

Operator: The California Company  
 Farm: F. P. Strader  
 Well No.: 1  
 Location: Giles County  
           7200' N of 37° 15'  
           14,600' W. of 80° 40'  
 Elevation: 1745.5 Ground  
 Total Depth: 1443  
 Commenced: June 10, 1948  
 Completed: Sept. 27, 1948  
 Result: Dry Hole

Geologic log  
 Samples examined by E. T. Jacobsen  
 U. S. Geological Survey  
 Lexington, Kentucky  
 March, 1950

Depth

- 8-13 Dolomite, slightly shaly, medium light gray and medium gray (N6 and N5), very finely crystalline, part very slightly silty, part with disseminated pyrite, 50%; shale, grayish yellowish green (5GY 7/2), very finely micaceous, some pyrite, moderately soft, 30%; shale, yellowish gray (5Y 8/1), soft, 15%; sandstone, slightly calcareous, yellowish gray (5Y 8/1), very fine-grained, 5%; trace slightly calcareous pinkish gray (5YR 8/1), very fine-grained, 5%; trace slightly calcareous pinkish gray (5YR 8/1), shale, considerable loose blocky pyrite.
- 13-18 Dolomite, slightly shaley, medium gray (N5), very finely crystalline.
- 18-23 Dolomite, slightly silty, medium dark gray to medium light gray (N4-6), very finely crystalline; about 15% dolomite, white (N9), medium crystalline, moderately soft.
- 23-28 Ditto.
- 28-33 Dolomite, very silty to silty, very light gray (N8), very finely crystalline to little medium crystalline, some white chert apparent in insoluble residue, moderately soft to hard.
- 33-38 Ditto, some light gray (N7).
- 38-43 Ditto.
- 43-48 Dolomite, very light gray and light gray, as above, and about 25% dolomite, shaly to very shaly, medium dark gray (N4), very finely crystalline, very dense; some dolomite medium dark gray shale; some fine-grained sand grains in insoluble residue.

<u>Depth</u>	
48-53	Dolomite, very light gray and light gray, as above, silty to slightly sandy, considerable angular, fine-grained, few medium-grained pieces in residue.
53-58	Dolomite, silty, light gray (N7), finely crystalline, considerable gray chert apparently in insoluble residue; slightly trace pyrite.
58-63	Dolomite, shaly to very shaly, medium dark gray (N4) to medium gray (N5), very finely crystalline, 30%; dolomite, as above, and very light gray (N8), finely crystalline, 70%.
63-67	Dolomite, silty, light gray (N7), very finely crystalline, and very light gray (N8), finely crystalline to medium crystalline, hard to moderately soft, much angular chert to coarse-grained size in insoluble residue.
67-70	Ditto, little less chert in insoluble residue.
70-75	Dolomite, silty, light gray (N7), and very light gray (N8), very finely crystalline to medium crystalline, considerable light gray chert to granule size in insoluble residue; trace oolitic chert, dark ooliths 1/2 mm. in diameter in light gray matrix; some iron staining in sample.
75-80	Ditto.
80-85	Ditto, light gray (N7), some thin siltstone (?) stringers apparent in insoluble residue.
85-900	Dolomite, silty, medium light gray (N6), very finely crystalline, some light gray stringers, little sandy, very fine-grained and trace fine-grained, about 50%; in dark gray (N4), dolomitic siltstone, about 20%; dolomite, as above, 30%.
90-95	Dolomite, calcareous, medium light gray (N6), very finely crystalline to medium crystalline, as above, some very large molds in insoluble residue, also few fine-grained to medium-grained rounded, quartz grains and trace coarse-grained chert, angular.
90-100	Dolomite, slightly calcareous, as above; some medium-gray (N5), shaly, dolomite; and little dolomite, medium gray (N5), shale, trace chert, as above.
100-105	Dolomite, silty, slightly calcareous, very light gray (N8), very finely crystalline to medium crystalline, much very light gray, angular chert to very coarse-grained size in insoluble residue.
105-110	Dolomite, silty, light gray (N7.5), medium crystalline, hard

Depth

- considerable very light gray and light gray (N8-7), chert and trace oolitic chert (1/2 mm. in diameter, medium-grained ooliths in light gray matrix) in insoluble residue, siltstone (?), stringers in dolomite noted in residue.
- 110-115 Ditto, more siltstone (?) stringers.
- 115-118 Dolomite, very silty and shaly, very slightly calcareous, medium dark gray (N4), coarsely crystalline, considerable mottled and part nodular, medium dark gray chert in insoluble residue, trace pyrite.
- 118-123 Dolomite, as above, 70%; dolomite, very silty, very light gray (N8), coarsely crystalline, very slightly calcareous part sandy (to fine-grained, rounded, quartz in insoluble residue), numerous siltstone (?) stringers in residue; some yellowish gray (5Y 8/1).
- 123-127 Dolomite, silty, very light gray and light gray (N8-7), very finely crystalline to finely crystalline, very slightly calcareous, numerous siltstone stringers and some white chert in residue, oolitic chert fragments noted (1/2 mm. in diameter, white ooliths in very light gray matrix), and few rounded fine-grained quartz.
- 127-132 Ditto.
- 132-138 Dolomite, silty, yellowish gray (5Y 8/1), very finely crystalline, very slightly calcareous, considerable white chert and siltstone stringers noted in insoluble residue, small part sandy (very fine-grained), some rounded, medium-grained quartz.
- 138-145 Dolomite, very shaly and silty, medium dark gray (N4), finely crystalline to medium crystalline, considerable light gray siltstone stringers apparent in residue, some medium dark gray (N4), oolitic chert (1/2 mm. in diameter, light gray ooliths in dark gray matrix), slightly trace very small pyrite (?).
- 145-151 Dolomite, silty, very light yellowish gray (5Y 9/1), very finely crystalline to finely crystalline; very slightly calcareous, very much medium-grained size, angular, very light gray (N8), chert fragments noted in insoluble residue very hard.
- 151-155 Dolomite, slightly silty to very slightly silty, medium light gray (N6), very finely crystalline to finely crystalline, very slightly calcareous, some very light gray chert and siltstone stringers noted in insoluble residue.

