KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1092594

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 33335
Name: IA Operating, Inc.
Address 1: 9915 W 21ST ST, STE B
Address 2:
City: WICHITA State: KS Zip: 67205 + __ __ __ __
Contact Person: Julie Burrows, Jeff Mowry
Phone: (316) 721-0036
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Randall Kilian
Purchaser: Coffeyville Resources, LLC

Designate Type of Completion:

- [x] New Well [ ] Re-Entry [ ] Workover
- [x] 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
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

03/01/2012	03/08/2012	04/06/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-051-26268-00-00
Spot Description:
NW - SE - SE - NW Sec. 18 Twp. 14 S. R. 19 [ ] East [x] West
2180 Feet from [x] North / [ ] South Line of Section
2100 Feet from [ ] East / [x] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[ ] NE [x] NW [ ] SE [ ] SW
County: Ellis
Lease Name: VIRGINIA K Well #: 18-1
Field Name: Pleasant SE
Producing Formation: Topeka-KC-C-E-J
Elevation: Ground: 2222 Kelly Bushing: 2223
Total Depth: 3925 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 221 Feet
Multiple Stage Cementing Collar Used? [x] Yes [ ] No
If yes, show depth set: 1510 Feet
If Alternate II completion, cement circulated from: 1510
feet depth to: 2215 w/ 250 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 67000 ppm Fluid volume: 400 bbls
Dewatering method used: Evaporated
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

- [ ] **Letter of Confidentiality Received**
  Date:
- [ ] **Confidential Release Date:**
- [x] **Wireline Log Received**
- [x] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [ ] I [x] II [ ] III **Approved by:** Deanna Garrison **Date:** 09/18/2012

Side Two

1092594

Operator Name: IA Operating, Inc. Lease Name: VIRGINIA K Well #: 18-1

Sec. 18 Twp. 14 S. R. 19 ☐ East ☑ West County: Ellis

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:

Geologist Well Report, Dual Receiver Cement Bond Log, Dual Induction Log, Micro Log, Compensated Density/Neutron Log

☐ Log Formation (Top), Depth and Datum ☑ Sample

Name	Top	Datum
Anhydrite	1488'	+735
Base	1532'	+691
Topeka	3231'	-1008
Toronto	3501'	-1278
Lansing	3523'	-1300
Arbuckle	3845'	-1622
Total	3924'	-1701

CASING RECORD ☑ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.2500	8.5	23	221	Common	150	3%CC, 2% gel
Production	7.8750	5.5000	15.5	3925	Common	200	10%salt, 3% gel

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:
☐ Perforate
☑ Protect Casing
☐ Plug Back TD
☐ Plug Off Zone

Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
2215-1510	QMDC	250	1/4# flo seal
-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
4	3581-84, 3552-55	1000 gal. 15% MCA	
	3581-84	retreat 250 gal. 15% MCA, 500 gal. 15% MCA	
4	3363-66	250 gal 15% MCA, 500 gal 15% MCA	
4	3709-13	250 gal 15% MCA, 500 gal. 15% MCA	

TUBING RECORD: Size: 2 7/8 Set At: 3812 Packer At:

Liner Run: ☑ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 4/6/2012

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	45	0	49		41

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Jall Kilian Corporation
Geologist

Certified Petroleum
Geologist #3351
License #224

RECEIVED
SEP 12 2012
KCC WICHITA

P.O. Box 26
Hays, Kansas 67601-0026
Phone: 785-628-6061
Cell: 785-635-1349

GEOLOGIST'S WELL REPORT

COMPANY IA OPERATING, INC. (33335)

WELL Virginia K. #18-1

FIELD Pleasant SE (Wildcat per seismic)

LOCATION (legal) Ap. SE SE NW
(2180' FNL & 2100' FWL)
Section 18 TWP 14S RGE 19W

(Map) 6½ mi W & 1½ mi S of Hays Golf Coarse

COUNTY Ellis STATE Kansas

ELEVATION: 2223' K.B., 2215' G.L.

Depths measured from Kelly Bushing

A. P. I. NUMBER 15-051-26268

GEOLOGY BY Randall Kilian

PERTINENT WELL DATA

CONTRACTOR DISCOVERY DRILLING CO., INC. (31548)

RIG #3 (Galen Gaschler TP) HYDRAULICS D-375 6x14x60

DRILL PIPE 4½" X-H COLLARS 6¼ 17 (526')

CASING: SURFACE 8 5/8" @ 221' w/ 150 sx Common

PRODUCTION 5 ½" @ 3923' w/ 155 sx Common PC in Anhydrite

DRILLING FLUID: COMPANY Andy's Mud & Chemical Co. (Kirk Werth)

TYPE: Chemical & Drispac

REMARKS: Full service

DRILL STEM TESTS: COMPANY Trilobite Testing Inc. (Ray Schwager)

NUMBER OF TESTS Four (4)

ELECTIC LOGS: COMPANY Superior Well Services

DETAIL (5") 3150' - RTD

TYPE DI, Comp N-D, Micro

DRILLING TIME FROM 3150' TO RTD

SAMPLE TIME FROM 3150' TO RTD

SUPERVISION FROM 3150' TO RTD

VERTICAL DEVIATION 3/4°@ 221', 2½°@ 3576', 2½°@ 3925'

PLUGGING REPORT 30 sx Rat, 15 sx Mouse

RESERVE PIT 400 bbls., Chl. 67,000 Ca. 2100

DAILY REPORT

DATE:	7 a.m. Depth	RIG ACTIVITY
3-1-12		MIRU, Spud
3-2-12	505'	Drilling under surface
3-3-12	2300'	Drilling shale & sand
3-4-12	3060'	Drilling shale & lime
3-5-12	3576'	DST #1 LKc C-D
3-6-12	3630'	DST #2 LKc F-G
3-7-12	3770'	DST #3 LKc H-L
3-8-12	3925'	TD. Logged. DST #4. Run pi

DRILL STEM TESTS

NO	INTERVAL	IFP/TIME	ISIP/TIME	FFP/TIME	FSIP/TIME	IHP/FHP	RECOVERY
1	LKc C-D 3535- 3576'	331# 329# 5"	522# 60"	374# 484# 30"	496# 90"	1686# 1631#	GTS 10" 2nd Open 1280' Oil 40° 120' Sl,O,C,M,Wtr
2	LKc F-G 3576- 3630'	54# 133# 5"	745# 60"	132# 393# 60"	659# 90"	1689# 1664#	520' GIP 75' Oil 40° 535' O&G,C,M,Wtr 190' Wtr
3	LKc H-L 3641- 3770'	27# 41# 5"	768# 60"	34# 60# 60"	904# 90"	1737# 1710#	270' GIP 92' M,G,Oil
4	Arb. 3820- 3856'	- 5"	- 60"	66# 259# 75"	1225# 105"	1853# 1851#	150' Sl,O,C,M,Wtr 490' Wtr
5							
6							
7							
8							

MUD RECORD

CHK	DEPTH	WT	VIS	FIL	CHL	YP
1	3038'					
2	3133'	8.7	46	8.0	1.8k	15
3	3170'	8.7	44			
4	3250'	8.7	53			
5	3330'	8.7	52			
6	3440'	8.7	53			
7	3576'	8.9	48	7.8	3k	14
8	3630'	9.1	56	7.8	3.2k	12
9	3730'	8.8	63			
10	3793'	9.2	60	8.8	8k	24
11	3880'	8.8	67			

Displaced

LCM 1#

LCM 1 3/4#

LCM 1#

LCM 1½# $76.1

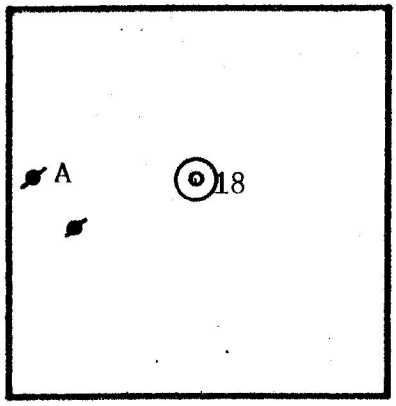
LCM 3#

BIT RECORD

NO	SIZE	MAKE	TYPE	DEPTHOUT	FEET	HOURS
1	12 ¼"	TZ	WA417GC	221'	221'	2 3/4
2	7 7/8"	HTCo	GC20C	3925'	3704'	77 ¼
3						
4						
5						
6						

FORMATION TOPS & STRUCTURAL GEOLOGY

R 19 W



REFERRED TO:

A: RAYMOND OIL CO.
#2 W. Kraus SW SW NW 18

B:

C:

D:

E:

STRATIGRAPHIC MARKERS	SUBJECT WELL SAMPLE	SUBJECT WELL E. LOG	STRUCTURAL POSITION DATUM	A	B	C	D	E
Anhydrite	1486'	1488'	+ 735	+ 730				
Base	1530'	1532'	+ 691	+ 693				
Topeka	3227'	3231'	-1008	-1006				
Heeb. Sh.	3474'	3480'	-1257	-1254				
Toronto	3498'	3501'	-1278	-1278				
Lansing	3520'	3523'	-1300	-1300				
BKc.	3768'	3774'	-1551	-1554				
Marmaton	3802'	3808'	-1585	-1588				
Arbuckle	3839'	3845'	-1622	-1619				
TD	3925'	3924'	-1701	-1623				

Note; The log tops were 3-6' deeper than the sample tops. Discovery Drilling #3 is a top quality rig and generally right on their measurments. Therefore, I question the electric log tops.

*Structural position of subject well as compared to referred well.

SUMMARY

The Virginia K. #18-1 well was drilled by Discovery Drilling tools rig #3 beginning 3-1-12 and drilling was completed 3-8-12.

The drill site was located via a 3-D seismic survey. The well ran high structurally to nearby wells.

Oil shows were encountered in numerous zones. DST #1 LKc C-D was a positive test. DST #2 LKc F-G may contribute to ultimate reserves. DST #3 LKc H-L was also a positive test.

The Arbuckle was encountered a bit lower than expected therefore DST #4 was a negative test.

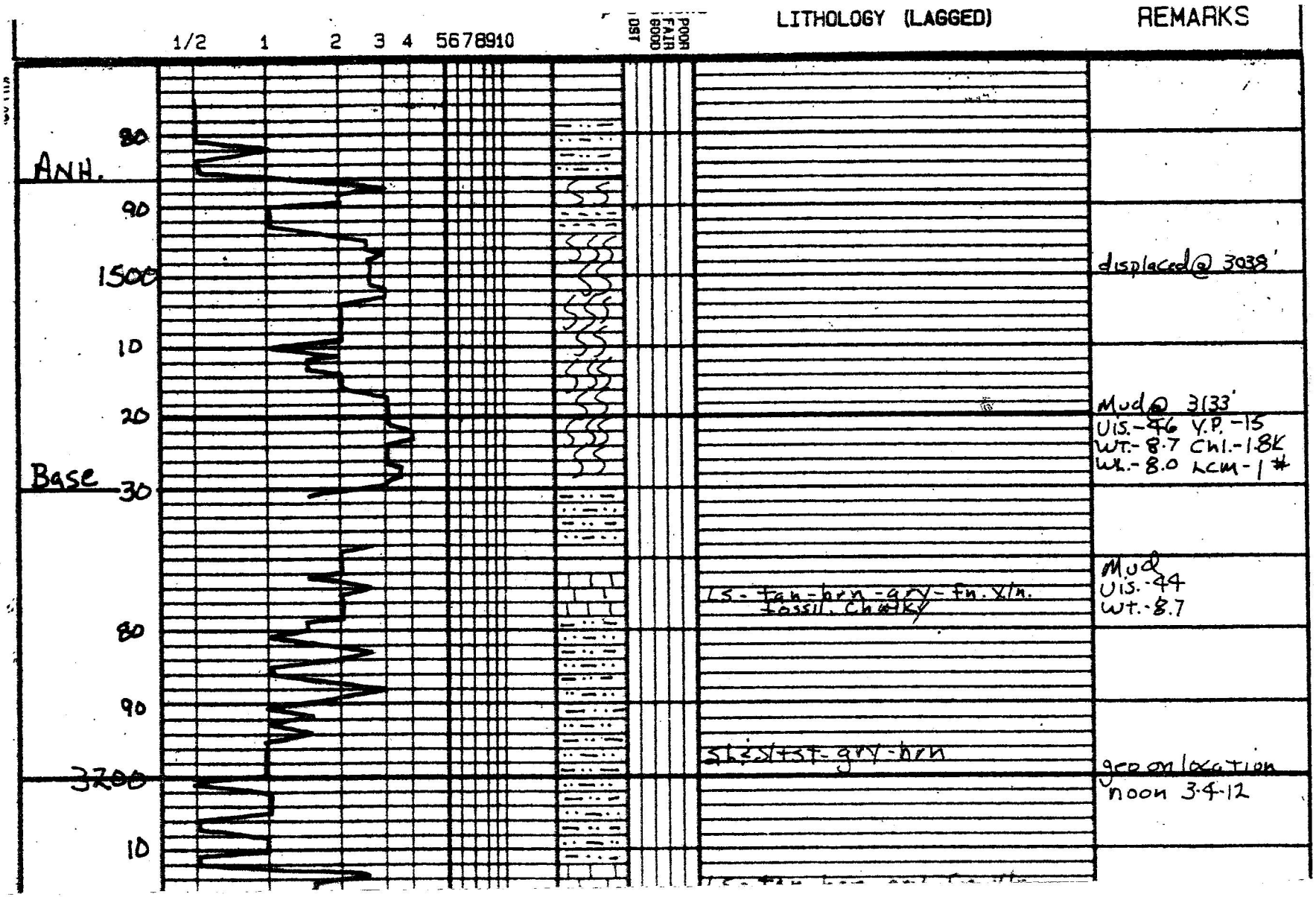
Based upon all data, casing was set and cemented to further test and produce the well.

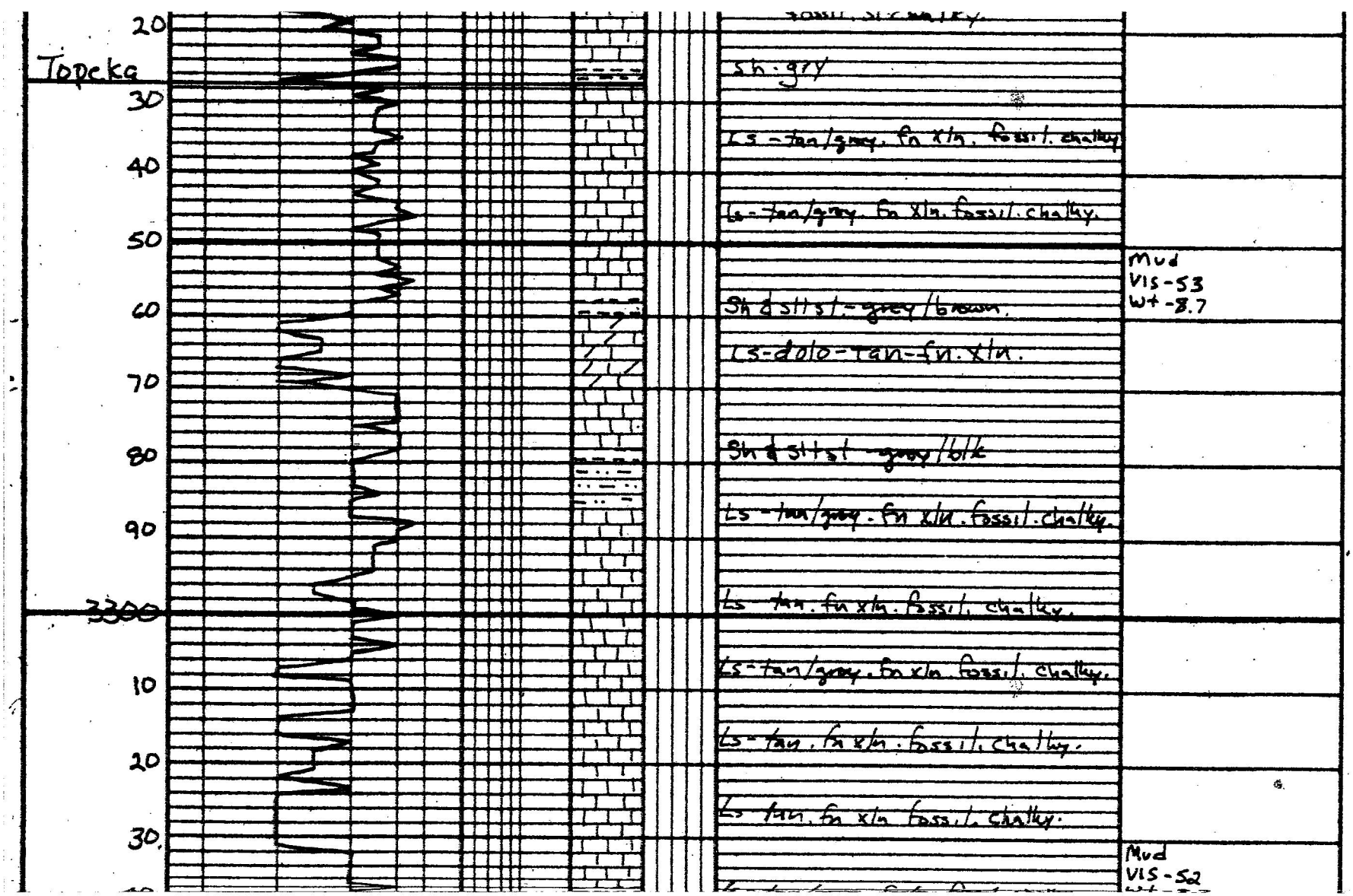
Recommended perfs; LKc K 3727-32', E 3591-95' &
C 3550-55'.

