

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: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Seneca Resources Corporation
Well Name	GREENGROUP 14A-1H
Doc ID	1203329

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	17.5	13.375	48	340		345	
Intermediate 1	12.25	9.625	36	1916		640	
Intermediate 2	8.75	7	26	4523		80	
Production Liner	6.125	4.5	13.5	8010		400	

Summary of Changes

Lease Name and Number: GREENGROUP 14A-1H

API/Permit #: 15-151-22422-01-00

Doc ID: 1203329

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
API	15-151-22422-00-00	15-151-22422-01-00
Approved Date	03/20/2014	05/07/2014



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1185550
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed

Form must be Signed

All blanks must be Filled

CONFIDENTIAL 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: _____

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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Seneca Resources Corporation
Well Name	GREENGROUP 14A-1H
Doc ID	1185550

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	17.5	13.375	48	340		345	
Intermediate 1	12.25	9.625	36	1916		640	
Intermediate 2	8.75	7	26	4523		80	
Production Liner	6.125	4.5	13.5	8010		400	

Perforation Record and frac fluid information - Greengroup 14A-1H

Stage	Shots per foot	Plug and type	Perforation Interval		Acid (15%) gals	Shot #	Slickwater - gals.	Linear gel - gals.	Plug depth	
Stage 1	6	Float collar	Top (ftKB)	Btm (ftKB)	1500	36	251930	0	No plug	
			7,725.00	7,727.00						
			7,800.00	7,802.00						
			7,875.00	7,877.00						
			7,950.00	7,952.00						
Stage 2	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	2340	36	337357	0	7688	
			7,425.00	7,427.00						
			7,500.00	7,502.00						
			7,575.00	7,577.00						
			7,650.00	7,652.00						
Stage 3	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	6000	36	249220	0	7388	
			7,178.00	7,180.00						
			7,238.00	7,240.00						
			7,280.00	7,282.00						
			7,358.00	7,360.00						
Stage 4	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	4000	45	377088	0	7123	
			6,600.00	6,602.00						
			6,715.00	6,717.00						
			6,870.00	6,872.00						
			7,000.00	7,002.00						
7,090.00	7,092.00									
Stage 5	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	4920	45	193017	0	6581	
			6,450.00	6,452.00						
			6,479.00	6,481.00						
			6,508.00	6,510.00						
			6,537.00	6,539.00						
6,566.00	6,568.00									
Stage 6	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	3000	45	237617	66876	6377	
			6,085.00	6,087.00						
			6,149.00	6,151.00						
			6,213.00	6,215.00						
			6,276.00	6,278.00						
6,340.00	6,342.00									
Stage 7	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	3000	45	179230	51254	5982	
			5,715.00	5,717.00						
			5,775.00	5,777.00						
			5,835.00	5,837.00						
			5,900.00	5,902.00						
5,940.00	5,942.00									
Stage 8	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	3000	45	183605	53725	5678	
			5,415.00	5,417.00						
			5,465.00	5,467.00						
			5,525.00	5,527.00						
			5,591.00	5,593.00						
5,650.00	5,652.00									
Stage 9	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	3423	45	176131	78198	5378	
			5,130.00	5,132.00						
			5,183.00	5,185.00						
			5,235.00	5,237.00						
			5,295.00	5,297.00						
5,340.00	5,342.00									
Stage 10	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	4119	45	174502	59750	5078	
			4,825.00	4,827.00						
			4,879.00	4,881.00						
			4,933.00	4,935.00						
			4,986.00	4,988.00						
5,040.00	5,042.00									
Stage 11	6	Flow through plug - Halliburton Obsidian	Top (ftKB)	Btm (ftKB)	3264	45	170181	52769	4778	
			4,540.00	4,542.00						
			4,590.00	4,592.00						
			4,640.00	4,642.00						
			4,695.00	4,697.00						
4,740.00	4,742.00									



EMPIRICA

The Surface Logging Company

Scale: 5" / 100'
Measured Depth Log

Well Name Greengroup 14A-1H Sidetrack 1

Location Sec 14, T27S, R12W

State Kansas

Country USA

API Number 15-151-22422

Region Gulf

Spud Date 11/21/2013

Surface Coordinates 156' FNL & 2338' FWL of Sec 14, T27s, R12W

Ground Elevation 1,861

Logged Interval 4,490'

Formation MISSISSIPPIAN

Type of Drilling Fluid Water Based

County Pratt

Rig Number HWD # 14

AFE # 131892

Drilling Completed 12/20/2013

K.B. Elevation 1,876

Total Depth 8030'

Company Seneca Resol

Address McCandless C
5800 Corporat
Pittsburgh, PA

Name Edward Revoll

Company Empirica

Address 609 Westland
Edmond, OK 7

Product Description

Equipment

TW
Log
Uni
ML
Cal

Operator

urces Corp.

Corporate Center
te Drive, Suite 300
15237

Rock Types

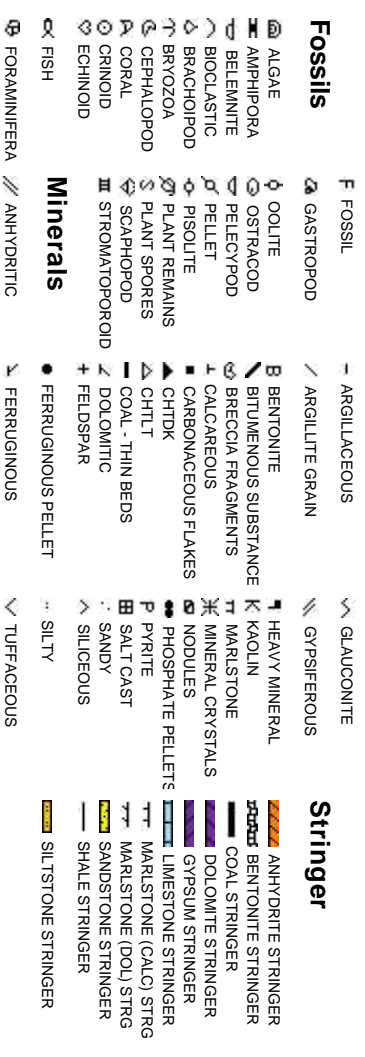


Geologist

llo/Sam Morris

Drive
73013

Accessories



Fossils

- ALGAE
- AMPHIPHORA
- BELEMNITE
- BIOCLASTIC
- BRACHOPOD
- BRYOZOA
- CERPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA
- GASTROPOD
- OOLITE
- OSTRACOD
- PELECYPOD
- PELLET
- PISOLITE
- PLANT REMAINS
- PLANT SPORES
- SCAPHOPOD
- STROMATOPOROID

Stringer

- ANHYDRITE STRINGER
- BENTONITE STRINGER
- COAL STRINGER
- DOLOMITE STRINGER
- GYPSUM STRINGER
- LIMESTONE STRINGER
- LIMESTONE (CALC) STRG
- MARLSTONE (DOL) STRG
- SANDSTONE STRINGER
- SHALE STRINGER
- SILTSTONE STRINGER

Other

o man logging
gging began: 11/23/2013
it Released:
ogger (160)
libration: Standar Calibration of MLogger

Other Symbols

Oil Show

- MOLDIC
- ORGANIC
- PINPOINT
- EVEN
- QUESTIONABLE
- SPOTTED STAINING

Porosity

- EARTHY
- FENESTRAL
- FRACTURE
- INTERCRYSTALLINE
- INTEROOLITIC

Engineering

- FAULT
- FORMATION TOP
- GAS SHOW
- MINDEPTH MNDEPTH
- NORMAL FAULT
- OIL SHOW
- OVERTURNED STRATA
- REVERSE FAULT
- SIDEWALL CORE (LEFT)
- SIDEWALL CORE (RIGHT)
- CONNECTION GAS
- CONNECTION (LEFT)
- CONNECTION (RIGHT)
- BIT
- CORE - LOST
- CORE - RECOVERED
- DST INTERVAL
- SLIDE
- SURVEY
- TRIP GAS

Rounding

- WIRELINE TESTED - LEFT
- WIRELINE TESTED - RT
- ANGULAR
- SUBRANG
- SUBRND
- MICROXLN
- MUDSTONE
- PACKSTONE
- WACKESTONE

Textures

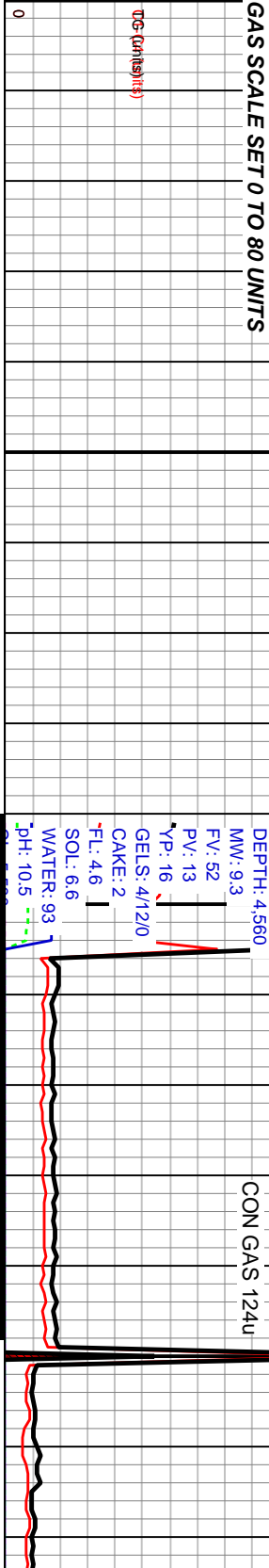
- BOUNDSTONE
- CHALKY
- CRYPTOXLN

Sorting

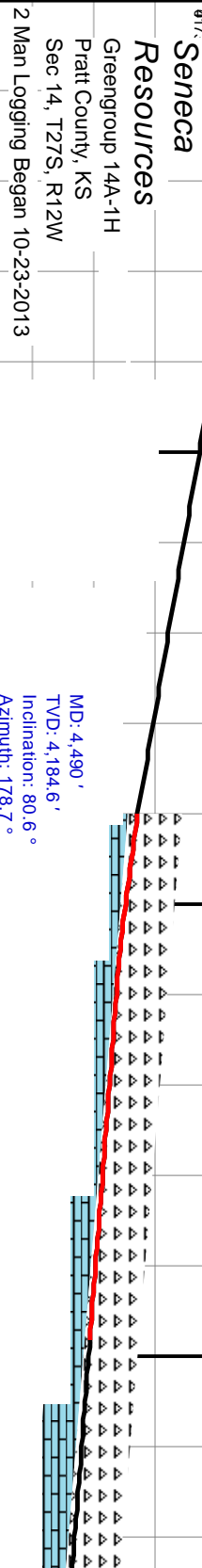
- MODERATE
- POOR
- WELL

Total Gas & Chromatograph

- TG —
- C1 —
- C2 —
- C3 —
- C4 —



Slide/Rotate
 Depth Labels
 4,410 4,420 4,430 4,440 4,450 4,460 4,470 4,480 4,490 4,500 4,510 4,520 4,530 4,540 4,550 4,560 4,570



Well Bore
 TVD (Survey Data Sidetrack 1) (ft)
 TVD - Survey Data Sidetrack 1

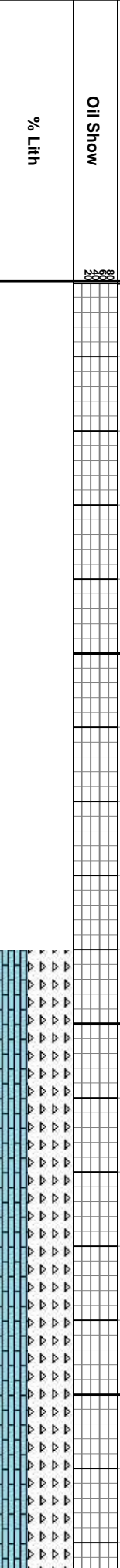
Bit #: 4
 Type: E1202
 Size: 8.75
 Depth In: 3,400'
 Depth Out: 4,560'
 Hours: 32.5 hrs
 Avg Ft/Hr: 46.1' /hr
 Jets: 5X12
 S/N: A163400

Bit #: 5
 Type: REED
 Size: 6.12
 Depth In: 4,560'
 Depth Out: 6,010'
 Hours: 48 hrs
 Avg Ft/Hr: 30.38' /hr
 Jets: 3X20
 S/N: D165149 Edward R. ON

Oil Show
 4063

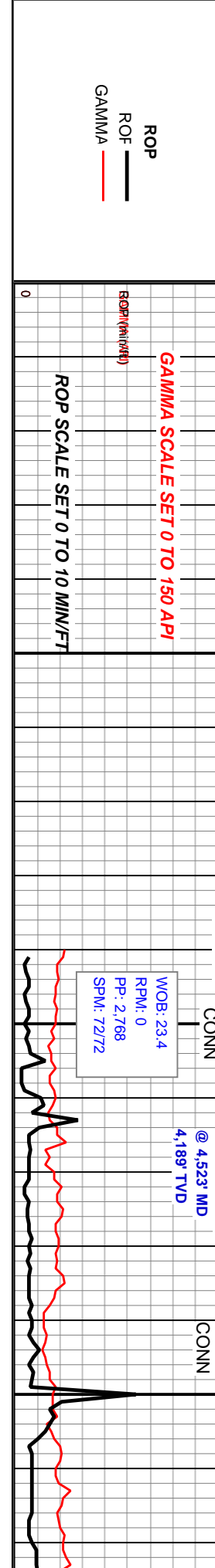
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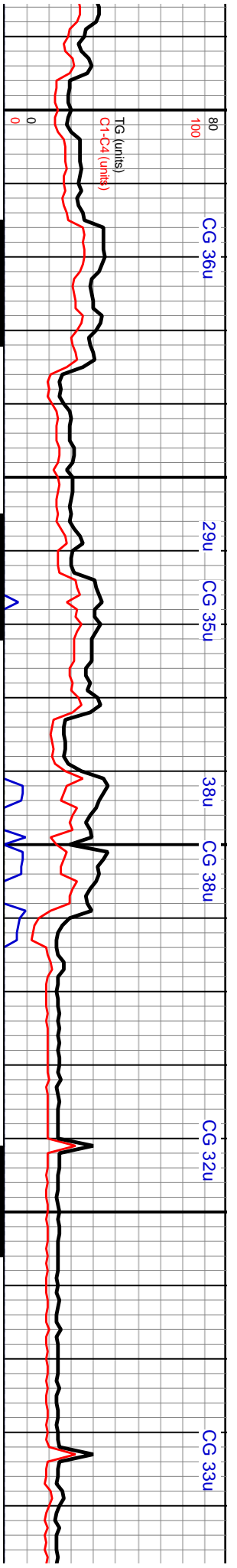
Images



160
GAMMA SCALE SET 0 TO 150 API
 ROP (ft/min/ft)
ROP SCALE SET 0 TO 10 MIN/FT

Sam M. on CONN
 7" CASING SET @ 4,523' MD
 4,189' TVD
 CONN





4,790 4,800 4,810 4,820 4,830 4,840 4,850 4,860 4,870 4,880 4,890 4,900 4,910 4,920 4,930 4,940 4,950 4,960 4,970 4,980 4,990 5



TVD (ft)
TVD - Survey Data Sidetrack 1 (ft)

MD: 4,841'
TVD: 4,194.2'
Inclination: 90.8°
Azimuth: 180.4°
VS: 898.6'

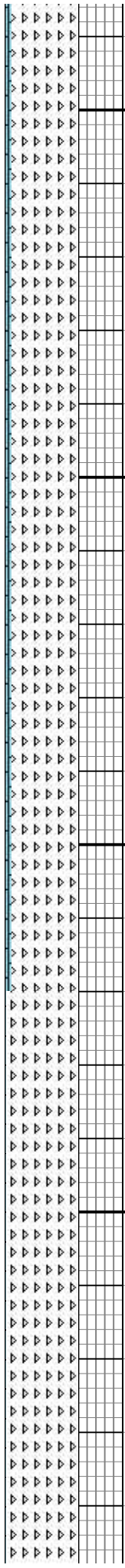
MD: 4,926'
TVD: 4,194.6'
Inclination: 88.7°
Azimuth: 181.1°
VS: 983.5'

OCC LT GY, MOD FRM TO
; V/FN XLN, OCC SUC
IFRACS, OCC HL FRAC
AIN, TR ASPHLTC SPOT
FLOR, NO VIS CUT

CHT: OFF WHT TO WHT, TRNSL TO OP, OCC LT GY, MOD
FRM TO FRM, OCC V/HRD, MICRO XLN, TR V/FN XLN, OCC
SUC TXT IP, OCC PYR INC, TR CONCH FRACS, OCC HL
FRAC POR, TR TAN TO LT BRN SPOT STAIN, TR ASPHLTC
SPOT STAIN, NO ODOR, V/FNT PAL YEL FLOR, NO VIS CUT

CHT: OFF WHT TO WHT, TRNSL TO OP, ANG TO SUB ANG,
MOD FRM TO FRM, OCC V/HD, MICRO XLN, TR V/FN XLN,
OCC SUC TXT IP, OCC HL FRAC POR, TR TAN TO LT BRN
SPOT STAIN, NO ODOR, TRCLS CRM, TRC FLOR BRI YEL,
V WEAK CUT.

