

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

API Number

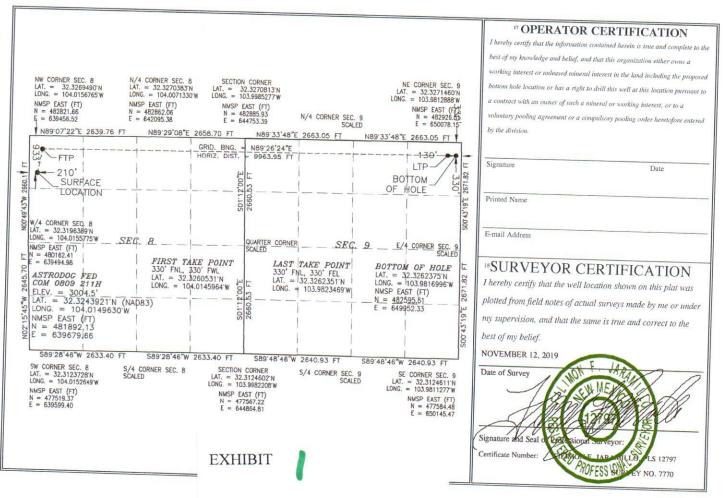
State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

Code						P001 Na	ame	
No.		NOV		STRODOG FE 8 Operator	D COM 0809 Name	RE, LLC		⁶ Well Number 211H ⁹ Elevation 3004.5
G d	-			10 Surface	Location			
Section 8	A CHESCO MICHIGAN		Lot Idn	Feet from the 933	North/South line NORTH	Feet from the 210	East/West line WEST	County EDDY
		" В	ottom He	ole Location	If Different Fr	om Surface		LIDET
9		1p Range	Lot Idn	Feet from the 330	North/South line	Feet from the	East/West line	County
Joint of	or Infill	14 Consolidation	Code			15 Order No.	LASI	EDDY
	Section 9	Section Townsh Section Townsh 9 23 S	No. No. No. No. No. No. No. No. Range 23 S 29 E B Section Township Range 9 23 S 29 E	No. No. No. Novo oil &	ASTRODOG FE Soperator	No. ASTRODOG FED COM 0809	Section Township Range 23 S 29 E Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the 933 NORTH 210 Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the 933 NORTH 210 Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the North/South line Feet from the 130	ASTRODOG FED COM 0809 No. O NOVO OIL & GAS NORTHERN DELAWARE, LLC Surface Location Section Township Range 23 S 29 E 933 NORTH 210 WEST Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the 933 NORTH 210 WEST Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the North/South line Feet from the Section 1 Township Range Lot Idn Feet from the North/South line Feet from the 1 Township Range Lot Idn Feet from the North/South line Feet from the 1 Township Range Lot Idn Feet from the North/South line Feet from the 1 Township Range Lot Idn Feet from the North/South line



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	AFI Numbe	ar .		² Pool Co	de		³ Pool Na	ame	
⁴ Property ⁷ OGRID 37292	No.		NOVO		8 Operator	CD COM 0809	RE, LLC		⁶ Well Number 212H ⁹ Elevation 3004.5
UL or lot no.	0 1				10 Surface	e Location			
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
200 23 10			п Во	ottom H	ole Location	If Different Fr	om Surface		LODI
JL or lot no.	Section 9	Township 23 S	Range 29 E	Lot Idn	Feet from the 1122	North/South line NORTH	Feet from the	East/West line EAST	County
Dedicated Acre	Joint o	or Infill 14 (Consolidation	Code			15 Order No.	EASI	EDDY

NN. CORNER SEC. 8		
Misper	LAT. = 32.3270383N LAT. = 32.3270383N LAT. = 32.327083N LAT. = 32.327465N LONG. = 103.985277W LAT. = 32.3274650N LONG. = 103.985277W LAT. = 32.3274650N LONG. = 103.985287W LAT. = 32.3274650N LONG. = 103.985287W LAT. = 32.3274650N LONG. = 103.9852350W LAT. = 32.327683N LAT. = 32.327685N LAT. = 32.32765N LAT. = 32.32765N LAT. = 32.32765N LAT. = 32.32765N LAT. = 32.327685N	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
	Condition Cond	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 Processional Surveyor:

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

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² Pool Code

	Albert 18			2000			1001 N	аше	
⁴ Property				AS	⁵ Property STRODOG FF	Name CD COM 0809			⁶ Well Number
⁷ OGRID 37292	2000		NOV		8 Operator		RE, LLC		215H ⁹ Elevation 3005.5
					10 Surface	e Location			
UL or lot no.	Section 8	Townsh 23 S		Lot Idn	Feet from the 1545	North/South line NORTH	Feet from the 200	East/West line WEST	County
			пB	ottom Ho	ole Location	If Different Fr	om Surface		
UL or lot no.	Section 9	Townsh 23 S	ip Range	Lot Idn	Feet from the 1914	North/South line NORTH	Feet from the	East/West line EAST	County EDDY
Dedicated Acre	es ¹³ Joint	or Infill	14 Consolidation	Code			15 Ondon No	LAST	EDD1

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

15 Order No.

	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
NW CORNER SEC. 8 N/4 CORNER SEC. 8 SECTION CORNER NE CORNER SEC. 9 LAT. = 32.3269490'N LAT. = 32.3270383'N LAT. = 32.3270813'N LAT. = 32.3270460'N	bottom hole location or has a right to drill this well at this location pursuant to
LONG. = 104.0156765'W LONG. = 104.0071330'W LONG. = 103.9985277'W LONG. = 103.9912888'W	a contract with an owner of such a mineral or working interest, or to a
MMSP EAST (FT) NMSP E	voluntary pooling agreement or a compulsory pooling order heretofore entered
E = 654753.39 SCALED E = 650078.15	by the division.
N89'07'22"E 2639.76 FT N89'29'08"E 2658.70 FT N89'33'48"E 2663.05 FT N89'33'48"E 2663.05 FT	
55 SURFACE 98 1916	Signature Date
5 SURFACE 1991 101111111111111111111111111111111	
SURFACE ILCATION BOTTOM SURFACE SURFAC	Printed Name
FTP GRID BNG. = N89'26'27'E	Times (table
HORIZ. DIST. = 9960.94 FT	
☐ IAT. = 32.3196359 N	E-mail Address
NMSP EAST (FT) SCALED SEC. 9	
E = 639494.86 FIRST TAKE POINT LAST TAKE POINT BOTTOM OF HOLE	18SURVEYOR CERTIFICATION
COM 0809 215H LONG. = 104.0145373'W 8 LONG. = 103.9822991'W NMSP EAST (FT)	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
NMSP EAST (FT) N = 481280,22 E = 639678179	best of my belief.
8 2 2 23 36 70 1/3	
S89'28'46"W 2633.40 FT S89'28'46"W 2633.40 FT S89'48'46"W 2640.93 FT S89'48'46"W 2640.93 FT	NOVEMBER 12, 2019
SW CORNER SEC. 8 5/4 CORNER SEC. 8 SECTION CORNER SEC. 9 SE CORNER SEC. 9 SE CORNER SEC. 9 SE CORNER SEC. 9	Date of Survey
LONG. = 104.0152649'W LONG. = 103.9982206'W LONG. = 103.99177'W LONG. = 103.99177'W	
NMSP EAST (FT) N = 477519.37 N = 477567.22 NMSP EAST (FT) N = 477567.22	
E = 639599.40	12737
	Signature and Seal of Professional Surveyor:
	Certificate Number: FN 100 10 10 LS 12797
	THUFESS WEY NO. 7772

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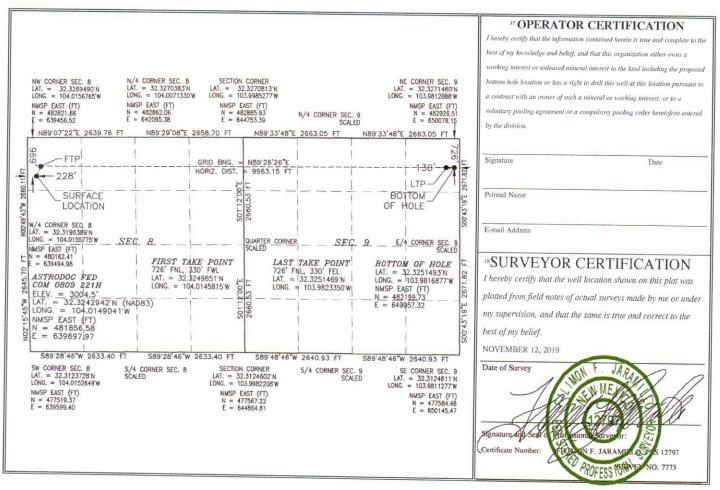
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WELL LOCATION AND ACREAGE DEDICATION PLAT

1	API Numbe	r		² Pool Cod	e		³ Pool Na	nme	
⁴ Property (Code			4.6	5 Property			T	⁶ Well Number
7 OGRID 1	Y-			AS	TRODOG FE				221H
	223				8 Operator				⁹ Elevation
37292	0		NOV	O OIL &	GAS NORTH	ERN DELAWA	RE, LLC		3004.5
					10 Surface	e 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		969	NORTH	228	WEST	EDDY
			п В	ottom He	ole Location	If Different Fr	om 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		726	NORTH	130	EAST	EDDY
Dedicated Acre	s ¹³ Joint	or Infill 14	Consolidation	Code			15 Order No.		



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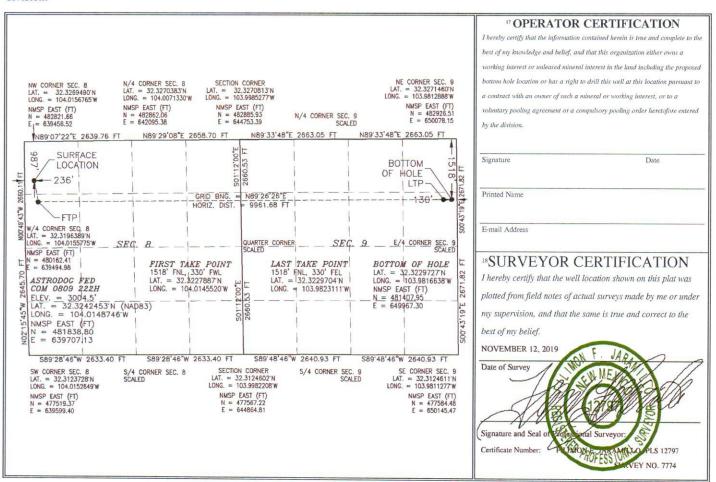
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PI Number	r		² Pool Cod	e		³ Pool Na	me	
Code			Λ.					Well Number
		NOV		8 Operator	Name	RE, LLC		⁹ Elevation 3004.5
				10 Surface	e Location			
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
8	23 S	29 E		987	NORTH	236	WEST	EDDY
		" B	ottom H	ole Location	If Different Fr	om Surface		
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
9	23 S	29 E		1518	NORTH	130	EAST	EDDY
s la Joint	or Infill	Consolidation	n Code			15 Order No.		
	Section 8	Section Township 8 23 S Section Township 9 23 S	Section Township Range 8 23 S 29 E Section Township Range 9 23 S 29 E	Section Township Range Lot Idn	Section Township Range Lot Idn Feet from the 9 23 S 29 E 1518 Section Township Range Lot Idn Feet from the 1518 Section Section Section Township Range Lot Idn Feet from the 1518 Section Section Township Range Lot Idn Feet from the 1518 Section Section Township Range Lot Idn Feet from the 1518 Section Sectio	Section Township Range Lot Idn Feet from the Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Section Township Range Lot Idn Feet from the North/South line Section Section Township Range Lot Idn Feet from the North/South line Section Section Township Range Lot Idn Feet from the North/South line Section Section Township Range Lot Idn Section Section Section Township Range Lot Idn Section Sec	Section Township Range Lot Idn Feet from the Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Feet from the Section Township Range Lot Idn Feet from the North/South line Feet from the Section Township Range Lot Idn Feet from the North/South line Feet from the Section Township Range Lot Idn Feet from the North/South line Feet from the Section Township Range Lot Idn Feet from the North/South line Feet from the Section Township Range Lot Idn Feet from the North/South line Feet from the Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Feet from the North/South line Section Township Range Lot Idn Section North/South line Section Township Range Lot Idn Section North/South line Section Township Range Lot Idn Section North/South line North/South line Section North/South line North/South l	Section Township Range Lot Idn Feet from the Bottom Hole Location If Different From Surface



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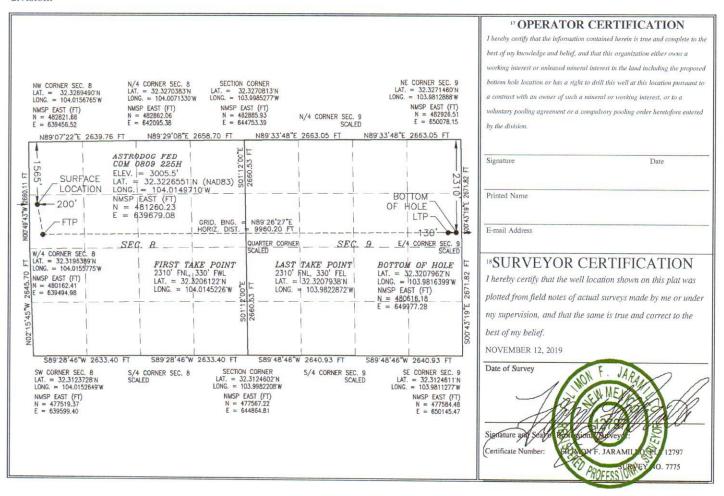
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WELL LOCATION AND ACREAGE DEDICATION PLAT

1	API Numbe	r		² Pool Code	9		³ Pool Na	me	
⁴ Property (Code				⁵ Property			6	Well Number
				AS	TRODOG FE	D COM 0809			225H
7 OGRID	No.				8 Operator	Name			⁹ Elevation
37292	0		NOV	O OIL &	GAS NORTH	ERN DELAWA	RE, LLC		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		1565	NORTH	200	WEST	EDDY
			" В	ottom Ho	ole Location	If Different Fr	om 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		2310	NORTH	130	EAST	EDDY
² Dedicated Acre	es 13 Joint	or Infill 14	Consolidation	n Code			15 Order No.		



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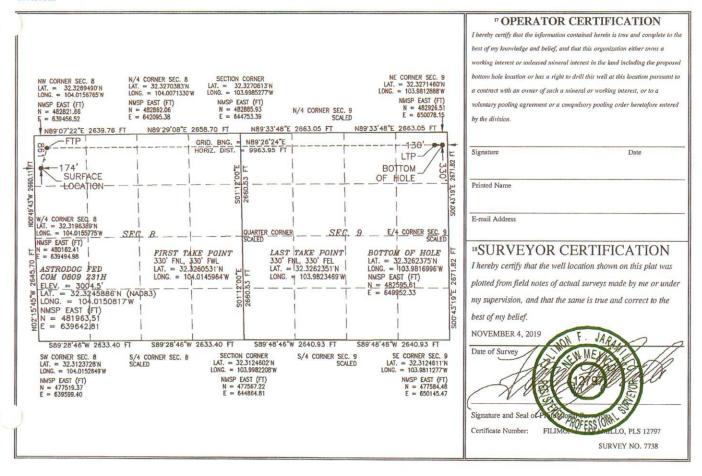
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1	API Numbe	r		² Pool Code	e		³ Pool Na	me	
⁴ Property (Code				5 Property				⁶ Well Number
				AS	TRODOG FE	D COM 0809			231H
OGRID 1	No.				8 Operator	Name			⁹ Elevation
37292	0		NOV	O OIL &	GAS NORTH	ERN DELAWA	RE, LLC		3004.5
					" Surface	e Location			
UL or lot no.	Section	Townshi	p 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
			11 B	ottom He	ole Location	If Different Fr	om Surface		
UL or lot no.	Section	Townshi	p 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
Dedicated Acre	s ¹³ Joint	or Infill	14 Consolidation	n Code			15 Order No.	The state of the s	



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⁴ Property (Code				5 Property	Name			⁶ Well Number
				AS	TRODOG FE	D COM 0809			232H
OGRID N	No.				8 Operator	Name			⁹ Elevation
37292	0		NOV	OOIL &	GAS NORTH	ERN DELAWA	RE, LLC		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		879	NORTH	183	WEST	EDDY
			п В	ottom Ho	ole Location	If Different Fr	om 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		1254	NORTH	130	EAST	EDDY
¹² Dedicated Acre	s 13 Joint	or Infill 14	Consolidation	Code			15 Order No.		

