Confidentiality Requested:
☐ Yes ☑ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1319913

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34996
Name: Stewart Producers, Inc.
Address 1: 301 N 27TH ST.
Address 2: PO BOX 546
City: MT. VERNON State: IL Zip: 62864 + 0546
Contact Person: Mark Thommpson
Phone: (316) 734-3141
CONTRACTOR: License # 33575
Name: WW Drilling, LLC
Wellsite Geologist: David J Goldak
Purchaser:

Designate Type of Completion:

☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☑ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

10/04/2016	10/10/2016	10/11/2016
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-135-25927-00-00
Spot Description:
NE - SW - SW - SW Sec. 32 Twp. 17 S. R. 24 ☐ East ☑ West
335 Feet from ☐ North / ☑ South Line of Section
385 Feet from ☐ East / ☑ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Ness
Lease Name: RUFENACHT Well #: 1
Field Name: Keilman SE
Producing Formation: Mississippian
Elevation: Ground: 2360 Kelly Bushing: 2368
Total Vertical Depth: 4412 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 220 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 7000 ppm Fluid volume: 1000 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date:
☐ **Confidential Release Date:**
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** Karen Ritter **Date:** 11/01/2016

[redacted] 1319913

Operator Name: Stewart Producers, Inc. Lease Name: RUFENACHT Well #: 1

Sec. 32 Twp. 17 S. R. 24 ☐ East ☑ West County: Ness

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	220	common	150	cc 3%, gel 2%

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing	-			
___ Plug Back TD				
___ Plug Off Zone	-			

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)* _____

PRODUCTION INTERVAL:

Form	ACO1 - Well Completion
Operator	Stewart Producers, Inc.
Well Name	RUFENACHT 1
Doc ID	1319913

All Electric Logs Run

DIL
Dual Comp. Porosity
Micro.
Comp. Sonic

Form	ACO1 - Well Completion
Operator	Stewart Producers, Inc.
Well Name	RUFENACHT 1
Doc ID	1319913

Tops

Name	Top	Datum
Anhydrite	1646	+722
Base/Anh.	1679	+689
Heebner	3702	-1334
Lansing	3744	-1376
Stark	4019	-1651
BKC	4064	-1696
Pawnee	4164	-1796
Fort Scott	4242	-1874
Cherokee	4268	-1900
Mississippian	4334	-1966

Form	ACO1 - Well Completion
Operator	Stewart Producers, Inc.
Well Name	RUFENACHT 1
Doc ID	1319913

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	220	common	150	cc 3%, gel 2%

GEOLOGIC REPORT

DAVID J. GOLDAK

WICHITA, KANSAS

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

Well Name:	**Rufenacht #1**		
Location:	**Section 32 - T17S - R24W**		
License Number:	**API: 15-135-25927**	**Region:**	**Ness Co., KS**
Spud Date:	**10 / 04 / 2016**	**Drilling Completed:**	**10 / 10 / 2016**
Surface Coordinates:	**335' FSL and 385' FWL** **Approx. NE - SW - SW - SW**		
Bottom Hole Coordinates:			
Ground Elevation (ft):	**2360'**	**K.B. Elevation (ft):**	**2368'**
Logged Interval (ft):	**3500' To: 4412'**	**Total Depth (ft):**	**4412'**
Formation:	**Mississippian**		
Type of Drilling Fluid:	**Chemical - Mud Co**		

OPERATOR

Company: **Stewart Producers, Inc.**
Address: **PO Box 546**
Mt Vernon, IL 62864

GEOLOGIST

Name: **David J. Goldak**
Company: **D. J. GOLDAK, INC.**
Address: **12427 W Ridgepoint Cir**
Wichita, Kansas 67235

General Info

CONTRACTOR: WW Drilling, Rig #12

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	Smith-?	4-15s	220	220	2.00
2	7-7/8	Smith-F27	15-14-14	4412	4192	101.25

SURVEYS: 220'-0.50, 4355'-0.75

GENERAL DRILLING & PUMP INFORMATION:
Running 7 stands of collars (6.25"x2.25"): 420.99'
Drilling with 33,000-35,000 lbs on bit and 70-80 RPM.
Pumping 60 S/M; 7.74 B/M; and 800 psi at the Standpipe.

Daily Status

10/04/16 - Spud at 3:45 PM; Set 8-5/8" Csg at 219'
10/05/16 - 570' Drilling
10/06/16 - 2,450' Drilling
10/07/16 - 3,262' Drilling; DiSplace mud @ 3,396'
10/08/16 - 3,915' Drilling; Wiper trip 43 stands @ 4,224'
10/09/16 - 4,224' CTCH after wiper trip; DST #1 @ 4,355'
10/10/16 - 4,355' TIH after DST #1; RTD @ 4,412'; Log well

	Log Tops	Sample Tops
Anhydrite	1646 (+722)	1653 (+715)
Base/Anhy	1679 (+689)	1686 (+682)
Heebner	3702 (-1334)	3709 (-1341)
Lansing	3744 (-1376)	3752 (-1384)
Stark Sh	4019 (-1651)	4027 (-1659)
BKC	4064 (-1696)	4076 (-1708)
Pawnee	4164 (-1796)	4172 (-1804)
Ft Scott	4242 (-1874)	4248 (-1880)
Cherokee	4268 (-1900)	4268 (-1900)
Mississippian	4334 (-1966)	4330 (-1962)
Total Depth	4408 (-2040)	4412 (-2044)

