KOLAR Document ID: 1309689

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 # 34318
Name: BEREXCO LLC
Address 1: 2020 N. BRAMBLEWOOD
Address 2:
City: WICHITA State: KS Zip: 67206 + 1094
Contact Person: Brett Blazer
Phone: (316) 265-3311
CONTRACTOR: License # 34317
Name: BEREDCO LLC
Wellsite Geologist: Ed Grieves
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 #:

05/06/2016 Spud Date or Recompletion Date
05/17/2016 Date Reached TD
06/15/2016 Completion Date or Recompletion Date

API No.: 15-187-21327-00-00
Spot Description:
W2 - NE - NE - NW Sec. 7 Twp. 29 S. R. 40 ☐ East ☑ West
335 Feet from ☑ North / ☐ South Line of Section
3040 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: Stanton
Lease Name: Earl Arnold Well #: 7-3
Field Name:
Producing Formation: Morrow
Elevation: Ground: 3316 Kelly Bushing: 3328
Total Vertical Depth: 5674 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1701 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 3201 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: 1800 ppm Fluid volume: 1000 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: 07/21/2016
☑ **Confidential Release Date:** 07/21/2018
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 07/21/2016

Operator Name: BEREXCO LLC Lease Name: Earl Arnold Well #: 7-3

Sec. 7 Twp. 29 S. R. 40 ☐ East ☑ West County: Stanton

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
Geologist Report / Mud Logs	☐ Yes	☐ No

List All E. Logs Run:
Attached

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

Name	Top	Datum
Base Heebner	3703	-375
Base KC	4324	-996
Morrow	5020	-1692
Mississippi	5460	-2132

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	24	1701	65/35 POZ, Class A	730	1/4# flakes, 3% CC
Production	7.875	5.5	15.5	5662	AMD, ASC	540	1/4# flakes, 2%CC, 2% gel, 10% salt, 5#

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	-			
	-			

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: 06/27/2016

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	29	31	1		

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)*

PRODUCTION INTERVAL:

Top	Bottom
5451'-5459'	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: 2.375 Set At: 5408 Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Earl Arnold 7-3
Doc ID	1309689

All Electric Logs Run

Neutron Density
Dual Induction
Microlog
Sonic

Form	ACO1 - Well Completion
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Well Name	Earl Arnold 7-3
Doc ID	1309689

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	1701	65/35 POZ, Class A	730	1/4# flakes, 3% CC
Production	7.875	5.5	15.5	5662	AMD, ASC	540	1/4# flakes, 2%CC, 2% gel, 10% salt, 5# gilsonite, 5.5% gyp, 0.5% fluid loss, 0.25% defoamer

ALLIED OIL & GAS SERVICES, LLC

CEMENTING LOG

STAGE NO.

Date 5/18/16 District Oakley Ticket No. 06752
Company Berexco Rig Berexco 1
Lease Earl Arnold Well No. 7-3
County Stanton State Ks
Location Field

CASING DATA: Conductor ☐ PTA ☐ Squeeze ☐ Misc ☐
Surface ☐ [✓ Intermediate ☒] Production ☐ Liner ☐

Size 8 5/8 Type Weight Collar

Casing Depths: Top KB Bottom 1728.85

Drill Pipe: Size 4 1/2 Weight Collars
Open Hole: Size 12 1/4 T.D. ft. P.B. to ft.

CAPACITY FACTORS:
Casing: Bbls/Lin. ft. .0637 Lin. ft./Bbl.
Open Holes: Bbls/Lin. ft. Lin. ft./Bbl.
Drill Pipe: Bbls/Lin. ft. Lin. ft./Bbl.
Annulus: Bbls/Lin. ft. Lin. ft./Bbl.
Bbls/Lin. ft. Lin. ft./Bbl.
Perforations: From ft. to ft. Amt.

CEMENT DATA:
Spacer Type:
Amt. Sks Yield ft³/sk Density PPG

LEAD: Pump Time hrs. Type ALW 65/35 6% gel 3% CC
1/4 Flo Excess
Amt. 580 Sks Yield 2.2 ft³/sk Density 12.07 PPG
TAIL: Pump Time hrs. Type Com 3% CC
Excess
Amt. 150 Sks Yield 1.33 ft³/sk Density 14.9 PPG
WATER: Lead 12.45 gals/sk Tail 6.2 gals/sk Total Bbls.

Pump Trucks Used 818-281 - Kevin
Bulk Equip. 840 - Wayne
841 - Cory

Float Equip: Manufacturer
Shoe: Type Cement nose Depth 1728.85
Float: Type Depth
Centralizers: Quantity 3 Plugs Top Btm.
Stage Collars
Special Equip.
Disp. Fluid Type H_2O Amt 108 Bbls. Weight 8.34 PPG
Mud Type Weight / PPG

COMPANY REPRESENTATIVE

CEMENTER [illegible]

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS
AM/PM	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	
						On location SPT, rig setup
						Run Csg, Circulate
	100			228.0	3 1/2	Mix ALW
	200			36.0	3 1/2	Mix Com
	400					Displace Plug w/ H_2O
	800					Bump Plug
6:30						Job Complete

FINAL DISP. PRESS: PSI BUMP PLUG TO PSI BLEEDBACK BBLS. THANK YOU

MILLER PRINTERS, INC. - Great Bend, KS

ALLIED OFS, LLC

Cement Job Summary

Job Number:	Llb1605182130	Job Purpose	04 Port Collar/Stage
Customer:	Berexco LLC	Date:	5/18/2016
Well Name:	Earl Arnold	Number: 7-3	API/UWI:
County:	Stanton	City:	State: Kansas
Cust. Rep:		Phone:	Rig Phone:
Distance	50 miles (one way)	Supervisor	Lenny Baeza

Employees:	Emp. ID:	Employees:	Emp. ID:
Kirby Harper		Kindel Holman	
Paul Mazzalongo		Lenny Baeza	
Ramon Escarcega			

