

BEFORE THE STATE CORPORATION COMMISSION  
OF THE STATE OF KANSAS

BEFORE COMMISSIONERS:   MICHAEL LENNEN, CHAIRMAN  
                              MARGALEE WRIGHT  
                              KEITH R. HENLEY

IN THE MATTER OF THE APPLICATION OF	)	DOCKET NO. E-2226
GLACIER PETROLEUM CO. FOR AN ORDER	)	
AMENDING PARAGRAPH 3, 6 AND 7 OF THE	)	CONSERVATION DIVISION
COMMISSION'S ORDER DATED JULY 29, 1949,	)	
TO ALLOW THE INJECTION OF FLUIDS FOR	)	
ENHANCED RECOVERY, INTO WELL NO. 1, WHICH	)	LICENSE NO. 5721
IS ON THE THRALL UNIT FARM AND BESSIE	)	
MCKEE LEASE, COVERING THE W/2 AND NE/4 OF	)	
SECTION 32 AND S/2 OF SECTION 29 AND	)	
S/2 NW/4 AND SW/4 SECTION 28 AND PART OF	)	
THE SE OF THE SE/4 OF SECTION 30 AND	)	
N/2 OF THE NW/4 OF SECTION 33, ALL IN	)	
TOWNSHIP 23 SOUTH, RANGE 10 EAST IN THE	)	
THRALL FIELD IN GREENWOOD COUNTY, KANSAS,	)	
TO ADD SIX (6) INJECTION WELLS AND	)	
DECREASE THE INJECTION PRESSURE ON THE	)	
ORIGINAL ORDER AS DESCRIBED IN PARAGRAPH	)	
(1);	)	

ORDER

THE ABOVE-ENTITLED MATTER COMES BEFORE THE COMMISSION FOR FURTHER CONSIDERATION AND DISPOSITION. THE COMMISSION, HAVING TAKEN THE MATTER UNDER ADVISEMENT FINDS:

1. AN APPLICATION WAS FILED ON THE 23RD DAY OF JANUARY, 1986, TO AMEND PARAGRAPH 3, 6 AND 7 OF THE ORDER DATED JULY 29, 1949 IN DOCKET NO. E-2226, TO ADD SIX (6) INJECTION WELLS TO THE SYSTEM: MCKEE #3, LOCATED 3190 FEET FROM THE SOUTH LINE AND 4280 FEET FROM THE EAST LINE IN SECTION 32, THRALL #8B, LOCATED 0 FEET FROM THE SOUTH LINE AND 1056 FEET FROM THE EAST LINE, THRALL #14B, LOCATED 1056 FEET FROM THE SOUTH LINE AND 1584 FEET FROM THE EAST LINE IN SECTION 29, THRALL #20B, LOCATED 528 FEET FROM THE SOUTH LINE AND 5016 FEET FROM THE EAST LINE, THRALL #23B, LOCATED 1980 FEET FROM THE SOUTH LINE AND 3830 FEET FROM THE EAST LINE AND THRALL #108, LOCATED 2310 FEET FROM THE SOUTH LINE AND 2970 FEET FROM THE EAST LINE IN SECTION 28, ALL IN TOWNSHIP 23 SOUTH, RANGE 10 EAST, GREENWOOD COUNTY, KANSAS, WITH THE FOLLOWING CASING INFORMATION:

MCKEE #3

<u>SIZE</u>	<u>SEAT DEPTH</u>	<u>CEMENTED OR MUDDIED</u>	<u>SACKS CEMENT USED</u>
7"	252'	CEMENTED	75
4 1/2"	2372'	CEMENTED	100

2 3/8" J-55 DUOLINE TUBING WITH BAKER D PACKER SET AT 2225'.

THRALL #8B

<u>SIZE</u>	<u>SEAT DEPTH</u>	<u>CEMENTED OR MUDDIED</u>	<u>SACKS CEMENT USED</u>
7"	115'	CEMENTED	50
4 1/2"	2360'	CEMENTED	120

2 3/8" J-55 DUOLINE TUBING WITH BAKER AD PACKER SET AT 2278'.

GLACIER PETROLEUM CO.

