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COMMERCIAL FOREST ACT PLAN 2010-2030

LESSA FAMILY PARCEL

The Lessa family parcel is a 616 acre parcel located in T47N-R45W, Section 30, S1/2, W1/2 NE1/4, NE1/4NE1/4, NE1/4NW1/4 and Section 29, S1/2SW1/4 and NE1/4SW1/4, Gogebic County. The parcel is located about 2 miles southwest of Wakefield, MI. Section 30 acres are accessed off Zorich Road and a woods road. This is first part of road is on Gogebic County lands and has been used by both Lessa and County in the past. Section 29 acres are most likely accessed off the Plymoth Road and a woods road system. Not sure of legal access for this part of parcel since it traverses other private parcels. Interior road access would necessarily be useable only in frozen soil periods or extremely dry periods in summer.

The Commercial Forest Act (CFA) Plan is prepared to guide the land owner's management of all the Forest Resources on the ownership for the future. The CFA provides for a tax incentive if the owner has a Forest Plan prepared and follows the recommendations. Owner must follow the plans requirements and notify the MDNR of planned activities. Owner must also abide by other requirements of the CFA. This area was covered by an older plan (1988) and needed to be updated to reflect current management options. Some harvesting was done in that period (stands 4 and 3).

The Lessa family has owned the parcels for many years. Roger Lessa son of Robert Lessa is currently actively becoming acquainted with the forest resources of the parcel. Owners goals are to continue to use the area for forest recreation activities and to perform quality overall forest management as prescribed by a certified forester. Adjacent forest land owners are also performing forest management.

The parcel is similar to other forest property in the area. The area consists of 616 acres of which 387 acres or 63% of area is commercially viable forest land. The other 229 acres or 37% of area would not be considered commercially viable forest land because of its soils and existing very poor quality and high risk black ash stands. Almost all of the trees have dead tops and understory is mostly tag alder. There has been harvesting on the parcel during the period since 1988 when first plan was prepared. Stand 3 was an aspen

stand that was clearcut and has regenerated nicely to aspen. This harvest was done in 1995. Stand 4 which was a pole stand of northern hardwoods was also harvested. This must have been a rather heavy harvest since Basal Area at this time is just below what it should have been after harvest in 1995. The stand probably will develop into a fair stand of northern hardwoods in the future. However, its destiny may end up similar to what stand 1 is currently at. This should be evaluated in 20 years to see if stand should be managed as an even aged stand or an uneven aged stand. Stands 1, 6 and 9 are northern hardwood pole stands. Stand 7 is a mixture of size classes and species but mostly it is a mixed conifer stand with some areas of mixed hardwoods. Stand % by forest type are mixed hardwoods (54%), mixed conifer (24%) and aspen (22%).

The parcel is relatively flat. Slopes are gentle towards both of the wet non commercial areas in both sections. The area has good exterior access. Parcel being located just a short distance from Ramsey and Wakefield and road system is a County system. Interior road system is more than adequate. It would need normal pre use maintenance when a road has not been used for several years. Winter use would be the preferred period of time of use to minimize maintenance cost. However, roads could be used during very dry periods of summer.

The parcel has 3 forest stands (stands 1, 6 & 9) that are in need of a forest harvest. Total acreage for this harvest would be approximately 190 acres.

Stands 6 & 9 would be your normal uneven aged management of a thinning/ selection harvest in a pole stand of northern hardwoods that has not been harvested for a very long time. It would be a combination of thinning and selection harvest. The goal would be to grow quality saw timber for many decades. Normal thinning/selection harvest has a goal of 85 square feet of basal area to be left after harvest. Trees to be left are the better quality trees. Goal is to remove the poor quality and high risk trees which usually amounts to about 20-25% of the trees. In some areas of all high quality trees, trees to remove are based on spacing (15 foot spacing goal). Secondary goal is to establish maple and other hardwood regeneration on the forest floor.

Stand 1 would be an even aged harvest of northern hardwoods (clearcut/overstory removal). The majority of the area is regenerated to balsam fir (70%) and northern hardwoods (30%). The majority of this area must have had an extreme logging operation (1950?) removing most of the higher quality trees. The majority of the trees left are maple, basswood and ash and are of very poor quality. 70% of the trees are of pulpwood quality and will never be anything else. Remainder (30%) are only fair quality with potential of developing into fair quality sawtimber. There are some pockets of fair quality trees that will be maintained in the stand by reserving trees. Harvest will be a designated harvest of all trees over 5 inches as measured at normal stump height. The only limitation for harvest will be the period of use of road and woods to very dry conditions or frozen winter condition. There is an intermittent drainage at south end of stand 1 that will need to be fixed up to allow use of road to stand 6. There is an intensive relative new road system to south of parcel that could possibly be used with a landowner agreement.

These harvests should be scheduled once the CFA plan has been approved. The goal should be to have harvests completed by the end of 2012. None of the other stands will need any harvests during this planning period.

SPECIFIC FOREST RESOURCE SUMMARY

TOPOGRAPHY: The overall look of the area is flat. Much of the area is flat or gently sloping. Maximum elevation change would be 20 feet. The majority of topographic change is less than 20 feet in elevation. The area drains to the center of each section. Area would eventually drain into the Little Black River.

HISTORIC: The area is totally forested. However, as shown in stand data sheet about 1/3 of that area is non commercial forest because of stand conditions and soils productivity. Some of adjacent surrounding area in the past has traditional been used for agricultural farming. Most are hobby farms at present. Area has been used by hunters and campers in the past and as commercial forest land. The owners of parcel do not have a camp in the area. There are several other camps and homes in the surrounding area. Access road to section 30 has been used by County in past. Road system has been used in past for logging purposes, snowmobiling and ORV use.

WATER: There is one small body of water in section 29, stand 8 and sometimes there is water in a small area in stand 5 near the south end of stand 1. There is an intermittent creek in stand 5 and crosses access road near south boundary of stand 1. Area drains into the Little Black River and eventually into Lake Superior.

