

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

In the matter of the application of Shakespeare Oil) Docket No. 25-CONS-3411-CUIC
Company, Inc. for a permit to authorize injection)
into the Whitehorse and Cedar Hills formations at) CONSERVATION DIVISION
the Wells #2-27 well in Section 27, Township 16)
South, Range 35 West, Wichita County, Kansas.) License No. 7311

PRE-FILED TESTIMONY OF

TODD BRYANT

ON BEHALF OF COMMISSION STAFF

OCTOBER 24, 2025

1 **Q. What is your name and business address?**

2 A. Todd Bryant, 266 N. Main St. Wichita, KS 67202.

3 **Q. By whom are you employed and in what capacity?**

4 A. I am employed by the Conservation Division of the Kansas Corporation Commission (KCC
5 or Commission), as Supervisor of the Production and Underground Injection Control (UIC)
6 Departments.

7 **Q. Would you please briefly describe your educational background and work experience?**

8 A. I received my Bachelor of Science in Geology from Wichita State University (WSU) in May
9 2017. Prior to that, I began working at the KCC in March 2012, as a Geology Intern while I
10 was completing my studies at WSU. I was promoted to a Research Analyst in September
11 2014. I was again promoted to Geologist Specialist in September 2017, and most recently
12 promoted to Supervisor of the Production and UIC Departments in July 2022.

13 **Q. What duties does your position with the Conservation Division involve?**

14 A. I manage the Conservation Division's UIC and Production Departments. This includes
15 providing technical support concerning various applications involving UIC wells. I enforce
16 the Commission's UIC regulations through injection permitting, I perform file reviews of
17 active injection wells, and I monitor daily injection volumes which are reported monthly
18 from Harper and Sumner Counties.

19 **Q. Have you previously testified before this Commission?**

20 A. Yes.

21 **Q. What is the purpose of your testimony in this matter?**

22 A. The purpose of my testimony is to inform the Commission about my review of the
23 application for injection filed by Shakespeare Oil Company, Inc. (Operator), and to support

1 my recommendation that the Commission deny Operator's application for injection into the
2 Wells #2-27 well (Subject Well), API #15-203-20394 under permit D-34,567.

3 **Q. What is Operator requesting in this docket?**

4 A. The most recent application that Staff received from Operator for injection into the Subject
5 Well was on March 17, 2025. That application requests injection into the Whitehorse and
6 Cedar Hills formations at a maximum rate of 500 barrels of water per day and maximum
7 surface pressure of 0 pounds per square inch (PSI).

8 **Q. Have there been inconsistencies in Operator's proposed injection?**

9 A. Yes. Operator initially submitted an application to inject into the Subject Well on January
10 10, 2025. In that initial application, Operator indicated that it sought to inject into the
11 Whitehorse formation at depths of 1452 to 1476 feet and 1522 to 1582 feet, as well as the
12 Cedar Hills formation from 1800 to 2000 feet. Then, on March 17, 2025, Operator
13 submitted an amended page one of its application. On the amended page, Operator indicated
14 that it sought to inject into the Whitehorse formation at a depth of 1452 to 1476 feet, as well
15 as the Cedar Hills formation from 1522 to 1582 feet and 1800 to 2000 feet. Next, in
16 Operator's pre-filed direct testimony, Mr. Eck indicates that Operator seeks to inject into the
17 Day Creek formation from 1452 to 1476 feet, the Whitehorse formation from 1522 to 1582
18 feet, and the Cedar Hills formation from 1800 to 2000 feet. However, Operator has not filed
19 an amended application for injection into the Day Creek formation. The constant changing
20 of formations from when the application was first filed to now is an indication to Staff that
21 Operator really does not know what formations it is proposing to inject into. On top of that,
22 it does not appear that Operator has provided all of the correct formations based on the
23 perforation depths provided in the application.

1 **Q. What are the issues that cause Staff to recommend denial of Operator's application?**

2 A. In my opinion, the application should be denied for a number of reasons. First, the Subject
3 Well is perforated above the minimum injection depth established by Table II causing the
4 well to be a current threat to usable water in the area. Second, even if the well was
5 perforated into Permian formations, there are a lack of confining layers between Operator's
6 proposed injection zones and usable water. Lastly, Operator has not provided sufficient
7 notice of it application.

8 **Q. Did Operator contact Staff about its application prior to conducting work on the**
9 **Subject Well?**

10 A. No. The daily reports attached to Mr. Kenny Sullivan's testimony as Exhibit KS-2 indicate
11 Operator perforated the Subject Well between December 18 and December 30, 2025.
12 Operator did not notify Staff of its intention to inject into the Subject Well until it filed its
13 application a few weeks later on January 10, 2025. By the time Operator's Application was
14 filed it had already completed and perforated the Subject Well into usable water.

15 **Q. Are operators able to obtain approval for their injection wells prior to conducting the**
16 **work on a proposed injection well?**

17 A. Yes, pursuant to K.A.R. 82-3-401(e) each applicant desiring design approval shall place the
18 words "design approval" at the top of the application for injection operations. Under the
19 permitting factors of K.A.R. 82-3-403(g) if the application requests design approval,
20 approval of the design of the proposed well may be obtained before actual construction of
21 the well. These regulations allow operators to submit an injection application for design
22 approval to UIC Staff prior to completing the wells construction. This allows Staff to review
23 the application and make sure there are no issues and it allows operators to avoid the costs

1 of constructing a well in a manner that will be rejected by Staff. However, as I testified
2 above, Operator did not communicate with Staff or submit an application for design
3 approval prior to conducting work on the Subject Well. If Operator had communicated with
4 Staff, then this situation may have been avoided.

5 **Q. Please explain the steps you took to determine whether Operator's application should**
6 **be approved.**

7 A. The KCC requirements for any injection well are listed in K.A.R 82-3-401 through K.A.R.
8 82-3-412. I will go into more depth regarding each of these steps below; however, I will first
9 generally discuss the steps Staff took in reviewing the Operator's application to see whether
10 permitting the Subject Well for injection would be appropriate. First, Staff reviews whether
11 the Subject Well met all KCC well construction requirements for this area.¹ Second, Staff
12 reviews the valid completion documentation for the Subject Well to ensure the well was
13 completed in accordance with KCC regulations. Third, Staff reviews the proposed zone of
14 injection for the Subject Well to ensure that it was compatible with the proposed injection
15 operation for the area. Fourth, Staff conducts an Area of Review (AOR) to check for
16 possible environmental concerns due to nearby wells. An AOR is a review of known wells
17 within a quarter mile of a proposed injection well to see if any threat to fresh and usable
18 water is present once an operator's proposed injection of fluids is introduced. Fifth, Staff
19 reviews the application to determine whether proper notice of the application was given.

20 **Q. Please describe your review of the surface and production casing depth in the Subject**
21 **Well.**

22 A. The Subject Well is located in Wichita County which, pursuant to Table I of the
23 Commission's Order on general rules and regulations for the conservation of crude oil and

1 natural gas in Docket No. 34,780-C, requires injection wells to protect through the Dakota
2 formation plus 20 feet into the underlying formation except where known local areas of
3 usable water occur in the Cheyenne sandstone, in which case, protection must be extended
4 20 feet into the Permian. Table I provides that two options are available: (1) set through the
5 Dakota plus 20 feet into the underlying formation or 20 feet into the Permian if specifically
6 designated or (2) set through all unconsolidated material plus 20 feet into the underlying
7 formation and cement the production string from a point 20 feet below the base of the
8 Dakota or 20 feet below the base of the Cheyenne, if specifically designated, to the surface.
9 In all instances, casing shall be set through all unconsolidated material plus 20 feet into the
10 underlying formation. I have attached a copy of the Intent to Drill (C-1) form submitted by
11 Operator to my testimony as *Exhibit TB-1*. The C-1 form provided by Operator indicates
12 that the base of usable water is 1520 feet. Additionally, I have attached a copy of the Well
13 Completion (ACO-1) form to my testimony as *Exhibit TB-2*. The ACO-1 indicates that the
14 Subject Well has surface casing set to 237 feet with 170 sacks of cement used. The
15 production casing in the Subject Well is set to 2500 feet with 390 sacks of cement used.

16 **Q. Please describe the proposed zone of injection for the Subject Wells.**

17 A. Table II provides depths that are the absolute minimum depth at which injection could be
18 permitted. However, Table II also provides that depths greater than those given may be
19 required for some areas. For Wichita County, Table II provides a minimum depth that is the
20 top of "Red Beds". At the Subject Well the top of Red Beds means the top of the Permian
21 formation. Operator is proposing to use the Subject Well to inject produced water into what
22 it alleges is the Whitehorse formation at a depth of 1452 feet to 1476 feet and the Cedar
23 Hills formation at a depth of 1522 feet to 1582 feet and 1800 feet to 2000 feet. Here, there is

¹ K.A.R. 82-3-405; K.A.R. 82-3-406; K.A.R. 82-3-407.

1 an issue because the upper perforations on the injection application are above the top of
2 usable water that operator provided on its ACO-1 form, 1520 feet. Mr. Eck's testimony
3 indicates that the upper perforations in the Subject Well are in the Day Creek Dolomite
4 formation. However, the KGS website describes the Day Creek Dolomite as a single bed,
5 typically about two feet thick, of fine-grained, dense dolomite, overlain and ordinarily
6 underlain by gray shales.² This description seems inconsistent with the evidence collected
7 by Staff.

8 Injection into the perforations identified in the application presents a threat to the quality
9 of usable water within the Dakota Aquifer System and Jurassic System due to demonstrated
10 local and regional hydraulic connectivity. Furthermore, the presence of unpredictable
11 fracture zones, even where direct communication is not evident, poses an elevated risk of
12 fluid migration into fresh and usable water bearing formations. Staff has collected samples
13 from the Subject Well which also show that the Subject Well has been perforated above the
14 top of the Permian formation and is a present danger to usable water. The threat Operator's
15 perforation poses to usable water and the collection of formation samples from the Subject
16 Well is covered in greater detail in Mr. Sullivan's testimony. After the sample from the
17 Subject Well was collected by District #1 Staff, Mr. Sullivan brought the sample to me in
18 order to conduct various tests on the sample.

19 **Q. How would you describe the sample?**

20 A. Mr. Sullivan discusses it in greater detail, but the sample appeared to be gritty and a lighter
21 colored sand.

² https://www.kgs.ku.edu/Publications/Bulletins/34/05_strat.html.

1 **Q. What tests did you conduct on the Subject Well sample that was brought to you by**
2 **District #1 Staff?**

3 A. On October 9, 2025, I took the sample to the Geology Department at Wichita State
4 University to review the material under a microscope and to see how the sample interacted
5 with hydrogen chloride (HCl). Under the microscope, the sample appeared to be a well
6 sorted, fine grained sand. I have attached a copy of pictures that I took of the sample through
7 a microscope to my testimony as ***Exhibit TB-3***. Additionally, when I placed droplets of HCl
8 on the sample there was little to no effervescence. If the sample was from a dolomite, then it
9 would have effervesced or fizzed when it interacted with the HCl. I have attached a video of
10 when I placed HCl droplets on the sample to my testimony as ***Exhibit TB-4***. Based on what
11 I viewed under the microscope and how the sample interacted with HCl, the formation
12 sample from the Subject Well is clearly not dolomitic and would not be from the Day Creek
13 formation. The sample is consistent with sandstone that would have been deposited above
14 the Permian formation. On October 20, 2025, I also traveled to the Kansas Geological
15 Society sample library in Wichita to compare the sample to other formations. I shared the
16 samples that I gathered with Mr. Sullivan which is discussed in greater detail in his
17 testimony.

18 **Q. Please describe your review of the requested rate and pressure.**

19 A. The Operator has requested to inject 500 barrels of produced water per day into the Subject
20 Well at a pressure of 0 PSI. However, at the Subject Well there is a lack of sufficient
21 confining layers above the injection perforations as the Subject Well is perforated above
22 Table II depth. Additionally, there is a lack of confining layers between the Permian and
23 usable water as Mr. Sullivan references in his testimony.

1 **Q. Please walk us through the Area of Review (AOR) you conducted.**

2 A. I used information from the Kansas Geological Survey (KGS) and the Commission's Risk
3 Based Data Management System (RBDMS) to conduct an AOR of one-quarter mile around
4 the Subject Well to check for possible environmental concerns due to nearby wells. Within
5 the one-quarter mile radius of the Subject Well there are zero plugged and abandoned wells,
6 zero producing oil wells, no potentially unplugged wells, no temporarily abandoned wells,
7 and no active saltwater disposal wells.

8 **Q. Did the Operator provide proper notice of the Application?**

9 A. No. Operator's application was initially received by Staff on January 10, 2025. Then Staff
10 received an amended page one of the application on March 17, 2025. That is evidenced by
11 the date stamps on each page of the application. To date, an affidavit of publication for
12 Operator's Application has not been received by Staff. Additionally, based on the testimony
13 provided it does not appear that sufficient notice has been provided to each offset operator
14 or lessee of record within a one-half mile radius, each unleased mineral owner within a one-
15 half mile radius, and the landowner for the formations the Subject Well would inject into.

16 **Q. Have you read and reviewed the testimony filed on behalf of Operator in this docket?**

17 A. Yes. I have read through and reviewed the testimony filed by Mr. Andrew Eck, Mr. Don
18 Williams, and Mr. Jeff Scarbrough.

19 **Q. On page 3, lines 16 through 17 of Mr. Eck's testimony, he references logs that he used
20 to form a cross section. Do you think his cross section should be considered persuasive?**

21 A. No. Generally, cross sections are in straight lines across a certain area and are used to show
22 trends in the subsurface. Mr. Eck instead tries to correlate logs on a line that zigzags back
23 and forth and even crosses back over itself. I have never seen a cross section depicted in

1 such a manner, and I am uncertain that any valuable information can be ascertained from his
2 Exhibit 3 based on how the cross section is depicted and given the knowledge that the
3 formation depths listed have been misidentified or are inconsistent.

4 **Q. On page 4, line 9 through page 5 line 1 of his testimony, Mr. Eck testifies that there are**
5 **sufficient confining layers above the injection interval. Do you agree with his**
6 **testimony?**

7 A. No, I do not agree that there are sufficient confining layers above the proposed injection
8 interval. As stated multiple times by Mr. Sullivan and I, the Subject Well is perforated
9 above the minimum depth established by Table II. Even if the Subject Well was perforated
10 below Table II depth, I share Mr. Sullivan's concerns regarding the sufficiency of the
11 confining layers above Operator's injection. The operator's top perforations are located
12 within the lower portion of the Dockum Group or the Entrada Sandstone, as part of the
13 Morrison Formation. This interval is characterized by massive beds of white, friable, very
14 fine- to medium-grained, extensively cross-bedded sandstone, interbedded with thin,
15 discontinuous layers of shale and siltstone. The Morrison Formation generally comprises
16 shale, sandstone, and limestone, with minor occurrences of chert and anhydrite.
17 Furthermore, the Permian interval exhibits elevated formation pressures and evidence of
18 natural and unpredictable fracturing. These conditions provide a conduit for fluids from the
19 Permian to migrate upward into zones containing usable water.

20 **Q. Next, let's discuss the testimony provided by Mr. Scarbrough. On page 2, lines 16**
21 **through 24 of his testimony, Mr. Scarbrough discusses water samples taken by**
22 **ChampionX Corporation. Do you believe those samples are credible?**

1 A. Not particularly. Water samples have no bearing on the Subject Well being perforated above
2 fresh and usable water. The Subject Well was perforated in December 2024, but the water in
3 the Subject Well was not tested until April 2025. This delay in testing from completion
4 resulted in three to four months of cross contamination, which is not going to lead to true
5 and accurate results. The threat this well presents is to the Dakota System. Mr. Sullivan
6 discusses that threat in greater detail in his testimony. The Dakota System consists of The
7 Dakota formation, the Kiowa formation, and the Cheyenne formation. These formations are
8 considered to be fractured and in communication with one another. There are no sufficient
9 confining layers between Operator's proposed injection and the Dakota System.

10 **Q. On page 3, lines 16 through 22 of his testimony, Mr. Scarbrough references his Exhibit**
11 **4 which includes 25 wells that are permitted for injection into the Whitehorse and/or**
12 **Day Creek formations. Do you have any comments regarding these wells?**

13 A. Yes. The Day Creek wells were permitted prior to Table II existing and the Whitehorse
14 wells in District #1 were permitted prior to my time here as supervisor. There are also some
15 wells which have been permitted in District #4, but the geology in that district is different
16 than what is found in District #1.

17 **Q. Have any injection wells been permitted for the Whitehorse and or Day Creek**
18 **formations in District #1 since you became Supervisor of the UIC Department?**

19 A. No. There was an application for injection into the Whitehorse formation which was
20 submitted in 2023 by Hartman Oil. However, that application was denied by Staff due to the
21 elevated risk the well posed to fresh and usable water resources. Hartman Oil did not protest
22 Staff's denial and instead recompleted the well for injection into a lower formation, the
23 Cedar Hills. Mr. Sullivan also references this denial in his testimony.

1 **Q. Do you believe that the Subject Well is perforated in the Day Creek, Whitehorse, and**
2 **Cedar Hills formations?**

3 A. No. I do not believe that the well is perforated in the Day Creek or the Cedar Hills. Based on
4 the information and evidence available, I believe that the upper perforations of the Subject
5 Well from 1452 to 1476 feet are located in the Morrison Formation, that the middle
6 perforations from 1522 to 1582 feet are located at the top of the Permian Red Beds, and that
7 the lower perforations from 1800 to 2000 feet are located in the Blaine formation.

8 **Q. Have you consulted with other KCC geologists regarding Operator's application?**

9 A. Yes. During the review of this application, I consulted with multiple KCC staff members to
10 obtain their independent evaluations of the formation tops for the Subject Well. Mr. Sullivan
11 discusses his findings in his testimony, but there is an overwhelming consensus that
12 Operator's formation calls are incorrect and that the Subject Well is perforated above the
13 minimum depth established by Table II. While the KCC Staff interpretations varied slightly,
14 all were within a reasonable range of one another.

15 For example, Mr. Jake Eastes, who is a Professional Geologist with the KCC, provided
16 additional information that I found to be useful in an email that he sent to me. I have
17 attached a copy of his email to my testimony as ***Exhibit TB-5***. His email noted that the
18 perforations from 1452 to 1476 feet are not within the Whitehorse or Day Creek formations,
19 but rather within a sand zone at the base of the Morrison or Jurassic-aged rocks. The email
20 also noted that the perforations from 1522 to 1582 feet are most likely within the
21 Whitehorse Formation, although one interpretation places this interval just within the top of
22 the Permian, with the Whitehorse top occurring near 1600 feet. Mr. Eastes' email identified
23 the perforations from 1800 to 2000 feet as being clearly within the Blaine Formation, with

1 the Density/Neutron/PE Log a halite/salt response throughout the perforated interval. Lastly,
2 his email noted that the Cedar Hills Formation in the Subject Well appears thinner than in
3 other areas of western and southwestern Kansas, with the top identified at approximately
4 2,075 feet and the base at 2,155 feet.

5 **Q. Based on your review of this Application, do you believe permitting the Subject Well**
6 **for the enhanced recovery of oil will potentially pollute the water resources of the State**
7 **of Kansas?**

8 A. Yes. The completion records for the Subject Well show that there is an adequate amount of
9 surface casing and cement to comply with Table I. However, based on the information
10 available, it appears that the well is perforated above the minimum depth established by
11 Table II and there is a lack of sufficient confining layers between Operator's injection and
12 the fresh and usable water resources in the area. The Subject Well presents an extremely
13 high risk to the usable water in this area especially when considering the information Mr.
14 Sullivan references in his testimony regarding the status of the Ogallala aquifer in the area of
15 the Subject Well.

16 **Q. Based on your review of this Application, do you believe granting the Application will**
17 **cause waste?**

18 A. Mr. Williams alleges that waste will occur if Operator's Application is denied. However,
19 approval of the application as submitted poses a substantial threat to the usable waters of the
20 Dakota Aquifer System. The protection of the aquifer outweighs any potential waste
21 associated with denial of the application. Operator has numerous alternative formations
22 available for the injection of produced water, including the Altamont, Council Grove,
23 Lancing, Lecompton, Kansas City, Marmaton, Mississippian, Oread, Shawnee, Tecumseh,

Topeka, and Toronto formations, all of which are at or above the total depth to which the well was drilled. This means that Operator has the ability and option to recomplete the Subject Well or drill a new injection well which properly protects usable water and would also prevent the waste it alleges. Operator elected to complete the well in its current configuration to reduce costs, a decision that does not justify the increased risk of waste or potential endangerment to usable groundwater resources.

Q. Based on your review of this Application, do you believe granting the Application will violate anyone's correlative rights?

A. No.

Q. Do you have a recommendation regarding whether the Commission should approve the Operator's Application?

A. Yes. Operator's application as it currently is filed should be denied, and Commission Staff is opposed to this application being granted. Other formations in the area are more suitable for injection than those proposed by Operator. Operator's Application for the Subject Well is insufficient because the well is completed above the minimum depth established by Table II. Further, I concur with Mr. Sullivan's testimony that any injection into the Whitehorse formation from 1522 to 1582 feet will also impact usable water due to the lack of confining layers and based on the knowledge that there are fractures in the formations which allow Permian fluids to seep upwards into usable water. Lastly, it does not appear that Operator has sufficiently provided notice of its application.

Q. Does this conclude your testimony at this time?

A. Yes.

For KCC Use:

Effective Date: _____

District # _____

SGA? ☐ Yes ☐ No**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION****Form C-1**

March 2010

**Form must be Typed
Form must be Signed
All blanks must be Filled****NOTICE OF INTENT TO DRILL****Must be approved by KCC five (5) days prior to commencing well****Form KSONA-1, Certification of Compliance with the Kansas Surface Owner Notification Act, MUST be submitted with this form.**Expected Spud Date: _____
month day year

OPERATOR: License# _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _ _ _ _

Contact Person: _____

Phone: _____

CONTRACTOR: License# _____

Name: _____

Well Drilled For:**Well Class:****Type Equipment:**

☐ Oil	☐ Enh Rec	☐ Infield	☐ Mud Rotary
☐ Gas	☐ Storage	☐ Pool Ext.	☐ Air Rotary
	☐ Disposal	☐ Wildcat	☐ Cable

☐ Seismic ; _____ # of Holes ☐ Other☐ Other: _____☐ If OWWO: old well information as follows:

Operator: _____

Well Name: _____

Original Completion Date: _____ Original Total Depth: _____

Directional, Deviated or Horizontal wellbore? ☐ Yes ☐ No

If Yes, true vertical depth: _____

Bottom Hole Location: _____

KCC DKT #: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ ☐ E ☐ W
(Q/Q/Q/Q)_____ feet from ☐ N / ☐ S Line of Section_____ feet from ☐ E / ☐ W Line of SectionIs SECTION: ☐ Regular ☐ Irregular?**(Note: Locate well on the Section Plat on reverse side)**

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Is this a Prorated / Spaced Field? ☐ Yes ☐ No

Target Formation(s): _____

Nearest Lease or unit boundary line (in footage): _____

Ground Surface Elevation: _____ feet MSL

Water well within one-quarter mile: ☐ Yes ☐ NoPublic water supply well within one mile: ☐ Yes ☐ No

Depth to bottom of fresh water: _____

Depth to bottom of usable water: _____

Surface Pipe by Alternate: ☐ I ☐ II

Length of Surface Pipe Planned to be set: _____

Length of Conductor Pipe (if any): _____

Projected Total Depth: _____

Formation at Total Depth: _____

Water Source for Drilling Operations:

☐ Well ☐ Farm Pond ☐ Other: _____

DWR Permit #: _____

(Note: Apply for Permit with DWR ☐)Will Cores be taken? ☐ Yes ☐ No

If Yes, proposed zone: _____

AFFIDAVIT

The undersigned hereby affirms that the drilling, completion and eventual plugging of this well will comply with K.S.A. 55 et. seq.

It is agreed that the following minimum requirements will be met:

1. Notify the appropriate district office **prior** to spudding of well;
2. A copy of the approved notice of intent to drill **shall be** posted on each drilling rig;
3. The minimum amount of surface pipe as specified below **shall be set** by circulating cement to the top; in all cases surface pipe **shall be set** through all unconsolidated materials plus a minimum of 20 feet into the underlying formation.
4. If the well is dry hole, an agreement between the operator and the district office on plug length and placement is necessary **prior to plugging**;
5. The appropriate district office will be notified before well is either plugged or production casing is cemented in;
6. If an ALTERNATE II COMPLETION, production pipe shall be cemented from below any usable water to surface within **120 DAYS** of spud date. Or pursuant to Appendix "B" - Eastern Kansas surface casing order #133,891-C, which applies to the KCC District 3 area, alternate II cementing must be completed within 30 days of the spud date or the well shall be plugged. **In all cases, NOTIFY district office** prior to any cementing.

Submitted Electronically**For KCC Use ONLY**

API # 15 - _____

Conductor pipe required _____ feet

Minimum surface pipe required _____ feet per ALT. ☐ I ☐ II

Approved by: _____

This authorization expires: _____*(This authorization void if drilling not started within 12 months of approval date.)*

Spud date: _____ Agent: _____

Remember to:

- File Certification of Compliance with the Kansas Surface Owner Notification Act (KSONA-1) with Intent to Drill;
- File Drill Pit Application (form CDP-1) with Intent to Drill;
- File Completion Form ACO-1 within 120 days of spud date;
- File acreage attribution plat according to field proration orders;
- Notify appropriate district office 48 hours prior to workover or re-entry;
- Submit plugging report (CP-4) after plugging is completed (within 60 days);
- Obtain written approval before disposing or injecting salt water.
- If well will not be drilled or permit has expired (See: authorized expiration date) please check the box below and return to the address below.

☐ **Well will not be drilled or Permit Expired** Date: _____

Signature of Operator or Agent: _____

Exhibit TB-1

Page 1 of 6

☐ E
☐ W

For KCC Use ONLY

API # 15 - _____

IN ALL CASES PLOT THE INTENDED WELL ON THE PLAT BELOW

In all cases, please fully complete this side of the form. Include items 1 through 5 at the bottom of this page.

