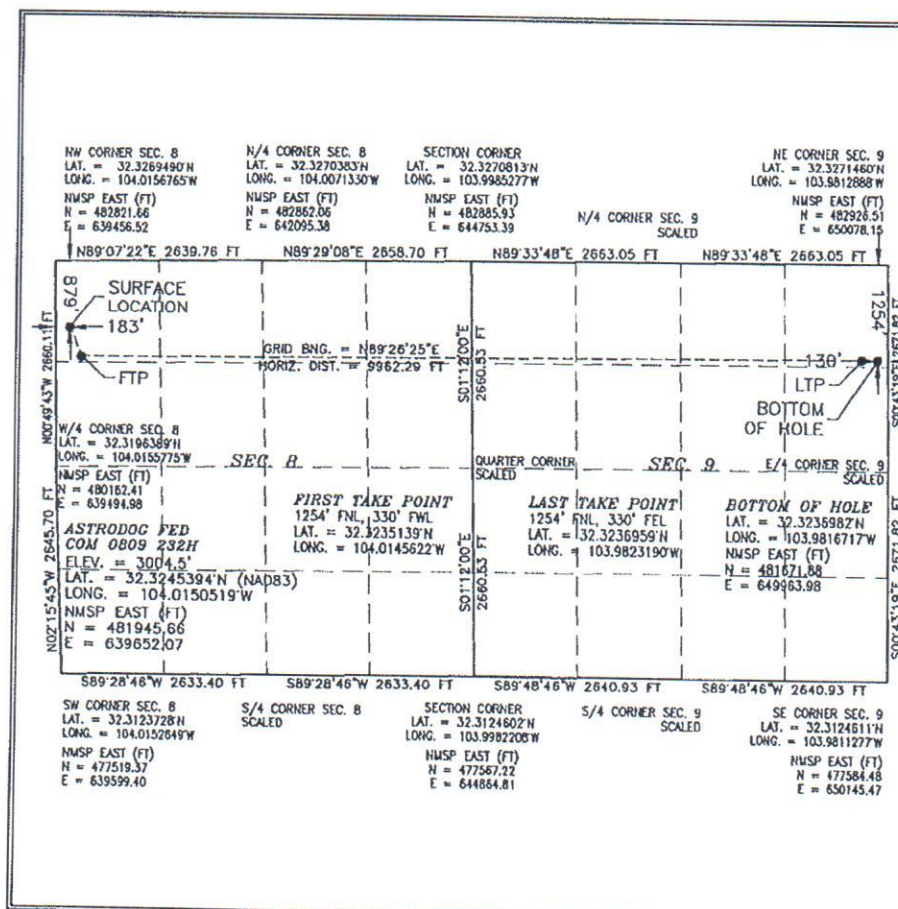
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	9	23 S	29 E		330	NORTH	130	EAST	EDDY

¹⁰ Dedicated Acres	¹¹ Joint or Infill	¹² Consolidation Code	¹³ Order No.
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⁴ Property Code		⁵ Property Name ASTRODOG FED COM 0809			⁶ Well Number 235H
⁷ OGRID No. 372920		⁸ Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC			⁹ Elevation 3005.5
" Surface Location					
UL or lot no. E	Section 8	Township 23 S	Range 29 E	Lot Idn	Feet from the 1880
		North/South line NORTH		Feet from the 200	East/West line WEST
		County EDDY			
" Bottom Hole Location If Different From Surface					
UL or lot no. H	Section 9	Township 23 S	Range 29 E	Lot Idn	Feet from the 2178
		North/South line NORTH		Feet from the 130	East/West line EAST
		County EDDY			
¹⁰ Dedicated Acres		¹¹ Joint or Infill		¹² Consolidation Code	
				¹³ Order No.	

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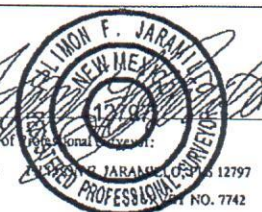
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Exhibit 2

Case No. 20916



Justin Carter
Landman
Novo Oil & Gas Northern Delaware, LLC
1001 West Wilshire Blvd, Suite 206
Oklahoma City, Oklahoma 73116
Office: 405-286-3375
jcarter@novoog.com

August 1, 2019

SEE ATTACHED LIST OF WORKING INTEREST OWNERS

Re: Astrodog Fed Com 08/09 Wolfcamp Working Interest Unit (WIU):
N/2 of Sections 08 and 09, Township 23 South, Range 29 East
Eddy County, New Mexico
640-acre Working Interest Unit

Proposed Wells

Astrodog Fed Com 0809 211H
Astrodog Fed Com 0809 212H
Astrodog Fed Com 0809 215H

Astrodog Fed Com 0809 221H
Astrodog Fed Com 0809 222H
Astrodog Fed Com 0809 225H

Astrodog Fed Com 0809 231H
Astrodog Fed Com 0809 232H
Astrodog Fed Com 0809 235H

Ladies and Gentlemen:

Novo Oil & Gas Northern Delaware, LLC ("Novo") as Operator hereby proposes a 640 Working Interest Unit covering the N/2 of Sections 08 and 09, Township 23 South, Range 29 East, Eddy County, New Mexico.

Further, in connection with the formation of the Astrodog Fed Com 08/09 Wolfcamp Working Interest Unit, as described above, Novo hereby proposes the drilling of nine (9) horizontal wells, as more particularly set forth below. The estimated cost of drilling, testing, completing and equipping of each Well is itemized on the enclosed Authority for Expenditures ("AFE") attached, dated July 29, 2019.

Proposed Well – Astrodog Fed Com 0809 211H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.
First Take Point: 330' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East
Last Take Point: 330' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 9,888 feet subsurface to evaluate the Wolfcamp XY formation. The proposed well will have a measured depth (MD) of approximately 19,888 feet.

Proposed Well – Astrodog Fed Com 0809 212H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 1,122' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 1,122' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 9,890 feet subsurface to evaluate the Wolfcamp XY formation. The proposed well will have a measured depth (MD) of approximately 19,890 feet.

Proposed Well – Astrodog Fed Com 0809 215H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 1,914' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 1,914' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 9,892 feet subsurface to evaluate the Wolfcamp XY formation. The proposed well will have a measured depth (MD) of approximately 19,892 feet.

Proposed Well – Astrodog Fed Com 0809 221H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 726' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 726' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,108 feet subsurface to evaluate the Wolfcamp A formation. The proposed well will have a measured depth (MD) of approximately 20,108 feet.

Proposed Well – Astrodog Fed Com 0809 222H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 1,518' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 1,518' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,108 feet subsurface to evaluate the Wolfcamp A formation. The proposed well will have a measured depth (MD) of approximately 20,108 feet.

Proposed Well – Astrodog Fed Com 0809 225H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 2,310' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 2,310' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,108 feet subsurface to evaluate the Wolfcamp A formation. The proposed well will have a measured depth (MD) of approximately 20,108 feet.

Proposed Well – Astrodog Fed Com 0809 231H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 330' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 330' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,728 feet subsurface to evaluate the Wolfcamp B formation. The proposed well will have a measured depth (MD) of approximately 20,728 feet.

Proposed Well – Astrodog Fed Com 0809 232H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 1,254' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 1,254' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,738 feet subsurface to evaluate the Wolfcamp B formation. The proposed well will have a measured depth (MD) of approximately 20,738 feet.

Proposed Well – Astrodog Fed Com 0809 235H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 2,178' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 2,178' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,748 feet subsurface to evaluate the Wolfcamp B formation. The proposed well will have a measured depth (MD) of approximately 20,748 feet.

Regarding the above, enclosed for your handling are AFEs for each of the nine (9) proposed wells listed above. In the event you elect to participate in the proposed wells, please execute the enclosed AFEs and return to the attention of the undersigned within thirty (30) days from receipt of this letter. Upon receipt of the executed AFEs, Novo will provide you with its proposed Operating Agreement for execution. Should you have any questions regarding the above, please call me at (405) 286-3375 or if by email, my email address is jcarter@novooil.com.

Sincerely,

Novo Oil & Gas Northern Delaware, LLC

Justin Carter
Landman

_____ Not to participate in the Astrodog Fed Com 0809 211H.

_____ Participate in the Astrodog Fed Com 0809 211H for its Proportionate share of the costs.

_____ Not to participate in the Astrodog Fed Com 0809 212H.

_____ Participate in the Astrodog Fed Com 0809 212H for its Proportionate share of the costs.

_____ Not to participate in the Astrodog Fed Com 0809 215H.

_____ Participate in the Astrodog Fed Com 0809 215H for its Proportionate share of the costs.

_____ Not to participate in the Astrodog Fed Com 0809 221H.

_____ Participate in the Astrodog Fed Com 0809 221H for its Proportionate share of the costs.

_____ Not to participate in the Astrodog Fed Com 0809 222H.

_____ Participate in the Astrodog Fed Com 0809 222H for its Proportionate share of the costs.

_____ Not to participate in the Astrodog Fed Com 0809 225H.

_____ Participate in the Astrodog Fed Com 0809 225H for its Proportionate share of the costs.

_____ Not to participate in the Astrodog Fed Com 0809 231H.

_____ Participate in the Astrodog Fed Com 0809 231H for its Proportionate share of the costs.

_____ Not to participate in the Astrodog Fed Com 0809 232H.

_____ Participate in the Astrodog Fed Com 0809 232H for its Proportionate share of the costs.

_____ Not to participate in the Astrodog Fed Com 0809 235H.

_____ Participate in the Astrodog Fed Com 0809 235H for its Proportionate share of the costs.

By: _____

Printed Name: _____

Title: _____

Date: _____

Contact Number: _____

Working Interest Owners
Astrodog Fed Com 08/09 Wolfcamp Working Interest Unit

BTA OIL PRODUCERS, LLC
104 S. PECOS STREET
MIDLAND, TX 79701



Address: 2913 NW 63RD ST
OKLAHOMA CITY
OK 73116
Location: TIKKC
Device ID: -BTC01
Transaction: 940237889257

FedEx Priority Overnight
788798418590 0.4 lbs. (S) 26.24
Declared Value 0
Recipient Address:
Titus Oil & Gas
100 THROCKMORTON ST STE 1800
FORT WORTH, TX 76102-2846
1111111111

Scheduled Delivery Date 07/31/2019

Pricing option:
STANDARD RATE

Package Information:
FedEx Envelope

FedEx Priority Overnight
788798458455 0.5 lbs. (S) 33.50
Declared Value 0
Recipient Address:
BTA Oil Producers LLC
104 S Pecos St
Midland, TX 79701
1111111111

Scheduled Delivery Date 07/31/2019

Pricing option:
STANDARD RATE

Package Information:
FedEx Envelope

FedEx Priority Overnight
788798492383 0.5 lbs. (S) 33.50
Declared Value 0
Recipient Address:
Chevron USA Inc
Attn Chris Copper
1400 Smith Street
Houston, TX 77002
1111111111

Scheduled Delivery Date 07/31/2019

Pricing option:
STANDARD RATE

Package Information:
FedEx Envelope

Shipment subtotal: \$93.24

Total Due: \$93.24

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*****4154

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S = Weight read from scale
T = Taxable item

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*** Thank you ***



Justin Carter
Landman
Novo Oil & Gas Northern Delaware, LLC
1001 West Wilshire Blvd, Suite 206
Oklahoma City, Oklahoma 73116
Office: 405-286-3375
jcarter@novoog.com

August 12, 2019

SEE ATTACHED LIST OF WORKING INTEREST OWNERS

Re: Astrodog Fed Com 08/09 Wolfcamp Working Interest Unit (WIU):
N/2 of Sections 08 and 09, Township 23 South, Range 29 East
Eddy County, New Mexico
640-acre Working Interest Unit

Proposed Wells

Astrodog Fed Com 0809 211H
Astrodog Fed Com 0809 212H
Astrodog Fed Com 0809 215H

Astrodog Fed Com 0809 221H
Astrodog Fed Com 0809 222H
Astrodog Fed Com 0809 225H

Astrodog Fed Com 0809 231H
Astrodog Fed Com 0809 232H
Astrodog Fed Com 0809 235H

Ladies and Gentlemen:

Novo Oil & Gas Northern Delaware, LLC ("Novo") as Operator hereby proposes a 640 Working Interest Unit covering the N/2 of Sections 08 and 09, Township 23 South, Range 29 East, Eddy County, New Mexico.

Further, in connection with the formation of the Astrodog Fed Com 08/09 Wolfcamp Working Interest Unit, as described above, Novo hereby proposes the drilling of nine (9) horizontal wells, as more particularly set forth below. The estimated cost of drilling, testing, completing and equipping of each Well is itemized on the enclosed Authority for Expenditures ("AFE") attached, dated July 29, 2019.

Proposed Well – Astrodog Fed Com 0809 211H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.
First Take Point: 330' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East
Last Take Point: 330' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 9,888 feet subsurface to evaluate the Wolfcamp XY formation. The proposed well will have a measured depth (MD) of approximately 19,888 feet.

Proposed Well – Astrodog Fed Com 0809 212H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 1,122' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 1,122' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 9,890 feet subsurface to evaluate the Wolfcamp XY formation. The proposed well will have a measured depth (MD) of approximately 19,890 feet.

Proposed Well – Astrodog Fed Com 0809 215H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 1,914' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 1,914' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 9,892 feet subsurface to evaluate the Wolfcamp XY formation. The proposed well will have a measured depth (MD) of approximately 19,892 feet.

Proposed Well – Astrodog Fed Com 0809 221H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 726' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 726' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,108 feet subsurface to evaluate the Wolfcamp A formation. The proposed well will have a measured depth (MD) of approximately 20,108 feet.

Proposed Well – Astrodog Fed Com 0809 222H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 1,518' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 1,518' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,108 feet subsurface to evaluate the Wolfcamp A formation. The proposed well will have a measured depth (MD) of approximately 20,108 feet.

Proposed Well – Astrodog Fed Com 0809 225H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 2,310' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 2,310' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,108 feet subsurface to evaluate the Wolfcamp A formation. The proposed well will have a measured depth (MD) of approximately 20,108 feet.

Proposed Well – Astrodog Fed Com 0809 231H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 330' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 330' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,728 feet subsurface to evaluate the Wolfcamp B formation. The proposed well will have a measured depth (MD) of approximately 20,728 feet.

Proposed Well – Astrodog Fed Com 0809 232H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 1,254' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 1,254' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,738 feet subsurface to evaluate the Wolfcamp B formation. The proposed well will have a measured depth (MD) of approximately 20,738 feet.

Proposed Well – Astrodog Fed Com 0809 235H

SHL: NW/4 of Section 8, Township 23 South, Range 29 East.

First Take Point: 2,178' FNL & 330' FWL of Section 8, Township 23 South, Range 29 East

Last Take Point: 2,178' FNL & 330' FEL of Section 9, Township 23 South, Range 29 East

BHL: NE/4 of Section 9, Township 23 South, Range 29 East.

The N/2 of Section 8 and 9 will be dedicated to the well as its 640-acre spacing unit. The well will be drilled to an approximate true vertical depth (TVD) of 10,748 feet subsurface to evaluate the Wolfcamp B formation. The proposed well will have a measured depth (MD) of approximately 20,748 feet.