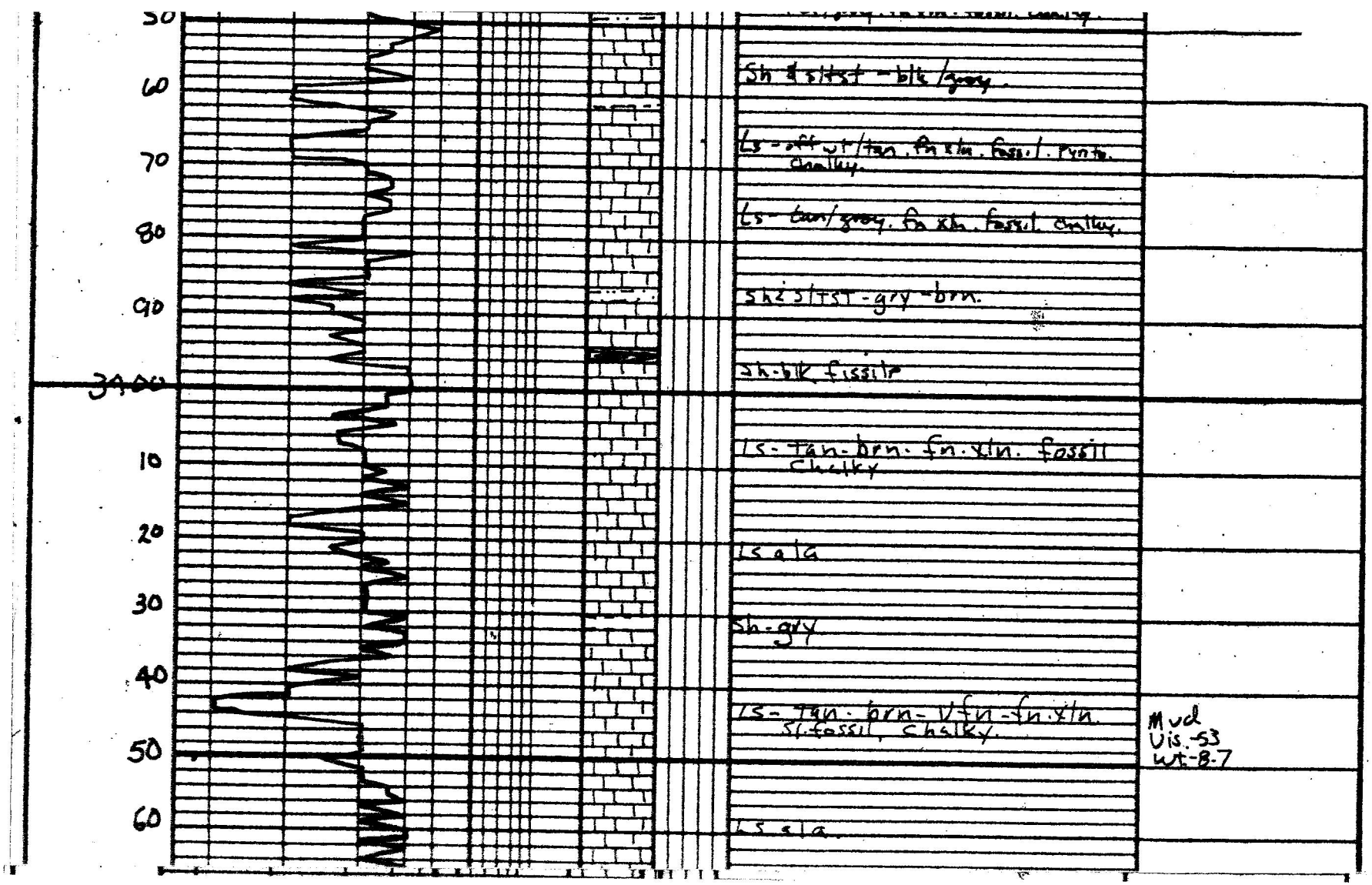
Respectfully,

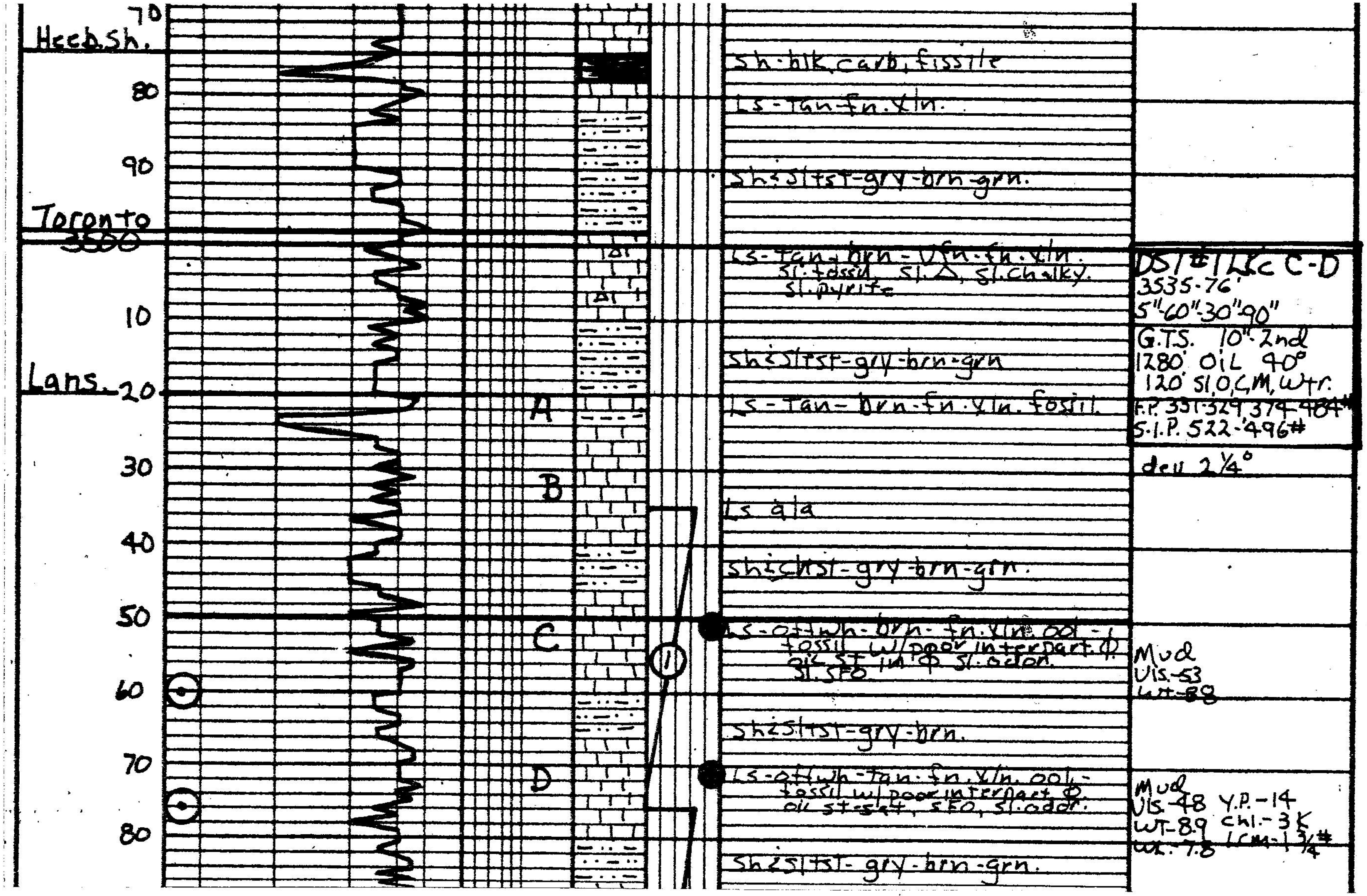
Randy

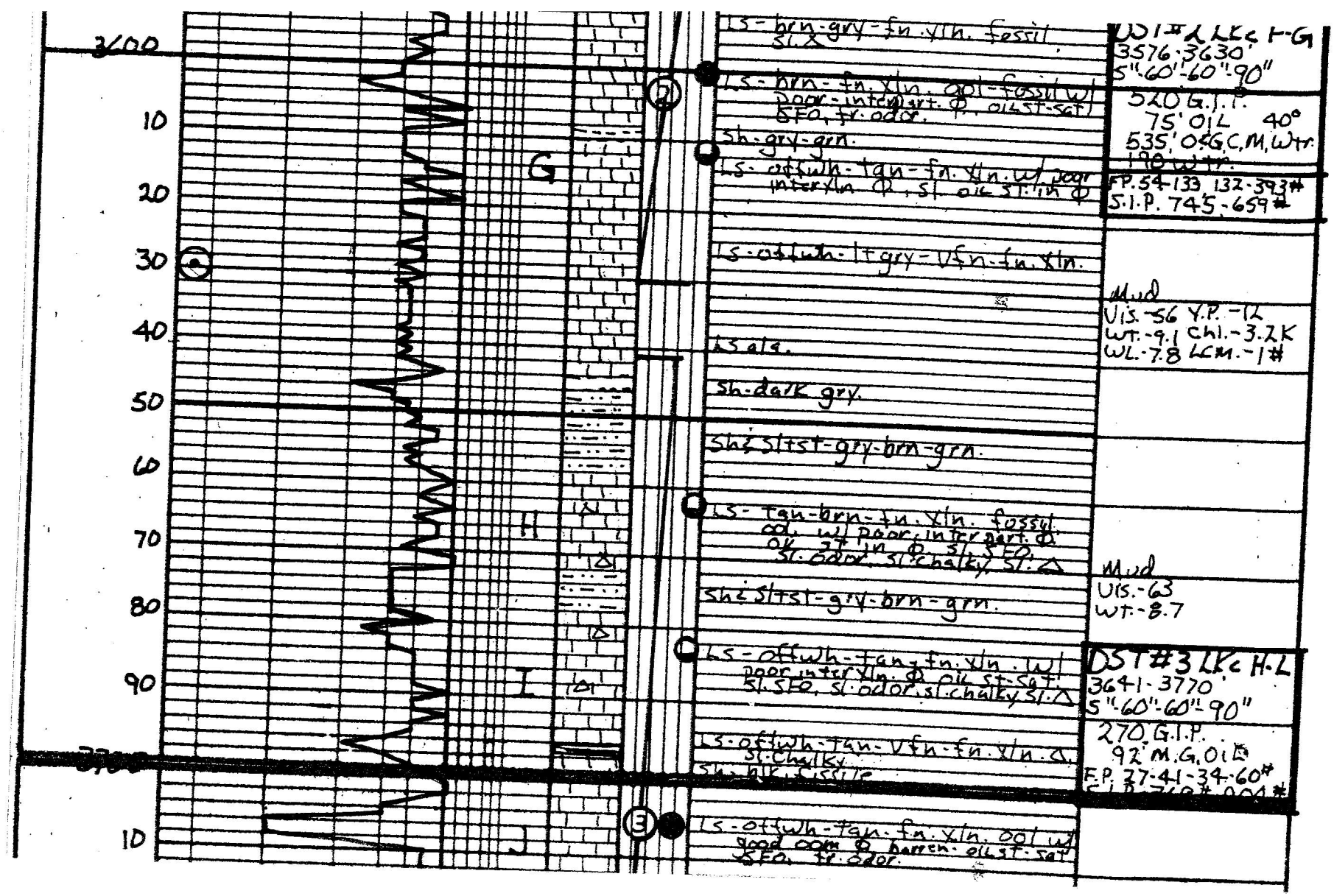
Randall Kilian

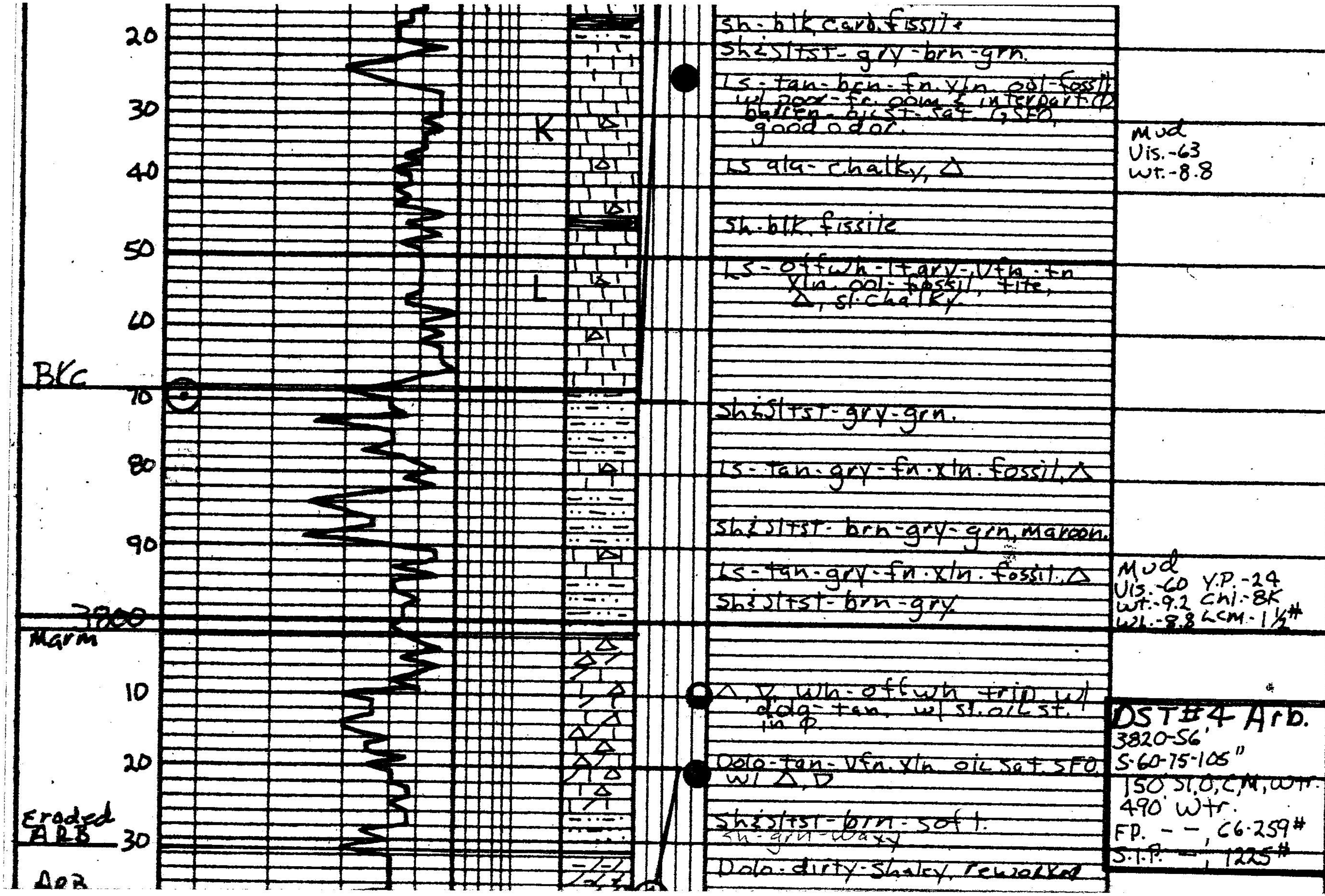

1/2 1 2 3 4 5 6 7 8 9 10
POOR FAIR GOOD
DST
LITHOLOGY (LAGGED)
REMARKS
80
ANH.
90
1500
10
20
Base
30
80
90
3200
10
displaced @ 3038'
Mud @ 3133'
VIS.-46 Y.P.-15
WT.-8.7 Chl.-18K
WL-8.0 LCM-1#
LS-tan-brn-gry-fn. x/n. fossil. Chalky
Mud
VIS.-44
WT.-8.7
SLTST-gry-brn
geo on location
noon 3-4-12


