



Operator Name LARSON OPERATING COMPANY, A DIVISION OF LARSON ENGINEERING, INC. Lease Name BRUNGARDT UNIT Well # 20

Sec. 35 Twp. 10S Rge. 17  East  West County ROOKS

Instructions: Show important tops and base of formation 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 (Attach Additional Sheets.) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run (Submit Copy.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: COMP NEUTRON DUAL INDUCTION GAMMA RAY	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datums <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Top</th> <th style="text-align: left;">Datum</th> </tr> </thead> <tbody> <tr><td>ANHYDRITE</td><td>1156</td><td>+799</td></tr> <tr><td>TOPEKA</td><td>2868</td><td>-913</td></tr> <tr><td>HEEBNER SH</td><td>3098</td><td>-1143</td></tr> <tr><td>TORONTO LS</td><td>3119</td><td>-1164</td></tr> <tr><td>LANSING GP</td><td>3142</td><td>-1187</td></tr> <tr><td>CONGLOMERATE</td><td>3430</td><td>-1475</td></tr> <tr><td>ARBUCKLE FM</td><td>3532</td><td>-1577</td></tr> </tbody> </table>	Name	Top	Datum	ANHYDRITE	1156	+799	TOPEKA	2868	-913	HEEBNER SH	3098	-1143	TORONTO LS	3119	-1164	LANSING GP	3142	-1187	CONGLOMERATE	3430	-1475	ARBUCKLE FM	3532	-1577
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CASING RECORD <input type="checkbox"/> New <input checked="" 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#	206.95	60-40 POZ	135	2% GEL, 3% CC
PRODUCTION	7-7/8	5-1/2	14#	3601	60-40 POZ	75	7# GILS, 0.6% H-3
					EA-2	125	7# GILS, 0.6% H-3

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	SURF-1120	65-35 POZ	200	10% GEL
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone	SURF-1120	COMMON	50	3% CC

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	
	2	3448-48, 3420-36		SEE ATTACHED
2	3241-45, 3231-36 CIBP @ 3205			
2	3178-82, 3120-23			
2	3060-65, 2898-2903			

TUBING RECORD	Size 2-3/8	Set At 3202.98	Packer At	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First, Resumed Production, SWD or Inj. 11/7/94	Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)
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Estimated Production Per 24 Hours	Oil 8 Bbls.	Gas Mcf	Water 186 Bbls.	Gas-Oil Ratio	Gravity 36
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Disposition of Gas:  Vented  Sold  Used on Lease (If vented, submit ACO-18).

METHOD OF COMPLETION

Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify) \_\_\_\_\_

Production Interval 2898-3182 OA

# ORIGINAL

ATTACHMENT TO ACO-1

Operator Name LARSON OPERATING COMPANY,  
A DIVISION OF LARSON ENGINEERING, INC. Lease Name BRUNGARDT UNIT Well # 20  
Sec. 35 Twp. 10S Rge. 17  East County ROOKS  
 West

API#15-163-23249-0000

## ACID, FRACTURE, SHOT, CEMENT SQUEEZE RECORD

Depth	Amount and Kind of Material Used
3430-36 & 3444-48	500 GAL 15% FE W/ 1 GAL LOSURF 259, 50 GAL XYLENE, 1 GAL CLA-STA XP, 1/2 GAL PEN-88
3231-36 & 3241-45	500 GAL 15% FE W/ 2 GAL LOSURF 259, 1/2 GAL PEN-88
3178-82	500 GAL 15% FE W/ 2 GAL LOSURF 259, 1/2 GAL PEN-88
3120-23	500 GAL 15% FE W/ 2 GAL LOSURF 259, 1/2 GAL PEN-88
3060-65	500 GAL 15% FE W/ 2 GAL LOSURF 259, 1/2 GAL PEN-88
2898-2903	500 GAL 15% FE W/ 2 GAL LOSURF 259, 1/2 GAL PEN-88
3178-82, 3120-23, 3060-65, 2898-2903	4000 GAL 15% FE W/ 16 GAL LOSURF 259, 4 GAL PEN-88, 50 BALL SEALERS

STATE OF KANSAS  
COMMISSION  
JAN 24 1995  
GEOLOGICAL DIVISION  
WICHITA, KANSAS

913-483-2627, Russell, Kansas  
 Phone 316-793-5861, Great Bend, Kansas

15-163 23249-0000  
 Phone Plainville 913-434-2812  
 Phone Ness City 913-798-3843

**ORIGINAL**

**ALLIED CEMENTING CO., INC.** 3851  
 Home Office P. O. Box 31 Russell, Kansas 67665

*New*

Date	9-15-94	Sec.	35	Twp.	10	Range	17	Called Out		On Location	6:30 PM	Job Start		Finish	10.15 AM	
Lease	Bingard	Well No.	20	Location	Codell + River RD Inc.				County	Rooks	State	Kan				
Contractor	Emph #8															
Type Job	Surface															
Hole Size	12 1/4	T.D.	207													
Csg.	8 5/8	Depth	206													
Tbg. Size																
Drill Pipe																
Tool																
Cement Left in Csg.																
Press Max.																
Meas Line	Displace <input checked="" type="checkbox"/>															
Perf.																