Regarding the above, enclosed for your handling are AFEs for each of the nine (9) proposed wells listed above. In the event you elect to participate in the proposed wells, please execute the enclosed AFEs and return to the attention of the undersigned within thirty (30) days from receipt of this letter. Upon receipt of the executed AFEs, Novo will provide you with its proposed Operating Agreement for execution. Should you have any questions regarding the above, please call me at (405) 286-3375 or if by email, my email address is jcarter@novooil.com.

Sincerely,

Novo Oil & Gas Northern Delaware, LLC



Justin Carter
Landman

- ☐ Not to participate in the Astrodog Fed Com 0809 211H.
- ☐ Participate in the Astrodog Fed Com 0809 211H for its Proportionate share of the costs.
- ☐ Not to participate in the Astrodog Fed Com 0809 212H.
- ☐ Participate in the Astrodog Fed Com 0809 212H for its Proportionate share of the costs.
- ☐ Not to participate in the Astrodog Fed Com 0809 215H.
- ☐ Participate in the Astrodog Fed Com 0809 215H for its Proportionate share of the costs.
- ☐ Not to participate in the Astrodog Fed Com 0809 221H.
- ☐ Participate in the Astrodog Fed Com 0809 221H for its Proportionate share of the costs.
- ☐ Not to participate in the Astrodog Fed Com 0809 222H.
- ☐ Participate in the Astrodog Fed Com 0809 222H for its Proportionate share of the costs.
- ☐ Not to participate in the Astrodog Fed Com 0809 225H.
- ☐ Participate in the Astrodog Fed Com 0809 225H for its Proportionate share of the costs.
- ☐ Not to participate in the Astrodog Fed Com 0809 231H.
- ☐ Participate in the Astrodog Fed Com 0809 231H for its Proportionate share of the costs.
- ☐ Not to participate in the Astrodog Fed Com 0809 232H.
- ☐ Participate in the Astrodog Fed Com 0809 232H for its Proportionate share of the costs.
- ☐ Not to participate in the Astrodog Fed Com 0809 235H.
- ☐ Participate in the Astrodog Fed Com 0809 235H for its Proportionate share of the costs.

By: _____

Printed Name: _____

Title: _____

Date: _____

Contact Number: _____

Working Interest Owners

Astrodog Fed Com 08/09 Wolfcamp Working Interest Unit

Proposed Wolfcamp XY

Proposed Wolfcamp A

Proposed Wolfcamp B

Astrodog Fed Com 0809 211H

Astrodog Fed Com 0809 212H

Astrodog Fed Com 0809 215H

Astrodog Fed Com 0809 221H

Astrodog Fed Com 0809 222H

Astrodog Fed Com 0809 225H

Astrodog Fed Com 0809 231H

Astrodog Fed Com 0809 232H

Astrodog Fed Com 0809 235H

BTA OIL PRODUCERS, LLC

104 S. PECOS STREET

MIDLAND, TX 79701

OXY Y-1 COMPANY

5 GREENWAY PLAZA, SUITE 110

HOUSTON, TX 77046



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Package Information:
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Shipment subtotal: \$8.65

Total Due: \$8.65

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Exhibit 3

Case No. 20916

**NOVO****NOVO OIL & GAS NORTHERN DELAWARE, LLC****AUTHORIZATION FOR EXPENDITURE**1011 West Winkler, Suite 205
Oklahoma City, Oklahoma 73118
405-266-4381

WELL NAME	Astrodog Fed Com 0809 211H	AFE TYPE	Development	AFE NUMBER	2015158
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp XY	DEPTH (TVD/TMO)	9,888' / 19,888'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well. Secretary Potash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE	COST ESTIMATE			
		DRILLING (300)	COMPLETION (600)		
	INTANGIBLE COSTS				
01	SURVEY/PERMITS/DAMAGES/LEGAL	\$ 50,000			\$ 50,000
02	LOCATION & ROAD	150,000			150,000
03	RIG MOVE	150,000			150,000
04	DRILLING - FOOTAGE	50,000			50,000
05	DRILLING - DAYWORK	854,000			854,000
06	COMPLETION/WORKOVER RIG		60,000		60,000
07	COIL TUBING/SNUBBING UNIT		160,000		160,000
08	SLICKLINE/SWABBING				0
09	BITS	150,000	5,000		155,000
10	DIRECTIONAL SERVICES	240,000			240,000
11	CASING CREW	100,000			100,000
12	TOOL & EQUIPMENT RENTAL	50,000	80,000		130,000
13	FUEL & POWER	204,000	200,000		404,000
14	DIESEL - BASE FOR MUD	100,000			100,000
15	MUD LOGGING & GEOLOGIST	24,000			24,000
16	DISPOSAL, RESTORATION & BACKFILL	150,000			150,000
17	TRUCKING	120,000	40,000		160,000
18	TESTING				0
19	CEMENTING	200,000			200,000
20	PERFORATING		358,000		358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE		75,000		75,000
23	OTHER STIMULATION		120,000		120,000
24	FORMATION STIMULATION		4,000,000		4,000,000
25	CONSULTING SERVICES		20,000		20,000
26	SUPERVISION	120,000	100,000		220,000
27	CONTRACT LABOR	5,000	20,000		25,000
28	OTHER LABOR		100,000		100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER	50,000	1,200,000		1,250,000
31	FLUIDS & CHEMICALS	200,000			200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS	10,000	10,000		20,000
34	BOP TESTING	20,000	10,000		30,000
35	FISHING TOOLS & SERVICES				0
36	INSPECTIONS	10,000	5,000		15,000
37	WIRELINE SERVICES				0
38	ENGINEERING & GEOLOGY - FIELD				0
39	ENGINEERING & GEOLOGY - OFFICE	15,000			15,000
40	MULTISHOT & GYRO				0
41	RE-ENTRY SERVICES				0
42	CAMPS & TRAILERS	15,000	15,000		30,000
43	SAFETY EQUIPMENT & H2S	10,000	5,000		15,000
44	CONTINGENCY				0
45	INSURANCE	10,000	2,000		12,000
46	MISCELLANEOUS	10,000	10,000		20,000
47	SIM-OPS				0
48	TOTAL INTANGIBLE COSTS	\$ 3,067,000	\$ 6,595,000		\$ 9,662,000
	TANGIBLE COSTS				
01	CASING - CONDUCTOR	\$ 10,000			\$ 10,000
02	CASING - SURFACE	20,000			20,000
03	CASING - INTERMEDIATE	85,000			85,000
04	CASING - INTERMEDIATE 2	305,000			305,000
05	CASING - PRODUCTION / LINER	545,000			545,000
06	SUBSURFACE EQUIPMENT	50,000	25,000		75,000
07	PRODUCTION TUBING		55,000		55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT	60,000	10,000		70,000
10	FLOWLINES		100,000		100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS		200,000		200,000
14	RODS				0
15	TRUCKING	40,000	2,000		42,000
16	RE-ENTRY EQUIPMENT				0
17	PRODUCTION EQUIPMENT		600,000		600,000
18	MISCELLANEOUS	10,000	10,000		20,000
19	TANGIBLE EQUIP-ACQUISITIONS				0
20	TOTAL TANGIBLE COSTS	\$ 1,125,000	\$ 1,002,000		\$ 2,127,000
	TOTAL ESTIMATED WELL COST	\$ 4,192,000	\$ 7,597,000		\$ 11,789,000

PREPARED BY: Aaron Cathey Senior Operations Engineer DATE: 7/29/2019

OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019

OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: _____

PARTNER APPROVAL: _____ DATE: _____

TITLE: _____

The costs of this AFE are estimates only. Participants in this project agree to pay their proportionate share of the actual costs. Please make a note that some expenditures such as tubing, artificial lift or surface equipment may occur up to one year after the project has been initiated.



NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
 1001 West Wilshire, Suite 200
 Oklahoma City, Oklahoma 73116
 405-266-4391

WELL NAME	Astrodog Fed Com 0809 212H	AFE TYPE	Development	AFE NUMBER	2015159
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp XY	DEPTH (TVD/TMD)	9,890' / 19,890'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well. Secretary Potash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE	COST ESTIMATE			
	INTANGIBLE COSTS	DRILLING (300)	COMPLETION (500)		
01	SURVEY/PERMITS/DAMAGES/LEGAL	\$ 50,000		\$	50,000
02	LOCATION & ROAD	150,000			150,000
03	RIG MOVE	150,000			150,000
04	DRILLING - FOOTAGE	50,000			50,000
05	DRILLING - DAYWORK	854,000			854,000
06	COMPLETION/WORKOVER RIG		80,000		80,000
07	COIL TUBING/SNUBBING UNIT		160,000		160,000
08	SLICKLINE/SWABBING				0
09	BITS	150,000	5,000		155,000
10	DIRECTIONAL SERVICES	240,000			240,000
11	CASING CREW	100,000			100,000
12	TOOL & EQUIPMENT RENTAL	50,000	80,000		130,000
13	FUEL & POWER	204,000	200,000		404,000
14	DIESEL - BASE FOR MUD	100,000			100,000
15	MUD LOGGING & GEOLOGIST	24,000			24,000
16	DISPOSAL, RESTORATION & BACKFILL	150,000			150,000
17	TRUCKING	120,000	40,000		160,000
18	TESTING				0
19	CEMENTING	200,000			200,000
20	PERFORATING		358,000		358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE		75,000		75,000
23	OTHER STIMULATION		120,000		120,000
24	FORMATION STIMULATION		4,000,000		4,000,000
25	CONSULTING SERVICES		20,000		20,000
26	SUPERVISION	120,000	100,000		220,000
27	CONTRACT LABOR	5,000	20,000		25,000
28	OTHER LABOR		100,000		100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER	50,000	1,200,000		1,250,000
31	FLUIDS & CHEMICALS	200,000			200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS	10,000	10,000		20,000
34	BOP TESTING	20,000	10,000		30,000
36	FISHING TOOLS & SERVICES				0
37	INSPECTIONS	10,000	5,000		15,000
38	WIRELINE SERVICES				0
39	ENGINEERING & GEOLOGY - FIELD				0
40	ENGINEERING & GEOLOGY - OFFICE	15,000			15,000
41	MULTISHOT & GYRO				0
42	RE-ENTRY SERVICES				0
43	CAMPS & TRAILERS	15,000	15,000		30,000
44	SAFETY EQUIPMENT & H2S	10,000	5,000		15,000
45	CONTINGENCY				0
46	INSURANCE	10,000	2,000		12,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	SIM-OPS				0
	TOTAL INTANGIBLE COSTS	\$ 3,667,000	\$ 6,595,000		\$ 9,662,000
	TANGIBLE COSTS	DRILLING (400)	COMPLETION (600)	TOTAL	
01	CASING - CONDUCTOR	\$ 10,000		\$	10,000
02	CASING - SURFACE	20,000			20,000
03	CASING - INTERMEDIATE	85,000			85,000
04	CASING - INTERMEDIATE 2	305,000			305,000
05	CASING - PRODUCTION / LINER	645,000			645,000
06	SUBSURFACE EQUIPMENT	50,000	25,000		75,000
07	PRODUCTION TUBING		55,000		55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT	60,000	10,000		70,000
10	FLOWLINES		100,000		100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS		200,000		200,000
15	RODS				0
17	TRUCKING	40,000	2,000		42,000
20	RE-ENTRY EQUIPMENT				0
34	PRODUCTION EQUIPMENT		600,000		600,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	TANGIBLE EQUIP-ACQUISITIONS				0
	TOTAL TANGIBLE COSTS	\$ 1,125,000	\$ 1,002,000		\$ 2,127,000
	TOTAL ESTIMATED WELL COST	\$ 4,192,000	\$ 7,597,000		\$ 11,789,000

PREPARED BY: Aaron Cathey Senior Operations Engineer DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: _____
 PARTNER APPROVAL: _____ DATE: _____
 TITLE: _____

The costs of this AFE are estimates only. Participants in this project agree to pay their proportionate share of the actual costs. Please make a note that some expenditures such as tubing, artificial lift or surface equipment may occur up to one year after the project has been initiated.



NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
1001 West Wilshire, Suite 205
Oklahoma City, Oklahoma 73116
405-266-4391

WELL NAME	Astrodog Fed Com 0809 215H	AFE TYPE	Development	AFE NUMBER	2015160
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp XY	DEPTH (TVD/TMD)	9,892' / 19,892'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well. Secretary Potash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE		COST ESTIMATE		
	INTANGIBLE COSTS		DRILLING (300)	COMPLETION (500)	
01	SURVEY/PERMITS/DAMAGES/LEGAL		\$ 50,000		\$ 50,000
02	LOCATION & ROAD		150,000		150,000
03	RIG MOVE		150,000		150,000
04	DRILLING - FOOTAGE		50,000		50,000
05	DRILLING - DAYWORK		854,000		854,000
06	COMPLETION/WORKOVER RIG			50,000	50,000
07	COIL TUBING/SNUBBING UNIT			160,000	160,000
08	SLICKLINE/SWABBING				0
09	BITS		150,000	5,000	155,000
10	DIRECTIONAL SERVICES		240,000		240,000
11	CASING CREW		100,000		100,000
12	TOOL & EQUIPMENT RENTAL		50,000	80,000	130,000
13	FUEL & POWER		204,000	200,000	404,000
14	DIESEL - BASE FOR MUD		100,000		100,000
15	MUD LOGGING & GEOLOGIST		24,000		24,000
16	DISPOSAL, RESTORATION & BACKFILL		150,000		150,000
17	TRUCKING		120,000	40,000	160,000
18	TESTING				0
19	CEMENTING		200,000		200,000
20	PERFORATING			358,000	358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE			75,000	75,000
23	OTHER STIMULATION			120,000	120,000
24	FORMATION STIMULATION			4,000,000	4,000,000
25	CONSULTING SERVICES			20,000	20,000
26	SUPERVISION		120,000	100,000	220,000
27	CONTRACT LABOR		5,000	20,000	25,000
28	OTHER LABOR			100,000	100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER		50,000	1,200,000	1,250,000
31	FLUIDS & CHEMICALS		200,000		200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS		10,000	10,000	20,000
34	BOP TESTING		20,000	10,000	30,000
36	FISHING TOOLS & SERVICES				0
37	INSPECTIONS		10,000	5,000	15,000
38	WIRELINE SERVICES				0
39	ENGINEERING & GEOLOGY - FIELD				0
40	ENGINEERING & GEOLOGY - OFFICE		15,000		15,000
41	MULTISHOT & GYRO				0
42	RE-ENTRY SERVICES				0
43	CAMPS & TRAILERS		15,000	15,000	30,000
44	SAFETY EQUIPMENT & H2S		10,000	5,000	15,000
45	CONTINGENCY				0
46	INSURANCE		10,000	2,000	12,000
47	MISCELLANEOUS		10,000	10,000	20,000
49	SIM-OPS				0
	TOTAL INTANGIBLE COSTS		\$ 3,067,000	\$ 6,595,000	\$ 9,662,000
	TANGIBLE COSTS		DRILLING (400)	COMPLETION (600)	TOTAL
01	CASING - CONDUCTOR		\$ 10,000		\$ 10,000
02	CASING - SURFACE		20,000		20,000
03	CASING - INTERMEDIATE		85,000		85,000
04	CASING - INTERMEDIATE 2		305,000		305,000
05	CASING - PRODUCTION / LINER		545,000		545,000
06	SUBSURFACE EQUIPMENT		50,000	25,000	75,000
07	PRODUCTION TUBING			55,000	55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT		60,000	10,000	70,000
10	FLOWLINES			100,000	100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS			200,000	200,000
15	RODS				0
17	TRUCKING		40,000	2,000	42,000
20	RE-ENTRY EQUIPMENT				0
34	PRODUCTION EQUIPMENT			600,000	600,000
47	MISCELLANEOUS		10,000	10,000	20,000
49	TANGIBLE EQUIP-ACQUISITIONS				0
	TOTAL TANGIBLE COSTS		\$ 1,125,000	\$ 1,002,000	\$ 2,127,000
	TOTAL ESTIMATED WELL COST		\$ 4,192,000	\$ 7,597,000	\$ 11,789,000

PREPARED BY: Aaron Cattley Senior Operations Engineer DATE: 7/29/2019
OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019
OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: _____
PARTNER APPROVAL: _____ DATE: _____
TITLE: _____

The costs of this AFE are estimates only. Participants in this project agree to pay their proportionate share of the actual costs. Please make a note that some expenditures such as tubing, artificial lift or surface equipment may occur up to one year after the project has been initiated.



NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
 1001 West Wilshire, Suite 200
 Oklahoma City, Oklahoma 73119
 405-286-4391

WELL NAME	Astrodog Fed Com 0809 221H	AFE TYPE	Development	AFE NUMBER	2015161
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp A	DEPTH (TVD/TMD)	10,108' / 20,108'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well. Secretary Potash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE	COST ESTIMATE			
	INTANGIBLE COSTS	DRILLING (300)	COMPLETION (500)		
01	SURVEY/PERMITS/DAMAGES/LEGAL	\$ 50,000		\$	50,000
02	LOCATION & ROAD	150,000			150,000
03	RIG MOVE	150,000			150,000
04	DRILLING - FOOTAGE	50,000			50,000
05	DRILLING - DAYWORK	854,000			854,000
06	COMPLETION/WORKOVER RIG		60,000		60,000
07	COIL TUBING/SNUBBING UNIT		160,000		160,000
08	SLICKLINE/WABBING				0
09	BITS	150,000	5,000		155,000
10	DIRECTIONAL SERVICES	240,000			240,000
11	CASING CREW	100,000			100,000
12	TOOL & EQUIPMENT RENTAL	50,000	80,000		130,000
13	FUEL & POWER	204,000	200,000		404,000
14	DIESEL - BASE FOR MUD	100,000			100,000
15	MUD LOGGING & GEOLOGIST	24,000			24,000
16	DISPOSAL, RESTORATION & BACKFILL	150,000			150,000
17	TRUCKING	120,000	40,000		160,000
18	TESTING				0
19	CEMENTING	200,000			200,000
20	PERFORATING		358,000		358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE		75,000		75,000
23	OTHER STIMULATION		120,000		120,000
24	FORMATION STIMULATION		4,000,000		4,000,000
25	CONSULTING SERVICES		20,000		20,000
26	SUPERVISION	120,000	100,000		220,000
27	CONTRACT LABOR	5,000	20,000		25,000
28	OTHER LABOR		100,000		100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER	50,000	1,200,000		1,250,000
31	FLUIDS & CHEMICALS	200,000			200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS	10,000	10,000		20,000
34	BOP TESTING	20,000	10,000		30,000
36	FISHING TOOLS & SERVICES				0
37	INSPECTIONS	10,000	5,000		15,000
38	WIRELINE SERVICES				0
39	ENGINEERING & GEOLOGY - FIELD				0
40	ENGINEERING & GEOLOGY - OFFICE	15,000			15,000
41	MULTISHOT & GYRO				0
42	RE-ENTRY SERVICES				0
43	CAMPS & TRAILERS	15,000	15,000		30,000
44	SAFETY EQUIPMENT & H2S	10,000	5,000		15,000
45	CONTINGENCY				0
46	INSURANCE	10,000	2,000		12,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	SIM-OPS				0
	TOTAL INTANGIBLE COSTS	\$ 3,067,000	\$ 6,595,000	\$	9,662,000
	TANGIBLE COSTS	DRILLING (400)	COMPLETION (600)	TOTAL	
01	CASING - CONDUCTOR	\$ 10,000		\$	10,000
02	CASING - SURFACE	20,000			20,000
03	CASING - INTERMEDIATE	85,000			85,000
04	CASING - INTERMEDIATE 2	305,000			305,000
05	CASING - PRODUCTION / LINER	545,000			545,000
06	SUBSURFACE EQUIPMENT	50,000	25,000		75,000
07	PRODUCTION TUBING		55,000		55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT	60,000	10,000		70,000
10	FLOWLINES		100,000		100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS		200,000		200,000
15	RODS				0
17	TRUCKING	40,000	2,000		42,000
20	RE-ENTRY EQUIPMENT				0
34	PRODUCTION EQUIPMENT		600,000		600,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	TANGIBLE EQUIP-ACQUISITIONS				0
	TOTAL INTANGIBLE COSTS	\$ 1,125,000	\$ 1,002,000	\$	2,127,000
	TOTAL ESTIMATED WELL COST	\$ 4,192,000	\$ 7,597,000	\$	11,789,000

PREPARED BY: Aaron Cattley Senior Operations Engineer DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: _____
 PARTNER APPROVAL: _____ DATE: _____
 TITLE: _____

The costs of this AFE are estimates only. Participants in this project agree to pay their proportionate share of the actual costs. Please make a note that some expenditures such as tubing, artificial lift or surface equipment may occur up to one year after the project has been initiated.



NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
1001 West Yorkshire, Suite 206
Oklahoma City, Oklahoma 73116
405-266-4391

WELL NAME	Astrodog Fed Com 0809 222H	AFE TYPE	Development	AFE NUMBER	2015162
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp A	DEPTH (TVD/TMD)	10,108' / 20,108'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well. Secretary Polash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE		COST ESTIMATE		
	INTANGIBLE COSTS		DRILLING (300)	COMPLETION (500)	
01	SURVEY/PERMITS/DAMAGES/LEGAL		\$ 50,000		\$ 50,000
02	LOCATION & ROAD		150,000		150,000
03	RIG MOVE		150,000		150,000
04	DRILLING - FOOTAGE		50,000		50,000
05	DRILLING - DAYWORK		854,000		854,000
06	COMPLETION/WORKOVER RIG			60,000	60,000
07	COIL TUBING/SNUBBING UNIT			160,000	160,000
08	SLICKLINE/SWABBING				0
09	BITS		150,000	5,000	155,000
10	DIRECTIONAL SERVICES		240,000		240,000
11	CASING CREW		100,000		100,000
12	TOOL & EQUIPMENT RENTAL		50,000	80,000	130,000
13	FUEL & POWER		204,000	200,000	404,000
14	DIESEL - BASE FOR MUD		100,000		100,000
15	MUD LOGGING & GEOLOGIST		24,000		24,000
16	DISPOSAL, RESTORATION & BACKFILL		150,000		150,000
17	TRUCKING		120,000	40,000	160,000
18	TESTING				0
19	CEMENTING		200,000		200,000
20	PERFORATING			358,000	358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE			75,000	75,000
23	OTHER STIMULATION			120,000	120,000
24	FORMATION STIMULATION			4,000,000	4,000,000
25	CONSULTING SERVICES			20,000	20,000
26	SUPERVISION		120,000	100,000	220,000
27	CONTRACT LABOR		5,000	20,000	25,000
28	OTHER LABOR			100,000	100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER		50,000	1,200,000	1,250,000
31	FLUIDS & CHEMICALS		200,000		200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS		10,000	10,000	20,000
34	BOP TESTING		20,000	10,000	30,000
35	FISHING TOOLS & SERVICES				0
37	INSPECTIONS		10,000	5,000	15,000
38	WIRELINE SERVICES				0
39	ENGINEERING & GEOLOGY - FIELD				0
40	ENGINEERING & GEOLOGY - OFFICE		15,000		15,000
41	MULTISHOT & GYRO				0
42	RE-ENTRY SERVICES				0
43	CAMPS & TRAILERS		15,000	15,000	30,000
44	SAFETY EQUIPMENT & H2S		10,000	5,000	15,000
45	CONTINGENCY				0
46	INSURANCE		10,000	2,000	12,000
47	MISCELLANEOUS		10,000	10,000	20,000
49	SIM-OPS				0
TOTAL INTANGIBLE COSTS			\$ 3,067,000	\$ 6,595,000	\$ 9,662,000
TANGIBLE COSTS			DRILLING (400)	COMPLETION (600)	TOTAL
01	CASING - CONDUCTOR		\$ 10,000		\$ 10,000
02	CASING - SURFACE		20,000		20,000
03	CASING - INTERMEDIATE		85,000		85,000
04	CASING - INTERMEDIATE 2		305,000		305,000
05	CASING - PRODUCTION / LINER		545,000		545,000
06	SUBSURFACE EQUIPMENT		50,000	25,000	75,000
07	PRODUCTION TUBING			55,000	55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT		60,000	10,000	70,000
10	FLOWLINES			100,000	100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS			200,000	200,000
15	RODS				0
17	TRUCKING		40,000	2,000	42,000
20	RE-ENTRY EQUIPMENT				0
34	PRODUCTION EQUIPMENT			600,000	600,000
47	MISCELLANEOUS		10,000	10,000	20,000
49	TANGIBLE EQUIP-ACQUISITIONS				0
TOTAL TANGIBLE COSTS			\$ 1,125,000	\$ 1,002,000	\$ 2,127,000
TOTAL ESTIMATED WELL COST			\$ 4,192,000	\$ 7,597,000	\$ 11,789,000

PREPARED BY: Aaron Catley Senior Operations Engineer DATE: 7/29/2019
OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019
OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: _____
PARTNER APPROVAL: _____ DATE: _____
TITLE: _____

The costs of this AFE are estimates only. Participants in this project agree to pay their proportionate share of the actual costs. Please make a note that some expenditures such as tubing, artificial lift or surface equipment may occur up to one year after the project has been initiated.



NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
 1001 West Wilshire, Suite 208
 Oklahoma City, Oklahoma 73116
 405-266-4391

WELL NAME	Astrodog Fed Com 0809 225H	AFE TYPE	Development	AFE NUMBER	2015163
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp A	DEPTH (TVD/TMD)	10,108' / 20,108'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well. Secretary Potash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE	COST ESTIMATE			
	INTANGIBLE COSTS	DRILLING (300)	COMPLETION (500)		
01	SURVEY/PERMITS/DAMAGES/LEGAL	\$ 50,000		\$	50,000
02	LOCATION & ROAD	150,000			150,000
03	RIG MOVE	150,000			150,000
04	DRILLING - FOOTAGE	50,000			50,000
05	DRILLING - DAYWORK	854,000			854,000
06	COMPLETION/WORKOVER RIG		60,000		60,000
07	COIL TUBING/SNUBBING UNIT		160,000		160,000
08	SLICKLINE/SWABBING				0
09	BITS	150,000	5,000		155,000
10	DIRECTIONAL SERVICES	240,000			240,000
11	CASING CREW	100,000			100,000
12	TOOL & EQUIPMENT RENTAL	50,000	80,000		130,000
13	FUEL & POWER	204,000	200,000		404,000
14	DIESEL - BASE FOR MUD	100,000			100,000
15	MUD LOGGING & GEOLOGIST	24,000			24,000
16	DISPOSAL, RESTORATION & BACKFILL	150,000			150,000
17	TRUCKING	120,000	40,000		160,000
18	TESTING				0
19	CEMENTING	200,000			200,000
20	PERFORATING		358,000		358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE		75,000		75,000
23	OTHER STIMULATION		120,000		120,000
24	FORMATION STIMULATION		4,000,000		4,000,000
25	CONSULTING SERVICES		20,000		20,000
26	SUPERVISION	120,000	100,000		220,000
27	CONTRACT LABOR	5,000	20,000		25,000
28	OTHER LABOR		100,000		100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER	50,000	1,200,000		1,250,000
31	FLUIDS & CHEMICALS	200,000			200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS	10,000	10,000		20,000
34	BOP TESTING	20,000	10,000		30,000
36	FISHING TOOLS & SERVICES				0
37	INSPECTIONS	10,000	5,000		15,000
38	WIRELINE SERVICES				0
39	ENGINEERING & GEOLOGY - FIELD				0
40	ENGINEERING & GEOLOGY - OFFICE	15,000			15,000
41	MULTISHOT & GYRO				0
42	RE-ENTRY SERVICES				0
43	CAMPS & TRAILERS	15,000	15,000		30,000
44	SAFETY EQUIPMENT & H2S	10,000	5,000		15,000
45	CONTINGENCY				0
46	INSURANCE	10,000	2,000		12,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	SIM-OPS				0
	TOTAL INTANGIBLE COSTS	\$ 3,067,000	\$ 6,595,000		\$ 9,662,000
	TANGIBLE COSTS	DRILLING (400)	COMPLETION (500)		TOTAL
01	CASING - CONDUCTOR	\$ 10,000		\$	10,000
02	CASING - SURFACE	20,000			20,000
03	CASING - INTERMEDIATE	85,000			85,000
04	CASING - INTERMEDIATE 2	305,000			305,000
05	CASING - PRODUCTION / LINER	545,000			545,000
06	SUBSURFACE EQUIPMENT	50,000	25,000		75,000
07	PRODUCTION TUBING		55,000		55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT	60,000	10,000		70,000
10	FLOWLINES		100,000		100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS		200,000		200,000
15	RODS				0
17	TRUCKING	40,000	2,000		42,000
20	RE-ENTRY EQUIPMENT				0
34	PRODUCTION EQUIPMENT		600,000		600,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	TANGIBLE EQUIP-ACQUISITIONS				0
	TOTAL TANGIBLE COSTS	\$ 1,125,000	\$ 1,002,000		\$ 2,127,000
	TOTAL ESTIMATED WELL COST	\$ 4,192,000	\$ 7,597,000		\$ 11,789,000

PREPARED BY: Aaron Cathey Senior Operations Engineer DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: _____
 PARTNER APPROVAL: _____ DATE: _____
 TITLE: _____

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NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
 1801 West Windsor, Suite 205
 Oklahoma City, Oklahoma 73116
 405-285-4391

