

OPERATOR:

Company: Larson Engineering Inc. Address: 562 West State Road 4 Olmitz, KS 67564-8561

DRILLING CONTRACTOR:

Southwind Drilling Co., Rig #8

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8" x 496', Kelly 40.00', Tool Joint 5.5"; Bit: HA-23X, 7-7/8", standard jets 14-14-14; rpm 80, WOB 35k; Kelly Bushing 10' above ground level; Bill Sanders (tool pusher), Doug Roberts (daylight driller).

CASING:

Ran 6 jts new 8-5/8" 20# R3 STC 8rd csg. Tallied 253', set @ 266' KB.

Ran 107 jts new 5-1/2" 15.5# R3 LTC 8rd csg. Tallied 4545.16', set @ 4541' KB.

CIRCULATION SYSTEM:

Continental EMSCO D-300, duplex, 6 x 14 (from 2145'), 60 spm, Chemical, premix, earth pits, MudCo/Service Mud, Inc., Jason Whiting

OPEN HOLE LOGS:

DN, DI (SP), ML, No Sonic; stacked tools, 5" detail LTD-3600; 2" DI to suface casing; Pioneer Wireline Services, Hays, KS, LTD 4542'.

DRILL STEM TESTS:

None.														
ROP (min/ft) Five Ten	DST	Lithology	Porosity and Show	Depth	Geological Descriptions	F	'G (ur ïfty)ne	nits)			l Ga	6		
0 ROP 1	5					0				Hot	Wire			_1(
				3800		-			TOP				_	_