Edward R. ON



WOB: 21
RPM: 66
PP: 1,565
SPM: 75

CONN

CONN

Edward R. on

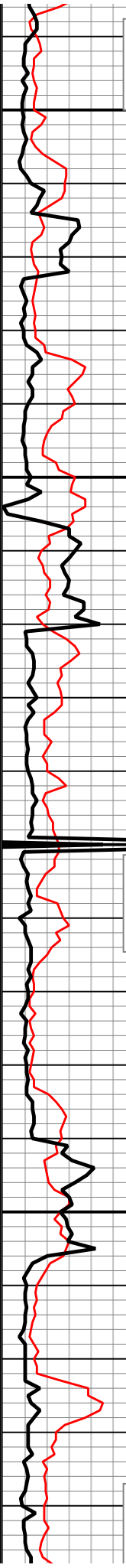
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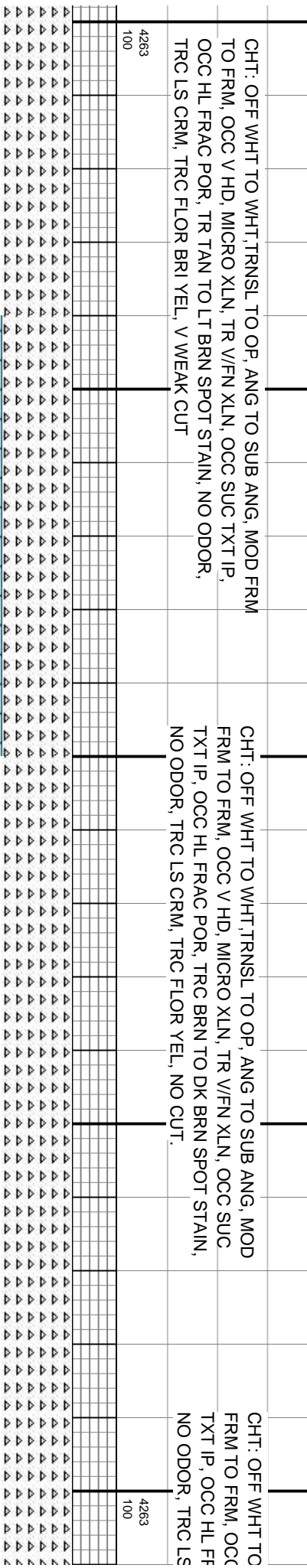
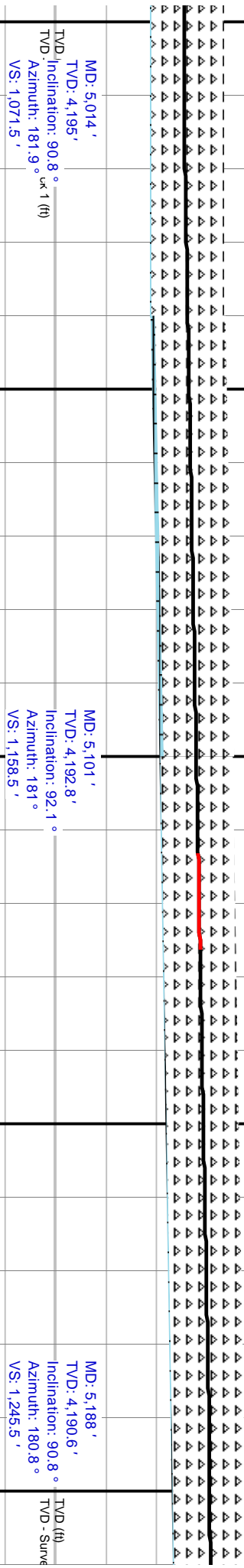
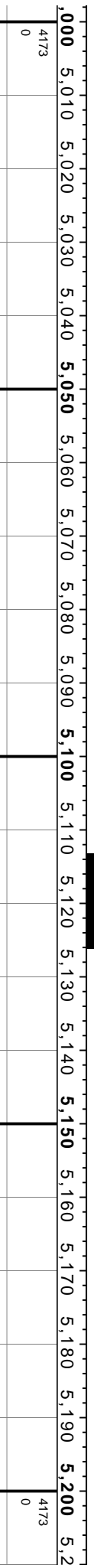
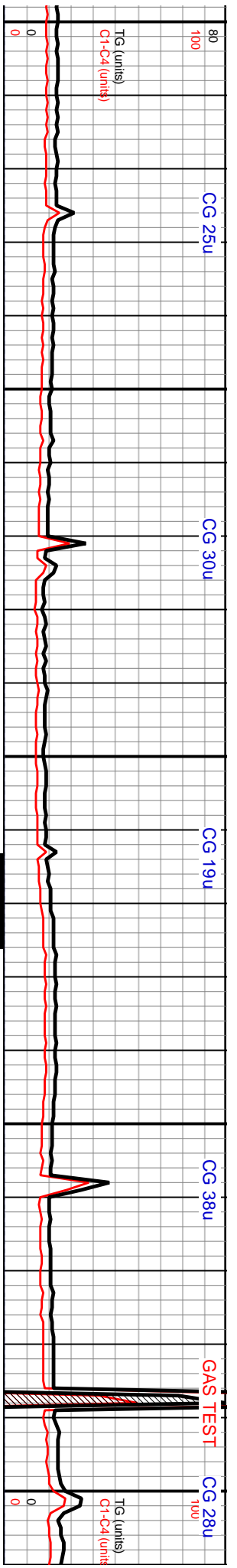
WOB: 20.7
RPM: 68
PP: 1,476
SPM: 72

CONN

CONN

WOB: 20.5
RPM: 68
PP: 1,679
SPM: 077





MD: 5,014 '
 TVD: 4,195 '
 TVD Inclination: 90.8 °
 Azimuth: 181.9 °
 VS: 1,071.5 '

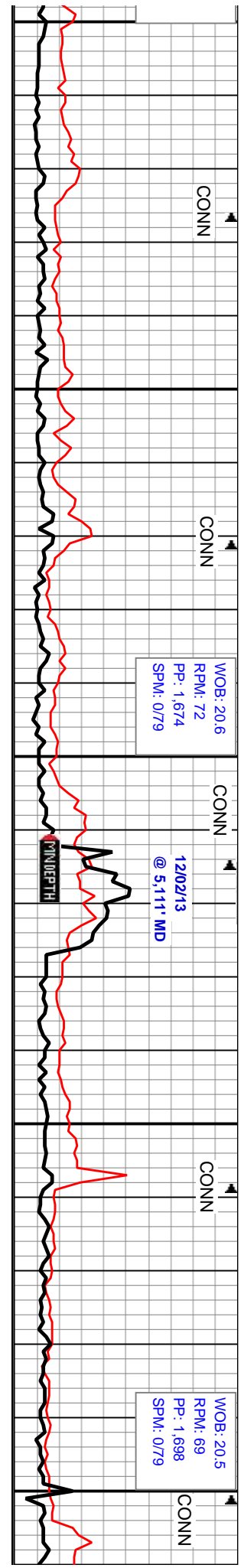
MD: 5,101 '
 TVD: 4,192.8 '
 Inclination: 92.1 °
 Azimuth: 181 °
 VS: 1,158.5 '

MD: 5,188 '
 TVD: 4,190.6 '
 Inclination: 90.8 °
 Azimuth: 180.8 °
 VS: 1,245.5 '

CHT: OFF WHT TO WHT, TRNSL TO OP, ANG TO SUB ANG, MOD FRM TO FRM, OCC V HD, MICRO XLN, TR V/FN XLN, OCC SUC TXT IP, OCC HL FRAC POR, TR TAN TO LT BRN SPOT STAIN, NO ODOR, TRC LS CRM, TRC FLOR BRI YEL, V WEAK CUT

CHT: OFF WHT TO WHT, TRNSL TO OP, ANG TO SUB ANG, MOD FRM TO FRM, OCC V HD, MICRO XLN, TR V/FN XLN, OCC SUC TXT IP, OCC HL FRAC POR, TRC BRN TO DK BRN SPOT STAIN, NO ODOR, TRC LS CRM, TRC FLOR YEL, NO CUT.

CHT: OFF WHT TO FRM TO FRM, OCC TXT IP, OCC HL FF NO ODOR, TRC LS



CONN

CONN

WOB: 20.6
 RPM: 72
 PP: 1.674
 SPM: 079

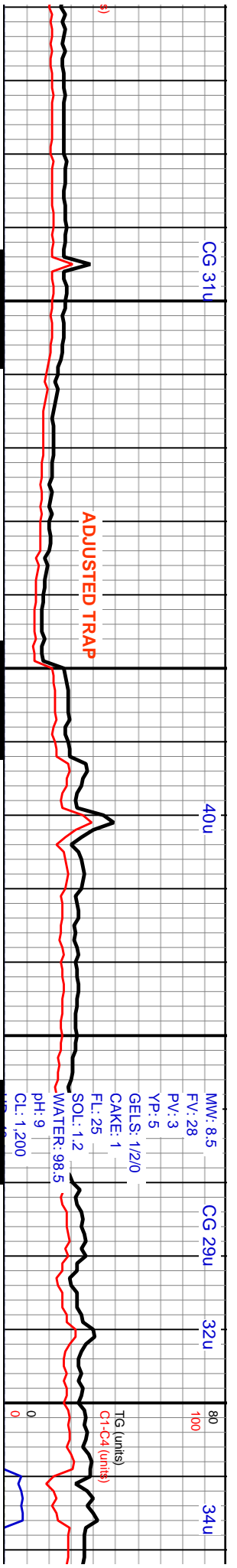
CONN

12/02/13
 @ 5,111' MD

CONN

WOB: 20.5
 RPM: 69
 PP: 1.698
 SPM: 079

CONN



CG 31u 40u CG 29u 32u 34u



MD: 5.278'
TVD: 4.189.5'
Inclination: 5.278°
Azimuth: 90.5°
VS: 1.335.5'

MD: 5.366'
TVD: 4.191.4'
Inclination: 87.1°
Azimuth: 180.2°
VS: 1.423.4'

TVD (ft)
TVD - Survey Data Siderack

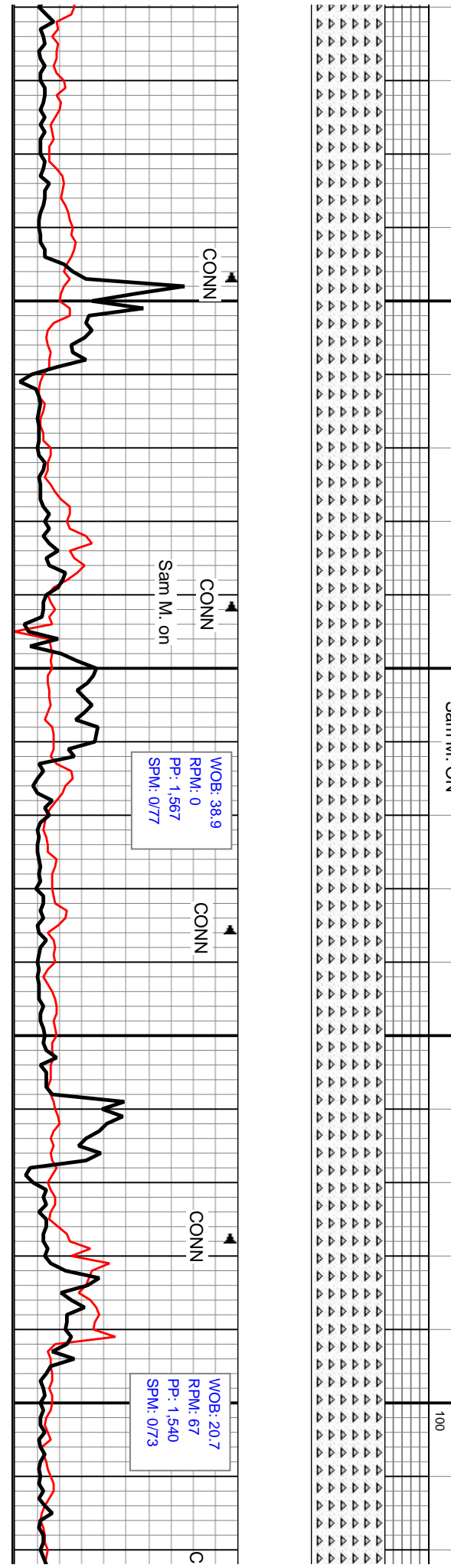
WHT, TRNSL TO OP, ANG TO SUB ANG, MOD
C V HD, MICRO XLN, TR V/FN XLN, OCC SUC
RAC POR, TRC BRN TO DK BRN SPOT STAIN,
3 CRM, TRC FLOF YEL, NO CUT.

