

GALVESTON COUNTY  
ROLLED SKETCH NO. 14

G. O. M. Tracts 26 & 27

*counter 44808*



counter 44809

TRACT  
DICKINSON BAYOU #1  
Pictures of Boyles & Crew  
1935

counter #910

Dickenson Bayon 4/25/35  
R. H. Patterson standing  
with hand on lath at edge  
of tall reeds 21' north of  
location of Stanolind #1 State.  
Lath is 105.64' S 85° 44' W of  
Sta. #24 on map.  
Line cut thru reeds to channel.



counell 144811

counter 74812

R. Patterson  
McClafferty  
Dickinson Bayou  
Apr 25 1935

039

Dickinson Bayou 4/25/35  
R. H. Patterson standing at  
edge of channel and pointing  
to stake under water 3.3' south  
of edge of channel. Standing  
#1 stake located 20' north  
of stake to which Patterson  
points.

Dickinson Bay 5:30 PM 4/30/35

A. L. Selig standing at edge of bench  
marking salt grass - sweet grass line.

McClafferty



PIPE LINE CROSSING  
DO NOT DROP OR DRAG ANCHOR



counter 44813

089

counter 74814

April 25th. 1935

State #1

Dickinson Bayou

R. H. Patterson

McClaffrum

089

R. H. Patterson  
McClaffrum

Dickinson Bayou  
April 25 1935

089

R. H. Patterson  
McClaffrum

Standing in position  
above McClaffrum Bayou  
his left foot at the  
intersection of water  
and dry land.

Subscribed by R. H. Patterson  
April 25-1935  
Dickinson Bayou



counter 44815



630

A. Patterson  
M.C. Hoffman

Dickinson Bayou  
Apr 25-1935  
State #1

counter 74816

Dickinson Bayou 4/25/35  
View of marsh looking  
toward H.D.R.Co. #A-3 Stewart  
Stanchion #1 state later  
located in left foreground,  
approx. 20' north of position  
of M.C. Hoffman.

630

A. Patterson

M.C. Hoffman

Dickinson Bayou  
April 25 1935  
State #1

# STANOLIND OIL AND GAS COMPANY

712 MAIN STREET  
HOUSTON, TEXAS

4934

Re: State Lease #18948  
Our File No. 16488  
Tract #3  
Dickinson Bayou  
Galveston County, Texas.

Mr. J. H. Walker, Commissioner,  
General Land Office,  
Austin, Texas.

Dear Sir: Attention: Mr. C. F. Blucher

We are pleased to furnish you with the attached topographic map based on Survey work done by Humble Oil and Refining Company and Stanolind Oil and Gas Company, in conjunction with Mr. J. S. Boyles as representative of the Land Office, covering Tract #3, Dickinson Bayou, Galveston County.

The elevations within the marshes furnished by the surveyors have been used as a basis for contouring on an interval of 0.2'.

Yours very truly,

STANOLIND OIL AND GAS COMPANY

By

*A. L. Selig*  
A. L. Selig

ALS:TG  
Encl.

*Acknowledged  
7/18/35  
B—*

RECEIVED

JUL 17 1935

REFERRED TO MAP

*counter 44817*

122

*Shawiff*

# SUN OIL COMPANY

JNO. G. PEW  
VICE PRESIDENT

SAN JACINTO LIFE BUILDING  
BEAUMONT, TEXAS

R. W. PACK  
GENERAL AGENT

November 17, 1947

**RECEIVED**  
NOV 19 1947  
REFERRED TO CHIEF CLERK

Mr. Alvis Vandygriff, Chief Clerk  
General Land Office  
Austin, Texas

Dear Mr. Vandygriff:-

In accordance with your request we hand you herewith attached one plat showing the location of Tracts No. 25, 26 and 27 of a General Land Office subdivision of offshore shore tracts in the vicinity of Caplen, Bolivar Peninsula, Galveston County, Texas. Also attached hereto the calculation notes for the above tracts along with a report and analysis of the manner in which we determined the position of said tracts.

From the accompanying plat it will be noted where Tract No. 25 is conflicting with Tract No. 153 of another subdivision of the General Land Office dated August 1947, and Tract No. 27 is in conflict also with Tracts No. 145, Tract No. 150 and Tract No. 163 of this same subdivision. This will confirm our telephone conversation to you of August 3, 1947.

In addition to the above data we also attach hereto three plats along with calculation notes and a separate report showing the location of Tracts No. 128, Tract No. 130, Tract No. 146, Tract No. 180, Tract No. 181 and Tract No. 182 of another General Land Office subdivision of offshore tracts off Matagorda Peninsula, Matagorda County, Texas.

From the above accompanying three plats it will be noted that Tracts No. 128 and Tract No. 130 conflict with Tract No. 406. There is a small conflict of Tract No. 146 with Tract No. 405, but no conflict of Tract No. 180 with Tract No. 338.

We trust that the foregoing data will furnish you with desired information and that the delay in getting this data to you has not in any way inconvenienced you.

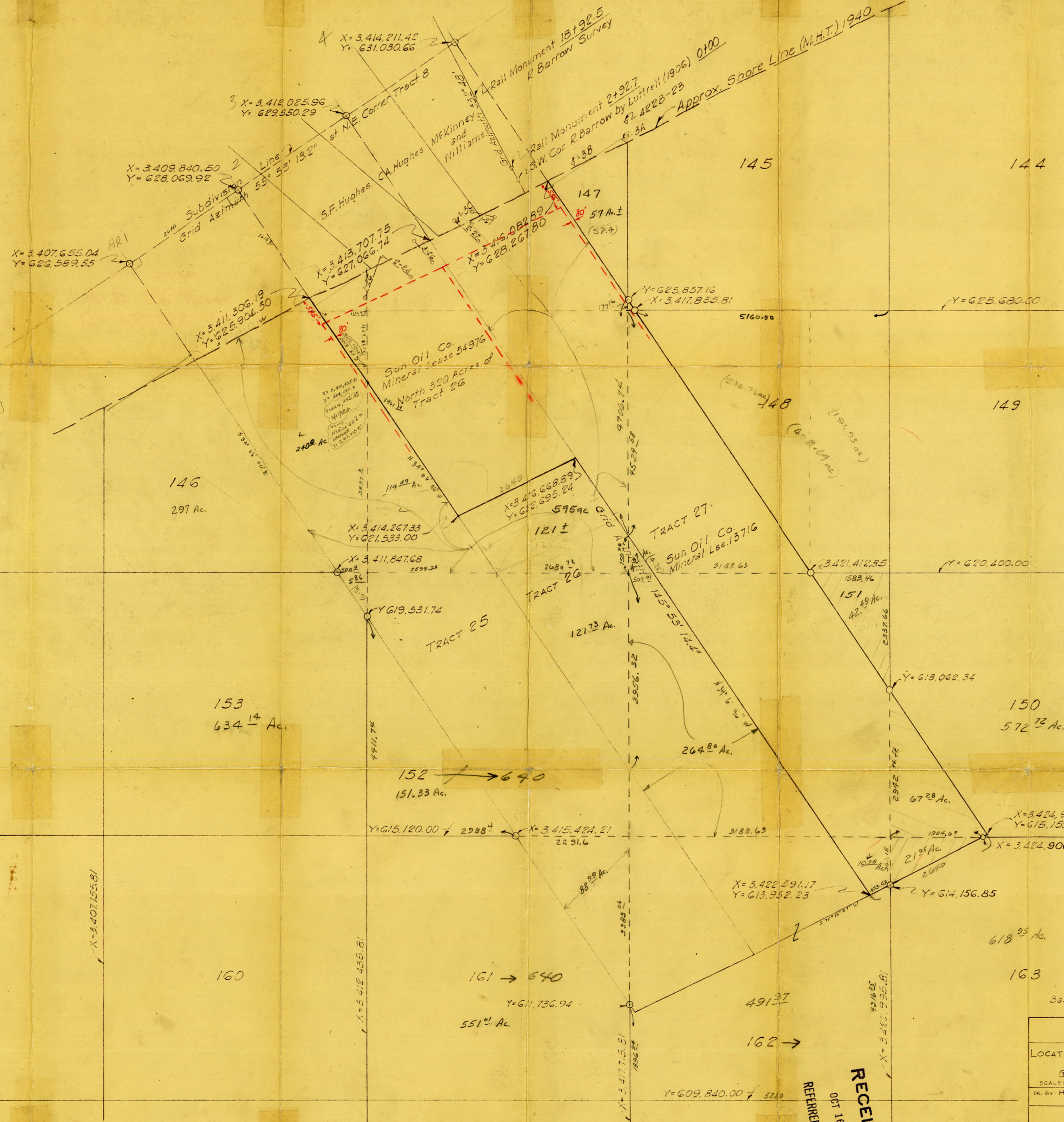
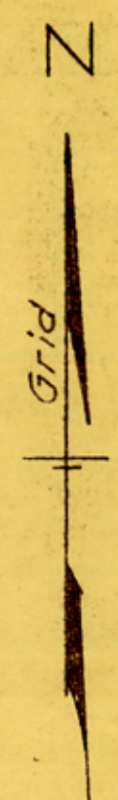
Yours very truly,

