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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
GROUND WATER BRANCH

LOGS OF TEST HOLES AND WELLS IN THE CENTRAL SNAKE RIVER PLAIN, IDAHO

By

P. T. VOEGELI AND N. B. CROW

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PREPARED IN COLLABORATION WITH THE
UNITED STATES ATOMIC ENERGY COMMISSION

54-323
BOISE, IDAHO

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PRELIMINARY RECORDS
SUBJECT TO REVISION

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LOGS OF TEST HOLES AND WELLS IN THE CENTRAL
SNAKE RIVER PLAIN, IDAHO

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INTRODUCTION

THE UNITED STATES GEOLOGICAL SURVEY, IN COLLABORATION WITH THE ATOMIC ENERGY COMMISSION, CONTINUED TEST DRILLING IN THE NORTHERN PART OF THE CENTRAL SNAKE RIVER PLAIN ON AND NEAR THE NATIONAL REACTOR TESTING STATION DURING 1953, *and the first-half of 1954.* THE DRILLING IS AN ESSENTIAL PHASE OF BASIC INVESTIGATIONS OF THE GEOLOGY AND HYDROLOGY OF THE AREA. IN ADDITION TO THE LOGS OF TEST HOLES THIS REPORT CONTAINS THE PRELIMINARY COMPILED LOGS OF WATER WELLS DRILLED BY CONTRACTORS FOR THE COMMISSION DURING THE FIRST-HALF OF 1953. THE LOGS OF 29 WELLS AND TEST HOLES WERE COMPILED IN EARLIER REPORTS ^{1/}. THIS SUPPLEMENT ADDS THE LOGS OF

^{1/} JONES, J. R., AND JONES, S. L., 1952, LOGS OF TEST HOLES IN THE CENTRAL SNAKE RIVER PLAIN, IDAHO: 96 P., 1 FIG. SEPTEMBER (TYPEWRITTEN). (REPT. NO. 100-22015 USGS).

JONES, J. R., JONES, S. L., AND CROSTHWAITE, E. G., 1953, LOGS OF TEST HOLES IN THE CENTRAL SNAKE RIVER PLAIN, IDAHO: 51 P., 1 FIG. JANUARY (TYPEWRITTEN). (REPT. NO. 100-22015 USGS SUPPLEMENT 1).

10 NEW WELLS AND TEST HOLES AND THE LOG OF A DEEP TEST HOLE DRILLED IN 1951 BUT NOT PREVIOUSLY REPORTED. THE LOCATIONS OF ALL THE TEST HOLES AND WELLS ARE SHOWN ON FIGURE 1. THE METHOD USED BY THE GEOLOGICAL SURVEY FOR NUMBERING WELLS AND TEST HOLES ON THE MRTS IS DESCRIBED IN THE BASIC REPORT.

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THE METHODS OF DRILLING, AND OF COLLECTING, HANDLING, AND STUDYING SAMPLES OF DRILL CUTTINGS ARE DESCRIBED IN THE BASIC REPORT. MORRIS DEUTSCH AND N. B. CROW SUPERVISED THE TEST DRILLING AND COLLECTED AND PROCESSED CUTTINGS. N. B. CROW, S. L. JONES, R. T. LITTLETON, R. O. SMITH AND P. T. VOEGELI MADE LABORATORY GEOLOGIC STUDIES OF THE WELL AND TEST-HOLE CUTTINGS AND PREPARED NOTES WHICH, CONSOLIDATED WITH THE FIELD DATA, ARE THE BASIS FOR THE PRELIMINARY LOGS CONTAINED HEREIN. THE CONSOLIDATED GEOLOGIC LOGS WERE PREPARED BY P. T. VOEGELI AND N. B. CROW, AND S. L. JONES. GROUND-WATER INVESTIGATIONS BY THE GEOLOGICAL SURVEY ARE DIRECTED BY A. N. SAYRE, CHIEF OF THE GROUND WATER BRANCH, WASHINGTON D. C. SPECIAL STUDIES FOR THE ATOMIC ENERGY COMMISSION ARE COORDINATED BY C. V. THEIS, PRINCIPAL GEOLOGIST, ALBUQUERQUE, NEW MEXICO. INVESTIGATIONS FOR THE ATOMIC ENERGY COMMISSION IN IDAHO ARE SUPERVISED BY R. L. NAGE, DISTRICT GEOLOGIST, BOISE, IDAHO. P. T. VOEGELI IS CHIEF OF THE GEOLOGICAL SURVEY FIELD PARTY ON THE NATIONAL REACTOR TESTING STATION.

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LOGS OF TEST HOLES AND WELLS

BUTTE COUNTY

WELL 6N-31E-12A01

CONTRACTOR: R. J. STRASSER DRILLING CO.

MATERIAL		THICKNESS (FEET)	DEPTH (FEET)
SILT,	TAN, CLAYEY, CALCAREOUS	40	40
GRAVEL,	GRAY AND TAN, ROUNDED. PEBBLES ARE CHIEFLY LIMESTONE AND QUARTZ	19	59
BASALT,	GRAY, MINUTELY VESICULAR	46	105
BASALT,	GRAY AND RED, COARSELY VESICULAR . . .	13	118
BASALT,	GRAY, MINUTELY VESICULAR	69	187
SILTSTONE,	RED, TUFFACEOUS, AND BROWN TUFFACEOUS SAND. CUTTINGS CONTAIN REDDISH-GRAY, COARSELY VESICULAR BASALT FROM 187 TO 190 FEET	14	201
BASALT,	GRAY, DENSE	9	210
BASALT,	DARK-GRAY, VESICULAR. WATER ENCOUNTERED FROM 220 TO 231 FEET. STATIC WATER LEVEL IS ABOUT 209 FEET	32	242
BASALT,	REDDISH-GRAY, COARSELY VESICULAR . . .	7	249
BASALT,	REDDISH-GRAY AND GRAY, VESICULAR. SMALL AMOUNT OF WATER ENCOUNTERED FROM 260 TO 263 FEET	67	316
BASALT,	REDDISH-GRAY, COARSELY VESICULAR . . .	3	319
BASALT,	REDDISH-GRAY, MINUTELY VESICULAR . . .	5	324
		TOTAL DEPTH	

PRELIMINARY RECORDS
SUBJECT TO REVISION

WELL 6N-31E-13A61

CONTRACTOR: R. J. STRASSER DRILLING CO.

MATERIAL		THICKNESS (FEET)	DEPTH (FEET)
CLAY,	GRAY TO LIGHT-TAN, SILTY, SLIGHTLY SANDY. CUTTINGS CONTAIN FRAGMENTS OF BASALT FROM LAND SURFACE TO 20 FEET AND FROM 45 TO 50 FEET	50	50
BASALT,	GRAY, VESICULAR	20	70
BASALT,	REDDISH-BROWN AND GRAY, VESICULAR, DENSE. CUTTINGS CONTAIN BASALTIC GLASS. CREVICES AT 70, 101 AND 105 FEET	35	105
BASALT,	GRAY, SLIGHTLY VESICULAR. DRILLER REPORTED "SOFT RED LAVA" AT 113 FEET. CREVICE AT 115 FEET	15	120
BASALT,	REDDISH-BROWN AND GRAY, MINUTELY VESICULAR. CUTTINGS CONTAIN BASALTIC GLASS. CREVICE FROM 137 TO 139 FEET	24	144
BASALT,	GRAY, MINUTELY VESICULAR. CREVICE AT 163, FROM 177 TO 182 AND 198 FEET	54	198
BASALT,	GRAY, SLIGHTLY DENSE, AND SANDSTONE, LIGHT-TAN, FINE-GRAINED, CALCAREOUS. DRILLER REPORTED "BROWN SHALE"	10	208
BASALT,	GRAY, VESICULAR. ENCOUNTERED SMALL AMOUNT OF WATER AT 222 FEET	17	225
BASALT,	GRAY, VESICULAR	10	235
BASALT,	GRAY, SLIGHTLY VESICULAR. CREVICE AT 250 FEET	15	250
BASALT,	REDDISH-BROWN. DRILLER REPORTED "BROKEN WATER-BEARING LAVA" FROM 250 TO 253 FEET. LOST 50 PERCENT OF CUTTINGS FROM 256 TO 260 FEET	10	260

