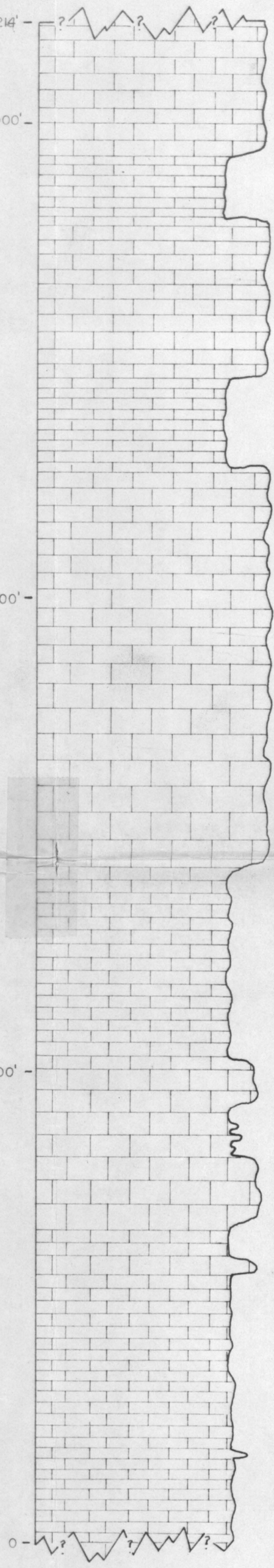

SAMPLE NUMBER — SAMPLE DESCRIPTION

- 29 Limestone, brownish gray, very fine grained, hard, dense, unfossiliferous, medium bedded (2.5–7').
- 30 Limestone, medium gray, very fine grained, hard, dense, unfossiliferous, medium bedded (2–5'). Composed of medium grained, rounded to subrounded intraclasts (maximum size 1.5 mm, average size 1/4–1/2 mm) cemented by clear calcite. Some oolites are present. The oolites and intraclasts are composed of very finely crystalline carbonate and are elliptical.
- 31 Limestone, blue-black, very fine grained, hard, dense, unfossiliferous, medium bedded (1–10'). Composed of very fine grained intraclasts or pellets (less than 1/16 mm) cemented by clear calcite, and cut by fractures filled with clear calcite. Looks as if it might be slightly sheared.

Rubble Covered Interval

- 32 Limestone, blue-black, very fine grained, hard, dense, unfossiliferous, medium bedded (2–5'). Texture is obscure, but the rock may be composed of very fine grained pellets or possibly carbonate ooze. Sample is cut by veinlets of clear calcite and contains patches of black organic (?) material.
- 33 Limestone, dark gray, very fine grained, hard, dense, unfossiliferous, medium bedded (2–6'). Composed of pellets or possibly very fine-grained intraclasts (less than 1/16mm) cemented by clear calcite which is glide twinned.
- 34 Limestone, light gray, very fine grained, hard, dense, unfossiliferous, medium bedded (4–10'). Texture is obscure; the rock may be composed of very fine pellets with some intraclasts all cemented with clear carbonate.
- 35 Limestone, light gray, very fine grained, hard, dense, slightly fossiliferous, medium bedded (2–8'). Composed of fine grained rounded intraclasts (maximum size 1 mm, average size 1/4–1/8 mm) and possibly pellets. The intraclasts are formed of very finely crystalline carbonate and are cemented by clear carbonate. Irregular patches of clear carbonate also occur.

