

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1274038  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
November 2016

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

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

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

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

Wellsite Geologist: \_\_\_\_\_

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

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

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

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

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

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

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

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

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

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

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

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

Location of fluid disposal if hauled offsite:

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

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that 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.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1274038

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No TCores aken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Mai Oil Operations, Inc.
Well Name	Kirkman 1
Doc ID	1274038

Tops

Name	Top	Datum
Heebner	3298	-1349
Toronto	3320	-1371
Douglas	3338	-1389
Brown Lime	3412	-1463
Lansing	3422	-1473
Viola	3697	-1748
Simpson Sand	3758	-1809
Arbuckle	3796	-1847



**JAMES C. MUSGROVE**

Petroleum Geologist, LLC  
212 Main Street  
P.O. Box 215  
Claflin, KS 67525

Office (620) 588-4250

Res. Claflin (620) 587-3444

Mai Oil Operations  
Kirkman #1  
NE-SE-NW-NE (780' FNL & 1670' FEL)  
Section 29-21s-14w  
Stafford County, Kansas

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**Dry and Abandoned**

**Contractor:** Southwind Drilling Co. (rig #1)  
**Commenced:** November 30, 2015  
**Completed:** December 6, 2015  
**Elevation:** 1949' K.B., 1947' D.F., 1941' G.L.  
**Casing program:** Surface; 8 5/8" @ 810'  
Production, none  
**Sample:** Samples saved and examined 3000' to the Rotary Total Depth.  
**Drilling time:** One (1) foot drilling time recorded and kept 3000' to the Rotary Total Depth.  
**Measurements:** All depths measured from the Kelly Bushing.  
**Drill Stem Tests:** There were two (2) Drill Stem Tests ran by Trilobite Testing Co.  
**Electric Log:** None

<u>Formation</u>	<u>Sample Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	865	+1084
Base Anhydrite	895	+1054
Heebner	3928	-1979
Toronto	3320	-1371
Douglas	3338	-1389
Brown Lime	3412	-1463
Lansing	3422	-1473
Base Kansas City	3656	-1707
Viola	3697	-1748
Simpson Shale	3738	-1789
Simpson Sand	3758	-1809
Arbuckle	3796	-1847
Rotary Total Depth	3805	-1856

(All tops and zone(s) determination were made from a correlation of drilling time log and sample analysis.)

**SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.**

**TOPEKA SECTION**

3000-3298' No shows of oil and /or gas was noted in drilling of the Topeka Section, see attached sample log/geological report.

**TORONTO SECTION**

3320-3328' Limestone, white, cream, finely crystalline, few fossiliferous, poor visible porosity, chalky in part.

**LANSING SECTION**

- 3420-3428' Limestone, cream, white, finely crystalline, oolitic, slightly chalky, poor visible porosity, no shows.
- 3442-3448' Limestone, cream, white, finely crystalline, oolitic, pinpoint porosity, chalky in part, no shows.
- 3463-3470' Limestone, white, cream, finely crystalline, oolitic, chalky, poor pinpoint and inter-crystalline type porosity, trace stain, no free oil and no odor in fresh samples.
- 3480-3488' Limestone, white, cream, oolitic, scattered porosity chalky in part, no shows.
- 3496-3501' Limestone, cream, tan, finely crystalline, oolitic, sucrosic in part, poorly developed porosity, trace stain, no free oil and no odor.
- 3506-3517' Limestone, white, cream finely crystalline, oolitic, oomoldic, fair oomoldic porosity, chalky in part, no shows.
- 3524-3536' Limestone, cream, tan, finely crystalline, oolitic, few sub-oomoldic, chalky, plus white/cream, boney chert.
- 3543-3548' Limestone, cream, tan, finely crystalline, chalky in part, oolitic, oomoldic, poor to fair oomoldic porosity, no show of free oil and faint odor in fresh samples.
- 3565-3574' Limestone, cream, tan, finely crystalline, oolitic, poorly developed porosity, few chalky, no shows.
- 3583-3588' Limestone, cream, finely crystalline, oomoldic, fair porosity, dark brown stain, show of free oil and fair odor in fresh samples.
- 3583-3588' Limestone, cream, finely crystalline, oomoldic, fair porosity, dark brown stain, show of free oil and fair odor in fresh samples.

