GEOLOGISTS REPORT

for

HUG #1

SE ¼, SE ¼, NW ¼,
sec. 34, 8 S, 15 E
JACKSON COUNTY, KANSAS

API-15-085-20087-00-00

November, 2013

By

George E. Petersen, C.P.G., R.G.
DEACON GEOLOGY INC.

GEOLOGISTS REPORT: HUG #1
November 14,2013: On location, 6:45 AM.
November 21, 2013: Released from location 3:30 AM upon completion of logging.

All measurements are from a KB elevation of 1176'. GL 1166'

FORMATION	SAMPLE DEPTH	LOG DEPTH	DATUM
Lansing	1037	1035	+141
B/KC	1358	1358	-182
Cherokee	1586	1586	-410
Burgess Sd	2186	2186	-1010
Miss Lm	2232	2230	-1054
Kinderhook	2398	2396	-1220
Hunton	2618	2616	-1440
Maquoketa	2870	2886	-1710
Viola	2960	2958	-1782
Simp dol	3080	3080	-1904
Simp Sd	3105	3105	-1929
Arbuckle	3184	3182	-2006

RTD 3200 LTD 3198

Sample returns were examined microscopically from base of surface pipe to TD for the presence of visible hydrocarbons. Potential units capable of carrying oil or gas were examined under a black light for visible fluorescence. Various tops of units were derived from the drilling time log, and sample returns and the DIL log

Sample descriptions were grouped with some units being named and other intervals being identified by drilling depth.

222' to top of Lansing at 1037. All depths measured from KB of 1076.

The interval from 222' to the top of the Lansing /Kansas City contains many limestone and sand units that may carry hydrocarbons in some areas of the state. Samples from these intervals were examined microscopically for the presence of hydrocarbon accumulations. There is the probability that some of the sand intervals may contain gas: however, there is no market in the area and the sands have not been tested to see if they can even produce.

LANSING GROUP/KANSAS CITY GROUP:

The log top of the Lansing was reached at a sample depth of 1037' (-141). This sequence of alternating limestone's and shale with an occasional sand or coal interval has been non-productive in this area and there were no shows in this sequence in this well.

SIMPSON SAND:

The Simpson sand lies in direct contact with the overlying Simpson dolomite. The sand is a well -rounded, friable clear to white quartz sand. There was a very good show of free oil, fluorescence and cut throughout the majority of the interval. The CNL log showed excellent porosity values.

ARBUCKLE:

The Arbuckle top was reached at a log depth of 3182' (-2006). There was a dark gray to black shale separating the base of the Simpson sand and the hard dark brown dolomite of the Arbuckle. There were no shows in the portion of the unit that was penetrated. Drilling was suspended at a drilled depth of 3200 when drilling time per foot was exceeding 10 minutes.

SUMMARY:

The two primary intervals that were thought to be productive in this well, were t the Hunton and Viola. Neither zone had positive shows of oil in either the samples or on the logs that were run.

Further drilling found good oil shows in the Simpson Dolomite. The interval between 3092 and 3102 (log depth) had good evidence of permeability on the Micro log. Log analysis of this interval is ongoing and the SW values are yet to be determined. This interval appears to be the interval that will be selected for perforating when the well is completed.

The Simpson underlying the dolomite had a very good oil show throughout its entire interval. The logs appear to indicate that the water to oil ratio may be to excessive to try to produce at this time. At such time as a disposal well can be established nearby, this zone may be completed with the much higher water to oil ratio than can be produced without a disposal nearby.

The wildcat location of this well indicates the probability that other successful well locations may be found in the nearby vicinity.

DISCLAIMER:

The author of this report is an independent Geologist and not an employee of J & K Crude LLC. The author has an ORRI if there is a successful completion of this well.

Respectfully submitted,

George E. Petersen, P.G., C.P.G.
DEACON GEOLOGY, INC.
3223 SW Mulvane Rd.
Topeka, KS 66614

Licensed Geologist, - Kansas
No. 166

Certified Professional Geologist- American Institute of Professional Geologists
No.4651

CHEROKEE SECTION:

The Cherokee section had an overall thickness of 644 feet. This interval is composed of thick shale segments with inter-bedded sand and coal deposits scattered throughout the interval. The coal and sands may contain limited amounts of gas.

The Burgess sand is found at the base of the Cherokee section in this well. The sand has an upper 24 foot thick sand and a lower 10 foot thick sand. The wall cake build up on the CNL log indicates good porosity and permeability. There were no visible shows of hydrocarbons present in the samples from this interval.

MISSISSIPPIAN LIME:

This geologic unit was reached at a log depth of 2230' (-1054). There were no shows of hydrocarbon present in the samples from this interval.

HUNTON:

The Hunton was reached at a log depth of 2616' (-1440. There was a slight show of free oil in vugular porosity found in samples that were lagged back to the 2616-2620 samples. There was no odor present and only slight fluorescence when solvent was added. Due to the very limited show and no odor, no DST was ordered for this interval. DST results on similar shows in wells to the NW of this well also had negative results.

The samples from the remainder had no visible shows of oil or gas. A detailed analysis of the Hunton log signatures will be done before final completions plans Made.

MAQUOKETA:

The Maquoketa samples from this well consisted of a dolomitic shale and there were no shows of oil or gas from this interval in this well.

VIOLA:

The log top of the Viola was 2958' (-1782). There was a drilling break from 3453 to 3456. Sample returns consisted of a grey dolomitic limestone. There was a single spot of free oil in a piece of pyrite. No odor was noticed and only mineral fluorescence under black light. There was a drilling break from 2964-68 and from2975-82. Samples from these intervals had no show or odor and only a slight stain. There is no potential for the production of oil from the Viola in this well.

SIMPSON DOLOMITE:

The top of the Simpson dolomite was called at a log depth of 3080' (-1904) .The Sample returns contained dark brown dolomite with some sandy dolomite sample chips being observed. There was a show of free oil in good inter-crystal porosity and a strong odor was noted from the samples. The application of a solvent yielded bright streaming cuts and fluorescence from the samples.