

A Geological Report On The
Abandoned Wilder Oil Field
In Northwest Indiana

by Jeff Lauman

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Advisor
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Abstract

The Wilder Oil Field in Southwest LaPorte County in Indiana produced some oil when it was initially drilled in the early part of this century. The oil that was found was located under the Antrim Shale and in the first few feet of the limestone of the Traverse Formation. The field shows no potential for oil or gas production.

Introduction

This report examines an old oil field in extreme Southwest LaPorte County in Indiana called the Wilder Field. This field, also called the San Pierre Oil Field, was explored in 1902-1903, 1914, and again in the 1930's (See figures 1 & 2). Unlike the Trenton Oil Field in East Central Indiana (Figure 4), the Wilder Field produced oil only 100 to 300 feet below the surface rather than in excess of 1000 feet. There were no official records kept during the time period when the wells were drilled. The best records are: (1) The Report of the State Geologist in 1914 (Appendix A) and (2) a location map of the wells and a newspaper clipping that was found in the files of the State Oil & Gas Department in the State Office Building in Indianapolis (Figure 2). Therefore in order to make a study of the Wilder Field, all of the well data from the surrounding area was collected (Appendix C & D) and a seismic test was conducted on the location of the old field.

Geology

This region of northwestern Indiana is geologically dominated by the northwestern part of a large bedrock arch under Jasper County that extends southeastward through Indiana called the Cincinnati Arch (Figure 3). The section under Jasper County has been called in the past the Kankakee Arch. However, the current literature tends to call it the Cincinnati Arch. An arch is composed

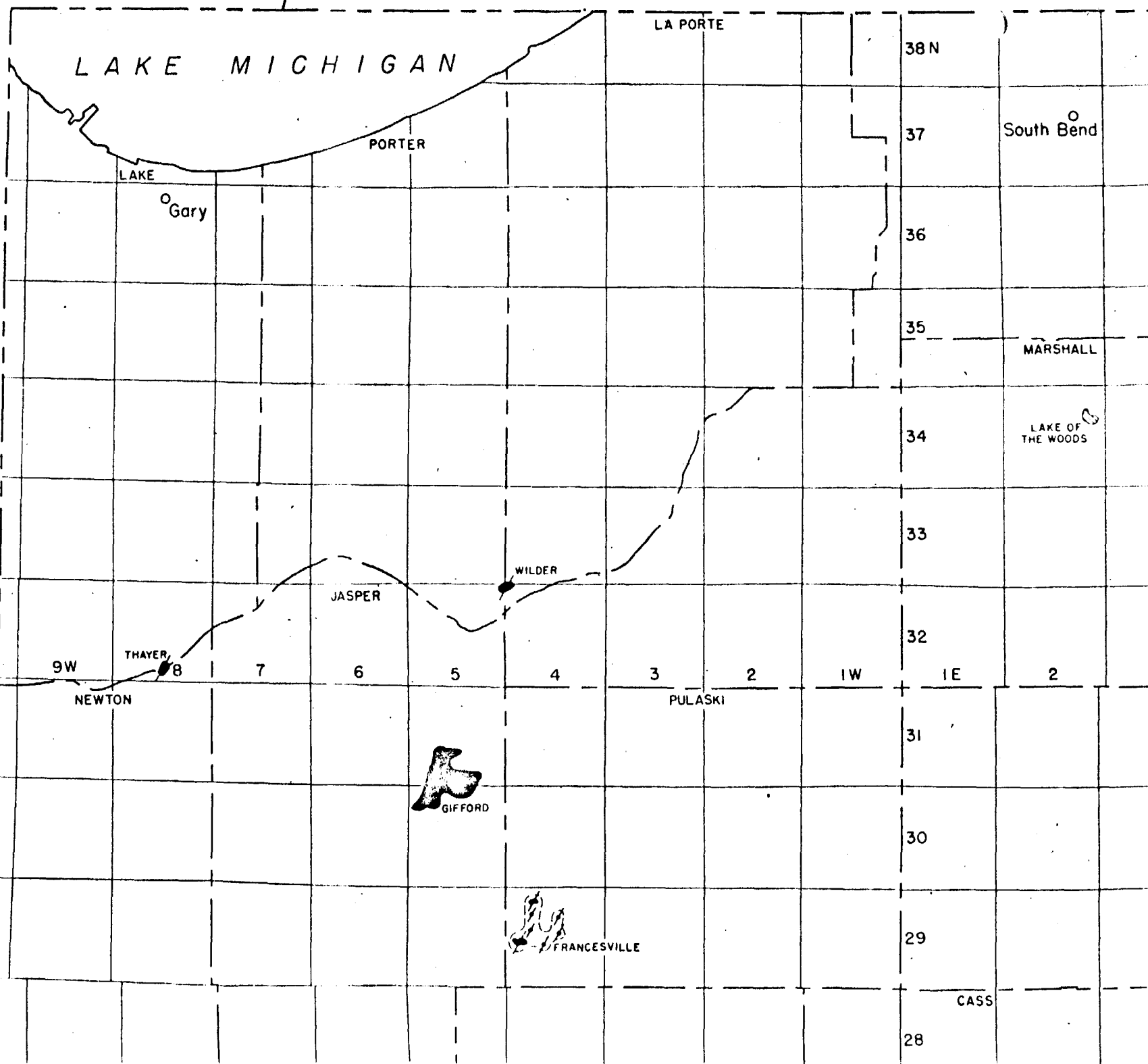


Figure 1.
Reference 2.

TOWNSHIP	RANGE
2N	8W
2N	9W
3N	6W
5S	3W
3S	12W
1S	11-12W
1S	12W
7S	11W
6S	13W
7S	13W
3-4S	13W
6S	4-5E
5S	13-14W
5S	13W
6-7S	14W
4S	4E
6S	4W
2S	8W
5N	9-10W
5N	5W
5N	5W
6S	13W
6S	13W
1S	12W
3S	11W
3S	11W
2S	11-12W
3S	11-12W
5S	10W
5-6S	12W
1S	11W
1S	10W
1S	10W
7N	9W
6S	8W
27N	4E
27N	4-5E
1N	8W
1N	8W
8S	13-14W
4N	7W

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Dewey Twp. W. M Voorhees is drilling a well for Aetna Drilling Company on the Keller farm west of LaCrosse. From C & G News, Dec. 1, 1923.

