

1186940

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
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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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	HERMAN L. LOEB, LLC
Well Name	RANDEL 1-20
Doc ID	1186940

Tops

Name	Top	Datum
Chase	2453	-238
Heebner	4043	-1828
Toronto	4058	-1843
Lansing 'A'	4198	-1983
Kansas City 'I'	4412	-2197
Kansas City 'J'	4450	-2235
BKC	4584	-2369
Marmaton	4626	-2411
Cherokee Shale	4712	-2497
Miss Unconformity	4770	-2555
Kinderhook Sand	4850	-2635

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Randel #1-20
Location: 1765' FNL&1320' FWL, Sec. 20-T27S-R18W, Kiowa County, KS.
Licence Number: 15-097-21771-00-00 Region: Unnamed Field
Spud Date: 10/26/2013 Drilling Completed: 11/5/2013
Surface Coordinates: 1765' FNL & 1320' FWL, Sec. 20-T27S-R18W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2204' K.B. Elevation (ft): 2215'
Logged Interval (ft): 3400' To: 4919' Total Depth (ft): 4919'
Formation: Kinderhook at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3326'; Chemical Gel 3326' to 4919'
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(Lansing 'A' Porosity) 4202' - 4221'(Corrected Depths to LOG) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/4.5 Min., FFP Strong Blow 15 Sec., Gas to Surface in 30 Min., Volume To Small To Measure, 0.25" Blowback on FSI; REC: 4170' Gas in Pipe, 35' WM(34%W, 66%M), CI 68,000, Mud 3000; IFP 17-23#, ISIP 1457#, FFP 13-30#, FSIP 1450#, IHP 2055#, FHP 2038#, BHT 114 Deg. F.

DST #2(Kansas City 'I' Zone) 4420' - 4440'(Corrected Depths to LOG) Test Times 15"-45"-30"-60" IFP Strong Blow BOB/6 Min., FFP Fair Blow building to BOB Blow in 27 Min., 1" Blowback on FSI, no GTS; REC: 415' Gas in Pipe, 2' Clean Oil, 95' OCMW(3%O, 63%W, 34%M), 213' SW, CI 92,000, Mud 3000; IFP 32-88#, ISIP 1359#, FFP 99-167#, FSIP 1334#, IHP 2153#, FHP 2122#, BHT 119 Deg. F.

DST #3(Cherokee/Miss. Chert) 4738' - 4788'(Corrected Depths to LOG) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/30 Sec. Gas to Surface in 14 Min., FFP Strong Blow Gas to Surface Gauged Max. 169.9 MCFG(11# on 0.5" Choke), Surface Blowback on FSI; REC: 4674' GIP, 65' SGCM(2%G, 98%M), NO WATER; IFP 95-91#, ISIP 1516#, FFP 94-110#, FSIP 1493#, IHP 2496#, FHP 2312#, BHT 120 Deg. F.

DST #4(Miss. Chert) 4788' - 4803'(Corrected Depths to LOG) Test Times 15"-45"-45"-90" IFP Weak Blow built to 4", FFP Strong Blow BOB/15 Sec., no Gas to Surface, no Blowback on SI's; REC: 739' Gas in Pipe, 5' SGCM(2%G, 98%M), NO WATER; IFP 29-34#, ISIP 499#, FFP 13-25#, FSIP 940#, IHP 2338#, FHP 2262#, BHT 121 Deg. F.

Comments

10/26/13 MIRU Sterling Drilling Rig #2, Spud at 5:45 PM.; 10/27/13 TD. 608' - Cementing Surface Casing;; 10/28/13 Drilling at 1256'; 10/29/13 Drilling at 2530'; 10/30/13 Drilling at 3305'; 10/31/13 Drilling at 4042'; 11/1/13 TD. 4225' - Lay down Test Tool after DST #1; 11/2/13 TD. 4444' - DST #2; 11/3/13 Drilling at 4685'; 11/4/13 TD. 4792' - TIH after DST #3; 11/5/13 Drilling at 4885' - RTD. 4919' at 9:30 AM., LTD. 4917'; 11/6/13 Running 5 1/2" Production Casing.

Set new 8 5/8"(24#) Surface Casing at 603' with 350 sx. of Cement(Basic Energy Services). Cement Did Circulate. PD. at 7:00 AM. on 10/27/13. Cement fell 50', so used 1" to fill up to base of cellar with 100 sx. Cement(Basic Energy Services) - Cement held OK.

Set new 5 1/2"(15.5#) Production Casing at 4909' with 200 sacks of "Loeb Blend" Cement(Basic Energy Services). PD. 11:45 AM. 11/6/13.

Surveys: 0.75 Deg. at 608'(Surface Casing); 0.25 Deg. at 4225'(DST #1); 1 Deg. at 4444'(DST #2); 1 Deg. at 4792'(DST #3); 0.75 Deg. at 4919' RTD.

Pipe Strap at 4225'(DST #1): Strap 1.01' Short 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 Mississippi Chert.

LOG TOPS: Chase 2453(-238), Stotler Lmst. 3401(-1186), Howard 3608(-1393), Queen Hill Shale 3912(-1697), Heebner Shale 4043(-1828), Toronto 4058(-1843), Brown Lmst. 4193(-1978), Lansing "A" 4198(-1983), K.C. 'I' 4412(-2197), Kansas City "J" 4450(-2235), Stark Shale 4498(-2283), Hertha 4556(-2341), BKC 4584(-2369), Marmaton 4626(-2411), Cherokee Shale 4712(-2497), Miss. Unconformity 4770(-2555), Kinderhook Shale 4821(-2606), Kinderhook Sand 4850(-2635).

NOTE: This log was shifted upward by 3' to 4' for Correlation purposes with the Halliburton Logs.

NOTE: Prior to abandonment of the Randel #1-20, the Kansas City "J" zone should be perforated and tested from 4452' - 4456'(Log depths). There was a 30 Unit gas kick in this zone, and favorable log calculations. Also, the Lansing "A" zone should be tested from 4200' - 4208' based on log calculations and gas shows recovered in DST #1.

ROCK TYPES

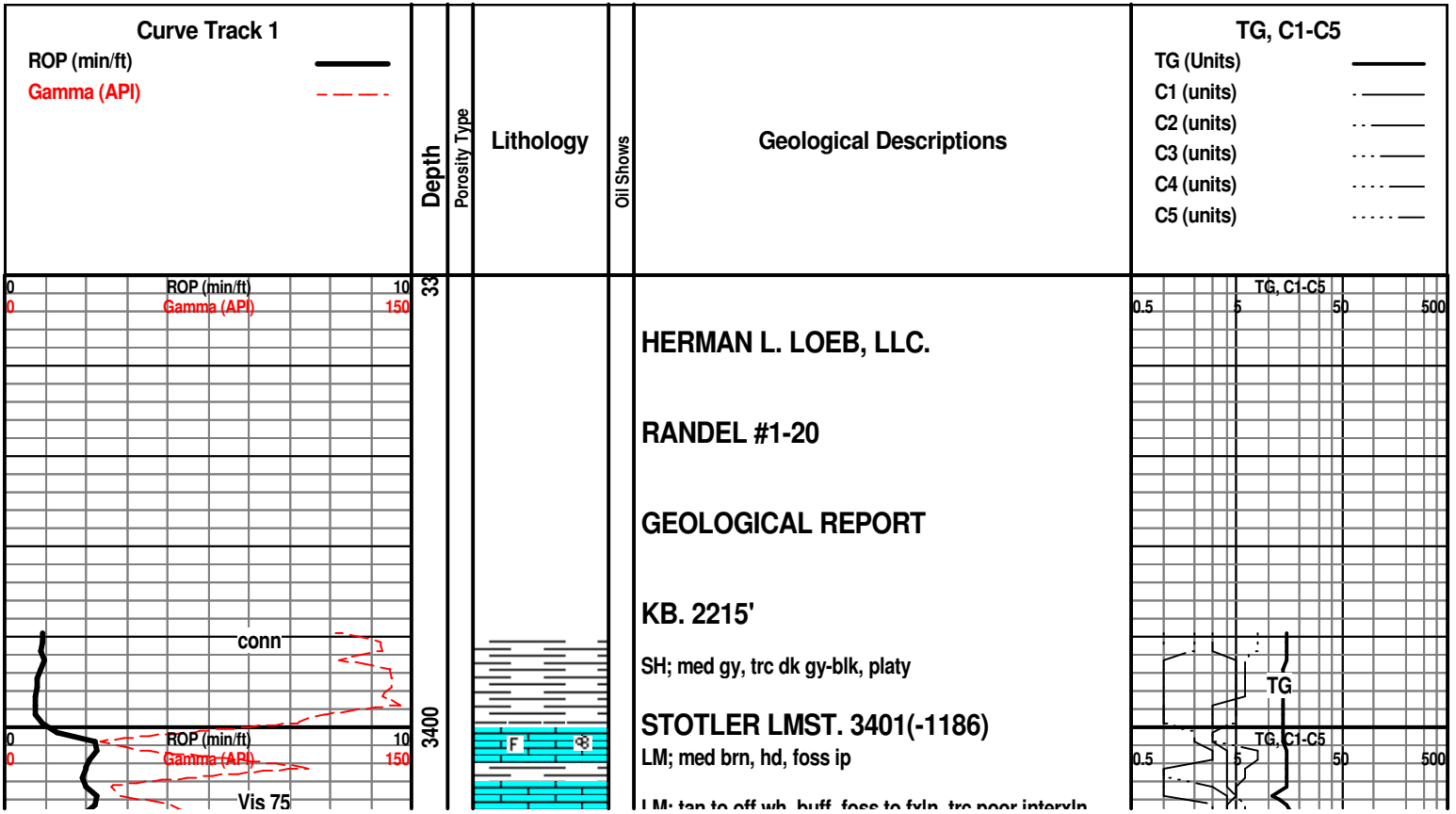
Anhy	Clyst	Gyp	Mrlst	Shgy
Bent	Coal	Igne	Salt	Sltst
Brec	Congl	Lmst	Shale	Ss
Cht	Dol	Meta	Shcol	Till

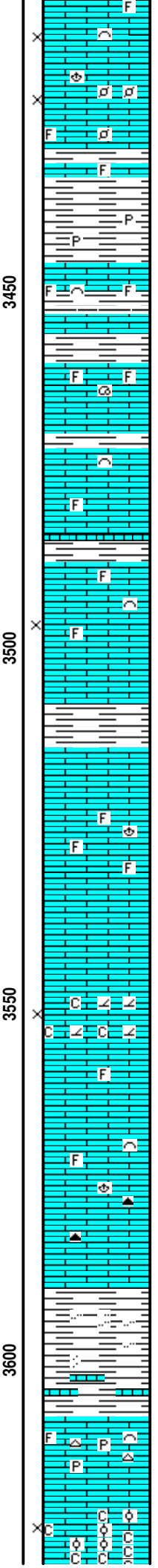
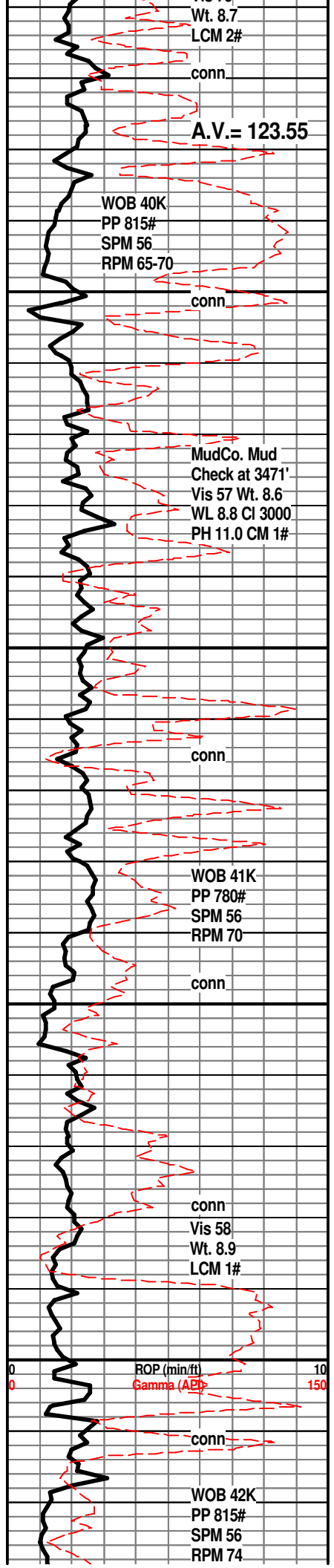
ACCESSORIES

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

OTHER SYMBOLS

POROSITY	Vuggy	ROUNDING	Spotted	EVENT
Earthy	SORTING	Rounded	Ques	Rft
Fenest	Well	Subrnd	Dead	Sidewall
Fracture	Moderate	Subang	INTERVAL	
Inter	Poor	Angular	Core	
Moldic		OIL SHOW	Dst	
Organic		Even		
Pinpoint				





LM; tan to off wh, buff, foss to fxln, trc poor interxn por, scat lt yel min fluor, no stn, no gas kick, ns.

LM; off wh, tan, foss w/scat finely pelletal lm, interbdd wh chalky mtx, lt to med yel fluor, no stn, ns.

SH; lt gy, gy grn, firm, occ pyr

LM; med gy brn, med brn, highly foss, tite

LM; tan to off wh, lt brn, foss ip, interbdd hd micrite, scat lt yel min fluor, ns.

LM; tan to buff, lt brn, foss ip, fxln to micritic, much dense blocky tite lmst, no vis por, ns.

SH; med gy, grn, platy

LM; tan to off wh, buff, fxln, scat foss mat, most well cem, trc poor interpart por, dull to lt yel min fluor, no stn or odor, ns.

SH; med to dk gy, platy, calc.

LM; med brn, gy brn, most dense, micritic, scat well cem foss, interbdd tan to buff fxln lmst, no vis por, dull yel to no fluor, ns.

