

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

In the Matter of the Application of Darrah)	Docket No. 25-CONS-3342-CWLE
Oil Company, L.L.C. for a well location)	
exception for its Drummond #1 well, to be)	CONSERVATION DIVISION
located in the S/2 SE/4 of Section 26,)	
Township 33 South, Range 5 East, Cowley)	License No. 35615
County, Kansas.)	

PRE-FILED DIRECT TESTIMONY OF

JARRED LEIS

DARRAH OIL COMPANY, LLC

1 **Q. Please state your name and business address for the record.**

2 A. Jarred Leis. I work at Darrah Oil Company, LLC located at 330 N Mead Ste 200, Wichita,
3 Kansas, 67202
4

5 **Q. What is your profession and who is your employer?**

6 A. I am an Exploration Geologist employed by Darrah Oil Company LLC ("Darrah Oil").
7

8 **Q. Please summarize your educational background and work experience?**

9 A. I obtained a Bachelor of Science in Geology from Kansas State University in 2010. In
10 2013, I obtained a Masters in Geology from Kansas State University. After graduating, I
11 worked independently as a consulting geologist from 2015 to 2024. As an independent
12 consulting geologist, I served as a wellsite geologist for over 100 wells drilled in Kansas
13 and one well in Oklahoma. I prepared and sold 2 prospects to various independents, and
14 was focused on prospecting in Eastern Kansas as well as Northwest Kansas. In 2024, I
15 was hired by Darrah Oil as an Exploration Geologist and have worked there since. While
16 at Darrah Oil I have been a part of drilling over 30 wells. We have explored in a vast array
17 of Kansas counties and have drilled 4 wells in Nebraska as well. We have found oil and
18 gas in many of these areas in Kansas and Nebraska.
19

20 **Q. Are you familiar with the Application for Well Location and Allowable**
21 **("Application") on file in this docket?**

22 A. Yes, I generated the geologic prospect that supports the drilling of the Drummond #1 well.
23 Darrah Oil desires to drill the Drummond #1 well on the Muret lease in Section 26-T33S-
24 R5E, Cowley County, Kansas, at a location that is 100' north of the lease line (from the
25 Brown Lease to the south) to test the Mississippi Chert for commercial quantities of oil.
26 The proposed location is based on a geologic examination of the wells surrounding the
27 proposed location of the Drummond #1 well. The proposed location of the Drummond #1
28 would maximize the possibility of encountering good formation pressures by staying 660'
29 or more from older wells producing from the Mississippi Chert to the North and South,

specifically, the producing Muret #6 to the north, and the plugged and abandoned Brown #3 to the south, each of which are depicted on the attached Figure 1.

Q. Can you explain the geologic justification for drilling the well at the proposed location in the Application?

A. The target formation to be tested by drilling the Drummond #1 well is the Mississippi Chert. The location is justifiable because I believe it is likely that oil reserves have not been drained by the existing wells in the proximity. My analysis is based on a review of the logs and drill stem tests ("DST's") from the analog wells in the field. As shown on Figure 1, the proposed location is in a good structural setting for the Mississippi Chert, because the anticipated top of the reservoir is relatively flat compared to the analog Muret #6 and Brown #3. As shown in Figure 2, the proposed location is also in a good area of Mississippi Chert thickness that correlates with commercial oil production in this area, and we anticipate encountering 15' of Mississippi Chert pay zone by drilling the Drummond #1 well.

By staying more than 660' away from the Muret #6 to the north and Brown #3 to the south, Darrah Oil believes it can mitigate or even alleviate any concern of pressure depletion in the reservoir resulting from historic production from these 40-year old wells. This will allow Darrah Oil to produce currently stranded oil reserves proven to be present in the Mississippi Chert, and thereby prevent waste.

The proposed location is also favorable for the secondary target, the Mississippi Lime, which is comprised of the Mississippian intervals below the Mississippi Chert extending down to the Kinderhook formation, due to structural setting and proximity to newer drilled Mississippi Lime wells drilled in Section 35 by another operator. These newer Mississippi Lime wells are circled in red on Figure 1. The proposed location allows Darrah Oil to be in a higher structural setting than the three newer Mississippi Lime wells that have been drilled in Section 35. Figure 1 shows the top of the Mississippian structure getting higher moving North and East. This allows for a multi-pay zone test by drilling the Drummond #1.