AESTHETICS: The area is fairly uniform and similar throughout the parcel. There is very little scene area at any one time. There is very little diversity or special areas of interest. The greatest diversity is the change in forest types along aspen hardwood stand and the hardwood stands and the ash areas.

RECREATION: The area has been used in the past mostly for hunting and general forest viewing for wildlife. The future holds a very similar use by the owners and users of commercial forest lands.

ROADS: The area has a good exterior road access consisting of the county roads accessing residents of the area and the other commercial forest lands. Parcels are very close to the main highway US 2 and the communities of Wakefield and Ramsay. The interior road systems are adequate for any type harvesting anticipated. Roads will need the normal pre use maintenance of interior roads that have not been used for several years. Additional work will have to be performed near south end of stand 1 where the intermittent creek crosses road. Basically removing tag alder and some trees, leveling

area and re establishing grade. Interior roads would normally be considered at a level to be used during winter periods. However, with additional work the roads could be used during a very dry period in the summer.

PROPERTY LINES: There is old evidence of corners on most of property corners. There is a monumented corner just off woods road near junctions of stand 2 & 3. There is evidence of old blue paint lines on many of boundaries. The non standard markings would have to be verified before relying on them for sale purposes.

FISH: The area has no fish populations.

WILDLIFE: The area has excellent habitat for deer, bear, grouse and other wildlife populations that like forest land. I visited the stand in February. There were a few deer in the area, snowshoe tracks in the aspen stand and I did see signs of coyote and wolves. I am sure area holds excellent population of deer in the spring, fall and summer with all the adjacent fields and old farms. No known T & E species are present as permanent residents. I am sure wolves and eagles traverse the area from time to time.

SOILS: The area commercial forest area appears to be a silty loam soil with few exposed rocks. There does appear to be areas with a substratum of clay. There are ruts in some of old roads from previous operations which indicates logging restrictions would need to be applied to the area to insure quality workmanship. Soils would allow forest harvesting in dry periods of summer or during winter freeze up period. Productivity of these soils is fair for the species that are growing on the soils. The non commercial forest areas are organic soils with clay in subsoil and high water tables.

TIMBER: Of the 616 acres, 387 acres or 63% of the area is commercial forest land. The remainder 229 acres or 37% is not commercial forest land. These areas do not meet commercial viable standards based on the soil productivity, past harvesting many years ago, health of the black ash trees and the lack of reproduction in understory. The 387 acres consists of mixed hardwood pole stands (54%), mixed conifer sapling/pole stand (24%) and aspen sapling stand (22%). There are a total of 9 stands on the parcel of which 6 are commercial forest land. The northern hardwood stands differ substantially in condition and stocking. All stands are pole (8inch diameter) stands but stand 6 and 9 have around 120 basal area of stocking with fair to good potential for sawtimber stand development in the near future. This stand should be managed as a un even aged stand.

Stand 1 stocking is about ½ of that and has very little too any potential to develop into a quality stand. The difference was most likely due to heavy high grading in stand 1 some time back in 50's. This harvesting apparently removed all the quality trees and left the rest. The remainder of trees are about 70% pulpwood quality trees and the other 30% has only fair potential for sawtimber. This stand will need to be managed as an even aged stand. Goal is to remove all the hardwoods in the overstory and release and create balsam fir and northern hardwoods. Majority of area has some sort of regeneration in understory. About 70% of it is balsam and the rest northern hardwoods. There are some pockets of fair quality stocking of hardwoods with potential to be managed for sawtimber. These

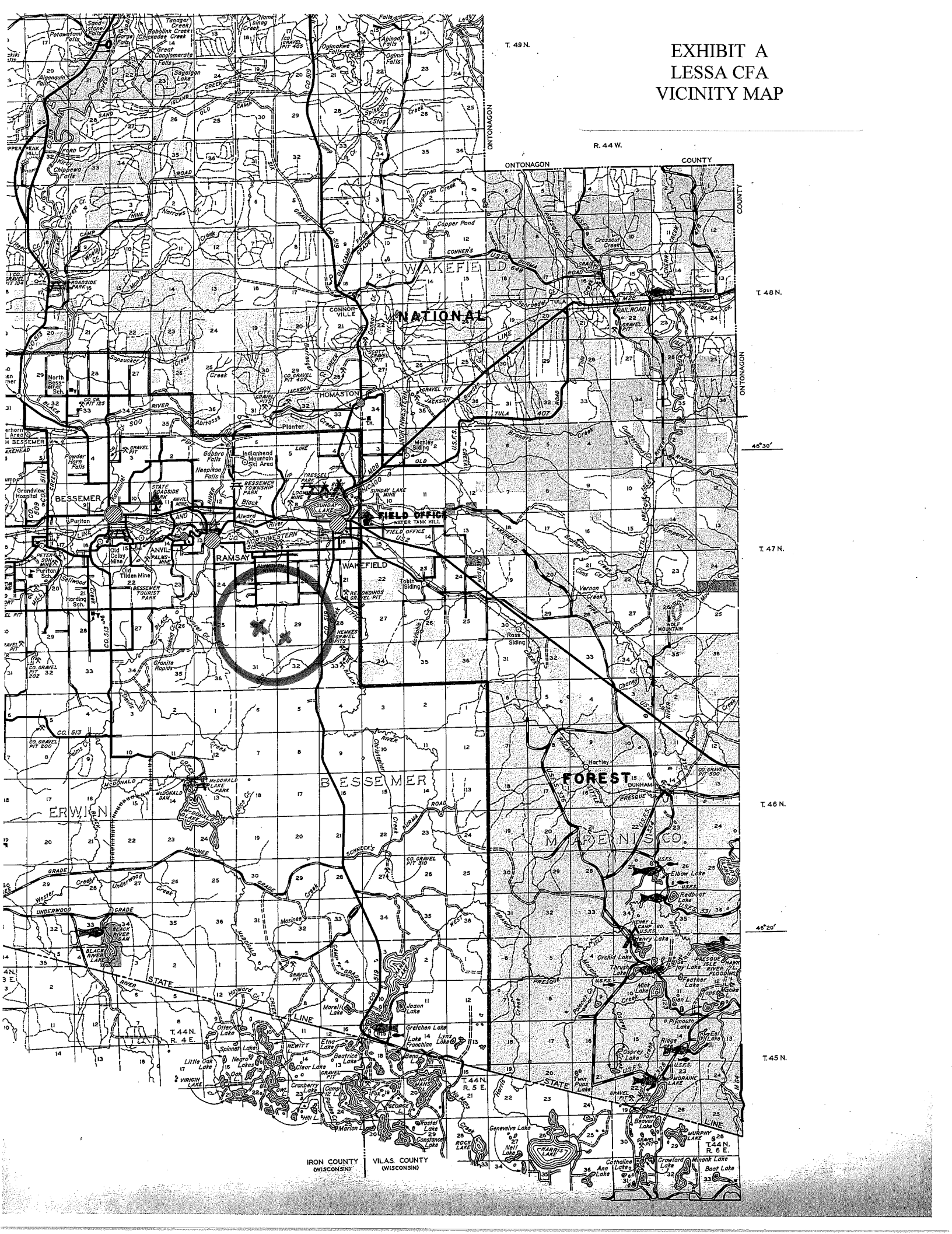
areas should be reserved from harvest and allowed to develop. The harvest will be a designated harvest of all hardwoods 5 inches and larger as measured at normal stump height. This harvest should be planned and completed by the end of 2012.

