

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1247135
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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 SIOW
- Gas 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
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

| | | |
|-----------------------------------|-----------------|---|
| Spud Date or Recompletion Date | Date Reached TD | Completion Date or Recompletion Date |
|-----------------------------------|-----------------|---|

API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1247135

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 Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <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 |
|--|---|

| 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 | | | | |
| | | | | |

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i> | 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: <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)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ | PRODUCTION INTERVAL: _____ _____ |
|--|---|---|

| | |
|-----------|---|
| Form | ACO1 - Well Completion |
| Operator | Larson Engineering, Inc. dba Larson Operating Company |
| Well Name | Paris-Hineman 1-7 |
| Doc ID | 1247135 |

Perforations

| Shots Per Foot | Perforation Record | Material Record | Depth |
|----------------|------------------------------|--------------------|------------------|
| 4 | 4362-65, 4311-14, 4282-84 | 250 gal 15% RWR-1 | 4362-65 |
| | | 250 gal 15% RWR-1 | 4311-14 |
| | | 100 gal 15% RWR-1 | 4282-84 |
| | | SQZ: 50 sx Class A | 4282-84 |
| 4 | 4237-41 | | |
| 4 | 4218-20, 4223-25 | 250 gal 15% RWR-1 | 4218-20, 4223-25 |
| 4 | 4179-85 | 250 gal 15% RWR-1 | 4179-85 |
| | BP @ 4350, 4265 & 4233 | | |

ALLIED OIL & GAS SERVICES, LLC

Federal Tax I.D. #20-5975804

067270

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Great Bend

| | | | | | | | |
|-------------------------|---------------|------------------|-----------------|---------------------------------------|-------------|-----------------------------|---------------------------|
| DATE <u>12-17-14</u> | SEC. <u>7</u> | TWP. <u>19</u> | RANGE <u>28</u> | CALLED OUT | ON LOCATION | JOB START <u>7:30 pm</u> | JOB FINISH <u>8 pm</u> |
| LEASE <u>Hoxman</u> | | WELL# <u>1-7</u> | | LOCATION <u>Defton 4.50th - Einto</u> | | COUNTY <u>Lincoln</u> | STATE <u>KS</u> |
| OLD OR NEW (Circle one) | | | | | | | |

CONTRACTOR HD #3 OWNER _____

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. _____

CASING SIZE 8 5/8 DEPTH 253.52

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 15 FT

PERFS. _____

DISPLACEMENT 15.19 bbl H2O

EQUIPMENT

PUMP TRUCK CEMENTER Justin Isaac

398 HELPER Patrick Walker

BULK TRUCK _____

811-112 DRIVER Jose Tracheta (TWS)

BULK TRUCK _____

_____ DRIVER Brian Long

REMARKS:

on location - Rig up - had soft mud
run 8 5/8 casing - break air
pump 5 bbl H2O
mix 16.5 sx class A 3% gel 7% gel
Displace 15.19 bbl H2O
Shut in 8 pm
Cement did air
Rig down

CHARGE TO: Larsen

STREET _____

CITY _____ STATE _____ ZIP _____

CEMENT

AMOUNT ORDERED 165 sx class A 3% gel

2% gel

COMMON 165 @ 17.90 2,953.50

POZMIX @ _____

GEL 310 @ .50 155.00

CHLORIDE 465 @ 1.10 511.50

ASC @ _____

@ _____

@ _____

@ _____

@ _____

@ _____

@ _____

@ _____

@ _____

TOTAL 3,620.00

DISCOUNT 25% 905.00

SERVICE

HANDLING 178.42 @ 2.48 442.48

MILEAGE 8.14 x 25 x 2.75 559.63

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____ 1512.35

EXTRA FOOTAGE @ _____

HV MILEAGE 25 @ 7.70 192.50

LV MILEAGE 25 @ 4.40 110.00

@ _____

@ _____

TOTAL 2,816.96

DISCOUNT 25% 704.22

PLUG & FLOAT EQUIPMENT

@ _____

@ _____

@ _____

@ _____

@ _____

TOTAL 0

DISCOUNT 0% 0

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cement 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 X LEWYNE TRESNER

SIGNATURE X Lewayne Tresner

SALES TAX (If Any) _____

TOTAL CHARGES 6,436.86

DISCOUNT 1609.22 IF PAID IN 30 DAYS

NET TOTAL 4,827.64 IF PAID IN 30 DAYS



CHARGE TO: Larson Engineering
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET 28146

SERVICE LOCATIONS
 1. Ness City KS WELL/PROJECT NO. 1-7 LEASE Paris-H. H. H. H. H. COUNTY/PARISH LANE STATE KS CITY Dighton DATE 11 Jan 15 OWNER _____
 2. TICKET TYPE SERVICE SALES CONTRACTOR _____ RIG NAME/NO. 3 SHIPPED VIA CT DELIVERED TO location ORDER NO. _____
 3. WELL TYPE oil WELL CATEGORY H-D JOB PURPOSE Development cement long string 4 1/2" WELL PERMIT NO. _____ WELL LOCATION _____
 4. REFERRAL LOCATION _____ INVOICE INSTRUCTIONS _____

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | U/M | | UNIT PRICE | AMOUNT |
|-----------------|-------------------------------------|------------|------|----|----------------------------|------|-----|-----|----|------------|---------|
| | | LOC | ACCT | DF | | | | | | | |
| 575 | | 1 | | | MILEAGE | 40 | mi | | | 6.00 | 240.00 |
| 578 | | 1 | | | Pump Charge | 1 | hr | | | 1500.00 | 1500.00 |
| 325 | | 1 | | | Standard cement (For EA-2) | 155 | sk | | | 14.50 | 2247.50 |
| 284 | | 1 | | | Calseal | 7 | sl | 700 | lb | 35.00 | 245.00 |
| 283 | | 1 | | | salt | 800 | lb | | | 0.20 | 160.00 |
| 292 | | 1 | | | brnd - 322 | 150 | lb | | | 8.00 | 1200.00 |
| 276 | | 1 | | | Flocele | 25 | lb | | | 2.50 | 62.50 |
| 277 | | 1 | | | cool seal | 1085 | lb | | | 0.75 | 813.75 |
| 255 | | 1 | | | Flocheck | 500 | gal | | | 3.00 | 1500.00 |
| 221 | | 1 | | | KCL liquid | 2 | gal | | | 25.00 | 50.00 |
| 290 | | 1 | | | D-AR | 2 | gal | | | 42.00 | 84.00 |

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS
 X
 DATE SIGNED _____ TIME SIGNED _____ A.M. P.M.
 1700

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

| SURVEY | AGREE | UN-DECIDED | DIS-AGREE | PAGE TOTAL | AMOUNT |
|---|-------|------------|-----------|----------------|---------|
| OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? | | | | 1 | 8102.75 |
| WE UNDERSTOOD AND MET YOUR NEEDS? | | | | 2 | 656.60 |
| OUR SERVICE WAS PERFORMED WITHOUT DELAY? | | | | Subtotal | 8759.35 |
| WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? | | | | Lane TAX 7.15% | 454.94 |
| ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | TOTAL | 9214.29 |
| <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND | | | | | |

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR [Signature] APPROVAL [Signature] Thank You!



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. **28146**

CUSTOMER **Larson Engineering** WELD **Paris-Hanneman-7** DATE **11 Jan 15** PAGE **2** OF **2**

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | TIME | DESCRIPTION | QTY | | U/M | | UNIT PRICE | AMOUNT |
|-----------------|-------------------------------------|------------|------|----|------|----------------|-----|--|-----|--|------------|--------|
| | | LOC | ACCT | DF | | | | | | | | |
| 581 | | 1 | | | | SERVICE CHARGE | | | | | 200 | 310.00 |
| 583 | | 1 | | | | MILEAGE CHARGE | | | | | 100 | 346.60 |
| | | | | | | TOTAL WEIGHT | | | | | | |
| | | | | | | 17,330 | | | | | | |
| | | | | | | LOADED MILES | | | | | | |
| | | | | | | 40 | | | | | | |
| | | | | | | TON MILES | | | | | | |
| | | | | | | | | | | | 346.6 | |

CONTINUATION TOTAL **656.60**

JOB LOG

SWIFT Services, Inc.

DATE: 11 Jan 15 PAGE NO. 1

| CUSTOMER | | WELL NO. | | LEASE | | JOB TYPE | | TICKET NO. | |
|--------------------|------|------------|--------------------|-----------------|---|---------------------|--------|--|--|
| Lalson Engineering | | 1-7 | | Puffs - Hirvman | | Current long string | | 28146 | |
| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS | | PRESSURE (PSI) | | DESCRIPTION OF OPERATION AND MATERIALS | |
| | | | | T | C | TUBING | CASING | | |
| | | | | | | | | | 155 sk EA-2 w/ 1/2" flocc & 7" gilsonite 4 1/2" x 166' casing 11.6" set @ 4454 Post collar 2096' |
| | 1430 | 1 | | | | | | | on log TRK114 |
| | 1440 | | | | | | | | circulates - drop ball |
| | 1540 | 4 | 5 | | | | 250 | | pump 5 bbl KCL flush |
| | | 4 | 12 | | | | 250 | | pump 500 gal Flocheck 21 |
| | | 4 | 15 | | | | 250 | | pump 15 bbl KCL flush |
| | | | 7 | | | | | | Plug RH 305* |
| | 1546 | 4 1/2 | 29 | | | | 250 | | mix EA-2 cement 1255' @ 15.3 ppm |
| | 1600 | | | | | | | | Drop latch down plug |
| | | | | | | | | | wash out pump & line |
| | 1608 | 5 1/2 | | | | | 250 | | Displace plug |
| | | 5 1/2 | 58 | | | | 600 | | |
| | 1630 | 5 1/2 | 68 | | | | 1500 | | Land plug |
| | | | | | | | | | Release pressure to truck - chid up |
| | 1635 | | | | | | | | wash truck & Back up |
| | 1655 | | | | | | | | Job complete |
| | | | | | | | | | Thanks Flint, Blair, & Isaac |



CHARGE TO: **LARSON ENGINEERING**
 ADDRESS:
 CITY, STATE, ZIP CODE:

TICKET 28190

PAGE 1 OF

SERVICE LOCATIONS
 1. **NESS CITY, KS.** WELL/PROJECT NO. **1-7** LEASE **PARIS-HINEMAN** COUNTY/RANGH **LANE** STATE **KS.** CITY **DIGHTON, KS.** DATE **14 JAN 15** OWNER
 2. TICKET TYPE SERVICE SALES CONTRACTOR **WILD WEST WELL SERV.** RIG NAME/NO.
 3. WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **CEMENT PORT COLLAR** WELL PERMIT NO. WELL LOCATION **45, ETWTO**
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | U/M | | UNIT PRICE | AMOUNT |
|-----------------|-------------------------------------|------------|------|----|-----------------------|-------|--|-----|----------|------------|---------|
| | | LOC | ACCT | DF | | | | | | | |
| 575 | | | | | MILEAGE #115 | 35 | | mi | | 6.00 | 210.00 |
| 576D | | | | | Pump CHARGE | | | | | 1500.00 | 1500.00 |
| 276 | | | | | FLOCELE | 60 | | lb | | 2.50 | 150.00 |
| 290 | | | | | D-AIR | 2 1/2 | | gal | | 42.00 | 105.00 |
| 330 | | | | | SMD CEMENT | 225 | | sx | | 1.80 | 416.25 |
| 581 | | | | | CEMENT SERVICE CHARGE | 300 | | sx | | 2.00 | 600.00 |
| 583 | | | | | DRAVAGE | 29875 | | lbs | 522.817m | 1.00 | 522.81 |

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS
 X
 DATE SIGNED **14 JAN 15** TIME SIGNED **1300** A.M. P.M.

