

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

API NO. 15-165-21,456-00-00

County Rush

SE/4 SE/4 SW/4 1 17S 18W East  
..... Soc. .... Twp. .... Rge. .... X West

330 Ft North from Southeast Corner of Section  
2970 Ft West from Southeast Corner of Section  
(Note: Locate well in section plat below)

Lease Name Muth Well # 2

Field Name Reichel West

Producing Formation Winfield

Elevation: Ground 2102 KB 2105

Operator: License # 3456  
Name AFG Energy, Inc.  
Address P.O. Box 605  
City/State/Zip Russell, Kansas 67665

Purchaser Enron Gas Processing  
Houston, Texas

Operator Contact Person Terry Piesker  
Phone 913-483-6213

Contractor: License # 5302  
Name Red Tiger Drilling Company

Wellsite Geologist Steve Parker  
Phone 316-263-5172

Designate Type of Completion  
 New Well  Re-Entry  Workover

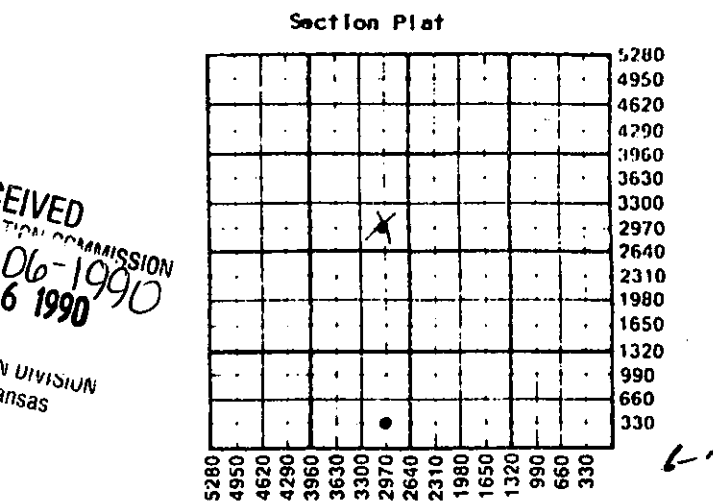
Oil  SWD  Temp Abd  
 Gas  Inj  Delayed Com  
 Dry  Other (Core, Water Supply etc.)

If ONNO: old well info as follows:  
Operator  
Well Name  
Comp. Date Old Total Depth

WELL HISTORY

Drilling Method:  
 Mud Rotary  Air Rotary  Cable  
1/10/89 1/18/89 2-1-89  
Spud Date Date Reached TD Completion Date  
3,700' 2,091'  
Total Depth PBD

Amount of Surface Pipe Set and Cemented at 1213 feet  
Multiple Stage Cementing Collar Used? Yes No  
If yes, show depth set feet  
If alternate 2 completion, cement circulated from feet depth to w/ SX cmt  
Cement Company Name Allied Cementing  
Invoice #



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WATER SUPPLY INFORMATION

Disposition of Produced Water: Disposal  
Docket # Repressuring

Questions on this portion of the ACO-1 call:  
Water Resources Board (913) 296-3717

Source of Water:  
Division of Water Resources Permit #

Groundwater Ft North from Southeast Corner (Well) Ft West from Southeast Corner of Sec Twp Rge East West

X Surface Water 1200 Ft North from Southeast Corner (Stream, pond etc) 900 Ft West from Southeast Corner Sec 35 Twp 16S Rge 18 East X West

Leonard Herman, LaCrosse, Ks. 67584  
Other (explain)  
(purchased from city, R.W.D. #)

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 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 drillers time log shall be attached with this form. 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 Terry W. Piesker  
Title General Manager Date 3-23-89

Subscribed and sworn to before me this 23rd day of March 1989  
Notary Public Marvin Post

Date Commission Expires

NOTARY PUBLIC  
State of Kansas  
MY APPT. EXPIRES 10-28-91

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

Operator Name AFG Energy, Inc. Lease Name Muth Well # 2

Sec. 1 Twp. 17S Rge. 18W  East  West County Rush

WELL LOG

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  
 Samples Sent to Geological Survey  Yes  No  
 Cores Taken  Yes  No

