

Sec. 2, Twp. 16, Rng. 20
 Fr. Co., Kansas
 1885 FSL 3720 FEL
 API # 15-059-26801

HUGHES DRILLING REPORT

Well No. #13
 Farm W. Brooks
 SURFACE CASING
 Size 7 1/2"
 Feet 23'
 Circulated 9 sx cement

PERMANENT CSG. (New)
 Size 7 1/2" 8 ft. E.V.E.
 Feet 713.10 of pipe
 Baffle at 699.10

T. D. at Completion 730'
 Contractor HUGHES DRILLING CO.

OPERATOR Hughes Drilling

DATE	DRILLED		REMARKS - TYPE WORK - BILLING REF.	PIPE TALLY
	FROM	TO		
8-20-14	0	3	Soil	① 21.5 - 21.5
23'	3	21	Clay	② 21.5 - 44.0
8/21/14	21	39	Shale	③ 21.5 - 66.5
5'	39	63	Lime	④ 21.5 - 89.0
5 1/8 PDC	63	72	shale (bank) (slate 70-71)	⑤ 22.5 - 111.5
	72	82	lime	⑥ 22.5 - 124.0
	82	87	shale	⑦ 22.5 - 156.5
	87	119	lime	⑧ 22.5 - 179.0
	119	122	shale	⑨ 22.5 - 201.5
	122	161	lime	⑩ 22.5 - 224.0
	161	228	shale	⑪ 22.5 - 246.5
	228	252	lime	⑫ 22.5 - 269.0
	252	268	shale (slate 256-261)	⑬ 22.5 - 291.5
	268	274	lime	⑭ 22.5 - 314.0
	274	300	shale	⑮ 22.5 - 336.5
	300	313	lime	⑯ 22.5 - 359.0
	313	317	shale	⑰ 22.5 - 381.5
	317	318	lime	⑱ 22.5 - 404.0
	318	334	shale	⑲ 22.5 - 426.5
30'	334	360	lime	⑳ 22.5 - 449.0
	360	360	shale (slate 360-361)	㉑ 22.5 - 471.5
20'	366	388	lime	㉒ 22.5 - 494.0
	388	393	shale (slate 388-389)	㉓ 22.5 - 516.5
	393	396	lime	㉔ 22.5 - 539.0
	396	399	shale	㉕ 22.5 - 561.5
"Heath"	399	405	lime	㉖ 22.5 - 584.0
	405	516	shale (BRIN 408-412)	㉗ 22.5 - 606.5

STRATA THICKNESS	FORMATION DRILLED	T.D.
3	soil	3
18	clay	21
18	shale	39
24	lime	63
9	shale	72
10	lime	82
5	shale	87
32	lime	119
3	shale	122
39	lime	161
67	shale	228
24	lime	252
16	shale	268
6	lime	274
26	shale	300
13	lime	313
4	shale	317
1	lime	318
16	shale	334
30'	26	lime 360
6	shale	366
20'	22	lime 388
5	shale	393
3	lime	396
3	shale	399
"Heath"	6	lime 405
11	shale	516
4	gr. sand	520
39	shale	559
4	lime	563
15	shale	578
11	lime	589
17	shale	596
1	lime	597
6	shale	603
8	lime	611
13	shale	624
3	lime	627
3	shale	632
8	lime	640
23	shale	663

HUGHES DRILLING REPORT

Well No. #13

Farm W. Roe 15

SURFACE CASING

Size.....

Feet.....

Circulated _____ sx cement

PERMANENT CSG.

Size 2 7/8 Bnd EVE (New)

Reel 713.10 of pipe
Baffle at 699.10

T. D. at Completion 739

Contractor HUGHES DRILLING CO.

OPERATOR Hughes Drilling

STRATA THICKNESS	FORMATION DRILLED	T.D.
8	Oil sand	671
2 1/2	sh. lime	673 1/2
9 1/2	sdy shale	683
23	shale	706
1	lime	707
8	shale	715
3 1/2	sand	719 1/2
11 1/2	shale	730
		712?

DATE	DRILLED		REMARKS -- TYPE WORK -- BILLING REF.	PIPE TALLY	
	FROM	TO			
7/22/14	516	520	Gray sand (some bleed 518-520)	(28) 22.5-629.0	
	520	554	shale	(29) 22.5-651.5	
	554	558	lime (BRK)	(30) 22.5-674.0	
	558	573	shale (BRK lime 564-568)	(31) 22.5-696.5	
	573	584	lime		
	584	596	shale		
	596	597	lime		
	597	623	shale		
	623	611	lime		
	611	624	shale		
	624	627	lime (BRK)		
	627	632	shale (shale 631-632)		
	632	640	lime		
	640	663	shale (lime break 651) lime break 653		
	7/23/14	663	671	Oil sand	} (Core Requests pg 7)
		671	673 1/2	sdy lime	
		673 1/2	683	sdy shale	
7/16	683	706	shale (lime break 699)		
7/22/14	706	707	lime		
	707	715	shale (lime break 714)		
7/23/14	715	718 1/2	sand		
	718 1/2	730	shale 713.10		
			8-22-14 set 699.10 of 2 7/8 Bnd EVE		
			Baffle at 699.10 no float shoe on Bottom		
			used 3 centralizers		

start core 665
K.D. 13 1/2

start core 716
K.D. 19.5

HUGHES DRILLING CO.

