

Sec. 11, Twp. 16, Rng. 20
4280 FSL 2/20 FEL
 API # 15-059-27152

HUGHES DRILLING REPORT

Well No. 144 Size 6 1/4
 Farm S. McMiller Feet 30
 Circulated 12 sk cement

PERMANENT CSG.
 Size 2 3/8 8rd EVC (used)
 Feet 719.85 of pipe float shoe on bottom

OPERATOR Hughes Drilling

T. D. at Completion 762
 Contractor HUGHES DRILLING CO.

DATE	DRILLED		REMARKS - TYPE WORK - BILLING REF.	PIPE TALLY
	FROM	TO		
6-9-17	0	2	soil	① 21.5 - 21.5
30'	2	28	clay	② 22.5 - 44.0
6-12-17	28	44	Shale	③ 22.5 - 66.5
PDC	44	50	Lime	④ 22.5 - 89.0
Spindle	50	53	Shale (slate 50-51)	⑤ 22.5 - 111.5
5 3/8	53	71	Lime	⑥ 22.5 - 134.0
	71	78	Shale (slate 72-73)	⑦ 22.5 - 186.5
	78	89	Lime	⑧ 22.5 - 179.0
	89	93	Shale	⑨ 22.5 - 201.5
	93	110	Lime	⑩ 22.5 - 224.0
	110	142	Shale	⑪ 22.5 - 246.5
	142	172	Lime	⑫ 22.5 - 269.0
	172	174	Shale	⑬ 22.5 - 291.5
	174	177	Gr. sand	⑭ 22.5 - 314.0
	177	243	Shale	⑮ 22.5 - 336.5
	243	264	Lime	⑯ 22.5 - 359.0
	264	282	Shale	⑰ 22.5 - 381.5
	282	289	Lime	⑱ 22.5 - 404.0
	289	316	Shale	⑲ 22.5 - 426.5
	316	326	Lime	⑳ 22.5 - 449.0
	326	350	Shale (lime 333-334)	㉑ 22.5 - 471.5
30'	350	373	Lime	㉒ 22.5 - 494.0
	373	381	Shale (slate 373-374)	㉓ 22.5 - 516.5
20'	381	405	Lime	㉔ 22.5 - 539.0
	405	409	Shale (slate 405-406)	㉕ 22.5 - 561.5
	409	413	Lime	㉖ 22.5 - 584.0
	413	416	Shale	㉗ 22.5 - 606.5

STRATA THICKNESS	FORMATION DRILLED	T.D.
2	soil	2
26	clay	28
16	shale	44
6	Lime	50
3	Shale	53
18	Lime	71
7	Shale	78
11	Lime	89
4	Shale	93
17	Lime	110
32	Shale	142
30	Lime	172
2	Shale	174
3	Gr. Sand	177
66	Shale	243
21	Lime	264
18	Shale	282
7	Lime	289
27	Shale	316
18	Lime	326
24	Shale	350
30'	21	Lime 373
	8	Shale 381
20'	24	Lime 405
	4	Shale 409
	4	Lime 413
	3	Shale 416
Hertma	5	Lime 421
	158	Shale 519
	2	Sand 582
	10	Shale 592
	8	Lime 600
	23	Shale 622
	8	Lime 630
	12	Shale 642
	3	Lime 645
	9	Shale 654
	3	Lime 657
	8	Shale 667
	8	Lime 675
	9	Shale 683

HUGHES DRILLING REPORT

Fr. Co., Kansas
4280 FSL 2120 FEL

API # 15-059-27152

Well No. 14
Farm S. McMillen
Size.....
Feet.....
Circulated _____ sx cement

PERMANENT CSG.

OPERATOR Hughes Drilling

T. D. at Completion 761
Contractor HUGHES DRILLING CO.

DATE	DRILLED		REMARKS - TYPE WORK - BILLING REF.	PIPE TALLY
	FROM	TO		
6-13-17	416	421	Lime	(18) 22.5-629.0
	421	579	Shale Broken 424-429 (Brown 571-574)	(29) 22.5-651.5
	579	582	sand (slight odor)	(30) 22.5-674.0
	582	592	shale	(31) 22.5-696.5
	592	600	Lime	(32) 22.5-719.0
	600	622	shale	(33) 22.5-741.5
	622	630	Lime	
	630	642	shale	
	642	645	Lime (Brown)	
	645	654	shale	
	654	659	Lime	
	659	667	shale	
	667	675	Lime (oil show 667-670)	
	675	683	shale	
	683	684	Gray sand (Hard)	
6-13-17	684	687	Shale (sandy 684-685 oil trace)	
	688	689	lt. Brown sand	
	689	698	Broken Oil sand (core time pg. 3)	
	698	724	shale	
	724	725	Lime	
	725	732	shale	
	732	733	Lime	
	733	734	shale	
	734	737	lt. Brown sand (No Oil)	
	737	762	shale	
	762		T.D.	

