



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1156759  
OIL & GAS CONSERVATION DIVISION

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 # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

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 #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

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: \_\_\_\_\_ Date: \_\_\_\_\_



1156759

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> 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 <i>(Amount and Kind of Material Used)</i>	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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Ainsworth Operating Co.
Well Name	Hammeke 5
Doc ID	1156759

All Electric Logs Run

Dual Induction Log
Sonic Cement Bond Log
Dual Compensated Porosity Log
Microresistivity Log

Form	ACO1 - Well Completion
Operator	Ainsworth Operating Co.
Well Name	Hammeke 5
Doc ID	1156759

Tops

Name	Top	Datum
Heebner	3080	-1276
Toronto	3100	-1296
Douglas	3214	-1410
Brown Lime	3215	-1411
Lansing	3240	-1436
Base KC	3476	-1672
Simpson	3552	-1748
Simpson Sand	3574	-1770
Arbuckle	3607	-1886

**OPERATOR**

Company: Ainsworth Operating Company  
 Address: 4676 Commercial St.  
 Suite #412  
 Salem, OR 97302

Contact Geologist:  
 Contact Phone Nbr: 503-881-4357  
 Well Name: Hammeke #5  
 Location: Sec. 7 - T22S - R11W  
 Pool:  
 State: Kansas

API: 15-185-23810-0000  
 Field: Max SE  
 Country: USA

Scale 1:240 Imperial

Well Name: Hammeke #5  
 Surface Location: Sec. 7 - T22S - R11W  
 Bottom Location:  
 API: 15-185-23810-0000  
 License Number: 6030  
 Spud Date: 7/1/2013  
 Region: Stafford County  
 Drilling Completed: 7/9/2013  
 Surface Coordinates: 2000' FSL & 2150' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 1796.00ft  
 K.B. Elevation: 1804.00ft  
 Logged Interval: 2950.00ft  
 Total Depth: 3695.00ft  
 Formation: Arbuckle  
 Drilling Fluid Type: Chemical/Fresh Water Gel

Time: 00:00  
 Time: 04:55  
 To: 3695.00ft

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:  
 N/S Co-ord: 2000' FSL  
 E/W Co-ord: 2150' FEL  
 Latitude:

**LOGGED BY**

**Keith Reavis**  
*Consulting Geologist*

Company: Keith Reavis, Inc.  
 Address: 3420 22nd Street  
 Great Bend, KS 67530

Phone Nbr: 620-617-4091  
 Logged By: KLG #136

Name: Keith Reavis

**CONTRACTOR**

Contractor: Southwind Drilling, Inc.  
 Rig #: 2  
 Rig Type: mud rotary  
 Spud Date: 7/1/2013  
 TD Date: 7/9/2013  
 Rig Release:

Time: 00:00  
 Time: 04:55  
 Time:

**ELEVATIONS**

K.B. Elevation: 1804.00ft  
 K.B. to Ground: 8.00ft  
 Ground Elevation: 1796.00ft

**NOTES**

After evaluations of drill stem test data, sample analysis and area production history, the operator elected to set 5 1/2" production casing to further test the Simpson Sand through perforations and stimulation. Tests on the Viola and Arbuckle proved non-commercial.

The gamma ray and caliper curves were imported into this mudlog along with the ROP to provide relative correlation. Actual log tops and drill time in this well were pretty close. Curves were not shifted to provide an exact match but left as recorded in the field.

Respectfully submitted,  
 Keith Reavis

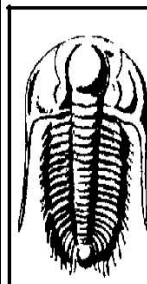
**Ainsworth Operating Company**  
**daily drilling report**

DATE	7:00 AM DEPTH	REMARKS
07/06/2013	3234	Geologist Keith Reavis on location @ 0125 hrs, 3074 ft., drilling ahead Topeka, Heebner, Toronto, LKC, BKC, short trip
07/07/2013	3540	complete short trip, resume drilling, BKC, conglomerate, Viola, show in Viola warrants test, TOH for DST #1, conduct and complete DST #1, successful test, TIH w/bit, resume drilling, Simpson, show in Simpson sand warrants test, TOH for DST #2
07/08/2013	3591	conduct and complete DST #2, successful test, out w/tools in w/bit, resume drilling, Simpson, Arbuckle, show in Arbuckle warrants test, TOH for DST #3 conduct and complete DST #3, mis-run, TIH w/bit
07/09/2013	3695	Rat-hole ahead for logs, TD @ 3695 ft. 0455 hrs, TOH w/bit, conduct and complete logging operations, TIH w/test tools, conduct DST #4 straddle test geologist released 2100 hrs

