

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs 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
--	---

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)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom

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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Matthews Energy, LLC
Well Name	WELLS & SON 13-1
Doc ID	1370687

All Electric Logs Run

Bond
Compensated Spectral
Density/Neutron
Microlog
Compensated Resistivity
Sonic
AVH

Form	ACO1 - Well Completion
Operator	Matthews Energy, LLC
Well Name	WELLS & SON 13-1
Doc ID	1370687

Tops

Name	Top	Datum
Indian Cave	312	931
Tarkio	356	887
Emporia	413	830
Howard Ls	598	645
Severly	633	610
Topeka Ls	668	575
Deer Creek	750	493
Oread	954	289
Heebner Sh	986	257
Douglas Sh	1036	207
Iatan Ls	1143	100
Brown Lime	1246	-3
Lansing	1256	-13
Lansing 'B'	1278	-35
Base/KS City	1584	-341
Marmaton	1642	-399
Pawnee	1716	-473
Base/Ft Scott	1734	-491
Penn Conglomerate	1776	-533
Arbuckle	1788	-545
Granite	1862	-619

Form ACO1 - Well Completion
Operator Matthews Energy, LLC
Well Name Wells & Sons 13-1
Doc ID 132097

Tops

Name	Top	Datum - KB
Indian Cave	312	931
Tarkio	356	887
Emporia	413	830
Howard Ls	598	645
Severly	633	610
Topeka LS	668	575
Deer Creek	750	493
Oread	954	289
Heebner Shale	986	257
Douglas Shale	1036	207
Iatan Ls	1143	100
Brown Lime	1246	-3
Lansing	1256	-13
Lansing 'B'	1278	-35
Base/KS City	1584	-341
Marmaton	1642	-399
Pawnee	1716	-473
Base/Ft. Scott	1734	-491
Penn Conglomerate	1776	-533
Arbuckle	1788	-545
Granite	1862	-619
Loggers TD	1870	-627



PRESSURE PUMPING

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

API#

15-017-20926-00-00

800 / 8102

TICKET NUMBER 53366
LOCATION El Donado, KS
FOREMAN Fuzzy

FIELD TICKET & TREATMENT REPORT

CEMENT

KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-9-17	5407	Wells + SON 13-1	13	19S	6E	Chase
CUSTOMER Matthews Energy LLC			TRUCK#	DRIVER	TRUCK#	DRIVER
MAILING ADDRESS P.O. Box 2128			446	Jeremy		
CITY Trause City			775	Tracy		
STATE Mich			725	Fuzzy		
ZIP CODE 64685						

JOB TYPE SurfACE HOLE SIZE 12 1/4 HOLE DEPTH 237' CASING SIZE & WEIGHT 8518-24"
 CASING DEPTH 236 7/8 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14.0 SLURRY VOL 34.9 BBLs WATER gal/sk 7.9 CEMENT LEFT in CASING 20'
 DISPLACEMENT 13.75 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting on Summit Dalg. Rig up and establish circulation. Pump 10 BBL fresh water, 125 SFS CLASS 'A' 390cc 290gal w/ 1/2" persk Polyflake. Displace 13 3/4 BBL and shot in.

Cement did circulate approx 5 BBL to Pit

Thanks Fuzzy + crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
660450	1	PUMP CHARGE	1500 ⁰⁰	1500 ⁰⁰
660002	50 miles	MILEAGE	7 ¹³	357 ⁵⁰
660711	5.9 Ton	Ton mileage Delivery (min)	660 ⁰⁰	660 ⁰⁰
665871	125 SFS	Surface Blend II	23 ⁰⁰	2875 ⁰⁰
666075	50 #	Polyflake	2 ⁰⁰	100 ⁰⁰
		subtotal		5492 ⁵⁰
		less discount	5290	2856 ⁰⁰
		subtotal		2636 ⁵⁰
		SALES TAX		101.10
		ESTIMATED TOTAL		2743.50

13005

Revin 9737

AUTHORIZATION _____

TITLE _____

DATE 8-9-17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



REMIT TO

QES Pressure Pumping LLC
 Dept:970
 P.O.Box 4346
 Houston, TX 77210-4346

MAIN OFFICE

P.O.Box884
 Chanute,KS 66720
 620/431-9210,1-800/467-8676
 Fax 620/431-0012

Invoice

Invoice#

811029

Invoice Date: 08/24/17

Terms: Net 30

Page 1

Matthews Energy, LLC

P.O. Box 2128

Wells and Son 13-1

Traverse City MI 49685

USA

231-313-7411

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0451	Cement Pump Charge 1501' - 3000'	1.000	1,900.0000	48.000	988.00
CE0002	Equipment Mileage Charge - Heavy Equipment	50.000	7.1500	48.000	185.90
CE0711	Minimum Cement Delivery Charge	1.000	660.0000	48.000	343.20
CP8254	5 1/2" Latch Down Plug & Assembly	1.000	400.0000	48.000	208.00
CP8433	5 1/2" Insert Float, AFU, Flapper Style	1.000	250.0000	48.000	130.00
CP8651	5 1/2" Cement Basket Reciprocating	3.000	360.0000	48.000	561.60
CP8554	5 1/2" Centralizer	6.000	81.0000	48.000	252.72
CC5860	ThixdoBlend I	225.000	25.0000	48.000	2,925.00
CC5970	Sodium Metasilicate	200.000	2.5500	48.000	265.20
CC6077	Kolseal	1,150.000	0.5000	48.000	299.00
CC6079	PhenoSeal Formica Flakes	225.000	1.3500	48.000	157.95
CC5325	Calcium Chloride	100.000	0.0000	0.000	0.00
WS2400	Water Transport	4.000	120.0000	48.000	249.60
CS3800	Miscellaneous Services	1.000	280.0000	48.000	145.60

Subtotal 12,907.25

Discounted Amount 6,195.48

SubTotal After Discount 6,711.77

Amount Due 13,433.28 If paid after 09/23/17

Tax: 273.53

Total: 6,985.30



PRESSURE PUMPING LLC

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-9676

8008
8700

TICKET NUMBER 54105
LOCATION 180 E Dorado
FOREMAN Jacob Storm

FIELD TICKET & TREATMENT REPORT
CEMENT

Invoice # 811029

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-15-17	5407	Wells and son 131	13	19	6	Chase
CUSTOMER			TRUCK #	DRIVER	TRUCK #	DRIVER
Matthews Energy			760	Chris	537	Jacob
MAILING ADDRESS			715	Jud		
Po Box 2128			4537	Mark		
CITY	STATE	ZIP CODE	702	Brad		
Traverse city	Mi	49685				

JOB TYPE Longstring HOLE SIZE 2 7/8 HOLE DEPTH 1870 CASING SIZE & WEIGHT 5 1/2 1710
 CASING DEPTH 1869 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 1416 SLURRY VOL 67.3 bbl WATER gal/sk 7.46 CEMENT LEFT in CASING 8ft shoe
 DISPLACEMENT 43.5 DISPLACEMENT PSI 750 MIX PSI 600 RATE 5bpm

REMARKS: Safety meeting. Run casing centralizer on joints 1, 5, 10, 20, 30, 40. Baskets on joints 7, 25, 35. Land pipe pull up 1ft. Circulate with mud for 30 min. pump 5bbl water 5bbl 2 1/2 cc water Swabber 12 bbl Sodium metasilicate. 5bbl water, mix 2.25. Skes thixo blend. I flush pump and lines. Release plug, displaced with 43.5bbl land plug at 1250 psi, check float float held. Calculated 5bbl cement to surface.

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0451	1	PUMP CHARGE	1900.00	1900.00
CE0002	50	MILEAGE	7.15	357.50
CE0711	1	Min bulk delivery	600.00	600.00
CP2254	1	5 1/2 hatch down plug	400.00	400.00
CP2433	1	5 1/2 AFu shoe	250.00	250.00
CP8651	3	5 1/2 cement Baskets	340.00	1020.00
CP8554	6	5 1/2 centralizer	81.00	486.00
CS200	225	thixo blend A	21.00	4725.00
CS970	200	Sodium metasilicate	2.55	510.00
CC0771	1150	Kal-Seal	.50	575.00
CC0791	225	Pheno-Seal	1.35	303.75
CS325	100	calcium chloride	1.25	N/C
WS2400	4	transport	120.00	480.00
CS3800	1	8ft shoe joint 5 1/2	280.00	280.00
			Subtotal	12907.25
			SALES TAX	6711.77
			ESTIMATED TOTAL	19619.02
			DATE	8.15.17

Ravin 3737

AUTHORIZATION

TITLE

ESTIMATED

TOTAL

DATE

19619.02
8.15.17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

John Miller



Chase Ks
2-Aug-17

PRICE ESTIMATE

Code No.		U.O.M.		Unit Cost	Total
CC5860	225.0	sk	ThixoBlend I	25.00	\$5,625.00
CC5970	100.0	lb	Sodium Metasilicate	2.55	\$255.00
CC6077	1150.0	lb	Kolseal	0.50	\$575.00
CC6079	225.0	lb	PhenoSeal, Formica flakes	1.35	\$303.75