Operator: _____

Lease: _____

Well Number: _____

Field: _____

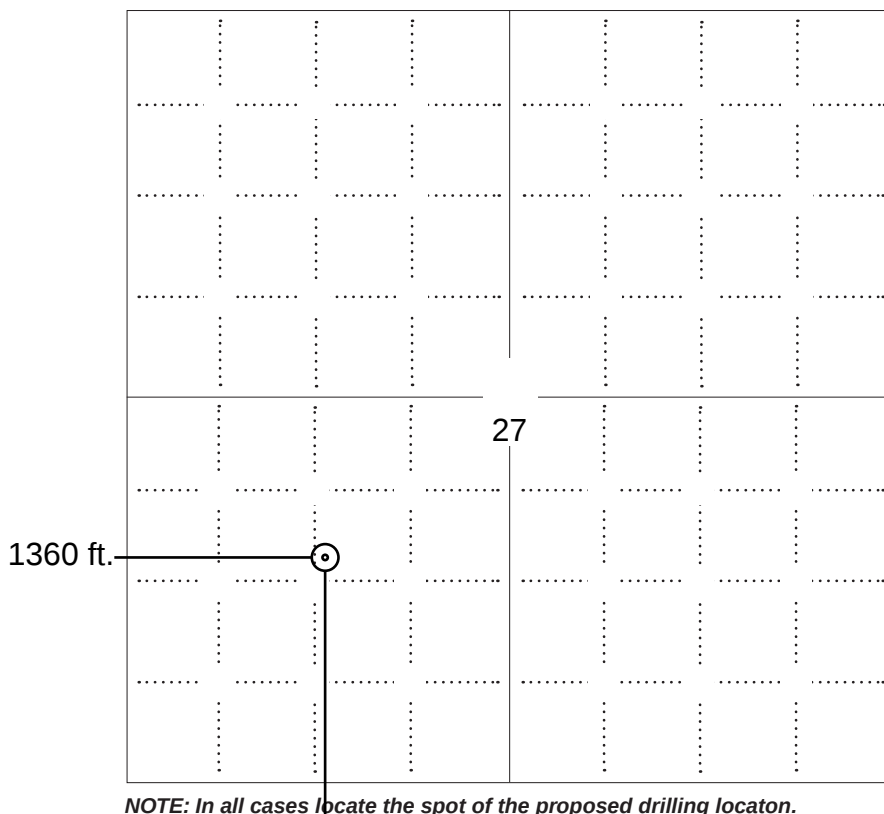
Number of Acres attributable to well: _____

QTR/QTR/QTR/QTR of acreage: _____ - _____ - _____ - _____

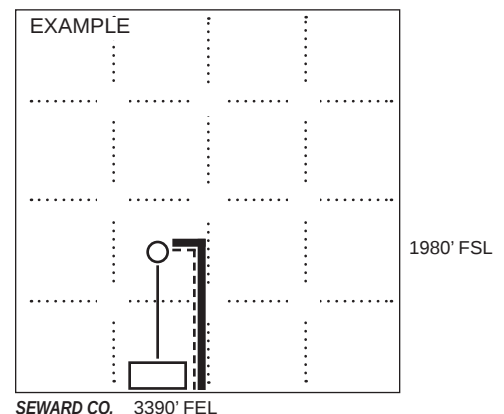
Location of Well: County: _____

_____ feet from ☐ N / ☐ S Line of Section_____ feet from ☐ E / ☐ W Line of SectionSec. _____ Twp. _____ S. R. _____ ☐ E ☐ WIs Section: ☐ Regular or ☐ Irregular**If Section is Irregular, locate well from nearest corner boundary.**Section corner used: ☐ NE ☐ NW ☐ SE ☐ SW**PLAT**

Show location of the well. Show footage to the nearest lease or unit boundary line. Show the predicted locations of lease roads, tank batteries, pipelines and electrical lines, as required by the Kansas Surface Owner Notice Act (House Bill 2032). You may attach a separate plat if desired.

**NOTE: In all cases locate the spot of the proposed drilling location.****LEGEND**

- ☐ Well Location
- ☐ Tank Battery Location
- ☐ Pipeline Location
- ☐ Electric Line Location
- ☐ Lease Road Location



1540 ft.

In plotting the proposed location of the well, you must show:

1. The manner in which you are using the depicted plat by identifying section lines, i.e. 1 section, 1 section with 8 surrounding sections, 4 sections, etc.
2. The distance of the proposed drilling location from the south / north and east / west outside section lines.
3. The distance to the nearest lease or unit boundary line (in footage).
4. If proposed location is located within a prorated or spaced field a certificate of acreage attribution plat must be attached: (C0-7 for oil wells; CG-8 for gas wells).
5. The predicted locations of lease roads, tank batteries, pipelines, and electrical lines.

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION
APPLICATION FOR SURFACE PIT

Form CDP-1
May 2010
Form must be Typed

Submit in Duplicate

Operator Name:		License Number:	
Operator Address:			
Contact Person:		Phone Number:	
Lease Name & Well No.:		Pit Location (QQQQ): ____ - ____ - ____ - ____ Sec. ____ Twp. ____ R. ____ ☐ East ☐ West ____ Feet from ☐ North / ☐ South Line of Section ____ Feet from ☐ East / ☐ West Line of Section ____ County	
Type of Pit: ☐ Emergency Pit ☐ Burn Pit ☐ Settling Pit ☐ Drilling Pit ☐ Workover Pit ☐ Haul-Off Pit <i>(If WP Supply API No. or Year Drilled)</i>	Pit is: ☐ Proposed ☐ Existing If Existing, date constructed: _____ Pit capacity: _____ (bbls)		
Is the pit located in a Sensitive Ground Water Area? ☐ Yes ☐ No		Chloride concentration: _____ mg/l <i>(For Emergency Pits and Settling Pits only)</i>	
Is the bottom below ground level? ☐ Yes ☐ No	Artificial Liner? ☐ Yes ☐ No	How is the pit lined if a plastic liner is not used?	
Pit dimensions (all but working pits): _____ Length (feet) _____ Width (feet) ☐ N/A: Steel Pits Depth from ground level to deepest point: _____ (feet) ☐ No Pit			
If the pit is lined give a brief description of the liner material, thickness and installation procedure.		Describe procedures for periodic maintenance and determining liner integrity, including any special monitoring.	
Distance to nearest water well within one-mile of pit: _____ feet Depth of water well _____ feet		Depth to shallowest fresh water _____ feet. Source of information: ☐ measured ☐ well owner ☐ electric log ☐ KDWR	
Emergency, Settling and Burn Pits ONLY: Producing Formation: _____ Number of producing wells on lease: _____ Barrels of fluid produced daily: _____ Does the slope from the tank battery allow all spilled fluids to flow into the pit? ☐ Yes ☐ No		Drilling, Workover and Haul-Off Pits ONLY: Type of material utilized in drilling/workover: _____ Number of working pits to be utilized: _____ Abandonment procedure: _____ _____ Drill pits must be closed within 365 days of spud date.	
Submitted Electronically			

KCC OFFICE USE ONLY

☐ Liner ☐ Steel Pit ☐ RFAC ☐ RFAS

Date Received: _____ Permit Number: _____ Permit Date: _____ Lease Inspection: ☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form KSONA-1

July 2021

Form Must Be Typed

Form must be Signed

All blanks must be Filled

CERTIFICATION OF COMPLIANCE WITH THE KANSAS SURFACE OWNER NOTIFICATION ACT

This form must be submitted with all Forms C-1 (Notice of Intent to Drill); CB-1 (Cathodic Protection Borehole Intent); T-1 (Request for Change of Operator Transfer of Injection or Surface Pit Permit); and CP-1 (Well Plugging Application). Any such form submitted without an accompanying Form KSONA-1 will be returned.

Select the corresponding form being filed: ☐ C-1 (Intent) ☐ CB-1 (Cathodic Protection Borehole Intent) ☐ T-1 (Transfer) ☐ CP-1 (Plugging Application)

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____ Fax: (_____) _____

Email Address: _____

Well Location:

____ - ____ - ____ Sec. ____ Twp. ____ S. R. ____ ☐ East ☐ West

County: _____

Lease Name: _____ Well #: _____

If filing a Form T-1 for multiple wells on a lease, enter the legal description of the lease below:

Surface Owner Information:

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

When filing a Form T-1 involving multiple surface owners, attach an additional sheet listing all of the information to the left for each surface owner. Surface owner information can be found in the records of the register of deeds for the county, and in the real estate property tax records of the county treasurer.

If this form is being submitted with a Form C-1 (Intent) or CB-1 (Cathodic Protection Borehole Intent), you must supply the surface owners and the KCC with a plat showing the predicted locations of lease roads, tank batteries, pipelines, and electrical lines. The locations shown on the plat are preliminary non-binding estimates. The locations may be entered on the Form C-1 plat, Form CB-1 plat, or a separate plat may be submitted.

Select one of the following:

- ☐ I certify that, pursuant to the Kansas Surface Owner Notice Act (see Chapter 55 of the Kansas Statutes Annotated), I have provided the following to the surface owner(s) of the land upon which the subject well is or will be located: 1) a copy of the Form C-1, Form CB-1, Form T-1, or Form CP-1 that I am filing in connection with this form; 2) if the form being filed is a Form C-1 or Form CB-1, the plat(s) required by this form; and 3) my operator name, address, phone number, fax, and email address.
- ☐ I have not provided this information to the surface owner(s). I acknowledge that, because I have not provided this information, the KCC will be required to send this information to the surface owner(s). To mitigate the additional cost of the KCC performing this task, I acknowledge that I must provide the name and address of the surface owner by filling out the top section of this form and that I am being charged a \$30.00 handling fee, payable to the KCC, which is enclosed with this form.

If choosing the second option, submit payment of the \$30.00 handling fee with this form. If the fee is not received with this form, the KSONA-1 form and the associated Form C-1, Form CB-1, Form T-1, or Form CP-1 will be returned.

I Submitted Electronically

I



25-16s-35w-999
CRD NO.

00-16s-35w
DMT NO.

PRO-STAKE LLC

Oil field & Construction Site Staking

20487
INVOICE NO.



Shakespeare Oil Co., Inc.

OPERATOR

Wells 2-27

LEASE NAME

SW/4 Sec. 27-T16S-R35W

LEGAL DESCRIPTION

Wichita Co. KS.

COUNTY

1540' FSL - 1360' FWL

FOOTAGE CALLS

3196.7'

GR ELEVATION

P.O. Box 1575
Leoti, Ks. 67861
Jay Koehn: 620-874-0022
jay@prostakellc.com

LEGEND

- irr. well
- water hydrant
- tank battery
- staked loc.
- prod. well / aband. well
- house
- building
- gas line
- water line
- transmission powerline
- 3 phase powerline
- single phase powerline
- fence
- gravel / sand rd.
- gravel trail / lease rd.
- dirt rd.
- dirt trail / lease rd.
- Hwy / blacktop rd.

SCALE: 1" = 1000'
DATE STAKED: Oct. 9, 2024
MEASURED BY: Jay K.
DRAWN BY: Jay K.
AUTHORIZED BY: Alex B.



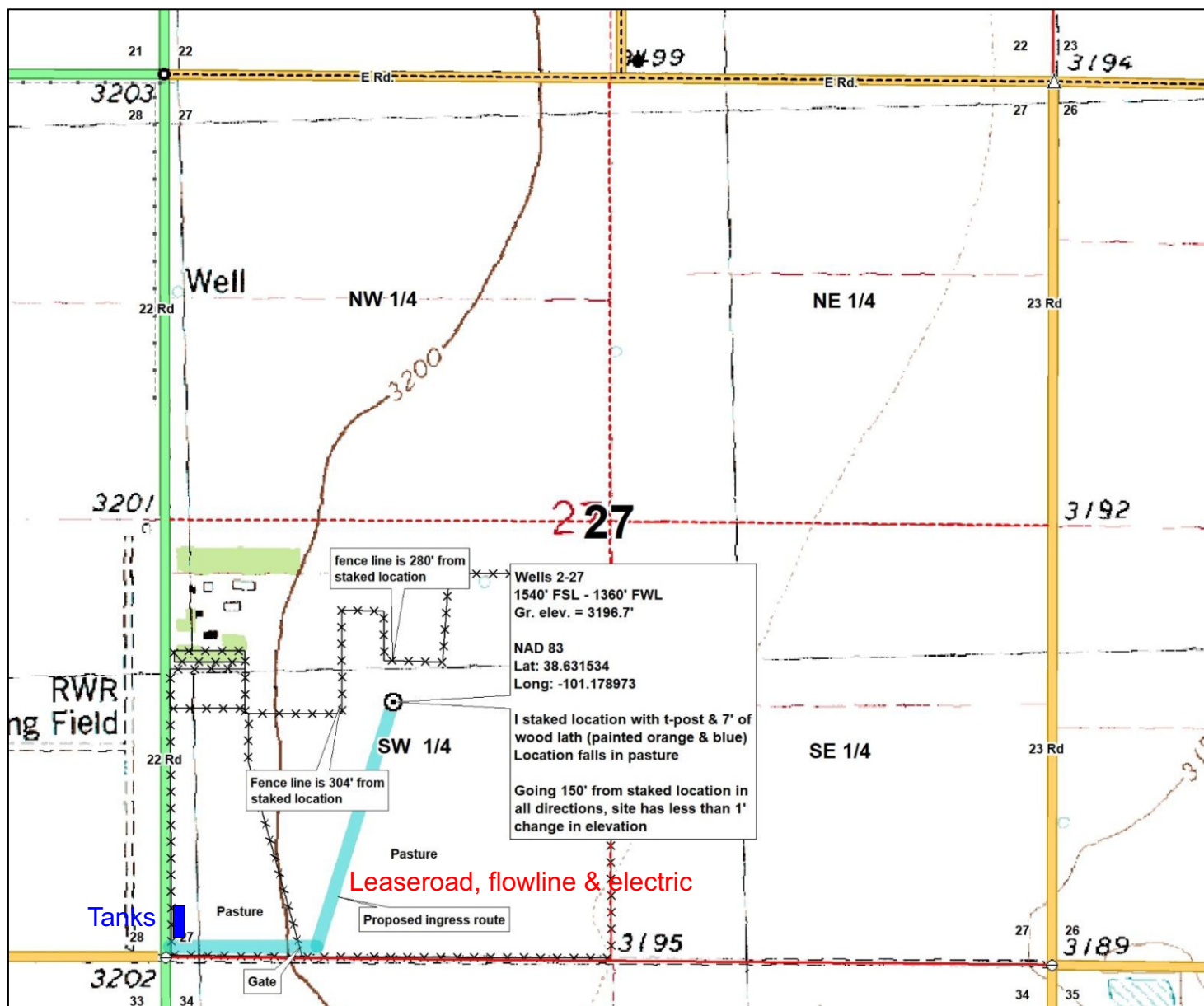
DIRECTIONS: From Marienthal, KS. At the intersection of Hwy 96 & Rd. 20 – Go 9 miles north on Rd. 20 to Rd G – turn right onto Rd G and proceed east for 2 miles to Rd 23 – turn left onto Rd 23 and proceed north for 1 mile to the southwest corner of section 27-16s-35w – Please contact landowner for final ingress into staked location

NAD 83
LAT: 38.631534°
LONG: -101.178973°

SPCS NAD 27 KS-S
X: 1234883.73
Y: 726451.34

LANDOWNER/CONTACT: Jason Wells (620) 874-1160

*This drawing does not constitute a monumented survey or a land survey plat.
This drawing is for construction purposes only.*



Preliminary, non-binding estimate of leaseroad, flowline, and electric

Andrew J. French, Chairperson
Dwight D. Keen, Commissioner
Annie Kuether, Commissioner

Laura Kelly, Governor

October 22, 2024

Toby Eck
Shakespeare Oil Co., Inc.
202 W MAIN ST
SALEM, IL 62881-1519

Re: Drilling Pit Application
Wells 2-27
SW/4 Sec.27-16S-35W
Wichita County, Kansas

Dear Toby Eck:

District staff has inspected the above referenced location and has determined that the reserve pit shall be constructed **without slots**, the bottom shall be flat and reasonably level, and the free fluids must be removed. The fluids are to be removed from the reserve pit within 96 hours of completion of drilling operations.

If production casing is set all completion fluids shall be removed from the working pits daily. NO completion fluids or non-exempt wastes shall be placed in the reserve pit.

The fluids should be taken to an authorized disposal well. Please call the District Office at (620) 682-7933 when the fluids have been removed. Please file form CDP-5 (August 2008), Exploration and Production Waste Transfer, through KOLAR within 30 days of fluid removal.

A copy of this letter should be posted in the doghouse along with the approved Intent to Drill. If you have any questions or concerns please feel free to contact the District Office at (620) 682-7933.

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	WELLS 2-27
Doc ID	1809174

All Electric Logs Run

Dual Induction/GR
Compensated Neutron
Compensated Density
Microlog

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	WELLS 2-27
Doc ID	1809174

Tops

Name	Top	Datum
Base Anhydrite	2203	+701
Heebner	3897	-782
Lansing	4032	-826
Muncie Creek	4103	-998
Stark Shale	4205	-1093
Hushpuckney	4236	-1140
Marmaton	4453	-1247
Pawnee	4526	-1320
L. Cherokee Shale	4608	-1402
Mississippian	4808	-1602

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	WELLS 2-27
Doc ID	1809174

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	237	Class A	170	2% gel, 3% cc
Production	7.875	5.5	15.5	2500	SMD	390	1/4# sx flocele

SWIFT



Services, Inc.

P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
11/6/2024	37161

BILL TO

Shakespeare Oil Company, Inc
202 West Main Street
Salem, IL 62881

RECEIVED
NOV 14 2024

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#2-27	Wells	Wichita	Duke Drlg	Oil	Development	Surface Pipe	Gideon
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				90	Miles	8.00	720.00
576D-S	Pump Charge - <u>Shallow Surface (< 500 Ft.)</u>				1	Job	1,250.00	1,250.00
325	Standard Cement				175	Sacks	17.50	3,062.50T
279	Bentonite Gel				7	Sack(s)	30.00	210.00T
278	Calcium Chloride				8	Sack(s)	55.00	440.00T
290	D-Air				2	Gallon(s)	45.00	90.00T
276	Flocele				50	Lb(s)	4.00	200.00T
581D	Service Charge Cement				175	Sacks	2.00	350.00
583D	Drayage				774	Ton Miles	1.00	774.00
Subtotal								7,096.50
Sales Tax Wichita County							8.50%	340.21
We Appreciate Your Business!						Total	\$7,436.71	



CHARGE TO:	Shakespeare Oil Co
ADDRESS	
CITY, STATE, ZIP CODE	

TICKET 37161

PAGE 1 OF 1
Exhibit TB-2
Page 7 of 69

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City, KS	2-27	Wells	Wichita	KS	Pence	11/6/2024	
2.	TICKET TYPE ☒ SERVICE ☐ SALES	CONTRACTOR Duke	RIG NAME/NO.	SHIPPED VIA CT	DELIVERED TO LOCATION	ORDER NO.	
3.	WELL TYPE Oil	WELL CATEGORY Development	JOB PURPOSE Surface Pipe	WELL PERMIT NO.	WELL LOCATION Pence, 6-W, 1 1/2-5		
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS			E-INTO		

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE Truck #115			90	mi	8.00	720.00
5765		1			Pump Charge - Surface			1	job	1,250.00	1,250.00
325		1			STANDARD CEMENT			175	sls	17.00	3062.50
279		1			BENTONITE GEL			7	sls	30.00	210.00
278		1			Calcium Chloride			8	sls	55.00	440.00
290		1			D-AIR			2	gal	45.00	90.00
276		1			Flocel			50	lbs	4.00	200.00
581		1			Cement Service Charge			175	sls	2.00	350.00
583		1			Drayage	17,200	lbs	774	rm	1.00	774.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

X

DATE SIGNED 11/6/2024 TIME SIGNED 11:45 ☐ A.M. ☒ P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY	AGREE	UNDECIDED	DISAGREE	PAGE TOTAL	1
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					
WE UNDERSTOOD AND MET YOUR NEEDS?					
OUR SERVICE WAS PERFORMED WITHOUT DELAY?					
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Wichita	340 1/2
ARE YOU SATISFIED WITH OUR SERVICE?	☐ YES	☐ NO		TOTAL	7436 71
☐ CUSTOMER DID NOT WISH TO RESPOND					

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR

APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE

PAGE NO.

11/6/2024 1

CUSTOMER

WELL NO.

LEASE

JOB TYPE

TICKET NO.

Shakespeare Oil Co

2-27

Wells

Surface Pipe

37161

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	12030							ON LOCATION 8 5/8" 2316/16
								RTD: 23'7"
	2130							Begin 8 5/8" Csg in Well
	2230							Break Circulation
	2240	4	5		✓	250		Pump 5 bbl H ₂ O SPACER
		4	42		✓	200		Mix 175 sks of STANDARD Cement @ 14.7ppg
		4	0		✓	125		Begin Displacement
		4	10.5		✓	250		* Circulate CMT to Surface *
	2300	—	13		✓	200		KO Pump * Shut in * -Release PSI * H ₂ O *
	2315							Wash up Truck #115
	2346							Job Complete
								175 sks of STANDARD Cement w/ 2% gel, 3% CC, 1/4" Flo used
								* Approx 10 sks to the Pit * "Plug Down" @ 11:00 PM CST
								Thanks!
								Seckman, Josh, Jan

SWIFT

Services, Inc.

P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300

Invoice

DATE	INVOICE #
11/19/2024	37167

BILL TO

Shakespeare Oil Company, Inc
202 West Main Street
Salem, IL 62881

RECEIVED
NOV 27 2024

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#2-27	Wells	Wichita	Duke Drlg Rig #4	SWD	Development	Long String	Gideon
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				90	Miles	8.00	720.00
579D	Pump Charge - Two-Stage & Top To Bottom LongString				1	Job	2,400.00	2,400.00
330	Swift Multi-Density Standard (MIDCON II)				450	Sacks	24.00	10,800.00T
276	Flocele				125	Lb(s)	4.00	500.00T
281	Mud Flush				500	Gallon(s)	2.50	1,250.00T
221	Liquid KCL (Clayfix)				2	Gallon(s)	25.00	50.00
290	D-Air				8	Gallon(s)	45.00	360.00T
581D	Service Charge Cement				450	Sacks	2.00	900.00
583D	Drayage				2,021	Ton Miles	1.00	2,021.00
	Subtotal							19,001.00
	SWD &/Or InJection Well, Exempt From Sales Tax						0.00%	0.00
We Appreciate Your Business!						Total	\$19,001.00	



CHARGE TO: <u>Shakespeare Oil Co</u>
ADDRESS
CITY, STATE, ZIP CODE

TICKET **37167**

PAGE 1 OF 1
Exhibit TB-2
Page 10 of 69

SERVICE LOCATIONS 1. <u>Ness City, KS</u>	WELL/PROJECT NO. <u>2-27</u>	LEASE <u>Wells</u>	COUNTY/PARISH <u>Wichita</u>	STATE <u>KS</u>	CITY <u>Pence</u>	DATE <u>11/19/2024</u>	OWNER
2.	TICKET TYPE ☒ SERVICE ☐ SALES	CONTRACTOR <u>DUKE</u>	RIG NAME/NO. <u>#4</u>	SHIPPED VIA <u>CT</u>	DELIVERED TO <u>LOCATION</u>	ORDER NO.	
3.	WELL TYPE <u>SKD</u>	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>Long String</u>	WELL PERMIT NO.	WELL LOCATION <u>Pence, G-W, 1 1/2-S</u>		
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS					

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
<u>575</u>		<u>1</u>			MILEAGE <u>Truck #115</u>			<u>90</u>	<u>MI</u>	<u>8.00</u>	<u>720.00</u>
<u>579</u>		<u>1</u>			<u>Pump Charge - Top to Bottom</u>			<u>1</u>	<u>Job</u>	<u>2,400.00</u>	<u>2,400.00</u>
<u>330</u>		<u>1</u>			<u>Swift Multi-Density Cement</u>			<u>450</u>	<u>skts</u>	<u>24.00</u>	<u>10,800.00</u>
<u>276</u>		<u>1</u>			<u>Flocalc</u>			<u>125</u>	<u>lbs</u>	<u>4.00</u>	<u>500.00</u>
<u>281</u>		<u>1</u>			<u>Mud Flush</u>			<u>500</u>	<u>gal</u>	<u>2.50</u>	<u>1,250.00</u>
<u>221</u>		<u>1</u>			<u>Liquid KCL</u>			<u>2</u>	<u>gal</u>	<u>25.00</u>	<u>50.00</u>
<u>290</u>		<u>1</u>			<u>D-AIR</u>			<u>8</u>	<u>gal</u>	<u>45.00</u>	<u>360.00</u>
<u>581</u>		<u>1</u>			<u>Cement Service Charge</u>			<u>450</u>	<u>skts</u>	<u>2.00</u>	<u>900.00</u>
<u>583</u>		<u>1</u>			<u>Drayage</u>	<u>44,906</u>	<u>lbs</u>	<u>2021</u>	<u>TM</u>	<u>1.00</u>	<u>2,021.00</u>

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

X

DATE SIGNED 11/19/2024 TIME SIGNED 10:45 ☐ A.M. ☒ P.M.

REMIT PAYMENT TO:

SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

SURVEY	AGREE	UNDECIDED	DISAGREE	PAGE TOTAL	<u>1</u>
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					
WE UNDERSTOOD AND MET YOUR NEEDS?					
OUR SERVICE WAS PERFORMED WITHOUT DELAY?					
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				TAX	<u>0</u>
ARE YOU SATISFIED WITH OUR SERVICE? ☐ YES ☐ NO				TOTAL	<u>19,001.00</u>
☐ CUSTOMER DID NOT WISH TO RESPOND					

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR Rudman Fuchs APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE

PAGE NO.

11/19/2024

1

CUSTOMER

WELL NO.

LEASE

JOB TYPE

TICKET NO.

