Form No. 10-300 (Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

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SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC: Lucas Gusher, Spindletop Oil Field

AND/OR COMMON: Lucas Gusher, Spindletop Oil Field

2 LOCATION

STREET & NUMBER: 3 miles south of Beaumont on Spindletop Avenue
__NOT FOR PUBLICATION

CITY, TOWN: Beaumont
__x__ VICINITY OF

CONGRESSIONAL DISTRICT: 9th

STATE: Texas
CODE: 48
COUNTY: Jefferson
CODE: 245

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	X OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	X PRIVATE	__UNOCCUPIED	__COMMERCIAL	__PARK
__STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
X SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	X INDUSTRIAL	__TRANSPORTATION
		__NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME: Multiple private-contact Lamar University, Office of Research and Development

STREET & NUMBER: Post Office Box 10078

CITY, TOWN: Beaumont
__ VICINITY OF

STATE: Texas

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.: Jefferson County Courthouse

STREET & NUMBER: Pearl Street

CITY, TOWN: Beaumont

STATE: Texas

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

DATE

__FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS

CITY, TOWN

STATE

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
__EXCELLENT	__DETERIORATED	__UNALTERED	XORIGINAL SITE
__GOOD	__RUINS	XALTERED	__MOVED DATE_____
XFAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The importance of Spindletop lies not only in the discovery of oil but in the rethinking it forced in geological study. What is a saltdome like Spindletop and why is oil found there?

The Spindletop saltdome was a core of rock salt which has protruded up through the overlying beds of sands, shales, and limestones, causing the pierced sedimentary beds to dip radially away from the salt core. The Spindletop salt core was roughly circular in shape, about one mile in diameter. The uplift of the salt mass had an effect on the surface area overlying the dome, forming a mound or small hill, approximately the same diameter as the subsurface salt core, which was quite perceptible above the flat praire lands of the Gulf Coast. The mound at Spindletop rose about 15 feet above the general level of the plain.

Many salt domes like Spindletop are located in the Gulf coastal plains of the United States. The area representing the Gulf coastal plains was, throughout early geologic times, either a very shallow basin of water or dry land, and successive cycles of rising and ebbing of the old seas took place, depositing, eroding and redepositing sediments. The thick mother salt bed was deposited during a time when extreme arid conditions prevailed in this part of the world. The climate was very hot, the land dry and the seas shallow. Very little rain fell in the area. The shallow seas became supersaturated with salt, so that salt dropped out of solution from the sea water and solidified on the bottom of the sea. Successive layers of salt thus deposited were packed into a bed of vast extent covering the entire Gulf coastal plain area. This great salt bed gave birth to the domes that lie beneath the landscape of the Gulf Coast and under the water of the Gulf of Mexico.

The depth at which the salt bed might be expected to be encountered under the Spindletop area is estimated at more than 30,000 feet below the surface.

Migration of oil into the dome area occured during the uplift of the dome. For example, after the dome pierced the Eocene series, oil that was formed in the muds of the basal Eocene seas was squeezed out of them by compaction, migrated through porous media to the dome, and was then trapped in the uplifted reservoirs. Since shales, which are the hardened and compacted muds of the old sea bottoms, like those of the Eocene, were deposited at various geologic times, each group of formations, within a series with such shale deposits, could have its own source for oil and its own oil-producing zones. Such a multiplicity of different oil formations on the flanks of salt domes, as at Spindletop, is the one big factor responsible for their importance as oil fields.

The uplift of the dome fractured and distorted the sediments as they were pierced, and sometimes the fractured planes opened avenues for the movement of oil from the lower formations into the upper strata. Many faults are

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION
__1400-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	X SCIENCE
__1500-1599	__AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE
__1600-1699	__ARCHITECTURE	__EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN
__1700-1799	__ART	__ENGINEERING	__MUSIC	__THEATER
__1800-1899	__COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	__TRANSPORTATION
X 1900-	__COMMUNICATIONS	X INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)
		__INVENTION		

SPECIFIC DATES 1901-1925 BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

Spindletop was a little knoll of land rising out of a swampy prairie in the southeast corner of Texas, a few miles north of the Gulf of Mexico. There, on January 10, 1901, a new age was born when the first great oil gusher, Lucas Gusher, roared in. This discovery not only opened the vast oil deposits of the Texas Gulf coastal plain and Louisiana to development, but also created the modern era of the American petroleum industry. Prior to Sprindletop, oil was used only for lamps and lubrication. The enormous output of the field led the petroleum industry into a successful search for new uses for oil, for new fields in Louisiana, Oklahoma and Texas, and for new techniques of producing, refining, transporting, and marketing oil. It began the liquid fuel age, stimulating wide use of fuel oil by steamships, locomotives, and factories. The increased petroleum supply, together with refining improvements also made cheap fuel and lubricants available, permitting the rapid expansion of the automotive industry.

