* 2017 - Now called Unit 147.

Old Growth Survey

Observer: Mac Donnitio

Date: Sept 13, 2016

General Area: G.B. Eastman Cr.		Stand ID: Unit 191 *
Elevation: 6000 - 6200	Aspect: NE	Slope: 1601 - 58 (part of)
Habitat Type Group: PICO		
Old Growth? Clearcut		

Desc. of O.G. Trees: Ø

Snags (Desc. & #) Ø

Down Wood (Desc. & #)

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Regen of PICO.

Logging history: clearcut, Only stand in this area not slated for commercial cutting.

Insects and Disease:

Wildlife: Elk
Piwo
Pima

Fisher
Lynx - mapped habitat Y N
if yes = _____.

☆ 2011 Now called Unit 54 + includes much more acreage slated for commercial logging.
see 2016 map for area checked.

Old Growth Survey stand 1601-202

Observer: MAC DONOTTIO Date: Sept. 6+7 2016

General Area: GB Eastman Cr.		Stand ID: part of 202 / which is part of UNIT 146 ☆
Elevation: 5700-6100	Aspect: East	Slope: ridge top + steep East slope
Habitat Type Group: PIPO, VACC. NINEBARK		
Old Growth? Parts are PIPO OG. 20%		

Desc. of O.G. Trees: PIPO 21-38" dbh 0-9/Acre

Snags (Desc. & #) PSME 12-32" few.

Down Wood (Desc. & #) low - med. larger trees mostly

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Mostly E Aspect with PIPO OG pocket ≈5 Acres + OG PIPO scattered Along ridge.

overstory PIPO 50/PSME 50, Pipo older + more dom. lots of psme coming in.

Canopy open to 35% closure.

2 sub canopy psme. Stems - low - medium high.

1 PSME snag pocket.

Shrubs: ninebark patches, VACC.
red stem base - pinegrass (or elk sedge)

Road proposed to be constructed through this stand, including right through Flamm Area + O.G. PIPO, Not recommended as O.G. + Flamm nesting habitat is important here. + elk security.

Logging history: NOT sure, no sign

Insects and Disease: some old psme beetle. Some mtn. p. beetle.

Wildlife: Elk HC Fisher 1
Piwo 3 Lynx non
Pima 1

Unit 146 stand 202 area

✓ (1) 35.5" 1½ pipe w/light scars, bear marks, h. bee hive, At or near flamm roost/nest
271976 x 5128361, signed metal

1+6 more 32" - 40" pipes in cluster All signed.

1601 - 202

FLAMM AREA

Old Growth Survey

Observer: MAC Donotrio Date: Sept 7, 2016

General Area: G. B. Gibbons Cr.		Stand ID: stand East of 211 in Unit 146
Elevation: 5800 - 6100	Aspect: WEST	~~Slope:~~ 1601 -
Habitat Type Group: PSME / SYAL / Elk sedge / ninebark		
Old Growth? Prob. not		

2017 name # is 55

PICO 16.5
PSME 24
Av. PSME 18"
ABLA 16

Desc. of O.G. Trees: PICO 16.5 alive, PSME 21-32"

Snags (Desc. & #) 0 - 10 acre, poles to 30". PICO + PSME mostly. atew big PIPO also at higher end near ridge. (east edge of stand)

Down Wood (Desc. & #) low - med.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Mostly A mature PSME stand.

stem density open to fairly dense mature PSME stems.

shrub coverage 25%. SYAL + elsewhere 9 bark in more open sites. MENZESIA in west running draw.

syAl
+
elk sedge

Logging history: unk. New Road laid out/planned for This Area? Not reccommended.

Insects and Disease: past bark beetles. PSME ~~sbwm thinning~~ tops in places. mistletoe in PSME

(Spring, Summer, Fall)
3 seasons of use evident.
elk use significant

Recr
known Flamm area
Piwo

Wildlife: Elk FF
Piwo 1
Pima 2

FISHER 1
LYNX NON

FLAMM AREA

Flamms calling from This stand
June 2016.

* 2017 Unit # changed to Unit 56.

Old Growth Survey

Observer: Mac Donofrio Date: Sept 6+7

General Area: G.B.		Stand ID: 1601-209 part of Unit 146*
Elevation: 5700-6300	Aspect: NNE	Slope: steep
Habitat Type Group: PSME / PICO / ABLA (saps)		
Old Growth? parts are PSME O.G. 10-20%		

Desc. of O.G. Trees: Big PSME up to 34" dbh. 1 Area of PSME O.G. > 1 Acre. May be alot more.

Snags (Desc. & #) PICO snags 6-13" 0-10/Acre.

Down Wood (Desc. & #) med. - high poles to mature. mostly poles.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

mature PSME / PICO overstory predom. Stem density medium. understory of ABLA + PSME mostly.

shrubs: extensive menzesia, dense, with some patches of 9bark also. In the mix also is S. willow, Thimbleberry, clematis, mountain Ash. some VACC.

forbs: nettles in places! - (cattle transported)

Logging history: non evident except up near top/road.

Insects and Disease: mtn. p.b. had hit the pico here.

Wildlife: Elk HC Fisher 1
Piwo 1 Lynx non - 2016 layer
Pima 2

Old Growth Survey

1601-216

Observer: MAC DONOTTO

Date: Sept 28 2016 (portion of)

General Area: G. B.		Stand ID: 216
Elevation: 6300 - 6700	Aspect: North	Slope: med. steep
Habitat Type Group: PICEA / ABLA / PSME / PICO		
Old Growth? YES		

Desc. of O.G. Trees: PSME The largest + prob. oldest >200 yrs. 21-40" 2-10/Acre. PICEA unknown ages 18-25" 8-18/Acre. ABLA - very tight growth rings 18-24". PICO 9-13" >120 yrs. old.

Snags (Desc. & #) ABLA 8-21" 0-5/Acre / PSME 0-3/Acre 18-38" One area of PICO along east border of stand is mostly PICO + has up to 50% mortality. Very old trees, 120 yrs + greater.

Down Wood (Desc. & #) medium to med. high quantity of 10-35" trees. Poles along east bndry.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Ovustory is main canopy. PICEA 50%, ABLA 15%, PSME 30%, PICO 4% Tall straight spruce, with big PSME scattered + in groups. ABLA also tall. Canopy coverage 70-95%. Stem density usually high.

Moose use in stand noticeable.

Creek in lower part of stand has been completely trampeled by cattle for years. (6+) Creek starts in stand 150 m above main road.

shrubs 25-90% coverage by menzesia, a bit of Thimble berry. Under PICO is VACC.

forbs: not much due to heavy shade n. slope. beargrass in upper end.

Logging history: NONE, except some serious firewood cutters skidding out 30+" psme from above + below rd.

Insects and Disease: some tops thinning dead by SBWM on ABLA. Seedlings ABLA + PICEA stressed by SBWM. MPB in PICO 20-50% where PICO are.

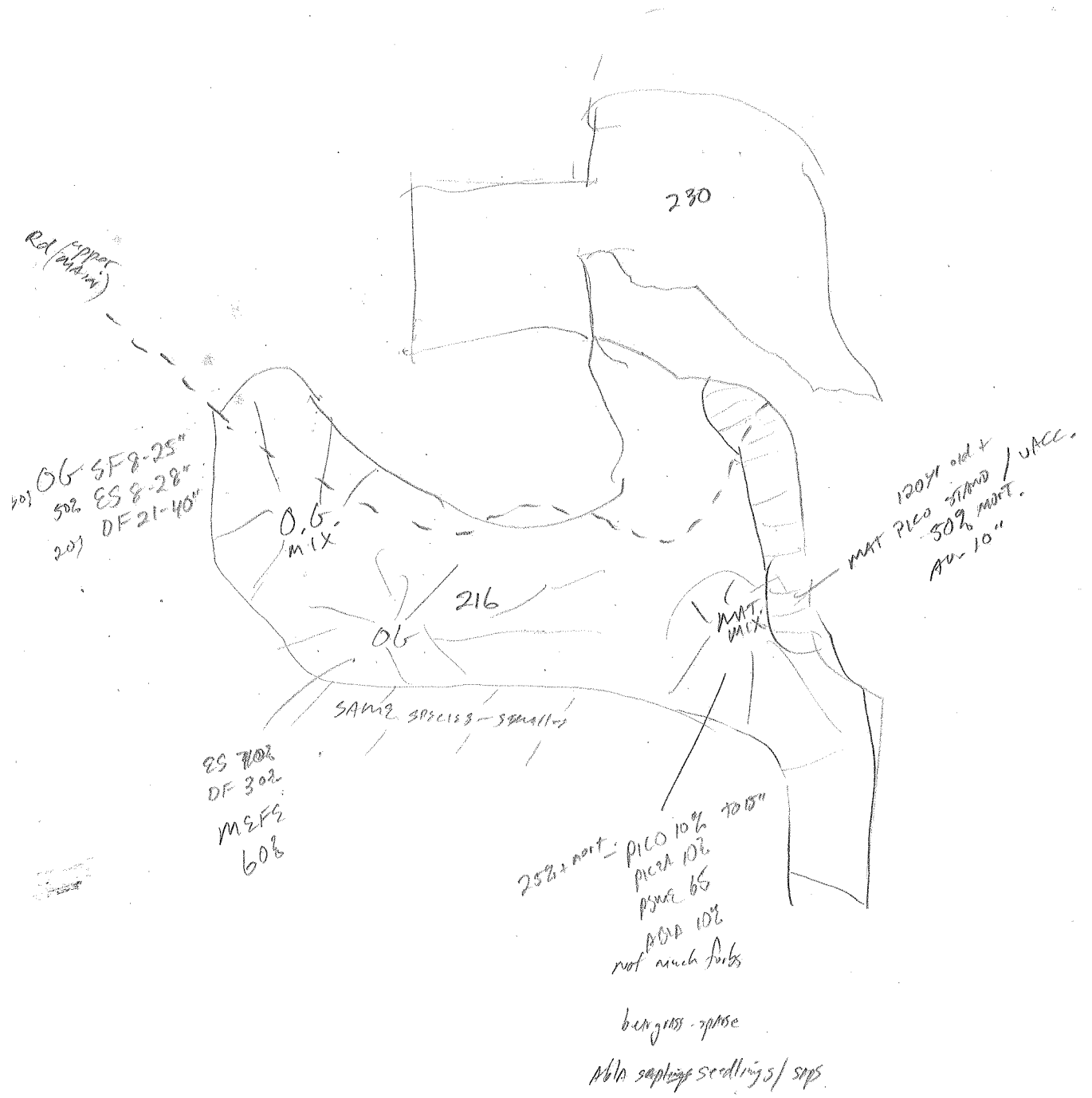
RBNU
CORA
STJA
CAJA
MOCU

Wildlife: Elk HC
1 Piwo high elev.
Pima 2-3

MOOSE SIGN
Fisher 1
Lynx - mapped habitat (Y) N
if yes = SE
20% = MM

(OVER)

✓ ① PSME 34.1" live bow Signed 272482 × 5127410



16
17
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6) 75
15

10
40
29
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17
19
20
19
21
121
9) 194
14

38
28
16
8
12
20
22
21
8
27
119
10) 198
98

34
16
14
18
22
20
19
24
18
15
17
19
219
12) 256
16
16

24
11
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15
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16
10
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9
12
9
9
7
159
13) 159
29

Spring Loop?

Old Growth Survey

Observer: MAC Donatto

Date: August 25th 2017
part of UNIT 58

General Area: G/B Estuary Cr.		Stand ID: 1601-217
Elevation: this portion is 5900-6400	Aspect: North	Slope: steep
Habitat Type Group: ABLA/ MEFE (Mexican spruce, DF, SF, PICO)		
Old Growth? 50-70% YES		

below rd. colored portion

Desc. of O.G. Trees: ABLA, spruce, DF, All have big specimens / 1 or groups. >21" PSME - 38", spruce to 30"+ 1-25/acre. Lots of tight rings on spruce + PSME, specimens of PSME up to 350 yrs. old.

Snags (Desc. & #) PSME snags to 39". Large >21 ABLA + spruce also. Also pole patch of PICO on east lobe of stand.

Down Wood (Desc. & #) med - med/high throughout. Poles to v. large.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Mixed conifer stand. Spruce, DF, + SF in that order of dominance. Lots of tall, old, straight spruce growing close together. Several areas of big groves + obvious OG status. Multi layer stand to single layer in some places - especially where spruce is high % of stems.

Most slopes have MEFE, A wide variety of plants near creek + on ridge. Better N. side meadow rue, ferns + S. triangulare along creek + elk beds. Really nice fern patch above spring that the elk bed in. Mtn. maple, serviceberry, thimbleberry, some VACC.

Canopy coverage 50 - 70%, tall impressive trees in >50% of stand. PSME not straight - lots of bows + bends. PICEA - straight - as are the ABLA which get up to 27". Lots of PSME/ABLA + SPRUCE over 21" dbh.

Logging history: Some logging from open rd. running through top of stand - old cable lines reach down ~200+ feet.

Insects and Disease: SBW in ABLA + spruce

MAWO
NOFL
hare (2 seen)
PIWO 2
WIWR

Wildlife: Elk TC
Piwo 2
Pima 3

Fisher 1
Lynx - mapped habitat Y N
if yes = high quality, winter, denning etc.
lots of hare pellets + see hares.

recent elk beds in every system

N.90
E.100
S.75
W.100 plot 1
spruce 16
ABLA 15
LARC 10
MEFE 21
ABLA/MEFE 16
15
23
116
7 | 116
7
46
42
40
81
4 | 365
36 5
Pl-2
9
14
21
23
22
22
23
19
19
9 | 171
9
81
3.
22
10
20
18
16
13
5 | 78
5
28
5
4. 23
29
30
23
21
17
21
16
38 - dead
210
195

65 70 10 95 95 100 25 70 335

4) 335 35 84 32 15 12 30

9) 210 23 18 30 27 30

8) 175 21 16 15

HC 60 95 35 100 280

4) 280

4. 5. 29 10 23 22 15 23 23 6 151

8) 151 19 8 71

4) 140 35 12 20

6. 17 9 22 13 15 76

5) 76 15 26

4) 230 20 30

W.L. TREES

✓ ① 30.5" live broketop PSME, with mistletoe + cavities + bow. in O.G. grove. vigor poor. - yes got it. no coordinates yet. Bark shows basal burning. 50' downhill from WL plot 4. North 0272389 x 5127748

✓ ② 39" PSME dead, intact. 0272384 x 5127715 2 12
WL sign.

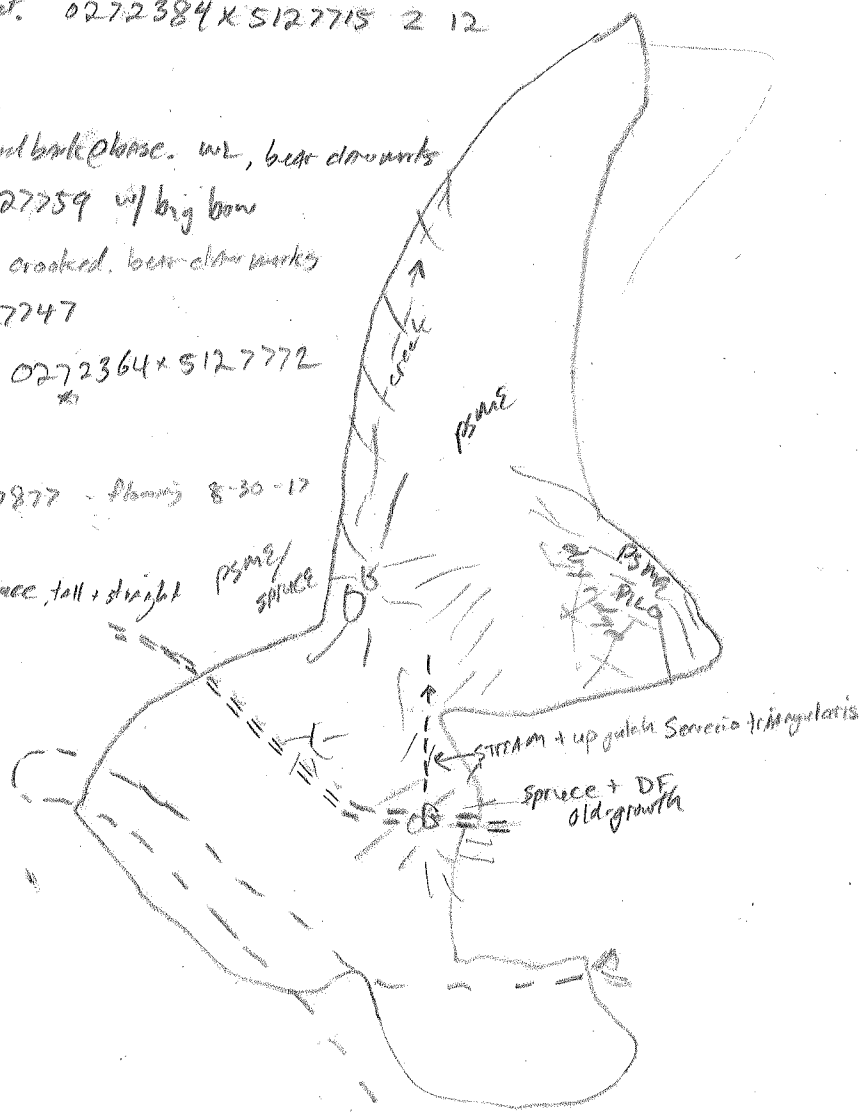
✓ ③ 35.6 live intact PSME, blackened bark @ base. WL, bear claw marks
0272393 x 5127759 w/ big bow

✓ ④ 30.4" live, intact PSME, crooked. bear claw marks
0272387 x 5127747

⑤ ✓ 35.3" live, intact PSME 0272364 x 5127772
grn. paper sign only

⑥ ✓ Spring 0272406 x 5127877 - flowing 8-30-17

⑦ WL tree - signed 28.5" spruce, tall + straight
272394 x 5127758



= = proposed new road.

Old Growth Survey STND: 1601-217

Observer: MAC DONOTTO

Date: Sept 28 2016
UNIT 37 (is huge)

General Area: G.B. Eastman Cr.		Stand ID: 217 upper portion only
Elevation:	Aspect: NORTH	Slope: steep
Habitat Type Group: PICEA, ABLA MEFE with big PSME.		
Old Growth? YES		

10% of STAND walked

This is only the very upper portion of STAND 217 (above main rd.)

Desc. of O.G. Trees: PSME 18-40" 3-10/Acre. PICEA 18-25"
ABLA - tight rings 18-24". Impressive PSME.

Snags (Desc. & #) PSME 19-40" but firewood cutters are cabeling them out from amazingly long distances.

Down Wood (Desc. & #) med - med high 12-35"

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):
Mostly a single story stand. PICEA 65%, ABLA 15%, PSME 20%.
all mature to OG stand. Impressive Douglas Fir.
Mostly a one layer stand. Stem density med high to high.
Spruce Range 8-21" up to 25"

ABLA 8-24"

PSME 18-40"

shrubs: mefe 25-80% coverage, some thimble berry

forbs: not much - really shaded.

CATTLE IN CREEK (no grazing legal here)

Logging history: none except firewood zealots.

Insects and Disease: SBWM in tops of mature ABLA + seeds/saps.

