

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

ORIGINAL

API NO. 15- 033-20962 0000

County Comanche County, Kansas

NW - NW - SE - Sec. 4 Twp. 33 Rge. 16 X <sup>E</sup> <sub>W</sub>

Operator: License # 4548

Name: ONEOK Resources Company

Address P.O. Box 871

City/State/Zip Tulsa, OK 74102-8711

Purchaser: KGS

Operator Contact Person: Daryl Duvall

Phone ( 918 ) 588-7711

Contractor: Name: Duke Drilling Co., Inc. PCW

License: 5929

Wellsite Geologist: Harold Trap

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:

Operator: NOV 20 1999

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

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

Deepening  Re-perf.  Conv. to Inj/SWD  
 Plug Back  PBTB  
 Commingled  Docket No. \_\_\_\_\_  
 Dual Completion  Docket No. \_\_\_\_\_  
 Other (SWD or Inj?)  Docket No. \_\_\_\_\_

07/27/98 08/07/98 11/20/98

Spud Date 07/27/98 Date Reached TD 08/07/98 Completion Date 11/20/98

2555 Feet from S/N (circle one) Line of Section

2415 Feet from E/W (circle one) Line of Section

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

Lease Name Herrington Well # 1-4

Field Name Shimer

Producing Formation Mississippi

Elevation: Ground 1796' KB 1804'

Total Depth 5100' PBTB 5006'

Amount of Surface Pipe Set and Cemented at 551 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 Att. 1, 1-6-99 U.C.  
(Data must be collected from the Reserve Pit)

Chloride content 70,000 ppm Fluid volume 1360 bbls

Dewatering method used Pit was not used - used Pyle 4-1

Location of fluid disposal if hauled offsite:

Operator Name KWB Oil & Gas

Lease Name Harmon SWD License No. 5993

Quarter 11 Sec. 11 Twp. 33 S Rng. 20 (E/W)

County Comanche Docket No. CD 98329

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

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Daryl K. Duvall  
Title District Engineer Date 11/20/98

Subscribed and sworn to before me this 20th day of November, 19 98.

Notary Public Gloria Buchanan

Date Commission Expires July 6, 2002

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

RECEIVED MAY 06 2000 Form ACO-1 (7-91)

FROM CONFIDENTIAL

Operator Name ONEOK Resources Company

Lease Name Herrington

Well # 1-4

Sec. 4 Twp. 33 Rge. 16

East

County Comanche County, Kansas

West

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken  Yes  No  
(Attach Additional Sheets.)

Samples Sent to Geological Survey  Yes  No

Cores Taken  Yes  No

Electric Log Run  Yes  No  
(Submit Copy.)

List All E.Logs Run: Array Induction Imager,  
Litho-Density- Copensated Neutron,  
Micro-Log, CBL, Geologist Log

Log Formation (Top), Depth and Datums  Sample

Name	Top	Datum
Heebner	4034	- 2230
Douglas	4097	- 2293
Lansing	4215	- 2411
Pawnee	4790	- 2986
Cherokee Shale	4828	- 3024
Conglomerate	4870	- 3066
Mississippi	4896	- 3092

CASING RECORD

New  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		20"	48#	54'		8yds	
Surface	12-1/4"	8-5/8"	24#	551'	60/40 Poz	300	3%cc 2%gel
Production	7-7/8"	4-1/2"	10.5#	5080'	Class A	200	

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

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
4 spf	4878-4885	Az 1000gals 15% NE acid	
4 spf	4888-4904	Frac w/ 750bbl gelled water	
		& 145,000# 12/20 sand - CO2	Foam

TUBING RECORD	Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	2-3/8"	4784'		

Date of First, Resumed Production, SWD or Inj. Waiting on Pipeline	Producing Method <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)

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

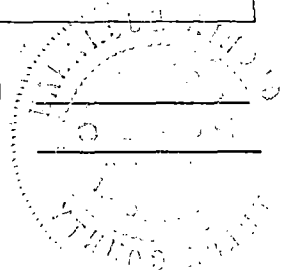
Disposition of Gas:

METHOD OF COMPLETION

Production Interval

Vented  Sold  Used on Lease  
(If vented, submit ACO-18.)

