

JOHNS AND MCKINLEY
CONSULTING ENGINEERS
Petroleum Engineers
WICHITA, KANSAS

Kansas
Ellis County
Stanolind #1 Wann
NW SW SE Sec. 12-15S-20W

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Stanolind #1 Wann, NW SW SE Section 12-15S-20W, Ellis County, was completed on July 28, 1935. Following is information regarding this well:

S U M M A R Y

	<u>Pipe Record</u>
1990' Derrick Floor Elevation	
1225' Top of Anhydrite	
2120' Approximate top of Ft. Riley	
2230' Base Florence	
2310' Approximate Base of Wreford	
2820' Tarkio?	16" OD at 79'
2860-2970' Emporia-Burlingame?	15" OD at 979'
2990' Howard-Topeka	
3298' Top of Lansing	
3538' Top Ref Basal Pennsylvanian Section	
3579' Top Chert-Conglomerate Section	
3616-3703' Sand "Gorham"	
3703-3716' Pre-Cambrian Granite	
3716' Total depth	

C O R E R E C O R D

3160-3190'	Lime hard (Rotary Samples)
3190-3196'	Lime soft. Very small show oil. Very little porosity.
3196-3203'	Cored. 3/7 recovery
3196-3201'	Lime grey, medium soft, very dense, very little porosity. Small show oil.
3201-3203'	Lime with numerous shale particles. No show oil.
3203-3210'	Lime hard (Rotary samples)
3210-3217'	Lime soft (Rotary samples) Very small show oil. Approximately the same amount as in the core from 3196-3201'.
3217-3237'	Cored. 6/20 recovery. Lime soft to very hard. Some black lime containing numerous fusulinas. No show oil.
3237-3238'	Drilled - Lime (Rotary samples)
3238-3253'	Cored. 4/15 recovery. Lime grey, hard.
3253-3254'	Drilled - lime (Rotary samples)
3254-3259'	Cored. 3 1/2/5 recovery.
3254-3258'	Lime white to grey, hard.
3257-3259'	Shale dark. Slightly calcareous.
3259-3275'	Cored. 15 plus/16 recovery.
3259-3267 1/2'	Shale dark grey to dark grey-green.
3267 1/2-3271'	Shale red with a few green shale particles. The lower six inches is a gradation zone between the red shale and the underlying green shale.
3271-3273'	Shale, bright green in color. The lower six inches is a gradational zone between the green shale and the underlying limestone.
3273-3275'	Lime white, dense, "Clay-like."
3275-3283'	Drilled - Lime same as from 3273-75' (Rotary samples).
3283-3300'	Cored - 15/17 recovery.
3283-3291'	Lime white to light grey "Clay-like." A few thin shale partings.
3291-3293'	Green shale.
3293-3298'	Red shale containing what appears to be fragments of lime.
3298-3300'	Lime grey. Show of oil.

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3300-3319½' Cored - 17/19½ recovery
 3300-3303' Lime hard, white, dense, grades into the underlying shale.
 3303-3306' Shale black.
 3306-3317' Lime grey. Very shaley and argillaceous. Fossils very numerous.
 3317-3319½' Lime 70%, shale dark grey 30%. Lime occurs in irregular nodules surrounded by wavy shale partings.

3319½-3320' Drilled - Lime. (Rotary samples)
 3320-3336' Cored - 10/16 recovery.
 3320-3322' Shale dark.
 3322-3324' Lime white to light grey, hard.
 3324-3326' Lime grey, very porous. Show of oil. The porous parts of the core were only partially saturated with oil.
 3326-3336' Lime dense, grey.

3336-3336½' Reamed.
 3336½-3356½' Cored - 15/20 recovery.
 3336½-3338' Shale dark.
 3338-3340' Shale very calcareous.
 3340-3350' Lime grey to tan in color. Very fossiliferous.
 3350-3353½' Lime grey with numerous shale partings. Very fossiliferous. Very small show oil.
 3353½-3356½' Lime light tan, very dense. With few thin shale partings.

3356½-3357' Reamed. Lime. (Rotary samples)
 3357-3377' Cored - 13/20 recovery.
 3357-3361½' Grey shale, very calcareous.
 3361½-3366½' Lime light tan, very dense.
 3366½-3369' Shale grey.
 3369-3377' Lime light grey to light tan. Very small show oil.

