TIMBER SALE PRESCRIPTION

GENERAL	
Date 08/01/2011	Forest, Mineral and Fire Management Unit Crystal Falls
Timber Sale Number (if applicable) 12-0??-11-01	Sale Name (or prescription name) Aspen Measurement Block Test A

LOCAL CONTACT	
Name Tom Seablom	Telephone (906) 485- 1966
Email Address seablomt@michigan.gov	FAX ( ) -

☒ **Map of Project Area Attached**

LEGAL DESCRIPTION

T44N R27W Section(s) 11 & 12 Description E1/2 & W1/2

Year of Entry: 2011 Compartment(s):22 Stand Number(s): 26

THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 41.4 Source: ☐ OI ☒ GPS ☐ Other _____

Payment will be made on the basis of these estimated acres.

TREATMENT & OBJECTIVE

STAND #	COVER TYPE	ACRES	BA	TREATMENT	MANAGEMENT OBJECTIVE
26	A6	41.4	126.6	Final Harvest	Aspen

PRESCRIPTION

1. Cut all trees greater than 2″ dbh except pine and cedar.
2. Stay out of vernal ponds.
3. 10.6″ average DBH
4. Mixed stand of aspen, balsam fir, balsam polar, red maple, white spruce and other hardwoods.
5.
6.
7.
8.
9.
10.

Access Kates Grade Rd

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
N/A	

CONTRACT WORK CAN BEGIN

☒ Immediately ☐ Date:

CONTRACT WORK MUST BE COMPLETED BY December 31, 2011

PAINT LINE WORK

☐ **This is included in the bid** ☒ **This is not included in the bid**

Paint line work to be performed: (See attached map for locations)

TYPE OF LINE	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR	
Private boundary	☐	☐	☐ Blue	☐ Other:
Sale boundary	☐	☐	☐ Red	☐ Other:
Sale cutting unit	☐	☐	☐ Yellow	☐ Other:
Stand type line	☐	☐	☐	☐ Other:

Exclusions to mark and why

Standards for marking lines against private land

AREA CALCULATION

☐ **This is included in the bid** ☒ **This is not included in the bid**

UNIT	METHOD	STANDARD
Sale	☐ GPS ☐ String Chain ☐ Other	
Payment Unit	☐ GPS ☐ String Chain ☐ Other	
Stand	☐ GPS ☐ String Chain ☐Other	

Special Instructions:

TIMBER CRUISING SPECIFICATIONS

☒ **This is included in the bid** ☐ **This is not included in the bid**

Required Basal Area Factor: ☒ 10 ☐ 20 ☐ Other:

Cruise Line Directions The plots have already been established. The plot locations and numbering is shown on page 5.

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
Northwest Forty	1	N/a X N/a
		N/a X N/a
		X
		X
TOTAL NUMBER OF CRUISE POINTS	42	

Cruise Special Instructions:

Temporary plots have been established. The test measurement can't be done by the same people that set up the plots. Plot center is PVC pipe sticking out at least 4" above the ground, flagged, painted, numbered and easy to see. Additional flagging has been placed overhead so the plot may be easily located. All trees, whether 'cut' or 'leave', which are 'in' using a Limiting Distance Table with a Basal Area Factor of 10 have been marked. Marking consists of a horizontal line (about 6") at dbh and a tree number anywhere on the tree, but clearly visible from plot center. Tree numbers start at 1 for each plot.

Azimuth and distance to the center of the tree at the base from the plot center have been recorded along with species. This information will be provided to you by the DNR in an Excel format. When trees are near the edge of the stand, the 'walkthrough' method (Ducey et al 2004) was used to determine 'in' trees. Trees 'in' from the 'walkthrough' method have been counted twice, have two numbers painted on the tree and are listed twice on the Excel spreadsheet.

Using the tree data in the spreadsheet, cruise each tree on the plot according to the following procedure. An example of the data and tally card is shown on page 6. The entire spreadsheet will be emailed to the winning bidder.

DBH: Measure Diameter at Breast Height (DBH) in the location marked on each tree. Round down to the nearest 10^{th}. Use a d-tape, or the average of a caliper where two measurements are taken at 90°.

$H_S(1')$: Record $H_S(1')$ for all trees with DBH $\geq$ 9.1". Measure height for the sawtimber portion of the tree in feet to a 9" Diameter Outside Bark (DOB) or to the sawlog stopper, which is a lower point on the tree (see Product Standards and Cruising Manual). Round down to the nearest 1'. Minimum recordable height is 9' (considers a 1' stump). Record heights less than 9' as 0'. This may occur on a tree with no 8' minimum log (9.1" tree with a fork at 6') or has no quality (9.1" tree with branches all the way to the ground). Use Gator Eyes®, a Wheeler Pentaprism®, a Criterion RD 1000®, Laser Ace® or similar device to determine the 9" location on the stem and a clinometer, Relaskop®, TruPulse®, Forestry 550®, Laser Ace® or similar device to determine H_S.

