



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1215052
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: _____

1215052

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Hess Oil Company
Well Name	Brull Farms 1
Doc ID	1215052

Tops

Name	Top	Datum
Anhydrite	1304	+720
Base Anhydrite	1346	+678
Topeka	3020	-996
Heebner	3277	-1253
Lansing	3346	-1322
Base Kansas City	3552	-1528
Arbuckle	3662	-1638
RTD	3672	-1648
LTD	3668	-1644



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

Well Name: BRULL FARMS #1
API: 15-051-26685-00-00
Location: SE NW NW NE SECTION 25 13S 19W
License Number: 5663
Spud Date: 4/11/2014
Surface Coordinates: 335' FROM NORTH LINE OF SECTION
2294' FROM EAST LINE OF SECTION
Bottom Hole Coordinates: 335' FROM NORTH LINE OF SECTION
2294' FROM EAST LINE OF SECTION
Ground Elevation (ft): 2019' K.B. Elevation (ft): 2024'
Logged Interval (ft): 2900' To: 3672 Total Depth (ft): 3672
Formation: ARBUCKLE
Type of Drilling Fluid: CHEMICAL, MUD-CO

Region: ELLIS CO. KS.
Drilling Completed: 4/20/2014

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: HESS OIL COMPANY
Address: P.O. BOX 1009
MCPHERSON, KANSAS 67460-1009
(620) 241-4640

GEOLOGIST

Name: DAVID GOULD (LOGGER)
Company: DMT COMPANY
Address: 532 SUNRISE
PRATT, KANSAS 67124
(620) 388-2847

Comments

CONTRACTOR:

MALLARD, J.V., INC. Rig #2

BIT RECORD:

#A, 12 1/4", RT, RR, 0-218

#1, 7 7/8, F27, RR, 218-3672

SURVEYS:

218', 1 DEGREE

3110', 3/4 DEGREE

3672', 1 DEGREE

DAILY STATUS: (6:00 AM)

4/11/14 Moved in Mallard Drilling rig. Spudded @ 3:25 pm. Drilled to 218' and ran 5 jts. 8-5/8" x 20# x 211' surface casing. Set @ 218' and cemented w/150 sx Common, 2% gel, 3% cc. CDC. PD @ 9:45 pm 4/11/14

4/12/14 Drilling @ 1950'

4/13/14 Drilling @ 2715'

4/14/14 Drilled to 3110'. Good break, gas kick, free oil in sample. DST #1 3063' - 3110'. 47' anchor. 45-60-45-60. Rec. SOSMW (5% mud, 95% water)

4/15/14 Drilled to 3245'. 100 unit gas kick, free oil in sample. Still above Heebner (correlation well called it the Shaw).

DST #2: 3235'-3245'. 45-60-45-60. Rec. 840' sl MCW (95% W, 5% M); 300' MCW (60% W, 40% M); 30' W&MCO (80% O, 5% W, 5% M).

4/16/14 Drilled to 3324'. 4' drilling break in Toronto, 50 unit gas kick, fair show in tight rocks. DST #3: 3289'-3324'. 45-45-45-45. Rec 240' MW (10% M, 90% W w/oil spots; 63' GMCW (10% G, 10% M, 80% W w/oil spots; 93' GWCO (10% G, 10% W, 80% O). Drilled to 3361'. DST #4: 3345'-3361'. 45-45-45-45. Rec 240' MOCG (10% M, 40% O, 50% G); 15' GMCO (10% G, 40% M, 50% O); 10' Oil

4/17/14 Drilled to 3405'. DST #5: 3369'-3405'. 45-45-45-45. Rec. 180' MW (10% M, 90% W, w/oil spots); 241' WM (10% M, 90% W, w/oil spots). Drilled to 3535'. DST #6: 3419'-3535'. 45-45-45-45. Rec. 60' MW (40% M, 60% W w/oil spots); 210' M (100% M w/oil spots).

4/18/14 Drilled to 3666'. DST #7: 3615'-3666'. 45-45-45-45. Rec 30' M w/light oil skim. Drilled to 3672' RTD.

4/19/14 DST #8: 3615'-3672'. 45-45-45-45. Rec 63' SGHOHWCM (5%G, 20%O, 20%W 55%M); 53' SGHOCM (5%G, 25%O, 70%M); 10' Clean oil. Decided to run casing based on the Lansing A test, and to evaluate the lower Lansing zones. Ran logs. LTD 3668'.

4/20/14 Ran 87 jts. 5 1/2" x 15.5# casing. Set @ 3662'. DV tool @ 1271'. Cemented bottom stage w/120 sx ASC, 5# gil. PD @ 8:45 am. Cemented top stage w/275 sx 60/40 pozmix, 4% gel, 1/4# floseal/sk. CDC. 30 sx RH, 15 sx MH. PD @ 1:45 pm 4/20/14.

4/21/14 Moved out rig

Well Name & No.: Brull Farms #1 Company: Hess Oil Co. Test No.: 1 Interval Tested: 3063 – 3110

Zone Tested: Topeka Times: 45-60-45-60

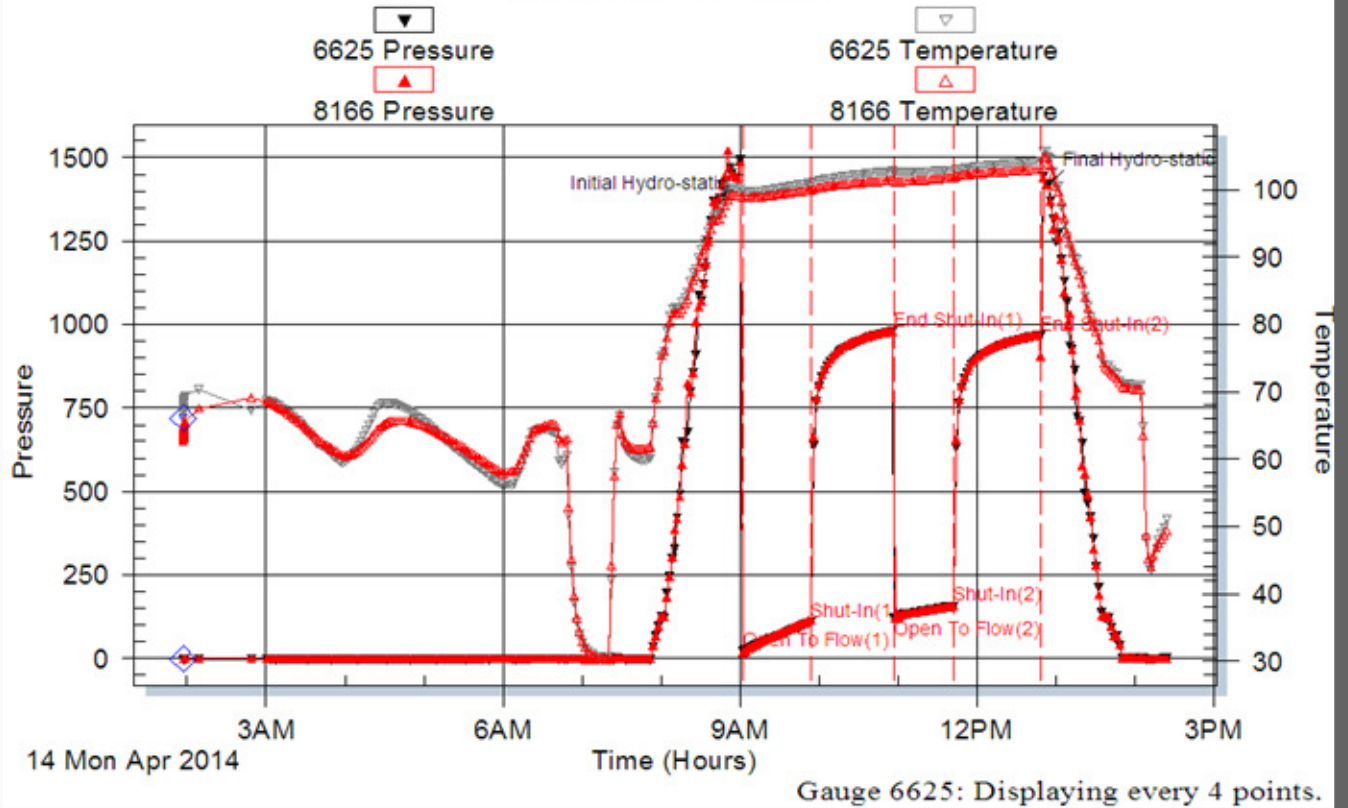
Blow Description: IFP: ½" Int. Blow built to 8" in 45 Min. ISI: No blow back FFP: Pulled WSB Started @ 2 Min. built to 5 ½" in 45 Min. FSI: No blow back

Rec: 292 Feet of SOSMW 0% Gas 0% Oil 95% Water 5% Mud, Rec. Total: 292', BHT: 105 Gravity: N/A

Initial Hydrostatic: 1494 First Initial Flow: 21 First Final Flow: 110 Initial Shut-In: 980

Second Initial Flow: 120 Second Final Flow: 157 Final Shut-In: 968 Final Hydrostatic: 1422

Pressure vs. Time



Well Name & No.: Brull Farms #1 Company: Hess Oil Co. Test No.: 2 Interval Tested: 3235 – 3245

Zone Tested: Shaw Times: 45-60-45-60

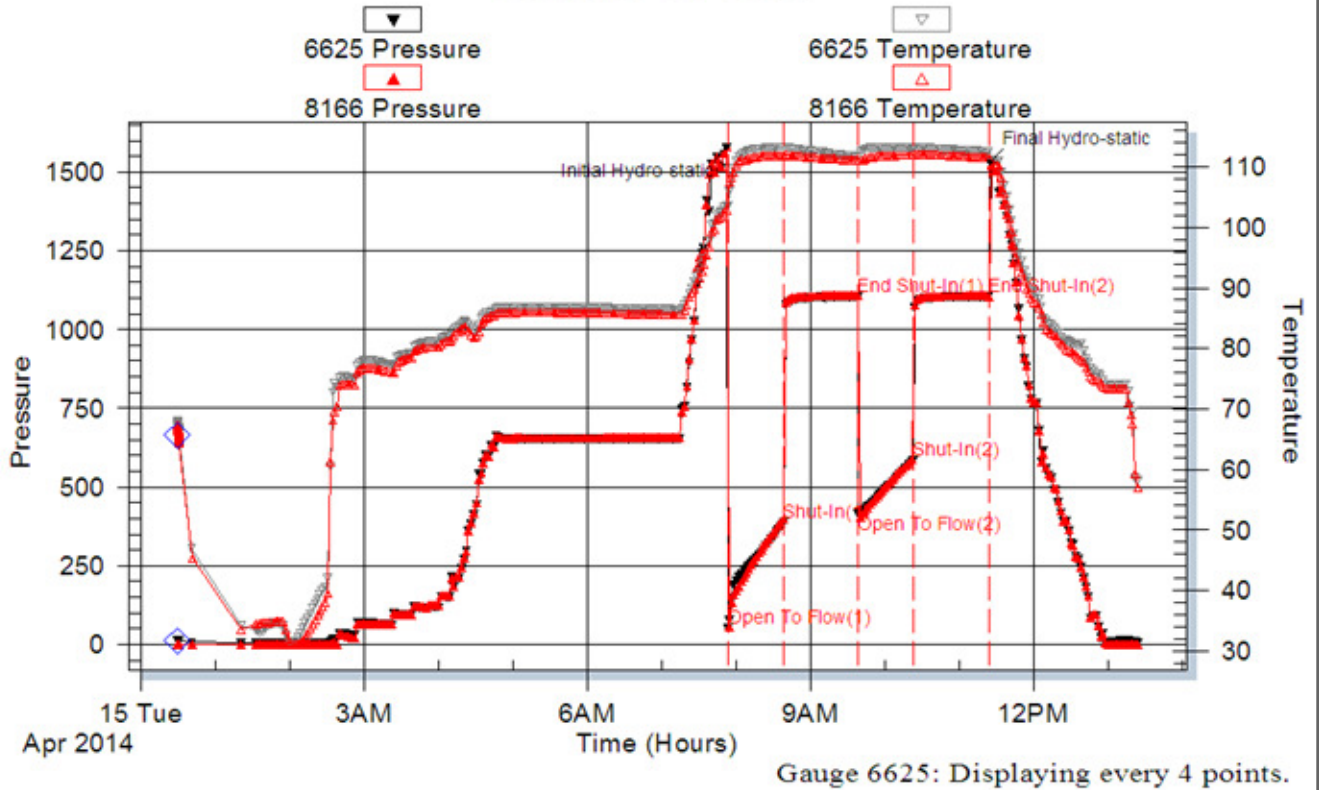
Blow Description: IFP: BOB in 14 Min. Flushed tool twice ISI: No blow back FFP: BOB in 5 Min. FSI: 5 ¼" Min.

Rec: 840 Feet of SMCW 0% Gas 0% Oil 95% Water 5% Mud, 300 Feet of MCW 0% Gas 0% Oil 60% Water 40% Mud, 30 Feet of WMCO 0% Gas 80% Oil 10% Water 10% Mud, Rec. Total: 1170', BHT: 113 Gravity: N/A

Initial Hydrostatic: 1579 First Initial Flow: 50 First Final Flow: 386 Initial Shut-In: 1104

Second Initial Flow: 416 Second Final Flow: 583 Final Shut-In: 1105 Final Hydrostatic: 1530

Pressure vs. Time



Well Name & No.: Brull Farms #1 Company: Hess Oil Co. Test No.: 3 Interval Tested: 3289 – 3324

Zone Tested: Toranto Times: 45-45-45-45

Blow Description: IFP: BOB in 10 Min. ISI: 5 3/4" FFP: BOB in 9 Min. FSI: 7 1/4"

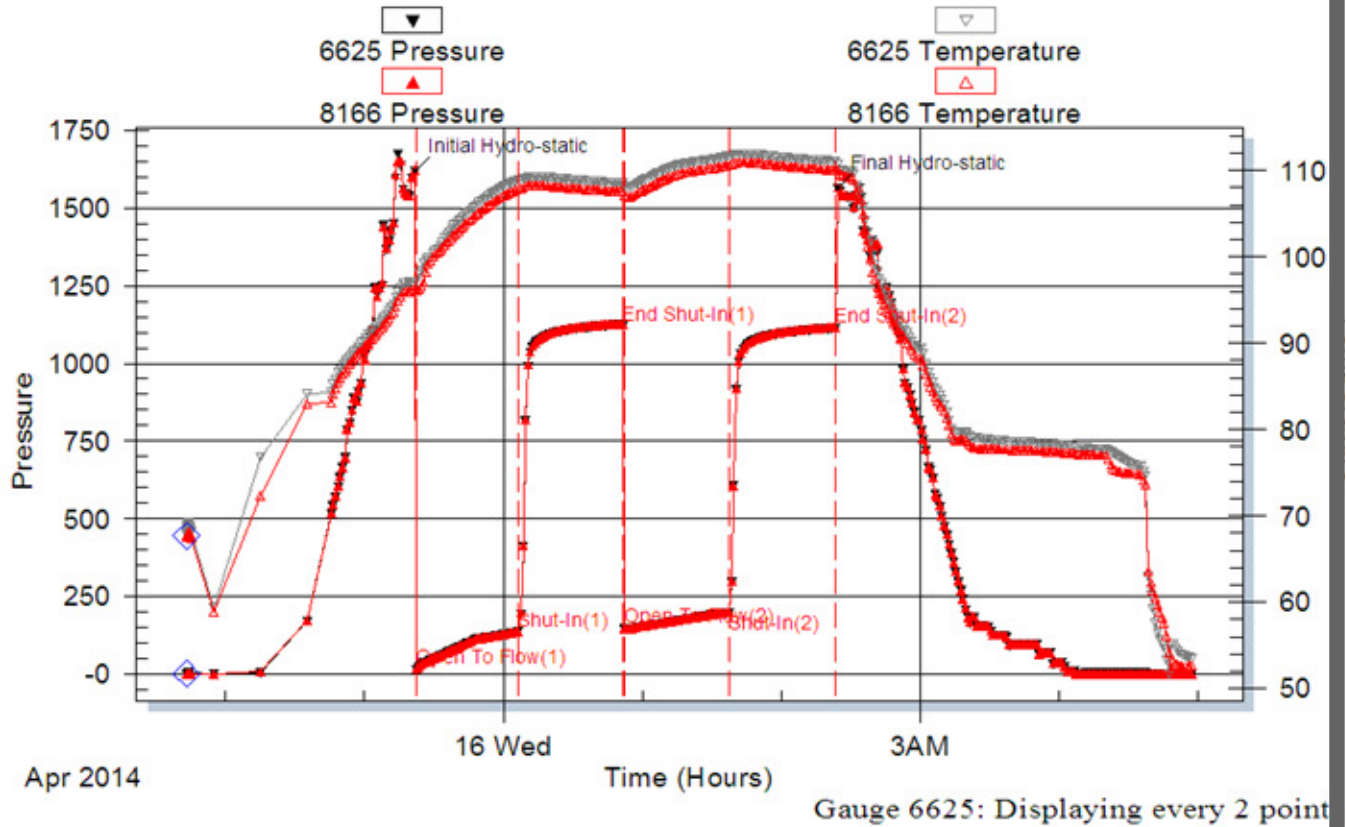
Rec: 240 Feet of MW with oil spots 0% Gas 0% Oil 90% Water 10% Mud, 63 Feet of GMCW with oil spots 10% Gas 0% Oil 80% Water 10% Mud, 93 Feet of GWCO 10% Gas 80% Oil 10% Water 0% Mud, Rec.