**EQUIPMENT**

No.	Cementer	<i>McAdoo</i>
Pumptrk 177	Helper	<i>Will H</i>
No.	Cementer	
Pumptrk	Helper	
	Driver	<i>Bill</i>
Bulktrk 282	Driver	

<b>DEPTH of Job</b>	
Reference:	<i>Pump Truck Plug</i>
	<i>235 Per mile</i>
	Sub Total
	Tax
	Total

Remarks: *Cement Did Cir.*

Owner *1 1/2 N 1/2 W 2 N*

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 listed.

Charge To *Hanson Oper. Co.*

Street

City State

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

Purchase Order No. *Jack B. Fox*

**CEMENT**

Amount Ordered *135.40 3% O.C. 2% Gel*

Consisting of

Common	
Poz. Mix	
Gel.	
Chloride	
Quickset	

Sales Tax

Handling

Mileage

Sub Total

Total

Floating Equipment

JAN 24 1995  
 WIGHT & WISNOM

WELL DATA

LOG

FIELD \_\_\_\_\_ SEC. 35 TWP. 10S RNG. 17W COUNTY ROCKS STATE KS

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_

FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_

INITIAL PROD. OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD \_\_\_\_\_

PRESENT PROD. OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD \_\_\_\_\_

COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_

PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_

BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_

MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING	U	14	5 1/2	162	3596.5	
LINER						
TUBING						
OPEN HOLE			7 1/2	3596.5	3610	SHOTS/FT.
PERFORATIONS			ORIGINAL			
PERFORATIONS						
PERFORATIONS						

JOB DATA

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLYING COLLAR		
1" HWT FLOAT	1	HOWCO
1" FLOW SHOE	1	"
GUIDE SHOE	1	BAKER
CENTRALIZERS	16	"
BOTTOM PLUG		
TOP PLUG	1	HOWCO
HEAD	1	"
PACKER		
OTHER	2	BAKER

CALLER OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE 9-21	DATE 9-21	DATE 9-21	DATE 9-21
TIME 1530	TIME 1800	TIME 2130	TIME 2330

PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
	PICKUP	
W. WILSON	B9377	39604 HAYS, KS
R. BERNS	57220	51374 "
D. ASH	E1609	51332-76102 "

MATERIALS

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB./GAL. °API \_\_\_\_\_

DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB./GAL. °API \_\_\_\_\_

PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB. \_\_\_\_\_

ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ % \_\_\_\_\_

SURFACTANT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ IN \_\_\_\_\_

NE AGENT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ IN \_\_\_\_\_

FLUID LOSS ADD. TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN \_\_\_\_\_

GELLING AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN \_\_\_\_\_

FRIC. RED. AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN \_\_\_\_\_

BREAKER TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_ IN \_\_\_\_\_

BLOCKING AGENT TYPE \_\_\_\_\_ GAL.-LB. \_\_\_\_\_

PERFPAC BALLS TYPE \_\_\_\_\_ QTY. \_\_\_\_\_

OTHER \_\_\_\_\_

OTHER \_\_\_\_\_

DEPARTMENT CEMENT

DESCRIPTION OF JOB 5 1/2" LONGSIDE

JOB DONE THRU: TUBING  CASING  ANNULUS  TBG./ANN.

CUSTOMER REPRESENTATIVE X T.C. Person

HALLIBURTON OPERATOR Wayne W. W.

COPIES REQUESTED 1

CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
	75	40% PDZ	60% STD	B	2% GEL, 7" GEL-SALT P/S, 1.6%		
	125	STANDARD		B	5% CALSAL, 1.8% SALT, 4" GEL-SALT P/S, 1.6% HALAD 322	1.39	13.8
						1.41	15.3

PRESSURES IN PSI

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_

BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_

AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_

SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN \_\_\_\_\_ 15-MIN \_\_\_\_\_