E-2226

AMENDED ENHANCED RECOVERY

THRALL #14B

<u>SIZE</u>	<u>SEAT DEPTH</u>	<u>CEMENTED OR MUDDED</u>	<u>SACKS CEMENT USED</u>
7"	217'	CEMENTED	80
4 1/2"	2408'	CEMENTED	100

2 3/8" J-55 DUOLINE TUBING WITH BAKER AD PACKER SET AT 2290'.

THRALL #20B

<u>SIZE</u>	<u>SEAT DEPTH</u>	<u>CEMENTED OR MUDDED</u>	<u>SACKS CEMENT USED</u>
8 5/8"	204'	CEMENTED	115
4 1/2"	2370'	CEMENTED	150

2 3/8" J-55 DUOLINE TUBING WITH BAKER AD PACKER SET AT 2264'.

THRALL #23B

<u>SIZE</u>	<u>SEAT DEPTH</u>	<u>CEMENTED OR MUDDED</u>	<u>SACKS CEMENT USED</u>
8 5/8"	207'	CEMENTED	120
4 1/2"	2410'	CEMENTED	150

2 3/8" J-55 DUOLINE TUBING WITH BAKER AD PACKER SET AT 2310'.

THRALL #10B

<u>SIZE</u>	<u>SEAT DEPTH</u>	<u>CEMENTED OR MUDDED</u>	<u>SACKS CEMENT USED</u>
8 7/8"	200'	CEMENTED	110
5 1/2"	2449'	CEMENTED	150

2 3/8" J-55 DUOLINE TUBING WITH BAKER PACKER SET AT 2326'.

AND DECREASE THE INJECTION PRESSURE TO 1000 PSI MAXIMUM.

2. PROPER NOTICE HAS BEEN FURNISHED ALL PARTIES HAVING ANY INTEREST HEREIN. NO PROTESTS HAVE BEEN FILED AND APPROVAL HAS BEEN RECOMMENDED BY THE CONSERVATION DIVISION.

3. APPLICANT'S LEASE IS LOCATED AND DESCRIBED AS FOLLOWS:

W/2 AND NE/4 OF SECTION 32 AND S/2 OF SECTION 29 AND S/2 NW/4 AND SW/4 SECTION 28 AND PART OF THE SE OF THE SE/4 OF SECTION 30 AND N/2 OF THE NW/4 OF SECTION 33, ALL IN TOWNSHIP 23 SOUTH, RANGE 10 EAST IN THE THRALL FIELD, GREENWOOD COUNTY, KANSAS;

4. THE APPLICATION SHOULD BE GRANTED IN ACCORDANCE WITH THE ABOVE FINDINGS.

IT IS, THEREFORE, BY THE COMMISSION ORDERED: THAT GLACIER PETROLEUM Co., BE, AND IS HEREBY GRANTED AN AMENDMENT TO PARAGRAPH 3, 6 AND 7 OF THE ORDER DATED JULY 29, 1949 IN DOCKET No. E-2226 AND THAT SAID APPLICANT BE PERMITTED TO ADD SIX (6) INJECTION WELLS AND DECREASE THE INJECTION PRESSURE AS DESCRIBED IN PARAGRAPH 1.

IT IS FURTHER BY THE COMMISSION ORDERED: THAT THE ENHANCED RECOVERY AUTHORITY GRANTED BY THIS ORDER SHALL NOT BE ASSIGNED, SOLD OR TRANSFERRED WITHOUT THE APPROVAL OF THIS COMMISSION.

GLACIER PETROLEUM CO.

E-2226

AMENDED ENHANCED RECOVERY

THE COMMISSION RETAINS JURISDICTION OF THE SUBJECT MATTER AND THE PARTIES FOR THE PURPOSE OF ISSUING SUCH FURTHER ORDER OR ORDERS AS FROM TIME TO TIME IT MAY DEEM NECESSARY.

LENNEN, CHMN.; WRIGHT, COM.; HENLEY, COM.

