

CONFIDENTIAL

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

ORIGINAL

Form ACO-1  
September 1999  
Form Must Be Typed

Handwritten initials

Operator: License # 6120  
Name: Cabot Oil & Gas Corporation  
Address: 600 17th Street, Suite 900N  
City/State/Zip: Denver, CO 80202  
Purchaser: Duke Energy Field Services  
Operator Contact Person: Jean Arnold - Prod. Tech.  
Phone: (303) 226-9443  
Contractor: Name: Cheyenne Drlg Div of Trinidad Drilling LTD Partnership Rig #2  
License: 33784 Woodward, OK PH#:(580) 256-7226  
Wellsite Geologist: Petroleum Mud Logging Inc.

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

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

Well Name: N/A

Original Comp. Date: N/A Original Total Depth: N/A  
 Deepening  Re-perf.  Conv. to Enhr./SWD  
 Plug Back  Plug Back Total Depth  
 Commingled  Docket No. \_\_\_\_\_  
 Dual Completion  Docket No. \_\_\_\_\_  
 Other (SWD or Enhr.?)  Docket No. \_\_\_\_\_

6/28/07 7/5/07 @ 2 AM 7/19/07  
Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

API No. 15 - 175-22088 -0000  
County: Seward  
SW SW SE Sec. 12 Twp. 34 S. R. 34  East  West  
330' feet from S N (circle one) Line of Section  
2294' feet from E W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
(circle one) NE SE NW SW

Lease Name: Fitzgerald Well #: 3-12  
Field Name: Hugoton

Producing Formation: Morrow

Elevation: Ground: 2883' Kelly Bushing: 2895'

Total Depth: 6759' Plug Back Total Depth: 6700'

Amount of Surface Pipe Set and Cemented at 1764 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set N/A Feet

If Alternate II completion, cement circulated from N/A

feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan AKI NS 35'09  
(Data must be collected from the Reserve Pit)

Chloride content 3500 ppm Fluid volume 2000 bbls

Dewatering method used Evaporation and dry out

Location of fluid disposal if hauled offsite:

Operator Name: N/A

Lease Name: N/A License No.: N/A

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

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 of 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.

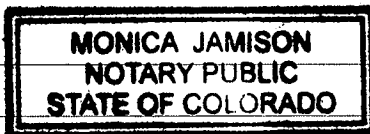
Signature: Jean Arnold

Title: Production Tech. Date: 9/6/07

Subscribed and sworn to before me this 6<sup>th</sup> day of September

20 07

Notary Public: Monica Jamison



Date Commission Expires: \_\_\_\_\_

My Commission Expires 12/03/2008

**KCC Office Use ONLY**  
 Letter of Confidentiality Attached  
If Denied, Yes  Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
**RECEIVED**  
KANSAS CORPORATION COMMISSION

SEP 11 2007

CONSERVATION DIVISION  
WICHITA, KS

Operator Name: Cabot Oil & Gas Corporation Lease Name: Fitzgerald Well #: 3-12  
 Sec. 12 Twp. 34 S. R. 34  East  West County: Seward

**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 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Submit Copy)</i>  List All E. Logs Run:  High Definition Induction Log (HDIL) GR/ Compensated Z-Densilog/CNL/GR/Minilog CCL/GR/ Segmented CBL, Mud Log	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name _____ Top _____ Datum _____ See attached csg record and formation info
---	---

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CASING RECORD <input checked="" 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
Surface	12-1/4"	8-5/8"	24#, J-55 ST&C	1764'	65:35:6 Poz	650 sx	2% CC+1/4#/SX Flo-seal
					Class C	150 sx Total 800	2% CC
Production	7-7/8"	4-1/2"	11.6#, M-80 LT&C	6,757'	Class H & Class A	280+285=565	See attached csg record

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input checked="" type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	DV Tool@3362'	Class A (60:40:8)	235	40% Fly ash 8% gel, 1/4#/sk Flo-seal
		Tailed w/ Class H neat	50	

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	Morrow: 6080' to 6086' (12 holes)	Delta frac 70Q N2 w/ 37,600# 20/40 Ottawa sd		6080-6086
		Base fluid 4% KCl		

<b>TUBING RECORD</b>		Size <u>2-3/8"</u>	Set At <u>6,079.42</u>	Packer At _____	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumerd Production, SWD or Enhr. <u>8-14-07</u>		Producing Method <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)			
Estimated Production Per 24 Hours	Oil Bbls. <u>1</u>	Gas Mcf <u>1000 MCFD</u>	Water Bbls. <u>1</u>	Gas-Oil Ratio <u>1000 mcf/bbl</u>	Gravity <u>38</u>

Disposition of Gas  Vented  Sold  Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify) \_\_\_\_\_

Production Interval \_\_\_\_\_

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CONSERVATION DIVISION  
 WICHITA, KS



Cabot Oil & Gas Corporation

Fitzgerald #3-12  
(SW SE) 330' FSL & 2294' FEL  
Sec. 12-T34S-R34W  
Seward County, KS  
API# 15-175-22088

Purpose of String	Size Hole Drl'd	Size Csg. Set	Weight Lbs/Ft.	Setting Depth	Type of Cement	# Sacks Used	Type & Percent Additives
Surface	12-1/4"	8-5/8"	24#, J-55 ST&C	1,764'	65:35:6	650	2% CaCl2 + .1/4#/sk Flo-seal
"	"	"	"	"	Class C	150	2% CaCl2
						<b>800 Total</b>	
Production	7-7/8"	4-1/2"	11.6# M-80 LT&C	6,757'	Class H	280	10% salt, 10% gyp, 2#/sk Kol-seal, 1/4#/sk Flo-seal 0.8% fluid loss, 0.6% gas block
DV Tool	7-7/8"	4-1/2"	11.6# M-80 LT&C	3362	Class A (60:40:8) Class H Neat	235 50	40% fly ash, 8% gel, 1/4# sk Flo-seal

Tops for Fitzgerald 3-12

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Formation	Depth	Datum
Chase	2,611'	2,895'
Council Grove	2,990'	
Wabaunsee	3,450'	
Base of Heebner Shale	4,311'	
Toronto	4,616'	
Lansing	4,433'	
Marmaton	5,147'	
Atoka	5,610'	
Morrow	5,805'	
Lower Morrow Sand	6,028'	
Chester	6,110'	
Ste. Genevieve	6,438'	

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KANSAS CORPORATION COMMISSION

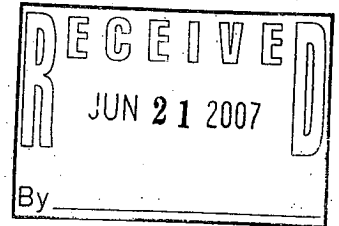
SEP 11 2007

CONSERVATION DIVISION  
WICHITA, KS

June 19, 2007

JEAN ARNOLD  
CABOT OIL & GAS CORPORATION  
600 17TH ST., SUITE 900 NORTH  
DENVER, CO. 80202

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SEP 11 2007  
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**NOTICE TO OPERATOR TO PROVIDE FORMATION SAMPLES OR DRILL CUTTINGS  
FOR THE  
FITZGERALD 3-12, SW SE 12 34 34 W, SEWARD COUNTY, KANSAS.**

On June 11, 2007, CABOT OIL & GAS CORPORATION Notice of Intent to Drill was approved by the Kansas Corporation Commission to drill the referenced well. The Kansas Geological Survey has determined the formation samples or drill cuttings retained by CABOT OIL & GAS CORPORATION during drilling of the well are geologically significant. In accordance with Kansas Administrative Regulation 82-3-107, the Survey requests that the formation samples or drill cuttings are provided to the Survey within 120 days of either the spud or well recompletion date at the address listed above.

The enclosed Survey form entitled, Request to Preserve Formation Samples or Drill Cuttings, must be completed and submitted with the requested samples or cuttings.

Regulations require formation samples or drill cuttings be washed, dried, cut into splits or sets and placed in properly labeled sample envelopes. Each sample in the set must be placed in a three inch by five inch, manila envelopes with a metal fold top, and properly labeled (Fig. 1).