REMIT PAYMENT TO:
SWIFT SERVICES, INC.
P.O. BOX 466
NESS CITY, KS 67560
785-798-2300

| SURVEY | AGREE | UN-DECIDED | DIS-AGREE | PAGE TOTAL | AMOUNT |
|--|------------------------------|-----------------------------|-----------|--------------|----------------|
| OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? | | | | 7250 | 31 |
| WE UNDERSTOOD AND MET YOUR NEEDS? | | | | | |
| OUR SERVICE WAS PERFORMED WITHOUT DELAY? | | | | | |
| WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? | | | | | |
| ARE YOU SATISFIED WITH OUR SERVICE? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | | | |
| <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND | | | | TOTAL | 7566.16 |

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR *[Signature]* APPROVAL
 Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 1/4/15 PAGE NO.

CUSTOMER LARSON ENGINEERING

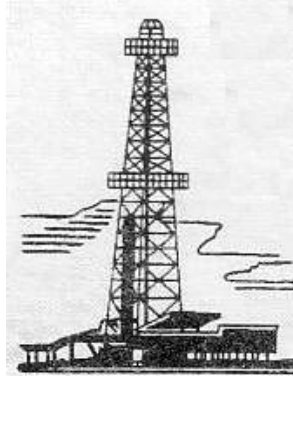
WELL NO. 1-7

LEASE PARIS HINEMAN

JOB TYPE CEMENT PORT COLLAR

TICKET NO. 28190

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS | | PRESSURE (PSI) | | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|------|------------|--------------------|-------|---|----------------|--------|--|
| | | | | T | C | TUBING | CASING | |
| | 1100 | | | | | | | ON LOCATION |
| | | | | | | | | PORT COLLAR @ 2097 |
| | 1137 | | | | ✓ | | 1000 | TEST - HELD |
| | | | | | | | | OPEN PORT COLLAR |
| | 1144 | 4 | 125 | ✓ | | 550 | | MIX 225 SX SMD |
| | | 3 | 7 1/2 | ✓ | | 300 | | DISPLACE CEMENT |
| | | | | | | | | CIRCULATE 20 SX TO PIT |
| | 1218 | | | | | | 1000 | CLOSE PORT COLLAR - TEST - HELD |
| | | | | | | | | RUN 5 JTS. |
| | 1228 | 4 | 20 | | ✓ | | 300 | REVERSE CLEAN |
| | 1237 | | | | | | | WASH TRUCK |
| | 1300 | | | | | | | JOB COMPLETE |
| | | | | | | | | THANKS \$ 115 |
| | | | | | | | | JASON DAVE COLE ROB |



WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG
CONSULTANT GEOLOGIST



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

Well Name: PARIS-HINEMAN #1-7
Location: NW NE NE NW SEC. 07-19S-28W
Licence Number: API: 15-101-22554
Spud Date: January 2, 2015
Surface Coordinates: 128' FNL & 2010' FWL

Region: Lane Co., KS
Drilling Completed: January 10, 2015

Bottom Hole Coordinates:
Ground Elevation (ft): 2782' K.B. Elevation (ft): 2791'
Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4455'
Formation: Marmaton
Type of Drilling Fluid: Chemical Premix (Displaced)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: Larson Engineering Inc.
Address: 562 West State Road 4
Olmits, KS 67564-8561

DRILLING CONTRACTOR:

H. D. Drilling, LLC, Rig #3 (Co. Tools)

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8" x 556'; Kelly 40.30', Tool Joint 5.5" ; Bit: JZ-HA20Q, 7-7/8", standard jets 15-15-15; rpm 80, WOB 35k; Kelly Bushing 9' above ground level; LeWayne "Lew" Tresner (tool pusher).

CASING:

Set 8-5/8" casing at 256'

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14, 60-62 spm, Chemical, premix, earth pits, Morgan Mud, Inc., Cade Lines.

OPEN HOLE LOGS:

DN, DI (SP) (Run-1); ML (Run-2); No Sonic; 5" detail LTD-3600; 2" DI to surface casing; LogTech-Pioneer Wireline, Hays, KS, Chris Desaire, Log total depth (4455') was even to rotary total depth (4455').

DRILL STEM TEST #1:

LKC (E-zone): Interval: 4074-4100 (26'); Blow: incr 5" IFP, no RB, BOB 11 min FFP, RB incr 3/4" FFP; Times: 5-15-15-30; Recovery: 200' TF, no GIP; Grindouts: 76' MO (50%O, 50%M), 124' GOM (10%G, 40%O, 50%M); Pressures: HP: 2016-1989, SIP: 1069-1063, FP: 28-61, 70-100; BHT: 107 F; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #2:

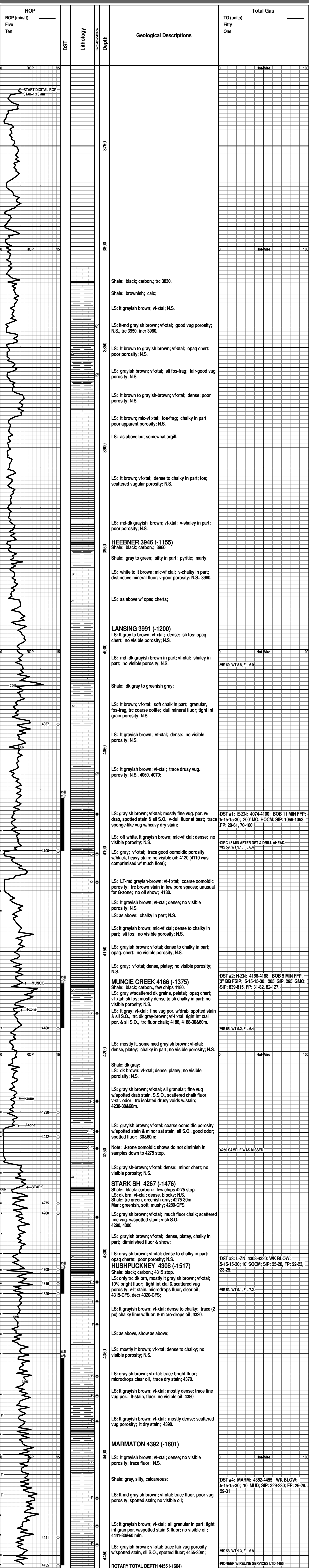
LKC (H-zone): Interval: 4166-4188 (22'); Blow: incr 9.5" IFP, surface RB ISIP, BOB 5 min FFP, 3" RB FSIP; Times: 5-15-15-30; Recovery: 205' GIP, 295' TF; Grindouts: 171' GCO (30%G, 70%O, 34 grav.), 124' GOM (10%G, 50%O, 40%M); Pressures: HP: 2071-2041, SIP: 839-815, FP: 31-82, 82-127; BHT: 121 F; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #3:

LKC (L-zone): Interval: 4308-4320 (12'); Blow: weak incr 1/2" IFP, no RB, weak incr 1/4" FFP, no RB; Times: 5-15-15-30; Recovery: 10' SOCM (2%O, 98%M); Pressures: HP: 2156-2128, SIP: 25-28, FP: 22-23, 23-25; BHT: 111 F; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.

DRILL STEM TEST #4:

Marmaton: Interval: 4352-4455 (103'); Blow: weak incr 1" IFP, no RB, surf blow FFP, no RB; Times: 5-15-15-30; Recovery: 10' mud w/few oil spots (100%M); Pressures: HP: 2223-2092, SIP: 329-230, FP: 26-29, 29-31; BHT: 108 F; Trilobite Testing, Inc., Scott City, KS, Jace McKinney.





DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Paris-Hineman #1-7

7-19s-28w Lane,KS

Start Date: 2015.01.07 @ 08:00:00

End Date: 2015.01.07 @ 14:58:30

Job Ticket #: 58518 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.13 @ 09:03:48



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering, Inc

7-19s-28w Lane, KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

ATTN: Vern Schrag

Job Ticket: 58518

DST#: 1

Test Start: 2015.01.07 @ 08:00:00

GENERAL INFORMATION:

Formation: **LKC 'E'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:18:45

Time Test Ended: 14:58:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jace McKinney

Unit No: 75

Interval: 4074.00 ft (KB) To 4100.00 ft (KB) (TVD)

Total Depth: 4100.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2801.00 ft (KB)

2791.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8675 Inside

Press@RunDepth: 99.78 psig @ 4097.00 ft (KB)

Start Date: 2015.01.07

End Date:

2015.01.07

Start Time: 08:00:15

End Time:

14:58:30

Capacity: 8000.00 psig

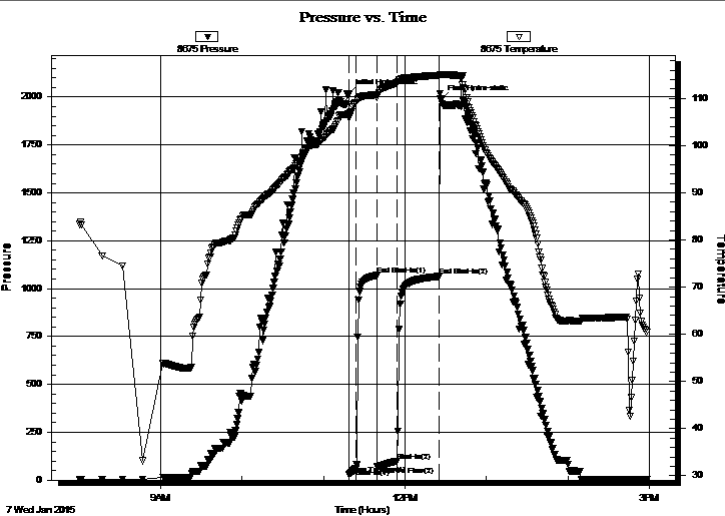
Last Calib.: 2015.01.07

Time On Btm: 2015.01.07 @ 11:18:30

Time Off Btm: 2015.01.07 @ 12:26:15

TEST COMMENT:

Built to 5"
Bled off for 2 min, No return blow
B.O.B. in 11 min
Bled off for 3, min, Built to 3/4" return blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2015.89 | 106.67 | Initial Hydro-static |
| 1 | 28.09 | 105.84 | Open To Flow (1) |
| 6 | 61.31 | 109.16 | Shut-In(1) |
| 21 | 1068.85 | 110.79 | End Shut-In(1) |
| 21 | 69.56 | 110.20 | Open To Flow (2) |
| 36 | 99.78 | 113.41 | Shut-In(2) |
| 67 | 1063.46 | 114.94 | End Shut-In(2) |
| 68 | 1988.67 | 115.12 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------|--------------|
| 124.00 | gcom 10%G 40%O 50%M | 0.61 |
| 76.00 | mco 50%M 50%O | 1.07 |
| | | |
| | | |

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering, Inc

7-19s-28w Lane, KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

ATTN: Vern Schrag

Job Ticket: 58518

DST#: 1

Test Start: 2015.01.07 @ 08:00:00

GENERAL INFORMATION:

Formation: LKC 'E'

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:18:45

Time Test Ended: 14:58:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jace McKinney

Unit No: 75

Interval: 4074.00 ft (KB) To 4100.00 ft (KB) (TVD)

Reference Elevations: 2801.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2791.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8650 Outside

Press@RunDepth: psig @ 4097.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.07

