



**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
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_- Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total 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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

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
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<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Mikol Oil LLC
Well Name	Patricia 1-34
Doc ID	1103889

All Electric Logs Run

Compact Photo Density Compensated Neutron
Array Induction Shallow Focused Electric log
Spectral Gamma Ray
Microresistivity Log
Compensated Sonic with Integrated Transit Time

Form	ACO1 - Well Completion
Operator	Mikol Oil LLC
Well Name	Patricia 1-34
Doc ID	1103889

Tops

Name	Top	Datum
Base Anhydrite	1304	+775
Topeka	3015	-936
Heebner Shale	3252	-1173
Toronto Ls	3272	-1193
Lansing Group	3294	-1215
G Zone Porosity	3392	-1313
Stark Shale	3495	-1416
Base KS City Gp	3534	-1455
Conglomerate Zone	3569	-1490
Simpson SS	3631	-1552
Arbuckle Fm.	3665	-1586



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Mikol Oil LLC  
1407 Washington Circ  
Hays KS, 67601  
ATTN: Bob Stolzle

**34-10s-16w Rooks KS**  
**Patricia 1-34**  
Job Ticket: 51553 **DST#: 1**  
Test Start: 2012.11.17 @ 16:29:00

## GENERAL INFORMATION:

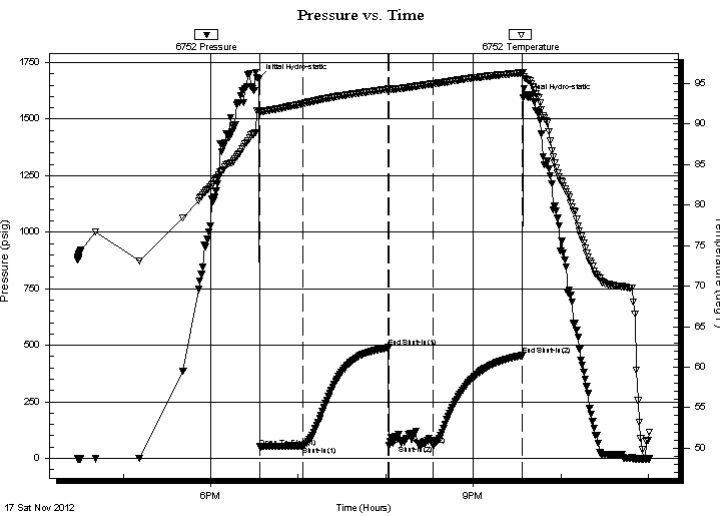
Formation: **KC "E-F"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 18:33:40  
Time Test Ended: 23:01:00  
Interval: **3313.00 ft (KB) To 3390.00 ft (KB) (TVD)**  
Total Depth: 3390.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 2079.00 ft (KB)  
2074.00 ft (CF)  
KB to GR/CF: 5.00 ft  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Cody Bloedorn  
Unit No: 41

## Serial #: 6752

Inside

Press @ Run Depth: 57.93 psig @ 3382.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2012.11.17 End Date: 2012.11.17 Last Calib.: 2012.11.17  
Start Time: 16:29:01 End Time: 23:01:00 Time On Btm: 2012.11.17 @ 18:33:00  
Time Off Btm: 2012.11.17 @ 21:34:00

TEST COMMENT: 30 - IF- 1/2" blow , dying  
60 - IS- No blow back  
30 - FF- No blow  
60 - FS- No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1677.63	91.68	Initial Hydro-static
1	50.90	91.49	Open To Flow (1)
31	55.16	92.54	Shut-In(1)
89	490.54	94.30	End Shut-In(1)
90	58.83	94.24	Open To Flow (2)
120	57.93	94.96	Shut-In(2)
181	454.56	96.33	End Shut-In(2)
181	1593.03	96.37	Final Hydro-static

## Recovery

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

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mikol Oil LLC  
1407 Washington Circ  
Hays KS, 67601  
ATTN: Bob Stolzle

**34-10s-16w Rooks KS**  
**Patricia 1-34**  
Job Ticket: 51553      **DST#: 1**  
Test Start: 2012.11.17 @ 16:29:00

## 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: bbl		
Water Loss: 9.59 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