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



# ALLIED CEMENTING CO., INC.

9539

Federal Tax I.D.# 48-0727860

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

ORIGINAL SERVICE POINT: Medicine Lodge

DATE <u>7-27-98</u>	SEC. <u>4</u>	TWP. <u>33S</u>	RANGE <u>16W</u>	CALLED OUT <u>6:30 AM</u>	ON LOCATION <u>9:30 AM</u>	JOB START <u>11:40</u>	JOB FINISH <u>12:11 AM</u>
LEASE <u>Herrington</u>		WELL# <u>1</u>	LOCATION <u>110 + 145 m.m. 45, 2 1/2 1/2 S</u>		COUNTY <u>Comanche</u>	STATE <u>KS.</u>	
OLD OR NEW (Circle one)			<u>3 1/2 E, 1/5</u>				

CONTRACTOR Duke = 2  
 TYPE OF JOB Surface  
 HOLE SIZE 13 1/4 T.D.  
 CASING SIZE 8 1/2 DEPTH 551  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX 200 MINIMUM 5'  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG. 15  
 PERFS.  
 DISPLACEMENT 34 RBs

**CONFIDENTIAL**

CEMENT  
 AMOUNT ORDERED 200sx (S:35:1 + 3'6 cc + 4 fl-Seal + 100 sx (CLASS) 13'cc + 2' gel

EQUIPMENT  
 PUMP TRUCK CEMENTER Carl D'Almeida  
 #255-205 HELPER Steve Wilson  
 BULK TRUCK  
 #256-251 DRIVER Mark D'Amador  
 BULK TRUCK  
 # DRIVER

COMMON \_\_\_\_\_ @ \_\_\_\_\_  
 POZMIX \_\_\_\_\_ @ \_\_\_\_\_  
 GEL \_\_\_\_\_ @ \_\_\_\_\_  
 CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ **KCC** \_\_\_\_\_  
 \_\_\_\_\_ **NOV 20 1998** \_\_\_\_\_  
 \_\_\_\_\_ **CONFIDENTIAL** \_\_\_\_\_  
 HANDLING \_\_\_\_\_ @ \_\_\_\_\_  
 MILEAGE \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ **RELEASED** \_\_\_\_\_  
 \_\_\_\_\_ **MAY 06 2000** \_\_\_\_\_  
 TOTAL \_\_\_\_\_

RECEIVED  
 NOV 23 1998  
 CONSERVATION DIVISION  
 WICHITA, KANSAS  
 STATE BOARD OF GEOLOGICAL SURVEY  
 1000 EAST 10TH AVENUE  
 WICHITA, KS 67202-1000

**REMARKS:**

FROM: **CONFIDENTIAL SERVICE**

Pipe on bottom break circulation w/kin  
 sld + freshwater pad. run 200sx (S:35:1) 13'cc +  
 4 fl-Seal + 100sx (CLASS) 13'cc + 2' gel  
 Cement in steps pumps, switch valves,  
 Release plug. Displace with 54  
 lbs freshwater.  
 Cement did circulate ✓

DEPTH OF JOB 551  
 PUMP TRUCK CHARGE \_\_\_\_\_  
 EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_  
 MILEAGE \_\_\_\_\_ @ \_\_\_\_\_  
 PLUG Rubber \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_

CHARGE TO: Duke Drilling Co.  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**FLOAT EQUIPMENT**

Raffle plate \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_

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

TOTAL \_\_\_\_\_  
 TAX \_\_\_\_\_  
 TOTAL CHARGE \_\_\_\_\_  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

SIGNATURE John J. Prinsmaster

JOHN J. PRINSMASTER  
 PRINTED NAME

## 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 remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein 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 wilful 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.



# CEMENTING LOG

ORIGINAL STAGE NO.