HISTORY

Patillo Higgins was the first to think that the presence of the gas and mineral springs on Spindletop Hill indicated the existence of something more. On a trip east to examine brickyards in Pennsylvania, prior to establishing one in Beaumont, he noticed that oil and gas were being used for fuel. He visited several oil fields and inquired about methods used in determing the existence of oil or gas. What he found were the same signs he had seen on Spindletop; the odors of escaping gas, the texture of the earth and the taste of the water.

The oil men he spoke with discussed geology as it applied to recognizing surface indications of oil and they were certain that oil would never be found anywhere except the east. Higgins began to study geology, but came to different conclusions than the geologists of the United States Geological Survey, whose books he was using. At the time it was believed that oil only came with rock and that oil-bearing rock probably did not exist along the Gulf Coast. Higgins disagreed, believing that the sulphureted hydrogen gas indicated oil.

He was able to interest several investors through his demonstrated knowledge of geology. His plans went beyond the drilling for oil,

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Clark, James A, and Halbouty, Michael, Spindletop, New York, 1952

Rister, Carl C., Oil, Titan of the Southwest, Norman, 1949.

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 1130.4

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	15	397130	3322910
B	15	397950	3320620
C	15	395740	3319760
D	15	394790	3322950

VERBAL BOUNDARY DESCRIPTION The boundary has been drawn to include both the 1901 and 1925 oil strikes, each of major importance in the history of the oil industry in the areas of exploration and technology. Structures located within the boundary do not therefore contribute significantly to the historic aspect of the landmark although by their presence they continue the use of the area as an oil field and serve as a reminder of the historic importance and significance of the landmark itself. By the nature of the process of oil

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE Patricia Heintzelman, Architectural Historian, Landmark Review Project

ORGANIZATION Historic Sites Survey — DATE 5/8/75

STREET & NUMBER 1100 L. Street, N.W. — TELEPHONE 202-523-5464

CITY OR TOWN Washington — STATE D.C.

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL ___ STATE ___ LOCAL ___

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

FEDERAL REPRESENTATIVE SIGNATURE (NATIONAL HISTORIC LANDMARKS)

TITLE

Landmark Designated: NOV 13 1966

Boundary Certified: date

DATE Jan 24 1979

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I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION — DATE 1/29/79

ATTEST: (NATIONAL HISTORIC LANDMARKS)

KEEPER OF THE NATIONAL REGISTER — DATE

associated with a fractured zone. The geologic definition of a fault is a dislocation, or displacement, caused by a slipping of strata along a plane of fracture which is commonly referred to as the fault plane, and the result of this movement is referred to as a fault; the displacement of the beds varies from a few feet to many hundreds of feet. Faults have an effect on the accumulation of oil. Some fault blocks are very prolific, whereas adjacent blocks are dry. Because of the fractures and faults which accompany these zones, the oil is usually present in most important quantities close to them and sometimes only on one side. To develop production, therefore, it is necessary not only to know the location of the flanks of the dome, but also of these fractures and faults and of the relation of the oil accumulation to them. On domes like Spindletop, where faults control the position of the oil, it has been established that there will be great differences in drilling and production between wells close together, but which are located on opposite sides of a fault. Faults separate the oil and prevent the migration from one fault block to another, and many dry holes are drilled only tens of feet from oil wells. Wells have been abandoned without oil on a flank of a dome, which, to the so-called practical oil man, condemned the acreage, only to have a later wildcatter drill a test between dry holes and open up prolific production.

There are many examples where the fault plane acts as a barrier and prevents the movement of oil to adjoining blocks, thereby causing a restricted movement and accumulation of the oil into a small area. A good example of this is the old Yount-Lee Oil Company's Guilmartin Fee 6.9-acre tract at Spindletop, which produced more than a million barrels of oil to the acre, whereas adjacent leases produced far less from the same sands but in different fault blocks. The Guilmartin tract happened to be located above a well-saturated fault block, which contained many sands carrying oil, whereas adjacent tracts were located over fault blocks which had most of the same sands carrying water.

It is for such reasons that operators consider that every well drilled on the side of a dome is a wildcat irrespective of its proximity to existing producers. Yet it can be safely stated that, regardless of the hazards and risks involved in the drilling and development of production on domes, the productive tracts on them, on a per-acre basis, are by far more prolific than from any other geologic feature in the world.