Equipment:	
994-550	1080-842
	774-744

Materials - Pumping Schedule

STAGE #1

Fluid Name	Description	Rqstd Qty	Density	Yield	Water (gal/sk)
Spacer 1	FRESH WATER	5	8.34	n/a	n/a
Fluid Name	**Description**	**Rqstd Qty**	**Density**	**Yield**	**Water (gal/sk)**
Lead 1	ALLIED MULTI-DENSITY CEMENT - CLASS A	150	11.54	2.95	18.00
Fluid Name	**Description**	**Rqstd Qty**	**Density**	**Yield**	**Water (gal/sk)**
Tail 1	ALLIED SPECIAL BLEND CEMENT - CLASS A	165	14.80	1.51	6.55
Fluid Name	**Description**	**Rqstd Qty**	**Density**	**Yield**	**Water (gal/sk)**
Disp. 1	Fresh Water	59.5	8.34	n/a	n/a
Fluid Name	**Description**	**Rqstd Qty**	**Density**	**Yield**	**Water (gal/sk)**
Disp. 2	Drilling Mud	76.2	9.00	n/a	n/a

STAGE #2

Fluid Name	Description	Rqstd Qty	Density	Yield	Water (gal/sk)
Stg 2 Spacer 1	FRESH WATER	5	8.34	n/a	n/a
Fluid Name	**Description**	**Rqstd Qty**	**Density**	**Yield**	**Water (gal/sk)**
Stg 2 Lead 1	ALLIED MULTI-DENSITY CEMENT - CLASS A	175	11.58	2.95	17.85
Fluid Name	**Description**	**Rqstd Qty**	**Density**	**Yield**	**Water (gal/sk)**
Stg 2 Tail 1	ALLIED SPECIAL BLEND CEMENT - CLASS A	50	14.80	1.51	6.55
Fluid Name	**Description**	**Rqstd Qty**	**Density**	**Yield**	**Water (gal/sk)**
Stg 2 Tail 2	ALLIED MULTI-DENSITY CEMENT - CLASS A	50	12.00	2.20	12.60
Fluid Name	**Description**	**Rqstd Qty**	**Density**	**Yield**	**Water (gal/sk)**
Stg 2 Disp. 1	Fresh Water	76.2	8.34	n/a	n/a

Slurry: Lead 1			Slurry Name: ALLIED MULTI-DENSITY CEMENT - CLASS A				
Quantity:	150 sacks		**Blend Vol:**	179.26 cu.ft.		**Blend Weight:**	15715.32 lbs
Material	Description			Conc. (lb/sk)	Determined by	Load Volume	UOM
CCAC	CLASS A COMMON			94	% Base Materia	14100.0	lbm
CA-500	GYPSUM			1.88	% BWOC	282.0	lbm
CA-200	SODIUM CHLORIDE			1.88	% BWOC	282.0	lbm
CGEL	GEL - BENTONITE			3.76	% BWOC	564.0	lbm
CA-300	POTASSIUM CHLORIDE			2.9988	% BWOW	449.8	lbm
CLC-CPF	CELLOPHANE FLAKES			0.25	lb/sk	37.5	lbm
Water	Mixing Water			18.00	gal/sk	2700	gal

Slurry: Tail 1			Slurry Name: ALLIED SPECIAL BLEND CEMENT - CLASS A				
Quantity:	165 sacks		**Blend Vol:**	218.02 cu.ft.	cu.ft.	**Blend Weight:**	18604.575 lbs

ALLIED OFS,LLC

Cement Job Summary

Material	Description	Conc. (lb/sk)	Determined by	Load Volume	UOM
CCAC	CLASS A COMMON	94	% Base Materia	15510.0	lbm
CA-200	SODIUM CHLORIDE	6	lb/sk	990.0	lbm
CA-500	GYPSUM	5.17	% BWOC	853.1	lbm
CGEL	GEL - BENTONITE	1.88	% BWOC	310.2	lbm
CLC-KOL	KOL-SEAL	5	lb/sk	825.0	lbm
CFL-330	FLUID LOSS ADDITIVE - LOW DENSITY SLURRIES	0.47	% BWOC	77.6	lbm
CDF-100P	DEFOAMER - POWDER	0.235	% BWOC	38.8	lbm
Water	Mixing Water	6.55	gal/sk	1080.8	gal

Slurry: Stg 2 Lead 1	**Slurry Name:** ALLIED MULTI-DENSITY CEMENT - CLASS A				
Quantity:	175 sacks	**Blend Vol:**	215.59 cu.ft.	**Blend Weight:**	18659.16675 lbs

Material	Description	Conc. (lb/sk)	Determined by	Load Volume	UOM
CCAC	CLASS A COMMON	94	% Base Materia	16450.0	lbm
CA-500	GYPSUM	1.88	% BWOC	329.0	lbm
CA-200	SODIUM CHLORIDE	1.88	% BWOC	329.0	lbm
CGEL	GEL - BENTONITE	3.76	% BWOC	658.0	lbm
CA-300	POTASSIUM CHLORIDE	2.97381	% BWOW	520.4	lbm
CLC-CPF	CELLOPHANE FLAKES	0.25	lb/sk	43.8	lbm
CA-100	CALCIUM CHLORIDE, PELLETS OR FLAKE	1.88	% BWOC	329.0	lbm
Water	Mixing Water	17.85	gal/sk	3123.75	gal

Slurry: Stg 2 Tail 1	**Slurry Name:** ALLIED SPECIAL BLEND CEMENT - CLASS A				
Quantity:	50 sacks	**Blend Vol:**	666337408389 cu.ft.	**Blend Weight:**	5637.75 lbs

Material	Description	Conc. (lb/sk)	Determined by	Load Volume	UOM
CCAC	CLASS A COMMON	94	% Base Materia	4700.0	lbm
CA-200	SODIUM CHLORIDE	6	lb/sk	300.0	lbm
CA-500	GYPSUM	5.17	% BWOC	258.5	lbm
CGEL	GEL - BENTONITE	1.88	% BWOC	94.0	lbm
CLC-KOL	KOL-SEAL	5	lb/sk	250.0	lbm
CFL-330	FLUID LOSS ADDITIVE - LOW DENSITY SLURRIES	0.47	% BWOC	23.5	lbm
CDF-100P	DEFOAMER - POWDER	0.235	% BWOC	11.8	lbm
Water	Mixing Water	6.55	gal/sk	327.5	gal

