



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1186586
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: _____

1186586

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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MIKE ENGELBRECHT

Licensed Geologist No. 334

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Wichita, KS 67205

Phone: 316-721-9226
Cell: 316-641-6008

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

OPERATOR BITZLIE EXPLORATION, INC.

LEASE # 1 WRAY 15A

FIELD WILDCAT

LOCATION S/2 NW NE \approx 960' ENL $\&$ 1830 FEL

SEC. 15 TWP. 13 RGE 34W

COUNTY LOGAN STATE KS

CONTRACTOR W/W DRIG RIG #2

COMPL. 10-12-13 COMP. 10-23-13

RTD 4120' LOG TD 4123'

SAMPLES SAVED FROM 3550 TO RTD

DRILLING TIME KEPT FROM 3400' TO RTD

SAMPLES OBTAINED FROM 3550 TO RTD

GEOLOGICAL SUPERVISION FROM 3580 TO RTD

MUD UP DISPL. \approx 3390' TYPE MUD CHEMICAL

API # 15-109-21, 267-00 00

FORMATION	TOP	LOG	DATE	SAMPLE	STRUCT.
				DEPTH	CONDS.
ANHYDRITE	2413+575			2413+575	-1
BASE	2436+552			2436+552	-4
STILLER	3486-498			3486-498	+2
HEBNER	3841-853			3840-852	+1
LANISING	3861-873			3888-900	+1
MUNKIE SH	4050-1062			4050-1062	-8
STARK SH	4141-1153			4140-1152	-9
BKC	4227-1239			4228-1240	-9
ALTAHONT	4272-1284			4272-1284	-7
PAWNE	4338-1350			4338-1350	-1
ST SCOTT	4399-1411			4397-1409	-13
CHEKORKE SH	4426-1438			4425-1437	-13
SOPHISON 2N	4472-1484			4472-1484	-12
MISS	4592-1604			4590-1602	-58

ELEVATION

KB 2988

DF

GL 2983

Measurements Are All
From KB 2988

CASING RECORD

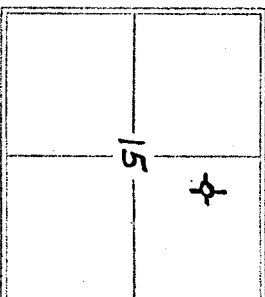
SURFACE 8 5/8" \approx 221'

w/165 sxs.

PRODUCTION

WELL LOG SURVEYS

COMP DENUS. NEXT ϕ
DUAL INDUCTION



DATE	DEPTH	NO	SIZE	WGS	TYPE	DEPTH CUT
10-12-13	MUD/SPLD					
10-13	DRIG \approx 445'					
10-14	DRIG \approx 2270'					
10-15	DRIG \approx 3245'					
10-16	DRIG \approx 3820'					
10-17	QES \approx 3955'					
10-18	DST #3 \approx 3996'					
10-19	DST #5 \approx 4105'					
10-20	DST #6 \approx 4170'					
10-21	DRIG \approx 4428'					
10-22	GOOD TIME AFTER DST7					
10-23	LOGGING					

EST & SURVEY RECORD

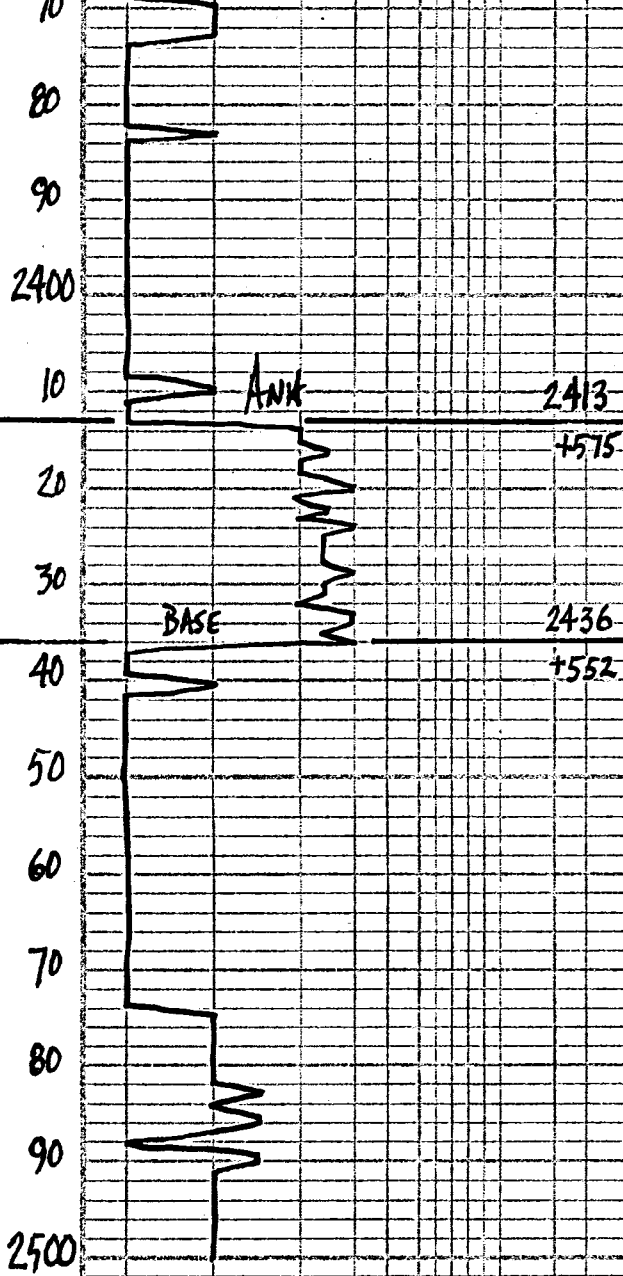
FORMATION

REMARKS

DESCRIPTION OF SURVEY

REFERENCE WELL FOR STRUCTURAL COMPARISON

CARMEN SCHMITT, INC. #1 Riley PPA
330' ENL $\&$ 330' ENL 14-13-34W



3400

10

20

30

40

DISPLACED @ 3390'