**Ainsworth Operating Company**  
**well comparison sheet**

DRILLING WELL					COMPARISON WELL			
Hammeke #5					Ainsworth - Hammeke #1-C			
2000' FSL & 2150' FEL					SW NW NE			
Sec. 7 - T22S - R11W					Sec. 7 - T22S - R11W			
1804 KB					1786 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log
Heebner	3081	-1277	3080	-1276	3063	-1277	0	1
Toronto	3103	-1299	3100	-1296	3083	-1297	-2	1
Douglas	3116	-1312	3214	-1410				
Brown Lime	3216	-1412	3215	-1411	3195	-1409	-3	-2
Lansing	3239	-1435	3240	-1436	3220	-1434	-1	-2
Lansing H	3376	-1572	3372	-1568				
Base KC	3484	-1680	3476	-1672	3467	-1681	1	9
Viola	3516	-1712	3516	-1712	3494	-1708	-4	-4
Simpson	3552	-1748	3552	-1748	3532	-1746	-2	-2
Simpson sand	3572	-1768	3574	-1770	3551	-1765	-3	-5
Arbuckle	3607	-1803	3607	-1803	3584	-1798	-5	-5
Total Depth	3695	-1891	3690	-1886	3690	-1904	13	18

**Drill Stem Test #1**



**TRIOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

AINSWORTH OPERATING CO. 7, 22S, 11W, STAFFORD  
 4676 COMMERCIAL ST, SE# 412 HAMMEKE # 5  
 SALEM, OR 97302 Job Ticket: 53922 DST#: 1  
 ATTN: KEITH REAVIS Test Start: 2013.07.07 @ 08:05:00

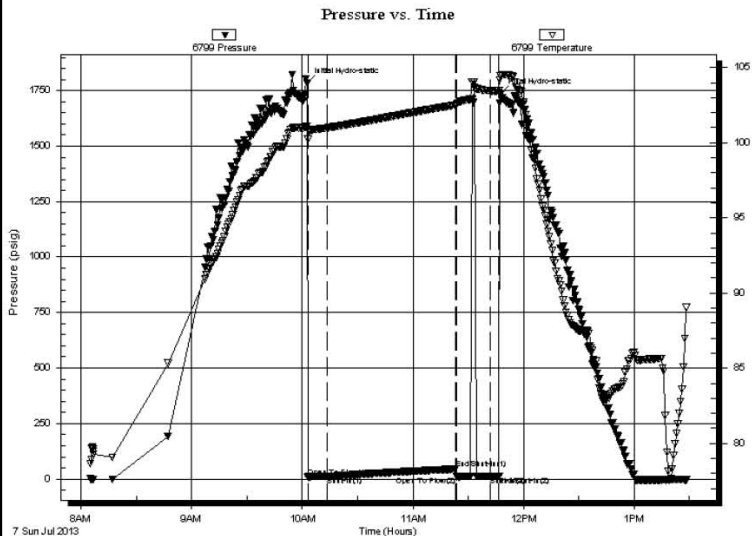
**GENERAL INFORMATION:**

Formation: VIOLA  
 Deviated: No Whipstock ft (KB)  
 Time Tool Opened: 10:03:00  
 Time Test Ended: 13:28:15  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: RANDY WILLIAMS  
 Unit No: 43  
 Interval: 3516.00 ft (KB) To 3540.00 ft (KB) (TVD)  
 Total Depth: 3540.00 ft (KB) (TVD)  
 Reference Elevations: 1804.00 ft (KB)  
 1796.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 8.00 ft

**Serial #: 6799**

Press@RunDepth: 12.06 psig @ ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.07 End Date: 2013.07.07 Last Calib.: 2013.07.07  
 Start Time: 08:05:05 End Time: 13:28:14 Time On Btm: 2013.07.07 @ 10:02:45  
 Time Off Btm: 2013.07.07 @ 11:47:30

TEST COMMENT: F-10- WEAK SURFACE BLOW  
 IS-60- NBB  
 FF-19- NO BLOW, FLUSHED TOOL  
 FSI-5- NBB



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1782.36	101.08	Initial Hydro-static
1	7.72	100.24	Open To Flow (1)
11	10.97	100.99	Shut-In(1)
81	44.76	102.51	End Shut-In(1)
81	10.60	102.52	Open To Flow (2)
100	12.06	103.45	Shut-In(2)
104	13.69	103.44	End Shut-In(2)
105	1737.75	104.41	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
2.00	MUD 100%	0.03

