



NOVO

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

<sup>1</sup> API Number		<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
<sup>4</sup> Property Code	<sup>5</sup> Property Name ASTRODOG FED COM 0809		<sup>6</sup> Well Number 211H
<sup>7</sup> OGRID No. 372920	<sup>8</sup> Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC		<sup>9</sup> Elevation 3004.5

<sup>10</sup> Surface Location

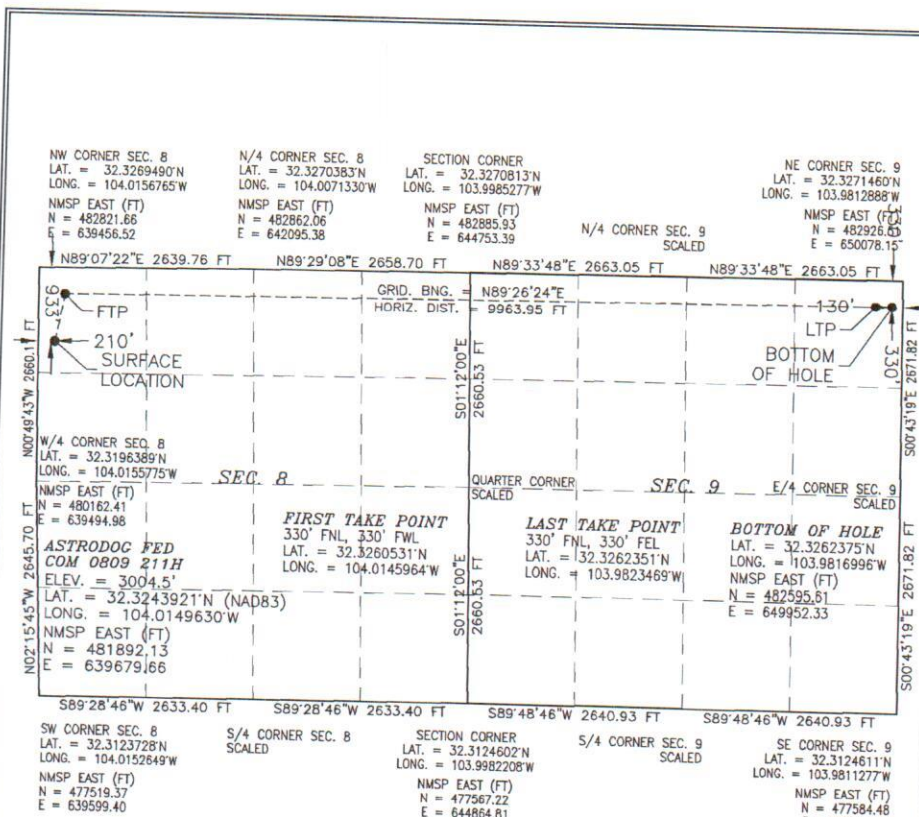
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	8	23 S	29 E		933	NORTH	210	WEST	EDDY

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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.



<sup>17</sup> 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 \_\_\_\_\_

<sup>18</sup> 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  
Surveyor: JARIMON E. JARAMILLO  
Survey No. 7770

EXHIBIT











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<sup>1</sup> API Number	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
<sup>4</sup> Property Code	<sup>5</sup> Property Name ASTRODOG FED COM 0809	<sup>6</sup> Well Number 221H
<sup>7</sup> OGRID No. 372920	<sup>8</sup> Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC	<sup>9</sup> Elevation 3004.5

<sup>10</sup> Surface Location

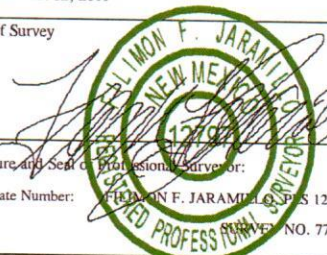
UL or lot no. D	Section 8	Township 23 S	Range 29 E	Lot Idn	Feet from the 969	North/South line NORTH	Feet from the 228	East/West line WEST	County EDDY
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. A	Section 9	Township 23 S	Range 29 E	Lot Idn	Feet from the 726	North/South line NORTH	Feet from the 130	East/West line EAST	County EDDY
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<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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<p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>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.</p> <p>NOVEMBER 12, 2019</p> <p>Date of Survey _____</p> <p>Signature and Seal of Professional Surveyor: </p> <p>Certificate Number: WILLIAM F. JARAMILA, P.S. 12797</p> <p>SURVEY NO. 7773</p>			



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

<sup>10</sup> Surface Location

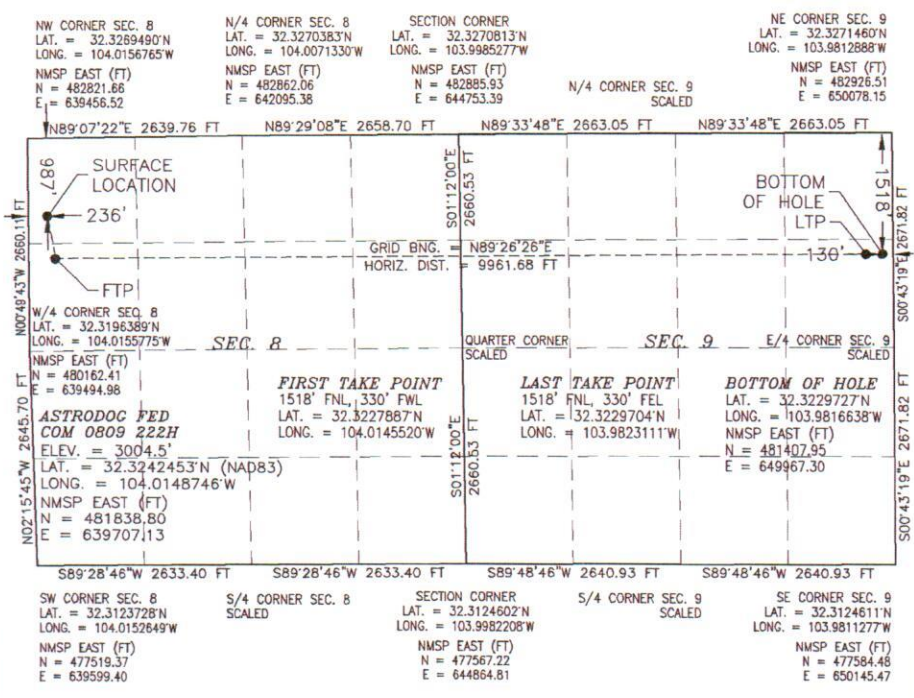

UL or lot no. D	Section 8	Township 23 S	Range 29 E	Lot Idn	Feet from the 987	North/South line NORTH	Feet from the 236	East/West line WEST	County EDDY
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. H	Section 9	Township 23 S	Range 29 E	Lot Idn	Feet from the 1518	North/South line NORTH	Feet from the 130	East/West line EAST	County EDDY
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<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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	<p><b><sup>18</sup> SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>NOVEMBER 12, 2019</p> <p>Date of Survey _____</p> <p>Signature and Seal of Professional Surveyor: </p> <p>Certificate Number: PL 12797-12840-12840 PLS 12797 SURVEY NO. 7774</p>



NW CORNER SEC. 8  
LAT. = 32.3289490°N  
LONG. = 104.0156765°W

NMSP EAST (FT)  
N = 482821.66  
E = 639456.52

N/4 CORNER SEC. 8  
LAT. = 32.3270383°N  
LONG. = 104.0071330°W

NMSP EAST (FT)  
N = 482862.06  
E = 642095.38

SECTION CORNER  
LAT. = 32.3270813°N  
LONG. = 103.9985277°W

N/4 CORNER SEC. 9  
LAT. = 32.3271460°N  
LONG. = 103.9812888°W

NMSP EAST (FT)  
N = 482885.93  
E = 644753.39

N89°07'22"E 2639.76 FT

N89°29'08"E 2658.70 FT

N89°33'48"E 2663.05 FT

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N89°29'08"E 2658.70 FT

N89°33'48"E 2663.05 FT

N89°33'48"E 2663.05 FT

**ASTRODOG FED COM 0809 226H**  
ELEV. = 3005.5'  
LAT. = 32.3226551°N (NAD83)  
LONG. = 104.0149710°W

NMSP EAST (FT)  
N = 481260.23  
E = 639679.08

GRID. BNG. = N89°26'27"E  
HORIZ. DIST. = 9960.20 FT

QUARTER CORNER SCALED

W/4 CORNER SEC. 8  
LAT. = 32.3196389°N  
LONG. = 104.0155775°W

NMSP EAST (FT)  
N = 480162.41  
E = 639494.98

SEC. 8

FIRST TAKE POINT  
2310' FNL, 330' FWL  
LAT. = 32.3206122°N  
LONG. = 104.0145226°W

LAST TAKE POINT  
2310' FNL, 330' FEL  
LAT. = 32.3207938°N  
LONG. = 103.9822872°W

SEC. 9

BOTTOM OF HOLE  
LAT. = 32.3207962°N  
LONG. = 103.9816399°W

NMSP EAST (FT)  
N = 480616.18  
E = 649977.28

E/4 CORNER SEC. 9  
LAT. = 32.3214611°N  
LONG. = 103.9811277°W

NMSP EAST (FT)  
N = 477584.46  
E = 650145.47

S89°28'46"W 2633.40 FT

S89°28'46"W 2633.40 FT

S89°48'46"W 2640.93 FT

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S89°48'46"W 2640.93 FT

S89°48'46"W 2640.93 FT

SW CORNER SEC. 8  
LAT. = 32.3123728°N  
LONG. = 104.0152649°W

NMSP EAST (FT)  
N = 477519.37  
E = 639599.40

S/4 CORNER SEC. 8  
LAT. = 32.3124602°N  
LONG. = 103.9982208°W

NMSP EAST (FT)  
N = 477567.22  
E = 644864.81

S/4 CORNER SEC. 9  
LAT. = 32.3124611°N  
LONG. = 103.9811277°W

NMSP EAST (FT)  
N = 477584.46  
E = 650145.47

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LAT. = 32.3207938°N  
LONG. = 103.9822872°W

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

<sup>10</sup> Surface Location

UL or lot no. D	Section 8	Township 23 S	Range 29 E	Lot Idn	Feet from the 861	North/South line NORTH	Feet from the 174	East/West line WEST	County EDDY
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<sup>11</sup> Bottom Hole Location If Different From Surface

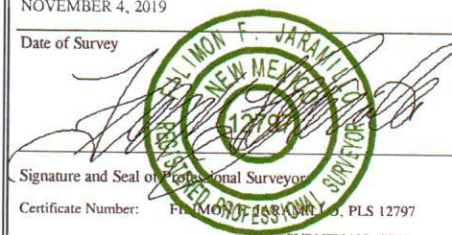
UL or lot no. A	Section 9	Township 23 S	Range 29 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 130	East/West line EAST	County EDDY
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<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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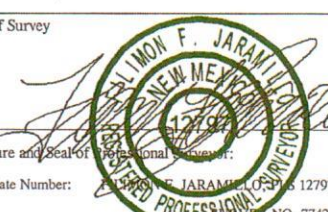
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<sup>4</sup> Property Code		<sup>5</sup> Property Name ASTRODOG FED COM 0809		<sup>6</sup> Well Number 235H					
<sup>7</sup> OGRID No. 372920		<sup>8</sup> Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC		<sup>9</sup> Elevation 3005.5					
<sup>10</sup> 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
<sup>11</sup> 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
<sup>12</sup> Dedicated Acres		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.			