PRELIMINARY RECORDS
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WELL 6N-31E-13AC1 -- CONTINUED

BASALT, REDDISH-BROWN AND GRAY, DENSE. DRILLER REPORTED "BROKEN LAVA" AT 265 AND 275 FEET	20	280
BASALT, REDDISH-BROWN, VESICULAR TO VERY VESICULAR. CUTTINGS CONTAIN BLACK BASALTIC GLASS AND BASALTIC TUFF	25	305
BASALT, LIGHT TO DARK-GRAY, VESICULAR	15	320
BASALT, REDDISH-GRAY, VESICULAR. DRILLER REPORTED "HARD GRAY LAVA" AT 323 FEET	5	325
BASALT, GRAY, VESICULAR. DRILLER REPORTED "VERY HARD GRAY LAVA" AT 350 AND "SOFT POROUS GRAY LAVA" AT 355 FEET	40	365
		TOTAL DEPTH

WELL 6N-31E-13AC2

CONTRACTOR: R. J. STRASSER DRILLING CO.

MATERIAL	THICKNESS (FEET)	DEPTH (FEET)
SAND, TAN, SILTY, CALCAREOUS	10	10
SILT, TAN, SANDY, CLAYEY, CALCAREOUS	45	55
BASALT, GRAY, VESICULAR. TROUGHLESTONE CREVICE 78 TO 79 FEET	25	80
BASALT, DARK-GRAY, VESICULAR. CREVICE AT 83 FEET.	5	85
BASALT, GRAY, VESICULAR	5	90
BASALT, DARK-GRAY, VERY VESICULAR	5	95
OLIVINE BASALT, GRAY, VESICULAR. CREVICE AT 104 FEET	20	115
BASALT, GRAY, VESICULAR, APHANTIC, DENSE	10	125

PRELIMINARY RECORDS
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WELL 6N-31E-13A02 -- CONTINUED

BASALT, GRAY, VESICULAR, APHANITIC	10	135
OLIVINE BASALT, GRAY, VESICULAR, APHANITIC, DENSE. CREVICE AT 137 AND 142 FEET	10	145
BASALT, GRAY, VESICULAR, APHANITIC	60	205
BASALT, GRAY, APHANITIC, DENSE. TROUBLESOME CREVICE AT 217 FEET	15	220
BASALT, GRAY, APHANITIC, DENSE	5	225
OLIVINE BASALT, LIGHT-GRAY, APHANITIC, DENSE. BAILED HOLE DRY AT 238 FEET. WATER AT 240 FEET	30	255
BASALT, REDDISH-BROWN, VESICULAR, APHANITIC, DENSE. LOST 90 PERCENT OF CUTTINGS AT 257 FEET	10	265
BASALT, REDDISH-GRAY, VESICULAR, APHANITIC, DENSE	30	295
OLIVINE BASALT, GRAY, APHANITIC, DENSE. 40 PERCENT OF CUTTINGS FROM 293 TO 301 FEET NOT RECOVERED	10	305
BASALT, GRAY, APHANITIC, DENSE	5	310
BASALT, GRAY, VESICULAR, APHANITIC, DENSE . . .	5	315
BASALT, GRAY, VESICULAR, APHANITIC, DENSE. LOST CUTTINGS IN CREVICE FROM 318 TO 321 FEET	5	320
BASALT, REDDISH-GRAY, VESICULAR, APHANITIC, DENSE	5	325
OLIVINE BASALT, GRAY, MINUTELY VESICULAR, APHANITIC, DENSE. STATIC WATER-LEVEL STANDS ABOUT 207 FEET	15	340
		TOTAL DEPTH

PRELIMINARY RECORDS
SUBJECT TO REVISION

WELL 6N-31E-136A1

CONTRACTOR: R. J. STRASSER DRILLING CO.

MATERIAL	THICKNESS (FEET)	DEPTH (FEET)
SILT, TAN, SANDY, CALCAREOUS	38	38
BASALT, GRAY, DENSE	76	114
NO SAMPLE. DRILLER REPORTED "YELLOW CLAY" . . .	2	116
BASALT, GRAY AND REDDISH-GRAY, MINUTELY VESICULAR. CREVICED AT 116 AND AT 145 FEET	43	159
BASALT, GRAY AND BLACK, DENSE	12	171
BASALT, GRAY, MINUTELY VESICULAR, DENSE. CREVICE AT 209 FEET. CUTTINGS CONTAIN ORANGE-RED, CALCAREOUS, SILTSTONE FROM 200 TO 250 FEET.	38	209
BASALT, REDDISH-GRAY, GRAY AND BLACK, VESICULAR, DENSE. WATER ENCOUNTERED FROM 226 TO 234 FEET. MORE WATER ENCOUNTERED FROM 240 TO 251 AND FROM 278 TO 304 FEET . .	101	310
		TOTAL DEPTH

Test
WELL 4N-30E-6A81

CONTRACTOR: COPE DRILLING AND PUMP CO.

MATERIAL	THICKNESS (FEET)	DEPTH (FEET)
SILT, BUFF, CLAYEY, CALCAREOUS, SLIGHTLY SANDY AND GRAVELLY	11	11
SAND, TAN, FINE TO COARSE, CALCAREOUS, VERY SILTY, GRAVELLY	6	17
GRAVEL, ROUNDED TO SUBANGULAR	2	19
SAND AND GRAVEL; MEDIUM TO COARSE SAND AND VERY FINE TO FINE GRAVEL	7	26

PRELIMINARY RECORDS
SUBJECT TO REVISION

WELL 4N-30E-6AB1 — CONTINUED

SILT,	SUFF, CLAYEY, CALCAREOUS, VERY SANDY . .	15	41
BASALT,	GRAY AND DARK-GRAY, FINELY VESICULAR, PORPHYRITIC. MINOR CREVICES AT 46.5 AND 49 FEET. DRILLED HARD FROM 43 TO 46.5 FEET AND FROM 55 TO 60 FEET	23	64
BASALT,	LIGHT-GRAY, SLIGHTLY VESICULAR. DRILLED HARD FROM 67.5 TO 70 FEET	6	70
BASALT,	GRAY, PORPHYRITIC	10	80
BASALT PORPHYRY,	GRAY, FINELY VESICULAR. DRILLED VERY HARD FROM 80 TO 85 FEET	5	85
BASALT,	GRAY, FINELY VESICULAR. DRILLED VERY HARD FROM 85 TO 88 FEET	7	92
BASALT,	DARK-GRAY, VESICULAR. DRILLED EASILY .	2	94
CLAY,	GRAY, WITH REDDISH-BROWN SILT AND SAND. HOLE FROM 94 TO 95 FEET WOULD NOT HOLD DRILLING WATER	11	105
BASALT,	GRAY TO LIGHT-GRAY, VESICULAR. DRILLED VERY HARD FROM 117 TO 122 FEET	17	122
BASALT,	DARK-GRAY, MINUTELY VESICULAR. DRILLED HARD FROM 123 TO 124 FEET	6	128
BASALT,	PURPLISH-RED TO PURPLISH-GRAY, VESICULAR. DRILLED READILY	2	130
BASALT,	GRAY, FINELY VESICULAR TO VESICULAR. DRILLED HARD FROM 130 TO 134 FROM 142 TO 152 FEET	22	152
BASALT,	BLACK, PURPLISH-BLACK, AND DARK PURPLISH- GRAY, FINELY VESICULAR TO VESICULAR. DRILLER REPORTED DRILLING WATER LOST IN CREVICE AT 165 FEET. DRILLED HARD FROM 152 TO 154, 160 TO 162, AND AT 165 FEET .	13.5	165.5
BASALT,	PURPLISH-GRAY, FINELY VESICULAR. DRILLED VERY HARD FROM 172 TO 177 FEET	11.5	177