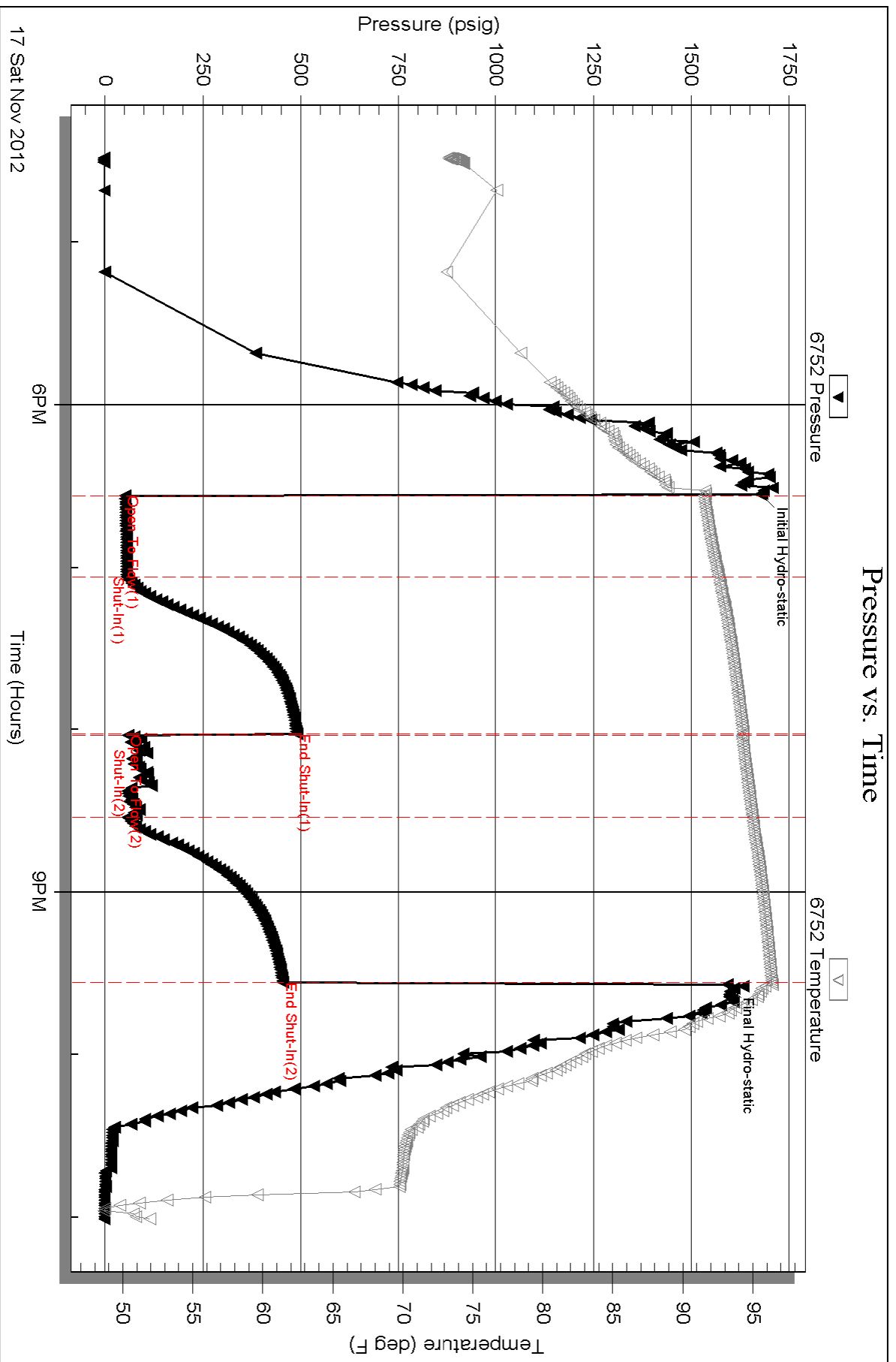
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud w ith oil spots, 100%M	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

# Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Mikol Oil LLC  
1407 Washington Circ  
Hays KS, 67601  
ATTN: Bob Stolzle

**34-10s-16w Rooks KS**  
**Patricia 1-34**  
Job Ticket: 51526 **DST#: 2**  
Test Start: 2012.11.18 @ 22:55:00

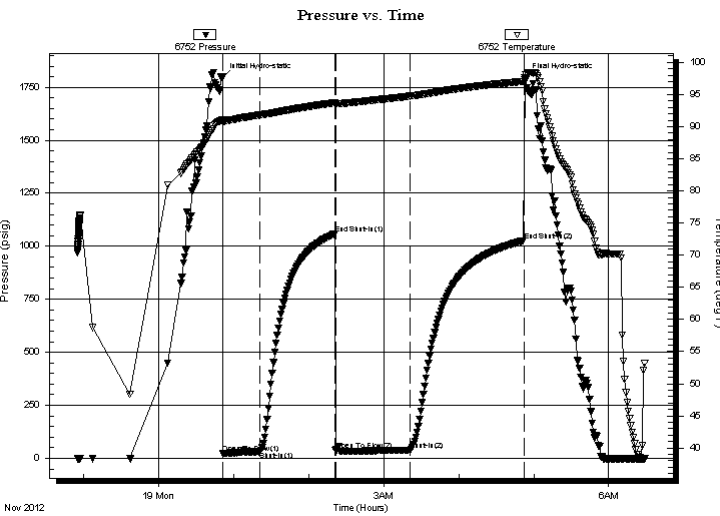
## GENERAL INFORMATION:

Formation: **Simpson Sand**  
Deviated: No Whipstock: 2079.00 ft (KB)  
Time Tool Opened: 00:51:20  
Time Test Ended: 06:30:00  
Interval: **3538.00 ft (KB) To 3650.00 ft (KB) (TVD)**  
Total Depth: 3650.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Jim Svaty  
Unit No: 41  
Reference Elevations: 2079.00 ft (KB)  
2074.00 ft (CF)  
KB to GR/CF: 5.00 ft