Wildlife: Elk HC-FF Fisher 1
Piwo 0 Lynx - mapped habitat (Y) N
Pima 3 if yes = 50% MM

SDA
CORA
CAJA

✓ ① 39.5" PSME snag w/ equally large PSME snag leaning against it.
272429 × 5127584

12
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11) 142
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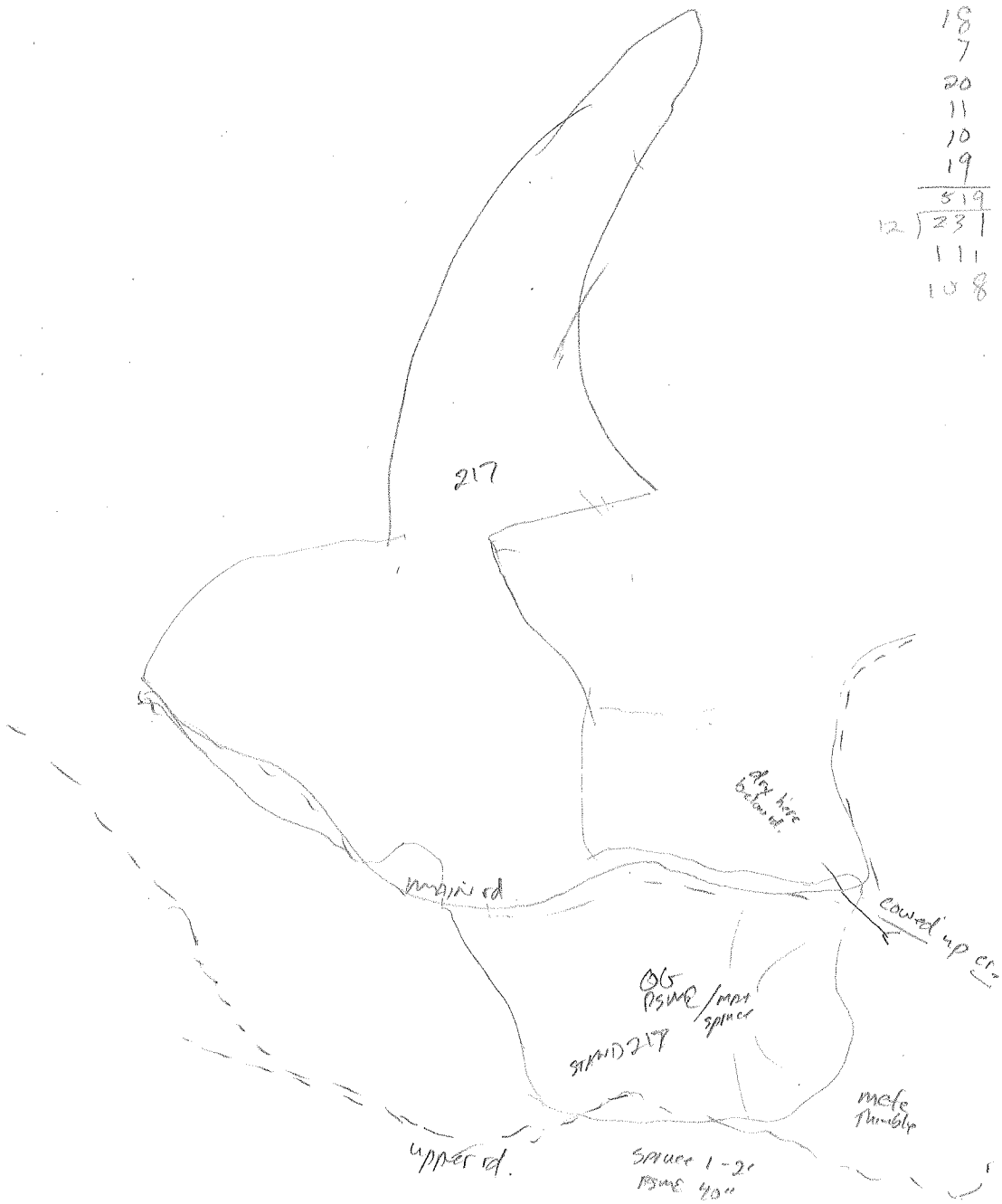
519
12) 231
111
108



Old Growth Survey

Observer: MAC Donofrio

Date: 8-31-2017
part of UNIT 58

General Area: Eastman Cr. G.B.		Stand ID: 1601-218
Elevation: 5800 - 6250	Aspect: mostly North	Slope: steep
Habitat Type Group: ABLA/MEFE (Mix Con)		ABLA/CARU
Old Growth? Parts are, All was LP OG prob.		

below main rd (Lower part)

Plot 1. 6
12
9
7
14
18
13
7 9 11
7 ~~11~~
7
9

4. N 15
E 15
S 40
W 95
41
4 ~~16~~ 5

Desc. of O.G. Trees: 15" dbh PICO 142 yrs. old. PSME 21-28", E.S. up to 34"
PICO - 0 - 20/Acre > 10", 1 - 10/Acre > 14"

Snags (Desc. & #) Mostly PICO 6 - 17". Lots of PICO over 15" dead + alive.
Some PICO have carpenter ants + heart rot > 15" dbh

Down Wood (Desc. & #) med. high - mostly poles to 18".

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

MIX con mature - OG stand of PICO 40 PSME 30 SPRUCE 20 ABLA 10
60% of stand is full of MEFE.

S canopy - M canopy. Stem density ~~too~~ med.

No water found in unit slated portion of stand.

Logging history: unk. At bottom boundary of unit a few very old stumps + compacted gravel.

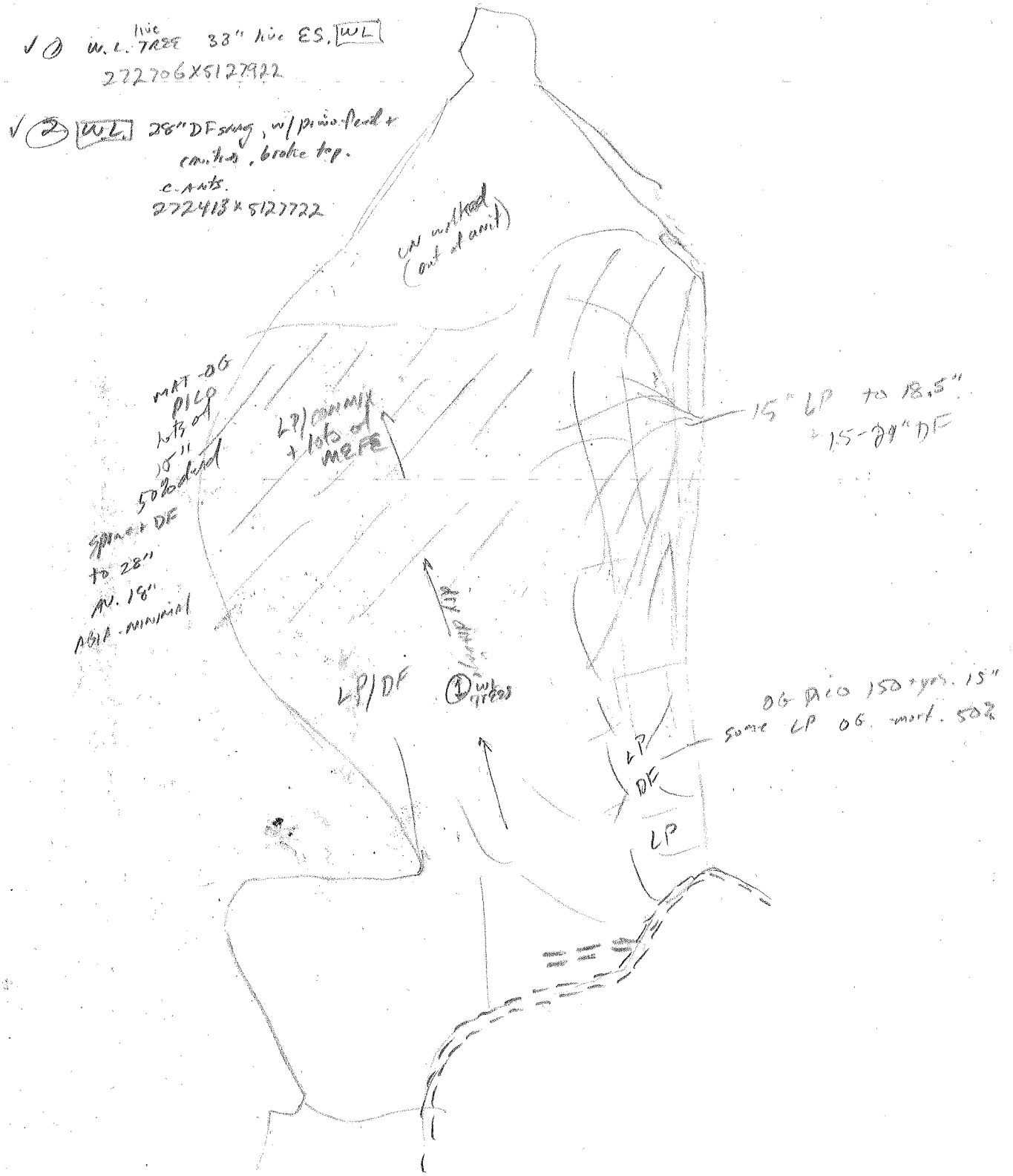
Insects and Disease: old mpb in PICO, SBW

PIWO
CLNU
CASA
MOCH
WIWR

Wildlife: Elk HC
Piwo 1
Pima 2

Bear/Cat sign/beds
At WL sign tree area
(1)

1 north



✓ ① W.L. live TREE 33" live ES. WL
272706X5127922
✓ ② WL 28" DF snag, w/ pileo feed + cavities, broke top.
c. ants.
272413 x 5127722
UN walked (out of unit)
MAT-OG PICO lots of 10" 50% dead
spruce + DF to 28" AV. 18" ABIA-MINIMAL
LP/COMMIX + lots of MEFE
15" LP to 18.5" + 15-29" DF
LP/DF
① WL trees
OG PICO 150+ yrs. 15"
some LP OG. mort. 50%
LP
DF
LP

Old Growth Survey

Observer: MAC DONOTTIO Date: Sept. 29 2016

☆ See sheet for stand 230 for MAP UNIT 35 STAND 1601-218

General Area: Gold Butterfly Eastman Cr.		Stand ID: part of 218 (upper part)
Elevation: 6500	Aspect: NORTH	Slope:
Habitat Type Group: PSME / PICO / VACC. / beargrass, pine grass		
Old Growth? YES, but may die out (PSME)		

Desc. of O.G. Trees: PSME 20-36" lots. PICO may be old but not much over 11" dbh. Spruce occasional.

Snags (Desc. & #) PSME 20-36" lots. upto 12/Acre > 20" (2.3 Acres)
Interesting atypical PIWO cavities (most) in a few of those PSME.

Down Wood (Desc. & #) low - med. poles of PICO to big PSME 35".

18
21
23
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28
11

21
10 | 216
16

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

PSME 75%, PICO 25%, A few ABLA, a few spruce
Canopy layers - bumpy - big trees + younger/shorter all mixed in.
Coverage 70%. Thinning over time due to old PSME + PICO beetle.
Stem density medium.

Impressive PSME in much of stand but most seem to have had hard life - lots of big scars up hill side - prob fire.

shrubs: VACC. + whortle,

Forbs: beargrass, & pine grass
Cattle weeds at upper part - 10x10' area - nettle, mullien, Canada Thistle. See back of sheet. - will spread heavily upon logging.
Logging history: Does not appear to be logged except at west bndry. - skid trail/or cable line.

at bee tree: CLNU CAJA STJA

Insects and Disease: MPB in past in PICO - may be continuing.
SBWM - in ABLA.

Moose sign
Fisher 1
Lynx - mapped habitat (Y) N
if yes = _____

CORA
CLNU
PYOW
PIWO
CAJA

Wildlife: Elk FF
Piwo 1+
Pima 2

light
Honey bee hive in DF SNAG

✓ (1) PSME 35.5" snag, intact 272844 × 5127644 + 5 other large PSME snags S. Fecal cavities 15' scar on bole

✓ (2) " 29.4" " 272845 × 5127656 S. mostly firescarred,

✓ (3) PSME 31.2 snag, intact, lean, h. bee hive - active ~~today~~ - sign in 18' vertical scar, ~~[illegible]~~ 40 FL sized cavities
bear scratches S. 272835 × 5127669

✓ (4) PSME 28.7 live, big bow + lean 272821 × 5127674 S

✓ (5) PSME 28.5 live, with 20' crack-healed (old fire scar) S
272828 × 5127673

✓ (6) RARE 18" PSME with Piwo roost holes. 4+ cavities. 272847 × 5127736

✓ (7) Canada Thistle 10 × 10' area (+ mullein) in otherwise weed free area. Prob from cow.
272847 × 5127738

✓ (8) PSME 26" live with basal scar 272827 × 5127770 (same loc.)

✓ (9) PSME ≈ 28" live with 6' scar 5' up 272827 × 5127770

✓ (10) PSME 36" ~~[illegible]~~ broke top. Piwo nest/roost

Old Growth Survey

Observer: Mac Donnelly

Date: 9-7-2017

part of UNIT 73

General Area: Eastman Cr headwaters / G.B.		Stand ID: 160/-219 — south lobe of
Elevation: 6000 - 6400	Aspect: N.E.	Slope: steep
Habitat Type Group: below main rd. ABLA / VAGL		
Old Growth? YES 75% of South Lobe		

Desc. of O.G. Trees: below main rd: PSME to 36", spruce to 26". Above main rd. PSME/PICO PICO 130-150 yrs. 9-15", 70% mort. PSME lots of trees >87PA >21" dbh. Large ABLA also 0-8/acre >21" - prob not very old but what is possible here.

Snags (Desc. & #) LP below main rd. 5-25/acre 8"-12". Above main rd: LP 5-15/acre. 8-18" dbh. PIWO feeding mainly on these heart rot/dist LP. LP 5-20/acre. SF - 12-25" 0-6/acre.

Down Wood (Desc. & #) - mid-high. poles - med., much well rotted.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover....):

Below main rd. SPRACE 75 PSME 20 ABLA 5 PICO 5. Big trees along the creek - that sometimes flows ~8" underground through rocks. MEFE patches big below road. Lots of animal beds (large ungulates) in this area + bear sign.

Above main road much of stand is PSME OG. with scattering of PICO OG component, aspects vary from wetter to dryer sites. One or 2 rock outcrops in stand.

VAGL/mtn. maple/XETE common understory/forbs, along w/sapling layer - ABLA - PSME.

Road effect - firewood cutters reduced snags greatly along main + upper road margins - mostly LP + some big PSME.

OW/Impt pellets in OG PSME area. - possible stick nest

Lots of large animal beds in flat spots

Creek runs on or 8" below surface from main rd. to Eastman Cr. -

Logging history: - some PICO removed below rd. Mostly appears completely uncut except for firewood cutters + old PICO removal. Old blueprint noted below main rd.

Insects and Disease: old MPB in LP, SBW in SF.

Here now: RUGR, UNWA, MAWO, CASA, STJA, NOFL, PIWO

Wildlife: Elk HC

Piwo 1

Pima 2-3

Fisher 1

feeding 85+% on standing live + dead LP + a few ABLA

Lynx - SSH - more north aspects good priority if have pellets.

9 20
7
17
11
13
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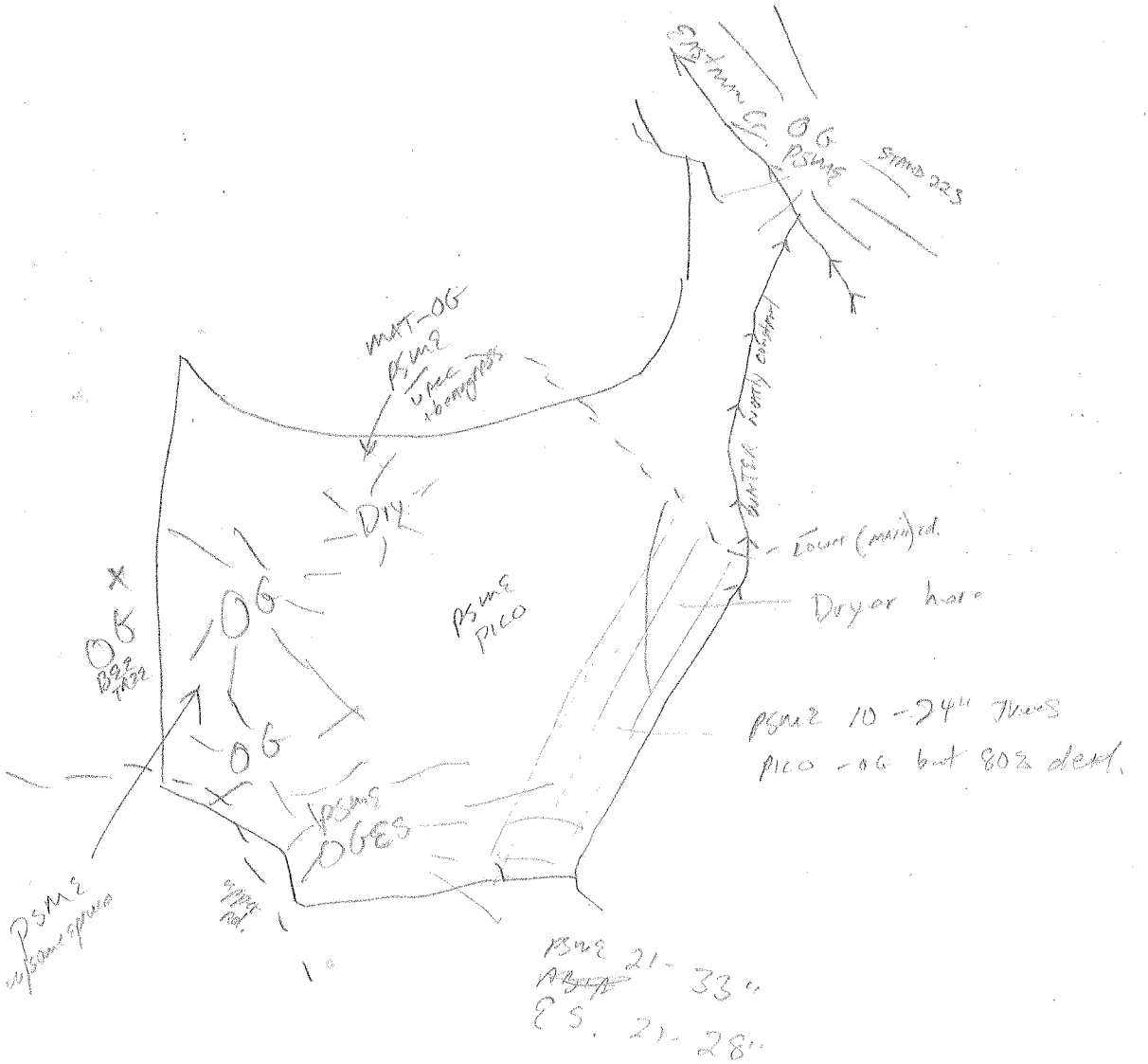
20
20
18
20
86
9/14 3
53

5 8
16
17
3/41
1
0
12
16
24
17
12
28
10
21
8/140
60

✓ ① WL TREE 11.2" PICO snag - ~~[illegible]~~ cavities, pivo + mammal, carp. ants.
green paper sign only 272947 x 5127504 N

✓ ② WL T 11.4 pico snag. pivo feed cavities, ants, other woodpeckers nest up higher.
$\boxed{WL}$ 272898 x 5127577

✓ ③ Owl / raptor pellets + feather 272868 x 5127571. Associated with >21" PSME
grove including one PSME w/ huge crook at 25'. + $\boxed{WL}$ 24.8" PSME, possible ~~[illegible]~~ stick nest up high.



10
50
95
80
35
4)235

Snap MTS
M + M

Old Growth Survey

Observer: MAC Donofrio

Date: Sept. 6, 2017

part of UNIT 58

General Area: SW side Eastman Cr basin		Stand ID: 1601-219 — the portion in UNIT 58
Elevation: 5800-6200	Aspect: North	Slope: steep
Habitat Type Group: ABLA/MEFE + ABLA/LIBO-LIBO		
Old Growth? patches qualify (DF) + large LP specimen also!		

Desc. of O.G. Trees: PICO 11-20" dbh w some/w h.r. + fire scars + nest + feed cavities. Big PICO in here SW corner among mature PSME. PICO 140-180 yrs. counted @ 12-13" range PSME here 21-33" dbh 4-9/Acre

Snags (Desc. & #) O.G. PICO snags 0-15 Acre, 8-20" dbh. good cavity trees in many cases. Few PSME snags.

Down Wood (Desc. & #) 5-13 TPA - poles - 18" mostly. often well rotted.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

This portion of stand 15% mature PSME 60% PICO 15% ABLA 20% SPRUCE < 5%. Mature trees - seemap

O G trees represented most by PSME >21-33" and PICO 11-19" 140 years + >. Also a few ABLA to 28", unk. age - but generally as big as they get here. Canopy coverage 50-75, less in east end of stand.

MEFE represented 3/4 + of stand.

* Some very impressive PICO here that are alive + spreading cones in the forest of seemingly MPB resistant seeds. Why would one cut these?

in stand now:

PIWO - feeling a long time.
MOCH
TTWO
CLNU
elk

Logging history: Some blue marking paint remains on some boles. logged selectively long ago - looks like they mainly took PICO. (PICO stumps only noted)

Insects and Disease: MPB - older, in PICO. SBW hitting hard.

Wildlife: Elk HC
Piwo 1
Pima 2

Fisher 1
Lynx - mapped habitat Y N
if yes = MS - good winter hab. 2/3 of.

NT

(1) 4 PICO w WL (A) 16.5" live w/basal scars (B) 17.9" PICO snag with light scars, bear claw marks, heart rot. MPB mod. (C) 18.5" PICO snag w/basal c. ants + pimo feeding. All within 10 meters, @ 272820 E × 5127946 N (D) 11.9" PICO snag w/ no fl nest cavity, basal scar, fire scar c. ants + pimo feeding, heart rot. All 150 + years old.