**Gas Rates**

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

**Drill Stem Test #2**

**DRILL STEM TEST REPORT**

Ainsworth Operating Co

**7-22s-11w Stafford,KS**

4676 Commercial St Ste #412  
Salem, OR 97302

**Hammeke #5**

Job Ticket: 53923

**DST#: 2**

ATTN: Keith Reavis

Test Start: 2013.07.07 @ 23:15:00

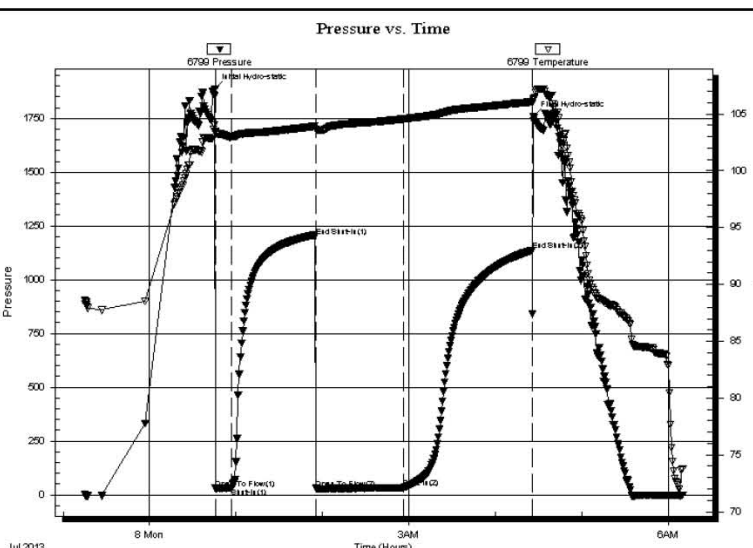


**GENERAL INFORMATION:**

Formation: **Simpson Sand**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:45:30  
 Time Test Ended: 06:09:45  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Randy Williams  
 Unit No: 43  
 Interval: **3549.00 ft (KB) To 3591.00 ft (KB) (TVD)**  
 Total Depth: 3591.00 ft (KB) (TVD)  
 Reference Elevations: 1804.00 ft (KB)  
 1796.00 ft (CF)  
 Hole Diameter: 7.88 inchesHole Condition: Fair  
 KB to GR/CF: 8.00 ft

**Serial #: 6799 Inside**  
 Press@RunDepth: 33.54 psig @ 3550.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.07 End Date: 2013.07.08 Last Calib.: 2013.07.08  
 Start Time: 23:15:05 End Time: 06:09:44 Time On Btm: 2013.07.08 @ 00:45:15  
 Time Off Btm: 2013.07.08 @ 04:26:30

**TEST COMMENT:** IF-10- No blow  
 IS-60- NBB  
 FF-60- FBB, BOB in 52 min  
 FSI-90- NBB



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1886.63	104.07	Initial Hydro-static
1	29.72	103.45	Open To Flow (1)
12	31.83	103.00	Shut-In(1)
70	1200.93	103.93	End Shut-In(1)
71	29.03	103.62	Open To Flow (2)
131	33.54	104.57	Shut-In(2)
220	1135.54	106.07	End Shut-In(2)
222	1759.52	106.33	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
1.00	CO 100%	0.01
25.00	OCM 25% O, 75% M	0.35
0.00	95 FT- GIP	0.00