LM; off wh, wh, buff, fxln w/scat sucrosic text, partly dolomitic, fair interxn por, chalky ip, lt yel fluor, no stn or odor, no vis gas bubbles

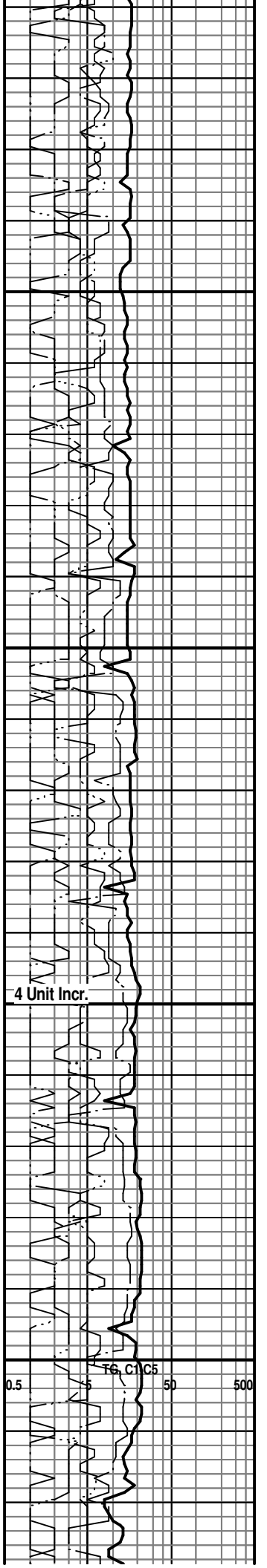
LM; off wh, tan, buff, fxln w/scat chalky mtx, most dense, dull yel fluor, ns.

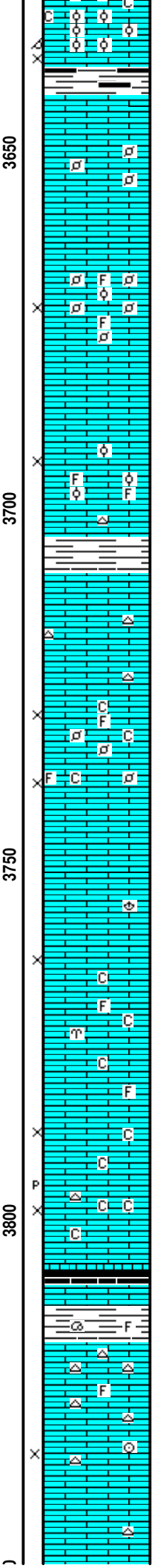
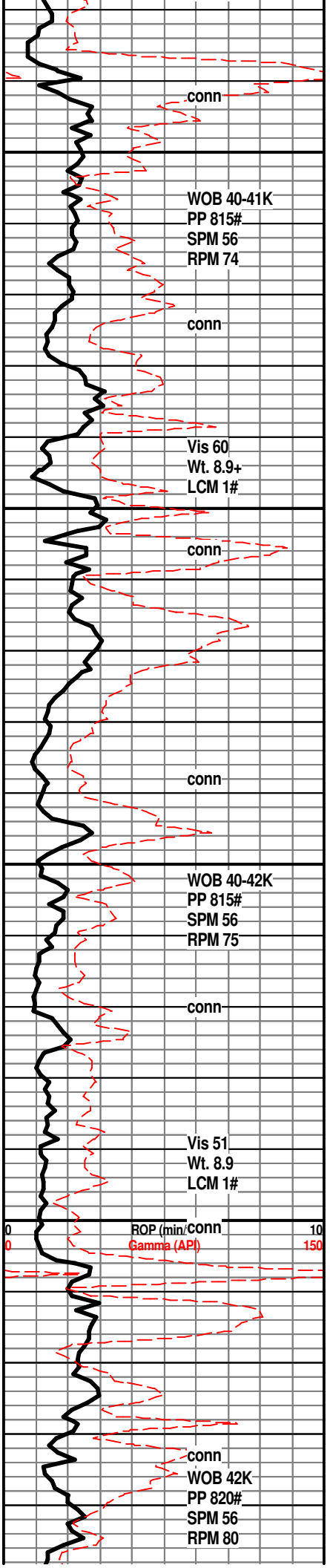
LM; med to dk brn, foss ip, scat dk brn cht, most dense

SH; med gy, gy grn, silty to occ sandy, platy

HOWARD 3608(-1393)
LM; tan to lt brn, fxln w/occ gy cht, well cem, trc pyr hd lmst, no vis por, ns.

LM; tan to off wh, wh, foss w/scat ooids and pellets, very chalky mtx, fair interpart por, scat lt yel fluor, no stn or odor, no gas kick, ns.





LM; tan to buff, foss - oolitic to pelletal, fair interpart w/trc oomoldic por, lt yel fluor, much soft chalky mtx, no stn or odor

SH; med to dk gy, trc blk, platy

LM; tan to lt brn, foss ip - well cem, scat small pellets, no vis por, no fluor, ns.

LM; tan to buff, lt brn, foss w/scat ooids and pellets, some foss hash, fair interpart por, dull yel min fluor, ns.

LM; off wh, tan, foss to med xln, fair interxln/interpart por, lt yel fluor, no stn, ns.

LM; lt to med gy, gy brn, dense, blocky, dense, scat off wh cht

LM; tan to buff, lt brn, foss w/occ pellets and foss hash, fair interpart por, minor soft chalky mtx, no stn or odor, ns.

LM; tan to cream, buff, f to med xln, scat foss, fair to occ gd interxln por, soft chalky mtx ip, lt to dull yel min fluor, no stn, ns.

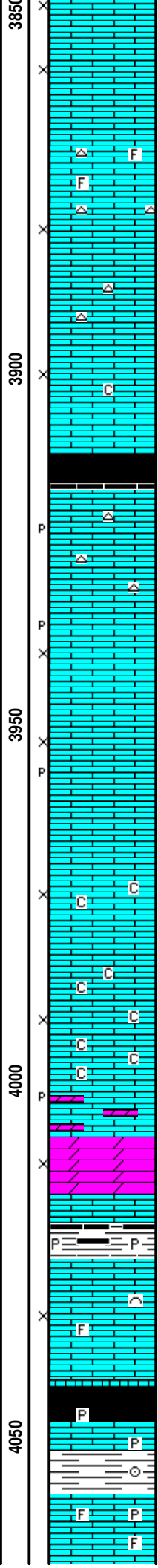
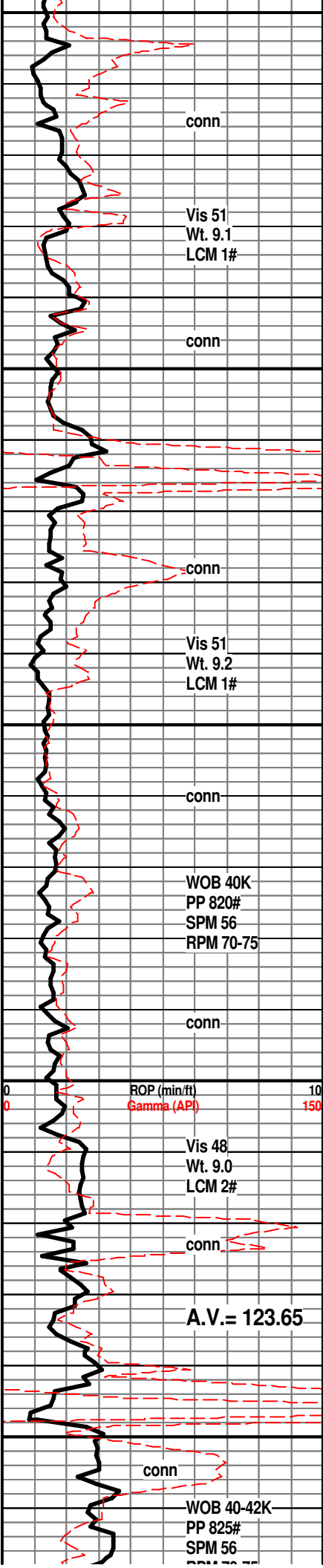
LM; tan to lt brn, buff, foss w/interbdd f to med xln lmst, fair to gd interpart w/scat p-p por, lt yel min fluor, no stn, ns.

SH; dk gy, trc blk, platy

LM; lt to med brn, blocky, scat gy cht, tite

LM; tan to lt brn, buff, f to med xln, scat fair interxln por, no fluor, scat gy foss cht, no stn, no gas kick, ns.





LM; tan to lt brn, buff, f to med xln, scat sucrosic text, fair interxln por, dull yel min fluor, no stn or odor, no sample show

LM; tan to cream, off wh, f to med xln, fair interxln por, scat off wh to gy cht, no fluor, ns.

QUEEN HILL SHALE 3912(-1697)
SH; dk gy, blk, platy

LM; tan to buff, off wh, f to med xln, occ gran text, fair to gd interxln w/scat p-p por, rare gy to off wh cht, scat dull to lt yel fluor, no vis stn, no odor, no sample shows

LM; tan to buff, off wh, f to med xln, fair to occ gd interxln w/scat p-p por, dull yel to no fluor, no vis stn, ns.

LM; off wh, buff, tan, f to med xln, fair interxln por, lt yel min fluor, minor chalky mtx, no stn, no gas kick, ns.

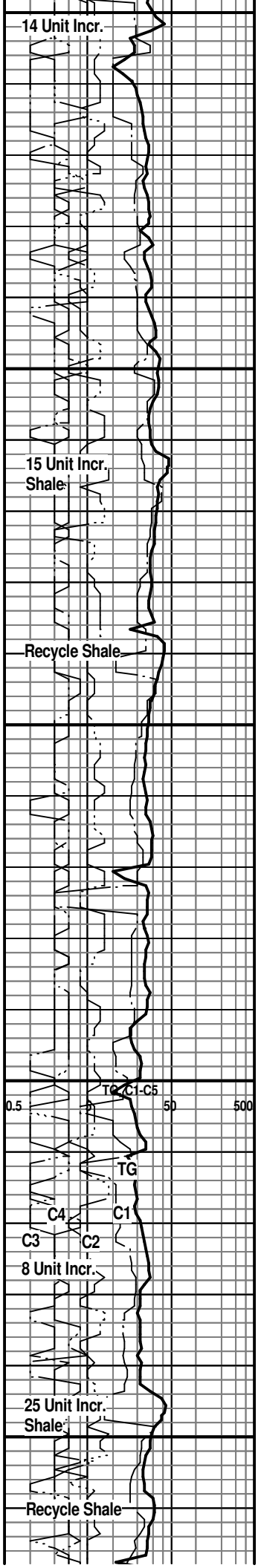
DOL; lt brn, buff, sucrosic, fair interxln por, opaque spar calc xtals, lt yel min fluor, no stn or odor, ns.

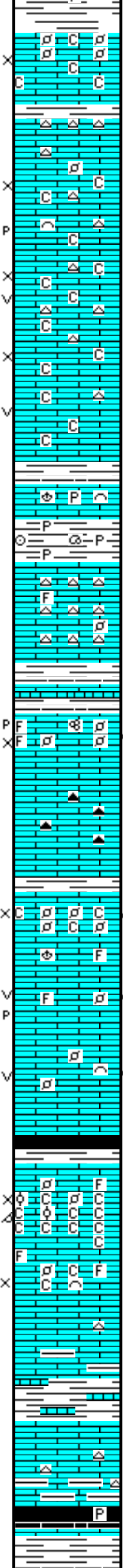
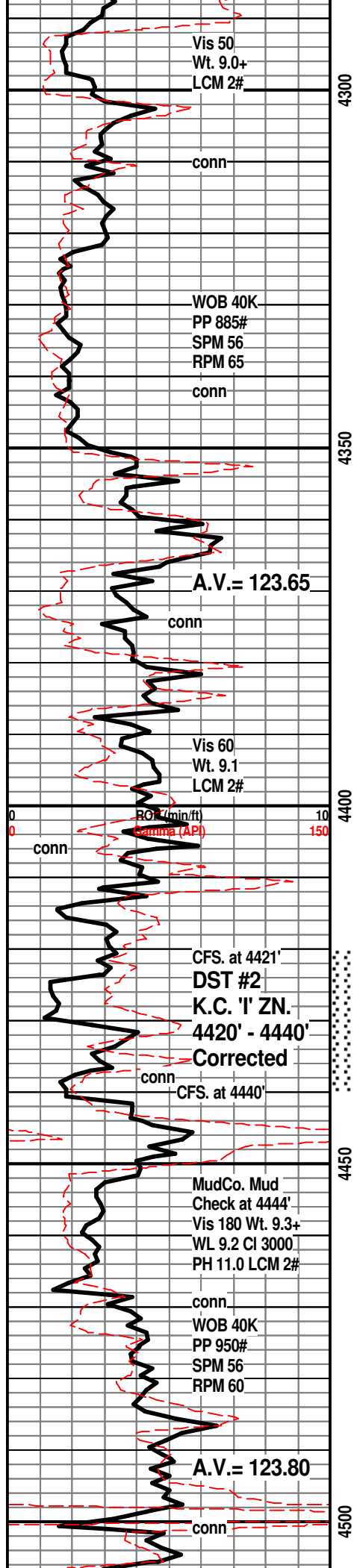
SH; med/dk gy, some blk, platy, occ pyr

LM; off wh, tan, lt gy, ftxln w/scat spar calc xtals, fair interxln por, minor foss mat, dull yel fluor, no stn or odor, ns.

HEEBNER SHALE 4043(-1828)
LM; blk, carb, gassy ip, trc pyr
LM; med brn, dense, blocky, pyr ip.

TORONTO 4058(-1843)
LM; lt gy to off wh, occ foss, much dense micrite, pyr ip, no vis por, ns.





SH; med gy, maroon, some varic.

LM; tan to buff, cream, foss w/scat small pellets, partly soft w/chalky mtx, poor to fair interpart por, dull yel fluor, no stn, no gas kick, ns.

LM; tan to cream, buff, f to med xln, trc sucrosic text, fairly soft w/some chalky mtx, poor vis interxln w/occ p-p por, occ med to cse spar calc xtals, dull blue/yel min fluor, no stn or odor, ns.

LM; tan to cream, off wh, med xln w/scat wh to lt gy cht, interbdd soft chalky mtx, poor to fair interxln w/occ small vug por, dull blue/yel fluor, no stn, no gas kick, ns.

LM; tan to cream, lt gy, med xln w/abnt spar calc xtals, med yel min fluor, scat chalky mtx, occ vug por, no stn, ns.

LM; med brn, dense, foss ip, occ pyr

SH; med gy, grn, platy, scat pyr, foss

LANSING/K.C. 'H' 4366(-2151)

LM; tan to cream, off wh, fxln w/abnt opaque and transl. cht, rare foss mat, lt yel min fluor, no stn, ns.

SH; med gy, gy grn, platy

LM; tan to cream, foss w/scat foss mat and small pellets, poor interpart w/trc p-p por, trc spotted lt brn stn, spotty brite yel fluor, most tite w/ns.