Well information required on each sample envelope includes:

- |                  |  |                                  |
|------------------|--|----------------------------------|
| 1) Company name  | 2) Well number and name                                    | 3) API number                    |
| 4) Spot location | 5) Section, Township and Range                             | 6) County                        |
| 7) State         | 8) Sample interval, start and end depths feet from surface | 9) Circulation depth and minutes |

If requested by the operator or when formation samples or drill cuttings contained in the set are not properly preserved or labeled as shown in Fig. 1, the Survey will process the set of formation samples or drill cuttings and invoice the operator for the processing service.

The sample set must be delivered to the Survey at the prepaid expense of the operator. Shipments sent COD or collect cannot be accepted.

\* Sample confidentially requests must be made in writing to the Conservation Division, Kansas Corporation Commission, 130 S Market Rm 2078, Wichita, Kansas 67202. The Survey will hold a sample set for 120 days pending Conservation Division final action of the confidentially request.

The Survey appreciates your cooperation with the preservation of the requested formation samples or drill cuttings. Please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,  
KANSAS GEOLOGICAL SURVEY

*Michael T. Dealy*

Michael T. Dealy, L.G.  
Manager Wichita Operations

Enclosure – Notice of Intent to Drill (Copy)  
Request to Preserve Formation Samples Or Drill Cutting Form

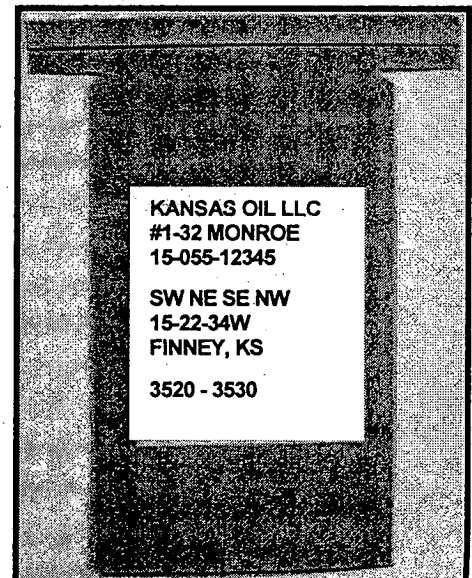


Figure 1.—Three by five inch labeled manila envelope with metal fold top.

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SEP 11 2007

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**KANSAS GEOLOGICAL SURVEY  
REQUEST TO PRESERVE FORMATION SAMPLES OR DRILL CUTTINGS**

Kansas Administrative Regulation 82-3-107(c)

*(To process your request, please complete and submit the form with the samples)*

**OPERATOR**

Name **JEAN ARNOLD** Operator **CABOT OIL & GAS CORPORATION**

Address **600 17TH ST., SUITE 900 NORTH** Telephone **303-226-9443 DL**

City **DENVER** State **CO** Zip Code **80202**

**SAMPLES**

I am submitting the following samples to the Sample Library because *(check only one)*:

- (a)  KGS requested the samples for the Sample Library  
(b)  The operator wants the samples preserved and placed in the Sample Library  
(c)  I authorize KGS to determine the geologic significance and disposition of the samples

Well Name and Number **FITZGERALD 3-12**

Spot Location **SW SE** Section-Township-Range **12 34 34 W**

County **SEWARD** State **KANSAS** API No. **1517522088**

Sample Condition: *check all that apply*  Washed  Bagged  Labeled  Wet  Dry

**CONFIDENTIALITY**

*(Samples can not be held in confidential custody, if this section is either blank, illegible, or not completed)*

I want the samples placed in confidential custody:  YES  NO *(if YES, complete the following)*

A written confidentiality request  WAS  WILL BE filed with the Kansas Corporation Commission

A copy of the written confidentiality request was provided to KGS:  YES  NO  UNKNOWN

**DUPLICATE SAMPLES**

I want a duplicate set of samples preserved.  YES  NO *(if YES, complete the following)*

Make \_\_\_\_\_ set of samples. Duplicate sample interval:  All samples  From \_\_\_\_\_ to \_\_\_\_\_

Send invoice and duplicate samples to:  Operator  Other, *(complete the following)*

Name \_\_\_\_\_ Company \_\_\_\_\_

Address NA Telephone \_\_\_\_\_ SEP 11 2007

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ CONSERVATION DIVISION  
WICHITA, KS

**REQUEST SUBMITTED BY**

Name *(please print)* JEAN ARNOLD Date 7 1 07

Telephone 303-226-9443 Email jean.arnold@cabotog.com

For KCC Use:  
 Effective Date: 6-16-07  
 District #: 1  
 SGA?  Yes  No

KANSAS CORPORATION COMMISSION  
 OIL & GAS CONSERVATION DIVISION

1009740 KCC

Form C-1  
 November 2005

Form must be Typed  
 Form must be Signed  
 All blanks must be Filled

NOTICE OF INTENT TO DRILL

Must be approved by KCC five (5) days prior to commencing well

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Expected Spud Date: 06/11/2007  
month day year

OPERATOR: License# 6120  
 Name: Cabot Oil & Gas Corporation  
 Address 1: 600 17th St., Suite 900 North  
 Address 2: \_\_\_\_\_  
 City: Denver State: CO Zip: 80202 + \_\_\_\_\_  
 Contact Person: Jean Arnold  
 Phone: 303-226-9400

CONTRACTOR: License# 33784  
 Name: Trinidad Drilling Limited Partnership

<b>Well Drilled For:</b>	<b>Well Class:</b>	<b>Type Equipment:</b>
<input type="checkbox"/> Oil	<input type="checkbox"/> Enh Rec	<input checked="" type="checkbox"/> Infield
<input checked="" type="checkbox"/> Gas	<input type="checkbox"/> Storage	<input type="checkbox"/> Pool Ext.
	<input type="checkbox"/> Disposal	<input type="checkbox"/> Wildcat
<input type="checkbox"/> Seismic ; _____ # of Holes	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Mud Rotary
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Air Rotary
		<input type="checkbox"/> Cable
<input type="checkbox"/> If OWWO: old well information as follows:		

Operator: \_\_\_\_\_  
 Well Name: \_\_\_\_\_  
 Original Completion Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Directional, Deviated or Horizontal wellbore?  Yes  No  
 If Yes, true vertical depth: \_\_\_\_\_  
 Bottom Hole Location: \_\_\_\_\_  
 KCC DKT #: \_\_\_\_\_

Spot Description: \_\_\_\_\_  
 \_\_\_\_\_ SW SE Sec. 12 Twp. 34 S. R. 34  E  W  
 (0.000) 330 feet from  N /  S Line of Section  
 2294 feet from  E /  W Line of Section

Is SECTION:  Regular  Irregular?  
 (Note: Locate well on the Section Plat on reverse side)

County: Seward  
 Lease Name: Fitzgerald Well #: 3-12  
 Field Name: KS-Miss / Penn

Is this a Prorated / Spaced Field?  Yes  No

Target Formation(s): Morrow  
 Nearest Lease or unit boundary line (in footage): 330  
 Ground Surface Elevation: 2885 feet MSL

Water well within one-quarter mile:  Yes  No  
 Public water supply well within one mile:  Yes  No

Depth to bottom of fresh water: 660  
 Depth to bottom of usable water: 660

Surface Pipe by Alternate:  I  II  
 Length of Surface Pipe Planned to be set: 1750

Length of Conductor Pipe (if any): 40  
 Projected Total Depth: 6750

Formation at Total Depth: St. Louis

Water Source for Drilling Operations:  
 Well  Farm Pond  Other: \_\_\_\_\_

DWR Permit #: Currently applying for it  
 (Note: Apply for Permit with DWR )

Will Cores be taken?  Yes  No  
 If Yes, proposed zone: \_\_\_\_\_

PRORATED & SPACED: HUBBARD

AFFIDAVIT

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 KANSAS CORPORATION COMMISSION

JUN 11 2007

CONSERVATION DIVISION  
 WICHITA, KS

The undersigned hereby affirms that the drilling, completion and eventual plugging of this well will comply with K.S.A. 55 et. seq.  
 It is agreed that the following minimum requirements will be met:

1. Notify the appropriate district office **prior** to spudding of well;
2. A copy of the approved notice of intent to drill **shall be posted** on each drilling rig;
3. The minimum amount of surface pipe as specified below **shall be set** by circulating cement to the top; in all cases surface pipe shall be set through all unconsolidated materials plus a minimum of 20 feet into the underlying formation.
4. If the well is dry hole, an agreement between the operator and the district office on plug length and placement is necessary **prior to plugging**;
5. The appropriate district office will be notified before well is either plugged or production casing is cemented in;
6. If an ALTERNATE II COMPLETION, production pipe shall be cemented from below any usable water to surface within **120 DAYS** of spud date. Or pursuant to Appendix "B" - Eastern Kansas surface casing order #133,891-C, which applies to the KCC District 3 area, alternate II cementing must be completed within 30 days of the spud date or the well shall be plugged. **In all cases, NOTIFY district office** prior to any cementing.

