

CONFIDENTIAL

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

1/2/08  
ORIGINAL

Form ACO-1  
September 1999  
Form Must Be Typed

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 3842  
Name: LARSON ENGINEERING, INC.  
Address: 562 WEST STATE ROAD 4  
City/State/Zip: OLMITZ, KS 67564-8561  
Purchaser: N/A  
Operator Contact Person: TOM LARSON  
Phone: (620) 653-7368  
Contractor: Name: H-D DRILLING LLC  
License: 33935  
Wellsite Geologist: ROBERT LEWELLYN

Designate Type of Completion:  
 New Well  Re-Entry  Workover  
 Oil  SWD  SIOW  Temp Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, WSW, Expl., Cathodic, 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./SWD  
 Plug Back \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Dual Completion \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Other (SWD or Enhr.?) \_\_\_\_\_ Docket No. \_\_\_\_\_

9/5/2007 9/18/2007 9/19/2007  
Spud Date or Date Reached TD Completion Date or  
Recompletion Date Recompletion Date

API No. 15 - 101-22036-00-00  
County: LANE  
APP NE SE SW NE Sec. 19 Twp. 18 S. R. 29  East  West  
2140 feet from NORTH Line of Section  
1500 feet from EAST Line of Section

Footages Calculated from Nearest Outside Section Corner:  
(circle one) NE SE NW SW  
Lease Name: BOCKELMAN Well #: 1-19  
Field Name: WILDCAT  
Producing Formation: N/A  
Elevation: Ground: 2834' Kelly Bushing: 2839'  
Total Depth: 4657' Plug Back Total Depth: \_\_\_\_\_  
Amount of Surface Pipe Set and Cemented at 258 Feet  
Multiple State 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 PAN 3-31-07  
(Data must be collected from the Reserve Pit)  
Chloride content 23000 ppm Fluid volume 470 bbls  
Dewatering method used ALLOWED TO DRY  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License No.: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Docket No.: \_\_\_\_\_

**INSTRUCTIONS:** An original and two copies of this information shall be filed with the Kansas Corporation Commission, 130 South Market-Room 2078, 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: Carol Larson  
Title: SECRETARY/TREASURER Date: 1/2/2008  
Subscribed and sworn to before me this 2ND day of JANUARY,  
2008.  
Notary Public: Debra Ludwig  
Date Commission Expires: MAY 5, 2008

**KCC Office Use ONLY**  
 Letter of Confidentiality Attached  
If Denied, Yes  Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution

DEBRA J. LUDWIG  
Notary Public - State of Kansas  
My Appt. Expires 5/5/2008

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WICHITA, KS

Operator Name: LARSON ENGINEERING, INC. Lease Name: BOCKELMAN Well #: 1-19

Sec. 19 Twp. 18 S. R. 29  East  West County: LANE

**INSTRUCTIONS:** Show important tops and base of formation penetrated. Detail all cores. Report all final copes of 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 test, along with final chart(s). Attach extra sheet if more space is needed. Attach copy of all Electric Wireline Logs surveyed. Attach final geologist well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Sample Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Submit Copy)</i>  List All E. Logs Run: DUAL INDUCTION DUAL COMP POROSITY BOREHOLE COMP SONIC MICRORESISTIVITY	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;"><input checked="" type="checkbox"/> Log</td> <td style="width:40%;">Formation (Top), Depth and Datum</td> <td style="width:30%;"><input type="checkbox"/> Sample</td> </tr> <tr> <td>Name</td> <td>Top</td> <td>Datum</td> </tr> <tr> <td>ANHYDRITE</td> <td>2162</td> <td>+677</td> </tr> <tr> <td>BASE ANHYDRITE</td> <td>2221</td> <td>+618</td> </tr> <tr> <td>HEEBNER SH</td> <td>3930</td> <td>-1091</td> </tr> <tr> <td>LANSING-KANSAS CITY GP</td> <td>3969</td> <td>-1130</td> </tr> <tr> <td>STARK SH</td> <td>4255</td> <td>-1416</td> </tr> <tr> <td>BASE KANSAS CITY</td> <td>4334</td> <td>-1495</td> </tr> <tr> <td>PAWNEE</td> <td>4448</td> <td>-1609</td> </tr> <tr> <td>FORT SCOTT</td> <td>4499</td> <td>-1660</td> </tr> <tr> <td>CHEROKEE</td> <td>4524</td> <td>-1685</td> </tr> <tr> <td>MISSISSIPPIAN</td> <td>4596</td> <td>-1757</td> </tr> </table> <div style="text-align: center; margin-top: 10px;"> <p><b>CONFIDENTIAL</b></p> <p><b>JAN 02 2008</b></p> <p><b>KCC</b></p> </div>	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample	Name	Top	Datum	ANHYDRITE	2162	+677	BASE ANHYDRITE	2221	+618	HEEBNER SH	3930	-1091	LANSING-KANSAS CITY GP	3969	-1130	STARK SH	4255	-1416	BASE KANSAS CITY	4334	-1495	PAWNEE	4448	-1609	FORT SCOTT	4499	-1660	CHEROKEE	4524	-1685	MISSISSIPPIAN	4596	-1757
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CASING RECORD <input checked="" 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
SURFACE	12-1/4"	8-5/8"	23#	258'	CLASS A	175	2% GEL, 3% CC

