

HUGHES DRILLING REPORT

Sec. 2, Twp. 16, Rng. 20

Co., Kansas

2285 FSL 3720 FEL

API # 15-059-26800

Well No. #12
Farm W. Broers

SURFACE CASING

Size 7 1/2"
Feet 23.85

PERMANENT CSG.

Size.....
Feet.....

Circulated 9 ex cement

OPERATOR Hughes Drilling

T. D. at Completion 719'

Contractor HUGHES DRILLING CO.

DATE	DRILLED		REMARKS - TYPE WORK - MILLING REF.	PIPE TALLY
	FROM	TO		
8/22/14	0	3	soil	(1) 21.5-21.5
23'	3	20	clay	(2) 22.5-44.0
8/25/14	20	29	shale	(3) 22.5-66.5
5 1/8" PDC	29	54	lime	(4) 22.5-89.0
	54	62	shale (dark)	(5) 22.5-111.5
	62	72	lime	(6) 22.5-134.0
	72	80	shale	(7) 22.5-156.5
	80	136	lime	(8) 22.5-179.0
	136	215	shale	(9) 22.5-201.5
	215	238	lime	(10) 22.5-224.0
	238	254	shale (Red Bl 246-248)	(11) 22.5-246.5
	254	264	lime	(12) 22.5-269.0
	264	289	shale	(13) 22.5-291.5
	289	301	lime	(14) 22.5-314.0
	301	305	shale	(15) 22.5-336.5
	305	307	lime	(16) 22.5-359.0
	307	322	shale	(17) 22.5-381.5
30'	322	347	lime	(18) 22.5-404.0
	347	354	shale (slate 347-348)	(19) 22.5-426.5
20'	354	377	lime	(20) 22.5-449.0
	377	381	shale (slate 377-378)	(21) 22.5-471.5
	381	384	lime	(22) 22.5-494.0
	384	387	shale	(23) 22.5-516.5
"Herdman"	387	393	lime	(24) 22.5-539.0
	393	505	shale (BRK 396-401)	(25) 22.5-561.5
	505	510	Gray sand (slight color / some feed)	(26) 22.5-584.0
	510	542	shale	

STRATA THICKNESS	FORMATION DRILLED	T.D.
3	soil	3
17	clay	20
9	shale	29
25	lime	54
8	shale	62
10	lime	72
8	shale	80
56	lime	136
71	shale	215
23	lime	238
16	shale	254
10	lime	264
25	shale	289
12	lime	301
4	shale	305
2	lime	307
15	shale	322
30'	25' lime	347
7	shale	354
20'	23' lime	377
4	shale	381
3	lime	384
3	shale	387
"Herdman"	6' lime	393
112	shale	505
9	gray sand	510
32	shale	542
9	lime	551
11	shale	562
10	lime	572
9	shale	581
1	lime	582
5	shale	587
9	lime	596
16	shale	612
3	lime	615
4	shale	619
10	lime	629
14	shale	641
2	lime	643
5	shale	648

HUGHES DRILLING REPORT

Sec. 2, Twp. 16, Rng. 20
 P. Co., Kansas

LP

2285 FSL 3720 FEL

API # 15-059-24800

Well No. #12

SURFACE CASING

PERMANENT CSG.

Farm W. Box 15

Size.....

Size.....

Feet.....

Feet.....

Circulated _____ ex cement

T. D. at Completion 217

Contractor HUGHES DRILLING CO.

OPERATOR Hughes Drilling

DATE	DRILLED		REMARKS -- TYPE WORK -- MILLING REP.	PIPE TALLY
	FROM	TO		
	542	551	Lime (BKA)	(27) 22.5 - 606.5
	551	562	Shale	(28) 22.5 - 629.0
	562	572	Lime	(29) 22.5 - 651.5
	572	581	Shale	(30) 22.5 - 674.0
	581	582	Lime	(31) 22.5 - 696.5
	582	587	Shale (slate 586-587)	
	587	596	Lime	
	596	612	Shale	
	612	615	Lime (Brown)	
	615	619	Shale (slate 615-616)	
	619	629	Lime	
	629	641	Shale (Lime Break 639)	
	641	643	Lime	
	643	648	Shale	
	648	659	Lt. Brown Sand	
#1 Squirt	659	665	Shale	(Remarks pg. 3)
	665	697	Shale	
	697	698	Lime	
	698	700	Shale	
#2 Squirt	700	702	Lime	
	702	703	Sand Coil Trace	
	703	719	Shale	
			T.D.	
			8-26-14 plugged well with consolidated plugged T.D. to 600' 10 sacks at 405' 250' to surface	

STRATA THICKNESS	FORMATION DRILLED	T.D.
11	Lt Br. Sand	659
6	Shale	665
32	Shale	697
1	Lime	698
2	Shale	700
2	Lime	702
1	Sand	703
16	Shale	719

Start core at 650
 KD. 21
 20-40' at 1.1...

T.D. 719

17 JTS run to surface pulled 3 JTS

HUGHES DRILLING CO.

Wellsville, Kansas 66092

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

CORE TIME

Ron 913-883-4655
Clay 913-883-4983

LEASE W. Broers #12

FORMATION #1 Squirted

DATE: 8-25-14

(3' shave Bit)

FROM	FEET TO	TIME	MINUTES	REMARKS
648	649	ch	—	} 1T. Brown sand (oil trace)
649	650	ch	—	
① 650	651	2:14:00-2:14:30	.30	} slightly lamin. w/shale
② 651	652	2:15:15	.45	
③ 652	653	2:16:15	1.00	} 652-655 1/2
④ 653	654	2:17:00	.45	
⑤ 654	655	2:18:00	1.00	} solid 1T. Brown sand
⑥ 655	656	2:18:45	.45	
⑦ 656	657	2:19:30	.45	} shale 655 1/2-656 1/2
⑧ 657	658	2:20:30	1.00	
⑨ 658	659	2:21:15	.45	} solid 1T. Brown sand (shows water)
⑩ 659	660	2:22:00	.45	
⑪ 660	661	2:22:45	.45	} solid sand (bleeding)
⑫ 661	662	2:23:45	1.00	
⑬ 662	663	2:24:30	.45	} Sand very lamin. w/shale (bleeding)
⑭ 663	664	2:25:00	.30	
⑮ 664	665	2:26:00	1.00	} shale
⑯ 665	666	2:26:45	.45	
⑰ 666	667	2:27:45	1.00	} Sand very lamin. w/shale (bleeding)
⑱ 667	668	2:28:45	1.00	
⑲ 668	669	2:29:45	1.00 stop	} solid tight sand (bleeding) some shale
⑳ 669	670	—	—	



FIELD TICKET & TREATMENT REPORT

FOREMAN Fred Mader

Leah Maden

Ravin 3737		SALES TAX		34 ⁰⁰
AUTHORIZATION <u>[Signature]</u>		ESTIMATED TOTAL		2276 ⁰⁷
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 for