Sartain-Williams Timberlands
Tract 85565 - East

30°47'8.7"N
93°40'14.0"W

This tract was originally 436 acres but the western 82 acres were sold prior to completion of the inventory leaving 354 acres located east Caney Creek. The residual acreage includes young pine plantations and approximatley 62 acres of SMZs (Streamside Management Zones) that comprise the merchantable timber.

The 62 acres contain a total of 3,744 tons of mixed natural and planted pine and hardwood with an estimated value of $46,476. The pine component accounts for 29% of the total volume and 54% of the value. Most of the timber is accessible for harvest without too much difficulty. However, few of the acres are convertible and most should not be harvested aggressively (exceptions include the perimeter of some of the areas). Conservative selective harvests are recommended to maintain the inetgrity of the SMZs. It is likely that roughly ½ of the timber value is available for extraction durring any single harvest interval (7-10 years).

The timber inventory data were collected from 19 sample points distributed across the 62 acres. (Note: timber inventory data were collected for the 82 acres that were part of the original tract. Timber inventory information is presented in this report under a separte heading.)

The GPS coordinates reference the point of access on the county road from the south.

85565— Merchantable Timber (62 acres)

PRODUCT	TONS	DOLLARS	$/TON
pine pulpwood	219	$1,533	$7.00
pine topwood	177	$1,241	$7.00
pine chip-n-saw	189	$3,210	$17.00
pine small sawlogs (11.5" to 13.5" dbh)	138	$3,875	$28.00
pine sawlogs (>13.5" dbh)	379	$15,164	$40.00
Total Pine	**1,102**	**$25,023**	**$22.71**
hardwood pulpwood	1,423	$5,692	$4.00
hardwood topwood	493	$1,972	$4.00
hardwood sawlogs	726	$13,789	$18.99
Total Hardwood	**2,642**	**$21,453**	**$8.12**
TOTAL	**3,744**	**$46,476**	**$12.41**

Tree Abundance
Eighty percent of the trees growing in the merchantable stands are hardwood species and 20% are pine. HARDWOOD PULPWOOD comprises 68% of the trees. **The average total number of trees is 101 per acre,** indicating moderate stocking. The two pine sawlog categories combined account for account for 9% of the total trees.

Stand Density
Stand density is an indication of crowding and is measured by basal area (defined as the sum of the cross-sectional area of all trees on one acre). The calculation of basal area is a function of the **number** <u>and</u> **size** of trees in the forest.

Hardwood trees comprise 75% of the average stand density, pine 25%. **The average total basal area for all trees in the merchantable stands is 64 square feet per acre,** indicating moderate stand density. HARDWOOD PULPWOOD is the most prominent category impacting stand density accounting for 45% of the total; HARDWOOD SAWLOGS comprise 30% of the stand density.

The average tree measures 10" dbh. Pine trees average 11.6" and hardwood trees average 9.6".

Timber Volume
Tree height and form are added to the function to calculate timber volume. Hardwood timber accounts for 71% of the total timber volume, pine 39%. HARDWOOD PULPWOOD continues as the most prominent product category accounting for 38% of the total timber volume. The two pine sawlog categories account for 14%.

PINE & HARDWOOD TOPWOOD area added to the analysis for the timber volume and value distributions. Topwood is derived from the sawlog trees (and chip-n-saw) and is the portion of the tree that is utilized for pulpwood after sawtimber is merchandized. Pine sawlog trees typically generate more topwood than hardwood sawlog trees.

The average total timber volume is 60 tons per acre, slightly over 2 truck loads per acre.

Timber Value
Timber value is assigned to the timber volume in a stair-stepped manner. That is, value increases at an uneven rate with jumps that are triggered by product thresholds rather than by gradual gradations. Some smoothing of the value to volume and tree size ratio is realized in "log sorts" offered (or required) by certain mills but "blended" pricing is more applicable for inventory and appraisal studies.

Pine trees account for 54% of the timber value, hardwoods 46%. The PINE SAWLOGS comprise 33% of the total timber value with only 5% of the trees.

The average total timber value for all trees in the merchantable stands is $749.60 per acre.

