T. 153 N., R. 98 W.

1 (169-11[1]) 2201
R 36.0
C 6.0
R 23.0
C 4.1 M
R 13.9
C 2.2
R 93.8
C 2.0
R 2.0
C 2.5
R 1.5
C 1.0
R 7.0
C 3.6
R 6.5
C 5.3
R 4.7
C 2.0
240

T. 153 N., R. 99 W.

2 (169-12[1]) 2380	3 (169-13[1]) 2353
R 56.0	R 42.0
C 2.3	C 3.8
R 5.7	R 2.2
C 1.0	C 4.7
R 36.0	R 109.3
C 7.0	C 5.0
R 26.0	R 29.0
C 5.8 M	C 4.0 } M
R 45.2	R 1.0
C 3.1	C 3.5
R 23.9	R 12.5
C 2.1	C 2.3
R 27.9	R 8.7
C 4.8	C 2.0
R 5.2	240
C 1.0	
R 9.0	
C 4.0	
280	

T. 153 N., R. 100 W.

4 (WATER WELL) UNKNOWN
R 196
C 7 W
UNKNOWN

T. 154 N., R. 95 W.

5 (1221[2]) 2153	6 (5980[2]) 2250
R 158	NR 24
C 4 Pt	R 133
R 37	C 4
C 3	R 100
R 27	C 6 Pt
C 3	R 29
R 77	C 9
C 3	R 34
R 217	C 7
C 6	R 64
R 270	C 6
C 5	R 140
R 4	C 6
C 5	R 91
R 77	C 3
C 5	700[5]
R 110	
C 3	
1025[5]	

T. 154 N., R. 97 W.

7 (169-5[1]) 2236
R 24.0
C 2.2
R 21.8
C 10.6 M
R 37.4
C 3.5
R 26.5
C 2.5
R 53.5
C 3.2
R 28.8
C 5.3
R 44.7
C 6.0 W
R 76.0
C 10.0 A
R 3.0
C 1.7
R 3.3
C 5.8
400

T. 154 N., R. 98 W.

8 (169-6[1]) 2252
R 34.0
C 1.0
R 25.0
C 8.3 M
R 63.7
C 3.3
R 6.7
C 3.8
R 57.2
C 4.0
R 12.0
C 8.6
R 34.4
C 6.0 W
R 28.0
C 4.9 A
R 3.1
C 3.3
320

T. 154 N., R. 99 W.

9 (169-9[1]) 2271	10 (169-10[1]) 2236	11 (169-14[1]) 2344
R 46.0	R 48.0	R 53.0
C 3.5 } M	C 6.8 M	C 4.6
R 1.5	R 25.2	R 29.4
C 4.0	C 3.5	C 3.7
R 23.0	R 30.5	R 29.3
C 2.5	C 3.0	C 3.3 } M
R 13.5	200	R 1.7
C 7.5		C 4.5
R 24.5		R 16.5
C 4.1		C 4.0
R 21.9		R 26.0
C 2.3		C 5.0
R 26.7		R 14.0
C 2.0		C 4.8
200		R 13.2
		C 4.2
		260