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Signature _____ Date _____					
Printed Name _____					
E-mail Address _____					
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NOVEMBER 4, 2019					
Date of Survey _____					
Signature and Seal of Professional Surveyor: 					
Certificate Number: 12797					

NW CORNER SEC. 8  
LAT. = 32.3269490°N  
LONG. = 104.0156765°W  
NMSP EAST (FT)  
N = 482821.86  
E = 639456.52

N/4 CORNER SEC. 8  
LAT. = 32.3270383°N  
LONG. = 104.0071330°W  
NMSP EAST (FT)  
N = 482885.93  
E = 642095.38

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

NE CORNER SEC. 9  
LAT. = 32.3271460°N  
LONG. = 103.9812888°W  
NMSP EAST (FT)  
N = 482926.51  
E = 650078.15

N/4 CORNER SEC. 9  
LAT. = 32.3271460°N  
LONG. = 103.9812888°W  
NMSP EAST (FT)  
N = 482926.51  
E = 650078.15

ASTRODOG FED COM 0809 235H  
ELEV. = 3005.5'  
LAT. = 32.3217895°N (NAD83)  
LONG. = 104.0149593°W  
NMSP EAST (FT)  
N = 480945.33  
E = 639683.64

GRID BNG. HORIZ. DIST. = 9960.64 FT  
QUARTER CORNER SCALED

W/4 CORNER SEC. 8  
LAT. = 32.3196389°N  
LONG. = 104.0155775°W  
NMSP EAST (FT)  
N = 480182.41  
E = 639484.98

FIRST TAKE POINT  
2178' FNL, 330' FWL  
LAT. = 32.3209747°N  
LONG. = 104.0145281°W

LAST TAKE POINT  
2178' FNL, 330' FWL  
LAT. = 32.3211566°N  
LONG. = 103.9822912°W

SW CORNER SEC. 8  
LAT. = 32.3123728°N  
LONG. = 104.0152649°W  
NMSP EAST (FT)  
N = 477519.37  
E = 639599.40

S/4 CORNER SEC. 8  
LAT. = 32.3124602°N  
LONG. = 103.9982208°W  
NMSP EAST (FT)  
N = 477567.22  
E = 644864.81

S/4 CORNER SEC. 9  
LAT. = 32.3124611°N  
LONG. = 103.9811277°W  
NMSP EAST (FT)  
N = 477584.48  
E = 650145.47

SE CORNER SEC. 9  
LAT. = 32.3211590°N  
LONG. = 103.9816439°W  
NMSP EAST (FT)  
N = 480748.14  
E = 649975.62





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

EXHIBIT

2

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](mailto: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.

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\_\_\_\_\_ 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

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Recipient Address:  
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100 THROCKMORTON ST STE 1600  
FORT WORTH, TX 76102-2846  
1111111111

Scheduled Delivery Date 07/31/2019

Pricing option:  
STANDARD RATE

Package Information:  
FedEx Envelope

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FedEx Priority Overnight  
788798456455 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

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FedEx Envelope

Shipment subtotal: \$93.24

Total Due: \$93.24

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\*\*\*\*\*4154

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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.  
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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.

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

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

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\_\_\_\_\_ 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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OK 73116  
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Scheduled Delivery Date 08/15/2019

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Shipment subtotal: \$8.65

Total Due: \$8.65

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NOVO OIL & GAS NORTHERN DELAWARE, LLC  
AUTHORIZATION FOR EXPENDITURE  
1001 West Wilshire, Suite 208  
Oklahoma City, Oklahoma 73118  
(405) 285-4391

WELL NAME	Astrolog 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/TMD)	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 9,800' horizontal well. Secretary Potash Area				
ACCT. CODE	DESCRIPTION OF EXPENDITURE				
	INTANGIBLE COSTS		COST ESTIMATE		
		DRILLING (\$00)	COMPLETION (\$00)		
01 SURVEY/PERMITS/DAMAGES/LEGAL					
02 LOCATION & ROAD		\$ 50,000		\$ 50,000	
03 RIG MOVE		150,000		150,000	
04 DRILLING - FOOTAGE		150,000		150,000	
05 DRILLING - DAYWORK		50,000		50,000	
06 COMPLETION/WORKOVER RIG		854,000		854,000	
07 COIL TUBING/SNUBBING UNIT			60,000	60,000	
08 SLICKLINE/SWABBING			160,000	160,000	
09 BITS				0	
10 DIRECTIONAL SERVICES		150,000	5,000	155,000	
11 CASING CREW		240,000		240,000	
12 TOOL & EQUIPMENT RENTAL		100,000		100,000	
13 FUEL & POWER		50,000	80,000	130,000	
14 DIESEL - BASE FOR MUD		204,000		204,000	
15 MUD LOGGING & GEOLOGIST		100,000	200,000	300,000	
16 DISPOSAL, RESTORATION & BACKFILL		24,000		24,000	
17 TRUCKING		150,000		150,000	
18 TESTING		120,000	40,000	160,000	
19 CEMENTING				0	
20 PERFORATING		200,000		200,000	
21 CASED HOLE LOGS			358,000	358,000	
22 DOWNHOLE TOOLS & SERVICE				0	
23 OTHER STIMULATION			75,000	75,000	
24 FORMATION STIMULATION			120,000	120,000	
25 CONSULTING SERVICES			4,000,000	4,000,000	
26 SUPERVISION			20,000	20,000	
27 CONTRACT LABOR		120,000	100,000	220,000	
28 OTHER LABOR		5,000	20,000	25,000	
29 COMPANY CONSULTING/SUPV			100,000	100,000	
30 WATER				0	
31 FLUIDS & CHEMICALS		50,000	1,200,000	1,250,000	
32 CORING & ANALYSIS		200,000		200,000	
33 COMMUNICATIONS				0	
34 BOP TESTING		10,000	10,000	20,000	
35 FISHING TOOLS & SERVICES		20,000	10,000	30,000	
37 INSPECTIONS				0	
38 WIRELINE SERVICES		10,000	5,000	15,000	
39 ENGINEERING & GEOLOGY - FIELD				0	
40 ENGINEERING & GEOLOGY - OFFICE				0	
41 MULTISHOT & GYRO		15,000		15,000	
42 RE-ENTRY SERVICES				0	
43 CAMPS & TRAILERS				0	
44 SAFETY EQUIPMENT & H2S		15,000	15,000	30,000	
45 CONTINGENCY		10,000	5,000	15,000	
46 INSURANCE				0	
47 MISCELLANEOUS		10,000	2,000	12,000	
49 SIM-OPS		10,000	10,000	20,000	
TOTAL INTANGIBLE COSTS		\$ 3,067,000	\$ 6,595,000	\$ 9,662,000	
	TANGIBLE COSTS	DRILLING (\$00)	COMPLETION (\$00)	TOTAL	
01 CASING - CONDUCTOR					
02 CASING - SURFACE		10,000		10,000	
03 CASING - INTERMEDIATE		20,000		20,000	
04 CASING - INTERMEDIATE 2		85,000		85,000	
05 CASING - PRODUCTION / LINER		305,000		305,000	
06 SUBSURFACE EQUIPMENT		545,000		545,000	
07 PRODUCTION TUBING		50,000	25,000	75,000	
08 SUBSURFACE PUMPING EQUIPMENT			55,000	55,000	
09 WELLHEAD EQUIPMENT				0	
10 FLOWLINES		60,000	10,000	70,000	
11 SURFACE PUMPING EQUIPMENT			100,000	100,000	
12 LINER HANGER & ASSOC EQUIP				0	
13 VALVES & FITTINGS				0	
15 RODS			200,000	200,000	
17 TRUCKING				0	
20 RE-ENTRY EQUIPMENT		40,000	2,000	42,000	
34 PRODUCTION EQUIPMENT				0	
47 MISCELLANEOUS			600,000	600,000	
49 TANGIBLE EQUIP-ACQUISITIONS		10,000	10,000	20,000	
TOTAL INTANGIBLE COSTS		\$ 1,125,000	\$ 1,062,000	\$ 2,127,000	
TOTAL ESTIMATED WELL COST		\$ 4,192,000	\$ 7,597,000	\$ 11,789,000	

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

PARTNER COMPANY NAME: \_\_\_\_\_  
PARTNER APPROVAL: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

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.

EXHIBIT







NOVO OIL & GAS NORTHERN DELAWARE, LLC  
AUTHORIZATION FOR EXPENDITURE  
1001 West Village, Suite 200  
Oklahoma City, Oklahoma 73116  
405-286-4391

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 (600)		
01	SURVEY/PERMITS/DAMAGES/LEGAL					
02	LOCATION & ROAD		\$ 50,000		\$	50,000
03	RIG MOVE		150,000			150,000
04	DRILLING - FOOTAGE		150,000			150,000
05	DRILLING - DAYWORK		50,000			50,000
06	COMPLETION/WORKOVER RIG		854,000			854,000
07	COIL TUBING/SNUBBING UNIT			60,000		60,000
08	SLICKLINE/SWABBING			160,000		160,000
09	BITS					0
10	DIRECTIONAL SERVICES		150,000	5,000		155,000
11	CASING CREW		240,000			240,000
12	TOOL & EQUIPMENT RENTAL		100,000			100,000
13	FUEL & POWER		60,000	80,000		130,000
14	DIESEL - BASE FOR MUD		204,000	200,000		404,000
15	MUD LOGGING & GEOLOGIST		100,000			100,000
16	DISPOSAL, RESTORATION & BACKFILL		24,000			24,000
17	TRUCKING		150,000			150,000
18	TESTING		120,000	40,000		160,000
19	CEMENTING					0
20	PERFORATING		200,000			200,000
21	CASED HOLE LOGS			358,000		358,000
22	DOWNHOLE TOOLS & SERVICE					0
23	OTHER STIMULATION			75,000		75,000
24	FORMATION STIMULATION			120,000		120,000
25	CONSULTING SERVICES			4,000,000		4,000,000
26	SUPERVISION			20,000		20,000
27	CONTRACT LABOR		120,000	100,000		220,000
28	OTHER LABOR		5,000	20,000		25,000
29	COMPANY CONSULTING/SUPV			100,000		100,000
30	WATER					0
31	FLUIDS & CHEMICALS		50,000	1,200,000		1,250,000
32	CORING & ANALYSIS		200,000			200,000
33	COMMUNICATIONS					0
34	BOP TESTING		10,000	10,000		20,000
35	FISHING TOOLS & SERVICES		20,000	10,000		30,000
37	INSPECTIONS					0
38	WIRELINE SERVICES		10,000	5,000		15,000
39	ENGINEERING & GEOLOGY - FIELD					0
40	ENGINEERING & GEOLOGY - OFFICE					0
41	MULTISHOT & GYRO		15,000			15,000
42	RE-ENTRY SERVICES					0
43	CAMPS & TRAILERS					0
44	SAFETY EQUIPMENT & H2S		15,000	15,000		30,000
45	CONTINGENCY		10,000	5,000		15,000
46	INSURANCE					0
47	MISCELLANEOUS		10,000	2,000		12,000
49	SIM-OPS		10,000	10,000		20,000
	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					0
15	RODS			200,000		200,000
17	TRUCKING					0
20	RE-ENTRY EQUIPMENT		40,000	2,000		42,000
34	PRODUCTION EQUIPMENT					0
47	MISCELLANEOUS			600,000		600,000
49	TANGIBLE EQUIP-ACQUISITIONS		10,000	10,000		20,000
	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 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 206  
Oklahoma City, Oklahoma 73116  
405-280-4391

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			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			75,000	75,000
22	DOWNHOLE TOOLS & SERVICE			120,000	120,000
23	OTHER STIMULATION			4,000,000	4,000,000
24	FORMATION STIMULATION			20,000	20,000
25	CONSULTING SERVICES		120,000	100,000	220,000
26	SUPERVISION		5,000	20,000	25,000
27	CONTRACT LABOR			100,000	100,000
28	OTHER LABOR				0
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				0
40	MULTISHOT & GYRO		15,000		15,000
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		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
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 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 Cattle 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  
405-286-4391