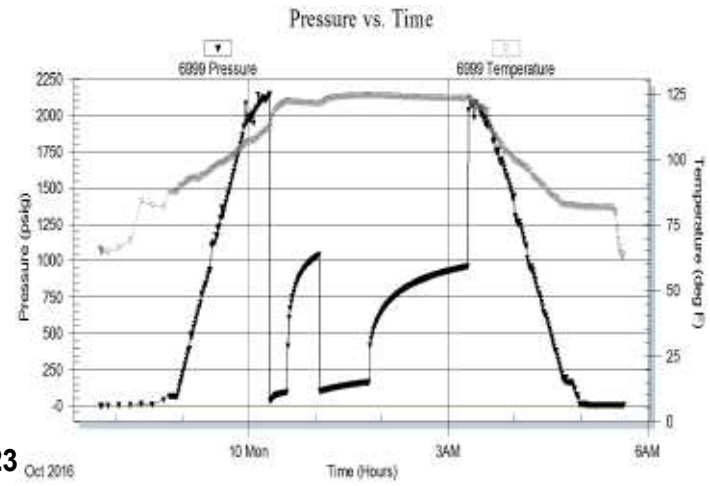
The open-hole log measurements are 6' shallower than drilling-time measurements from TD to 4,060' and 7' shallower from 4,060' to 3,500' (top of drilling time measurements).

DST #1: 4,338' - 4,355' (Mississippian)
15" - 30" - 45" - 90"

IF: Good blow building to BOB in 8-1/2 minutes
ISI: No blow back
FF: Fair blow building to BOB in 32 minutes
FSI: No blow back

RECOVERY: 341' Total Fluid, consisting of:
15' CO (100% O); Gravity: 37 API
326' MW (90% W & 10% M)
Chlorides Recovery: 21,000 ppm

SIP: 1037-958; FP: 31-93, 98-162; HP: 2143-2113; BHT: 123



ROCK TYPES

Anhy
Bent
Brec
Cht
Clyst
Coal
Congl
Dol
Gyp
Igne
Lmst
Meta
Mrlst
Salt
Shale
Shcol
Shgy
Sltst
Ss
Till
Carb sh
Dol
Dtd
Gry sh
Sandylms
Shale
Sltstn
Shlyslts
Sltysh
Lms

ACCESSORIES

MINERAL
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Slty

FOSSIL
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

STRINGER
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

TEXTURE
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY TYPE
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

SORTING
- Well
- Moderate
- Poor

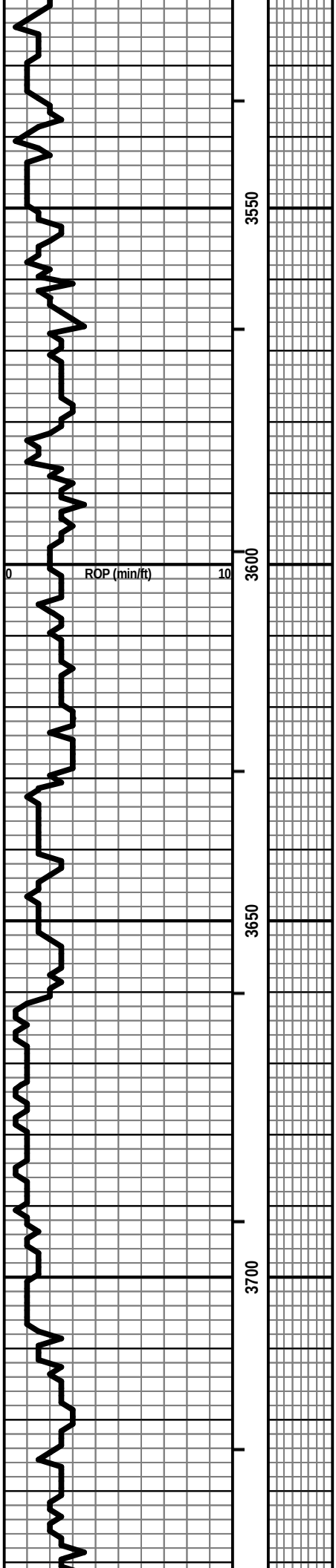
ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

OIL SHOWS
- Even
- Spotted
- Ques
- Dead
- Gas show

INTERVALS
- Core
- Dst
- Dst_1_t
- Dst_1_b
- Dst

EVENTS
- Rft
- Sidewall
- Conn

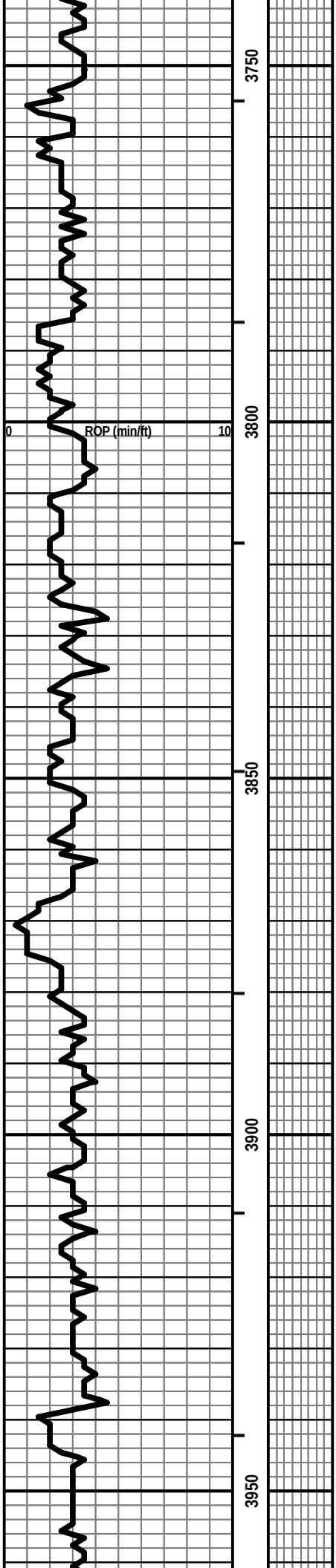
Curve Track 1 ROP (min/ft)	Depth	Porosity 24% 18% 12% 6%	Lithology	Oil Shows	Geological Descriptions	Remarks
0 ROP (min/ft) 10	3500					DRLG WITH BIT #2: 7-7/8" CONV NEW SMITH-F27; JETS: 15-14-14 DISPLACE MUD SYSTEM @ 3,396' MUD-CO @ 3,400': Vis: 59, Wt: 8.7, YP: 13, GelS: 10/45, pH: 10.0, WL: 8.8, Chl: 6,200, Sol: 2.6, LCM: 1#