20
Topeka
30
40
50
60
70
80
90
3300
10
20
30
sh. gry
Ls - tan/grey. fn x/n. fossil. chalky
Ls - tan/grey. fn x/n. fossil. chalky.
Mud
VIS - 53
Wt - 8.7
Sh & slt st - grey/brown.
Ls-dolo-tan-fn. x/n.
Sh & slt st - grey/blk
Ls - tan/grey. fn x/n. fossil. chalky.
Ls tan. fn x/n. fossil. chalky.
Ls - tan/grey. fn x/n. fossil. chalky.
Ls - tan. fn x/n. fossil. chalky.
Ls tan. fn x/n fossil. chalky.
Mud
VIS - 52

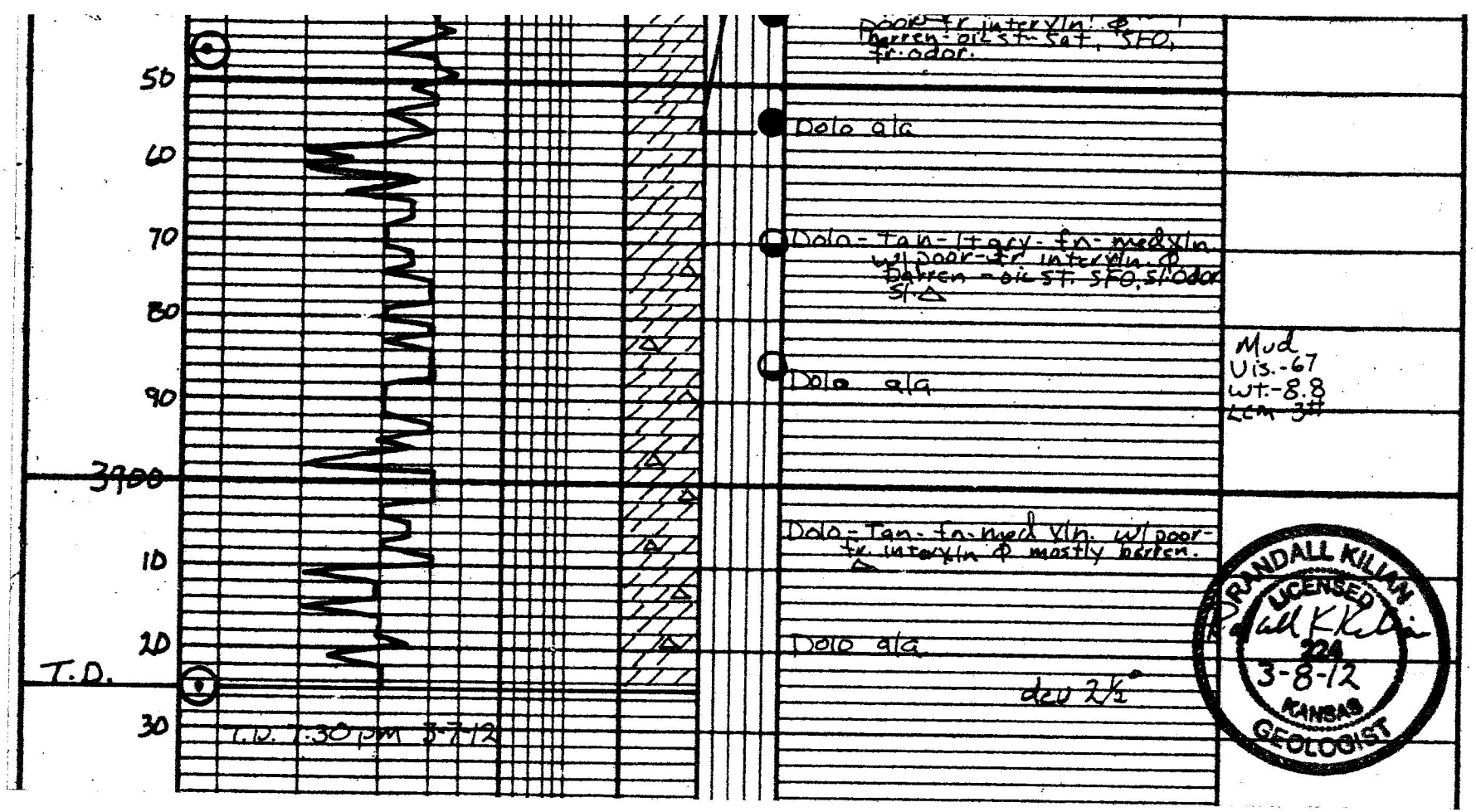

50
60
70
80
90
3400
10
20
30
40
50
60
Sh & s/tst - blk/gray.
ls - off wt/tan. fn xln. fossil. pyrite. chalky.
ls - tan/gray. fn xln. fossil. chalky.
sh & s/tst - gry - brn.
sh - blk. fissile
ls - tan - brn. fn. xln. fossil chalky
ls & lg
sh - gry
ls - tan - brn - v fn - fn. xln. sl. fossil, chalky.
ls & lg.
Mud
Vis. -53
Wt - 8.7


70
Heeb.Sh.
80
90
Toronto
3500
10
Lans.
20
30
40
50
60
70
80
A
B
C
D
Sh-blk carb, fissile
Ls-tan-fn.xln.
Sh&sltst-gry-brn-grn.
Ls-tan-brn-vfn-fn.xln.
sl.fossil, sl.△, sl.chalky.
sl.pyrite
Sh&sltst-gry-brn-grn
Ls-tan-brn-fn.xln.fossil.
Ls a/a
Sh&sltst-gry-brn-grn.
Ls-off wh-brn-fn.xln.ool-fossil w/poor interpart.Φ
oil st in Φ sl.odor.
sl.SFO
Sh&sltst-gry-brn.
Ls-off wh-tan-fn.xln.ool-fossil w/poor interpart.Φ
oil st-sat, SFO, sl.odor.
Sh&sltst-gry-brn-grn.
DST #1 LKC C-D
3535-76'
5"60"30"90"
G.T.S. 10" 2nd
1280' OIL 40°
120' sl.O,C,M, Wtr.
F.P. 351-329, 374-484#
S.I.P. 522-496#
dev 2¼°
Mud
Vis-53
Wt-8.9
Mud
Vis-48 Y.P.-14
WT-8.9 chl.-3K
wl.-7.8 lcm-1¾#


3600
10
20
30
40
50
60
70
80
90
3700
10
G
H
I
J
LS - brn-gry-fn. xln. fossil sl. ∆
LS - brn-fn. xln. ool-fossil w/ poor-interpart. Φ, oil st-sat, SFO, fr. odor.
sh-gry-grn.
LS - off wh-tan-fn. xln. w/ poor interxln Φ, sl oil st. in Φ
LS - off wh-ltgry-vfn-fn. xln.
LS alg.
sh-dark gry.
sh; sltst-gry-brn-grn.
LS - tan-brn-fn. xln. fossil. ool. w/ poor, interpart. Φ ok. st. in Φ, sl SFO. sl. odor. sl. chalky, sl. ∆
sh; sltst-gry-brn-grn.
LS - off wh-tan, fn. xln. w/ poor, interxln. Φ, oil st-sat. sl. SFO, sl. odor, sl. chalky, sl. ∆
LS - off wh-tan-vfn-fn. xln. ∆, sl. chalky
sh-blk, fissile
LS - off wh-tan. fn. xln. ool w/ good oom Φ, barren. oil st. sat. SFO, fr. odor.
DST #2 LKC H-G
3576-3630'
5"-60"-60"-90"
520 G.I.P.
75' OIL 40°
535' OSGCM, Wtr.
190 Wtr.
F.P. 54-133, 132-393#
S.I.P. 745-659#
Mud
Vis. -56 Y.P. -12
Wt. -9.1 Chl. -3.2K
WL. -7.8 LCM. -1#
Mud
Vis. -63
Wt. -8.7
DST #3 LKC H-L
3641-3770'
5"-60"-60"-90"
270 G.I.P.
92' M.G.O.C.M.
F.P. 37-41-34-60#
S.I.P. 740-704#



20
30
40
50
60
BKC
70
80
90
3800
Marm
10
20
Eroded ARB
30
Arb
K
L
Sh-blk carb. fissile
Sh&Sltst-gry-brn-grn.
Ls-tan-brn-fn.xln. ool-fossil. w/ poor-fr. oom & interpart Φ broken-bit st-sat. G.SFO, good odor.
Ls alg-chalky, △
Sh-blk, fissile
Ls-offwh-lt gry-vfn-fn xln. ool-fossil, tite, △, sl chalky.
Sh&Sltst-gry-grn.
Ls-tan-gry-fn-xln. fossil. △
Sh&Sltst-brn-gry-grn, maroon.
Ls-tan-gry-fn-xln. fossil. △
Sh&Sltst-brn-gry
△, ▽ wh-offwh trip. w/ dolo-tan. w/ sl. oil st. in Φ.
Dolo-tan-vfn. xln. oil sat. SFO w/ △, ▽
Sh&Sltst-brn-soft.
Sh-grn-waxy
Dolo-dirty-shaley, reworked
Mud
Vis.-63
wt.-8.8
Mud
Vis.-60 Y.P.-24
wt.-9.2 Chl-8K
WL-8.8 LCM-1½#
DST#4 Arb.
3820-56'
S-60-75-105"
150' Sl.O.C.M. wtr.
490' wtr.
FP. – –, 66-259#
S.I.P. –, 1225#


poor fr intervln &
barren - oil ST - Sat, SFO,
fr odor.
Dolo gla
Dolo - Tan - lt gry - fn - med vln
w/ poor - fr intervln &
barren - oil ST, SFO, slodor
SFA
Dolo gla
Dolo - Tan - fn - med vln w/ poor -
fr intervln & mostly barren.
Dolo gla
dev 2½°
50
60
70
80
90
3900
10
20
T.D.
30
T.D. 7:30 PM 3-7-12
Mud
Vis. - 67
wt. - 8.8
Lcm 3#
RANDALL KILIAN
LICENSED
3-8-12
KANSAS
GEOLOGIST

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 5465

Date	Sec.	Twp.	Range	County	State	On Location	Finish
3-15-12	18	14	19	Ellis	Ks		2:00 PM

Lease Virgina K. Well No. 18-1 Location Yocemento, Ks - S to Golf Course Rd, W to 160 Rd, 1S, ½E, S/Into

Contractor Chito's well Service

Type Job Port Collar

Hole Size T.D.

Csg. 5½" Depth 3924'

Tbg. Size 2⅞" Depth 1510'

Tool Port Collar Depth 1510'

Cement Left in Csg. Shoe Joint

Meas Line Displace 73/4 BLS

Owner To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To I A operating

Street

City State

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

Cement Amount Ordered 250 SX QMDC ¼# F.S.

EQUIPMENT

Pumptrk 15 No. Cementer Helper Cisco

Bulktrk 8 No. Driver Driver Doug

~~Bulktrk~~ p.u. No. Driver Driver Rick

JOB SERVICES & REMARKS

Remarks: Cement did Circulate.

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

test 1200# + held
Open tool + Estalished a blow
Mix 160 SX QMDC ¼# F.S.
+ Displaced with 73/4 BLS of water. Closed tool + test to 1200# + held. Run 5 Jts tubing + wash clean.

Cement did Circulate.

Common	160
Poz. Mix	
Gel.	
Calcium	
Hulls	
Salt	
Flowseal	50#
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	250
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge	port Collar
Mileage	9
Tax	
Discount	
Total Charge	

X Signature

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 252

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
3/8/12	18	14	19	Ellis	KS		10:30 PM

Lease Virginia K Well No. 18-1 Location Yocemento, S to Golf Course Rd, 2W, 1S, ½W, S into

Contractor Discovery Drilling Rig #3 Owner

Type Job Production String

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size	7 7/8"	T.D.	3925'
Csg.	5½" 15.50#	Depth	3924'
Tbg. Size		Depth	
Tool	Port Collar	Depth	1510' Jt #58
Cement Left in Csg.	17'	Shoe Joint	17'
Meas Line		Displace	93 Bbls.

Charge To TA Operating, Inc.

Street

City State

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

Cement Amount Ordered 200sx Com 10% Salt 5% Gilsonite

EQUIPMENT

Pumptrk 9	No.	Cementer / Helper	Paul
Bulktrk 10	No.	Driver / Driver	Matt
Bulktrk PU	No.	Driver / Driver	Lonnie

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 sx

Mouse Hole 20 sx

Centralizers 1, 4, 7, 10, 13, 16, 59

Baskets 57

Port Collar - 1510' Jt # 58

Est. Circ. - 30 min

Pump 500 gal. Mud Clear

Plug Rat / Mouse

Mix 150 sx down 5½"

Displace

Land Plug

Float Held

Thank You!!