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/SWABBING				
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				
19	CEMENTING		200,000		200,000
20	PERFORATING			358,000	358,000
21	CASED HOLE LOGS				
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				
30	WATER		50,000	1,200,000	1,250,000
31	FLUIDS & CHEMICALS		200,000		200,000
32	CORING & ANALYSIS				
33	COMMUNICATIONS		10,000	10,000	20,000
34	BOP TESTING		20,000	10,000	30,000
36	FISHING TOOLS & SERVICES				
37	INSPECTIONS		10,000	5,000	15,000
38	WIRELINE SERVICES				
39	ENGINEERING & GEOLOGY - FIELD				
40	ENGINEERING & GEOLOGY - OFFICE		15,000		15,000
41	MULTISHOT & GYRO				
42	RE-ENTRY SERVICES				
43	CAMPS & TRAILERS		15,000	15,000	30,000
44	SAFETY EQUIPMENT & H2S		10,000	5,000	15,000
45	CONTINGENCY				
46	INSURANCE		10,000	2,000	12,000
47	MISCELLANEOUS		10,000	10,000	20,000
49	SIM-OPS				
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				
09	WELLHEAD EQUIPMENT		60,000	10,000	70,000
10	FLOWLINES			100,000	100,000
11	SURFACE PUMPING EQUIPMENT				
12	LINER HANGER & ASSOC EQUIP				
13	VALVES & FITTINGS			200,000	200,000
15	RODS				
17	TRUCKING		40,000	2,000	42,000
20	RE-ENTRY EQUIPMENT				
34	PRODUCTION EQUIPMENT			600,000	600,000
47	MISCELLANEOUS		10,000	10,000	20,000
49	TANGIBLE EQUIP-ACQUISITIONS				
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 Cattle 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 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 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			75,000	75,000
22	DOWNHOLE TOOLS & SERVICE			120,000	120,000
23	OTHER STIMULATION			4,000,000	4,000,000
24	FORMATION STIMULATION			20,000	20,000
25	CONSULTING SERVICES		120,000	100,000	220,000
26	SUPERVISION		5,000	20,000	25,000
27	CONTRACT LABOR			100,000	100,000
28	OTHER LABOR				0
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				0
40	MULTISHOT & GYRO		15,000		15,000
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		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
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 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: \_\_\_\_\_

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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 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 (600)	
01	SURVEY/PERMITS/DAMAGES/LEGAL		\$ 50,000		\$ 50,000
02	LOCATION & ROAD		150,000		150,000
03	RIG MOVE		160,000		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		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
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 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 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: \_\_\_\_\_  
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**NOVO OIL & GAS NORTHERN DELAWARE, LLC**  
**AUTHORIZATION FOR EXPENDITURE**  
 1001 West Wilshire, Suite 200  
 Oklahoma City, Oklahoma 73116  
 405-286-4391

WELL NAME	Astrodog 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			
	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		75,000		75,000
22	DOWNHOLE TOOLS & SERVICE		120,000		120,000
23	OTHER STIMULATION		4,000,000		4,000,000
24	FORMATION STIMULATION		20,000		20,000
25	CONSULTING SERVICES		100,000		100,000
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: \_\_\_\_\_

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

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 B	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 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		75,000		75,000
22	DOWNHOLE TOOLS & SERVICE		120,000		120,000
23	OTHER STIMULATION		4,000,000		4,000,000
24	FORMATION STIMULATION		20,000		20,000
25	CONSULTING SERVICES	120,000	100,000		220,000
26	SUPERVISION	5,000	20,000		25,000
27	CONTRACT LABOR		100,000		100,000
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	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
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 INTANGIBLE COSTS	\$ 1,125,000	\$ 1,002,000	\$	2,127,000
21	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: 7/19/2019  
 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**  
 1001 West Wilshire, Suite 200  
 Oklahoma City, Oklahoma 73116  
 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			
	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
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	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
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

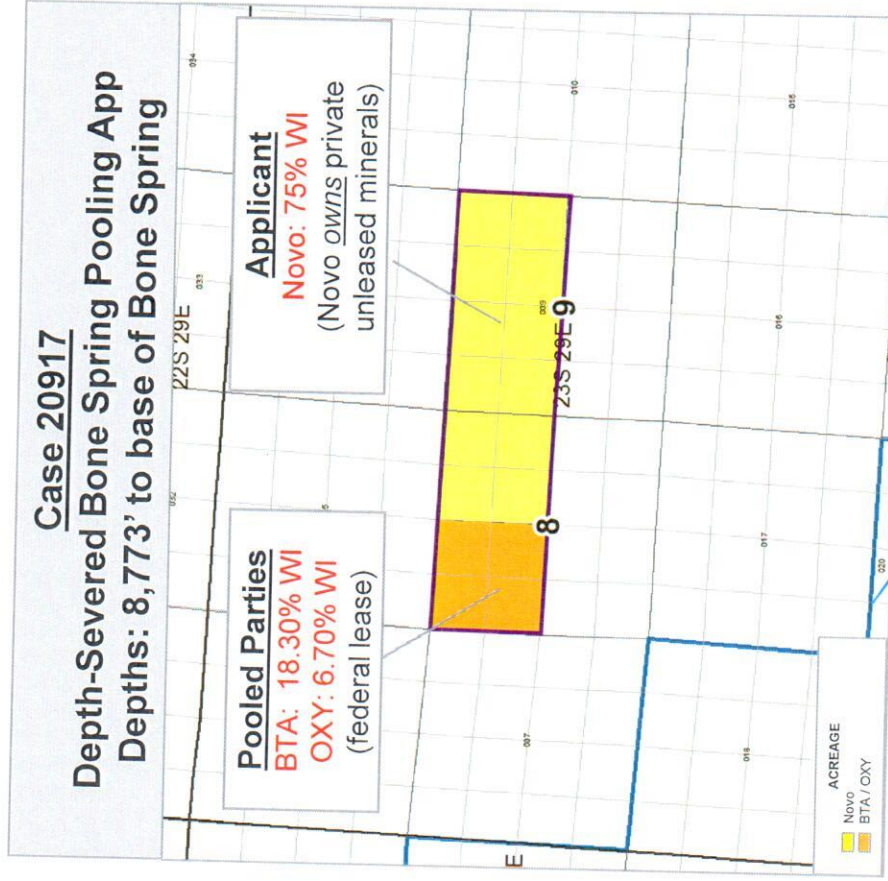
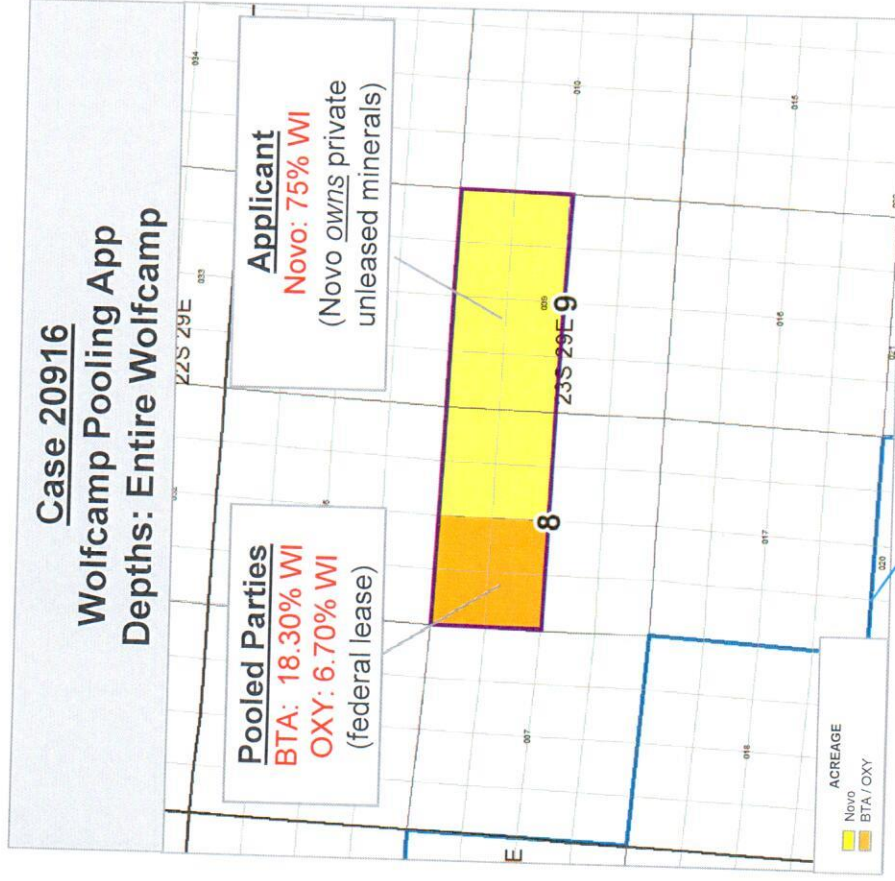
PREPARED BY: Aaron Catley Senior Operations Engineer DATE: 7/29/2019  
 OPERATOR APPROVAL: [Signature] VP - Operations DATE: 7/29/2019  
 OPERATOR APPROVAL: [Signature] CEO or COO DATE: 7/30/19

PARTNER COMPANY NAME: \_\_\_\_\_  
 PARTNER APPROVAL: \_\_\_\_\_ DATE: \_\_\_\_\_  
 TITLE: \_\_\_\_\_

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# Land Overview





# History of Prospect

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

2

11/2018: BTA acquires acreage

3

7/2019: Novo acquires acreage

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 ultimately acquired the interest that Titus pursued in July 2019



EXHIBIT 5

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





# Novo Contacts Mosaic to Plan Surface

## Actions Taken by Novo

EXHIBIT **6**

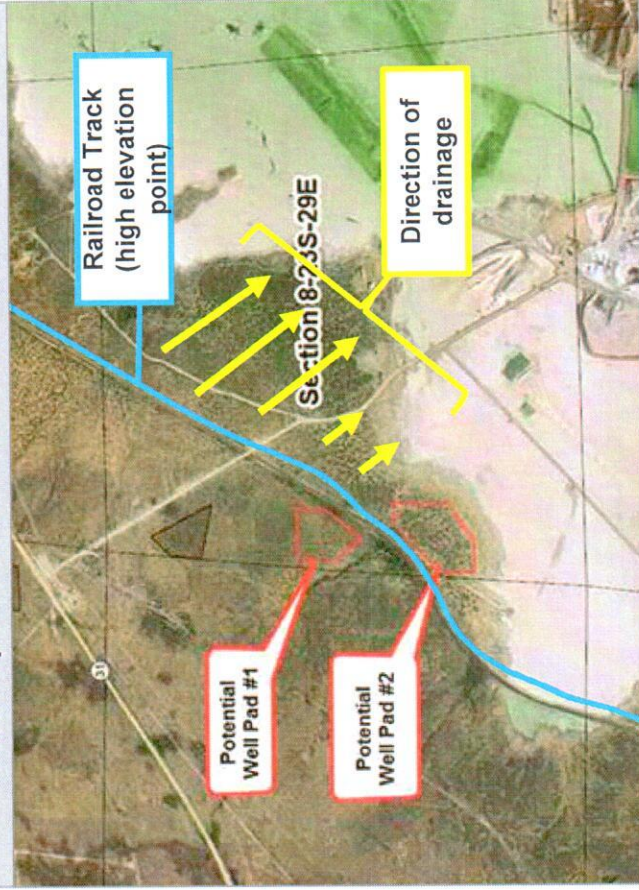
August 2019  
Novo proposed wells  
Novo scheduled onsite with BLM

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

October 2019  
Novo conducted onsite with BLM

November 2019  
NMOCD Hearing for Novo's Pooling Apps on 11/14/19

## Base 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@novooog.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

