

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](mailto: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)</i> <i>(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	Griffin, Charles N.
Well Name	MADELYN #1
Doc ID	1803274

Tops

Name	Top	Datum
Heebner	3816	-1914
Brown Lime	3992	-2090
Lansing	4008	-2106
Stark Shale	4323	-2421
Hushpuckney	4366	-2464
B/KC	4410	-2508
Pawnee	4472	-2570
Cherokee	4506	-2604
Simpson Shale	4690	-2788
Arbuckle	4776	-2874





## Griffin Management LLC

Madelyn #1

7/12/24

Logged well. LD dill pipe and collars.

Started running casing at 10 pm

Ran in 119 jts 5 ½” 17# casing. Total tally 4866.08’

Landed casing at 4865. PBTD 4858’

Circulated 1 hr. RU Quality Cementers

Cemented casing with 175 sks Pro C wig 2% gel, 10% salt and 5# Koseal. Plug down at 2:15 am on 7/13/24.

7/16/24

RD drilling rig. Pulled cellar box and cleaned up location. RU CCWS rig 1. RU Excel Wireline. Ran CBL/GR log. Good bond. LTD 4848’ RD Excel.

Unloaded 154 jts 2 7/8” 4981.34’ Secured rig and shut down,

7/17/24

RU Excel and perforated

4632' - 4652' 1 spft

4598' - 4614' 2 spft

PU packer and 143 jts plus 10' sub=4654'

RU Tiger Chemical and spotted acid at 4654'.

LD 3 jts and set packer at 4537' (140).

Tiger pumped 1500 gals 15% MCA acid, 5 bbls

KCL spacer water and 29 KCL flush water.

Breakdown 300#. Treated 4.5 bpm at 575#. Ball

action increased pressure to 1000-1200#. ISIP

vacuum. RU to tubing swab. IFL 1300'

1<sup>st</sup> hr FL 2000' swabbed 40 bbls 30% OC

2<sup>nd</sup> hr FL 2000' swabbed 45 bbls 50% OC

3<sup>rd</sup> hr FL 2000' swabbed 40 bbls 50% OC

Gas follows each swab today. Swabbed 125 bbls

total. Left well venting to frack tank.

7/18/24

Well dead. Released packer. TOOH. LD packer.  
PU tubing barrel. TIH with production string as  
follows:

1)	Mud anchor	15.00'
1)	tubing barrel assembly	20.00'
10)	jts 2 7/8"	323.50'
1)	tubing anchor	3.00'
134)	jts 2 7/8"	4334.90'

BOT landed at 4696.40' R/O to run in pump and  
rods as follows:

1)	4' x 2 1/2" grooved plunger
9)	1.5" x 25' sinker bars
177)	7/8" rods
1)	26' polished rod

Loaded hole, pressured to 700#. HELD. RD  
Hooking up wellhead and flowline.  
RU Pumping unit.

8/7/24

RU CCWS rig 4.

Rod part. Pulled 177) 7/8" and 9) sinker bars. Part was between plunger and bottom sinker bars.

C/O to pull tubing. TOOH. Pulled 16 stds well started flowing. Died down finished TOOH. NU shut in ring and left well open to swab tank.

8/8/24

Well venting gas with no fluid. TIH with tubing as follows

1) Mud anchor.	15.00'
1) Tubing barrel.	21.00'
10). Jts 2 7/8".	323,50'
1). Tubing anchor.	3.00'
134). Jts 2 7/8".	4334.90'