	"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
NW CORNER SEC. 8 N/4 CORNER SEC. 8 SECTION CORNER NE CORNER SEC. 9 LAT. = 32.3269490'N LAT. = 32.3270383'N LAT. = 32.3270180'N LAT. = 32.3271460'N	bottom hole location or has a right to drill this well at this location pursuant to
LONG. = 104.0156765W LONG. = 104.0071330'W LONG. = 103.9985277W LONG. = 103.9912888'W	a contract with an owner of such a mineral or working interest, or to a
NMSP EAST (FT) NMSP EAST (FT) NMSP EAST (FT) NMSP EAST (FT) N = 482821.66 N = 482862.06 N = 482885.93 N/4 CORNER SEC. 9 N = 482926.51	voluntary pooling agreement or a compulsory pooling order heretofore entered
E = 639456.52 E = 642095.38 E = 644753.39 SCALED E = 650078.15	by the division.
N89'07'22"E 2639.76 FT N89'29'08"E 2658.70 FT N89'33'48"E 2663.05 FT N89'33'48"E 2663.05 FT	
SURFACE 1 12 E	Signature Date
E / 197,	Date
GRID BNG. = N89'26'25"E 8 2	
HORIZ. DIST. = 9962.29 FT - 0	Printed Name
80110W BOTTOM BO	
S W/4 CORNER SEQ. 8	E-mail Address
LAT. = 32.3198.389N LONG. = 104.0155775'W SEG. 8. QUARTER CORNER SEC. 9 E/4 CORNER SEC. 9 NMSP EAST (FI) SCALED SCALED	
N = 480162.41	*SUDVEYOR CERTIFICATION
E = 639494.98 FIRST TAKE POINT LAST TAKE POINT BOTTOM OF HOLE	¹⁸ SURVEYOR CERTIFICATION
1254' FNL, 330' FWL LAT. = 32.3236982'N LAT. =	I hereby certify that the well location shown on this plat was
	plotted from field notes of actual surveys made by me or under
E = 649963.98 LONG. = 104.0150519'W NMSP EAST (FT) N = 481945.66 E = 639652.107	my supervision, and that the same is true and correct to the
NMSP EAST (FT)	best of my belief.
N = 481945,66 9 E = 639652107	
\$89'28'46"W 2633.40 FT \$89'28'46"W 2633.40 FT \$89'48'46"W 2640.93 FT \$89'48'46"W 2640.93 FT	NOVEMBER 4, 2019
SW CORNER SEC. 8 S/4 CORNER SEC. 8 SECTION CORNER S/4 CORNER SEC. 9 SE CORNER SEC. 9	Date of Survey
LAT. = 32.3123728'N SCALED LAT. = 32.3124602'N SCALED LAT. = 32.3124611'N LONG. = 104.0152649'W LONG. = 103.9982208'W LONG. = 103.9811277'W	- LAMES ALA
NMSP EAST (FT) NMSP EAST (FT) NMSP EAST (FT) N = 477519.37 N = 477567.22 N = 477584.48	
E = 639599.40 E = 644864.81 E = 650145.47	AND THE STATE OF T
	Signature and Seal of topestional Surveyor
	Certificate Number: FR. MONOF PAR WHIT O. PLS 12797
	SURVEY NO. 7739

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number ² Pool (² Pool Code	e		³ Pool Na	me		
⁴ Property Code				AS	⁵ Property Name ASTRODOG FED COM 0809				Well Number 235H
⁷ OGRID No. 372920 NOVO OIL				O OIL &	8 Operator GAS NORTH	Name ERN DELAWA	RE, LLC		⁹ Elevation 3005.5
	•				" Surface	Location			
UL or lot no.	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
			п В	ottom He	ole Location	If Different Fr	om Surface		
UL or lot no.	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
¹² Dedicated Acres ¹³ Joint or Infill ¹⁴ Consolidation Code ¹⁵ Order No.		15 Order No.							

--



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 well as its 640-acre spacing unit.

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 jearter@novoog.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.
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Бу.	
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

33.50

Declared Value 0

Recipient Address:

Titus Oil & Gas
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

FedEx Priority Overnight 788798456455 0.5 lbs. (S)

Declared Value 0

Recipient Address:
BTA 011 Producers LLC
104 S Pecos St
Midland, TX 79701
11111111111

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

FedEx SENDER Account ****4154

M = Weight entered manually 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 Bhd, Suite 206 Oklahoma City, Oklahoma 73116 Office: 405-286-3375 Jearter@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

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

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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.

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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

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Proposed Well - Astrodog Fed Com 0809 231H

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Proposed Well - Astrodog Fed Com 0809 232H

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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

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Sincerely,

Novo Oil & Gas Northern Delaware, LLC

Landman

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Printed Name:	
Fillited Ivaille.	
Title:	
Date:	

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



Address:

2913 NW 63RD ST OKLAHOMA CITY OK 73116

TIKKC

Location: Device ID: Transaction:

-BTC01 940238999679

8.65

FedEx Express Saver 789082866889 0.5 lbs. (S) Declared Value 0

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OXY Y-1 COMPANY

5 GREENWAY PLAZA SUITE 110

Houston, TX 77046

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Scheduled Delivery Date 08/15/2019

Pricing option: ONE RATE

Package Information: FedEx Envelope

Shipment subtotal:

\$8.65

Total Due:

\$8.65

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Aug 12, 2019 3:52:39 PM

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NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
1001 West Wilnibe, Boile 208
Olichimus City, Olichems 73118
467-288-291

	NAME RAL LOCATION	Astrodog Fed Com 0809 211H T23S, R29E, Sec 8 - T23S, R29E, Sec 9	AFE TYPE	Development	AFE NUMBER	2015158
	ACE LOCATION	T23S, R29E, Sec 8 NW/4	FIELD	Northern Delaware	DRILLING DAYS	32
OTTO	OM-HOLE LOCATION	T23S, R29E, Sec 9 NF/4	FORMATION		DEPTH (TVD/TMD)	9,888' / 19,888'
KOJE	ECT DESCRIPTION	Drilling, completion, facilities and pipeline costs f	for 9 900' horizont	Eddy County	STATE	New Mexico
CCT		The state of the s	or 0,000 Horizotti	al Well.		
ODE		DESCRIPTION OF EXPENDITURE		T	CORTERNAL	
01	SURVEY/PERMITS/DAM	INTANGIBLE COSTS		DRILLING (300)	COST ESTIMATE COMPLETION (500)	
02	LOCATION & ROAD	AGES/LEGAL		\$ 50,00		
03	RIG MOVE			150,00		\$ 6
04	DRILLING - FOOTAGE			150,00		15
05	DRILLING - DAYWORK			50,00		5
07	COMPLETION/WORKOV	ER RIG		854,00)	85
08	COIL TUBING/SNUBBING SLICKLINE/SWABBING	3 UNIT			60,000	6
09	BITS				160,000	18
10	DIRECTIONAL SERVICE	9		150,000	5 000	
11	CASING CREW			240,000		15
12	TOOL & EQUIPMENT RE	NTAL		100,000		100
13	FUEL & POWER			50,000	80,000	130
14	DIESEL - BASE FOR MUI			204,000	200,000	404
15	MUD LOGGING & GEOLO	GIST		100,000		100
7	DISPOSAL, RESTORATION	ON & BACKFILL		24,000		24
	TRUCKING TESTING			150,000		150
	CEMENTING			120,000	40,000	160
	PERFORATING			200,000		
1	CASED HOLE LOGS			200,000	358,000	200
2	DOWNHOLE TOOLS & SE	RVICE			000,000	358
3	OTHER STIMULATION				75,000	75
4	FORMATION STIMULATION	N .			120,000	120
5 1	CONSULTING SERVICES				4,000,000	4,000
	SUPERVISION				20,000	20
	CONTRACT LABOR OTHER LABOR			120,000	100,000	220
	COMPANY CONDUCTION			5,000	20,000	25
_	COMPANY CONSULTING	SUPV			100,000	100,
	FLUIDS & CHEMICALS			50,000	1,200,000	
. (CORING & ANALYSIS			200,000	1,200,000	1,250,
	COMMUNICATIONS					200,
E	BOP TESTING			10,000	10,000	20,
F	ISHING TOOLS & SERVIO	CES		20,000	10,000	30,
7 II	NSPECTIONS			40.000		
E	VIRELINE SERVICES ENGINEERING & GEOLOG	N/ PIPE		10,000	5,000	15,
	NGINEERING & GEOLOG	Y - FIELD				
M	MULTISHOT & GYRO	1 - OFFICE		15,000		
R	E-ENTRY SERVICES					15,0
S	AMPS & TRAILERS					
S	AFETY EQUIPMENT & H2	S		15,000	15,000	30,0
C	ONTINGENCY			10,000	5,000	15,0
NA.	ISURANCE ISCELLANEOUS			40.000		
SI	IM-OPS			10,000	2,000	12,0
TO	OTAL INTANGIBLE COST	S		10,000	10,000	
0				\$ 3,067,000	\$ 6,595,000	20,0
W	ASING - CONDUCTOR	TANGIBLE COSTS		DRILLING (400)		\$ 9,662,0
CA	ASING - SURFACE	I ANGIBLE COSTS		DRILLING (400) \$ 10,000	\$ 6,595,000 \$ COMPLETION (600)	\$ 9,662,0 TOTAL
C/	ASING - SURFACE ASING - INTERMEDIATE			DRILLING (400) \$ 10,000 20,000	COMPLETION (600)	\$ 9,662,0 TOTAL \$ 10,0
C/	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE 2			DRILLING (400) \$ 10,000 20,000 85,000	COMPLETION (600)	\$ 9,662,0 TOTAL \$ 10,0 20,0 85,0
CA	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE 2 ASING - PRODUCTION / L) INER		DRILLING (400) \$ 10,000 20,000 85,000 305,000	COMPLETION (600)	\$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0
C/ C/ SL	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE 2 ASING - PRODUCTION / L JBSURFACE EQUIPMENT) INER		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000	COMPLETION (600)	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0 545,0
C/ C/ C/ SU PR	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE 2 ASING - PRODUCTION / L JBSURFACE EQUIPMENT RODUCTION TUBING JBSURFACE PUMPING FI	INER		DRILLING (400) \$ 10,000 20,000 85,000 305,000	25,000	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0
CA CA SU PR SU WE	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE 2 ASING - PRODUCTION / L JBSURFACE EQUIPMENT OUT TO TUBING JBSURFACE PUMPING EG ELLHEAD EQUIPMENT	INER		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	COMPLETION (600)	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0
CA CA SU PR SU WE FL	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / L JBSURFACE EQUIPMENT ADDUCTION TUBING JBSURFACE PUMPING EG ELLHEAD EQUIPMENT OWLINES	INER OUIPMENT		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000	25,000	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0 545,0 55,01
CA CA SU PR SU WE FLU SU	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / L JBSURFACE EQUIPMENT OCOULTION / TUBING JBSURFACE PUMPING E ELLHEAD EQUIPMENT OWLINES IRFACE PUMPING EQUIP IRFACE PUMPING EQUIP	: INER QUIPMENT		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0 70,00
CA CA SU PR SU VIE FLU SU LIN	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE 2 ASING - PRODUCTION / L INSURFACE EQUIPMENT RODUCTION TUBING IDBURFACE PUMPING E ELLHEAD EQUIPMENT OWLINES IFFACE PUMPING EQUIP IER HANGER & ASSOCE E	: INER QUIPMENT		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 65,000	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0 70,00
CA CA SU PR SU VA	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / L BSURFACE EQUIPMENT ODUCTION TUBING IBSURFACE PUMPING EGUIP ELLHEAD EQUIPMENT OWLINES RFACE PUMPING EQUIP IER HANGER & ASSOC E LVES & FITTINGS	: INER QUIPMENT		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000 100,000	20,6 \$ 9,662,0 TOTAL \$ 10,0 85,0 305,0 545,0 75,0 70,0 100,0
CA CA SU PR SU WE FLI SU LIN VA	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING BSURFACE PUMPING E ELLHEAD EQUIPMENT OWLINES RFACE PUMPING EQUIP IER HANGER & ASSOC E LVES & FITTINGS DS	: INER QUIPMENT		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 65,000	20,6 \$ 9,662,0 TOTAL \$ 10,0 85,0 305,0 545,0 75,0 70,0 100,0
CA CA SU PR SU WE FLIN VA RO	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE 2 ASING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING IBSURFACE PUMPING E ELLHEAD EQUIPMENT OWLINES IRFACE PUMPING EQUIP IER HANGER & ASSOC E LVES & FITTINGS DS UCKING	: INER QUIPMENT		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 65,000 10,000 200,000	20,6 \$ 9,662,0 TOTAL \$ 10,0 85,0 305,0 545,0 75,0 65,01
CA CA SU PR SU VA SU LIN VA RO TRI RE	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE Z ASING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING BURFACE PUMPING E ELLHEAD EQUIPMENT OWLINES IRFACE PUMPING EQUIP ER HANGER & ASSOC E LVES & FITTINGS DOS UCKING LENTY EQUIPMENT OULTION EQUIPMENT	: INER QUIPMENT		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000 100,000	20,6 \$ 9,662,0 TOTAL 20,0 85,0 305,0 545,0 70,0 100,0 200,0 42,00
CA CA SU PR SU VA SU LIN VA RO TRI RE- PRI MIS	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / L BSURFACE EQUIPMENT ODUCTION TUBING BSURFACE PUMPING EI ELLHEAD EQUIPMENT OWNERS RFACE PUMPING EQUIP HER HANGER & ASSOC E LVES & FITTINGS DS UCKING ENTRY EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT	INER QUIPMENT MENT QUIP		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 80,000 60,000 40,000	25,000 55,000 10,000 200,000 200,000	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0 645,0 770,00 200,00 200,00
CA CA SU PR SU VA FLIN VA RO TRE PRI MIS	ASING - SURFACE ASING - INTERMEDIATE 2 ASING - INTERMEDIATE 2 ASING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING BSURFACE PUMPING EI ELLHEAD EQUIPMENT OWLINES IRFACE PUMPING EQUIP IER HANGER & ASSOC E LVES & FITTINGS DS UCKING -ENTRY EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT OCIBLE EQUIPACQUISIT MOIBLE EQUIPACQUISIT	INER QUIPMENT MENT QUIP		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 65,000 10,000 200,000	20,0 \$ 9,662,0 TOTAL 10,0 20,0 305,0 545,0 75,0 100,0 200,00 42,00 600,00
CA CA SU SU SU SU SU SU SU SU SU SU SU SU SU	ASING - SURFACE ASING - INTERMEDIATE A SING - INTERMEDIATE A SING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING BSURFACE PUMPING EC ELLHEAD EQUIPMENT OWLINES RFACE PUMPING ECUIP IER HANGER & ASSOC E LVES & FITTINGS DS UCKING -ENTRY EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT TAL INTANGIBLE COSTS	EUIPMENT MENT QUIP		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 60,000 40,000	25,000 55,000 10,000 200,000 2,000 600,000 10,000	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0 305,0 645,0 770,00 200,00 200,00
CA CA SU PR SU VA RO TRI RE- PRI MIS TAN	ASING - SURFACE ASING - INTERMEDIATE A SING - INTERMEDIATE A SING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING BSURFACE PUMPING EC ELLHEAD EQUIPMENT OWLINES RFACE PUMPING ECUIP IER HANGER & ASSOC E LVES & FITTINGS DS UCKING -ENTRY EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT TAL INTANGIBLE COSTS	EUIPMENT MENT QUIP		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 80,000 60,000 40,000	25,000 5,000 10,000 100,000 200,000 2,000 600,000 10,000	20,6 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0,0 305,0 545,0 75,0,0 100,00 200,00 42,00
CA CA SU PR SU VA ROO TRI RE- PRI MIS TAN	ASING - SURFACE ASING - INTERMEDIATE A SING - INTERMEDIATE A SING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING IBSURFACE EQUIPMENT OWLINES RFACE PUMPING EQUIP IER HANGER & ASSOC E LVES & FITTINGS DOS UCKING -ENTRY EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT OCILIANEOUS NOBILE EQUIPMENT TAL INTANGIBLE COSTS TAL ESTIMATED WEL	EUIPMENT MENT QUIP		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 80,000 60,000 40,000 10,000 11,125,000 \$	25,000 55,000 10,000 100,000 200,000 2,000 600,000 1,000 1,000 1,000 1,000	20,6 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0,0 305,0 545,0 75,0,0 200,00 42,00 20,00 2,127,00
CA CA CA SU PR SU WE FLU VA RO TRI MIS TAN TO	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING ISBURFACE PUMPING EGUIPMENT OWLINES IFFACE PUMPING EGUIPMENT OWLINES IFFACE PUMPING EGUIPMENT OWLINES IFFACE PUMPING EGUIPMENT ODLOTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT TAL INTANGIBLE COSTS TAL ESTIMATED WEL BY: Aar	EUIPMENT MENT QUIP	\$	DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 60,000 40,000 10,000	25,000 5,000 10,000 100,000 200,000 200,000 10,000 1,000	20,6 \$ 9,662,0 TOTAL 10,0 85,0 305,0 545,0 75,0 100,0 200,00 42,00 20,00 2,127,00 11,789,000
CA CA SU PR SU WI FLU SU LIN VA RO TRI TAM TO	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / L ISSING - PRODUCTION - L ISSING - PRODUCTION - L ISSING - L ISS	MENT QUIP MONS LL COST	\$ \$	DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 80,000 60,000 10,000 11,125,000 \$ 4,192,000 \$ \$	25,000 55,000 10,000 100,000 200,000 2,000 2,000 10,000 1,002,000 1,002,000 3,000 1,002,000 5,000 1,002,000 1,000	20,0 \$ 9,662,0 TOTAL \$ 10,0 85,0 305,0 545,0 70,00 100,00 42,00 20,00 2,127,00 11,789,000
CA CA CA SU PR SU WI FLU SU LIN VA RO TRI TAN TO TO	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / L ISBURFACE EQUIPMENT RODUCTION TUBING ISBURFACE PUMPING EGUIPMENT OWLINES IFFACE PUMPING EGUIPMENT OWLINES IFFACE PUMPING EGUIPMENT OWLINES IFFACE PUMPING EGUIPMENT ODLOTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT ODUCTION EQUIPMENT TAL INTANGIBLE COSTS TAL ESTIMATED WEL BY: Aar	MENT QUIP MONS LL COST	\$ \$ \$	DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000 60,000 40,000 1,125,000 \$ 4,192,000 \$ 4,192,000	25,000 5,000 10,000 100,000 200,000 200,000 10,000 1,000	20,0 \$ 9,662,0 TOTAL \$ 10,0 20,0 85,0,0 545,0 70,0(100,0(200,00 42,00 600,00 20,20 2,127,00(11,789,00(7/29/2019