Depth

- 155-159 Dolomite, silty to sandy, light gray and little very light gray (N7-8), finely crystalline to medium crystalline, many rounded, fine-grained to few medium-grained quartz, considerable white chert and siltstone stringers noted in insoluble residue.
- 159-164 Dolomite, very slightly silty, very gray (N8.5), finely crystalline to medium crystalline, some chert, and siltstone stringers in insoluble residue.
- 164-169 Dolomite, silty, slightly shaly, calcareous to non-calcareous, very light gray to medium light gray (N8-6), and some yellowish gray (5Y 8/1), very finely crystalline to finely crystalline, some siltstone stringers, considerable brownish gray (5YR 4/1) chert; about 10% shale, grayish black (N3), hard, part very slightly dolomitic, very slightly micaceous.
- 169-174 Ditto.
- 174-182 Dolomite, very shaly and silty, medium dark gray (N4), medium crystalline, considerable mottled light gray and dark gray chert, some bluish chert in insoluble residue; some grayish black shale, as above; some large clusters of pyrite with dolomolds (?) in residue.
- 182-190 Dolomite, medium dark gray, as above, some conspicuous light gray dolomitic siltstone banding in insoluble residue, 50%; dolomite, medium light gray and yellowish gray (N6 and 5Y 8/1), very finely crystalline to finely crystalline, very hard.
- 190-195 Dolomite, medium dark gray, as above, 50%; dolomite, medium light gray and yellowish gray, finely crystalline to medium crystalline, as above.
- 195-200 Dolomite, silty, light gray to medium light gray (N7-6), very finely crystalline to finely crystalline, considerable very light gray chert in insoluble residue.
- 200-205 Dolomite, calcareous, slightly silty, very light gray (N8), very finely crystalline, trace chert in insoluble residue, very hard.
- 205-211 Dolomite, very shaly (approaching dolomitic shale), slightly calcareous, medium gray (N5), finely crystalline, some light gray stringers apparently in insoluble residue which has very small dolomolds, 50%; dolomite, as above, 50%.
- 211-217 Dolomite, medium gray (N5), as above, and medium dark gray (N4), 50%; shale, dark gray (N3), very slightly dolomitic, part silty, several pieces showing contact of shale and dolomite, 10%; dolomite, silty to shaly, very light gray,

Depth

- finely crystalline, as some yellowish gray (5Y 8/1), silty to shaly, finely crystalline, moderately soft, 40%; trace pyrite.
- 217-222 Dolomite, silty to non-silty, very light gray (N8 to 8.8), finely crystalline, some angular white quartz to coarse-grained size.
- 222-228 Dolomite, silty to slightly silty, medium light gray (N6), finely crystalline to medium crystalline, some white quartz in residue.
- 228-231 Dolomite, silty to very slightly shaly, very light gray (N8), coarsely crystalline, moderately soft to hard.
- 231-237 Dolomite, very light gray, as above, 40%; dolomite, shaly to slightly silty, medium gray (N5), coarsely crystalline, 40%; dolomite, silty, medium light gray (N6), very finely crystalline, 20%.
- 237-244 Dolomite, very slightly silty, very light gray to light gray (N8-7), coarsely crystalline, little very finely crystalline, much very light gray (N8), angular chert, to very coarse-grained size in insoluble residue.
- 244-249 Ditto, more smaller size chert fragments.
- 249-255 Dolomite, shaly to part silty, medium gray (N5), finely crystalline to medium crystalline, 50%; dolomite, silty, light gray, finely crystalline, to medium crystalline, 50%; considerable medium gray and white chert fragments in residue.
- 255-262 Dolomite, slightly silty, very light gray to light gray (N8-7), much light gray (N7), angular chert to granule size, very large dolomolds in residue.
- 262-265 Dolomite, slightly silty, very light gray, finely crystalline, very large dolomolds in residue; about 50% very light gray (N8), angular chert to very coarse-grained size.
- 265-270 Dolomite, slightly silty, medium light gray (N6), very coarsely crystalline, large dolomolds in insoluble residue, some siltstone, stringers; considerable chert, as above.
- 270-276 Dolomite, slightly shaly to very shaly (approaching dolomitic shale), medium-grained, medium crystalline, very small dolomolds in insoluble residue, 40%; dolomite, as above, about 60%; some chert as above.

Depth

- 276-282 Dolomite, slightly silty to slightly shaly, brownish gray to very light gray (5YR 6/1), (N8), medium crystalline to very finely crystalline, very slightly calcareous, some siltstone stringers evident in insoluble residue, considerable chert to very coarse-grained size, light gray and very light brownish gray, part oolitic (1/4 mm. in diameter, very light brownish gray ooliths in light gray matrix), hard to very hard.
- 282-287 Dolomite, very slightly shaly to very slightly silty, as above, coarsely crystalline to very finely crystalline, very slightly calcareous; about 50% chert, as above.
- 287-294 Dolomite, silty to very shaly, medium light gray (N6), coarsely crystalline to medium crystalline, 30%; dolomite, as above, coarsely crystalline, 70%; trace grayish black, very hard shale; some chert as above.
- 294-300 Dolomite, very silty to very shaly, light brownish gray (5YR 6/1), medium crystalline, 85%; dolomite, very shaly to very slightly dolomitic shale, medium dark gray (N4), finely crystalline, 15%; considerable white quartz and very light gray (N8), chert in sample.
- 300-304 Dolomite, slightly silty to very slightly shaly, light brownish gray and very light brownish gray (5YR 7/1 to 6/1), medium crystalline to coarsely crystalline.
- 304-309 Dolomite, slightly silty to very slightly silty, light gray and some light brownish gray (N7 and 5YR 6/1), very finely crystalline, some very large dolomolds in residue, much light gray angular chert to very coarse-grained size; trace pyrite.
- 309-312 Dolomite, very shaly to silty, medium dark gray (N4), coarsely crystalline; some brownish gray and medium dark gray (5YR 4/1), (N4), chert to over granule size; small to medium dolomolds in residue; some dark gray (N3) dolomitic shale; trace pyrite.
- 312-315 Dolomite, as above, with some streaks of light gray silty dolomite; some light gray chert to coarse-grained size; trace pyrite.
- 315-320 Dolomite, slightly silty, light brownish gray (5YR 6/1), very coarsely crystalline to medium crystalline, moderately soft, much light brownish gray and light gray chert to coarse-grained size.
- 320-325 Dolomite, as above, and brownish gray (5YR 4/1) very slightly calcareous, about 30% chert, as above, and dark gray (N3), to very coarse-grained size.

