

**ORIGINAL**

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

API No. 15- 033-20788-0000

County Comanche  
- - SW - SW Sec. 26 Twp. 34S Rge. 20 X W

Operator: License # 3882

330 Feet from South Line of Section

Name: SAMUEL GARY JR. & ASSOCIATES, INC.

990 Feet from West Line of Section

Address 1670 BROADWAY

Footages calculated from nearest outside section corner: SW

SUITE 3300

Lease Name Woolfolk Well # 26-13

City/State/Zip DENVER, CO 80202-4838

Field Name BOX RANCH

Purchaser: \_\_\_\_\_

Producing Formation \_\_\_\_\_

Operator Contact Person: TOM FERTAL

Elevation: Ground 1724' KB 1736'

Phone (303) 831-4673

Total Depth 6600' PBDT \_\_\_\_\_

Contractor: Name: TRIAD DRILLING

Amount of Surface Pipe Set and Cemented at 659' Feet

License: 7345

Multiple Stage Cementing Collar Used? Yes X No

Wellsite Geologist: Tim McCoy

If yes, show depth set \_\_\_\_\_ Feet

Designate Type of Completion  
X New Well        Re-Entry        Workover

If Alternate II completion, cement circulated from \_\_\_\_\_

       Oil        SWD        SLOW        Temp. Abd.  
       Gas        ENHR        SIGW  
X Dry        Other (Core, WSW, Expl., Cathodic, etc.)

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

Drilling Fluid Management Plan ALT 1 DIA 8-9-99 JK  
(Data must be collected from the Reserve Pit)

If Workover/Re-Entry: Old well info as follows:

Chloride content \_\_\_\_\_ ppm Fluid Volume \_\_\_\_\_ bbls

Operator: \_\_\_\_\_

Dewatering method used Allowed to dry and back filled

Well Name: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Comp. Date \_\_\_\_\_ Old Total Depth \_\_\_\_\_

       Deepening        Re-Perf.        Conv. To Inj/SWD  
       Plug Back        PBDT  
       Commingled        Docket No. \_\_\_\_\_  
       Dual Completion        Docket No. \_\_\_\_\_  
       Other (SWD or Inj?)        Docket No. \_\_\_\_\_

Operator Name \_\_\_\_\_

Lease Name \_\_\_\_\_

7/23/90 8/6/90 8/8/90  
Spud Date Date Reached TD Completion Date

Quarter Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ Rng. \_\_\_\_\_ W

County \_\_\_\_\_ Docket No. \_\_\_\_\_

INSTRUCTIONS: An original and two copies of this information shall be filed with the Kansas Corporation Commission, 130 South Market, Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-196 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 geological well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 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 an the statements herein are complete and correct to the best of my knowledge.

Signature Thomas G Fertal

K.C.C. OFFICE USE ONLY  
F        Letter of Confidentiality Attached  
C   /   Wireline Log Received  
C   /   Geologist Report Received

Title Senior Geologist Date 8/3/99

Subscribed and sworn to before me this 3rd day of August, 1999

Notary Public William D Shea

Distribution  
  /   KCC        SWD/Rep        NGPA  
       KGS        Plug        Other (Specify)

Date Commission Expires 8-24-02

15-033-20788-00-00

Operator Name Samuel Gary Jr. & Associates, Inc. Lease Name Woolfolk Well # 26-13

Sec. 26 Twp. 34 S Rge. 20 County Comanche

Instructions: Show important tops and base of formation 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 (Attach Additional Sheets.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum Name	Top	<input type="checkbox"/> Sample Datum
Sample Sent to Geological Survey	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		Stone Corral	758	+978
Cores Taken	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		Wabaunsee	3220	-1484
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		Base Heebner Shale	4173	-2437
List all E. Logs Run:	Dual Induction Comp. Neutron-Density			Lansing	4367	-2631
				Cherokee	5083	-3347
				Mississippian	5223	-3487
				Viola	6262	-4526
				Arbuckle	6562	-4826

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
Conductor	30"	20"		75'		6 yds	concrete
Surface Casing	12 1/4"	8 5/8"		659'	see Triad drilling report	565 sx	

ADDITIONAL CEMENTING/SQUEEZE RECORD					
Purpose:	Depth		Type of Cement	# Sacks Used	Type and Percent Additives
	Top	Bottom			
Perforate					
Protect Casing					
Plug Back TD					
Plug Off Zone					

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

TUBING RECORD		Size	Set At	Packer At	Liner Run	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Date of First, Resumed Production, SWD or Inj.			Producing Method					
D&A			<input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)					
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Water	Bbls.	Gas-Oil Ratio	Gravity

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

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

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

STATE OF KANSAS RECEIVED  
 CONSERVATION COMMISSION  
 AUG - 9 1999  
 8-9-1999  
 CONSERVATION DIVISION  
 Wichita, Kansas

SA. JEL GARY JR. & ASSOCIATES, INC.  
1775 SHERMAN STREET, SUITE 1925  
DENVER, COLORADO 80203  
(303) 831-4673

WELL HISTORY

-----  
Operator: Samuel Gary Jr. & Associates, Inc.  
Well Name: #26-13 Woolfolk  
Location: SW/4SW/4  
Section 26-T34S-R20W  
County: Comanche  
State: Kansas  
Prospect: BOBWHITE  
(Receive Daily Drilling Reports from Joanie - (303) 831-4673)  
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-----  
DATE            DEPTH            PROGRESS HISTORY  
-----

07/23/90            Drlg @ 75'. Well spud at 7:00 a.m., 07/23/90.  
  
