KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1060701

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 5259
Name: Mai Oil Operations, Inc.
Address 1: 8411 PRESTON RD STE 800
Address 2:
City: DALLAS State: TX Zip: 75225 + 5520
Contact Person: Allen Bangert
Phone: (214) 219-8883
CONTRACTOR: License # 33350
Name: Southwind Drilling, Inc.
Wellsite Geologist: Steve Murphy
Purchaser:

Designate Type of Completion:

- [x] New Well
- [ ] Re-Entry
- [ ] Workover

- [ ] Oil
- [ ] WSW
- [ ] SWD
- [ ] SIOW
- [ ] Gas
- [x] D&A
- [ ] ENHR
- [ ] SIGW
- [ ] OG
- [ ] GSW
- [ ] Temp. Abd.
- [ ] 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 ENHR
- [ ] Conv. to SWD
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

06/10/2011	06/16/2011	06/16/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-167-23721-00-00
Spot Description:
SE - SW - SE - NE Sec. 23 Twp. 13 S. R. 14 [ ] East [x] West
2375 Feet from [x] North / [ ] South Line of Section
875 Feet from [x] East / [ ] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[x] NE [ ] NW [ ] SE [ ] SW
County: Russell
Lease Name: Anschutz-Krug Unit Well #: 1
Field Name:
Producing Formation: N/A
Elevation: Ground: 1838 Kelly Bushing: 1844
Total Depth: 3350 Plug Back Total Depth: 3350
Amount of Surface Pipe Set and Cemented at: 451 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] 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: 58000 ppm Fluid volume: 300 bbls
Dewatering method used: Evaporated
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

- [x] **Letter of Confidentiality Received**
  Date: 08/02/2011
- [x] **Confidential Release Date:** 08/01/2013
- [x] **Wireline Log Received**
- [ ] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [x] I [ ] II [ ] III **Approved by:** NAOMI JAMES **Date:** 08/03/2011

Side Two

[redacted]

1060701

Operator Name: Mai Oil Operations, Inc. Lease Name: Anschutz-Krug Unit Well #: 1

Sec. 23 Twp. 13 S. R. 14 ☐ East ☑ West County: Russell

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:

CDNL
DIL
MICRO

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Anhydrite	844	+1000
Topeka	2712	-868
Heebner	2942	-1098
Toronto	2959	-1115
Lansing	3000	-1156
Base Kansas City	3262	-1418
Arbuckle	3288	-1444

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	12.25	8.625	20	451	60-40 Poz	225	2% Gel, 3% CC

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:
☐ Perforate
☐ Protect Casing
☐ Plug Back TD
☐ Plug Off Zone

Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
-			
-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water 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. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

August 02, 2011

Allen Bangert
Mai Oil Operations, Inc.
8411 PRESTON RD STE 800
DALLAS, TX 75225-5520

Re: ACO1
API 15-167-23721-00-00
Anschutz-Krug Unit 1
NE/4 Sec.23-13S-14W
Russell County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Allen Bangert

Notice: Fill out COMPLETELY and return to Conservation Division at the address below within 60 days from plugging date.

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

WELL PLUGGING RECORD
K.A.R. 82-3-117

Form CP-4
March 2009
Type or Print on this Form
Form must be Signed
All blanks must be Filled

OPERATOR: License #: 5259
Name: Mai Oil Operations, Inc
Address 1: 8411 Preston Road, Suite 800
Address 2:
City: Dallas State: TX Zip: 75225 +
Contact Person: Allen Bangert
Phone: (214) 219-8883
Type of Well: *(Check one)* ☐ Oil Well ☐ Gas Well ☐ OG ☑ D&A ☐ Cathodic
☐ Water Supply Well ☐ Other: ☐ SWD Permit #:
☐ ENHR Permit #: ☐ Gas Storage Permit #:
Is ACO-1 filed? ☐ Yes ☐ No If not, is well log attached? ☐ Yes ☐ No
Producing Formation(s): List All *(If needed attach another sheet)*
Depth to Top: Bottom: T.D.
Depth to Top: Bottom: T.D.
Depth to Top: Bottom: T.D.