Depth

- 325-331 Dolomite, slightly silty to very slightly silty, light gray, (N7), medium crystalline to coarsely crystalline, very slightly calcareous; about 50% white quartz to coarse-grained size and some light brownish gray chert, as above.
- 331-337 Dolomite, as above, to very finely crystalline; and dolomite, silty, medium light gray (N6), medium crystalline, about 25% quartz and chert, as above.
- 337-344 Ditto, less quartz and chert, as above.
- 344-351 Dolomite, slightly silty, medium light gray (N6), coarsely crystalline to medium crystalline; some dolomite, very shaly, coarsely crystalline to medium crystalline, part dolomite, to non-dolomitic shale; very much white quartz to some white chert in insoluble residue.
- 351-355 Dolomite, slightly silty to very slightly silty, light gray (N7), medium crystalline; very much quartz, as above; trace pyrite.
- 355-360 Ditto, coarsely crystalline.
- 360-367 Ditto, very small fragments; about 10% of sample shales, pale reddish brown (10R 5/2), moderate yellowish brown (10R 5/4), and pale olive (10Y 6/2).
- 367-374 Dolomite, slightly silty, medium gray to medium dark gray (N5-4), coarsely crystalline, much light brownish gray (5YR 6/1), chert, part oolitic (1/6mm, brownish gray ooliths and light gray matrix), some white quartz as above.
- 374-381 Dolomite, slightly silty to shaly, medium gray and medium light gray (N5-6), coarsely crystalline; much white angular quartz to coarse-grained size.
- 381-385 Dolomite, very slightly silty, light brownish gray and some very light gray (5YR and N8), coarsely crystalline; much white quartz, as above, and light brownish gray chert, part oolitic.
- 385-391 Dolomite, very slightly silty, slightly silty, light brownish gray (5YR 4/1), coarsely crystalline, mottled slightly with light gray; trace pyrite; considerable white quartz, as above.
- 391-399 Dolomite, very slightly shaly to silty and shaly, light brownish gray, as above, medium gray (N5), coarsely crystalline and light gray (N7), medium crystalline; some brownish gray chert.

Depth

- 399-403 Dolomite, very slightly silty and shaly to slightly silty, light brownish gray and light gray (5YR 6/1 and N7), coarsely crystalline to medium crystalline, little siltstone and shale stringers evident in insoluble residue.
- 403-410 Dolomite, shaly to very slightly shaly, part slightly silty, medium gray and light gray (N5-7), coarsely crystalline, some light gray shale stringers.
- 410-415 Ditto; trace pyrite.
- 415-420 Dolomite, very shaly (approaching dolomitic shale), medium gray (N5), and very light gray (N8), very finely crystalline, very small dolomolds in insoluble residue, trace silty, few light gray siltstone stringers, very hard; slightly trace pyrite.
- 420-424 Dolomite, slightly shaly to shaly, light brownish gray to medium gray (5YR 6/1 to N5), coarsely crystalline to medium crystalline, little siltstone and shale stringers evident in insoluble residue; some white quartz to medium grained size.
- 424-430 Ditto.
- 430-435 Dolomite, very shaly (approaching dolomitic shale), dark gray (N3) to medium dark gray (N4), very finely crystalline, very small dolomolds in insoluble residue, 20%; dolomite, shaly to silty, medium dark gray (N4), medium crystalline to coarsely crystalline, small part silty, larger dolomolds in residue, 50%; dolomite, as above, 30%; trace pyrite.
- 435-440 Dolomite, slightly shaly, light brownish gray (5YR 6/1), and light gray (N7), medium crystalline to finely crystalline, some disseminated pyrite evident in insoluble residue and very small dolomolds.
- 440-446 Dolomite, slightly shaly, light brownish gray (5YR 6/1), coarsely crystalline, pyrite evident in insoluble residue and small dolomolds, some white quartz.
- 446-450 Ditto, shaly, considerable angular white quartz and light brownish gray chert to coarse-grained size.
- 450-457 Dolomite, very slightly shaly, light olive gray (5Y 6/1), finely crystalline; dolomite, very slightly shaly, medium light gray (N7), very finely crystalline, mottled, very hard; dolomite, white (N9), very coarsely crystalline; very much (about 65% of residue) oolitic chert, grayish black (N2), ooliths in light gray (N7), matrix.