ADDITIONAL CEMENTING/SQUEEZE RECORD					
Purpose:	Depth Top	Depth Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone					

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

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TUBING RECORD				Size	Set At	Packer At	Liner Run
							<input type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumed Production, SWD or Enhr.			Producing Method				
			<input type="checkbox"/> Flowing	<input type="checkbox"/> Pumping	<input type="checkbox"/> Gas Lift	<input type="checkbox"/> 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  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify) D & A

Production Interval \_\_\_\_\_

*If vented, submit ACO-18.)*

# ALLIED CEMENTING CO., INC.

30437

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

SERVICE POINT:  
Great Bend

DATE <u>9-5-06</u>	SEC. <u>19</u>	TWP. <u>18</u>	RANGE <u>29</u>	CALLED OUT <u>7:00 PM</u>	ON LOCATION <u>10:30 PM</u>	JOB START <u>12:00 AM</u>	JOB FINISH <u>1:00 AM</u>
BOCKELMAN LEASE	WELL# <u>1-19</u>	LOCATION <u>Dighton, SW to Gage Rd,</u>			COUNTY <u>Lane</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)			<u>1/2 S, W 1/3</u>				

CONTRACTOR H-D Drilling  
 TYPE OF JOB Surface Job  
 HOLE SIZE 12 1/4" T.D. 260'  
 CASING SIZE 8 5/8" DEPTH 260'  
 TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX 200# PSI MINIMUM 0  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT 15'  
 CEMENT LEFT IN CSG. 15'  
 PERFS. \_\_\_\_\_  
 DISPLACEMENT 15 1/2 BBLs of freshwater

OWNER Larson Engineering  
 CEMENT AMOUNT ORDERED 175 sx Common, 3%CC, 2% Gel

COMMON	<u>175 net</u>	@	<u>11.10</u>	<u>1942.50</u>
POZMIX		@		
GEL	<u>3 net</u>	@	<u>16.65</u>	<u>49.95</u>
CHLORIDE	<u>5 net</u>	@	<u>46.60</u>	<u>233.00</u>
ASC		@		
HANDLING	<u>183 net</u>	@	<u>1.90</u>	<u>347.70</u>
MILEAGE	<u>183 net</u>	@	<u>3.09</u>	<u>576.45</u>
TOTAL				<u>3149.60</u>

EQUIPMENT

PUMP TRUCK CEMENTER Rick H.  
 # 181 HELPER David J.  
 BULK TRUCK DRIVER Tyler W.  
 # 342  
 BULK TRUCK DRIVER \_\_\_\_\_  
 # \_\_\_\_\_

REMARKS:

pipe on bottom, broke circulation, mixed 175 sx Common, 3%CC, 2% Gel. Shut down. Released plug and displaced with 15 1/2 BBLs of freshwater and shut in, rigged down. Cement did Circulate.

SERVICE

DEPTH OF JOB	<u>261'</u>			
PUMP TRUCK CHARGE				<u>815.00</u>
EXTRA FOOTAGE		@		
MILEAGE	<u>39</u>	@	<u>6.00</u>	<u>210.00</u>
MANIFOLD	<u>Heat Rent</u>	@	<u>100.00</u>	<u>100.00</u>
TOTAL				<u>1125.00</u>

CHARGE TO: Larson Engineering  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

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PLUG & FLOAT EQUIPMENT

<u>1-wooden plug</u>	<u>60.00</u>	<u>60.00</u>
	@	
	@	
	@	
	@	
TOTAL		<u>60.00</u>

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.