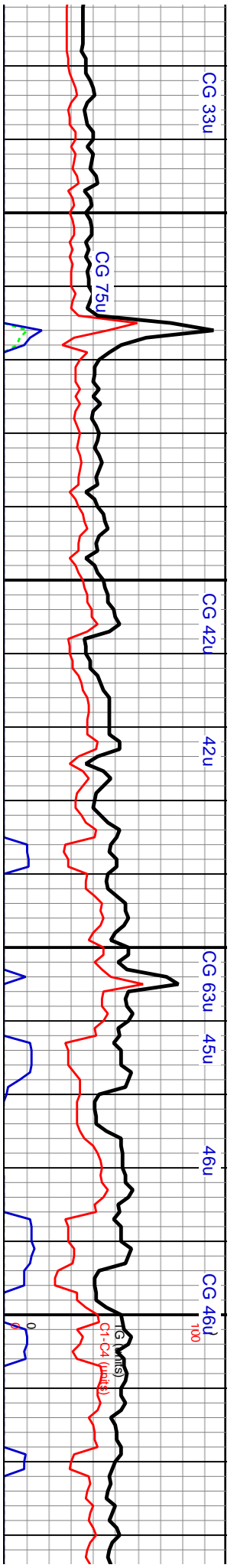
CHT: WHT TO LT GY, SME OFF WHT, TRNSL TO OP, ANG
TO SUB ANG, MOD FRM TO FRM, OCC V HD, MICRO XLN,
TR V/FN XLN, OCC SUC TXT IP, OCC HL FRAC POR, TRC
BRN TO DK BRN SPOT STAIN, NO ODOR, TRC FLOF YEL,
NO CUT

CHT: OFF WHT TO WHT, TRNSL TO OP, OCC LT GY, MOD FRM
FRM, OCC V/HRD, MICRO XLN, TR V/FN XLN, OCC SUC TXT IP,
PYR INC., TR CONCH FRACS, OCC HL FRAC POR, TR TAN TO
BRN SPOT STAIN, TR ASPHLTC SPOT STAIN, NO ODOR, OCC
PAL YEL FLOF, NO VIS CUT

Sam M. ON

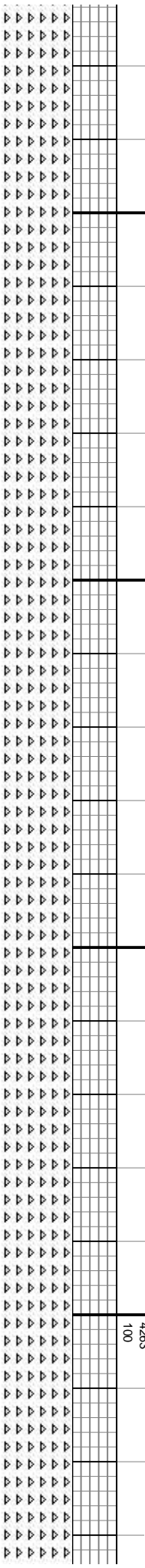
4263
100



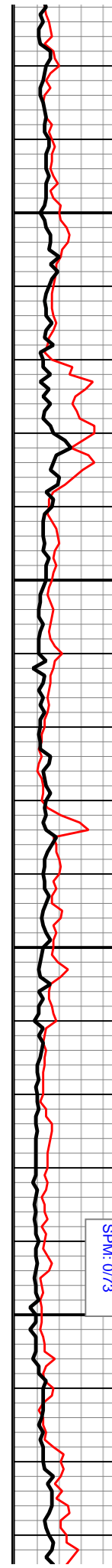


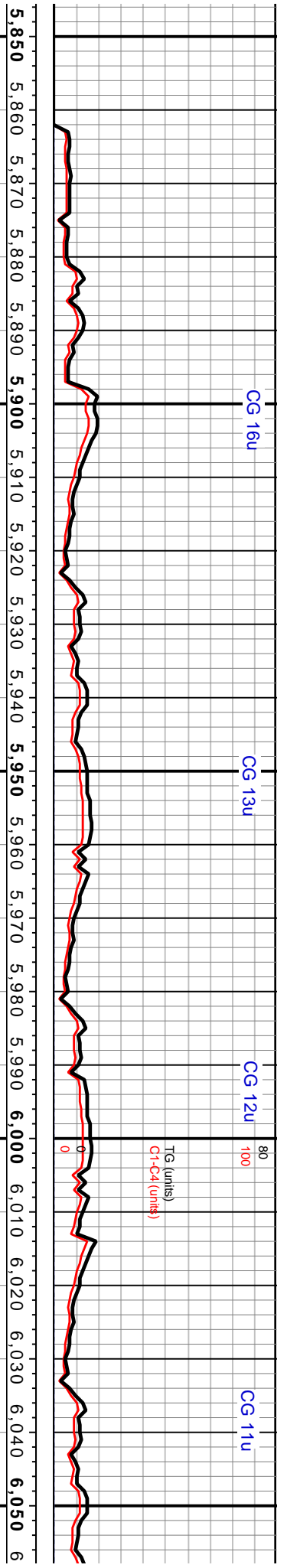
MD: 5.451'	MD: 5.539'	MD: 5.626'
TVD: 4,195.2'	TVD: 4,197.5'	TVD: 4,197.8'
Inclination: 87.8°	Inclination: 89.2°	Inclination: 90.4°
Azimuth: 179.7°	Azimuth: 179.1°	Azimuth: 177.9°
VS: 1,508.3'	VS: 1,596.2'	VS: 1,683.1'

A TO CHT: OFF WHT TO WHT, TRNSL TO OPQ, OCC LT GY, MOD FRM TO
 , OCC FRM, OCC V/HRD, MICRO XLN, TR V/FN XLN, OCC SUC TXT IP, OCC
 LT PYR INC., TR CONCH FRACS, OCC HL FRAC POR, TR TAN TO LT
 V/FNT BRN SPOT STAIN, TR ASPHLTC SPOT STAIN, NO ODOR, OCC V/FNT
 PAL YEL FLOR, NO VIS CUT



WOB: 22.7	WOB: 21.5
RPM: 69	RPM: 75
PP: 1,523	PP: 1,496
SPM: 074	SPM: 073





CG 16u CG 13u CG 12u CG 11u

4173
4173

MD: 5,889'
 TVD: 4,195.86'
 Inclination: 90.7°
 Azimuth: 179.4°
 VS: 1,945.76'

Bit #: 9
 Type: REED R40
 Size: 6.12
 Depth In: 5.90'
 Depth Out: 6.78'
 Hours: 26.5 hrs
 Avg Ft/Hr: 33.4 1/4hr
 Jets: 5X12

MD: 5,977'
 TVD: 4,192.03'
 Inclination: 94.3°
 Azimuth: 179.3°
 VS: 2,033.6'

TVD (ft)
 TVD - Survey Data Sidetrack 1 (ft)

CHT: OFF WHT TO WHT, TRNSL TO OP, SME LT GY, MOD
 FRM TO FRM, SME V HD, MICRO XLN, TR V/FN XLN, PYR
 INC, FRAC POR, TR TAN TO LT BRN SPOT STAIN, TR
 ASPHLTC SPOT STAIN, NO ODOR, TRC BRI YEL FLOR,
 NO CUT

CHT: OFF WHT TO WHT, TRNSL TO OP, SME LT GY, MOD
 FRM TO FRM, SME V HD, MICRO XLN, TR V/FN XLN, PYR
 INC, FRAC POR, TR TAN TO LT BRN SPOT STAIN, TR
 ASPHLTC SPOT STAIN, NO ODOR, TRC BRI YEL FLOR,
 NO CUT

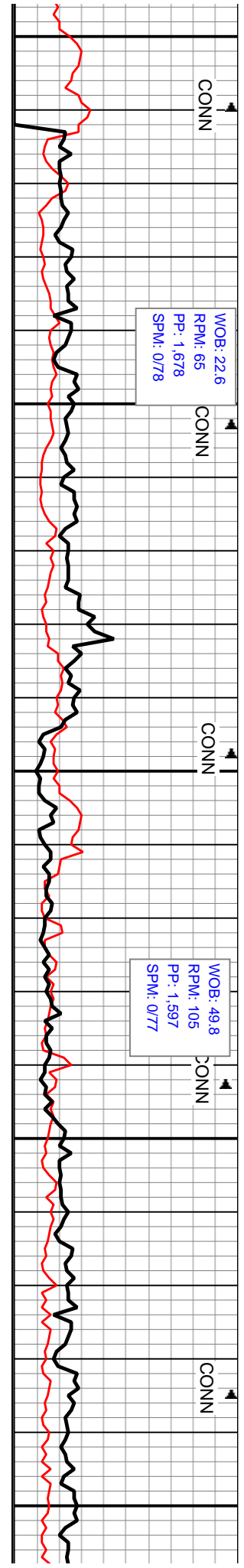
CHT: OFF WHT TO WHT, TRN;
 MICRO XLN, TR V/FN XLN, PY
 LAM CHAL CHT, TR LS: OFF \
 XLN, TR SH: LT GY TO GY, M
 TXT, OCC SLTY, TR FRAC PC
 ASPHLTC SPOT STAIN, NO O

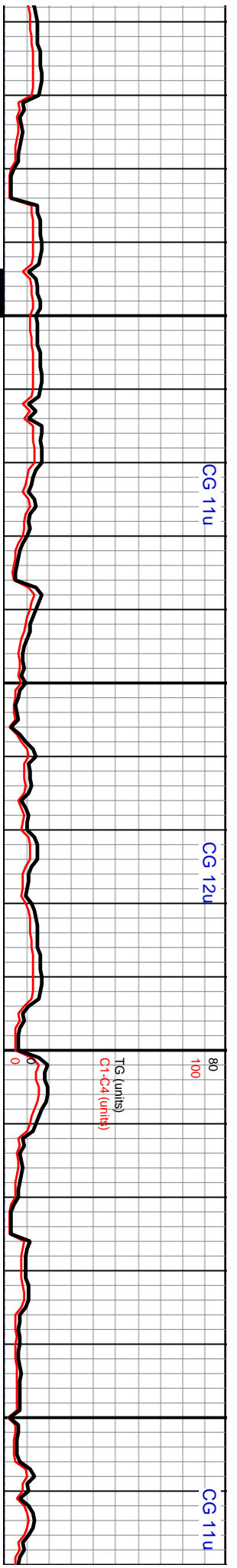
4263
4263

Sam IV

WOB: 22.6
 RPM: 65
 PP: 1.678
 SPM: 0.78

WOB: 49.8
 RPM: 105
 PP: 1.597
 SPM: 0.777





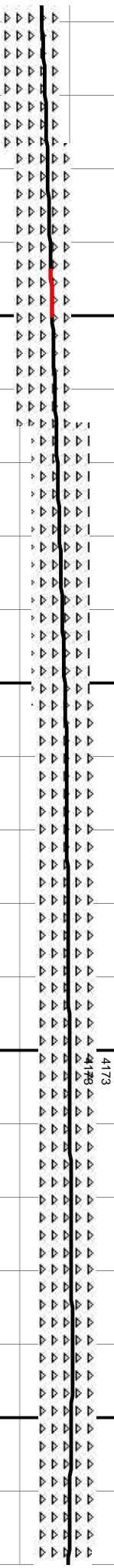
CG 11u

CG 12u

CG 11u

TG (units)
C1-C4 (units)

6,060 6,070 6,080 6,090 6,100 6,110 6,120 6,130 6,140 6,150 6,160 6,170 6,180 6,190 6,200 6,210 6,220 6,230 6,240 6,250 6,260 6,2



MD: 6.068 '
TVD: 4.186.55 '
Inclination: 92.6 °
Azimuth: 179.9 °
VS: 2.124.38 '

MD: 6.156 '
TVD: 4.182.71 '
Inclination: 92.4 °
Azimuth: 178.7 °
VS: 2.212.23 '

TVD (ft)
TVD - Survey Data Sidetrack 1 (ft)

MD: 6.243 '
TVD: 4.181.57 '
Inclination: 89.1 °
Azimuth: 182.1 °
VS: 2.299.18 '

SL TO OPG, MOD FRM TO FRM, SM V/HRD,
'R INC, OCC BLUSH/GY V/HRD SHRP ANG
WHT TO CRM, MOD FRM, CHNKY, MIC TO V/FN
OD SFT TO MOD FRM, BRTL, MSTRLY SMTH
)R, TR TAN TO LT BRN SPOT STAIN, TR
IDOR, OCC PAL YEL TO YEL FLOR, NO CUT

CHT: WHT, WHT - OFF WHT, SOME WHT - V LT GY, TR
SPECKL, OP - SL TRNSP, TRNSP IP, HD - V HD, DNS, CONCH
FRACS, SOME DLL GLD - GLD FLOR, V SL RING CUT, V SL
FLASH CUT, TR PIPE DOPE, OCC BRN - BLK STN ON
CUTTINGS

CHT: WHT, WHT - OFF WHT, SOME WHT - V LT GY, TR
SPECKL, OP - SL TRNSP, TRNSP IP, HD - V HD, DNS, C
FRACS, SOME DLL GLD - GLD FLOR, V SL RING CUT, V
FLASH CUT, TR PIPE DOPE, OCC BRN - BLK STN ON
CUTTINGS

1. ON

4263
4263

CONN
WOB: 45.6
RPM: 73
PP: 1.690
SPM: 0.82

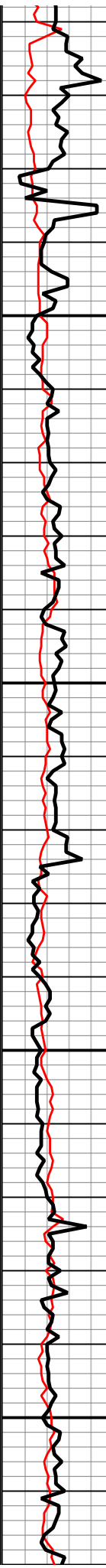
CONN

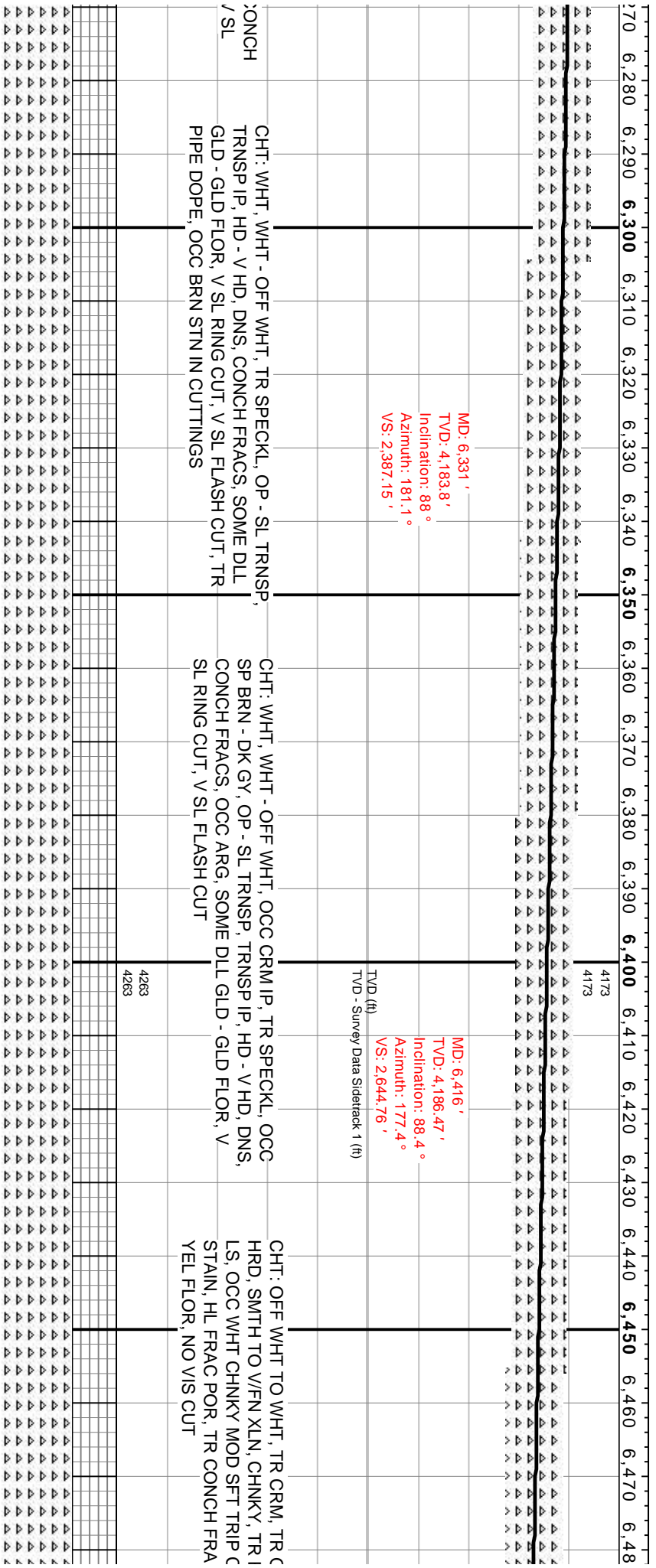
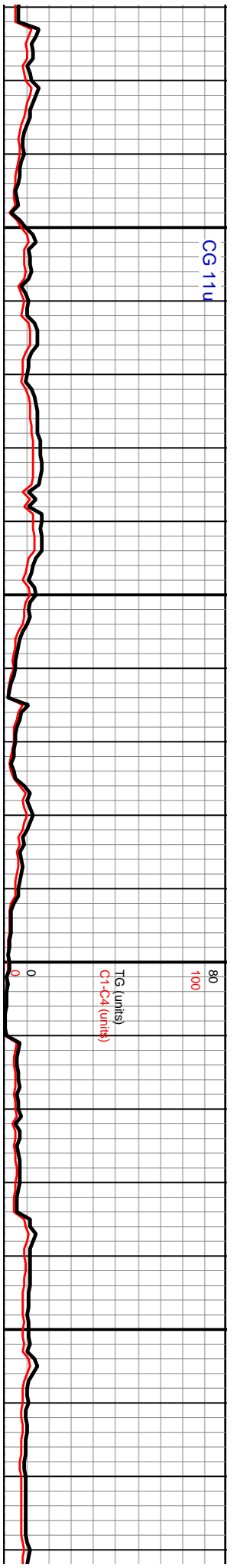
CONN

