

Geological Report

Suppes #7

1650' FSL & 2605' FWL

Sec. 23 T19s R31w

Scott County, Kansas



Pioneer Resources, Inc.

General Data

Well Data: Pioneer Resources, Inc.
Suppes #7
1650' FSL & 2605' FWL
Sec. 23 T19s R31w
Scott County, Kansas
API # 15-171-21242-0000

Drilling Contractor: Discovery Drilling Co. Inc. Rig #4

Geologist: Jason T Alm

Spud Date: April 2, 2019

Completion Date: April 10, 2019

Elevation: 2946' Ground Level
2954' Kelly Bushing

Directions: Grigston KS, ¼ west on hwy 96. 7 ½ mi south on
Venison. East into location.

Casing: 220' 8 5/8" surface casing
4709' 5 1/2" production casing

Samples: 10' wet and dry, 3700' to RTD

Drilling Time: 3700' to RTD

Electric Logs: ELI "Jeff Luebbers"
CNL/CDL, DIL, MEL

Drillstem Tests: Two, Trilobite Testing, Inc. "Mike Roberts"

Problems: None

Remarks: Deviation 1 degrees at 4510'

Formation Tops

Formation	Pioneer Resources, Inc. Suppes #7 Sec. 23 T19s R31w 1650' FSL & 2605' FWL
Anhydrite	2269' +685
Krider	2795' +159
Topeka	3734' -780
Heebner	3946' -991
Lansing	3989' -1035
BKC	4362' -1408
Pawnee	4490' -1536
Fort Scott	4529' -1575
Cherokee	4550' -1596
Miss St. Louis	4618' -1664
Miss Spergen	4640' -1686
LTD	4710' -1756
RTD	4710' -1756

Sample Zone Descriptions

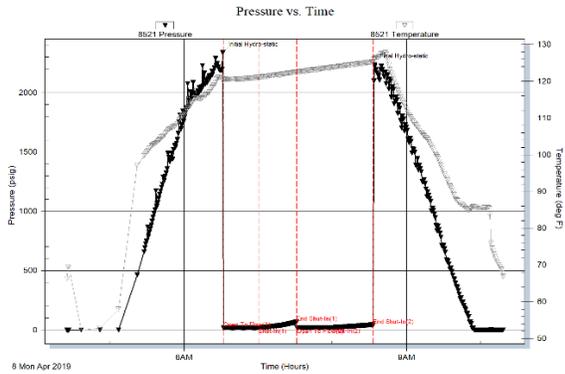
- Pawnee (4490' -1536): Covered in DST #1**
 Ls – Fine to sub-crystalline, oolitic packstone with poor to scattered fair oolitic porosity, light to fair oil stain in porosity, few rocks with light saturation, slight show of free oil, very light odor, fair yellow fluorescents, fair to good cut, 70 gas units.
- Miss St. Louis (4618' -1664): Covered in DST #2**
 Ls – Fine to sub-crystalline, oolitic packstone with poor to very poor oolitic porosity, light to scattered fair oil stain in porosity, slight show of free oil on break, chalky in part, mostly dense.
- Miss Spergen (4640' -1686): Covered in DST #2**
 Ls – Fine to sub-crystalline, oolitic in part with poor scattered oolitic and oomoldic porosity, light spotted oil stain in porosity, no show of free oil, mostly dense, 12 units hotwire.

Drill Stem Tests
Trilobite Testing, Inc.
"Mike Roberts"

DST #1 Pawnee

Interval (4475' – 4510') Anchor Length 35'

IHP	– 2335 #	18-19 #
IFP	– 30" – Built to ¾ in.	66 #
ISI	– 30" – Dead	19-21 #
FFP	– 30" – Dead	41 #
FSI	– 30" – Dead	
FHP	– 2235 #	
BHT	– 126°F	

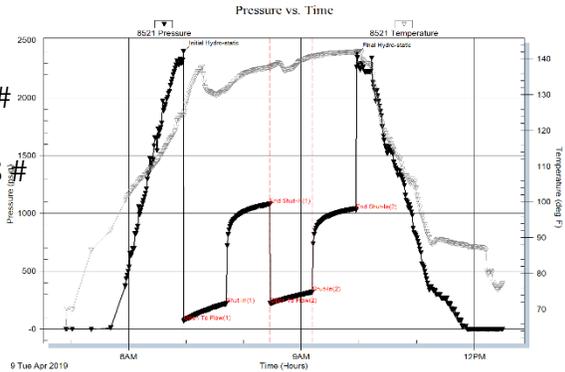


Recovery: 2' Mud w/ oil spots

DST #2 Mississippi Spergen

Interval (4566' – 4654') Anchor Length 88'

IHP	– 2399 #	68-219 #
IFP	– 45" – B.O.B. 12 min.	1079 #
ISI	– 45" – Dead	219-318 #
FFP	– 45" – B.O.B. 17 min,	1027 #
FSI	– 45" – Built to 2 in.	
FHP	– 2381 #	
BHT	– 142°F	



Recovery: 218' GIP
62' GCO
402' GOCM
156' SOCWM
32' GCWM

10% Oil
2% Oil, 3% Water
45% Water

Structural Comparison

Formation	Pioneer Resources, Inc. Suppes #7 Sec. 23 T19s R31w 1650' FSL & 2605' FWL	Brehm Asset Mgt Braeden #2 Sec. 23 T19s R31w 1650' FSL & 2296' FEL	H&B Petroleum, Inc. Suppes #1 Sec. 23 T19s R31w 1410' FSL & 1760' FWL
Anhydrite	2269' +685	2263' +685	FL
Krider	2795' +159	2790' +158	(+1)
Topeka	3734' -780	3730' -782	(+2)
Heebner	3946' -991	3940' -992	(+1)
Lansing	3989' -1035	3982' -1034	(-1)
BKC	4362' -1408	4362' -1415	(+7)
Pawnee	4490' -1536	4486' -1538	(+2)
Fort Scott	4529' -1575	4526' -1578	(+3)
Cherokee	4550' -1596	4548' -1600	(+4)
Miss St. Louis	4618' -1664	4618' -1670	(+6)
Miss Spergen	4640' -1686	4640' -1691	(+5)

Summary

The location for the Suppes #7 well was found via 3-D seismic survey. The new well ran structurally slightly lower than expected via the survey. Two Drill Stem Tests were conducted, one of which recovered commercial amounts of oil from the Mississippian Spergen Formation. After all gathered data had been examined the decision was made to run 5 ½ inch production casing to further evaluate the Suppes #7 well.

Recommended perforations

Mississippian Spergen 4641' – 4644' DST #2

Respectfully Submitted,

Jason T Alm
Hard Rock Consulting, Inc.