



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1227552
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
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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: _____

1227552

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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: _____ _____
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Form	ACO1 - Well Completion
Operator	HERMAN L. LOEB, LLC
Well Name	RANDEL 3-20
Doc ID	1227552

Tops

Name	Top	Datum
Chase	2432	-231
Heebner Shale	4023	-1822
Lansing 'A'	4184	-1983
Lansing/KC 'H'	4344	-2143
Kansas City 'I'	4393	-2192
Kansas City 'J'	4437	-2236
BKC	4568	-2367
Miss. Chert	4763	-2562
Kinderhook Shale	4817	-2616

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Randel #3-20
Location: 2360' FSL & 1930' FEL, Sec. 20-T27S-R18W, Kiowa Co., KS.
Licence Number: 15-097-21807-00-00 Region: Einsel North
Spud Date: 9/3/2014 Drilling Completed: 9/10/2014
Surface Coordinates: 2360' FSL & 1930' FEL, Sec. 20-T27S-R18W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2188' K.B. Elevation (ft): 2201'
Logged Interval (ft): 3900' To: 4827' Total Depth (ft): 4827'
Formation: Kinderhook at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3196'; Chemical Gel 3196' to 4827'

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

OPERATOR

Company: Herman L. Loeb, LLC.
Address: P.O. Box 838
Lawrenceville, IL. 62439-0838

GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
Address: 9002 W. Silver Hollow St.
Wichita, KS. 67205-8856

Cores

None Taken

DSTs

DST #1(Kansas City 'I' Middle Porosity) 4396' - 4415'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Fair to Good 8.5" Blow, FFP Fair to Strong Blow BOB/44 Min., No Blowback on SI's; REC: 186' Gas in Pipe, 20' O&GCM(2%G, 2%O, 96%M), 120' GWM(2%G, 20%W, 78%M), 120' SW(CL 78,000, Mud 4000), IFP 33-60#, ISIP 1346#, FFP 65-141#, FSIP 1332#, IHP 2231#, FHP 2156#, BHT 122 Deg. F.

DST #2(Kansas City Lower 'I' + 'J' zones) 4420' - 4442'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/45 Sec., 6" Blowback on ISI; FFP Strong Blow BOB/3 Min., Gas to Surface in 40 Min., Volume TSTM, 5" Blowback on FSI; REC: 3685' Gas in Pipe, 155' GWMO(30%G, 31%O, 34%W, 5%M), 124' GOCW(10%G, 10%O, 80%W), 444' SW(CI 70,000, Mud 5000); IFP 46-144#, ISIP 1383#, FFP 177-334#, FSIP 1376#, IHP 2258#, FHP 2159#, BHT 121 Deg. F.

DST #3(Miss. Chert) 4726' - 4790'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/45 Sec., 9" Blowback in ISI, FFP Strong Blow Gas to Surface in 5 Min., Gauged Max. 30.7 MCFG; REC: 4674' Gas in Pipe, 50' SGCM(2%G, 98%M), no oil, no water; IFP 34-43#, ISIP 1436#, FFP 43-47#, FSIP 1491#, IHP 2431#, FHP 2296#, BHT 128 Deg. F.

Comments

9/3/14 MIRU Sterling Drilling Co. Rig #5, Spud at 6:45 PM. ; 9/4/14 TD. 652' - Cementing Surface Casing ; 9/5/14 Drilling at 1820'; 9/6/14 Drilling at 3580'; 9/7/14 Drilling at 4320'; 9/8/14 TD. 4444' - CFS; 9/9/14 Drilling at 4625'; 9/10/14 TD. 4792' - TOH with DST #3, Reached TD. 4827' at 1:00 PM.; 9/11/14 RTD. 4827' - LTD. 4826', CCH to LDDP - Set 5 1/2" Production Casing.

Set new 8 5/8"(23#) Surface Casing at 647' KB. with 400 sacks cement(Basic Energy Services). Cement did Circulate. PD. at PM. at 7:45 AM. on 9/4/14.

Set new 5 1/2"(15.5#) Production Casing at 4824' KB. with 200 sacks of "Loeb Blend" cement(Basic Energy Services). PD. at 5:15 PM. 9/11/14.

Surveys: 0.75 Deg. at 652'(Surface Casing); 0.50 Deg. at 4202'(Bit Trip); 0.75 Deg. at 4417'(DST #1); 1.0 Deg. at 4792'(DST #3).


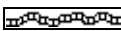
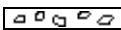
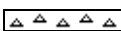




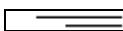
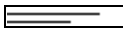


Pipe Strap at 4202'(Bit Trip): Strap 1.07' Long to the Board, no correction made to the Board.

After review of the Halliburton Logs, DST data and positive indications of commercial amounts of recoverable hydrocarbons, the operator elected to set new 5 1/2" Production Casing for completion in the Miss. Chert and Kansas City zones.








































































NOTE: This log was shifted upward by 2' - 4' for correlation purposes with the Halliburton Logs.

LOG TOPS: Chase 2432(-231), Stotler Lmst. 3382(-1181), Howard 3589(-1388), Heebner Shale 4023(-1822), Toronto 4038(-1837), Brown Lmst. 4177(-1976), Lansing 'A' 4184(-1983), Lansing/KC 'H' 4344(-2143), KC. 'I' 4393(-2192), KC 'J' 4437(-2236), Stark Shale 4481(-2280), Hertha 4538(-2337), BKC 4568(-2367), Marmaton 4616(-2415), Pawnee 4664(-2463), Cherokee Shale 4700(-2499), Miss. Chert 4763(-2562), Kinderhook Shale 4817(-2616).

ROCK TYPES

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

MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau	 Gyp  Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff	FOSSIL  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite	 Ostra  Pelec  Pellet  Pisolite  Plant  Strom STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst	 Sltstrg  Ssstrg TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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OTHER SYMBOLS

- POROSITY**
 [E] Earthy
 [F] Fenest
 [X] Fracture
 [I] Inter
 [M] Moldic
 [O] Organic
 [P] Pinpoint

- [V] Vuggy
SORTING
 [W] Well
 [M] Moderate
 [P] Poor

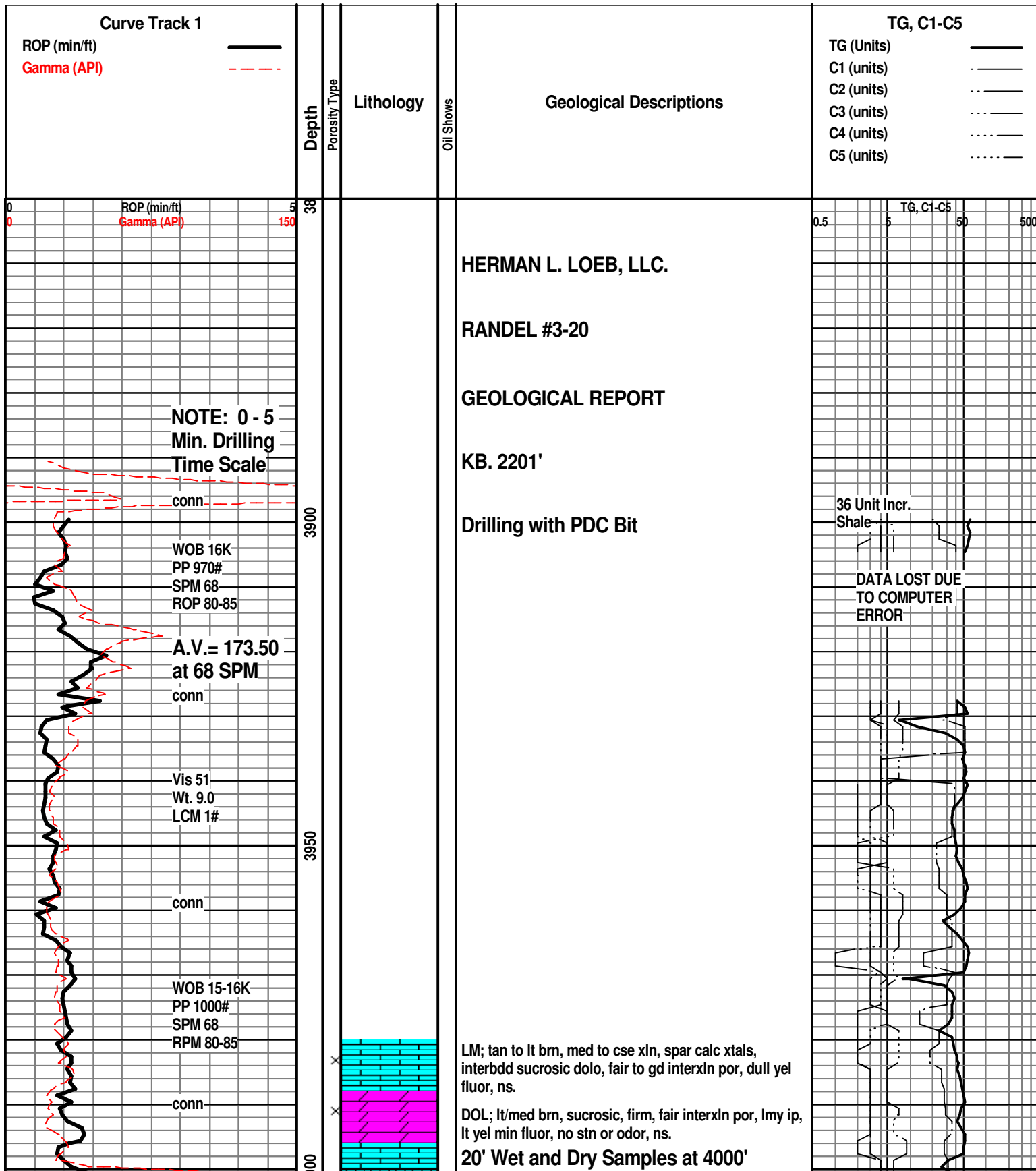
- ROUNDING**
 [R] Rounded
 [r] Subrnd
 [a] Subang
 [A] Angular

