



Operator Name: Three Rivers Exploration LLC Lease Name: Waddell Well #: 1A  
 Sec. 15 Twp. 23 S. R. 10  East  West County: Greenwood

**INSTRUCTIONS:** Show important tops and base 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. Attach copy of all Electric Wireline Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input checked="" type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Cherokee Group	1943	-628
Electric Log Run <i>(Submit Copy)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Ardmore LS	2032	-717
List All E. Logs Run:		Base Cattleman SS	2114	-799
<b>gamma ray neutron</b>		Total Depth	2224	-909

CASING RECORD <input type="checkbox"/> New <input checked="" 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
surface casing	12 1/4	8 5/8	23	200	class A	105	3% calcium chloride; 2% gel
longstring	7 7/8	5 1/2	15.50	2195	thick set	100	500# kol-seal

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				

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
2	2093 to 2103	<div style="text-align: center;"> <b>RECEIVED</b>  <b>FEB 25 2010</b>  <b>KCC WICHITA</b> </div> <div style="text-align: right;"> <b>RECEIVED</b>  <b>NOV 10 2009</b>  <b>KCC WICHITA</b> </div>	

TUBING RECORD:	Size: <u>2 3/8</u>	Set At: <u>2090</u>	Packer At: <u>NA</u>	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Enhr. <u>06/27/09</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)			
Estimated Production Per 24 Hours	Oil Bbls. <u>5</u>	Gas Mcf <u>3</u>	Water Bbls. <u>50</u>	Gas-Oil Ratio <u>NA</u> Gravity <u>39</u>

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input checked="" type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <u>NA</u>
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**CONSOLIDATED**  
Oil Well Services, LLC

*Paid 2-9-9*

**REMIT TO**  
Consolidated Oil Well Services, LLC  
Dept. 970  
P.O. Box 4346  
Houston, TX 77210-4346

MAIN OFFICE  
P.O. Box 884  
Chanute, KS 66720  
620/431-9210 • 1-800/467-8676  
FAX 620/431-0012

INVOICE Invoice # 228584  
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Invoice Date: 01/27/2009 Terms: Page 1  
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THREE RIVERS EXPLORATION  
538 ROAD 20  
OLPE KS 66865  
( ) -

WADDELL A-1  
20763  
01-20-09

Part Number	Description	Qty	Unit Price	Total
1104S	CLASS "A" CEMENT (SALE)	105.00	12.7000	1333.50
1102	CALCIUM CHLORIDE (50#)	300.00	.7100	213.00
1118A	S-5 GEL/ BENTONITE (50#)	200.00	.1600	32.00
1107	FLO-SEAL (25#)	25.00	1.9700	49.25

Description	Hours	Unit Price	Total
441 MIN. BULK DELIVERY	1.00	296.00	296.00
485 CEMENT PUMP (SURFACE)	1.00	680.00	680.00
485 EQUIPMENT MILEAGE (ONE WAY)	15.00	3.45	51.75

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Parts:	1627.75	Freight:	.00	Tax:	102.55	AR	2758.05
Labor:	.00	Misc:	.00	Total:	2758.05		
Sublt:	.00	Supplies:	.00	Change:	.00		

Signed \_\_\_\_\_ Date \_\_\_\_\_



**CONSOLIDATED**  
Oil Well Services, L.L.C.

**ENTERED**

TICKET NUMBER 20763  
LOCATION EWICKA  
FOREMAN Russell McVey

PO Box 884, Chanute, KS 66720  
820-431-8210 or 800-467-8676

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
1-20-09	1993	WADDell A-1				Franklin
CUSTOMER These Rivers Exploration			TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS 538 Road 20			485	ALAN		
CITY OPIE			441	John		
STATE KS						
ZIP CODE 66865						

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 207 CASING SIZE & WEIGHT 8 5/8 used  
CASING DEPTH 201 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
SLURRY WEIGHT 15# SLURRY VOL 25 Bbl WATER gal/sk 6.5 CEMENT LEFT in CASING 20'  
DISPLACEMENT 11 1/2 DISPLACEMENT PSI 50# MIX PSI \_\_\_\_\_ RATE 3 RPM

REMARKS: Safety meeting, Rig up to 8 5/8 casing, Break circulation w/ 10  
Bbl water mix 10% SKi Regular cement 3% CaCl2 2% Gel 1/4 # Flocc  
Displace 8 5/8 casing w/ 11.5 Bbl Fresh water, 5 Bbl Good cement Returns  
To Surface. Job complete Close casing in.

