

Recipient	Delivered	Receipt	Returned	Interest Type	Tracking Notes	Published in Current-Argus
1 Bureau of Land Management	X	X		RI		11/1/2018
2 EOG Y Resources, Inc.	X	X		WI		11/1/2018
3 EOG A Resources, Inc.	X	X		WI		11/1/2018
4 EOG M Resources, Inc.	X	X		WI		11/1/2018
5 OXY Y-1 Company	X	X		WI		11/1/2018
6 THRU Line O&G NM, LLC	X	X		WI		11/1/2018
7 CTV-LMB I, BPEOR NM, LLC	X	X		ORI		11/1/2018
8 CTV-LMB II BPEOR NM, LLC	X	X		ORI		11/1/2018
9 CTV-CTAM BPEOR NM, LLC	X	X		ORI		11/1/2018
10 CTV-SRB I, BPEOR NM, LLC	X	X		ORI		11/1/2018
11 CTV-SRB II BPEOR NM, LLC	X	X		ORI		11/1/2018
12 SRBI I BPEOR NM, LLC	X	X		ORI		11/1/2018
13 SRBI II BPEOR NM, LLC	X	X		ORI		11/1/2018
14 THRU LINE BPEOR NM, LLC	X	X		ORI		11/1/2018
15 Keystone (RMB) BPEOR NM, LLC	X	X		ORI		11/1/2018
16 Keystone (CTAM) BPEOR NM, LLC	X	X		ORI		11/1/2018
17 LMBI I BPEOR NM, LLC	X	X		ORI		11/1/2018
18 LMBI II BPEOR NM, LLC	X	X		ORI		11/1/2018
Wells Fargo Bank, NA, Trustee of the John Saleh Charitable Foundation	X	X		ORI		11/1/2018
20 Morris E. Schertz et ux Holly K. Schertz	X	X		ORI		11/1/2018
21 Rolla R. Hinkle II	X	X		ORI		11/1/2018
22 NOVO Minerals, LP			X	ORI	Returned to Sender	11/1/2018
23 Destiny Management, Inc.			X	ORI	Returned to Sender	11/1/2018
Melinda Mueller Personal Rep. of the						
24 Estate of Philip B. Withrow	X	X		ORI		11/1/2018
25 Mesquite SWD, Inc.	X	X		ORI		11/1/2018
26 C. Wendel Schoenberger, LP	X	X		ORI		11/1/2018

Vertical Offsets

Recipient	Delivered	Receipt	Returned	Interest Type	Tracking Notes	Published in Current-Argus
1 COG Operating LLC	X	X		WI		11/1/2018
2 Bureau of Land Management	X	X		RI		
Wells Fargo Bank, NA, Trustee of the John Saleh Charitable Foundation	X	X		ORI		11/1/2018
4 Morris E. Schertz et ux Holly K. Schertz	X	X		ORI		11/1/2018
5 Rolla R. Hinkle II	X	X		ORI		11/1/2018
6 NOVO Minerals, LP			X	ORI	Returned to Sender	11/1/2018
Melinda Mueller Personal Rep. of the						
7 Estate of Philip B. Withrow	X	X		ORI		11/1/2018
8 Mesquite SWD, Inc.	X	X		ORI		11/1/2018
9 C. Wendel Schoenberger, LP	X	X		ORI		11/1/2018

CARLSBAD CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001266951

APPLICATION OF NOVO OIL & GAS
NORTHERN DELAWARE, LLC Case No. 16283
EXHIBIT #25

BEATTY & WOZNAK, P.C.
216 SIXTEENTH STREET, SUITE 1100

DENVER CO 80202

I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

11/01/18



Legal Clerk

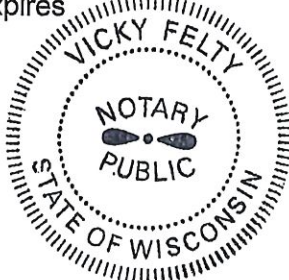
Subscribed and sworn before me this
1st of November 2018.



State of WI County of Brown
NOTARY PUBLIC

9-19-21

My Commission Expires



Ad#:0001266951
P O : 0001266951
of Affidavits :0.00

STATE OF NEW MEXICO ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION SANTA FE, NEW MEXICO

The State of New Mexico through its Oil Conservation Division hereby gives notice pursuant to law and the Rules and Regulations of the Division of the following public hearing to be held at 8:15 a.m. on November 15, 2018 in the Oil Conservation Division's Hearing Room at 1220 South St. Francis, Santa Fe, New Mexico, before an examiner, duly appointed for the hearing. OCD Rule Subsection B of 19.15.4.13 NMAC requires parties who intend to present evidence at an adjudicatory hearing to file a pre-hearing statement no later than the Thursday before the hearing and serve a copy on opposing counsel of record. If the OCD does not receive a pre-hearing statement from the applicant by the close of business on the Thursday before the hearing, the hearing may be continued.

