



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1071086
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
-----------------------------------	-----------------	---

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: _____

1071086

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No 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: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	Hodges, Dennis D. and/or Peggy D.
Well Name	HODGES 3
Doc ID	1071086

Tops

Name	Top	Datum
Base KC	1090	-52
Cherokee	1377	-235
U. Squirrel SS, 18'	1380	-238
L. Squirrel SS, 18'	1428	-286
Ardmore LS	1480	-338
Burgess SS, 52'	1721	-579
Mississippi Dol	1775	-633
RTD	1781	-639



CONSOLIDATED
Oil Well Services, LLC

TICKET NUMBER 31597
LOCATION Eureka
FOREMAN STEUCKHEAD

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT

CEMENT API 15 031-22996

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
<u>9/16/11</u>		<u>Hodges #3</u>	<u>12</u>	<u>21S</u>	<u>13E</u>	<u>COFFEY</u>

TRUCK #	DRIVER	TRUCK #	DRIVER
<u>485</u>	<u>ALVIN</u>		
<u>479</u>	<u>TIM</u>		

CITY	STATE	ZIP CODE
<u>Reading</u>	<u>KS</u>	<u>66868</u>

CUSTOMER: Dennis D & Peggy D Hodges
MAILING ADDRESS: 1827 Rd 2

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 212 CASING SIZE & WEIGHT 8 3/4 24"
CASING DEPTH 201 DRILL PIPE _____ TUBING _____ OTHER _____
SLURRY WEIGHT 14.5[#] SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING _____
DISPLACEMENT 11 1/2 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety Meeting. Rig up to 8 3/8 Surface pipe. Break Circulation with 10 bbls Fresh water. Mix 114 sks Class A Cement w/ 3% CaCl₂ 2% Gel & 1/4" Fluore per/sk. At 14.5[#]. Displace with 11 1/2 bbls Fresh Water shut well in. Circulated 2 1/2 bbls of Cement to Pit. Job Complete Rig down

Thank You

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
<u>54015</u>	<u>1</u>	<u>PUMP CHARGE</u>	<u>775.00</u>	<u>775.00</u>
<u>5406</u>	<u>45</u>	<u>MILEAGE</u>	<u>4.00</u>	<u>180.00</u>
<u>11645</u>	<u>114 sks</u>	<u>Class A Cement</u>	<u>14.25</u>	<u>1651.50</u>
<u>1167</u>	<u>330[#]</u>	<u>CaCl₂ 3%</u>	<u>.70</u>	<u>231.00</u>
<u>1118B</u>	<u>220[#]</u>	<u>Gel 2%</u>	<u>.20</u>	<u>44.00</u>
<u>1167</u>	<u>30[#]</u>	<u>Fluore 1/4" per/sk</u>	<u>2.22</u>	<u>66.60</u>
<u>5407</u>	<u>5.55 ton</u>	<u>Jun Mileage Bulk Truck</u>	<u>MIC</u>	<u>330.00</u>
			<u>Sub Total</u>	<u>3308.10</u>
		<u>6.3%</u>	<u>SALES TAX</u>	<u>127.20</u>
			<u>ESTIMATED TOTAL</u>	<u>3435.30</u>

AUTHORIZATION [Signature] TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



CONSOLIDATED
Oil Well Services, LLC

TICKET NUMBER 31602
LOCATION Fureks
FOREMAN Rick Letford

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT

CEMENT

API# 15-031-22996

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
9-20-11		Hodges # 3	12	215	13E	Coffey

TRUCK #	DRIVER	TRUCK #	DRIVER
520	Allen B.		
515	Chris B.		
637	Jim		

CUSTOMER: Dennis + Peggy Hodges
MAILING ADDRESS: 1827 Rd 2
CITY: Reading STATE: KS ZIP CODE: 66808

Three Rivers Explorator

JOB TYPE L/S 0 HOLE SIZE 2 7/8" HOLE DEPTH 1924' CASING SIZE & WEIGHT 5 1/2" 15.5 lb/ft
CASING DEPTH 1830' GL DRILL PIPE _____ TUBING _____ OTHER _____
SLURRY WEIGHT 13.6* SLURRY VOL 41 Bbl WATER gal/ek 9.0 CEMENT LEFT IN CASING 0'
DISPLACEMENT 43.5 Bbl DISPLACEMENT PSI 500 PSI 1000 Bump plug RATE _____

REMARKS: Safety meeting. Rig up to 5 1/2" casing. Break circulation w/ 5 Bbl fresh water. Pump 12 Bbl caustic soda pre-flush, 5 Bbl water spacer. Mixed 135 sacks thickset cement w/ 5* Kal-seal/lug @ 13.6*/gal yield 11.9 washout pump + lines, shut down, release 5 1/2" latch down plug. Displace w/ 43.5 Bbl fresh water. Final pump pressure 500 PSI. Bump plug to 1000 PSI. Release pressure, float + plug held. Good circulation @ all times while cementing. Job complete. Rig down.

Thank You

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	975.00	975.00
5406	45	MILEAGE	4.00	180.00
1126A	135 SCS	thickset cement	18.30	2470.50
1110A	675*	5* Kal-seal/lug	.44	297.00
1103	100*	caustic soda	1.52	152.00
5402A	7.43	tan mileage bulk tank	1.26	421.28
5502C	3.5 hrs	80 Bbl vas. tank	90.00	315.00
1123	3000 gals	city water	15.60/1000	46.80
4157	1	5 1/2" AFU float shoe	344.00	344.00
4454	1	5 1/2" latch down plug	259.00	259.00
4130	5	5 1/2" x 2 7/8" centralizers	48.00	240.00
4104	1	5 1/2" borehole	229.00	229.00
		<i>Check # 670</i>		
		Ticket # 31597 \$ 3435.30	subtotal	5924.58
		Ticket # 31602 \$ 6178.68	SALES TAX 6.3%	254.10
		Total	ESTIMATED TOTAL	6178.68

AUTHORIZATION _____

TITLE 9133.28

DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form

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
Ward Loyd, Commissioner
Thomas E. Wright, Commissioner

Sam Brownback, Governor

December 29, 2011

Dennis Hodges
Hodges, Dennis D. and/or Peggy D.
1827 Rd Z
Reading, KS 66868

Re: ACO1
API 15-031-22996-00-00
HODGES 3
NW/4 Sec.12-21S-13E
Coffey 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,
Dennis Hodges

Geological Wellsite Report

By David Griffin, RG
GGR, Inc. (Griffin Geological Resources)
September 23, 2011

Well Info: Hodges 3
N/2 NW SW NW/4
3785' fsl, 330' fwl
Section 12, T21S-R13E
Coffey County, KS
API No. 15-031-22996
GPS Coordinates
W-95.938907, N38.239217
Datum: GL, Elev. 1142' est.
RTD: 1824', GL
Status: Pipe Set,
Burgess SS Test

Operator: Dennis D. and
Peggy D. Hodges
1827 Road Z
Reading, Kansas 66868
Operator License No.: 34291
Contact: Dennis Hodges

Contractor: Three Rivers Exploration, LLC
Contractor License No.: 33217
Owner: Dave Farthing

Objectives: Primary objective, evaluate the Burgess Sandstone
Secondary objective, evaluate the Squirrel Sandstones.

