

STATE CORPORATION COMMISSION OF KANSAS  
OIL & GAS CONSERVATION DIVISION  
WELL COMPLETION FORM  
ACD-1 WELL HISTORY  
DESCRIPTION OF WELL AND LEASE

Operator: License # 30915  
Name: Richfield Gas Storage System  
Address Two Warren Place  
6120 S. Yale, Suite 1200  
City/State/Zip Tulsa, OK 74136  
Purchaser: N/A  
Operator Contact Person: Larry Jenkins  
Phone: (713) 627-5684  
Contractor: Name: Allen Drilling Company  
License: Unknown  
Wellsite Geologist: None

Designate Type of Completion  
 New Well  Re-Entry  Workover  
 Oil  SWD  S10W  Temp. Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, WSW, Expl., Cathodic, etc)  
Gas Storage Observation

If Workover:  
Operator: RELEASED  
Well Name: \_\_\_\_\_  
Comp. Date \_\_\_\_\_ Old Total Depth APR 6 1998  
 Deepening  Re-perf.  Completion  
 Plug Back  PBD  
 Commingled  Docket No. \_\_\_\_\_  
 Dual Completion  Docket No. \_\_\_\_\_  
 Other (SWD or Inj?)  Docket No. \_\_\_\_\_  
11-9-96 11/19/96 12/21/96  
Spud Date Date Reached TD Completion Date

API NO. 15- 129-209890001  
County Morton  
- - SW - NW Sec. 1 Twp. 32S Rge. 42  <sup>E</sup><sub>W</sub>  
3300 Feet from  N (circle one) Line of Section  
4620 Feet from  W (circle one) Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
NE,  SE, NW or SW (circle one)  
Lease Name Baughman Well # 1-1  
Field Name Richfield West  
STORAGE  
Producing Formation Morrow Keyes & G-2  
Elevation: Ground 3458 KB 3471  
Total Depth 5225 PBD 5166  
Amount of Surface Pipe Set and Cemented at 1501 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set 3197 Feet  
If Alternate II completion, cement circulated from \_\_\_\_\_  
feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.  
Drilling Fluid Management Plan ALT 1 97 4-8-97  
(Data must be collected from the Reserve Pit)  
Chloride content 900 ppm Fluid volume 300 bbls  
Dewatering method used Evaporation  
Location of fluid disposal if hauled offsite: KCC  
Operator Name \_\_\_\_\_  
Lease Name \_\_\_\_\_ License CONFIDENTIAL  
\_\_\_\_\_  
Quarter Sec. Twp. S Rng. E/W  
County \_\_\_\_\_ Docket No. \_\_\_\_\_

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.

Signature Larry J. Jenkins  
Title Principal Petroleum Engineer Date 2/13/97  
Subscribed and sworn to before me this 13 day of February, 19 97.  
Notary Public Gloria A. [Signature]  
Date Commission Expires 8-16-97

K.C.C. OFFICE USE ONLY  
F  Letter of Confidentiality Attached  
C  Wireline Log Received  
C  Geologist Report Received  
Distribution  
 KCC  SWD/Rep  NGPA  
 KGS  Plug  Other (Specify)

RECEIVED  
KANSAS CORPORATION COMMISSION  
FEB 14 1997  
CONSERVATION DIVISION  
WICHITA, KS

ORIGINAL

SIDE TWO

CONFIDENTIAL

Operator Name Richfield Gas Storage System Lease Name Baughman Well # 1-1

Sec. 1 Twp. 32S Rge. 42 County Morton

East  
 West

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem 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 during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken  Yes  No  
(Attach Additional Sheets.)  
Samples Sent to Geological Survey  Yes  No  
Cores Taken  Yes  No  
Electric Log Run  Yes  No  
(Submit Copy.)  
List All E.Logs Run:  
Array Induction - Micro-resistivity-GR  
CNL-Litho Density  
Microlog-GR Cement Bond Log

<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datums	<input type="checkbox"/> Sample
Name	Top	Datum KB 3471
Morrow Shale	4675 (-1204)	
" G-1	4943 (-1472)	
" G-2 Sand	4987 (-1516)	
" Keyes Sand	5068 (-1597)	

CASING RECORD

New  Used

\*Surface set 5/26/89

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

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface*	12 1/2	8-5/8	24	1501	Lite	460	2%CC
Production	7-7/8	4 1/2	11.6	5220	Lite+Versage	1 275	5% KCL, 5# gilsonite 1/2# Flocele
					Midcon+C	210	2% cc, 1/4# Flocele

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				

PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated

Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) Depth

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
8	G-2 5020-30	1650 gal 7 1/2% Fe w/25% N2	
8	Keyes 5069-78, 5100-05	2400 gal 7 1/2% Fe w/25% N2	