Thanks!  
Russell  
McVey

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5405	1	PUMP CHARGE	680.00	680.00
5406	15	MILEAGE	3.45	51.75
1104 S	105	SKi	13.70	1,438.50
1102	300 #	3% CaCl2	.71	213.00
1118 A	200 #	2% Gel	.16	32.00
1107	25 #	Flocc 1/4 # per/sk	1.97	49.25
5407	5 Tons	Tow mileage	M/L	296.00
			RECEIVED	
			NOV 10 2009	
			KCC WICHITA	
			Sub Total	2,455.50
			SALES TAX	102.55
			ESTIMATED TOTAL	2,558.05

Revin 3737

228584

AUTHORIZATION called by Dave Farthing TITLE owner

DATE 1-20-09



**CONSOLIDATED**  
Oil Well Services, LLC

*paid 2-9-9*

**REMIT TO**  
Consolidated Oil Well Services, LLC  
Dept. 970  
P.O. Box 4346  
Houston, TX 77210-4346

MAIN OFFICE  
P.O. Box 884  
Chanute, KS 66720  
620/431-9210 • 1-800/467-8676  
FAX 620/431-0012

INVOICE Invoice # 228585  
-----  
Invoice Date: 01/27/2009 Terms: Page 1  
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THREE RIVERS EXPLORATION  
538 ROAD 20  
OLPE KS 66865  
( ) -

WADDELL 1-A  
20779  
01-23-09

Part Number	Description	Qty	Unit Price	Total
1126A	THICK SET CEMENT	100.00	16.0000	1600.00
1110A	KOL SEAL (50# BAG)	500.00	.3900	195.00
1123	CITY WATER	3000.00	.0140	42.00
4406	5 1/2" RUBBER PLUG	1.00	58.0000	58.00
4158	FLOAT SHOE FLAPPER 5 1/2	1.00	267.0000	267.00
4104	CEMENT BASKET 5 1/2"	1.00	206.0000	206.00
4130	CENTRALIZER 5 1/2"	3.00	44.0000	132.00

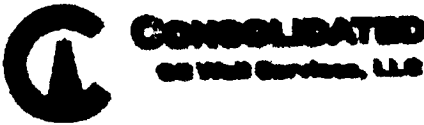
  

Description	Hours	Unit Price	Total
437 80 BBL VACUUM TRUCK (CEMENT)	3.00	94.00	282.00
445 CEMENT PUMP	1.00	870.00	870.00
445 EQUIPMENT MILEAGE (ONE WAY)	15.00	3.45	51.75
515 MIN. BULK DELIVERY	1.00	296.00	296.00

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Parts: 2500.00 Freight: .00 Tax: 157.51 AR 4157.26  
Labor: .00 Misc: .00 Total: 4157.26  
Sublt: .00 Supplies: .00 Change: .00  
-----

Signed \_\_\_\_\_ Date \_\_\_\_\_



**ENTERED**

TICKET NUMBER 20779  
 LOCATION EUREKA  
 FOREMAN Kevin McCoy

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

**FIELD TICKET & TREATMENT REPORT  
 CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
1-23-09	1993	Waddell 1-A	15	235	10E	Sw
CUSTOMER			TRUCK #	DRIVER	TRUCK #	DRIVER
Three Rivers Exploration LLC			445	Justin		
MAILING ADDRESS			515	CHRIS		
538 RD 20			437	Jim		
CITY	STATE	ZIP CODE				
OLpe	Ks	66865				

JOB TYPE Longstring HOLE SIZE 7 7/8 HOLE DEPTH 2225' CASING SIZE & WEIGHT 5 1/2" steel  
 CASING DEPTH 2203' KB DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 13.6\* SLURRY VOL 30 BBL WATER gal/sk 8.0 CEMENT LEFT in CASING 0'  
 DISPLACEMENT 55 BBL DISPLACEMENT PSI 600  PSI 1000 Bump Plug RATE \_\_\_\_\_