STATE OF NEW MEXICO TO:

All named parties and persons having any right, title interest or claim in the following cases and notice to the public (NOTE: All land descriptions herein refer to the New Mexico Principal Meridian whether or not so stated)

TO: EOG Y Resources, Inc., EOG A Resources, Inc., EOG M Resources, Inc., OXY Y-1 Company, THRU LINE O&G NM, LLC, CTV-LMB I BPEOR NM, LLC, CTV-LMB II BPEOR NM, LLC, CTV-CTAM BPEOR NM, LLC, CTV-SRB I BPEOR NM, LLC, CTV-SRB II BPEOR NM, LLC, SRBI I BPEOR NM, LLC, SRBI II BPEOR NM, LLC, THRU LINE BPEOR NM, LLC, Keystone (RMB) BPEOR NM, LLC, Keystone (CTAM) BPEOR NM, LLC, LMBI I BPEOR NM, LLC, LMBI II BPEOR NM, LLC, Wells Fargo Bank, N.A., Trustee of the John Saleh Charitable Foundation, Morris E. Schertz and wife, Holly K. Schertz, Rolla R. Hinkle II, NOVO Minerals, LP, Destiny Management, Inc., COG Operating LLC, Melinda Mueller Personal Representative of the Estate of Philip B. Withrow, Mesquite SWD, Inc., C. Wendel Schoenberger, LP.

Case No. 16283: Amended Application of Novo Oil & Gas Northern Delaware, LLC, the wholly owned subsidiary of Novo Oil & Gas, LLC, for a non-standard spacing and proration unit, and compulsory pooling, Eddy County, New Mexico. Applicant in the above-styled cause seeks an order (1) creating a non-standard 320.00 acre, more or less, spacing unit in the Culebra Bluff; Bone Spring, South Pool (15011) limited to all depths below 8,773 feet to the base of the Bone Spring formation, comprised of the N/2S/2 of Section 4 and N/2S/2 of Section 5, Township 23 South, Range 29 East, Eddy County, New Mexico; and (2) pooling all uncommitted mineral interests underlying this proposed spacing unit. This non-standard unit is to be dedicated to the applicant's Rana Salada Fed Com 0504 133H well which will be horizontally drilled from a surface location in the NE/4SE/4

of Section 6, Township 23 South, Range 29 East, to a first take-point location in the NW/4SW/4 of Section 5, Township 23 South, Range 29 East, to a bottom hole location in the NE/4SE/4 of Section 4, Township 23 South, Range 29 East. The producing interval will be orthodox. Also to be considered will be the cost of drilling and completing each well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a 200% charge for risk involved in drilling the well. Said area is located approximately 5 miles Northeast of Loving, New Mexico.

Pub: Nov. 1, 2018 #1266951

**STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION**

**AMENDED APPLICATION OF NOVO OIL & GAS
NORTHERN DELAWARE, LLC FOR NON-STANDARD
PRORATION UNIT AND COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO.**

CASE NO. 16283

AFFIDAVIT OF MICHAEL HALE

Michael Hale of lawful age and being first duly sworn, declares as follows.

1. My name is Michael Hale. I work for Novo Oil & Gas, LLC ("Novo") as the Vice President of Exploration. I am responsible for all geologic operations and development of Novo's Delaware Basin assets in Eddy County, NM as well as exploring other oil and gas basins in North America for opportunities.

2. I received a Bachelor of Science in Geology and a Master of Science in Geology from East Carolina University in 2004 and 2008, respectively. While in graduate school, I worked on a Petroleum Research Fund (PRF) grant with senior scientists from the National Museum of Natural History, Smithsonian Institution in Washington D.C. I have worked as a geologist in the oil and gas industry for over 11 years. I began my career in 2008, working for Fronterra Geosciences doing primarily resistivity formation image evaluation. After I left Fronterra, I worked as a Geologist for Sandridge Energy, performing both operational and exploration duties in both the Permian Basin and Anadarko Basins. Before coming to Novo, I was Geological Advisor for Ascent Resources, overseeing all work in the Appalachian Basin with a primary focus in Ohio's Utica Shale play. While I have never testified before the New Mexico Oil Conservation

Division (NMOCD), while with Ascent Resources I testified as an expert witness as part of ~10 unitization hearings before the Ohio Department of Natural Resources (ODNR).

3. My professional associations are: American Association of Petroleum Geologists (AAPG), West Texas Geological Society (WTGS), Oklahoma City Geological Society (OCGS), Young Professionals in Energy (YPE)

4. I am familiar with the application filed by Novo in this case. I am also familiar with the application filed by Novo in Case No. 16282 heard with this case by the Division on July 12, 2018 and August 9, 2018, and with Case No. 16284, all pertaining to offsetting lands within the same Sections 4 and 5, Township 23 South, Range 29 East, Eddy County, New Mexico. I have conducted a geologic study of the Bone Spring formation underlying Sections 4 and 5.

5. Novo is targeting the Bone Spring formation (3rd Bone Spring Sand interval) with the proposed Rana Salada Fed Com 133H well. The well will be located in the Culebra Bluff; Bone Spring, South Pool (Pool Code 15011).