Slurry: Stg 2 Tail 2	**Slurry Name:** ALLIED MULTI-DENSITY CEMENT - CLASS A				
Quantity:	50 sacks	**Blend Vol:**	59.12 cu.ft.	**Blend Weight:**	5193.46 lbs

Material	Description	Weight (lb/sk)	Determined by	Load Volume	UOM
CCAC	CLASS A COMMON	94	% Base Materia	4700.0	lbm
CA-500	GYPSUM	1.88	% BWOC	94.0	lbm
CA-200	SODIUM CHLORIDE	1.88	% BWOC	94.0	lbm
CGEL	GEL - BENTONITE	3.76	% BWOC	188.0	lbm
CA-300	POTASSIUM CHLORIDE	2.09916	% BWOW	105.0	lbm
CLC-CPF	CELLOPHANE FLAKES	0.25	lb/sk	12.5	lbm
Water	Mixing Water	12.60	gal/sk	630	gal

Job Number:	Llb1605182130	Job Purpose	04 Port Collar/Stage		
Customer:	Berexco LLC			Date:	5/18/2016
Well Name:	Earl Arnold		Number: 7-3	API/UWI:	
County:	Stanton	City:		State:	Kansas
Cust. Rep:		Phone:		Rig Phone:	0
Distance	50 miles (one way)			Supervisor	Lenny Baeza

DATE	TIME	PRESSURE - (PSI)		FLUID PUMPED DATA		COMMENTS
	AM/PM	CASING	ANNULUS	VOLUME	RATE (BPM)	
5/18/2016	3:00pm					ARRIVE ON LOCATION

ALLIED OFS,LLC

Cement Job Summary

1st Stage	7:45pm					SAFETY MEETING
	8:00pm					PUMP WATER AHEAD
	8:02pm	3000		0		Pressure test lines
	8:04pm	240		5	4	5 bbls of flush water ahead
	8:06pm	230		83	4	Mixing Lead Cement 11.5#
	8:28pm	210		127	5	Mixing Tail Cement 14.8#
	8:48pm	0		127	0	Shut down to washing pump
						lines to the pit and drop plug
	8:53pm	110		127	4	Dropped plug and starting
						displacement of 60 bbls of
						water and 73 bbls of MUD
	9:03pm	250		187	6	60 bbls gone and swapping
						to MUD
	9:04pm	250		207	6	80 bbls gone
	9:06pm	760		227	5	100 bbls gone
	9:17pm	1030		247pm	3	120 bbls gone slowing down
					3	to land plug
	9:20pm	1800		260		133 bbls gone and laned plug
	9:22pm			260		Dropping bomb to open tool
	9:42pm	840		260		Tool opened and circluate for
						4 hrs
5-19-16	1:00am				3	Plugging rat and mouse hole
2nd Stage	1:30am			5	5	5 bbls flush
	1:40am	210		97	5	Mixing lead cement 11.5#
	2:04am	180		110	4	Mixing Tail cement 14.8#
	2:10am	0		110	0	Shut down to wash to pit
	2:16am	80		110	4	Plug left head and started
						displacement of 76 bbls
	2:24am	280		150	6	40 bbls gone
	2:28am	540		170	5	60 bbls gone
	2:29am	570		176	3	66 bbls gone slowing down
						to land the plug
	2:32am	2000		186	3	76 bbls gone and landed plug
						Released and float holding
		2500				Went up to 2500 psi to make
						Sure DV Tool Closed
						Full returns threw job
						Rigging up
						Leaving location @3:30am

GEOLOGIST'S REPORT

DRILLING TIME & SAMPLE LOG

COMPANY Berexco LLC

LEASE Earl Arnold NO. 7-3

LOCATION 335'FNL & 3040'FEL

SEC. 7 TWP. 29S RNG. 40W

COUNTY Stanton , STATE Kansas

FIELD ARroyo Northeast

ELEVATIONS
KB 3328
DF 3326
GL 3316

MEASUREMENTS ARE ALL FROM KB

CONTRACTOR Beredco Drlg. Rig #1

COMM. 5-6-2016 COMP. 5-18-2016

RTD 5674 LTD

CASING RECORD
8 5/8" at 1710 w/ 730 sx
at w/ sx
at w/ sx
at w/ sx

No. of DST'S None No. of CORES None

EL. LOG AORes·SP·GR
Den·Neut·G.R·Caliper
ML·Sonic

SAMPLES SAVED FROM 3500 TO TD

DRILLING TIME KEPT FROM 3500 TO TD

SAMPLES EXAMINED FROM 3500 TO TD

GEOLOGICAL SUPERVISION FROM 4226 TO TD

GEOLOGIST ON WELL Edwin H. Grieves

FORMATION TOPS

	SAMPLE	LOG	SUBSEA
Base Heebner	3705		
Lansing Fm	3765		
Marmaton	4359		
Ft. Scott	4530		
Morrow Fm	5013		
St. Genevieve	5536		
St. Louis	5612		
TD	5674		

7

API# 15-187-21327

MARKS Earth-Tech had an unmanned gas detection trailer on this well from 3500 feet to total depth.