LM; tan to lt brn, hd, scat smoky/dk brn cht, tite

K.C. 'I' ZONE 4412(-2197)

LM; off wh, buff, foss - finely pelletal ip, fair interpart por, minor chalky mtx, 2-3 pcs. w/trc. lt brn spotted stn, no odor, lt yel fluor, very little to no show

LM; tan to off wh, lt gy, med xln w/scat gd p-p and vug por, med to occ brite yel fluor, SFO, sev. gas bubbles, strong odor, spotted v. light brn oil stn, fair to gd cut

LM; lt brn, tan, off wh, foss, med xln w/scat gd vug por, strong odor, gas bubbles, SFO, spotted lt brn stn, med to brite yel fluor

DST #2: K.C. 'I' ZONE 4420' - 4440'

K.C. 'J' ZONE 4450(-2235)

LM; lt brn, foss - partly oolitic, poor interpart w/trc poor oomoldic por, faint to fair odor, very chalky w/much pure soft chalk, scat med yel fluor, no vis oil stn, no vis gas bubbles

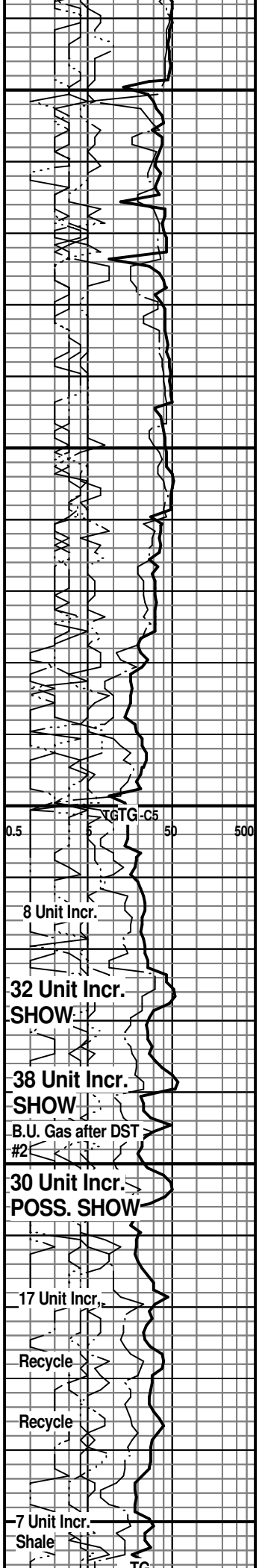
LM; tan to cream, buff, foss ip w/scat hash, most fxln w/poor to fair interxln por, no fluor, no stn, minor chalky mtx, ns.

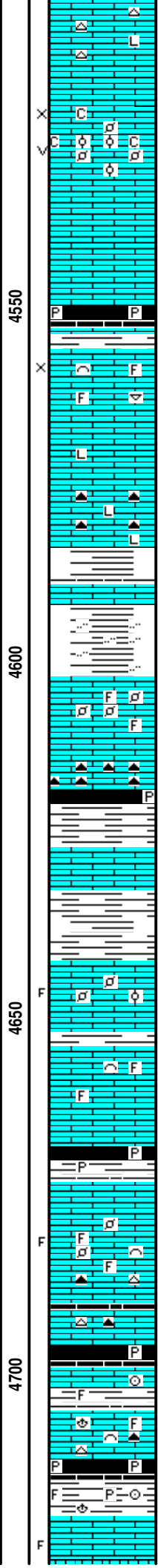
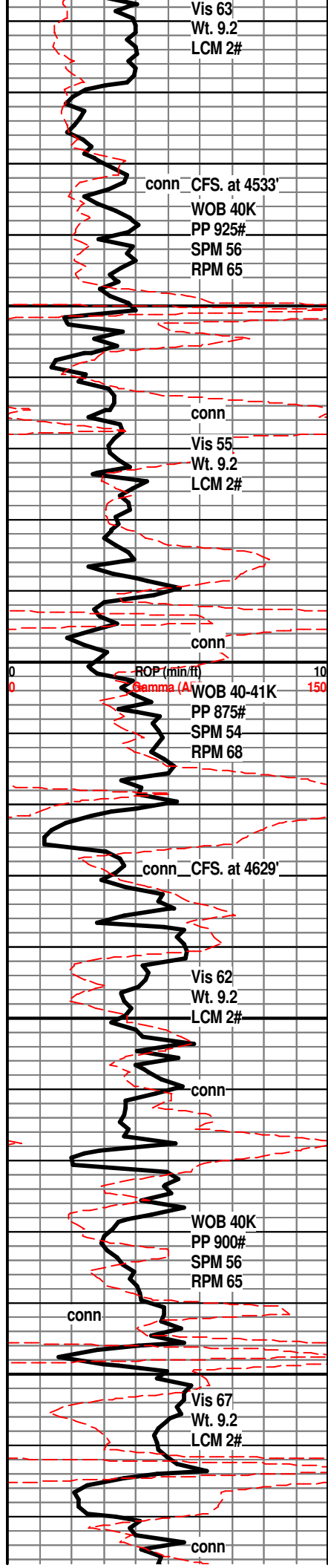
LM; lt to med brn, hd, occ gritty text, scat gy to tan cht, argil ip, tite

STARK SHALE 4498(-2283)

SH; blk, carb ip, trc pyr

SWOPE 4507(-2292)





LM; lt gy brn, lt brn, most dense, some litho, hd, scat tan to gy cht, no vis por, no fluor, ns.

LM; tan to buff, foss ip w/scat small pellets and occ hash, trc oolitic lmst, fair interpart w/rare vug por, minor chalky mtx, lt yel min fluor, no vis stn, no odor, no sample shows

LM; tan to lt brn, buff, fxln to micritic, blocky, scat tan to gy cht, tite

SH; blk, carb ip, occ pyr

HERTHA 4556(-2341)
LM; off wh, buff, tan, foss w/scat med xln lmst, trc poor interxln por, lt/med yel min fluor, no stn or odor, no gas kick

LM; tan to buff, off wh, fxln bcm med to dk brn, hd, no vis por, med yel min fluor, ns.

LM; med to dk brn, hd, litho, interbdd blk to smoky cht, tite

BASE KANSAS CITY 4584(-2369)
LM; dk brn, blocky, dense

SH; varic, gy, grn, maroon, platy, occ silty

PLEASANTON 4601(-2386)
LM; off wh, tan, foss w/scat pellets and occ hash, most well cem, lt yel min fluor, no stn or odor, ns.

LM; dk brn, hd, blocky, scat blk cht, tite

SH; blk, some varic, pyr, trc gas

MARMATON 4626(-2411)
LM; lt brn, rare pale grn tint, dense, blocky, no vis por, ns.

SH; med gy, grn, some varic, firm, smooth

LM; off wh, wh, buff, foss ip, fxln w/scat soft chalky mtx, few pcs w/blk tar/gils, trc fracs, no live shows, lt yel fluor, no odor, no cut

LM; wh, off wh, fxln w/occ foss, rare dk brn/blk dead/residual oil stn, no live show, poor interxln por, lt yel fluor, no gas kick

SH; dk gy - blk, platy, occ pyr

PAWNEE 4673(-2458)
LM; tan to lt brn, foss w/scat small pellets and hash, most well cem, scat fracs w/dk brn/blk edge stn, no odor, occ lt yel fluor, no live shows

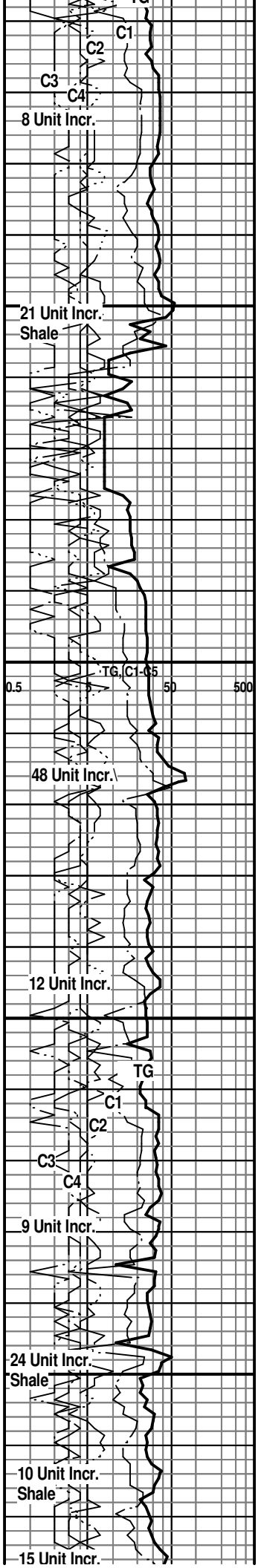
LM; med brn, most dense, occ cherty, tite

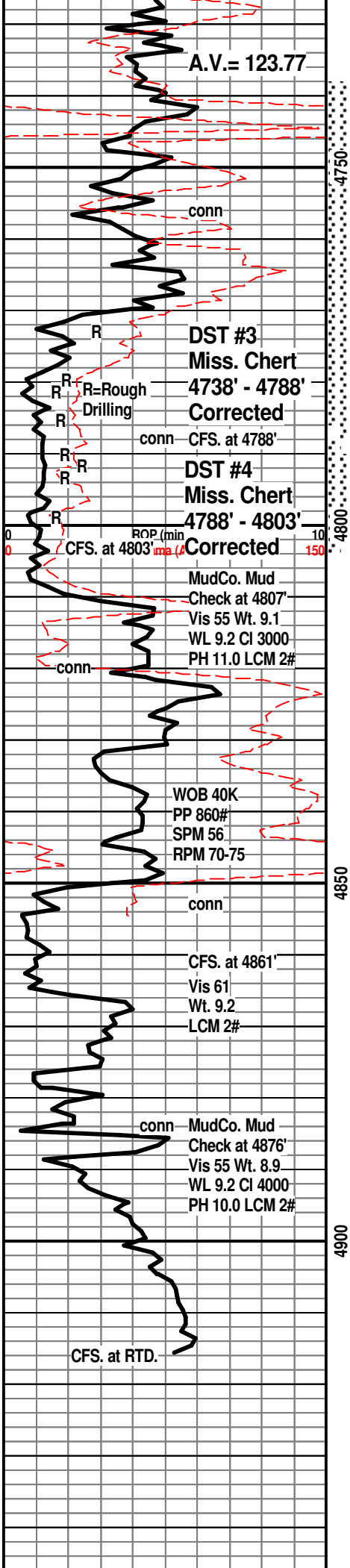
SH; blk, carb ip, pyr, trc gas

LM; med brn, foss ip, well cem. scat tan to amber cht, lt yel min fluor, no stn or odor, ns.

CHEROKEE SHALE 4712(-2497)
SH; blk, dk gy, gy grn, foss ip, occ pyr

LM; lt brn, fxln w/scat spar calc xtals, vis fracs w/trc gas bubbles, dull to lt yel fluor, no odor





LM; tan to buff, off wh, f to occ med xln, occ spar calc xtals, trc frags, rare blk tar/gils on few pcs, poss. faint odor, dull yel fluor, looks tite

LM; lt brn, fxltn, few pcs. w/spotted to even med brn stn, faint odor, fair p-p and small vug por, brite yel fluor, streaming cut, some bleeding oil

SS; lt gy, grn, vf to f gr qtz, some qtzitic, some fri clusters w/vis gas bubbles, tite to fair intergran por, lt yel fluor, no vis oil stn

SH; varic, sandy ip w/scat cse rnd qtz gr

MISSISSIPPI UNCONF. 4770(-2555)
CHT; wh tripolite w/gd p-p & occ vug por, spotted live med brn stn, SSFO, much varic. fresh cht - org, amber, off wh, frags w/live edge stn, some blk tar, faint odor, med w/occ brite yel fluor, few gas bubbles

CHT; varic, wh, fresh and trip, much live oil stn in vug por and frac edges, fair odor

DST #3: Miss. Chert 4738' - 4788'
CHT; most wh/off wh, fresh w/weathered parts, some trip, med/brite yel fluor, fair odor, spotted live med brn stn, occ blk tar, less vug por - more frags w/edge stn, Trc FO, gas bubbles

DST #4: Miss. Chert 4788' - 4803'
CHT; wh, fresh, blk tar/gils, scat vug por, frags

LM; med red brn, weath/oxidized, blocky, scat red hd cht, no vis por

KINDERHOOK SHALE 4821(-2606)
SH; med grn, gy grn, maroon, occ sandy

SS; lt grn, vf to f gr, argil ip, clusters, looks tite, no fluor, ns.

SH; med gy grn, platy, sev. grn f gr ss strngs

KINDERHOOK SAND 4850(-2635)
SS; clr, lt gy, pale grn tint, f gr qtz, clusters, gd intergran por, subrnd/subang gr, occ glau/chlorite incl, no fluor, no stn or odor, questionable gas bubbles

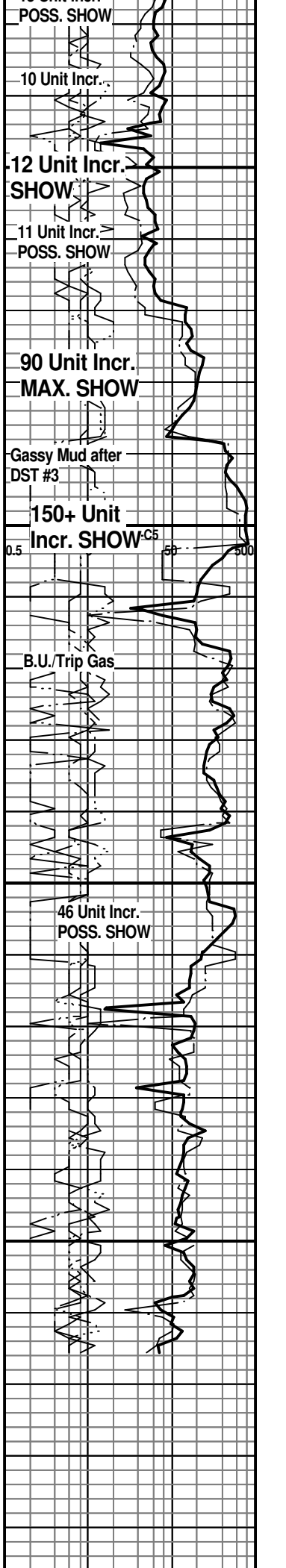
SS; wh, off wh, siliceous, dense, wh sandy cht, tite

SS; wh, pale grn, f gr qtz, fri w/fair to gd intergran por, abnt glau/chlorite, no fluor, no stn or odor, no sample shows

SS; off wh pale grn, tan, f gr qtz, interbdd hd qtzitic cherty sand and sandy cht, poor/fair intergran por, glau ip, no stn/odor, no fluor, ns.