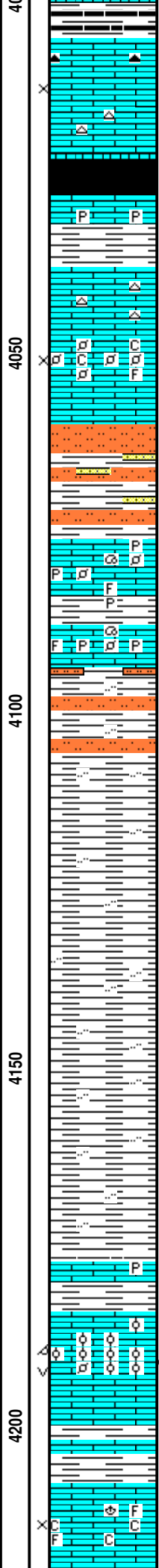
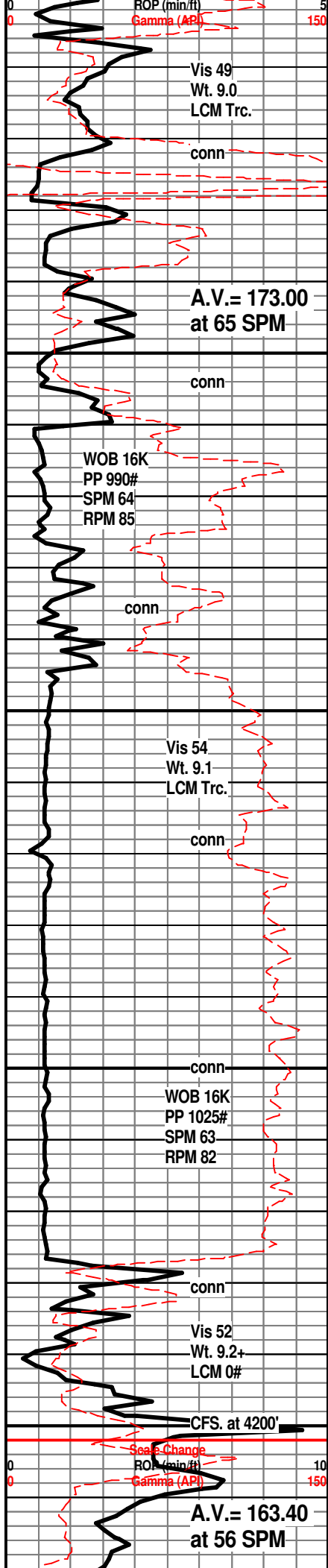
- [S] Spotted
 [Q] Ques
 [D] Dead

- EVENT**
 [Rft] Rft
 [Sd] Sidewall

- INTERVAL**
 [C] Core
 [D] Dst

- OIL SHOW**
 [E] Even





SH; dk gy, blk, platy

LM; tan to lt brn, cream, f to med xln, fair interxln por ip, scat dk gy/off wh cht, lt yel min fluor, no stn or odor, ns.

HEEBNER SHALE 4023(-1822)

SH; blk, carb, gassy ip.

LM; med brn, hd, pyr ip, tite

TORONTO 4038(-1837)

LM; off wh, lt gy, tan, f to med xln, some dense - micritic, blocky ip, interbdd soft foss - partly pelletal lmst w/fair/gd interpart por, lt yel fluor, no stn or odor, minor chalky mtx, ns.

DOUGLAS SHALE 4060(-1859)

SLTST; lt gy, mica, interbdd vf gr qtz ss, trc poor intergran por, no fluor, ns.

LM; med to dk brn, brn, foss ip, hd, scat pyr, tite, dull yel min fluor

LM; med to dk brn, foss, hd, scat pyr

SH; lt to med gy, silty ip w/interbdd sltst.

SH; lt to med gy, silty ip, platy

SH; med gy, silty ip, smooth

BROWN LMST. 4177(-1976)

LM; med to dk brn, hd, blocky, rare pyr, tite

LANSING 'A' 4184(-1983)

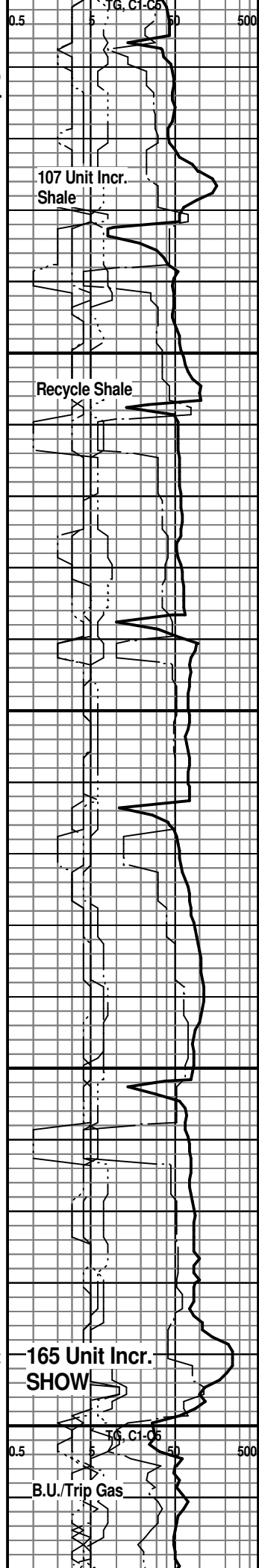
LM; lt to med brn, oolitic, med to rarely lrg molds, gd oomoldic por, trc poor vug por, med/brite yel fluor, faint odor, spotted lt brn stn, VSSFO, trc gas bubbles

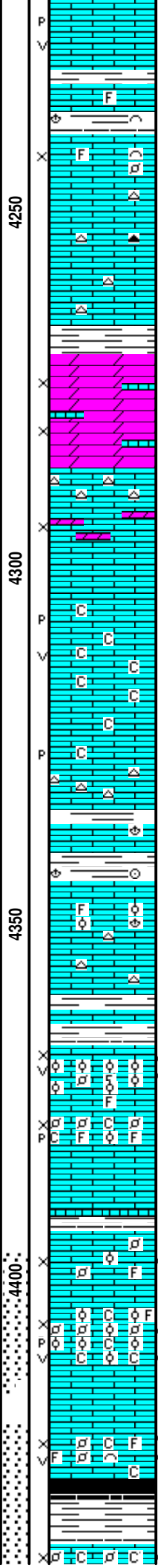
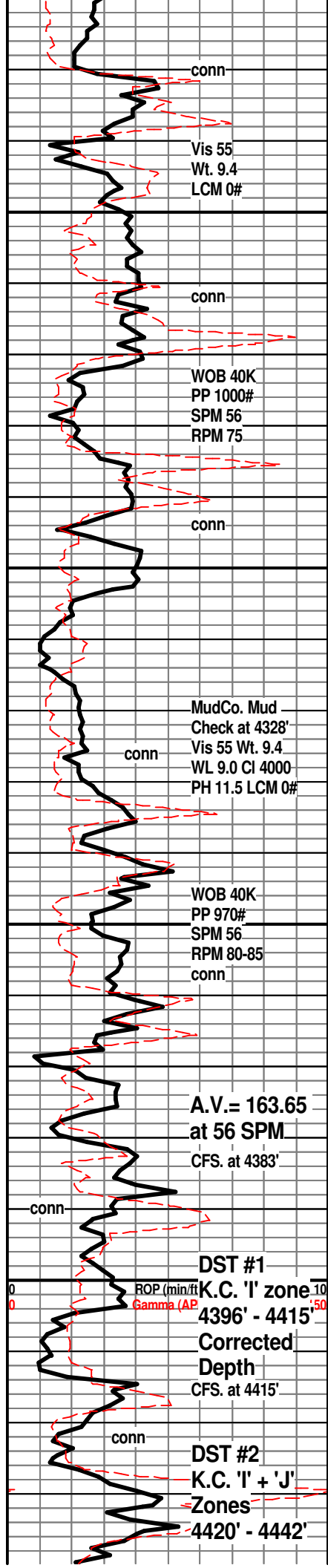
BIT TRIP AT 4200'

Drilling with Button Bit

LANSING 'B' 4208(-2007)

LM; off wh, buff, tan, foss ip, most well cem, scat chalk and chalky mtx, trc poor interxln por, no fluor, no stn or odor, ns.