Depth

- 457-461 Dolomite, slightly shaly, dark brownish gray (5YH 3/1), somewhat mottled with very light gray, medium crystalline dolomolds, very small in residue; dolomite, white (N9), very coarsely crystalline, some very finely crystalline and shaly; some dolomite, very shaly, grayish black (N2), very finely crystalline, very small dolomitic molds; considerable oolitic chert, as above, light brownish gray chert, and white quartz evident in residue.
- 461-468 Dolomite, slightly silty, medium light gray (N6), finely crystalline; dolomite, shaly, dark gray (N3), finely crystalline to medium crystalline, slightly mottled with light gray, very small dolomolds in residue; some grayish black (N2), light brownish gray, and dark gray (N3) oolitic chert; trace pyrite.
- 468-475 Dolomite, shaly to slightly silty, light brownish gray (5YR 6/1), very finely crystalline, very slightly calcareous, very small dolomitic molds in insoluble residue, some pyrite; dolomite, shaly, medium dark gray (N4), finely crystalline to some coarsely crystalline; some dolomite, shaly, light gray (N7), very small dolomolds.
- 475-482 Dolomite, very shaly (approaching dolomitic shale), dark gray (N3), very finely crystalline, very hard, very small dolomods, in residue.
- 482-490 Dolomite, shaly to silty, very light gray (N8), and light brownish gray (5YR 6/1), very finely crystalline, 30%; dolomite, dark gray, as above, 70%; trace dolomite crystals.
- 490-495 Dolomite, dark gray, as above; some dolomite, white, very coarsely crystalline; some dolomite yellowish gray (5Y 8/1), finely crystalline; little dolomite, very light gray (N8), very finely crystalline.
- 495-502 Dolomite, slightly shaly to little silty, medium brownish gray and light brownish gray (5YR 5/1) and (5YR 6/1), finely crystalline and some very finely crystalline, part very hard; dolomite, shaly to some silty to very little sandy, very light gray (N8), finely crystalline to medium crystalline; few white (N9), dolomitic crystals.
- 502-507 Dolomite, as above; about 40% residue light brownish gray angular chert to very coarse-grained size, trace dolomite, sandy, fine-grained, rounded, quartz grains.
- 507-510 Ditto; about 30% dolomite, very shaly, dark gray (N3), finely crystalline; chert, as above, and considerable rounded quartz grains to medium-grained size in residue.

Depth

- 510-515 Dolomite, very shaly (approaching dolomitic shale), medium dark gray, finely crystalline to very finely crystalline, very slightly calcareous, very small dolomitic molds in residue, 40%; dolomite, shaly to silty, yellowish gray (5Y 8/1), finely crystalline, 10%; dolomite, as above, 45%; shale, dolomite, dark gray (N3), 5%; some grayish black; some gray, brownish, and light gray chert evident in residue.
- 515-522 Dolomite, slightly shaly to silty, light gray to very light gray (N7-8), very finely crystalline, 70%; dolomite, medium dark gray, as above, 30%; much chert, light gray and some brownish gray, and some rounded, fine-grained quartz in residue.
- 522-532 Dolomite, shaly to very slightly shaly, very light brownish gray (5Y 7/1), very finely crystalline; dolomite, very slightly silty, light gray (N7), finely crystalline; dolomite, shaly, medium dark gray (N4), very finely crystalline; considerable medium light gray (N6) chert, part mottled and part with rounded, nodules, some medium dark gray (N4), chert, and some rounded, fine-grained to medium-grained quartz in residue; trace pyrite.
- 532-537 Dolomite, very light brownish gray, as above, 40%; dolomite, slightly silty to sandy, very light gray to white (N8-9), medium crystalline to very coarsely crystalline, 40%; dolomite, medium dark gray, as above, 20%; much rounded, quartz grains; fine-grained to medium-grained, as above, some chert; trace pyrite.
- 537-543 Dolomite, slightly silty to slightly sandy, very light gray and white (N8-9), very finely crystalline to very coarsely crystalline; considerable fine-grained and some medium-grained quartz grains evident in residue; some oolitic chert, 3/4 mm. in diameter, very light gray matrix with brownish gray ooliths.
- 543-549 Dolomite, very slightly shaly to very slightly silty, light gray to very light gray (N7-8), very finely crystalline, very much quartz, rounded, fine-grained to medium-grained, some loose in sample, about 40% of residue, some of quartz forming nuclei of some oolitic chert.
- 549-555 Dolomite, very shaly (approaching dolomitic shale), finely crystalline, medium dark gray (N4), very small dolomolds in residue, 40% dolomite, sandy, as above, 60%.
- 555-562 Dolomite, very slightly silty to silty, medium light gray to light gray (N6-7), very finely crystalline, very much rounded, fine-grained to some medium-grained, quartz grains.

Depth

- in residue and some loose in sample, 70%; dolomite, medium dark gray, as above, 30%; little oolitic chert.
- 562-568 Dolomite, shaly to silty, medium dark gray, to light gray, few quartz grains as above, 70%, dolomite, medium dark gray, very shaly as above 30%; trace brownish gray chert.
- 568-572 Dolomite, slightly shaly to slightly silty to slightly sandy, very light gray to light gray (N8-7), very finely crystalline some angular to rounded, fine-grained to few medium-grained quartz grains evident in residue and some loose in sample; trace chert, pyrite; very small fragments.
- 573-579 Ditto, shaly; considerable very light gray (N8), angular chert fragments to medium-grained size; slightly large fragments; trace pyrite.
- 579-585 Dolomite, shaly, very light gray and light gray (N8-7), finely crystalline; in residue much light gray chert to medium-grained size and some rounded, fine-grained quartz grains, trace dark chert and pyrite.
- 585-590 Ditto, finely crystalline to very finely crystalline; some chert and quartz grains as above.
- 590-597 Dolomite, shaly, medium light gray (N6), very finely crystalline, very slightly calcareous, 70%; dolomite, very slightly shaly, very light gray (N8), very finely crystalline, 20%; dolomite, very shaly, dark gray (N3), very finely crystalline to medium crystalline; trace pyrite and some brownish gray and grayish black chert noted in residue.
- 597-602 Ditto, small part sandy, fine-grained, as noted in residue.
- 602-610 Dolomite, slightly shaly, light gray (N7), very finely crystalline, very small dolomolds in residue, considerable rounded and frosted fine-grained to few medium-grained quartz, and trace very light gray and dark gray chert.
- 610-616 Dolomite, silty, medium gray to very light gray (N5-8), medium crystalline to very finely crystalline, some loose fine-grained, rounded quartz grains in sample, considerable very fine-grained to fine-grained quartz grains in residue.
- 616-623 Dolomite, slightly sandy (fine-grained to few medium-grained very poorly sorted), very light gray (N8), very finely crystalline to finely crystalline, about 50%; dolomite, very shaly, medium dark gray (N4), very finely crystalline some dark gray (N3), dolomitic shale, about 10%; trace chert and pyrite in residue.
- 623-627 Dolomite, slightly sandy (rounded and frosted fine-grained

Depth

with very fine-grained to some medium-grained), finely crystalline, 85%; dolomite, medium dark gray, and little dolomitic shale, as above, 15%.