## Serial #: 6752 Inside

Press @ Run Depth: 39.57 psig @ 3545.00 ft (KB)  
Start Date: 2012.11.18 End Date: 2012.11.19  
Start Time: 22:55:01 End Time: 06:29:20  
Capacity: 8000.00 psig  
Last Calib.: 2012.11.19  
Time On Btm: 2012.11.19 @ 00:51:00  
Time Off Btm: 2012.11.19 @ 04:52:40

TEST COMMENT: 30-IFP- Weak Surface Blow  
60-ISIP- No Blow  
60-FFP- Weak Surface Blow - Surging  
90-FSIP- No Blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1795.79	91.05	Initial Hydro-static
1	21.83	90.69	Open To Flow (1)
30	31.46	91.82	Shut-In(1)
90	1058.82	93.73	End Shut-In(1)
91	37.86	93.52	Open To Flow (2)
151	39.57	94.74	Shut-In(2)
241	1026.66	97.04	End Shut-In(2)
242	1797.18	97.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	WCM 2%w 98%m	0.35

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mikol Oil LLC  
1407 Washington Circ  
Hays KS, 67601  
ATTN: Bob Stolzle

**34-10s-16w Rooks KS**  
**Patricia 1-34**  
Job Ticket: 51526      **DST#: 2**  
Test Start: 2012.11.18 @ 22:55:00

**Mud and Cushion Information**

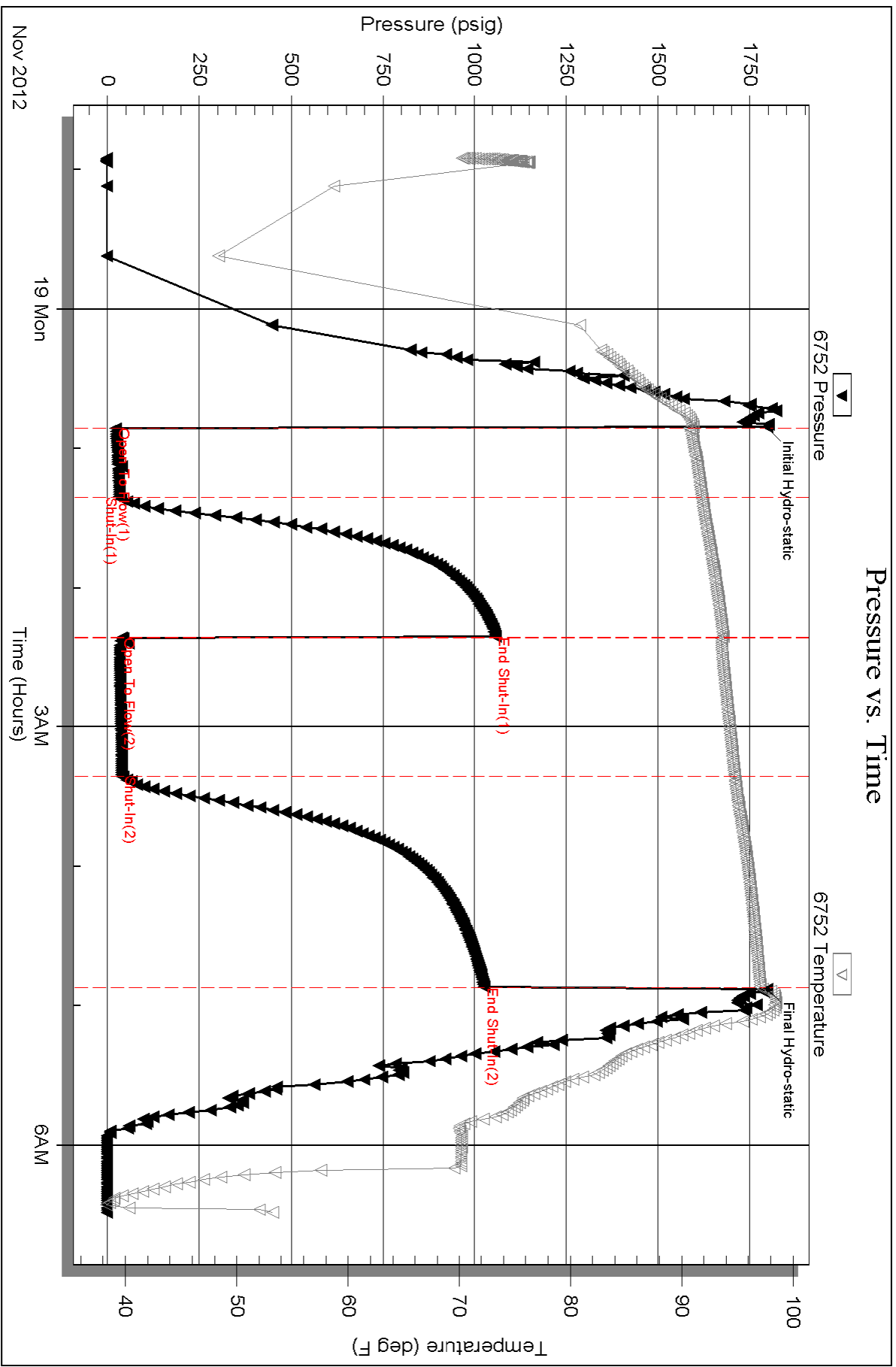
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.76 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 8000.00 ppm			
Filter Cake: 1.50 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
45.00	WCM 2%w 98%m	0.349