LM; off wh, lt gy, buff, med xln w/fair vug and p-p por, dull yel fluor, no stn or odor, ns.

SH; med to dk gy, foss ip, platy

LM; tan to lt brn, fxln w/scat foss mat, fair interxln/interpart por, no stn/odor, no fluor, ns.

LM; lt to med brn, blocky, cherty ip, no vis por, no fluor, ns.

SH; med gy, smooth, platy

DOL; tan to cream, lt brn, sucrosic, dolomitic w/interbdd dolo. Imst, poor to fair vis interxln por, dull yel fluor, no stn or odor, no gas kick, ns.

LM; tan to off wh, lt brn, scat sucrosic text, partly dolomitic, fair interxln por, no fluor, ns.

LM; off wh, wh, buff, med to cse xln, abnt spar calc xtals, fair p-p and vug por, occ soft chalk and chalky mtx, lt to occ med yel min fluor, no stn or odor, ns.

LM; tan, off wh, med to cse xln, chalky ip, scat cse spar calc, bcm cherty, lt to med yel min fluor, no stn or odor, ns.

SH; med gy, gy grn, red/brn, foss ip.

LANSING/K.C. 'H' 4344(-2143)

LM; tan to buff, foss ip, rare well cem ooids, scat hash, no vis por, no fluor, occ off wh/gy cht, no gas kick, ns.

LM; tan, off wh, hd, blocky, scat gy cht

SH; med gy, gy grn, some slough sh.

LM; off wh, v. foss w/small ooids/pellets, fair interpart/small vug por, med/brite yel fluor, spotted/even lt brn stn, fair odor, SSFO, gas bubbles, fair/gd cut

LM; tan, off wh, foss - pelletal/oolitic ip, fair interpart w/p-p por, chalky mtx ip, lt yel fluor, no vis stn, no odor, no gas kick, barren por.

K.C. 'I' ZONE 4393(-2192)

LM; tan to lt brn, foss ip - most well cem, poor to no vis interpart por, spotted lt yel fluor, trc lt/med brn oil stn, no F.O, looks tite

LM; tan to buff, foss - partly oolitic, fair interpart, p-p and scat vug por(not oomoldic), strong odor, scat brite yel fluor, SFO, few gas bubbles, some chalk has brite yel fluor, gd cut

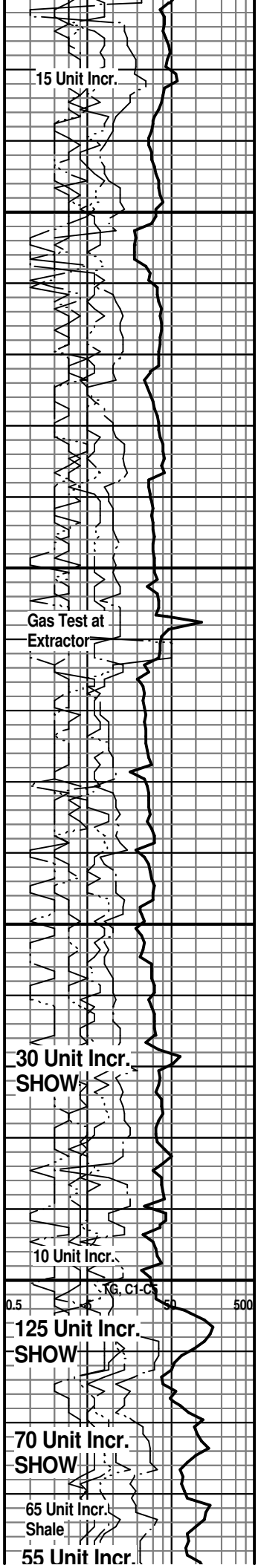
DST #1: Kansas City 'I' 4396' - 4415'

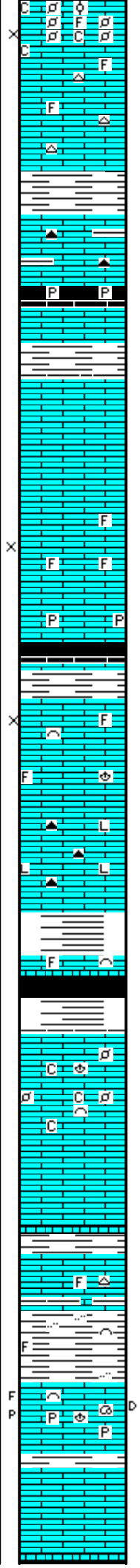
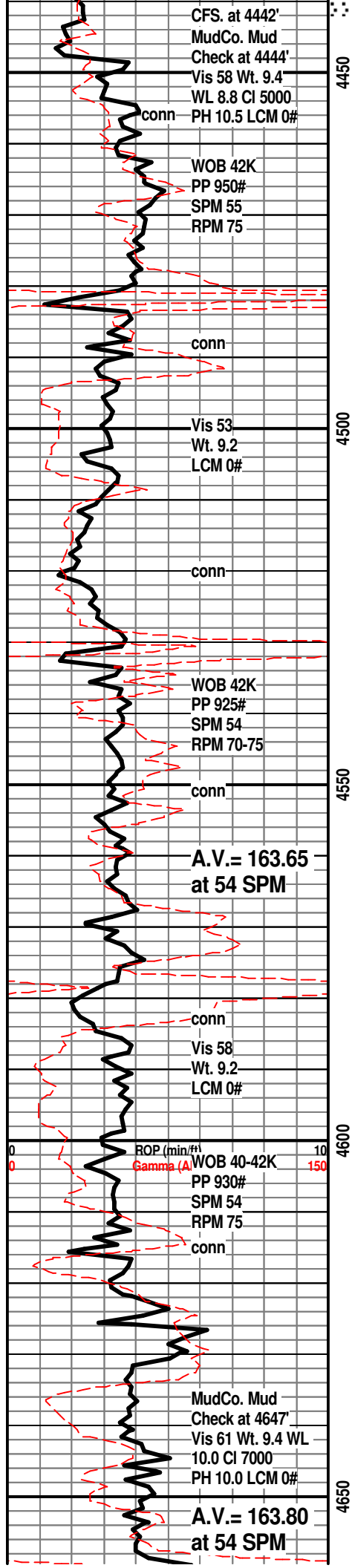
LM; lt brn, foss - med xln, fair interxln w/scat small vug por, strong odor, abnt brite yel fluor, spotted to even lt brn oil stn, SFO, few gas bubbles, gd cut, minor chalky mtx

SH; blk, dk gy, carb ip, platy

KANSAS CITY 'J' 4437(-2236)

LM; tan/ buff, foss - finely pelletal, fair to gd interpart





por, fair sweet odor, SFO, most w/even lt brn stn, med/brite yel fluor, gd cut, chalky ip.

DST #2: K.C. 'I' + 'J' 4420' - 4442'
Corrected Depths to Log
LM; tan to lt brn, foss to micritic, scat wh to lt gy cht, no vis por, ns.

SH; med gy, gy grn, platy

LM; med to dk brn, gy brn, argil ip, hd, scat dk gy cht, no vis por, ns.

STARK SHALE 4481(-2280)
SH; blk, carb ip, scat pyr, trc gas

SWOPE 4493(-2292)
LM; tan to off wh, buff, fxln w/scat foss mat, most well cem, no fluor, no stn or odor, ns.

LM; off wh, buff, rare lt gy, foss to fxln, trc sucrosic text, fair interxln/interpart por, v. dull yel min fluor, no vis stn, no odor, no gas kick

SH; blk, carb ip, trc gas

HERTHA 4538(-2337)
LM; lt brn, tan, fxln, foss ip w/trc poor interpart por, most dense - blocky, no fluor, no stn or odor, ns.

LM; med to odd dk brn, gy brn, hd, litho ip, interbdd blk/smoky cht, dense, ns.