40
50
60
70
80

STOTLER

3486

-498

3500

10

20

30

40

50

60

70

80

90

3600

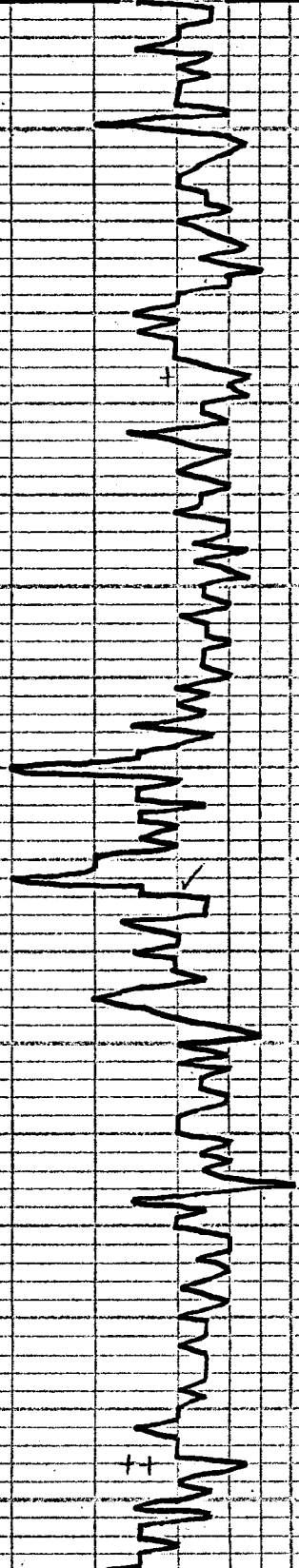
10

20

30

40

50



60 LT CRM-TAN BUFF SLI-FOSS LS
POOR ϕ - NS

BUFF LT CRM SLI-FOSS LS - NS

SR LS AA - NS, NO ODDR

LT CRM - BUFF SLI-FOSS LS - NS

00 CRK WK LS $\frac{1}{4}$ LT GRAY SHS

10 WK-LT CRM CRK LS POOR ϕ - NS

20 LT CRM - WK CRK LS - NS NO ODDR

LT CRM SEMI-FOSS LS - P-F ϕ NS
INC GRAY SHS

40 LOTS RED RUST SHS $\frac{1}{4}$ GRAY

LT CRM - BUFF SLI-FOSS LS POOR ϕ
NS NO ODDR

60 LT CRM SEMI-FOSS LS P-F ϕ - NS

WK-LT CRM SLI-FOSS LS PLY CRK
P-F ϕ - NS NO ODDR

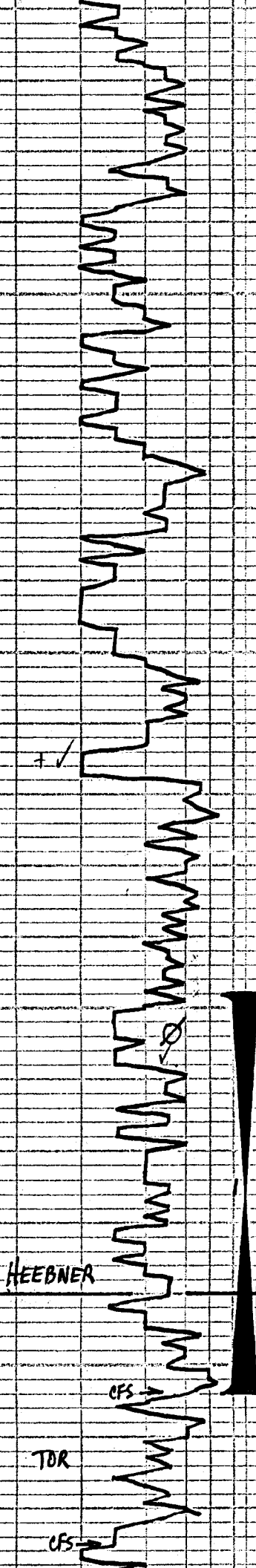
VISC: 64
WT: 8.7
LEN: 1 1/2"