SH; med brn, sandy to gritty, occ pyr

LM; med brn, sandy to gritty, dense, partly dolomitic, no vis por, ns.



RTD. 4919' at 9:30 AM. 11/5/13

LTD. 4917'

4950

Halliburton DIL, NEU/DEN w/PE,
Microlog, Sonic

**NOTE: This log was shifted upward by
3' to 4' for correlation purposes with the
Halliburton LOGS.**

00



BASIC
ENERGY SERVICES

6076
711 Sampson
6438

PAGE 1 of 1	CUST NO 1007589	INVOICE DATE 10/30/2013
INVOICE NUMBER 1718 - 91324547		

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

J LEASE NAME RANDEL 1-20
 O LOCATION Sampson 2-19
 B COUNTY Kiowa
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 B JOB CONTACT

9093A (SURFACE)

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
4065652	20920		Net 30 days	11/29/2013

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 10/27/2013 to 10/27/2013				
0040656525				
171809093A Cement-New Well Casing/Pi 10/27/2013				
Cement 8-5/8 Surface				
A-Con Blend Common	175.00	EA	13.50	2,362.33
Common Cement	175.00	EA	12.00	2,099.86
Celloflake	88.00	EA	2.77	244.18
Calcium Chloride	825.00	EA	0.79	649.64
"Top Rubber Cmt Plug, 8 5/8"	1.00	EA	168.74	168.74
"8 5/8" Guide Shoe (Red)"	1.00	EA	412.47	412.47
Flapper Type Insr Float Valve 8 5/8" (BI	1.00	EA	209.99	209.99
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	3.19	111.56
Heavy Equipment Mileage	70.00	MI	5.25	367.48
"Proppant & Bulk Del. Chgs., per ton mil	578.00	EA	1.20	693.55
Depth Charge; 501'-1000'	1.00	EA	899.94	899.94
Blending & Mixing Service Charge	350.00	BAG	1.05	367.48
Plug Container Util. Chg.	1.00	EA	187.49	187.49
"Service Supervisor, first 8 hrs on loc."	1.00	EA	131.24	131.24

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	8,905.95
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	382.95
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	9,288.90
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



BASIC
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET
1718 09093 A

DATE _____ TICKET NO. _____

DATE OF JOB: 10-27-13		DISTRICT: PRATT		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 WEB				LEASE: SIMPSON RANER 5-39				WELL NO.:	
ADDRESS:				COUNTY: KIOWA		STATE: KS			
CITY:				STATE:		SERVICE CREW: SULLIVAN, GRAVES, KURNIAN			
AUTHORIZED BY:				JOB TYPE: CNW 8 3/8 Surface					
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	TIME
20920-33708	45	m3					10-26-13	AM	10:30
19831-19862	45	m3					10-27-13	PM	8:00
37900								PM	6:15
								AM	7:00
								AM	7:45
						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: _____
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 101	A-CO2 cmt	SK	175		3,150 00
CP 100c	Common cmt	SK	175		2,800 00
CC 102	Cell Fake	lb	88		325 00
CC 109	Calcium Chloride	lb	825		866 25
CE 105	TDP Rubber Plug 8 5/8	SA	1		225 00
CE 203	Slider Shoe	SA	1		550 00
CE 1453	Insert Float	SA	1		280 00
E 100	Pickup m3	m3	35		148 75
E 101	HP Plug Cement	m	70		490 00
P 113	Bulk Delivery	TM	578		924 00
CE 201	Depth charge 0.500'	SA	1		1,200 00
CE 240	Blending - mixing	SK	350		490 00
CE 504	Plug Container Rented	SA	1		250 00
S 003	Steward Supervisor	SA	1		175 00

SUB TOTAL 10,905.95

CHEMICAL / ACID DATA:			

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

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

FIELD SERVICE ORDER NO. _____



BASIC
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET

1718 09093 A

DATE _____ TICKET NO. _____

DATE OF JOB: 10-21-10		DISTRICT: 10-11		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: H. Martin Leub				LEASE: RANDOL		WELL NO. F20				
ADDRESS:				COUNTY: K...		STATE: KS				
CITY:				SERVICE CREW: ...						
AUTHORIZED BY:				JOB TYPE: NEW B7K 50 yds						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
2194	4					10-21				
						ARRIVED AT JOB				
						START OPERATION				
						FINISH OPERATION				
						RELEASED				
						MILES FROM STATION TO WELL				

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

ITEM PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
101	Ac. Cond. cont.	SK	175		3,150.00
102	Continuum cont.	SK	175		2,800.00
102	coll. bit	16	06		325.00
103	2" diam. Chloride	16	525		8,400.00
105	Top. rods - Plus E7x	SH	1		225.00
203	rod. spec. 1	SA	1		550.00
1423	Top. & spec. 1	SH	1		280.00
107	rod. spec.	"	3		148.75
107	rod. spec.	"	2		490.00
113	coll. bit	16	572		9,240.00
201	rod. spec. U - spec.	SH	1		1,200.00
240	rod. spec.	SK	35		490.00
504	Plus condenser H. & V	"	1		250.00
504	rod. spec.	SA	1		175.00

SUB-TOTAL 100 75

CHEMICAL / ACID DATA:			

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

SERVICE REPRESENTATIVE: <i>[Signature]</i>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <i>[Signature]</i>
FIELD SERVICE ORDER NO. _____	(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

BASIC

energy services, L.P.

TREATMENT REPORT

Customer HERMAN Web	Lease No.	Date 10-27-13
Lease SAMPSON Ranch	Well # 219 1-20	
Field Order # 4093	Station PRATT	County Kiowa
Type Job CNW 8 5/8 Surface	Formation	Legal Description 219-27-18

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME	
Casing Size 8 5/8	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth 608	Depth	From	To	Pre Pad	Max		5 Min.
Volume 36	Volume	From	To	Pad	Min		10 Min.
Max Press 350	Max Press	From	To	Frac	Avg		15 Min.
Well Connection H.C.	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth 505	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	Station Manager Dave Scott	Treater Robert Sullivan
-------------------------	--------------------------------------	-----------------------------------

Service Units	32900	33208	20920	19831	19862				
Driver Names	Sullivan	GRAVES	Kuenn						

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1:00					on bc safety meeting
					Run 1st 545 8 5/8 24 cgs.
6:00					CASING ON BOTTOM
6:10					HOOK Rig circ csg.
6:15	150		3	3.5	1st SPACER
			27	4.5	mix 175 sk A-CO ₂ cement 39cc 1/4 CF
			37		mix Tail 175 sk cement w/2% cc 1/4 CF
					cmt mixed shut down
					Release Plug
				4	1st Disp
7:00	700		36		plug down
					cmt ID cellin
					503 Complete
					Thank you



BASIC
ENERGY SERVICES

6076
TII Sumps W/D
L438

PAGE 1 of 1	CUST NO 1007589	INVOICE DATE 10/30/2013
INVOICE NUMBER 1718 - 91324549		

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

J LEASE NAME
O LOCATION
B COUNTY
S STATE
I JOB DESCRIPTION
T JOB CONTACT
E

~~RANDEL 120~~
~~Sampson 2-19~~

#9094A (SURFACE TOP OFF)

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40656628	19843		Net - 30 days	11/29/2013

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 10/27/2013 to 10/27/2013</i>				
0040656628				
171809094A Cement-New Well Casing/Pi 10/27/2013				
Cement Top Off Surface				
Common Cement	100.00	EA	12.00	1,199.77
Calcium Chloride	160.00	EA	0.79	125.98
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	3.19	111.54
Heavy Equipment Mileage	70.00	MI	5.25	367.43
"Proppant & Bulk Del. Chgs., per ton mil	165.00	EA	1.20	197.96
Depth Charge; 0-500'	1.00	EA	749.86	749.86
Blending & Mixing Service Charge	100.00	BAG	1.05	104.98
Plug Container Util. Chg.	1.00	EA	187.46	187.46
"Service Supervisor, first 8 hrs on loc.	1.00	EA	131.23	131.23

PAID
44889
NOV 07 2013
SCANNED

PLEASE REMIT TO: BASIC ENERGY SERVICES, LP PO BOX 841903 DALLAS, TX 75284-1903	SEND OTHER CORRESPONDENCE TO: BASIC ENERGY SERVICES, LP 801 CHERRY ST, STE 2100 FORT WORTH, TX 76102	SUB TOTAL TAX INVOICE TOTAL	3,176.21 94.79 3,271.00
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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 0000 A

DATE _____ TICKET NO. _____

DATE OF JOB <u>10-27-13</u> DISTRICT <u>Pratt KC</u>		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 <u>Herman Lueb</u>		LEASE <u>RANDER</u> <u>1-29</u> WELL NO. <u>279</u>						
ADDRESS		COUNTY <u>Nowata</u> STATE <u>KS</u>						
CITY STATE		SERVICE CREW <u>Williams, Edna, Jr., Phys.</u>						
AUTHORIZED BY		JOB TYPE: <u>CW TOP OFF SUPPLIES</u>						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	ADD TIME
<u>1982-19343</u>	<u>1 hr</u>						<u>10-27-13</u>	<u>11:00</u>
						ARRIVED AT JOB		<u>1:00</u>
<u>37900</u>	<u>1 hr</u>					START OPERATION		<u>1:30</u>
						FINISH OPERATION		<u>2:50</u>
<u>19903</u>	<u>1</u>					RELEASED		<u>3:30</u>
<u>73728</u>						MILES FROM STATION TO WELL		<u>35</u>

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

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 105	Compass	SK	100		1,600.00
CC 107	Calcium Chloride	lb	160		160.00
E 100	Galvanic	mi	35		149.75
E 101	Hydr. Foot	sq	70		490.00
E 113	Bulk Delivery	gal	165		263.25
CE 200	Depth Charge	sq	1		1,000.00
E 240	Blending - mixing	sk	100		100.00
ES 54					250.00
5003	Sumo Separator	gal	1		179.00

CHEMICAL / ACID DATA:			

SUB TOTAL		<u>16</u>	<u>3,176.21</u>
SERVICE & EQUIPMENT	%TAX ON \$		
MATERIALS	%TAX ON \$		
TOTAL			

SERVICE REPRESENTATIVE Robert [Signature]

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

FIELD SERVICE ORDER NO. _____

Customer <i>HERMAN LOEB</i>	Lease No.	Date <i>10-27-13</i>
Lease <i>SIMPSON RANDOL</i>	Well # <i>1-20</i>	
Field Order # <i>9094</i>	Station <i>PRATT KC</i>	Casing
Type Job <i>CNW TOP OFF SURFACE</i>	Formation	Legal Description <i>210-27-18</i>
	Depth	County <i>KIOWA</i>
		State <i>KS</i>

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

Customer Representative	Station Manager <i>DAVE SCOTT</i>	Treater <i>Robert J. ...</i>
Service Units <i>37900 19889 19843 19903 73768</i>		
Driver Names <i>Sullivan, Edando, Phyc</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>1:00</i>					<i>as loc soft, matz</i>
					<i>TOP OFF SURFACE</i>
<i>1:30</i>					<i>RUN 45' ONE INCH</i>
				<i>1.5</i>	<i>BT MIXING CNT 100 ST 3 1/2 CC</i>
			<i>24</i>		<i>SHOT KNOWN CNT COLLAR</i>
					<i>WAIT WATCH CNT</i>
<i>2:50</i>					<i>JOB COMPLETE</i>
					<i>THANK YOU</i>



76
797 Randel
L438

PAGE 1 of 1	CUST NO 100589	INVOICE DATE 11/07/2013
INVOICE NUMBER 1718 - 91330936		

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 1-20
 O
 B LOCATION
 COUNTY Kiowa
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T
 E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40659893	78983		Net - 30 days	12/07/2013

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 11/06/2013 to 11/06/2013				
0040659893				
171809066A Cement-New Well Casing/Pi 11/06/2013				
Cement 5 1/2" Longstring				
50/50 POZ	250.00	EA	8.25	2,062.39
Celloflake	63.00	EA	2.77	174.82
Gypsum	1,050.00	EA	0.56	590.59
FLA-322	105.00	EA	5.62	590.59
Gilsonite	1,500.00	EA	0.50	753.71
KCL, Potassium Chloride	566.00	EA	1.12	636.72
Claymax KCL Substitute	6.00	EA	26.25	157.49
Mud Flush	1,000.00	EA	0.64	644.97
"Latch Down Plug & Baffle, 5 1/2" (Blue)	1.00	EA	299.98	299.98
"Auto Fill Float Shoe 5 1/2" (Blue)"	1.00	EA	269.99	269.99
"Turbolizer, 5 1/2" (Blue)"	12.00	EA	82.50	989.95
"5 1/2" Basket (Blue)"	2.00	EA	217.49	434.98
"Cement Scratchers Cable Type, 5 1/2" "	10.00	EA	56.25	562.47
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	3.19	111.56
Heavy Equipment Mileage	70.00	MI	5.25	367.48
"Proppant & Bulk Del. Chgs., per ton mil	368.00	EA	1.20	441.58
Depth Charge; 4001'-5000'	1.00	EA	1,889.90	1,889.90
Blending & Mixing Service Charge	250.00	BAG	1.05	262.49
Plug Container Util. Chg.	1.00	EA	187.49	187.49
"Service Supervisor, first 8 hrs on loc.	1.00	EA	131.24	131.24

PAID
45062
NOV 14 2013
SCANNED

PLEASE REMIT TO: BASIC ENERGY SERVICES, LP PO BOX 841903 DALLAS, TX 75284-1903	SEND OTHER CORRESPONDENCE TO: BASIC ENERGY SERVICES, LP 801 CHERRY ST, STE 2100 FORT WORTH, TX 76102	SUB TOTAL TAX INVOICE TOTAL	11,560.39 401.21 11,961.60
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10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

FIELD SERVICE TICKET
1718 0000 A

DATE _____ TICKET NO. _____

DATE OF JOB: 11-6-13	DISTRICT: Pratt	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 Loe3 LLC	LEASE: Randal	1-20 WELL NO.							
ADDRESS:	COUNTY: Kiowa	STATE: KS							
CITY:	STATE:	SERVICE CREW: James Tim Joe							
AUTHORIZED BY:	JOB TYPE: CW Long String								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM/PM	TIME
19903-73188	45 min						11-5-13	AM	10:00
23443	45 min					ARRIVED AT JOB	11-6-13	AM	4:00
						START OPERATION		AM	11:00
						FINISH OPERATION		AM	11:45
						RELEASED		AM	12:45
						MILES FROM STATION TO WELL			

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: *[Signature]*
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 104	50/50 POZ	SK	200		3,200 00
CP 104	50/50 POZ	SK	50		550 00
CL 102	celloflake	lb	63		233 10
CL 113	Gypsum	lb	1050		787 50
CL 139	FLG-322 Low Fluid Loss	lb	105		787 50
CL 201	GILSONITE	lb	1500		1,005 00
C 700	SCI Potassium Chloride	lb	536		849 00
CF 607	Latch Down Plug	eg	1		400 00
CF 1351	AUTO FILL FLOAT shoe	eg	1		360 00
CF 1551	Turbo	eg	12		1,320 00
CF 1701	57" Basket	eg	2		580 00
CF 2501	Cement Scrappers	eg	10		750 00
C 704	Clay max	gal	6		210 00
CL 151	mud flush	gal	1000		860 00
45062					
NOV 16 2013					
SCANNER					

CHEMICAL / ACID DATA:			

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

SUB TOTAL

TOTAL

SERVICE REPRESENTATIVE *[Signature]*

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: *[Signature]*

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.