(2) 18" dbh live PICO w/ basal scars to 16'. 272874 × N5128022

(3) 32" dbh live PSME, intact w/ 3 poles leaning against it Zone 12 272875 × N 5127920 w/ Bear claw marks

(4) = 28" dbh live ABIA, w/basal crack WL 12 E 272891 × N 5127980

11
14
17
24
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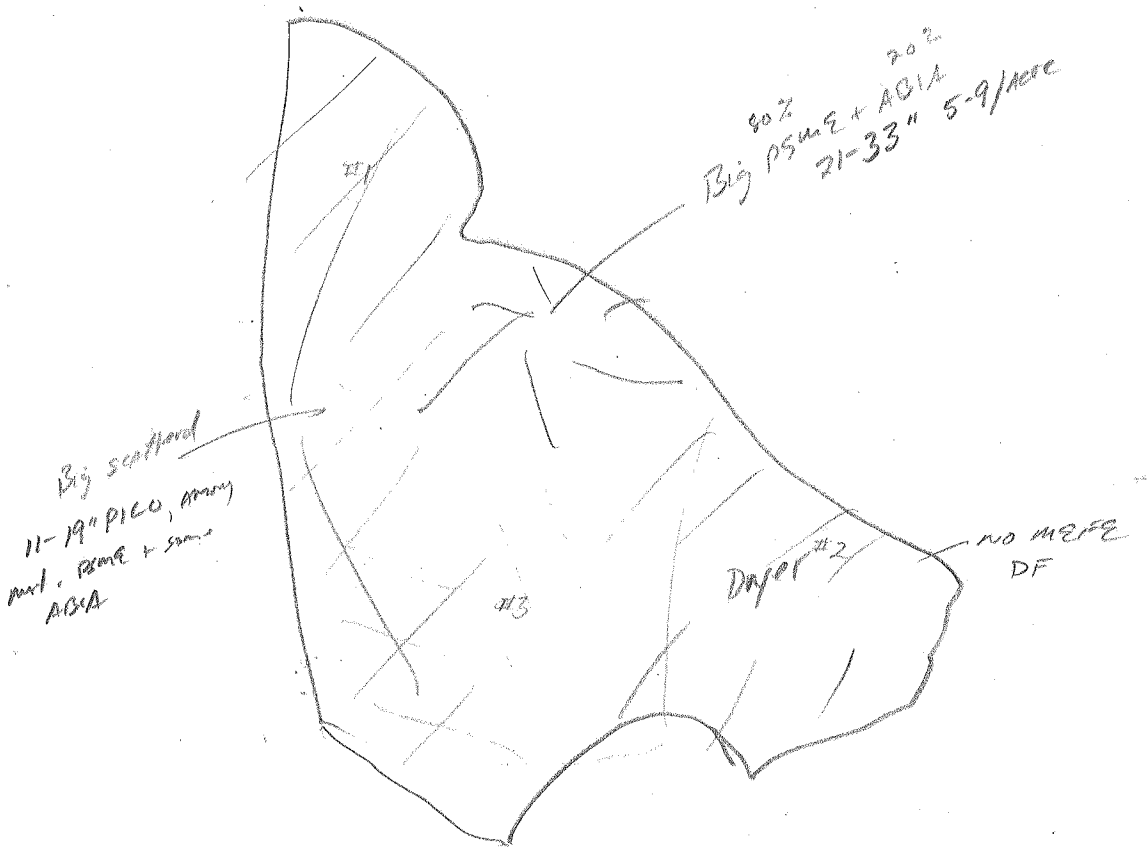
18
15
6)91
6
31
6
4)275
29
35



2017 - ~~#~~ unit # changed from "0" to Unit 53 + cutting area greatly expanded to FS boundary. See 2016 map for old ~~sta~~ unit bndry.

FLAMM. AREA

Old Growth Survey

NORTH of UNIT 146

Observer: MAC DONOTRIO

Date: Sept. 7 2016

General Area: GB Gibbons Cr.		Stand ID: 1601-228 (South east of)
Elevation: 5800 - 6100	Aspect: WEST	Slope:
Habitat Type Group: PSME / elksedge / SYAL		
Old Growth? 15%		

Desc. of O.G. Trees: PSME up to 41". a few old PIPO scattered NE side a few acres of PSME O.G. but lots of areas too small or too few old trees.

Snags (Desc. & #) PSME snags most common. 1-10/Acre pole to 30". handfull or less of large PIPO snags. Some w/ PIWO cavities.

Down Wood (Desc. & #) medium overall - pole to 30" trees. mostly PSME.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):
Mostly a mature spotty stand of PSME 90%, PIPO/PICO 10%.
Overstory as above. Canopy 15-30% coverage. Understory in groupings to thickets of PSME saplings and poles. Overall overstory stem density is medium. Lots of Mistletoe, some dead or nearly dead tops of PSME due to SBWM. RTHA nest in stand, active last 2 years - and this year Nate Bauba found nest w/ 2 young that fledge late July.

Shrubs: 2 mostly snowberry, a few ninebark patches in the summer more open west aspects. Lots of extensive elk sedge + pine grass.
Nettle pocket here also. (guessing due to heavy elk travel + possibly cattle Tresspass.

Logging history: Poles to 14" TREES Thinned out years ago.

Insects and Disease: lots of DF Mistletoe. lots of SBWM thinning at the PSME prob. at least 2 suspecious root rot pockets.

Wildlife: Elk FF ELK use obvious spring / summer / Fall
Piwo 1
Pima 2
FISHER 1
LYNX non
FLAMM Habitat

(OVER)

WL TREES

✓ ① 40.8" live PSME, intact, signed, gps in JUNO only

✓ ② 32" pipo snag w/ pinofeed, possible nest cavities. In JUNO only

✓ ③ 49" PSME live, broke top, nest cavities, old saw mark in trunk.

25
25
7
17
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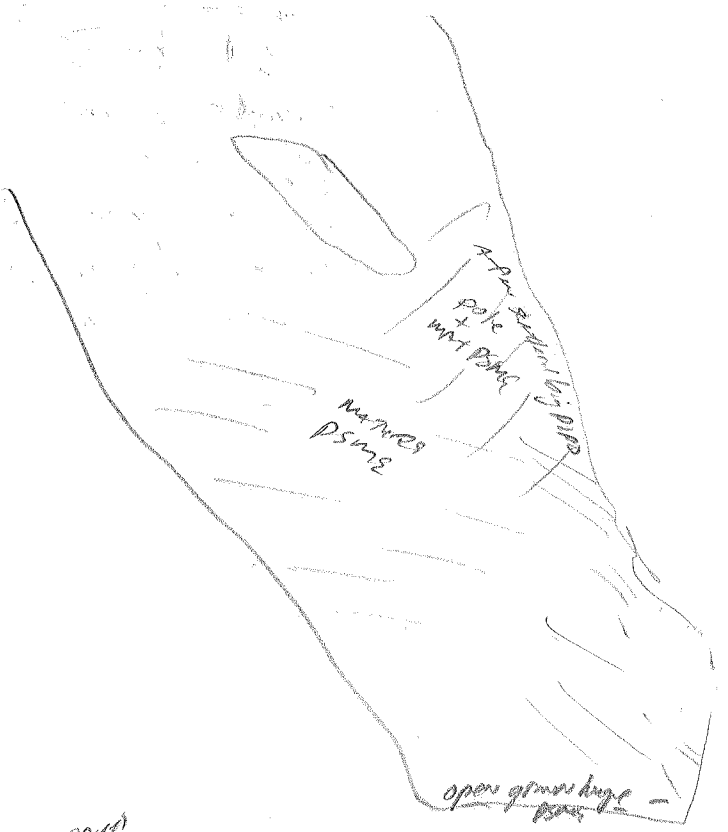
28
6
21

149

18
8) 149
8
69



Signed WL TREES

✓ ① - UNIT 146 STAND ridge 27.5 live PIPO w/ cavities, Flamm area, heart rot JUNO only

✓ ② " " " JUNO only

✓ ③ unit 146 33" live PIPO, crooked top, ridge top. signed - JUNO only

Old Growth Survey STAND: 1601-230

Observer: MAC DONOFRIO

Date: Sept. 28 2016
UNIT 35 + UNIT 37

General Area: G. B. EASTMAN Cr.		Stand ID: 1601-230
Elevation: 6200 - 6500	Aspect: North	Slope: moderate
Habitat Type Group: MIX CON, part PICO/PSME part spruce		
Old Growth? NO		

Desc. of O.G. Trees: a few big PSME -30", most cut out by woodcutters. Spruce occasionally to 24" dbh - 28" spruce measured at 156 years old.

Snags (Desc. & #) Not too many, 6-20". ABLA + PICO 3-10".

Down Wood (Desc. & #) Low - med. poles, slash. | high in places - poles hard to walk through.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

MIX CON STAND
Overstory Thinned / little shelterwoods / fellar bunched.
PICEA 45%, PSME 20%, ABLA 15%, PICO 20%.
PSME 10 - 35" - variable,

Saplings / seedlings ABLA, PICO, spruce, PSME,

Forbs. princes pine,

shrubs: significant patches of scouler willow, Alder, thimbleberry, gooseberry, UACC. MONTSIA

Logging history: logged, Looks Thinned in places, other parts sort of shelterwood style
Lots of heavily disturbed, compacted ground / soils.

Insects and Disease: SBWM most in ABLA, MPB in pico, not active now.
SBWM hitting ABLA saps the most.

Wildlife: Elk HC - FF Fisher 1
Piwo 1 Lynx - mapped habitat (Y) N
Pima 2 if yes = SE, 10% mon
MOOSE

PYOW
CAJA
RBNU
STJA
MOCH

UNIT 35

21
17
16
16
16
16
13
6) 102
42

LACE
berrar
pine grass

6
18
13
11
6
6
6) 60

16
12
8
13
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9
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15
15
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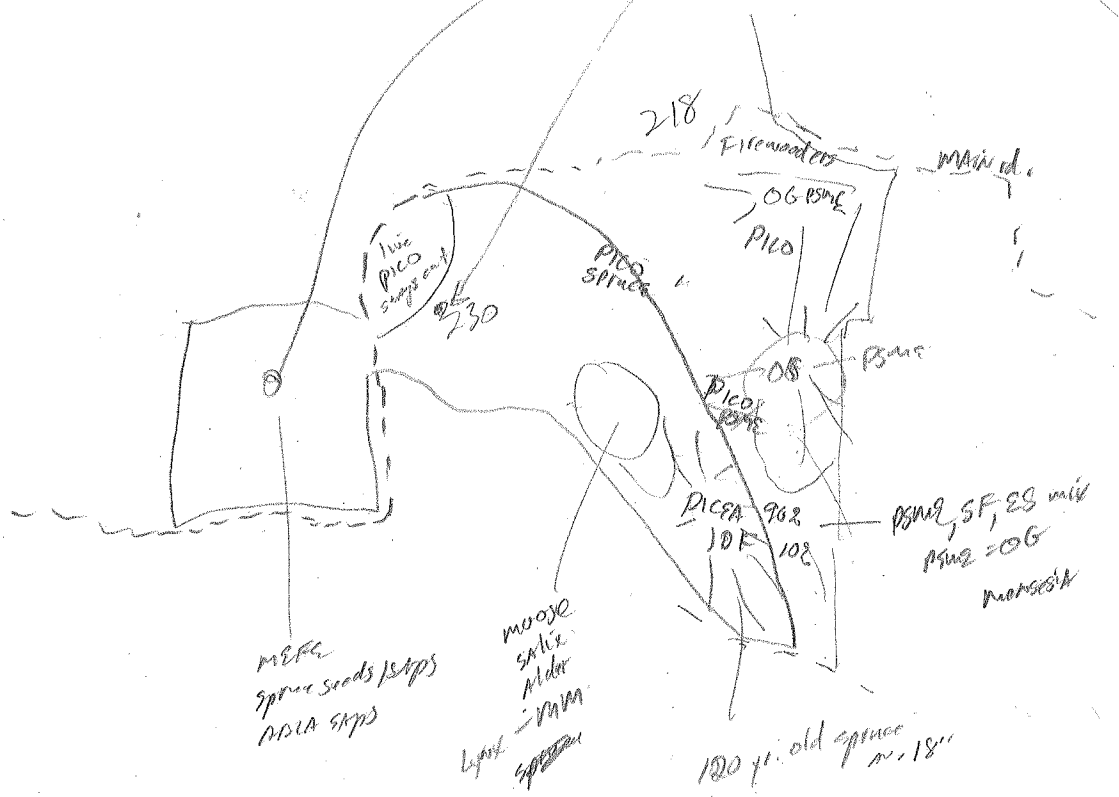
16
15
13) 146
66
65



17
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9
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10) 144
44

22
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19
21
16
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9
20
19
1
9) 149
59

Old Growth Survey

Observer: MAC Donotrio Date: 9-11-2017 + 2016

General Area: Gibbons Cr. G/B		Stand ID: 1601-231
Elevation: 6200-6400	Aspect: WEST	Slope: steep
Habitat Type Group: PSME/LIBO-VAGL		PSME/VAGL
Old Growth? No - soil too compacted + too many PSME removed.		

Desc. of O.G. Trees: Some old scattered PSME Rems. >21" but usually less than 8/acre

Snags (Desc. & #) very few, of PSME + PICO

Down Wood (Desc. & #) low

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

A small stand that was looked at last year as part of a unit. Mostly PSME, mature - old + poles - med size.

95% PSME, heavily thinned 15+ yrs. ago. May have had more PICO in it back then.

Dom. canopy is widely spaced old PSME, among pole to med PSME + a few PICO. Canopy average coverage 25%.

Shrub layer is VACC + SYAI not usually more than 15" tall.

Some areas fairly thick stem density of PSME poles, much is very open however.

4 plots in stand
2 - 2016
2 more 2017

Logging history: Commercial heavy Thinned 15+ yrs. ago

Insects and Disease: SBW in saplings of PSME

Wildlife: Elk ~~FF~~ FF Fisher
Feeding in stand today — Piwo / Lynx - mapped habitat (Y) N — part of
Pima / if yes = ~~p~~ S portion of stand possible decent have habitat / feeding

Old Growth Survey

STND 1601-231

Observer: MAC Donotrio

Date: Sept. 9 2016
PART of UNIT 55 (2017)

General Area: GB Gibbons Cr.		Stand ID: 231
Elevation: 6000 - 6400	Aspect: WEST	Slope:
Habitat Type Group:		
Old Growth?		

Desc. of O.G. Trees:

Snags (Desc. & #)

Down Wood (Desc. & #)

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

14
10
24
18
7
10
20
6
5 | 61
5
9
18
22
22
17
19
12
7
16
7 | 117
7
47

Logging history:

Insects and Disease: SBWM

NOT finished

Wildlife: Elk
Piwo
Pima

Fisher
Lynx - mapped habitat (Y) N
if yes = _____

Old Growth Survey

Observer: MAC DONOTTIO Date: Sept 27, 2016

sub comp. 1602

General Area: G.B. EASTMAN Cr. (N.W. side of)		Stand ID: Part of 1, 38, 240
Elevation: 5200 - 5500	Aspect: S + W	Slope: moderate + steep
Habitat Type Group: PSME		
Old Growth? NO		

only 1 WL TREE signed or listed.

Desc. of O.G. Trees: P. Pine + DF found here > 21" dbh, but very few + growth rates from old stumps indicate some fairly fast growing trees.
Average 2 - 4/acre > 21", often have "defects"

Snags (Desc. & #) very few, most common are the occas. small groups of ≈ 12" dbh PIPO morts from MPB. Did not see a large snag in whole area except for a few old snag offs + 1 big pine is starting to die.

Down Wood (Desc. & #) very low to none. various sizes, including a very few old old PIPO snags that fell on their own.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Unit comprises parts of 3 stands. What they all have in common is that they have been high graded long ago > 35 yrs I'm guessing, maybe 50. old Roads, skid trails + soil compaction common but stand #1 seems to have better soil, although it does have a sizable washout / gully - see log history + back.
Most of unit has occasional tall older trees 100 yrs + overtops of a hodgepodge of low - med - to occasionally high density thickets of PSME 20 - 40' tall.
Overstory trees - 8-24 (30") Average 14". PIPO Tallest + oldest.
Overall stems > 6" dbh composition is 90% PSME, 10% PIPO

shrubs: mostly very shrubby with 9bark dominating, Redosier confined to one draw - (along with cottonwood trees + seedlings. 10 - 90% coverage, 9bark coverage heaviest in South half of stand, Syal mix, then salix + a bit of serviceberry.
Forbs pine grass dominant, Kinik, oregon grape,

Logging history: High graded Throughout. One draw used as log transport.
One old substantial yet healed washout from old rd. construction 15 - 30' wide / 6 - 8' deep / 80 meters long.

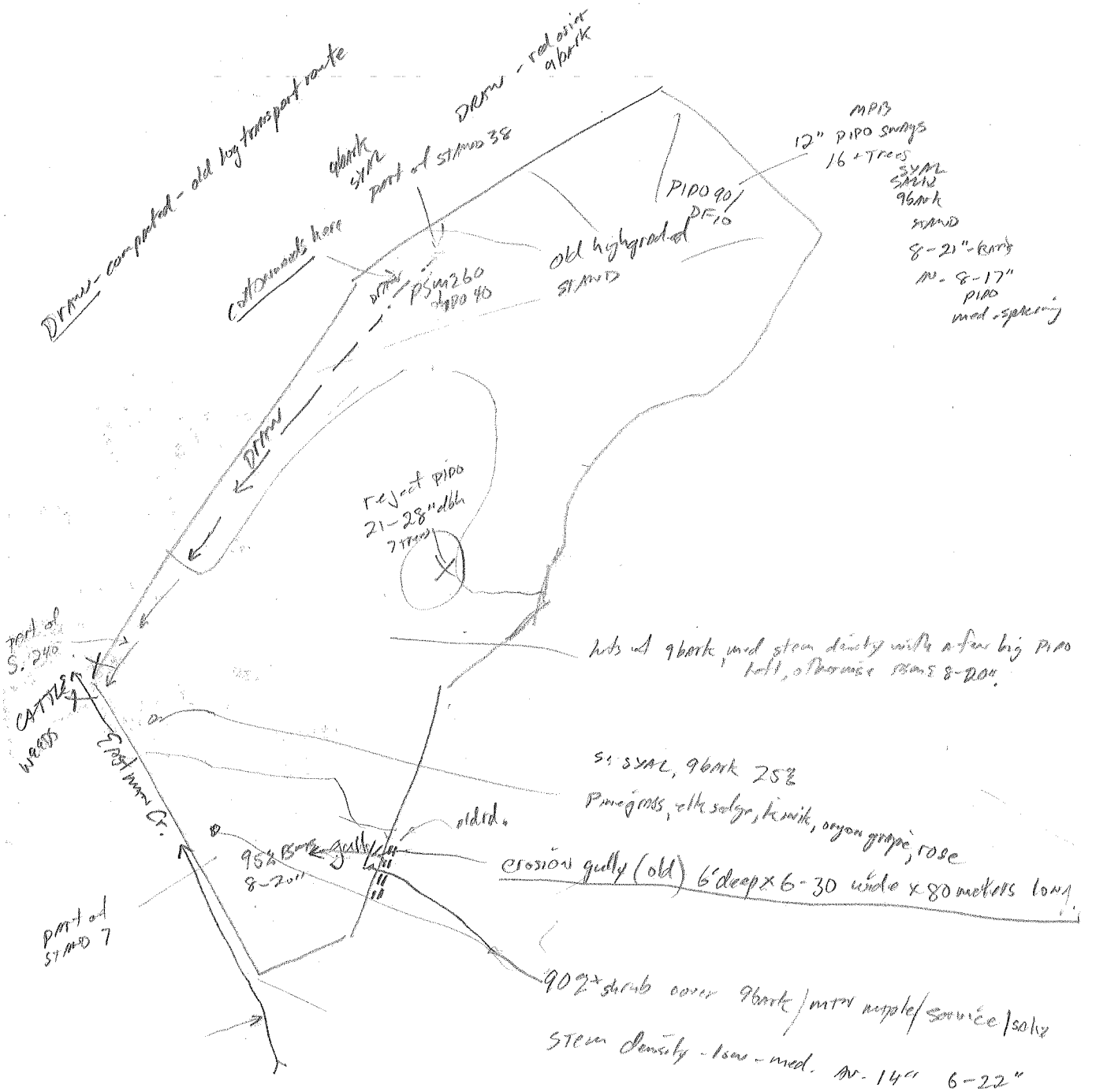
Insects and Disease: Some MPB in PIPO trees of 12" dbh. SBWM in PSME saps, some dead. Lots of PSME mistletoe.

♀ RBNG
WISA
AMRO
DEJU
HAWO
CWU

Wildlife: Elk H C Fisher 0
Piwo 0 Lynx - mapped habitat Y (N)
Pima 1 if yes = 0

CATTLE IN UNIT THIS YEAR - cattle weeds established (OVER)

Cattle in here this year.