PRELIMINARY RECORDS
SUBJECT TO REVISION

WELL 4N-30E-6A21 — CONTINUED

BASALT, DARK-GRAY TO GRAY, MINUTELY VESICULAR TO VESICULAR. CAVED FROM 185 TO 190 AND FROM 195 TO 200 FEET. DRILLED HARD FROM 180 TO 182 FEET	23	200
BASALT PORPHYRY, GRAY, FINELY VESICULAR TO DRUSY	5	205
BASALT, DARK-GRAY, FINELY VESICULAR TO DRUSY. DRILLED HARD FROM 211 TO 215 FEET . . .	10	215
BASALT, PURPLISH-GRAY, PORPHYRITIC, COARSELY VESICULAR TO DRUSY	5	220
BASALT, GRAY, MINUTELY VESICULAR TO FINELY VESICULAR. CUTTINGS AND DRILLING WATER DISAPPEARED IN CREVICE FROM 222 TO 223 FEET. DRILLED VERY HARD FROM 225 TO 230 FEET	10	230
BASALT, GRAY, PORPHYRITIC, FINELY VESICULAR TO DRUSY. DRILLED HARD FROM 232 TO 234 AND FROM 239 TO 242 FEET	12	242
BASALT PORPHYRY, GRAY, FINELY VESICULAR TO DRUSY.	3	245
BASALT, GRAY, PORPHYRITIC, FINELY VESICULAR TO DRUSY	14	259
BASALT, PURPLISH-BLACK, BLACK, AND RED, VESICULAR TO DRUSY	4	263
BASALT, DARK-GRAY, MINUTELY VESICULAR	2	265
BASALT, DARK-RED, VESICULAR TO SCORIACEOUS . . .	4	269
BASALT, DARK-GRAY, PORPHYRITIC, FINELY VESICULAR	3	272
BASALT, REDDISH AND PURPLISH-GRAY, VESICULAR. HOLE WOULD NOT HOLD WATER BETWEEN 277 FEET AND 278 FEET	13	285
BASALT, PURPLISH-GRAY, DENSE. DRILLED HARD FROM 288 TO 290 FEET	5	290

PRELIMINARY RECORDS
SUBJECT TO REVISION

WELL 4N-30E-6AS1 — CONTINUED

BASALT, GRAY TO LIGHT-GRAY, FINELY TO MINUTELY VESICULAR. CAVED FROM 297 TO 298 FEET. DRILLED HARD FROM 290 TO 304, FROM 314 TO 316, AND FROM 316 TO 323 FEET	33	323
BASALT, DARK-GRAY TO GRAY, DENSE; BLOCKY FROM 325 TO 331 FEET. DRILLED HARD FROM 323 TO 328 AND FROM 331 TO 337 FEET. STRUCK WATER AT ABOUT 331 FEET	14	337
SILTSTONE, ORANGE, SANDY. PROBABLY REPRESENTS AN INTERFLOW BED	4	341
BASALT, DARK-GRAY, FINELY TO MINUTELY VESICULAR. CREVICE AT 348 FEET	13	354
BASALT, PURPLISH-GRAY, VESICULAR TO DRUSY. CUTTINGS CONTAIN CLAY AND SANDSTONE WHICH MAY REPRESENT AN INTERFLOW BED. CREVICE AT 359 FEET	6	360
BASALT, DARK-GRAY TO GRAY, FINELY VESICULAR TO DRUSY	15	375
NO SAMPLE. CUTTINGS NOT RECOVERED AT 377, 380, AND 387 FEET. CREVICE FROM 382 TO 382.5 FEET. CAVED AT 383 FEET	12	387
BASALT, PURPLISH-GRAY, MINUTELY VESICULAR TO DRUSY	2	389
NO SAMPLE. CUTTINGS NOT RECOVERED	8	397
BASALT, DARK-RED, MINUTELY VESICULAR TO VESICULAR. CAVED FROM 397 TO 400 FEET	5	402
BASALT, GRAYISH-BLACK, BLOCKY, MINUTELY VESICULAR TO DRUSY AND AMYGDALOIDAL	10	412
BASALT, DARK PURPLISH-GRAY, BLOCKY, VESICULAR TO DRUSY, POROUS. CUTTINGS NOT RECOVERED FROM 412 TO 415 FEET	7	419
SAND, ORANGE-TAN, ROUNDED, CALCAREOUS AND CALCAREOUS, VERY FINE TO FINE, SILTY, TAN SANDSTONE. DRILLED READILY	10	429

PRELIMINARY RECORDS
SUBJECT TO REVISIONWELL 4N-30E-6AB1 — CONTINUED

SAND AND GRAVEL, DARK, ROUNDED; COARSE SAND TO MEDIUM GRAVEL. CUTTINGS CONTAIN SOME BASALT AND CLAY	5	434
CLAY, LIGHT-TAN, SANDY. CAVED FROM 436 TO 445 FEET	42	476
SAND, REDDISH-BROWN, SUBANGULAR TO SUBROUNDED, FINE TO MEDIUM, CALCAREOUS. CUTTINGS CONTAIN SOME CALCAREOUS TAN CLAY	2	478
CLAY, TAN, SANDY, CALCAREOUS. CAVED FROM 478 TO 479 FEET	6	484
SAND AND CLAY, TAN, CALCAREOUS. CAVED	41	525
SAND AND GRAVEL, LIGHT-BROWN, SUBROUNDED; MEDIUM SAND AND FINE GRAVEL	5	530
SAND, BROWN, FINE TO COARSE	10	540
BASALT, DARK-GRAY, FINELY TO MINUTELY VESICULAR. BLOCKY FROM 540 TO 543 FEET	20	560
BASALT, BLACK, PORPHYRITIC, FINELY VESICULAR TO DRUSY. BLOCKY FROM 563 TO 565 FEET . .	10	570
BASALT, DARK-GRAY TO DARK PURPLISH-GRAY, MINUTELY VESICULAR TO DRUSY. BLOCKY FROM 577 TO 579 FEET	15	585
BASALT, GRAYISH-BLACK, MINUTELY VESICULAR . . .	10	595
BASALT, DARK-GRAY; VESICULAR TO DRUSY FROM 595 TO 600; DENSE FROM 600 TO 612 FEET. CUTTINGS CONTAIN SANDY TAN SILT AND CALCAREOUS TAN CLAY WHICH MAY REPRESENT AN INTERFLOW BED. DRILLED READILY FROM 606 TO 610 FEET. MORE WATER ENCOUNTERED AT 605 FEET	17	612
SILT, TAN, CALCAREOUS, AND SANDY; SOME BLUE-GRAY CLAY	3	615
CLAY, BLuish-GRAY, SANDY, SLIGHTLY CALCAREOUS	10	625

PRELIMINARY RECORDS
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WELL 4N-30E-6AB1 -- CONTINUED

