

Forest Service Cryptogam Habitat Study

Site No. RNA 1 Date: 7.27.97 Surveyors: AKS/NMG GPS #: _____

S: _____

E: _____

Time: _____

Page 2 of 5
Elev: _____

	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	2	10	7	2	3	3	2	2	1	1	3	2			
Gravel 1-2											3				
Gravel > 2-6						3		4							
Stones 6-15 cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	7	8	4	4	2	7	22	20	7	8	3	3	3	4	
Sand															
litter/basal-veg	70	77	64	80.5	53	47	35	40	64	60	52	67	77	81.9	88.9
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
POUGRA basal	18	1	16	5	4	7	35	10	27	6	8	11	9	16	4
Lichen brown fru	1.5	1.5	6	5.5	10	18	1	12	12	3	26	17	4	1	3
Lichen green fru	1.5	1	1	1			1	2	2	1	1				
Lichen Xan	2		3	4	25	12	2	10	5	5	7	6	5	6	5
Lichen woodc crusts			1.5												
Lichen															
Lichen															
Rabbit scat		2	1		3	2	1				1		1		
Moss: wood		1.5													
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
Leucophaea														1.5	1.5
Log														1.5	1.5
Log														1.5	1.5

Summer 1997

Forest Service Cryptogamic Habitat Study JAKL/MM

Site#: MANN1 Date: 7-22-97 Surveyors: KS Gps: 1072222A

S: 3783917.8 E: 7224325

Time: 1630 Elev: 2326

Directions to Site: 18m east of fence.

General Site observations:

Slope and direction: 4.5° 60° Aspect: 60°

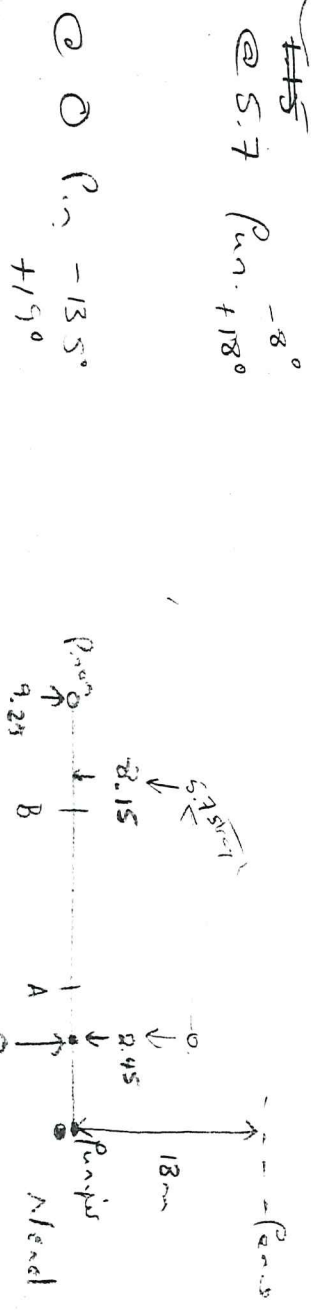
Canopy cover of site:

Mid-transect: Open quarters facing: <u>SE</u>	North: <u>96</u>	South: <u>76</u>	East: <u>96</u>	West: <u>94</u>	Posn: <u>3.35m</u> from <u>A</u> end (<u>4.67</u> from <u>P</u> in ^{ns})
<u>A</u> end: Open quarters facing: <u>SE</u>	North: <u>88</u>	South: <u>90</u>	East: <u>76</u>	West: <u>96</u>	
<u>B</u> end: Open quarters facing: <u>NW</u>	North: <u>96</u>	South: <u>52</u>	East: <u>96</u>	West: <u>80</u>	

(Exact middle of rebars)

Plnts/burn/disturbance

Sketch:



~~HS~~
@ 5.7 Pun. +178°

@ 0 Pun. -135°
+190°

Forest Service Cryptogam Habitat Study

Site No. MAD 01 Date: 7-22-97 Surveyors: JAKES/M GPS #: _____

Page 2 of 4

Time: _____

Elev: _____

	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	30	25	25	25	20	3	40	15	10	40	43	75	40	40	30
Gravel 1-2		15	1		2		11	2		2	7	3	1.5		71
Gravel > 2-6							4								6
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	55	68	51	70	70	50	26.3	28	55	53	40	10	55	55.5	15
Sand	10														3
litter/bedrock	5	20	26	4	6	7	12	25	15	45	10	(14)	5	3	5
Woody debris 3-8cm					1	40									
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
BUNNY SCAT															
Lichen Bryorn Fru															
Lichen green															
Lichen <i>Substratum</i>															
Lichen															
Lichen															
Lichen															
Moss star															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae <i>WMA</i>															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
<i>BASA</i> <i>vas. bryocora</i>		8	3					3.0	2.0						

Forest Service Cryptogam Habitat Study

Site No. MA 281

Date: 7-22-97

Surveyors: _____

GPS #: _____

S: _____

E: _____

Time: _____

Elev: _____

	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravels < 1 cm	30	29.5	4.5	10	3.6	7.0	2.5	2.0	5	10	1.5	5	2.1	7	14
Gravel 1-2	2	4			2	3							3		
Gravel > 2-6					3					1.5					
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	32.4	3.5	3	12	5	1.5	3.6	4.0	2.7	4.0	5.4	6.1	6.3	2.2	7
Sand		3				5				1.1					
litter/basal veg	30	10	4.0	5.3	4.5	7	3.0	3.2	5.6	2.0	2.1	3.0	1.2	3.3	7.0
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
Burnt scat										1				2	1.1
Lichen Cladonia	.1														
Lichen															
Lichen															
Lichen															
Lichen															
Lichen															
Moss star	.5	.5					3				1				
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
Burnt scat	18		1.2	2.5	9		6	8	1.2	1.0	9	4	1	3.5	8

