## **Geological Report**

Baker #SCZ-40 NE-SE-SW-NW, Sec. 26, T18S, R22E 2145' FNL & 1155' FWL Miami County, KS API #15-121-30514-00-00

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

77055

**Drilling Contractor:** JTC Oil Company

Well Site Geologist: Mark Brecheisen

**Date Drilled:** August 2<sup>nd</sup>, 2014

**Size of Hole:** 6"

**Total Depth:** 420'

**Elevation:** 977' (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:** Peru Sandstone @ 330'-355'

**Water Encountered:** No appreciable water encountered while drilling.

**On Location:** August 2<sup>nd</sup>, 2014, 9:00 AM. Drilling depth of 160'; left location @ TD

420' @ approximately 11:50 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.

Note:

Hepler Sandstone Section only had a trace of free oil within a few thin sandstone laminations. No real saturation or sandstone show. No samples saved

## Top of the Peru Sandstone @ 330'

330'-332'

Sandstone; light gray to very light brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Glauconitic. Slightly micaceous. Very clean. Poorly-cemented grainstone. Friability overall excellent, with abundant vugular porosity on sample surfaces. Visible evidence of water passing through this footage from previous water flooding attempts. Even, very light brown oil staining on sample surfaces. Saturation overall very poor. Sample had a very slight petroliferous odor. No free oil show to sample surfaces or to pit. 90% even, very dull yellow hydrocarbon fluorescence. Slow, streaming to blooming, poor milky blue cut; no residual oil show to tray after cut

332'-335'

Sandstone; light brown. Very fine to fine-grained. Very well-sorted with angular to subrounded grains. Glauconitic. Slightly micaceous. Very clean. Poorly-cemented grainstone. Friability overall excellent with abundant vugular porosity on sample surfaces. Visible evidence of water passing through this footage from previous water flooding attempts. Even, light brown oil staining on sample surfaces. Saturation overall poor. Sample had a slight petroliferous odor. Pinpoint free oil show to few sample surfaces; very slight free oil show to pit. 85-90% even, very dull yellow hydrocarbon fluorescence. Slow, blooming to even, fair milky blue cut; very slight residual oil show to tray after cut

335'-338'

Sandstone; light gray to medium brown. Mottled in part. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Glauconitic. Slightly micaceous. Laminated in part. Traces of limestone present in sample. Sandstone still clean. Poorly-cemented grainstone. Friability overall very good to excellent. Abundant vugular porosity on many sample surfaces. Slightly mottled to even, light to medium brown oil staining on sample surfaces. Saturation overall poor to fair. Visible evidence of water passing through this footage from previous water flooding attempts. Sample had fair to good petroliferous odor. Fair free oil show to some sample surfaces; slight to fair free oil show to pit. 70% slightly mottled to mostly even, variegated yellow hydrocarbon fluorescence. Fairly fast, streaming, good milky blue cut; very slight oil show to tray after cut

Note:

The 335'-338' sample represents the last sample that has been infiltrated by previous water flooding. This well should not be perforated above 338'

338'-341'

Sandstone; medium-dark to dark brown. Mottled in part. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Calcareous in

part with abundant limestone present in sample. Glauconitic. Slightly micaceous. Fairly well-cemented. Fairly hard. Friability overall good, with abundant vugular porosity on some sample surfaces. Abundant vugular porosity on calcareous sandstone samples as well. Mottled to even, medium-dark to dark brown oil staining on sample surfaces. Saturation overall good. Sample had strong petroliferous odor. Good free oil show to sample surfaces and to pit. 75% even, variegated yellow hydrocarbon fluorescence. Very fast, even, very strong milky blue cut; good residual oil show to tray after cut

341'-344'

Sandstone; medium-dark to dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous. Glauconitic. Calcareous in part. Overall very clean. Poorly-cemented grainstone. Friability overall very good. Even, medium-dark to dark brown oil staining on sample surfaces. Saturation overall very good. Sample had a very strong petroliferous odor. Strong free oil show to sample surfaces and to pit. 85% even, variegated yellow hydrocarbon fluorescence. Instantaneous, even, excellent milky blue cut; very strong residual oil show to tray after cut

344'-347'

Sandstone; medium-dark to dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Mottled in part. "Sugar sand" section. Some samples very calcareous with lots of limestone in sample. Sandstone is clean. Poor to well-cemented grainstone. Friability overall good to excellent. Abundant vugular porosity observed on many sample surfaces. Slightly mottled to even, medium-dark to dark brown oil staining on sample surfaces. Saturation overall very good. Sample had an excellent petroliferous odor. Very strong free oil show to sample surfaces and to pit. 90-95% even, variegated yellow hydrocarbon fluorescence. Instantaneous, even, excellent milky blue cut; very strong residual oil show to tray after cut

347'-350'

Sandstone; dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly glauconitic. Slightly micaceous. Traces of interbedded shale present. Very clean sandstone. Poorlycemented. Friability overall very good to excellent. With abundant vugular porosity on sample surfaces. Even, dark brown oil staining on sample surfaces. Saturation overall very good to excellent. Sample had an excellent petroliferous odor. Excellent free oil show to sample surfaces and to pit. 45-50% even, variegated yellow hydrocarbon fluorescence. Fast, even, very strong milky blue cut; good residual oil show to tray after cut

350'-353'

Sandstone; dark to very dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Slightly micaceous.

Glauconitic. Slightly calcareous in part with traces of limestone present in sample. Very clean. Poorly-cemented grainstone. Friability overall very good to excellent. Even, dark to very 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. 95% even, variegated yellow hydrocarbon fluorescence. Instantaneous, even, excellent milky blue cut; excellent residual oil show to tray after cut

353'-355'

Sandstone; dark brown. Very fine to fine-grained. Well-sorted with angular to subrounded grains. Mottled in part. Slightly micaceous. Glauconitic. Traces of interbedded shale and limestone present in sample. Calcareous in part. Fairly clean. Fairly well-cemented grainstone. Friability overall good with abundant vugular porosity observed on many sample surfaces. Mottled to even, dark brown oil staining on some sample surfaces. Saturation overall good to very good. Ample had a strong petroliferous odor. Strong free oil show to sample surfaces and to pit. 30% slightly mottled to mostly even, variegated yellow hydrocarbon fluorescence. Fairly fast, blooming, fair milky blue cut; no residual oil show to tray after cut

TD 420' @ approximately 11:50 AM, August 2<sup>nd</sup>, 2014

Mark Drehish Dr.