Cement, Blends & Chemical Book Price Total: \$6,758.75

Cement, Blends & Chemical Discounted Total: \$3,514.55

Equipment Charges					
CE0451	1.0	4 hrs	Pump Charge; 1501'-3000'	1900.00	\$1,900.00
CE0002	50.0	mile	Pump Truck/Heavy Equipment Mileage Charge	7.15	\$357.50
CE0711	1.0	ea	Minimum Cement Delivery Charge	660.00	\$660.00

Equipment Book Total: \$2,917.50

Equipment Discounted Total: \$1,517.10

Plugs & Float Equipment					
CP8254	1.0	ea	5 1/2" Latch Down Plug & Assembly	400.00	\$400.00
CP8433	1.0	ea	5 1/2" Insert Float, AFU, Flapper Style	250.00	\$250.00
CP8651	3.0	ea	5 1/2" Cement Basket, Reciprocating	360.00	\$1,080.00
CP8554	6.0	ea	5 1/2" Centralizer	81.00	\$486.00

Float Equipment Book Total: \$2,216.00

Float Equipment Discounted Price: \$1,152.32

Misc. Charges					
WS2400	4.0	hr	Water Transport	120.00	\$480.00

Misc. Equipment Book Total: \$480.00

Misc. Equipment Discounted Total: \$249.60

CUSTOMERS (30 Day Net Pay) DISCOUNTED TOTAL: \$6,433.57

DISCLAIMER NOTICE

This technical data is presented in good faith and QES Pressure Pumping LLC assumes no liability for recommendations or advice made concerning results to be obtained from the use of any products or service. The prices quoted are only estimates and may vary depending on equipment, materials used, hours and the work actually performed. Pricing does not include federal, state & local taxes that may apply. This quotation will remain in effect for 45 days from the date issued unless otherwise stated.

Price



REMIT TO
 QES Pressure Pumping LLC
 Dept:970
 P.O.Box 4346
 Houston,TX 77210-4346

MAIN OFFICE

P.O.Box884
 Chanute,KS 66720
 620/431-9210,1-800/467-8676
 Fax 620/431-0012

Invoice

Invoice# 810997
CM #500355

Invoice Date: 08/18/17

Terms: Net 30

Page 1

Matthews Energy, LLC
 P.O. Box 2128
 Traverse City MI 49685
 USA
 231-313-7411

Wells and Son 13-1

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0451	Cement Pump Charge 1501' - 3000'	1.000	1,900.0000	0.000	1,900.00
CE0002	Equipment Mileage Charge - Heavy Equipment	50.000	7.1500	0.000	357.50
CE0711	Minimum Cement Delivery Charge	1.000	660.0000	0.000	660.00
CP8254	5 1/2" Latch Down Plug & Assembly	1.000	400.0000	0.000	400.00
CP8433	5 1/2" Insert Float, AFU, Flapper Style	1.000	250.0000	0.000	250.00
CP8651	5 1/2" Cement Basket Reciprocating	3.000	360.0000	0.000	1,080.00
CP8554	5 1/2" Centralizer	6.000	81.0000	0.000	486.00
CC5860	ThixdoBlend I	225.000	25.0000	0.000	5,625.00
CC5970	Sodium Metasilicate	200.000	2.5500	0.000	510.00
CC6077	Kolseal	1,150.000	0.5000	0.000	575.00
CC6079	PhenoSeal Formica Flakes	225.000	1.3500	0.000	303.75
CC5325	Calcium Chloride	100.000	0.0000	0.000	0.00
WS2400	Water Transport	4.000	120.0000	0.000	480.00
CS3800	Miscellaneous Services	1.000	280.0000	0.000	280.00

Subtotal 12,907.25

Discounted Amount 0.00

SubTotal After Discount 12,907.25

Amount Due 13,433.28 If paid after 09/17/17

Tax: 526.03

Total: 13,433.28

QES Pressure Pumping LLC1322 South Grant Avenue / PO Box
884Chanute KS 66720
USA[QES Pressure Pumping LLC](#)**Matthews Energy, LLC**P.O. Box 2128
Traverse City MI 49685
USA**Original****CREDIT MEMO**Document Number: **500355** Document Date: **08/24/17** Page: **1/3**Customer No.: **5407** Federal Tax ID - Business Partner

Your Reference

Wells and Son 13-1

Your Contact

-No Sales Employee-

Delivery Address

Matthews Energy, LLC

410 S. Union Street

Traverse City MI 49684
USA

Currency: \$

Description	Quantity	UoM	Price	Tax %	Total
001 Cement Pump Charge 1501' - 3000' Item Code: CE0451	1	4 Hours	1,900.0000	0.000	1,900.00
	0				
002 Equipment Mileage Charge - Heavy Equipment Item Code: CE0002	50	Mile	7.1500	0.000	357.50
	0				
003 Minimum Cement Delivery Charge Item Code: CE0711	1	EA	660.0000	0.000	660.00
	0				
004 5 1/2" Latch Down Plug & Assembly Item Code: CP8254	1	EA	400.0000	0.000	400.00
	0				
005 5 1/2" Insert Float, AFU, Flapper Style Item Code: CP8433	1	EA	250.0000	0.000	250.00
	0				
006 5 1/2" Cement Basket Reciprocating Item Code: CP8651	3	EA	360.0000	0.000	1,080.00
	0				

Carry Over: 4,647.50

CEO: Phone: 620-431-9210
 Shareholder: Fax: 620-431-0012
 Tax Official: E-Mail:
 Headquarters: Tax No.:
 Website: www.cows.bz Tax ID No.: 20-8026586

Bank Name: Amegy Bank - Operating
 Bank Account: 3766527
 Bank Code: AMOPER
 Swift/BIC Code:
 IBAN:

QES Pressure Pumping LLC

1322 South Grant Avenue / PO Box
884

Chanute KS 66720

Original

Document Number

500355

Document Date

08/24/17

Page

2/3

CREDIT MEMO

Currency: \$

Carry Over: **4,647.50**

Description	Quantity	UoM	Price	Tax %	Total
007 5 1/2" Centralizer Item Code: CP8554	6	EA	81.0000	0.000	486.00
	0				
008 ThixdoBlend I Item Code: CC5860	225	SK	25.0000	7.500	5,625.00
	0				
009 Sodium Metasilicate Item Code: CC5970	200	LB	2.5500	7.500	510.00
	0				
010 Kolseal Item Code: CC6077	1,150	LB	0.5000	7.500	575.00
	0				
011 PhenoSeal Formica Flakes Item Code: CC6079	225	LB	1.3500	7.500	303.75
	0				
012 Calcium Chloride Item Code: CC5325	100	LB	0.0000	7.500	0.00
	0				
013 Water Transport Item Code: WS2400	4	Hour	120.0000	0.000	480.00
	0				
014 Miscellaneous Services Item Code: CS3800	1	Day	280.0000	0.000	280.00
	0				

Tax Details

Tax Code	Tax %	Base Amount	Tax
CHS	1.000	7,013.75	70.14
KS	6.500	7,013.75	455.89
NOTAX	0.000	5,893.50	0.00

Invoice Subtotal: **\$ 12,907.25**

Total Before Tax: **\$ 12,907.25**

Total Tax Amount: **\$ 526.03**

Total Amount: \$ 13,433.28

CEO:
Shareholder:
Tax Official
Headquarters:
Website: www.cows.bz

Phone: 620-431-9210
Fax: 620-431-0012
E-Mail:
Tax No.:
Tax ID No.: 20-8026586

Bank Name: Amegy Bank - Operating
Bank Account: 3766527
Bank Code: AMQPER
Swift/BIC Code:
IBAN:

QES Pressure Pumping LLC

1322 South Grant Avenue / PO Box
884

Chanute KS 66720

Original

CREDIT MEMO

Document Number

Document Date

Page

500355

08/24/17

3/3

Currency: \$

Additional Expenses

Shipping Type:

Based on Field Ticket 8705 Based On Deliveries 708711. Rescanned FT Attached showing tax & total. Based On A/R Invoices 810997. Credit Memo as original invoice did not included discount to coordinate with bid.