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

**Drill Stem Test #4**

**DRILL STEM TEST REPORT**

Ainsworth Operating Co

**7-22s-11w Stafford,KS**

4676 Commercial St Ste #412  
Salem, OR 97302

**Hammeke #5**

Job Ticket: 53925

**DST#: 4**

ATTN: Keith Reavis

Test Start: 2013.07.09 @ 10:31:00

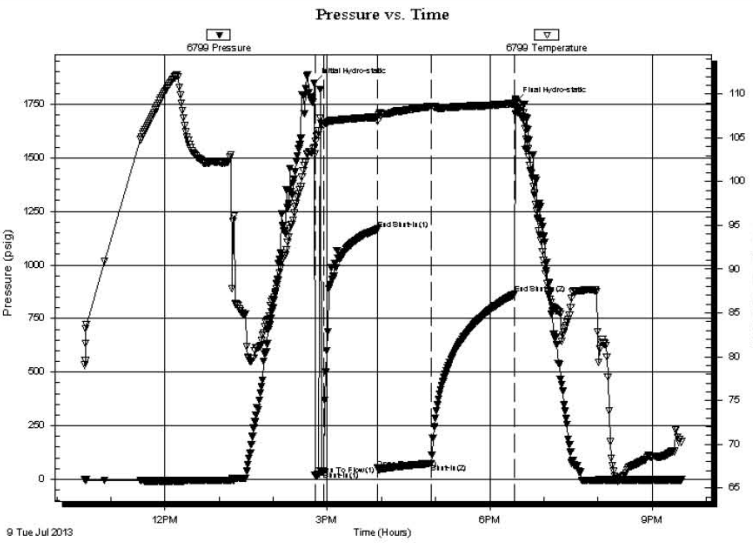


**GENERAL INFORMATION:**

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:46:00  
 Time Test Ended: 21:32:30  
 Test Type: Conventional Straddle (Reset)  
 Tester: Cody Bloedorn  
 Unit No: 43  
 Interval: **3609.00 ft (KB) To 3633.00 ft (KB) (TVD)**  
 Total Depth: 3690.00 ft (KB) (TVD)  
 Reference Elevations: 1804.00 ft (KB)  
 1796.00 ft (CF)  
 Hole Diameter: 7.88 inchesHole Condition: Fair  
 KB to GR/CF: 8.00 ft

**Serial #: 6799 Inside**  
 Press@RunDepth: 74.31 psig @ 3609.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.09 End Date: 2013.07.09 Last Calib.: 2013.07.09  
 Start Time: 10:31:05 End Time: 21:32:30 Time On Btm: 2013.07.09 @ 14:45:45  
 Time Off Btm: 2013.07.09 @ 18:28:30

**TEST COMMENT:** 10 - IF- 4 1/2" blow  
 60 - IS- No return  
 60 - FF- 4" blow  
 90 - FSI- No return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1846.48	103.85	Initial Hydro-static
1	18.82	103.22	Open To Flow (1)
10	38.56	106.47	Shut-In(1)
70	1166.99	107.38	End Shut-In(1)
70	51.14	106.96	Open To Flow (2)
130	74.31	108.59	Shut-In(2)
222	864.54	108.93	End Shut-In(2)
223	1759.07	109.41	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
124.00	SOCWM, 5%O, 15%V, 80%M	1.74
25.00	SOCM, 5%O, 95%M	0.35

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

\* Recovery from multiple tests

**ROCK TYPES**

Cht	Dolsec	shale, grn	shale, red
Cht vari	Lmst fw<7	shale, gry	Ss
Dolprim	Lmst fw>7	Carbon Sh	

