MATAGORDA CO. ROLLED SKETCH # 25

(FLAT FOLDER)

OFFSHORE SUBMERGED TRACTS

128	M. L.	25920
130	M. L.	25921
146	M. L.	25922
180	M. L.	25933
181	M. L.	25934
182	M. L.	25935

Leased to SUN OIL CO.

Maps, Computations and XY Coordinates

Date: Nov. 19, 1947

counter 46624

Locate

X=3,117,299.02
Y=375,687.46

Grid Azimuth 56°-56'-50.8"

X=3,112,873.83
Y=372,807.93

Approx. Shore Line

X=3,108,448.64
Y=369,928.40

To ETHEL

Grid Azimuth 147°-03'-14.7"

Y=365,257.32

Grid Azimuth 147°-02'-50"

X=3,119,534.38

Grid Azimuth 147°-02'-25"

Y=372,240

Y=368,382.21

X=3,116,664.67

Y=366,819.40

X=3,122,957.94

Y=366,960.00

Tr. 181
Sun Oil Co. Min Lse. 25934

Tr. 182
Sun Oil Co. Min Lse. 25935

Tr. 180
Sun Oil Co. Min Lse. 25933

X=3,113,794.12

X=3,120,087.36

X=3,126,380.93

Y=361,680.00

X=3,127,315.81

X=3,127,835.81

Y=360,239.25

X=3,116,755.81

X=3,111,475.81

X=3,106,195.81

X=3,132,595.81

Y=358,674.23

Y=357,109.93

X=3,117,215.89

Y=356,400.00

421 420 419
422 423 424 425
434 433 432 431 430
438 439 440 441 442
338

MATAGORDA RLD Sk. 25

Based On Texas State Lambert Grid
South Central Zone

SUN OIL COMPANY
BEAUMONT, TEXAS

LOCATION OF OFFSHORE TRACTS #180, #181, & #182
OFF MATAGORDA PENINSULA
MATAGORDA COUNTY, TEXAS

SCALE DATE 11-15-47

DR. BY
TR. BY CHECKED BY
APPROVED
REVISION DATE
APPROVED
DRAWING No. 158

counter 46625

To △ MARIE

X = 3,036,288.61
Y = 326,025.66
2164+80

Grid Azimuth 59°-21'-57.2"

X = 3,031,746.83
Y = 323,335.42
2112+00

To △ ROW

Approx. Shore Line

Y = 324,063.44

Grid Azimuth 147°-09'-58.6"

X = 3,034,259.82

Tr. 145

X = 3,040,539.26

Grid Azimuth 147°-10'-24.0"

Y = 324,720.00

Y = 319,440.00

Y = 315,881.06

Y = 314,330.86
X = 3,037,666.03

X = 3,043,946.39

Y = 314,160.00

Tr. 146

Sun Oil Co. Min Lse. 25922

X = 3,032,275.81

X = 3,037,555.81

X = 3,042,835.81

X = 3,048,115.81

Y = 308,880.00

X = 3,047,353.59

X = 3,041,072.24

474 475

485 484 483

487 488 489 490 491

500 499 498 497 496

405

MATAGORDA RLD SK. 25

Based On Texas State Lambert Grid
South Central Zone

SUN OIL COMPANY
BEAUMONT, TEXAS

LOCATION OF OFFSHORE TRACT #146
OFF MATAGORDA PENINSULA
MATAGORDA COUNTY, TEXAS

SCALE | DATE 11-15-47

DR. BY | TR. BY | CHECKED BY | APPROVED

REVISION | DATE | APPROVED

counter 76626 | DRAWING NO. 159

ROW

X = 2,999,745.61
Y = 304,880.08

Y = 303,559.66

Grid Azimuth = 64°-15'-44.1"

Approx. Shore Line 7

X = 2,994,989.71
Y = 302,587.36

X = 2,990,233.81
Y = 300,294.64

To △ PENN

Grid Azimuth = 147°-13'-23.1"

Grid Azimuth = 147°-13'-49.2"

Grid Azimuth = 147°-14'-15.6"