13
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3 | 53
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3 | 42
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7
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20
10
21
14
8 | 115
35

16
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12
4
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14
14
12
1
8 | 128
48

38
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16
21
3 | 63

2017 Unit # + boundary changed in 2017. Below descript. is now for portions of unit 45. See 2016 map.

Old Growth Survey

Observer: MAC DONOTRIO

Date: Sept 27 2016

UNIT 50 ☆

General Area: G.B. Butterfly Cr.		Stand ID: 1602-38+245
Elevation: 5570-5800	Aspect: N, W	Slope: steep + gentle parts
Habitat Type Group: PSME / PIPO		
Old Growth? NO		

2016 loc. s.w. portion

2017 w/ # changes = + portion of stand 208.

Desc. of O.G. Trees: Only ones are PIPO with bows, crooks, or other "imperfections." The range from 0 - 4/acre. Average < 1/acre.

Snags (Desc. & #) extremely few.

Down Wood (Desc. & #) low throughout

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….): (OVER)

Portion of unit is in stand 208. This is a cleacut of 30+yrs. with lots of roads parallel to slope + cable runways up the fall line. Grown in thick with 25-30' PSME. A couple mature to old PIPO left in this stand, usually or always bent, bowed etc.

Portion of stand in 245. - not walked except edges. high graded, remains are scraggly PSME poles - 20' trees, canopy coverage low.

Portion in stand 38 - 30+ yr. ago? high graded. Now scraggly PSME thickets to occassional mature trees, a few pine left here + ther 16-20". If bigger than 15" usually not a straight tree.

Canopy is 2 fold +. Older left trees + otherwise thickets of mostly PSME poles with mistletoe.

West 10% of unit has more PSME 8-14".

shrubs: 9bark dominant in places. Syal, s. willow scarce. coverage 10-50%

Forbs: mostly pine grass, some birch leaf spirea, some areas kinik., oregon grape.

☆ Logging history: part cleacut 30+yrs. ago. Part heavily cut/high graded. Heavily roaded skidded, tractored, cabled, compacted ground throughout.

Insects and Disease: Lots of PSME mistletoe, SBWM - some saplings/seedlings hit hard.

Wildlife: Elk HC — low elk use throughout.

Piwo 1

Pima 1

Fisher 0

Lynx - mapped habitat Y (N)

if yes = _____.

BCCH

CAFI

Some BEAR use

Lots of snowshoe hare sign (OVER)

✓ ① PIPO 40.8" live, with big crook (only reason left) bear marks, heart rot, vigor good. 272846 × 5129250 S. Tree had large fork at 20' but lesser lead broke out. now natural cavity.

10
9
6
10

4 ⟌ 35

☆ soil compaction, skid trails, old roads, wheel ruts, etc. on 50% of the ground. No more compaction here is reccommended. Also no money to be made in this unit. O

10
15

1
21
12
15
21
16

5
17
5 ⟌ 85
35

☆ STAND 1602-66 now part of UNIT 139. (2017)

Precommercial part of unit 186 **Old Growth Survey**

Observer: MAC DONOTTIO

Date: Sept. 21, 2016
1602-66

General Area: G.B. Butterfly Cr.		Stand ID: 66 of unit 186 ☆
Elevation: 5000-5300	Aspect: ENE	Slope: steep
Habitat Type Group: PIPO		
Old Growth? NO 20+ yr. old c.c. w/ A few PIPO reserves		

Desc. of O.G. Trees: A very few old PIPO + PSME. Leave trees average 20^?

Snags (Desc. & #) A very few PSME. Looks like natural or presented fire went through this stand < 1 Acre.

Down Wood (Desc. & #) low, med. size

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Stand accessed from across valley in unit 64.
Mostly a clearcut stand. 20+ yrs. old with a few scattered natural PIPO + PSME 0-6 per acre.
Mostly regen 6-10' tall, looks like planted in PIPO + lots of natural sprinting of PSME saplings 40-50% coverage.

(☆ ON my map created by Jean C. unit 186 is smaller (and delinates the old clearcut) than the unit 186 on the JUNO, which appears to have other (mat. PIPO) habitats included.)

shrubs: appear to be varied from 9bark - vacc + a few outer maple. coverage 75% +

Logging history: Nearly a clearcut. Fire also been through here at some point, don't know if before or after logging.

Insects and Disease: not much, some PSME mistle.

Wildlife: Elk FF
Piwo 0
Pima 0

Fisher 0
Lynx - mapped habitat Y (N)
if yes = _____

* 1602-213 is now part of unit 65, (2017)

Old Growth Survey

STAND 1602-213

Observer: Mac Donofrio

Date: Sept. 9 2016
part of unit 190*

General Area: G. B. Eastman Cr.		Stand ID: 213
Elevation: 5800 - 6000	Aspect: S.W.	Slope: steep
Habitat Type Group: PIPO / PSME / 9 bark / SYAL		
Old Growth? NO		

Desc. of O.G. Trees: PIPO 0 - 5/Acre > 21" dbh. Few PSME look > 120 yrs.

Snags (Desc. & #) Though a low stem density overstory, PSME snags comprise 10 - 50% of PSME stems. 8" - 21". PIPO snags rare.

Down Wood (Desc. & #) low - med. mainly because of low-med. intense burn here 15 + yrs. ago - fallen PSME below rd. + above rd. out of reach of wood cutters.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Thin - low stem density overstory 5 - 15% coverage of 50% PSME / 50% PIPO with a very few others - a few junipers.

Sub canopy 10 - 20' Tall of 75% + PSME, scattered + in thickets - esp. in case of mapped pink lynx hab. area.

Saplings/seedlings of PSME 60% + PIPO 40%

Overstory

5% DF 50 PIPO 50 | 75 9bark ribes SYAL burn

10-25 dbh

15% 50/50 | dw / m

DF sap thickets | OVS Balsam pine grass S. willow 9bark MSTLTOE burn

10% 50/50 20' understory | birch leaf SYAL

PIPO seeds saps | knap

Shrubs 30% 9 bark coverage. Also syal, a few mtn. maple, Serviceberry, Scouter willow, lots of birch leaf spirea, pine grass, balsam root, Forbs

75 9bark

Logging history: logged above main road + lots of firewood cutting yrs. ago

OSFL
RPSD
PYOW
SIOA
ISOMA
CORA
PIWO
CLNU
COHA

Insects and Disease: PSME mistletoe

Wildlife: Elk FF Fisher 0
Piwo 1 Lynx NON
Pima 1

☆ - 2017 Unit now called #65.

Old Growth Survey

Observer: Mac Donofrio Date: Sept. 8, 2016

1602-239

General Area: Gold Butterfly Eastman Cr.		Stand ID: 239 of unit 190 ☆
Elevation: 5600-6500	Aspect: SW	Slope:
Habitat Type Group:		
Old Growth? NO, rems only		

PIPO 38" 36

Desc. of O.G. Trees: PIPO up to 38" DBH. 20" PSME 195 yrs. old
PIPO 21"-38" 0-5/Acre. Av. <1 per acre.
PSME - tight growth rings 16" Trees ridge top 140 yrs.+ trees 21"+ per Acre ARE few, most left are stunted from mistletoe.

PSME

Snags (Desc. & #)
PSME snags 80% of snags, 12"-29" 0-20/Acre (burn effect)
PIPO + PICO <10% of snags. Pocket of v. large PICO snags 12-17" dbh.

Down Wood (Desc. & #) med - high 10"-25" average. Lots of fallen PSME from old fire,

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):
PSME mature scraggly low stem density stand with a few big Pipo + 1-2 acres of big dead PICO.
Area burned low + med. intensity several years ago 16+ years ago estimate.
Pole/sapling layers of mostly PSME, dense in places but overall very open.

Shrubs: 50% coverage by 9bark. Also some syal.

Forbs. Pine grass, birchleaf spirea, oregon grape.
Knapweed heavy upper slope of stand. Other weeds look like the tresspass cattle suite - hounds tongue, knap, non native grasses, mullein, + native nettle.

Logging history: upper east part of stand logged - maybe salvaged after fire.

Insects and Disease: mistletoe, SBWM, 1 pocket large long dead PICO from mpb.

YB marmot sign at ~~RTHA~~ CORA tree (RTHA calls in Area)

Wildlife: Elk FF
Piwo 1
Pima 1

Fisher 0
Lynx - mapped habitat (Y) N small Area
if yes = MM
Another polygon

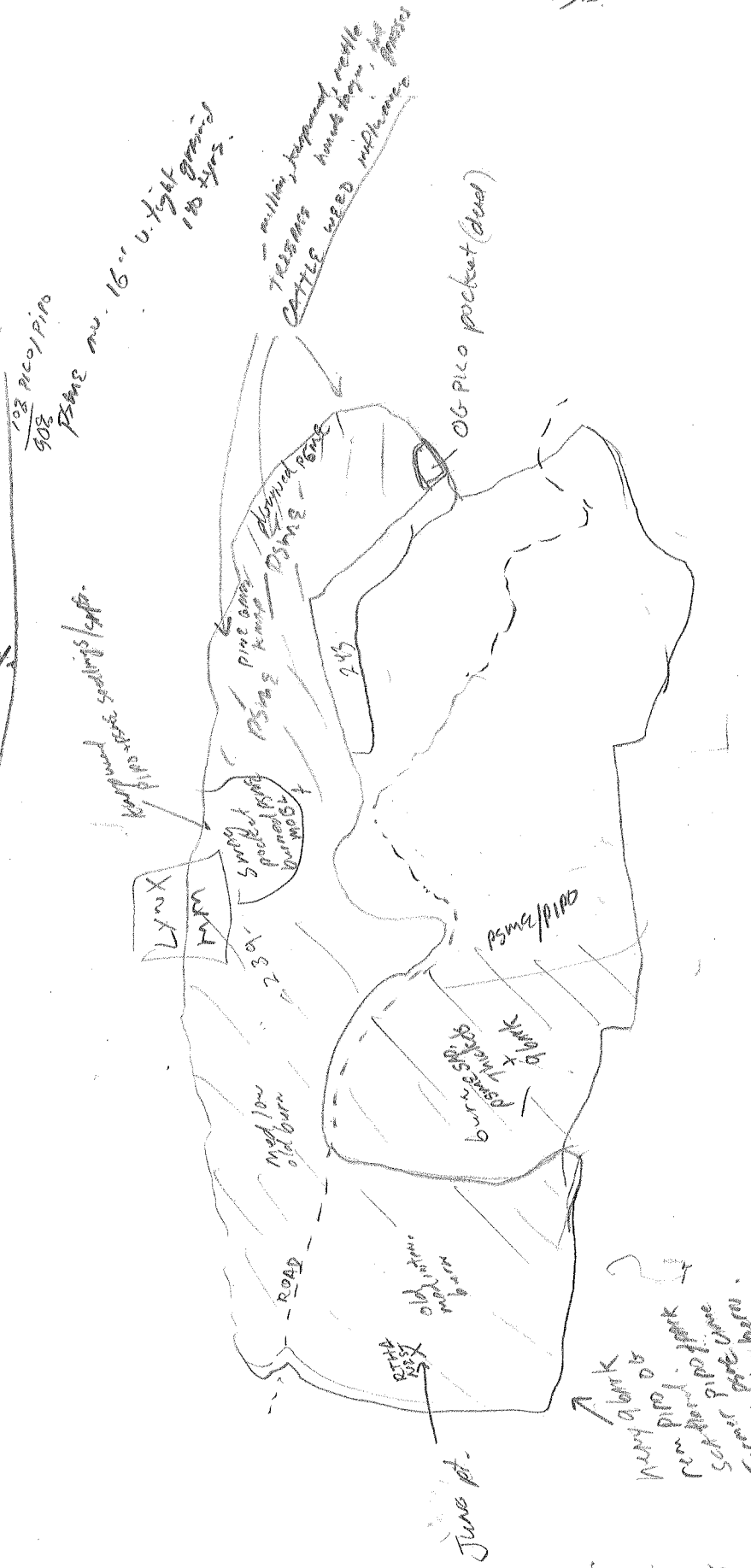
(RTHA or Possible CORA NEST TREE)

WL TREES

① 38.1" live intact PIPO w/RTHA nest. sigwed. Basal fire scar, v. old tree 300+yrs.
272877 × 5128707

Lynx

one square polygone of pink lynx is a yes-MM. The other larger polygon that is partially in stand 239 + mostly in stands 243+213 is < 50% "MM". Mostly is "intermediate forage" (IM.)



Top of stand in lynx mapped area
17
13
30

MOBL
CLNU
EUGR
STJA

38
11
36
85
28
3 85
6
25

2017 - Unit #66 has been renamed to Unit 49 + the boundaries of have been greatly expanded.

Old Growth Survey

1603-01

Observer: MAC DONOTTIO

STARTED Date: Sept. 26 2016

UNIT 66 ☆

General Area: G.B. Butterfly Cr.		Stand ID: Part of STAND
Elevation: 5700-6200	Aspect: WEST	Slope: mostly gentle slope
Habitat Type Group: PIPO / PSME Heavily cut w/ PIPO "reserves"		
Old Growth? NO TERRACED		

Desc. of O.G. Trees: PIPO 0-12/Acre > 21" but some are fast growing. A very few PICO scattered throughout 8-15" dbh.

Snags (Desc. & #) very few. up to PICO 17.7" 0-7/Acre 9-17". Av. 1/Acre Basically 0 PIPO snags + nearly 0 PSME snags. Most of the larger PICO dead

Down Wood (Desc. & #) very low.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Overystory - highest canopy dominated by PIPO leave trees standing alone or in small groups.

Tall Dom Overstory PIPO 95%, PICO 2%, PSME 3%.

Overstory stem density highly variable. But often PIPO 18-30" left in small groves of 10-20 trees. Other areas scattered mature trees left. regen under the scattered large trees is combo of planted PIPO plantation that has been precommercial thinned + mix of PIPO + PSME w lots of PSME thickets of saplings. Planted Pines average 7-9"

A couple aspen + S. willow.

Shrubs: syal, 9bark 10% cover or less

Forbs: PINE GRASS, oregon grape, birch leaf spirea. kinnik. A couple creeping juniper

Sunny day - lots of bird activity

Logging history: Part of UNIT IS TERRACED ≈50% or more. Planted in PIPO. Precommercial thinned in ½ the stand.

Insects and Disease: 2+ yr. old mpb. morts. in PICO. SBWM stressing tops of some PSME.

Wildlife: Elk FF Fisher 0

Piwo 1 Lynx - mapped habitat Y (N)

Pima 1 if yes = _____

WEBL
CAJA
CLNU
RECR
STJA
2+ PYOW
MOBL
R
CAFI
RBNU

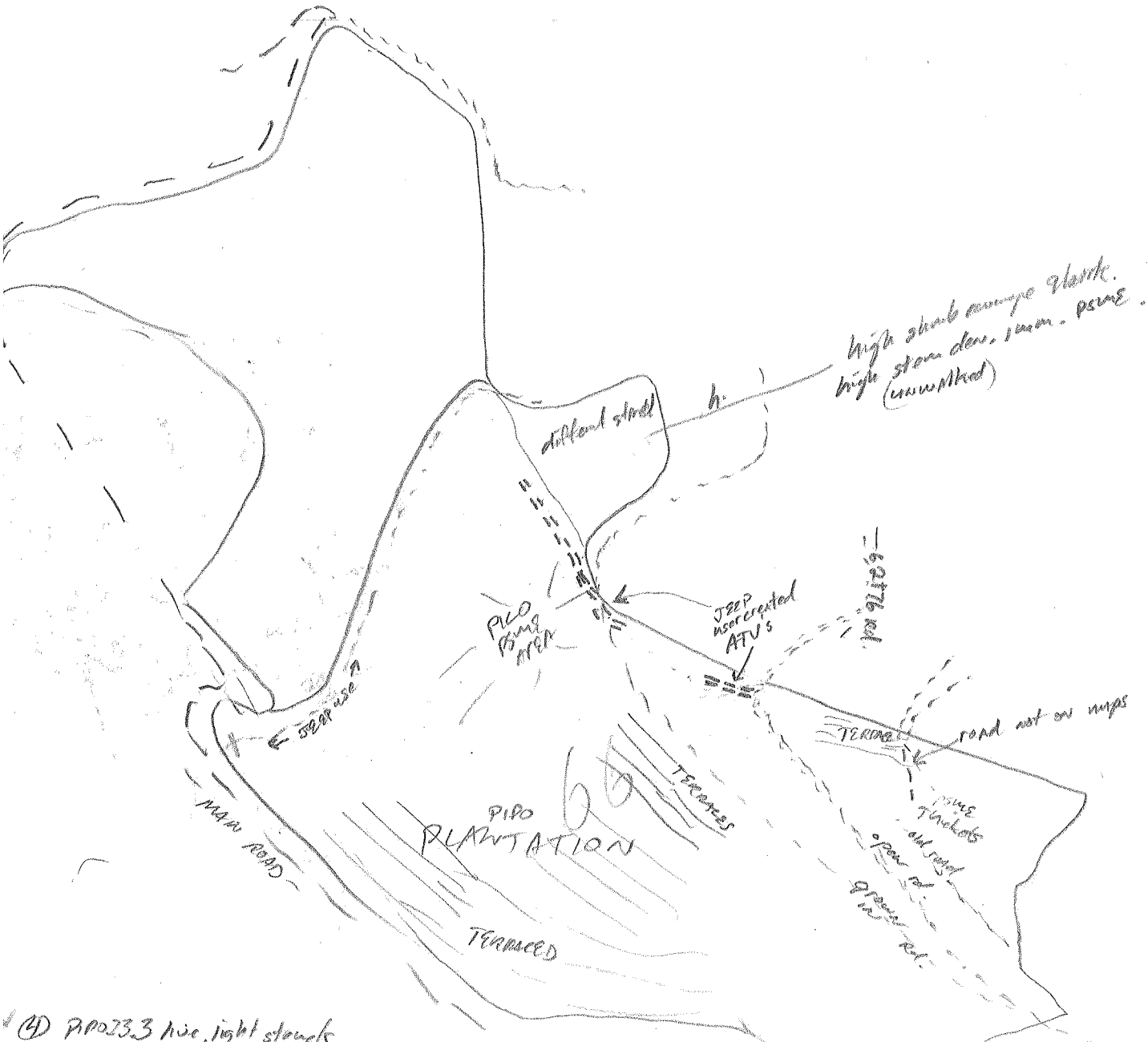
(OVER)

WL TREES

✓① PIPO 29.5 live w/commander top Signed 273842x 5129700

✓② PSME ≈30" live, broke top, cavities, heart rot, unique branchy structure. S. 274044 × 5129741

✓③ PIPO 24.5 live, light struck, S. 273784 × 5129912



✓④ PIPO 23.3 live, light struck 273776 × 5129914

✓⑤ PICO 13.1 dead 2 yrs. heart rot, claw marks. S. 273783 × 5129922

✓⑥ PICO 12" dead. Piwo feeding/ants, heart rot. S. 273784 × 5129919

✓⑦ PICO 15.5 dead, heart rot, Piwo feed c. + ants, basal fire scars 273765 × 5129977

✓⑧ PICO 17.6 dead, verticle scars. future ant tree S 273765 × 5129980

✓⑨ PICO 10.2" dead, piwo feed, NOGO nest like crook. green paper sign only 273808 × 5129986 green paper marker only

planted PIPO 8") PSME 8"10

STAND has evidence of cattle trespass.

13
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19
16
16
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23
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413
12)160
40
36

23
11
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24
26
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1
6)119
59

18
12
7
11
7
13
31
6)170
6
10

☆ 2017 Unit # changed from # 64 to being dropped out or maybe there is a unit 64 elsewhere now. See 2016 map for details.

snow fleas

Old Growth Survey

Observer: Mac Donnelly

Date: Sept. 21 2016
1603-4

General Area: G.B. N. side Butterfly		Stand ID: UNIT 64 ☆
Elevation: 5200-5500	Aspect: WEST	Slope: STEEP
Habitat Type Group: PIPO / PINE GRASS, fescue, service berry / 9bark		
Old Growth? Yes		

Desc. of O.G. Trees: PIPO trees 5-15/acre 21-35" dbh. PSME 27" ≈200 yrs. 200 yr. old trees +. a few old PSME also >21" and 200 years old on average.

Snags (Desc. & #) PIPO snags 21-35" 0-4/acre. PSME 0-2/acre and they are 21"+.

PIPO 22" 200 yrs+
26" 215 yrs

Down Wood (Desc. & #) low

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Admired this grove for years... Has documented active PIWO nest a couple years ago and several other excellent nest-trees + future nest trees for PIWO and Flammulated Owls.

OG PIPO stand of mostly open grown 20-35" dbh trees. 5-15/acre.

Saplings of PIPO and PSME, but not thickets.

☆ - Granite boulders/out crops throughout stand.

Shrubs: some 9bark, service berry, low coverage 5%.

