

**Shakespeare Oil Company, Inc.
Herron No.1-22
733' FNL and 1099' FWL
NE SE NW NW
Sec 22 T17S R33W
Scott County, Kansas**

Geological Report
by

Macklin M. Armstrong, P.G.
License Number 743

Scale 1:240 Imperial

Well Name:	Herron No. 1-22	
Surface Location:	Sec 22 T17S R33W	
Bottom Location:	733' FNL and 1099' FWL	
API:	15-171-21105	
License Number:	7311	
Spud Date:	11/5/2014	Time: 6:00 PM
Region:	Scott County, Kansas	
Drilling Completed:	11/15/2014	Time: 11:48 PM
Surface Coordinates:		
Bottom Hole Coordinates:		
Ground Elevation:	2945.00ft	
K.B. Elevation:	2957.00ft	
Logged Interval:	3800.00ft	To: 4723.00ft
Total Depth:	4720.00ft	
Formation:	Mississippi	
Drilling Fluid Type:	Chemical/Fresh Water Gel	

OPERATOR

Company:	Shakespeare Oil Company, Inc.	
Address:	202 West Main Street Salem, Illinois 62881	
Contact Geologist:	Don Williams	
Contact Phone Nbr:	618-548-1585	
Well Name:	Herron No. 1-22	
Location:	Sec 22 T17S R33W	API: 15-171-21105
Pool:	Oil	Field: Rudolph
State:	Kansas	Country: USA

CONTRACTOR

Contractor: Southwind Drilling, Inc.
 Rig #: 70
 Rig Type: mud rotary
 Spud Date: 11/5/2014
 TD Date: 11/15/2014
 Rig Release: 11/16/2014

Time: 6:00 PM
 Time: 11:48 PM
 Time: 7:00 PM

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: 100.958967903
 N/S Co-ord:
 E/W Co-ord:

Latitude: 38.567242193

ELEVATIONS

K.B. Elevation: 2957.00ft
 K.B. to Ground: 12.00ft

Ground Elevation: 2945.00ft

NOTES

Date	Depth at 7 am	Activity
11-05-14	MIRU	Spud at 6 pm
11-06-14	268	WOC
11-07-14	1622	Drilling
11-08-14	2713	Drilling
11-09-14	3326	Drilling
11-10-14	3735	Drilling
11-11-14	3972	OB with DST No. 1
11-12-14	4164	CFS
11-13-14	4255	Drilling
11-14-14	4520	Drilling
11-15-14	4624	TOH after DST No. 3
11-16-14	4720	Logging
11-17-14	4720	P & A

Surface Casing: 8 5/8" 23# at 268'
 Production Casing: None set

Deviation: 268' - 3/4°
 3972' - 1 1/2°
 4720' - 1 1/4°

Bit Record:	Make	Size	Type	Depth In	Depth Out	Hours
	Reed	12 1/4"	RR	Surface	268	2
	Reed	7 7/8"	S52P	268	4720	135 3/4

Drill Stem Tests:

DST No. 1 3926 to 3972 Lansing B, C, D Zones
 15-30-45-90

Recovery: 191' WCM (20%W, 80%M)
 315' WCM (50%W, 50%M)
 189' MCW (20%M, 80%W)
 1070' Water (Chl 25,000 ppm)

IHP 1870 FHP 1848
 IFP 65-290 FFP 301-731
 ISIP 1039 FSIP 1038
 Temp 121°

DST No. 2 4178 to 4230 Lansing K Zone
 30-30-60-90

Recovery: 199' MCW (30%M, 70%W)
 252' Water (Chl 38,000 ppm)

IHP 2001 FHP 1954

IFP 25-106 FFP 107-240
 ISIP 1067 FSIP 1087
 Temp 122°

DST No. 3 4556 to 4624 Lower Johnson Zone and Morrow Sand
 30-30-60-90

Recovery: 45' Mud with oil spots in tool
 IHP 2306 FHP 2241
 IFP 26-34 FFP 36-45
 ISIP 821 FSIP 712
 Temp 119°

Formation	Sample	E-Log	Datum	Well 1	Well 2	Well 3
Anhydrite	2292	2290	+667	-7		+10
Base/Anhydrite	2309	2309	+648	-10		+13
Heebner	3849	3850	-893	-3	+51	+18
Toronto	3870	3873	-916	-8	+49	+14
Lansing	3891	3894	-937	-5	+56	+16
Muncie Creek	4075	4076	-1119	-8	+49	+14
Stark	4174	4176	-1219	-7	+51	+10
Hushpuckney	4221	4224	-1267	-8	+55	+8
Base/Kansas City	4287	4289	-1332	-11	+62	+13
Marmaton	4322	4322	-1365	-17	+63	+11
Pawnee	4400	4402	-1445	-6	+67	+12
Myrick Station	4424	4426	-1469	-8	+67	+11
Fort Scott	4442	4445	-1488	-9	+67	+11
Cherokee Shale	4470	4472	-1515	-10	+67	+10
Johnson Zone	4514	4516	-1559	-10	+67	+10
Morrow	4585	4586	-1629	-24	+73	+6
Mississippi	4622	4625	-1668	-11	+84	-9
Total Depth	4720	4723	-1766			