Thank you,
Edwin H. Grieves
Geologist

THOLOGY

- SANDSTONE
- LIMESTONE
- SHALE
- CHERT
- SILTSTONE
- DOLOMITE
- GRANITE WASH
- ANHY & GYP

CHROMATOGRAPH

HOT WIRE BY TOTAL GAS VOLUME

C1 = METHANE
C2 = ETHANE
C3 = PROPANE
C4 = ISOBUTANE
C5 = BUTANE
C6 = ISOPENTANE
C7 = PENTANE

ILL TIME SCALE 5 10 15

SAMPLE DESCRIPTION

3500

GAS SCALE 10 100 1000

LITHOLOGY

SANDSTONE
LIMESTONE
SHALE
CHERT
SILTSTONE
DOLOMITE
GRANITE WASH
ANHY & GYP

CHROMATOGRAPH

HOT WIRE BY TOTAL GAS VOLUME

C1 = METHANE
C2 = ETHANE
C3 = PROPANE
C4 = ISOBUTANE
C5 = BUTANE
C6 = ISOPENTANE
C7 = PENTANE

DRILL TIME SCALE
5 10 15

SAMPLE DESCRIPTION

GAS SCALE
10 100 1000

3500

Interbedded Limestones
① Faster Drlg. Lms. buy. trs. to extr. abu. wht. to crm-chlk trs. w/chlk oolites & crm., lt. tn. to tan; crypto to v.v.fn. xln.; sub-chlk, sub-sucro. to sucro; dul. yel. to dul. lt. yel. fluor.; No Cut; abu. pp to fr + trs. gd. to excell micro-pp. por
② Slower Drlg. Lms. lt. gry to tan crypto. to v.v.fn. xln.; sub-chlk sub-sucro. to packstn. phantom oolitic IPs. to oolitic IPs; dul. yel. to dul. lt. yel. fluor No Cut; No Vis. Por.

3600

— Sh v. drk gry to black-carb.

3700

Base Heebner
3705 - 3717

Lms. gry-tan; crypto xln. packstn to sub-lithogr.; dul. yel. fluor; No Cut — No Vis Por.

Sh. lt. gry. to lt. green; soft & mushy when wet; silty IPs

Interbedded Limestones
① Faster Drlg Lms. buy trs. w/ltogrn-chlk & crm to tan; crypto to v.v.fn xln.; sub-chlk, sub-sucro to trs. sucro.; dul. yel. fluor; No Cut; w/ widely scattered trs por. microfract
② Slower Drlg. Lms. gry-tan to tan chlky to tov.v.fn.xln. trs sub-chlky sub-sucro

Sh v. dark gy to black-carb.

3700

Base Heebner
3705 - 377

Lms. gy, light tan; cryptaxln. packstn to sub-lithogr; dul. yel-fluor; No Cut
No Vis Por.

Sh. H. gray to lt. green; soft + mushy when wet; silty lams

Interbedded Limestones
① Faster Dalg Lms. hvy trs. wht to cream chlk + crm to tan; crypto to v.v. fn xln; sub-chlk, sub-sucro to trs. sucro; dul. yel-fluor; No Cut; w/ widely scattered trs pr. micro ipp por
② Slower Dalg. Lms. gy, lt. tan to trnsl. cryptto to v.v. fn. xln; trs sub-chlky sub-sucro packstn + sli. trs. sub-lithogr; dul. yel-fluor lams; No Cut; No Vis Por

Sh. med. to dark. gry; sl. to v. calc

Lansing
3765 - #37

Interbedded Limestones

3800

① Faster Dalg Lms. trs. to hvy. trs wht to crm - chlk lt gryish. tan to tan crypto. to v.v. fn xln; sub-chlk, sub-sucro. to sucro.; scattered trs. phantom oolitic to trs oolitic; dul. yel. to dul. lt. yel. fluor; No Cut; scattered trs to hvy trs pr to fr micro-ipp. por. + poss interxln por. lams.
② Slower Dalg. Lms. lt. gry. to tan; crypto. to v.v. fn xln; trs. sub-chlk sub-sucro, packstn, trs sub-lithogr. trs. phantom oolitic to trs. oolitic dul lt yel fluor No Cut; No Vis Por

3900

Lms. v. to extra. abn wht. to cream chlk trs. w/ chlk oolites + tan; crypto to v.v. fn. xln.; v. to extrly oolicastic + / or sli. to v. oolitic; MATRIX trs. sub-chlk, sub-sucro to sucro. + packstn., mottled yel. to golden yel. fluor.; No Cut abn. pr-grdng to exel.

Lms. v. to extr. abn wht. to crm-chlk trs. w/chlk oolites + tan; crypto to v.v.fn. xln.; v. to extrely oolicastic +/or sli. to v. oolitic; matrix trs. sub-chlk, sub-sucro. to sucro. + packstn., mottled yell. to glden yel. fluor.; No cut abn. pr. grdng to exell. oolicastic por. w/trs poor to sli trs fair micro-pp. por Quest. Perm

4000

Lms. lt. gry. to tanish lt. gry., crypto to v.v. fn. xln.; sub-chlk, sub-sucro. + packstn.; dul. yel. fluor.; 1P's No cut No Vis Por

Lms. similar 3947-4014

Lms similar 4014-4022

Lms similar 3947-4014

Lms. lt. to med. gry. - sli. to v. Shly and grayish tan to tan; crypto. to v.v. fn. xln; sub-chlk or Shly sub-sucro. + packstn.; trs dull yel. fluor. 1P's No cut; No Vis Por

4100

Lms. v. abn. wht. to crm chlk + crm to lt tan; crypto. to v.v. fn. xln.; v. to extrly oolicastic +/or sli to fairly oolitic; matrix sub-chlk, sub-sucro. + packstn.; dul lt. to lt. yel. fluor.; No cut; abn. fr. gd to excel. oolicastic por. Quest. Perm

Lms. similar 4047-4134

Lms similar 4134-4156

4200

Adjusted Agitator At 4226 So Would Read Gas

Total all Limestones

Lms Similar 4134-4156

4200

Adjusted Agitator At 4226 So Would Read Gas

Torq Stopped

Interbedded Limestones
① Lms. trs. crm to wht.-chlk & crm; lt. tan to tan; grayish. lPS; crypto. to v.v.fn. xln.; sub-chlk, sub-sucro. & packstn.; dul. lt. yel. to trs lt. yel fluor.; No Cut; No Vis Por
② Lms. lt. to med. gray w/trs. drk. gry; sli. to v. Shly.; crypto. to v.v.fn. xln.; sub-chlk &/or Shly. & packstn.; No fluor.; No Cut; No Vis Por.; becoming more Shly. w/depth

Torq Stopped

C

4300

Sh lt., med. to drk. gry.; frly to extr'ly. calc. grding. to Shy. Lms.