Formation Description  
 Log  Sample

DST #1 3619' to 3680' 15-30-15-30

1st opn.: No blow, flushed tool,  
no help.  
2nd opn.: No Blow  
Rec: 10' mud

IF-83-83 FF-83-83  
ISID-119 FSID-107

Name	Top	Bottom
Anhydrite	1204	1242
Herrington	2012	
Winfield	2046	
Brownville	2742	
Tarkio	2855	
Topeka	3097	
Heebner	3336	
Toronto	3352	
Lan.-K.C.	3386	3618
Granite Wash	3665	

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	12 1/4"	8 5/8"	24#	1,210'	60/40 Poz	375	2% Gel. 3% CC.
Production	7 7/8"	4 1/2"	10.5#	2,115'	Common	75	10% Salt
PERFORATION RECORD				Acid, Fracture, Shot, Cement Squeeze Record			
Shots Per Foot	Specify Footage of Each Interval Perforated			(Amount and Kind of Material Used)		Depth	
4	2048' to 2050'			250 gal. 15% acid			
				retreated w/750 gal.			
TUBING RECORD				Liner Run	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Date of First Production		Size	Set At	Packer at			
2-16-89		2 3/8"	2050'				
Date of First Production		Producing Method					
2-16-89		<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	Gas	Water	Gas-Oil Ratio	Gravity	
		Bbls	60 MCF	5 Bbls	CFPB		

METHOD OF COMPLETION

Production Interval

Disposition of gas:  Vented  Open Hole  Perforation  
 Sold  Other (Specify) ..... 2048' to 2050'  
 Used on Lease  Dually Completed .....  
 Commingled

State Corporation Commission  
200 Colorado Derby Building  
202 West 1st Street  
Wichita, Kansas 67202-1286

Regarding holding of information for 12 months on the following well:

MUTH #2 - SE/4-SE/4-SW/4 Sec. 1-17S-18W. Rush County, Kansas

Please keep the following information confidential on the above described well for 12 months.

Thank You.

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STATE CORPORATION COMMISSION

Sincerely,

JUL - 6 1990

CONSERVATION DIVISION  
Wichita, Kansas

Terry W. Piesker  
General Manager  
AFG Energy, Inc.

Muth #2

- 1-27-89 Moved in double drum and rigged up. Swabbed down to 1000'. Perforate 2048' to 2050' w/4 shots per ft. No show. Took off orbit valve and put on tubing head. Ran 67 jts - 2049.56' - 2 3/8" used tubing with seating nipple on bottom. Rigged up 2" tubing swab. Shut well in.
- 1-28-89 Nothing on tubing or casing. Swabbed well down. No show of gas. Ran 15 minute test-dry. Loaded hole and spotted 250 gal, 15% Reg. Acid on bottom. Shut in backside. Pumped 2.5 Bbl. acid out in 1 hr, starting at 200# and slowly went to 700#. Broke at 700#. Treated at 1 BPM at 100# for 2 Bbls, and last 3 Bbl. on slight vacuum. Max. press - 700# SIP - 50#. Let set 30 min. and swab load back. (Total load approx. 39 Bbl.) Swabbed 32 Bbl. back, no show of gas. 15 min. test - dry.
- 1-29-89 Shut down.
- 1-30-89 Casing - 440#; Tubing - 150#. Blew down through 3". Unloaded approximately 4 Bbl. water. Ran swab and was dry. Gauged through 1" - 70 MCF/Day. 30 min. - 85 MCF/Day, 100# on casing; 1 hr. - 85 MCF/Day, 130# on casing; 2 hrs. - 85 MCF/Day, 150# and unloaded 1/2 Bbl. 3 hrs - 70 MCF, 120# on casing. Loaded hole; spotted 750 gal, 15% INS on bottom and retreated well. Max. pressure - 550#. Treated at 3.5 BPM at 550# to 500#. ISP - 50#. On vacuum in 2 minutes. Let set 1 hr & swab load back (Total load 61 Bbls.) Swabbed 25 Bbls. of load and 100# on casing - Shut well in (short 36Bbls)
- 1-31-89 Casing - 440#. Tubing 0#. Ran swab in. Swabbed approx. 21 Bbl. (Total load back 46 Bbls.) Put on test. 1st hr. - 255 MCF and 100# on backside. 2nd and 3rd hr. - 360 MCF and 110# on casing. Light mist. Still short 10 Bbl. of load.
- 2-1-89 Casing - 440#; Tubing - 330#. Opened to the atmosphere and unloaded well. Shut well in and tore down rig and moved off.