BASE KANSAS CITY 4568(-2367)
SH; varic - rust red, grn, brn, platy

LM; lt to med gy brn, hd, foss ip, tite

SH; dk gy, blk, varic, platy

PLEASANTON 4585(-2384)
LM; off wh, wh, buff, foss to med xln, scat pellets/some foss hash, minor soft chalky mtx, dull yel fluor, trc poor interpart por, no stn, ns.

LM; off wh, tan, foss w/well cem ooids/pellets, no vis por, scat dull yel min fluor, no gas kick, ns.

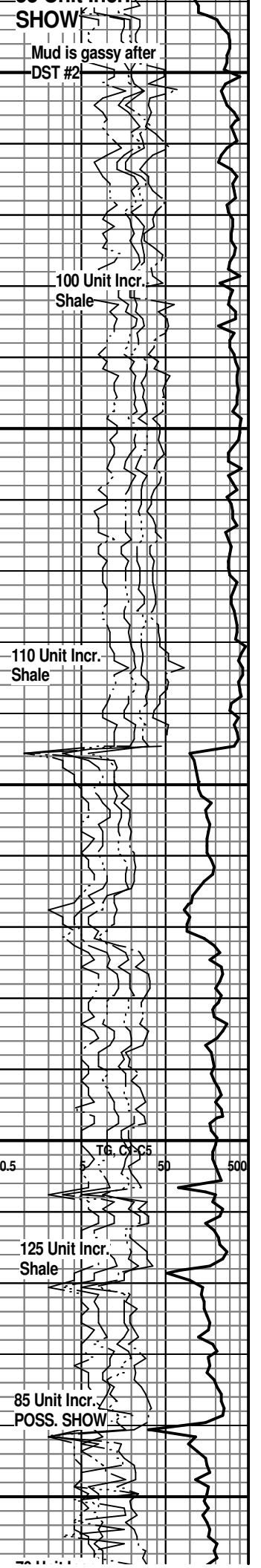
SH; dk gy, some blk, platy

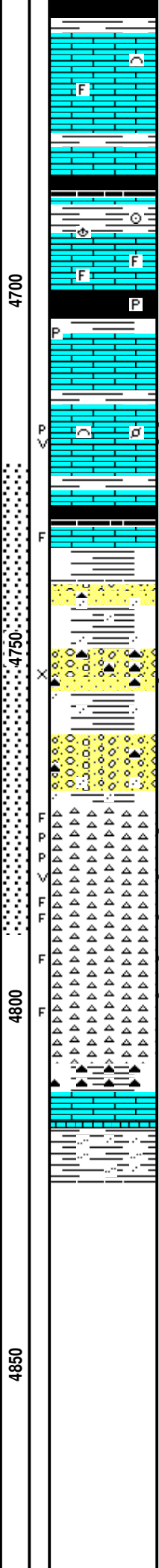
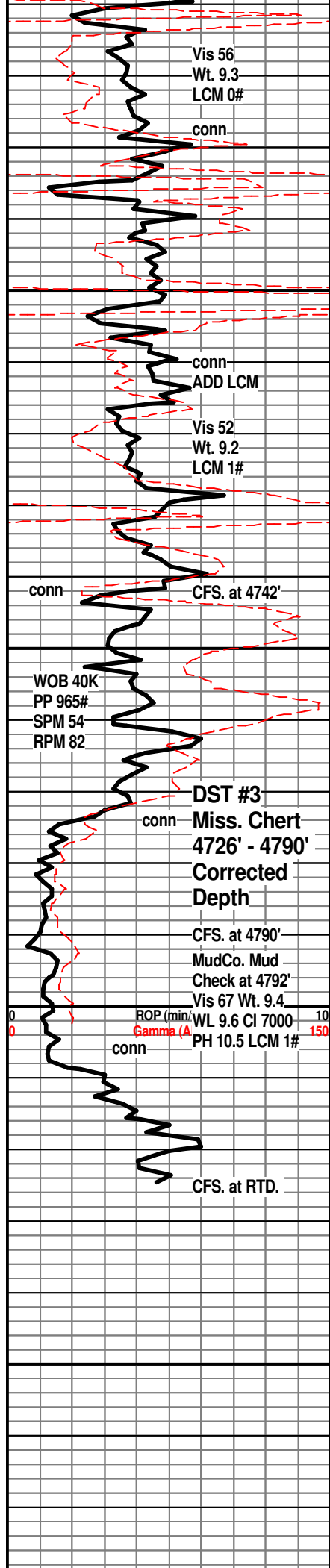
MARMATON 4616(-2415)
LM; lt brn, pale grn tint - argil ip, most dense, blocky, trc transl cht, tite

SH; med gy, grn, silty ip, rare foss mat.

LM; lt brn, tan, foss ip, sev. pcs. w/blk hvy oil stn - tar/gilsonite, trc poor p-p por, dull yel fluor, trc calc fld fracs w/gilsonite on edges, no live sample shows, scat pyr, tite

LM; lt to med brn, most dense - micritic, blocky, no vis por, no fluor, ns.





PAWNEE 4664(-2463)
 SH; dk gy, blk, dk grn, platy
 LM; lt brn, tan, foss ip, most dense - micritic, no vis por, spotted dull yel fluor, no stn or odor, no gas kick, ns.

SH; blk, carb ip, gassy
 SH; med gy, platy, smooth, foss ip.

LM; tan to lt brn, foss ip, most dense, blocky, no vis por, no fluor, ns.
CHEROKEE SHALE 4700(-2499)
 SH; blk, dk gy, some varic, pyr ip.

LM; lt gy, tan, lt brn, fxln, most dense, dull yel min fluor, no vis por, ns.

LM; lt brn, foss/fxln, scat fair p-p with trc. vug por, spotted to occ even med brn stn, SSFO, brite yel fluor, faint odor, gd cut

SH; dk gy - blk, platy
 LM; lt/med brn, most dense, trc frags w/blk tar/gils, no live show, no gas kick

SS/CONGL; med gr qtz tite clusters, org cht, rnd nodules, w/varic sh, no fluor, ns.
 SH; varic, sandy ip, platy

CONGL CHT; org, red, off wh, fresh, w/interbdd varic occ sandy shale, occ ss strngs w/blk tar/gilsonite, some with live brn stn, SSFO, fair intergran por and med yel fluor

MISSISSIPPI CHERT 4773(-2572)
 CHT; wh, fresh w/ tripolite, most w/brite yel fluor, SFO, frags w/edge stn, trip/p-p por, faint odor, spotted to even oil stn, gd cut
 CHT; wh, porc, most fresh, frags w/rare vug por, med/brite yel fluor, fair/gd odor, SSFO, some tripolite w/gd vug por + SFO

DST #3: Miss. Chert 4726' - 4790'
 CHT; off wh, some lt gy, most fresh, frags w/occ dk oil stn, decr. in fluor, occ spotted lt brn oil stn, v. faint odor

SH; varic, rust red, brn, varic chts interbdd
 LM; med brn, red/brn, partly oxidized, tite

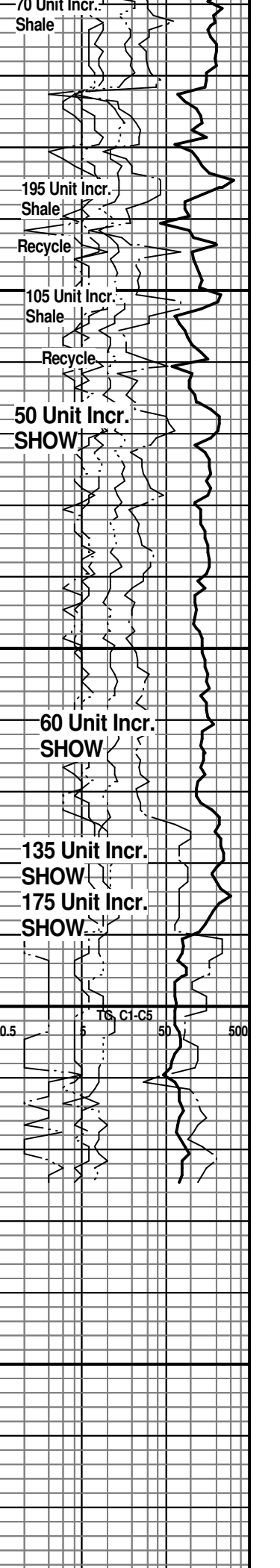
KINDERHOOK SHALE 4817(-2616)
 SH; med gy, gy grn, silty to occ sandy, platy

RTD. 4827' at 1:03 PM. 9/10/14

LTD. 4826'

Halliburton ACRT, NEU/DEN w/PE, Microlog, MRIL

NOTE: This log was shifted upward by 2' to 4' for correlation purposes with the Halliburton Logs.





PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007589	1718	09/06/2014
INVOICE NUMBER			
91587245			

Pratt (620) 672-1201

B HERMAN L LOEB LLC
 I PO Box: 838
 L LAWRENCEVILLE
 L IL US 62439
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Randel 3-20
 O LOCATION
 B COUNTY Kiowa
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

100716 797 Randel 3 6438

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40762712	19905		Net - 30 days	10/06/2014

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 09/04/2014 to 09/04/2014				
0040762712				
171811238A Cement-New Well Casing/Pi 09/04/2014				
Cement 8 5/8 Surface				
A-Con Blend Common	200.00	EA	13.14	2,628.00 T
Common Cement	200.00	EA	11.68	2,336.00 T
Celloflake	100.00	EA	2.70	270.10 T
Calcium Chloride	940.00	EA	0.77	720.51 T
"Top Rubber Cmt Plug, 8 5/8""	1.00	EA	164.25	164.25
"8 5/8"" Guide Shoe (Red)"	1.00	EA	401.50	401.50
Flapper Type Insrt Float Valve 8 5/8"(BI	1.00	EA	204.40	204.40
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	3.10	108.59
Heavy Equipment Mileage	70.00	MI	5.11	357.70
"Proppant & Bulk Del. Chgs., per ton mil	658.00	EA	1.61	1,056.75
Depth Charge; 501'-1000'	1.00	EA	876.00	876.00
Blending & Mixing Service Charge	400.00	BAG	1.02	408.80
Plug Container Util. Chg.	1.00	EA	182.50	182.50
"Service Supervisor, first 8 hrs on loc.	1.00	EA	127.75	127.75

PAID
53019
SEP 18 2014

SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	9,842.85
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	425.75
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	10,268.60
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET
1718 11238 A

DATE _____ TICKET NO. _____

DATE OF JOB: 09-04-14	DISTRICT: PRATT KC	NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.:				
CUSTOMER: HERMAN LOEB LLC	LEASE: RANDOL	3-20		WELL NO.							
ADDRESS:	COUNTY: KIOWA	STATE: KS									
CITY:	STATE:	SERVICE CREW: Salloum, Eggen, Phye									
AUTHORIZED BY:	JOB TYPE: CNW 8 1/2" Surface										
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME	
77686-19905	1 hr					9-3-14				11:00	
19903-19860	1 hr										
37900											
ARRIVED AT JOB							9-4-14			3:30	
START OPERATION										6:50	
FINISH OPERATION										7:45	
RELEASED										8:15	
MILES FROM STATION TO WELL											35

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: Alan Lofth
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 101	A-CoD cement	SK	200		3,600.00
CP 100-c	Common cement	SK	200		3,200.00
CC 102	Cell/FAK	lb	100		370.00
CC 109	Calcium chloride	lb	940		987.00
CF 105	TOP Rubber Plug 8 5/8"	SA	1		225.00
CF 1453	Insert float	SA	1		280.00
CF 203	Guide shoe	SA	1		550.00
E 100	packer m	m'	35		148.75
E 101	HSA 09 Spout	m'	70		490.00
E 113	Bullh Peking	mm	658		1,447.40
PE 201	Depth change	SA	1		1,200.00
PE 240	Blending - drug	SK	400		560.00
PE 504	Plug Cement Rental	SA	1		250.00
S 003	Sekur Superior	SA	1		175.00

SUB TOTAL 9,842.85

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$
TOTAL	

SERVICE REPRESENTATIVE: <u>Robert J. Lofth</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>Alan Lofth</u>
FIELD SERVICE ORDER NO. _____	(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

Customer <i>HERMAN LOEB LLC</i>	Lease No.	Date <i>09-04-14</i>
Lease <i>RAWDEL</i>	Well # <i>3-20</i>	
Field Order # <i>11238</i>	Station <i>PRATT</i>	Casing <i>8 5/8</i>
		Depth <i>647'</i>
Type Job <i>CNW Surface</i>	Formation	County <i>KIOWA</i>
		State <i>KS</i>
		Legal Description <i>20-27-18</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>8 5/8</i>								
Depth <i>647</i>	Depth	From	To	Pre Pad	Max		5 Min.	
Volume <i>37</i>	Volume	From	To	Pad	Min		10 Min.	
Max Press <i>450</i>	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection <i>P.C.</i>	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth <i>605</i>	Packer Depth	From	To	Flush	Gas Volume		Total Load	

Customer Representative	Station Manager <i>DAVE SCOTT</i>	Treater <i>Robert Jullien</i>
Service Units <i>37900 77686 19905 19903 19860</i>		
Driver Names <i>Sullivan Spring Phyllis</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>3:30</i>					<i>ON LOC.</i>
					<i>Ran 8 5/8 csg.</i>
					<i>90</i>
<i>6:40</i>					<i>CASING ON BOTTOM</i>
<i>6:45</i>					<i>HOOK UP CIRC</i>
<i>6:55</i>			<i>3</i>	<i>4.5</i>	<i>AT SPACER</i>
			<i>88</i>		<i>Mix A-CON cement 200 sk w/ 3% cc</i>
			<i>43</i>		<i>114 CF. 12 PPP.</i>
					<i>Mix Tail 200 sk common 2% cc 1/4 CF</i>
					<i>cm mixed shut down</i>
					<i>Release Plug</i>
					<i>at Disp</i>
<i>7:45</i>			<i>39</i>		<i>Plug down</i>
					<i>Float Hold</i>
					<i>CIRC 10 BBL cm + Pit</i>
					<i>JOB COMPLETE</i>
					<i>Frank</i>



PAGE 1 of 1	CUST # 1007589	YARD # 1718	INVOICE DATE 09/15/2014
INVOICE NUMBER 91594569			

Pratt (620) 672-1201
 B HERMAN L LOEB LLC
 I PO Box: 838
 L LAWRENCEVILLE
 L IL US 62439
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Randel 3-20
 O LOCATION
 B COUNTY Kiowa
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

4076 797 Randel 3 6438

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40765485	27463		Net - 30 days	10/15/2014

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 09/11/2014 to 09/11/2014				
0040765485				
171811318A Cement-New Well Casing/Pi 09/11/2014				
Cement 5 1/2" Longstring				
50/50 POZ	250.00	EA	8.47	2,117.36 T
Celloflake	63.00	EA	2.85	179.47 T
Gypsum	1,050.00	EA	0.58	606.33 T
FLA-322	105.00	EA	5.77	606.33 T
Gilsonite	1,501.00	EA	0.52	774.31 T
KCL, Potassium Chloride	566.00	EA	1.15	653.69 T
"Latch Down Plug & Baffle, 5 1/2" (Blu	1.00	EA	307.98	307.98
"Auto Fill Float Shoe 5 1/2" (Blue)"	1.00	EA	277.18	277.18
"Turbolizer, 5 1/2" (Blue)"	12.00	EA	84.69	1,016.33
"5 1/2" Basket (Blue)"	2.00	EA	223.29	446.57
"Cement Scratchers Cable Type, 5 1/2" "	6.00	EA	57.75	346.48
Claymax KCL Substitute	5.00	EA	26.95	134.74 T
Mud Flush	1,000.00	EA	1.15	1,154.92 T
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	3.27	114.53
Heavy Equipment Mileage	70.00	MI	5.39	377.27
"Proppant & Bulk Del. Chgs., per ton mil	368.00	EA	1.69	623.35
Depth Charge; 4001'-5000'	1.00	EA	1,940.27	1,940.27
Blending & Mixing Service Charge	250.00	BAG	1.08	269.48
Plug Container Util. Chg.	1.00	EA	192.49	192.49
"Service Supervisor, first 8 hrs on loc.	1.00	EA	134.74	134.74

PAID
53160
SEP 25 2014
SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	12,273.82
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	445.24
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	12,719.06
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET

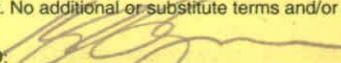
1718 11318 A

DATE _____ TICKET NO. _____

DATE OF JOB 9-11-14 DISTRICT _____		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:								
CUSTOMER Herman L. Loeb, LLC		LEASE Randel 3-20 WELL NO. _____								
ADDRESS _____		COUNTY Nowata STATE KS								
CITY _____ STATE _____		SERVICE CREW Scott, Eddy, Clanton								
AUTHORIZED BY _____		JOB TYPE: 5 1/2 long string (NGL)								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
38970	.9									
27463	.9									
19903 19860	.9									
						ARRIVED AT JOB	9-11-14	AM	PM	11:45
						START OPERATION	9-11-14	AM	PM	4:25
						FINISH OPERATION	9-11-14	AM	PM	5:15
						RELEASED	9-11-14	AM	PM	6:15
						MILES FROM STATION TO WELL				

