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OIL AND GAS IN OKLAHOMA

GEOLOGY OF KINGFISHER AND CANADIAN COUNTIES

By
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FOREWORD

In 1917 the Oklahoma Geological Survey issued Bulletin 19, Part II, entitled "Petroleum and Natural Gas in Oklahoma." This volume was so popular that the supply was soon exhausted, and for several years copies have not been obtainable.

The present Director has seen the need of a revision of this bulletin. On account of the lack of appropriations he has not been able to employ sufficient help to compile the data, and has called on some twenty representative geologists throughout the State to aid in the preparation of reports on separate counties. These gentlemen, all busy men, have contributed freely of their time and information in the preparation of these reports.

It will be understood that the facts as set forth in the various reports represent the observation and opinion of the different men. The Oklahoma Geological Survey has every confidence in the judgment of the various authors, but at the same time the Survey does not stand sponsor for all statements made or for all conclusions drawn. Reports of this kind, are at best, progress reports, representing the best information obtainable as of the date issued, and doubtless new data will cause many changes in our present ideas.

This report on Canadian and Kingfisher counties represents the new data available through the drilling of several deep wells in this area.

CHAS. N. GOULD,
Director

July, 1927.

OIL AND GAS IN OKLAHOMA

Kingfisher and Canadian Counties

By

W. C. Kite

LOCATION

Kingfisher and Canadian counties lie just to the northwest of the center of the State. Kingfisher extends from T. 15 N. to T. 19 N., inclusive and from R. 5 W. to R. 9 W., inclusive. Its total area covers 25 townships and comprises 900 square miles. Canadian extends from T. 10 N. to T. 14 N., inclusive and from R. 5 W. to R. 10 W., inclusive. Its total area covers 24 entire townships and parts of four others, comprising approximately 927 square miles.

ACKNOWLEDGMENTS

The writer wishes to express thanks and appreciation to Glenn C. Clark, Chas. N. Gould, R. L. Clifton, D. W. Ohern, the Bu-Vi-Bar Petroleum Corporation and the T. B. Slick Company, for aid and suggestions on this paper.

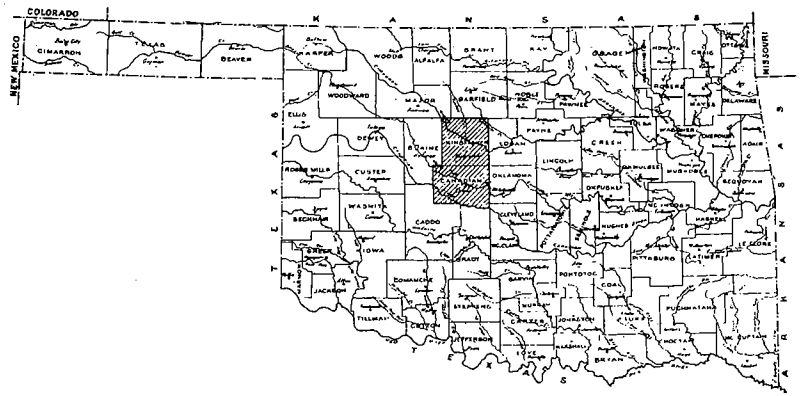


Figure 1. Index map of Oklahoma showing location of Kingfisher and Canadian Counties.

TOPOGRAPHY AND DRAINAGE

The topography of most of the area is that of typical gently rolling western plains. The gypsum hills occupy the northwestern part of Canadian County and their topography is fairly rough, presenting many dissected escarpments peculiar to the gypsum hills region of western Oklahoma.

The Cimarron River crosses Kingfisher County in a northwest southeast direction and with its tributaries drains the entire county. The lowest elevation in Kingfisher County, 960 feet, is in the bed of Cimarron River on the eastern border of the county and the highest elevation, 1,440 feet, is in the southwestern part of the county.

Most of Canadian County is drained by the North and South Canadian rivers with their tributaries. The northeastern part of the county is drained by the tributaries of Cimarron River.

