

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

API NO. 15- 077-21,325-0000

ORIGINAL

County Harper County, Kansas

C - NW - NW Sec. 22 Twp. 31S Rge. 7 XX<sup>E</sup><sub>V</sub>

860 Feet from S (circle one) Line of Section

560 Feet from E (circle one) Line of Section

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

Lease Name Burkholder Well # 1-22

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

Producing Formation None

Elevation: Ground 1540' KB 1548'

Total Depth 4793' PSTD 4800'

Amount of Surface Pipe Set and Cemented at 250 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 cat.

Drilling Fluid Management Plan D&A JH 8-20-97  
(Data must be collected from the Reserve Pit)

Chloride content 20,000 ppm Fluid volume 200 bbls

Dewatering method used Hauled off site

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

Operator Name MTM Petroleum, Inc.

Lease Name Joslin SWD License No. 6236

NW Quarter Sec. 1 Twp. 31 S Rng. 7 E/V

County Harper Docket No. D-12, 513

Operator: License # 6236

Name: MTM Petroleum, Inc.

Address P.O. Box 82

City/State/Zip Spivey, Kansas 67124-0082

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

Operator Contact Person: Marvin Miller

Phone ( 316 ) 532-5178

Contractor: Name: Duke Drilling Co., Inc.

License: 5929

Wellsite Geologist: Jerry Smith

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

\_\_\_\_\_ Oil \_\_\_\_\_ SWD \_\_\_\_\_ SLOW \_\_\_\_\_ Temp. Abd.  
\_\_\_\_\_ Gas \_\_\_\_\_ ENHR \_\_\_\_\_ SIGW  
 Dry \_\_\_\_\_ Other (Core, WSV, Expl., Cathodic, etc)

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

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

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

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

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

05-17-97 05-25-97 05-25-97

Spud Date Date Reached TD Completion Date

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 Marvin A. Miller  
Title Marvin A. Miller, President Date 6-30-97

Subscribed and sworn to before me this 30 day of June 19 97.

Notary Public Kathy Hill

Date Commission Expires 01-04-99

E.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)

**KATHY HILL**  
Notary Public - State of Kansas  
My Appt. Expires

Operator Name MTM PETROLEUM INC

Lease Name BURKHOLDER

Well # 1-22

Sec. 22 Twp. 31S Rge. 7  
 East  
 West

County Harper County, Kansas

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:

Sample log only

Name	Top	Datum
HEEBNER	3297	-1749
TATAN	3529	-1981
STALNAKER SD	3588	-2040
KANSAS CITY	3853	-2305
SWOPE	3994	-2446
HERTHA	4029	-2481
BASE KC	4098	-2550
CONGLOMERATE	4386	-2838
MISSISSIPPI	4408	-2860
KINDERHOOK SH.	4665	-3117
CHATTANOOGA SH.	4751	-3208
SIMPSON	4789	-3241

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
Surface	12-1/4"	8-5/8"	20#	259'	60/40 Poz	150	3%cc 2%gel

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	Acid, Fracture, Shot, Cement Squeeze Record
	Specify Footage of Each Interval Perforated	(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. D&A Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours Oil N/A Bbls. Gas N/A Mcf Water N/A 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.  Commingled  
 Other (Specify) Plugged

Production Interval

# ALLIED CEMENTING CO., INC.

ORIGINAL

15-077-21,325

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

SERVICE POINT:

DATE <u>5-25-97</u>	SEC. <u>22</u>	TWP. <u>31</u>	RANGE <u>7</u>	CALLED OUT <u>1:30 PM</u>	ON LOCATION <u>4:30 PM</u>	JOB START <u>5:00 PM</u>	JOB FINISH <u>7:45 PM</u>
LEASE <u>Burkholder</u>	WELL# <u>1-22</u>	LOCATION <u>Dugannon, 35, 1w, 9 miles</u>			COUNTY <u>Harper</u>	STATE <u>Ks</u>	

OLD OR NEW (Circle one)

CONTRACTOR Dub #1

TYPE OF JOB Rotary Plug

HOLE SIZE 7 7/8" T.D. 4793'

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE 4 1/2" DEPTH 1250'

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

OWNER Same

CEMENT

AMOUNT ORDERED 165 sacks 60/40 490 net  
1/4" flow/oh.

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

**EQUIPMENT**

PUMP TRUCK CEMENTER Tom D

# 181 HELPER Bob B

BULK TRUCK

# 342 DRIVER Kenny R.

BULK TRUCK

# \_\_\_\_\_ DRIVER \_\_\_\_\_

TOTAL \_\_\_\_\_

**REMARKS:**

Mixed - 35 sacks @ 1250'

35 sacks @ 750'

35 sacks @ 310'

25 sacks @ 60'

15 sacks in Rotobore

10 sacks in Marshall

10 sacks in Watsonwell

T. Honda

**SERVICE**

DEPTH OF JOB 1250'

PUMP TRUCK CHARGE \_\_\_\_\_

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

PLUG 1-8 5/8" Dupole @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

CHARGE TO: WTR Petroleum Inc

STREET P.O. Box 82

CITY Spicer STATE Ks ZIP 67442-0082

**FLOAT EQUIPMENT**

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

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.

TAX \_\_\_\_\_

TOTAL CHARGE \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

SIGNATURE X. Miller

RECEIVED  
KANSAS CEMENT CO.

## GENERAL TERMS AND CONDITIONS

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

—**TITLE:** If satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "ALLIED" before the job is taken 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.

Duke Drilling Company, Inc.  
GREAT BEND, KANSAS

15-077-21325  
DAILY DRILLING RECORD  
ORIGINAL

FOR 24 HOURS ENDING AT MIDNIGHT 8-17 1977 RIG NO. 41  
 WELL OWNER M.T.M. LEASE W. H. H. H. H. WELL NO. 1-22  
 SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_ COUNTY Harper STATE KAN  
IF INJURED, SIGN AND DESCRIBE INJURY UNDER REMARKS WE HAVE NOT BEEN INJURED THIS DAY

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
				DON KNOLL
				DERRICKMAN RANDY BETHEL
			Sx GEL Sx LIME	MOTORMAN GARY THORP
				HELPER DOUG CHISM
				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO.	REMARKS: 7:00 to 3:00 Move Rig & Rig Up				
SIZE					
MAKE					
SERIAL NO.					
SERIAL NO.					

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
				Galen D. Roach 12
			Barb Loe	260 DERRICKMAN Donald L. Roach 12
				MOTORMAN Kenneth G. Roach 12
				HELPER Todd Elsen 12
				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO.	REMARKS: Move Rig & Rig up in the Sand				
SIZE					
MAKE					
SERIAL NO.					
SERIAL NO.					

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
0			Sand & Redbed	305" DRILLER Tommy Maxwell
			Spud 8:00 PM	DERRICKMAN Mike Cochran
				MOTORMAN
				HELPER David Sanders
				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO.	REMARKS: 3:00 - 8:00 Rig up & Rig Rathole				
SIZE	8:00 - 11:00 - 1 1/2" hole				
MAKE	HTC				
SERIAL NO.	RT 43				
SERIAL NO.	2 hrs				

# Duke Drilling Company, Inc.

GREAT BEND, KANSAS

# DAILY DRILLING RECORD

## ORIGINAL

FOR 24 HOURS ENDING AT MIDNIGHT 5-18 19 47 RIG NO. 1  
 WELL OWNER MTM LEASE BURKHEIDER WELL NO. 1-22  
 SECTION            TOWNSHIP            RANGE            COUNTY HARPER STATE KANSAS  
IF INJURED: SIGN AND DESCRIBE INJURY UNDER REMARKS WE HAVE NOT BEEN INJURED THIS DAY

FROM	DRILLED TO	FEET DRILLED	FORMATION	240	
150	260		SURVAY @ 260 '14"	DRILLER	Don Knoll
				DERRICKMAN	Randy Bethel
			RUN 6 1/2 New 90# 8 5/8	MOTORMAN	Cary Tiler
			TALLY @ 250 = SET @ 259		
			CEMENTED w/150Sx 6 7/8	HELPER	Doug Casey
			PSZ 3 1/2 CC - 2 1/2 GEL		
			PLUG DOWN @ 3:15 AM	HELPER	
			CEMENT DID CIR.		

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. <u>01</u>	REMARKS: <u>1:00 to 1:30 DRILL - 1:30 to 2:00 TRIP OUT SURVAY</u>				
SIZE <u>12 1/2</u>	<u>3:00 to 3:00 Run 8 5/8 - 3:00 to 3:15 Cement - 3:15 to 7:00</u>				
MAKE <u>HTC</u>	<u>WOC</u>				
SERIAL NO. <u>RT 73</u>					
SERIAL NO. <u>4 NR</u>					

FROM	DRILLED TO	FEET DRILLED	FORMATION	240	
260	473			DRILLER	Bob D. Paul
				DERRICKMAN	Ed Paul
				MOTORMAN	Ken Paul
				HELPER	Todd Paul
				HELPER	

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. <u>6</u>	REMARKS: <u>1:00 to 1:15 WOC, 1:15 to 1:30 D. by plus 8 1/2' Head cement</u>				
SIZE <u>9 1/8</u>	<u>1:30 to 3:00 D. by</u>				
MAKE <u>WOC</u>					
SERIAL NO. <u>51 F</u>					
SERIAL NO. <u>002692</u>					

FROM	DRILLED TO	FEET DRILLED	FORMATION	305	
493	1000			DRILLER	Jimmy Harrell
				DERRICKMAN	Mike Cochran
			20 Gel	MOTORMAN	Randy Bethel
			4 Soda Ash		
			4 Cement	HELPER	David Sanborn
			4 bag	HELPER	

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. <u>2</u>	REMARKS: <u>3:00 3:15 Rig 3:15 5:20 D. by 5:30 7:45 Jet @ 261</u>				
SIZE <u>7 1/8</u>	<u>5:45 8:45 D. by 8:45 9:00 Jet @ 260 9:00 11:00 D. by</u>				
MAKE <u>W-11</u>					
SERIAL NO. <u>51-F</u>					
SERIAL NO. <u>003182</u>					
<u>9 1/2</u>					

# Duke Drilling Company, Inc.

GREAT BEND, KANSAS

# DAILY DRILLING RECORD

ORIGINAL

5-19

19 97

RIG NO. #1

FOR 24 HOURS ENDING AT MIDNIGHT

WELL OWNER MTM LEASE BURKHOLDER WELL NO. 1-22

SECTION 22 TOWNSHIP 31S RANGE 7W COUNTY HARPER STATE KANS  
IF INJURED: SIGN AND DESCRIBE INJURY UNDER REMARKS WE HAVE NOT BEEN INJURED THIS DAY

FROM	DRILLED TO	FEET DRILLED	FORMATION	240	
1000	1415			DRILLER	DON KNOLL 10
				DERRICKMAN	RANDY BETHEL 10
Rig Sec. 1/4				MOTORMAN	GARY THORP 10
DRLG 7				HELPER	DOUG CHISM 10
J&E 5/4				HELPER	

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. #2	REMARKS: 11:00 to 11:15 Rig Sec. - 11:15 to 7:00 DRLG.				
SIZE 7 7/8					
MAKE WM					
SERIAL NO. 51-F					
SERIAL NO. 003682					
16 1/2					