750# PP

← GEOL ON LOC. 9:30 AM
TUES. 10-15-13

VISC: 65
WT: 8.7

60
70
80
90
3700
10
20
30
40
50
60
70
80
90
3800
10
20
30
40
50
60
70
80



20 LT CRM SEMI-FOSS LS P-F φ NS
 LT CRM - BUFF SEMI-FOSS LS P-F φ
 NS NO ODR PTLY CRU
 00 LS AA - NS NO ODR
 LT CRM - LT BUFF SEMI-FOSS LS
 P-F φ - NS
 20 LT CRM - WH SLI-FOSS LS PTLY
 CRU P-F φ - NS NO ODR
 LT CRM - V-LT TAN FN-XEN CRU
 LS POOR φ SOFT - NS
 40 LT CRM - V-LT TAN V-FOSS LS FAIR φ
 NS NO ODR
 LT CRM SLI-FOSS LS P-F φ
 NS NO ODR PTLY CRU
 FEW BLK SHS
 60 LT CRM - V-LT TAN SEMI-FOSS LS
 P-F φ - NS NO ODR
 WH-LT CRM SEMI-FOSS LS P-F φ
 NS NO ODR
 80 WH-LT CRM SLI-FOSS LS LOTS
 CRU POOR φ - NS NO ODR
 SOFT RES
 PRED LT CRM - V-LT TAN SEMI-FOSS
 LS P-F φ - NS
 00 LOTS RED-RUST GUMBO SHS
 LS AA - NS
 10 FEW REG LT CRM FOSS LS W/FAIR
 FOSS φ W/DR STN, NO ODR
 20 FEW PCS WH-CRM SEMI-FOSS LS
 W/FAIR φ W/DR STN, 2 PCS SSFO,
 LT-NO ODR, FEW GAS BUB
 30 FEW PCS LT CRM SEMI-FOSS LS
 W/FAIR φ - FEW W/DR STN
 2 PCS SSFO, FT ODR
 40 LT CRM FOSS LS W/P-F FOSS φ
 3 PCS W/SSFO, SLI GSH, FT ODR
 50 LT CRM SLI-FOSS LS W/P-F φ
 FEW PCS W/SSFO
 5A) FEW PCS BLK SH
 20 MIN LT CRM - LT TAN FN-XEN LS
 POOR φ - NS NO ODR
 45 MIN PRED WH-LT CRM LS - NS
 FEW GRAY-GRN SHS
 70 LT PEACH - FLESH GUMBO SH
 WH FN-XEN LS MISC CRU - NS
 15) WH - V-LT TAN SLI-FOSS LS
 POOR φ - NS NO ODR PTLY CRU
 20 MIN WH - NOB FOSS LS POOR φ
 NS NO ODR PTLY CRU
 45 MIN WH SLI-FOSS NOB LS
 P-F φ - NS NO ODR PTLY CRU
 LOTS RUST RED GUMBO SHS STILL
 80 PURE WH FN-XEN CRU LS - NS

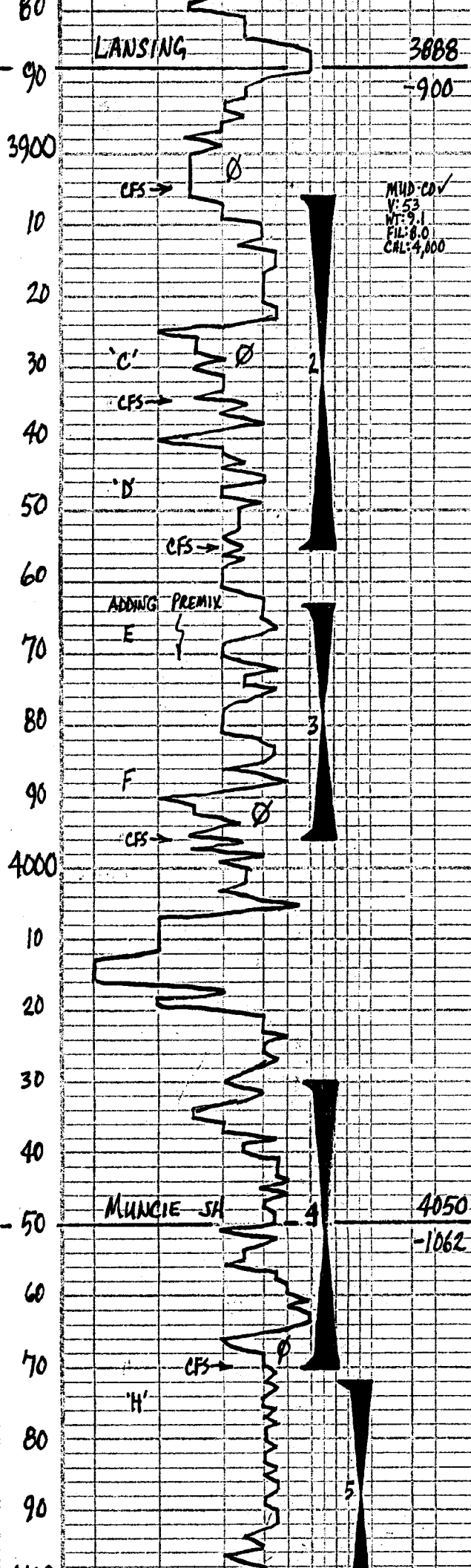
← Visc: 60
WT: 8.7

MUD: CO ✓
 ← Visc: 65
 WT: 8.7
 FILT: 6.4
 CHL: 3,000

PULLED 30 STD. SHORT TRIP
 PIPE STRAP = 1.35 SHORT
 S.H.T. = 1/2°

DST #1 3798-3854
 30-45-30-45
 IF: 1" BUILT TO BOB 5 1/4 MINS.
 EF: 3/4" BUILT TO BOB 5 1/2 MINS.
 NO BB.
 REC: 134' HMCN + OS = 40' M 60' W
 992' SLMCN = 5' M, 95' W
 1126' T.F. CHL = 40K
 SIP: 1104-1103
 I.F.P: 19-307, F.F.P: 310-522
 TEMP: 116°

