On the southwest coast of the Florida Peninsua in the counties of Lee and Monroe are large strands and bodies of cypress timber, also thousands of acres of lands containing pine timber, suitable for saw-logs, turpentining and ties. There are also hundreds of acres of rich hammock land which can be cultivated for orange and grapefruit groves and there are great possibilities, owing to the quality of the soil, for the cultivation of sugar cane and vegetables. Whis this section is properly developed and transportation facilities furnished, it will prove one of the richest sections of the United States.

The rapid exhaustion of white pine timber east of the Pacific coast has induced lumber operators, who are now using cypress as a substitute for pine, to investigate these cypress swamps of Florida. The remoteness of these lands from railroad and water transportation has delayed the marketing of this timber; but recent investigations made by engineers of the United States Coast Survey and also reports of officers of the United States Merchant Marine Service, show that a well protected harbor affording good anchorage and a good channel to deep water in the Gulf has been found.

This harbor is 1½ miles from the main land, shallow bays and low keys being crossed in the intervening distance. Situated at the end of this harbor is an island called Russells Island, over 100 acres in extent of coral and shell formation rising over nine feet above tide water. This island is suitable as a terminus for a railroad and for the erection of saw-mills and other plants. The main land is reached by trestling over a shallow bay which can be done at the minimum of cost for work of this kind. The timber begins eight miles from the island and it is embraced in a radius of thirty miles.

Russells Island is situated about fourteen about fourteen miles south-westerly from Cape Romano, and is the best harbor between Boca Grande at Charlotte Harbor and the Northwest Channel at Key West,- a littoral distance of 200 miles. The geographical advantages of this port are that it is the nearest port on the mainland of the United States to Key West, Cuba, and Panama. The depths found at the harbor entrance and leading to deep water in the Gulf, are permanent to shifting bars at other ports.

Following will be found copies of letters received from W.H. Caldwell, Assistant Engineer of the United States Coast Survey, Tampa, Florida, J.L. Skeith, representative of the Allis Chalmers Company and J.T. Hendricks, expert field agent of the Southern States Land and Timber Company.

W.H. Caldwell, Asst. Engineer of the U.S. Coast Survey.

In compliance with the instructions contained in your letter of the 9th ultimo, a preliminary examination and survey was made July 19-26, 1904 of a harbor (Langford Harbor) on the West Coast of Florida that is situated about fourteen miles southwesterly from Cape Romano.

A map, scale 1 to 10000, has been plotted from the survey; a neat copy of tracing cloth, and five blue prints from same are forwarded you to-day, separate roll by registered mail.

Following is a report upon the subjects enumerated in your letter and answered in the same order as there given:-

1. Rise and fall of the tide.

The observations recorded by me in the limited period of the survey indicated that the rise and fall of the tide at Roberts Key. is practically the same as at Round Key, about 3½ miles northwesterly from Roberts Key. The U.S. Coast Survey determined the rise and fall of the tides at Round Key in 1886; the mean rise and fall is 3.4 feet; the rise and fall during spring tides (when the moon is new or full) is 4.4 feet; and the rise and fall during neap tides (when the moon is in first or last quarter ) is 2.3 feet. If there be any difference in the range of the tide at Roberts Key and Round Key the hydrographic conditions would indicate that the range is greater at the former Key; this though, can be determined definitely only by tidal observations for at least one lunar month.

2. Draft that can be safely carried into Langford Harbor

There is a natural channel leading into the harbor, the least depth of which at mean low water is 8.3 feet. At low water a

vessel drawing 8 feet can safely enter; at any high water a vessel can enter drawing 10 feet; and at high water during spring tides a vessel can enter drawing 12½ feet. Inside the harbor there is a natural anchorage basin, with depths varying from 12.0 to 17.2 feet, well protected by neighboring keys from strong winds in any direction, and with a bottom of character that forms excellent holding ground. The area of this basin is 92 acres, which would afford anchorage room for 25 vessels of twelve feet draft (cargo capacity of each vessel being 500,000 feet of lumber). Mooring capacity of the harbor could be trebled by establishing "Mooring Buoys".

3. Location of Channel bar at harbor entrance and possibility of dredging it.

The channel bar where the least depth is 8.3 feet, is South Southwest (Mag) from a point in Langford Harbor midway between the westerly extremities of Roberts Key and Butcher Key, and is distant 1.3 miles. I took a line of borings across the bar, at intervals of about 500 feet, and found no rock at a maximum mean low water depth of 14.2 feet. My boring rod was 15.0 feet long and state of tide 1.8 feet above mean low water when borings were taken. Character of the bottom material is mud, shell and sand- principally the last. It is perfectly practicable to dredge a channel across the bar and, if properly located with respect to the prevailing currents, its cost of maintenance would be nominal.

4. Herbor Soundings.

The Harbor soundings were reduced to the plan of mean low water, and the reduced depths are shown in feet and tenths on the accompanying map. An examination of the chart shows that the available depth at the westerly end of the herbor is 9.0 feet; but 1/2 mile eastward from there the depth is 12 feet and thence to the wharf site there is a wide channel with a least depth of 12 feet and a maximum depth of 17.2 feet.

5. Soundings at wharf site and possibility of dredging there.

Soundings and borings were taken at the site of the proposed wharves in a line perpendicular to the shore at intervals of 25 ft.

At mean low water depth of 12.0 feet was found about 175 feet from the shore line. No rock was found at a depth of 12.5 feet, m.l.w.level. The character of the bottom material was coarse sand and shell, good for a wharf structure. I saw no necessity for dredging there, but if you deem it necessary the work can be easily accomplished.

6. Soundings of bay along line of proposed trestle from Russell Island to Mainland.

I took borings along the line of the proposed railroad from Russells Island to the mainland, except where there was intervening keys at distance apart of about 300 feet. Rock was found in every instance, except seven, at depths varying from 7.1 to 11.8 feet at mean low water. In the seven localities where rock was not encountered the borings were taken to a mean low water depth of 12.7; the character of th bottom in those places was a fine, hard sand; and I believe that rock would have been encountered had the boring rod been of a slightly greater length.

In conclusion I wish to say that from a knowledge of this coast of Florida obtained by extensive surveying and examination of current Government charts I consider Langford Harbor the best Harbor between Boca Grande at Charlotte Harbor and the Northwest Channel at Key West,- a littoral distance of 200 miles. It is exceptionally well protected from the dangerous N.W. storms of the West Florida Coast by the natural bulkhead of shoals off Cape Romano. The depths found at the harbor entrance are permanent and seem sufficient to answer the needs of a lumber port; but if improvement be deemed necessary, it can be accomplished for

J.T. Hendricks, Expert Field Agent, Southern States

Land and Timber Co. No. 2.

Regarding amount of timber available to Russell Island Mill site, having spend from December 21, 1903 until May 25, 1904 in Lee County in examination of lands for S.S.L.& T. Co, and covering most of the county, would estimate amount of timber available to Russell mill site at 2,500,000,000 ft., 500,000,000 ft. being pine, 2,000,000,000 ft cypress. This does not include posts or telegraph poles of which there are also an immense quantity. The cypress is mostly of fine grade and would bring top prices properly manufactured and shipped East.

Yours respectfully,

(Signed) J.T. Hendricks

Lake Stearns, Fla.
Aug 10, 1904.