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**SUMMARY OF FLORIDA PETROLEUM  
PRODUCTION AND EXPLORATION  
IN 1962**

By  
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# SUMMARY OF FLORIDA PETROLEUM PRODUCTION AND EXPLORATION IN 1962

By

Clarence Babcock

## SUNNILAND FIELD

### DRILLING ACTIVITY

Activity in 1962 in the Sunniland field, operated by the Humble Oil and Refining Company, and located in Collier County, Florida, as shown in figure 1, has been greater than for any year since 1949. Two new wells have been drilled and completed as producers; also, a permit has been issued for the deepening of an old well. These tests, together with other wells in the immediate area of the Sunniland field, are shown on figure 2, a location map.

Production in the Sunniland field is from a fossiliferous carbonate section occurring in the upper part of the middle member of the Sunniland formation of Lower Cretaceous Trinity Age, as defined in Raasch's type section (1954, p. 8). Production and structural statistics on field wells which have produced commercial quantities of oil from this section, including the two wells drilled in 1962, are presented in table 1, which reveals the following facts: (1) Most of the 16 Sunniland field wells have been good producers, with one well producing about 1 1/3 million barrels of oil, while two other wells have produced almost a million barrels each; (2) the last two columns of this table show that generally less water is produced from wells that are structurally high than from wells that are structurally low; also, the percentage of salt water production by individual wells has increased markedly; (3) since all of the wells produce large percentages of salt water at the present time, it is inferred that most of the production is from a gradational zone rather than from above a sharp oil-water contact.

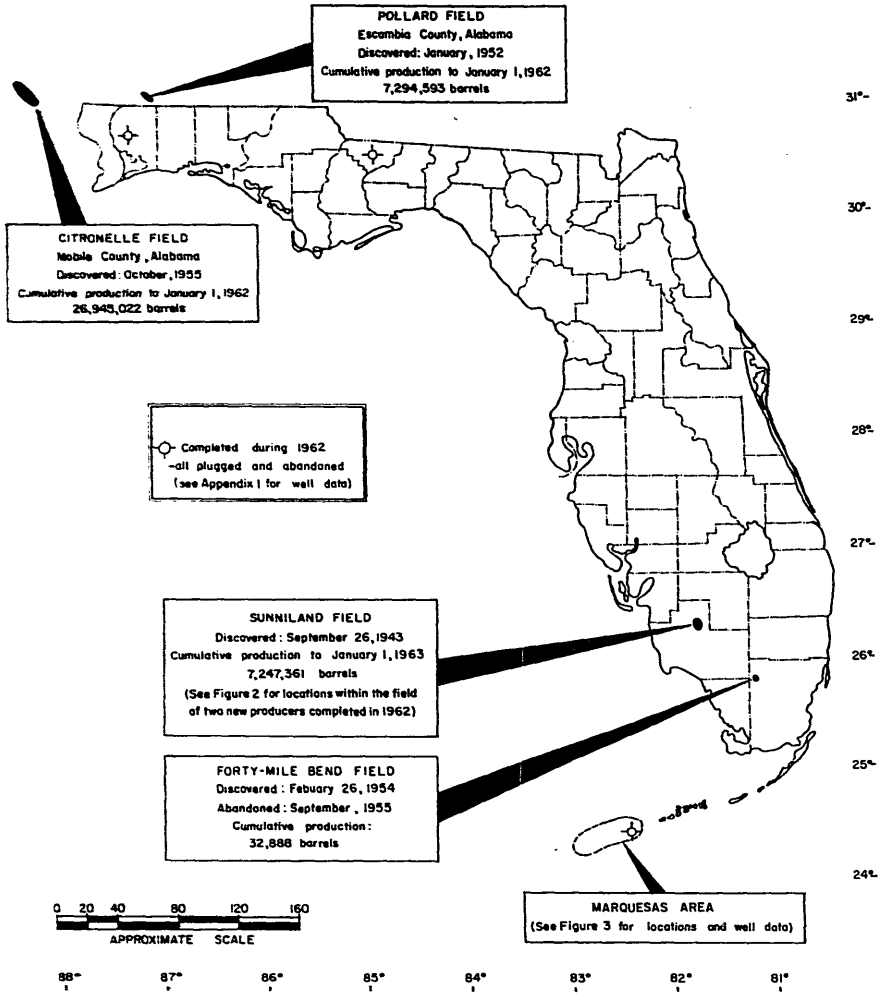
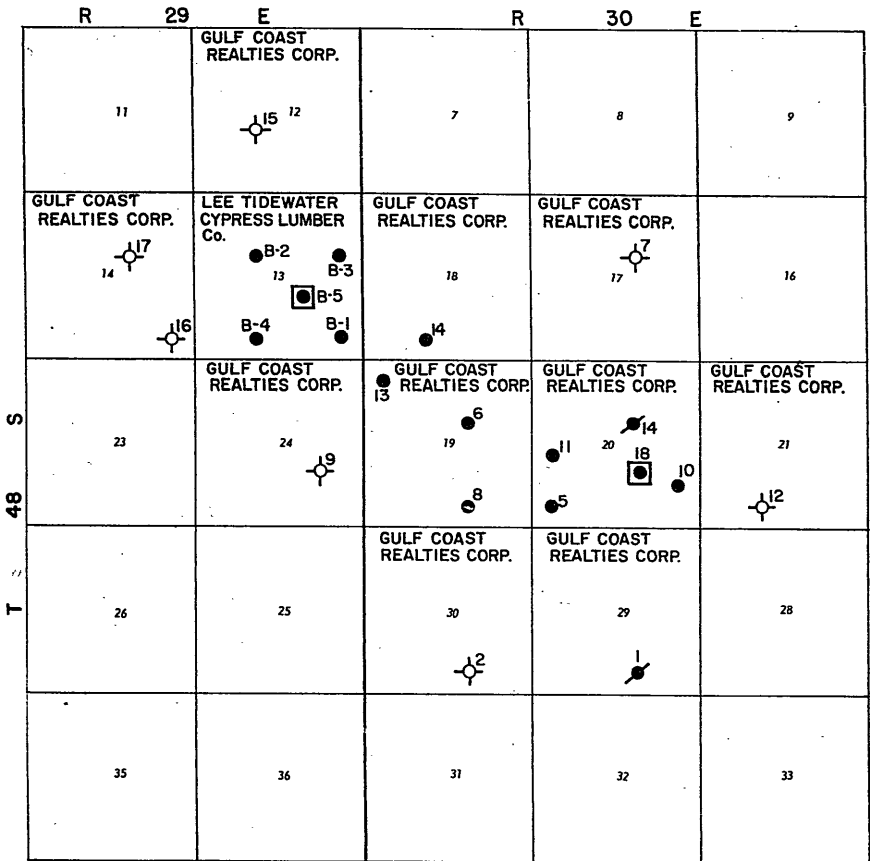