FROM	DRILLED TO	FEET DRILLED	FORMATION	2:10	
1415	1709		Lime/Shell	DRILLER	Charles D. Roach
				DERRICKMAN	Darrell L. Roach
				MOTORMAN	Kenneth C. Roach
				HELPER	Todd Eisen
				HELPER	

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. 2	REMARKS: 7:00 to 9:15 Dlg, 9:15 to 9:45 Dlg @ 1509, 9:45 to 11:15 Dlg, 11:15 to 11:30 Dlg @ 1570, 11:30 to 2:15 Dlg, 2:15 to 2:30 Dlg @ 1086, 2:30 to 3:00 Dlg				
SIZE 7 7/8					
MAKE WM					
SERIAL NO. 51-F					
SERIAL NO. 003682					
23					

FROM	DRILLED TO	FEET DRILLED	FORMATION	305	
1708	2000		Lime - Shell	DRILLER	Jimmy Harrell
				DERRICKMAN	Mike Cochran
Drlg 6 1/2				MOTORMAN	Don Knoll
Brick 1/4				HELPER	David Sandburn
Cash 3/4				HELPER	
Tet 1/2					

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. 2	REMARKS: 3:00 3:15 Rig ✓ 3:15 5:30 Dlg 5:30 5:45 Tet @ 1821, 5:45 5:15 Dlg 5:15 9:30 Tet @ 1947, 9:30 11:00 Dlg				
SIZE 7 7/8					
MAKE WM					
SERIAL NO. 51-F					
SERIAL NO. 003682					
25 1/2					

# Duke Drilling Company, Inc.

GREAT BEND, KANSAS

# DAILY DRILLING RECORD

## ORIGINAL

FOR 24 HOURS ENDING AT MIDNIGHT 5-20 19 97 RIG NO. #1  
 WELL OWNER MTM LEASE BURKHOLDER WELL NO. # 1-22  
 SECTION 22 TOWNSHIP 31<sup>S</sup> RANGE 7<sup>W</sup> COUNTY HARPER STATE KANS.

IF INJURED: SIGN AND DESCRIBE INJURY UNDER REMARKS

WE HAVE NOT BEEN INJURED THIS DAY

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
2000	2250			240 DON KNOLL
				DERRICKMAN RANDY BETHEL
Rig Sev. 1 1/2 C	14 14		35 SX GCL 1 SX LIQ	MOTORMAN GARY THORP
DRLG REPAIR	7 1/2		1 SX CAU 1 SX S. ASM	HELPER DOUG CHISM
				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. <u>#2</u>	REMARKS: 11:00/11:15 Rig Sev. - 11:15 to 3:15 Drlg. - 3:15 to 3:45 REPLACE				
SIZE <u>7 7/8</u>	HEAD, ROD OILER SIDE - 3:45 to 7:00 DRLG				
MAKE <u>WM</u>					
SERIAL NO. <u>51-F</u>					
SERIAL NO. <u>003682</u>					
<u>36 1/2</u>					

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
2250	2566			Calvin D Rank
				DERRICKMAN Dwain L Rank
				240 MOTORMAN Kenneth C Rank
				HELPER Todd Eisen
				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. <u>2</u>	REMARKS: 7:00 to 7:15 Rig Sev. 2258, 7:15 to 9:15 Drlg 9:45 to 10:00 Set @ 2384				
SIZE <u>7 7/8</u>	10:00 to 3:00 Drlg				
MAKE <u>WM</u>					
SERIAL NO. <u>51 F</u>					
SERIAL NO. <u>003682</u>					
<u>43</u>					

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
2566	2860		lime shale	305 Jimmy Harrell
				DERRICKMAN Mike Cochran
Drlg Rig Sev Cement Set	2 1/2 1/4 1/4 1/2			MOTORMAN David Sandborn
				HELPER James Montley
				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. <u>2</u>	REMARKS: 3:00 3:15 Rig Sev 3:15 4:15 Drlg 4:15 4:30 Set @ 2603				
SIZE <u>7 7/8</u>	4:30 11:00 Drlg w/ 1/4 Set @ 2700				
MAKE <u>WM</u>					
SERIAL NO. <u>51-F</u>					
SERIAL NO. <u>003682</u>					
<u>48 1/2</u>					



# Duke Drilling Company, Inc.

GREAT BEND, KANSAS

# DAILY DRILLING RECORD

ORIGINAL

FOR 24 HOURS ENDING AT MIDNIGHT

5-21

1997 RIG NO. #1

WELL OWNER MTM

LEASE BURK HOLDER

WELL NO. # 1-22

SECTION 22 TOWNSHIP 31<sup>S</sup> RANGE 7<sup>W</sup> COUNTY HARPER STATE KANS.

IF INJURED: SIGN AND DESCRIBE INJURY UNDER REMARKS

WE HAVE NOT BEEN INJURED THIS DAY

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION	240
2860	3120			DRILLER DON KNOLL
				DERRICKMAN RANDY BETHEL
Rig Sev. 1/4				MOTORMAN GARY THORP
J 1/2	1/2			HELPER DOUG CHISM
DRIG 7 1/4				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. #2	REMARKS: 11:00 to 11:15 Rig Sev. - 11:15 to 7:00 DRIG.				
SIZE 7 7/8					
MAKE W.M.					
SERIAL NO. S1-F					
SERIAL NO. 003682					
56314					

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
3120	3331			Clayton D. Rouben
				240 DERRICKMAN Donald L. Rouben
				MOTORMAN Kenneth B. Rouben
				HELPER Todd ESEN
				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. 2	REMARKS: 7:00 to 7:15 DRIG @ 3135 7:15 to 11:15 DRIG, 11:15 to 11:30 J 1/2				
SIZE 7 7/8	(@ 3221 11:30 to 12:45 DRIG, 12:45 to 10:00 J 1/2 @ 3292, Displace, 100				
MAKE W.M.	to 3:00 DRIG w/ 1/2 112 J 1/2				
SERIAL NO. S1-F					
SERIAL NO. 003682					
63					

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION	305
3331	3710			DRILLER Jimmy Harrell
				DERRICKMAN Mike Cochran
DRIG 5 3/4				MOTORMAN David Soudern
Rig 1/4				HELPER Randy Bethel
Coat 3/4				HELPER
GFS 1 1/4				

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. 2	REMARKS: 3:00 3:15 Rig ✓ 3:15 8:15 DRIG 8:00 9:30 GFS @ 3598				
SIZE 7 7/8	9:30 11:00 DRIG				
MAKE W.M.					
SERIAL NO. S1-F					
SERIAL NO. 003682					
1.2 300					

# Duke Drilling Company, Inc.

GREAT BEND, KANSAS

# DAILY DRILLING RECORD

FOR 24 HOURS ENDING AT MIDNIGHT 5-22 19 97 RIG NO. #1  
 WELL OWNER MTM LEASE BURK HOLDER WELL NO. 1-22  
 SECTION 22 TOWNSHIP 31<sup>S</sup> RANGE 7<sup>W</sup> COUNTY HARPER STATE KANS.

IF INJURED: SIGN AND DESCRIBE INJURY UNDER REMARKS

WE HAVE NOT BEEN INJURED THIS DAY

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION	240	
3710	3930			DRILLER	DON KNOLL
				DERRICKMAN	RANDY BETHEL
Rig Sev 1/2"	1/4 1/2		ORIGINAL	MOTORMAN	GARY THURP
DRlg	7'14"			HELPER	DOUG CHISM
				HELPER	

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. <u>#2</u>	REMARKS: 11:00 to 11:15 Rig Sev. - 11:15 to 7:00 DRlg				
SIZE <u>7 7/8</u>					
MAKE <u>W.M.</u>					
SERIAL NO. <u>51-F</u>					
SERIAL NO. <u>003682</u>					
<u>76</u>					

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION		
3930	4038		1/4" C	DRILLER	Glenn D. Reach
			20 Gal	DERRICKMAN	Dwain L. Reach
			1- Colusia	240	
			1- DRlg	MOTORMAN	Randolph A. Reach
			2- S. Ash	HELPER	Todd W. Sen
			1- Pie R	HELPER	
Foul 4 1/2"					

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. <u>6</u>	REMARKS: 7:00 to 7:15 D.L.S., 7:15 to 7:30 J.R.C. @ 3946, 7:30 to 10:15 D.L.S.				
SIZE <u>7 7/8</u>	10:15 to 11:15 C.F.S. @ 4000, 11:15 to 12:30 D.L.S., 12:30 to 2:15 C.F.S. @ 4038				
MAKE <u>W.M.</u>	2:15 to 2:45 13 STAND SHORT T.P. @ 4100 to 3:00 C.F.C.H.				
SERIAL NO. <u>51-F</u>					
SERIAL NO. <u>003682</u>					
<u>80</u>					

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION	305	
4038				DRILLER	Jimmy Harrell
			Dst #1 4027-4038	DERRICKMAN	Randy Bethel
			Run 30-20-30-20	MOTORMAN	Mike Cochran
				HELPER	David Sandburn
				HELPER	

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO.	REMARKS: 3:00 3:45 C.T.C.H. 3:45 5:30 O.J.T. #1 13.4 5:30 6:00 Make up Tool				
SIZE	2:00 2:15 T.W. Tool 2:15 10:30 TO 13 10:30 11:00 O.J.T. #1 Tool				
MAKE					
SERIAL NO.					
SERIAL NO.					

# Duke Drilling Company, Inc.

GREAT BEND, KANSAS

# DAILY DRILLING RECORD

FOR 24 HOURS ENDING AT MIDNIGHT 5-23 1997 RIG NO. #1  
 WELL OWNER MTM LEASE BURKHOLDER WELL NO. 1-22  
 SECTION 22 TOWNSHIP 31<sup>S</sup> RANGE 7<sup>W</sup> COUNTY HARPER STATE KANS.