Timber Inventory Summary for 85565

Sartain-Williams Timberlands
85565   **62 acres**

		per acre				
		trees	basal area	tons	stumpage	avg dbh
Loblolly	pine pulpwood	6.6	3.2	3.5	$24.70	8.9
	pine topwood			2.9	$20.00	
	chip-n-saw	4.5	2.6	3.0	$51.80	10.4
	pine small sawlogs (12-13")	3.7	3.2	2.2	$62.50	12.5
	pine sawlogs (>13")	5.2	6.8	6.1	$244.60	15.4
	total pine	**20.0**	**15.8**	**17.7**	**$403.60**	**11.6**
Hardwood	hardwood pulpwood	68.8	28.9	23.0	$91.80	8.3
	hardwood sawlogs	11.8	19.5	11.7	$222.40	17.0
	hardwood topwood			7.9	$31.80	
	total hardwood	**80.6**	**48.4**	**42.6**	**$346.00**	**9.6**
Total		**100.6**	**64.2**	**60.3**	**$749.60**	**10.0**

Sartain-Williams Timberlands
85565   **62 acres**

		tract total			
		trees	basal area	tons	stumpage
Loblolly	pine pulpwood	410	196	219	$1,533
	pine topwood			177	$1,241
	chip-n-saw	278	163	189	$3,210
	pine small sawlogs (12-13")	231	196	138	$3,875
	pine sawlogs (>13")	321	424	379	$15,164
	total pine	**1240**	**979**	**1102**	**$25,023**
Hardwood	hardwood pulpwood	4266	1795	1423	$5,692
	hardwood sawlogs	731	1207	726	$13,789
	hardwood topwood			493	$1,972
	total hardwood	**4997**	**3002**	**2642**	**$21,453**
Total		**6237**	**3981**	**3744**	**$46,476**

Sartain-Williams Timberlands   **Tract 85565**

Pine Stock & Stand Table

DBH	Total Pine		Pine PW			Chip-N-Saw			Pine Small Logs (12-13" dbh)			Pine Sawlogs (>13" dbh)			Pine Tops
	trees	tons	trees	tons	avg. total height	trees	tons	avg. total height	trees	tons	avg. log height	trees	tons	avg. log height	tons
5	0	0													
6	166	24	166	24	35										
7	0	0													
8	0	0													
9	74	32	74	32	50										
10	239	153	60	39	70	179	104	60							10
11	148	127	49	42	79	99	85	81							0
12	125	83							125	64	32				19
13	106	106							106	74	34				32
14	214	265	61	81	71							153	141	41	43
15	106	156										106	120	44	36
16	23	40										23	33	49	7
17	0	0													
18	0	0													
19	17	40										17	29	41	11
20	0	0													
21	0	0													
22	12	42										12	31	45	11
23	0	0													
24	0	0													
25	10	33										10	26	36	7
>25	0	0													
total	1240	1102	410	219		278	189		231	138		321	379		177