Total: 396', BHT: 111 Gravity: N/A

Initial Hydrostatic: 1618 First Initial Flow: 15 First Final Flow: 135 Initial Shut-In: 1122

Second Initial Flow: 148 Second Final Flow: 198 Final Shut-In: 1113 Final Hydrostatic: 1563

Pressure vs. Time



Well Name & No.: Brull Farms #1 Company: Hess Oil Co. Test No.: 4 Interval Tested: 3345 – 3361

Zone Tested: Lansing Times: 45-45-45-45

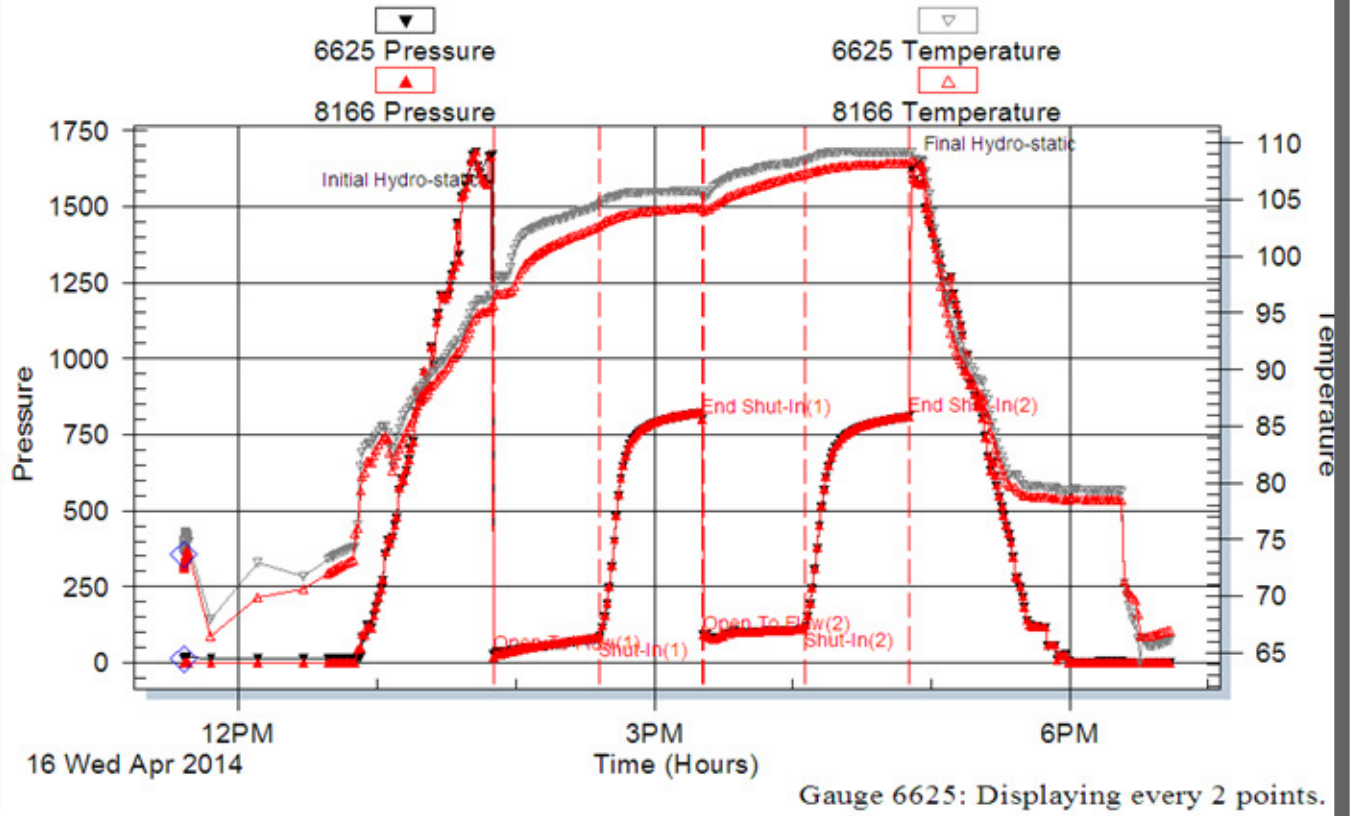
Blow Description: IFP: BOB in 5 Min. ISI: Built to 1 ¼", Died back to ¾" FFP: BOB in 5 Min. FSI: Built to 1 ¼", Died back to 1"

Rec: 240 Feet of MOCG 50% Gas 40% Oil 0% Water 10% Mud, 15 Feet of GMCO 10% Gas 50% Oil 0% Water 40% Mud, 10 Feet of O 0% Gas 100% Oil 0% Water 0% Mud, 315 Rec. Total: 265', BHT: 109 Gravity: 42

Initial Hydrostatic: 1668 First Initial Flow: 26 First Final Flow: 79 Initial Shut-In: 803

Second Initial Flow: 91 Second Final Flow: 108 Final Shut-In: 808 Final Hydrostatic: 1624

Pressure vs. Time



Well Name & No.: Brull Farms #1 Company: Hess Oil Co. Test No.: 5 Interval Tested: 3369 – 3405

Zone Tested: Lansing Times: 45-45-45-45

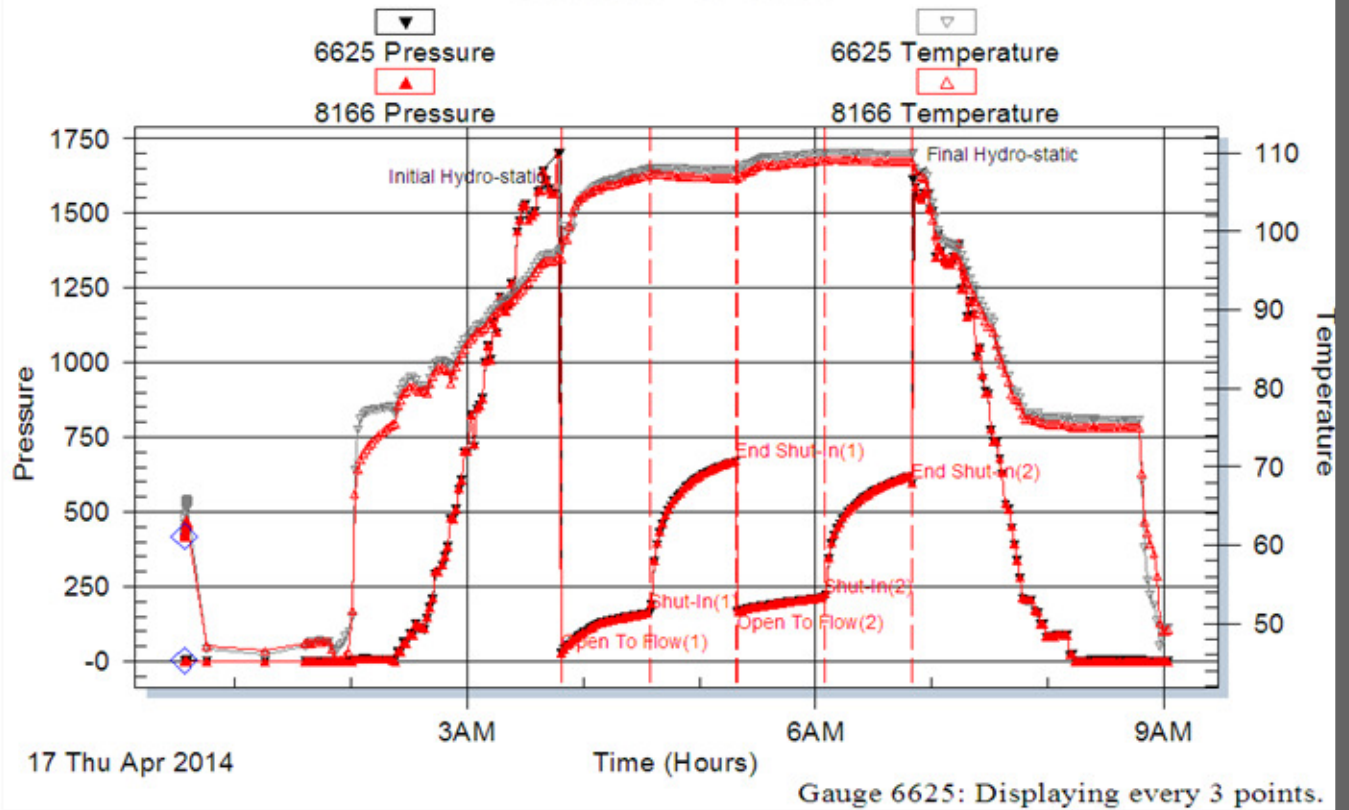
Blow Description: IFP: BOB in 11 Min. ISI: No blow back FFP: BOB in 20 Min. FSI: 1/4" Blow back

Rec: 180 Feet of MW with oil spots 0% Gas 0% Oil 90% Water 10% Mud, 241 Feet of WM with oil spots 0% Gas 0% Oil 10% Water 90% Mud, Rec. Total: 421', BHT: 110 Gravity: N/A

Initial Hydrostatic: 1702 First Initial Flow: 28 First Final Flow: 161 Initial Shut-In: 337

Second Initial Flow: 167 Second Final Flow: 213 Final Shut-In: 595 Final Hydrostatic: 1312

Pressure vs. Time



Well Name & No.: Brull Farms #1 Company: Hess Oil Co. Test No.: 6 Interval Tested: 3419 – 3535

Zone Tested: Lansing Times: 45-45-45-45

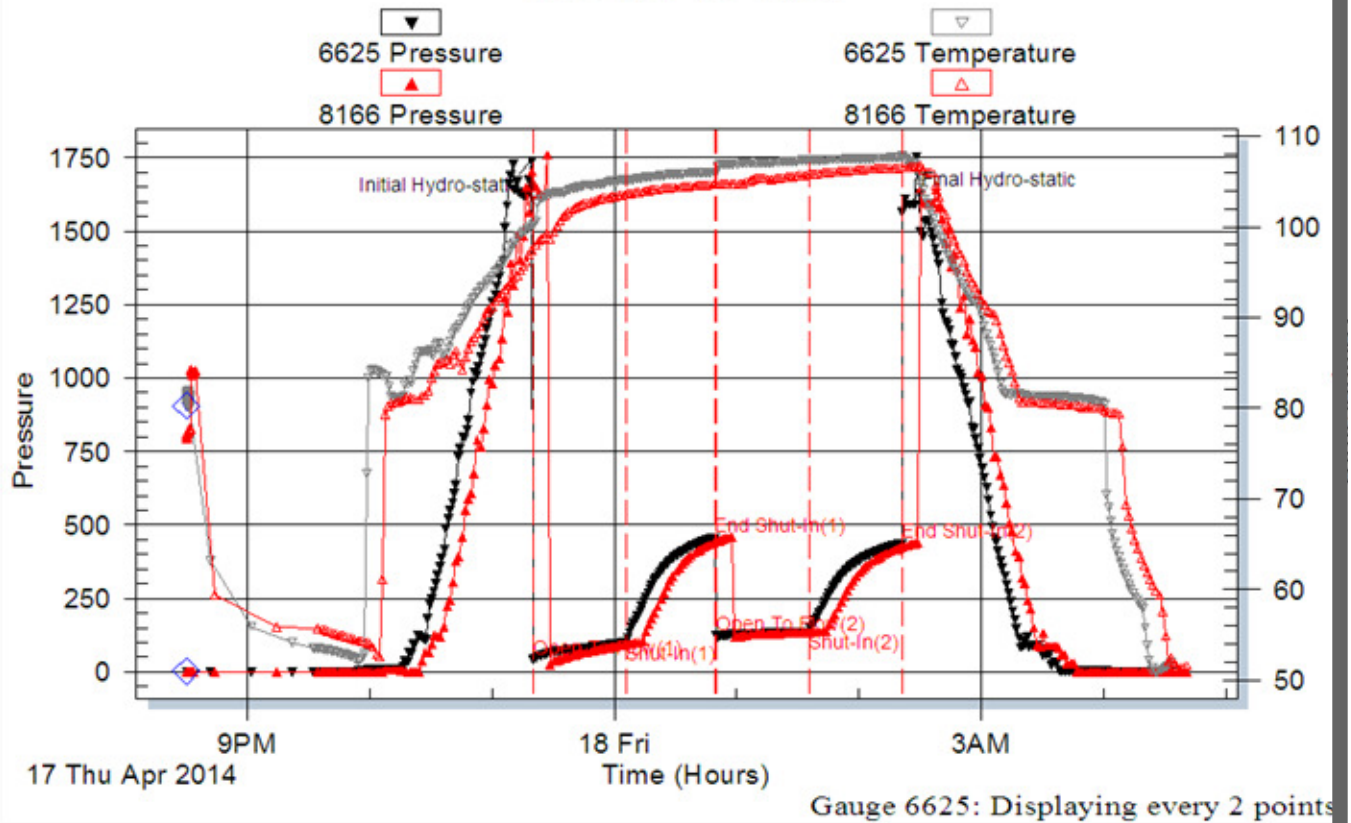
Blow Description: IFP: BOB in 10 Min. ISI: Built to 1/2", died back to weak surface blow FFP: Built to 8"
FSI: Built to 1/2", died in 33 Min.