PREPARED BY:	Aaron Cattley		
OPERATOR APPROVAL:	XXXX	Sanlor Operations Engineer	DATE:7/29/2019
OPERATOR APPROVAL:	7:511	VP - Operations	DATE: 7/29/2019
	- pu	CEO er COO	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 proportionale share of the actual costs. Please make a note that some expanditures such as tubing, artificial lift or surface equipment may occur up to one year after the project has been initiated.

EXHIBIT 3



NOVO OIL & GAS NORTHERN DELAWARE, LLC AUTHORIZATION FOR EXPENDITURE 1001 West Wilshire, Suite 200 Oldshome City, Outshome 37116 405-284-381

WELL NAM	LOCATION	Astrodog Fed Com 0809 212H	AFE TYPE	Development	AFE NUMBER	2015159
	LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
	HOLE LOCATION	T23S, R29E, Sec 8 NW/4	FORMATION		DEPTH (TVD/TMD)	
PROJECT		T23S, R29E, Sec 9 NE/4	COUNTY	F-11 0 .	STATE	9,890' / 19,890
	-LJOKIF HON	Drilling, completion, facilities and pipeline Secretary Potash Area	e costs for 9,900' horizont	al well.		New Mexico
ACCT.		DESCRIPTION OF EXPENDITURE	The state of the s			
CODE		INTANGIBLE COSTS			COST ESTIMATE	
01 SU	JRVEY/PERMITS/DAMA	GES/LEGAL		DRILLING (300)	COMPLETION (500)	
02 LO	CATION & ROAD			\$ 50,000		\$!
	G MOVE			150,000		15
04 DR	ILLING - FOOTAGE			150,000		15
05 DR	ILLING - DAYWORK			50,000 854,000		
	MPLETION/WORKOVE DIL TUBING/SNUBBING	RRIG		054,000	60,000	85
	ICKLINE/SWABBING	UNIT			160,000	6
09 BIT					100,000	16
	RECTIONAL SERVICES			150,000		15
	SING CREW			240,000		24
12 TO	OL & EQUIPMENT REN	TAL		100,000		10
	EL & POWER			50,000	00,000	13
	SEL - BASE FOR MUD			204,000		40
15 MU	D LOGGING & GEOLOG	GIST		100,000		100
16 DIS	POSAL, RESTORATION	& BACKFILL		24,000 150,000		24
	JCKING			120,000		150
	STING MENTING			120,000	40,000	160
-	REPORATING			200,000		200
	SED HOLE LOGS				358,000	358
	WNHOLE TOOLS & SEF	RVICE				300
23 OTH	ER STIMULATION				75,000	75
24 FOR	RMATION STIMULATION	1			120,000	120
	SULTING SERVICES				4,000,000	4,000
	ERVISION			120,000	20,000	20
	TRACT LABOR			5,000	100,000	220
	MPANY CONSULTING/S	LIBY		5,500	100,000	25
30 WAT	TER	UFV			100,000	100
	DS & CHEMICALS			50,000	1,200,000	1,250,
	ING & ANALYSIS			200,000		200,
	MUNICATIONS			40.000		
	TESTING			10,000	10,000	20,
	ING TOOLS & SERVICE	S		20,000	10,000	30,
	ECTIONS			10,000	5.000	
-	ELINE SERVICES			10,000	5,000	15,
-	INEERING & GEOLOGY					
	INEERING & GEOLOGY TISHOT & GYRO	- OFFICE		15,000		15,
	NTRY SERVICES					15,
	PS & TRAILERS					
44 SAFE	TY EQUIPMENT & H2S			15,000	15,000	30,0
45 CON	TINGENCY			10,000	5,000	15,0
	RANCE			10,000		
47 MISC 49 SIM-C	ELLANEOUS			10,000	2,000	12,0
	L INTANGIBLE COSTS			10,000	10,000	20,0
1.0	E INTANGIBLE COSTS	TANGIBLE COSTS			\$ 6,595,000	\$ 9,662,0
1 CASIN	NG - CONDUCTOR	TANGIBLE COSTS			COMPLETION (600)	TOTAL
2 CASIN	NG - SURFACE			\$ 10,000		\$ 10,0
CASIN	NG - INTERMEDIATE			20,000		20,0
4 CASIN	NG - INTERMEDIATE 2			85,000		85,0
5 CASIN 6 SUBS	NG - PRODUCTION / LIN	IER		305,000 545,000		305,0
	URFACE EQUIPMENT			50,000	25,000	545,0
	UCTION TUBING URFACE PUMPING EQ	IIDUELIE		00,000	55,000	75,0 55,0
	HEAD EQUIPMENT	OIFMENT			00,000	55,0
0 FLOW				60,000	10,000	70,0
	ACE PUMPING EQUIPA	IENT			100,000	100,0
2 LINER	HANGER & ASSOC EC	UIP				
3 VALVE	S & FITTINGS					
RODS					200,000	200,00
TRUCK RE-EN				40,000	2.000	
	TRY EQUIPMENT UCTION EQUIPMENT		100	.0,000	2,000	42,00
	LLANEOUS				600,000	600,00
	BLE EQUIP-ACQUISITION	ONS		10,000	10,000	20,00
TOTAL	INTANGIBLE COSTS					20,00
		0007		1,125,000 \$	1,002,000 \$	2,127,00
TOTAL	L ESTIMATED WELI	. 0081	9	4,192,000 \$	7,597,000 \$	11,789,00
				, , , , ,	.,,007,000 \$	11,769,00
PARED BY	. Ann	n Cattley				
		17000	Ser	nior Operations Engineer	DATE:	7/29/2019
RATOR AP	PROVAL:	MA	200	7 3	The second secon	
	~	2. 91/	VP	- Operations	DATE: 11	29/2019
RATOR AP	PROVAL:	~ ~	CE	O or COO	DATE: 7	2/30/10
	,	y			DATE:	1 -/11
NER COM	PANY NAME:					
HER COM						
NER APPR	ROVAL:	The same of the sa			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
NER APPR	ROVAL:				DATE:	



NOVO OIL & GAS NORTHERN DELAWARE, LLC AUTHORIZATION FOR EXPENDITURE 1901 West Wilshins, Suits 205 Oldshorms City, Oldsmore 37110 405-286-4391

WELL	NAME		405-286-4391			
	AL LOCATION	Astrodog Fed Com 0809 215H	AFE TYPE	Development	AFE NUMBER	2015160
	CE LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9 T23S, R29E, Sec 8 NW/4	FIELD	Northern Delaware	DRILLING DAYS	32
	M-HOLE LOCATION	T23S, R29E, Sec 9 NE/4	FORMATION	Wolfcamp XY	DEPTH (TVD/TMD)	9,892' / 19,892'
ROJE	CT DESCRIPTION	Drilling, completion, facilities and pipeline costs	COUNTY	Eddy County	STATE	New Mexico
		Secretary Potash Area	s for 9,900 honzonta	l well.		
CCT.		DESCRIPTION OF EXPENDITURE	-			
CODE		INTANGIBLE COSTS		DRILLING (200)	COST ESTIMATE	
01	SURVEY/PERMITS/DAM	AGES/LEGAL		DRILLING (300) \$ 50,000	COMPLETION (500)	
02	LOCATION & ROAD					\$ 50
03	RIG MOVE			150,000 150,000		150
04	DRILLING - FOOTAGE			50,000		150
05	DRILLING - DAYWORK			854,000		50
06	COMPLETION/WORKOV	ER RIG		034,000	60.000	854
07	COIL TUBING/SNUBBING	UNIT			60,000	60
08	SLICKLINE/SWABBING				160,000	160
09	BITS			150,000	£ 000	
10	DIRECTIONAL SERVICES	3		240,000	5,000	155
11	CASING CREW			100,000		240
12	TOOL & EQUIPMENT RE	NTAL		50,000	90,000	100
13	FUEL & POWER			204,000	80,000	130
	DIESEL - BASE FOR MUD			100,000	200,000	404
15	MUD LOGGING & GEOLO	GIST				100
16	DISPOSAL, RESTORATION	N & BACKFILL		24,000		24
17	TRUCKING			150,000		150
	TESTING			120,000	40,000	160
	CEMENTING			222 222		
	PERFORATING			200,000		200
1	CASED HOLE LOGS				358,000	358
2	DOWNHOLE TOOLS & SE	RVICE				
3	OTHER STIMULATION				75,000	75
	FORMATION STIMULATIO	N			120,000	120
	CONSULTING SERVICES				4,000,000	4,000
	SUPERVISION			400.000	20,000	20,
7	CONTRACT LABOR			120,000	100,000	220,
8 (OTHER LABOR			5,000	20,000	25
9 (COMPANY CONSULTING	SUPV			100,000	100,
0	WATER			F0.400		
1	FLUIDS & CHEMICALS			50,000	1,200,000	1,250,
2 (CORING & ANALYSIS			200,000		200,
	COMMUNICATIONS					
4 E	BOP TESTING			10,000	10,000	20,
S F	FISHING TOOLS & SERVIO	CES		20,000	10,000	30,
	NSPECTIONS					
B	WIRELINE SERVICES			10,000	5,000	15,
9 8	ENGINEERING & GEOLOG	Y - FIELD				
) E	ENGINEERING & GEOLOG	Y - OFFICE		45.000		
I N	MULTISHOT & GYRO			15,000		15,
2 F	RE-ENTRY SERVICES					
	CAMPS & TRAILERS			15.000	45.000	
	SAFETY EQUIPMENT & H2	S		15,000	15,000	30,
C	CONTINGENCY			10,000	5,000	15,
11	NSURANCE			10.000		
	MISCELLANEOUS			10,000	2,000	12,
	IM-OPS			10,000	10,000	20,0
T	OTAL INTANGIBLE COST	S		\$ 3,067,000	\$ 6,595,000	
		TANGIBLE COSTS		NAME OF TAXABLE PARTY.	\$ 6,595,000 COMPLETION (600)	\$ 9,662,
	ASING - CONDUCTOR					TOTAL
	ASING - SURFACE			\$ 10,000 20,000		\$ 10,0
	ASING - INTERMEDIATE			85,000		20,0
	ASING - INTERMEDIATE :			305,000		85,0
	ASING - PRODUCTION / L			545,000		305,0
	UBSURFACE EQUIPMEN			50,000	25 000	545,0
	RODUCTION TUBING			00,000	25,000	75,0
	UBSURFACE PUMPING E	QUIPMENT			55,000	55,0
	ELLHEAD EQUIPMENT			60,000	40.000	
	LOWLINES			00,000	10,000	70,0
	URFACE PUMPING EQUIP				100,000	100,0
LI	NER HANGER & ASSOC I	EQUIP				
VA	ALVES & FITTINGS				200,000	
	ODS				200,000	200,0
	RUCKING			40,000	2.000	40.0
	E-ENTRY EQUIPMENT			40,000	2,000	42,0
	RODUCTION EQUIPMENT				600,000	200 00
	SCELLANEOUS	No. of the second secon		10,000		600,00
	NGIBLE EQUIP-ACQUISI			10,000	10,000	20,00
TC	TAL INTANGIBLE COSTS	3		1,125,000	1,002,000 5	0.405
TO	TAL ESTIMATED WE	I COST			1,002,000 \$	2,127,00
1.0	EUTHIATED WE	LL 0031		4,192,000	7,597,000 \$	11,789,00
					,	,,
ARE	D BY: Aa					
TREL	Aa Aa	ron Cattley	Se	nior Operations Engineer	DATE:	7/29/2019
ATO	R APPROVAL:	#1500		The second second second	The second secon	
., 01	- THOVAL:	- NO	VP	- Operations	DATE: 7	/29/2019
TO	R APPROVAL:	1- 71				-1-1
			CE	D or COO	DATE:	1/10/19