DATED: SEP 24 1986

  
EXECUTIVE SECRETARY

Disposal ☒ Enhanced Recovery E2226 Docket No. 5721  
Operator Glacier Petroleum Co License No. 5721  
Amending paragraph (s) 3, 6 + 7 Date of Original Order July 29, 1949  
WELL No. 1; Name of Lease Thrall Unit Farm & Bonnie McKee  
(from original order)  
Complete lease description see attached

Section \_\_\_\_\_ Township 23 South, Range 10 (E) ~~(W)~~;

Field Thrall County Greenwood

to add (or delete) (State number of leases, wells; Formation etc)  
(Increase/decrease injection quantity/rate)

add sip (6) injection wells and decrease  
injection pressure rate

Application filed on January 23, 1986

(Add or Delete leases: (Owner, Name, Description/Location))

to add sip (6) injection wells: McKee #3 located 3190' FSL  
and 4280' FEL in Section 32; Thrall #8B located 0' FSL  
+ 1056' FEL and Thrall #14B located 1056' FSL and  
1584' FEL in Section 29; Thrall 20B located 528' FSL and  
5016' FEL; Thrall 23B located 1980' FSL and 3830' FEL  
and Thrall #108 located 2310' FSL + 2970' FEL in  
Section 28; all in Township 23, Range 10E, Greenwood  
County, KS with the following casing information

Add or Delete Wells: (Name, Location from S/E lines and casing information)

Well #	Size	Seat Depth	Cemented or mudded	Lbs of Cement
McKee #3	7"	232'	cemented	75
	4 1/2"	2372'		100
	2 3/8" J-55	Duoline tubing + Baker O Packer at 2225'		
Thrall #8B	7"	113'	"	50
	4 1/2"	2360'	"	120
	2 3/8" J-55	Duoline tubing + Baker A D Packer at 2278'		
Thrall #14B	7"	217'	"	80
	4 1/2"	2408'	"	100
	2 3/8" J-55	Duoline tubing + Baker A D Packer at 2290'		
Thrall 20B	8 5/8"	204'		115
	4 1/2"	2370'		150
	2 3/8" J-55	Duoline tubing + Baker A D Packer at 2264'		
Thrall 23B	8 5/8"	207'		120
	4 1/2"	2410'		150
	2 3/8" J-55	Duoline tubing + Baker A D Packer at 2310'		
Thrall #108	8 5/8"	200		110
	5 1/2"	2449		150
	2 3/8" J-55	Duoline tubing + Baker Packer at 2326'		

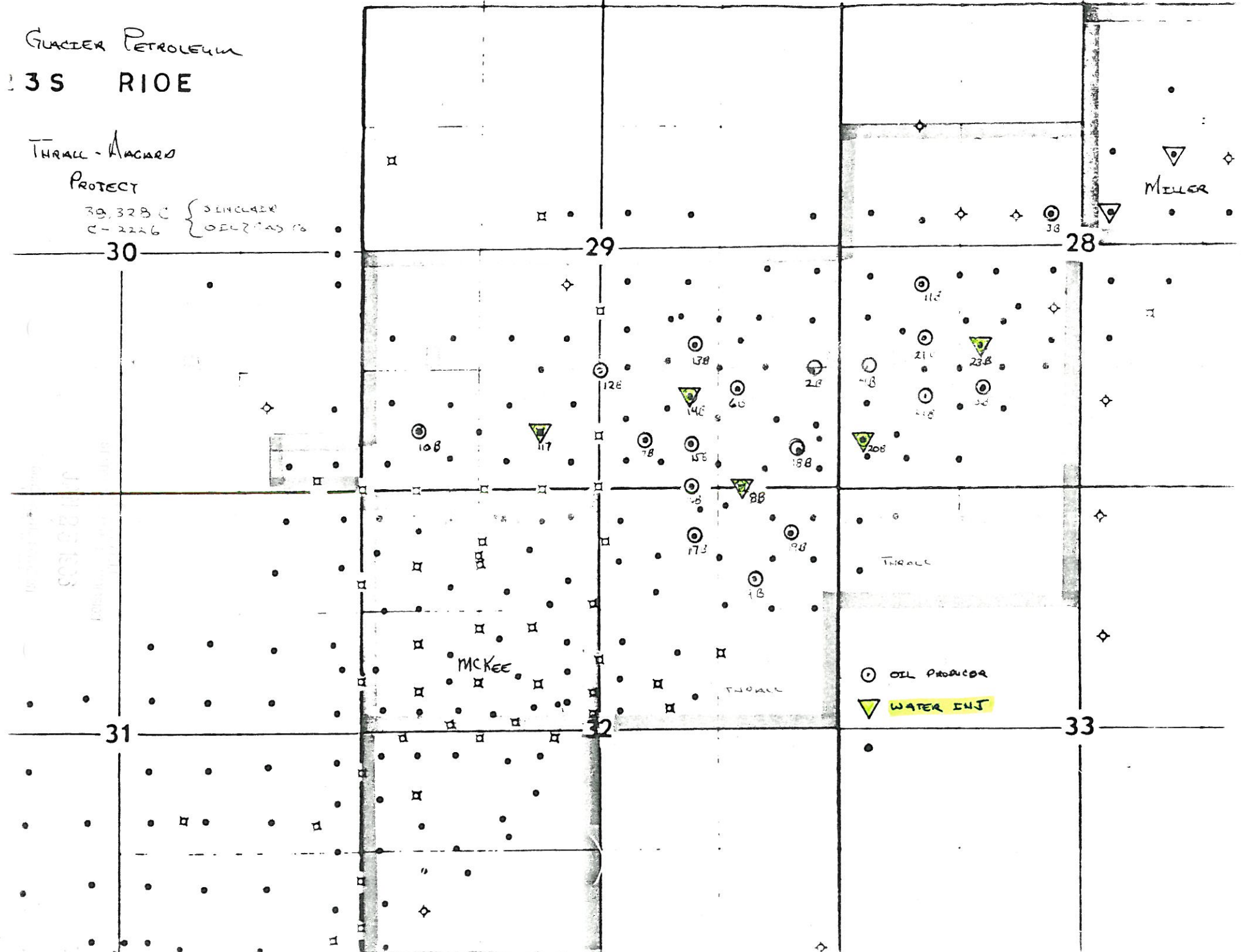
and decrease injection pressure rate to 1000 psi