WOB: 11
RPM: 71
PP: 2.060
SPM: 76

CONN

CONN

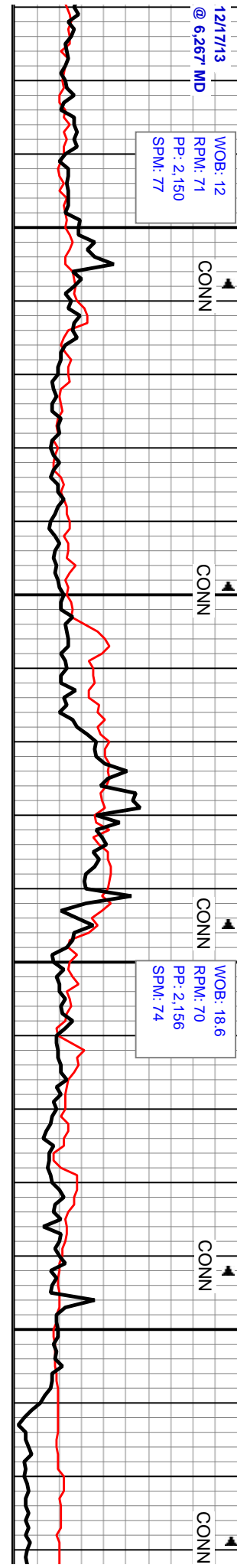


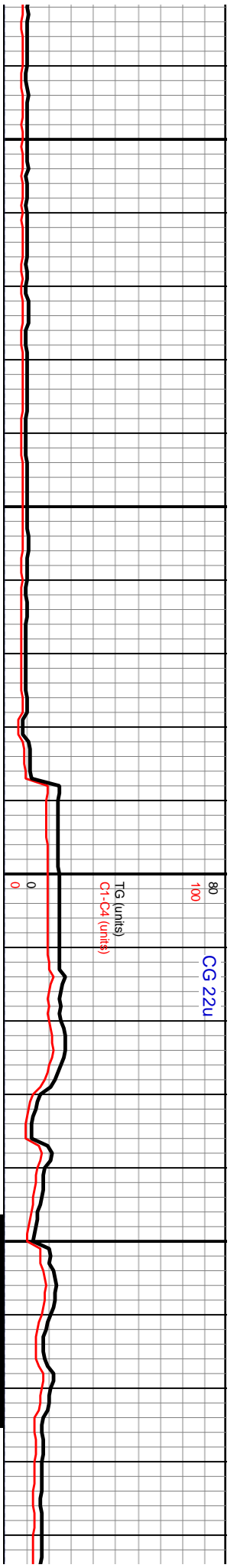


CHT: WHT, WHT - OFF WHT, TR SPECKL, OP - SL TRNSP, TRNSP IP, HD - V HD, DNS, CONCH FRACS, SOME DLL GLD - GLD FLOR, V SL RING CUT, V SL FLASH CUT, TR PIPE DOPE, OCC BRN STN IN CUTTINGS

CHT: WHT, WHT - OFF WHT, OCC CRM IP, TR SPECKL, OCC SP BRN - DK GY, OP - SL TRNSP, TRNSP IP, HD - V HD, DNS, CONCH FRACS, OCC ARG, SOME DLL GLD - GLD FLOR, V SL RING CUT, V SL FLASH CUT

CHT: OFF WHT TO WHT, TR CRM, TR C HRD, SMTH TO V/FN XLN, CHNKY, TR I LS, OCC WHT CHNKY MOD SFT TRIP C STAIN, HL FRAC POR, TR CONCH FRA YEL FLOR, NO VIS CUT





MD: 6.502 '
 TVD: 4,188.95 '
 Inclination: 88.3 °
 Azimuth: 178.1 °
 VS: 2.557.98 '

MD: 6.589 '
 TVD: 4,191.3 '
 Inclination: 88.6 °
 Azimuth: 177.4 °
 VS: 2.644.76 '

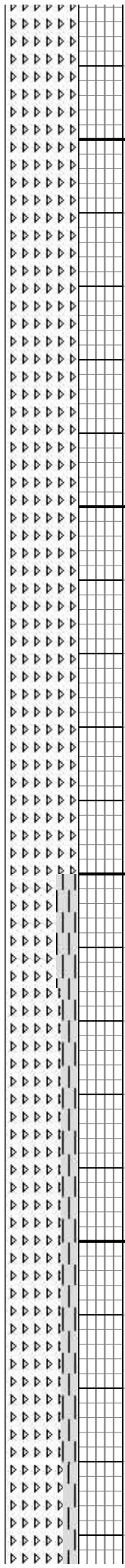
TVD (ft)
 TVD - Survey Data Sidetrack 1 (ft)

MD: 6.691 '
 TVD: 4,192 '
 Inclination: 1
 Azimuth: 1
 VS: 2.746.6

ENTERED THE ORIGINAL BORE HOLE

JPOQ, MOD FRM TO FRM,
 BLKY, OCC PLTY, OCC SIL
 HT, OCC ASPHLTC SPOT
 C OCC PAL YEL TO DULL

CHT: OFF WHT TO WHT, TR CRM, TR OPQ, MOD FRM TO FRI
 HRD, SMTH TO V/FN XLN, CHNKY, TR BLKY, OCC PLTY, OCC
 CHNKY MOD SFT TRIP CHT, TR SH: LT GY TO GY TR GRN CH
 MOD FRM OCC PYR INC., OCC ASPHLTC SPOT STAIN, HL FR
 POR, TR CONCH FRAC OCC PAL YEL TO DULL YEL FLOR, NC
 CUT



WOB: 2.8
 RPM: 73
 PP: 2.356
 SPM: 76

CONN

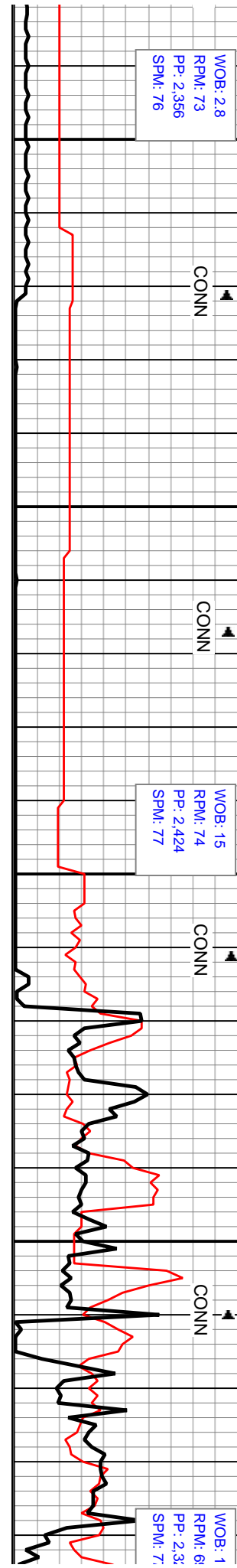
CONN

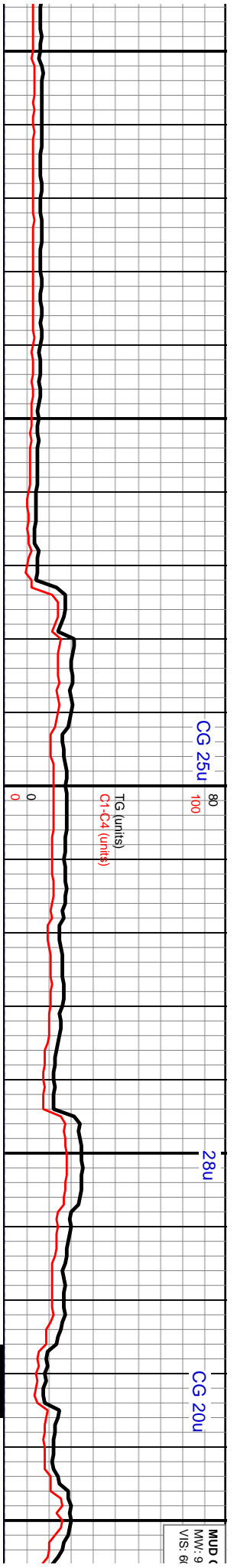
WOB: 15
 RPM: 74
 PP: 2.424
 SPM: 77

CONN

CONN

WOB: 1
 RPM: 6
 PP: 2.3
 SPM: 7





6,700 6,710 6,720 6,730 6,740 6,750 6,760 6,770 6,780 6,790 6,800 6,810 6,820 6,830 6,840 6,850 6,860 6,870 6,880 6,890 6,900

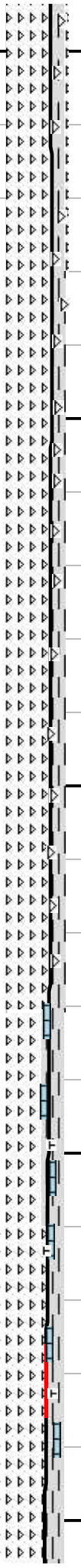
CG 25u 80 100

28u

CG 20u

MWD (MW: 9 V/S: 6'

TG (units)
C1-C4 (units)



MD: 6.734' TVD: 4,191.9' Inclination: 89.7° Azimuth: 182° VS: 2,789.6'

Bit #: 10
Type: SEC MM64D
Size: 6.12
Depth In: 6.78'
Jets: 6X16

MD: 6.818' TVD: 4,192.1' Inclination: 90° Azimuth: 182.7° VS: 2,873.5' (ft)

M, ;WHT
-NKY
RAC
C VIS

CHT: OFF WHT TO WHT, TR CRM, TR OPQ, MOD FRM TO FRM, HRD, SMTH TO V/FN XLN, CHNKY, TR BLKY, OCC PLTY, OCC LS OFF WHT TO CRM MOD FRM MIC TO V/FN XLN OCC PP POR, OCC WHT CHNKY MOD SFT TRIP CHT, OCC ASPHLTC SPOT STAIN, HL FRAC POR, TR CONCH FRAC OCC PAL YEL TO DULL YEL FLOR, NO VIS CUT

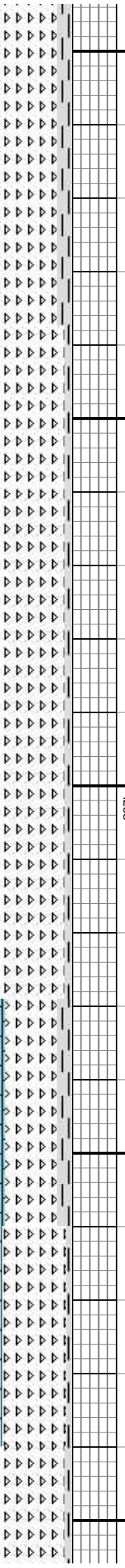
CHT: OFF WHT TO WHT, TR CRM, TR OPQ, MOD FRM TO FRM, HRD, SMTH TO V/FN XLN, CHNKY, TR BLKY, OCC PLTY, OCC LS OFF WHT TO CRM MOD FRM MIC TO V/FN XLN OCC PP POR, OCC WHT CHNKY MOD SFT TRIP CHTGELS: 10/14/0 TR SH: LT GY TO GY CHNKY MOD SFT BRTL, OCC BLUSH WHT V/SHRP V/HRD CHAL CHT NODULES, TR ASPHLTC SPOT STAIN, HL FRAC POR, TR CONCH FRAC OCC PAL YEL TO DULL YEL FLOR, NO VIS CUT

MW: 9.3
FV: 60
PV: 15
MYP: 18

MD: 6.902 TVD: 4,193' Inclination: Azimuth: 1 VS: 2,957.4'

FL: 4.2
SOL: 7.1
WATER: 92.6
pH: 10.4
CL: 3,000

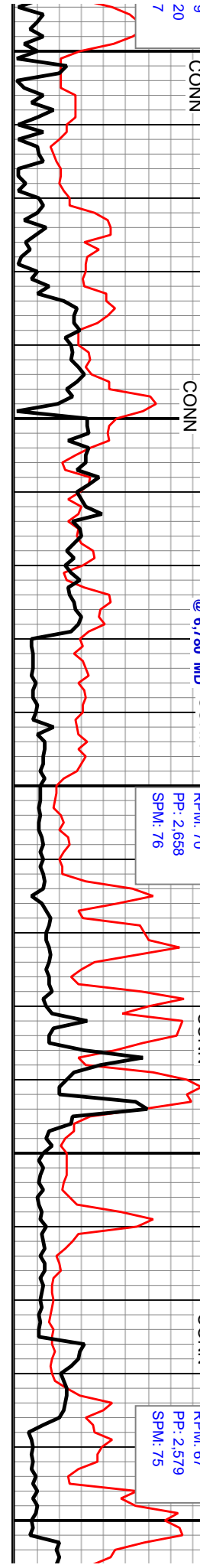
CH
SP
SM
PIP
GLT



WOB: 15.6
RPM: 70
PP: 2.658
SPM: 76

12/18/13 @ 6,780' MD

WOB: 15.9
RPM: 67
PP: 2.579
SPM: 75



CONN
CONN
CONN
CONN

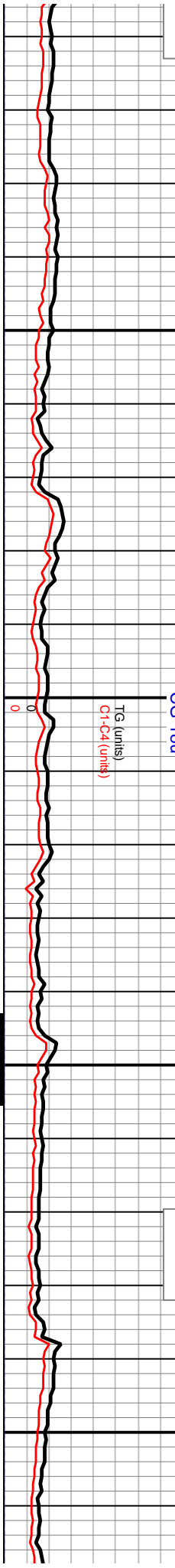
CHECK 1.3
0

80
100
CG 18U

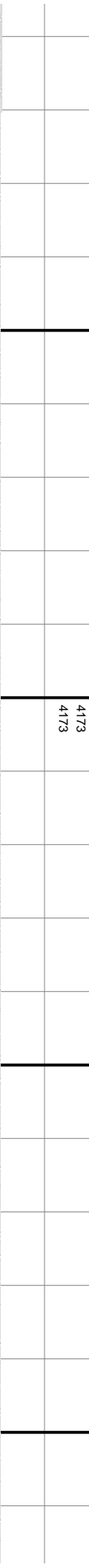
CG 19U

CG 21U

MUD CHECK MW: 9.1
VIS: 53



6,910 6,920 6,930 6,940 6,950 6,960 6,970 6,980 6,990 7,000 7,010 7,020 7,030 7,040 7,050 7,060 7,070 7,080 7,090 7,100 7,110 7



MD: 6,986' TVD: 4,195.34' Inclination: 88.2° Azimuth: 182.6° VS: 3,041.48'

TVD (ft) TVD - Survey Data Sidetrack 1 (ft)

MD: 7,074' TVD: 4,197.26' Inclination: 89.3° Azimuth: 182.1° VS: 3,129.45'

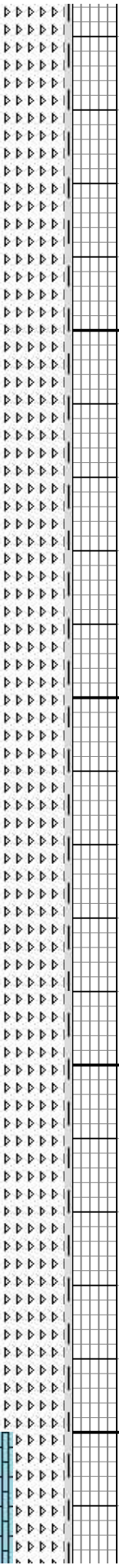
T: WHT - OFF WHT, TR CRM IP, TR ECKL, OP - SL TRNSP, SOME TRNSP, HD - V HD, TR TRIP, OCC ARG, TR E DOPE IN SAMPLE, TR DLL GLD - D FLOR, NSOC

