

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

API NO. 15- 155-21,322

**ORIGINAL**

County Reno

- C - W/2-SW Sec. 13 Twp. 25 Rge. 9 X W

Operator: License # 3911

1320 Feet from S (circle one) Line of Section

Name: RAMA Operating Co., Inc.

710 Feet from E (circle one) Line of Section

Address P.O. Box 159

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

City/State/Zip Stafford, KS 67578

Lease Name Moore Well # 1-13

Purchaser: NCRA-OIL; RAMA OPERATING-GAS

Field Name \_\_\_\_\_

Operator Contact Person: Robin L. Austin

Producing Formation Mississippian

Phone (316) 234-5191

Elevation: Ground 1653 KB 1662

Contractor: Name: Sterling Drilling Co.

Total Depth 4000 PBDT 3992

License: 5142

Amount of Surface Pipe Set and Cemented at 216 Feet

Wellsite Geologist: Steve McClain

Multiple Stage Cementing Collar Used? \_\_\_\_\_ Yes X No

Designate Type of Completion  
X New Well \_\_\_\_\_ Re-Entry \_\_\_\_\_ Workover

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

X Oil \_\_\_\_\_ SWD \_\_\_\_\_ SIOW \_\_\_\_\_ Temp. Abd.  
\_\_\_\_\_ Gas \_\_\_\_\_ ENHR \_\_\_\_\_ SIGM  
\_\_\_\_\_ Dry \_\_\_\_\_ Other (Core, MSW, Expl., Cathodic, etc)

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

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

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

Drilling Fluid Management Plan ALT 1 897 5-16-95  
(Data must be collected from the Reserve Pkt)

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

Chloride content \_\_\_\_\_ ppm Fluid volume \_\_\_\_\_ bbls

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

Dewatering method used \_\_\_\_\_

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

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

\_\_\_\_\_ 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 \_\_\_\_\_ License No. \_\_\_\_\_

06-02-94 06-07-94 07-06-94  
Spud Date Date Reached TD Completion Date

\_\_\_\_\_ Quarter Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S Rng. \_\_\_\_\_ E/W

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

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, 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 [Signature]

Title Vice-President Date 10-21-94

Subscribed and sworn to before me this 21 day of October 19 94.

Notary Public Caroline Farris

Notary Public - State of Kansas  
CAROLINE FARRIS  
My Appt. Exp. 2-11-98

RECEIVED  
STATE CORPORATION COMMISSION  
OCT 24 1994  
K.C.C. OFFICE USE ONLY  
F ✓ Letter of Confidentiality Attached  
C ✓ Wireline Log Received  
C \_\_\_\_\_ Geologist Report Received  
Distribution  
\_\_\_\_\_ KCC \_\_\_\_\_ SWD/Rep \_\_\_\_\_ MSRA  
\_\_\_\_\_ KGS \_\_\_\_\_ Plug \_\_\_\_\_ Other  
(Specify)

Operator Name RAMA Operating Co., Inc. Lease Name Moore Well # 1-13

Sec. 13 Twp. 25 Rge. 9  East  West County Reno

**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 (Attach Additional Sheets.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name	Top Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Attached	
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
List All E.Logs Run:			
Dual Induction			
Comp Density/Neutron			
Coral			

CASING RECORD <input type="checkbox"/> New <input checked="" type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12	8-5/8	23	217	60/40	185	2% Gel-3c
Production	7-7/8	5-1/2	14	3982	50/50	200	18% Salt 2% Gel

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
2	3836-3946	Frac-21,000 Gal	
		30,000# SAND	

<b>TUBING RECORD</b>	Size <u>2-7/8</u>	Set At <u>3800</u>	Packer At	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First, Resumed Production, SWD or Inj. <u>09-15-94</u>	Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)
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Estimated Production Per 24 Hours	Oil <u>6</u> Bbls.	Gas <u>60</u> Mcf	Water <u>240</u> Bbls.	Gas-Oil Ratio <u>10</u>	Gravity
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Disposition of Gas:  Vented  Sold  Used on Lease (If vented, submit ACO-18.)