Vis: 61, Wt: 8.7, LCM: 1#

Vis: 59, Wt: 8.7, LCM: 1#

HEEBNER 3709 (-1341)

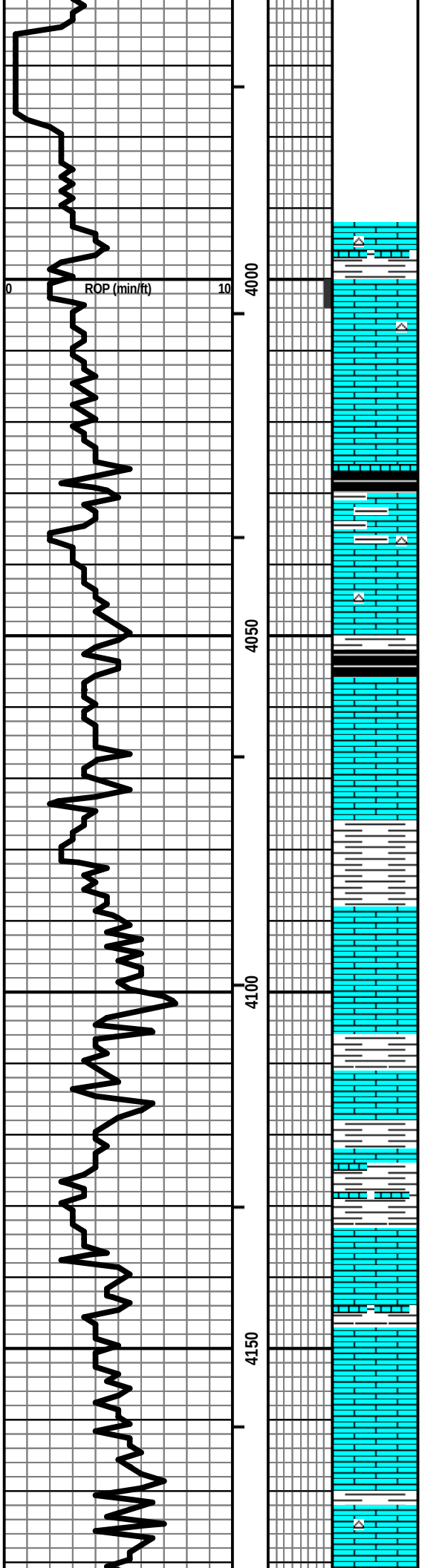


LANSING 3752 (-1384)

Vis: 59, Wt: 8.8, LCM: 1.5#

Vis: 63, Wt: 8.9, LCM: 2#

Vis: 61, Wt: 9.0, LCM: 2#



LS - CRM / TAN / SCAT BRN, MOT IN PT, VF / F XLN, SCAT REXLN CALC, SL FOSS + OOL, TR INTXLN POR, PRED DNS, NS W/ CHT - LT GY / WHT

BEGIN SAMPLES @ 4,010'

Vis: 50, Wt: 9.3, YP: 14, GelS: 11/46, pH: 8.5, WL: 8.0, Chl: 6,400, Sol: 6.8, LCM: Tr

LS - GY / TAN, PRED VF / SCAT F XLN, TR FOSS PRED DNS, NS W/ SH - BLK, CARB

STARK SHALE 4027 (-1659)

LS - CRM / TAN / SCAT GY, VF / F XLN, OOL IN PT, TR FOSS, CHKY IN PT, PRED DNS, NS W/ SCAT CHT - GY / WHT

LS -TAN / BRN / SCAT GY, MOT IN PT, VF / F XLN, SCAT REXLN CALC, TR CHKY, PRED DNS, NS

BASE OF KC 4076 (-1708)

SH - GY / SCAT GRN + BLK W/ LS - CRM / TAN, VF / F XLN, FOSS IN PT, CHKY IN PT, PRED DNS, NS

LS - GY / TAN / SCAT BRN, MOT IN PT, VF / F XLN, SL FOSS, PRED DNS, NS

Vis: 55, Wt: 9.3, LCM: 1#

LS - TAN, VF / CRYPTO XLN, PRED DNS, NS W/ SH - GY / GRN / RED W/ SCAT LS - TAN / GY, MOT, ARGIL / DNS

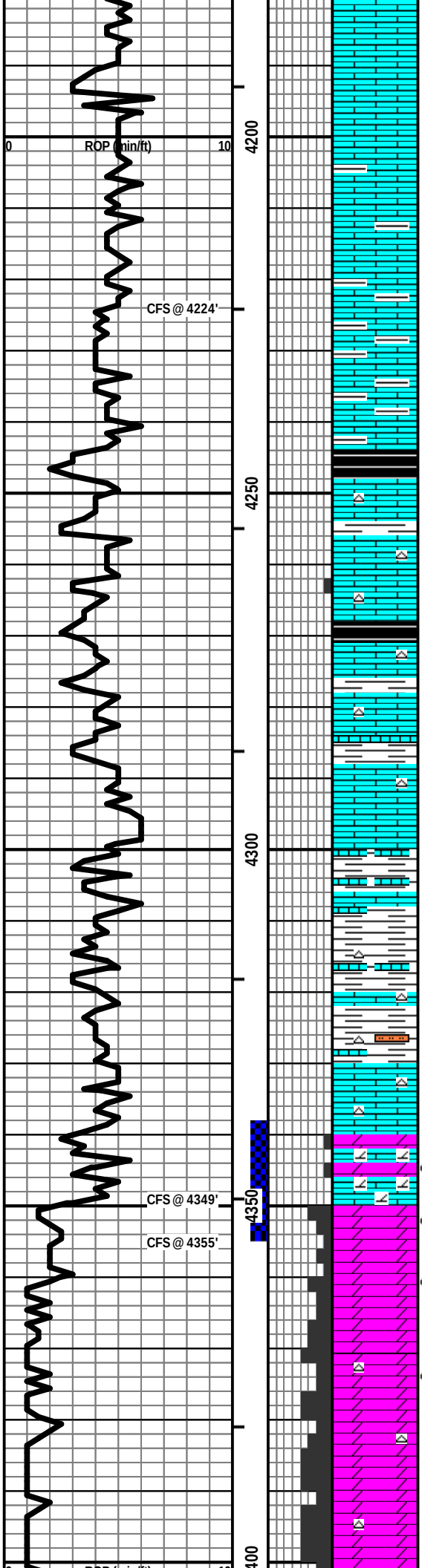
ABNT SH - GY / RED / SCAT GRN W/ LS - TAN / WHT, VF XLN, CHKY / DNS