PREPARED BY:	Aaron Cattley	Senior Operations Engineer	DATE: 7/29/2019
OPERATOR APPROVAL:	4880	VP - Operations	DATE: 7/29/2019
OPERATOR APPROVAL:	7-5ML	CEO er COO	DATE: 7/30/19
PARTNER COMPANY NAME:			
PARTNER APPROVAL:			DATE:
TITLE:			



NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE
1001 West Wilhibre, Buile 206
OMahoma City, Olstahoma 73116
405-284-349

SURFAC	AL LOCATION	Astrodog Fed Com 080		AFE TYPE	Development	AFE NUMBER	2015161
BOTTON	CE LOCATION	T23S, R29E, Sec 8 - T		FIELD	Northern Delaware	DRILLING DAYS	32
	M-HOLE LOCATION	T23S, R29E, Sec 8 NV T23S, R29E, Sec 9 NE		FORMATION	Wolfcamp A	DEPTH (TVD/TMD)	10,108' / 20,108'
KOJEC	CT DESCRIPTION	Drilling, completion, fac	cilities and pipeline costs for	or 9,900' horizontal	Eddy County well.	STATE	New Mexico
		Secretary Potash Area					
ACCT.		DESCRIPTION OF I				COST ESTIMATE	
ODE S	CLIDVEY/DEDANTO DA	INTANGIBLE	COSTS		DRILLING (300)	COMPLETION (500)	
	SURVEY/PERMITS/DAM LOCATION & ROAD	MAGES/LEGAL			\$ 50,000		\$ 50,0
	RIG MOVE				150,000 150,000		150,0
	DRILLING - FOOTAGE				50,000	THE PERSON NAMED IN COLUMN	150,0
	DRILLING - DAYWORK				854,000		854,0
	COMPLETION/WORKO					60,000	
	COIL TUBING/SNUBBIN	G UNIT				160,000	160,0
	SLICKLINE/SWABBING BITS						
-	DIRECTIONAL SERVICE	9			150,000	5,000	
	CASING CREW				240,000 100,000		240,0
12	TOOL & EQUIPMENT R	ENTAL			50,000	80,000	100,0
	FUEL & POWER				204,000	200,000	404,0
	DIESEL - BASE FOR MU				100,000		100,0
	MUD LOGGING & GEOL				24,000		24,0
	DISPOSAL, RESTORAT TRUCKING	ON & BACKFILL			150,000		150,0
	TESTING				120,000	40,000	160,0
	CEMENTING			-	200,000		200,0
20 F	PERFORATING				200,000	358,000	358,0
	CASED HOLE LOGS					555,200	230,0
	DOWNHOLE TOOLS & S	SERVICE				75,000	75,0
	OTHER STIMULATION	ION				120,000	120,0
	FORMATION STIMULAT CONSULTING SERVICE					4,000,000	4,000,0
	SUPERVISION				120,000	20,000	20,0
	CONTRACT LABOR				5,000	20,000	220,0 25,0
	OTHER LABOR					100,000	100,0
	COMPANY CONSULTIN	G/SUPV					
	WATER				50,000	1,200,000	1,250,0
	FLUIDS & CHEMICALS CORING & ANALYSIS				200,000		200,0
	COMMUNICATIONS				10,000	10,000	20,0
	BOP TESTING				20,000	10,000	30,0
36 F	FISHING TOOLS & SER	/ICES				10,000	00,0
	NSPECTIONS				10,000	5,000	15,0
	WIRELINE SERVICES						
	ENGINEERING & GEOL						
	ENGINEERING & GEOLI MULTISHOT & GYRO	DGY - OFFICE			15,000		15,0
	RE-ENTRY SERVICES						
	CAMPS & TRAILERS				15,000	15,000	30,0
	SAFETY EQUIPMENT &	H2S			10,000	5,000	15,0
	CONTINGENCY						7515
	NSURANCE				10,000	2,000	12,0
	MISCELLANEOUS SIM-OPS				10,000	10,000	20,0
					\$ 3,067,000		
49 S		STS					£ 0.662.0
49 S	TOTAL INTANGIBLE CO		OSTS		THE RESERVE OF THE PERSON NAMED IN COLUMN 2 IS NOT THE PERSON NAME	\$ 6,595,000	\$ 9,662,0
49 S		STS TANGIBLE C	OSTS		DRILLING (400)	COMPLETION (600)	TOTAL
49 S T 01 C 02 C	CASING - CONDUCTOR CASING - SURFACE	TANGIBLE C	OSTS		DRILLING (400)		
01 C 02 C 03 C	CASING - CONDUCTOR CASING - SURFACE CASING - INTERMEDIAT	TANGIBLE C	COSTS		DRILLING (400) \$ 10,000 20,000 85,000		TOTAL \$ 10,00 20,00 85,00
01 C 02 C 03 C 04 C	CASING - CONDUCTOR CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT	E E 2	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000		* 10,00 20,00 85,00 305,00
01 C 02 C 03 C 04 C 05 C	CASING - CONDUCTOR CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION	E E 2 / LINER	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000	COMPLETION (600)	* 10,00 20,00 85,00 305,00 545,00
01 C 02 C 03 C 04 C 05 C 06 S	CASING - CONDUCTOR CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT	E E 2 / LINER	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000	25,000	TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0
01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - RODUCTION SUBSURFACE EQUIPMI	E E 2 / LINER ENT	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000	COMPLETION (600)	* 10,00 20,00 85,00 305,00 545,00
01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 V	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPMI PRODUCTION TUBING SUBSURFACE PUMPING VIELLHEAD EQUIPMEN	E E 2 /LINER ENT GEQUIPMENT	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000	25,000 55,000	TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0
01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 W	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPM PRODUCTION TUBING SUBSURFACE PUMPIN WELLHEAD EQUIPMEN LOWLINES	TANGIBLE C E E 2 / LINER ENT B EQUIPMENT	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000	TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0
01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 W 10 F	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPM PRODUCTION TUBING SUBSURFACE PUMPING WELLHEAD EQUIPMEN **LOWLINES SURFACE PUMPING EG	TANGIBLE C E E 2 / LINER ENT G EQUIPMENT UIPMENT	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000	TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0 55,0
01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 W 10 F 11 S	CASING - CONDUCTOR CASING - CONDUCTOR CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPMIN PRODUCTION TUBING SUBSURFACE PUMPIN VELLHEAD EQUIPMEN **LOWLINES** SURFACE PUMPING EQ	TANGIBLE C E E 2 / LINER ENT G EQUIPMENT UIPMENT	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000 10,000	TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0 70,0 100,0
49 S T 01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 V 10 F 11 S 12 L 13 V	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPM PRODUCTION TUBING SUBSURFACE PUMPING WELLHEAD EQUIPMEN ***LOWLINES SURFACE PUMPING EG SUR	TANGIBLE C E E 2 / LINER ENT G EQUIPMENT UIPMENT	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000	TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0 55,0
49 S T 01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 V 10 F 11 S 12 L 13 V 15 R	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPMING PRODUCTION TUBING SUBSURFACE PUMPING WELLHEAD EQUIPMEN LOWLINES SURFACE PUMPING EG LINER HANGER & ASSO (ALVES & FITTINGS	TANGIBLE C E E 2 / LINER ENT G EQUIPMENT UIPMENT	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 56,000 100,000 200,000	TOTAL \$ 10,0 20,0 85,0 85,0 95,0 545,0 75,0 70,0 100,0
49 S T 01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 W 10 F 11 S 12 L 13 W 15 T 17 T 17 T	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPM PRODUCTION TUBING SUBSURFACE PUMPIN PRODUCTION TUBING PRODUCTION TUBING SUBSURFACE PUMPING PRODUCTION TUBING SUBSURFACE PUMPING PRODUCTION TUBING SUBSURFACE PUMPING CALVENER SURFACE PUMPING EG LINER HANGER & ASSO (ALVES & FITTINGS CODS TRUCKING TRUCKING ELENTRY EQUIPMENT	TANGIBLE C E E E 2 / LINER ENT B EQUIPMENT T UIPMENT C EQUIP	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000 10,000	TOTAL \$ 10,0 20,0 85,0 305,0 545,0 75,0 70,0 100,0
9 S 01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 V 10 F 11 S 12 L 13 V 15 R 17 T 20 R 34 P	CASING - CONDUCTOR CASING - CONDUCTOR CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPMEN PRODUCTION TUBING SUBSURFACE PUMPING VELLHEAD EQUIPMEN LOWLINES SURFACE PUMPING EQ LINER HANGER & ASSO CALVES & FITTINGS RODS RUCKING RUCKING RUCKING RUCKING RUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT RODUCTION EQUIPMENT RODUCTION EQUIPMENT RODUCTION EQUIPMENT RODUCTION EQUIPMENT RODUCTION EQUIPMENT	TANGIBLE C E E E 2 / LINER ENT B EQUIPMENT T UIPMENT C EQUIP	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000 60,000	25,000 56,000 10,000 200,000 2,000 600,000	TOTAL \$ 10,0 20,0 85,0 85,0 95,0 545,0 75,0 70,0 100,0
49 S T 01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 V 10 F 11 S 12 L 13 V 15 R 17 T 20 R 34 P 47 M	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION CASING - PRODUCTION CASING - PRODUCTION CONDUCTION TUBING CONDUCTION TUBING CONDUCTION TUBING CONDUCTION TUBING CONDUCTION TUBING CONDUCTION CONDUCTIO	TANGIBLE C E E 2 / LINER ENT B EQUIPMENT T UIPMENT C EQUIP	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 65,000 10,000 200,000	TOTAL \$ 10,0 20,0 85,0,0 305,0 545,0 75,0,0 70,0,0 100,0,0 42,0,0
49 S T 01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 V 10 F 11 S 11 S 12 L 13 V 15 R 17 T 17 T 20 R 34 P 47 M	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPM PRODUCTION TUBING SUBSURFACE PUMPINN WELLHEAD EQUIPMEN LOWLINES SURFACE PUMPING EG LINER HANGER & ASSO (ALVES & FITTINGS CODS TRUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT RODUCTION EQUIPMENT ROSULLANEOUS 'ANGIBLE EQUIPACOU'	TANGIBLE C E E E 2 / LINER ENT G EQUIPMENT C EQUIP NT ISITIONS	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 60,000 40,000	25,000 55,000 10,000 200,000 2,000 2,000 600,000 10,000	TOTAL \$ 10,0 20,0 85,0,0 305,0 545,0 75,0,0 70,0,0 100,0,0 42,0,0 600,0,0
49 S T 01 C 02 C 03 C 04 C 05 C 06 S 07 P 08 S 09 W 10 F 11 S 12 L 13 W 15 R 17 T 17 T 17 T 17 T 17 T	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPM PRODUCTION TUBING SUBSURFACE PUMPINN WELLHEAD EQUIPMEN FLOWLINES SURFACE PUMPING EQ LINER HANGER & ASSO (ALVES & FITTINGS CODS RUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT RODUCTION EQUIPMENT RISCELLARGOUS ANGIBLE EQUIP-ACQU OTAL INTANGIBLE CO	TANGIBLE C E E E 2 / LINER ENT G EQUIPMENT C EQUIP NT ISITIONS STS	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 60,000 40,000	25,000 56,000 10,000 200,000 2,000 600,000	TOTAL \$ 10,0 20,0 85,0 85,0 905,0 545,0 75,0 70,0 100,0 200,0 42,0
49 ST T T M M M M M M M M M M M M M M M M	CASING - CONDUCTOR CASING - SURFACE CASING - SURFACE CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - INTERMEDIAT CASING - PRODUCTION SUBSURFACE EQUIPM PRODUCTION TUBING SUBSURFACE PUMPINN WELLHEAD EQUIPMEN LOWLINES SURFACE PUMPING EG LINER HANGER & ASSO (ALVES & FITTINGS CODS TRUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT RODUCTION EQUIPMENT ROSULLANEOUS 'ANGIBLE EQUIPACOU'	TANGIBLE C E E E 2 / LINER ENT G EQUIPMENT C EQUIP NT ISITIONS STS	COSTS		DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 60,000 40,000	25,000 55,000 10,000 200,000 2,000 2,000 600,000 10,000	TOTAL \$ 10,0 20,0 85,0,0 305,0 545,0 75,0,0 100,0,0 42,0,0 \$00,0,0 \$ 200,0,0 \$ 20,0,0



NOVO OIL & GAS NORTHERN DELAWARE, LLC AUTHORIZATION FOR EXPENDITURE 1001 West Wishire, Suite 200 Olitahoma (2lt), Olitahoma 73116 405-205-4391

