

Submit a Copy To Appropriate District  
Office  
District I – (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240  
District II – (575) 748-1283  
811 S. First St., Artesia, NM 88210  
District III – (505) 334-6178  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV – (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM  
87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised July 18, 2013

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO.	30-015-28992
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	OSAGE BOYD 15 SWD
8. Well Number	1
9. OGRID Number	328947
10. Pool name or Wildcat	SWD; CISCO-CANYON
4. Well Location Unit Letter <u>F</u> : <u>1980</u> feet from the <u>NORTH</u> line and <u>1980</u> feet from the <u>WEST</u> line Section <u>15</u> Township <u>19S</u> Range <u>25E</u> NMPM County <u>EDDY</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	3454' GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
DOWNHOLE COMMINGLE ☐  
CLOSED-LOOP SYSTEM ☐  
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐  
OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

OCD Engineering bureau requested additional data for the Osage SRT interpretation due to previous acid frac be submitted via sundry for proper processing.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE  TITLE Agent for Spur Energy DATE 3/11/2024

Type or print name Ben Stone E-mail address: ben@sosconsulting.us PHONE: 936-377-5696

**For State Use Only**

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of Approval (if any):



**Cross Section and Fracture  
Gradient Correlation for  
Osage Boyd SWD Injection  
Pressure Increase**

February 21, 2024

# Introduction

- ✦ 3 Step Rate Tests have been performed by Spur in the Dagger Draw area where bottom hole pressure gauges have been run
  - ✦ Secrest Et Al SWD #1 – Tested Oct. 2022
  - ✦ Lakewood Farms 18 1 SWD – Tested November 2023
  - ✦ Osage Boyd 15 1 SWD – Tested November 2023
- ✦ The Osage Boyd SWD is stratigraphically/geologically similar to the Secrest SWD and Lakewood Farms SWD causing us to be curious when it showed to have fractured sooner than either of those wells
- ✦ Spur's theory is that since the well was initially gel acid-fractured in 1996, this “break” in pressure is likely the already existing fractures “opening-up” allowing enhance conductivity and not new fractures being created
- ✦ A cross section and base map were prepared to show the geological similarities



