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DEPARTMENT OF NATURAL RESOURCES

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OIL AND GAS ACTIVITIES IN FLORIDA, 1967

By
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PRODUCTION

SUNOCO-FELDA OIL FIELD

The Sunoco-Felda oil field as shown in figure 1, is the newer of Florida's two currently producing fields. It was discovered by the Sun Oil Company on October 9, 1964, and is located in Hendry and Collier counties of southern Florida. The structural configuration of the field is shown on figure 2; the character on representative induction-electrical logs of the marker contoured is depicted on figure 3, a cross section. As of December 31, 1967 this field contains 26 producing wells drilled on 160-acre spacing, and it appears that nine dry holes have mostly defined the limits of the field. In 1967 there was no field drilling.

It is possible that additional fields are present along a northwest-southeast trend of which the Sunoco-Felda field is a part. At the present time there is insufficient control to definitely determine if the Sun, No. 1 Red Cattle Company "B" well located 3½ miles northwest of the main part of the Sunoco-Felda field, and completed August 2, 1966 with an initial production of 56 BOPD, is an extension of the original field, or is a new field discovery.

The Sunoco-Felda field produces on pump from the microfossiliferous (miliolitic) limestone of the Roberts zone, which is reached at a depth of about 11,460 feet, and which occurs about 60 feet below the top of the Sunniland Limestone of Lower Cretaceous (Trinity) age. A large percentage of salt water is yielded by up-gradient producing wells to the north, where the porosity of the Roberts zone is reported by the operator to be poor. Woodson R. Oglesby (1967, p. 278) has suggested that hydrodynamic factors may have contributed to the oil accumulation in the Sunoco-Felda field.

The yield of the better wells of the field ranges from about 230 to 285 BOPD, with 19 and 11 percent, respectively, of the total fluid recovery being salt water. The gravity of this oil is about 24 degrees API. Table 1 shows monthly and cumulative oil production from the field for the four-year period, 1964-1967, inclusive. In association with the 1967 production of 982,807 barrels of oil (table 1), the field also produced 1,184,055 barrels of salt water, which was 55 percent of the total fluid yield.

SUNNILAND OIL FIELD

The Sunniland oil field (fig. 1), discovered in 1943 and operated by the Humble Oil and Refining Company, is located in Collier County, and about 18 miles south of the Sunoco-Felda field. The structural configuration of the field is shown on figure 4. The short-lived Forty Mile Bend field is the only additional discovery of a field similar to the Sunniland field.

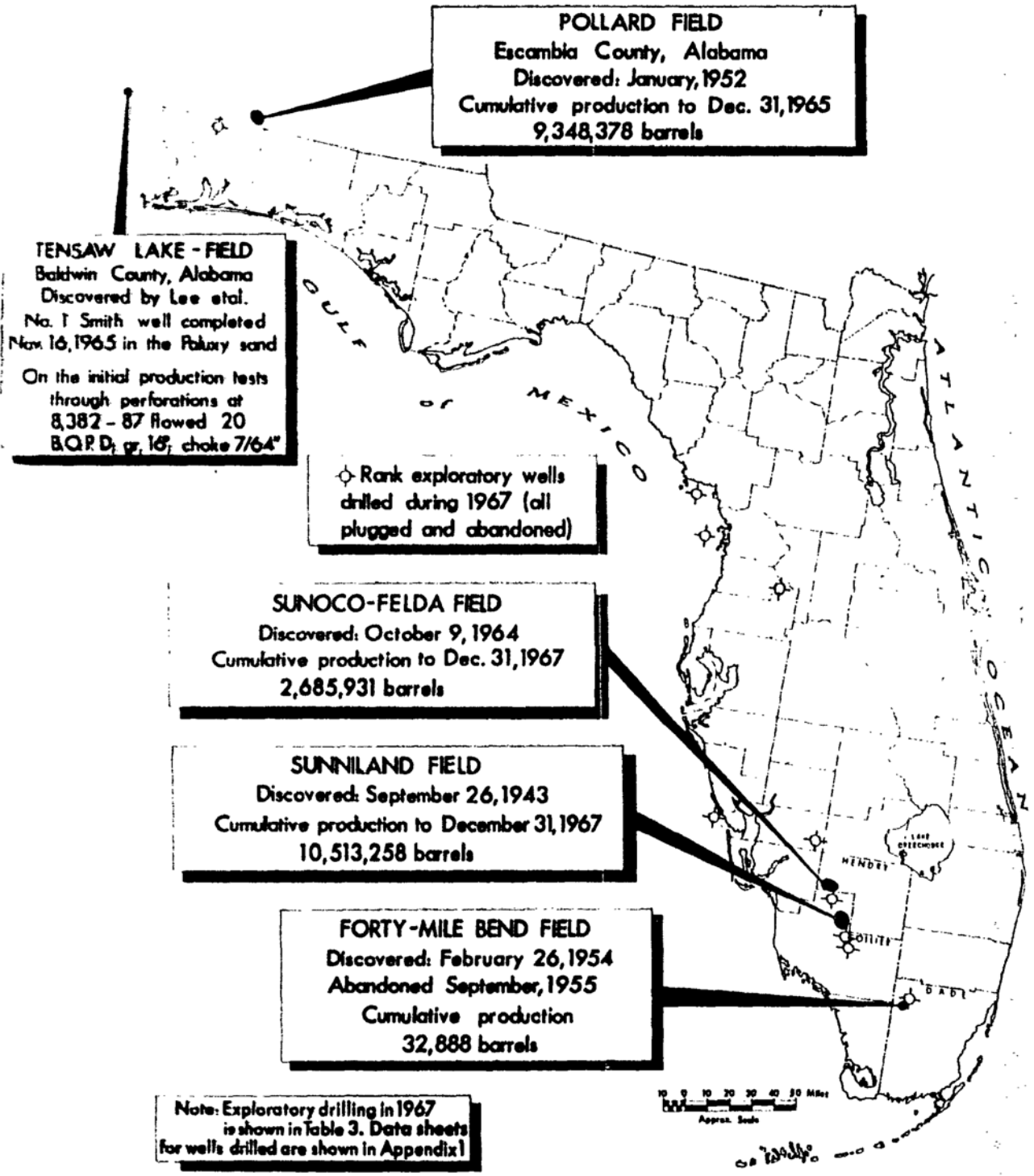


Figure 1. Florida petroleum exploration and production, 1967.