BOT landed at 4697.40'. C/O to run in pump and rods

- 1) 2 1/2" x 4' plunger

9). Sinker bars

177). 7/8" rods

1). 26' polished rod

Loaded hole, pressured to 700#. Held. Hung off well and started pumping. RD

# QUALITY WELL SERVICE, INC.

8579

Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124

Mailing Address P.O. Box 468

Office 620-786-6992  
Fax 620-672-3663

Todd's Cell 620-388-4967  
Brady's Cell 620-727-6964

Date	7-6-24	Sec.	16	Twp.	30S	Range	15W	County	BARBER	State	Ks	On Location	Finish
Lease	MADELYN		Well No.	41		Location							
Contractor	MURKIN DRLG R/G #104							Owner					
Type Job	Cond							To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Hole Size	17 1/2		T.D.	53'		Charge To							
Csg.	15 3/8		Depth	53'		Gaffin							
Tbg. Size			Depth			Street							
Tool			Depth			City State							
Cement Left in Csg.			Shoe Joint	10'		The above was done to satisfaction and supervision of owner agent or contractor.							
Meas Line			Displace	5.75		Cement Amount Ordered 425 sk 20/20 2 1/2 CEL 3 1/2 1 1/2							
<b>EQUIPMENT</b>										USED 100 sk			
Pumptrk	3	No.				Common 80 sk							
Bulktrk	12	No.				Poz. Mix 20 sk							
Bulktrk		No.				Gel. 180 lbs							
Pickup		No.				Calcium 271 lbs							
<b>JOB SERVICES &amp; REMARKS</b>										Hulls			
Rat Hole										Salt			
Mouse Hole										Flowseal 50 lbs			
Centralizers										Kol-Seal			
Baskets										Mud CLR 48			
D/V or Port Collar										CFL-117 or CD110 CAF 38			
Ran 1 1/2" 13 3/8 AB + CSG SET D 53'										Sand			
Hook up to CSG & 32 GAL CIRC W/1 1/2"										Handling 493			
START PUMPING H2O										Mileage 30 / 10000			
START MIX: Pump 100 sk Common 20/20										<b>FLOAT EQUIPMENT</b>			
2 1/2 CEL 3 1/2 1/2" PS D 14.8" GAL										Guide Shoe			
START DISP										Centralizer			
CLOSE VALVE ON CSG 575 lbs total										Baskets			
GOOD CIRC THRU JOB										AFU Inserts			
CIRC OFF TO PRT										Float Shoe			
										Latch Down			
										SERVICE SON 1 EA			
										LAW 30'			
THANK YOU										Pumptrk Charge Cond.			
PLEASE CALL AGAIN										Mileage 60			
TODD MARY HILTON													
X Signature										Tax			
										Discount			
										Total Charge			



# QUALITY WELL SERVICE, INC.

8580

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Mailing Address P.O. Box 468

Office 620-786-6992  
Fax 620-672-3663

Todd's Cell 620-388-4967  
Brady's Cell 620-727-6964

Date	7-8-24	Sec.	16	Twp.	30S	Range	15W	County	Barber	State	Ks	On Location	Finish
Lease	MADELYN		Well No.	# 1		Location							
Contractor	Martin DelG R.G. #104							Owner					
Type Job	SURFACE							To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Hole Size	12 1/4		T.D.	1029		Charge To							
Csg.	8 5/8 23"		Depth	1019		Griffin							
Tbg. Size			Depth			Street							
Tool			Depth			City State							
Cement Left in Csg.			Shoe Joint	42.20		The above was done to satisfaction and supervision of owner agent or contractor.							
Meas Line			Displace	62.52		Cement Amount Ordered 325 sk 80/20 21 CEL 3/16 1/2" P							
<b>EQUIPMENT</b>						250 sk Com 21. CEL 3/16 1/2" P used 150 sk							
Pumptrk	3	No.				Common 410 sk							
Bulktrk	7	No.				Poz. Mix 65 sk							
Bulktrk	15	No.				Gel. 86 B lbs							
Pickup		No.				Calcium 1302 lbs							
<b>JOB SERVICES &amp; REMARKS</b>						Hulls							
Rat Hole					Salt								
Mouse Hole					Flowseal > 30 lbs								
Centralizers	3-12				Kol-Seal								
Baskets	3-12				Mud CLR 48								
D/V or Port Collar					CFL-117 or CD110 CAF 38								
Run 24 ft's 8 5/8 23" # CSG SET D						Sand							
START CSG CSG on Bottom Drop Ball						Handling 516							
Hook up to CSG & BREAK CIRC W/ RIG						Mileage 30 12000							
START PUMPING H <sub>2</sub> O						8 5/8 <b>FLOAT EQUIPMENT</b>							
START MIX! Pump 325 sk LEAD D 14.7" KAL						Guide Shoe 1 EA H; M							
START MIX! Pump sk TAIL D 14.3" KAL						Centralizer 2 EA							
SHOT DOWN RELEASE 8 5/8 TOP Rubber Plug						Baskets 2 EA							
START DISP						AFU Inserts 1 EA							
PLUG DOWN 600" 62.52 30lb						Float Shoe 1 EA TOP Rubber Plug							
CLOSE VALVE CSG						Latch Down							
GOOD CIRC THE JOB						SERVICE SUP 1 EA							
CIRC OUT TO PST						LMV 35							
						Pumptrk Charge SURFACE							
						Mileage 90							
THANK YOU PLEASE CALL AGAIN TODD MARTIN Active HERMAN						Tax							
						Discount							
						Total Charge							
X Signature													