Figure 1. Florida petroleum exploration and production, 1962.



- PRODUCING WELL
- PRODUCING WELL (COMPLETED, 1962)
- ⊗ ABANDONED WELL
- ⊕ DRY HOLE

Figure 2. Location map of Sunniland field.

Table 1. Sunniland Field Production and Structural Statistics

Farm and no.	Initial production		Production test Sept. 1962		Accumulated production (to Oct. 1, 1962) <sup>1</sup>			Top of Sunniland marker <sup>2</sup> (feet)	
	BOPD	Percent BS and W	BOPD	Percent Salt water	Bbls. oil	Bbls. salt water	Percent salt water		
Gulf Coast Realities Corporation wells (arranged in order of structural elev.)									
No. 18	Pump 178.7	11.1	(Completed Oct. 18, 1962)					11,527 (-11,493)	
11	Flow 120	1.0	Pump 180	7	656,050	212,142	25	11,531 (-11,501)	
13	Flow 395	.4	Pump 206	36	868,810	360,703	29	11,541 (-11,502)	
4	Pump 257	18.0	(Abandoned in 1957)			190,000	1,460,000	89	11,544 (-11,506)
14	Flow 190	1.2	Pump 45	74	399,398	259,283	40	11,537 (-11,507)	
8	Flow 527	.4	(Shut in) <sup>3</sup>			714,605	945,887	57	11,545 (-11,516)
6	Flow 225	Trace	Pump 215	48	1,390,093	774,923	36	11,548 (-11,517)	
10	Flow 175	1.8	Pump 51	50	385,706	145,421	27	11,549 (-11,519)	
5	Flow 518	.3	Pump 71	77	440,571	628,257	59	11,551 (-11,520)	
9	Minor		(Abandoned in 1948)			81	701	90	11,564 (-11,535)
1	Pump 97	81.4	(Abandoned in 1947)			21,463	437,250	95	11,582 (-11,548)
Total lease					<u>5,066,777</u>	<u>5,224,567</u>	<u>51</u>		
Lee Tidewater Cypress Lumber Co. "B" (arranged in order of struc- tural elev.)									
No. 5	Pump 109	None	(Completed Dec. 18, 1962)					11,540 (-11,503)	
4	Flow 437	0.3	Pump 261	42	906,409	155,416	15	11,548 (-11,514)	
3	Flow 447	.4	Pump 20	96	357,087	822,657	70	11,548 (-11,514)	
1	Flow 137	3.7	Pump 53	62	577,001	403,910	41	11,556 (-11,517)	
2	Flow 519	1.2	Pump 9	98	275,698	785,132	74	11,561 (-11,521)	
Total lease					<u>2,116,196</u>	<u>2,167,115</u>	<u>50</u>		
Total field					<u>7,182,972</u>	<u>7,391,682</u>	<u>51</u>		

<sup>1</sup>Field discovered in September, 1943.<sup>2</sup>Middle member of the Sunniland formation as defined in Raasch's type section (1954, p. 8).<sup>3</sup>Shut in on March 12, 1962.



The highlights and background of the activity connected with drilling in 1962 in the Sunniland field follows:

*The Humble Oil and Refining Company, No. 5 Gulf Coast Realties Corporation* well, according to permit no. 51 dated November 27, 1962, will be deepened from 11,578 feet to a proposed depth of 11,700 feet. The bottom of the Chamid zone, which is the lower of the two zones containing intervals which have produced in the field, should be reached at a depth of about 11,628 feet.

It is shown in table 1 that in this well the top of the middle member of the Sunniland formation occupies a relatively low structural position as compared with other Sunniland field wells.

This well originally was completed on May 24, 1947, in the open hole from 11,562 to 11,578 feet (-11,531 to -11,547 feet, subsea). Initial flowing production (table 1) was 518 barrels of 25° API (American Petroleum Institute) gravity oil, and 0.3 percent BS&W (basic sediment and water) through a 1/4-inch choke. Accumulated production to October 1, 1962, was 440,571 barrels of oil, with 59 percent (or 628,257 barrels) of the fluid recovery being salt water. During the production test of September 1962 the well pumped 71 BOPD (barrels oil per day) with 77 percent of the fluid recovery being salt water.

*The Humble Oil and Refining Company, No. 18 Gulf Coast Realties Corporation* well is a new producer which occupies an infield location between four other Gulf Coast Realties Corporation producers separated from the No. 18 well by distances ranging from about one-third to one-half mile. In these surrounding wells production has been obtained for periods of 12 to 15 years.