STRATA THICKNESS	FORMATION DRILLED	T.D.
1	Gray sand	684
3	shale	687
2	lt. Br. sand	689
9	Brk sand	698
26	shale	724
1	Lime	725
7	shale	732
1	Lime	733
1	shale	734
3	lt. Br. sand	737
45	shale	762
1		T.D.

6-13-17 Set 749.85 of 278 8rd EUE (used)
Used 3 centralizers Float shoe on Bottom

HUGHES DRILLING CO.

Wellsville, Kansas 66092

Roger 913-883-2235
Darrel 913-883-4027

Ron 913-883-4655
Clay 913-883-4383

CORE TIME
LEASE S. McMillan #1
FORMATION #1 Squirrel
DATE: 6-13-71

(RPM PDC)

FROM	FEET TO	TIME	MINUTES	REMARKS
687	688	chip sample	—	LT. Brown sand
688	689	chip sample	—	oil trace
① 689	690	9:32:00 - 9:33:00	1:00	Solid sand 689-689.5 (B.O.)
② 690	691	9:34:15	1:15	Sand lamin. w/shale 689.5-690.5 (B.O.)
③ 691	692	9:35:30	1:15	Solid sand 690.5-692.5 (B.O.)
④ 692	693	9:36:30	1:00	
⑤ 693	694	9:37:45	1:15	sand very lamin. w/shale (B.O.)
⑥ 694	695	9:38:45	1:00	692.5-695
⑦ 695	696	9:40:00 ^{stop}	1:15	Sand slightly lamin. w/shale (B.O.)
⑧ 696	697	9:44:00 - 9:45:15	1:15	Sand very lamin. w/shale B.O.
⑨ 697	698	9:46:45	1:30	(Some sand 697.5-698)
⑩ 698	699	9:48:30	1:45	(Bleeding)
⑪ 699	700	9:50:15	1:45	
⑫ 700	701	9:52:15	2:00	shale
⑬ 701	702	9:54:15	2:00	
⑭ 702	703	9:56:15	2:00	
⑮ 703	704	9:57:45	1:30	
⑯ 704	705	STOP		Best Perf zone
⑰ 705	706			
⑱ 706	707			689-698
⑲ 707	708			Do 4 shots per ft
⑳ 708	709			
				CCN

PS-3



PRESSURE PUMPING LLC
PO Box 884, Chanute, KS 66720
620-431-8210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT CEMENT

TICKET NUMBER 53829
LOCATION Ottawa, KS
FOREMAN Way Kennedy
810507

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6/13/17	3425	S. McMillan # 14	NE 11	16	20	FR
CUSTOMER <u>Hudges Drilling</u>			TRUCK #			
MAILING ADDRESS <u>122 Main</u>			DRIVER			
CITY <u>Walden</u>			TRUCK #			
STATE <u>KS</u>			DRIVER			
ZIP CODE <u>66092</u>			TRUCK #			
			DRIVER			

JOB TYPE <u>Longstring</u>	HOLE SIZE <u>5 5/8"</u>	HOLE DEPTH	CASING SIZE & WEIGHT <u>2 7/8" GUC</u>
CASING DEPTH <u>749'</u>	DRILL PIPE	TUBING	OTHER
SLURRY WEIGHT	SLURRY VOL	WATER gal/sk	CEMENT LEFT IN CASING
DISPLACEMENT <u>4.34 bbls</u>	DISPLACEMENT PSI	MIX PSI	RATE <u>4 bpm</u>

REMARKS: hold safety meeting, established circulation, mixed & pumped 100 # Gel followed by 5 bbls fresh water, mixed & pumped 104 sks Portland IA cement w/ 2% gel + 1/4 # Floeal per sk, cement to surface, flushed pump clean, pumped 2 1/2" rubber plug to casing TD w/ 4.34 bbls fresh water, pressured to 800 PSI, released pressure, shut in casing.

[Signature]

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0450	1	PUMP CHARGE	1500.00	
CE0002	15 mi	MILEAGE	107.25	
CE0711	mi	ton mileage	600.00	
		trucks	2267.25	
		-55%	1246.99	
		subtotal		1020.26
CC5840	104 sks	Portland IA cement	1404.00	
CC5945	275 #	Gel	82.50	
CC6075	26 #	Floeal	52.00	
CP8176	1	2 1/2" rubber plug	45.00	
		materials	1583.50	
		-55%	870.93	
		subtotal		712.58
		8%	SALES TAX	57.01
			ESTIMATED TOTAL	1789.85

Ravin 3737

AUTHORIZATION [Signature] TITLE

DATE 6/13/17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer account records, at our office, and conditions of service on the back of this form are in effect for services identified