SILT,	LIGHT-TAN, CALCAREOUS. CUTTINGS CONTAIN CALCAREOUS BLUE-GRAY CLAY	5	630
CLAY,	LIGHT-GRAY, SANDY, SLIGHTLY CALCAREOUS .	12	642
SILT,	LIGHT-TAN, CALCAREOUS	5	647
SAND,	TAN, VERY FINE, VERY SILTY, CALCAREOUS .	8	655
SILT,	TAN, CLAYEY, SLIGHTLY GRAVELLY, CALCAREOUS	6	661
BASALT,	GRAY TO DARK-GRAY, FINELY VESICULAR TO DRUSY. BLOCKY FROM 661 TO 675 FEET . . .	19	680
BASALT,	PURPLISH-BLACK, MINUTELY VESICULAR TO DRUSY	5	685
BASALT,	GRAY TO DARK-GRAY, MINUTELY VESICULAR TO DRUSY. CUTTINGS CONTAIN VESICULAR DARK- GRAY BASALT AND SEVERAL ROUNDED PEBBLES FROM 700 TO 705	20	705
BASALT,	DARK-GRAY, PORPHYRITIC, FINELY VESICULAR TO DRUSY. CUTTINGS CONTAIN MUCH CALCITE	5	710
BASALT,	DARK-GRAY TO GRAY, FINELY VESICULAR, DRILLER REPORTED "CLAY IN SEAMS OF ROCK". DRILLED READILY	15	725
BASALT,	DARK PURPLISH-GRAY, MINUTELY VESICULAR. CUTTINGS CONTAIN CALCAREOUS LIGHT-TAN SILT AND CLAYSTONE WHICH MAY REPRESENT AN INTERFLOW BED	5	730
BASALT,	DARK-RED, PURPLISH-RED, AND PURPLISH-GRAY, DENSE. CUTTINGS CONTAIN GRAY AND CALCAREOUS LIGHT-TAN CLAY WHICH MAY REPRESENT AN INTER- FLOW BED	10	740
BASALT,	DARK-GRAY, PORPHYRITIC, FINELY VESICULAR TO DRUSY. CUTTINGS CONTAIN LIGHT-TAN CLAY AND CALCAREOUS, CLAYEY TAN SILT, WHICH MAY REPRESENT AN INTERFLOW BED	5	745

PRELIMINARY RECORDS
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WELL 4N-30E-6A81 -- CONTINUED

BASALT, GRAY TO DARK-GRAY, FINELY VESICULAR TO AMYGDALOIDAL	10	755
BASALT, GRAY, PORPHYRITIC, MINUTELY TO FINELY VESICULAR. CUTTINGS CONTAIN GRAY AND CALCAREOUS TAN AND VERY LIGHT-TAN CLAY WHICH MAY REPRESENT AN INTERFLOW BED. . .	5	760
BASALT, DARK-GRAY, FINELY VESICULAR TO AMYGA- LOIDAL. CUTTINGS CONTAIN CALCAREOUS TAN CLAY AND CALCITE WHICH MAY REPRESENT AN INTERFLOW BED	5	765
BASALT PORPHYRY, DARK-GRAY, FINELY VESICULAR . . .	5	770
BASALT, DARK-GRAY TO DARK PURPLISH-GRAY, PORPHY- RITIC, FINELY VESICULAR TO AMYGDALOIDAL	10	780
BASALT, GRAY, PORPHYRITIC, MINUTELY VESICULAR. DRILLED READILY FROM 785 TO 790 FEET. . .	10	790
BASALT, DARK-GRAY, PORPHYRITIC, MINUTELY TO FINELY VESICULAR	15	805
BASALT, GRAY TO DARK-GRAY, MINUTELY VESICULAR TO DRUSY	5	810
BASALT PORPHYRY, DARK-GRAY, MINUTELY VESICULAR	5	815
SILT, REDDISH-TAN, VERY SANDY, CALCAREOUS. . .	11	826
BASALT, DARK-GRAY, PORPHYRITIC, FINELY VESICULAR TO DRUSY. DRILLED HARD FROM 831 TO 834 AND FROM 837 TO 845 FEET	19	845
SILT, REDDISH-BROWN, CALCAREOUS. CUTTINGS CONTAIN CALCAREOUS TAN CLAY, SAND, GRAVEL, AND DARK-GRAY BASALT. CAVED	6	851
BASALT, GRAYISH-BLACK TO DARK-GRAY, MINUTELY VESICULAR TO DRUSY; MATRIX SLIGHTLY POROUS FROM 851 TO 856 FEET. DRILLER REPORTED "BROKEN LAVA" FROM 861 TO 868 FEET . . .	17	868

PRELIMINARY RECORDS
SUBJECT TO REVISIONWELL 4N-30E-6AB1 — CONTINUED

BASALT, BLACK, DENSE. DRILLER REPORTED "BROKEN LAVA"	7	875
SILT, LIGHT-TAN, SANDY, GRAVELLY, CALCAREOUS	9	884
SAND AND GRAVEL, SUBROUNDED; MEDIUM SAND TO COARSE GRAVEL	13	897
SILT, FINE SAND, AND FINE GRAVEL, CALCAREOUS	9	906
SAND AND GRAVEL, SUBROUNDED TO ROUNDED; MEDIUM TO VERY COARSE SAND, AND VERY FINE TO FINE GRAVEL. CUTTINGS CONTAIN CALCAREOUS TAN AND YELLOW SILT, CALCAREOUS TAN CLAY, AND VERY FINE CALCAREOUS SANDSTONE FROM 917 TO 925 FEET	19	925
SILT, GRAY, CALCAREOUS, AND ROUNDED COARSE GRAVEL	7	932
SAND AND GRAVEL, SUBROUNDED TO ROUNDED	11	943
GRAVEL, MEDIUM, SUBANGULAR TO ROUNDED. CUTTINGS CONTAIN CALCAREOUS TAN SILT	7	950
SAND, GRAYISH-BROWN, COARSE, CALCAREOUS. DRILLER REPORTED SAND CAVED BELOW CASING AT 946 FEET	5	955
SILT, LIGHT-TAN, CLAYEY, CALCAREOUS.	5	960
CLAY, LIGHT-TAN, CALCAREOUS	2	962
SAND, TAN, FINE TO MEDIUM, SILTY, CALCAREOUS	8	970
CLAY, TAN TO LIGHT-TAN, CALCAREOUS. CUTTINGS CONTAIN ROUNDED FINE GRAVEL	17	987
CLAY, LIGHT-TAN AND GREENISH-GRAY, CALCAREOUS. CUTTINGS CONTAIN ROUNDED COARSE SAND FROM 1,005 TO 1,010 FEET	29	1,016
SAND, GRAY, MEDIUM, GRAVELLY, CALCAREOUS. CUTTINGS CONTAIN CALCAREOUS VERY LIGHT-TAN TO GREENISH-GRAY CLAY. CAVED FROM 1,022 TO 1,023 FEET	25	1,041

PRELIMINARY RECORDS
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WELL 4N-30E-6A81 — CONTINUED