WELL	NAME	Ashedon Foldon association	405-286				
-	RAL LOCATION	Astrodog Fed Com 0809 222H T23S, R29E, Sec 8 - T23S, R29E, Sec 9		AFE TYPE	Development	AFE NUMBER	2015162
	ACE LOCATION	T23S, R29E, Sec 8 NW/4		FIELD	Northern Delaware	DRILLING DAYS	32
	OM-HOLE LOCATION	T23S, R29E, Sec 9 NE/4		FORMATION	Wolfcamp A	DEPTH (TVD/TMD)	10,108' / 20,108'
ROJE	ECT DESCRIPTION	Drilling, completion, facilities and pipeline	o anota fac 0	COUNTY	Eddy County	STATE	New Mexico
		Secretary Potash Area	e costs for a	,900 nonzonta	Well,		
ACCT		DESCRIPTION OF EXPENDITURE	-				
CODE		INTANGIBLE COSTS			DDILL INO (ann)	COST ESTIMATE	
01	SURVEY/PERMITS/DAM	AGES/LEGAL			DRILLING (300)	COMPLETION (500)	
02	LOCATION & ROAD				\$ 50,000		\$ 50
03	RIG MOVE				150,000		150
04	DRILLING - FOOTAGE				150,000		150
05	DRILLING - DAYWORK				50,000		50,
06	COMPLETION/WORKOV	ER RIG	and the same of th		854,000		854,
07	COIL TUBING/SNUBBING					60,000	60,
08	SLICKLINE/SWABBING	20111				160,000	160,
09	BITS						1000
10	DIRECTIONAL SERVICES				150,000	5,000	155,
11	CASING CREW	3			240,000		240,
12	TOOL & EQUIPMENT RE	NTAL			100,000		100,
13	FUEL & POWER	NIAL			50,000	80,000	130,
14					204,000	200,000	404,
	DIESEL - BASE FOR MUI				100,000		100,
15	MUD LOGGING & GEOLO	OGIST			24,000		24,
16	DISPOSAL, RESTORATION	ON & BACKFILL	7.34.1734		150,000		150,
17	TRUCKING	- Humaniyib	- Andrews		120,000	40,000	160,
18	TESTING		712		,000	70,000	160,
19	CEMENTING				200,000		000
20	PERFORATING				200,000	358,000	200,
21	CASED HOLE LOGS					350,000	358,
22	DOWNHOLE TOOLS & SE	ERVICE				75 000	
23	OTHER STIMULATION	A CONTRACTOR OF THE CONTRACTOR				75,000	75,
24	FORMATION STIMULATIO	NO				120,000	120,
25	CONSULTING SERVICES					4,000,000	4,000,
26	SUPERVISION				400.000	20,000	20,
27	CONTRACT LABOR				120,000	100,000	220,
28	OTHER LABOR				5,000	20,000	25,
29	COMPANY CONSULTING	SUPV				100,000	100,
30	WATER	OCC V					
31	FLUIDS & CHEMICALS				50,000	1,200,000	1,250,
32	CORING & ANALYSIS				200,000		200,
33	COMMUNICATIONS						
	BOP TESTING				10,000	10,000	20,0
CHECKSON PROPERTY.		OF S			20,000	10,000	30,
	FISHING TOOLS & SERVI INSPECTIONS	CES					
					10,000	5,000	15,0
	WIRELINE SERVICES						
	ENGINEERING & GEOLOG			110000000000000000000000000000000000000			
	ENGINEERING & GEOLOG	SY - OFFICE			15,000		15,0
	MULTISHOT & GYRO						
	RE-ENTRY SERVICES					meaning and a second	
	CAMPS & TRAILERS				15,000	15,000	30,0
	SAFETY EQUIPMENT & H	2S			10,000	5,000	15,0
	CONTINGENCY	The state of the s					10,0
	INSURANCE				10,000	2,000	12,0
	MISCELLANEOUS				10,000	10,000	20,0
	SIM-OPS					10,000	20,0
	TOTAL INTANGIBLE COS	TS			\$ 3,067,000	\$ 6,595,000	\$ 9,662,0
	Control of the second	TANGIBLE COSTS			DRILLING (400)	COMPLETION (600)	THE RESERVE OF THE PERSON NAMED IN
	CASING - CONDUCTOR				\$ 10,000	- 3 IN LE 110N (800)	TOTAL
	CASING - SURFACE				20,000		\$ 10,0
	CASING - INTERMEDIATE		and the state of t		85,000		20,0
	CASING - INTERMEDIATE				305,000		85,0
	CASING - PRODUCTION /				545,000		305,0
	SUBSURFACE EQUIPMEN	IT	-		50,000	25 002	545,0
	PRODUCTION TUBING				00,000	25,000	75,0
8 8	SUBSURFACE PUMPING E	EQUIPMENT				55,000	55,0
	WELLHEAD EQUIPMENT				60.000	40.000	
	FLOWLINES				60,000	10,000	70,0
	SURFACE PUMPING EQUI	PMENT				100,000	100,0
	INER HANGER & ASSOC						
	ALVES & FITTINGS						
	RODS					200,000	200,0
	TRUCKING						
	RE-ENTRY EQUIPMENT				40,000	2,000	42,0
	PRODUCTION EQUIPMENT	Т					
_	MISCELLANEOUS					600,000	600,0
	ANGIBLE EQUIP-ACQUIS	ITIONS			10,000	10,000	20,0
1	OTAL INTANGIBLE COST	'e					The Superior
				- 1	1,125,000	\$ 1,002,000	\$ 2,127,0
7	TOTAL ESTIMATED WE	LL COST		1	4 402 000	¢ 7.507.000	
			-	13	4,192,000	\$ 7,597,000	\$ 11,789,00
PARI	ED BY: A	aron Cattley					
		1/1/1/19		Se	nior Operations Engineer	DATE:	7/29/2019
RATO	OR APPROVAL:	714781					7/29/2019
		1		VF	- Operations	DATE:	12812019
RATO	OR APPROVAL:	1- TI					7/20/10
					O or COO		

FILE ARED BI.	Aaron Cartley	Senior Operations Engineer	DATE:	7/29/2019
OPERATOR APPROVAL:	4 5881	VP - Operations	DATE:	//29/2019
OPERATOR APPROVAL:	7-71	CEO er COO	DATE:	7/30/19
PARTNER COMPANY NAME:			West of the second	
PARTNER APPROVAL:			DATE:	
TITLE:			ACT COME AND ARCHITECT	



NOVO OIL & GAS NORTHERN DELAWARE, LLC AUTHORIZATION FOR EXPENDITURE 1001 West Wilshire, Sults 206 Olishoma City, Olishoma 73116 405-206-139

	NAME RAL LOCATION	Astrodog Fed Com 0809 225H	AFE TYPE	Development	AFE NUMBER	2015163
	ACE LOCATION	T23S, R29E, Sec 8 - T23S, R29E, Sec 9	FIELD	Northern Delaware	DRILLING DAYS	32
	OM-HOLE LOCATION	T23S, R29E, Sec 8 NW/4 T23S, R29E, Sec 9 NE/4	FORMATION	Wolfcamp A	DEPTH (TVD/TMD)	10,108' / 20,108
	ECT DESCRIPTION	Drilling completion facilities and significant	COUNTY	Eddy County	STATE	New Mexico
		Drilling, completion, facilities and pipeline cost Secretary Potash Area	s for 9,900' horizontal	well.		
ACCT.		DESCRIPTION OF EXPENDITURE				
CODE		INTANGIBLE COSTS		DRILLING (300)	COST ESTIMATE	
01	SURVEY/PERMITS/DAM	AGES/LEGAL			COMPLETION (500)	
02	LOCATION & ROAD			The second secon		\$ 5
03	RIG MOVE			150,000		15
04	DRILLING - FOOTAGE			150,000		15
05	DRILLING - DAYWORK			50,000		51
06	COMPLETION/WORKOV			854,000		854
07	COIL TUBING/SNUBBING	UNIT			60,000	60
08	SLICKLINE/SWABBING				160,000	160
09	BITS			450,000		
10	DIRECTIONAL SERVICES	3		150,000		155
11	CASING CREW			240,000		240
12	TOOL & EQUIPMENT RE	NTAL				100
13	FUEL & POWER			50,000	80,000	130
14	DIESEL - BASE FOR MUE			204,000	200,000	404
15	MUD LOGGING & GEOLO			100,000		100
16	DISPOSAL, RESTORATIO			24,000		24
17	TRUCKING			150,000		150
18	TESTING			120,000	40,000	160
19	CEMENTING					
	PERFORATING			200,000		200
21	CASED HOLE LOGS				358,000	358
	DOWNHOLE TOOLS & SE	RVICE				
23	OTHER STIMULATION				75,000	75
	FORMATION STIMULATIO	ON			120,000	120
	CONSULTING SERVICES				4,000,000	4,000
_	SUPERVISION			400.000	20,000	20
	CONTRACT LABOR			120,000	100,000	220
	OTHER LABOR			5,000	20,000	25
_	COMPANY CONSULTING	SUPV			100,000	100
	WATER					
_	FLUIDS & CHEMICALS			50,000	1,200,000	1,250
	CORING & ANALYSIS			200,000		200
	COMMUNICATIONS					
-	BOP TESTING			10,000	10,000	20,
	FISHING TOOLS & SERVI	CES		20,000	10,000	30,
	INSPECTIONS	02.0				A CONTRACTOR OF THE PARTY OF TH
_	WIRELINE SERVICES			10,000	5,000	15,
	ENGINEERING & GEOLOG	EV - EIELD				
	ENGINEERING & GEOLOG	Y - OFFICE				
41	MULTISHOT & GYRO	31 - OFFICE		15,000		15,
	RE-ENTRY SERVICES					
	CAMPS & TRAILERS					
	SAFETY EQUIPMENT & H	29		15,000	15,000	30,
-	CONTINGENCY			10,000	5,000	15,
	INSURANCE					
	MISCELLANEOUS			10,000	2,000	12,
	SIM-OPS			10,000	10,000	20,
	TOTAL INTANGIBLE COST	rs				20,
-	THE INTERNATIONAL COS			\$ 3,067,000		\$ 9,662,
01 0	CASING - CONDUCTOR	TANGIBLE COSTS		DRILLING (400)	COMPLETION (600)	TOTAL
-	CASING - SURFACE		-	\$ 10,000		\$ 10,
	CASING - INTERMEDIATE			20,000		20,
-	CASING - INTERMEDIATE	2		85,000		85,0
_	CASING - INTERMEDIATE			305,000		305,0
	SUBSURFACE EQUIPMEN			545,000		545,
	PRODUCTION TUBING	1		50,000	25,000	75,0
	SUBSURFACE PUMPING E	CUIRMENT			55,000	55,0
		COLLMENT				
8 8	WELLHEAD FOLIDMENT			60,000	10,000	70,0
)8 S	WELLHEAD EQUIPMENT	M. Children				100,0
08 S	WELLHEAD EQUIPMENT FLOWLINES	DIMENT			100,000	
08 S 09 V 0 F 1 S	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI				100,000	100,0
08 S 09 V 0 F 1 S 2 L	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI LINER HANGER & ASSOC				100,000	100,0
08 S 09 V 0 F 1 S 2 L 3 V	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI LINER HANGER & ASSOC VALVES & FITTINGS				200,000	
08 S 09 V 0 F 1 S 2 L 3 V 5 R	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI LINER HANGER & ASSOC VALVES & FITTINGS RODS					
08 S 09 V 10 F 11 S 12 L 13 V 15 R	WELLHEAD EQUIPMENT FLOWLINES SUMMERACE PUMPING EQUI LINER HANGER & ASSOC VALVES & FITTINGS RODS TRUCKING			40,000		200,0
08 S 09 V 10 F 11 S 12 L 13 V 15 R 7 T	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUIL LINER HANGER & ASSOC VALVES & FITTINGS RODS TRUCKING RE-ENTRY EQUIPMENT	EQUIP		40,000	200,000	200,0
08 S 09 V 00 F 11 S 2 L 3 V 5 R 7 T 00 R	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI LINER HANGER & ASSOC VALVES & FITTINGS RODS TRUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT	EQUIP		40,000	200,000	200,0
08 S 09 VV 10 F 11 S 12 L 13 VV 15 R 17 T 10 R 14 P	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI LINER HANGER & ASSOC /ALVES & FITTINGS RODS IRUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT MISCELLANEOUS	EQUIP		40,000	200,000 2,000 600,000	200,0 42,0 600,0
08 S 09 VV 00 F 11 S 22 L 33 VV 55 R 77 T 100 R 44 P 77 M 99 T	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI LINER HANGER & ASSOC VALVES & FITTINGS RODS ROUS FRUCKING EE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT MISCELLANEOUS 'ANGIBLE EQUIP. ACQUISI	EQUIP			200,000	200,0 42,0 600,0
08 S 09 VV 00 F 11 S 22 L 33 VV 55 R 77 T 100 R 44 P 77 M 99 T	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI LINER HANGER & ASSOC /ALVES & FITTINGS RODS IRUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT MISCELLANEOUS	EQUIP		10,000	200,000 2,000 600,000 10,000	200,0 42,0 600,0 20,0
8 S S S S S S S S S S S S S S S S S S S	WELLHEAD EQUIPMENT FLOWLINES SURFACE PUMPING EQUI LINER HANGER & ASSOC VALVES & FITTINGS RODS ROUS FRUCKING EE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT MISCELLANEOUS 'ANGIBLE EQUIP. ACQUISI	EQUIP TIONS S		10,000	200,000 2,000 600,000 10,000	200,0 42,0 600,0 20,0

The factor of the	Aaron Categy	Senior Operations Engineer	DATE: 7/29/	2019
OPERATOR APPROVAL:	488	VP - Operations	DATE: 7/29/20	19
OPERATOR APPROVAL:	7 7-11	CEO er COO	DATE: 7/3	19
PARTNER COMPANY NAME:				
PARTNER APPROVAL:			DATE:	
TITLE:				



TITLE:

NOVO OIL & GAS NORTHERN DELAWARE, LLC AUTHORIZATION FOR EXPENDITURE 1001 West Winshise, Bulle 200 Olikhoms Carp, Olikamur 27116