SWT - 85565 (62 acres)- Trees by Timber Product by DBH
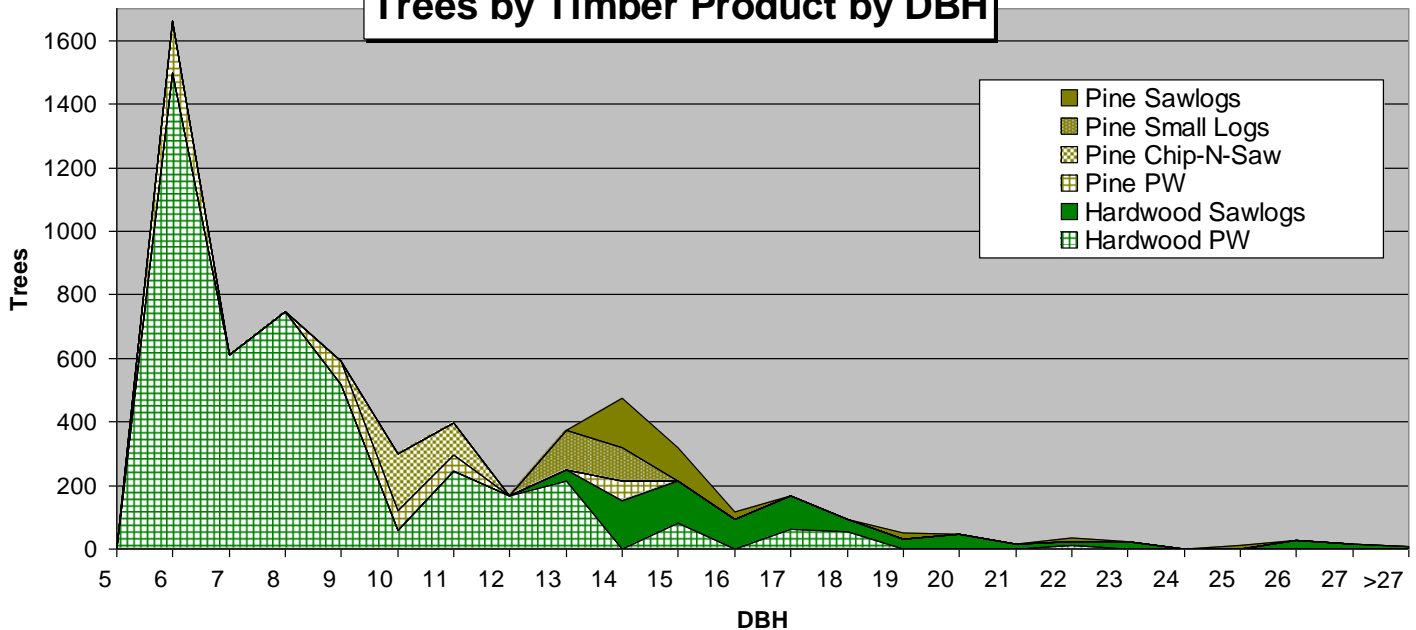
Sartain-Williams Timberlands   **Tract 85565**

Hardwood Stock & Stand Table

DBH	Total Hdwd trees	Total Hdwd tons	Hdwd PW trees	Hdwd PW tons	Hdwd Sawlogs trees	Hdwd Sawlogs tons	Hdwd Tops tons
5	0	0					
6	1496	181	1496	181			
7	610	118	610	118			
8	748	197	748	197			
9	517	179	517	179			
10	60	18	60	18			
11	247	166	247	166			
12	166	116	166	116			
13	248	184	213	150	35		34
14	153	161			153	64	97
15	213	264	80	89	133	106	69
16	93	113			93	54	59
17	166	266	62	100	104	105	61
18	92	140	55	78	37	50	12
19	33	62			33	44	18
20	45	128			45	86	42
21	14	39			14	27	12
22	24	71	12	31	12	23	17
23	23	57			23	44	13
24	0	0					
25	0	0					
26	27	102			27	64	38
27	16	57			16	40	17
>27	7	23			7	19	4
total	4997	2642	4266	1423	731	726	493