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CONSERVATION DIVISION  
Wichita, Kansas

**STATE OF KANSAS - CORPORATION COMMISSION**  
**ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST**

FORM O-3  
8-7-58

TEST:  Deliverability  Open Flow TEST DATE: 3-15-89

COMPANY: AFG Energy, Inc. LEASE: Muth WELL NO.: #2

COUNTY: Rush LOCATION: SE-SE-SW SECTION: 1 TWP: 17S RNG: 18W ACRES: .

FIELD: West Reichel RESERVOIR: Winfield PIPELINE CONNECTION: Enron Gas Processing

COMPLETION DATE: 2-1-89 PLUG BACK TOTAL DEPTH: 2091' PACKER SET AT: \_\_\_\_\_

CASINO SIZE: 4 1/2" WT. 10.5# I.D. 4" SET AT 2115' PERF. 2048' to 2050'

TUBING SIZE: 2 3/8" WT. 4.6# I.D. 2" SET AT 2050' PERF. \_\_\_\_\_ TO \_\_\_\_\_

TYPE COMPLETION (Describe): Perforations 2048' to 2050' w/acid TYPE FLUID PRODUCTION: 3SWPD

PRODUCING THRU: 2" Tubing RESERVOIR TEMPERATURE: F BAR. PRESS - P<sub>a</sub>: 14.4 Psia

GAS GRAVITY - G<sub>g</sub>: .670 % CARBON DIOXIDE: \_\_\_\_\_ % NITROGEN: \_\_\_\_\_ API GRAVITY OF LIQUID: \_\_\_\_\_

VERTICAL DEPTH (H): 2048' TYPE METER CONN.: Flange (METER RUN)(PROVER) SIZE: 4" Meter Run

SHUT-IN PRESSURE: SHUT IN 3-12 10:39 AT 9:30 (AM) TAKEN 3-15 10:39 AT 9:30 (AM) TAKEN

FLOW TEST: STARTED 3-15 10:39 AT 9:30 (AM) TAKEN 3-16 10:39 AT 9:30 (AM) TAKEN

OBSERVED DATA

DURATION OF SHUT-IN 72 HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. X(X)(P <sub>d</sub> )	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASINO WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P <sub>w</sub> )(P <sub>i</sub> X P <sub>c</sub> ) psia	psig	(P <sub>w</sub> )(P <sub>i</sub> X P <sub>c</sub> ) psia		
SHUT-IN						356	372.4	267	281.4	72	---
FLOW	.625	43	44	49	---	245	259.4	238	245	24	3 Bbls. H2O

RATE OF FLOW CALCULATIONS

STATE CORPORATION COMMISSION

COEFFICIENT (C <sub>d</sub> ) (P <sub>d</sub> ) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m \times h_w}$	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP. FACTOR F <sub>L</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R	GOR	G <sub>m</sub>
2.45	57.4	50.255	1.222	1.011	1.027	156		

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CONSERVATION DIVISION  
Wichita, Kansas

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 138.7 ; (P<sub>w</sub>)<sup>2</sup> = 67.3 ; P<sub>d</sub> = .68 % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>d</sub>)<sup>2</sup> = 0.207 204

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
136.5	71.4	1.9118	.2814	.850	.2391	1.734	271
116.1	71.4	1.6504	.2175	.850	.1849	1.531	239

OPEN FLOW 271 Mcfd @ 14.65 psia DELIVERABILITY 239 Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Executed this the 23rd day of March, 1989.

