Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1161287

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 5135
Name: Farmer, John O., Inc.
Address 1: 370 W WICHITA AVE
Address 2: PO BOX 352
City: RUSSELL State: KS Zip: 67665 + 2635
Contact Person: Marge Schulte
Phone: (785) 483-3144
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Austin Klaus
Purchaser: Coffeyville Resources

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 #:

06/11/2013	06/16/2013	07/10/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-167-23884-00-00
Spot Description: NW NE NW SW
NW NE NW SW Sec. 4 Twp. 15 S. R. 12 ☐ East ☑ West
2345 Feet from ☐ North / ☑ South Line of Section
925 Feet from ☐ East / ☑ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Russell
Lease Name: SHU T1 twin Well #: 11
Field Name: Hall-Gurney
Producing Formation: Gorham Sand
Elevation: Ground: 1789 Kelly Bushing: 1797
Total Vertical Depth: 3370 Plug Back Total Depth: 3339
Amount of Surface Pipe Set and Cemented at: 721 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: 25000 ppm Fluid volume: 320 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 10/04/2013
☑ **Confidential Release Date:** 10/04/2015
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 10/07/2013

1161287

Operator Name: Farmer, John O., Inc. Lease Name: SHU T1 twin Well #: 11

Sec. 4 Twp. 15 S. R. 12 ☐ East ☑ West County: Russell

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 (Attach Additional Sheets)	☑ Yes	☐ No
Samples Sent to Geological Survey	☑ Yes	☐ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No

List All E. Logs Run: Attached

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

Name: Attached Top: Attached Datum: Attached

CASING RECORD ☑ New ☐ Used

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

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	721	Common	325	3% C.C., 2% gel
Production	7.875	5.50	14	3367	EA2	130	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing	-			
___ Plug Back TD				
___ Plug Off Zone	-			

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 *(Amount and Kind of Material Used)*	Depth
4	3206-26' (Upper Gorham Sand)	Completed Natural	
4	3246-51' (Lower Gorham Sand)	Completed Natural	(non-productive)
	(CIBP set @ 3238')		

TUBING RECORD: Size: 2-7/8" Set At: 3336 Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR: 07/15/2013

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	13.44		51.00		39

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

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

PRODUCTION INTERVAL: 3206-3226' (Simpson Sand)

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

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	SHU T1 twin 11
Doc ID	1161287

All Electric Logs Run

Compensated Density Neutron Log
Micro Resistivity Log
Dual Induction Log
Cement Bond Log

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	SHU T1 twin 11
Doc ID	1161287

Tops

Name	Top	Datum
Anhydrite	710'	(+1087)
Tarkio LS	2340'	(-543)
Topeka	2572'	(-775)
Heebner	2844'	(-1047)
Lansing	2930'	(-1133)
Base/KC	3201'	(-1404)
Gorham	3206'	(-1409)
Granite	3329'	(-1532)
L.T.D.	3370'	(-1573)

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

October 04, 2013

Marge Schulte
Farmer, John O., Inc.
370 W WICHITA AVE
PO BOX 352
RUSSELL, KS 67665-2635

Re: ACO1
API 15-167-23884-00-00
SHU T1 twin 11
SW/4 Sec.04-15S-12W
Russell County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Marge Schulte

Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

DRILLER'S LOG

Operator: John O. Farmer, Inc. **Lic# 5135**
370 West Wichita Avenue - P.O. Box 352
Russell, KS 67665

Contractor: **Discovery Drilling Co., Inc. LIC#31548**
PO Box 763
Hays, KS 67601

Lease: SHU T 1 Twin # 11

Location: 2345 FSL & 925 FWL
NW/NE/NW/SW
Section 4/ 15S/ 12W
Russell County, KS

Loggers Total Depth: 3370'
Rotary Total Depth: 3370'
Commenced: 6/11/2013
Casing: 8 5/8" @ 721'W/325sks
5 1/2" @ 3367'W/130sks

API#15- 167-23,884-00-00
Elevation: 1789 GL / 1797 KB
Completed: 6/17/2013
Status: Oilwell

DEPTHS & FORMATIONS
(All from KB)

Surface, Sand & Shale	0'	Shale	742'
Dakota Sand	211'	Shale & Lime	1341'
Shale	242'	Shale	1634'
Cedar Hill Sand	317'	Shale & Lime	1981'
Red Bed Shale	435'	Lime & Shale	3015'
Anhydrite	710'	RTD	3370'
Base Anhydrite	742'		

STATE OF KANSAS)
) ss
COUNTY OF ELLIS)

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

Thomas H. Alm

Subscribed and sworn to before me on 6-24-13

My Commission expires: 8-9-15

(Place stamp or seal below)

Glenna S. Alm
Notary Public

NOTARY PUBLIC - State of Kansas
GLENNA S. ALM
My Appt. Exp. 8-9-15

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 6950

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
6-12-13	4	15	12	Russell	KS		8:15 AM

Location Dunlap Hill 5 to D.E. 2E to 195 1/2 S Into

Lease SHU T1 IWN Well No. 11

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

Contractor Discovery 4

Type Job Surface

Hole Size 12 1/4 T.D. 721

Csg. 8 5/8 Depth

Charge To J. O. Farmer Inc

Tbg. Size Depth

Street

Tool Depth

City State

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

Cement Left in Csg. 20 ft Shoe Joint 20 ft

Cement Amount Ordered 325 3%CC 2% Gel

Meas Line Displace 49.5 BBL

EQUIPMENT

Common 325

Pumptrk 5 No. Cementer Matt

Helper

Poz. Mix

Bulktrk 4 No. Driver Driver Brett

Gel. 6

Bulktrk 84 No. Driver Driver Dewie

Calcium 12

JOB SERVICES & REMARKS

Hulls

Remarks:

Rat Hole SHU T1 IWN #11

Salt

Mouse Hole

Flowseal

Centralizers

Kol-Seal

Baskets

Mud CLR 48

D/V or Port Collar

CFL-117 or CD110 CAF 38

Cement did Circulate

Sand

Handling 343

Mileage 57/8

FLOAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

2 Cup Rubber Plugs

Pumptrk Charge Long Surface

Mileage 16

Tax

Discount

Total Charge

X Signature Mike Landwehr

JOB LOG

SWIFT Services, Inc.

DATE 6-17-13 | PAGE NO.