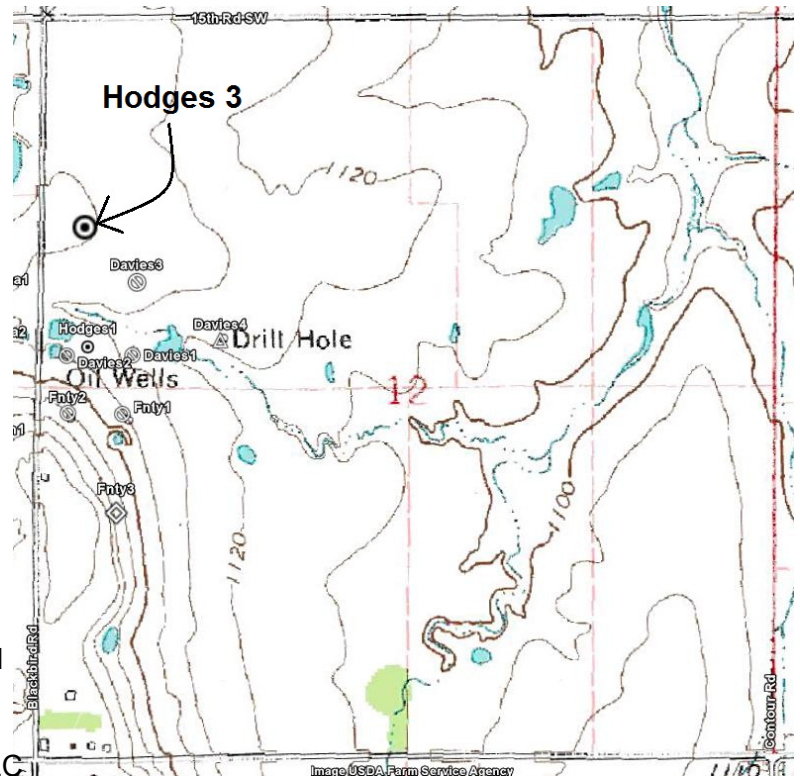
Drilling Notes:

September 12, 2011, Spud 12 1/4" Bit, Set 201', 8 5/8" Surface Casing
September 20, 2011, Reached Total Depth of 1824', GL
Bit One, 7 7/8" PDC Bit from 200' to 1600'
Bit Two, 7 7/8" Button Bit from 1600' to TD at 1824'
Native fresh water mud to 1500', Chemical Gel Mud 1500' to TD

Geological Supervision:

David Griffin, RG, provided wellsite supervision on September 18, 19, and 20, 2011.
Drilling was witnessed from 1030' to TD at 1824', samples were microscopically
examined from 1300' to 1824'.

Cement Co.: Consolidated Oil Well Service Co., Contractor License No.: 04996



Geological Datums:

Geologic Tops					
Dennis D. and/or Peggy D. Hodges			Haas Petroleum, LLC		
Hodges 3			Hodges 1, Oil Well		
N/2 NW SW NW/4			SW SW NW/4		
Sec. 12-T21S-R13E			Sec. 12-T21S-R13E		
Zones of Interest	OH Log Tops		S C T O R M C P	OH Log Tops	
	GL Elev. 1142'			KB Elev. 1141'	
	Depth	Subsea	Depth	Subsea	
Base Kansas City	1090	52	-7	1082	59
Cherokee	1377	-235	-7	1369	-228
Upper Squirrel SS	1380	-238	-2	1377	-236
Base SS	1398	-256	-11	1386	-245
Lower Squirrel SS	1428	-286	-7	1420	-279
Base SS	1446	-304	-7	1438	-297
Ardmore LS	1480	-338	-9	1470	-329
Burgess SS	1721	-579	-11	1709	-568
Top Pay Zone, (Porosity)	1721	-579	-4	1716	-575
Base Pay (75% SW Cutoff)	1736	-594	-13	1722	-581
Base SS	1773	-631	-18	1754	-613
Mississippian Dol	1775	-633	-14	1758	-617
Osage Chert	dnp			1874	-733
Northview Shale	dnp			2022	-881
Compton LS	dnp			2054	-913
Kinderhook Shale	dnp			2075	-934
Base Shale (Pre Khk)	dnp			2164	-1023
Rotary Total Depth	1781	-639		2169	-1028

Structural Comparisons:

Structural comparison of the top of the Burgess Sandstone Pay Zone indicates that Hodges 3 is structurally 5' low to Hodges 1, a new pending producer well lying ~800' to the south.

Gas Detection, Logs, Cores, DST's:

Digital total gas detection and rate of penetration was performed from 1160' to TD at 1824'. A dual induction and dual porosity open hole log was ran by Osage Wireline. No cores or DST's were obtained for this well.

Descriptions of Oil Show Zones:

Upper Squirrel SS

1380' to 1397', GL, (-238'), 17' thick, Very Good to Excellent Pay Zone Potential

Sandstone, light to dark brown, clean, very fine with minor fine grained sub-angular quartz, loose grains to clusters, mostly good porosity with minor tite mostly in top, very good odor, very good show of free brown oil rinsing from samples and bleeding into sample bags, very good live oil show and odor in pit; oil a little heavier below 1390'; Siltstone, shale, 30% to 70%, very light gray to gray. Total gas readings peaked at 1317 units which are 1246 units of the background reading of approximately 76 units, no gas bubbles observed.

Pay Zone was flagged from 1381' to 1398' using an Rw of 0.15 and cutoffs for saltwater (Sw) of 75%, porosity (Phi) of 17% and shaliness (VSH) of 0.6.

Oil In-Place in the flagged pay zone interval was estimated at 55,831 barrels using a 440' well spacing. The recovery factor is highly variable, but for comparison purposes, a 10% recovery factor is approximately 5,583 barrels. See attached sheet of calculations.

Lower Squirrel SS

1427' to 1445', GL, (-285'), 18' thick, Marginal Pay Zone Potential

Sandstone, dark brown to dark grayish-brown, mostly clean, very fine to fine grained sub-angular quartz, loose grains to clusters, mostly good porosity with minor tite, very good odor; good to very good show of dark brown heavy oil rinsing from samples and bleeding into sample bags, slight show of oil in pit; oil is heavy black and sticky below 1438'; Siltstone, shale, 20% to 70%, dark gray interbeds. Total gas readings peaked at 555 units which is 315 units of the background reading of approximately 240 units.

Pay Zone was flagged from 1429' to 1431' and 1444' to 1445.5' using an Rw of 0.15 and cutoffs for Sw of 75%, Phi of 17% and VSH of 0.6.

Oil In-Place in the flagged pay zone interval was estimated at 7,780 barrels using a 440' well spacing. The recovery factor is highly variable, but for comparison purposes, a 10% recovery factor is approximately 778 barrels. See attached sheet of calculations.