Summer 1997

Forest Service Cryptogamic Habitat Study

Site#: Road 2 Date: 7/23/97 Surveyors: Paul Gps: 4723164 S: 3788399.0 E: 712854.2 Time: 10:20 Elev: 2182

Directions to Site: 15m west of fence

General Site observations: Downed road in vicinity not on list

Slope and direction: 60 260 Aspect: 260

Canopy cover of site:

Mid-transect: Open quarters facing: North: 60 South: 60 East: 90 West: 59 Posn: 235m from E end

NWA end: Open quarters facing: North: 76 South: 44 East: 88 West: 86

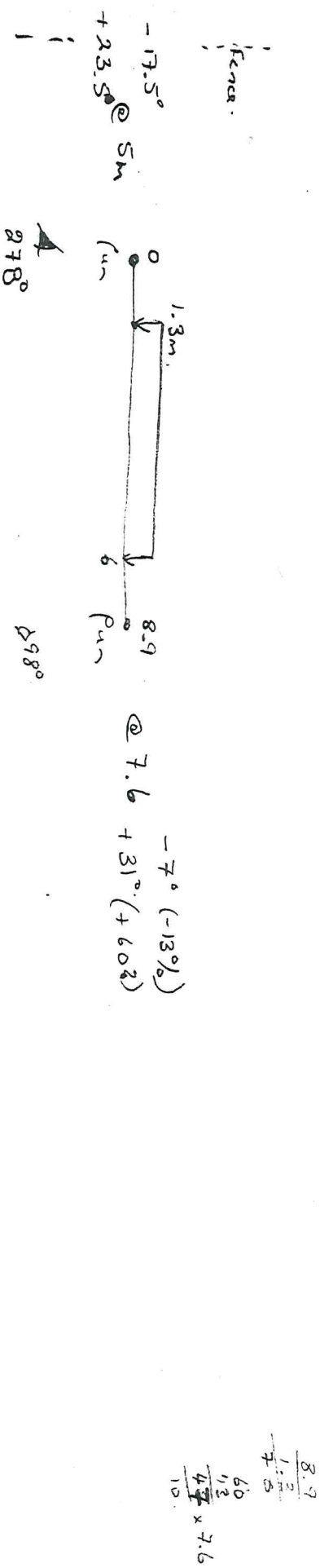
SE B end: Open quarters facing: North: 67 South: 80 East: 90 West: 59

Community: PF's No recent fire; Downed road at entrance of meadow area

Plots/burn/disturbance

Pellagra off road - a burn area North Br. Forest off road
Quadr 25 black munts Regents in 25% = ? Sign on Quad 35

Sketch:



Forest Service Cryptogam Habitat Study

Site No. FNQ #2 Date: 7/23/97 Surveyors: FNRL GPS #: _____ S: _____ E: _____ Time: _____ Elev: _____

N side of cut

	Start	End	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm			0.5					5					3	20	10	13	20
Gravel 1-2														2	4	3	5
Gravel > 2-6																	
Stones 6-15cm																	
Rocks 15cm-1m																	
Boulders > 1m																	
Bedrock																	
Soil			7	12	35	3	40	65	20	25	29	9	4	30	30	59.5	22
Sand																	
litter/leaf litter			80.5	76	57	81.5	37	29	69	64	66	27.5	21	41	43	6	27
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm																	
Scat (type and size)						0.5				1		1	1				
Lichen <i>Cladonia</i>					1	7	1						2				1
Lichen <i>Sarkis</i>													1				1
Lichen <i>Bryn Fw</i>														2			1
Lichen <i>Black Fw</i>														1			1
Lichen																	
Lichen																	
Moss <i>Star</i>			7	6	5	3	20	5	5	1	1	21.5	2	1	4	13	0.1
Moss <i>Grey</i>				1					1								
Moss																	
Moss																	
Moss																	
Moss																	
Moss																	
Liverwort																	
Algae																	
Canopy-grass																	
Canopy-forb																	
Canopy-shrub																	
Vascular Species																	
<i>Bougainvillea</i>			5	5	2	5	2	1	5	8	4	2	5	5	7	2	25

Forest Service Cryptogam Habitat Study

Site No. RWA 02 Date: 7/23/97 Surveyors: PRL GPS #: _____ S: _____ E: _____ Time: _____ Elev: _____

	Quads on N side of 1 st rd														
Start at W end	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravel < 1 cm	60	53	40	42	34	33	44	24	6	35	30	25	8	15	13
Gravel 1-2	5	12	6	6	6	6	7	4	2	2	1	2	1	2	3
Gravel > 2-6															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	30	30	28	30	33	35	30	35	37	38	46	24	3	57	46
Sand	1				5					3					
litter/leaves	4	5	25	20	7	22	12	37	38	18	16	40	45	26	35
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scar (type and size)	hairy												1		
Lichen on white rock	(6)	(6)	(6)												
Lichen 5 to 5									1						
Lichen															
Lichen															
Lichen															
Lichen															
Black Frag deep					15	1			9	3	3	5	38	3	2
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
<u>Bougainvillea</u>			1	2		3		3	4	1	4	4	4	1	7

Summer 1997

Forest Service Cryptogamic Habitat Study

Site#: MAN 02 Date: 7/23/97 Surveyors: NW/LS/SS GPS: K072315A S: 7992415.3 E: 3783377.80 Time: 9:55 Elev: 2388.3m

Directions to Site: 1.5m East of Pass

General Site observations: Abundant downy woodpecker but not on line

Slope and direction: 3° 91° Aspect: 91°

Canopy cover of site:

Mid-transect: Open quarters facing: North: 91 South: 37 East: 96 West: 90 Posn. 209 m from rebar end

A end: Open quarters facing: North: 96 South: 48 East: 94 West: 58

B end: Open quarters facing: North: 82 South: 80 East: 96 West: 93

Community:

Plnts/burn/disturbance OP Natural burn Downy woodpecker

Sketch:



	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	7	50	20	50	10	5	7	5	25	4	30	22	12	12	10
Gravel 1-2		3	5	20	2	2				2		12	8	10	8
Gravel > 2-6	4				9								9		4
Stones 6-15cm					20	3								6	1
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	28	20	15	7	20	6	8	18	17	25	30	20	22	32	15
Sand															
litter/basal veg	44	18	35	14	25	73.9	70	67	44	42	32	43	39	40	56
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
liverwort		1													
Lichen															
Lichen															
Lichen green crustos (rock)														(1)	1
Lichen dark gray (rock)														(2)	
Lichen black crustos (rock)														(2)	(1)
Lichen yellow crustos (rock)														(3)	(1)
white crustos (rock)														(2.1)	
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
Basal veg bryoph	17	8	25	9	8	10	15	10	14	27	7	3	10		4
liverwort						.1									

col mat in 15' 31

Summer 1997

Forest Service Cryptogamic Habitat Study

Site#: RVA 03 Date: 7/23/97 Surveyors: KS/NM/ST/DB Gps: _____ S: _____ E: _____ Time: _____ Elev: _____

Directions to Site: 17m from Race road west

General Site observations: West of site ~ 15m higher proportion of brown fru. cladonia crust, Pinon-juniper

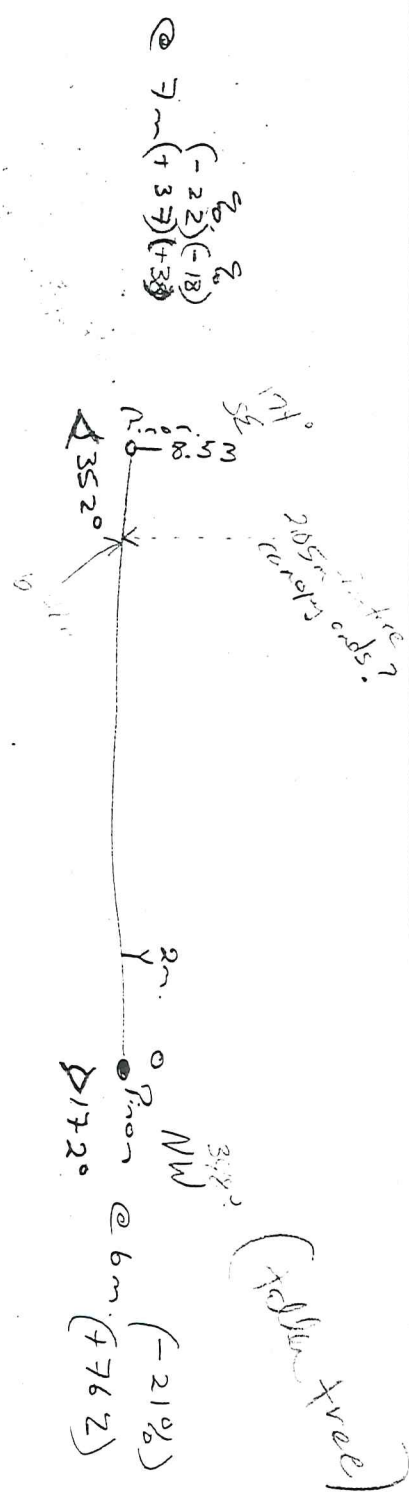
Slope and direction: 2070 Aspect: 68° NW-SE Damaged wood.

Canopy cover of site:	Mid-transect:	Open quarters facing:	North:	South:	East:	West:	Posn: 2.25m from end (alt. end or mid)
	<u>NWB</u>	<u>NW</u>	<u>74</u>	<u>94</u>	<u>96</u>	<u>80</u>	} (1.5) from rebar } ok
	<u>SE</u>	<u>SE</u>	<u>82</u>	<u>86</u>	<u>74</u>	<u>59</u>	
		end: Open quarters facing:	North:	South:	East:	West:	
		end: Open quarters facing:	North:	South:	East:	West:	
			<u>88</u>	<u>78</u>	<u>69</u>	<u>84</u>	

Community: _____

Plnts/burn/disturbance _____

Sketch: _____



MWD 03
@ both ends
Pinon + Juniper?
174' SE

Pinon 350 N, 1

10
Do

Fence

Summer 1997

Forest Service Cryptogamic Habitat Study

Site#: RVA 03 Date: 7/23/97 Surveyors: KS/NM/Gps: S: _____ E: _____ Time: _____ Elev: _____

Directions to Site: 17m from Fence west

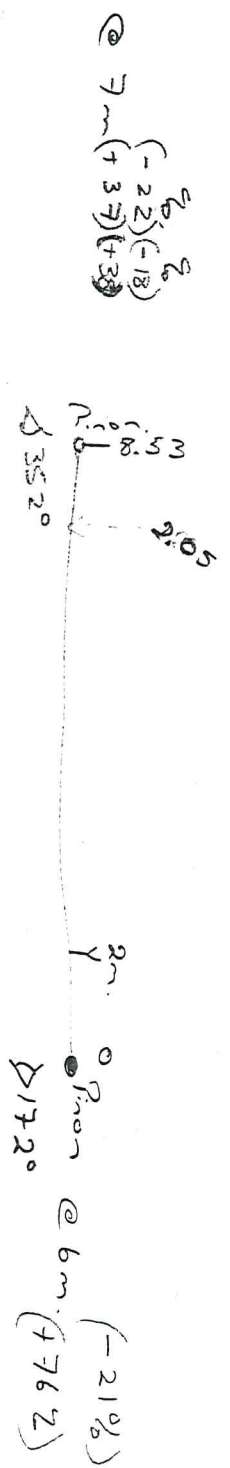
General Site observations: West of site ~ 15 m higher prepurchase of brown fir, cladoxia rust, brown-jumper
Downed wood.