Rec: 60 Feet of MW with oil spots 0% Gas 0% Oil 60% Water 40% Mud, 210 Feet of M 0% Gas 0% Oil 0%
Water 100% Mud, Rec. Total: 270', BHT: 107 Gravity: N/A

Initial Hydrostatic: 1727 First Initial Flow: 42 First Final Flow: 100 Initial Shut-In: 457

Second Initial Flow: 123 Second Final Flow: 137 Final Shut-In: 437 Final Hydrostatic: 1649

Pressure vs. Time



Well Name & No.: Brull Farms #1 Company: Hess Oil Co. Test No.: 7 Interval Tested: 3615 – 3666

Zone Tested: Arbuckle Times: 45-45-45-45

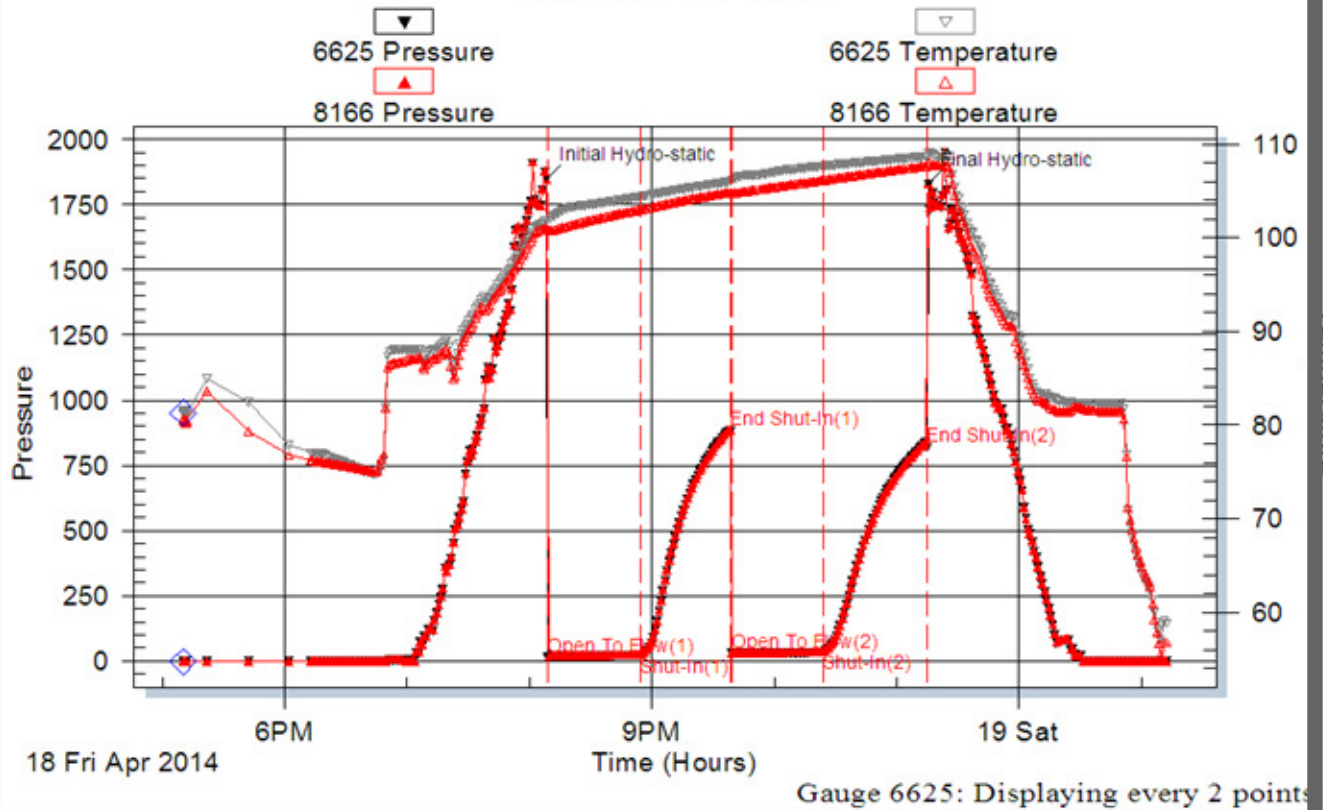
Blow Description: IFP: Built to 1" died back to 3/4" ISI: No blow back FFP: No Blow FSI: No blow back

Rec: 30 Feet of M with oil skim 0% Gas 0% Oil 0% Water 100% Mud, Rec. Total: 30', BHT: 109 Gravity: N/A

Initial Hydrostatic: 1848 First Initial Flow: 16 First Final Flow: 23 Initial Shut-In: 883

Second Initial Flow: 30 Second Final Flow: 34 Final Shut-In: 820 Final Hydrostatic: 1829

Pressure vs. Time



Well Name & No.: Brull Farms #1 Company: Hess Oil Co. Test No.: 8 Interval Tested: 3615 – 3672

Zone Tested: Arbuckle Times: 45-45-45-45

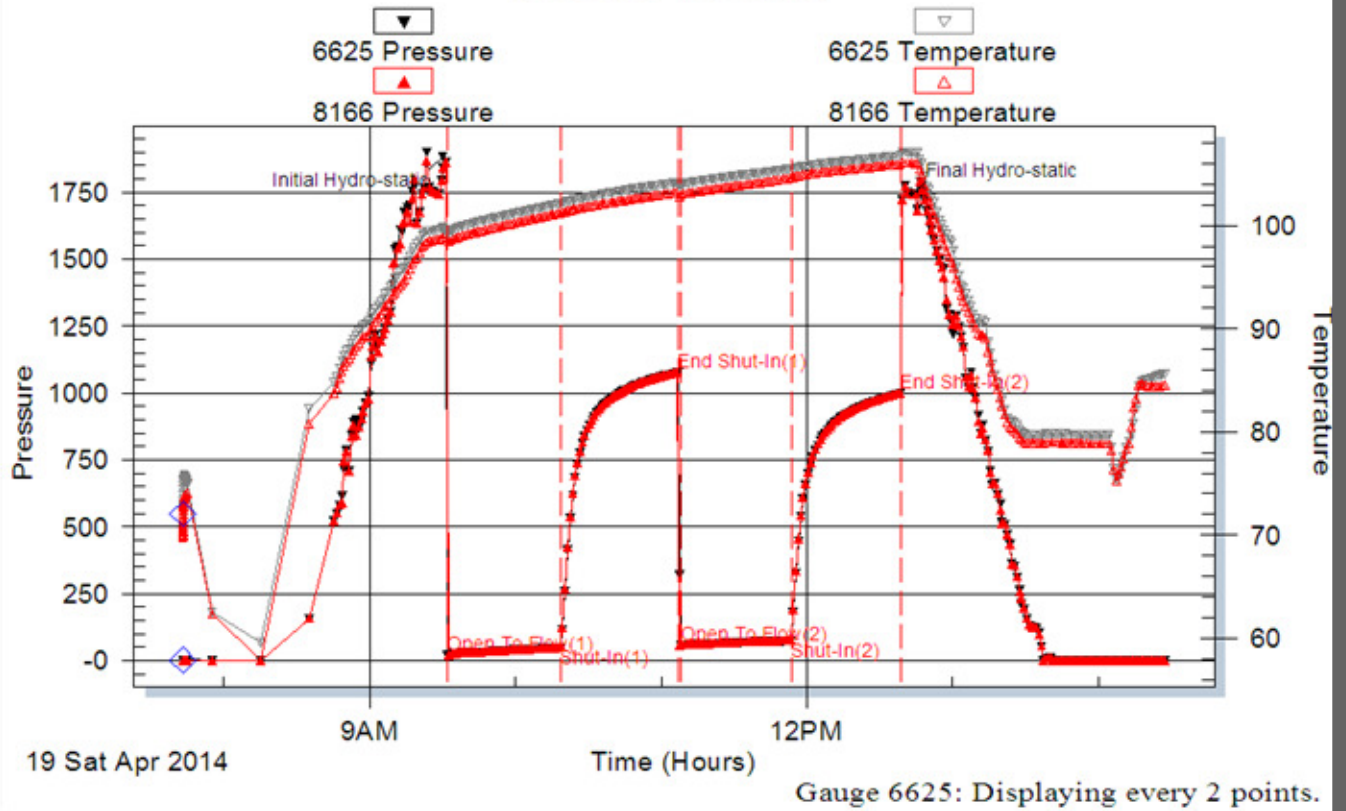
Blow Description: IFP: 1/2" Int. Blow built to 4 1/2" in 45 Min. ISI: No blow back FFP: weak surface blow @ 10 Min. built to 1" FSI: No blow back

Rec: 10 Feet of Clean oil 0% Gas 100% Oil, 53 Feet of SGHOCM 5% Gas 25% Oil 0% Water 70% Mud, 63 Feet of SGHOHWCM 5% Gas 20% Oil 20% Water 55% Mud, Rec. Total: 131', BHT: 110 Gravity: N/A

Initial Hydrostatic: 1884 First Initial Flow: 20 First Final Flow: 50 Initial Shut-In: 1077

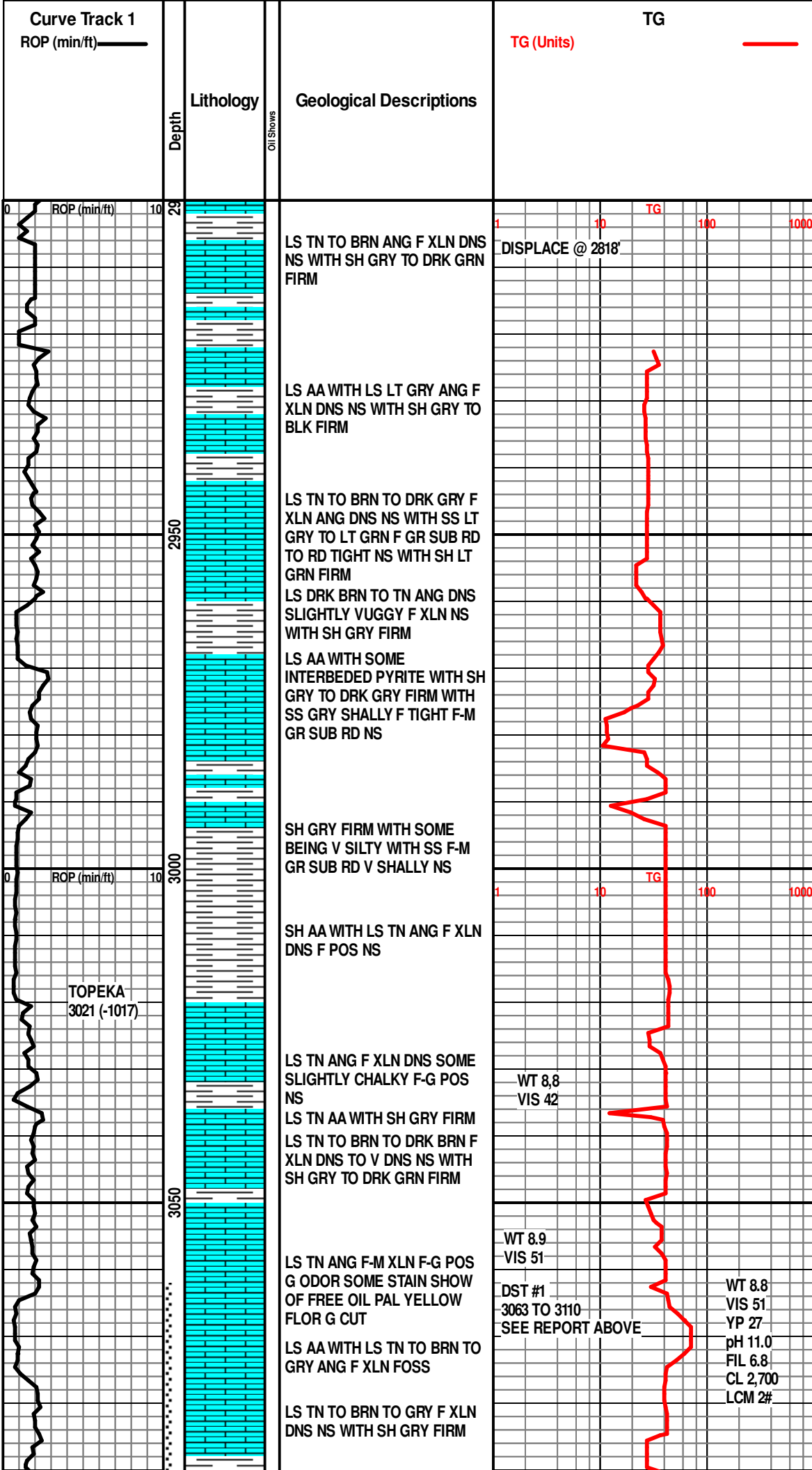
Second Initial Flow: 58 Second Final Flow: 76 Final Shut-In: 997 Final Hydrostatic: 1743

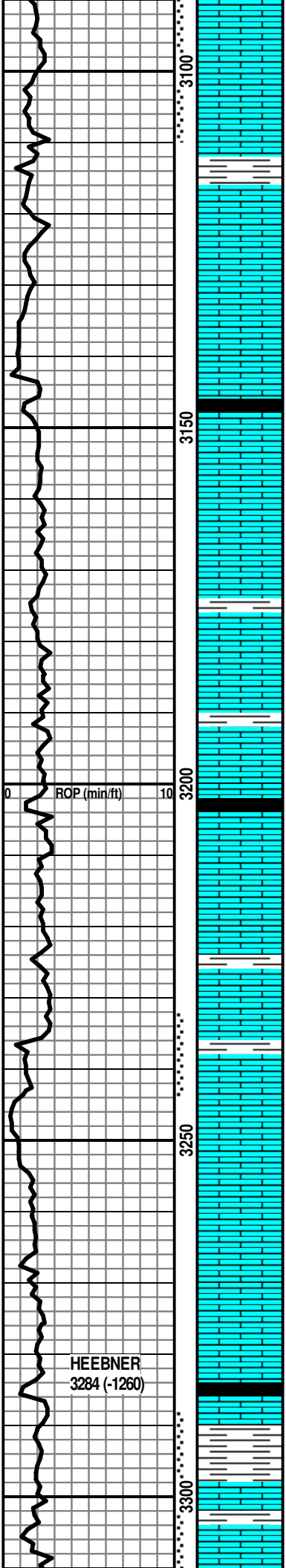
Pressure vs. Time



ROCK TYPES

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





LS AA WITH SH GRN FIRM

LS TN TO BRN ANG F XLN DNS TO V DNS NS WITH TR CHERT DRK GRY SHARP WITH SH GRY FIRM WITH TR PYRITE

LS AA WITH SH GRY TO DRK GRY FIRM

LS BRN ANG F-M XLN MOSTLY DNS SOME V POS NS WITH SH DRK GRY TO BLK SOME CARB

LS CRM TO TN ANG F XLN DNS SOME SLIGHTLY CHERTY NS WITH LS OFF WHT VF XLN CHALKY SOFT

LS CRM TO TN TO BRN ANG F XLN DNS NS

LS AA WITH LS TN ANG F XLN DNS FOS WITH INTERBEDDED PYRITE NS WITH CHERT GRY SHARP V HD

LS TN TO BRN ANG F XLN DNS NS

LS AA WITH INTERBEDDED PYRITE WITH SH BLK CARB

LS CRM TO TN ANG F XLN DNS WITH SOME LS OFF WHT VF XLN CHALKY SOFT

LS CRM TO TN AA WITH SH GRY TO DRK GRY FIRM

LS TN ANG F XLN DNS G PIN POS G ODER G TO VG FLOR G CUT G STAIN GOOD SHOW OF FREE OIL

LS OFF WHT TO TN ANG F XLN SOME VG POS G SHOW AA WITH SOME SLIGHTLY CHALKY

LS TN ANG F XLN DNS NS WITH SH GRY TO GRN FIRM

LS AA WITH CHERT WHT TO GRY SHARP HD

LS TN TO LT TN ANG F XLN DNS WITH SH BLK CARB

LS GRY TO LT BRN ANG F XLN DNS NS SOME SLIGHTLY CHAKLY

LS OFF WHT TO TN ANG F-VF XLN DNS P-VP POS V GOOD STAIN SHOW OF FREE OIL GOOD BRIGHT FLOR GOOD CUT WITH STREAMERS

WT 9.0
VIS 47

WT 9.1
VIS 50

DST #2
3235 TO 3245
SEE REPORT ABOVE

WT 9.1
VIS 54

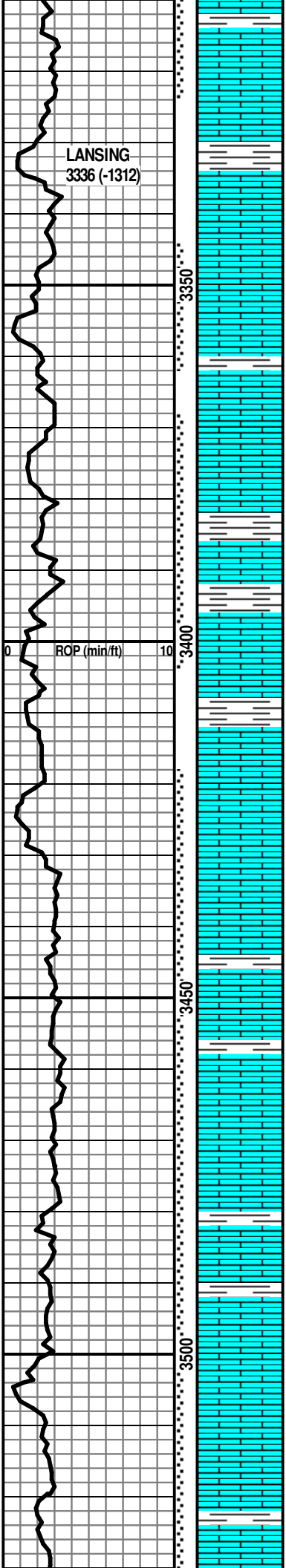
WT 9.0
VIS 46
YP 19
pH 10.5
FIL 7.6
CL 2,800
LCM 2#