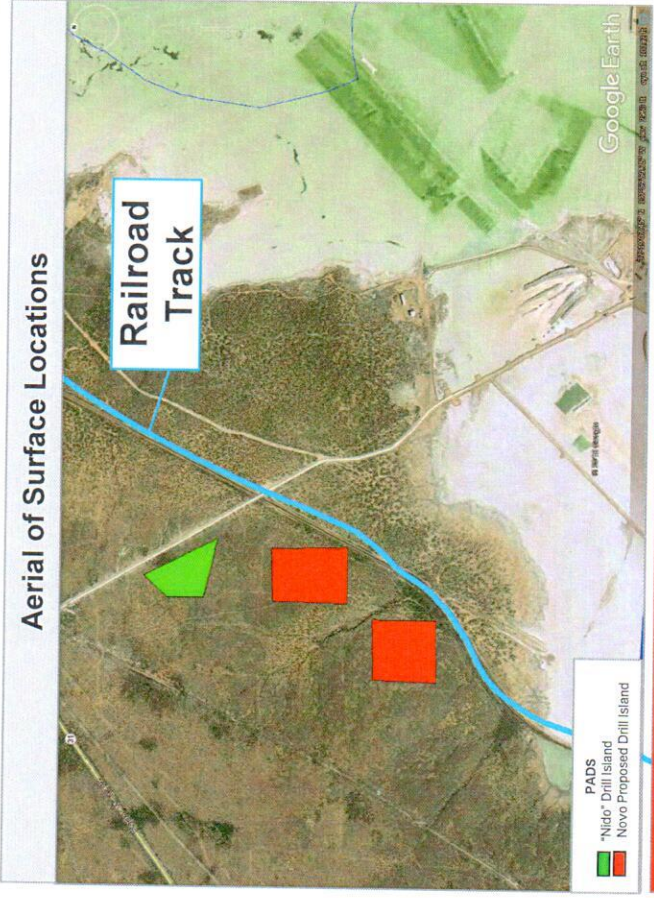
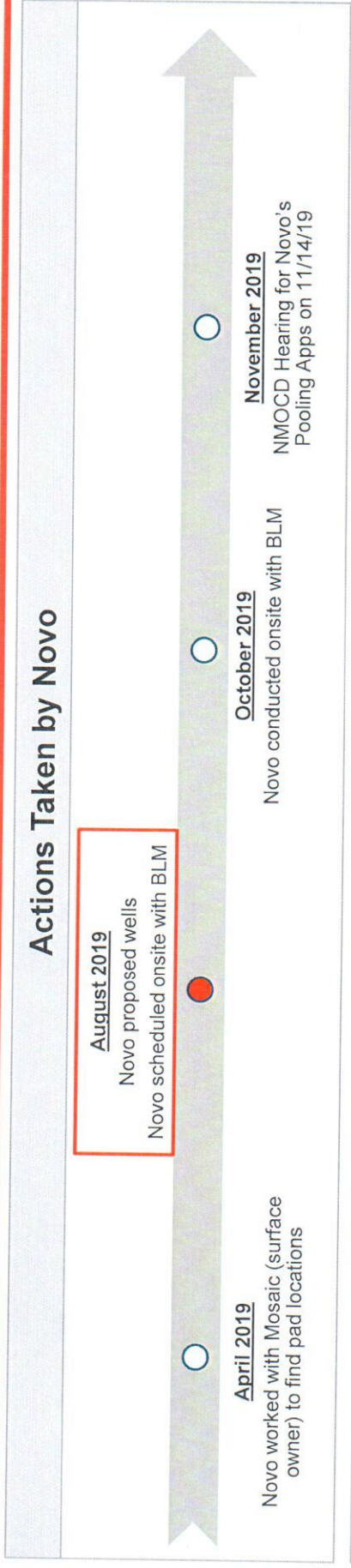
**Mosaic**  
Mary Langman | Supervisor, Land and Minerals  
The Mosaic Company | 1700, 2010 - 12<sup>th</sup> Avenue | Regina, SK  
Canada S4P 0M3  
P: 306.523.6105 | F: 306.523.2867 | E: mary.langman@mosaicco.com | W: www.mosaicco.com

Mosaic objects to pad locations SE of Railroad Track

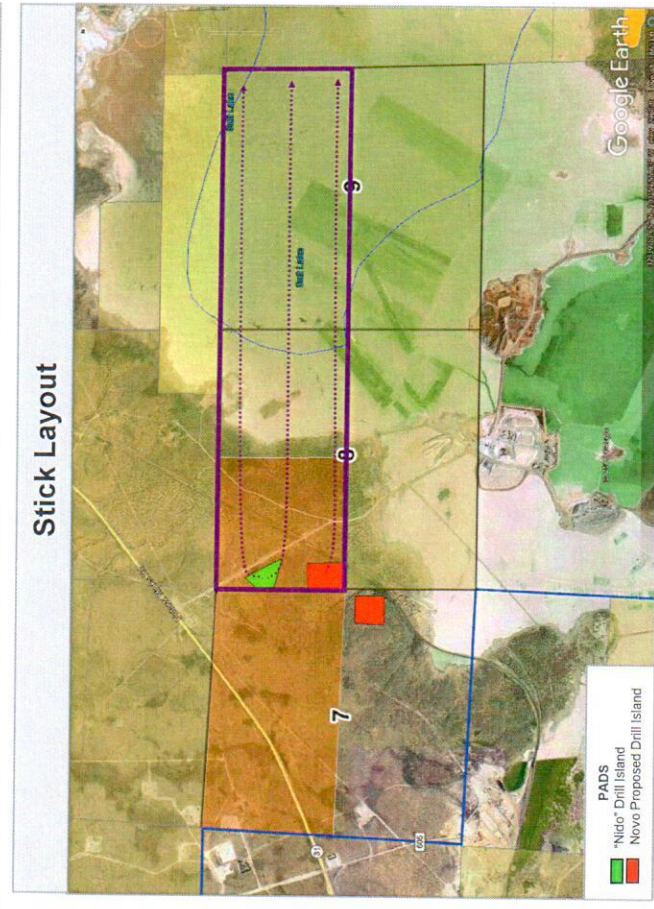




# Novo Proposes Astrodog 0809 Wells



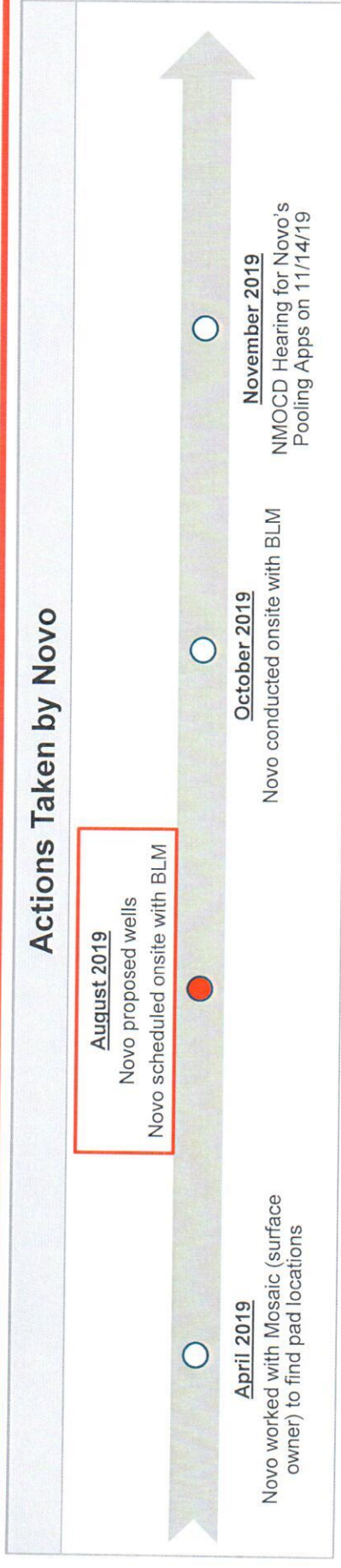
**Mosaic approved pad locations NW of Railroad Track**



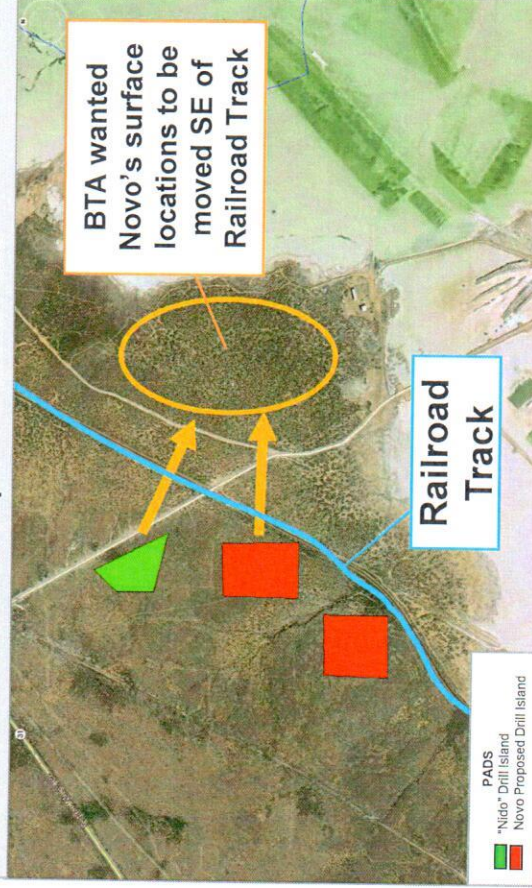
**Novo proposed Astrodog wells to be drilled from Mosaic-approved drill islands**



# BTA Opposes Novo's Astrodog Plans



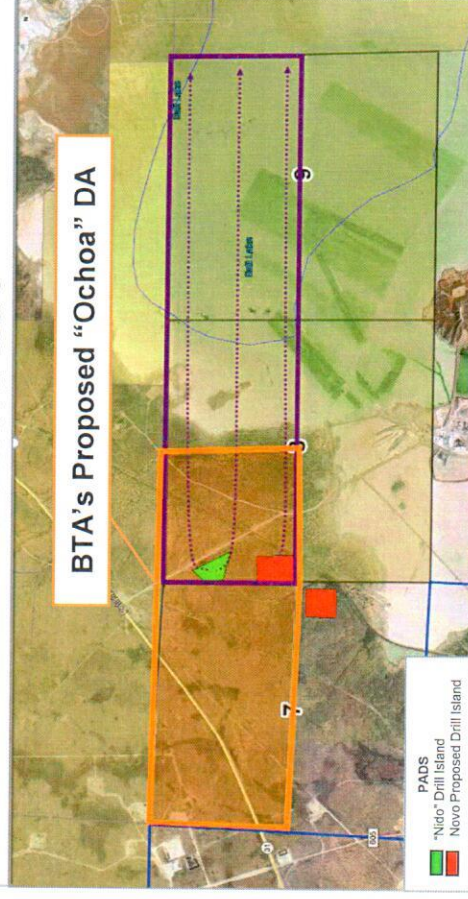
## BTA's Request to Move Pads



**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 and BTA Discuss Novo's Plans

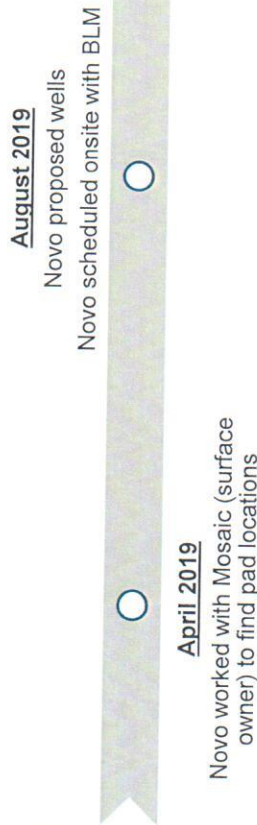
Actions Taken by Novo	
<div>April 2019</div> <div>Novo worked with Mosaic (surface owner) to find pad locations</div>	<div>August 2019</div> <div>Novo proposed wells</div> <div>Novo scheduled onsite with BLM</div>
<div>October 2019</div> <div>Novo conducted onsite with BLM</div>	<div>November 2019</div> <div>NMOCD Hearing for Novo's Pooling Apps on 11/14/19</div>
<div>Excerpt from 10/23 Email sent by BTA's Land Manager</div> <div>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 <a href="mailto:wprice@btaoil.com">wprice@btaoil.com</a>.</div> <div></div> <div>Willis Price</div>	
<div>BTA-Novos Interactions</div> <div><div>1. Novo offered to do trades with BTA</div><div>2. BTA-Novos meeting in OKC<ul style="list-style-type: none"><li>Novo told BTA that moving the pad locations likely would <u>not</u> be approved by Mosaic and BLM</li><li>Novo invited BTA to attend 10/24 BLM onsite</li><li>Novo and BTA agreed to jointly approach BLM to discuss <b>after</b> BTA's Engineer reviewed pad locations</li></ul></div><div>3. While Novo was waiting on BTA's Engineer, BTA's Land Manager went behind Novo's back and <b>approached BLM without including Novo</b></div><div>4. Novo objected to BTA's "Ochoa" Development Area</div><div>5. BTA threatened to object to <b>any</b> Development Area proposed within the Secretary's Potash Area unless Novo withdraws its objection to "Ochoa" DA</div></div>	