SUN OIL COMPANY

BY *D. L. Alexander*  
D. L. Alexander

DLA/mp  
Attachment

*counter 44818*



123.62 = tan 34° 06' 15.4"  
Y 211/1000

X=3,407,155.81

X=3,412,435.81

X=3,422,925.31

Based on Texas State Lambert Grid South Central Zone

SUN OIL COMPANY BEAUMONT, TEXAS	
LOCATION OF STATE TRACTS 25, 26 & 27 OFF BOLIVAR PENINSULA GALVESTON COUNTY, TEXAS	
SCALE: 1" = 1000'	DATE: 9-21-50
DR. BY: H. B. S.	APPROVED:
DRAWING NO. 157-A	

RECEIVED  
OCT 18 1950  
REFERRED TO MNP

RECEIVED TO INV. 6  
OCT 10 1940  
RECEIVED

THE TEXAS STATE ARCHIVES  
1000 WEST 11TH STREET  
AUSTIN, TEXAS  
RECEIVED

D 889  
GALVESTON Co  
RLD. SK N-14  
Flat Folder

25-2130613  
26-M 38137  
27-M 19974

counter 14819

GALVESTON CO. ROLL SK. # 14

— FLAT FOLDER —

OFFSHORE SUBMERGED TRACTS

26	M. L.	33137
27	M. L.	19974 .

Leased to SUN OIL CO.

Maps, Computations and XY Coordinates

Date: Nov. 19, 1947 & Oct. 16, 1950

counter 44821

RECEIVED

NOV 19 1947

GENERAL LAND OFFICE

TEXAS OFFSHORE TRACTS - CAPLEN AREA,  
BOLIVAR PENINSULA, GALVESTON COUNTY, TEXAS

PURPOSE: The purpose of the accompanying analysis was to demonstrate any possible conflict between the offshore tracts as offered for lease on the subdivision published in August 1947 by the Texas General Land Office and leases currently held by the Sun Oil Company. The problem resolves itself into locating the position of the tracts now under lease on the Texas State Grid System and comparing such location with the tracts in the subdivision as published in August 1947, also specified by lines on the Texas State Grid System.

METHOD: Had the other subdivision, on which leases are currently held, been specified on the Lambert Grid, the problem here would be simple and straight forward. However, the points and distances given as a basis for subdivision were geodetically stated. Hence, the accompanying computations, while in terms of the Lambert Projection, are computations along Geodetic lines.

In laying out the positions of the boundary lines perpendicular to the shore lines, a basic assumption had to be made. The NE corner of Tract No. 8 was specified, as was the NE boundary line. Other lines were stated to be parallel to the NE boundary of Tract No. 8 and spaced on half-mile intervals. There was no statement describing the line along which the spacing was to be measured. It should be pointed out that the ultimate location of the tract boundaries in both position and azimuth will depend upon the line chosen along which the tract spacing is made. This follows because two non-identical lines, both perpendicular to the NE boundary of Tract No. 8 will no where else remain parallel, but will converge increasingly as the distance from this boundary is increased. Thus different lines taken, along which to subdivide, will produce distinctly different tract boundaries. This fact was overlooked in the Texas General Land Office specification of the tract boundaries.

In the accompanying computations of tract boundaries, it was assumed that the line along which subdivision was to be measured passed through the specified NE corner of Tract No. 8, and ran perpendicular to the specified NE boundary of Tract No. 8. Also it was assumed that this line was a geodetically "straight" line, and so used in the computations. Should this line be accepted as the logical subdivision line (assumed here), the described boundaries may be assumed correct. If, however, any other line is chosen, the precise location may then be questioned. In any event, the result should not differ greatly from that derived here.

counter 4822

A location of the subdivision origin is shown on a sketch, page 1, along with miscellaneous computations. The first step was to establish the "mapping angle" at Parr's Grove, which is the angle between true and grid north. The computation of this angle is made on page 2.

The next step is to convert the lengths specified by the General Land Office into lengths on the grid. The specified lengths are geodetic lengths and must be converted into grid lengths by the use of scale factors. Because of the long length between the NE corner of Tract No. 8 and the NE corner of Tract No. 25 considerable error would be introduced by the omission of this scale correction. The scale corrections are factors applied as corrections to logarithms and are obtained from the State Grid Projection Tables. The computation of scale factors to be applied to various lengths was made on Page 3. The particular scale factor used in each case is noted on the coordinate computations, pages 5, 11 and 12.

The condition of parallelism between tract boundaries cannot literally be met, because all geodetic lines converge. The nearest condition obtainable is to say that all tract boundaries must be perpendicular to a single line along which subdivision is to be made. This subdivision line, as stated above, was arbitrarily taken through the specified NE corner of Tract No. 8 and normal to the NE boundary of Tract No. 8. This arbitrary "subdivision line" is a geodetic line by implication. To convert it to a line on the projection grid, it was necessary to compute a correction to the azimuth. This necessity arises because a geodetic line is a curved line on the grid. Over short distances this would produce a negligible error. Over the eight to ten miles involved in this problem, the resulting difference in position becomes significant. This azimuth correction computation is made on page 4.

With the modifications discussed just above, the coordinates of points were computed in a conventional manner. The points determined along the "subdivision line" were designated tract corners. It must be understood that these are not true corners, which are, in fact, on the shore line. These points, however, may be precisely described, which the shore line cannot. These so-called corners are merely points on the tract boundaries along a line of subdivision. The true corners are obtained by projection of the boundaries across the shore line.

The next step in the computations was to establish an approximate position of the shore line. This was accomplished by resetting a survey made by Sun Oil Company into coordinates on the State Grid. This survey was made on a plane coordinate system with origin at triangulation Station "Red Bluff" and based on the Red Bluff Meridian. An azimuth was obtained in this system between Triangulation Stations "Slipper" and "Shell". A comparison of this



azimuth and the State Grid azimuth between these stations gave a conversion angle to place all azimuths in this survey on the grid. Scale factors were applied and coordinates were computed of pertinent points in this survey. This provided coordinates of the corners of Tracts No. 26 and No. 27 as actually surveyed and established a shore line. A sketch of the used portion of this survey is shown on page 7. The usual computations follow. In the coordinate list, the tract covers as established by this survey are designated "(Sun)".

Beginning on page 13 are computations of the coordinates of intersections of the tract boundaries with other lines of importance.

The above computations are plotted on the accompanying map. Points not pertinent to the purpose of this analysis were omitted as superfluous.