Marmaton 4357-1031

Lms. trs. wht. to crm-chlk & lt. gry crm. to tan; crypto. to v.v.fn. xln.; trs. chlk, sub-chlk, trs. sub-sucro. & packstn; trs. foss. dul. yel. to dul lt. yel. fluor.; No Cut; No Vis Por

Lms. extr. abun. wht. to crm-chlk w/chlk. oolites lPS & lt. tan to tan, grayish. lP's; crypto. to v.v.fn. xln.; v. to extr'ly oolicastic &/or sl. to v. oolitic; matrix sub-chlk, sub-sucro. & packstn.; dul. yel. fluor.; No Cut v. abun. fr., gd. to excel oolicastic por.; Quest. Perm

4400

Interbedded Limestones
① Lms. lt., med. to drk. gry. - sli. to v. Shly w/grayish tan to tan; crypto. to v.v.fn. xln.; sub-chlk &/or Shly.; sub-sucro & packstn; trs. w/dul yel. fluor. No Cut; No Vis Por.
② Some of Faster Drlg. maybe similar 4385-4414

Interbedded Limestones
① Lms. lt., med. to drk. gry. - sli. to v. shly w/ grysh. tan to tan; cryptо. to v.v.fn.xln.; sub-chlk to Shly.; sub-sucro. packstn.; trs. w/ dul yel. fluor. No Cut; No Vis Por.
② Some of Faster. Drlg. maybe similar 4385-4414 or. stringing in samples from above

4500

Bit Trip At 4509

Sh. v.drk.gry. to black-carb. Lms. med to drk. gry. - shly, cryptо. xln. sub-chlk to Shly. packstn, No Fluor, No Cut; No Vis Por
4535-4552 Lms. trs. wht. to crm-chlk + grysh. tan to tan; cryptо to v.v.fn.xln.; sub-chlk. sub-sucro. to sucro.
abn. phantom oolitic to sli. trs oolitic; dul. lt. to lt. yel-fluor.; No Cut
abn. pr. to fn. micro-pp por & poss. interxln por

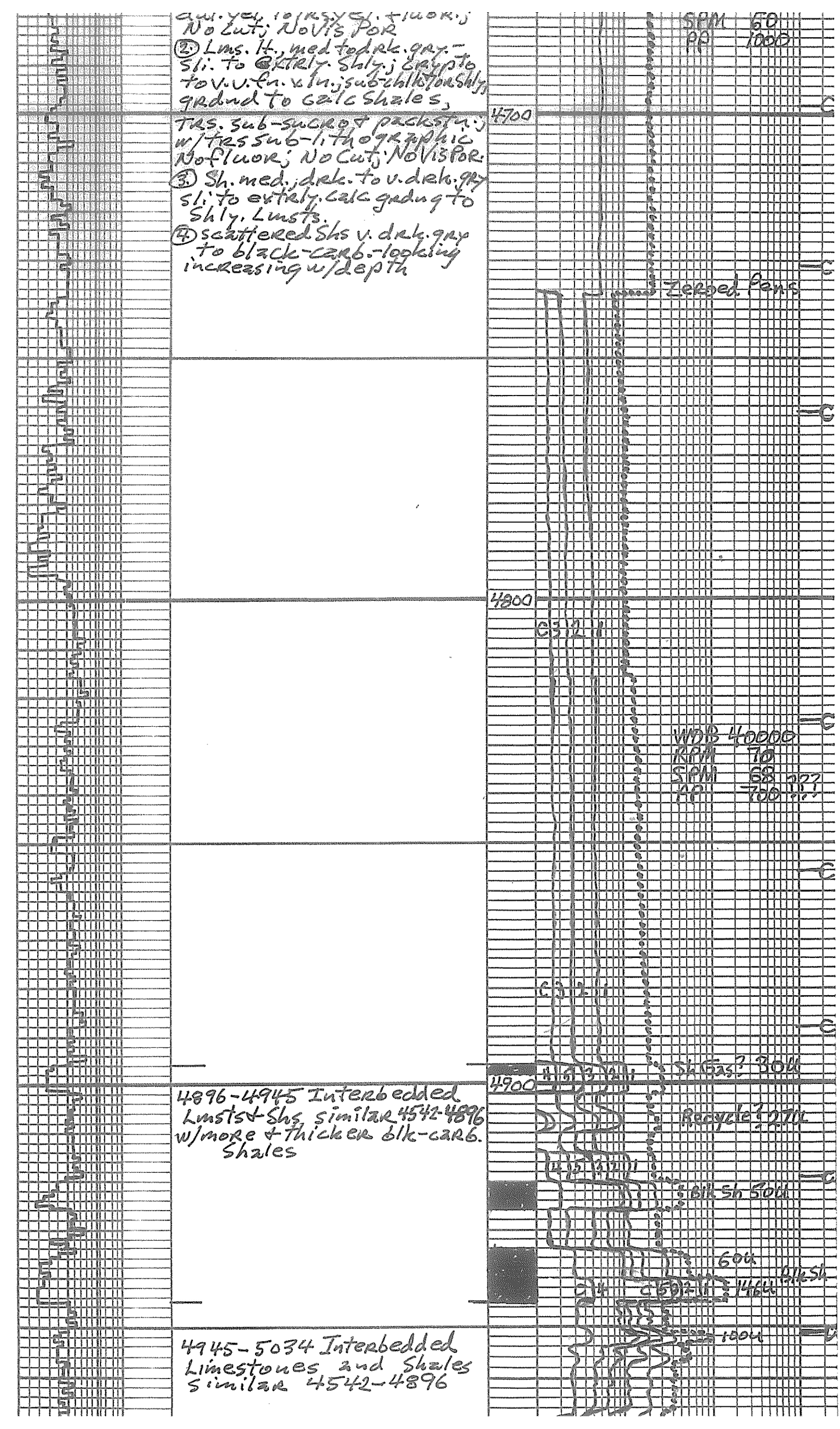
4542-4896 Interbedded Limestones + Shales
① Lms. trs. wht. to crm-chlk + tan, grysh. lt's; cryptо. to v.v.fn.xln.; sub-chlk; sub sucro, packstn. + sub-lithographic; abn. w/ phantom oolites to scattered hvy trs oolitic; dul. yel. to trs. yel. fluor.; No Cut; No Vis Por
② Lms. lt., med to drk. gry. - sli. to Extrly. Shly.; cryptо to v.v.fn.xln.; sub-chlk to Shly; grdud to calc Shales, trs. sub-sucro & packstn.;

