Baldwin Creek Kimberlite, Stratigraphic Well drilled by the Kansas Geological Survey
September 27, 1999 TD 308' 7"

Appendix C—Baldwin Creek kimberlite

Sec. 9-T5S - R8E
NW NW

0'-24'9" Casing

24'9"-29' Drilled 4 ft 3 inches down to 29 ft. 6 inches cement then 1 ft 9 inches of kimberlite. Might have left some in the hole. Kimberlite is quite soft. It is mostly small pieces of sediment (including red shale) set in a ground mass. See ilmenite in the rock.

29'-31' Drilled 2 ft down to 31 ft. Kimberlite as above. Possibly one larger limestone clast(?) which is loose and one shale clast about 2 inches long. Rock has several small cavities lined with calcite?

31'-36' Drilled 5 ft to 36 ft. Kimberlite as above. Material does not drill well. It is still quite soft.

36'-39' Drilled 3 ft recovered 3 ft 6 inches. Joe is down to 39 ft. Kimberlite looks much the same as above.

39'-40' Drilled 1 ft recovered 7 inches. Should be at 40 ft. Drilled and recovered 9 ft of kimberlite as above. Lots of sedimentary inclusion. Also large 3–4-mm mica.

40'-59' Recovered 9 ft 8 inches. Some of the material is washed out. Several cavities up to 1 inch. Otherwise the rock is much like above. Down to 59 ft.

59'-64'6" Drilled and recovered 5 ft 6 inches, down to 64 ft 6 inches. Rock as above. Big phlogopite? Crystal ~4 inches from the top.

64'6"-69' Drilled down to 69 ft. Rock as above. About halfway down one clast looks like a reworked piece. Mica (phlogopite?) is common.

69'-73'8" Drilled ~4 ft 8 inches. Keep getting plugged up. Core breaks into small pieces and gets cock-eyed in the barrel. Some clasts are up to several inches in diameter.

73'8"-78'8" Recovered 5 ft down to 78 ft 8 inches. Rock is still the same.

78'8"-89' Drilled 10 ft recovered 9 ft 4 inches. Depth of hole 89 ft. No change in the rock.

89'-98'4" Drilled 10 ft recovered 8 ft 5 inches of the same rock. Tom found a small garnet in the fine soft kimberlite. Up to now the kimberlite core breaks up very easily and appears to be quite weathered. Bottom of the core is probably 98 ft 4 inches.

98'4"-104' Drilled 5 ft recovered 5 ft 4 inches. Total depth 104 ft. Nice-size garnet near the bottom of the hole. Rock takes on a little darker and fresher appearance. Some of the inclusions also start to look different. Also fewer cavities in this core.

104'-109' Drilled 5 ft recovered 4 ft 9 inches. Kimberlite as above.

109'-119' Drilled 10 ft recovered 9 ft 11 inches. Rock gets to be fresher. Best pieces of core recovered.

119'-129' Drilled 10 ft recovered 9 ft 11 inches. Rock is relatively fresh. Still some large inclusions as well as numerous small ones. No cavities, but core shows many fractures.

129'-139' Drilled 16 ft recovered 9 ft 1 inch. Rock as above, but there are several inclined fractures filled with gypsum(?) up to 2 mm thick.

139'-148'9" Drilled 9 ft 9 inches recovered 10 ft 3 inhes. Core probably 148 ft 6 inches. Kimberlite same as above.

148'9"-152'1" Drilled 3 ft 5 inches recovered 3 ft 4 inches. Kimberlite as above. Gypsum-filled fractures common. Some of the gypsum washes out during coring.

152'1"-159' Drilled 6 ft 8 inches recovered 7 ft 2 inches. Kimberlite as above. Some different type inclusions.

159'-168'5" Drilled 9 ft recovered 10 ft 3 inches. Joe's depth is 168 ft. Kimberlite as above. Bottom of core 168 ft 5 inches.

168'5"-169'1" 8 ft of core measured bottom at 169 ft 1 inch. Adjust above depths.

169'1"-179'1" Drilled and recovered 10 ft down to 179 ft 1 inch. Kimberlite has several gypsum stringers—some up to 0.5 inch thick.

179'1"-189'1" Drilled and recovered 10 ft down to 189 ft 1 inch. Kimberlite as above.

189'1"-199'1" Cored and recovered 10 ft down to 199 ft 1 inch. Kimberlite contains quite a few clasts that look like quartzite. Possibly from an older metamorphic terrane.

199'1"-204'4" Drilled 5 ft 6 inches recovered 5 ft 3 inches. Drill depth 204 ft 7 inches. Kimberlite as above. Nice igneous clast at about 199 ft 6 inches.

204'4"-208'10" Recovered 5 ft 5 inches. Measured depth 208 ft 10 inches. Core depth different. Kimberlite contains numerous gypsum veinlets at various angles. Use measured depth in core box.

208’10”-218’10” Drilled and recovered 10 ft down to 218 ft 10 inches. Kimberlite as above. Saw a garnet about 212 ft 4 inches. Gypsum veinlets at various angles common.

218’10”-228’10” Drilled and recovered 10 ft down to 228 ft 10 inches. Kimberlite as above. The rock is quite fresh and has lots of possible basement inclusions.

228’10”-238’10” Cored and recovered 10 ft down to 238 ft 10 inches. Kimberlite as above but fewer gypsum veinlets. Also a large calcite gypsum(?)-rich clast at the bottom. Several clasts that are green when wet.

238’10”-248’10” Cored and recovered 10 ft down to 248 ft 10 inches. Gypsum pocket continues for about 6 inches at the top of this core. Otherwise rock is about the same.

248’10”-258’10” Cored and recovered 10 ft down to 258 ft 10 inches. Quite a few cm-thick gypsum stringers. Otherwise the rock is as above.

258’10”-265’8” Cored 10 ft recovered 6 ft 10 inches down to 265 ft 8 inches.

265’8”-268’4” Retrieved another 2 ft 8 inches down to 268 ft 4 inches. Kimberlite is still much the same.

268’4”-278’4” Cored and recovered core down to 278 ft 4 inches. Kimberlite as above.

278’4”-287’2” Cored 10 ft recovered 8 ft 10 inches down to 287 ft 2 inches.

287’2”-288’9” Retrieved 1 ft 7 inches to 288 ft 9 inches.

288’9”-298’7” Cored 10 ft retrieved 9 ft 10 inches. Down to 298 ft 7 inches. Kimberlite as above.

298’7”-308’7” Drilled 10 ft more to give away to 308 ft 7 inches.

Source: Kansas Geological Survey, Open-file Report KGS_OF_2012-17. The Geology, Petrology, and Elemental Composition of Kimberlites from Riley and Marshall Counties, Kansas, USA

Baldwin Creek September 27, 1999 TD 308'7"

Tuttle Kimberlite Oct. 14, 1999 T.D. 307'6"

Antioch Kimberlite Oct. 18, 1999 T.D. 307'11"

from Pieter Berendsen KGS
05/24/2024 KGS-DRL-DLS