Burgess SS

1720' to 1775', GL, (-578'), 55' thick, Very Good to Excellent Pay Zone Potential

Sandstone, light brown to light gray, mostly clean, very fine to coarse grained sub-angular quartz, loose grains to clusters, fair to very good porosity with minor tite zones of quartz re-crystallization.

(1720'-1728'), Very good to excellent pay zone potential, very fine to fine with medium grains toward bottom, fair to mostly good porosity, possible shale interbeds, very good odor, mostly very good to excellent show of free brown oil rinsing from samples and bleeding into sample bags, very good oil odor coming from pit. Total gas readings peaked at 63 units, however, a possible high power draw may have negatively biased the gas instrumentation.

(1728'-1736'), Very good pay zone potential, very fine to medium grained, good porosity, possible shale interbeds, very good odor in samples and from pit, very good show of free brown oil rinsing from samples and bleeding into sample bags. Total gas readings peaked at 53 units.

(1736'-1741'), Good pay zone potential, probably top of water transition zone, very fine to coarse grained, recrystallized quartz encompass many of the coarse grains, but mostly good to very good porosity, good to very good show of free oil. Total gas readings peaked at 35 units.

(1741'-1750'), Water transition zone, very fine to coarse grained, good porosity, fair to good show of oil in about 50% of the sandstone. Total gas readings peaked at 35 units.

(1750'-1775'), Water zone, very fine to coarse grained, fair show of oil grading to trace show toward bottom, mostly good porosity, quartz recrystallization partly, trace weathered chert near bottom. Total gas readings ranged from 28 units at the top to 16 units at the bottom.

Bright fluorescence from oil stain was as follows:

1717'-1721', 8%, Good Pay
1721'-1723', 40%, Very Good to Excellent Potential
1723'-1726', 60%, Very Good to Excellent Potential
1726'-1728', 50%, Very Good to Excellent Potential
1728'-1730', 70%, Very Good Potential
1730'-1736', 60%, Very Good Potential
1736'-1743', 40%, Good Potential, Water Transition Zone
1743'-1750', 25%, No Potential
1750'-1775', 5% to 20%, No Potential

Based on sample observations, the best potential pay zone lies from 1720' to 1736'. Pay Zone was flagged from 1724.5' to 1736' using an Rw of 0.2 and cutoffs for Sw of 75%, Phi of 16% and VSH of 0.8.

Oil In-Place in the flagged pay zone interval was estimated at 61,136 barrels using a 660' well spacing. The recovery factor is highly variable, but for comparison purposes, a 10% recovery factor is approximately 6,114 barrels. See attached sheet of calculations.

Summary:

Hodges 3 contained Upper Squirrel Sandstone from 1380' (-238) to 1397', (17' thick) with a very good to excellent show of free brown oil rinsing from samples and in pit throughout. The Upper Squirrel Sandstone has very good to excellent potential as pay zone with saltwater calculations that ranged from 37% to 63%. Lower Squirrel Sandstone was present from 1427', (-285) to 1445', (18' thick) with good to very good shows of dark brown to black free oil rinsing from samples. The Lower Squirrel Sandstone has marginal pay zone potential with saltwater calculations that ranged from 70% to 81%. Burgess Sandstone was present from 1720' (-578) to 1775', (55' thick) and contained mostly very good to excellent show of free brown oil from 1720' to 1736'. The Burgess Sandstone has very good to excellent pay zone potential with saltwater calculations that ranged from 52% to 74%. The top of the Burgess Sandstone is structurally 11' low to Hodges 1, a new Burgess Sandstone producer well lying ~800' to the south. Due to the very good to excellent potential of the Upper Squirrel and Burgess Sandstones, 5 $\frac{1}{2}$ " production casing was set.

Recommendations:

It is recommended that the Burgess Sandstone be perforated from 1722' to 1731', GL and tested naturally through perforations. A cased hole GRN log should be correlated with the open-hole and sample log to aid in properly placing the perforations. The Upper Squirrel Sandstone could also be tested with perforations from 1382' to 1395' and sand frac'd, however, a twin well planned for 440' acre spacing should be considered. It is not recommended that the Lower Squirrel Sandstone be tested at this time.

Respectfully Submitted,



David Griffin, RG, Owner
GGR Inc. (Griffin Geological Resources)
Lawrence, Kansas
785-842-3665

Attachment: Sample Log, Saltwater and OIP Calculations

Hodges 3
Upper Squirrel Sandstone Saltwater and Oil in Place Calculations
N2 NW SW NW/4, Sec. 12-T21S-R13E, Coffey County, KS
September 23, 2011