Thanks!  
 SIGNATURE X Doug Roberts

TAX \_\_\_\_\_  
 TOTAL CHARGE \_\_\_\_\_  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS  
v Doug Roberts  
 PRINTED NAME

# ALLIED CEMENTING CO., INC. 30626

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

SERVICE POINT:

Great Bend  
9.19.07

DATE <u>9.18.07</u>	SEC. <u>19</u>	TWP. <u>18</u>	RANGE <u>29</u>	CALLED OUT <u>9:00 PM</u>	ON LOCATION <u>11:30 AM</u>	JOB START <u>12:30</u>	JOB FINISH <u>4:00 AM</u>
LEASE <u>Bockelman</u>		WELL # <u>1.19</u>	LOCATION <u>Bighton 5 west 1/2 south</u>		COUNTY <u>Lane</u>	STATE <u>Kansas</u>	
<input checked="" type="radio"/> OLD OR NEW (Circle one)			west into.				

CONTRACTOR H D Drilling L.L.C.  
 TYPE OF JOB Rotary Plug  
 HOLE SIZE 7 7/8 T.D. 4654'  
 CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 DRILL PIPE 4 1/2 XH & FH DEPTH 2230'  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_  
 CEMENT LEFT IN CSG. \_\_\_\_\_  
 PERFS. \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_

OWNER Larson Engineering Inc.  
 CEMENT  
 AMOUNT ORDERED 245 cu 60/40 poz  
4% Gel 1/4" flo seal per ex.

COMMON	<u>147</u>	@	<u>11.10</u>	<u>1631.70</u>
POZMIX	<u>98</u>	@	<u>6.20</u>	<u>607.60</u>
GEL	<u>10</u>	@	<u>16.65</u>	<u>166.50</u>
CHLORIDE		@		
ASC		@		
FLO-SEAL	<u>61</u>	@	<u>2.00</u>	<u>122.00</u>
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>257</u>	@	<u>1.90</u>	<u>488.30</u>
MILEAGE	<u>35.9</u>			<u>257</u>
TOTAL				<u>3825.65</u>

**EQUIPMENT**

HB  
 PUMP TRUCK CEMENTER J.D. Drilling  
 #181 HELPER David Juergensen  
 BULK TRUCK  
 #260 DRIVER Kevin Weighous  
 BULK TRUCK  
 # DRIVER \_\_\_\_\_

**REMARKS:**

- 1st 2230' - 50 AX
  - 2nd 1480' - 80 AX
  - 3rd 750' - 40 AX
  - 4th 260' - 40 AX
  - 5th 60' - 20 AX
- 15 AX rat holes

**SERVICE**

DEPTH OF JOB	<u>2230'</u>		
PUMP TRUCK CHARGE			<u>955.00</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>35</u>	@	<u>6.00</u> <u>210.00</u>
MANIFOLD		@	
		@	
		@	
TOTAL <u>1165.00</u>			

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CONSERVATION DIVISION  
WICHITA, KS FLOAT EQUIPMENT

CHARGE TO Larson Engineering Inc  
 STREET 562 West Hwy 4  
 CITY Olmitz STATE Kansas ZIP 67564-8561

*Thank you!*

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.

① THANKS!  
 SIGNATURE X Doug Roberts

TAX \_\_\_\_\_  
 TOTAL CHARGE \_\_\_\_\_  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS  
 TOTAL 0  
 SIGNATURE X Doug Roberts  
 PRINTED NAME \_\_\_\_\_

# **Robert C. Lewellyn**

*Consulting Petroleum Geologist*

P. O. Box 609  
Kechi, KS 67067-0609  
Office 316-744-2567  
Cell 316-518-0495  
Fax 209-396-2988  
*boblewellyn@yahoo.com*

## GEOLOGICAL REPORT

### **Larson Operating Company**

Bockelman No. 1-19  
2140 FNL & 1500 FEL Sec. 19-18S-29W  
Lane County, Kansas

CONTRACTOR: H. D. Drilling, LLC  
SPUDDED: September 05, 2007  
DRILLING COMPLETED: September 18, 2007  
SURFACE CASING: 8 5/8" @ 258 KBM/175 sx.  
ELECTRIC LOGS: Log-Tech DIL CDN ML BHCS  
ELEVATIONS: 2834 GL 2839 KB  
FORMATION TOPS (Electric Log):