Recovery on a pumping test of the No. 18 well through 2-inch tubing from a perforated interval in the Sunniland field Chamid zone at 11,585 to 11,589 feet (-11,551 to -11,555 feet, subsea) was:

178.7 BOPD (19.6° API corrected gravity)

19.8 barrels BS&W (158,500 ppm [parts per million] chloride)

Some gas

As shown on table 2 the No. 18 Gulf Coast Realties Corporation well is structurally the highest well in the Sunniland field. Despite this fact, however, the top of the perforations in this well is lower by amounts ranging from 2 to 18 feet than the bottom of the perforated or open-hole interval in any well in the field, with the exception of the No. 1 and No. 4

Table 2. Structural and Thickness Comparisons of the Producing Intervals in Sunniland Field Wells

Farm and no.	Structural top of Sunniland marker <sup>1</sup> (feet)	Producing interval	
		Type completion	Top and bottom in feet subsea (thickness)
<b>Gulf Coast Realities Corporation wells (arranged in order of structural elev.)</b>			
No. 18	11,527 (-11,493)	Perforated	-11,551 to -11,555 (4)
11	11,531 (-11,501)	Open hole	-11,520 to -11,543 (23)
13	11,541 (-11,502)	Open hole	-11,480 to -11,533 (53)
4	11,544 (-11,506)	Open hole	-11,526 to -11,563 (37)
14	11,537 (-11,507)	Open hole	-11,501 to -11,546 (45)
8	11,545 (-11,516)	Perforated	-11,535 to -11,540 (5)
6	11,548 (-11,517)	Open hole	-11,525 to -11,547 (22)
10	11,549 (-11,519)	Open hole	-11,536 to -11,544 (8)
5	11,551 (-11,520)	Open hole	-11,529 to -11,547 (18)
9	11,564 (-11,535)	Not available	
1	11,582 (-11,548)	Open hole	-11,566 to -11,592 (26)
<b>Lee Tidewater Lumber Company "B" wells (arranged in order of structural elev.)</b>			
No. 5	11,540 (-11,503)	Perforated	-11,543 to -11,548 (5)
4	11,548 (-11,514)	Open hole	-11,503 to -11,544 (41)
3	11,548 (-11,514)	Open hole	-11,507 to -11,545 (38)
1	11,556 (-11,517)	Open hole	-11,529 to -11,549 (20)
2	11,561 (-11,521)	Open hole	-11,524 to -11,545 (21)

<sup>1</sup>Middle member of the Sunniland formation as defined in Raasch's type section (1954, p. 8).

Gulf Coast Realties Corporation wells, both of which have been abandoned. When this perforated interval in the No. 18 well is depleted or goes to salt water, perhaps overlying intervals which have produced in other Sunniland field wells will be opened to production.

This well was drilled to a total depth of 11,806 feet and the bottom of the Chamid zone appears to have been reached at a depth of about 11,604 feet. It is possible that the operator had hoped, in drilling about 202 feet below the bottom of the Chamid zone, to find a third pay interval in the underlying Coskinolinid zone. A promising pumping test of this underlying zone, made through perforations 108 to 130 feet below the bottom of the approximate stratigraphic equivalent of the Chamid reef and in the lower part of Bank's Dade Cyclothem Unit D-2 (1960, p. 1740), was conducted in the Commonwealth, et al., No. 1 M. B. Wisheart and State Board of Education well of the Forty Mile Bend field, shown on figure 1 to be located about 48 miles southeast of the Sunniland field. In this test the zone (11,464 to 11,486 feet) was acidized, and recovery was 20 barrels of 23° API gravity oil plus considerable salt water.

The Humble Oil and Refining Company, No. 5 Lee Tidewater Cypress Lumber Company "B" well is a new producer which occupies an infield location at a point approximately 0.4 mile equidistant from the four producing wells previously drilled by the Lee Tidewater Cypress Lumber Company. The four producing wells surrounding the new producer have been in production for periods ranging from 14 to 15 years.

Recovery on a 9-hour pumping test of this well from a perforated interval in the Chamid zone from 11,580 to 11,585 feet (-11,543 to -11,548 feet subsea) was:

108.7 BOPD (25.3° API gravity)

0.7 percent BS&W

It is shown in table 2 that the top of the middle member of the Sunniland formation in this new producer occurs at 11,540 feet (-11,503 feet subsea). On this marker the well is not as high as the previously discussed Gulf Coast Realties Corporation No. 18 test, but it is higher than any of the four surrounding Lee Tidewater Cypress Lumber Company producers by amounts ranging from 8 to 18 feet. Despite the fact that these two new producers drilled in 1962 are structurally high, the perforated intervals in both of them are somewhat lower in structural elevation than they are in surrounding producers. When these intervals are depleted or go to salt water, perhaps overlying zones which have produced in the surrounding wells will be opened to production.

## PRODUCTION

Production figures for the Sunniland field for 1962, as submitted by the Humble Oil and Refining Company operator, are:

<u>Month</u>	<u>Barrels</u>
January	38,584
February	33,002
March	36,866
April	36,082
May	33,341
June	32,218
July	34,042
August	35,074
September	34,067
October	34,972
November	30,570
December	35,855
	<u>414,673</u>

Production was obtained from 11 wells during the months of January through part of July. During the remainder of the year only 10 wells were on production as a result of the shutting in for workover operations of the No. 8 Gulf Coast Realities Corporation well, which had developed a casing leak.

The cumulative total production from the field through December 31, 1962, was 7,247,361 barrels.

## PRESSURES

Table 3 reveals that differential pressures push fluid levels far above the producing intervals in all of the Sunniland field wells. This table also shows that in 1958 the fluid levels, or the depths from which the wells are pumped, varied from about 1,550 to 4,034 feet of depth. As a consequence the oil lifting cost is relatively low.