API No. 15 - 167-23721-00-00
Spot Description:
SE SW SE NE Sec. 23 Twp. 13 S. R. 14 ☐ East ☑ West
2,375 Feet from ☑ North / ☐ South Line of Section
875 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☑ NE ☐ NW ☐ SE ☐ SW
County: Russell
Lease Name: Anschutz-Krug Unit Well #: 1
Date Well Completed: 6/16/2011
The plugging proposal was approved on: 6/15/2011 *(Date)*
by: Bruce Basye *(KCC District Agent's Name)*
Plugging Commenced: 6/16/2011
Plugging Completed: 6/16/2011

Show depth and thickness of all water, oil and gas formations.

Oil, Gas or Water Records		*Casing Record (Surface, Conductor & Production)*			
Formation	Content	Casing	Size	Setting Depth	Pulled Out
		Surface	8 5/8"	451'	0'

Describe in detail the manner in which the well is plugged, indicating where the mud fluid was placed and the method or methods used in introducing it into the hole. If cement or other plugs were used, state the character of same depth placed from (bottom), to (top) for each plug set.

Plugged well with 190 sacks, 60/40 Poz, 4% gel, ¼# flo-seal, 1st plug @ 3270' with 25 sacks, 2nd plug @ 870' with 25 sacks, 3rd plug @ 500' with 100 sacks, 4th plug @ 40' to surface with 10 sacks, 30 sacks for rat hole, plug was down @ 5:00 pm on 6/16/2011, by Allied (Ticket #35784).

Plugging Contractor License #: 33350 Name: Southwind Drilling, Inc.
Address 1: PO Box 276 Address 2:
City: Ellinwood State: Kansas Zip: 67526 +
Phone: (620) 564-3800
Name of Party Responsible for Plugging Fees: Mai Oil Operations, Inc.
State of Kansas County, Barton , ss.
Jennifer Heape *(Print Name)* ☐ Employee of Operator or ☐ Operator on above-described well,
being first duly sworn on oath, says: That I have knowledge of the facts statements, and matters herein contained, and the log of the above-described well is as filed, and the same are true and correct, so help me God.

COPY

Signature: Jennifer Heape

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mai Oil Operations

8411 Preston Rd Ste800
Dallas, TX 75225

ATTN: Steve Murphy

Anschutz-Krug 1

23-13-14,Russell,KS

Job Ticket: 43902 **DST#: 1**

Test Start: 2011.06.14 @ 05:45:22

GENERAL INFORMATION:

Formation: **KC"E-G"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:28:52
Time Test Ended: 12:51:22

Test Type: Conventional Bottom Hole
Tester: Brett Dickinson
Unit No: 47

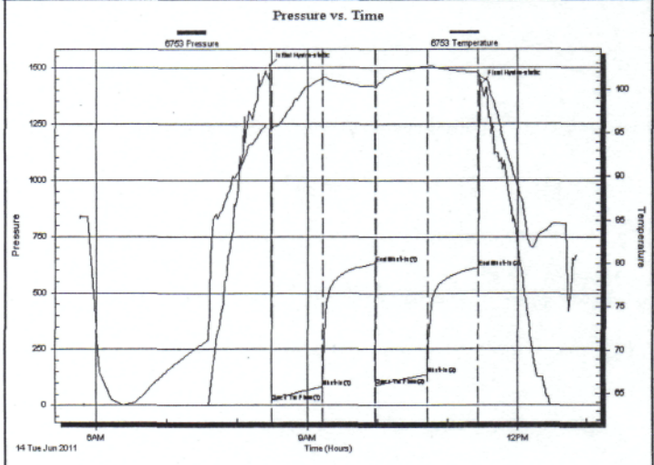
Interval: 3062.00 ft (KB) To 3100.00 ft (KB) (TVD)
Total Depth: 3100.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1844.00 ft (KB)
1836.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Inside**
Press@RunDepth: 137.18 psig @ 3063.00 ft (KB)
Start Date: 2011.06.14 End Date: 2011.06.14
Start Time: 05:45:27 End Time: 12:51:21

Capacity: 8000.00 psig
Last Calib.: 2011.06.14
Time On Btm: 2011.06.14 @ 08:27:52
Time Off Btm: 2011.06.14 @ 11:29:22

TEST COMMENT: IF-BOB in 23 min
ISI-No blow
FF-9" blow
FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1508.17	96.04	Initial Hydro-static
1	17.51	95.27	Open To Flow (1)
45	81.70	101.23	Shut-In(1)
90	630.35	100.33	End Shut-In(1)
91	86.80	100.21	Open To Flow (2)
135	137.18	102.66	Shut-In(2)
179	611.42	101.93	End Shut-In(2)
182	1427.66	101.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Free Oil	0.01
14.00	SMCW 10%M 90%W	0.20
240.00	water	3.37