Total Length: 45.00 ft      Total Volume: 0.349 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



# 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. 6095

Date	11-13-12	Sec.	34	Twp.	W	Range	16	County	ROOKS	State	KS	On Location		Finish	10:30pm
Location								Fairport. N to 290 W to T L N 1/4 W S into							

Lease	Patricia 1-34	Well No.	1-34	Owner	Fairport
Contractor	Discroxy 4	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.			
Type Job	Surface	Charge To	Mikol Oil		
Hole Size	12 1/4	T.D.	220 FT	Street	
Csg.	8 3/8	Depth	223 FT	City	
Tbg. Size		Depth		State	
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	20 FT	Shoe Joint	20 FT	Cement Amount Ordered	150 3% CC 2% gel
Meas Line		Displace	12 3/4 BBL		

EQUIPMENT			Common
Pumptrk	5	No. Cementer Helper	150
Bulktrk	14	No. Driver	Poz. Mix
Bulktrk	pu	No. Driver	Gel. 3
		No. Driver	Calcium 5

JOB SERVICES & REMARKS		Hulls
Remarks:		Salt
Rat Hole	Patricia 1-34	Flowseal
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
		Handling 138
		Mileage

Cement did Circulate		Float Equipment
		Guide Shoe
		Centralizer
		Baskets
		AFU Inserts
		Float Shoe
		Latch Down
		Pumptrk Charge Surface
		Mileage 31

Signature	<i>[Signature]</i>	Tax	
		Discount	
		Total Charge	

# QUALITY OILWELL CEMENTING,

Federal Tax I.D.# 20-2886107

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

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

No. 6226

Date	11-20-12	Sec.	34	Twp.	10	Range	16	County	ROCKS	State	KS	On Location	3:00 AM	Finish	8:00 AM
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Location *Port N to 290 W to T 22 N 1/2 S into*

Lease	<i>Patricia</i>	Well No.	<i>1-34</i>	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.
Contractor	<i>Discount 4</i>				
Type Job	<i>plug</i>				
Hole Size		T.D.	<i>37 80</i>	Charge To	<i>Mikol Oil</i>
Csg.		Depth	<i>36 45</i>	Street	
Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.		Shoe Joint		Cement Amount Ordered	<i>245 <math>\frac{60}{40}</math> 4% gel by plan</i>
Meas Line		Displace			

**EQUIPMENT**

Pumptrk	<i>16</i>	No.	Cement Helper	<i>Matt</i>
Bulktrk	<i>8</i>	No.	Driver	<i>Clayton</i>
Bulktrk	<i>04</i>	No.	Driver	<i>Billy</i>

Common	<i>147</i>
Poz. Mix	<i>98</i>
Gel.	<i>9</i>
Calcium	
Hulls	
Salt	
Flowseal	<i>61#</i>
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	
Mileage	

**JOB SERVICES & REMARKS**

Remarks: *30 SWS*  
Rat Hole *15 SWS*  
Mouse Hole  
Centralizers  
Baskets  
D/V or Port Collar

<i>1</i>	<i>36 45</i>	<i>25 SWS</i>
<i>2</i>	<i>17 85</i>	<i>23 SWS</i>
<i>3</i>	<i>7 80</i>	<i>100 SWS</i>
<i>4</i>	<i>2 70</i>	<i>40 SWS</i>
<i>5</i>	<i>40</i>	<i>10 SWS</i>

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Lease  
*Patricia*

Pumptrk Charge *Plug*  
Mileage *31*

X Signature *Mike [unclear]*

Tax	
Discount	
Total Charge	

# ROBERT STOLZLE

CONSULTING PETROLEUM GEOLOGIST

6211 S. 201st ST., W. Greenwood, MO 67032 - 0240 (918) 764 - 2400

## DRILLING TIME AND SAMPLE LOG

OPERATOR: **Mikrol Oil, LLC**  
 LEASE: **Patricia** WELL NO.: **1-34**  
 FIELD: **Unnamed**  
 LOCATION: **630'ENL, 1965'FML (SENNENNEM)**  
 SEC.: **34** TWP: **10S** RANGE: **16W**  
 COUNTY: **Rooks** STATE: **K5**  
 API NO.: **15-163-24083-00-00**

CONTRACTOR: **Discovery Drilling-Rig #4**  
 COMPLETED: **November 13, 2012** COMPLETED: **11/20/12**  
 ROTARY TOTAL DEPTH: **3780'** LOG TOTAL DEPTH: **3782'**  
 GEOLOGICAL SUPERVISION FROM: **3100'** to: **T.D.**  
 MUD-UP DEPTH: **2810'** MUD TYPE: **Chemical Polymer**