TUBING RECORD Size 2-3/8 Set At \_\_\_\_\_ Packer At 5050 Liner Run  Yes  No

Date of First, Resumed Production, SWD or Inj. N/A Producing Method  Flowing  Pumping  Gas Lift  Gas Storage Other (Explain)

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

Disposition of Gas: METHOD OF COMPLETION  Vented  Sold  Used on Lease (If vented, submit ACO-18.)  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify) \_\_\_\_\_ Production Interval 5020 - 30  
5069 - 5105

ORIGINAL

RELEASED

APR 6 1998

INVOICE

FROM CONFIDENTIAL



HALLIBURTON

REMIT TO:  
P.O. BOX 951046  
DALLAS, TX 75395-1046

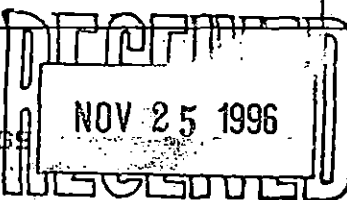
CONFIDENTIAL ORIGINAL

INVOICE NO. DATE

107017 11/19/1997

WELL/LEASE NO./PROJECT	WELL/PROJECT LOCATION	STATE	OWNER
BAUGHMAN 1-1	MORTON	KS	SAME
SERVICE LOCATION	CONTRACTOR	JOB PURPOSE	TICKET DATE
LIBERAL		CEMENT PRODUCTION CASING	11/19/1997
ACCT NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER PO NUMBER
739280	H. FRAULI		
		SHIPPED VIA	FILE NO
		COMPANY TRUCK	1675

RICHFIELD GAS STORAGE  
P O BOX 976  
LIBERAL, KS 67905



DIRECT CORRESPONDENCE TO:

P O BOX 1598  
LIBERAL KS 67901

RECEIVED  
KANSAS CORPORATION

FEB 12 1998

REFERENCE NO.	DESCRIPTION	QTY	UNIT	PRICE	AMOUNT
000-117	MILEAGE CEMENTING ROUND TRIP	120 MI	CONSERVATION		358.80
000-119	MILEAGE FOR CREW	120 MI	1.60		192.00
5A	FLOAT SHOE-SSII-4-1/2 BRD	1 EA	200.00		200.00
837.00300					
40	CENTRALIZER 4-1/2 X 7-7/8	7 EA	50.00		350.00
806.60004					
350	HALLIBURTON WELD-4	1 EA	16.75		16.75
890.10802					
320	BASKET-CMT-4 1/2 CSG X 18"OD-	2 EA	97.00		194.00
806.71415					
71	MULT STAGE CMTR-4-1/2 BRD	1 EA	2,790.00		2,790.00
813.80100					
75	PLUS SET-FREE FALL-4 1/2 BRD 9	1 EA	760.00		760.00
813.16411					
001-016	CEMENTING CASING	5220 FT	1,950.00		1,950.00
		1 UNT			
007-161	MULT STAGE CEMENTING-ADD STAGE	1 STG	1,550.00		1,550.00
		1 UNT			
314-163	CLAYFIX II	10 GAL	28.00		280.00
504-118	CEMENT - HALL. LIGHT PREMIUM	50 SK	10.92		546.00
504-043	CEMENT - PREMIUM	225 SK	12.03		2,706.75
504-050	CEMENT - PREMIUM PLUS	70 SK	13.12		918.40
504-282	MIDCON-2 PREMIUM PLUS CEMENT	140 SK	16.76		2,346.40
508-291	GILSONITE BULK	250 LB	.40		100.00
508-095	VERSASET	190 LB	3.90		741.00
507-775	HAI AD-322	198 LB	7.00		1,386.00
508-002	POTASSIUM CHLORIDE	648 LB	.27		174.96
507-210	FLOCELE	109 LB	1.65		179.85
509-406	ANHYDROUS CALCIUM CHLORIDE	3 SK	40.75		122.25
500-207	BULK SERVICE CHARGE	510 CFT	1.55		688.50

\*\*\*\*\* CONTINUED ON NEXT PAGE \*\*\*\*\*

TERMS: If Customer does not have an approved open account with Halliburton, all sums due are payable in cash at the time of performance of services or delivery of equipment, products or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable but never

RELEASED

ORIGINAL

APR 6 1998



HALLIBURTON  
CONFIDENTIAL

REMIT TO:  
P.O. BOX 951046  
DALLAS, TX 75395-1046

INVOICE  
FROM CONFIDENTIAL

INVOICE NO. DATE

107017 11/19/1994

WELL LEASE NO./PROJECT		WELL/PROJECT LOCATION		STATE	OWNER
BOUGHMAN 1-1		MORTON		KS	SAME
SERVICE LOCATION	CONTRACTOR	JOB PURPOSE		TICKET DATE	
LIBERAL		CEMENT PRODUCTION CASING		11/19/1994	
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.
739280	H. FRAULI			COMPANY TRUCK	16754