Shakespeare Oil Co

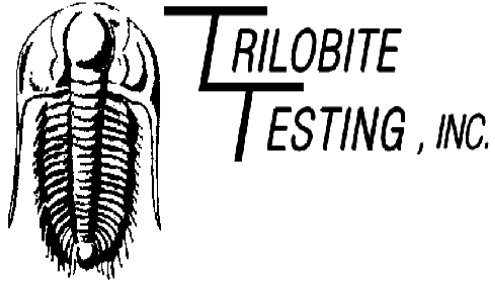
2-27

Wells

Long String

37167

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1700							ON LOCATION 5 1/2" 15lb/PG
								TP: 2.503' SS: 42.63'
	1845							BREAK Circulation
	1945							Set PKR shoe
	2000							Circulate Additional 10 minutes
	2020	4	12	✓		400		Pump 500 gal Mud Flush -1
		4	20	✓		400		Pump 20 bbl KCL SPACER
	2035	1	7.8			75		Plug RH + MAT [30, 20]
		Avg	94					
	2060	6	83	✓		400		Mix 150 sks of SMD @ 11.2 ppg
		6	87	✓		300		Mix 200 sks of SMD @ 12.0 ppg
		6	17	✓		300		Mix 50 sks of SMD @ 13.0 ppg
	2130							Wash Pump + Lines
								Release Latch Down Plug
	2135	6 1/2	0	✓		300		Begin Displacement
		6 1/2	30	✓		400		LIFE PSI * Circulate CMT to surface *
		6 1/2	58	✓		600		MAX LIFE PSI
	2145	5	58.5	✓		1500		LAND LATCH DOWN Plug
								-Release PSI * Hold *
								→ leave shut in
	2200							Wash up Truck #116
	2230							Job Complete
								450 sks of SMD ^{1/4" F10} Cement used
								* 50 sks Circulated to the Pit *
								Thanks!
								Gordon, Preston, Josh, Jan



DRILL STEM TEST REPORT

Prepared For: **Shakespeare Oil Company Inc**

202 W Main St
Salem IL 62881+1519

ATTN: Kent Matson

Wells #2-27

27-16S-35W Wichita KS

Start Date: 2024.11.11 @ 18:55:00

End Date: 2024.11.12 @ 01:17:32

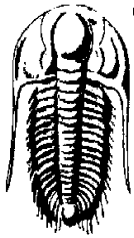
Job Ticket #: 72451 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.11.20 @ 11:18:58



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72451

DST#: 1

ATTN: Kent Matson

Test Start: 2024.11.11 @ 18:55:00

GENERAL INFORMATION:

Formation: **Lecomp/Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:19:32

Time Test Ended: 01:17:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J Staab

Unit No: 75

Interval: 3864.00 ft (KB) To 3940.00 ft (KB) (TVD)

Total Depth: 3940.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8875 Inside

Press@RunDepth: 77.49 psig @ 3868.00 ft (KB)

Start Date: 2024.11.11

End Date:

2024.11.12

Start Time: 18:55:01

End Time:

01:17:32

Capacity: psig

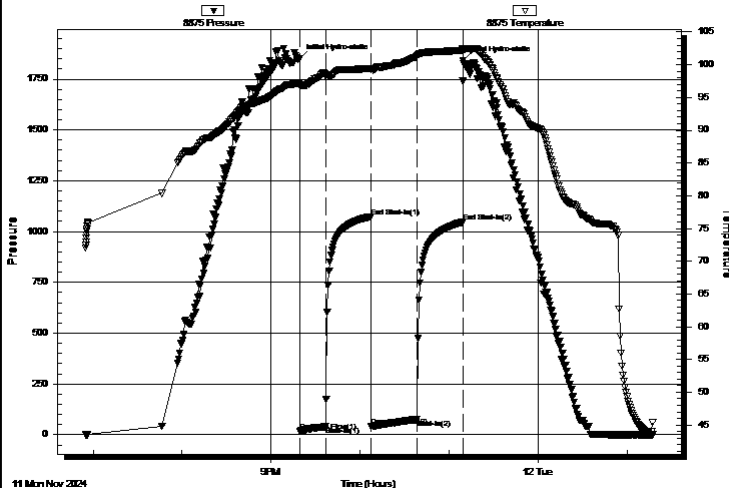
Last Calib.: 2024.11.12

Time On Btm: 2024.11.11 @ 21:19:21

Time Off Btm: 2024.11.11 @ 23:09:22

TEST COMMENT: 15-IF-Surface to 4.75"
30-ISI-No Return
30-FF-Surface to 6.25"
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

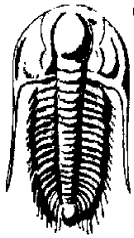
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1851.51	97.23	Initial Hydro-static
1	16.57	96.73	Open To Flow (1)
18	40.89	98.39	Shut-In(1)
49	1074.16	99.43	End Shut-In(1)
49	42.12	99.23	Open To Flow (2)
80	77.49	101.41	Shut-In(2)
110	1046.05	102.23	End Shut-In(2)
111	1840.18	102.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	Oil Spotted Mud 100%M	1.13

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72451

DST#: 1

ATTN: Kent Matson

Test Start: 2024.11.11 @ 18:55:00

GENERAL INFORMATION:

Formation: **Lecomp/Oread**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:19:32

Time Test Ended: 01:17:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Spencer J Staab

Unit No: 75

Interval: 3864.00 ft (KB) To 3940.00 ft (KB) (TVD)

Total Depth: 3940.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6838 Inside

Press@RunDepth: psig @ 3868.00 ft (KB)

Start Date: 2024.11.11

End Date:

2024.11.12

Start Time: 18:55:01

End Time:

01:17:32

Capacity: psig

Last Calib.:

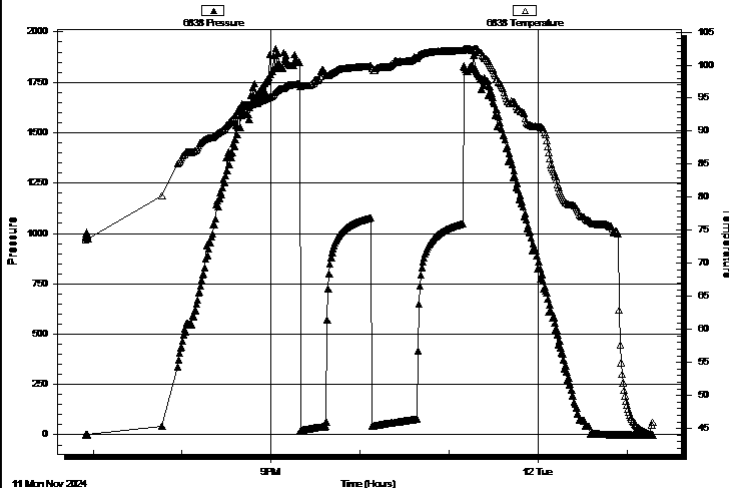
2024.11.12

Time On Btm:

Time Off Btm:

TEST COMMENT: 15-IF-Surface to 4.75"
30-ISI-No Return
30-FF-Surface to 6.25"
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

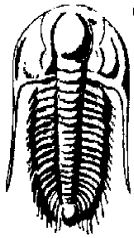
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
80.00	Oil Spotted Mud 100%M	1.13

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72451

DST#: 1

ATTN: Kent Matson

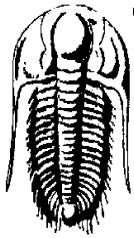
Test Start: 2024.11.11 @ 18:55:00

Tool Information

Drill Pipe:	Length: 3864.00 ft	Diameter: 3.82 inches	Volume: 54.77 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	62000.00 lb
		Total Volume:	- bbl	Tool Chased	ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3864.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	76.00 ft				
Tool Length:	108.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3833.00	
Shut In Tool	5.00			3838.00	
Hydraulic tool	5.00			3843.00	
Jars	5.00			3848.00	
Gap Sub	4.00			3852.00	
Safety Joint	3.00			3855.00	
Packer	5.00			3860.00	32.00 Bottom Of Top Packer
Packer	4.00			3864.00	
Stubb	1.00			3865.00	
Perforations	2.00			3867.00	
Change Over Sub	1.00			3868.00	
Recorder	0.00	6838	Inside	3868.00	
Recorder	0.00	8875	Inside	3868.00	
Drill Pipe	63.00			3931.00	
Change Over Sub	1.00			3932.00	
Perforations	5.00			3937.00	
Bullnose	3.00			3940.00	76.00 Bottom Packers & Anchor
Total Tool Length:	108.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72451

DST#: 1

ATTN: Kent Matson

Test Start: 2024.11.11 @ 18:55:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 5.78 in³

Resistivity: ohm.m

Salinity: 8200.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	Oil Spotted Mud 100%M	1.134

Total Length: 80.00 ft

Total Volume: 1.134 bbl

Num Fluid Samples: 0

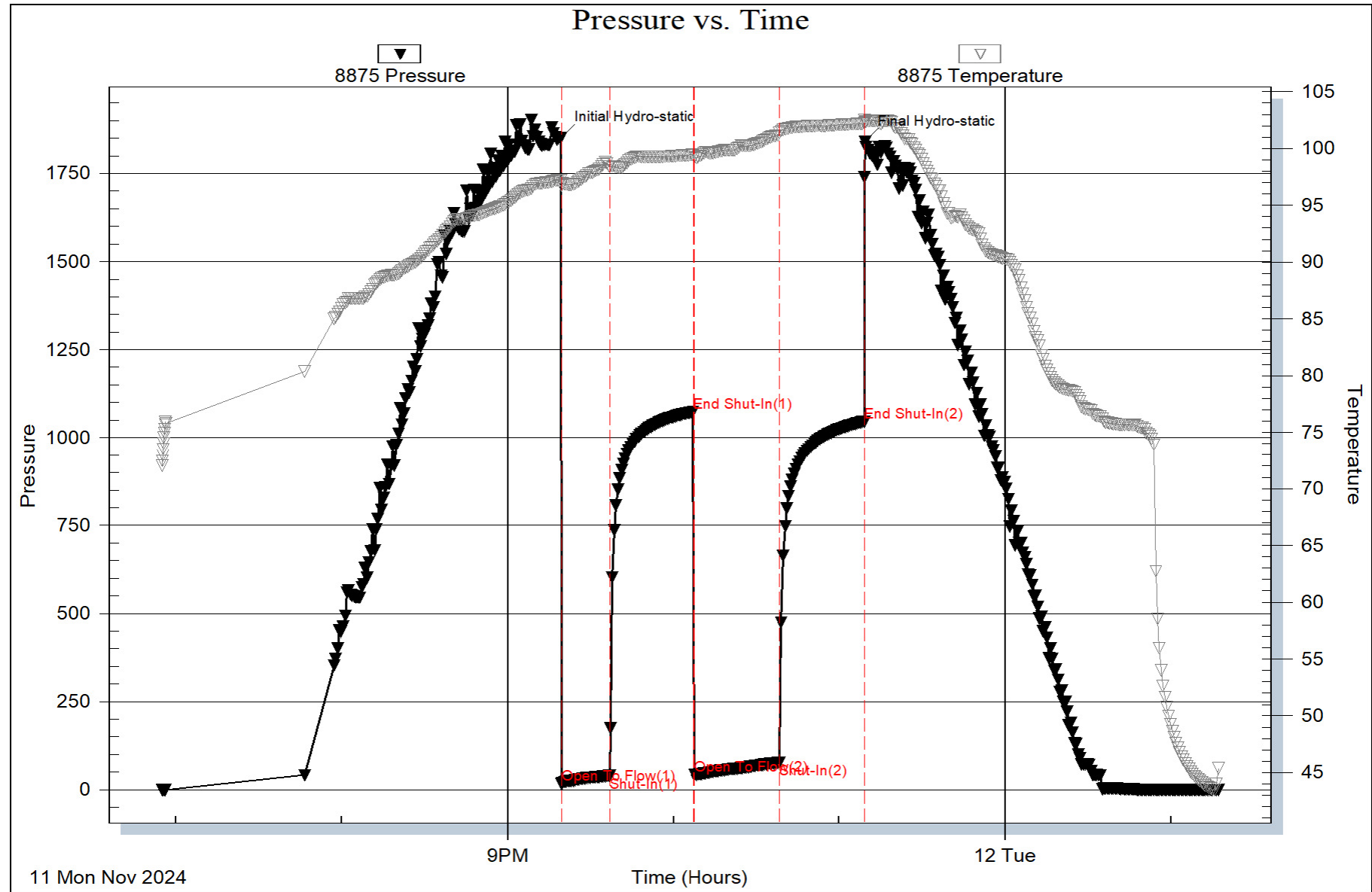
Num Gas Bombs: 0

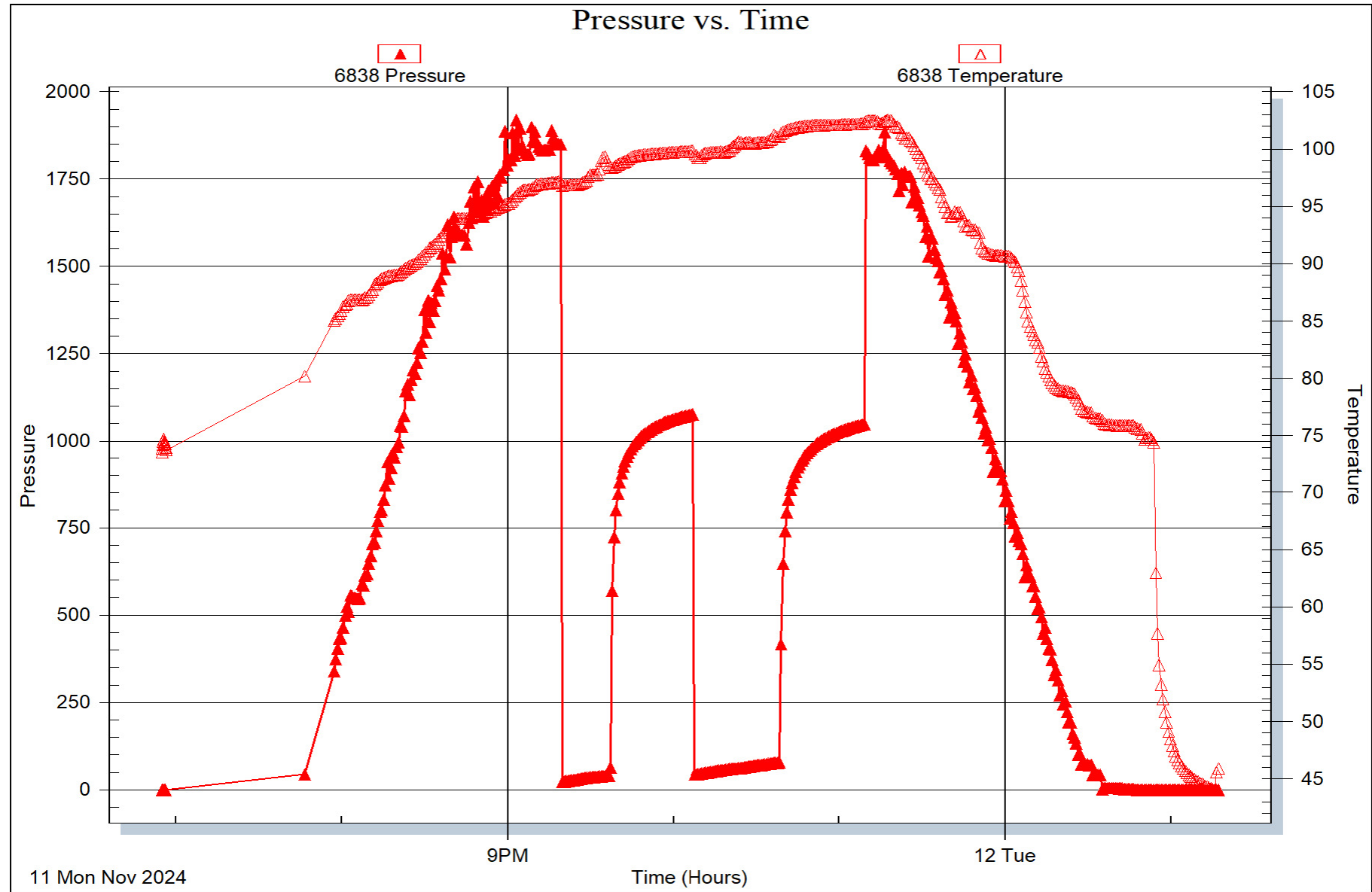
Serial #:

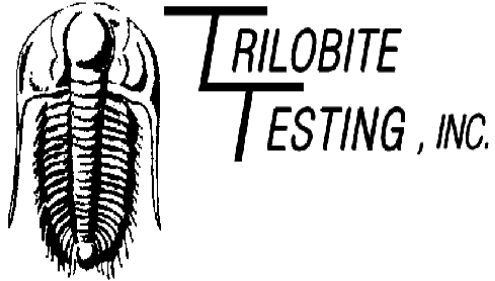
Laboratory Name:

Laboratory Location:

Recovery Comments: 2#LCM







DRILL STEM TEST REPORT

Prepared For: **Shakespeare Oil Company Inc**

202 W Main St
Salem IL 62881+1519

ATTN: Kent Matson

Wells #2-27

27-16S-35W Wichita KS

Start Date: 2024.11.12 @ 15:36:00

End Date: 2024.11.12 @ 21:41:52

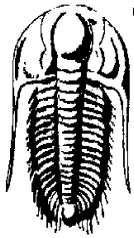
Job Ticket #: 72452 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.11.20 @ 11:13:24



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72452

DST#: 2

ATTN: Kent Matson

Test Start: 2024.11.12 @ 15:36:00

GENERAL INFORMATION:

Formation: **Tor-LKC A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:36:47

Time Test Ended: 21:41:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 3984.00 ft (KB) To 4050.00 ft (KB) (TVD)

Total Depth: 4050.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8875 Inside

Press@RunDepth: 94.88 psig @ 3988.00 ft (KB)

Start Date: 2024.11.12

End Date:

2024.11.12

Start Time: 15:36:01

End Time:

21:41:52

Capacity: psig

Last Calib.: 2024.11.12

Time On Btm: 2024.11.12 @ 17:36:37

Time Off Btm: 2024.11.12 @ 19:38:27

TEST COMMENT: 15-IF-Surface to 5.75"

30-ISI-No Return

30-FF-Surface to 8"

40-FSI-No Return

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1926.82	98.31	Initial Hydro-static
1	21.49	97.82	Open To Flow (1)
17	48.30	102.67	Shut-In(1)
49	1067.57	103.25	End Shut-In(1)
50	50.92	103.09	Open To Flow (2)
80	94.88	105.28	Shut-In(2)
122	1025.19	105.20	End Shut-In(2)
122	1925.84	105.42	Final Hydro-static

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Recovery

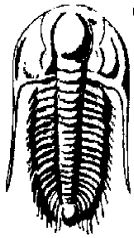
Length (ft)	Description	Volume (bbl)
70.00	WCM 15%W 85%M	0.99
60.00	SWCM 5%W 95%M	0.85
40.00	Mud w/oil spots (tarry) 100%M	0.57

* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72452

Printed: 2024.11.20 @ 11:13:24



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72452

DST#: 2

ATTN: Kent Matson

Test Start: 2024.11.12 @ 15:36:00

GENERAL INFORMATION:

Formation: **Tor-LKC A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:36:47

Time Test Ended: 21:41:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 3984.00 ft (KB) To 4050.00 ft (KB) (TVD)

Total Depth: 4050.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6838 Inside

Press@RunDepth: psig @ 3988.00 ft (KB)

Start Date: 2024.11.12

End Date:

2024.11.12

Start Time: 15:36:01

End Time:

21:41:52

Capacity: psig

Last Calib.:

2024.11.12

Time On Btm:

Time Off Btm:

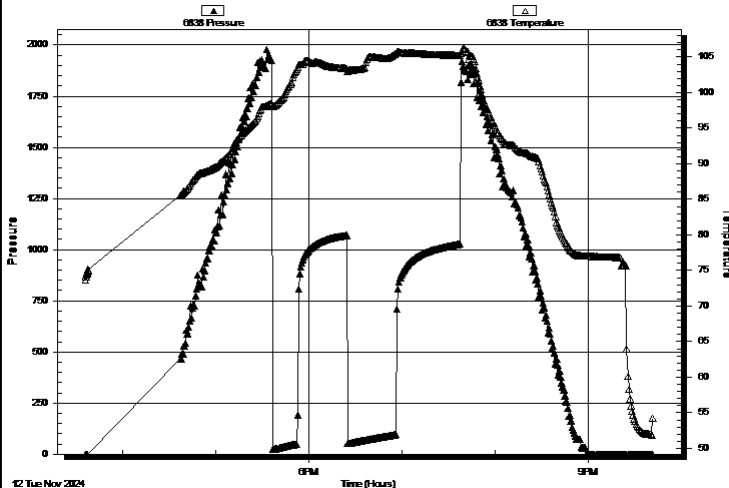
TEST COMMENT: 15-IF-Surface to 5.75"

30-ISI-No Return

30-FF-Surface to 8"

40-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
70.00	WCM 15%W 85%M	0.99
60.00	SWCM 5%W 95%M	0.85
40.00	Mud w/oil spots (tarry) 100%M	0.57

Gas Rates

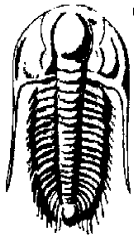
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72452

Printed: 2024.11.20 @ 11:13:24



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72452

DST#: 2

ATTN: Kent Matson

Test Start: 2024.11.12 @ 15:36:00

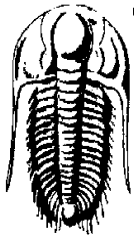
Tool Information

Drill Pipe:	Length:	3961.00 ft	Diameter:	3.82 inches	Volume:	56.15 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75 inches	Volume:	- bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	61000.00 lb
					Total Volume:	- bbl	Tool Chased	ft
Drill Pipe Above KB:		9.00 ft					String Weight: Initial	60000.00 lb
Depth to Top Packer:		3984.00 ft					Final	60000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		66.00 ft						
Tool Length:		98.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			3953.00		
Shut In Tool	5.00			3958.00		
Hydraulic tool	5.00			3963.00		
Jars	5.00			3968.00		
Gap Sub	4.00			3972.00		
Safety Joint	3.00			3975.00		
Packer	5.00			3980.00	32.00	Bottom Of Top Packer
Packer	4.00			3984.00		
Stubb	1.00			3985.00		
Perforations	2.00			3987.00		
Change Over Sub	1.00			3988.00		
Recorder	0.00	6838	Inside	3988.00		
Recorder	0.00	8875	Inside	3988.00		
Drill Pipe	32.00			4020.00		
Change Over Sub	1.00			4021.00		
Perforations	26.00			4047.00		
Bullnose	3.00			4050.00	66.00	Bottom Packers & Anchor
Total Tool Length:	98.00					



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72452

DST#: 2

ATTN: Kent Matson

Test Start: 2024.11.12 @ 15:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 9.98 in³

Resistivity: ohm.m

Salinity: 9100.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

41000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	WCM 15%W 85%M	0.992
60.00	SWCM 5%W 95%M	0.851
40.00	Mud w /oil spots (tarry) 100%M	0.567

Total Length: 170.00 ft

Total Volume: 2.410 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

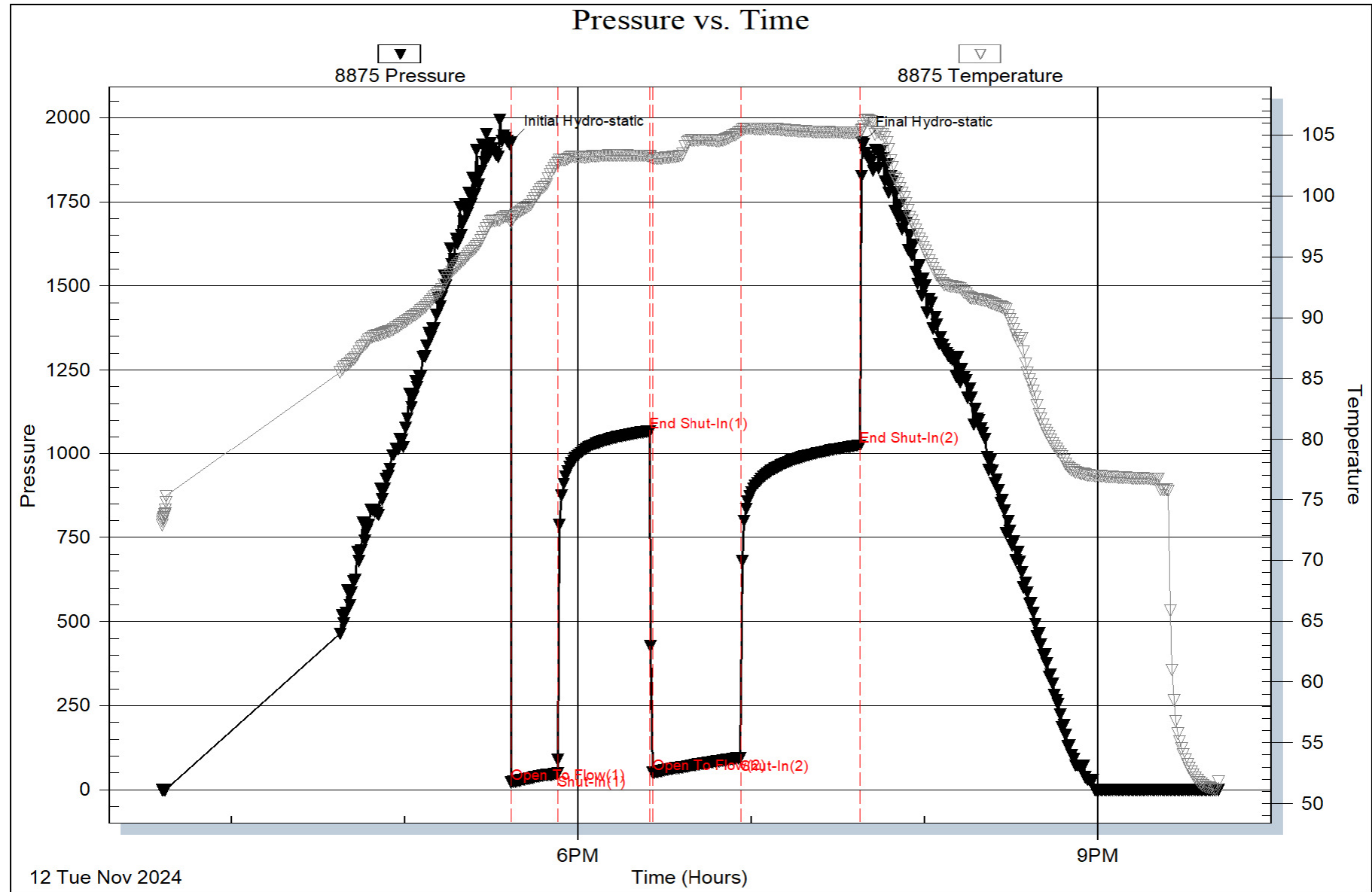
Serial #:

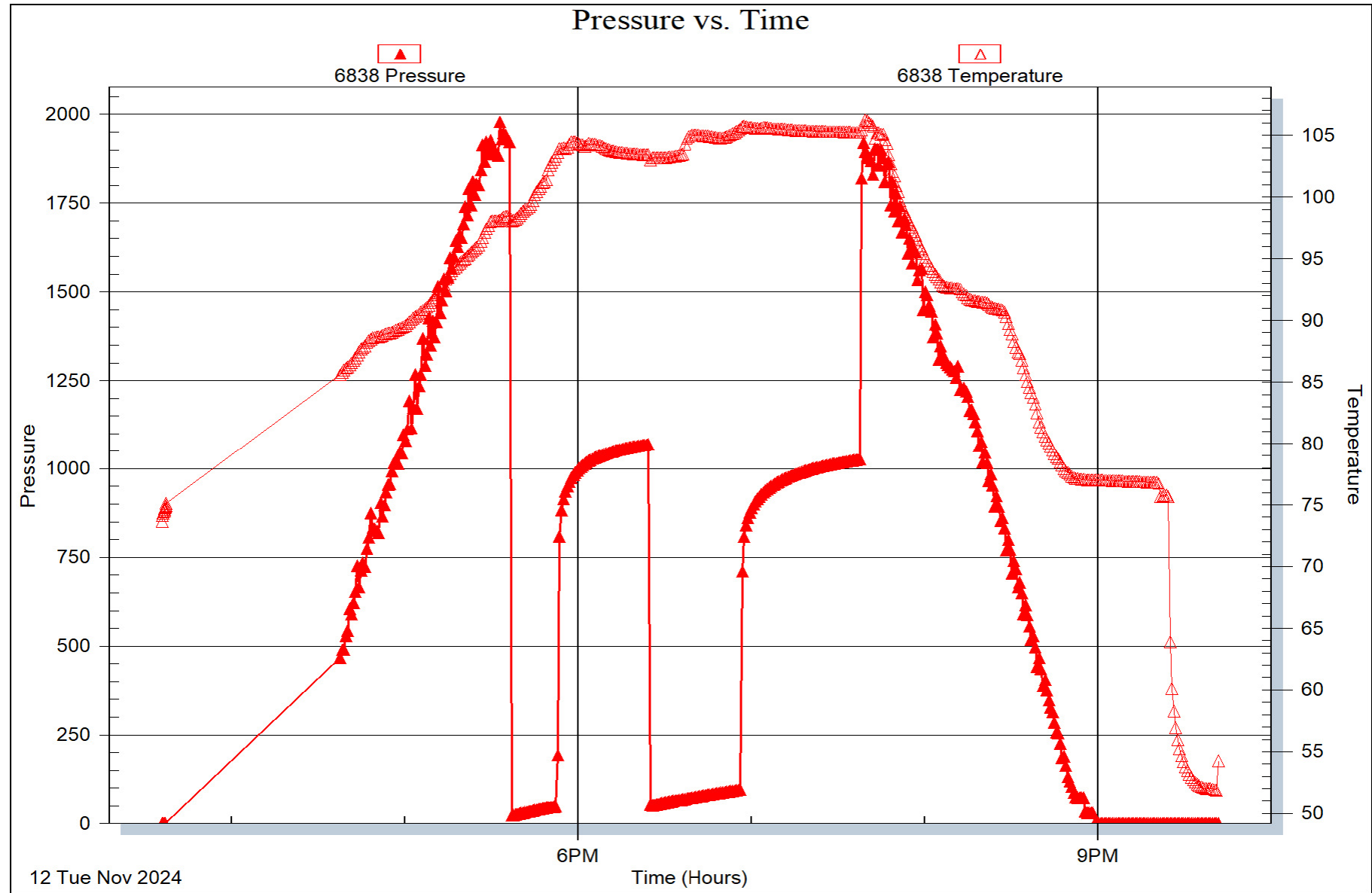
Laboratory Name:

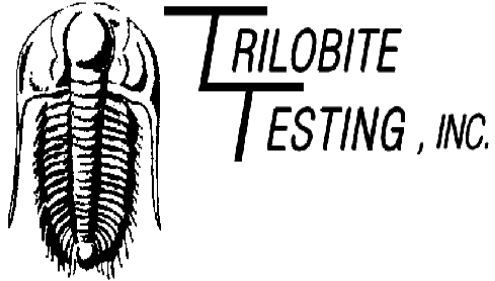
Laboratory Location:

Recovery Comments: 2#LCM

RW=.251@53F







DRILL STEM TEST REPORT

Prepared For: **Shakespeare Oil Company Inc**

202 W Main St
Salem IL 62881+1519

ATTN: Kent Matson

Wells #2-27

27-16S-35W Wichita KS

Start Date: 2024.11.13 @ 13:11:00

End Date: 2024.11.13 @ 18:30:52

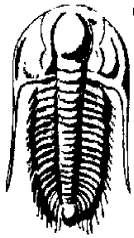
Job Ticket #: 72453 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.11.20 @ 11:12:48



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72453

DST#: 3

ATTN: Kent Matson

Test Start: 2024.11.13 @ 13:11:00

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:57:52

Time Test Ended: 18:30:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 4115.00 ft (KB) To 4135.00 ft (KB) (TVD)

Total Depth: 4135.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8875 Outside

Press@RunDepth: 35.51 psig @ 4116.00 ft (KB)

Start Date: 2024.11.13

End Date:

2024.11.13

Start Time: 13:11:01

End Time:

18:30:52

Capacity: psig

Last Calib.: 2024.11.13

Time On Btm: 2024.11.13 @ 14:57:47

Time Off Btm: 2024.11.13 @ 16:48:37

TEST COMMENT: 15-IF-Surface to 1"
30-ISI-No Return
30-FF-Surface to 1"
30-FSI-No Return

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2009.61	99.28	Initial Hydro-static
1	13.39	98.41	Open To Flow (1)
16	23.45	101.70	Shut-In(1)
50	1073.02	102.67	End Shut-In(1)
50	24.87	102.17	Open To Flow (2)
80	35.51	103.62	Shut-In(2)
111	1042.88	105.42	End Shut-In(2)
111	1939.85	105.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.43

Gas Rates

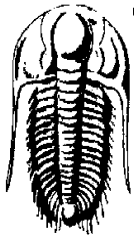
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72453

Printed: 2024.11.20 @ 11:12:48



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72453

DST#: 3

ATTN: Kent Matson

Test Start: 2024.11.13 @ 13:11:00

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:57:52

Time Test Ended: 18:30:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 4115.00 ft (KB) To 4135.00 ft (KB) (TVD)

Total Depth: 4135.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6838 Inside

Press@RunDepth: psig @ 4116.00 ft (KB)

Start Date: 2024.11.13

End Date:

2024.11.13

Start Time: 13:11:01

End Time:

18:30:52

Capacity: psig

Last Calib.:

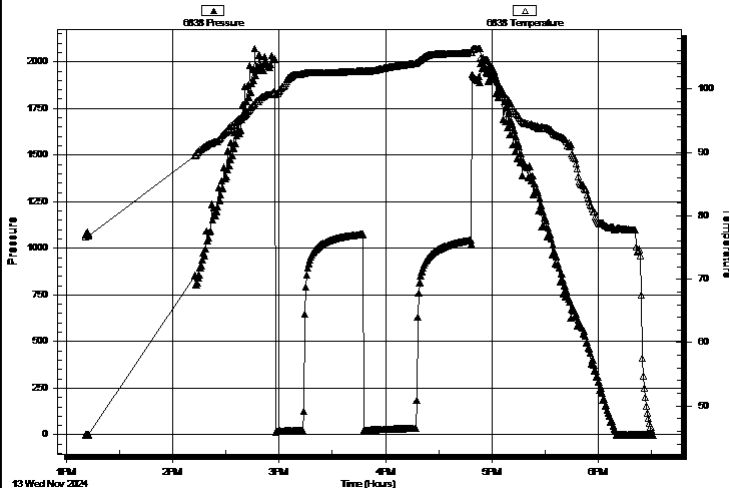
2024.11.13

Time On Btm:

Time Off Btm:

TEST COMMENT: 15-IF-Surface to 1"
30-ISI-No Return
30-FF-Surface to 1"
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.43

Gas Rates

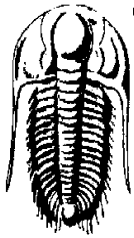
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72453

Printed: 2024.11.20 @ 11:12:48



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72453

DST#: 3

ATTN: Kent Matson

Test Start: 2024.11.13 @ 13:11:00

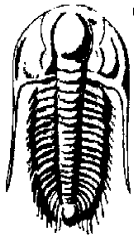
Tool Information

Drill Pipe:	Length: 4116.00 ft	Diameter: 3.82 inches	Volume: 58.35 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	61000.00 lb
		Total Volume:	- bbl	Tool Chased	ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4115.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	20.00 ft				
Tool Length:	52.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4084.00	
Shut In Tool	5.00			4089.00	
Hydraulic tool	5.00			4094.00	
Jars	5.00			4099.00	
Gap Sub	4.00			4103.00	
Safety Joint	3.00			4106.00	
Packer	5.00			4111.00	32.00 Bottom Of Top Packer
Packer	4.00			4115.00	
Stubb	1.00			4116.00	
Recorder	0.00	6838	Inside	4116.00	
Recorder	0.00	8875	Outside	4116.00	
Perforations	16.00			4132.00	
Bullnose	3.00			4135.00	20.00 Bottom Packers & Anchor

Total Tool Length: 52.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72453

DST#: 3

ATTN: Kent Matson

Test Start: 2024.11.13 @ 13:11:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 57.00 sec/qt

Water Loss: 6.79 in³

Resistivity: ohm.m

Salinity: 10500.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%M	0.425

Total Length: 30.00 ft

Total Volume: 0.425 bbl

Num Fluid Samples: 0

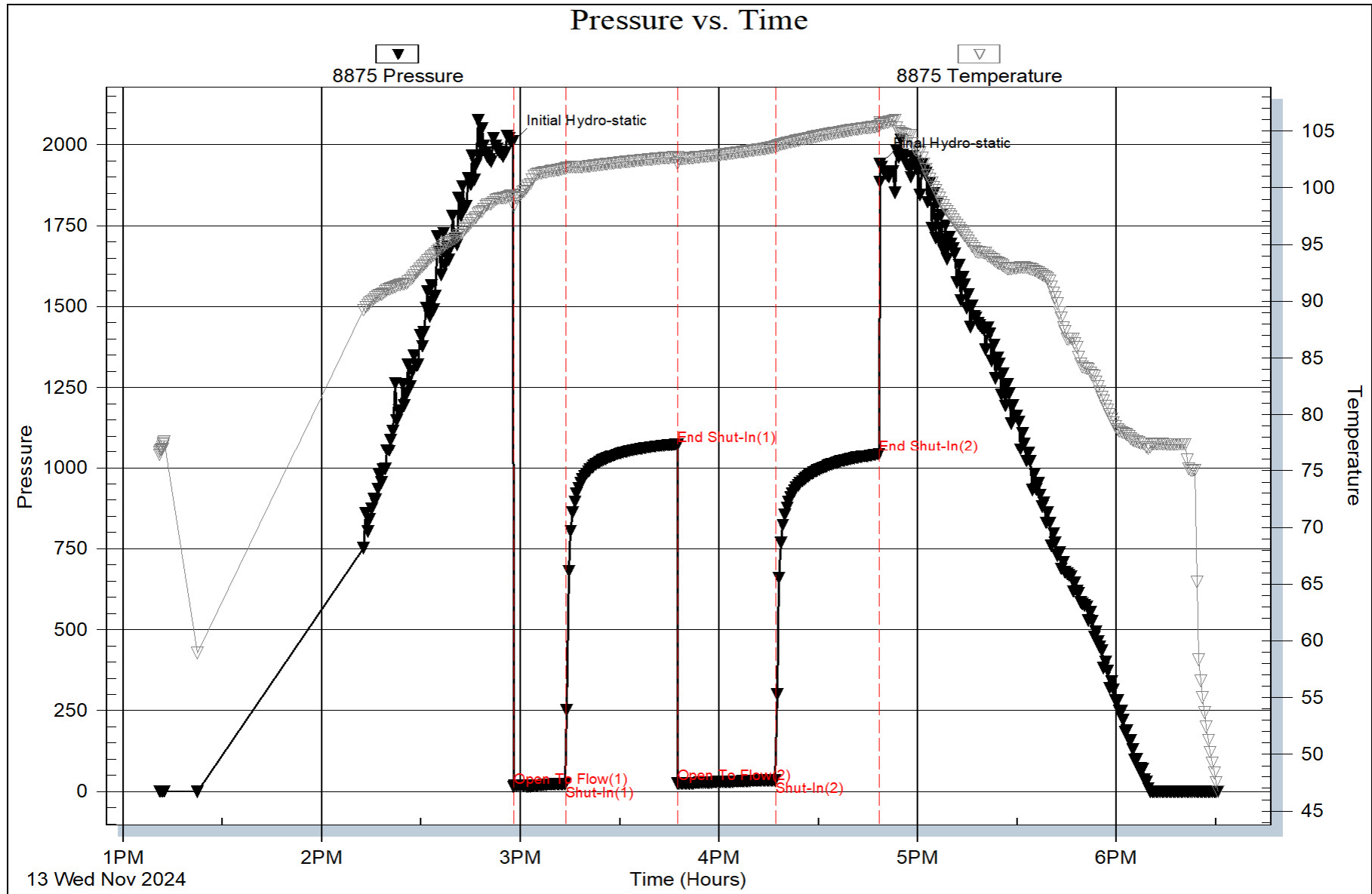
Num Gas Bombs: 0

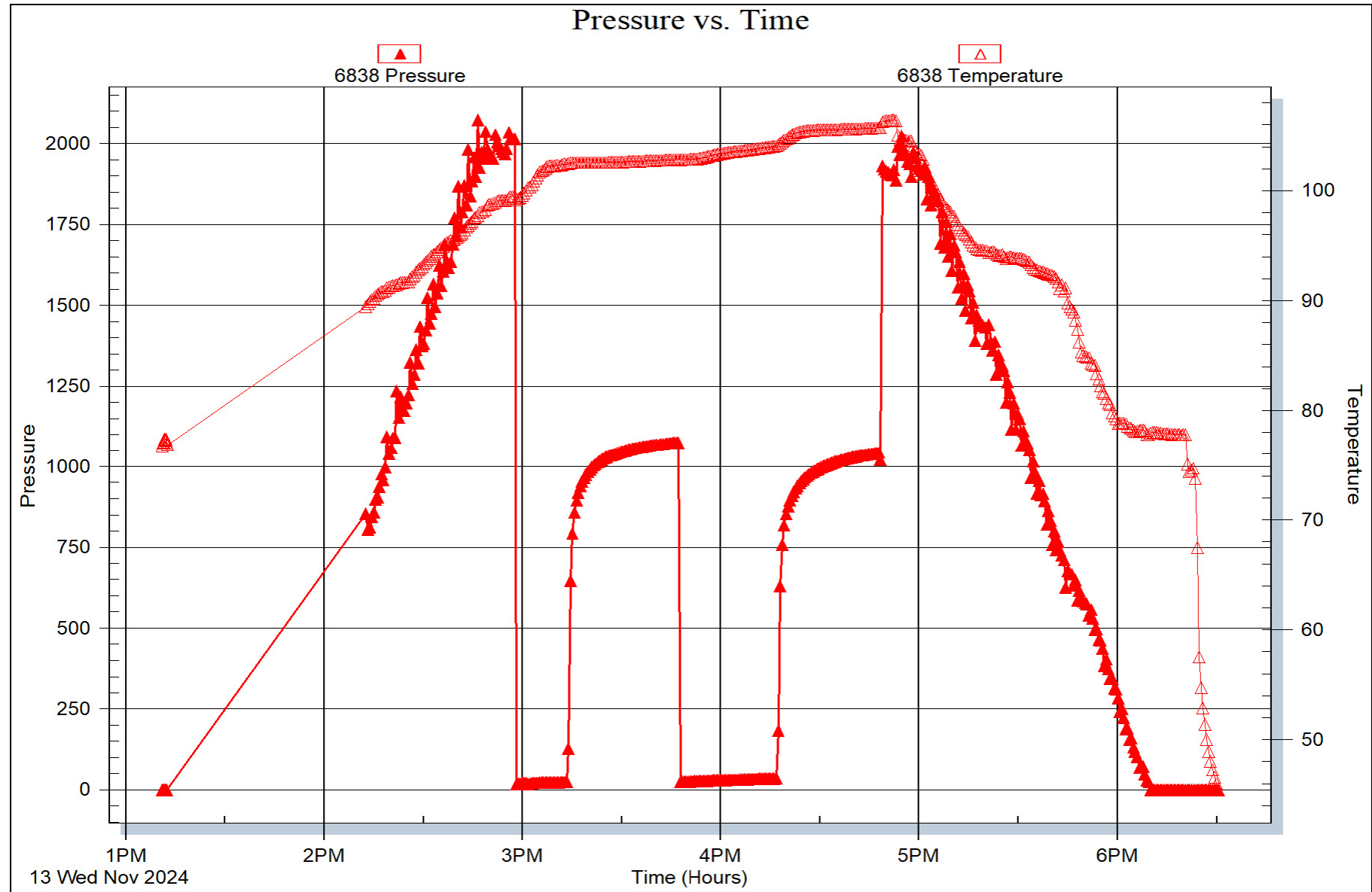
Serial #:

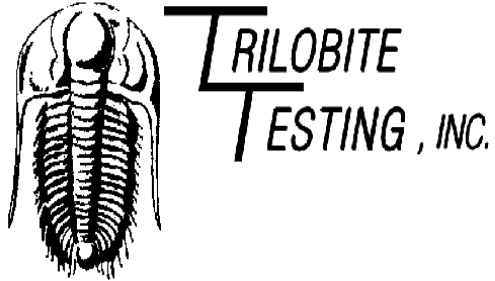
Laboratory Name:

Laboratory Location:

Recovery Comments: 2#LCM







DRILL STEM TEST REPORT

Prepared For: **Shakespeare Oil Company Inc**

202 W Main St
Salem IL 62881+1519

ATTN: Kent Matson

Wells #2-27

27-16S-35W Wichita KS

Start Date: 2024.11.14 @ 12:16:00

End Date: 2024.11.14 @ 18:11:12

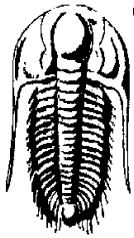
Job Ticket #: 72454 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.11.20 @ 11:12:19



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72454

DST#: 4

ATTN: Kent Matson

Test Start: 2024.11.14 @ 12:16:00

GENERAL INFORMATION:

Formation: **LKC H-I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:21:12

Time Test Ended: 18:11:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 4196.00 ft (KB) To 4260.00 ft (KB) (TVD)

Total Depth: 4260.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8875 Inside

Press@RunDepth: 36.80 psig @ 4199.00 ft (KB)

Start Date: 2024.11.14

End Date:

2024.11.14

Start Time: 12:16:01

End Time:

18:11:11

Capacity: psig

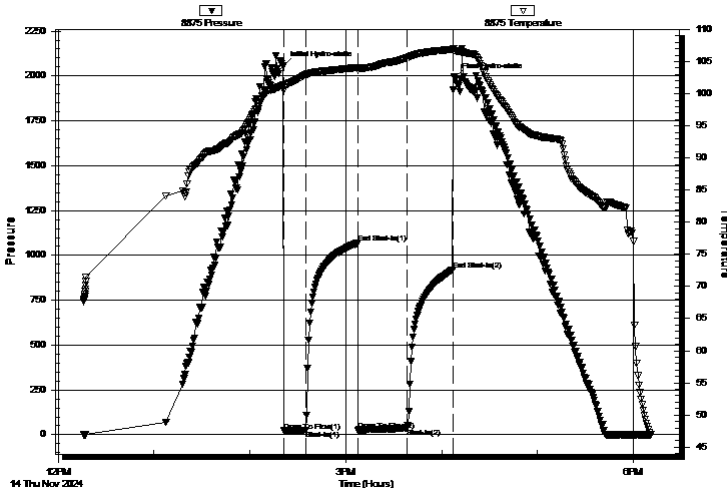
Last Calib.: 2024.11.14

Time On Btm: 2024.11.14 @ 14:21:07

Time Off Btm: 2024.11.14 @ 16:08:07

TEST COMMENT: 15-IF-Surface to 1.5"
30-ISI-No Return
30-FF-Surface to 1.5"
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2055.49	101.33	Initial Hydro-static
1	21.71	100.53	Open To Flow (1)
14	25.34	102.91	Shut-In(1)
47	1067.94	104.07	End Shut-In(1)
47	26.91	103.67	Open To Flow (2)
78	36.80	105.61	Shut-In(2)
106	920.48	106.94	End Shut-In(2)
107	1993.03	106.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.43

Gas Rates

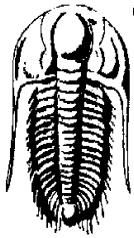
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72454

Printed: 2024.11.20 @ 11:12:19



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72454

DST#: 4

ATTN: Kent Matson

Test Start: 2024.11.14 @ 12:16:00

GENERAL INFORMATION:

Formation: **LKC H-I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:21:12

Time Test Ended: 18:11:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 4196.00 ft (KB) To 4260.00 ft (KB) (TVD)

Total Depth: 4260.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6838 Inside

Press@RunDepth: psig @ 4199.00 ft (KB)

Start Date: 2024.11.14

End Date:

2024.11.14

Start Time: 12:16:01

End Time:

18:11:11

Capacity: psig

Last Calib.:

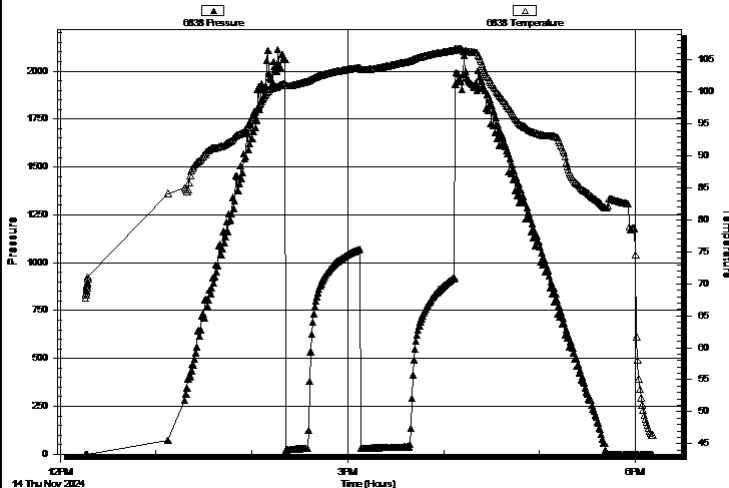
2024.11.14

Time On Btm:

Time Off Btm:

TEST COMMENT: 15-IF-Surface to 1.5"
30-ISI-No Return
30-FF-Surface to 1.5"
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.43

Gas Rates

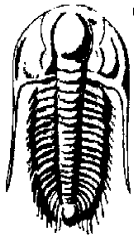
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72454

Printed: 2024.11.20 @ 11:12:19



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72454

DST#: 4

ATTN: Kent Matson

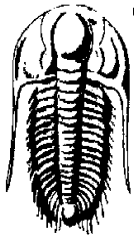
Test Start: 2024.11.14 @ 12:16:00

Tool Information

Drill Pipe:	Length: 4177.00 ft	Diameter: 3.82 inches	Volume: 59.21 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	61000.00 lb
		Total Volume:	- bbl	Tool Chased	ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4196.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	64.00 ft				
Tool Length:	96.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4165.00	
Shut In Tool	5.00			4170.00	
Hydraulic tool	5.00			4175.00	
Jars	5.00			4180.00	
Gap Sub	4.00			4184.00	
Safety Joint	3.00			4187.00	
Packer	5.00			4192.00	32.00 Bottom Of Top Packer
Packer	4.00			4196.00	
Stubb	1.00			4197.00	
Perforations	1.00			4198.00	
Change Over Sub	1.00			4199.00	
Recorder	0.00	6838	Inside	4199.00	
Recorder	0.00	8875	Inside	4199.00	
Drill Pipe	32.00			4231.00	
Change Over Sub	1.00			4232.00	
Perforations	25.00			4257.00	
Bullnose	3.00			4260.00	64.00 Bottom Packers & Anchor
Total Tool Length:	96.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72454

DST#: 4

ATTN: Kent Matson

Test Start: 2024.11.14 @ 12:16:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 11800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%M	0.425