GEOLOGY

SURFACE FORMATIONS

Surface formations in the counties are Permian, Tertiary (?), Quaternary (?) terrace deposits and dunes, and river alluvium. The valleys of the North and South Canadian and Cimarron rivers are chiefly alluvium. Bordering the alluvium deposits of the Cimarron River along its northern border is a wide band of Quaternary (?) terrace and dune sand deposits. Tertiary (?) sands and gravel cap some of the hills in western Canadian County.

The formations exposed in the eastern part of Kingfisher and northeastern Canadian counties belong to the lower Enid formation and are mostly soft red shales. The lower Enid exposed in the northeastern part of Kingfisher County correlates with Clark and Cooper's[1] Hennessey formation of Garfield County. The southwestern part of Kingfisher County and most of the eastern half of Canadian County is composed of the upper Enid formation, which is mostly red shales and lenticular sands. Farther south, the upper Enid is sub-divided into the Chickasha formation and the Duncan sandstone. The latter has been traced across Canadian and Kingfisher counties to connect with Clark and Cooper's Duncan formation of western Garfield County. The Chickasha and Duncan are not readily distinguished in the area here discussed.

The Blaine formation outcrops in a bed three to five miles wide and crosses the extreme southwestern corner of Kingfisher County and extends to the southeast across Canadian County, and consists of gypsum, red clay and shale. Its gypsum beds in northwestern Canadian

1. Clark, G. C., and Cooper, C. L., Geology of Kay, Grant, Garfield and Noble counties: Oklahoma Geol. Survey, Bull. 40-H, 1927.

County are classified by Gould as Shimer, Medicine Lodge and Ferguson, members; the Ferguson, which is the lowest of the three, being the thickest and most conspicuous. These beds thin to the southeast with the escarpments fading into flat plains so that they often become difficult to trace.

Just above the Blaine is the Dog Creek formation, consisting of red clay and shales. It crosses the North Canadian River at Fort Reno. Its thickness is hard to estimate in this territory but is probably less than 300 feet.

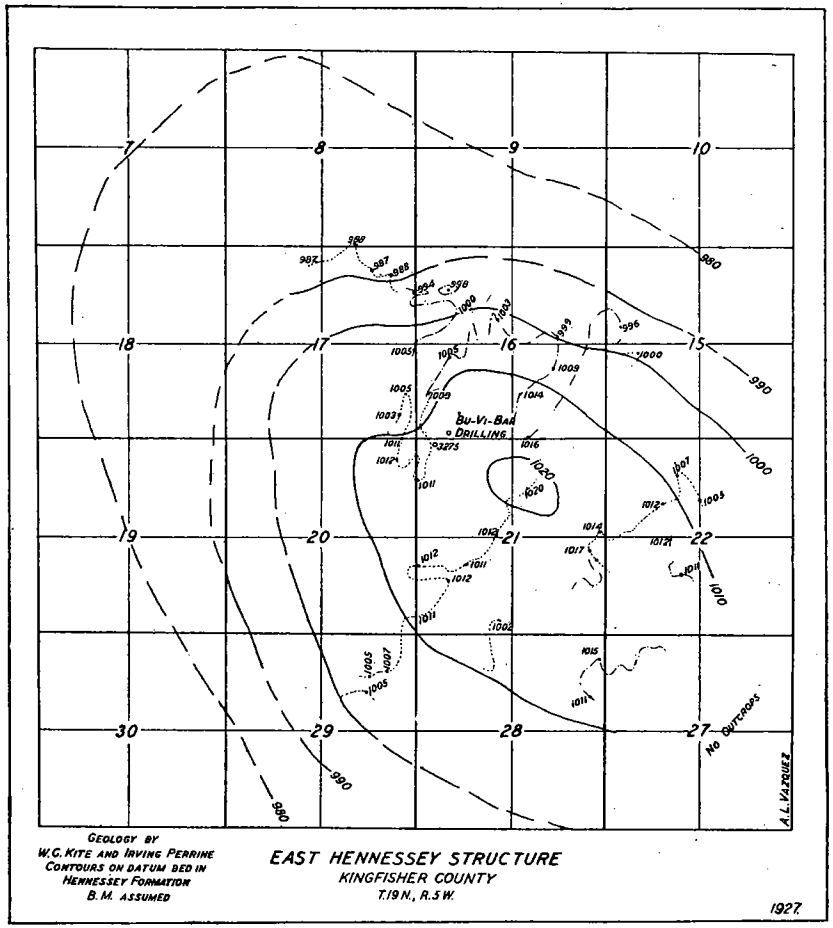


Figure 2. East Hennessey Structure.