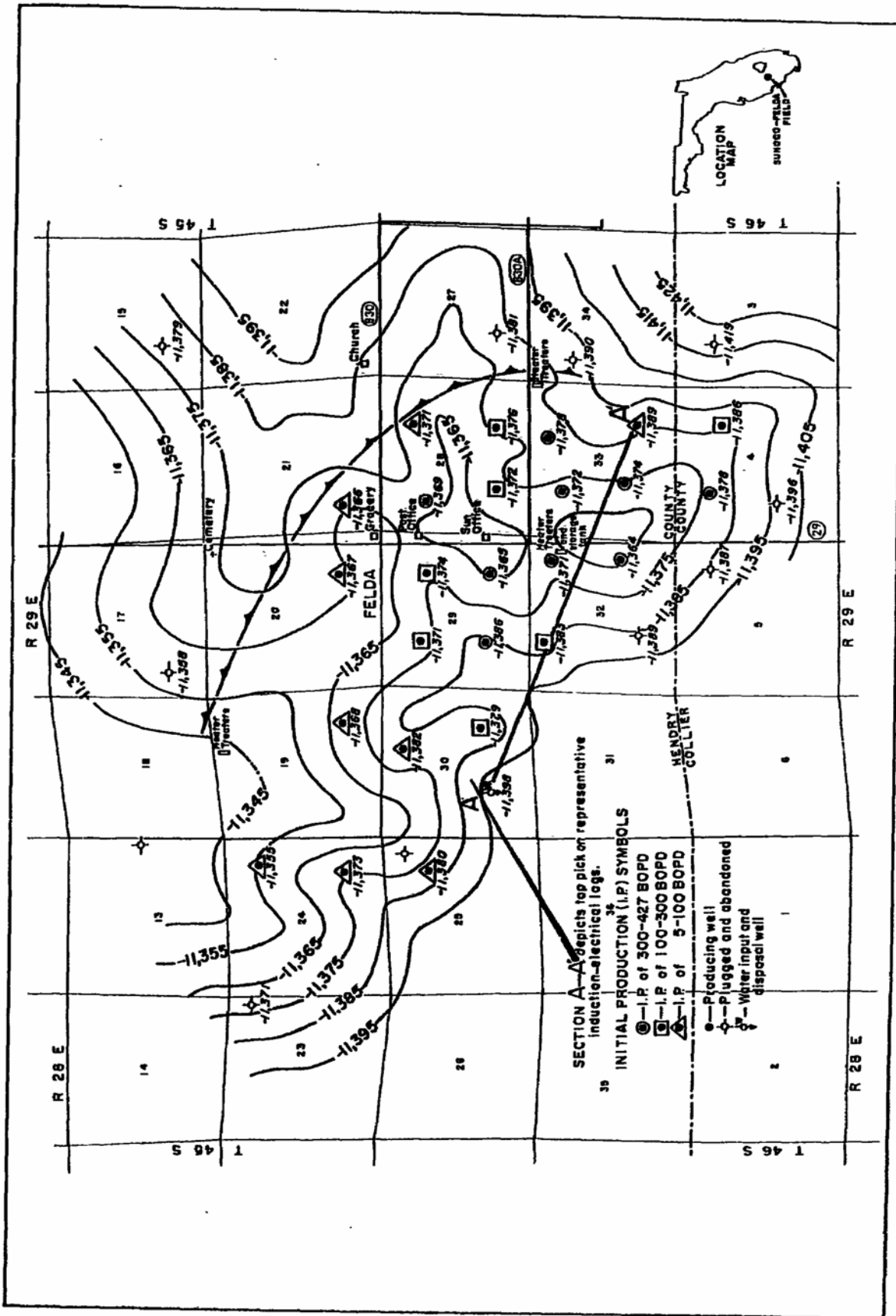
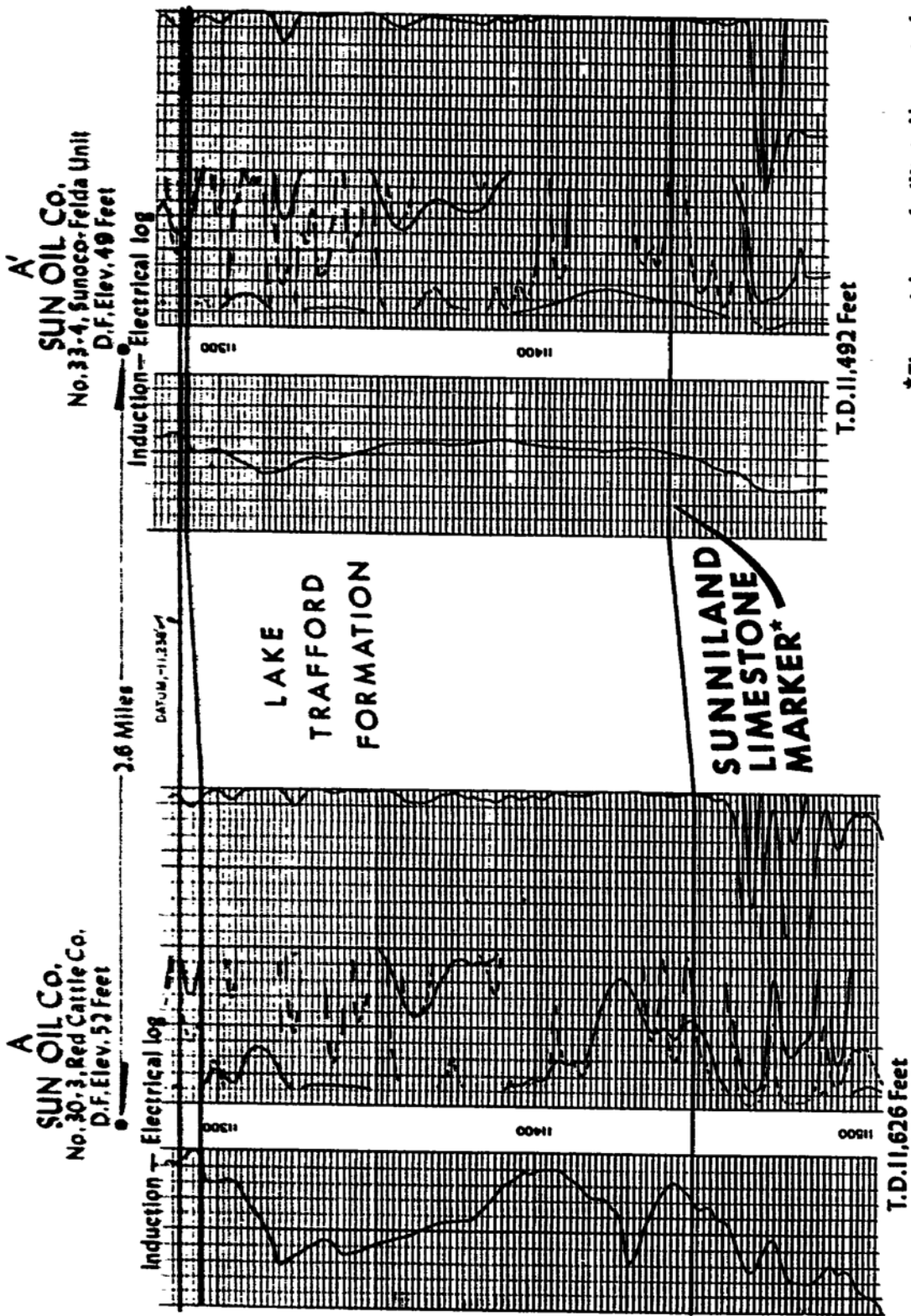


Figure 2. Structure map on top of the Sunniland Limestone, Sunoco-Felda field, Hendry and Collier counties, Florida.



* These picks are facilitated by control from gamma ray logs

NOTE: Location of this section shown on Figure 2

Figure 3. Section A-A', depicting the character of the Sunniland Limestone marker, Sunoco-Feida field, Hendry and Collier counties, Florida.

Table 1. Monthly and cumulative oil production, Sunoco-Felda field, 1964-1967, inclusive.

Month	Barrels			
	1964	1965	1966	1967
Cumulative total, preceding year				1,703,124
January		19,222	706,218	89,463
February		11,323	92,166	80,077
March		12,358	87,935	88,105
April		21,029	94,935	86,414
May		28,654	88,100	86,933
June		45,076	82,397	84,032
July		56,418	79,879	87,264
August		64,327	81,718	80,995
September		72,256	79,776	78,436
October	2,202	77,646	73,670	78,468
November	7,322	103,047	76,327	73,517
December	9,698	97,520	76,696	69,103
Annual Total	19,222	97,342	83,307	982,807
Cumulative total, as of Dec. 31	19,222	686,996	996,906	2,685,931