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mai Oil Operations

8411 Preston Rd Ste800
Dallas, TX 75225

ATTN: Steve Murphy

Anschutz-Krug 1

23-13-14,Russell,KS

Job Ticket: 43903 **DST#: 2**

Test Start: 2011.06.14 @ 20:50:26

GENERAL INFORMATION:

Formation: **KC "I"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:21:26
Time Test Ended: 00:52:26

Test Type: Conventional Bottom Hole
Tester: Brett Dickinson
Unit No: 47

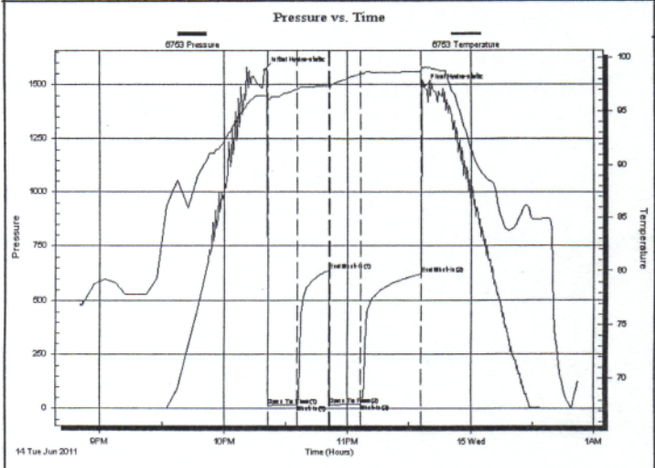
Interval: 3154.00 ft (KB) To 3170.00 ft (KB) (TVD)
Total Depth: 3170.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1844.00 ft (KB)
1836.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Inside**
Press@RunDepth: 22.75 psig @ 3155.00 ft (KB)
Start Date: 2011.06.14 End Date: 2011.06.15
Start Time: 20:50:31 End Time: 00:52:26

Capacity: 8000.00 psig
Last Calib.: 2011.06.15
Time On Btm: 2011.06.14 @ 22:19:56
Time Off Btm: 2011.06.14 @ 23:37:26

TEST COMMENT: IF-1/4" blow
ISI-No blow
FF-surface blow
FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1566.95	96.45	Initial Hydro-static
2	14.04	96.03	Open To Flow (1)
16	17.40	97.04	Shut-In(1)
31	637.38	97.35	End Shut-In(1)
32	18.90	97.10	Open To Flow (2)
47	22.75	98.50	Shut-In(2)
76	620.93	98.68	End Shut-In(2)
78	1490.12	99.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Oil scum MCW 15%M 85%W	0.21

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mai Oil Operations

8411 Preston Rd Ste800
Dallas, TX 75225

ATTN: Steve Murphy

Anschutz-Krug 1

23-13-14,Russell,KS

Job Ticket: 43904 **DST#: 3**

Test Start: 2011.06.15 @ 19:45:45

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:04:45
Time Test Ended: 00:46:45

Test Type: Conventional Bottom Hole
Tester: Brett Dickinson
Unit No: 47

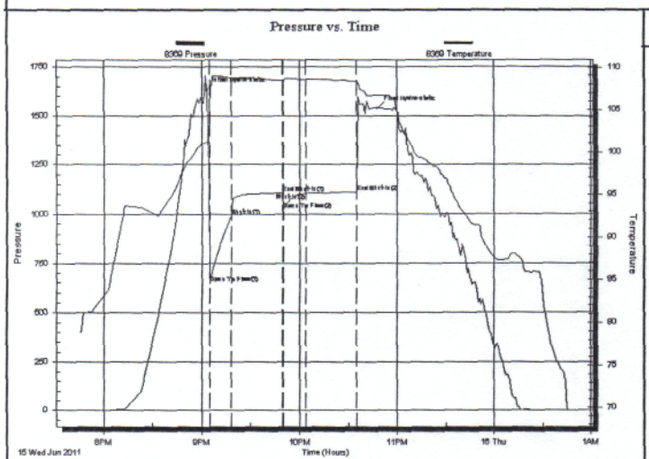
Interval: 3290.00 ft (KB) To 3310.00 ft (KB) (TVD)
Total Depth: 3310.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1844.00 ft (KB)
1836.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8369 **Outside**
Press@RunDepth: 1105.16 psig @ 3291.00 ft (KB)
Start Date: 2011.06.15 End Date: 2011.06.16
Start Time: 19:45:50 End Time: 00:46:44

