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STATE TRACT 59
CORPUS CHRISTI BAY

WEST BOUNDARIES OF
53.56 ACRE TRACT
PER FRONTIER SURVEY

53.56 ACRES PER FRONTIER SURVEY
56.11 ACRES PER V-1770, P-30
D.R.N.C.T.

12.95 ACRE TRACT
V-1854, P-421
D.R.N.C.T.

W.M. BRYAN SURVEY
SURVEY 605
A-46

15.801 ACRES BASED
ON 11/12/07 SURVEY

TEXAS GENERAL LAND OFFICE
Art. 33.136 Natural Resources Code
Co. Nueces Sketch No. 13, skt. 1
File Date 4-8-2008 by D.T.H.

COUNTY OF NUECES
DOCUMENT NO. 888926
D.R.N.C.T.

W.M. BRYAN SURVEY
SURVEY 606
A-45

WE, HDR ENGINEERING, INC., HEREBY STATE THAT THIS DRAWING REPRESENTS THE CONDITIONS THAT EXISTED AT THE TIME OF THE COASTAL BOUNDARY SURVEY CONDUCTED ON NOVEMBER 12, 2007.
NOTICE: THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH SECTION 33.136, NATURAL RESOURCES CODE, FOR THE PURPOSE OF EVIDENCING THE LOCATION OF THE SHORELINE IN THE AREA DEPICTED IN THIS SURVEY AS THAT SHORELINE EXISTED BEFORE COMMENCEMENT OF EROSION RESPONSE ACTIVITY, AS REQUIRED BY CHAPTER 33, NATURAL RESOURCES CODE. THE LINE DEPICTED ON THIS SURVEY FIXES THE SHORELINE FOR THE PURPOSE OF LOCATING A SHORELINE BOUNDARY, SUBJECT TO EROSION LANDWARD AS PROVIDED BY SECTION 33.136, NATIONAL RESOURCES CODE.

George Rubalcaba
GEORGE RUBALCABA
LICENSED STATE LAND SURVEYOR



LOCATION MAP
NOT TO SCALE

SOUTH CORNER
N 17122422.90
E 1404730.69
N58°22'00"W, 100.00', TO FOUND 5/8"
IRON ROD WITH "RPLS 5400" CAP.
N60°43'28"W, 0.41', TO 4" PVC PIPE

LINE	LENGTH	BEARING
L1	109.53'	N17°31'42"E
L2	82.91'	N13°08'41"E
L3	91.96'	N28°47'26"E
L4	81.72'	N28°37'51"E
L5	90.43'	N28°48'09"E
L6	104.88'	N11°32'37"E
L7	25.37'	N01°48'45"W
L8	93.50'	N20°48'54"E
L9	95.41'	N12°23'03"W
L10	32.72'	N12°08'47"W
L11	46.45'	N18°55'51"W
L12	6.90'	N16°20'22"E
L13	28.19'	N04°55'43"W
L14	18.56'	N18°48'03"E
L15	18.51'	N28°36'49"E
L16	37.56'	N16°35'48"E
L17	20.74'	N24°01'36"W
L18	6.85'	N31°11'24"W
L19	67.17'	N08°08'31"E



NOTES

- ALL SURVEYING WAS DONE BY HDR/SHINER MOSELEY AND ASSOCIATES INC. THIS DRAWING REPRESENTS THE CONDITIONS THAT EXISTED AT THE TIME OF THE SURVEY CONDUCTED NOVEMBER 12, 2007.
FIELD PERSONNEL: GEORGE RUBALCABA
HOMER MARTINEZ
- ALL ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED TO NAVD '88.
- COORDINATES SHOWN ARE IN U.S. FEET AND ARE REFERENCED TO STATE PLANE GRID COORDINATE SYSTEM, TEXAS SOUTH ZONE, AS DEFINED BY ARTICLE 21.071 OF THE NATURAL RESOURCES CODE OF THE STATE OF TEXAS, 1983 DATUM (1993 ADJUSTMENT).
- MONUMENTS USED FOR HORIZONTAL CONTROL WERE:
"CRANE AZ.MK." N 17,126,435.80'
E 1,407,328.74'
MONUMENT USED FOR VERTICAL CONTROL WERE:
"CRANE AZ.MK." EL. 4.05'
"D 1518" EL. 6.40'
- MEAN HIGH WATER DETERMINED FROM TIDAL INFORMATION AT PACKERY CHANNEL GAUGE MHW = 0.76' NAVD '88.
- BASIS OF BEARING IS "TEXAS COORDINATE SYSTEM" PER SECTION 21.071 OF THE NATURAL RESOURCES CODE.
- DISTANCES AND BEARINGS ARE GRID, SCALE FACTOR IS 0.99995825, CONVERGENCE IS +0'35"26".
- UPLAND OWNER IS HARKIN OIL.
- 15.801 ACRES OF UPLAND AFTER 11/12/07 SURVEY.
- AREA NOTED IS GRID.