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

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SIGNED: 
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP104	50/50 P02	SK	200		2200 00
CP104	50/50 P02	SK	50		550 00
CC102	Celloflake	lb	63		233 10
CC113	Gypsum	lb	1050		787 50
CC129	FIA-322	lb	105		787 50
CC201	Gilsonite	lb	1501		1005 67
C700	KCL, Potassium Chloride	lb	566		849 00
CF607	Witch Down Plug + Baffle 5 1/2	EA	1		400 00
CF1251	Auto fill float shoe 5 1/2	EA	1		360 00
E100	Unit Mileage Pickup	MI	35		148 75
E101	Heavy Equipment Mileage	MI	70		490 00
E113	Prop + Bulk Delivery	TM	368		808 50
CE205	Depth Charge 4001 - 5000'	4his	1		2520 00
CE240	Blending + Mixing Service Charge	SK	250		350 00
CE504	Plug Container Utilization	Job	1		250 00
5003	Service Supervisor	CA	1		175 00
C764	Claymax KCL Substitute	Gal	5		175 00
CC151	Mud Flush	Gal	1000		1500 00
CF1651	Turbolizers 5 1/2	EA	12		1320 00

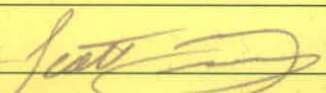

SUB TOTAL

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$

TOTAL

12,273 82

SERVICE REPRESENTATIVE:  THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: 
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

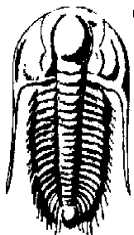
FIELD SERVICE ORDER NO. _____

Customer <i>Haman L Lorb LLC</i>	Lease No.	Date <i>9-11-14</i>
Lease <i>Rundel</i>	Well # <i>3-20</i>	
Field Order # <i>11318A</i>	Station <i>Pratt</i>	Casing <i>5 1/2</i>
		Depth <i>4825</i>
Type Job <i>5 1/2 long string</i>	Formation <i>CNW</i>	County <i>kiowa</i>
		State <i>KS</i>
		Legal Description <i>70 27 15</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>5 1/2</i>								
Depth <i>4825</i>	Depth	From	To	Pre Pad	Max		5 Min.	
Volume <i>1148</i>	Volume	From	To	Pad	Min		10 Min.	
Max Press <i>7000</i>	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection <i>5 1/2</i>	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load	

Customer Representative	Station Manager <i>Kevin Goodley</i>	Treater <i>Scott Graves</i>
Service Units <i>38970 77465 19905 19560</i>		
Driver Names <i>Scott Eddy</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>11:45</i>					<i>On location safety meeting Rig up</i>
<i>12:30</i>					<i>Run float equipment</i>
					<i>Scratchers on #2 Baskets on #12</i>
					<i>Turbolizers on 1,2,3,4,9,10,11,15,19,23,27,31</i>
<i>2:00</i>					<i>Circulate well on Joint #80 30 min</i>
<i>2:30</i>					<i>Finish running casing</i>
<i>3:20</i>					<i>Circulate on bottom 1 hr</i>
<i>4:25</i>	<i>0</i>		<i>10</i>	<i>4</i>	<i>Pump H₂O spacer</i>
<i>4:28</i>	<i>100</i>		<i>24</i>	<i>4</i>	<i>Pump Mud Flush 1000 gallon</i>
<i>4:35</i>	<i>100</i>		<i>15</i>	<i>4.5</i>	<i>Pump H₂O spacer</i>
<i>4:39</i>	<i>300</i>		<i>48.1</i>	<i>5.3</i>	<i>Mix 200 SKS 50/50 POZ at 14 ppg</i>
<i>4:47</i>					<i>Shut down wash pump + lines</i>
<i>4:49</i>					<i>Drop plug</i>
<i>4:49</i>	<i>0</i>			<i>5.7</i>	<i>start Displacement</i>
<i>5:00</i>	<i>400</i>		<i>75</i>	<i>6</i>	<i>lift pressure</i>
<i>5:08</i>	<i>700</i>		<i>35</i>	<i>3.5</i>	<i>Reduce Rate</i>
<i>5:10</i>	<i>700</i>		<i>3.5</i>		<i>Plug landed</i>
<i>5:16</i>	<i>1500</i>				<i>Pressure up on plug</i>
<i>5:11</i>					<i>Released pressure check valve held</i>
<i>5:13</i>	<i>0</i>		<i>7.75</i>	<i>2.5</i>	<i>plug Rate hole 30 SKS 50/50 POZ</i>
<i>5:15</i>	<i>0</i>		<i>5</i>	<i>2.5</i>	<i>plug mouse hole 20 SKS 50/50 POZ</i>
					<i>Job complete</i>



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

20-27S-18W Kiowa
Randel 3-20
 Job Ticket: 57756 **DST#: 1**
 Test Start: 2014.09.07 @ 17:37:19

GENERAL INFORMATION:

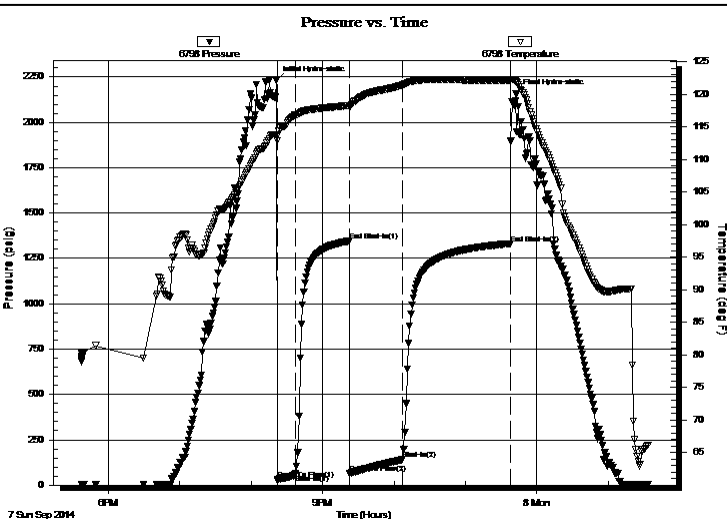
Formation: **Lansing KC "I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:21:49
 Time Test Ended: 01:33:04
 Interval: **4398.00 ft (KB) To 4417.00 ft (KB) (TVD)**
 Total Depth: 4417.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 2201.00 ft (KB)
 2188.00 ft (CF)
 KB to GR/CF: 13.00 ft

Serial #: 6798

Inside

Press @ Run Depth: 140.87 psig @ 4399.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.07 End Date: 2014.09.08 Last Calib.: 2014.09.08
 Start Time: 17:37:20 End Time: 01:33:04 Time On Btm: 2014.09.07 @ 20:21:04
 Time Off Btm: 2014.09.07 @ 23:42:19

TEST COMMENT: IF: Fair Blow , Built to 8 1/2 inches
 IS: No Blow Back
 FF: Fair Blow , BOB in 44 minutes
 FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2231.48	113.86	Initial Hydro-static
1	32.71	112.90	Open To Flow (1)
16	59.93	116.87	Shut-In(1)
62	1346.41	118.29	End Shut-In(1)
62	65.29	118.14	Open To Flow (2)
106	140.87	121.41	Shut-In(2)
197	1331.64	122.13	End Shut-In(2)
202	2156.25	121.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	186 GIP	0.00
120.00	Water	0.59
120.00	GWCM 2%G 20%W 78%M	0.59
20.00	SOGCM 2%O 2%G 96%M	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

20-27S-18W Kiowa
Randel 3-20
 Job Ticket: 57756 **DST#: 1**
 Test Start: 2014.09.07 @ 17:37:19

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:	78000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.02 inches			