VELL NAME Astrodog Fed Com 0809 231H ATERAL LOCATION T23S, R29E, Sec 8 - T23S, R29E, Sec 9 URFACE LOCATION T23S, R29E, Sec 8 NW/4 OTTOM-HOLE LOCATION T23S, R29E, Sec 9 NE/4 COT, DESCRIPTION Onilling, completion, facilities and pipeline costs f Secretary Potash Area CCT, DESCRIPTION OF EXPENDITURE CODE INTANGIBLE COSTS 01 SURVEY/PERMITS/DAMAGES/LEGAL 102 LOCATION & ROAD 03 RIG MOVE 04 DRILLING - FOOTAGE 05 DRILLING - DAYWORK 06 COMPLETION/WORKOVER RIG 07 COIL TUBING/SNUBBING UNIT	AFE TYPE FIELD FORMATION COUNTY for 9,900' horizontal	Development Northern Delaware	ACE MUNACES	10045404
URFACE LOCATION	FORMATION		AFE NUMBER DRILLING DAYS	2015164
	COUNTY	Wolfcamp B	DEPTH (TVD/TMD)	10,728' / 20,728'
Secretary Potash Area	for 9,900' horizontal	Eddy County	STATE	New Mexico
Secretary Potash Area		well,		THE MICKEU
DDE INTANGIBLE COSTS 11 SURVEY/PERMITS/DAMAGES/LEGAL 12 LOCATION & ROAD 13 RIG MOVE 14 DRILLING - FOOTAGE 15 DRILLING - DAYWORK 16 COMPLETION/WORKOVER RIG 17 COIL TUBING/SNUBBING UNIT				
01 SURVEY/PERMITS/DAMAGES/LEGAL 102 LOCATION & ROAD 31 RIG MOVE 104 DRILLING - FOOTAGE 105 DRILLING - DAYWORK 106 COMPLETION/WORKOVER RIG 107 COIL TUBING/SNUBBING UNIT			COST ESTIMATE	
D2 LOCATION & ROAD 33 RIG MOVE 40 DRILLING - FOOTAGE 55 DRILLING - DAYWORK 56 COMPLETION/WORKOVER RIG 57 COIL TUBING//SNUBBING UNIT		DRILLING (300)	COMPLETION (500)	
03 RIG MOVE 04 DRILLING - FOOTAGE 05 DRILLING - DAYWORK 06 COMPLETION/WORKOVER RIG 07 COLL TUBING/SNUBBING UNIT		\$ 50,000		\$ 50,0
04 DRILLING - FOOTAGE 05 DRILLING - DAYWORK 08 COMPLETION/WORKOVER RIG 07 COIL TUBING/SNUBBING UNIT		150,000		150,0
DE DRILLING - DAYWORK DE COMPLETION/WORKOVER RIG DO COIL TUBING/SNUBBING UNIT		150,000		150,0
06 COMPLETION/WORKOVER RIG 07 COIL TUBING/SNUBBING UNIT		50,000		50,0
07 COIL TUBING/SNUBBING UNIT		854,000	60,000	854,0
	WELLINES OF STREET		160,000	160,0
D8 SLICKLINE/SWABBING			100,000	100,0
09 BITS		150,000	5,000	155,0
10 DIRECTIONAL SERVICES		240,000		240,0
11 CASING CREW		100,000		100,0
12 TOOL & EQUIPMENT RENTAL 13 FUEL & POWER		50,000	80,000	130,0
13 FUEL & POWER 14 DIESEL - BASE FOR MUD		204,000	200,000	404.0
MUD LOGGING & GEOLOGIST		100,000		100,0
16 DISPOSAL, RESTORATION & BACKFILL		24,000		24,0
7 TRUCKING		150,000		150,0
8 TESTING		120,000	40,000	160,0
9 CEMENTING		200,000		000
PERFORATING		200,000	358,000	200,0 358,0
1 CASED HOLE LOGS			356,000	358,0
2 DOWNHOLE TOOLS & SERVICE			75,000	75,0
OTHER STIMULATION			120,000	120,0
4 FORMATION STIMULATION	Market .		4,000,000	4,000,0
CONSULTING SERVICES			20,000	20,0
26 SUPERVISION 27 CONTRACT LABOR		120,000	100,000	220,0
27 CONTRACT LABOR 28 OTHER LABOR		5,000	20,000	25,0
9 COMPANY CONSULTING/SUPV			100,000	100,0
0 WATER		50,000	1,200,000	4.050.0
FLUIDS & CHEMICALS		200,000	1,200,000	1,250,0
2 CORING & ANALYSIS		200,000		200,0
3 COMMUNICATIONS		10,000	10,000	20,0
4 BOP TESTING		20,000	10,000	30,0
6 FISHING TOOLS & SERVICES				
7 INSPECTIONS		10,000	5,000	15,0
8 WIRELINE SERVICES 9 ENGINEERING & GEOLOGY - FIELD				
9 ENGINEERING & GEOLOGY - FIELD 0 ENGINEERING & GEOLOGY - OFFICE				
1 MULTISHOT & GYRO		15,000		15,0
2 RE-ENTRY SERVICES				
3 CAMPS & TRAILERS		15,000	15,000	***
4 SAFETY EQUIPMENT & H2S		10,000	5,000	30,0 15,0
5 CONTINGENCY		10,000	0,000	13,01
6 INSURANCE		10,000	2,000	12,0
7 MISCELLANEOUS		10,000	10,000	20,00
9 SIM-OPS TOTAL INTANGIBLE COSTS				
TANGIBLE COSTS		\$ 3,067,000	\$ 6,595,000	\$ 9,662,0
1 CASING - CONDUCTOR		DRILLING (400) \$ 10,000	COMPLETION (600)	TOTAL
2 CASING - SURFACE		20,000		\$ 10,0
3 CASING - INTERMEDIATE		85,000		20,00
4 CASING - INTERMEDIATE 2		305,000		305,00
5 CASING - PRODUCTION / LINER		545,000		545,00
S SUBSURFACE EQUIPMENT		50,000	25,000	75,00
7 PRODUCTION TUBING 8 SUBSURFACE PUMPING EQUIPMENT			55,000	55,00
8 SUBSURFACE PUMPING EQUIPMENT 9 WELLHEAD EQUIPMENT				
D FLOWLINES	-	60,000	10,000	70,00
SURFACE PUMPING EQUIPMENT			100,000	100,00
2 LINER HANGER & ASSOC EQUIP			200,000	200,00
			200,000	200,00
3 VALVES & FITTINGS 5 RODS		40,000	2,000	42,00
3 VALVES & FITTINGS 5 RODS 7 TRUCKING	-			42,00
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 0 RE-ENTRY EQUIPMENT			600,000	600,00
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 0 RE-ENTRY EQUIPMENT 4 PRODUCTION EQUIPMENT		10,000	10,000	20,00
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 0 RE-ENTRY EQUIPMENT 1 MISCELLANEOUS 7 MISCELLANEOUS				
VALVES & FITTINGS RODS TRUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT MISCELLANEOUS TANGIBLE EQUIP-ACQUISITIONS			4	
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 10 RE-ENTRY EQUIPMENT 1 PRODUCTION EQUIPMENT 1 MISCELLANEOUS 10 TANGIBLE EQUIP-ACQUISITIONS 1 TOTAL INTANGIBLE COSTS			\$ 1,002,000	\$ 2,127,00
NALVES & FITTINGS RODS TRUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT MISCELLANEOUS TANGBILE EQUIP-ACQUISITIONS		\$ 1,125,000		
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 10 RE-ENTRY EQUIPMENT 1 PRODUCTION EQUIPMENT 1 MISCELLANEOUS 10 TANGIBLE EQUIP-ACQUISITIONS 1 TOTAL INTANGIBLE COSTS		\$ 1,125,000		
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 0 RE-ENTRY EQUIPMENT 4 PRODUCTION EQUIPMENT 7 MISCELLANEOUS 9 TANGIBLE EQUIP-ACQUISITIONS TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST		\$ 1,125,000		
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 0 RE-ENTRY EQUIPMENT 4 PRODUCTION EQUIPMENT 7 MISCELLANEOUS 8 TANGIBLE EQUIP-ACQUISITIONS TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST		\$ 1,125,000		
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 0 RE-ENTRY EQUIPMENT 4 PRODUCTION EQUIPMENT 7 MISCELLANEOUS 9 TANGIBLE EQUIP-ACQUISITIONS TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST PARED BY: Aaron Cattley		\$ 1,125,000 \$ 4,192,000 Benior Operations Engineer	\$ 7,597,000 DATE:	\$ 11,789,00 7/29/2019
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 0 RE-ENTRY EQUIPMENT 4 PRODUCTION EQUIPMENT 7 MISCELLANEOUS 9 TANGIBLE EQUIP-ACQUISITIONS TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST		\$ 1,125,000 \$ 4,192,000	\$ 7,597,000 DATE:	\$ 11,789,00
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 0 RE-ENTRY EQUIPMENT 4 PRODUCTION EQUIPMENT 7 MISCELLANEOUS 9 TANGIBLE EQUIP-ACQUISITIONS TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST PARED BY: Aaron Cattley	s	\$ 1,125,000 \$ 4,192,000 Benior Operations Engineer	\$ 7,597,000 DATE: DATE:	\$ 11,789,00 7/29/2019
3. VALVES & FITTINGS 5. RODS 7. RODS 7. REPUTE SOUIPMENT 9. PRODUCTION EQUIPMENT 7. MISCELLANEOUS 1. TANGIBLE EQUIP-ACQUISITIONS 1. TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST PARED BY: RATOR APPROVAL:	s	\$ 1,125,000 \$ 4,192,000 \$ Parlor Operations Engineer (P - Operations	\$ 7,597,000 DATE:	\$ 11,789,00 7/29/2019
3 VALVES & FITTINGS 5 RODS 7 TRUCKING 9 RE-ENTRY EQUIPMENT 4 PRODUCTION EQUIPMENT 7 MISCELLANEOUS 9 TANGIBLE EQUIP-ACQUISITIONS 1 TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST PARED BY: RATOR APPROVAL:	s	\$ 1,125,000 \$ 4,192,000 \$ Parlor Operations Engineer (P - Operations	\$ 7,597,000 DATE: DATE:	\$ 11,789,00 7/29/2019
3. VALVES & FITTINGS 5. RODS 7. RODS 7. REPUTE SOUIPMENT 9. PRODUCTION EQUIPMENT 7. MISCELLANEOUS 1. TANGIBLE EQUIP-ACQUISITIONS 1. TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST PARED BY: RATOR APPROVAL:	s	\$ 1,125,000 \$ 4,192,000 \$ Parlor Operations Engineer (P - Operations	\$ 7,597,000 DATE: DATE:	\$ 11,789,00 7/29/2019
VALVES & FITTINGS RODS RODS TRUCKING RE-ENTRY EQUIPMENT PRODUCTION EQUIPMENT MISCELLANEOUS TANGIBLE EQUIP-ACQUISITIONS TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST PARED BY: Aaron Cattley RATOR APPROVAL: AARON	s	\$ 1,125,000 \$ 4,192,000 \$ Parlor Operations Engineer (P - Operations	\$ 7,597,000 DATE: DATE:	\$ 11,789,00 7/29/2019
UALVES & FITTINGS A RODS TRUCKING RE-ENTRY EQUIPMENT MISCELLANEOUS TANGIBLE EQUIP-ACQUISITIONS TOTAL INTANGIBLE COSTS TOTAL ESTIMATED WELL COST PARED BY: Aaron Cattley RATOR APPROVAL:	s	\$ 1,125,000 \$ 4,192,000 \$ Parlor Operations Engineer (P - Operations	\$ 7,597,000 DATE: DATE:	\$ 11,789,00 7/29/2019 7/29/2019 1/39/13



NOVO OIL & GAS NORTHERN DELAWARE, LLC AUTHORIZATION FOR EXPENDITURE 1001 West Wilsible. Suits 206 OMehoma City, Oldshoma 73116 405-286-4391

WELL N	AL LOCATION	Astrodog Fed Com 0809 232H T23S, R29E, Sec 8 - T23S, R29E, S	Can O	AFE TYPE	Development	AFE NUMBER	2015165
	CE LOCATION	T23S, R29E, Sec 8 NW/4	900 9	FORMATION	Northern Delaware Wolfcamp B	DRILLING DAYS	32
	M-HOLE LOCATION	T23S, R29E, Sec 9 NE/4		COUNTY	Eddy County	DEPTH (TVD/TMD)	10,738' / 20,738'
	CT DESCRIPTION	Drilling, completion, facilities and pig	peline costs for	9.900' horizontal	well	STATE	New Mexico
-		Secretary Potash Area	Maria Constantina de la Constantina de	o,ooo nonzonta	Woll.		
ACCT.		DESCRIPTION OF EXPENDITU	RE			COST ESTIMATE	
CODE	CUDATA PROPERTY OF ALL	INTANGIBLE COSTS			DRILLING (300)	COMPLETION (500)	
01	SURVEY/PERMITS/DAM LOCATION & ROAD	AGES/LEGAL			\$ 50,000		\$ 50,0
03	RIG MOVE				150,000		150,0
04	DRILLING - FOOTAGE				150,000		150,0
05	DRILLING - DAYWORK				50,000 854,000		50,0
06	COMPLETION/WORKOV	ER RIG			854,000	60,000	854,0
07	COIL TUBING/SNUBBING	SUNIT				160,000	60,0 160,0
08	SLICKLINE/SWABBING					100,000	100,0
10	DIRECTIONAL SERVICE		-		150,000	5,000	155,0
11	CASING CREW	5			240,000		240,0
	TOOL & EQUIPMENT RE	NTAL			100,000		100,0
	FUEL & POWER	The state of the s			50,000	80,000	130,0
	DIESEL - BASE FOR MUI)			204,000	200,000	404,0
	MUD LOGGING & GEOLO				24,000		100,0
	DISPOSAL, RESTORATION	ON & BACKFILL			150,000		24,0 150,0
	TRUCKING				120,000	40,000	160,0
	TESTING						.50,0
	CEMENTING PERFORATING	119			200,000		200,0
-	CASED HOLE LOGS					358,000	358,0
	DOWNHOLE TOOLS & SI	ERVICE		-			
	OTHER STIMULATION					75,000	75,0
24	FORMATION STIMULATION	ON				120,000 4,000,000	120,0 4,000,0
	CONSULTING SERVICES					20,000	20,0
	SUPERVISION			Marian Company	120,000	100,000	220,0
	CONTRACT LABOR				5,000	20,000	25,0
	OTHER LABOR COMPANY CONSULTING	/STIDY/				100,000	100,0
	WATER	SUFV					
	FLUIDS & CHEMICALS				50,000	1,200,000	1,250,00
	CORING & ANALYSIS	ALTERNATION OF THE PROPERTY OF		-	200,000		200,00
	COMMUNICATIONS				10,000	10,000	20,00
-	BOP TESTING			Daniel Communication	20,000	10,000	30,00
36	FISHING TOOLS & SERVI	CES				10,000	30,00
	INSPECTIONS				10,000	5,000	15,00
-	WIRELINE SERVICES ENGINEERING & GEOLOG	OV FIELD					
	ENGINEERING & GEOLO						
	MULTISHOT & GYRO	31 - OTTIOE			15,000		15,00
_	RE-ENTRY SERVICES						
43 (CAMPS & TRAILERS				15,000	15,000	30,00
	SAFETY EQUIPMENT & H	2S			10,000	5,000	15,00
	CONTINGENCY						10,00
	NSURANCE				10,000	2,000	12,00
	MISCELLANEOUS SIM-OPS				10,000	10,000	20,00
	TOTAL INTANGIBLE COS	TS			6 2007.000		
		TANGIBLE COSTS			\$ 3,067,000 DRILLING (400)	\$ 6,595,000	
01 0	CASING - CONDUCTOR	77470122 00010			\$ 10,000	COMPLETION (600)	TOTAL
02 0	CASING - SURFACE				20,000		\$ 10,00
	CASING - INTERMEDIATE				85,000		85,00
	CASING - INTERMEDIATE				305,000		305,00
	CASING - PRODUCTION /				545,000	The state of the s	545,00
	PRODUCTION TUBING	(1)			50,000	25,000	75,00
	SUBSURFACE PUMPING	EQUIPMENT				55,000	55,00
	VELLHEAD EQUIPMENT				60,000	40.000	70.00
10 F	LOWLINES				60,000	10,000	70,00
	SURFACE PUMPING EQU					100,000	100,00
	INER HANGER & ASSOC	EQUIP					
	ALVES & FITTINGS					200,000	200,00
	RUCKING						200,00
	RE-ENTRY EQUIPMENT				40,000	2,000	42,00
	RODUCTION EQUIPMENT	Т					
	IISCELLANEOUS				40.000	600,000	600,00
	ANGIBLE EQUIP-ACQUIS	ITIONS			10,000	10,000	20,00
	OTAL INTANGIBLE COST				\$ 1,125,000	\$ 1,002,000	\$ 2,127,00
7	OTAL ESTIMATED W	ELL COST					\$ 2,127,00
		ELL COST			\$ 4,192,000	\$ 7,597,000	\$ 11,789,00

PREPARED BY:	Aaron Cattley	Senior Operations Engineer	DATE: 7/29/2019
OPERATOR APPROVAL:	4881	VP - Operations	DATE: 7/19/2019
OPERATOR APPROVAL:	7-7-	CEO er COO	DATE: 7/31/19
PARTNER COMPANY NAME:			
PARTNER APPROVAL:	W		DATE:
TITLE:			



NOVO OIL & GAS NORTHERN DELAWARE, LLC
AUTHORIZATION FOR EXPENDITURE

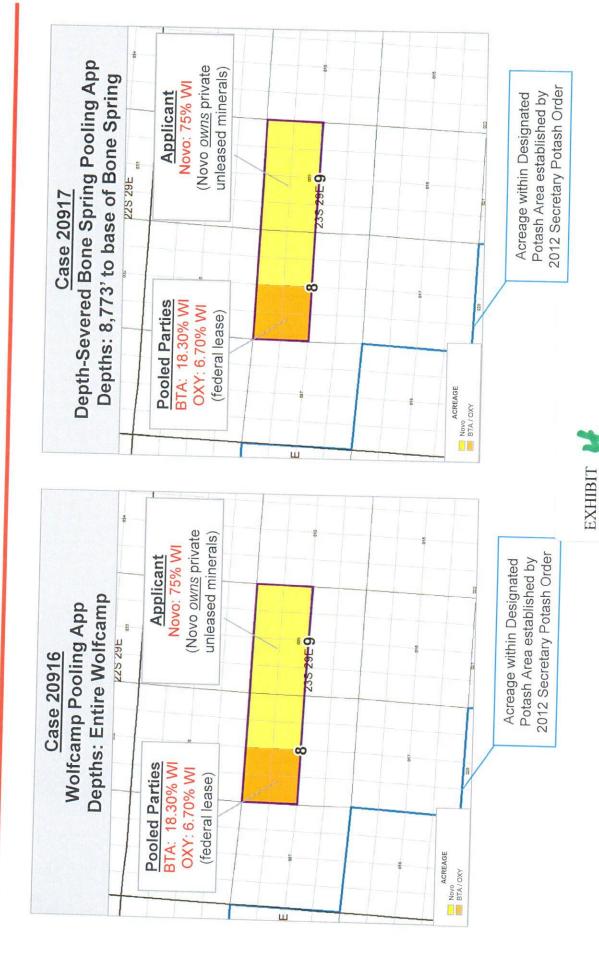
1001 West Wishers, Suits 206
Oldahoma (Dip, Oldahoma 73116