503

513

514

512

515

516

517

518

519

526

525

524

534

535

536

406

Tr. 129

Tr. 127

Tr. 128

Tr. 130

Y = 303,600.00

X = 3,005,875.81

X = 3,011,155.81

X = 2,997,736.64

X = 2,003,969.55

Y = 298,320.00

Y = 295,359.60

Y = 293,878.27

X = 2,994,902.36

Y = 293,040.00

X = 3,001,135.31

X = 3,007,369.47

Y = 292,397.52

X = 2,990,035.81

X = 2,995,315.81

X = 3,000,595.87

Y = 287,760.00

X = 2,998,300.18

Sun Oil Co. Min Lse 25921

Sun Oil Co. Min Lse 25920

MATAGORDA Co RLD SK. 2J

Based On Texas State Lambert Grid
South Central Zone

SUN OIL COMPANY
BEAUMONT, TEXAS

LOCATION OF OFFSHORE TRACTS #128 & #130
OFF MATAGORDA PENINSULA
MATAGORDA COUNTY, TEXAS

SCALE | DATE 11-15-47

DR. BY | TR. BY | CHECKED BY | APPROVED

REVISION | DATE | APPROVED

Counter 46627 | DRAWING No. 160

1122

OFFSHORE STATE TRACTS -
MATAGORDA COUNTY, TEXAS

This analysis has for its purpose the investigation of possible conflict between the older subdivision of the submerged lands (October 1940) with the recent resubdivision (August 1947). The new subdivision was made with specifications on the State Coordinate Grid. The older subdivision was made geodetically. The problem, then, was to place the lines of the older subdivision on the State Grid.

The method of subdivision was to construct a sequence of lines or tangents between U. S. Coast and Geodetic Survey Triangulation stations in such manner that a continuous traverse line was formed. The origin of the system was taken as U.S.C.&G.S. Triangulation Station "Cavallo". From this station points were specified to fall at intervals of 5280 feet along the lines of the specified traverse. These points are points through which the northeast and southwest boundaries are to be run, bearing South 31° 15' East from these points. The Northwest and Southeast boundaries are made parallel to the shoreline and are to be placed at distances of one and one half and three miles from the shoreline. The shore line is indeterminate from the standpoint of these computations and so must either be located by a survey, or merely estimated graphically.

The steps in computation necessary to establish this subdivision on the state grid are as follows:

First, an azimuth and grid length must be established between adjacent triangulation stations between which the subdivision points under investigation are to be found.

The lengths on the grid will not be an exact identity with the lengths as given in the state subdivision scheme. The grid lengths are made exactly proportional to specified lengths by determining and applying logarithmic scale factors to state specified lengths. This fits the specified and true grid lengths together in exact proportion.

Using the scale adjusted lengths and the azimuth between the adjacent triangulation stations, the coordinates can be computed for subdivision points.

The next step is to determine the grid azimuth of the boundaries arising along the subdivision line. At each point the mapping angle must be determined to convert the specified direction (of South 31° 15' East for each boundary) to a grid azimuth.

With the point of origin and grid azimuth for each line other points on the line may be computed. In this instance the intersections were determined between both systems of subdivision. This establishes quantitatively the relations involved.

Don G. Lovett

FINAL COORDINATES

Survey Gulf Tracts Coord. Zone Sou Cent, Date

County Matagorda State Tex. Prospect

Station	X	Y
△ Marie	3,062,609.69	341,612.47
△ Ethel	3,103,092.15	366,442.87
△ Penn	2,957,412.35	284,472.09
△ Row	3,004,248.39	307,050.78
△ Locate	3,119,773.77	377,297.81
3009+60 (NE Cor. Tr. 177)	3,108,448.64	369,928.40
3062+40 (NE Cor. Tr. 179)	3,112,873.83	372,807.93
3115+20 (NE Cor. Tr. 181)	3,117,299.02	375,687.46
2112+00 (NE Cor. Tr. 143)	3,031,746.83	323,835.42
2164+80 (NE Cor. Tr. 145	3,036,289.61	326,025.66
1636+80 (NE Cor. Tr. 125)	2,990,233.81	300,294.64
1689+60 (NE Cor. Tr. 127)	2,994,989.71	302,587.36
1740+40 (NE Cor. Tr. 129)	2,999,745.61	304,880.08

counter 46630 G3

AZIMUTH AND LENGTH FROM CO-ORDINATES.

Name Survey Offshore Tracts Date

County State Texas. Prospect

From: △ Locate To: △ Ethel Use: Tracts 179-180-181

ΔX	ΔY	
3,119,773.77	377,297.81	Log ΔX 4.2222382
3,103,092.15	366,442.87	Log ΔY 4.0356274
16,681.62	10,854.94	Log tan Ø 0.1866108
		Ø 56°56'50.8 Az

Log ΔX 4.2222382	Log ΔY
Log sin Ø 9.9233323	Log cos Ø
Log Dist. 4.2989059	Log Dist. (19902.42')

From: △ Row To: △ Marie Use: Tract 146

ΔX	ΔY	
3,062,609.69	341,612.47	Log ΔX 4.7661250
3,004,248.39	307,050.78	Log ΔY 4.5385950
58,361.30	34,561.69	Log tan Ø 0.2275300
		Ø 59°21'57.2 Az