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
John O Farmer	11	SHU TX Twin	5½ Long String	24436

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	0700							on location
								TD 3370 SJ 19.87
								TP 3367 Insert 3349
								5½" x 14#
	0800							Start Casing
	0930							Drop Ball Break Circulation Rotate
	1030		7/4					Plug RH 30 sks MH 25 sks
		5	12		✓		200	Start Mud flush
		5	20		✓		300	Start KCL flush
		5	32		✓		200	Start Cement
	1058							Drop Plug wash out Pump + Lines
	1100	6.5			✓		200	Start Displacement
	1115	6.5	81.7		✓		800/1500	land Plug
	1117							release Dry
								wash up Rack up
	1200							Job Complete
								thank you
								Josh, Brian, Rob

SWIFT Services, Inc.

PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 24437

CUSTOMER	WELL	DATE	PAGE	OF
John O Farmer	SHU T1 Twin	6 17-13	2	2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCOUNTING ACCT	ACCOUNTING DF	TIME	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
325		2				Standard Cement (EA2)	175	sks	*		14 00	2450 00
276		2				Flocele	50	lbs			2 00	100 00
283		2				Salt	900	lbs			.20	180 00
284		2				Calseal	8 ~~800~~	sk			35 00	280 00
286		2				Halad 1	85	lbs			8 00	680 00
…1		2				SERVICE CHARGE	CUBIC FEET 175				2 00	350 00
		2				MILEAGE CHARGE — TOTAL WEIGHT 18285 — LOADED MILES 60	TON MILES 548.55				1 00	548 55

CONTINUATION TOTAL: 4588.55

John O farmer Inc
SHU T1 Twin #11
Russell Co Ks.

6-16-13
Moved in 5 ½ casing.
6-17-13
Ran 80 jts of 5 ½ casing 14# new R-3 . Installed centerlizers at 3346 3265 3195 3110 3025 2938 2811. Baskets at 3305 and 2810. Welded scratchers thru sand and LK-C zones. Set 3' off bottom at 3367 Cir and rotated for ½ hr. Rigged up Swift and cemented rat hole w/ 30 sxs and mouse hole w/ 15 sxs. Pumped 500 gal mud flush and 20 bbls KCL flush. Pumped 130 EA-2 good cir at all times. 800# pumping 1500 landing plug Plug down at 11.15 AM Released rig 11:45 AM

5 ½ cement guide shoe		1.00	3367
5 ½ shoe jt		19.87	
Total shoe jt		20.87	3346
5 ½ 14# new R-3	79jts	3340.59	
Landing jt		8.00	
Total pipe		3369.46	
RTD LTD		3370	
Pipe set 3' off bottom		3367	8' KB

DISCOVERY DRILLING

P. O. Box 763 Hays, Kansas 67601

(785) 623-2920

Contractor Discovery Drilling Co, Inc. Rig No. 4

Company John O. Farmer, Inc.

Lease SHU T1 Twin Well No. 11

State Kansas County Russell Field Hall-Gurney

API # 167-23,884 Elevation 1795 K.B. R.T.D. 3370

Spot NW/NE/NW/SW Section 4 Township 15S RN 12W

Tool Joint Conn. XH Drill Pipe Size 4½ Drill Collars No. 17 O.D. 6¼" I.D. 2¼" Pump No. 1 Emsco D-375

Tool Pusher Mike Gaschler Driller Max Balthazor Driller Jerry Wilson Driller Kevin Dinkel

C	Schmidtkonzer Construction
Trucks	Company
Water-Hauling	RPM (mud & water)
Testing	Trilobite testing
Cement Surface	Quality Oilwell
Loggers	Gemini L.T.D. 3370'
Casing Crew	Maximum Torque
Fuel	Frontier Ag, Inc.
Mud Company	Andy's Mud Type Drispac
Surface Mud Used	20 Gel & 3 Hulls
Mud Up @	2068'
1' Drlg. Time @	2300' 10' Wet & Dry @ 2300'
Mud Cost - $	8,451.39
Surface Pipe - Co. Trucks	Other
No Service Mud -	Yes No
W Well	No
Frac Tank	Discovery Drilling
Motel	None
Back Hoe	Schmidtkonzer Construction
Welder	Weld Tech
Reserve Pit Chlorides	25,000 Ppds - 320 Ppds
Pit Liner	RPM

Run No.	Size	Make	Type	Jet Size	Serial	Depth From	Depth To	Feet	Hours	Feet Per Hour	Weight 1000 Lbs.	RPM	Vert. Dev.	Pump Press.	Formation Tops
1	12¼	Varel	V517	3/14	95417	0	721	721	9¾	73.95	All/20000	100	3°	600	Dakota Sand
2	7⅞	HTC	GBOC	3/14	5224388	721	3370	2649	66½	39.83	20/40000	70/90		800	Cedar Hills Sand
															Anhydrite (710-742)
								(3370 ÷ 76.25 HRS = 44.20 FPH)							Topeka
															Heebner
															Toronto
															LKC-BKC
															Marmaton
															Arbuckle
															Geo. Name Austin Haas
															Phone (785) 650-3629
															Dst #1 (3198-3228) (30')
															Dst #2
															Dst #3
															Dst #4
															Dst #5
															Dst #6
															Dst #7
															Dst #8
															Dst #9
															Dst #10
															Dst #11
															Dst #12

Plugging Report Rat Stabb (Plug)

State Plugger - Richard Williams (SPM)

Ran 80 Joints (New 14# 5½") (X)

Casing Talley 3359 Set @ 3367'

KB Cement By Swift w/130sks

Edz

30 sks @ Rat hole

15 sks @ Mouse hole

175 sks (Total) Edz

Plug Down @ 11:15 A.M. P.M. 6/17/13

Rig Release @ 11:45 A.M. P.M. 6/17/13

Job By - Swift Services

Surface Pipe

Ran 17 jts. used new 23 # 8-5/8" casing

Talley 711.86 set @ 721 K.B.