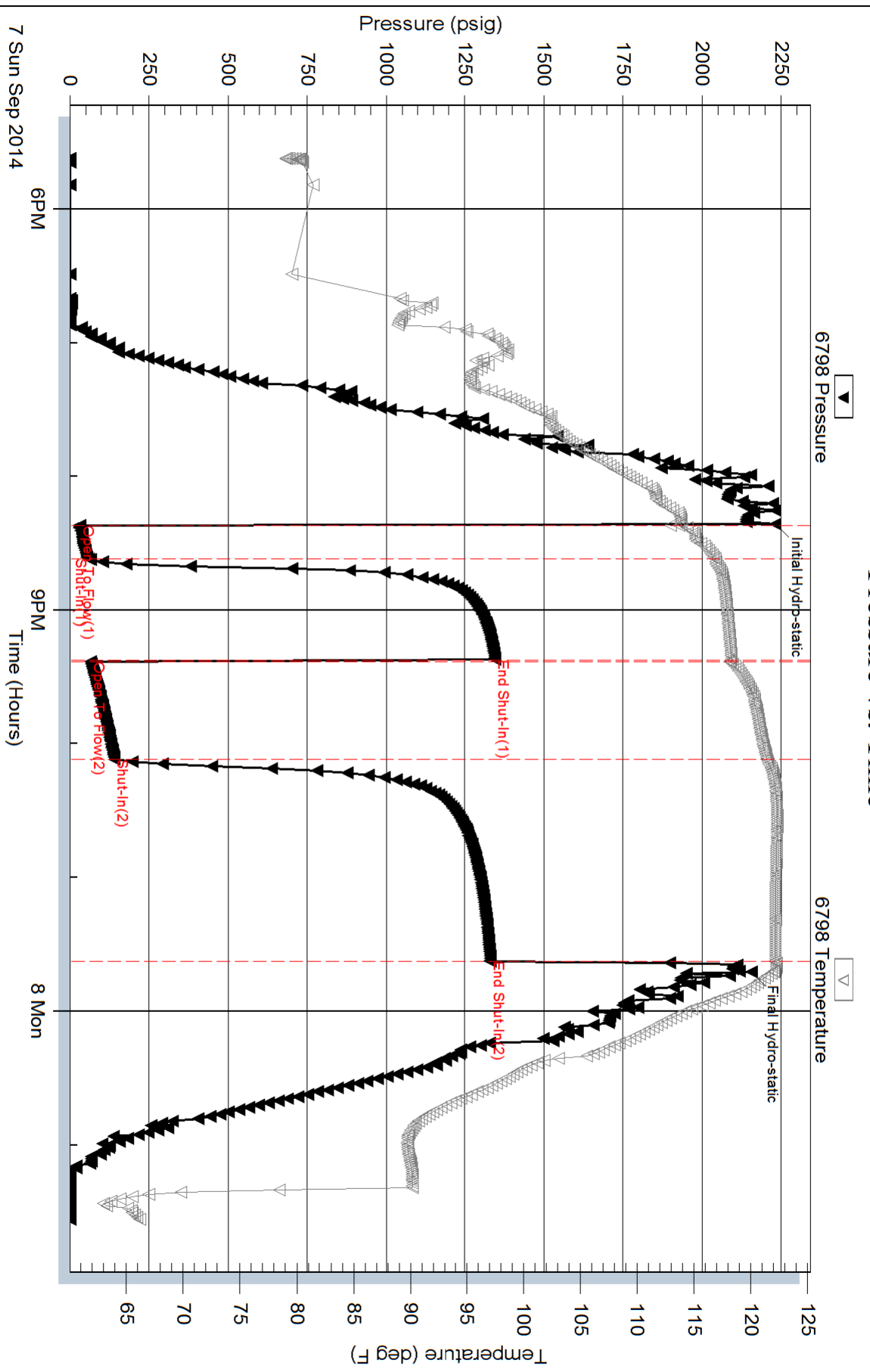
Recovery Information

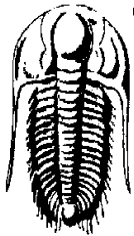
Recovery Table

Length ft	Description	Volume bbl
0.00	186 GIP	0.000
120.00	Water	0.590
120.00	GWCM 2%G 20%W 78%M	0.590
20.00	SOGCM 2%O 2%G 96%M	0.098

Total Length: 260.00 ft Total Volume: 1.278 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW w as .1 @ 70 degrees

Pressure vs. Time





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

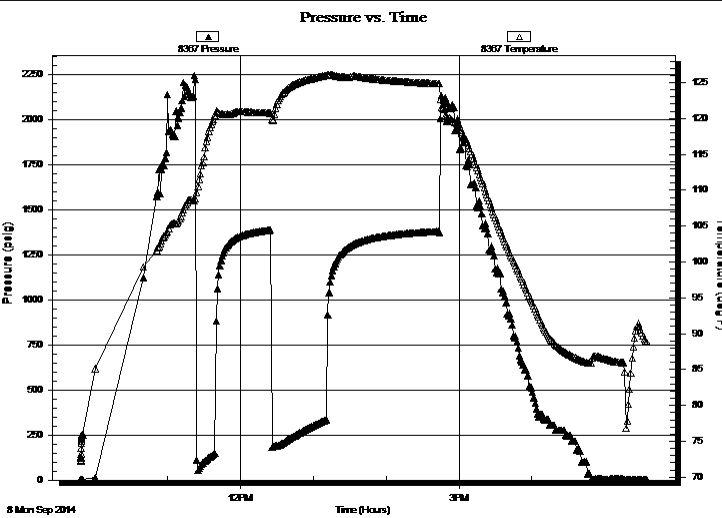
20-27S-18W Kiowa
Randel 3-20
 Job Ticket: 57757 **DST#: 2**
 Test Start: 2014.09.08 @ 09:47:57

GENERAL INFORMATION:

Formation: **KC "I & J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 11:24:12 Tester: Leal Cason
 Time Test Ended: 17:34:57 Unit No: 74
 Interval: **4422.00 ft (KB) To 4444.00 ft (KB) (TVD)** Reference Elevations: 2201.00 ft (KB)
 Total Depth: 4422.00 ft (KB) (TVD) 2188.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

Serial #: 8367 Outside
 Press @ Run Depth: psig @ 4423.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.08 End Date: 2014.09.08 Last Calib.: 2014.09.08
 Start Time: 09:47:58 End Time: 17:35:12 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong Blow , BOB in 45 seconds
 IS: Blow Back Built to 6 inches
 FF: Strong Blow , BOB in 3 minutes, GTS in 40 minutes, TSTM
 FS: 5 inch Blow Back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3685 GIP	0.00
444.00	Water	3.24
124.00	GSY SOCW 10%G 10%O 80%W	1.74
155.00	GSY MOCW 30%G 5%M 31%O 34%W	2.17

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

20-27S-18W Kiowa
Randel 3-20
 Job Ticket: 57757 **DST#: 2**
 Test Start: 2014.09.08 @ 09:47:57

Mud and Cushion Information

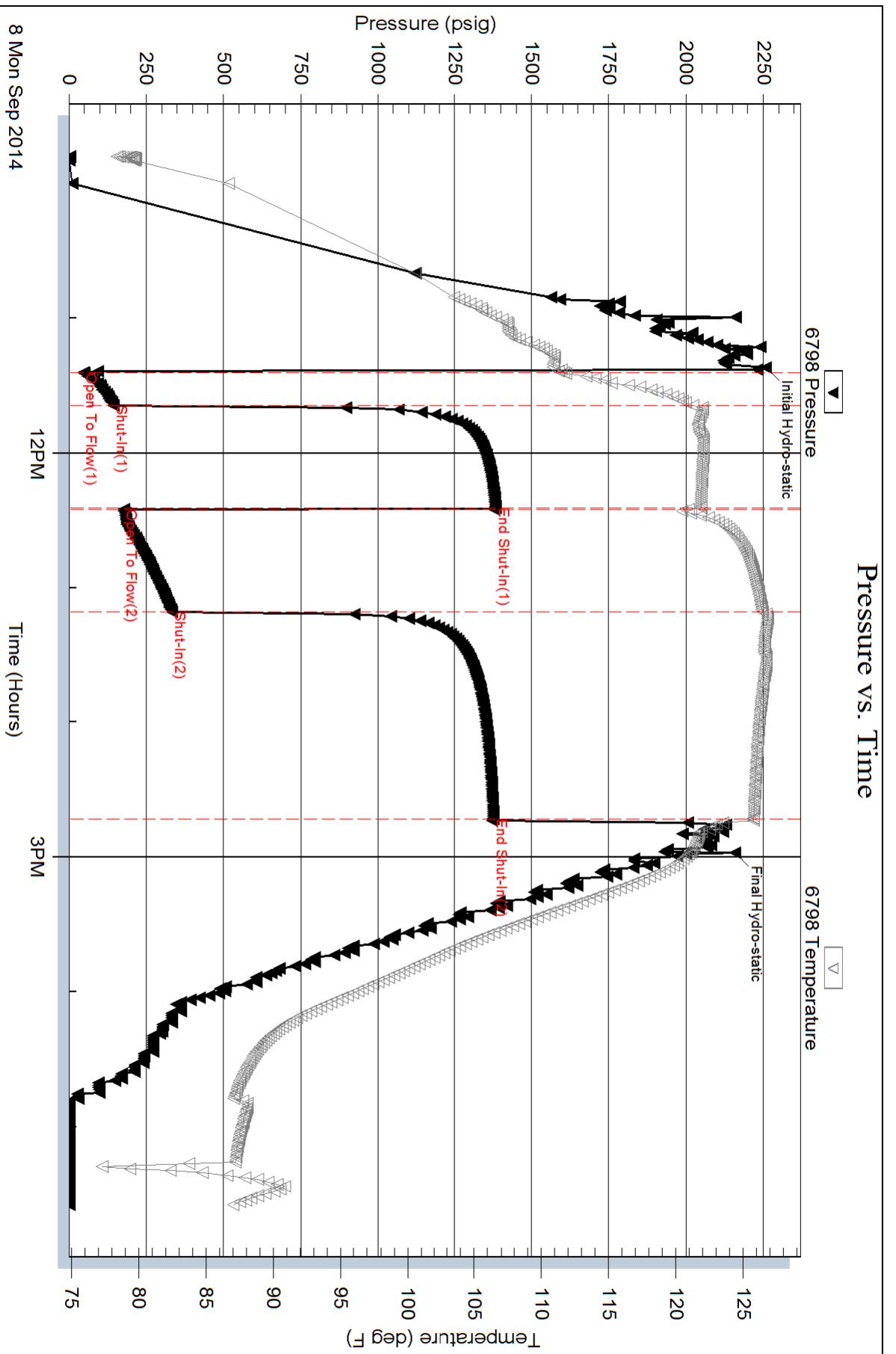
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	70000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.02 inches			