Log ΔX 4.7661250	Log ΔY
Log sin Ø 9.9347201	Log cos. Ø
Log Dist. 4.8314049	Log. Dist. (67827.39')

From: △ Penn To: △ Row Use: Tracts 128-130

ΔX	ΔY	
3,004,248.39	307,050.78	Log ΔX 4.6705802
2,957,412.35	284,472.09	Log ΔY 4.3536987
46,836.04	22,578.69	Log tan Ø 0.3168815
		Ø 64°15'44.1 Az

Log ΔX 4.6705802	Log ΔY
Log sin Ø 9.9546241	Log sin Ø
Log Dist. 4.7159561	Log Dist. 51994.35

counter 98631

Tracts 179, 180, 181 (2)

△ Locate To △ Ethel Scale Factors

△ Locate	3144 + 72.8
△ Ethel	2945 + 68.8
Length as per state	199 + 04.0

Length as per State	19904.0	Log	4.2989404
Grid length	19902.42	Log	4.2989059
Diff. and scale factor	1.58		0.0000345

NE Cor. Tr. 177	3009 + 60.0		
△ Ethel	2945 + 68.8		
Diff.	63 + 91.2	Log.	3.8055824
	Scale Factor.	(−)	345
	Log Grd. length		3.8055479

NE Cor Tr. 179	3062 + 40		
NE Cor Tr. 177	3009 + 60		
Diff	52 + 80	Log.	3.7226339
	Scale Factor	(−)	345
	Log Grd. Length		3.7225994

NE. Cor. Tr. 181	3115 + 20		
NE Cor. Tr. 179	3062 + 40		
Diff	52 + 80	Log	3.7226339
	Scale Factor	(−)	345
	Log Grid Length		3.7225994

△ Locate	3144 + 72.8		
NE Cor. Tr. 181	3115 + 20.0		
Diff	29 + 52.8	Log	3.4702340
	Scale Factor	(−)	345
	Log Grid Length		3.4701995

counter 76632 G 5

Traverse Final Coordinate Computation

Name Traverse | County | State | Prosp. | Date

Sta.	Brng.	Δ X	Adj	X	Δ Y	Adj	Y	Σ X
△ Ethel		3,8055479 9,9233323 3,7288802		3,103,092.15	3,8055479 9,7367216 3.5422695		366,442.87	
2945+68.8		(+) 5356.49		5356.49	(+) 3485.53		3,485.53	
NE Cor. Tr. 177	6391.2			3,108,448.64			369,928.40	
3009+60		3,7225994 9.9233323 3.6459317		4,425.19	3.7225994 9.7367216 3.4593210		2 889.53	
NE. Cor Tr 179	5280	(+) 4425.19		3,112,873.83	(+) 2879.53		372,807.93	
3062+40		ditto from above		4,425.19	ditto from above		2,879.53	Σ Y
NE Cor. Tr 181	5280	(+) 4425.19		3,117,299.02	(+) 2879.53		375,687.46	
3115+20		3.4701995 9.9233323 3.3935318		2,474.75	3.4701995 9.9367216 3.2069211		1,610.35	
△ Locate	2952.8	(+) 2474.75		3,119,773.77	(+) 1610.35		377,297.81	
3144+72.8								

Tracts 179, 180, 181 (3)

counter 96633

Mapping Angle — Tracts 179, 180, 181 — (4)

Geodetic Position From Lambert Coordinates

Survey Offshore Tracts. Coord. Zone South Cent

State Tex County Prosp.

Station: NE Cor. Tr. 177

X	3 108 448.64	R (Y=0)	37 807 440.38
(-)	2,000,000.00	Y	369 928.40
X'	1.108.448.64	R'	37,437.511.98
		Tan θ	0.029607967 5
θ (min of θ)	1° 41' 40"	Tan θ (min of θ)	0.029582259 3
θ (sec of θ)	5".2981	Diff. (sec of θ)	257082
θ	1° 41' 45".2981	←	
θ (min of λ)		(min of λ)	
Diff (sec of λ)		(sec of λ) (-)	
		λ	
Corr. 1/2Tan θ (')		1/2 Tan θ	
Corr. 1/2 Tan θ ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y"(X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

Station: NE Cor Tr. 181

X	3,117 299.02	R (Y=0)	37,807,440.38
(-)	2,000,000.00	Y	375,687.46
X'	1,117,299.02	R'	37,431,752.92
		Tan θ	0.029848 9633
θ (min. of θ)	1° 42' 30"	Tan θ (min. of θ)	0.029824 8800
θ (sec. of θ)	4".9631	Diff. (sec. of θ)	240833
θ	1° 42' 34".9631		
θ (min. of λ)		(min. of λ)	
Diff. (sec. of λ)		(sec. of λ) (-)	
		λ	
Corr. 1/2Tan θ (')		1/2 Tan θ	
Corr. 1/2Tan θ ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y" (X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

counter 46634 G 7

Tracts 179, 180, 181 (5)

Geodetic Position From Lambert Coordinates

Survey Offshore Tracts Coord. Zone Sou Cent.