Well 1: New Gulf Operating, LLC Muench No. 1-16 NE NE SW SE Sec 16 T17S R33W
 Well 2: Peel-Hardman Herron No. 1 C SW NE Sec 21 T17S R33W
 Well 3: Shakespeare Oil Company, Inc. Rudolph No. 1-22 1450' FSL and 1350' FEL Sec 22 T17S R33W

Respectfully submitted,
 Macklin M. Armstrong

ROCK TYPES

 Lmst fw7>	 shale, gry	 shale, red
 shale, grn	 Carbon Sh	 Ss

ACCESSORIES

MINERAL

- ▲ Chert, dark
- P Pyrite
- Sandy
- Silty
- △ Chert White

FOSSIL








- ⊙ Crinoids
- F Fossils < 20%
- ⊕ Oolite
- ⚙ Oomoldic

TEXTURE

- C Chalky

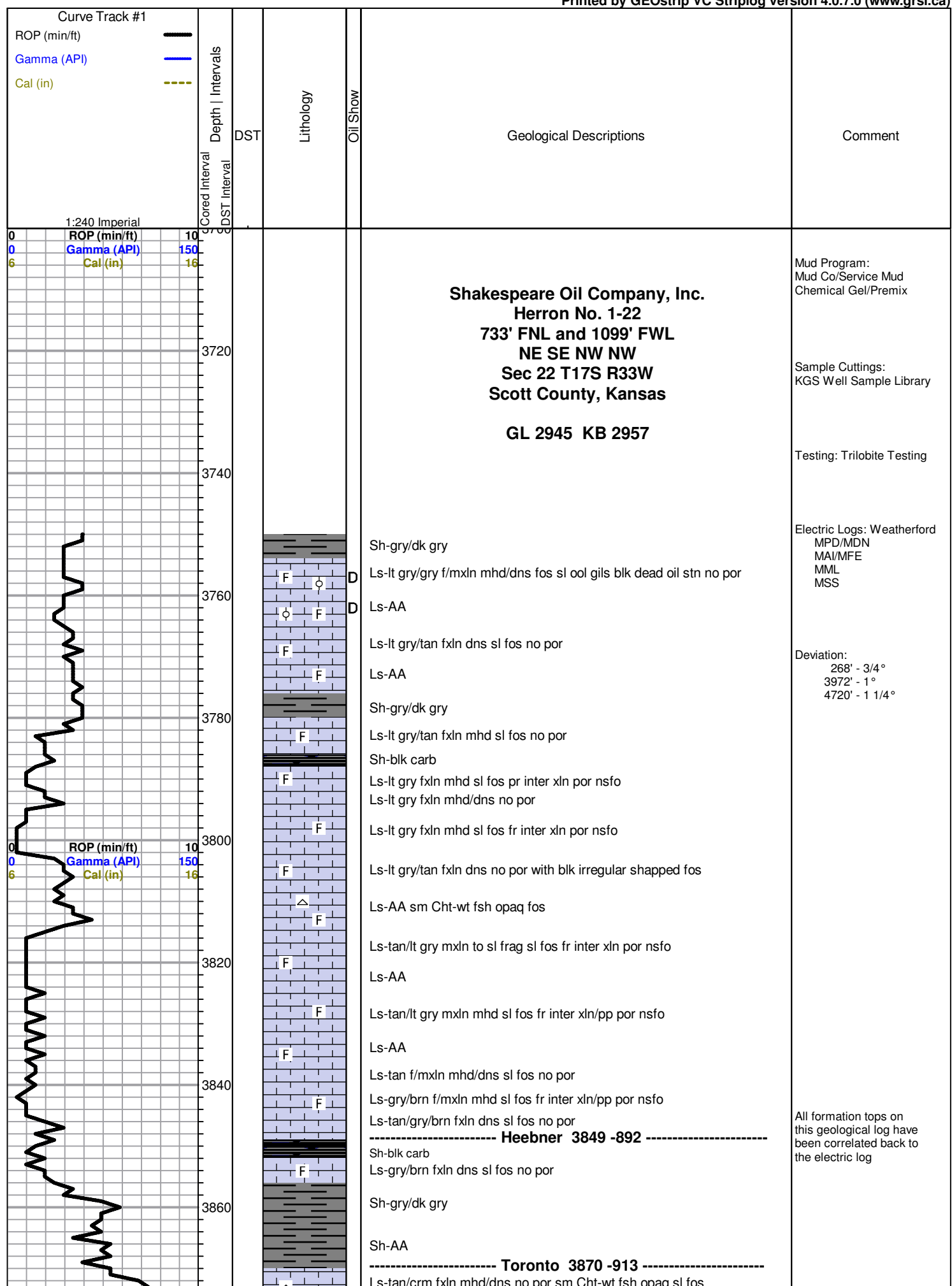
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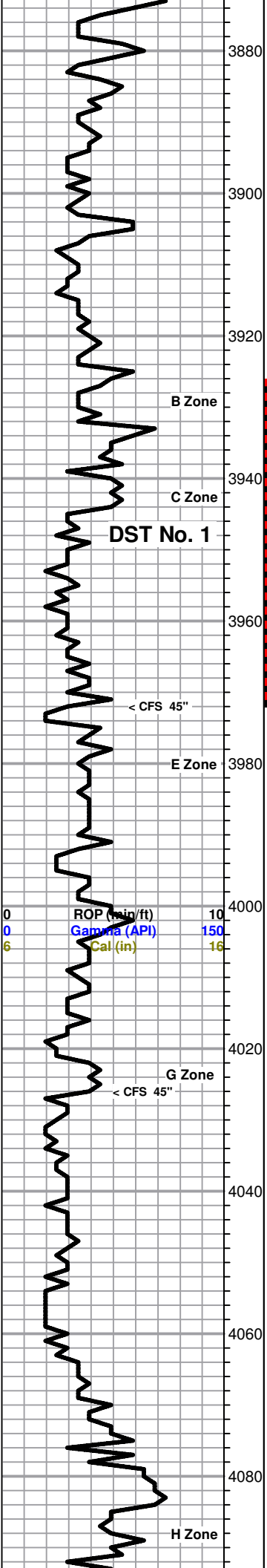
MISC