I hereby certify that the statements made herein are true and to the best of my knowledge and belief.

Date: 6-8-07 Signature of Operator or Agent: Jean Arnold Title: Prod. Sec.

**For KCC Use ONLY**

API # 15 - 175-22088-0000

Conductor pipe required 0 feet

Minimum surface pipe required 680 feet per ALT  I  II

Approved by: June 6-11-07

This authorization expires: 12-11-07  
 (This authorization void if drilling not started within 6 months of approval date.)

Spud date: \_\_\_\_\_ Agent: \_\_\_\_\_

- Remember to:**
- File Drill Pit Application (form CDP-1) with Intent to Drill;
  - File Completion Form ACO-1 within 120 days of spud date;
  - File acreage attribution plat according to field proration orders;
  - Notify appropriate district office 48 hours prior to workover or re-entry;
  - Submit plugging report (CP-4) after plugging is completed (within 60 days);
  - Obtain written approval before disposing or injecting salt water.
- If this permit has expired (See: authorized expiration date) please check the box below and return to the address below.
- Well Not Drilled - Permit Expired Date: \_\_\_\_\_  
 Signature of Operator or Agent: \_\_\_\_\_

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

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SEP 11 2007

CONSERVATION DIVISION  
 WICHITA, KS

ST  
 AC 34  
 E  
 W

**Confidential Log Request (Max. 2 years)**



Dominion Plaza Building  
600 17<sup>th</sup> Street, Suite 900N  
Denver, CO 80202  
PH#: 303-226-9400  
FAX#: 303-226-4063

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July 2, 2007

State Corp Commission of KS  
Conservation Division  
130 S. Market Room 2078  
Wichita, KS 67202-1212  
PH#: (316) 337-6223

RE: **COGC Confidential Letter Request for all Logs & Completion Information**  
**Fitzgerald #3-12**  
**(SW SE) 330' FSL & 2294' FEL**  
**Sec. 12-T34S-R34W**  
**Seward County, KS**  
**API# 15-175-22088**

To Whom It May Concern:

Cabot Oil & Gas Corporation requests a maximum of 2 years from the date of spud on the **Fitzgerald 3-12** for all logs and completion information (ACO-1) to be held confidential, the well information is referenced above.

If you have any questions, please do not hesitate to call at 303-226-9400.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Jean Arnold', is written over the typed name.

Jean Arnold  
Production Tech.

/jaa/H:/KCC letters/confidential letter for KS logs (Fitzgerald 3-12)

cc: Well File

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KANSAS CORPORATION COMMISSION

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CONSERVATION DIVISION  
WICHITA, KS

# INVOICE

24 S. Lincoln Street  
P.O. Box 31  
Russell, KS 67665-2906  
Voice: (785) 483-3887  
Fax: (785) 483-5566

Invoice Number: 109011  
Invoice Date: Jul 3, 2007  
Page: 1

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*Mulling*

**Bill to:**  
Cabot Oil & Gas Corp.  
P. O. Box 670  
Beaver, OK 73932

Customer ID	Well Name# or Customer P.O.	Payment Terms	
Cabot	Fitzgerald #3-12	Net 30 Days	
Sales Rep ID	Camp Location	Service Date	Due Date
	Medicine Lodge	Jul 3, 2007	8/2/07

Quantity	Item	Description	Unit Price	Amount
150.00	MAT	Class C	15.40	2,310.00
18.00	MAT	Chloride	46.60	838.80
650.00	MAT	ALW	11.85	7,702.50
163.00	MAT	Flo Seal	2.00	326.00
858.00	SER	Handling	1.90	1,630.20
20.00	SER	Mileage 858 sx @.09 per sk per mi	77.22	1,544.40
1.00	SER	Surface	1,610.00	1,610.00
20.00	SER	Mileage Pump Truck	6.00	120.00
1.00	SER	Head Rent	100.00	100.00
1.00	EQP	Top Rubber Plug	100.00	100.00
1.00	EQP	Guide Shoe	250.00	250.00
1.00	EQP	Sure Seal Collar	600.00	600.00
5.00	EQP	Centralizers	55.00	275.00
3.00	EQP	Stop Rings	29.00	87.00

KCC  
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COGC AP CONTROL

Invoice approval \_\_\_\_\_

Approval Date \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Subtotal	17,493.90
Sales Tax	818.05
Total Invoice Amount	18,311.95
Payment/Credit Applied	
<b>TOTAL</b>	<b>18,311.95</b>

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$ 1249.39

ONLY IF PAID ON OR BEFORE

Aug 2, 2007

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SEP 11 2007  
CONSERVATION DIVISION  
WICHITA, KS



# ALLIED CEMENTING CO., INC.

32514

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Medicine Lodge

DATE <u>6-30-07</u>	SEC. <u>12</u>	TWP <u>34S</u>	RANGE <u>34W</u>	CALLED OUT <u>9:30 AM</u>	ON LOCATION <u>9:30 AM</u>	JOB START <u>12:30 PM</u>	JOB FINISH <u>2:00 PM</u>
LEASE <u>Fitzgerald</u>	WELL # <u>3-12</u>	LOCATION <u>Liberal, KS, NW 83 To Co. Rd #5,</u>			COUNTY <u>Seward</u>	STATE <u>KS</u>	
OLD OR <u>(NEW)</u> (Circle one)		3w, 1500 R.F., 1/2 East, on Rd #4, 1/2 N, E INTO					

CONTRACTOR Cheyenne #2

TYPE OF JOB Surface

HOLE SIZE 12 1/4" T.D. 1,770'

CASING SIZE 8 5/8" DEPTH 1,767'

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE 4 1/2 DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX 1,100 MINIMUM 100

MEAS. LINE \_\_\_\_\_ SHOE JOINT 44'

CEMENT LEFT IN CSG. 44'

PERFS. \_\_\_\_\_

DISPLACEMENT 110 Bbl Freshwater

OWNER Cabot oil & gas

CEMENT

AMOUNT ORDERED 650 sk 65:35:6 + 2% CC + 1/4" Flo-seal, 150 sk class C + 2% CC

COMMON	<u>150 C</u>	@	<u>15.40</u>	<u>2310.00</u>
POZMIX		@		
GEL		@		
CHLORIDE	<u>18</u>	@	<u>46.60</u>	<u>838.80</u>
ASC		@		
	<u>ALW 650</u>	@	<u>11.85</u>	<u>7702.50</u>
	<u>Flo Seal 163 #</u>	@	<u>2.00</u>	<u>326.00</u>
		@		
	<u>KGC</u>	@		
	<u>SEP 11 2007</u>	@		
	<u>CONFIDENTIAL</u>	@		
		@		
HANDLING	<u>858</u>	@	<u>1.90</u>	<u>1630.20</u>
MILEAGE	<u>20 x 8.58 x .09</u>			<u>1544.40</u>
				TOTAL <u>14351.90</u>

EQUIPMENT

PUMP TRUCK # 414 CEMENTER Thomas D.  
HELPER Greg G.

BULK TRUCK # 421 DRIVER Greg K.

BULK TRUCK # 353 DRIVER Raymond R.

REMARKS:  
Pipe on bottom, Break circulation, Pump 5 Bbl Fresh water, Pump 650 sk 65:35:6 + 2% CC + 1/4" Flo Seal, 150 sk class C + 2% CC, Stop pumps, Release plug start Displacement, Dis Place 110 Bbl Fresh water, Pump Plug, Float Held, Circulate cement.

CHARGE TO: Cabot oil & gas Co.