IF INJURED: SIGN AND DESCRIBE INJURY UNDER REMARKS

WE HAVE NOT BEEN INJURED THIS DAY

FROM	DRILLED TO	FEET DRILLED	FORMATION	240
4038	4095			DRILLER DON KNOLL
			ORIGINAL	DERRICKMAN RANDY BETHEL
DSP*	3 1/4			MOTORMAN GARY THORP
CTCH	1			HELPER DOUG CHISM
DRLO	2 1/2			
JOC	1 1/4			

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. #2	REMARKS: 11:00 to 12:00 FINISH PULLING TEST - 12:00 to 12:30 BRAKE & LAY				
SIZE 7 7/8	DOWN TOOL - 12:30 to 2:15 RUN BIT #2 T.B. - 2:15 to 3:15 CTCH @ 4038				
MAKE WM	3:15 to 7:00 DRG				
SERIAL NO. S1-F					
SERIAL NO. 003682					

FROM	DRILLED TO	FEET DRILLED	FORMATION	240
4095	4224			DRILLER Cabot D Reuch
			15. Gel	DERRICKMAN Darrell L Reuch
			2. CRUSIC	MOTORMAN Kenneth C Reuch
			2.6.5	HELPER Todd ELSEN
			2. SASH	
			1/2 FAC	
Fuel 35"				
Prod 92%				

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. 2	REMARKS: 7:00 to 7:30 P.R.G. Dunks Edg Fuel Linos @ 4101, 7:30 to 3:00 D.Lg				
SIZE 7 7/8					
MAKE WM					
SERIAL NO. S1 F					
SERIAL NO. 003682					

FROM	DRILLED TO	FEET DRILLED	FORMATION	305
4224				DRILLER Jimmy Harrell
				DERRICKMAN Mike Cochran
				MOTORMAN David Sandborn
D.Lg	7 1/4			HELPER Todd Elsen
Big	1/1			
Conn	1/2			

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. 2	REMARKS: 3:00 to 11:00 D.Lg w/ 1/4 Rig				
SIZE 7 7/8					
MAKE WM					
SERIAL NO. 003682					
SERIAL NO. 98					

**Duke Drilling Company, Inc.**  
GREAT BEND, KANSAS

**DAILY DRILLING RECORD**

FOR 24 HOURS ENDING AT MIDNIGHT 5-24 19 97 RIG NO. 1  
 WELL OWNER MTM LEASE BURKHOLDER WELL NO. 1-22  
 SECTION 22 TOWNSHIP 31<sup>S</sup> RANGE 7<sup>W</sup> COUNTY HARPER STATE KANS

IF INJURED: SIGN AND DESCRIBE INJURY UNDER REMARKS

WE HAVE NOT BEEN INJURED THIS DAY

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
4335	4475			240 DON KNOLL
				DERRICKMAN RANDY BETHEL
				MOTORMAN GARY THORP
				HELPER DOUG CHISM
				HELPER
<b>ORIGINAL</b>				
DRILLING BITS: RIG SEV. 114, DRIG 411/2, CFSR 4424 114, REPAIR 11/2, JIC 1/2 CASING RECORD: SIZE, BOTTOMED AT, CEMENT USED, DEFLECTION SURVEY, DEGREES OFF RUN NO. #2, SIZE 7 7/8, MAKE WM, SERIAL NO. 51-F, 003682, 10212 REMARKS: 11:00 to 11:15 Rig Sev. - 11:15 to 3:15 DRIG - 3:15 to 4:00 CFSR 4424 4:20 to 4:45 DRIG - 4:45 to 6:15 WORK ON PUMP - 6:15 to 7:00 DRIG.				

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
4475	4670		M.S.S.	CRABER D RUCK
			15-Gal	DERRICKMAN DERRICKMAN
			1-S. Ash	240 MOTORMAN
			2-AUSTRIE	KENNETH G RUCK
			1-Pac	HELPER TODD ELSEN
			2-Lig	HELPER
DRILLING BITS: RUN NO. 2, SIZE 7 1/8, MAKE WM, SERIAL NO. 51-F, 003682, 10914 CASING RECORD: SIZE, BOTTOMED AT, CEMENT USED, DEFLECTION SURVEY, DEGREES OFF REMARKS: 7:00 to 7:15 D.L.G., 7:15 to 7:30 R.C. @ 4503, 7:30 to 1:00 D.L.G. 1:00 to 1:15 change actuator on pump @ 4657, 1:15 to 2:00 D.L.G., 2:00 to 2:15 WA.1 @ 4665, 2:15 to 3:00 D.L.G.				

FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
4170				305 TIMMY HARRELL
				DERRICKMAN MIKE COCHRAN
				MOTORMAN TODD ELSEN
				HELPER DAVID SANBURN
				HELPER
DRILLING BITS: RUN NO. 3, SIZE 7 1/8, MAKE WM, SERIAL NO. 51-F, 003682, 10914 CASING RECORD: SIZE, BOTTOMED AT, CEMENT USED, DEFLECTION SURVEY, DEGREES OFF REMARKS: 3:00 4:30 DRIG 4:30 4:45 Rig 4:45 11:00 DRIG				

# Duke Drilling Company, Inc.

GREAT BEND, KANSAS

# DAILY DRILLING RECORD

FOR 24 HOURS ENDING AT MIDNIGHT 5-25 19 97 RIG NO. #1  
 WELL OWNER MTM LEASE BURK HOLDER WELL NO. 1-22  
 SECTION 22 TOWNSHIP 31<sup>s</sup> RANGE 7<sup>w</sup> COUNTY HARPER STATE KANS

IF INJURED: SIGN AND DESCRIBE INJURY UNDER REMARKS

WE HAVE NOT BEEN INJURED THIS DAY

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
4760	4793		<b>ORIGINAL</b>	240 DON KNOLL
				DERRICKMAN RANDY BETHEL
Rig Sev 12.0	-			MOTORMAN GARY THORP
DRG 2'4	-			HELPER DOUG CHISM
CFS 4793 DST #2 1'4	4'1/2			HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. #2	REMARKS: 11:00 to 1:15 DRG - 1:15 to 2:30 CFS @ 4793 - 2:30 to 4:30 PULL				
SIZE 7 7/8	OUT P/DST #2 - 4:30 to 5:00 PICK UP TOOL - 5:00 to 6:30 RUN TOOL				
MAKE W.M.	T.B. - 6:30 to 7:00 TEST				
SERIAL NO. S.F.					
SERIAL NO. 203682					
118 3/4					

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
4793	TD		Simpson	240 Cedon D Roche
				DERRICKMAN Dwain L Roche
				MOTORMAN Kenneth G Roche
				HELPER TODD EISEN
				HELPER

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO. 3	REMARKS: 7:00 to 9:30 OB w/ DST #2, 9:30 to 11:15 PULL DST, 11:15 to 1:05				
SIZE 7 7/8	Back & Lay down Tools, 11:05 to 1:00 IN w/ B.I. 1:00 to 3:00 CDP				
MAKE W.M.					
SERIAL NO. 30					
SERIAL NO. (RL)					

DRILLED FROM	DRILLED TO	FEET DRILLED	FORMATION	DRILLER
			1 <sup>st</sup> Plug @ 1250 355x	Jimmy Herrell
			750 355x	DERRICKMAN Mike Cochran
			310 355x	MOTORMAN Richard Bittle
			60 255x	HELPER DAVID Sanborn
			RAT 155x mouse 105x	HELPER
			165x 6 3/4 1/2 Gel 1/2 Flowxale	
			water well 105x	

DRILLING BITS	CASING RECORD: SIZE	BOTTOMED AT	CEMENT USED	DEFLECTION SURVEY	DEGREES OFF
RUN NO.	REMARKS: 3:00 - 4:00 - L.DAG 4:00 - 6:30 G31 w/ Plugging 5'				
SIZE	Plug down @ 6:45 pm				
MAKE					
SERIAL NO.					
SERIAL NO.					

JERRY A. SMITH

PETROLEUM GEOLOGIST

ORIGINAL

GEOLOGICAL WELL REPORT

MTM PETROLEUM, INC.  
BURKHOLDER #1-22  
200'S & 100'W of C-NW-NW  
Sec. 22-31-7W  
HARPER COUNTY, KANSAS  
15-077-21325

RECEIVED  
KANSAS CORP COMM  
1997 APR -2 12:13

May 28, 1997

ORIGINAL

Mr. Marvin A. Miller  
MTM Petroleum, Inc.  
P.O. Box 82  
Spivey, KS 67142-0082

RE: MTM Petroleum, Inc.  
Burkholder #1-22  
200'S & 100'W of C-NW-NW  
Sec. 22-31-7W  
Harper County, Kansas  
Wildcat Test  
API No. 15-077-21,325

Dear Mr. Miller:

Submitted herewith is the geological report concerning the above-captioned test. Data pertinent to the operation are tabulated below.

Spud:	5/17/97	Complete:	5/25/97
Contractor:	Duke Drlg., Rig #1	Toolpusher:	Mike Godfrey
Surf. Csg.:	8 5/8" @ 259'	Prod'n. Csg.:	None
Drill Time:	1400' to RTD	Samples:	1400' to RTD
DST's:	Western (2)	Cores:	None
Mud:	Dombar Mud	Open-hole Log:	None
Gas Detector:	None		

Bit Record:	Walker-McDonald	Dev. Surveys:	1/4° @ 260'
	7 7/8" 51-F (New)		1° @ 4038'
	In: 260'		
	Out: 4793'		
	Hrs: 118 3/4		

Geological formation tops as picked from the rotary samples follow. All measurements are from the kelly bushing (KB) elevation.

Elevations: 1540 GL 1548 KB

Heebner Shale	3297 (-1749)	B/Kansas City	4098 (-2550)
Iatan Lime	3529 (-1981)	"Conglomerate"	4386 (-2838)
Stalnaker Sand	3588 (-2040)	Mississippian	4408 (-2860)
B/Stalnaker	3714 (-2166)	Kinderhook Shale	4665 (-3117)
Kansas City	3853 (-2305)	Chattanooga Shale	4751 (-3203)
Swope Lime Poro.	3994 (-2446)	Simpson	4789 (-3241)
Hertha Lime Poro.	4029 (-2481)	Rotary Total Depth	4793 (-3245)

Geological wellsite supervision commenced at 3250' and was maintained through total depth. Rotary samples were examined in both the wet and dry states and were subjected to UV light examination. Zones of interest encountered in the Burkholder #1-22 were described and evaluated as follows. All depth intervals are from rotary measurements as no open-hole log was run.

3588-3600 STALNAKER SAND: Sandstone. White to light gray. Fine grained. Well rounded and well sorted. Micaceous in part. Friable with poor intergranular porosity development. No oil or gas shows noted.

3994-4014 SWOPE LIMESTONE: Limestone. Brown. Fine crystalline. Oolitic with good oomoldic porosity development. No oil or gas shows noted.

4029-4040 HERTHA LIMESTONE: Limestone. Brown. Fine crystalline. Oolitic with good oomoldic and inter-oolitic porosity development. Wet samples carried a weak to fair odor, scattered (10% to 15%) fluorescence, slight show of gas bubbles and a very slight show of light free oil. This zone was evaluated by Drill Stem Test #1.

DST #1: 4027-4038 (30-60-30-60)

Fair blow (4½") on first flow period. Weak blow (2") on second flow period.

Recovered: 120' of Slightly Muddy Salt Water (15% Mud, 85% Water). No shows of oil or gas.

Water Chlorides: 36,500 ppm

Flow Pressures: 9-48# / 96-106#

Shut-in Pressures: 1610-1610#

Hydrostatic Pressures: 2025-1986#

Bottom-hole Temp.: 116° F

4408-4424 SOLID MISSISSIPPIAN: Chert. White. Opaque. Devitrified. Partially to highly weathered with a "cottony" texture. With chert white, opaque, fresh, dense to fair tripolitic porosity development. No oil or gas shows noted.

4789-4793 SIMPSON: This 4' interval consisted of both dolomite and sandstone. The dolomite was brown, fine to medium crystalline, sucrosic in part and exhibited poor intercrystalline porosity development. The dolomite carried a "questionable" dark brown staining. The sandstone was white to light gray in color, medium grained, well rounded and well sorted, friable with good intergranular porosity development. The wet samples carried a weak odor and spotty (10%) fluorescence. The sandstone carried fair brown staining to partial saturation, a poor show of gas bubbles and a very slight show of brown free oil. This zone was evaluated by Drill Stem Test #2.



DST #2: 4789-4793 (30-45-30-60)

Strong blow (bottom of bucket) during both flow periods.

Gas to Surface 3 minutes into Final Shut-in Period --  
too small to measure.