LS - TAN / SCAT GY, VF / SCAT F XLN, OOL IN PT, SL FOSS, PRED DNS, NS

LS - CRM / TAN / SCAT WHT, MOT IN PT, VF / F XLN, SCAT OOL + FOSS, CHKY IN PT, PRED DNS, NS

PAWNEE 4172 (-1804)

LS - TAN / BRN / GY, VF / F XLN, SCAT REXLN CALC, CHKY IN PT, PRED DNS, NS W/ TR CHT - TAN



LS - TAN / BRN / GY, VF / F XLN, SCAT REXLN CALC, SUBCHKY / CHKY IN PT, PRED DNS, NS

Vis: 50, Wt: 9.4, LCM: 1#

LS - TAN / BRN / SCAT GY, VF / F XLN, SUBCHKY IN PT, PRED DNS, NS W/ SH - LT / DK GY

WIPER TRIP 43 STANDS @ 4,224'

LS - TAN / CRM / SCAT BRN, VF / F XLN, SUBCHKY IN PT, PRED DNS, NS W/ ABNT SH - LT / DK GY

SH - BLK, CARB W/ LS - TAN / CRM, F / VF XLN, OOL IN PT, SL FOSS, PRED DNS, NS W/ SCAT CHT - LT / MED GY

FT SCOTT 4248 (-1880)

Vis: 52, Wt: 9.35, YP: 11, GelS: 12/46, pH: 9.0, WL: 9.6, Chl: 6,200, Sol: 7.5, LCM: 1#

LS - TAN / CRM, F / VF XLN, FOSS IN PT, SL OOL, TR P INTXLN POR, TR GB, NSFO, FT ODOR, TR BRN / BLK SPTY STN, SCAT FLUOR, NO / GD CUT W/ CHT - LT GY

CHEROKEE SH 4268 (-1900)

LS - TAN, VF / F XLN, FOSS IN PT, SUBCHKY IN PT, PRED DNS, NS W/ CHT - GY / TAN

LS - TAN / CRM / WHT, MOT IN PT, VF / F XLN, SCAT REXLN CALC, FOSS IN PT, SCAT OOL, CHKY IN PT, PRED DNS, NS W/ SCAT CHT - GY / TAN

Vis: 56, Wt: 9.1+, LCM: 2#

LS - TAN / CRM, VF / F XLN, SCAT OOL + FOSS, SUBCHKY IN PT, PRED DNS, NS W/ SH - GY / SCAT GRN

LS - TAN / CRM / SCAT BRN, MOT IN PT, F / M XLN, SCAT GLAUC, SCAT OOL, NO POR, TR FO + SPTY STN, NO ODOR W/ SCAT CHT - TAN / RED / ORG W/ SH - GRN / GY

LS - TAN / SCAT BRN, MOT IN PT, F / M XLN, SCAT REXLN CALC, SL FOSS, DNS, NS W/ CHT - ORG / YEL / GY W/ SCAT SH - GY / GRN, SLTY IN PT

MISSISSIPPIAN 4330 (-1962)

LS - AS ABOVE W/ DOLO, LMY IN PT AND DOLO LS - TAN, F / M XLN, OOL IN PT, SCAT P INTXLN + PPT + VUG POR, TR FO, V FT ODOR, TR RESIDUAL SPTY STN

PIPE STRAP @ 4,355': LONG 0.6'

DOLO - LT GY / CRM, F / SCAT M XLN, F / TR GD INTXLN + VUG POR, PRED SL / GD SFO, SL SGB, G ODOR, SPTY / SAT STN, P / G FLUOR + CUT

DOLO - LT GY / CRM, F / SCAT M XLN, FR / GD VUG + INTXLN POR, SL / FR SFO, SL / FR SHOW RESIDUAL OIL, F ODOR, SPTY BRN / BLK STN

DST #1: 4,338' - 4,355' (Mississippian)
15" - 30" - 45" - 90"

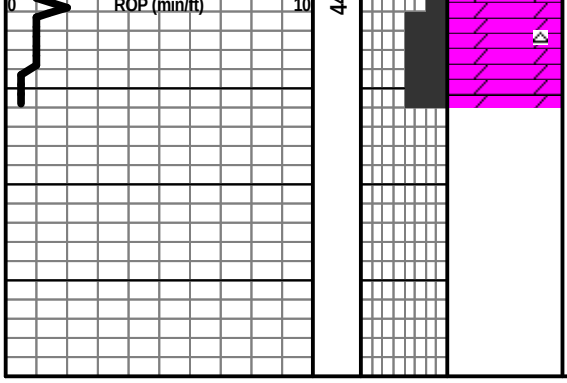
IF: Good blow, BOB in 8-1/2 min.
ISI: No blow back
FF: Fair blow, BOB in 32 min.
FSI: No blow back