3840
-852



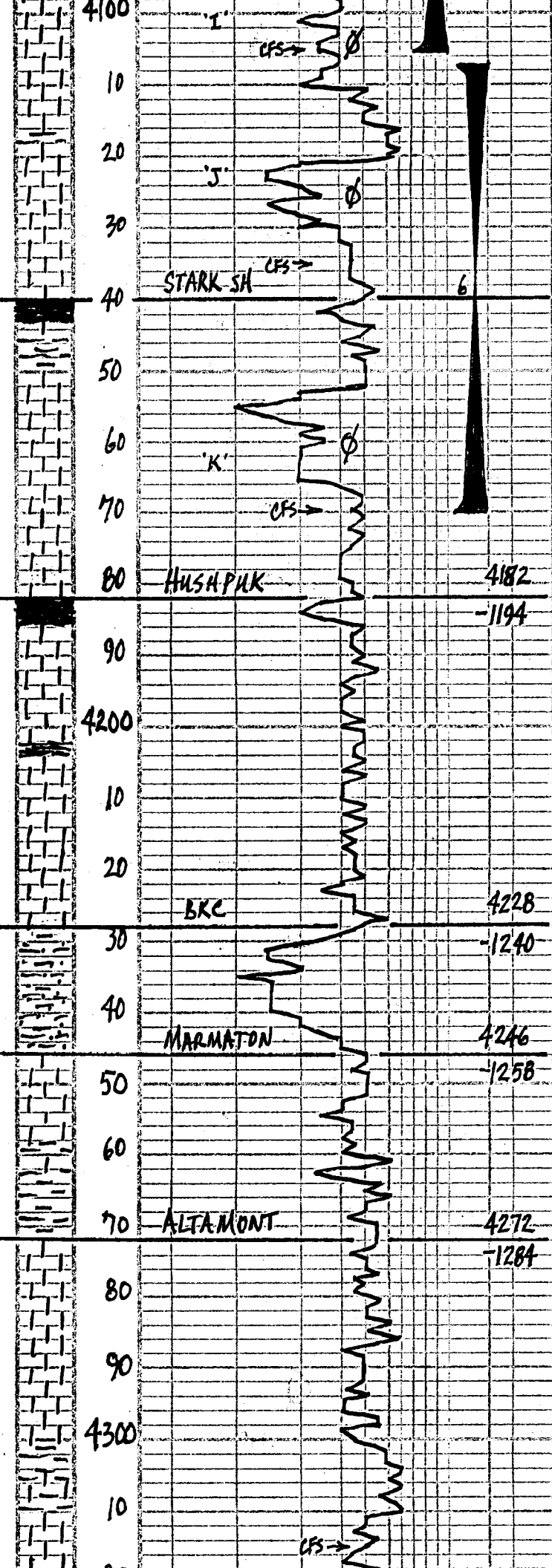
30 WH-SEMI-FOSS OOL LS PTLY CKY NS
 00 WH-V LT TAN SLI-FOSS LS POOR OF NS NO ODOOR FEW GRN SHS
 05) WH-LT TAN EN-XLN LS PTLY CKY POOR OF NS NO ODOOR
 20 MIN: LT CRM SUB OOL LS P-F P NS, NO ODOOR, PTLY CKY
 10 WH-LT CRM SLI-FOSS LS DUSE-CKY SLI APT-NS NO ODOOR
 20 WH-LT CRM LS AA-NS NO ODOOR
 30 WH-FN-XLN CKY LS
 35) FLOOD WH-LT CRM SUB OOL LS P-F P LOTS CKY NS NO ODOOR
 20 MIN: PURE WH CKY LS P-F P NS NO ODOOR
 45 MIN: WH-CRM SUB OOL LS P-F P NS, NO ODOOR LOTS CKY
 40 WH-CKY LS W/ SCAT SMALL FOSS W/ DR STN SFO NO ODOOR
 50 INC PCS WH-LT CRM SEMI-OOL LS W/ FAIR OF W/ SLT & DR FO FT ODOOR
 55) LOTS PCS WH-LT CRM SLI-FOSS LS W/ SCAT VUG OF W/ DR STN & SFTFO
 20 MIN: WH-LT CRM SLI-FOSS LS W/ P-F P W/ DR STN FEW W/ SFTFO NO ODOOR PTLY CKY TRACE GAS
 45 MIN: WH-CRM LS AA SFO, NO ODOOR TRACE GAS BUB
 WH-CRM LS W/ POOR TAN VUG OF W/ SCAT STN DR NO ODOOR
 70 PRED WH-FN-XLN CKY LS POOR OF NS NO ODOOR
 80 FEW PCS LT TAN V. FOSS LS W/ FAIR FOSS OF W/ SFTFO, LT ODOOR
 90 LOTS LT CRM V. FOSS-OOL LS W/ FAIR FOSS OF W/ SFTFO, LT ODOOR 45 PCS W/ STN DR SFO CLEAN PCS
 95) LOTS PCS WH-LT CRM FOSS LS W/ FAIR FOSS OF W/ S-FSBEF, LT ODOOR INC IN SLI CKY
 30 MIN: WH-CRM-V LT TAN SLI-FOSS LS W/ P-F FOSS OF W/ SFTFO, LT ODOOR SLI CKY
 60 MIN: PRED LT TAN SEMI-FOSS LS W/ P-F FOSS OF FEW W/ SFTFO, LT ODOOR, INC IN CKY-S
 10 LT CRM SLI-FOSS LS P-F P-NS
 20 WH-LT CRM SLI-FOSS LS P-F P-NS NS NO ODOOR CKY-DUSE
 30 FLOOD WH-LT CRM OOL LS FAIR OOC OF NS, NO ODOOR PTLY CKY
 40 LT CRM-V, LT TAN OOL LS FAIR OOC OF NS, NO ODOOR PTLY CKY
 50 LOTS DK GRN-GRN SHS FEW BLK LT CRM SLI-FOSS LS W/ POOR OF NS NO ODOOR
 60 LT CRM SLI-FOSS LS POOR OF FEW PCS SCAT LT STN, NO ODOOR
 70) LOTS BLK SHS? CRM-LT TAN BUFF SLI-FOSS LS POOR OF NS NO ODOOR
 30 MIN: FAIR TAN LT CRM SEMI-FOSS LS W/ P-F FOSS OF W/ SFTFO, SCAT LT STN, LT ODOOR SLI CKY
 60 MIN: LT CRM SEMI-FOSS LS W/ FAIR OF 15 PCS W/ SFTFO LT-F ODOOR 1 FEW GAS BUB SLI CKY 1 MORE BLK SHS 30 PCS STN
 90 LOTS GRN SHS 1 WH-LT CRM LS SLI-FOSS CKY, NS NO ODOOR
 00 WH-LT CRM FN-XLN LS POOR OF NS LOTS GRN-GRN SHS
 05) LT GRN-LT TAN FN-XLN LS POOR OF NS NO ODOOR
 30 MIN: FEW LT TAN SLI-FOSS LS W/ P-F P FEW LT STN SFO