Stand 6 and stand 9 should be managed as an uneven aged stand of northern hardwoods. Periodic thinning/selection harvests to develop a quality stand of northern hardwoods. Both these stands are in need of a harvest at the current time. Harvesting should be scheduled to be accomplished by the end of 2012. Standards to be implemented in the harvest would be an individual tree marking for harvest. Goal would be to remove stocking from the 120 basal area that exists now to about 85 basal area. Trees to be removed will be the poorer quality and high risk trees. If all trees are good quality a spacing pattern will be attempted with a goal of 15 foot spacing. This type of harvest can be performed every 10 to 15 years. So at the end of this planning period a re evaluation of these stands should be done in preparation for another harvest toward the end of this 20 year planning period. The other 3 stands will only need to be monitored during this planning period. Stand 3 is a 15 year old aspen stand that will develop nicely and will not need a harvest for about 35 years. Stand 7 is a young mixed conifer stand with some hardwoods and will also need to be harvested in about 35 years. Stand 4 is a northern hardwood stand of poles that should be re-evaluated towards the end of this planning period and perhaps a harvest toward end of this planning period depending on how well the stand develops. Overall, there is potential for both short term harvest and an addition harvest toward end of this planning period (2030). Timber potential for entire area is fair to good.

EXHIBITS: See exhibits A – G for additional information

Terry L. Read
Terry L. Read, ACF, CF
Registered Forester #633
2/20/10

EXHIBIT A
LESSA CFA
VICINITY MAP



BESSEMER MAP NO. 2 WAKEFIELD MAP NO. 5 T.46-47N.-R.45W.

BESSEMER MAP NO. 2 WAKEFIELD MAP NO. 5 T.46-47N.-R.45W.