                         23.50 hrs. RURT, mixing spud mud.  
                         .50 hr. drilling.

07/24            TD @ 660', WOC, made 585' feet. Lost circ. @ 153',  
                         mix LCM. Ran 16 jts. 8-5/8" csg. set @ 659' cement  
                         plug down @ 7:15 p.m. 07/23/90. Estimate drilling  
                         out below surface csg @ 3 or 4 P.M. today.  
  
                         8.50 hrs. drilling  
                         .75 hr. drilling cement  
                         1.00 hr. lost circ/mix LCM  
                         .25 hr. sweeping hole  
                         .75 TOH  
                         10.75 running/cementing 8-5/8" csg.  
                         2.00 hrs. cut-off csg. & weld on wellhead

07/25            Drilling @ 1,860', made 1,200' last 24 hrs. Bit #2  
                         7-7/8" made 1,200' in 13.25 hrs. Pump pressure  
                         1,200 psi, 6" liner, 110 SPM, 286 GPM. MW 10.0,  
                         VIS 29, deviations: 3/4° @ 1,171'; 3/4° @ 1,697'  
  
                         13.25 hrs. drilling  
                         .25 hr. service rig  
                         .50 hr. surveys  
                         1.75 hrs. weld on wellhead  
                         5.75 hrs. NUBOP  
                         .50 hr. pressure testing BOP to 1,000 psi  
                         .75 hr. TIH  
                         1.25 hr. drlg plug & cement

07/26            Drilling @ 2,530', made 670' last 24 hrs. Bit #2  
                         7-7/8" depth in 660', depth out 2,150'; total foot-  
                         age drilled 1,490'; w/cumulative rotating hrs: 22-  
                         1/4. Bit #3 7-7/8" depth in 2,150' total footage  
                         drilled 380'; w/cumulative rotating hrs: 11. Pump  
                         pressure 1650 psi, 6" liner, 106 SPM, 273 GPM. MW  
                         9.8, VIS 28. Deviation: 1° @ 2,189'.  
  
                         20.00 hrs. drilling  
                         3.25 hrs. tripping for New Bit.  
                         .50 hr. service rig

AUG - 9 1999  
8-9-1999  
CONSERVATION DIVISION  
Wichita, Kansas

**INVOICE**



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

A Halliburton Company

15-033-20788-00-00

INVOICE NO.	DATE
999863	08/08/199

WELL LEASE NO./PLANT NAME		WELL/PLANT LOCATION		STATE	WELL/PLANT OWNER	
WOOLFOLK 26-13		COMANCHE		KS	SAME	
SERVICE LOCATION		CONTRACTOR		JOB PURPOSE		TICKET DATE
PRATT		TRIAD DRILLING		PLUG TO ABANDON		08/08/199
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA		FILE N
315450	L E HUBBARD			COMPANY TRUCK		9958

SAM GARY JR. & ASSOC.  
1775 SHERMAN STREET  
SUITE 1925  
DENVER, CO 80203

DIRECT CORRESPONDENCE TO:  
SUITE 1300  
LIBERTY TOWER  
100 BROADWAY AVENUE  
OKLAHOMA CITY, OK 73102-0000

PRICE REF. NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
000-117	MILEAGE	54	MI	2.35	126.90
		1	UNT		
090-910	MISCELLANEOUS PUMPING JOB	1	TRK	370.00	370.00
090-928	MISCELLANEOUS PUMP JOB-ADD HRS	2	HR	84.00	168.00
		1	TRK		
504-308	STANDARD CEMENT	99	SK	5.35	529.65
506-105	POZMIX A	66	SK	2.79	184.14
506-121	HALLIBURTON-GEL 2%	3	SK	.00	N/C
507-277	HALLIBURTON-GEL BENTONITE	6	SK	13.75	82.50
500-207	BULK SERVICE CHARGE	177	CFT	1.10	194.70
500-306	MILEAGE CMTG MAT DEL OR RETURN	407	TMI	.75	305.25
INVOICE SUBTOTAL					1,961.14
DISCOUNT-(BID)					392.22-
INVOICE BID AMOUNT					1,568.92
*- KANSAS STATE SALES TAX					66.68
*- PRATT COUNTY SALES TAX					15.69
INVOICE TOTAL - PLEASE PAY THIS AMOUNT					\$1,651.29

ACCT. #	DOLLARS
80115	\$ 1651.29
TOTAL \$	

APP'D \_\_\_\_\_  
Date 8/21/90  
Cy UK

AUG 15 1990  
RECEIVED  
STATE CORPORATION COMMISSION  
AUG - 9 1999  
8-9 1999  
CONSERVATION DIVISION  
Wichita, Kansas