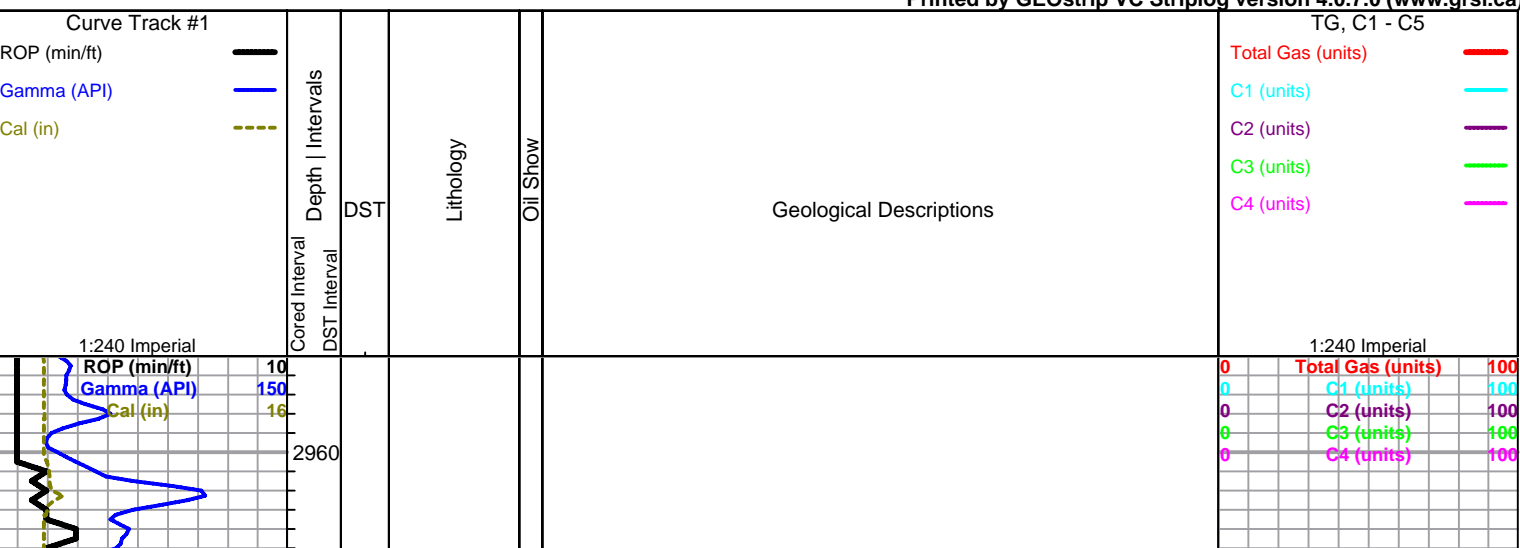
**ACCESSORIES**

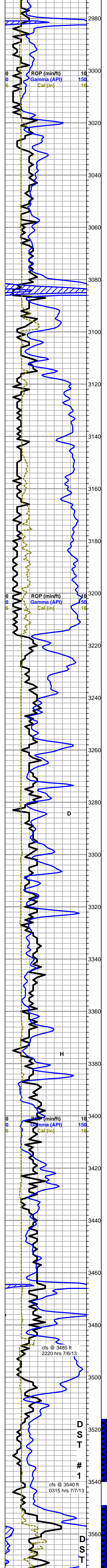
<b>MINERAL</b>	<b>FOSSIL</b>	<b>STRINGER</b>	<b>TEXTURE</b>
▲ Chert, dark ▲ Dolomitic P Pyrite * Sandy ** Silty ▲ Chert White Mc Mica	∧ Bioclastic or Fragmental F Fossils < 20% φ Oolite φ Pellets ⊕ Oomoldic ⊕ Fussilind	▨ Dolomite ▨ Limestone ▨ Sandstone ▨ Siltstone	C Chalky CX Cryptocrystalline L Lithogr

**OTHER SYMBOLS**

<b>MISC</b>	<b>Oil Show</b>	<b>DST</b>
Daily Report Digital Photo Document Folder Link Vertical Log File Horizontal Log File Core Log File Drill Cuttings Rpt	● Fair Show ○ Poor Show ○ Spotted or Trace ○ Questionable Stn ○ Dead Oil Stn ■ Fluorescence * Gas	■ DST Int ■ DST alt ■ core ■ tail pipe

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limestone, cream, microcrystalline, fossiliferous, chalky to grainy, poor visible porosity, with limestone, cryptocrystalline, dense, slightly fossiliferous, and dolomitic limestone to dolomite, tan to light gray, microcrystalline, sub-sucrosic, slightly vuggy, no shows, trace gray and tan chert

as above, with limestone, gray, mottled, fossiliferous to pelletal, trace chert

as above, increase in dolomite-dolomitic limestone described above, slight increase in chert

**Heebner 3081 -1277**

shale, black carbonaceous

shales, gray to green, silty

**Toronto 3103 -1299**

limestone, cream to white, microcrystalline, fossiliferous to chalky spongy bioclastic, some pinpoint porosity, mostly dense, no shows

**Douglas 3116 -1312**

shale, gray to green, some silty, carrying abundant limestones from above

a.a., some dense pale green limey shale to cryptocrystalline shaley limestone, few pieces fossiliferous

shale, light green and gray, some silty and micaceous, scattered pale green slightly micaceous siltstones, trace sandstone, very fine grain, fair sorting and rounding, well cemented, micaceous, poor visible porosity, barren

**Brown Lime 3216 -1412**

limestone, dark gray to brown, cryptocrystalline, fossiliferous, dense, cherty, no shows

**Lansing 3239 -1435**

limestone, gray, cryptocrystalline, dense, slightly fossiliferous, some large clasts, fusulinids, with limestone, gray to light gray mottled, fossiliferous, weathered/chalky - no visible porosity or shows

limestones, as above

limestone, gray to gray mottled, fossiliferous to bioclastic, grainy to mottled, poor visible porosity, no shows

limestone, gray to dark gray, mostly cryptocrystalline, fossiliferous to very fossiliferous, some sub-lithographic, dense, no shows, trace chert

as above

limestone, light gray to gray, cryptocrystalline, lithographic to slightly fossiliferous, with limestone, light gray, cryptocrystalline matrix with secondary calcite nodules (recrystallized?) and calcite veins, dense, no shows

as above, some dark gray fossiliferous limestones, pyritic

limestone, cream to white, micro-oolitic to oomoldic, some fair oomold porosity, with some dense oolitic to bioclastic, no visible show, fleeting odor, 1 piece spongy chalky oomoldic, good porosity, saturated stain, show oil, good cut

limestone, white to cream, cryptocrystalline, oolitic to fossiliferous, some lithographic, light edge etching and light stain, few gas bubbles, no show free oil, poor overall porosity, fleeting odor