Capacity: 8000.00 psig
Last Calib.: 2011.06.16
Time On Btm: 2011.06.15 @ 21:02:45
Time Off Btm: 2011.06.15 @ 22:48:15

TEST COMMENT: IF-BOB in 30 sec
ISI-No blow
FF-BOB in 30 sec
FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1632.17	101.07	Initial Hydro-static
2	646.43	105.03	Open To Flow (1)
16	993.80	108.74	Shut-In(1)
47	1107.74	108.36	End Shut-In(1)
47	1022.68	108.18	Open To Flow (2)
61	1105.16	108.56	Shut-In(2)
93	1109.70	108.31	End Shut-In(2)
106	1539.05	106.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2550.00	w ater	35.77

Gas Rates

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

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 4662

Cell 785-324-1041

	Sec.	Twp.	Range	County	State	On Location	Finish
Date 6-11-11				Russell	Kansas		9:15AM

Lease Anschutz Krug Well No. 1 Location Russell 3E 1/2N

Contractor Mai Oil Operations

Type Job Surface

Hole Size 12¼ T.D. 451

Csg. 8⅝ Depth 451

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 10-15 Shoe Joint

Meas Line Displace 27 3/4 Bbl

Owner

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.

Charge To Mai Oil Operations

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 225 60/40 3%CC 2%Gel

EQUIPMENT

Pumptrk 1	No.	Cementer	
		Helper	Steve
Bulktrk 3	No.	Driver	
		Driver	Matt
Bulktrk	No.	Driver	
		Driver	

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Cement did Circulate

Common	135
Poz. Mix	90
Gel.	4
Calcium	8
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	237
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
	8⅝ Wood
Pumptrk Charge	Surface
Mileage	2
Tax	
Discount	
Total Charge	

X Signature Joey Shinn

ALLIED CEMENTING CO., LLC. 035784

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Russell, KS

DATE 6-16-11	SEC. 23	TWP. 13	RANGE 14	CALLED OUT	ON LOCATION	JOB START 4:00 Pm	JOB FINISH 5:00 Pm
LEASE Anschutz-Kg	WELL # 1		LOCATION Russell 1N Einto			COUNTY Russell	STATE KS
OLD OR (NEW) (Circle one)							

CONTRACTOR Southwind #3
TYPE OF JOB PTA
HOLE SIZE T.D.
CASING SIZE DEPTH
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT

OWNER

CEMENT
AMOUNT ORDERED 190 60/40 4%Gel 1/4#FC

EQUIPMENT

PUMP TRUCK # 409 CEMENTER Heath - Bill
HELPER Todd
BULK TRUCK # 473 DRIVER Nick
BULK TRUCK # DRIVER

COMMON	114	@ 16.25	1852.50
POZMIX	76	@ 8.50	646.00
GEL	6	@ 21.25	127.50
CHLORIDE		@	
ASC		@	
Flo Seal 47#		@ 2.70	126.90
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	196	@ 2.25	441.00
MILEAGE	111/sk/mile		21.56
		TOTAL	3215.46

REMARKS:

1st 25 sx @ 3270'
2nd 25 sx @ 870'
3rd 100 sx @ 500'
4th 10 sx @ 40'

Rat Hole 30 sx

SERVICE

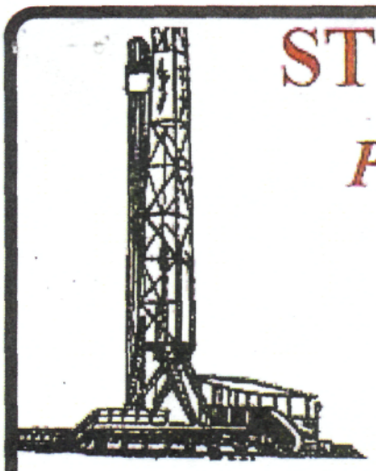
DEPTH OF JOB			
PUMP TRUCK CHARGE			1250.00
EXTRA FOOTAGE		@	
MILEAGE	2	@ 7.00	14.00
MANIFOLD		@	
Lua	2	@ 4.00	8.00
		@	
		TOTAL	1272.00

CHARGE TO: Mai Oil Operations
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

		@	
		@	
		@	
		@	

To Allied Cementing Co., LLC.
You are hereby requested to rent cementing equipment



STEVEN P. MURPHY, P.G.