TERMS INVOICES PAYABLE NET BY THE 20TH OF THE FOLLOWING MONTH AFTER DATE OF INVOICE. UPON CUSTOMER'S DEFAULT IN PAYMENT OF CUSTOMER'S ACCOUNT BY THE LAST DAY OF THE MONTH FOLLOWING THE MONTH IN WHICH THE INVOICE IS DATED, CUSTOMER AGREES TO PAY INTEREST THEREON AFTER DEFAULT AT THE HIGHEST LAWFUL CONTRACT RATE APPLICABLE BUT NEVER TO EXCEED 18% PER ANNUM. IN THE EVENT IT BECOMES NECESSARY TO EMPLOY AN ATTORNEY TO ENFORCE COLLECTION OF SAID ACCOUNT, CUSTOMER AGREES TO PAY ALL COLLECTION COSTS AND ENFORCE THE UNPAID ACCOUNT.

19

FIELD OR DIST.	COUNTY	STATE	WIRE LINE RECORD	REEL NO.
SIZE	MAKE	WT. & GR.	NO. JOINTS	FEET
LAST CASING TUBING OR LINER	20			63 12 75
STROKE LENGTH				
			RKB. TO CSG. NO.	SET AT
			SIZE	NO. LINES
			FT. CUT OFF	PRESENT LENGTH
			TON MI. OR TRIPS SINCE LAST CUT	
			CUMULATIVE TON MI. OR TRIPS	

DRILLING CREW PAYROLL DATA 15-033-20788-00-00  
 DATE 7-23-90  
 WELL NAME & NO. Woolfolk 26-13  
 COMPANY Gary & Associates INC  
 TOOL PUSHER \_\_\_\_\_ RIG NO. 19

FOOTAGE		DR. D	CORE NO.	FORMATION	ROTARY	WT. ON	PUMP	PUMP NO.	PUMP NO.	METHOD
FROM	TO	RM-R		(SHOW CORE RECOVERY)	RPM	BIT	PRESS	LINER	LINER	RUN
75	50					1000'		SIZE	SIZE	COMPLE
DEVIATION RECORD		DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
TIME LOG		ELAPSED	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS						
FROM	TO	TIME		Rig up, Mix Spud Mud						
6:45	7:00	8								

MORNING TOUR 10:30 P.M. 6:30 A.M.

CREW	SOC. SEC. NO.	NAME	HRS.
DRILLER		Mike Abbott	8
DRKMAN		Rodney Gage	8
MTRMAN		David Hibbard	8
FIREMAN		Brian Foale	8
FLRMAN			
FLRMAN			
FLRMAN			
TRAINEE			

DRILLER *Mike Abbott*

FOOTAGE		DR. D	CORE NO.	FORMATION	ROTARY	WT. ON	PUMP	PUMP NO.	PUMP NO.	METHOD
FROM	TO	RM-R		(SHOW CORE RECOVERY)	RPM	BIT	PRESS	LINER	LINER	RUN
80	510	D		Red Bed				SIZE	SIZE	COMPLE
DEVIATION RECORD		DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
TIME LOG		ELAPSED	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS						
FROM	TO	TIME		Dry						
7:00	7:45	24	2							
7:45	8:45	1	21	Loss Circ. 155' Build up volume #166m						
8:45	9:00	6	2	Dry Part. Dry Dry 295'						

DAY TOUR \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.

CREW	SOC. SEC. NO.	NAME	HRS.
DRILLER		Gene Cole	8
DRKMAN		Tim Liebert	8
MTRMAN		Karl Williams	8
FIREMAN		Frank C. Pak	8
FLRMAN			
FLRMAN			
FLRMAN			
TRAINEE			

DRILLER *Gene Cole*

NO ACC

FOOTAGE		DR. D	CORE NO.	FORMATION	ROTARY	WT. ON	PUMP	PUMP NO.	PUMP NO.	METHOD
FROM	TO	RM-R		(SHOW CORE RECOVERY)	RPM	BIT	PRESS	LINER	LINER	RUN
510	660	D		Red Bed	130	1 1/2"	1000	6"	90	
DEVIATION RECORD		DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
TIME LOG		ELAPSED	CODE NO.	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS						
FROM	TO	TIME		265SX + 100SX + 50SX + 50SX + 100SX						
3:00	4:15	1 1/4	2	Dry Delg. (565 SX TOTAL) Run 315 24" JSS						
4:15	4:30	1/4	5	Circ. 1 1/2" cong. 660 overall						
4:30	5:15	3/4	6	P.C.H. set @ 659' RIG						
5:15	6:15	1	12	Rig up CASERS & Run 8 5/8"						
6:15	7:15	1	12	Lump blocks, pressure test & 3/4" del. 2 1/2" class C 2 1/2" cement						
7:15	8:00	3/4	22	1" cement class C 2 1/2" cement						
8:00	10:00	2	13	W.O. Cement						
10:00	10:15	1/4	22	1" cement W.O. Cement class C 2 1/2" cement						

EVENING TOUR 3:00 P.M. 11:00 P.M.