# QUALITY WELL SERVICE, INC.

8590

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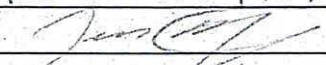
Mailing Address P.O. Box 468

Office 620-786-6992

Fax 620-672-3663

Todd's Cell 620-388-4967

Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish
7-13-24	16	30S	15W	Barber	Ks		
Lease	MADELYN		Well No.	1			
Contractor	MORTIN DR/G R/G # 104			Owner			
Type Job	5 1/2 LS			To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Hole Size	7/8		T.D.	4867			
Csg.	5 1/2 17"		Depth	4865			
Tbg. Size			Depth	Charge To Gaffin			
Tool			Depth	Street			
Cement Left in Csg.			Shoe Joint	643			
Meas Line			Displace	112.74			
<b>EQUIPMENT</b>				Cement Amount Ordered 205 & Pool 2% Gel 10% Salt			
Pumptrk	8 No.		5 1/2 x Kolsent .61 C16A 25% C41P 25 1/4 PS				
Bulktrk	10 No.		Common 205 &				
Bulktrk	No.		Poz. Mix				
Pickup	No.		Gel. 385 lbs				
<b>JOB SERVICES &amp; REMARKS</b>				Calcium			
Rat Hole	30S		Hulls				
Mouse Hole			Salt 1129 lbs				
Centralizers	1-2-3-4-5-6-7		Flowseal				
Baskets			Kol-Seal 1025 lbs				
D/V or Port Collar			Mud CLR 48 500 Gal				
Run 17 # 5 1/2 17" Csg SET D 4865				GFL-117-or-GB110 CAF-38 C16A 116 lbs			
START Csg Csg on Bottom TAG				Sand CC-1 9 Gal C41P 49 lbs			
DROP BALL Hook up to Csg & BREAK circ w/ rig				Handling 276			
START Pumping 10 Bbls 1/2 12 Bbls MF 10 Bbls H2O				Mileage 301 3280			
START Plug R-Hole 30S				5 1/2 FLOAT EQUIPMENT			
START MIXE Pump 175 & Pool 1/4 Csg 1/4 8" Gal				Guide-Shoe H & M 1 EA			
SHUT DOWN Wash up tick Release 5/2 L0				Centralizer 7 EA			
START Disp 20 2% KCL				Baskets			
LIFT PS 93 out 550"				AFU Inserts			
LAND Plug 112.7 Bbls 1100"				Float Shoe 1 EA			
PS up Csg 1700"				Latch Down 1 EA			
RELEASE & HELD 1/2 Bbl				SERVICE Sump 1 EA			
GOOD CIRC thru JOB				LMV 30'			
THANK YOU				Pumptrk Charge LS			
PLEASE CALL AGAIN				Mileage 60			
TODD MATT ACTHUR							
X Signature 				Tax			
				Discount			
				Total Charge			



Well Name: Madelyn #1  
 API: 15-007-24499  
 Location: T30S R15W Sec 16  
 License Number: 33936  
 Spud Date: 7/06/2024  
 Surface Coordinates: 990' FSL & 330' FEL  
 Region: Barber County, KS  
 Drilling Completed: 7/12/2024

Bottom Hole Vertical Wellbore  
 Coordinates:  
 Ground Elevation (ft): 1897' K.B. Elevation (ft): 1902'  
 Logged Interval (ft): 3700' To: 4867' Total Depth (ft): 4867'  
 Formation: Ordovician (Arbuckle) @ RTD  
 Type of Drilling Fluid: Mud-Co. Chemical Drispac  
 Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

**OPERATOR**

Company: Griffin Management, LLC  
 Address: 126 S. Main  
 Pratt, KS 67124

**GEOLOGIST**

Name: Eli J. Felts  
 Company: Griffin Management, LLC  
 Address: 126 S. Main  
 Pratt, KS 67124