Recovered: 135' of Slightly Oil & Gas Cut Watery Mud  
(1% Oil, 15% Gas, 30% Water, 54% Mud).

840' of Slightly Oil & Gas Cut Salt Water  
(1% Oil, 3% Gas, 96% Water).

Water Chlorides: 78,000 ppm

Flow Pressures: 67-222# / 290-406#

Shut-in Pressures: 1788-1788#

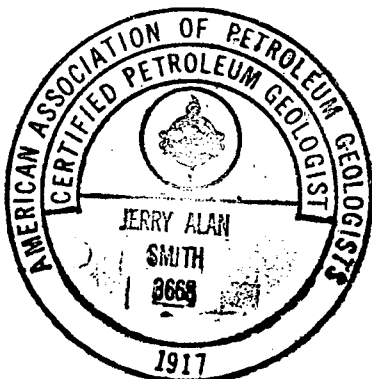
Hydrostatic Pressures: 2587-2456#

Bottom-hole Temp.: 122° F

With only 4' of Simpson penetrated and without the benefit of an open-hole log, it is difficult to differentiate a separate dolomite interval and a separate sandstone interval. It is felt that both do exist as distinct dolomite pieces and distinct sandstone clusters were observed as opposed to "sandy dolomite or dolomitic sand". The better and greater amount of oil and gas shows were noted in the sandstone.

Referring to Exhibit 1, it will be noted that the Burkholder #1-22 ran generally structurally higher than Control Wells A, B, C and D and lower than Control Wells E and F. This was expected prior to drilling. It should also be noted that the Burkholder #1-22 exhibited the thinnest Mississippian to Simpson interval of all of the surrounding control wells, possibly indicating presence on or very near an Ordovician structure.

The Burkholder #1-22 was not high enough, structurally, to develop a commercial pay zone in the Simpson. Because of the negative results of Drill Stem Tests #1 and #2, the decision was made to plug and abandon the Burkholder #1-22 as non-commercial on May 25, 1997. Pursuant to the Kansas Geological Survey sample request letter of May 15, 1997, the rotary samples from the Burkholder #1-22 were delivered by the undersigned to the Wichita Well Sample Library on May 27, 1997.

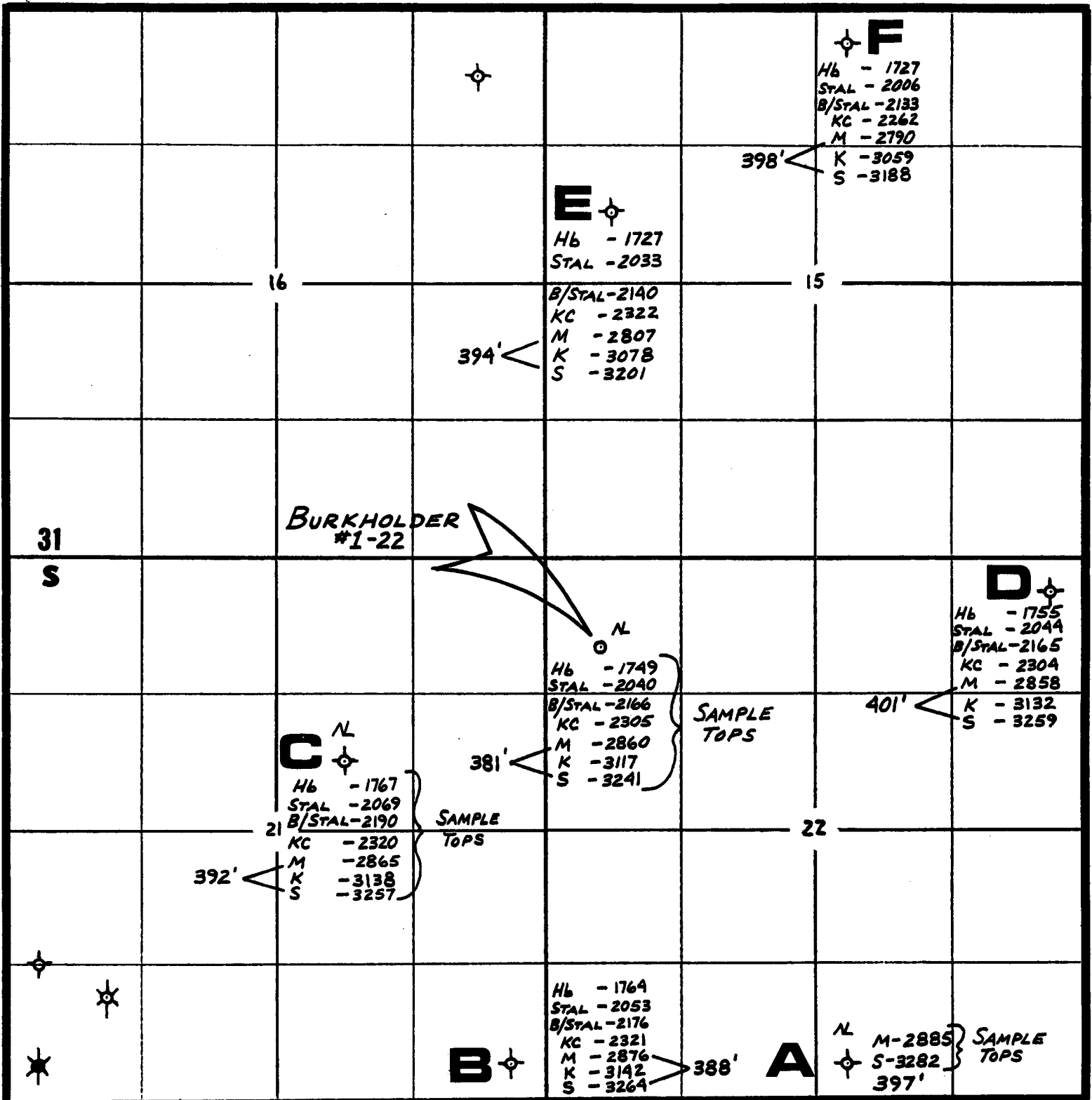


Respectfully submitted,

Jerry A. Smith, C.P.G. #3668

Wellsite Geologist

7W



MTM PETROLEUM, INC.

BURKHOLDER PROSPECT  
HARPER COUNTY, KANSAS

Control Wells for Structural Comparison  
(Subsea Data Calculated from Open-hole  
Logs Unless Otherwise Noted)

4" = 1 Mi.



JERRY A. SMITH

PETROLEUM GEOLOGIST

5/97

EXHIBIT 1

DAILY DRILLING PROGRESS

5/17/97: MIRT. RUR. Spud @ 8:00 PM. Set 8 5/8", 20# Surf.  
Csg. @ 259'. PD @ 3:15 AM (5/18). WOC 8 hrs. 1/4°  
Dev. @ 260'.

5/18/97: 260' WOC @ 7:00 AM. Drill Plug @ 11:15 AM.

5/19/97: Drlg. @ 1415' @ 7:00 AM. 1155' last 19 3/4 hrs.

5/20/97: Drlg. @ 2250' @ 7:00 AM. 835' last 24 hrs.

5/21/97: Drlg. @ 3135' @ 7:00 AM. 885' last 24 hrs. Mud up  
@ 3300'.

5/22/97: Drlg. @ 3941' @ 7:00 AM. 806' last 24 hrs. DST #1  
4029-4038 (Hertha). Test tool open @ 7:30 PM. Test  
out @ 12:00 AM (5/23). 1° Dev. @ 4038'.

5/23/97: Drlg. @ 4098' @ 7:00 AM. 157' last 24 hrs.

5/24/97: Drlg. @ 4489' @ 7:00 AM. 391' last 24 hrs.

5/25/97: 4793' @ 7:00 AM. 304' last 24 hrs. DST #2 4789-4793  
(Simpson). Test tool open @ 6:40 AM. Test out @  
11:30 AM. RTD 4793'. No log. Prep to LDDP and P&A.

ORIGINAL

DST REPORT

15-077-21325

GENERAL INFORMATION

DATE : 5/22/97  
CUSTOMER : MTM PETROLEUM INC  
WELL : #1-22 TEST: 1  
ELEVATION: 1548 KB  
SECTION : 22  
RANGE : 7W COUNTY: HARPER  
GAUGE SN#: 13400 RANGE : 3950  
TICKET : 22317  
LEASE : BURKHOLDER  
GEOLOGIST:  
FORMATION: KANSAS CITY HERTHA  
TOWNSHIP : 31S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4027.00 ft TO: 4038.00 ft TVD: 4038.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL  
DEPTH OF RECORDERS: 4030.0 ft 4033.0 ft  
TEMPERATURE: 116.0  
DRILL COLLAR LENGTH: 0.0 ft I.D.: 0.000 in  
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in  
DRILL PIPE LENGTH : 4005.0 ft I.D.: 3.800 in  
TEST TOOL LENGTH : 22.0 ft TOOL SIZE : 5.500 in  
ANCHOR LENGTH : 11.0 ft ANCHOR SIZE: 5.500 in  
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in  
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH  
PACKER DEPTH: 4022.0 ft SIZE: 6.630 in  
PACKER DEPTH: 4027.0 ft SIZE: 6.630 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : DUKE RIG 1  
MUD TYPE : CHEMICAL VISCOSITY : 52.00 cp  
WEIGHT : 9.100 ppg WATER LOSS: 11.200 cc  
CHLORIDES : 8700 ppm  
JARS-MAKE :  
DID WELL FLOW?: NO SERIAL NUMBER:  
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW SLOWLY BUILDING TO  
FAIR BLOW - 4 1/2 INCHES IN BUCKET. FINAL FLOW  
PERIOD WEAK 2 INCH BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
120.0	0.0	0.0	85.0	15.0	SLIGHTLY MUDDY SALTWATER CHLORIDES 36500 PPM
0.0	0.0	0.0	0.0	0.0	

RATE INFORMATION

OIL VOLUME:	0.0000 STB	TOTAL FLOW TIME:	60.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	0.0000 STB/D
MUD VOLUME:	0.2525 STB	AVERAGE WATER RATE:	40.3959 STB/D
WATER VOLUME:	1.4307 STB		
TOTAL FLUID :	1.6832 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2025.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	9.00	48.00
INITIAL SHUT-IN	60.00		1610.00
FINAL FLOW	30.00	96.00	106.00
FINAL SHUT-IN	60.00		1610.00

FINAL HYDROSTATIC PRESSURE: 1986.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2041.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	5.78	42.83
INITIAL SHUT-IN	60.00		1613.34
FINAL FLOW	30.00	103.90	96.64
FINAL SHUT-IN	60.00		1608.01