Petroleum Geologist (KS #228)

RR#1, Box 69
Otis, Kansas 67565
geomurphy@gbta.net

Cell 620.639.3030
Fax 785.387.2400

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name:	Anschutz-Krug #1
Location:	Russell County
License Number:	API #15-167-23,721-00-00
Region:	Kansas
Spud Date:	6/10/11
Drilling Completed:	
Surface Coordinates:	2375' FNL & 875' FEL (Appr. SE SW SE NE) Section 23-T13S-R14W
Bottom Hole Coordinates:	Vertical well w/minimal deviation (Same as above)
Ground Elevation (ft):	1836'
K.B. Elevation (ft):	1844'
Logged Interval (ft):	2400' To: TD
Total Depth (ft):	RTD - 3350'
Formation:	Tarkio thru Arbuckle
Type of Drilling Fluid:	Chemical (Andy's Mud - Mud Engineer Dennis Rector)

OPERATOR

Company:	Mai Oil Operations, Inc.
Address:	8411 Preston Road Suite 800 Dallas, TX 75225-5520

GEOLOGIST

Name:	Steven P. Murphy, PG
Company:	Consulting Petroleum Geologist
Address:	3365 CR 390 Otis, KS 67565 Cell: 620-639-3030

LogTops (Datum)

The open-hole logging was performed by Jeff Lubbers with Superior Well Services (Hays, KS shop). Logs included Compensated Neutron/Compensated Density, Dual Induction & Microlog.

Formation tops and datums from the open-hole logs include the following:
Top Anhydrite - 844 (+1000)
Base Anhydrite - 881 (+964)
Tarkio - 2443 (-599)
Howard - 2648 (-804)
Topeka - 2712 (-868)
Heebner - 2942 (-1098)
Toronto - 2959 (-1115)
Lansing - 3000 (-1156)
Muncie Crk - 3137 (-1293)
Stark - 3207 (-1363)
BKC - 3262 (-1418)
Arbuckle - 3288 (-1444)

DSTs

DST #1 3062-3100 (LKC E,F,G)
45:45:45:45
IF: BOB in 23 min, no return
FF: 9" blow, no return
Recovery: 1' FO, 14' SMCW (10% M, 90%W),
240' W
IHP: 1508 FHP: 1428
IFP: 18-82 ISIP: 630
FFP: 87-137 FSIP: 611
BHT - 101 F
Chlorides: 110,000 ppm

DST #2 3154-3170 (LKC 'I')
15:15:15:30
IF: 1/4" blow, no return
FF: surface blow, no return
Recovery: 15' Oil scum MCW
(85%W, 15%M)
IHP: 1567 FHP: 1490
IFP: 14-17 ISIP: 637
FFP: 19-23 FSIP: 621
BHT: 99 F
Chlorides: 78,000 ppm

DST #3 3290-3310 (Arbuckle)
15:30:15:30
IF: BOB in 30 sec, no return
FF: BOB in 30 sec, no return
Recovery: 2550' SW
IHP: 1632 FHP: 1532
IFP: 646- 994 ISIP: 1108
FFP: 1022-1105 FSIP: 1109
BHT: 108 F
Chlorides: 4,000 ppm

COMMENTS

All significant and/or commercial shows of oil were evaluated by sample analysis, DST's and open-hole logs. Based on the negative results of these evaluations, it was recommended that this test be plugged at a rig total depth (RTD) of 3350'.

Respectfully submitted,

Steven P. Murphy, PG
Consulting Petroleum Geologist
(KS License #228)