Don G. Lovett

FINAL COORDINATES

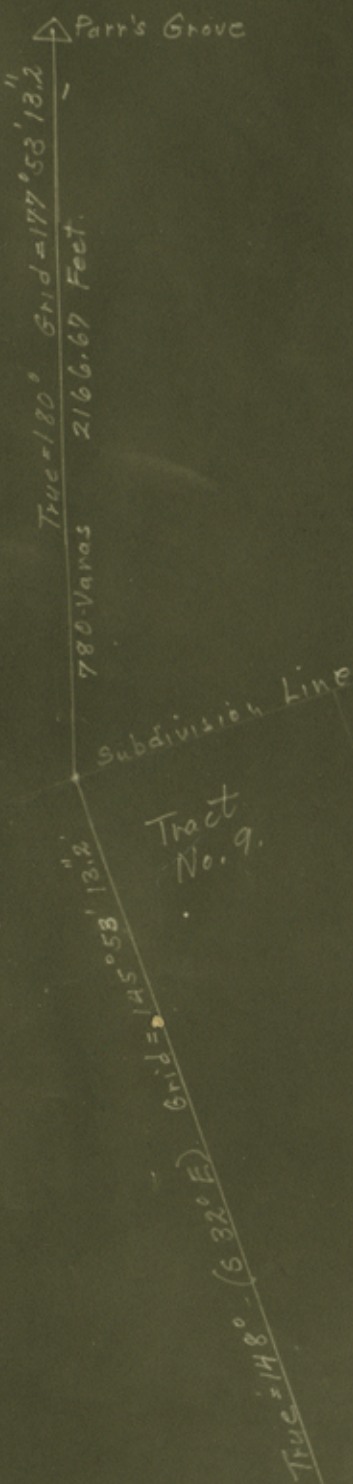
Survey	Coord. Zone	Sou. Cent.	Date
County	State	Prospect	
Station	X	Y	
△ Paris Grove	3,372,607.89	605,068.38	
△ Slippet	3,408,472.03	643,846.54	
△ Shell	3,423,419.57	648,028.25	
Corners as computed along a line through the NE Corner of Tract 8 - Asper sketch, Page 1:			
NE Corner Tr. 8	3,372,687.77	602,903.48	
NE Cor. Tr. 24	3,407,655.04	626,589.55	
NE Cor. Tr. 25	3,409,840.50	628,069.92	
NE Cor. Tr. 26	3,412,025.96	629,550.29	
NE Cor. Tr. 27	3,414,211.42	631,030.66	
Corners of Gulf Tracts, as located by Sun Oil Co survey, on the shore line - as per sketch, page 7			
Monument	3,407,881.11	643,081.51	
Corner	3,415,478.03	628,283.87	
Rail Monument	3,415,611.69	628,023.51	
"C"	3,413,801.63	626,796.94	
"B"	3,413,678.63	626,978.53	
"A"	3,411,492.89	625,498.18	
"D"	3,415,986.36	628,277.29	
NE Cor. Tr. 27 (Sun)	3,416,346.34	627,745.84	
NE Cor. Tr. 26 (Sun)	3,413,971.67	626,545.90	
NE Cor. Tr. 25 (Sun)	3,411,569.68	625,364.82	

STANDARD B&P "NOISE"

B&P "NOISE"

Winter 1925

# Gulf Tracts - Subdivision Scheme.



N Azimuth, Parr's Grove To NE Cor. Tract No 8 =  $180^{\circ} 00' 00''$   
 Lambert Grid Mapping Angle =  $(-2^{\circ} 06' 46.8''$   
 Grid Azimuth =  $177^{\circ} 53' 13.2''$

Dist. Parr's Grove to N.E. Cor. Tract No 8, 780 Var.  
 Factor to feet. X. 2.97778  
 Dist. in Feet. = 2166.67'

Grid Azimuth  $177^{\circ} 53' 13.2''$   
 $- 32^{\circ} - -$   
 Grid Azimuth Tract Bound.  $145^{\circ} 53' 13.2''$

Grid Az Tract Bound.  $145^{\circ} 53' 13.2''$   
 $- 90^{\circ}$   
 Grid Az Subdivision Line  $55^{\circ} 53' 13.2''$

$\frac{1}{2}$  mile in feet 2640'  
 X No. Tracts 8 to 25 X 17  
 Dist. NE Cor. Tr. 8 To NE Cor. Tr. 25  
 (Taken along Subdivision line) 44880.00'

(2)

PLANE COORDINATES ON LAMBERT PROJECTION &  
GEODETIC POSITION FROM LAMBERT COORDINATES

Survey State Tracks		Coord. Zone Texas South Central	
State Texas		County Galveston	
Station: $\Delta$ Parr's Grove		On Bolivar Peninsula, Galveston Co., Tex	
		Prosp. —	
X	3,372,607.89	R (Y=0)	37,807,440.38
(-)	2,000,000.00	Y (-)	605,068.38
X'	1,372,607.89	R'	37,202,372.00
		Tan $\theta$	0.0368757089
$\theta$ (min of $\theta$ )	2° 06' 40"	Tan $\theta$ (min of $\theta$ )	0.0368625230
$\theta$ (sec of $\theta$ )	6.8858	Diff. (sec of $\theta$ )	0.0000331859
$\theta$ →	2° 06' 46".8358		
$\theta$ (min of $\lambda$ )	2° 06' 23".8477	$\lambda$ (min of $\lambda$ )	94° 42'
Diff. (sec of $\lambda$ )	22".9881	$\lambda$ (sec of $\lambda$ ) (-)	46".9229
			94° 41' 13".0771 ✓
Corr. 1/2 Tan $\theta$ (')	- 61587	1/2 Tan $\theta$	0.0184478545
Corr. 1/2 Tan $\theta$ (")	- 1152	Correc. (-)	62739
Total correc.	- 62739	Tan $\theta/2$	0.0184415806
Y	605,068.38		
Y" (X' Tan $\theta/2$ ) (-)	25,313.06		
Y'	579,755.32		
Y' (min. of $\phi$ ) (-)	575,682.66	$\phi$ (min. of $\phi$ )	29° 25'
Y' (sec. of $\phi$ )	4,072.66	$\phi$ (sec. of $\phi$ )	40".3240
		$\phi$	29° 25' 40".3240 ✓
R (for min. of $\phi$ )		Y' (for min. of $\phi$ )	
Cor. for sec. of $\phi$ (-)		Cor. for sec of $\phi$ (-)	
R		Y'	
		Y" (=2R sin $\frac{\theta}{2}$ ) (+)	
$\theta$ (for min of $\lambda$ )	2° 06' 53".2424	Y	
Cor. for sec of $\lambda$ (-)	6.4066		
$\theta$ →	2° 06' 46".8358		
$\theta$ "			
M (for 10")		K (for 10")	
Cor. for frac. (-)		Cor. for frac. (+)	
M		K	
Sin $\theta$ ( $\theta$ "M)		2 sin $\frac{\theta}{2}$ ( $\theta$ "K)	
X' (R sin $\theta$ )	2,000,000.00	2R sin $\frac{\theta}{2}$	(Place results above)
X			

Latitude ( $\phi$ ) 29° 25' 40".3240      Longitude ( $\lambda$ ) 94° 41' 13".0771

For mapping angle at  $\Delta$  Parr's Grove.

### Grid Scale Factors.

Log factors for conversion of measured distance into grid distance on the Lambert Grid - Tex. Sou. Cont. Zone  
(Units in seventh place logs)

Scale Factor at	Δ Parr's Grove	=	-587
Scale Factor at	Δ Caplen	=	-576
	Sum	=	-1163
		÷ 2	
Factor to apply between	Δ Parr's Grove & Δ Caplen	=	-581

Scale Factor at	Δ Caplen	=	-576
Scale Factor at	Δ Slipper	=	-568
	Sum	=	-1144
		÷ 2	
Factor To apply between	Δ Caplen & Δ Slipper	=	-572

- Δ Parr's Grove Lat. = 29° 25' 40.3240
- Δ Caplen Lat. = 29° 29' 46.5595
- Δ Slipper Lat. = 29° 31' 50.730

Correction To Grid Azimuth.