CREW	SOC. SEC. NO.	NAME	HRS.
DRILLER		John W. Scott	8
DRKMAN		Victor Gordon	8
MTRMAN		Roy Lee Wreath	8
FIREMAN		George Betty	8
FLRMAN			
FLRMAN			
FLRMAN			
TRAINEE			

DRILLER *John W. Scott*

NO ACC

RIG NO. 19

FIELD OR DIST.	COUNTY	STATE	WIRE LINE RECORD	REEL NO.
	Comanche	Kansas	SIZE 1 1/8"	NO. LINES 8
LAST CASING TUBING OR LINE	SIZE	MAKE	WT. & GR.	NO. JOINTS
6 1/2"	20"	Cond.	63 12	75
	8 5/8"	2 1/2" J-55	660	659'
			RKB. TO CSG. NO.	SET AT
			FT. CUT OFF	PRESENT LENGTH
			TON MI. OR TRIPS SINCE LAST CUT	
			CUMULATIVE TON MI. OR TRIPS	

DRILLING CREW PAYROLL DATA 15-033-20788-00-00

DATE 7-24-90

WELL NAME & NO. Woolfolk 26-13

COMPANY Gary & Associates Inc.

TOOL PUSHER Lloyd Hubbard RIG NO. 19

FOOTAGE		DR. D	CORE	FORMATION	ROTARY	WT. ON	PUMP	PUMP NO. 1	PUMP NO.	METHOD
FROM	TO	RM-R	NO.	(SHOW CORE RECOVERY)	RPM	BIT	PRESS	LINER	LINER	RUN
		CORE.C				1000#		SIZE	SIZE	COMPLE.
660				Red Bed				6"		
DEVIATION RECORD		DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
TIME LOG		ELAPSED	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS						
FROM	TO	TIME	NO.							
11:00	1:00	2	13	W.O.C. Fuel = 69"						
1:00	1:30	1/2	12	CMT - 1" - 100sk's glass c 2%cc						
1:30	4:00	2 1/2	13	W.O.C.						
4:00	7:00	3	14	CUT OFF + WELD ON HEAD						

MORNING TOUR 11:00 P.M. 7:00 A.M.

CREW	SOC. SEC. NO.	NAME	HRS.
DRILLER		Ron Norenik	8
DRKMAN		Hevly Gbreer	8
MTRMAN		E.L. Ehrlich	8
FIREMAN		Tom Pattel	8
FLRMAN			
FLRMAN			
FLRMAN			
TRAINER			

NO ACC

FOOTAGE		DR. D	CORE	FORMATION	ROTARY	WT. ON	PUMP	PUMP NO.	PUMP NO.	METHOD
FROM	TO	RM-R	NO.	(SHOW CORE RECOVERY)	RPM	BIT	PRESS	LINER	LINER	RUN
		CORE.C				1000#		SIZE	SIZE	COMPLE.
DEVIATION RECORD		DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
TIME LOG		ELAPSED	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS						
FROM	TO	TIME	NO.							
2:00	2:45	3/4		Weld on Head						
2:45	3:00	6	14	1 1/2" nipple from well runs #1000						
2:00				<del>1 1/2" nipple from well runs #1000</del>						
2:45	1:30	5 1/4		Nipple up						
1:30	1:45	1/4		Test Pump bleed #1000						
1:45	2:30	3/4		T. I. H. P.U. Bottom hole call at 2700'						
2:30	2:45	1/4		Test Pump #1000						
2:45	3:00	1/4		Drip Pipe						

DAY TOUR 7:00 A.M. 3:00 P.M.

CREW	SOC. SEC. NO.	NAME	HRS.
DRILLER		Gene Cole	8
DRKMAN		Tim Liebert	8
MTRMAN		Frank Csipak	8
FIREMAN		Karl Williams	8
FLRMAN			
FLRMAN			
FLRMAN			
TRAINER			

NO ACC

FOOTAGE		DR. D	CORE	FORMATION	ROTARY	WT. ON	PUMP	PUMP NO.	PUMP NO.	METHOD
FROM	TO	RM-R	NO.	(SHOW CORE RECOVERY)	RPM	BIT	PRESS	LINER	LINER	RUN
		CORE.C				1000#		SIZE	SIZE	COMPLE.
660	1300	D		Red Bed	130	2 1/2"	1150	6"	112	
DEVIATION RECORD		DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION	DEPTH	DEV.	DIRECTION
		1171	3/4							
TIME LOG		ELAPSED	CODE	DETAILS OF OPERATIONS IN SEQUENCE AND REMARKS						
FROM	TO	TIME	NO.							
3:00	4:00	1	23	Dslq Plug & Cement						
4:00	9:15	5 1/4	2	Dslq						
9:15	9:30	1/4	10	Dev. Survey @ 1171'						
9:30	11:00	1 1/2	2	Dslq						

EVENING TOUR 3:00 P.M. 11:00 P.M.

CREW	SOC. SEC. NO.	NAME	HRS.
DRILLER		John W. Scott	8
DRKMAN		Victor Gooden	8
MTRMAN		Roy Lee Wreath	8
FIREMAN		George Kelly	8
FLRMAN			
FLRMAN			
FLRMAN			
TRAINER			

W.A.