Total Length: 30.00 ft

Total Volume: 0.425 bbl

Num Fluid Samples: 0

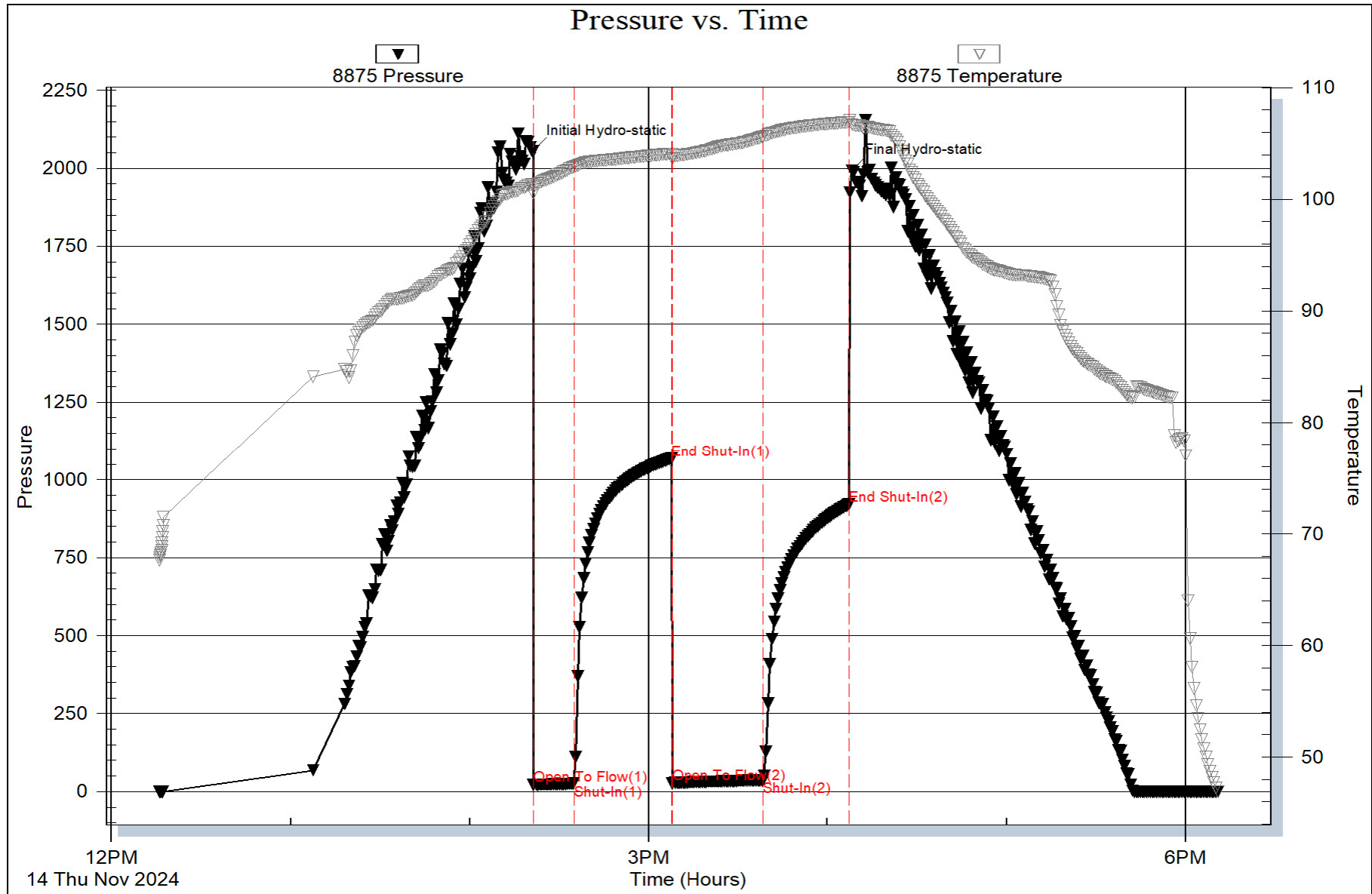
Num Gas Bombs: 0

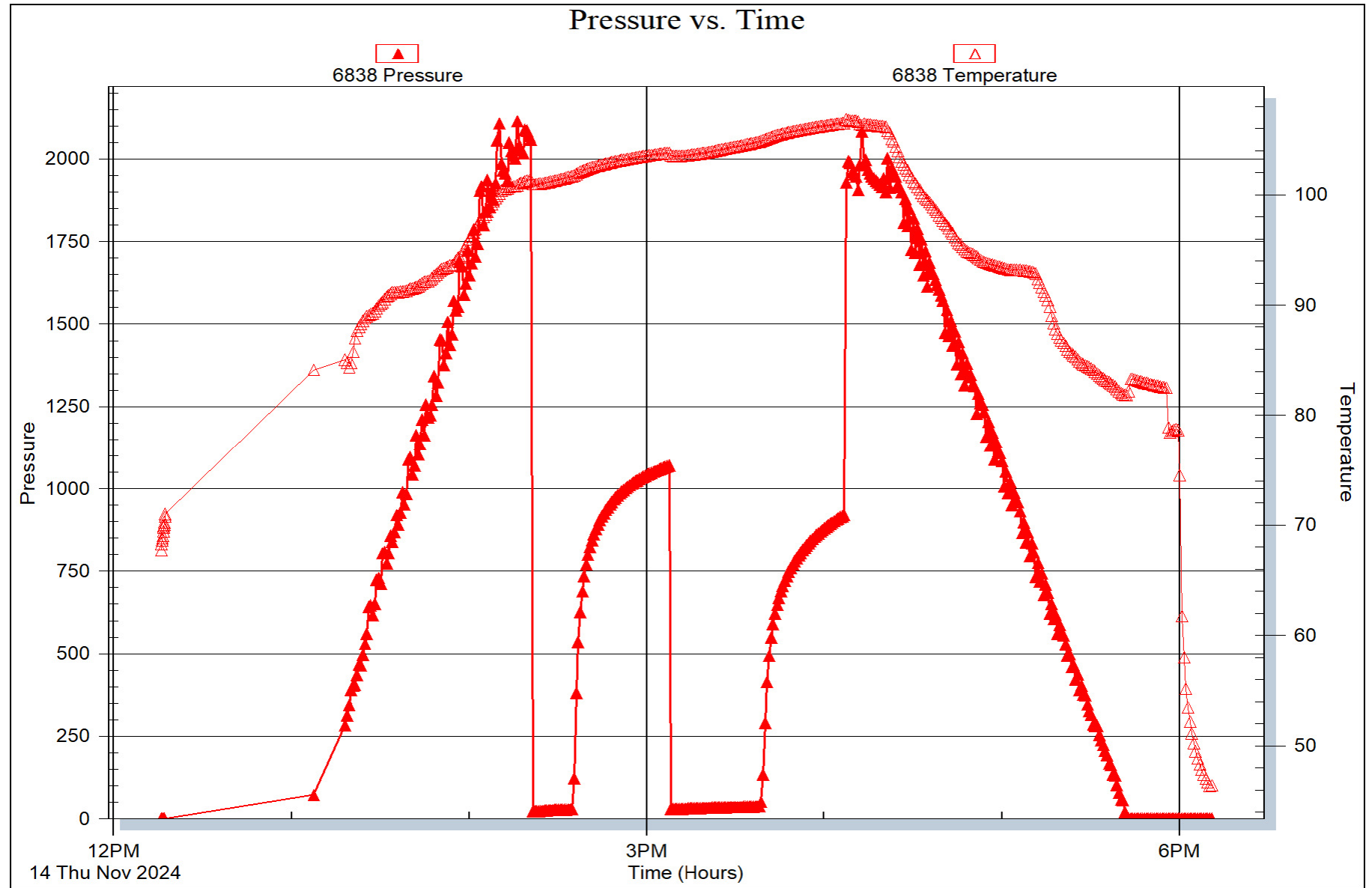
Serial #:

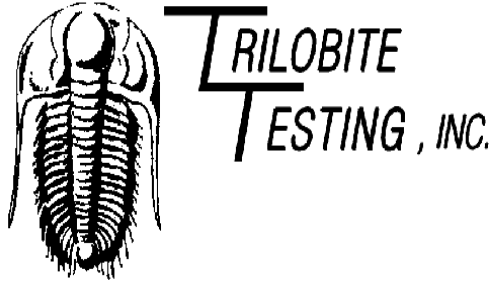
Laboratory Name:

Laboratory Location:

Recovery Comments: 2#LCM







DRILL STEM TEST REPORT

Prepared For: **Shakespeare Oil Company Inc**

202 W Main St
Salem IL 62881+1519

ATTN: Kent Matson

Wells #2-27

27-16S-35W Wichita KS

Start Date: 2024.11.15 @ 04:35:00

End Date: 2024.11.15 @ 11:08:12

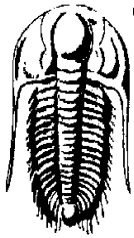
Job Ticket #: 72455 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.11.20 @ 11:11:50



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72455

DST#: 5

ATTN: Kent Matson

Test Start: 2024.11.15 @ 04:35:00

GENERAL INFORMATION:

Formation: **LKC J-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:02:57

Time Test Ended: 11:08:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 4266.00 ft (KB) To 4315.00 ft (KB) (TVD)

Reference Elevations: 3206.00 ft (KB)

Total Depth: 4315.00 ft (KB) (TVD)

3196.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8875 Inside

Press@RunDepth: 97.11 psig @ 4269.00 ft (KB)

Capacity: psig

Start Date: 2024.11.15

End Date:

2024.11.15

Last Calib.: 2024.11.15

Start Time: 04:35:01

End Time:

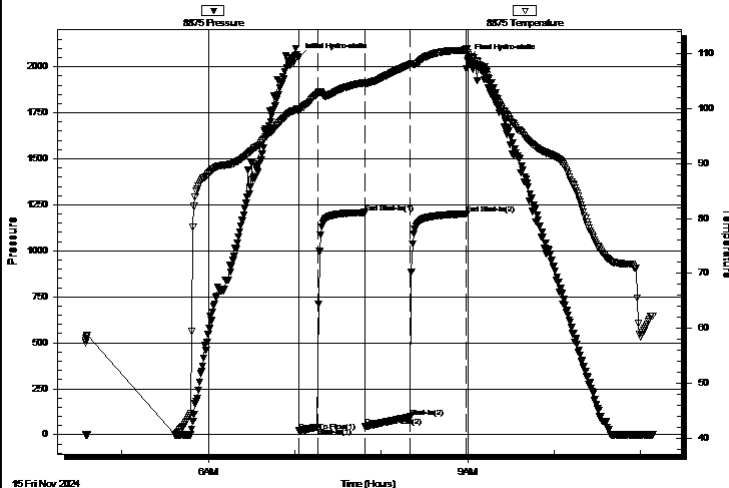
11:08:11

Time On Btm: 2024.11.15 @ 07:02:47

Time Off Btm: 2024.11.15 @ 09:00:22

TEST COMMENT: 15-IF-Surface to 5.25"
30-ISI-Surface Blow
30-FF-Surface to 7.25"
40-FSI-Weak Surface Blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2049.97	99.91	Initial Hydro-static
1	20.97	99.38	Open To Flow (1)
14	42.68	102.61	Shut-In(1)
46	1207.34	104.65	End Shut-In(1)
47	45.66	104.52	Open To Flow (2)
78	97.11	108.00	Shut-In(2)
117	1200.98	110.59	End Shut-In(2)
118	2045.16	109.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	MCW 15%M 85%W	1.42
60.00	SWCM 5%W 95%M	0.85
40.00	VSOCM 1%O 99%M	0.57

Gas Rates

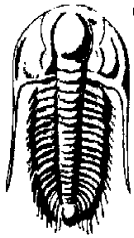
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72455

Printed: 2024.11.20 @ 11:11:50



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72455

DST#: 5

ATTN: Kent Matson

Test Start: 2024.11.15 @ 04:35:00

GENERAL INFORMATION:

Formation: **LKC J-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:02:57

Time Test Ended: 11:08:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 4266.00 ft (KB) To 4315.00 ft (KB) (TVD)

Total Depth: 4315.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6838 Inside

Press@RunDepth: psig @ 4269.00 ft (KB)

Start Date: 2024.11.15

End Date:

2024.11.15

Start Time: 04:35:01

End Time:

11:08:11

Capacity: psig

Last Calib.:

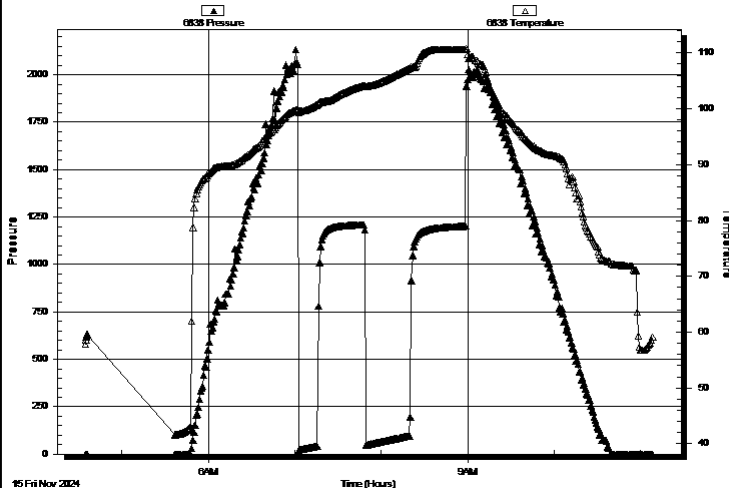
2024.11.15

Time On Btm:

Time Off Btm:

TEST COMMENT: 15-IF-Surface to 5.25"
30-ISI-Surface Blow
30-FF-Surface to 7.25"
40-FSI-Weak Surface Blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
100.00	MCW 15%M 85%W	1.42
60.00	SWCM 5%W 95%M	0.85
40.00	VSOCM 1%O 99%M	0.57

Gas Rates

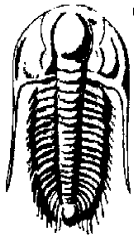
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72455

Printed: 2024.11.20 @ 11:11:50



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72455

DST#: 5

ATTN: Kent Matson

Test Start: 2024.11.15 @ 04:35:00

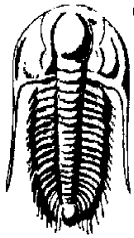
Tool Information

Drill Pipe:	Length: 4244.00 ft	Diameter: 3.82 inches	Volume: 60.16 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	62000.00 lb
		Total Volume:	- bbl	Tool Chased	ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4266.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	49.00 ft				
Tool Length:	81.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			4235.00	
Shut In Tool	5.00			4240.00	
Hydraulic tool	5.00			4245.00	
Jars	5.00			4250.00	
Gap Sub	4.00			4254.00	
Safety Joint	3.00			4257.00	
Packer	5.00			4262.00	32.00 Bottom Of Top Packer
Packer	4.00			4266.00	
Stubb	1.00			4267.00	
Perforations	1.00			4268.00	
Change Over Sub	1.00			4269.00	
Recorder	0.00	6838	Inside	4269.00	
Recorder	0.00	8875	Inside	4269.00	
Drill Pipe	32.00			4301.00	
Change Over Sub	1.00			4302.00	
Perforations	10.00			4312.00	
Bullnose	3.00			4315.00	49.00 Bottom Packers & Anchor
Total Tool Length:	81.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72455

DST#: 5

ATTN: Kent Matson

Test Start: 2024.11.15 @ 04:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 58.00 sec/qt

Water Loss: 9.99 in³

Resistivity: ohm.m

Salinity: 11800.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity: 39000 ppm

deg API

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	MCW 15%M 85%W	1.418
60.00	SWCM 5%W 95%M	0.851
40.00	VSOCM 1%O 99%M	0.567

Total Length: 200.00 ft

Total Volume: 2.836 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

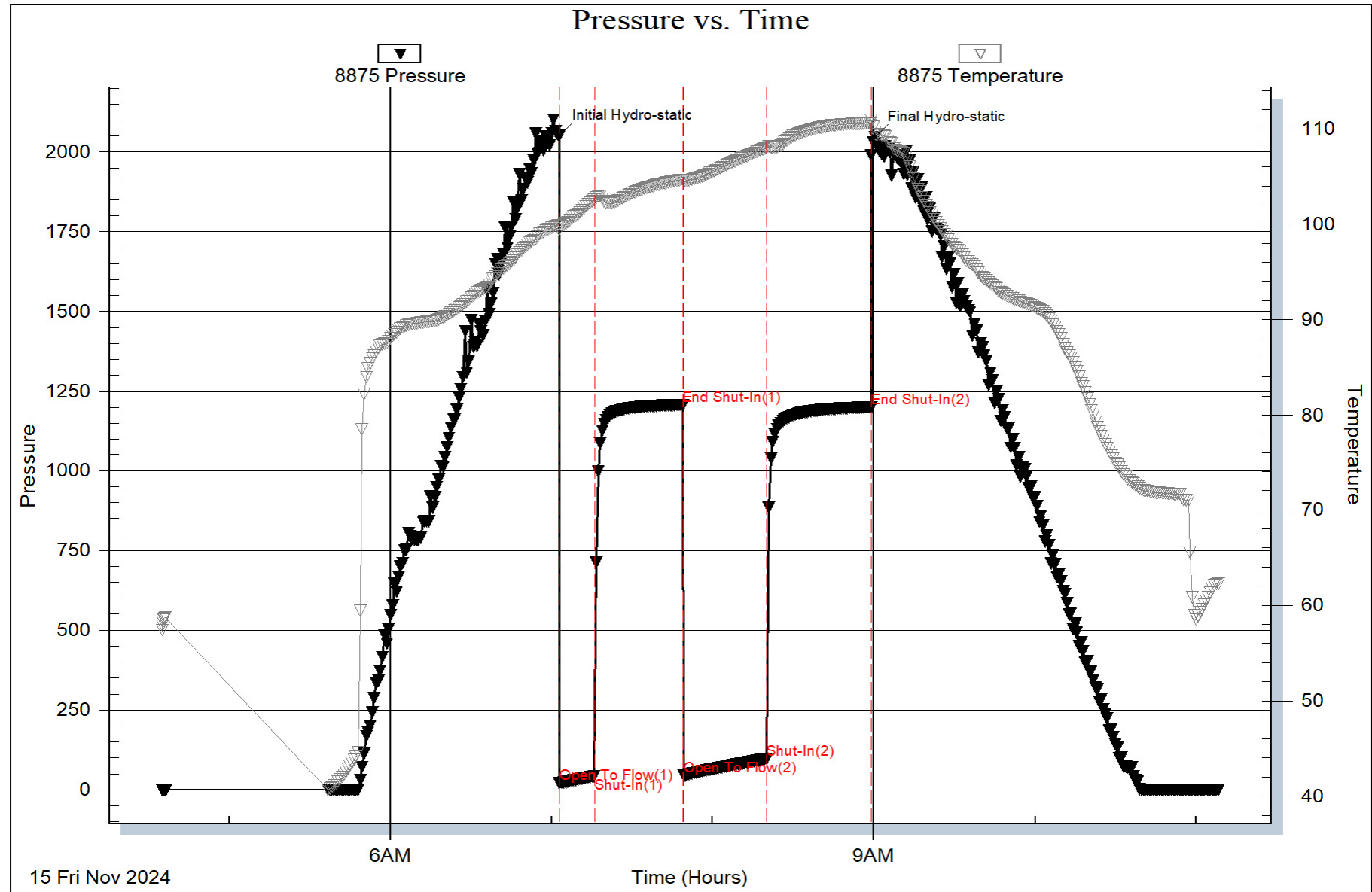
Serial #:

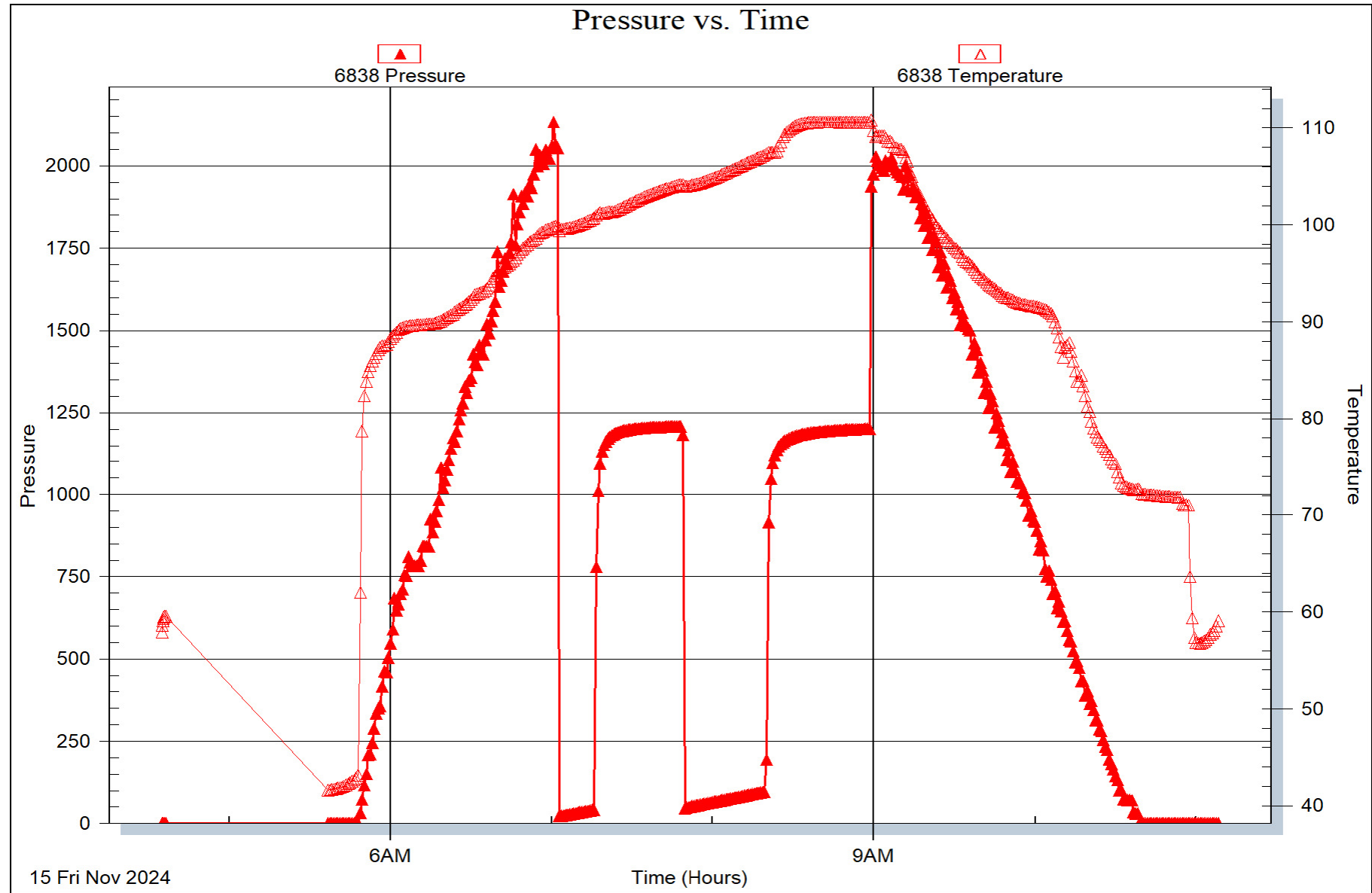
Laboratory Name:

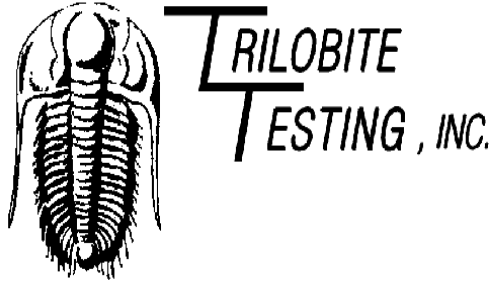
Laboratory Location:

Recovery Comments: 2#LCM

RW=.239@55F







DRILL STEM TEST REPORT

Prepared For: **Shakespeare Oil Company Inc**

202 W Main St
Salem IL 62881+1519

ATTN: Kent Matson

Wells #2-27

27-16S-35W Wichita KS

Start Date: 2024.11.16 @ 14:08:00

End Date: 2024.11.16 @ 20:27:52

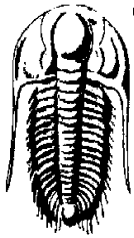
Job Ticket #: 72456 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2024.11.20 @ 11:07:50



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72456

DST#: 6

ATTN: Kent Matson

Test Start: 2024.11.16 @ 14:08:00

GENERAL INFORMATION:

Formation: **Marmaton A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:23:02

Time Test Ended: 20:27:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: **4444.00 ft (KB) To 4510.00 ft (KB) (TVD)**

Total Depth: 4510.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8875 Inside

Press@RunDepth: 30.27 psig @ 4448.00 ft (KB)

Start Date: 2024.11.16

End Date:

2024.11.16

Start Time: 14:08:01

End Time:

20:27:52

Capacity: psig

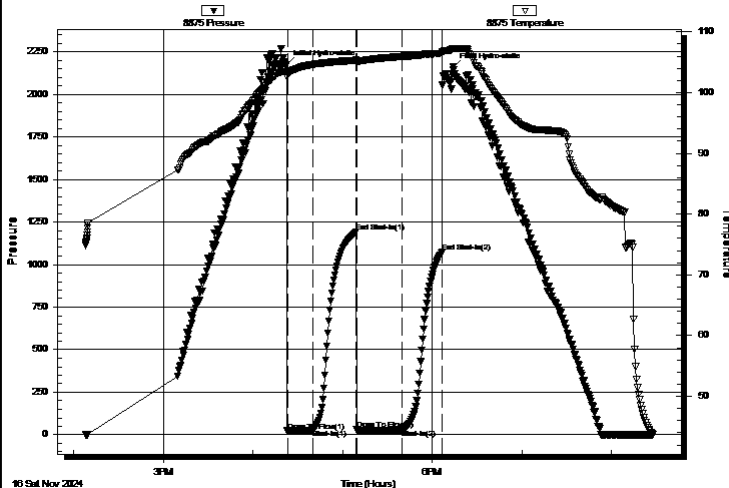
Last Calib.: 2024.11.16

Time On Btm: 2024.11.16 @ 16:22:47

Time Off Btm: 2024.11.16 @ 18:13:47

TEST COMMENT: 15-IF-Surface to 1"
30-ISI-No Return
30-FF-Surface to 2.25"
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2171.84	103.47	Initial Hydro-static
1	22.84	103.16	Open To Flow (1)
18	29.76	104.62	Shut-In(1)
47	1191.12	105.31	End Shut-In(1)
47	29.84	105.13	Open To Flow (2)
77	30.27	105.96	Shut-In(2)
104	1072.22	106.51	End Shut-In(2)
111	2158.69	107.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	GMCO 10%G 15%M 75%O	0.21
15.00	GO 10%G 90%O	0.21
0.00	30 GIP 100%G	0.00

Gas Rates

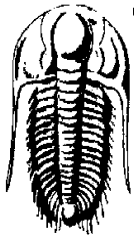
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72456

Printed: 2024.11.20 @ 11:07:50



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72456

DST#: 6

ATTN: Kent Matson

Test Start: 2024.11.16 @ 14:08:00

GENERAL INFORMATION:

Formation: **Marmaton A-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:23:02

Time Test Ended: 20:27:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J Staab

Unit No: 75

Interval: 4444.00 ft (KB) To 4510.00 ft (KB) (TVD)

Total Depth: 4510.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3206.00 ft (KB)

3196.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6838 Inside

Press@RunDepth: psig @ 4448.00 ft (KB)

Start Date: 2024.11.16

End Date:

2024.11.16

Start Time: 14:08:01

End Time:

20:27:52

Capacity: psig

Last Calib.:

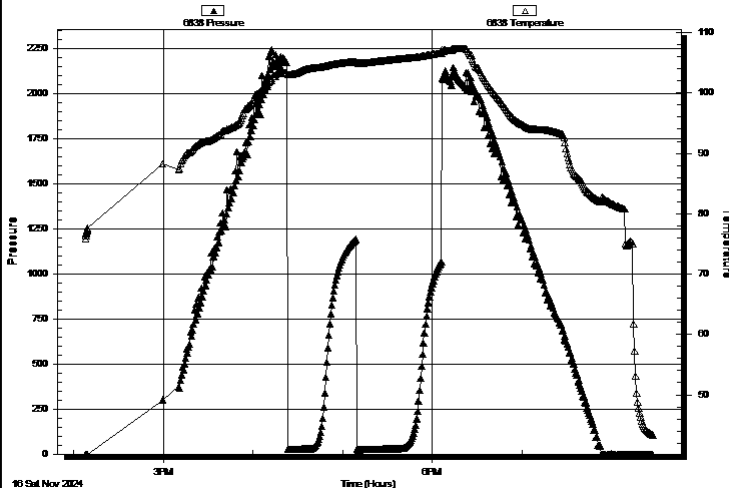
2024.11.16

Time On Btm:

Time Off Btm:

TEST COMMENT: 15-IF-Surface to 1"
30-ISI-No Return
30-FF-Surface to 2.25"
30-FSI-No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
-------------	-----------------	--------------	------------

Recovery

Length (ft)	Description	Volume (bbl)
15.00	GMCO 10%G 15%M 75%O	0.21
15.00	GO 10%G 90%O	0.21
0.00	30 GIP 100%G	0.00

Gas Rates

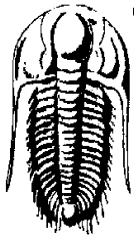
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests

Trilobite Testing, Inc

Ref. No: 72456

Printed: 2024.11.20 @ 11:07:50



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72456

DST#: 6

ATTN: Kent Matson

Test Start: 2024.11.16 @ 14:08:00

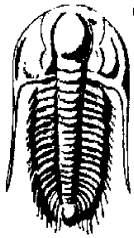
Tool Information

Drill Pipe:	Length: 4432.00 ft	Diameter: 3.82 inches	Volume: 62.83 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	65000.00 lb
		Total Volume:	- bbl	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	63000.00 lb
Depth to Top Packer:	4444.00 ft			Final	63000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	66.00 ft				
Tool Length:	98.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			4413.00	
Shut In Tool	5.00			4418.00	
Hydraulic tool	5.00			4423.00	
Jars	5.00			4428.00	
Gap Sub	4.00			4432.00	
Safety Joint	3.00			4435.00	
Packer	5.00			4440.00	32.00 Bottom Of Top Packer
Packer	4.00			4444.00	
Stubb	1.00			4445.00	
Perforations	2.00			4447.00	
Change Over Sub	1.00			4448.00	
Recorder	0.00	6838	Inside	4448.00	
Recorder	0.00	8875	Inside	4448.00	
Drill Pipe	32.00			4480.00	
Change Over Sub	1.00			4481.00	
Perforations	26.00			4507.00	
Bullnose	3.00			4510.00	66.00 Bottom Packers & Anchor
Total Tool Length:	98.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Company Inc

27-16S-35W Wichita KS

202 W Main St
Salem IL 62881+1519

Wells #2-27

Job Ticket: 72456

DST#: 6

ATTN: Kent Matson

Test Start: 2024.11.16 @ 14:08:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 63.00 sec/qt

Water Loss: 7.99 in³

Resistivity: ohm.m

Salinity: 10000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

24 deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	GMCO 10%G 15%M 75%O	0.213
15.00	GO 10%G 90%O	0.213
0.00	30 GIP 100%G	0.000

Total Length: 30.00 ft

Total Volume: 0.426 bbl

Num Fluid Samples: 0

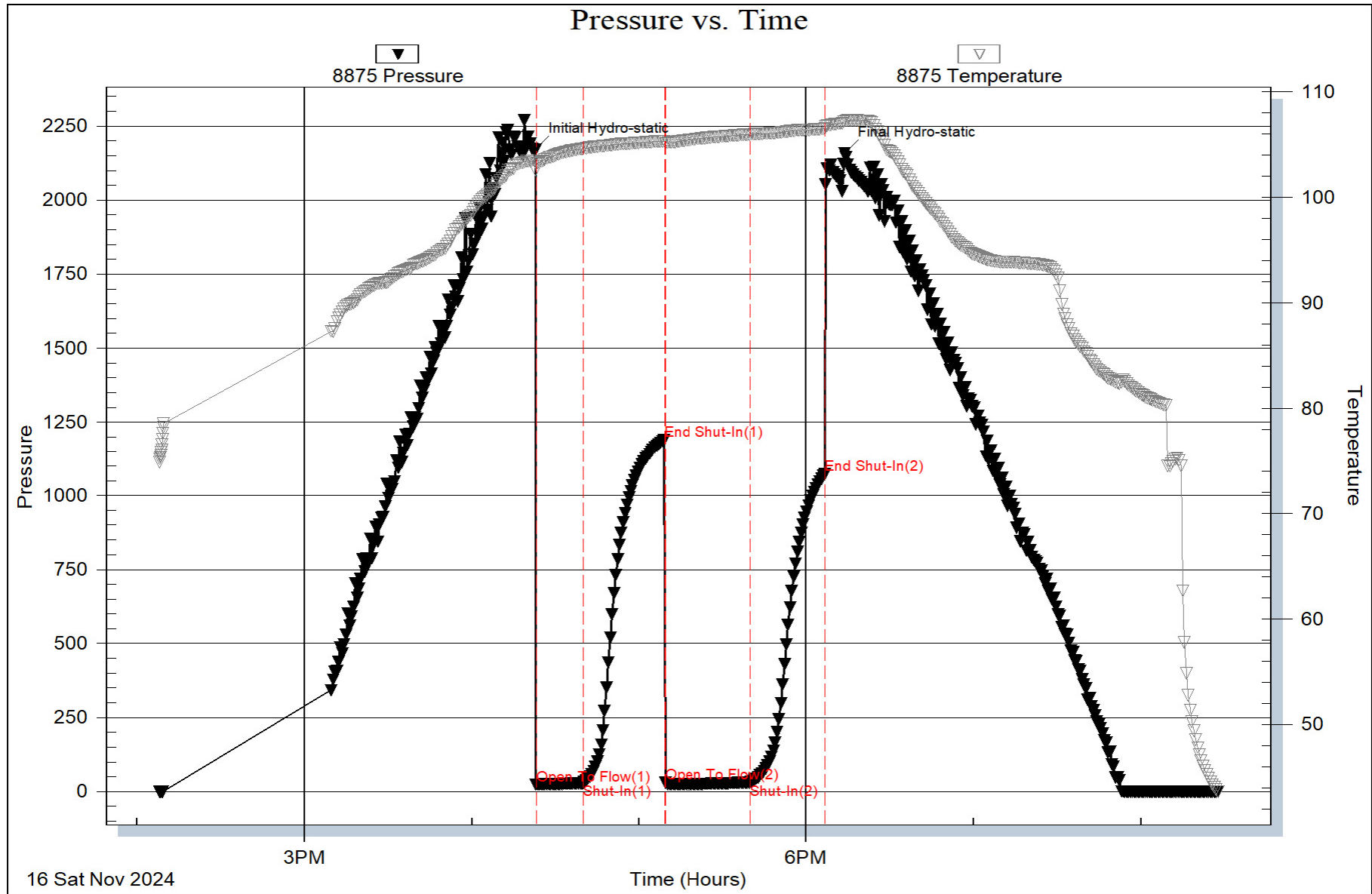
Num Gas Bombs: 0

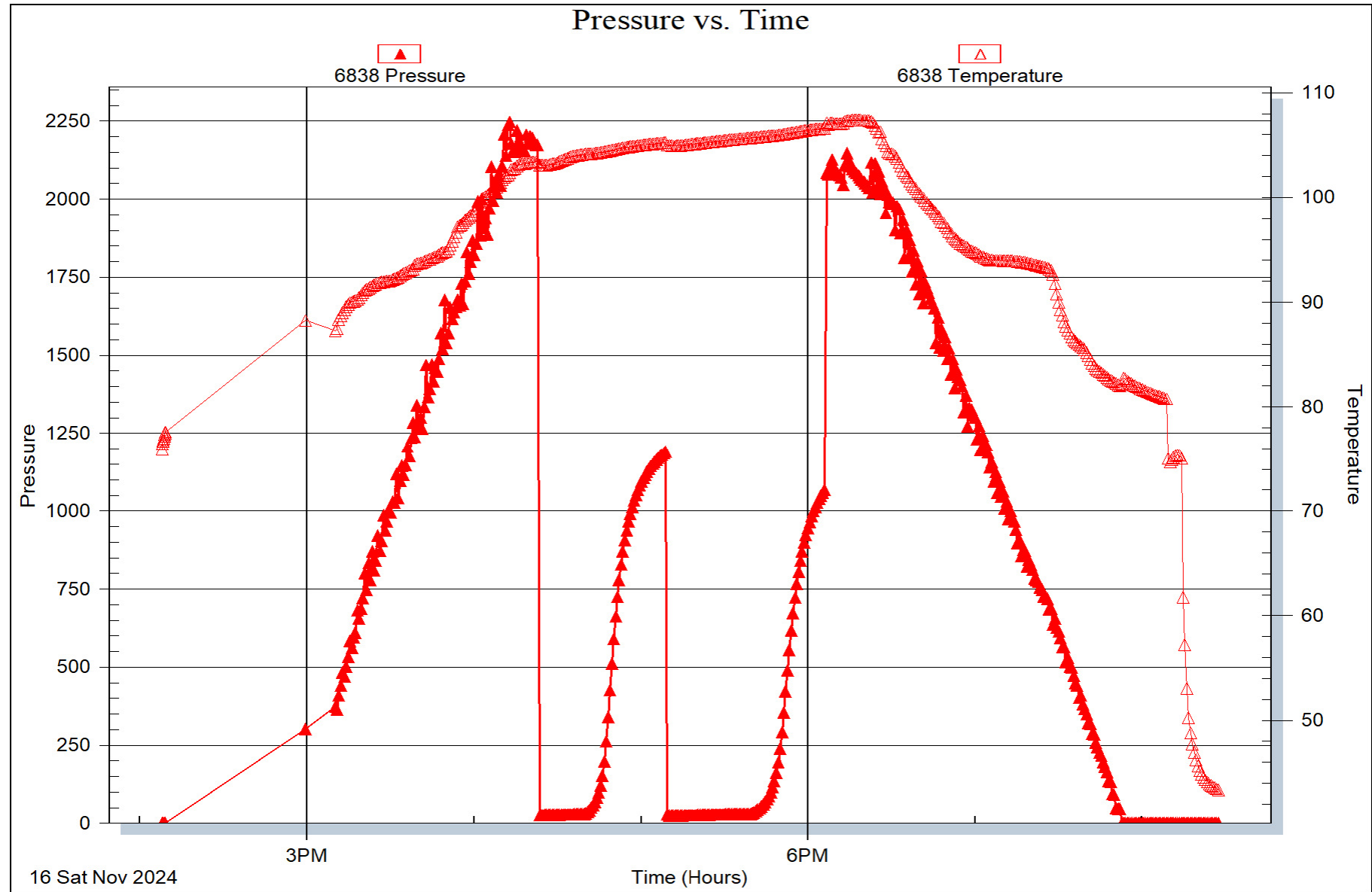
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2#LCM







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 72451

Well Name & No. Wells #2-27 Test No. 1 Date 11/11/2024
 Company Shakespeare Oil Company Inc Elevation 3206 KB 3196 GL
 Address 202 W Main St Salem IL 62881+1519
 Co. Rep / Geo Kent Matson Rig Duke #4
 Location: Sec. 27 Twp 16S Rge. 35W Co. Wichita State KS

Interval Tested 3864' - 3940' Zone Tested Decompton to Oread
 Anchor Length 76' Drill Pipe Run 3864' Mud Wt. 8.8
 Top Packer Depth 3859' Drill Collars Run - Vis 56
 Bottom Packer Depth 3864' Wt. Pipe Run - WL 5.8
 Total Depth 3940' Chlorides 8200 ppm System LCM 2#

Blow Description D7-Surface to 4.75
QSD-No Return
77-Surface to 6.25"
7SD-No Return

Rec <u>80'</u>	Feet of <u>Oil Spotted Mud</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 80' BHT 102° Gravity - API RW - @ - °F Chlorides - ppm

Initial Hydrostatic 1851 ☒ Test 1800 ☐ Ruined Shale Packer
 Initial Flow 16 to 40 ☒ Jars 300 ☐ Ruined Packer
 Initial Shut-In 1074 ☐ Circ Sub ☒ Hotel
 Final Flow 42 to 77 ☐ Hourly Standby ☒ EM Tool Successful
 Final Shut-In 1046 ☒ Mileage 5627 98 ☐ Accessibility
 Final Hydrostatic 1840 ☐ Sampler ☐ Gas Sample

T- On Location 18:12 ☐ Straddle ☐ Oversized Hole
 Initial Flow 15 T-Started 18:55 ☐ Shale Packer ☐ Sub Total 0
 Initial Shut-In 30 T-Open 21:20 ☐ Extra Packer ☐ Total 2198
 Final Flow 30 T-Pulled 23:05 ☐ Extra Recorder ☐ Tool Loaded @
 Final Shut-In 30 T-Out 06:17 ☐ Day Standby ☐ MP/DST Disc't

Comments mileage from Scott City shops

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damage of any kind of property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



**TRILOBITE
TESTING INC.**

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **72452**

Well Name & No. Wells #2-27 Test No. 2 Date 11/12/2024
 Company Shakespeare Oil Company Inc Elevation 3206 KB 3196 GL
 Address 202 W Main St Salem IL 62881 +1519
 Co. Rep / Geo Kend Matson Rig Duke #4
 Location: Sec. 27 Twp 16S Rge. 35W Co. Wichita State KS

Interval Tested 3984' - 4050' Zone Tested Toronto - LKC 'a'
 Anchor Length 66' Drill Pipe Run 3961' Mud Wt. 9.0
 Top Packer Depth 3979' Drill Collars Run — Vis 54
 Bottom Packer Depth 3984' Wt. Pipe Run — WL 10.0
 Total Depth 4050' Chlorides 9100 ppm System LCM 2H

Blow Description 57- Surface to 5.75"
58- No Return
77- Surface to 8"
78- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>70'</u>	<u>WCM</u>		<u>15</u>	<u>85</u>	
<u>60'</u>	<u>SWCM</u>		<u>5</u>	<u>95</u>	
<u>40'</u>	<u>Mud w/oil spots (heavy)</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 170' BHT 105° Gravity — API RW 251 @ 53 °F Chlorides 41,000 ppm
 Initial Hydrostatic 1926 ☒ Test 1950 ☐ Ruined Shale Packer
 Initial Flow 21 to 48 ☒ Jars 300 ☐ Ruined Packer
 Initial Shut-In 1067 ☐ Circ Sub ☒ Hotel
 Final Flow 50 to 94 ☐ Hourly Standby ☒ EM Tool Successful
 Final Shut-In 1025 ☒ Mileage 5627 98 ☐ Accessibility
 Final Hydrostatic 1925 ☐ Sampler ☐ Gas Sample

T- On Location 14:40 ☐ Straddle ☐ Oversized Hole
 Initial Flow 15 T-Started 15:36 ☐ Shale Packer ☐ Sub Total 0
 Initial Shut-In 30 T-Open 17:38 ☐ Extra Packer ☐ Total 2348
 Final Flow 30 T-Pulled 19:33 ☐ Extra Recorder ☐ Tool Loaded @
 Final Shut-In 40 T-Out 21:41 ☐ Day Standby ☐ MP/DST Disc't

Comments _____

Approved By _____ Our Representative [Signature]



**TRILOBITE
TESTING INC.**

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **72453**

Well Name & No. Wells #2-27 Test No. 3 Date 11/13/2024
 Company Shakespeare Oil Company Inc Elevation 3206 KB 3196 GL
 Address 202 W Main St Salina OK 62881 +1579
 Co. Rep / Geo Kent Matson Rig Dynke #4
 Location: Sec. 27 Twp 16S Rge. 35W Co. Wichita State KS

Interval Tested 4115' - 4135' Zone Tested LKC D
 Anchor Length 20' Drill Pipe Run 4116' Mud Wt. 9.05
 Top Packer Depth 4110' Drill Collars Run - Vis 57
 Bottom Packer Depth 4115' Wt. Pipe Run - WL 6.8
 Total Depth 4135' Chlorides 10,500 ppm System LCM 2H

Blow Description 27- Surface to 1"
JSJ - No Return
77- Surface to 1"
75J - No Return

Rec	Feet of	%gas	%oil	%water	%mud
30	Mud			100%	

Rec Total 30' BHT 105° Gravity - API RW - @ - °F Chlorides - ppm

Initial Hydrostatic 2009 ☒ Test 1950 ☐ Ruined Shale Packer
 Initial Flow 13 to 23 ☒ Jars 300 ☐ Ruined Packer
 Initial Shut-In 1073 ☐ Circ Sub ☒ Hotel
 Final Flow 24 to 35 ☐ Hourly Standby ☒ EM Tool Successful
 Final Shut-In 1042 ☒ Mileage 5627 98 ☐ Accessibility
 Final Hydrostatic 1939 ☐ Sampler ☐ Gas Sample

T- On Location 12:38 ☐ Straddle ☐ Oversized Hole
 Initial Flow 15 T-Started 13:11 ☐ Shale Packer ☐ Sub Total 0
 Initial Shut-In 30 T-Open 14:58 ☐ Extra Packer ☐ Total 2348
 Final Flow 30 T-Pulled 16:43 ☐ Extra Recorder ☐ Tool Loaded @
 Final Shut-In 30 T-Out 18:30 ☐ Day Standby ☐ MP/DST Disc't

Comments _____

Approved By _____ Our Representative [Signature]



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 72454

Well Name & No. Wells #2-27 Test No. 4 Date 11/14/2024
Company Shakespeare Oil Company Inc Elevation 3206' KB 3196' GL
Address 202 W Main St Salem MO 62881+1519
Co. Rep / Geo Kent Matson Rig Duke #4
Location: Sec. 27 Twp 16S Rge. 35W Co. Wichita State KS

Interval Tested 4196' - 4260' Zone Tested LKC 2H - J
Anchor Length 64' Drill Pipe Run 4177 Mud Wt. 9.15
Top Packer Depth 4191' Drill Collars Run - Vis 58
Bottom Packer Depth 4196' Wt. Pipe Run - WL 10.0
Total Depth 4260' Chlorides 11,800 ppm System LCM 2H

Blow Description 17- Surface to 1.5"
150- No Return
77- Surface to 1.5"
75- No Return

Rec <u>30'</u>	Feet of <u>Mud</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30' BHT 106° Gravity - API RW - @ - °F Chlorides - ppm

Initial Hydrostatic 2055 ☒ Test 1950 ☐ Ruined Shale Packer
Initial Flow 21 to 25 ☒ Jars 300 ☐ Ruined Packer
Initial Shut-In 1067 ☐ Circ Sub ☒ Hotel
Final Flow 26 to 36 ☐ Hourly Standby ☐ EM Tool Successful -175
Final Shut-In 920 ☒ Mileage 3627 98 ☐ Accessibility
Final Hydrostatic 1993 ☐ Sampler ☐ Gas Sample

T- On Location 11:33 ☐ Straddle ☐ Oversized Hole
Initial Flow 15 T-Started 12:16 ☐ Shale Packer ☐ Sub Total -175
Initial Shut-In 30 T-Open 14:20 ☐ Extra Packer ☐ Total 2173
Final Flow 30 T-Pulled 16:05 ☐ Extra Recorder ☐ Tool Loaded @
Final Shut-In 30 T-Out 18:11 ☐ Day Standby ☐ MP/DST Disc't

Comments

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 72455

Well Name & No. Wells #2-27 Test No. 5 Date 11/15/2024
 Company Shakespeare Oil Company, Inc Elevation 3206 KB 3196 GL
 Address 202 W Main St Salem IL 62881 +1519
 Co. Rep / Geo Kent Matson Rig Duke #4
 Location: Sec. 27 Twp 16S Rge. 35W Co. Wichita State KS

Interval Tested 4266' - 4315' Zone Tested LKC J-K
 Anchor Length 49' Drill Pipe Run 4244' Mud Wt. 9.15
 Top Packer Depth 4261' Drill Collars Run - Vis 58
 Bottom Packer Depth 4266' Wt. Pipe Run - WL 10.0
 Total Depth 4315' Chlorides 11800 ppm System LCM 2H

Blow Description 7' - Surface to 5.25"

1SD - Surface Blow

7'7" - Surface to 7.25"

7SD - Weak Surface Blow

Rec 100' Feet of MCW %gas %oil 85 %water 15 %mud

Rec 60' Feet of SWCM %gas %oil 5 %water 9.5 %mud

Rec 40' Feet of VSOCM %gas 1 %oil %water 99 %mud

Rec _____ Feet of _____ %gas %oil %water %mud

Rec _____ Feet of _____ %gas %oil %water %mud

Rec _____ Feet of _____ %gas %oil %water %mud

Rec _____ Feet of _____ %gas %oil %water %mud

Rec Total 200' BHT 110° Gravity - API RW 239 @ 55 °F Chlorides 39000 ppm

Initial Hydrostatic 2049 ☒ Test 1950 ☐ Ruined Shale Packer

Initial Flow 20 to 42 ☒ Jars 300 ☐ Ruined Packer

Initial Shut-In 1207 ☐ Circ Sub ☒ Hotel

Final Flow 45 to 97 ☐ Hourly Standby ☐ EM Tool Successful -350

Final Shut-In 1200 ☒ Mileage 56R7 98 ☐ Accessibility

Final Hydrostatic 2045 ☐ Sampler ☐ Gas Sample

T- On Location 04:01 ☐ Straddle ☐ Oversized Hole

Initial Flow 15 T-Started 04:35 ☐ Shale Packer ☐ Sub Total -350

Initial Shut-In 30 T-Open 07:00 ☐ Extra Packer ☐ Total 1998

Final Flow 30 T-Pulled 08:55 ☐ Extra Recorder ☐ Tool Loaded @

Final Shut-In 40 T-Out 11:08 ☐ Day Standby ☐ MP/DST Disc't

Comments

Approved By _____ Our Representative [Signature]

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Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

No. Wells #2-27 Test No. 6 Date 11/16/2024
 Company Shakespeare Oil Company Inc Elevation 3206' KB 3196' GL
 Address 202 W Main St Salem IL 62881+1519
 Co. Rep / Geo Kent Matson Rig Duke #41
 Location: Sec. 27 Twp 16S Rge. 35W Co. Wichita State KS

Interval Tested 4444' - 4510' Zone Tested Marmaton A-B-C
 Anchor Length 66' Drill Pipe Run 4432' Mud Wt. 9.1
 Top Packer Depth 4439' Drill Collars Run - Vis 63
 Bottom Packer Depth 4444' Wt. Pipe Run - WL 8.0
 Total Depth 4510' Chlorides 10,000 ppm System LCM 2H

Blow Description 17 - Surface to 1"
JSJ - No Return

47 - Surface to 2.25"

75 - No Return

Rec <u>15'</u>	Feet of <u>GMCO</u>	<u>10</u> %gas	<u>75</u> %oil	%water <u>15</u>	%mud
Rec <u>15'</u>	Feet of <u>G.O</u>	<u>10</u> %gas	<u>90</u> %oil	%water	%mud
Rec	Feet of <u>30' GIP</u>	<u>100</u> %gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30' BHT 106° Gravity 24° API RW - @ - °F Chlorides - ppm

Initial Hydrostatic 2171
 Initial Flow 22 to 29
 Initial Shut-In 1191
 Final Flow 29 to 30
 Final Shut-In 1072
 Final Hydrostatic 2158

T- On Location 13:17
 Initial Flow 15 T-Started 14:08
 Initial Shut-In 30 T-Open 16:23
 Final Flow 30 T-Pulled 18:08
 Final Shut-In 30 T-Out 20:27

Comments 1 Day Standby between Oct 5 & 6 ; 2 Days and 14 hrs after Oct #6

Approved By _____ Our Representative [Signature]



**Scale 1:240 (5"=100') Imperial
Measured Depth Log**

Well Name: WELLS
Well Id: #2-27
Location: 1540' FSL, 1360' FWL, SW/4 Sec 27-T16S-R35W, Wichita County, Kansas
License Number: API: 15-203-20394 **Region:** Wichita County
Spud Date: 11/06/2024 **Drilling Completed:** 11/18/2024
Surface Coordinates: NAD83
Lat: 38.6315408; Long: -101.1790208
Bottom Hole Coordinates: Vertical hole
Ground Elevation (ft): 3197' **K.B. Elevation (ft):** 3206'
Logged Interval (ft): 3800' **To:** RTD **Total Depth (ft):** 4897'
Formation: Mississippian at RTD
Type of Drilling Fluid: Chemical

Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: SHAKESPEARE OIL COMPANY, INC.
Address: 202 West Main Street
Salem, IL 62881
618-548-1585

WELLSITE GEOLOGIST

Name: Kent R. Matson
Company: Matson Geological Services, LLC
Address: 33300 W. 15th Street S.
Garden Plain, Kansas 67050
316-644-1975; kent4m@hotmail.com



COMMENTS

Shakespeare Oil Company, Inc., Geologist: Toby Eck, 316-305-0572 (cell).

Contractor: Duke Drilling Company, Inc.: Rig #4.

Tool Pusher: Hector Torres, 620-682-3927 (cell).

Surface Casing: 8 5/8" set at 236' (KB) w/175sx cement.

Production Casing: Based on field observations of drill cuttings, DST results and electric log evaluation, the well was converted to a saltwater disposal well and 5.5" production casing was installed.

Mud by: Mud-Co/Service Mud, Inc.; Justin Whiting, 620-214-3630 (cell); Gary Schmidtberger, 785-259-2757 (cell); Reid Atkins 785-694-3741 (cell).

DST's by: Trilobite Testing; Spencer Staab, 785-259-0056 (cell).

Logs by: ELI Wireline (DI w/GR, CND, Micro), Cole Robben, 785-735-7112 (office).