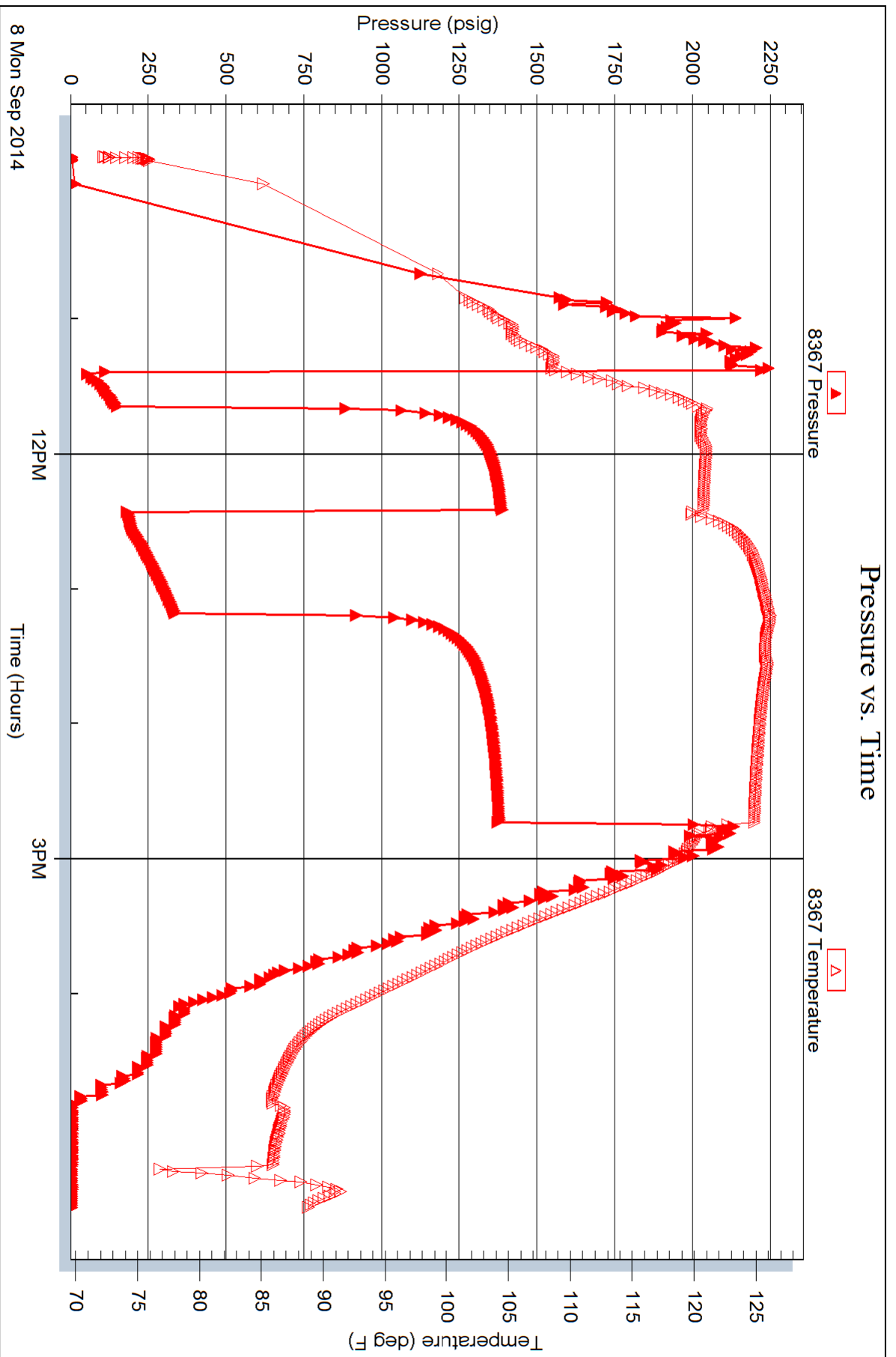
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3685 GIP	0.000
444.00	Water	3.240
124.00	GSY SOCW 10%G 10%O 80%W	1.739
155.00	GSY MOCW 30%G 5%M 31%O 34%W	2.174

Total Length: 723.00 ft Total Volume: 7.153 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW w as .095 @ 82 degrees







TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

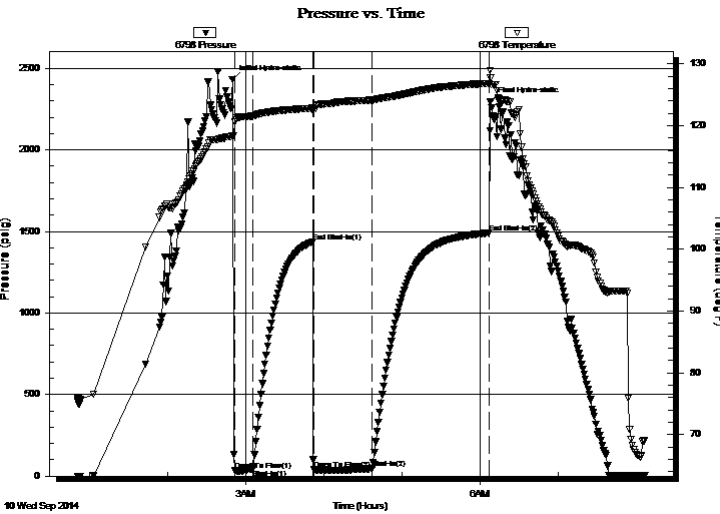
20-27S-18W Kiowa
Randel 3-20
 Job Ticket: 57758 **DST#: 3**
 Test Start: 2014.09.10 @ 00:51:11

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 02:51:41 Tester: Leal Cason
 Time Test Ended: 08:06:23 Unit No: 74
 Interval: **4728.00 ft (KB) To 4792.00 ft (KB) (TVD)** Reference Elevations: 2201.00 ft (KB)
 Total Depth: 4792.00 ft (KB) (TVD) 2188.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

Serial #: 6798 Inside
 Press@RunDepth: 46.99 psig @ 4729.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.10 End Date: 2014.09.10 Last Calib.: 2014.09.10
 Start Time: 00:51:12 End Time: 08:06:23 Time On Btm: 2014.09.10 @ 02:49:56
 Time Off Btm: 2014.09.10 @ 06:08:11

TEST COMMENT: IF: Strong Blow , BOB in 45 seconds
 IS: Blow Back Built to 9 inches
 FF: Strong Blow , BOB immediate, GTS in 5 minutes, Gauged & Caught Sample
 FS: 2 inch Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2431.31	118.36	Initial Hydro-static
2	33.85	120.65	Open To Flow (1)
16	43.39	121.56	Shut-In(1)
62	1436.50	122.83	End Shut-In(1)
63	42.79	122.73	Open To Flow (2)
108	46.99	124.13	Shut-In(2)
198	1491.21	126.80	End Shut-In(2)
199	2296.15	127.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4674 GIP	0.00
50.00	SGCM 2%G 98%M	0.25

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	5.00	30.78
Last Gas Rate	0.13	12.00	9.88
Max. Gas Rate	0.13	12.00	9.88



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC
PO Box 838
Lawrenceville, IL 62439
ATTN: Jon Christensen

20-27S-18W Kiowa
Randel 3-20
Job Ticket: 57758 **DST#: 3**
Test Start: 2014.09.10 @ 00:51:11

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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.98 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4674 GIP	0.000
50.00	SGCM 2%G 98%M	0.246

Total Length: 50.00 ft Total Volume: 0.246 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Herman L Loeb LLC
PO Box 838
Lawrenceville, IL 62439
ATTN: Jon Christensen

20-27S-18W Kiowa
Randel 3-20
Job Ticket: 57758 **DST#: 3**
Test Start: 2014.09.10 @ 00:51:11

Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.25	5.00	30.78
2	20	0.13	5.00	7.26
2	30	0.13	9.00	8.76
2	40	0.13	12.00	9.88
2	45	0.13	12.00	9.88