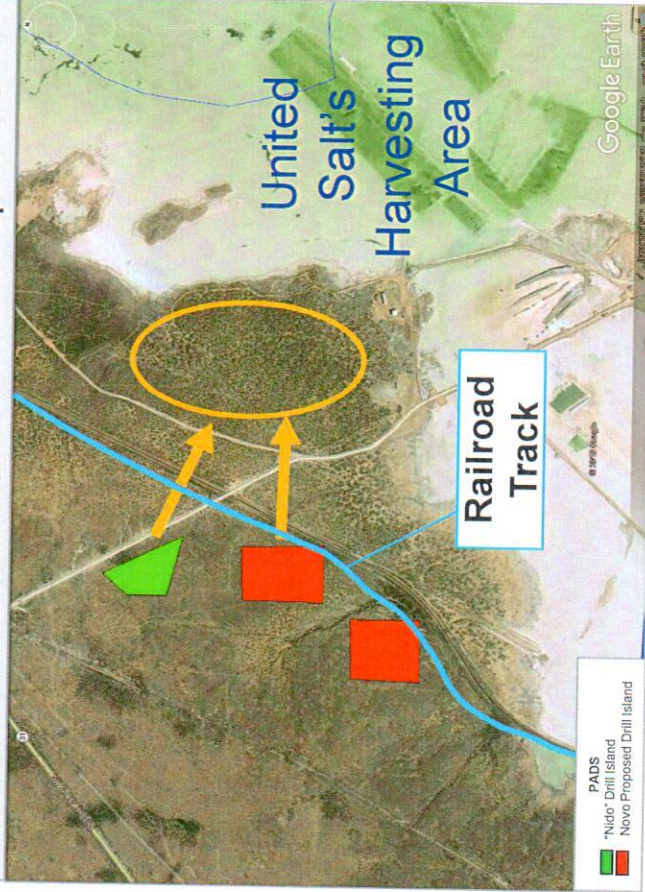
# 10/24 BLM Onsite for Astrodog Surface Plan



## Actions Taken by Novo



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

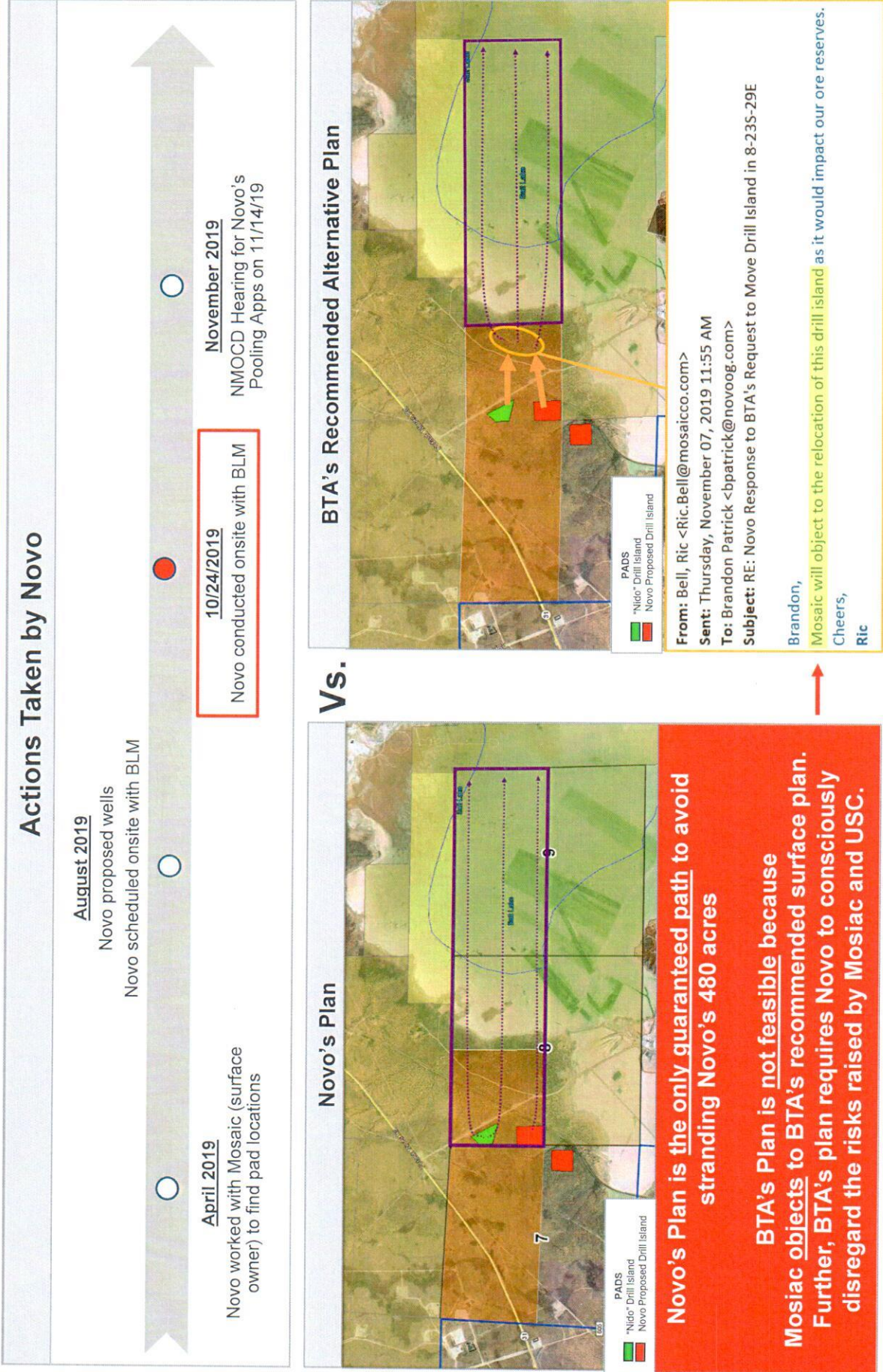
1. BLM approved all 3 "Astrodog" pad locations
2. United Salt Carlsbad (surface lessee of Salt Lake) supported Novo's pad locations

*"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

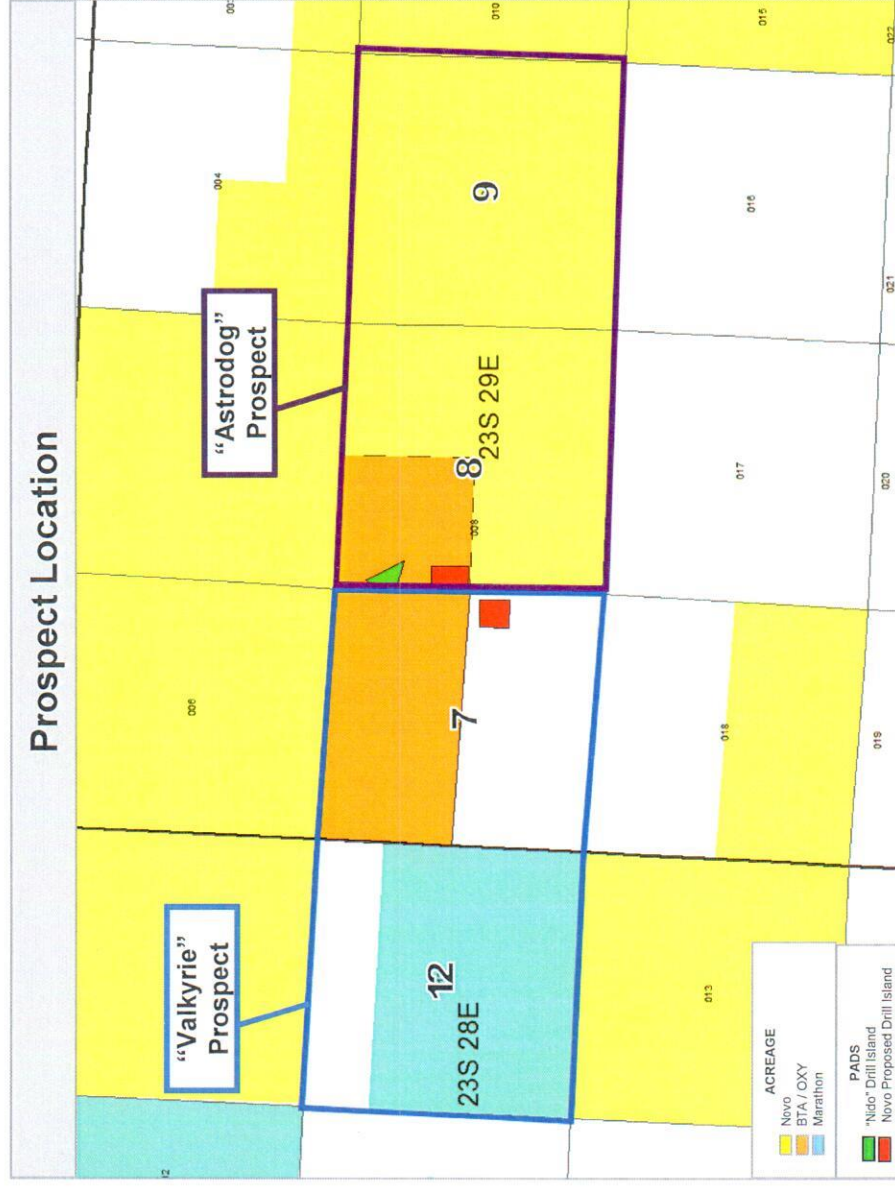




# Marathon's "Valkyrie" Pooling Applications

## Key Points

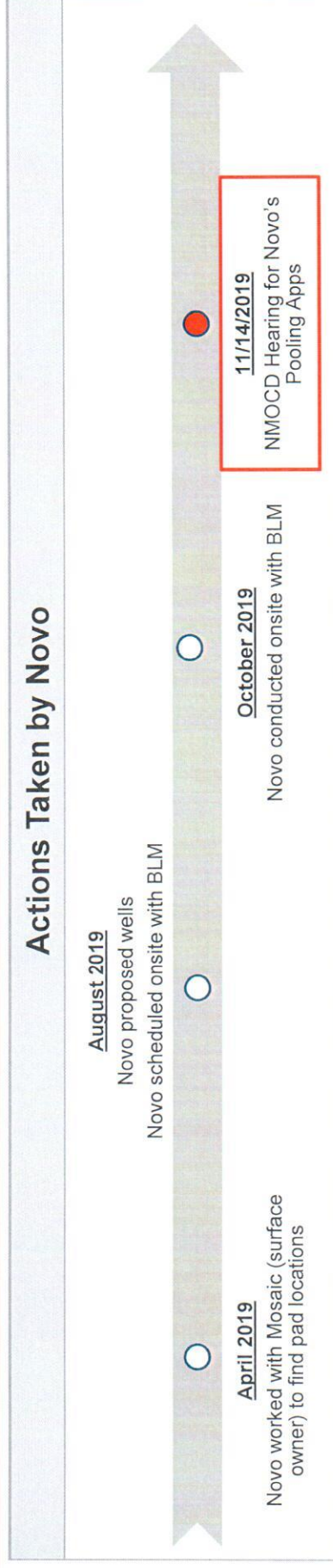
- Marathon has proposed 2-mile wells across Sections 12-23S-28E and 7-23S-29E
- Marathon and BTA are fighting over who will operate
- Marathon supports Novo's "Astrodog" plans
- Novo supports Marathon's plan because, unlike BTA's plan, it does not negatively impact Novo's "Astrodog" prospect



**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**



# Conclusion



## SUPPORTS / DOES NOT OPPOSE NOVO'S APPLICATIONS

- ✓ **Mosaic** (surface owner)
- ✓ **United Salt Carlsbad** (surface lessee of Salt Lake)
- ✓ **OXY** (WI owner in pooled depths)
- ✓ **Marathon** (offset operator)
- ✓ **COG** (WI owner in other depths)

## OPPOSES NOVO'S APPLICATIONS

- ✗ **BTA** (WI owner in pooled depths)

EXHIBIT  
**8**

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

BTA's Plan is not feasible because

Mosaic objects to BTA's recommended surface plan. Further, BTA's plan requires Novo to consciously disregard the risks raised by Mosaic and USC.