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB 1,770'

PUMP TRUCK CHARGE 1610.00

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE 20 @ 6.00 120.00

MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_

Head Rent @ 100.00 100.00

TOTAL 1830.00

8 5/8" PLUG & FLOAT EQUIPMENT

Top rubber Plug	1	@	<u>100.00</u>	<u>100.00</u>
Guide shoe	1	@	<u>250.00</u>	<u>250.00</u>
Sore seal collar	1	@	<u>600.00</u>	<u>600.00</u>
Centralizers	5	@	<u>55.00</u>	<u>275.00</u>
Stop Rings	3	@	<u>29.00</u>	<u>87.00</u>

To Allied Cementing Co., Inc.  
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

ANY APPLICABLE TAX WILL BE CHARGED UPON INVOICING

TOTAL CHARGE 1830.00

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

SIGNATURE Robert Hurst

PRINTED NAME Robert Hurst

RECEIVED  
KANSAS CORPORATION COMMISSION

SEP 11 2007

CONSERVATION DIVISION  
WICHITA, KS



# INVOICE

24 S. Lincoln Street  
P.O. Box 31  
Russell, KS 67665-2906

Voice: (785) 483-3887  
Fax: (785) 483-5566

Invoice Number: 109115  
Invoice Date: Jul 10, 2007  
Page: 1

**JUL 16 2007**  
**RECEIVED**

*Dueling*

**Bill To:**  
Cabot Oil & Gas Corp.  
P. O. Box 670  
Beaver, OK 73932

Customer ID	Well Name/# or Customer P/O	Payment Terms	
Cabot	Fitzgerald #3-12	Net 30 Days	
Sales Rep ID	Camp Location	Service Date	Due Date
	Medicine Lodge	Jul 10, 2007	8/9/07

Quantity	Item	Description	Unit Price	Amount
280.00	MAT	Class H	13.40	3,752.00
30.00	MAT	Salt	9.60	288.00
70.00	MAT	Defoamer	7.20	504.00
560.00	MAT	Kol Seal	0.70	392.00
26.00	MAT	Gyp Seal	23.35	607.10
210.00	MAT	FL-160	10.65	2,236.50
158.00	MAT	Gas Block	8.90	1,406.20
11.00	MAT	Cla Pro	25.00	275.00
356.00	SER	Handling	1.90	676.40
20.00	SER	Mileage	32.04	640.80
1.00	SER	Two Stage Production	2,310.00	2,310.00
20.00	SER	Mileage Pump truck	6.00	120.00
1.00	SER	Head Rental	100.00	100.00
1.00	EQP	Sure Seal Float Shoe	385.00	385.00
1.00	EQP	Sure Seal Float Collar	340.00	340.00
5.00	EQP	Stop Rings	25.00	125.00
20.00	EQP	Centralizers	45.00	900.00
20.00	EQP	Turbolizers	60.00	1,200.00
1.00	EQP	D V Stage tool	3,750.00	3,750.00
6.00	EQP	Thread Lock Kits	30.00	180.00

**KCC**  
**SEP 11 2007**  
**CONFIDENTIAL**

**COX AP CONTROL**  
**INVOICE**  
**ADD**  
**Pkg**  
**P.O.**  
**Match**

Subtotal	20,188.00
Sales Tax	1,070.32
<b>Total Invoice Amount</b>	<b>21,258.32</b>
Payment/Credit Applied	
<b>TOTAL</b>	<b>21,258.32</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

**\$ 21,258.32**

ONLY IF PAID ON OR BEFORE

**Aug 9, 2007**

RECEIVED  
KANSAS CORPORATION COMMISSION

**SEP 11 2007**

CONSERVATION DIVISION  
WICHITA, KS

# ALLIED CEMENTING CO., INC.

21238

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Medicine Lodge KS

DATE <u>7-06-07</u>	SEC. <u>12</u>	TWP. <u>34s</u>	RANGE <u>34W</u>	CALLED OUT <u>1:00 PM</u>	ON LOCATION <u>4:00 PM</u>	JOB START <u>6:30 PM</u>	JOB FINISH <u>7:30 PM</u>
Fitzgerald LEASE		WELL # <u>3-12</u>	LOCATION <u>Liberal, KS. North on 83<sup>rd</sup></u>		COUNTY <u>Seward</u>	STATE <u>Kansas</u>	
OLD OR <u>NEW</u> (Circle one)			To Co Rd 5 <sup>th</sup> 3 west 1 south 1/2 E, 1/2 North				

CONTRACTOR Cheyenne Rig #2

TYPE OF JOB 2nd stage Production

HOLE SIZE 7 7/8 T.D. 6750'

CASING SIZE 4 1/2 x 11.6 DEPTH 6757

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL DV Tool DEPTH 3395

PRES. MAX 1300 MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT 42.71

CEMENT LEFT IN CSG. 43'

PERFS. \_\_\_\_\_

DISPLACEMENT 52 Bbls fresh 54 Bbls mud

OWNER Cabot Oil + Gas

CEMENT

AMOUNT ORDERED 280 sk class H + 10% Gyseal  
10% salt 2<sup>nd</sup> Kolseal .8% FI-160 .6% Gas block  
+ Defoamer, 11 gals clapro

COMMON <u>H 280 sk</u>	@ <u>13.40</u>	<u>3752.00</u>
POZMIX _____	<u>KCO</u>	
GEL _____		
CHLORIDE _____	<u>SEP 11 2007</u>	
ASC _____	<u>CONFIDENTIAL</u>	
<u>salt 30 sk</u>	@ <u>9.60</u>	<u>288.00</u>
<u>Defoamer 70<sup>th</sup></u>	@ <u>7.20</u>	<u>504.00</u>
<u>Kolseal 560<sup>th</sup></u>	@ <u>.70</u>	<u>392.00</u>
<u>Gyseal 26 sk</u>	@ <u>23.35</u>	<u>607.10</u>
<u>FI-160 210<sup>th</sup></u>	@ <u>10.65</u>	<u>2236.50</u>
<u>Gas Block 158<sup>th</sup></u>	@ <u>8.90</u>	<u>1406.20</u>
<u>Clapro 11 gal</u>	@ <u>25.00</u>	<u>275.00</u>
HANDLING <u>356</u>	@ <u>1.90</u>	<u>676.40</u>
MILEAGE <u>356 / .09/20</u>		<u>640.80</u>
		<b>TOTAL <u>10,778.00</u></b>

EQUIPMENT

PUMP TRUCK CEMENTER Dave Felio / Paul B.

# 352 HELPER Clint Williard

BULK TRUCK

# 356 DRIVER Randy Franklin

BULK TRUCK

# 368 DRIVER Heath McMurray

REMARKS:

Run total at 6757' 4 1/2 casing w/ DV tool  
set at 3395' circulate on bottom for  
2 hours, mix 25 sk scavenger cement  
+ 25 sk class H + additives @ 14.8 ppg  
wash pump + lines, + drop bottom plug.  
Displace with 52 Bbls freshwater, + 54  
Bbls mud. Land plug 500 psi over  
lift. Bump plug + float held (wash up)

CHARGE TO Cabot Oil + Gas

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB <u>6750'</u>		
PUMP TRUCK CHARGE _____		<u>2310.00</u>
EXTRA FOOTAGE _____	@ _____	
MILEAGE <u>20</u>	@ <u>6.00</u>	<u>120.00</u>
MANIFOLD _____	@ _____	
<u>Head Rental</u>	@ _____	<u>100.00</u>
		<b>TOTAL <u>2530.00</u></b>

4 1/2" PLUG & FLOAT EQUIPMENT

<u>1 sure seal float shoe</u>	@ <u>385.00</u>	<u>385.00</u>
<u>1 sure seal float collar</u>	@ <u>340.00</u>	<u>340.00</u>
<u>5-step Rings</u>	@ <u>25.00</u>	<u>125.00</u>
<u>20 Centralizers</u>	@ <u>45.00</u>	<u>900.00</u>
<u>20 Turbolizers</u>	@ <u>60.00</u>	<u>1200.00</u>
<u>1 DV stage tool</u>	@ <u>3750.00</u>	<u>3750.00</u>
<u>6-Thread Lock Kits</u>	@ <u>30.00</u>	<u>180.00</u>
		<b>TOTAL <u>6880.00</u></b>

To Allied Cementing Co., Inc.  
You are hereby requested to rent cementing equipment  
and furnish cementer and helper to assist owner or  
contractor to do work as is listed. The above work was  
done to satisfaction and supervision of owner agent or  
contractor. I have read & understand the "TAX APPLICABLE TAX  
CONDITIONS" listed on the reverse side.