GLACIER PETROLEUM  
13S RIOE

THRALL - ACHARD  
PROTECT

39, 328 C { SINKHOLE  
C-2226 { OIL & GAS



NEW Well

## CASING MECHANICAL INTEGRITY TEST

POCKET # C-2226Disposal ☐ Enhanced Recovery: ☐Repressuring ☒  
Flood ☐  
Tertiary ☐Date injection started \_\_\_\_\_  
API #15 \_\_\_\_\_SW4, Sec 28, T 23 S, R 10 (E/W)1980 Feet from South Section Line  
3830 Feet from East Section LineLease Thrall Well # 23-B  
County GREENWOODOperator: GLACIER PET.Operator License # 5721Name & Address P.O. Box 577Contact Person J. C. JAMESEmporia Ks 66801Phone 316-342-1148

Max. Auth. Injection Press. \_\_\_\_\_ psi; Max. Inj. Rate \_\_\_\_\_ bbl/d;  
 If Dual Completion - Injection above production \_\_\_\_\_ Injection below production \_\_\_\_\_

Conductor	Surface	Production	Liner	Size	Tubing
Size	<u>8 5/8</u>	<u>4 1/2</u>			<u>2 3/8</u>
Set at	<u>207</u>	<u>2410</u>			Set at <u>2310</u>
Cement Top	<u>Surface</u>	<u>1250</u>			Type _____
" Bottom	<u>207</u>	<u>2410</u>			
DV/Perf.		TD (and plug back)			ft. depth
Packer type	<u>BAKER TENSION</u>	Size <u>4 1/2</u>		Set at <u>2310</u>	
Zone of injection	<u>2304</u> ft. to ft. <u>2364</u>			Perf. or open hole	

Type Mit: Pressure ☒ Radioactive Tracer Survey ☐ Temperature Survey ☐F Time: Start 315 Min. 20 Min. 30 Min.

Pressures:	<u>120</u>	<u>120</u>	<u>120</u>	Set up 1	System Pres. during test
				Set up 2	Annular Pres. during test
				Set up 3	Fluid loss during test _____ bbls.