405-286-4391

	AL LOCATION	Astrodog Fed Com 0809 235H	See 5	AFE TYPE	Development	AFE NUMBER	2015166
URFAC	CE LOCATION	T23S, R29E, Sec 8 - T23S, R29E T23S, R29E, Sec 8 NW/4	, 560 9	FIELD	Northern Delaware	DRILLING DAYS	32
	M-HOLE LOCATION	T23S, R29E, Sec 9 NE/4		FORMATION	Wolfcamp B	DEPTH (TVD/TMD)	10,748' / 20,7
	CT DESCRIPTION	Drilling, completion, facilities and	pipeline costs for 9	9.900' horizontal	Eddy County	STATE	New Mexico
-		Secretary Potash Area		riess Horizonia	Woll.		
CCT.		DESCRIPTION OF EXPENDIT	URE			COST ESTIMATE	
ODE 01 5	PUBLICATION	INTANGIBLE COSTS			DRILLING (300)	COMPLETION (500))
	SURVEY/PERMITS/DAM LOCATION & ROAD	IGES/LEGAL			\$ 50,000		\$
THE REAL PROPERTY AND ADDRESS OF THE PERTY	RIG MOVE				150,000		
	DRILLING - FOOTAGE				150,000		
	DRILLING - DAYWORK				50,000		Anna di mana d
	COMPLETION/WORKOV	ER RIG			854,000		
	COIL TUBING/SNUBBING					60,000	
08 8	SLICKLINE/SWABBING					160,000)
	BITS				150,000	E 000	
	DIRECTIONAL SERVICE	in many			240,000		
	CASING CREW			and the second second	100,000		
	TOOL & EQUIPMENT RE	NTAL .			50,000		
	FUEL & POWER				204,000		
	DIESEL - BASE FOR MUI MUD LOGGING & GEOLO	CICT			100,000		
	DISPOSAL, RESTORATION				24,000		
-	TRUCKING	N & BACKFILL			150,000		
_	TESTING				120,000	40,000	
	CEMENTING						
	PERFORATING				200,000		1
	CASED HOLE LOGS					358,000	3
2 D	DOWNHOLE TOOLS & SI	RVICE				75.000	-
	OTHER STIMULATION					75,000 120,000	-
	ORMATION STIMULATION	iN				4,000,000	4,0
5 C	CONSULTING SERVICES					20,000	4,0
	SUPERVISION				120,000	100,000	2
	OTHER LABOR				5,000	20,000	
	COMPANY CONSULTING	ELIDIA				100,000	1
	VATER	SUPV					
	LUIDS & CHEMICALS				50,000	1,200,000	1,2
	ORING & ANALYSIS				200,000		2
	COMMUNICATIONS						
	IOP TESTING				10,000	10,000	
6 FI	ISHING TOOLS & SERVI	CES			20,000	10,000	
	NSPECTIONS				10,000	5,000	
	VIRELINE SERVICES				10,000	5,000	
9 EN	NGINEERING & GEOLOG	Y - FIELD					
0 EN	NGINEERING & GEOLOG	Y - OFFICE			15,000		
	IULTISHOT & GYRO E-ENTRY SERVICES						
	AMPS & TRAILERS						
	AFETY EQUIPMENT & H	es e			15,000	15,000	
_	ONTINGENCY	~			10,000	5,000	3
	SURANCE				40.000		
	ISCELLANEOUS				10,000	2,000	
	M-OPS				10,000	10,000	
TO	OTAL INTANGIBLE COS	S					:
					\$ 3,067,000	\$ 6,595,000	
10.	ADINO ODVITIONE	TANGIBLE COSTS	CALL COLOR DE LA CALL C		\$ 3,067,000 DRILLING (400)	\$ 6,595,000 COMPLETION (600)	\$ 9,66
	ASING - CONDUCTOR	THE RESERVE OF THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER.				\$ 6,595,000 COMPLETION (600)	\$ 9,60 TOTAL
CA	ASING - SURFACE	THE RESERVE OF THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER.			DRILLING (400)		\$ 9,66 TOTAL \$
CA	ASING - SURFACE ASING - INTERMEDIATE	TANGIBLE COSTS			DRILLING (400) \$ 10,000 20,000 85,000		\$ 9,60 TOTAL
CA CA	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE	TANGIBLE COSTS			DRILLING (400) \$ 10,000 20,000 85,000 305,000		\$ 9,66 TOTAL \$
CA CA CA	ASING - SURFACE ASING - INTERMEDIATE	TANGIBLE COSTS 2 LINER			DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000	COMPLETION (600)	\$ 9,66 TOTAL \$
CA CA CA SU	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION /	TANGIBLE COSTS 2 LINER			DRILLING (400) \$ 10,000 20,000 85,000 305,000	25,000	\$ 9,64 TOTAL \$ 2 8 30 54
CA CA CA CA SU PR	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / JBSURFACE EQUIPMEN	TANGIBLE COSTS 2 INER T			DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000	COMPLETION (600)	\$ 9,66 TOTAL \$
CA CA CA SU PR SU	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / JESURFACE EQUIPMEN RODUCTION TUBING JESURFACE PUMPING SE ELLHEAD EQUIPMENT	TANGIBLE COSTS 2 INER T			DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000	25,000 55,000	\$ 9,61 TOTAL \$ 4 8 33 54
CA CA CA CA SU PR SU WE	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / JBSURFACE EQUIPMEN RODUCTION TUBING JBSURFACE PUMPING IS ELLHEAD EQUIPMENT OWLINES	TANGIBLE COSTS 2 LINER T QUIPMENT			DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000	25,000 55,000	\$ 9,61 TOTAL \$ 3 3 54 7
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CA CA CA CA SU PR SU WE FLC SU LIN VA RO	ASING - SURFACE ASING - INTERMEDIATE ASING - INTERMEDIATE ASING - PRODUCTION / JBSURFACE EQUIPMEN RODUCTION TUBING JBSURFACE PUMPING ELLHEAD EQUIPMENT OWLINES JRFACE PUMPING EQUI WER HANGER & ASSOC LIVES & FITTINGS JDS LUCKING LUCKING LUCKING LENTERMENT EQUIPMENT	TANGIBLE COSTS 2 JINER T QUIPMENT PMENT EQUIP			DRILLING (400) \$ 10,000 20,000 85,000 305,000 545,000 50,000 60,000	25,000 55,000 100,000 200,000	\$ 9,61 TOTAL \$ 33,65 55 77
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Land Overview







7/2019: Novo acquires acreage

0

11/2018: BTA acquires acreage

0

History of Prospect

- 12/2017: BLM establishes "Nido" Drill Island
- that is now owned by acquire the interest A company named Titus was trying to Novo
- find surface locations worked with BLM to In Q4 2017, Titus 5
- "Nido" drill island for Titus to develop N/2 of Sections 8 and 9 **BLM** established 3
- that Titus pursued in July 2019 acquired the interest Novo ultimately 4







- BLM established the "Nido" drill island for development of N/2 of Sections 8 and 9 4. 4
 - 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

August 2019

Novo proposed wells

Novo scheduled onsite with BLM



April 2019

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

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

October 2019

Novo conducted onsite with BLM

November 2019

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

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@novoog.com>

Cc: Anderson, John < John. Anderson@mosaicco.com>; Goodale, Scotty

<Scotty.Goodale@mosaicco.com>

(high elevation Railroad Track

point)

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. he ground that close to the salt lake is unstable and there is a risk of flooding, plus a very igh risk of contamination to the salt lake should there be a release.

Once Novo has more definite plans in place please fill out the attached application forms hey would prefer both well pads to be on the NW side of the rail tracks.

The completed Application will be reviewed by our site Governance Committee. Please provide as much detail as possible including pipeline tie in points. for all the required infrastructure.

Regards, Mary

Direction of

Well Pad #2

Potential

Sertion 8-735-29E

Well Pad #1

Potential

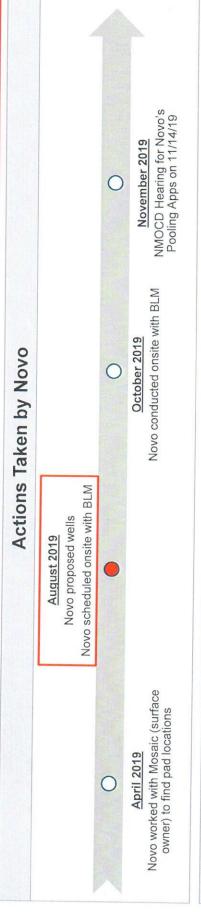
drainage

Mary Langman | Supervisor, Land and Minerals Canada S4P 0M3 P; 306,523,6105 | F: 306,523,2867 | E:

Mosaic objects to pad locations SE of Railroad Track

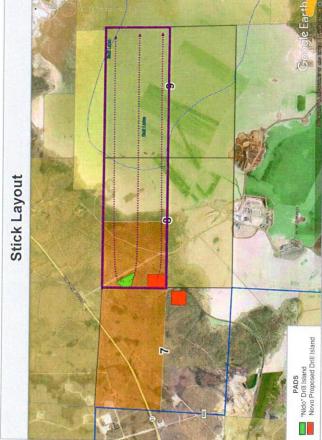
Novo Proposes Astrodog 0809 Wells







Mosaic <u>approved</u> pad locations NW of Railroad Track

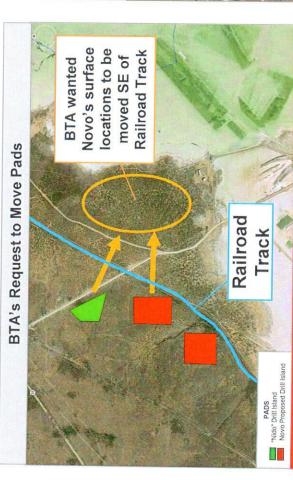


Novo proposed Astrodog wells to be drilled from Mosaic-approved drill islands



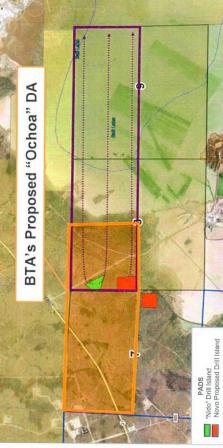
BTA Opposes Novo's Astrodog Plans





BTA's Reaction to "Astrodog" Well Proposals

- 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



Mosaic has <u>rejected</u> BTA's alternative pad

location

Novo and BTA Discuss Novo's Plans



NMOCD Hearing for Novo's Pooling Apps on 11/14/19 November 2019 Novo conducted onsite with BLM October 2019 Actions Taken by Novo Novo scheduled onsite with BLM Novo proposed wells August 2019 Novo worked with Mosaic (surface owner) to find pad locations **April 2019**

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

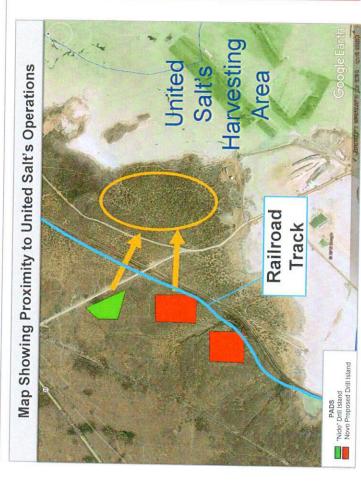
BTA-Novo Interactions

- 1. Novo offered to do trades with BTA
- BTA-Novo meeting in OKC
- Novo told BTA that moving the pad locations likely would <u>not</u> 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
- Novo objected to BTA's "Ochoa" Development Area
- 5.) BTA threatened to object to <u>any</u> 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



NMOCD Hearing for Novo's Pooling Apps on 11/14/19 November 2019 Novo conducted onsite with BLM Actions Taken by Novo 10/24/2019 Novo scheduled onsite with BLM Novo proposed wells August 2019 Novo worked with Mosaic (surface owner) to find pad locations **April 2019**



10/24/2019 BLM Onsite Notes

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

Key Takeaways

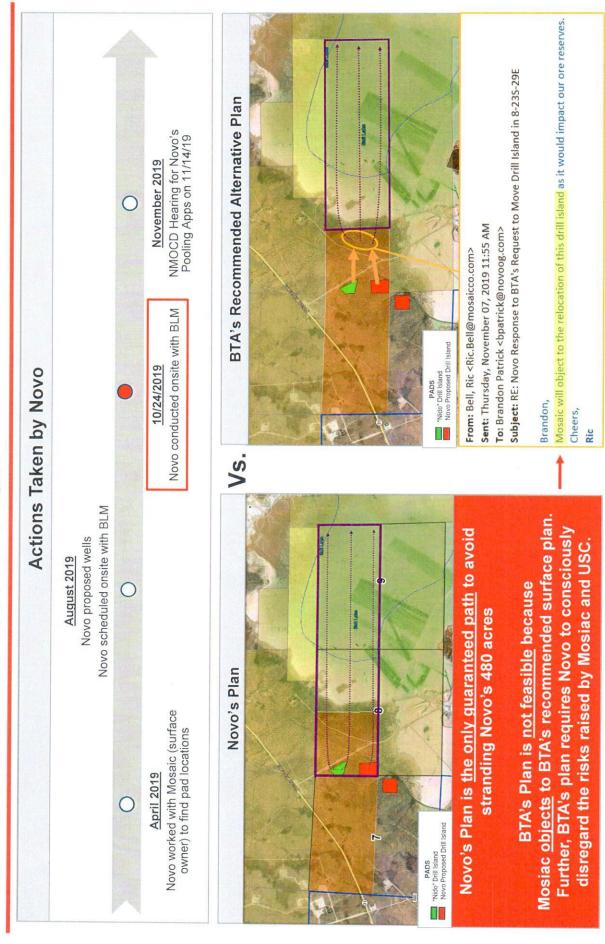
- 1. BLM approved all 3 "Astrodog" pad locations
- United Salt Carlsbad (surface lessee of Salt Lake) supported Novo's pad locations

"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







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 <u>not</u> 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

NMOCD Hearing for Novo's Pooling Apps Novo conducted onsite with BLM October 2019 **Actions Taken by Novo** Novo scheduled onsite with BLM Novo proposed wells August 2019 Novo worked with Mosaic (surface owner) to find pad locations **April 2019**

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

X BTA (WI owner in pooled depths)



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

Mosiac objects to BTA's recommended surface plan. Further, BTA's plan requires Novo to consciously disregard the risks raised by Mosiac and USC. BTA's Plan is not feasible because

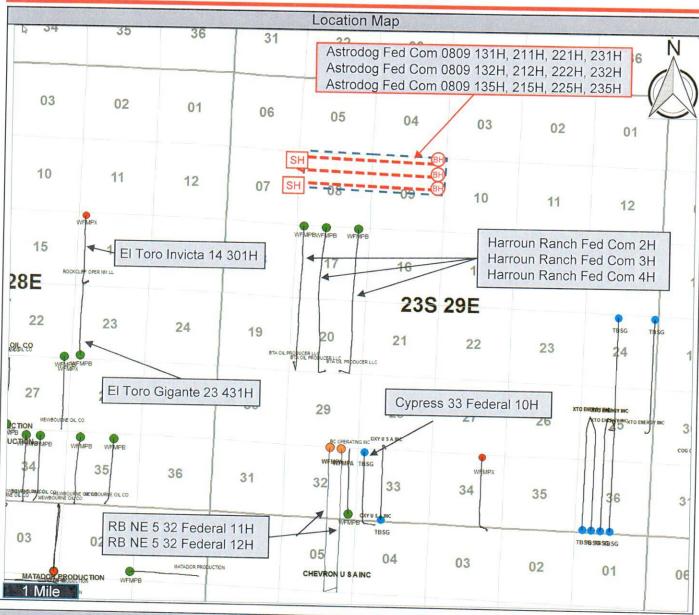
Date (all in 2019)	Medium of Communication	Affected Party	Summary of Communication with Mosaic Party Type	ation with Mosaic Content
April 3 - 11	E-Mail	Mosaic	Surface Owner & Potash Lessee	Novo proposed pad locations for development of "Astrodog" prospect; Mosaic rejected Novo's proposed pad SE of the 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."