(On line from NE Cor. Tr. No. 8 To NE Cor. Tr. No. 25  
Taken along subdivision line.)  
Nominal Azimuth = 55° 53' 13.2"

$$\begin{array}{r} \Delta X \\ \text{Log Dist} = 4.6520528 \\ \text{L Sin Nom Az} = 9.9184224 \\ \hline 4.5704752 \\ \Delta X = 37194.20 \end{array}$$

$$\begin{array}{r} \Delta Y \\ \text{Log Dist} = 4.6520528 \\ \text{L Cos Nom Az} = 9.7978948 \\ \hline 4.3999476 \\ \Delta Y = 25115.83 \end{array}$$

$$\begin{array}{r} Y_1 = 602,903.48 \\ Y_0 = 545,931.18 \\ \hline Y - Y_0 = +56,972.30 \end{array}$$

$$\begin{array}{r} \Delta Y = 25115.83 \\ \div 3 \\ \hline \Delta Y/3 = +8371.94 \end{array}$$

$$\begin{array}{r} (Y - Y_0) = +56,972.30 \\ \Delta Y/3 = +8,371.94 \\ \hline \Sigma = 65,344.24 \end{array}$$

$$\begin{array}{r} \text{Log } \Sigma = 4.8152057 \\ \text{Log } \Delta X = 4.5704752 \\ \text{Log } k = 0.3735671 - 10 \\ \hline \text{Log Corr}(\") = 9.7592480 - 10 \end{array}$$

Correction = +0.57"  $\approx$  +0.6"

$$\begin{array}{r} \text{Nominal Azimuth} = 55^\circ 53' 13.2" \\ \text{Correc.} = + 0.6 \\ \hline \text{Corrected Grid Az.} = 55^\circ 53' 13.8" \\ \text{(NE Cor. Tr. No 8 To NE Cor. Tr. No 25)} \end{array}$$

$$\begin{array}{r} \text{Nominal Az.} = 235^\circ 53' 13.8" \\ \text{Correc.} = + 0.6 \\ \hline \text{Back Azimuth} = 235^\circ 53' 14.4" \end{array}$$

Notes: Using the same correction for obtaining the back azimuth is not quite exact. However since this azimuth is to be used only locally, involving no great distances, further refinement would not be of practical utility.

Traverse Final Coordinate Computation

Name Traverse	State Tracts	County	State	Prosp.	Date			
Sta.	Brng.	$\Delta X$	Adj	$X$	$\Delta Y$	Adj	$Y$	$\Sigma X$
$\Delta$ Parr's Grove	177°53'13.2"	L. Dist. 3,335.7927 Scale factor - 587		3,372,607.89	3,335.7927 -587		605,068.88	Scale factor at $\Delta$ Parr's Grove ←
	S 2°06'46.8" E	3,335.7340 L. sin 8,566.6783 1,902.4123	(+)	79.88	3,335.7340 L. cos 9,999.7046 3,335.4386		(-) 2,164.90	
	2166.67'							
N.E. Cor.		+79.875			-2164.902			
Tract No 8	55°53'13.8"	4,652.0528 -581	(+)	3,372,687.77	4,652.0528 -581		602,903.48	Scale factor at Pt. between $\Delta$ Parr's Grove and $\Delta$ Caplen ←
	N 55°53'13.8" E	4,651.9947 9,917.9761 4,569.9908		37,152.73	4,651.9947 9,748.8270 4,400.8217		(+) 25,166.44	
N.E. Cor.	44880.00	(+) 37,152.73			(+) 25,166.44			
Tract No 25	55°53'14.4"	3,421.6039 -579	(+)	3,409,840.50	3,421.6039 -579		628,069.92	Scale factor at N.E. Cor. Tract No 25 ←
	N 55°53'14.4" E	3,421.5460 9,917.9769 3,339.5429		2,185.46	3,421.5460 9,748.8252 3,170.3712		(+) 1,480.37	
N.E. Cor.	2640.0'	(+) 2,185.46			(+) 1,480.374			$\Sigma Y$
Tract No 26	55°53'14.4"		(+)	3,412,025.96			629,550.29	
	N 55°53'14.4" E	ditto from above		2,185.46	ditto from above		(+) 1,480.37	
N.E. Cor.	2640.0							
Tract No 27				3,419,211.42			631,030.66	
N.E. Cor.								
Tract No 25	235°53'14.4"		(+)	3,409,840.50			628,069.92	
	S 55°53'14.4" W	ditto from above	(-)	2,185.46	ditto from above		(-) 1,480.37	
N.E. Cor.	2640.0"	(-) 2,185.46			(-) 1,480.37			
Tract No 24				3,407,655.04			626,589.55	

Corners on "Subdivision Line"

counter 4830

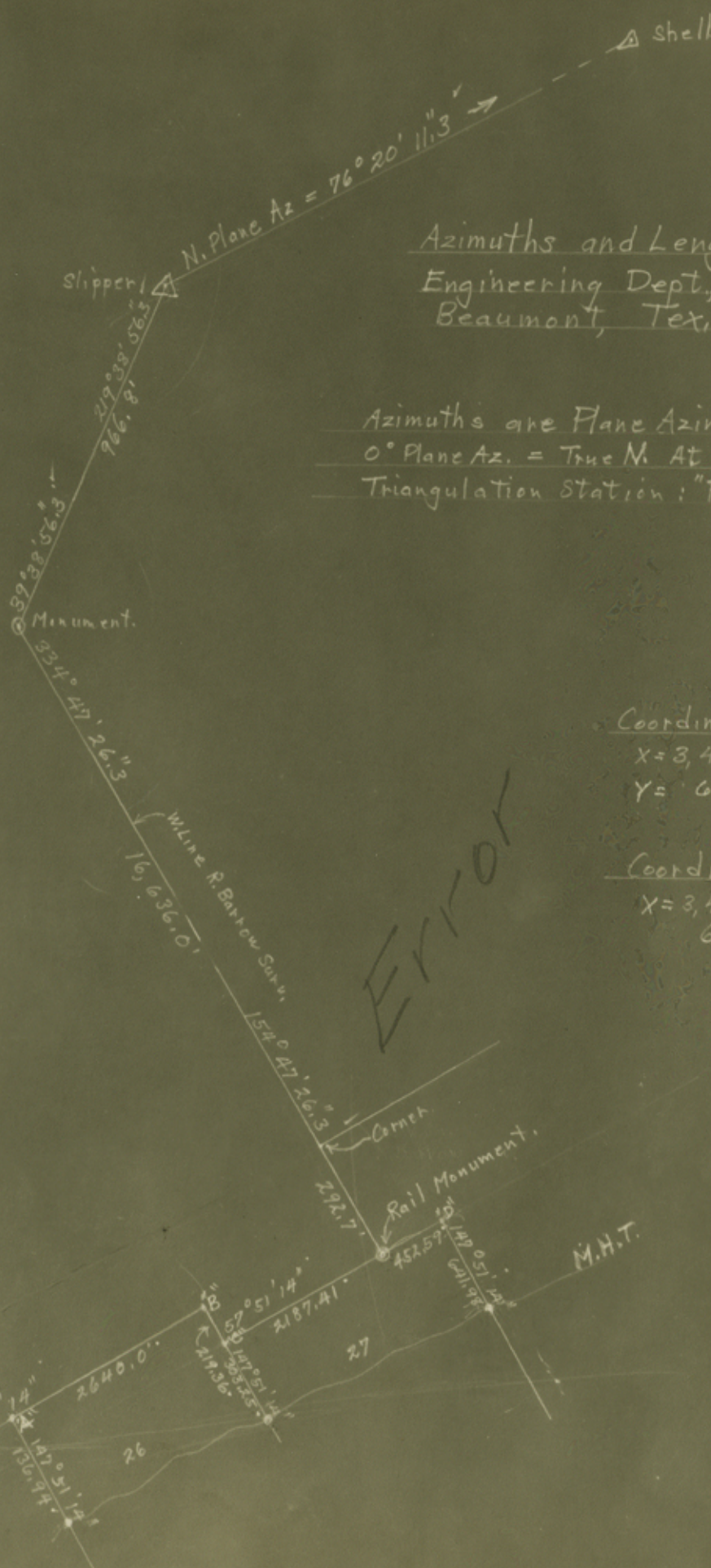
Geodetic Position From Lambert Coordinates