6. **Exhibit No. 26** is a map view of the execution plan for the 2nd and 3rd Bone Spring Sand in the Rana Salada development block in Sections 4 and 5. The proposed wellbores are denoted by the red dashed lines, with BHL locations depicted by the red circles and SHL depicted with a red box. The proposed horizontal spacing unit for the Rana Salada Fed Com 133H well proposed in this case is depicted by the blue dashed rectangle. The horizontal spacing units proposed in Novo's Case Nos. 16282 and 16284 to be drilled in the 3rd and 2nd Bone Spring, respectively, are depicted by the grey outlined rectangle.

7. **Exhibit No. 27** is a subsea structure map that I prepared for the top of the 3rd Bone Spring Sand. The proposed spacing unit is depicted by the blue dashed rectangle. The contour

interval is 50 feet and the proposed wellbore path for the 133H well is depicted by the red dashed line, with the BHL indicated by the red circle and the SHL depicted with a red box. Offset Bone Spring horizontal producers are indicated by blue circles at the BHL and black well paths. The structure map shows that the area is gently dipping from West to East across the map. I do not observe any faulting, pinch-outs, or other geologic impediments or hazards to developing this targeted interval with a horizontal well.

8. **Exhibit No. 28** is a gross isopach map I prepared for the 3rd Bone Spring Sand. As in the previous map, the proposed spacing unit is depicted by the blue dashed rectangle, the proposed wellbore path is denoted by the red dashed line, the well BHL is indicated by the red circle and the SHL is depicted with a red box. Existing Bone Spring horizontal producers are indicated by blue circles with black well paths. The contour interval is 25 feet and thickness of the 3rd Bone Spring Sand interval over the Rana Salada development block ranges from approximately 275 feet to 325 feet. Also shown on the map is one line of section for cross-section I prepared to illustrate the consistent and contiguous nature of the 3rd Bone Spring Sand. The orange line (A-A') is an apparent dip section of type wells that penetrate the Bone Spring in and offsetting the Rana Salada development block.

9. **Exhibit No. 29** is a West to East dip section (A-A') illustrating the three type wells in and offsetting the Rana Salada development block (Longview Deep 31, API 30015376040000, HF 7 Federal Com 1, API 30015285090000, and Carthel Federal 2, API 30015233890000) that penetrate the 3rd Bone Spring Sand with the line of section shown on the inset map. Each well in the cross-section contains gamma ray, resistivity, and porosity logs. The proposed target interval is labeled and depicted by the green shaded box labeled "Target". The cross-section demonstrates

that the targeted interval extends across the proposed spacing and proration unit (i.e. it is laterally continuous) and is consistent in thickness and log character.

10. **Exhibit No. 30** is a Type Log (Carthel Federal 2, API 30015233890000) for the Rana Salada development block illustrating the low porosity limestone barriers existing between the 2nd and 3rd Bone Spring intervals underlying this area.

11. In my opinion, the proposed location of the well bore for the 133H well is such that the 3rd Bone Spring Lime barrier will effectively prevent communication between the 2nd and 3rd Bone Spring intervals and fracs for the well proposed in this case will not extend into the 2nd Bone Spring interval.

12. In my opinion, there is no preferential stress direction underlying the Rana Salada development area and both north-south and east-west development are acceptable, provided they allow operators to optimally develop their acreage position.

13. Based on my geologic study of the area, the Bone Spring formation underlying the subject area is suitable for development by horizontal wells and each quarter-quarter section comprising the proposed spacing and proration unit will contribute more-or-less equally to the production from the wellbore.

14. In my opinion, the granting of Novo's application will be in the best interest of conservation, the prevention of waste, and the protection of correlative rights.

15. The Exhibits attached to this affidavit were either prepared by me or compiled under my direction and supervision.

16. The foregoing is correct and complete to the best of my knowledge and belief.

FURTHER AFFIANT SAYETH NOT.

Michael Hale
MICHAEL HALE

STATE OF OKLAHOMA)
)
COUNTY OF OKLAHOMA)

SUBSCRIBED and SWORN to before me this 19th day of February 2019 by Michael Hale.