*Henry W. Piesker*  
For Company

Witness (if any)

Checked by

2627, Russell, Kansas  
 793-5861, Great Bend, Kansas

Phone Plainville 913-434-2812  
 Phone Ness City 913-798-3843

# ALLIED CEMENTING CO., INC. N° 3318

Home Office P. O. Box 31

Russell, Kansas 67665

*New*

Date	1-11-89	Sec	1	Twp	17	Range	18	Called Out	3:15 pm	On Location	8:45 pm	Job Start	10:00 pm	Finish
Lease	Math	Well No.	#2			Location	LaCross, HW 3/4 E, Alca Rus h			Country	KS		State	KS
Contractor	Red Tiger Drilling							Owner	A. F. & G. Energy, Inc.					
Type Job	Surface casing (Deep)							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 listed.						
Hole Size	12 1/4		I.D.		12 1/4									
Csg.	8 7/8		Depth		1213'		Charge To Red Tiger Drilling Co							
Tbg. Size			Depth				Street 1720 Ks State Bank Bldg							
Drill Pipe			Depth				City Wichita State Ks 67202							
Tool			Depth				The above was done to satisfaction and supervision of owner agent or contractor							
Cement Left in Csg.	20'		Shoe Joint				Purchase Order No.							
Press Max.			Minimum				x Day Roberts							
Meas Line	✓ 1173		Displace		✓ 76		CEMENT							
Perf.														

**EQUIPMENT**

# No.	Cementor	Allen
Pumptrk 120	Helper	Orcl
# No.	Cementor	
Pumptrk	Helper	
#	Driver	Toby
Bulktrk 179	Driver	

DEPTH of Job	1213'	
Reference	Pumptrk Chg	360.00
	Pumptrk mileage	23.00
	18 7/8 R Plus	60.00
	913' @ 39	356.07
	<b>Total</b>	<b>799.07</b>

Amount Ordered	375.54	60/40 322
Consisting of	Common 225 5.00 1125.00	
	Poz Mix 15.0 2.25 337.50	
	Gel 8 6.75 54.00	
	Chloride 11 20.00 220.00	
	Quickset	
Handling	3.75	.90 337.50
Mileage	2.3	271.80
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Floating Equipment		
<b>Total</b>	<b>\$ 3144.93</b>	
Less Disc	628.98	
<b>Total</b>	<b>\$ 2515.95</b>	

Remarks: Cement Did Circulate  
 Plug was @ 500'

627, Russell, Kansas  
 93-5861, Great Bend, Kansas

Phone Plainville 913-434-2812  
 Phone Ness City 913-798-3843

# ALLIED CEMENTING CO., INC. No 3321

Home Office P. O. Box 31

Russell, Kansas 67665

*New*

Date	1-18-89	Sec	Twp	Range	Called Out	On Location	Job Start	Finish
Lease	Math	Well No.	#2	Location	LaCrosse HWY 3E	County	Pearson	State
Contractor	Red Tiger #4			Owner	Same			
Type Job	Production Casing			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 listed.				
Hole Size	7 7/8	T.D.	3700	Charge To	American Flat Glass			
Csg.	4 1/2	Depth	2146.85	To	A.F.G. Energy Inc.			
Tbg. Size		Depth	<del>2107.71</del>	Street	Box 605			
Drill Pipe		Depth		City	Russell	State	Ks 67665	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor				
Cement Left in Csg.		Shoe Joint	25.45	Purchase Order No.	Larry W. Piesher			
Press Max.		Minimum		<b>CEMENT</b>				
Meas Line	2090	Displace.	33.27	Amount Ordered	75 sx Com 10% salt			
Perf.				Consisting of				

**EQUIPMENT**

Pumptrk	No. #120	Cementor	Allen
		Helper	Brad
Pumptrk	No.	Cementor	
		Helper	
Bulktrk	#116	Driver	Toby
Bulktrk		Driver	

Common	75	5.00	375.00
Poz. Mix			
Gel			
Chloride			
Quickset			
Salt - 7		4.75	33.25
Sales Tax			
Handling	75	.90	67.50
Mileage	23		51.75
Sub Total			527.50

DEPTH of Job	2090'		
Reference:	Pump trk. Chrg	838.00	
	Pump trk. mileage	23.00	
	<del>1 1/2 Hr. Plug</del>		
	Sub Total		
	Tax		
	Total	861.00	

Floating Equipment			
Wichita, Kansas			
TOTAL		1388.50	
Less Disc		277.70	
		\$ 1110.80	

Remarks: Plug Held

*Thank you*