DST #3
3289 TO 3324
SEE REPORT ABOVE

HEEBNER
3284 (-1260)

ROP (min/ft)

TG 10 100 1000



LANSING
3336 (-1312)

LS AA WITH SAME SHOW WITH
LS BRN TO DRK BRN ANG V
DNS NS
LS OFF WHT TO TN ANG F XLN
DNS NS
LS GRY TO BRN ANG F XLN
DNS NS WITH SH GRY TO DRK
GRY FIRM
LS GRY TO DRK GRY ANG F
XLN DNS TO V DNS NS

WT 9.1
VIS 53
WT 9.0
VIS 54
YP 25
pH 10.5
FIL 6.0
CL 2,700
LCM 2#

DST #4
3345 TO 3361
SEE REPORT ABOVE

LS TN F XLN G-VG POS VG
STAIN GOOD SHOW OF FREE
OIL PAL FLOR VG CUT

LS AA WITH LS OFF WHT TO
LT TN ANG F XLN DNS NS
LS OFF WHT TO TN ANG F XLN
SLIGHTLY FOSS NS WITH SH
GRY FIRM
LS TN ANG F XLN F TO G POS
GOOD ODOR GOOD OIL STAIN
SLIGHT SHOW OF FREE OIL F
FLOR G CUT

WT 8.9
VIS 45
DST #5
3369 TO 3405
SEE REPORT ABOVE
WT 9.1
VIS 47

LS AA WITH LOTS OF FREE
OIL WITH SH DRK GRY TO BLK
FIRM
LS OFF WHT TO TN ANG F XLN
F POS G STAIN SLIGHT SHOW
OF FREE OIL V FLOR G CUT

LS OFF WHT TO TN TO LT GRY
ANG F XLN DNS WITH LS WHT
VF XLN CHALKY SOFT
MOSTLY LS AA WITH LS TN TO
BRN ANG F XLN DNS F POS
SLIGHTLY FRAC SOME STAIN
SHOW OF FREE OIL G ODOR
G YELLOW FLOR G CUT WITH
STREAMERS LS OFF WHT TO
TN ANG F XLN DNS F POS G
STAIN G ODER SHOW OF
FREE OIL G YELLOW FLOR G
CUT

TG
10 100 1000
WT 9.0
VIS 54
YP 26
pH 10.0
FIL 6.8
CL 3,200
LCM 2#
DST #6
3419 TO 3535
SEE REPORT ABOVE

LS AA WITH LS GRY ANG F
XLN WITH INTERBED SHALLY
DNS WITH LS BRN ANG F TO
VF XLN V DNS NS

LS CRM TO TN ANG F XLN DNS
NS WITH LOTS OF CHERT TN
SHARP HD
LS CRM TO TN AA WITH SOME
SLIGHT STAIN SLIGHT ODOR
NO FREE OIL

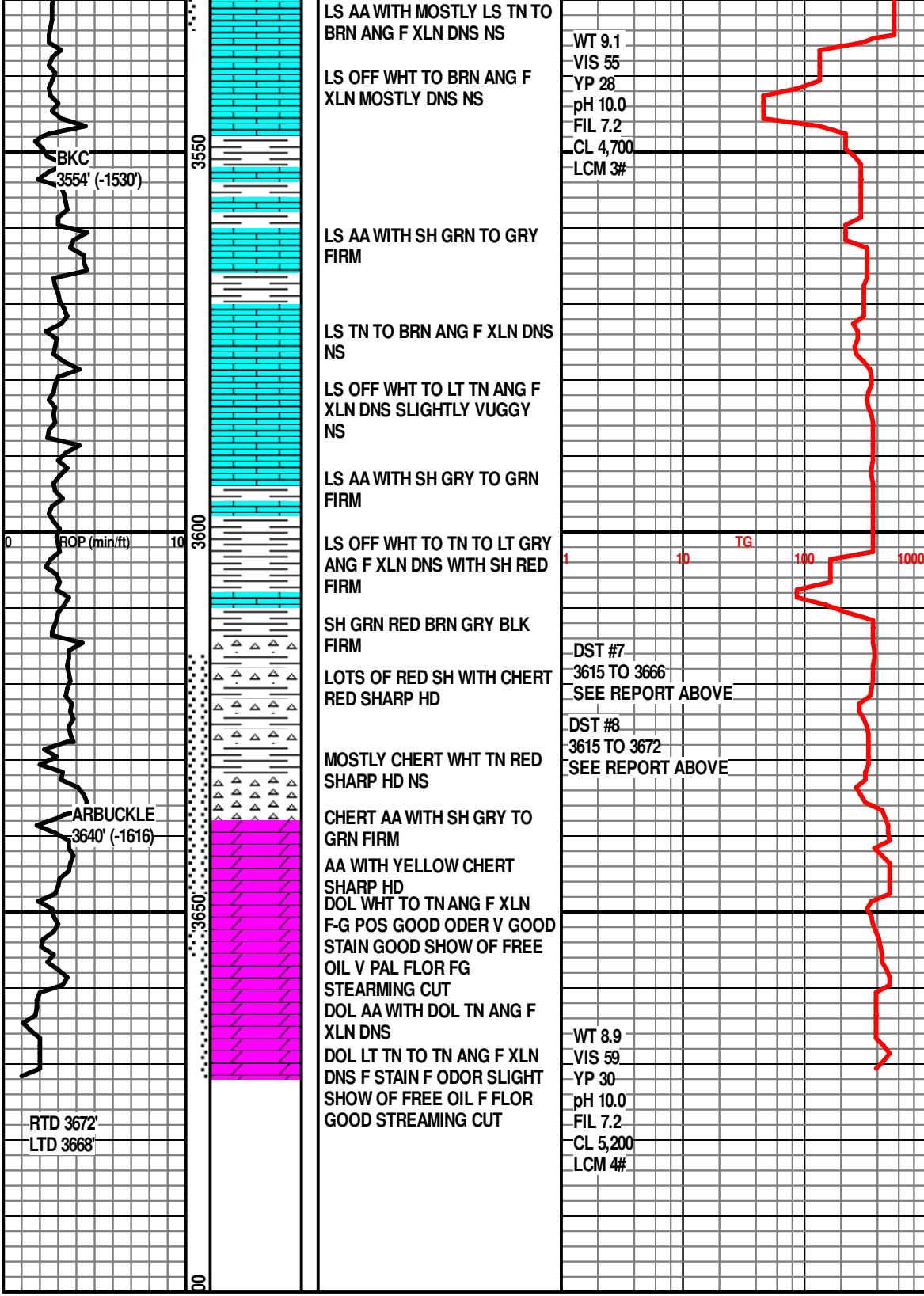
LS AA WITH LESS STAIN WITH
LS BRN ANG F-VF XLN V DNS
NS

LS LT TN ANG F XLN G -VG
OOLIC POS GOOD STAIN F
ODOR VG SHOW OF FREE OIL
G YELLOW FLOR G
STREAMING CUT

WT 9.1
VIS 52

LS AA WITH LS TN ANG F XLN
DNS V SLIGHT OIL STAIN NO
FREE OIL LS CRM TO LT TN
ANG F XLN DNS WITH
INTERBED PYRITE NS

LS OFF WHT TO LT TN ANG F
XLN P-F POS F STAIN GOOD
SHOW OF FREE OIL F FLOR
GOOD CUT WHEN BROKEN



LS AA WITH MOSTLY LS TN TO
BRN ANG F XLN DNS NS

WT 9.1
VIS 55
YP 28
pH 10.0
FIL 7.2
CL 4,700
LCM 3#

LS OFF WHT TO BRN ANG F
XLN MOSTLY DNS NS

LS AA WITH SH GRN TO GRY
FIRM

LS TN TO BRN ANG F XLN DNS
NS

LS OFF WHT TO LT TN ANG F
XLN DNS SLIGHTLY VUGGY
NS

LS AA WITH SH GRY TO GRN
FIRM

ROP (min/ft)

LS OFF WHT TO TN TO LT GRY
ANG F XLN DNS WITH SH RED
FIRM

TG 1 10 100 1000

SH GRN RED BRN GRY BLK
FIRM

DST #7
3615 TO 3666
SEE REPORT ABOVE

LOTS OF RED SH WITH CHERT
RED SHARP HD

DST #8
3615 TO 3672
SEE REPORT ABOVE

MOSTLY CHERT WHT TN RED
SHARP HD NS

ARBUCKLE
3640' (-1616)

CHERT AA WITH SH GRY TO
GRN FIRM

AA WITH YELLOW CHERT
SHARP HD

DOL WHT TO TN ANG F XLN
F-G POS GOOD ODER V GOOD

STAIN GOOD SHOW OF FREE
OIL V PAL FLOR FG

STEARMING CUT
DOL AA WITH DOL TN ANG F

XLN DNS
DOL LT TN TO TN ANG F XLN

DNS F STAIN F ODOR SLIGHT
SHOW OF FREE OIL F FLOR

GOOD STREAMING CUT

WT 8.9
VIS 59
YP 30
pH 10.0
FIL 7.2
CL 5,200
LCM 4#

RTD 3672'
LTD 3668'



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57606

DST#: 1

ATTN: David gould

Test Start: 2014.04.14 @ 01:57:00

GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:02:00

Time Test Ended: 14:26:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 67

Interval: 3063.00 ft (KB) To 3110.00 ft (KB) (TVD)

Reference Elevations: 2024.00 ft (KB)

Total Depth: 3110.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press@RunDepth: 157.28 psig @ 3073.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.14

End Date:

2014.04.14

Last Calib.:

2014.04.14

Start Time: 01:57:01

End Time:

14:26:00

Time On Btm:

2014.04.14 @ 09:00:30

Time Off Btm:

2014.04.14 @ 12:55:30

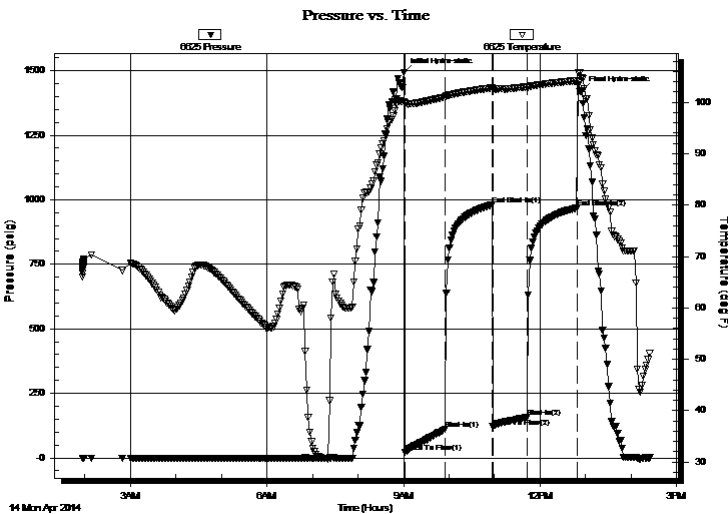
TEST COMMENT: I.F. - 45 - 1/2" INT. BLOW BUILT TO (8" IN 45 MIN.)

I.S.I. - 60 - NO B.B.

F.F. - 45 - W.S.B. STARTED @ 2MIN. BUILT TO (5 1/2" IN 45 MIN.)

F.S.I. - 60 - NO B.B.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1493.54	100.09	Initial Hydro-static
2	21.04	99.88	Open To Flow (1)
54	110.40	101.02	Shut-In(1)
117	979.94	102.78	End Shut-In(1)
117	120.42	102.64	Open To Flow (2)
162	157.28	102.92	Shut-In(2)
228	967.91	104.19	End Shut-In(2)
235	1422.08	104.76	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
292.00	S,O,S,M,W, 5%MUD 95% WATER	1.80

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57606

DST#: 1

ATTN: David gould

Test Start: 2014.04.14 @ 01:57:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
292.00	S,O,S,M,W, 5%MUD 95% WATER	1.800

Total Length: 292.00 ft Total Volume: 1.800 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: R.W. = .12 OHMS @ 53 DEG.