Dewey Twp. W. M. Voorhees is drilling a well for Aetna Drilling Company on the Keller farm west of LaCrosse. From C & G News, Dec. 1, 1923.

Dewey Twp. R. W. Keller, will drill a second well on his farm, one mile west of LaCrosse. The first well produced a barrel of oil a day before it was shot, but failed to produce afterwards. W. M. Voorhees is drilling contractor. From C & G News, April 1, 1924.

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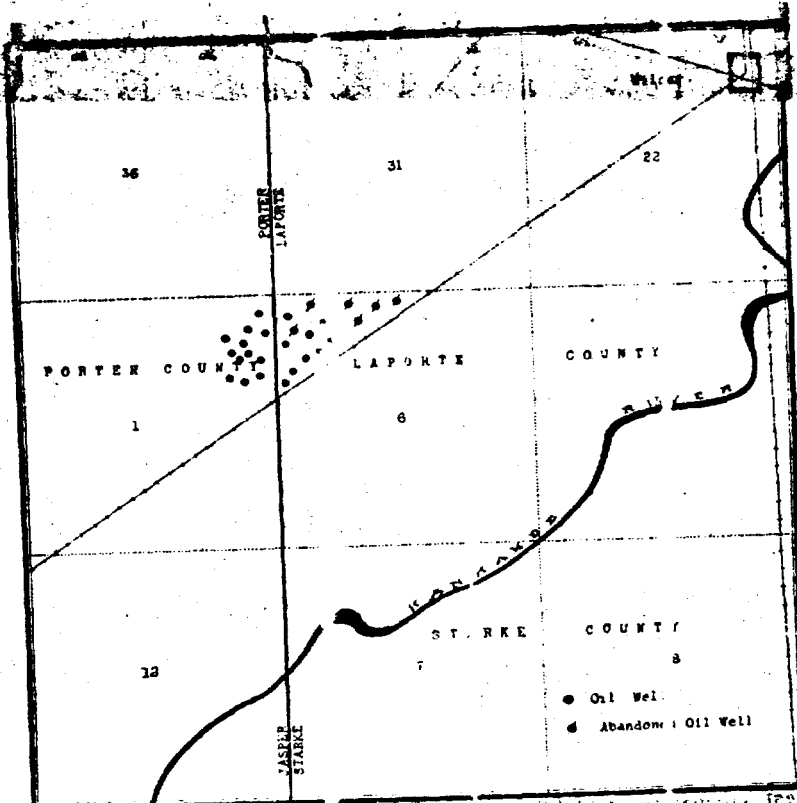


Fig. 13. Map showing the location of oil wells in the Wilder Oil Field on the border between LaPorte and Porter Counties.

Figure 2. Reference 3.
Map showing the location of oil wells in the Wilder Oil Field on the border between LaPorte and Porter Counties.



Figure 3.

Figure 4.
From page 4.

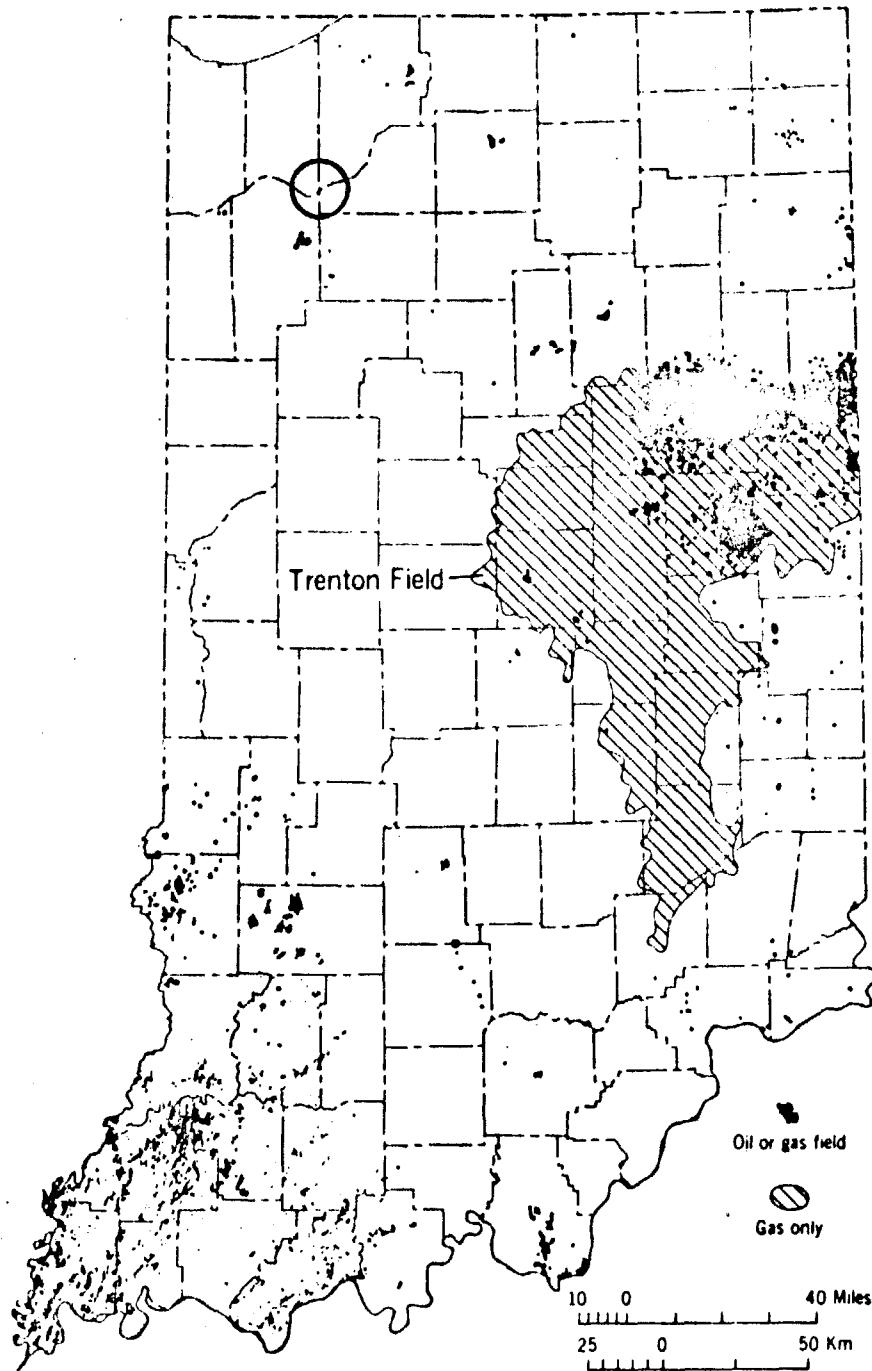


Figure 9. Oil and gas fields in Indiana.