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	<p>Novo proposed pad locations for development of "Astrodog" prospect; Mosaic <u>rejected</u> Novo's proposed pad SE of the railroad track.</p> <p><b>Mosaic:</b> "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."</p>
July 22 - 25	E-Mail	Mosaic	Surface Owner & Potash Lessee	<p>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.</p>
August 26 - 27	E-Mail	Mosaic	Surface Owner & Potash Lessee	<p>Novo asked Mosaic if they would object to Novo using the existing, BLM-approved Drill Island located in the NW/4 of Section 8-23S-29E (the "Nido de Salado" Drill Island).</p> <p><b>Mosaic:</b> "We will not object to you using the approved BLM DI in Section 8"</p>
October 29	Phone Call	Mosaic	Surface Owner & Potash Lessee	<p>Novo informed Mosaic that BTA wants the "Nido de Salado" Drill Island to be moved to the E/2 NW/4 of Section 8. <b>Mosaic expressed that they would object to moving the "Nido de Salado" Drill Island</b></p>
October 29 - November 7	E-Mail	Mosaic	Surface Owner & Potash Lessee	<p>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.</p> <p><b>Mosaic:</b> "Mosaic will object to the relocation of the drill island as it would impact our ore reserves."</p>

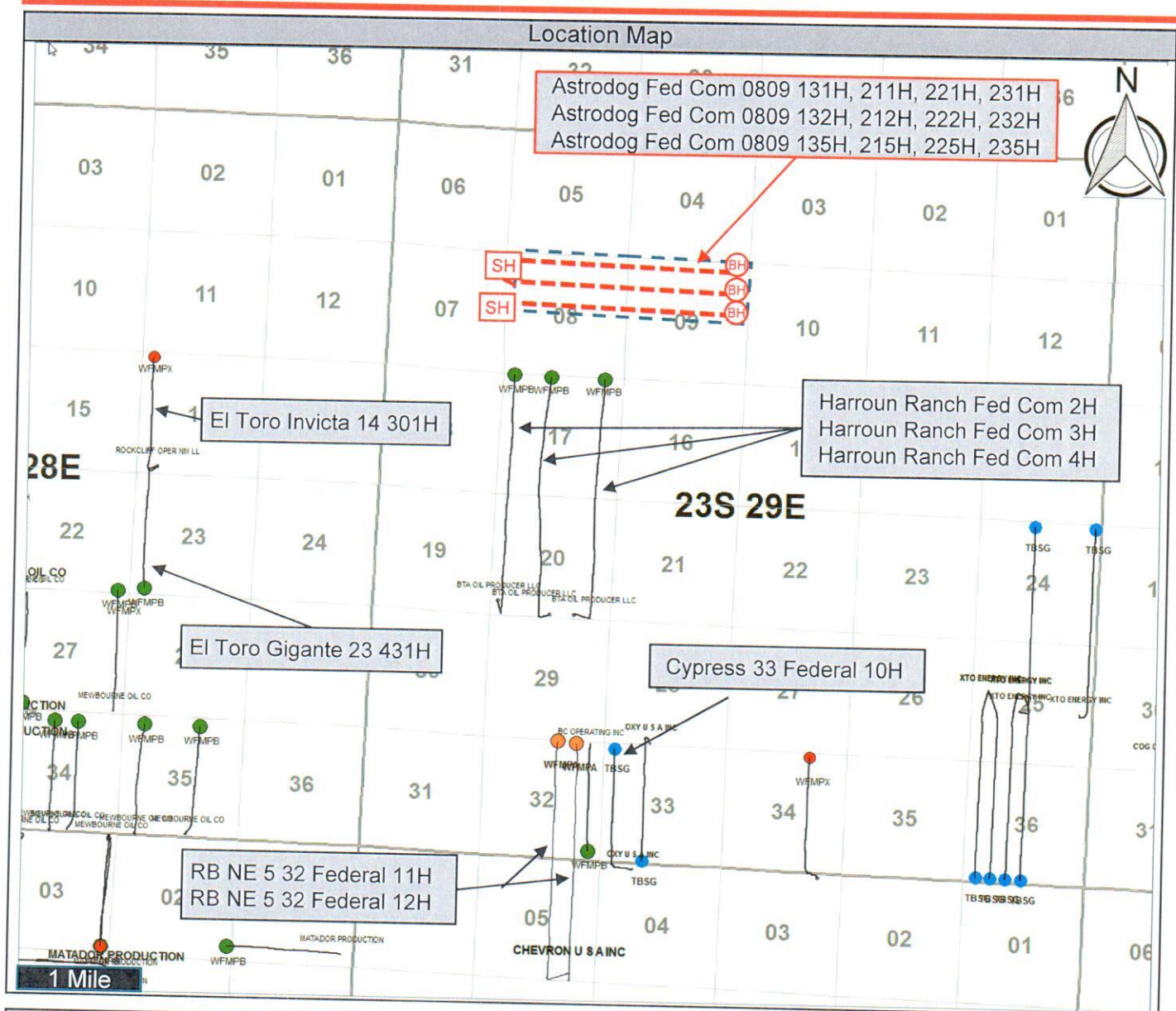
EXHIBIT

9



# Astrodog Fed Com 0809– Full Development Plan

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



## Map Legend

	Spacing Unit (640 ac.)		Third Bone Spring Producer
	Surface Hole Location		Wolfcamp XY Producer
	Novo Horizontal Location		Wolfcamp A Producer
	Bottom Hole Location		Wolfcamp B Producer
	Horizontal Landing Target		

## Hearing Details

Novo Oil & Gas Northern  
Delaware, LLC

Case Number: 20916 / 20917

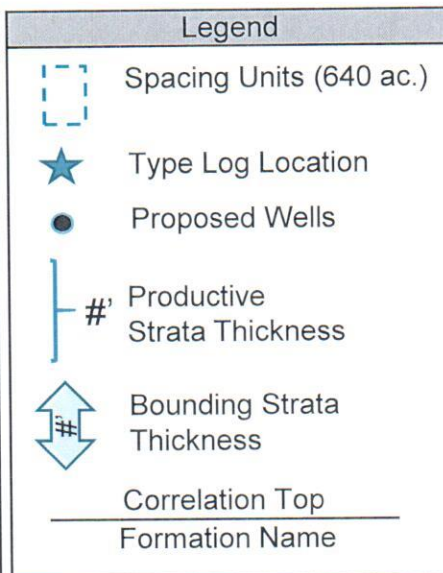
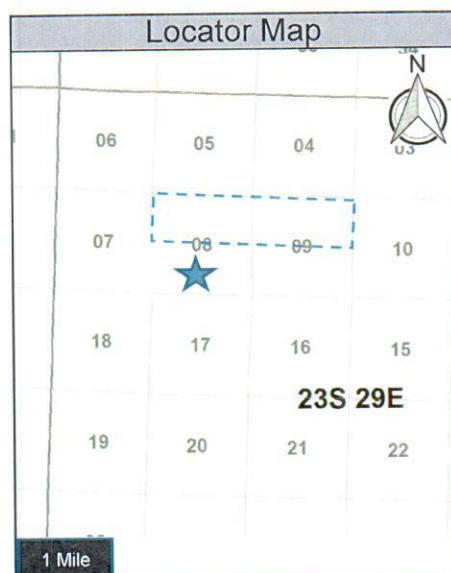
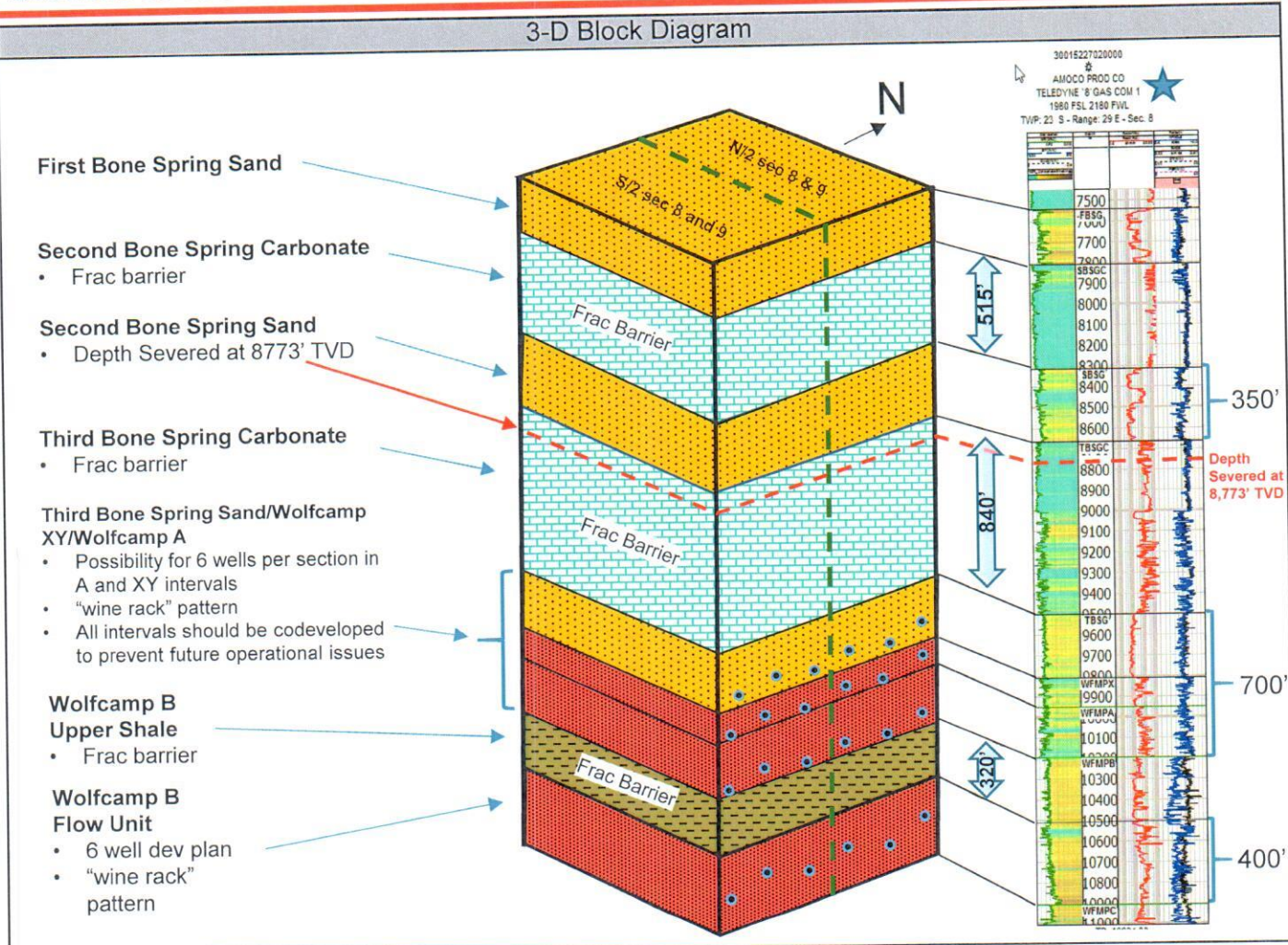
Date: 11/14