End Date: 2015.01.07

Last Calib.: 2015.01.07

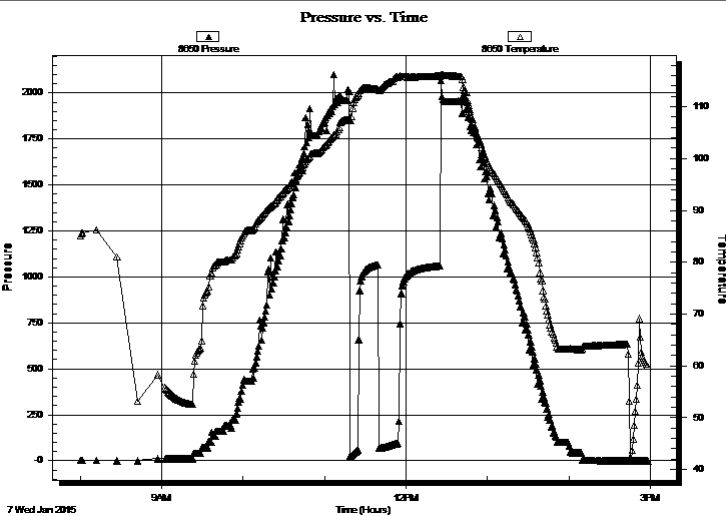
Start Time: 08:00:15

End Time: 14:58:30

Time On Btm:

Time Off Btm:

TEST COMMENT: Built to 5"
Bled off for 2 min, No return blow
B.O.B. in 11 min
Bled off for 3, min, Built to 3/4" return blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
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Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------|--------------|
| 124.00 | gcom 10%G 40%O 50%M | 0.61 |
| 76.00 | mco 50%M 50%O | 1.07 |
| | | |
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| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

7-19s-28w Lane, KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

Job Ticket: 58518

DST#: 1

ATTN: Vern Schrag

Test Start: 2015.01.07 @ 08:00:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3951.65 ft | Diameter: 3.80 inches | Volume: 55.43 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 30000.00 lb |
| Drill Collar: | Length: 124.09 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: 71000.00 lb |
| | | | <u>Total Volume: 56.04 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 29.24 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 4074.00 ft | | | Final 61000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 26.00 ft | | | |
| Tool Length: | 53.50 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 4047.50 | |
| Shut In Tool | 5.00 | | | 4052.50 | |
| Hydraulic tool | 5.00 | | | 4057.50 | |
| Jars | 5.00 | | | 4062.50 | |
| Safety Joint | 2.50 | | | 4065.00 | |
| Packer | 5.00 | | | 4070.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4074.00 | |
| Stubb | 1.00 | | | 4075.00 | |
| Perforations | 22.00 | | | 4097.00 | |
| Change Over Sub | 0.00 | | | 4097.00 | |
| Recorder | 0.00 | 8675 | Inside | 4097.00 | |
| Recorder | 0.00 | 8650 | Outside | 4097.00 | |
| Drill Pipe | 0.00 | | | 4097.00 | |
| Change Over Sub | 0.00 | | | 4097.00 | |
| Perforations | 0.00 | | | 4097.00 | |
| Bullnose | 3.00 | | | 4100.00 | 26.00 Bottom Packers & Anchor |
| Total Tool Length: | 53.50 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

7-19s-28w Lane,KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

Job Ticket: 58518

DST#: 1

ATTN: Vern Schrag

Test Start: 2015.01.07 @ 08:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------------|---------------|
| 124.00 | gcom 10%G 40%O 50%M | 0.610 |
| 76.00 | mco 50%M 50%O | 1.065 |

Total Length: 200.00 ft Total Volume: 1.675 bbl

Num Fluid Samples: 0

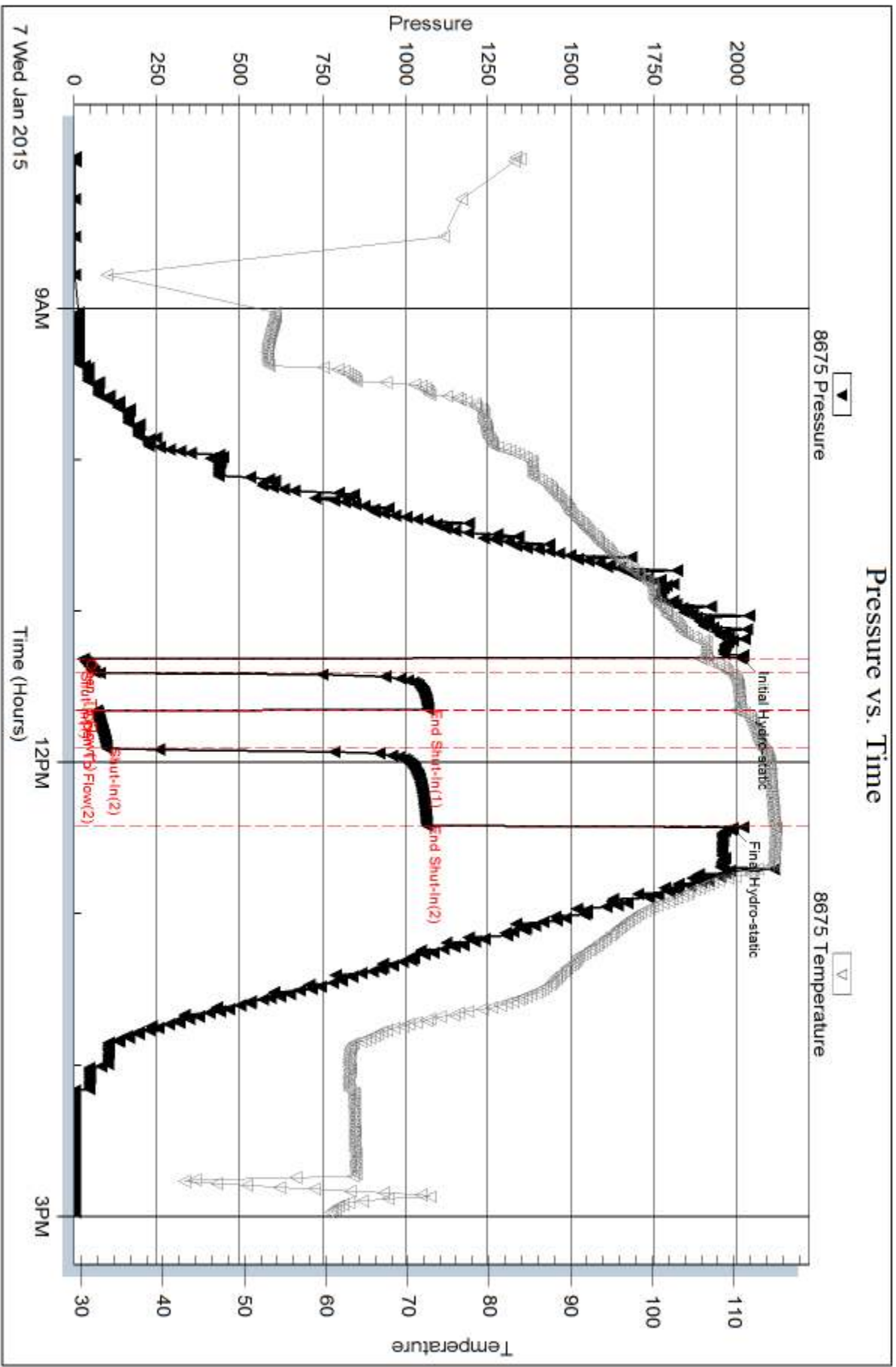
Num Gas Bombs: 0

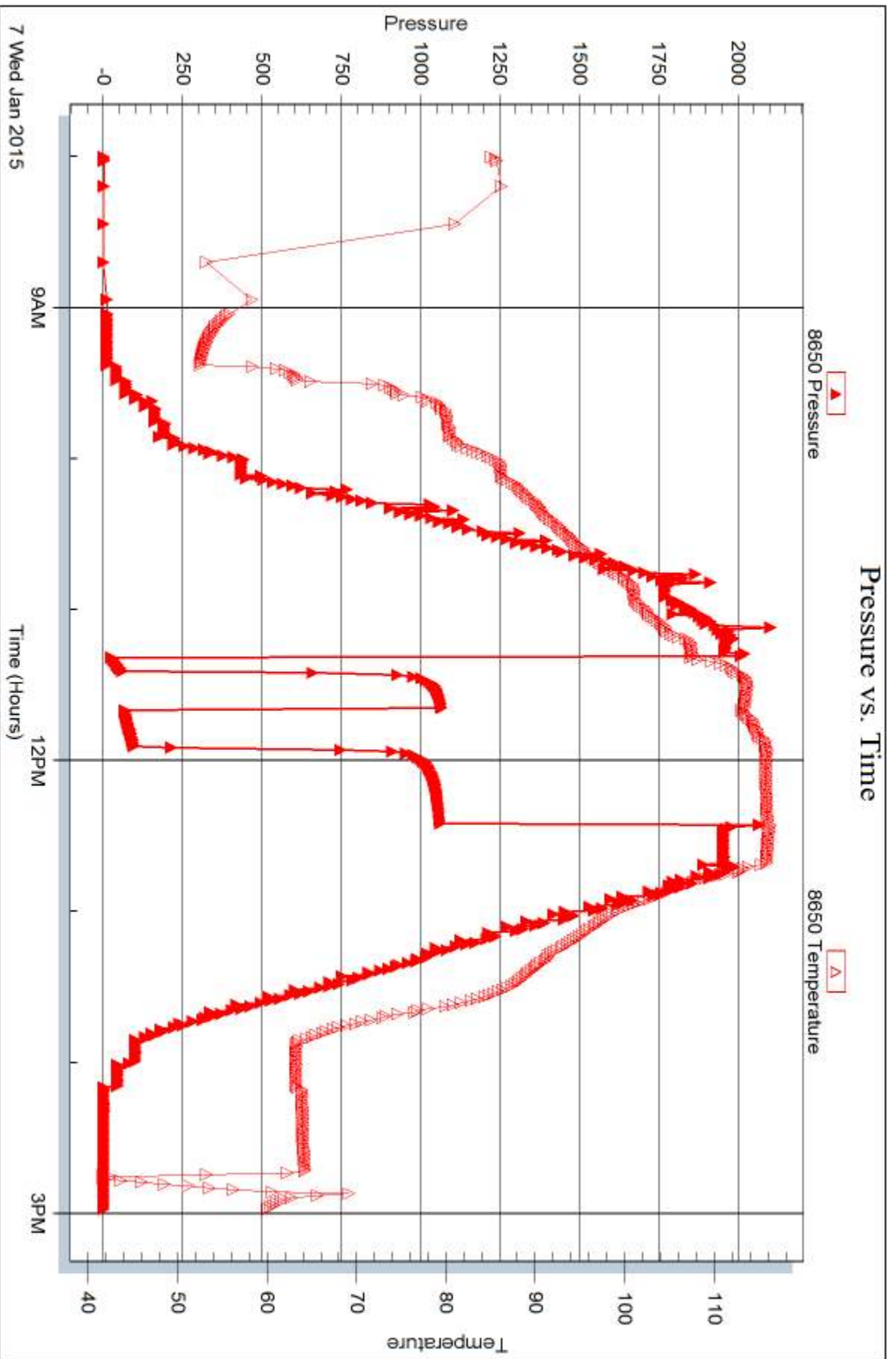
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Paris-Hineman #1-7

7-19s-28w Lane,KS

Start Date: 2015.01.08 @ 03:15:00

End Date: 2015.01.08 @ 09:36:30

Job Ticket #: 58519 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.13 @ 09:03:22



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering, Inc
562 West State Rd 4
Olmitz KS 67564-8561
ATTN: Vern Schrag