SILT,	LIGHT-TAN, SANDY, GRAVELLY, CALCAREOUS .	4	1,045
CLAY,	LIGHT-TAN, SANDY, GRAVELLY, CALCAREOUS .	7	1,052
SAND AND CLAY,	LIGHT-GRAY, CALCAREOUS; FINE TO MEDIUM SAND	8	1,060
CLAY,	LIGHT-TAN, GRAVELLY. CUTTINGS CONTAIN FRAGMENTS OF CLAM AND SNAIL SHELLS . . .	4	1,064
SILT,	LIGHT GRAYISH-TAN, CALCAREOUS	6	1,070
CLAY,	LIGHT GRAYISH-TAN, CALCAREOUS; SLIGHTLY SANDY AND GRAVELLY TAN 1,076 TO 1,080 FEET. CUTTINGS CONTAIN CALCAREOUS DARK-GRAY CLAY FROM 1,070 TO 1,076 FEET . . .	10	1,080
CLAY,	LIGHT-TAN, SANDY, CALCAREOUS. CUTTINGS CONTAIN FRAGMENTS OF CLAM SHELLS FROM 1,080 TO 1,085 FEET	15	1,095
CLAY,	GRAYISH-TAN, CALCAREOUS. CUTTINGS CONTAIN SHELL FRAGMENTS FROM 1,100 TO 1,105 FEET	10	1,105
CLAY,	LIGHT-TAN, CALCAREOUS	5	1,110
CLAY,	GRAY, CALCAREOUS	5	1,115
CLAY,	GRAYISH-TAN, SANDY, CALCAREOUS	15	1,130
CLAY,	TAN, CALCAREOUS	20	1,150
CLAY AND SILT,	GRAYISH-TAN, CALCAREOUS. CUTTINGS CONTAIN FRAGMENTS OF CLAM AND SNAIL SHELLS	5	1,155
SAND,	TAN, VERY FINE TO FINE, SILTY, CALCAREOUS. CUTTINGS CONTAIN SNAIL SHELLS	5	1,160
SILT,	TAN, CLAYEY, CALCAREOUS	5	1,165
SILT,	TAN, SANDY, CALCAREOUS	5	1,170
CLAY,	GRAYISH-TAN, CALCAREOUS. CUTTINGS CONTAIN SHELL FRAGMENTS; AND CALCAREOUS, SANDY SILT FROM 1,175 TO 1,190 FEET	20	1,190

PRELIMINARY RECORDS
SUBJECT TO REVISION

WELL 4N-30E-6A21 — CONTINUED

CLAY,	GRAY, CALCAREOUS; SILTY FROM 1,200 TO 1,210 FEET	25	1,215
CLAY AND SILT,	TAN, CALCAREOUS. CUTTINGS CONTAIN FINE TAN SAND	5	1,220
CLAY,	GRAY, CALCAREOUS	5	1,225
CLAY AND SILT,	LIGHT-BROWN, CALCAREOUS. CUTTINGS CONTAIN FRAGMENTS OF CLAM SHELLS	5	1,230
CLAY,	TAN, CALCAREOUS AND VERY FINE TAN SAND .	5	1,235
CLAY,	LIGHT-GRAY, CALCAREOUS. CUTTINGS CONTAIN CALCAREOUS TAN CLAY FROM 1,245 TO 1,250 FEET	15	1,250
CLAY,	LIGHT-TAN, CALCAREOUS	10	1,260
CLAY,	LIGHT-GRAY TO VERY LIGHT-GRAY, CALCAREOUS; SLIGHTLY SILTY FROM 1,260 TO 1,280 FEET	40	1,300
CLAY,	GRAYISH-TAN, CALCAREOUS	10	1,310
CLAY,	LIGHT-GRAY AND GRAYISH-TAN, CALCAREOUS	4	1,314
CLAY,	LIGHT-TAN, CALCAREOUS	26	1,340
CLAY,	LIGHT-GRAY, CALCAREOUS	25	1,365
CLAY,	LIGHT TANNISH-GRAY, CALCAREOUS	25	1,390
CLAY,	LIGHT-GRAY AND BROWN, CALCAREOUS	5	1,395
CLAY,	LIGHT-GRAY, CALCAREOUS	5	1,400
SAND,	DARK-GRAY, FINE TO COARSE, SUBANGULAR TO SUBROUNDED. MORE WATER ENCOUNTERED . .	4	1,404
CLAY,	GRAYISH-GREEN, SANDY	3	1,407
BASALT,	GRAY; DRILLED HARD	3	1,410

PRELIMINARY RECORDS
SUBJECT TO REVISION

WELL 4N-30E-6A21 -- CONTINUED

BASALT, DARK-GRAY, MINUTELY VESICULAR TO VESICULAR. CUTTINGS CONTAIN A CLAM SHELL, CALCAREOUS DARK-GRAY CLAY AND SILT, AND FINE SAND WHICH PROBABLY CAVED FROM ABOVE. DRILLED HARD	5	1,415
SILT, GREENISH-GRAY, SANDY, CALCAREOUS	5	1,420
BASALT, DARK-GRAY TO BLACK, MINUTELY VESICULAR TO VESICULAR. CUTTINGS CONTAIN CALCAREOUS GRAY CLAY WITH FRAGMENTS OF SNAIL AND CLAM SHELLS FROM 1,420 TO 1,425 FEET; CALCAREOUS TANNISH-GRAY CLAY AND MUCH FINE SAND FROM 1,425 TO 1,430 FEET; GRAYISH-GREEN AND CALCAREOUS GRAY CLAY FROM 1,430 TO 1,435 FEET; GREEN AND CALCAREOUS VERY LIGHT-GRAY CLAY WITH FRAGMENTS OF CLAM SHELLS FROM 1,435 TO 1,440 FEET; GREEN AND CALCAREOUS GRAYISH-TAN CLAY AND A LITTLE GRAVEL FROM 1,440 TO 1,445 FEET; CALCAREOUS GRAYISH-TAN CLAY; FRAGMENTS OF CLAM SHELLS FROM 1,455 TO 1,465 FEET; FINE VERY SILTY GRAYISH-TAN TO GRAY SAND, AND ROUNDED GRAVEL FROM 1,445 TO 1,465 FEET; CALCAREOUS GRAY CLAY AND FINE GRAY SAND FROM 1,465 TO 1,470 FEET; GREEN AND CALCAREOUS GRAYISH-TAN CLAY, CALCAREOUS FINE GRAYISH-TAN SAND, FINE GRAVEL, AND FRAGMENTS OF CLAM SHELLS FROM 1,470 TO 1,480 FEET. PROBABLY REPRESENTS SAVINGS AND ALTERNATING THIN LAYERS OF BASALT AND SEDIMENTS	60	1,480
CLAY AND SILT, GRAYISH-TAN, CALCAREOUS	5	1,485
CLAY, GRAYISH-TAN, SANDY, CALCAREOUS. CUTTINGS CONTAIN SHELL FRAGMENTS	5	1,490
CLAY, GRAYISH-TAN, CALCAREOUS, AND CALCAREOUS FINE BROWN SAND	5	1,495
		TOTAL DEPTH

PRELIMINARY RECORDS
SUBJECT TO REVISION

JEFFERSON COUNTY

TEST 5N-33E-10C01

CONTRACTOR: R. J. STRASSER DRILLING CO

MATERIAL		THICKNESS (FEET)	DEPTH (FEET)
SILT,	TAN, SANDY, CALCAREOUS	18	13
BASALT,	GRAY, VESICULAR, DENSE. CREVICE AT 16 FEET	40	58
BASALT,	REDDISH-GRAY, VESICULAR	7	65
BASALT,	GRAY, VESICULAR	15	80
CLAY,	REDDISH-TAN, CALCAREOUS. CUTTINGS CONTAIN BASALT FRAGMENTS	15	95
BASALT,	DARK- TO LIGHT-GRAY, DENSE	67	162
BASALT,	DARK-GRAY, VESICULAR, DENSE	3	170
BASALT,	GRAY AND RED-GRAY, DENSE. DRILLER REPORTED "CINDERS" FROM 185 TO 188 FEET	15	185
SILT,	REDDISH-TAN, SANDY. CUTTINGS CONTAIN MANY BASALT FRAGMENTS	3	188
BASALT,	LIGHT AND REDDISH-GRAY, SLIGHTLY DENSE, VESICULAR FROM 199 TO 200 FEET	52	240
BASALT,	DARK-GRAY AND RED, VESICULAR TO VERY VESICULAR. CLAY LAYERS AT 257 AND 272 FEET. WATER STRUCK UNDER CLAY LAYER AT 257 FEET	65	305
BASALT,	LIGHT-GRAY, DENSE	40	345
BASALT,	DARK-GRAY, VESICULAR	5	350
BASALT,	LIGHT-GRAY, DENSE	23	373
BASALT,	DARK-GRAY AND RED, VESICULAR TO VERY VESICULAR	29	402

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST 5N-33E-106D1 — CONTINUED

NO SAMPLE. DRILLER REPORTED "POROUS RED LAVA" . .	13	415
NO SAMPLE. DRILLER REPORTED "GRAY LAVA"	14	429
	TOTAL DEPTH	

TEST 5N-33E-136D1

CONTRACTOR: R. J. STRASSER DRILLING CO.