Today, because of sulphur mining, as well as the removal of oil and gas, the entire area has subsided, leaving Spindletop a low and marshy field. A few wells are still evident but the land is largely deserted and desolate, surrounded by oil tank farms and highways. Because of the

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land subsidence, the monument marking the site of Lucas Gusher has been moved to the extreme northeast on the perimeter of the oil field, fronting Spindletop Avenue. A Spindletop Museum is planned for this area along with a full-scale display of original and replica equipment in an effort to illustrate the early days of one of the major industries which shaped modern American life.

concieving of an entire city with residental and industrial lots. The first meeting of the Gladys City Oil, Gas and Manfacturing Company was held August 10, 1892, but drilling efforts were not begun until February, 1893. When it did begin, equipment too light for the necessary drilling was contracted for against Higgins advice. With a hole of only 418 feet instead of the 1500 feet Higgins felt was needed, drilling was halted as money ran out.

In 1895, the company leased the land to the Savage Brothers for drilling, but their equipment was as useless as the first company's. As the financial difficulties of the mid-nineties did not lessen until 1898, Higgins knew he could find no new investors for his project until that time. He then had a geologist sent down from the state office, a Mr. Kennedy. Unfortunately, Mr. Kennedy refused to listen with an open mind to Higgins' new geological theories and warned all of Beaumont that oil was not to be found at Spindletop.

Higgins then decided to place an advertisement in a manufacturing journal for lease of the land, specifying that the person answering should be capable of adequately financing a propostion of some magnitude. He received only one answer, that from Captain Anthony F. Lucas.

Lucas graduated from the school of mining engineering in Gratz, before entering the Austrian navy. After visiting his uncle in Michigan he decided to apply for American citizenship. In 1893 he became a mining engineer for Louisiana and explored the salt mines which had attracted his attention. He observed signs of oil, gas and sulpher in them and developed a theory that they were salt plugs around which it was possible for oil or sulpher to accumulate.

On weekend excursions, Lucas visited some of Texas' coastal uplifts, including those at Beaumont and High Island. He found good indications of sulphur at Gladys City and Higgins' advertisement attracted him. At the time Lucas was looking for sulpher, not oil.

At Higgins' advice he began drilling on Lot 44 in Gladys City, near Higgins' original drill site. His drilling rig was also too light and broke under gas pressure after passing through some oil sand. After a futile search for additional backing he was introduced to the wildcatting team of James Guffey and John Galey, who got their money from Mellon interests. Galey chose the site for the new well on the south side of the hill and the north edge of the McFaddin-Kyle and Weiss land. Had he gone fifty-feet farther

south, Galey and Guffey would have been financing a dry hole.

The drilling team of Jim and Al Hammil were sent in by Galey and Guffey. Through their ingenuity and determination, combined with that of Lucas, they were able to overcome the drilling difficulties which had stopped others, until the morning of January 10, 1901.

Mud began to bubble up and suddenly spurted high up over the derrick, knocking off the crown block and falling all around the camp. Just as they were beginning to survey the damage, the mud began to flow again, followed by a terrific column of gas, followed by a solid flow of oil. A geyser of oil was spouting over the derrick, a steady six-inch stream more than 100 feet above the top of the derrick, flowing more than 100,000 barrels a day from a well 1020 feet deep. No where else on earth had such a sight been seen before except for one instance in Russia. The Lucas gusher flowed for nine days uncontrolled until the Hammil brothers devised a method for capping it.

By April 18, six wells had been drilled, each one a gusher, brought in by early investors, D.R. Beatty, the Heywood brothers, Higgins and Lucas. Yet none of these men ever entered into the frenzied stock schemes of the boom town that was to follow.

After the sixth well came in, amazing facts began to be published in usually conservative manufacturing journals. Half of Spindletop's six wells were capable of flowing more than the 68,000,000 barrels annually, or 185,000 barrels daily.

Russia had pioneered the use of fuel oil, particularly in powering steamships with oil from the Baku region. Now America would follow and go beyond that example, not only in ships, but in railroads, factories and the home.

The discovery also spelled doom to Standard Oil's monopoly. Prior to Spindletop, Standard directly controlled 48,000,000 of the 58,000,000 barrels of petroleum produced annually in the country. Now, the Lucas well alone was producing as much oil as 37,000 eastern wells, six times as much oil as California, twice as much as Pennsylvania and at least half of the nation's total output. With five additional wells, these figures multiplied. Spindletop could produce more oil in one day than the rest of the fields of the world combined.