(P)

Wellsville, Kansas 66092

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

CORE TIME

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

LEASE W. Broeck #13

FORMATION #1 squirrel

DATE: 8/21/14

(PDC)
~~3"~~ 3" Shave Bit

FROM	FEET TO	TIME	MINUTES	REMARKS
663	664	chip	—	Sand lamin, w/shale (Bleed)
664	665	chip	—	} solid sand (bleeding)
①	665	12:47:12-12:47:30	:30	
②	666	12:48:15	:45	} 666-668.3 (shows water) solid sand (some bleed)
③	667	12:49:00	:45	
④	668	12:49:45	:45	} shale 668.3-668.7
⑤	669	12:50:15	:30	
⑥	670	12:51:00	:45	} solid sand (exc bleed) 668.7-671
⑦	671	12:51:45	:45	
⑧	672	12:53:00	1:15	} sdy lime 671-673.5 (No oil)
⑨	673	12:53:45	:45 ^{stop}	
⑩	674	12:54:00-12:54:45	:45	} sdy shale with a few strips of sand
⑪	675	1:00:30	:45	
⑫	676	1:01:15	:45	} (some bleeding) 673.5-678
⑬	677	1:02:15	1:00	
⑭	678	1:03:00	:45	} sdy shale with a few strips of sand
⑮	679	1:03:45	:45	
⑯	680	1:04:45	1:00	} (little bleeding) (heavy oil) 678-683
⑰	681	1:05:30	:45	
⑱	682	1:06:30	1:00 stop	} shale
⑲	683	:	:	
⑳	684	:	:	

(Best Perf Zone)
664-671
can

HUGHES DRILLING CO.

Wellsville, Kansas 66092

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

CORE TIME

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

LEASE W. B. Co. #13

FORMATION #2 SQUIREL

DATE: 8-22-14

~~3" Shave Bit~~

FROM	FEET TO	TIME	MINUTES	REMARKS	
	715	716		Clay -	
①	716	717	9:07:00-9:07:45	:45	} Fine grain sand w/ mica Some Bleeding
②	717	718	9:08:15	:30	
③	718	719	9:08:45	:30 ^{STOP} add Joint	
④	719	720	9:17:00-9:17:30	:30	} shale
⑤	720	721	9:18:15	:45	
⑥	721	722	9:18:45	:30	
⑦	722	723	9:19:30	:45	
⑧	723	724	9:20:15	:45	
⑨	724	725	9:21:00	:45	
⑩	725	726	9:21:45	:45	
⑪	726	727	9:22:15	:30	
⑫	727	728	9:22:45	:30	
⑬	728	729	9:23:45	1:00	
⑭	729	730	9:24:45	1:00 STOP	
⑮	730	731			} (Did NOT save cch
⑯	731	732			
⑰	732	733			
⑱	733	734			
⑲	734	735			
⑳	735	736			



CONSOLIDATED
Oil Well Services, LLC

270631

TICKET NUMBER 48131

LOCATION Chawna, KS

FOREMAN Casen, Kennedy

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8/22/14	3425	W. Broers # 13	sw 2	16	20	FR
CUSTOMER Huches Drilling			TRUCK #			
MAILING ADDRESS 122 Main			729	Driver Casen	✓	Safety Meeting
CITY Wellsville			6660	Driver Kei Car	✓	
STATE KS			548	Driver Tro Har	✓	
ZIP CODE 66092						

JOB TYPE long string HOLE SIZE 5 7/8" HOLE DEPTH 730' CASING SIZE & WEIGHT 2 7/8" EUE
 CASING DEPTH 713' DRILL PIPE _____ TUBING baffle - 699' OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING _____
 DISPLACEMENT 4.05 bbls DISPLACEMENT PSI _____ MIX PSI _____ RATE 5 bpm

REMARKS: held safety meeting, established circulation, mixed + pumped 200# Premium Gel followed by 10 bbls fresh water, mixed + pumped 95 lbs 50/50 Pozmix cement w/ 2% gel + 1/4 # Floccal per ok, cement to surface, flushed pump clean, pumped 2 1/2" rubber plug to baffle w/ 4.05 bbls fresh water, pressured to 800 PSI, released pressure, valve shut in casing.

Rig supplied H₂O

B+9

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE		1085.00
5406	15 mi	MILEAGE		63.00
5402	713'	casing footage		
5407	mi	ton mileage		368.00
1124	95 lbs	50/50 Pozmix cement	1092.50	✓
11183	360 #	Premium Gel	79.20	✓
1107	24 #	Floccal	59.28	✓
		materials	1230.98	
		- 20%	369.29	
		subtotal		861.69
4402	1	2 1/2" rubber plug		29.50
			2872.91	
		7.65%	SALES TAX	168.18
			ESTIMATED TOTAL	2475.37

Ravin 3737

AUTHORIZATION

Clay

TITLE

DATE

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