State Tex. County Prosp.

Station: NE. Cor. Tr. 179

X	3 112 873 83	R (Y=0)	37,807,440.38
(-)	2,000,000.00	Y	372,807.93
X'	1,112,873.83	R'	37 434 632 45
		Tan θ	0.02972 84561
θ (min of θ)	1° 42' 10"	Tan θ (min of θ)	0.02972 78313
θ (sec of θ)	0.0129	Diff. (sec of θ)	6248
θ	1° 42' 10.0129		
θ (min of λ)		(min of λ)	
Diff (sec of λ)		(sec of λ) (-)	
		λ	
Corr. 1/2Tan θ(')		1/2 Tan θ	
Corr. 1/2 Tan θ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y"(X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

Station:

X		R (Y=0)	
(-)	2,000,000.00	Y	
X'		R'	
		Tan θ	
θ (min. of θ)		Tan θ (min. of θ)	
θ (sec. of θ)		Diff. (sec. of θ)	
θ			
θ (min. of λ)		(min. of λ)	
Diff. (sec. of λ)		(sec. of λ) (-)	
		λ	
Corr. 1/2Tan θ (')		1/2 Tan θ	
Corr. 1/2Tan θ ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y"(X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

counter 466257 6

Tracts 179, 180, 181

Computation of Grid Azimuths - Tract Boundaries (6)

N Geodetic Azimuth NE Boundary Tract No 181 = 148° 45' 00"
Mapping Angle at 3115+20 on subdivision line (−) = 1° 42' 35"
Grid Azimuth 147° 02' 25"

N. Geodetic Azimuth N.E. Boundary Tract No. 179 = 148° 45' 00"
Mapping Angle at 3062+40 on Subdivision line = (−) 1° 42' 10"
Grid Azimuth 147° 02' 50"

N. Geodetic Azimuth N.E Boundary Tract No. 177 = 148° 45' 00"
Mapping Angle at 3009+60 on subdivision line = − 1° 41' 45.3"
Grid Azimuth 147° 03' 14.7"

counter 76636 G 9

Tracts 179, 180, 181

(7)

Intersection of NE. Boundary of Tract No 177 with Lines as Indicated

Intersection with Line X=3,111,475.81 - E. Boundary Block 434

3,111,475.81
3,108,448.64
ΔX = 3,027.17

ΔX = 3.4810368
Log Tan α = 9.8116196
Log ΔY = 3.6694172

369,928.40
ΔY 4,671.08
365,257.32

Intersection with Line Y=361,650.00 - N. Boundary Block 439

369,928.40
361,680.00
ΔY = 8,248.40

Log ΔY = 3.9163697
Log Tan α = 9.8116169
Log ΔX = 3.7279866

3,108,448.64
ΔX = 5,345.48
3,113,794.12

Intersection with Line X=3,116,755.81 - E. Boundary Block 439

3,116,755.81
3,108,448.64
ΔX = 8,307.17

Log ΔX = 3.9194531
Log Tan α = 9.8116169
Log ΔY 4.1078362

369,928.40
ΔY = 12,818.47
357,109.93

Intersection with Line Y=356,400.00 - S. Boundary Block 440

369,928.40
356,400.00
ΔY = 13,528.40

Log ΔY = 4.1312464
Log Tan α = 9.8116169
Log ΔX = 3.9428633

3,108,448.64
ΔX = 8,767.25
3,117,215.89

counter 96637

G 10

Intersection of NE Boundary of Tract No. 179 With Lines as Indicated

Intersection with Line X = 3,116,755.81 - E. Boundary Block 433

3,116,755.81	Log ΔX = 3.5890533	372,807.93
3,112,873.83	Log Tan α = 9.8117334	Log ΔY 5,988.53
3,881.98	Log ΔY 3.7773199	366.819.40

Intersection with Line Y = 366,960.00 - N. Boundary Block 433

372,807.93	Log ΔY = 3.7670022	3,112,873.83
366,960.00	Log Tan α = 9.8117334	ΔX = 3,790.84
ΔY = 5847.93	Log ΔX = 3.5787356	3,116 664.67