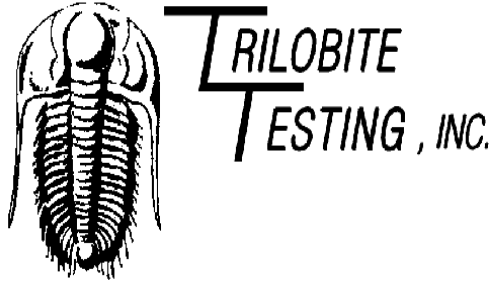
Customer Herman L LOEB	Lease No.	Date 11-6-13
Lease RanDel	Well # 1-20	
Field Order # 9066	Station Pratt	Casing 5 1/2
		Depth 4909
Type Job CN W LongString	Formation	County KS10W9
		State KS
		Legal Description 20-27-18

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size 5 1/2	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth 4909	Depth	From	To	Pre Pad	Max		5 Min.
Volume	Volume	From	To	Pad	Min		10 Min.
Max Press 1500	Max Press	From	To	Frac	Avg		15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth 4589	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	Station Manager Kevin	Treater Joe
-------------------------	------------------------------	--------------------

Service Units	78982	78983	19903	73768	2383	25443				
Driver Names	James		Tim			Joe				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
0400					on Loc / safety meeting
					Run III JTS of 5 1/2 csg 15.5#
					cement scratchers on 3-4 JTS
					Turbo. on 1-2-3-4-6-9-12-15-18-21-24 and 27
					Basket on Pin of JTs 5-15
0630					Start Running csg/circ for 30 min 1/2 way
1000					csg on Bottom / circ with Rig
					Hook up to Pump to start Job
1100	15		5	5	H2O spacer
			24	5	mud flush
			5	5	H2O spacer
	200		48	65	Mix 200SK of 50/50 Poz @ 14#
1120			+	+	shut Down / clear Pump and Lines
			+	+	Release Plug
	250		+	65	Start H2O Disp. with 2% ISCL
	350		92	65	Lift PSI
	500		106	5	Slow Down
1145	1500		116	+	Plug Down
					kill + mtl
					Job Complete
					Thank you Joe



DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb, LLC**

PO Box 838
Lawrenceville Il.62439

ATTN: Jon Christensen

Randel #1-20

20-27s-18w Kiowa,KS

Start Date: 2013.10.31 @ 23:21:59

End Date: 2013.11.01 @ 07:25:59

Job Ticket #: 52369 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.06 @ 15:15:42



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52369

DST#: 1

ATTN: Jon Christensen

Test Start: 2013.10.31 @ 23:21:59

GENERAL INFORMATION:

Formation: **Lans. A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:39:59

Time Test Ended: 07:25:59

Test Type: Conventional Bottom Hole (Initial)

Tester: Gary Pevoteaux

Unit No: 56

Interval: 4206.00 ft (KB) To 4225.00 ft (KB) (TVD)

Reference Elevations: 2215.00 ft (KB)

Total Depth: 4225.00 ft (KB) (TVD)

2204.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8352 Inside

Press @ Run Depth: 30.39 psig @ 4207.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.31

End Date: 2013.11.01

Last Calib.: 2013.11.01

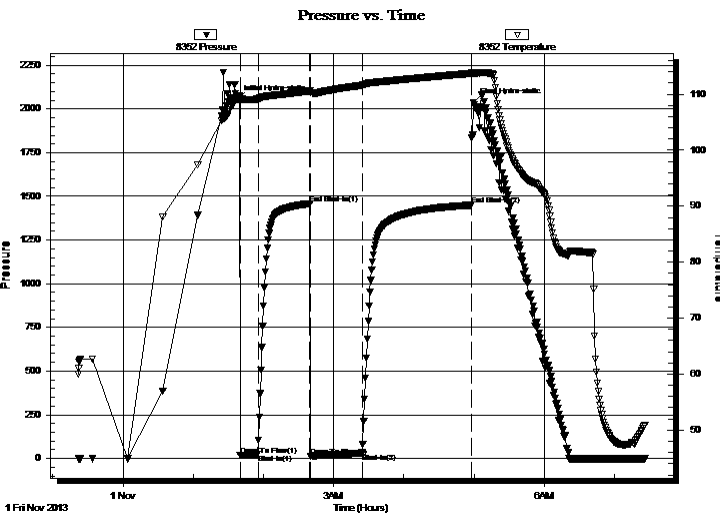
Start Time: 23:22:04

End Time: 07:25:58

Time On Btm: 2013.11.01 @ 01:37:59

Time Off Btm: 2013.11.01 @ 04:59:29

TEST COMMENT: IF: Strong blow . B.O.B. in 4 1/2 mins.
IS: No blow .
FF: Strong blow . B.O.B. in 2 secs. GTS in 30 mins. TSTM
FS: No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2055.42	109.67	Initial Hydro-static
2	17.00	109.22	Open To Flow (1)
18	22.79	109.12	Shut-In(1)
62	1457.41	110.60	End Shut-In(1)
63	13.08	110.28	Open To Flow (2)
107	30.39	111.55	Shut-In(2)
200	1449.78	113.71	End Shut-In(2)
202	2037.84	113.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	WM 34%w 66%m	0.17

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52369

DST#: 1

ATTN: Jon Christensen

Test Start: 2013.10.31 @ 23:21:59

Tool Information

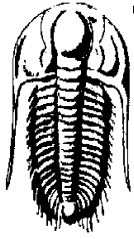
Drill Pipe:	Length: 3919.00 ft	Diameter: 3.80 inches	Volume: 54.97 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 274.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 56.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	4206.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.70 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

C.O. Sub	1.00			4184.00	
Shut in tool	5.00			4189.00	
HMV	5.00			4194.00	
Safety Joint	3.00			4197.00	
Packer	4.00			4201.00	23.00 Bottom Of Top Packer
Packer	5.00			4206.00	
Stubb	1.00			4207.00	
Recorder	0.00	8352	Inside	4207.00	
Recorder	0.00	8370	Outside	4207.00	
Perforations	13.00			4220.00	
Bullnose	5.00			4225.00	19.00 Bottom Packers & Anchor

Total Tool Length: 42.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52369

DST#: 1

ATTN: Jon Christensen

Test Start: 2013.10.31 @ 23:21:59

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:

68000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	WM 34%w 66%m	0.172

Total Length: 35.00 ft Total Volume: 0.172 bbl

Num Fluid Samples: 0

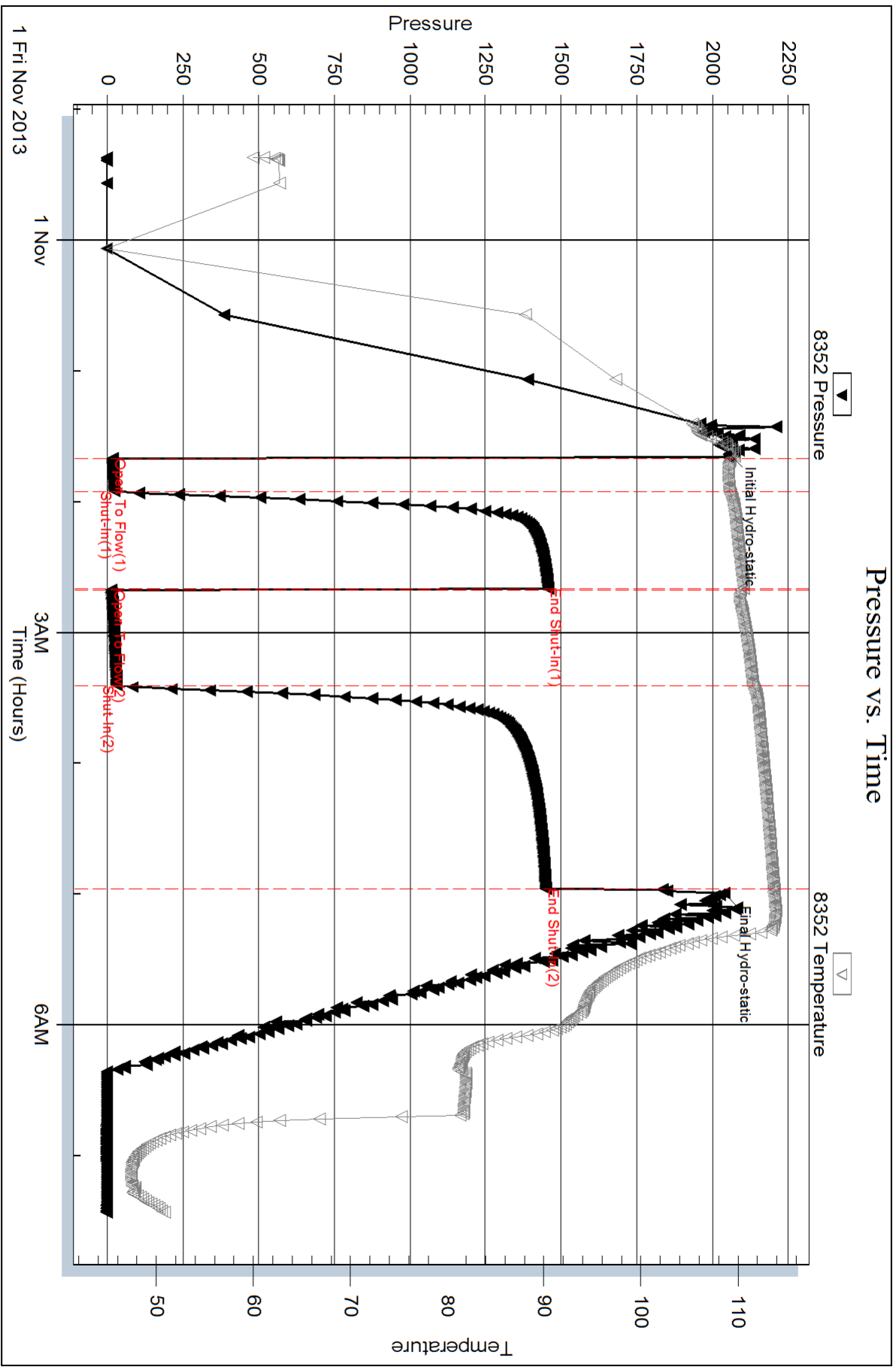
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .16ohms @49deg

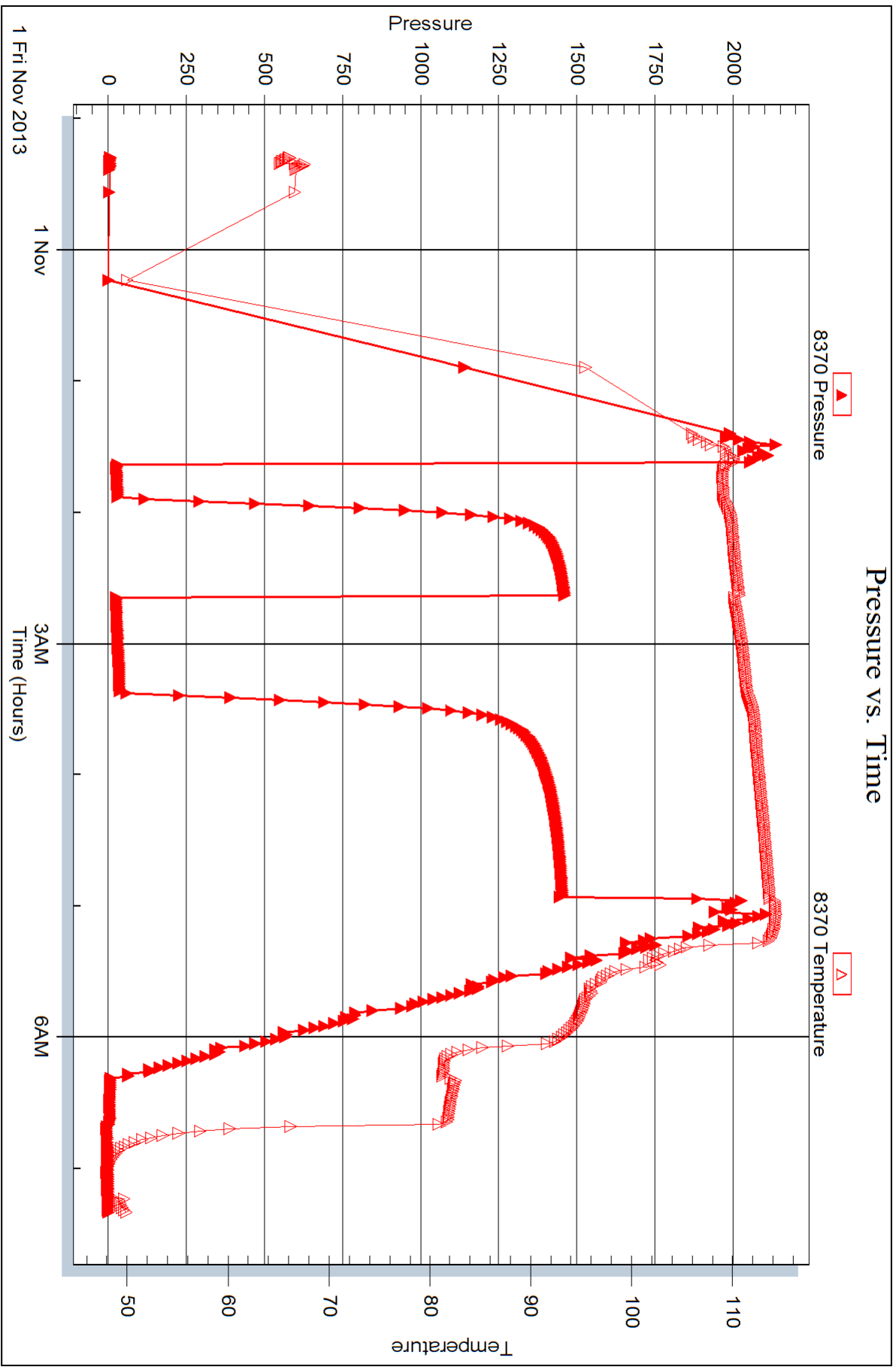


Serial #: 8370

Outside Herran L. Loeb, LLC

Randel #1-20

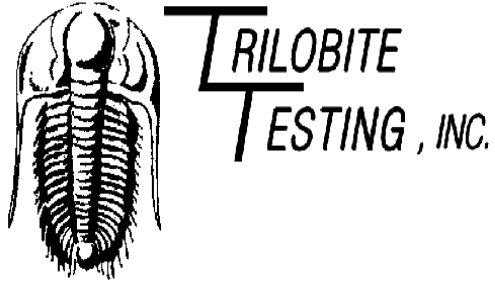
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 52369