T. 154 N., R. 100 W.

12 (307[3]) 2000	13 (309[3]) 2060	14 (306[3]) 2053	15 (S-1[3]) 2038	16 (7[3]) 2089	17 (303[3]) 2040	18 (K[3]) 2045	19 (305[3]) 2030	20 (I[3]) 2131	21 (K-1[3]) 2075	22 (304[3]) 2100	23 (6[3]) 2110	24 (302[3]) 2095	25 (H-1[3]) 2010	26 (H[3]) 2020	27 (14[3]) 2029	28 (Q-1[3]) 2080	29 (F[3]) 1935
R 107	R 32.0	R 17.0	R 79.5	R 55.0	R 38.0	R 18.0	R 52.0	R 45.0	R 32.0	R 20.0	R 23.0	R 24.5	R 35	R 44.5	R 55	R 14.5	R 96
C 11 W	C 6.5	C 5.5	C 10.0 W	C 7.5	C 4.5	C 1.7	C 3.5	C 1.0	C 0.5	C 1.0	DC 6.5	C 5.5	C 6 W	C 10.0 W	C 12 W	C 12.5	96[4]
R 30	R 15.5	R 2.5	R 47.0	R 6.5	R 40.5	R 13.8	C 47.5	R 26.0	R 17.5	R 28.0	R 16.0	R 6.0	R 36	R 32.5	R 39	R 13.0	
C 11 A	C 5.5	C 6.5	C 7.5 A	C 5.5	C 11.5 W	C 1.7	C 11.0 W	C 2.5	C 5.0	C 6.5	C 5.5	C 8.0	C 7 A	C 9.0 A	C 9 A	NR 28.0	
165	R 94.5	C 80.5	160	R 77.5	R 28.5	R 36.8	150	R 20.0	R 19.0	R 6.5	R 5.0	R 26.0	105	102	165	R 42.0	
	C 12.0 W	C 12.0 W		C 10.0 W	C 9.5 A	C 9.0 W		C 5.5	C 4.0	C 7.0	C 7.0	C 5.0				C 10.0 W	
	R 16.0	150		R 39.0	150	R 10.5		103	83	R 79.0	R 79.5	R 51.0				R 35.0	
	C 9.0 A			C 9.0 A		C 7.5 A				C 10.5 W	C 10.5 W	C 11.0 W				C 2.5 } A	
	210			213		168				R 29.5	R 28.0	R 29.0				R 3.5	
										C 10.0 A	C 8.0 A	C 9.5 A				C 1.5	
										210	R 59.0	193				184	
											C 4.0						
											258						

T. 154 N., R. 100 W. Continued

30 (F-1[3]) 1975	31 (E[3]) 1997	32 (D-1[3]) 2015	33 (D[3]) 2027	34 (9[3]) 2070	35 (A[3]) 1940	36 (A-1[3]) 1975	37 (8[3]) 1985	38 (C[3]) 2009	39 (301[3]) 2071	40 (B[3]) 1997	41 (Z-25[3]) 2113
R 68.0	R 19	R 43	R 49.0	R 12.5	R 72.0	R 52.0	R 18.5	R 12	R 70.0	R 55.0	R 20.0
C 1.5 A	C 6 W	C 9 W	C 13.0 W	C 3.0	C 3.5	C 6.5 A	C 7.5 W	C 1 W	C 8.0 W	C 1.0	C 1.0
R 23.0	35	R 43	R 32.0	R 1.0	80	NR 11.0	R 55.5	R 53	R 51.0	R 5.0	R 19.0
C 7.5		C 5 A	C 9.5 A	C 3.5		R 40.0	C 7.0 A	C 10 A	C 7.5 A	C 10.0 A	C 3.0
140		102	150	R 83.5		C 2.0	119.5	180	180	R 15.5	R 17.0
				C 10.5 W		117				C 1.0	C 1.0
				R 51.0						R 12.0	R 2.0
				C 10.0 A						NR 18.5	C 1.5
				177						118	R 5.5
											C 7.5
											R 2.5
											C 4.0
											R 63.0
											C 7.0 W
											R 51.0
											C 10.0 A
											225

T. 155 N., R 95 W.

42 (1812[2]) 2322	43 (5629[2]) 2331	44 (2007[2]) 2103	45 (1214[2]) 2086
NR 17	R 175	NR 28	NR 36
R 70	C 6 W	R 152	R 122
C 14	R 31	C 10 Pt	C 8 Pt
R 18	C 4 A	R 29	R 19
C 9	R 213	C 6	C 8
R 65	C 7 Pt	R 28	R 23
C 12 W	R 26	C 3	C 6
R 26	C 3	R 12	R 35
C 3 A	R 43	C 5	C 3
R 210	C 4	R 166	R 291
C 9 Pt	R 1	C 3	C 3
R 34	C 3	R 194	R 3
C 4	R 207	C 6	C 3
R 42	C 4	R 230	R 268
C 12	R 125	C 5	C 5
R 88	C 6	R 98	R 102
C 3	R 222	C 5	C 6
R 109	C 4	R 32	R 30
C 3	R 28	C 5	C 3
R 138	C 5	1100[5]	R 39
C 4	R 65		C 4
R 207	C 5		1100[5]
C 3	R 22		
R 95	C 3		
C 3	R 28		
R 86	C 4		
C 4	R 86		
1350[5]	C 6		
	1400[5]		