Anhydrite	2162 (+ 677)
Base Anhydrite	2221 (+ 618)
Heebner Shale	3930 (-1091)
Lansing-Kansas City Group	3969 (-1130)
Muncie Creek Shale	4149 (-1310)
Stark Shale	4255 (-1416)
Hushpuckney shale	4284 (-1445)
Base Kansas City	4334 (-1495)
Marmaton	4372 (-1533)
Altamont	4387 (-1548)
Pawnee	4448 (-1609)
Myrick Station	4475 (-1636)
Fort Scott	4499 (-1660)
Cherokee	4524 (-1685)
Mississippian	4596 (-1757)
Electric Log Total Depth	4657 (-1818)

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Samples were examined microscopically from 3850 to Rotary Total Depth. Samples were examined wet and dry and samples from potentially productive zones were viewed under a fluoroscope and checked for oil cut. Following is a description of zones of interest, Drill Stem Tests, etc. For a complete lithologic description of all formations, refer to the sample log in the back pages of this report. Depths on Drill stem tests have been corrected downhole four feet to correlate with electric log measurements.

Lansing-Kansas City Zones:

3969-3977 (A Zone)

Limestone, buff, dense to finely crystalline with scattered cream chalky, trace of very poor intercrystalline porosity, trace of dead stain, no show of live oil.

4005-4011 (B Zone)

Limestone, cream to buff, finely crystalline poor scattered intercrystalline porosity, trace of dead stain, no show of live oil, some white chert, fresh, opaque.

4024-4054 (C-D Zone)

Limestone, cream to buff, dense and chalky, mostly tight, no show of oil, some chert, light gray, fresh, semi-translucent, some chert, buff, opaque, some tan, sub-lithographic limestone.

4056-4071 (E Zone)

Limestone, cream to buff, dense, finely crystalline, scattered very poor intercrystalline porosity, one or two fragments with poor spotted stain, no odor, no free oil, no fluorescence, no cut, zone warrants no further evaluation.

4074-4088 (F Zone)

Limestone, buff to tan, finely crystalline and slightly fossiliferous, partly oolitic, fair intercrystalline, interfossil and interoolitic porosity, fair to good spotted stain, good show of free oil, fair odor, fair fluorescence, fair cut.

DST No. 1

4067-4084

Open 15 minutes, shut in 30 minutes, open 30 minutes, shut in 60 minutes; weak blow, building to one-inch blow on first flow period; blow did not return on second flow; recovered one foot of free oil and four feet of mud with a scum of oil. ISIP 1063# FSIP 984# IFP 17-19# FFP 19-21# IHP 1965# FHP 1932# BHT 113 degrees.

4090-4095 (G Zone)

Limestone, buff to tan, finely crystalline and oolitic, fair ooliticastic porosity, no show of oil.

4163-4174 (H Zone)

Limestone, cream to buff, some tan, some brown, dense to finely crystalline and slightly fossiliferous, fair intercrystalline and vugular porosity, fair to good spotted stain, fair show of free oil, good odor, fair fluorescence, fair cut.

DST No. 2 4140-4174

Open 15 minutes, shut in 30 minutes, open 30 minutes, shut in 60 minutes; first flow blowing off bottom of bucket in five minutes, no blowback; second flow blowing off bottom of bucket in five minutes, no blowback; recovered 790 feet of muddy water (95% water, 5% mud). ISIP 1113# FSIP 1106# IFP 31-143# FFP 152-370# IHP 2038# FHP 2016# BHT 113 degrees.

4189-4219 (I Zone)

Limestone, cream to buff, some tan, finely crystalline and partly oolitic, fair intercrystalline and interoolitic porosity, good show of free oil, fair to good spotted stain, good odor, fair fluorescence, fair cut.

Drill Stem Test No. 3 4180-4218

Open 15 minutes, shut in 30 minutes, open 45 minutes, shut in 60 minutes; weak blow, building to one-inch blow on first flow, no blowback; second flow, no blow for seven minutes, then weak blow building to two-inch blow, no blowback; recovered 80 feet of muddy water (80% water, 20% mud) and 10 feet of mud. ISIP 1010# FSIP 969# IFP 20-33# FFP 34-56# IHP 2059# FHP 2016# BHT 112 degrees.

4231-4240 (J Zone)

Limestone, buff to tan, finely crystalline and oolitic, fair to good ooliticastic porosity, fair spotted stain, fair show of free oil, good odor, fair fluorescence, fair cut, porosity is approximately 45% barren.

Drill Stem Test No. 7 4204-4250 (Straddle test off electric log)

Top packers failed, tried to reset, failed again, pulled tool.

Drill Stem Test No. 8 4178-4250 (Straddle test off electric log)

Top packers failed, tried to reset, failed again, pulled tool.