7-19s-28w Lane, KS
Paris-Hineman #1-7
Job Ticket: 58519 **DST#: 2**
Test Start: 2015.01.08 @ 03:15:00

GENERAL INFORMATION:

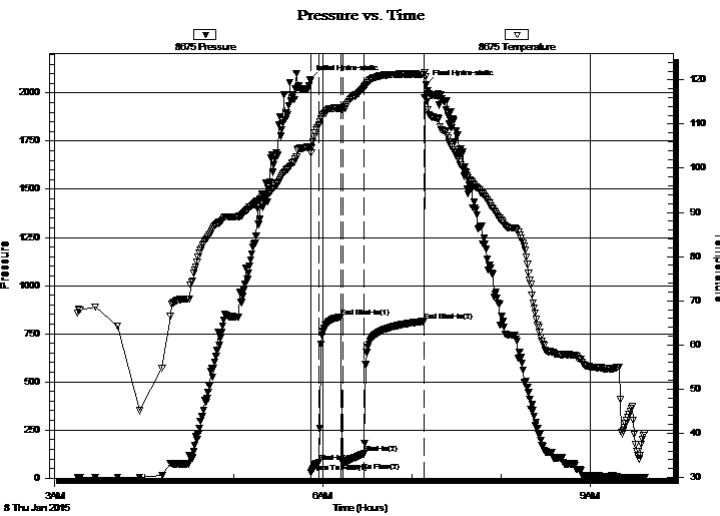
Formation: **LKC 'H'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:52:15
Time Test Ended: 09:36:30
Interval: **4166.00 ft (KB) To 4188.00 ft (KB) (TVD)**
Total Depth: 4188.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 75
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8675

Inside

Press@RunDepth: 126.53 psig @ 4185.00 ft (KB)
Start Date: 2015.01.08 End Date: 2015.01.08
Start Time: 03:15:15 End Time: 09:36:30
Capacity: 8000.00 psig
Last Calib.: 2015.01.08
Time On Btm: 2015.01.08 @ 05:51:15
Time Off Btm: 2015.01.08 @ 07:09:15

TEST COMMENT: Built to 9 1/2"
Bled off for 3 min, Weak surface return blow
B.O.B. in 5 min
Bled off for 5 min, Built to 3" return blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2071.24 | 104.83 | Initial Hydro-static |
| 1 | 30.95 | 103.55 | Open To Flow (1) |
| 7 | 81.53 | 109.86 | Shut-In(1) |
| 22 | 838.68 | 113.66 | End Shut-In(1) |
| 23 | 81.86 | 113.48 | Open To Flow (2) |
| 37 | 126.53 | 118.25 | Shut-In(2) |
| 77 | 814.80 | 121.23 | End Shut-In(2) |
| 78 | 2041.40 | 120.78 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------|--------------|
| 124.00 | gcmo 10%G 40%M 50%O | 0.61 |
| 171.00 | gco 30%G 70%O | 2.40 |
| 0.00 | 205 feet gas in pipe | 0.00 |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 West State Rd 4
 Olmitz KS 67564-8561
 ATTN: Vern Schrag

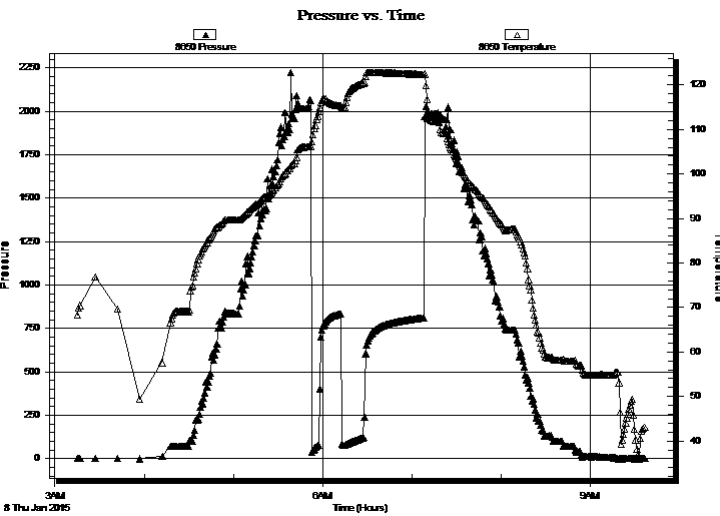
7-19s-28w Lane, KS
Paris-Hineman #1-7
 Job Ticket: 58519 **DST#: 2**
 Test Start: 2015.01.08 @ 03:15:00

GENERAL INFORMATION:

| | |
|---|---|
| Formation: LKC 'H' | |
| Deviated: No Whipstock: ft (KB) | Test Type: Conventional Bottom Hole (Reset) |
| Time Tool Opened: 05:52:15 | Tester: Jace McKinney |
| Time Test Ended: 09:36:30 | Unit No: 75 |
| Interval: 4166.00 ft (KB) To 4188.00 ft (KB) (TVD) | Reference Elevations: 2801.00 ft (KB) |
| Total Depth: 4188.00 ft (KB) (TVD) | 2791.00 ft (CF) |
| Hole Diameter: 7.88 inches | Hole Condition: Poor |
| | KB to GR/CF: 10.00 ft |

| | | | |
|--|------------------------|-------------------------|--|
| Serial #: 8650 | Outside | | |
| Press@RunDepth: psig @ 4185.00 ft (KB) | Capacity: 8000.00 psig | | |
| Start Date: 2015.01.08 | End Date: 2015.01.08 | Last Calib.: 2015.01.08 | |
| Start Time: 03:15:15 | End Time: 09:36:15 | Time On Btm: | |
| | | Time Off Btm: | |

TEST COMMENT: Built to 9 1/2"
 Bled off for 3 min, Weak surface return blow
 B.O.B. in 5 min
 Bled off for 5 min, Built to 3" return blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------|--------------|
| 124.00 | gcmo 10%G 40%M 50%O | 0.61 |
| 171.00 | gco 30%G 70%O | 2.40 |
| 0.00 | 205 feet gas in pipe | 0.00 |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

7-19s-28w Lane, KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

Job Ticket: 58519

DST#: 2

ATTN: Vern Schrag

Test Start: 2015.01.08 @ 03:15:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4045.54 ft | Diameter: 3.80 inches | Volume: 56.75 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 30000.00 lb |
| Drill Collar: | Length: 124.09 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: 72000.00 lb |
| | | | <u>Total Volume: 57.36 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 31.13 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 4166.00 ft | | | Final 62000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 22.00 ft | | | |
| Tool Length: | 49.50 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 4139.50 | |
| Shut In Tool | 5.00 | | | 4144.50 | |
| Hydraulic tool | 5.00 | | | 4149.50 | |
| Jars | 5.00 | | | 4154.50 | |
| Safety Joint | 2.50 | | | 4157.00 | |
| Packer | 5.00 | | | 4162.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4166.00 | |
| Stubb | 1.00 | | | 4167.00 | |
| Perforations | 18.00 | | | 4185.00 | |
| Change Over Sub | 0.00 | | | 4185.00 | |
| Recorder | 0.00 | 8675 | Inside | 4185.00 | |
| Recorder | 0.00 | 8650 | Outside | 4185.00 | |
| Drill Pipe | 0.00 | | | 4185.00 | |
| Change Over Sub | 0.00 | | | 4185.00 | |
| Perforations | 0.00 | | | 4185.00 | |
| Bullnose | 3.00 | | | 4188.00 | 22.00 Bottom Packers & Anchor |
| Total Tool Length: | 49.50 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

7-19s-28w Lane,KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

Job Ticket: 58519

DST#: 2

ATTN: Vern Schrag

Test Start: 2015.01.08 @ 03:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------|---------------|
| 124.00 | gcmo 10%G 40%M 50%O | 0.610 |
| 171.00 | gco 30%G 70%O | 2.398 |
| 0.00 | 205 feet gas in pipe | 0.000 |

Total Length: 295.00 ft Total Volume: 3.008 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

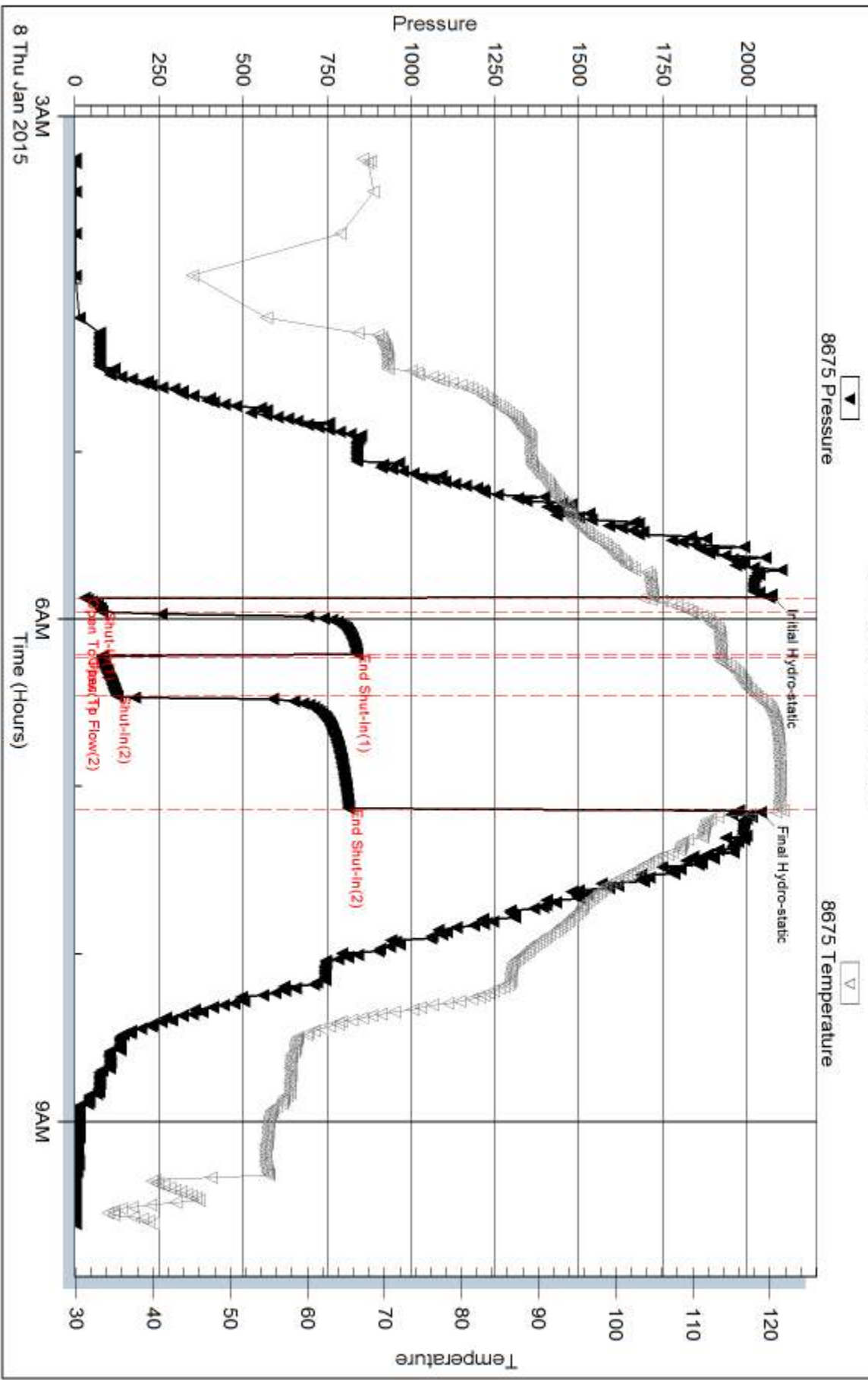
Serial #:

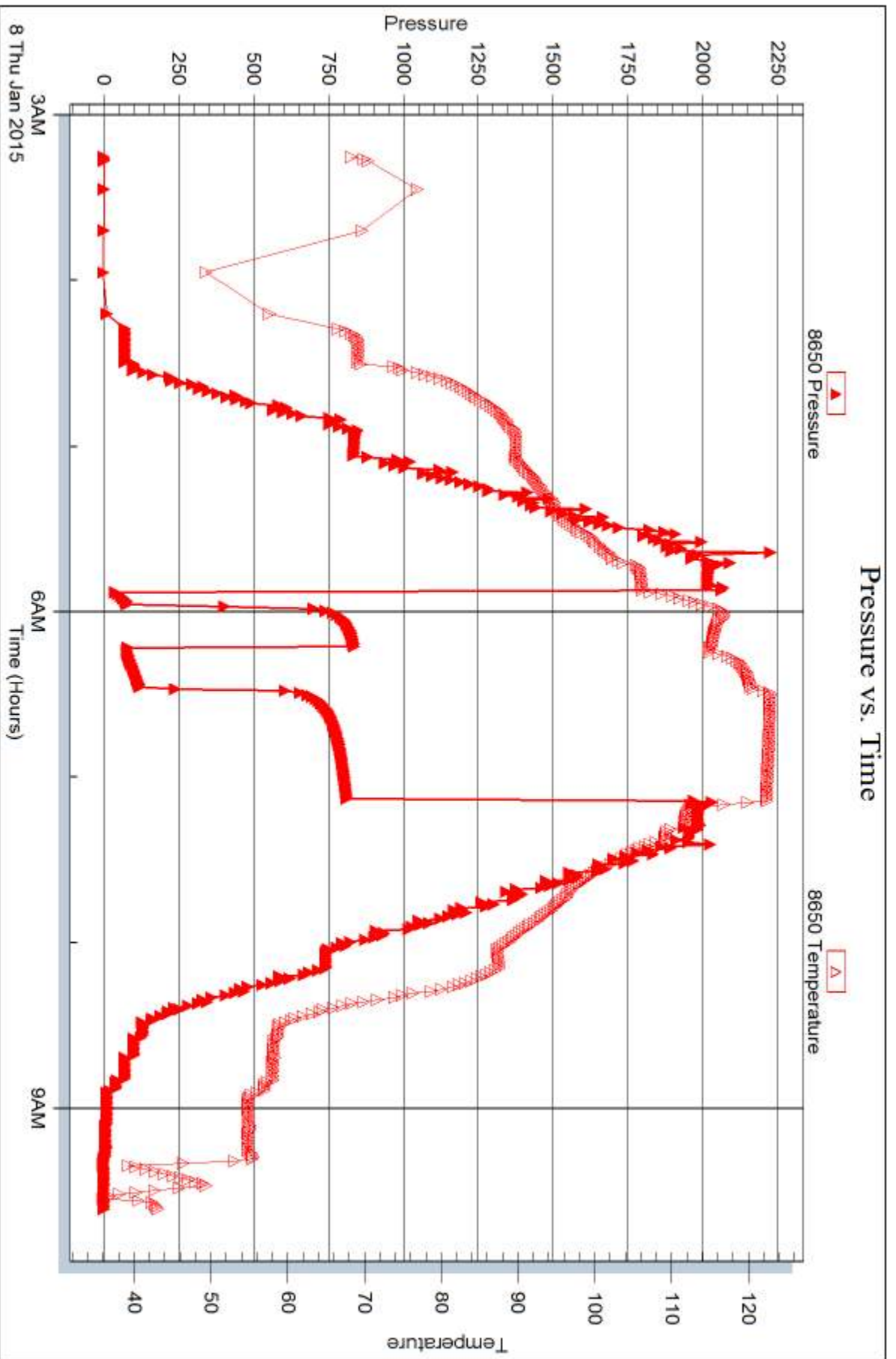
Laboratory Name:

Laboratory Location:

Recovery Comments: API: 31 @ 30 F = 34

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Paris-Hineman #1-7

7-19s-28w Lane,KS

Start Date: 2015.01.09 @ 08:35:40

End Date: 2015.01.09 @ 14:20:40

Job Ticket #: 58520 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.13 @ 09:02:58



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 West State Rd 4
 Olmitz KS 67564-8561
 ATTN: Vern Schrag

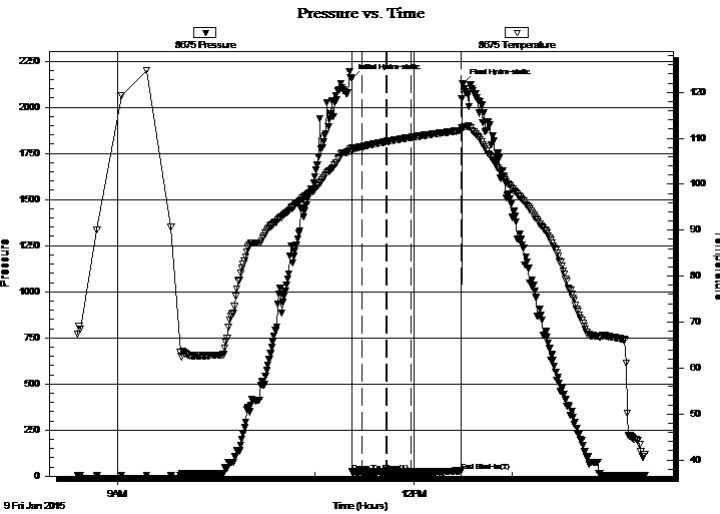
7-19s-28w Lane, KS
Paris-Hineman #1-7
 Job Ticket: 58520 **DST#: 3**
 Test Start: 2015.01.09 @ 08:35:40

GENERAL INFORMATION:

Formation: **LKC 'L'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:22:40
 Time Test Ended: 14:20:40
 Interval: **4308.00 ft (KB) To 4320.00 ft (KB) (TVD)**
 Total Depth: 4320.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jace McKinney
 Unit No: 75
 Reference Elevations: 2801.00 ft (KB)
 2791.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8675 Inside
 Press@RunDepth: 24.92 psig @ 4317.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.01.09 End Date: 2015.01.09 Last Calib.: 2015.01.09
 Start Time: 08:35:55 End Time: 14:20:40 Time On Btm: 2015.01.09 @ 11:22:25
 Time Off Btm: 2015.01.09 @ 12:29:40

TEST COMMENT: Built to 1/2"
 Bled off for 2 min, No return blow
 Built to 1/4"
 Bled off for 3 min, No return blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2156.29 | 107.89 | Initial Hydro-static |
| 1 | 22.44 | 107.11 | Open To Flow (1) |
| 7 | 22.71 | 108.19 | Shut-In(1) |
| 21 | 24.96 | 109.26 | End Shut-In(1) |
| 21 | 23.43 | 109.28 | Open To Flow (2) |
| 36 | 24.92 | 110.19 | Shut-In(2) |
| 67 | 27.93 | 111.71 | End Shut-In(2) |
| 68 | 2128.07 | 112.38 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------|--------------|
| 10.00 | ocm 2%O 98%M | 0.05 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering, Inc

7-19s-28w Lane,KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

ATTN: Vern Schrag

Job Ticket: 58520

DST#: 3

Test Start: 2015.01.09 @ 08:35:40

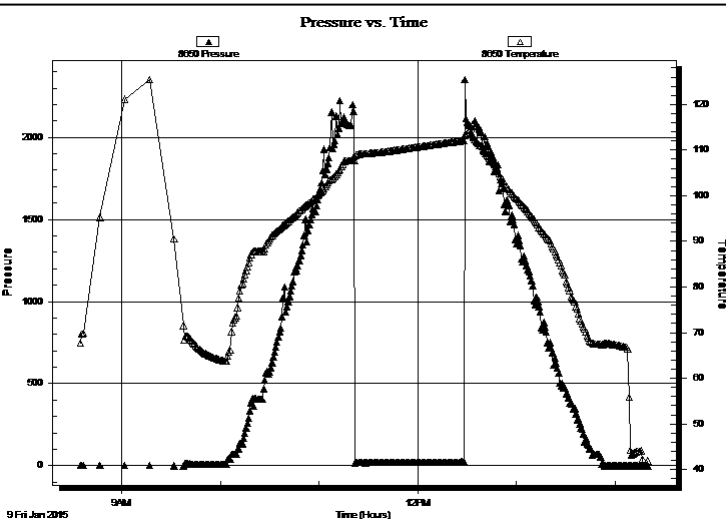
GENERAL INFORMATION:

Formation: **LKC 'L'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:22:40
 Time Test Ended: 14:20:40
Interval: 4308.00 ft (KB) To 4320.00 ft (KB) (TVD)
 Total Depth: 4320.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches
 Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jace McKinney
 Unit No: 75
 Reference Elevations: 2801.00 ft (KB)
 2791.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4317.00 ft (KB)
 Start Date: 2015.01.09 End Date: 2015.01.09
 Start Time: 08:35:15 End Time: 14:19:45
 Capacity: 8000.00 psig
 Last Calib.: 2015.01.09
 Time On Btm:
 Time Off Btm:

TEST COMMENT: Built to 1/2"
 Bled off for 2 min, No return blow
 Built to 1/4"
 Bled off for 3 min, No return blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
| | | | |
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| | | | |
| | | | |
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| | | | |
| | | | |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------|--------------|
| 10.00 | ocm 2%O 98%M | 0.05 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

7-19s-28w Lane, KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

Job Ticket: 58520

DST#: 3

ATTN: Vern Schrag

Test Start: 2015.01.09 @ 08:35:40

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 4171.15 ft | Diameter: 3.80 inches | Volume: 58.51 bbl | Tool Weight: | 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 30000.00 lb |
| Drill Collar: | Length: 124.09 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: | 70000.00 lb |
| | | | <u>Total Volume: 59.12 bbl</u> | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 14.74 ft | | | String Weight: Initial | 60000.00 lb |
| Depth to Top Packer: | 4308.00 ft | | | Final | 60000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 12.00 ft | | | | |
| Tool Length: | 39.50 ft | | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|--------------|------------|----------|------------|-------------------------------|
| Change Over Sub | 1.00 | | | 4281.50 | |
| Shut In Tool | 5.00 | | | 4286.50 | |
| Hydraulic tool | 5.00 | | | 4291.50 | |
| Jars | 5.00 | | | 4296.50 | |
| Safety Joint | 2.50 | | | 4299.00 | |
| Packer | 5.00 | | | 4304.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4308.00 | |
| Stubb | 1.00 | | | 4309.00 | |
| Perforations | 8.00 | | | 4317.00 | |
| Change Over Sub | 0.00 | | | 4317.00 | |
| Recorder | 0.00 | 8675 | Inside | 4317.00 | |
| Recorder | 0.00 | 8650 | Outside | 4317.00 | |
| Drill Pipe | 0.00 | | | 4317.00 | |
| Change Over Sub | 0.00 | | | 4317.00 | |
| Perforations | 0.00 | | | 4317.00 | |
| Bullnose | 3.00 | | | 4320.00 | 12.00 Bottom Packers & Anchor |
| Total Tool Length: | 39.50 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

7-19s-28w Lane, KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

Job Ticket: 58520

DST#: 3

ATTN: Vern Schrag

Test Start: 2015.01.09 @ 08:35:40

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------|---------------|
| 10.00 | ocm 2%O 98%M | 0.049 |