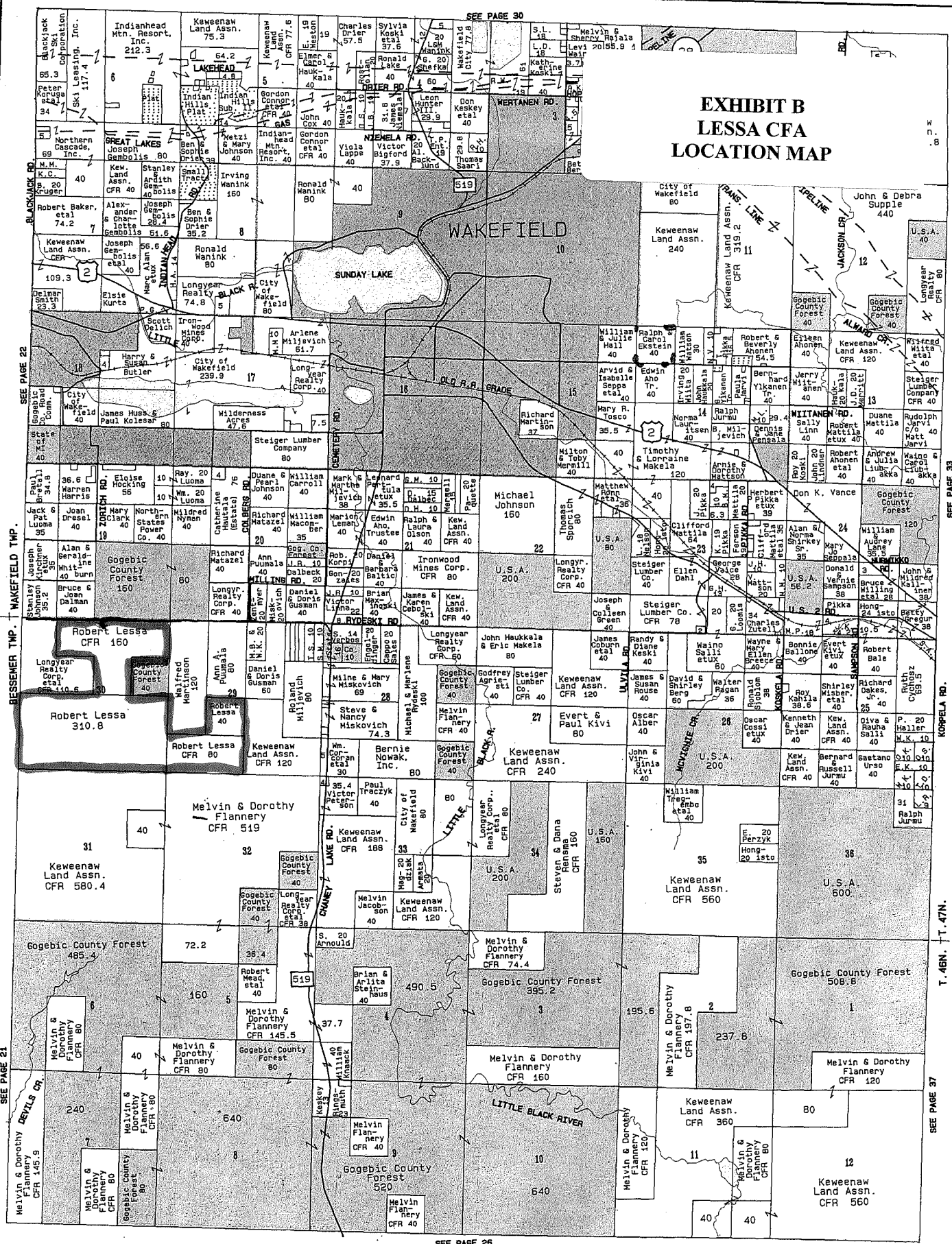


EXHIBIT B
LESSA CFA
LOCATION MAP

SEE PAGE 21

BESSEMER TWP. WAKEFIELD TWP.

SEE PAGE 22

T. 46N. R. 45W.

SEE PAGE 39

T. 46N. R. 47W.

SEE PAGE 37

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Small (400 x 400) | Medium (600 x 400) | Large (800 x 600)

BASE MAP

- None
 - Topo maps
 - Color Aerial
 - Hybrid TopoPhoto
 - B/W Aerial
- [Standard aeriels note](#)

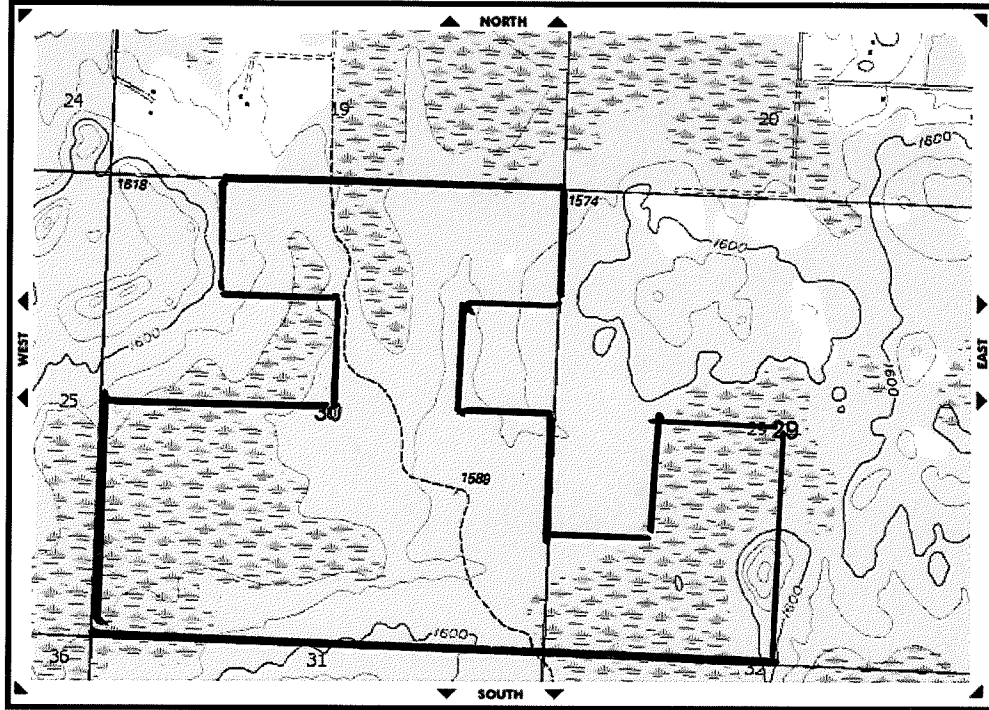
MAP LAYERS

- Shaded Relief
- Street Maps
- PLSS Grid [\[map legend\]](#)

ZOOM LEVEL

- Regional
- 1:1,000,000
- 1:200,000
- 1:100,000
- 1:50,000
- 1:25,000
- 1:12,500
- 1:6,000

[Redraw Map](#)



MAP ACTIONS

- Current Map:
Untitled
- New Map
 - Save
 - Open Saved Map
 - Print/Email Map
 - Find a Map
 - GPS/Waypoints
- ### MAP TOOLS
- [Unload map tools](#)
- Pan Map
 - Select Annotation
 - Waypoint/Marker
 - Pencil
 - Route
 - Polygon
 - Text Note