CEO:
Shareholder:
Tax Official
Headquarters:
Website: www.cows.bz

Phone: 620-431-9210
Fax: 620-431-0012
E-Mail:
Tax No.:
Tax ID No.: 20-8026586

Bank Name: Amegy Bank - Operating
Bank Account: 3766527
Bank Code: AMQPER
Swift/BIC Code:
IBAN:

Covey

The Well Watchers

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

Well Name: WELLS & SON #13 - 1
Location: Section 13 - Township 19 South - Range 6 East
Licence Number: 15-017-20926-00-00 Region: Chase County, KS.
Spud Date: 9 August 2017 Drilling Completed: 14 August 2017
Surface Coordinates: 1,956' FSL & 1,866' FEL
(Approximate 24' S & 114' E of C NW SE)

Bottom Hole
Coordinates:
Ground Elevation (ft): 1,233' K.B. Elevation (ft): 1,243'
Logged Interval (ft): 237' To: 1,870' Total Depth (ft): 1,870'
Formation: Admire -----> Arbuckle
Type of Drilling Fluid: Chemical Low Solids Non-dispersed (Vertical)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: MATTHEWS ENERGY, LLC.
Address: P. O. Box 2128 POC:
Traverse City, Michigan 49685 John Miller
(231) 313-7411

GEOLOGIST

Name: Ted Johcems Curtis E. Covey
Company: TPJ Services COVEY - The Well Watchers
Address: 2106 North Mars 6548 Bedford Circle Wichita, Kansas
67212 Derby, Kansas 67037
Cell: (316) 686-1366 Cell: (316) 217-4679

KB: 1,243'

FORMATION TOPS

GL: 1,233'

Formation	Rotary Sample Depth (Datum)	E-log Depth (Datum)
Indian Cave	315' (+928')	312' (-931')
Tarkio	358' (+885')	356' (+887')
Emporia	409' (+834')	413' (+830')
Howard Ls	607' (+636')	598' (+645')
Severly	628' (+615')	633' (+610')
Topeka Ls	670' (+573')	668' (+575')
Deer Creek	740' (+503')	750' (+493')
Oread	955' (+288')	954' (+289')
Heebner Shale	987' (+256')	986' (+257')
Douglas Shale	1,037' (+206')	1,036' (+207')
Iatan Ls	1,142' (+101')	1,143' (+100)
Brown Lime	1,244' (-1')	1,246' (-3)
Lansing	1,252' (-9')	1,256' (-13')
Lansing 'B'	1,278' (-35')	1,278' (-35')
B / KC	1,584' (-341')	1,584' (-341')
Marmaton	1,644' (-401')	1,642' (-399')
\Pawnee	1,715' (-472')	1,716' (-473')
B / Ft. Scott	1,734' (-491')	1,734' (-491')
Penn Conglomerate	1,766' (-533')	1,776' (-533')
Arbuckle	1,800' (-557')	1,788' (-545')
Granite	1,860' (-617')	1,862' (-619')

RTD: 1,870' LTD: 1,870' ATD: 1,870'

Float:
E-Log is 1' high to 2' low to rotary sample depth.E-Loggers:
Halliburton Energy Services
El Reno, Oklahoma

2017

DAILY DRILLING - AUGUST

2017

12-1/4" Hole (Surface)	7-7/8" Hole (Vertical)	7-7/8" Hole (Vertical)
9 Aug --- Spud @ 11:35am.. Drilled to 237'. Ran 8-5/8" casing. Set @ 232'. 125 sx Class A (2% Gel, 3% CC & 1/4# PloyFlake). Displace 1.375 Bble Cement. [Elite Cementers]. Plug Down @ 8:50pm. WOC.	10 Aug --- Drilled Cement. Under surface casing @ 8:10am. 11 --- 7am @ 820'. Drilled to 1,045'. S/T: 15 joints. Work on Pump (replace valve). Resumed Drilling @ 12 --- 7am @ 1,146'. Drilled to 1,359'. S/T: 10 joints. Work on Pump (R/R valve). Resumed Drilling @ 11:35pm.	13 Aug --- 7sm @ 1,418. Start & 14 --- Finish Bit Trip @ 1,705'. Strap. Resumed Drilling @ 3am. 7am @ 1,800' RTD (1,870') @ 12:29pm. E-Log (Halliburton)

HOLE DEVIATION (237' - 1,870' MD)

12-1/4" Surface Hole								
DEPTH / TVD	---	INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
237' /	---	0.25						
7-7/8" Vertical Hole								
511' /	---	0.75						
1,045' /	---	1.00						
1,515' /	---	1.00						
1,870' /	---	1.00 (RTD)						
					BIT TRIP @ 1,705/18'		Board: 1,705.18'	
							Strap: 1,705.77'	
							Diff: 0.18'	

Inclination Surveys provided by Summit Drilling - Emporia, Kansas

BIT RECORD

DATE	SIZE	TYPE	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	ROP (ft/hr)
SURFACE ---							
9 Aug 2017	12-1/4"	Varel	2 x 14's --- 4 x 16's	0' / 237'	237'	4.00	59.25
VERTICAL ---							
10 Aug 2017	7-7/8"	GT M25YG	16 - 16 - 16	237' / 1,705'	1,468'	67.50	21.75
14 Aug 2017	7-7/8"	GT 27YG	16 - 16 - 16	1,705' / 1,870'	165'	6.25	26.40

CONTRACTOR

Summit Drilling Co. --- Rig # 1

P. O. Box 2004
Emporia, Kansas 66801
Office: (620) 343-3278

Pump: EMSCO D-300
6.5" x 14" @ 44 SPM.
400 PSI @ Standpipe.

Drill Collars: 6" x 2.75" --- 316'. (75#/ft)
Dry Collar Weight: 23,700#
(@ 9.2 ppg / Buoyancy Factor 0.86)
Bouyancy Collar Weight: 20,382#
Design Factor: 15%, therefore:
available WOB is 17,325#

10 - 14M on Tri-Cone Bit @ 75 RPM
(237' - 983').

Drill Pipe: 4-1/2"XH. (16#/ft - used)

Check Weight Indicator @ 983.

WI weighing 40% light.
WOB of 14M on WI = 19,600# Actual WOB.
Adjusted WOB @ 983'.
WOB 12,375# on WI = 17,325 Actual WOB.
Calculated WOB for Collars is 17,325#.

13 - 14M on Tri-Cone Bit @ 60 - 65 RPM.
(983' - RTD).

ROCK TYPES

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

LITHOLOGY

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Granite was
- Congl
- Dol lmst
- Silty dol

- Calc dol
- Dol 2
- Dol
- Gyp
- Igne
- Lmst 2
- Lmst
- Meta
- Mrlst
- Salt
- Shale 3
- Shale 3
- Shale
- Shcol
- Shgy
- Sltst
- Ss
- Till
- Ss 2

MINERAL

- Mica
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl

- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Copper
- Ooliticastic
- Ooloid
- Oolite
- Sucrosic
- Dark specks

STRINGER

- Calc dol
- Silty dol
- Anhy

- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Calc dol
- Sltstrg
- Ssstrg
- Chalk
- New symbol
- SHOW
- Oil
- Spotted
- Ques
- Dead
- Gas
- Oil/gas
- Bed contact

ACCESSORIES

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Spore
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro

- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

MINERAL

- Mica
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag

- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos

- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Copper
- Ooliticastic
- Ooloid
- Oolite
- Sucrosic
- Dark specks

- #### STRINGER
- Calc dol

- Silty dol
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Calc dol
- Sltstrg
- Ssstrg
- Chalk
- New symbol

