

HUGHES DRILLING REPORT

Sec. 30, Twp. 17, Rng. 22
 MI Co., Kansas
5115 FSL 495 FEL
 API # 15-121-29383

Well No. # 19
 Farm Brown
 SURFACE CASING
 Size 7"
 Feet 20', 75
 Circulated 8 sx cement

PERMANENT CSG.
 Size 2 3/8" Red Eye
 Feet 553 (Bolt at 549')
Scarfing nipple at 504'
 T. D. at Completion 565'
 Contractor HUGHES DRILLING CO.

OPERATOR John Herrick

DATE	DRILLED		REMARKS - TYPE WORK - BILLING REF.	PIPE TALLY
	FROM	TO		
6/19/13	0	4	Soil	(1) 21.5-21.5
	4	17	Clay	(2) 22.5-44.0
6/20/13	17	34	Lime	(3) 22.5-66.5
20'	34	59	Shale	(4) 22.5-89.0
5 5/8"	59	64	LIME	(5) 22.5-111.5
PDL	64	108	Shale	(6) 22.5-134.9
BIT	108	122	LIME	(7) 22.5-156.5
	122	132	Shale	(8) 22.5-179.0
30'	132	159	LIME	(9) 22.5-201.5
	159	167	Shale (Slate 166-167)	(10) 22.5-224.0
20'	167	190	LIME	(11) 22.5-246.5
	190	195	Shaly (Slate 194-195)	(12) 22.5-269.9
	195	201	LIME	(13) 22.5-291.5
	201	209	Shale	(14) 22.5-314.0
4 Hertzels	205	210	LIME	(15) 22.5-336.5
	210	339	Shale (Brkn 217-220) (sd) 231-246)	(16) 22.5-359.0
	339	341	Red Bed	(17) 22.5-381.5
	341	344	Shale	(18) 22.5-404.0
	344	347	Lime (sd) oil odor)	(19) 22.5-426.5
"Pen"	347	350	Shale	(20) 22.5-449.0
	350	355	Broken sand (remarks pg. 3)	(21) 22.5-471.5
	355	367	Shale	(22) 22.5-494.0
	367	388	Lime	(23) 22.5-516.5
	388	426	Shale	(24) 22.5-539.0
	426	432	LIME	(25) 22.5-561.5
	432	445	Shale	
	445	448	LIME (Brown)	

STRATA THICKNESS	FORMATION DRILLED	T.D.
4	Soil	4
13	Clay	17
17	Lime	34
25	Shale	59
5	LIME	64
44	Shale	108
14	Lime	122
10	Shale	132
30	27 Lime	159
8	Shale	167
20	23 LIME	190
5	Shale	195
6	Lime	201
4	Shale	205
Herrick	5 Lime	210
129	Shale	339
2	Red Bed	341
3	Shale	344
5	Lime	347
3	Shale	350
Pen	5 Sand	355
12	Shale	367
21	Lime	388
38	Shale	426
6	LIME	432
9	Shale	445
3	LIME	448
14	Shale	462
7	Lime	469
12	Shale	476
3	Red Bed	478
9	Shale	487
2	Lime	489
6	Shale	495
4	Lime	499
8	Shale	507
7	Oil Sand	514
51	Shale	565
		710