3377-3387' Cored - 7/10 recovery.
 3377-3380' Lime tan, very dense. Little black chert.
 3380-3384' Shale black.
 3384-3387' Lime tan, very dense.

3387-3407' Cored - 2/20 recovery. Lime white to light grey in color
 Very dense. Stylolites very abundant.

3407-3417' Cored - 7/10 recovery.
 3407-3408' Lime grey, very dense.
 3408-3410' Shale dark grey, very calcareous and fossiliferous.
 3410-3414' Lime tan in color.
 3414-3417' Lime grey with few argillaceous zones which are very fossiliferous.

3417-3437' Cored - 12/20 recovery.
 3417-3423' Lime tan. Fusulinas very abundant.
 3423-3429' Shale dark. Numerous fragments of fossil plants.
 3429-3431' Lime very argillaceous. Appears to be full of worm borings.
 3431-3437' Lime tan, dense.

3437-3457' Cored - 2/20 recovery. Lime grey, hard.
 3457-3471' Cored - 4/14 recovery. Lime grey to light tan.
 3471-3491' Cored - 18/20 recovery.
 3471-3475' Shale red. Few green shale partings. Green shale fragments cemented with red shale appears to be a Conglomerate at 3471-71½'.
 3475-3481' Lime 90%, red shale 10%. Interbedded. Very nodular. Lime is dense, light grey in color.
 3481-3486' Lime 95%, dark grey green shale 5%. Shale occurs as irregular particles in the lime. Lime is dense tan in color.
 3486-3491' Lime tan, and a few shale partings.

3491-3511' Cored - 4/20 recovery.
 3491-3491½' Lime tan.
 3491½-3508½' Shale grey, brittle, calcareous.
 3508½-3511' Lime light grey in color.

- 3511-3531' Cored - 3/20 recovery. Lime grey, tan in color, very dense. Little chert.
- 3531-3551' Cored - 20/20 recovery.
 3531-3534' Lime grey, dense, hard.
 3534-3538' Shale light to dark grey.
 3538-3543' Shale red with few lime nodules.
 3543-3551' Lime 95%, shale red 5%. Interbedded, nodular in appearance. Lime cream to light red in color.
- 3551-3566' Cored - 12/15 recovery. Red shale. Few pieces of green shale and very few pieces of cream to light red limestone.
- 3566-3567' Drilled - Red shale (Rotary cuttings)
 3567-3575' Cored - 8/8 recovery.
 3567-3570' Shale red.
 3570-3573½' Shale red, and limestone cream to light red in color.
 3573½-3575' Shale red.
- 3575-3583' Cored - 7/8 recovery.
 3575-3579' Red and green shale. Few lime nodules.
 3579-3583' Chert conglomerate. 75% chert, jasper-like in appearance. 25% lime cementing the chert into a hard formation. Small show oil coming from the cracks in and around the chert pebbles.
- 3583-3601' Cored - 10/18 recovery.
 3583-3587' Shale red with a few lime nodules.
 3587-3596' Shale gree.
 3596-3601' Red chert and lime. Small show oil occurring in the cracks in and around the chert. Not all of the cracks carry oil. Very small show oil.
- 3601-3606' Cored - 3/5 recovery. Lime and chert. Little red chert, but mostly grey chert. Lime grey, dense. Very small show oil coming from the cracks in and around the chert.
- 3606-3620½' Cored - 12½/14½ recovery.
 3606-3608' Lime dense, grey tan in color.
 3608-3611' Lime and grey shale, interbedded.
 3611-3615' Lime dense, grey, very hard with a few small shale partings.
 3615-3616' Shale grey-green. Few lime nodules. Very fossiliferous. Numerous shell fragments and conodonts.
 3616-3620½' Sand. Coarse to very fine sand, average medium to fine. Few pink grains. Approximately 20% clay shale. No porosity. Appears to have small trace dead black oil or tar. Grains sub-angular to curvilinear. Upper part is more shaley and contains large size sand grains.
- 3620½-3624½' Cored - 3½/4 recovery. Sand. Oil stained core, did not bleed but showed oil inside core. Turned black after few hours. Coarse to very fine sand. Average is medium to fine. Poorly sorted, curvilinear to sub-angular. Only trace of shale cement.
- 3624½-3620' Cored - 1/5 recovery.
 3624½-3625' Sand - same as above.
 3625-3625½' Sand - same as above but only medium stained with oil.
 3625½-3630' Sand (Rotary samples) Same as above.
- 3630-3630' 4" Core barrel jammed into the sand after circulating for Haliburton sand test. 4" recovered. Same as above.
- 3630' 4"-3643' 4" Cored - 12/13 recovery. Sand. Smell of oil but no free show. Sand same as above but less large grains and real fine grains. Better sorted. Medium to fine.
- 3643' 4"-3645' Drilled - Sand same as above (Rotary samples)
 3645-3665' Cored - 9/20 recovery.
 3645-3653' Sand - very slight show oil. Mostly oil odor but little trace of free oil. Sand average size is medium. Only few coarse grains. Common fine grains. Better sorted sand. Poorly cemented