REMARKS: Safety Meeting; Rig up to 5 1/2" casing. Break Circulation w/ 15 BBL fresh water. Mixed 100 sks Thick Set Cement w/ 5" Kol-Seal /sk @ 13.6\*/gal, yield 1.69. Shut down. Wash out Pump & Lines. Release Plug. Displace w/ 55 BBL fresh water. Final Pressure 600 psi. Bump Plug to 1000 psi. Note: After Bumping Plug to 1000 psi, pressure instantly fell off to 250 psi. Repressure Plug to 1000 psi. Pressure instantly fell off to 250 psi. Release Pressure, no flow back. Shut casing in @ 0 psi. Good Circulation @ all times while cementing. Job Complete. Rig down.  
Note: Going to Pressure Check casing @ later date after cement has set to check for casing leak.

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	870.00	870.00
5406	15	MILEAGE	3.45	51.75
1126 A	100 sks	THICK SET Cement	16.00	1600.00
1110 A	500 *	KOL-SEAL 5" /sk	.39*	195.00
5407	5.5 TONS	Ton Mileage BULK TRUCK	MI	296.00
5502 C	3 Hrs	80 BBL UAC TRUCK	96.00	288.00
1123	3000 gals	City water	14.00/gal	42.00
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4406	1	5 1/2" Top Rubber Plug	58.00	58.00
4158	1	5 1/2" FV float shoe	262.00	262.00
4104	1	5 1/2" Cement Basket	206.00	206.00
4130	3	5 1/2" x 7 1/2" Centralizers	46.00	138.00
			Sub Total	3997.75
			SALES TAX ESTIMATED	157.51
			TOTAL	4157.26

Revin 3737

THANK YOU

228585

6.3%

AUTHORIZATION witnessed by Dave Farthing

TITLE OWNER Three Rivers Exploration DATE \_\_\_\_\_

# Griffin Geological Resources, Inc.

David B. Griffin, RG, Owner  
1502 W. 27<sup>th</sup> Terrace  
Lawrence, Kansas 66046

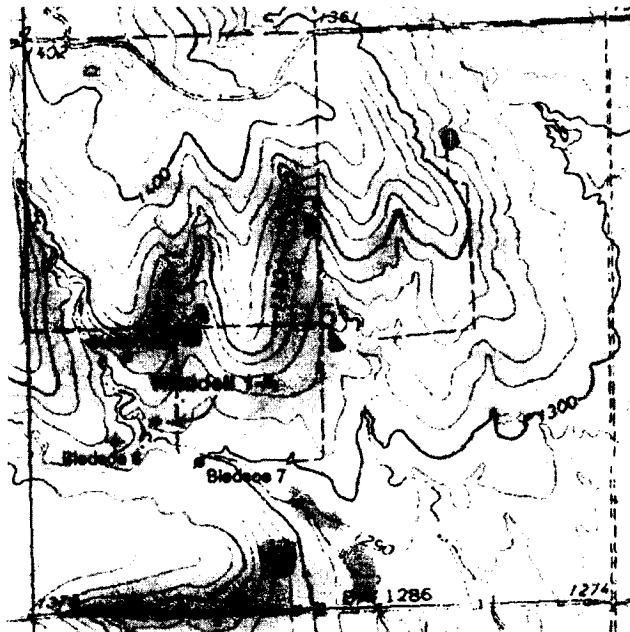
Ph. (785) 842-3665  
Cell (785) 766-0099  
Fax (785) 856-3935

January 28, 2009

## Geological Wellsite Report

For: Waddell 1-A  
NE SE NW SW/4  
1,742' fsl, 4,184' fel  
Section 15, T23S – R10E  
Greenwood County, Kansas  
GL Elev. 1315'

Operator: Three Rivers Exploration, LLC  
538 Road 20  
Olpe, KS 66865  
License No.: 33217  
Attn: Dave Farthing



The following report on the subject well includes detailed information and geological data based on microscopic examination of rotary drill cuttings from 1850' to a total depth of 2224' below ground level on January 22, 2009. A sample log with drilling time, sample cuttings description and geological tops are included with this report. Subsea corrected geological sample tops were based on a relative ground level datum elevation of 1315' above sea level.