APP	DESCRIPTION	DATE	REV
	ISSUED TO CLIENT & GLO	10/3/07	0
	ADDED TRACT LIMITS	10/29/07	1
	11/12/07 SURVEY REVISIONS	11/30/07	2
	REVISIONS PER GLO	12/10/07	3

DATE	10/1/07
BY	GR
CHK	GR
APP	GRAPHIC
PROJ	70379-00-T1
PROJ#	70379

HDR | SHINER MOSELEY AND ASSOCIATES, INC.
555 N. Carancahua, Suite 1650
Corpus Christi, Texas 78478

HELIX ENERGY SOLUTIONS
15.801 ACRE TRACT OUT OF
W.M. BRYAN SURVEY, A-46
NUECES COUNTY
MHW SURVEY WITHIN 53.56 ACRE TRACT

SHEET
T1
OF 1 REV 3

METES AND BOUNDS DESCRIPTION
OF A
15.801 ACRE TRACT DETERMINED FROM A
MEAN HIGH WATER SURVEY (MHW)
WITHIN W.M. BRYAN SURVEY, A-46, SURVEY 605,
NUECES COUNTY, TEXAS

Being 15.801 acres of land, more or less, determined from an on the ground mean high water survey conducted by GPS observations on November 12, 2007, said mean high water determined from Packery Channel, gauge 005 at elevation +0.76', NAVD' 88 and said 15.801 acres located within a 53.56 acre tract as surveyed by Frontier Surveying Company on September 14, 2005 and being same 56.11 acre tract described in Volume 1770, Page 30, Deed Records Nueces County, Texas, and described as being out of the W.M. Bryan Survey, A-46, Survey 605, Nueces County, Texas, and being the portion within said 53.56 acre survey that accreted from the mainland to said W.M. Bryan Survey and being more particularly described by metes and bounds as follows:

Beginning at a found 5/8 inch iron rod for the northeast corner of this tract and said 53.56 acre and 56.11 acre tracts, said corner having a grid coordinate of N = 17,123,722.41', E = 1,405,490.30', State Plane Grid, Texas South Zone, NAD' 83 in U.S. feet and bearing S 34°07'10" W, 3,277.55 feet (1,179.92 varas) from NGS monument "Crane AZ MK" having a grid coordinate of N = 17,126,435.80', E = 1,407,328.74', NAD' 83 (1993 adjustment) State of Texas coordinate system, South Zone as defined by Article 21.071 of the Natural Resources Code of the State of Texas, Scale Factor 0.99995825, convergence +0°35'36.0";

Thence S 30-18-28 W with the east boundary of this tract and said 53.56 acre and 56.11 acre tracts, the same being the west right-of-way line of State Highway 361, 1,505.23 feet (541.88 varas), to the southeast corner of this tract, said 53.56 acre and 56.11 acre tracts, and also being the northeast corner of a tract as recorded in Document number 888926, Official Public Records of Nueces County, Texas, said corner having a grid coordinate of N = 17,122,422.90', E = 1,404,730.69', State Plane Grid, Texas South Zone, NAD' 83 in U.S. feet, and from which a found 5/8 inch iron rod with cap stamped "RPLS 5400" bears N 58°22'00" W, 100.00 feet, and a 4 inch PVC pipe bears N 60°43'28" W, 0.41 feet;

Thence N 58-22-00 W along the south boundary line of this tract and said 53.56 acre and 56.11 acre tracts, the same being the north boundary line of said tract recorded in Document Number 888926, 214.31 feet (77.15 varas), to the southwest corner of this tract, said corner being on the mean high water line;

Thence with said Mean High Water Line as follows:

N 17-31-42 E, 109.53 feet (39.43 varas);
N 15-08-41 E, 92.91 feet (33.45 varas);
N 26-47-56 E, 91.96 feet (33.11 varas);
N 28-37-51 E, 91.73 feet (33.02 varas);
N 28-46-09 E, 90.43 feet (32.55 varas);
N 11-32-37 E, 104.88 feet (37.76 varas);
N 01-45-45 W, 95.37 feet (34.33 varas);
N 20-48-54 E, 93.50 feet (33.66 varas);
N 15-23-03 W, 95.41 feet (34.35 varas);
N 12-08-47 W, 92.72 feet (33.38 varas);
N 18-55-49 W, 46.45 feet (16.72 varas);
N 16-20-22 E, 6.90 feet (2.49 varas);
N 04-55-43 W, 28.19 feet (10.15 varas);
N 18-46-03 E, 18.58 feet (6.69 varas);
N 28-36-49 E, 18.51 feet (6.66 varas);
N 16-35-48 E, 37.56 feet (13.52 varas);
N 24-01-36 W, 20.74 feet (7.46 varas);
N 31-11-42 W, 6.85 feet (2.47 varas);

Thence leaving said mean high water line and crossing artificial fill as follows:

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N 04-07-40E, 458.75 feet (165.15 varas) to a corner of said 53.56 acre tract;
 N 08-08-31 E, 67.17 feet (24.18 varas) to the northwest corner of this tract, said corner
 also being a northwest corner of said 53.56 acre and 56.11 acre tracts;

Thence S 59-41-32 E, with the north boundary line of said 53.56 acre and 56.11 acre
 tracts, 821.09 feet (295.59 varas), to the point of beginning and containing 15.801 acres
 of land, more or less.



- Note: 1.) Bearings based on "Texas Coordinate System" per Section 21.071 of the
 Natural Resources Code.
- 2.) Area noted is grid area.
- 3.) This metes and bounds description is for survey of 15.801 acres shown in
 drawing number 70379-00-T1.

TEXAS GENERAL LAND OFFICE
 Art. 33.136, Natural Resources Code
 Co. NUACES, Sketch No. 13, sht. 3
 File Date 4/8/2008 by D.J.H.