-  Daily Report
-  Digital Photo
-  Document
-  Folder
-  Link
-  Vertical Log File
-  Horizontal Log File
- Core Log File

DST

-  DST Int
-  DST alt
-  Core



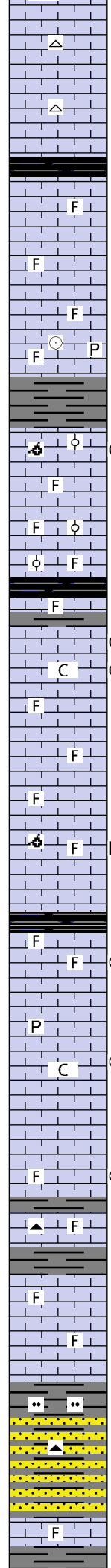
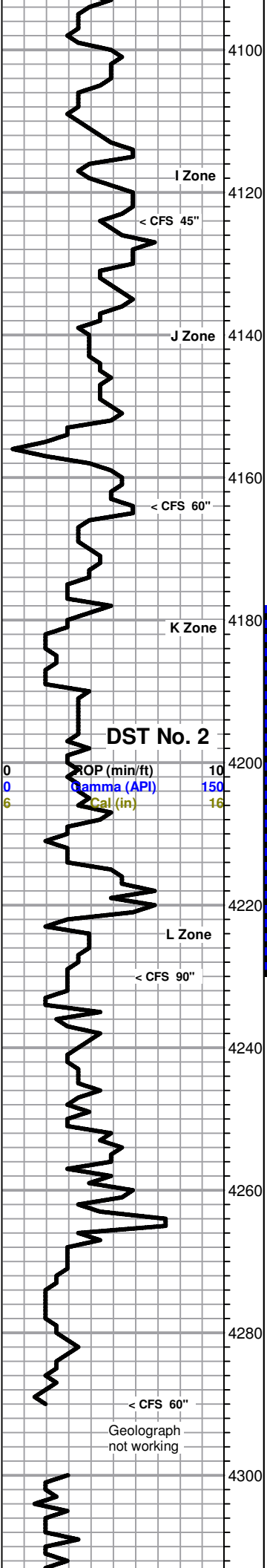


Ls-tan/crm fxln mhd dns no por sm Cht-wt fsh opa
 Ls-tan/crm fxln mhd no por
 Ls-tan/crm fxln dns no por sm Cht-crm fsh opa
 Ls-crm/tan fxln mhd sl fos no por sm Cht-AA
 Sh-gry/dk gry
 ----- **Lansing 3891 -934** -----
 Ls-crm/tan fxln mhd fos sl oom no por sm Cht-wt fsh opa sl fos
 Ls-crm/tan fxln mhd/dns no por sm Cht-AA
 Ls-crm/tan fxln dns no por
 Ls-crm/tan/lt gry fxln mhd no por
 Ls-tan/crm/lt gry f/mxln mhd/dns sl fos no por
 Sh-gry/dk gry
 Ls-tan/crm/lt gry f/mxln mhd/dns sl fos no por
 Sh-gry/dk gry
 Ls-tan/lt gry/gry f/mxln mhd/dns sl fos no por sm Ls-tan mxln mhd fos brn spt
 stn fr cut vssfo on brk
 Ls-tan/crm fxln dns no por
 Ls-AA
 Sh-gry/dk gry
 Ls-tan/crm fxln mhd/dns no por sm Ls-tan f/mxln mhd fr vug/xln
 por brn spt stn gd cut fgso on brk sl odor
 Ls-AA
 Ls-crm/tan/lt gry fxln mhd sl fos no por sm Ls-tan fxln mhd fr inter
 xln por brn spt stn sl cut ssfo on brk
 Ls-AA
 Ls-AA
 Ls-AA
 Ls-lt gry/crm fxln mhd/dns sl fos no por
 Sh-gry/dk gry
 Ls-lt gry/crm fxln mhd/dns sl fos no por
 Sh-gry/dk gry
 Ls-crm/tan fxln dns no por
 Ls-gry/tan/brn f/mxln mhd/dns fos sl oom no por
 Ls-gry/tan f/mxln dns sl fos no por
 Ls-gry/tan m/cxln mhd fos sl oom no por
 Ls-AA sm Cht-wt fsh opa
 Ls-crm/lt tan fxln mhd clkly no por sm Cht-wt/crm fsh opa
 Sh-gry/dk gry
 Ls-crm/tan fxln dns sl clkly no por
 Ls-gry/brn fxln mhd fos no por sm Ls-tan fxln mhd sl clkly no por
 Ls-crm/lt tan fxln mhd sl clkly no por sm pcs with dead oil stn
 Ls-AA
 Ls-crm/lt tan fxln mhd sl clkly no por sm Cht-wt fsh opa
 Ls-crm/lt gry fxln mhd sl clkly no por sm Cht-AA
 Ls-AA sm Cht-wt fsh opa
 Ls-crm/lt gry fxln mhd/dns sl clkly no por sm Cht-AA
 Ls-crm/lt tan fxln dns no por sm Cht-wt fsh opa
 ----- **Muncie Creek 4075 -1118** -----
 Sh-blk carb
 Ls-crm/lt tan fxln dns no por
 Sh-gry/dk gry
 Ls-crm/lt tan fxln dns no por sm Ls-lt gry fxln mhd sl clkly
 with blk ool no por