**TAX APPLICABLE TAX  
WILL BE CHARGED  
UPON INVOICING**

DISCOUNT 20% IF PAID IN 30 DAYS

SIGNATURE [Signature]

PRINTED NAME RECEIVED  
KANSAS CORPORATION COMMISSION

SEP 11 2007



24 S. Lincoln Street  
 P.O. Box 31  
 Russell, KS 67665-2906

Voice: (785) 483-3887  
 Fax: (785) 483-5566

# INVOICE

Invoice Number: 109116  
 Invoice Date: Jul 10, 2007  
 Page: 1

<b>Bill To:</b>
Cabot Oil & Gas Corp. P. O. Box 670 Beaver, OK 73932

<b>Customer ID</b>	<b>Well Name/# for Customer P.O.</b>	<b>Payment Terms</b>	
Cabot	Fitzgerald #3-12	Net 30 Days	
<b>Sales Rep ID</b>	<b>Camp Location</b>	<b>Service Date</b>	<b>Due Date</b>
	Medicine Lodge	Jul 10, 2007	8/9/07

Quantity	Item	Description	Unit Price	Amount
50.00	MAT	Class H	13.40	670.00
235.00	MAT	ASC	11.25	2,643.75
59.00	MAT	Flo Seal	2.00	118.00
11.00	MAT	Cla Pro	25.00	275.00
303.00	SER	Handling	1.90	575.70
20.00	SER	Mileage 303 sx @.09 per sk per mi	27.27	545.40
1.00	SER	Two Stage - 2nd stage	955.00	955.00
1.00	SER	Tool Hand	350.00	350.00

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Subtotal	6,132.85
Sales Tax	242.79
Total Invoice Amount	6,375.64
Payment/Credit Applied	
<b>TOTAL</b>	<b>6,375.64</b>

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

\$ 613.28

ONLY IF PAID ON OR BEFORE

Aug 9, 2007

RECEIVED  
 KANSAS CORPORATION COMMISSION

SEP 11 2007

CONSERVATION DIVISION  
 WICHITA, KS

# ALLIED CEMENTING CO., INC.

21239

For

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:

Medicine Lodge, KS.

DATE <u>07 Jul 07</u>	SEC. <u>12</u>	TWP. <u>34S</u>	RANGE <u>34W</u>	CALLED OUT <u>1:00 PM</u> <sup>7-6-07</sup>	ON LOCATION <u>4:30 PM</u>	JOB START <u>12:30 AM</u>	JOB FINISH <u>1:30 AM</u>
LEASE <u>FitzGerald</u>	WELL # <u>3-12</u>	LOCATION <u>Liberal, KS North on 83<sup>rd</sup></u>			COUNTY <u>Seward</u>	STATE <u>Kansas</u>	
OLD OR <input checked="" type="radio"/> NEW (Circle one) <u>to Co. Rd. 5<sup>th</sup> West 1 south 1/2, 1/4 north</u>							

CONTRACTOR Cheyenne Rig #2

TYPE OF JOB 2nd stage / 1<sup>st</sup> Two Stage

HOLE SIZE 7 7/8" T.D.

CASING SIZE 4 1/2" DEPTH 6750'

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX 2300 MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

DISPLACEMENT 52 Bbls 4% KCL

EQUIPMENT \_\_\_\_\_

OWNER Cabot Oil + Gas

CEMENT

AMOUNT ORDERED 235 sx 60:40:8 + 1/4 Floseal

50 sx class H Neat

11 Gals Clapro

COMMON <u>H 50 sx</u>	@	<u>13.40</u>	<u>670.00</u>
POZMIX _____	@	_____	_____
GEL _____	@	_____	_____
CHLORIDE _____	@	_____	_____
ASC _____	@	_____	_____
<u>235 60/40/8</u>	@	<u>11.25</u>	<u>2643.75</u>
<u>Floseal 59<sup>th</sup></u>	@	<u>2.00</u>	<u>118.00</u>
<u>Clapro 11 gals</u>	@	<u>25.00</u>	<u>275.00</u>
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
HANDLING <u>303</u>	@	<u>1.90</u>	<u>575.70</u>
MILEAGE <u>303 / .09 / 20</u>			<u>545.40</u>
			TOTAL <u>4827.85</u>

PUMP TRUCK CEMENTER Dave Felix / Carl B

# 352 HELPER Clint Williard

BULK TRUCK \_\_\_\_\_

# \_\_\_\_\_ DRIVER Randy Franklin

BULK TRUCK \_\_\_\_\_

# \_\_\_\_\_ DRIVER \_\_\_\_\_

REMARKS:

DV Tool - 3395' Drop opening  
Tool for stage collar + let fall  
30 minutes w/ pump truck open  
tool w/ 900 psi pump 4 Bbls with rig  
circulate for 5 hours. Pump 25 sx  
60:40:scavenger + 210 sx 60:40: + additives  
+ 50 sx class H neat wash pump + lines  
+ Release Top plug Displace with 52 Bbls  
4% KCL water. Pump plug 1500 psi over + float  
lift held.

CHARGE TO: Cabot Oil + Gas

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB _____			
PUMP TRUCK CHARGE _____		<u>95.00</u>	
EXTRA FOOTAGE _____	@	_____	_____
MILEAGE <u>20</u>	@	<u>6.00</u>	<u>N/C</u>
MANIFOLD _____	@	_____	_____
<u>Tool Hand</u>	@	<u>350.00</u>	
_____	@	_____	_____

KCC

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TOTAL 1305.00

PLUG & FLOAT EQUIPMENT

To Allied Cementing Co., Inc.

You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

ANY APPLICABLE TAX  
WILL BE CHARGED  
UPON INVOICING

TOTAL \_\_\_\_\_

TAX \_\_\_\_\_

TOTAL CHARGE ~~\_\_\_\_\_~~

DISCOUNT ~~\_\_\_\_\_~~ IF PAID IN 30 DAYS

SIGNATURE \_\_\_\_\_

RECEIVED  
KANSAS CORPORATION COMMISSION

SEP 11 2007

PRINTED NAME \_\_\_\_\_

CONSERVATION DIVISION  
WICHITA, KS

SW SW SE Section 12, T34S, R34W  
330' S / 2,294' E  
Seward County, KS

Elev. GL @ 2,883'  
Elev. KB @ 2,895' (12' KB)

**Surface Casing**

8 5/8", 24#, J-55 csg, set @ 1,764'  
Cmt w/ 800 sx  
Circ cmt to surface.

**Production Casing**

4-1/2", 11.6#, M-80, set @ 6,757' KB.  
Cmt w/ 280 sx

TOC @ 1,930' KB by CBL  
TOC @ 5,350' KB by CBL

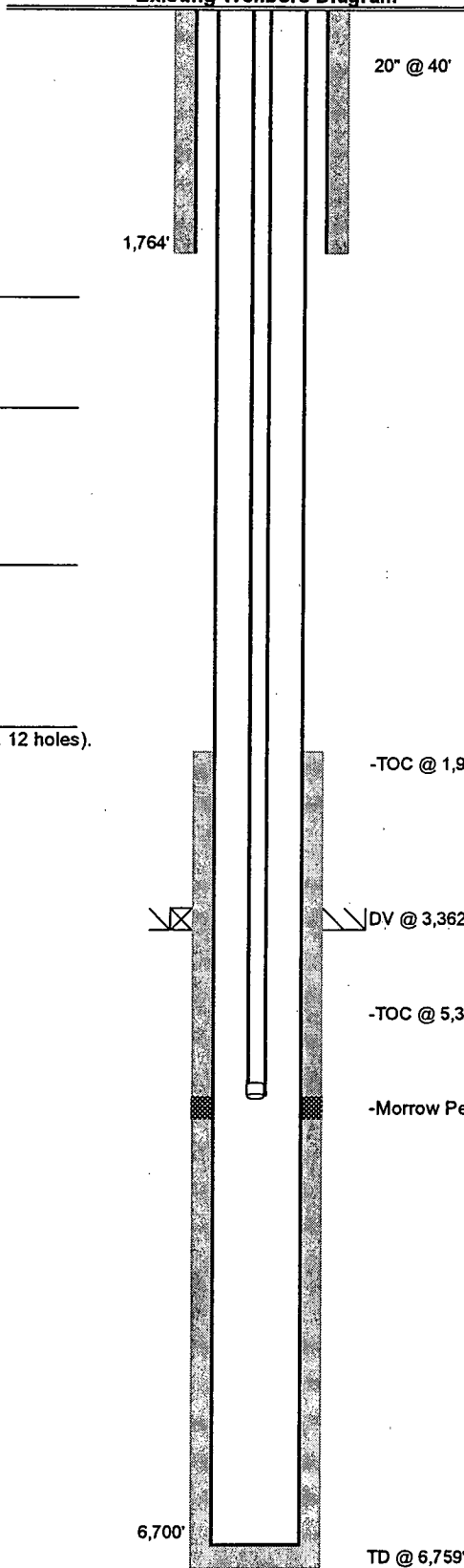
**Tubing**

2-3/8", 4.7#, J-55, 196 tbg  
NC @ 6,079'  
XN @ 6,075'  
1.875 Xn w/1.791" No/go  
DV @ 3,362' w/ 285 sx

**Morrow**

6,080' - 6,086' KB (6', 2 spf, 12 holes).