The lower Whitehorse sandstone outcrops in about six townships in southwestern Canadian County. It is just above the Dog Creek shales and apparently lies unconformably on them. The Whitehorse is made up of fine red, frequently highly cross-bedded sandstones.

SUBSURFACE FORMATIONS

Various geologists in interpreting subsurface stratigraphy from studying the log of the Bu-Vi-Bar well in sec. 16, T. 19 N., R. 5 W., northeastern Kingfisher County, place the base of the Garber formation at about 840 feet, the base of the Permian at 2,400 feet and estimate that the Layton sand will be found at around 4,950 feet, with the Wilcox probably below 6,000 feet.

STRUCTURE

The general dip of the surface formations in Kingfisher and Canadian counties is about 15 to 20 feet per mile to the southwest and toward the axis of the Anadarko basin. There are possibly variations in this general dip but little evidence is found at the surface of anticlinal folding, due to the presence of much sand and shales in the Enid and Blaine formations. However, a few calcareous beds do occur in the lower Enid formation in the northeastern part of Kingfisher County, by means of which local structural conditions can be partly determined. A small plunging anticline occurs in secs. 16, 17, 20 and 21, T. 19 N., R. 5 W. The high point on this fold is in section 21, just to the southeast of the Bu-Vi-Bar well.

Meager well log information suggests thickening of the upper formations to the southwest so that the rate of the dip increases with depth. The base of the red beds probably dips more than twice as fast as the surface formations. The Pennsylvanian formations probably thin toward the northwest across the area as they do in the region to the east and north of the two counties.

In the Marland-Garber test in sec. 19, T. 23 N., R. 3 W., the interval from the top of the Layton to the top of the Wilcox is 1,050 feet, while the Roxana-Brunken well in sec. 29, T. 23 N., R. 4 W., this interval is 1,700 feet. With these changes in mind it is difficult to estimate what may occur below the Layton.

OIL AND GAS DEVELOPMENT

In 1922 the Fensland Oil Company drilled a test in the NW. cor sec. 21, T. 19 N., R. 5 W., to a total depth of 3,275 feet and encountered only small showings of oil and gas. The Bu-Vi-Bar Petroleum Corporation is now drilling around 4,750 feet in section 16, just to the northeast of the old Fensland test. The following is a list of the wells drilled in the two counties, as reported to the Corporation Commission:

Wells drilled in Kingfisher and Canadian Counties

Location	Depth (feet)	Company
NW.¼ sec. 21, T. 19 N., R. 5 W.	3,275	Fensland Oil Co.
SW.¼ SW.¼ NW.¼ sec. 12 T. 18 N., R. 5 W.	4,502	Peerless Oil & Gas Co.
SW.¼ NE.¼ SW.¼ sec. 31, T. 15 N., R. 7 W.	3,012	F. & N. Oil Co.
SE. cor. NW.¼ sec. 7, T. 17 N., R. 8 W.	3,471	Plover Drilling Co.
Cen. NW.¼ SE.¼ sec. 1, T. 18 N., R. 8 W.	2,400	
NW. cor. NE.¼ sec. 13, T. 11 N., R. 10 W.	2,850	O. R. Howard
SE. cor. SE.¼ sec. 25, T. 17 N., R. 5 W.	2,317	Carson-Malernee et al
NW.¼ sec. 12, T. 11 N., R. 6 W.	3,073	Yukon Co-operative Co.
SE.¼ sec. 6, T. 13 N., R. 5 W.	2,270	Deer Creek Oil & Gas Co.
NW. cor. NW.¼ sec. 13, T. 14 N., R. 10 W.	2,400	Gladys Bell Oil & Gas Co.
NE. cor. sec. 34, T. 13 N., R. 9 W.	3,619	T. E. Revels

Log of Hannum-Franks-Slick-Pazoureck No. 1.