Cemented w/ 325 sks. Common 2%cc & 3%cc

Cement Did Circulate

Plug Down @ 8:15 A.M. P.M. 6, 12, 2013

Spud @ 2:15 A.M. P.M. 6, 11, 2013

Drilled Plug @ 4:15 A.M. P.M. 6, 12, 2013

Job By - Quality Oil Cementing

WATER INFORMATION

Name -

Address - Phone # -

City

Social Security #

Amount $

Section Township Range

Pond Water Well Other

FSL FEL

DRILL STEM TEST REPORT

Famer, John O. Inc

Po box 352
Russell KS, 67665

ATTN: Austin Klaus

4-15s-12w Russell KS

Hall - Gurney #11

Job Ticket: 53914 **DST#: 1**

Test Start: 2013.06.16 @ 18:09:00

GENERAL INFORMATION:

Formation: **Gorham Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:23:30
Time Test Ended: 01:37:15

Test Type: Conventional Straddle (Initial)
Tester: Cody Bloedorn
Unit No: 43

Interval: 3198.00 ft (KB) To 3228.00 ft (KB) (TVD)
Total Depth: 3370.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

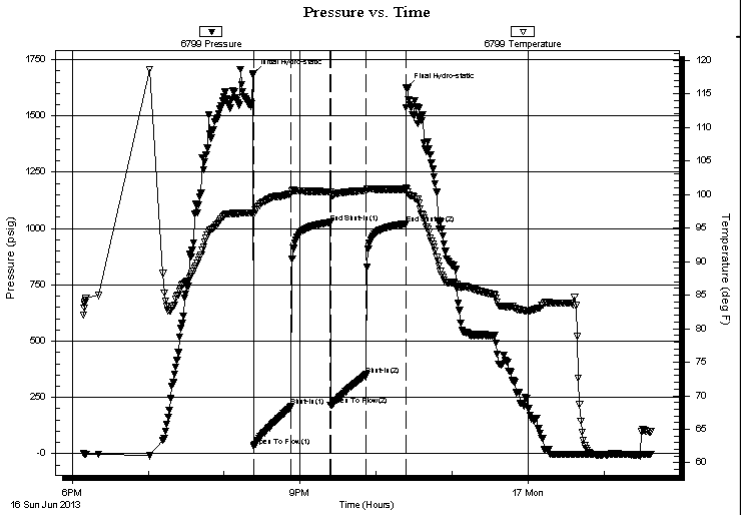
Reference Elevations: 1792.00 ft (KB)
1784.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 350.93 psig @ 3199.00 ft (KB)
Start Date: 2013.06.16 End Date: 2013.06.17
Start Time: 18:09:05 End Time: 01:37:14

Capacity: 8000.00 psig
Last Calib.: 2013.06.17
Time On Btm: 2013.06.16 @ 20:23:00
Time Off Btm: 2013.06.16 @ 22:24:00

TEST COMMENT: 30 - IF- B.O.B. in 4 minutes
30 - ISI- Surface return
30 - FF- B.O.B. in 5 minutes
30 - FSI- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1687.70	97.29	Initial Hydro-static
1	33.61	96.92	Open To Flow (1)
30	209.40	100.10	Shut-In(1)
61	1027.07	100.37	End Shut-In(1)
61	214.04	99.98	Open To Flow (2)
90	350.93	100.57	Shut-In(2)
121	1020.86	100.74	End Shut-In(2)
121	1626.26	100.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	SOCMW, 10%O, 40%M, 50%W	0.60
434.00	GMCO, 5%G, 40%M, 55%O	6.09
372.00	GO, 30%G, 70%O	5.22
0.00	186' G.I.P.	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Famer, John O. Inc

Po box 352
Russell KS, 67665

ATTN: Austin Klaus

4-15s-12w Russell KS

Hall - Gurney #11

Job Ticket: 53914 **DST#: 1**

Test Start: 2013.06.16 @ 18:09:00

GENERAL INFORMATION:

Formation: **Gorham Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:23:30
Time Test Ended: 01:37:15

Test Type: Conventional Straddle (Initial)
Tester: Cody Bloedorn
Unit No: 43

Interval: 3198.00 ft (KB) To 3228.00 ft (KB) (TVD)
Total Depth: 3370.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

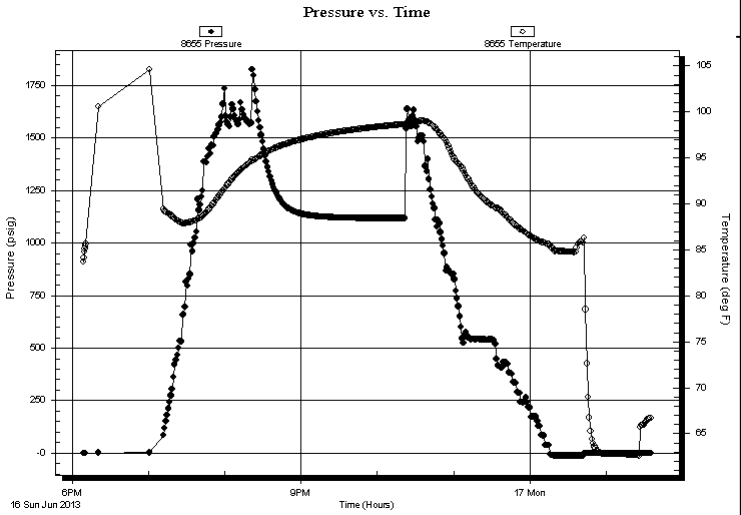
Reference Elevations: 1792.00 ft (KB)
1784.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8655 **Below (Straddle)**

Press@RunDepth: psig @ 3233.00 ft (KB)
Start Date: 2013.06.16 End Date: 2013.06.17
Start Time: 18:09:05 End Time: 01:35:29

Capacity: 8000.00 psig
Last Calib.: 2013.06.17
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF- B.O.B. in 4 minutes
30 - ISI- Surface return
30 - FF- B.O.B. in 5 minutes
30 - FSI- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	SOCMW, 10%O, 40%M, 50%W	0.60
434.00	GMCO, 5%G, 40%M, 55%O	6.09
372.00	GO, 30%G, 70%O	5.22
0.00	186' G.I.P.	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Famer, John O. Inc

Po box 352
Russell KS, 67665

ATTN: Austin Klaus

4-15s-12w Russell KS

Hall - Gurney #11

Job Ticket: 53914 **DST#: 1**

Test Start: 2013.06.16 @ 18:09:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	58.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.19 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	inches				