Common	200
Poz. Mix	
Gel.	
Calcium	
Hulls	
Salt	17
Flowseal	
Kol-Seal	1000#
Mud CLR 48	500 gal.
CFL-117 or CD110 CAF 38	
Sand	
Handling	227
Mileage	5½"

FLOAT EQUIPMENT

Guide Shoe	1
Centralizer	7
Baskets	1
AFU Inserts	1
Float Shoe	
Latch Down	

Rubber Plug

Port Collar, 27 Recip. Scratchers

Pumptrk Charge	Prod Long String
Mileage	9
Tax	
Discount	
Total Charge	

X Signature Mike Stanton

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 466

	Sec.	Twp.	Range	County	State	On Location	Finish
Date 3-1-12	18	14	19	Ellis	Kansas		7:00PM

Lease Virginia X Well No. 18-1 Location Commanche Rd & Golf Course Rd 2W 1S 4W

Contractor Discovery Drilling Rig 3

Type Job Surface

Hole Size 12¼ T.D. 221

Csg. 8⅝ Depth 221

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 10-15 Shoe Joint

Meas Line Displace 13 BBL

EQUIPMENT

Pumptrk 5 No. Cementer Shane / Helper

Bulktrk 10 No. Driver Brett / Driver

Bulktrk No. Driver Brian / Driver

JOB SERVICES & REMARKS

Remarks: Cement did Circulate

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

X Signature

Owner

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To TA Operating

Street

City State

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

Cement Amount Ordered 150 Com 3%CC 2%Gel

Common	150
Poz. Mix	
Gel.	3
Calcium	
Hulls	5
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	158
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
	Sample
Pumptrk Charge	Surface
Mileage	9
Tax	
Discount	
Total Charge	

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc**

9915 W 21st Street North
Ste B
Wichita KS 67205

ATTN: Jeff Mowry

Virginia K #18-1

18-14s-19w Ellis,KS

Start Date: 2012.03.05 @ 10:30:34
End Date: 2012.03.05 @ 18:49:28
Job Ticket #: 46260 DST #: 1

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

ORIGINAL

Printed: 2012.03.09 @ 15:35:16

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46260 **DST#: 1**

Test Start: 2012.03.05 @ 10:30:34

Tool Information

Drill Pipe:	Length:	3515.00 ft	Diameter:	3.80 inches	Volume:	49.31 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	30.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
					Total Volume:	49.31 bbl	

Drill Pipe Above KB:	31.00 ft
Depth to Top Packer:	3535.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	41.00 ft
Tool Length:	62.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2200.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	95000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	52000.00 lb
Final	61000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3515.00		
Shut In Tool	5.00			3520.00		
Hydraulic tool	5.00			3525.00		
Packer	5.00			3530.00	21.00	Bottom Of Top Packer
Packer	5.00			3535.00		
Stubb	1.00			3536.00		
Perforations	5.00			3541.00		
Recorder	0.00	6625	Inside	3541.00		
Recorder	0.00	8700	Outside	3541.00		
Blank Spacing	32.00			3573.00		
Bullnose	3.00			3576.00	41.00	Bottom Packers & Anchor
Total Tool Length:	**62.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mow ry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46260 **DST#: 1**

Test Start: 2012.03.05 @ 10:30:34

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	40 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	126000 ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.74 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	Gas to surface	0.000
1280.00	CO	17.534
120.00	SOCMW 4%O10%M86%W	1.683

Total Length: 1400.00 ft Total Volume: 19.217 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW .06@65F

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mow ry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46260 **DST#: 1**

Test Start: 2012.03.05 @ 10:30:34

GENERAL INFORMATION:

Formation: **LKC C-D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:40:29
Time Test Ended: 18:49:28

Test Type: Conventional Bottom Hole (Initial)
Tester: Ray Schw ager
Unit No: 42

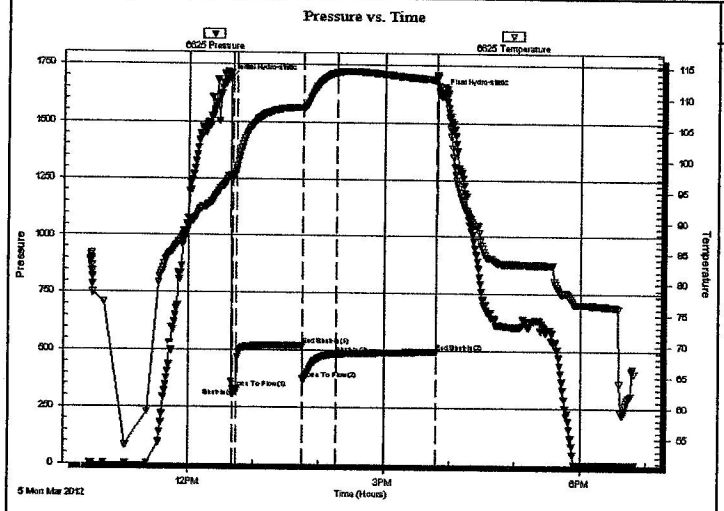
Interval: 3535.00 ft (KB) To 3576.00 ft (KB) (TVD)
Total Depth: 3576.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2223.00 ft (KB)
2215.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**
Press@RunDepth: 484.25 psig @ 3541.00 ft (KB)
Start Date: 2012.03.05 End Date: 2012.03.05
Start Time: 10:30:34 End Time: 18:49:28

Capacity: 8000.00 psig
Last Calib.: 2012.03.05
Time On Btm: 2012.03.05 @ 12:37:59
Time Off Btm: 2012.03.05 @ 15:52:28

TEST COMMENT: 5-IFP-strg bl thru-out
60-ISIP-strg bl bk
30-FFP-strg bl GTS in 10 min,to w k to gauge
90-FSIP-strg bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1686.93	97.35	Initial Hydro-static
3	331.98	97.17	Open To Flow (1)
7	329.94	98.60	Shut-In(1)
67	522.86	108.49	End Shut-In(1)
68	374.91	108.46	Open To Flow (2)
98	484.25	114.07	Shut-In(2)
189	496.05	113.05	End Shut-In(2)
195	1631.13	110.38	Final Hydro-static

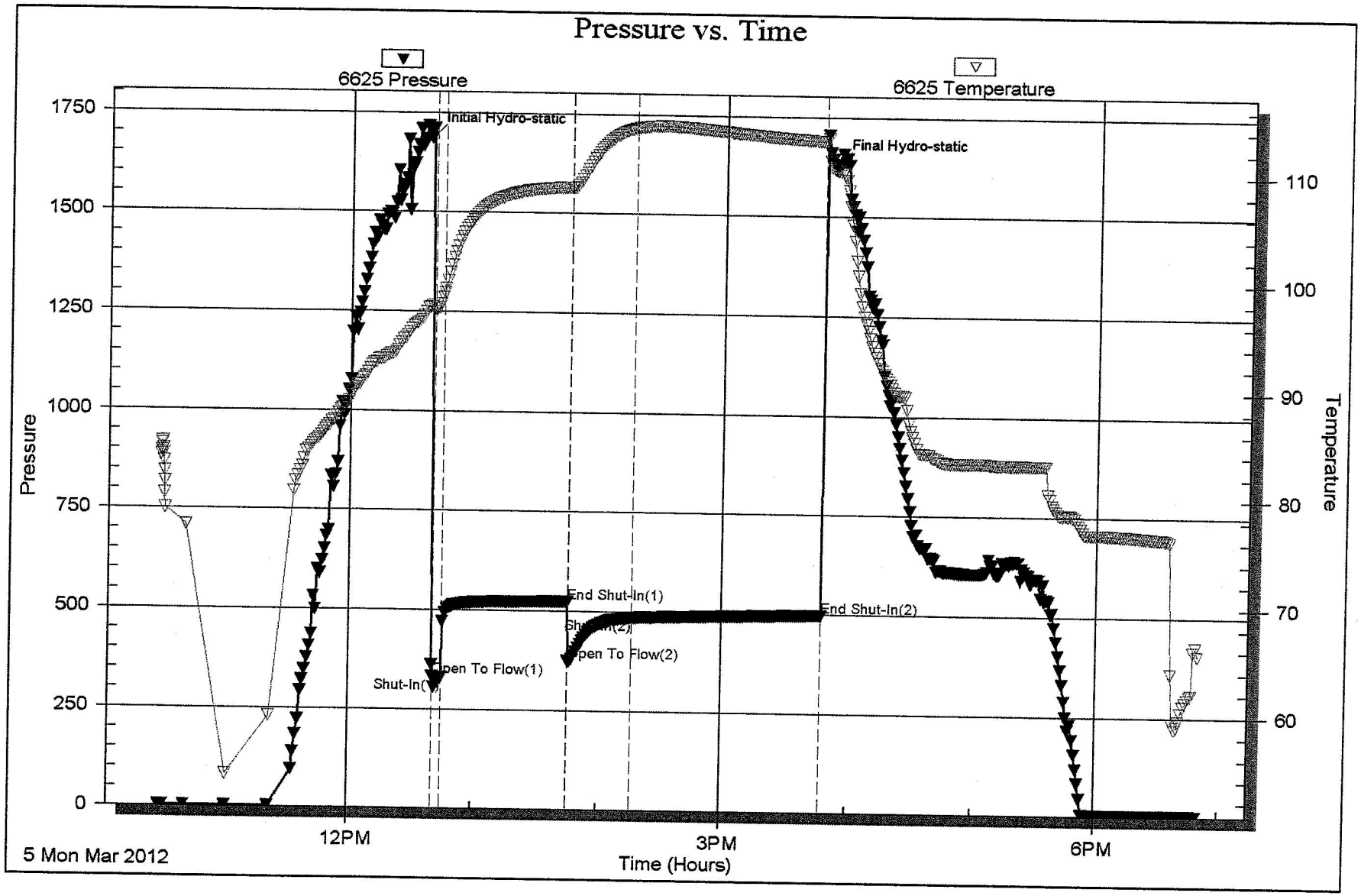
Recovery

Length (ft)	Description	Volume (bbl)
0.00	Gas to surface	0.00
1280.00	CO	17.53
120.00	SOCMW 4%O10%M86%W	1.68

Gas Rates

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

Serial #: 6625 **Inside** IA Operating Inc Virginia K #18-1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 46260 Printed: 2012.03.09 @ 15:35:19

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc**

9915 W 21st Street North
Ste B
Wichita KS 67205

ATTN: Jeff Mowry

Virginia K #18-1

18-14s-19w Ellis,KS

Start Date: 2012.03.06 @ 02:45:37
End Date: 2012.03.06 @ 11:09:01
Job Ticket #: 46261 DST #: 2

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

Printed: 2012.03.09 @ 15:35:44

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46261 **DST#: 2**

Test Start: 2012.03.06 @ 02:45:37

Tool Information

Drill Pipe:	Length:	3550.00 ft	Diameter:	3.80 inches	Volume:	49.80 bbl	Tool Weight:	2200.00 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:	30.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight to Pull Loose:	80000.00 lb
					Total Volume:	49.80 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		25.00 ft					String Weight: Initial	54000.00 lb
Depth to Top Packer:		3576.00 ft					Final	60000.00 lb
Depth to Bottom Packer:		ft						
Interval betw een Packers:		54.00 ft						
Tool Length:		75.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3556.00		
Shut In Tool	5.00			3561.00		
Hydraulic tool	5.00			3566.00		
Packer	5.00			3571.00	21.00	Bottom Of Top Packer
Packer	5.00			3576.00		
Stubb	1.00			3577.00		
Perforations	1.00			3578.00		
Recorder	0.00	6625	Inside	3578.00		
Recorder	0.00	8700	Outside	3578.00		
Blank Spacing	33.00			3611.00		
Perforations	16.00			3627.00		
Bullnose	3.00			3630.00	54.00	Bottom Packers & Anchor
Total Tool Length:	**75.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46261 **DST#: 2**

Test Start: 2012.03.06 @ 02:45:37

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	40 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	126000 ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.75 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	520'GIP	0.000
75.00	CO	0.631
535.00	O&GCMW 10%G4%O10%M76%W	7.505
190.00	Water	2.665

Total Length: 800.00 ft Total Volume: 10.801 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW.06@70F

DRILL STEM TEST REPORT

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46261 **DST#: 2**

Test Start: 2012.03.06 @ 02:45:37

GENERAL INFORMATION:

Formation: **LKC F-G**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:54:02
Time Test Ended: 11:09:01

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 42

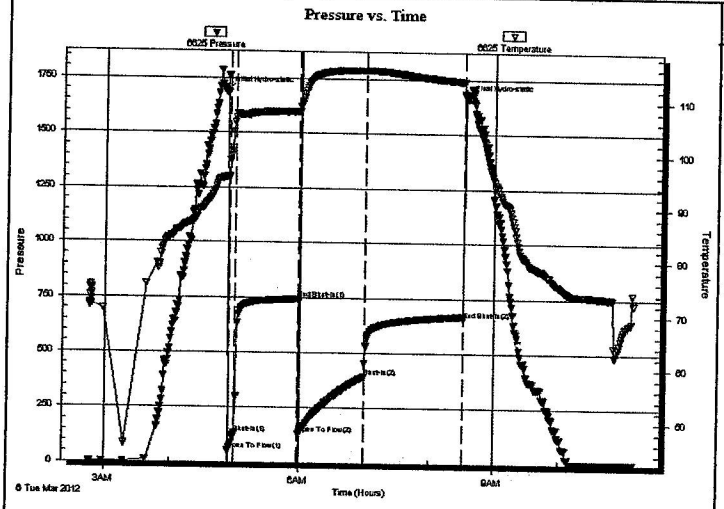
Interval: 3576.00 ft (KB) To 3630.00 ft (KB) (TVD)
Total Depth: 3630.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2223.00 ft (KB)
2215.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**
Press@RunDepth: 393.83 psig @ 3578.00 ft (KB)
Start Date: 2012.03.06 End Date: 2012.03.06
Start Time: 02:45:37 End Time: 11:09:01

Capacity: 8000.00 psig
Last Calib.: 2012.03.06
Time On Btm: 2012.03.06 @ 04:51:02
Time Off Btm: 2012.03.06 @ 08:34:01

TEST COMMENT: 5-IFP-strg bl in 3 min
60-ISIP-no bl
60-FFP-strg bl in 7 min
90-FSIP-strg bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1689.74	95.68	Initial Hydro-static
3	54.83	95.71	Open To Flow (1)
9	133.75	106.81	Shut-In(1)
68	745.08	107.92	End Shut-In(1)
69	132.64	109.05	Open To Flow (2)
129	393.83	115.73	Shut-In(2)
220	659.15	113.73	End Shut-In(2)
223	1664.21	110.84	Final Hydro-static

Recovery

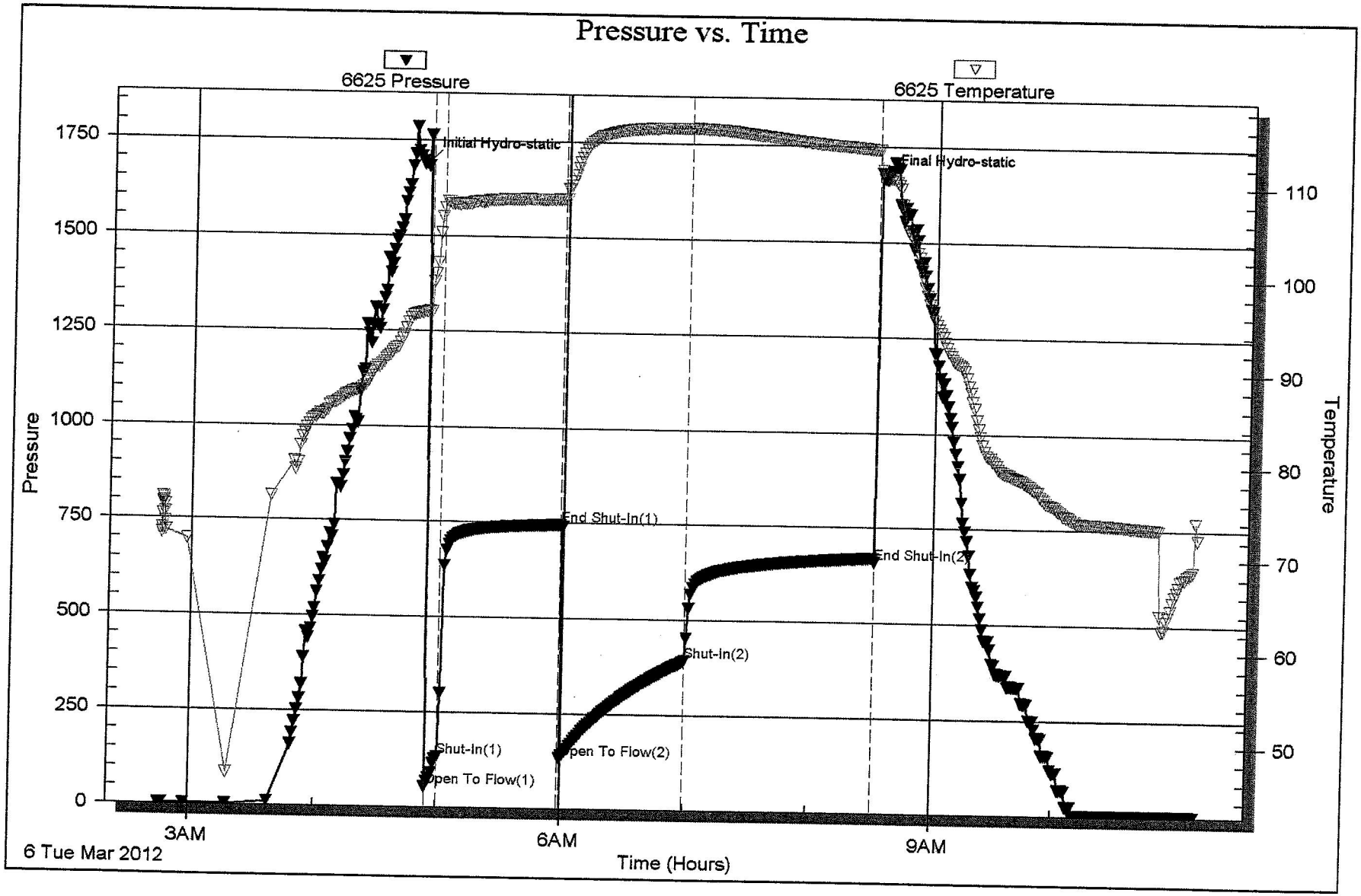
Length (ft)	Description	Volume (bbl)
0.00	520'GIP	0.00
75.00	CO	0.63
535.00	O&GCMW 10%G4%O10%M76%W	7.50
190.00	Water	2.67