Date 9-20-98 District Medicine Lodge Ticket No. 9639  
 Company Oil Co Rig Duke 2  
 Lease Permian Well No. \_\_\_\_\_  
 County Lincoln State KS  
 Location 14 + 113 man. 49 25 Field 4-265-16W

CEMENT DATA:  
 Spacer Type: 500lb freshwater  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG \_\_\_\_\_

CASING DATA: PTA  Squeeze   
 Surface  Intermediate  Production  Liner   
 Size 58 Type \_\_\_\_\_ Weight 24 Collar \_\_\_\_\_

LEAD: Pump Time \_\_\_\_\_ hrs. Type 15:35:6+32cc  
Kiflo-seal Excess \_\_\_\_\_  
 Amt. 20 Sks Yield 197 ft<sup>3</sup>/sk Density 12.5 PPG \_\_\_\_\_

Casing Depths: Top KB Bottom 551

TAIL: Pump Time \_\_\_\_\_ hrs. Type CLASS A+32cc  
26 gel Excess \_\_\_\_\_  
 Amt. 100 Sks Yield 134 ft<sup>3</sup>/sk Density 1512 PPG \_\_\_\_\_  
 WATER: Lead 10.9 gals/sk Tail 65 gals/sk Total 66 Bbls.

**CONFIDENTIAL**

Pump Trucks Used 255-265 share winson  
 Bulk Equip. 256-251 Mark Pump ART

Drill Pipe: Size \_\_\_\_\_ Weight \_\_\_\_\_ Collars \_\_\_\_\_  
 Open Hole: Size \_\_\_\_\_ T.D. \_\_\_\_\_ ft. P.B. to \_\_\_\_\_ ft.

Floater Manufacturer Comco  
 Shoe: Type walk cut Depth 351

CAPACITY FACTORS:  
 Casing: Bbls/Lin. ft. 637 Lin. ft./Bbl. 1570  
 Open Holes: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Drill Pipe: Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbls/Lin. ft. 1735 Lin. ft./Bbl. 13.61  
 Bbls/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

Floater Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Centralizers: Quantity \_\_\_\_\_ Plugs Top \_\_\_\_\_ Btm. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type freshwater Amt. \_\_\_\_\_ Bbls. Weight \_\_\_\_\_ PPG \_\_\_\_\_  
 Mud Type \_\_\_\_\_ Weight \_\_\_\_\_ PPG \_\_\_\_\_

COMPANY REPRESENTATIVE DW Anderson

CEMENTER Paul Ball

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
11:49						on location + Rig
11:52	50		5	5	5	on bottom break circulation w/ Rig pump.
11:54	100		25	20	5	start freshwater PAD
11:54	250		98	23	6	Mix + pump 200 sy 65:35:6+32 + kiflo-seal mix + pump 100 sy class A + 32 cc + 2% gel cement in 5 top pumps switch valves + Release plug
11:58						start displacement
12:00	200		132	34	4-5	Displace with 34 bbls freshwater
12:07	200					Displacement in other pumps cement did circulate
12:10	250					shut in

RELEASED  
 MAY 06 2000

RECEIVED  
 NOV 25 1998  
 STATE CORPORATION COMMISSION  
 CONSERVATION DIVISION  
 Wichita, Kansas

KCC  
 NOV 20 1998  
 CONFIDENTIAL

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

KANSAS  
SION

*\* Revised \**

API NO. 15- 033-20962-0000

**ORIGINAL**

County Comanche County, Kansas  
NW - NW - SE - Sec. 4 Twp. 33 Rge. 16 <sup>E</sup> <sub>W</sub>

Operator: License # 4548

Name: ONEOK Resources Company

Address P.O. Box 871

City/State/Zip Tulsa, OK 74102-0871

Purchaser, KGS

Operator Contact Person: Daryl Duvall

Phone ( 918 ) 588-7711

Contractor: Name: Duke Drilling Co.