Field discovered Oct. 9, 1964

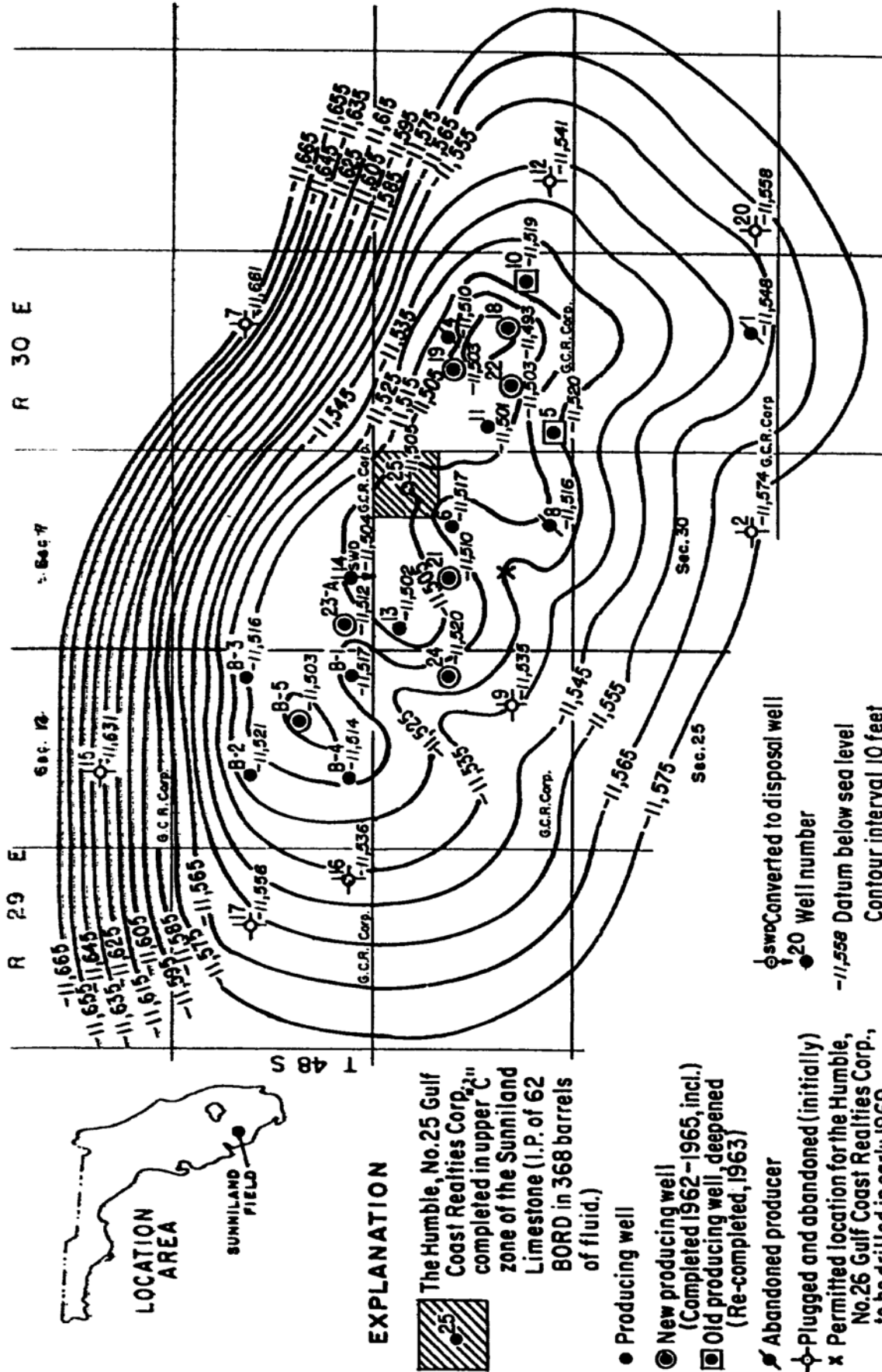


Figure 4. Structure map on top of the Sunniland Limestone marker, Sunniland field, Collier County, Florida.

Production in the field is obtained from calcareous rock containing mostly disoriented macrofossils (rudistids) which is reached at a depth of about 11,500 feet. The trap is a gentle anticline associated with a biostromal reef. Productive zones begin at the top of the Sunniland Limestone and extend to a depth of about 65 to 75 feet lower in the section; the lowermost of these zones is correlative with the productive Roberts zone of the Sunoco-Felda field.

Production from the better wells in the Sunniland field ranges from about 180 to 220 BOPD, with 27 and 37 percent, respectively, of the total fluid recovery being salt water. The gravity of this oil ranges from 19 to 26 degrees API. Table 2 shows monthly and cumulative oil production from the field for the seven-year period, 1961-1967, inclusive. Along with the 1967 production of 585,374 barrels of oil (table 2), the field also produced 1,646,215 barrels of salt water, which is 74 percent of the total fluid yield.

It is significant that the oil production in the years following 1961 increased markedly over the 1961 figure (table 2). This reflects the opening to production, beginning in 1962, of deeper zones (C₂ and D) of the field in a total of nine wells (fig.4). The bottom of zone D is only about 65 to 75 feet below the top of the Sunniland producing interval.

At this time it is thought that 30 million barrels of oil probably is a reasonable figure for the initially recoverable reserves of the field.

Humble has completed drilling operations on their No. 25 Gulf Coast Realties Corporation well, which is the only field test drilled in 1967. This well is located near the northeastern edge of the field. On December 15, 1967 an induction-electrical log was recorded for this hole, and it has been released by the company. The structural contours of the field, as shown in figure 4, have been revised to reflect this additional control. It will be noted that the No. 25 well has a rather favorable structural elevation. As of the end of the year, the operator was conducting testing operations to determine the productivity of this well. Since this is an edge location, it is possible that the relatively favorable structural elevation will not be a guarantee that the parts of the Sunniland producing interval with a strong water drive will produce.

EXPLORATION

EXPLORATORY DRILLING

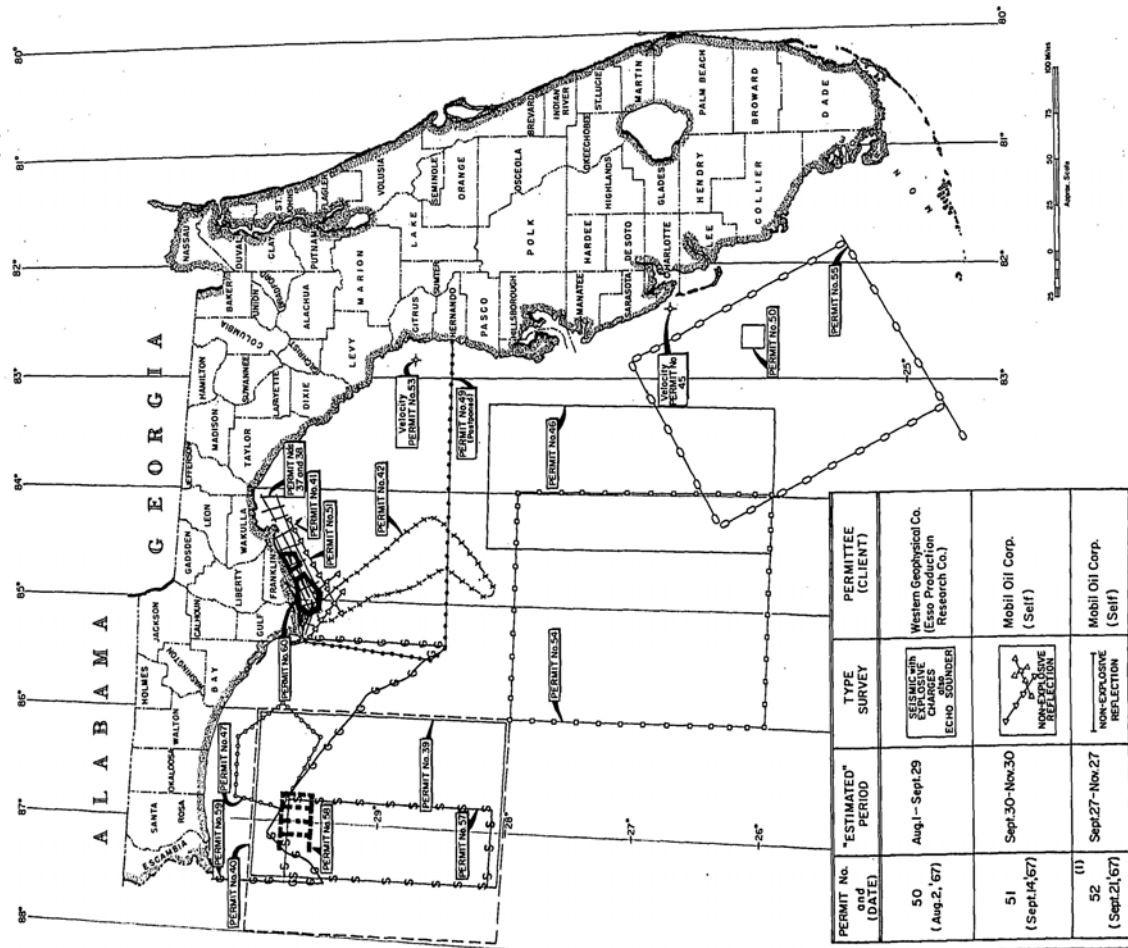
As recapitulated in table 3, a footage of 98,432 feet was drilled in 11 exploratory tests in 1967, including an outpost well to the abandoned Forty Mile Bend field. All of these wells have been plugged and abandoned. Well data sheets for these test are presented in appendix 1.