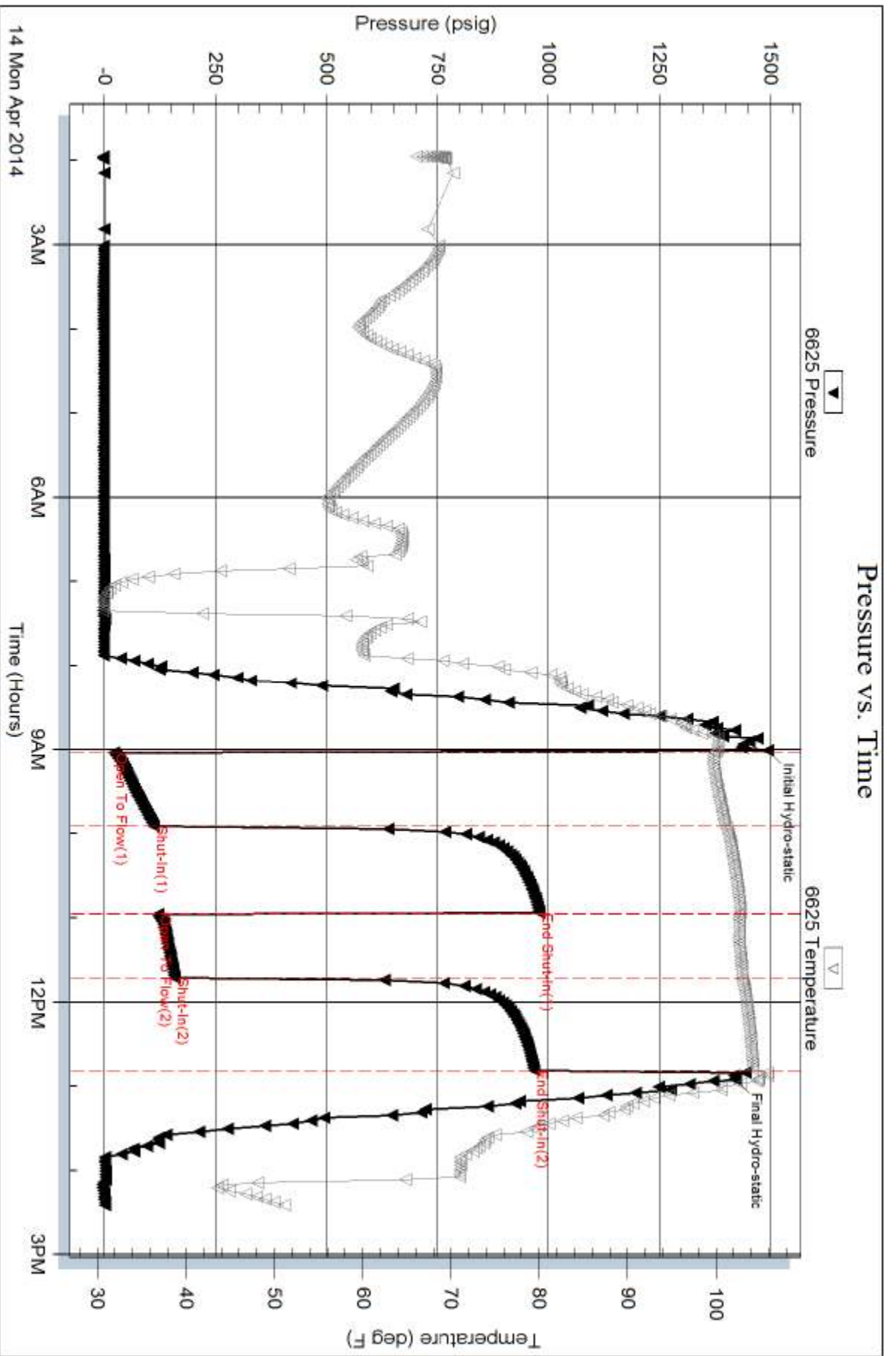
CHLORIDES = 124,000 P.P.M.

Serial #: 6625

Outside HESS OIL COMPANY

Bull Farms # 1-11

DST Test Number: 1





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57517

DST#: 2

ATTN: David gould

Test Start: 2014.04.15 @ 00:28:47

GENERAL INFORMATION:

Formation: **Shaw**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:53:17

Time Test Ended: 13:25:17

Test Type: Conventional Bottom Hole (Reset)

Tester: Phillip Gage

Unit No: 67

Interval: 3235.00 ft (KB) To 3245.00 ft (KB) (TVD)

Reference Elevations: 2024.00 ft (KB)

Total Depth: 3245.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press@RunDepth: 583.19 psig @ 3236.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.15 End Date: 2014.04.15

Last Calib.: 2014.04.15

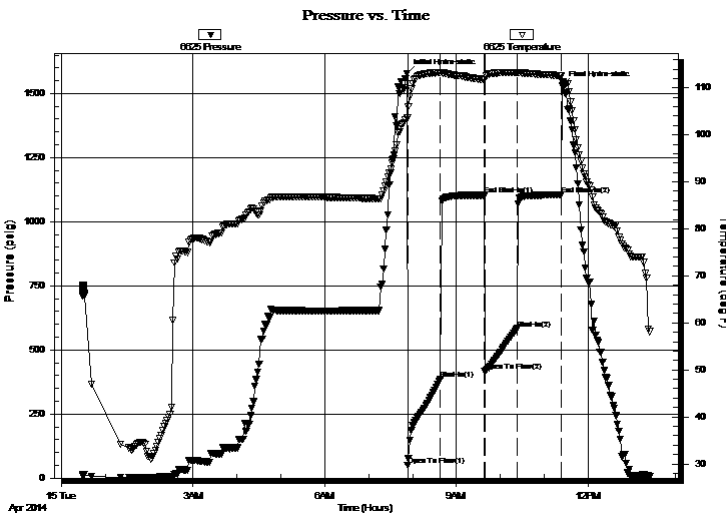
Start Time: 00:28:48 End Time: 13:25:17

Time On Btm: 2014.04.15 @ 07:52:47

Time Off Btm: 2014.04.15 @ 11:25:17

TEST COMMENT: 45-IF-BOB in 14 mins
60-ISI-1/2" Return
45-FF-BOB in 5 mins
60-FSI-5 1/4" Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1578.94	103.58	Initial Hydro-static
1	50.33	103.63	Open To Flow (1)
46	386.15	113.26	Shut-In(1)
106	1103.66	111.72	End Shut-In(1)
106	415.89	111.68	Open To Flow (2)
151	583.19	113.18	Shut-In(2)
211	1104.64	112.50	End Shut-In(2)
213	1530.49	111.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
840.00	sl mcw 95% w 5% m,	9.49
300.00	mcw 60% w 40% m	4.21
30.00	W&MCO 80% O 5% w 5% m	0.42

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57517

DST#: 2

ATTN: David gould

Test Start: 2014.04.15 @ 00:28:47

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: 170000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
840.00	sl mcw 95% w 5% m,	9.487
300.00	mcw 60% w 40% m	4.208
30.00	W&MC O 80% O 5% w 5% m	0.421

Total Length: 1170.00 ft Total Volume: 14.116 bbl

Num Fluid Samples: 0

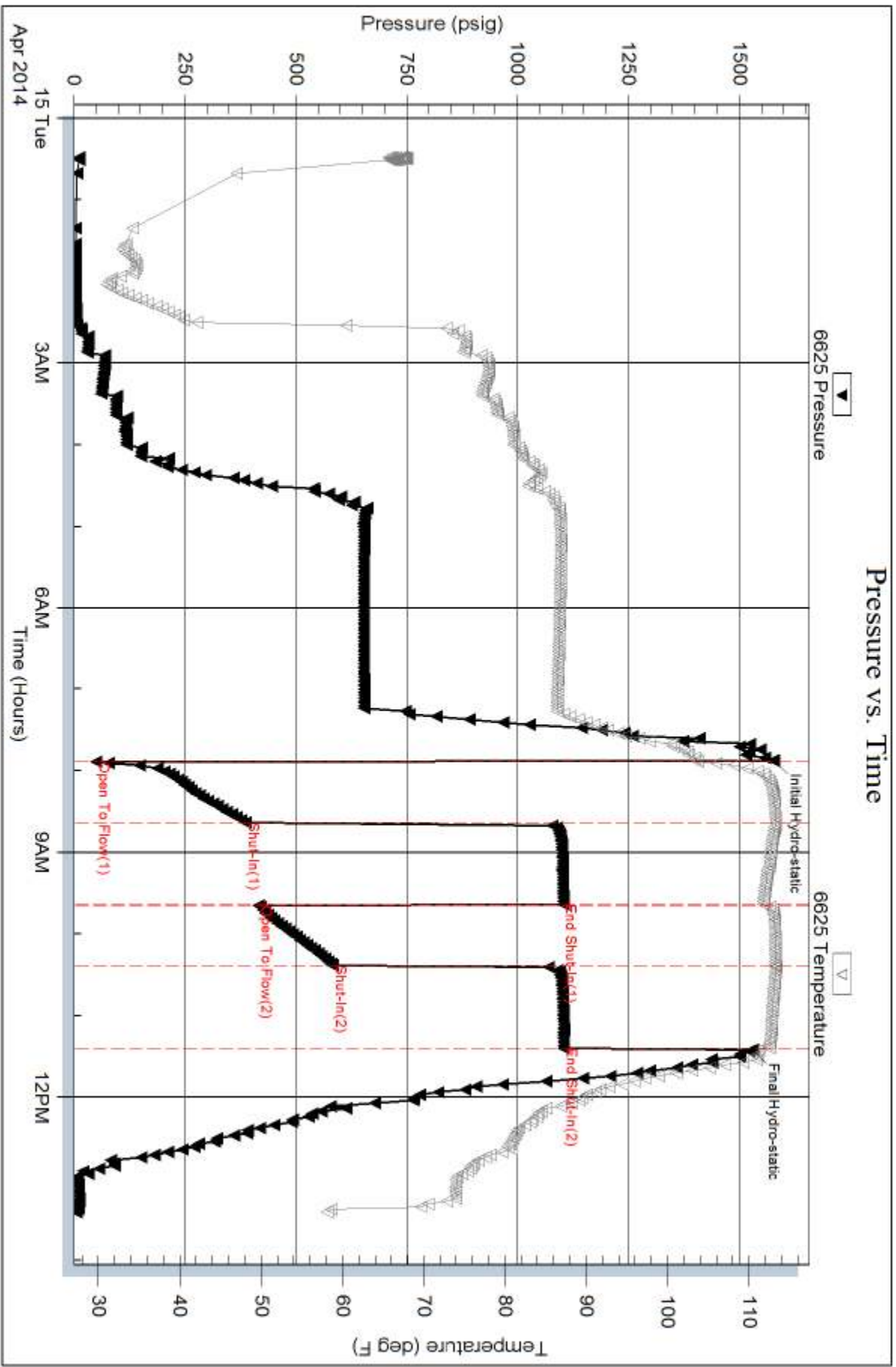
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .06 @ 68= 170,000





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460
ATTN: David gould

Brull Farms # 1-11

Job Ticket: 57518

DST#: 3

Test Start: 2014.04.15 @ 21:43:00

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:22:30

Time Test Ended: 04:57:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Phillip Gage

Unit No: 67

Interval: 3289.00 ft (KB) To 3324.00 ft (KB) (TVD)

Reference Elevations: 2024.00 ft (KB)

Total Depth: 3324.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press@RunDepth: 198.68 psig @ 3290.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.15

End Date:

2014.04.16

Last Calib.:

2014.04.16

Start Time: 21:43:01

End Time:

04:57:30

Time On Btm:

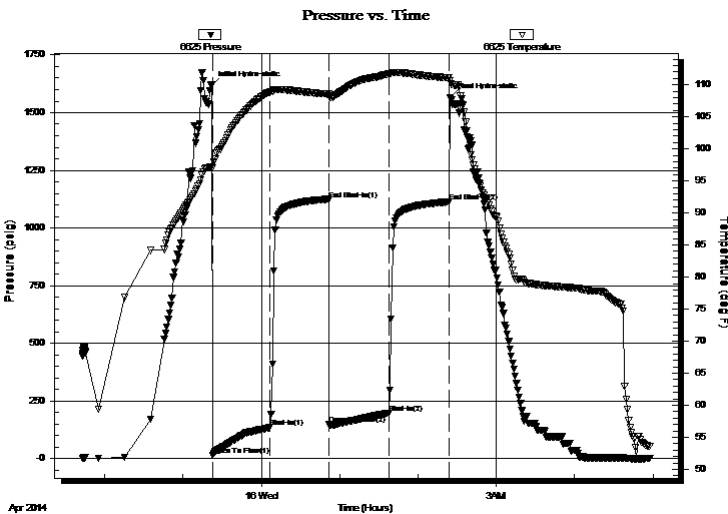
2014.04.15 @ 23:22:00

Time Off Btm:

2014.04.16 @ 02:24:30

TEST COMMENT: 45-IF-BOB in 5 mins
60-ISI-5 3/4" Return
45-FF-BOB in 9 mins
60-FSI-7 1/4" Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1618.76	97.17	Initial Hydro-static
1	15.90	97.06	Open To Flow (1)
45	135.98	108.89	Shut-In(1)
90	1122.14	108.55	End Shut-In(1)
90	148.64	108.25	Open To Flow (2)
136	198.68	111.68	Shut-In(2)
182	1113.64	111.08	End Shut-In(2)
183	1563.23	110.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MW, 10%m, 90%w , with oil spots	1.18
63.00	GMCW, 10%g, 10%m, 80%w , with oil spots	0.77
93.00	GWCO, 10%g, 10%w , 80%o	1.30

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57518

DST#: 3

ATTN: David gould

Test Start: 2014.04.15 @ 21:43:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
240.00	MW, 10% <i>m</i> , 90% <i>w</i> , with oil spots	1.180
63.00	GMCW, 10% <i>g</i> , 10% <i>m</i> , 80% <i>w</i> , with oil spots	0.774
93.00	GWCO, 10% <i>g</i> , 10% <i>w</i> , 80% <i>o</i>	1.305

Total Length: 396.00 ft Total Volume: 3.259 bbl

Num Fluid Samples: 0

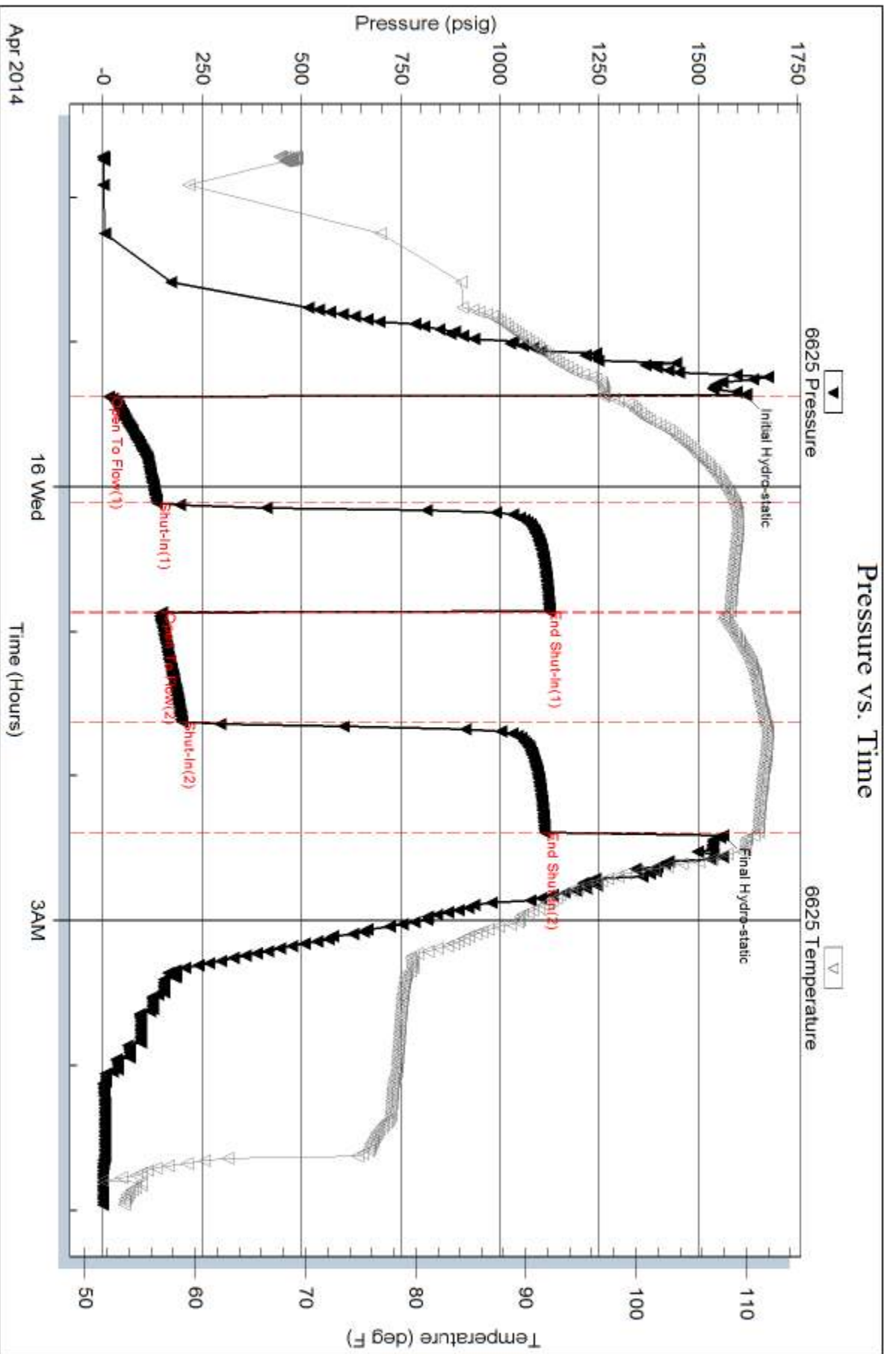
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .08 @ 50 degrees = 175,000 Salinity