627-648

No sample.

648-650

Dolomite, shaly, medium light gray (N6), and some very light gray (N8), very finely crystalline, very small dolomoids, 75%; dolomite, very light gray white (N8-9), very coarsely crystalline, crystals to 1.8 mm. 10%; dolomite, dark yellowish brown (10YR 4/2), very finely crystalline, 3%; quartz, very light gray, clear fragments, 8%; siltstone, brownish gray (5YR 4/1), and moderately yellowish brown (10YR 5/2), laminated, 7%; trace light gray (N7), chert.

650-653

Dolomite, shaly to slightly shaly, medium dark gray (N4), little wilty, very finely crystalline to finely crystalline, 50%; shale, silty, dark yellowish gray (5Y 7/1), 20%; dolomite, shaly to slightly shaly, medium light gray (N6), very finely crystalline, 20%; quartz, as above, some secondary (?) crystals, 10% some very coarsely crystalline white clear dolomite crystals.

653-658

Dolomite, shaly to very slightly shaly, medium dark gray to medium gray (N4-7), finely crystalline to medium crystalline, 50%; dolomite, slightly shaly, medium light gray (N6), very finely crystalline, 50%; considerable quartz and crystals as above.

658-664

Dolomite, very shaly, dark gray to grayish black (N3-2), finely crystalline.

664-668

Dolomite, very shaly (approaching dolomitic shale, medium gray to medium dark gray (N5-4), very finely crystalline; some (about 15%, dolomite, silty to little sandy, medium light gray (N6), finely crystalline.

668-671

Dolomite, as above, much less shaly, 50%; dolomite, silty to sandy, medium light gray to medium gray (N6-5), finely crystalline, 50%; considerable loose rounded very fine-grained to medium-grained quartz grains in residue.

671-675

Dolomite, slightly shaly to some very shaly, medium light gray (N6), very finely crystalline, 50%; sandstone, very light gray (N8), loose grains, fine-grained, very poorly sorted, rounded to angular fragments, 50%.

675-680

Dolomite, very slightly shaly to some very shaly, light gray and very light brownish gray (N7 and 5YR 7/1), very finely crystalline; about 40% of residue, sandstone, as above, very fine-grained to some medium-grained, and considerable light gray chert.

680-685

Ditto.

Depth

685-690 Dolomite, shaly to very shaly, medium gray to medium dark gray (N5-4), finely crystalline to medium crystalline; some shale, silty to very silty, yellowish gray (5Y 8/1),

690-700 No sample.

700-703 Dolomite, very shaly to shaly, dark gray (N3.5), medium crystalline, 75%; dolomite, silty to some sandy, very light gray (N8), finely crystalline, 25%.

703-709 Dolomite, shaly, medium light gray to medium gray (N6-5), very finely crystalline to finely crystalline, 50%; dolomite, as above, 50%; much rounded, fine-grained quartz, probably dolomitic sandstone lense.

709-715 Dolomite, slightly shaly, light gray to very light gray (N7-8), very finely crystalline to finely crystalline, little silty; about 50% of residue loose sandstone grains, very light gray (N8) to white (N9), fine-grained, rounded to subangular fragments, very poorly sorted (very fine-grained to medium-grained), few clusters to very dolomitic sandstone, probably all represents dolomitic sandstone lense.

715-723 Ditto, some dark gray (N3), banding.

723-729 Ditto.

729-734 Ditto.

734-739 Dolomite, very shaly, medium dark gray (N4), finely crystalline, very hard, 50%; dolomite, shaly to silty to little sandy, very light gray (N7), as above, 50%.

739-742 Dolomite, medium dark gray (N4), to dark gray (N3), as above, little banding with light gray, especially evident in residue.

742-747 Dolomite, slightly silty to slightly shaly, light gray (N7), some very light gray (N8), finely crystalline very little sandy.

747-752 Ditto, few very small pyrite crystals.

752-757 Ditto, medium crystalline.

757-762 Ditto, very finely crystalline to medium crystalline, about 85%; dolomite, shaly to very shaly, medium gray (N5), very finely crystalline, about 15%.

762-765 Ditto.

765-769 Ditto, light gray to very light gray (N7-8), medium crystalline, more fine-grained sandstone grains in residue about 90%; dolomite, medium-grained, about 10%.

Depth

- 769-777 Dolomite, shaly to very shaly, dark gray (N3), finely crystalline, considerable rounded to subrounded, fine-grained to medium-grained, quartz in residue.
- 777-781 Sandstone, quartzose, very light gray (N8), fine-grained, rounded, moderately poorly sorted (very fine-grained to few medium-grained), predominantly loose grains, 75%; dolomite, slightly shaly, light gray (N7), very finely crystalline, 25%.
- 781-789 Dolomite, very shaly, dark gray (N3), very finely crystalline, 50%; dolomite, light gray, as above, very finely crystalline, 50%; dolomite, light gray, as above, very finely crystalline, 50%.
- 789-793 Dolomite, light gray, as above, 75%; dolomite, dark gray, as above, 25%; some medium-grained angular and some rounded, quartz grains.
- 789-797 Dolomite, slightly silty to sandy, light gray to very light gray (N7-8), coarsely crystalline to medium crystalline, very micaceous (about 30%) to residue sandstone grains, fine-grained, rounded to subrounded, to some angular fragments.
- 797-802 Dolomite, very shaly, dark gray (N3), medium crystalline, (approaching dolomitic shale).
- 802-806 Dolomite, very slightly shaly to shaly to silty, light gray (N7), finely crystalline to medium crystalline.
- 806-812 Dolomite, slightly shaly to shaly, medium gray (N5), much silt and rounded, very fine-grained quartz grains in residue; trace pyrite.
- 812-815 Dolomite, very slightly silty to sandy (?), very light gray (N8), medium crystalline to coarsely crystalline, about 30% of residue rounded to subrounded, very fine-grained, moderately poorly sorted quartz grains.
- 815-822 Dolomite, as above, 85%; dolomite, shaly, brownish gray (5YR 4/1), coarsely crystalline 15%.
- 822-829 Dolomite, very slightly shaly, to slightly shaly, light brownish gray (5YR 6/1), coarsely crystalline; very small fragments.
- 829-835 Dolomite, very slightly shaly to silty to shaly, medium gray (N5), medium crystalline, 35%; dolomite, slightly shaly, light brownish gray (5YR 6/1), very finely crystalline, some disseminated pyrite, 35%; dolomite, very light gray, finely crystalline, 20%; chert, brownish gray to light gray,