		e		-T.O.	H. AT :	2145'	TO SW	AP M	UD PU	MPS.		
9:21 am 05/21.					HYDF NHY		2162 2193					
			LS: grayish-brn, sli spotted dk gray; vf-xtal; v-sli granular; poor porosity; N.S.									
			LS: as above.									
S		3850	LS: It brown, off-white; mic-xtal; chalky; no visible porosity; N.S.									
			LS: It-md brown; vf-xtal; dense; sli shaley in part; trc fine moldic porosity; N.S., 3870.									
			LS: It brown to off white chalky portions; mic-vf xtal; trc sulfides; no visible porosity; N.S.									
			Shale: black; few chips 3890. LS: dk brown; vf-xtal; dense; N.S.									
			LS: It gray; vf-xtal; dense; v-sli. granular; trc coarse spar; no visible porosity; N.S.									
	ø	3900	LS: v-lt brown; vf-xtal; finely oolitic in part; tight pin-point porosity; N.S.; 3910.									
		ŝ	LS: It-grayish brown; vf-xtal; dense; no visible									
			porosity; N.S. LS: It-md grayish brown; vf-xtal; dense; no visible									
			porosity; N.S.									
5			LS: off white; mic-xtal; v-chalky; N.S.									
			LS: dk grayish brown; vf-xtal; black shale laminations; some black shale w/lime grains and streaks; N.S.									
		3950										
			HEEBNER 3957 (-1124) Shale: black; carbon; only few chips 3970. Shale: green, greenish gray; calcareous in part; trc									
			siltstone; LS: white to It brown; mic-vf xtal; dense to chalky in				AT C R, DO				: TRIP O	UTFEW
Ž			part; dull mineral fluor; no visible poroisty; N.S., few chips 3990.									
			LS: white to It brown; mic-vf xtal; mostly dense; no visible porosity; dull fluor; N.S. 4000.									
		4000	Shale: green, gray; trc coarse pyrite.									
0 ROP 15		40	LS: It brown; vf-xtal; minor chalk; trc white to brown, opaq. chert, no visible porosity; v-dull fluor, N.S.	0				Hot-	Wire			100
			LS: It brown to gray; vf-xtal; dense; v-sli fluor., no									
			visible porosity; N.S. Shale: dk gray; trc black chert; 4040.									
B-zone			LS: dk grayish brown; vf-xtal; dense; N.S. Shale: gray, calcareous;									
			LS: It brown; vf-xtal; sli oolitic; dense; v-tight int ool porosity at best; v-dull fluor., N.S.									
		4050										
			LS: It brown; vf-xtal; dense; minor opaq. chert; no visible porosity; N.S.									
			LS: It-md brown to grayish-brn; vf-xtal; dense; blocky; no visible porosity; N.S.									
			blocky; no visible porosity; N.S. LS: as above.									
			LS: It-md brown; vf-xtal; fine vug porosity; v-sli fllour., spotted dry stain, no visible oil, trc 4100,									
			1-2% 4110. LS: It-md brown; vf-xtal; dense to chalky; platey; no visible porosity; N.S.									
		4100	LS: It brown; mic-vf xtal; trc oolitic; white, opaq.									
• \$	•		cherts; chalky portions; v-fine vug por., trc spotted dry stain, no fluor.									
G-zone	•		LS: It-md brown; vf-xtal w/scattered med-xtal, imbedded calcites; med to coarse oomoldic porosity; dull mineral fluor., trc pin- point spotted oil stain; no									
•			visible oil; 99.9% barren, 4150, possible float ?									
•			LS: as above; N.S. LS: It grayish-brown; vf-xtal; dense; sli oolitic; no									
		4150	visible porosity; N.S.									
		,	LS: grayish brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S.									
				-								
S			LS: as above; trc grayish brown, opaq. chert; N.S.									
			MUNCIE CREEK 4183 (-1350) Shale: black; carbonaceous; 4200. LS: It-md grayish brown; trc black pellets; vf-xtal;									
			v-sli. fos-frag; trc opaq. chert; no visible porosity; N.S.	-GEO	LOGR		CABLE	HUN	G UP /	AFTER		4192.—
0 ROP 15	•	4200	LS: v-lt brown; vf-xtal; scattered fine-med., sli drusy vug porosity; spotted dry stain; only dull fluor., no visible oil; 1% 4210.	0				Hot-	Wire			100
	•		LS: It brown to gray; vf-xtal; trc rhombic calcites; few chips fine vug por. w/spotted dry stains; no visible oil; 4230.									
			Shale: gray, black; 4230. LS: dk brown; vf-xtal, dense, platey; N.S.									
•	•		LS: md-dk brown to gray; vf-xtal; fine vug porosity, speckled wet stain; no visible oil; v-sli fluor. at best; 4240.									
. }	•		LS: It-dk brown to gray; vf-xtal; trc fine vug porosity w/stains as above; no visible oil;									
		4250										
J-zone		,	LS: It-md grayish brown; vf-xtal; coarse oom porosity; spotted brown to black wet stains; v-sli. S.O., weak fluor., much barren por., 4280, decr 4290.	, 								
			LS: as above.									
			LS: gray; vf-xtal; dense, platey; chalky in part; no visible porosity; N.S.									
Stark			STARK SH 4287 (-1454)									
	•		Shale: black; carbon., few chips 4300. LS: dk brown; vf-xtal; dense; N.S. LS: gray; vf-xtal; distinctive med-grains; fair int gran por, speckled wet stain; also fine viug w/spotted									
		4300	gran. por., speckled wet stain; also fine vug w/spotted stains; scattered soft chalk, dull fluor., no visible oil, 4310.									
• }			LS: gray; vf-xtal; dense to sli chalky; few chips fine									
	•		vug porosity; spotted stains; no visible oil; possible float ? HUSHPUCKNEY 4325 (-1492)									
• • • • • • • • • • • • • • • • • • •	•		Shale: black; carbonaceous; trc 4340, 4350. LS: gray-brown; vf-xtal; mostly dense; trc med~crs vug por. w/spotted stains; no visible oil; no crystall;									
	•		4340, 4350. LS: It grayish brown, vf-xtal contacting dk gray, m-xtal which appears altered, w/ fair int xtal & drusy vug									
		4350	por., spotted wet stain w/very sli. show oil; dull fluor., few chips 4360, 4370.									
		4	LS: grayish-brown w/lt gray chalky parts; vf-xtal;	E								
			LS: grayish-brown wit gray chaiky parts; vr-xtai; dense; no visible porosity; N.S.									
			LS: grayish brown; vf-xtal; decr chalk; no visible porosity; N.S.									
			LS: It grayish brown; vf-xtal; dense to sli chalky in part; no visible porosity; N.S.									
			Shale: green, gray;									
0 ROP 15		4400		0				Hot-	Wire			100
			Shale: gray, green, trc maroon; washes 4440 sample	GEO	LOGR	APH	KICKE	D IN L	ATE			
$\boldsymbol{<}$			gray; Note: trc wet stain, 4430, 4440, has very poor dry stain at best; is probably float.									
			LS: It gray-brown; vf-xtal; chalky; no visble porosity; N.S.									
Altamont			LS: It brown; vf-xtal; trc fine drusy vug por., It brn									
		4450	stain, w/soft fluor. chalk, no visible oil, 2-5% dry stains & fluor. at 4460 sample, decr 4470 to trace.									
		4	LS: It gray to off-white; mic-vf xtal; sli chalky; includes pink-white mottled trans. cherts; v-fine vug									
			porosity; N.S., 4470. LS: It-md grayish brown; vf-xtal; dense; smokey									
			chert; scattered fine vug por., N.S. Shale: dk gray to black;									
Pawnee			PAWNEE 4480 (-1647) LS: It-md grayish brown; vf-xtal; trc white opaq chert; v-fine vug porosity; N.S.									
			LS: It gray; mic-vf xtal; chalky; no visible porosity; N.S.									
		4500	N.S. Shale: black; 4520. LS: dk gray-brn; vf-xtal; dense; N.S.									
Myrick			Shale: green, gray; LS: It-gray to white; mic-vf xtal; It gray, sli fos,									
			semi-opaq. chert; tight fine vug porosity; N.S. Shale: black; carbonaceous; much; 4540.									
Ft. Scott			FT. SCOTT 4527 (-1694) LS: dk grayish-brn; vf-xtal; coarsely oolitic in part;									
4540-0			no visible porosity; N.S., 30 min. ROTARY TOTAL DEPTH 4540 (-1707)	-								
		550	× - /	PION	IEER I	LTD 4	542'					
RTD 12:37 AM		45		É								