CHT: WHT - OFF WHT, TR CRM IP, TR SPECKL, OP - SL TRNSP, SOME TRNSP, SM, HD - V HD, OCC ARG, TR FOSS SHELL FRAG, POSS TR FORAM, TR PIPE DOPE IN SAMPLE, TR DLL GLD - GLD FLOR, NSOC

CHT: WHT - OFF WHT, TR LT TAN, TR SPECKL, OP - SL TRNSP, SOME TRNSP, SM, HD - V HD, OCC ARG, TR DLL GLD - GLD FLOR, NSOC; OCC SH W/IMBD CHT

CHT: WHT - OFF WHT, OP - SL TRNSP, SOME TRNSP, SM, HD - V HD, OCC ARG, TR MIC FOSS, TR DLL GLD - GLD FLOR, NSOC; OCC SH W/IMBD CHT

CHT: WHT - O SOME TRNSP TR MIC FOSS OCC SH W/IN LS: OFF WHT, SM TEX, FRM



CONN

CONN

CONN

CONN

CONN

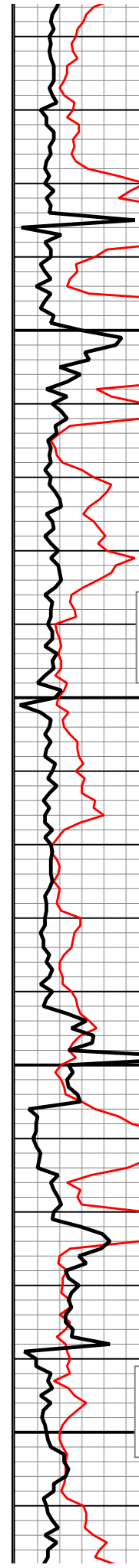
CONN

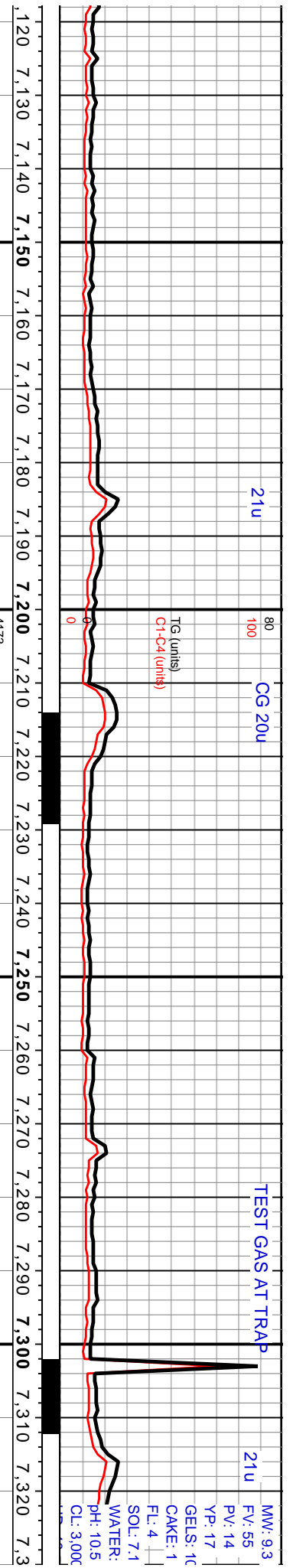
CONN

WOB: 16K RPM: 69 PP: 2,530 SPM: 79

12/19/13 @ 7,075' MD

WOB: 15K RPM: 66 PP: 2,330 SPM: 76





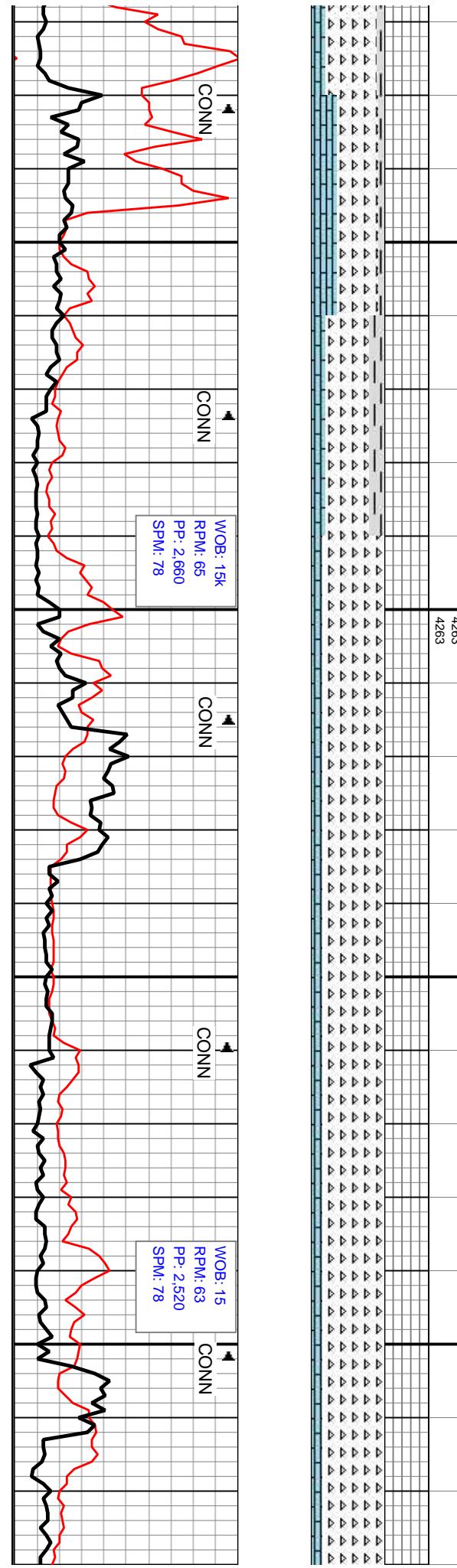
MD: 7.157'
 TVD: 4,196.83'
 Inclination: 91.3°
 Azimuth: 182.1°
 VS: 3,212.44'
 CHT: WHT - OFF WHT, OP - SL TRNSP, SOME TRNSP, SM, HD - V HD, OCC ARG, TR MIC FOSS, TR DLL GLD FLO, NSOC LS - OFF WHT, SOME CRM, MICROXLN, SM TEX, FRM, SOME SFT - FRM SH: MOD GY, TR GN TINT, TR DK GY, DLL RTHY LSTR, SM TEX, FRM, PLTY, NON CALC, OCC SH W/IMBD CHT

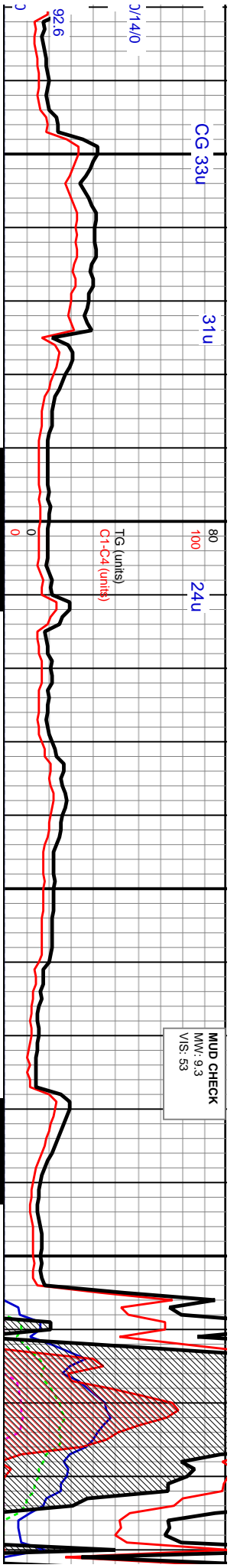
MD: 7.243'
 TVD: 4,196.2'
 Inclination: 89.5°
 Azimuth: 183.4°
 VS: 3,298.4'
 CHT: OFF WHT TO WHT, TR CRM, TR TRANSL TO OPQ, MOD FRM TO FRM, HRD, SMTH TO V/FN XLN, CHNKY, TR BLKY, OCC PLTY, OCC LS OFF WHT TO CRM MOD FRM MIC TO V/FN XLN OCC PP POR, OCC ASPHLTC SPOT STAIN, HL FRAC POR, TR CONCH FRAC OCC PAL YEL TO DULL YEL FLO, NO VIS CUT

MD: 7.330'
 TVD: 4,19'
 Inclination:
 Azimuth:
 VS: 3,385'
 CHT: OFF WHT TO WHT, TR CRM, TR FRM, HRD, SMTH TO V/FN XLN, CHN OFF WHT TO CRM MOD FRM MIC TC MOD SFT TO MOD FRM CHNKY TRIP STAIN, OCC LT BRN STAIN, HL FRAC PAL YEL TO DULL YEL FLO, NO VIS

4173
 4173
 TVD (ft)
 TVD - Survey Data Sidetrack 1 (ft)

4263
 4263





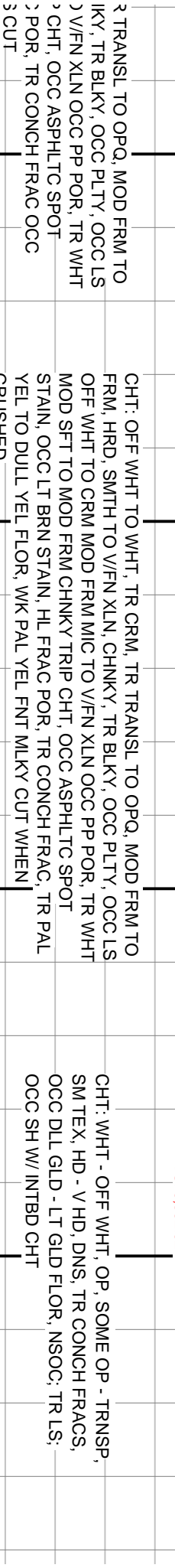
30 7,340 7,350 7,360 7,370 7,380 7,390 7,400 7,410 7,420 7,430 7,440 7,450 7,460 7,470 7,480 7,490 7,500 7,510 7,520 7,530 7,54



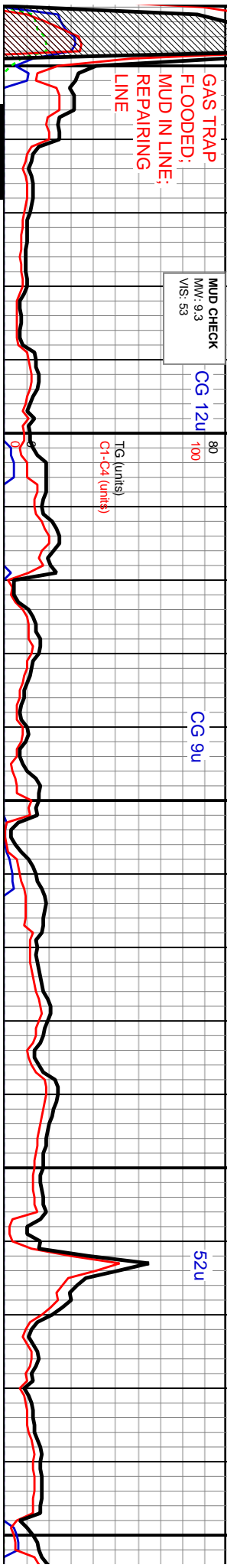
3 CUT
POR, TR CONCH FRAC OCC
CHT, OCC ASPHLTC SPOT
V/N XLN OCC PP POR, TR WHT
TR BLKY, OCC PLTY, OCC LS
MOD FRM TO OPQ, MOD FRM TO

CHT: OFF WHT TO WHT, TR CRM, TR TRANSL TO OPQ, MOD FRM TO FRM, HRD, SMTH TO V/N XLN, CHNKY, TR BLKY, OCC PLTY, OCC LS OFF WHT TO CRM MOD FRM MIC TO V/N XLN OCC PP POR, TR WHT MOD SFT TO MOD FRM CHNKY TRIP CHT, OCC ASPHLTC SPOT STAIN, OCC LT BRN STAIN, HL FRAC POR, TR CONCH FRAC, TR PAL YEL TO DULL YEL FLOR, WK PAL YEL FNT MLKY CUT WHEN CRUSHED

CHT: WHT - OFF WHT, OP, SOME OP - TRNSP, SM TEX, HD - V HD, DNS, TR CONCH FRACS, OCC DLL GLD - LT GLD FLOR, NSOC; TR LS; OCC SH W/ INTBD CHT



CONN
CONN
CONN
CONN
CONN



0 7,550 7,560 7,570 7,580 7,590 7,600 7,610 7,620 7,630 7,640 7,650 7,660 7,670 7,680 7,690 7,700 7,710 7,720 7,730 7,740 7,750

CG 12U	100	CG 9U	52U
4173	4173		

MD: 7,584'
 TVD: 4,198.95'
 Inclination: 90.8°
 Azimuth: 179.2°
 VS: 3,639.26'

TVD (ft)
 TVD - Survey Data Siderack 1 (ft)

MD: 7,671'
 TVD: 4,197.66'
 Inclination: 90.9°
 Azimuth: 179.4°
 VS: 3,726.18'

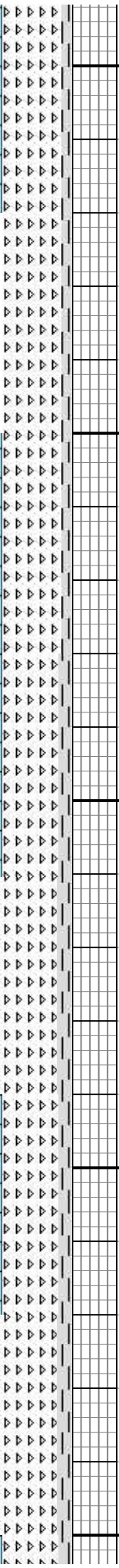
MD: 7,7
 TVD: 4,
 Inclinat
 Azimut
 VS: 3.8

CHT: WHT - OFF WHT, OCC SPECKL, OP, SOME
 OP - TRNSP, SM TEX, HD - V HD, DNS, TR CONCH
 FRACS, TR DLL GLD - LT GLD FLOR, V SL THIN
 RING CUT; TR LS; OCC SH W/ INTBD CHT

CHT: WHT - OFF WHT, OCC SPECKL, OP, SOME
 OP - TRNSP, SM TEX, HD - V HD, DNS, TR CONCH
 FRACS, OCC DLL GLD - LT GLD FLOR, NSOC; TR
 LS; TR SH W/ INTBD CHT

CHT: WHT - OFF WHT, OCC SPECKL, OP - SL
 TRNSP, SM TEX, HD - V HD, DNS, TR CONCH
 FRACS, OCC DLL GLD - LT GLD FLOR, V SL - SL
 THIN RING CUT; TR SH W/ INTBD CHT