GEOPHYSICAL ACTIVITY

The interest in Florida offshore geophysical activity which began in 1964 continues to the present time. In 1967, as shown by figure 5, a total of 23 permits were issued to 8 major oil companies and 2 independents for offshore geophysical work. Work permitted was: 15 non-conventional seismic surveys

Table 2. Monthly and cumulative oil production, Sunniland field, 1961-1967, inclusive.

	Barrels						
Month	1961	1962	1963	1964	1965	1966	1967
Cumulative total, preceding year							
January	6,495,456	6,869,696	7,284,369	7,748,011	8,348,697	9,125,916	9,927,884
February	33,324	38,584	32,756	38,270	66,252	83,533	56,138
March	29,977	33,002	36,365	34,807	60,881	72,703	48,766
April	32,093	36,866	39,211	36,285	58,950	76,410	53,733
May	29,513	36,082	38,539	33,785	60,323	72,022	50,845
June	30,550	33,341	41,631	41,116	63,879	71,173	50,394
July	29,359	32,218	40,927	46,911	62,209	66,597	50,276
August	30,195	34,042	39,965	56,766	58,528	65,540	50,439
September	30,400	35,074	39,729	56,872	60,163	63,784	49,196
October	31,718	34,067	36,291	53,552	61,064	57,427	44,525
November	28,520	34,972	40,169	64,174	72,492	61,159	47,569
December	30,719	30,570	39,057	68,849	68,500	55,624	42,780
	37,872	35,855	39,002	69,299	83,978	55,996	40,713
Annual total	374,240	414,673	463,642	600,686	777,219	801,968	585,374
Cumulative total as of Dec. 31	6,869,696	7,284,369	7,748,011	8,348,697	9,125,916	9,927,884	10,513,258



PERMIT No. and (DATE)	*ESTIMATED* PERIOD	TYPE SURVEY	PERMITTEE (CLIENT)
53 (Oct. 17, 1967)	Oct. 20 - Dec. 31	Velocity survey at the Mobil No. 1-A S/L Lease, 224-A Farm A well	Mobil Oil Corp. (Self) Contractor: Century Geophysical Co.
54 (Oct. 24, 1967)	Nov. 2 - Nov. 30	SPARKER	Shell Oil Co. (Self)
55 (Nov. 15, 1967)	Nov. 25, '67 - Jan. 15, 1968	VIBROSEIS	Roy Geophysical Div., Mandrel Industries Inc.
56 (Nov. 15, 1967)	Nov. 15 - Dec. 1	VIBROSEIS	Roy Geophysical Div., Mandrel Industries Inc.
57 (Nov. 28, 1967)	Nov. 30, '67 - Jan. 4, '68	SPARKER and SHALLOW CORING	Shell Oil Co. (Self)
58 (Nov. 29, 1967)	Dec. 2, '67 - Jan. 30, '68	VIBROSEIS	Olympic Geophysical (Continental Oil)
59 (Nov. 29, 1967)	Dec. 1, '67 - Feb. 28, '68	VIBROSEIS	Selismograph Service Co. (Gulf Oil Corp.)
60 (Dec. 11, 1967)	Jan. 1, '68 - April 30, '68	NON-EXPLOSION REFLECTION	Mobil Oil Corp. (Self)

FOOTNOTE

(1) These permits authorized single seismic lines. It is the policy of the Division of Geology to describe the location of such lines in general terms, rather than by plotting them.

GENERAL LOCATION and DESCRIPTION of OFFSHORE SEISMIC LINES

- Five lines, 00, 205, 265, 340 and 365 miles long, respectively, surveying the Federal water bottoms offshore from various parts of the east coast, traversing the continental platform, and the Blake plateau, escarpment and basin.
- Two lines, each about 25 miles long, located in Federal waters approximately 50 miles seaward of Monroe County.
- One line approximately 30 miles long, located in State and Federal waters offshore from Levy County.
- One line approximately 30 miles long, located in State waters paralleling the coastline of Charlotte and Lee Counties.
- Four lines: Three in State and Federal waters seaward off St. Johns County (65 miles long), Volusia County (50 miles long), Brevard County (45 miles long). One line intersecting in Federal waters (190 miles long).

PERMIT No. and (DATE)	*ESTIMATED* PERIOD	TYPE SURVEY	PERMITTEE (CLIENT)
50 (Aug. 2, '67)	Aug. 1 - Sept. 29	SEISMIC WITH EXPLOSIVE CHARGES AND ECHO SOUNDER	Western Geophysical Co. (Contractor: Gulf Research Co.)
51 (Sept. 14, '67)	Sept. 30 - Nov. 30	NON-EXPLOSION REFLECTION	Mobil Oil Corp. (Self)
52 (Sept. 21, '67)	Sept. 27 - Nov. 27	NON-EXPLOSION REFLECTION	Mobil Oil Corp. (Self)

Figure 5. Florida offshore geophysical permits, 1967.

Table 2. Monthly and cumulative oil production, Sunniland field, 1961-1967, inclusive.

TABLE 3. EXPLORATORY FOOTAGE FOR 1967. TOTAL: 98,432 FEET.

County	Company	Well No.	Landowner	New-Field Wildcat Wells	Offset Wells	Total Exploratory Footage	Results	Comments
A). WILDCAT WELLS								
Charlotte	Mobil Oil Corp.	1	Babcock Ranch "A"	12,500			P & A	Slight oil show in tight Sunniland limestone Permitted depth, 17,000
Charlotte Offshore	Mobil Oil Corp.	1	Fla. State Lease 224-B	12,931			P & A	
Citrus Offshore	Mobil Oil Corp.	1-A	Fla. State Lease 224-A, Farm A	6,041			P & A	Primarily a Tuscaloosa test
Collier	Chambers, Kennedy and Hibbert	1	Anchor Investment Corp.	11,757			P & A	Show in rather chalky section of the Upper Sunniland limestone, 11,573-11,575½
Collier	Humble Oil	1	Price-Improvement	12,925			Testing Sunniland limestone	Planned as Sunniland limestone and deeper Cretaceous test. Set 5½" casing in 12½" hole at 12,305'
Collier	McCalloch Oil Corp. of Calif.	1	Collier Development Corp.	11,810			Temp. ab'd.	Slight oil show in porosity in fairly hard calcarenite at 11,596" (Sunniland and limestone, prob. Roberts zone). Tools lost
Hernando	Thayer-Davis	1	Hill	1,404			P & A	Tools lost
Hernando	Thayer-Davis	2	Hill	6,209			P & A	Primarily a Tuscaloosa test
Levy Offshore	Mobil Oil Corp.		Fla. State Lease 224-A, Farm B	4,735			P & A	Primarily a Tuscaloosa test
Santa Rosa	Young Oil Co.	1	Thomas	6,610			P & A	Tuscaloosa test
				TOTAL WILDCAT WELL FOOTAGE	86,922			
B). OUTPOST WELL (to abandoned Forty Mile Bend field)								
Dade	RK Petroleum Co.	1	Fla. State Lease 1930-1939S		11,510		P & A	Cored shell reef, 11,356-358" and 11,366-378" with good perm. and stain in upper interval, Sunniland limestone.
				TOTAL OUTPOST WELL FOOTAGE	11,510			
				TOTAL EXPLORATORY WELL FOOTAGE, 1967	98,432			

*Classification when drilling commenced. This classification follows guidelines from Labeo, Frederick H. (AAPG, 1944, vol. 29, table 1, p. 702)

(those which did not use dynamite as an energy source), 4 conventional seismic surveys, 2 velocity surveys, and 12 gravity surveys. The bulk of this activity will be in State and Federal waters offshore from the west coast of the State in the Gulf of Mexico, though some will be in Atlantic water bottoms and mostly over Federal acreage.