## Well Information

GPS lat/long Coord: N38.04735, W-96.30031

API No.: 15-073-24109-00-00

Field: Hollis

Drilling Co.: Three Rivers Exploration, LLC  
538 Road 20  
Olpe, Kansas, 66865  
KS Operator License No.: 33217

Drilling Co. Owner: Dave Farthing

Tool Pusher: Dave Farthing

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**Cement Co.:** Consolidated Oil Well Service Co.  
KS Operator License No.: 04996

**Status:** 4½" Production casing set and cemented, waiting on completion.

**Rotary Total Depth:** 2224', GL

**Surface Casing:** Hole drilled with 12¼" bit, set approx. 200' 8⅝" casing

**Drilling Notes:** 4½" drill pipe, One 3-blade PDC 7⅞" button bit from 200' to TD at 2224'

**Mud Program:** Native fresh water mud to 1850', fresh water chemical gel mud from 1850' to TD, 35 vis, 8.8 wt, 3# LCM.

**Geological Supervision:**

David Griffin, RG, of GGR, Inc., provided wellsite supervision on Jan. 22, 2009. Samples microscopically examined from 1850' to 2224'.

**Logs, Gas Detection, Cores, DST's:**

No open-hole logs, cores or drill stem tests were obtained for this well, nor was gas detection in use.

**Geological Datums:**

<b>Three Rivers Exploration LLC Waddell 1-A NE SE NW SW/4 Sec. 15-T23S-R10E Geological Tops</b>				Structural Comparison Wells					
				Teichgraeber Oil Bledsoe 5 NW NE NW SW/4 Sec. 15-23S-R10E			Teichgraeber Oil Bledsoe 6 SW SE NW SW/4 Sec. 15-23S-R10E		
		Sample Tops GL Elev. 1315'		STRC COMP	Open-Hole Log Tops KB Elev. 1334'		STRC COMP	Open-Hole Log Tops KB Elev. 1332'	
Zones of Interest		Depth	Subsea		Depth	Subsea		Depth	Subsea
Kansas City Group		NA			1495	-161		1497	-165
Base Kansas City Group		NA			1679	-345		1684	-352
Marmaton Group		NA			1794	-460		1802	-470
Cherokee Group		1943	-628	-7	1955	-621	+4	1964	-632
Ardmore LS		2032	-717	-10	2041	-707	0	2049	-717
Cattleman SS Pay Zone		2089	-774	-11	2097	-763		absent	
Base Cattleman SS		2114	-799	-9	2124	-790		absent	
Penn Basal Conglomerate		DNP			DNP			2305	-973
Mississippian LS		DNP			DNP			2310	-978
Total Depth		2224	-909		2235	-901		2335	-1003

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## **Structural Comparisons:**

Structural comparison of subsea geological log tops for Waddell 1-A indicates that the top of the Cattleman Sandston Pay Zone is 11' lower than in Bledsoe 5 lying approximately 660' to the northwest.

## **Description of Pay Zone**

### **Cattleman Sandstone: 2089' to 2114', GL**

**2089'-2091'**, (2100' to 2105' sample), Top of Pay Zone, 15% sandstone, 10% gray with 5% brown, very fine to fine grained, fair to good porosity, good (first) odor, good show of light gravity oil bleeding from sample into bag, 15% bright golden yellow fluorescence, micaceous, carbonaceous; 85% shale, gray, silty, micaceous and carbonaceous.

**2091'-2093'**, (2105'-2107' sample), Good Pay Zone, 30% sandstone, light grayish-tan, very fine to fine grained, fair to mostly good porosity, sub-angular quartz, very good odor, very good oil saturations with minor gas bubbles, good to very good show of oil bleeding from sample and in bag, takes multiple rinses to remove oil for sample examination, 30% bright fluorescence, minor (<5%) heavy mineral, slight mica; 70% shale, gray, silty, mica, carb.

**2093'-2096'**, (2107'-2110' sample), Very Good Pay Zone, 40% sandstone, light grayish-tan, very fine to fine grained, good to very good porosity, sub-angular quartz, strong odor, very good oil saturations with minor gas bubbles, very good show of oil bleeding from sample into sample bag, takes multiple rinses to remove oil for sample examination, 40% bright fluorescence, minor (<5%) heavy mineral, slight mica; 60% shale, gray, silty, mica, carb.