* Recovery from multiple tests

Gas Rates

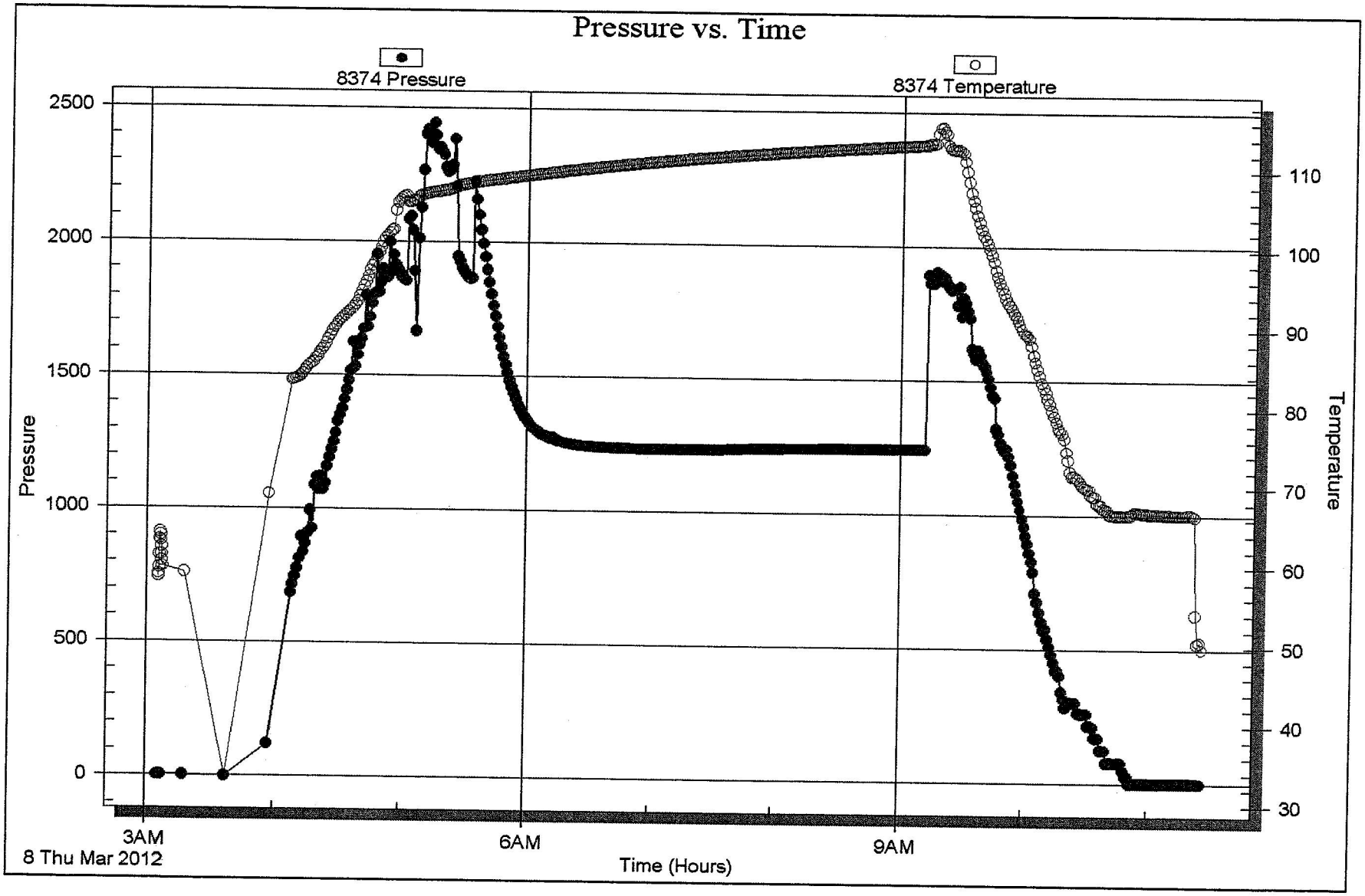
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Serial #: 6625 **Inside** IA Operating Inc Virginia K #18-1 DST Test Number: 2



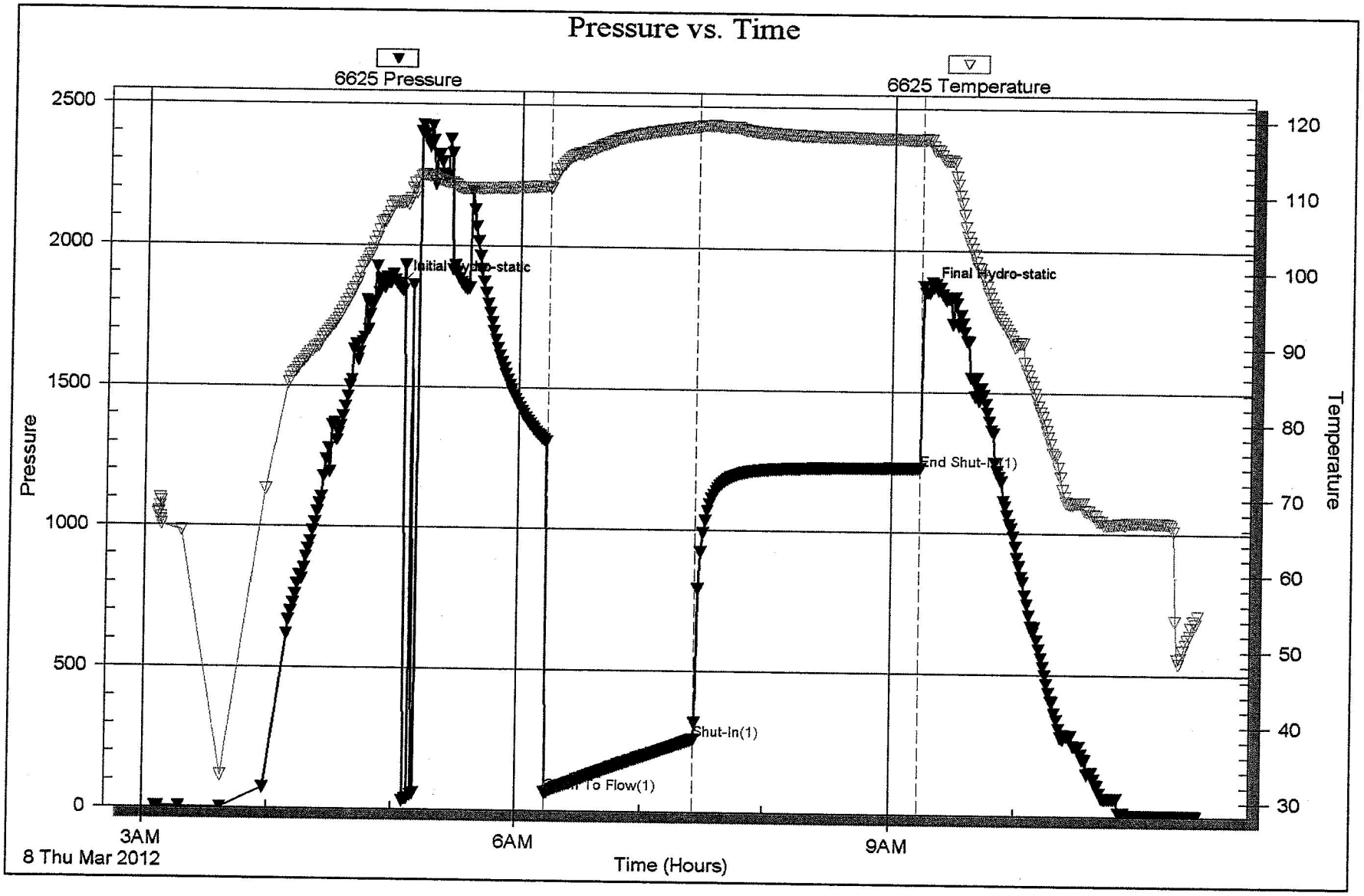
Trilobite Testing, Inc Ref. No: 46261 Printed: 2012.03.09 @ 15:35:46

Serial #: 8374 Below (Straddle) Operating Inc Virginia K #18-1 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 46263 Printed: 2012.03.09 @ 15:38:17

Serial #: 6625 **Inside** IA Operating Inc Virginia K #18-1 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 46263 Printed: 2012.03.09 @ 15:38:16

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc**

9915 W 21st Street North
Ste B
Wichita KS 67205

ATTN: Jeff Mowry

Virginia K #18-1

18-14s-19w Ellis,KS

Start Date: 2012.03.07 @ 01:05:28
End Date: 2012.03.07 @ 09:12:52
Job Ticket #: 46262 DST #: 3

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

Printed: 2012.03.09 @ 15:37:15

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46262 **DST#: 3**

Test Start: 2012.03.07 @ 01:05:28

Tool Information

Drill Pipe:	Length:	3615.00 ft	Diameter:	3.80 inches	Volume:	50.71 bbl	Tool Weight:	2200.00 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:	30.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight to Pull Loose:	80000.00 lb
					Total Volume:	50.71 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		25.00 ft					String Weight: Initial	56000.00 lb
Depth to Top Packer:		3641.00 ft					Final	56000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		129.00 ft						
Tool Length:		150.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3621.00		
Shut In Tool	5.00			3626.00		
Hydraulic tool	5.00			3631.00		
Packer	5.00			3636.00	21.00	Bottom Of Top Packer
Packer	5.00			3641.00		
Stubb	1.00			3642.00		
Perforations	5.00			3647.00		
Recorder	0.00	6625	Inside	3647.00		
Recorder	0.00	8700	Outside	3647.00		
Blank Spacing	96.00			3743.00		
Perforations	24.00			3767.00		
Bullnose	3.00			3770.00	129.00	Bottom Packers & Anchor
Total Tool Length:	**150.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mow ry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46262 **DST#: 3**

Test Start: 2012.03.07 @ 01:05:28

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:	bbl		
Water Loss:	7.74 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3200.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	270'GIP	0.000
90.00	MGO 35%G35%O30%M	0.842
2.00	CO	0.028

Total Length: 92.00 ft Total Volume: 0.870 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46262 **DST#: 3**

Test Start: 2012.03.07 @ 01:05:28

GENERAL INFORMATION:

Formation: **LKC H-L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:28:53
Time Test Ended: 09:12:52

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 42

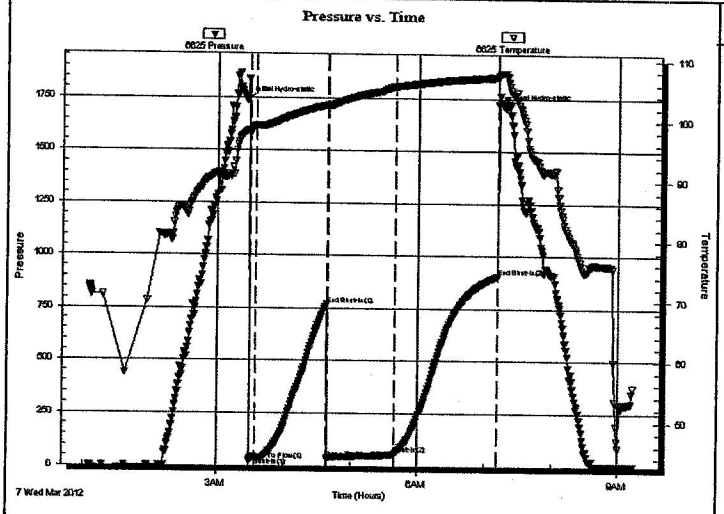
Interval: 3641.00 ft (KB) To 3770.00 ft (KB) (TVD)
Total Depth: 3770.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2223.00 ft (KB)
2215.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**
Press@RunDepth: 60.82 psig @ 3647.00 ft (KB)
Start Date: 2012.03.07 End Date: 2012.03.07
Start Time: 01:05:28 End Time: 09:12:52

Capacity: 8000.00 psig
Last Calib.: 2012.03.07
Time On Btm: 2012.03.07 @ 03:26:23
Time Off Btm: 2012.03.07 @ 07:16:52

TEST COMMENT: 5-IFP-wk bl 1/2" to 3" bl
60-ISIP-no bl
60-FFP-strg bl thru-out
90-FSIP-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1737.15	98.22	Initial Hydro-static
3	27.08	98.08	Open To Flow (1)
8	41.43	99.13	Shut-In(1)
72	768.96	102.51	End Shut-In(1)
73	34.80	102.36	Open To Flow (2)
133	60.82	105.64	Shut-In(2)
225	904.75	107.25	End Shut-In(2)
231	1710.52	107.88	Final Hydro-static

Recovery

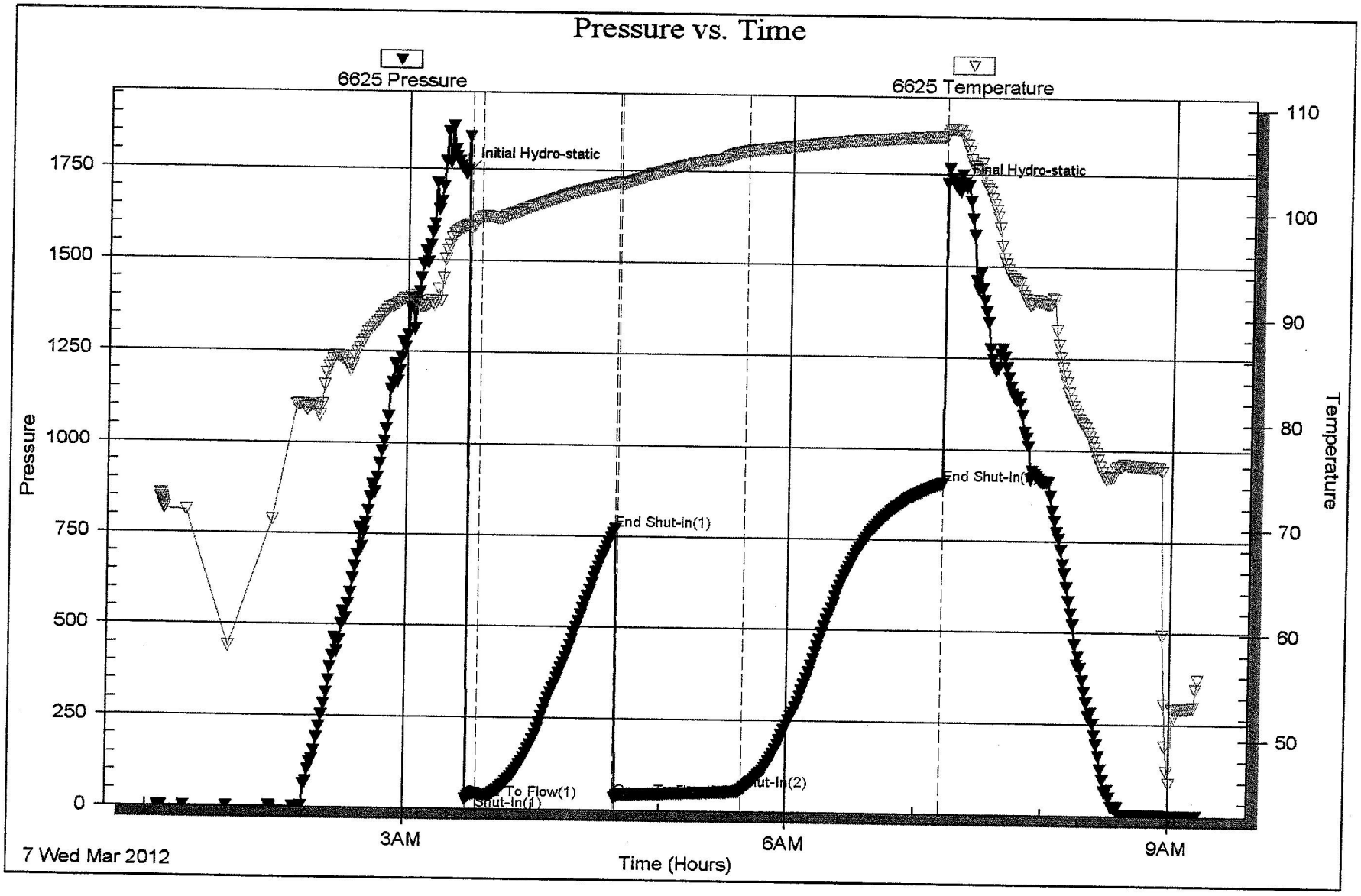
Length (ft)	Description	Volume (bbl)
0.00	270'GIP	0.00
90.00	MGO 35%G35%O30%M	0.84
2.00	CO	0.03