3430 sample, limestone, mixed white to cream cryptocrystalline lithographic to oolitic to fossiliferous, dense, barren, limestone, gray, fossiliferous, some vuggy interclast porosity, slight stain, one piece, saturated stain, bleeding some heavy oil, very slow poor cut, no odor in wet cup

a.a. with some gray mottled fossiliferous, dense pyritic

limestone, white to cream and light gray, cryptocrystalline, some fossiliferous and oolitic, mostly dense, few pieces grainy and chalky, trace edge stain and solution etching, some small vugs, no show free oil, fleeting odor, some faint fluorescence

as above, few pieces grainy light gray bioclastic, some small vugs with light stain, 1 specimen with sheen oil on break, fleeting odor, dull fluorescence

cfs sample, cryptocrystalline limestones as above, trace bioclastic with slight stain (from above?)

**Base Kansas City 3484 -1680 (log 3476 -1672)**

shale, mixed gray, green, black and red

shales as above, with limestone, cream to pale green and gray, cryptocrystalline, dense lithographic, with limestone, white to cream, very chalky, weathered, friable, some red very dense shaley limestone, no visible porosity or shows

**Viola 3516 -1712**

chert, variable gray, tan, yellow and rose, translucent to opaque, mostly sharp, fresh, some scattered black staining, some slight tripolitic edges with stain, with dolomite, light gray to light brown saturated stain, sub-sucrosic, argillaceous/gritty, poor visible porosity, scaly oil sheen to slight bleeding oil, light fluorescence, fair milky cut with halo, pungent faint odor in wet cup

cherts, mixed white to yellow, gray and black, fresh to partially to fully tripolitic, striated to edge to saturated black stain, some slight porosity, trace bleeding oil, light fluorescence, fair to poor cut, no odor, some dolomite as above

**Simpson 3552 -1748**

shale, green to gray, some waxy, some soft, trace sandy, scattered micaceous siltstone, some pyrite nodules

**Simpson Sand 3572 -1768**

shale, green to gray, some waxy, some soft, trace sandy, scattered micaceous siltstone, some pyrite nodules

displaced mud system @ 2727'

Begin 10 ft wet and dry samples @ 3000'

0	Total Gas (units)	100
1	C1 (units)	100
0	C2 (units)	100
9	C3 (units)	100
0	C4 (units)	100

0	Total Gas (units)	100
1	C1 (units)	100
0	C2 (units)	100
9	C3 (units)	100
0	C4 (units)	100

Andy's Mud chk @ 3243 ft. 0730 hrs. 7/6/13 Vis. 48 Wt. 9.2 PV 12 YP 22 WL 9.6 Cake 1/32, pH 10.0 CHL 8000 ppm Ca 30 ppm Sol 6.0 LCM 1# DMC \$7995.95 CMC \$7995.95

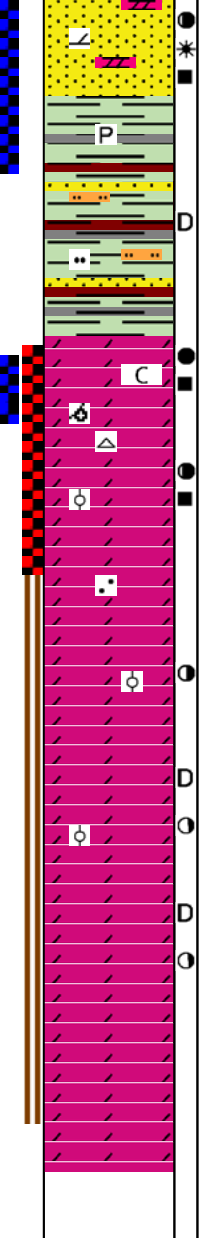
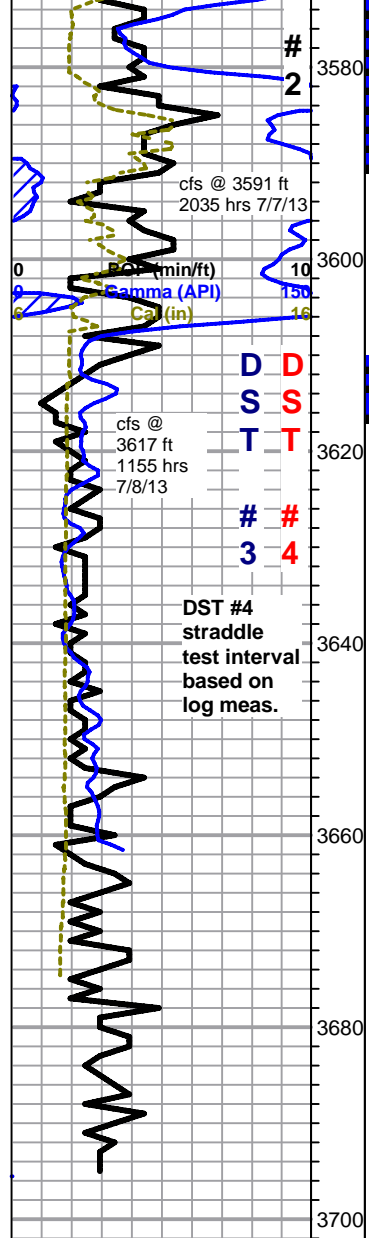
0	Total Gas (units)	100
1	C1 (units)	100
0	C2 (units)	100
9	C3 (units)	100
0	C4 (units)	100