Survey	Caplen	Coord. Zone	Tex. Sav. Cent.
State	Texas	County	Galveston
		Prosp.	
Station: NE Cor. Tr. 25' (Preliminary for correct scale factor)			
X	3,409,877.00	R (Y=0)	37,807,440.38
(-)	2,000,000.00	Y	628,015.85
X'	1,409,877.00	R'	37,179,424.53
		Tan $\theta$	0.0379208954
$\theta$ (min of $\theta$ )	2° 10' 10"	Tan $\theta$ (min of $\theta$ )	0.0378820538
$\theta$ (sec of $\theta$ )	8.0002	Diff. (sec of $\theta$ )	0.0000388416
$\theta$	2° 10' 18.0002		
$\theta$ (min of $\lambda$ )	2° 09' 49.6110	(min of $\lambda$ )	94° 35'
Diff (sec of $\lambda$ )	28.3892	(sec of $\lambda$ ) (-)	57.9475
		$\lambda$	94° 34' 02.0525
Corr. 1/2 Tan $\theta$ (")	-07644	1/2 Tan $\theta$	0.0189604477
Corr. 1/2 Tan $\theta$ (")	-469	Correc. (-)	-68113
Total Correc.	-68113	Tan $\theta/2$	0.0189536364
Y	628,015.85		
Y" (X' Tan $\theta/2$ ) (-)	26,722.30		
Y'	601,293.55		
Y' (min. of $\phi$ ) (-)	599,922.38	$\phi$ (min. of $\phi$ )	29° 29' 7"
Y' (sec. of $\phi$ )	1,371.17	$\phi$ (sec. of $\phi$ )	13.5760
		$\phi$	29° 29' 13.5760

Station:			
X		R (Y=0)	
(-)	2,000,000.00	Y	
X'		R'	
		Tan $\theta$	
$\theta$ (min. of $\theta$ )		Tan $\theta$ (min. of $\theta$ )	
$\theta$ (sec. of $\theta$ )		Diff. (sec. of $\theta$ )	
$\theta$			
$\theta$ (min. of $\lambda$ )		(min. of $\lambda$ )	
Diff. (sec. of $\lambda$ )		(sec. of $\lambda$ ) (-)	
		$\lambda$	
Corr. 1/2 Tan $\theta$ (")		1/2 Tan $\theta$	
Corr. 1/2 Tan $\theta$ (")		Correc. (-)	
Total Correc.		Tan $\theta/2$	
Y			
Y" (X' Tan $\theta/2$ ) (-)			
Y'			
Y' (min. of $\phi$ ) (-)		$\phi$ (min. of $\phi$ )	
Y' (sec. of $\phi$ )		$\phi$ (sec. of $\phi$ )	
		$\phi$	

This latitude close enough to lat. of Caplen to make scale estimate close enough. Pass. error  $\pm 0.01$





Azimuths and Lengths given by  
Engineering Dept., Sun Oil Co.,  
Beaumont, Tex.

Azimuths are Plane Azimuths with  
 $0^{\circ}$  Plane Az. = True N. At U.S.C. 46.S  
Triangulation Station: "Red Bluff"

Coordinates  $\Delta$  Shell  
X = 3,423,419.57  
Y = 648,028.25

Coordinates  $\Delta$  Slipper  
X = 3,408,472.03  
Y = 648,846.54

(3)

AZIMUTH AND LENGTH FROM CO-ORDINATES.

Name Survey <i>Caplen</i>		Date
County <i>Galveston</i>	State <i>Tex</i>	Prospect
From: <i>Δ Slipper</i>	To: <i>Δ Shell</i>	Use: <i>Azimuth</i>
$\Delta X$	$\Delta Y$	Log $\Delta X$ <i>4.1745697</i>
<i>3,423,419.57</i>	<i>648,028.25</i>	Log $\Delta Y$ <i>3.6213539</i>
<i>3,408,472.03</i>	<i>643,846.54</i>	Log tan $\phi$ <i>0.5532158</i>
<i>14,947.54</i>	<i>4,181.71</i>	$\phi$ <i>74^{\circ}22'14.0"</i> Az <i>74^{\circ}22'14.0"</i>
Log $\Delta X$		Log $\Delta Y$
Log sin $\phi$		Log cos $\phi$
Log Dist.		Log Dist.
From:	To:	Use:
$\Delta X$	$\Delta Y$	Log $\Delta X$
		Log $\Delta Y$
		Log tan $\phi$
		$\phi$ Az
Log $\Delta X$		Log $\Delta Y$
Log sin $\phi$		Log cos. $\phi$
Log Dist.		Log. Dist.
From:	To:	Use:
$\Delta X$	$\Delta Y$	Log $\Delta X$
		Log $\Delta Y$
		Log tan $\phi$
		$\phi$ Az
Log $\Delta X$		Log $\Delta Y$
Log sin $\phi$		Log sin $\phi$
Log Dist.		Log Dist.

Conversion "Red Bluff" to Grid Azimuths

Connection to  $\Delta$  Slipper to  $\Delta$  Shell Azimuth.

$$\begin{array}{r}
 Y_1 \quad 643,846,54 \\
 Y_0 \quad 545,931,18 \\
 \hline
 Y_1 - Y_0 \quad 97,915,36
 \end{array}$$

$$\begin{array}{r}
 \Delta Y = 4,181,71 \\
 \div 3 \\
 \hline
 \Delta Y/3 = 1,393,90
 \end{array}$$

$$\begin{array}{r}
 Y_1 - Y_0 = 97,915,36 \\
 \Delta Y/3 = 1,393,90 \\
 \hline
 \Sigma = 99,309,26
 \end{array}$$

$$\begin{array}{r}
 \text{Log } \Delta X = 4,1745697 \\
 \text{Log } \Sigma = 4,9969886 \\
 \text{K.K.} = 0,8235671 - 10 \\
 \hline
 9,5451254 \\
 \text{Correc} = (+) 0,35 \approx 0,4
 \end{array}$$

$$\begin{array}{r}
 \text{Computed Azimuth } \Delta \text{ Slipper to } \Delta \text{ Shell} = 74^\circ 22' 14,0'' \\
 \text{Connection} = (-) \quad 0,4'' \\
 \hline
 \text{Corrected Az} = 74^\circ 22' 13,6''
 \end{array}$$

$$\begin{array}{r}
 \text{Scale correc. at } \Delta \text{ Slipper.} = -569 \\
 \text{Scale correc. at NE Cor. Tr. 25} = -579 \\
 \hline
 \Sigma = -1148 \\
 \div 2 \\
 \hline
 \text{Scale correct. between } \Delta \text{ Slipper + NE Cor. Tr. 25} = -574
 \end{array}$$

$$\begin{array}{r}
 \text{Azimuth } \Delta \text{ Slipper to Shell } \Delta \text{ on Red Bluff } \Delta \text{ Merid.} = 76^\circ 20' 11,3'' \\
 \text{Grid Azimuth } \Delta \text{ Slipper to } \Delta \text{ shell} = 74^\circ 22' 13,6'' \\
 \hline
 \text{Conversion Factor} = (-) 1^\circ 57' 57,7''
 \end{array}$$

Conversion "Red Bluff" to Grid Azimuths

$$\begin{array}{rcl} \Delta \text{Slipper to Monument} & = & 219^\circ 38' 56.3 \\ \text{Factor} & (-) & 1^\circ 57' 57.7 \\ \hline \text{Grid Az.} & & 217^\circ 40' 58.6 \end{array}$$

$$\begin{array}{rcl} \text{Monument to Rail Monument} & = & 154^\circ 47' 26.3 \\ \text{Factor} & (-) & 1^\circ 57' 57.7 \\ \hline \text{Grid Az.} & & 152^\circ 49' 28.6 \end{array}$$

$$\begin{array}{rcl} \text{"A" to "B"} = \text{"C" to "D"} & = & 57^\circ 51' 14.0 \\ \text{Factor} & (-) & 1^\circ 57' 57.7 \\ \hline \text{Grid Az.} & & 55^\circ 53' 16.3 \end{array}$$

Traverse Final Coordinate Computation

Name Traverse		County		State		Prosp.		Date
Sta.	Brgg.	$\Delta X$	Adj	X	$\Delta Y$	Adj	Y	$\Sigma X$
A Slipper	217°40'58.6	L.Dist. 2,985,336.6		3,408,472.03	L.Dist. 2,985,336.6		643,846.54	
	S 37°40'58.6" W 966.8'	-574 2,985,279.2 L.Sin 9,786,248.3 2,771,527.5	(-)	590.92	-574 2,985,279.2 9,898,899.1 2,883,678.3	(-)	765.03	
Monument	152°49'28.6"	L.Dist. 4,221,048.9		3,407,881.11	L.Dist. 4,221,048.9		643,081.51	
	S 27°10'31.4" E 16,636.0'	-574 4,220,991.5 9,659,646.0 3,880,639.5	(-)	7596.92	-574 4,220,991.5 9,949,201.0 4,170,192.5	(-)	14,797.64	
Corner	152°49'28.6"	L.Dist. 2,466,422.7		3,415,478.03	L.Dist. 2,466,422.7		628,283.87	
	S 27°10'31.4" E 292.7'	-574 2,466,365.3 9,659,646.0 2,126,011.3	(-)	133.66	-574 2,466,365.3 9,949,201.0 2,415,566.3	(-)	260.36	
Rail Monument	235°53'16.3"	L.Dist. 3,339,930.2		3,415,611.64	L.Dist. 3,339,930.2		628,023.51	
	S 55°53'16.3" W 21,87.41'	-579 3,339,872.3 9,917,999.6 3,257,871.9	(-)	1,810.06	-579 3,339,872.3 9,948,819.3 3,088,691.6	(-)	1,226.37	
"C"	235°53'16.3"	L.Dist. 2,341,157.4		3,413,801.63	L.Dist. 2,341,157.4		626,796.94	
	N 34°06'43.7" W 219.36'	-579 2,341,099.5 9,948,819.3 2,089,918.8	(-)	123.00	-579 2,341,099.5 9,917,999.6 2,259,099.1	(-)	181.59	
'B'	235°53'16.3"	L.Dist. 3,421,603.9		3,413,678.63	L.Dist. 3,421,603.9		626,978.53	
	S 55°53'16.3" W 2640.0'	-579 3,421,546.0 9,917,999.6 3,339,545.6	(-)	2185.74	-579 3,421,546.0 9,948,819.3 3,170,365.3	(-)	1,480.35	
A		(-)	2185.474		(-)	1480.353		
				3,411,492.89			625,498.18	

Traverse Final Coordinate Computation

Name Traverse		County		State		Prosp.		Date
Sta.	Brng.	$\Delta X$	Adj	X	$\Delta Y$	Adj	Y	$\Sigma X$
Rail Monument	55°53'16.3"	2.6557050		3,415,611.69	2.6557050		628,023.51	Scale factor at N.E. Corner Tract 25 ← ↓
	N 55°53'16.3" E	-579		(+) 374.67	-579		253.78	
		2.6556471			2.6556471			
		9.7179996			9.7179996			
		2.5786467			2.4044664			
"D"	452.59'	(+) 374.668			(+) 253.783			
	145°53'16.3"	2.8075215		3,415,986.36	2.8075215		628,277.29	
	S 34°06'43.7" E	-579		(+) 359.98	-579		531.45	
		2.8074636			2.8074636			
		9.7488193			9.7179996			
		2.5562829			2.7254632			
"Sun" NE Cor. 27	641.98	(+) 359.984		3,416,346.34	(-) 531.451		627,745.84	
"C"	145°53'16.3"	2.4818008		3,413,801.63	2.4818008		626,796.94	$\Sigma Y$
	S 34°06'43.7" E	-579		(+) 170.04	-579		(-) 251.04	
		2.4817429			2.4817429			
		9.7488193			9.7179996			
		2.2305622			2.3997425			
"Sun" NE Cor. 26	303.25	(+) 170.044		3,413,971.67	(-) 251.039		626,545.90	
"A"	145°53'16.3"	2.1365303		3,411,492.89	2.1365303		625,498.18	
	S 34°06'43.7" E	-579		(+) 76.79	-579		(-) 133.36	
		2.1364724			2.1364724			
		9.7488193			9.7179996			
		1.8852917			2.0544720			
"Sun" NE Cor. 25	136.94	(+) 76.787		3,411,569.68	(-) 113.63		625,364.82	

counter 4837

# Computations of Intersections of NE. Boundary of Tract No. 27 with Lines as indicated

Intersection with line  $X = 3,417,715.81$  - West Boundary of Block No. 145

$\frac{3,417,715.81}{3,414,211.42}$	$\frac{\log \Delta X \quad 3.5446125}{\log \tan \alpha \quad 9.8308281}$	$\frac{631,030.66}{\Delta Y = 5,173.50}$
$\Delta X = 3,504.39$	$\frac{\log \Delta Y \quad 3.7137844}{}$	$Y = 625,857.16$

Intersection with line  $Y = 625,680.00$  - South Boundary of Block No. 145

$\frac{631,030.66}{625,680.00}$	$\frac{\log \Delta Y \quad 3.7284074}{\log \tan \alpha \quad 9.8308281}$	$\frac{3,414,211.42}{\Delta X = 3,624.89}$
$\Delta Y = 5,350.66$	$\frac{\log \Delta X \quad 3.5592355}{}$	$X = 3,417,835.81$

Intersection with line  $Y = 620,400.00$  - South Boundary of Block No. 148

$\frac{631,030.66}{620,400.00}$	$\frac{\log \Delta Y \quad 4.0265602}{\log \tan \alpha \quad 9.8308281}$	$\frac{3,414,211.42}{\Delta X = 7,200.93}$
$\Delta Y = 10,630.66$	$\frac{\log \Delta X \quad 3.8573883}{}$	$X = 3,421,412.35$

Intersection with line  $X = 3,422,995.81$  - West Boundary of Block No. 150

$\frac{3,422,995.81}{3,414,211.42}$	$\frac{\log \Delta X \quad 3.7437116}{\log \tan \alpha \quad 9.8308281}$	$\frac{631,030.66}{\Delta Y = 12,968.32}$
$\Delta X = 8,784.39$	$\frac{\log \Delta Y \quad 4.1128835}{}$	$Y = 618,062.34$

Intersection with line  $Y = 615,120.00$  - South Boundary of Block No. 150

$\frac{631,030.66}{615,120.00}$	$\frac{\log \Delta Y \quad 4.2016882}{\log \tan \alpha \quad 9.8308281}$	$\frac{3,414,211.42}{\Delta X = 10,777.41}$
$\Delta Y = 15,910.66$	$\frac{\log \Delta X \quad 4.0325163}{}$	$X = 3,424,988.83$

Computations of Intersections of NE Boundary of Tract No. 24 with Lines as indicated.

Intersection with line Y=620,400.00, - South Boundary of Block 146

626,589.55	Log ΔY = 3.7916591	3,407,655.04
620,400.00	Log Tan α (°) = 9.8308281	4,192.64
ΔY = 6,189.55	Log ΔX = 3.6224872	X = 3,411,847.68

Intersection with line X=3,412,435.81, - East Boundary of Block No. 153

3,412,435.81	Log ΔX = 3.6794979	626,589.55
3,407,655.04	Log Tan α (°) = 9.8308281	ΔY = 7,057.81
ΔX = 4,780.77	Log ΔY = 3.8486698	Y = 619,531.74

Intersection with line Y=615,120.00, - South Boundary of Block No. 152

626,589.55	Log ΔY = 4.0595464	3,407,655.04
615,120.00	Log Tan α (°) = 9.8308281	ΔX = 7,769.17
ΔY = 11,469.55	Log ΔX = 3.8903745	Y = 3,415,424.21

Intersection with line X=3,417,715.81, - East Boundary of Block No. 161

3,417,715.81	Log ΔX = 4.0026310	626,589.55
3,407,655.04	Log Tan α (°) = 9.8308281	ΔY = 14,852.61
ΔX = 10,060.77	Log ΔY = 4.1718029	Y = 611,736.94



November 26, 1947

Sun Oil Company  
San Jacinto Life Building  
Beaumont, Texas

Attention: Mr. D. L. Alexander

Gentlemen:

I appreciate very much you supplying me with the detailed information concerning the present location of Tracts No. 25, 26 and 27, submerged area offshore in the vicinity of Bolivar Peninsula, Galveston County, Texas.