T Tested: Casing ☐ or Casing - Tubing Annulus ☒The bottom of the tested zone is shut in with PACKERTest Date 1/30/86 Using GLACIER PET Company's EquipmentThe operator hereby certifies that the zone between 2304 feet and 2310 feet was the zone tested Don Evans

Signature

Title

The results were Satisfactory ☒, Marginal \_\_\_\_\_, Not Satisfactory \_\_\_\_\_State Agent DAVE MORRIS Title PET Witness: Yes ☒ No \_\_\_\_\_

REMARKS: \_\_\_\_\_

☐ Origin. Conservation Div.; ☐ KDHE/T; ☐ Dist. Office;☐ Computer UpdateRECEIVED  
STATE CORPORATION COMMISSION

KCC Form U-7 6/84

FEB 6 1986

CONSERVATION DIVISION

Reporting Period 1987

TO:  
STATE CORPORATION COMMISSION  
CONSERVATION DIVISION - UIC SECTION  
200 COLORADO DERBY BUILDING  
WICHITA, KANSAS 67202

DOCKET NO. C-2226 [    ]  
KCC KDHE

SW/4 SEC 28, T 23 S, R 10 [    ] West  
[ x ] East

ANNUAL REPORT OF PRESSURE MONITORING,  
FLUID INJECTION AND ENHANCED RECOVERY

Lease Name Thrall Well# 23B  
(if battery of wells, attach list with  
locations)

Feet from S section line 1980 x

Operator License Number 5721

Feet from E section line 3830

Operator: Glacier Petroleum, Inc.  
Name & 825 Commercial  
Address Emporia, Kansas 66801

Field Thrall-Aagard

County Greenwood

Contact Person J. C. Hawes  
Phone 316-342-1148

Disposal [    ] or Enhanced Recovery [ x ]

Person (s) responsible for monitoring well Mark Porter  
Was this well/project reported last year? [ x ] yes [    ] no  
List previous operator if new operator   

# I. INJECTION FLUID:

Type: Source: Quality:  
[    ] fresh water [ x ] produced water Total dissolved solids N/A ppm/mgm/liter  
[ x ] brine treated other:    Additives N/A  
[    ] brine untreated (attach water analysis, if available)  
[    ] water/brine mixture

# TYPE COMPLETION:

[ x ] tubing & packer packer setting depth 2310 feet.  
[    ] packerless (tubing-no packer) Maximum authorized pressure 1000 psi.  
[    ] tubingless (no tubing) Maximum authorized rate 1200 bbl/day.

Month	Total Fluid Injected in Month (bbl)	Days of Injection	Maximum Injection Pressure	Average Injection Pressure	Aver. Pressure Tubing to Casing Annulus	Pressure psig Casing to Surf. Pipe
Jan.	<u>3385</u>	<u>31</u>	<u>860</u>	<u>840</u>	<u>0</u>	<u>0</u>
Feb.	<u>3500</u>	<u>28</u>	<u>920</u>	<u>800</u>	<u>"</u>	<u>"</u>
Mar.	<u>8915</u>	<u>31</u>	<u>1000</u>	<u>920</u>	<u>"</u>	<u>"</u>
Apr.	<u>6080</u>	<u>30</u>	<u>1000</u>	<u>980</u>	<u>"</u>	<u>"</u>
May	<u>5435</u>	<u>31</u>	<u>980</u>	<u>900</u>	<u>"</u>	<u>"</u>
June	<u>2440</u>	<u>30</u>	<u>960</u>	<u>920</u>	<u>"</u>	<u>"</u>
July	<u>3180</u>	<u>31</u>	<u>960</u>	<u>880</u>	<u>"</u>	<u>"</u>
Aug.	<u>7245</u>	<u>31</u>	<u>1000</u>	<u>940</u>	<u>"</u>	<u>"</u>
Sept.	<u>5825</u>	<u>30</u>	<u>1000</u>	<u>940</u>	<u>"</u>	<u>"</u>
Oct.	<u>6510</u>	<u>31</u>	<u>1000</u>	<u>960</u>	<u>"</u>	<u>"</u>
Nov.	<u>5640</u>	<u>30</u>	<u>1000</u>	<u>980</u>	<u>"</u>	<u>"</u>
Dec.	<u>5635</u>	<u>31</u>	<u>1000</u>	<u>920</u>	<u>"</u>	<u>"</u>

Well tests and the results during reporting period:

\*For disposal wells complete page 1 plus section IV page 2.  
For enhanced recovery wells (repressuring, secondary, tertiary) complete both pages.  
Prepare one form for each injection well (SWD and ER) but only one report of  
Section II and III for each docket (project).

12/83 Form U3C

FEB 10 1988

CONSERVATION DIVISION  
WICHITA, KANSAS