

CONTRACTOR

June 2-8, 1987

OPERATOR

HUGHES DRILLING COMPANY
122 NORTH MAIN
WELLSVILLE, KANSAS 66092

Hughes Drilling Company
122 North Main
Wellsville, Kansas

LOG

NORTH McMILLEN

WELL NO. 4
FRANKLIN CO., KS.
SEC. 2, TWP. 16S, RNG. 20E

API # 15-059-24,220
1236' from S. line
2446' from E. line of
Section

STRATA THICKNESS	FORMATION DRILLED	T.D.	STRATA THICKNESS	FORMATION DRILLED	T.D.
1	Soil	1	4	Lime	405
17	Clay	18	2	Shale (Broken)	407
16	Shale (Limebreak 20-20.5)	34	7	Lime "HERIRA"	414
23	Lime (Bkn. w/shale 38-44)	57	7	Shale (Bkn. 418-421)	421
6	Shale (Dark) (Slate 62-63)	63	9	White Shale (Very Sandy)	430
12	Lime	75	97	Shale (Limebreak 526-527)	527
6	Shale	81	3	White Shale (Sdy.)	530
18	Lime	99	5	Sand "PERU" Gas (Some Shale)	535
9	Shale	108	27	Shale (Very Sdy. 535-542) (Slate 558-559)	562
6	Sand	114	6	Lime (Broken)	568
6	Shale (Sdy.)	120	3	Shale (Broken)	571
8	Sand	128	6	Sand "WAYSIDE" (Hard)(Bleeding oil) (Oil show)	577
11	Shale (Sdy.)	139	3	(Very Hard 574-575) (Slight oil show)	
34	Lime	173	6	(Good Bleeding oil 575-577)	
60	Shale (Sdy. lime shale 188-192)	233			
23	Lime	256			
17	Shale (Sdy.)	273	6	Shale	583
6	Lime	279	9	Lime	592
28	Shale	307	7	Shale (Dark)	599
11	Lime	318	8	Lime	607
23	Shale (Bkn. 318-323) (Lime 323-324)	341	6	Shale	613
25	Lime 30' (Shale Brk. 351-352)	366	9	Lime	622
8	Shale (Bkn.) (Slate 371-372)	374	12	Shale	634
25	Lime 20' (Slight oil show 391-392)	399	3	Lime (Hard)	637
2	Shale (Slate 400-401)	401	8	Shale	645
			7	Lime (Bkn. w/white shale)	652
			22	Shale (Slate 665-666) (Slate 671-672)	674

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API #

cont.

STRATA THICKNESS	FORMATION DRILLED	T.D.	STRATA THICKNESS	FORMATION DRILLED	T.D.
4	Gray Sand (Bkn. w/some lime)	678			
1.5	White Shale (Limebreak 679.5)	679.5			
13.5	Sand #1 SQUIRREL	692			
36.5	Shale (Bkn. 726-728.5)	728.5			
9.5	Sand #2 SQUIRREL	738			
46	Shale	784T.D.			
6-2-87 to 6-8-87					
Drilled 784 ft. of 5 1/8" hole.					
6-2-87					
Set 20.25 ft. of used 6 1/2" surface pipe.					
Cemented in with 5 sacks cement.					
6-4-87 Cored #1 SQUIRREL 680'-695'.					
6-8-87 Cored #2 SQUIRREL 730'-742'.					
6-8-87 Set 780.5 ft. of 2 1/2" 10 rd. reg pipe.					
Seating nipple at 726 ft.					
Used 4 centralizers.					

HUGHES DRILLING CO.

Wellsville, Kansas 66092

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

CORE TIME

ROD 913-883-4655
Clay 913-883-4383

LEASE NORTH MILLER #4

FORMATION 1st SQUIZZES

DATE: JUNE 4, 1987 (RPM)