SWT - 85565 (62 acres)- Tons by Timber Product by DBH

SWT 85565 - east

sold

043

5565

043

043

033

SMZ - 62 acres
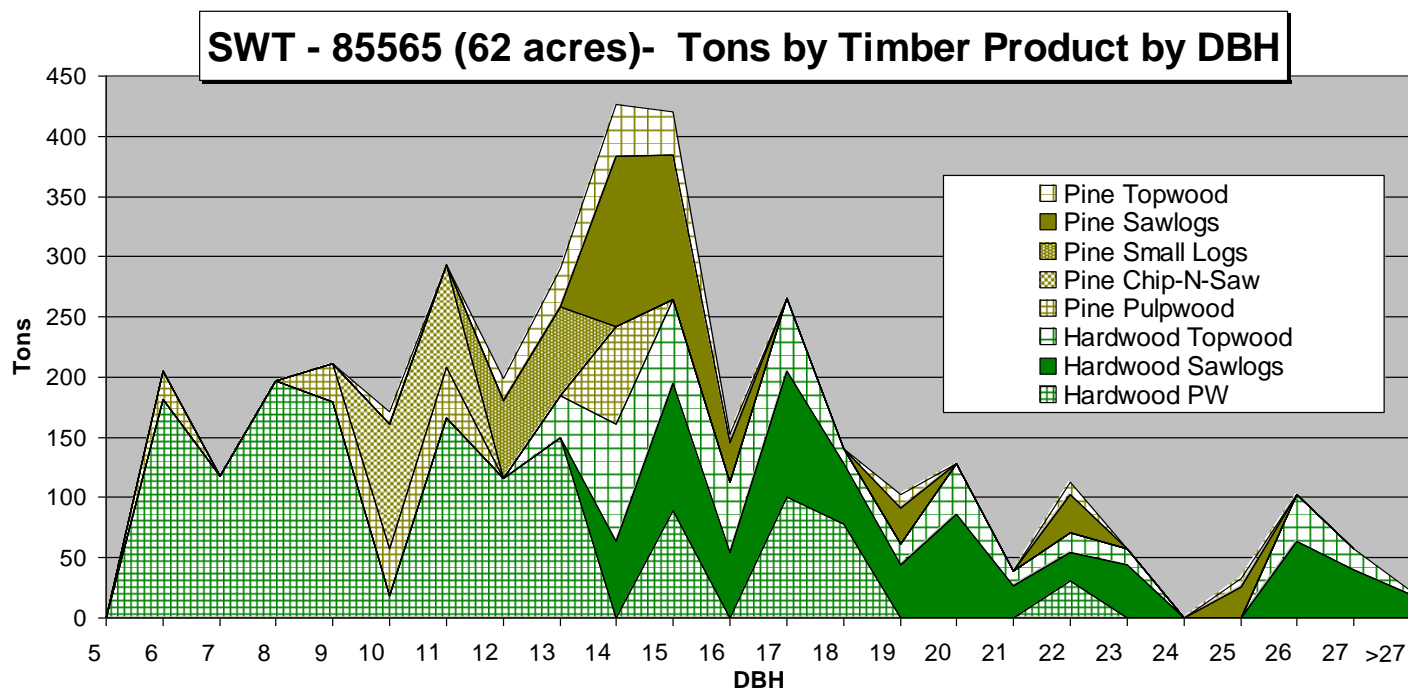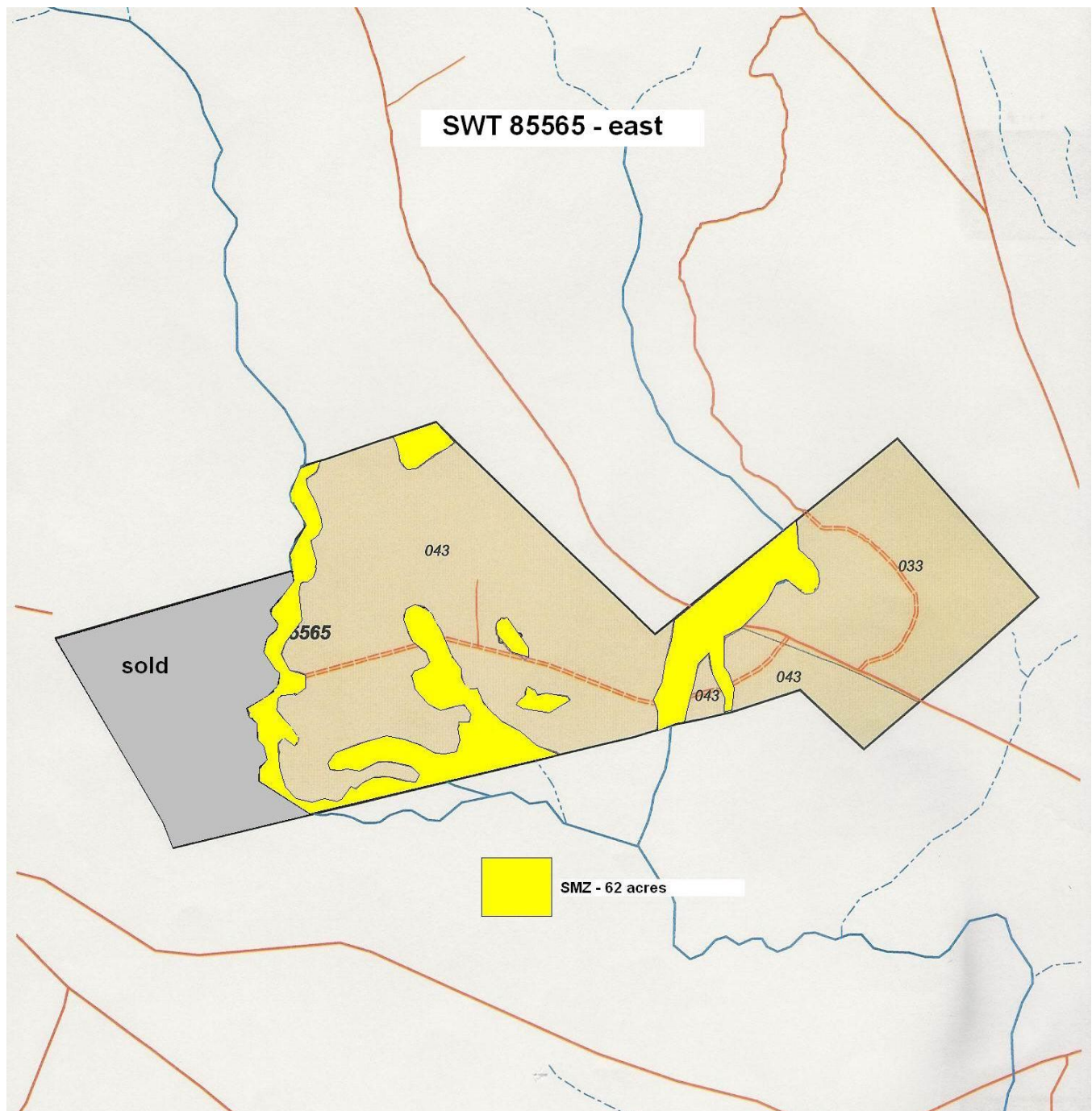
Sartain-Williams Timberlands (sold to Robert Williams)
Tract 85565 – West