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

Stamp: **RECORDS TO CHECK - CHECK WHAT? PRODUCTION on Interval**  
**3836-3846**  
**8836-3846**

**GEOLOGICAL FORMATION TOPS**

API #15-155-21322

**ORIGINAL**

FORMATION TOP	ELECTRIC LOG DEPTH	DRILLING TIME DEPTH	SUB-SEA DEPTH (E-LOG)
Heebner Shale	3131	3134	-1469
Brown Limestone	3304	3307	-1642
Lansing	3339	Not Called	-1677
Stark Shale	3599	3603	-1937
BKC	3692	3696	-2030
Cherokee Shale	3795	3803	-2133
Mississippian Chert	3835	3838	-2173
Mississippian 'B' Zone	3856	3859	-2194
Mississippian Ls	3908	3910	-2246
Kinderhook Shale	3916	3920	-2254
Total Depth	3998	4000	-2336

RECEIVED  
 STATE CORPORATION COMMISSION  
 OCT 24 1994  
 CONSERVATION DIVISION  
 MISSOURI, KANSAS

**DRILL STEM TEST RESULTS**  
API#15-155-21322

**ORIGINAL**

DST No. 1 (Mississippian 'A' Zone)																															
Interval: 3841' to 3854' (13' of anchor)																															
Intervals tested: High Porosity Mississippian Section																															
Period	Time	Pressure	Description																												
IHSP		1870																													
IFP	45	139-208	GTS in 1 minute.																												
ISIP	60	1056	p* = 1108 psi.																												
FFP	60	222-308	GTS.																												
FSIP	90	1008	p* = 1059 psi.																												
FHSP		1853	BHT = 116 deg. F.																												
Recovery:	<p>Gas to surface.</p> <p>40' 0% Gas, 0% Oil, 100% Mud, 0% Water.            120' 18% Gas, 2% Oil, 20% Mud, 60% Water.            120' 0% Gas, 10% Oil, 1% Mud, 89% Water.            120' 0% Gas, 1% Oil, 0% Mud, 99% Water.            180' 0% Gas, 0% Oil, 0% Mud, 100% Water.            180' 0% Gas, 0% Oil, 0% Mud, 100% Water.</p> <p>-----</p> <p>760' Total Fluid Recovered.</p> <p>Summary of Fluid Recovered:            Total Oil pulled during test = .1 bbls.            Total Water pulled during test = 4.6 bbls.            Total Mud pulled during test = .9 bbls.            Total = 5.6 bbls.</p> <p>Water Chlorides Tester = 112,000 ppm            Mud Filtrate = 4,000 ppm</p> <p>-----</p> <p>GAS FLOW REPORT (Saturated BTU = 1117)</p> <p>First Open Period (45 Minutes):      Second Open Period (60 minutes):</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:25%;">Time</th> <th style="width:25%;">Gauge (MCF/D)</th> <th style="width:25%;">Time</th> <th style="width:25%;">Gauge (MCF/D)</th> </tr> </thead> <tbody> <tr> <td>5"</td> <td>138</td> <td>10"</td> <td>145</td> </tr> <tr> <td>15"</td> <td>181</td> <td>20"</td> <td>132</td> </tr> <tr> <td>25"</td> <td>181</td> <td>30"</td> <td>124</td> </tr> <tr> <td>35"</td> <td>158</td> <td>40"</td> <td>124</td> </tr> <tr> <td>45"</td> <td>145</td> <td>50"</td> <td>116</td> </tr> <tr> <td></td> <td></td> <td>60"</td> <td>116 * Sampled Gas</td> </tr> </tbody> </table>			Time	Gauge (MCF/D)	Time	Gauge (MCF/D)	5"	138	10"	145	15"	181	20"	132	25"	181	30"	124	35"	158	40"	124	45"	145	50"	116			60"	116 * Sampled Gas
Time	Gauge (MCF/D)	Time	Gauge (MCF/D)																												
5"	138	10"	145																												
15"	181	20"	132																												
25"	181	30"	124																												
35"	158	40"	124																												
45"	145	50"	116																												
		60"	116 * Sampled Gas																												