Recovery Information

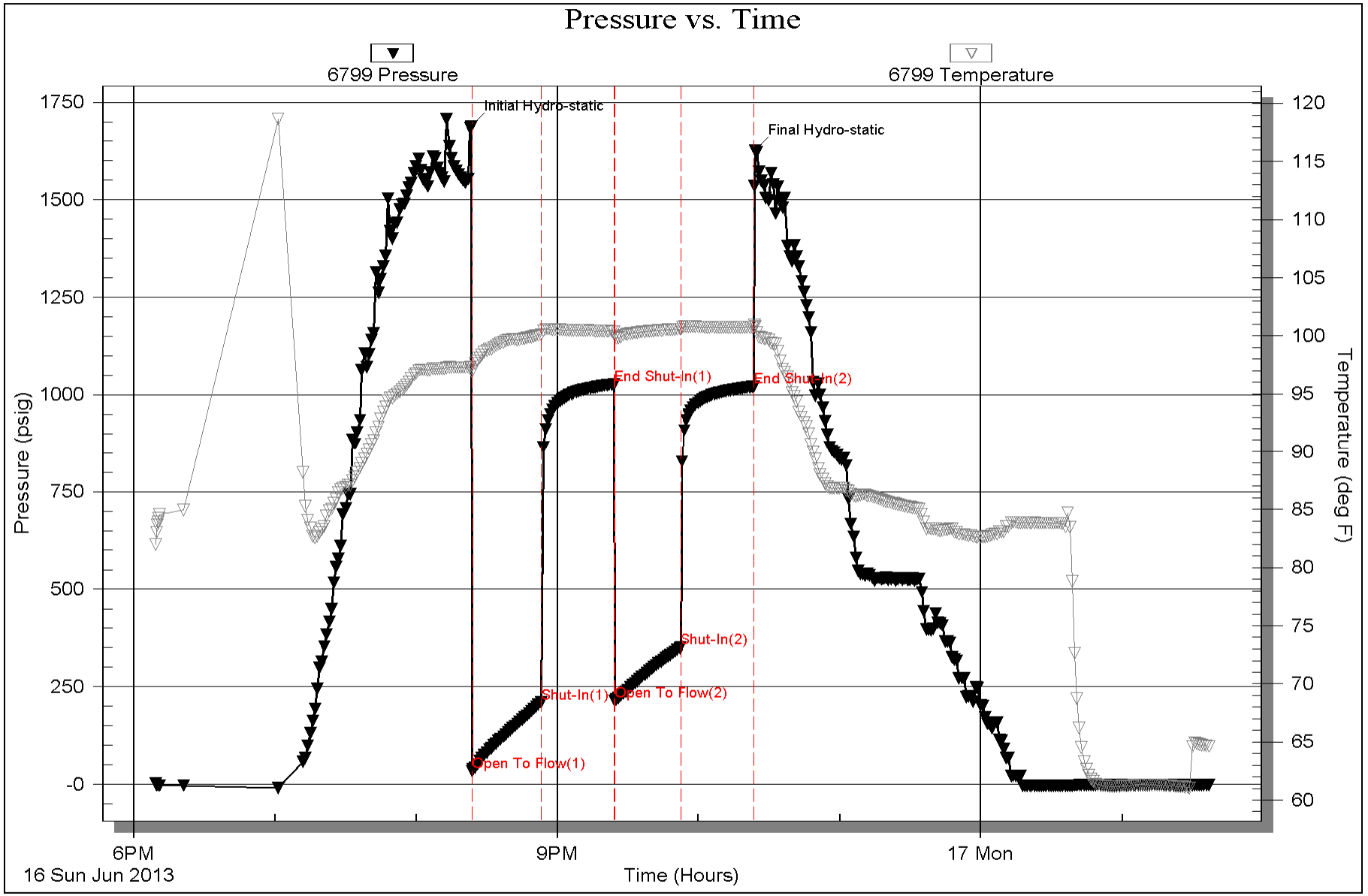
Recovery Table

Length ft	Description	Volume bbl
62.00	SOCMW, 10%O, 40%M, 50%W	0.596
434.00	GMCO, 5%G, 40%M, 55%O	6.088
372.00	GO, 30%G, 70%O	5.218
0.00	186' G.I.P.	0.000

Total Length: 868.00 ft Total Volume: 11.902 bbl

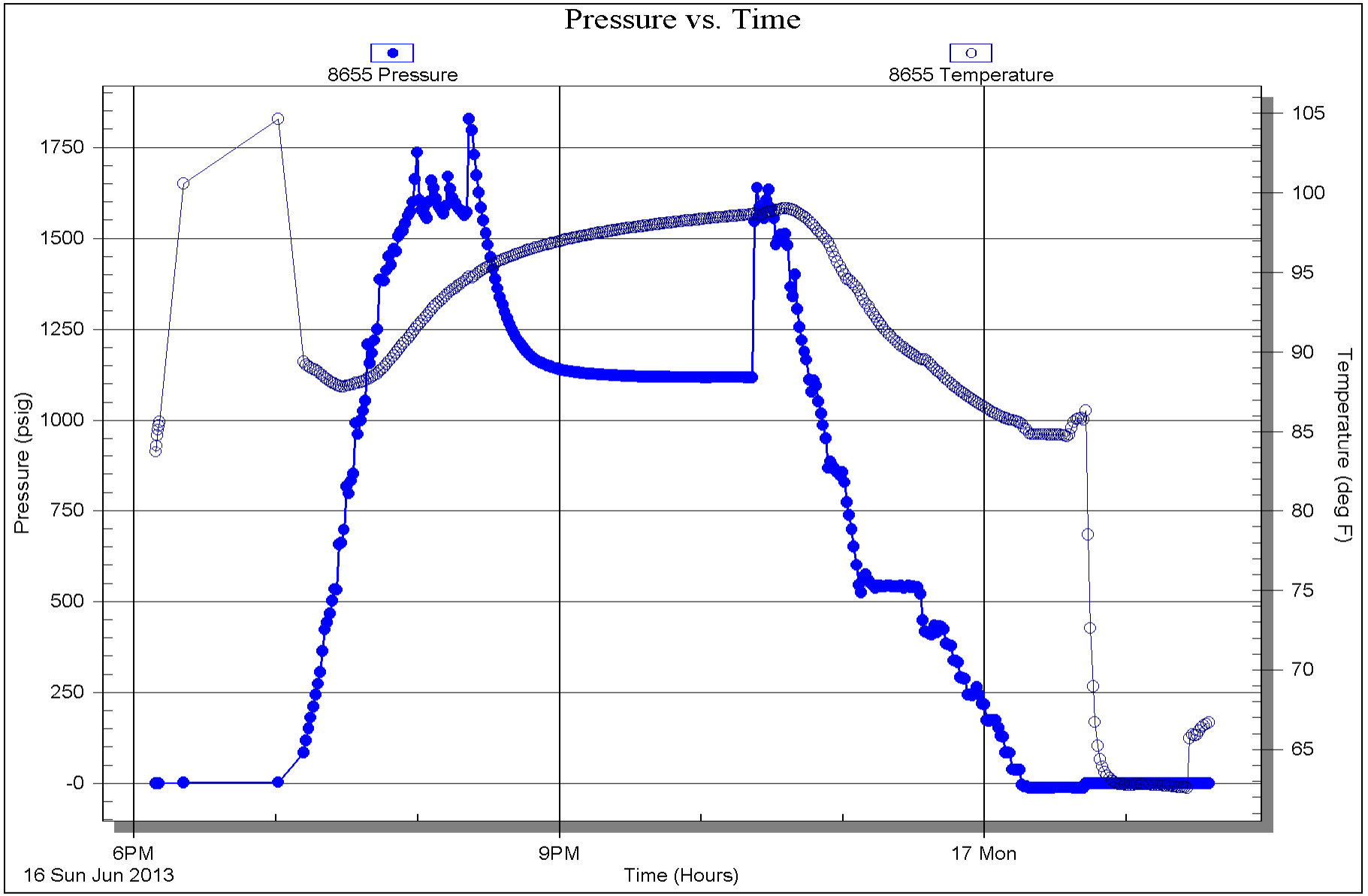
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6799 **Inside** Famer, John O. Inc Hall - Gurney #11 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 53914 Printed: 2013.06.17 @ 02:37:44