SW.¼ NE.¼ sec. 29 T. 13 N., R. 5 W., Canadian County, Oklahoma. Elevation 1,280 feet. Drilling commenced June 30, 1926. Contract depth 4,000 feet reached 11-17-26. Still drilling by T. B. Slick Nov. 20, 26.

Formation	Top	Bottom
Surface soil	0	50
Sand	20	100
Red bed	50	20
Sand	100	110
Red bed	110	175
Sand	175	200
Red bed	200	565
Hard shale and shells	565	700
No record	700	831
Hard shale and shells	831	941
Broken lime	941	951
Hard shale	951	1091
Sandy shale	1091	1151
Broken lime shells and hard sandy shale	1151	1191
Broken lime	1191	1200
Hard shale	1200	1246
Red bed	1246	1350
Lime	1350	1352
Red bed	1352	1400
Hard shale	1400	1450
Red bed	1450	1507
Red bed and boulders	1507	1617
Blue shale and beds	1617	1667
Blue shale and boulders	1667	1742
Blue shale	1742	1775
Lime	1775	1777
Blue shale and boulders	1777	1814
Hard sand	1814	1817
Gumbo strkd. with brown shale	1817	1835
Gray gumbo sandy	1835	1855
Hard sand	1855	1860
Brown shale	1860	1880
Shale and shells	1880	1890
Sandy lime	1890	1896
Gumbo	1896	1904
Slate and lime, broken	1904	1920
Sticky shale	1920	1930
Lime	1930	1932
Slate and hard shale	1932	1940
White chalky lime	1940	1945
Shale	1945	1960
Lime and slate, broken	1960	1985
Lime	1985	1995
Brown shale	1995	2001
Lime, sandy	2001	2003
Broken lime	2003	2013
Sticky shale	2013	2028
Broken lime	2028	2038
Shale and lime	2038	2045
Lime	2043	2045
Hard shale and lime shell	2045	2065
Shale	2065	2180
Broken lime	2180	2190
Hard shale and slate	2190	2220
Hard shale	2220	2237
Lime	2237	2238
Shale	2238	2245
Lime	2245	2246
Shale and gumbo	2246	2340
Sand and slate	2340	2347
Tough shale	2347	2357
Sticky shale	2357	2372
Broken lime	2372	2382
Hard shale and shells	2382	2407
Shale	2407	2422
Tough shale	2422	2434
Sand, salt water	2434	2435
Hard sandy lime	2435	2438
Hard sand	2438	2450
Shale	2450	2460
Lime	2460	2475
Sticky shale	2475	2510
Broken lime	2510	2515
Sticky shale	2515	2540
Sticky shale, red	2540	2575
Lime shell	2575	2577

Formation	Top	Bottom
Tough shale	2577	2600
Hard shale	2600	2609
Sticky shale	2609	2620
Broken lime	2620	2630
Sandy lime	2630	2644
Sticky shale	2644	2660
Gumbo	2660	2695
Shale, blue and brown	2695	2730
Lime, gray	2730	2732
Shale	2732	2755
Soft brown sand	2755	2762
Sticky shale	2762	2800
Broken lime	2800	2810
Hard shale	2810	2830
Sticky shale	2830	2833
Sandy lime —Show some oil	2833	2840
Broken lime	2840	2850
Hard sandy lime	2850	2857
Sticky shale	2857	2882
Hard shale and shells	2882	2902
Sticky shale and shells	2902	2922
Lime	2922	2942
Hard lime	2942	2952
Shale and slate broken	2952	2974
Sticky shale	2974	2994
Shale	2994	3030
Tough shale	3030	3038
Sand, hard	3038	3046
Tough shale	3046	3050
Broken lime	3050	3060
Lime	3060	3070
Slate and lime, broken	3070	3075
Lime	3075	3086
Shale	3086	3106
Lime	3106	3126
Hard sand	3126	3134
Broken lime	3134	3136
Gumbo	3136	3149
Hard gray lime	3149	3154
Gumbo	3154	3160
Blue slate	3160	3168
Slate	3168	3178
Hard shale	3178	3188
Broken slate and shale	3188	3196
Lime	3196	3198
Lime, hard, gray Gumbo	3198	3203
Hard shale and lime	3203	3210
	3210	3226
Hard slate	3226	3238
Lime	3238	3243
Hard slate	3243	3251
Broken lime	3251	3261
Tough gumbo	3261	3291
Hard shale	3291	3318
Lime	3318	3325
Slate	3325	3327
Hard gray sand	3327	3334
Hard sandy lime	3334	3344
Hard sand	3344	3355
Slate and sand	3355	3375
Hard gray sand	3375	3385
Slate and sand	3385	3415
Hard sand	3415	3417
Tough shale	3417	3430
Shale and slate	3430	3464
Hard slate	3464	3481
Lime	3481	3492
Sand and hard shale, broken	3492	3502
Hard blue shale	3502	3514
Hard black slate	3514	3525
Lime	3525	3549
Sand water	3549	3569
Blue shale	3569	3573
Red Rock	3573	3577
Hard shale	3577	3593
Sandy shale	3593	3610
Sticky shale	3610	3622
Hard shale	3622	3649
Water sand and shale	3649	3654
Shale	3654	3668
Hard shale	3668	3701
Water sand and shale	3701	3704
Hard shale	3704	3720
Shale	3720	3735
Lime	3735	3741

Standard Tools

Black shale	3746	3750
Shale	3750	3757
White lime	3757	3761
Sand	3761	3767
Shale	3767	3787
Sand	3787	3803
Shale	3803	3821
Sand	3821	3828
Shale	3828	3888
Hard white lime	3888	3935
Shale	3935	3942
Lime	3942	3952
Water sand with water	3952	3959
Water sand	3959	3967
Sand	3967	3970
Sandy shale	3970	3973
Shale and sand	3973	3978
Sand water	3978	3980
Shale	3980	3982
Lime, black	3982	3984
Sand	3984	3986
Shale	3986	3990
Shale, blue	3990	4000
Blue shale	4000	4010
Sand	4010	4013
Sandy shale	4013	4015
Sand	4015	4020
Blue shale	4020	4077
Brown shale	4077	4081
Blue shale	4081	4095
Sandy lime	4095	4105
Blue shale	4105	4170
Sandy lime	4170	4183
Blue shale	4183	4200
Sandy shale	4200	4210
Sand	4210	4215
Lime	4215	4220
Sand	4220	4225
Blue shale	4225	4245
Sandy shale	4245	4247
Sand, water	4247	4271
Blue shale	4271	4285
Lime	4285	4288
Blue shale	4288	4313
Shale	4313	4318
Broken lime	4318	4338
Water sand	4338	4372

Formation	Top	Bottom
Shale, sand	4372	4375
Sand	4375	4393
Sand	4393	4412
Shale	4412	4420
Shale	4420	4431
Sandy lime	4431	4439
Sand	4439	4445
Shale	4445	4452
Lime	4452	4454
Correction		
Total depth of hole		4468
Black shale	4468	4470
Lime	4470	4472
B. shale	4472	4476
Red rock	4476	4498
Green sand	4498	4505
Gray sand	4505	4515
Dark shale	4515	4533
Water sand	4533	4537

Log of Fensland Oil Co.'s Henry No. 1.

NW.¼ NW.¼ NW.¼ sec. 21 T. 19 N., R. 5 W., Kingfisher County, Oklahoma. Drilling commenced Feb. 1, 1922. Completed July 15, 1922.

Formation	Top	Bottom
Shale, red	0	40
Red shale	40	130
Red rock	130	250
Red shale	250	270
Wtr. sand	270	295
Shale, red	295	310
Red rock	310	355
Red shale	355	430
Wtr. sand	430	455
Red rock	455	470
Coarse gravel, wtr.	470	480
Red rock	480	615
Sand, wtr.	615	620
Pink rock	620	630
Red rock	630	690
Red shale	690	790
Sand, no wtr.	790	830
Blue shale	830	840
White slate	840	1185
White lime	1185	1200
White shale	1200	1230
Gray slate	1230	1300
Blue slate	1300	1320
White hd. lime	1320	1330
Broken lime shells	1330	1345
Blue slate	1345	1365
Broken shale	1365	1375
Broken lime	1375	1460
White shale	1460	1475
Broken lime	1475	1535
Gray slate	1535	1610
Red rock	1610	1660
White slate	1660	1665
Lime	1665	1685
Red rock	1685	1765
Sand, wtr.	1765	1770
Sand	1770	1775
Slate	1775	1785
White slate	1785	1835
Hd. white lime	1835	1845
White slate	1845	1860
Red rock	1860	1910
Sand, water, show gas	1910	1915
Gravel, wtr. red	1915	1925
Sand, wtr.	1925	1935
Blue slate	1935	1965
Gray lime	1965	1985
Brown shale	1985	2010
Red rock	2010	2135
Gray lime	2135	2155
White shale	2155	2175
Red rock	2175	2200
Sand, wtr. show gas	2200	2225
Red rock	2225	2242
Gray lime	2242	2247
White slate	2247	2280
Red rock	2280	2350
White slate	2350	2360
Red rock	2360	2368
Lime	2368	2390
Slate	2390	2395
Black sandy lime	2395	2400
White slate	2400	2410
Black sand	2410	2415
White slate	2415	2420
White lime	2420	2440
Black slate	2440	2445
White lime	2445	2460
Blue slate	2460	2500
White lime	2500	2510
Slate	2510	2625
Lime	2625	2635
Red rock	2635	2695
White slate	2695	2700
Gray lime	2700	2705
White slate	2705	2720
Brown slate	2720	2730
White slate	2730	2820
White lime	2820	2825
Red rock	2825	2835
Gravel, wtr, red	2835	2840
Sand, wtr.	2840	2850
White slate	2850	2855
Sandy lime, black	2855	2860
White slate	2860	2870
Gray lime	2870	2875
Blue slate	2875	2885
Red rock	2885	2890
Dry sand	2890	2910
Blue slate	2910	2918
Black slate, hd.	2918	2938
White sandy lime	2938	2945
Hd. rock	2945	2950
Broken gravel	2950	2960
Slate	2960	2970
Lime	2970	2980
Black slate	2980	3000
Broken lime	3000	3020
Red rock	3020	3050
Broken lime shell	3050	3065
White lime	3065	3085
Slate	3085	3100
Broken lime shells	3100	3115
Gray slate	3115	3150
Black slate	3150	3170
Red rock	3170	3210
Blue slate	3210	3240
Sandy lime	3240	3245
Shale	3245	3250
Sandy lime	3250	3270

Formation	Top	Bottom
Blue shale	3270	3275
T. D.**		
Lime and slate	3275	3280
Lime	3280	3300
Broken lime	3300	3305
Hard shale	3305	3320
Sand and shale	3320	3325
Water sand	3325	3335
Hard shale	3335	3345
Slate	3345	3355
Sand	3355	3365
Blue shale	3365	3375
Lime	3375	3385
White sand	3385	3390
Sandy lime	3390	3395
Hard lime	3395	3410
Lime	3410	3415
Hard shale	3415	3430
Slate and lime shells	3430	3450
Broken lime and slate	3450	3470
Broken lime	3470	3475
Sand	3475	3487
Slate	3487	3500
Hard sand	3500	3530
Slate	3530	3540
Blue shale	3540	3555
Lime	3555	3565
Hard sandy lime	3565	3575
Lime, hard	3575	3585
Brown slate and lime shells	3585	3595
Broken lime	3595	3600
Shale and slate	3600	3610
Hard sandy lime	3610	3620
Lime and hard sand	3620	3635
Hard sand	3635	3655
Hard shale, sandy	3655	3665
Slate and shale	3665	3685
Hard shale	3685	3700
Shale	3700	3710
Hard sand	3710	3720
Sharp sand	3720	3725
Hard sand	3725	3730
Slate and shale	3730	3740
Slate	3740	3760
Red and brown shale with lime shells	3760	3770
Slate	3770	3775
Sand	3775	3785
Hard shale	3785	3800
Slate	3800	3805
Sandy lime	3805	3810
Black slate	3810	3815
Shale	3815	3825
Sand	3825	3860
Sandy lime	3860	3870
Sand	3870	3880
Hard shale	3880	3885
Shale	3885	3896
Lime	3890	3905
Hard shale and shells, sandy	3905	3925
Lime	3925	3930
Red shale	3930	3935
Shale and lime shells	3935	3945
Lime	3945	3952
Sand	3952	3980
Sandy lime	3980	4005
Broken lime	4005	4015
Broken sand and red shale	4015	4025
Slate and shale	4025	4045
Sand	4045	4061
Shale, blue	4061	4065
Red rock	4065	4072
Blue shale	4072	4075
Lime, blue	4075	4077
Blue shale	4077	4085
Red rock	4085	4094
Blue shale	4094	4114
White lime	4114	4120
Blue shale	4120	4154
Sandy shale	4154	4160
Blue shale	4160	4170
Sandy shale	4170	4174
Sand	4174	4180
Blue shale	4180	4190
Sandy shale	4190	4218
Black shale	4218	4228
White shale	4228	4233
Blue shale	4233	4239
Sand	4239	4245
White shale	4245	4250
Blue shale	4250	4253
White shale	4253	4258
Blue shale	4258	4260
White shale	4260	4265
Blue shale	4265	4269
White shale	4269	4271
Shale	4271	4276
White shale	4276	4278
Blue shale	4278	4282
Blue lime	4282	4284
Blue shale	4284	4304
Blue shale	4304	4339
Sandy shale	4339	4368
Sandy lime	4368	4370
Lime	4370	4374
Blue shale	4374	4380
Water sand	4380	4405
Lime	4405	4410
Blue shale	4410	4430
Broken sand	4430	4437
Blue shale	4437	4444
White water sand	4444	4473
Hard sand	4473	4479
Sand	4479	4484
Blue shale	4484	4501
Sand, hard	4501	4505
Blue shale	4505	4514
Lime	4514	4516
Blue shale	4516	4530
Sand	4530	4542
White water sand	4542	4556
Sand	4556	4565
Blue shale	4565	4572
Blue slate	4572	4595
Blue shale	4595	4609
Blue shale	4609	4691
Lime	4691	4696
Blue shale	4696	4702
Lime	4702	4703