Figure 8. Map of Indiana showing county names and geologic provinces.

of layers of upward folded bedrock. If oil and gas are present, they will accumulate in the rocks that are the highest in the crest of the arch provided that: (1) there was a source material and specific geological conditions for the oil and gas to form; (2) that this oil and gas could migrate from the source to the current holding rock; and (3) that the oil and gas were not allowed to escape at the time of formation, migration, and entrapment. The local geological conditions of the Wilder Field meet these conditions for the most part for the formation of this oil field.

Local Geology

In the Wilder Field there is a shale unit named the Antrim Shale that is directly above the limestone unit called the Traverse Formation (Figure 5). The Antrim Shale acts to trap the oil and gas and prevents them from escaping into the atmosphere or from seeping away. The glacial sediments or till, is made up of sand, silt, soil, and clay. This till has no bearing on the oil and gas in the much older rock units below. The oil has been found directly under the Antrim Shale and in the first few feet of the limestone. Dr. Walter Pierce, Ball State University, states that the oil and gas were formed in the Michigan Basin. The oil and gas migrated through the rocks to be trapped in the upper portions of the Cincinnati Arch. He also stated that the oil is a low value crude because the lighter and more valuable parts of the oil have escaped and the remainder is a thick asphalt-tar type oil.

GEOLOGY IN LAND USE PLANNING IN LAPORTE COUNTY

ERA	SYSTEM	STRATIGRAPHIC UNIT		DOMINANT LITHOLOGY	THICKNESS IN FEET	
CENOZOIC	QUATERNARY	Glacial drift		Sand, gravel, and clay	25-350	
	MISSISSIPPIAN	Ellsworth Sh. Antrim Sh.		Shale	25-290	
PALEOZOIC	DEVONIAN	Traverse Fm. Detroit River Fm.		Limestone, dolomite, anhydrite, and gypsum	110-190	
		SILURIAN	Salina Fm. Wabash Fm. Louisville Ls. Salamonie Dol. Brassfield Ls.		Dolomite and limestone	450-550
	ORDOVICIAN	Maquoketa Gr.		Shale and limestone	240-355	
		Trenton Ls. Black River Ls.		Limestone and dolomite	310-360	
		St. Peter Ss.		Sandstone	50-100	
		Knox Dol.		Dolomite	275-475	
	CAMBRIAN	No reliable data below this depth in LaPorte County				
		Franconia Fm. Ironton Ss.		Dolomite and sandstone	25-100	
		Galesville Ss.		Sandstone	130-190	
		Eau Claire Fm.		Shale, dolomite, and sandstone	300-450	
		Mount Simon Ss.		Sandstone	1500-2000	
	PRECAMBRIAN			Granite		

Figure 7. Summary of bedrock stratigraphy in LaPorte County.

Figure 5.
Reference 6.

It should be well understood by the reader of this paper that the oil is in the rock pores. There is no hollow "pool" of oil in the rocks, only small beads of oil exist in the rock openings. The glacial till is of Quaternary Age or relatively (geologically) recent in age. However, the Ellsworth Shale, Antrim Shale, and the Traverse Limestone are many millions of years older.

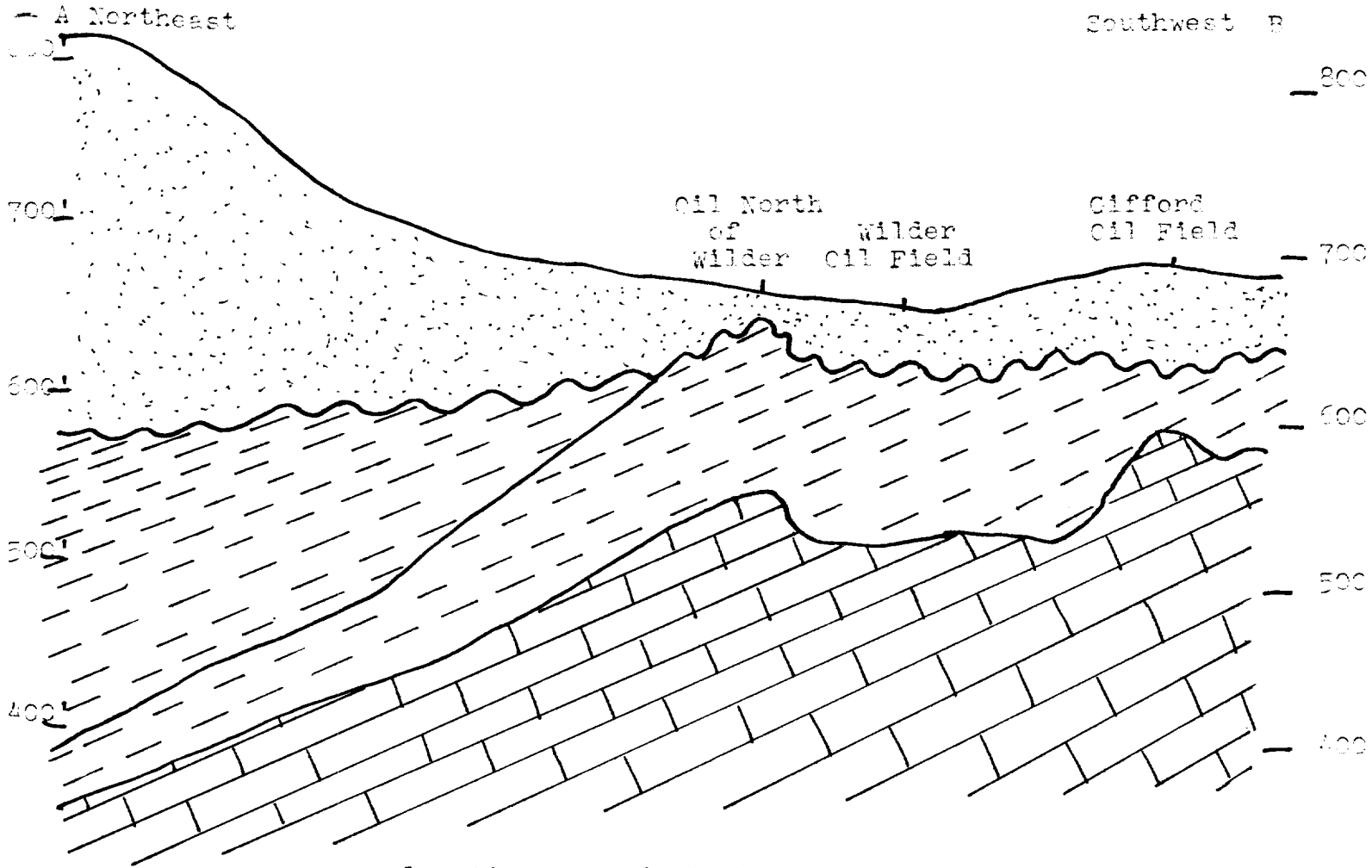
Oil Producing Rock Formations

The well data has shown that the oil is found in a very shallow region trapped under the shale and in the first few feet of the limestone. It is a very rare situation for oil to be found a few hundred feet below the ground surface instead of thousands of feet below the ground surface. The oil that has been found in the area is not of a significant quantity. This oil is a very low grade oil. It is less valuable than most grades of crude oil. In most of the oil sites in this study, oil has been found on small anticlines. The Gifford Field to the southwest is an example of this. The Wilder Field is for the most part located in a depression of both the shale and the limestone (Figures 6 & 7). This type of rock formation would lessen the chances of any quantity of oil that could be produced.

Data

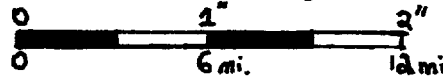
The data collected came from two main sources. The first and

Geological Cross Section



Elevations are feet above sea level

Scale - One inch equals six miles






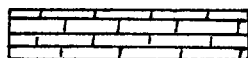
-  Glacial Drift - Sand, gravel, and clay
-  Unconformity
-  Ellsworth Shale/Antrim Shale
-  Traverse Formation - Limestone

Figure 6.

Map Of Oil Well Sites

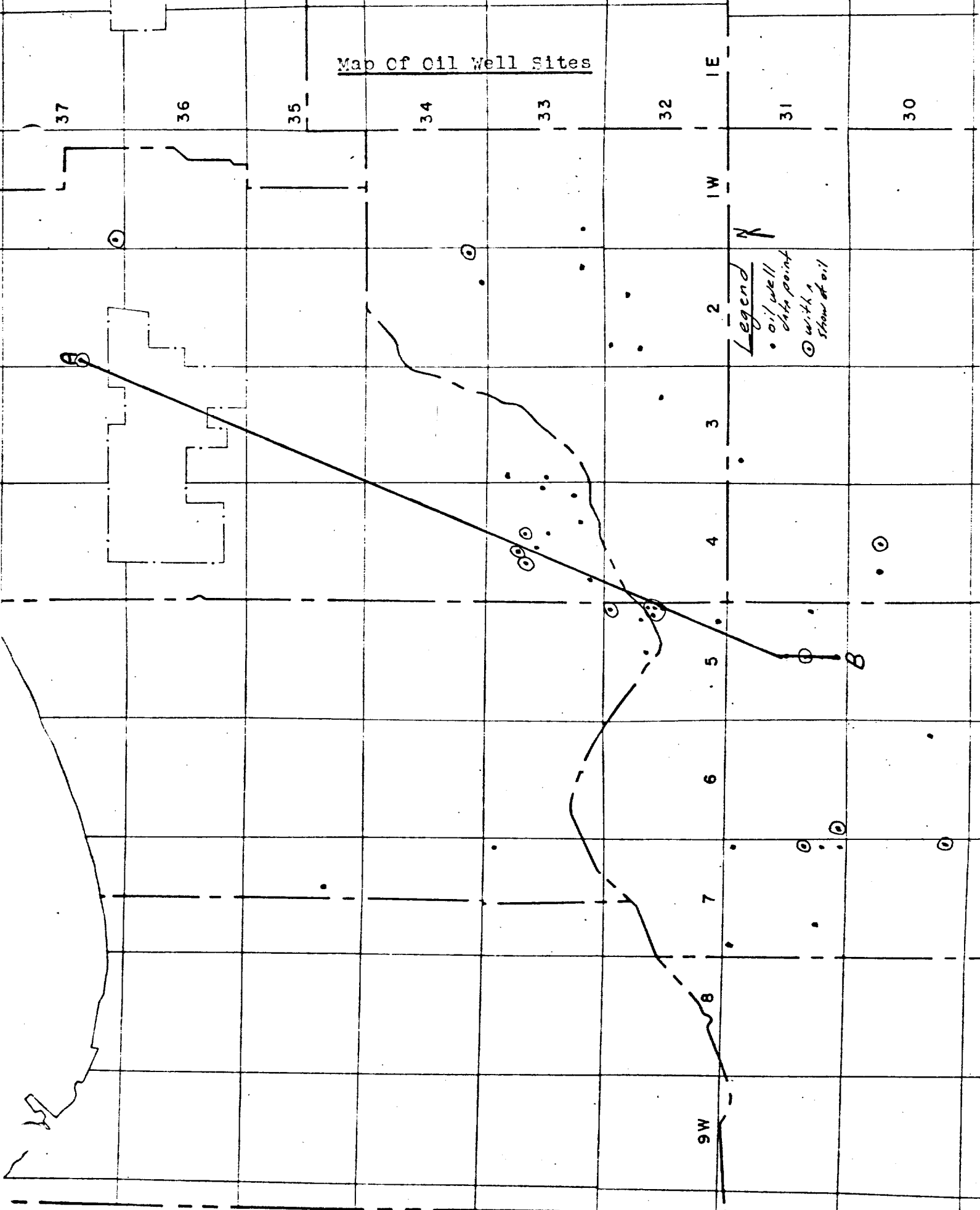
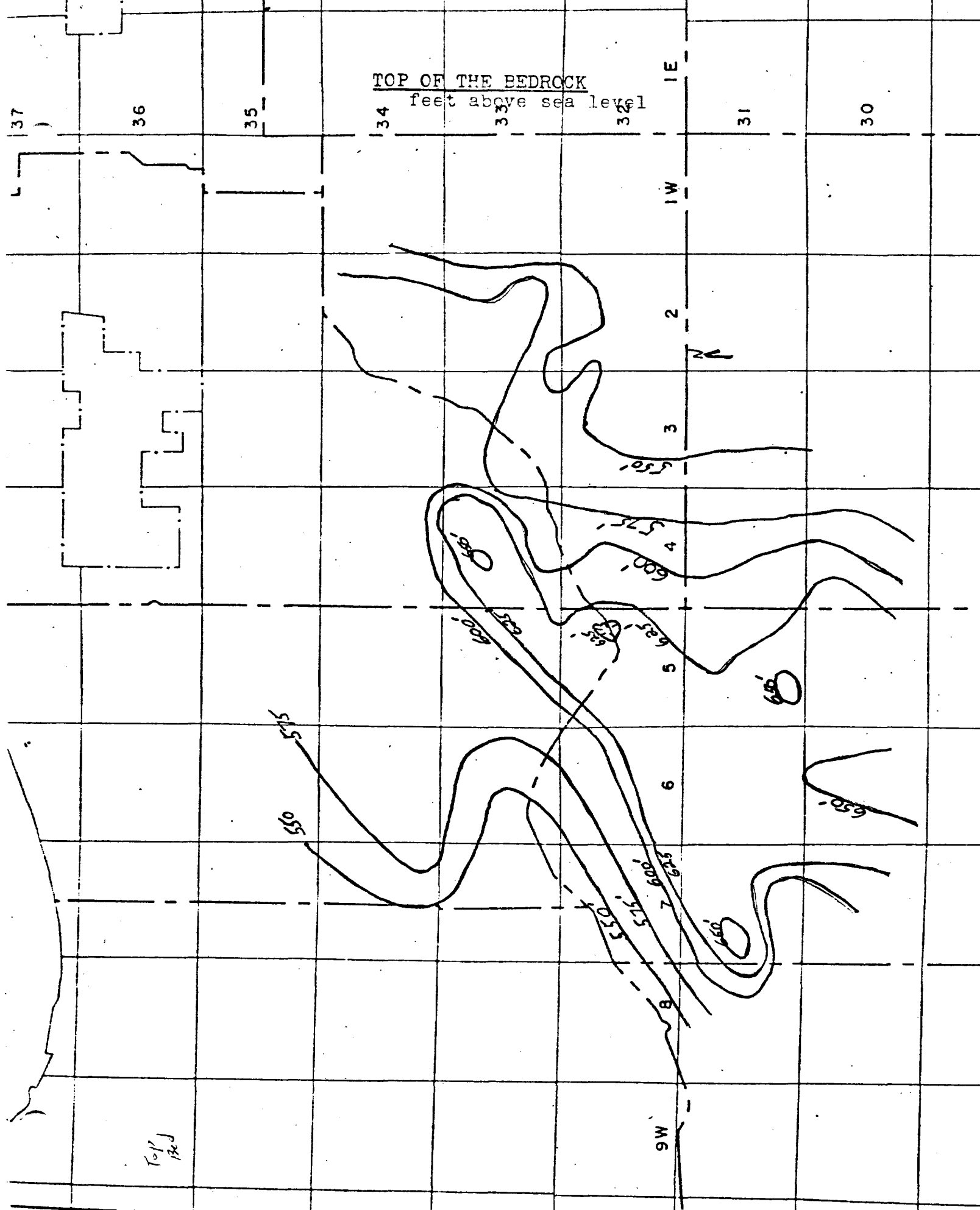


Figure 7.
Reference 11.

most important are the drillers' logs or notes that show what depths the rock units and showings of oil were found (Appendix C and Appendix D). Most of the drillers' logs indicate that the wells were drilled through the shale to a shallow depth in the limestone. There are some logs of deeper wells that were drilled down to investigate the possibility of oil or gas at the top of the Trenton Limestone. Some of the logs indicate that there was a "show" or sign of oil. For those that did have a show of oil, it was determined that there was not enough oil present to make it worthwhile to spend the extra money to try to produce an oil well. The drillers' logs provided the location, depth of the rock units and whether or not there was a show of oil. These locations and data are presented on the maps (Figures 7, 8, and 9). The first map (Figure 8) shows the contoured surface (topography) of the bedrock. The second map (Figure 9) shows the topography of the limestone unit. The limestone has a depression directly under the Wilder Field and a small anticline to the south that is the Gifford Field. The data and the maps agree, generally, with maps from the Indiana Geological Survey. The second part of the data used in this report was obtained from an actual seismic investigation. The results that were obtained were basically the same as stated in the drillers' logs. The seismic data showed that the first layer, the shale, is about 33 feet below the surface. The depths of the other layers, however, did not agree with the depths recorded from the same drillers' logs.



TOP OF THE BEDROCK
feet above sea level

Top Bed

Figure 8 Reference 11.
11.

TOP OF TRAVERSE LIMESTONE

feet above sea level

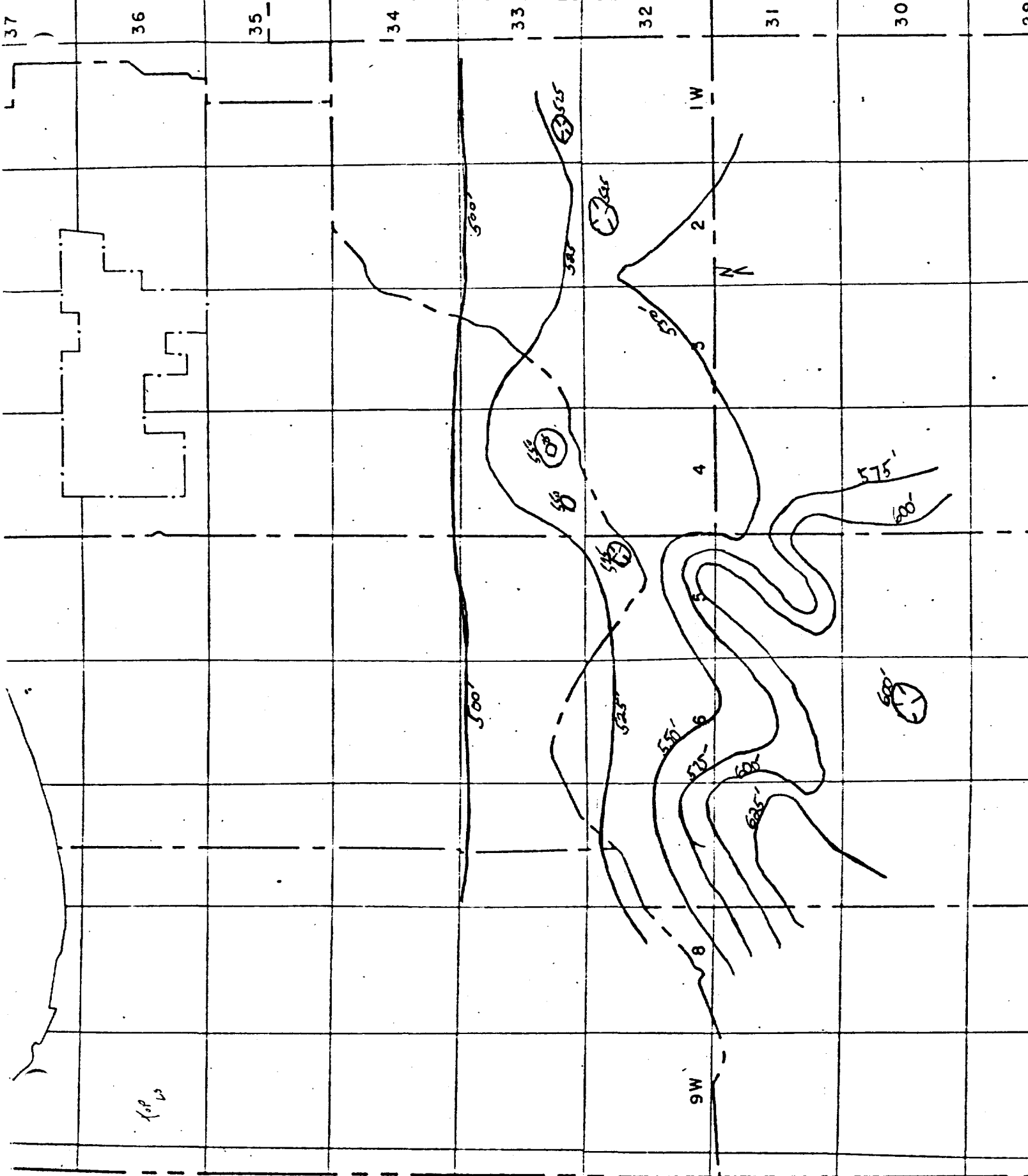


Figure 9 Reference 12.

Conclusions and Recommendations

The Wilder Field and nearby fields in this area of study do contain a trace of low grade oil. Exploration and development of these fields by drilling is not recommended at this time. All of the wells studied are dry wells that have not produced oil of any economically feasible proportions. If drilling is conducted, it should be confined to the upper few feet of the first limestone layer (depths of 200 to 300 feet). Past drilling for oil and gas to the depth needed to encounter the Trenton Limestone has resulted in a negligible show of oil or gas. Until there is a well drilled that produces a sizable amount of oil (10 or more barrels per day) in the area, any money, time, or equipment used on exploration for oil should be considered as an extremely risky venture.

THE SAN PIERRE OIL FIELD.

The San Pierre Oil Field, so-called in this report, includes a strip of country about twenty-five miles in length by about fifteen in width. The field proper starts south of Kouts in Porter County and extends south to the White County line, taking in parts of Porter, Laporte, Starke, Pulaski, and Jasper counties. The main field at this time is located three miles west of Wilder, part of the field being in Laporte County and part being in Porter County. This is the only part of the field that is being worked at this time. There are about twenty-five wells in this field that are being pumped, the wells being owned by one man, Mr. C. E. Russell of Laporte.

Since the beginning of the oil and gas industry in Indiana there has been more or less drilling in this field. One of the first gas wells in the State was drilled near Francesville in Pulaski County, which is in the southern part of this field. The Gifford field was at one time well known to all oil men of the State for the quality of oil found there. This field was extensively exploited in 1902-03 and was pumped for a short time, but due to the expense of operating the pumps by steam the wells failed to be a paying proposition and were abandoned in 1905 altogether.

The field now operated by C. E. Russell south of Kouts and west of Wilder was formerly drilled and a few good producing wells pumped in 1904 by an eastern oil company who abandoned their lease in 1906 due to the fact that it became too expensive to pump the wells for the output. Later Mr. Russell took up the lease and drilled a few new wells and cleaned out some of the old ones and began pumping these in July, 1914. The wells at first pumped water, but since the water is beginning to be decreased the wells are pumping a small amount of oil each day and it is expected that they will begin to be a paying proposition. At the beginning these wells pumped about 1,500 barrels of water in ten hours giving about half a barrel to a barrel and a half of oil in ten hours, compared to about 600 barrels of water with a barrel and a half to two barrels of oil in eighteen hours at the present time.

All the wells in this field are very shallow, ranging from 95 to 150 feet south of Kouts to four and six hundred feet in the southern part of the field around Medaryville, Francesville and Gifford. There have been a few deep holes drilled in Trenton rock, ranging from nine hundred to twelve hundred feet in depth.

The oil secured from these shallow wells is heavy and black

and makes a very good lubricating oil as it is, as it comes from the well, but due to the small production of each well it has never been thought to be profitable to pump these wells, yet since the gasoline engine has become such a factor in the power world it may be that these wells can be profitably operated with this kind of power, and are at the present time being used in the pumping of the wells on the Hayman lease now operated by Mr. Russell.

The Gifford field, located about two miles north and east of Gifford in Jasper County, was thought at one time to be a very valuable field, so valuable that an asphaltum company located there to manufacture asphalt. The company built a large plant and worked the field until the supply of oil became inadequate for their purpose, when the plant was abandoned. The field was first worked by several different companies but was finally consolidated into one company by Wm. Budge, who operated the field until it was finally abandoned.

There were no records kept of these early wells in this county or practically any of the wells drilled in this part of the State. The companies that were responsible for the drilling of most of the wells in this territory have long since gone out of existence and it is impossible to secure any information, as all of the records that they might have kept at that time have long since been destroyed.

Practically all wells that have ever been worked at all have been shallow wells and very light producers, very few if any at any time producing over five barrels per day. The great amount of water encountered in pumping the wells has been the cause of several of the wells being abandoned.

Conditions of Oil Fields and Development in Indiana, 1914.

BY EDWARD BARRETT.

The Continental War in Europe has affected the movement of most commercial commodities in this country, and consequently the prices of such commodities, but none perhaps have been as seriously affected as petroleum and its by-products. These products seem to be very sensitive to any curtailing of the export trade of the country, and they respond immediately to fluctuating conditions.

The war has practically shut off oil exportations; as a consequence the supplies of oil in this country exceed the demand. The first effect of the curtailing of the export trade in oil was a lowering of the price from \$1.35 per barrel to 75c per barrel, a reduction of practically 45% on the barrel.

With this tremendous reduction in the price of crude oil, investment in oil properties and development in oil territory practically came to a standstill; particularly is this true in untried and untested territory, and also in territory that is believed to be worked out or exhausted to a large extent. A large portion of Indiana would fall under the above conditions. Even in the newest developed field in Indiana, viz., Sullivan County, oil investment and development have been reduced perhaps 50%.

Possibly there has never been a time in the history of oil in this State when as many persons, and as much capital, stood ready to enter the oil business as at the present time, and these are waiting the time when our ports will be open for exportation and the consequent rise in price.

There never was a time, too, when readiness to invest and develop was as *general* over the State as at the present time. The areas awaiting development, as reported to this Department, include the following:

Noble, Lagrange, Pulaski, Jasper, Miami, Wells, Grant, Howard, Fountain, Hamilton, Madison, Delaware, Hancock, Hendricks, Putnam, Vigo, Owen, Shelby, Rush, Decatur, Greene, Sullivan, Knox, Daviess, Martin, Orange, Jackson, Washington, Scott, Clark, Harrison, Perry, Spencer, Dubois, Pike, Gibson, and Posey.

The above list may not include all the counties awaiting investment and development, but they do include all the areas, and they

show the widespread interest in oil development. The distribution of these counties shows also that every known oil and gas formation in Indiana is to be exploited. The tendency, too, of oil drillers and operators is toward deeper borings, and this will make all tests more thorough.

In the old Trenton field in the eastern part of the State, borings below the Trenton formation were not necessary, as the strata and conditions for the accumulation of oil and gas below Trenton, offered no inducements. But as we go westward in the State, the number of superincumbent strata increases every few miles, and some of these strata are known oil bearing rocks. To illustrate, some oil and gas are found in the Jeffersonville limestone (Carboniferous) and in the Devonian shales (Genesee); again in the Huron limestones and shales; and still farther west in the Mansfield sandstone, and possibly in the Carboniferous limestones and shales. All of these, with the intervening formations, add to the total thickness of the crust as we advance westward in the State, until we reach the Coal Measures. The added thickness probably amounts to a total of from 1,500 to 2,000 feet; and this thickness would have to be added to the old Trenton rock depth in drilling for Trenton rock oil in the western part of the State. As a rule, too, drillings for oil in the several formations mentioned would have to be deeper than in the old Trenton rock field, which averaged about 1,000 feet. The exception to this is found in Sullivan County, where the wells run from 600 to 800 feet in depth.

There have been about 35,000 oil and gas wells drilled in Indiana in the last twenty-five years. Probably 30,000 of these were drilled in the Trenton rock field, and the rest in counties in various parts of the State.

The following is from the Oil City Derrick:

"The development of oil resources back in the early nineties opened at that time a new area of prosperity to the State of Indiana, and it is scarcely an exaggeration to say that petroleum did exceed in value any other industry in the State at the time, helped along by the wonderful gas development that brought many large manufacturing plants from other sections of the country. True, the interest that attaches to an oil well is perhaps lacking in the interest inseparable from other industries, and yet the crude product of the Eocene or Neocene age has not been without its romance in ancient times, and also in modern history. But in these rapid living days the practical side of life is what appeals to the multitude, and any new invention or new development of nature's re-

sources that tends to add to the material strength and capability of the nation may be counted as a factor in the broadening out and development of civilization.

While the knowledge of the existence of oil in Indiana dates back to a time long anterior to the advent of Gaspar de Portala's little band of missionary friars, and when the Godfrey tribe of Indians were roaming over the territory adjacent to Montpelier, the successful development of these hidden sources of wealth is so recent that the importance of the industry that had sprung into existence was not yet fully developed until early in the Nineteenth century, and was not appreciated during the early nineties.

Indiana's first oil excitement dates back to 1862, when oil springs were found on Otter Fork and West Fork and along the streams tributary to them, in Crawford County. There were a number of springs from which small quantities of oil could be collected. The oil rock could be found in many places. At one place on Otter Fork the bed of the creek was soft black sandstone, or shale, which contained more than 30 per cent of oil.

During the oil excitement of 1862-66 when oil springs were found on Otter Fork and West Fork, oil seekers flocked to that county and the excitement ran high. Several wells were drilled, but oil in paying quantities was never found. On the farm of J. J. Clark a well was drilled during the oil excitement, but only a small quantity of oil mixed with salt water was obtained. At 408 feet, in this well natural gas was found, and at 648 feet salt water and a small amount of oil.

The second oil excitement in the State dates back to 1865, when an artesian well being drilled for water at Terre Haute, Vigo County, found oil at a depth of 1,630 feet. During the following five years three more wells had been drilled in that locality, and all found quantities of sulphur water, with more or less oil. It was not until 1888, however, that this oil development attracted the attention of operators. It was on May 6th of that year that the Phoenix well was drilled in, and for a dozen years yielded an average of 1,000 barrels or more a month. The result of this strike was like that of all similar ones in the history of the oil industry. Hundreds of oil operators from far and near flocked to Terre Haute. Real estate was usually almost doubled in price. Twenty-four new companies were formed, eighteen of which made locations. A dozen or more wells were drilled to the required depth within three miles' radius of the Phoenix well, struck the proper stratum, and, for the most part, found—nothing. Terre Haute never did make an oil field.

The Oil Area.—The great bulk of Indiana's oil is derived from the Trenton rock formation in Wells, Blackford, Jay, Adams, Grant, Huntington, Delaware, Randolph, Madison, Hamilton, Marion, Miami and Wabash counties. The Indiana field is but an extension of the Ohio Trenton rock district, which was discovered several years previous to the Indiana field. The Ohio development was extended rapidly, and test wells drilled to the south and west of the original strikes in Wood, Hancock and Allen counties of Ohio indicated an extension toward the Indiana line, the result being that a test well was drilled at Eaton, Delaware County, in 1885, which resulted in a large gas well, making the beginning of the development of the great Indiana gas and oil field. The Indiana Trenton rock field extends over a large area, commencing with the Ohio line at its eastern boundary, and extending westward approximately 50 miles into the central portion of the State. On the north of the principal oil pools will be found an immense area of territory in which the oil formation has been filled with blue lick water, making it an impossibility for the oil reservoir to contain oil in commercial quantities, except in certain isolated pools, where the terrace structure or slight anticlinal folds may have trapped the oil and gas.