## ENERGY FOR WATER DRIVE

The original bottom hole shut-in pressure in the Sunniland field, recorded before significant quantities of fluids were withdrawn, was

Table 3. Sunniland Field Pressures and Fluid Levels

Farm and no.	Production Test - March, 1958			
	(Adjusted to a datum of reference of -11,548')		Calculated differential pressure (psig)	Fluid level (feet)
	Bottom hole shut-in pressure (psig)	Est. bottom hole flowing pressure (psig) <sup>1</sup>		
Gulf Coast Realities Corporation wells <sup>2</sup> (arranged in order of fluid level)				
No. 8	<sup>3</sup> 4,638	4,450	188	1,640
5	<sup>3</sup> 4,638	4,330	308	1,899
13	4,838 Bomb	4,020	818	2,169
6	<sup>3</sup> 4,638	3,575	1,063	3,033
11	4,400 Bomb	3,040	1,360	4,034
Lee Tidewater Cypress Lumber Co. "B" wells <sup>2</sup> (arranged in order of fluid level)				
No. B-2	<sup>3</sup> 4,638	4,580	58	1,695
B-3	<sup>3</sup> 4,638	4,480	158	1,550
B-1	4,675 Bomb	3,615	1,060	2,697
B-4	<sup>3</sup> 4,638	3,105	1,533	3,732

<sup>1</sup> Based on estimated average fluid gradient and fluid level measurements.

<sup>2</sup> Data not available to the Division of Geology on other wells.

<sup>3</sup> Average pressure of three bomb tests.

5,292 psig (pounds per square inch gage). This also is essentially the pressure existing in the Sunniland producing interval at the present time in areas adjacent to the field but far enough removed from it that they are not affected by its production. The difference between this original bottom hole shut-in pressure and the present bottom hole shut-in pressure in the field (4,638 psig) is 654 psig. This pressure difference, which is equivalent to the pressure exerted by a head of water 1,510 feet high, provides the energy for the active water drive by which the field is produced. The Division of Geology has no information about the artificially induced gradient along which this pressure as discussed above is distributed.

### SALT-WATER ENCROACHMENT

Levorsen states (1958, p. 452) that the velocity of salt-water encroachment in a water drive pool varies within the range of 100 to 1,000 feet per year. It is hoped that the average rate of encroachment in the Sunniland field is so low that pockets exist in which oil originally in place has not been adversely affected by salt-water incursion.

### EXPLORATION

In 1962 three exploratory wells were completed, and all three have been plugged and abandoned. Data on these wells are given in appendix 1, and the wells are spotted on figure 1, a generalized location map.

During 1962 an amount of 16,378 feet of exploratory footage was drilled in three wells, whereas in 1961, a footage of 87,737 feet was drilled in nine exploratory wells.

A summary by counties of the highlights of exploratory drilling in 1962 follows:

#### GADSDEN COUNTY

*The Prince and Munroe, No. 1 La Corona* well, located about 1½ miles south-southwest of Quincy, was permitted with a proposed depth of 7,500 feet. However, the well proved to be 95 feet lower, on top of the Lower Tuscaloosa section of Upper Cretaceous Woodbine Age, than

the Sun Oil Company, No. 1 American Tobacco Company well, located about 1 mile to the north-northeast. Consequently, the test was abandoned at a total depth of 4,196 feet in Lower Cretaceous sediments after drilling 316 feet below the Lower Tuscaloosa marker.

It was hoped that this well would drill a fault as interpreted from seismic records; however, a fault was not penetrated in the Upper Cretaceous section.

### MONROE COUNTY-OFFSHORE

*The California Company, No. 3 State Lease 1011* well, which reached a total depth of 12,850 feet, is shown on figure 3, a location and information map, to be the sixth offshore well which has been drilled in the Marquesas area. This well is located 790 feet southeast of the same operator's No. 2 State Lease 1011 dry hole and about 7½ miles southwest of the Gulf Oil Corporation, No. 1 State Lease 826-Y well, which produced 15 barrels of oil on a 14-hour drill stem test from a 59-foot interval (12,474-12,533 feet) in the Suniland zone. This 826-Y well probably could have been developed as a commercial producer if it had been located on land and the oil present at a shallow depth.

### SANTA ROSA COUNTY

*The Humble Oil and Refining Company, No. 1 St. Regis Paper Company* well was drilled to a total depth of 11,722 feet, terminating in probable Hosston sediments of Lower Cretaceous Coahuilan Age. An important objective of this test of the deeper Lower Cretaceous section was the Rodessa Formation, which Forgotson (1957) defines as the upper member of the lower Glen Rose subgroup of Lower Cretaceous Trinity Age. This formation is productive in the Citronelle field which lies about 50 miles to the west-northwest in Alabama.

In the Lower Tuscaloosa section three conventional cores were taken but none of these contained oil shows. The results of an open-hole drill stem test of the top of the Lower Tuscaloosa section (6,572-6,612 feet), run primarily to obtain a sample of formation water for analysis, are:

Recovery (using ¼-inch top and bottom chokes)  
1,000 feet water cushion  
4,270 feet salt water (95,000 ppm chloride)