Model = Archie		Porosity										FT		Barrels Oil
PARAMETERS	Zone	Depth	Thick	RT	PHI	RWA	RO	MA	SW	BVW	VSH	PAY	BOI	In-Place Per Acre
X	1	1378	0.5	6.15	18.7%	0.30	3.06	2.22	70.6%	0.132	1.119	0	1.12	0
Y	2	1378.5	0.5	6.39	17.4%	0.27	3.50	2.14	74.0%	0.129	0.881	0	1.12	0
A	1	1379	0.5	6.70	16.0%	0.25	4.05	2.07	77.8%	0.125	0.827	0	1.12	0
M	1.8	1379.5	0.5	6.96	15.6%	0.25	4.26	2.06	78.2%	0.122	0.771	0	1.12	0
N	2	1380	0.5	7.19	16.0%	0.27	4.04	2.11	75.0%	0.120	0.666	0	1.12	0
RW	0.15	1380.5	0.5	7.46	16.9%	0.31	3.67	2.20	70.1%	0.119	0.572	0	1.12	0
CTHK	32.5	1381	0.5	7.72	17.9%	0.35	3.31	2.29	65.5%	0.117	0.498	0.03	1.12	214
AVPHI	0.18	1381.5	0.5	8.00	18.6%	0.39	3.09	2.37	62.2%	0.116	0.461	0.04	1.12	244
FTOIL	1.81	1382	0.5	8.37	18.9%	0.42	3.00	2.42	59.9%	0.113	0.465	0.04	1.12	263
PAYFEET	17	1382.5	0.5	8.75	19.2%	0.45	2.93	2.46	57.9%	0.111	0.471	0.04	1.12	280
Estimated Oil-In-Place	11	1383	0.5	9.23	19.7%	0.50	2.80	2.53	55.0%	0.108	0.450	0.04	1.12	307
440' Spacing	55,831	12	1383.5	0.5	9.87	20.4%	0.56	2.63	51.6%	0.105	0.430	0.05	1.12	342
10%OIP	5,583	13	1384	0.5	10.60	20.8%	0.63	2.52	48.8%	0.102	0.448	0.05	1.12	370
DMIN		14	1384.5	0.5	11.45	21.0%	0.69	2.49	46.6%	0.098	0.485	0.06	1.12	388
DMAX		15	1385	0.5	12.42	21.2%	0.76	2.44	44.4%	0.094	0.468	0.06	1.12	409
GL	1142	16	1385.5	0.5	13.48	21.6%	0.85	2.37	41.9%	0.090	0.391	0.06	1.12	434
LTD		17	1386	0.5	14.62	21.5%	0.92	2.38	39.9%	0.087	0.343	0.06	1.12	445
BHT		18	1386.5	0.5	15.74	21.1%	0.96	2.47	39.6%	0.084	0.334	0.06	1.12	442
ST		19	1387	0.5	16.74	20.7%	0.98	2.56	39.1%	0.081	0.342	0.06	1.12	436
RMF		20	1387.5	0.5	17.76	20.6%	1.03	2.58	38.1%	0.078	0.329	0.06	1.12	441
RMFT		21	1388	0.5	18.88	20.7%	1.10	2.57	36.9%	0.076	0.323	0.07	1.12	452
		22	1388.5	0.5	19.76	20.2%	1.11	2.66	36.7%	0.074	0.358	0.06	1.12	444
CUT-OFFS		23	1389	0.5	20.20	19.5%	1.06	2.85	37.6%	0.073	0.376	0.06	1.12	421
PHICUT	0.17	24	1389.5	0.5	20.16	19.1%	1.02	2.96	38.3%	0.073	0.361	0.06	1.12	408
SWCUT	0.75	25	1390	0.5	19.77	19.2%	1.01	2.94	38.5%	0.074	0.335	0.06	1.12	408
VSHCUT	0.6	26	1390.5	0.5	19.29	19.6%	1.02	2.82	38.3%	0.075	0.353	0.06	1.12	419
BVWCUT	0.22	27	1391	0.5	18.71	20.4%	1.07	2.61	37.4%	0.076	0.415	0.06	1.12	443
Colors:		28	1391.5	0.5	17.86	21.3%	1.11	2.42	36.8%	0.079	0.451	0.07	1.12	467
		29	1392	0.5	16.87	21.8%	1.09	2.33	37.2%	0.081	0.465	0.07	1.12	474
		30	1392.5	0.5	15.62	21.8%	1.00	2.33	38.6%	0.084	0.489	0.07	1.12	463
		31	1393	0.5	14.37	21.7%	0.92	2.34	40.4%	0.088	0.482	0.06	1.12	449
		32	1393.5	0.5	13.33	21.6%	0.85	2.36	42.1%	0.091	0.453	0.06	1.12	434
		33	1394	0.5	12.55	20.9%	0.75	2.50	44.7%	0.093	0.438	0.06	1.12	401
		34	1394.5	0.5	11.94	19.7%	0.64	2.78	48.3%	0.095	0.454	0.05	1.12	354
		35	1395	0.5	11.41	18.6%	0.55	3.09	52.0%	0.097	0.484	0.04	1.12	309
		36	1395.5	0.5	10.88	17.6%	0.48	3.41	56.0%	0.099	0.488	0.04	1.12	269
		37	1396	0.5	10.30	17.0%	0.42	3.65	59.6%	0.101	0.487	0	1.12	0
		38	1396.5	0.5	9.83	17.0%	0.41	3.63	60.8%	0.103	0.513	0.03	1.12	231
		39	1397	0.5	9.53	17.6%	0.42	3.42	59.9%	0.105	0.542	0.04	1.12	244
		40	1397.5	0.5	9.32	17.8%	0.42	3.35	59.9%	0.107	0.571	0.04	1.12	247
		41	1398	0.5	9.19	17.1%	0.38	3.61	62.7%	0.107	0.575	0.03	1.12	221
		42	1398.5	0.5	9.03	16.0%	0.33	4.07	67.1%	0.107	0.588	0	1.12	0
		43	1399	0.5	8.79	15.3%	0.30	4.42	70.9%	0.108	0.614	0	1.12	0
		44	1399.5	0.5	8.50	15.1%	0.28	4.50	72.8%	0.110	0.636	0	1.12	0
		45	1400	0.5	8.29	15.7%	0.30	4.20	71.2%	0.112	0.684	0	1.12	0
		46	1400.5	0.5	8.21	16.8%	0.33	3.71	67.2%	0.113	0.733	0	1.12	0
		47	1401	0.5	8.23	17.8%	0.37	3.35	63.8%	0.114	0.732	0	1.12	0
		48	1401.5	0.5	8.30	18.1%	0.38	3.25	62.5%	0.113	0.676	0	1.12	0
		49	1402	0.5	8.33	17.6%	0.36	3.42	64.1%	0.113	0.677	0	1.12	0
		50	1402.5	0.5	8.36	16.9%	0.34	3.69	66.4%	0.112	0.751	0	1.12	0
		51	1403	0.5	8.47	16.7%	0.34	3.76	66.6%	0.111	0.839	0	1.12	0
		52	1403.5	0.5	8.62	16.8%	0.35	3.72	65.7%	0.110	0.862	0	1.12	0
		53	1404	0.5	8.78	16.8%	0.36	3.71	65.0%	0.109	0.865	0	1.12	0
		54	1404.5	0.5	8.93	16.7%	0.36	3.75	64.8%	0.108	0.904	0	1.12	0
		55	1405	0.5	9.01	16.5%	0.35	3.85	65.4%	0.108	0.929	0	1.12	0
		56	1405.5	0.5	9.02	16.1%	0.34	4.00	66.6%	0.107	0.920	0	1.12	0
		57	1406	0.5	9.02	16.1%	0.34	4.03	66.8%	0.107	0.943	0	1.12	0
		58	1406.5	0.5	9.00	16.5%	0.35	3.85	65.4%	0.108	0.976	0	1.12	0
		59	1407	0.5	8.95	17.0%	0.37	3.63	63.7%	0.108	0.982	0	1.12	0
		60	1407.5	0.5	8.91	17.3%	0.38	3.53	63.0%	0.109	0.958	0	1.12	0
		61	1408	0.5	8.90	17.0%	0.36	3.66	64.1%	0.109	0.916	0	1.12	0
		62	1408.5	0.5	8.87	16.3%	0.34	3.92	66.5%	0.108	0.930	0	1.12	0
		63	1409	0.5	8.87	16.0%	0.33	4.08	67.8%	0.108	0.954	0	1.12	0
		64	1409.5	0.5	8.86	16.0%	0.33	4.08	67.9%	0.108	0.949	0	1.12	0
		65	1410	0.5	8.81	16.4%	0.34	3.89	66.5%	0.109	0.979	0	1.12	0

Hodges 3
Lower Squirrel Sandstone Saltwater and Oil in Place Calculations
 N2 NW SW NW/4, Sec. 12-T21S-R13E, Coffey County, KS
 September 23, 2011