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

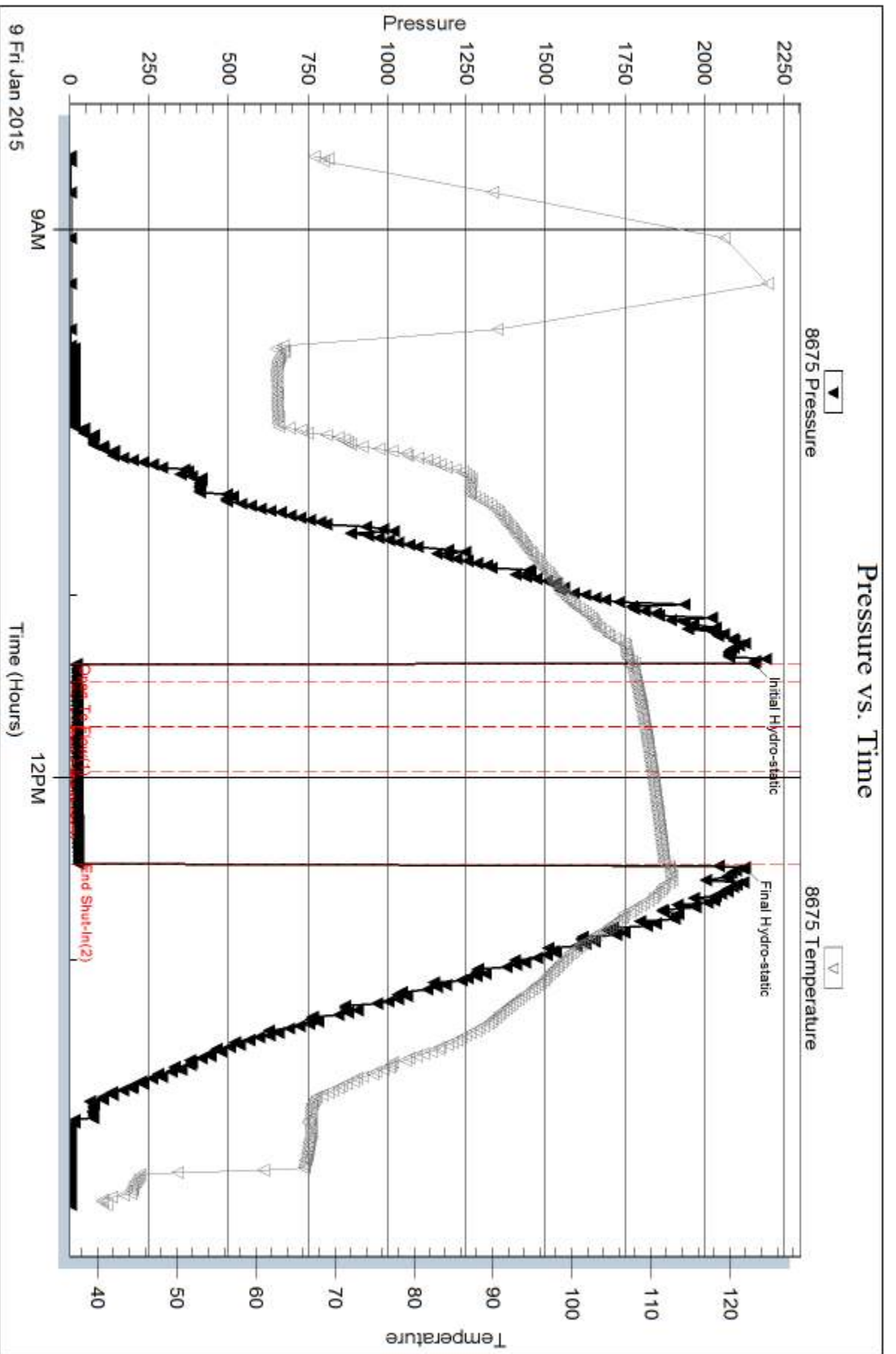
Num Gas Bombs: 0

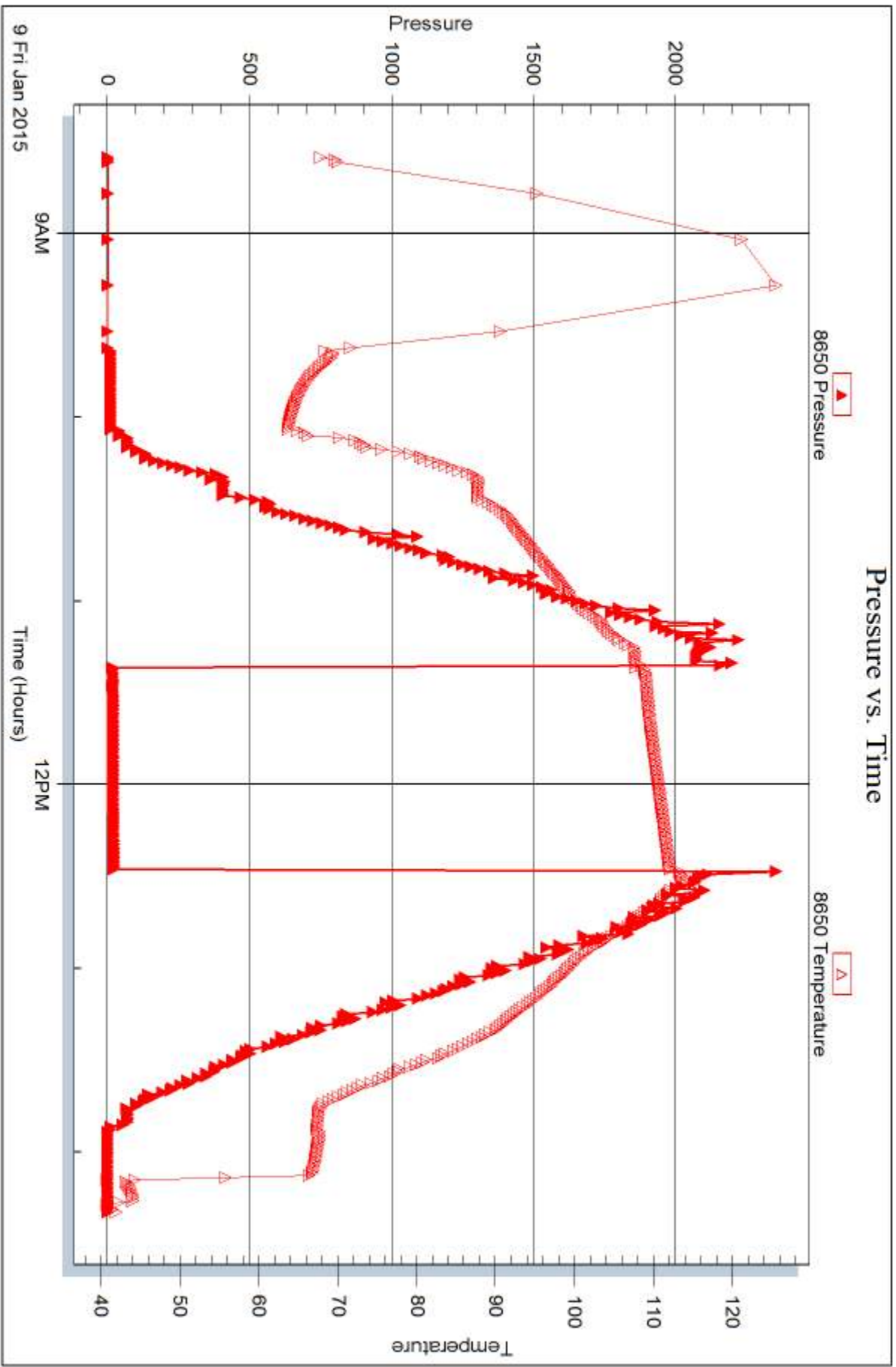
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Paris-Hineman #1-7

7-19s-28w Lane,KS

Start Date: 2015.01.10 @ 11:15:00

End Date: 2015.01.10 @ 16:16:00

Job Ticket #: 58521 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.13 @ 09:01:17



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering, Inc
 562 West State Rd 4
 Olmitz KS 67564-8561
 ATTN: Vern Schrag

7-19s-28w Lane, KS

Paris-Hineman #1-7

Job Ticket: 58521

DST#: 4

Test Start: 2015.01.10 @ 11:15:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:30:15

Time Test Ended: 16:16:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 75

Interval: 4353.00 ft (KB) To 4455.00 ft (KB) (TVD)

Reference Elevations: 2801.00 ft (KB)

Total Depth: 4455.00 ft (KB) (TVD)

2791.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

Serial #: 8675

Inside

Press@RunDepth: 30.64 psig @ 4358.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.10

End Date:

2015.01.10

Last Calib.: 2015.01.10

Start Time: 11:15:15

End Time:

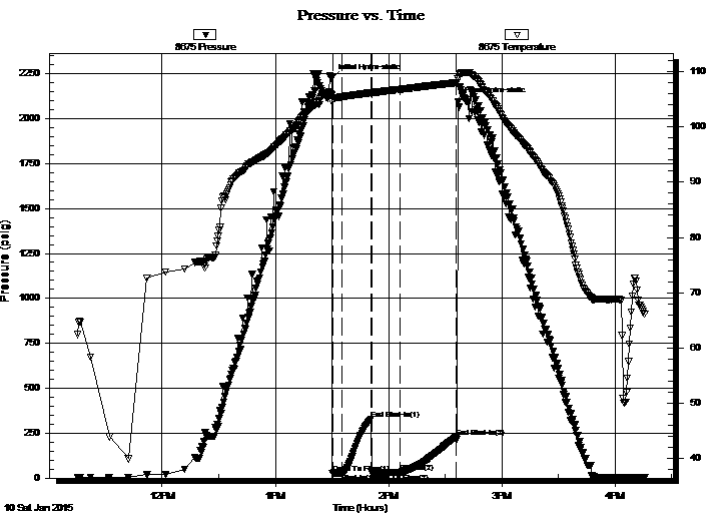
16:16:00

Time On Btm: 2015.01.10 @ 13:30:00

Time Off Btm: 2015.01.10 @ 14:36:45

TEST COMMENT:

Built to 1"
 Bled off for 2 min, No return blow
 Built to 1/4"
 Bled off for 2 min, No return blow



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2222.69 | 105.76 | Initial Hydro-static |
| 1 | 26.37 | 104.59 | Open To Flow (1) |
| 6 | 28.64 | 105.47 | Shut-In(1) |
| 21 | 328.61 | 106.22 | End Shut-In(1) |
| 21 | 28.99 | 105.99 | Open To Flow (2) |
| 36 | 30.64 | 106.82 | Shut-In(2) |
| 66 | 230.19 | 108.04 | End Shut-In(2) |
| 67 | 2091.84 | 108.69 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------|--------------|
| 10.00 | 100% Mud w ith oil spots | 0.05 |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