* Recovery from multiple tests

Gas Rates

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

Serial #: 6625 Inside IA Operating Inc Virginia K #18-1 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 46262 Printed: 2012.03.09 @ 15:37:17

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **IA Operating Inc**

9915 W 21st Street North
Ste B
Wichita KS 67205

ATTN: Jeff Mowry

Virginia K #18-1

18-14s-19w Ellis,KS

Start Date: 2012.03.08 @ 03:06:01
End Date: 2012.03.08 @ 11:27:25
Job Ticket #: 46263 DST #: 4

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

Printed: 2012.03.09 @ 15:38:14

DRILL STEM TEST REPORT

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mow ry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46263 **DST#: 4**

Test Start: 2012.03.08 @ 03:06:01

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:13:56
Time Test Ended: 11:27:25

Test Type: Conventional Straddle (Reset)
Tester: Ray Schw ager
Unit No: 42

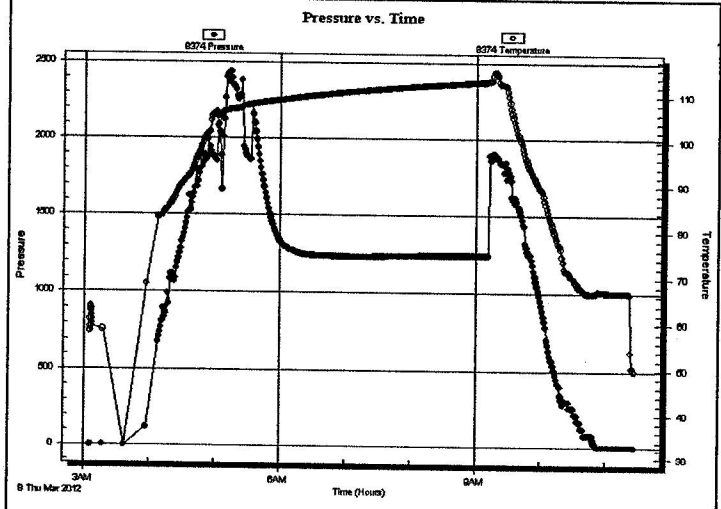
Interval: 3820.00 ft (KB) To 3856.00 ft (KB) (TVD)
Total Depth: 3924.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2223.00 ft (KB)
2215.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8374 **Below (Straddle)**
Press@RunDepth: psig @ 3864.00 ft (KB)
Start Date: 2012.03.08 End Date: 2012.03.08
Start Time: 03:05:09 End Time: 11:25:33

Capacity: 8000.00 psig
Last Calib.: 2012.03.08
Time On Btm:
Time Off Btm:

TEST COMMENT: 5-IFP-w k to a fr bl 1/2" to 5" bl
60-ISIP-no bl
60-FFP-w k to strg in 45 min
90-FSIP-no bl



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
490.00	Water RW .24@60F	6.45
150.00	SOCMW 2%O30%M68%W	2.10

* Recovery from multiple tests

Gas Rates

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

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46263 **DST#: 4**

Test Start: 2012.03.08 @ 03:06:01

Tool Information

Drill Pipe:	Length:	3800.00 ft	Diameter:	3.80 inches	Volume:	53.30 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	30.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
					Total Volume:	53.30 bbl	

Drill Pipe Above KB:	31.00 ft
Depth to Top Packer:	3820.00 ft
Depth to Bottom Packer:	3856.00 ft
Interval between Packers:	36.00 ft
Tool Length:	129.00 ft
Number of Packers:	3 Diameter: 6.75 inches
Tool Comments:	

Tool Weight:	2200.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	85000.00 lb
Tool Chased	15.00 ft
String Weight: Initial	56000.00 lb
Final	61000.00 lb

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3800.00		
Shut In Tool	5.00			3805.00		
Hydraulic tool	5.00			3810.00		
Packer	5.00			3815.00	21.00	Bottom Of Top Packer
Packer	5.00			3820.00		
Stubb	1.00			3821.00		
Perforations	7.00			3828.00		
Recorder	0.00	6625	Inside	3828.00		
Recorder	0.00	8700	Outside	3828.00		
Perforations	24.00			3852.00		
Blank Spacing	3.00			3855.00		
Blank Off Sub	1.00			3856.00	36.00	Tool Interval
Packer	5.00			3861.00		
Stubb	1.00			3862.00		
Perforations	2.00			3864.00		
Recorder	0.00	8374	Below	3864.00		
Blank Spacing	64.00			3928.00	72.00	Bottom Packers & Anchor
Total Tool Length:	**129.00**					

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46263 **DST#: 4**

Test Start: 2012.03.08 @ 03:06:01

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:	33000 ppm
Viscosity:	66.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.74 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
490.00	Water RW .24@60F	6.453
150.00	SOCMW 2%O30%M68%W	2.104

Total Length: 640.00 ft Total Volume: 8.557 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: slid tool approx 15' to bottom on 1st shut-in pulled tool loose to add Jt of pipe, reset tool

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

IA Operating Inc

9915 W 21st Street North
Ste B
Wichita KS 67205
ATTN: Jeff Mowry

18-14s-19w Ellis,KS

Virginia K #18-1

Job Ticket: 46263 **DST#: 4**

Test Start: 2012.03.08 @ 03:06:01

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:13:56
Time Test Ended: 11:27:25

Test Type: Conventional Straddle (Reset)
Tester: Ray Schwager
Unit No: 42

Interval: 3820.00 ft (KB) To 3856.00 ft (KB) (TVD)
Total Depth: 3924.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

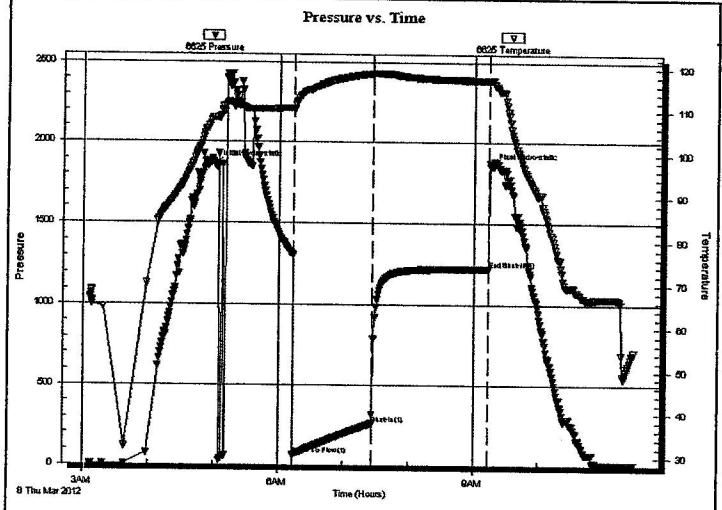
Reference Elevations: 2223.00 ft (KB)
2215.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6625 **Inside**

Press@RunDepth: 259.86 psig @ 3828.00 ft (KB)
Start Date: 2012.03.08 End Date: 2012.03.08
Start Time: 03:06:01 End Time: 11:27:25

Capacity: 8000.00 psig
Last Calib.: 2012.03.08
Time On Btm: 2012.03.08 @ 05:01:26
Time Off Btm: 2012.03.08 @ 09:16:25

TEST COMMENT: 5-IFP-w k to a fr bl 1/2" to 5" bl
60-ISIP-no bl
60-FFP-w k to strg in 45 min
90-FSIP-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1853.34	108.44	Initial Hydro-static
73	66.45	110.43	Open To Flow (1)
145	259.86	118.81	Shut-In(1)
252	1225.83	117.30	End Shut-In(1)
255	1851.31	117.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
490.00	Water RW .24@60F	6.45
150.00	SOCMW 2%O30%M68%W	2.10

* Recovery from multiple tests

Gas Rates

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

Jall Kilian Corporation
Geologist

Certified Petroleum
Geologist #3351
License #224

RECEIVED
SEP 12 2012
KCC WICHITA

P.O. Box 26
Hays, Kansas 67601-0026
Phone: 785-628-6061
Cell: 785-635-1349

GEOLOGIST'S WELL REPORT

COMPANY IA OPERATING, INC. (33335)

WELL Virginia K. #18-1

FIELD Pleasant SE (Wildcat per seismic)

LOCATION (legal) Ap. SE SE NW
(2180' FNL & 2100' FWL)
Section 18 TWP 14S RGE 19W

(Map) 6½ mi W & 1½ mi S of Hays Golf Coarse

COUNTY Ellis STATE Kansas

ELEVATION: 2223' K.B., 2215' G.L.

Depths measured from Kelly Bushing

A. P. I. NUMBER 15-051-26268

GEOLOGY BY Randall Kilian

PERTINENT WELL DATA

CONTRACTOR DISCOVERY DRILLING CO., INC. (31548)

RIG #3 (Galen Gaschler TP) HYDRAULICS D-375 6x14x60

DRILL PIPE 4½" X-H COLLARS 6¼ 17 (526')

CASING: SURFACE 8 5/8" @ 221' w/ 150 sx Common

PRODUCTION 5 ½" @ 3923' w/ 155 sx Common PC in Anhydrite

DRILLING FLUID: COMPANY Andy's Mud & Chemical Co. (Kirk Werth)

TYPE: Chemical & Drispac

REMARKS: Full service

DRILL STEM TESTS: COMPANY Trilobite Testing Inc. (Ray Schwager)

NUMBER OF TESTS Four (4)

ELECTIC LOGS: COMPANY Superior Well Services

DETAIL (5") 3150' - RTD

TYPE DI, Comp N-D, Micro

DRILLING TIME FROM 3150' TO RTD

SAMPLE TIME FROM 3150' TO RTD

SUPERVISION FROM 3150' TO RTD

VERTICAL DEVIATION 3/4°@ 221', 2½°@ 3576', 2½°@ 3925'

PLUGGING REPORT 30 sx Rat, 15 sx Mouse

RESERVE PIT 400 bbls., Chl. 67,000 Ca. 2100

DAILY REPORT

DATE:	7 a.m. Depth	RIG ACTIVITY
3-1-12		MIRU, Spud
3-2-12	505'	Drilling under surface
3-3-12	2300'	Drilling shale & sand
3-4-12	3060'	Drilling shale & lime
3-5-12	3576'	DST #1 LKc C-D
3-6-12	3630'	DST #2 LKc F-G
3-7-12	3770'	DST #3 LKc H-L
3-8-12	3925'	TD. Logged. DST #4. Run pi

DRILL STEM TESTS

NO	INTERVAL	IFP/TIME	ISIP/TIME	FFP/TIME	FSIP/TIME	IHP/FHP	RECOVERY
1	LKc C-D 3535- 3576'	331# 329# 5"	522# 60"	374# 484# 30"	496# 90"	1686# 1631#	GTS 10" 2nd Open 1280' Oil 40° 120' Sl,O,C,M,Wtr
2	LKc F-G 3576- 3630'	54# 133# 5"	745# 60"	132# 393# 60"	659# 90"	1689# 1664#	520' GIP 75' Oil 40° 535' O&G,C,M,Wtr 190' Wtr
3	LKc H-L 3641- 3770'	27# 41# 5"	768# 60"	34# 60# 60"	904# 90"	1737# 1710#	270' GIP 92' M,G,Oil
4	Arb. 3820- 3856'	- 5"	- 60"	66# 259# 75"	1225# 105"	1853# 1851#	150' Sl,O,C,M,Wtr 490' Wtr
5							
6							
7							
8							

MUD RECORD

CHK	DEPTH	WT	VIS	FIL	CHL	YP
1	3038'					
2	3133'	8.7	46	8.0	1.8k	15
3	3170'	8.7	44			
4	3250'	8.7	53			
5	3330'	8.7	52			
6	3440'	8.7	53			
7	3576'	8.9	48	7.8	3k	14
8	3630'	9.1	56	7.8	3.2k	12
9	3730'	8.8	63			
10	3793'	9.2	60	8.8	8k	24
11	3880'	8.8	67			

Displaced

LCM 1#

LCM 1 3/4#

LCM 1#

LCM 1½# $76.1

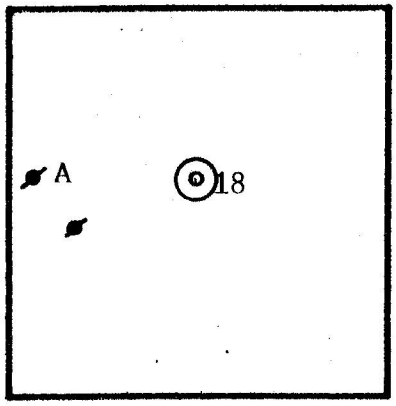
LCM 3#

BIT RECORD

NO	SIZE	MAKE	TYPE	DEPTHOUT	FEET	HOURS
1	12 ¼"	TZ	WA417GC	221'	221'	2 3/4
2	7 7/8"	HTCo	GC20C	3925'	3704'	77 ¼
3						
4						
5						
6						

FORMATION TOPS & STRUCTURAL GEOLOGY

R 19 W



REFERRED TO:

A: RAYMOND OIL CO.
#2 W. Kraus SW SW NW 18

B:

C:

D:

E:

STRATIGRAPHIC MARKERS	SUBJECT WELL SAMPLE	SUBJECT WELL E. LOG	STRUCTURAL POSITION DATUM	A	B	C	D	E
Anhydrite	1486'	1488'	+ 735	+ 730				
Base	1530'	1532'	+ 691	+ 693				
Topeka	3227'	3231'	-1008	-1006				
Heeb. Sh.	3474'	3480'	-1257	-1254				
Toronto	3498'	3501'	-1278	-1278				
Lansing	3520'	3523'	-1300	-1300				
BKc.	3768'	3774'	-1551	-1554				
Marmaton	3802'	3808'	-1585	-1588				
Arbuckle	3839'	3845'	-1622	-1619				
TD	3925'	3924'	-1701	-1623				

Note; The log tops were 3-6' deeper than the sample tops. Discovery Drilling #3 is a top quality rig and generally right on their measurments. Therefore, I question the electric log tops.

*Structural position of subject well as compared to referred well.

SUMMARY

The Virginia K. #18-1 well was drilled by Discovery Drilling tools rig #3 beginning 3-1-12 and drilling was completed 3-8-12.

The drill site was located via a 3-D seismic survey. The well ran high structurally to nearby wells.

Oil shows were encountered in numerous zones. DST #1 LKc C-D was a positive test. DST #2 LKc F-G may contribute to ultimate reserves. DST #3 LKc H-L was also a positive test.

The Arbuckle was encountered a bit lower than expected therefore DST #4 was a negative test.

