

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
September 1999  
Form Must Be Typed

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

ORIGINAL

Operator: License # 6988  
Name: SMITH OIL OPERATIONS  
Address: PO BOX 550  
City/State/Zip: HUTCHINSON, KS 67504-0550  
Purchaser: \_\_\_\_\_  
Operator Contact Person: DALE OHL  
Phone: (620) 663-6622  
Contractor: Name: ABERCROMBIE RTD, INC.  
License: 30684  
Wellsite Geologist: TIM HELLMAN  
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: \_\_\_\_\_  
Well Name: \_\_\_\_\_  
Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_  
 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. \_\_\_\_\_  
12/5/01 12/19/01  
Spud Date or Date Reached TD Completion Date or Recompletion Date

API No. 15 - 033-21283-0000  
County: COMANCHE  
W2 E2 SE Sec. 01 Twp. 31 S. R. 19  East  West  
1250 feet from  N (circle one) Line of Section  
990 feet from  W (circle one) Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
(circle one) NE  SE NW SW  
Lease Name: ROBBINS A Well #: 1  
Field Name: WC  
Producing Formation: \_\_\_\_\_  
Elevation: Ground: 2209 Kelly Bushing: 2215  
Total Depth: 5715 Plug Back Total Depth: \_\_\_\_\_  
Amount of Surface Pipe Set and Cemented at 313 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set \_\_\_\_\_ Feet  
If Alternate II completion, cement circulated from \_\_\_\_\_  
feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan see 6/6/02  
(Data must be collected from the Reserve Pit)  
Chloride content 40,000 ppm Fluid volume 100 bbls  
Dewatering method used VACUUM TRUCK  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: PETER H. BEREN  
Lease Name: V.H. KOEHN License No.: 3051  
Quarter 28 Sec. 29 Twp. 29 S. R. 18  East  West  
County: KIOWA Docket No.: D05,617

04-05-2002

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, 82-3-136 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 temporary abandoned wells.

RECEIVED  
APR 05 2002  
KCC WICHITA

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: Dale R OHL  
Title: CONTROLLER Date: 04/04/02  
Subscribed and sworn to before me this 4th day of APRIL  
2002  
Notary Public: Mary Johnson  
Date Commission Expires: \_\_\_\_\_

MARY JOHNSON  
Notary Public - State of Kansas  
My Appt. Expires 07-15-02

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

X

Operator Name: SMITH OIL OPERATIONS Lease Name: ROBBINS A Well #: 1  
 Sec. 01 Twp. 31 S. R. 19  East  West County: COMANCHE

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Attach Additional Sheets)  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 (Submit Copy)  List All E. Logs Run: DUAL INDUCTION DUAL COMPENSATED SONIC	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name</td> <td style="width:20%;">Top</td> <td style="width:20%;">Datum</td> </tr> <tr> <td>HEEBNER</td> <td>4284</td> <td>-2070</td> </tr> <tr> <td>BROWN LIME</td> <td>4458</td> <td>-2244</td> </tr> <tr> <td>LANSING</td> <td>4480</td> <td>-2266</td> </tr> <tr> <td>ALTAMONT</td> <td>4952</td> <td>-2738</td> </tr> <tr> <td>PAWNEE</td> <td>4998</td> <td>-2784</td> </tr> <tr> <td>FT. SCOTT</td> <td>5034</td> <td>-2820</td> </tr> <tr> <td>CHEROKEE</td> <td>5042</td> <td>-2828</td> </tr> <tr> <td>MISSISSIPPI</td> <td>5105</td> <td>-2891</td> </tr> <tr> <td>VIOLA</td> <td>5620</td> <td>-3406</td> </tr> </table>	Name	Top	Datum	HEEBNER	4284	-2070	BROWN LIME	4458	-2244	LANSING	4480	-2266	ALTAMONT	4952	-2738	PAWNEE	4998	-2784	FT. SCOTT	5034	-2820	CHEROKEE	5042	-2828	MISSISSIPPI	5105	-2891	VIOLA	5620	-3406
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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	17 1/2"	13 3/8"	48#	313.5'	A SERVICE LIGHT	175	3% CC 1/4# CELLOFLAKE
					COMMON	150	2% CC 1/4# CELLOFLAKE

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
___ Perforate	950	60/40 POZ	50	6% GEL, 1/4# FLOSEAL
___ Protect Casing	350	60/40 POZ	50	6% GEL, 1/4# FLOSEAL
___ Plug Back TD	40	60/40 POZ	10	6% GEL, 1/4# FLOSEAL
___ Plug Off Zone				
X D&A	R&M HOLES	60/40 POZ	25	6% GEL, 1/4# FLOSEAL

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
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Date of First, Resumed Production, SWD or Enhr.	Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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Disposition of Gas <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <small>(If vented, Sumit ACO-18.)</small>	METHOD OF COMPLETION <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify) _____
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ORIGINAL

SMITH OIL OPERATIONS  
ROBBINS A #1  
CW2E2SE4 - 01-31S-19W  
COMANCHE CO., KS  
API # - 15-033-21283-0000

DST #1

4997 - 5025

30 - 30 - 30 - 30

1<sup>ST</sup> OPENING - 1/2" BLOW

2<sup>ND</sup> OPENING - 1/2" BLOW - DECREASING

RECOVERED: 10' DRILLING MUD W/ TRACE OF GIP

IHP: 2517#

FHP: 2464#

IFP: 20/21#

FFP: 19/22#

ISIP: 38#

FSIP: 35#

TEMP: 112 F

DST #2

5102 - 5155

45 - 60 - 60 - 120

1<sup>ST</sup> OPENING - 26" - GTS

35" - 23 MCFG

45" - 24.4 "

2<sup>ND</sup> OPENING - 10" - 27.4 "

20" - 27.4 "

30" - 26 "

40" - 26 "

50" - 26 "

60" - 24.4 "

RECOVERED: 120' SGCM

IHP: 2550#

FHP: 2451#

IFP: 33/50#

FFP: 35/83#

ISIP: 1546#

FSIP: 1504#

TEMP: 116 F

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APR 05 2002

KCC WICHITA

# TREATMENT REPORT

04135



Customer ID	Date	
Customer SMITH OIL OPER	12-6-01	
Lease Robbent's A	Lease No.	Well #
Field Order # 4337	Station PRATT	Casing 13 3/8
		Depth 317
	County Comanche	State KS