7-19s-28w Lane, KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

Job Ticket: 58521

DST#: 4

ATTN: Vern Schrag

Test Start: 2015.01.10 @ 11:15:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4206.39 ft | Diameter: 3.80 inches | Volume: 59.00 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 30000.00 lb |
| Drill Collar: | Length: 124.09 ft | Diameter: 2.25 inches | Volume: 0.61 bbl | Weight to Pull Loose: 72000.00 lb |
| | | | <u>Total Volume: 59.61 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 5.98 ft | | | String Weight: Initial 62000.00 lb |
| Depth to Top Packer: | 4352.00 ft | | | Final 62000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 103.00 ft | | | |
| Tool Length: | 130.50 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|---------------|------------|----------|------------|--------------------------------|
| Change Over Sub | 1.00 | | | 4325.50 | |
| Shut In Tool | 5.00 | | | 4330.50 | |
| Hydraulic tool | 5.00 | | | 4335.50 | |
| Jars | 5.00 | | | 4340.50 | |
| Safety Joint | 2.50 | | | 4343.00 | |
| Packer | 5.00 | | | 4348.00 | 27.50 Bottom Of Top Packer |
| Packer | 4.00 | | | 4352.00 | |
| Stubb | 1.00 | | | 4353.00 | |
| Perforations | 4.00 | | | 4357.00 | |
| Change Over Sub | 1.00 | | | 4358.00 | |
| Recorder | 0.00 | 8675 | Inside | 4358.00 | |
| Recorder | 0.00 | 8650 | Outside | 4358.00 | |
| Drill Pipe | 93.00 | | | 4451.00 | |
| Change Over Sub | 1.00 | | | 4452.00 | |
| Perforations | 0.00 | | | 4452.00 | |
| Bullnose | 3.00 | | | 4455.00 | 103.00 Bottom Packers & Anchor |
| Total Tool Length: | 130.50 | | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

7-19s-28w Lane, KS

562 West State Rd 4
Olmitz KS 67564-8561

Paris-Hineman #1-7

Job Ticket: 58521

DST#: 4

ATTN: Vern Schrag

Test Start: 2015.01.10 @ 11:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------------------|---------------|
| 10.00 | 100% Mud w ith oil spots | 0.049 |

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

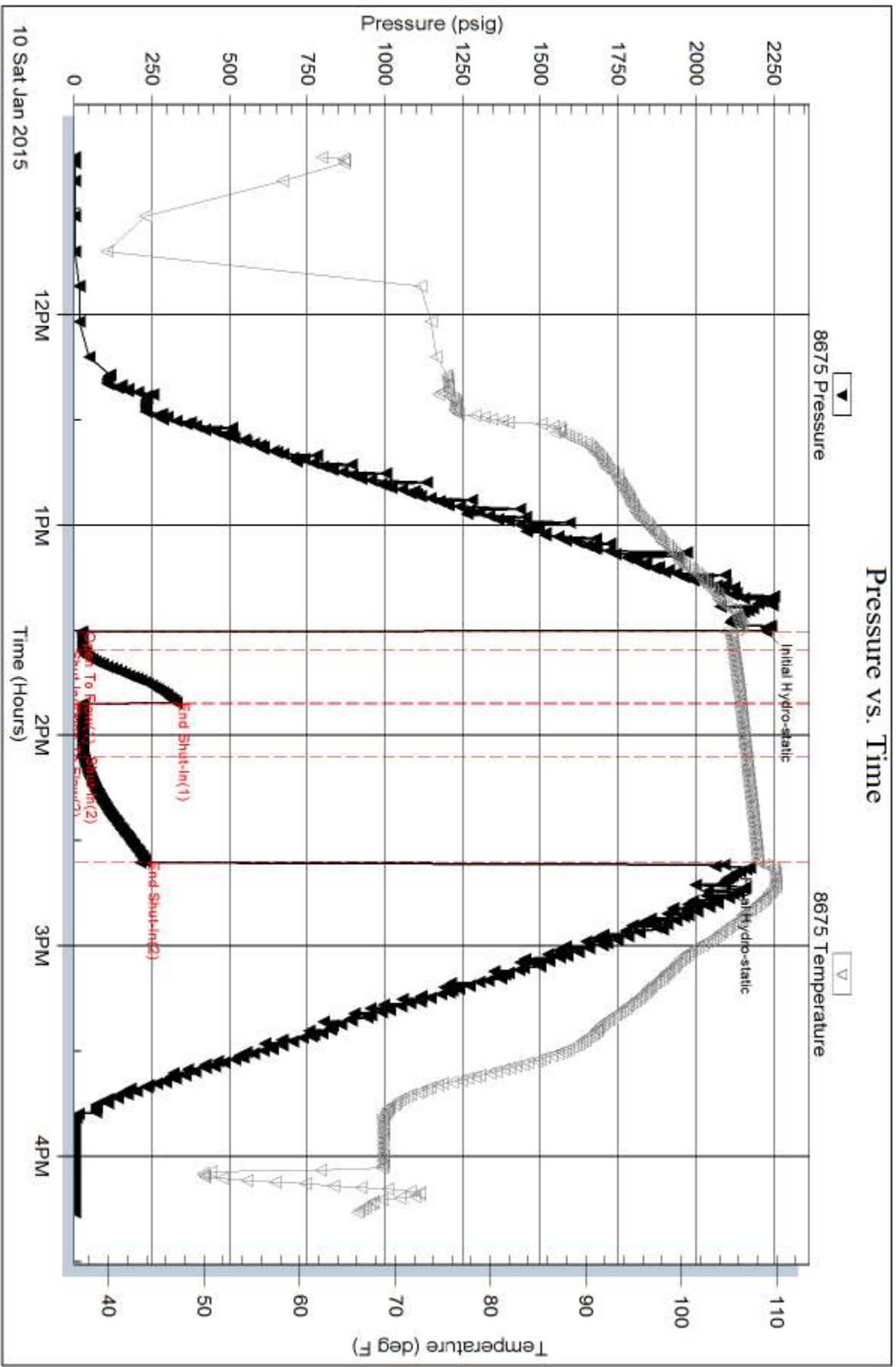
Num Gas Bombs: 0

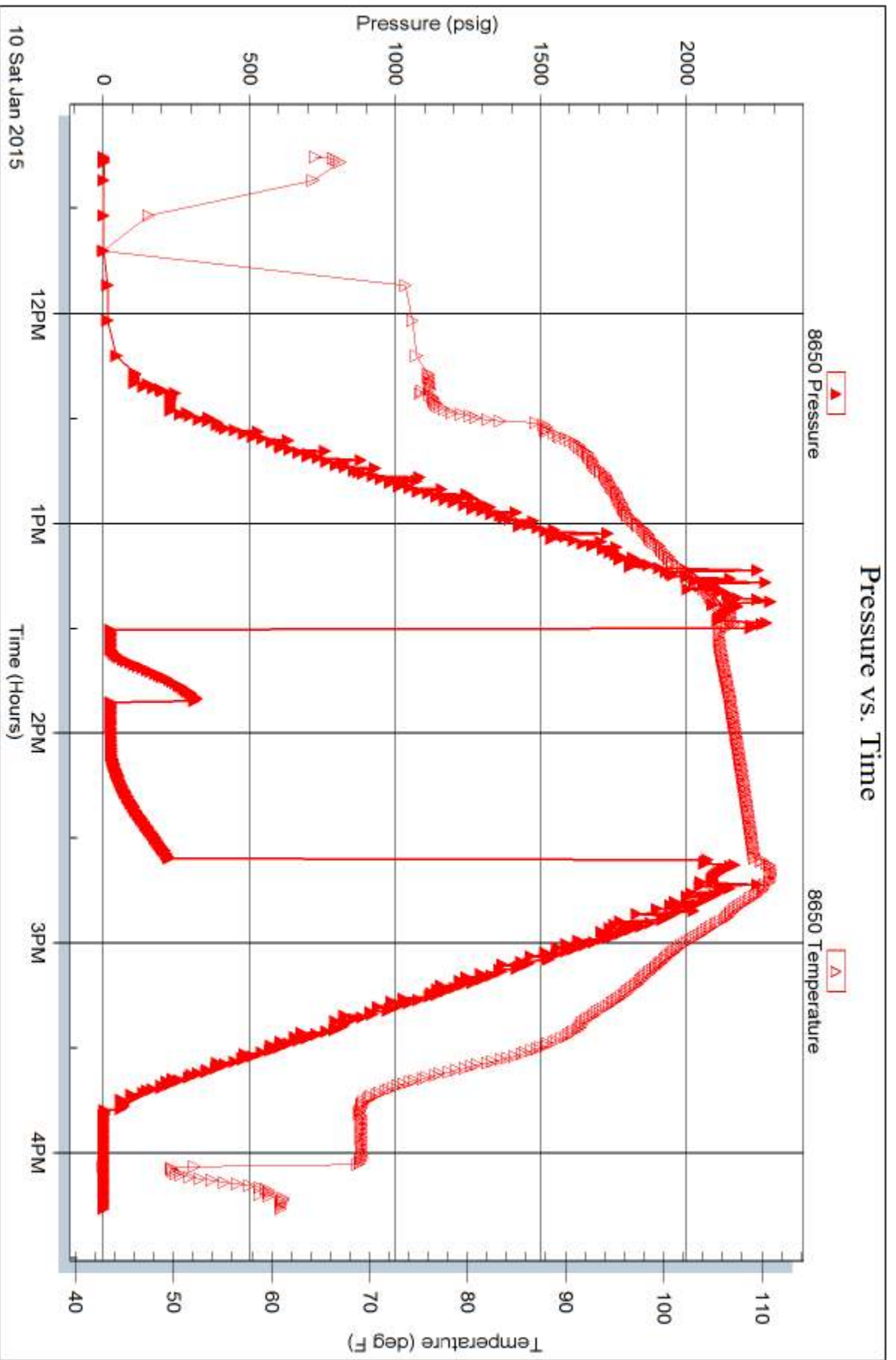
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58518

Well Name & No. Paris - Hineman #1-7 Test No. 1 Date 1/7/15
 Company Larson Engineering, Inc. Elevation 2801 KB 2791 GL
 Address 562 West State Rd 4, Olmitz, KS 67564-8501
 Co. Rep / Geo. Vern Schrag Rig 40 Rig 3
 Location: Sec. 7 Twp. 19s Rge. 28w Co. Lane County State KS

Interval Tested 4074 - 4100 Zone Tested Kansas City 'E'
 Anchor Length 26 Drill Pipe Run 3951.65 Mud Wt. 8.8
 Top Packer Depth 4070 Drill Collars Run 124.09 Vis 60
 Bottom Packer Depth 4074 Wt. Pipe Run _____ WL 600
 Total Depth 4100 Chlorides 2,600 ppm System LCM 2#

Blow Description Built to 5" below
Bled off for 3 min. No return below

B.O.B. in 31 min.
Bled off for 5 min. Built to 3/4" return below

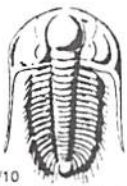
| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|----------------------|------------|------------|--------------|------------|
| <u>76</u> | <u>Feet of mco</u> | | <u>50</u> | | <u>50</u> |
| <u>124</u> | <u>Feet of 600PM</u> | <u>10</u> | <u>40</u> | | <u>50</u> |
| Rec _____ | Feet of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |
| Rec _____ | Feet of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |
| Rec _____ | Feet of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |

Rec Total 200 BHT 107 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2,016 Test 1150 T-On Location 05:45
 (B) First Initial Flow 28 Jars 250 T-Started 08:00
 (C) First Final Flow 61 Safety Joint 75 T-Open 11:22
 (D) Initial Shut-In 1,069 Circ Sub N/C T-Pulled 12:27
 (E) Second Initial Flow 70 Hourly Standby _____ T-Out 14:58
 (F) Second Final Flow 100 Mileage 60 RT 60
 (G) Final Shut-In 1,063 Sampler _____
 (H) Final Hydrostatic 1,989 Straddle _____

Initial Open 5 Shale Packer _____
 Initial Shut-In 15 Shale Packer _____
 Final Flow 15 Extra Packer _____
 Final Shut-In 30 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1535

Approved By _____ Our Representative [Signature]
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58519