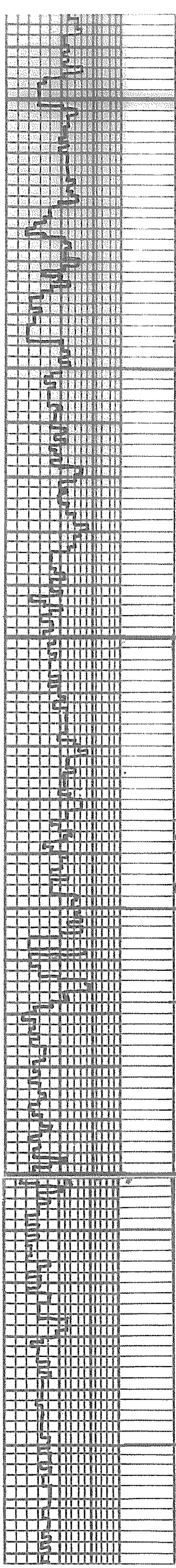
4600

Conn Gas 7260u

WOB 40000
RPM 70
SPM 60
PP 1000

4700


No Cut; No Vis Por
(2.) Lms. lt., med to dk. gry. - sli. to ◎ ktrly. Shly; crpt to to v.v.fn. v fn.; sub-chlkstone Shly; grdng to calc Shales,
TRS. sub-sucrosic packst n.; w/ trs sub-lithographic No fluor; No Cut; No Vis Por.
(3.) Sh. med., dk. to v. dk. gry sli. to extrly. calc grdng to Shly. Lmsts.
(4.) scattered Shs v. dk. gry to black-carb.-looking increasing w/depth
4700
4800
4900
4896-4945 Interbedded Lmsts & Shs similar 4542-4896 w/more & thicker blk-carb. Shales
4945-5034 Interbedded Limestones and Shales similar 4542-4896
SPM 60
PP 1000
Zeroed. Pens
WOB 40000
RPM 70
SPM 68 ???
PP 700 !!?
Sh Gas? 30u
Recycle? 270u
Blk Sh 50u
60u
Blk Sh
1460u
1000u



4896-4945 Interbedded Lmsts+Shs similar 4542-4896 w/more + thicker blk-carb. Shales

4945-5034 Interbedded Limestones and Shales similar 4542-4896

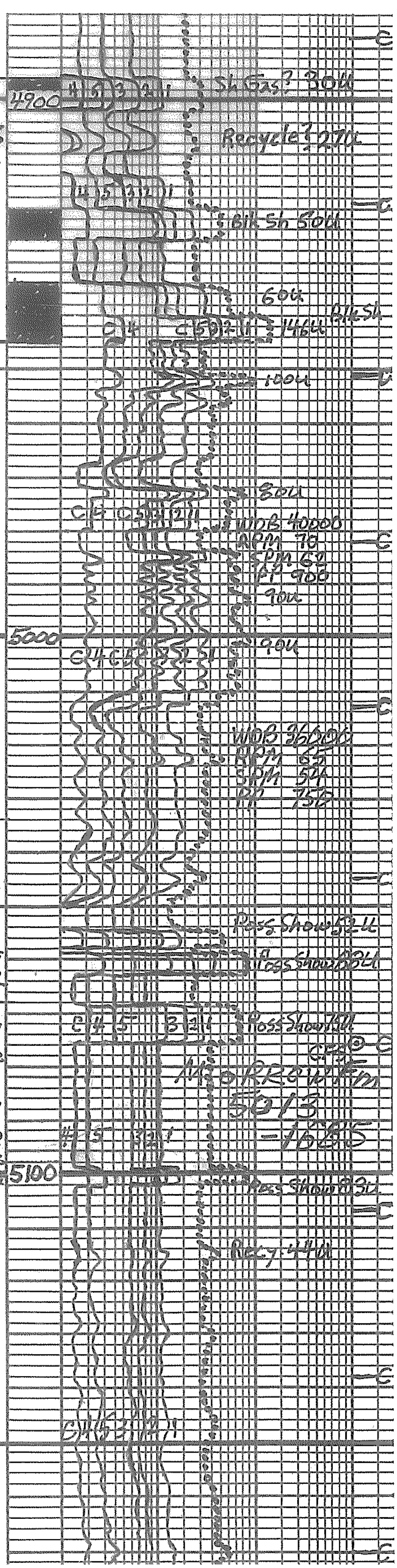
← MORROW E-log Pick →

5034-5068 Interbedded Lmsts+Shs similar 4542-4896 w/scattered trs. vv.fn.gr. Qtz sdsts to siltstns

① Siltstn lt.gry. to lt. green from glauc &/or chlorite No fluor. No Cut; No Vis Por.

② 5055-5063 Qtz Sdst to siltstn brn. w/trs v.v.fn. embedded Qtz grs-allang.; v.pr. to 1/3 fr to gd. sort; trs to abn. finely disseminated pyrite; No Cut; hvy. trs pr. to trs fr. intergr. por

5068-5340 Sh. med.gry., soft.; silky Luster IP's to dk. gry.- splintery; trs. to hvy trs pyrite w/scattered Lms. beds; lt. to med. gry. grdng. to tan; crypto. to v.v.fn.-xln.; trs sli to v. foss.; v. sli trs. sub-sucro packstn. to sub-lithographic v. sli trs v. dull yel. fluor.; No Cut No Vis Por



5068-5340 Sh med gry, soft w/silky luster IPs to drk gry splintery IPs; trs. to huy trs. pyrite w/scattered Lms. beds. H. tomed. grs grdng. to tans; crypto to v.v.fn.xln. trs. sl. to v. foss.; v. sl. trs sub-sucro.; packstone to sub-lithographic; v. sl. trs v. dul. H. yel. fluor. No Cut; No Vis POR.