WELL NAME	Astrolog Fed Com 0809 231H	AFE TYPE	Development	AFE NUMBER	2015164
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp B	DEPTH (TVD/TMD)	10,728' / 20,728'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well. Secretary Potash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE	COST ESTIMATE			
		DRILLING (300)	COMPLETION (600)		
	INTANGIBLE COSTS				
01	SURVEY/PERMITS/DAMAGES/LEGAL	\$ 50,000		\$	50,000
02	LOCATION & ROAD	150,000			150,000
03	RIG MOVE	150,000			150,000
04	DRILLING - FOOTAGE	50,000			50,000
05	DRILLING - DAYWORK	854,000			854,000
06	COMPLETION/WORKOVER RIG		60,000		60,000
07	COIL TUBING/SNUBBING UNIT		160,000		160,000
08	SLICKLINE/SWABBING				0
09	BITS	150,000	5,000		155,000
10	DIRECTIONAL SERVICES	240,000			240,000
11	CASING CREW	100,000			100,000
12	TOOL & EQUIPMENT RENTAL	50,000	80,000		130,000
13	FUEL & POWER	204,000	200,000		404,000
14	DIESEL - BASE FOR MUD	100,000			100,000
15	MUD LOGGING & GEOLOGIST	24,000			24,000
16	DISPOSAL, RESTORATION & BACKFILL	150,000			150,000
17	TRUCKING	120,000	40,000		160,000
18	TESTING				0
19	CEMENTING	200,000			200,000
20	PERFORATING		358,000		358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE		75,000		75,000
23	OTHER STIMULATION		120,000		120,000
24	FORMATION STIMULATION		4,000,000		4,000,000
25	CONSULTING SERVICES		20,000		20,000
26	SUPERVISION	120,000	100,000		220,000
27	CONTRACT LABOR	5,000	20,000		25,000
28	OTHER LABOR		100,000		100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER	50,000	1,200,000		1,250,000
31	FLUIDS & CHEMICALS	200,000			200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS	10,000	10,000		20,000
34	BOP TESTING	20,000	10,000		30,000
36	FISHING TOOLS & SERVICES				0
37	INSPECTIONS	10,000	5,000		15,000
38	WIRELINE SERVICES				0
39	ENGINEERING & GEOLOGY - FIELD				0
40	ENGINEERING & GEOLOGY - OFFICE	15,000			15,000
41	MULTISHOT & GYRO				0
42	RE-ENTRY SERVICES				0
43	CAMPS & TRAILERS	15,000	15,000		30,000
44	SAFETY EQUIPMENT & H2S	10,000	5,000		15,000
45	CONTINGENCY				0
46	INSURANCE	10,000	2,000		12,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	SIM-OPS				0
	TOTAL INTANGIBLE COSTS	\$ 3,067,000	\$ 6,595,000	\$	9,662,000
	TANGIBLE COSTS	DRILLING (400)	COMPLETION (600)		TOTAL
01	CASING - CONDUCTOR	\$ 10,000		\$	10,000
02	CASING - SURFACE	20,000			20,000
03	CASING - INTERMEDIATE	85,000			85,000
04	CASING - INTERMEDIATE 2	305,000			305,000
05	CASING - PRODUCTION / LINER	545,000			545,000
06	SUBSURFACE EQUIPMENT	50,000	25,000		75,000
07	PRODUCTION TUBING		55,000		55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT	60,000	10,000		70,000
10	FLOWLINES		100,000		100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS		200,000		200,000
15	RODS				0
17	TRUCKING	40,000	2,000		42,000
20	RE-ENTRY EQUIPMENT				0
34	PRODUCTION EQUIPMENT		600,000		600,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	TANGIBLE EQUIP-ACQUISITIONS				0
	TOTAL TANGIBLE COSTS	\$ 1,125,000	\$ 1,002,000	\$	2,127,000
	TOTAL ESTIMATED WELL COST	\$ 4,192,000	\$ 7,597,000	\$	11,789,000

PREPARED BY: Aaron Cattley Senior Operations Engineer DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: _____ DATE: _____
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NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
 1001 West Wible, Suite 200
 Oklahoma City, Oklahoma 73116
 405-286-4391

WELL NAME	Astrodog Fed Com 0809 232H	AFE TYPE	Development	AFE NUMBER	2016165
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp 8	DEPTH (TVD/TMD)	10,738' / 20,738'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well. Secretary Polash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE	COST ESTIMATE			
	INTANGIBLE COSTS	DRILLING (\$00)	COMPLETION (\$00)		
01	SURVEY/PERMITS/DAMAGES/LEGAL	\$ 50,000		\$	50,000
02	LOCATION & ROAD	150,000			150,000
03	RIG MOVE	150,000			150,000
04	DRILLING - FOOTAGE	50,000			50,000
05	DRILLING - DAYWORK	854,000			854,000
06	COMPLETION/WORKOVER RIG		60,000		60,000
07	COIL TUBING/SNUBBING UNIT		160,000		160,000
08	SLICKLINE/SWABBING				0
09	BITS	150,000	5,000		155,000
10	DIRECTIONAL SERVICES	240,000			240,000
11	CASING CREW	100,000			100,000
12	TOOL & EQUIPMENT RENTAL	50,000	80,000		130,000
13	FUEL & POWER	204,000	200,000		404,000
14	DIESEL - BASE FOR MUD	100,000			100,000
15	MUD LOGGING & GEOLOGIST	24,000			24,000
16	DISPOSAL, RESTORATION & BACKFILL	150,000			150,000
17	TRUCKING	120,000	40,000		160,000
18	TESTING				0
19	CEMENTING	200,000			200,000
20	PERFORATING		358,000		358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE		75,000		75,000
23	OTHER STIMULATION		120,000		120,000
24	FORMATION STIMULATION		4,000,000		4,000,000
25	CONSULTING SERVICES		20,000		20,000
26	SUPERVISION	120,000	100,000		220,000
27	CONTRACT LABOR	5,000	20,000		25,000
28	OTHER LABOR		100,000		100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER	50,000	1,200,000		1,250,000
31	FLUIDS & CHEMICALS	200,000			200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS	10,000	10,000		20,000
34	BOP TESTING	20,000	10,000		30,000
35	FISHING TOOLS & SERVICES				0
36	INSPECTIONS	10,000	5,000		15,000
37	WIRELINE SERVICES				0
38	ENGINEERING & GEOLOGY - FIELD				0
39	ENGINEERING & GEOLOGY - OFFICE	15,000			15,000
40	MULTISHOT & GYRO				0
41	RE-ENTRY SERVICES				0
42	CAMPS & TRAILERS	15,000	15,000		30,000
43	SAFETY EQUIPMENT & H2S	10,000	5,000		15,000
44	CONTINGENCY				0
45	INSURANCE	10,000	2,000		12,000
46	MISCELLANEOUS	10,000	10,000		20,000
47	SIM-OPS				0
	TOTAL INTANGIBLE COSTS	\$ 3,067,000	\$ 6,595,000		\$ 9,662,000
	TANGIBLE COSTS	DRILLING (\$00)	COMPLETION (\$00)		TOTAL
01	CASING - CONDUCTOR	\$ 10,000		\$	10,000
02	CASING - SURFACE	20,000			20,000
03	CASING - INTERMEDIATE	85,000			85,000
04	CASING - INTERMEDIATE 2	305,000			305,000
05	CASING - PRODUCTION / LINER	545,000			545,000
06	SUBSURFACE EQUIPMENT	50,000	25,000		75,000
07	PRODUCTION TUBING		55,000		55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT	60,000	10,000		70,000
10	FLOWLINES		100,000		100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS		200,000		200,000
14	RODS				0
15	TRUCKING	40,000	2,000		42,000
16	RE-ENTRY EQUIPMENT				0
17	PRODUCTION EQUIPMENT		600,000		600,000
18	MISCELLANEOUS	10,000	10,000		20,000
19	TANGIBLE EQUIP-ACQUISITIONS				0
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	TOTAL ESTIMATED WELL COST	\$ 4,192,000	\$ 7,597,000		\$ 11,789,000

PREPARED BY: Aaron Caitley Senior Operations Engineer DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/19/2019
 OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

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NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
 1001 West Wilshire, Suite 200
 Oklahoma City, Oklahoma 73119
 405-266-4391

WELL NAME	Astrodog Fed Com 0809 235H	AFE TYPE	Development	AFE NUMBER	2015166
LATERAL LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
SURFACE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION	Wolfcamp B	DEPTH (TVD/TMD)	10,748' / 20,748'
BOTTOM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	COUNTY	Eddy County	STATE	New Mexico
PROJECT DESCRIPTION	Drilling, completion, facilities and pipeline costs for 9,900' horizontal well, Secretary Potash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE	COST ESTIMATE			
		DRILLING (300)	COMPLETION (500)		
	INTANGIBLE COSTS				
01	SURVEY/PERMITS/DAMAGES/LEGAL	\$ 50,000		\$	50,000
02	LOCATION & ROAD	150,000			150,000
03	RIG MOVE	150,000			150,000
04	DRILLING - FOOTAGE	50,000			50,000
05	DRILLING - DAYWORK	854,000			854,000
06	COMPLETION/WORKOVER RIG		60,000		60,000
07	COIL TUBING/SNUBBING UNIT		160,000		160,000
08	SLICKLINE/SWABBING				0
09	BITS	150,000	5,000		155,000
10	DIRECTIONAL SERVICES	240,000			240,000
11	CASING CREW	100,000			100,000
12	TOOL & EQUIPMENT RENTAL	50,000	80,000		130,000
13	FUEL & POWER	204,000	200,000		404,000
14	DIESEL - BASE FOR MUD	100,000			100,000
15	MUD LOGGING & GEOLOGIST	24,000			24,000
16	DISPOSAL, RESTORATION & BACKFILL	150,000			150,000
17	TRUCKING	120,000	40,000		160,000
18	TESTING				0
19	CEMENTING	200,000			200,000
20	PERFORATING		358,000		358,000
21	CASED HOLE LOGS				0
22	DOWNHOLE TOOLS & SERVICE		75,000		75,000
23	OTHER STIMULATION		120,000		120,000
24	FORMATION STIMULATION		4,000,000		4,000,000
25	CONSULTING SERVICES		20,000		20,000
26	SUPERVISION	120,000	100,000		220,000
27	CONTRACT LABOR	5,000	20,000		25,000
28	OTHER LABOR		100,000		100,000
29	COMPANY CONSULTING/SUPV				0
30	WATER	50,000	1,200,000		1,250,000
31	FLUIDS & CHEMICALS	200,000			200,000
32	CORING & ANALYSIS				0
33	COMMUNICATIONS	10,000	10,000		20,000
34	BOP TESTING	20,000	10,000		30,000
36	FISHING TOOLS & SERVICES				0
37	INSPECTIONS	10,000	5,000		15,000
38	WIRELINE SERVICES				0
39	ENGINEERING & GEOLOGY - FIELD				0
40	ENGINEERING & GEOLOGY - OFFICE	15,000			15,000
41	MULTISHOT & GYRO				0
42	RE-ENTRY SERVICES				0
43	CAMPS & TRAILERS	15,000	15,000		30,000
44	SAFETY EQUIPMENT & H2S	10,000	5,000		15,000
45	CONTINGENCY				0
46	INSURANCE	10,000	2,000		12,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	SIM-OPS				0
	TOTAL INTANGIBLE COSTS	\$ 3,067,000	\$ 6,595,000		\$ 9,662,000
	TANGIBLE COSTS	DRILLING (400)	COMPLETION (600)	TOTAL	
01	CASING - CONDUCTOR	\$ 10,000		\$	10,000
02	CASING - SURFACE	20,000			20,000
03	CASING - INTERMEDIATE	85,000			85,000
04	CASING - INTERMEDIATE 2	305,000			305,000
05	CASING - PRODUCTION / LINER	545,000			545,000
06	SUBSURFACE EQUIPMENT	50,000			75,000
07	PRODUCTION TUBING		55,000		55,000
08	SUBSURFACE PUMPING EQUIPMENT				0
09	WELLHEAD EQUIPMENT	60,000	10,000		70,000
10	FLOWLINES		100,000		100,000
11	SURFACE PUMPING EQUIPMENT				0
12	LINER HANGER & ASSOC EQUIP				0
13	VALVES & FITTINGS		200,000		200,000
16	RODS				0
17	TRUCKING	40,000	2,000		42,000
20	RE-ENTRY EQUIPMENT				0
34	PRODUCTION EQUIPMENT		600,000		600,000
47	MISCELLANEOUS	10,000	10,000		20,000
49	TANGIBLE EQUIP-ACQUISITIONS				0
	TOTAL TANGIBLE COSTS	\$ 1,125,000	\$ 1,002,000		\$ 2,127,000
	TOTAL ESTIMATED WELL COST	\$ 4,192,000	\$ 7,597,000		\$ 11,789,000

PREPARED BY: Aaron Cattley Senior Operations Engineer DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019
 OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: _____ DATE: _____
 PARTNER APPROVAL: _____
 TITLE: _____

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Exhibit 4

Case No. 20916

Land Overview

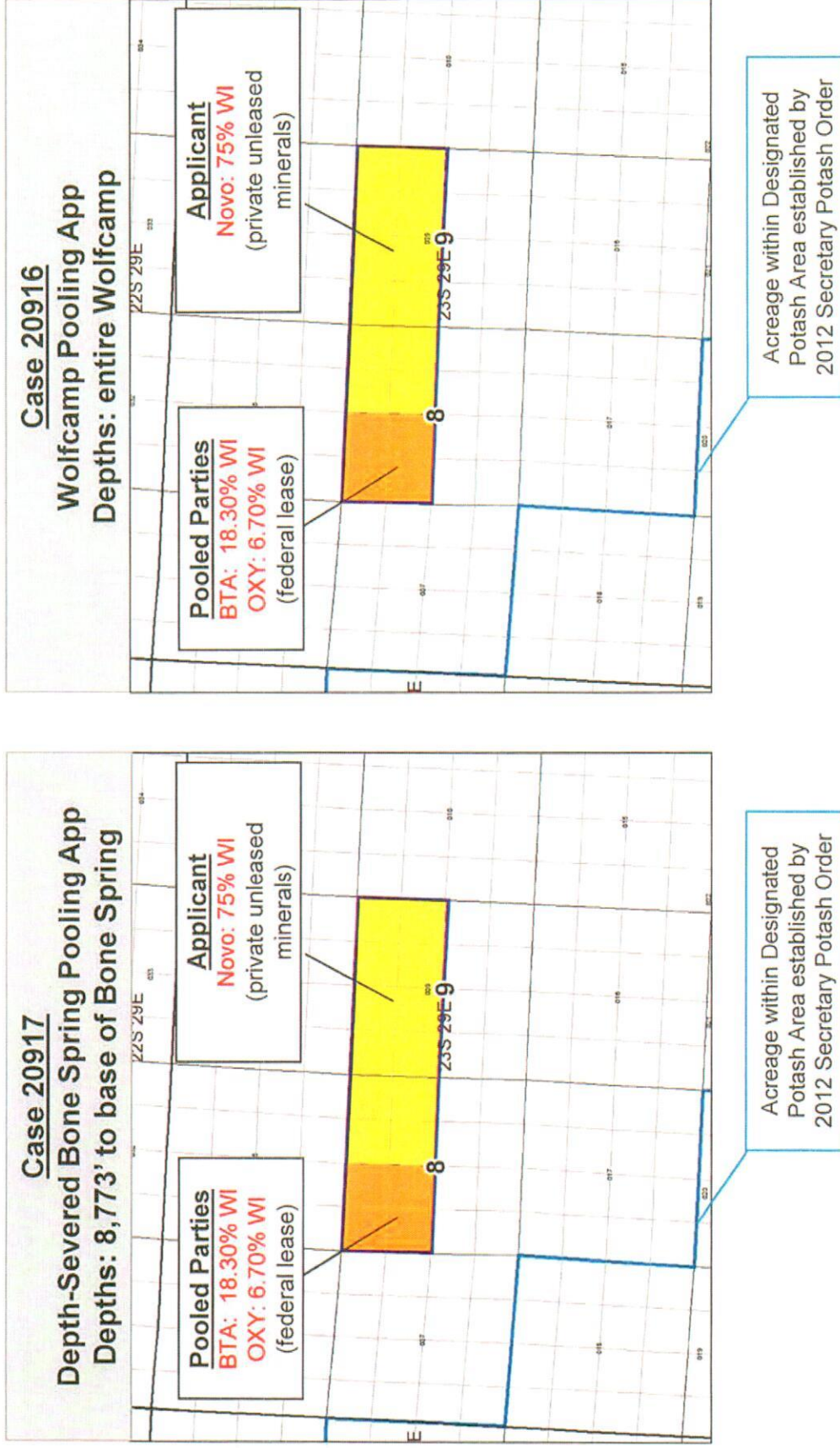




Exhibit 5

Case No. 20916

History of Prospect



1 12/2017: BLM establishes "Nido" Drill Island

1. A company named Titus was trying to acquire the interest that is now owned by Novo
2. In Q4 2017, Titus worked with BLM to find surface locations
3. BLM established "Nido" drill island for Titus to develop N/2 of Sections 8 and 9
4. Novo ended up buying the interest that Titus wanted