4263	4263		
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CONN

CONN

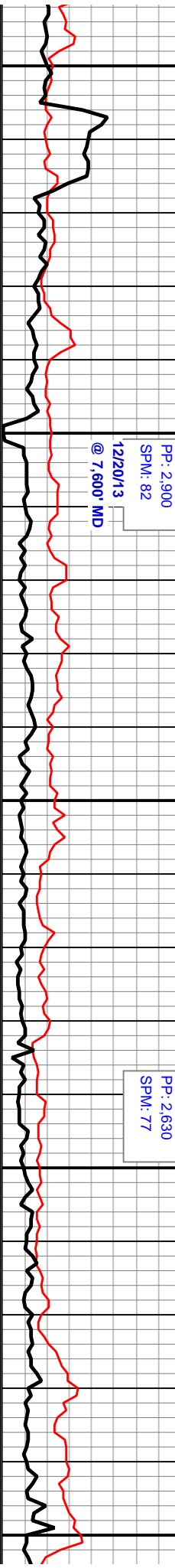
CONN

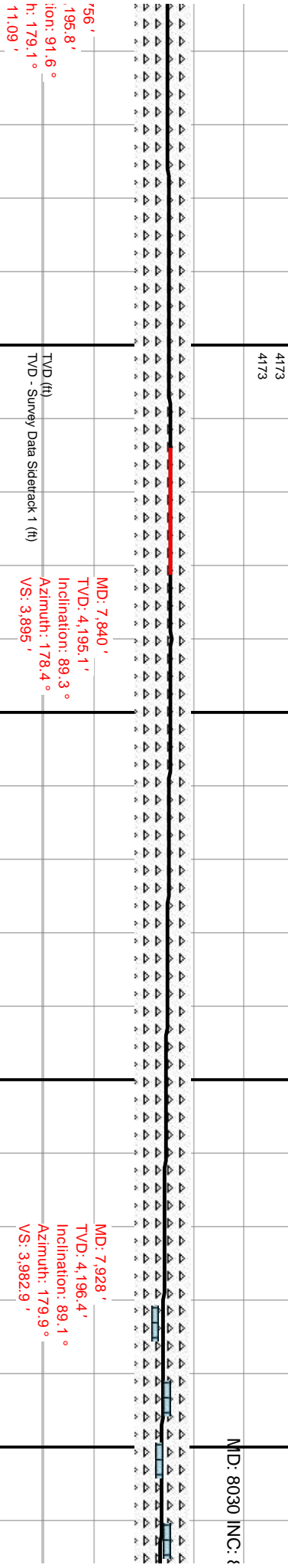
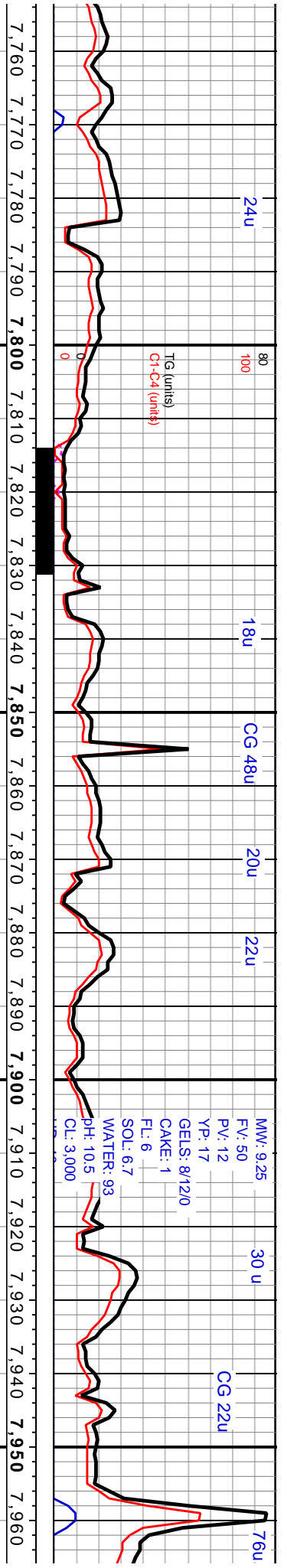
CONN

CONN

WOB: 15K
 RPM: 64
 PP: 2,900
 SPM: 82
 12/20/13
 @ 7,600' MD

WOB: 15K
 RPM: 64
 PP: 2,630
 SPM: 77

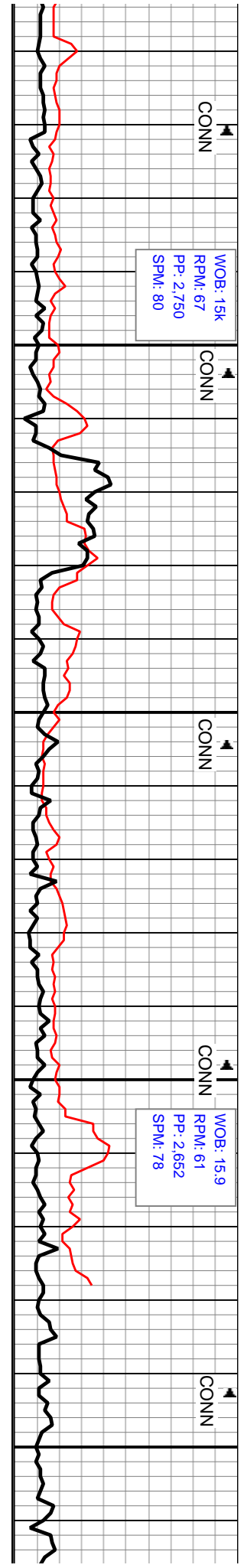
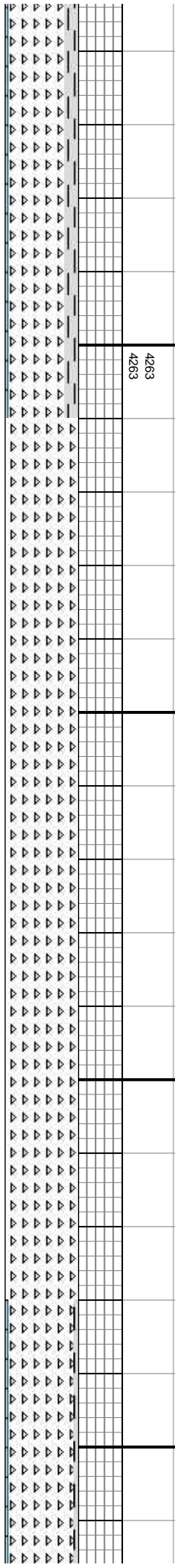




CHT: WHT, OCC WHT - OFF WHT, OP - SL TRNSP,
 SM TEX, HD - V HD, DNS, TR CONCH FRACS, OCC
 DLL GLD - LT GLD FLOR, V SL - SL THIN RING
 CUT; TR SH W/ INTBD CHT

CHT: OFF WHT TO WHT, TR CRM, TR OPQ, MOD FRM TO FRM,
 HRD, SMTH TO V/FN XLN, CHNKY, TR BLKY, OCC PLTY, OCC WHT
 CHNKY MOD SFT TRIP CHT, OCC ASPH LTC SPOT STAIN, HL
 FRAC POR, TR CONCH FRAC, OCC PAL YEL TO DULL YEL FLOR,
 NO VIS CUT

CHT: OFF WHT TO WHT, T
 FRM, HRD, SMTH TO V/FN
 WHT CHNKY MOD SFT TR
 CHAL CHT, OCC LS OFF V
 OCC ASPH LTC SPOT STAI
 OCC PAL YEL TO DULL YE



CONN

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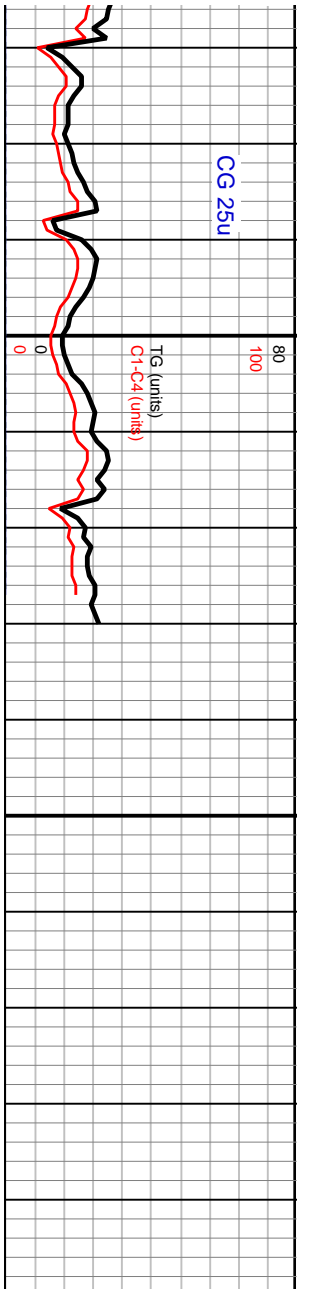
CONN

CONN

WOB: 15K
 RPM: 67
 PP: 2.750
 SPM: 80

WOB: 15.9
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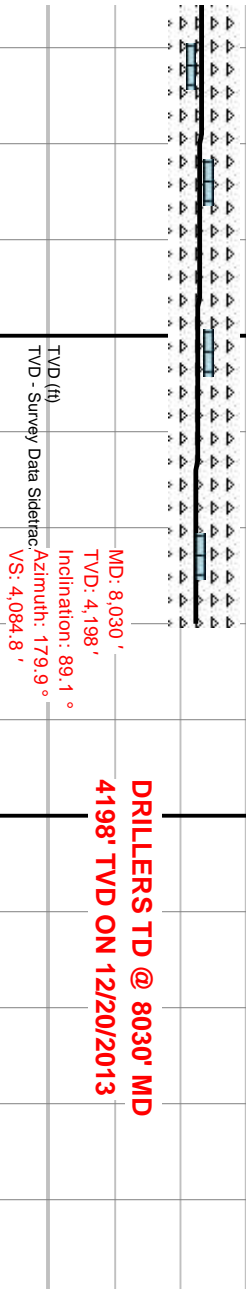
MD: 8030 INC: {



7,970 7,980 7,990 **8,000** 8,010 8,020 8,030 8,040 **8,050** 8,060 8,070 8,080 8,090 **8,100**

4173
4173

89.1 AZM: 179.9 TVD: 4198.0 VS: 4084.8

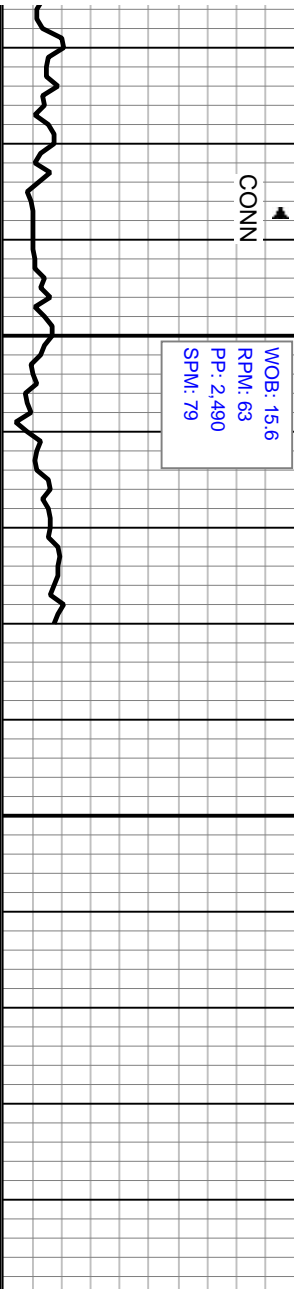


TR CRM, TR TRNSL TO OPQ, MOD FRM TO
I XLN, CHNKY, TR BLKY, OCC PLTY, OCC
IP CHT, OCC BLUSH GY V/HRD V/ANG
VHT TO CRM MOD FRM MIC TO V/FN XLN,
IN, HL FRAC POR, TR CONCH FRAC,
IL FLOR, NO VIS CUT

4263	4263
4263	4263

CONN

WOB: 15.6
RPM: 63
PP: 2.490
SPM: 79





Seneca Resources - MC

Pratt County, Kansas

Greengroup

Greengroup 14A-1H - NEW SHL

Sidetrack #1

Design: Sidetrack #1

Survey Report - Geographic

23 December, 2013



Company:	Seneca Resources - MC	Local Co-ordinate Reference:	Well Greengroup 14A-1H - NEW SHL
Project:	Pratt County, Kansas	TVD Reference:	WELL @ 1876.0usft (HWD #8)
Site:	Greengroup	MD Reference:	WELL @ 1876.0usft (HWD #8)
Well:	Greengroup 14A-1H - NEW SHL	North Reference:	Grid
Wellbore:	Sidetrack #1	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack #1	Database:	EDM 5000.1 Single User Db

Project	Pratt County, Kansas		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Kansas Southern Zone		

Site	Greengroup				
Site Position:		Northing:	1,689,728.78 usft	Latitude:	37° 42' 11.056 N
From:	Lat/Long	Easting:	1,281,021.84 usft	Longitude:	98° 36' 29.628 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.07 °

Well	Greengroup 14A-1H - NEW SHL					
Well Position	+N/-S	0.0 usft	Northing:	1,689,695.53 usft	Latitude:	37° 42' 10.749 N
	+E/-W	0.0 usft	Easting:	1,283,053.31 usft	Longitude:	98° 36' 4.349 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	1,861.0 usft

Wellbore	Sidetrack #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/23/2013	4.76	65.62	51,973

Design	Sidetrack #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	5,801.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	182.03	

Survey Program	Date	12/23/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	3,350.0	VES Gyro Survey (Wellbore #1)	Good_gyro	Good Gyro	
3,398.0	5,801.0	MWD (Wellbore #1)			
5,889.0	8,030.0	MWD (Sidetrack #1)			

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,689,695.53	1,283,053.31	37° 42' 10.749 N	98° 36' 4.349 W	
100.0	0.13	257.11	100.0	0.0	-0.1	1,689,695.51	1,283,053.20	37° 42' 10.749 N	98° 36' 4.350 W	
200.0	0.50	224.09	200.0	-0.4	-0.5	1,689,695.17	1,283,052.78	37° 42' 10.746 N	98° 36' 4.355 W	
300.0	0.83	259.82	300.0	-0.8	-1.5	1,689,694.73	1,283,051.77	37° 42' 10.741 N	98° 36' 4.368 W	
400.0	0.69	246.77	400.0	-1.2	-2.8	1,689,694.36	1,283,050.50	37° 42' 10.738 N	98° 36' 4.384 W	
500.0	0.96	240.48	500.0	-1.8	-4.1	1,689,693.71	1,283,049.22	37° 42' 10.731 N	98° 36' 4.400 W	
600.0	1.04	268.22	600.0	-2.3	-5.7	1,689,693.27	1,283,047.58	37° 42' 10.727 N	98° 36' 4.420 W	
700.0	1.08	259.65	699.9	-2.5	-7.6	1,689,693.07	1,283,045.75	37° 42' 10.725 N	98° 36' 4.443 W	
800.0	1.29	285.06	799.9	-2.3	-9.6	1,689,693.20	1,283,043.73	37° 42' 10.726 N	98° 36' 4.468 W	
900.0	2.01	284.59	899.9	-1.6	-12.4	1,689,693.93	1,283,040.95	37° 42' 10.733 N	98° 36' 4.503 W	