Pandemonium broke loose; the population grew from 10,000 to 30,000 in three months. Beaumont became overun with promoters, saloons, brothels,

speculators and swindlers. In addition to the turmoil in Beaumont, the hill gained a population of its own. When the land boom subsided, things moved toward normalization with three distinct living areas. The most popular was the McFaddin land around the Log Cabin saloon. Men with families chose Gladys City which kept law enforcement in evidence. Negroes and Mexicans lived in South Africa, across the tracks to the east.

Derricks went up every where, In the summer of 1901 there were 214 wells at Spindletop. Three spots of unusal activity were created by the sale of infinitesimal tracts of land to promoters in the Hogg-Swayne, Keith-Ward, and Yellowpine districts. Higgins, Guffey, Heywood, Lone Star and Crescent, National Oil and Pipeline kept the wells sparsely spaced on their tracts. As the derricks increased, so did the dangers of fire and gas blowouts. These dangers were aggravated by the wasteful indulgence of promotors who frequently uncapped wells for the amusement of visitors.

During 1902, fires became more frequent. In late October, the Hogg-Swayne tract was completely wiped out by a series of fires. Twenty-six derricks and pumping units were lost in the first blaze which began when a small wooden tank collapsed and oil spilled over a boiler. This fire was almost under control when a second fire began in another section, started by gas fumes ingnited by a latern. By the next morning the Hogg-Swayne tract was a smoldering ruin. As the fire was cooling, lightning hit a Guffey tank. The flames leapt to an adjoining tank and carried on to the thick patch of wells in the Keith-Ward tract. When the twelve days of hellfire came to an end, only the Yellowpine district stood intact.

Rebuilding began immediately, but a safety committee ruled that as soon as wells were capped, derricks would be removed and replaced with brick housing. This destroyed the picturesque onion-patch effect but gave protection to millions of barrels of oil. By October there were 440 gushers on the hill, spaced on an average of twenty wells to an acre. The gusher for fun and promotion days had ended. But in the boom of the first months several major American oil companies were formed, including Gulf, Humble and Sun Oil, which owe their success to the men and ideas which grew from Spindletop.

By 1908, Spindletop was in decline. Only a few years before, a 10,000 barrel well was closed as a nuisance, and now the entire field was flowing less than 5,000 barrels a day. The boom towns had moved on to other domes in Oklahoma and Texas. One man, Marrs McLean, continued to search for oil in flank drilling.

By 1915, McLean had studied maps, geological reports and stratographic

sketches of domes and formed a theory involving off-side sands feeding oil into caprock domes. He had seen oil produced from the off-sides of Sour Lake, Vinton, Hull and Saratoga domes. Despite Vinton's barren caprock, oil was found on the flanks. McLean reasoned that barren-top domes were the result of contact being broken with the off-side sands. With this idea he leased and bought land around all of the Gulf Coast domes whenever possible.

In 1920 he returned to Spindletop and began leasing land. He finally was able to interest Frank Yount, owner of the small but successful Yount-Lee Oil Company, who had brought in deep flank production in both Sour Lake and Hull.

In 1925 Spindletop was a ghost town, deserted and desolate, with a few rundown stores and houses in the Gladys City area and a few old derricks as relics of the past. On November 13, 1925, the scene was to change again. Yount-Lee Oil Company's Number 2 McFaddin on the south flank of the dome came in at an estimated 5000 barrels a day. It was the second most significant event in the history of Beaumont and another landmark in the oil industry. What Hull, Sour Lake and other flank producers had failed to do, old Spindletop would do; it would prove the importance of off side production on salt domes.

On January 13, 1926, McFaddin Number 4 came in on the old McFaddin-Kyle-Weiss lease, and then Gladys City Number 3, just about 1/2 mile west of the Lucas well, but still there was no great notice among major oil companies. The day Gladys City Number 4 came in on exactly the spot Marrs McLean had staked out before he could find backing, the rush was on again. Gulf and Sun Oil moved back to the field, paying high prices for leases they had relinguished as recently as five years earlier.

The result of Yount's discovery was one of the most prolific oil productions in the county since the first Spindletop boom. Yount's company produced well over 50,000,000 barrels of oil in the first five years and others pumped over 9,000 barrels. The ring of wells started on the south and swung west and then due north up the side of the railroad track. There was never a gusher on the new field but Spindletop had again sparked the imagination of the wildcatters. Its example would soon result in even greater discoveries.

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Verbal Boundary Description

exploration, the resource is consumed. The boundary has still been drawn to include the entire extent of both oil discoveries to historically document the rather small area which revolutionized the oil industry. Because of the circular nature of the dome structure, the boundary is described as a circle with UTM 15.396400.3321330 as the center point with a radias of 3/4 mile which encloses the entire Spindletop mound and oil field.