5200

5340-5376 Lm + Qtz Sdst. 40% are 100% Lm grs grdng to 5 to 10% are 100% Qtz grs.; Lms. lt. gry to tan; v.fn to med + trs coarse grs; composed of Lm grs. oo's, trs + foss frags matrix sub-sucro to trs sucro + packstn; sl. to fnly glauc + pr chloritic; No fluor; No Cut; No Vis POR. and Qtz Sds lt. gry. to tanish lt. gry.; v.v.fn to v.fn., silt. filled; ang.; prly Sorted; sl. to v. glauc + or chloritic. No fluor.; No Cut; v. sl. trs v. pr micro-pp. por IPs

5300

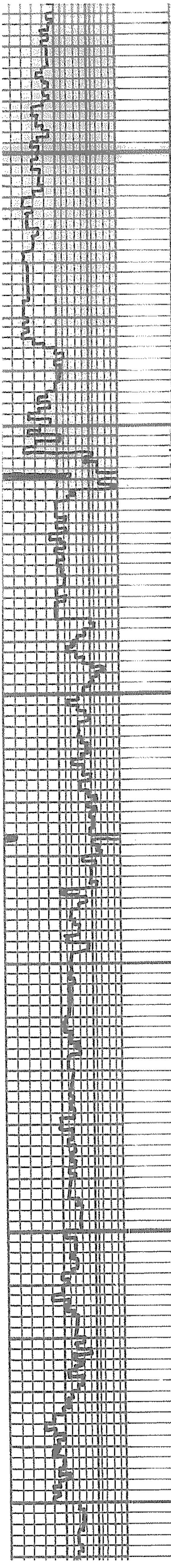
5376-5408 Sh. med. gry-soft, silky luster IPs; + drk. gry splintery; huy trs. of Lm + Qtz Sdsts. from above stringing in samples

5408-5435 Qtz Sdst. lt. gry whtish. gry. to grysh. tan v.v.fn. to fn gr. w/huy trs. to 20% coarse gr.; ang. w/trs. to huy trs. sub-ang. to sub-rnded; prly sort. fair oil odor; mostly sl. to fnly glauc + or chloritic sl. trs. pyrite; huy trs. w/gld. yel. fluor.; w/faint to gd strmng cuts huy trs. w/tan oil stn.; huy trs