FINAL HYDROSTATIC PRESSURE: 1975.00

Company: MTM PETROLEUM INC  
Well: #1-22 BURKHOLDER  
Field: TKT 22317 DST 1

[Thursday: May. 22, 1997]  
Page 1

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
START FLOW 1				
1	0	19:25:0	0.0000	5.78
10	0	19:26:5	0.0180	5.75
19	0	19:27:10	0.0360	7.33
28	0	19:28:14	0.0540	8.91
37	0	19:29:19	0.0720	10.49
46	0	19:30:24	0.0900	12.88
55	0	19:31:29	0.1080	14.47
64	0	19:32:34	0.1260	16.05
73	0	19:33:39	0.1440	16.82
82	0	19:34:43	0.1620	18.41
91	0	19:35:48	0.1800	19.99
100	0	19:36:53	0.1980	21.57
109	0	19:37:58	0.2160	23.15
118	0	19:39:3	0.2340	24.74
127	0	19:40:7	0.2520	26.32
136	0	19:41:12	0.2700	27.10
145	0	19:42:17	0.2880	28.68
154	0	19:43:22	0.3060	29.45
163	0	19:44:27	0.3240	31.04
172	0	19:45:31	0.3420	32.62
181	0	19:46:36	0.3600	33.39
190	0	19:47:41	0.3780	34.98
199	0	19:48:46	0.3960	35.75
208	0	19:49:51	0.4140	37.33
217	0	19:50:55	0.4320	38.11
226	0	19:52:0	0.4500	39.69
235	0	19:53:5	0.4680	41.28
244	0	19:54:10	0.4860	41.24
253	0	19:55:14	0.5040	42.83
END FLOW 1				
START SHUTIN 1				
262	0	19:56:21	0.5224	81.52
270	0	19:57:27	0.5408	309.82
277	0	19:58:30	0.5583	642.25
284	0	19:59:36	0.5766	1054.24
292	0	20:0:42	0.5949	1274.57
300	0	20:1:42	0.6117	1347.72
309	0	20:2:49	0.6302	1394.85
318	0	20:3:54	0.6484	1420.84
327	0	20:5:0	0.6666	1440.32
336	0	20:6:5	0.6848	1458.18
345	0	20:7:11	0.7029	1471.97
354	0	20:8:16	0.7210	1483.33
363	0	20:9:21	0.7391	1494.68
372	0	20:10:26	0.7572	1502.81
381	0	20:11:31	0.7753	1511.83
390	0	20:12:36	0.7933	1519.20
399	0	20:13:41	0.8114	1526.58
408	0	20:14:46	0.8295	1533.95
417	0	20:15:51	0.8475	1538.03
426	0	20:16:56	0.8655	1543.76
435	0	20:18:1	0.8836	1548.66
444	0	20:19:6	0.9016	1551.92
453	0	20:20:11	0.9196	1555.18

WESTERN TESTING CO., INC.

Company: MTM PETROLEUM INC  
 Well: #1-22 BURKHOLDER  
 Field: TKT 22317 DST 1

[Thursday: May. 22, 1997]  
 Page 2

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
462	0	20:21:16	0.9376	1560.09
471	0	20:22:20	0.9557	1563.35
480	0	20:23:25	0.9737	1566.60
489	0	20:24:30	0.9917	1569.04
498	0	20:25:35	1.0097	1572.30
507	0	20:26:40	1.0277	1575.56
516	0	20:27:45	1.0457	1578.00
525	0	20:28:50	1.0637	1580.43
534	0	20:29:54	1.0818	1583.69
543	0	20:30:59	1.0998	1585.31
552	0	20:32: 4	1.1178	1587.74
561	0	20:33: 9	1.1358	1588.53
570	0	20:34:14	1.1538	1590.15
579	0	20:35:18	1.1718	1591.76
588	0	20:36:23	1.1898	1593.38
597	0	20:37:28	1.2078	1594.99
606	0	20:38:33	1.2258	1596.60
615	0	20:39:38	1.2438	1597.39
624	0	20:40:42	1.2618	1599.01
633	0	20:41:47	1.2798	1599.80
642	0	20:42:52	1.2978	1601.41
651	0	20:43:57	1.3158	1602.20
660	0	20:45: 2	1.3338	1603.82
669	0	20:46: 6	1.3518	1604.61
678	0	20:47:11	1.3697	1605.40
687	0	20:48:16	1.3877	1606.19
696	0	20:49:21	1.4057	1607.80
705	0	20:50:26	1.4237	1607.77
714	0	20:51:30	1.4417	1609.39
723	0	20:52:35	1.4597	1610.18
732	0	20:53:40	1.4777	1610.97
741	0	20:54:45	1.4957	1611.76
750	0	20:55:49	1.5137	1612.55
759	0	20:56:54	1.5317	1613.34
		END SHUTIN 1		
		START FLOW 2		
765	0	20:59:33	1.5757	103.90
774	0	21: 0:38	1.5937	103.87
783	0	21: 1:42	1.6117	103.04
792	0	21: 2:47	1.6297	101.39
801	0	21: 3:52	1.6476	98.94
810	0	21: 4:56	1.6656	96.49
819	0	21: 6: 1	1.6836	95.65
828	0	21: 7: 6	1.7015	93.20
837	0	21: 8:10	1.7195	91.55
846	0	21: 9:15	1.7375	91.52
855	0	21:10:20	1.7555	91.49
864	0	21:11:25	1.7735	91.46
873	0	21:12:29	1.7914	89.81
882	0	21:13:34	1.8094	89.78
891	0	21:14:39	1.8274	89.75
900	0	21:15:43	1.8454	89.72
909	0	21:16:48	1.8634	89.69
918	0	21:17:53	1.8813	90.47
927	0	21:18:58	1.8993	90.44

WESTERN TESTING CO., INC.

Company: MTM PETROLEUM INC  
Well: #1-22 BURKHOLDER  
Field: TKT 22317 DST 1

[Thursday: May. 22, 1997]  
Page 3

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
936	0	21:20: 2	1.9173	91.21
945	0	21:21: 7	1.9353	91.99
954	0	21:22:12	1.9533	91.96
963	0	21:23:17	1.9713	92.73
972	0	21:24:22	1.9893	93.51
981	0	21:25:26	2.0073	93.48
990	0	21:26:31	2.0253	94.25
999	0	21:27:36	2.0433	96.64
		END FLOW 2		
		START SHUTIN 2		
1003	0	21:28: 5	2.0515	115.18
1007	0	21:28:37	2.0601	179.71
1015	0	21:29:43	2.0786	412.05
1022	0	21:30:43	2.0954	676.29
1029	0	21:31:45	2.1126	981.56
1036	0	21:32:46	2.1295	1262.95
1044	0	21:33:48	2.1465	1361.31
1053	0	21:34:54	2.1649	1398.68
1062	0	21:36: 0	2.1832	1427.92
1071	0	21:37: 5	2.2014	1449.03
1080	0	21:38:11	2.2196	1464.45
1089	0	21:39:16	2.2377	1478.24
1098	0	21:40:21	2.2558	1489.59
1107	0	21:41:26	2.2739	1499.21
1116	0	21:42:31	2.2920	1506.68
1125	0	21:43:36	2.3100	1514.05
1134	0	21:44:41	2.3281	1521.24
1143	0	21:45:46	2.3461	1527.96
1152	0	21:46:51	2.3642	1533.98
1161	0	21:47:56	2.3822	1539.34
1170	0	21:49: 1	2.4003	1543.98
1179	0	21:50: 6	2.4183	1547.94
1188	0	21:51:11	2.4363	1551.41
1197	0	21:52:16	2.4543	1554.56
1206	0	21:53:21	2.4723	1557.52
1215	0	21:54:25	2.4904	1560.34
1224	0	21:55:30	2.5084	1563.04
1233	0	21:56:35	2.5264	1565.61
1242	0	21:57:40	2.5444	1568.08
1251	0	21:58:45	2.5624	1570.46
1260	0	21:59:50	2.5804	1572.78
1269	0	22: 0:54	2.5984	1575.06
1278	0	22: 1:59	2.6164	1576.87
1287	0	22: 3: 4	2.6344	1579.31
1296	0	22: 4: 9	2.6524	1580.92
1305	0	22: 5:14	2.6704	1582.53
1314	0	22: 6:19	2.6884	1584.97
1323	0	22: 7:23	2.7064	1585.76
1332	0	22: 8:28	2.7244	1587.38
1341	0	22: 9:33	2.7424	1588.99
1350	0	22:10:38	2.7604	1590.60
1359	0	22:11:42	2.7784	1591.39
1368	0	22:12:47	2.7964	1593.01
1377	0	22:13:52	2.8145	1594.62
1386	0	22:14:57	2.8324	1595.41

WESTERN TESTING CO., INC.



Company: MTM PETROLEUM INC  
Well: #1-22 BURKHOLDER  
Field: TKT 22317 DST 1

[Thursday: May. 22, 1997]  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
1395	0	22:16: 2	2.8505	1597.03
1404	0	22:17: 6	2.8685	1597.82
1413	0	22:18:11	2.8865	1598.61
1422	0	22:19:16	2.9044	1599.40
1431	0	22:20:21	2.9224	1600.19
1440	0	22:21:26	2.9404	1600.98
1449	0	22:22:30	2.9584	1601.77
1458	0	22:23:35	2.9764	1602.56
1467	0	22:24:40	2.9944	1602.53
1476	0	22:25:45	3.0124	1602.50
1485	0	22:26:49	3.0304	1603.29
1494	0	22:27:54	3.0484	1604.08
1503	0	22:28:59	3.0664	1604.05
1512	0	22:30: 4	3.0844	1604.84
1521	0	22:31: 8	3.1023	1605.63
1530	0	22:32:13	3.1203	1606.42
1539	0	22:33:18	3.1383	1607.21
1548	0	22:34:23	3.1563	1607.97
1557	0	22:35:28	3.1743	1608.01

WESTERN TESTING CO., INC.



WESTERN TESTING CO., INC.  
FORMATION TESTING

TICKET No. 22317

P. O. BOX 1599 PHONE (316) 262-5861  
WICHITA, KANSAS 67201

Elevation 1540 KG Formation KC Heath Eff. Pay      Ft.

District Pratt Date 5-22-97 Customer Order No.     

COMPANY NAME MTM Petroleum Inc

ADDRESS Box 82 Spirey, KS

LEASE AND WELL NO. Burkholder #1-22 COUNTY HARPER STATE KS Sec. 22 Twp. 31S Rge. 7W

Mail Invoice To Turn Key No. Copies Requested Reg

Co. Name #1-22 Burkholder Address      No. Copies Requested Reg

Mail Charts To      Address      No. Copies Requested Reg

Formation Test No. 1 Interval Tested From 4027 ft. to 4038 ft. Total Depth 4038 ft.

Packer Depth 4022 ft. Size 6 3/8 in. Packer Depth      ft. Size      in.

Packer Depth 4027 ft. Size 6 3/8 in. Packer Depth      ft. Size      in.

Depth of Selective Zone Set     

Top Recorder Depth (Inside) 4030 ft. Recorder Number 13400 Cap 3950

Bottom Recorder Depth (Outside) 4033 ft. Recorder Number 2604 Cap 4150

Below Straddle Recorder Depth      ft. Recorder Number      Cap     

Drilling Contractor Duke #1 Drill Collar Length      I. D.      in.

Mud Type Chemical Viscosity 52 Weight Pipe Length      I. D.      in.

Weight 9.1 Water Loss 11.2 cc. Drill Pipe Length 4005 I. D. 3.8 in.

Chlorides 8700 P.P.M. Test Tool Length 22 ft. Tool Size 5/2 in.

Jars: Make      Serial Number      Anchor Length 11 ft. Size 5/2 in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 x 1 1/2 in.