short trip @ 3485 ft - 28 stands

-Hammeke 5 DST 1.pdf

strap 1.51 ft STB deviation survey 3/4 deg

Andy's Mud chk @ 3540 ft. 1100 hrs. 7/7/13 Vis. 59 Wt. 9.3 PV 14 YP 24 WL 9.6 Cake 1/32, pH 10.0 CHL 11000 ppm Ca 20 ppm Sol 6.1 LCM 1/4# DMC \$807.55 CMC \$8603.50



sandstone, quartz, very fine to fine grain, well sorted and rounded, well cemented, fair inter-granular porosity, saturated light brown stain, bleeds oil and gas, light fluorescence, bright instant cut, with: mixed sandstones to sandy dolomite, mixed dirty white to reddish brown, some brown and black staining, mixed grain, mostly intergranular clay to dolomite infill, fleeting odor in wet cup

shales, green, maroon, green/maroon striated, red, olive and gray silty, some gray micaceous siltstone, scattered black gilstonitic stained sand clusters, very friable, abundant brick red siltstone to very fine grain dirty sandstone, abundant loose quartz grains, no odor

**Arbuckle 3607 -1803**  
**30 min samp.**, dolomite, light gray to cream, microcrystalline, sub-sucrosic, weathered, cherty and chalky, fair staining, good show free oil, fair fluorescence and cut, **60 min samp.**, influx microcrystalline rhombic to sucrosic, some oomoldic, some recrystallized, fair to good porosity, some weathered, light to good saturated stain in dolomites, good show bleeding free oil, some stained sub-tripolitic bleeding white chert, strong odor, abundant caliche in samples

@3620 dolomite, light gray to cream, microcrystalline, rhombic, fair intercrystalline porosity, some sandy and recrystallized oolitic, spotty to saturated black intercrystalline staining, fair show free oil and sheen, scattered light gray to cream cryptocrystalline dolomite, dense, spotty black stain, fair odor in cup, fair even overall fluorescence, good to poor cut

as above, decreasing stain and odor, decrease in cryptocrystalline facies

dolomite, light gray to cream, microcrystalline, rhombic, fair intercrystalline porosity, spotty to fair black gilstonitic staining, tarry stringy and clingy oil and oil film, with dolomite, cream to light gray, cryptocrystalline, very dense, barren, some fine recrystallized oolitic, sour odor in wet cups, good even green/yellow fluorescence

dolomites as above, decreasing stain and odor

TD cfs samples, dolomites as above, increased cryptocrystalline facies, virtually all barren with no odor

**TD @ 3695 ft 0455 hrs 7/9/13**  
**Pioneer Wireline TD 3690 ft**  
**Complete Logging Operations 1150 hrs 7/9/13**

Hammeke 5 DST 2.pdf	
Andy's Mud chk @ 3595 ft. 0930 hrs. 7/8/13 Vis. 78 Wt. 9.0	
0 Total Ga	PV 12 YP 30
1 C1 (l)	WL 11.6
0 C2 (l)	Cake 1/32,
9 C3 (l)	pH 9.0
0 C4 (l)	CHL 12500 ppm
	Ca 20 ppm
<b>DST #3 Mis-Run packer failure</b>	Sol 7.9 LCM 1/4#
	DMC \$0
	CMC \$8603.50
Hammeke 5 DST 3.pdf	
Hammeke 5 DST 4.pdf	
	Andy's Mud chk @ 3695 ft. 0930 hrs. 7/9/13 Vis. 54 Wt. 9.2 PV 14 YP 25 WL 9.6 Cake 1/32, pH 9.5 CHL 14000 ppm Ca 30 ppm Sol 7.9 LCM 4# DMC \$3370.45 CMC \$11973.95



Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

October 15, 2013

Al Ainsworth  
Ainsworth Operating Co.  
4676 COMMERCIAL ST., SE #412  
SALEM, OR 97302