This information will be of much benefit to us in the office and the excellent manner in which it was arranged is appreciated.

If at any time I can be of service to you, do not hesitate to call upon me.

Sincerely yours,

BASCOM GILES, COMMISSIONER  
OF THE GENERAL LAND OFFICE

AV:kms

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920

# SUN OIL COMPANY

GULF COAST DIVISION

SAN JACINTO BUILDING  
BEAUMONT, TEXAS

October 11, 1950

Honorable Bascom Giles, Commissioner  
General Land Office  
Austin, Texas

Dear Sir:

On November 17, 1947, Mr. D. L. Alexander furnished your office a copy of our Plat No. 157 showing our State Leases 26 and 27 near Caplen, Galveston County, Texas, in relation to adjoining tracts in the Gulf of Mexico as based on the Lambert Coordinate System. Attached also to Mr. Alexander's letter was a copy of the report and calculations pertaining to these Lambert Coordinates.

In checking through the calculations, it has been discovered that the coordinates of the intersection of the eastern and western lines of Tracts 25, 26 and 27 with the shore line is in error. This error will show on Page 7 of the calculations (a photostatic copy of this page is attached for your convenience). As shown on this sketch, the distance from the "Monument" to "Corner" is 16,636.0 feet, which is correct. "Rail Monument" shows to be on an azimuth of  $154^{\circ}47'26.3''$  from "Corner". This is the error as "Rail Monument" should be on an azimuth of  $334^{\circ}47'26.3''$  292.7 feet from "Corner". This error will account for the northeast corners of Lots 25, 26 and 27 being located 585 feet southeastwardly and 80 feet southwestwardly from their correct positions.

Attached hereto is a copy of our Drawing No. 157A showing the corrected Lambert Coordinates of these corners. Other Lambert Coordinates shown on our original Drawing No. 157 and this Drawing No. 157A have been checked and proven to be correct.

It is noticed that your map of Galveston Turtle and East Bays and portions of the Gulf of Mexico revised to May 18, 1949, shows these erroneous coordinates.

**RECEIVED**

OCT 16 1950

REFERRED TO MAP

counter 4841

Honorable Bascom Giles  
Page #2  
October 11, 1950

Hoping this error has been discovered in time  
to keep it from causing any trouble, I remain,

Yours very truly,

SUN OIL COMPANY

By J. L. Patton  
J. L. Patton, Mgr.  
Engineering Dept.

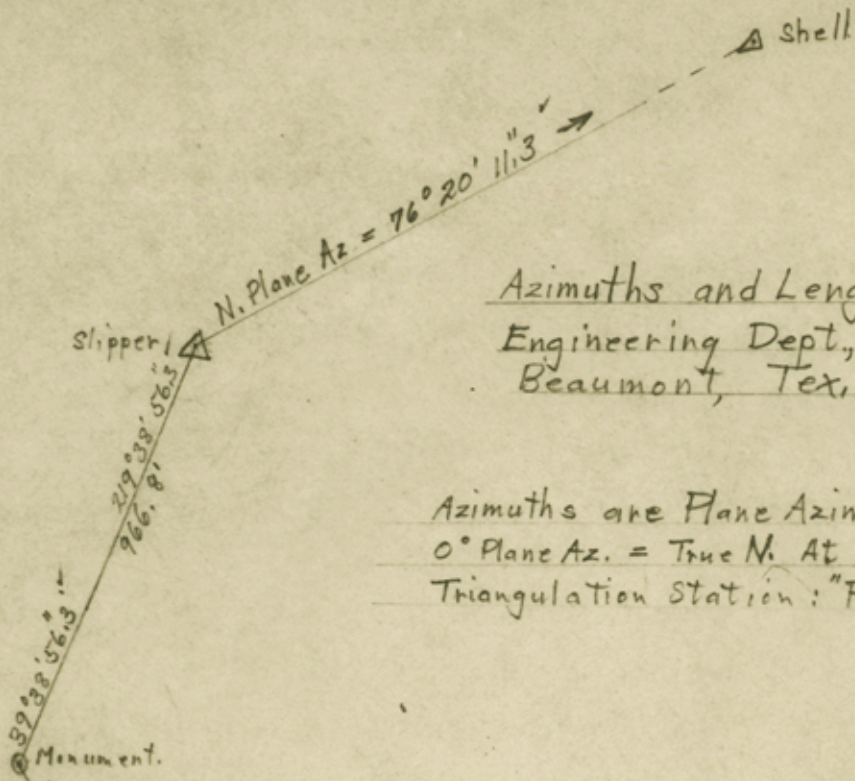
JLP/mmi  
Encls.

cc: Management Committee - Encls.  
Mr. Joiner Cartwright - Encls.

counter 144812

D 889

2920



Azimuths and Lengths given by  
Engineering Dept., Sun Oil Co.,  
Beaumont, Tex.

Azimuths are Plane Azimuths with  
0° Plane Az. = True N. At U.S.C. 46S  
Triangulation Station: "Red Bluff"

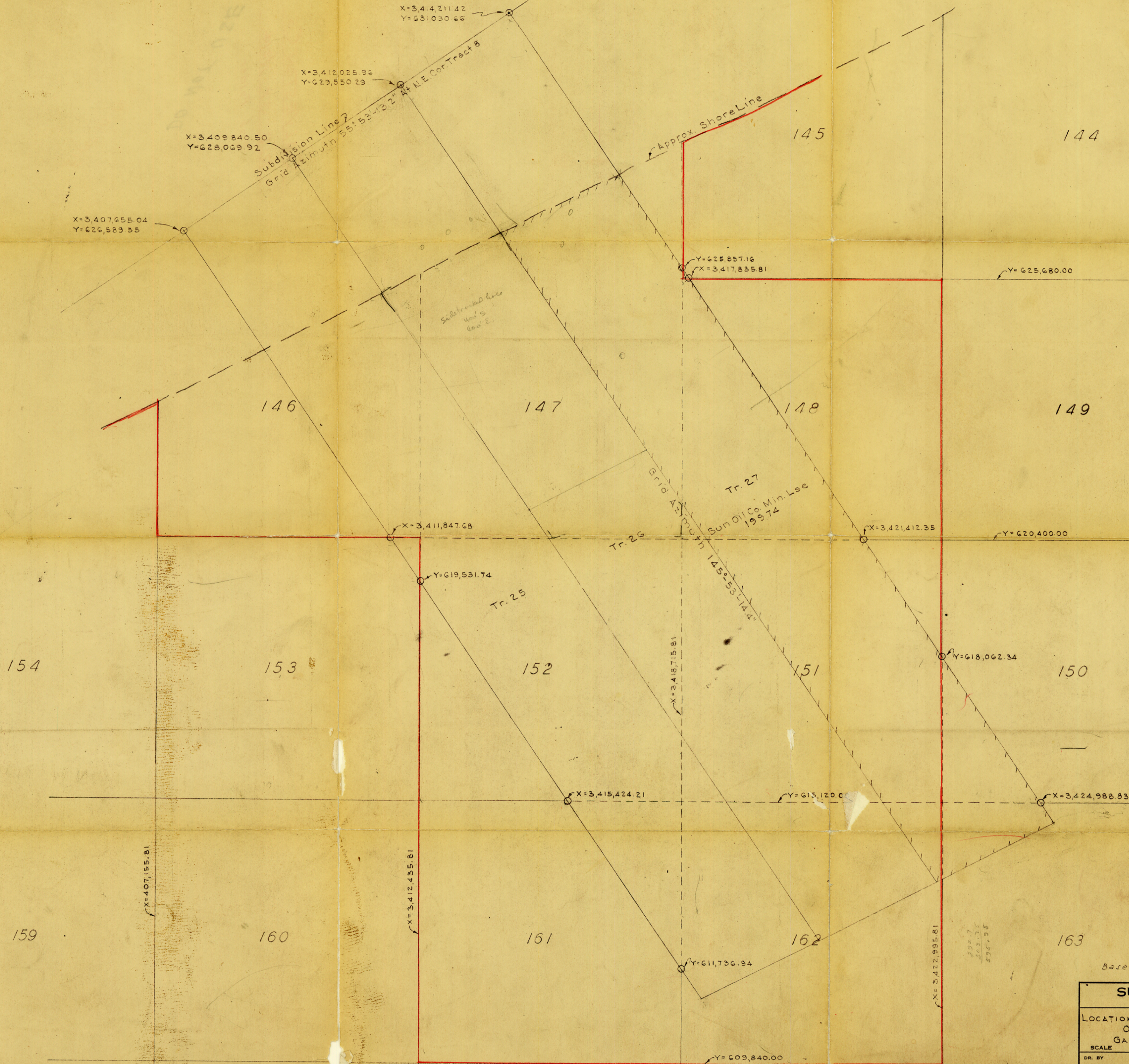
Coordinates  $\Delta$  Shell  
X = 3,423,419.57  
Y = 648,028.25