2 11/2018: BTA acquires acreage

3 7/2019: Novo acquires acreage



KEY POINTS

1. BLM established the "Nido" drill island for development of N/2 of Sections 8 and 9
2. BTA knew the "Nido" drill island existed when they acquired NW/4 of Sec. 8 from EOG



Exhibit 6

Case No. 20916

Novo Contacts Mosaic to Plan Surface



Actions Taken by Novo

8/2019
Novo proposed wells
Novo scheduled onsite with BLM

4/2019

Novo worked with Mosaic (surface owner) to find pad locations

10/2019

Novo conducted onsite with BLM

11/14/2019

NMOCD Hearing for Novo's Pooling Apps

Map from Novo's 4/3/2019 Email to Mosaic



Mosaic's 4/11/2019 Response

From: Langman, Mary <Mary.Langman@mosaicco.com>
Sent: Thursday, April 11, 2019 2:43 PM
To: Brandon Patrick <bpatrick@novooil.com>
Cc: Anderson, John <John.Anderson@mosaicco.com>; Goodale, Scotty <Scotty.Goodale@mosaicco.com>
Subject: RE: Salt Lake - Potential SUA

Hi Brandon,
Our site team has looked at your proposal and they have some concerns with **Well Pad #2**. The ground that close to the salt lake is unstable and there is a risk of flooding, plus a very high risk of contamination to the salt lake should there be a release. They would prefer both well pads to be on the NW side of the rail tracks. Once Novo has more definite plans in place please fill out the attached application forms for all the required infrastructure. The completed Application will be reviewed by our site Governance Committee. Please provide as much detail as possible including pipeline tie in points.

Regards,
Mary

Mosaic
Mary Langman | Supervisor, Land and Minerals
The Mosaic Company | 1700, 2010 - 12th Avenue | Regina, SK
Canada S4P 0M3
P: 306.523.6105 | F: 306.523.2867 | E: mary.langman@mosaicco.com | W: www.mosaicco.com



Novo Proposes Astrodog 0809 Wells

Actions Taken by Novo

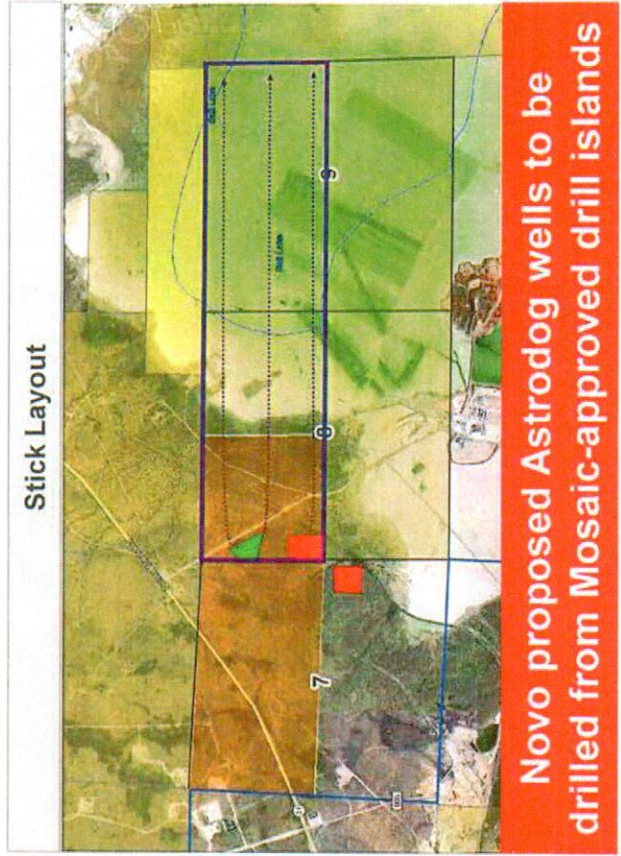
8/2019
Novo proposed wells
Novo scheduled onsite with BLM



4/2019
Novo worked with Mosaic (surface owner) to find pad locations

10/2019
Novo conducted onsite with BLM

11/14/2019
NMOCD Hearing for
Novo's Pooling Apps



BTA Opposes Novo's Astrodog Plans



Actions Taken by Novo

8/2019

Novo proposed wells
Novo scheduled onsite with BLM



4/2019

Novo worked with Mosaic (surface owner) to find pad locations



10/2019

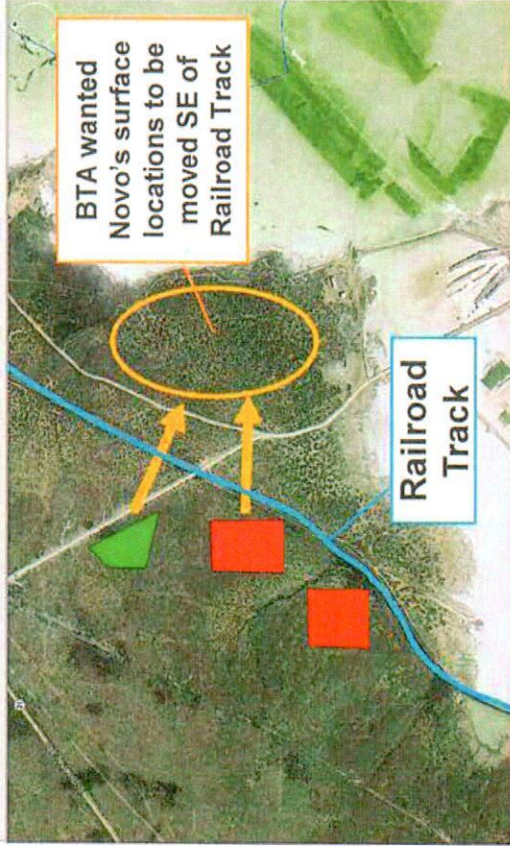
Novo conducted onsite with BLM



11/14/2019

NMOC Hearing for
Novo's Pooling Apps

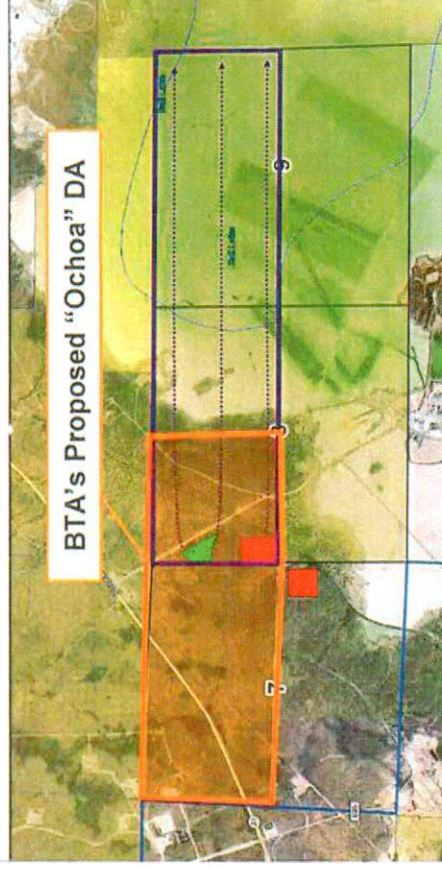
BTA's Request to Move Pads



Mosaic has rejected BTA's alternative pad location

BTA's Reaction to "Astrodog" Well Proposals

1. BTA did not want Novo to develop NW/4 of Sec. 8
 - BTA urged Novo to move pad locations SE of Railroad Track
 - BTA proposed "Ochoa" Development Area covering N/2 of Sec. 7 and NW/4 of Sec. 8



Novo

8/2019
Novo proposed wells
Novo scheduled onsite with BLM

8/2019

Novo proposed wells

Novo scheduled onsite with BLM

○

4/2019

Novo worked with Mosaic (surface owner) to find pad locations

10/2019

Novo conducted onsite with BLM

11/14/2019

NMOCD Hearing for
Novo's Pooling Apps

Excerpt from 10/23 Email sent by BTA's Land Manager

part of BTA's development area. BTA will oppose Novo's pooling applications on the Astrodog wells and will object to any Novo development areas filed within the Secretary's Potash Area that BTA is notified of until this issue is resolved and Novo withdraws its objection to BTA's development area. BTA will be attending the on-site for the Astrodog and the Saturninus drilling island onsite tomorrow. Please call me at 432-682-3753 should you wish to discuss, or my e-mail is

wprice@btaoil.com.



Willis Price

BTA-Novo Interactions

1. Novo offered to do trades with BTA
2. BTA-Novato meeting in OKC
 - Novo told BTA that moving the pad locations likely would not be approved by Mosaic and BLM
 - **Novo invited BTA to attend 10/24 BLM onsite**
 - Novo and BTA agreed to jointly approach BLM to discuss **after** BTA's Engineer reviewed pad locations
3. While Novo was waiting on BTA's Engineer, BTA's Land Manager went behind Novo's back and ***approached BLM without including Novo***
4. Novo objected to BTA's "Ochoa" Development Area
5. BTA threatened to object to **any** Development Area proposed within the Secretary's Potash Area unless Novo withdraws its objection to "Ochoa" DA

10/24 BLM Onsite for Astrodog Surface Plan



Actions Taken by Novo

8/2019

Novo proposed wells
Novo scheduled onsite with BLM

4/2019

Novo worked with Mosaic (surface owner) to find pad locations

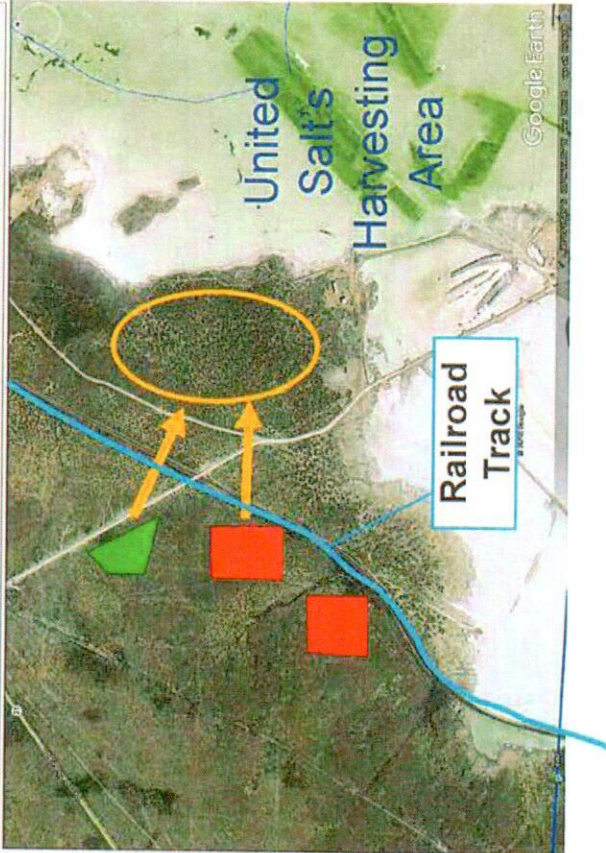
10/24/2019

Novo conducted onsite with BLM

11/14/2019

NMOCD Hearing for
Novo's Pooling Apps

Map Showing Proximity to United Salt's Operations



10/24/2019 BLM Onsite Notes

Attendees: BTA, Novo, BLM, United Salt Carlsbad, XTO, and Titus

Key Takeaways

1. BLM approved all 3 "Astrodog" pad locations
2. United Salt Carlsbad (surface lessee of Salt Lake) supported Novo's pad locations

"we prefer the current placement much more than the one proposed by BTA due to less risk to harvesting areas."

**-Tom Vandekraats, Plant Manager
United Salt Carlsbad**



Novo's Plan vs. BTA's Plan

Actions Taken by Novo

8/2019

Novo proposed wells
Novo scheduled onsite with BLM



4/2019

Novo worked with Mosaic (surface owner) to find pad locations

10/24/2019

Novo conducted onsite with BLM

11/14/2019

NMOCD Hearing for
Novo's Pooling Apps

Novo's Plan



Novo's Plan is the only guaranteed path to avoid stranding Novo's 480 acres

BTA's Plan is not feasible because surface owner objects to BTA's recommended surface locations

Vs.

BTA's Recommended Alternative Plan



From: Bell, Ric <Ric.Bell@mosaicco.com>

Sent: Thursday, November 07, 2019 11:55 AM

To: Brandon Patrick <bpatrick@novooil.com>

Subject: RE: Novo Response to BTA's Request to Move Drill Island in 8-23S-29E

Brandon,

Mosaic will object to the relocation of this drill island as it would impact our ore reserves.

Cheers,

Ric



Exhibit 7

Case No. 20916



Marathon's "Valkyrie" Pooling Applications

Notes

- Marathon has proposed 2-mile wells across Sections 12-23S-28E and 7-23S-29E
- Marathon and BTA are fighting over who will operate
- Marathon supports Novo's "Astrodog" plans
- Novo supports Marathon's plan because, unlike BTA's plan, it does not negatively impact Novo's "Astrodog" prospect



Marathon's "Valkyrie" plans and Novo's "Astrodog" plans will fully develop four (4) sections while minimizing surface disturbance, accommodating potash concerns, and preventing waste



MODRALL SPERLING

L A W Y E R S

November 8, 2019

Via Fed Ex and e-mail to ocd.hearings@state.nm.us

New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, New Mexico, 87505

Re: Support for Novo Oil & Gas Northern Delaware LLC's Astrodog cases, Case Numbers 20916 and 20917, located in the N/2 of Section 8 and the N/2 of Section 9, Township 23 South, Range 29, Eddy County, New Mexico

Ladies and Gentlemen,

Marathon Oil Permian LLC ("Marathon") submits this letter in support of Novo Oil & Gas Northern Delaware LLC's ("Novo") "Astrodog" cases, Case Numbers 20916 and 20917, which are set for hearing on November 14, 2019. Novo has proposed a two-mile development plan that would traverse Sections 8 and 9, of Township 23 South, Range 29 East, Eddy County, New Mexico.

Marathon has proposed a two-mile development plan ("Valkyrie") being represented by Case Number 20866 that would traverse the N/2 of Section 12 of Township 23 South, Range 28 East and the N/2 of Section 7 of Township 23 South, Range 29 East, Eddy County, New Mexico, as well as a two-mile development plan being represented by Case Number 20865 that would traverse the S/2N/2 of Section 12 of Township 23 South, Range 28 East and the S/2N/2 of Section 7 of Township 23 South, Range 29 East, Eddy County, New Mexico, also set for hearing on November 14, 2019.

It is Marathon's opinion that the Novo Astrodog and the Marathon Valkyrie development plans represent an efficient use of the surface in and around the Potash Area, as well as an efficient development of the subsurface minerals. Accordingly, Marathon supports the designation of Novo as operator and its planned development of the lands proposed to be included in the spacing units devoted to the Astrodog wells.