Exhibit Number: 10 / 20



# Novo Development Plan: Astrodog Fed Com 0809 Units

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



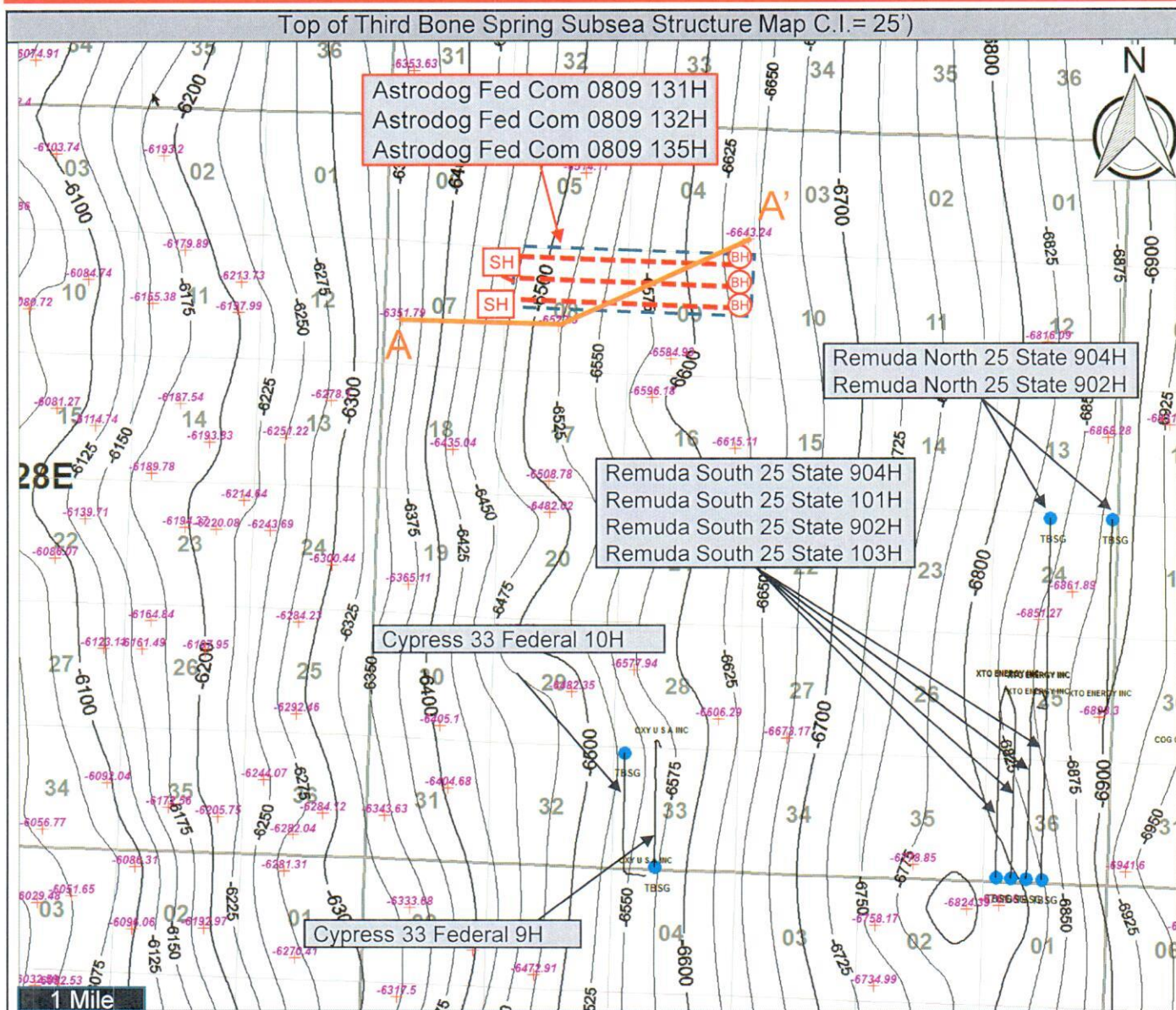
Novo Oil & Gas Northern Delaware, LLC	
Case Number:	20916 / 20917
Date:	11/14
Exhibit Number:	10 / 20



# 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
- 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

Case Number: 20916 / 20917

Date: 11/14

Exhibit Number: 10 / 20

<p>October 15 - 22</p> <p>E-Mail</p> <p>BTA</p> <p>Pooled Party</p>	<p>BTA offered to have another meeting at Novo's office in OKC.</p> <p>Novo notified BTA that Novo was unable to meet in person before the 10/24 onsite; however, Novo was available to communicate via email.</p> <p>BTA called Novo's Land Manager and left a short voicemail.</p> <p>Novo replied via email and asked BTA to communicate via email.</p> <p>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 <b>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.</b> 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 <a href="mailto:wprice@btaoil.com">wprice@btaoil.com</a>."</p>
<p>October 23</p> <p>E-Mail</p> <p>BTA</p> <p>Pooled Party</p>	



## 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	<p>United Salt Carlsbad expressed that they did not have problems with Novo's "Astrodog" pad locations.</p> <p>Novo offered to do a Road Sharing Agreement on roads that both Novo and USC would jointly use.</p> <p>Novo promised to send surveys to USC</p>
November 5 - 6	E-Mail	United Salt Carlsbad	Surface Lessee of Salt Lake	<p>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.</p> <p>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.</p>

## Summary of Communication with BTA

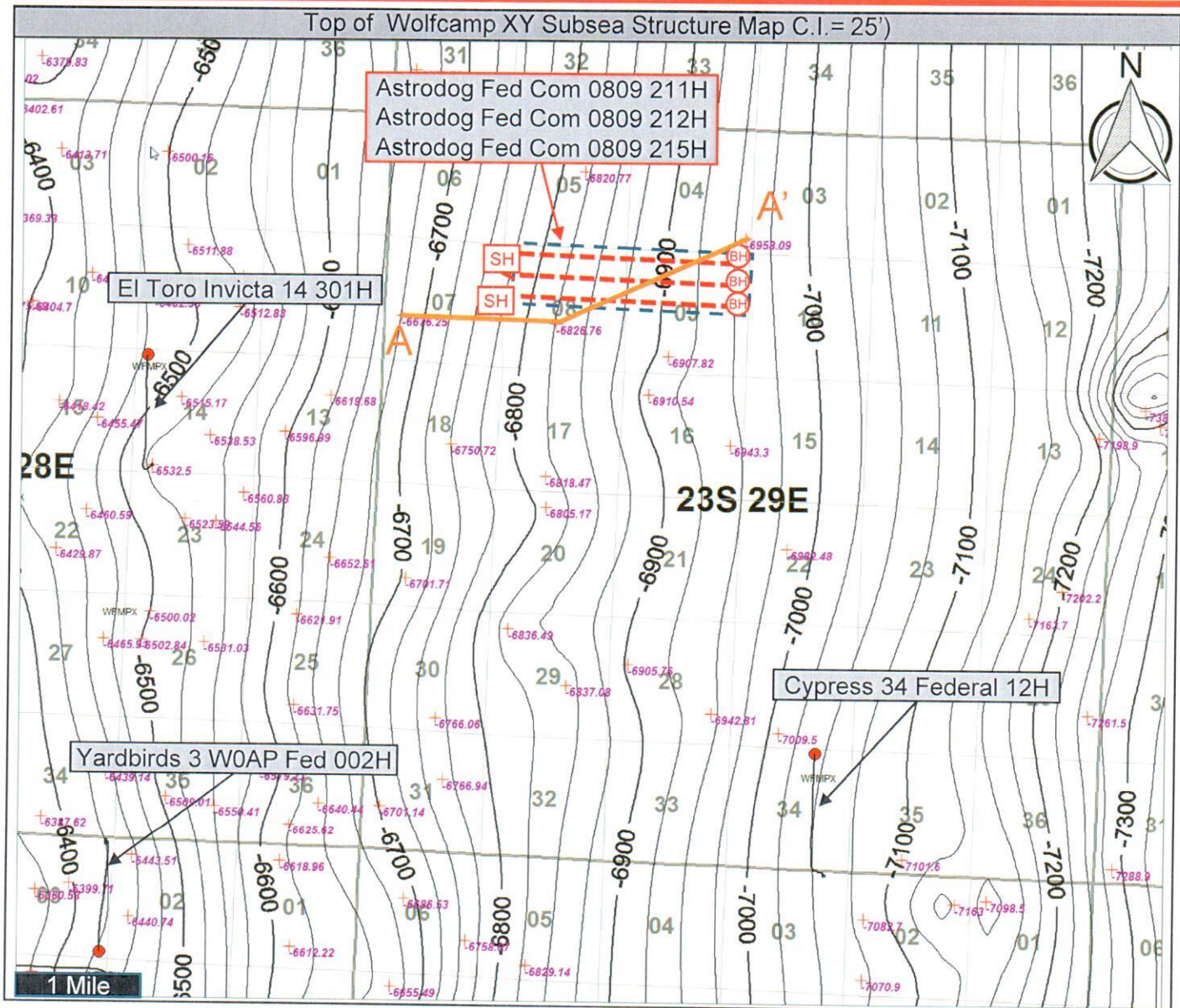
Date (all in 2019)	Medium of Communication	Affected Party	Party Type	Content
August 15 - 21	E-Mail	BTA	Pooled Party	<p>Novo offered to do a trade with BTA where BTA would assign its interest in the NW/4 of Section 8 to Novo.</p> <p><b>BTA: "BTA has plans to develop the N/2 of Section 7 and the NW/4 of 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."</b></p>
August 29	E-Mail	BTA	Pooled Party	<p>BTA notified Novo that BTA is submitting "Ochoa" Development Area proposal.</p> <p>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. <b>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?"</b></p> <p>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.</p>
September 3	E-Mail	BTA	Pooled Party	<p>BTA asked to meet with Novo in person on September 5 at Novo's OKC office.</p> <p>Novo agreed to meet.</p>
September 5	In-Person Meeting	BTA	Pooled Party	<p>BTA suggested that Novo could move its pad locations to the E/2 NW/4 of Section 8</p> <p>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. <b>Novo invited BTA to attend the 10/24 BLM onsite.</b></p> <p><b>Novo and BTA agreed that they would jointly 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.</b></p>
September 24 - 25	E-Mail	BTA	Pooled Party	<p>Novo asked if BTA's Land Manager was finished discussing with BTA's engineer.</p> <p><b>BTA revealed that:</b></p> <p><b>(1) BTA had been communicating with the BLM without including Novo;</b></p> <p><b>(2) BTA had asked the BLM and Mosaic for approval of a pad location that BTA selected for Novo.</b></p> <p>Novo told BTA that they would consider BTA's proposed pad location, if the pad fully meets Novo's requirements</p>
October 1	E-Mail	BTA	Pooled Party	<p>Novo notified BTA that Novo objects to BTA's "Ochoa" Development Area proposal.</p>



# 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.)		Wolfcamp XY Producer
	Surface Hole Location		Datum value
	Novo Horizontal Location		Wolfcamp XY Subsea Structure
	Bottom Hole Location		Contour line – interval 25'
	Horizontal Landing Target		Cross Section Line