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57519

DST#: 4

ATTN: David Gould

Test Start: 2014.04.16 @ 11:36:00

GENERAL INFORMATION:

Formation: **LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:50:30

Time Test Ended: 18:44:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Phillip Gage

Unit No: 67

Interval: 3345.00 ft (KB) To 3361.00 ft (KB) (TVD)

Reference Elevations: 2024.00 ft (KB)

Total Depth: 3361.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 108.99 psig @ 3346.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.16

End Date: 2014.04.16

Last Calib.: 2014.04.16

Start Time: 11:36:01

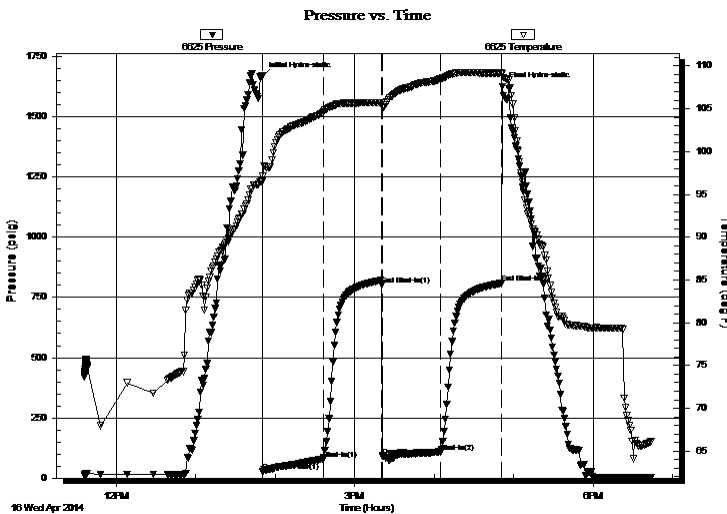
End Time: 18:44:00

Time On Btm: 2014.04.16 @ 13:50:00

Time Off Btm: 2014.04.16 @ 16:51:30

TEST COMMENT: 45-IF-BOB in 5 mins
45-ISI-Return built to 1 1/4", died back to 3/4"
45-FF-BOB in 5 mins
45-FSI-Return built to 1 3/4", died back to 1"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1668.39	96.53	Initial Hydro-static
1	26.50	97.10	Open To Flow (1)
46	79.58	104.54	Shut-In(1)
91	803.16	105.73	End Shut-In(1)
91	91.21	105.21	Open To Flow (2)
135	108.99	108.48	Shut-In(2)
181	808.12	109.16	End Shut-In(2)
182	1624.05	109.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MOCG, 10%g, 40%o, 50%g	1.18
15.00	GMCO, 10%g, 40%g, 50%o	0.10
10.00	O, 100%	0.14

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57519

DST#: 4

ATTN: David gould

Test Start: 2014.04.16 @ 11:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

422 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
240.00	MOCG, 10%m, 40%o, 50%g	1.180
15.00	GMCO, 10%g, 40%m, 50%o	0.101
10.00	O, 100%	0.140

Total Length: 265.00 ft

Total Volume: 1.421 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

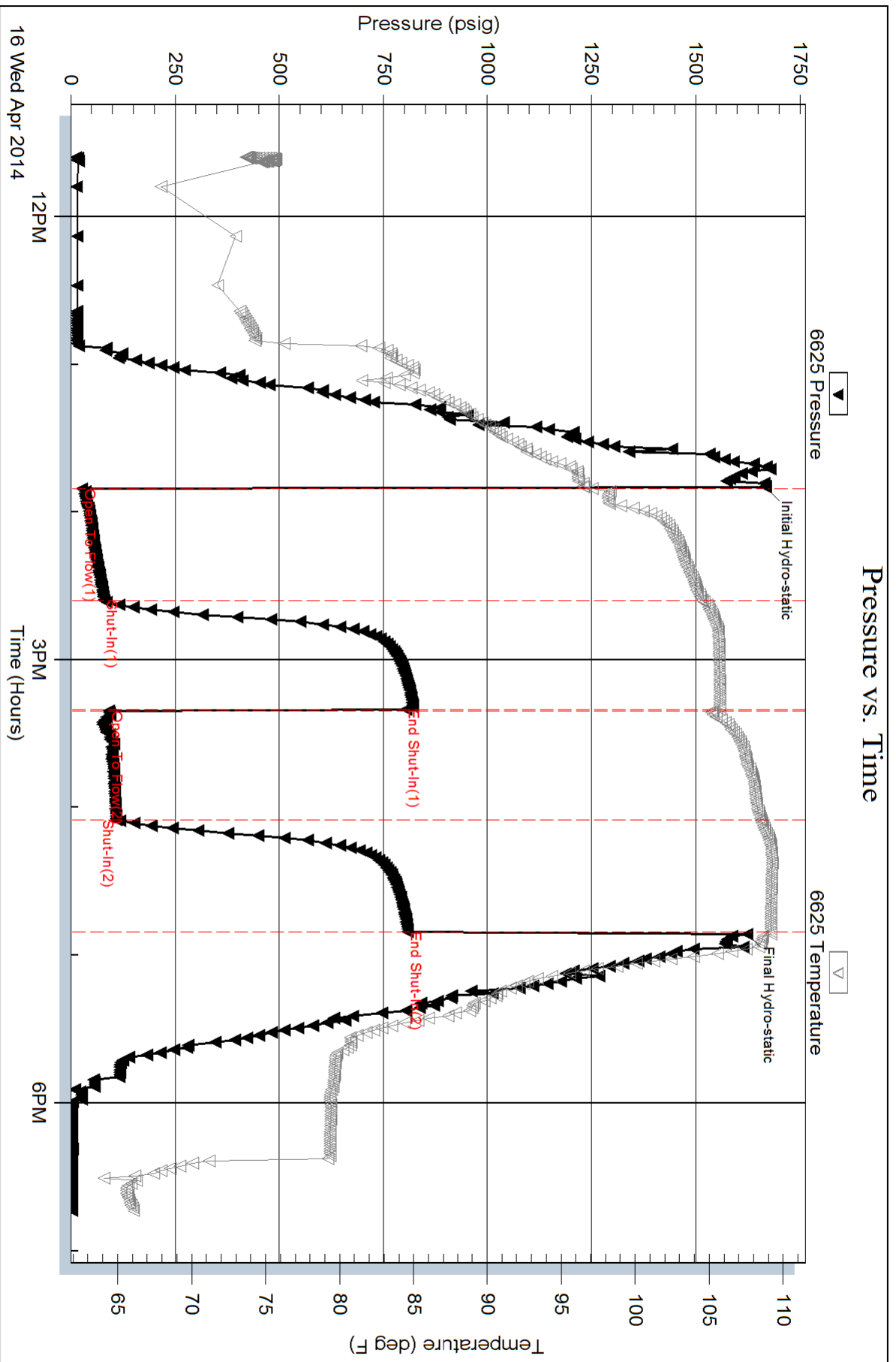
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57520

DST#: 5

ATTN: David gould

Test Start: 2014.04.17 @ 00:34:00

GENERAL INFORMATION:

Formation: **LKC "B&C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:48:30

Time Test Ended: 09:03:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Phillip Gage

Unit No: 67

Interval: 3369.00 ft (KB) To 3405.00 ft (KB) (TVD)

Reference Elevations: 2024.00 ft (KB)

Total Depth: 3405.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 213.86 psig @ 3370.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.17

End Date:

2014.04.17

Last Calib.:

2014.04.17

Start Time: 00:34:01

End Time:

09:03:00

Time On Btm:

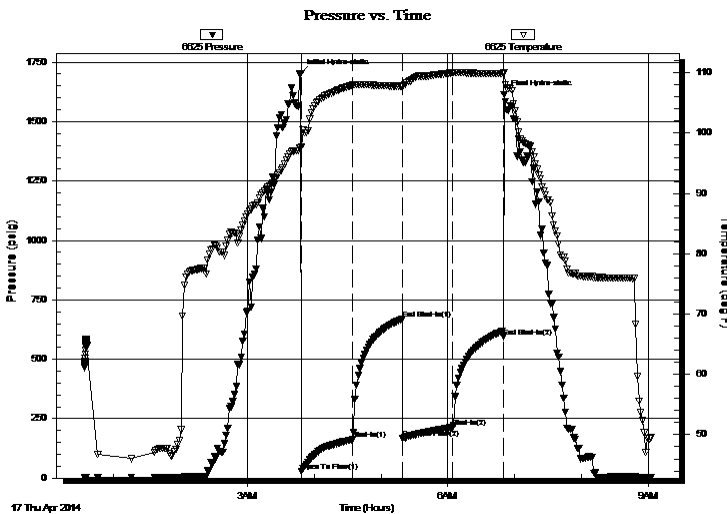
2014.04.17 @ 03:48:00

Time Off Btm:

2014.04.17 @ 06:50:30

TEST COMMENT: 45-IF-BOB in 11 mins
45-ISI-No Return
45-FF-BOB in 21 mins
45-FSI-1/4" Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1702.97	97.59	Initial Hydro-static
1	28.31	97.73	Open To Flow (1)
47	161.92	107.97	Shut-In(1)
91	667.91	107.79	End Shut-In(1)
92	167.54	107.73	Open To Flow (2)
137	213.86	110.03	Shut-In(2)
182	595.09	109.84	End Shut-In(2)
183	1612.72	110.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	MW, 10% m, 90% w, with oil spots	0.89
241.00	WM, 10w, 90% m, with oil spots	2.72

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57520

DST#: 5

ATTN: David gould

Test Start: 2014.04.17 @ 00:34:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
180.00	MW, 10%m, 90%w , w ith oil spots	0.885
241.00	WM, 10w , 90%m, w ith oil spots	2.725

Total Length: 421.00 ft Total Volume: 3.610 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

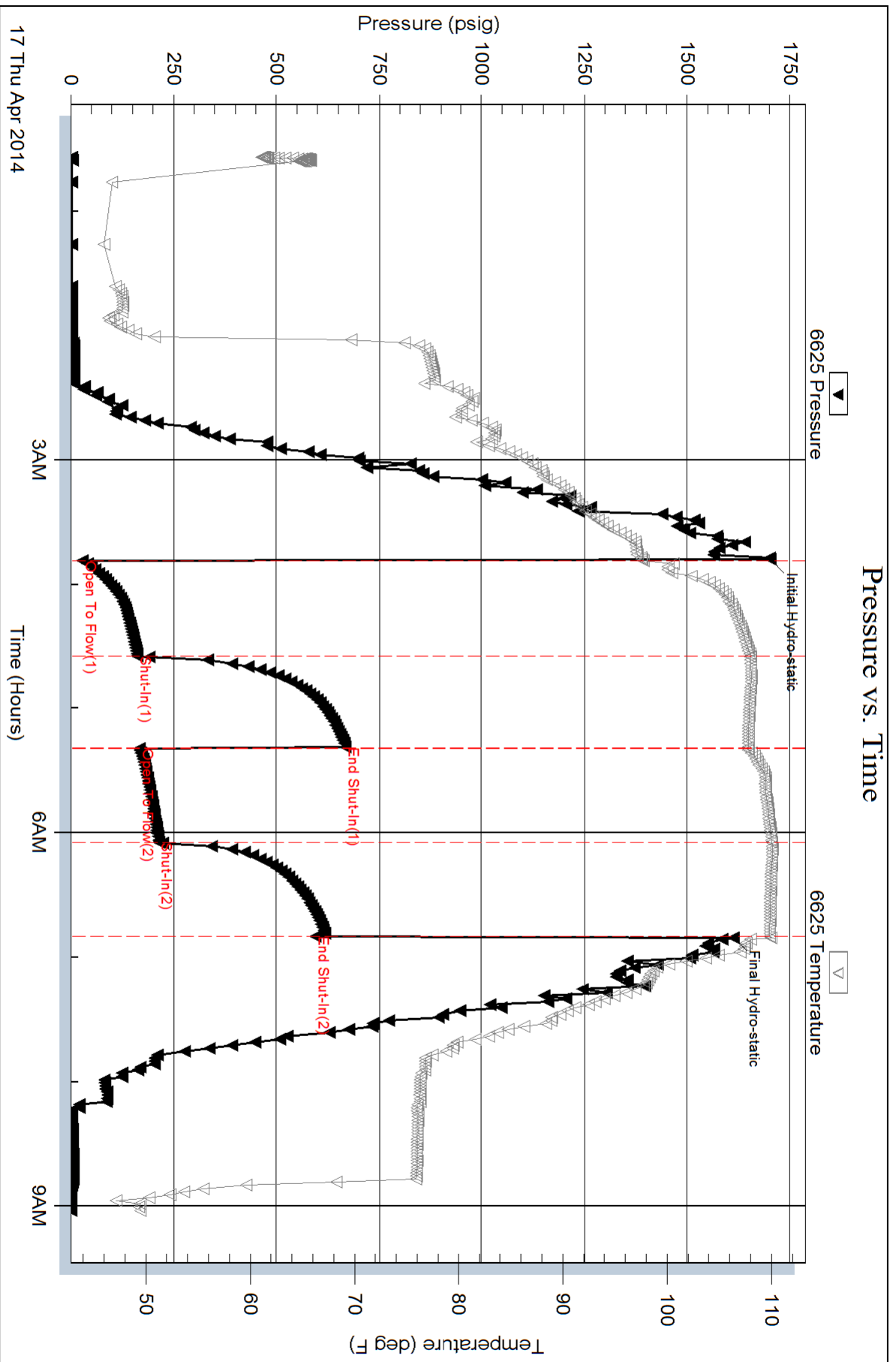
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .09 @ 46 degrees = 175,000 Salinity

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57521

DST#: 6

ATTN: David gould

Test Start: 2014.04.17 @ 20:30:00

GENERAL INFORMATION:

Formation: **Lower Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:20:30

Time Test Ended: 04:33:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Phillip Gage

Unit No: 67

Interval: 3419.00 ft (KB) To 3535.00 ft (KB) (TVD)

Reference Elevations: 2024.00 ft (KB)

Total Depth: 3535.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 137.15 psig @ 3434.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.17 End Date: 2014.04.18