FORMATION	SAMPLE		LOG		STRUCTURAL DEVIATION
	TOP	THICKNESS	TOP	THICKNESS	
Stenocharal Anth.	1270	(+809)	1270	(+809)	-5'
Basa Anhydrite	1304	(+775)	1304	(+775)	-6'
Topoka Fm.	3011	(-932)	3015	(-936)	-10'
Haebner Sh.	3249	(-1170)	3252	(-1173)	-15'
Toronto ls.	3272	(-1193)	3272	(-1193)	-12'
Lansing Group	3292	(-1213)	3294	(-1215)	-13'
D'Ford Basalt	3392	(-1313)	3392	(-1313)	-15'
Stark Shale	3493	(-1414)	3495	(-1416)	-13'
Baskin City Gp.	3535	(-1456)	3534	(-1455)	-3'
Conglomerate Zone	3568	(-1489)	3569	(-1490)	-8'
Simpson ss.	3630	(-1551)	3631	(-1552)	-6'
Alpuckle Fm.	3662	(-1583)	3665	(-1586)	-16'
Total Depth			3780		3782

ELEVATIONS  
 KB **2079**  
 GL **2071**  
 Measurements are all from KB

CASING RECORD  
 SURFACE: **New 8 5/8"**  
 @220KB, Pinc.  
 PRODUCTION: **None**  
 P+H.

WIRELINE SURVEYS  
**Weatherford:**  
**Photo Density & Comp.**  
**Neutron Array**  
**Induction Spectral**  
**Gammaray and**  
**Sonic Microresis-**  
**tivity Logs Etc.**

LOCATION MAP

O Location	
Patricia 1-34	
	34

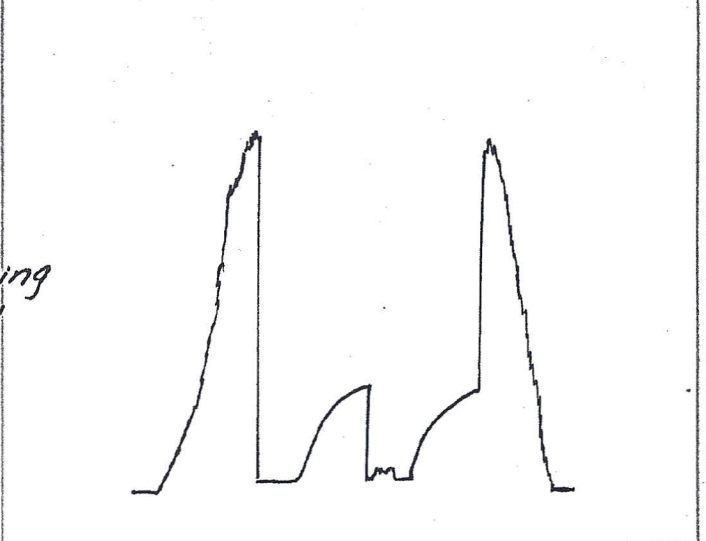
Reference Well for Structural Comparison: **Mikrol Oil Heberer #1-27 (WES 54 5227)**  
 Comments and Recommendations: **Recommended well to be plugged and abandoned.**

DST # 1 ZONE: Lansing 'C', 'D', 'E' and 'F' zones  
 INTERVAL: 3313'-3390'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1678 psi	10' oil spotted
2. Initial Flow: Start	0	51 psi	Mud
3. Initial Flow: End	30	55 psi	
4. Initial Shut-in: End	60	491 psi	Blow Desc:
5. Final Flow: Start	0	59 psi	I.F. - 1/2" blow/dying
6. Final Flow: End	30	58 psi	I.S.I. - No blow
7. Final Shut-in: End	60	455 psi	F.F. - No blow
8. Final Hydrostatic			F.S.I. - No blow

BHT: 96°F  
 Rv: \_\_\_\_\_

DST # 1 6752 Chert  
 Interval: 3313'-90' Depth: 3382'



DST # 2 ZONE: Conglomerate & Simpson sand  
 INTERVAL: 3538'-3650'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1796 psi	45' water cut mud
2. Initial Flow: Start	0	22 psi	(2% water)
3. Initial Flow: End	30	31 psi	
4. Initial Shut-in: End	60	1059 psi	Blow Desc:
5. Final Flow: Start	0	38 psi	I.F. - Surface blow
6. Final Flow: End	60	40 psi	I.S.I. - No blow

DST # 2 6752 Chert  
 Interval: 3538'-3650' Depth: 3545'

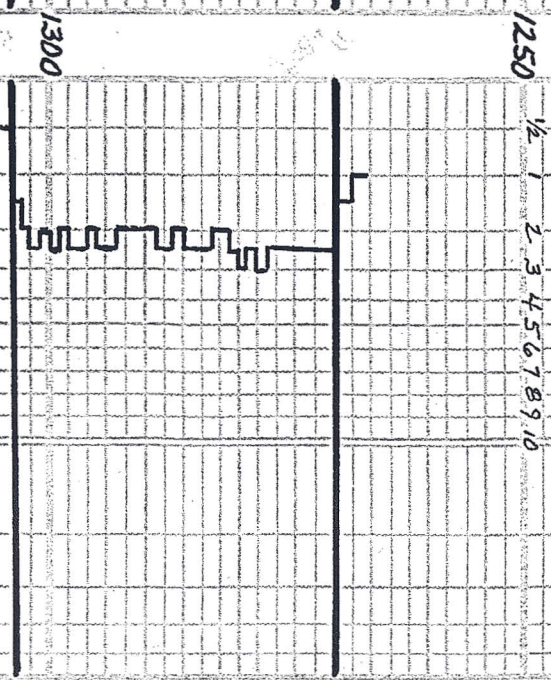


7. Final Shut-in: End 90 1027 psi E/E-Mk surf blow  
 8. Final Hydrostatic 1797 psi RSI-No blow  
 BHT: 97°F  
 Rev: \_\_\_\_\_