Well Name & No. Paris - Himmelman #1-7 Test No. 2 Date 1/8/15
 Company Larson Engineering, Inc. Elevation 2801 KB 2791 GL
 Address 562 West State Rd #4, Olmitz KS, 67564-8561
 Co. Rep / Geo. Vern Schrag Rig H0 Rig 3
 Location: Sec. 7 Twp. 19s Rge. 28w Co. Lane County State KS

Interval Tested 4166 - 4188 Zone Tested Kansas City 'H'
 Anchor Length 22 Drill Pipe Run 4045.54 Mud Wt. 9.1
 Top Packer Depth 4162 Drill Collars Run 124.09 Vis 59
 Bottom Packer Depth 4166 Wt. Pipe Run _____ WL 6.4
 Total Depth 4188 Chlorides 2,500 ppm System LCM 2#

Blow Description Built to 9 1/2" below
Bled off for 3 min. Weak surface return below
B.O.B. in 5 min.
Bled off for 5 min. Built to 3" return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|------------------------------|------------|------------|--------------|------------|
| <u>0</u> | <u>205 feet loss in pipe</u> | | | | |
| <u>171</u> | <u>0.00</u> | <u>30%</u> | <u>70%</u> | | |
| <u>124</u> | <u>6.00</u> | <u>10%</u> | <u>50%</u> | | <u>40%</u> |
| Rec _____ | Feet of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |
| Rec _____ | Feet of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |

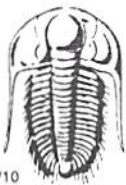
Rec Total 295 BHT 121 Gravity 34 API RW _____ @ _____ ° F Chlorides _____ ppm
 (A) Initial Hydrostatic 2,071 Test 1150 T-On Location 02:10
 (B) First Initial Flow 31 Jars 250 T-Started 03:15
 (C) First Final Flow 82 Safety Joint 75 T-Open 05:55
 (D) Initial Shut-In 839 Circ Sub N/C T-Pulled 07:00
 (E) Second Initial Flow 82 Hourly Standby _____ T-Out 09:36
 (F) Second Final Flow 127 Mileage 60 BT 60 Comments _____
 (G) Final Shut-In 815 Sampler _____
 (H) Final Hydrostatic 2,041 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1535

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30

Sub Total 0
 Total 1535
 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **58520**

Well Name & No. Paris-Hineman #1-7 Test No. 3 Date 1/9/15
 Company Larson Engineering, Inc. Elevation 2801 KB 2791 GL
 Address 562 West State Rd 4, Olmitz KS, 67564-8561
 Co. Rep / Geo. Vern Schrag Rig HD Rig 3
 Location: Sec. 7 Twp. 19S Rge. 28W Co. Lane County State KS

Interval Tested 4308-4320 Zone Tested Kansas City 'L'
 Anchor Length 12 Drill Pipe Run 4771.15 Mud Wt. 9.2
 Top Packer Depth 4304 Drill Collars Run 124.09 Vis 65
 Bottom Packer Depth 4308 Wt. Pipe Run _____ WL 6.4
 Total Depth 4320 Chlorides 3,300 ppm System LCM 2#

Blow Description Built to 1/2" below
Bled off for 2 min. No return below
Built to 1/4" below
Bled off for 3 min. No return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|------------|------|----------|--------|-----------|
| <u>10</u> | <u>OCM</u> | | <u>2</u> | | <u>98</u> |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 10 BHT III Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

| | | |
|--------------------------------------|--|--|
| (A) Initial Hydrostatic <u>2,156</u> | <input checked="" type="checkbox"/> Test <u>1150</u> | T-On Location <u>07:30</u> |
| (B) First Initial Flow <u>22</u> | <input checked="" type="checkbox"/> Jars <u>250</u> | T-Started <u>08:35</u> |
| (C) First Final Flow <u>23</u> | <input checked="" type="checkbox"/> Safety Joint <u>75</u> | T-Open <u>11:23</u> |
| (D) Initial Shut-In <u>25</u> | <input checked="" type="checkbox"/> Circ Sub <u>N/C</u> | T-Pulled <u>12:28</u> |
| (E) Second Initial Flow <u>23</u> | <input type="checkbox"/> Hourly Standby _____ | T-Out <u>14:20</u> |
| (F) Second Final Flow <u>25</u> | <input checked="" type="checkbox"/> Mileage <u>60 RT</u> <u>60</u> | Comments _____ |
| (G) Final Shut-In <u>28</u> | <input type="checkbox"/> Sampler _____ | <input type="checkbox"/> Ruined Shale Packer _____ |
| (H) Final Hydrostatic <u>2,128</u> | <input type="checkbox"/> Straddle _____ | <input type="checkbox"/> Ruined Packer _____ |

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30

Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Sub Total 1535

Sub Total 0
 Total 1535
 MP/DST Disc't _____

Approved By _____ Our Representative _____

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58521

Well Name & No. Paris-Himeman # 1-7 Test No. 4 Date 1/10/15
 Company Larson Engineering, Inc Elevation 2801 KB 2791 GL
 Address 562 West State Rd 4 Olmitz KS, 67564 8561
 Co. Rep / Geo. Vern Schrag Rig HD Rig 3
 Location: Sec. 4 Twp. 19S Rge. 28W Co. Lane County State KS

Interval Tested 4352-4455 Zone Tested Marmaton
 Anchor Length 103 Drill Pipe Run 7206.98 Mud Wt. 9.2
 Top Packer Depth 4348 Drill Collars Run 124.09 Vis 54
 Bottom Packer Depth 4352 Wt. Pipe Run _____ WL 8.0
 Total Depth 4455 Chlorides 3,300 ppm System LCM 2#

Blow Description Built to 1" below
Bled off for 2 min. no return below
Built to 1/4" below

Bled off for 2 min. No return below

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|--------------------------|------|------|------------|------|
| <u>10</u> | <u>mud with oil spot</u> | | | <u>100</u> | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 10 BHT 108 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2,223 Test 1150 T-On Location 10:00
 (B) First Initial Flow 26 Jars 250 T-Started 11:15
 (C) First Final Flow 29 Safety Joint 75 T-Open 13:32
 (D) Initial Shut-In 329 Circ Sub N/C T-Pulled 14:37
 (E) Second Initial Flow 29 Hourly Standby _____ T-Out 16:16
 (F) Second Final Flow 31 Mileage 60 RT 60
 (G) Final Shut-In 230 Sampler _____
 (H) Final Hydrostatic 2,092 Straddle _____

Initial Open 5 Shale Packer _____
 Initial Shut-In 16 Ruined Packer _____
 Final Flow 16 Extra Packer _____
 Final Shut-In 30 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1535 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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CHARGE TO: Larson Engineering
 ADDRESS:
 CITY, STATE, ZIP CODE:

TICKET 28155

PAGE 1 OF 1

| | | | | | | | |
|---|---|-----------------------------------|------------------------------------|----------------------|---------------------------------|--------------------------|-------|
| SERVICE LOCATIONS 1. <u>Ness City KS</u> | WELL/PROJECT NO. <u>1-7</u> | LEASE <u>Paris - Hinman</u> | COUNTY/PARISH <u>Lane</u> | STATE <u>KS</u> | CITY <u>Dighton</u> | DATE <u>22 Jan 15</u> | OWNER |
| 2. | TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES | CONTRACTOR | RIG NAME/NO. | SHIPPED <u>ET</u> | DELIVERED TO <u>location</u> | ORDER NO. | |
| 3. | WELL TYPE <u>oil</u> | WELL CATEGORY <u>Wild West</u> | JOB PURPOSE <u>perf squeeze</u> | WELL PERMIT NO. | WELL LOCATION | | |
| 4. REFERRAL LOCATION | INVOICE INSTRUCTIONS | | | | | | |

| PRICE REFERENCE | SECONDARY REFERENCE/ PART NUMBER | ACCOUNTING | | | DESCRIPTION | QTY. | | UNIT PRICE | | AMOUNT |
|--------------------|-------------------------------------|------------|------|----|-----------------|------|-----|------------|--|---------|
| | | LOC | ACCT | DF | | | U/M | | | |
| 575 | | 1 | | | MILEAGE | 40 | mi | 6.00 | | 240.00 |
| 578 | | 1 | | | Pump Charge | 1 | ea | 1500.00 | | 1500.00 |
| 325 | | 1 | | | Standard cement | 50 | sk | 14.50 | | 725.00 |
| 286 | | 1 | | | brack | 5 | lb | 8.50 | | 42.50 |
| 288 | | 1 | | | sand | 1 | sk | 22.00 | | 22.00 |
| 290 | | 1 | | | D-air | 1 | gal | 42.00 | | 42.00 |
| 583 582 | | 1 | | | Drayage (min) | 1 | ea | 250.00 | | 250.00 |
| 581 | | 1 | | | Service charge | 50 | sk | 2.00 | | 100.00 |

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X
 DATE SIGNED _____ TIME SIGNED _____ A.M. P.M.

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

| SURVEY | AGREE | UN-DECIDED | DIS-AGREE | PAGE TOTAL | AMOUNT |
|---|-------|------------|-----------|------------|---------|
| OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? | | | | 39 | 21.50 |
| WE UNDERSTOOD AND MET YOUR NEEDS? | | | | | |
| OUR SERVICE WAS PERFORMED WITHOUT DELAY? | | | | | |
| WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? | | | | | |
| ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | |
| <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND | | | | TOTAL | 2980.95 |

Lane TAX 7.15%

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR Rehall

APPROVAL _____ **Thank You!**

JOB LOG

SWIFT Services, Inc.

DATE 22 Jan 15 PAGE NO.

CUSTOMER Ladem Engineering WELL NO. 1-7 LEASE Paris-Hinaman JOB TYPE perf squeeze TICKET NO. 28155

| CHART NO. | TIME | RATE (BPM) | VOLUME (BBL) (GAL) | PUMPS | | PRESSURE (PSI) | | DESCRIPTION OF OPERATION AND MATERIALS |
|-----------|------|------------|--------------------|-------|---|----------------|--------|---|
| | | | | T | C | TUBING | CASING | |
| | | | | | | | | 50sk standard cement 2 7/8 x 4 1/2 perf 4282-84 packer 4199' plug 4305' pne to spot 4294' fluid tagged - 3030 |
| | 0930 | | | | | | | on bc TRK 114 - tools tested yesterday - spot 1sk sand - let fall |
| | 0945 | | 5 | | | | | |
| | 1045 | | 31 | | | | 500 | load Backside - shut in |
| | 1055 | 1 1/2 | 14 | | | | 1000 | injection rate |
| | 1058 | 1 1/2 | 11 | | | | 300 | Mix Std cement 50sk @ 156 PPG Kick out - on vac |
| | 1130 | 1 1/2 | | | | | ∅ | shut in tubing - wash truck Displace cement catch pressure |
| | | 1 1/2 | 6 | | | | 1200 | |
| | | 1 | 8 | | | | 1600 | |
| | | 1/2 | 10 | | | | 2000 | |
| | | 1/2 | 14 | | | | 2200 | Kickout - holding 2000 Release pressure to truck. dried up |
| | 1200 | | | | | | | Reverse out tubing 30sk behind the pipe - 2 bbl cement in tubing - tubing clean |
| | | 2 | 500 | | | | 20 | |
| | 1228 | | 40 | | | | | wash through ports and go down to plug 1.5 bbl cement to pit but no sand seen - able to get on & off Bridge plug - pump 20 bbl clean backside & out tubing - no sand seen - |
| | 1250 | 2 | 20 | | | | 300 | |
| | 1305 | | | | | | | pull up 15 joints |
| | 1325 | | 2 | | | | 500 | Pressure to 500 psi - holding/ shut in tubing & backside of packer. swinging Back up |
| | 1350 | | | | | | | job complete Thru Blow, float & rods |