MATERIAL		THICKNESS (FEET)	DEPTH (FEET)
CLAY,	GRAY AND LIGHT-TAN, SILTY. CUTTINGS CONTAIN BASALT FRAGMENTS	5	5
BASALT,	LIGHT-GRAY, DENSE	5	10
BASALTIC ASH,	GRAY, FINE-GRAINED	5	15
BASALT,	LIGHT-GRAY, DENSE TO MINUTELY VESICULAR .	60	75
BASALT,	DARK-GRAY, VESICULAR	15	90
BASALT,	DARK-GRAY AND RED, VESICULAR, DENSE. CUTTINGS CONTAIN SANDSTONE AND BAKED YELLOW CLAY AND ROUNDED GRAVEL	10	100
BASALT,	DARK-GRAY AND RED, SCORIACEOUS	15	115
BASALT,	GRAY, VESICULAR	20	135
SILT,	GRAY, SANDY. CUTTINGS CONTAIN BASALT FRAGMENTS	10	145
BASALT,	GRAY, COARSELY CRYSTALLINE	5	150
SILT,	GRAY, SANDY. CUTTINGS CONTAIN BASALT FRAGMENTS	10	160
BASALT,	GRAY, DENSE. CUTTINGS CONTAIN CLAY FROM 160 TO 170 FEET	27	187

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST 5N-33E-17AD1 — CONTINUED

BASALT,	GRAY AND DARK-GRAY, FINELY CRYSTALLINE. CUTTINGS CONTAIN REDDISH-BROWN FRAGMENTS OF BASALT FROM 45 TO 50 AND FROM 60 TO 70 FEET	28	73
CLAY,	ORANGE-TAN, BENTONITIC. CUTTINGS CONTAIN LARGE FRAGMENTS OF DARK-GRAY BASALT FROM 73 TO 75 FEET	9	82
BASALT,	LIGHT-GRAY, MINUTELY VESICULAR, VERY FINELY CRYSTALLINE	33	115
BASALT,	LIGHT-GRAY, MINUTELY VESICULAR. DRILLED HARD	91	206
CLAY,	LIGHT TAN, SILTY, SANDY, SLIGHTLY CALCAREOUS	26	232
BASALT,	DARK-GRAY, DENSE. STRUCK WATER AT 242 FEET. 80 PERCENT OF CUTTINGS FROM 247 TO 252 FEET NOT RECOVERED	23	255
BASALT,	DARK-GRAY TO BLACK, VESICULAR, DENSE. DRILLER REPORTED "LOOSE ROCK" FROM 260 TO 276 FEET. 35 PERCENT CUTTINGS FROM 255 TO 265 FEET NOT RECOVERED. LOST ALL FINE CUTTINGS FROM 270 TO 275 FEET	21	276
SAND,	LIGHT-TAN, CLAYEY, CALCAREOUS. CUTTINGS CONTAIN ANGULAR AND SUBROUNDED FRAGMENTS OF BASALT AND QUARTZ	11	287
BASALT,	GRAY, MINUTELY VESICULAR, FINELY CRYSTALLINE. DRILLED HARD	4	291
SAND,	TAN, CUTTINGS CONTAIN LARGE, SUBROUNDED BASALT AND QUARTZ FRAGMENTS. DRILLER REPORTED "LOOSE SAND"	3	294
SAND,	LIGHT-TAN, CLAYEY, CALCAREOUS. CUTTINGS CONTAIN ANGULAR FRAGMENTS OF VESICULAR BASALT. DRILLER REPORTED "HARD SANDSTONE"	12	306
BASALT,	DARK-GRAY, MINUTELY VESICULAR, FINELY CRYSTALLINE. CUTTINGS CONTAIN SOME REDDISH-BROWN BASALT FROM 320 TO 325 FEET	29	335

TOTAL DEPTH

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST 5N-33E-13801 -- CONTINUED

BASALT, RED AND GRAY, VERY VESICULAR. DRILLER REPORTED "CINDERS"	10	197
BASALT, GRAY, SLIGHTLY DENSE	27	224
BASALT, GRAY AND RED, VERY VESICULAR. DRILLER REPORTED "LOOSE CINDERS"	25	249
BASALT, GRAY, VESICULAR	17	266
BASALT, GRAY AND BLACK, DENSE. DRILLER REPORTED "CINDERS". LARGE AMOUNT OF WATER ENCOUNTERED FROM 266 TO 287 FEET	21	287
BASALT, GRAY AND BLACK, VESICULAR TO SCORFACEOUS	18	305
NO SAMPLE. DRILLER REPORTED "BLACK ROCK". ENCOUNTERED LARGE AMOUNT OF WATER	10	315
BASALT, DARK-GRAY, GLASSY. CUTTINGS CONTAIN BASALTIC GLASS	4	319
SILT, TAN, CLAYEY. CUTTINGS CONTAIN FRAGMENTS OF BASALT	28	347
BASALT, GRAY, SLIGHTLY DENSE. CUTTINGS CONTAIN BASALTIC GLASS AT 375 FEET	43	390
BASALT, RED AND GRAY, VESICULAR	13	403
SAND, TAN, MEDIUM-GRAINED	3	406
	TOTAL DEPTH	

TEST 5N-33E-17AD1

CONTRACTOR: R. J. STRASSEN DRILLING CO.

MATERIAL	THICKNESS (FEET)	DEPTH (FEET)
CLAY, LIGHT-TAN, SANDY, CALCAREOUS. CUTTINGS CONTAIN ANGULAR FRAGMENTS OF BASALT . . .	5	5
BASALT, GRAY, MINUTELY VESICULAR, FINELY CRYSTAL-LINE. DRILLED VERY HARD FROM 20 TO 30 FEET	40	45

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST SN-33E-23001

CONTRACTOR: R. J. STRASSER DRILLING CO.