1111  
 2

Rate of Penetration  
 (inches per foot)

1/2 1 2 3 4 5 6 7 8 9 10



Stone Corral  
 Anhydrite  
 (4809')

Base of  
 Anhydrite  
 (4775')

Displace Native Mud System  
 @ 1810'

2900

1350

1300

Start 1' Drilling Time  
at 2950'

2950

3000

3050

3100

3150

Topok2 Fm.  
(-932')

Start 10' Wet & Dry Samples  
at 3100'

Ls: crm. - tan, hrd - m. sft. dns.,  
VEG - mx. in., foss., Abun. sh.  
stnc., tr. pr. pp. v. g.  $\emptyset$   
NSFOC

Ls: crm. - tan - gry., hrd - m. sft.,  
VEG - mx. in., tr. mic., tr. chky.  
tr. chky., foss. + sh. stnd.  
NSFOC

Ls: A.A. NSFOC

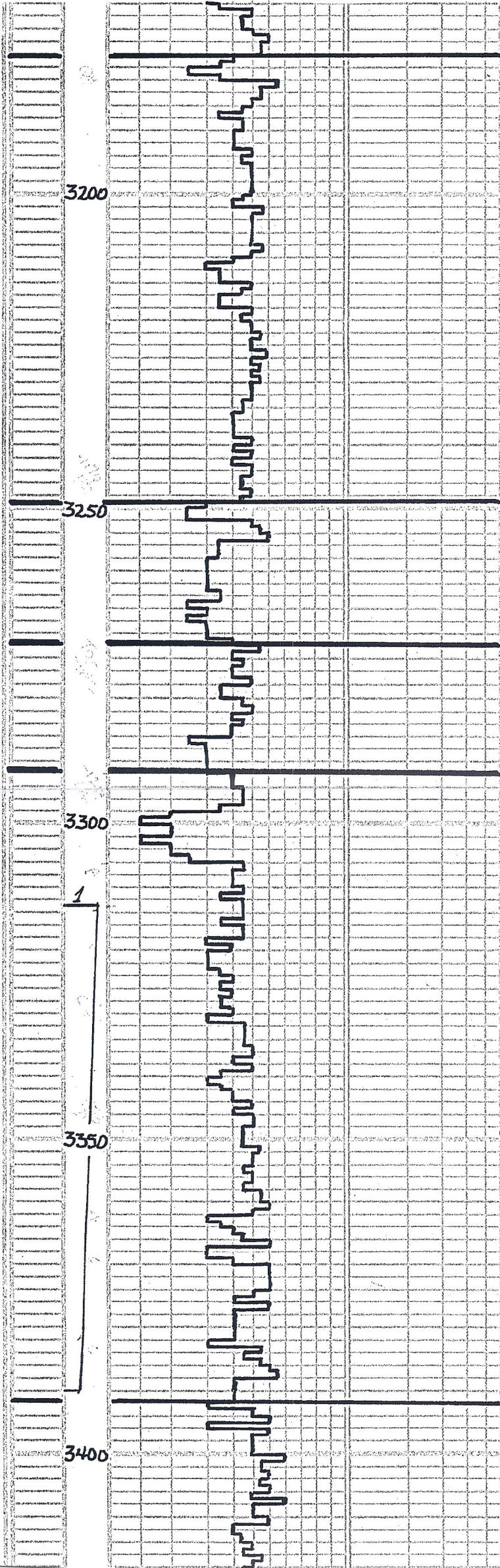
Sh. gry. - blk., m. sft. dns.,  
partly, tr. carb.  
occ. sh. A.A.

Ls: crm. - tan, hrd - m. sft. dns.,  
VEG. v. in., occ. foss. + sh. stnd.  
occ. stnd. NSFOC

Ls: crm., hrd. dns., VEG - mx. in.,  
mic., tr. carb., occ. foss. +  
sh. stnd. NSFOC

Ls: crm., hrd., dns., mx. in., mic.  
tr. chky., tr. dk. gry. carb.  
rare foss. NSFOC

Ls: A.A. w/ Ls: tan - gry., m. hrd  
- m. sft., foss., VEG. v. in.,  
sh. stnd. NSFOC