RECEIVED  
STATE CORPORATION COMMISSION  
OCT 2 1994  
RESERVATION DIVISION  
Wichita, Kansas

**DRILL STEM TEST RESULTS**

API # 15-155-21322

**ORIGINAL**

DST No. 2 (Mississippian 'B' Zone)			
Interval: 3856' to 3884' (28' of anchor)			
Intervals tested: Mississippian 'B' Zone			
Period	Time	Pressure	Description
IHSP		1903	
IFP	45	86-109	Blow to bottom in 8 minutes.
ISIP	60	1169	p* = 1296 psi.
FFP	45	123-153	Good blow, NO GTS!
FSIP	90	1174	p* = 1266 psi.
FHSP		1873	BHT = 115 deg. F.
Recovery:	800' Gas in the Pipe.		
	80'	28% Gas, 12% Oil, 32% Mud, 28% Water.	
	60'	0% Gas, 0% Oil, 15% Mud, 85% Water.	
	60'	0% Gas, 0% Oil, 10% Mud, 90% Water.	
	-----		
	200' Total Fluid Recovered.		
	Chlorides of water = 65,000 ppm.		

CUSTOMER COPY

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



INVOICE

ORIGINAL

INVOICE NO.	DATE
614307	06/08/1994

WELL LEASE NO./PROJECT		WELL/PROJECT LOCATION		STATE	OWNER
MOORE 1-13		RENO		KS	SAME
SERVICE LOCATION	CONTRACTOR	JOB PURPOSE		TICKET DATE	
PRATT	COMPANY TOOLS	CEMENT PRODUCTION CASING		06/08/1994	
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO
847190	V L THOMPSON			COMPANY TRUCK	70862

STERLING DRLG CO  
BOX 129  
STERLING, KS 67579

DIRECT CORRESPONDENCE TO:  
OKLAHOMA TOWER  
210 WEST PARK AVENUE  
SUITE 2000  
OKLAHOMA CITY, OK 73102-5601

REFERENCE NO.	DESCRIPTION	QUANTITY	UM	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT					
000-117	MILEAGE CEMENTING ROUND TRIP	68	MI	2.75	187.00
		1	UNT		
001-016	CEMENTING CASING	3995	FT	1,570.00	1,570.00
		1	UNT		
030-016	CEMENTING PLUG 5W ALUM TOP	5 1/2	IN	60.00	60.00
		1	EA		
12A	GUIDE SHOE - 5 1/2" 8RD THD.	1	EA	121.00	121.00
825.205					
40	CENTRALIZER-5-1/2 X 8-1/2	3	EA	44.00	132.00
806.60022					
24A	INSERT FLOAT VALVE - 5 1/2" 8RD	1	EA	110.00	110.00
815.19251					
27	FILL-UP UNIT 5 1/2"-6 5/8"	1	EA	55.00	55.00
815.19313					
320	BASKET-CEMENT-5-1/2 X 7-7/8	1	EA	110.00	110.00
806.70030					
019-241	CASING SWIVEL W/O WALL CLEANER	1	JOB	185.00	185.00
018-317	SUPER FLUSH	12	SK	100.00	1,200.00
504-316	CEMENT - HALL. LIGHT STANDARD	75	SK	6.82	511.50
504-130	CEMENT - 50/50 POZMIX STANDARD	125	SK	5.73	716.25
508-291	GILSONITE BULK	625	LB	.40	250.00
509-968	SALT	1150	LB	.15	172.50
507-210	FLOCELE	15	LB	1.65	24.75
507-775	HALAD-322	76	LB	7.00	532.00
509-968	SALT	400	LB	.15	60.00
500-207	BULK SERVICE CHARGE	237	CFT	1.35	319.95
500-306	MILEAGE CMTG MAT DEL OR RETURN	329.171	TMI	.95	312.71

INVOICE SUBTOTAL

6,629.66

\*\*\*\*\* CONTINUED ON NEXT PAGE \*\*\*\*\*

STATE RECEIVED  
CORPORATION COMMISSION  
OCT 24 1994  
CONSERVATION DIVISION  
WATER RESOURCES

TERMS: If Customer does not have an approved open account with Halliburton, all sums due are payable in cash at the time of performance of services or delivery of equipment, products or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, Customer agrees to pay attorney fees of 20% of the amount uncollected plus all collection and court costs.