**SAMUEL GARY JR. AND ASSOCIATES**  
  
**LEASE : WOOLFOLK**  
  
**WELL NO.: 26-13**  
  
**TEST NO.: 1**

**TICKET NO. 00885200**  
**13-AUG-90**  
**PRATT.**

LEGAL LOCATION	WOOLFOLK	WELL NO.	26-13	TEST NO.	1	TESTED INTERVAL	6248.0 - 6297.0	LEASE OWNER / COMPANY NAME	SAMUEL GARY JR. AND ASSOCIATES
SEC. - TWP. - RANG.	26-34S-20W								
FIELD AREA		COUNTY	COMANCHE	STATE	KANSAS	SM			

RECEIVED  
 STATE COMMISSION  
 8-9-1999  
 AUG - 9 1999

CONSERVATION DIVISION  
 Wichita, Kansas

### EQUIPMENT & HOLE DATA

FORMATION TESTED: VIOLA  
 NET PAY (ft): \_\_\_\_\_  
 GROSS TESTED FOOTAGE: 41.0  
 ALL DEPTHS MEASURED FROM: KELLY BUSHING  
 CASING PERFS. (ft): \_\_\_\_\_  
 HOLE OR CASING SIZE (in): 7.875  
 ELEVATION (ft): 1736.0  
 TOTAL DEPTH (ft): 6600.0  
 PACKER DEPTH(S) (ft): 6240, 6246, 6287, 6293  
 FINAL SURFACE CHOKE (in): \_\_\_\_\_  
 BOTTOM HOLE CHOKE (in): 0.750  
 MUD WEIGHT (lb/gal): 8.80  
 MUD VISCOSITY (sec): 46  
 ESTIMATED HOLE TEMP. (°F): \_\_\_\_\_  
 ACTUAL HOLE TEMP. (°F): 130 @ \_\_\_\_\_ ft

TICKET NUMBER: 00885200  
 DATE: 8-7-90 TEST NO: 1  
 TYPE DST: OFF BTM STRADDLE  
 FIELD CAMP: PRATT.  
 TESTER: L.R. PARKER  
F. SNYDER  
 WITNESS: R. SINKBEIL  
 DRILLING CONTRACTOR: TRIAD DRILLING #19

### FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
<u>TOP RECOVERY</u>	_____ @ _____ °F	<u>6780</u> ppm
<u>BOTTOM RECOVERY</u>	_____ @ _____ °F	<u>8475</u> ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm

### SAMPLER DATA

Psig AT SURFACE: 18.5  
 cu.ft. OF GAS: 0.003  
 cc OF OIL: \_\_\_\_\_  
 cc OF WATER: \_\_\_\_\_  
 cc OF MUD: 2250.0  
 TOTAL LIQUID cc: 2250.0

### HYDROCARBON PROPERTIES

OIL GRAVITY (°API): \_\_\_\_\_ @ \_\_\_\_\_ °F  
 GAS/OIL RATIO (cu.ft. per bbl): \_\_\_\_\_  
 GAS GRAVITY: \_\_\_\_\_

### CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

### RECOVERED :

90 FEET OF DRILLING MUD

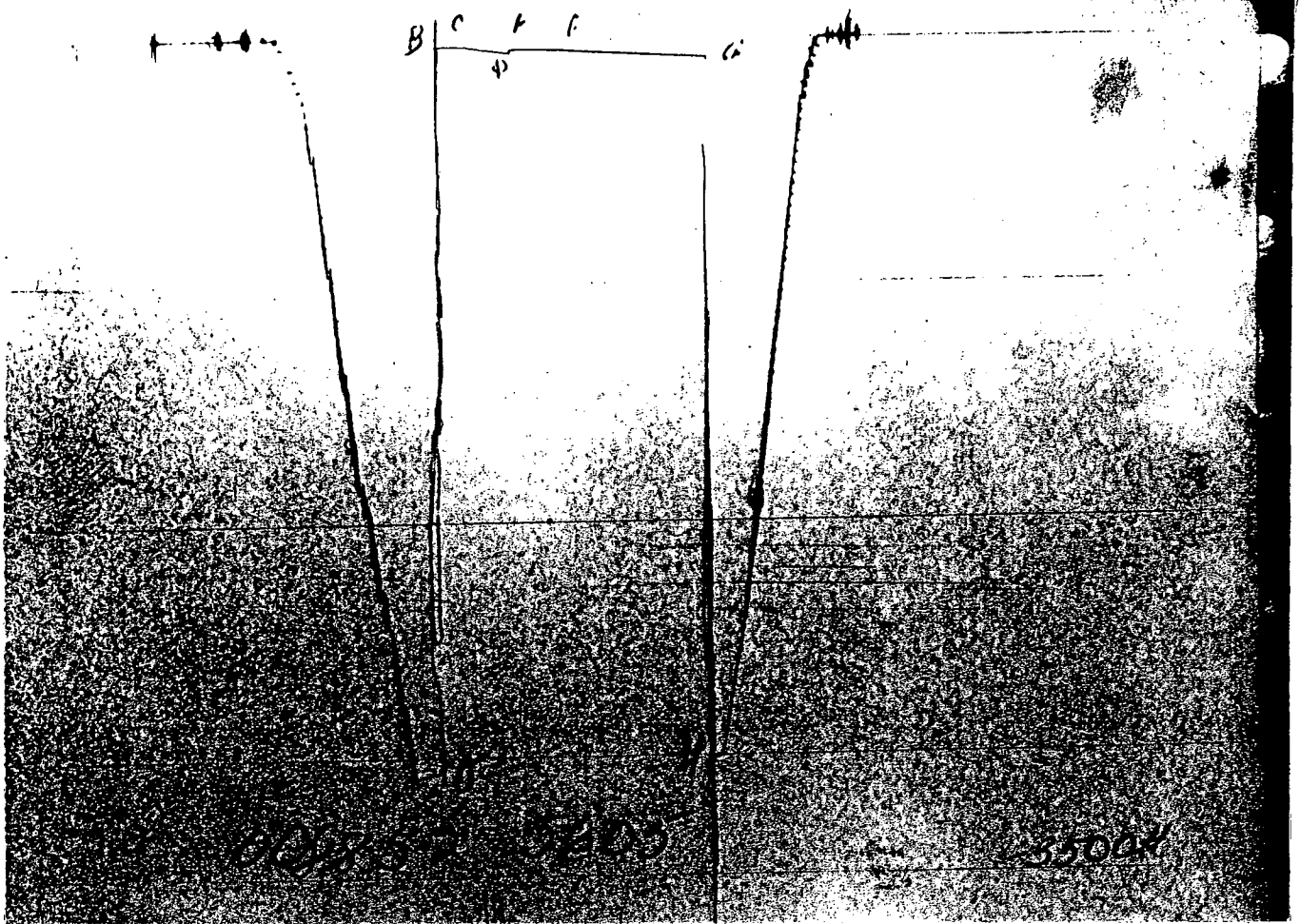
MEASURED FROM TESTER VALVE

### REMARKS :

-----TIGHT HOLE INFORMATION-----

RECEIVED  
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GAUGE NO: 5605 DEPTH: 6224.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		3059.0			
B	INITIAL FIRST FLOW		32.6	30.0	30.0	F
C	FINAL FIRST FLOW		32.6			
C	INITIAL FIRST CLOSED-IN		32.6	60.0	60.0	C
D	FINAL FIRST CLOSED-IN		56.9			
E	INITIAL SECOND FLOW		46.5	60.0	60.0	F
F	FINAL SECOND FLOW		42.9			
F	INITIAL SECOND CLOSED-IN		42.9	180.0	180.0	C
G	FINAL SECOND CLOSED-IN		76.3			
H	FINAL HYDROSTATIC		3000.2			
I	HYDROSTATIC RELEASE					

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SAMUEL GARY, JR. & ASSOCIATES, INC.

WOOLFOLK #26-13

SE SW SW SEC 26 T34S R20W

COMANCHE COUNTY, KANSAS

# WELLSITE GEOLOGIST'S REPORT

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T. M. MCCOY & CO., INC.  
CONSULTING GEOLOGISTS

CONSERVATION DIVISION  
Wichita, Kansas

Samuel Gary, Jr. & Associates, Inc.  
Woolfolk #26-13

WELL DATA

OPERATOR: Samuel Gary, Jr. & Associates, Inc.

WELL NAME: Woolfolk #26-13

LOCATION: 330' fsl 990' fwl  
SE SW SW Sec. 26 T34S R20W  
Comanche County, Kansas

ELEVATIONS: 1724' GL 1736' KB

FIELD: Extension - Box Ranch Field

ROAD DIRECTIONS: From Protection, S 10.0 mile on gravel road; E 0.2 mile  
on lease road.

SURFACE CASING: 8 5/8" 24# J-55 set at 659' KB.

SPUD DATE: 23 July 1990 6:45 AM

DRILLING COMPLETED: 5 August 1990 6:30 PM

TOTAL DEPTH: 6600' Driller 6591' SLM 6594' Logger

MAXIMUM TEMPERATURE: 148 deg F (Schlumberger)

LAST FORMATION  
PENETRATED: Ordovician Arbuckle

WELL STATUS: Plugged and abandoned.

OPERATOR  
REPRESENTATIVES: Tom Fertal - Geologist  
Dan Hall - Engineer

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Woolfolk #26-13

SUMMARY OF SHOWS AND LITHOLOGY

The following descriptions are interpretive and are tied to the wireline logs. Rig personnel collected unlagged 10-ft samples from 3500' to 6600' rig TD. Sample quality was fair to poor; below 5400' cuttings were recirculated while shaker was bypassed to carry LCM.

Grain size was determined by use of the American Stratigraphic Company comparator. Rock colors were determined from the Rock-Color Chart distributed by the Geological Society of America. 10% HCl was used in acid-reaction tests.