Type Job: 13 3/8 Surface ✓ New Well Formation: Legal Description: 1-315-1961

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 13 3/8	Tubing Size	Shots/Ft		Acid 175 SKS A-SEMI		RATE	PRESS	ISIP
Depth 317	Depth	From	To	Pre-Pad 13.3 #/gal 1.70 ft <sup>3</sup>	Max			5 Min.
Volume	Volume	From	To	Pad 150 SKS Common	Min			10 Min.
Max Press	Max Press	From	To	Frac 15.6 #/gal 1.22 ft <sup>3</sup>	Avg			15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used			Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume			Total Load

Customer Representative: BILL CRAIG Station Manager: D. A. TRY Treater: T. SEBA

Service Units	108	23	31	71
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Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
9:00	21.00				Called out
11:30	24.20				RECEIVED MAY 31 2004 KCC WICHITA
12:10					START CSG
2:05					CSG ON BOTTOM
2:10					Hook up TO CSG
2:15					BREAK CIRC U/ESG
2:39	125			5	START PUMPING H <sub>2</sub> O
			10		START MIX LEAD CMT @ 13.3 #/gal
			52.96		START MIX TAIL CMT @ 15.6 #/gal
			85.57		FINISHED MIX
				5	START DISP
3:05					CLOSE SHUT DOWN
3:07			47.5		CLOSE VALVE ON CSG
					JOB COMPLETE THANKS TODD



# ALLIED CEMENTING CO., INC.

09001

Federal Tax I.D.# ~~000000000~~

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

SERVICE POINT:  
Medicine Lodge KS

DATE 12-17-01	SEC. 1- <del>2</del>	TWP. 31c	RANGE 19W	CALLED OUT 10:30 pm	ON LOCATION 1:00 pm	JOB START 2:00 am	JOB FINISH 4:00 am
LEASER <del>RATON</del> #1	WELL #A#1	LOCATION Coldwater N. to Co. line			COUNTY Comanche	STATE KS	
OLD OR <u>NEW</u> (Circle one)			West into Loc				

CONTRACTOR Abercrombie  
 TYPE OF JOB Rotary Plug  
 HOLE SIZE 7 7/8 T.D. 950'  
 CASING SIZE 4 1/2 DEPTH 950'  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG.  
 PERFS.  
 DISPLACEMENT fresh H<sub>2</sub>O mud

OWNER Smith oil company  
 CEMENT  
 AMOUNT ORDERED 135 sk (20' 40' 16' 1/4" #10 Seal)

**EQUIPMENT**  
 PUMP TRUCK CEMENTER Mike Rucker  
 # 360-265 HELPER David West  
 BULK TRUCK  
 # 364 DRIVER Eric Brewer  
 BULK TRUCK  
 # DRIVER

COMMON @  
 POZMIX @  
 GEL @  
 CHLORIDE @  
 @  
 @  
 @  
 @  
 @  
 HANDLING @  
 MILEAGE

RECEIVED  
 MAY 31 2003

TOTAL

**REMARKS:**

**SERVICE**

50 sk - 950  
50 sk - 350  
10 sk - 40  
15 sk - Patch hole

KCC WICHITA  
 DEPTH OF JOB 950  
 PUMP TRUCK CHARGE  
 EXTRA FOOTAGE @  
 MILEAGE @  
 PLUG @  
 @

provided, and ALLIED shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.  
 2. More specifically:  
 (A) Nothing in this contract shall be construed as a warranty by ALLIED of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.  
 (B) Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by ALLIED or any interpretation of tests, meter readings, chart information, analysis of research, or recommendations made by ALLIED, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of ALLIED or its employees in the preparation or furnishing of such facts, information or data.  
 (C) Work done by ALLIED shall be under the direct supervision and control of the CUSTOMER or his agent and ALLIED will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.

## GENERAL TERMS AND CONDITIONS

**DEFINITIONS:** In these terms and conditions, "Allied" shall mean Allied Cementing Co., Inc., and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract, "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

—**TERMS:** Unless satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "ALLIED" before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, "CUSTOMER" agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing, in no event shall this Contract provide for interest exceeding the maximum rate of interest that "CUSTOMER" may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the "CUSTOMER" or at the option of "ALLIED," refunded directly to "CUSTOMER." For purposes of this paragraph, ALLIED and CUSTOMER agree that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

—**ATTORNEY FEES:** In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the terms of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limited to, a reasonable sum as and for attorney's fees.

—**PRICES AND TAXES:** All merchandise listed in "ALLIED'S" current price schedule are F.O.B. ALLIED'S local station and are subject to change without notice. All prices are exclusive of any federal, state, local, or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by ALLIED shall be added to the quoted prices charged to CUSTOMER.

—**TOWING CHARGES:** ALLIED will make a reasonable attempt to get to and from each job site using its own equipment. Should ALLIED be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by ALLIED, will be charged to and paid by CUSTOMER.

—**PREPARATION CHARGES:** If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay ALLIED for the expenses incurred by ALLIED as a result of the cancellation.

—**DEADHAUL CHARGES:** Unless otherwise specified on the front of this Contract, a deadhaul charge as set forth in ALLIED'S current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

—**SERVICE CONDITIONS AND LIABILITIES:** 1. ALLIED carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond ALLIED'S control, ALLIED shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless ALLIED, its officers, agents and employees, from and against any and all claims or suits for:

(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with ALLIED'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of ALLIED or its employees.

2. With respect to any of ALLIED'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to ALLIED at the landing, CUSTOMER shall either recover the lost item without cost to ALLIED or reimburse ALLIED the current replacement cost of the item unless the loss or damage results from the sole negligence of ALLIED or its employees.

3. ALLIED does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

**WARRANTIES:** 1. ALLIED warrants all merchandise manufactured or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. ALLIED'S obligation under this warranty is expressly limited to repair, replacement, or allowance for credit, at its option, for any merchandise which is determined by ALLIED to be defective. THIS IS THE SOLE WARRANTY OF ALLIED AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESS OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, CUSTOMER'S sole and only

**ABERCROMBIE RTD, INC.**

**150 N. MAIN, SUITE 801**

**WICHITA, KANSAS 67202**

**(316)262-1841**

RECEIVED

MAY 31 2002

KCC WICHITA

**ROBBINS 'A' #1**

1250' FSL & 1020' FEL

Section 1-31S-19W

Comanche County, KS

OPERATOR: Smith Oil Operations

CONTRACTOR: Abercrombie RTD, Inc.