DST No. 1
 3926 to 3972
 15-30-45-90
 1st Open: BOB in 2.5"
 2nd Open: BOB in 3"
 Recovery:
 191' WCM (20%W, 80%M)
 315' WCM (50%W, 50%M)
 189' MCW (20%M, 80%W)
 1070' W (Chl 25,000 ppm)
 IHP 1870 FHP 1848
 IFP 65-290 FFP 301-731
 ISIP 1039 FSIP 1038
 Temp 121°

Pulled 20 stand short trip at 3972', then cir for test 90"

Mud Data at 3972'
 6:00 am 11-11-14
 Wt 8.9 Vis 51 WL 8.0
 pH 10 Chl 3200 Sol 4%
 YP 18 LCM 2#



Ls-crm/lt gry fxln mhd/dns no por
 Ls-crm/lt gry fxln dns no por sm Cht-wt fsh opa

Ls-crm/tan fxln mhd no por sm Cht-AA

Ls-tan fxln mdh/dns no por sm Ls-brn fxln dns no por
 Sh-blk carb

Ls-tan fxln dns no por sm Ls-gry/brn fxln mhd/dns fos no por

Ls-tan/lt gry fxln mhd/dns no por

Ls-lt gry/tan f/mxln mhd/dns sl fos no por

Ls-tan/lt gry f/mxln dns sl fos no por

Ls-tan fxln dns sl fos no por sm Pyrite and free Crin

Sh-gry/dk gry

Ls-tan/lt gry mhd fos oom and ool gd ooc por nsfo and sm Ls-tan (5 pcs)
 fxln mhd sl fos fr vug por sl cut ssfo on brk no odor

Ls-tan/gry/brn fxln mhd/dns sl fos no por

Ls-tan/lt gry fxln mhd/dns fos sl ool no por

Ls-tan/lt gry fxln dns sl fos sl ool no por

----- Stark 4174 -1217 -----

Ls-tan/lt gry fxln dns sl fos no por
 Sh-gry/dk gry

Ls-tan/lt gry fxln mhd pr inter xln por dk brn spt stn sl cut ssfo on brk

Ls-tan fxln mhd sl clkly fr vug por dk brn spt stn sl cut fsfo on brk faint odor

Ls-tan/lt gry fxln dns fos no por

Ls-AA

Ls-tan/gry fxln dns sl fos no por

Ls-AA

Ls-tan/lt gry mxln mhd fos sl oom no por sm Ls-tan (5 pcs) fxln mhd
 sl gils pr inter xln por blk dead oil stn nsfo no odor

Ls-tan/lt gry fxln dns no por

----- Hushpuckney 4221 -1264 -----

Ls-tan/lt gry fxln mhd sl fos no por sm Ls-lt gry (2 pcs) fxln mhd fr vug por
 dk brn spt stn sl cut vssfo on brk no odor

Ls-lt gry/crm fxln mhd sm pcs sl gils no por

Ls-AA sm Pyrite

Ls-lt gry/crm/tan fxln mhd sl clkly sm pcs sl gils with vssfo on brk no odor

Ls-tan/lt gry fxln mhd no por

Ls-AA

Ls-lt gry/tan f/mxln mhd fos no por sm Ls-lt gry (5 pcs) fxln mhd fr vug
 por dk brn to blk dead oil spt stn sl cut vssfo on brk no odor