Model = Archie													Barrels Oil		
PARAMETERS	Zone	Depth	Thick	Porosity							FT		BOI	In-Place Per Acre	
				RT	PHI	RWA	RO	MA	SW	BVW	VSH	PAY			
X		1	1420	0.5	6.44	16.7%	0.26	3.76	2.10	76.4%	0.128	1.150	0	1.12	0
Y		2	1420.5	0.5	6.54	16.6%	0.26	3.80	2.10	76.2%	0.127	1.235	0	1.12	0
A	1	3	1421	0.5	6.60	16.2%	0.25	3.96	2.08	77.5%	0.126	1.197	0	1.12	0
M	1.8	4	1421.5	0.5	6.62	15.1%	0.22	4.51	2.00	82.6%	0.125	0.974	0	1.12	0
N	2	5	1422	0.5	6.63	13.4%	0.18	5.59	1.89	91.8%	0.123	0.709	0	1.12	0
RW	0.15	6	1422.5	0.5	6.75	12.3%	0.15	6.53	1.82	98.4%	0.121	0.626	0	1.12	0
CTHK	30.5	7	1423	0.5	7.04	12.6%	0.17	6.27	1.86	94.3%	0.119	0.704	0	1.12	0
AVPHI	0.19	8	1423.5	0.5	7.49	13.8%	0.21	5.30	1.97	84.1%	0.116	0.812	0	1.12	0
FTOIL	0.25	9	1424	0.5	7.88	15.0%	0.26	4.58	2.09	76.3%	0.114	0.917	0	1.12	0
PAYFEET	4.5	10	1424.5	0.5	8.14	15.2%	0.27	4.46	2.12	74.0%	0.112	0.918	0	1.12	0
Estimated Oil-In-Place		11	1425	0.5	8.18	14.4%	0.25	4.90	2.06	77.4%	0.112	0.811	0	1.12	0
440' Spacing	7,780	12	1425.5	0.5	8.08	13.4%	0.22	5.63	1.98	83.5%	0.111	0.690	0	1.12	0
10%OIP	778	13	1426	0.5	8.04	12.6%	0.19	6.28	1.92	88.4%	0.111	0.605	0	1.12	0
DMIN		14	1426.5	0.5	8.07	12.3%	0.19	6.51	1.90	89.8%	0.111	0.632	0	1.12	0
DMAX		15	1427	0.5	8.05	12.8%	0.20	6.03	1.94	86.5%	0.111	0.712	0	1.12	0
GL	1142	16	1427.5	0.5	7.90	13.9%	0.23	5.21	2.01	81.2%	0.113	0.730	0	1.12	0
LTD		17	1428	0.5	7.49	15.3%	0.25	4.41	2.08	76.8%	0.117	0.688	0	1.12	0
BHT		18	1428.5	0.5	6.89	16.6%	0.27	3.81	2.13	74.4%	0.123	0.616	0	1.12	0
ST		19	1429	0.5	6.28	17.7%	0.28	3.39	2.16	73.5%	0.130	0.555	0.02	1.12	162
RMF		20	1429.5	0.5	5.76	18.9%	0.29	3.02	2.19	72.4%	0.137	0.516	0.03	1.12	180
RMFT		21	1430	0.5	5.34	19.9%	0.29	2.75	2.21	71.8%	0.143	0.501	0.03	1.12	194
		22	1430.5	0.5	5.00	20.6%	0.29	2.59	2.22	71.9%	0.148	0.527	0.03	1.12	200
CUT-OFFS		23	1431	0.5	4.71	21.2%	0.29	2.44	2.23	71.9%	0.153	0.596	0.03	1.12	206
PHICUT	0.17	24	1431.5	0.5	4.47	21.9%	0.29	2.31	2.24	71.8%	0.157	0.679	0	1.12	0
SWCUT	0.75	25	1432	0.5	4.28	22.4%	0.29	2.22	2.24	72.0%	0.161	0.762	0	1.12	0
VSHCUT	0.6	26	1432.5	0.5	4.14	22.8%	0.29	2.15	2.24	72.1%	0.164	0.834	0	1.12	0
BVWCUT	0.22	27	1433	0.5	4.06	23.0%	0.29	2.12	2.24	72.3%	0.166	0.799	0	1.12	0
		28	1433.5	0.5	4.02	23.0%	0.29	2.11	2.24	72.4%	0.167	0.696	0	1.12	0
Colors:		29	1434	0.5	3.98	23.0%	0.28	2.11	2.23	72.7%	0.168	0.651	0	1.12	0
		30	1434.5	0.5	3.95	22.4%	0.27	2.23	2.18	75.1%	0.168	0.663	0	1.12	0
		31	1435	0.5	3.89	21.4%	0.24	2.41	2.11	78.7%	0.168	0.667	0	1.12	0
		32	1435.5	0.5	3.82	21.1%	0.23	2.46	2.08	80.3%	0.170	0.638	0	1.12	0
		33	1436	0.5	3.72	21.5%	0.23	2.38	2.09	80.0%	0.172	0.557	0	1.12	0
		34	1436.5	0.5	3.63	21.8%	0.23	2.32	2.09	80.0%	0.175	0.478	0	1.12	0
		35	1437	0.5	3.55	21.9%	0.23	2.30	2.08	80.6%	0.177	0.463	0	1.12	0
		36	1437.5	0.5	3.48	22.2%	0.23	2.26	2.09	80.5%	0.178	0.502	0	1.12	0
		37	1438	0.5	3.44	22.5%	0.23	2.20	2.10	80.0%	0.180	0.514	0	1.12	0
		38	1438.5	0.5	3.43	22.7%	0.24	2.17	2.11	79.6%	0.180	0.505	0	1.12	0
		39	1439	0.5	3.46	22.9%	0.24	2.13	2.13	78.6%	0.180	0.504	0	1.12	0
		40	1439.5	0.5	3.53	23.0%	0.25	2.11	2.15	77.3%	0.178	0.501	0	1.12	0
		41	1440	0.5	3.65	22.6%	0.25	2.18	2.14	77.4%	0.175	0.567	0	1.12	0
		42	1440.5	0.5	3.80	21.6%	0.24	2.36	2.11	78.8%	0.170	0.658	0	1.12	0
		43	1441	0.5	3.98	21.0%	0.24	2.50	2.10	79.3%	0.166	0.685	0	1.12	0
		44	1441.5	0.5	4.15	20.7%	0.24	2.56	2.11	78.5%	0.162	0.673	0	1.12	0
		45	1442	0.5	4.31	20.4%	0.25	2.63	2.11	78.0%	0.159	0.594	0	1.12	0
		46	1442.5	0.5	4.47	20.0%	0.25	2.73	2.11	78.1%	0.156	0.489	0	1.12	0
		47	1443	0.5	4.62	19.8%	0.25	2.77	2.11	77.5%	0.153	0.448	0	1.12	0
		48	1443.5	0.5	4.79	20.0%	0.26	2.72	2.15	75.3%	0.151	0.447	0	1.12	0
		49	1444	0.5	4.98	20.4%	0.28	2.62	2.20	72.6%	0.148	0.471	0.03	1.12	193
		50	1444.5	0.5	5.21	20.6%	0.30	2.59	2.24	70.5%	0.145	0.510	0.03	1.12	209
		51	1445	0.5	5.46	20.2%	0.31	2.67	2.25	69.9%	0.141	0.545	0.03	1.12	210
		52	1445.5	0.5	5.74	19.4%	0.30	2.86	2.23	70.6%	0.137	0.583	0.03	1.12	198
		53	1446	0.5	6.06	18.2%	0.28	3.21	2.17	72.8%	0.133	0.614	0	1.12	0
		54	1446.5	0.5	6.39	16.9%	0.26	3.68	2.11	75.9%	0.128	0.640	0	1.12	0
		55	1447	0.5	6.75	16.1%	0.25	4.01	2.08	77.1%	0.124	0.710	0	1.12	0
		56	1447.5	0.5	7.09	15.9%	0.26	4.11	2.10	76.1%	0.121	0.835	0	1.12	0
		57	1448	0.5	7.41	16.0%	0.27	4.08	2.13	74.2%	0.118	0.947	0	1.12	0
		58	1448.5	0.5	7.76	16.1%	0.29	4.01	2.16	71.9%	0.116	0.991	0	1.12	0
		59	1449	0.5	8.07	16.1%	0.30	4.00	2.18	70.4%	0.114	0.975	0	1.12	0
		60	1449.5	0.5	8.35	15.8%	0.30	4.14	2.18	70.4%	0.111	0.911	0	1.12	0
		61	1450	0.5	8.60	15.6%	0.30	4.27	2.18	70.4%	0.110	0.852	0	1.12	0