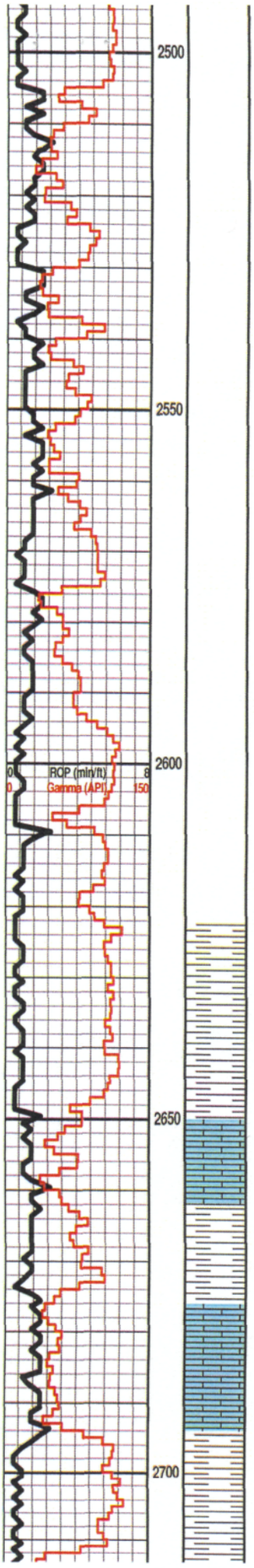
ROCK TYPES

Anhy, Bent, Brec, Cht, Clyst
Coal, Congl, Dol, Gyp, Igne
Lmst, Meta, Mrlst, Salt, Shale
Shcol, Shgy, Sltst, Ss, Till

OTHER SYMBOLS

OIL SHOW: Even, Spotted, Ques
Dead, Gas
INTERVAL: Core, Dst
EVENT: Conn, Rft, Sidewall

Curve Track 1 ROP (min/ft) Gamma (API)	Depth	Lithology	Oil Shows	Geological Descriptions	REMARKS
ROP (min/ft) 0 Gamma (API) 150 2450					The following are sample formation tops & associated datums (with KB of 1918'). Please refer to the main header for electric log tops & datums: Top Anhydrite: 848 (+996) Base Anhydrite: 882 (+962) NOTES: 8-5/8" Surface casing set @ 451' w/225 sacks cement Deviation survey @ 451' - 1/2 degree Geologist on location @ 10:00 AM on 6/1311 @ depth of 2720' TARKIO 2445 (-601)



SH: gry

LS: tan-gry, fxln, foss, dense, NS

LS: crm-tan, fxln, foss, chalky, dense, NS

LS: crm-tan, fxln, dense, sl chalky, NS

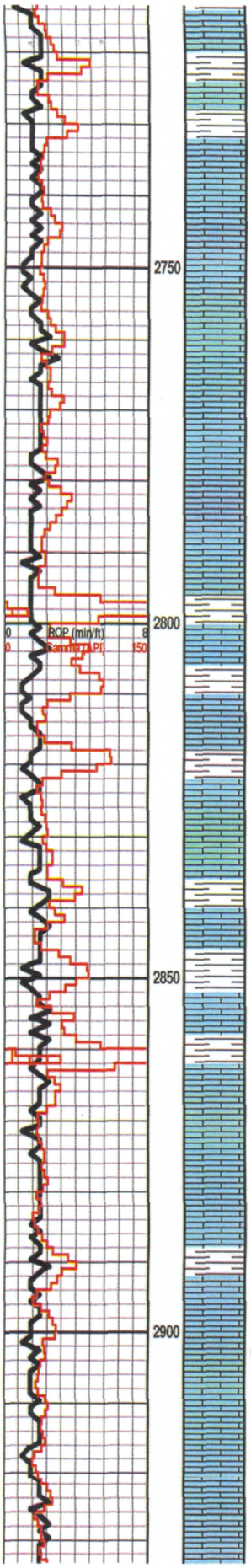
LS: crm-tan, fxln, dense, sl chalky, NS

SH: gry

SH: gry

HOWARD 2649 (-805)

Begin samples @ 2650'