ORIGINAL

DIRECT CORRESPONDENCE TO:

RICHFIELD GAS STORAGE  
P O BOX 976  
LIBERAL, KS 67905

P O BOX 1598  
LIBERAL KS 67901

REFERENCE NO.	DESCRIPTION	QUANTITY	UM	UNIT PRICE	AMOUNT
500-306	MILEAGE CMTG MAT DEL OR RETURN	1429.86	TMT	1.05	1,501.35
INVOICE SUBTOTAL				KCC	20,053.01
DISCOUNT-(BIB)				FEB 12	7,018.52-
INVOICE BID AMOUNT					13,034.49
				CONFIDENTIAL	
*-KANSAS STATE SALES TAX					477.15
*-LIBERAL CITY SALES TAX					97.39
*-SEWARD COUNTY SALES TAX					146.05

Charge to: 03011 1070 7109100 T2 CAPPB 960156  
Larry Jenkins

RECEIVED  
KANSAS CORPORATION COMMISSION

FEB 14 1997

CONSERVATION DIVISION  
WICHITA, KS

PETROLEUM MANAGEMENT COMPANY

DRLG \_\_\_\_\_ COMP. L

TANG \_\_\_\_\_ INTANG. \_\_\_\_\_

PROD. OPERATION EXPENSE \_\_\_\_\_

LEASE Boughman 1-1

USED FOR Cement 4 1/2 csg

APPROVED BY \_\_\_\_\_

INVOICE TOTAL -- PLEASE PAY THIS AMOUNT \$13,755.08

TERMS: If Customer does not have an approved open account with Halliburton, all sums due are payable in cash at the time of performance of services or delivery of equipment, products or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never



**HALLIBURTON** JOB SUMMARY

HALLIBURTON DIVISION *Mid Cont.*  
 HALLIBURTON LOCATION *Liberal KS*

**ORIGINAL**

BILLED ON TICKET NO. *107017*

**WELL DATA**

FIELD \_\_\_\_\_ SEC \_\_\_\_\_ TWP. \_\_\_\_\_ RNG. \_\_\_\_\_ COUNTY \_\_\_\_\_ STATE \_\_\_\_\_

FORMATION NAME **RELEASED** TYPE \_\_\_\_\_  
 FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_  
 INITIAL PROD: OIL \_\_\_\_\_ BPD. WATER *APR 6 1998* BPD. GAS \_\_\_\_\_ MCFD  
 PRESENT PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_  
 PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
 BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_  
 MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING	<i>1)</i>	<i>11.6</i>	<i>4 1/2</i>	<i>0</i>	<i>5220.25</i>	
LINER						
TUBING						
OPEN HOLE						SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

**JOB DATA**

CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <i>11-19-96</i>	DATE <i>11-19-96</i>	DATE <i>11-19-96</i>	DATE <i>11/19/96</i>
TIME <i>9:30</i>	TIME <i>12:30</i>	TIME <i>17:25</i>	TIME <i>22:00</i>

**TOOLS AND ACCESSORIES**

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR		
FLOAT SHOE <i>4 1/2</i>	<i>1</i>	
GUIDE SHOE		
CENTRALIZERS	<i>7</i>	
BOTTOM PLUG <i>Big Set</i>	<i>1</i>	
TOP PLUG		
<i>D.V. Tool</i>	<i>1</i>	
<i>Baskets</i>	<i>2</i>	
OTHER <i>Weld A</i>	<i>1LB</i>	

**PERSONNEL AND SERVICE UNITS**

NAME	UNIT NO. & TYPE	LOCATION
<i>Danny Bacon</i>	<i>7/1</i>	<i>Duncan OK.</i>
<i>D9366</i>	<i>426045</i>	
<i>John Kluft</i>	<i>Rcm</i>	<i>Duncan OK</i>
<i>85257</i>	<i>52947-7131</i>	
<i>Sam Grant</i>	<i>Bulk</i>	<i>Hugoton KS</i>
<i>11-41639</i>	<i>4411-7527</i>	
<i>STAN TELFORD</i>	<i>8411</i>	<i>Hugoton, KS</i>
	<i>50737-75817</i>	
		<i>KCS</i>
		<i>FEB 12</i>
		<b>CONFIDENTIAL</b>

**MATERIALS**

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB./GAL. °API  
 DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB./GAL. °API  
 PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
 PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
 ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ %  
 ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ %  
 ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ %  
 SURFACTANT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ IN  
 NE AGENT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ IN  
 FLUID LOSS ADD. TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 GELLING AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 FRIC. RED. AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 BREAKER TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 BLOCKING AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_  
 PERFPAC BALLS TYPE \_\_\_\_\_ QTY. \_\_\_\_\_  
 OTHER \_\_\_\_\_  
 OTHER \_\_\_\_\_

DEPARTMENT *Cement 5001*

DESCRIPTION OF JOB *4 1/2 Longstring D.V. P.V. Tool AT 3197'*

JOB DONE THRU: TUBING  CASING  ANNULUS  TBG. ANN.