Blow: work slow steady building top in blow 4 1/2" submerged on 18" flow period

work 2" blow on final flow period

Recovered 120 ft. of slightly muddy salt water 18% mud 85% water

Recovered      ft. of     

Recovered      ft. of     

Recovered      ft. of     

Recovered      ft. of     

Chlorides 36,500 P.P.M. Sample Jars used 3 Remarks:     

Time On Location 4:45 A.M. Time Pick Up Tool 5:35 P.M. Time Off Location 1:15 A.M.

Time Set Packer(s) 7:25 P.M. Time Started Off Bottom 10:25 P.M. Maximum Temperature 116° F

Initial Hydrostatic Pressure      (A) 2025 P.S.I. 2041

Initial Flow Period      Minutes 30 (B) 9 P.S.I. to (C) 48 P.S.I.

Initial Closed In Period      Minutes 60 (D) 1610 P.S.I.

Final Flow Period      Minutes 30 (E) 96 P.S.I. to (F) 106 P.S.I.

Final Closed In Period      Minutes 60 (G) 1610 P.S.I.

Final Hydrostatic Pressure      (H) 1986 P.S.I. 1975

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 18% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By       
Signature of Customer or his authorized representative

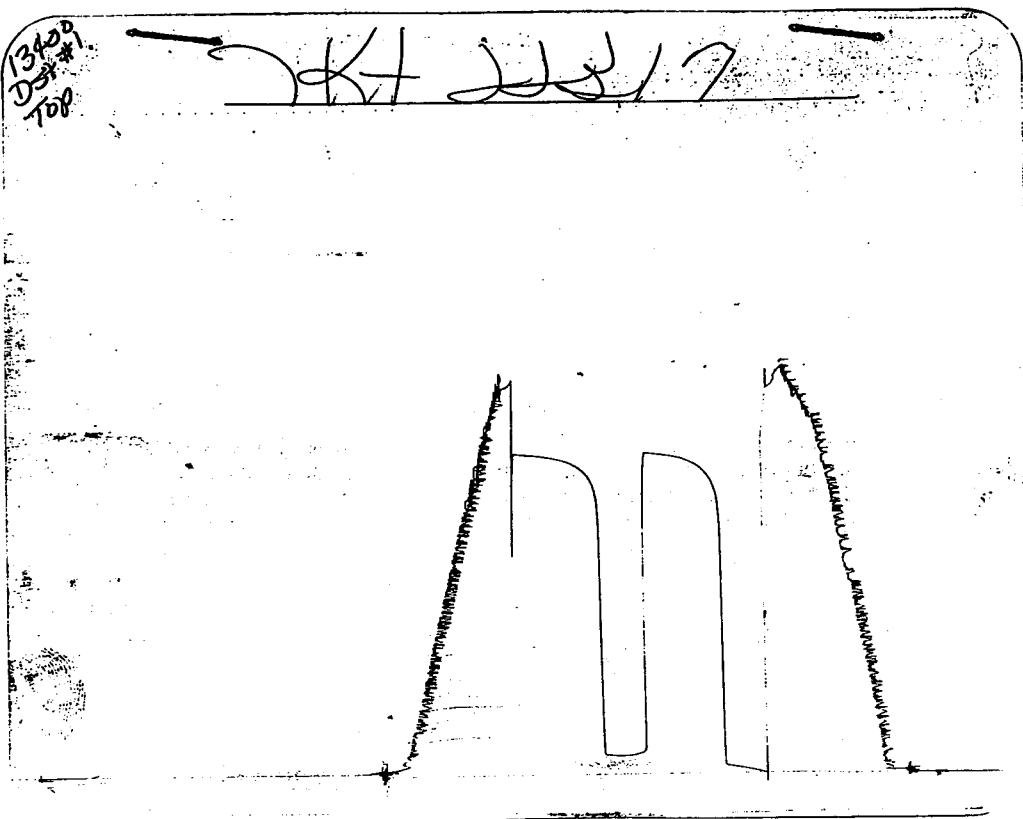
Western Representative WK Dager Thank You!

FIELD INVOICE

- Open Hole Test \$
- Misrun \$
- Straddle Test \$
- Jars \$
- Selective Zone \$
- Safety Joint \$
- Standby \$
- Shale Packer \$
- Extra Packer \$
- Circ. Sub. \$
- Mileage \$
- Fluid Sampler \$
- Extra Charts \$

13400  
DST #1  
TOP

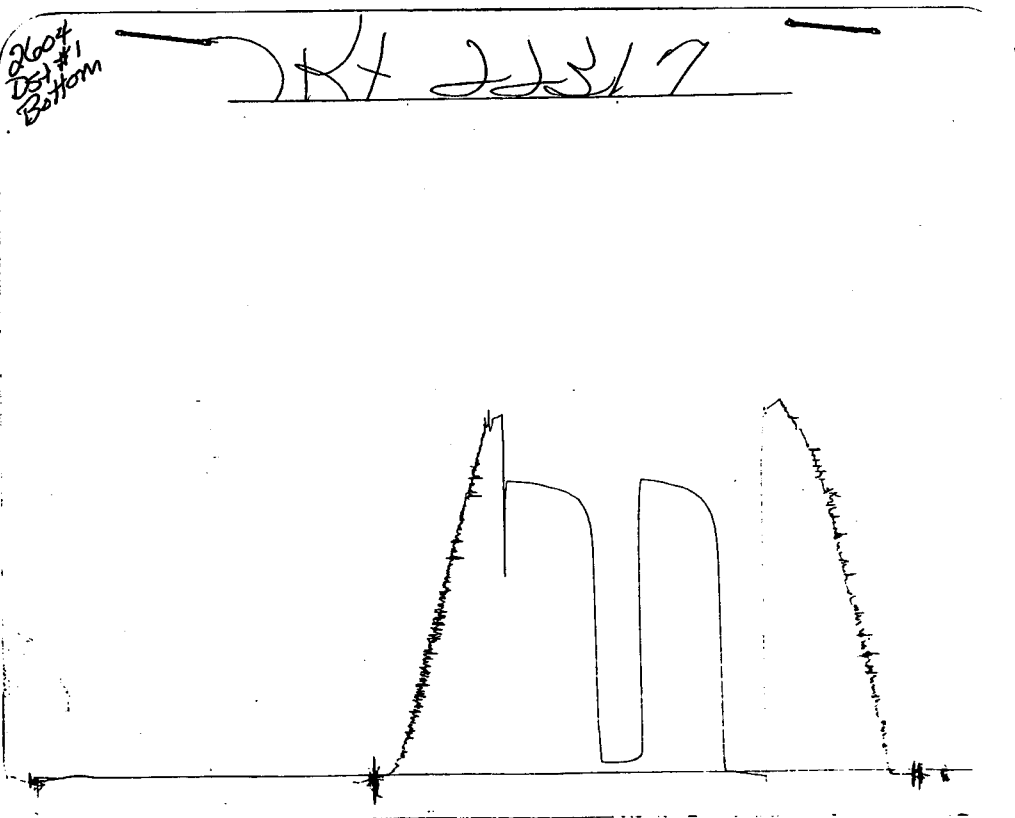
KT 22317



Inside Recorder

13400  
DST #1  
Bottom

KT 22317



Outside Recorder

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2522.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	65.09	233.35
INITIAL SHUT-IN	45.00		1797.20
FINAL FLOW	30.00	307.85	430.34
FINAL SHUT-IN	60.00		1798.83

FINAL HYDROSTATIC PRESSURE: 2440.00

Company: MTM PETROLEUM INC  
Well: #1-22 BURKHOLDER  
Field: TKT 22318 DST 2

[Sunday: May. 25, 1997]  
Page 1

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
-----				
START FLOW 1				
1	0	6:40:20	0.0000	65.09
3	0	6:40:34	0.0038	72.37
8	0	6:41:10	0.0138	72.42
13	0	6:41:46	0.0237	72.48
18	0	6:42:22	0.0338	70.11
23	0	6:42:58	0.0438	69.35
28	0	6:43:34	0.0538	69.40
33	0	6:44:10	0.0639	67.84
38	0	6:44:46	0.0739	67.89
43	0	6:45:22	0.0839	67.95
48	0	6:45:58	0.0938	68.80
53	0	6:46:34	0.1038	68.86
58	0	6:47:10	0.1138	69.71
63	0	6:47:46	0.1237	70.57
68	0	6:48:21	0.1337	71.43
73	0	6:48:57	0.1436	73.10
78	0	6:49:33	0.1536	74.76
83	0	6:50: 9	0.1635	77.23
88	0	6:50:45	0.1734	78.90
93	0	6:51:20	0.1834	80.57
98	0	6:51:56	0.1933	83.84
103	0	6:52:32	0.2032	86.32
108	0	6:53: 7	0.2131	89.60
113	0	6:53:43	0.2229	93.68
118	0	6:54:18	0.2328	97.77
123	0	6:54:54	0.2426	101.85
128	0	6:55:29	0.2525	105.94
133	0	6:56: 5	0.2624	110.02
138	0	6:56:40	0.2722	114.92
143	0	6:57:16	0.2821	119.00
148	0	6:57:51	0.2919	123.09
153	0	6:58:27	0.3018	127.17
158	0	6:59: 2	0.3117	131.26
163	0	6:59:38	0.3215	135.34
168	0	7: 0:13	0.3314	139.43
173	0	7: 0:49	0.3413	143.52
178	0	7: 1:24	0.3511	147.60
183	0	7: 2: 0	0.3610	151.69
188	0	7: 2:35	0.3708	156.58
193	0	7: 3:10	0.3806	161.47
198	0	7: 3:46	0.3905	166.36
203	0	7: 4:21	0.4004	170.45
208	0	7: 4:57	0.4102	174.53
213	0	7: 5:32	0.4201	178.62
218	0	7: 6: 8	0.4299	182.71
223	0	7: 6:43	0.4398	187.60
228	0	7: 7:19	0.4496	192.49
233	0	7: 7:54	0.4595	196.58
238	0	7: 8:30	0.4693	201.47
243	0	7: 9: 5	0.4792	205.55
248	0	7: 9:41	0.4890	209.64
253	0	7:10:16	0.4989	213.73
258	0	7:10:52	0.5088	217.00
263	0	7:11:27	0.5186	221.09

WESTERN TESTING CO., INC.