Slope and direction: 2070 Aspect: 680

Canopy cover of site:	Mid-transect: Open quarters facing:	North: <u>74</u>	South: <u>94</u>	East: <u>96</u>	West: <u>80</u>	Posn: <u>2.25</u> m from <u>redwood</u> end
	<u>A</u> end: Open quarters facing:	North: <u>82</u>	South: <u>86</u>	East: <u>74</u>	West: <u>59</u>	
	<u>B</u> end: Open quarters facing:	North: <u>88</u>	South: <u>78</u>	East: <u>69</u>	West: <u>84</u>	(1.5) from (relax)

Community: _____
Plnts/burn/disturbance _____

Sketch:



Summer 1997

Forest Service Cryptogamic Habitat Study

Site#: RVA 03 Date: 7/23/92 Surveyors: KS/NM/APS

S:

E:

Time:

Elev:

Directions to Site: 17m from Race east

General Site observations: West of site N 15m higher prepanderae of brown fru. cladonia crust, Pinon-juniper

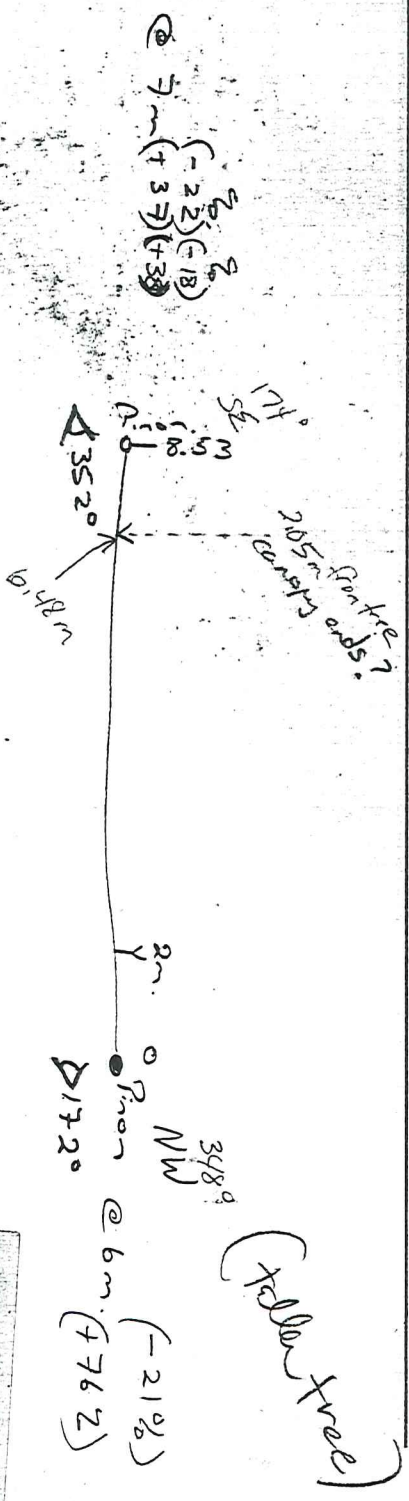
Slope and direction: 2070 Aspect: 168° NW → SE

Canopy cover of site: Damaged wood.

Mid-transect:	Open quarters facing:	North:	<u>74</u>	South:	<u>94</u>	East:	<u>96</u>	West:	<u>80</u>	Posn. <u>2.5m</u> from <u>end</u> <u>where</u>
	Open quarters facing:	North:	<u>82</u>	South:	<u>86</u>	East:	<u>74</u>	West:	<u>59</u>	
	Open quarters facing:	North:	<u>88</u>	South:	<u>78</u>	East:	<u>69</u>	West:	<u>84</u>	} <u>(1.5m from rebar)</u> or <u>end</u>

Community: _____
Pins/burn/disturbance _____

Sketch:



MWDPS
 @ both ends
 Pinon Juniper?
 174° SW

P. 0.001 350 NW

171°
205/180
95/5

10
DO

— Fence

Forest Service Cryptogamic Habitat Study

Gps: _____ S: _____ E: _____ Site#: RNA 13 Date: _____ Elev: _____ Surveyors: _____

Directions to Site: _____

General Site observations: _____

Primary Aspect: _____ Secondary Aspect: _____ Primary slope & direction: _____ Secondary slope and direction: _____

Canopy cover of site: _____

Mid-transsect: _____ m from _____ end Open quarters facing: _____ North: _____ South: _____ East: _____ West: _____

Within 1m at _____ end. Open quarters facing: _____ North: _____ South: _____ East: _____ West: _____

Within 1m at _____ end. Open quarters facing: _____ North: _____ South: _____ East: _____ West: _____

Plants (vascular and nonvascular) within 3m of transect: _____

(Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)

Woody debris within: _____ m of transect; in what part of transect: _____

Species: _____ Tree at _____ end. Standing: _____ m away + _____ (%; right side of clinometer)

SR End

LN End

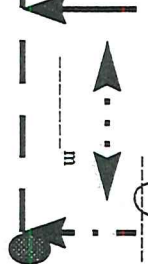
Tree = Pinon
(canopy = _____ m)

Trunk = 8.5 m Rebar = 6.53 m



Tree = Pinon
(canopy = _____ m)

Rebar = 2.05 m Trunk = _____ m



354

precise direction of line w.r.t. tree

Length from tree trunk to tree trunk = _____ m
Length from rebar to rebar = _____ m

174

precise direction of line w.r.t. tree

	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	6	2	54	66	33	15	3	15	15	30	36	16	25	36	42
Gravel 1-2			6	5	4	4		5	12	10		2	3	2	2
Gravel > 2-6														6	1
Stones 6-15cm															
Rocks 15cm-1m															
Boulders > 1m															
Bedrock															
Soil	43	15	15	18	34	33	73	70	67.9	52	40	62	32	22	20
Sand															
litter/basalt-veg	45	72	35	10	29	32	15	10	5	6	18	20	30	20	22
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)	Wavy	2		1	15	1				2		13		50	1
Lichen															
Lichen															
Lichen															
Lichen															
Lichen															
Lichen															
Lichen															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
<u>DAVIDIA</u>	<u>C</u>	<u>8</u>				<u>4</u>	<u>9</u>					<u>7</u>	<u>10</u>	<u>4</u>	<u>12</u>
<u>WIND SEEDLING</u>								<u>1</u>	<u>0.1</u>						