Printed: 2013.11.06 @ 15:15:43



DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb, LLC**

PO Box 838
Lawrenceville Il.62439

ATTN: Jon Christensen

Randel #1-20

20-27s-18w Kiowa,KS

Start Date: 2013.11.02 @ 05:13:06

End Date: 2013.11.02 @ 11:53:36

Job Ticket #: 52370 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.06 @ 15:15:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52370

DST#: 2

ATTN: Jon Christensen

Test Start: 2013.11.02 @ 05:13:06

GENERAL INFORMATION:

Formation: **KC. I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:00:06

Time Test Ended: 11:53:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Gary Pevoteaux

Unit No: 56

Interval: 4424.00 ft (KB) To 4444.00 ft (KB) (TVD)

Reference Elevations: 2215.00 ft (KB)

Total Depth: 4444.00 ft (KB) (TVD)

2204.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8352

Inside

Press @ Run Depth: 166.96 psig @ 4425.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.02

End Date:

2013.11.02

Last Calib.:

2013.11.02

Start Time: 05:13:11

End Time:

11:53:35

Time On Btm:

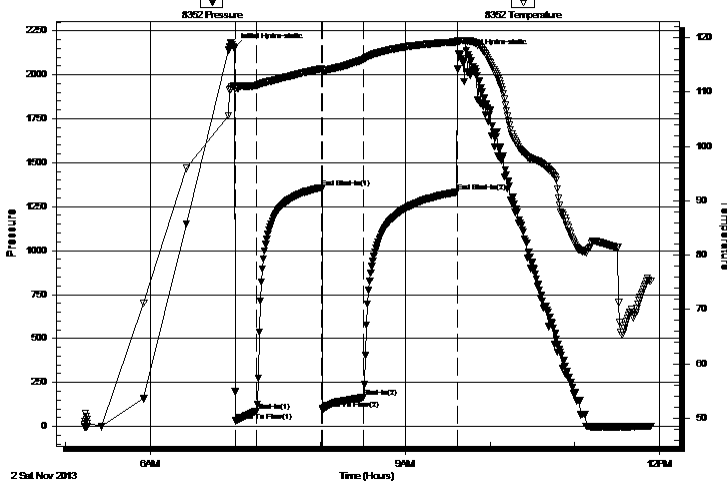
2013.11.02 @ 06:58:51

Time Off Btm:

2013.11.02 @ 09:38:21

TEST COMMENT: IF: Strong blow . B.O.B. in 6 mins.
IS: Weak blow . 1/2 - 3/4".
FF: Fair to strong blow . B.O.B. in 27 mins.
FS: Weak blow . 1/2 - 1".

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2152.66	111.10	Initial Hydro-static
2	32.37	110.72	Open To Flow (1)
16	88.05	111.21	Shut-In(1)
62	1359.15	114.27	End Shut-In(1)
63	98.74	113.88	Open To Flow (2)
92	166.96	116.03	Shut-In(2)
158	1333.62	119.23	End Shut-In(2)
160	2121.65	119.38	Final Hydro-static

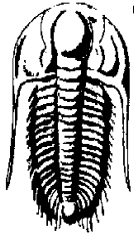
Recovery

Length (ft)	Description	Volume (bbl)
213.00	SW	1.05
95.00	OCMW 3%o 34%m 63%w	0.78
2.00	Clean oil	0.03
0.00	415 ft.of GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52370

DST#: 2

ATTN: Jon Christensen

Test Start: 2013.11.02 @ 05:13:06

Tool Information

Drill Pipe:	Length: 4142.00 ft	Diameter: 3.80 inches	Volume: 58.10 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 274.00 ft	Diameter: 2.25 inches	Volume: 1.35 bbl	Weight to Pull Loose: 89000.00 lb
			<u>Total Volume: 59.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4424.00 ft			Final 79000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.70 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

C.O. Sub	1.00			4402.00	
Shut in tool	5.00			4407.00	
HMV	5.00			4412.00	
Safety Joint	3.00			4415.00	
Packer	4.00			4419.00	23.00 Bottom Of Top Packer
Packer	5.00			4424.00	
Stubb	1.00			4425.00	
Recorder	0.00	8352	Inside	4425.00	
Recorder	0.00	8370	Outside	4425.00	
Perforations	14.00			4439.00	
Bullnose	5.00			4444.00	20.00 Bottom Packers & Anchor

Total Tool Length: 43.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52370

DST#: 2

ATTN: Jon Christensen

Test Start: 2013.11.02 @ 05:13:06

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:

92000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
213.00	SW	1.047
95.00	OCMW 3%o 34%m 63%w	0.777
2.00	Clean oil	0.028
0.00	415 ft.of GIP	0.000

Total Length: 310.00 ft Total Volume: 1.852 bbl

Num Fluid Samples: 0

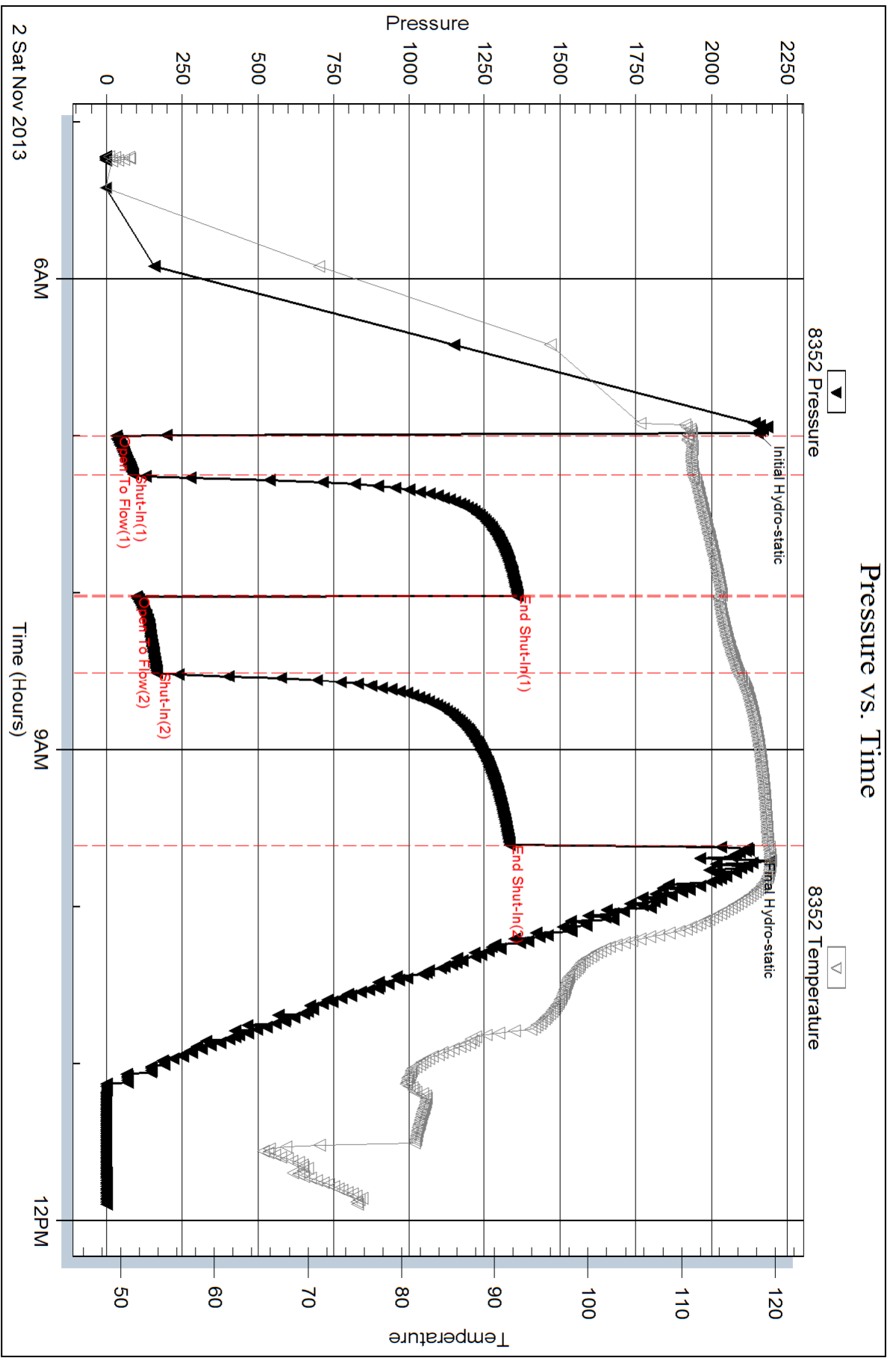
Num Gas Bombs: 0

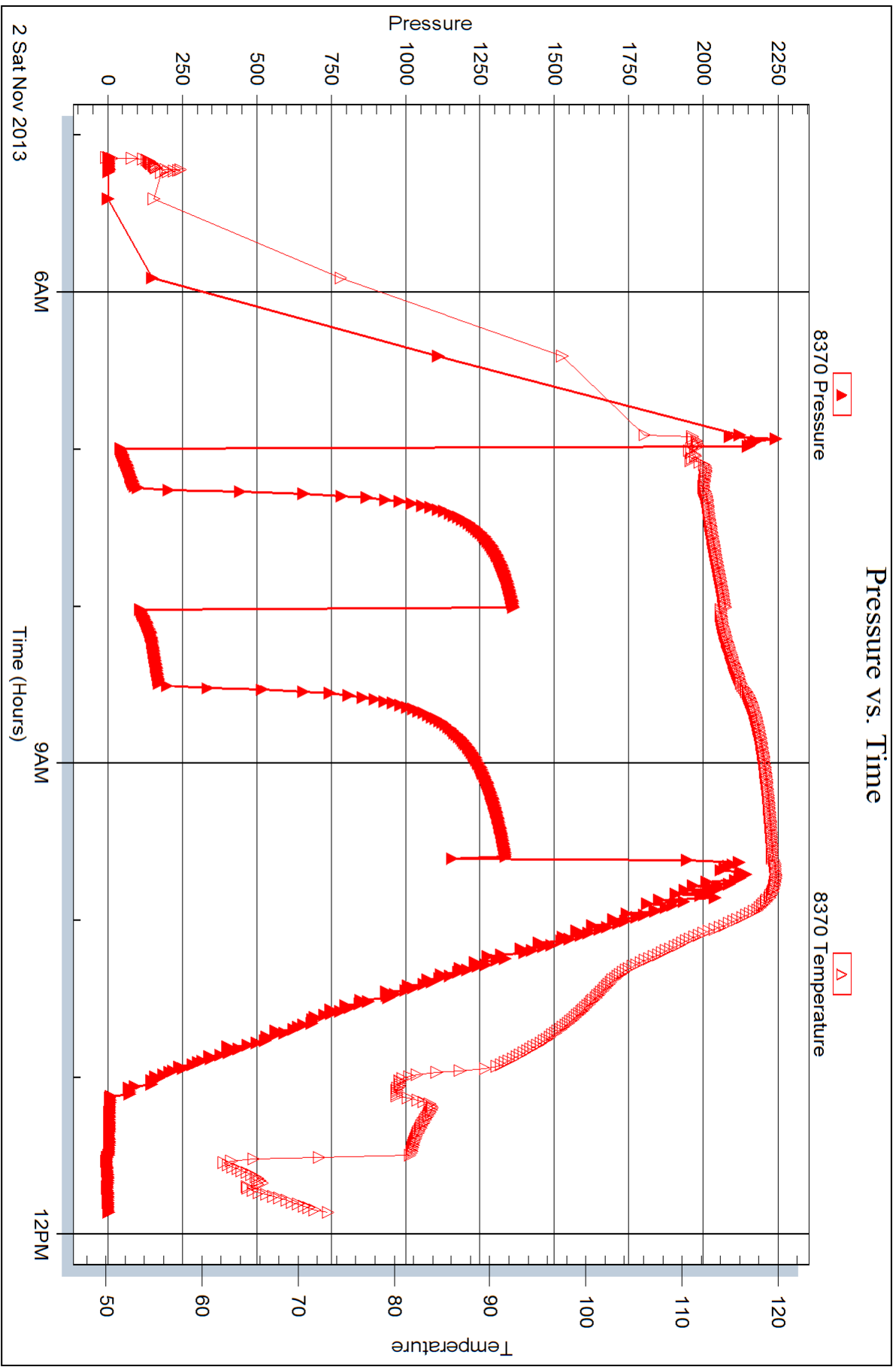
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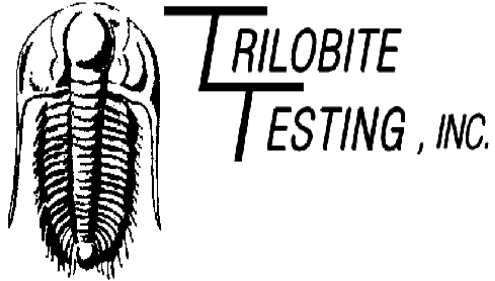
Laboratory Name:

Laboratory Location:

Recovery Comments: Rw .12ohms @51deg







DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb, LLC**

PO Box 838
Lawrenceville Il.62439

ATTN: Jon Christensen

Randel #1-20

20-27s-18w Kiowa,KS

Start Date: 2013.11.03 @ 20:57:48

End Date: 2013.11.04 @ 05:31:18

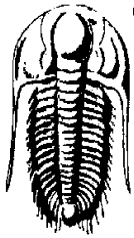
Job Ticket #: 52371 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.06 @ 15:14:36