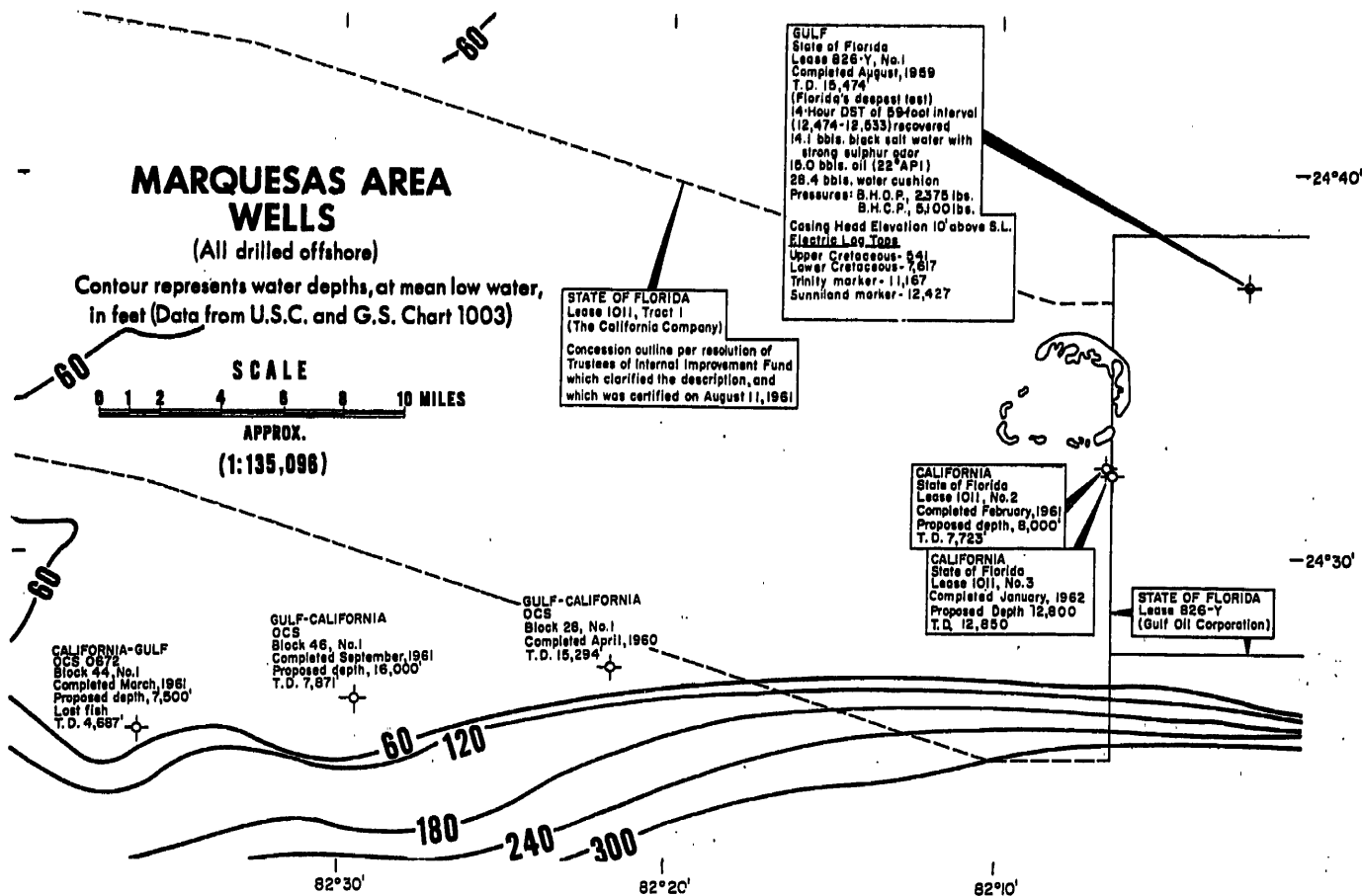


Figure 3. Marquesas area wells.



**Pressures**

BHFP, 517 to 2,505 pounds

SIBHP, 2,905 pounds

Hydrostatic, 3,437 pounds

There was recovery from 22 of the 26 sidewall samples taken from 7,638 to 11,387 feet, but no show of oil was reported in any of the samples.

Well control, though very limited at the level of the Rodessa Formation, is adequate to reveal that, on Upper Cretaceous markers, both the Humble and Socony Mobile wells are about normal regionally. This indicates that probably the seismic information used in selecting the locations of both of these wells will need to be reassessed.

**LAND****FLORIDA MAINLAND**

The Division of Geology has specific information on two lease plays in Florida during 1962. First, in the month of July, the Phillips Petroleum Company took a 10-year mineral lease on 36,826.48 acres in the following parts of Hendry County:

T. 43 S., R. 29 E.

T. 43 S., R. 30 E.

T. 43 S., R. 31 E.

T. 44 S., R. 29 E.

T. 44 S., R. 30 E.

T. 44 S., R. 32 E.

It is reported that Phillips paid a bonus of \$1.00 per acre plus 50 cents per year rental on this acreage, which lies slightly east of a block leased by the Sinclair Oil and Gas Company.

In a second leasing play, occurring in the latter part of the year, 18,000 acres along the St. Mary's River between Folkston, Charlton County, Georgia, and Hilliard, Nassau County, Florida, were leased by W. B. and E. C. McCarter, Houston, Texas.

The latest information available to the Division of Geology on the total amount of acreage held under oil and gas lease in Florida pertains to 1961, and is from the *International Oil and Gas Development Year Book of 1962*, p. 55. This source, as supplemented by information from the State Land Office relative to offshore acreage, reveals

that nine companies in 1961 held oil and gas leases on undeveloped mainland acreage in 54 of Florida's 67 counties, as follows:

<u>Company</u>	<u>Florida mainland acreage under lease in 1961</u>
Coastal	643,809
Gulf	76,830 (estimated)
Humble	152,051
Mobile	58,922
Shell	91,695
Sinclair	92,857
Sun	171,024
Texaco	194,723
Union	14,316
	<u>1,496,227</u>

#### FLORIDA OFFSHORE

At the end of 1962, Florida acreage offshore from the west coast of Florida, according to information from the State Land Office, was held by three companies as tabulated below:

<u>Company</u>	<u>Florida offshore acreage under lease at the end of 1962</u>
California	734,760
Coastal	3,910,460
Gulf	979,160
	<u>5,624,380</u>

An additional area of approximately 2,500,000 acres offshore from the west coast of Florida a distance of 3 leagues (10.36 miles) were available for lease at the end of 1962. These consist of water bottoms leased under the provisions of State Leases 833 and 826 (Blocks A-J and O-U). Furthermore, offshore from the Atlantic coastline of Florida, out to a distance of 3 miles, water bottoms are available for oil and gas leasing. However, leasing of any of Florida's offshore acreage which lies within 3 miles of municipalities or bathing beaches is subject to advice of public hearings (Florida Statutes Chapter 253.52). In addition, manmade beaches owned by private parties are not available for oil and gas leasing by the State.