	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm			12	45	80	22		10	35	30	3	1	4	5	4
Gravel 1-2					8										3
Gravel > 2-6															
Stones 6-15cm															
Rocks 15cm-1m				25		52	100	70	35						
Boulder > 1m															
Bedrock															
Soil			15	10	5	20		17	23	43	62	88	81	91	70
Sand															
litter/basal veg	98	88	58	20	6	6		3	7	10	15	7	10	4	5
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
BERRY															
Lichen					1										
Lichen orange (MUL)							(1)								
Lichen black gray (MUL)						(2)	(2)	(2)							
Lichen light gray (MUL)						(2)	(2)	(2)							
Lichen gray foliose (MUL)						(2)	(10)	(5)							
Lichengreen (MUL)						(37)	(10)	(55)							
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
Basal veg height	2	12	5							17	20	4	5		12

Summer 1997

Forest Service Cryptogamic Habitat Study JAKL

Site#: MAN03 Date: 7/23/97 Surveyors: NM RE Gps: _____ S: _____ E: _____ Time: _____ Elev: _____

Directions to Site: ~ 26.8m east of Pens

General Site observations: Damaged wood ~ 0.5m off line

Slope and direction: 5% Aspect: 85° (curator) haler

Canopy cover of site: Mid-transect: Open quarters facing: North: 60 South: 68 East: 86 West: 68 Posn: 2.67 m from end
(N) A end: Open quarters facing: North: 24 South: 48 East: 76 West: 76
(S) B end: Open quarters facing: North: 86 South: 60 East: 70 West: 48

Community: Pf + no recent burn; Abundant downed wood

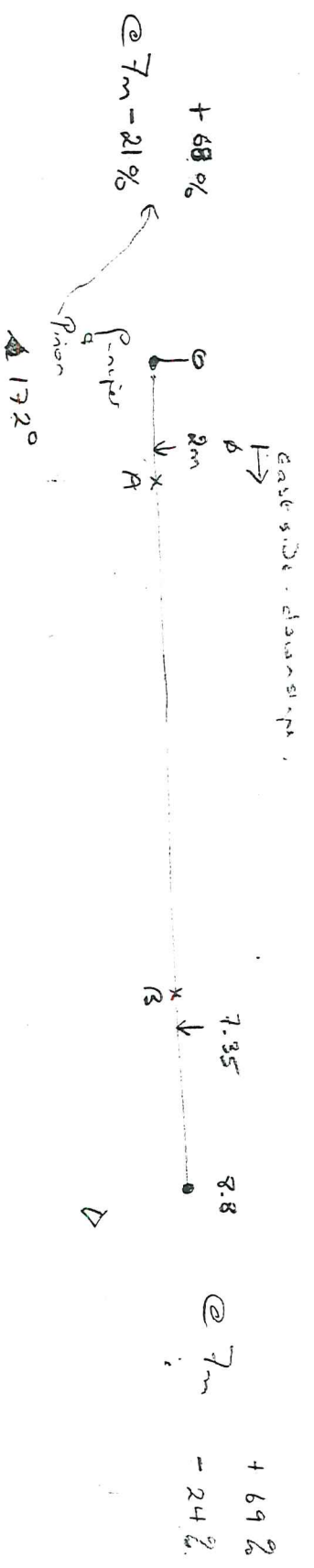
Plots/burn/disturbance

Sketch: Photo

22 site MAN03 Azimuth 152

23 Quadd 20 MAN03

w/ North end in foreground
w/ large amounts of lichen



Pinell

Forest Service Cryptogam Habitat Study

Site No. MMV 03 Date: 7-23-97 Surveyors: V8/NM GPS #:

S: E:

Time:

Page 1 of 4
Elev:

STAKE #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Gravels < 1 cm						2	3	4	1	1	2	2	3	5	4
Gravel 1-2											3			4	3
Gravel > 2-6															
Stones 6-15cm															
Rocks 15cm-1m			35	97	100	45		3		11	55		22	60	
Boulders > 1m															
Bedrock															
Soil						43	15	30	10	23	15	30	19	25	80
Sand															
litter/basal veg															
Woody debris 3-8cm	86	94	65	2		10	74	61	81	55	15	60	38	5	11
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
Rabbit		1					1								
Lichen															
Lichen yellow (rock)															
Lichen black (rock)			(11)	(3)	(11)	(11)					(11)				
Lichen light gray (rock)			(4)	(4)	(5)	(11)					(11)				
Lichen dark gray (rock)			(8)	(15)	(70)	(4)					(15)				
Lichen green (rock)			(18)		(15)	(37)									
Lichen light brown (rock)				(70)											
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
	9	5		1			7	2	8	10		8	12	1	1

Forest Service Cryptogam Habitat Study

Site No. MANN 63 Date: 7-23-97 Surveyors: NW

GPS #: 163

S: 8

E: 8

Time:

Elev:

	Quad 01	Quad 3L	Quad 3Z	Quad 3K	Quad 3S	Quad 3G	Quad 37	Quad 3X	Quad 3P	Quad 4A	Quad 4I	Quad 4Z	Quad 4B	Quad 4Y	Quad 4S
Gravels < 1 cm	5		3	9	1	12	12	24		11	80	44	33	1	8
Gravel 1-2			5	13		10	2	5		4	2				
Gravel > 2-6											1				
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	9	5	12	20	10	63	10	12	7		9	12	27	40	8
Sand															
litter/basal veg	80	83	69	51	42	8	63	48	76	63	5	4	40	47	77
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
<i>Polyp</i>	2	2					1	1	1						
Lichen															
Lichen <i>Black rock</i>											(1)	(1)			
Lichen <i>4 gray rock</i>											(2)	(1)			
Lichen <i>white rock</i>											(1)	(1)			
Lichen <i>Orange crust</i>								(1)							
Lichen <i>Green fr</i>	1	4	8	1	2	1	2		1						
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
<i>Boat Gym</i>	3	10	3	5	45	10	10	10	15	22	1		10	10	7