Drill Stem Test No. 9 4235-4250 (Straddle test off electric log)

Top packers failed, tried to reset, failed again, pulled tool.

4266-4275 (K Zone)

Limestone, cream to buff, some tan, dense to finely crystalline, slightly fossiliferous, slightly oolitic, fair intercrystalline and interfossil porosity, poor to fair scattered spotted stain, slight show of free oil, good odor, poor fluorescence, poor cut. Zone is tight on electric logs and warrants no further evaluation.

4287-4300 (L Zone)

Limestone, cream to buff, finely crystalline, slightly fossiliferous, slightly oolitic, fair intercrystalline and vugular porosity, fair spotted stain, slight show of free oil, fair odor, fair fluorescence, fair cut.

Drill Stem Test No. 4                      4290-4314

Open 15 minutes, shut in 30 minutes, open 30 minutes, shut in 60 minutes; weak blow, died in seven minutes of first flow, blow did not return of second flow; recovered one foot of mud. ISIP 37# FSIP 96# IFP 19-19# FFP 18-19# IHP 2113# FHP 2066# BHT 114 degrees.

4334-4372 (Pleasanton Zone)

The Pleasanton section consisted of limestones, cream to buff to tan, dense to finely crystalline and chalky. The zone was mostly tight and contained no shows of oil.

4387-4408 (Altamont "A" Zone)

Limestone, cream to buff, finely crystalline, some dense, poor intercrystalline porosity, poor spotted stain in porosity and on fracture faces, very slight show of free oil, faint questionable odor, poor fluorescence, no cut.

4410-4444 (Altamont "B" Zone)

Limestone, cream to buff, finely crystalline and fossiliferous, some oolitic, poor to fair intercrystalline and interoolitic porosity, fair spotted stain, fair show of free oil, faint to fair odor, poor fluorescence, fair cut, trace of gilsonite.

Drill Stem Test No. 5                      4414-4444

Open 15 minutes, shut in 30 minutes, open 30 minutes, shut in 60 minutes; opened tool on first flow with only a few bubbles, no blow, second flow had no blow; recovered one foot of mud cut oil (50% oil, 50% mud). ISIP 51# FSIP 44# IFP 18-16# FFP 17-17# IHP 2183# FHP 2139# BHT 115 degrees.

4475-4492 (Myrick Station Zone)

Limestone, buff to tan, trace of brown, dense to finely crystalline, slightly fossiliferous, mostly tight, trace of scattered very poor spotted stain, no free oil, no odor, no fluorescence, no cut, trace of light gray opaque chert.



4499-4524 (Fort Scott Zones)

Limestone, buff to tan, some brown, dense with dense-oolitic, mostly tight with trace of very poor spotted stain, slight show of free oil, no odor, no fluorescence, no cut. Lower portion has some poor vugular porosity, slight show of free oil, faint odor, no fluorescence, no cut.

4526-4542 (Cherokee lime)

Limestone, buff to tan to brown, dense to finely crystalline, trace of poor stain on fracture faces, no free oil, no odor, no fluorescence, no cut.

4556-4580 (Johnson Zone)

Limestone, tan to brown, dense to finely crystalline and fossiliferous, poor to fair intercrystalline and vugular porosity, slight show of free oil, poor spotted stain, faint odor, poor fluorescence, fair cut.

Drill Stem Test No. 6

4472-4584

Open 15 minutes, shut in 30 minutes, open 30 minutes, shut in 60 minutes; weak quarter-inch blow died in six minutes, no blow on second flow; recovered three feet of mud. ISIP 897# FSIP 1084# IFP18-21# FFP 22-25# IHP 2285# FHP 2250# BHT 116 degrees.

4596-4657 (Mississippian Zones)

The Mississippian section consisted of limestones, cream to buff and tan to brown, dense to finely crystalline and partly oolitic, partly chalky. The entire section was mostly tight and contained no shows of oil.

4657

Electric Log Total Depth

Conclusions and Recommendations:

The No. 1-19 Bockelman had numerous sample shows of oil but drill stem test results were negative. Three attempts to straddle the Lansing-Kansas "J" zone after electric logging resulted in failures of the upper packers, possibly due to vertical fractures, hole washout, tool failure, or other factors. It was recommended, and permission granted, that the No. 1-19 Bockelman be plugged and abandoned as a dry hole.