OTHER SYMBOLS

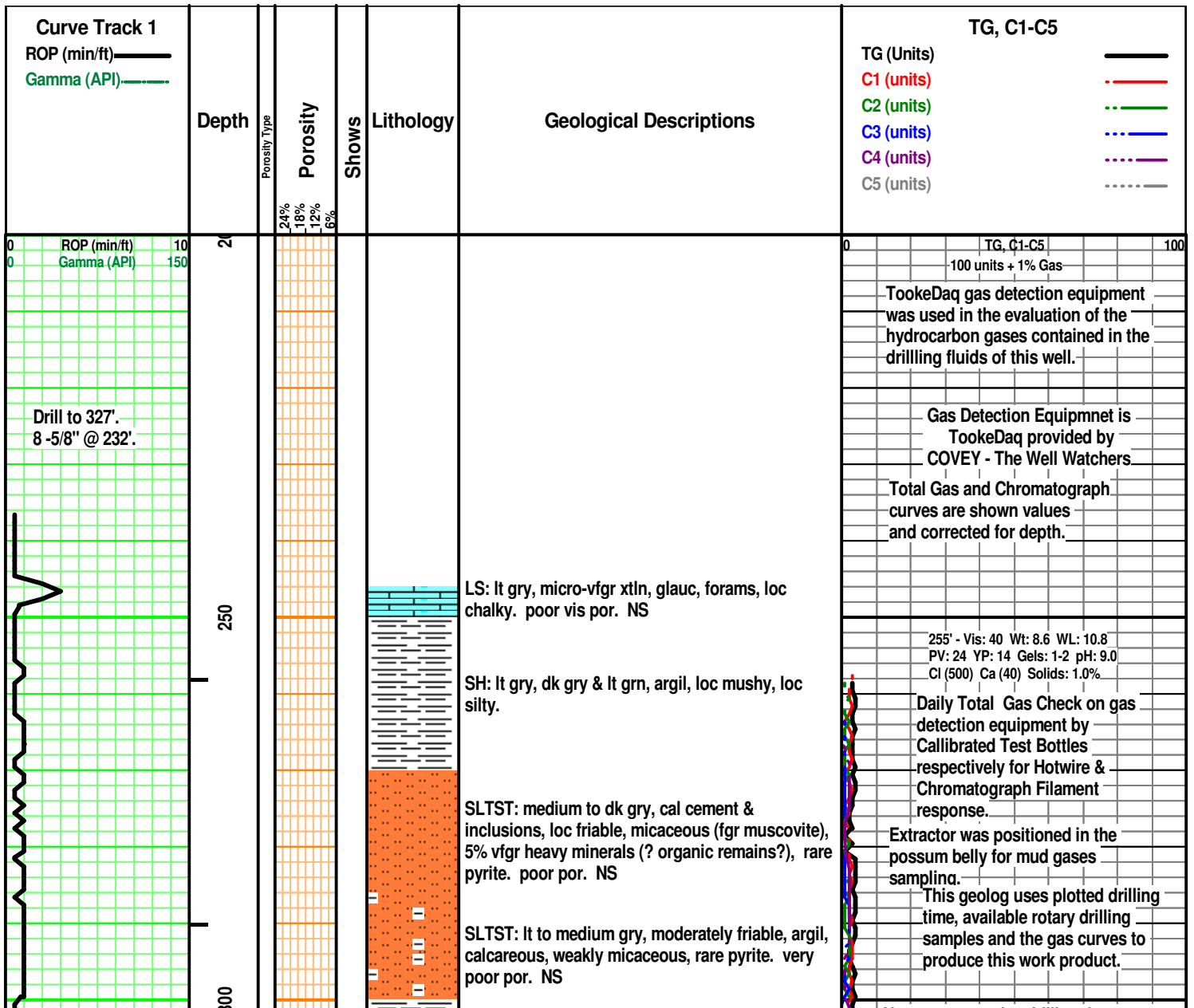
ACTIVITY

- Lost circulation
- Circulate for same

- Circulate for same
- Rtd
- Trip

- Connection
- Rft

- Sidewall



Non-representative drilling time, rotary rock samples and/or drilling practices does effect the accuracy of any geolog.

SH: gry, argil, sl silty, micaceous.

-- INDIAN CAVE

315' (+ 928')

Rotary Samples were collected from the rig's sample box which is located in the possum belly.

SS: pale gry, vfgr granular, some fgr grains of ls, cal cement, micaceous, loc friable, dk brn to blk gilsonite (?plant fossils?) along bedding. poor por. no odor, NS

SH: gry to dark gry, very argil (often mushy), sl silty, abt vfgr mica.

SH: dk gry, very argil, silty, micac.

-- TARKIO

358' (+ 885')

LS: off wht, mgr xtln, abt forams in microxtln cal matrix. v poor vis por. NS

SLTST: gry, argil, micac, minor vfgr blk grains.

LS: off wht, microxtln, abt relict forams, sl chalky. no vis por. NS

Vis: 42
Wt: 8.9

SH: gry to dk gry, v argil (loc mushy), loc stringers of SLTST (gry, v micaceous)

100 units + 1% Gas

TG, C1-C5

100

SH: dk gry, very argil (loc mushy), loc silty.

-- EMPORIA

409' (+824')

LS: cream to off wht, microxtln, wkly calcite flooded, minor relict forams. no vis por. no odor, NS
stringers of SH: dk gry, v argil, silty.

LS: off wht, microxtln, fossil (forams & ?bryozoans?), rare py. poor por. no odor, NS

SH: gry to grn, very argil, minor cal inclusions.

LS: gry, micro-vfgr xtln, fusulinids. no vis por. NS

SH: dk gry, very argil (loc mushy).

LS: off wht to pale gry, crypt-microxtln, commonly chalky, relict forams. v poor vis por. NS

LS: wht to pale grn, cryptxtln, completely altered to chalk. v poor vis por. NS

TookeDaq lockout

SH: grn & gry, argil.

LS: maroon, microxtln, abundant py and earthy hematite, scant fusulinids, stringers of wht SLTST. no vis por. NS

SH: grn, argil, mushy, calc.

LS: off wht & lt brn, crypt-microxtln, v chalky, minor orange hematite. v poor vis por. NS

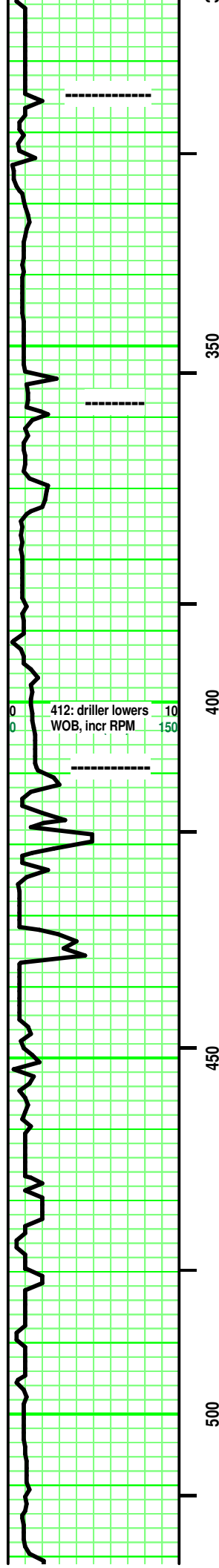
SH: grn, argil, mushy, calc.

SH: gry & grn, argil, commonly mushy, silty.

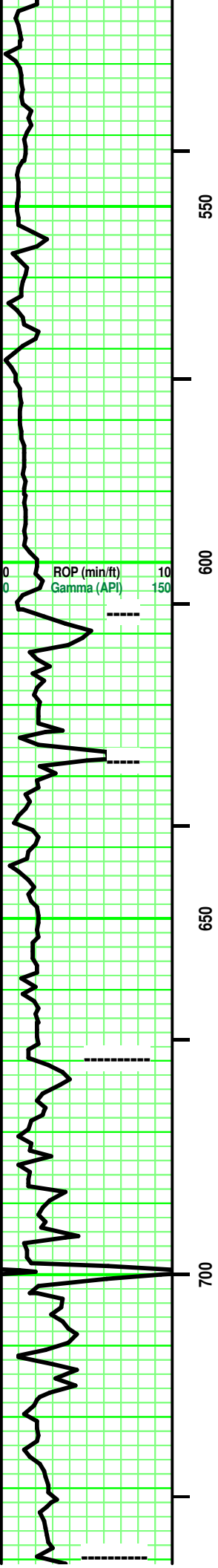
SH: gry, very argillaceous (loc mushy), loc silty.

Hole Dev:
0.75 degree @ 511'

LS: off wht, microxtln, chalky. poor vis por. NS



412: driller lowers 10
WOB, incr RPM 150



550

600

650

700

ROP (min/ft)
Gamma (API)

SH: lt grn & pale gry, very argil, very silty.

LS: gry & off wht, microxtln, sl chalky (loc very chalky. v poor vis por. NS

LS: wht, off wht & pale grn, crypt-microxtln, very chalky (often mushy), minor fgr glauconite. very poor vis por. NS

SH: grn, argil, silty, calcareous.

SH: gry, argil, somewhat silty, calcareous.

LS - Tans/ tr Tannish Lt Gray. Sing/ Mot/ tr Mixed. VF-/ Micro-xln. xln & part por. No/ tr Re-xln. some chalky/ argil in part. rare minute carb 'rubble'. Firm at top and bottom. some No/ mostly tr to fair vis por.

SH - mostly Med Gray / tr Dark Gray, rare Greenish Gray. Sing. Massive. (gumbo cluming after washing). some silty in part.

LS - Lt / Med Tan. tr Off Whitish Tan. Mot / Mixed. tr Med/ mostly VF-xln. xln & part por. No/ some Re-xln. No/ tr fossil frags. No/ tr misc argil/chalky frags and inclusions. Friable to partly friable. some No / mostly Fair to tr Good vis por.

SH - Med/Dark Gray. Sing. mostly No/ rare limey in part. No/ tr minute dark specks.

Vis: 37 Wt: 9.0 LCM: 0

Ted Jochems
Curtis Covey

100 units + 1% Gas
TG, C1-C5

Vis: 44 Wt: 9.0

--- HOWARD LS
607' (+ 636')

--- SEVERLY
628' (+ 615')

--- TOPEKA LS
670' (+ 573')

Flowline plugging up.