Sh-gry/dk gry

Ls-lt gry/tan f/mxln dns sl fos no por sm Cht-gry fsh opa sl fos

Sh-gry/dk gry

Ls-tan/lt gry fxln mhd sl fos no por

Ls-AA

Ls-tan/lt gry f/mxln mhd/dns with blk and dk gry irregular shapped
 fos no por

----- Base/Kansas City 4287 -1330 -----

Sh-gry/dk gry slty

Sh-AA with Siltstone-lt gry/gry and sm Cht-gry/brn fsh opa

Sh-gry/dk gry slty with Siltstone-lt gry

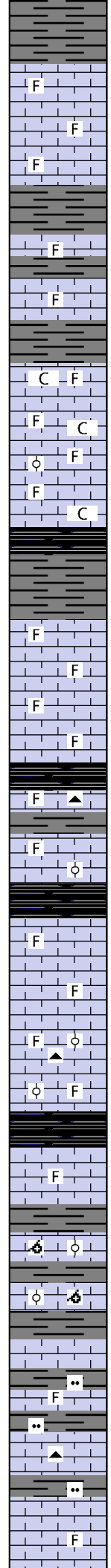
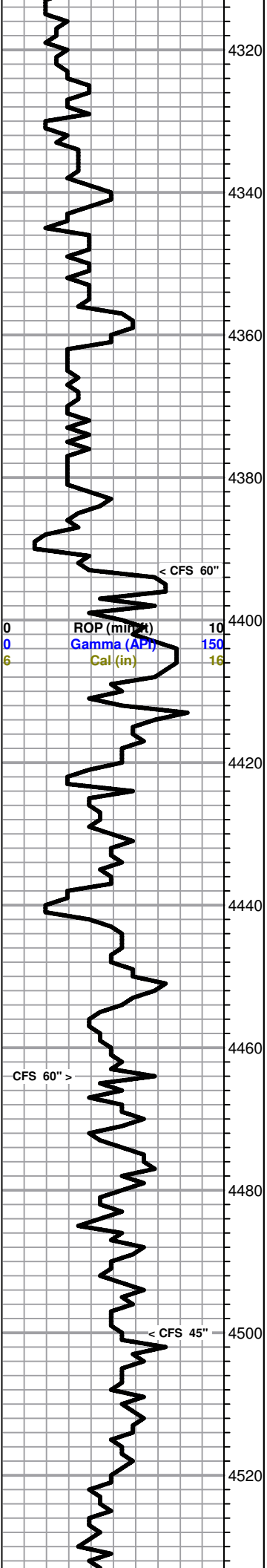
Ls-tan/lt gry f/mxln mhd sl fos no por

Sh-gry/dk gry

Mud Data at 4146'
 4:30 am 11-12-14
 Wt 9.1 Vis 46 WL 8.0
 pH 10 Chl 5200 Sol 5.2%
 YP 15 LCM 2#

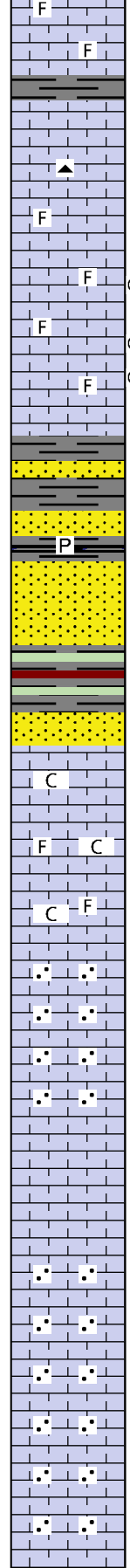
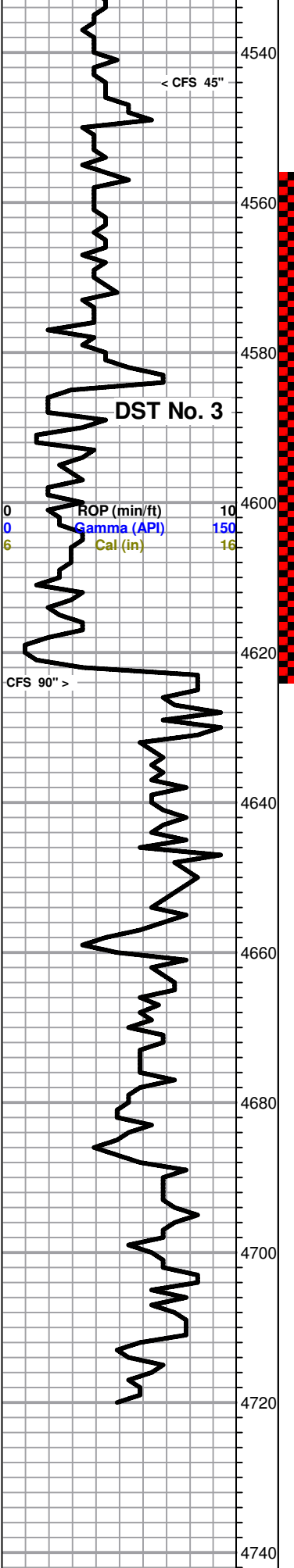
DST No. 2
 4178 to 4230
 30-30-60-90
 1st Open: BOB in 15"
 2nd Open: BOB in 22"
 Recovery:
 199' MCW (30%M, 70%W)
 252' W (Chl 38,000 ppm)
 IHP 2001 FHP 1954
 IFP 25-106 FFP 107-240
 ISIP 1067 FSIP 1087
 Temp 122°