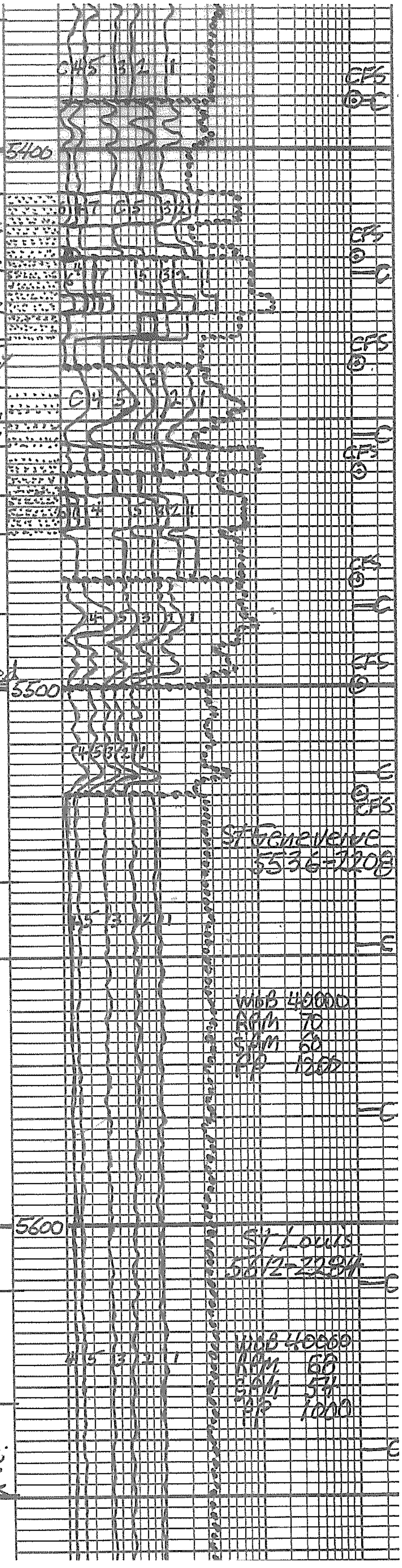
5400

WOB 25000
RPM 55
SPM 54
PP 750

CFS



splintery; huy trs. of Lm
+ Qtz Sdsts. from above
stringing in samples
5408-5435 Qtz Sdst. lt. gry
whtish. gry. to grysh. tan
v.v.fn. to fn gr. w/huy trs. to
abn. coarse gr.; ang. w/trs.
to huy trs. sub-ang. to
sub-rnded; prly sort.
fair oil oder; mostly sli to
frly glauc &/or chloritic
sli trs. pyrite; huy trs. w/gldn. yel.
fluor., w/faint to gd streaming cuts
huy trs. w/tan oil stn; huy trs
large clusters w/fr to gd intergr
por.; sm. clusters have fr to gd
intergr. por.; v. abn loose Qtz
grs.;
5435-5444 Sh. med gry-soft
w/silky Luster lp's & drk gry-splintery
w/trs Lms. gry to tan; crypto to v.v.fn xln
sub-sucro. to ptchy v. dul. yel fluor.
No cut; No vis Por
5444-5455 Qtz sdst lt gry to lt. tan from
oil stn; fair oil oder; v.v.fn to fn w/trs
med. gr.; ang.; pr. to fr w/huy trs gd
sort; scattered v. sli. trs w/glauc
&/or chlorite; brt. yel fluor
w/flush cut to faint to gd streaming
cuts; abn. pr to fr & huy trs gd to
trs. excel micro-pp to intergr
por.; sm. clusters v. friable
abn loose Qtz grs
A 5455-5464 Similar 5408
to 5435 w/ v. abn more
sub-rnded to rnded
B. 5464-5471 Qtz Sdst Tanish
Wht.; v.v.fn. to v.fn. w/trs fn to
med. gr.; trs. w/med gry Sh. grs
ang. to trs. sub-ang. sub-rnded
to sli trs rnded; pr to fr
& trs gd sort; abn brt yel.
to gldn. yel. fluor. w/flush
& faint to gd streaming cuts
abn. pr to fr & trs gd
micro-pp to intergr. por
sm clusters v. friable
abn loose Qtz grs; fr. oil oder
C 5471-5486 Qtz Sdst lt gry
gryish. crm, gryish tan to trs
v. lt. tan; v.v.fn to v.fn w/trs fn
to med gr.; ang.; prly sort.
silt filled lp's, trs sli to v calc
trs. w/finely disseminated pyr.
trs. w/trs Sh. grs rnd to ang.
trs. yel. to trs gldn yel. fluor
w/faint to gd. streaming cuts
huy trs. to abn. pr to fr. intergr.
por; abn. loose Qtz grs.
huy trs are med to coarse gr.
D 5486-5500 Qtz Sdst lt. gry
whtish gry. to gryish wht & trs tanish
gry.; v.v.fn. to v.fn. w/huy trs fn
to trs med & sli trs coarse gr.
ang. w/huy trs. sub-ang to rnded
scattered trs pyritic to trs w/
finely disseminated pyrite
sli trs w/yel. fluor. w/faint to fr
streaming cuts; huy trs. pr to fr
& trs. gd. intergr. por in small
clusters.; sm clusters v. friable
abn loose Qtz grs. w/prob.
interbeds. Sh. med to dark
gry & trs brnish reds to reds
E 5500-5536 Shs & Lms
1. shs. brownish reds to reds
2. Lms. pinks & reds; crypto to v.v.fn
xln.; extly micro-oolitic w/huy
trs Qtz grs-v.v.fn gr-ang.
matrix sub-chlk & sub-sucro
No fluor; No cut; No vis Por
3. Lms (trs in top of Zn to v. abn
in bottom Zn) gryish tan to tan
crypto to v.v.fn xln; extly micro-
oolitic w/trs Qtz grs-v.v.fn gr-ang;
matrix trs sub-chlk & sub-sucro
v. dul yel. fluor; No cut; No vis Por
E 5536-5612 Lms similar
Number 3 description from
5500-5536



H — s. Lms CTRS in top of Zn to v. abn in bottom Zn) lt gy/dk tan/tan cryptocrystln, estly micro-oolitic/fms CRYGS-vuggy-intg matrix, trs sub-chlk+sub-sucrs, v dul yel. fluor; No Cut; No Vis Por

E 5536-5612 Lms similar Number 3 description from 5500-5536

I — Lms. trs wht. to cream-chlk w/chlkoolites IP's + M tan to tan/grnish IP's; cryptocrystln, v. oolitic (sm, med + lg) matrix sub-chlky, trs sub-sucro + packstn.; dul. yel. fluor No Cut; No Vis Por w/trs Chert M. orange, to trs gry to tan; trans/to opque

H 5633-5650 Lms. extra abn wht to cream-chlk abn w/chlkoolites and tan; cryptocrystln, estly oolitic (med, lg + trs sm) matrix sub-chlky, sub-sucro + silty trs sucro; dul. yel. fluor No Cut; trs pr micro-pp por IP's w/trs Chert gry to tan opque to trans/t.

I — Lms. similar 5612-5633 w/trs Chert gry to tan; opque to trans/t.

TD 5674

7 7/8in Bit Info
Bit #1 PDC 1710 to 4509
Bit #2 New Smith F27 IVV in 4509 out TD 5674

Dev. Surv
1. 659 3/4°
2. 1710 3/4°
3. 4509 1°
4. 5674 TD

Cir Points
1. 4509
2. 5076
3. 5391
4. 5420
5. 5440
6. 5460
7. 5480
8. 5500
9. 5520
10. 5674

Daily Drlg Progress
1. 3728 At 7:00AM 5-11-16
2. 4450 At 7:00AM 5-12-16
3. 4692 At 7:00AM 5-13-16
4. 4969 At 7:00AM 5-14-16
5. 5246 At 7:00AM 5-15-16
6. 5469 At 7:00AM 5-16-16
7. 5614 At 7:00AM 5-17-16
8. 5674 At 7:00AM 5-18-16

No DST Were Run

Mud Info:

Date	5-11 11:35A	5-12 11:05A	5-13 2:35A	5-14 10:15A	5-15 9:10A	5-16 7:30A
Depth	4033	4509	4804	5014	5174	5488

Cir Points

1. 4509	6. 5460
2. 5076	7. 5480
3. 5391	8. 5500
4. 5420	9. 5520
5. 5440	10. 5674

Daily Drlg Progress

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Depth	4033	4509	4804	5014	5174	5488	
wt	8.95	9.3	9.3	9.1	9.25	9.15	
Vis	47	50	50	66	77	77	
PV	14	15	14	18	20	18	
YP	15	16	16	21	22	21	
Gs	14/42	16/46	15/46	17/64	19/22	17/61	
WL	8.8	9.2	9.2	8.0	8.4	7.6	
Cake	1/32	1/32	1/32	1/32	1/32	1/32	
pH	10.5	10.5	10.0	9.0	9.5	9.5	
Chl	600	1100	1200	1600	1000	600	
Ca	20	20	20	20	20	20	
LLM	8.5	13.0	13.0	14.0	14.2	13.0	

OPERATOR Berexco LLC LOCATION 335'FNL & 3040'FEL

LEASE Earl Arnold NO. 7-3 SEC. 7 TWP. 29S RNG. 40W

ELEVATION 3328 KB RTD 5674 COUNTY Stanton STATE Kansas