Intersection with Line Y = 361,680.00 - N Boundary Block 440

372,807.93	Log ΔY = 4.0464144	3,112,873.83
361,680.00	Log Tan α = 9.8117334	7,213.53
11,127.93	Log ΔX = 3.8581478	3,120,087.36

Intersection with Line X = 3,122,085.81 - E Boundary Block 440

3,122,035.81	Log ΔX = 3.7619893	372,807.93
3,112,873.83	Log Tan α = 9,8117334	14,133.70
ΔX = 9,161.98	Log ΔY 4,1502559	358,674.23

counter 76638 G11

Traverse Final Coordinate Computation

Name Traverse | County | State | Prosp. | Date

Sta.	Brng.	ΔX	Adj	X	ΔY	Adj	Y	ΣX
△ Row		4.5045881		3,004,248.39	4.5045881		307,050.78	
1792+39		9.9347199		(+) 27,498.44	9.7071900		16,284.64	
		4.4393080			4.2117781			
		(+) 27498.44			16284.64			
NE Cor. Tr. 143		3.7226016		3,031,746.83	3.7226016		323,335.42	
2112+00		9.9347199		4,542.78	9.7071900		2,690.24	
		3.6573215			3.4297916			
		(+) 4542.78			2690.24			
NE Cor Tr. 145		4.4855668		3,036,289.61	4.4855668		326,025.66	
2164+80		9.9347199		26,320.05	9.7071900		15,586.79	
		4.4202867			4.1927568			
								ΣY
△ Marie		26320.05		3,062,609.66	15586.79		341,612.45	
2470+71.4								

Tract 146

(2)

GN

Counter 46639

△ Row to Marie — Scale Factors

△ Marie	2470 + 71.4		
△ Row	1792 + 39.0		
Length as per state	678 + 32.4		
Length as per state	67,832.4	Log	4.83314372
Grid length	67,827.5	Log	4.83140049
Diff - Scale Factor	4.9		323

NE Cor. Tr. No. 143	211,200		
△ Row	179,239		
Diff	31,961	log	4.5046204
	Scale Factor	(-)	323
	Grid Length		4.5045881

NE Cor. Tr. No. 145	216,480		
NE. Cor. Tr No. 143	211,200		
	5,280	log	3.7226339
	Scale Factor	(-)	323
	Grid Length		3.7226016

△ Marie	247,071.4		
NE. Cor Tr. 145	216,480.0		
Diff	30,591.4	log =	4.4855991
	Scale Factor		323
	Log Grid Length		4.4855668

counter 76670 G 13

Intersection of NE Boundary Tract No 181 with Lines as Indicated

Intersection with line Y = 372,420.00 – South Boundary Block 421

375,687.46
372,240.00
ΔY = 3,447.46

Log ΔY = 3.5374992
Log Tan α = (+)9.8118488
Log ΔX = 3.3493480

3,117,299.02
ΔX 2,235.36
3,119,534.38

Intersection with line Y = 366,960.00 – East Boundary Block 423

375,687.46
366,960.00
ΔY 8,727.46

Log ΔY = 3.9408849
Log Tan α = (+)9.8118488
Log ΔX = 3.7527337

3,117,299.02
ΔX 5,658.92
3,122,957.94

Intersection with line X = 3,122,035.81 – South Boundary Block 424

3,122,035.81
3,117,299.02
ΔX = 4,736.79

Log ΔX = 3.6754841
Log Tan α = (+)9.8118488
Log ΔY = 3.8636353

375,687.46
ΔY = 7,305.25
368,382.21

Intersection with line Y = 361,680.00 – South Boundary Block 431

375,687.46
361,680.00
ΔY 14,007.46

Log ΔY = 4.1463284
Log Tan α = (+)9.8118488
Log ΔX = 3.9581772

3,117,299.02
ΔX = 9,081.91
3,126,380.93

Intersection with line X = 3,127,315.81 – East Boundary Block 441

3,127,315.81
3,117,299.02
ΔX 10,016.79

Log ΔX = 4.0007287
Log Tan α = (+)9.8118488
Log ΔY 4.1888799

375,687.46
ΔY = 15,448.21
360,239.25

Tract 146 (3)

Geodetic Position From Lambert Coordinates

Survey Offshore Tracts Coord. Zone Sou. Cent.

State Texas County Matagorda Prosp.