BTA Oil Producers, LLC ("BTA") has stated some concerns with respect to Novo's Astrodog planned development and Marathon's Valkyrie planned development for the N/2 of the relevant sections, including that BTA has a development plan for the N/2 of Section 7 and the NW/4 of Section 8.

Deana M. Bennett
Tel: 505.848.1834
Fax: 505.848.9710
deana.bennett@modrall.com

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New Mexico 87102

PO Box 2168
Albuquerque,
New Mexico 87103-2168

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www.modrall.com

Page 2

Marathon's opinion is that Novo's and Marathon's proposals will lead to more efficient development than those of BTA. Marathon also notes that BTA has not filed competing applications with the NM OCD.

If you have any further questions, please contact Chase Rice at Marathon. Mr. Rice's phone number is 713-296-3055. Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Deana M. Bennett". The signature is written in a cursive, flowing style.

Deana M. Bennett



Exhibit 8

Case No. 20916

Conclusion



Actions Taken by Novo

8/2019

Novo proposed wells
Novo scheduled onsite with BLM



4/2019

Novo worked with Mosaic (surface owner) to find pad locations

10/24/2019

Novo conducted onsite with BLM

11/14/2019

NMOCD Hearing for Novo's Pooling Apps

SUPPORTS / DOES NOT OPPOSE NOVO'S APPLICATIONS

1. **Mosaic** (surface owner)
2. **United Salt Carlsbad** (surface lessee of Salt Lake)
3. **OXY** (WI owner in pooled depths)
4. **Marathon** (offset operator)
5. **COG** (WI owner in other depths)

OPPOSES NOVO'S APPLICATIONS

1. **BTA** (WI owner in pooled depths)



Exhibit 9

Case No. 20916

Summary of Communication with Mosaic				
Date (all in 2019)	Medium of Communication	Affected Party	Party Type	Content
April 3 - 11	E-Mail	Mosaic	Surface Owner & Potash Lessee	Novo proposed pad locations for development of "Astrodog" prospect; Mosaic <u>rejected</u> Novo's proposed pad SE of the railroad track. Mosaic: "The ground that close to the salt lake is unstable and there is a risk of flooding, plus a very high risk of contamination to the salt lake should there be a release. They would prefer both well pads to be on the NW side of the rail tracks."
July 22 - 25	E-Mail	Mosaic	Surface Owner & Potash Lessee	As Mosaic requested, Novo proposed revised pad locations located NW of the railroad tracks. Novo submitted a completed form of Mosaic's Surface Use Application.
August 26 - 27	E-Mail	Mosaic	Surface Owner & Potash Lessee	Novo asked Mosaic if they would object to Novo using the existing, BLM-approved Drill Island located in the NW/4 NW/4 of Section 8-23S-29E (the "Nido de Salado" Drill Island). Mosaic: "We will not object to you using the approved BLM DI in Section 8"
October 29	Phone Call	Mosaic	Surface Owner & Potash Lessee	Novo informed Mosaic that BTA wants the "Nido de Salado" Drill Island to be moved to the E/2 NW/4 of Section 8. Mosaic expressed that they would object to moving the "Nido de Salado" Drill Island
October 29 - November 7	E-Mail	Mosaic	Surface Owner & Potash Lessee	Novo asked Mosaic to confirm in writing that Mosaic objects to the "Nido de Salado" Drill Island being moved to the E/2 NW/4 of Section 8. Mosaic: "Mosaic will object to the relocation of the drill island as it would impact our ore reserves."

Summary of Communication with United Salt Carlsbad				
Date (all in 2019)	Medium of Communication	Affected Party	Party Type	Content
October 24	In-Person Discussion	United Salt Carlsbad	Surface Lessee of Salt Lake	United Salt Carlsbad expressed that they did not have problems with Novo's "Astrodog" pad locations. Novo offered to do a Road Sharing Agreement on roads that both Novo and USC would jointly use. Novo promised to send surveys to USC
November 5 - 6	E-Mail	United Salt Carlsbad	Surface Lessee of Salt Lake	Novo sent surveys to USC and asked if USC would have concerns with Novo relocating its pads to the E/2 NW/4 of Section 8. USC said that USC prefers the current placement of Novo's pads "much more" than the one proposed by BTA due to less risk to USC's salt harvesting areas. USC further explained that, if a big rainfall occurred, a pad in BTA's recommended location would harm USC's harvesting areas, whereas a pad in Novo's current placement would <u>not</u> harm USC's harvesting areas.

Summary of Communication with BTA				
Date (all in 2019)	Medium of Communication	Affected Party	Party Type	Content
August 15 - 21	E-Mail	BTA	Pooled Party	Novo offered to do a trade with BTA where BTA would assign its interest in the NW/4 of Section 8 to Novo. BTA: "BTA has plans to develop the N/2 of Section 7 and the NW/4 of Section 8-T23S-R29E- Eddy County, New Mexico. We are not interested in trading the NW/4 of Section 8 per your proposal outlined in your 8/20/2019 e-mail. Thanks."
August 29	E-Mail	BTA	Pooled Party	BTA notified Novo that BTA is submitting "Ochoa" Development Area proposal. Novo: "We have been preparing a Development Area Proposal called "Astrodog" covering all of Sections 8 and 9, 23S-29E. Our DA proposal corresponds with the Astrodog wells that we proposed to BTA and OXY not too long ago. We need to drill 2-mile wells across Sections 8 and 9 due to surface and potash constraints. Novo owns minerals under some BTA-operated tracts in this area. We hope we can find a mutually beneficial trade or other type of deal to make both companies happy. Is BTA interested in working something out with Novo?" BTA asked Novo why Novo couldn't develop its minerals from the E/2 NW/4 of Section 8. BTA expressed that they would work with Novo however they can to accommodate surface locations that don't interfere with BTA's development plans.
September 3	E-Mail	BTA	Pooled Party	BTA asked to meet with Novo in person on September 5 at Novo's OKC office. Novo agreed to meet.
September 5	In-Person Meeting	BTA	Pooled Party	BTA suggested that Novo could move its pad locations to the E/2 NW/4 of Section 8 Novo notified BTA that Mosaic had expressed concerns about locating pads SE of the railroad tracks. Further, Novo was <u>not</u> optimistic that BTA's suggestion to relocate the drill islands would be approved. Novo invited BTA to attend the 10/24 BLM onsite. Novo and BTA agreed that they would <u>jointly</u> approach (via email) the BLM to discuss the idea of relocating the drill islands to the E/2 NW/4. Novo offered to send an email to Jim Rutley, but BTA's Land Manager asked Novo to hold off until he can discuss with BTA's engineer. Novo asked if BTA's Land Manager was finished discussing with BTA's engineer. BTA revealed that: (1) BTA had been communicating with the BLM without including Novo; (2) BTA had asked the BLM and Mosaic for approval of a pad location that BTA selected for Novo. Novo told BTA that they would consider BTA's proposed pad location, if the pad fully meets Novo's requirements
October 1	E-Mail	BTA	Pooled Party	Novo notified BTA that Novo objects to BTA's "Ochoa" Development Area proposal.

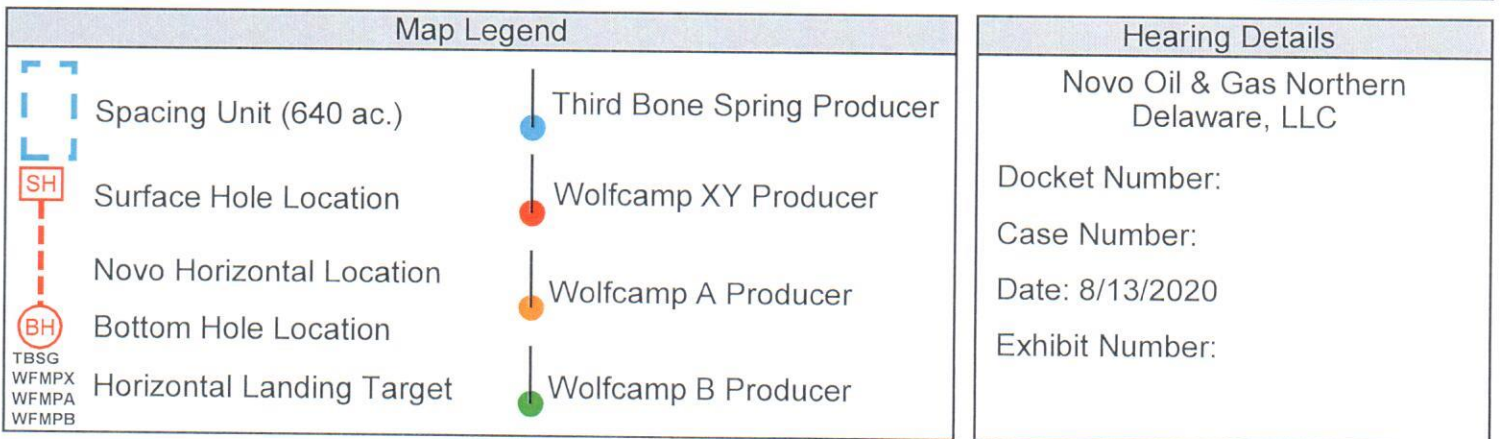
October 15 - 22	E-Mail	BTA	Pooled Party	BTA offered to have another meeting at Novo's office in OKC. Novo notified BTA that Novo was unable to meet in person before the 10/24 onsite; however, Novo was available to communicate via email. BTA called Novo's Land Manager and left a short voicemail. Novo replied via email and asked BTA to communicate via email. BTA: "The purpose of The purpose for my proposed trip to OKC and my telephone call to Novo was to reiterate that BTA will support a Novo surface location in the E/2NW/4 of Section 8 that does not interfere with BTA's development area filed covering the N/2 of Section 7 and NW/4 of Section 8-T23S-R29E-Eddy County, NM. BTA will support a development area filed by Novo covering the NE/4 of Section 8 and the N/2 of Section 9-T23S-R29E-Eddy County, NM. These two development areas will allow each party to develop its acreage with 1-1/2 mile horizontal wells and allow BTA to operate its acreage and Novo to operate its acreage. BTA will object to any Novo surface location that interferes with BTA's development area , or a development area filed by Novo that includes any of BTA's 474.11 acres (N/2 of Section 7 and NW/4 of Section 8-T23S-R29E-Eddy County, NM) that is covered by an existing Operating Agreement covering all depths and does not require pooling. BTA would prefer to work with Novo on the development of this this area but Novo's objection to BTA's development area leaves BTA with no option but to object to Novo's proposed drilling islands or any Novo development plan filed with the BLM that interferes with or includes any part of BTA's development area. BTA will oppose Novo's pooling applications on the Astrodog wells and will object to any Novo development areas filed within the Secretary's Potash Area that BTA is notified of until this issue is resolved and Novo withdraws its objection to BTA's development area. BTA will be attending the on-site for the Astrodog and the Saturninus drilling island onsite tomorrow. Please call me at 432-682-3753 should you wish to discuss, or my e-mail is wprice@btaoil.com."
October 23	E-Mail	BTA	Pooled Party	



Exhibit 10

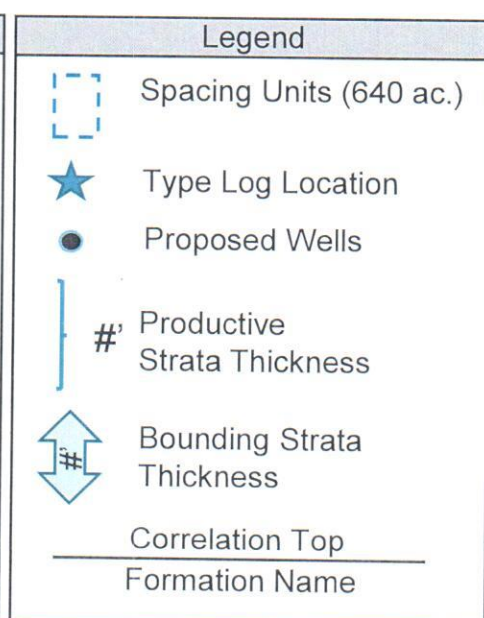
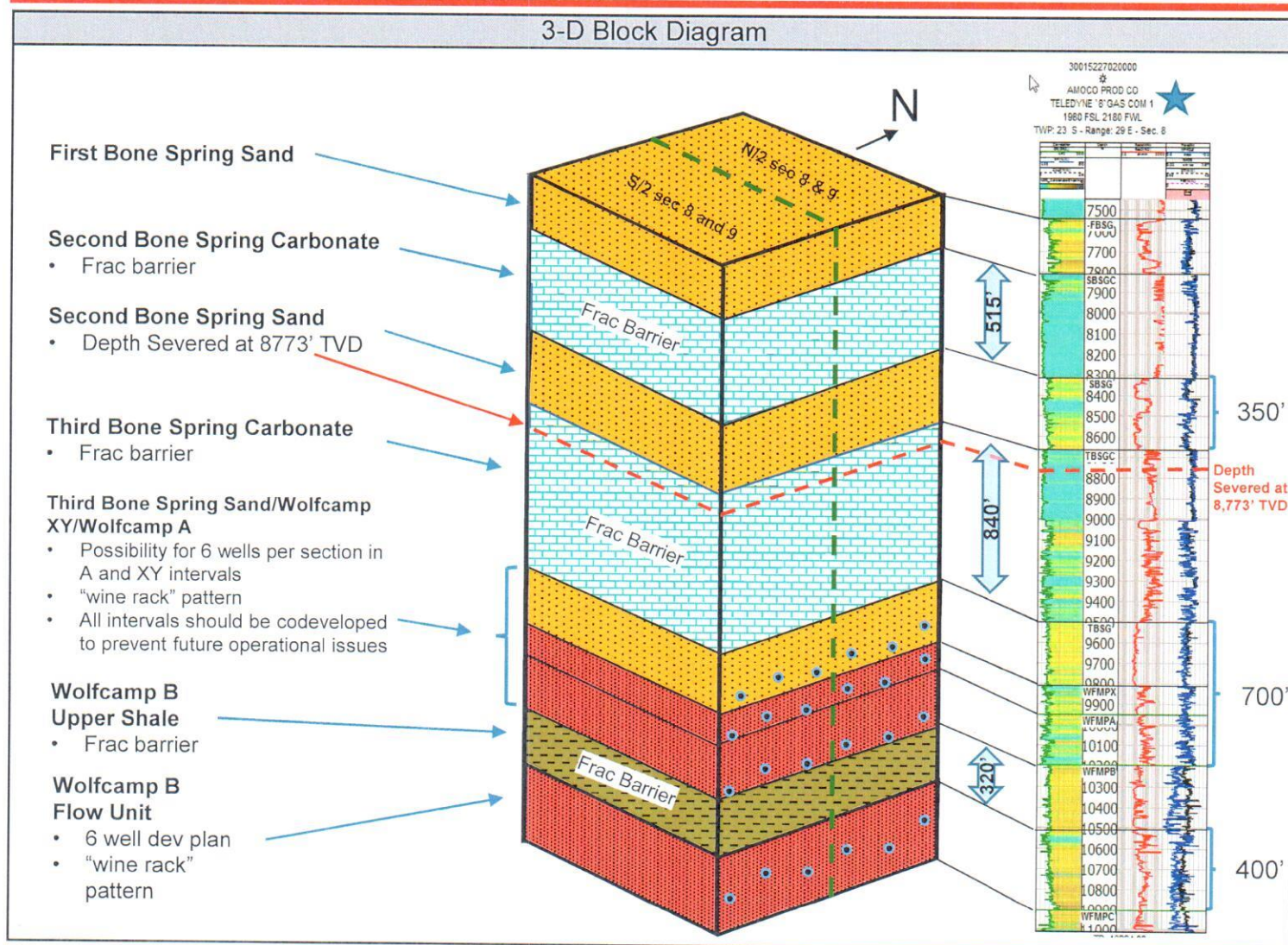
Case No. 20916