T. 155 N., R 96 W.

46 (8844[2]) 2349	47 (18[4]) 2190	48 (13[4]) 1985	49 (2569[2]) 2207	50 (5310[2]) 2319	51 (19[4]) 2205	52 (169-3[1]) 2181	53 (12[4]) 1960	54 (WATER WELL) 1930	55 (1895[2]) 2089	56 (17[4]) 2045	57 (16[4]) 2010	58 (11[4]) 1930	59 (14[4]) 1925	60 (15[4]) 1948
NR 127	R 39.0	R 74.3	NR 49	NR 55	R 72.1	R 72.0	R 64.4	R 32	NR 7	R 76.6	R 84.1	R 23.2	R 10.0	R 40.0
R 39	C 12.1 W	C 13.5 Pt	R 239	R 107	C 10.8 W	C 1.6	C 12.6 Pt	C 5 Pt	R 183	C 2.3	C 14.7 Pt	C 7.6 Pt	C 1.9 } Pt	C 9.2 Pt
C 10 W	R 22.3	R 35.5	C 3 } Pt	C 13 W	R 25.3	R 25.4	R 29.8	52	C 6 Pt	R 10.3	R 18.5	R 37.3	R 0.4	R 51.1
R 22	C 3.2 A	C 7.1	R 1	R 25	C 3.4 A	C 4.5 W	C 8.9		R 4	C 15.8 Pt	C 9.5	C 10.3	C 9.5	C 11.7
C 6 A	135.0	141.5	C 3	C 6 A	135.3	R 17.5	R 16.7		C 3	R 56.9	R 9.9	R 21.4	R 21.3	R 15.9
R 192			R 22	R 205		C 2.6 A	C 2.6		R 23	C 9.9	C 3.4	C 2.3	C 9.7	C 3.4
C 7 Pt			C 6	C 9 Pt		R 105.4	149.0		C 5	177.0	159.6	166.3	R 24.0	142.0
R 24			R 44	R 15		C 0.7			R 102				C 2.0	
C 7			C 5	C 9		R 5.3			C 4				80.0	
R 88			R 161	R 28		C 3.0			R 69					
C 10			C 4	C 11		R 1.0			C 3					
R 15			R 125	R 44		C 2.2			R 13					
C 4			C 5	C 4		R 12.8			C 2					
R 281			R 96	R 30		C 3.0			R 521					
C 5			C 6	C 6		340			C 6					
R 22			R 114	R 245					R 30					
C 3			C 4	C 3					C 2					
R 50			R 106	R 3					1200[5]					
C 3			C 4	C 2										
R 150			R 64	R 27										
C 3			C 5	C 6										
R 25			R 76	R 114										
C 4			C 3	C 2										
R 33			R 2	R 64										
C 3			C 2	C 4										
R 30			1250[5]	R 108										
C 4				C 4										
R 7				R 24										
C 4				C 2										
R 30				R 39										
C 3				C 4										
1300[5]				1250[5]										

T. 155 N., R. 97 W.

61 (169-1[1]) 2184	62 (169-2[1]) 2199
R 147.0	R 46.0
C 3.0 A	C 5.3
R 67.0	R 8.7
C 3.2	C 1.0
R 35.8	R 24.0
C 1.0	C 5.0
R 28.0	R 56.0
C 1.0	C 10.7 W
R 4.0	R 18.3
C 0.8	C 4.6 A
R 39.2	R 20.4
C 14.2 Pt	C 1.8
360	240