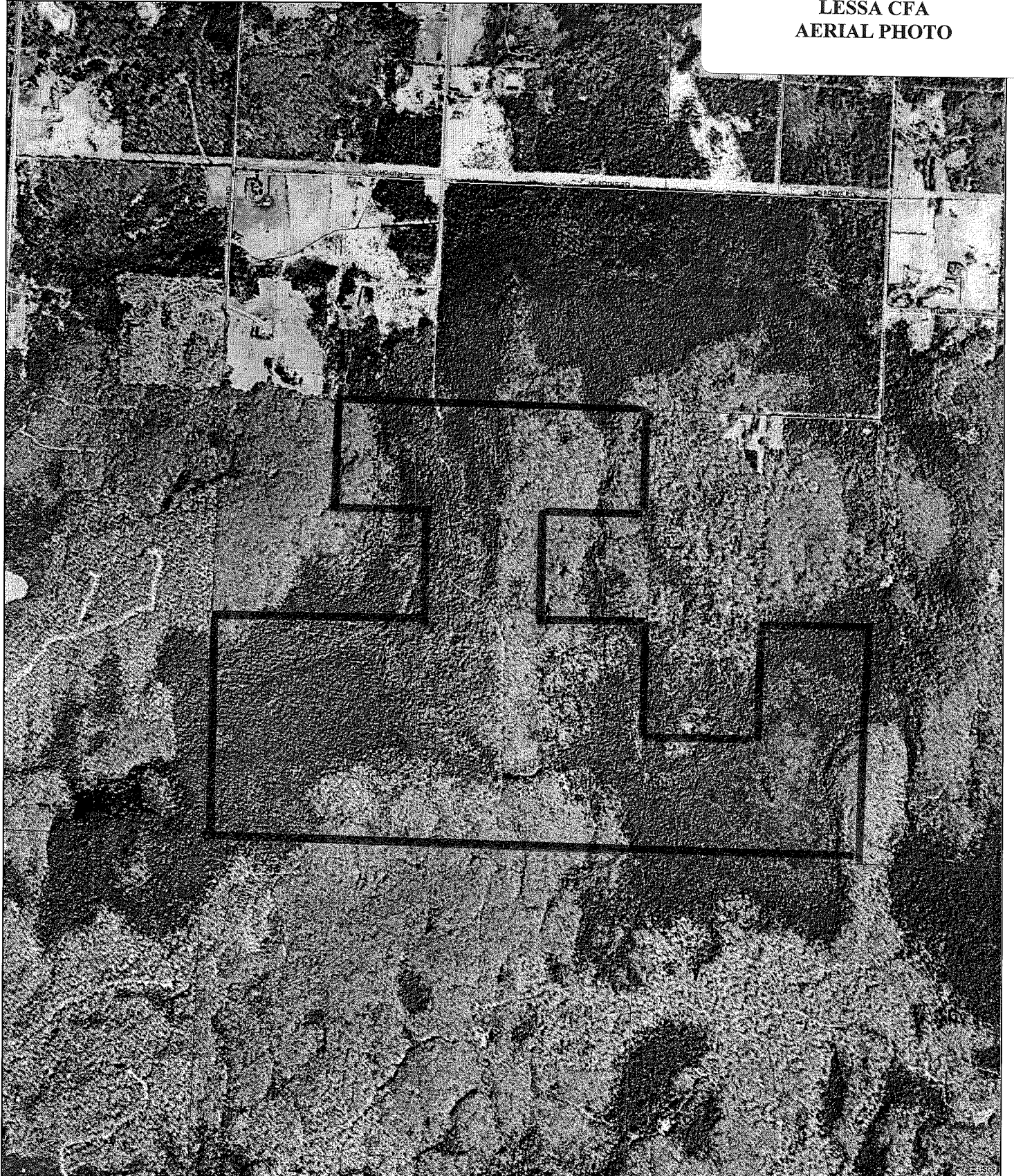
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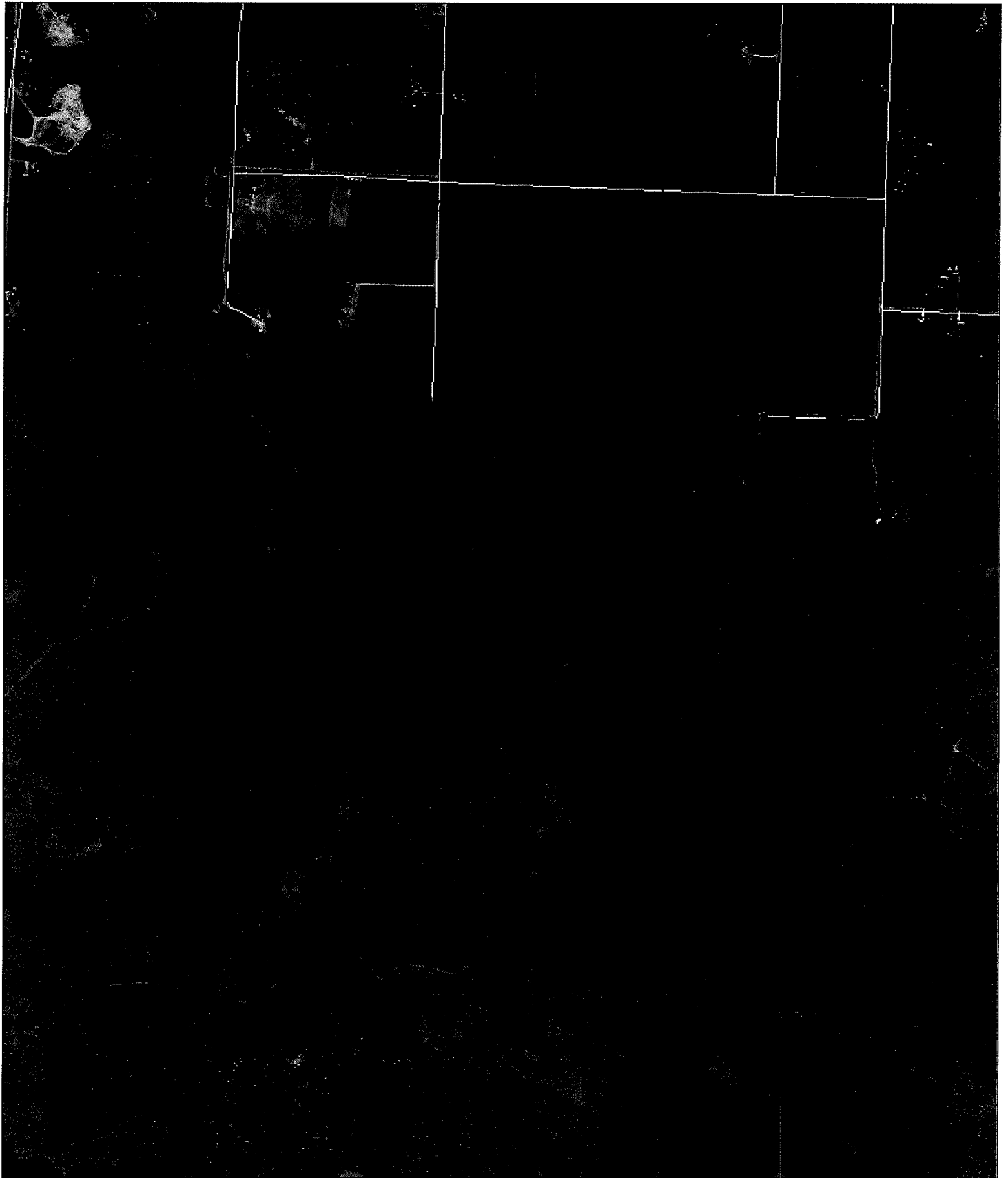
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**EXHIBIT D
LESSA CFA
AERIAL PHOTO**