Depth Feb. 25, 1927.

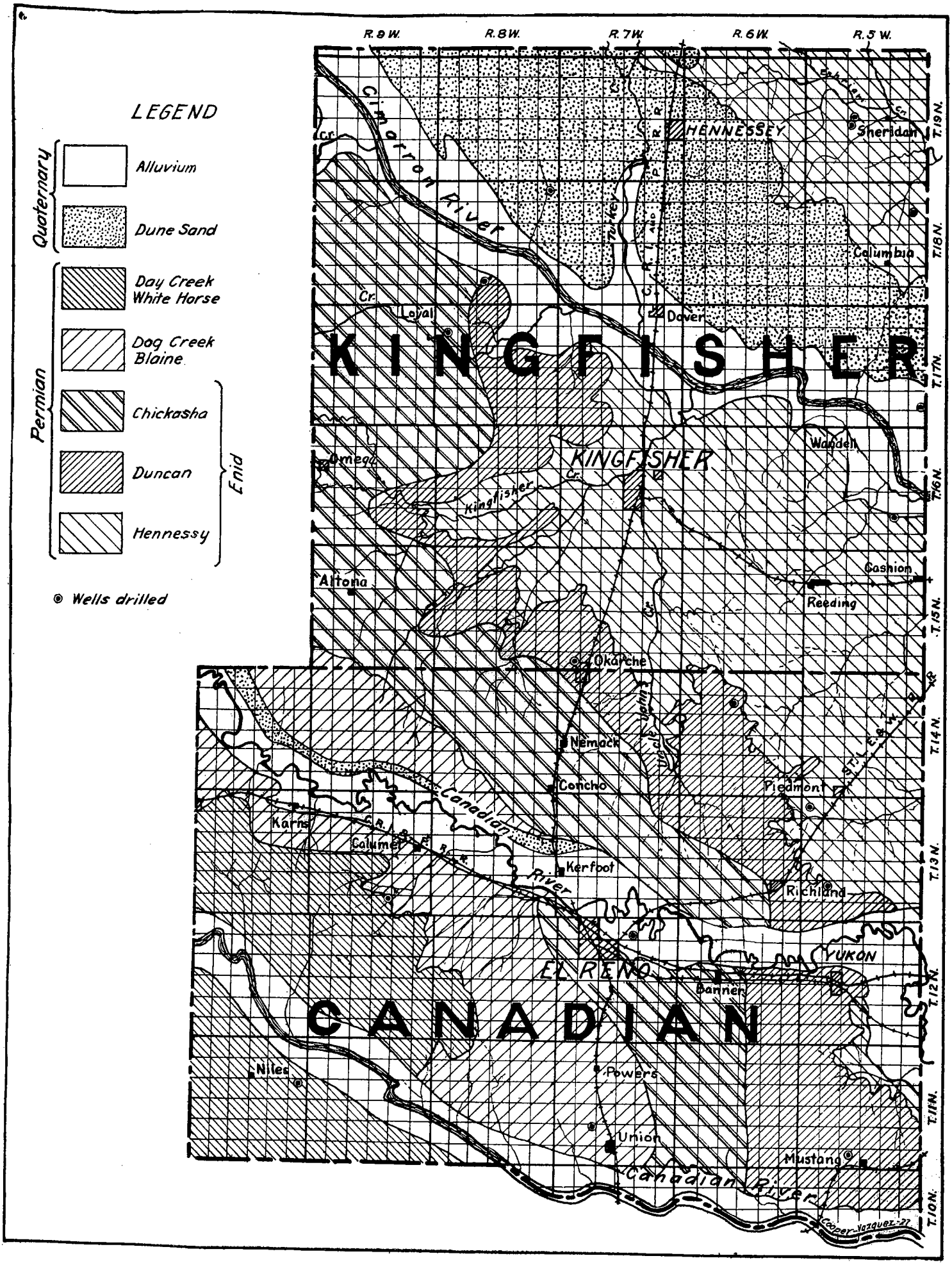
**The first 3275 feet shown above is the Fensland log, which was drilled with standard tools. The balance of the log from 3275 feet to 4703 feet is log of the Bu-Vi-Bar Petroleum Corporation's drilling Well No. 1 School Land, in the SW.¼ SW.¼ sec. 16, T. 19 N., R. 5 W., Kingfisher County, Oklahoma.