**Drilling Report**

7/2/24  
MIRT  
  
 7/6/24  
Start Up  
  
 7/7/24  
Drilling @ 513'  
  
 7/8/24  
WOC @ 1029'  
  
 7/9/24  
Drilling @ 2180'  
  
 7/10/24  
Drilling @ 3722'  
  
 7/11/24  
CFS @ 4613'  
  
 7/12/24  
TOH @ 4867'  
  
 7/13/24  
Done - Release Rig @ 6:15 AM

Lithology	MD	Rate of Penetration ROP (min/ft) Gas (units)	Geological Descriptions	DSTs/MudSurveys, etc.
	3750		SH - flood deep brown to grey, some black; earthy organic; carbonaceous; visible laminations break along stacked edges; slight gas bubbles appear w/ slight pressure application to cuttings; odorless; fair % LS - white fn xln chalky w/ vis contact/trans into carb shales	
	3800		SH - deep grey to brown; black; smooth well compacted carb shales; Heebner Shale	
	3850		SH - flood dark earthy shales; organic rich; mature - visible laminations w/ soft break; slight show gas along visible laminations	
	3900		SH - lt to medium grey w/ dark-black speckled mineral inclusions; some sand remains throughout w/ significant reduction in % sand; dark minerals shimmer/lean w/ tilted tray; possible micaceous fragments included; no odor, ns	
	3950		SH - medium grey; smooth overall w/ nearly 0% visible sand; some darker speckled inclusions ca lithographic, med to soft shale; no odor, no shows	
	4000		SH - varshades grey, lt to medium & some dark shale; most solid w/ darker speckled incls; shales & clay minerals; micaceous appearance shimmery to glittery; v. fine grained qtz sand cluster shalebound	
	4050		LS - cream to buff, pale grey; white chalky in some; fine xln; partially foss; weathered w/ abdt loose shales; sandy texture in some; others fragtl coarse foss txt	
	4100		LS - cream to tan, brown; fine to v. fine xln w/ vis foss inclusions; poor visible xln dev; limited to no visible primary porosity; some dissolution & mineral staining present hinting at potential fractured/weathered section	
	4150		LS - stark white; big contrast; fine xln w/ chalky texture in many; soft loosely consolidated & fragile; some cream to tan, fn-med xln w/ partial stain; non-lively; no odor, no fluor, no shows	
	4200		LS - white, cm-brown, mst cherty appearance, fn-med xln, abdt oolite inclusions; weathered/reworked appearance overall; SH - greys w/ some tan to brown; silty	
	4250		LS - cream to white, lt tan to grey in part; fn to med xln w/ grainy rough texture & chalky break; dark stained edges grey to brown shale contacts; grey & organic brown shales w/ earthy to carb appearance	
	4300		LS - cream to lt tan/brown in part; lt grey foss w/ fn-med xln; gritty oatmeal-like texture; soft poorly compacted w/ chalky break in many; increasing shale staining/contacts & stringers; grey to brown; sb carb in most	
	4350		LS - mst cream to white; fine & med xln w/ sl granular to xln texture; sl dolomitic ip; chert marbled ip; chalky overall w/ white loose fragments scattered	
	4400		LS - cream to tan; brown, fn-med xln w/ rough weathered texture; fractured w/ sm vis xln; tan dev; partially stained w/ brown to dark; fluor is spotty; dull yellow, static/residual; non-lively; no visible droplets	
	4450		LS - cream to white; fine & med xln w/ sl granular to xln texture; sl dolomitic ip; chert marbled ip; chalky overall w/ white loose fragments scattered white & transitional pieces pale green shale; edge	
	4500		LS - cream to buff, white; fn & med xln; granular w/ some dolomitic xln dev; marbled CH - white to tan/brown; vitreous ip; micritic sm cottony w/ weathered cottony texture; soft friable w/ chalky break; low compaction/density oa; no odor, no show	
	4550		LS - cream to buff, abdt white; fine xln oa w/ pred soft loose chalky pos; fragmented to pulverized in some loose particles chalk meandering throughout; some soft gummy clays	
	4600		LS - cream to buff; greys; fine xln w/ smooth to sl xln texture; partially dolomitic ip; sucrosic granular texture; v. slight staining present in few pcs	
	4650		LS - cream to lt tan; brown; fine xln in most w/ v. fine xln ip; visible brown staining; pp dissolution porosity; questionable show visible w/ faint fluor in few pcs; edge to partial fluor; slight gas kick presents w/ 60"	
