

HUGHES DRILLING REPORT

Well No. 13
 Farm S. McMillen
 SURFACE CASING
 Size 6 1/4
 Feet 34'
 Circulated 10 sx cement

PERMANENT CSG
 Size 2 7/8 8'1' ETC. (used)
 Feet 754.45 of pipe
 Float shoe on Bottom

OPERATOR Hughes Drilling
#5682

T. D. at Completion T12
 Contractor HUGHES DRILLING CO.

Fr. Co., Kansas
4280 FSL 1720 FEL
 API # 15-059-27151

DATE	DRILLED		REMARKS - TYPE WORK - BILLING REF.	PIPE TALLY
	FROM	TO		
6/6/17	0	2	soil	(1) 21.5-21.5
34'	2	32	clay	(2) 22.5-44.0
6-7-17	32	48	shale	(3) 22.5-66.5
5 3/8" PDL	48	49	lime	(4) 22.5-89.0
	49	58	shale	(5) 22.5-111.5
	58	62	lime	(6) 22.5-134.0
	62	71	shale	(7) 22.5-156.5
	71	89	lime	(8) 22.5-179.0
	89	94	shale	(9) 22.5-201.5
	94	104	lime	(10) 22.5-224.0
	104	109	shale	(11) 22.5-246.5
	109	126	lime	(12) 22.5-269.0
	126	136	shale	(13) 22.5-291.5
	136	139	gray sand	(14) 22.5-314.0
	139	160	shale	(15) 22.5-336.5
	160	187	lime	(16) 22.5-359.0
	187	191	shale	(17) 22.5-381.5
	191	198	lime (sdy)	(18) 22.5-404.0
	198	260	shale	(19) 22.5-426.5
	260	286	lime	(20) 22.5-449.0
	286	298	shale	(21) 22.5-471.5
	298	306	lime	(22) 22.5-494.0
	306	332	shale	(23) 22.5-516.5
	332	342	lime	(24) 22.5-539.0
	342	350	shale	(25) 22.5-561.5
	350	352	lime	(26) 22.5-584.0
	352	366	shale	(27) 22.5-606.5

STRATA THICKNESS	FORMATION DRILLED	T.D.
2	soil	2
30	clay	32
16	shale	48
1	lime	49
9	shale	58
6	lime	62
9	shale	71
13	lime	89
10	shale	94
10	lime	104
5	shale	109
17	lime	126
10	shale	136
3	Gr. sand	139
21	shale	160
27	lime	187
4	shale	191
7	lime	198
62	shale	260
26	lime	286
12	shale	298
8	lime	306
26	shale	332
10	lime	342
8	shale	350
2	lime	352
14	shale	366
30'	23 LIME	389
	11 shale	400
20'	22 LIME	422
	4 shale	426
	3 LIME	429
	4 shale	433
Hertley	1 LIME	437
	149 shale	586
	12 LIME	599
	9 shale	608
	9 LIME	617
	13 shale	630
	3 LIME	633
	2 shale	635

HUGHES DRILLING REPORT

Well No. 13
Farm S. McMillen

SURFACE CASING

Size.....

Feet.....

Circulated _____ sx cement

PERMANENT CSG.

Size.....

Feet.....

T. D. at Completion 772

Contractor HUGHES DRILLING CO.

OPERATOR Hughes Drilling

DATE	DRILLED		REMARKS - TYPE WORK - BILLING REF.	PIPE TALLY
	FROM	TO		
	366	389	Lime (Bleeding oil 371-373)	(28) 22.5 - 629.0
	389	400	Shale (slate 389-390)	(29) 22.5 - 651.5
	400	422	Lime	(30) 22.5 - 674.0
	422	426	Shale (slate 422-423)	(31) 22.5 - 696.5
	426	429	Lime	(32) 22.5 - 719.0
	429	433	Shale	(33) 22.5 - 741.5
11/11/11	433	437	Lime	
	437	586	Shale (Broken 443-446)	
	586	599	Lime (Broken)	
	599	608	Shale	
	608	617	Lime	
	617	630	Shale	
	630	633	Lime	
	633	635	Shale (slate 634-635)	
	635	644	Lime	
	644	658	Shale	
	658	662	Lime (Brown)	
	662	670	Shale (slate 662-663)	
	670	676	Lime	
	676	684	Shale	
	684	692	Lime (oil trace 684-688)	
	692	698	Shale	
	698	715	oil sand (#1 squirrel)	
6-8-17	715	742	Shale	
6-9-17	742	743	Lime	
	743	750	Shale	
	750	751	Lime	

FR Co., Kansas (P92)
4280 FSL 1720 FEL

API # _____

STRATA THICKNESS	FORMATION DRILLED	T.D.
4	Lime	644
14	Shale	658
11	Lime	662
8	Shale	670
6	Lime	676
8	Shale	684
8	Lime	692
6	Shale	698
#159 16	oil sand	715
27	Shale	742
1	Lime	743
7	Shale	750
1	Lime	751
2	Shale	752
1	Shale	753
1	Shale	752
#229 1	oil sand	757
25	Shale	772
		T.D.

For Co., Kansas 1993
4280 FSL 1720 FEL
 API # 15-059-27151

PERMANENT CSG.

