

**ROBERT T. HOPKINS, L.G., C.P.G.**

**709 Harold Ave.**

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**cell (785) 819-2460**

May 24, 2013

Solutions Consulting  
Attention: Herb Deines  
108 W. 35th  
Hays, Kansas 67601

Werth Exploration Trust – Worcester M-2, Section 21, T7S, R22W,  
Graham County, Kansas

Herb and Andy:

Attached to this summary letter is my lithologic log for the above-captioned well. As recommended by myself and the open-hole logger, Operator elected to plug the above-captioned well. This decision to plug was made due to the low structural position of the M-2 well. The M-2 was barely higher than a nearby dry hole and low to other wells in the area (see below). The decision to plug was supported by a poor DST result and a lack of good oil shows in very thin, LKC zones which had only slight porosity. The DST (3546-3573') recovered 868' of muddy water from a test of slight oil shows in the D, E, and F zones of the LKC.

Shows were observed in the A, D, E, F, and K zones of the LKC. These shows consisted of very slight to fair oil stain, no odor, weak fluorescence, and no to fair free oil in well cuttings. Note that the samples were very poor following the DST, consisting almost entirely of uphole shards of red and gray shale.

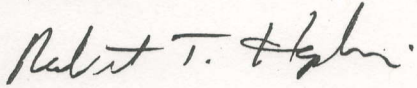
**LOG TOP COMPARISON:**

<u>Formation</u>	<u>M-2 Worcester log tops</u>	<u>compared to Worcester #1 (to S)</u>		<u>compared to Worcester M-1 (to N)</u>	
Anhydrite	1888(+376)	-16	(+392)	+1	(+375)
Topeka Ls.	3251(-987)	+1	(-988)	-9	(-978)
Heebner Sh.	3456(-1192)	+2	(-1194)	-9	(-1183)
Top LKC	3498(-1234)	-0-	(-1234)	-13	(-1221)
LKC "E"	3556(-1292)	+2	(-1294)	-6	(-1286)
LKC "H"	3622(-1358)	+5	(-1363)	-8	(-1350)
LKC "K"	3674(-1410)	+4	(-1414)	-11	(-1399)
Base KC	3694(-1430)	+2	(-1432)	-12	(-1418)



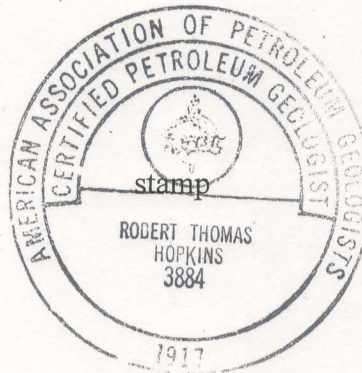
If you have any questions, please call me at 785-819-2460. Thank you for this opportunity to serve you!

Sincerely,



Robert T. Hopkins, L.G., C. P. G.

attachments









# LITHOLOGIC LOG

ROBERT HOPKINS-consulting geologist

Operator Wenth Explor. Trust  
 Lease/Well WORCESTER M-2  
 GL KB 2264 (measure from \*)

Location SW SE SE 21-7s-22w  
 County Graham State KS  
 depth this sheet - from 3380 to 3560

scale 1" = 20'  
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DRILLING TIME (min/ft)								DEPTH	tops shows	lith graph	DESCRIPTION (lithology, shows, mud properties)	
1	2	3	4	5	6	7	8					
								3380			bf fox/lis tite lst., n.s.	
								3400			(sl. fossiliferous, w/sl. φ, n.s.) dk gry sh - sdy sh - blk sh.	MUD VIS. 61; wt 9.0
								50			bf fox-matrix lst., sl. cherty, tite, n.s.	
											gry sh	MUD VIS. 61; wt. 9.0
								50			bf fox/lis cherty, lst., tite, n.s.	Heebner 3461'
											blk carb sh. gry tite lst., fossiliferous, n.s.	
								50			gray shale	Toronto 3484'
											wh-gry fox/lis lst., tite, n.s.	(trouble w/Auto Driller)
								50			dk gry sh.	LKC 3500'
											wh fw oolitic lst., free free oil, vis. str., weak floor, no odor	
								50			wh. fox/lis lst., tite, n.s.	MUD VIS. 55; wt. 9.1
											blk sh	
								50			gry sdy sh	
											wh cherty lst., tite, n.s.	
								50			gry to grn sh.	
											wh granular lst., sl. φ, free free oil, over str., gd floor, no odor	
								50			wh fox/lis tite lst., n.s., cherty	

"A"

"B"

"C"

"D"

CFS  
45"

DST #1



# LITHOLOGIC LOG

ROBERT HOPKINS-consulting geologist

Operator Wexth Explor. Trust

Location SW SE SE 21-7s-22W

Lease/Well WORCESTER M-2

County Graham State Ks

scale 1" = 20'

GL KB 2264 (measure from \*)

depth this sheet - from 3560 to 3740

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DRILLING TIME (min/ft)								DEPTH	tops shows	lith graph	DESCRIPTION (lithology, shows, mud properties)
1	2	3	4	5	6	7	8				
					"E"			60			blk sh. wh med xln lst., H. str., br. fluor, fair free oil, no odor
					"F"						- wh lst., sl. φ, ferric str., sl. free oil, no odor; dk gry sh.
											wh oolitic lst., tite, n.s. gry sh.
					"G"			3600			wh fn-med xln lst., sl. cherty, tite, n.s. (strap ~ 2' ht). MUD VIS 52; wt. 8.9
					"G"						blk sh. gry sh. (poor samples after DST!)
					"H"						gry - bf fuxln fossiliferous lst., tite, n.s.
					"H"						wh fuxln cherty lst., sl. φ, n.s. dk gry carb. sh.; trc grw sdy sh.
					"I"						dk gry sh. - gry sdy sh. wh fuxln cherty lst., tite, n.s.
					"J"						blk sh. bf fuxln lst., sl. φ, n.s. MUD VIS 50; wt. 9.2
											bf fuxln tite lst., n.s. gray sh to sandy sh.
					"K"						blk sh. wh fuxln oolitic lst.; inter-φ; sl. str., trc free oil, no odor
					"L"						- blk sh. weak fluorescence (tight @ base) bf fuxln tite lst., n.s.; sl. cherty
								BKC			dk gry sh. BKC 3697'
											red-gry sh. to sdy sh.
											bf fuxln oolitic lst.; tite, n.s. rd-gry sh.
											wh fuxln cherty lst., tite, n.s.

DST #1

CFS 45"

DST #1: 3546-3573

30-45-30-45"

SIP: 503-502"

FP: 66-316"; 324-434"

REC: 368' MW; fair

blow-building

CFS 45"

CFS 45"

BKC 3697'