Significant shows are marked in the left margin; lesser indications of hydrocarbons are contained in sample descriptions or are noted as "No show". Cut tests were performed with 1,1,1-trichloroethane. Samples were examined for fluorescence with a Corvascope.

Wellsite geologist's descriptions begin at top of Cherokee.

CHEROKEE / ATOKA                      TOP: 5083'      DATUM: -3347'

5083' - 5192'      Shale; dark gray to grayish black, some medium dark gray tinted olive gray; smooth; firm; slightly calcareous, some noncalcareous; platy to splintery. Limestone; pinkish gray (buff), increasingly light brownish to brownish gray; crypto- and micro- to some very fine crystalline, part chalky; firm to some medium hard; clean, trace brown filmy HCl-insoluble residue downhole to some moderately argillaceous; decreasing trace sparry dolomite in limestone matrix, along edges of chips, and rarely lining small vugs; few fossil fragments including several pore-bearing surfaces; mostly dense and no visible porosity to rare slight vuggy porosity uphole. No sample show.

Shale Gas:                      215 units at 5086'; 150 units at 5125'; 120 units at 5167' (adjusted downhole from mudlog peak at 5150').

MORROW                                      TOP: 5192'      DATUM: -3456'

5192' - 5223'      Shale; greenish gray, light olive and olive gray, medium dark to dark gray--part streaked and mottled; smooth; firm; non- to slightly calcareous; fissile, platy to splintery. No show.

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SUMMARY OF SHOWS AND LITHOLOGY

MISSISSIPPIAN

TOP: 5223' DATUM: -3487'

5223' - 5242'

Limestone; pinkish gray (5 YR 8/1), some white with dispersed black specks and streaks in part; very fine to medium crystalline, granular texture in part; clean; slightly glauconitic; dispersed sand grains in part, few chips limy sandstone without show; trace pyrite; slight to fair intercrystalline and small vug porosity in show lithology, no visible porosity in nonshow lithology. Trace Chert; white to light gray; free and as inclusions in limestone.

Show:

Minor solid to spotty light brown oil stain. 70% displays bright solid bluish yellow fluorescence. Fast moderately streaming bluish yellow cut fluorescence dries to bright yellow halos. Under white light, no cut but minor brownish yellow microdroplets of oil form discontinuous oil ring.

Hot-wire Gas:

	Total	C1	C2	C3	C4	Min/Ft	Mud Log
Before	30	81%	16%	4%	0%	3.1	5216'
During	80	77%	11%	11%	1%	2.8	5218'
During	75	78%	11%	10%	2%	2.4	5220'
Maximum	250	78%	11%	9%	3%	2.6-1.8	5228' - 5236'
During	100	78%	11%	12%	3%	1.9	5240'
After	50	72%	11%	12%	5%	2.1	5245'

5242' - 5426'

Limestone; nearly white to pinkish gray (buff); minor light gray; mostly micro- to very fine crystalline, little fine to lower medium crystalline; commonly chalky, minor part peloidal and oolitic; one well preserved bivalve; mostly no visible porosity. Minor Chert; white to light gray; few chips oolitic. Virtually no sample show; slight gas show of 70 units at 5366'.

5426' - 5460'

Limestone; nearly white to pinkish gray (buff), light gray; higher resistivity and decreased hole size may result from moderately hard cryptocrystalline clean limestone; no visible porosity. No show.

5460' - 5580'

Limestone; less off white, mostly pinkish gray (buff), little light gray; micro- to very fine crystalline, much slightly chalky; firm to little hard and dense; trace fair visible porosity where oolitic and slightly vuggy at 5550' - 5580', otherwise no visible porosity. Trace Chert; white, very light gray. No sample show; gas show of 190 units at

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5536' which correlates to shale shown on logs but not distinguished in samples from caving shale.

Largely caving Shale; medium dark to dark gray to grayish black and olive gray; firm; non- to slightly calcareous; platy to splintery, some subblocky.

5580' - 5654' Limestone; pinkish gray (buff) to light brownish gray, some approaches neutral gray; crypto- to microcrystalline; moderately hard; clean; no visible porosity. Trace Chert; white to light gray; hard. No show.

5654' - 5787' Limestone; pinkish gray (buff), some very light gray; crypto- to microcrystalline, commonly chalky, some very fine to little fine crystalline; faint fine to medium grained texture in part; firm to some moderately hard; clean; trace pyrite; few microfossils; no to slight visible porosity. No show.

OSAGE TOP: 5787' DATUM: -4051'

5787' - 5992' Gradational, interbedded. In upper part, some Limestone; pinkish gray (buff), mottled light to medium gray; micro- to some fine crystalline; firm; clean to slightly argillaceous; slightly glauconitic; partly dolomitic; no to trace visible porosity. Largely Siltstone; light to medium gray; abundant dispersed silt-size to very fine crystals of dolomite; most chips remain intact in acid; partly argillaceous; trace glauconite; some is partly limy; mostly no visible porosity. Minor Shale; medium light to medium gray; silty; dolomitic--dispersed crystals; coarse platy to subblocky. No show.