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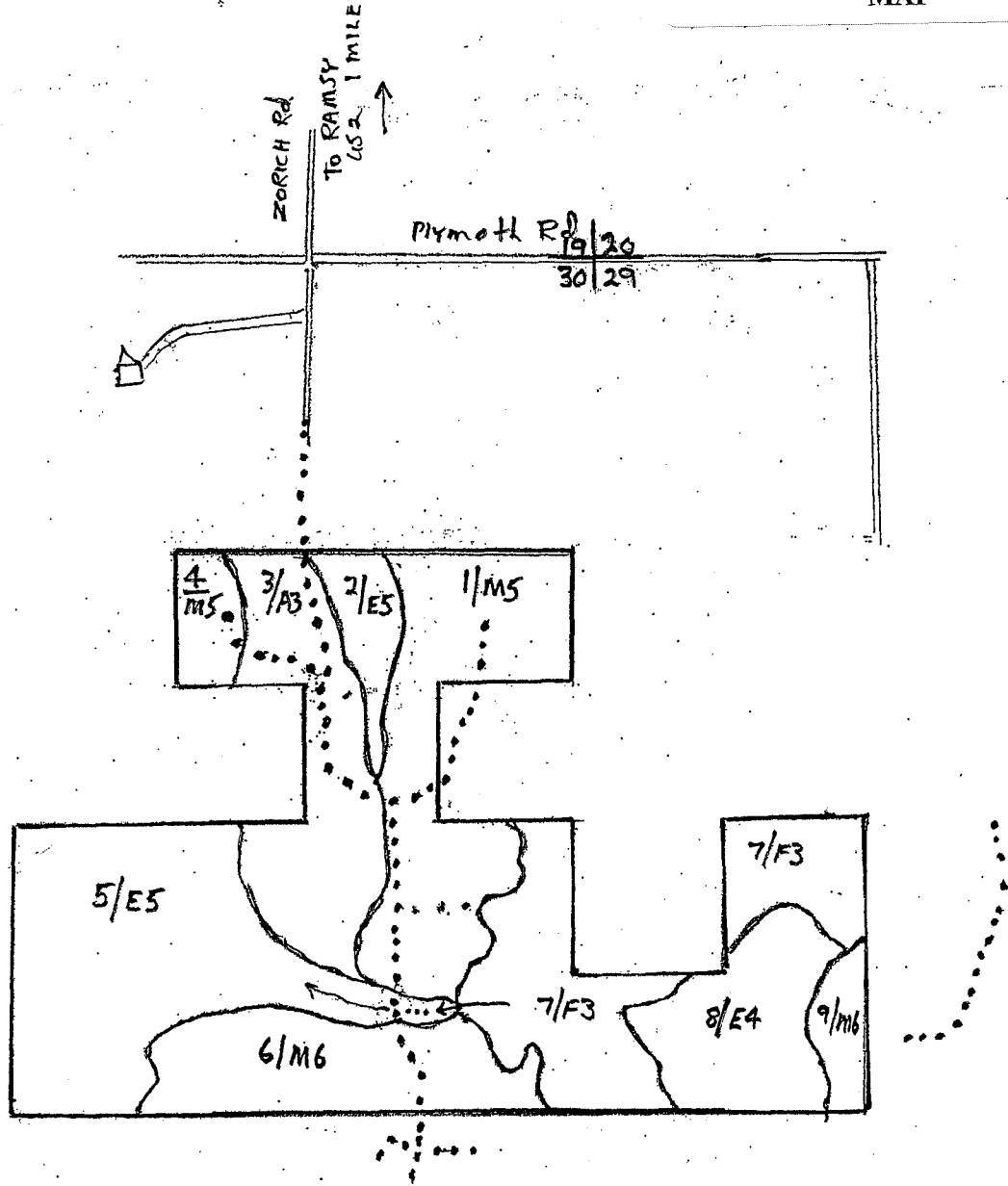
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Exhibit
 Lessa CFA Plan
 T47N-R45W

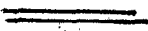


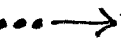
EXHIBIT E
 LESSA CFA
 FOREST
 STAND/TYPER/SIZE/DENSITY
 MAP