Hodges 3
Burgess Sandstone Saltwater and Oil in Place Calculations
N2 NW SW NW/4, Sec. 12-T21S-R13E, Coffey County, KS
September 23, 2011

Model = Archie													Barrels Oil		
PARAMETERS													FT	In-Place	
Zone	Depth	Thick	Porosity		RWA	RO	MA	SW	BVW	VSH	PAY	BOI	Per Acre		
X	1	1720	0.5	3.37	16.4%	0.13	5.18	1.56	124.0%	0.203	1.112	0	1.14	0	
Y	2	1720.5	0.5	3.13	17.5%	0.14	4.62	1.58	121.6%	0.212	1.062	0	1.14	0	
A	3	1721	0.5	3.10	18.9%	0.15	4.01	1.64	113.8%	0.215	0.903	0	1.14	0	
M	4	1721.5	0.5	3.27	20.1%	0.18	3.60	1.74	105.0%	0.211	0.647	0	1.14	0	
N	5	1722	0.5	3.64	20.4%	0.21	3.48	1.83	97.9%	0.200	0.420	0	1.14	0	
RW	6	1722.5	0.5	4.29	19.9%	0.23	3.66	1.90	92.3%	0.184	0.344	0	1.14	0	
CTHK	55.5	7	1723	0.5	5.36	18.7%	0.26	4.08	87.3%	0.163	0.438	0	1.14	0	
AVPHI	0.19	8	1723.5	0.5	6.72	17.6%	0.29	4.56	82.4%	0.145	0.614	0	1.14	0	
FTOIL	0.93	9	1724	0.5	8.05	17.2%	0.34	4.74	76.7%	0.132	0.752	0	1.14	0	
PAYFEET	11.5	10	1724.5	0.5	9.06	17.9%	0.41	4.42	2.22	69.9%	0.125	0.734	0.03	1.14	184
Estimated Oil-In-Place		11	1725	0.5	9.50	19.1%	0.48	3.93	2.33	64.3%	0.123	0.597	0.03	1.14	233
660' Spacing	61,136	12	1725.5	0.5	9.68	20.2%	0.54	3.56	2.43	60.6%	0.123	0.464	0.04	1.14	272
10%OIP	6,114	13	1726	0.5	9.98	20.8%	0.59	3.36	2.49	58.0%	0.121	0.380	0.04	1.14	299
DMIN		14	1726.5	0.5	10.26	21.4%	0.64	3.21	2.55	55.9%	0.120	0.303	0.05	1.14	322
DMAX		15	1727	0.5	10.42	22.3%	0.70	2.99	2.63	53.5%	0.119	0.253	0.05	1.14	353
GL	1142	16	1727.5	0.5	10.53	22.9%	0.74	2.84	2.69	51.9%	0.119	0.278	0.06	1.14	376
LTD		17	1728	0.5	10.50	22.5%	0.72	2.93	2.66	52.8%	0.119	0.406	0.05	1.14	363
BHT		18	1728.5	0.5	10.42	20.9%	0.62	3.35	2.53	56.7%	0.118	0.552	0.05	1.14	309
ST		19	1729	0.5	10.55	19.0%	0.53	3.97	2.39	61.3%	0.117	0.567	0.04	1.14	251
RMF		20	1729.5	0.5	10.83	18.0%	0.49	4.40	2.32	63.8%	0.114	0.513	0.03	1.14	222
RMFT		21	1730	0.5	10.97	18.0%	0.50	4.38	2.34	63.2%	0.114	0.516	0.03	1.14	226
		22	1730.5	0.5	10.86	19.2%	0.56	3.91	2.42	60.0%	0.115	0.489	0.04	1.14	262
CUT-OFFS		23	1731	0.5	10.44	21.1%	0.64	3.28	2.55	56.0%	0.119	0.348	0.05	1.14	317
PHICUT	0.16	24	1731.5	0.5	9.83	22.7%	0.68	2.88	2.63	54.1%	0.123	0.225	0.05	1.14	356
SWCUT	0.75	25	1732	0.5	9.23	23.0%	0.65	2.82	2.61	55.3%	0.127	0.248	0.05	1.14	351
VSHCUT	0.8	26	1732.5	0.5	8.48	22.1%	0.56	3.02	2.48	59.7%	0.132	0.393	0.04	1.14	304
BVWCUT	0.22	27	1733	0.5	7.54	20.9%	0.45	3.35	2.32	66.6%	0.139	0.474	0.03	1.14	238
Colors:		28	1733.5	0.5	6.57	20.2%	0.37	3.56	2.18	73.6%	0.149	0.381	0.03	1.14	182
		29	1734	0.5	5.71	20.9%	0.34	3.35	2.14	76.6%	0.160	0.266	0	1.14	0
		30	1734.5	0.5	5.07	23.1%	0.36	2.79	2.21	74.2%	0.172	0.230	0.03	1.14	203
		31	1735	0.5	4.64	25.2%	0.39	2.38	2.28	71.7%	0.181	0.211	0.04	1.14	244
		32	1735.5	0.5	4.38	25.9%	0.38	2.28	2.28	72.1%	0.187	0.174	0.04	1.14	246
		33	1736	0.5	4.28	25.4%	0.36	2.36	2.23	74.2%	0.189	0.165	0.03	1.14	223
		34	1736.5	0.5	4.30	24.5%	0.34	2.51	2.18	76.4%	0.187	0.167	0	1.14	0
		35	1737	0.5	4.37	23.7%	0.33	2.67	2.14	78.1%	0.185	0.140	0	1.14	0
		36	1737.5	0.5	4.44	23.2%	0.32	2.77	2.12	79.0%	0.183	0.108	0	1.14	0
		37	1738	0.5	4.55	22.8%	0.32	2.87	2.11	79.4%	0.181	0.100	0	1.14	0
		38	1738.5	0.5	4.71	22.0%	0.31	3.06	2.08	80.7%	0.177	0.119	0	1.14	0
		39	1739	0.5	4.92	20.8%	0.29	3.38	2.04	82.9%	0.172	0.131	0	1.14	0
		40	1739.5	0.5	5.22	19.7%	0.28	3.73	2.01	84.6%	0.166	0.157	0	1.14	0