Depth

- angular to very coarse-grained size, 10%; in residue much quartz grains, loose and in clusters, subrounded, poorly sorted, very fine-grained to fine-grained, probably dolomitic sandstone lense or very sandy dolomite lense.
- 835-840 Ditto.
- 840-845 Dolomite, shaly to some very shaly, medium gray and medium light gray (N5-6), very finely crystalline.
- 845-852 Dolomite, shaly, medium gray (N5), and light brownish gray (5YR 6/1), and some yellowish gray (5Y 8/1), finely crystalline; about 30% fine-grained and few medium-grained quartz grains, part clustered, few coarse-grained angular quartz fragments in residue.
- 852-859 Ditto, very small fragments.
- 859-865 Ditto, more very fine-grained quartz.
- 865-872 Sandstone, quartzose, very light gray (N8), fine-grained, rounded to subrounded, very poorly sorted (some very fine-grained to some medium-grained), loose grains.
- 872-877 Dolomite, very slightly shaly to shaly, light gray (N7), very finely crystalline, hard, 50%; dolomite, silty to sandy, very light gray (N8), very finely crystalline, 50%; about 75% of residue sandstone, as above.
- 877-880 Dolomite, shaly, slightly sandy, very light gray (N8), very finely crystalline, residue showing disseminated sandstone grains, 50%; dolomite, shaly, medium gray (N5), very finely crystalline, 50%; some very fine-grained sandstone clusters, possibly dolomitic sandstone lense, some fine-grained to medium-grained rounded and frosted loose grains.
- 880-886 Ditto, more sandstone clusters.
- 886-888 Sandstone, quartzose, dolomitic, very light gray (N8), very fine-grained, subrounded, poorly sorted (many rounded and frosted); some dolomite, shaly, medium gray (N5).
- 888-893 Dolomite, sandy (?), very light gray (N8), and medium gray (N5), very finely crystalline; residue, 85% quartz, as sandstone, above.
- 893-899 Ditto, very small fragments, about 75% residue quartz grains; trace pyrite; some high luster coal in residue.
- 899-905 Dolomite, sandy (?), and very fine-grained sandstone, very small fragments, as above.

Depth

- 905-915 Dolomite, slightly shaly to slightly silty, medium light gray to light gray (N6-7), finely crystalline, probably sandy; about 60% residue very fine-grained to some fine-grained, rounded, quartz; some chert, very light gray (N8), medium-grained size; much iron fragments and staining in sample.
- 915-920 Dolomite, slightly shaly, medium gray (n5), finely crystalline to medium crystalline; much iron staining.
- 920-924 Sandstone, quartzose; dolomite, very light gray (N8), fine-grained, subrounded to rounded, very poorly sorted, (very fine-grained to medium-grained), loose quartz grains and some clusters in residue, 60%; dolomite, as above, 40%; much iron staining.
- 924-929 Ditto, very fine-grained to fine-grained.
- 929-936 Ditto.
- 936-943 Dolomite, slightly shaly to very slightly silty, medium gray and light gray (N5-7), very finely crystalline, some grayish green (5G 5/2), and dark gray (N3), silty shale in residue; some iron staining.
- 943-952 Ditto; slightly more dark gray (N3), silty and less green shale in residue.
- 952-958 Dolomite, shaly, medium light gray (N6), very finely crystalline, secondary (?) quartz crystal noted in residue.
- 958-965 Dolomite, shaly, medium gray (N5), very finely crystalline, much chert, part oolitic (1/3 mm. in diameter, dark gray and brownish gray ooliths with light gray matrix), 50%; dolomite, as above, 50%.
- 965-970 Ditto, chert, as above, and light gray (N7), about 50% of residue.
- 970-975 Dolomite, slightly silty, medium gray (N5), finely crystalline; about 50% residue chert as above and dark gray mottled with light gray.
- 975-982 Dolomite, as above, very finely crystalline, some (about 15%), dolomite, slightly silty, light gray (N7), finely crystalline; about 75% of insoluble residue chert, dark gray oolitic as above, and brownish gray.



Depth

982-990 Dolomite, medium dark gray to medium gray and light gray (N 4-5-7), as above; about 35% residue chert, as above, some grayish black (N2), and some white quartz.

990-999 Ditto, much iron staining.

999-1006 Dolomite, slightly shaly, to shaly, medium gray (N5), very finely crystalline, 80%; dolomite, slightly silty, light gray (N7), very finely crystalline, 20%; much white quartz and some chert, as above, in residue.

1000-1019 Dolomite, light gray (N7), as above, 70%; dolomite, very slightly shaly to silty, medium brownish gray (5YR 6/1), very finely crystalline, 30%; much brownish gray chert noted in residue.

1006-1010 Dolomite, light gray, as above, 70%; dolomite, slightly shaly, to shaly, brownish gray and medium dark gray (N4), as above; much light gray chert in sample and about 50% of residue light gray chert with some white quartz.