Forbs: pinegrass, Kinnickinnick, fescue, flowering dogbane

RECR
CLUN
RUGR
WBWG

Logging history: none evident

Insects and Disease: Most big Pipo look drought stressed or White Pine Butterfly stressed. Thousands of snow fleas cover chipboard! + Juno

FLAM HABITAT #3 high quality

Wildlife: Elk FF
Piwo 3
Pima 1+

Fisher O
Lynx - mapped habitat Y (N)
if yes = _____

✓ 1. PIPO 35" live, poor vigor 272879 x 5130433 signed

✓ 2. PIPO 21" dead, broke top w/ PIWO/NOFL etc. cavities burn scar 8", lean
272850 x 5130454

✓ 3. PIPO 29.8" live w piwo feed/possible nests, heart rot, vigor poor 272808 x 5130503
signed

✓ 4. PIPO 30.3" snag, intact top. Piwo nest/roost. 272767 x 5130547
100% bark, basal fire scar

✓ 5. PIPO 29.2" snag, intact top, crook, fire scar, 100% bark green paper sign only.
272751 x 5130545 w/ cavities

✓ 6. PIPO 34.5" snag, intact, 100% bark 272742 x 5130575

✓ 7. PIPO 20" snag 10% bark (was 22") just below unit boundary. piwo cavities + others. old snag, fire scarred. 272712 x 5130516

✓ 8. PIPO 22.3" snag, 30% bark, old piwo nest hole, big lean downhill WL signed
272779 x 5130466

✓ 9. PIPO 20" snag, 20% bark NOFL cavity, Flamm country,
272822 x 5130465 green paper sign only

✓ 10. PIPO 23" snag 25% bark, piwo cavities + others. fire scar, signed
272845 x 5130332

28	30	35
23	17	11
26	14	20
20	14	21
16	14	22
21	12	19
19	25	14
	34	30
	19	
	20	
	30	

7) 153 = 2, 13

11) 199 = 109, 99

198) 172 = 21, 12

363-3033

☆ 2017 - Unit boundaries greatly expanded and unit # changed from unit 53 to unit 51. See 2016 map for old boundary + ∴ area described.

Old Growth Survey

Observer: MAC DONOTTIO

Date: Sept. 28 2016
UNIT 53 ☆

General Area: G.B. Butterfly		Stand ID: 1603-47
Elevation: 5800-6400	Aspect: WEST	Slope: steep
Habitat Type Group: PSME / PIPO		
Old Growth? NO		

This unit described from rd. - not walked. See bottom + top 200 meters.

Desc. of O.G. Trees: Many PIPO + PSME >21" a bit / but stand appears commercial thinned.

Snags (Desc. & #) V. Few, next to none >18"

Down Wood (Desc. & #) low

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Commercial thinned lots at 21" + PSME + PIPO remain, but stem density medium-low. PSME 80%, PIPO 15%, 5% PICO.

Canopy closure 20%.

Open Road borders bottom of stand and top of stand. Another through the middle.

2 canopys, dom canopy was thinned,

lower trees are 25-40' tall PSME, scattered + in clusters.

saplings PSME scattered and in thickets.

Some PIPO + PICO saplings seedlings seen

shrubs: 96 ark dominates 80% coverage at bottom, 10% coverage at top, some mtn. maple.
forbs pine grass, elk sedge, birch leaf spirea

STJA
CAJA
PISI
RECR
PIGR

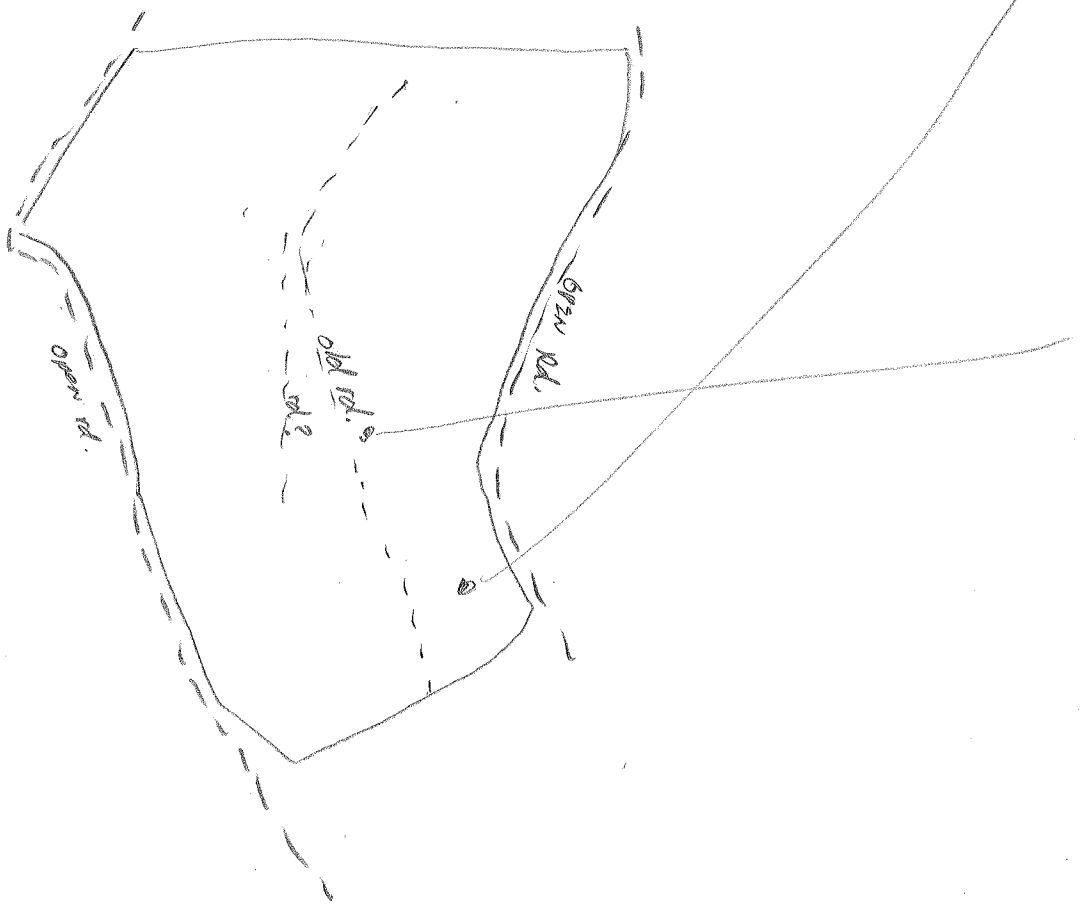
Logging history: appears commercial thinned, - yes. pretty uniformly thinned though to my relief there are some mature trees growing kind of near each other occas.

Insects and Disease: Some stress from SBWM in both PSME saplings + mature trees

Wildlife: Elk FF
Piwo 1
Pima 1

Fisher 0
Lynx - mapped habitat Y (N)
if yes = ____.

✓ ① PIPO 39" live w/ dead branch containing several omitters. S 274295 < 5128750



12
39
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24
18
22
7 | 154
14

22
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23
3 | 69

☆ Unit now is changed to UNIT 182 + part of UNIT 51.

Old Growth Survey

Observer: MAC DONOTTIO

Date: Sept. 22, 2016

UNIT 144 ☆

General Area: G. B. Butterfly Cr		Stand ID: 1603-203+ small parts of 220 + 47
Elevation: 5600-5800	Aspect: SW	Slope: steep
Habitat Type Group: PIPO / PSME + variable		
Old Growth? 55%		

Boulders at top of unit may have kept the O.G. intact.

Desc. of O.G. Trees: large old PIPO + PSME + a few PICO throughout stand. OG PIPO mostly in west 1/3 of stand. 5-12 >21"/Acre. PSME throughout stand, more in the east half. 0-12 >21"/Acre.

Snags (Desc. & #) Unit is light on large snags. Though a few PIPO + PSME >21" are thinly scattered throughout. A few pockets of trees 5-10# pico exist, most of which are dead. 8-15" trees. Max pipo snag 30" dbh. Other areas low mortality of pico.

Down Wood (Desc. & #) low throughout.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

~~Stand~~ STAND/unit varies. See map on back for area surveyed. I think I have described 95% of unit 144 here:

West 1/3: mat. + O.G. PIPO forest of med/low stem density. 5-12 trees/acre >21" dbh. Trees average large 20+ and not much underneath. Overstory PIPO 90%, PSME 10%. PIPO 8-32" dbh / PSME 6-24" dbh.

Saplings PIPO + PSME. Little or no thickets.

Shrubs: 9bark, syal, scouler willow. coverage 5-10%

Forbs: kinikinik, pinegrass, elksedge,

Center + east 1/3s of stand. PSME increases eastward as does stem density + tall shrub component. Canopy 90% PSME, 5% PIPO, 4% PICO, 1% juniper along lower slope. CLNU 30 RECR

PSME saplings increase to thickets in east 1/2.

shrubs: 9bark, s.willow, mtn. maple coverage 50-90%.

Parts of stand have been select logged before ~ 10-15%. stumps are generally of 14" dbh or less.

Logging history: mostly unlogged.

NO WEEDS (except small area east end below rd with some thinly scattered knapweed)

Insects and Disease: SBWM in mat. PSME crowns. PICO mostly ≈75% dead from old MPB.

old seasonal elk trails throughout

Wildlife: Elk FF

Piwo 1+

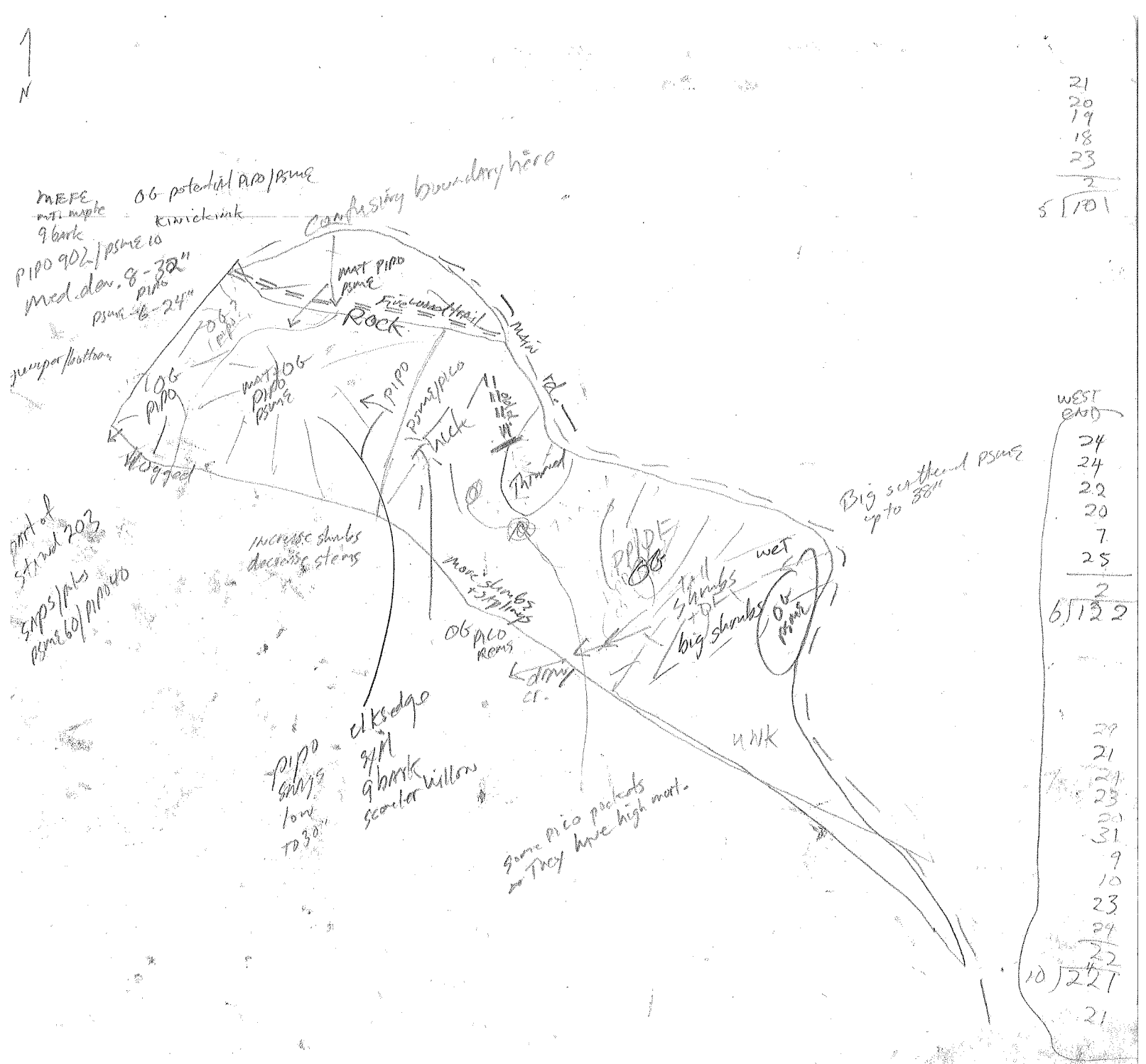
Pima 1-2

Fisher ⊙

Lynx - mapped habitat Y (N)

if yes = _____

microwave retrieved from stand. Evidence of sheep beer drinking + litterings + firewood road created.



WL TREES:

1. PICO 15.3" live, high scar, lightening?/heart rot, pivo feed, cavities, ants 273761 × 5129316
2. PIPO 29" live, broke top, 100% bark, 273797 × 5129134
3. PSME 27" live, bow + lean. 273795 × 5129134
4. PSME 40" live signed + wet area 274030 × 5129092

entered

monday 2nd Oct.

Old Growth Survey

Observer: Mac Donofrio

Date: 9-8-2017
part of unit 51

General Area: Butterfly GB		Stand ID: 1603-203
Elevation:	Aspect:	Slope:
Habitat Type Group:		
Old Growth? Yes - some mature 200 yr. old PSME		

Desc. of O.G. Trees:

Snags (Desc. & #)

Down Wood (Desc. & #)

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Logging history:

Insects and Disease:

Wildlife: Elk
Piwo
Pima
Fisher

Lynx - mapped habitat Y (N)
if yes = _____

(OVER)

10 4 trees w/ [illegible] 25, 25, 27, 32" PSME. recent dead from Douglas fir beetle
274093x 5128032

2017 - ~~Unit boundary greatly expanded and Unit # changed from Unit 55 to unit 51.~~
Now may be part of UNIT 50. (2017)
See 2016 map

Old Growth Survey

Observer: MAC DONOTTIO

Date: Sept. 2 2016
1603-220 (very east end of)

General Area: GB Butterfly		Stand ID: Unit 55
Elevation: 6100 - 6400	Aspect: S, W + NW	Slope: STEEP
Habitat Type Group: PSME / PICO		
Old Growth? NO, but lots of old PSME + large PICO		

Desc. of O.G. Trees: PSME up 35", PICO up to 19"
ABLA up to 29".

Snags (Desc. & #) Many PICO snags 9-15". about 1/3 - 1/2 large PICO in stand are dead.

Down Wood (Desc. & #) med. poles to 21" dbh.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

11.5 - 90 yrs.
LP 14.7
9.5

Overstory PICO 25%, PSME 80%, PICEA 1%, ABLA 4%. PIPO <1%
Mature stand of medium density of stems. Impressive examples of PICO, PSME, + ABLA.

with fire scars + heart rot - beetle killed % —.

shrubs - extensive + large. much mtn maple 15 - 20'. 20% cover.
wine bark, red osier, birch leaf spirea. Menzesia patches also, VACC.
Thimble berry, meadow rue. N+W aspects very thick/jungle.
Forbs - beargrass - spotty, ~~[illegible]~~ kinick.,
Logging history: - southern 1/4 show some sign of past logging. N. side of stand maybe cut also.

Insects and Disease: MPB in PICO

(OVER) WATER

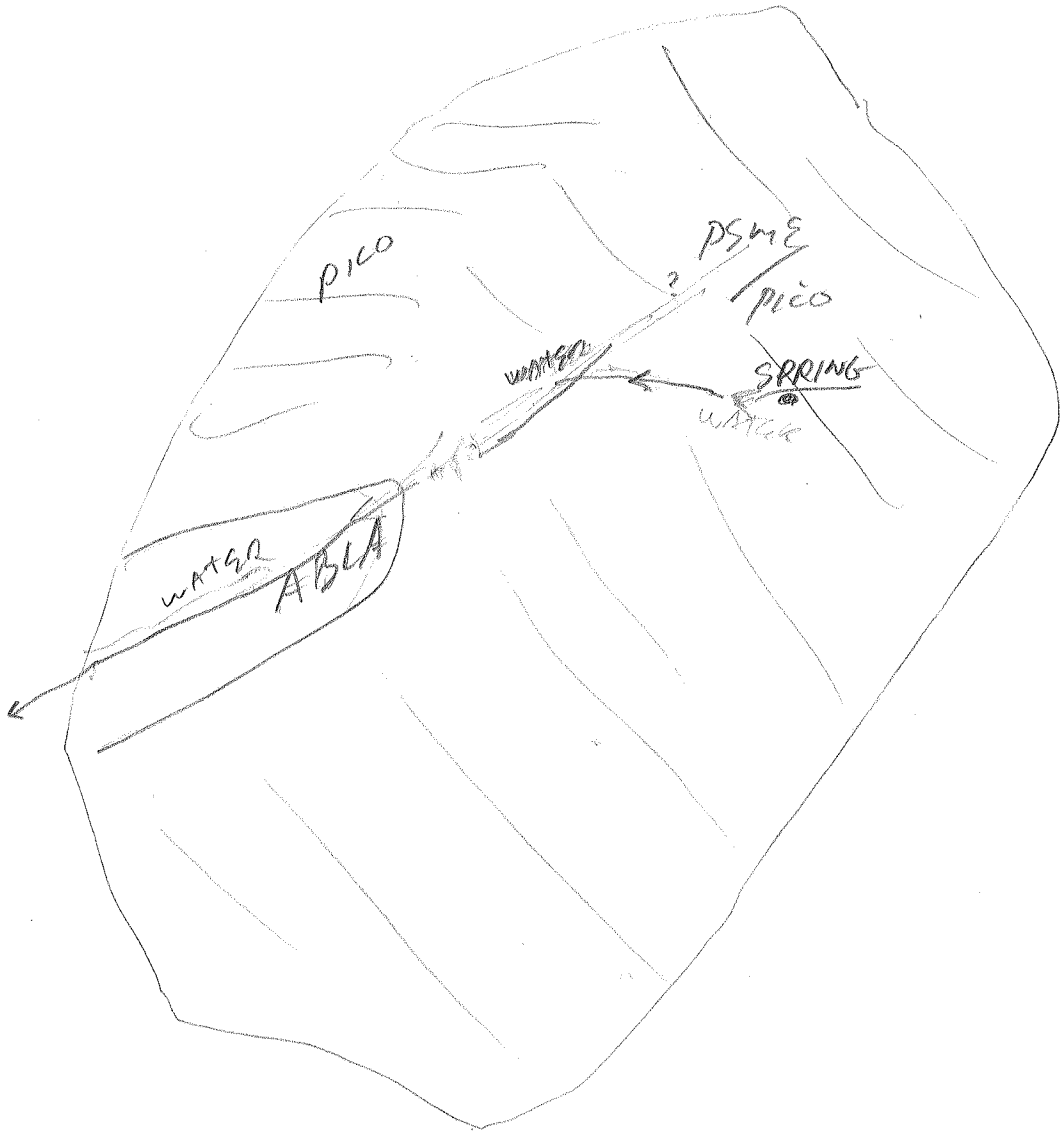
Fresh bear sign
FISHER 1
LYNX mm 30% of unit (All of lynx mapped area)

Wildlife: Elk HC
Piwo 1
Pima 2+

PSME 35
84.5 live
PICO 18"

PT. 1	PT 2 (spring)	PT. 3	PT 4
9		20	34
6		35	29
13		8	10
12		21	10
10		17	22
10		20"	4) 83
10		5) 101	30
8			
10			
22			
12			
24			

146 12
2) 146
12
26



2017
☆ This described area now appears to be part of Unit 50 - small n. lobe of.

Old Growth Survey

Observer: Mac Donotrio

Date: Sept. 1 2016
1603-220 tiny n. lobe of

General Area: G.B. Butterfly Cr.		Stand ID: UNIT 56 *
Elevation: 1927 M	Aspect: WEST NW SW	Slope: steep
Habitat Type Group: PSME, ninebark, syal		
Old Growth? 40%	v. small stand	

Desc. of O.G. Trees: PSME 21-28" dbh in clusters.

Snags (Desc. & #) Pipo, PSME 1-3/Acre >18"

Down Wood (Desc. & #) low-med. pole to 20" PSME + Atm PIPO

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):
3% PIPO
96% PSME, mature to possibly 180 yr. + ~~3% PIPO~~ pole layer / Thickets here + There + pockets + stringers of large 18-28" PSME.
~ 50% + og structure + size, not sure of ages. Some at least 170 yrs.
stem density medium to close in places.