Kiley Mixon
NOTARY PUBLIC

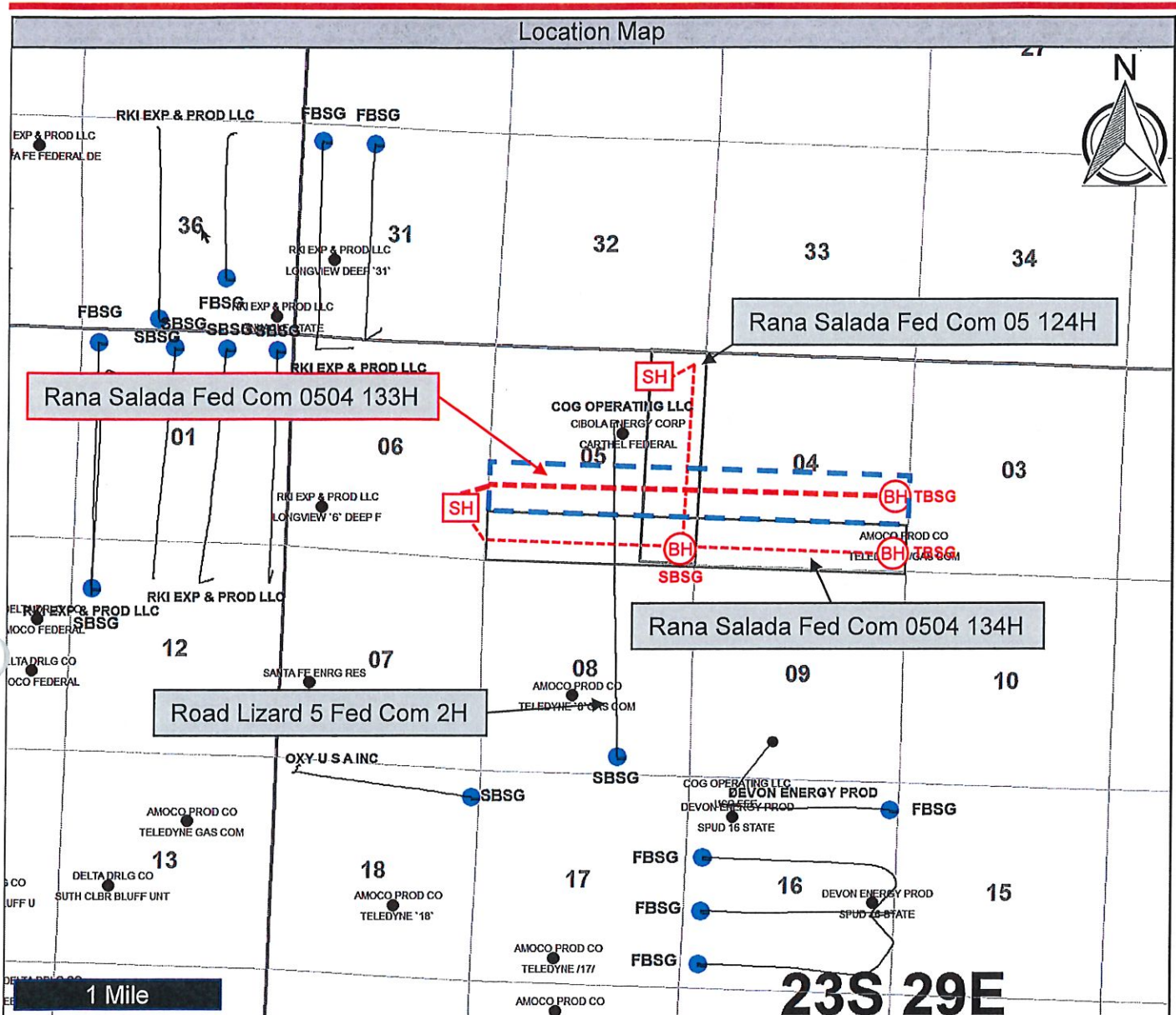
My Commission Expires:

11/15/20



Salt Lake – Bone Spring Execution Plan

3rd Bone Spring Proposed Location, Section 05-23S-29E and Section 04-23S-29E

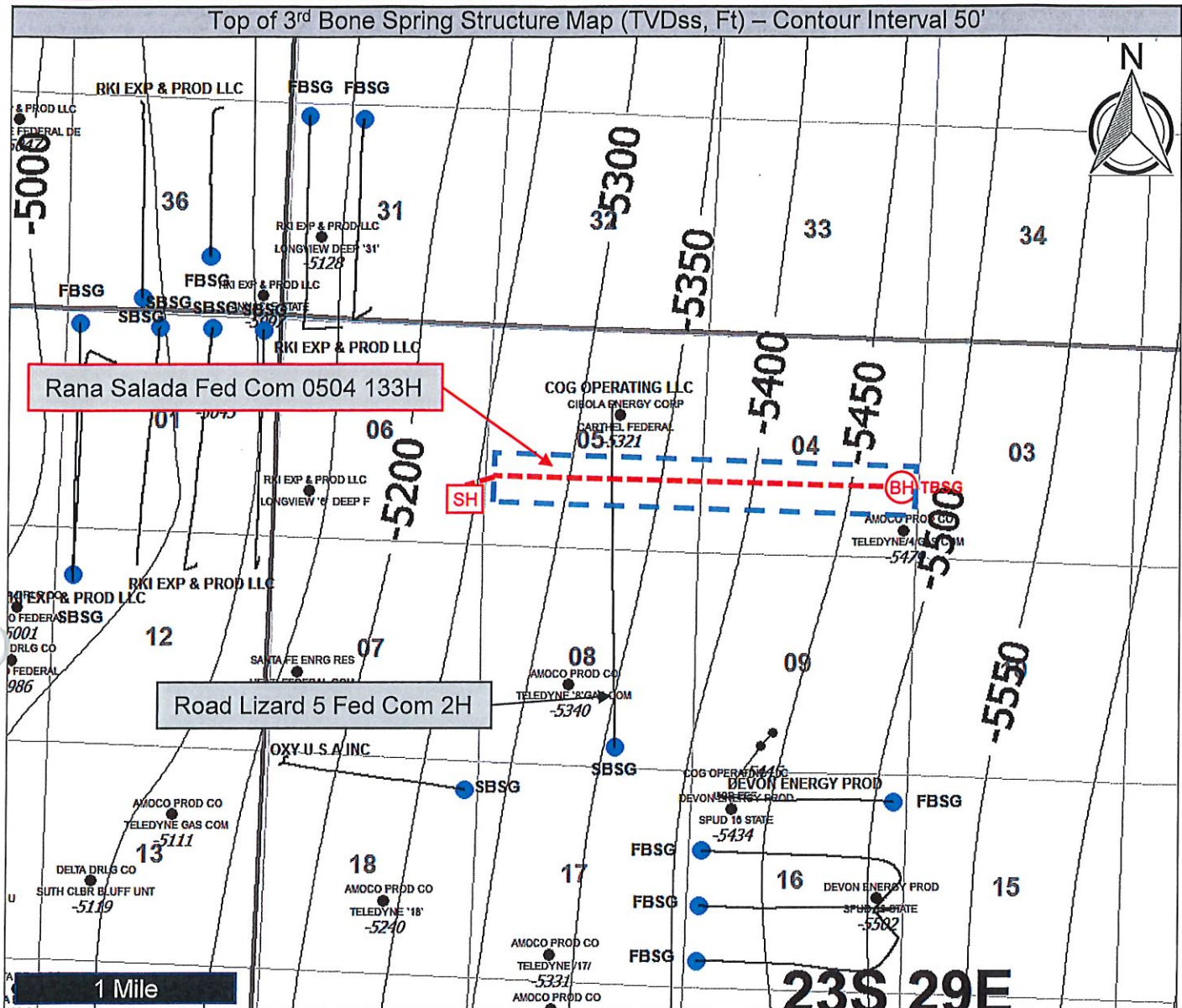


Map Legend	Hearing Details
Spacing Unit (320 ac.) Bone Spring Producer Surface Hole Location Novo Horizontal Location Bottom Hole Location Horizontal Landing Target	Novo Oil & Gas Northern Delaware, LLC Docket Number: Case Number: 16283 Date: 02/21/2019 Exhibit Number:

Salt Lake – Top of 3rd Bone Spring Structure Map



3rd Bone Spring Proposed Location, Section 05-23S-29E and Section 04-23S-29E



Map Legend

- | | | | |
|--|---------------------------|--|---------------------------------|
| | Spacing Unit (320 ac.) | | Bone Spring Producer Company |
| | Surface Hole Location | | Well Name |
| | Novo Horizontal Location | | 3 rd Bone Spring Top |
| | Bottom Hole Location | | Contour line – interval 50' |
| | Horizontal Landing Target | | Cross Section Line |

Hearing Details

Novo Oil & Gas Northern Delaware, LLC

Docket Number:

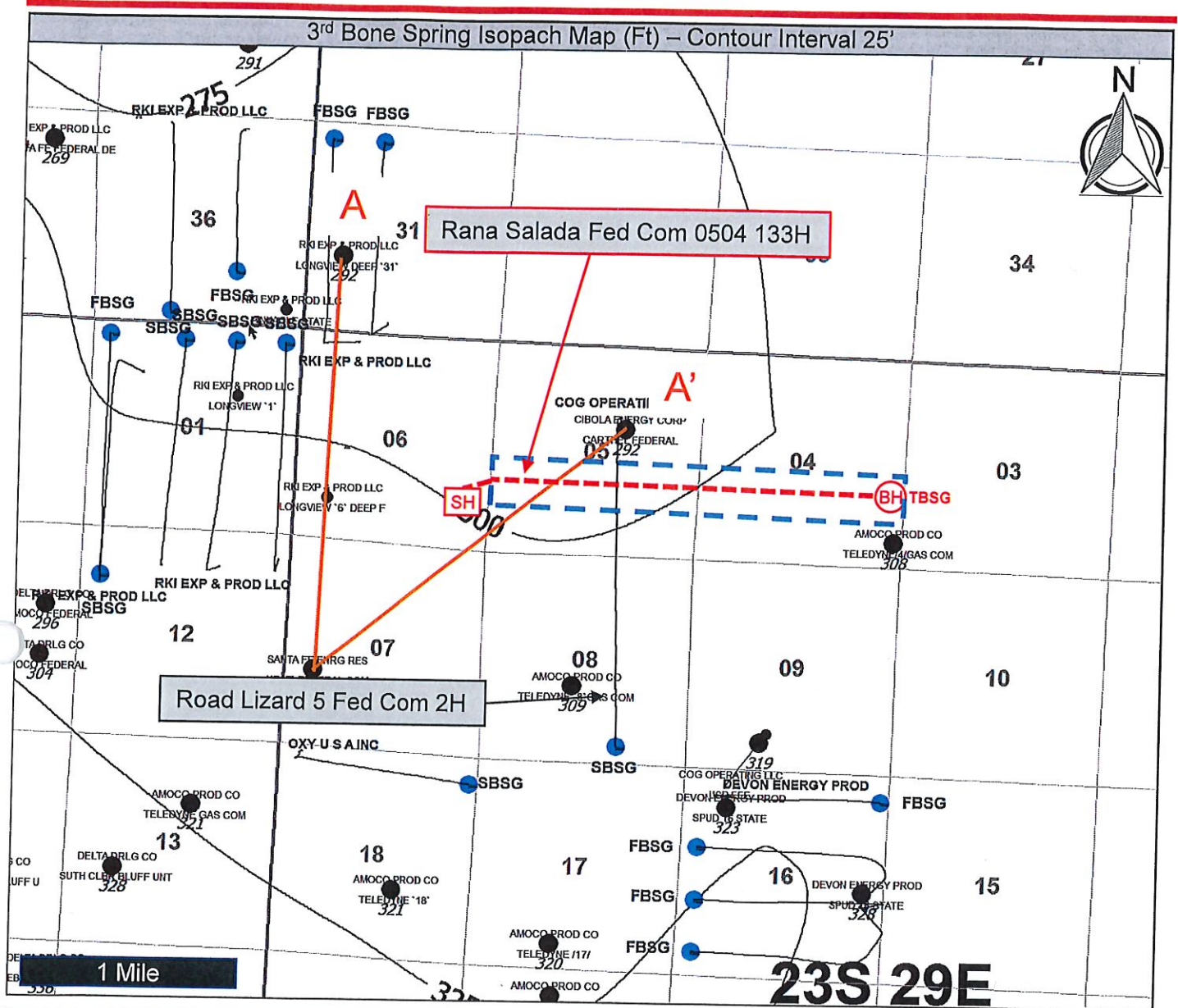
Case Number: 16283

Date: 02/21/2019

Exhibit Number:

Salt Lake – 3rd Bone Spring Isopach Map

3rd Bone Spring Proposed Location, Section 05-23S-29E and Section 04-23S-29E



Map Legend		Hearing Details
	Spacing Unit (320 ac.)	Novo Oil & Gas Northern Delaware, LLC Docket Number: Case Number: 16283 Date: 02/21/2019 Exhibit Number:
	Surface Hole Location	
	Novo Horizontal Location	
	Bottom Hole Location	
	Horizontal Landing Target	
	Bone Spring Producer Company	
	Well Name	
	3 rd Bone Spring Isopach	
	Contour line – interval 25'	
	Cross Section Line	