Serial #: 8655 Below (Straddle), John O. Inc Hall - Gurney #11 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 53914 Printed: 2013.06.17 @ 02:37:44

AUSTIN B. KLAUS

Cell 785.650.3629
Work 785.483.3145
Ext 225

PO BOX 352
Russell, KS 67665
austin.klaus@johnofarmer.com

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

Well Name:	**SHU Tr1 W11**		
Location:	**Russell County**		
License Number:	**API # 15-167-23,884-0000**	**Region:**	**Kansas**
Spud Date:	**6/11/13**	**Drilling Completed:**	**6/16/13**
Surface Coordinates:	**Section 4 - Township 15 South - Range 12 West** **2,345' FSL & 925' FWL**		
Bottom Hole Coordinates:	**Vertical well with minimal deviation, same as above**		
Ground Elevation (ft):	**1,789'**	**K.B. Elevation (ft):**	**1,797'**
Logged Interval (ft):	**2,250'** **To: RTD**	**Total Depth (ft):**	**3,370**
Formation:	**Tarkio - Granite**		
Type of Drilling Fluid:	**Chemical (Andy's)**		

OPERATOR

Company: **John O. Farmer, Inc.**
Address: **P.O. Box 352**
Russell, KS 67665-0352

Comments

The SHU Tr1 W11-twin well was drilled by Discovery Drilling Rig #4 (Tool Pusher: Mike Gaschler).

The location for the SHU Tr1 W11-twin well was drilled as a replacement for the Kuhnle #11, drilled in 1956. Geologic samples were collected and examined from 2,250-3,370'. A straddle test was run over the Gorham Sand, which yielded positive results. After all sample, log, and drill stem test data was gathered and evaluated, the decision was made to run 5 1/2" production casing to further evaluate the SHU Tr1 W11 well on 6/17/13.

ROCK TYPES

Anhy, Bent, Brec, Cht, Clyst, Coal, Congl, Dol, Gyp, Igne, Lmst, Meta, Mrlst, Salt, Shale, Shcol, Shgy, Sltst, Ss, Till

OTHER SYMBOLS

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

SORTING
- Well
- Moderate
- Poor

ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW
- Even

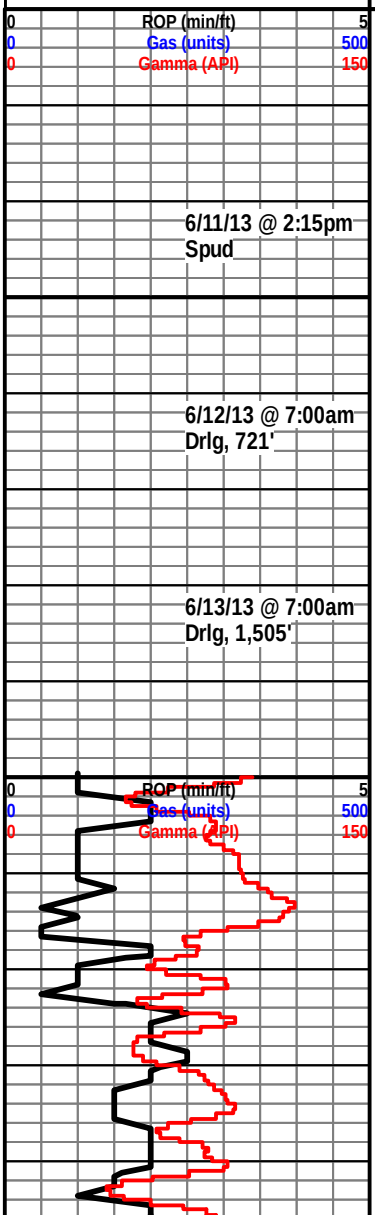
- Spotted
- Ques
- Dead

INTERVAL
- Core
- Dst

EVENT
- Rft
- Sidewall

Curve Track 1
ROP (min/ft)
Gas (units)
Gamma (API)

Depth | Lithology | Oil Shows | Geological Descriptions | Drill Stem Tests



The open-hole logging was performed by Mr. Gus Pfannenstiel with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density/Compensated Neutron, Dual Induction, and Micro Resistivity.