1 **Q. Why do you believe the well will be successful if drilled at the proposed location?**

2 A. As noted in the prefiled testimony of Mike Atterbury, the Brown Lease has produced more
3 than 230,000 cumulative barrels of oil from the Mississippi Chert and the Muret Lease has
4 produced more than 418,000 cumulative barrels of oil from the Mississippi Chert. Drilling
5 the Drummond #1 in the historically productive Mississippi Chert field together with the
6 likelihood that the historic wells likely drained a small area should make this location
7 successful for commercial oil production from the Mississippi Chert. Given the structural
8 setting, I believe there is a good probability the secondary Mississippi Lime pay zone may
9 also prove successful.
10

11 **Q. Do you have an opinion on the likelihood that the well would be successful if it were
12 drilled in conformance with the statewide minimum setback of 330'?**

13 A. I believe that the Drummond #1 well would encounter a pressure depleted Mississippi
14 Chert reservoir if drilled in conformance with the statewide minimum setback of 330' due
15 the proximity to historic wells completed in that zone.
16

17 **Q. Have you reviewed the Notice of Protest submitted by Protesters in this Docket?**

18 A. Yes.
19

20 **Q. What do you understand Protesters concerns to be?**

21 A. The protesters think the Mississippi Chert reservoir will have already been drained at the
22 proposed location of the Drummond #1 well. I do not believe that to be the case. Chert
23 reservoirs do not efficiently drain very large areas around the wellbores. This is due to
24 Mississippi Chert reservoirs typically having a high porosity (typically between 25-35%)
25 and low permeability (confirmed with many DST's in this area). High porosity and limited
26 permeability indicates poor connectivity of the pores within the reservoir rock, and
27 consequentially, the reservoir area that can be effectively drained via a conventional
28 wellbore is typically small. These porosity and permeability characteristics support why I
29 believe there will be satisfactory reservoir pressure remaining within the Mississippi Chert
30 reservoir at the proposed location of the Drummond #1 well. Additionally, I do not

1 anticipate much, if any, depletion within the secondary target Mississippi Lime formation,
2 because the nearest wells producing from that formation are sufficiently far away from the
3 proposed location of the Drummond #1 well.

4 Second, it appears protesters believe their correlative rights will be violated. Darrah Oil
5 attempted to address that concern by amending the Brown Lease to allow for unitization;
6 however, the protesters would not seriously entertain that proposal. These land and leasing
7 issues are beyond the scope of my employment. Mike Atterbury, Land Manager of Darrah
8 Oil, has addressed that issue in his prefiled testimony.

9
10 **Q. Do you believe drilling the well at the proposed location will cause waste?**

11 A. No. In fact, my recommendation as an Exploration Geologist is that the Drummond #1 well
12 be drilled at the proposed location in order to drain untapped oil reserves, which would
13 prevent waste.

14 If this location is successful in developing previously un-recovered oil reserves, it will
15 make available many more locations in this area to exploit the Mississippi Chert. This
16 would include several development locations on the Brown Lease, which the protesters are
17 lessor-mineral owners under. The original wide 40-acre spacing of the wells drilled on the
18 Brown Lease make it a potential candidate for the drilling of similar infill wells like the
19 Drummond #1 for the same reasons I have explained above.

20
21 **Q. Do you believe granting the well a full production allowable of 100 BOPD is**
22 **appropriate?**

23 A. Yes. Initial production from wells drilled in this area in the past 10 years have been as high
24 as 75 BOPD, and it is possible this well could have higher initial production with advanced
25 completion techniques. A curtailed allowable could lead to waste, as existing reservoir
26 energy and artificial energy provided from the completion of the well could be lost if oil
27 production was arbitrarily reduced.


28
29 **Q. Does this conclude your testimony?**

30 A. Yes.

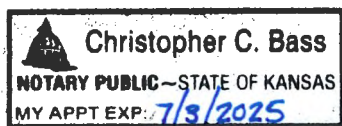
VERIFICATION

STATE OF ~~TEXAS~~ ^{KANSAS})
) ss:
COUNTY OF Sedgewick)

Jarred Leis, being first duly sworn, deposes and says that he is the Jarred Leis referred to in the foregoing "PRE-FILED DIRECT TESTIMONY OF JARRED LEIS" to be filed before the State Corporation Commission of the State of Kansas in Docket No. 25-CONS-3342-CWLE, and that the contents thereof are true and correct to the best of his information, knowledge, and belief.


Jarred Leis

SIGNED AND SWORN to before me on this 2nd day of July, 2025.