NOVO



Novo Development Plan: Astrodog Fed Com 0809 Units

Sections 08-23S-29E and 09-23S-29E

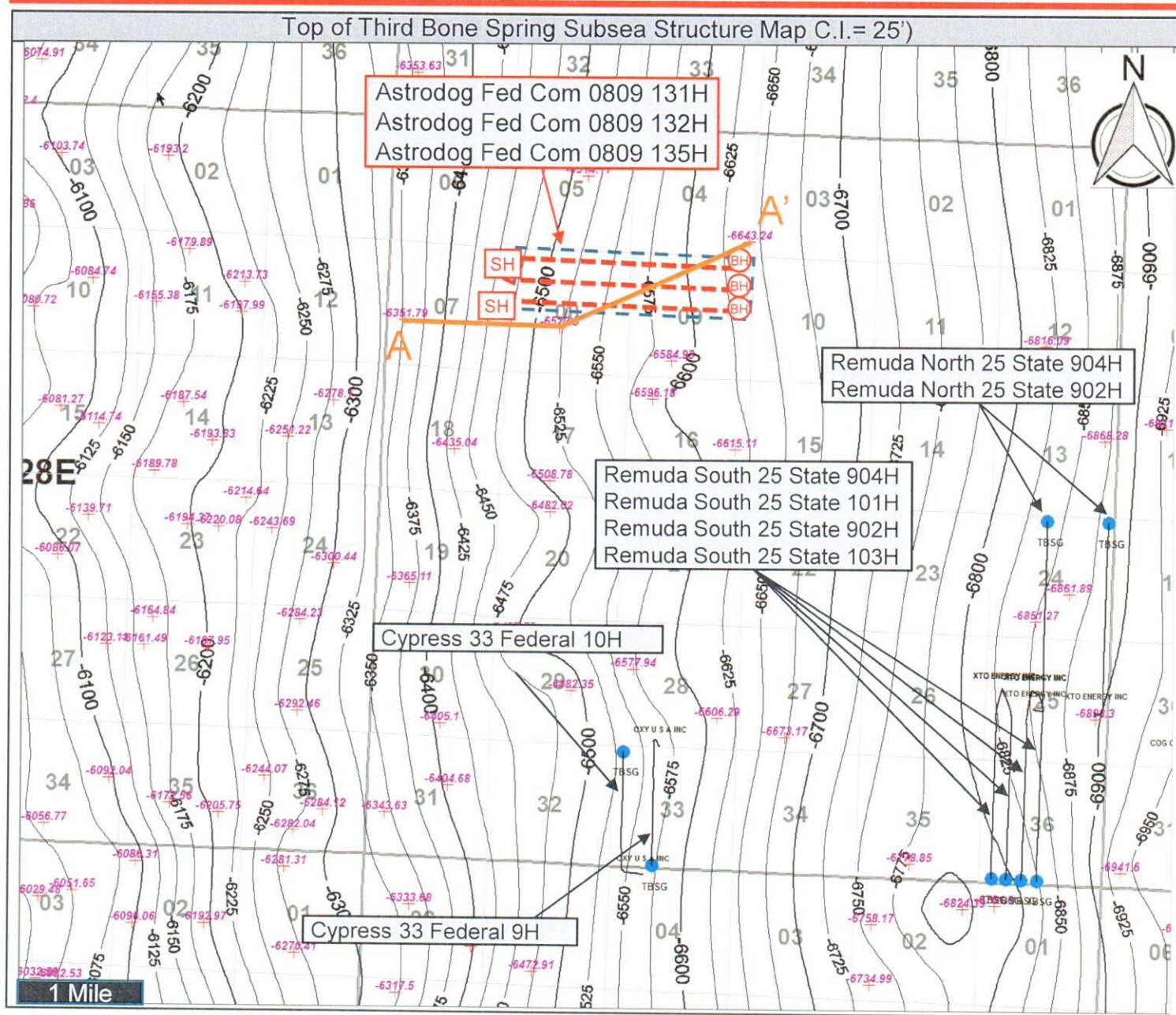


Novo Oil & Gas Northern Delaware, LLC	
Docket Number:	
Case Number:	
Date:	8/13/2020
Exhibit Number:	

Astrodog Fed Com 0809: Top of Third Bone Spring Structure Map



Third Bone Spring Proposed Locations; Sections 08-23S-29E and 09-23S-29E



Map Legend

- Spacing Unit (640 ac.)
- Surface Hole Location
- Novo Horizontal Location
- Bottom Hole Location
- TBSG Horizontal Landing Target
- Third Bone Spring Producer
- Datum value
- Third Bone Spring Subsea Structure
- Contour line – interval 25'
- Cross Section Line A' A'

Hearing Details

Novo Oil & Gas Northern Delaware, LLC

Docket Number:

Case Number:

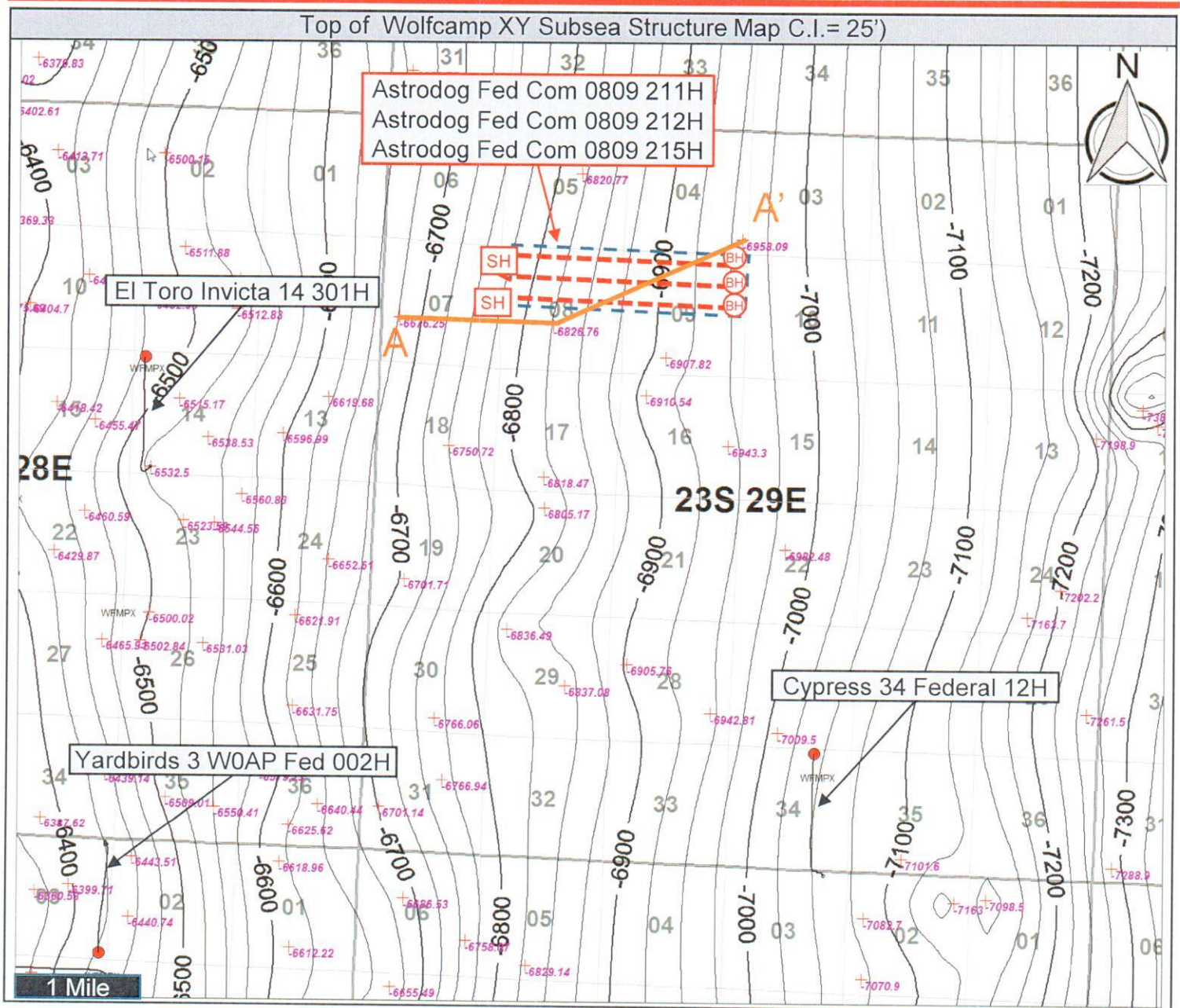
Date: 8/13/2020

Exhibit Number:

Astrodog Fed Com 0809: Top of Wolfcamp XY Structure Map



Wolfcamp XY Proposed Locations; Sections 08-23S-29E and 09-23S-29E



Map Legend

- Spacing Unit (640 ac.)
- Surface Hole Location
- Novo Horizontal Location
- Bottom Hole Location
- WFMPC Horizontal Landing Target
- Wolfcamp XY Producer
- Datum value
- Wolfcamp XY Subsea Structure
- Contour line – interval 25'
- Cross Section Line A A'

Hearing Details

Novo Oil & Gas Northern
Delaware, LLC

Docket Number:

Case Number:

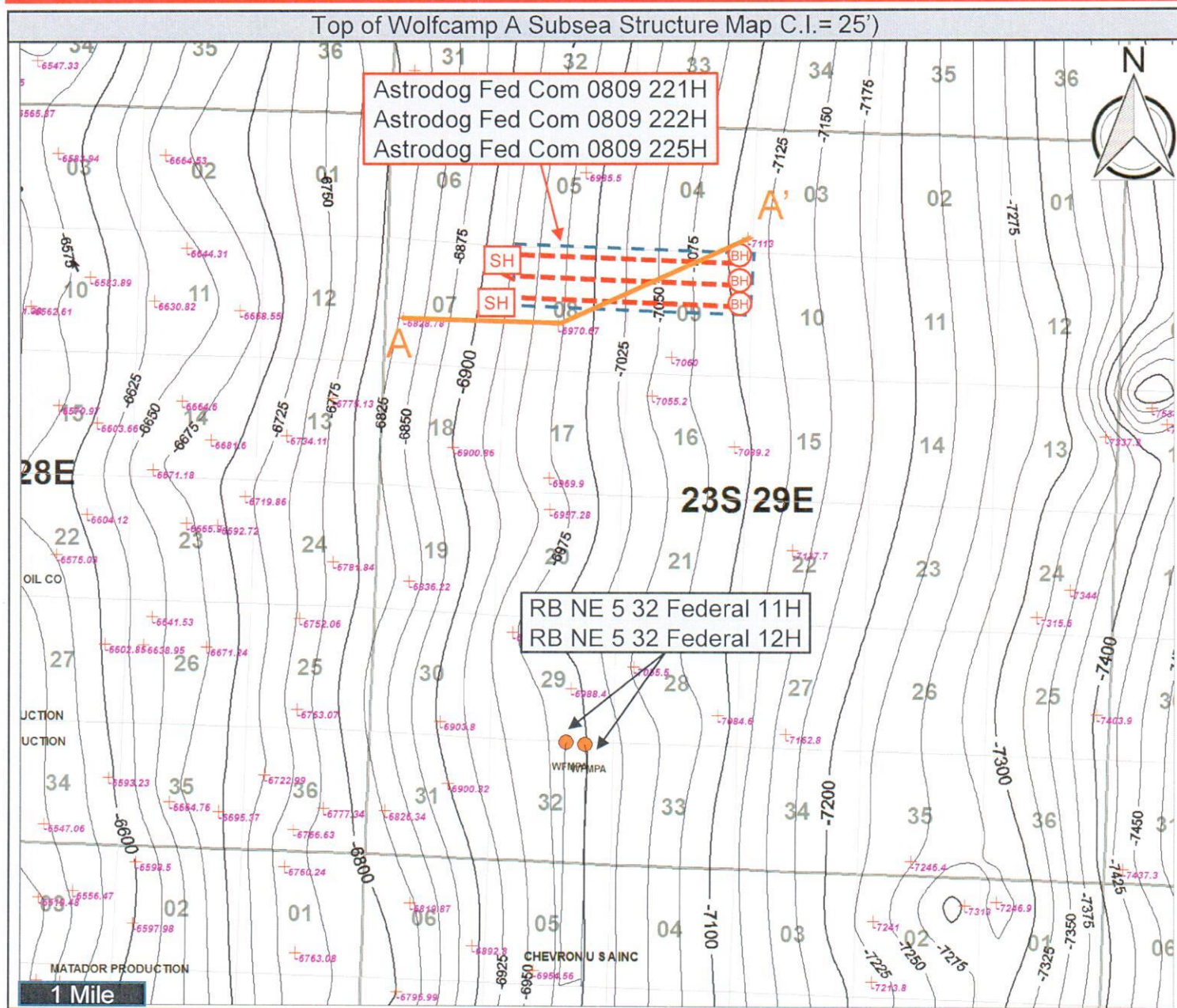
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Exhibit Number:

Astrodog Fed Com 0809: Top of Wolfcamp A Structure Map



Wolfcamp A Proposed Locations; Sections 08-23S-29E and 09-23S-29E



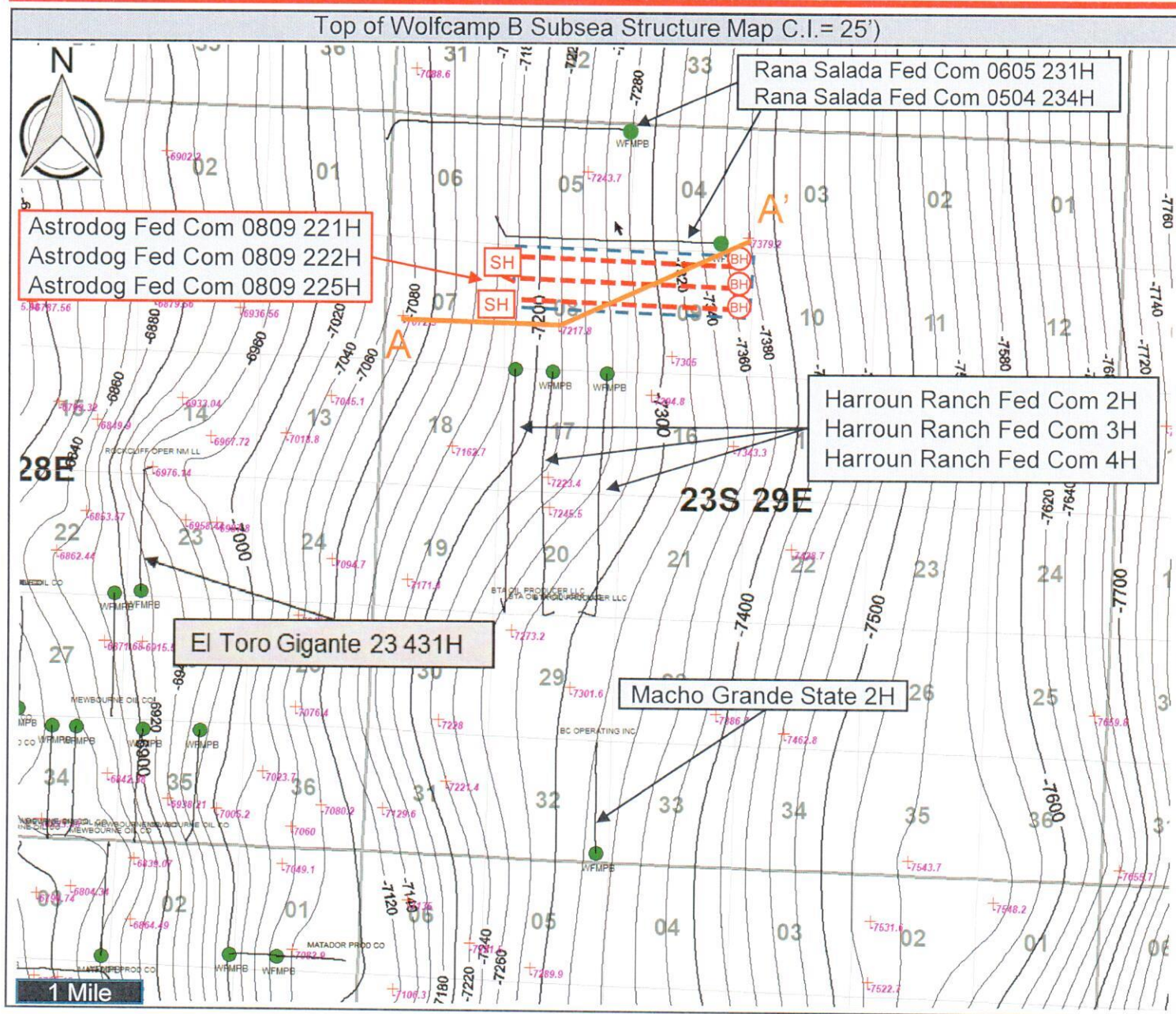
Map Legend	
	Spacing Unit (640 ac.)
	Surface Hole Location
	Novo Horizontal Location
	Bottom Hole Location
	WFMPA Horizontal Landing Target
	Wolfcamp A Producer
	Datum value
	Wolfcamp A Subsea Structure
	Contour line – interval 25'
	Cross Section Line

Hearing Details
Novo Oil & Gas Northern Delaware, LLC
Docket Number:
Case Number:
Date: 8/13/2020
Exhibit Number:

Astrodog Fed Com 0809: Top of Wolfcamp B Structure Map



Wolfcamp B Proposed Locations; Sections 08-23S-29E and 09-23S-29E



Map Legend	
	Spacing Unit (640 ac.)
	Surface Hole Location
	Novo Horizontal Location
	Bottom Hole Location
	WFMPB Horizontal Landing Target
	Wolfcamp B Producer
	Datum value
	Wolfcamp B Subsea Structure
	Contour line – interval 25'
	Cross Section Line

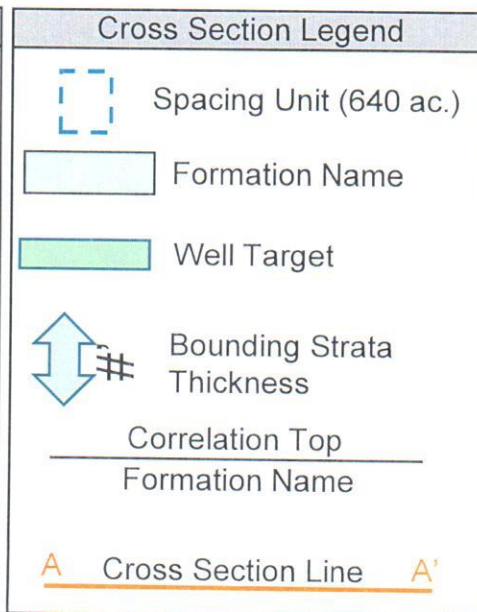
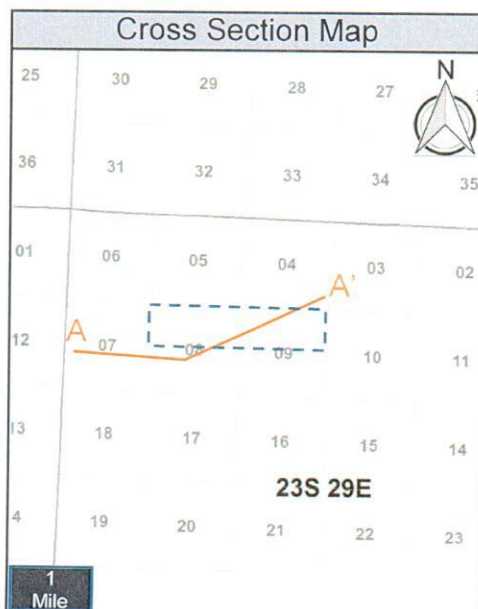
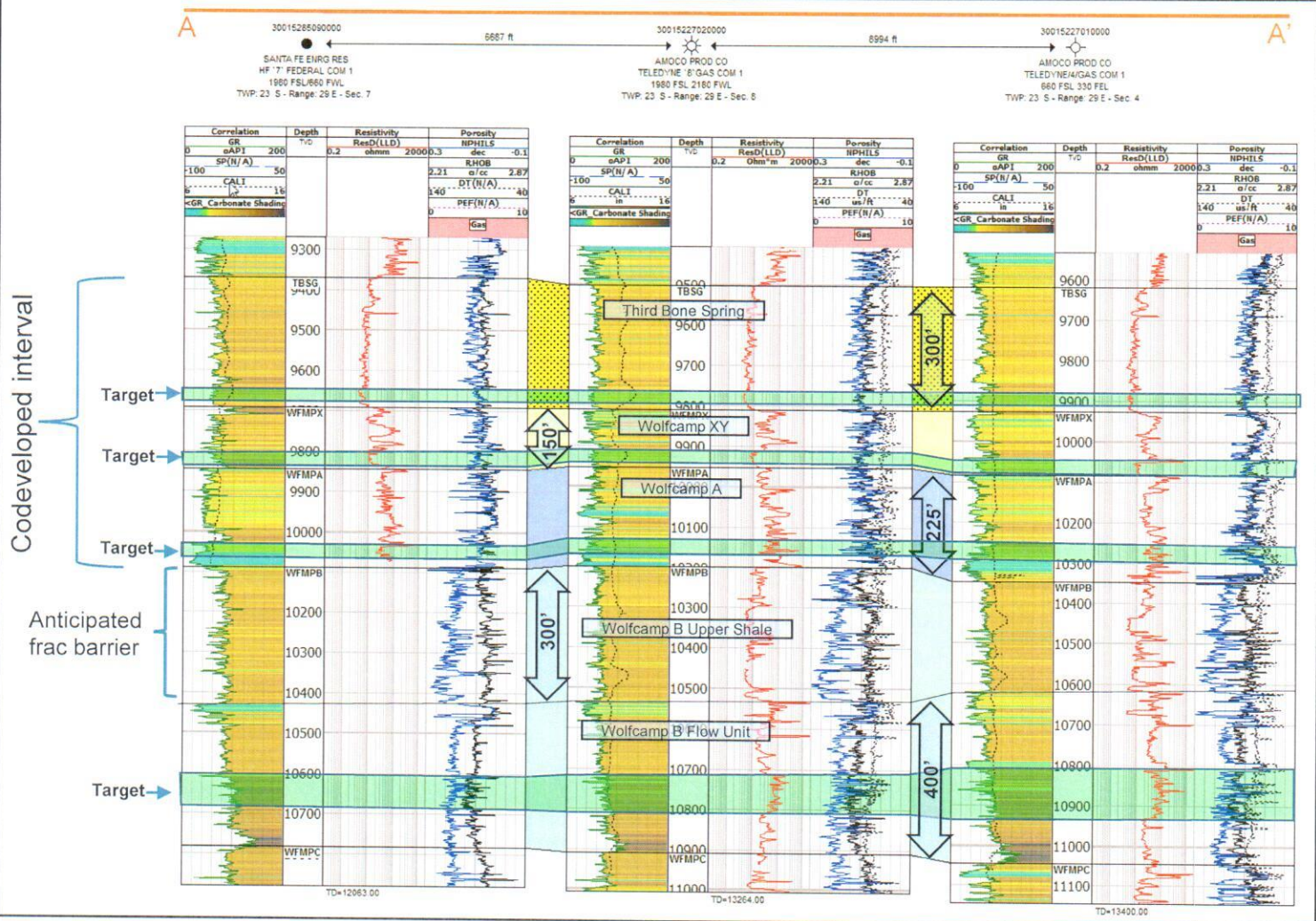
Hearing Details
Novo Oil & Gas Northern Delaware, LLC
Docket Number:
Case Number:
Date: 8/13/2020
Exhibit Number:

Astrodog– Third Bone Spring and Wolfcamp Stratigraphic Cross Section



Third Bone Spring, Wolfcamp XY, Wolfcamp A, and Wolfcamp B Proposed Locations;
Section 08-23S-29E and 09-23S-29E

Third Bone Spring and Wolfcamp Stratigraphic Cross Section (Ft) – Top of Wolfcamp XY Datum



Novo Oil & Gas Northern Delaware, LLC

Docket Number:

Case Number:

Date: 8/13/2020

Exhibit Number:



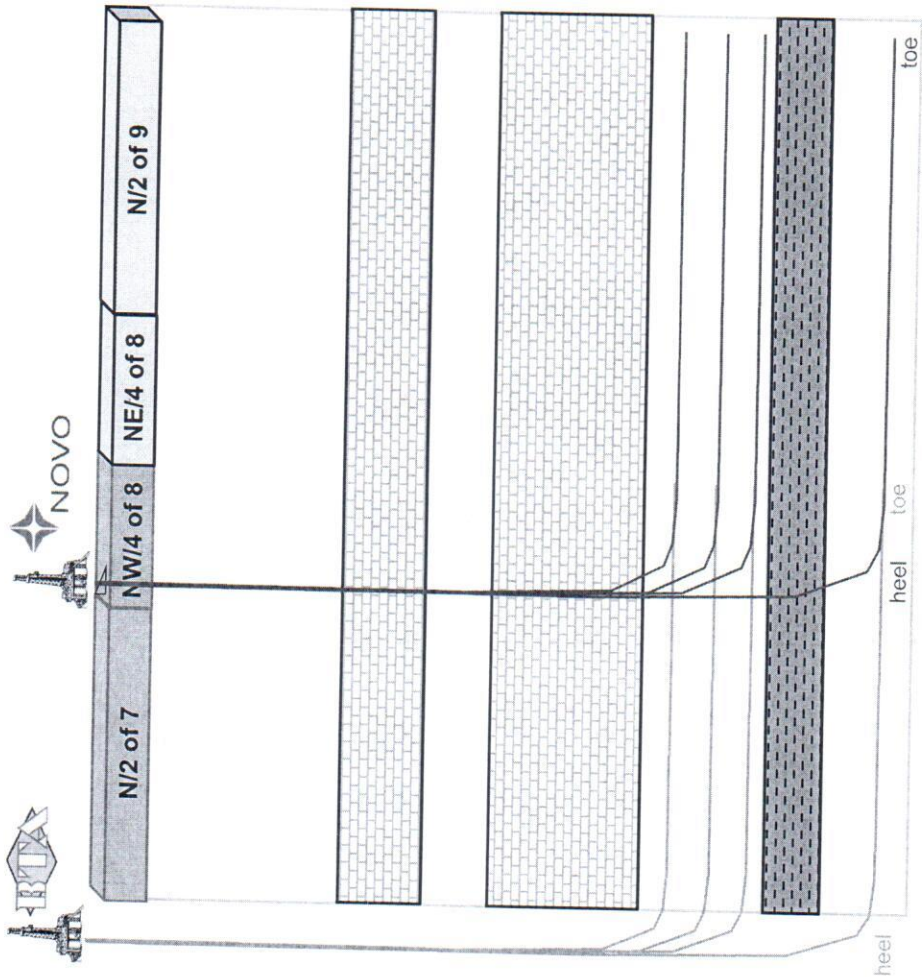
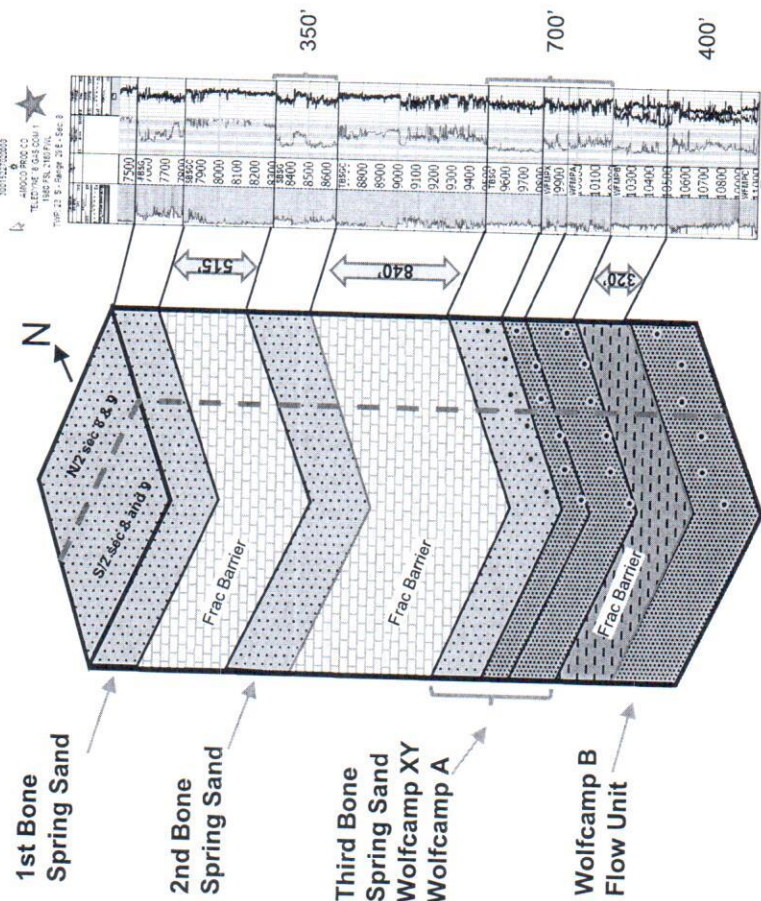
Exhibit 11

Case No. 20916

Wellbore Collision Risk



If BTA is allowed to drill into NW/4 of Sec. 8, Novo and BTA's development plans will overlap and increase risk of wellbore collision



- Modern drilling technology helps operators understand where wellbores are located, but the location of wellbores is not exact.
- The best an operator can do is understand that its wellbore is somewhere within the well's "ellipse of uncertainty".
 - The ellipse grows with the TMD of the well
 - Smallest at the well's "heel"
 - Largest at the well's "toe"

BTA's Ellipse of Uncertainty Novo's Ellipse of Uncertainty