Re: ACO1  
API 15-185-23810-00-00  
Hammeke 5  
SE/4 Sec.07-22S-11W  
Stafford County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Al Ainsworth

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 8708

Date	7-1-13	Sec	7	Twp.	22	Range	11	County	Stallard	State	Kansas	On Location	10/00/13	Finish	2:30 AM
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Location: *Sec 2E 1S 11E N. 100*

Lease	<i>Hammke</i>	Well No.	<i>5</i>	Owner	
Contractor	<i>Southward 2</i>	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job	<i>Surface</i>	Charge To			<i>Ainsworth Operating Co</i>
Hole Size	<i>12 1/4</i>	T.D.	<i>305</i>	Street	
Csg.	<i>19 5/8</i>	Depth	<i>304</i>	City	
Tbg. Size		Depth		State	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	<i>20'</i>	Shoe Joint	<i>20'</i>	Cement Amount Ordered	
Meas Line		Displace	<i>18 1/2</i>		

**EQUIPMENT**

Pumptrk	<i>16</i>	No.		Cement Helper		Common	<i>300 3% CC 2 1/2 gal 4 1/2 lbs Salt</i>
Bulktrk	<i>19</i>	No.		Driver	<i>Dave L</i>	Poz. Mix	
Bulktrk	<i>20</i>	No.		Driver	<i>Vital B</i>	Gel.	
				Driver		Calcium	

**JOB SERVICES & REMARKS**

Remarks:		Hulls	
Rat Hole		Salt	
Mouse Hole		Flowseal	
Centralizers		Kol-Seal	
Baskets		Mud CLR 48	
D/V or Port Collar		CFL-117 or CD110 CAF 38	
<i>MIX 175 SRS</i>		Sand	
<i>Cement dol</i>		Handling	
<i>Cementate</i>		Mileage	<i>8 1/2</i>

**FLOAT EQUIPMENT**

		Guide Shoe	
		Centralizer	
		Baskets	<i>1</i>
		AFU Inserts	
		Float Shoe	
		Latch Down	

		Pumptrk Charge	
		Mileage	
		Tax	
		Discount	
		Total Charge	

X Signature *William Anderson*

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 7259

Date	7-10-13	Sec.	7	Twp.	22	Range	11	County	Stafford	State	KS	On Location		Finish	9:00 AM
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Location **IRE + Joes IS 1 1/2 E N into**

Lease	<b>Hammeke</b>	Well No.	<b>5</b>	Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor	<b>Southwind #2</b>			Charge To	<b>Ainsworth Operating</b>
Type Job	<b>Production String</b>	T.D.	<b>3695 ft</b>	Street	
Hole Size	<b>7 7/8</b>	Depth	<b>3701 ft</b>	City	State
Csg.	<b>5 1/2</b>	Depth	<b>555 ft</b>	The above was done to satisfaction and supervision of owner agent or contractor.	
Tbg. Size		Shoe Joint	<b>39.10 ft</b>	Cement Amount Ordered <b>200 com 10% salt 5% gilsonite</b>	
Tool	<b>Port collar</b>	Displace	<b>89 bbl</b>		
Cement Left in Csg.	<b>39.10 ft</b>				

**EQUIPMENT**

Pumptrk	<b>17</b>	No.	Cementer		Common	<b>200</b>
			Helper	<b>Matt</b>	Poz. Mix	
Bulktrk	<b>1</b>	No.	Driver	<b>Doug</b>	Gel.	
			Driver	<b>Brett</b>	Calcium	

**JOB SERVICES & REMARKS**

Remarks:		Hulls	
Rat Hole	<b>30 sx</b>	Salt	<b>17</b>
Mouse Hole	<b>20 sx</b>	Flowseal	
Centralizers	<b>2,4,6,8,10,12,14,17 &amp; 73</b>	Kol-Seal	<b>1000#</b>
Baskets	<b>5, 18 &amp; 74</b>	Mud CLR 48	<b>500 gal</b>
Port Collar	<b>74 @ 555 ft</b>	CFL-117 or CD110 CAF 38	

**Dropped ball circulated 1 hr**

**Ran mud Flush**

**Plugged Rat & Mouse hole**

**Mixed 150 sx down hole**

**Displaced 89 bbl**

**Flow held**

**Rigged down**

**Lift pressure 900 lbs**

**Landed @ 1500 lbs**

Mileage

**5 1/2**

**FLOAT EQUIPMENT**

Guide Shoe

Centralizer - **9**

Baskets - **3**

AFU Inserts

Float Shoe - **1**

Latch Down - **1**

Port collar - **1**

Pumptrk Charge **prod Long String**

Mileage **26**

Tax

Discount

Total Charge

X Signature 