In the southern part of the field, notably in what is known as the Camden district in Jay County, and also in several of the isolated pools located in the gas area near Alexandria, Marion and Hartford City, the principal pays are found from 80 to 200 feet in the Trenton, the upper portion of the formation in these districts being filled with natural gas at considerable pressure when the field was new. In the eastern end of the field, known as the Geneva district, all of the profitable pays were found located in the upper 60 feet of the Trenton. In the early days of the excitement, gas was so plentiful that it was wasted. Large flambeaux would be seen in all parts of the field, with millions of cubic feet of the natural fuel going to waste daily. At that time it was thought that the supply would always last, but in later years it was discovered that not near enough gas could be found to furnish fuel for the pumping of the wells, and for that reason thousands of wells were pulled out and abandoned that would have been snug fortunes for their owners had there been a supply of gas to handle them cheaply. This great waste of Indiana gas caused other States to adopt the conservation policy of handling it, and many States have profited from the experience in Indiana.

First Paying Oil Strike.—The first real oil well was drilled in Indiana in 1886 and located near Portland, in Jay County, but

were abandoned. Numerous wells were drilled in the same vicinity and it was up to Benjamin F. Fulton to start the ball rolling by drilling in a 35-barrel producer. It was at this well that the first real disaster occurred in the Indiana field. Oil was being used for fuel on the James Penn farm, and an explosion caused the death of the driller. The first paying oil well was drilled in Indiana in June, 1890, and was owned by the Northern Indiana Oil Company, and located on the D. A. Bryson farm, in Chester Township, Wells County, near the town of Keystone, north from Montpelier. This well started at 60 barrels a day natural, but within three months had dropped to 25 barrels a day. Then it was given a shot and increased to 90 barrels a day. This same company drilled several wells in the vicinity of the Bryson well without results. The second scene of operation was on the Cory farm, in Nottingham Township, Wells County, where Edward J. Little, a resident of Toledo, Ohio, at the time, but now deceased, drilled in a well that started at 250 barrels.

The best oil wells found in the Indiana field were located in the heavy gas belt near Camden, Jay County, known as Pennville, and in Penn Township. Wells showing a production above 3,500 barrels were drilled in this pool, but the life of the wells was short as they blew out in a few years, as did the gas in the same field. Another important and productive pool was located in the northwest corner of the same township, and known as the Harris. This pool was void of the big gushers but was a very exciting development, as many wells of the 200 barrel size were drilled in daily. The best well in the pool was the first well drilled, and was located on the southeast corner of the Hannah M. Harris farm, from whence the pool derived its name. This well started at 15 barrels of oil and close to 2,000 barrels of water, but at the expiration of forty days the water had about exhausted and the well produced 1,400 barrels of oil, being one of the remarkable wells of Indiana. This pool was located just at the edge of the Godfrey reserve, known as Indian lands, upon which later some fair wells were found. The Nottingham pool as well as the Muncie and Geneva pools was also rich, but the fading away of the gas supply made all the pools look alike to the oilman.

Outside of the Trenton rock field and in the western section of the State, the past few years has shown some production in Gibson, Pike, Vigo, Sullivan, Martin and other counties, but nothing like the early wells in the Trenton rock section of the State.

It is remarkable the number of wells that can be drilled in an oil field within a few years and the great number that can be

abandoned. As near as can be gleaned since development was started in the oil fields of the State, there have been 17,164 oil wells abandoned out of a total producing number of 28,279 wells. This does not include the dry holes and gas wells. The greatest number of wells completed in any one year in the Indiana field was in 1902, when a total of 3,914 wells were completed, and the years of 1902-3-4 were the most active in the history of the field.

The Grant County field was exhausted of its production more rapidly than any other county in the State, as over 5,000 oil wells have been abandoned in the county, with Wells County a close second, although the last named had a great many more wells and produced for some years before Grant County was developed.

The number of wells completed yearly in the State is of interest to all identified with the past industry in that once active and productive oil field.

The following table gives the number of wells drilled in the Indiana field each year since 1892 and with the number drilled previous to that year. The figures give the total number of completions with the number that were oil wells and the dry holes and gas wells.

YEAR.	Comp.	Oil Wells.	Dry and Gas.
Prior to 1892.....	1,306	405	901
1892.....	296	220	76
1893.....	665	519	146
1894.....	1,808	1,413	395
1895.....	2,711	1,957	754
1896.....	1,637	1,185	452
1897.....	1,041	761	280
1898.....	1,102	758	344
1899.....	2,223	1,706	517
1900.....	2,963	2,323	640
1901.....	2,586	2,114	442
1902.....	3,914	3,283	631
1903.....	3,686	3,310	376
1904.....	3,766	3,366	400
1905.....	1,922	1,678	244
1906.....	1,185	1,043	142
1907.....	655	529	126
1908.....	402	317	85
1909.....	305	219	86
1910.....	360	300	60
1911.....	117	82	35
1912.....	89	65	24
1913.....	311	225	86
1914.....	744	471	273
Total.....	35,800	28,279	7,521

PERMIT NO. 80

B. & B. OIL COMPANY #1, Hermar A. Nelson, 100' SL, 50' EL, in
 SE¹/₄, SE¹/₄, NW¹/₄, Sec. 28, T. 31 N., R. 5 W. Completed 6-26-38.
 Elev. 675'. G. L. DRY HOLE.

Soil	&	gravel	1'	50'
Slate				112
Limestone		blue		117
OIL		sand		122
Limestone				128

CASING RECORD:

4" casing 62'

Slight trace of heavy oil

PERMIT NO. 15740

LAPORTE COUNTY
DEWEY TWP:

Jack West - # 1 - John Gorski - 395'NL 990'WL NW NE, sec 16, 33N
4W, Elev. 673.7'. Completed November 12, 1954. Dry Hole.

Glacial fill	22
New Albany Blk. Shale	125
Devonian & silurian lime	685
blue shale	706
lime	754
blue shale	758
lime & shale	790
shale	1000
lime	1152
T. D.	1152

Casing Record

10	22
8	95
7	690
5½	1140

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