Summer 1997

Forest Service Cryptogamic Habitat Study

Site#: RNA 44 Date: 7.24.97 Surveyors: JARL Gps: 40724 17A S: 37883108.6 E: 7222368.8 Time: 13:45 Elev: 2531

Directions to Site: 28.2 m west of Pass

General Site observations: Down road north of house (intersection of NE 1/2)

Slope and direction: 1720% 274% Aspect: 1784° 27170°

Canopy cover of site:

Mid-transect: Open quarters facing: North: 84 South: 92 East: 73 West: 82 Posn: 2.5 m from E end

(E) A end: Open quarters facing: North: 50 South: 90 East: 16 West: 96

(W) B end: Open quarters facing: North: 88 South: 79 East: 91 West: 45

Community: IP no recent burn - Down road road about 100m

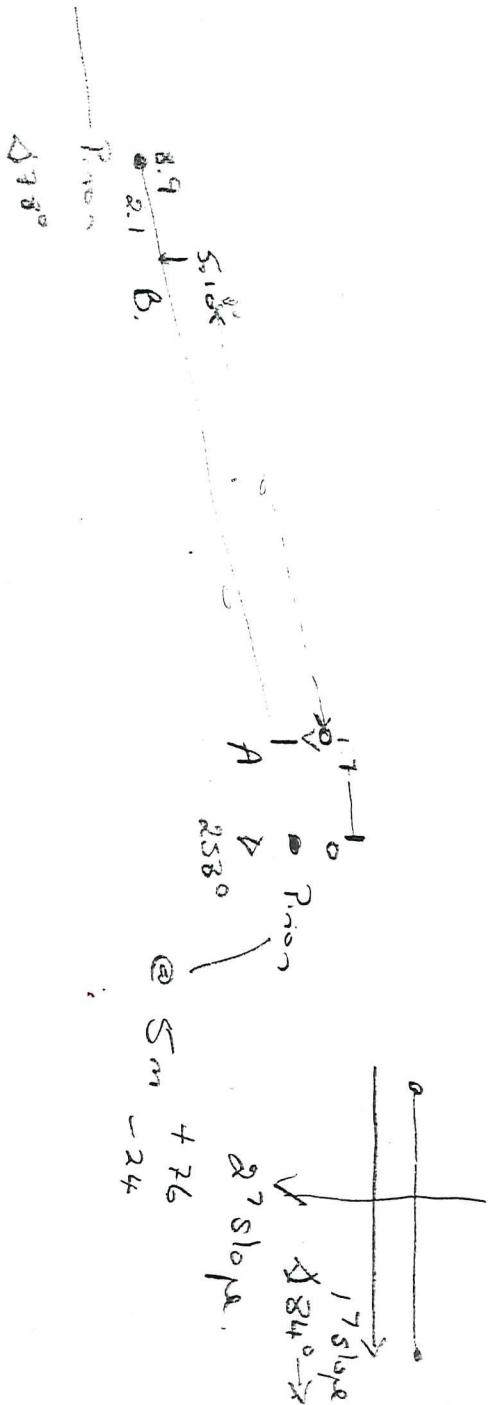
Pests/burn/disturbance

Sketch:

Photo 24
for ground (alt = west)

5.10
1.7
6.80
8.9
6.8
2.1

+582
-15% @ 7 m



Forest Service Cryptogam Habitat Study

Site No. RNA 04 Date: 7.24.97 Surveyors: KS/N/M GPS #: _____ S: _____ E: _____ Time: _____ Page 1 of 4 Elev: _____

	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm	4	4	3	4	35	12	27	9	3	34	0	4	14	7	10
Gravel > 2-6									5				3		13
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	35	52	15	17	48	52	43	46	49	21	14	52	58	7	65
Sand															
litter/basal veg	56	85	52	69	7	13	25	35	30	33	55	30	20	1	87
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
LNA/BAT		1		1											
Lichen Brown frut.	3	18	26	6	8	7	1								
Lichen															
Lichen Dark cr (crk)													(5)		
Lichen Green crust (crk)													(11)		
Lichen white crk (crk)			(1)	(1)											
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species	2		4	3	2	6	4	11	12	8	22	2			1

Forest Service Cryptogam Habitat Study

Site No. QNA 4 Date: 7-24-97 Surveyors: LM MM GPS #: _____

S: _____ E: _____

Time: _____

Page 2 of 4

Elev: _____

	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	37	35	35	60	40	30	40	70	34	32	15	22	17	12	5
Gravel 1-2	2	3.5	1		2		1	4	3	7	2	4	6	6.5	8
Gravel > 2-6		3.5									5				
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	26	31.5	44	12	22	40	20	23	10	50.5	30	40	70	50.5	60
Sand															
litter/branches	33	30	20	20	20	25	25	3	40	8	28	18	5	15	18
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)	1														
Lichen <u>White, crumbly</u>								(1)							
Lichen <u>Small, crustose</u>										(1)					
Lichen <u>Brown, frim</u>											14	9			
Lichen <u>green, crustose</u>												(.5)			
Lichen															
Lichen															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
<u>BOUGRA</u>	2			8	15	5	14		10	1.5	6	10	7	10	9