Rubble Covered Interval

- 36 Limestone, light gray, very fine grained, hard, dense, unfossiliferous, medium bedded (2–10'). The texture is obscure, but the rock seems to be composed of very finely crystalline tan carbonate which contains veinlets and patches of clear carbonate which is glide twinned. It may also contain some pellets.
- 37 Limestone, medium gray mottled with white, very fine grained, hard, dense, unfossiliferous, medium bedded (5–10'). The rock is composed of very finely crystalline dark carbonate which has been highly fractured and the fractures filled with clear carbonate.
- 38 Limestone, dark gray, very fine grained, hard, dense, unfossiliferous, medium bedded (5–10'). Composed of very fine grained subrounded intraclasts (less than 1/8 mm) or pellets with a few very fine grained oolites (1/8–1/16 mm) all of which are cemented by very finely crystalline clear carbonate. Patches and veinlets of clear carbonate also occur. The matrix appears to have a higher magnesium content than the veinlets.
- 39 Limestone, medium gray, very fine-grained, hard, dense, unfossiliferous, medium bedded. The texture is obscure, but the rock seems to be composed of indistinct rounded to subrounded, very fine grained intraclasts (less than 1/16 mm) and possibly some oolites all cemented with very finely crystalline clear carbonate. Some of the interclasts are ellipsoidal and all are composed of very finely crystalline dark carbonate.
- 40 Limestone, light gray, very fine grained, hard, dense, unfossiliferous, thick bedded (10–20'). Composed of rounded to subrounded, very fine grained intraclasts (maximum size 1 mm, average size 1/8–1/4 mm), some oolites and possibly a few pellets. They are cemented by very finely crystalline clear carbonate. Patches and veinlets of clear carbonate also occur.
- 41 Limestone, brownish gray, fine grained, hard, dense, unfossiliferous, thick bedded. Composed of rounded to subrounded, medium grained oolites and intraclasts (maximum size 1 mm, average size 1/4–1/2 mm) cemented by clear very finely crystalline carbonate. They are composed of very finely crystalline dark carbonate. Wide veinlets of coarsly crystalline clear carbonate which is glide twinned also occur. This section seems to have a slightly higher magnesium content than others.
- 42 Limestone, medium gray, very fine grained, hard, dense, slightly fossiliferous, thick bedded. Composed of well rounded to subrounded intraclasts with some oolites (maximum size 2 mm, average size 1/8–1/4 mm). Cemented with clear carbonate. Some iron staining occurs.

Rubble Covered Interval

- 43 Limestone, medium gray, very fine grained, hard, dense, slightly fossiliferous. Composed of rounded to subrounded fine to coarse grained intraclasts (maximum size 2 mm, range 1/8 – 2 mm) cemented with very finely crystalline clear carbonate. The intraclasts are composed of very finely crystalline dark carbonate. Veinlets filled with clear carbonate cut the rock. A few oolites are present.
- 44 Limestone, dark gray, very fine grained, hard, dense, unfossiliferous, thick bedded (20'). Composed of very fine grained subrounded intraclasts (maximum size 1/2 mm, average size, 1/8–1/16 mm) cemented with very finely crystalline clear carbonate. Occasional patches of coarsly crystalline clear carbonate also occur. Some of this section is slightly dolomitic.
- 45 Limestone, light gray, very fine grained, hard, dense, unfossiliferous, thick bedded (15–20'). Composed of very finely crystalline calcite cut by veinlets of clear calcite which show well developed glide-twinning.

Rubble Covered Interval

- 46 Limestone, pink and gray mottled, very fine grained, massive, hard, vuggy porosity, unfossiliferous. Appears brecciated, angular breccia fragments of clear carbonate are surrounded by a very finely crystalline matrix of darker carbonate. Some vugs are filled with clear carbonate. Iron staining occurs and accessory quantities of opaque minerals are present.
- 47 Limestone, gray, hard, dense, unfossiliferous. Appears highly brecciated and recemented by medium to coarsely crystalline clear carbonate. The breccia fragments are composed of very fine grained rounded interclasts and some oolites. (Collected from rubble.)

By R. E. Church and
M. C. Durfee, 1960

STRATIGRAPHIC SECTION OF THE TOLOVANA LIMESTONE

NORTHERN FOSSIL CREEK AREA

WHITE MOUNTAINS, ALASKA