RECOVERY: 341' Total Fluid:
15' CO (100% O); Gravity: 37 API
326' MW (90% W & 10% M)
Chlorides ecovery: 21,000 ppm

SIP: 1037-958 HP: 2143-2113
FP: 31-93, 98-162 BHT: 123

DOLO - LT GY / CRM, F / SCAT M XLN, FR / GD VUG + INTXLN POR, SL / FR SFO, BARR IN PT, FT ODOR, SCAT SPTY STN W/ SCAT CHT - LT GY / WHT W/ MOD CAVINGS

DOLO - LT GY / CRM, F / SCAT M XLN, FR / GD VUG + INTXLN POR, VSSFO, PRED BARR, V FT ODOR, TR SPTY STN W/ SCAT CHT - LT GY / WHT W/ MOD CAVINGS



DOLO - LT GY / CRM, F / SCAT M XLN, FR / GD VUG + INTXLN POR, VSSFO, PRED BARR, V FT ODOR, TR SPTY STN W/ SCAT CHT - LT GY / WHT W/ MOD CAVINGS

Vis: 50, Wt: 9.2, YP: 13,
GelS: 10/38, pH: 9.0, WL: 8.8,
Chl: 7,000, Sol: 6.0, LCM: 1#

TOTAL DEPTH 4412 (-2044)

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Stewart Producers Inc**

PO Box 546
Mt Vernon IL 62864+0546

ATTN: Dave Goldak

Rufenacht #1

32-17S-24W Ness,KS

Start Date: 2016.10.09 @ 21:46:00
End Date: 2016.10.10 @ 05:38:30
Job Ticket #: 61931 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.10.10 @ 08:38:45

DRILL STEM TEST REPORT

Stew art Producers Inc

PO Box 546
Mt Vernon IL 62864+0546

ATTN: Dave Goldak

32-17S-24W Ness,KS

Rufenacht #1

Job Ticket: 61931 **DST#: 1**

Test Start: 2016.10.09 @ 21:46:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:19:30
Time Test Ended: 05:38:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Sw inney
Unit No: 72

Interval: 4338.00 ft (KB) To 4355.00 ft (KB) (TVD)
Total Depth: 4355.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

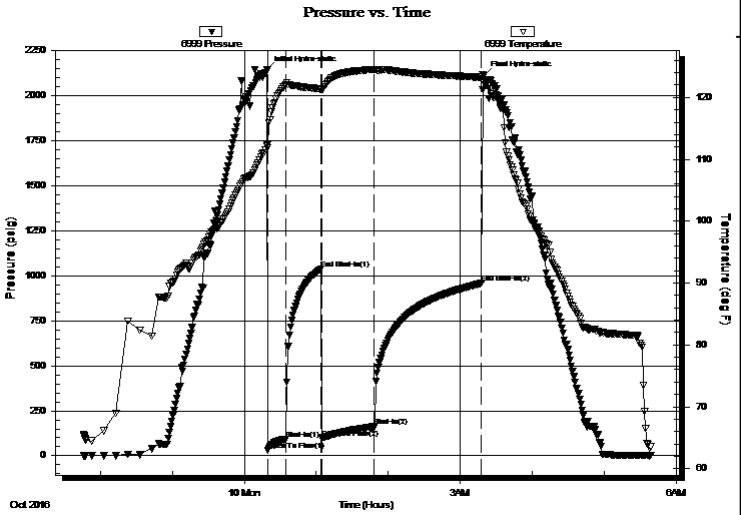
Reference Elevations: 2368.00 ft (KB)
2361.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6999 **Inside**

Press@RunDepth: 161.75 psig @ 4351.00 ft (KB)
Start Date: 2016.10.09 End Date: 2016.10.10
Start Time: 21:46:05 End Time: 05:38:29

Capacity: 8000.00 psig
Last Calib.: 2016.10.10
Time On Btm: 2016.10.10 @ 00:19:00
Time Off Btm: 2016.10.10 @ 03:19:30

TEST COMMENT: IFP 15 minutes Blow built to 8 3/4"
ISI 30 minutes No blow back
FFP 45 minutes BOB in 32 minutes
FSI 90 mintues No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2143.10	112.39	Initial Hydro-static
1	31.39	111.88	Open To Flow (1)
16	92.95	122.13	Shut-In(1)
45	1037.18	121.33	End Shut-In(1)
46	98.23	121.29	Open To Flow (2)
89	161.75	124.52	Shut-In(2)
179	958.33	123.27	End Shut-In(2)
181	2112.87	122.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
326.00	MW Mud 10% Water 90%	3.48
15.00	Clean Oil 100%	0.21

Gas Rates

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

DRILL STEM TEST REPORT

Stewart Producers Inc

PO Box 546
Mt Vernon IL 62864+0546

ATTN: Dave Goldak

32-17S-24W Ness,KS

Rufenacht #1

Job Ticket: 61931 **DST#: 1**

Test Start: 2016.10.09 @ 21:46:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:19:30
Time Test Ended: 05:38:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Ken Swinney
Unit No: 72

Interval: 4338.00 ft (KB) To 4355.00 ft (KB) (TVD)
Total Depth: 4355.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