HYDRAULIC HORSEPOWER \_\_\_\_\_

ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_

AVERAGE RATES IN BPM \_\_\_\_\_

TREATING \_\_\_\_\_ DISPL \_\_\_\_\_ OVERALL \_\_\_\_\_

CEMENT LEFT IN PIPE \_\_\_\_\_

FEET 3000 REASON 32.26

SUMMARY

VOLUMES

PRESLUSH EBL cm 35 - 12 TYPE SLURRY-MIXED

LOAD & BKDN: BBL.-GAL. \_\_\_\_\_ PAD: BBL.-GAL. \_\_\_\_\_

TREATMENT: BBL.-GAL. \_\_\_\_\_ DISPL. EBL GAL 87

CEMENT SLURRY EBL GAL 18.6 - 31.4 = 50

TOTAL VOLUME: BBL.-GAL. \_\_\_\_\_

REMARKS PART CALUM @ 1123' (CUSTOMER PROVIDED)

JAN 2 1995

WICHITA, KANSAS

CUSTOMER NEON OPERATOR

LEASE BRADSHAW

WELL NO 20

JOB TYPE 5 1/2" LONGSIDE

DATE 9-21-91



**JOB LOG** HAL-2013-C

DATE: 9-21-94 PAGE NO. 1

CUSTOMER: URSO OPERATING WELL NO. 20 LEASE: REWDGARDT JOB TYPE: 5 1/2" LONGSTRAW6 TICKET NO. 722519

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1530							CALLED OUT
	1800							ON LOCATION ORIGINAL
	2050							BREAK CIRCULATION
	2144	5	20		✓		250	PUMP CUMFLEX FLUSH
	2148	5	12		✓		250	PUMP MUDFLUSH
	2151	5	5		✓		250	PUMP CUMFLEX FLUSH
	2153		3.5					PLUG RATHOLE
	2158	4.7	0		✓		200	MIX CEMENT
	2210		46.5					FINISH MIXING CEMENT
	2211							WASH OUT PUMP & LINES
	2211							RELEASE PLUG
	2212	7	0		✓		600	DISPLACE PLUG
	2227		87				1000	PLUG DOWN
	2229						1000	RELEASE PSZ
								OK FLOAT HELD
								WASH-UP
	2330							RACK-UP JOB COMPLETE

THANK YOU

WAKE, DAVID 4 1995  
 ROW

STATE OF TEXAS COMMISSION ON  
 GEOLOGICAL SURVEY  
 DIVISION

Phone 913-483-2627, Russell, KS  
 Phone 316-793-5861, Great Bend, KS

Phone 913-625-5516, Hays, KS  
 Phone 913-672-3471, Oakley, KS

Phone 316-886-5926, Medicine Lodge, KS  
 Phone 913-798-3843, Ness City, KS

# ALLIED CEMENTING CO., INC. 0007765 ORIGINAL

Home Office P. O. Box 31 Russell, Kansas 67665

New

Date	10-1-94	Sec.		Fwp.		Range		Called Out	5:30am	On Location	8:40am	Job Start	9:30am	Finish	4:50pm	
Lease	BRUNGARDT	Well No.	UNIT-20	Location	Codell RUA. RD. JCT			County	Ellis	State	KANSAS					
Contractor	EXPRESS Well SERVICE							Owner	2N 3/4E & N into							
Type Job	CIRCULATE Cement (OPEN PORT COLLAR)							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 listed.								
Hole Size								T.D.								
Csg.	5 1/2" ✓							Depth								
Tbg. Size	2"							Depth								
Drill Pipe								Depth								
Tool	PORT COLLAR @ (BAKER)							Depth	1140'							
Cement Left in Csg.								Shoe Joint								
Press Max.	1500#							Minimum								
Meas Line								Displace								
Perf.																

### EQUIPMENT

Pumptrk # 177	No.	Cementer	Jim
		Helper	Will
Pumptrk # 282	No.	Cementer	
		Helper	
Bulktrk # 213		Driver	Jason
		Driver	Paul

### DEPTH of Job

Reference:	Pump Truck CHRG
	Sub Total
	Tax
	Total

Charge To	LARSON OIL OPERATION'S
Street	
City	State
The above was done to satisfaction and supervision of owner agent or contractor.	
Purchase Order No.	
X	J.C. Larson
Amount Ordered	50 SK COM 3% CEMENT 200 SK 6 5/8 10% GEL <del>4# PER SK</del>
Consisting of	
Common	
Poz. Mix	
Gel.	
Chloride	
Quickset	
	Sales Tax
Handling	
Mileage	
	Sub Total
	Total
Floating Equipment	

Remarks: BAKER PORT COLLAR @ 1140' TEST to 1500# + HELD (CSG). COULD NOT OPEN PORT COLLAR. WIRE LOG TECH PERF @ 1160'. MIXED 200 SK 6 5/8 10% GEL, Followed By 50 SK COM 3% CEMENT. RELEASES RUBBER PLUG, & DISPLACED DOWN TO 1120'. Followed By WIRE LINE CEMENT DID CIRCULATE, (APPROX. 100SK.)  
 Jhuts

JAN 2 1995

WICHITA COUNTY