License: 5929

Wellsite Geologist: Harold Trap

Designate Type of Completion  
 New Well  Re-Entry  Workover

Oil  SWD  SLOW  Temp. Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, WSW, <sup>Exp.</sup> Cathodic, etc)

If Workover:

Operator: MAY 06 2000

Well Name: FROM CONFIDENTIAL

Comp. Date Old Total Depth

Deepening  Re-perf.  Conv. to Inj/SWD  
 Plug Back  PBTD  
 Commingled  Docket No.   
 Dual Completion  Docket No.   
 Other (SWD or Inj?)  Docket No.

Spud Date 07/27/98 Date Reached TD 08/07/98 Completion Date 01/31/99

2555 Feet from SW (circle one) Line of Section  
2415 Feet from E/W (circle one) Line of Section

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

Lease Name Herrington Well # 1-4

Field Name Shimer

Producing Formation Mississippi

Elevation: Ground 1796' KB 1804'

Total Depth 5100' PBTD 5006'

Amount of Surface Pipe Set and Cemented at 551 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  
(Data must be collected from the Reserve Pit)

Chloride content 70,000 ppm Fluid volume 1360 bbls

Dewatering method used Pit was not used- used Pyle 4-

Location of fluid disposal if hauled offsite:

Operator Name KWB Oil & Gas

Lease Name Harmon SWD License No. 5993

Quarter 11 Sec. 33 Twp. 33 S Rng. 20 <sup>E</sup> <sub>W</sub>

County Comanche Docket No. CD 98329

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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 [Signature]

Title District Engineer Date 02/05/99

Subscribed and sworn to before me this 5th day of February, 19 99.

Notary Public [Signature]

PATTY L. WHITMIRE  
Date Commission Expires 10-28-2000

K.C.C. OFFICE USE ONLY	
F <input type="checkbox"/>	Letter of Confidentiality Attached
C <input type="checkbox"/>	Wireline Log Received
C <input type="checkbox"/>	Geologist Report Received
Distribution	
<input checked="" type="checkbox"/> KCC	<input type="checkbox"/> SWD/Rep <input type="checkbox"/> NGPA
<input type="checkbox"/> KGS	<input type="checkbox"/> Plug <input type="checkbox"/> Other
(Specify)	

Operator Name ONEOK Resources Company

Lease Name Herrington

Well # L-4

Sec. 4 Twp. 33 Rge. 16  
 East  West

County Comanche County, Kansas

**ORIGINAL**

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken  Yes  No  
 (Attach Additional Sheets.)

Samples Sent to Geological Survey  Yes  No

Cores Taken  Yes  No

Electric Log Run  Yes  No  
 (Submit Copy.)

List All E.Logs Run: Array Induction Imager,  
 Litho-Density- Compensated Neutron,  
 Micro-Log, CBL, Geologist Log

Log Formation (Top), Depth and Datums  Sample

Name	Top	Datum
Heebner	4034	- 2230
Douglas	4097	- 2293
Lansing	4215	- 2411
Pawnee	4790	- 2986
Cherokee Shale	4828	- 3024
Conglomerate	4870	- 3066
Mississippi	4896	- 3092

**CASING RECORD**  New  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		20"	48#	54'		8yds	
Surface	12-1/4"	8-5/8"	24#	551'	60/40 Poz	300	3%cc 2%gel
Production	7-7/8"	4-1/2"	10.5#	5080'	Class A	200	

**ADDITIONAL CEMENTING/SQUEEZE RECORD**

Purpose:	Depth		Type of Cement	#Sacks Used	Type and Percent Additives
	Top	Bottom			
<input type="checkbox"/> Perforate					
<input type="checkbox"/> Protect Casing					
<input type="checkbox"/> Plug Back TD					
<input type="checkbox"/> 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
4 spf	4878-4885	Az 1000gals 15% NE acid	
4 spf	4888-4904	Frac w/ 750bbl gelled water	
		& 145,000# 12/20 sand - CO2 Foam	

**TUBING RECORD**

Size 2-3/8" Set At 4784' Packer At \_\_\_\_\_

Liner Run  Yes  No

Date of First, Resumed Production, SMD or Inj. 1/4/99 Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	0	153	30		

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

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

RECEIVED  
 STATE COMMISSION  
 CONSERVATION DIVISION  
 Wichita, Kansas