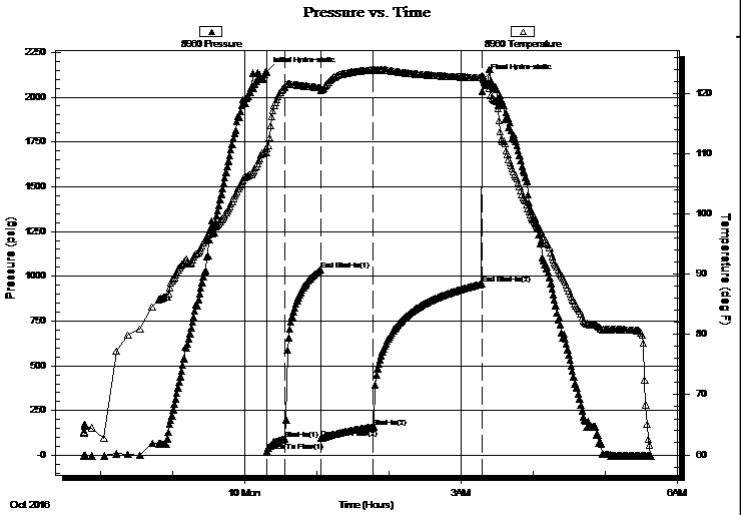
Reference Elevations: 2368.00 ft (KB)
2361.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8960 **Outside**

Press@RunDepth: 957.26 psig @ 4352.00 ft (KB)
Start Date: 2016.10.09 End Date: 2016.10.10
Start Time: 21:46:05 End Time: 05:37:59

Capacity: 8000.00 psig
Last Calib.: 2016.10.10
Time On Btm: 2016.10.10 @ 00:18:00
Time Off Btm: 2016.10.10 @ 03:19:00

TEST COMMENT: IFP 15 minutes Blow built to 8 3/4"
ISI 30 minutes No blow back
FFP 45 minutes BOB in 32 minutes
FSI 90 mintues No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2141.04	110.96	Initial Hydro-static
1	25.69	110.18	Open To Flow (1)
15	91.28	121.08	Shut-In(1)
45	1036.91	120.98	End Shut-In(1)
46	95.50	120.62	Open To Flow (2)
89	159.77	123.94	Shut-In(2)
179	957.26	122.65	End Shut-In(2)
181	2106.04	122.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
326.00	MW Mud 10% Water 90%	3.48
15.00	Clean Oil 100%	0.21

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Stew art Producers Inc

PO Box 546
Mt Vernon IL 62864+0546

ATTN: Dave Goldak

32-17S-24W Ness,KS

Rufenacht #1

Job Ticket: 61931 **DST#: 1**

Test Start: 2016.10.09 @ 21:46:00

Tool Information

Drill Pipe:	Length:	4198.00 ft	Diameter:	3.80	inches	Volume:	58.89	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	120.00 ft	Diameter:	2.25	inches	Volume:	0.59	bbl	
						Total Volume:	59.48	bbl	

Drill Pipe Above KB:	7.00 ft
Depth to Top Packer:	4338.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	17.00 ft
Tool Length:	44.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		20000.00 lb
Weight to Pull Loose:		70000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	66000.00 lb
	Final	66000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			4316.00		
Hydraulic tool	5.00			4321.00		
Jars	5.00			4326.00		
Safety Joint	2.00			4328.00		
Top Packer	5.00			4333.00		
Packer	5.00			4338.00	27.00	Bottom Of Top Packer
Anchor	12.00			4350.00		
Recorder	1.00	6999	Inside	4351.00		
Recorder	1.00	8960	Outside	4352.00		
Bullnose	3.00			4355.00	17.00	Anchor Tool
Total Tool Length:	**44.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Stewart Producers Inc

PO Box 546
Mt Vernon IL 62864+0546

ATTN: Dave Goldak

32-17S-24W Ness,KS

Rufenacht #1

Job Ticket: 61931 **DST#: 1**

Test Start: 2016.10.09 @ 21:46:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	37 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	21000 ppm
Viscosity:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.57 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6200.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
326.00	MW Mud 10% Water 90%	3.480
15.00	Clean Oil 100%	0.210

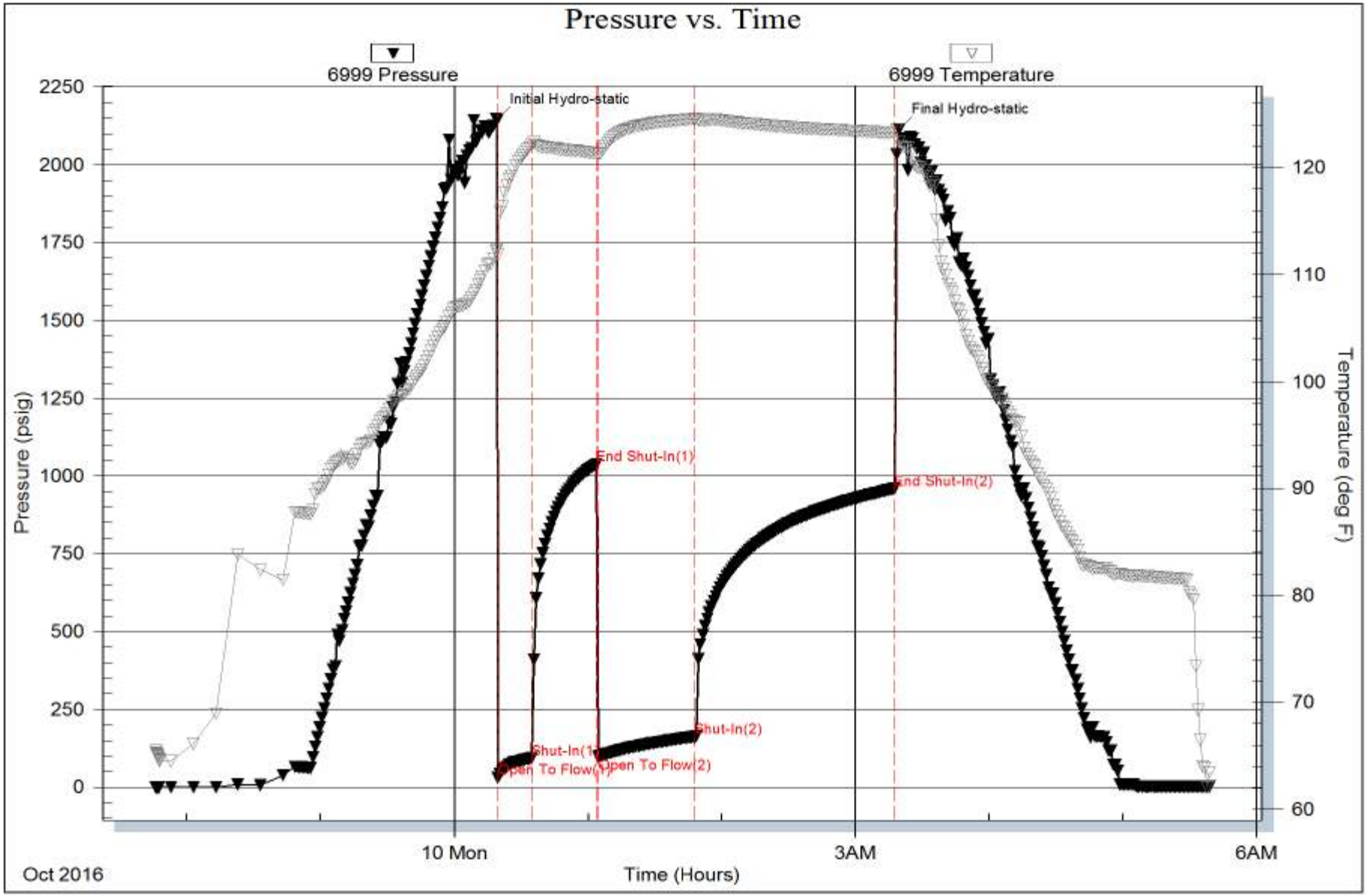
Total Length: 341.00 ft Total Volume: 3.690 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