In 1967 there were 51 crew weeks of geophysical activity performed on the Florida mainland, as follows: 24 in Collier County, 5 in Broward County, 5 in Lee County, 4 in Charlotte County, 4 in Dade County, 4 in Hendry County, 4 in Palm Beach County, and 1 in Santa Rosa County.

LAND

Offshore State leases in 1967 totaled 3,910,460 acres, all under lease to the Coastal Petroleum Company and located offshore from the west coast of Florida.

About 3,700,000 acres on the Florida mainland were held under oil and gas lease during 1967; the corresponding figure for 1965 was 3,075,219 acres. Most of this leased acreage is located in southern Florida, with 15 percent in Collier County, 11 percent in Hendry County, and 9 percent in Palm Beach County. Leases on this acreage were purchased by 10 major oil companies, with about 60 percent going to Humble, 11 percent to Texaco, 10 percent to Amerada, and 8 percent to Sun.

In 1963 about one million acres of the State's water bottoms offshore from northwestern Florida and in Choctawhatchee Bay were restricted by the State from oil and gas leasing at the request of the U.S. Defense Department as shown on figure 6. This restriction was based upon the premise that offshore drilling in these areas would interfere with testing delicate sound detection equipment, and also hamper weapons testing. In March, 1967, after receiving the approval of the Defense Department, the State re-opened to oil, gas and mineral leasing about half of the originally restricted area. As shown on figure 6, all leasing restrictions were removed from most of the area re-opened, but part of the re-opened area remained subject to certain defense activity limitations in connection with leasing.

PIPELINE FACILITIES

The oil transmission lines (fig. 7) operated by the Sunniland Pipeline Company transport about 4,100 barrels of oil a day over the 80-mile route from the Sunoco-Felda and Sunniland fields to the terminal at Port Everglades. This volume of crude is the equivalent of 30 oil transport truck loads. Use of the pipeline has resulted in a saving of as much as 20 cents a barrel as compared with movement by truck, thus reducing the transportation cost by more than half.

The facility actually consists of two pieces of welded joint steel pipe: a six-inch diameter pipe from Sunoco-Felda to Andytown, and a four-inch pipe from Sunniland to Port Everglades. The two pipes extend side-by-side from Sunniland to Andytown, and over this distance they are "looped", or serve to tandem. When the "looped" line narrows to the four-inch pipe at Andytown, the

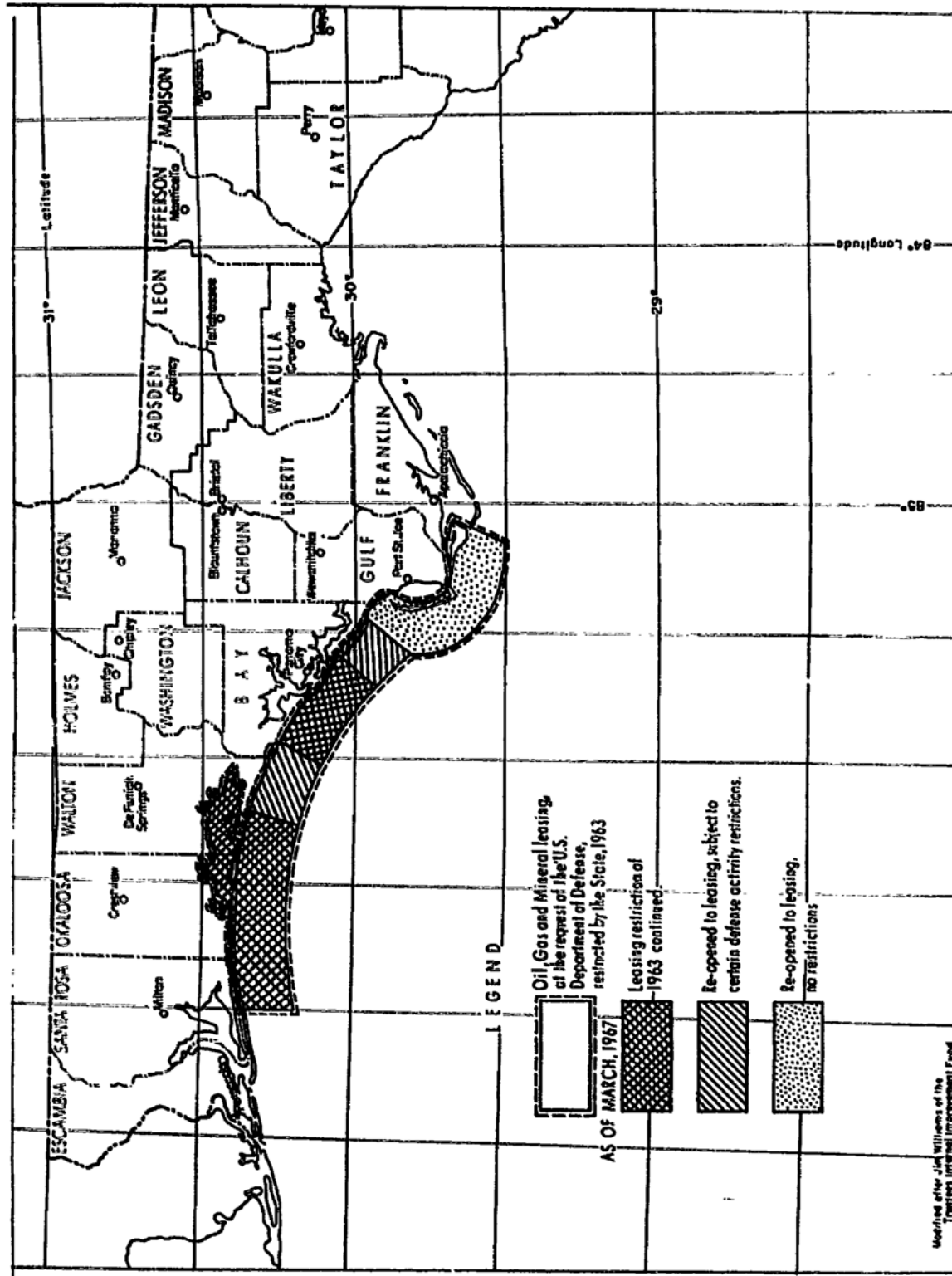


Figure 6. State acreage, located offshore from northwestern Florida, made available for leasing, March, 1967.