Formation tops and datums from the open-hole logs include the following:

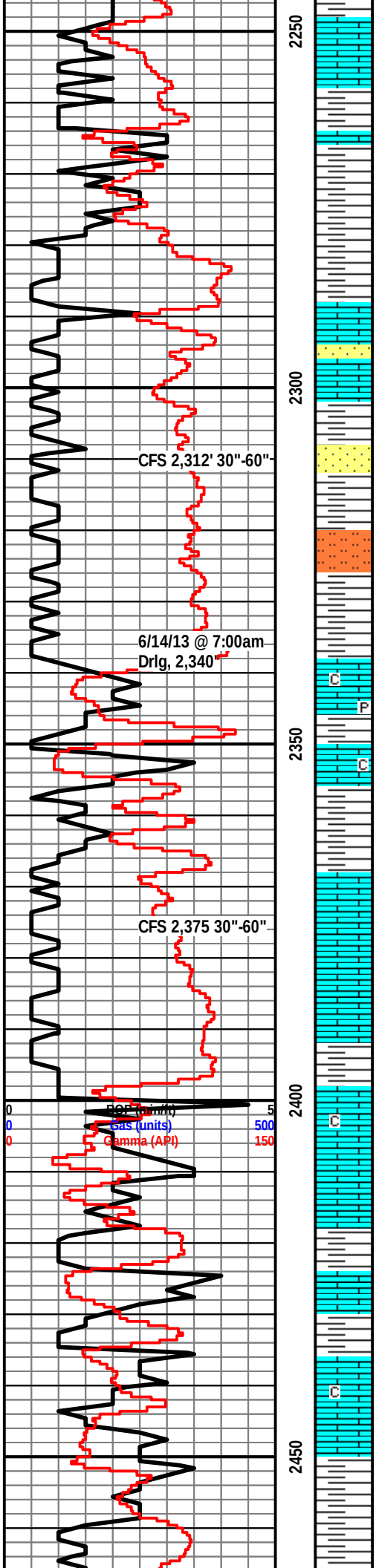
Anhydrite	710	1,087
Tarkio LS	2,340	-543
Topeka	2,572	-775
Heebner	2,844	-1,047
Lansing	2,930	-1,133
BKC	3,201	-1,404
Gorham	3,206	-1,409
Arbuckle	ABS	
Granite	3,329	-1,532
RTD		
LTD	3,370	-1,573

Sh: lt-drk gry-brn, vry soft

Sh: drk gry-brn, soft

Mud Engineer: Ken Rupp
Tester: Cody Bloedorn

Wt: 8.6
Vis: 57



Sh: drk gry-brn, soft

Ls: tan-lt gry, fn-sub xln, DNS

Grandhaven 2264' (-467)

Ls: ala

Sh: lt gry-brn

Sh: lt-drk gry, vry soft

Dover 2289' (-492)

Qtz: ss, drk gry, vry fn grn, rounded, well sorted, fair-poorly cemented, poor int grn porosity, NSFO, no odor

Sh: drk gry-brn, vry soft

Ss: few pcs qtz, vry fn grn, NSFO

Sh: lt-drk gry, vry soft

Sh, Sltst: lt-drk gry-brn, vry soft

Sh, Sltst: ala

Tarkio 2341' (-544)

Ls: tan-gry, fn-sub xln, DNS, sl chalky, sl pyrite

Sh,Sltst: lt-drk gry

Ls: tan-lt gry, fn-sub xln, vry DNS, sl chalky, NSFO

Sh,Sltst: lt-drk gry, soft

Ls: tan-lt gry, fn-sub xln, mostly DNS, NSFO, fw pcs ss, vry fn grn, NSFO

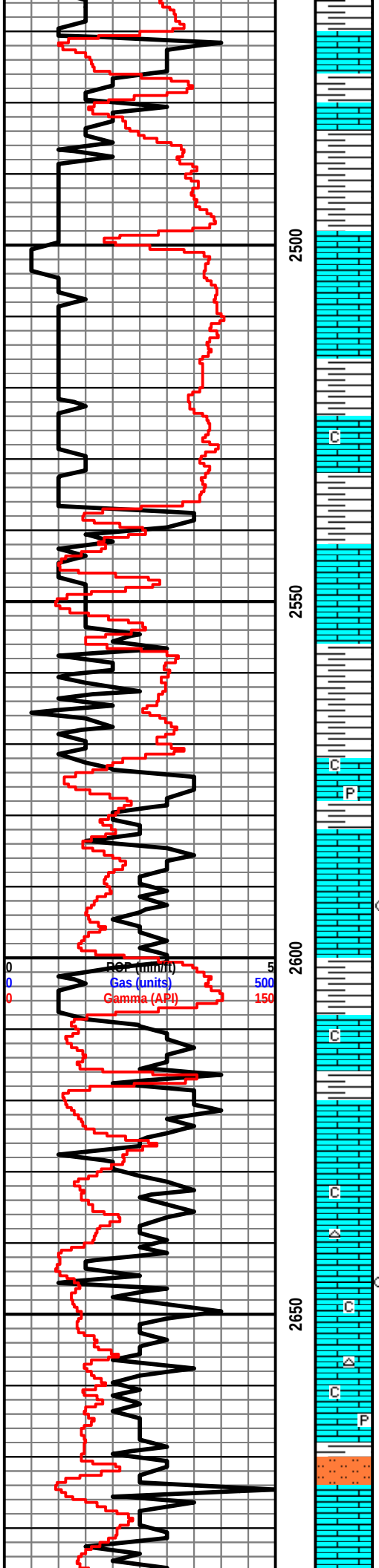
Ls: ala

Elmont 2400' (-603)

Ls: tan-lt gry, fn-sub xln, mostly DNS, sl fossil, sl chalky

Sh,Sltst: lt gry-grn,

Ls: off wh-lt gry, fn-sub xln, mostly DNS, sl fossil, poor int fossil porosity, sl chalky



Ls: ala

Sh,Sltst: lt-drk gry, blocky

Ls: tan-brn, fn-sub xln, mostly DNS, sl fossil, fw pcs poor int fossil porosity

Ls: ala

Sh,Sltst: lt gry-grn, silty, blocky

Ls: lt gry-tan-brn, fn-sub xln, ool, poor oom porosity, sl fossil, sl chalky

Sh,Sltst: drk gry, soft, flakey

Sh, Sltst: ala

Topeka 2573' (-776)

Ls: lt gry-tan-brn, fn-sub xln, mostly DNS, sl fossil, sl chalky, sl pyrite

Ls: ala

Sh,Sltst: lt-drk gry, soft

Ls: lt gry-brn, fn xln, fossil, poor int xln & int fossil porosity, dead oil st, vry sl odor, dull yel fluor