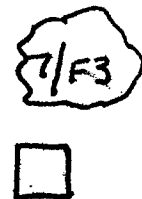
TR - 2/18/10
 SCALE: 6" = 1 MILE



LEGEND

- County Road 
- Woods Road 
- Home 
- Intermittent Creek 

- Forest Stand #
- Type/Size/Density
- Parcel Boundary



Cover Type, Size and Density Symbols

Cover Type

- A - Aspen (Upland)
- B - Paper Birch
- C - Cedar
- D - Treed bog
- E - Swamp Hardwoods
- F - Spruce - Fir (upland, including upland black spruce)
- G - Grass
- H - Hemlock
- I - Local Use
- J - Jack Pine
- K - Rock
- L - Lowland Brush
- M - Northern Hardwood
- N - Marsh
- O - Oak
- P - Balsam Poplar & swamp aspen and swamp white Birch
- Q - Mixed swamp conifer
- R - Red Pine
- S - Black spruce - swamp
- T - Tamarack
- U - Upland Brush
- V - Bog or muskeg
- W - White pine
- X - Other non-stocked or non-forest or non-productive
- Y - Sand Dunes
- Z - Water

Size Density (Stocking)

- 0 - Non-stocked (less than 17% stocked)
- 1 - Seedling - Sapling, poor stocking (17% - 39%)
- 2 - Seedling - Sapling, medium stocking (40% - 69%)
- 3 - Seedling - Sapling, well stocked (70% +)
- 4 - Pole-timber, poor stocking (10 - 39 sq ft basal area)
- 5 - Pole-timber, medium stocking (40 - 69 sq ft basal area)
- 6 - Pole-timber, well stocked (70 + sq ft basal area)
- 7 - Saw-timber, poor stocking (10 - 39 sq ft basal area)
- 8 - Saw-timber, medium stocking (40 - 69 sq ft basal area)
- 9 - Saw-timber, well stocked (70 + sq ft basal area)