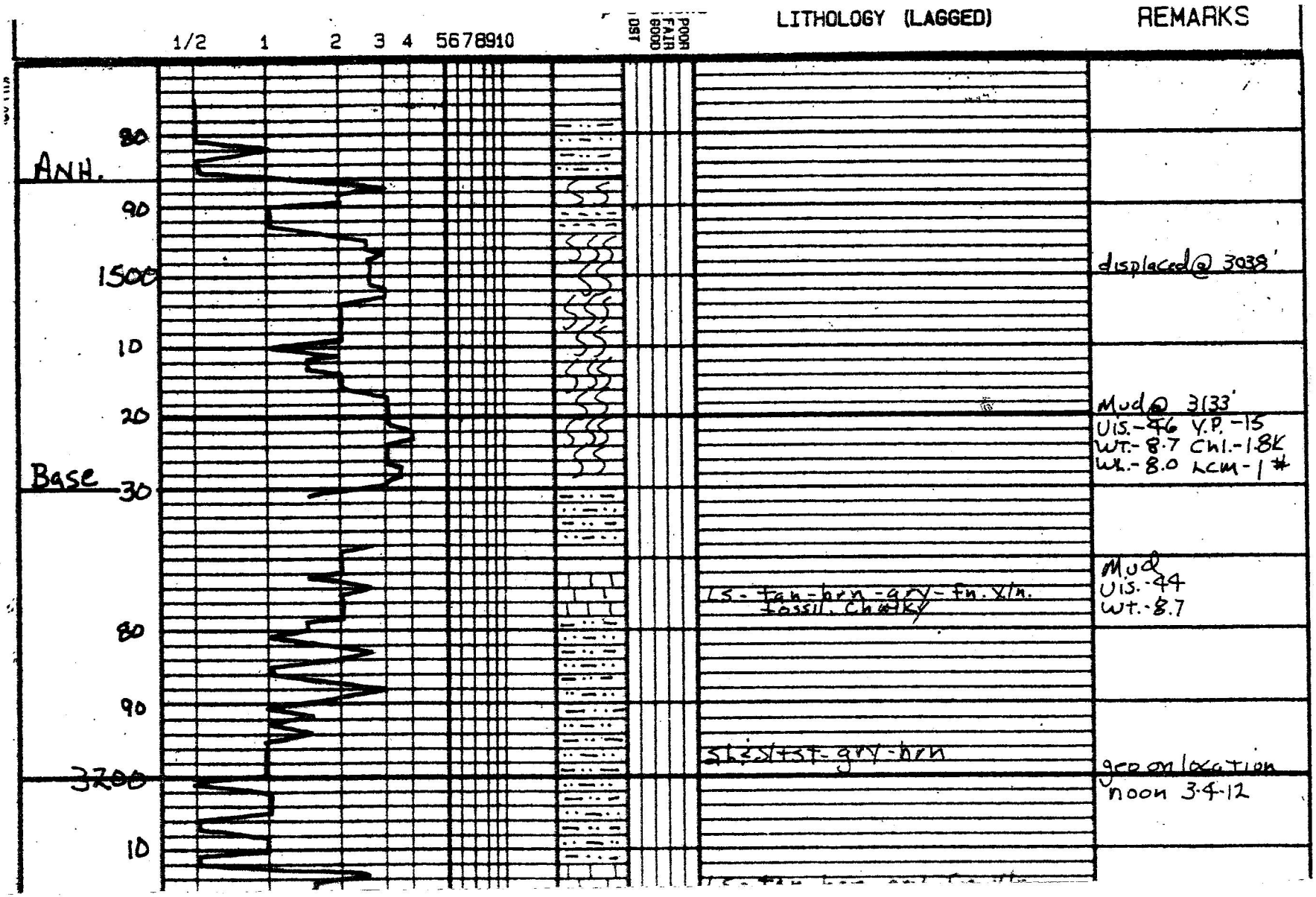
Based upon all data, casing was set and cemented to further test and produce the well.

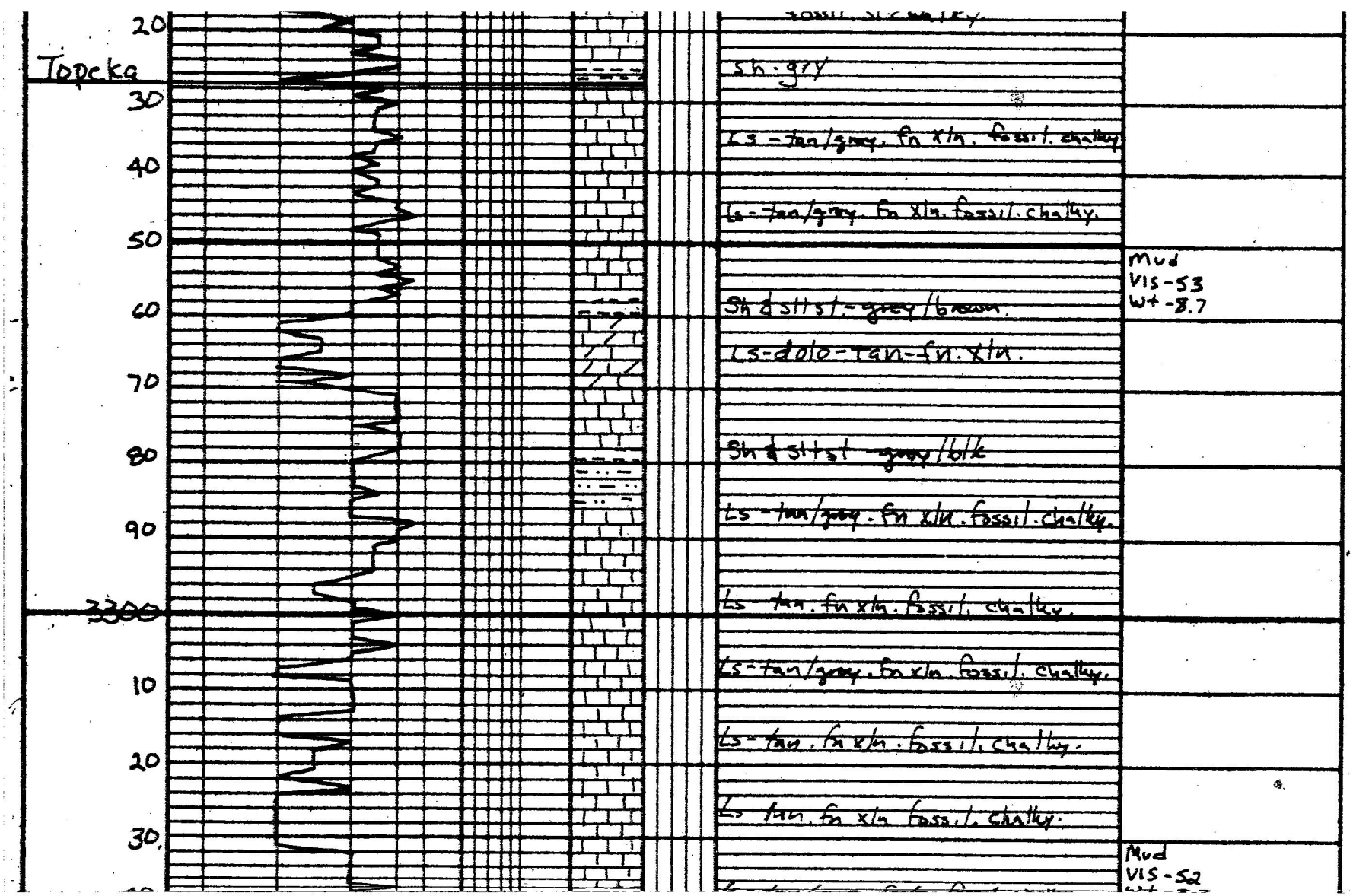
Recommended perfs; LKc K 3727-32', E 3591-95' &
C 3550-55'.

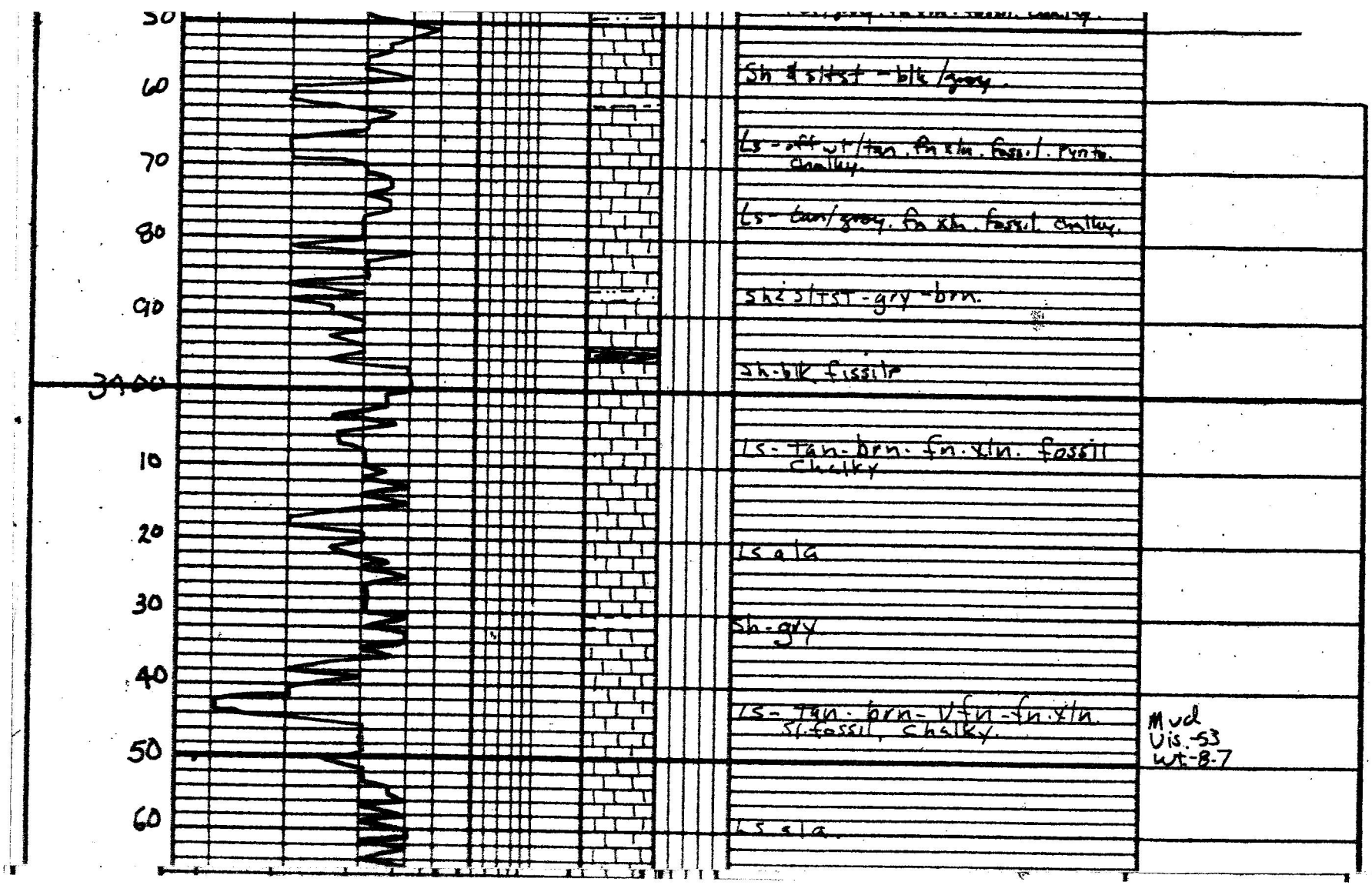
Respectfully,

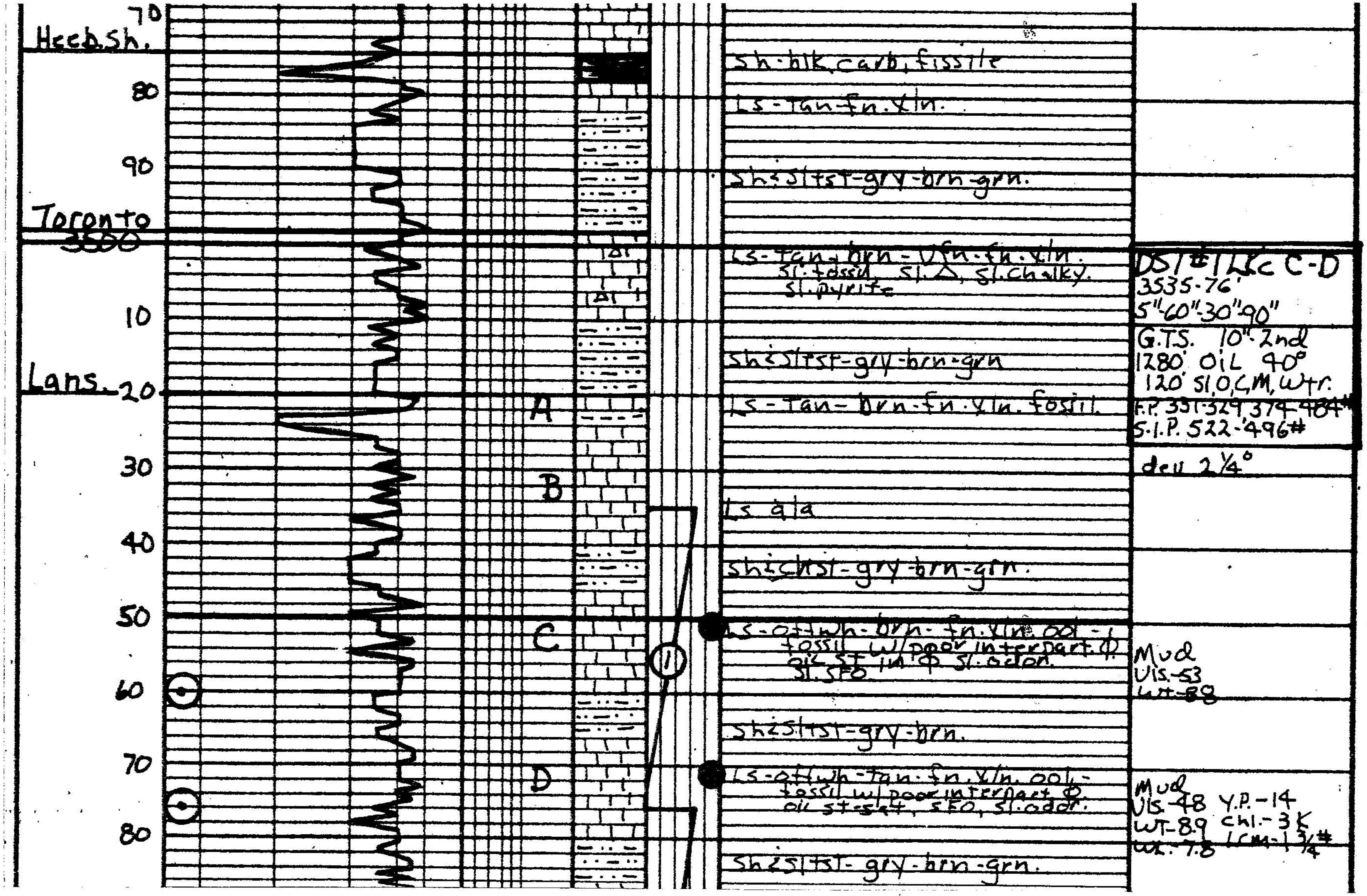
Randy

Randall Kilian

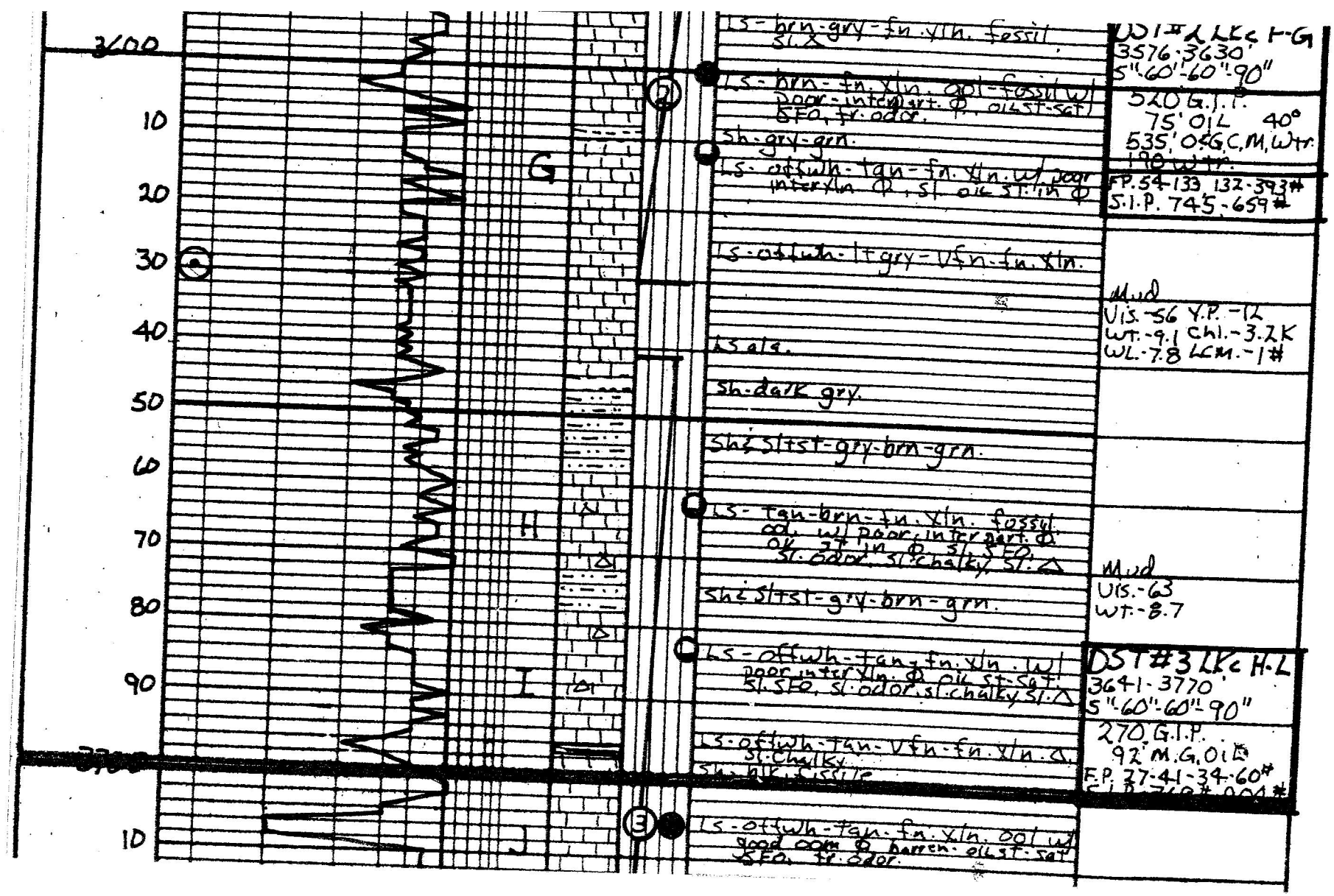

1/2 1 2 3 4 5 6 7 8 9 10
POOR FAIR GOOD
DST
LITHOLOGY (LAGGED)
REMARKS
80
ANH.
90
1500
10
20
Base
30
80
90
3200
10
displaced @ 3038'
Mud @ 3133'
VIS.-46 Y.P.-15
WT.-8.7 Chl.-18K
WL-8.0 LCM-1#
LS-tan-brn-gry-fn. x/n. fossil. Chalky
Mud
VIS.-44
WT.-8.7
SLTST-gry-brn
geo on location
noon 3-4-12