RTD= 4897'

LTD= 4898'

FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Stotler	3617'	-411	3620'	-414
Heebner Shale	3988'	-782	3990'	-784
Lansing	4032'	-826	4034'	-828
Muncie Creek Shale	4200'	-994	4204'	-998
Stark Shale	4298'	-1092	4299'	-1093
Hushpuckney Shale	4346'	-1140	4348'	-1142
Base of KC	4390'	-1184	4390'	-1184
Marmaton	4450'	-1244	4452'	-1246
Pawnee	4524'	-1318	4526'	-1320
Myrick Station	4565'	-1359	4566'	-1360
Fort Scott	4578'	-1372	4580'	-1374
Cherokee Shale	4606'	-1400	4608'	-1402
Johnson	4669'	-1463	4673'	-1467
Morrow	4742'	-1536	4743'	-1537
Mississippian	4808'	-1602	4808'	-1602
RTD	4897'	-1691		
LTD			4898'	-1692

ROCK TYPES

LITHOLOGY

	Anhy
	Cht
	Coal
	Congl
	Dol
	Gyp
	Lmst
	Salt
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Carb sh
	Dol
	Dtd
	Gry sh
	Sandy lms
	Shale
	Sltstn
	Shlyslts



Sltys
Sdy dolo
Silty dolo
Shy dolo
Shaly ls

FOSSIL



Algae
Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite

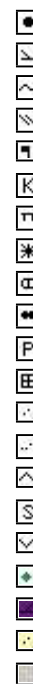


MINERAL



Ostra
Pelec
Pellet
Pisolite
Plant
Strom
Fuss
Oomold

Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chltt
Dol
Feldspar



Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff
Chlorite
Dol
Sand
Slt

Rate of Penetration (ROP) ROP (min/ft)		DEPTH	Lithology	CFS Point	Oil Shows	Geological Descriptions	Remarks
0	ROP (min/ft)	10				Morning Report Depth/Activity (7:00 am) 11/06/2024: MIRU, spud @ 05:15pm. Set surface casing @ 237'. 11/07: WOC. 11/08: Drilling @ 1220'. 11/09: Drilling @ 2400'. 11/10: Drilling @ 3410'. 11/11: Drilling @ 4230'. 11/12: Drilling @ 3989'. 11/13: CFS @ 4101'. 11/14: CFS @ 4230'. 11/15: TIH w/tool for DST #5 @ 4315'. 11/16: CFS and working on mud pump @ 4486'. 11/17: Drilling @ 4555'. 11/18: Drilling @ 4740'. Reached 4897' TD @ 10:13pm. 11/19: Electric logged.	Mud-Co/Service Mud Inc. Check #1 @ 0' 11/05/24, predrilling instructions. Mud-Co/Service Mud Inc. Check #2 @ 237' 11/07/24 08:45am No mud parameters taken. Rig WOC. Mud-Co/Service Mud Inc. Check #3 @ 1329' 11/08/24 08:40am wt vis pH chl 9.0 28 7.0 890 Filt LCM n/c 2 Mud-Co/Service Mud Inc. Check #4 @ 2597' 11/09/24 12:10pm wt vis pH chl 9.7 29 7.0 29000 Filt LCM n/c 2 Mud-Co/Service Mud Inc. Check #5 @ 3457' 11/10/24 08:30am wt vis pH chl 9.7 29 7.0 31000 Filt LCM n/c 2
		3500				Anhydrite: Drill Time (ROP) Top @ 2484' (+722), Base @ 2505' (+701). E-Log Top @ 2484' (+722), Base @ 2504' (+702).	Displaced drilling mud @ 3457-3465'.
		3550				ROP Data begins @ 3500' on 11/10/2024. Recorded from drillers geolograph record, and geologist's auto-reader switch on geolograph.	Bit Trip @ 3548' conn; replaced PDC bit with Tricone bit.
		3600					Pipe strap TOH for Bit Trip @ 3548' was 2.31' long to the board.
							Mud-Co/Service Mud Inc. Check #6 @ 3805' 11/11/24 06:15am wt vis pH chl 8.8 56 11 8200 Filt LCM 5.8 2 Mud-Co/Service Mud Inc. Check #7 @ 4050' 11/12/24 11:50am wt vis pH chl 9.0 54 11 9100 Filt LCM 10 2 Mud-Co/Service Mud Inc. Check #8 @ 4135' 11/13/24 10:25am wt vis pH chl 9.0 57 11 10500 Filt LCM 6.8 2 Mud-Co/Service Mud Inc. Check #9 @ 4260' 11/14/24 09:45am wt vis pH chl 9.2 51 11 12800 Filt LCM 10 2

Stotler 3617 (-411)

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Mud-Co/Service Mud Inc. Check
#10 @ 4315 11/15/24 10:15am
wt vis pH chl
9.2 59 11 9000

Mud-Co/Service Mud Inc. Check
#11 @ 4491 11/16/24 09:10am
wt vis pH chl
9.1 63 11.5 10000
Filt LCM
8.0 2

MudCo/Service Mud Inc. Check
#12 @ 4570 11/17/24 09:00am
wt vis pH chl
9.2 67 10 11000
Filt LCM
9.6 2

Mud-Co/Service Mud Inc. Check
#3 @ 4708 11/18/24 04:10am
wt vis pH chl
9.4 67 9 10000
Filt LCM
10.4 1

Survey Record

Deg@Ft

0.00 @ 237
0.75 @ 836
0.75 @ 1181
0.25 @ 1682
0.75 @ 2180
0.75 @ 2681
0.50 @ 3550
0.50 @ 4260
0.50 @ 4897

Formation tops and lithologies have been adjusted to correlate to the electric log.

Oil Shows indicator: Left Block 0-10 tray pcs w/show, Middle Block 10-20 tray pcs w/show, Right Block 20+ tray pcs w/show.

NOTE: RED TEXT INDICATES THE PRESENCE OF OIL.

Drill cutting samples at 10' intervals start at 3800'.

LS: whitcm/lt brn/min lt gry, micro-mxtal, some silty/sndy/arg, chalky, foss frags, no vis por, no odor, ns.

LS: crn/lt brn/lt gry, vf-m xtal, silty/sndy, chalky, foss frags/fusln, no vis por, no odor, ns.

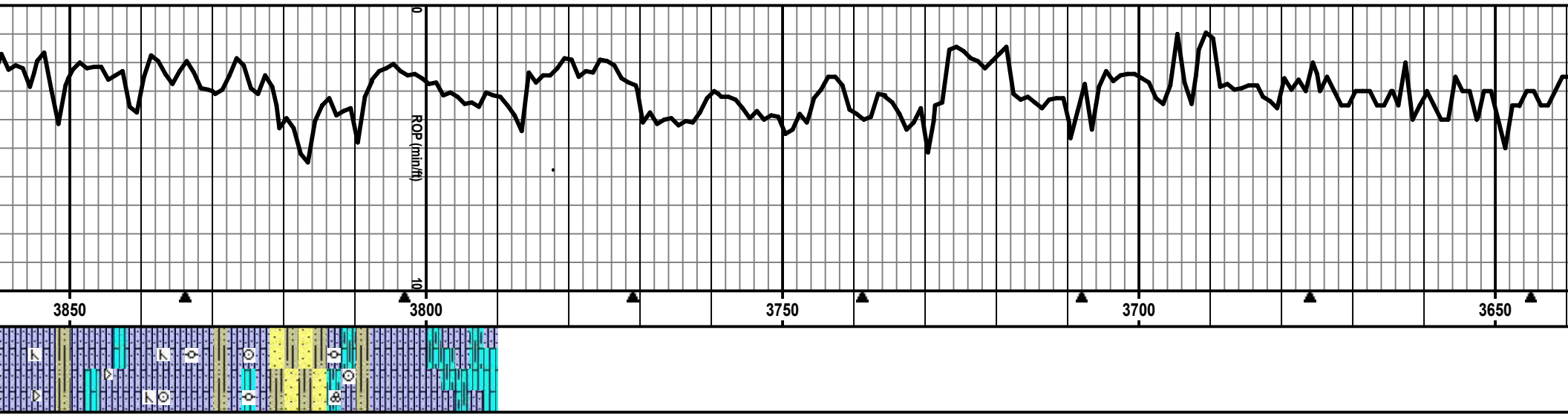
LS: cm/tt/bm/tm gry, vfm xtal, vry sily/sndy/arg, chaky, foss frags/crtn/flush/ool, no vis por, no odor, ns.

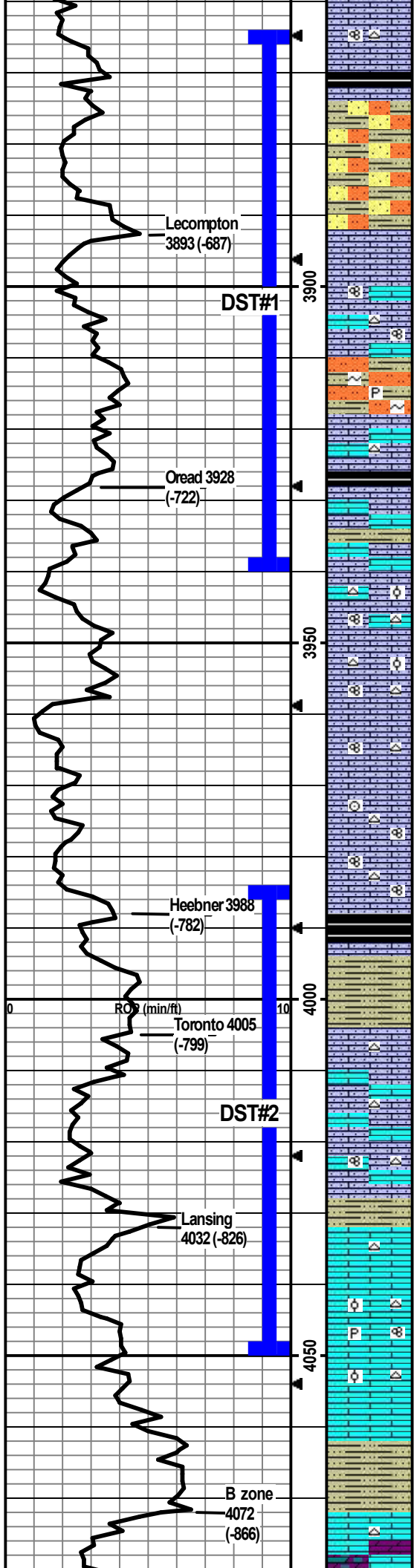
L.S: crn/lt brn/lt gry, micro-mtxal, chalky, some silty/sndy, foss frags/crin-ool, no vis por, no odor, ns.

L.S.: crnlt bmr/nim lt gry, vf-m xtal, chalky, silty/sndy, min dolomitic, foss frags/crn/ool, vf-i in xtal por, no odor, ns.

L.S. crnlt-mgnylt bm, vf-m xtal, mostly silty/sndy, chalky, min whtlt gry
trinitolitic chert, foss frags, min vf-in-xtal por, no odor, ns.

LS: crn/min lt brn/min lt gry, vf-f xtal silty/sndy, chalky, min dolo, min wht tripolitic chert, foss frags, min vf-f dolo in-xtal por, no odor, ns.





LS: cm/lt bm, vf-m xtal, silty/sndy, chalky, min dolo, min wht tripolitic foss chert, foss frags/fusln, vf-f in-xtal por, no odor, ns.

SH: lt-dk gry/blk, some silty/sndy, carb, soft-firm. Some Sltstn/SS, lt gry, vf-f, sr-wr, arg, carb, friable, no odor, ns.

SH: lt-dk gry/blk/red-bm, vry silty/sndy, carb, soft-firm. SS/Sltstn: lt gry, vf-f, sr-wr, arg, carb, friable, no odor, ns.

LS: cm/lt bm/lt-m gry, vf-m, silty/sndy/arg, chalky, foss frags, 4 pcs w/sfo w/vf-f in-xtal por, slt cup sheen, dul yel fluor, no odor, sfo.

LS: cm/lt bm/min lt gry, micro-m xtal, some silty/sndy, chalky, wht foss chert, foss frags/fusln, 26 pcs w/sfo w/vf-m in-xtal por, slt cup sheen, dul yel fluor, no odor, sfo.

SH: lt-dk gry, vry silty/sndy, glauc, pyrite, carb, soft-firm. Sltstn: lt gry, vf, arg, glauc, carb, friable, no odor, ns. (LS show from above, slt rainbow on cup water.)

LS: cm/lt bm/min lt gry, vf-m xtal, some silty/sndy, chalky, min wht chert, foss frags, 16 pcs w/sfo w/vf-f in-xtal por, slt cup sheen, dul yel fluor, no odor, sfo.

LS: cm/lt bm/min lt gry, micro-m xtal, some silty/sndy, chalky, foss frags, 22 pcs w/sfo w/ppt-f in-xtal por, slt cup sheen, no fluor, no odor, sfo.

LS: cm/lt bm, micro-m xtal, chalky, some silty/sndy, gd amt wht foss chert, foss frags/fusln/dense ool, 4 pcs w/blk tar/min fo, vf-f in-xtal por, no fluor, no odor, sfo.

LS: cm/lt bm/lt gry, vf-m xtal, silty/sndy, some chalky, wht foss chert, foss frags/fusln/dense ool, 4 pcs w/sfo/blk tar, vf-f in-xtal por, no fluor, no odor, sfo.

LS: cm/lt bm/lt gry, micro-m xtal, chalky, silty/sndy, wht chert, foss frags/fusln, 6 pcs w/mostly blk tar/min fo, vf-f in-xtal por, no fluor, no odor, slt sfo.

LS: cm/lt bm/lt gry, vf-m xtal, chalky, silty/sndy, min wht/cm chert, foss frags/crin/fusln, vf-m in-xtal/in-fusln por, no odor, ns.

LS: cm/lt bm/lt gry, vf-m xtal, silty/sndy, chalky, min wht chert, foss frags/fusln, vf-f in-xtal w/mid in-fusln por, no odor, ns.

SH: blk, slt carb, firm, fissile.

SH: m-dk gry/dk gry-green/dk bm/red-bm, some vry silty, carb, soft-firm.

LS: wht/cm/lt bm/lt gry, vf-m xtal, silty/sndy, chalky, min wht chert, foss frags, 7 pcs w/sfo w/vf-f in-xtal por, dul yel fluor, no odor, sfo.

LS: wht/cm/lt bm/lt gry, micro-m xtal, some chalky, some silty/sndy, wht chert, foss frags, 45 pcs w/sfo/staining w/vf-crs in-xtal por, dul yel fluor, no odor, gd sfo.

LS: wht/cm/lt bm, micro-m xtal, some chalky, some silty/sndy, wht chert, foss frags/min fusln, 13 pcs w/sfo w/vf-f in-xtal por, dul yel fluor, no odor, sfo.

LS: wht/cm, micro-f xtal, some chalky, wht chert, min foss frags, 24 pcs w/sfo w/vf-m in-xtal por, slt sheen on cup water, no fluor, no odor, sfo.

LS: wht/cm/lt bm/min lt gry, micro-m xtal, some chalky, wht chert, min pyrite, foss frags/fusln/ool, 18 pcs w/sfo, min chalk w/blk tar, vf-m in-xtal/in-ool por, no fluor, no odor, sfo.

LS: cm/min lt gry, micro-m xtal, min chalky, wht chert, min foss frags/ool, 4 pcs w/staining/sfo/blk tar, vf-m in-xtal/in-ool por, no fluor, no odor, sfo.

SH: lt-m gry/blk/red-bm/lt gry-green, some vry silty, carb, soft-firm.

LS: wht/cm, micro-m xtal, min chalky, min wht chert, min foss frags, 41 pcs w/mostly tar/min fo, vf-crs in-xtal por, no fluor, no odor, sfo.

LS: wht/cm/lt bm/lt gry, micro-m xtal, some chalky, lt gry/lt bm sucrosic dolo,

DST1) 3864-3940 Lecompton & Oread

15/30/30/30
1st Blow built to 4.75"; No BB.
2nd Blow built to 6.25"; No BB.
IFP 17-41#
ISIP 1074#
FFP 42-77#
FSIP 1046#
HP 1852-1840#
Recvd: 80' Mud w/oil spots (100%/M).

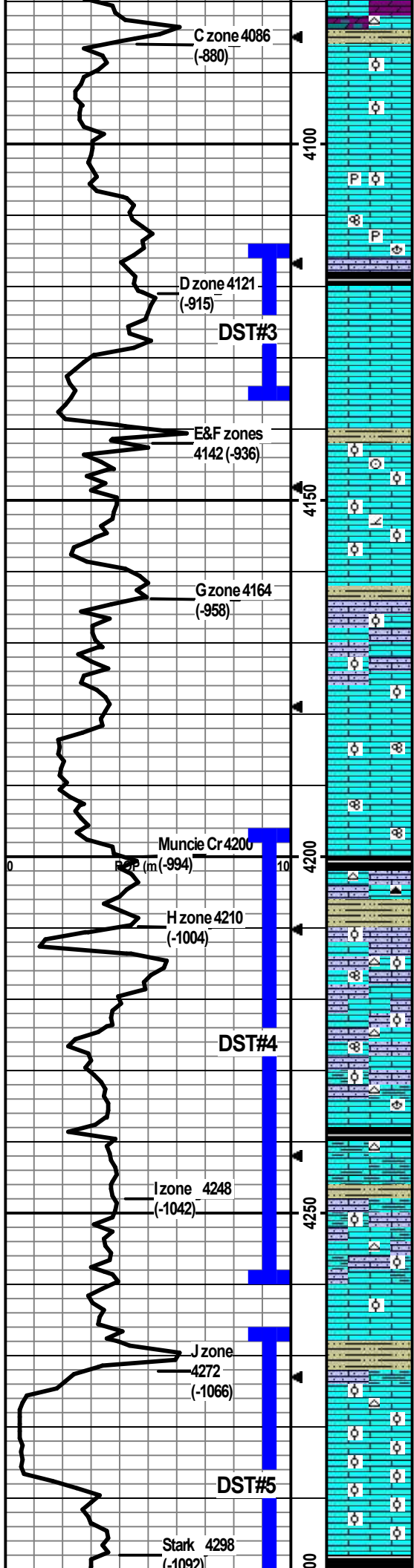
CFS @ 3940'
Stop/30"/60"

DST2) 3984-4050 Toronto & Lansing A-zone

15/30/30/40
1st Blow built to 5.75"; No BB.
2nd Blow built to 8"; No BB.
IFP 21-48#
ISIP 1068#
FFP 51-95#
FSIP 1025#
HP 1927-1926#
Recvd: 170' Total Fluid; 40' Mud w/oil spots-tarry (100%/M), 60' WM (5%/W, 95%/M), 70' WM (15%/W, 85%/M).

CFS @ 4020'
Stop/30"/60"

CFS @ 4050'
Stop/30"/60"



min wht chert, min foss frags, 17 pcs w/mostly tar/min fo, vf-m in-xtal por, no fluor, no odor, sfo.

LS: wht/cm/min lt bm, micro-m xtal, some chalky, min foss frags/ool, ~5% of smpl w/mostly tar/some fo, vf-crs in-xtal por, no fluor, no odor, sfo.

LS: same as above w/27 pcs w/tar/sfo.

LS: wht/cm/lt bm, micro-m xtal, some chalky, min pyrite, foss frags/min ool, 15 pcs w/mostly tar/min fo, vf-m in-xtal por, no fluor, no odor, sfo.

LS: wht/cm/lt bm, micro-m xtal w/crs 2dry xtal, chalky, min silty/sndy, min pyrite, min foss frags/fusin/brac, 14 pcs w/mostly tar/min fo, vf-m in-xtal por, no fluor, no odor, sfo.

LS: cm/lt bm/min lt gry, micro-m xtal, some chalky, min foss frags, 36 pcs w/sfo, ppt-crs in-xtal por, no fluor, gd odor, sfo.

LS: cm/lt-m bm/lt gry, vf-m xtal/crs 2ndry xtal, some chalky, min foss frags, 29 pcs w/sfo, ppt-crs in-xtal por, no fluor; sheen on smpl water, gd odor, sfo.

LS: wht/cm/lt bm, micro-m xtal, some chalky, foss frags/crin/ool, 7 pcs w/sfo w/vf-f in-xtal/in-ool por, no fluor, no odor, sfo.

LS: wht/cm, micro-m xtal, some chalky, min dolo, foss frags/ool, 8 pcs w/sfo/some tar, vf-f in-xtal por, no fluor, no odor, sfo.

LS: wht/cm/min lt bm/min lt gry, micro-m xtal, some chalky, some silty/sndy, min foss frags/ool, min vf-f in-xtal por/min crs oo-castic por, no odor, ns.

LS: wht/cm/lt gry/min lt bm, micro-m xtal/2ndry crs xtal, min silty/sndy, some chalky, foss frags/ool, min vf-m in-xtal/in-ool por, no odor, ns.

LS: wht/cm/lt gry/min lt bm, micro-m xtal, some chalky, min foss frags/fusin/ool, min vf-m in-xtal/in-oo/in-fusin por, no odor, ns.

LS: wht/cm/lt gry, micro-crs xtal, some chalky, foss frags/fusin, f-crs in-xtal por, no odor, ns.

SH: lt-dk gry/bk/gry-green, some silty, carb, soft-firm.

LS: cm/lt gry/lt bm, micro-crs xtal, some chalky, some silty/sndy, min dk bm/gry chert, 4 pcs w/stain/sfo, ppt-f in-xtal por, no fluor; slt odor, slt sfo.

LS: cm/lt bm/lt gry, micro-m xtal, chalky, some silty/sndy, wht/cm chert, foss frags/fusin/ool, 26 pcs w/sfo, vf-m in-xtal/in-ool por, dul yel fluor; slt odor, sfo.

LS: cm/lt bm/lt gry, micro-m xtal, some chalky, some silty/sndy, wht chert, foss frags/fusin/ool, 19 pcs w/sfo, vf-m in-xtal/in-ool por, dul yel fluor; slt odor, sfo.

LS: cm/lt bm/lt gry, micro-m xtal, some chalky, some silty/arg, wht/lt gry chert, foss frags/ool/brac, 6 pcs w/sfo, ppt-m in-xtal por, dul yel fluor; slt odor, sfo.

SH: lt-dk gry/bk/min dk bm/min gry-green, some silty, carb, soft-firm.

LS: cm/lt-m bm/lt gry, micro-m xtal, some chalky, some arg, min wht chert, foss frags, 4 pcs w/sfo, vf-m in-xtal por, slt odor, sfo.

LS: cm/lt-m bm/lt gry, micro-m xtal, chalky, some silty/arg, min wht/gry chert, foss frags/ool, 14 pcs w/stain/sfo, ppt-f in-xtal/in-ool/frac por, dul yel fluor; slt odor, sfo.

LS: cm/lt-m bm/lt gry, micro-m xtal, chalky, foss frags/min ool, 13 pcs w/sfo, ppt-f in-xtal por, dul yel fluor; slt odor, sfo.

SH: lt-dk gry/bk/red-brn/gry-green, some vry silty, carb, soft-firm.

LS: wht/cm/lt bm/lt gry, micro-m xtal, min silty/arg, chalky, min wht chert, foss frags/ool, 13 pcs w/sfo, vf-f in-xtal/in-ool por, dul yel fluor; slt odor, sfo.

LS: wht/cm/lt bm, micro-m xtal, min chalky, foss frags/abund ool, 10-15% of smpl w/sfo, f-crs/vug in-xtal/in-ool/oo-castic por, dul yel fluor; fo on cup water, stg odor, sfo.

LS: as above, 5-10% of smpl w/stain/sfo, fo on cup water, stg odor, sfo.

CFS @ 4085'
Stop/30"/60"

CFS @ 4101'
Stop/30"/60"

DST3) 4115-4135 Lansing D-zone

15/30/30/30

1st Blow built to 1"; No BB.

2nd Blow built to 1"; No BB.

IFP 13-23#

ISIP 1073#

FFP 25-36#

FSIP 1043#

HP 2010-1940#

Recvd: 30' Mud (100%M).

CFS @ 4135'
Stop/30"/60"

CFS @ 4155'
Stop/30"/60"

DST4) 4196-4260 Lansing H & I-zones

15/30/30/30

1st Blow built to 1.5"; No BB.

2nd Blow built to 1.5"; No BB.

IFP 22-25#

ISIP 1068#

FFP 27-37#

FSIP 920#

HP 2055-1993#

Recvd: 30' Mud (100%M).

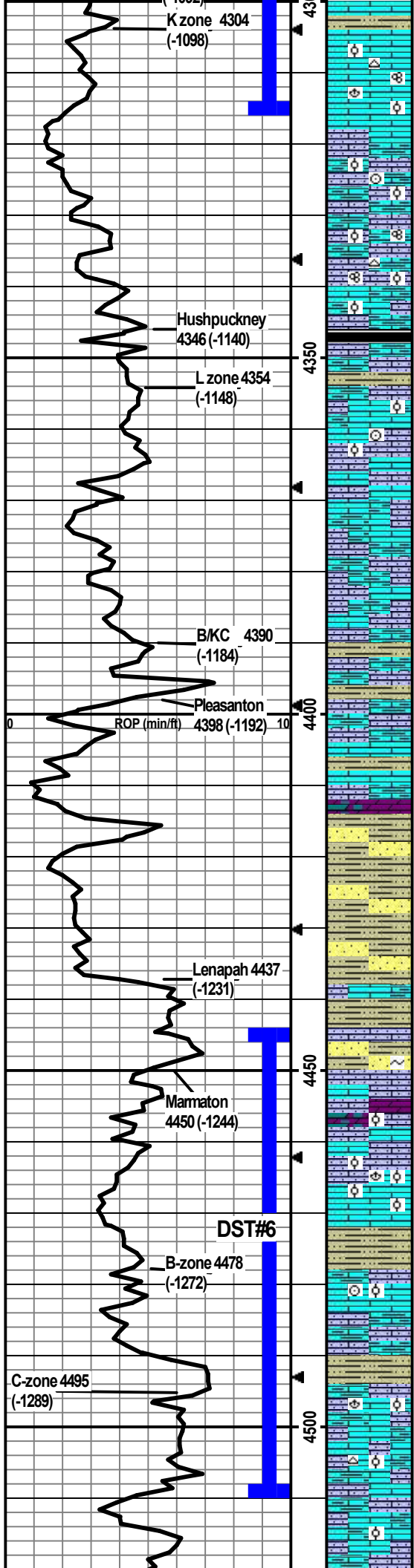
CFS @ 4230'
Stop/30"/60"

CFS @ 4260'
Stop/30"/60"

CFS @ 4290'
Stop/30"/60"

Exhibit TB-2

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SH: lt-dk gry/blk/red-bm/gry-green, some silty/sndy, silt carb, soft-firm.
LS: cm/lt bm/min lt gry, micro-m xtal, min arg/silty, some chalky, wht chert, foss frags/fusln/ool/some grainy, vf-m in-xtal/in-ool por, m-crs oo-castic por, 7 pcs w/sfo w/ppt-f in-xtal por, dul yel fluor, no odor, sfo.