Mai Oil Operations  
Kirkman #1  
NE-SE-NW-NE (780' FNL & 1670' FEL)  
Section 29-21s-14w  
Stafford County, Kansas

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3596-3603' Limestone, cream, white, finely crystalline, oolitic, poor visible porosity, no shows.

**Drill Stem Test #1**

**3537-3610**

**Times: 30-45-45-60**

**Blow: Fair**

**Recovery: 90'muddy water**

**Pressures: ISIP 555 psi**  
**FSIP 539 psi**  
**IFP 56-59 psi**  
**FFP 54-70 psi**  
**HSH 1813-1774 psi**

3621-3626' Limestone, cream, tan, finely crystalline, oolitic, scattered porosity, trace stain, no free oil and no odor in fresh sample.

3626-3638' Limestone, cream, gray, finely crystalline, chalky, few cherty, no shows.

**VOILA SECTION**

3697-3716' Chert; white, semi-tripolitic, scattered porosity, dark brown to black stain, no show of free oil and faint to fair odor in fresh samples.

3716-3726' Chert, as above, plus limestone, white/gray, cherty, dense.

3726-3738' Chert and limestone, as above.

**SIMPSON SECTION**

3758-3774' Sand, white, clear, medium grained, well rounded, well sorted, calcareous in part, glauconitic, light brown stain, show of free oil and faint odor in fresh samples.

**Drill Stem Test #2**

**3727-3770**

**Times: 30-30-30-30**

**Blow: Weak**

**Recovery: 3' mud**

**Pressures: ISIP 39 psi**  
**FSIP 41 psi**  
**IFP 36-33 psi**  
**FFP 37-39 psi**  
**HSH 1923-1891 psi**

Mai Oil Operations  
Kirkman #1  
NE-SE-NW-NE (780' FNL & 1670' FEL)  
Section 29-21s-14w  
Stafford County, Kansas

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**ARBUCKLE SECTION**

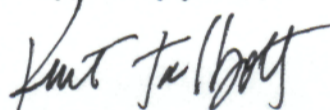
3796-3805' Dolomite, cream, tan, finely crystalline, fair inter-crystalline porosity,  
black dead oil stain, no free oil and fair odor in fresh samples.

**Rotary Total Depth            3805**

**Recommendations:**

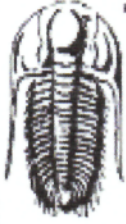
The Mai Oil Operations Inc., Kirkman #1, was plugged and abandoned at the Rotary Total  
Depth of 3805'.

Respectfully yours,



Kurt Talbott  
Petroleum Geologist





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Mai Oil Operation Inc  
8411 Preston Road Suite 800  
Dallas TX 75225+5520  
ATTN: Kurt Talbot

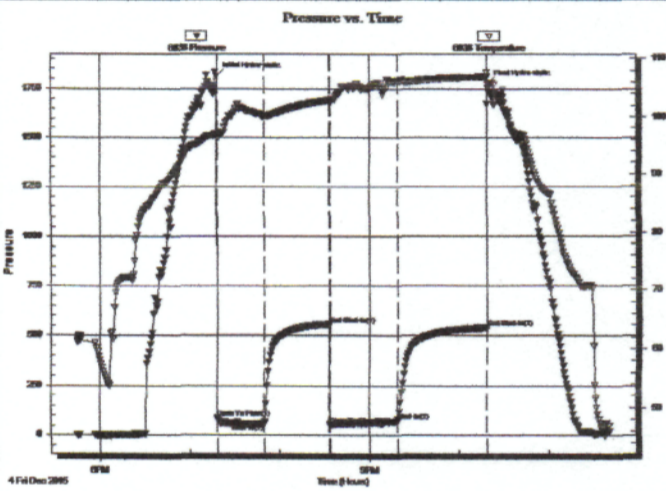
**29-21s-14w Stafford,KS**  
**Kirkman #1**  
Job Ticket: 61963      **DST#: 1**  
Test Start: 2015.12.04 @ 17:45:00

