## **Geological Report**

Baker #SCZ-30 NE-NW-SW-NW, Sec. 26, T18S, R22E 1485' FNL & 495' FWL Miami County, KS API #15-121-30486-00-00

**Operator:** SCZ Resources LLC, Jorge Ranz, 8614 Cedarspur Drive, Houston, TX,

77055

**Drilling Contractor:** JTC Oil Inc.

Well Site Geologist: Mark Brecheisen

**Date Drilled:** August 11<sup>th</sup>, 2014

**Size of Hole:** 6"

**Total Depth:** 420'

**Elevation:** 938' (estimated)

**Drilling Fluid:** Compressed air with fresh water injection

**Surface casing:** 20' of 7" casing cemented with 3 sacks of cement to surface

**Formation Tops:** Formation tops have not been correlated to electric logs

Field Name: Paola-Rantoul

Status: Oil Well

**Oil Shows:** Hepler Sandstone @ 311'-316'

Peru Sandstone @ 339'-364'

Water Encountered: No appreciable water encountered while drilling.

**On Location:** August 11<sup>th</sup>, 2014, 7:06 AM. Drilling depth of 110'; left location @ TD

420' @ approximately 8:58 AM.

**Notes:** Well cuttings were examined at rig and discarded. Samples of zones of

interest were saved and examined with binocular microscope and UV light.

## **Top of the Hepler Sandstone @ 311'**

311'-316'

Sandstone; light gray to dark brown. Mottled. Very fine-grained. Very well-sorted with angular to subrounded grains. Argillaceous. Laminated in part. Very micaceous. Friability overall good, with vugular porosity observed on some sample surfaces. Mostly mottled to even, dark brown oil staining on sample surfaces. Saturation overall good. Sample collected by driller. 45% mottled, variegated yellow hydrocarbon fluorescence. Fairly fast, streaming to even, good milky blue cut; slight residual oil show to tray after cut

## **Top of the Peru Sandstone @ 339'**

339'-340'

Sandstone; medium brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Sample is fairly clean; fair cementation. Friability overall good, with vugular porosity observed on sample surfaces. Even, medium-brown oil staining on sample surfaces. Saturation overall fair. Visible evidence of water passing through this footage from previous water flooding attempts. Sample had a good petroliferous odor. Good free oil show to sample surfaces and to pit. 45% mottled to even, variegated yellow hydrocarbon fluorescence. Slow, blooming to even, good milky blue cut; fair residual oil show to tray after cut

340'-343'

Sandstone; medium-dark to dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Argillaceous in part. Clean; poorly-cemented grainstone. Friability overall very good to excellent, with abundant vugular porosity on some sample surfaces. Slightly mottled to mostly even, medium-dark to dark brown oil staining on sample surfaces. Saturation overall very good. Sample had a very good petroliferous odor. Very good free oil show to sample surfaces and to pit. 75% slightly mottled to even, variegated yellow hydrocarbon fluorescence. Slow, even, very good milky blue cut; good residual oil show to tray after cut

343'-346'

Sandstone; dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Extremely clean; very poorly-cemented grainstone. Friability overall excellent, with abundant vugular porosity on sample surfaces. Even, dark brown oil staining on sample surfaces. Saturation overall very good to excellent. Sample had a very strong petroliferous odor. Strong free oil show to sample surfaces and to pit. 95% even, medium yellow hydrocarbon fluorescence. Fairly fast, even, very strong milky blue cut; strong residual oil show to tray after cut

346'-349'

Sandstone; dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Extremely friable. Very poorly-cemented grainstone. Friability overall excellent, with abundant vugular porosity on sample surfaces. Even, dark brown oil staining on sample surfaces. Saturation overall excellent. Sample had an excellent petroliferous odor. Excellent free oil show to sample surfaces and to pit. 100% even, medium-bright yellow hydrocarbon fluorescence. Fast, even, excellent milky blue cut; very strong residual oil show to tray after cut

349'-352'

Sandstone; "sugar sand" section. Dark brown; mottled. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Most sample obtained is calcareous sandstone with traces of non-porous, interbedded limestone present. Friability overall fair, with abundant vugular porosity on sample surfaces. Mostly mottled to even, dark brown oil staining on sample surfaces. Saturation overall good to very good. Sample had a very strong petroliferous odor. Very strong free oil show to sample surfaces and to pit. 95% mostly even, variegated yellow hydrocarbon fluorescence. Fairly fast, streaming to even, good milky blue cut; fair residual oil show to tray after cut

352'-355'

Sandstone; medium-dark to dark brown. Laminated in part. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Slightly calcareous in part. Fairly clean; poorly-cemented grainstone. Friability overall good to very good, with vugular porosity observed on sample surfaces. Mottled to even, medium to dark brown oil staining on sample surfaces. Saturation overall good to very good. Sample had a very strong petroliferous odor. Very strong free oil show to sample surfaces and to pit. 75% slightly mottled to even, variegated yellow hydrocarbon fluorescence. Fairly fast, streaming to even, strong milky blue cut; good residual oil show to tray after cut

355'-358'

Sandstone; dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Very clean; poorly-cemented grainstone. Friability overall very good to excellent, with abundant vugular porosity on sample surfaces. Even, dark brown oil staining on sample surfaces. Saturation overall excellent. Sample had an excellent petroliferous odor. Excellent free oil show to sample surfaces and to pit. 100% even, variegated yellow hydrocarbon fluorescence. Fairly fast, even, excellent milky blue cut; excellent residual oil show to tray after cut

358'-361'

Sandstone; medium-dark to dark brown. Mottled in part. Most sample obtained was calcareous sandstone, with traces on non-porous, interbedded limestone present. Few samples of "sugar sand" present. Friability overall

fair, with abundant vugular porosity on sample surfaces. Mostly mottled to even, medium-dark to dark brown oil staining on sample surfaces. Saturation overall very good. Sample had a very good petroliferous odor. Very good free oil show to sample surfaces and to pit. 90% mottled to even, variegated yellow hydrocarbon fluorescence. Fairly fast, even, excellent milky blue cut; very strong residual oil show to tray after cut

361'-364'

Sandstone; very dark brown to black. Mottled in part. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Traces of non-porous, interbedded limestone present in sample. Sandstone is fairly clean, slightly calcareous. Friability overall good to very good, with abundant vugular porosity on many sample surfaces. Slightly mottled to mostly even, dark brown to black oil staining on sample surfaces. Saturation overall very good. Sample had a very good petroliferous odor. Strong free oil show to sample surfaces and to pit. 75-80% slightly mottled to even, variegated yellow hydrocarbon fluorescence. Very fast, streaming to even, very strong milky blue cut; strong residual oil show to tray after cut

TD 420' @ approximately 8:58 AM, August 11th, 2014

Mark Brotion Sr.