Company: MTM PETROLEUM INC  
 Well: #1-22 BURKHOLDER  
 Field: TKT 22318 DST 2

[Sunday: May. 25, 1997]  
 Page 2

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
268	0	7:12: 3	0.5285	225.18
273	0	7:12:38	0.5384	229.26
278	0	7:13:14	0.5482	233.35
END FLOW 1				
START SHUTIN 1				
281	0	7:13:29	0.5524	292.27
287	0	7:13:45	0.5569	527.42
303	0	7:14:19	0.5663	1242.48
315	0	7:14:55	0.5765	1682.17
320	0	7:15:28	0.5856	1709.06
325	0	7:16: 4	0.5954	1716.62
330	0	7:16:39	0.6052	1723.63
335	0	7:17:14	0.6150	1729.87
340	0	7:17:49	0.6248	1735.21
345	0	7:18:25	0.6346	1739.72
350	0	7:19: 0	0.6445	1743.55
355	0	7:19:36	0.6544	1746.85
360	0	7:20:12	0.6643	1749.78
365	0	7:20:47	0.6742	1752.47
370	0	7:21:23	0.6841	1755.01
375	0	7:21:59	0.6940	1757.43
380	0	7:22:35	0.7040	1758.03
385	0	7:23:10	0.7139	1760.45
390	0	7:23:46	0.7239	1762.74
395	0	7:24:22	0.7338	1764.87
400	0	7:24:57	0.7437	1766.84
405	0	7:25:33	0.7536	1768.67
410	0	7:26: 9	0.7636	1770.37
415	0	7:26:45	0.7735	1771.97
420	0	7:27:21	0.7835	1773.46
425	0	7:27:56	0.7934	1774.86
430	0	7:28:32	0.8034	1776.17
435	0	7:29: 8	0.8133	1777.41
440	0	7:29:44	0.8233	1778.58
445	0	7:30:20	0.8332	1779.67
450	0	7:30:56	0.8432	1780.71
455	0	7:31:32	0.8532	1781.70
460	0	7:32: 7	0.8631	1782.63
465	0	7:32:43	0.8731	1783.52
470	0	7:33:19	0.8831	1784.38
475	0	7:33:55	0.8930	1785.20
480	0	7:34:31	0.9030	1786.00
485	0	7:35: 7	0.9130	1786.80
490	0	7:35:43	0.9229	1786.86
495	0	7:36:19	0.9329	1786.91
500	0	7:36:55	0.9429	1787.78
505	0	7:37:30	0.9529	1788.66
510	0	7:38: 6	0.9629	1788.71
515	0	7:38:42	0.9729	1788.76
520	0	7:39:18	0.9828	1788.82
525	0	7:39:54	0.9928	1788.87
530	0	7:40:30	1.0028	1789.75
535	0	7:41: 6	1.0128	1790.62
540	0	7:41:42	1.0228	1790.67
545	0	7:42:18	1.0327	1790.73

WESTERN TESTING CO., INC.

Company: MTM PETROLEUM INC  
 Well: #1-22 BURKHOLDER  
 Field: TKT 22318 DST 2

[Sunday: May. 25, 1997]  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
550	0	7:42:54	1.0427	1790.78
555	0	7:43:30	1.0527	1790.83
560	0	7:44: 6	1.0627	1790.89
565	0	7:44:42	1.0727	1792.58
570	0	7:45:18	1.0826	1792.64
575	0	7:45:54	1.0926	1792.69
580	0	7:46:30	1.1026	1792.74
585	0	7:47: 6	1.1126	1792.80
590	0	7:47:42	1.1226	1792.85
595	0	7:48:18	1.1326	1792.90
600	0	7:48:53	1.1426	1792.95
605	0	7:49:29	1.1525	1793.83
610	0	7:50: 5	1.1625	1793.88
615	0	7:50:41	1.1725	1793.94
620	0	7:51:17	1.1825	1793.99
625	0	7:51:53	1.1925	1794.04
630	0	7:52:29	1.2025	1795.74
635	0	7:53: 5	1.2125	1795.79
640	0	7:53:41	1.2224	1795.85
645	0	7:54:17	1.2324	1795.90
650	0	7:54:53	1.2424	1795.95
655	0	7:55:29	1.2524	1796.00
660	0	7:56: 5	1.2624	1796.06
665	0	7:56:41	1.2724	1796.11
670	0	7:57:17	1.2824	1796.16
675	0	7:57:53	1.2924	1796.22
680	0	7:58:29	1.3024	1796.27
685	0	7:59: 5	1.3123	1797.14
690	0	7:59:41	1.3223	1797.20
		END SHUTIN 1		
		START FLOW 2		
694	0	8: 2:58	1.3772	307.85
699	0	8: 3:34	1.3872	307.90
704	0	8: 4:10	1.3972	307.95
709	0	8: 4:46	1.4072	308.00
714	0	8: 5:22	1.4172	308.06
719	0	8: 5:58	1.4272	308.91
724	0	8: 6:34	1.4371	309.77
729	0	8: 7:10	1.4471	310.63
734	0	8: 7:45	1.4570	313.10
739	0	8: 8:21	1.4670	314.77
744	0	8: 8:57	1.4769	317.24
749	0	8: 9:33	1.4868	318.91
754	0	8:10: 8	1.4967	320.57
759	0	8:10:44	1.5067	322.24
764	0	8:11:20	1.5166	325.52
769	0	8:11:55	1.5265	327.99
774	0	8:12:31	1.5364	330.46
779	0	8:13: 7	1.5463	333.74
784	0	8:13:42	1.5562	337.82
789	0	8:14:18	1.5660	341.91
794	0	8:14:53	1.5759	345.19
799	0	8:15:29	1.5858	347.66
804	0	8:16: 5	1.5957	351.75
809	0	8:16:40	1.6056	355.03

Company: MTM PETROLEUM INC  
Well: #1-22 BURKHOLDER  
Field: TKT 22318 DST 2

[Sunday: May. 25, 1997]  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
814	0	8:17:16	1.6155	358.30
819	0	8:17:51	1.6253	362.39
824	0	8:18:27	1.6352	364.86
829	0	8:19: 3	1.6451	368.14
834	0	8:19:38	1.6550	372.23
839	0	8:20:14	1.6649	375.51
844	0	8:20:49	1.6747	378.78
849	0	8:21:25	1.6846	382.06
854	0	8:22: 1	1.6946	384.54
859	0	8:22:36	1.7044	388.62
864	0	8:23:12	1.7143	392.71
869	0	8:23:47	1.7241	396.79
874	0	8:24:23	1.7340	400.88
879	0	8:24:58	1.7439	404.96
884	0	8:25:34	1.7538	408.24
889	0	8:26: 9	1.7636	412.33
894	0	8:26:45	1.7735	416.41
899	0	8:27:20	1.7834	419.69
904	0	8:27:56	1.7932	423.78
909	0	8:28:31	1.8031	427.06
914	0	8:29: 7	1.8130	430.34
		END FLOW 2		
		START SHUTIN 2		
917	0	8:29:24	1.8178	467.48
922	0	8:29:40	1.8223	643.46
932	0	8:30:11	1.8307	1009.20
947	0	8:30:41	1.8392	1691.32
952	0	8:31:15	1.8486	1710.29
957	0	8:31:50	1.8583	1722.69
962	0	8:32:25	1.8680	1730.59
967	0	8:33: 0	1.8778	1735.30
972	0	8:33:36	1.8877	1740.48
977	0	8:34:11	1.8975	1745.15
982	0	8:34:47	1.9074	1749.28
987	0	8:35:22	1.9173	1752.87
992	0	8:35:58	1.9272	1755.97
997	0	8:36:34	1.9371	1758.67
1002	0	8:37: 9	1.9470	1761.05
1007	0	8:37:45	1.9569	1763.19
1012	0	8:38:21	1.9668	1765.11
1017	0	8:38:57	1.9768	1766.87
1022	0	8:39:32	1.9867	1768.50
1027	0	8:40: 8	1.9967	1770.01
1032	0	8:40:44	2.0066	1771.45
1037	0	8:41:20	2.0166	1772.81
1042	0	8:41:56	2.0265	1774.13
1047	0	8:42:31	2.0365	1775.40
1052	0	8:43: 7	2.0464	1776.63
1057	0	8:43:43	2.0564	1777.85
1062	0	8:44:19	2.0663	1779.05
1067	0	8:44:55	2.0763	1779.04
1072	0	8:45:31	2.0863	1780.09
1077	0	8:46: 7	2.0962	1781.09
1082	0	8:46:43	2.1062	1782.05
1087	0	8:47:18	2.1162	1782.95

WESTERN TESTING CO., INC.



Company: MTM PETROLEUM INC  
Well: #1-22 BURKHOLDER  
Field: TKT 22318 DST 2

[Sunday: May. 25, 1997]  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
1092	0	8:47:54	2.1261	1783.82
1097	0	8:48:30	2.1361	1784.65
1102	0	8:49: 6	2.1461	1785.46
1107	0	8:49:42	2.1560	1786.23
1112	0	8:50:18	2.1660	1786.99
1117	0	8:50:54	2.1760	1787.73
1122	0	8:51:30	2.1859	1788.46
1127	0	8:52: 6	2.1960	1787.83
1132	0	8:52:41	2.2059	1788.71
1137	0	8:53:17	2.2159	1789.58
1142	0	8:53:53	2.2259	1790.46
1147	0	8:54:29	2.2358	1790.51
1152	0	8:55: 5	2.2458	1790.56
1157	0	8:55:41	2.2558	1790.62
1162	0	8:56:17	2.2658	1790.67
1167	0	8:56:53	2.2758	1790.72
1172	0	8:57:29	2.2858	1790.78
1177	0	8:58: 5	2.2958	1790.83
1182	0	8:58:41	2.3058	1790.88
1187	0	8:59:17	2.3158	1790.93
1192	0	8:59:53	2.3257	1791.81
1197	0	9: 0:29	2.3357	1792.69
1202	0	9: 1: 5	2.3457	1792.74
1207	0	9: 1:41	2.3557	1792.79
1212	0	9: 2:17	2.3657	1792.84
1217	0	9: 2:53	2.3757	1792.90
1222	0	9: 3:28	2.3856	1792.95
1227	0	9: 4: 5	2.3956	1793.00
1232	0	9: 4:40	2.4056	1793.06
1237	0	9: 5:16	2.4156	1793.11
1242	0	9: 5:52	2.4256	1793.16
1247	0	9: 6:28	2.4356	1793.21
1252	0	9: 7: 4	2.4456	1793.27
1257	0	9: 7:40	2.4556	1793.32
1262	0	9: 8:16	2.4656	1793.37
1267	0	9: 8:52	2.4756	1793.43
1272	0	9: 9:28	2.4856	1793.48
1277	0	9:10: 4	2.4955	1793.53
1282	0	9:10:40	2.5055	1794.41
1287	0	9:11:16	2.5155	1794.46
1292	0	9:11:52	2.5255	1794.51
1297	0	9:12:28	2.5355	1794.57
1302	0	9:13: 4	2.5455	1794.62
1307	0	9:13:40	2.5555	1794.67
1312	0	9:14:16	2.5655	1794.72
1317	0	9:14:52	2.5754	1794.78
1322	0	9:15:28	2.5854	1794.83
1327	0	9:16: 4	2.5954	1795.71
1332	0	9:16:40	2.6054	1795.76
1337	0	9:17:15	2.6154	1796.63
1342	0	9:17:51	2.6254	1796.69
1347	0	9:18:27	2.6353	1796.74
1352	0	9:19: 3	2.6453	1796.79
1357	0	9:19:39	2.6553	1796.85
1362	0	9:20:15	2.6653	1796.90

WESTERN TESTING CO., INC.

Company: MTM PETROLEUM INC  
Well: #1-22 BURKHOLDER  
Field: TKT 22318 DST 2

[Sunday: May. 25, 1997]  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
1367	0	9:20:51	2.6753	1796.95
1372	0	9:21:27	2.6853	1797.00
1377	0	9:22: 3	2.6953	1797.06
1382	0	9:22:39	2.7053	1797.11
1387	0	9:23:15	2.7153	1797.16
1392	0	9:23:51	2.7253	1797.22
1397	0	9:24:27	2.7353	1797.27
1402	0	9:25: 3	2.7452	1798.14
1407	0	9:25:39	2.7552	1798.20
1412	0	9:26:15	2.7652	1798.25
1417	0	9:26:51	2.7752	1798.30
1422	0	9:27:27	2.7852	1798.36
1427	0	9:28: 3	2.7952	1798.41
1432	0	9:28:39	2.8052	1798.46
1437	0	9:29:15	2.8152	1798.51
1442	0	9:29:51	2.8252	1798.57
1447	0	9:30:27	2.8351	1798.62
1452	0	9:31: 3	2.8451	1798.67
1457	0	9:31:39	2.8551	1798.73
1462	0	9:32:15	2.8651	1798.78
1467	0	9:32:51	2.8751	1798.83

WESTERN TESTING CO., INC.