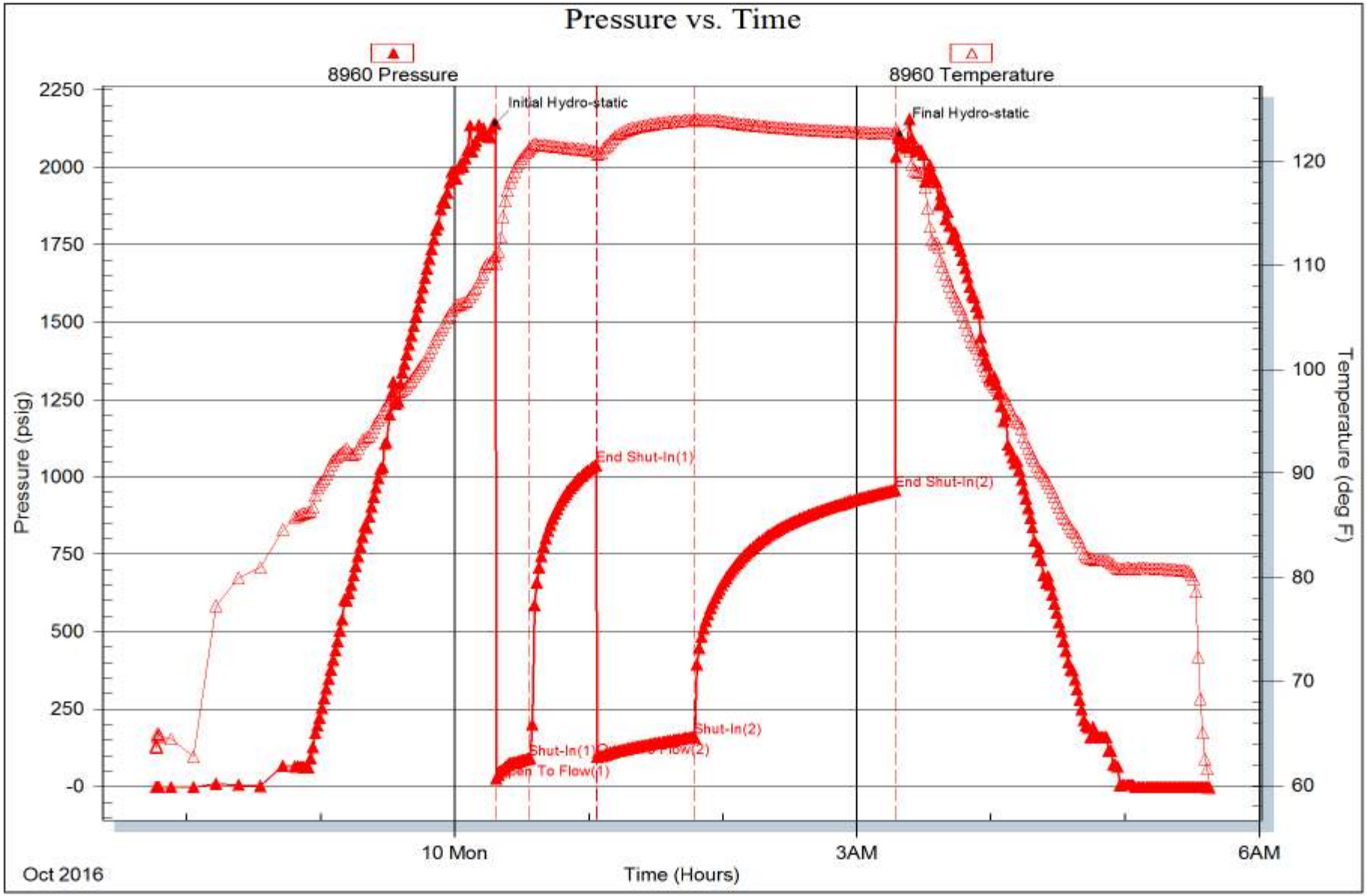
Recovery Comments: Recovery Resistivity .36 ohms @ 61 deg

Serial #: 6999 **Inside** Stew art Producers Inc Rufenacht #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 61931 Printed: 2016.10.10 @ 08:38:47