DST #2 3906-3955
 30-45-45-60
 IF: WK BUILT TO 5 1/2"
 FF: WK BUILT TO 7" WSBB
 REC: 77' HWCW= 30' W, 70' M
 120' HMCW= 33' M, 67' W
 197 TF, CHL= 35K
 SIP: 1135-1115
 IFP: 8-70 FFP: 71-103
 TEMP: 111°

DST #3 3963-3996
 30-45-45-60
 IF: WK, BUILT TO 3 1/4"
 FF: WK, BUILT TO 3 1/4" NO BB
 REC: 20' VSOW CM= 2' D, 2' W, 96%
 120' WCM= 20' W, 89%
 140 TF CHL= 36K
 SIP: 1189-1173
 IFP: 8-42 FFP: 47-72
 TEMP: 108

DST #4 4030-4070
 30-45-45-60
 IF: WK BUILT TO BOB 27 MIN
 FF: WK, BUILT TO BOB 30 MIN
 REC: 398' SLMCW= 10' M, 90% W
 CHL= 36K
 SIP: 1265-1263
 IFP: 9-99 FFP: 101-185
 TEMP: 111

DST #5 4072-4105
 30-45-30-45
 IF: WK, BUILT TO 1" 30 MIN
 FF: WK SURE BLOW THRU OUT
 REC: 2' MUD
 SIP: 527-594
 IFP: 6-9 FFP: 8-9
 TEMP: 105



CR. MIN. FEW LT TAN LS W/FAIR TAN ODOR FOSS O W/FCG FO, LT-FAIR ODOR SLI CKY

20 FLOOD WH-FN-XLN CRN LS POOR LS POOR O, FEW SCAT STN, NO ODOR CKY
 30 LOTS GRN-GRN SHS & WH-CRM SLI FOSS LS POOR O, 4 PCS M. USSES, NO ODOR LOTS CKY SLI EFF
 35 FLOOD LT GRN-CRM, SHB OOC LS LOTS CKY FAIR O, NS NO ODOR
 30 MIN: FLOOD WH-FN-CRM VLT TAN SU B OOC LS W/FAIR OOC O, NS NO ODOR, LOTS CKY
 60 MIN: CKY LS AA-NS FEW DR GRN SHS
 40 LT CRM-LT CRM-SLI-FOSS LS POOR O, NS NO ODOR CKY
 50 LT CRM-LT TAN SMALL FOSSLS FEW PCS W/POOR FOSS O W/SC FT ODOR ON BK
 60 FEW BLK SHS POOR LT TAN SLI-FOSS LS W/POOR O-NS

DST#6 4107-4170
 30-45-30-45
 IF: FAIR TO BOB 2 1/2 MINS
 FE: FAIR TO BOB 3 1/4 MINS
 REC: 164' M&W=50% M, 50% W
 1550' SLI M&W=15% M, 85% W
 1714' IF... CHL=30 K
 SIP: 1213-1213
 IFP: 70-515 FFP: 537-791
 TEMP: 121°

70 LT CRM-LT TAN SEMI-FOSS LS W/P-F FOSS O FEW PCS WISSED 147 OODR ON BK LATE-CRM
 30 MIN: LT CRM-JOY SLI-FOSS LS FEW PCS LT SCAT STN, NO ODOR
 60 MIN: CKY LT TAN SLI-FOSS LS FEW PCS LT STN LT OODR ON BK PTY CKY-DNSE
 80 LT CRM-TAN SLI-FOSS LS-NS BUNCH VARI-COLOR SHS
 90 BK SHS & WH-CRM SLI-FOSS LS POOR O & CKY NS NO ODOR

MUD-CON
 VISC: 59 FILT: 8.8
 WT: 9.2 CHL: 6,000

00 LOTS BLK SHS! CRM-LT GRN-FN-XLN LS POOR O-NS-1 NO ODOR, TEN LT GRN-DR GRN A

ADDING: PRE-MIX

10 LT CRM-LT BUFF-FN-XLN LS POOR O, FEW PCS LT SCAT STN, NO FO, NO ODOR CKY-DNSE
 20 PRED WH-LT CRM, LT TAN, FN-XLN LS DNSE-CKY POOR O NS

30 CRM-LT TAN-BUFF-SLI-FOSS LS POOR O-NS, NO ODOR DNSE-CKY
 40 LOTS LT GRN-GRN-BRN SHS LS AA-NS NO ODOR
 50 LT LT PENCH-BUFF SH & SHYLS LS POOR O-NS NO ODOR