Mud Data at 4230'
 3:20 am 11-13-14
 Wt 9.1 Vis 45 WL 8.8
 pH 9.5 Chl 6400 Sol 5.2%
 YP 14 LCM 3#



Sh-gry/dk gry
 ----- **Marmaton 4322 -1365** -----
 Ls-tan/lt gry f/mxln dns sl fos no por
 Ls-tan/lt gry f/mxln mhd/dns sl fos no por
 Ls-AA
 Sh-gry/dk gry
 Ls-tan/brn f/mxln to sl frag dns fos no por
 Sh-gry/dk gry
 Ls-tan/gry/brn f/mxln mhd/dns sl fos no por
 Sh-gry/dk gry
 Ls-lt gry/tan fxln mhd sl clkly no por and Ls-gry/brn f/mxln mhd
 fos sm pcs sl gils no por
 Ls-lt gry/tan fxln mhd sl fos sl clkly no por
 Ls-AA sm Ls-tan fxln mhd fos with blk ool no por
 Ls-tan fxln dns fos no por
 Ls-lt gry/gry cxln to frag mhd fos no por sm Ls-tan fxln mhd sl clkly no por
 Sh-blk carb
 Sh-grydk gry
 ----- **Pawnee 4400 -1443** -----
 Ls-tan fxln mhd sl fos no por
 Ls-tan fxln dns no por sm Ls-dk gry mxln dns fos no por
 Ls-tan/lt gry fxln mhd sl fos no por
 Ls-tan/lt gry fxln dns no por sm Ls-gry/brn f/mxln mhd fos no por
 ----- **Myrick Station 4424 -1467** -----
 Ls-tan/gry mxln dns sl fos no por sm Cht-gry fsh opaqa sl fos
 Sh-gry/dk gry
 Ls-lt gry/gry f/mxln dns fos ool no por
 Sh-blk carb
 ----- **Fort Scott 4442 -1485** -----
 Ls-lt gry/tan fxln dns no por sm Ls-gry/brn cxln dns fos no por
 Ls-lt gry/tan fxln dns no por sm Ls-tan f/mxln dns sl fos no por
 Ls-crm/tan fxln dns no por sm Ls-tan fxln dns fos ool no por
 sm Cht-gry fsh opaqa fos
 Ls-AA
 ----- **Cherokee Shale 4470 -1513** -----
 Sh-blk carb
 Ls-tan/lt gry fxln dns no por sm Ls-gry/brn fxln dns fos no por
 Sh-gry/dk gry
 Ls-tan/gry f/mxln dns fos sl oom and ool no por
 Sh-gry/dk gry
 Ls-tan/gry fxln dns sm Ls-tan fxln mhd fos sl ool and oom no por
 Sh-gry/dk gry
 Ls-lt gry fxln dns no por
 Sh-gry/dk gry slty
 Ls-tan/lt gry fxln dns sl fos no por
 ----- **Johnson Zone 4514 -1557** -----
 Ls-gry/brn fxln dns no por sm Cht-gry/brn fsh opaqa
 Sh-gry/dk gry slty
 Ls-gry/brn fxln dns no por
 Ls-AA sm Ls-tan fxln dns sl fos no por

Mud Data at 4500'
 4:45 am 11-14-14
 Wt 9.1 Vis 55 WL 8.8
 pH 10 Chl 6000 Sol 5.2%
 YP 20 LCM 2#



Ls-lt gry/gry fxln dns sl fos no por

Ls-AA

Sh-gry/dk gry

Ls-gry/brn fxln dns no por

Ls-gry/brn/tan fxln mhd/dns no por sm Cht-gry fsh opa

Ls-lt gry/gry/brn fxln dns no por sm Ls-lt gry fxln dns sl fos no por

Ls-AA

Ls-gry fxln dns no por sm Ls-lt gry fxln mhd fos with blk irregular shapped fos no por and sm Ls-lt gry (5 pcs) fxln mhd pr inter xln por brn spt to sat stn vssfo on brk faint odor