RIG #:8

JOB #: 2001821

Smith Oil Operations

P. O. Box 550

Hutchinson, KS 67504-0550

(620) 663-6622

ELEVATION:

**API #15-033-21283-0000**

- 12-04-01 MIRU
- 12-05-01 Finish rigging up, preparing to spud.
- 12-06-01 315' - Running casing. Drilled 315' - 24 hrs., drilling 5 3/4 hrs., trip 1 1/2 hrs., circulate 1/2 hr., run casing 2 1/2 hrs., RU 8 hrs., mixing mud & pumping wtr. 3 hrs., p/u & circ. collars 2 1/4 hrs., rathole 1/2 hr. Bit #1, 17 1/2" Smith DS, in @ 0', out @ 315'. Cut 315' - 5 3/4 hrs. Mud weight 9.2, Viscosity 40. KCC Contact - Steve Middleton - Dodge City 3:00 p.m. 12-05-01. Spud @ 6:30 p.m. 12-05-01. Bit weight 20,000, 400# pump, rot 110, SPM 55.
- 12-07-01 525' - Drilling. Drilled 210' - 24 hrs., drilling 6 hrs., trip 2 1/4 hrs., circulate 1 hr., run casing & cement 3 1/4 hrs., p/u collars 1 hr., lay down 13 3/8" pipe 1 1/2 hrs., drill cement 1 hr., WOC 8 hrs. Bit #2, 12 1/4" Veral L117, SN: 172905, in @ 315'. Cut 210' - 6 hrs. Mud weight 9.3, Viscosity 34, LCM 6#. Daily Mud \$986.00, Accum. Mud \$986.00. Mud mix: gel 60 sks., soda ash 2 sks., lime 5 sks., hulls 53 sks. Bit weight 20,000, 600# pump, rot 110, SPM 60. Ran 7 jts. new 13 3/8" 48# casing, tally 306.57' with threads off, set @ 313.50' with landing jt. Cemented w/175 sks. A Service Light, 3% cc, 1/4# celloflake and 150 sks. Common, 2% cc, 1/4# celloflake. Plug down @ 3:15 p.m. 12-06-01. Job by Acid Services.
- 12-08-01 1501' - Drilling. Drilled 80' - 24 hrs., drilling 13 3/4 hrs., trip 3 1/4 hrs., rig check 3/4 hr., jet pit 1 hr., circulate 1/4 hr., wireline 1/4 hr., repairs 1/4 hr., BOP 4 1/2 hrs. Bit #2, 12 1/4" Veral L117, SN: 174905, in @ 315', out @ 701'. Cut 386' - 9 3/4 hrs. Bit #3, 7 7/8" NT M11C, SN: 13079, in @ 701'. Cut 800' - 9 1/2 hrs. Mud weight 9.4, Viscosity 30, LCM 2#. Accum. Mud \$986.70. Mud mix: no count. Bit weight 25-30,000, 1000# pump, rot 75-95, SPM 52.
- 12-09-01 2585' - Drilling. Drilled 1080' - 24 hrs., drilling 21 1/4 hrs., rig check 1/2 hr., jet pit 1 hr., repairs 1 1/4 hrs. Bit #3, 7 7/8" NT, M11C, SN: 13079, in @ 701'. Cut 1884' - 30 3/4 hrs. Mud weight 9.4, Viscosity 28, PVYP 1/2, Gels 1/2, pH 7.0, Chlorides 82,000, Solids 4.1%, tr/sand, LCM 1#. Daily Mud \$812.00, Accum. Mud \$1,798.90. Mud mix: gel 53 sks., soda ash 1 sk., lime 4 sks., hulls 45 sks. Deviation - 1° @ 701'. Bit weight 25-35,000, 1000# pump, rot 75-90, SPM 56.
- 12-10-01 3058' - Work on mud pump. Drilled 460' - 24 hrs., drilling 14 1/2 hrs., trip 1 1/2 hrs., jet pit 1 hr., repairs 3 hrs., WO parts 3 hrs., displace 1 hr. Bit #3, 7 7/8" NT, M11C, SN: 13079, in @ 701'. Cut 2357' - 45 1/4 hrs. Mud weight 8.8, Viscosity 40, PVYP 8/22, pH 7.0, Chlorides 13,000, Solids 2.0%, tr/sand, LCM 1#. Daily Mud \$936.70, Accum. Mud \$2,762.780. Mud mix: gel 121 sks., hulls 10 sks. Bit weight 30-35,000, 1000# pump, rot 80, SPM 59.



# ABERCROMBIE RTD, INC.

150 N. MAIN, SUITE 801  
WICHITA, KANSAS 67202  
(316)262-1841

RECEIVED  
MAY 31 2000  
KCC WICHITA

## ROBBINS 'A' #1

1250' FSL & 1020' FEL  
Section 1-31S-19W  
Comanche County, KS

OPERATOR: Smith Oil Operations  
CONTRACTOR: Abercrombie RTD, Inc.  
RIG #:8  
JOB #: 2001821

Smith Oil Operations  
P. O. Box 550  
Hutchinson, KS 67504-0550  
(620) 663-6622

ELEVATION:

API #15-033-21283-0000

- 12-11-01 3480' - Drilling. Drilled 422' - 24 hrs., drilling 17 1/2 hrs., trip 3 1/4 hrs., jet pit 1/2 hr., repairs 3 3/4 hrs. Bit #3, 7 7/8" NT M11C, SN: 13079, in @ 701'. Cut 2779' - 62 3/4 hrs. Mud weight 9.1, Viscosity 35, PV/YP 4/15, Gels 6/10, pH 7.0, Chlorides 24,000, Solids 4.2%, tr/sand, LCM 1#. Daily Mud \$871.14, Accum. Mud \$3,633.74. Mud mix: gel 40 sks., caustic 2 sks., soda ash 6 sks., lignite 2 sks., drispac 1 sk., hulls 10 sks. Bit weight 35,000, 1000# pump, rot 75-80, SPM 52-54. Page 2
- 12-12-01 3995' - Drilling. Drilled 515' - 24 hrs., drilling 22 1/4 hrs., rig check 1/2 hr., jet pit 1/2 hr., displace hole 3/4 hrs. Bit #3, 7 7/8" NT M11C, SN: 13079, in @ 701'. Cut 3294' - 84 3/4 hrs. Mud weight 9.4, Viscosity 34, PV/YP 5/13, Gels 8/15, pH 7.0, Chlorides 26,000, Solids 7.7%, tr/sand, LCM 1/2#. Daily Mud \$1,996.49, Accum. Mud \$5,637.38. Mud mix: gel 175 sks., caustic 4 sks., soda ash 8 sks., lignite 4 sks., drispac 1 sks., hulls 11 sks. Bit weight 35,000, 1000# pump, rot 80, SPM 54.
- 12-13-01 4423' - Drilling. Drilled 428' - 24 hrs., drilling 23 1/4 hrs., rig check 1/4 hr., jet pit 1/4 hr., repairs 1/4 hr. Bit #3, 7 7/8" NT 11CM, SN: 13079, in @ 701'. Cut 3722' - 108 hrs. Mud weight 8.8, Viscosity 54, PV/YP 14/18, Gels 10/27, Water loss 8.0, pH 10.5, Chlorides 4,000, Solids 3.3%, tr/sand, LCM 1/2#. Daily Mud \$1,318.84, Accum. Mud \$6,956.22. Mud mix: gel 73 sks., caustic 5 sks., soda ash 6 sks., lignite 5 sks., drispac 1 sk., hulls 14 sks. Bit weight 38,000, 1000# pump, rot 75, SPM 54.
- 12-14-01 4685' - Drilling. Drilled 258' - 24 hrs., drilling 17 hrs., trip 5 1/2 hrs., rig check 1/2 hr., circulate @ 4670' 1/2 hr., repairs 1/2 hr. Bit #3, 7 7/8" NT M11C, SN: 13079, in @ 701', out @ 4607' (junk). Cut 3906' - 119 1/4 hrs. Bit #4, 7 7/8" Veral Re-run 28CH, SN: 176995, in @ 4607'. Cut 78' - 5 3/4 hrs. Mud weight 9.1, Viscosity 54, PV/YP 14/23, Gels 27/40, Water loss 10.4, pH 10.0, Chlorides 6m,000, Solids 5.3%, tr/sand, tr/LCM. Daily Mud \$136.60, Accum. Mud \$7,092.82. Pit information: calcium 40. Mud mix: caustic 3 sks., lignite 1 sk. Deviation - 1/2° @ 4607'. Bit weight 35-38,000, 1000# pump, rot 75-80, SPM 54.
- 12-15-01 4985' - Drilling. Drilled 300' - 24 hrs., drilling 22 hrs., rig check 1/4 hr., jet pit 3/4 hr., circulate @ 4970' 1 hr. Bit #4, 7 7/8" Veral 28CH, SN: 176995, in @ 4607', out @ 4985'. Cut 378' - 27 3/4 hrs. Mud weight 9.2, Viscosity 45, PV/YP 10/18, Gels 15/38, Water loss 14.0, pH 9.5, Chlorides 7,000, Solids 6.7%, tr/sand, LCM 1/4#. Daily Mud \$641.55, Accum. Mud \$7,734.37. Pit information: calcium 70. Mud mix: gel 56 sks., caustic 3 sks., lignite 1 sk., hulls 11 sks. Bit weight 38,000, 1000# pump, rot 80, SPM 54.
- 12-16-01 5060' - Drilling. Drilled 75' - 24 hrs., drilling 6 3/4 hrs., trip 5 3/4 hrs., circulate 3 hrs., wireline 1/4 hr., testing 7 hrs., test tool 1 hrs., repairs 1/4 hr. Bit #4, 7 7/8" Veral 28CH, SN: 176995, in @ 4607', out @ 5025'. Cut 418' - 30 1/2 hrs. Bit #5, 7 7/8" W-Mc 43CF, SN: 164679, in @ 5025'. Cut 35' - 4 hrs. Mud weight 9.1, Viscosity 55, PV/YP 15/20, Gels 15/38, Water loss 8.8, pH 10.0, Chlorides 4,500, Solids 5.4%, tr/sand, LCM 1#. Daily Mud \$1,787.42, Accum. Mud \$9,521.79. Pit information: calcium 40. Mud mix: gel 51 sks., caustic 6 sks., soda ash 6 sks., lignite 5 sks., drispac 3 sks., hulls 15 sks. Deviation - 3/4° @ 5025'. Bit weight 35-38,000, 1000# pump, rot 75-80, SPM 53.

# ABERCROMBIE RTD, INC.

150 N. MAIN, SUITE 801  
WICHITA, KANSAS 67202  
(316)262-1841

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## ROBBINS 'A' #1

1250' FSL & 1020' FEL  
Section 1-31S-19W  
Comanche County, KS

OPERATOR: Smith Oil Operations  
CONTRACTOR: Abercrombie RTD, Inc.  
RIG #: 8  
JOB #: 2001821

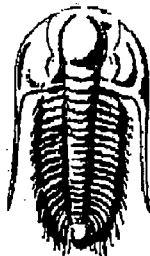
Smith Oil Operations  
P. O. Box 550  
Hutchinson, KS 67504-0550  
(620) 663-6622

ELEVATION:

API #15-033-21283-0000

- 12-17-01 5155' - TIH after DST #2 - Plugged bit. Drilled 95' - 24 hrs., drilling 6 ½ hrs., rig check ¼ hr., circulate 1 ¾ hrs., testing 15 ½ hrs. Bit #5, 7 7/8" W-Mc 43CF, SN: 164679, in @ 5025'. Cut 130' - 10 ½ hrs. Mud weight 9.0, Viscosity 75, PV/YP 15/32, Gels 25/73, Water loss 9.6, pH 9.5, Chlorides 6,000, Solids 4.7%, tr/sand, LCM 1#. Accum. Mud \$ 9,521.79. Pit information: calcium 40. Bit weight 40,000, 1000# pump, rot 80, SPM 54. Page 3
- 12-18-01 5414' - Drilling. Drilled 259' - 24 hrs., drilling 16 ½ hrs., trip 2 ½ hrs., rig check ½ hr., circulate 2 ½ hrs., plugged bit 2 hrs. Bit #5, 7 7/8" W-Mc Rerun 43CF, SN: 164679, in @ 5025'. Cut 389' - 24 hrs. Mud weight 9.3, Viscosity 51, PV/YP 14/17, Gels 14/38, Water loss 8.0, pH 10.0, Chlorides 6,000, Solids 6.8%, tr/sand, LCM ½#. Daily Mud \$124.65, Accum. Mud \$9,646.44. Pit information: calcium 80. Mud mix: caustic 2 sks., lignite 2 sks., hulls 1 sk. Bit weight 40,000, 1000# pump, rot 70-75, SPM 54.
- 12-19-01 5700' - Drilling. Drilled 286' - 24 hrs., drilling 20 ¼ hrs., rig check ½ hr., circulate 3 hrs., repairs ¼ hr. Bit #5, 7 7/8" W-Mc 43CF, SN: 164679, in @ 5025'. Cut 675' - 46 ¼ hrs. Mud weight 9.2, Viscosity 49, PV/YP 13/17, Gels 9/25, Water loss 9.6, pH 9.0, Chlorides 6,000, Solids 6.1%, tr/sand, LCM 2#. Daily Mud \$1,501.32, Accum. Mud \$11,147.76. Pit information: calcium 40. Mud mix: gel 40 sks., caustic 5 sks., soda ash 4 sks., lignite 9 sks., drispac 3 sks., hulls 80 sks. Bit weight 40,000, 1000# pump, rot 75, SPM 54.
- 12-20-01 5715' - Tearing down. Drilled 15' - 24 hrs., drilling ¾ hr., trip 6 ¼ hrs., circulate 2 hrs., wireline ¼ hr., logging 4 ¾ hrs., cellar work 3 hrs., laydown pipe 4 ½ hrs., plugging 2 ½ hrs. Bit #5, 7 7/8" W-Mc 43CF, SN: 164679, in @ 5025', out @ 5715'. Cut 690' - 47 hrs. Mud weight 9.2, Viscosity 52, PV/YP 16/18, Gels 9/28, Water loss 8.0, pH 10.0, Chlorides 5,000, Solids 5.4%, tr/sand, LCM 2#. Reached TD @ 7:45 a.m. 12-19-01. Accum. Mud \$13,465.74(revised). Pit information: chlorides 40,000, calcium 420, volume 1800. Bit weight 40,000, 1000# pump, rot 75, SPM 54. 1<sup>st</sup> plug @ 950' w/50 sks., 2<sup>nd</sup> plug @ 350' w/50 sks., 3<sup>rd</sup> plug @ 40' w/10 sks., 15 sks. in rathole, 10 sks. in mousehole. Total 135 sks. 60/40 poz, 6% gel, 1/4# floseal. Plug down @ 4:00 a.m. 12-20-01. Job by Allied Cementing. State Plugger - Mike Maiers.

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**TRILOBITE  
TESTING, INC.**

### DRILL STEM TEST REPORT

Prepared For: **Smith Oil Operations**

P.O.Box 550  
Hutchinson Ks. 67504

ATTN: Tim Hellman

**1-31s-19w Comanche K**

**Robbins A#1**

Start Date: 2001.12.15 @ 15:22:21

End Date: 2001.12.15 @ 22:45:21

Job Ticket #: 15753                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2001.12.17 @ 08:56:58 Page 1

Smith Oil Operations


Robbins A#1

1-31s-19w Comanche K

DST # 1

Pawnee

2001.12.15

 <b>TRILOBITE TESTING, INC.</b>	<b>DRILL STEM TEST REPORT</b>	
	Smith Oil Operations P.O.Box 550 Hutchinson Ks. 67504 ATTN: Tim Hellman	<b>Robbins A#1</b> <b>1-31s-19w Comanche K</b> Job Ticket: 15753      DST#: 1 Test Start: 2001.12.15 @ 15:22:21

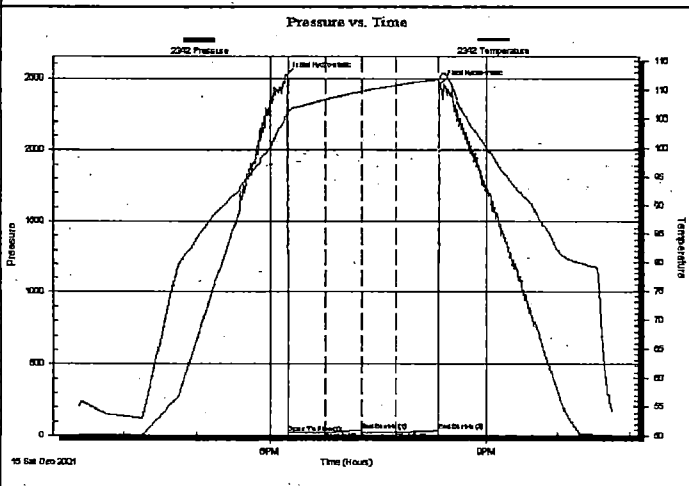
**GENERAL INFORMATION:**

Formation: <b>Pawnee</b>	Test Type: <b>Conventional Bottom Hole</b>
Deviated: <b>No Whipstock</b> ft (KB)	Tester: <b>Gary Pevoteaux</b>
Time Tool Opened: <b>18:14:51</b>	Unit No: <b>13</b>
Time Test Ended: <b>22:45:21</b>	Reference Elevations: <b>2214.00 ft (KB)</b>
Interval: <b>4997.00 ft (KB) To 5025.00 ft (KB) (TVD)</b>	<b>2209.00 ft (CF)</b>
Total Depth: <b>5025.00 ft (KB) (TVD)</b>	KB to GR/CF: <b>5.00 ft</b>
Hole Diameter: <b>7.88 inches</b> Hole Condition: <b>Poor</b>	

<b>Serial #: 2342</b> <b>Inside</b>	Capacity: <b>7000.00 psig</b>
Press@RunDepth: <b>22.06 psig @ 4998.00 ft (KB)</b>	Last Calib.: <b>2001.12.15</b>
Start Date: <b>2001.12.15</b> End Date: <b>2001.12.15</b>	Time On Btm: <b>2001.12.15 @ 18:13:21</b>
Start Time: <b>15:22:22</b> End Time: <b>22:45:21</b>	Time Off Btm: <b>2001.12.15 @ 20:20:51</b>

TEST COMMENT: IF:Weak blow . 1/2".  
 IS:No blow .  
 FF:Weak blow . 1/2" decreasing.  
 FS:No blow .