**Existing Wellbore Diagram**



Spud Date 6/28/2007  
TD 7/6/2007  
Completion Date 7/19/2007

7/14/2007 Perf (Morrow): 6,080' - 6,086' w/ 2 spf. Set packer @ 6,047'.  
7/15/2007 Break down w/28 bbls 4% KCL. 6.8 BPM/4,800 psi. ISIP = 750 psi. Vacuum - 3.5 minutes. Swab well to flow. Estimated 373 MCF/D.  
7/16/2007 POOH and swab. 6.5 hour SICP = 1,515 psi. Pull packer.  
7/18/2007 Frac w/ 38,000# 20/40 sand in 70 Q N2 Delta frac. 15 BPM / 3,100 psi. ISIP = 3,537 psi. Flow back 1.1 MMCF/D.  
7/19/2007 Snub in tubing. TFF @ 6,464'. Land EOT @ 6,079'. Estimated 1.3 MMCF/D.  
8/14/2007 First sales to DCP. SITP = SICP = 1510 psi. 1.0 MMCF/D on 12/64" choke.

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KANSAS CORPORATION COMMISSION

SEP 11 2007

CONSERVATION DIVISION  
WICHITA, KS

# CABOT OIL & GAS PRODUCTION CORP

## Fitzgerald 3-12

Interval 1  
N/A County, N/A

Sales Order: 5233876

## Post Job Report

For: N/A  
Date: Wednesday, July 18, 2007

Notice: Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

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KANSAS CORPORATION COMMISSION  
SEP 11 2007  
CONSERVATION DIVISION  
WICHITA, KS

**HALLIBURTON**

## 1.0 EXECUTIVE SUMMARY

### CABOT OIL & GAS PRODUCTION CORP

Halliburton appreciates the opportunity to perform the stimulation treatment on the Fitzgerald 3-12. A pre-job safety meeting was held where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined. Pump time was 40.59 min.

The proposed treatment for Cabot Oil & Gas Production Fitzgerald 3-12 consisted of:

- 3440 gal of WATER FRAC G 25# - SBM (15346)
- 3451 gal of DELTA FRAC 140 CBM 25 - SBM (231490) carrying 279.24 100\*lb of SAND-PREMIUM WHITE-20/40, BULK (100003678)
- 368 gal of DELTA FRAC 140 25# -SBM (14331) carrying 50.01 100\*lb of SAND-PREMIUM WHITE-20/40, BULK (100003678)

There was 457559 ft<sup>3</sup> of Nitrogen planned.

The treatment actually pumped consisted of:

- 3839 gal of WATER FRAC G 25# - SBM (15346)
- 3180 gal of DELTA FRAC 140 CBM 25 - SBM (231490) carrying 234.36 100\*lb of SAND-PREMIUM WHITE-20/40, BULK (100003678)
- 168 gal of DELTA FRAC 140 25# -SBM (14331) carrying 10.90 100\*lb of SAND-PREMIUM WHITE-20/40, BULK (100003678)

The average BH treating rate was 12.1 bpm and average WH pressure was 3063 psi.

There was 434800 scf of Nitrogen.

The total liquid load to recover is 7187 gal.

Halliburton is strongly committed to quality control on location. Before and after each job all chemicals, proppants, and fluid volumes are measured to assure the highest level of quality control. Tank fluid analysis, crosslink time, and break tests are performed before each job in order to optimize the performance of the treatment fluids.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Kris Thomas / Cesar Chavez



**2.0 WELL INFORMATION**

**2.1 Customer Information**

Customer	CABOT OIL & GAS PRODUCTION CORP
Sales Order	5233876
Well Name	Fitzgerald
Interval	1
Well Number	3-12
Start Time	18-Jul-07 07:25:55
Halliburton Representative	Kris Thomas / Cesar Chavez

**2.2 Wellbore Geometry**

Top MD ft	Bottom MD ft	OD in	ID in	Grade	Weight lb/ft
0.0	6759.0	4.500	4.000	J-55	11.60
0.0	20.0	4.000	3.000		

**2.3 Perforation Intervals**

Top MD ft	Bottom MD ft
6080.0	6086.0

## 3.0 PUMPING SCHEDULE

### 3.1 Designed Pumping Schedule

Stage Number	Description	Fluid System	Clean Volume gal	Prop Conc Start lb/gal	Prop Conc End lb/gal	Prop Type	Prop Mass 100*lb	Rate Stage Start bpm	Rate Stage End bpm	Stage Time min
1	Pad	WATER FRAC G 25# - SBM (15346)	2250	0.00	0.00			4.5	4.5	11.83
2	Proppant Laden Fluid	DELTA FRAC 140 CBM 25 - SBM (231490)	3451	3.19	13.59	SAND-PREMIUM WHITE-20/40, BULK (100003678)	279.24	5.1	7.3	18.27
3	Proppant Laden Fluid	DELTA FRAC 140 25# -SBM (14331)	368	13.59	13.59	SAND-PREMIUM WHITE-20/40, BULK (100003678)	50.01	7.3	7.3	1.95
4	Flush	WATER FRAC G 25# - SBM (15346)	1190	0.00	0.00			4.5	4.5	6.26
5	Shut-In	WATER FRAC G 30# - SBM (15347)	0	0.00	0.00			0.0	0.0	0.00
Total			7259				329.25			38.30

### 3.2 Designed BH Foam Schedule

Stage Number	Description	BH Clean Foam Vol gal	BH Foam Rate Begin bpm	BH Foam Rate End bpm	BH Prop Conc Begin lb/gal	BH Prop Conc End lb/gal
1	Pad	7223	15	15	0.00	0.00
2	Proppant Laden Fluid	10353	15	15	0.98	4.92
3	Proppant Laden Fluid	1007	15	15	4.97	4.97
4	Flush	3822	15	15	0.00	0.00
5	Shut-In	0	0	0	0.00	0.00
Total		22405				

### 3.3 Designed BH IPF Schedule

Stage Number	Description	BH IPF Begin %	BH IPF End %
1	Pad	69.1	69.1
2	Proppant Laden Fluid	70.6	70.6
3	Proppant Laden Fluid	70.4	70.4
4	Flush	69.1	69.1
5	Shut-In		

## 4.0 ACTUAL STAGE SUMMARY

### 4.1 Stage Summary

Stage Number	Start Time	Max Treating Pressure psi	Avg Treating Pressure psi	Avg Slurry Rate bpm	Clean Volume gal	Max Concentration lb/gal	Avg Concentration lb/gal
1	09:31:50	3302	2747	3.8	2255	3.01	0.48
2	09:46:13	3257	3071	5.7	3180	12.49	7.16
3	10:03:58	3081	2955	6.6	168	10.02	6.57
4	10:04:45	4184	3645	5.0	1584	3.96	0.34
5	10:13:18	0	0	0.0	0	0.00	0.00
Total					7187		

Stage Number	Start Time	Proppant Mass Pumped 100*lb	Avg HHP hp
1	09:31:50	9.20	256
2	09:46:13	234.36	429
3	10:03:58	10.90	478
4	10:04:45	7.52	448
5	10:13:18	0.00	0
Total		261.97	