Coordinates  $\Delta$  Slipper  
X = 3,408,472.03  
Y = 643,846.54



**RECEIVED**  
OCT 16 1950  
REFERRED TO MAP

counter 74843



Based On Texas State Lambert Grid  
South Central Zone

<b>SUN OIL COMPANY</b>		
BEAUMONT, TEXAS		
LOCATION OF OFFSHORE TRACTS *25, 26 & 27		
OFF SOLIVAR PENINSULA		
GALVESTON COUNTY, TEXAS		
DATE 11-15-47		
SCALE		
DR. BY	CHECKED BY	APPROVED
TR. BY		
REVISION	DATE	APPROVED
		DRAWING No.
		157

counter 44875

ЭПИ ОИГ СОМЪИИ

GALVESTON Co  
RLD SK №14  
Flat Folder

DO NOT USE

Error in this

October 20, 1950

Sun Oil Company  
San Jacinto Building  
Beaumont, Texas

Attention: Mr. J. L. Patton, Mgr.  
Engineering Dept.

Dear Mr. Patton:

Your letter of October 11, 1950 relative to M. L. 19974 and M. L. 33137 on submerged tracts 26 and 27, Gulf of Mexico, Galveston County, has been received.

We had attempted to check the calculations pertaining to the Lambert Coordinates as submitted by Mr. Alexander with his letter of November 17, 1947, but were unable to get the same results, nor could we detect the error at that time.

Your letter of October 11, 1950 explains the reason, and we have now checked your calculations and find them to be correct.

The map of Galveston, Turtle and East Bays and Portion of the Gulf of Mexico, dated May 18, 1949, has been corrected to correspond.

We thank you for your assistance and cooperation in this matter; and will appreciate your calling our attention to any other discrepancies or errors you may find at any time on the maps compiled by this department.

Sincerely yours,

BASCOM GILES, COMMISSIONER  
OF THE GENERAL LAND OFFICE

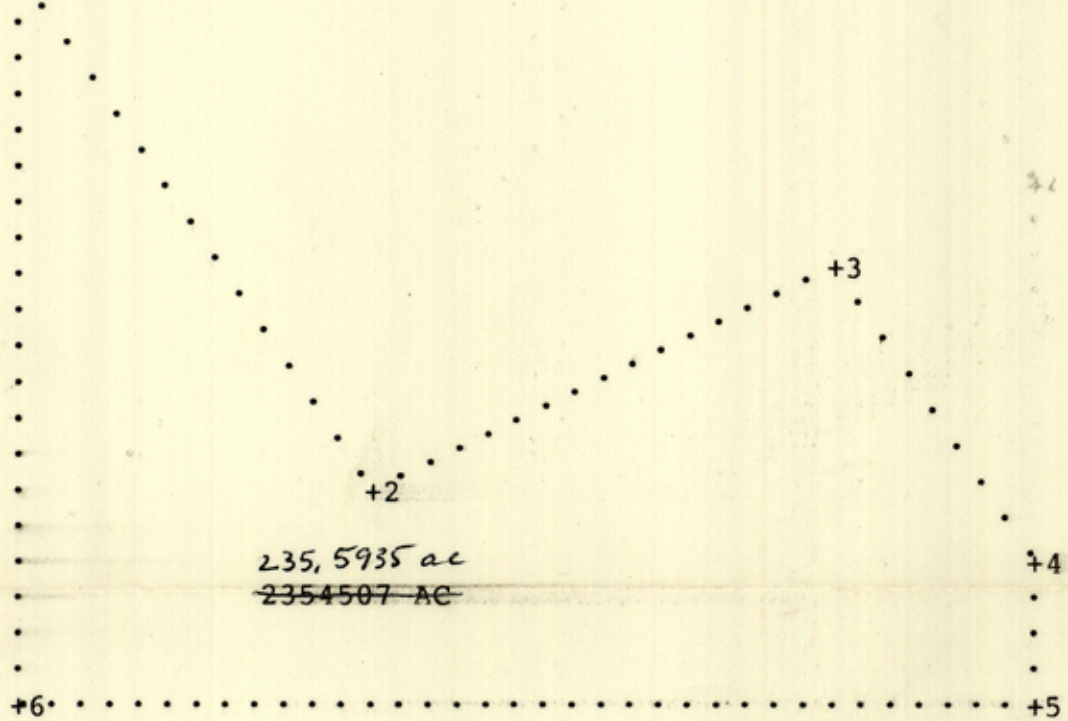
WS:ib

Coaster 44846

1-04-84 CLS

0850' 1

+1 FILE



0850' 1

FILE

START

1					624237.300	3412435.810
INV	SE	34	6	29.9	3266.145	
2					621533.000	3414267.330
INV	NE	64	10	30.9	2668.013	
3					622695.240	3416668.890
INV	SE	34	7	30.1	1866.165	
4					621150.400	3417715.810
INV	SW	0	0	0.0	750.400	
5					620400.000	3417715.810
INV	NW	89	59	60.0	5280.010	
6					620400.000	3412435.800
INV	NE	0	0	0.5	3837.300	
1					624237.300	3412435.810

AREA 10262454 SF 235.5935 ACRES

0850' 1

FILE

Counter 44847



GRANTEE \_\_\_\_\_ SUR. No. \_\_\_\_\_ BLK. \_\_\_\_\_ COUNTY \_\_\_\_\_ STATE \_\_\_\_\_

SURVEYED BY \_\_\_\_\_ DATE \_\_\_\_\_ CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_

COURSE	DISTANCE	COS	SINE	LATITUDES		DEPARTURES		D. M. D.	N. D. A.	S. D. A.
				N	S	E	W			
N 71 12 57 E	453 <sup>4</sup>			146 <sup>0</sup>		429 <sup>3</sup>				
N	963 <sup>2</sup>			963 <sup>2</sup>						
W	1180 <sup>6</sup>						1180 <sup>6</sup>			
S 34 04 46 E	1339 <sup>2</sup>	82793			1109 <sup>3</sup>	751 <sup>3</sup>				<del>19,78 ac</del>
E	2599 <sup>28</sup>					2599 <sup>28</sup>				
N 34 06 46 W	4634 <sup>28</sup>			3837 <sup>30</sup>			2599 <sup>28</sup>			<del>114 49 ac</del>
S	3837 <sup>30</sup>				3837 <sup>30</sup>					
E	588 <sup>13</sup>					588 <sup>13</sup>				
N	3837 <sup>3</sup>			3837 <sup>3</sup>						<del>241 9 ac</del>
N 34 06 46 W	2013 <sup>9</sup>			1668 <sup>3</sup>			1128 <sup>0</sup>			
S 61 14 17 W	2652 <sup>±</sup>				1274 <sup>2</sup>		2325 <sup>2</sup>			
S 34 06 46 E	5110 <sup>0</sup>				4230 <sup>7</sup>	2865 <sup>8</sup>				
N 34 06 46 W	2614 <sup>8</sup>									
S 55 53 13 W	2640 <sup>0</sup>									
S 34 06 46 E										
N 64 10 31 E										

counter 44848