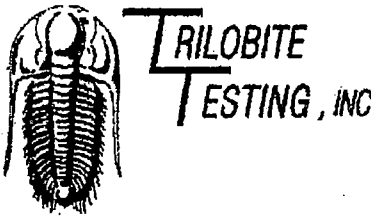
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 KCC WICHITA




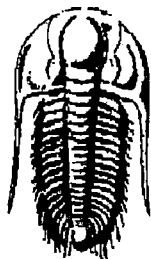
PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2516.74	105.46	Initial Hydro-static
2	19.55	106.02	Open To Flow (1)
32	20.64	108.31	Shut-in(1)
63	38.09	109.81	End Shut-in(1)
63	19.13	109.83	Open To Flow (2)
91	22.06	110.89	Shut-in(2)
127	34.91	111.94	End Shut-in(2)
128	2464.03	112.12	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
10.00	Drig.mud w ith a trace of gas in pipe.	0.05

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

	<b>DRILL STEM TEST REPORT</b>		<b>TOOL DIAGRAM</b>
	Smith Oil Operations P.O.Box 550 Hutchinson Ks. 67504  ATTN: Tim Hellman	<b>Robbins A#1</b> <b>1-31s-19w Comanche K</b> Job Ticket: 15753      DST#: 1 Test Start: 2001.12.15 @ 15:22:21	
<b>Tool Information</b>			
Drill Pipe: Length: 4618.00 ft	Diameter: 3.80 inches	Volume: 64.78 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe: Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar: Length: 370.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 98000.00 lb
	Total Volume: 66.60 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB: 13.00 ft			String Weight: Initial 86000.00 lb
Depth to Top Packer: 4997.00 ft			Final 85000.00 lb
Depth to Bottom Packer: ft			
Interval betw een Packers: 28.00 ft			
Tool Length: 50.00 ft			
Number of Packers: 2	Diameter: 6.75 inches		
Tool Comments:			
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<b>Tool Description</b>			
<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>
<b>Accum. Lengths</b>			
C.O. Sub	1.00		4976.00
S.L Tool	5.00		4981.00
HMV	5.00		4986.00
Safety Joint	2.00		4988.00
Packer	4.00		4992.00
			22.00
			Bottom Of Top Packer
Packer	5.00		4997.00
Stubb	1.00		4998.00
Recorder	0.00	2342	Inside 4998.00
Perforations	22.00		5020.00
Recorder	0.00	10248	Outside 5020.00
Bullnose	5.00		5025.00
			28.00
			Bottom Packers & Anchor
<b>Total Tool Length: 50.00</b>			

 <p style="font-size: 2em; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC.</p>	DRILL STEM TEST REPORT		FLUID SUMMARY
	Smith Oil Operations	Robbins A#1	
	P.O.Box 550 Hutchinson Ks. 67504	1-31s-19w Comanche K	
ATTN: Tim Hellman	Job Ticket: 15753	DST#: 1	
	Test Start: 2001.12.15 @ 15:22:21		
Mud and Cushion Information			
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	5000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.20 inches			
Recovery Information			
Recovery Table			
Length ft	Description	Volume bbl	
10.00	Drig.mud w ith a trace of gas in pipe.	0.049	
Total Length: 10.00 ft		Total Volume: 0.049 bbl	
Num Fluid Samples: 0		Num Gas Bombs: 0	
Laboratory Name:		Laboratory Location:	
Recovery Comments:			
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p style="margin: 0; font-weight: bold; font-size: 1.2em;">RECEIVED</p> <p style="margin: 0; font-weight: bold; font-size: 1.2em;">MAY 31 2002</p> <p style="margin: 0; font-weight: bold; font-size: 1.2em;">KCC WICHITA</p> </div>			



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **Smith Oil Operations**

P.O.Box 550  
Hutchinson Ks. 67504

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ATTN: Tim Hellman

**1-31s-19w Comanche K**

**Robbins A#1**

Start Date: 2001.12.16 @ 17:56:56

End Date: 2001.12.17 @ 04:33:56

Job Ticket #: 15754 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Smith Oil Operations


Robbins A#1

1-31s-19w Comanche K

DST # 2

Miss.

2001.12.16

 <p style="font-size: 2em; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC.</p>	DRILL STEM TEST REPORT	
	Smith Oil Operations  P.O.Box 550 Hutchinson Ks. 67504  ATTN: Tim Helman	<b>Robbins A#1</b>  <b>1-31s-19w Comanche K</b> Job Ticket: 15754 <b>DST#: 2</b>  Test Start: 2001.12.16 @ 17:56:56

**GENERAL INFORMATION:**

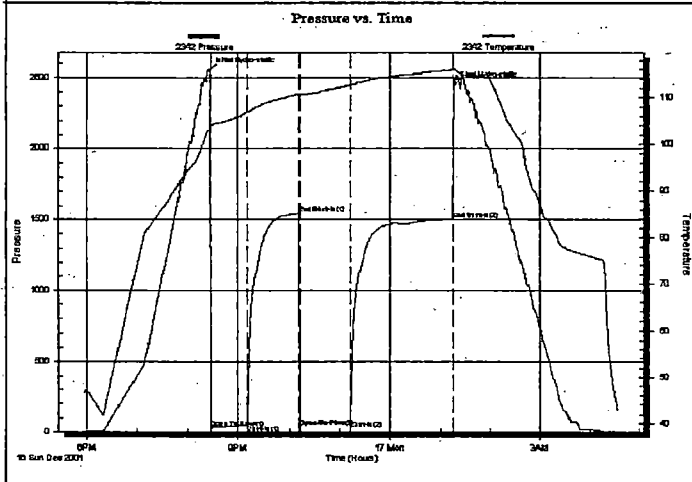
Formation: <b>Miss.</b> Deviated: <b>No Whipstock</b> ft (KB) Time Tool Opened: 20:27:11 Time Test Ended: 04:33:56  Interval: <b>5102.00 ft (KB) To 5155.00 ft (KB) (TVD)</b> Total Depth: <b>5155.00 ft (KB) (TVD)</b> Hole Diameter: <b>7.88 inches</b> Hole Condition: <b>Poor</b>	Test Type: <b>Conventional Bottom Hole</b> Tester: <b>Gary Pavoteaux</b> Unit No: <b>13</b>  Reference Elevations: <b>2214.00 ft (KB)</b> <b>2209.00 ft (CF)</b> KB to GR/CF: <b>5.00 ft</b>
--	--

**Serial #: 2342      Inside**

Press@RunDepth: <b>83.33 psig @ 5103.00 ft (KB)</b>	Capacity: <b>7000.00 psig</b>
Start Date: <b>2001.12.16</b> End Date: <b>2001.12.17</b>	Last Calib.: <b>2001.12.17</b>
Start Time: <b>17:56:57</b> End Time: <b>04:33:56</b>	Time On Btm: <b>2001.12.16 @ 20:25:41</b>
	Time Off Btm: <b>2001.12.17 @ 01:16:26</b>

TEST COMMENT: IF: Strong blow . B.O.B. in 20 secs. (see gas volume report)  
 IS: Fair blow . 3 - 9"  
 FF: Strong blow . (see gas volume report)  
 FS: Fair to strong blow .