Respectfully submitted,

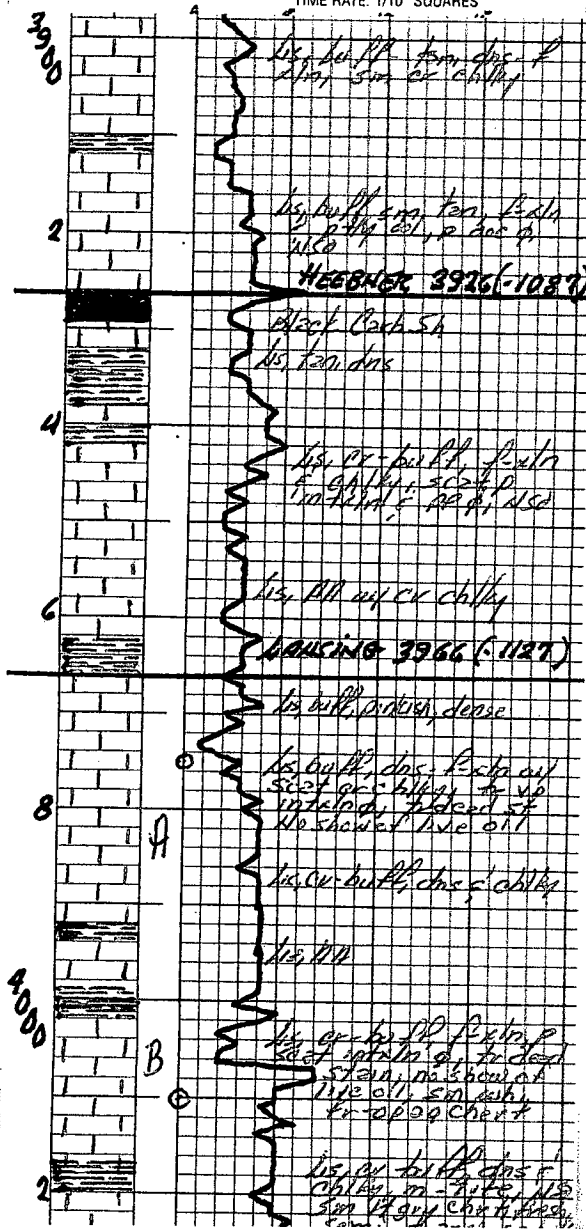
Robert C. Lewellyn  
Petroleum Geologist