L_{DS}: If a sub-portion of the stem is defective between H_S and the stump, record the total cumulative length of defect to the nearest 1'. This may be in one section or multiple sections, but is recorded as one number. If in multiple sections, add the sections together and record one number. The minimum length for a sawlog is 8'. There is no maximum length. See Product Standards and Cruising Manual for information on deduct.

L_{DSR}: If a portion of L_{DS} is recoverable as pulpwood, record the length of deduct that is recoverable to the nearest 1'. The minimum length for recoverable pulpwood is 8'. There is no maximum length. For example, if there is a (H_S =)30'sawlog section in a tree with a 10' section in the middle that is defective (L_{DS} = 10'), 9' of which could be a pulp log, then L_{DSR} = 9'.

$H_4(1')$: Record $H_4(1')$ for all trees with DBH $\geq$ 4.6". Measure height of the tree in feet to a 4" Diameter Outside Bark (DOB) regardless of merchantability. Round down to the nearest 1'. This can be, but is not necessarily the merchantable height. Record height to a 4" DOB regardless of the location of the pulpwood stopper (denoted as H_P). Use Gator Eyes®, a Wheeler Pentaprism®, a Criterion RD 1000®, Laser Ace® or similar device to determine the 4" location on the stem and use a clinometer, Relaskop, Laser Ace® or similar device to determine H_4.

$H_P(1')$: If the limit of pulpwood merchantability is lower on the tree than H_4, record $H_P(1')$, the height to a pulpwood stopper (See Product Standards and Cruising Manual); otherwise record H_P as H_4. The minimum recordable height for H_P is 9' (considers a 1' stump). If the tree does not contain at least one 8' pulp log, record H_P = 0. Use a clinometer, Relaskop®, TruPulse®, Forestry 550®, Laser Ace® or similar device to determine H_p.

L_{D4}: If a sub-portion of the stem is defective between H_S and H_4 (or H_P, if $H_4 \neq H_P$) or between H_P and the stump when H_S = 0, record the total cumulative length of defect to the nearest 1'. This may be in one section or multiple sections, but is recorded as one number. If in multiple sections, add the sections together and record one number. The minimum length for pulpwood is 8'. There is no maximum length. See Product Standards and Cruising Manual for information on deduct.

In addition to the tree measurements, you must track your time conducting this test. If you are using a portable data recorder, this could be used for time tracking. Time starts when you leave your truck to begin measurement and ends when you return to your truck. If you take breaks or lunch in the woods, then stop your time at the beginning of each break and start when you resume work. This is an important attribute of our test so it is important that you remember to start and stop your time appropriately.

Tally sheets will be provided by the DNR. Output from an electronic data recorder is acceptable.

TIMBER MARKING SPECIFICATIONS

☐ **This is included in the bid** ☒ **This is not included in the bid**

☐ **Precise specifications to be delineated at pre-work meeting with DNR staff**

Total Merchantable Residual BA (Basal Area): _____ (Minimum _____ to Maximum _____)

TREATMENT	NUMBER	SIZE
Regeneration Gaps Per Acre **Girdled Trees Per Acre**		

PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs			
Sawbolts			
Pulpwood			

TYPE OF WORK	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR
Trees marked to leave	☐	☐	☐ Green ☐ Other
Trees marked to cut	☐	☐	☐ Orange ☐ Other

TALLY INTENSITIES

SPECIES / PRODUCT	RATIO
	1 :
	1 : 1 :
	1 :

SPECIAL MARKING INSTRUCTIONS

Unless otherwise specified, the tally sheets used must be those provided by the Forest Management Unit.