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Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2550.05	103.18	Initial Hydro-static
2	32.81	103.74	Open To Flow (1)
46	50.01	106.74	Shut-In(1)
106	1546.45	110.62	End Shut-In(1)
107	35.16	110.70	Open To Flow (2)
167	83.33	112.66	Shut-In(2)
289	1503.81	115.93	End Shut-In(2)
291	2450.68	115.99	Final Hydro-static

Length (ft)	Description	Volume (bbl)
120.00	SGCM	0.59
0.00	Gas in all fluid free pipe.	0.00

	Choke (Inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	1.00	24.43
Last Gas Rate	0.25	3.00	27.60
Max. Gas Rate	0.25	4.00	29.19



 <p style="font-size: 2em; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC</p>	DRILL STEM TEST REPORT		TOOL DIAGRAM																																																																																																																	
	Smith Oil Operations P.O.Box 550 Hutchinson Ks. 67504 ATTN: Tim Hellman	<b>Robbins A#1</b> <b>1-31s-19w Comanche K</b> Job Ticket: 15754      DST#: 2 Test Start: 2001.12.16 @ 17:56:56																																																																																																																		
<b>Tool Information</b>																																																																																																																				
Drill Pipe:	Length: 4713.00 ft	Diameter: 3.80 inches	Volume: 66.11 bbl	Tool Weight: 2100.00 lb																																																																																																																
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Depth to Bottom Packer:	ft																																																																																																																			
Interval between Packers:	53.00 ft																																																																																																																			
Tool Length:	75.00 ft																																																																																																																			
Number of Packers:	2	Diameter:	6.75 inches																																																																																																																	
Tool Comments:																																																																																																																				
RECEIVED MAY 31 2002 KCC WICHITA																																																																																																																				
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Tool Description</th> <th style="width:10%;">Length (ft)</th> <th style="width:10%;">Serial No.</th> <th style="width:10%;">Position</th> <th style="width:10%;">Depth (ft)</th> <th style="width:10%;">Accum. Lengths</th> <th style="width:20%;"></th> </tr> </thead> <tbody> <tr> <td>C.O. Sub</td> <td>1.00</td> <td></td> <td></td> <td>5081.00</td> <td></td> <td></td> </tr> <tr> <td>S.I. Tool</td> <td>5.00</td> <td></td> <td></td> <td>5086.00</td> <td></td> <td></td> </tr> <tr> <td>HMV</td> <td>5.00</td> <td></td> <td></td> <td>5091.00</td> <td></td> <td></td> </tr> <tr> <td>Safety Joint</td> <td>2.00</td> <td></td> <td></td> <td>5093.00</td> <td></td> <td></td> </tr> <tr> <td>Packer</td> <td>4.00</td> <td></td> <td></td> <td>5097.00</td> <td>22.00</td> <td>Bottom Of Top Packer</td> </tr> <tr> <td>Packer</td> <td>5.00</td> <td></td> <td></td> <td>5102.00</td> <td></td> <td></td> </tr> <tr> <td>Stubb</td> <td>1.00</td> <td></td> <td></td> <td>5103.00</td> <td></td> <td></td> </tr> <tr> <td>Recorder</td> <td>0.00</td> <td>2342</td> <td>inside</td> <td>5103.00</td> <td></td> <td></td> </tr> <tr> <td>Perforations</td> <td>13.00</td> <td></td> <td></td> <td>5116.00</td> <td></td> <td></td> </tr> <tr> <td>C.O. Sub</td> <td>1.00</td> <td></td> <td></td> <td>5117.00</td> <td></td> <td></td> </tr> <tr> <td>Blank Spacing</td> <td>32.00</td> <td></td> <td></td> <td>5149.00</td> <td></td> <td></td> </tr> <tr> <td>C.O. Sub</td> <td>1.00</td> <td></td> <td></td> <td>5150.00</td> <td></td> <td></td> </tr> <tr> <td>Recorder</td> <td>0.00</td> <td>10248</td> <td>Outside</td> <td>5150.00</td> <td></td> <td></td> </tr> <tr> <td>Bullnose</td> <td>5.00</td> <td></td> <td></td> <td>5155.00</td> <td>53.00</td> <td>Bottom Packers &amp; Anchor</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total Tool Length:</b></td> <td><b>75.00</b></td> <td colspan="3"></td> <td></td> </tr> </tbody> </table>					Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths		C.O. Sub	1.00			5081.00			S.I. Tool	5.00			5086.00			HMV	5.00			5091.00			Safety Joint	2.00			5093.00			Packer	4.00			5097.00	22.00	Bottom Of Top Packer	Packer	5.00			5102.00			Stubb	1.00			5103.00			Recorder	0.00	2342	inside	5103.00			Perforations	13.00			5116.00			C.O. Sub	1.00			5117.00			Blank Spacing	32.00			5149.00			C.O. Sub	1.00			5150.00			Recorder	0.00	10248	Outside	5150.00			Bullnose	5.00			5155.00	53.00	Bottom Packers & Anchor	<b>Total Tool Length:</b>		<b>75.00</b>				
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths																																																																																																															
C.O. Sub	1.00			5081.00																																																																																																																
S.I. Tool	5.00			5086.00																																																																																																																
HMV	5.00			5091.00																																																																																																																
Safety Joint	2.00			5093.00																																																																																																																
Packer	4.00			5097.00	22.00	Bottom Of Top Packer																																																																																																														
Packer	5.00			5102.00																																																																																																																
Stubb	1.00			5103.00																																																																																																																
Recorder	0.00	2342	inside	5103.00																																																																																																																
Perforations	13.00			5116.00																																																																																																																
C.O. Sub	1.00			5117.00																																																																																																																
Blank Spacing	32.00			5149.00																																																																																																																
C.O. Sub	1.00			5150.00																																																																																																																
Recorder	0.00	10248	Outside	5150.00																																																																																																																
Bullnose	5.00			5155.00	53.00	Bottom Packers & Anchor																																																																																																														
<b>Total Tool Length:</b>		<b>75.00</b>																																																																																																																		

 <b>TRILOBITE TESTING, INC.</b>	<b>DRILL STEM TEST REPORT</b>		<b>FLUID SUMMARY</b>
	Smith Oil Operations	<b>Robbins A#1</b>	
	P.O.Box 550 Hutchinson Ks. 67504	<b>1-31s-19w Comanche K</b>	
ATTN: Tim Hellman	Job Ticket: 15754	DST#: 2	
	Test Start: 2001.12.16 @ 17:56:56		

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 71.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.20 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
120.00	SGCM	0.590
0.00	Gas in all fluid free pipe.	0.000