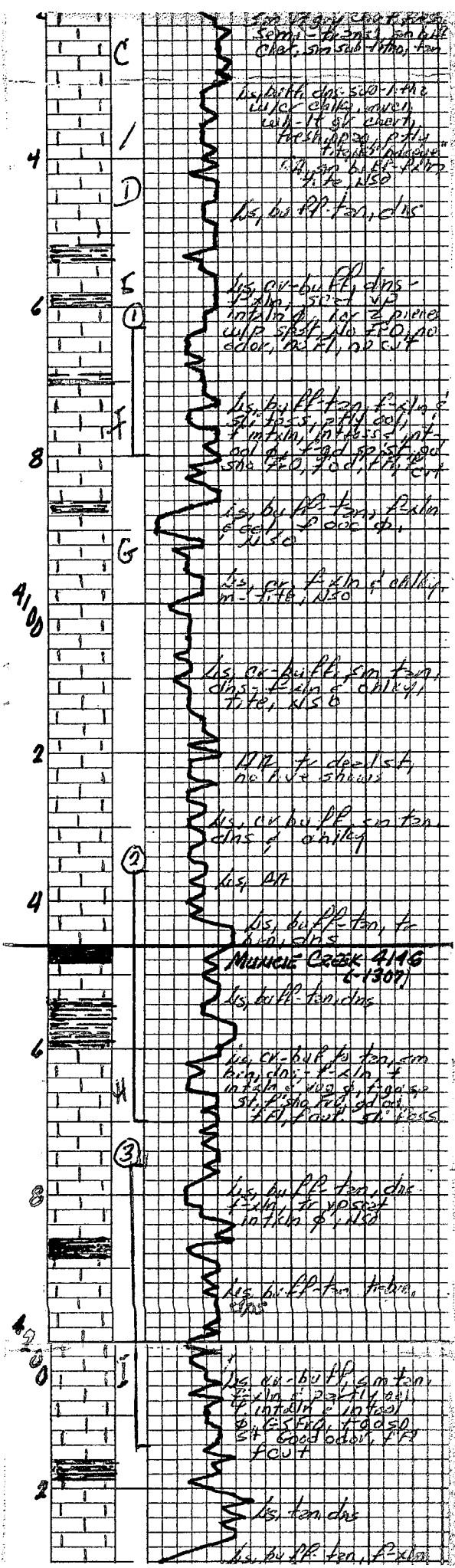
RCL:me

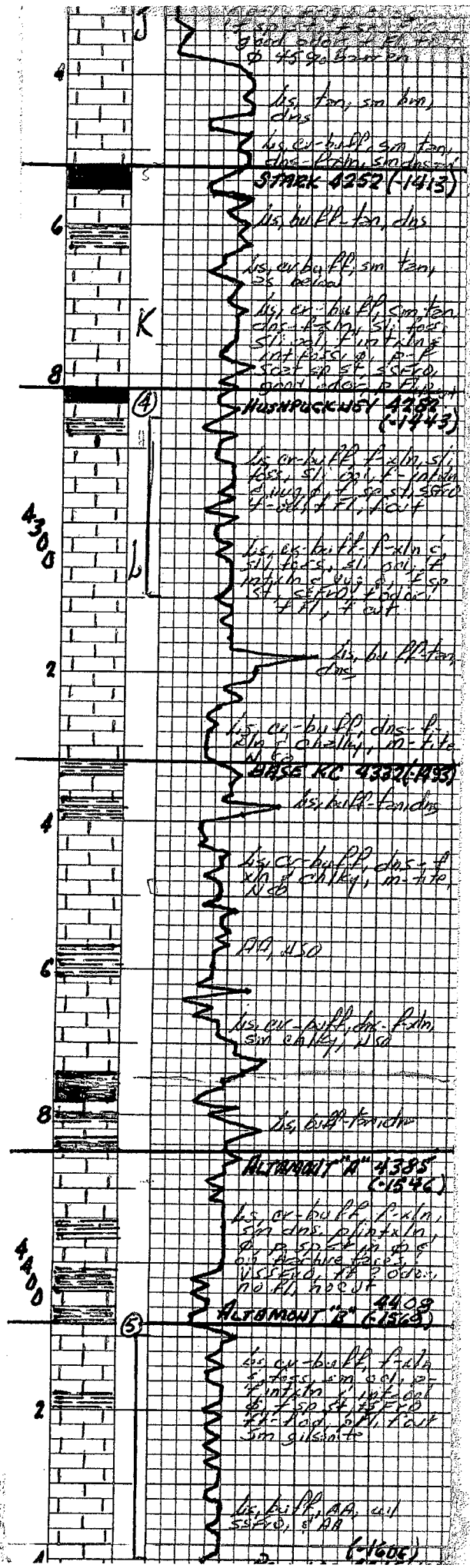
STATE **KANSAS** COMPANY **LARSON OPERATING CO.**  
 COUNTY **LANE** FARM **BOCKELMAN** WELL NO. **1-19**  
 BLOCK **2140 FNL & 1500 FEL**  
 SEC. **19** NE SE SW NE  
 I **185** R **29W** TOTAL DEPTH **4653**  
 CONTRACTOR **H.D. Drilling, LLC**  
 COMMENCED **09-05-07**  
 COMPLETED **09-18-07**  
 ALTITUDE **2839 KB**  
 PRODUCTION **Robert C. Jewell - Geol**

REMARKS  
**8 5/8" @ 258 KBM / 180 SX**

TIME RATE SCALE: 1/10" = MINUTES  
**Kraftbill 450-A TULSA, OKLAHOMA 74101 PRINTED IN U.S.A.**







Grand plateau, Ft. ...  
 45 90 lb ...

ls. tan, sm tan,  
 dus

ls. cr-buff, sm tan,  
 dus - cherty, sm discol

**STAKE 4252 (-1413)**

ls. buff-tan, dus

ls. cr-buff, sm tan,  
 ss below

ls. cr-buff, sm tan,  
 dus - cherty, sm tan,  
 silt, sh, fine, fine  
 int. sh, sh, silt  
 ss at top of 2' ss  
 gran. calc. P. Fl.