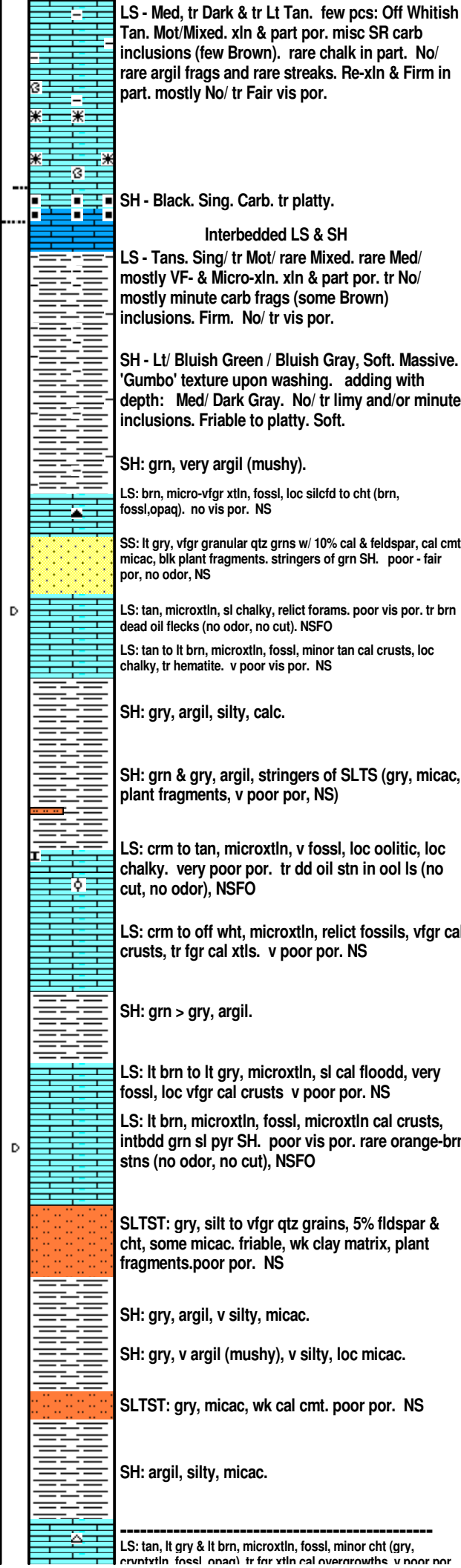
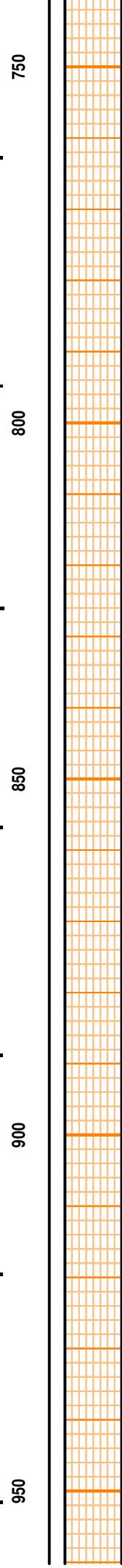
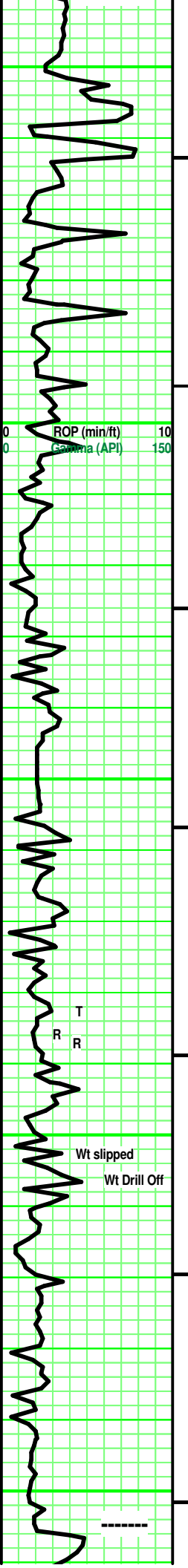
Hotwire Calibration Check

Chromatograph Calibration Check
Vis: 44 Wt: 9.0 LCM: 0

Vis: 40 Wt: 9.2

Flowline plugging up.

--- DFFR CRFFK



LS - Med, tr Dark & tr Lt Tan. few pcs: Off Whitish Tan. Mot/Mixed. xln & part por. misc SR carb inclusions (few Brown). rare chalk in part. No/ rare argil frags and rare streaks. Re-xln & Firm in part. mostly No/ tr Fair vis por.

SH - Black. Sing. Carb. tr platty.

Interbedded LS & SH

LS - Tans. Sing/ tr Mot/ rare Mixed. rare Med/ mostly VF- & Micro-xln. xln & part por. tr No/ mostly minute carb frags (some Brown) inclusions. Firm. No/ tr vis por.

SH - Lt/ Bluish Green / Bluish Gray, Soft. Massive. 'Gumbo' texture upon washing. adding with depth: Med/ Dark Gray. No/ tr limy and/or minute inclusions. Friable to platty. Soft.

SH: grn, very argil (mushy).

LS: brn, micro-vfgr xtn, fossl, loc silcfd to cht (brn, fossl,opaq). no vis por. NS

SS: lt gry, vfgr granular qtz grns w/ 10% cal & feldspar, cal cmt, micac, blk plant fragments. stringers of grn SH. poor - fair por, no odor, NS

LS: tan, microxtln, sl chalky, relict forams. poor vis por. tr brn dead oil flecks (no odor, no cut). NSFO

LS: tan to lt brn, microxtln, fossl, minor tan cal crusts, loc chalky, tr hematite. v poor vis por. NS

SH: gry, argil, silty, calc.

SH: grn & gry, argil, stringers of SLTS (gry, micac, plant fragments, v poor por, NS)

LS: crm to tan, microxtln, v fossl, loc oolitic, loc chalky. very poor por. tr dd oil stn in ool ls (no cut, no odor), NSFO

LS: crm to off wht, microxtln, relict fossils, vfgr cal crusts, tr fgr cal xtls. v poor por. NS

SH: grn > gry, argil.

LS: lt brn to lt gry, microxtln, sl cal floodd, very fossl, loc vfgr cal crusts v poor por. NS

LS: lt brn, microxtln, fossl, microxtln cal crusts, intbdd grn sl pyr SH. poor vis por. rare orange-brn stns (no odor, no cut), NSFO

SLTST: gry, silt to vfgr qtz grains, 5% fldspar & cht, some micac. friable, wk clay matrix, plant fragments.poor por. NS

SH: gry, argil, v silty, micac.

SH: gry, v argil (mushy), v silty, loc micac.

SLTST: gry, micac, wk cal cmt. poor por. NS

SH: argil, silty, micac.

LS: tan, lt gry & lt brn, microxtln, fossl, minor cht (gry, crnxtln, fossl, opa) tr for xtn cal overgrowths v poor por

Vis: 39
Wt: 9.3

Flowline plugging up.

Vis: 38
Wt: 9.3

100 units + 1% Gas
TG, C1-C5 100

Vis: 37
Wt: 9.1
LCM: 0

Curtis Covey
Ted Jochems

Hotwire Calibration Check

WOB 14M @ 76 RPM.
400 PSI @ 48 PM.

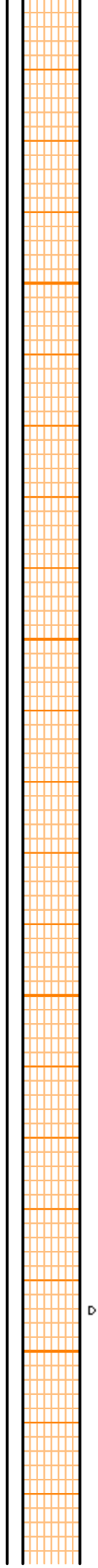
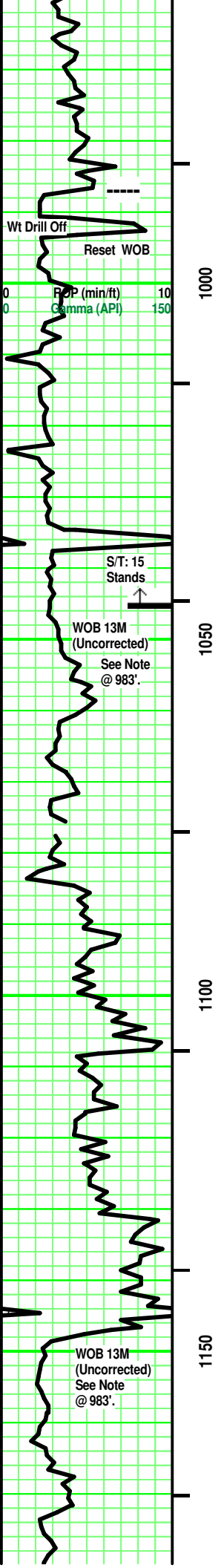
857 - Vis: 37 Wt: 9.2 WL: 9.8
PV: 26 YP: 18 Gels: 1 / 2
pH: 9.5 Cl (1,400) Ca (40)
Solids: LCM: 0#

350 psi @ 48 SPM.