Total Length: 120.00 ft	Total Volume: 0.590 bbl	
Num Fluid Samples: 0	Num Gas Bombs: 1	Serial #: gp
Laboratory Name: Caraway	Laboratory Location: Liberal KS	
Recovery Comments:		

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**TRIOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**GAS RATES**

Smith Oil Operations  
P.O.Box 550  
Hutchinson Ks. 67504  
ATTN: Tim Hellman

**Robbins A#1**  
**1-31s-19w Comanche K**  
Job Ticket: 15754      **DST#:2**  
Test Start: 2001.12.16 @ 17:56:56

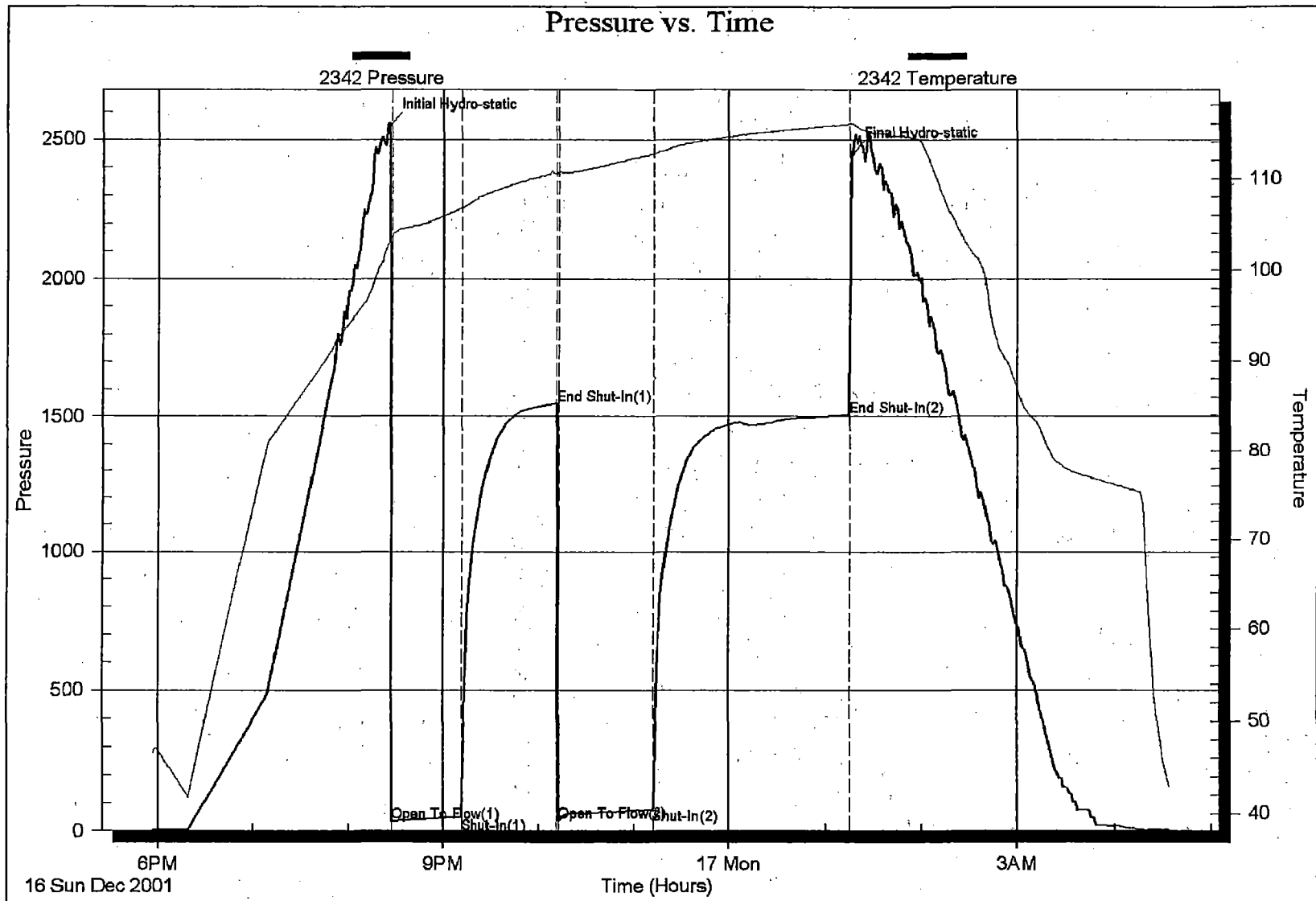
**Gas Rates Information**

Temperature:            59 deg C      *116 ° F*  
Relative Density:      0.65  
Z Factor:                0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	35	0.25	1.00	24.43
1	35	0.25	1.00	24.43
1	45	0.25	2.00	26.02
2	10	0.25	4.00	29.19
2	20	0.25	4.00	29.19
2	30	0.25	3.00	27.60
2	40	0.25	3.00	27.60
2	50	0.25	3.00	27.60

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NATURAL GAS ANALYSIS REPORT

Sampled by:  
Trilobite Testing, Inc.  
Hays, Kansas  
Scott City, Kansas  
Phone: 800-728-5369  
Fax: 785-625-5620

Analyzed by:  
Caraway Analytical, Inc  
P. O. Box 2137  
Liberal, Kansas 67905  
Phone: 620-624-5389  
Fax: 620-626-7108

Lab Number:	20016419	Analyzed:	12/19/01
Sample From:	Robbns A-1 DST 1	Pressure:	
Producer:	Smith Oil Operations	Temperature:	
Date:		Location:	1-31-19
Time:		County:	Comanche
Sampler:	Gary	State:	Kansas
Source:		Formation:	Miss

		Mole %	GPM
Helium	He:	0.805	0.000
Hydrogen	H2:	0.000	0.000
Oxygen	O2:	0.000	0.000
Nitrogen	N2:	13.775	0.000
Carbon Dioxide	CO2:	0.118	0.000
Methane	C1:	76.277	0.000
Ethane	C2:	3.813	1.020
Propane	C3:	1.337	0.368
Iso Butane	iC4:	0.189	0.062
Normal Butane	nC4:	0.483	0.152
Iso Pentane	iC5:	0.217	0.079
Normal Pentane	nC5:	0.389	0.141
Hexanes Plus	C6+:	2.597	1.133

TOTAL: 100.000 2.956  
Z Fact: 0.9974  
SP.GR.: 0.7329  
BTU (SAT): 1037.7 @ 14.73 psia  
BTU (DRY): 1056.0 @ 14.73 psia  
OCTANE RATING: 105.8

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COMMENTS:

0.000