MATERIAL		THICKNESS (FEET)	DEPTH (FEET)
SAND,	REDDISH-BROWN, CALCAREOUS. CUTTINGS CONTAIN SUBROUNDED BASALT FRAGMENTS . . .	5	5
SILT,	TAN, SANDY, CALCAREOUS	3	8
BASALT,	LIGHT TO DARK-GRAY, DENSE	22	30
BASALT,	DARK-GRAY, DENSE. CREVICES AT 31 AND 40 FEET. DRILLER REPORTED "GINDERS" FROM 35 TO 50 FEET	20	50
BASALT,	LIGHT TO DARK-GRAY, VESICULAR, DENSE . .	6	56
BASALT,	REDDISH-GRAY AND DARK-GRAY, VESICULAR, DENSE. DRILLER REPORTED "GINDERS" . . .	34	90
BASALT,	GRAY, VESICULAR, DENSE. CREVICED FROM 130 TO 135 FEET. DRILLER REPORTED "GINDERS" FROM 120 TO 125 FEET	45	135
BASALT,	REDDISH-BLACK AND GRAY, DENSE. DRILLER REPORTED "GINDERS" FROM 135 TO 155 FEET .	23	158
CLAY,	REDDISH-TAN, SANDY, NON-CALCAREOUS . . .	14	172
BASALT,	LIGHT-GRAY, DENSE. DRILLER REPORTED "LOOSE ROCK" FROM 195 TO 205, FROM 210 TO 215, AND FROM 223 TO 240 FEET	38	210
BASALT,	GRAY, FINELY VESICULAR, DENSE	5	215
BASALT,	DARK-GRAY, VESICULAR	15	230
BASALT,	GRAY, VESICULAR, DENSE	25	255
BASALT,	DARK-GRAY AND RED, MINUTELY TO HIGHLY VESICULAR. DRILLER REPORTED HOLE WOULDN'T HOLD WATER BETWEEN 266 AND 285 FEET. STRUCK WATER AT 289 FEET	40	295
BASALT,	GRAY, VESICULAR	20	315

PRELIMINARY RECORDS
SUBJECT TO REVISIONTEST 5N-33E-35DA1 -- CONTINUED

SILT, TAN, SANDY, CALCAREOUS. CUTTINGS CONTAIN BASALT FRAGMENTS	3	220
BASALT, LIGHT-GRAY, MINUTELY VESICULAR	24	244
BASALT, REDDISH-GRAY, VESICULAR. CUTTINGS CONTAIN REDDISH-BROWN BASALTIC GLASS	19	263
BASALT, LIGHT-GRAY, SLIGHTLY VESICULAR	20	283
CINDERS, REDDISH-GRAY	7	290
BASALT, REDDISH-GRAY, GLASSY	5	295
BASALT, REDDISH-GRAY AND GRAY, SLIGHTLY VESICULAR	40	335
BASALT, LIGHT-GRAY AND BROWN, VESICULAR	25	360
BASALT, REDDISH-GRAY AND BLACK, VESICULAR . .	15	375
BASALT, GRAY AND BROWN, VESICULAR. WATER ENCOUNTERED FROM 377 TO 385 FEET. CAVING FROM 410 TO 413 FEET	40	415
BASALT, LIGHT-GRAY. MORE WATER ENCOUNTERED FROM 439 TO 443 FEET	28	443
SAND, REDDISH-ORANGE, SILTY, COMPACTED. SAND GRAINS CONSIST OF ABOUT 85 PERCENT ROUNDED TUFF, ABOUT 10 PERCENT ROUNDED FELDSPAR, AND 5 PERCENT ROUNDED QUARTZ. DRILLER REPORTED "RED AND BLACK ROCK" FROM 460 TO 470 FEET. MORE WATER ENCOUNTERED FROM 443 TO 460 AND FROM 465 TO 490 FEET	47	490
NO SAMPLE. MORE WATER ENCOUNTERED	5	495
BASALT, GRAY, VESICULAR. CUTTINGS CONTAIN ABOUT 50 PERCENT SAND OF THE TYPE FOUND FROM 443 TO 490 FEET	5	500
BASALT, LIGHT-GRAY, VESICULAR	16	516
		TOTAL DEPTH

PRELIMINARY REPORT
SUBJECT TO REVISION

TEST 5N-33E-230d1 -- CONTINUED

BASALT, GRAY, DENSE	40	355
BASALT, GRAY AND BLACK, VESICULAR, DENSE. CUTTINGS CONTAIN BASALTIC GLASS	20	375
BASALT, GRAY AND BLACK, VESICULAR TO VERY VESICULAR. CUTTINGS CONTAIN BASALTIC GLASS AND GRAY, SILTY, CALCAREOUS CLAY. DRILLER REPORTED "YELLOW CLAY" FROM 375 TO 387 FEET, "BLACK LAVA" FROM 387 TO 388 FEET, AND "BLUE CLAY" FROM 388 TO 398 FEET	15	390
CLAY, LIGHT-TAN, SILTY, CALCAREOUS	2	392
		TOTAL DEPTH

TEST 5N-33E-350d1

CONTRACTOR: R. J. STRASSER DRILLING CO.

MATERIAL	THICKNESS (FEET)	DEPTH (FEET)
SILT, TAN, SANDY, CALCAREOUS. CUTTINGS CONTAIN BASALT FRAGMENTS	15	15
BASALT, GRAY, VESICULAR	10	25
BASALT, GRAY, DENSE	5	30
NO SAMPLE. DRILLER REPORTED "LOOSE ROCK" . . .	10	40
BASALT, REDDISH-GRAY, GRAY AND BLACK, HIGHLY VESICULAR TO VESICULAR. DRILLER REPORTED "CINDERS" FROM 40 TO 64 AND FROM 68 TO 85 FEET	45	85
BASALT, REDDISH-GRAY AND GRAY, MINUTELY VESICULAR TO VESICULAR	92	177
BASALT, REDDISH-GRAY AND BLACK, COARSELY VESICULAR, SLIGHTLY WEATHERED	40	217

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST 5N-34E-290A1

CONTRACTOR: R. J. STRASSER DRILLING CO.

MATERIAL		THICKNESS (FEET)	DEPTH (FEET)
SILT,	LIGHT-TAN, CLAYEY. CUTTINGS CONTAIN ANGULAR FRAGMENTS OF BASALT	7	7
BASALT,	GRAY AND PURPLISH-GRAY, SLIGHTLY DENSE. CUTTINGS CONTAIN BASALTIC GLASS FROM 7 TO 10 FEET. LOST CUTTINGS AT 20 FEET. CREVICE AT 23 AND 24 FEET. DRILLED HARD FROM 18 TO 35 FEET	28	35
BASALT,	GRAY, VESICULAR. LOST CUTTINGS AT 40 FEET. CREVICES AT 36, 40 AND 49 FEET	16	51
BASALT,	RED AND GRAY, VERY VESICULAR. DRILLED READILY	6	57
BASALT,	GRAY, MINUTELY VESICULAR	5	62
NO SAMPLE.	DRILLER REPORTED "LOOSE, GRAY CINDERS"	6	68
BASALT,	GRAY, DENSE. DRILLED VERY HARD	26	94
CINDERS,	GRAY, BASALTIC	3	97
NO SAMPLE.	DRILLER REPORTED "SOLID, GRAY LAVA" FROM 97 TO 102 FEET	5	102
BASALT,	GRAY, BLACK AND RED, VERY VESICULAR . .	2	104
BASALT,	GRAY, VESICULAR. DRILLER REPORTED "CINDERS" AT 119 FEET	19	123
NO SAMPLE.	DRILLER REPORTED "CINDERS". HOLE GAVED BADLY	3	126
BASALT,	GRAY AND RED, VESICULAR. CUTTINGS FROM 127 FEET CONTAIN BASALTIC SAND	23	149
BASALT,	BLACK AND GRAY, VERY VESICULAR. DRILLER REPORTED "CINDERS"	7	156