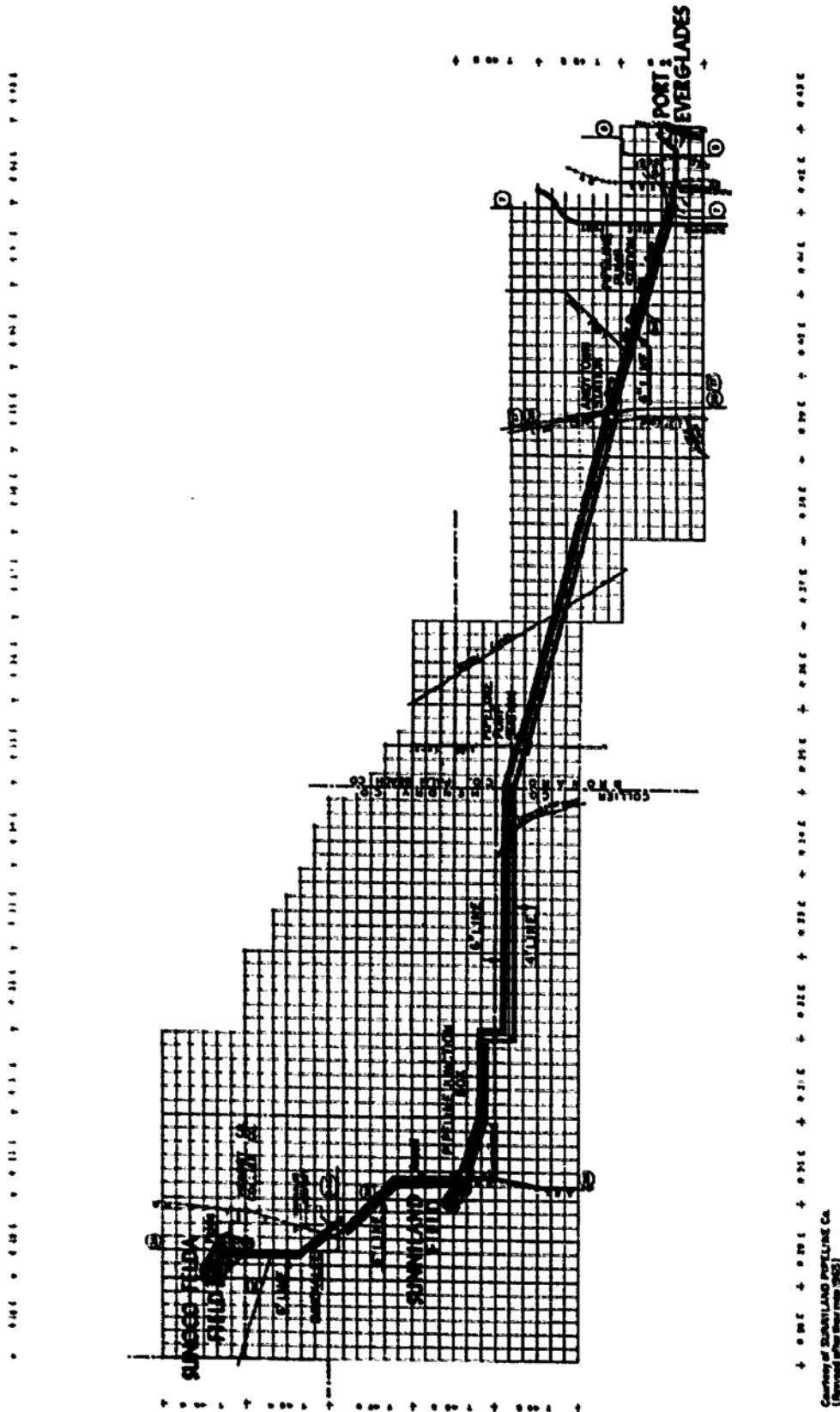


Figure 7. Map showing the location of the Sunniland Pipeline Company oil transmission lines.

Courtesy of SUNNIGS PIPELINE CO.
[Revised after their map 1955]

oil continues eastward to the terminal at Port Everglades with increased pressure and velocity. The design capacity of the system if the six-inch line were extended all the way to the port would be 8,500 BOPD, which would approximately double the present transmission capacity.

There are two booster stations along the line. The first, used in normal operation, is between Sunniland and Andytown. The second, not used in normal operation, is between Andytown and Port Everglades.

At Sunniland field the Sunoco-Felda and Sunniland crudes are commingled at a pipeline junction box. When the oil reaches Port Everglades, it is reconsigned to the original owners.

The pipelines have been factory-wrapped with a protective coating, and are buried approximately 24 inches below ground. To prevent corrosion, cathodic protection is provided by impressing a DC current into the lines at Sunniland Junction, interceptor canal, and Andytown. The company utilized about 40 anodes across the conservation areas.

The pipelines have been field tested to a pressure of 1,000 psi, with an operational maximum pressure limitation of 750 psi through the conservation areas of the Central and Southern Florida Flood Control District. The lines presently are being operated at about 450 psi, giving an approximate flow rate of 3.7 barrels per minute.

A volume-at-temperature measuring system measures flow rates at Sunniland Junction and Port Everglades, respectively. Any difference between these rates becomes apparent by means of a telemetry system. The entire pipeline is automatically shut down after 15/100 percent of the hourly flow rate, or 40 gallons, is lost; repair crews in swamp buggies and air boats can patch the line in a matter of hours. The operation of the pipeline also is automatically discontinued if a malfunction develops in either the measuring system, or the telemetry system.

RULES AND REGULATIONS

In 1967 there were no changes in the legal code governing the conservation of oil and gas in Florida. As an administrative action, however, the State required that the Mobil Oil Corporation post a \$500,000 bond to assure performance of remedial action in the unlikely event that the beaches should be contaminated during the drilling of three tests located offshore from the west coast of Florida. Also, public concern for beach protection motivated the Department of Natural Resources to assign an agent to witness the drilling of these wells.

The rules and regulations for drilling of oil wells in Florida, and administrative oil and gas forms 1 thru 12, closely conform with the pattern suggested by the Interstate Oil Compact Commission. This material can be obtained without charge by writing to: Administrator, Oil and Gas Section, Bureau of Geology, Department of Natural Resources, P.O. Drawer 631, Tallahassee, Florida 32302.

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1944 *Classification of exploratory drilling for petroleum (part II, of classification of exploratory drilling and statistics for 1943):* Am. Assoc. Petroleum Geologists Bull., v. 28, no. 6, p. 701-711, 2 tables.

Oglesby, Woodson R.

1967 *Gravity profile of the south Florida shelf, in Trans. Gulf Coast Association of Geological Societies (J.R. Sandidge, ed.),* v. 17, p. 278-286.

APPENDIX I

WELL DATA SHEETS, 1967

CHARLOTTE COUNTY

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
W-8079	WCh-425-27E-9 aa	09-015-10001	Mobil Oil Corp.	1	Babcock Ranch "A"	-Dec. 10, 1966 -Jan. 31, 1967	12,500	55 DF

Location: Sec. 9, T42S, R27E (660 feet FWL and 660 feet FNL of the section)

Miscellaneous: This well was drilled on acreage farmed-out from the Gulf Oil Corporation, and the location was selected after performance seismic and core drill programs

Subsurface record:

1. Plugged and abandoned
2. Casing program
 - 20-inch at 110 feet
 - Set 13 3/8 - inch at 1,185 feet with 790 sacks of cement
 - Set 9 5/8 - inch at 3,711 feet with 250 sacks of cement
3. Plugging details
 - 11,124 - 11,324 feet, set 150 sacks of cement
 - 3,611 - 3,811 feet, set 75 sacks of cement
 - 1,556 - 1,775 feet, set 75 sacks of cement

The mud-laden fluid used below and between the plugs was 9-pound gel mud the viscosity of which was 40.
4. Logs: Induction-Electrical, 110-12,491 feet; Sonic-Gamma Ray, 110-12,484 feet; Formation Density, 8,000-12,466 feet.
5. Structural tops
 - Sunniland Limestone 11,130 (-11,076) feet
6. Conventional core at 11,185-11,213½ feet. Contains slight show in tight limestone
7. DST: none

CHARLOTTE COUNTY, OFFSHORE

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
W-8139		09-683-10014	Mobil Oil Corp.	1	Fla. St. Lse. 224-B	-March 21, 1967 -May 12, 1967	12,931	21 DF