The lessor, approximate locations, and outlines of State leases located offshore from the west coast of Florida, acreage contained in each lease, and bonuses and annual rentals paid are shown on figure 4. All leases provide that the State's share of production shall be one-eighth of the value of the oil at the wellhead. There also is a 5 percent severance tax on the value of the oil at the wellhead (Florida Statutes Chapter 211.02).

## GEOPHYSICS

Geophysical activity in Florida in 1962 is summarized in table 4.

For 8 weeks in May and June of 1962 the Pan American Petroleum Corporation had a Western Geophysical Company crew working on federal water mostly off the coast of southern Georgia, with some of the work being off the coast of northern Florida.

During each of the 2 years preceding 1962, the geophysical activity in Florida was:

<u>Year</u>	<u>Crew weeks of geophysical activity</u>	<u>Source</u>
1961	49	International Oil and Gas Development Year Book of 1962, part 1, p. 54
1960	89	Vernon and Hendry (1960, p. 7)

Crew weeks of geophysical activity in Florida, by counties, of the 21-year interval, 1941-61, inclusive, were obtained from the *International Oil and Gas Year Book* pertaining to each of the included years, and are shown in table 5.

In 1959 there was an additional 17 crew weeks of seismic activity over water bottom acreage which lies beyond the jurisdiction of the State of Florida (further offshore than 3 leagues or 10.36 statute miles).

# FLORIDA GEOLOGICAL SURVEY

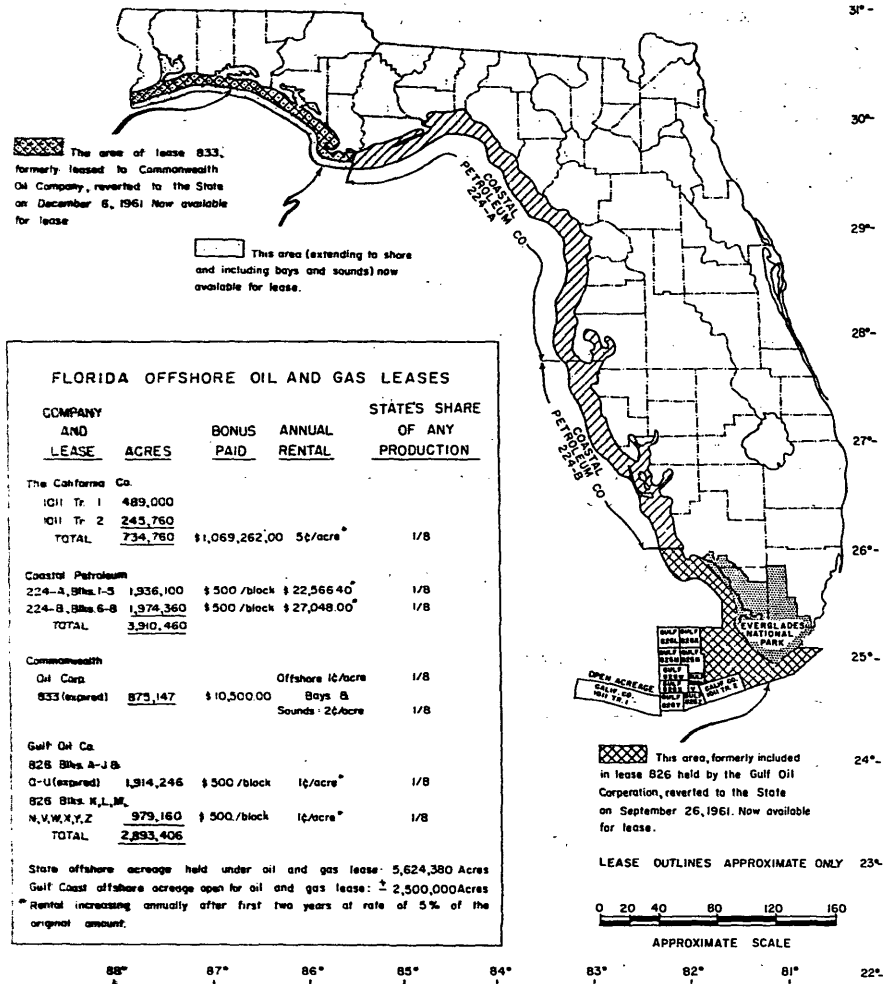


Figure 4. Offshore Florida state leases, December 31, 1962

Table 4. Geophysical Activity in Florida in 1962

County	Company	Crew	Type	Crew Weeks	Area worked
<u>Charlotte</u>	California	Chevron	Refl	4 1/3	T. 41 S., R. 21 E. T. 42 S., R. 21 E. T. 42 S., R. 22 E.
<u>Escambia</u>	Shell	Own	Refl	5/6	T. 5 N., R. 33 W.
<u>Hendry</u>	Sinclair	SSC	Vibra- Thumper	8	T. 44 S., R. 28 E.
<u>Lee</u>	California	Chevron	Refl	1/3	T. 43 S., R. 20 E.
<u>Okaloosa</u>	Texaco	Own	Gravity	5	T. 3 N., R. 25 W. T. 5 N., R. 24 W. T. 6 N., R. 24 W.
<u>Pinellas</u>	California	Chevron	Refl	1 5/6	T. 27 S., R. 15 E. T. 27 S., R. 16 E. T. 28 S., R. 15 E. T. 28 S., R. 16 E.
<u>Santa Rosa</u>	Pan American	Precision	Refl	1 1/2	T. 1 N., R. 27 W. T. 2 N., R. 27 W.
	Plymouth	Own	Refl	6	T. 4 N., R. 28 W.
	Texaco	Own	Gravity	19	T. 3 N., R. 26 W. T. 3 N., R. 27 W. T. 3 N., R. 28 W. T. 3 N., R. 29 W. T. 4 N., R. 26 W. T. 4 N., R. 27 W. T. 4 N., R. 28 W. T. 4 N., R. 29 W. T. 5 N., R. 26 W. T. 5 N., R. 27 W. T. 5 N., R. 28 W. T. 5 N., R. 29 W.