VISC: 56
 WT: 9.1
 LCM: 2#

60 FEW VLT GRN-FLESH V-FGR SHS SHYLS-NS O LT TAN-FN-XLN LS POOR O-TNS NO ODOR

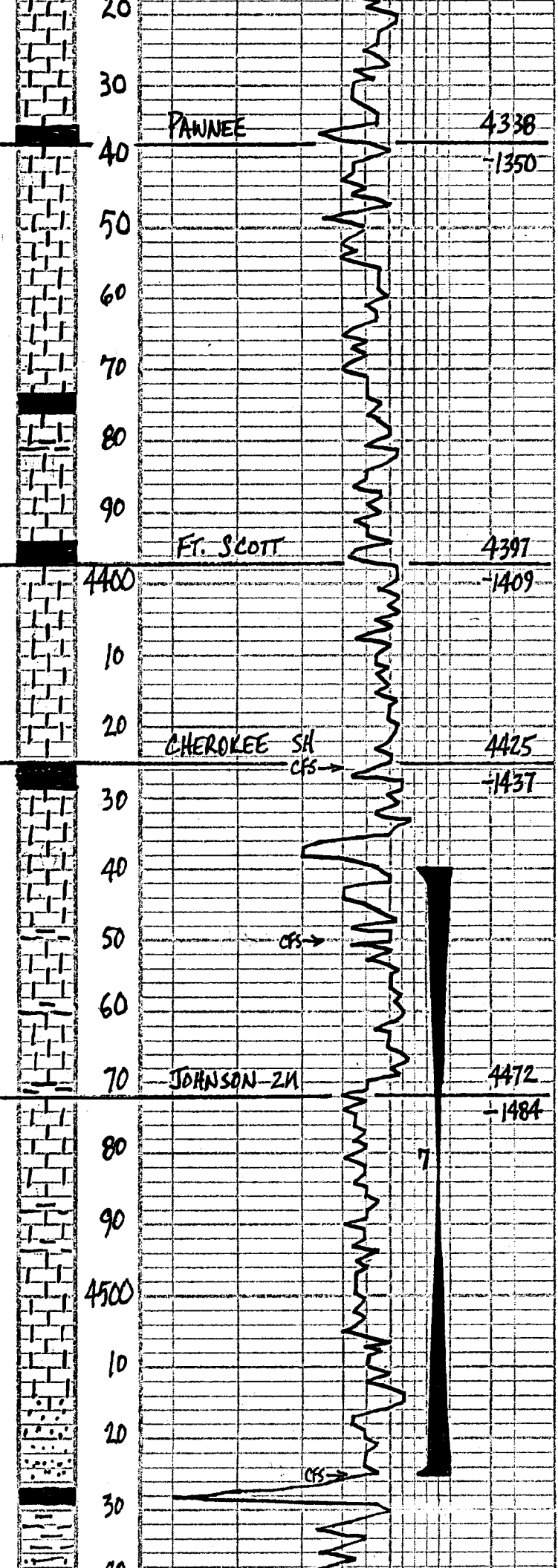
70 LT TAN SEMI-FOSS LS W/FAIR FOSS O W/DR STN, PT ODOR ON BK

80 LOTS LT TAN-BUFF-FN-XLN LS POOR O-NS NO ODOR DNSE-CKY

90 LT TAN-BUFF-FN-XLN LS POOR O-NS NO ODOR LOTS BRN GRN SHS

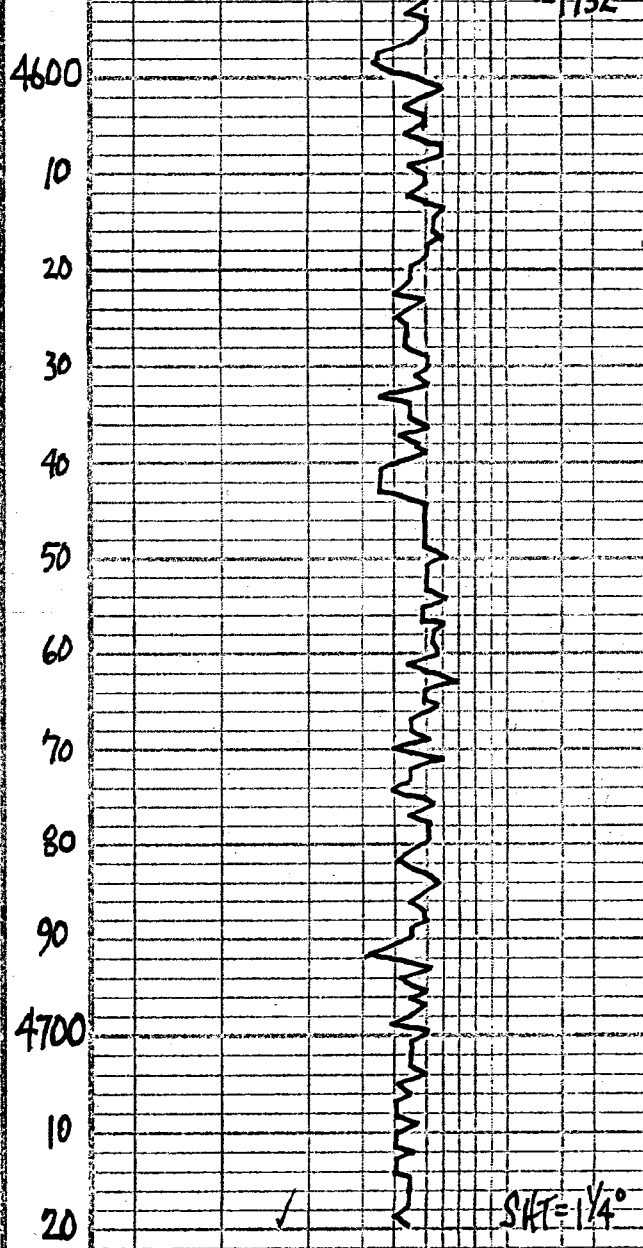
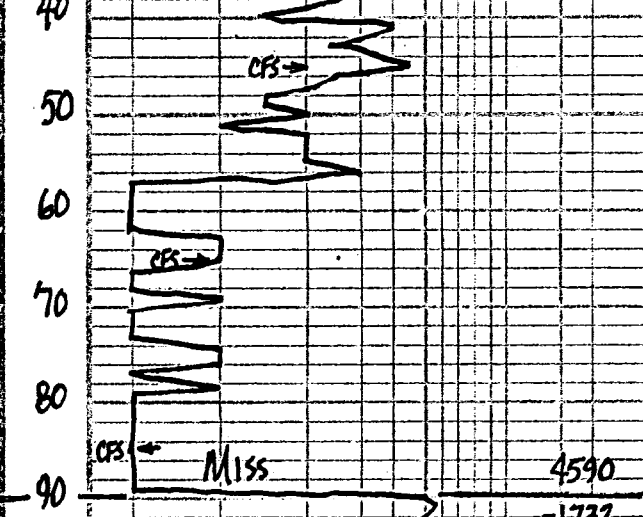
00 LT CRM-LT BUFF-SLI-FOSS LS 1 PC W/POOR VUG O W/LT BRN STN NO ODOR