	4700		SH - flood pale cream to green; soft gummy ip; few clusters SS - cluster appears cream to tan w/ fine grains clear sb anglr qtz; well sorted; good friab w/ burst oil shows on break; free & lively w/ fair odor; fluor mild to fair; ~15% sample represented as sand w/ staining to slight live shows present; lacking odor	
	4750		Dolomite - cream to white w/ peachy/orange staining; mst fine xln dolomite to sucrosic texture w/ slight shows exchanged with loose soft chalky & occasional dark residual staining; CH - bone white vitreous w/ fractured & erosional porosity stained dark brown to black highlighting fluid transportation indicators; abdt pale green shales	
	4800		LS - cream to buff, some pale green & pink hue; varying composition w/ marbled cherty dolomite; dolomite LS & abdt cherty to chalky dolomitic limestone; scattered weathered pcs w/ fractured to tripolitic porosity & dark brown staining; abdt shales throughout; green to maroon, mottled in some	
	4850		LS - cream to white w/ dark webbed fractured staining; dolomitic xln % in most pcs w/ fair friability; dark staining w/ vssso on break; fleeting shows v. light, translucent w/ green-yellow fluor in ~10% rox CH - peach to org, opaque to semi translucent; mst vitreous w/ weathered edges & dark staining; surface stained edges w/ traces fluor; fair odor in cup	
	4900		Dolomite - cream to buff, white; fine xln sucrosic w/ partially saturated staining w/ some visible shows present floating freely; odor in cup present; bright yellow fluor in ~20%; dolomitic chert present in part	
	4950		Dolomite - w/mt, cream to tan w/ shows staining/saturating in many, fn xln sucrosic in most w/ sm med xln; good vis xln pos; s msi dissolution/te-xln development w/ scattered vitreous CH banding; fair-gd friab break w/ show lt bm-gld free oil; shows decreasing in 40" sample & 60" sample; abdt chert and limy presence	
	5000		LS appears white to cream, mst fine xln sucrosic w/ dolomitic, cherty to chalky texture in most; CH - bone white cherty & dense; many sharp & fresh; vis dolomite contactss & dissolution vugs along fractures; fine xln sucrosic texture & trans limy	
	5050		SH - flood green shale w/ moderate to high % sand content; dark green w/ some visible dark swirling locked up in shale; break releases streaks tarry residual specks w/ sticky/clingy feel; no fluor; SS inclusions are qtz; fine grain well med & std w/ poorly friable clusters (trapped in shales) fair amount pyrite xln dev within shales among sand grains	
	5100		SH - dark green silty to partly sandy; smooth waxy texture in some w/ soft to sl brittle break; few w/ dark tarry spots; decreasing & decreasing overall % visible SS; mostly dark blue-green, Simpson Type shale	
	5150		SH - dark green w/ increasing sand % w/ few clusters "clean" SS appear cream w/ dark inclusions; sl dense granular, well cemented & fair amt pyrite & carb shales within; poorly dev intragranular pores; no odor, no shows	
	5200		LS - cream to white; buff, fn to med xln w/ heavily chalky & partly dolomitic texture; soft to powder on break w/ slight resistance in pcs w/ higher chert % barren; no odor, ns	
	5250		Dolomite - cream to buff, fn to v. fine xln w/ smooth texture overall w/ no visible porosity; well cemented, v. dense break; lithographic	
	5300		Dolomite - flood cleaned dolomite; cream to lt grey, fine xln sucrosic in most w/ few med xln; some imbedded CH in part appears in few pcs w/ oolitic foss w/ CH replacement; semi-translucent in some; dense overall; well compacted; poor vis porosity; no odor, no shows	
	5350		Dolomite - cream to lt tan, fn xln w/ sl sucrosic texture in some; fair vis xln porosity w/ soft friability; cherty stringers remain in some w/ translucent oolitic foss incls; lithographic oa w/ no odor, ns	
	5400		Dolomite - cream, fn xln in most w/ granular, fossiliferous & some sandy appearance textures ip; abdt stringers turquoise green shale dip in and out along edges	