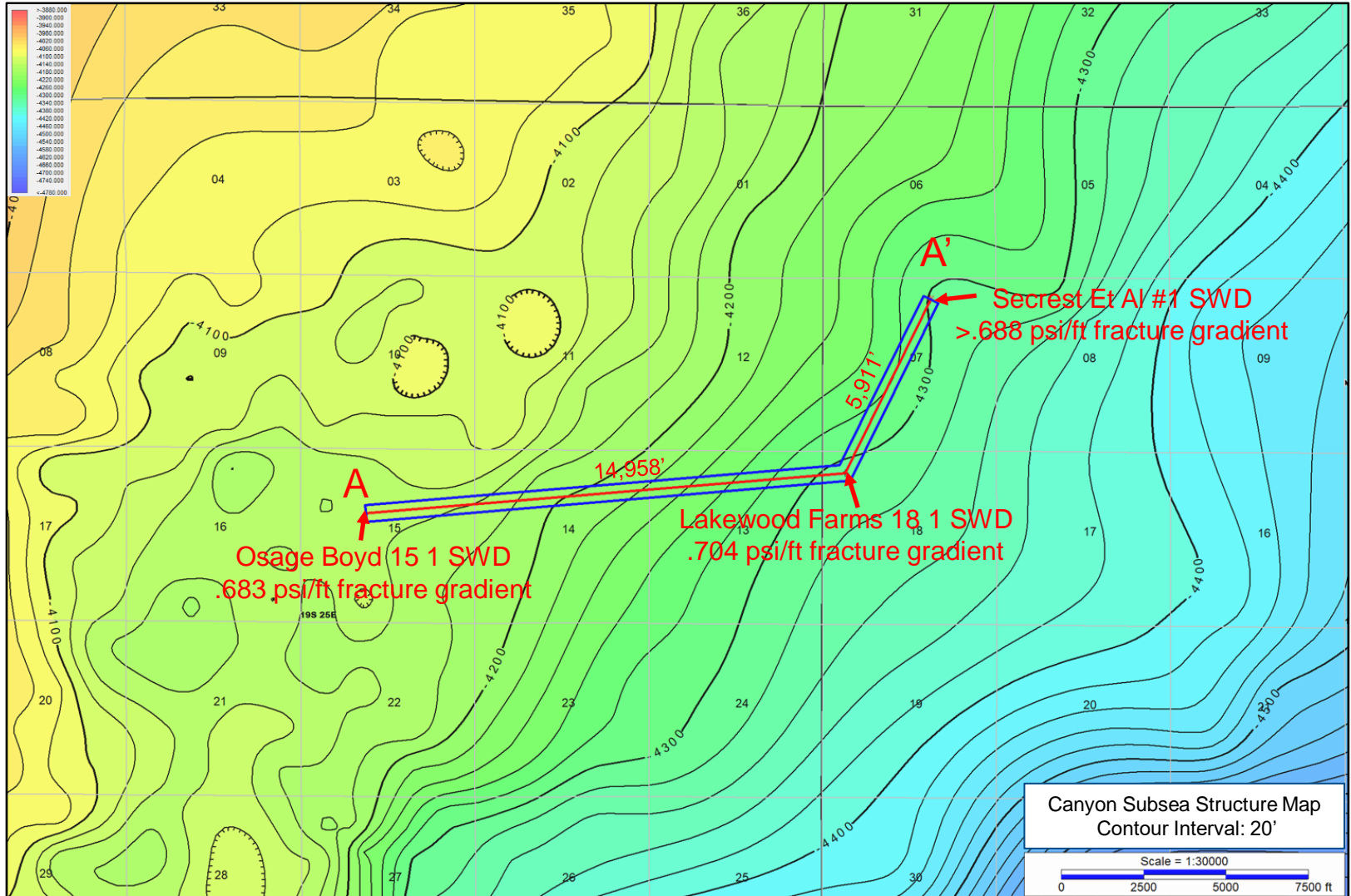
# Test Summary



- ✦ The Secrest Et Al #1 SWD did **not** fracture the formation
  - ✦ Fracture gradient is above .688psi/ft,
    - ✦ Based on the maximum BHP observed during that test
- ✦ The Lakewood Farms 18-1 SWD was tested in November of 2023 and did reach fracture pressure
  - ✦ Fracture gradient is known to be .704 psi/ft
- ✦ The Osage Boyd 15 1 SWD was tested in November of 2023 and did reach formation breakdown pressure
  - ✦ Estimated fracture opening pressure at around .683 psi/ft



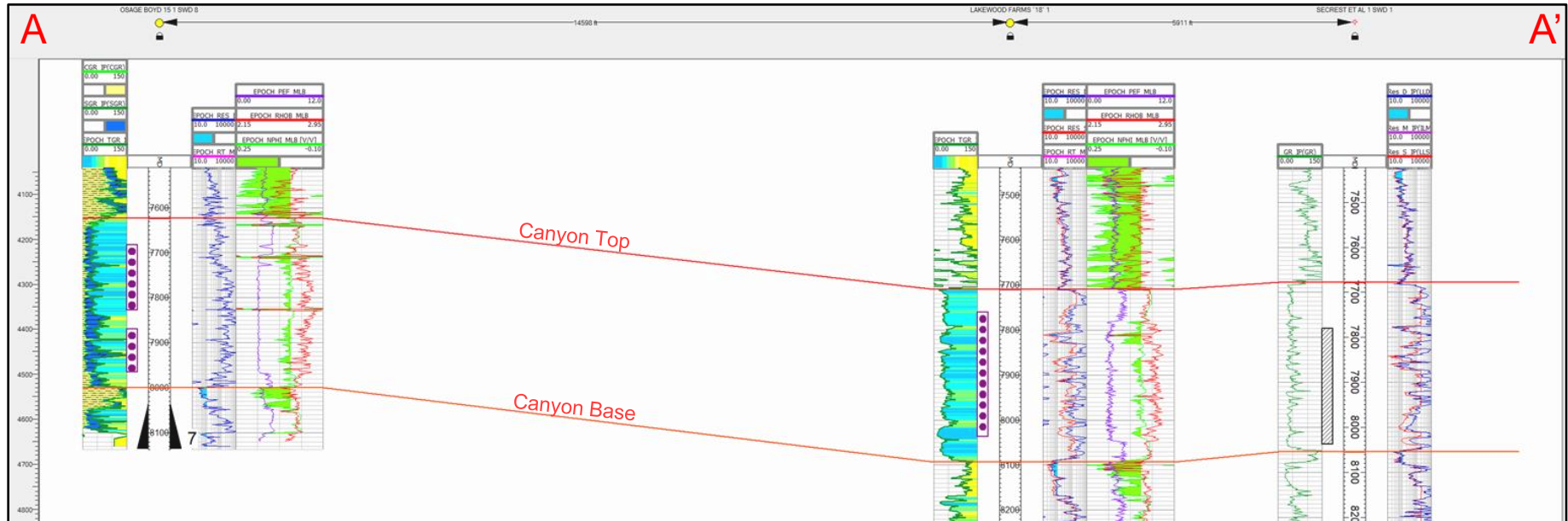
# Base Map



# Structural Cross Section



- ✦ Perforated intervals very similar in all three wells
- ✦ Rock Quality comparable in all three wells



Osage Boyd 15 1 SWD  
.683 psi/ft fracture gradient

Lakewood Farms 18 1 SWD  
.704 psi/ft fracture gradient

Secret Et Al #1 SWD  
>.688 psi/ft fracture gradient



# Summary

- ✦ Secret SWD SRT did not fracture the rock, so we know the gradient is  $>.688$  psi/ft
- ✦ Lakewood Farms SWD has a clear break/fracture pressure and was not fractured during its original completion to our knowledge
- ✦ The Osage Boyd SWD pre-stimulated fracture gradient is likely similar to the Lakewood Farms at  $\sim.704$  psi/ft
  - ✦ The requested 2,000 psi maximum allowable injection pressure correlates to  $.693$  psi/ft ( $.01$  psi/ft higher than observed fracture opening pressure)



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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 322299

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 322299
	Action Type: [C-103] Sub. General Sundry (C-103Z)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	3/11/2024