Station: NE Cor Tract No 143 Mapping Angle

X	3 031 746.83	R (Y=0)	37,807,440.38
(-)	2,000,000.00	Y	323,335.42
X'	1,031,746.83	R'	37,484,104.96
		Tan θ	0.02752 49157
θ (min of θ)	1° 34' 30"	Tan θ (min of θ)	0.02749 58617
θ (sec of θ)	5.9883	Diff. (sec of θ)	0.00002 90540
θ	1° 34' 35.9883		
θ (min of λ)		(min of λ)	
Diff (sec of λ)		(sec of λ) (-)	
		λ	
Corr. 1/2Tan θ (')		1/2 Tan θ	
Corr. 1/2 Tan θ ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y"(X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

Station: NE Cor. Tract No 145 Mapping Angle

X	3,036,289.61	R (Y=0)	37,807,440.38
(-)	2,000,000.00	Y	326,025.66
X'	1,036,289.61	R'	37,481,414.72
		Tan θ	0.02764 80922
θ (min. of θ)	1° 35' 00"	Tan θ (min. of θ)	0.02764 14164
θ (sec. of θ)	1".3759	Diff. (sec. of θ)	66758
θ	1° 35' 01".3759		
θ (min. of λ)		(min. of λ)	
Diff. (sec. of λ)		(sec. of λ) (-)	
		λ	
Corr. 1/2Tan θ (')		1/2 Tan θ	
Corr. 1/2Tan θ ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y" (X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

Counter 76692 G15

Grid Azimuths – Tract Boundaries

N. Geodetic Azimuth, NE Boundary Tract No. 143		148° 45' 00"
Mapping angle at 2112+00	(–)	1° 34' 36"
Grid Azimuth		147° 10' 24"

N. Geodetic Azimuth, NE Boundary Trat No. 145		148° 45' 00".0
Mapping Angle at 2164+80		1° 35' 01".4
Grid Azimuth		147° 09' 58".6

Intersection of NE Boundary of Tract No. 143 With Lines as Indicated

Intersection with line Y=319,440.00 – S. Boundary Block No. 485

323 335.42
319,440.00
ΔY= 3,895.42

Log ΔY = 3.5905543
Log Tan α = 9.8096372
Log Δx = 3.4001915

3,031,746.83
Δx = 2,512.99
3,034,259.82

Intersection with line X=3,037,555.81 – E. Boundary Block 488

3,037,555.81
3,031,746.83
Δx 5,808.98

Log Δx = 3.7640999
Log Tan α = 9.8096372
Log ΔY 3.9544627

323,335.42
ΔY = 9,004.56
314,330.86

Intersection with line Y=314,160.00 S. Boundary Block 487

323,335.42
314,160.00
ΔY = 9,175.42

Log ΔY = 3.9626259
Log Tan α = 9.8096372
Log Δx = 3.7722631

3,031,746.83
Δx = 5,919.20
3,037,666.03

Intersection with line Y=308,880.00 S. Boundary Block. 498

323,335.42
308,880.00
ΔY 14,455.42

Log ΔY = 4.1600307
Log Tan α = 9.8096372
Log Δx 3.9696679

3,031,746.83
Δx = 9,325.41
3,041,072.24

counter 46674

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Intersections of NE Boundary of Tract No. 145 With Lines as Indicated

Intersection with line X = 3,037,555.81 – E. Boundary Block 486

3,037,555.81	Log ΔX = 3.1025023	326,025.66
3,036,289.61	Log Tan α = 9.8097544	ΔY = 1,962.22
ΔX = 1,266.20	Log ΔY = 3.2927479	324,063.44

Intersection with line Y = 319,440.00 – S. Boundary Block 485

326,025.66	Log ΔY = 3.8185993	3,036,289.61
319,440.00	Log Tan α = 9.8097544	ΔX = 4,249.65
ΔY 6,585.66	Log ΔX = 3.6283537	3,040,539.26

Intersection with line X = 3,042,835.81 – E Boundary Block 489

3,042,835.81	Log ΔX = 3.8159893	326,025.66
3,036,289.61	Log Tan α = 9.8097544	ΔY = 10,144.60
ΔX = 6,546.20	Log ΔY 4.0062349	315,881.06

Intersection with line Y = 314,160.00 – S. Boundary Block 490

326,025.66	Log ΔY = 4.0742919	3,036,289.61
314,160.00	Log Tan α = 9.8097544	ΔX = 7,456.78
ΔY 11,865.66	Log ΔX = 3.8840463	3,043,946.39

Intersection with line Y = 308,880.00 – S. Boundary Block 497

326,025.66	Log ΔY = 4.2341570	3,036,289.61
308,880.00	Log Tan α = 9.8097544	11,063.98
ΔY = 17,145.66	Log ΔX = 4.0439114	3,047,353.59

counter 16675 G 18

△ Penn to △ Row – Scale Factors

△ Row.	1792+39.0		
△ Penn	(–) 1272+41.6		
Length as per State	519+97.4	Log =	4.7159816
Grid Length	519+94.35	Log =	4.7159561
Diff. – Scale Factor	3.05		0.0000255