10 FLOOD WH-LT CRM SLI-FOSS LS POOR O-NS NO ODOR DNSE-CKY
 15 LT CRM-BUFF-FN-XLN LS POOR O NS NO ODOR LOTS BRN RUST SHS
 30 MIN: FLOOD WH-VLT GRN-FN-XLN LS POOR O-NS NO ODOR
 60 MIN: LT CRM-VLT GRN-FN-XLN LS POOR O-NS DNSE-CKY
 10



LT CRM - V. LG GRN - BUFF FN - XLN LS
 POOR ϕ - NS NO ODOR
 LT CRM - LT TAN FN - XLN LS
 POOR ϕ - NS NO ODOR
 NO LT CRM - LT TAN FN - XLN LS POOR ϕ
 NS NO ODOR
 50 LOTS BLK SHS CRM - TAN LS - NS
 DNSE - CRV POOR ϕ NO ODOR
 60 FLOOD LT TAN - BUFF FN - XLN LS
 POOR ϕ - NS NO ODOR FEW &
 LT GRN
 70 LT CRM - LT TAN FN - XLN LS POOR ϕ
 NS NO ODOR
 80 LOTS BLK SHS LT TAN - BUFF
 FN - XLN LS POOR ϕ - NS NO ODOR
 90 LT CRM - LT TAN CRV LS POOR ϕ
 NS NO ODOR LOTS SHS
 00 LT TAN FN - XLN LS DNSE LOTS GRN
 SEMI - OPAQUE A POOR ϕ - NS
 PR. CRM LS W/ POOR ϕ - STN, NO ODOR
 10 BLK - GRN SHS CRM - LT TAN
 FN - XLN LS POOR ϕ - NS NO ODOR
 20 LT TAN - WHF FN - XLN LS POOR ϕ
 DNSE - CRV NS, NO ODOR
 26 FLOOD LT TAN - BUFF FN - XLN LS
 POOR ϕ - NS NO ODOR
 30 MIN. LS AA - NS NO ODOR
 60 MIN. LT CRM - TAN BUFF FN - XLN
 LS POOR ϕ - NS NO ODOR LOTS BLK SH
 40 BLK SHS & PRED LT TAN - BUFF FN -
 XLN LS POOR ϕ - NS NO ODOR
 50 LT CRM - LT TAN FN - XLN LS POOR ϕ
 NS NO ODOR
 30 MIN. LT TAN - BUFF SLI - FOSS LS
 POOR ϕ - NS NO ODOR
 60 MIN. (PCS TAN CRV LS W/ POOR
 INTER. CO. ϕ W/ STN, NO ODOR
 60 LOTS BLK - GRN SHS LT TAN SLI - FOSS
 CRV LS POOR ϕ - NS NO ODOR
 70 LOTS SHS GRN GRN BRN BLK LT TAN
 FN - XLN LS POOR ϕ - NS NO ODOR
 80 LOTS LT GRN - GRN SHS FEW LT TAN
 FN - XLN LS - NS NO ODOR
 90 FEW LT CRM - LT TAN SLI - FOSS LS
 W/ POOR ϕ SCAT LT STN, TRACE FO
 NO ODOR
 00 FEW LT TAN - BUFF SLI - FOSS LS
 POOR ϕ FEW LT SCAT STN VSSFO
 NO ODOR
 10 LT BUFF FN - XLN SLI - CRV LS POOR ϕ
 SCAT LT STN, NO ODOR
 20 PRED LT TAN FN - XLN LS POOR ϕ FEW
 PCS W/ SCAT LT STN
 25 LT CRM - BUFF FN - XLN CRV LS
 POOR ϕ - NS NO ODOR FEW CL. F. FN CR
 SST. CRV MATRIX - SOFT - NS NO STN
 30 MIN. LS AA - NS INC. WH. CL. FN -
 GR SST. SUB. RD. ANG POOR ϕ - NS
 60 MIN. FLOOD LT TAN FN - XLN LS
 POOR ϕ - NS NO ODOR
 45 LOTS LT GRN SHS FEW LT GRN V. FN - GR
 SLTST - POOR ϕ DIRTY - NS NO ODOR
 LESS GOLD & BLK SHS
 30 MIN. LOTS GRN SHS V. FEW LGE SD GO

DST #7 4440-4525
 30-45-45-60
 IF: 1" BUILT TO BOB IN 10 1/2 MINS.
 FF: 3/4" BUILT TO BOB IN 12 MINS.
 REC: 248' HMCN = 25% W, 75% M
 372' HMCN = 45% W, 55% M
 244' HMCN = 33% W, 67% M
 864' TOTAL FLUID 32K
 SIP: 1160-1155
 IFP: 17-211 FFP: 218-415
 TEMP: 124°



RTD = 4720'
LTD = 4723'