Company:	Seneca Resources - MC	Local Co-ordinate Reference:	Well Greengroup 14A-1H - NEW SHL
Project:	Pratt County, Kansas	TVD Reference:	WELL @ 1876.0usft (HWD #8)
Site:	Greengroup	MD Reference:	WELL @ 1876.0usft (HWD #8)
Well:	Greengroup 14A-1H - NEW SHL	North Reference:	Grid
Wellbore:	Sidetrack #1	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack #1	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
1,000.0	2.17	287.50	999.8	-0.6	-15.9	1,689,694.94	1,283,037.45	37° 42' 10.743 N	98° 36' 4.546 W	
1,100.0	2.46	289.18	1,099.7	0.7	-19.7	1,689,696.22	1,283,033.62	37° 42' 10.756 N	98° 36' 4.594 W	
1,200.0	2.48	294.90	1,199.6	2.3	-23.7	1,689,697.83	1,283,029.63	37° 42' 10.772 N	98° 36' 4.644 W	
1,300.0	2.67	291.35	1,299.5	4.1	-27.8	1,689,699.59	1,283,025.49	37° 42' 10.789 N	98° 36' 4.695 W	
1,400.0	3.11	295.87	1,399.4	6.1	-32.4	1,689,701.62	1,283,020.88	37° 42' 10.809 N	98° 36' 4.752 W	
1,500.0	2.99	294.99	1,499.3	8.4	-37.2	1,689,703.91	1,283,016.08	37° 42' 10.832 N	98° 36' 4.812 W	
1,600.0	2.92	305.92	1,599.1	11.0	-41.7	1,689,706.51	1,283,011.65	37° 42' 10.857 N	98° 36' 4.867 W	
1,700.0	2.84	303.29	1,699.0	13.8	-45.8	1,689,709.36	1,283,007.52	37° 42' 10.886 N	98° 36' 4.919 W	
1,800.0	2.64	320.03	1,798.9	17.0	-49.3	1,689,712.48	1,283,003.97	37° 42' 10.916 N	98° 36' 4.963 W	
1,900.0	2.88	300.35	1,898.8	20.0	-53.0	1,689,715.52	1,283,000.32	37° 42' 10.946 N	98° 36' 5.008 W	
2,000.0	2.72	307.08	1,998.7	22.7	-57.0	1,689,718.22	1,282,996.26	37° 42' 10.973 N	98° 36' 5.059 W	
2,100.0	2.20	316.78	2,098.6	25.5	-60.3	1,689,721.05	1,282,993.05	37° 42' 11.001 N	98° 36' 5.099 W	
2,200.0	2.52	305.15	2,198.5	28.2	-63.4	1,689,723.71	1,282,989.94	37° 42' 11.027 N	98° 36' 5.138 W	
2,300.0	2.11	307.43	2,298.4	30.6	-66.6	1,689,726.10	1,282,986.68	37° 42' 11.051 N	98° 36' 5.178 W	
2,400.0	2.02	302.85	2,398.3	32.6	-69.6	1,689,728.17	1,282,983.74	37° 42' 11.071 N	98° 36' 5.215 W	
2,500.0	2.16	318.73	2,498.3	35.0	-72.3	1,689,730.54	1,282,981.02	37° 42' 11.095 N	98° 36' 5.249 W	
2,600.0	1.45	311.74	2,598.2	37.3	-74.5	1,689,732.80	1,282,978.83	37° 42' 11.117 N	98° 36' 5.276 W	
2,700.0	1.69	297.79	2,698.2	38.8	-76.7	1,689,734.33	1,282,976.58	37° 42' 11.132 N	98° 36' 5.304 W	
2,800.0	1.67	301.68	2,798.1	40.3	-79.3	1,689,735.79	1,282,974.04	37° 42' 11.147 N	98° 36' 5.336 W	
2,900.0	1.33	322.71	2,898.1	41.9	-81.2	1,689,737.47	1,282,972.09	37° 42' 11.163 N	98° 36' 5.360 W	
3,000.0	0.86	303.99	2,998.1	43.3	-82.5	1,689,738.82	1,282,970.77	37° 42' 11.176 N	98° 36' 5.377 W	
3,100.0	1.40	326.07	3,098.1	44.7	-83.8	1,689,740.25	1,282,969.46	37° 42' 11.191 N	98° 36' 5.393 W	
3,200.0	1.68	320.74	3,198.0	46.9	-85.5	1,689,742.40	1,282,967.85	37° 42' 11.212 N	98° 36' 5.413 W	
3,300.0	1.42	322.23	3,298.0	49.0	-87.1	1,689,744.51	1,282,966.17	37° 42' 11.233 N	98° 36' 5.434 W	
3,350.0	1.42	321.57	3,348.0	50.0	-87.9	1,689,745.49	1,282,965.40	37° 42' 11.242 N	98° 36' 5.443 W	
3,398.0	1.80	310.30	3,396.0	50.9	-88.9	1,689,746.44	1,282,964.46	37° 42' 11.252 N	98° 36' 5.455 W	
3,439.0	1.90	312.30	3,436.9	51.8	-89.8	1,689,747.32	1,282,963.46	37° 42' 11.260 N	98° 36' 5.467 W	
3,482.0	1.70	309.50	3,479.9	52.7	-90.9	1,689,748.20	1,282,962.44	37° 42' 11.269 N	98° 36' 5.480 W	
3,527.0	2.70	222.70	3,524.9	52.3	-92.1	1,689,747.85	1,282,961.21	37° 42' 11.266 N	98° 36' 5.496 W	
3,572.0	7.90	210.60	3,569.7	48.9	-94.4	1,689,744.40	1,282,958.92	37° 42' 11.232 N	98° 36' 5.524 W	
3,615.0	12.10	209.60	3,612.0	42.4	-98.1	1,689,737.94	1,282,955.18	37° 42' 11.168 N	98° 36' 5.570 W	
3,660.0	15.40	207.50	3,655.7	33.0	-103.2	1,689,728.53	1,282,950.09	37° 42' 11.075 N	98° 36' 5.634 W	
3,705.0	18.30	202.90	3,698.8	21.2	-108.7	1,689,716.72	1,282,944.58	37° 42' 10.958 N	98° 36' 5.702 W	
3,747.0	20.00	197.60	3,738.5	8.3	-113.5	1,689,703.80	1,282,939.85	37° 42' 10.830 N	98° 36' 5.761 W	
3,792.0	23.00	187.40	3,780.4	-7.8	-116.9	1,689,687.74	1,282,936.38	37° 42' 10.671 N	98° 36' 5.804 W	
3,838.0	27.20	179.50	3,822.0	-27.2	-118.0	1,689,668.30	1,282,935.32	37° 42' 10.479 N	98° 36' 5.817 W	
3,880.0	31.70	179.10	3,858.6	-47.9	-117.7	1,689,647.66	1,282,935.58	37° 42' 10.275 N	98° 36' 5.813 W	
3,923.0	35.20	180.80	3,894.5	-71.6	-117.7	1,689,623.96	1,282,935.58	37° 42' 10.041 N	98° 36' 5.813 W	
3,965.0	39.90	181.80	3,927.7	-97.2	-118.3	1,689,598.38	1,282,934.99	37° 42' 9.788 N	98° 36' 5.820 W	
4,008.0	44.90	182.60	3,959.5	-126.1	-119.4	1,689,569.41	1,282,933.86	37° 42' 9.501 N	98° 36' 5.833 W	
4,051.0	49.80	183.30	3,988.6	-157.7	-121.1	1,689,537.84	1,282,932.23	37° 42' 9.189 N	98° 36' 5.853 W	
4,094.0	54.30	184.60	4,015.0	-191.5	-123.4	1,689,504.02	1,282,929.88	37° 42' 8.855 N	98° 36' 5.882 W	
4,139.0	58.00	185.00	4,040.1	-228.7	-126.6	1,689,466.79	1,282,926.75	37° 42' 8.486 N	98° 36' 5.920 W	
4,184.0	58.80	185.50	4,063.7	-266.9	-130.1	1,689,428.62	1,282,923.25	37° 42' 8.109 N	98° 36' 5.964 W	
4,229.0	59.90	183.60	4,086.6	-305.5	-133.1	1,689,390.03	1,282,920.18	37° 42' 7.728 N	98° 36' 6.001 W	
4,271.0	59.50	184.50	4,107.8	-341.7	-135.7	1,689,353.86	1,282,917.62	37° 42' 7.370 N	98° 36' 6.033 W	
4,316.0	62.90	182.30	4,129.5	-381.0	-138.0	1,689,314.51	1,282,915.29	37° 42' 6.981 N	98° 36' 6.061 W	
4,359.0	67.60	180.60	4,147.5	-420.1	-139.0	1,689,275.48	1,282,914.32	37° 42' 6.595 N	98° 36' 6.073 W	
4,403.0	72.00	179.10	4,162.7	-461.3	-138.9	1,689,234.20	1,282,914.43	37° 42' 6.187 N	98° 36' 6.071 W	
4,445.0	75.40	178.70	4,174.5	-501.6	-138.1	1,689,193.90	1,282,915.21	37° 42' 5.788 N	98° 36' 6.060 W	
4,490.0	78.70	178.70	4,184.6	-545.5	-137.1	1,689,150.06	1,282,916.20	37° 42' 5.355 N	98° 36' 6.048 W	
4,504.0	80.60	178.70	4,187.1	-559.2	-136.8	1,689,136.30	1,282,916.51	37° 42' 5.219 N	98° 36' 6.043 W	
4,579.0	87.70	176.50	4,194.7	-633.7	-133.7	1,689,061.80	1,282,919.64	37° 42' 4.482 N	98° 36' 6.003 W	
4,624.0	89.10	177.70	4,196.0	-678.7	-131.4	1,689,016.88	1,282,921.92	37° 42' 4.038 N	98° 36' 5.975 W	
4,667.0	90.10	177.10	4,196.3	-721.6	-129.4	1,688,973.93	1,282,923.87	37° 42' 3.614 N	98° 36' 5.950 W	

Company:	Seneca Resources - MC	Local Co-ordinate Reference:	Well Greengroup 14A-1H - NEW SHL
Project:	Pratt County, Kansas	TVD Reference:	WELL @ 1876.0usft (HWD #8)
Site:	Greengroup	MD Reference:	WELL @ 1876.0usft (HWD #8)
Well:	Greengroup 14A-1H - NEW SHL	North Reference:	Grid
Wellbore:	Sidetrack #1	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack #1	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,711.0	90.50	177.40	4,196.0	-765.6	-127.3	1,688,929.98	1,282,925.98	37° 42' 3.179 N	98° 36' 5.923 W	
4,753.0	90.90	179.60	4,195.5	-807.5	-126.2	1,688,888.00	1,282,927.08	37° 42' 2.764 N	98° 36' 5.909 W	
4,841.0	90.80	180.40	4,194.2	-895.5	-126.2	1,688,800.01	1,282,927.08	37° 42' 1.894 N	98° 36' 5.907 W	
4,926.0	88.70	181.10	4,194.6	-980.5	-127.3	1,688,715.02	1,282,925.97	37° 42' 1.054 N	98° 36' 5.920 W	
5,014.0	90.80	181.90	4,195.0	-1,068.5	-129.6	1,688,627.06	1,282,923.67	37° 42' 0.184 N	98° 36' 5.948 W	
5,101.0	92.10	181.00	4,192.8	-1,155.4	-131.8	1,688,540.12	1,282,921.46	37° 41' 59.325 N	98° 36' 5.974 W	
5,188.0	90.80	180.80	4,190.6	-1,242.4	-133.2	1,688,453.16	1,282,920.10	37° 41' 58.465 N	98° 36' 5.990 W	
5,278.0	90.50	181.60	4,189.5	-1,332.3	-135.1	1,688,363.19	1,282,918.21	37° 41' 57.575 N	98° 36' 6.012 W	
5,366.0	87.10	180.20	4,191.4	-1,420.3	-136.5	1,688,275.23	1,282,916.83	37° 41' 56.706 N	98° 36' 6.028 W	
5,451.0	87.80	179.70	4,195.2	-1,505.2	-136.4	1,688,190.32	1,282,916.91	37° 41' 55.866 N	98° 36' 6.026 W	
5,539.0	89.20	179.10	4,197.5	-1,593.2	-135.5	1,688,102.35	1,282,917.83	37° 41' 54.996 N	98° 36' 6.013 W	
5,626.0	90.40	177.90	4,197.8	-1,680.1	-133.2	1,688,015.39	1,282,920.10	37° 41' 54.137 N	98° 36' 5.984 W	
5,714.0	90.90	178.40	4,196.8	-1,768.1	-130.4	1,687,927.44	1,282,922.94	37° 41' 53.267 N	98° 36' 5.947 W	
5,801.0	89.80	179.30	4,196.3	-1,855.1	-128.6	1,687,840.46	1,282,924.69	37° 41' 52.407 N	98° 36' 5.924 W	
TIE INTO OH @ 5801' MD / 4196.3' TVD										
5,889.0	90.70	179.40	4,195.9	-1,943.1	-127.6	1,687,752.47	1,282,925.69	37° 41' 51.537 N	98° 36' 5.910 W	
5,977.0	94.30	179.30	4,192.0	-2,031.0	-126.6	1,687,664.57	1,282,926.69	37° 41' 50.668 N	98° 36' 5.897 W	
6,068.0	92.60	179.90	4,186.6	-2,121.8	-126.0	1,687,573.74	1,282,927.32	37° 41' 49.770 N	98° 36' 5.888 W	
6,156.0	92.40	178.70	4,182.7	-2,209.7	-124.9	1,687,485.83	1,282,928.39	37° 41' 48.901 N	98° 36' 5.873 W	
6,243.0	89.10	182.10	4,181.6	-2,296.7	-125.5	1,687,398.87	1,282,927.79	37° 41' 48.041 N	98° 36' 5.880 W	
6,331.0	88.00	181.10	4,183.8	-2,384.6	-128.0	1,687,310.93	1,282,925.33	37° 41' 47.172 N	98° 36' 5.909 W	
6,416.0	88.40	180.20	4,186.5	-2,469.6	-128.9	1,687,225.98	1,282,924.37	37° 41' 46.332 N	98° 36' 5.920 W	
6,502.0	88.30	178.10	4,188.9	-2,555.5	-127.7	1,687,140.03	1,282,925.64	37° 41' 45.482 N	98° 36' 5.903 W	
6,589.0	88.60	177.40	4,191.3	-2,642.4	-124.3	1,687,053.13	1,282,929.06	37° 41' 44.623 N	98° 36' 5.859 W	
6,691.0	90.60	178.80	4,192.0	-2,744.3	-120.9	1,686,951.20	1,282,932.44	37° 41' 43.615 N	98° 36' 5.816 W	
6,734.0	89.70	182.00	4,191.9	-2,787.3	-121.2	1,686,908.20	1,282,932.14	37° 41' 43.190 N	98° 36' 5.819 W	
6,818.0	90.00	182.70	4,192.1	-2,871.3	-124.6	1,686,824.28	1,282,928.69	37° 41' 42.361 N	98° 36' 5.861 W	
6,902.0	88.70	182.50	4,193.1	-2,955.2	-128.4	1,686,740.37	1,282,924.88	37° 41' 41.531 N	98° 36' 5.907 W	
6,986.0	88.20	182.60	4,195.3	-3,039.0	-132.2	1,686,656.48	1,282,921.15	37° 41' 40.701 N	98° 36' 5.952 W	
7,074.0	89.30	182.10	4,197.3	-3,127.0	-135.8	1,686,568.58	1,282,917.54	37° 41' 39.832 N	98° 36' 5.996 W	
7,157.0	91.30	182.10	4,196.8	-3,209.9	-138.8	1,686,485.64	1,282,914.50	37° 41' 39.012 N	98° 36' 6.033 W	
7,243.0	89.50	183.40	4,196.2	-3,295.8	-142.9	1,686,399.75	1,282,910.37	37° 41' 38.163 N	98° 36' 6.083 W	
7,330.0	89.30	183.00	4,197.1	-3,382.6	-147.8	1,686,312.89	1,282,905.52	37° 41' 37.304 N	98° 36' 6.142 W	
7,414.0	89.10	181.10	4,198.3	-3,466.6	-150.8	1,686,228.95	1,282,902.51	37° 41' 36.474 N	98° 36' 6.178 W	
7,497.0	89.60	179.40	4,199.3	-3,549.6	-151.2	1,686,145.96	1,282,902.15	37° 41' 35.654 N	98° 36' 6.182 W	
7,584.0	90.80	179.20	4,199.0	-3,636.6	-150.1	1,686,058.97	1,282,903.21	37° 41' 34.794 N	98° 36' 6.167 W	
7,671.0	90.90	179.40	4,197.7	-3,723.5	-149.0	1,685,971.99	1,282,904.27	37° 41' 33.934 N	98° 36' 6.153 W	
7,756.0	91.60	179.10	4,195.8	-3,808.5	-147.9	1,685,887.02	1,282,905.39	37° 41' 33.094 N	98° 36' 6.138 W	
7,840.0	89.30	178.40	4,195.1	-3,892.5	-146.1	1,685,803.05	1,282,907.22	37° 41' 32.264 N	98° 36' 6.114 W	
7,928.0	89.10	179.90	4,196.4	-3,980.5	-144.8	1,685,715.07	1,282,908.52	37° 41' 31.394 N	98° 36' 6.096 W	
8,030.0	89.10	179.90	4,198.0	-4,082.5	-144.6	1,685,613.08	1,282,908.70	37° 41' 30.385 N	98° 36' 6.093 W	
TD @ 8030' MD / 4198' TVD										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,801.0	4,196.3	-1,855.1	-128.6	TIE INTO OH @ 5801' MD / 4196.3' TVD	
8,030.0	4,198.0	-4,082.5	-144.6	TD @ 8030' MD / 4198' TVD	

Checked By: _____ Approved By: _____ Date: _____

Well Completion Form
Casing Record Supplemental Data

Seneca Resources
Greengroup 14A-1H
15-151-22422
Sec. 14-27S-12W
Pratt County, Kansas