**GENERAL INFORMATION:**

Formation: **LKC H-J**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 19:18:46  
Time Test Ended: 23:40:46  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Ken Swinney  
Unit No: 58  
Interval: **3537.00 ft (KB) To 3610.00 ft (KB) (TVD)**  
Total Depth: 3610.00 ft (KB) (TVD)  
Reference Elevations: 1949.00 ft (KB)  
1941.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
KB to GR/CF: 8.00 ft

**Serial #: 6838      Inside**  
Press@RunDepth: 70.70 psig @ 3606.28 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2015.12.04      End Date: 2015.12.04      Last Calib.: 2015.12.04  
Start Time: 17:45:01      End Time: 23:40:46      Time On Btm: 2015.12.04 @ 19:18:16  
Time Off Btm: 2015.12.04 @ 22:19:16

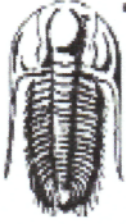
**TEST COMMENT:** FFP 30 Minutes Weak blow built to 5"  
ISI 45 Minutes No blow back  
FFP 45 Minutes Weak blow built to 4 1/2"  
FSI 60 Minutes No blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1813.54	96.76	Initial Hydro-static
1	86.85	96.22	Open To Flow (1)
32	59.74	99.93	Shut-In(1)
75	555.17	102.85	End Shut-In(1)
76	54.95	102.58	Open To Flow (2)
121	70.70	106.06	Shut-In(2)
181	539.14	106.89	End Shut-In(2)
181	1774.64	105.62	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
90.00	Muddy Water	1.26
0.00	Mud 30% Water 70%	0.00

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



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

Mai Oil Operation Inc

**29-21s-14w Stafford,KS**

8411 Preston Road Suite 800  
Dallas TX 75225+5520

**Kirkman #1**

Job Ticket: 61964

**DST#: 2**

ATTN: Kurt Talbot

Test Start: 2015.12.05 @ 16:25:00

**GENERAL INFORMATION:**

Formation: **Simpson Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:44:16

Time Test Ended: 20:59:46

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 58

Interval: **3727.00 ft (KB) To 3770.00 ft (KB) (TVD)**

Reference Elevations: 1949.00 ft (KB)

Total Depth: 3770.00 ft (KB) (TVD)

1941.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6838**

**Inside**

Press@RunDepth: 38.52 psig @ 3766.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.12.05

End Date:

2015.12.05

Last Calib.: 2015.12.05

Start Time: 16:25:01

End Time:

20:59:46

Time On Btm: 2015.12.05 @ 17:44:01

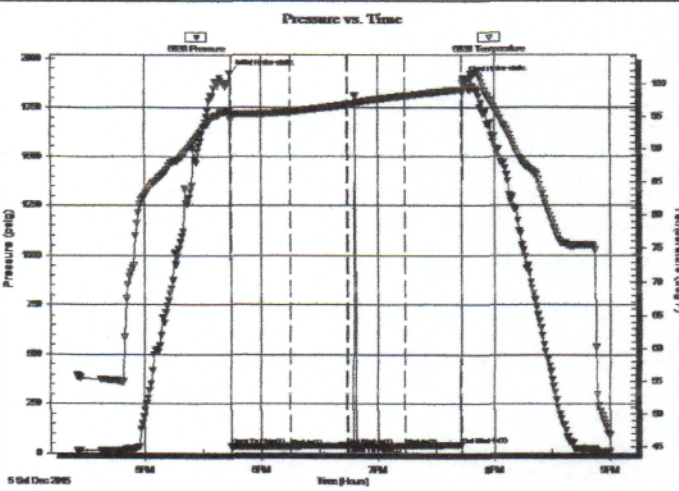
Time Off Btm: 2015.12.05 @ 19:44:01

TEST COMMENT: FFP 30 Minutes Weak surface blow, died after 18 minutes

ISI 30 Minutes No blow back

FFP 30 Minutes Dead no blow - Flush tool - Light surge then dead

FSI 30 Minutes No blow back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1923.89	95.80	Initial Hydro-static
1	36.19	94.49	Open To Flow (1)
31	33.69	95.77	Shut-In(1)
61	39.20	96.77	End Shut-In(1)
61	37.90	96.78	Open To Flow (2)
91	38.52	98.13	Shut-In(2)
120	41.03	99.12	End Shut-In(2)
120	1891.65	100.69	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
3.00	Mud 100%	0.04