RESTRICTIONS

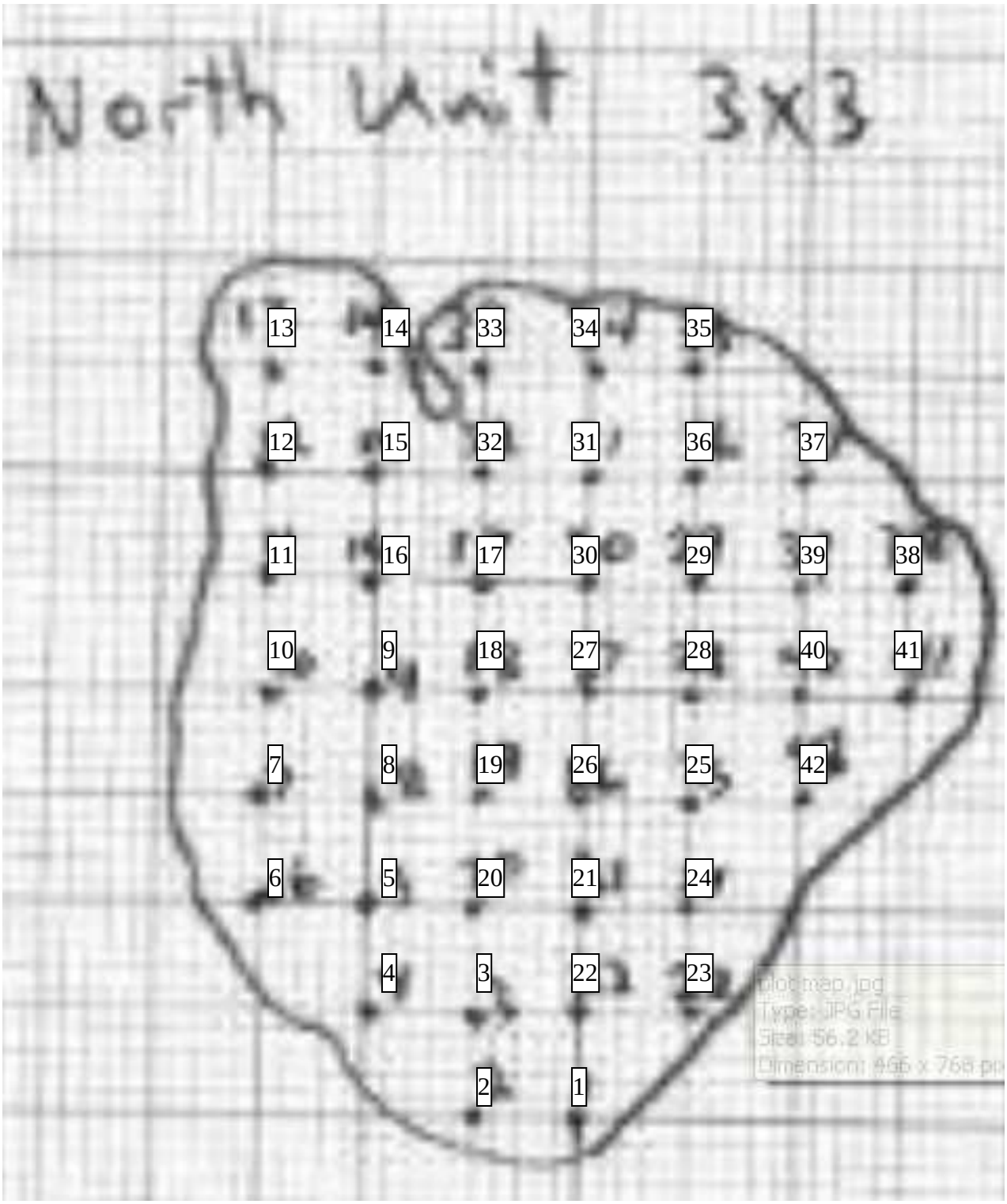
1. Forest Management Division must to be able to identify who did what on the timber sale.
2. This work is to be performed by one person.

PAINT

1. None needed.

DELIVERABLES

1. The name of the person that did the cruising.
2. Tally from each plot in the Excel spreadsheet provided by the DNR.


North Unit 3x3
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Plot#	Tree #	Species	Azimuth	Distance	DBH	H_S1'	L_{DS}	L_{DSR}	H_P1'	H_41'	L_{D4}
1	1	asp	43	19.7							
1	2	asp	51	32							
1	3	bf	90	24							
1	4	asp	126	13.9							
1	5	bf	164	5.6							
1	6	bf	164	11.5							
1	7	ws	203	7.9							
1	8	asp	257	25.4							
1	9	bf	278	5.9							
1	10	bf	310	24.9							
1	11	ws	343	23.5							
2	1	bf	19	8							
2	2	bf	55	10.1							
2	3	asp	69	9.9							
2	4	bp	74	30.9							
2	5	bf	82	16.3							
2	6	bp	120	15.2							
2	7	bf	121	17.1							
2	8	bp	122	27							
2	9	bp	146	19.1							
2	10	ws	198	4.4							
2	11	bp	202	16							
2	12	bf	202	14.6							
2	13	bp	222	20.4							
2	14	bp	239	19.3							
2	15	bp	280	25							
2	16	bf	280	17.9							
3	1	ws	108	4.1							
3	2	asp	117	26.6							
3	3	asp	127	19.6							
3	4	rm	139	19.9							
3	5	bf	252	10.8							
3	6	bp	285	19.1							
3	7	bp	333	35							