N.E. Cor. Tr. 125	1636+80.0		
△ Penn	1272+41.6		
Diff.	364+38.4	Log =	4.5615593
Scale Factor.		(–)	255
Log Grid Length			4.5615338

N.E. Cor. Tr. 127	1689+60		
N.E. Cor. Tr. 125	1636+80		
Diff.	52+80	Log. =	3.7226339
Scale Factor		(–)	255
Log Grid Length			3.7226084

NE Cor. Tr. 129	1742+40		
NE Cor. Tr. 127	1689+60		
Diff.	52+80	Log =	3.7226339
Scale Factor.			255
Log Grid Length.			3.7226084

△ Row	1792+39		
NE Cor. Tr. 129	1742+40		
Diff.	49+99	Log =	3.6988831
Scale Factor			255
Log Grid Length.			3.6988576

counter 76646 GM

Traverse Final Coordinate Computation

Name Traverse | County | State | Prosp. | Date

Sta.	Brng.	ΔX	Adj	X	ΔY	Adj	Y	ΣX
△ Penn		4,5615338 9,9546241 4,5161579		2,957,412.35	4,5615338 9,6377425 4.1992763		284,472.09	
1272+41.6		(+) 32821.46		(+) 32,821.46	(+) 15822.55		(+) 15,822.55	
N.E Cor. Tr. No. 125		3.72260 84 9.9546241 3.6772325		2,990,233.81	3.72260 84 9.6377425 3.3603509		300,294.64	
1636+80		(+) 4755.90		(+) 4,755.90	(+) 2292.72		(+) 2,292.72	
NE Cor. Tr. No. 127		ditto from above		2,994,989.71			302,587.36	
1689+60.		(+) 4755.90		(+) 4,755.90	(+) 2292.72		(+) 2,292.72	ΣY
NE Cor. Tr. No 129		3.6988576 9.9546241 3.6534817		2,999,745.61	3.6988576 9.6377425 3.3366001		304,880.08	
1740+40		(+) 4502.77		(+) 4,502.77	(+) 2170.70		(+) 2,170.70	
△ Row				3,004,248.38			307,050.78	
1792+39								

Projects 128-130

counter 76647

(12)

Tracts 128-130 (3)

Geodetic Position From Lambert Coordinates

Survey Tracts 128-130 Coord. Zone Sou. Cent.

State Texas County Matagorda Prosp.

Station: NE Cor Tr 125 1636+80

X	2990233.81	R (Y=0)	37,807,440.38
(-)	2,000,000.00	Y	300,294.64
X'	990,233.81	R'	37,507,145.74
		Tan θ	0.026401204 1
θ (min of θ)	1° 30' 40"	Tan θ (min of θ)	0.026379981 0
θ (sec of θ)	4".3745	Diff. (sec of θ)	212231
θ	1° 30' 44".3745		
θ (min of λ)		(min of λ)	
Diff (sec of λ)		(sec of λ) (-)	
		λ	
Corr. 1/2Tan θ(')		1/2 Tan θ	
Corr.1/2 Tan θ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y"(X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

Station: NE Cor Tr 127 1689+60

X	2,994,989.71	R (Y=0)	37,807,440,38
(-)	2,000,000.00	Y	302,587.36
X'	994,989.71	R'	37,504,853.02
		Tan θ	0.026529625 6
θ (min. of θ)	1° 31' 10"	Tan θ (min. of θ)	026525526 9
θ (sec. of θ)	0".8448	Diff. (sec. of θ)	40987
θ	1° 31' 10".8448		
θ (min. of λ)		(min. of λ)	
Diff. (sec. of λ)		(sec. of λ) (-)	
		λ	
Corr. 1/2Tan θ (')		1/2 Tan θ	
Corr. 1/2Tan θ ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y" (X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

counter 76648 G21

Tracts 128-130

(4)

Geodetic Position From Lambert Coordinates

Survey Tracts 128-130 Coord. Zone Sou Cent

State Texas County Matagorda Prosp.