**Gas Rates**

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

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1302

Date	12-1-15	Sec.	29	Twp.	21	Range	14	County	Stafford	State	Ks	On Location		Finish	1:15 AM
Lease								Location		Kickman					
Well No.								Owner		#1 E. S/Into					
Contractor								To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Type Job								Charge To							
Hole Size								Max oil operations							
Csg.								Street							
Tbg. Size								City							
Tool								State							
Cement Left in Csg.								The above was done to satisfaction and supervision of owner agent or contractor.							
Meas Line								Cement Amount Ordered							
Displace								450 60/40 3% CC 2% Gel							
EQUIPMENT								Common							
Pumptrk								Poz. Mix							
Bulktrk								Gel.							
Bulktrk								Calcium							
JOB SERVICES & REMARKS								Hulls							
Remarks:								Salt							
Rat Hole								Flowseal							
Mouse Hole								Kol-Seal							
Centralizers								Mud CLR 48							
Baskets								CFL-117 or CD110 CAF 38							
D/V or Port Collar								Sand							
								Handling							
								Mileage							
								FLOAT EQUIPMENT							
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge							
								Mileage							
								Tax							
								Discount							
								Total Charge							
Signature								Kent							

# GLOBAL CEMENTING, L.L.C.

REMIT TO 18048 170RD  
RUSSELL, KS 67665

SERVICE POINT: Russell

DATE <u>12-6-15</u>	SEC. <u>29</u>	TWP. <u>21s</u>	RANGE <u>14w</u>	CALLED OUT	ON LOCATION	JOB START <u>NOON</u>	JOB FINISH <u>12:00 AM</u>
LEASE <u>Kiakman</u>		WELL #. <u>#1</u>	LOCATION <u>Radium 2N 1w</u>			COUNTY <u>STAFFORD</u>	STATE <u>KANSAS</u>
OLD OR <input checked="" type="radio"/> (CIRCLE ONE)							

CONTRACTOR SOUTHWIND DRUG. Rig #3 "Jay" OWNER

TYPE OF JOB ROTARY Plug

HOLE SIZE 7 7/8 I.D. 3805

CASING SIZE 8 5/8 Surface DEPTH 810

TUBING SIZE DEPTH

DRILL PIPE 4 1/2 x-H DEPTH @ 3774

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS

DISPLACEMENT

EQUIPMENT

PUMP TRUCK # P-2 CEMENTER HELPER Heath C. Glenn G.

BULK TRUCK # B-5 DRIVER Jason M.

BULK TRUCK # DRIVER

REMARKS:

<u>50 SX @ 3774</u>
<u>60 SX @ 810</u>
<u>30 SX @ 250</u>
<u>20 SX @ 60</u>
<u>30 SX @ Patchole w/ Plug</u>

CHARGE TO: MAT OIL OPERATIONS INC.  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

Global Cementing, L.L.C.,  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) 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 and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Jay Krier  
 SIGNATURE Jay Krier

CEMENT AMOUNT ORDERED <u>190 SX 60 42 gel</u>		
<u>1/4 # F10 Seal</u>		
COMMON @ _____		
POZMIX @ _____		
GEL @ _____		
CHLORIDE @ _____		
ASC @ _____		
_____ @ _____		
_____ @ _____		
_____ @ _____		
_____ @ _____		
_____ @ _____		
_____ @ _____		
_____ @ _____		
_____ @ _____		
_____ @ _____		
HANDLING @ _____		
MILEAGE @ _____		
TOTAL _____		

SERVICE	
DEPTH OF JOB	_____
PUMP TRUCK CHARGE	_____
EXTRA FOOTAGE @ _____	
MILEAGE @ _____	
MANIFOLD @ _____	
_____ @ _____	
_____ @ _____	
TOTAL _____	

PLUG & FLOAT EQUIPMENT	
_____ @ _____	
_____ @ _____	
_____ @ _____	
_____ @ _____	
<u>8 5/8 WOODEN Plug</u> @ _____	
TOTAL _____	
SALES TAX (If Any) _____	
TOTAL CHARGES _____	
DISCOUNT _____ IF PAID IN 30 DAYS	