Sh, Sltst: drk gry-brn, soft

Ls: lt gry-tan, fn-sub xln, mostly DNS, sl fossil, sl chalky

Ls: ala

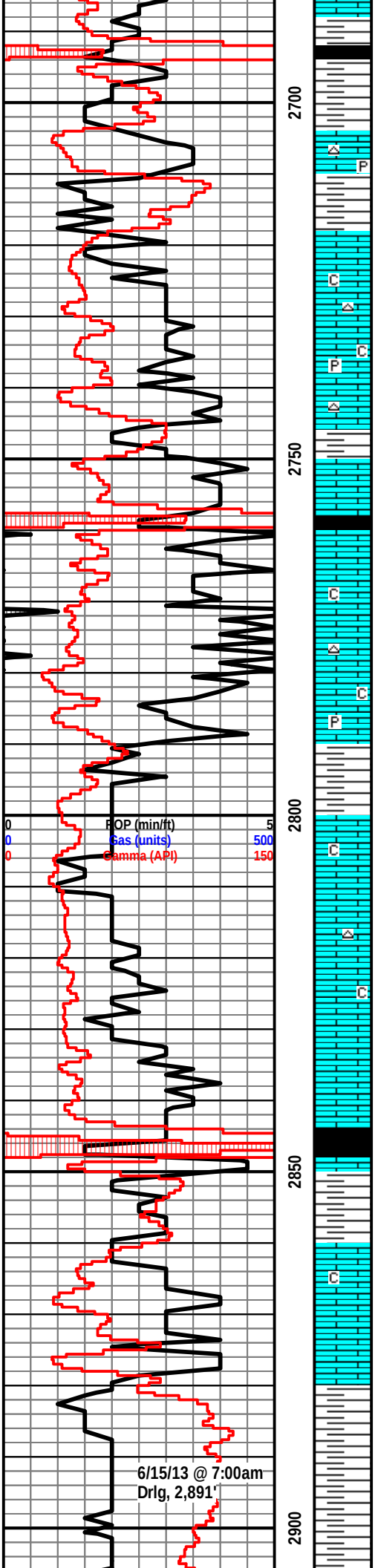
Ls: lt gry-tan-brn, fn xln, fossil, poor int xln & fossil porosity, dead oil st, NSFO, no odor, sl chalky, scat dull yel fluor, sl chert-off wh

Wt: 8.8
Vis: 49

Ls: lt gry-tan-brn, fn-sub xln, mostly DNS, sl chalky, sl pyrite, chert-off wh

Sh, Sltst: drk gry

Ls: ala



2700

2750

2800

2850

2900

Kinghill Shale 2692' (-895)

Sh: drk gry-blk, carb, blky

Ls: lt gry-tan-brn, fn-sub xln, mostly DNS, sl fossil, sl pyrite, chert-off wh

Wt: 8.9
Vis: 49
LCM: 5#

Ls: ala

Ls: off wh-lt gry, fn-sub xln, fossil, poor int fossil & pp vuggy porosity, sl chalky, sl pyrite, chert-off wh-tan

Ls: ala

Queenhill Shale 2756' (-959)

Sh: drk gry-blk, carb

Ls: tan-lt gry-brn, fn-sub xln, sl fossil, poor int fossil porosity, sl chalky, scat pyrite, chert-off wh

Ls: lt gry-tan-lt brn, fn-sub xln, fossil, scat pp vuggy porosity, NSFO, sl chalky, chert-off wh, scat pyrite

Ls: ala

Ls: off wh-tan-lt gry, fn-sub xln, mostly DNS, sl fossil, sl chalky, chert-off wh

Ls: ala

Heebner 2846' (-1049)

Sh: drk gry-blk, carb, fissile

Ls: tan-lt gry, fn-sub xln, mostly DNS, sl fossil,

Sh: lt gry, vry soft

Toronto 2867' (-1070)

Ls: tan-lt gry, fn-sub xln, fossil, scat fossil and int xln porosity, scat oil st, VSSFO, vry lt odor, sl chalky

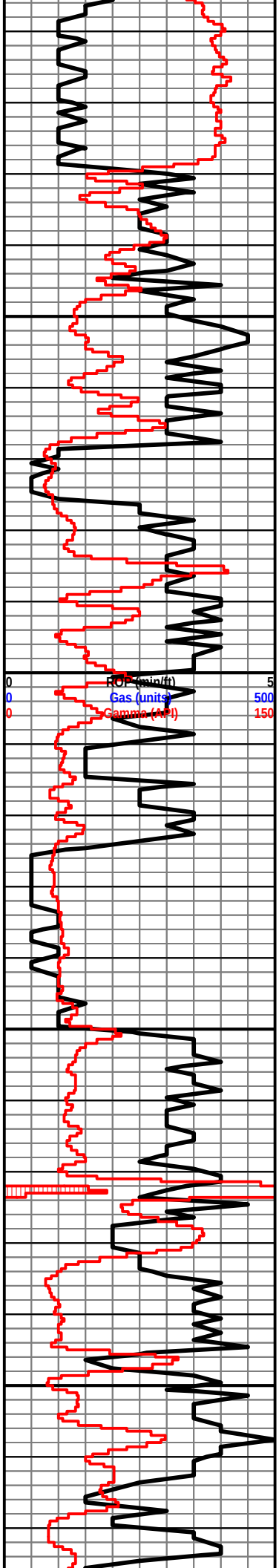
Douglas Shale 2879' (-1082)

Ls: lt gry-tan-brn, fn-sub xln, vry DNS, sl fossil, chalky

Sh: drk gry-brn-red, fissile

Ls: off wh-tan-lt gry, fn xln, scat ool, poor fossil porosity, NSFO, no odor, sl chalky

Sh,Sltst: drk gry, soft



Sh, Sltst: ala

Sh, Sltst: lt-drk gry-grn, fw pcs soft

Lansing 2931' (-1134)

Ls: tan-lt gry, fn-sub xln, vry poor int xln & fossil porosity, dead oil st, NSFO, no odor, chalky, chert-off wh

Sh: drk gry

Ls: off wh-tan, fn xln, poor int xln porosity, lt oil st, VSSFO, sl odor, fossil, sl chert-off wh

Ls: off wh-tan-lt gry, fn-sub xln, mostly DNS, chert-off wh, sl fossil, scat pyrite

Ls: off wh, fn xln, ool, good oom porosity, poor int xln & ool porosity, fair oil st in porosity, SSFO, fair odor, sl fossil, sl chalky

Ls: off wh-tan-lt gry, fn-sub xln, mostly DNS, sl chalky, chert-off wh-drk gry

Sh: drk gry-grn

Ls: tan-lt gry, fn-sub xln, moslty DNS, sl chalky, scat pyrite

Sh: lt-drk gry

Ls: off wh-tan, fn xln, ool, fossil, scat ool & fossil porosity, scat oil st, NSFO, sl odor, chalky, sl chert-off wh

Sh: lt-drk gry

Ls: off wh-tan, fn xln, ool, good oom porosity, scat oil st, SSFO, fair odor, dull yel fluor