**MUSHPOCKNEY 4282 (-1443)**

ls. cr-buff, l-xln, silt,  
 sh, silt, sh, fine  
 silt, sh, fine, fine  
 silt, sh, fine, fine  
 silt, sh, fine, fine

ls. cr-buff, fine, silt,  
 sh, sh, silt, sh, fine  
 silt, sh, fine, fine  
 silt, sh, fine, fine  
 silt, sh, fine, fine

ls. buff-tan,  
 dus

ls. cr-buff, dus - ls.  
 sh & cherty, m-fine  
 sh

**BASE KC 4330 (1955)**

ls. buff-tan, dus

ls. cr-buff, dus - ls.  
 sh & cherty, m-fine,  
 sh

AA, 150

ls. cr-buff, dus - ls.  
 sm cherty, 150

ls. buff-tan

**ALTIMONT "A" 4385 (-1546)**

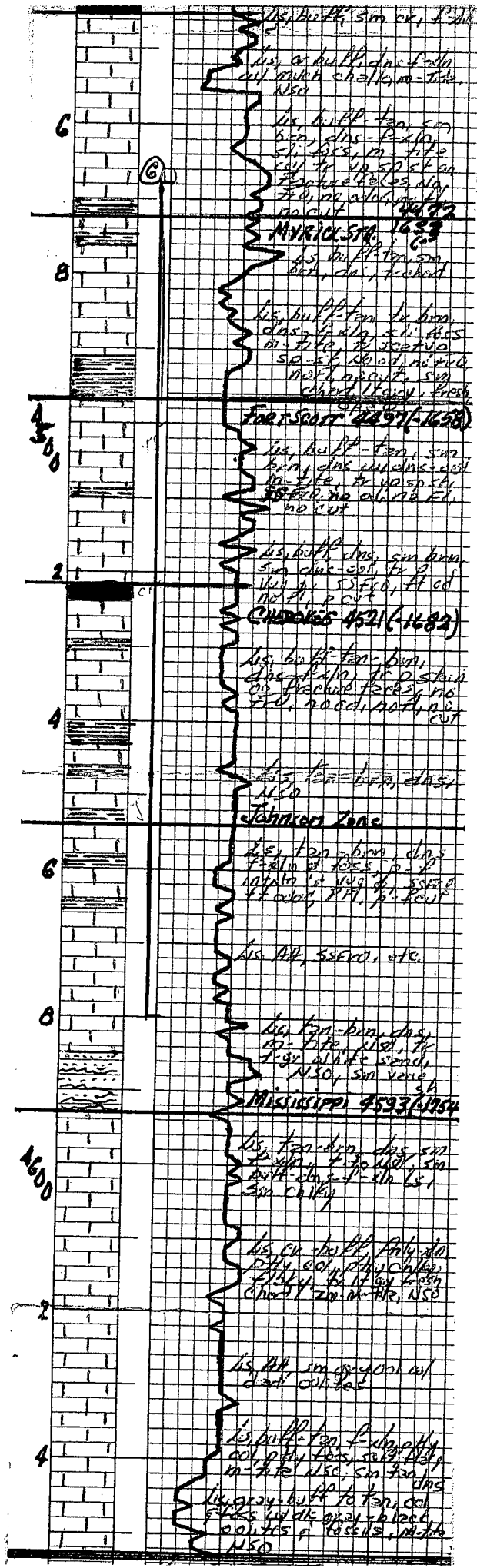
ls. cr-buff, l-xln,  
 sm dus, silt, sh,  
 sh, silt, sh, fine  
 silt, sh, fine, fine  
 silt, sh, fine, fine  
 silt, sh, fine, fine

**ALTIMONT "B" 4409 (-1563)**

ls. cr-buff, l-xln,  
 sm dus, silt, sh,  
 silt, sh, fine, fine  
 silt, sh, fine, fine  
 silt, sh, fine, fine  
 silt, sh, fine, fine

ls. buff-tan, AA, sil  
 ss, sh, sh

(-1600)



ls. buff, tan, dk. silt  
 clay, shaly, m. fine  
 NSO

ls. buff. tan, silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st. on  
 fracture faces, no  
 fossils, no cut  
**MYRIK-STB. 1633**

ls. buff. tan, silt  
 clay, shaly, m. fine

ls. buff. tan, dk. silt  
 clay, shaly, m. fine  
 m. fine, to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut, no  
 fossils, no cut

**FERT. STB. 1637/1638**

ls. buff. tan, silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut

ls. buff. tan, silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut

**CHRONOS 1521 (1682)**

ls. buff. tan, silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut

ls. tan, dk. silt  
 clay, shaly, m. fine  
 NSO

**Johannes zone**

ls. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut

ls. tan, dk. silt  
 clay, shaly, m. fine

ls. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut

ls. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut

**Mississippi 9593/1954**

ls. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut

ls. buff. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut

ls. buff. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut

ls. buff. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut  
 ls. buff. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut  
 ls. buff. tan, dk. silt  
 clay, shaly, m. fine  
 clay to 1/2" sp. st.  
 on fracture faces, no  
 fossils, no cut, no  
 fossils, no cut