16K on bit 64 rpm 50
spm @ 400#

Vis: 35
Wt: 9.2

OREAD



LS: crm to tan, microxtln, fossl (mostly forams), tr cht (orange & brn, cryptxtln, microxtln hematite). v poor por. NS

LS: crm to tan, micro-vfgr xtln, sl cal floodd, fossl, wk cal crusts. v poor por. NS

SH: blk & dk brn, carb, micac, abt pink cal >. wht cal.
LS: gry, microxtln, hvly cal floodd, loc silcfd to cht (gry, fossl), fusulinids, pellets. no vis por. NS
SH: grn & gry, argil, tr red earthy hematite

----- TORONTO LS 1,000' (+243')
LS: crm, microxtln, uniformly altered to chalk, relict fossils. v poor intxtln por, wkly developed vugs, poss fracture por. NS

SH: gry & grn, argil, silty, minor mgr granules.

SLTST: gry, micac, loc v pyr, variably competent. tr vug por. NS
SH: grn & gry, argil, sl micac.
LS: lt brn, microxtln, cal flooded, cal crusts. no vis por. NS

----- Intermixed SH & SS
SH - Med/ Dark Gray, tr / some Greenish Gray.. Sing/ Mot. No/ tr mics inclusions. Massive.

SS (1) - Clear/ Grayish Tan / Lt Gray, Silver Gray.. Mot. Silt sized qtz grains. SA/ most SR. Well sorted. Frosted/ tr Vitreous. tr point/ mostly 'floating' grain contact. Calc / Siliceous cement and overgrowths. Misc minute inclusions (mica, black carb frags, dark specks, hvy minerals). Firm. No vis por.

SH - Med/ Dark Gray. tr/some Greenish Gray. Sing/ Mot. No/ tr mics inclusions. Massive.

SS - similiar to (1) above.

SH - Med/ Dark Gray. tr/some Greenish Gray. Sing/ Mot. No/ tr mics inclusions. Massive.

SH: Med/Dark Gray. Minor mics inclusions. Massive.

LS: brn, microxtln, cal flooded, fusulinids & other fossils, microxtln cal crusts. no intxtln por, poss fracture por. small brn & blk stns (no odor, no cut), NSF0

SH: lt gry & pale grn, very argil, loc stringers of gry SLTST (friable, argil, v poor por, NS

LS: crm to v pale gry, microxtln, sl cal flooded, chalky crusts, tr forams. no vis por. NS

SLTST: gry, silt to vfgr qtz grains, cal cmt, abt muscovite. loc platv. abt minute blk plant fraas.

Check Wt Indicator @ 983.
WI weighing 40% light.
14M on WI = 19,600# Actual. Vis: 37
Adjusted WOB: Wt: 9.3
12,375# on WI = 17,325 Actual.
Calculate WOB for Collars is 17,325#.
Jet Pit

----- HEEBNER 987 (+256)

100 units + 1% Gas
TG, C1-C5 Vis: 36 Wt: 9.1
100

WOB: 13M @ 50 60 - 65 RPM.
Standpipe: 400#
@ 50 SPM on pump.

Vis: 36
Wt: 9.2
LCM: 2#

-- DOUGLAS SH 1,037' (+206')

XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX
^ Hole Dev: 1.0 degree @ 1,045'
^ S/T: 15 stands. Curtis Covey
^ Work on Pump.
^ Washed out valve.
^ T/I, Circ to condition hole.
^ Resumed Drilling.

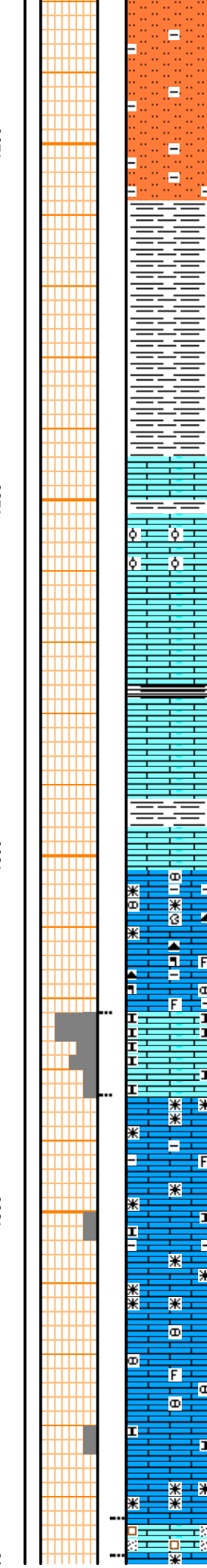
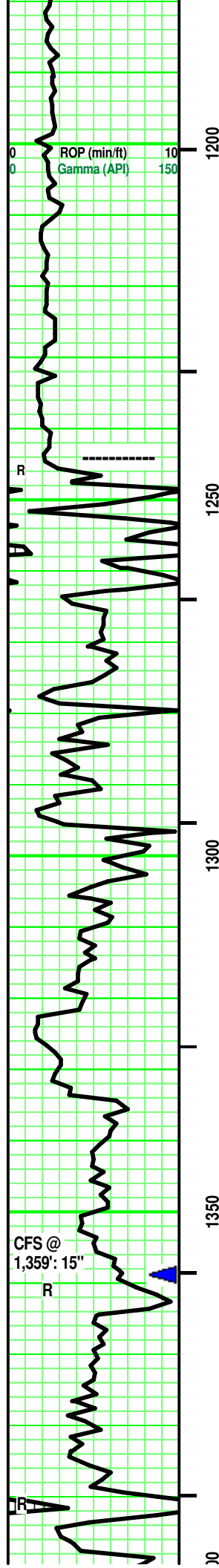
Vis: 34
Wt: 9.3+

Hotwire Calibration Check
Chromatograph Check
Curtis Covey
Ted Jochems

----- IATAN 1,142 (+101)

Corrected WOB
WI weighing 40% light.
14M on WI = 19,600# Actual.
Adjusted WOB:
12,375# on WI = 17,325 Actual.
Calculate WOB for Collars is 17,325#.

1,175' -
Vis: 36 Wt: 9.4 WL: 9.4
PV: 28 YP: 18 Gels: 2 / 3
pH: 9.5 Cl (1,500) Ca (40)
Solids: 2% 1 CM = 0



several pieces of wood w/ abt py, lepidodendron fragment, pale grn clay partings w/ abt vfgr py. no / v poor intgran por. NS

more lt gry clay, more friable.

SLTST: gry, v argil, micac. v poor por. NS

SH: gry, v argil, v silty, micac, wkly bedded.

SH: gry, very argil, v mushy, somewhat silty.

SH: lt grn & gry, very argillaceous, mushy, somewhat silty, somewhat micac, sl pyr.

LS (below): brn & tan, microxtln, hvly cal flooded, fossl (crinoids & fusulinids), microxtln cal crusts, loc pyr. no vis intxtln por, poss frac por. NS

see description above

LS: tan & gry, microxtln, cal flooded, loc ool, cal overgrths. no intxtln por, loc wk ooc por. NS

LS: wht to off wht, microxtln, cal flooding + alteration to chalk, relict forams & bryozoans. no / v poor vis intxtln por, scant wk vug development. NS

SH: blk & brn, carb, micac, red & wht cal inclusions.

LS: gry, micro-fgr xtln, hvly cal floodd, cal crusts, tr py. no vis por. NS

LS: crm to wht, micro-vfgr xtln, cal flooding + chalk alteration, relict fossils. poor intxtln por. NS

SH: gry & grn, argil.

LS: brn to tan, micro-vfgr xtln, cal flooded, cal crusts & overgrths, loc pelletal. poor intxtln por. NS

LS - Lt/ Med and tr Dark Tan, some Tannish Gray, rare Med Gray. Med F/ VF/ some Micro-xln. xln & part por. No/ some Re-xln. few fossil frags. tr/ some Brown mineral staining. [few pcs: CHERT - Med/ Dark Gray, Grayish Tan. Mot. misc inclusions. No tripolitic.] Intermixed carb rubble. mostly Firm to sub-Firm. No/ tr vis por.

LS - Lt/ Med Tan. rare Dark Tan, Lt Tannish Gray. Mot/ Mixed. VF-/ Micro-xln. xln por. misc, minute inclusions. Chalky grading to more limy with depth. Friable. Tr vis por.