LS: crm-tan-brn, vfxln, dense, foss, NS

SH: gry

LS: crm-gry, vfxln, sl foss, dense, NS

LS: crm-gry, vfxln, sl foss, dense, NS

LS: crm-gry, fxln, foss, sl chalky, dense, NS

LS: crm-brn-gry, vfxln, foss, chalky, dense, NS

LS: crm-brn-gry, vfxln, foss, chalky, dense, NS

LS: crm-brn-gry, vfxln, foss, chalky, dense, NS

SH: dk gry-blk

LS: crm-tan, fxln, foss, chalky, dense, NS

SH: gry-grn-blk

LS: wh-tan, fxln, foss, dense, NS

LS: wh-tan, fxln, foss, dense, NS

LS: wh-tan, vfxln, foss, sl chalky, dense, NS

SH: grn-gry

LS: crm-gry, vfxln, foss, chalky, dense, NS

SH: blk-gry

LS: crm-tan-gry, vfxln, foss, dense, NS

LS: wh-tan-brn, fxln, foss, spty stn in wh-chalky LS, mostly dense

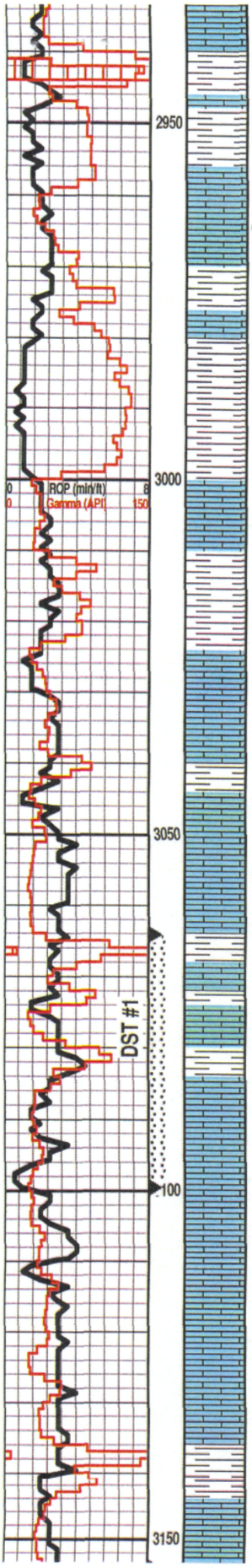
LS: wh-gry, fxln, foss, oolic in pt, sl chalky, pr-fr inxln & fr vug por, ssfo, fr stn, fr odor

LS: wh-gry, fxln, foss, sl chalky, pr-fr inxln por, vssfo, spty stn, sl odor

SH: gry-grn

LS: crm-gry, vfxln, dense, NS

TOPEKA 2715 (-874)



LS: crm-gry, fxln, foss, pr inxln por, vssfo, minor edge stn, sl odor

SH: blk

HEEBNER 2941 (-1097)

SH: gry-brn-grn

LS: wh-crm-gry, mostly dense, sl foss, sl chalky, pr inxln por, nsfo, spty stn, sl odor

TORONTO 2959 (-1114)

LS: wh-crm, fxln, oolic in pt, fr vug por, ssfo, spty stn, fr odor

SH: gry-grn-red-blk

SH: gry-grn-red-blk

LANSING 2999 (-1155)

LS: wh-tan, fxln, foss, sl chalky, dense, vssfo on brk, spty stn, sl odor

SH: gry-grn-red

LS: wh-tan, fxln, oolic, fr-gd vug por, ssfo, sat stn, gd odor

LS: crm-gry, vfxln, dense, abund cht, NS

CFS @ 3036'

SH: grn-gry-red

LS: crm-tan, fxln, oolic in pt, mostly dense, rare gd vug por, ssfo, sat lite stn, fr odor

LS: wh-tan, vfxln, foss, oolic in pt, cherty, dense, nsfo, minor stn, v sl odor

CFS @ 3060'

LS: wh-tan-gry, vfxln, sl foss, dense, NS

SH: blk-gry

DST #1 3062-3100 (LKC E,F,G)
45:45:45:45
IF: BOB in 23 min, no return
FF: 9" blow, no return
Recovery: 1' FO, 14' SMCW (10% M, 90%W), 240' W
IHP: 1508 FHP: 1428
IFP: 18-82 ISIP: 630
FFP: 87-137 FSIP: 611
BHT - 101 F
Chlorides: 110,000 ppm

LS: wh-brn-grn, fxln, foss, sl chalky, mostly dense, rare fr-gd inxln por, vssfo, fr sat stn, sl odor

LS: crm-tan, fxln, sl foss, chalky, dense, nsfo, minor stn, sl odor

CFS @ 3086'

SH: gry-grn-red

LS: wh-tan, vfxln, foss, chalky, dense, cherty, NS

LS: wh-crm, fxln, oolic, sl chalky, gd vug por, fsfo, even sat stn, gd odor

CFS @ 3100'

Pipe strap @ 3100' - 0.20' short to board (No correction)