Size 600mm x 600mm, 900mm x 900mm, 1200mm x 1200mm
600mm x 1200mm, 900mm x 1800mm, 1200mm x 2400mm

Feet 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

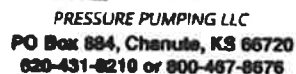
OPERATOR Hughes Drilling
5682

T. D. at Completion 772
Contractor **HUGHES DRILLING CO.**

DATE	DRILLED		REMARKS - TYPE WORK -- BILLING REF.	PIPE TALLY
	FROM	TO		
	751	752	shale	
#2 Squirrels	752	757	Broken sand (remarks pg. 5)	
	757	772	shale	
		TV,		

6-9-17 set 754.45 of used 2³/₈ bad EUE
used 3 centralizers Float shoe on Bottom

[illegible]



TICKET NUMBER 53808

LOCATION Oxiana KS

FOREMAN *Fred Mader*

Invoice # 810466

DATE	CUSTOMER #	WELL NAME & NUMBER		SECTION	TOWNSHIP	RANGE	COUNTY
6-9-17	3425	So. McMillan # 13		NE 11	16	20	FR
CUSTOMER Hughes Drilling Co.							
MAILING ADDRESS 122 Main St.							
CITY Wellsville		STATE KS	ZIP CODE 66092	TRUCK # 712	DRIVER Frye, Mel	TRUCK #	DRIVER
				495	Max, Bob		
				804	Kel, Car		

JOB TYPE <u>long string</u>	HOLE SIZE <u>6 7/8</u>	HOLE DEPTH <u>772</u>	CASING SIZE & WEIGHT <u>2 3/8 EUE</u>
CASING DEPTH <u>354</u>	DRILL PIPE	TUBING	OTHER
SLURRY WEIGHT	SLURRY VOL	WATER gal/sk	CEMENT LEFT in CASING <u>25' Plug</u>
DISPLACEMENT <u>4.4662</u>	DISPLACEMENT PSI	MIX PSI	RATE <u>4.6 PM</u>

REMARKS: Hold Safety meeting. Establish circulation. Mix Pump 100 & Gel Flush. Mix Pump 102 SKS For Blend I/A Cement 2% Gel 44" Flo Seal/sk. Cement to Surface. Flush pump & lines clean. Displace 2 1/2" Rubber plug to casing TD. Pressure to 700" PSI. Release pressure to Set float valve. Shut in casing.

Customer Supplied Water

Find Modern

[illegible]

Bayo 3737

AUTHORIZATION

TITLE

SALES TAX	55.91
ESTIMATED TOTAL	177.44
DATE	394627

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 form.

HUGHES DRILLING CO.

Wellsville, Kansas 66092

Pg 4

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

CORE TIME

LEASE South McMillen #13
FORMATION #1 Squinnet
DATE: 6/8/17

Box 913-883-4455
Clay 913-883-4383

(REM PDC)

	FROM	FEET TO	TIME	MINUTES	REMARKS
	698	699	chip sample	—	Sand very lamin. w/shale (Bleed)
					698-699.5
①	699	700	9:31:00 - 9:31:45	:45	Shale 699.5-701.5
②	700	701	9:32:30	:45	
③	701	702	9:33:15	:45	Solid Sand 701.5-702.5 (exc. Bleed)
④	702	703	9:33:45	:30	Sand very lamin. w/shale 702.5-704
⑤	703	704	9:34:30	:45	(Bleeding)
⑥	704	705	9:35:15	:45	
⑦	705	706	9:35:45	:30	
⑧	706	707	9:36:15	:30	Solid Sand 704-709
⑨	707	708	9:36:45	:30	(exc. Bleeding)
⑩	708	709	9:37:15	:30	
⑪	709	710	9:38:00	:45	709-713
⑫	710	711	9:38:30	:30	Sand slightly lamin. w/shale
⑬	711	712	9:39:15	:45	(exc. Bleeding)
⑭	712	713	9:40:00	:45	
⑮	713	714	9:40:30	:30	
⑯	714	715	9:41:00	:30	
⑰	715	716	9:42:00	1:00	
⑱	716	717	9:43:00	1:00	lost core (check E-log)
⑲	717	718	9:44:00	1:00	
⑳	718	719	9:45:00	1:00	CCH
					(Best Perf Zone)
					701.5-713
					maybe 701.5-715

HUGHES DRILLING CO.

Wellsville, Kansas 66092

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

CORE TIME
LEASE S. Mcmillen #13
FORMATION #2 Sargis
DATE: 6-8-17

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

(RPM PDL)

FROM	FEET TO	TIME	MINUTES	REMARKS
752	753	cut sample		
① 753	754	1:55:00-1:55:45	:45	752-757 sand very lamin. w/shale (some bleeding)
② 754	755	1:56:45	1:00	
③ 755	756	1:57:30	:45	
④ 756	757	1:58:15	:45	
⑤ 757	758	1:59:00	:45	
⑥ 758	759	2:01:00	2:00	shale
⑦ 759	760	2:02:30	1:30	
⑧ 760	761	2:03:30	1:00	
⑨ 761	762	2:04:15	:45	
⑩ 762	763	2:05:15	1:00	
⑪ 763	764	2:06:15 stop Add Joint	1:00	
⑫ 764	765	2:11:00 - 2:12:00	1:00	
⑬ 765	766	2:12:45	:45	
⑭ 766	767	2:13:45	1:09	
⑮ 767	768	2:15:15	1:30	
⑯ 768	769	2:16:45	1:30	
⑰ 769	770	2:17:45	1:00	
⑱ 770	771	2:18:45	1:00	
⑲ 771	772	2:19:45	1:00	
⑳ 772	773			
				No Good CCH