		41	1740	0.5	5.55	18.9%	0.28	4.01	1.99	85.0%	0.161	0.200	0	1.14	0
		42	1740.5	0.5	5.84	18.7%	0.29	4.07	2.02	83.5%	0.157	0.197	0	1.14	0
		43	1741	0.5	6.04	19.3%	0.31	3.85	2.07	79.9%	0.154	0.165	0	1.14	0
		44	1741.5	0.5	6.14	20.0%	0.34	3.63	2.13	76.9%	0.154	0.165	0	1.14	0
		45	1742	0.5	6.20	19.8%	0.34	3.69	2.12	77.2%	0.153	0.156	0	1.14	0
		46	1742.5	0.5	6.25	19.0%	0.31	3.98	2.07	79.9%	0.152	0.127	0	1.14	0
		47	1743	0.5	6.27	17.9%	0.28	4.43	2.00	84.0%	0.150	0.116	0	1.14	0
		48	1743.5	0.5	6.32	16.3%	0.24	5.22	1.90	90.9%	0.148	0.105	0	1.14	0
		49	1744	0.5	6.44	15.2%	0.22	5.95	1.84	96.2%	0.146	0.084	0	1.14	0
		50	1744.5	0.5	6.60	15.9%	0.24	5.48	1.90	91.2%	0.145	0.070	0	1.14	0
		51	1745	0.5	6.69	17.4%	0.29	4.65	2.01	83.3%	0.145	0.082	0	1.14	0
		52	1745.5	0.5	6.60	18.1%	0.30	4.33	2.05	81.0%	0.147	0.093	0	1.14	0
		53	1746	0.5	6.36	18.2%	0.29	4.31	2.03	82.3%	0.150	0.096	0	1.14	0
		54	1746.5	0.5	6.14	18.4%	0.29	4.22	2.02	83.0%	0.152	0.124	0	1.14	0
		55	1747	0.5	5.96	18.3%	0.28	4.25	2.00	84.5%	0.155	0.150	0	1.14	0
		56	1747.5	0.5	5.80	17.5%	0.25	4.59	1.93	89.0%	0.156	0.147	0	1.14	0
		57	1748	0.5	5.72	17.1%	0.24	4.78	1.90	91.4%	0.157	0.131	0	1.14	0
		58	1748.5	0.5	5.74	18.3%	0.27	4.27	1.97	86.3%	0.157	0.126	0	1.14	0
		59	1749	0.5	5.82	20.3%	0.33	3.51	2.12	77.7%	0.158	0.157	0	1.14	0
		60	1749.5	0.5	5.90	21.8%	0.38	3.09	2.22	72.4%	0.158	0.186	0	1.14	0
		61	1750	0.5	5.93	21.8%	0.38	3.09	2.23	72.2%	0.158	0.146	0	1.14	0
		62	1750.5	0.5	5.89	20.6%	0.34	3.44	2.14	76.4%	0.157	0.080	0	1.14	0
		63	1751	0.5	5.80	19.1%	0.29	3.95	2.03	82.6%	0.157	0.052	0	1.14	0
		64	1751.5	0.5	5.69	18.0%	0.26	4.39	1.95	87.8%	0.158	0.072	0	1.14	0
		65	1752	0.5	5.55	18.0%	0.25	4.39	1.94	88.9%	0.160	0.123	0	1.14	0
		66	1752.5	0.5	5.40	19.1%	0.27	3.95	1.99	85.5%	0.163	0.165	0	1.14	0
		67	1753	0.5	5.26	20.2%	0.29	3.57	2.04	82.4%	0.166	0.175	0	1.14	0
		68	1753.5	0.5	5.11	20.9%	0.30	3.35	2.07	81.0%	0.169	0.177	0	1.14	0
		69	1754	0.5	5.01	21.4%	0.31	3.20	2.09	79.9%	0.171	0.168	0	1.14	0
		70	1754.5	0.5	4.95	21.6%	0.31	3.15	2.10	79.8%	0.173	0.179	0	1.14	0
		71	1755	0.5	4.99	21.1%	0.30	3.29	2.07	81.2%	0.171	0.198	0	1.14	0
		72	1755.5	0.5	5.20	20.1%	0.29	3.59	2.03	83.0%	0.167	0.185	0	1.14	0
		73	1756	0.5	5.59	19.1%	0.28	3.95	2.01	84.1%	0.160	0.154	0	1.14	0
		74	1756.5	0.5	6.02	18.2%	0.28	4.30	2.00	84.5%	0.154	0.151	0	1.14	0
		75	1757	0.5	6.34	17.3%	0.27	4.70	1.97	86.1%	0.149	0.169	0	1.14	0
		76	1757.5	0.5	6.50	16.1%	0.24	5.33	1.91	90.5%	0.146	0.167	0	1.14	0
		77	1758	0.5	6.59	15.3%	0.23	5.84	1.86	94.2%	0.144	0.161	0	1.14	0
		78	1758.5	0.5	6.63	15.6%	0.23	5.68	1.88	92.6%	0.144	0.176	0	1.14	0
		79	1759	0.5	6.60	16.5%	0.26	5.13	1.94	88.1%	0.145	0.209	0	1.14	0
		80	1759.5	0.5	6.45	17.3%	0.28	4.69	1.98	85.3%	0.148	0.225	0	1.14	0
		81	1760	0.5	6.18	17.6%	0.27	4.57	1.97	86.0%	0.151	0.196	0	1.14	0
		82	1760.5	0.5	5.92	17.1%	0.25	4.81	1.92	90.2%	0.154	0.152	0	1.14	0
		83	1761	0.5	5.76	16.5%	0.22	5.13	1.86	94.4%	0.156	0.142	0	1.14	0
		84	1761.5	0.5	5.68	16.4%	0.22	5.16	1.85	95.2%	0.157	0.188	0	1.14	0
		85	1762	0.5	5.70	17.1%	0.24	4.80	1.90	91.8%	0.157	0.230	0	1.14	0
		86	1762.5	0.5	5.72	18.1%	0.26	4.34	1.96	87.1%	0.158	0.238	0	1.14	0
		87	1763	0.5	5.71	18.8%	0.28	4.05	2.01	84.2%	0.158	0.243	0	1.14	0
		88	1763.5	0.5	5.72	18.7%	0.28	4.08	2.00	84.5%	0.158	0.247	0	1.14	0
		89	1764	0.5	5.83	18.0%	0.27	4.36	1.97	86.5%	0.156	0.234	0	1.14	0