Deviation survey @ 3100' - 1-1/4 degrees

LS: wh-crm, vfxln, oolic, sl chalky, dense, NS

SH: dk gry-reddish brn

LS: crm-tan, vfxln, chalky, dense, NS

LS: crm-tan, vfxln, chalky, dense, NS

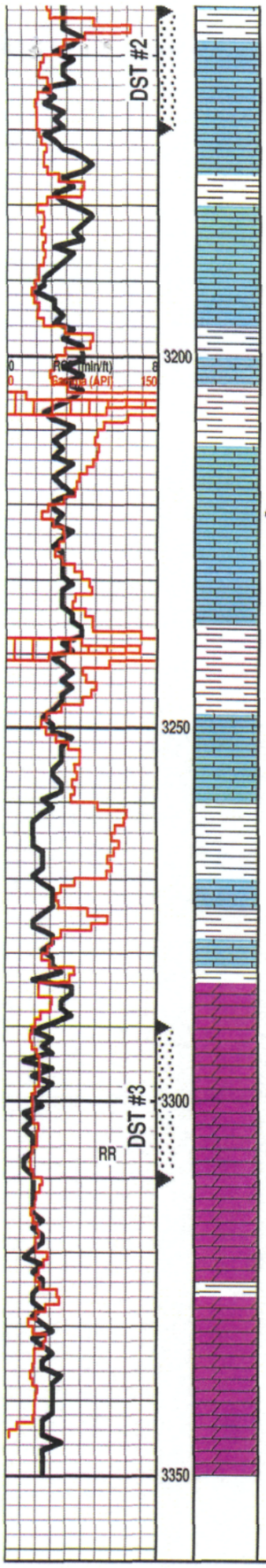
SH: blk-gry

MUNCIE CREEK 3137 (-1293)

LS: wh-tan-gry, fxln, dense, chalky, rare wh oolic, nsfo, tr lite stn, no odor

LS: crm-tan-gry, vfxln, dense, sl foss, chalky, NS

CFS @ 3154'



SH: blk-brn-grn

LS: wh-tan, fxln, oolic, fr-g vug & oomold por, fsfo, gd sat stn, str odor

CFS@3170'

DST #2 3154-3170 (LKC 'I')
15:15:15:30
IF: 1/4" blow, no return
FF: surface blow, no return
Recovery: 15' Oil scum MCW (85%W, 15%M)
IHP: 1567 FHP: 1490
IFP: 14-17 ISIP: 637
FFP: 19-23 FSIP: 621
BHT: 99 F
Chlorides: 78,000 ppm

SH: blk-gry-grn

LS: wh-crm, vfxln, sl foss, sl chlky, dense, NS

LS: crm, fxln, oolic in pt, ssfo on brk, spty stn, str odor

CFS@3194'

LS: crm-tan-gry, vfxln, sl foss, chalky, dense, NS

SH: blk-gry

SH: gry-grn-red

STARK 3206 (-1362)

LS: crm-gry, vfxln, sl foss, dense, NS

CFS@3220'

LS: crm-gry, fxln, mostly dense, rare pr inxln por, vssfo, spty stn, sl odor

LS: crm-tan-gry, vfxln, dense, NS

SH: blk-gry-grn

LS: wh-tan, vfxln, sl oolitic, dense, nsfo, rare stn, no odor

CFS@3250'

LS: wh-tan, vfxln, dense, sl chalky, NS

BKC 3259 (-1415)

SH: gry-grn

LS & CHT: red-grn, vfxln, dense, NS

SH: turq-mar-yel-gry

ARBUCKLE 3284 (-1440)

DOL: wh-tan, fxln, dense, NS

CFS@3290'

CFS@3294'

DST #3 3290-3310 (Arbuckle)
15:30:15:30
IF: BOB in 30 sec, no return
FF: BOB in 30 sec, no return
Recovery: 2550' SW
IHP: 1632 FHP: 1532
IFP: 646- 994 ISIP: 1108
FFP: 1022-1105 FSIP: 1109
BHT: 108 F
Chlorides: 4,000 ppm

DOL: crm-tan, f-cxln, rhombic, fr-gd vug & inxln por, NS

DOL: wh-crm-tan, f-cxln, rhom, fr-gd vug & inxln por, NS

DOL: wh-crm-tan, f-cxln, rhom, fr-gd vug & inxln por, NS

CFS@3300'

CFS@3303'

DOL: wh-tan, f-cxln, rhom in pt, fr-gd inxln & vug por, nsfo, sl stn in 2 pcs/tray, v-sl odor

CFS@3310'

DOL: wh-tan, f-mxln, ool in pt, mostly dense, pr-fr inxln & vug por, NS

Deviation Survey @ RTD (3350') - 1 degree

DOL: wh-tan, f-mxln, ool in pt, mostly dense, pr-fr inxln & vug por, minor cht, NS

DOL: wh-tan-gry, vf-mxln, mostly dense, rare pr-fr inxln por, cherty, NS

RTD - 3350'

LTD - 3350'