Rocky ground, thin soils.

shrubs 20% coverage by ninebark 4-5' tall, other areas no forbs/shrubs.

Stand appears to be very heavily used by mule deer + maybe elk.

Logging history: No evidence of logging seen.

Insects and Disease: Some stress to PSME by SBWM.

Wildlife: Elk FF
Piwo 1
Pima 1

Fisher O
NOGO F

☆ 3 plots made w/ Trimble.

☆ 2017 - unit # changed + boundaries of unit expanded. Now called unit 48.

NOT finished

Old Growth Survey

1604-202+203

Observer: MAC DONOTTIO

Date: Sept. 29th 2016

only brief note re. old pine on ridge.

UNIT 61 ☆

General Area: G. B. Willow Cr.		Stand ID: border of STAND 202 + 203 (ridge)
Elevation:	Aspect:	Slope:
Habitat Type Group:		
Old Growth? PARTS		

Desc. of O.G. Trees: Yes 40" PIPO along ridge Top.

Snags (Desc. & #)

Down Wood (Desc. & #)

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Logging history:

Insects and Disease:

W.L. Trees on back.
O.G. PIPO line on ridge.

Wildlife: Elk
Piwo
Pima

Fisher
Lynx - mapped habitat Y N
if yes = _____

(OVER)

Ridge Top Trees

✓ (1) 40.5" live pipo, dead Top 273827 × 5130576 S
bear marks, dead top.

✓ (2) 35.5 live PIPO on ridge 273811 × 5130592 S.
claw marks.

✓ (3) ≈30 live PIPO 273817 × 5130603

✓ (4) 30.0 live PIPO, healed crack @ 10' 273816 × 5130603

✓ (5) 30.0" live PIPO 273802 × 5130639

+ 1

✓ (6) 28.7" live Pipo 273794 × 5130644

* 2017 Unit name changed from 189 to NOW IS 135 + expanded to N.E.

Old Growth Survey

Observer: MAC DONOTTIO

Date: Sept. 1 2016
1604-251

General Area: GB (WILLOW CR.)		Stand ID: UNIT 189A
Elevation: 1,936 M	Aspect: North	Slope: steep
Habitat Type Group: PSME saps Scouler Willow, PICO saps		
Old Growth? NO		

Desc. of O.G. Trees: a very few scattered tall older PSME in a sea of PSME / PICO 6-17' saplings. old PSME average < 1 acre.

Snags (Desc. & #) lots of 16-24" PSME burnt snags. 0-17 per acre. average 3/acre.

Down Wood (Desc. & #) low. Stand logged, ~~burned~~ burned and salvage logged.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Open stand, ~~either~~ I think nearly clearcut, with reserves + maybe a bit of shelterwood cut, then wildfire, then salvaged.

Mostly a fairly homog. stand of 8-18' saplings PSME, PICO + (from memory) I think maybe subalpine fir.

Steep slope

Tall shrubs - Scouler willow, others, even a few cottonwood.

Logging history: Cut, wildfire, salvage.

Insects and Disease: not much noticed except the White bark (PIAL) seedings/saplings may already have blister rust.

Wildlife: Elk HC FISHER O
Piwo /
Pima /
NOGO F

* 2017 - Unit #'s changed to 153 + 154.

Old Growth Survey

Observer: MAC Donofrio

Date: Sept 9

unit 193+194 = stand 29 *

General Area: GB Butterfly		Stand ID: 1606 - 29+28
Elevation: 6500 - 6800	Aspect: NORTH	Slope:
Habitat Type Group: planted in PICO		
Old Growth? CLEARCUTS		

UNIT 194 = STAND 28

Desc. of O.G. Trees: NONE clearcut

Snags (Desc. & #) NONE

Down Wood (Desc. & #) low

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Old clearcuts. These 2 units virtually the SAME.

Regeneration: 15-25' TALL, very thick stand. Average dbh PICO is 5.5"

PICO 85+ %, ABLA 9 %, SPRUCE <1 %

shrubs: Alder along road + elsewhere, elderberry, menzesia, vacc. ribes.

Logging history: clearcut 25+ yrs ago. Heavily compacted, impacted soils.

Insects and Disease:

SSHARE - winter foraging

Wildlife: Elk HC
Piwo 0
Pima 1

FISHER 0
LYNX - mapped
category = stand initiation

* 2017 Unit # changed to Unit 164.

Old Growth Survey

Observer: MAC DONOTTO Date: Sept. 12 2016

-check These #'s

General Area: G.B. ST. CLAIR CR.		Stand ID: 4201-48 unit 202
? Elevation: 6400-6700	Aspect: W	Slope:
Habitat Type Group: PICO 48 / PSME 48 / ABLA 4%		
Old Growth? CLEARCUT 20' TALL regen		

Desc. of O.G. Trees: 0

Snags (Desc. & #) 0

Down Wood (Desc. & #) low

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

90% "canopy" coverage. 20' tall regen.

3-6" dbh trees

shrubs - alder along old bisecting rd. S. willow, vacc. menzesia

Logging history: clearcut, compacted soils but decent shrub regen.

Insects and Disease: A bit of SBWM

Wildlife: Elk FF Fisher 0
Piwo 0 Lynx - mapped habitat Y N
Pima 0 if yes = SI. hare pellets noted

Old Growth Survey

Observer: MAC DONOTRIO Date: Sept 13 2016

★★ - See Unit 12 STAND 4201 = +81

General Area: G.B. St. Clair cr.		Stand ID: 82 Unit 12
Elevation: 6300-6800	Aspect: SW S SE E	Slope:
Habitat Type Group: PSME / pine grass / VACC		
Old Growth? YES		

Desc. of O.G. Trees: PSME 21-43", PICO 9-17", ABLA to 21"
all three species grow to average maximum size in this stand. See MAP on sheet for STAND 83
Need to check definition but at this elev. maybe <21" qualifies as OG PSME

Snags (Desc. & #) mostly PSME 8"-35". 4-6/Acre PICO - A few pockets where PICO exists. 6-14"
Some pico 10" + have fire scars/carpenter ants/piwo feeding

Down Wood (Desc. & #) low - med # Poles to very large. Mostly 10-20"

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Overstory PSME dominant

PSME 90%, PICO 9%, ABLA 1% All three of these species tall + mature to OG. Stem density always at least medium. Sometimes fairly high stem density of PSME or mix.
Second story of saplings + poles of PSME, ABLA + to < extant PICO.
Lots of areas with saplings for hare S + W feeding.

Shrubs: S. Aspect Not much 5% coverage, oregon grape, syal, rose,
E. Aspect 75% coverage VACC., oregon grape

forbs S. Aspect beargrass, pinegrass, lupine, ARNICA
E. Aspect princes pine, pine grass

Top of this unit heavily logged along road during after a wildfire 5+ yrs. ago.

Logging history: Unlogged except at some accessible edges.

Insects and Disease: older MPB, some SBWM

Wildlife: Elk HC Fisher
Piwo 2 Lynx - mapped habitat (Y) N
Pima 2 if yes = 50% + MM / rest is SE or other

✓ *(1) 5 live PSME within 25 meters of each other.
All between 35" + 39" dbh. All 5 metal signed.
Legacy PSME TREES. 272396 x 5127044

✓ (2) PSME Legacy live tree 43.8" dbh. signed 272306 X 5127100
+ bear sign/marks

✓ (3) marked 2017. 26.7" live broke top E Spruce with pitch cavity
west top. poor vigor - near road 272807 x 5127149
with prominent healed vertical crack E side

3
24
8
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21
26
20
12
23
12
1.8
9) 16.6
9
76
72

14
14
19
13
17
20
17
16
1.6
8) 13.0
80

22
17
16
24
12
16
11
13
13
3.1
9) 14.9
54

Old Growth Survey

stand 4201-083

Observer: MAC DONOTRIO

Date: Sept 13, 2016

portion above the 13281 road.

General Area: G.B. St. CLAIR		Stand ID: 83 Unit 12
Elevation: 6300-6800 ?	Aspect: W, SW	Slope:
Habitat Type Group: PICEA / PSME / ABLA		
Old Growth? YES		

Desc. of O.G. Trees: PICEA to 35" PSME to 41".
Med to thick density of large straight tall trees. Impressive area.
5-25+/acre > 21" ABLA to 27".

Snags (Desc. & #) spotty, but plenty overall. One area of v. large PSME snags 1 acre. Typical O.G. spottyness for this hab. type in Sapphires.

Down Wood (Desc. & #) med to med high poles to 40" Average 10-25"

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):
Impressive stand of overstory of tall straight PICEA 50%, PSME 45%, ABLA 5%
+ noted 2 big old PIPO.
STEM density med-close. Esp. in PICEA lower half of stand very tall + pretty close spacing. 5-25+ trees > 21"/acre. Average 11/acre.
Lots of have feed opportunity. Most of stand is MM.

Shrubs - lower slope - heavy shade low % cover. mid + higher ribes, MENZESIA, Thimble,

Cattle influence first 60 meters up creek+. Including some cattle weeds + lots of trampling + lack of shrubs.
Logging history:

Insects and Disease: some SBWM, some old DFBB.
in ABLA saplings especially.

Wildlife: Elk HC
Piwo 1
Pima 3

Fisher
Lynx - mapped habitat (Y) N
if yes = MM

IN STAND TODAY + yesterday
HAWO
TTWO 2+
PIWO
STJA
OLNU
elk

IN STAND NOT. - portant winter forage area

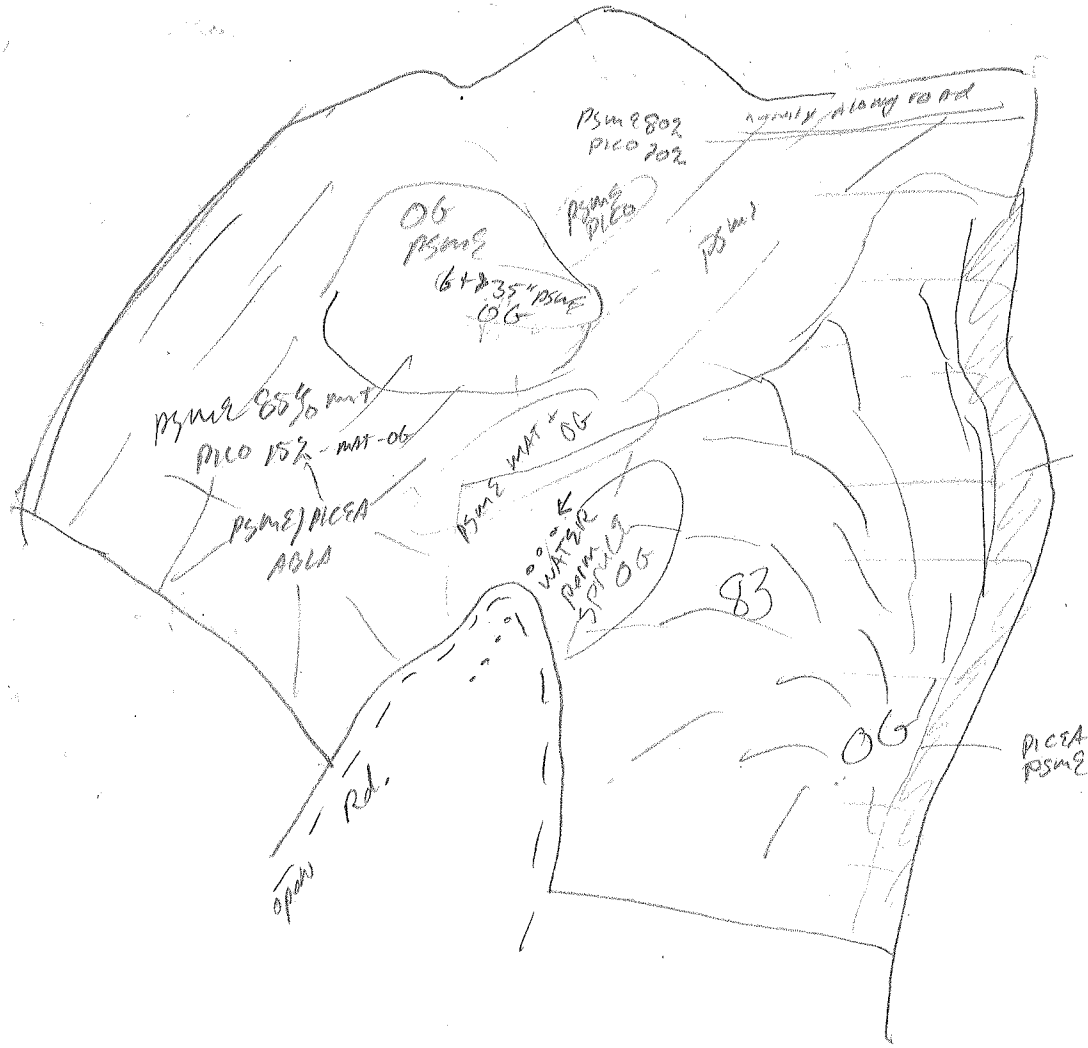
1 WL TREES (they All Are!)

✓ ① PSME, live, leaning, with 3 snags leaning against it 38" dbh 272718×5126752 [WL]

N ✓ ② PICEA live ≈20" dbh, straight tall + growing through above tree's crown. Same gps as above. [WL]

✓ ③ + ✓ ④ 22.2 live PIPO with basal scar + crook top [WL]

31" PSME, snag, intact - lean toward live WL tree PIPO [WL] > 272696× × 5126935



PICEA 6-15/Acre
PSME >21"

VACC + bear grass = more shrubs

STRUCTURE = OG
PICEA/PSME

26 | 10 | 30
16 | 23 | 6
21 | 16 | 6
10 | 10 | 26
9 | 22 | 30
20 | 7 | 24
19 | 22 | 122
28 | 23
30 | 9
9 ⟌ 179 | 15
89
6 ⟌ 122 | 9 ⟌ 136
9
46

ABLA S 27"
41" snag DF
10/Acre 26" + snags
Snags 33" PSME
6/Acre
SYAL 0-8 Acre 6-21"
low cover

34" PICEA

main cr. ribes
menzies
thimble
mead

U. Tall trees

Creek cowed up as All Are in this Area.

Forbs meadow sue

MAP for All of UNIT 12 (STANDS 81, 82, 83
See other sheet for STAND [illegible]

See UNIT 14 STAND 85 sheet also.

Old Growth Survey

STAND 4201 - 85 + parts of STAND 1+78

Observer: MAC DONOTRIO

Date: Sept. 20 2016
UNIT 14

General Area: Gold Butterfly St. CLAR cr.		Stand ID:
Elevation: 5700-6400	Aspect: WEST	Slope:
Habitat Type Group: PSME/PICO/PICEA/ABLA		
Old Growth? 40% PSME most obvious		

Long-fairly narrow unit with rd. bordering high side.

Desc. of O.G. Trees: Only a couple Ponderosas in entire unit and they are >30" dbh. Majority of big oldest trees are PSME 0-10/Acre >21". Pockets of < 1 acre clusters to 5 acre + cluster. ABLA + some Spruce have very tight growth rings.

Snags (Desc. & #) PICO - 6-15" 1-20/Acre / PSME 0-5/Acre usually >22".
Big PSME snags in small groups + solo. ~~to~~ 16-35" dbh. 0-6/Acre

Down Wood (Desc. & #) MED to med high. PICO scatters to OG PSME.
Downed wood is significant in this unit, esp. in the PICO groves.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):
Most trees in stand > 110 years. 1806. Many much older, esp. the biggest PSME dim guessing at 180-220.
Donstony is a mixture to OG sprinkled stand of PSME 60%, PICO 25%, SPRUCE 10%, ABLA 5%. Stem density mostly is close but up towards the road it thins out some + also in the S. part of unit there are more openings + pinegrass + mistletoe.
Saplings of PSME + ABLA + spruce, thickets + other areas spruce seedlings/saplings.

Shrubs:
West Aspect: VACC, Thimble, menzesia / some oregon grape / ribes near cr. / mtn. maple
9 bark.

PYOW
CLNU
PIWO
HAWO

Logging history: None evident

Insects and Disease: old MPB., PSME mistletoe, SBWM esp. in ABLA + PSME.

Wildlife: Elk HC
Piwo 1
Pima 2

Fisher 2
Lynx - mapped habitat (Y) N
if yes = 50% = MM

UNIT 14

VL 6
L

23	16
19	18
8	21
24	11
18	19
16	19
13	17
23	8
27	16
21	14
9	14
22	14
17	22
18	14
13) 240 6	15
11014	) 217
1204	14
	77
	70

Legacy trees PSME scattered throughout + along creek PSME + spruce

See map on other UNIT 14 sheet

Old Growth Survey

Observer: Mac Donnotio

Date: Sept. 20 2016

Unit 14

General Area: G.B. St. Clair cr.		Stand ID: 4201-085
Elevation: 5800 - 6900	Aspect: WEST	Slope:
Habitat Type Group: PSME		
Old Growth? 40%		

Desc. of O.G. Trees: PSME 21-35" 170yrs + 0-8 / acre. Some PICO up to 14" dbh, of unknown age.

Snags (Desc. & #) PICO to 14" PSME to 35". PICO in groups of 20% + mortality.

Down Wood (Desc. & #) 10-15" trees + med + quantity.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Mostly A mature PSME / PICO stand with mature spruce + cbla growing w/in 100' or so of the small stream.
20% + of the mature PICO are now snags due to MPB.

Overstory 60% PSME, 25% PICO, 10% spruce, 5% ABLA.
Stem density generally close but more open in S end of unit.
About 50% of stand has lots of low saplings for MM Lynx hab.

for UNIT 14 in a whole

Shrubs. 70% coverage. SYAL, mtn. maple, ninebark, raspberry, clematis, Oregon grape, a bit of whortleberry.

Forbs: beargrass, pine grass, meadow rue.

Logging history: unk. Non evident

Insects and Disease: Mistletoe in some PSME, SBWM

Wildlife: Elk FF Piwo 1 Pima 2

Fisher 1
Lynx - mapped habitat (Y) N
if yes = 50% MM

WL TREE

1 ① 34" live PIPO, 10' high fire scar, heart rot, light strike, pino cavities 272117 x 5125975

Old Growth Survey

Observer: MAC DONOTTIO

Date: Sept. 12, 2016
Stand 4201-088

General Area: G.B. St. Clair Cr.		Stand ID: Part of stand 88 UNIT 15
Elevation: 6000 - 6400	Aspect: S	Slope: steep
Habitat Type Group: PSME / pine grass / SYAL		
Old Growth? Prob not.		

Desc. of O.G. Trees: PSME 16 - 25". Not sure of age. One area near west boundary of unit (drawn) has >21" 10+ in an acre.

Snags (Desc. & #) PSME 8" - 24" 2 - 5/acre. One huge PIPO snag found + put on Juno + on back of this sheet. Did not measure or sign this tree yet - WL in tree at the time.

Down Wood (Desc. & #)
medium and low. 10-16" average.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Overstory/Dom. story PSME 98 %, PIPO 1 %, saw 1 spruce.
Med to sometimes close stem density of mature PSME.
Canopy closure ~ 60%. Understory of some PSME saplings.

PSME
AV. 15"
stem den. m
Snags 10-21"
aw low

Draw
lots of 20" PSME
+ high 80% shrub
coverage.

shrubs: utah honeysuckle ?, mtn. maple, 9 bark, SYAL. % coverage 15%. 80% at west boundary - mtn. maple

forbs: pine grass, a bit of bear grass, oregon grape, birchleaf spirea

Logging history: Never logged.
ridge to east of unit pink flagged along ridge top into stand #88.

Insects and Disease: some crown thinning from SBWM.

Wildlife: Elk HC
Piwo 1
Pima 2

Fisher 1
Lynx - mapped habitat ⊗ N part < 10%
if yes = SE.

AUSR

1 ① WL TREE - not signed
2+ piwo west holes with flying squirls (3) in s. facing hole
≈ 35" PIPO sandy. broke top. 272472X5125795

~~part of 88~~ - pink, no flagging unit #

① WL TREE 14
PICO 15" 10
272265X5125843 10
live, heart rot, piwo 30
fecal extension. 19
was put on juno 9
14

15
8) 120
40

Old Growth Survey

Observer: Mac Donofrio

Date: Sept. 12 2016

STAND 4201 - ~~parts of~~ EAST 1/2 84 east edge 85 part of 88

General Area: G.B. ST. CLAIR CR.		Stand ID: UNIT 16
Elevation: 6400 - 6600	Aspect: W, SW, SE	Slope:
Habitat Type Group:		
Old Growth? parts are PSME OG. 15%? Some PICO old also		

Desc. of O.G. Trees: PSME 21 - 35" 0 - 10/Acre

12" PICO 195 yrs. old

Snags (Desc. & #) PICO 5" - 15" 0 - 30/Acre

Down Wood (Desc. & #) v. large trees, poles + medium. low - high

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Dom. canopy PSME 49%, PICO 50%, PICEA 1%

PSME average 16" 10-36" trees. PICO show fire scars + heart rot + some ants + feeding by piwo. Pico 4" - 16" trees. 20+% mortality from beetles. Overall stand med. stem density. 25% of stand shows stumps from past logging. Other parts couple acre pockets of O.G. PSME. 1 PSME root rot / PSME beetle pocket.