**2096'-2099'**, (2110'-2113' sample), Very Good Pay Zone, 60% sandstone, light grayish-tan, very fine to fine grained, good to very good porosity, very good to excellent show of free oil and minor gas bubbles, 60% bright fluorescence; 40% shale, gray, silty, mica, carb.

**2099'-2108'**, (2113'-2116', 2116'-2119, 2119'-2122' samples), Very Good Pay Zone, 60% sandstone, very fine to fine with minor medium grains, very good to excellent show of free oil and minor gas bubbles, much oil in sample bags using fluorescence, 60% bright fluorescence; 40% shale, gray, silty, mica, carb.

**2108'-2111'**, (2122'-2125' sample), Very Good Pay Zone, 70% sandstone, fine to medium grained, good to very good porosity, thin tight streak, very good to excellent show of free oil and minor gas bubbles, much oil in sample bag, 50% bright and 20% medium fluorescence; 30% shale, gray, silty, mica, carb.

**2111'-2114'**, (2125'-2128' sample), Bottom of Pay Zone, 30% sandstone, fine to medium grained, fair to good porosity, decreasing show but still good amount of free oil, 30% fluorescence; 70% shale, gray, silty, mica, carb.

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## Other Oil Show

While drilling at 1815', free oil was noted in the drilling fluid in the sample return ditch. Samples were collected as quickly as possible for microscopic examination. Examination of the samples revealed only very few cuttings with a good oil show and bright fluorescence. These cuttings consisted of coarse calcite crystals and medium crystalline vugular limestone with very good porosity and a good show of free oil. By applying a sample lag of 12', the oil show came from at or above an approximate depth of 1803', which is likely from the Lenapah Limestone in the top of the Marmaton Group.

### Summary:

Cattleman sandstone was present from the interval 2089' to 2114', GL in Waddell 1-A. The interval contained approximately 30% to 70% sandstone with good to very good porosity and good to excellent shows of light gravity slightly gassy brown oil throughout that abundantly bled into the sample bags. The top of the Cattleman sandstone in Waddell 1-A was 11' lower than in Bledsoe 5, a Cattleman sandstone producer lying approximately 660' to the northwest. The sand is virtually the same thickness in both wells with no obvious oil-water contact in either well. There was no significant sandstone development of mention in the upper or lower Bartlesville sandstone zones in Waddell 1-A.

The scout card completion record for Bledsoe 5 is as follows: PF (CATT SD) 5/ 2096'-2112' SWB DWN, SO, RE-PF 4/ 2097-2112, AC FRAC 300G (MA) and 200# REDIFRAC, SWB LD, GSO, POP, IP 27 BO, 293 BWPD, 6/6/83. It is possible that Bledsoe 5 has been recompleted since this time; however that information is currently not available to the author if it exists.

The core analysis for this well showed the Cattleman SS had a high GOR (Gas Oil Ratio) from 2090' to 2108' and made perforation recommendations from 2108'-2121' in what was identified as commercial pay. Only 3 feet of the picked commercial pay was perforated, leaving 8 feet behind pipe (2112' to 2121'). The oil saturations in the picked commercial pay zone varied from 11.5% to 18.5% with a significant amount of pore space volume not accounted for. It is likely that the majority of the unaccounted pore volume was gas and/or oil that bled from the core prior to analysis. If this is the case, then the actual oil saturations could be roughly 10% to 20% higher.

The KGS reports that the Bledsoe lease produced 70,375 barrels of oil from 1982-2000 from as many as 7 wells.

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**Recommendations:**

Based on the very good to excellent show of free oil throughout the Cattleman sandstone in Waddell 1-A, the operator set and cemented production casing. It is unclear if high water production can be avoided in the Cattleman sandstone producers of the Hollis field without a more detailed study. The scout card for Bledsoe 5 indicated that at least initially, the upper half of the pay zone was perforated. It remains a possibility that the well could have been better if more of the picked commercial pay zone had been perforated. Therefore, in the absence of an observable oil-water contact from sample examination, the heart of the pay zone should be perforated in Waddell 1-A (unless further well study shows otherwise). It is recommended that the Cattleman sandstone be perforated in Waddell 1-A from approximately 2092'-2109'. A cased-hole log should be evaluated for exact placement of the shots.

Respectfully Submitted,



David B. Griffin, RG, Owner  
Griffin Geological Resources (GGR), Inc.

Attachments: Sample Log with Drilling Time

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