Location: Latitude 26° 50.3 feet North; Longitude 82° 24.3 feet West

Miscellaneous: The permitted depth for this well was 17,000 feet

Subsurface record:

1. Plugged and abandoned
2. Casing program
 - 33-inch at 153 feet
 - Set 20-inch in 28-inch hole at 303 feet with 500 sacks of common cement
 - Set 13 3/8-inch in 17 1/2-inch hole at 1,387 feet with 775 sacks of common cement
 - Set 10 3/4-inch in 12 1/2-inch hole at 3,971 feet with 200 sacks of common cement
3. Plugging details
 - 11,800 - 12,100 feet, set 150 sacks of cement
 - 10,800 - 11,100 feet, set 150 sacks of cement
 - 3,877 - 4,077 feet, set 100 sacks of cement
 - 100 - 200 feet, set 50 sacks of cement
4. Logs: Induction-Electrical, 303-12,921 feet; Compensated Formation Density, 8,000-12,921 feet; and Borehole Compensated Sonic, with Caliper, 303-12,913 feet.
5. Conventional cores at 10,930-10,957 feet; 10,957-10,987 feet; 10,987-11,026 feet; and 12,924-12,931 feet.
6. DST: None

CITRUS COUNTY, OFFSHORE

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
W-		09-683-20001	Mobil Oil Corp.	1-A	Fla. St. Les 224-A	-Oct, 7, 1967 -Nov, 27, 1967	6,041	11 DF

Location: Latitude 28° 50'00" North; Longitude 82° 49'42" West. This is S 69° 05'59" W a distance of 46,752.92 feet from USC and GS "Mullet", and N 51° 55'14" W a distance of 35,551 feet from USC and GS "Homasassa Point".

Subsurface record:

1. Plugged and abandoned
2. Casing program
 - Set 13 3/8-inch in 17 1/2-inch hole at 112 feet with 170 sacks of common cement with 2% CaCl₂
 - Set 9 5/8-inch in 12 1/4-inch hole at 1,198 feet with 230 sacks of common cement plus 16% gel, 2% CaCl₂, and 1/4-pound floccule. This was followed by 100 sacks of common cement, with 1/4-pound floccule.
3. Plugging details
 - 1155-1288 feet, set 50 sacks of cement
 - 60- 193 feet, set 50 sacks of cement
 - Left top of 9 5/8-inch and 13 3/8-inch casing strings 10 feet below the mud line
4. Logs: Induction-Electrical, 1206-6020 feet; Borehole Compensated Sonic, 1206-6032 feet; Sidewall Newtonron Porosity, 20-6035 feet.
5. Conventional core at 6,030-6,041 feet

COLLIER COUNTY

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
W-8321	WCr-49S-31E-20 a	09-021-20003	Chambers-Kennedy-Hibbert	1	Anchor Investment Corporation	-Sept. 14, 1967 -Nov. 3, 1967	11,757	35

Location: Section 20, T49S, R31E (1486 feet FNL and 1314.5 feet FWL of the section)

Subsurface record

1. Plugged and abandoned
2. Casing record
 - Set 13 3/8-inch at 1,365 feet
 - Set 9 5/8-inch at 3,961 feet
3. Plugging details
 - 11,550-11,650 feet, set cement plug
 - 3,911- 4,011 feet, set cement plug
 - Recovered 2,500 feet of 9 5/8-inch casing
 - 1,315- 1,515 feet, set cement plug
 - Welded 13 3/8-inch casing at the surface
4. Logs: Induction-Electrical, 3965-11,757 feet
5. Structural tops
 - Sunniland Limestone 11,576 (-11,541) feet
6. Conventional cores: No. 1 at 11,530-11,575 feet; No. 2 at 11,575-11,600 feet; and No. 3 at 11,600-11,637 feet.
 Core at 11,573-11,575 1/2 feet contained a show in rather chalky section of the upper Sunniland Limestone.
 The remainder of the Sunniland Limestone above definite salt water was tight.

COLLIER COUNTY

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	Commenced - Completed	Total Depth (feet)	Elevation (feet)
W-8256	Cr-485-30E-35 cc	09-021-20002	Humble	1	Price- Improvement Fund	-July 12, 1967 -Dec. 31, 1967	12,925	35

Location: Section 35, T48S, R30E (1320 feet FWL, and 1717 feet FSL of the section)

Miscellaneous: It is understood that the operator intended to drill this test to a depth of about 17,000 feet or more. For this reason a 12 1/2-inch hole was drilled to 12,305 feet, in preparation for the setting of a 9 5/8-inch string of pipe to that depth. Humble proposed to utilize this unusually long string of 9 5/8-inch casing to protect the producing Sunniland Limestone reservoir of the Sunniland field, located 3 1/2 miles to the northwest. However, it was decided to terminate the hole at the final total depth of 12,925 feet, and consequently, the 9 5/8-inch casing was never run.

Subsurface record:

1. Plugged and abandoned
2. Casing program
 - Set 30-inch in 34-inch hole at 201 feet with 650 sacks of common cement
 - Set 20-inch in 26-inch hole at 1,396 feet with 1700 sacks of common cement
 - Set 13 31/8-inch in 17 1/2-inch hole at 4,004 feet with 1200 sacks of common cement
 - Set 5 1/2-inch in 9 7/8-inch hole at 12,305 feet with 920 sacks of common cement
3. Plugging details
 - Squeezed 50 sacks of slow set cement and 9 barrels of slurry through perforations at 11,452 feet; tagged cement at 11,462 feet.
 - Spotted 50 sacks of common cement and 10 barrels of mixed fluid in 5 1/2-13 3/8 annulus.
 - Spotted 50 sacks of common cement, and 15 barrels of mixed fluid in the 13 3/8-20 annulus
 - Cut and recovered 5 1/2-inch casing

COLLIER COUNTY (cont'd)

Set 30-foot cement plug in top of 13 3/8-inch casing, and welded steel plate on the top of it.

4. Logs: Induction-Electrical, 1398-4011
5. Structural tops:
Sunniland Limestone
6. Conventional cores
7. DST:

COLLIER COUNTY

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
	Cr-46S-29E-20 dd	09-021-20001	McCullough Oil Corp.	1	Collier Develop. Corp.	-May 19, 1967 -July 6, 1967	11,810	52 DF

Location: Section 20, T46S, R29E (660 feet FSL, and 660 feet FEL)

Subsurface record:

1. Plugged and abandoned
2. Casing record
 - Set 20-inch in a 24-inch hole at 85 feet with 150 sacks of regular cement
 - Set 13 3/8-inch in a 17 1/4-inch hole at 1,310 feet with 650 sacks of Class "A" cement
 - Set 9 5/8-inch in a 12 1/4-inch hole at 3,600 feet with 250 sacks of Class "A" cement
3. Plugging details
 - well temporarily abandoned July 6, 1967
4. Logs: Induction-Electrical, 3,597-11,810 feet; and Borehole Compensated Sonic, with Caliper, 8,200-11,805 feet.
5. Structural tops:
 - Sunniland Limestone 11,527 (-11,475) feet
6. Conventional Cores at 11,572-11,602 feet. Consist almost entirely of hard, tight calcarenite and calcilutite. However, minor porosity occurred at 11,593 1/2-11,594 (1 foot) in moderately hard calcarenite. Also, fairly vugular and pinpoint porosity occurred in moderately hard calcarenite at 11,596-11,597 feet (1 foot); there was slight oil staining in the upper part of this interval.