CONCLUSIONS

So few wells have been drilled to the deeper formations in this area that it is impossible at this time to determine the presence of any pronounced subsurface folding. With the normal dip of the formations to the southwest, the Wilcox sand would occur too deep for drilling under present methods. However, with the trend of folding in Kay, Noble and Garfield counties being generally northeast-southwest and with the arching of the deeper formations being very much more pronounced than the surface folding, as in the case of the Garber field where the Wilcox sand is arched more than 1,700 feet, it is possible that some extension of that line of folding will be found in the region here discussed and that folding in the Wilcox sand may be high enough to bring it within reach of the drill.

The few well logs obtainable in northeastern Canadian county seem to have less red beds than do some of the wells farther north, which suggests that the line of folding here mentioned may come into the territory from the northeast near the northeastern corner of Kingfisher County. However, the logs in that vicinity show considerable thickness of shale which may be red, but logged by driilers merely as "shale".

Any well-defined surface fold is a good possibility for oil production in the shallow formations of the lower Permian and Pennsylvanian. Producing horizons underlie the area and it is very likely that sufficient folding to trap oil is present. Therefore, it is reasonable to expect oil to be produced in these counties.


LEGEND
Quaternary
Alluvium
Dune Sand
Permian
Day Creek
White Horse
Dog Creek
Blaine
Chickasha
Duncan
Hennessy
Enid
Wells drilled
R. 9 W.
R. 8 W.
R. 7 W.
R. 6 W.
R. 5 W.
T. 19 N.
T. 18 N.
T. 17 N.
T. 16 N.
T. 15 N.
T. 14 N.
T. 13 N.
T. 12 N.
T. 11 N.
T. 10 N.
KINGFISHER
CANADIAN
Cimarron River
HENNESSEY
Sheridan
Columbia
Loyal
Dover
Omega
KINGFISHER
Kingfisher Cr.
Wanden
Cashion
Reading
Altona
Okarche
Dover
Nemack
Concho
Piedmont
Karns
Calumet
Canadian River
Kerfoot
Richland
YUKON
EL RENO
Banner
Niles
Powers
Union
Mustang
Canadian River
Cooper-Vazquez-27