Ls-AA few pcs with vssfo

Ls-AA few pcs with vssfo

Ls-lt gry/gry fxln mhd/dns no por

----- **Morrow 4585 -1628** -----

Ss-lt gry fgrr ang to sub ang tite cement

Sh-gry/dk gry

Ss-lt gry/gry fgrr ang to sub ang tite cement

Sh-gry/dk gry/blk sm Pyrite

Ss-lt gry/gry fgrr sub rnd to sub ang tite cement to sl fri

Ss-lt gry/wt fgrr sub rnd to sub ang tite cement to sl fri sl gils

Sh-gry/dk gry/dk grn sm mar

Ss-wt/lt gry fgrr sub rnd fri

----- **Mississippi 4622 -1665** -----

Ls-crm/tan fxln dns sl clkly no por

Ls-AA

Ls-tan/lt gry fxln mhd/dns sl fos sl clkly no por

Ls-AA

Ls-wt/crm fgrr mhd/dns no por

Ls-wt/crm fxln to fgrr mhd/dns no por

Ls-wt/lt gry fgrr mhd no por

Ls-lt gry fxln to fgrr mhd/dns no por

Ls-lt gry f/mxln mhd/dns no por

Ls-lt gry/tan f/mxln mhd/dns no por

Ls-lt gry/crm fxln to sl gran mhd no por

Ls-lt gry/crm fxln to sl gran dns no por

Ls-lt gry/crm fxln to sl gran mhd/dns no por

Ls-lt gry/crm fxln to gran dns no por

Ls-AA

Ls-lt gry/crm fxln to gran mhd/dns no por

----- **RTD 4720 -1763** -----

DST No. 3
 4556 to 4624
 30-30-60-90
 1st Open: Weak blob, building to 3.5"
 2nd Open: Weak blow, building to 1.5"
 Recovery:
 45' Mud with oil spots in tool
 IHP 2306 FHP 2241
 IFP 26-34 FFP 36-45
 ISIP 821 FSIP 712
 Temp 119°

Pulled 20 stand short trip at 4624', then cir for test 60"

Mud Data at 4624'
 6:00 am 11-15-14
 Wt 9.3 Vis 53 WL 9.6
 pH 9.5 Chl 6500 Sol 6.8%
 YP 20 LCM 2#

Finished drilling at 11:48 pm on 11-15-14. Circulated for log 60 minutes.


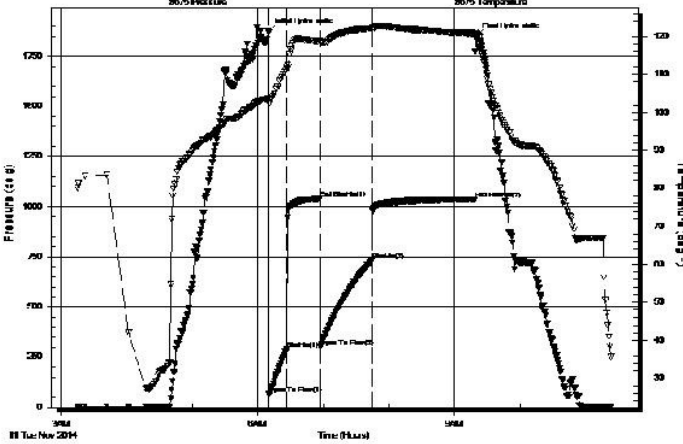
Finished logging at 7:20 am on 11-16-14


Shakespeare Herron 1-22 dst 1-1.jpg

Shakespeare Herron 1-22 dst 2-1.jpg

Shakespeare Herron 1-22 dst 3-2.jpg

	4760			
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 <p style="font-size: 2em; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC.</p>	<h2 style="margin: 0;">DRILL STEM TEST REPORT</h2> <p>Shakespeare Oil Company, Inc. 22-17s-33w Scott Co, KS</p> <p>202 West Street Herron #1-22 Salem IL, 62881</p> <p>ATTN: Mac Armstrong Job Ticket: 57297 DST#: 1 Test Start: 2014.11.11 @ 03:15:00</p>																																				
<p>GENERAL INFORMATION:</p> <p>Formation: Lansing 'A,B,C' Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial) Time Tool Opened: 06:10:30 Tester: Jace McKinney Time Test Ended: 11:24:00 Unit No: 75</p> <p>Interval: 3946.00 ft (KB) To 3972.00 ft (KB) (TVD) Reference Elevations: 2957.00 ft (KB) Total Depth: 3972.00 ft (KB) (TVD) 2945.00 ft (CF) Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 12.00 ft</p>																																					
<p>Serial #: 8675 Inside</p> <p>Press@RunDepth: 730.76 psig @ 3953.00 ft (KB) Capacity: 8000.00 psig Start Date: 2014.11.11 End Date: 2014.11.11 Last Calib.: 2014.11.11 Start Time: 03:15:15 End Time: 11:24:00 Time On Btm: 2014.11.11 @ 06:10:15 Time Off Btm: 2014.11.11 @ 09:20:00</p> <p>TEST COMMENT: B.O.B. in 2 1/2 min. Bled off for 5 min, No return blow B.O.B. in 3 min. Bled off for 5 min, No return blow</p>																																					
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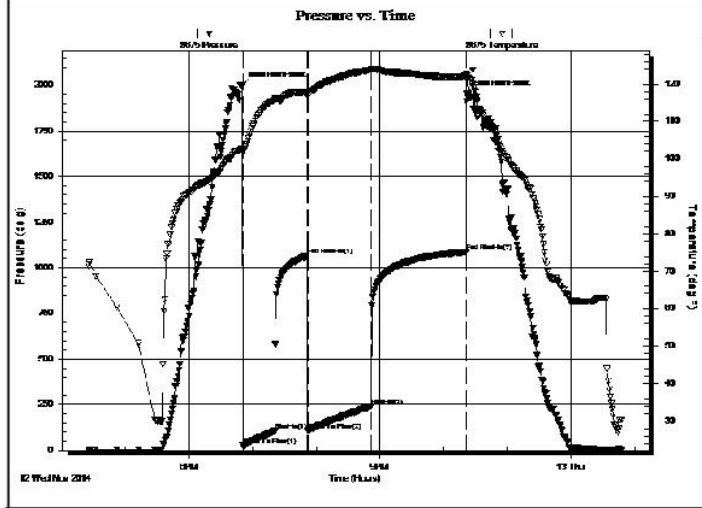
 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT	
	Shakespeare Oil Company, Inc. 202 West Street Salem IL, 62881 ATTN: Mac Armstrong	22-17s-33w Scott Co, KS Herron #1-22 Job Ticket: 57298 DST#: 2 Test Start: 2014.11.12 @ 16:25:00