Last Calib.: 2014.04.18

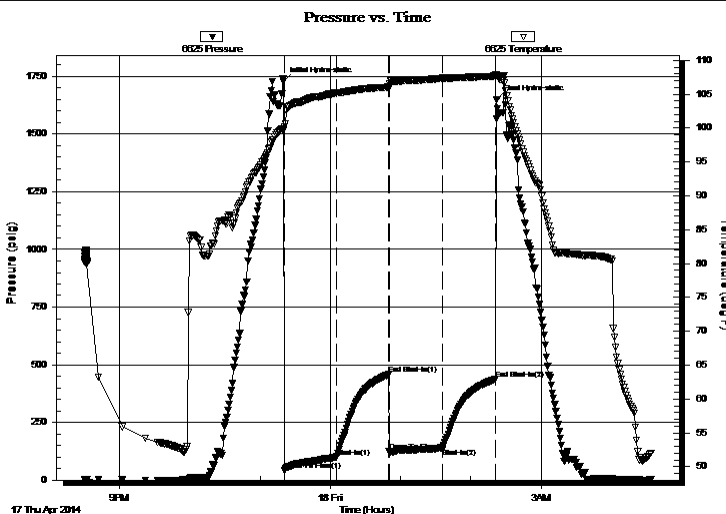
Start Time: 20:30:01 End Time: 04:33:30

Time On Btm: 2014.04.17 @ 23:20:00

Time Off Btm: 2014.04.18 @ 02:22:00

TEST COMMENT: 45-IF-BOB in 10 mins
45-ISI-Return built to 1", died back to weak surface blow.
45-FF-Built to 8"
45-FSI-Return built to 1/2", died in 33 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1727.66	99.65	Initial Hydro-static
1	42.49	100.23	Open To Flow (1)
45	100.67	105.23	Shut-In(1)
90	457.60	106.05	End Shut-In(1)
90	123.36	105.96	Open To Flow (2)
136	137.15	107.36	Shut-In(2)
181	437.38	107.67	End Shut-In(2)
182	1649.44	107.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MW, 40%m, 60%w with oil spots	0.30
210.00	M, 100%m, with oil spots	1.20

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57521

DST#: 6

ATTN: David gould

Test Start: 2014.04.17 @ 20:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
60.00	MW, 40% m, 60% w with oil spots	0.295
210.00	M, 100% m, with oil spots	1.197

Total Length: 270.00 ft Total Volume: 1.492 bbf

Num Fluid Samples: 0

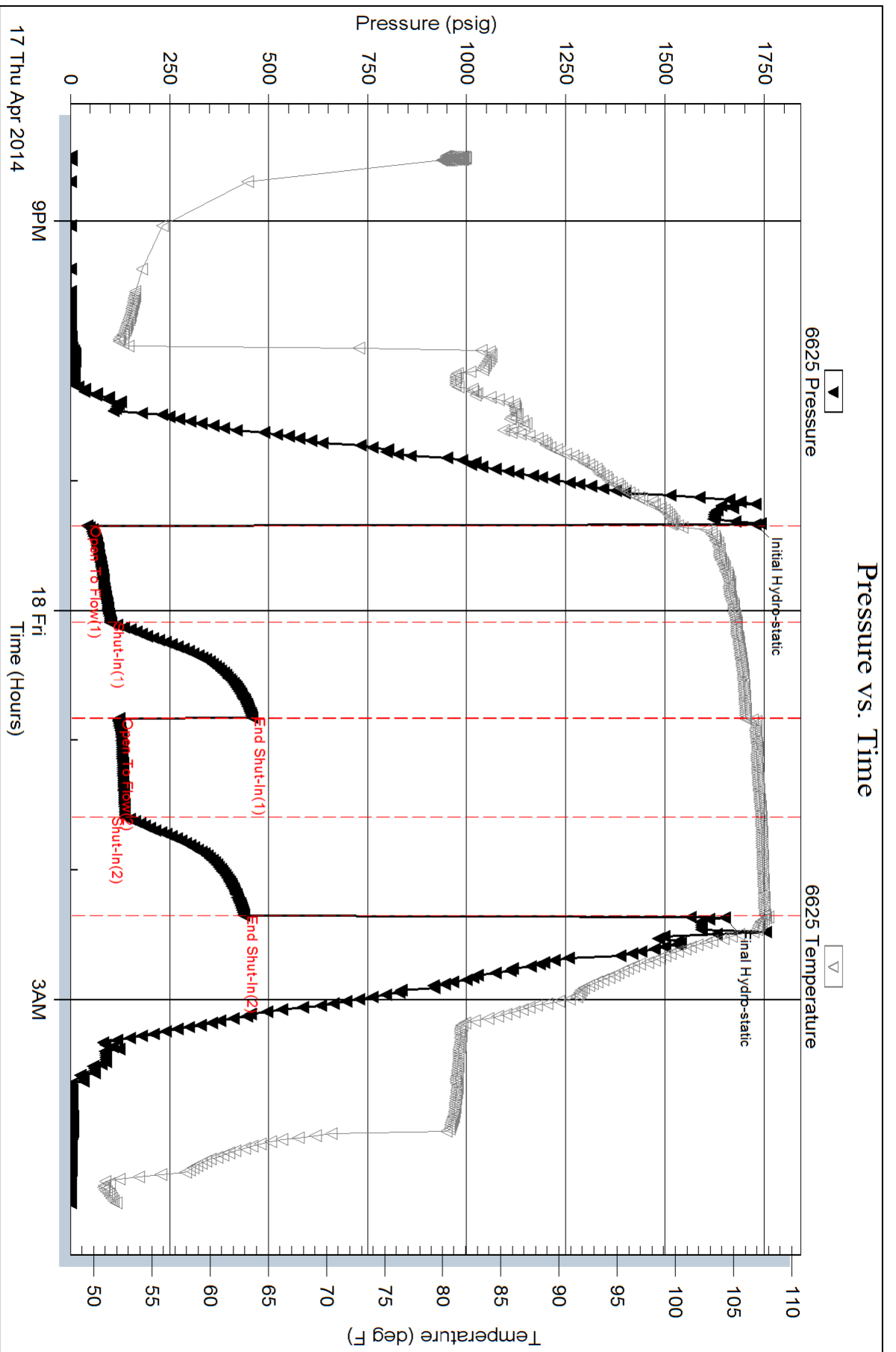
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .18 @ 49 degrees = 44,000 Salinity





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57522

DST#: 7

ATTN: David gould

Test Start: 2014.04.18 @ 17:10:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:09:00

Time Test Ended: 01:13:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Phillip Gage

Unit No: 67

Interval: 3615.00 ft (KB) To 3666.00 ft (KB) (TVD)

Reference Elevations: 2024.00 ft (KB)

Total Depth: 3666.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 34.11 psig @ 3630.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.18

End Date:

2014.04.19

Last Calib.:

2014.04.19

Start Time: 17:10:01

End Time:

01:13:00

Time On Btm:

2014.04.18 @ 20:08:30

Time Off Btm:

2014.04.18 @ 23:15:30

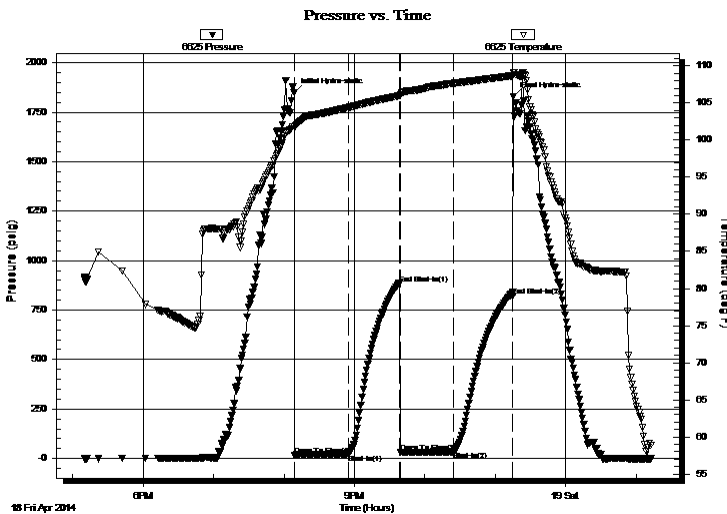
TEST COMMENT: 45-IF-Built to 1", died back to 3/4"

45-ISI-No Return

45-FF-No Blow

45-FSI-No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1848.35	101.83	Initial Hydro-static
1	16.38	101.80	Open To Flow (1)
46	23.53	104.39	Shut-In(1)
90	883.81	105.98	End Shut-In(1)
91	30.35	106.00	Open To Flow (2)
136	34.11	107.64	Shut-In(2)
187	820.06	108.66	End Shut-In(2)
187	1829.18	109.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	M, 100% m, w ith light oil skim.	0.15

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57522

DST#: 7

ATTN: David gould

Test Start: 2014.04.18 @ 17:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4700.00 ppm

Filter Cake: 3.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	M, 100% m, with light oil skim.	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

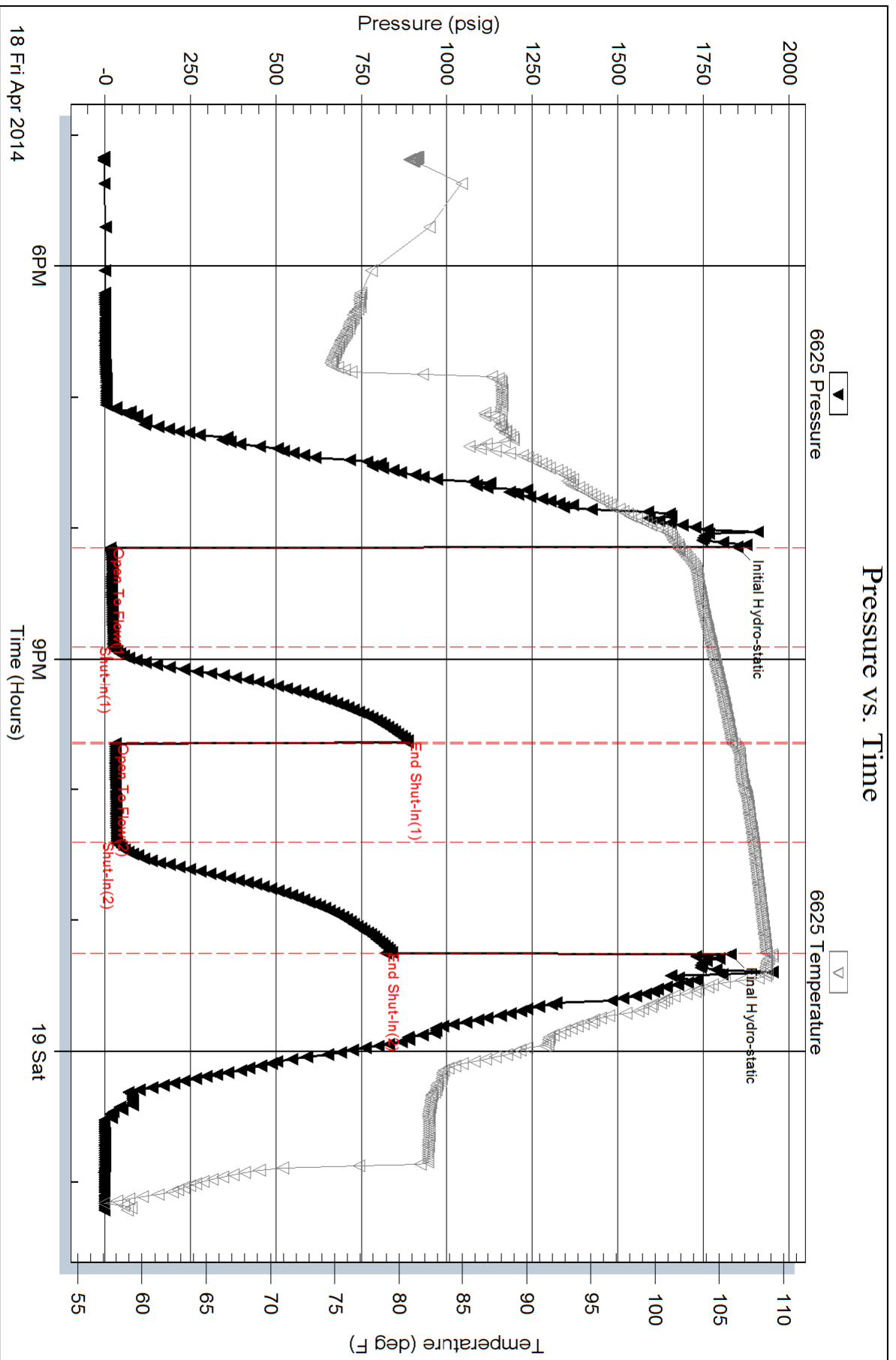
Serial #: 6625

Outside HESS OIL COMPANY

Bull Farms # 1-11

DST Test Number: 7

Pressure vs. Time





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57607

DST#: 8

ATTN: David gould

Test Start: 2014.04.19 @ 07:43:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:32:00

Time Test Ended: 14:27:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3615.00 ft (KB) To 3672.00 ft (KB) (TVD)

Reference Elevations: 2024.00 ft (KB)

Total Depth: 3672.00 ft (KB) (TVD)

2019.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 75.57 psig @ 3621.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.19 End Date: 2014.04.19

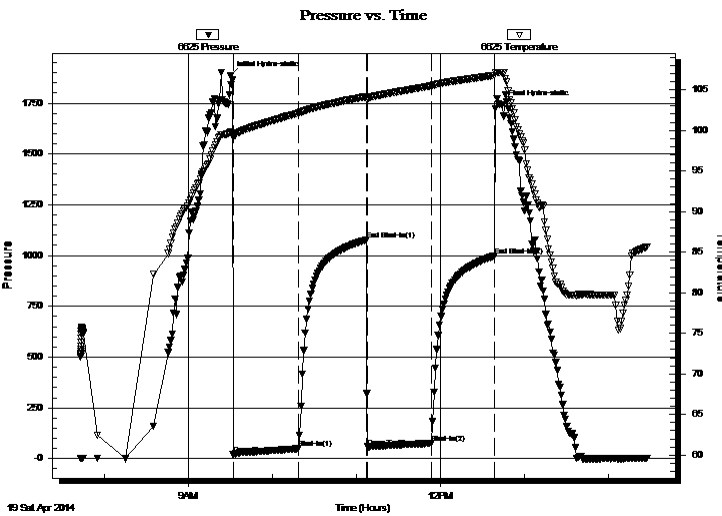
Last Calib.: 1899.12.30

Start Time: 07:43:01 End Time: 14:27:30

Time On Btm: 2014.04.19 @ 09:30:00

Time Off Btm: 2014.04.19 @ 12:43:30

TEST COMMENT: I.F. - 45 - 1/2" INT. BLOW BUILT TO (4 1/2" IN 45 MIN.)
I.S.I. - 45 - NO B.B.
F.F. - 45 - W.S.B STARTED @ 10 MIN. BUILT TO (1" IN 45 MIN.)
F.S.I. - 45 - NO B.B.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1884.33	99.78	Initial Hydro-static
2	19.60	99.17	Open To Flow (1)
49	50.28	102.13	Shut-In(1)
97	1076.55	104.17	End Shut-In(1)
98	58.23	103.98	Open To Flow (2)
144	75.57	105.50	Shut-In(2)
189	997.45	106.77	End Shut-In(2)
194	1742.62	107.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,G,H,O,H,W,C,M 5%G 20%O 20%W 55%M	0.31
53.00	S,G,H,O,C,M 5%G 25%O 70%M	0.26
10.00	CLEAN OIL 100 %	0.05

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

HESS OIL COMPANY

P.O. BOX 1009
McPHERSON KS.
67460
ATTN: David gould

SEC. 25 - 13 s. - 19 w. / ELLIS

Brull Farms # 1-11

Job Ticket: 57607

DST#: 8

Test Start: 2014.04.19 @ 07:43:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:32:00

Time Test Ended: 14:27:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3615.00 ft (KB) To 3672.00 ft (KB) (TVD)

Total Depth: 3672.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2024.00 ft (KB)

2019.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8166

Press @ Run Depth: psig @ ft (KB)