# JOB SUMMARY

HALLIBURTON DIVISION INDIAN CONCRETE  
 HALLIBURTON LOCATION PAHRS

BILLED ON TICKET NO. 614330

FIELD \_\_\_\_\_ SEC 13 TWP. 25 RING. 9 COUNTY RENO STATE 8518

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
 FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_  
 INITIAL PROD. OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 PRESENT PROD. OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_  
 PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
 BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_  
 MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING			8 7/8	23	229	
LINER						
TUBING						
OPEN HOLE				229	30	SHOTS/FT.
PERFORATIONS			ORIGINAL			
PERFORATIONS						
PERFORATIONS						

### JOB DATA

CALLLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <u>6-2</u>	DATE <u>6-2</u>	DATE <u>6-2</u>	DATE <u>6-2</u>
TIME <u>0700</u>	TIME <u>0850</u>	TIME _____	TIME _____

### TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR		
FLOAT SHOE		
GUIDE SHOE		
CENTRALIZERS		
BOTTOM PLUG		
TOP PLUG		
HEAD		
PACKER		
OTHER		

### MATERIALS

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB./GAL. °API  
 DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB./GAL. °API  
 PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
 PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
 ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ %  
 ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ %  
 ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ %  
 SURFACTANT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ IN  
 NE AGENT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ IN  
 FLUID LOSS ADD. TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 GELLING AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 FRIC. RED. AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 BREAKER TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 BLOCKING AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN  
 PERFFAC BALLS TYPE \_\_\_\_\_ QTY. \_\_\_\_\_  
 OTHER \_\_\_\_\_  
 OTHER \_\_\_\_\_

### PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<u>24221 MCDuff</u>	<u>40537</u>	<u>25555</u>
<u>61622 SEBA</u>	<u>4410</u>	
<u>62223 GARVOL</u>	<u>4413</u>	

DEPARTMENT CMT  
 DESCRIPTION OF JOB SET 229' 8 7/8"  
 JOB DONE THRU: TUBING  CASING  ANNULUS  TBG./ANN.   
 CUSTOMER REPRESENTATIVE X.V. Thompson  
 HALLIBURTON OPERATOR J.M. O'Neil COPIES REQUESTED \_\_\_\_\_

### CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
	<u>185</u>	<u>P02</u>	<u>4060</u>	<u>B</u>	<u>2706-1 370CC</u>	<u>1.3</u>	<u>14</u>

PRESSURES IN PSI \_\_\_\_\_  
 CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_  
 BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_  
 AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_  
 SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN. \_\_\_\_\_ 15-MIN. \_\_\_\_\_  
 HYDRAULIC HORSEPOWER \_\_\_\_\_  
 ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_  
 AVERAGE RATES IN BPM \_\_\_\_\_  
 TREATING \_\_\_\_\_ DISPL. \_\_\_\_\_ OVERALL \_\_\_\_\_  
 CEMENT LEFT IN PIPE \_\_\_\_\_  
 FEET 10 REASON 202

### SUMMARY

PRESLUSH: BBL.-GAL. \_\_\_\_\_ TYPE \_\_\_\_\_  
 LOAD & BKDN: BBL.-GAL. \_\_\_\_\_ PAD: BBL.-GAL. \_\_\_\_\_  
 TREATMENT: BBL.-GAL. \_\_\_\_\_ DISPL. BBL.-GAL. 13.9  
 CEMENT SLURRY: BBL.-GAL. 42.83  
 TOTAL VOLUME: BBL.-GAL. \_\_\_\_\_

### REMARKS

\_\_\_\_\_

CUSTOMER: Steelcase Bldg  
 LEASE: MOORE  
 WELL NO.: 1-13  
 JOB TYPE: 8518  
 DATE: 6-2-74



JOB LOG HAL-2013-C

CUSTOMER Steeling Delc	WELL NO. 1-13	LEASE Mooze	JOB TYPE 8 7/8's	TICKET NO. 614330
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CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0700							Called out
	0850							ONLOC ORIGINAL
	1230							BREAK CIRC
	1238	6	-				300	START MIXING F02
	1245	5	42.83				450	Finish mixing
	1246		-					RELEASE PLUG
	1247	6	-				300	START DISD
	1250	2	13.9				300	plug down
	1251							Circ'd good cont to Pt Close W
	1345							Job Complete
								THANK YOU
								JAMES TODD LARRY

STATE OF OKLAHOMA  
OCT 24 1994  
CONSERVATION DIVISION  
NIGHTINGALE