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52371

DST#: 3

ATTN: Jon Christensen

Test Start: 2013.11.03 @ 20:57:48

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:43:33

Time Test Ended: 05:31:18

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 56

Interval: 4742.00 ft (KB) To 4792.00 ft (KB) (TVD)

Reference Elevations: 2215.00 ft (KB)

Total Depth: 4792.00 ft (KB) (TVD)

2204.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8370 Outside

Press @ Run Depth: 110.14 psig @ 4743.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.03

End Date: 2013.11.04

Last Calib.: 2013.11.04

Start Time: 20:57:53

End Time: 05:31:18

Time On Btm: 2013.11.03 @ 23:39:03

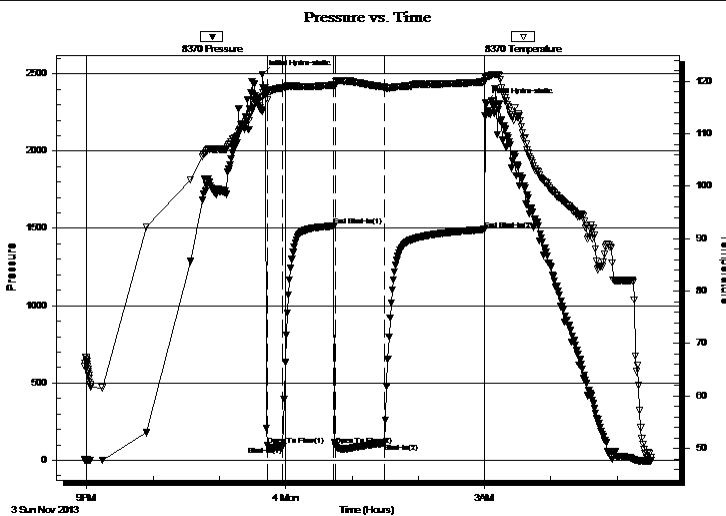
Time Off Btm: 2013.11.04 @ 03:01:03

TEST COMMENT: IF: Strong Blow , BOB in 30 seconds, GTS in 14 minutes

IS: Weak Surface Blow Back

FF: Strong Blow , BOB & GTS Immediate, Gauged & Caught Sample

FS: Weak Surface Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2496.24	116.97	Initial Hydro-static
5	95.23	116.39	Open To Flow (1)
19	90.93	118.65	Shut-In(1)
64	1515.72	119.27	End Shut-In(1)
66	94.56	119.29	Open To Flow (2)
111	110.14	118.89	Shut-In(2)
201	1492.83	119.87	End Shut-In(2)
202	2311.96	120.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4674 GIP	0.00
65.00	SGCM 2%G 98%M	0.32

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	11.00	169.99
Last Gas Rate	0.25	55.00	109.78
Max. Gas Rate	0.25	55.00	109.78

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52371

DST#: 3

ATTN: Jon Christensen

Test Start: 2013.11.03 @ 20:57:48

Tool Information

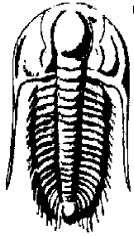
Drill Pipe:	Length: 4524.00 ft	Diameter: 3.80 inches	Volume: 63.46 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 215.00 ft	Diameter: 2.25 inches	Volume: 1.06 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 64.52 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	4742.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.70 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

C.O. Sub	1.00			4720.00	
Shut in tool	5.00			4725.00	
HMV	5.00			4730.00	
Safety Joint	3.00			4733.00	
Packer	4.00			4737.00	23.00 Bottom Of Top Packer
Packer	5.00			4742.00	
Stubb	1.00			4743.00	
Recorder	0.00	8352	Inside	4743.00	
Recorder	0.00	8370	Outside	4743.00	
Perforations	6.00			4749.00	
Change Over Sub	0.50			4749.50	
Drill Pipe	32.00			4781.50	
Change Over Sub	0.50			4782.00	
Perforations	5.00			4787.00	
Bullnose	5.00			4792.00	50.00 Bottom Packers & Anchor

Total Tool Length: 73.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52371

DST#: 3

ATTN: Jon Christensen

Test Start: 2013.11.03 @ 20:57:48

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: 8.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	4674 GIP	0.000
65.00	SGCM 2%G 98%M	0.320

Total Length: 65.00 ft Total Volume: 0.320 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

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52371

DST#: 3

ATTN: Jon Christensen

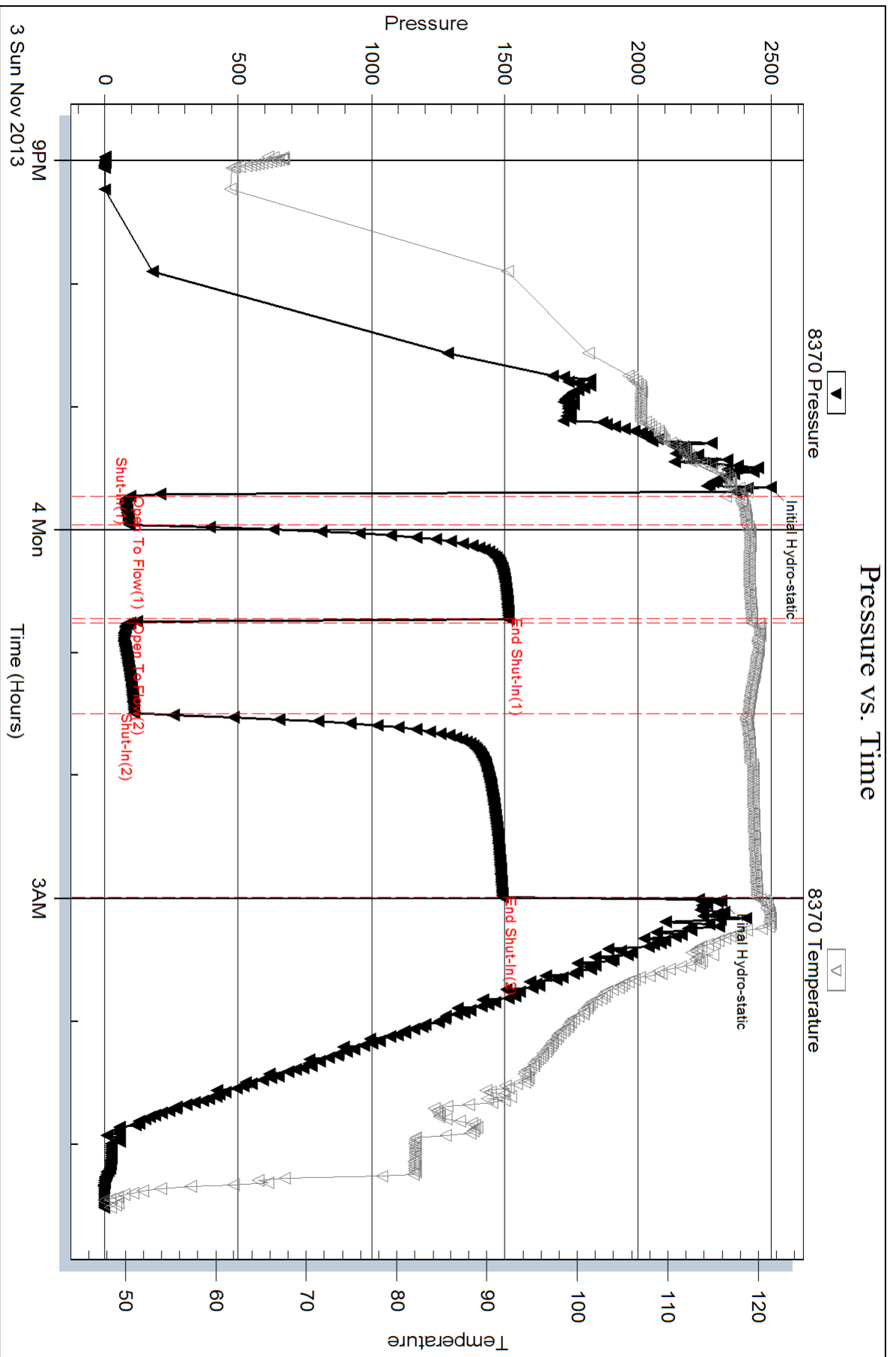
Test Start: 2013.11.03 @ 20:57:48

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	0.50	11.00	169.99
2	20	0.25	30.00	70.12
2	30	0.25	45.00	93.92
2	40	0.25	50.00	101.85
2	45	0.25	55.00	109.78



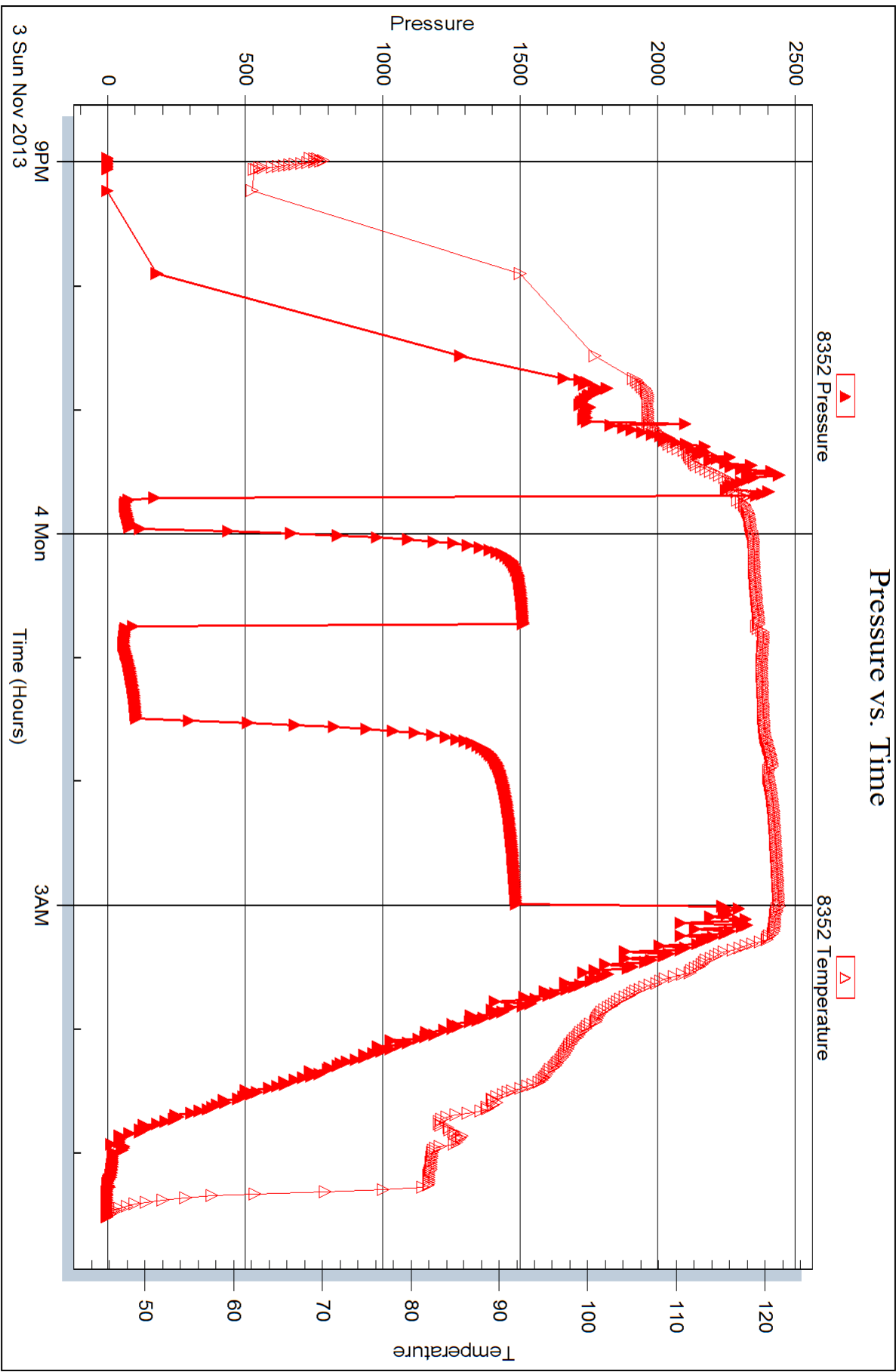
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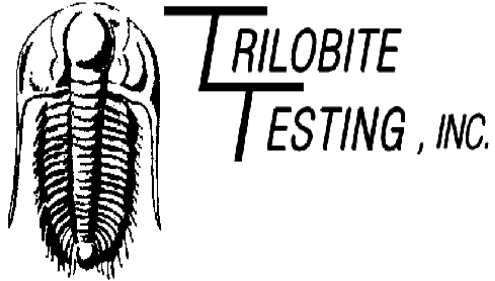
Inside

Herrman L. Loeb, LLC

Randel #1-20

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb, LLC**

PO Box 838
Lawrenceville Il.62439

ATTN: Jon Christensen

Randel #1-20

20-27s-18w Kiowa,KS

Start Date: 2013.11.04 @ 14:03:20

End Date: 2013.11.04 @ 22:00:05

Job Ticket #: 52372 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.11.06 @ 15:12:32



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52372

DST#: 4

ATTN: Jon Christensen

Test Start: 2013.11.04 @ 14:03:20

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:23:05

Time Test Ended: 22:00:05

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 56

Interval: 4792.00 ft (KB) To 4807.00 ft (KB) (TVD)

Reference Elevations: 2215.00 ft (KB)

Total Depth: 4807.00 ft (KB) (TVD)

2204.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8352 Inside

Press @ Run Depth: 24.96 psig @ 4793.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.04

End Date:

2013.11.04

Last Calib.: 2013.11.04

Start Time: 14:03:25

End Time:

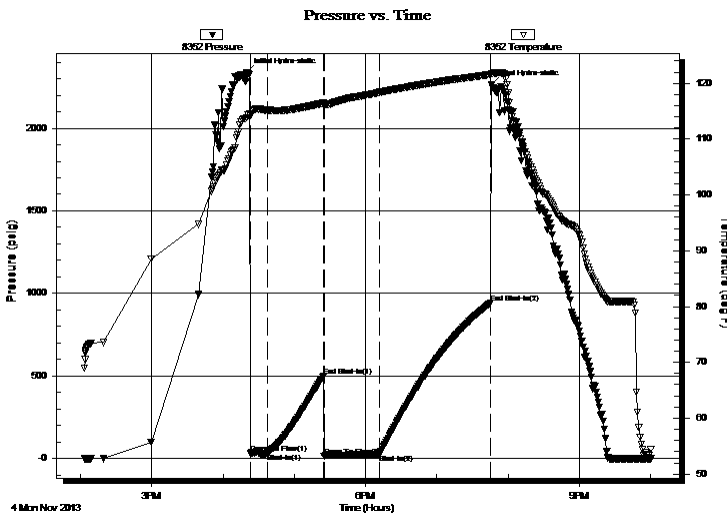
22:00:04

Time On Btm: 2013.11.04 @ 16:20:05

Time Off Btm: 2013.11.04 @ 19:46:05

TEST COMMENT: IF: Weak Blow , Built to 4 inches
IS: No Blow Back
FF: Strong Blow , BOB in 15 seconds
FS: Weak Surface Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2338.43	113.79	Initial Hydro-static
3	29.16	114.15	Open To Flow (1)
18	34.20	115.17	Shut-In(1)
65	498.77	116.45	End Shut-In(1)
65	13.16	116.27	Open To Flow (2)
112	24.96	118.39	Shut-In(2)
205	940.59	121.55	End Shut-In(2)
206	2262.40	121.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	739 GIP	0.00
5.00	SGCM 2%G 98%M	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52372

DST#: 4

ATTN: Jon Christensen

Test Start: 2013.11.04 @ 14:03:20

Tool Information

Drill Pipe:	Length: 4587.00 ft	Diameter: 3.80 inches	Volume: 64.34 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 215.00 ft	Diameter: 2.25 inches	Volume: 1.06 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 65.40 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4792.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.70 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00			4770.00	
Shut in tool	5.00			4775.00	
HMV	5.00			4780.00	
Safety Joint	3.00			4783.00	
Packer	4.00			4787.00	23.00 Bottom Of Top Packer
Packer	5.00			4792.00	
Stubb	1.00			4793.00	
Recorder	0.00	8352	Inside	4793.00	
Recorder	0.00	8370	Outside	4793.00	
Perforations	9.00			4802.00	
Bullnose	5.00			4807.00	15.00 Bottom Packers & Anchor

Total Tool Length: 38.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L. Loeb, LLC

20-27s-18w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Randel #1-20

Job Ticket: 52372

DST#: 4

ATTN: Jon Christensen

Test Start: 2013.11.04 @ 14:03:20

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:

bbbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	739 GIP	0.000
5.00	SGCM 2%G 98%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

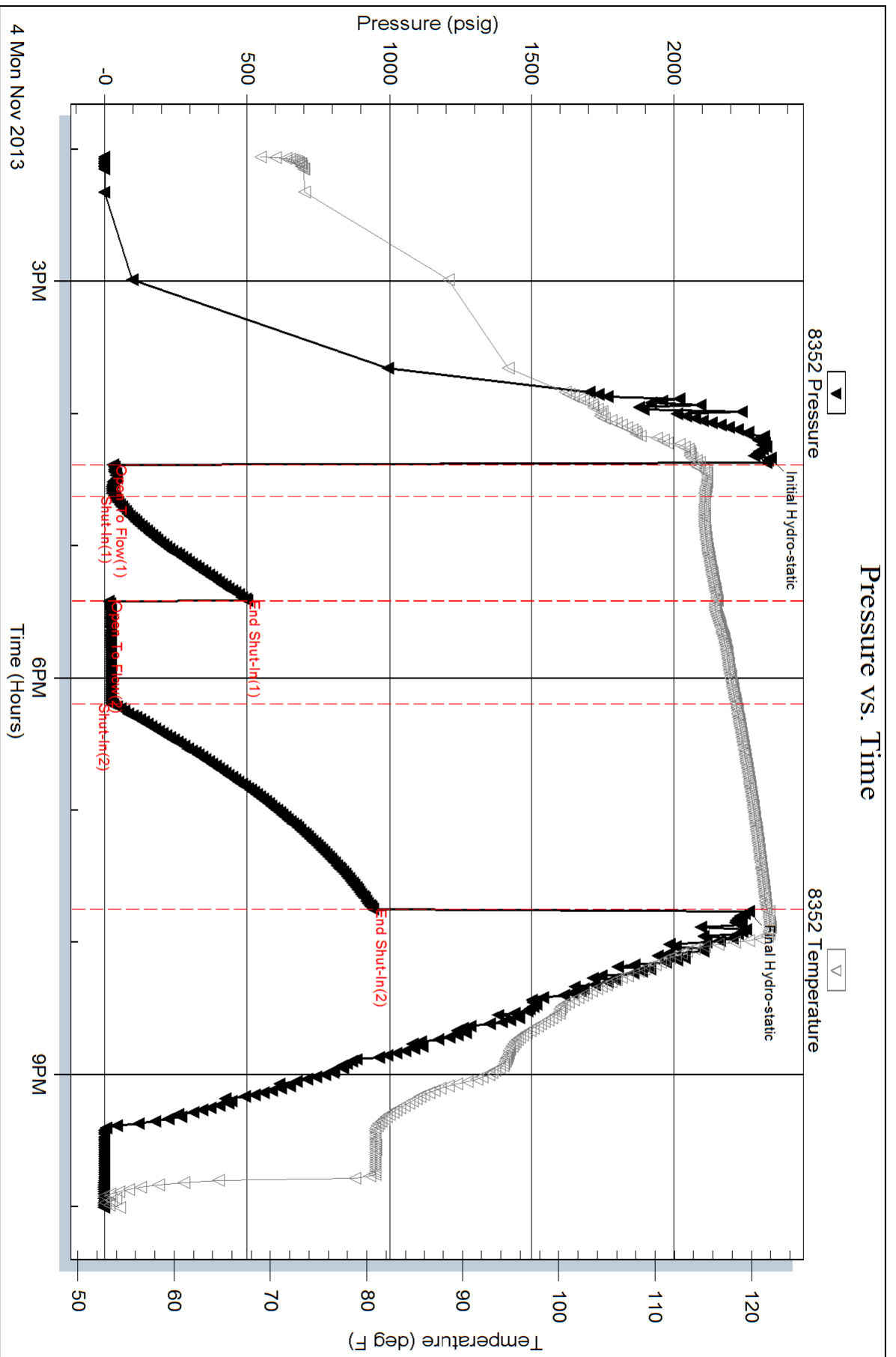
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52369

Well Name & No. RANDEL # 1-20 Test No. 1 Date 10-31-13
 Company HERMAN L. LOEB, LLC Elevation 2215 KB 2204 GL
 Address P.O. Box 838, LAWRENCEVILLE IL 62439
 Co. Rep / Geo. SON CHRISTENSEN Rig STERLING DRILG. # 2
 Location: Sec. 20 Twp. 27^S Rge. 18^W Co. KANSAS State KS

Interval Tested 4206 ~ 4225' Zone Tested LANS. A.
 Anchor Length 19' Drill Pipe Run 3919 Mud Wt. 9.2
 Top Packer Depth 4201' Drill Collars Run 274' Vis 60
 Bottom Packer Depth 4206' Wt. Pipe Run 0 WL 8.8cc
 Total Depth 4225' Chlorides 3,000 ppm System LCM 2#

Blow Description IF: Strong blow. B.O.B. in 4 1/2 mins. ISI: No blow.

FF: Strong blow. B.O.B. in 2 secs. GTS in 30 mins. TSTM FSI, Wets below. 1/4".

Rec	Feet of	%gas	%oil	%water	%mud
<u>35</u>	<u>WM</u>		<u>34</u>	<u>66</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 35 fluid BHT 114° Gravity N/A API RW 31.6 @ 319 Chlorides 68,000 ppm

(A) Initial Hydrostatic 2055 Test 1250 T-On Location 2140
 (B) First Initial Flow 17 Jars _____ T-Started 2321
 (C) First Final Flow 23 Safety Joint 75 T-Open 0139
 (D) Initial Shut-In 1457 Circ Sub _____ T-Pulled 0456
 (E) Second Initial Flow 13 Hourly Standby _____ T-Out 0725
 (F) Second Final Flow 30 Mileage 81.2 133.30 Comments _____
 (G) Final Shut-In 1450 Sampler _____
 (H) Final Hydrostatic 2038 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 15 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 45 Day Standby _____ Total 1458.30
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____
 Sub Total 1458.30

Approved By _____ Our Representative Cory Pivato

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52370

Well Name & No. RANDEL # 1-20 Test No. 2 Date 11-2-13
 Company HERMAN L. LOEB, LLC Elevation 2215 KB 2204 GL
 Address P.O. Box 838, LAWRENCEVILLE IL. 62439
 Operator / Geo. Jon Christensen Rig STERLING DRUG. #2
 Section 20 Twp. 27^s Rge. 18^w Co. KIOWA State Ks.

Well ID 4424-4444 Zone Tested K.C. I
 Length 20' Drill Pipe Run 4142' Mud Wt. 9.1
 True Depth 4419' Drill Collars Run 274' Vis 59
 Casing Depth 4424' Wt. Pipe Run 0 WL 9.0 cc
 Chlorides 4444 6,000 ppm System LCM 2#

Description IF; strong blow. B.O.B. in 6 mins. Weak blow. 1/2 - 3/4".
air to strong blow. B.O.B. in 27 mins. FSI. Weak blow. 1/2 - 1".

Feet of	%gas	%oil	%water	%mud
<u>415</u> Feet of <u>Gas in pipe</u>				
<u>2</u> Feet of <u>clean oil</u>				
<u>95</u> Feet of <u>OCM w</u>		<u>3</u>	<u>63</u>	<u>34</u>
<u>103</u> Feet of <u>sw</u>				

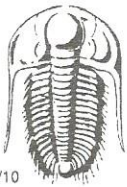
310 Fluid BHT 119° Gravity N/A API RW 12 @ 51 °F Chlorides 92,000 ppm

Hydrostatic 2153 Test 1250 T-On Location 0452
 Initial Flow 32 Jars _____ T-Started 0513
 Final Flow 88 Safety Joint 75 T-Open 0700
 Shut-In 1359 Circ Sub _____ T-Pulled 0932
 Initial Flow 99 Hourly Standby _____ T-Out 1153
 Final Flow 167 Mileage 86 133.30 Comments _____
 Shut-In 1334 Sampler _____
 Hydrostatic 2122 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1458.30

Open 15
 Shut-In 43
 Flow 30
 Shut-In 490

Our Representative Cary P. [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52371

Well Name & No. Randel 1-20 Test No. 3 Date 11/03/13
 Company Herman L Loeb LLC Elevation 2215 KB 2204 GL
 Address PO Box 838 Lawrenceville IL 62439
 Co. Rep / Geo. Jon Christensen Rig Sterling 2
 Location: Sec. 20 Twp. 27S Rge. 18W Co. Kiowa State KS

Interval Tested 4742 - 4792 Zone Tested Mississippi
 Anchor Length 50 Drill Pipe Run 4524 Mud Wt. 9.2
 Top Packer Depth 4737 Drill Collars Run 215 Vis 53
 Bottom Packer Depth 4742 Wt. Pipe Run 0 WL 9.2
 Total Depth 4792 Chlorides 3000 ppm System LCM 2

Blow Description IF: Strong Blow, BOB in 30 seconds, GTS in 14 minutes
ISI: Weak surface Blow Back
FF: Strong Blow, BOB + GTS Immediate, Gauged + caught Sample
FSI: Weak surface Blow Back

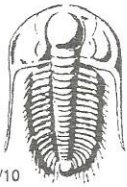
Rec	Feet of	%gas	%oil	%water	%mud
<u>4674</u>	<u>Feet of GIP</u>				
<u>65</u>	<u>Feet of 56CM</u>	<u>2</u>			<u>98</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 65 BHT 120 Gravity N/C API RW N/C @ N/C °F Chlorides N/C ppm

(A) Initial Hydrostatic 2496 Test 1250 T-On Location 19:30
 (B) First Initial Flow 95 Jars _____ T-Started 20:57
 (C) First Final Flow 91 Safety Joint 75 T-Open 23:43
 (D) Initial Shut-In 1516 Circ Sub _____ T-Pulled 02:59
 (E) Second Initial Flow 94 Hourly Standby _____ T-Out 05:31
 (F) Second Final Flow 110 Mileage 847 133.30 Comments _____
 (G) Final Shut-In 1493 Sampler _____
 (H) Final Hydrostatic 2312 Straddle _____

Initial Open 15 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 45 Extra Packer _____ Ruined Packer _____
 Final Flow 45 Extra Recorder _____ Extra Copies _____
 Final Shut-In 90 Day Standby _____ Sub Total 0
 Sub Total 1458.30 Accessibility _____ Total 1458.30
 Sub Total 1458.30 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52372

Well Name & No. Randel 1-20 Test No. 4 Date 11/04/13
 Company Herman L LOEB LLC Elevation 2215 KB 2204 GL
 Address PO Box 838 Lawrenceville, IL 62439
 Co. Rep / Geo. Jon Christensen Rig sterling 2
 Location: Sec. 20 Twp. 27S Rge. 18W Co. Kiowa State KS

Interval Tested 4792 - 4807 Zone Tested Mississippi
 Anchor Length 15 Drill Pipe Run 4587 Mud Wt. 9.1
 Top Packer Depth 4787 Drill Collars Run 215 Vis 55
 Bottom Packer Depth 4792 Wt. Pipe Run 0 WL 9.2
 Total Depth 4807 Chlorides 3000 ppm System LCM 2

Blow Description IF: weak blow, Built to 4 inches
ISI: No Blow Back
FI: Strong Blow, BOB in 15 seconds
FSI: weak surface Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>739</u>	<u>GI P</u>				
<u>5</u>	<u>SGCM</u>	<u>2</u>			<u>98</u>

Rec Total 5 @ BHT 121 Gravity NIC API RW NIC @ NIC° F Chlorides NIC ppm

(A) Initial Hydrostatic 2338 Test 1250 T-On Location 13:15
 (B) First Initial Flow 29 Jars _____ T-Started 14:03
 (C) First Final Flow 34 Safety Joint 75 T-Open 16:23
 (D) Initial Shut-In 499 Circ Sub _____ T-Pulled 19:45
 (E) Second Initial Flow 13 Hourly Standby _____ T-Out 22:00
 (F) Second Final Flow 25 Mileage 842 133.30
 (G) Final Shut-In 940 Sampler _____
 (H) Final Hydrostatic 2262 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1458.30
 MP/DST Disc't _____

Initial Open 15
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 90

Sub Total 1458.30

Approved By [Signature] Our Representative [Signature]
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