Ls: off wh-tan-lt brn, fn xln, mostly DNS, fossil, sl chalky

Sh: lt-drk gry

Ls: tan-lt gry, fn-sub xln, mostly DNS, sl chalky, scat chert-off wh

Ls: ala

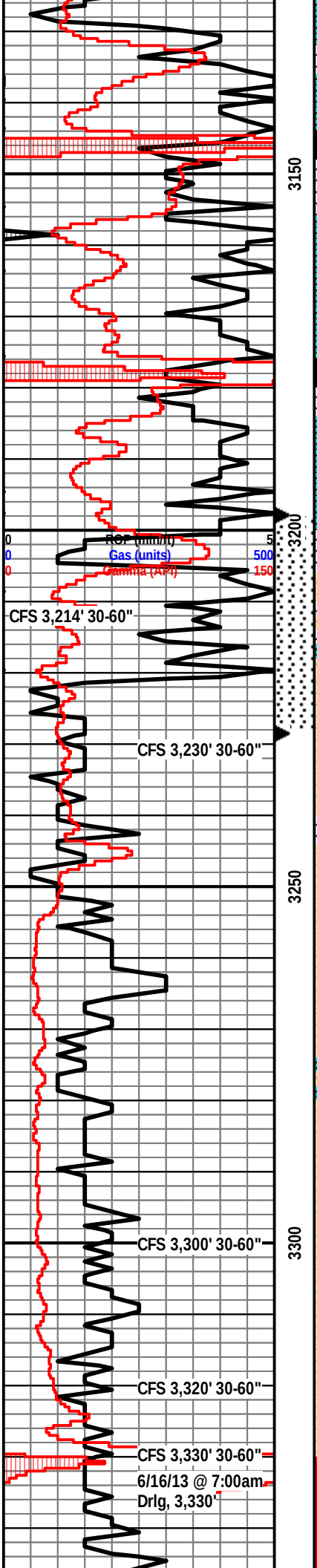
Sh: lt-drk gry

Ls: off wh-lt gry, fn-sub xln, mostly DNS, fossil, sl chalky, chert-off wh-brn

Sh: lt-drk gry-grn, blky

Ls: off wh-tan, fn xln, oolitic-oomoldic, fair int oolicastic porosity, lt oil st in porosity, VSSFO, sl odor, dull yel fluor, scat chert-lt brn

Ls: off wh-crm, ool, fair-good oom porosity, scat



oil st in porosity, fair odor, VSSFO, chert-off wh-tan

Ls: tan-lt gry, fn-sub xln, mostly DNS, sl chalk, sl chert

Stark Shale 3145' (-1348)

Sh: drk gry-blk, carb

Wt: 9.1
Vis: 57

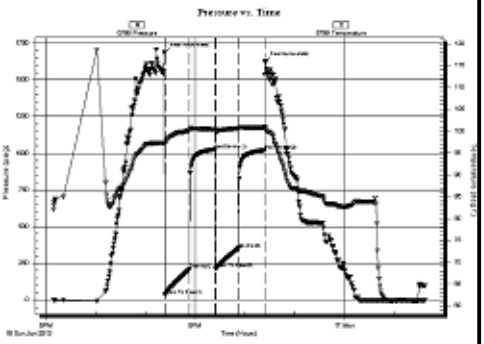
Ls: tan-lt gry, fn-sub xln, vry DNS, chalky, scat chert-off wh-brn

Ls: ala

Sh: lt-drk gry-brn, carb, fissile

Ls: tan-lt gry, fn-sub xln, mostly DNS, sl chalky, scat chert-off wh

DST #1 3,198-3,228' (Top 22' of Gorham Sand)
30"-30"-30"-30"
IF: BOB in 4 minutes, surface blow back
FF: BOB in 5 minutes, no blow back
Rec: 186' GIP
372' GO (30% G, 70% O) -32 API
434' GMCO (5% G, 40% M, 55% O)
62' O&MCW (10% O, 40% M, 50% W)
FP: 34-209-214-351#
SIP: 1,027-1,021#
HP: 1,688-1,626#
BHT: 101



BKC 3201' (-1404)

Sh: drk gry-brn

Gorham 3205' (-1408)

Ss: qtz, off wh-tan, fn grn, sub rounded-rounded, well cemented, poorly sorted, poor int grn porosity, oil st, SSFO, fair odor, dull yel fluor

Ls, Congl: tan-gry, fn-sub xln, vry DNS, sl chert-off wh

SS: qtz, off wh-clear, fn-md grn, sub rounded-rounded, fairly well cemented, poor-fair int grn porosity, fair oil st, SFO, fair odor, dull yel fluor

Sh: lt-drk gry-grn, waxy, fw pcs soft

Ss: qtz, off wh-tan, fn-md grn, sub rounded-rounded, well cemented, poorly sorted, fair int grn porosity, lt-fair oil st, SSFO, fair odor, dull yel fluor, sl chert-off wh

Ss: qtz, off wh, fn-vry fn grn, well rounded, fair-poorly sorted, fairly cemented, fair int grn porosity, fair-good oil st, FSFO, good odor, bright yel fluor, chert-off wh

Ls,Congl: off wh-tan-brn, fn-sub xln, mostly DNS, NSFO, no odor

Ss: qtz, off wh-clr, fn-md grn, well rounded, poorly sorted, fairly well cemented, poor int grn porosity, mostly barren, VSSFO, sl odor, chert-off wh

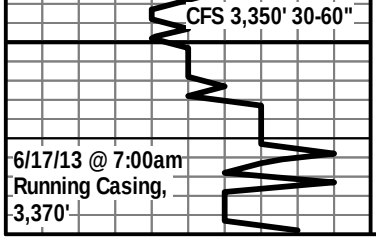
Ss: qtz, off wh-clr, fn-md-crs grn, well rounded, poorly sorted, fair-well cemented, fair int grn porosity, FSFO, good odor, fair yel fluor, chert-off wh-clr

Ss: qtz, off wh-clr, fn-md grn, well rounded, poorly sorted, well cemented, mostly barren Congl: tan-brn-lt gry, fn-sub xln, mostly DNS, hvy chert-off wh-clr, Sh: drk gry-brn, fissile

Granite 3329' (-1532)

Qtz: off wh-clr, vry DNS

Cong: Ls, off wh-tan-lt gry, fn-sub xln, Sh: drk gry



3350

Qtz: clr-red, vry DNS

Qtz: ala, Sh: grn, waxy, scat pyrite