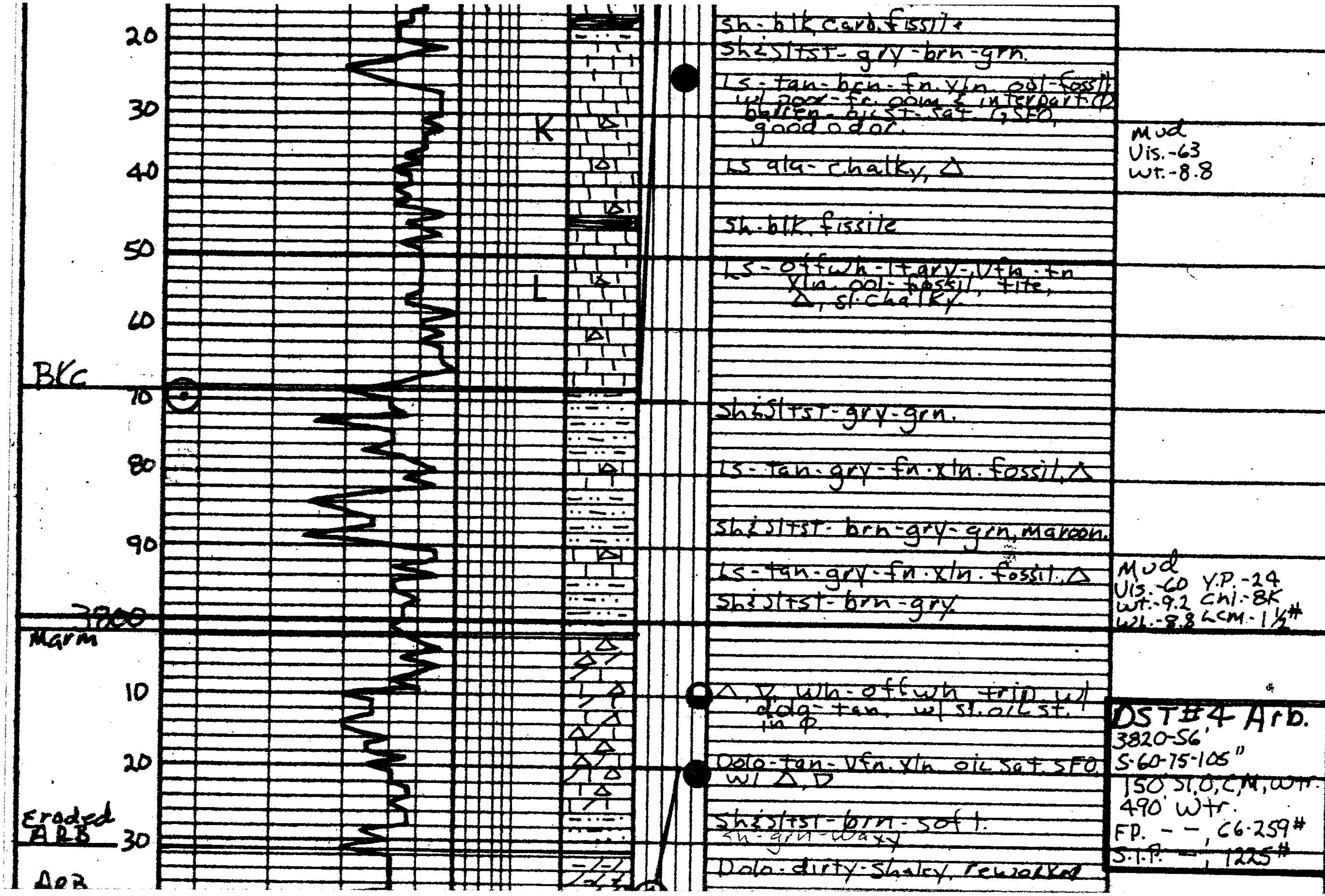

20
Topeka
30
40
50
60
70
80
90
3300
10
20
30
sh. gry
Ls - tan/grey. fn x/n. fossil. chalky
Ls - tan/grey. fn x/n. fossil. chalky.
Mud
VIS - 53
Wt - 8.7
Sh & slt st - grey/brown.
Ls-dolo-tan-fn. x/n.
Sh & slt st - grey/blk
Ls - tan/grey. fn x/n. fossil. chalky.
Ls tan. fn x/n. fossil. chalky.
Ls - tan/grey. fn x/n. fossil. chalky.
Ls - tan. fn x/n. fossil. chalky.
Ls tan. fn x/n fossil. chalky.
Mud
VIS - 52

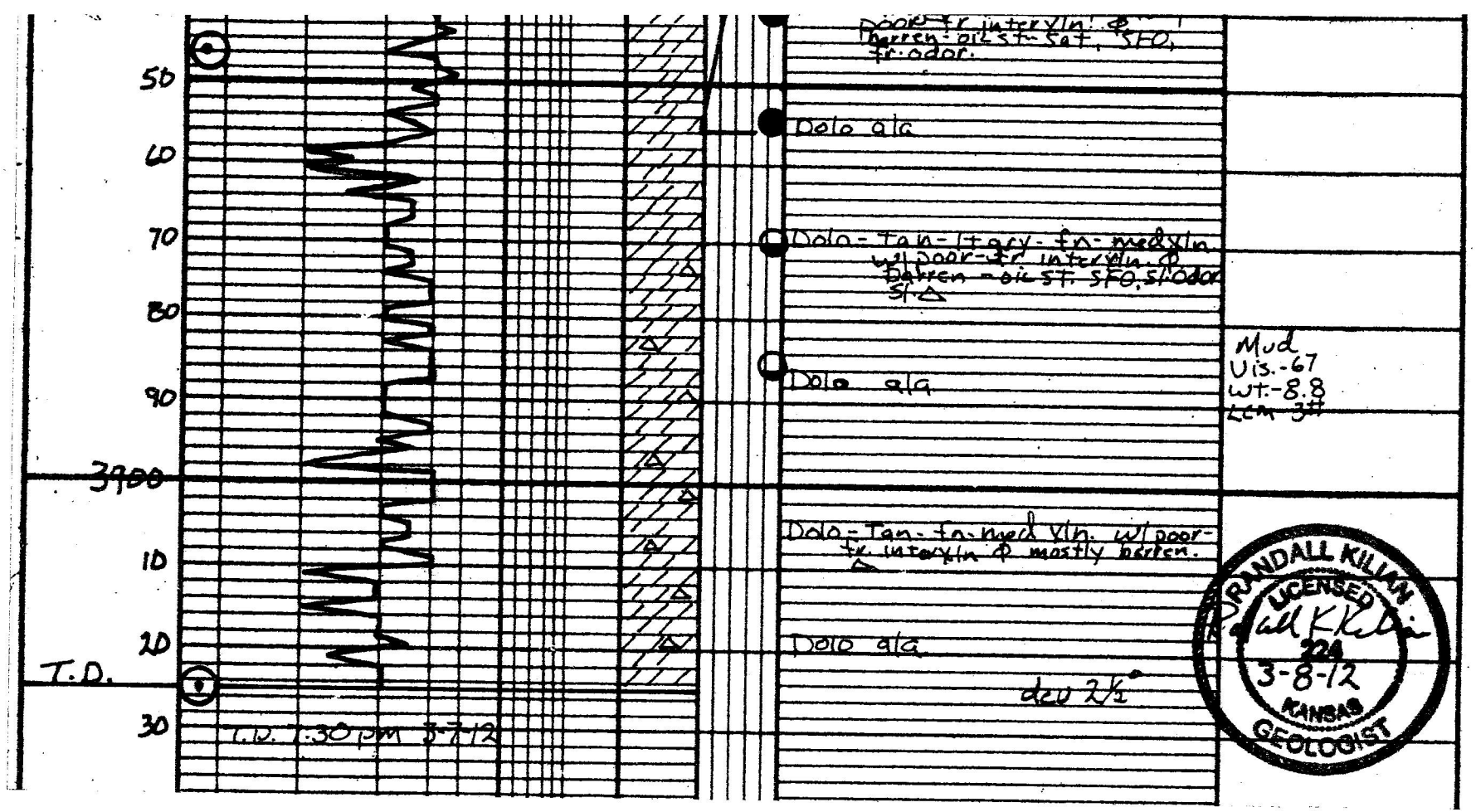

50
60
70
80
90
3400
10
20
30
40
50
60
Sh & s/tst - blk/gray.
ls - off wt/tan. fn xln. fossil. pyrite. chalky.
ls - tan/gray. fn xln. fossil. chalky.
sh & s/tst - gry - brn.
sh - blk. fissile
ls - tan - brn. fn. xln. fossil chalky
ls & lg
sh - gry
ls - tan - brn - v fn - fn. xln. sl. fossil, chalky.
ls & lg.
Mud
Vis. -53
Wt - 8.7



70
Heeb.Sh.
80
90
Toronto
3500
10
Lans.
20
30
40
50
60
70
80
A
B
C
D
Sh-blk, carb, fissile
Ls-Tan-fn.xln.
Sh & sltst-gry-brn-grn.
Ls-Tan-brn-vfn-fn.xln.
sl.fossil, sl.△, sl.chalky.
sl.pyrite
Sh & sltst-gry-brn-grn
Ls-Tan-brn-fn.xln. fossil.
Ls a/a
Sh & sltst-gry-brn-grn.
Ls-off wh-brn-fn.xln. ool-fossil w/poor interpart. Φ
oil st in Φ sl. odor.
sl. SFO
Sh & sltst-gry-brn.
Ls-off wh-Tan-fn.xln. ool-fossil w/poor interpart. Φ
oil st-sat, SFO, sl. odor.
Sh & sltst-gry-brn-grn.
DST #1 LKC C-D
3535-76'
5"-60"-30"-90"
G.T.S. 10" 2nd
1280' OIL 40°
120' Sl.O.C.M, W.tr.
F.P. 351-329, 374-484#
S.I.P. 522-496#
dev 2 1/4°
Mud
Vis-53
Wt-8.9
Mud
Vis-48 Y.P.-14
WT-8.9 Chl.-3K
wl.-7.8 LCM-1 3/4#


3600
10
20
30
40
50
60
70
80
90
3700
10
G
H
I
J
LS - brn-gry-fn. xln. fossil sl. ∆
LS - brn-fn. xln. ool-fossil w/ poor-interpart. Φ, oil st-sat, SFO, fr. odor.
sh-gry-grn.
LS - off wh-tan-fn. xln. w/ poor interxln Φ, sl oil st. in Φ
LS - off wh-ltgry-vfn-fn. xln.
LS alg.
sh-dark gry.
sh; sltst-gry-brn-grn.
LS - tan-brn-fn. xln. fossil. ool. w/ poor, interpart. Φ ok. st. in Φ, sl SFO. sl. odor. sl. chalky, sl. ∆
sh; sltst-gry-brn-grn.
LS - off wh-tan, fn. xln. w/ poor, interxln. Φ, oil st-sat. sl. SFO, sl. odor, sl. chalky, sl. ∆
LS - off wh-tan-vfn-fn. xln. ∆, sl. chalky
sh-blk, fissile
LS - off wh-tan. fn. xln. ool w/ good oom Φ, barren. oil st. sat. SFO, fr. odor.
DST #2 LKC H-G
3576-3630'
5"-60"-60"-90"
520 G.I.P.
75' OIL 40°
535' OSGCM, Wtr.
190 Wtr.
F.P. 54-133, 132-393#
S.I.P. 745-659#
Mud
Vis. -56 Y.P. -12
Wt. -9.1 Chl. -3.2K
WL. -7.8 LCM. -1#
Mud
Vis. -63
Wt. -8.7
DST #3 LKC H-L
3641-3770'
5"-60"-60"-90"
270 G.I.P.
92' M.G.O.C.M.
F.P. 37-41-34-60#
S.I.P. 740-704#


20
30
40
50
60
BKC
70
80
90
3800
Marm
10
20
Eroded ARB
30
Arb
K
L
Sh-blk carb. fissile
Sh&sltst-gry-brn-grn.
Ls-tan-brn-fn.xln. ool-fossil. w/ poor-fr. oom & interpart. φ, broken-hi st-sat, GSFO, good odor.
Ls alg-chalky, △
Sh-blk, fissile
Ls-offwh-ltgry-vfn-fn xln. ool-fossil, tite, △, sl-chalky.
Sh&sltst-gry-grn.
Ls-tan-gry-fn-xln. fossil, △
Sh&sltst-brn-gry-grn, maroon.
Ls-tan-gry-fn-xln. fossil. △
Sh&sltst-brn-gry.
△, ▽ wh-offwh trip. w/ dolo-tan. w/ sl. oil st. in φ.
Dolo-tan-vfn.xln. oil sat. SFO. w/ △, ▽
Sh&sltst-brn-soft.
Sh-grn-waxy
Dolo-dirty-shaley, reworked
Mud
Vis.-63
Wt.-8.8
Mud
Vis.-60 Y.P.-24
Wt.-9.2 Chl.-8K
WL.-8.8 LCM-1½#
DST#4 Arb.
3820-56'
S-60-75-105"
150' Sl.O.C.M., Wtr.
490' Wtr.
FP. --, 66-259#
S.I.P. --, 1225#


poor fr intervln &
barren - oil ST - Sat, SFO,
fr odor.
Dolo gla
Dolo - Tan - lt gry - fn - med vln
w/ poor - fr intervln &
barren - oil ST, SFO, slodor
SFA
Dolo gla
Dolo - Tan - fn - med vln w/ poor -
fr intervln & mostly barren.
Dolo gla
dev 2½°
50
60
70
80
90
3900
10
20
T.D.
30
T.D. 7:30 PM 3-7-12
Mud
Vis. - 67
wt. - 8.8
Lcm 3#
RANDALL KILIAN
LICENSED
3-8-12
KANSAS
GEOLOGIST