- 3653-3655' Sand - Well saturated with oil. Average size is medium. More coarse size than above. Better rounded.
- 3655-3665' Core lost. (Rotary samples) Sand medium to coarse in size. Showing some oil.
- 3665-3673' Cored - 0/8 recovery. (Rotary samples) Sand medium to coarse.
- 3673-3683' Cored - 5/10 recovery. Sand average size is medium to coarse. Curvilinear to sub-rounded. Some granule size sand.
- 3683-3703' Cored - 0/20 recovery. (Rotary samples) Sand medium to very coarse. Grains well rounded, clear and poorly cemented. Sand is very coarse sand or gritstone. Poorly cemented, curvilinear to sub-rounded. Clear grains. Some of cement is fine sand.
- 3703-3716' Cored - 13/13 recovery.
- 3703-3711' Granite weathered. Most of the material has a true granitic texture. A small amount from 3708-09' is either a grey gneiss containing large phenocrysts or it is a porphyritic gneissose granite. The latter is more probable as it appears to grade both upward and downward into true granite texture, although it is possible that that part of the core is a Xenolith.
- 3711-3716' Red granite, very hard, not weathered. The minerals in this granite appear to be the same as in the weathered grey-granite above and the contact between the two appears to be gradational. Quartz, pink orthoclase? and albite, biotite, and one dark to green ferromagnesian are abundant in the granite.

SHOWS OF OIL

- 3190-3201' - Very small show oil.
- 3210-3218' - Very small show oil.
- 3298-3300' - Very small show oil.
- 3324-3326' - Best show oil encountered in the Oswald. Tested with the Haliburton test for 20 minutes. Showed a trace of salt water
- 3369-3377' - Very small show oil.
- 3579-3583' - Very small show oil.
- 3596-3606' - Very small show oil.
- 3620 $\frac{1}{2}$ -3625' - Good show oil. Tested by Haliburton method 20 minutes 3622-3630'4". Filled up 1000 feet of 4 inch drill pipe and 180 feet of 6 inch. 20 barrels of salt water in 20 minutes and not more than a very slight rainbow show of oil. This may have been due to the oil in the rotary equipment.
- 3653-3665' - Good show oil. Tested by Haliburton method 10 minutes 3645-65'. Filled up 1000 feet of 4 inch and 480 feet of 6 inch drill pipe. Salt water. 31 barrels water in 10 minutes and not more than a very slight rainbow show of oil and this may have been due to the oil in the rotary equipment.

R E M A R K S

The most favorable show of oil in the Lansing "Oswald" was from 3324-26'.

The sand encountered at 3616' was shaley and non-porous from 3616-20'. The core from 3620-24 $\frac{1}{2}$ ' carried a good show. This was the best show in the sand, but was not a bleeding core. Because of the poor results of Haliburton tests in Kansas, an additional 5 $\frac{1}{2}$ ' was cored in order to have more of the sand body open to test. The result of this test was 20 barrels of salt water in 20 minutes and the very slight rainbow show was not more than could be expected from the rotary equipment. This showed that if there was any pay in this sand, it would have to be very thin, as we tested the top 10 feet of the porous sand and water directly beneath.