FOREST STAND DATA SHEET

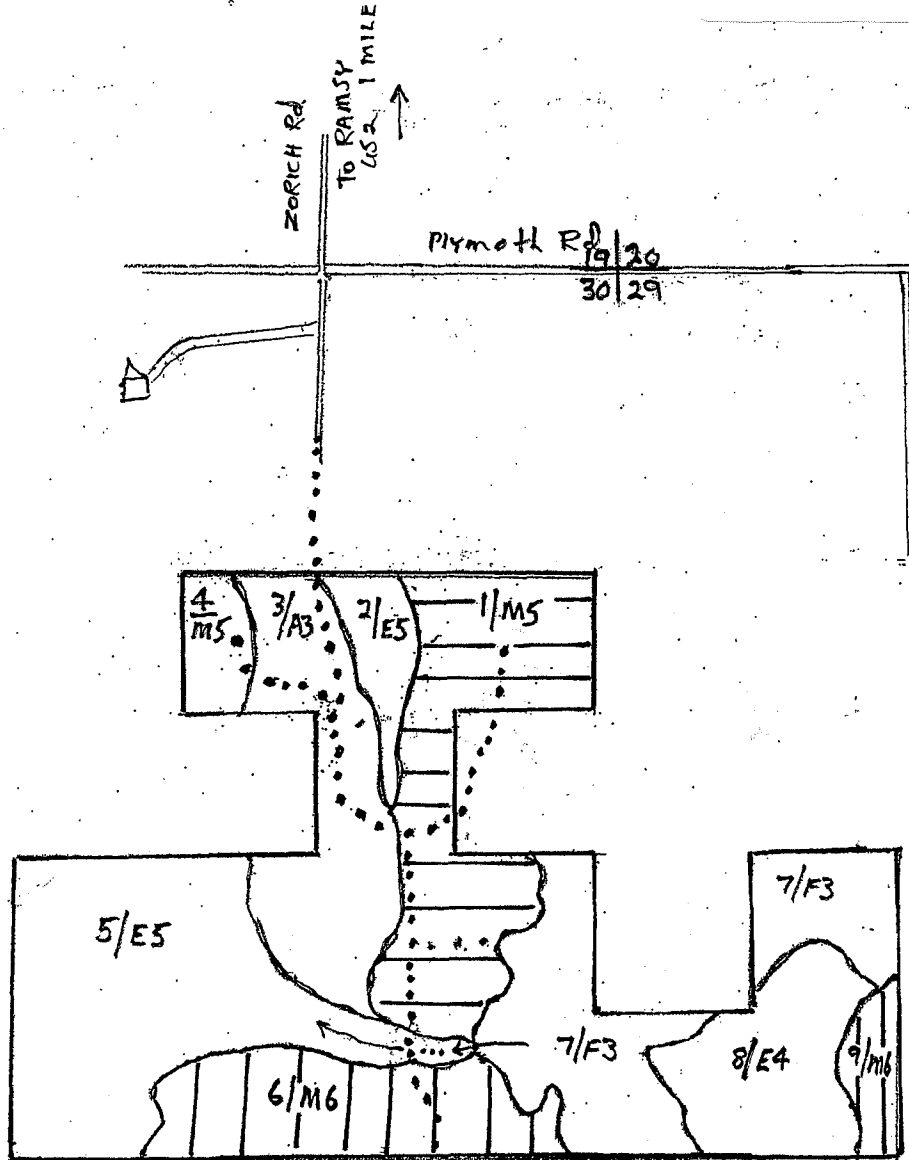
LESSA CFA STAND DATA SHEET

STD #	ACR.	CURR. TYPE	FUTUR TYPE	AGE	YR ORG	AVG. DIA	BASAL AREA	AVG. HT.	COMMENTS	HARVEST	CORDS	TIME FRAME
1	99	M5	M9	80	1930	8	65	60	Stand is 70 % poor quality/high risk trees. There is an understory of balsam fir seedlings and saplings and 30% stocking of sugar maple seedlings and saplings. Area needs to have overstory removed and manage as an even aged stand. There are pockets of potential sawtimber trees that could be retained and will be delineated during sale layout and cruising.	Clearcut/overstory removal and let existing regeneration of balsam, ash & maple take over stand.	1000	2011/2
2	19	E5	E5	120	1890	7	50	50	This stand is similar to stand 5. Trees are generally very high risk and poor quality with most having dead tops. So most trees area less than 40 feet of live tops. Stand does not appear to be a commercially viable forest stand and should just be allowed to develop over a very long period and serve as a watershed and wildlife buffer. Non commercial forest land.	N/A	N/A	N/A
3	86	A3	A6	15	1995	2	100%	20	This stand was clearcut and has regenerated nicely. There is an extension of this stand that was not cut and is poorly stocked to poles of aspen in northern part of stand 5. It should be managed as an inclusion in stand 5 and will provide excellent wildlife area.	N/A	N/A	N/A
4	19	M5	M9	80	1930	8	60	60	Area was harvested along with stand 3 and was thinned. Thinning was too heavy from a basal area removal but perhaps quality was poor. Area should develop into a fair sawtimber stand in 40 years or so. Re exam in 20 years and perhaps stand will need to be treated as an even aged stand and remove overstory if regeneration has begun.	N/A	N/A	N/A
5	147	E5	E5	50	1890	7	50	50	Similar to stand 2 but of even poorer condition. Similar management. Monitor for watershed protection and wildlife. Non commercial forest land.	N/A	N/A	N/A
6	86	M6	M9	120	2930	8	120	60	Stand can be managed as uneven aged and needs a thinning lowering basal area to around 85-90 sq ft.	Thinning/shelterwood	600	2011/2

Exhibit
 Lessa CFA Plan
 T47N-R45W

EXHIBIT F
 LESSA CFA
 HARVEST MAP

TR - 2/18/10
 SCALE: 6" = 1 MILE



LEGEND

- County Road
- Woods Road
- Home
- Intermittent Creek






- Uneven age management
Thin/Shelter wood Harvest
- Even age management
Clearcut/Leave pockets
quality trees
- Forest Stand #
- Type/Size/Density
- Parcel Boundary

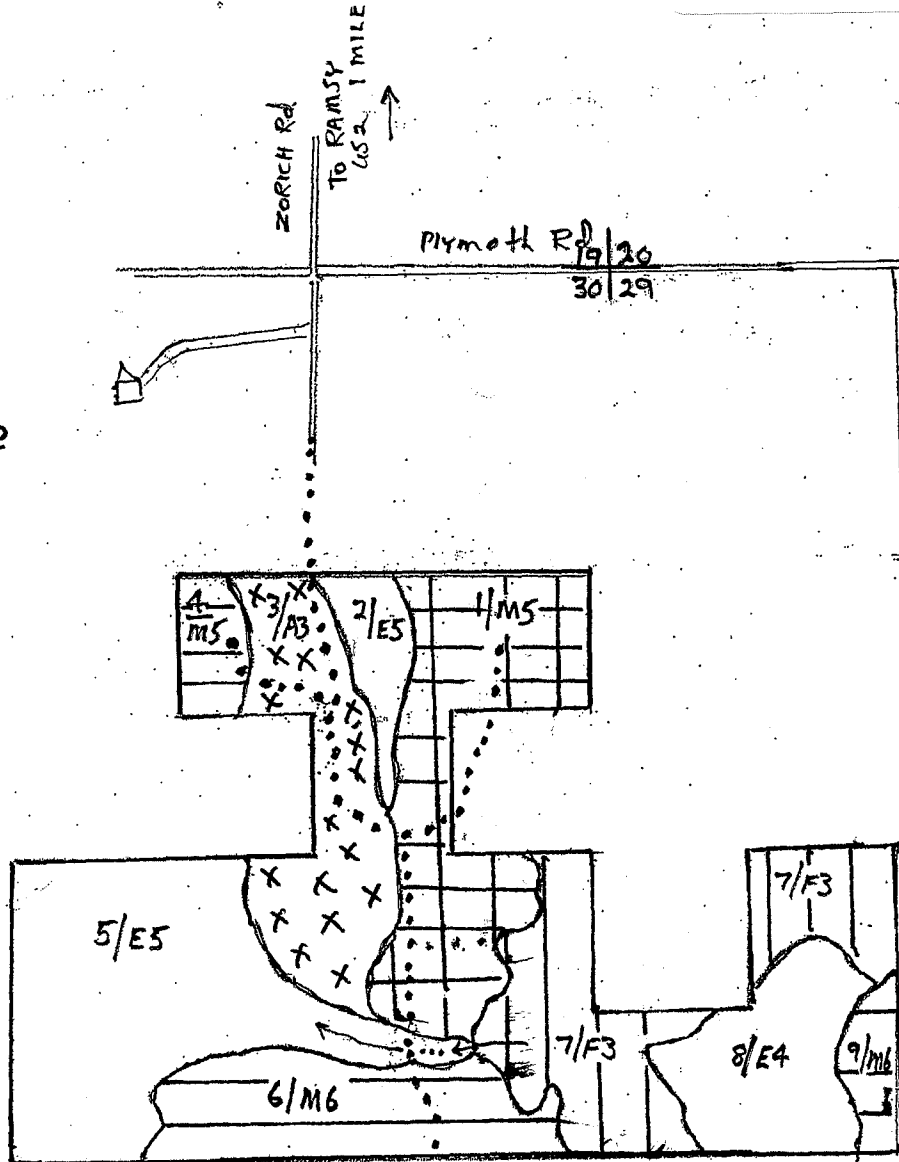
Exhibit
 Lessa CFA Plan
 T47N-R45W

EXHIBIT G
 LESSA CFA
 DESIRED FUTURE CONDITION
 MAP

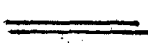






TR - 2/18/10
 SCALE: 6" = 1 MILE

-  Hardwoods
UNEVEN AGE
-  MIX CONIFER
& Hardwoods
EVEN AGE
-  CONIFER
EVEN AGE
-  ASPEN
EVEN AGE
-  Non
Commercial
Black Ash



LEGEND

- County Road 
- Woods Road 
- Home 
- Intermittent Creek 

- Forest Stand # 
- Type/Size/Density
- Parcel Boundary 