1010-1015 Dolomite, slightly shaly to shaly, medium gray and medium dark gray (N5-5), very finely crystalline, 70%; dolomite, light gray, very finely crystalline to finely crystalline, as above, 30%; about 25% of residue light gray and grayish brown chert with some white quartz.

1015-1019 No sample.

1019-1025 Ditto, about 25% residue white quartz and chert as above.

1025-1030 Dolomite, slightly silty to very slightly silty, medium light gray (N6), finely crystalline; about 30% residue white quartz chert, as above.

1030-1037 Dolomite, slightly silty, medium gray (N5), very finely crystalline, considerable white quartz and chert, part oolitic in residue.

1037-1041 Dolomite, slightly silty, light brownish gray (5YR 6/1), very finely crystalline to finely crystalline, chert and quartz, as above.

1041-1060 Dolomite, small fragments; much iron staining considerable bit fragments in sample.

1060-1065 Dolomite, slightly silty, medium gray (N5), finely crystalline to medium crystalline; about 25% of residue medium gray and dark gray (N5-3) chert and white quartz; much iron staining.

1065-1073 Ditto, trace white quartz and chert in residue.

Depth

1073-1080 Ditto, to very slightly silty; much less iron staining.

1080-1086 Dolomite, very calcareous (approaching dolomitic limestone), slightly silty, medium gray (N5), medium crystalline to coarsely crystalline; about 10% residue clear quartz.

1086-1092 Dolomite, silty to shaly, medium gray (N5), little iron staining.

1092-1096 Dolomite, slightly silty to silty, light gray (N7), very finely crystalline to finely crystalline, part slightly calcareous, 70%; limestone, slightly shaly, light brownish gray (5YR 6/1), very finely crystalline, 30%.

1096-1103 Dolomite, calcareous to non-calcareous, shaly to slightly silty, medium gray (N5), coarsely crystalline; trace white quartz in residue.

1103-1110 Ditto, very shaly to silty, medium crystalline; more white quartz in residue and few very silty clusters.

1110-1117 Dolomite, very slightly silty to silty, medium light gray (N6), very finely crystalline; very small fragments; about 20% of residue white quartz.

1117-1124 Dolomite, as above, medium gray and medium light gray (N5-6), little coarsely crystalline white dolomite; much (about 20% of residue) light brownish gray chert and white quartz.

1124-1130 Dolomite, silty, medium gray to medium dark gray (N5-4), medium crystalline; little dolomite, medium dark gray (N4), very finely crystalline, very shaly to dolomitic shale; considerable (about 20%) white quartz and some brownish gray chert in residue.

1130-1140 Dolomite, slightly silty to shaly, medium gray and medium light gray (N5-6), very finely crystalline; much white quartz in sample, about 40% of residue white quartz and much brownish gray chert.

1140-1146 Ditto.

1146-1152 Dolomite, slightly shaly to silty, medium dark gray (N4), medium crystalline, some light brownish gray, rounded white quartz.

1152-1155 Dolomite, medium dark gray, as above, and dolomite, slightly shaly, to slightly silty, light gray (N7), finely crystalline; about 30% of residue light brownish gray chert and some white quartz; very small fragments.

Depth

1155-1160 Dolomite, light gray and medium gray (N6-5), very finely crystalline, as above; more white quartz evident in residue.

1160-1162 Ditto, slightly part sandy (fine-grained quartz), some iron staining.

1162-1167? No sample.

1167?-1170 Sandstone, quartzose, very light gray (N8), very fine-grained, subangular, moderately poorly sorted, (considerably fine-grained, few medium-grained), loose grains, considerably iron stainings.

1167-1170 Ditto, fine-grained (very fine-grained to coarse-grained), angular to some rounded.

1165-1175 Ditto, very fine-grained, as 1167?-1170.

1170-1175 Limestone, oolitic (ooliths 1/2 to 1/10 mm. in diameter), some in light gray limestone matrix), slightly shaly, medium dark gray (N4), medium clastic with very finely clastic matrix; about 50% of insoluble residue, sandstone, as above.

1175-1180 Dolomite, silty to slightly silty, light gray, medium light gray and some medium gray (N7-6-5), very finely crystalline, considerable chert, in sample, part nodular, and ooliths, about 40% of insoluble residue.

1180-1185 Ditto, extremely small fragments.

1185-1190 Dolomite, slightly silty, very light gray (N8), to light gray (N7), very finely crystalline, some dark gray very shaly dolomite and dark gray chert in sample; chert, about 20% of residue; extremely small fragments.

1190-1195 Ditto.

1195-1200 Ditto, light gray (N7).

1200-1205 Ditto; slight trace pyrite.

1205-1210 Ditto, slightly to very slightly silty, light gray and very light gray (N7-8), about 30% and residue light greenish gray and brownish gray chert fragments; all very small fragments.

1210-1215 Ditto, part very slightly calcareous; about 15% chert, as above, some grayish black chert and some grayish black very slightly dolomitic shale.

1215-1219 Ditto; little very fine-grained white quartz noted in residue.

Depth:

- 1219-1223 Dolomite, slightly shaly to very slightly shaly, slightly calcareous, brownish gray and medium brownish gray (5YR 4/1 and 5/1), very finely crystalline, 60%; dolomite, as above, 40%; some larger (to medium-grained) fragments of white quartz; very small fragments.
- 1223-1228 Ditto, slightly calcareous to calcareous, part very slightly silty.
- 1228-1233 Ditto, very light brownish gray and brownish gray (5YR 7/1 and 4/1), 80%; very light gray dolomite, as above, 20%; considerable white quartz in residue and little light brownish gray chert.
- 1233-1239 Limestone, slightly silty to some shaly, brownish gray (5YR 4/1), very finely crystalline, small fragments; some dolomite, as above; some dark gray (N3), very small chert fragments.
- 1239-1245 Ditto, slightly silty to very slightly silty, trace chert fragments, as above.
- 1245-1249 Ditto.
- 1249-1254 Limestone, slightly silty to very slightly shaly, brownish gray (5YR 4/1), mottled with light gray and very light gray (N7-8), moderately nodular, medium clastic to finely clastic, with very finely crystalline matrix; very small fragments.
- 1254-1260 Limestone, very slightly silty to slightly sandy, some part slightly shaly, light brownish gray (5YR 6/1), and light gray (N7), very finely crystalline, extremely small fragments.
- 1260-1265 Ditto, some brownish gray fragments (5YR 4/1); small part very slightly nodular.
- 1265-1270 Limestone, slightly shaly, medium dark gray (N4), part nodular and oolitic trace, finely clastic to medium clastic with very finely crystalline to very finely clastic matrix, moderately hard.
- 1270-1274 Ditto.
- 1274-1275 No sample.
- 1275-1278 Limestone, very slightly shaly, medium dark gray, finely clastic, nodular, matrix very finely crystalline to finely crystalline, about 50%; sandstone, quartzose, very light gray (N8), very fine-grained, subangular, moderately poorly sorted, loose grains, about 50%.

Depth:

1278-1283 Limestone, as above.

1283-1286 Limestone, oolitic (chert ooliths, 1/5 to 1/2 mm. in diameter), part very slightly shaly, medium dark gray (N4), medium clastic, matrix very finely clastic to very finely crystalline, 75%; sandstone, as above, 25%; few angular, coarse-grained, quartz fragments.

1286-1294 Limestone, as above, ooliths, and slightly shaly, 50%; limestone, very light gray to light gray (N8-9), very finely crystalline, to medium crystalline, 50%.

1294-1300 Limestone, shaly to silty, brownish gray, medium clastic to very finely crystalline, nodular and trace oolitic (chert to 1 mm. in diameter) and slightly mottled with light gray (N7).

1300-1307 Limestone, very slightly shaly to some shaly, as above, and light gray (N7), extremely small fragments.

1307-1310 Ditto.

1310-1316 Ditto, very slightly silty, much less oolitic.

1316-1323 Ditto, predominantly brownish gray, small part slightly shaly.

1323-1332 Limestone, very slightly silty to slightly shaly, some dolomitic, medium gray (N5), porphyro blastic texture.

1332-1337 Limestone, dolomitic, light brownish gray (5YR 6/1), as above.

1337-1344 Dolomite, calcareous to very calcareous, slightly shaly to little shaly, light brownish gray and some medium dark gray (5YR 6/1), and (N4), medium crystalline to coarsely crystalline.

1344-1353 Dolomite, calcareous, slightly shaly to shaly, medium gray (N5), very finely crystalline to very finely clastic.

1353-1365 Dolomite, slightly calcareous, shaly to very slightly shaly, very light brownish gray (5YR 7/1), very finely crystalline; trace white quartz in residue; very small fragments.

1365-1370 Ditto, calcareous, very slightly silty to very slightly shaly; little more white quartz in residue.

Total Depth: 1370'

Co. California Co.  
 No. 1  
 FARM F.B. Strader  
 ELEV. 1745.5  
 PROD. D + A

STATE VIRGINIA  
 COUNTY Giles  
 SURVEY  
 BLOCK SEC.  
 LOC. 0.3 mi. W. of bridge over Walker Creek near Bane store on Virginia Hwy. No. 100. 2800' W. of 8° 43', 1000' N of 37° 16'. SW 1/4 sec 17, 37-4, 80-9  
 Spud. 6-10-48  
 COMP. 9-27-48 T.D. 1443 (?)

REMARKS  
 Located on Bane Lane  
 Surf. Rocks are Rome

SAMPLE INTERV.  
 PERCENT RES.

FORMATION RECORD

Driller's Log	Sample Log	Formation Record
8	40%	SLTSTN-wh, dol, SH-grn. DOLO-tan, gr, dense
12	30%	same. DOLO-dker, f xln.
13	25%	same. DOLO-tan ltgr, dk gr.
14	25%	SLTSTN-gr, dolom. LIMON. SH-do. DOLO-do.
15	15%	SLTSTN-dk. SH-do. DOLO-wh gr
16	15%	do.
17	15%	do. LIMON-incr.
18	20%	SLTSTN-do. SH-grn, blk. CHT-tr. QTZ-tr
19	15%	QTZ-incr.
20	58 10%	DOLO-silty, wh, gr, xln. ss.-fr.
21	10%	DO. CHT-eol tr. SH-brn, yel. DOLO-do
22	10%	CHT-transl. DOLO-do
23	15%	SH-limon. ↑ CHT-do, trcol. DOLO-do
24	10%	do
25	35	SLTSTN-bl, gr, shly, dolom. DOLO-f xln
26	20	SLTSTN-do. CHT-same dolom. frss
27	100	CHT-incr transl. DOLO-dkgr lt-gr
28	5	CHT-brnool. DOLO-do
29	10	do
30	10	do
31	10	do
32	10	do
33	10	do
34	20	CHT-transl. SLTSTN-brn wh shly dolom
35	20	CHT-do. SLTSTN-wh dolom DOLO-gr
36	5	DOLO-gr tan fss xln
37	5	SH-brn-yel
38	15	CHT-brn same eol. SH-bl
39	15	do
40	12	SLTSTN-dk-brn gr shly dolom CHT-lt tan
41	20	DOLO-cse xln dkgr
42	20	do
43	20	SLTSTN-wh bl DOLO-gr dkgr
44	30	CHT-bl SLTSTN+SH-gr brn dolom. DOLO-gr
45	25	do
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200	10	do

1167  
 T. D.  
 1167  
 9NC  
 Got large piece of gn. sh. maybe  
 stump.  
 11200  
 CHT-wh, tan, bl. DOLO-H-gr, tan, f xln.  
 Water std within 22' of T. of hole  
 Back in dolomite  
 11230  
 9-3-48

(1287 - filled hole  
 8' crushed rock)

(1378 - filled hole  
 6' crushed rock)

1400

1500

1600