Ls. crm. - tan, lt. gry., m. sft. - hrd, dns., VEG - mxln., mic., tr. chb. foss. & sh. stnd. NΦ NSFDC  
 Sh. gry. - blk., m. sft., dns., carb. earthy  
 Ls. crm. - tan, m. hrd. - hrd, dns., VEG - mxln., mic. NΦ NSFDC  
 Shi. A. A.  
 Ls. crm. - lt. gry., hrd. - m. sft. + chky., VEG - mxln., mic., occ. foss. & sh. stnd. NΦ NSFDC  
 Ls. A. A. tr. chb., 1-2 pc. w/ VEG, pp. φ, v. wk. stn., wk. cut + fl. No F.O., No odor. v. wk. show  
 Ls. A. A. NΦ NSFDC  
 Sh. gry. - dk. gry., m. sft. - m. hrd. dns., tracky  
 Ls. crm. - gry., hrd. - sft. + chky., VEG - mxln., foss. abun. sh. stn. NΦ NSFDC  
 Ls. crm. - lt. gry., hrd. - m. sft., dns., VEG - mxln., tr. chb., tr. chky. abun. brn. sh. stn., occ. foss. NΦ NSFDC  
 Ls. crm. - gry., hrd. - m. sft., dns., VEG - mxln., occ. foss. & sh. stnd. tr. mic. tr. chb. NΦ NSFDC  
 occ. sh. dk. gry. - blk., m. sft., dns. carb., earthy  
 Ls. A. A. NΦ NSFDC  
 Sh. gry., sft., clayey. - earthy  
 Ls. crm. hrd., dns., VEG - mxln., foss. & sh. stnd. NΦ NSFDC  
 tr. sh. A. A.  
 Ls. crm., hrd., dns., VEG - mxln., mic. tr. chb., occ. foss. & sh. stnd. NΦ NSFDC  
 Ls. crm., hrd., dns., tr. mxln. - mxln. tr. foss., occ. sh. stn. NΦ NSFDC  
 Sh. gry., m. sft., dns., earthy  
 Sh. gry., m. hrd., dns., earthy - tracky  
 occ. Ls. A. A. NΦ NSFDC  
 Ls. crm., hrd., dns., VEG - mxln., mic. v. rare foss. NΦ NSFDC  
 Sh. lt. dk. gry., m. hrd. - sft. + clayey., earthy  
 Shi. A. A. less clayey.  
 Ls. crm., hrd., dns., VEG - mxln., occ. foss. & sh. stnd. NΦ NSFDC  
 Shi. lt. gry. - rd. brn., sft. - m. sft. dns., earthy - clayey.  
 Ls. crm. - tan, hrd., dns., VEG - mxln., mic., foss. NΦ NSFDC  
 Ls. crm., hrd., dns., tr. mxln. - mxln. mic., chky., tr. pr. pc. w/ VEG, pp. vug φ, lt. brn. stn., tr. wk. cut + fl., ip. int. ool. φ, wk. odor  
 Ls. crm., hrd., dns., VEG - mxln., occ. foss., w/ tr. tr. - pr. vug φ - some moldic φ, lt. stn. tr. cut + fl., wk. odor, No F.O.  
 Ls. wh. - crm., hrd., dns., med. - veg. yln., occ. foss. + ool. w/ pr. VEG oom. φ + tr. vug φ, lt. brn. mot. stn. wk. cut + fl., No F.O., ? perm., wk. odor  
 Ls. A. A. tr. chb., tr. chik. NΦ NSFDC  
 Sh. dk. gry. - blk., m. sft. - m. hrd. dns., occ. carb., earthy  
 Ls. crm. - gry., hrd. - m. sft., dns., VEG - mxln., mic., occ. foss. & sh. stn. tr. pr. vug φ, mot. brn. stn. wk. cut + fl., wk. odor, No F.O. v. perm.  
 Ls. crm. - tan, hrd., dns., med. - VEG yln., occ. foss. + ool. w/ pr. - gd. vug φ, mot. - unif. stn., wk. odor, No F.O., gd. cut. + fl., thin zone  
 Ls. A. A. w/ tr. vug φ, lt. stn., gd. cut + fl. No F.O. Fr. odor ? perm., oom. φ  
 Ls. crm. - wh., m. hrd. - hrd., dns., tr. ool. w/ pr. oom. φ NSFDC  
 Ls. wh. - crm. - tan, hrd., dns., VEG - mxln., mic. NΦ NSFDC

Queen Hill Shale (-1099')

4

Heebner Shale (-1170')

Toronto Ls. (-1193')

Lansing Group (-1213')

Weak Show

Weak Show

Very Weak Show

Fair - Good Show

G' Zone Porosity (-1313') Weak Show

Mudcheck @ 3390' Mwt. 8.9 lb. gal. Vis. 51 sec. 1/6.



3450

3500

3550

3600

3650

Ls: crm. - tan, hrd., dns., VFG - mxln., occ. chiky. NΦ NSFOC  
Sh: gry. grn. - dk. gry., m. hrd., dns., hackly  
chl. 4,000 PPM  
solids 4.2%  
L.C.M. 1 1/2 lb./bb1

5

Ls: crm. - lt. gry., hrd., dns., VFG - mxln., mic., occ. sft. + chiky. NΦ NSFOC  
tr. sh. stnd.  
Ls: crm. - tan - gry., hrd., dns., VFG - mxln., mic., occ. sft. + chiky., rare foss.