Station: NE Cor Tract 129 1742+40

X	2,999,745.61	R (Y=0)	37,807,440.38
(-)	2,000,000.00	Y	304,880.08
X'	999,745.61	R'	37,502,560.30
		Tan θ	0.026658062 9
θ (min of θ)		Tan θ (min of θ)	0.026622558 1
θ (sec of θ)	1° 31' 30"	Diff. (sec of θ)	355048
θ	6".9060		
θ (min of λ)	1° 31' 36".9060	(min of λ)	
Diff (sec of λ)		(sec of λ) (-)	
		λ	
Corr. 1/2Tan θ(')		1/2 Tan θ	
Corr. 1/2 Tan θ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y"(X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

Station:

X		R (Y=0)	
(-)	2,000,000.00	Y	
X'		R'	
		Tan θ	
θ (min. of θ)		Tan θ (min. of θ)	
θ (sec. of θ)		Diff. (sec. of θ)	
θ			
θ (min. of λ)		(min. of λ)	
Diff. (sec. of λ)		(sec. of λ) (-)	
		λ	
Corr. 1/2Tan θ ('		1/2 Tan θ	
Corr. 1/2Tan θ ("		Correc. (-)	
Total Correc.		Tan θ/2	
Y			
Y" (X'Tan θ/2) (-)			
Y'			
Y' (min. of Ø) (-)		Ø (min. of Ø)	
Y' (sec. of Ø)		Ø (sec. of Ø)	
		Ø	

counter 76679 G22

Tract 3 128-130

Grid Azimuths Tract Boundaries

N Geodetic Azimuth, NE Boundary Tract 125		148° 45' 00.0
Grid Mapping Angle	(-)	1° 30' 44.4
Grid Azimuth		147° 14' 15.6

N. Geodetic Azimuth, NE Boundary Tract 127		148° 45' 00.0
Grid Mapping Angle		1° 31' 10.8
Grid Azimuth		147° 13' 49.2

N. Geodetic Azimuth NE Boundary Tract 129		148° 45' 00.0
Grid Mapping Angle		1° 31' 36.9
Grid Azimuth		147° 13' 23.1

counter 76650 G 23

Intersections of NE Boundary of Tract No 125 With Lines as Indicated

Intersection with line Y = 293,040.00 – S. Boundary Block 516

300,294.64
293,040.00
ΔY = 7,254.64

Log Δx. = 3.8606159
Log tanα = 9.8085661
Log Δx. = 3.6691820

2,990,233.81
4 668.55
2,994,902.36

Intersection with line X = 2,995,315.81 – E. Boundary Block 525

2,995,315.81
2,990,233.81
Δx = 5,082.00

Log Δx = 3.7060347
Log tanα = 9.8085661
Log ΔY = 3.8974686

300,294.64
ΔY = 1 897.12
292,397.52

Intersection with line Y = 287,760.00 – S. Boundary Block 524

300,294.64
287,760.00
ΔY = 12,534.64

Log ΔY = 4.0981119
Log tanα = 9.8085661
3.9066780

2,990,233.81
8,066.37
2,998,300.18

Intersections of N.E. Boundary of Tract No. 127 With Lines as Indicated.

Intersection with line Y=298,320.00 – S. Boundary Block 514

302,587.36
298,320.00
ΔY=.4,267.36

Log ΔY = 3.6301593
Log Tan α = 9.8086882
Log ΔX 3.4388475

2,994,989.71
ΔX = 2,746.93
2,997,736.64

Intersection with line X=3,000,595.81 – E. Boundary Block 517

3,000,595.81
2,994,989.71
ΔX 5,606.10

Log ΔX = 3.7486608
Log Tan α = 9.8086882
3.9399726

302,587.36
ΔY = 8,709.09
293,878.27

Intersection with line. Y=293,040.00 – S. Boundary Block 518

302,587.36
293,040.00
ΔY 9,547.36

Log ΔY = 3.9798833
Log tan α = 9.8086882
log ΔX = 3.7885715

2,994,989.71
6,145.60
3,001,135.31

counter 46652

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Intersections of NE Boundary of Tract No. 129 With Lines As Indicated

Intersection with line X = 3,000,595.81 - E. Boundary Block 514

3,000,595.81	Log ΔX = 2.9295211	304,880.08
2,999,745.61	Log Tan α = 9.8088090	ΔY = 1,320.42
ΔX = 850.20	Log ΔY 3.1207121	303,559.66

Intersection with line Y = 298,320.00 - S. Boundary Block 513

304,880.08	Log ΔY = 3.81690900	2,999,745.61
298,320.00	Log Tan α = 9.8088090	ΔX = 4,223.94
ΔY = 6,560.08	3.6257180	2,003,969.55

Intersection with line X = 3,005,875.81 - E. Boundary Block 518

3,005,875.81	Log ΔX = 3.7874696	304,880.08
2,999,745.61	Log Tan α = 9.8088090	ΔY = 9520.48
ΔX = 6,130.10	Log ΔY = 3.9786586	295,359.60

Intersection with line Y = 293,040.00 - S. Boundary Block 519

304,880.08	Log ΔY = 4.0733546	2,999,745.81
293,040.00	Log Tan α = 9.8088090	7,623.66
ΔY = 11,840.08	Log ΔX 3.8821636	3,007,369.47

counter 76653

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