Serial #: 8960 **Outside** Stew art Producers Inc Rufenacht #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 61931 Printed: 2016.10.10 @ 08:38:47

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 61931

Well Name & No. Rufenacht #1 Test No. 1 Date 9 OCT 16

Company Stewart Producers Inc. Elevation 2368 KB 2361 GL

Address 301 N 27th Street PO Box 546 Mt Vernon IL 62864+0546

Co. Rep / Geo. Dave Goldak Rig WW Rig 12

Location: Sec. 32 Twp. 17S Rge. 24W Co. Ness State KS

Interval Tested 4338-4355 Zone Tested Mississippi

Anchor Length 17 Drill Pipe Run 4198 Mud Wt. 9.35

Top Packer Depth 4333 Drill Collars Run 120 Vis 52

Bottom Packer Depth 4338 Wt. Pipe Run — WL 9.6

Total Depth 4355 Chlorides 6200 ppm System LCM 1#

Blow Description I.F. Blow built to 8¾ inches

I.S.I. no blow back

F.F. Blow built to bottom of bucket in 32 minutes

F.S.I no blow back

Rec	326	Feet of	Muddy Water	%gas	%oil	90	%water	10 %mud
Rec	15	Feet of	Clean Oil	%gas	100	%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 341 BHT 123 Gravity ____ API RW .36 @ 61 °F Chlorides 21,000 ppm

(A) Initial Hydrostatic	2143	☑ Test	1150	T-On Location	8:02 pm
(B) First Initial Flow	31	☑ Jars	250	T-Started	9:46 pm
(C) First Final Flow	92	☑ Safety Joint	75	T-Open	12:19 am
(D) Initial Shut-In	1037	☐ Circ Sub		T-Pulled	3:19 am
(E) Second Initial Flow	98	☐ Hourly Standby		T-Out	5:38 am
(F) Second Final Flow	161	☑ Mileage	122 91.50	Comments	
(G) Final Shut-In	958	☐ Sampler			
(H) Final Hydrostatic	2112	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	15	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	30	☐ Extra Recorder		Sub Total	0
Final Flow	45	☐ Day Standby		Total	1566.50
Final Shut-In	90	☐ Accessibility		MP/DST Disc't	
		Sub Total	1566.50		

Approved By _____ Our Representative _____

GLOBAL OIL FIELD SERVICES, LLC

2707

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell, KS

DATE 10-4-16	SEC. 32	TWP. 17	RANGE 24	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE RUFENACHT	WELL # 1		LOCATION Arnold, KS 1E 4S 2E			COUNTY Ness	STATE KS
OLD OR NEW (CIRCLE ONE)			1S Into				

CONTRACTOR WW #12
TYPE OF JOB Surface
HOLE SIZE 12 1/4 T.D. 220
CASING SIZE 8 5/8 DEPTH
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX 300psi MINIMUM 0
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 20ft
PERFS
DISPLACEMENT 12 3/4 bbl

OWNER

CEMENT
AMOUNT ORDERED 150sx com 3% CC 2% gel

EQUIPMENT

PUMP TRUCK # 417 CEMENTER Heath
HELPER Cody
BULK TRUCK # 378 DRIVER Jason
BULK TRUCK # DRIVER

REMARKS:

Ran 5 jts of 8 5/8 casing and landing 1st - Est Circulation

Hook up and mix 150sx and disp 12 3/4 bbl of H2O - shut in @ 300 psi

Cement Did Circulate!!

CHARGE TO: Stewart Producers
STREET
CITY STATE ZIP

COMMON		@	
POZMIX		@	
GEL		@	
CHLORIDE		@	
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING		@	
MILEAGE			
		TOTAL	

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			
EXTRA FOOTAGE		@	
MILEAGE		@	
MANIFOLD		@	
		@	
		@	
		TOTAL	

PLUG & FLOAT EQUIPMENT

		@	
		@	
		@	
		@	
		@	
		TOTAL	

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS

Global Oil Field Services, LLC
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side. Thank You!!

PRINTED NAME Calvin Hammerstad
SIGNATURE

GLOBAL OIL FIELD SERVICES, LLC

2716

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell, KS

DATE 10-10-16	SEC. 32	TWP. 17	RANGE 24	CALLED OUT	ON LOCATION	JOB START	JOB FINISH 12:30am
LEASE Rupenthal	WELL # 1		LOCATION Arnold 1E 5 to Rig			COUNTY Ness	STATE KS
OLD OR NEW (CIRCLE ONE)							

CONTRACTOR WW #12
TYPE OF JOB Rotary Plug
HOLE SIZE 7 7/8 T.D. 4412
CASING SIZE DEPTH
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS
DISPLACEMENT

EQUIPMENT

PUMP TRUCK # 417 CEMENTER Heath
HELPER Cody
BULK TRUCK # 473 DRIVER Duke
BULK TRUCK # DRIVER

OWNER

CEMENT
AMOUNT ORDERED 230sx 60/40 4%gel 1/4# F/C

COMMON		@	
POZMIX		@	
GEL		@	
CHLORIDE		@	
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING		@	
MILEAGE			
		TOTAL	

REMARKS:

1st Plug @ 1680 = 50sx
2nd Plug @ 800 = 80sx
3rd Plug @ 270 = 50sx
4th Plug @ 60 = 20sx - Come out of hole top off with wiper plug and 10sx RH = 30sx

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			
EXTRA FOOTAGE		@	
MILEAGE		@	
MANIFOLD		@	
		@	
		@	
		TOTAL	

RECEIVED
OCT 13 2016

CHARGE TO: Stewart Producers
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

		@	
Dry hole Plug		@	
		@	
		@	
		@	
		TOTAL	

Global Oil Field Services, LLC
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Colton Thomasson
SIGNATURE

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS