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16-22-11W⁸¹

Geologic Report
for:
Bill Chew Inc.
#1 Shepherd West
Stafford County, Kansas

16-22-11W

C W/2 NWNW

NOV 18 1985

State Geological Survey
WICHITA BRANCH

Supervised by:
Dean Pattisson

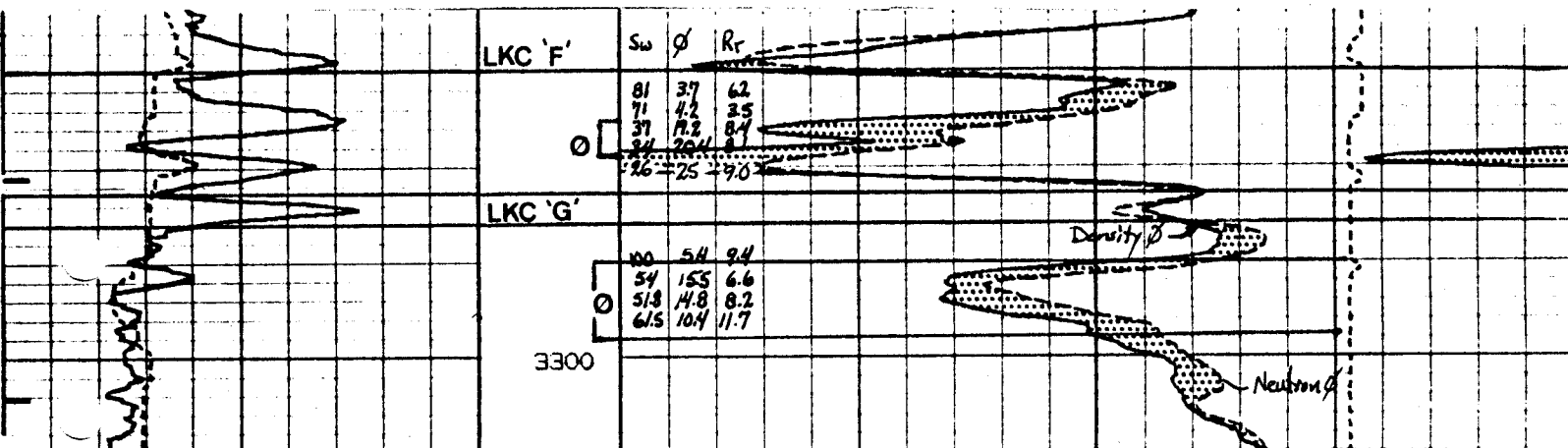
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CONSERVATION DIVISION
Wichita, Kansas

#1 Shepherd West
 Section 16-22-11W
 Stafford County, KS

Lansing Group 'F' Zone, 3270 - 3283 (13') - Circulated & covered
 by DST #1.



Limestone: Light gray-tan, singular, fine - very fine crystalline with fine scattered fossil frags. Good fine intercrystalline and vugular porosity. Fair to medium brown stain and odor. Positive acid cut with strong bright yellow color presence.

Due to the oil shows sample this zone should be considered as a secondary target of the Lansing-KC Group, possibly treated with the 'D' zone as communication is likely.

Kansas City Group Iola Limestone, 'G' zone, 3286 - 3336 (50') - Not circulated, not tested.

- See preceding log section for porosity curves. -

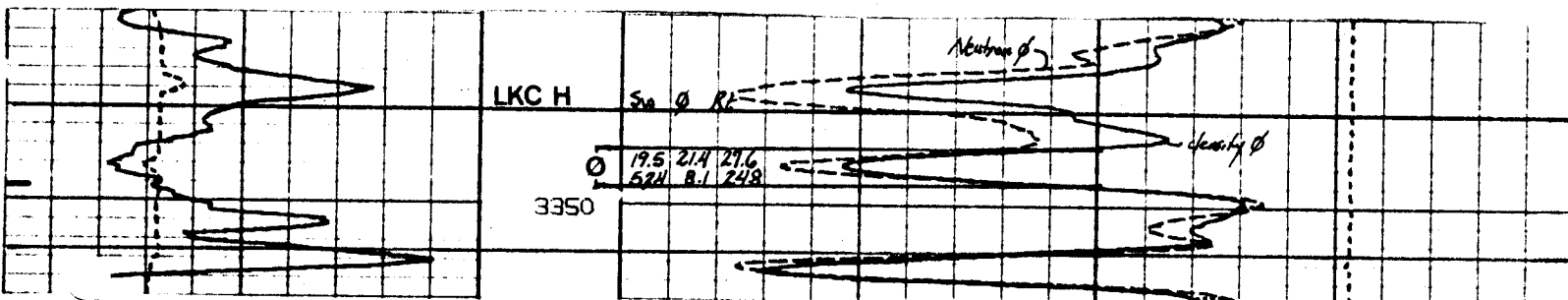
Limestone: Mostly tan - buff singular, fine crystalline, fine fossiliferous in part. Fair visible intercrystalline porosity. Scattered medium brown stain. Poor to no odor. One piece found with fair - good vug porosity with dark brown - black heavy partially dead stain.

Though this zone has reasonable porosity, induction log resistivities indicate it to be fairly wet, averaging 50%+ Sw. In addition the sample shows were only fair though it must be noted that the sample returns were spotty as the zone was not circulated.

Though the Iola was not individually tested, it was perforated and co-produced in the adjacent Twin Eagle Hammeke 2B well with both zones initially giving up 80 BOPD. These results indicate that the zone may have some economic value and should be tested prior to abandonment.

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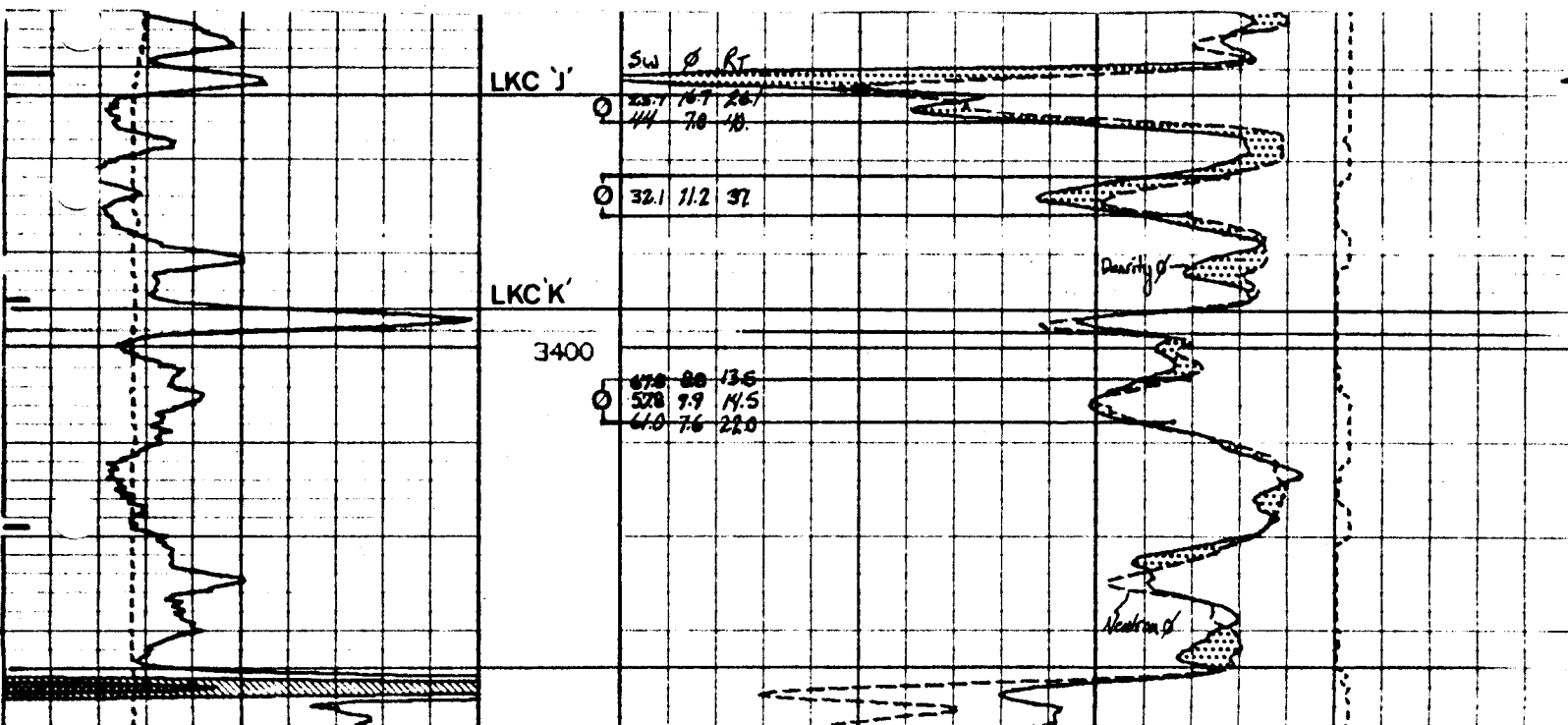
Kansas City Group Drum Limestone/ 'H' Zone, 3340 - 3355, (15')
 Circulated, not tested.



Limestone: Tan - cream, singular, fine - very finely crystalline matrix, fine to medium oölitic and oölcastic with very good visible oölcastic porosity. No odor, No stain, to very light stain, with bright yellow flourescence. Negative acid cut. (Poor sample returns over this zone). Only several pieces found representative of 'H' zone. One piece, very small oölcastic with dark brown - black heavy dead oil stain with slight cut.

Due to this zone's poor sample returns, the lack of oil shows may not be extremely critical and the log results do indicate low water as is normal for highly oölcastic zones. This zone should be considered as a secondary target prior to abandonment.

Kansas City Group Swope Limestone/ 'J' Zone, 3373 - 3396, (23')
 Circulated, Not tested.



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Limestone: Light gray - white, singular, very fine - finely crystalline matrix mostly oölitic with good scattered oölastic porosity and fair - good intercastic sucrosic porosity. Showing light brown saturation and very slight show free oil. Positive acid cut, medium straw yellow flourescence. No odor. Grades to Limestone; cream - white sing., very finely crystalline, fossiliferous and trace oölitic with depth. Mostly barren.

The upper porosity break in this zone had positive sample shows and calculates well on the log and should definately be tested prior to abandonment.

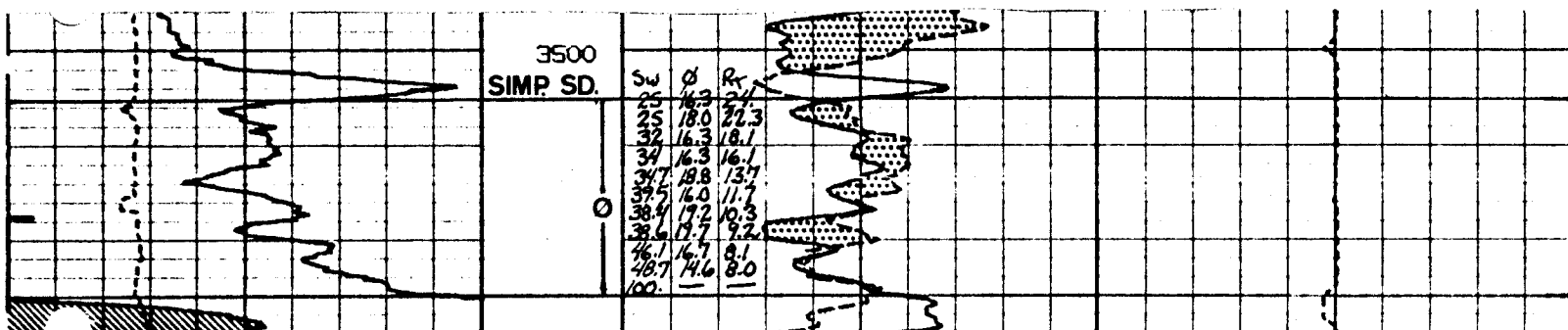
Kansas City Group Hertha Limestone/ 'K' ,3398 - 3434 (36')
 Not circulated/ Not tested.

- See preceeding log section for porosity curves. -

Limestone: White, singular, fine - very fine crystalline matrix, finely oölitic with good visible intercrystalline porosity and scattered small to medium vugs. Good light - medium brown stain with a trace of live oil in porosity. Slight positive cut and cut flouresence. No odor.

This zone developed much like the overlying 'J' with slightly better vugular porosity in sample and similar hydrocarbon shows. It may be questioned as to whether the samples described as 'K' zone may have been 'J' zone float, as the log values do not indicate this zone to have the quality of porosity observed in sample. However this zone should be considered prior to abandonment.

Simpson Group, Simpson Sand 3505 - 3526 (21')-Circulated and covered by DST #2.

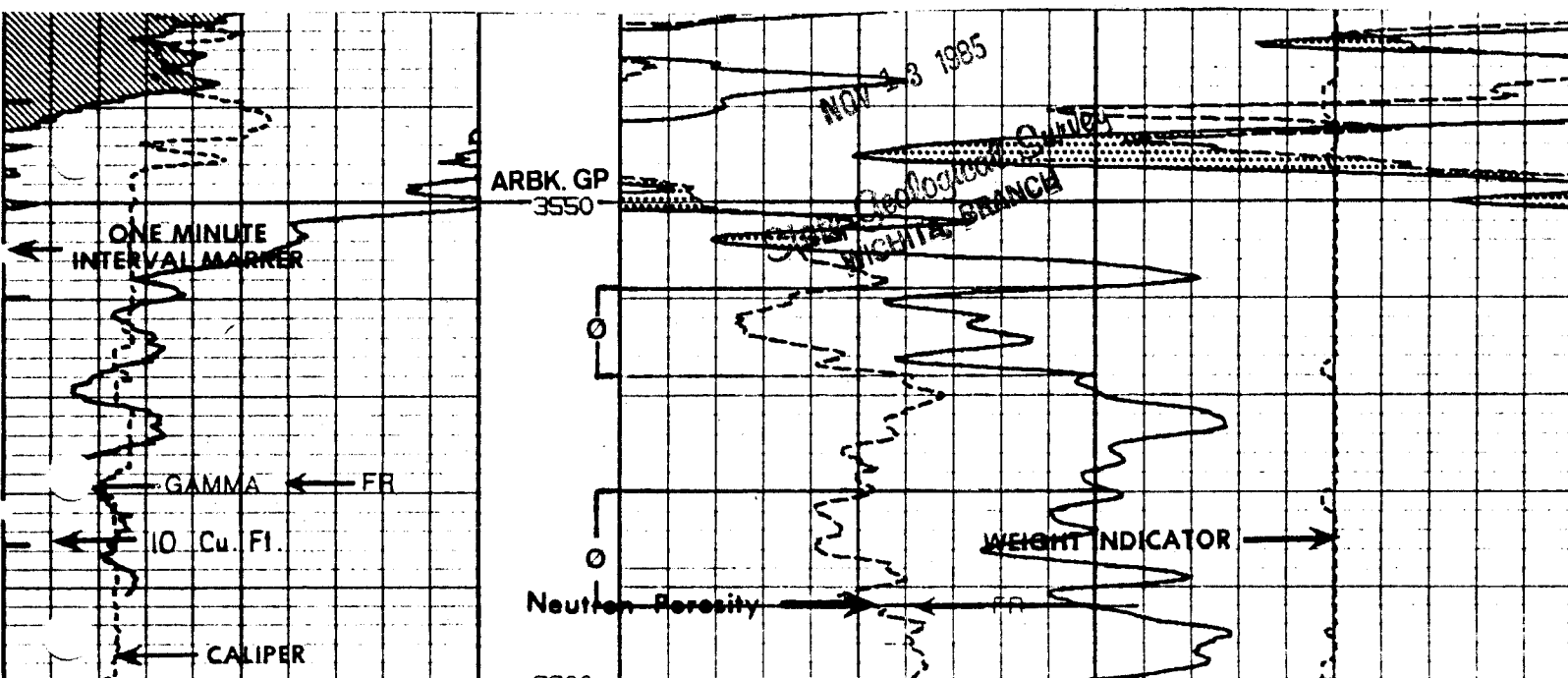


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Sandstone: Tan - light gray, singular, very fine grained, subrounded, moderate - well sorted, friable with light silica cement. Very good intergranular porosity. Good odor, uniform light brown saturation, show of gas, scum of oil on sample cup, no live/free oil in sample. Strong acid cut and bright cut fluorescence.

The Simpson Sand was quite well developed in the well with over 20 feet of friable sand encountered. The formation test over the zone was one of the best in the area giving excellent shut in and flow pressures. This zone should be a prolific producer and be completed after testing the Arbuckle below.

Arbuckle Group, Arbuckle Dolomite 3550 - TD-Circulated and covered by DST #3.



Dolomite: Tan - light gray, singular, fine - medium crystalline with some euhedral development. Fair - good inter-crystalline porosity. Good odor, light - brown stain, some spotted. Bleeds medium brown oil and some gas in tray. Positive acid cut with strong acid cut fluorescence.

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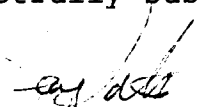
Dolomite: As above only finer crystalline, very sucrosic, some friable with good fine intercrystalline porosity. Light brown saturation. Bleeds oil in tray. Trace imbedded chert and pyrite. Grades to coarser dolomite with depth, mostly dense with secondary calcite and barren of shows.

The Arbuckle zone showed good porosity, both on the log and by sample. The porosity was fine however and indications of low permeability were seen on the test results and in sample examination. The best porosity zone (3360 - 68) unfortunately went untested as failed packer seats ended with two misruns. These results are not altogether different from the Twin Eagle #1 Hammeke to the north and west, which also had one misrun, one test with poor recovery and low pressures before finally recovering almost 1000 feet of oil on the third test over the same interval. Consideration of these factors along with the log calculations and samples, indicate that excellent potential exists in the Arbuckle and it should be tested thoroughly before moving to the Simpson pay.

Conclusions:

The #1 Shepherd West ran structurally very close to the predicted geologic datums and proved again that the area responds quite well to seismic prospecting techniques. After completion and evaluation of this test further exploration to the west is certainly warranted, as the structure encountered appears to be both continuous and higher in that direction.

Respectfully submitted,


Dean Pattisson
Consulting Geologist