Forest Service Cryptogamic Habitat Study

Site#: MADP4 Date: 7-24-97 Surveyors: JACK

Directions to Site: KS, W, W, Gps

General Site observations: Downed wood on edge of (ing N) line

Slope and direction: 123.5 N-SE Aspect: 126.5°

Canopy cover of site: 24%

Mid-transsect: Open quarters facing: North: 96 South: 64 East: 81 West: 95

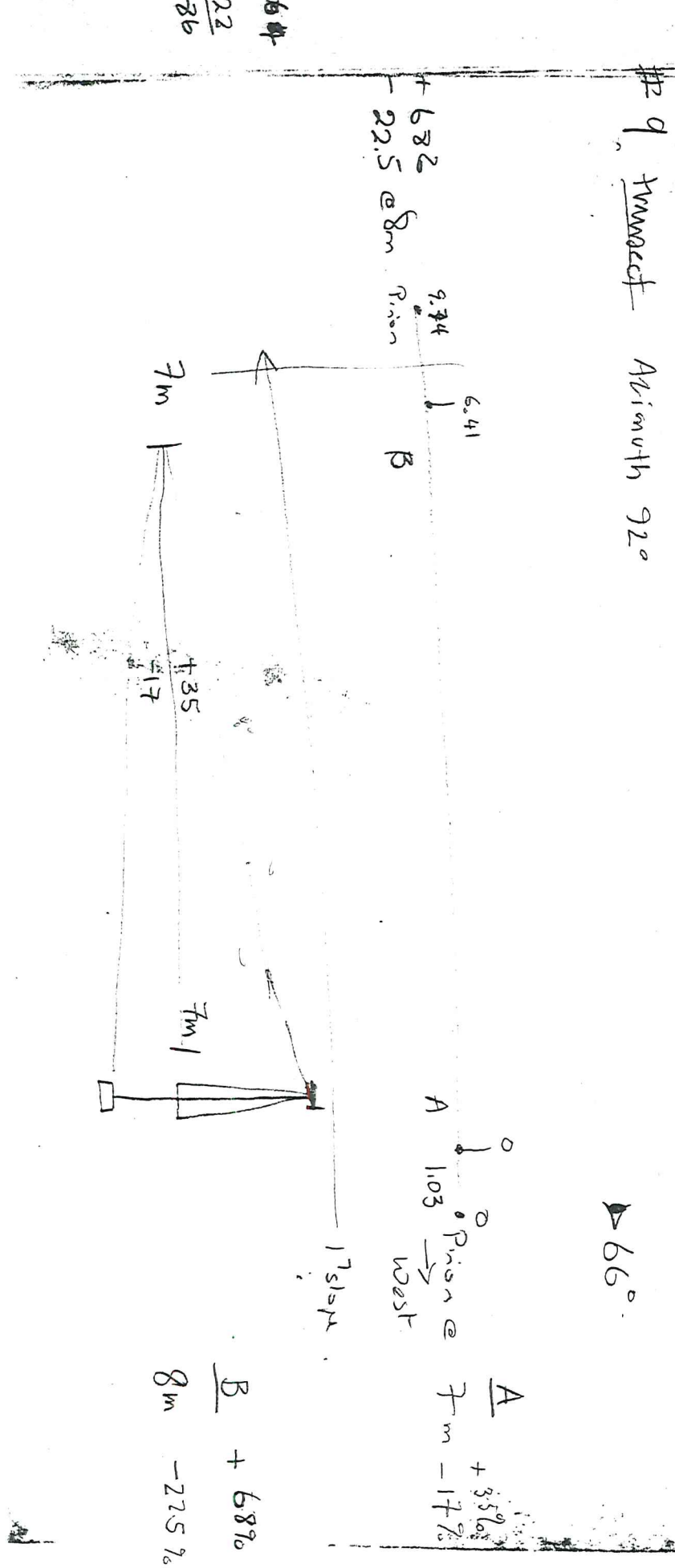
W) A end: Open quarters facing: North: 96 South: 79 East: 89 West: 51

E) B end: Open quarters facing: North: 69 South: 56 East: 0 West: 95

Community: OP ashburn

Plnts/burn/disturbance: Downed wood is greater than 100%

Sketch: # 9 transsect Azimuth 92°



Summer 1997

Forest Service Cryptogamic Habitat Study

JKL

Site#: MAD04 Date: 7-24-97 Surveyors: KS/AM

Gps: _____

S: _____

E: _____

Time: _____

Elev: _____

Directions to Site: _____

General Site observations: Dense wood 1 km off line N of line

Slope and direction: 17 3.5 W-SE Aspect: 17 65°

Canopy cover of site: 24% 27 138°

Mid-transect: Open quarters facing: North: 96 South: 64 East: 81 West: 95 Posn: 3.2m from W end