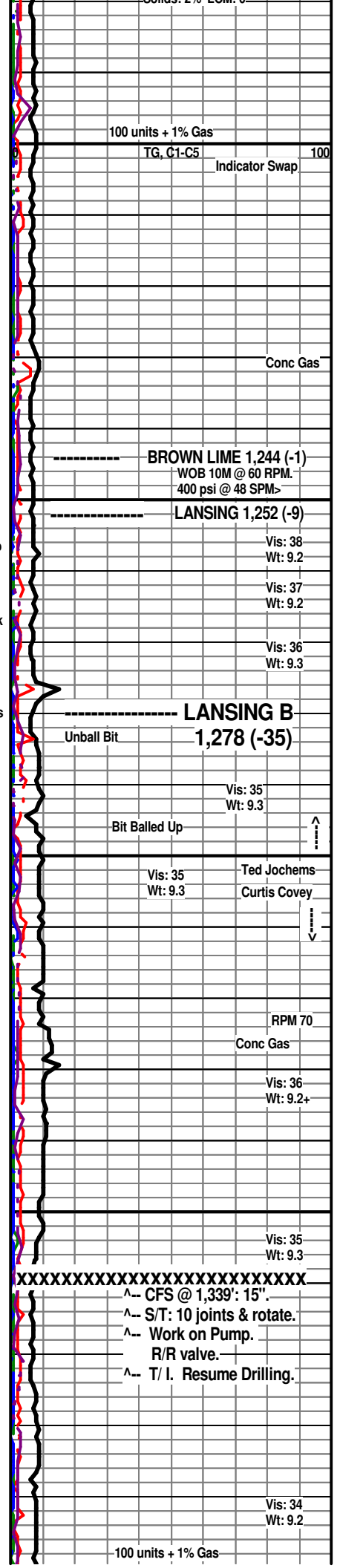
LS - Off White/ some Lt & Med Tan. Sing/ Mot/ tr Mixed. VF- / Micro-xln. xln por. Mostly No/ tr Re-xln in part. mostly No/ rare chalky in part. mostly No/ rare fossil frag. tr Greenish Med Gray argil/shale streaks. Firm. No/ tr vis por.

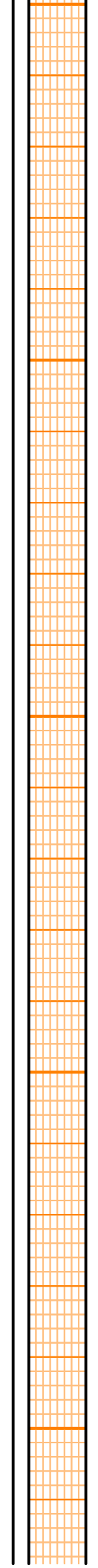
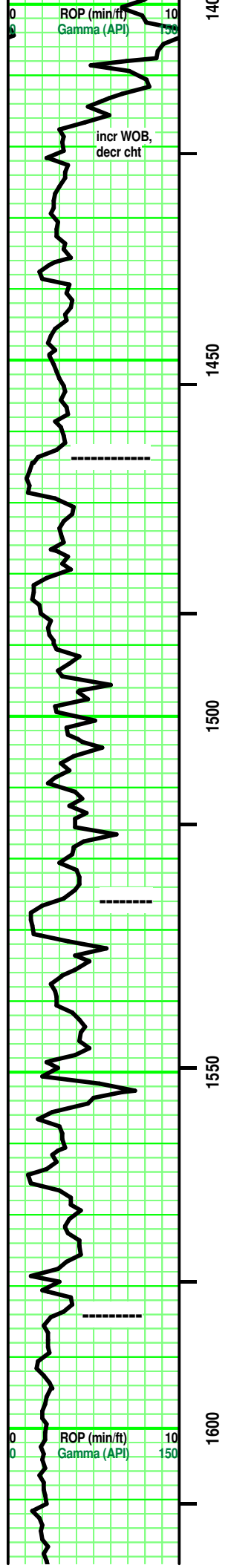
Add: Lt Gray, SR/R argil nodules. tr/ some Tan, Sing, SR/R carb nodules and rubble.

Add: Brownish frags/ few nodules and streaks. No cut.

Few pcs: Siltstone - Greenish Bluw. Soft. Massive.

LS - Brownish Tan. Sing. Mf-/VF-xln. xln & sucrosic por. Re-xln. few dark specks. Friable. Fair vis por.





LS - Med Tan. Sing. VF-/ Micro-xln. xln & part por. Re-xln. [few pcs: Clear/ White, semi-transparent, Calc xtals. C xln.] Firm. No/ tr vis por.

Interbedded SH - Greenish Med Gray. Sing. soft.

LS: tan to lt brn, microxtln, cal flooded, relict fossl, abt cht (brn to gry-brn, cryptxtln, loc fossl, vitreous). no vis por. tr brn stn (no odor, no cut), NSFO

LS: lt brn, microxtln, cal flooded, tr lepidodendron - no marine fossils. no vis por. NS
several cavings of blk carb sh in 1,430 spl.

LS: brn to gry to tan, microxtln, cal flooded. no vis por. NS

SH: grn > gry, argil, soft, sl silty, blk plant frags.

LS: wht to crm, microxtln, mildly cal flooded, loc wkly altered to chalk. no / poor vis por. NS

LS: brn to tan, microxtln, cal flooded, cal crusts & mgr cal overgrths (wht & clr) on chip edges. no vis por. NS

SH: intbdd lime grn & blk, v argil, silty. loc minor blk carb, micac with cal inclusions.

LS: brn to tan, microxtln, cal crusts, cal flooded, mgr ool bed @ top is silcfd to cht (wht, cryptxtln, opaq). no vis por. NS

SH: gry & grn, argil, sl silty.

SH: blk, very argil, mushy, micac, sl bedded.

LS: tan, mgr ool in microxtln matr, sl chalky, minor silcfcn to cht. no / poor VIS por. NS

LS: gry to lt brn, microxtln, cal flooded, no vis por. NS

LS: crm to wht, microxtln, wk cal flooding + wk chalk alteration, loc platy. no / poor vis por. NS

LS: gry to brn, microxtln, cal flooded, wk cal crusts, minor cht (pale brn. cryptxtln, spicules, sl xlsct). no vis por. NS

SH: blk, carb, micac, abt unknown pink mineral.

LS: gry, micro-vfgr xtln, hvly cal flooded, cal crusts. no vis por. NS

LS: lt brn, microxtln, cal flooded, tr cal crusts. no vis por. NS

LS: crm to wht, microxtln, cal flooding + chalk alteration. no / poor vis por. NS

SH: blk, carb, micac, calc, abt unknown pink (wet) mineral.

LS: gry, microxtln, hvly cal flooded, forams. no vis por. NS

LS: crm to off wht, microxtln, altered to chalk, loc cal flooded w/ cgr xtls, loc relict fossils. no / v poor vis por. NS

LS: wht & lt gry, microxtln, cal flooded, minor wkly developd cal crusts, minor relict fossils. no vis por. 1 pc w/ small blk residue (no odor, no cut). NSFO

SH: grn > gry, v argil (loc mushy), pyritized plant frags oxidizing to hematite.

LS: tan to brn, microxtln, cal flooded. no vis por, NS

SH: lt grn & lt gry, v argil, sl silty.

SH: grn & gry, very argillaceous, very soft, silty, weakly laminated.

SLTST: gry, argil, micac, abt plant matter. v poor por. NS

SH: gry > grn, argil, loc silty.

jet & add mud.

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Vis: 36 Wt: 9.0

68 rpm 45 spm @ 500#

^--- Pump Check

500 psi

Curtis Covey Ted Jochems

Vis: 35 Wt: 9.1

-----MUNCIE CREEK
1,464 (-221)

68 rpm 48 spm @ 500#

Vis: 34 Wt: 9.2

1,567 -
Vis: 36 Wt: 9.2 WL: 8.8
PV: 28 YP: 18 Gels: 2/3
pH: 9.5 Cl (1,300) Cal (40)
Solids: 3% LCM: 0#

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

^--- Hole Dev: 1 degree @ 1,515'

-----STARK
1,526 (-283)
Wt slipped

Drilled off Wt.

Vis: 36 Wt: 9.2

--- BKC
1,584 (-341)
Bouncy

100 units + 1% Gas

TG, C1-C5 100

Vis: 36 Wt: 9.3

Ted Jochems
Curtis Covey

Butane Check

MARMATON
1,644' (- 401')

Vis: 34
Wt: 9.4

Hotwire Calibration Check (Blk)

Chromatograph Calibration Check (Red)

Vis: 35
Wt: 9.4

XXXXXXXX BIT TRIP XXXXXXXX
Trip ^--- BIT TRIP @ 1,705'
Gas ^--- CFS @ 1,705': 15"
Board: 1,705.77
Strap: 1,705.18
Diff: 0.18
^--- Resumed Drilling

LS - similar to (2) below

LS (2) - Tan/ Off Grayish Tan. Sing/ Mot. VF-/ Micro-xln. xln por. No/ rare Re-xln. few pcs: argil streaks. partly Firm. NO/ tr vis por.

SH - similar to (3) below.

SS - Clear/ Blue Green/ Med Gray / Orange. Mot/Mixed. VF-/ Silt qtz grains. Sutured grain contact. SR/SA. Mod sph. mixture of Vitreous and Frost Luster. Blue Green clay in fill. misc hvy minerals. Pyritic (A/SA) grans. Glauc (SR) grains. Firm. No/ tr vis por.