## Hearing Details

Novo Oil & Gas Northern  
Delaware, LLC

Case Number: 20916 / 20917

Date: 11/14

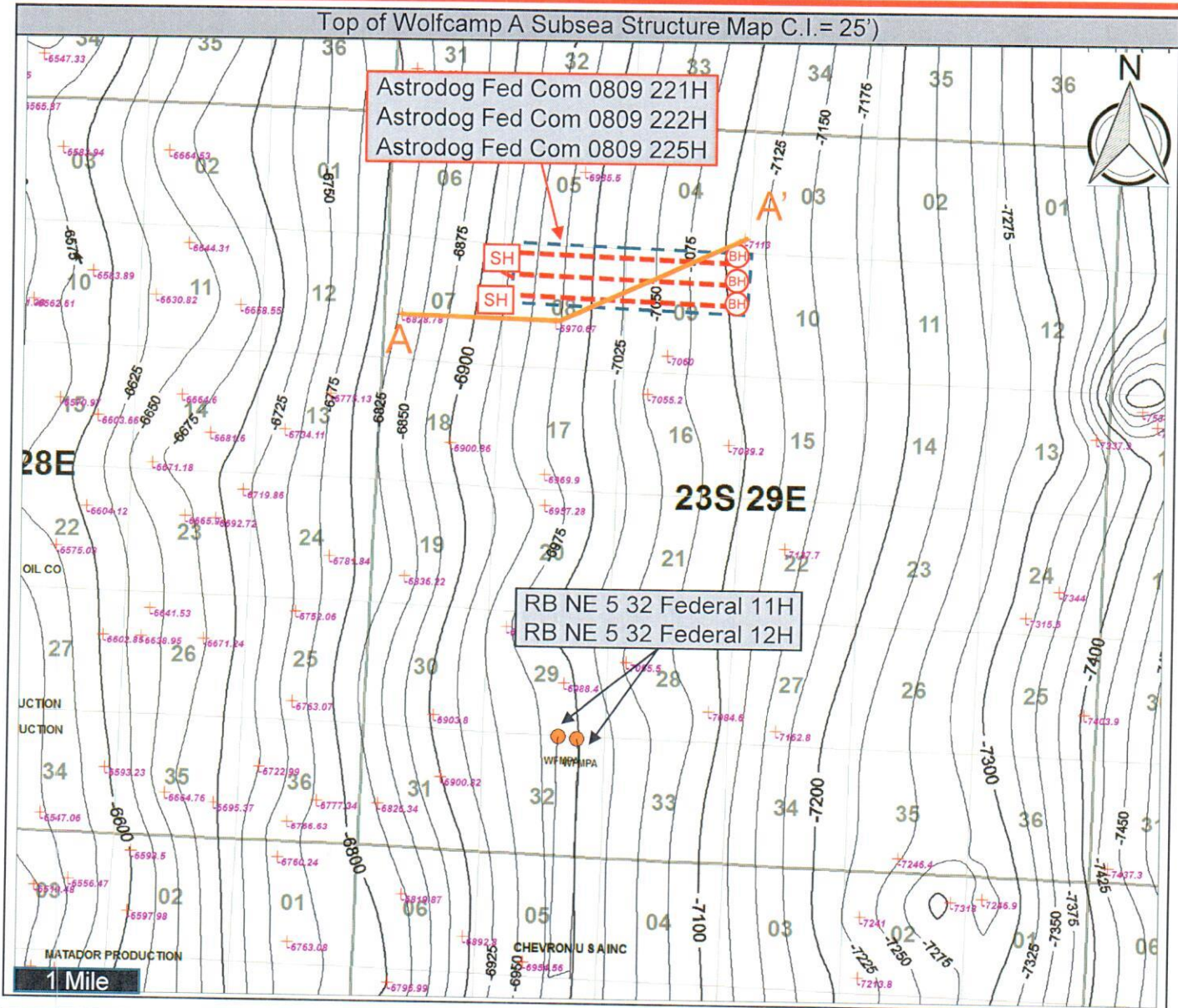
Exhibit Number: 10 / 20



# Astrodog Fed Com 0809: Top of Wolfcamp A Structure Map



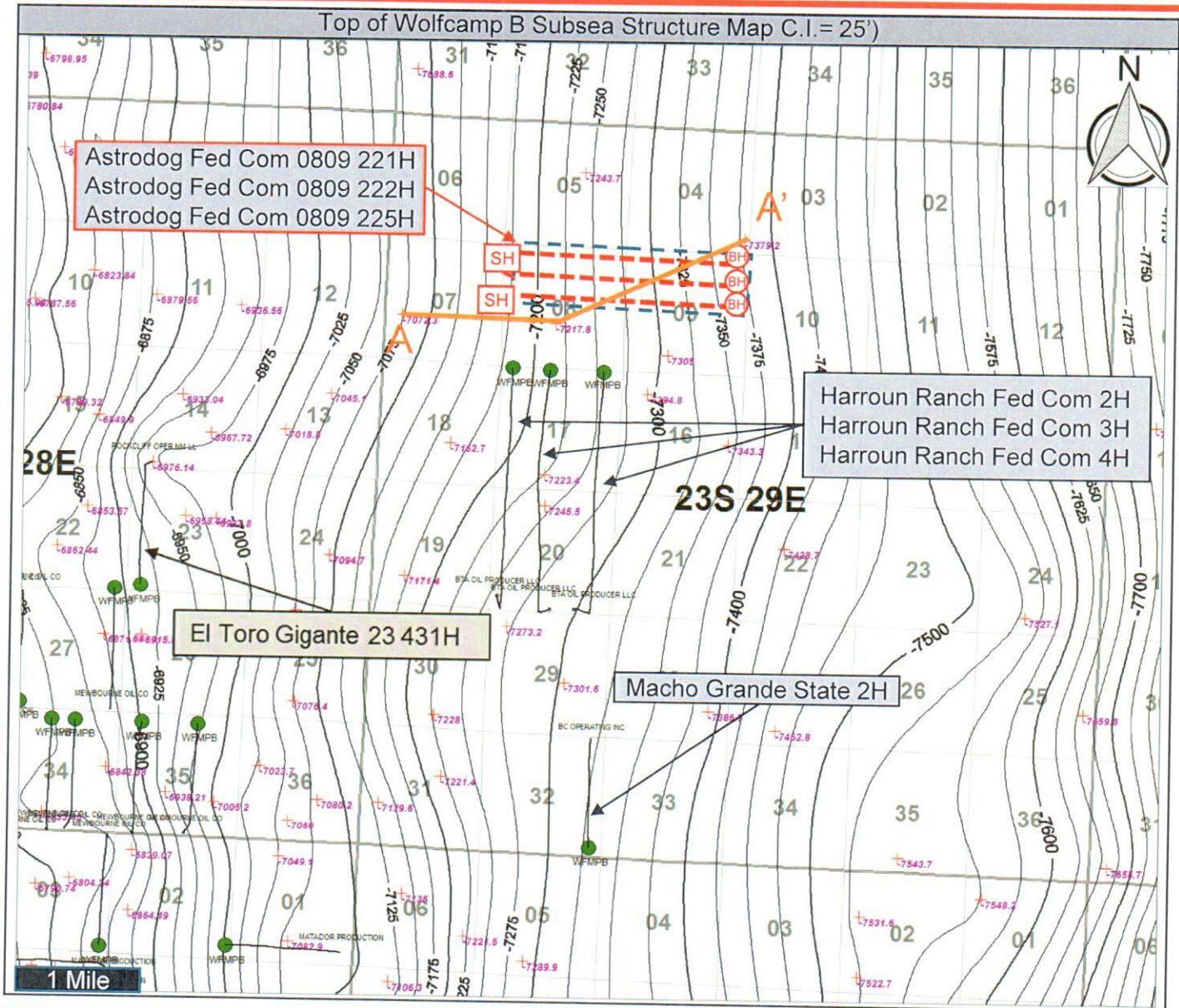
Wolfcamp A Proposed Locations; Sections 08-23S-29E and 09-23S-29E





# 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 A' A'

Hearing Details
Novo Oil & Gas Northern Delaware, LLC
Case Number: 20916 / 20917
Date: 11/14
Exhibit Number: 10 / 20

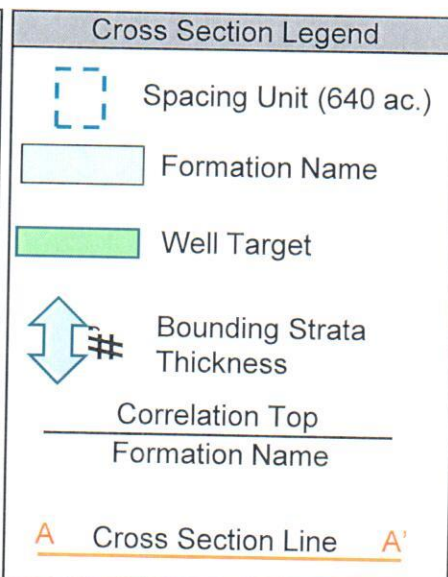
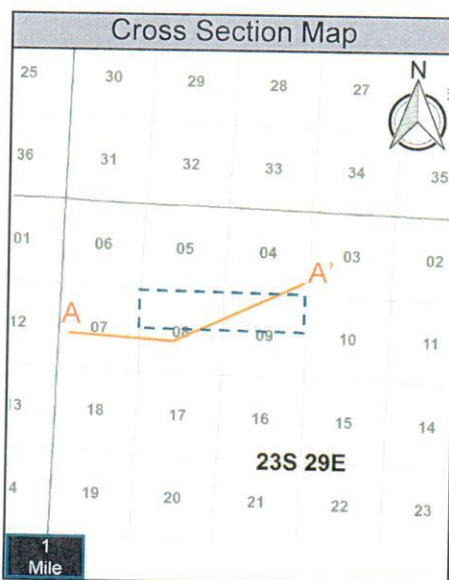
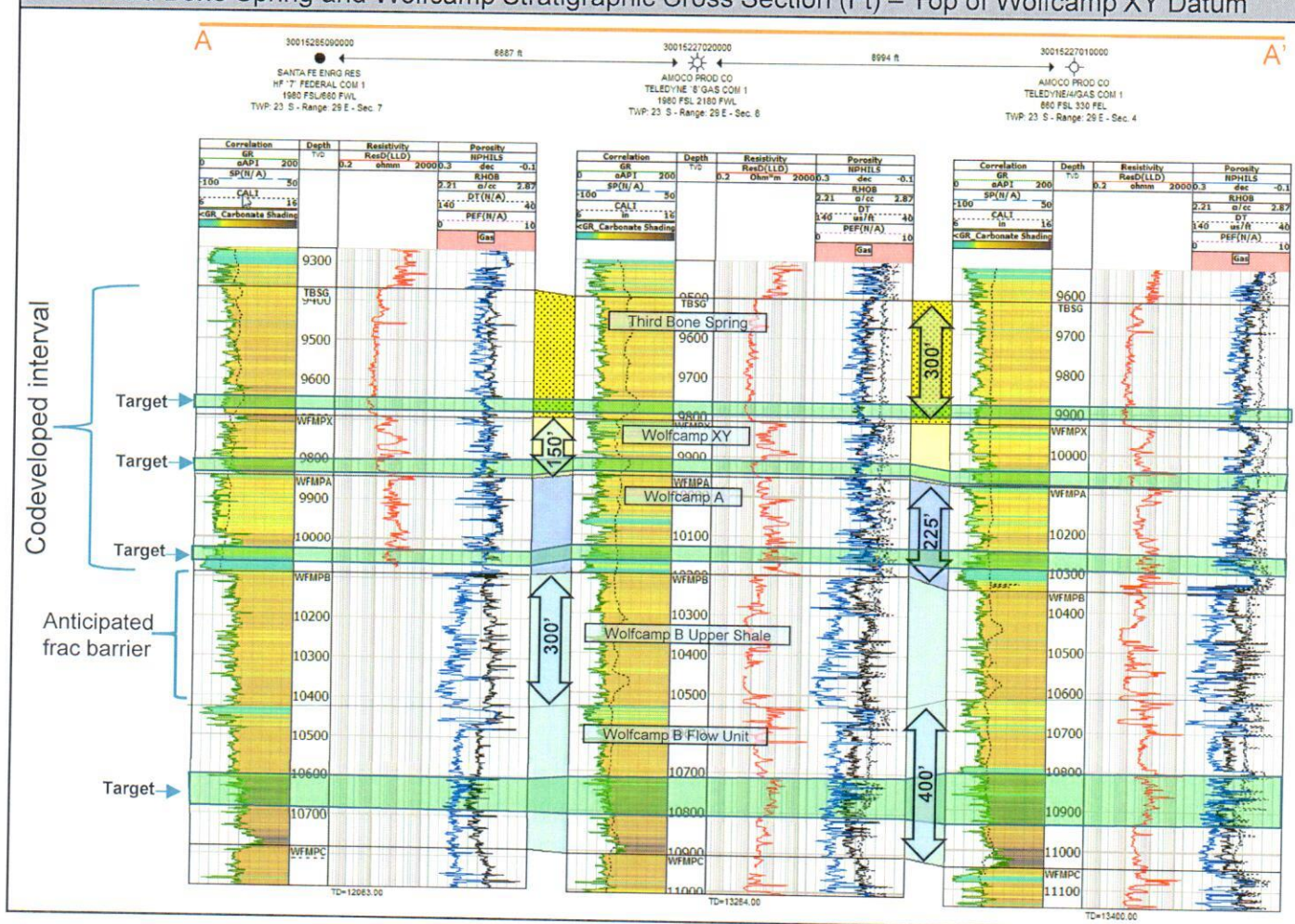


# Astrodog- Third Bone Spring and Wolfcamp Stratigraphic Cross Section

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

Case Number: 20916 / 20917

Date: 11/14

Exhibit Number: 10 / 20