The acreage located west of Caney Creek was sold prior to completion of this report. However, timber inventory data were collected in this area (the cruiser was unaware of the sale). A number of the sample points were located in areas where timber had been harvested. So, to calculate the volume and value of the timber standing and growing on the entire 82 acres, these data are excluded.

The timber inventory data were collected from 8 sample points (an addiotional 9 sample points were taken in areas where timber had been harvested and were excluded from this analysis) .

SWT sold to Robert Williams		per acre				
85565-west **82 acres**		trees	basal area	tons	stumpage	avg dbh
Loblolly	pine pulpwood					
	pine topwood			0.8	$3.20	
	chip-n-saw					
	pine small sawlogs (12-13")					
	pine sawlogs (>13")	1.2	2.5	2.4	$96.10	19.3
	total pine	**1.2**	**2.5**	**3.2**	**$99.30**	**19.3**
Hardwood	hardwood pulpwood	39.3	31.3	28.2	$112.80	11.2
	hardwood sawlogs	21.0	41.3	26.6	$442.40	18.4
	hardwood topwood			28.1	$112.30	
	total hardwood	**60.3**	**72.6**	**82.9**	**$667.50**	**13.7**
Total		**61.5**	**75.1**	**86.1**	**$766.80**	**13.9**

SWT sold to Robert Williams		tract total			
85565-west **82 acres**		trees	basal area	tons	stumpage
Loblolly	pine pulpwood				
	pine topwood			67	$470
	chip-n-saw				
	pine small sawlogs (12-13")				
	pine sawlogs (>13")	98	205	197	$7,883
	total pine	**98**	**205**	**264**	**$8,353**
Hardwood	hardwood pulpwood	3226	2563	2312	$9,250
	hardwood sawlogs	1725	3383	2182	$36,275
	hardwood topwood			2303	$9,211
	total hardwood	**4951**	**5946**	**6797**	**$54,736**
Total		**5049**	**6151**	**7061**	**$63,089**