FROM FEET	TO FEET	TIME	MINUTES	REMARKS
679.5	680	Chip Sample	Laminar	SAND 1/2 Shale
680	681	2:54:10 - 2:54:50	1:30	SAND Slightly laminar (Good description) (2:54:10 - 2:54:50) (SAND) (680.5)
681	682	2:54:50 - 2:55:55	1:05	Laminar SAND 1/2 Shale
682	683	2:55:55 - 2:56:25	1:30	Solid Sand (Black Dip o. 1)
683	684	2:56:25 - 2:57:05	1:35	
684	685	2:57:00 - 2:57:45	1:45	Laminar SAND 1/2 Shale (684.5)
685	686	2:57:45 - 2:58:50	1:05	Slightly laminar SAND 1/2 Shale (685.5 - 686.5) (Black Dip o. 1)
686	687	2:58:50 - 3:00:05	1:15	
687	688	3:00:05 - 3:02:05	2:00	
688	689	3:02:05 - 3:03:45	1:40	Very laminar SAND 1/2 Shale
689	690	3:03:45 - 3:04:50	1:05	(Source bleeding oil)
690	691	3:04:50 - 3:06:45	1:55	
691	692	3:06:45 - 3:08:40	1:55	
692	693	3:08:40 - 3:11:25	2:45	Silty Shale
693	694	3:11:25 - 3:14:15	2:50	
694	695	3:14:15 - 3:17:50	3:00	
				BEST PERFS
				Zone
				679.5 - 686.5
				(?)

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 K. MICHELETTI NO. 4

FORMATION 2ND SQUARE

DATE: 6-8-87

(RPM)

FROM	TO	TIME	MINUTES	REMARKS
728.5	730	Clay/tear bit		
730	731	10:19:15-10:19:55	:40	SAND GOOD BLEEDING OIL
731	732	10:19:55-10:21:05	1:10	SAND SLIGHTLY LAMINATED WITH SHALE & MICA
732	733	10:21:05-10:22:05	1:00	GOOD BLEEDING OIL
733	734	10:22:05-10:23:35	1:30	SAND LAMINATED w/ SHALE
734	735	10:23:35-10:25:15	1:40	BLEEDING OIL MICA
735	736	10:25:15-10:27:05	1:50	SHALES SAND WERT LAMINATED WITH
736	737	10:27:05-10:29:30	2:25	SHALE SAME BLEEDING OIL
737	738	10:29:30-10:30:55	1:25	SAND LAMINATED WITH SAND BLEEDING OIL
738	739	10:30:55-10:33:05	2:10	
739	740	10:33:05-10:35:25	2:20	SAND SHALE SLIGHT SAND AT 741-241.1
740	741	10:35:25-10:38:10	2:45	
741	742	10:38:10-10:39:45	1:35	SHALE
				BEST PERM ZONE
				729-738
				DATA

STATION _____ OPERATOR _____

CONSOLIDATED OIL WELL SERVICES, INC.
 P.O. Box 884
 Chanute, Kansas 66720
 Phone (316) 431-9210

Ticket 8379

Date	Customer's Acct No	Sec	Typ	Range	Well No & Farm	Place of Destination
Charge To					Owner	Country
Mailing Address					Contractor	State
City & State					Well Owner Operator Contractor	

TYPE OF JOB		CASING			HOLE DATA			PLUGS AND HEAD			PRESSURE			CEMENT LEFT IN CASING		
Surface	Production	New	Used	Base Size	Bottom	Top	Head	Circulating	Minimum	Maximum	Requested	Necessity	Measured			
				Total Depth												
				Weight												
				Depth												
				Type												

CEMENTING SERVICE DATA

FRACTURING - ACIDIZING SERVICE DATA

Type of Job _____
 Breakdown Pressure from _____ psi to _____ psi
 Treating Pressure Maximum _____ psi Avg Pump Rate _____ GPM/8PM
 Sand _____ Gals Treating Acid _____ Type _____ Size _____ Open Hole Diameter _____
 Well Treating Through Tubing _____ Casing _____ Annulus _____ Weight _____
 Remarks _____
 No. Perforations _____ Pay Formation Name _____ Depth of Job _____ Ft

INVOICE SECTION

CEMENTING	Pumping Charge	Office Use	Office Use	Pumping Charge		Office Use	Office Use
				\$	\$		
Sacks Bulk Cement	@			12x30 Sand	@		
Ton Mileage on Bulk Cement	@			10x20 Sand	@		
Premium Gel	@			x Sand	@		
Flo-Seal	@			Ton Mileage	@		
Calcium Chloride	@			Gals., Acid	@		
Plug	@			Chemicals	@		
Equipment	@				@		
	@			Potassium Chloride	@		
	@			Rock Salt	@		
	@			Water Gel	@		
Granulated Salt	@			Transport Truck (Hrs.)	@		
Transport Truck (Hrs.)	@			Vac Truck (Hrs.)	@		
Vac Truck (Hrs.)	@			Fuel Surcharge	@		
Fuel Surcharge	@			Tax			
Total			\$	Total		\$	

FRACTURING - ACIDIZING

A Finance Charge computed at 1 1/2% per month (annual percentage rate of 21%) will be added to balance over 30 days.

NSCOW-8893