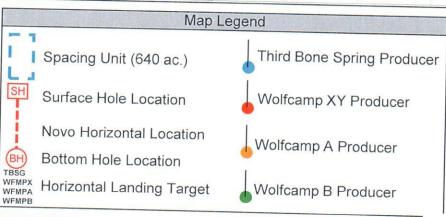


Astrodog Fed Com 0809- Full Development Plan



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





Hearing Details

Novo Oil & Gas Northern Delaware, LLC

Case Number: 20916 / 20917

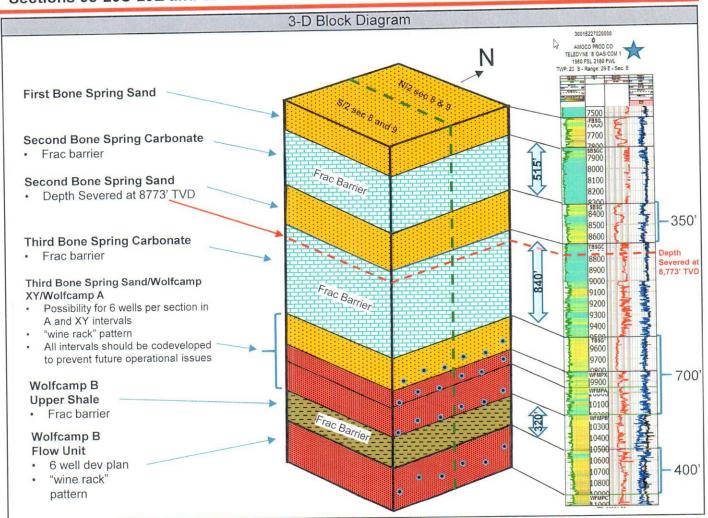
Date: 11/14

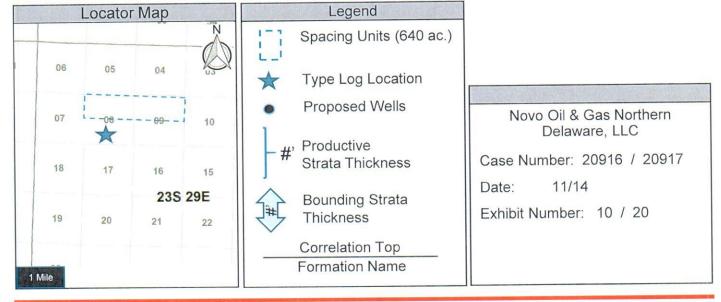
Exhibit Number: 10 / 20

Novo Development Plan: Astrodog Fed Com 0809 Units



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

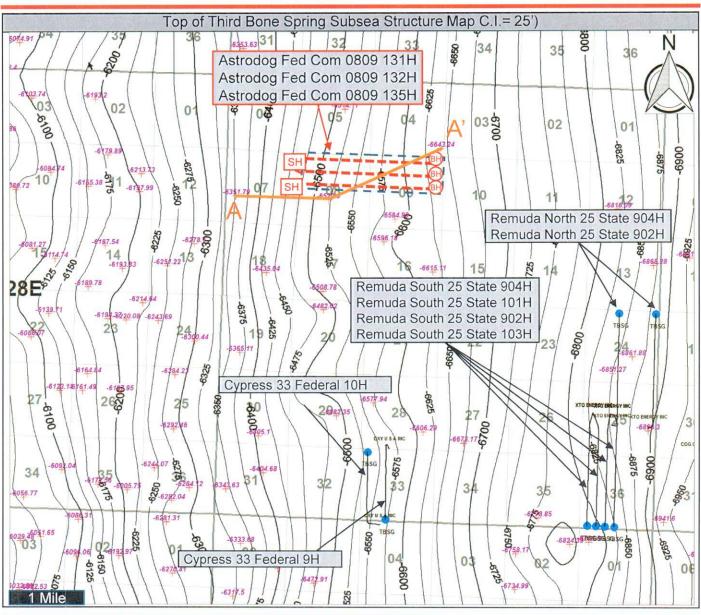


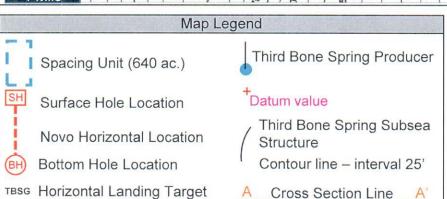


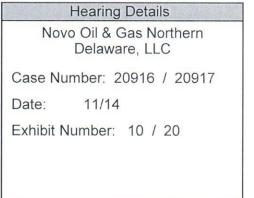
Astrodog Fed Com 0809: Top of Third Bone



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







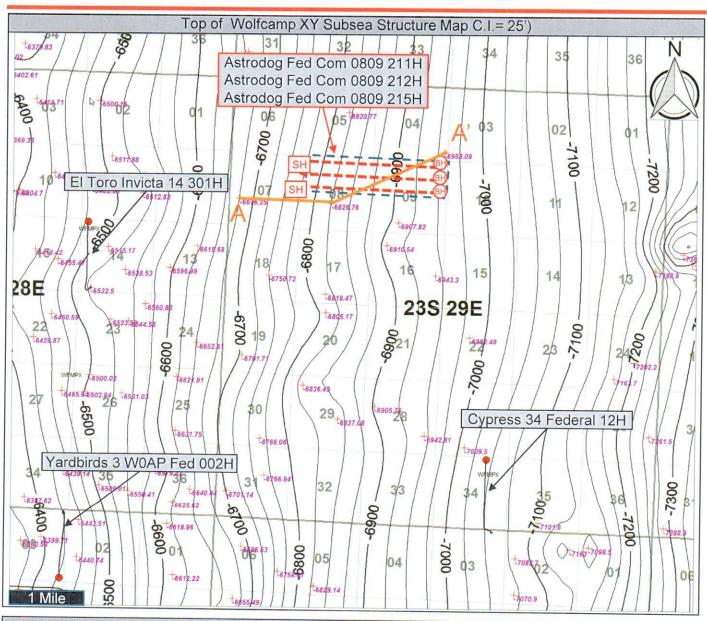
BTA offered to have another meeting at Novo's office in OKC. Novo notified BTA that Novo was unable to meet in person before the 10/24 onsite; however, Novo was available to communicate via email. BTA called Novo's Land Manager and left a short voicemail. Novo replied via email and asked BTA to communicate 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-T235-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 with 1-1/2 mile horizontal wells and allow 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 Satuminus drilling island onsite tomorrow. Please call me at 432-682-3753 should you wish to discuss, or my e-mail is wprice@btaoil.com."
Pooled Party	Pooled Party
ВТА	ВТА
E-Mail	E-Mail
October 15 - 22	October 23

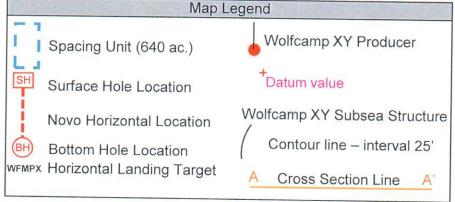
		8	ummary of C	Summary of Communication with United Salt Carlsbad
Date (all in 2019)	Medium of Communication	Medium of Communication Affected Party	Party Type	Content
				United Salt Carlsbad expressed that they did not have problems with Novo's "Astrodog" pad locations.
October 24	In-Person	United Salt	Surface Lessee of Salt	Novo offered to do a Road Sharing Agreement on roads that both Novo and USC would jointly use.
	Discussion	Carisbad	Lake	Novo promised to send surveys to USC
				Novo sent surveys to USC and asked if USC would have concerns with Novo relocating its pads to the E/2 NVV/4 of Section 8.
November 5 - 6	E-Mail	United Salt Carlsbad	Surface Lessee of Salt Lake	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 not harm USC's harvesting areas.

Date	Medium of		Sum	Summary of Communication with BTA
(all in 2019)	Communication	Affected Party	Party Type	Content
				Novo offered to do a trade with BTA where BTA would assign its interest in the NW/4 of Section 8 to Novo.
August 15 - 21	E-Mail	ВТА	Pooled Party	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."
				BTA notified Novo that BTA is submitting "Ochoa" Development Area proposal.
August 29	E-Mail	ВТА	Pooled Party	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.
	L	, H	1	BTA asked to meet with Novo in person on September 5 at Novo's OKC office.
September 3	E-IVIAII	BIA	Pooled Party	Novo agreed to meet.
				BTA suggested that Novo could move its pad locations to the E/2 NW/4 of Section 8
September 5	In-Person Meeting	ВТА	Pooled Party	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 <u>agreed</u> 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.
				Novo asked if BTA's Land Manager was finished discussing with BTA's engineer.
September 24 - 25	E-Mail	ВТА	Pooled Party	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.

Astrodog Fed Com 0809: Top of Wolfcamp XX Structure Map NOVO

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

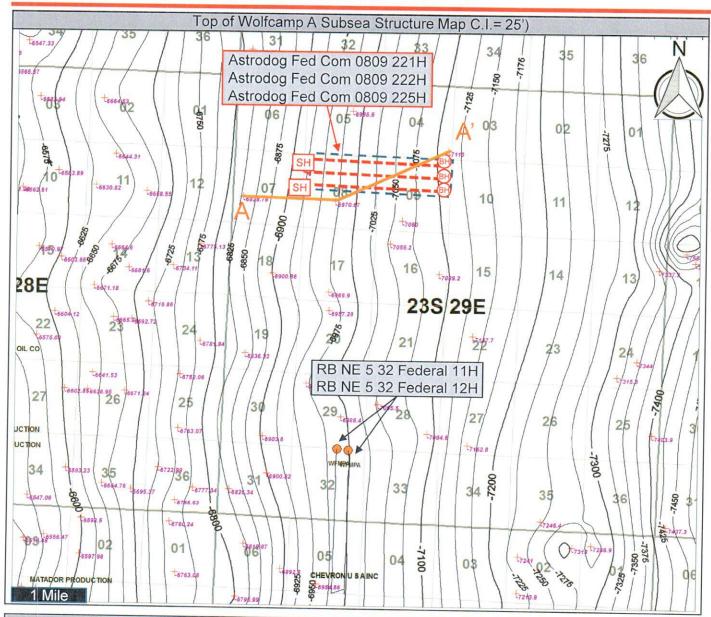


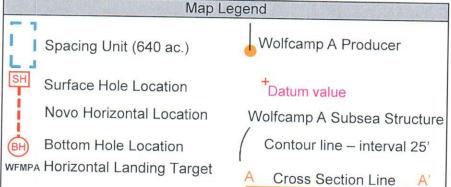


Hearing Details Novo Oil & Gas Northern Delaware, LLC Case Number: 20916 / 20917 Date: 11/14 Exhibit Number: 10 / 20

Astrodog Fed Com 0809: Top of Wolfcamp A

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

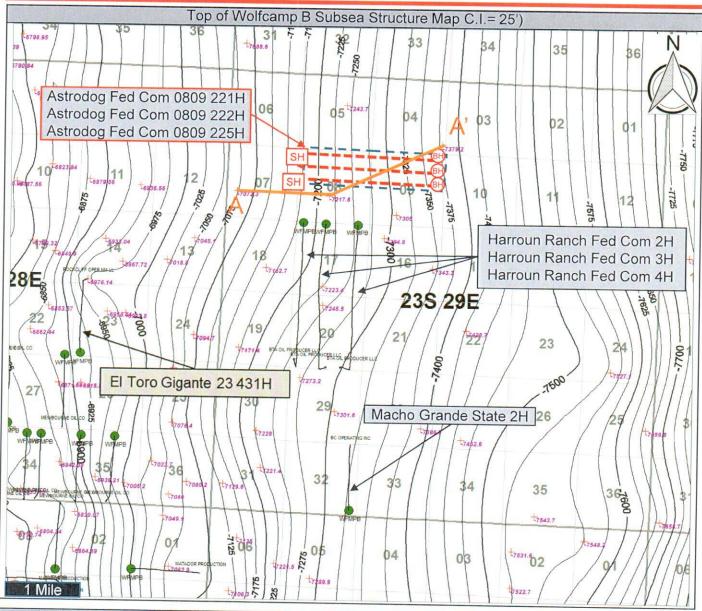


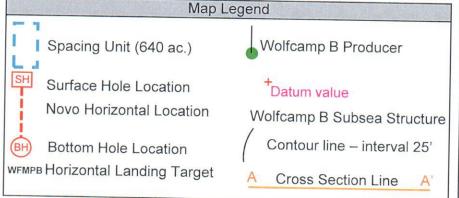


Hearing Details Novo Oil & Gas Northern Delaware, LLC Case Number: 20916 / 20917 Date: 11/14 Exhibit Number: 10 / 20

Astrodog Fed Com 0809: Top of Wolfcamp B

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



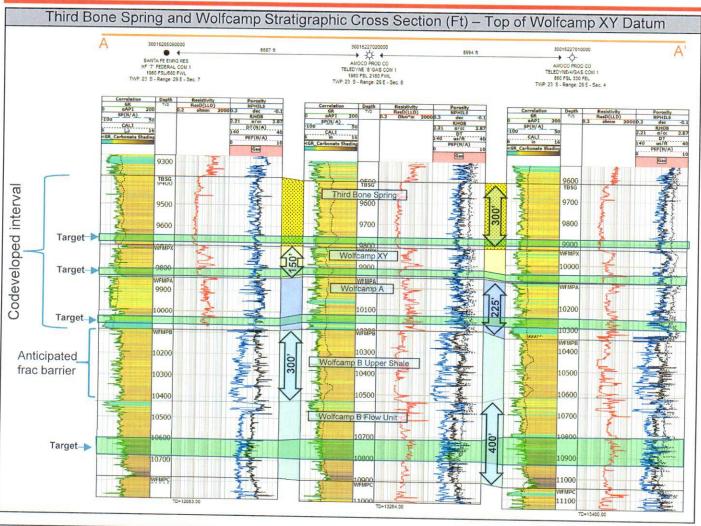


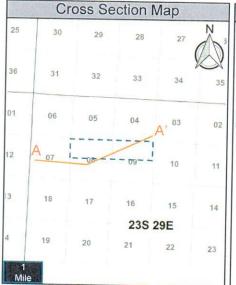
Hearing Details Novo Oil & Gas Northern Delaware, LLC Case Number: 20916 / 20917 Date: 11/14 Exhibit Number: 10 / 20

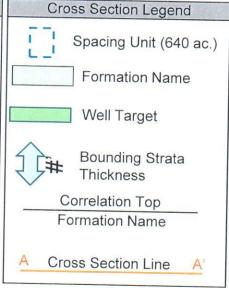
Astrodog – Third Bone Spring and Wolfcamp Stratigraphic Cross Section



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







Novo Oil & Gas Northern Delaware, LLC

Case Number: 20916 / 20917

Date: 11/14

Exhibit Number: 10 / 20