### 4.2 Foam Stage Summary

Stage Number	Start Time	Max N2 Rate scfm	Avg N2 Rate scfm	N2 Volume scf
1	09:31:50	13540	10559	151919
2	09:46:13	13135	11329	200931
3	10:03:58	9209	9018	7062
4	10:04:45	14205	9744	74888
5	10:13:18	0	0	0
				434800

### 4.3 Bottom Hole Stage Summary

Stage Number	Start Time	Max BH Rate bpm	Avg BH Rate bpm	Max BH Conc lb/gal	Avg BH Conc lb/gal
WB/SL	09:31:50	16.5	12.9	0.00	0.00
1	09:39:09	15.5	14.4	0.82	0.11
2	09:52:20	19.3	14.9	6.02	2.60
3	10:10:11	13.7	1.3	4.40	2.39

### 4.4 BH Foam Stage Summary

Stage Number	Start Time	Max BH Rate bpm	Avg BH Rate bpm	BH Volume gal	Avg BH IPF %
WB/SL	09:31:50	16.5	12.9	4414	0.0
1	09:39:09	15.5	14.4	7343	68.7
2	09:52:20	19.3	14.9	10942	70.8
3	10:10:11	13.7	1.3	390	57.9
Total				23089	

**5.0 PERFORMANCE HIGHLIGHTS**

**5.1 Job Summary**

Start Time	18-Jul-07 09:31:50	
End Time	18-Jul-07 10:32:00	
Max Treating Pressure	4184	psi
Avg Treating Pressure	3063	psi
Clean Volume	7187	gal
Max Slurry Rate	8.9	bpm
Avg Slurry Rate	4.9	bpm
Slurry Volume	8375	gal
Max N2 Std Rate	14205	scfm
Avg N2 Std Rate	10711	scfm
N2 Std Volume	434800	scf
Max Proppant Concentration	4.91	lb/gal
Avg Proppant Concentration	0.94	lb/gal
Proppant Mass Pumped	261.97	100*lb
Avg HHP	369	hp
BH Max Rate	19.3	bpm
BH Avg Rate	12.1	bpm
BH Volume	23089	gal
BH Avg IPF	56.8	%
BH Clean Foam Volume	21568	gal
BH Max Proppant Concentration	6.02	lb/gal
BH Avg Proppant Concentration	1.44	lb/gal
Proppant in Formation	253.84	100*lb
Load to Recover	7187	gal

## 5.2 Job Event Log

Time	Description	Comment	Treating Pressure psi	Slurry Rate bpm	N2 Standard Rate scfm	Job Clean Vol gal	Job Slurry Vol gal
18-Jul-07 06:00:00	Arrive At Loc						
06:30:00	Pre-Rig Up Safety Meeting						
08:56:23	Start Job	Starting Job					
08:56:23	Next Treatment	Treatment Interval 1					
09:04:18	Prime Pumps		42	8.8	0	518	518
09:11:29	Pressure Test		5520	0.0	0	1512	1512
09:17:34	Pressure Test	N2 Line	4596	0.0	0	1512	1512
09:18:14	Pre-Job Safety Meeting		1533	0.0	0	1512	1512
09:31:51	Stage 1	Pad	1429	6.0	2518	1657	1657
09:46:14	Stage 2	Proppant Laden Fluid	3233	4.9	13122	2255	2297
10:03:59	Stage 3	Proppant Laden Fluid	3002	7.0	9235	5435	6540
10:04:46	Stage 4	Flush	2966	6.5	8974	5603	6757
10:13:19	Stage 5	Shut-In	3544	0.0	0	7187	8375
10:13:22	ISIP		3537	0.0	0	7187	8375
10:18:22	Shut-In Pressure @ 5 Minutes		3192	0.0	0	7187	8375
10:23:22	Shut-In Pressure @ 10 Minutes		3034	0.0	0	7187	8375
10:28:22	Shut-In Pressure @ 15 Minutes		2956	0.0	0	7187	8375
10:32:00	End Job	Ending Job	-6	0.0	0	7187	8375

## 5.3 ISIP

Time	Description	Treating Pressure psi
10:13:22	ISIP	3537
10:18:22	Shut-In Pressure @ 5 Minutes	3192
10:23:22	Shut-In Pressure @ 10 Minutes	3034
10:28:22	Shut-In Pressure @ 15 Minutes	2956



## 6.0 QUALITY ASSURANCE

### 6.1 Break Test

Test Number	Fluid Temp °F	Fluid Name	GBW-30/ slurry gal/Mgal	SP Breaker/ slurry gal/Mgal
1	132.0	DELTA FRAC 140 CBM 25	0.25	0.00
2	132.0	DELTA FRAC 140 CBM 25	0.50	0.00
3	132.0	DELTA FRAC 140 CBM 25	1.00	0.00
4	132.0	DELTA FRAC 140 CBM 25	2.00	0.00
5	132.0	DELTA FRAC 140 CBM 25	0.00	0.00

Test Duration min	Test #1 Fluid Visc	Test #2 Fluid Visc	Test #3 Fluid Visc	Test #4 Fluid Visc	Test #5 Fluid Visc
0.00	C-Crosslinked	C-Crosslinked	C-Crosslinked	C-Crosslinked	C-Crosslinked
10.00	C-Crosslinked	C-Crosslinked	C-Crosslinked	WC-Weak crosslink	C-Crosslinked
20.00	C-Crosslinked	C-Crosslinked	WCS-Weak crosslink stringy	B-Broke	C-Crosslinked
30.00	C-Crosslinked	WC-Weak crosslink	B-Broke		C-Crosslinked
40.00	C-Crosslinked	WC-Weak crosslink			C-Crosslinked
50.00	WC-Weak crosslink	WCS-Weak crosslink stringy			C-Crosslinked
60.00	WC-Weak crosslink	WCS-Weak crosslink stringy			C-Crosslinked
70.00	WCS-Weak crosslink stringy	B-Broke			C-Crosslinked
80.00	WC-Weak crosslink				C-Crosslinked
90.00	B-Broke				C-Crosslinked
100.00	B-Broke				C-Crosslinked

### 6.2 Base Fluid Source

Name	Begin Strap Volume gal	End Strap Volume gal	Planned gal	Actual gal	% Difference
3% KCL Water	10080.0	420.0	7182.0	9660.0	34.50

### 6.3 Liquid Additives

Name	Begin Strap Volume gal	End Strap Volume gal	Planned gal	Actual gal	Ticket Total gal	% Difference
GBW-30/ slurry	20.0	0.0	18.0	20.0	20.0	11.11
BC-140	65.0	50.0	11.0	15.0	15.0	36.36
Gasperm 1000	290.0	275.0	8.0	10.0	15.0	25.00
HC-2	280.0	240.0	29.0	35.0	40.0	20.69
SP Breaker/ slurry	0.0	0.0	0.0			

### 6.4 Dry Additives

Name	Begin Volume lb	End Volume lb	Planned lb	Actual lb	Ticket Total lb	% Difference
GBW-30	15.00	7.00	8.00	8.00	8.00	0.00
SP Breaker	30.00	30.00	0.00	0.00	0.00	
BE-3S	2.00	0.00	2.00	2.00	2.00	-0.05
BE-6	2.00	0.00	2.00	2.00	2.00	-0.05

### 6.5 Proppant Inventories

Name	Begin 100*lb	End 100*lb	Planned 100*lb	Actual 100*lb	% Difference
SAND-PREMIUM WHITE-20/40, BULK (100003678)	376.40	0.00	349.10	376.40	7.82

### 6.6 Sand Sieve Tests

Sieve Test

<b>Name</b>	SAND-PREMIUM WHITE-20/40, BULK (100003678)	
<b>Description</b>	Badger 20/40	
<b>Absolute Volume</b>	0.05	gal/lb
<b>Sieve Size</b>	20/40	
<b>Sieve Type</b>	Standard	
<b>Sample Mass</b>	100.00	g
<b>Passed Test</b>	Yes	