Start Date: 2014.04.19

End Date: 2014.04.19

Start Time: 07:43:01

End Time: 14:27:30

Capacity: 8000.00 psig

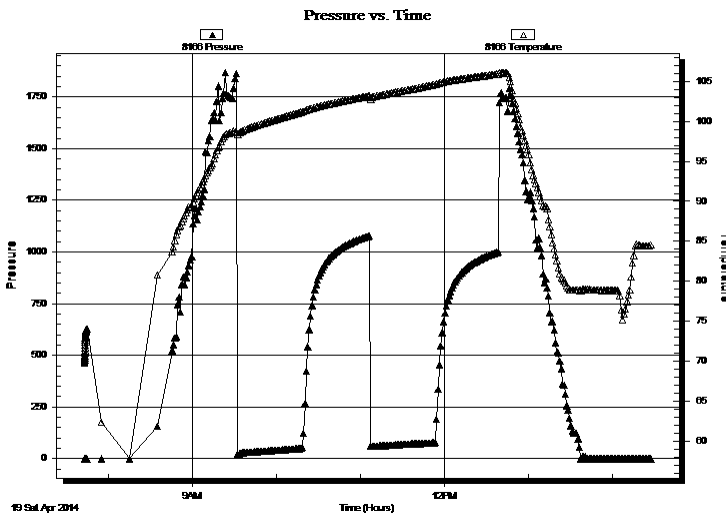
Last Calib.: 2014.04.19

Time On Btm:

Time Off Btm:

TEST COMMENT: I.F. - 45 - 1/2" INT. BLOW BUILT TO (4 1/2" IN 45 MIN.)
I.S.I. - 45 - NO B.B.
F.F. - 45 - W.S.B STARTED @ 10 MIN. BUILT TO (1" IN 45 MIN.)
F.S.I. - 45 - NO B.B.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,G,H,O,H,W,C,M 5%G 20%O 20%W 55%	0.31
53.00	S,G,H,O,C,M 5%G 25%O 70%M	0.26
10.00	CLEAN OIL 100 %	0.05

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

HESS OIL COMPANY

SEC. 25 - 13 s. - 19 w./ ELLIS

P.O. BOX 1009
McPHERSON KS.
67460

Brull Farms # 1-11

Job Ticket: 57607

DST#: 8

ATTN: David gould

Test Start: 2014.04.19 @ 07:43:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.10 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	S,G,H,O,H,W,C,M 5%G 20%O 20%W 55%M	0.310
53.00	S,G,H,O,C,M 5%G 25%O 70%M	0.261
10.00	CLEAN OIL 100 %	0.049

Total Length: 126.00 ft

Total Volume: 0.620 bbl

Num Fluid Samples: 0

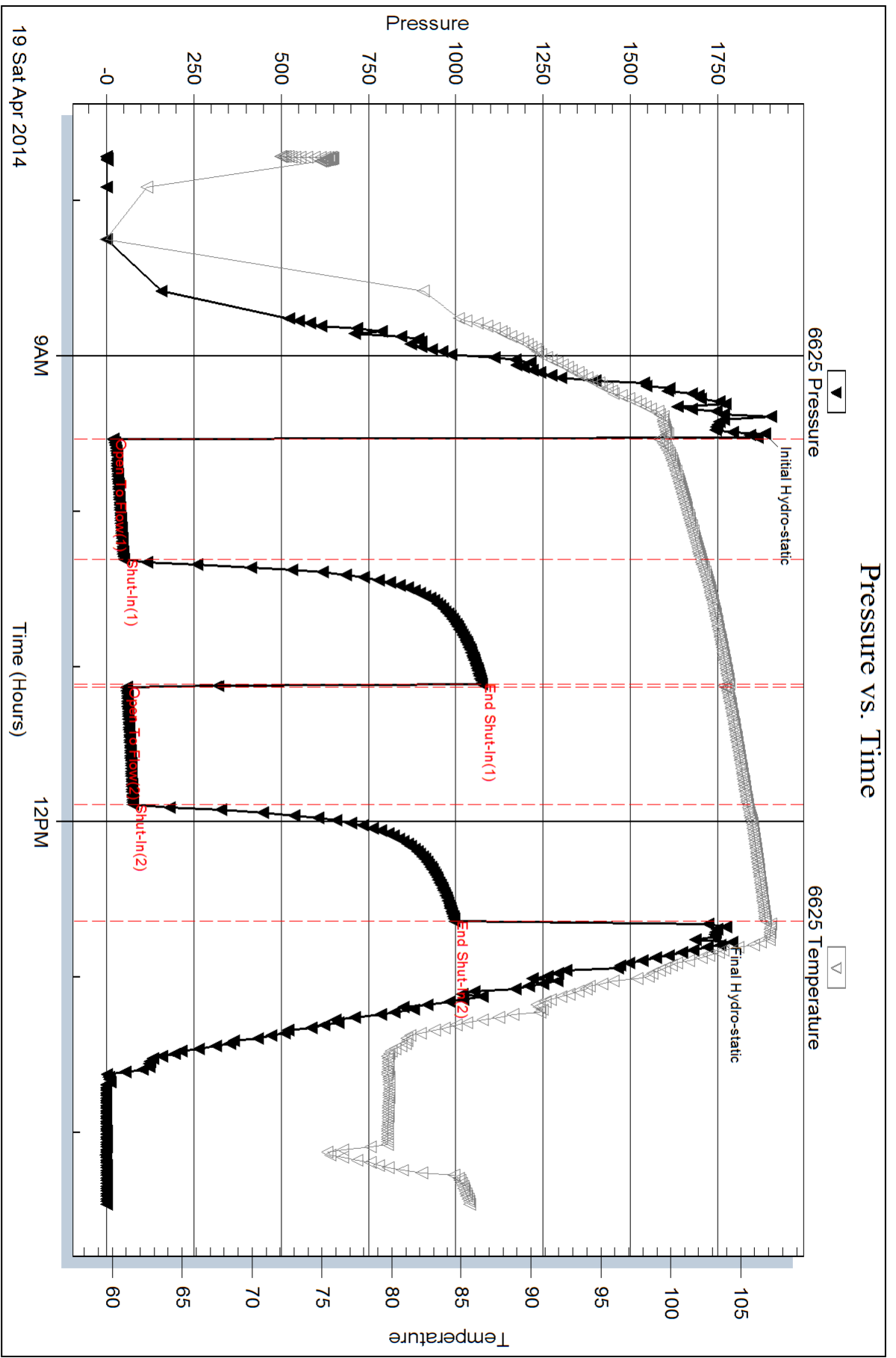
Num Gas Bombs: 0

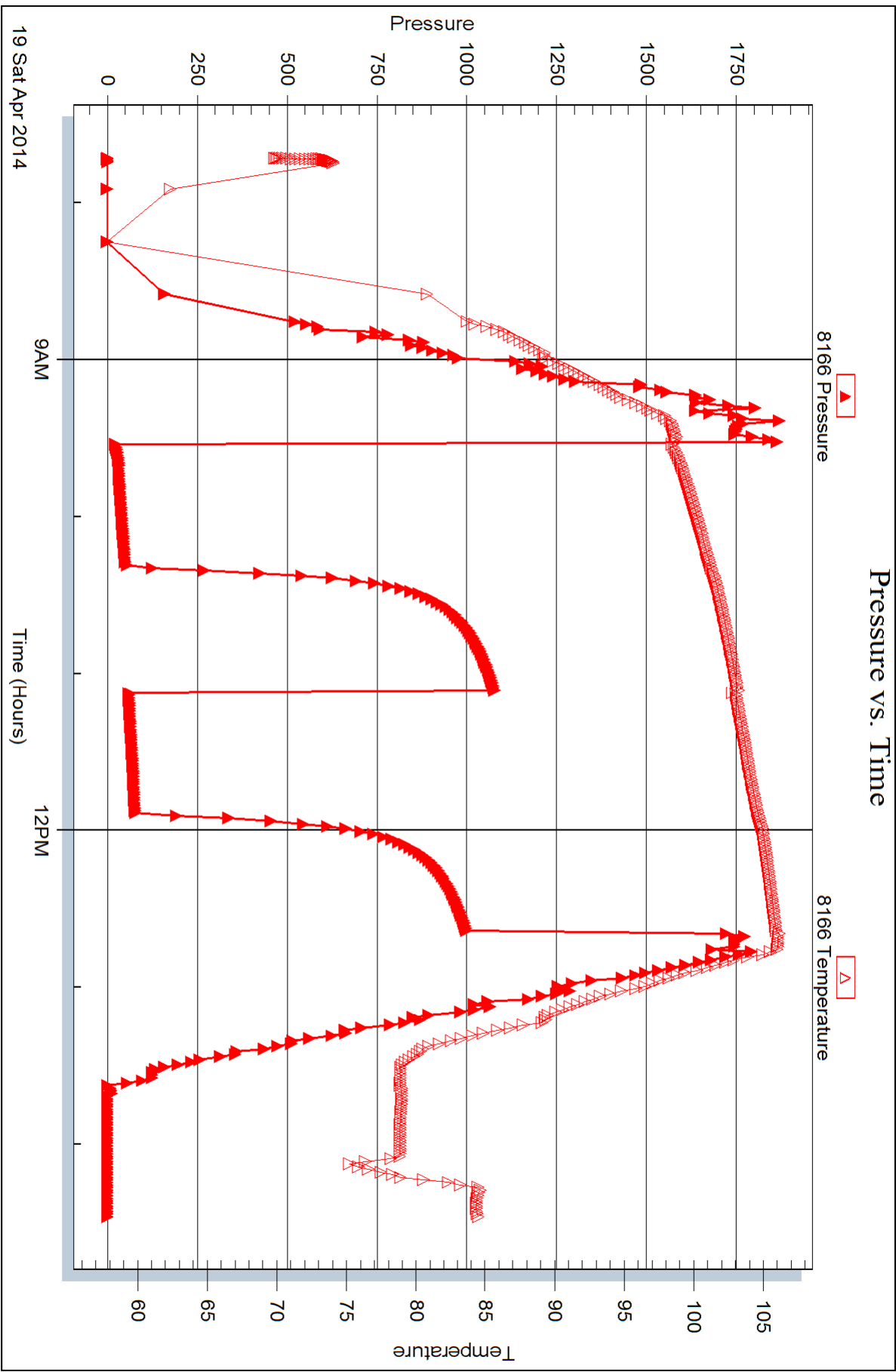
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





ALLIED OIL & GAS SERVICES, LLC 055217

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Russell KS

DATE <u>4-10-14</u>	SEC. <u>25</u>	TWP. <u>13</u>	RANGE <u>19</u>	CALLED OUT	ON LOCATION	JOB START <u>10:00 AM</u>	JOB FINISH <u>10:30 PM</u>
LEASE <u>Brill Farms</u>	WELL# <u>1</u>	LOCATION <u>Hays KS-E70 25</u>			COUNTY <u>E11W</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)		<u>2.62 into</u>					

CONTRACTOR Mallard OWNER _____

TYPE OF JOB surface

HOLE SIZE 12 1/4 T.D. 218 CEMENT AMOUNT ORDERED 150 com 3% cc 2% gel

CASING SIZE 8 5/8 20" DEPTH 218

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT 15

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT 13 bbl

EQUIPMENT

PUMP TRUCK CEMENTER Robert Y

409 HELPER Nathan D

BULK TRUCK _____

378 DRIVER Kevin R

BULK TRUCK _____

_____ DRIVER _____

REMARKS:

see log

cement did circulate to surface

Thank you!!!

CHARGE TO: Hess Oil Company

STREET _____

CITY _____ STATE _____ ZIP _____

CEMENT AMOUNT ORDERED 150 com 3% cc 2% gel

COMMON 150 @ 17.90 2685.00

POZMIX _____ @ _____

GEL 2.92 @ 0.24 67.68

CHLORIDE 423 @ 0.80 338.40

ASC _____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING 150 st @ 2.48 372.00

MILEAGE 70.54/m @ 2.60 183.30

TOTAL 3646.38

911.59 @ 25%

SERVICE

DEPTH OF JOB 218

PUMP TRUCK CHARGE 1512.25

EXTRA FOOTAGE @ _____

MILEAGE 10 LVMF @ 4.40 44.00

MANIFOLD @ _____

20 HVMF @ 7.70 154.00

_____ @ _____

1710.25

421.59 @ 25%

TOTAL 3646.38

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES 5356.63

DISCOUNT 1339.16 IF PAID IN 30 DAYS

net \$ 4017.47

PRINTED NAME Frank Symank

SIGNATURE Frank Symank

SUCCESS

ALLIED OIL & GAS SERVICES, LLC 055224

Federal Tax I.D.# 20-5975604

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

SERVICE POINT:
Russell KS

DATE <u>4-20-14</u>	SEC. <u>25</u>	TWP. <u>13</u>	RANGE <u>19</u>	CALLED OUT	ON LOCATION	JOB START <u>2:30PM</u>	JOB FINISH <u>3:00PM</u>
Brall Farms LEASE		WELL.# <u>1</u>	LOCATION <u>Hays 2W into</u>			COUNTY <u>Ellis</u>	STATE <u>KS</u>
OLD OR NEW (Circle one) <u>NEW</u>							

CONTRACTOR Mallard
 TYPE OF JOB 2 stage
 HOLE SIZE 7 7/8 T.D. 3668
 CASING SIZE 5 1/2 15.5 DEPTH 3659
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DV DEPTH 1268
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT 21.05
 CEMENT LEFT IN CSG. 21.05
 PERFS.
 DISPLACEMENT 86 1/2 30 bbl
 EQUIPMENT

PUMP TRUCK CEMENTER Robert V
 # 409 HELPER Nathan D
 BULK TRUCK
 # 481 DRIVER Kevin R
 BULK TRUCK
 # 410 DRIVER Dwayne B

REMARKS:

see log

Cement did circulate to surface pumped 555 sks to pit

Thank you!!!

CHARGE TO: Hess Oil Company Inc
 STREET _____
 CITY _____ STATE _____ ZIP _____

OWNER _____
 CEMENT
 AMOUNT ORDERED 120 ASC 5" Gilsonite/1st
320 6 3/4 4 9/16 gal 1/4" 5 1/2
 COMMON _____ @ _____
 POZMIX _____ @ _____
 GEL _____ @ _____
 CHLORIDE _____ @ _____
 ASC 120 @ 20.90 2508.00
6 3/4 4 9/16 gal min 320 @ 15.30 4896.00
5 1/2 seal 75# @ 2.97 222.75
Gilsonite 600# @ 0.98 588.00
mud flush 12 bbl @ 58.70 704.40
 _____ @ _____
Material @ 899.15
Disc. @ 2408.17
 _____ @ _____
 HANDLING 496.23 ft³ @ 2.48 1230.65
 MILEAGE 210.975 1/m @ 2.60 548.54
 TOTAL 9978.94
10678.24

SERVICE

DEPTH OF JOB 3659
 PUMP TRUCK CHARGE 2558.75
 EXTRA FOOTAGE @ _____
 MILEAGE 10 6.40 @ 4.40 44.00
 MANIFOLD yes @ 275.00 275.00
20 HVMI @ 7.70 154.00
2nd stage @ _____ 2406.25
 _____ @ _____
Disc 1948.64 TOTAL 7217.19
8438.00

PLUG & FLOAT EQUIPMENT

WF latch down plug @ 660.00 660.00
5/8 WF stage tool @ 5335.26 5335.26
5/8 WF basket @ 395.00 395.00
5/8 WF Pactor shoe @ 3765.00 3765.00
5/8 WF 7 turbo's @ 665.00 665.00
Disc 2921.47 TOTAL 10820.26

SALES TAX (if Any) _____
 TOTAL CHARGES 26956.60
 DISCOUNT 7278.28 270 PAID IN 30 DAYS

net \$ 19678.32

PRINTED NAME _____
 SIGNATURE Joh & [Signature]

To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.