Table 5. Crew Weeks of Geophysical Activity in Florida  
1941 to 1961, Inclusive

County	Gravity	Mag.	Air mag.	Resist.	Core drill	Seismic	Total
Alachua	42	14	0.33			7	63.33
Baker	26.66	16.33	.33				43.32
Bay	60.25	15	1.33		11	18	105.58
Bradford	12.33	3	.33				15.66
Brevard	13.66	4.75				14	32.41
Broward	6	.5			2	2	10.50
Calhoun	67	3	.33		17	14	101.33
Charlotte	25	3.5		1	13	70	112.50
Citrus	28	10			.5		38.50
Clay	13.33	13.33				3.5	30.16
Collier	33.5	7.5		4	318.5	158	521.50
Columbia	41.5	5			3	7.16	56.66
Dade	21	4.25				53	78.25
DeSoto	31	1.5			17	60	109.50
Dixie	31.5	19.5			71	12	134.00
Duval	17.5	17.66				3.25	38.41
Escambia	64	11	3		95	64	237.00
Flagler	28.	4				2	34.00
Franklin	26.33		.33		12	31	69.66
Gadsden	37.5	17	.33		27	21	102.83
Gilchrist	26.5	4.5	.33				31.33
Glades	25	2.5			16	27	70.50
Gulf	60.75	8	.33		12	61	142.08
Hamilton	20.83	4	.33		18		43.16
Hardee	42.5	3			35.5	19	100.00
Hendry	21	1.5			63	87	172.50
Hernando	33.5	13.25			46.5		93.25
Highlands	38.5	6.25			16	56	116.75
Hillsborough	59	2			16	21	98.00
Indian River	9	2.33				29	40.33
Holmes	67.83	29	1			47	144.83
Jackson	73.33	27	.33		52	31	183.66
Jefferson	38.33	15	.33				53.66
Lafayette	35.5	6.5	.33		43	12	97.33
Lake	34.33	9.25				6	49.58
Lee	11	3.5		2	27	54	97.50
Leon	45	13.75	.33		6		65.08
Levy	45	22.91	.33		14.5		82.74
Liberty	30.33	10	.33		6	16	62.66
Madison	49	10	.33		6	3	68.33
Manatee	23	9				40	72.00
Marion	36	28.25				2	66.25
Martin	4	1.33			3	10	18.33
Monroe	69.5	17.25				116	202.75
Nassau	15.5	13.66				4	33.16
Okaloosa	77.3	14	5		26	22	144.30
Okeechobee	25	6.25			30	60	121.25
Orange	17.83	8.75			23	1	50.58
Osceola	23.5	7.33			28.5	45	104.33
Palm Beach	41	10			20	45	116.00
Pasco	58	4			60		122.00
Pinellas	18.5	1					19.50

Table 5. (Continued)

County	Gravity	Mag.	Air Mag.	Resist.	Core drill	Seismic	Total
Polk	100.5	12			66.5	17	196.00
Putnam	14.66	10.5					25.16
Santa Rosa	89.5	11	6		167	120	393.50
St. Johns	20	6.5				2	28.50
St. Lucie	6	6.75				20	32.75
Sarasota	12	5.5			28	13	58.50
Seminole	18	4.75					22.75
Sumter	18	6.75					24.75
Suwannee	46.33	6.66	.33		46	1.5	100.82
Taylor	53	7	.33		31		91.33
Union	12	7					19.00
Volusia	29.33	2					31.33
Wakulla	23.66	4	.33			6	33.99
Walton	100.83	22	4		58	112	296.83
Washington	72	23.5	2.33	4	16.5	34.5	152.83
Total	2,417.23	621.79	28.93	11.00	1,568.00	1,679.91	6,326.86
Activity not broken down by counties, for 1951, '52, '53, and '58 (with percent of grand total)	82(3%)				250(14%)	1,214(42%)	1546(20%)
Total	2,499.23	621.79	28.93	11.00	1,818.00	2,893.91	7,872.86

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**APPENDIX**

**EXPLORATORY WELL INFORMATION, 1962**

## COLLIER COUNTY

Sunniland Field

Permit no.	FGS no.	Company or owner	Well name	Location	Well data
51	W-1495	Humble Oil and Refining Co.	No. 5 Gulf Coast Realities Corporation	600' E of W/L and 660' N of S/L, sec. 20, T. 48 S., R. 30 E.	Elev. - 31' DF Comp. - November 27, 1962 TD - 11,621.79 feet

REMARKS: (1) Well to be deepened; proposed new depth 11,700 feet.

- (2) This well originally was completed May 24, 1947, in the Sunniland producing zone at a total depth of 11,578 feet. This was an open-hole completion from 11,562 to 11,578 feet. Initial flowing production was 518 barrels of 25° API gravity oil through  $\frac{1}{4}$ -inch choke.

Accumulated production to October 1, 1962, was 440,571 barrels of oil, with 59 percent (or 628,257 barrels) of the fluid recovery being salt water.

During production test of September 1962, the well pumped 71 BOPD. An amount of 77 percent of fluid recovery was salt water.

- (3) This well occupies a relatively low position on top of the Sunniland marker (-11,520 feet).

## COLLIER COUNTY

## Sunniland Field

Permit no.	FGS no.	Company or owner	Well name	Location	Well data
300	W-6150	Humble Oil and Refining Co.	No. 18 Gulf Coast Realities Corporation	1,863.4' W of E/L and 3,536.8' S of N/L, sec. 20, T. 48 S., R. 30 E.	Elev. - 34' DF Comp. - October 18, 1962 TD - 11,806' (in lower Cretaceous beds of the Sunniland formation of Trinity Age).