Depth	David Griffin, GGR Inc., Lawrence, KS		Lithology	Shows	Well: Hodges 3	Pg. 1 of 3
	Penetration Rate (ROP)				Location: N/2 NW SW NW4, 3785' fsl & 330' fwl, Section 12-T21S-R13E, Cfy Co.	Datum/Elev. GL 1142'
	Min./Foot	Lagged Total Gas Units				Sample Descriptions (Lagged)
1150 9-18-11					Operator: Dennis Hodges Drilg Contr: Three Rivers Exploration, LLC API No.: 15-031-22996	
1160					7 7/8" PDC Bit Fresh Water Native Mud	
1170 6 PM						
1180						
1190						
1200						
1210						
1220			gas bubbles	coal, gas bubbles, (Grab sample)	Annular Velocity ~145'/min	
1230						
1240 8 PM						
1250						
1260						
1270 10 PM						
1280				Shale, Blk (Log Indicated)		
1290			gd gas show	coal, abundant gas bubbles (Grab sample)		
1300					Start 10' samples	
1310			gd gas show	coal, abundant gas bubbles LS, off-wh, vfx ln, frp, ns LS, gy, shly Sh gn-gy		
1320 9-18-11						
1330 9-19-11						
1340						
1350						
1360 2 AM						
1370			VGA Gas Show	LS, blk, vigorous, gas bubbles, carb. coalty LS, gy-bn to lt fr-gy Sh, vdk gy to blk	Begin 5' samples Cherokee 1375 (-233)	
1380			gd SFO Vgals EXC SFO in Sample & pit	SS, lt bn to bn, v f-f gn sub-ang qtz, Clean, qtz to v, gd p mostly, some ptchy fite Vgd o'don, Vgd-EXC SFO rinsq from sample & in bag, much oil in pit, Brown dil, mid 20's API	U. Squirrel SS 1380 (-238) 17' thick Pay Zone	
1390 3 AM						
1400						

Depth	David Griffin, GGR Inc., Lawrence, KS		Lithology	Shows	Well: Hodges 3	Pg. 2 of 3	
	Penetration Rate (ROP)				Location: N/2 NW SW NW4, 3785' fsl & 330' fwl, Section 12-T21S-R13E, Cfy Co.	Datum/Elev. GL 11 42'	
	Min./Foot	Lagged Total Gas Units				Sample Descriptions (Lagged)	Tops/Remarks
1400	0.1	1	10	100	1000		
9-19-11	1.77	2.14	2.14	316	316	sh, gy, silty, mtc	5' samples
1410	1.97	2.14	2.14	316	316	sh, gy, tockgy, ptly silty, mtc	
4AM	1.97	2.14	2.14	316	316		
1420	1.97	2.14	2.14	316	316		
1430	1.97	2.14	2.14	316	316	1427-32' SS, dk bn, vf-f gn qtz, gdp, gd odor, gd-vgd show heavy dk bn free oil in Bag, gd sco rinsing from samples	L. Squirrel SS 1427(-285) 18' Thick Fr-Gd Pay Zone Potential
1440	1.97	2.14	2.14	316	316	1432-38' SS, dkgy-bn, vf-f qtz, many loose snus, gdp, gd odor, gd-vgd SFHy Oil mlt patchy tite but clean ss	Base SS
1450	1.97	2.14	2.14	316	316	1438-45' SS, A, gdp, gd show heavy sticky black oil, many lse gns & v. small clstns clean ss	1445(-303) 10' samples
1460	1.97	2.14	2.14	316	316	sh, gy, w/sltst lam dkgy	
6AM	1.97	2.14	2.14	316	316	sh, gy to bk	
1470	1.97	2.14	2.14	316	316	Coal	
1480	1.97	2.14	2.14	316	316	LS, tan, foss sh, vltgy LS sh, blk	Ardmore Ls 1478(-336)
1490	1.97	2.14	2.14	316	316	LS, ltgy-tan sltst, vltgy, prf, hard, NS	
1500	1.97	2.14	2.14	316	316	sh, gy	Dump First Pre-Mix of Mud
1510	1.97	2.14	2.14	316	316	Pass Gas? SS, vltgy, vfgn, instl lse gns, gdp, No odor, No oil show, sltst, vlt, sand, sh, blk sltst, ltgy, limey	
8AM	1.97	2.14	2.14	316	316	sh, vltgy to gy	
1520	1.97	2.14	2.14	316	316	sh, blk	
1530	1.97	2.14	2.14	316	316	sh, vltgy to bk	
1540	1.97	2.14	2.14	316	316	coal sh, ltgy to dgy, st mtc	
10AM	1.97	2.14	2.14	316	316		
1550	1.97	2.14	2.14	316	316	sh, vltgy to bk to ltgy	Dump Second Pre-Mix of Mud
1560	1.97	2.14	2.14	316	316	coal sh, dkgy	
1570	1.97	2.14	2.14	316	316		1570'-1608' Poor samples
1580	1.97	2.14	2.14	316	316	LS, tan	
Noon	1.97	2.14	2.14	316	316	LS, tan, dns, NS	
1590	1.97	2.14	2.14	316	316	sh, ltgy to dkgy	
1600	1.97	2.14	2.14	316	316		7 7/8" Button Bit Trip @ 1608'
1PM	1.97	2.14	2.14	316	316		
1610	1.97	2.14	2.14	316	316	sh, ltgy, gn-gs, dkgy, cs silt lam w/30%	
6PM	1.97	2.14	2.14	316	316		
1620	1.97	2.14	2.14	316	316		
1630	1.97	2.14	2.14	316	316		
7PM	1.97	2.14	2.14	316	316		
1640	1.97	2.14	2.14	316	316	Coal	
1650	1.97	2.14	2.14	316	316		

Depth	David Griffin, GGR Inc., Lawrence, KS		Lithology	Shows	Well: Hodges 3	Pg. 3 of 3
	Penetration Rate (ROP)				Location: N/2 NW SW NW4, 3785' fsl & 330' fw, Section 12-T21S-R13E, Cfy Co.	Datum/Elev. GL 1142'
	Min./Foot	Lagged Total Gas Units				Sample Descriptions (Lagged)
1650 9-19-11	0.1	1	10	100	1000	
1660						sh, dkgy, pptly silty
1670						codl
10 PM 1680						sh, mostly dkgy, s+mtc
1690						AA
1700						AA
9-19-11 9-20-11 1710						Begin 3' samples @ 1720'
1720						sh, mostly dkgy, s+mtc
1730						Burgess SS 1720'(-578)
1740 2 AM						55' Thick
1750						1720'-36' Poss. Pay Zone
1760						1720'-28' Best Pay Zone
1770 4 AM						Base SS 1773(-633)
1780						Top Miss 1776(-634)
1790 6 AM						Trace oil stain
1800						Dol, AA, intbd w/LS, ltgy, f-m xln, Drp trace oil stain; chrt, 15%, No Free Oil
1810						AA
1820 8 AM						mostly LS, ltgy-tu, f-m xln, pr φ
1830						RTD 1824 (-682)
1840						OPEN-HOLE LOGGED BY Osage Wireline (9-20-11)
1850						
1860						
1870						
1880						
1890						
1900						