- 60 MIN: PRED GRN GOLD PHAP BLK SHS
V. FEW FN-GR SST - DIRTY - NS NO ODR
- 60 LT GRN SILTY-SM SHS FEW LT GRN-CL
V. FN GR SST - NS V. FEW LGE SD GRANS
- 30 MIN: PRED LT GRN SHS, FEW WH
FN-GR SST CHALK MATRIX - NS
- 60 MIN: FAIR MAT WH - V. LT TAN SST
FN-GR FAIR SORT, SEMI - FAIR CHL MATR
FAIR ϕ - NS, NO ODR
- 80 SST ϕ SHS AA - NS, NO ODR
- 85) WH-LT GRN FN-GR SST - CHL - SILTY -
NS, NO ODR INC PYRITE GRN SHS
30 MIN: LOTS WH FN-GR SST - CHL
NS, NO ODR V. FEW LOOSE SD GRN
60 MIN: SST AA - NS F. LT TAN - BUFF
FN-XLN LS - NS NO ODR
- 90
LOTS GRN-GRN SHS ϕ LESS WH CRYSST
NS, NO ODR
- 85) FLOOD DULL WH FN-XLN CHL LS POOR
 ϕ DNSE - CHL NS NO ODR
30 MIN: WH - LT CRM FN-XLN CR-SM
LS POOR ϕ - NS NO ODR
60 MIN: FLOOD WH - LT CRM MICRO-DOL
CHL LS POOR ϕ - NS NO ODR
10 WH - LT CRM MICRO-DOL LS POOR ϕ
NS NO ODR
20 PURE WH CHL LS FN-XLN
POOR ϕ - NS
- 30 WH - LT CRM MICRO-DOL CHL LS
P-F ϕ - NS NO ODR
- 45 WH - LT CRM DOL - DC LS CHL ← Visc: 55
POOR ϕ - NS NO ODR WT: 9.2
- 50 V. LT TAN DNSE MICRO-XLN LS - NS
- 60 PRED V. LT CRM - TAN FN-XLN LS
POOR ϕ - NS NO ODR CHL
- 70 LT CRM - TAN FN-XLN LS - NS ← Visc: 54
WT: 9.1
- 80 LT TAN FN-XLN DNSE LS POOR ϕ
NS NO ODR
- 90 LT CRM - LT TAN LS - NS
INC GRN SHS
- 80 LT TAN FN-XLN LS PTLY CHL
POOR ϕ - NS NO ODR
- 70 CRM - LT TAN LS POOR ϕ - NS
- 20 LT CRM - LT TAN FN-XLN LS
POOR ϕ - NS NO ODR
PTLY CHL



#1 Wray 15A
960' FNL & 1830' FEL
30' N & 150' E of S/2 NW NE Section 15-13S-34W
Logan County, Kansas
API# 15-109-21207-0000
Elevation: 2983' GL, 2988' KB

Sample Tops			Ref. Well
Anhydrite	2413'	+575	-1
B/Anhydrite	2436'	+552	-4
Stotler	3486'	-498	+2
Heebner	3840'	-852	+2
Toronto	3860'	-872	+2
Lansing	3888'	-900	+2
Muncie Shale	4050'	-1062	-8
Stark Shale	4140'	-1152	-8
Hush. Shale	4182'	-1194	-11
BKC	4228'	-1240	-10
Marmaton	4255'	-1267	-11
Altamont	4276'	-1288	-11
Pawnee	4338'	-1350	-11
Myrick	4381'	-1393	-12
Fort Scott	4397'	-1409	-11
Cherokee Shale	4425'	-1437	-12
Johnson	4472'	-1484	-12
Mississippian	4590'	-1602	-56
RTD	4720'	-1732	

ALLIED OIL & GAS SERVICES, LLC 061358

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Earley, KS

DATE <u>10-23-13</u>	SEC. <u>15</u>	TWP. <u>13</u>	RANGE <u>34</u>	CALLED OUT	ON LOCATION <u>12:00 PM</u>	JOB START	JOB FINISH
LEASE <u>Way 15A</u>	WELL# <u>1</u>	LOCATION <u>Merchants to Plains Rd W to Rd 310. 1/2 E 253 n to</u>			COUNTY <u>Logan</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)				JOB START <u>2:30 PM</u> JOB FINISH <u>3:00 PM</u>			

CONTRACTOR <u>W&A</u>	OWNER <u>Same</u>
TYPE OF JOB <u>PA</u>	
HOLE SIZE <u>7 7/8</u>	T.D. <u>4720</u>
CASING SIZE	DEPTH
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT	

CEMENT		
AMOUNT ORDERED	<u>220 SKB 60/10 30242851</u>	
<u>1/4" Flo-seal</u>		
COMMON	<u>132 SKB @ 17.80</u>	<u>2342.80</u>
POZMIX	<u>88 SKB @ 9.38</u>	<u>822.80</u>
GEL	<u>8 SKB @ 23.40</u>	<u>187.20</u>
CHLORIDE	@	
ASC	@	
<u>Flo-seal</u>	<u>55# @ 2.97</u>	<u>163.25</u>
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING	<u>236.28 cu ft @ 2.48</u>	<u>585.97</u>
MILBAGE	<u>9.4 lb ton x 30 x 2.50</u>	<u>717.88</u>
TOTAL		<u>5860.80</u>

EQUIPMENT

PUMP TRUCK	CEMENTER <u>Kelly Gabel</u>
# <u>422</u>	HELPER <u>Andrew Forlund</u>
BULK TRUCK	
# <u>341</u>	DRIVER <u>Juan (JWS)</u>
BULK TRUCK	
#	DRIVER

REMARKS:

<u>25 @ 242.5</u>
<u>100 @ 12.85</u>
<u>30 @ 270</u>
<u>10 @ 40 helper plug</u>
<u>32 RH</u>
<u>15 MH</u>

SERVICE

DEPTH OF JOB	<u>2425'</u>
PUMP TRUCK CHARGE	<u>1353.00</u>
EXTRA FOOTAGE	@
MILBAGE <u>MILV 30</u>	<u>@ 4.40 132.00</u>
MANIFOLD	@
<u>MILV 30</u>	<u>@ 7.70 231.00</u>
	@

CHARGE TO: Richie Expl.
STREET _____
CITY _____ STATE _____ ZIP _____

TOTAL 1613.00

PLUG & FLOAT EQUIPMENT

	@	
<u>8 5/8 in. wooden plug</u>	@	<u>107.54</u>
	@	
	@	

TOTAL 107.54

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.

SALES TAX (If Any) _____
TOTAL CHARGES 6,580.64
DISCOUNT 1,513.54 IF PAID IN 30 DAYS
5,067.09 Net.

PRINTED NAME Donnie Lang
SIGNATURE [Signature]