Ls: crm. - tan - gry., hrd. - sft. + chiky., VFG - mxln., occ. mic. rare foss. NΦ NSFOC

Ls: crm. - gry., hrd. - sft. + chiky., VFG - mxln., mic., tr. pol. + foss. w/ 1-2 pc. pr. fr. Vug. moldic. φ. lt. stn. fr. cut + fl.  
Very weak show

Ls: crm. - gry., hrd., dns., VFG - mxln., mic., 1-2 pc. w/ VEG, Vug. φ. round. ob. l., lt. brn. stn. fr. cut + fl., wk. odor. No F.O.  
Very weak show

Ls: A.A., 2-3 pc. w/ fr. - pr. oom. φ. 1 pc. in pool φ. lt. stn. tr. cut + fl., wk. odor. No F.O., v. perm.  
Very weak show

Ls: A.A., sh. stnd., 2-3 pc. w/ fr. - pr. pr. Vug φ. + show A.A.  
Sh: dk. gry. - blk., m. sft. - m. hrd. dns., hack - earthy, carb.  
Ls: crm. - tan, hrd., dns., VFG - mxln., mic., tr. pyr., occ. ool. w/ tr. pr. Vug. φ. w/ lt. brn. stn. fr. cut + fl., No odor, No F.O., v. perm.  
Very weak show

Stark Shale (-1414)

Ls: crm. - tan, hrd. - m. sft. + chiky. VFG - mxln., mic., tr. pyr., occ. ool. w/ tr. pr. Vug. φ. w/ lt. brn. stn. fr. cut + fl., No odor, No F.O., v. perm.  
Mud Check @ 3520'  
M.W. 8.7  
V.S. 53

Sh: gry. - dk. gry., m. sft., earthy  
Ls: crm. - tan, hrd., dns., VFG - mxln., mic., tr. pr. Vug. φ. lt. brn. stn. No odor, No F.O., v. Very wk. show  
chl. 8,000  
solids 2.4%  
L.C.M. 1 1/2 #

Ls: crm. - tan, hrd. - m. sft. + chiky. VFG - mxln., mic., pyr., tr. foss. NΦ NSFOC  
Ls: A.A., tr. sh. stnd. NΦ NSFOC  
tr. ss: gry. tr. rd. dns. in VEG, pr. sft., v. w. emd. NΦ NSFOC  
Base of Ks. City Group (-1456')

Ls: crm. hrd., dns., VFG - mxln., mic., sandy - v. sandy - calc. ss: VEG. NΦ NSFOC

Ls: A.A. w/ Ls: tan - brn., hrd., dns., occ. rd. sh. stnd. NΦ NSFOC  
tr. sh. rd. brn. - gry. grn., m. sft. earthy  
sh: rd. brn. - gry. grn., 2-3 ft. v. sft. + clayey, earthy  
Ls: crm. - brn., hrd., dns., VFG - mxln., mic., dec. foss. NΦ NSFOC  
Ls: crm. - tan, hrd., dns., VFG - mxln., mic., rd. sh. stnd., dec. pebb. surf. NΦ NSFOC

Conglomerate Zone (-1489')

Sh: A.A.  
Ls: crm. - gry., hrd., dns., VFG - mxln., tr. rd. sh. stn., tr. m. sft. + chiky., occ. v. sandy., tr. v. ool. + foss., tr. rd. sh. stnd. NΦ NSFOC  
Sh: lt. gry. - rd. brn., sft., earthy - clayey, occ. sandy.  
Ls: crm., hrd., dns., VFG - mxln., tr. rd. sh. stn., tr. ppl. NΦ NSFOC  
Ls: A.A., dec. pebble surface, tr. brn. chit. NΦ NSFOC  
Sh: maroon - rd. brn., m. sft. - v. sft. + clayey, dec. sandy, earthy  
Sh: rd. brn. - mar. - gry., sft. + clayey - m. sft., earthy, occ. sandy.  
Ls: A.A., tr. ss. wh. imp., dns., mod. w. sft., w. emd. NΦ NSFOC

Simpson Sandstone (-1551')

Cg: Sh: A.A. occ. Ls: + chit. rd. tr. ss: wh., hrd., dns., VFG, mod. - w. rd. w. sft., w. emd. tr. blu. - grn. sh. No v. s. NΦ NSFOC

Cg: Sh: A.A. occ. v. lw. grn. occ. Ls: + chit. tr. ss: wh.; hrd., dns., tr. VEG, subrd. w. sft., w. emd. No v. s. NΦ NSFOC

Cg: Sh: rd. brn. - dk. gry. occ. v. lw. blu. - grn., m. sft. - m. hrd., occ. sandy, earthy - hackly.  
Ls: A.A. CAVIAGS? NΦ NSFOC  
Pbun. Cg: Sh: A.A.

Arbuckle Fm. (-1583')  
Weak Show

Dol: crm. m. hrd., dns., fuz. w/ occ. tr. int. φ. tr. Vug φ. tr. v. fr. sh. tr. cut + fl., wk. odor, poss. wet

Cg: Sh: rd. brn. - dk. gry. occ. v. lw. blu. - grn., m. sft. - m. hrd., occ. sandy, earthy - hackly.  
Ls: A.A. CAVIAGS? NΦ NSFOC  
Pbun. Cg: Sh: A.A.

Dol: crm. m. hrd., dns., fuz. w/ occ. tr. int. φ. tr. Vug φ. tr. v. fr. sh. tr. cut + fl., wk. odor, poss. wet