COLLIER COUNTY (cont'd)

7. DST: No. 1

Interval 11, 594-11, 602 feet
 Chokes, 1/4-inch bubble hose at surface; 5/8-inch at bottom
 Surface pressure: Slight to fair blow throughout test (0 to 1 1/2 psi)
 Water cushion: 2,000 feet
 Tool oper: 3 hours
 Recovery
 1906 feet of salt water (128,000 ppm chloride)
 Pressures (psi)

	Top guage	Bottom guage
Initial mud	5,309	5,395
Initial closed-in (after 30 minutes)	4,907	4,954
Initial flow		951
First flow period	902	1,040
Second flow period	992	
Final flow		1,006
First flow period	965	1,872
Second flow period	1,819	4,761
Final closed-in (after 1 hour)	4,714	5,351
Final mud	5,303	

No. 2

Interval 11, 719-11, 810
 Chokes, 1/4-inch bubble hose at surface; 5/8-inch at bottom
 Surface pressure: 0
 Water cushion: 2,000 feet
 Recovery
 2,000 feet of water cushion
 Pressures (psi)

COLLIER COUNTY (cont'd)

Initial mud	5,435
Initial closed-in (after 30 minutes)	2,330
Initial flow	
First flow period	1,004
Second flow period	1,006
Final flow	
First flow period	1,004
Second flow period	1,006
Final closed-in (after 1 hour)	1,949
Final mud	5,418

DADE COUNTY

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
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W-8131	WDD-545-36E-18 C	09-025-20001	RK Petroleum 1 Co.		St. Lease 1939-1939S	-April 25, 1967 -May 27, 1967	11,510	24 DF
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Location: Sec. 18, T54S, R36E (1320 feet east, and 920 feet north of the SW corner of the section)

Subsurface record:

1. Plugged and abandoned

2. Casing program

- Set 20-inch in 24-inch hole at 123 feet with 100 sacks of cement
- Set 13 3/8-inch in 17-inch hole at 1,083 feet with 500 sacks of cement
- Set 9 5/8-inch in 12 1/4-inch hole at 3,838 feet with 350 sacks of cement

3. Plugging details

- Set 100 sacks of cement at 11,510-11,310 feet (200 feet)
- Set 80 sacks of cement at 3,938-3,738 feet (200 feet)
- Set 10 sacks of cement at 0-30 feet (30 feet)
- Set 25 sacks of cement in 13 3/8-9 5/8 annulus (75 feet)

4. Logs: Induction-Electrical 3,835-11,492 feet

5. Structural tops

Sunniland Limestone 11,333-11,309 feet

6. Conventional Core at 11,332-11,378 feet. Included in the cored interval were shell reefs at 11,356-11,358 feet and 11,366-11,378 feet. Both reefs were permeable; the upper reef contained heavy oil stain.

7. DST

Interval, 11,480-11,510 feet
Chokes, 1/4-inch at surface; 5/8-inch at bottom
Tool open, 8 hours

DADE COUNTY (cont'd)

	Top gauge	Bottom gauge
Recovery		
5 feet of oil		
2,000 feet of water cushion		
372 feet of salt water		
Pressures (psi)		
Initial mud	5,283	5,312
Initial closed-in (after 30 minutes)	4,726	4,751
Initial flow		
First flow period	919	953
Second flow period	936	970
Final flow		
First flow period	921	953
Second flow period	1,056	1,085
Final closed-in (after 1 hour)	4,606	4,628
Final mud	5,277	5,304

HERNANDO COUNTY

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
W-8140	Hr-225-21E-32 dc	09-053-10002	Thayer-Davis 1		Hill	-Dec. 27, 1966 -May 31, 1967	1,404	73 Ground

Location: Sec. 32, T22S, R21E (SE quarter of the SW quarter of the section)

Subsurface record:

1. Junked and abandoned
2. Casing record: Set 16-inch at approximately 150 feet
3. Plugging details
This hole was drilled and plugged, with a cable tool rig. Plugging operations consisted of setting a temporary brush and rock plug, about 10 feet thick, with the top at 665 feet. On top of this was set the permanent cement plug, consisting of 95 sacks of cement. The top of this permanent plug was tagged at a depth of 545 feet.
A steel plate was welded over the top of the surface casing in this hole.
4. This hole will be converted to use as a fresh water well.
5. Logs: Widco survey run by the Division of Geology.
6. Cores: None
7. DST's: None

HERNANDO COUNTY

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
W-	Hr-22S-21E-32 bc	09-053-20001	Thayer-Davis 2		Hill	-Nov. 4, 1967 -Dec. 14, 1967	6,209	82 DF

Location: Sec. 32, T22S, R21E (center of the NE quarter of the SW quarter)

Miscellaneous: The fresh water (1,000 ppm per Schlumberger Engineer) - Salt water contact occurred from 3,240-3,550 feet.

Subsurface record:

1. Plugged and abandoned
2. Casing record
 - Set 8 5/8-inch in 10 3/4-inch hole at 1,250 feet with 650 sacks of cement; returns not established. Part of the cement was grouted from the surface.
 - Set 7-inch in 7 7/8-inch hole at 3,150 feet with 350 sacks of cement.
3. Plugging details
 - 3,000-3,416 feet, set 95 sacks of cement
 - Welded a steel plate on top of the 7-inch casing at the surface
4. Conversion of this hole to use as a fresh water well.
 - Fresh water with a chlorinity of 50 ppm, and total dissolved solids of about 1,200 ppm, flowed from a depth of about 1,850 feet. The braden head was left on the well to control this annular flow, which emanates with a fair flow from a 2-inch pipe.
5. Logs: Induction-Electrical-Gamma Ray, 3,160-6,209 feet.
6. Structural top
 - Tuscaloosa Sd 5,250 (-5168)
 - Lower Cretaceous 5,375 (-5293)
7. Cores: None
8. DST's: None

LEVY COUNTY, OFFSHORE

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	-Commenced -Completed	Total Depth (feet)	Elevation (feet)
W -		09-683-20002	Mobil Oil Corp.	1-B	Fla. St. Lse 224-A	-Nov. 27, 1967 -Dec. 10, 1967	4,735	16 DF

Location: Latitude 29° 05'24" N; Longitude 82° 55'16" W. This is S 38° 41'36" E a distance of 45,732.76 feet from USC and GS "Lukens", and S 53° 04'52" W a distance of 44,280.98 feet from USC and GS "Wacca".

Subsurface record:

1. Plugged and abandoned
2. Casing record
 - Set 13 3/8-inch in 17 1/2-inch hole at 145 feet with 170 sacks of common cement
 - Set 9 5/8-inch in 12 1/4-inch hole at 1,185 feet with 310 sacks of common cement
3. Plugging details
 - 1,019-1,156 feet, set 50 sacks of cement
 - 40- 150 feet, set 50 sacks of cement
 - Left top of 9 5/8-inch and 13 3/8-inch casing strings 9 feet below the mud line
4. Logs: Induction-Electrical, 1,192-4,735 feet; Borehole Compensated Sonic-Gamma Ray, 1,192-4,735 feet.
5. Conventional core at 4,721-4,735 feet.

SANTA ROSA COUNTY

Division of Geology Acquisition No.	Locality designation	API No.	Operator	Well No.	Fee Name	Commenced	Completed	Total Depth (feet)	Elevation (feet)
W.	5r-5N-29W-18	09-113-20001	Young Oil Co, I		Thomas	July 6, 1967	July 17, 1967	6,613	262

Location: Sec. 18, T5N, R29W (330 feet FNL, and 330 feet FWL of the north half of Lot 2)

Subsurface record:

1. Plugged and abandoned
2. Casing record
3. Plugging details
 - 1,600-1,800 feet, set 60 sacks of cement
 - 900-1,100 feet, set 60 sacks of cement
 - top of 8 5/8-inch casing, set 25 sacks of cement. Welded steel plate over top of casing
4. Logs: Induction-Electrical, 1,010-6,610 feet; Borehole Compensated Sonic, 5,000-6,610 feet.
5. Structural tops:
 - Upper Cretaceous 3,722 (13,460)
 - Lower Tuscaloosa 6,128 (-5,866)
 - Massive 6,285 (-6,023)



FLORIDA GEOLOGICAL SURVEY

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