7
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22
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19
16) 189
29

PSME 14-24

PSME 14-24
pico 7-11 thick
pico snags: 5-9
18/Acre

elk sign
ARNICA

15" fire scar LP
PSME 26"

PSME thickets
OG PSME
(one)
pico pole thickets
w/ high
[illegible]

Saplings PSME + PICO, dense thickets to well spaced trees

Shrubs VACC.

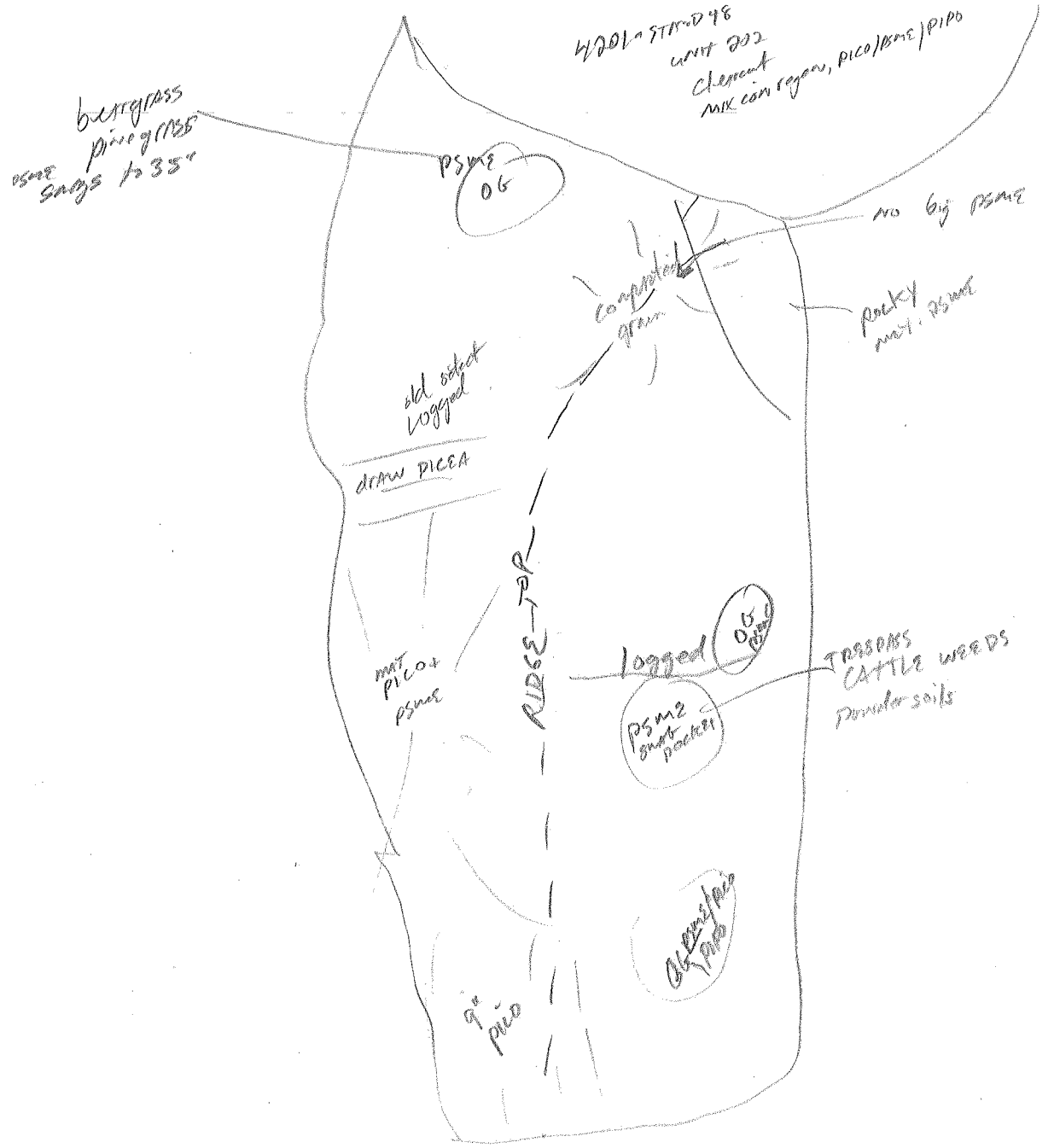
Forbs pinegrass, beargrass

Logging history:

Insects and Disease: mpb, SBWM, Armillaria pocket - 1 acre.

Wildlife: Elk FF
Piwo 1
Pima 1+

Fisher 0
Lynx - mapped habitat Y N
if yes = 30% MM. 70% SE



(unit "O" on 2016 map)
now boundary changed

Rd. 13205 bisects stand

Old Growth Survey

part of unit 63

Observer: Mac Donofrio Date: 9-12-17

General Area: N. ridge st. Clair Cr. G.B.		Stand ID: 4201-91 — below road
Elevation: 6400-6900	Aspect: SE	Slope:
Habitat Type Group: PSME/VAGL-XETE +/ABLA/XETE		some ABLA / - but Abies not well represented
Old Growth? YES - see map on back		30% of stand below rd. not including the old LP.

Desc. of O.G. Trees: below rd. Old growth grove of ~5 acres-10 acres in bottom of stand below road of PSME 20-39". Lots over 30". Lots of OG PSME have basal fire scars.
Above rd. some PSME OG. 21-33" on map. Also LP OG maybe - but 80+% mort. now. Ridge top OG extends over to stand to the north.

Snags (Desc. & #) 2-3 Acre snag point of LP poles - med. Below rd. - LP snags scattered throughout 8-17". often with heart rot + ants/piwo feed + some w. nests. ABLA 8-21" few but some becoming snags soon due to SBW. A few 21" + PSME snags - snapped off w/lots of feeding

Down Wood (Desc. & #) below rd. Med - Low in places. often v. well rotted. med - poles mostly med - to med high in places above road.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

live - Overstory 85% PSME, 10% PICO, <5% ABLA. PSME - Poles to 33" with a few huge ancient PSME to 49" dbh. See reverse for map.
PICO - 80% mort. - mpb. was probable O.G. - whole area below road maybe.
Appears never logged. PICO 6-17" trees.

9" dbh PICO 130 yrs. old

ABLA - few - SBW hit.
saplings - PSME by far most common. No thickets of them noted.

floor is mostly VAGL/XETE with pinegrass.

Above rd. live PSME 85% ABLA 10% PICO 5 mix. Mature to OG in parts.
PSME/VAGL + ABLA/XETE + ABLA/XETE-VAGL
STEM density - close. Heavy ABLA SBW mort.

Birds in stand now. CAJA, PIWO, CLNU, CORA, MOCH
Much PIWO feeding - gave whole stand a (2) even though above 6200 for foraging.

Logging history: NONE below road, above rd. only LP firewood cutting.

Insects and Disease: old MPB in LP. SBW bottom of stand boundary.

No weeds further than 15 m from rd. only 1 hounds tongue noted.

Male deer trails.

Wildlife: Elk HC-TC
heavy feeding — Piwo 2
here both days in — Pima 2

Lynx - mapped habitat Y (N)
if yes = but good hab ridge top. for at least 8 years OVER

✓ ① [WL] 44.8" live PSME. 5 leader with broke top, huge quinine conks, mammal nests, very old spectacular tree
273098 x 5126425. Ancient tree. 3 LP snags leaning into it. claw marks, woodpecker feeding

✓ ② [WL] 15" LP snag, w pinio feed, carp ants, intact - basal fire scar. 273088 x 5126343

✓ (2A.) [WL] 34.5" live PSME w/heart rot, carp ants, fire scar, nofl sized nest cavity + ext. pinio feeding
prob. wold tree 273105 x 5126327, mammal nests. vigor poor

✓ ③ old-growth Acres, PSME. 273176 x 5126366

✓ ④ 30.4" live psme [WL] in OG grove. second leader, 1 pico leans on it
273165 x 5126291

✓ ⑥ 38.9" live DF, vigor good. claw marks.
IN OG grove. [WL] straight + tall.
273195 x 5126287

✓ ⑦ double stem DF 41.4" [WL] live DF fair
21.7" leans NE + L vigor w/ fire scar
w/ light scar
273203 x 5126278

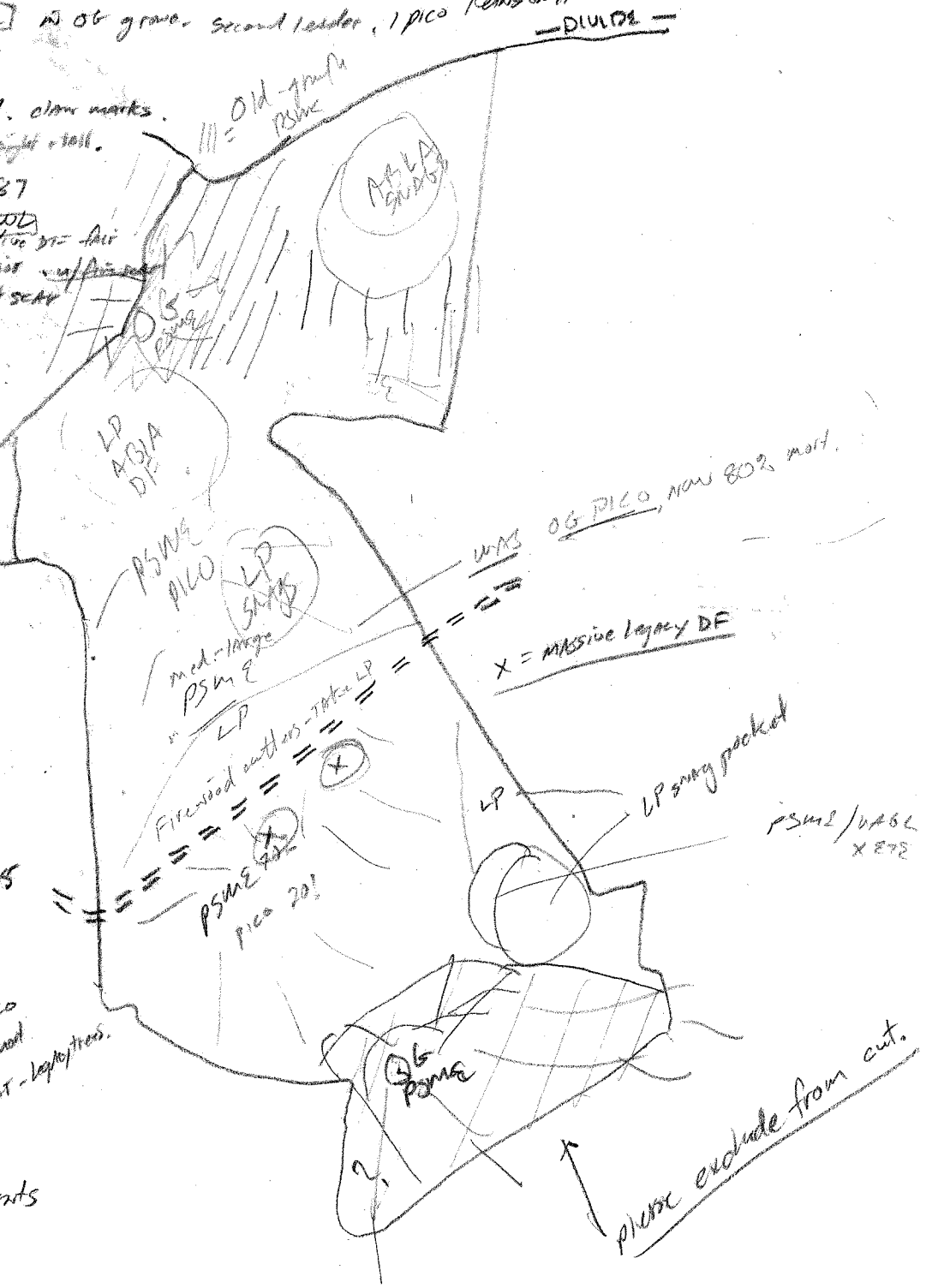
✓ ⑧ 273222 x 5126288
37.4" DF live, with bow,
good vigor. w many
others nearby. [WL]

⑧ 37.0" PSME nice specimen.
O.G. grove. w/ ~~old~~ upgrade bed
273225 x 5126297
[WL]

⑨ 18.2" LP snag, broke top
~~Hw~~ TTWO like nest cavity.
273190 x 5126385
green paper sign only

⑩ 49.2" DF live, vigor fair.
another ancient legacy of
a long ago forest.
273092 x 5126454
[WL] 2 LP snags lean into.
Bear claw marks
Leader branch. lean.

⑪ [NL] 14" snag pico
273092 x 5126475
pinio feed, basal fire scar, ants



Old Growth Survey

Observer: Mac Donofrio Date: 9-29-2017

part of Unit

General Area: N. Ridge St. Clair drainage G/B		Stand ID: 4201-95
Elevation: 6570 - 7075	Aspect: South, w/some ridgetop + a bit of N. aspect.	Slope: moderate in general but varies alot.
Habitat Type Group: ABLA/XETE - VAGL		
Old Growth? Yes - About 15%+ of stand		

12" LP 220 yrs. old above rd. 13205. 10" LP - same age.

Desc. of O.G. Trees: 3 areas of old-growth DF in this stand and one grove extends into adjacent stand to the east in 4201-96, (which is likely "official" O.G.) Some old PICO also, ages variable on the PICO 90 yrs. - 220 yrs. old. Pico has O.G. interesting qualities in some of the trees, + live.

Snags (Desc. & #) Most are PICO + ABLA snags. PICO in stand is about 20% mort., from beetles. Trees 8-16" dbh on average 0-20/acre. ABLA up to 18" but few dead.

Down Wood (Desc. & #) low to high depending on area of stand. Below rd. # 13205 less downfall. Between 13205 + Rd. #364 med-high down wood. North of #364 - low.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Quite variable stand. See map on back.

This stand maybe should be split up. N. of rd. 364 med. stem density, somewhat Stem Exclusion with pole - med-large PICO/PSME.

Divide ridge runs through N end of stand. One saddle area high hare/lynx values w/lots of downed wood, cover, forage + close canopy. - Maybe good for BAOW nesting. ~~mixed in.~~

N. old PICO in stand N. of Rd. 13205, but scattered + also younger ones w close stem density.

Below rd. 13205 (south of) several patches or lines of old-growth PSME with trees to near 40" dbh. w/ good vigor. See map. This area is

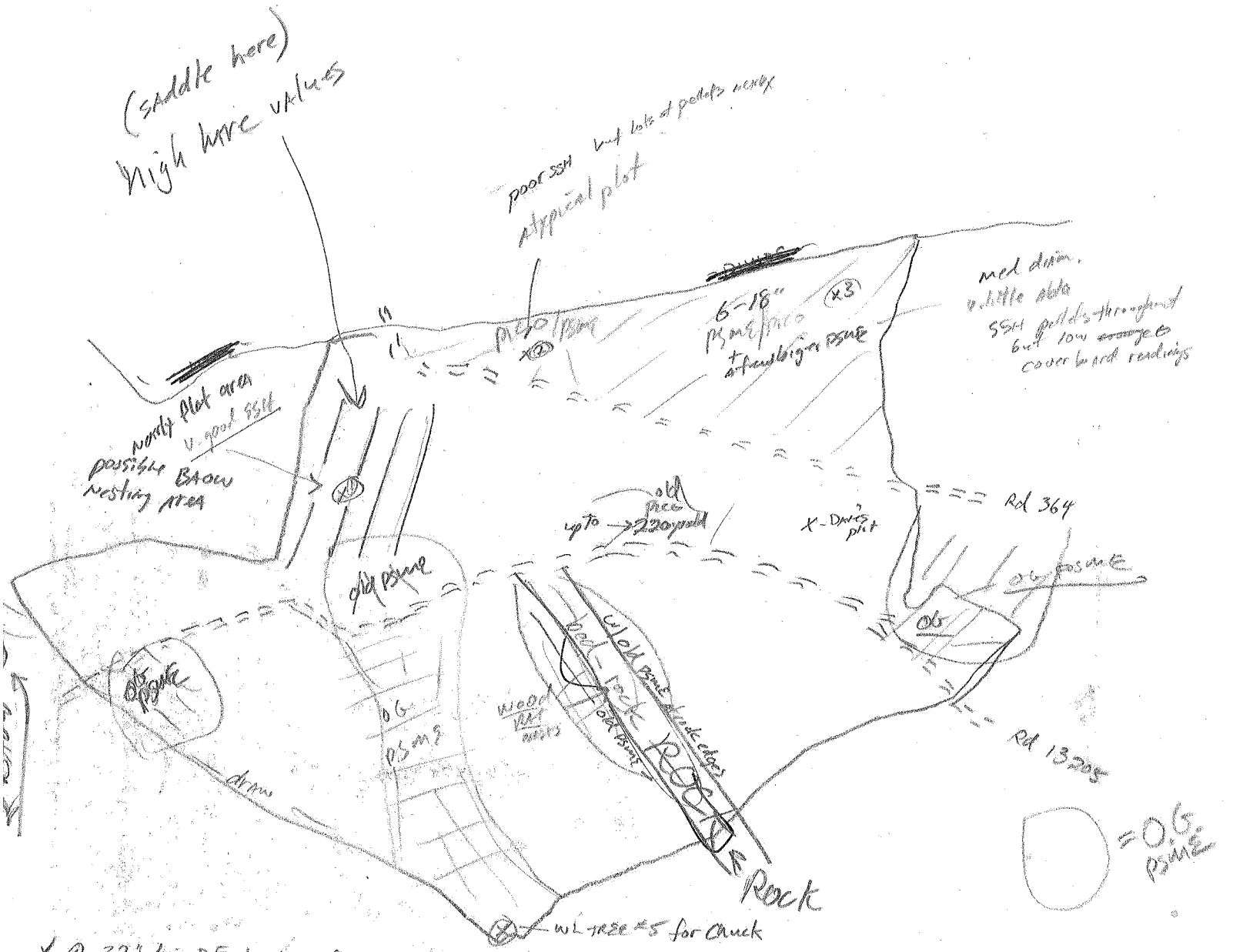
In stand today: CORA, RECR, ELK, MOBL, DEJU, CLNU, CAJA, PISI, PIWO, AMRO, HAWO, AMRO, PAIR of Barred Owls, MOCH

Logging history: below lower road - none found

Insects and Disease: a bit of mpb + SBW occured ≈ 7 yrs. ago
No weeds except where FS cutting along rd. #364 for fire break attempt. (OVER)

Wildlife: Elk AC-TC
Piwo 1
Pima 1

Lynx - mapped habitat (Y) N hare pellets throughout. one area very high hare values. See map on back
if yes = _____



✓ ① 32" live DF, heavy wolf, vigor good. on ridge among O.G. Acres on ridge. 273257 x 5126515

✓ ② 36.8 " ", vigor fair, " " 273281 x 5126492, w/ LP leaner

✓ ③ 31.9" live DF, w/ bow, vigor good. 273150 x 5126485 w/ LP leaner

✓ ④ 38." " " " " wolf 273595 x 5126573 or O.G. Rodsoft - like

---

4201-96,

A. 30.1 live DF 273616 x 5126597, with basal fire scar + pocket cavity, in OG grove

✓B. 38" live DF 273619 x 5126609

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(5) 40.3" live DF, vigor good - for Chuck - up hill several hundred yards are the Barred Owls, calling -

(6) 34.5" live DF " ", edge of rock outcrop 273383 x 5126524

(7) 29.7" " " poor v. in rock outcrop 273391 x 5126554 + 2 more live DF nesty in Rocks

Old Growth Survey

Observer: Mac Donofrio

Date: 9-18-2017
part of unit 72

General Area: Ridge top n. of St. Clair / Gold / Butter		Stand ID: 4201-96
Elevation: 6800-7100	Aspect: South	Slope:
Habitat Type Group:		
Old Growth? YES at least parts are - not walked		

Desc. of O.G. Trees: PSME

Snags (Desc. & #)

Down Wood (Desc. & #)

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Logging history:

Insects and Disease:

OVER

Wildlife: Elk
Piwo /
Pima
Fisher

Lynx - mapped habitat Y N
if yes = _____

✓ ① 42.2" live PSME, w/ lean among 15 other big PSME grove.
273608 x 5126583.