CUSTOMER REPRESENTATIVE *X Hewell Frank*

HALLIBURTON OPERATOR \_\_\_\_\_ COPIES REQUESTED \_\_\_\_\_

**CEMENT DATA**

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
<i>1</i>	<i>50</i>	<i>Prem-um Lite</i>		<i>B</i>	<i>5 1/2% Gilsonite</i>	<i>1.62</i>	<i>13.4</i>
<i>2</i>	<i>225</i>	<i>Premium</i>		<i>B</i>	<i>.97% Ureaset, 75% Halad-322, 5% KCL, 1/16 Flocc</i>	<i>1.44</i>	<i>14.5</i>
<i>3</i>	<i>140</i>	<i>P+midcon</i>		<i>B</i>	<i>2% CC, 1/16 1/2 Flocc</i>	<i>3.22</i>	<i>11.1</i>
<i>4</i>	<i>70</i>	<i>Premium Plus</i>		<i>B</i>	<i>.6% Halad 322, 1/16 1/2 Flocc</i>	<i>1.32</i>	<i>14.8</i>

**PRESSURES IN PSI**

**SUMMARY**

**VOLUMES**

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_  
 BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_  
 AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_  
 SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN \_\_\_\_\_ 15-MIN. \_\_\_\_\_  
 HYDRAULIC HORSEPOWER \_\_\_\_\_  
 ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_  
 AVERAGE RATES IN BPM \_\_\_\_\_  
 TREATING \_\_\_\_\_ DISPL. \_\_\_\_\_ OVERALL \_\_\_\_\_  
 CEMENT LEFT IN PIPE \_\_\_\_\_  
 FEET *43.14* REASON *Shoe Joint*

PRESLUSH: BBL.-GAL. \_\_\_\_\_ TYPE \_\_\_\_\_  
 LOAD & BKDN: BBL.-GAL. \_\_\_\_\_ PAD: BBL.-GAL. \_\_\_\_\_  
 TREATMENT: BBL.-GAL. \_\_\_\_\_ DISPL. BBL. \_\_\_\_\_  
 CEMENT SLURRY: BBL.-GAL. *(2) 14.5 L.C. 57.716 (2) 20.156 16.576*  
 TOTAL VOLUME: BBL. *168.7*

**REMARKS**

*See Job Log*

**FEB 14 1997**

CONSERVATION DIVISION

CUSTOMER *Kitchell Gas Storage*  
 LEASE *Drughman*  
 WELL NO. *1-1*  
 JOB TYPE *4 1/2 Longstring P.V.*  
 DATE *11-19-96*

**JOB LOG** HAL-2013-C

 CUSTOMER **Richfield Gas Storage** WELL NO. **1-1** LEASE **BAUGHMAN** JOB TYPE **4 1/2 D.V. Longstring** TICKET NO. **107017**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	9:30							Called Out
	12:30							On Location <b>CONFIDENTIAL</b>
	13:00							Safety Meeting
	14:00							Run Float Equipment
	16:45							Circulate Hole
	17:25	6	14.5			875		1 <sup>ST</sup> STAGE <b>ORIGINAL</b> LEAD CMT
	17:30	6	57.7			150		TAIL CMT
	17:45					0		WASH Pump & LINES
	17:48							DROP PLUG & START DISPLACEMENT
								30 BBL H <sub>2</sub> O & 50 BBL MUD
	18:20	6	80			1000		LAND PLUG
								RELEASE FLOAT / FLOAT HEAD
								1BPM BEFORE LANDING PLUG
	18:30							... THE DROP OPENING DEVICE
	18:50					1400		PRESSURE up TO OPEN TOOL
								2 <sup>ND</sup> STAGE <b>KUD</b>
	21:35	6	80			170		LEAD CMT <b>FEB 12</b>
	21:46	6	165			75		TAIL CMT <b>CONFIDENTIAL</b>
	21:50							WASH Pump & LINES
	21:53	6	50					DROP PLUG & START DISPLACEMENT
	22:00							LAND PLUG
								RELEASE FLOAT / FLOAT HEAD
								1BPM BEFORE LANDING PLUG

RELEASED  
APR 6 1998  
FROM CONFIDENTIAL

THANKS  
DAN, JOHN, & CREW

RECEIVED  
KANSAS CORPORATION COMMISSION

FEB 14 1997