REMARKS: (1) This well is structurally the highest well in the Sunniland field on the top of the middle member of the Sunniland formation (11,527 feet). However, the perforated interval (11,585-11,589 feet) in this well is structurally lower, by amounts ranging from 2 to 18 feet, than the open hole or perforated intervals in any of the other wells in the field with the exception of the No. 1 and No. 4 Gulf Coast Realities Corporation wells.

(2) Relative to perforation history and acidation:

Originally this well was perforated from 11,581-11,585 feet, and the zone was acidized with 3,000 gallons. These perforations were 4 feet too high and were therefore squeezed off with cement. Then the zone from 11,585-11,589 feet was perforated with 16 shots.

(3) Casing program:

Set 20" at 116' with 250 sacks; 13-3/8" at 1,027' with 570 sacks; 9-5/8" at 4,361' with 325 sacks; and 7" at 11,741' with 130 sacks.

(4) Production test:

Pump from perforations (11,585-11,589 feet) through 2" tubing:

178.7 BOPD (19.6° corrected gravity)  
+19.8 BS&W (158,500 ppm chloride)  
+ Some gas  
GOR was 100 to 1  
Tubing pressure was 120 pounds

## COLLIER COUNTY

## Sunniland Field

Permit no.	FGS no.	Company or owner	Well name	Location	Well data
300	W-	Humble Oil and Refining Company	No. 5 Lee Tidewater Lumber Co. "B"	1,926.6' N of S/L and 1,831.1' W of E/L, sec. 13, T. 48 S., R. 29 E.	Elev. - 37' DF Comp. - December 18, 1962 TD - 11,651'

- REMARKS: (1) Proposed depth: 11,850 feet.
- (2) No sidewall cores taken.
- (3) Recovery on a 9-hour pumping test from a perforated interval in the Chamid zone from 11,580 to 11,585 feet was:

108.7 BOPD (25.3° API gravity)  
0.7 percent BS&W  
GOR was 100 to 1

GADSDEN COUNTY

Permit no.	FGS no.	Company or owner	Well name	Location	Well data
302	W-6143	C. E. Prince and W. B. Munroe	No. 1 La Corona	Center NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T. 2 N., R. 4 W., about 1 $\frac{1}{2}$ miles SSW of Quincy	Elev. - 206' DF Comp. - December 20, 1962 TD - 4,196 feet

- REMARKS:
- (1) It was hoped that this well would drill a fault as interpreted from seismic records. However, a fault was not penetrated in the Upper Cretaceous section.
  - (2) Proposed depth - 7,500 feet.
  - (3) This well was converted to use as a fresh-water well. To prevent salt-water contamination, a cement plug was set in the interval starting from 900 feet to about 650 feet. The well will produce fresh water from the open-hole extending from about 650 feet to the bottom of the casing (516 feet).

MONROE COUNTY - OFFSHORE

Permit no.	FGS no.	Company or owner	Well name	Location	Well data
298	W-5970	The California Co.	No. 3 State Lease 1011	Lat. 24°32'05" N. Long. 82°06'35" W. -15 mi. SW of Key West, 8 mi. SE of Marquesas Keys. Located 790' SE of same operator's No. 2 State Lease 1011	Elev. - 57' DF Comp. - January 13, 1962 TD - 12,850' (probably Lower Cretaceous)

REMARKS:

- (1) This was a seismic location.
- (2) Proposed depth, 12,800 feet. Planned as a Lower Cretaceous test.
- (3) Casing program:
  - 26-inch casing set at 116 feet
  - 20-inch casing set at 636 feet with 620 sacks
  - 9 5/8-inch casing set at 5,654 feet with 500 sacks
- (4) According to Dixie Geological Service (Nov. 15, 1962), the following cores were taken:

Core 12,325'-12,368'	Rec. 34'	No details
Core 12,368'-12,393'	Rec. 32'	No details
Core 12,393'-12,452'	Rec. 55'	No details
Core 12,452'-12,473'	Rec. 20.1'	No details
Core 12,473'-12,561'	Rec. 73'	No details
Core 12,561'-12,600'	Rec. 34'	No details



## SANTA ROSA COUNTY

Permit no.	FGS no.	Company or owner	Well name	Location	Well data
299	W- 6149	Humble Oil and Refining Co.	No. 1 St. Regis Paper Co., et al.	Center SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T. 2 N., R. 29 W. 3 mi. NE of Wallace and 9 mi. NW of Milton	Elev. - 119' DF Comp. - September 8, 1962 TD - 11,722' in Lower Cretaceous beds - probably the Hosston Formation of the Coahuila Series).

- REMARKS:
- (1) This is a seismic location.
  - (2) On the structural top of the Rodessa Formation of the Glen Rose subgroup of the Comanche Series of Lower Cretaceous Trinity Age this well is about 250 feet lower than the Socony-Mobile No. 1 St. Regis Paper Co. well located about 10 miles to the NW.
  - (3) Cores:
    - 6,562'-6,612' Rec. 50', sand, no show
    - 6,612'-6,662' Rec. 50', sand and shale, no show
    - 6,662'-6,712' Rec. 37', sand and shale, no show
  - (4) Mud logging unit used from 570' to probably total depth.
  - (5) DST (for water analysis) at 6,572'-6,612', using  $\frac{1}{2}$ " top and bottom choke with packer set in open hole.
    - Recovery:
      - 1,000' Water cushion
      - 4,270' Salt water (95,000 ppm)
    - Pressures:
      - BHFP, 517 to 2,505 pounds
      - SIBHP, 2,905 pounds
      - Hydrostatic, 3,437 pounds
  - (6) There was recovery from 22 of the 26 sidewall samples taken from 7,632 to 11,387 feet. All no show.



FLORIDA GEOLOGICAL SURVEY

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