Notary Public

My Commission expires: 7/3/2025

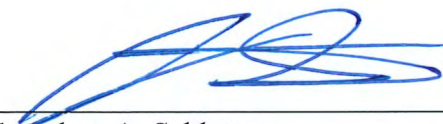
CERTIFICATE OF SERVICE

The undersigned certifies that on this 2nd day of July, 2025, I caused the original of the foregoing **Pre-Filed Direct Testimony of Jarred Leis** to be electronically filed with the Conservation Division of the State Corporation Commission of the State of Kansas, and caused true and correct copies of the same to be delivered by electronic mail to the following persons:

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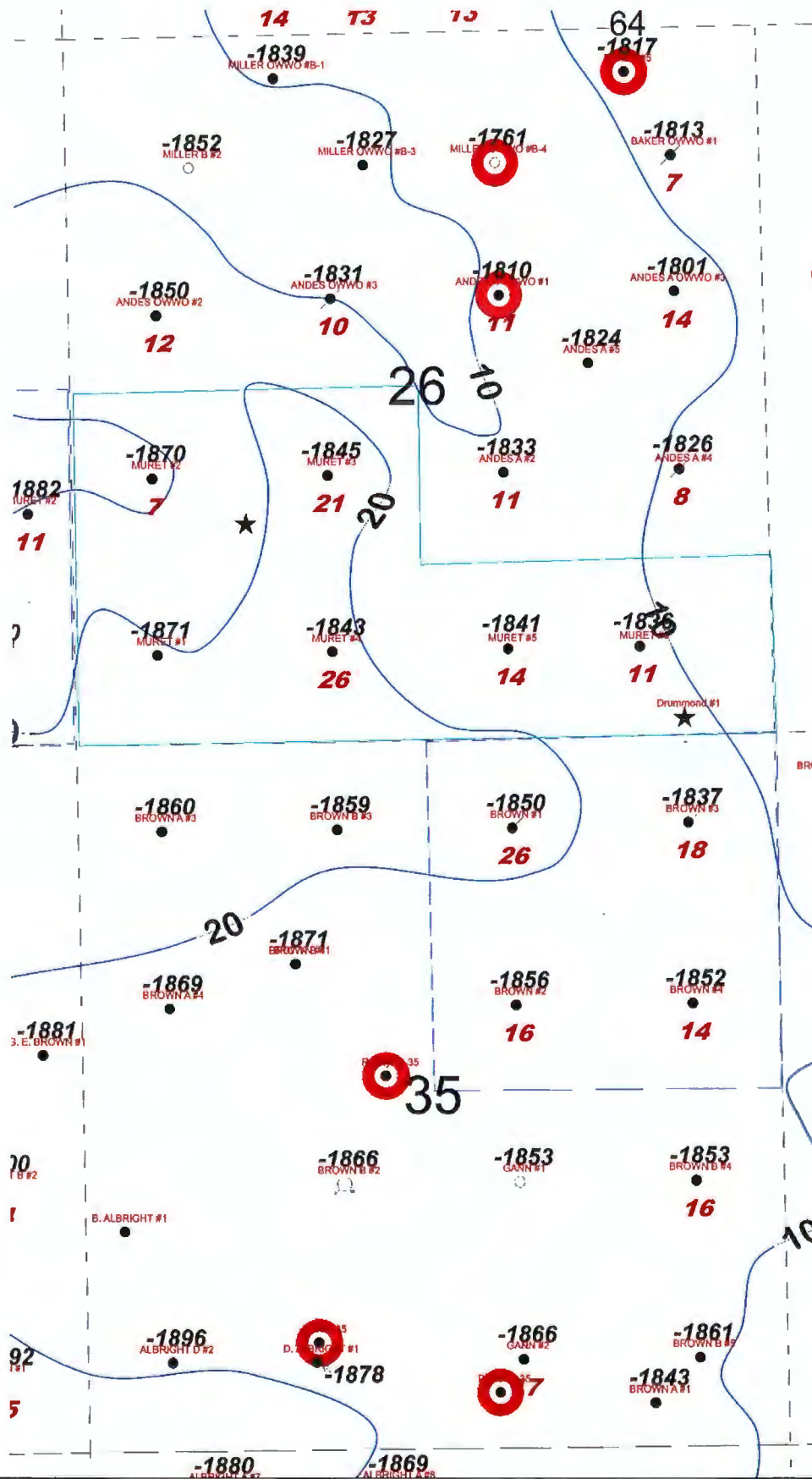


Figure 2 showing Miss Chert thickness. Miss Chert thickness values below the well. Miss Structure tops above the well. Contour Interval: 10ft