5992' - 6184' Siltstone; light to medium gray, faint light brownish gray to light olive gray tint common; firm to moderately hard; abundant dispersed silt-size to very fine dolomite crystals; partly argillaceous; little is limy; no to rare glauconite; rare pyrite; trace cherty, white to light gray; subblocky. Less Shale; medium to medium dark gray; silty; dolomitic; platy to blocky. No show.

Note: Lost circulation at 6210' log depth, 6217' rig depth. Reduced sample quality makes the following interpretation questionable.

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SUMMARY OF SHOWS AND LITHOLOGY

6184' - 6224'      Decreased Siltstone; light to medium gray; dolomitic; argillaceous; subblocky. Shale; medium to medium dark gray; firm; silty; non- to slightly calcareous/dolomitic; subblocky, platy. Limestone 6208' - 6216'; light brownish gray; crypto- to microcrystalline; moderately hard; slightly argillaceous; dense; blocky; no visible porosity. Minor Shale; dark gray, grayish to brownish black, little dusky yellowish brown; slightly silty; firm; calcareous/dolomitic; platy, subblocky; part appears organic rich. No show.

VIOLA                                      TOP: 6224'      DATUM: -4488'

6224' - 6242'      Limestone; light brownish to brownish gray; crypto- to very fine crystalline; moderately hard; quite clean to argillaceous; dense; one crinoid; no visible porosity. No show.

VIOLA "B"                                      TOP: 6242'      DATUM: -4506'

6242' - 6248'      Limestone; light gray; fine to medium crystalline; firm to moderately hard; clean; no visible porosity. No show.

6248' - 6263'      Shale; grayish to brownish black, some dusky yellowish brown; firm, some moderately hard; silty; non- to slightly calcareous/dolomitic; platy to blocky. No show.

6263' - 6320'      Much Chert; white to light gray to little medium gray; hard, sharp irregular cuttings; slightly calcareous. Poor recovery of dolomite indicated by logs: Dolomite; light gray; crypto- to very fine crystalline; Alizarin Red staining indicates some calcite; silicified--many chips remain intact in acid; dense; no visible porosity. No show.

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SUMMARY OF SHOWS AND LITHOLOGY

MIDDLE VIOLA MARKER                      TOP: 6320'      DATUM: -4584'

6320' - 6334'                      Dolomite; pinkish gray (buff), trace tinted olive; micro- to very fine crystalline; firm; clean; no to slight intercrystalline porosity. No show.

6334' - 6384'                      Abundant Chert; white to light gray to minor light brownish gray and medium gray; hard, sharp; mostly free, some cuts through dolomite chips. Dolomite; pinkish gray (buff) to light brownish gray; micro- to very fine crystalline; partly limy; moderately hard, some firm; clean to slightly argillaceous; parts siliceous, cherty; no to trace visible intercrystalline porosity. No show.

6384' - 6420'                      Poor recovery in samples of limestone indicated by logs: Limestone; pinkish gray (buff) to light brownish gray; micro- to very fine crystalline; firm; clean; mostly no visible porosity. Much Chert; white to light gray, some light brownish gray; hard. No show.

SIMPSON                                      TOP: 6420'      DATUM: -4684'

6420' - 6480'                      Uphole, mostly Dolomite; light brownish to some brownish gray, pale yellowish brown; micro- to very fine crystalline; firm; clean to slightly argillaceous; no to slight visible porosity. Downhole, Dolomite; pinkish gray (buff) to light brownish gray, some light gray; micro- to very fine to some medium crystalline; firm to moderately hard; clean; trace pyrite; varies from dense and no visible porosity to some good intercrystalline and vug porosity. 6426' - 6431': Shale; dusky yellowish brown; silty; firm; calcareous/dolomitic; subblocky. Some Chert; white to light gray; hard; may be recirculated. No significant show.

6480' - 6488'                      Sandstone; very light gray to pinkish gray (buff); fine to lower medium grained; subrounded to rounded; well sorted; slightly to very dolomitic--grades from sandy dolomite; trace pyrite; slight visible porosity. No show.

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SUMMARY OF SHOWS AND LITHOLOGY

SIMPSON SHALE

TOP: 6488' DATUM: -4752'

6488' - 6539'

Poor recovery in samples: Few chips Shale; grayish green to olive gray; smooth; firm; slightly calcareous; platy to splintery. No show.

SIMPSON SANDSTONE

TOP: 6539' DATUM: -4803'

6539' - 6558'

Sandstone; quartzose; very light gray to some medium light gray; upper fine to lower coarse grained, mostly medium grained; rounded to well rounded; moderately well sorted; unconsolidated in samples; some faceted grains indicate minor quartz overgrowths; broken quartz grains suggest silica cement, rare clusters also contain dolomite cement, trace pyrite; too few clusters to estimate porosity. No sample show; slight gas increase to 55 units.

ARBUCKLE

TOP: 6558' DATUM: -4822'

6558' - 6562'

Logs indicate Sandstone; not distinguished in samples from Simpson Sandstone.

6562' - 6594' TD

Dolomite; light brownish gray to medium light gray; very fine to fine crystalline; moderately hard, quite dense; clean; no visible porosity. No show.

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