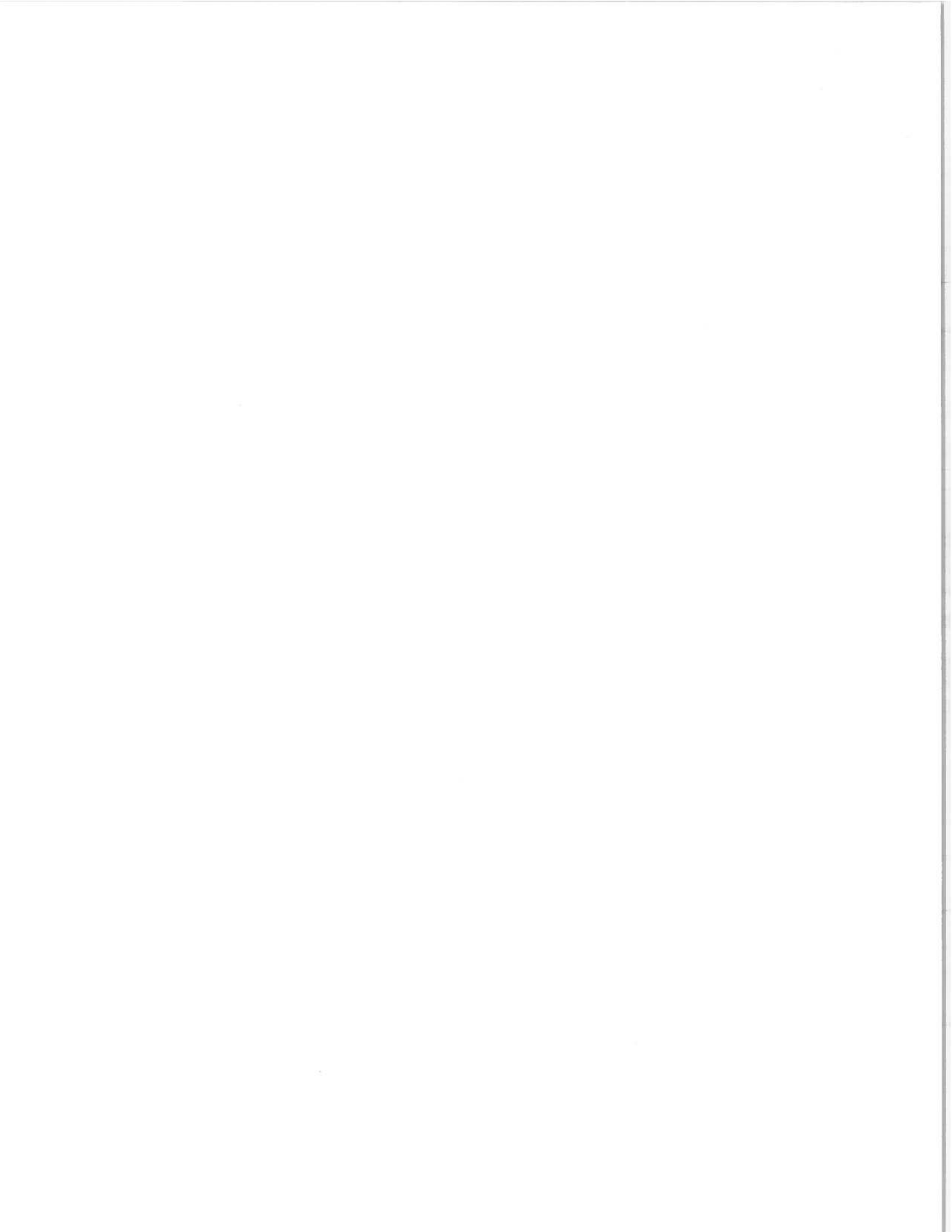
Purpose of String	Hole Size	Casing Size	Weight	Depth	Cement Type	Sacks Used	Type/Percent Additives
Surface	17-1/2"	13-3/8"	48 lb/ft	340'	65/35 Poz	195 sx	3% CaCl, 1/4 lb celloflake
					Common	150 sx	2% gel, 1/4 lb celloflake
Intermediate	12-1/4"	9-5/8"	36 lb/ft	1,916'	Common	340 sx	3% CaCl, 1/4 lb celloflake
					Common	300 sx	2% CaCl, 1/4 lb celloflake
Protective	8-3/4"	7"	26 lb/ft	4,523'	Class H	80 sx	0.8% FL, 0.5% FR, 0.25% defoam, 5% gypsum, 10% salt, 0.1% WCA, 5 lb gilsonite
Production Liner	6-1/8"	4-1/2"	13.5 lb/ft	4,269' - 8,010'	Premium	400 sx	0.25% defoam, 10% salt, 0.75% FR, 0.1% WCA

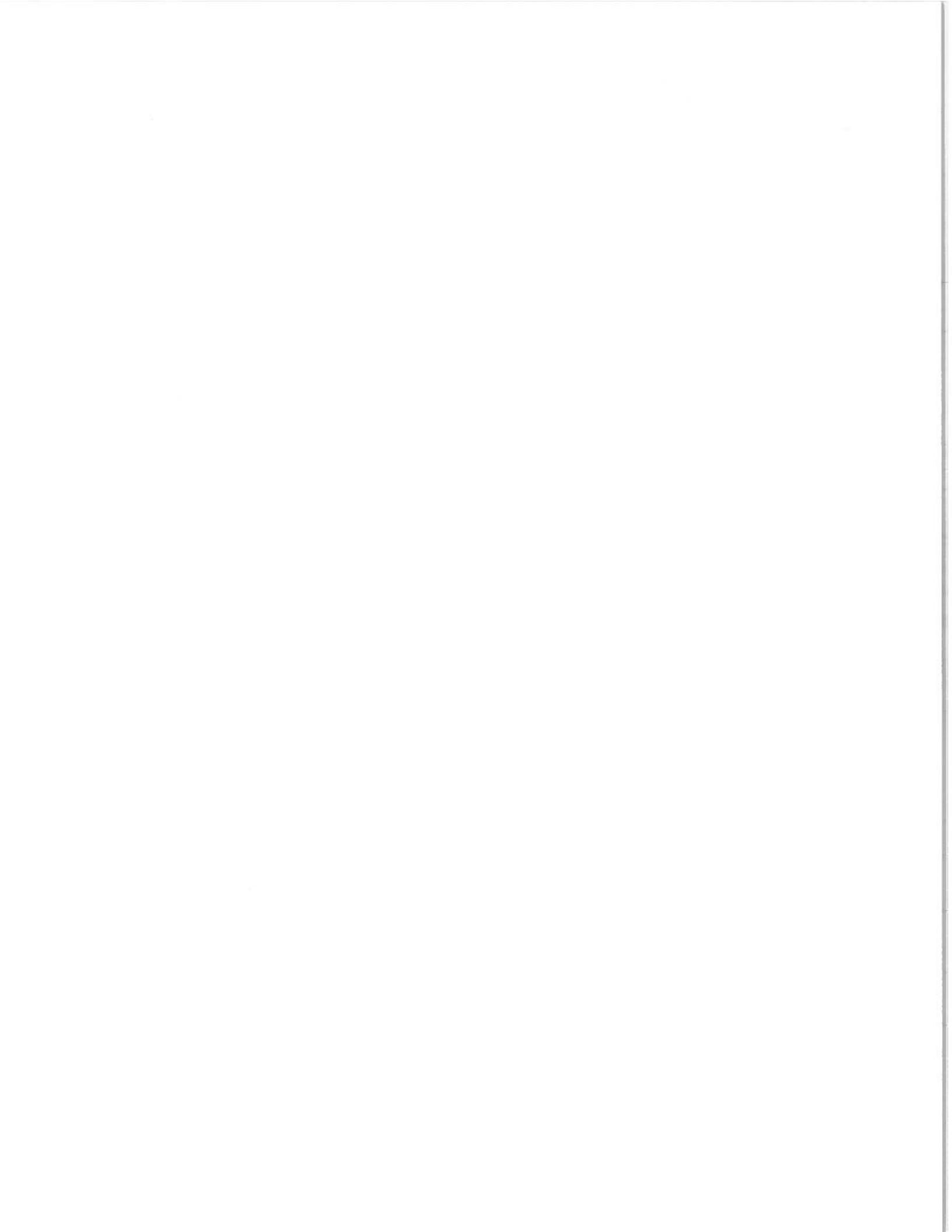
Customer SENECA - Res	Lease No.	Date 11-22-13
Lease # 71201000?	Well # 14-A-14	
Field Order # 9537	Station PO 114 KS	County PRATT
Type Job CNW 13 3/8 Conductor	Formation	Legal Description H-27-12

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
13 3/8								
Depth 341	Depth	From	To	Pre Pad	Max		5 Min.	
Volume 50	Volume	From	To	Pad	Min		10 Min.	
Max Press 500	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection Swage	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth 327	Packer Depth	From	To	Flush	Gas Volume		Total Load	

Customer Representative	Station Manager DAVE SCOTT	Treater Sub: J. Miller
Service Units 37900	27686	19905
Driver Names Sullivan	SCOTT	Kuranda

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1:00 Am.					ON loc Soling mostly
					Ran 13 3/8 csg.
1:15					CASING ON BOTTOM
1:40			20		Hook by csg. on. Pick up csg. 1/2 in. Tank
			57		St mix 195 sk A-SEAL Lito cut
			32		3% cc 1/4 CF mix 13.3 ppg. 1.64 FPK 8.24 p/4sk
					mix total 150 st con. cut 2% cc 1/4 CF
					mix 15.6 ppg. 7/16 1.70 5.22 p/4sk
2:30	290		50		Plug down
					circulate 30 min cut lit
					JOB complete
					THANK YOU





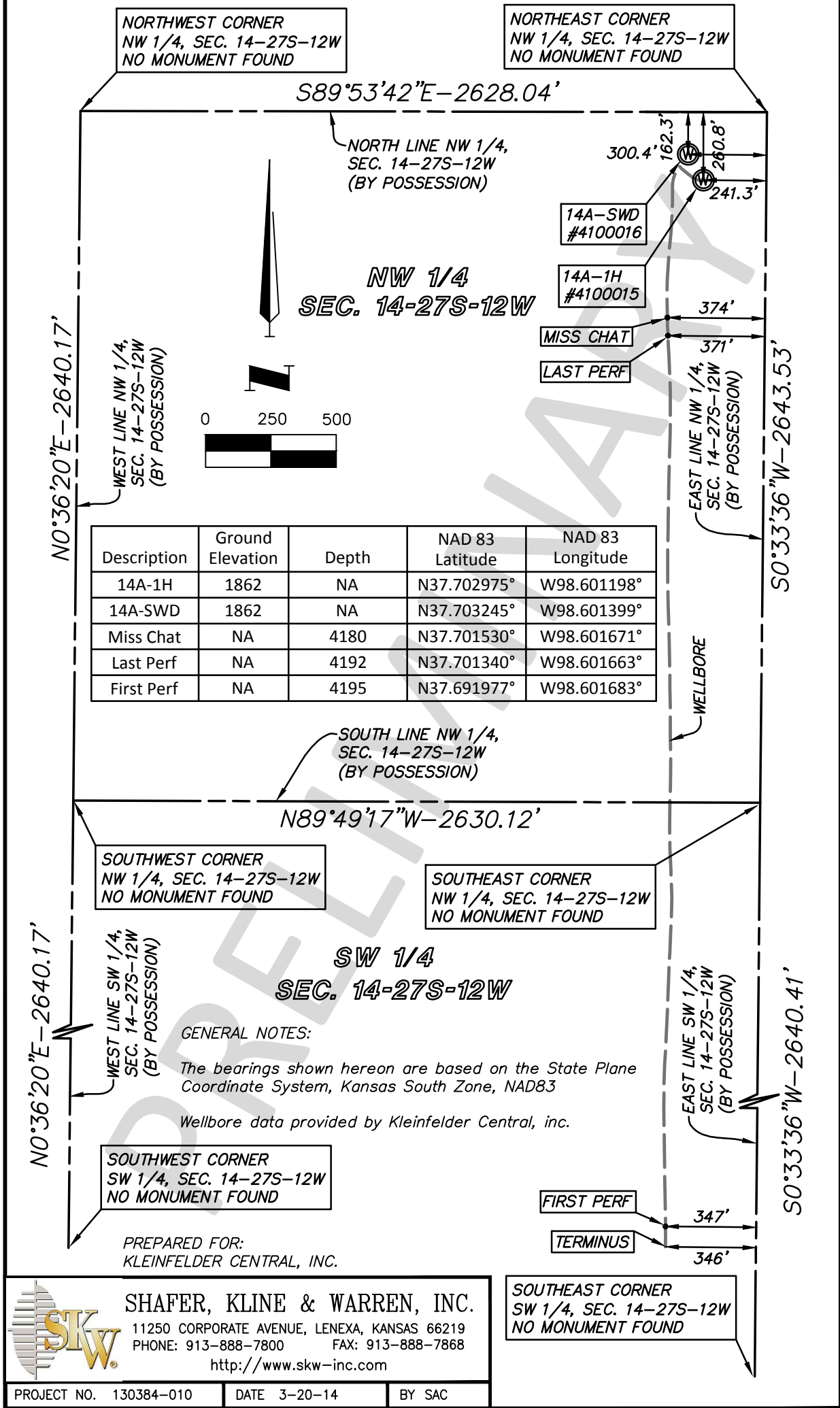
Customer <i>SENECA - RESOVS</i>	Lease No.	Date <i>12-22-13</i>
Lease <i>Green Group</i>	Well # <i>14-A-1H</i>	
Field Order # <i>7685</i>	Station <i>PRATT, KS</i>	Casing <i>4 1/2</i>
Type Job <i>CNW 4 1/2 LINNER</i>	Formation	Legal Description <i>14-27-12</i>
Depth	County <i>PRATT</i>	State <i>KS</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>4 1/2</i>								
Depth	Depth	From	To	Pre Pad	Max		5 Min.	
Volume <i>94</i>	Volume	From	To	Pad	Min		10 Min.	
Max Press	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load	

Customer Representative	Station Manager <i>DAVE SCOTT</i>	Treater <i>Robert J. ...</i>
Service Units <i>37900 78982 78987 19862 73768</i>		
Driver Names <i>Sullivan Molsan GRADYS</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>6:45</i>					<i>on loc Scott, ready</i>
<i>11:08</i>		<i>9500</i>			<i>Test Lines</i>
<i>11:10</i>		<i>300</i>	<i>12</i>	<i>3</i>	<i>OPEN VALVES AT MUD FLUSH</i>
			<i>5</i>		<i>AT SPACER</i>
				<i>5</i>	<i>AT MIX CNT 400 ST PREPARED AT 15.5 PPM</i>
			<i>101</i>		<i>cnt mixed shut down with lining prod</i>
					<i>RELEASE DART</i>
<i>11:50</i>		<i>300</i>		<i>5</i>	<i>14 Drip w 10 BBL Sujan H™ 2% KCl</i>
		<i>550</i>	<i>26</i>	<i>4</i>	<i>Slow Rate</i>
			<i>32</i>	<i>2</i>	<i>Slow Rate</i>
		<i>940</i>	<i>40</i>		<i>LATCH DART & Plug</i>
				<i>5</i>	<i>Increase Rate</i>
		<i>1200</i>	<i>85</i>	<i>3</i>	<i>Slow Rate</i>
<i>12:10</i>		<i>1543</i>	<i>93</i>		<i>Plug down Release Ps. Hand Hold.</i>
<i>12:20</i>				<i>2</i>	<i>St Pump in BALL DOWN</i>
		<i>5214</i>	<i>C</i>		<i>Bust Dis</i>
		<i>2501</i>		<i>2</i>	<i>SET LINNER</i>
					<i>Release Ps.</i>
					<i>Pull UP OUT LINNER</i>
<i>12:35</i>		<i>1200</i>		<i>5</i>	<i>circ Hole CLEAN</i>
<i>1:00</i>			<i>110</i>		<i>Shut down circ 12 BBL cnt BACK PIT</i>

**WELL COMPLETION EXHIBIT
GREENGROUP
SEC 14, T 27 S, R 12 W
PRATT COUNTY, KANSAS**



SHAFFER, KLINE & WARREN, INC.
11250 CORPORATE AVENUE, LENEXA, KANSAS 66219
PHONE: 913-888-7800 FAX: 913-888-7868
<http://www.skw-inc.com>

SOUTHEAST CORNER SW 1/4, SEC. 14-27S-12W NO MONUMENT FOUND