GENERAL INFORMATION:

Formation: LKC 'J&K'	Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)	Tester: Jace McKinney
Time Tool Opened: 18:50:30	Unit No: 75
Time Test Ended: 00:48:30	Reference Elevations: 2957.00 ft (KB)
Interval: 4178.00 ft (KB) To 4230.00 ft (KB) (TVD)	2945.00 ft (CF)
Total Depth: 4230.00 ft (KB) (TVD)	KB to GR/CF: 12.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Poor

Serial #: 8675	Inside	Capacity: 8000.00 psig
Press@RunDepth: 240.46 psig @ 4191.00 ft (KB)	Start Date: 2014.11.12	Last Calib.: 2014.11.12
Start Time: 16:25:15	End Date: 2014.11.13	Time On Btm: 2014.11.12 @ 18:50:15
End Time: 00:48:30	Time Off Btm: 2014.11.12 @ 22:21:45	

TEST COMMENT: B.O.B. in 15 min.
 Bled off for 5 min, No return blow
 B.O.B. in 22 min.
 Bled off for 5 min, No return blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2000.76	102.82	Initial Hydro-static
1	24.78	101.98	Open To Flow (1)
31	105.76	115.81	Shut-In(1)
62	1066.74	117.84	End Shut-In(1)
62	107.24	117.19	Open To Flow (2)
122	240.46	123.78	Shut-In(2)
211	1087.14	122.07	End Shut-In(2)
212	1953.65	122.48	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
199.00	mcw 30%M 70%O	2.79
252.00	100% Water	3.53

* Recovery from multiple tests

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

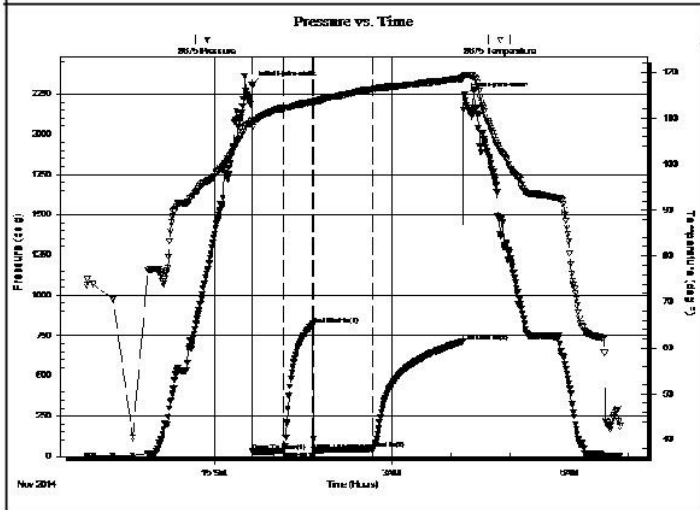
 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT	
	Shakespeare Oil Company, Inc. 202 West St Salem IL 62881 ATTN: Mac Armstrong	22-17s-33w Scott,KS Herron #1-22 Job Ticket: 57299 DST#: 3 Test Start: 2014.11.14 @ 21:50:00

GENERAL INFORMATION:

Formation: Lower Johnson & Morr	Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)	Tester: Jace McKinney
Time Tool Opened: 00:38:45	Unit No: 75
Time Test Ended: 06:52:00	
Interval: 4556.00 ft (KB) To 4624.00 ft (KB) (TVD)	Reference Elevations: 2957.00 ft (KB)
Total Depth: 4624.00 ft (KB) (TVD)	2945.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Poor	KB to GR/CF: 12.00 ft

Serial #: 8675	Inside				
Press@RunDepth: 45.49 psig @ 4584.00 ft (KB)	Capacity: 8000.00 psig				
Start Date: 2014.11.14	End Date: 2014.11.15	Last Calib.: 2014.11.15			
Start Time: 21:50:15	End Time: 06:52:00	Time On Btm: 2014.11.15 @ 00:38:30			
		Time Off Btm: 2014.11.15 @ 04:13:15			

TEST COMMENT: Built to 3 1/2" blow
 Bled off for 3 min, No return blow
 Built to 1 1/2" blow
 Bled off for 3 min, No return blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2306.48	109.68	Initial Hydro-static
1	25.99	108.09	Open To Flow (1)
32	34.17	112.19	Shut-In(1)
62	820.72	113.61	End Shut-In(1)
62	36.10	113.35	Open To Flow (2)
123	45.49	116.37	Shut-In(2)
214	712.06	118.72	End Shut-In(2)
215	2240.79	119.31	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
45.00	100% Mud with oil spots in tool	0.63

* Recovery from multiple tests

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