LS: wht/cm/lt bm/lt gry, micro-m xtal, chalky, foss frags/brac/ool, min med oo-castic por, 4 pcs w/sfo w/ppt-m in-xtal por, dul yel fluor, no odor, sfo.

LS: cm/lt gry/lt bm, micro-crs xtal, smpl vry chalky, silty/sndy/arg, foss frags/crin/ool, 23 pcs w/stain/sfo, f-crs/vug in-xtal/in-ool/oo-castic por, dul yel fluor, gd odor, sfo.

LS: cm/lt bm/lt gry, micro-crs xtal, silty/sndy/arg, smpl vry chalky, min wht/cm chert, foss frags/fusln/ool, 7 pcs w/stain/sfo, vf-crs/vug in-xtal/in-ool por, dul yel fluor, gd odor, sfo.

LS: cm/lt bm/lt gry, micro-m xtal, smpl vry chalky, some silty/sndy/arg, foss frags/ool, no vis por, no odor, ns.
SH: blk, silt silty, carb, firm.
SH: lt-dk gry/dk bm/blk, some silty, some foss, carb, soft-firm.
LS: wht/cm/lt-m bm/lt gry, micro-m xtal, some chalky, some silty/sndy, foss frags/ool, 9 pcs w/stain/sfo w/vf-crs/vug in-xtal/in-ool por, yel fluor, silt odor, sfo.

LS: wht/cm/lt-m bm/lt gry, micro-m xtal, chalky, some silty/sndy/arg, foss frags/crin/ool, 7 pcs w/stain/sfo w/vf-crs/vug in-xtal/in-ool por, dul yel fluor, silt odor, sfo.

LS: wht/cm/lt gry, micro-m xtal, vry chalky, some silty/sndy/arg, foss frags, no vis por, no odor, ns.

LS: cm/lt bm/lt-m gry, chalky, some silty/arg, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/lt-m gry, micro-m xtal, chalky, silty/sndy/arg, foss frags, no vis por, no odor, ns.
SH: lt-dk gry/dk bm/gry-green, some silty, carb, soft.

LS: cm/lt gry/lt-m bm, micro-m xtal, chalky, some silty/sndy/arg, foss frags, no vis por, no odor, ns.
LS: cm/lt gry/lt bm/dk gry incls, micro-m xtal, chalky, some silty/sndy/arg, foss frags/fusln, no vis por, no odor, ns. Dolo: cm/lt bm/lt gry, vf, sucrosic, vf-f in-xtal por, no odor, ns.

SH: lt-m gry/red-bm/gry-green, some silty, silt carb, soft-firm. SS: lt-m gry/lt green/lt red-bm, vf-f, sr-wr, pred qtz, arg, friable, no odor, ns.

Cont. SH/SS as above, no odor, ns.

LS: cm/lt-m bm, micro-m xtal, chalky, some silty/arg, foss frags, no vis por, no odor, ns.
SH: lt-m gry/gry-green, some silty/sndy, carb, soft. SS: lt gry, vf-f, sr-wr, pred qtz, min glauc, arg, friable, no odor, ns.

LS: cm/lt bm, micro-m xtal, some silty/sndy, some chalky, some lt bm/lt gry sucrosic dolo, foss frags/ool, ppt-f in-xtal por, 2 pcs w/dk bm tar/min sfo w/vf-f in-xtal/frac por, no odor, silt sfo.

LS: cm/lt bm/lt gry, micro-m xtal, some silty/sndy, chalky, foss frags/brac/ool, 11 ool pcs w/sfo w/vf-m in-ool por, no odor, sfo.

LS: as above, 15 ool pcs w/sfo, no odor.
SH: lt-dk gry/dk red-bm/gry-green, some silty, carb, soft-firm.

LS: cm/lt bm/min lt gry, micro-m xtal, some chalky, some silty/arg, foss frags/crin/fn dense ool, no vis por, no odor, ns. (8 ool pcs w/sfo assume from Marm A).

LS: cm/lt bm/lt gry, micro-m xtal, some chalky, some silty/arg, foss frags/brac/ool, 4 pcs w/sfo, ppt-m in-xtal/in-ool por, no odor, sfo.

LS: cm/lt bm/lt bm, some chalky, some silty/arg, wht/lt gry chert, foss frags/min dense ool, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, micro-m xtal, some chalky, some silty/arg, foss frags/min ool, no vis por, no odor, ns.

CFS @ 4315'
Stop/30"/60"

DST5) 4266-4315
Lansing J & K-zones
15/30/30/40
1st Blow built to 5.25"; No BB.
2nd) Blow built to 7.25"; No BB.
IFP 21-43#
ISIP 1207#
FFP 46-97#
FSIP 1201#
HP 2050-2045#
Recvd: 200' total fluid; 40' OM (1%O, 99%M), 60' WM (5%W, 95%M), 100' MW (15%M, 85%W).

CFS @ 4365'
Stop/30"/60"

DST6) 4466-4510
Marmaton A, B and C-zones
15/30/30/30
1st Blow built to 1"; No BB.
2nd) Blow built to 2.25"; No BB.
IFP 23-30#
ISIP 1191#
FFP 30-30#
FSIP 1072#
HP 2172-2156#
Recvd: 30' GIP, 15' GO (5%G, 90%O), 15' GMO (10%G, 15%M, 75%O).

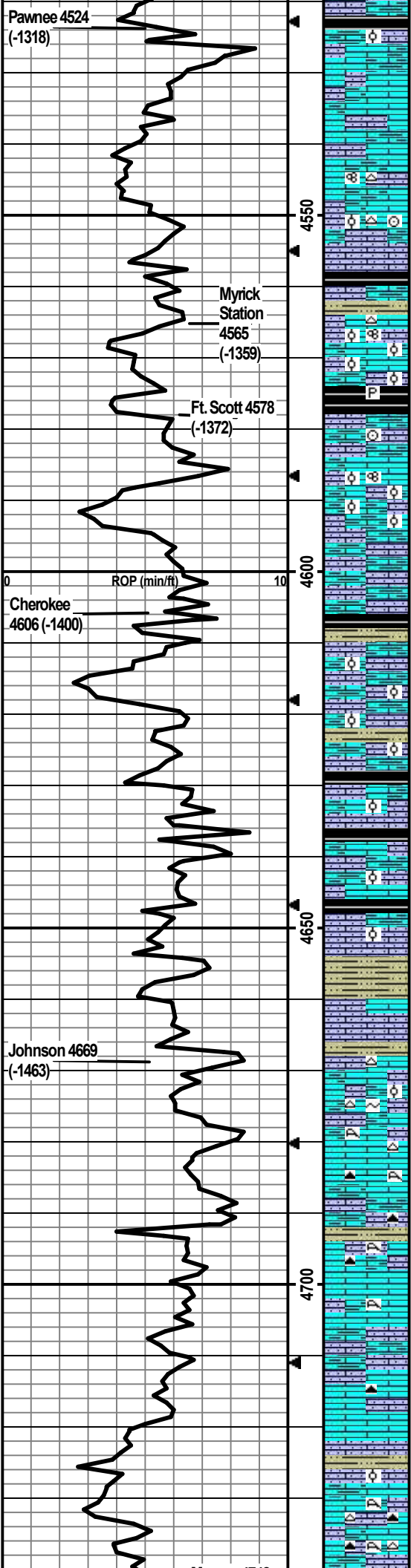
CFS @ 4442'
Stop/30"/60"

CFS @ 4470'
Stop/30"/60"

CFS @ 4486'
Stop/30"/60"

CFS @ 4510'
Stop/30"/60"

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SH: dk gry/blk, slt carb, firm.

LS: cm/lt bm/lt-dk gry, micro-m xtal, some silty/arg, some chalky, min foss frags/dense ool, no vis por, no odor, ns.

LS: wht/cm/lt bm/lt gry, micro-m xtal, min silty/arg, some chalky, foss frags, no vis por, 3 pcs in 60min w/sfo/tar, ppt-m in-xtal por, no odor, slt sfo.

LS: cm/lt-m bm/min lt gry, micro-m xtal, some silty/arg, some chalky, some wht/lt bm foss chert, foss frags/fusln, 2 pcs w/stain/sfo, ppt-m in-xtal por, no odor, slt sfo.

LS: cm/lt-m bm/lt-m gry, micro-m xtal, some silty/sndy/arg, some chalky, cm chert, foss frags/dense ool/crin, no vis por, no odor, ns.

SH: m-dk gry/blk/red-brn/gry-green, some silty, carb, soft-firm.

LS: cm/lt-m bm/lt gry, micro-m xtal, some chalky, some silty/sndy/arg, cm/lt bm foss/ool chert, foss frags/fusln/abund ool, no vis por, no odor, ns.

1 ool pce in 60min w/stain/sfo, no fluor, m-crs/vug in-ool/oo-castic por

LS: cm/lt-m bm/lt gry, micro-m xtal, chalky, some silty/arg, foss frags/sbund ool, no vis por, no odor, ns.

SH: dk gry/blk/dk brn mottling, min pyrite, some silty, carb, firm.

LS: cm/lt-m bm/lt-m gry, micro-m xtal, some vry silty/sndy/arg, chalky, foss frags/fusln/crin/abund ool, 2 pcs w/sfo w/ppt-f in-xtal por, no odor, slt sfo.

LS: cm/lt-m bm, micro-m xtal, some silty/arg, some chalky, foss frags/abund ool pcs, no vis por, no odor, ns. (Smpl is flood of green/med gry silty SH).

LS: wht/cm/lt bm/lt-m gry, micro-m xtal, silty/arg, chalky, foss frags, no vis por, no odor, ns.

SH: lt-dk gry/blk/dk brn/maroon/gry-green, silty, carb, soft-firm.

LS: cm/lt-m bm/lt gry, vf-m xtal, silty/sndy/arg, chalky, foss frags/ool, no vis por, no odor, ns. (Smpl SH flood.)

LS: wht/cm/lt-m gry, vf-m/min crs xtal, silty/sndy/arg, chalky, foss frags/ool, no vis por, no odor, ns. (Smpl cont SH flood.)

SH: lt-dk gry/blk/gry-green, some vry silty, carb, soft-firm.

LS: cm/lt-m bm/lt gry-bm, micro-m xtal, some vry silty/arg, chalky, foss frags/ool, no vis por, no odor, ns.

SH: lt-dk gry/red-brn/gry-green, some vry silty, carb, soft-firm.

LS: cm/lt bm/lt gry, micro-m xtal, some vry silty/sndy/arg, chalky, foss frags/ool, no vis por, no odor, ns.

SH: lt-dk gry/green/orange-brn, some vry silty, carb, soft-firm.

LS: cm/lt bm/lt-m gry, micro-m xtal, chalky, some silty/sndy/arg, foss frags/ool, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, micro-m xtal, chalky, some silty/sndy, wht/lt bm/lt gry chert, foss frags, no vis por, no odor, ns.

LS: cm/lt-m bm/lt-m bm-gry, micro-m xtal, some chalky, some vry silty/sndy/arg, some glauc, min lt bm chert, foss frags/coral/min ool, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, micro-m xtal, chalky, wht/bm foss chert, foss frags/coral, no vis por, no odor, ns.

LS: cm/lt-m bm/lt gry, micro-m xtal, chalky, some silty/sndy/arg, bm chert, foss frags/coral, no vis por, no odor, ns.

LS: cm/lt-m bm, micro-m xtal, some chalky, min silty/sndy/arg, foss frags/min coral, no vis por, no odor, ns. (Smpl is SH flood.)

LS: cm/lt-m bm/lt-dk brn-gry, micro-m xtal, some chalky, min silty/sndy, min m-dk bm chert, foss frags, no vis por, no odor, ns.

LS: wht/cm/lt-m bm/min lt-dk gry, micro-m xtal, chalky, some sndy, foss frags/min coral/ool, no vis por, 1 ool pce w/sfo w/ppt-vf in-xtal por, no odor, slt sfo.

LS: wht/cm/lt bm/lt-dk gry, micro-m xtal, some chalky, some silty/arg/sndy, gd amt wht/lt-dk brn/lt-dk gry/orange foss chert, foss frags/coral, min fn coral por, no odor, ns.

CFS @ 4540'
Stop/30"/60"

CFS @ 4570'
Stop/30"/60"

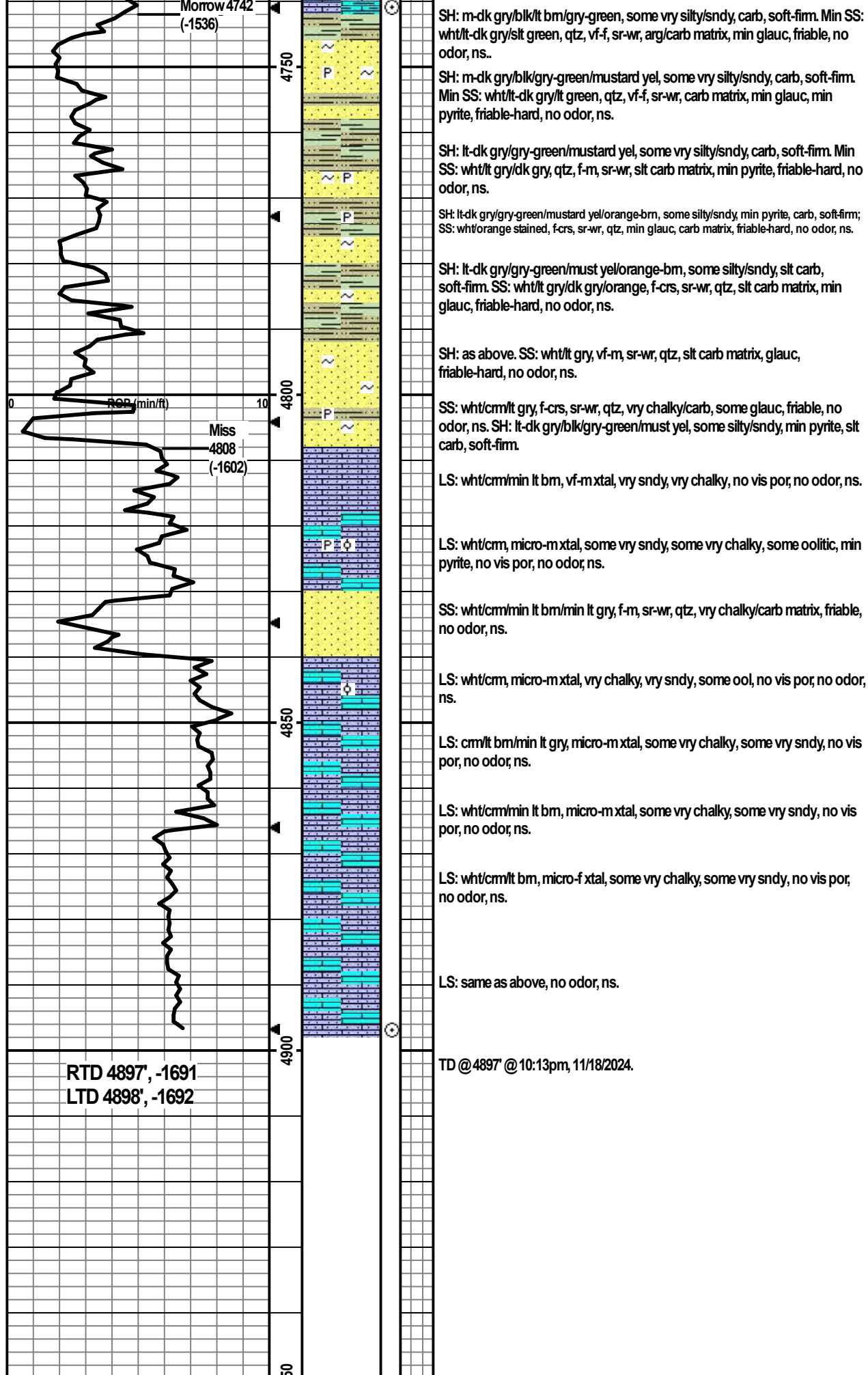
CFS @ 4595'
Stop/30"/60"

CFS @ 4628'
Stop/30"/60"

CFS @ 4680'
Stop/30"/60"

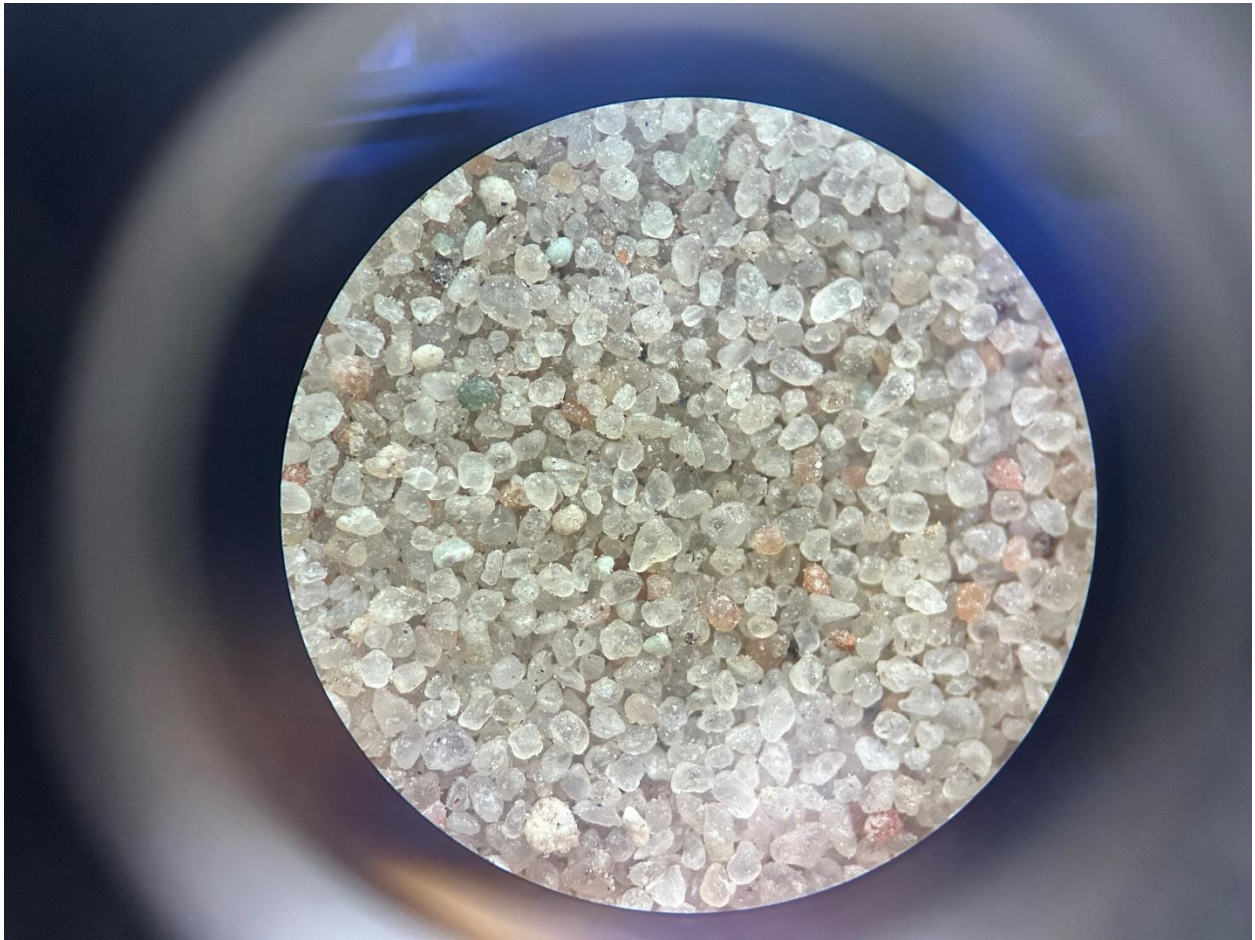
Exhibit TB-2
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CFS @ 4741'



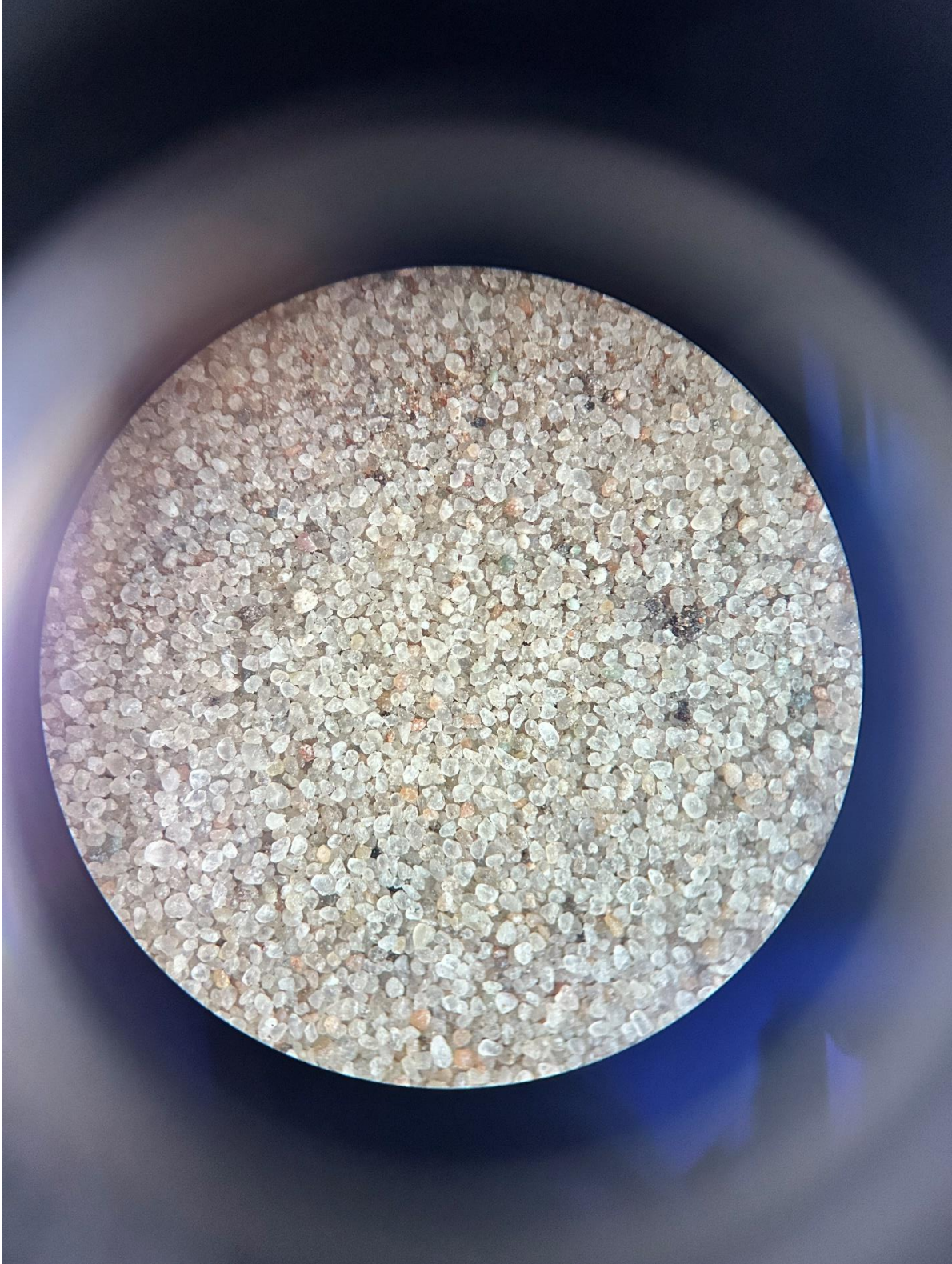
Stop/30"/60"

CFS @ 4897'
Stop/30"/60"
Conducted 7 std short trip,
CTCH 1.5 hrs, TOH for logging.



Sample from Wells #2-27

Well sorted, Fine grained quartz sand



Sample from Wells #2-27

Well sorted, Fine grained quartz sand

From: [Jake Eastes \[KCC\]](#)
To: [Todd Bryant \[KCC\]](#)
Cc: [Kelcey Marsh \[KCC\]](#)
Subject: Tops Project
Date: Friday, October 24, 2025 2:23:17 PM

Todd,

The perms from 1452' – 1476' are not in the Whitehorse formation, I believe that this sand zone is actually the base of the Morrison or Jurassic aged rocks. This sand appears in both the Wells #2-27 and the Omaha #1-14. Ginger Oil Company's Whitham & Sons #13-1 located further to the West in Sec. 13 – 16S – 36W, Wichita County also showed this sand being present and a little thicker in comparison to the Wells #2-27 and the Omaha #1-14. Therefore, this leads me to believe that this sand is not a lense or random channel but is a sand that is consistently reported as being part of the lower Morrison formation. (i.e. Entrada Sand formation of Colorado and other Western States).

The perms from 1522' – 1582' are most likely in the Whitehorse formation but one interpretation I had showed this perforated interval being just in the Big Basin formation and a Whitehorse formation top picked at 1600' due to the presence of some interbedded dolomites.

The perms from 1800' – 2000' are clearly in the Blaine formation, the Density/Neutron/PE Log is showing a halite/salt response through the entire perforated interval. The Neutron Porosity is in the negatives while the Density Porosity is showing values greater than 30pu. The PE values are holding steady through the entire section as well. This thick salt section within the Blaine formation I know is also seen in Hamilton and Kearny Counties just to the South and Southwest

The Cedar Hills formation in the Wells #2-27 is actually thinner than in other areas of Western/SW Kansas. I had a top picked for it at 2075' and a base picked at 2155'

Jake Eastes, *Professional Geologist*
Conservation Division
Kansas Corporation Commission
266 N Main St., Ste 220 | Wichita, KS | 67202
Office (316) 337-6216 | Cell (316) 217-5478

CERTIFICATE OF SERVICE

25-CONS-3411-CUIC

I, the undersigned, certify that a true and correct copy of the attached Testimony has been served to the following by means of electronic service on October 24, 2025.

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/s/ Sara Graves

Sara Graves