T. 155 N., R. 98 W.

63 (169-7[1]) 2316	64 (169-8[1]) 2387
R 68.0	R 92.0
C 2.0	C 2.6
R 2.0	R 54.4
C 2.5	C 4.6 } M
R 15.5	R 2.4
C 8.0 M	C 4.3
R 13.0	R 10.7
C 2.5	C 0.6
R 1.5	R 0.4
C 1.0	C 2.0
R 39.0	R 66.0
C 2.5	C 3.0
R 2.5	R 29.0
C 4.5	C 8.0+
R 15.5	280
C 10.0	
240	

T. 155 N., R. 99 W.

65 (169-15[1]) 2232
R 71.0
C 6.6 M
R 94.4
C 2.7
R 25.3
C 3.0
R 45.0
C 6.5 W
R 29.5
C 5.1 A
340.0

T. 155 N., R. 100 W.

66 (4[3]) 2080	67 (2[3]) 2051	68 (3[3]) 2119	69 (5[3]) 2084	70 (308[3]) 1995
R 50.0	R 32.0	R 80.0	R 47.0	R 94
C 4.0	C 2.0	C 0.5	C 4.0	C 12 W
R 4.5	R 23.0	R 20.0	R 1.5	R 32
C 7.5	C 4.3	C 1.0	C 7.5	C 12 A
R 15.0	R 6.7	R 16.5	R 8.0	165
C 5.0	C 6.4	C 2.5	C 7.0	
R 70.0	R 15.6	R 7.5	R 68.0	
C 9.0 W	C 5.0	C 6.0	C 12.0 W	
R 48.0	R 30.0	R 14.0	R 29.0	
C 12.0 A	C 2.0	C 3.7	C 8.0 A	
228	R 34.0	R 57.9	194	
	C 7.5 W	C 9.4 W		
	R 40.5	R 54.0		
	C 11.0 A	C 3.0+A		
	225	276		

T. 156 N., R. 96 W.

71 (1514[2]) 2275	72 (45[2]) 2355	73 (5408[2]) 2326
R 109	NR 19	R 196
C 10 W	R 22	C 9 W
R 240	C 3	R 31
C 3 Pt	R 15	C 4 A
R 37	C 6	R 208
C 4	R 11	C 8 Pt
R 5	C 3	R 13
C 4	R 113	C 6
R 50	C 6 W	R 49
C 6	R 199	C 10
R 105	C 3 Pt	R 106
C 3	R 33	C 5
R 131	C 4	R 259
C 4	R 22	C 5
R 352	C 3	R 187
C 4	R 81	C 3
R 107	C 8	R 138
C 5	R 374	C 5
R 89	C 5	R 16
C 3	R 34	C 4
R 12	C 3	R 22
C 5	R 286	C 6
1300[5]	C 7	1290[5]
	R 83	
	C 4	
	1360[5]	

DATA EXAMPLE

72	Drill hole number, as shown in this report
(81[4])	Original designation of drill hole, footnote indicates source
2350	Ground level elevation
NR 40	No record-showing interval thickness
R 15	Rock-showing rock thickness
C 6 W	Coal-showing coal thickness for bed: M, Mormon; W, Williston; A, Avoca; Pt, Pittsley
R 8	
DC 3	Dirty coal-showing coal thickness
85	Total depth of drill hole

All measurements in feet (to convert to meters, multiply by 0.3048)

[1] USGS-NDGS, Open-file report 76-869, 1976
[2] North Dakota Geological Survey oil well number
[3] Great Northern Railway, 1966
[4] Great Northern Railway, 1955
[5] Depth to which log interpreted

DRILL HOLE DATA
SOUTHEAST WILLIAMS COUNTY, NORTH DAKOTA

THIS REPORT HAS NOT BEEN EDITED FOR CONFORMITY WITH GEOLOGICAL SURVEY EDITORIAL STANDARDS OR STRATIGRAPHIC NOMENCLATURE.