✓ ② 42.8" live PSME w/ lean + LP lean sweep. - same grove as above tree
273626 x 5126610 (N)

part of this stand (west 3RD) checked earlier by Dave Lockman

Old Growth Survey

Observer: Mac Donofrio Date: 9-21-2017

6"8" snow on ground part of Unit 71

General Area: St. Clair's N. ridge		Stand ID: 4202-53
Elevation: 6950 - 7200	Aspect: S	Slope: moderate
Habitat Type Group: ABLA / XETE-VAGL		
Old Growth? Maybe PICO, patches of PSME		

Desc. of O.G. Trees: ABLA to 21", could be old - see tight rings on some. PICO may be old. A few scattered large PSME ≈ 25" dbh. v. old.

Snags (Desc. & #) ABLA 50% PICO 50% 10-20 / ACTO 8-21"

PICO mortality ≈ 50%. A few v. old broken off PSME snags

Down Wood (Desc. & #) med high - high All sizes

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

8" of fresh snow in stand today.

Overstory 80-85% ABLA 6-20", PICO 5-10% 6-18", PSME 5% mostly bigger trees seen. 18-21".

Canopy coverage 75%+, multistory stand.

Saps + seedlings ABLA.

stand pretty homogenous but with some old variation, generally close stem density.

full of snowshoe hares - many crisscrossing snow tracks.

In stand now: mule deer - mule deer tracks

PIWO
CORA
MOCH
BEAR
SSH

Logging history: Appears mostly uncut, but may have had LP removal in past.

Insects and Disease: not bad, some MPB + SBW

Wildlife: Elk TC
Piwo 1
Pima 2
Fisher 0

interesting - came out as ~~MMSS~~ MMU MMSSH with [illegible] measuring - but after snow full of HARE TRACKS ∴ 11 MMU SSH

Lynx - mapped habitat (Y) N blue
if yes = MMU MMSSH

LHCO = 64 + 95 + 82 + 28 = (67)

4202-54

✓ ① WL live PSME 38" crooks + forks, wolf lichen heavy, dam marks. part of old growth 7200' grove. w/ lesser PICO snag at 17" dbh, Tree vigor - great. 212 274493 x 5126851. Old foot/horse trail bisects grove.

✓ ② WL L DF 27" vigor good has several leaders. 274496 x 5126860 SAME grove AS #1

All heavy SSHAVE

4202-53

✓ ① WL live PSME 29.8 Vigor good. + associated bear bed uphill side of tree, WL 274382 x 5126732 + .2 lesser PICO snags in grove

Old Growth Survey

Observer: Mac Donofrio Date: 9-25-2017

Part of Unit 71

General Area: Ridge N. of St. Clair CR.		Stand ID: 4202-54
Elevation: 7000-7250	Aspect: South	Slope: moderate
Habitat Type Group: ABLA/XETE-VAGL		
Old Growth? Parts are		

Desc. of O.G. Trees: Patch of 6 or so big old PSME in + around rock outcrop See sheet for 4202-53 for a few tree descriptions. 24-37" tree pocket among old 8-17" PICO + ABLA of unk. age (yet) / Also lots of old PICO 8-18" scattered.

Snags (Desc. & #) mostly PICO 8-18" average 12". @ 3-20/acre old

Down Wood (Desc. & #) med - med high - high (med - diam.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

Dense stand of ABLA 80-85%, PICO + PSME 15%, a few ES. Trees vary in dbh from areas of 11" average dbh to higher + patches of old/large PSME, Rock outcrops (few), and little meadows (~5% of stand) Crown closure v. high except in the little meadows west end of stand. lots of ABLA saplings for year round forage for SSH.

In stand now: Mule deer, elk, moch, deju, CORA, SSH, pine squirl. Also moose antler.

Heavy/obvious hare sign due to lots of hares + snow on ground.

Logging history: lower part some selective logging.

Insects and Disease: Some MPB, some SBW

Mule Deer ✓
Moose - spring use

Wildlife: Elk HC
Piwo 1
Pima 2
Elkhorn 0 LHCO: 54+76+86+75+77+63+72

Lynx - mapped habitat (Y) in blue + purple if yes = MMM SSH.

Some cattle trespass in stand high quality

Lots of SSH

4202-54 ① 42.5"
✓ live DF, lion + bear marks, big crook, vigor good several leaders, broke central leader
2 12 274172 x 5126939
in tiny rocky meadow

✓ ② 32" live DF
w/ double leader,
274197 x 5126918

✓ ③ 31.5" live DF, deer + elk b.
w/ lean, 3 pico snags hung up in it + wood nks, feeding in
bark

✓ ④ 35.3" live DF, vigor fair
274210 x 5126871

1 stop 4202-54
north

Old Growth Survey

Also see data sheet for stand #54

Observer: Mac Donofrio

Date: 9-18-2017 cold

General Area: Vermiculite Mine G/B		Stand ID: 4202-55
Elevation: 7100-7200	Aspect: South	Slope: moderate
Habitat Type Group: ABLA/XETE - VAGL		
Old Growth? Possibly - no weeds - prob. never entered.		

Desc. of O.G. Trees: ABLA up to 21", LP to 18". Growth rates unknown. A few spruce to 21".

Snags (Desc. & #) LP + SF snags throughout stand - average 10 TPA 10-18" dbh typically.

Down Wood (Desc. & #) med - high throughout 15-25 Ton PA pole + med. diam mainly.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

4 stand (WL) plots put in stand.

Stand is fairly homogenous. Mature ABLA 90% LP 6% ES 4%
Canopy coverage 70-90%. Stem density - close.

~~Shrubs~~ Seedlings/saplings 10% - 25% coverage.

SSH - med - high droppings quantity.

shrubs & forbs VACC (VAGL) mostly + lots of bunchgrass.

lots of elk + mule deer sign + trails in stand. Also some human trails or old fire hand lines.

no. firewood cutting in stand as it is not road accessible.

* - cattle in this stand + stands nearby, Frost's brand. Cattle trespass.

Mine claim boundaries marked in this stand, including old + also 2017 surveys.

Logging history: none evident, stand is adjacent to a clearcut.

Insects and Disease: Not much. Way less bugs than most places.

VARIED THRUSH

(OVER)

Wildlife: Elk TC - lots of sign

Piwo 0. — a few scattered feed sights.

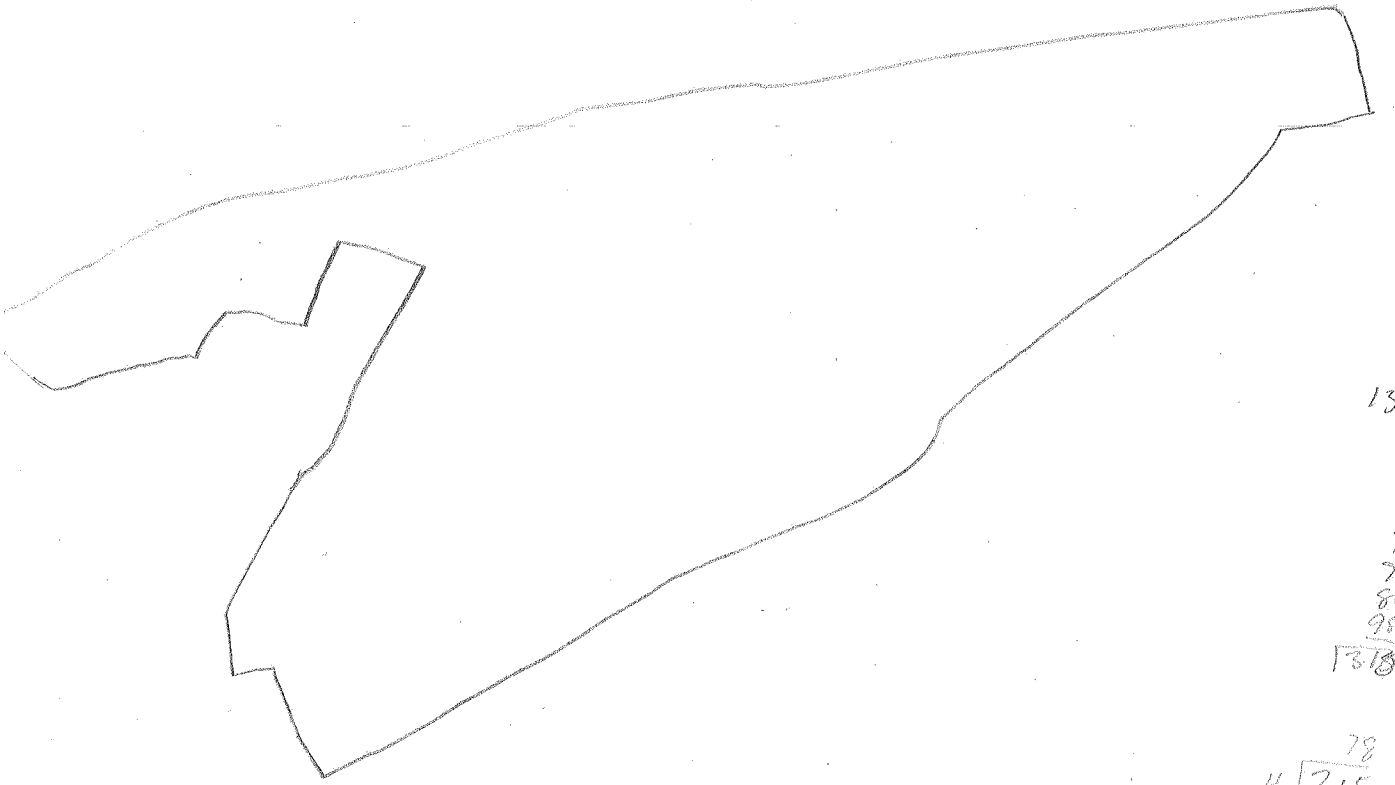
Pima 3

Fisher

Lynx - mapped habitat (Y) N if yes = marks SSH

LHCO 56

48 + 29 + 18 + 79



birds in attend 9.18.2017:

VATH
CORA
DEJU
STJA

Old Growth Survey

Observer: Mac Donofrio Date: 9-27-2017

part of Unit 71 Above road only

General Area: St. Clair's North Ridge		Stand ID: 4202-61
Elevation: This portion is 6950-7200	Aspect: SE	Slope: moderately steep
Habitat Type Group: ABLA/XETE-VAGL		
Old Growth? parts are for sure, Yes		

Desc. of O.G. Trees: PSME 21-32+" 2-18/ACRE, scattered around + in groups, often groups around small isolated rock outcrops. Stumps not snap offs - not aged.

Snags (Desc. & #) old PSME 23"+ dbh, often snaped off. 0-5/Acre. PICO 8-16" in pockets.

Down Wood (Desc. & #) v/g. PSME on ground due to ~~[illegible]~~ old fire.

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):
Mostly a close stem density stand of 80% ABLA, + 20% variable mix of PSME/PICO + a few Spruce with scattered big PSME 18" - 35" throughout stand w/ several concentrations sometimes around small isolated rock outcrops.
ABLA 5-20" 12" average. PICO - mostly mature - old with 20%+ mort.
PSME more common east end of stand
ABLA saplings throughout.

SSH - lots of sign + ABLA saps + some poles w/ low live branches

Fire went through this stand long ago as evidenced by the burn on old PSME + occasional old burnt standing trunks.

In stand today: SSH
DEJU, Elk, mule deer, p. squirl.
RBNU, mach, deju, TTWO, CORA, CLNU

Find Spring above enter rd. record in "Juno"

Logging history: only firewood cuts along rd. noted, but then a few old stumps higher in east half of stand above main road.

Insects and Disease: little SBW

Wildlife: Elk HC
Piwo 1
Pima 2

LHCO = 67+72 = 70

Lynx - mapped habitat (Y) N blue
if yes = MMU SSH pt. 1A MMU SSH
pt 2

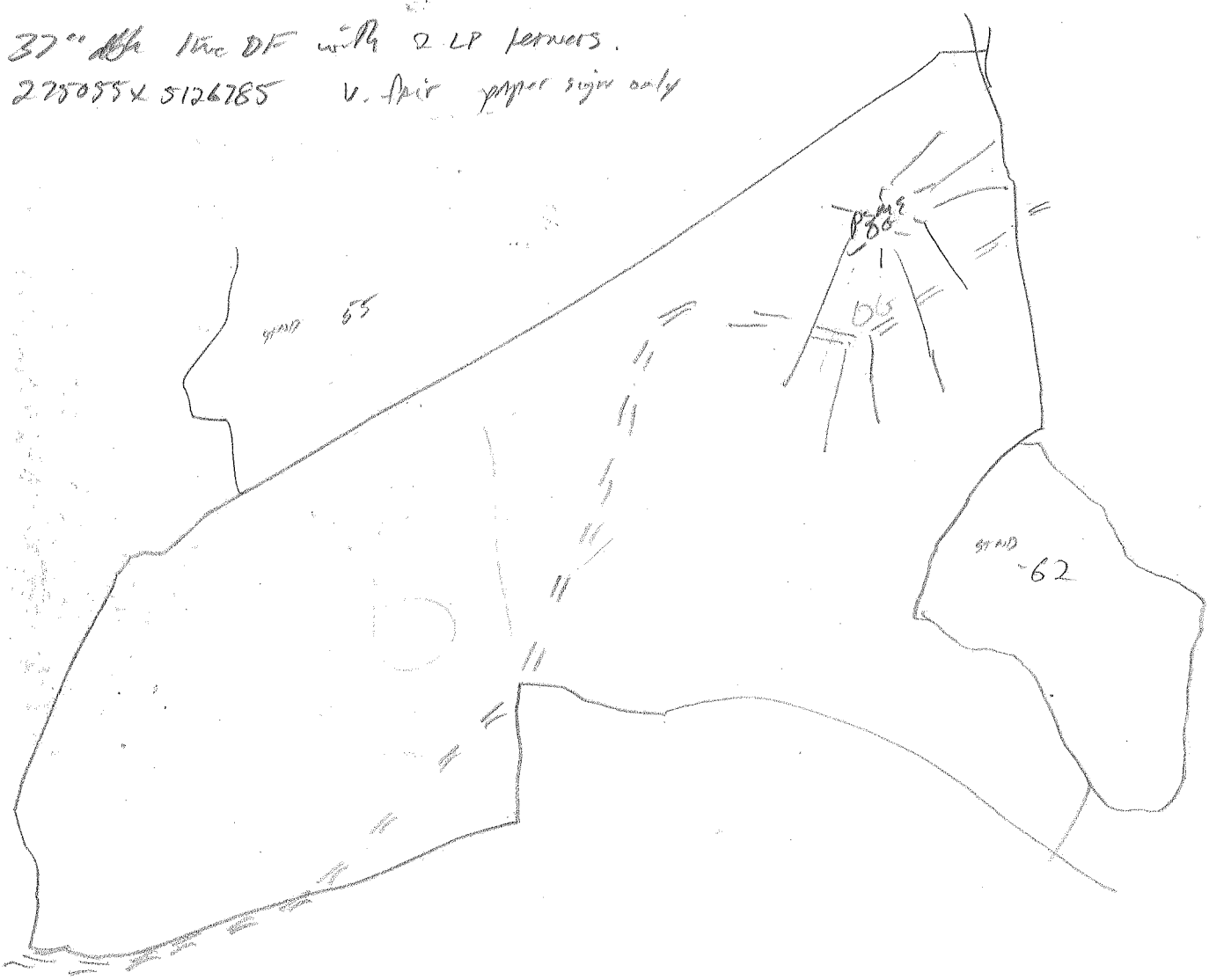
1 N ✓ ① 33.3 live PSME, broken top, heavy wolf lichen, claw marks
274898 x 5126601

✓ ② 27 live PSME 18" - 28" dbh OG patch. small rock outcrop WL rigor on one DF at 25.9" live
275127 x 5126784

✓ ③ 39.8" live DF by road. vigor good. Mech. damage to trunk Nearby 34" dbh PSME 325 yrs. old

✓ ④ WL live DF by road in OG area 27.8" dbh vigor fair
275143 x 5126716

✓ ⑤ 37" dbh live DF with 2 LP leaners.
275055 x 5126785 v. fair paper sign only



Rd 364

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5 | 65
15

Old Growth Survey

Observer: Mac Donofrio Date: Sept. 27 2017
part of Unit 78

General Area: St. Clair's N. ridge		Stand ID: 4202-56
Elevation: 6750 - 6950	Aspect: S - SW	Slope:
Habitat Type Group: ABLA/XETE-VAGL		
Old Growth? Yes, parts		

Desc. of O.G. Trees: PSME, some Spruce

Snags (Desc. & #)

Down Wood (Desc. & #)

Stand Composition and Structure (Dominance, Canopy layers/cover, stem density, shrub and forb species and cover….):

See Dave's Juno

In stand today: DEOU, CLAM, MOCH, CORA,

OVER

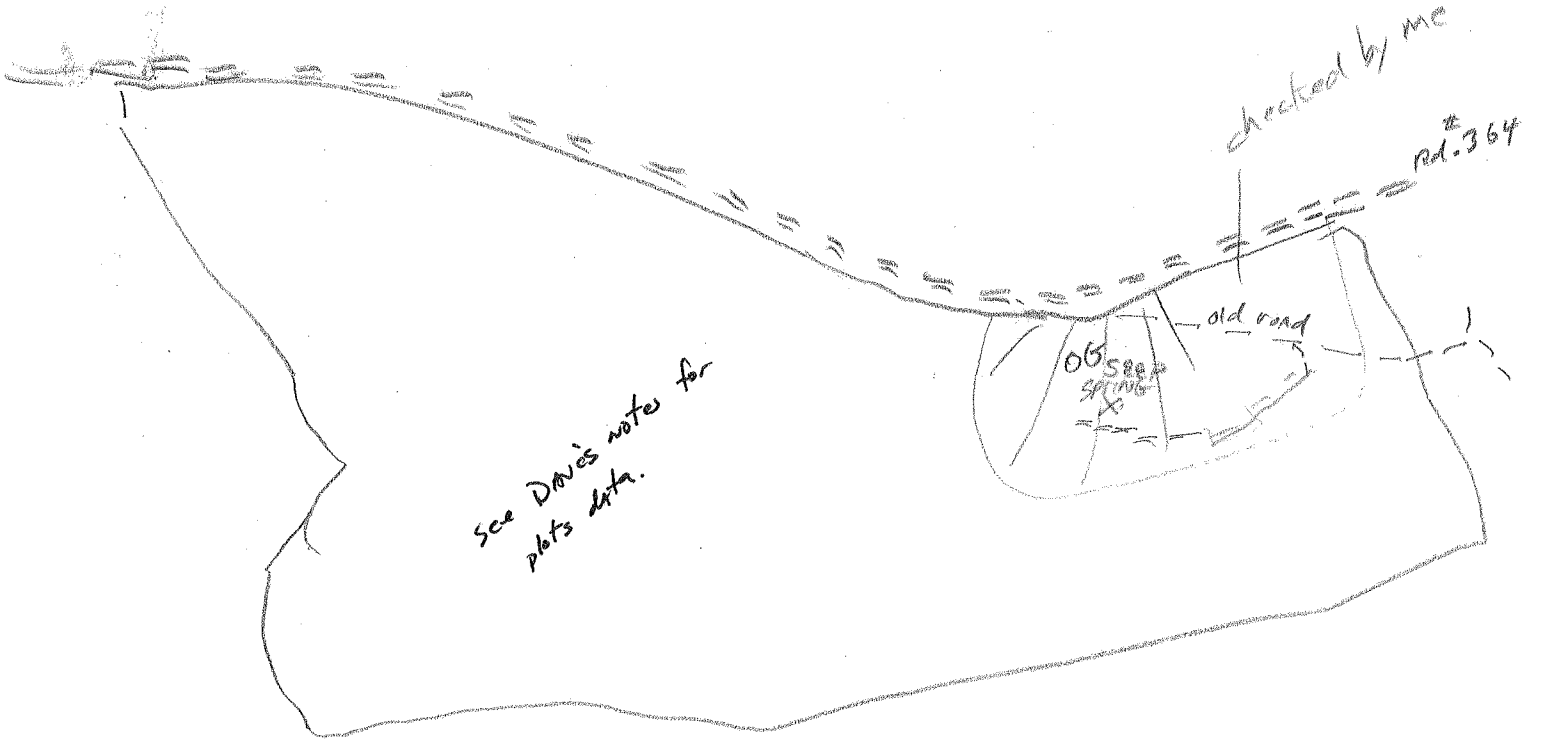
Logging history:

Insects and Disease:

cattle trespass in this stand now + for 10 + years.

Wildlife: Elk
Piwo
Pima

Lynx - mapped habitat (Y) N 90% of is blue
if yes = _____

✓ (1) 45.7" spruce, almost dead, nice specimen, near spring.
274645 x 5126389

✓ (2) Spring + old grown in mine rd. 274645 x 5126382