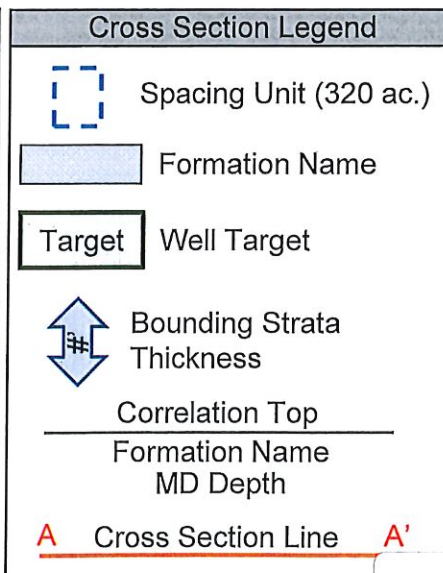
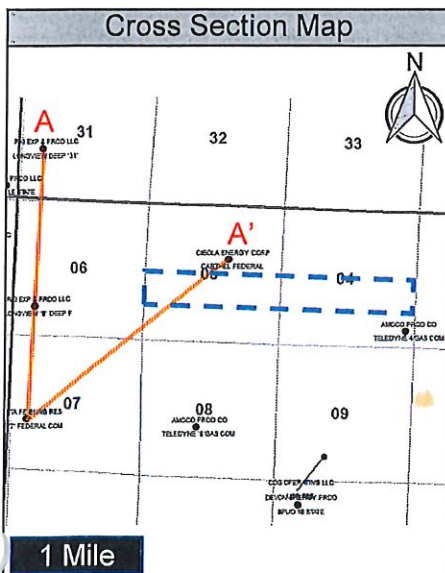
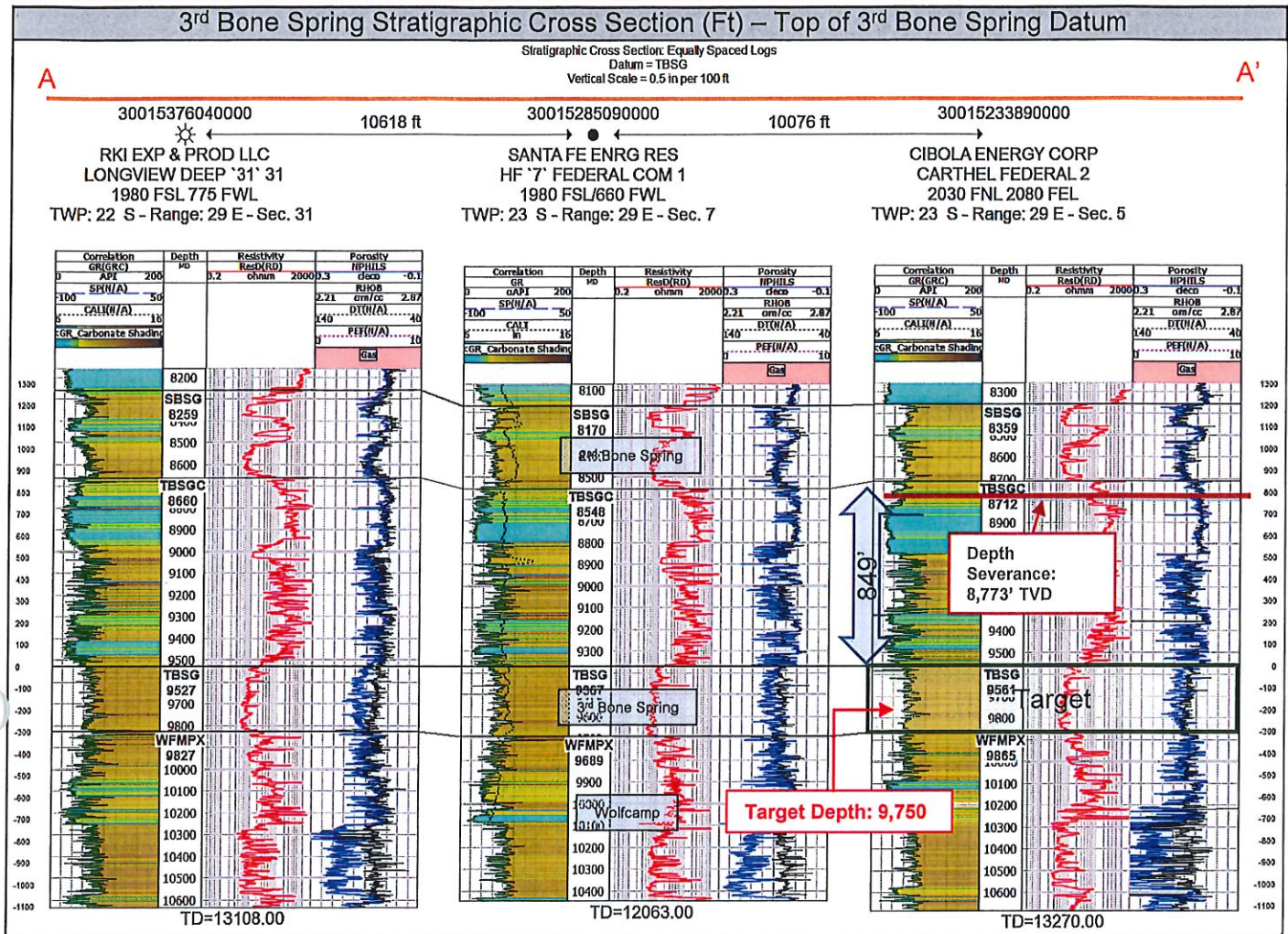
A. Exhibit Created by: Michael E. Hale (NOVO VP-Exploration), January 21, 2018

**APPLICATION OF NOVO OIL & GAS
NORTHERN DELAWARE, LLC**
Case No. 16283
HALE EXHIBIT #28

Salt Lake – 3rd Bone Spring Stratigraphic Cross Section



3rd Bone Spring Proposed Location, Section 05-23S-29E and Section 04-23S-29E



Novo Oil & Gas Northern Delaware, LLC

Docket Number:

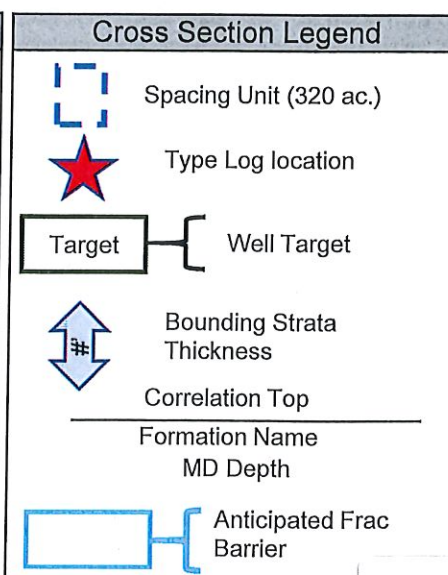
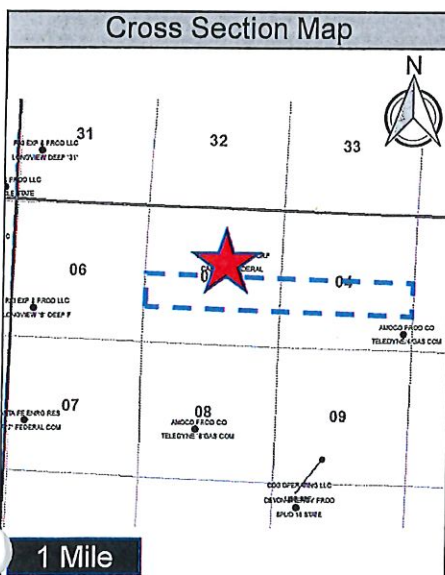
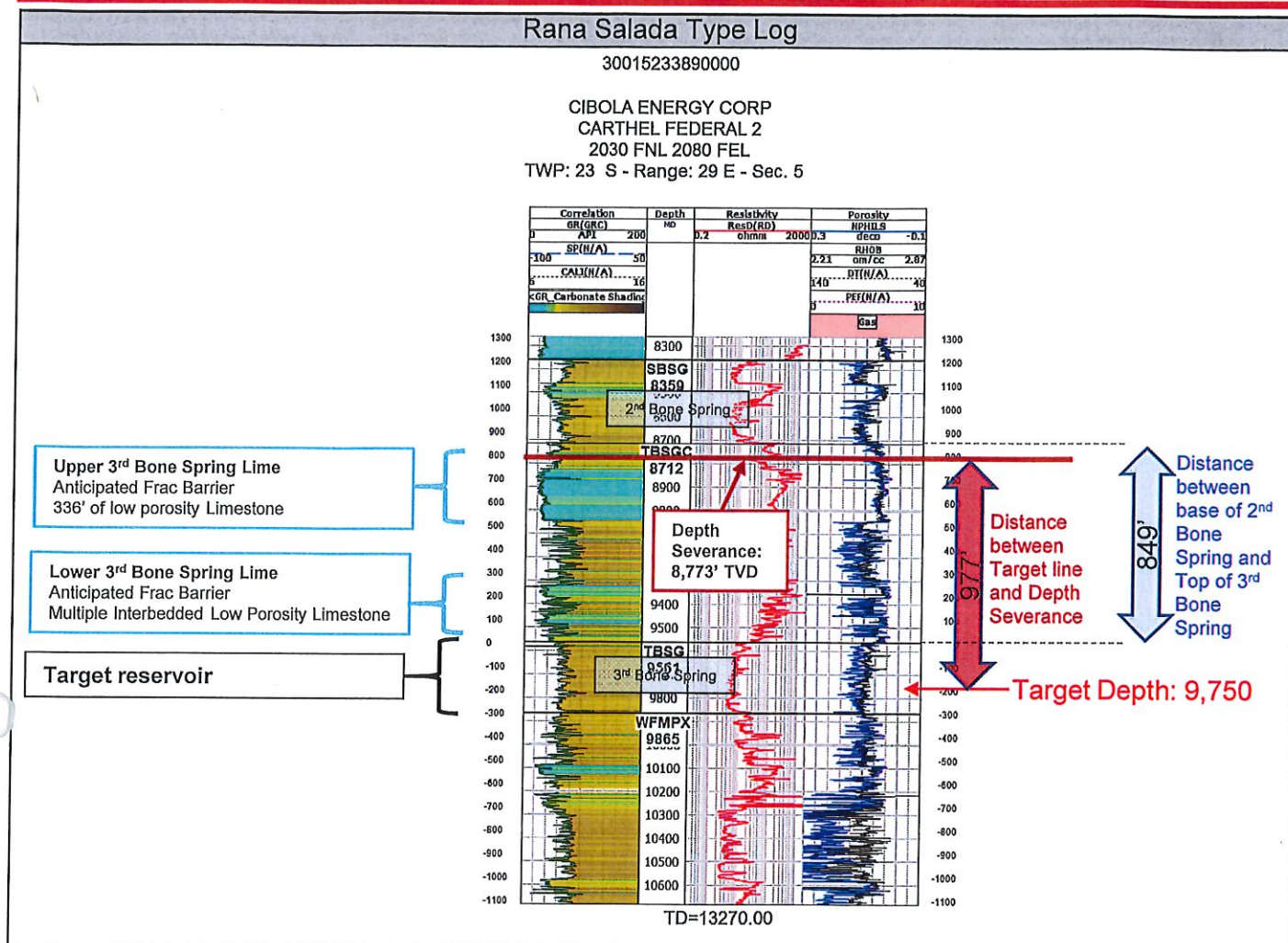
Case Number: 16283

Date: 02/21/2019

Exhibit Number:

**APPLICATION OF NOVO OIL & GAS
NORTHERN DELAWARE, LLC**
Case No. 16283
HALE EXHIBIT #29

Rana Salada Development Block Type Log Frac Barriers and Target Interval



Novo Oil & Gas Northern
Delaware, LLC

Docket Number:
Case Number: 16283
Date: 02/21/2019
Exhibit Number:

**APPLICATION OF NOVO OIL & GAS
NORTHERN DELAWARE, LLC
Case No. 16283
HALE EXHIBIT #30**