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST 5N-34E-290A1 — CONTINUED

BASALT, GRAY, SLIGHTLY DENSE. DRILLER REPORTED "POROUS SEMI-SOLID RED AND GRAY LAVA" FROM 156 TO 160 FEET. DRILLED HARD FROM 160 TO 178 FEET	23	179
BASALT, REDDISH-GRAY, VERY VESICULAR. DRILLER REPORTED "GINDERS"	3	182
BASALT, GRAY, DENSE. CREVICE AT 188 FEET. DRILLED HARD FROM 188 TO 217 FEET	35	217
NO SAMPLE. DRILLER REPORTED "RED GINDERS".	5	222
BASALT, GRAY, VESICULAR. DRILLED HARD	35	257
BASALT, REDDISH-GRAY, VESICULAR	9	266
BASALT, REDDISH-GRAY, VESICULAR. HOLE GAVED BADLY; DRY FROM 275 TO 280 FEET	16	282
BASALT, GRAY, MINUTELY VESICULAR. DRILLED HARD	10	292
BASALT, REDDISH-GRAY, VESICULAR	8	300
BASALT, GRAY, DENSE. DRILLER REPORTED "HARD, BROKEN GRAY LAVA" FROM 300 TO 310 FEET. HOLE WOULD NOT HOLD WATER FROM 300 TO 310 FEET	16	316
BASALT, REDDISH-GRAY, VESICULAR	8	324
BASALT, GRAY, SLIGHTLY DENSE	21	345
BASALT, REDDISH-GRAY, VESICULAR. STRUCK WATER AT 354 FEET	11	356
BASALT, REDDISH-GRAY AND GRAY, VESICULAR. DRILLER REPORTED A LARGE QUANTITY OF WATER ENCOUNTERED. CREVICE AT 357 FEET	4	360
BASALT, REDDISH-GRAY AND GRAY. DRILLER REPORTED MOST OF CUTTINGS NOT RECOVERED. WATER LEVEL ABOUT 349 FEET BELOW LAND SURFACE. DRILLED EASILY	8	368

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST 5N-34E-290A1 -- CONTINUED

BASALT, GRAY, VESICULAR. DRILLER REPORTED "POROUS LAVA" FROM 378 TO 380 FEET. 50 PERCENT OF CUTTINGS NOT RECOVERED. DRILLED HARD FROM 380 TO 384 FEET	17	385
BASALT, DARK-GRAY, VESICULAR. DRILLER REPORTED "CINDERS" FROM 384 TO 386 FEET AND "POROUS, HARD LAVA" FROM 386 TO 388 FEET. MOST OF CUTTINGS NOT RECOVERED	14	399
BASALT, GRAY, DENSE	12	411
SAND, GRAY AND REDDISH-BROWN, FINE, ANGULAR. GOOD DRILLING	14	425
BASALT, BLACK, VESICULAR. DRILLER REPORTED "LOOSE MATERIAL THAT ONLY CAN BE GROUND UP AND FLOATED AWAY".	2	427
	TOTAL DEPTH	

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST 3N-29E-25801

CONTRACTOR: COPE DRILLING AND PUMP CO.

MATERIAL	THICKNESS (FEET)	DEPTH (FEET)
SILT AND SAND, TAN. CUTTINGS CONTAIN GRAVEL	1.5	1.5
GRAVEL, POORLY SORTED, SANDY	32.5	34
BASALT, GRAY, FINELY VESICULAR	6	40
BASALT, REDDISH-GRAY	9.5	49.5
BASALT, GRAY, MINUTELY VESICULAR	9.5	58
CLAY, TAN, SLIGHTLY SANDY. CUTTINGS CONTAIN A FEW BASALT PARTICLES AND PEBBLES	7	65
BASALT, GRAY AND DARK-GRAY, VESICULAR, DENSE . . .	15	80
BASALT, GRAY, DENSE. DRILLED EASILY AT 90 FEET . .	10	90
BASALT, DARK-GRAY, VESICULAR, DENSE	10	100
BASALT, GRAY AND BROWN, FINELY VESICULAR TO VESICULAR. HOLE SAVED EASILY AT 104 FEET	10	110
BASALT, GRAY, FINELY VESICULAR, DENSE	15	125
CLAY, TAN. CUTTINGS CONTAIN PEBBLES AND BASALT PARTICLES	5	130
BASALT, GRAY TO DARK-GRAY	5	135
BASALT, GRAY, SLIGHTLY VESICULAR, DENSE	30	165
BASALT, DARK-GRAY, SLIGHTLY VESICULAR, DENSE, CUTTINGS CONTAIN LIGHT-TAN CLAY	5	170
BASALT, GRAY, VESICULAR, DENSE	5	175
BASALT, GRAY, DENSE. DRILLED EASILY FROM 202 TO 205 FEET	30	205

PRELIMINARY RECORDS
SUBJECT TO REVISION

TEST 3N-29E-25001 -- CONTINUED

BASALT, DARK-GRAY, VESICULAR, DENSE	10	215
BASALT, RED AND GRAY, VESICULAR, DENSE	10	225
BASALT, GRAY, FINELY VESICULAR	20	245
BASALT, REDDISH-BROWN, VESICULAR	15	260
BASALT, PINKISH-GRAY, SLIGHTLY VESICULAR. DRILLED EASILY FROM 265 TO 269 FEET	10	270
BASALT, GRAY	5	275
BASALT, GRAY, VESICULAR, DENSE	15	290
BASALT, DARK-GRAY, VESICULAR	5	295
BASALT, GRAY, VESICULAR. DRILLED HARD AT 318 FEET	25	320
BASALT, BROWNISH-GRAY, VESICULAR, DENSE	5	325
BASALT, GRAY, VERY VESICULAR, DENSE. CUTTINGS CONTAIN LIGHT-TAN CLAY	15	340
BASALT, GRAY, VESICULAR. CUTTINGS CONTAIN ORANGE SANDY CLAY	5	345
BASALT, DARK-GRAY, VERY VESICULAR	5	350
BASALT, GRAY, VESICULAR. CUTTINGS CONTAIN PARTICLES OF TAN CLAY FROM 350 TO 355 FEET, AND INSURATED VOLCANIC ASH FROM 360 TO 370 FEET	35	385
BASALT, DARK-GRAY, VERY VESICULAR	15	400
CLAY, TAN, SANDY	5	405
BASALT, DARK-GRAY, VESICULAR	5	410
BASALT, GRAY, VESICULAR	20	430
BASALT, GRAY, VERY VESICULAR. CREVICE AT 431 FEET	30	460

PRELIMINARY RECORDS
SUBJECT TO REVISIONTEST 3N-29E-25nd1 -- CONTINUED

BASALT, DARK-GRAY, VESICULAR. WATER ENCOUNTERED AT 468 FEET. STATIC WATER LEVEL IS ABOUT 465 FEET	9	469
BASALT, GRAY. CREVICES AT 527 AND 531 FEET. DRILLED EASILY FROM 490 TO 498 FEET . . .	71	540
BASALT, GRAY, VESICULAR	5	545
BASALT, BROWN, VESICULAR. CUTTINGS CONTAIN LIGHT-TAN CLAY FROM 560 TO 575 FEET	25	570
BASALT, GRAY. DRILLER REPORTED "LOOSE LAVA" AT 578 FEET	15	585
BASALT, GRAY, VESICULAR. CUTTINGS CONTAIN ORANGE CLAY	5	590
CLAY, TAN, SLIGHTLY SANDY	5	595
BASALT, DARK-GRAY, VERY VESICULAR	10	605
BASALT, GRAY, VESICULAR. DRILLER REPORTED "BROKEN LAVA" AT 605 FEET	10	615
BASALT, GRAY AND GRAYISH-BROWN, VESICULAR. CUTTINGS CONTAIN TAN CLAY FROM 620 TO 625 FEET . .	10	625
SAND, DARK-GRAY. CONSISTS OF ROUNDED AND SUB-ROUNDED GRAINS OF FELDSPAR, AND VOLCANIC GLASS	5	630
BASALT, GRAY, VESICULAR. CUTTINGS CONTAIN CHUNKS OF YELLOW CLAY	5	635
BASALT, GRAY AND DARK-GRAY	25	660
BASALT, GRAY AND REDDISH-BROWN	10	670
BASALT, GRAY	15	685
BASALT, REDDISH-GRAY, VESICULAR	5	690
BASALT, GRAY, FINELY VESICULAR	10	700
		TOTAL DEPTH

FIGURE 1