SH (3) - Med Gray / Med Green Gray. Sing. Massive. No/ misc minute inclusions. 'gumbo' texture after washing.

LS - Tan/ rare Grayish Tan. Mot/ Mixed. Micro-xln. xln & part por. mostly No/ rare argil inclusions. . No/ rare Re-xln. Firm. No vis por.

SH - Med Gray, Greenish Gray. Sing/ tr Mixed. misc minute dark inclusions / frags. Hi Limy clasts and frags. Carb in part at top & bottom. Massive. soft.

PAWNEE 1,715' (- 472')

LS - Med Tan. Sing. VF-/ Micro-xln. xln por. No / rare Re-xln. Firm. No/ tr vis por.

SH - Med/ Dark Gray. Sing. tr Blk, card flecks and streaks. misc inclusions.

LS - Off Whitish Tan. Sing. VR-/ Micro-xln. xln por. Re-xln. Firm. tr argil with depth. Firm. No/ tr vis por.

B / FT. SCOTT 1,734' (- 491')

SH - Black. Sing. soft.

LS - Lt Grayish Tan. Sing. Micro-xln. xln por. argil in part. partly Firm. No vis por.

SH - Black. Sing. soft.

SH - Lt/Med Gray. Sing. with Dark Tan, Micro-/Crypto- xln, SR nodules. Lt Purple, Sing. Massive. [few pcs: CHERT - Dark Tan, White Incusions fossil frags, Opaque. No tripolitic.] Dark Gray, hi argil, VF-xln LS with Tan streaks. Misc rubble.

Siltstone - mostly Reddis Oragne. tr Red. Sing. Massive.

CONGLOMERATE
1,776' (- 533')

(Check Calcium Chloride tube)

XXXX CFS @ 1,795': 15" XXXX

XXXX CFS @ 1,800': 15" XXXX

TG, C1-C5

100 units ± 1% Gas

XXXX CFS @ 1805': 20 min XXXX

XXXX CFS @ 1810': 20 min XXXX

XXXX CFS @ 1815': 20 min XXXX

XXXX CFS @ 1820': 20 min XXXX

Vis: 37
Wt: 9.3

ARBUCKLE 1,800'(- 557')

CHT: gry & orange (cryptxtn) & wht (microxtln). relict forams & oolites, rare py, tr faint fluor in wht pcs after being cut w/ chlorophane. no vis por. NS

cht: wht & orange as above w/ abt wht ?clay or bit flour? wht cht chips are loc soft. no vis por. NS

DOL: lt gry, microxtln (minor vfgr-fgr), minor glauc. no / v poor intxtln por. NS

abt cavings of limonite-stained SH (from CONG)

DOL: wht to lt gry, fgr xtn, loc abt glauc. v poor intxtln por (loc fair - good). NS

1650

1700

1750

1800

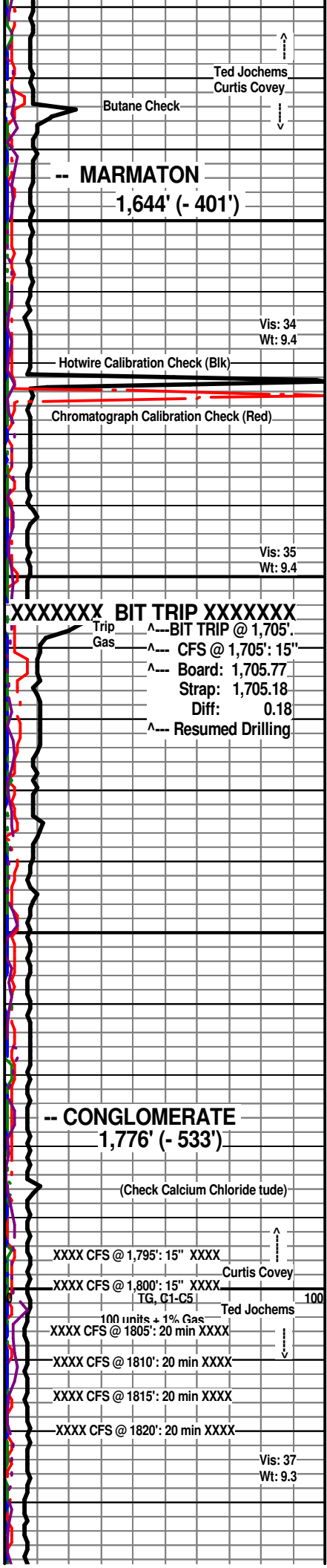
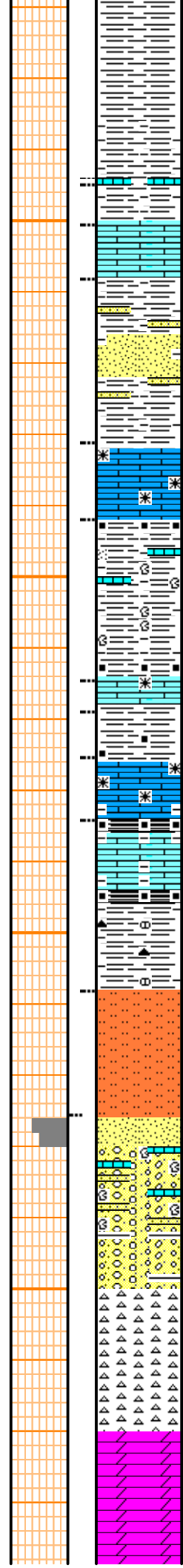
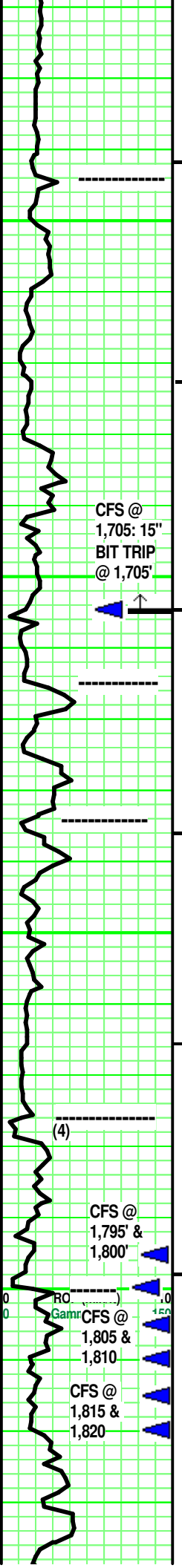
CFS @ 1,705: 15"
BIT TRIP @ 1,705'

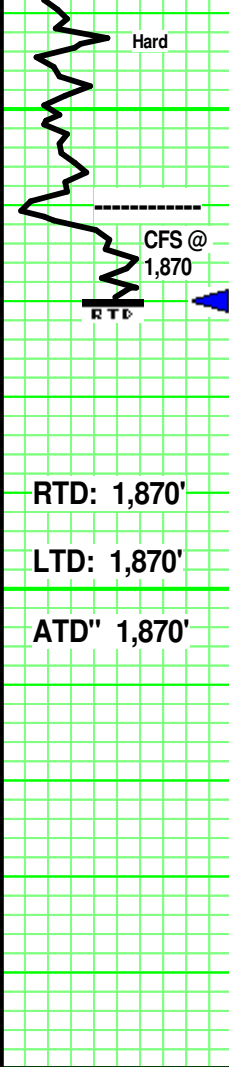
CFS @ 1,795' & 1,800'

CFS @ 1,805 & 1,810

CFS @ 1,815 & 1,820

(4)



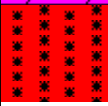


RTD: 1,870'
 LTD: 1,870'
 ATD" 1,870'

1850

50

DOL: pale gry - lt gry, vfgr - cgr xtln, tr py, minor rhombs. v poor intxtln por, loc poor - fair vug development. NS
 DOL: lt gry, minor lt brn (natural color - no odor, no cut), vfgr - fgr xtln, minor mgr rhombs & overgrths, loc minor py. fair - good intxtln por. NS



GRANITE: abt qtz, orange, sl xlsct K feldspar, accessory mica & hrnblende, abt secondary chlorite, wht clay (?bit flour?) on chip edges.

WELLS & SON #13-1
 1,956' FSL & 1,866' FEL 13 - T19S - R6E
 Chase County, Kans

MATTHEWS ENERGY, LLC.
 Traverse City, Michigan

GRANITE
 1,860 (- 617)

Ted Jochems
 Vis: 46 Wt: 9.2

XXXXXXXX RTD XXXXXXXX
 ^--- RTD @ 1,720'
 ^--- CFS @ RTD: 25"
 ^--- T/O.
 ^--- Hole Dev::
 1 deg @ RTD.
 ^--- E-Log.
 (Halliburton)

Geologist:
 Ted Jochems
 TPJ Services

Geologist:
 Curtis Covey
 COVEY - The Well Watchers
 Well Number: 1,169