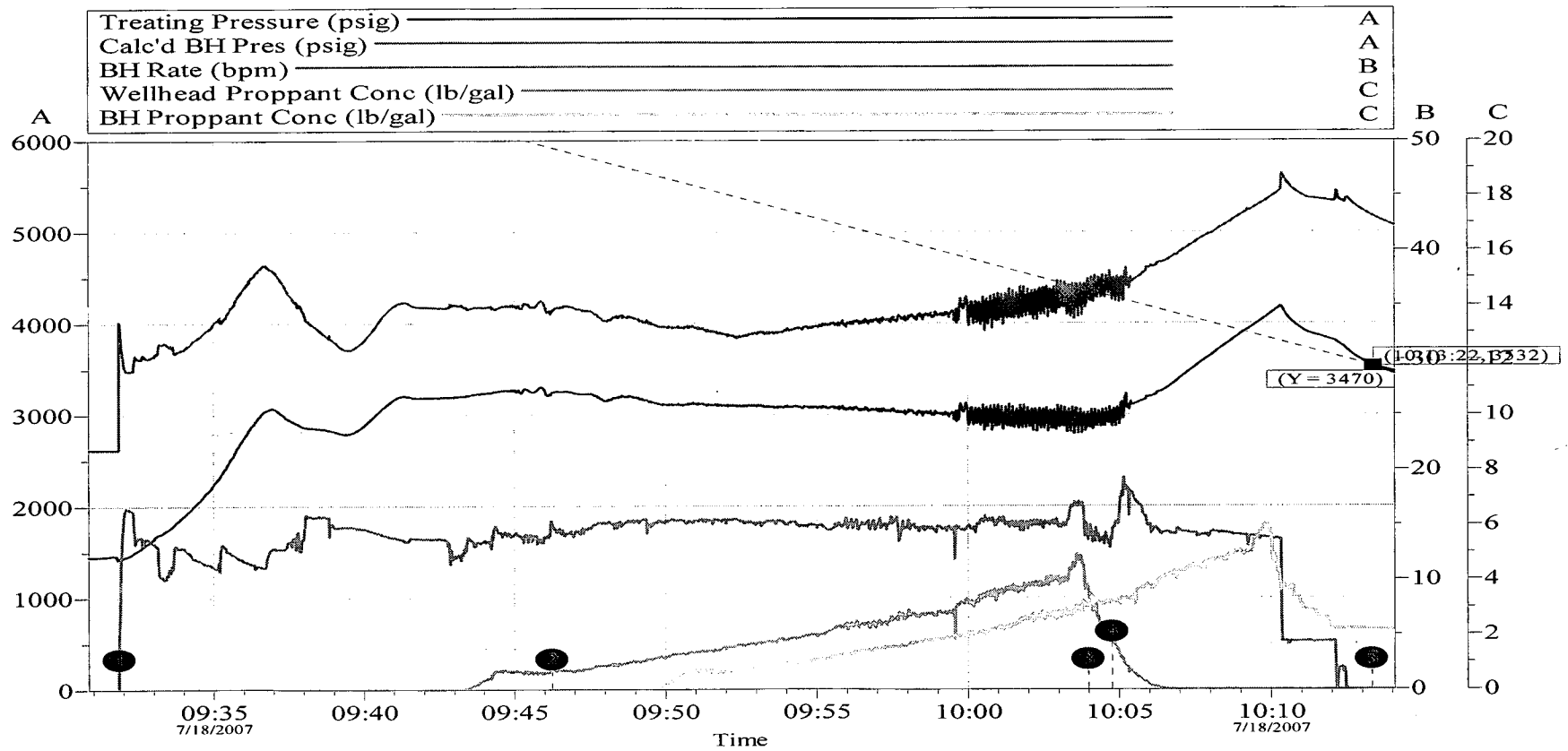
Sieve Size	Amount Retained g	Percent %
#16	0.000	0.0
#20	2.300	2.3
#30	33.500	33.5
#35	45.200	45.2
#40	13.100	13.1
#50	5.700	5.7
Pan	0.000	0.0
Total	99.800	99.8

## 6.7 Fluid Analysis Tests

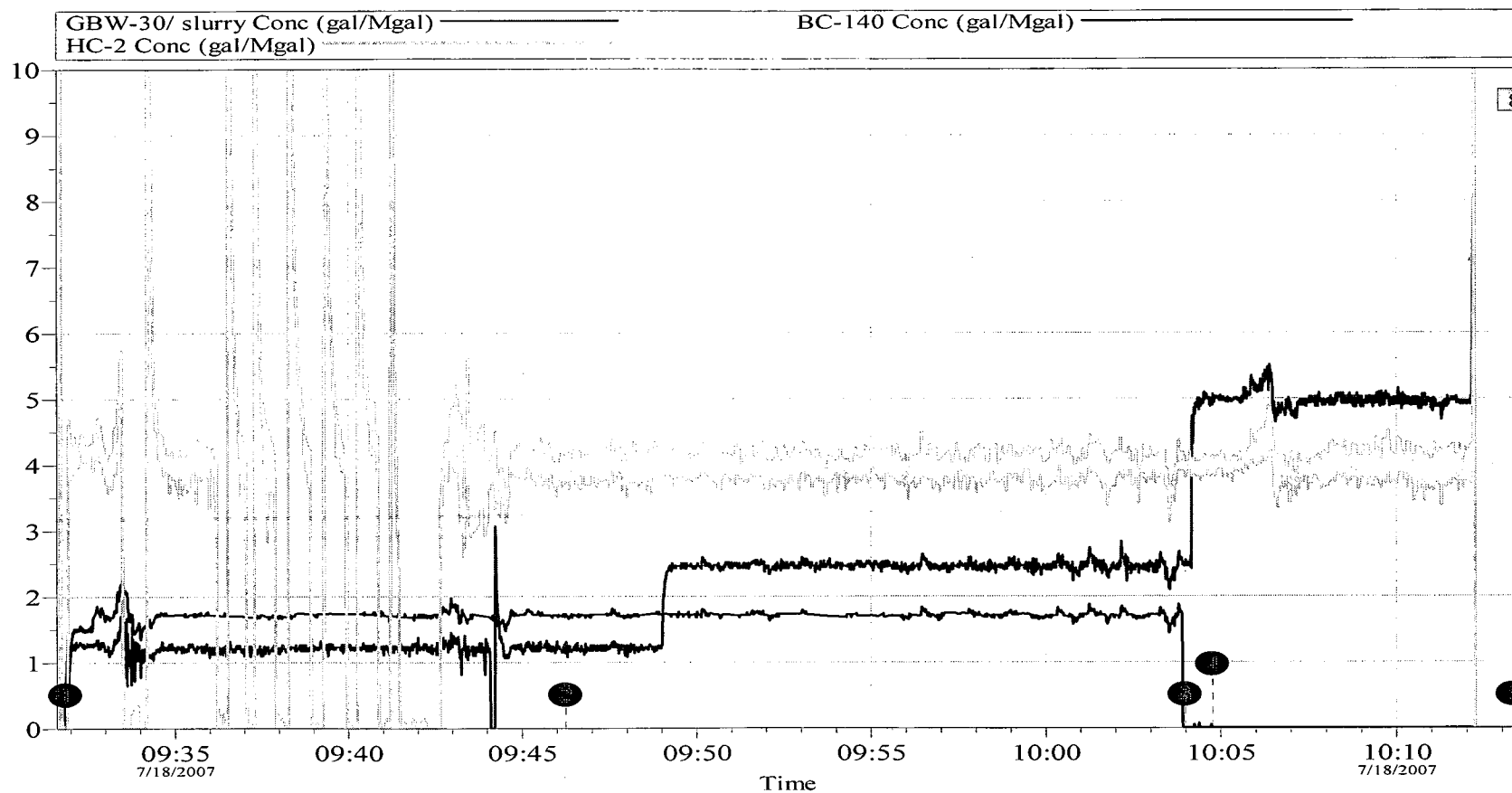
Tank	Fluid Name	Fluid Density lb/gal	Test Temp °F	pH	Iron Conc mg/L	Chloride Conc mg/L	Sulfate Conc mg/L
1	3% KCL Water	8.52	91.0	7.50	0.00	16920.00	0.00
Average		8.52	91.0		0.00	16920.00	0.00

## 7.0 ATTACHMENTS

### 7.1 Job Summary



## 7.2 Job Chemicals



Customer: CABOT OIL & GAS PRODUCTION CORP	Job Date: 18-Jul-2007	Sales Order #: 5233876
Well Description: Fitzgerald 3-12	UWI:	