WESTERN TESTING CO., INC.  
FORMATION TESTING

TICKET No. 22318

P. O. BOX 1599 PHONE (316) 262-5861  
WICHITA, KANSAS 67201

Elevation 1549 KB Formation Simpson Eff. Pay \_\_\_\_\_ Ft.

District Pratt Date 5-25-97 Customer Order No. -

COMPANY NAME MTM Petroleum Inc

ADDRESS Box 82 Spivey Ks

LEASE AND WELL NO. Burkholder 1-22 COUNTY HARPER STATE Ks Sec. 22 Twp. 31S Rge. 7W

Mail Invoice To Tuen Key Co. Name \_\_\_\_\_ Address \_\_\_\_\_ No. Copies Requested Reg

Mail Charts To \_\_\_\_\_ Address \_\_\_\_\_ No. Copies Requested Reg

Formation Test No. 2 Interval Tested From 4789 ft. to 4793 ft. Total Depth 4793 ft.

Packer Depth 4784 ft. Size 6 5/8 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.

Packer Depth 4789 ft. Size 6 5/8 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.

Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 4780 ft. Recorder Number 13400 Cap. 3950

Bottom Recorder Depth (Outside) \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_

Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_

Drilling Contractor Duke #1 Drill Collar Length \_\_\_\_\_ I. D. \_\_\_\_\_ in.

Mud Type Chemical Viscosity 55 Weight Pipe Length \_\_\_\_\_ I. D. \_\_\_\_\_ in.

Weight 9.6 Water Loss 15.2 cc. Drill Pipe Length 4763' I. D. 3.8 in.

Chlorides 10,800 P.P.M. Test Tool Length 26 ft. Tool Size 5 1/2 in.

Jars: Make \_\_\_\_\_ Serial Number \_\_\_\_\_ Anchor Length 4 ft. Size 5 1/2 in.

Did Well Flow? \_\_\_\_\_ Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 x 1 1/2 in.

Blow: Strong blow off bottom of bucket in 2 minutes on 1st flow period //

Strong blow off bottom of bucket in 5 minutes on 2nd flow period

Recovered 135 ft. of slightly oil & gas cut water mud 1% oil 15% gas 3% water

Recovered 840 ft. of slightly oil & gas cut water less than 1% oil 3% gas 96% water

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_ 54% mud

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Chlorides 78,000 P.P.M. Sample Jars used 3 Remarks: Ran A/P Hanger # 900 for 30 minutes into 1st flow period

Time On Location 4:30 A.M. Time Pick Up Tool 5:00 A.M. Time Off Location 12:30 A.M.

Time Set Packer(s) 6:40 P.M. Time Started Off Bottom 9:25 A.M. Maximum Temperature 122 °F

Initial Hydrostatic Pressure \_\_\_\_\_ (A) 2587 P.S.I. 2522

Initial Flow Period \_\_\_\_\_ Minutes 30 (B) 67 P.S.I. to (C) 222 P.S.I.

Initial Closed In Period \_\_\_\_\_ Minutes 45 (D) 1788 P.S.I.

Final Flow Period \_\_\_\_\_ Minutes 30 (E) 290 P.S.I. to (F) 406 P.S.I.

Final Closed In Period \_\_\_\_\_ Minutes 60 (G) 1788 P.S.I.

Final Hydrostatic Pressure \_\_\_\_\_ (H) 2436 P.S.I. 2440

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

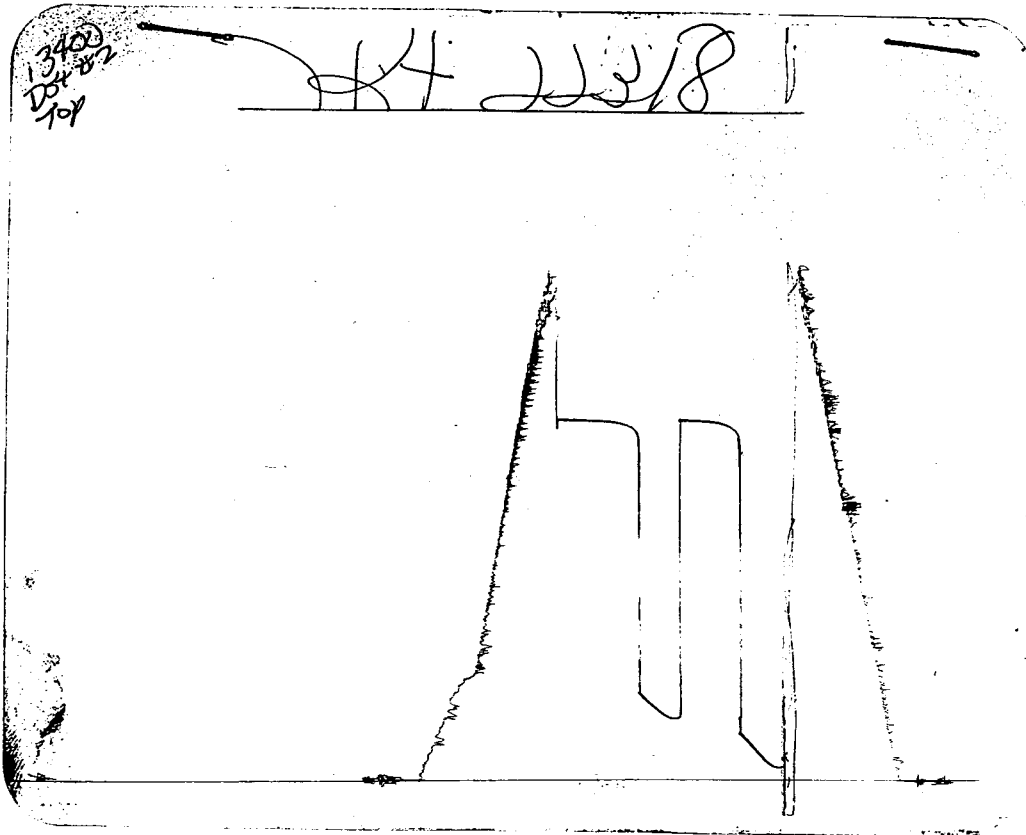
All charges subject to 18% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By \_\_\_\_\_  
Signature of Customer or his authorized representative

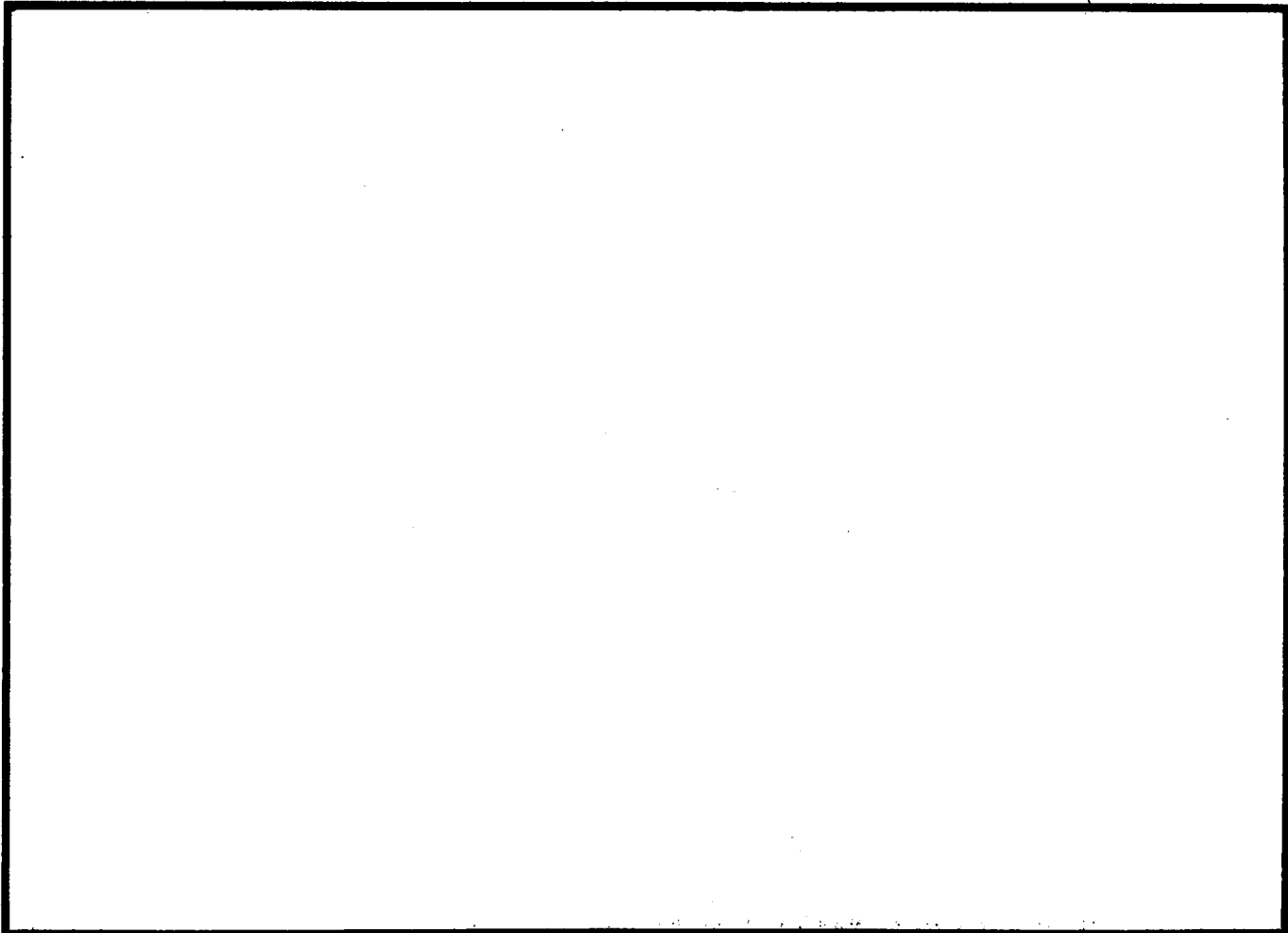
Western Representative WK Hosen Thanks You!

FIELD INVOICE

Open Hole Test \$   
Misrun \$ \_\_\_\_\_  
Straddle Test \$ \_\_\_\_\_  
Jars \$ \_\_\_\_\_  
Selective Zone \$ \_\_\_\_\_  
Safety Joint \$   
Standby \$ \_\_\_\_\_  
Shale Packer \$ \_\_\_\_\_  
Extra Packer \$ \_\_\_\_\_  
Circ. Sub. \$ \_\_\_\_\_  
Mileage \$ \_\_\_\_\_  
Fluid Sampler \$ \_\_\_\_\_  
Extra Charts \$ \_\_\_\_\_



Inside Recorder



Outside Recorder