(W) A end: Open quarters facing: North: 96 South: 79 East: 89 West: 51

E S end: Open quarters facing: North: 69 South: 56 East: 0 West: 95

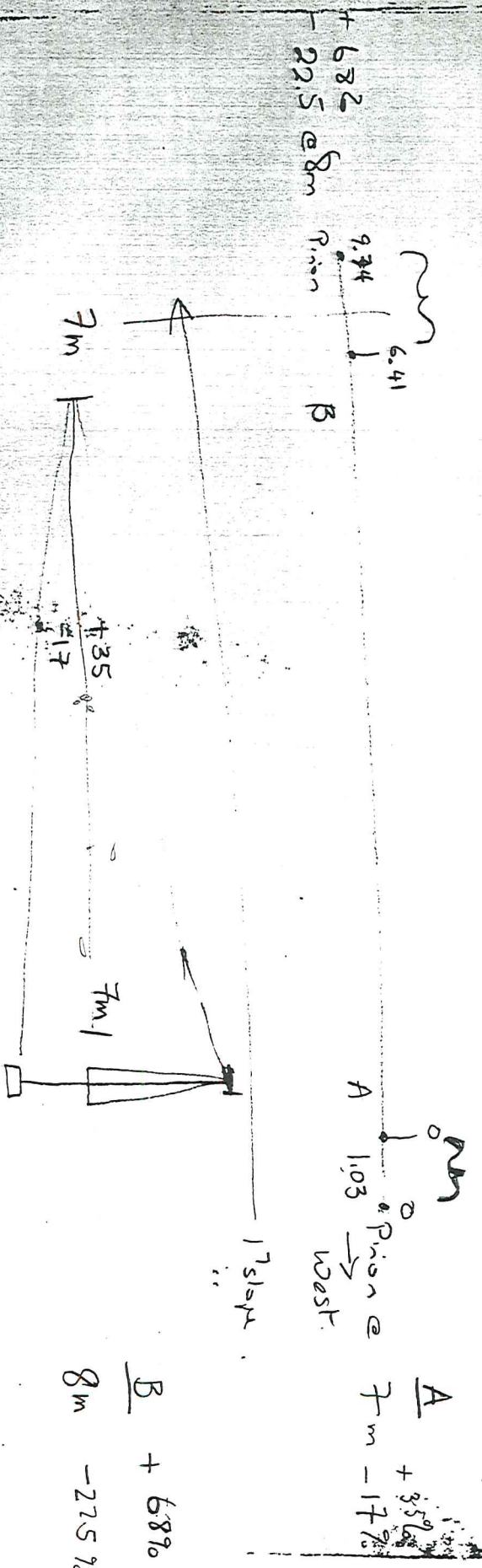
Community: _____

Plots/burn/disturbance Open burn Dense wood is greater than 10 yrs

Sketch:

#9 transect Azimuth 92°

66°



B + 6890
8m -225%

64
-22
86

Forest Service Cryptogamic Habitat Study

Gps: _____ S: _____ E: _____ Site #: MAN 4 Date: _____

Time: _____ Elev: _____ Surveyors: _____

Directions to Site: _____

General Site observations: _____

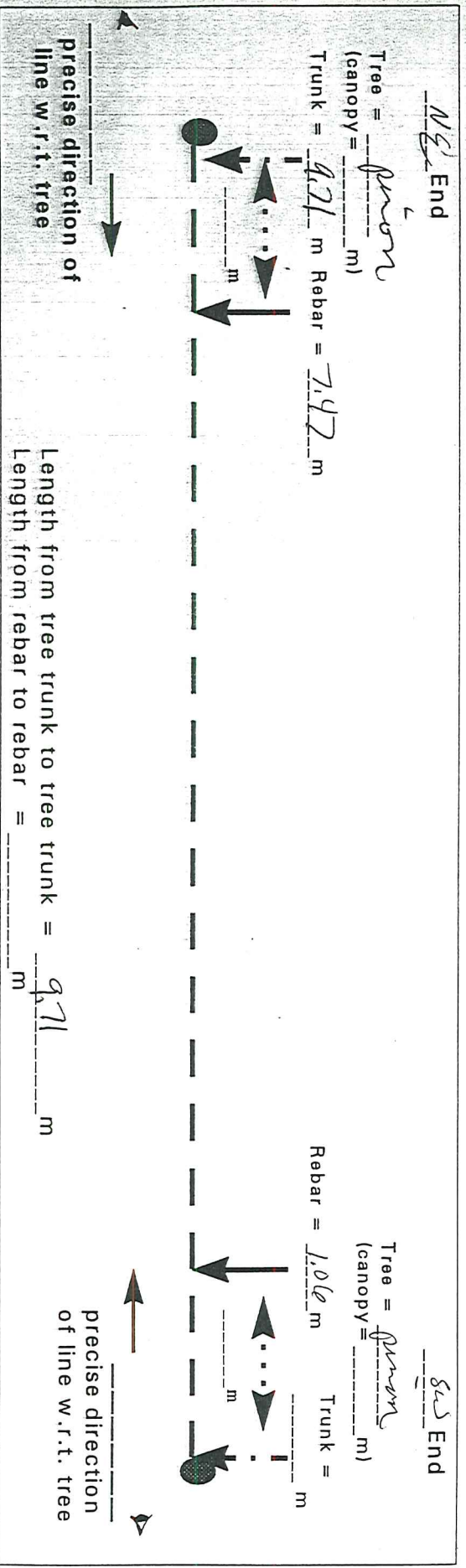
Primary Aspect: _____ Secondary Aspect: _____ Primary slope & direction: _____ Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transsect: _____ m from _____ end Open quarters facing: North: _____ South: _____ East: _____ West: _____
 Within 1m at _____ end. Open quarters facing: North: _____ South: _____ East: _____ West: _____
 Within 1m at _____ end. Open quarters facing: North: _____ South: _____ East: _____ West: _____

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals
 In vicinity - if particularly abundant)

Woody debris within: _____ m of transect; in what part of transect: _____
 Woody debris within: _____ m of transect; in what part of transect: _____

Species: _____ Tree at _____ end. Standing: _____ m away + _____ (%: right side of clinometer)
 Species: _____ Tree at _____ end. Standing: _____ m away + _____ (%: right side of clinometer)



Site No. WYN 04 Date: 7.24 Surveyors: KS GPS #: _____ S: _____ E: _____ Time: _____ Elev: _____

SOUTH SIDE

	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravel < 1 cm	20	4	3	8	5	6	4	9	7	20	6	4	5	6	
Gravel 1-2	5	10	13	6	9	14	5	11	4	4	6	1	1	10	14
Gravel > 2-6										5				10	14
Stones 6-15cm															
Rocks 15cm-1m															
Boulders > 1m															
Bedrock															
Soil	66	56	67	58	74	65	58	51.5	63	56	42	65	76	47	82
Sand															
litter/hoarsteege	15	25	14	23	16	8	27	20	18	12	40	25	19	25	15
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Seat (type and size)															
Lichen <u>White WMat</u>											(11)				(1)
Lichen <u>Black WMat</u>											(11)				(5)
Lichen <u>Dark grey</u>															(2.5)
Lichen															
Lichen															
Lichen															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
<u>GALEA</u>		5	3	5		3	5	6.5	8	3	6	5			
<u>CPA</u>								2						2	

Site No. MAN/4 Date: 7.24 Surveyors: JAKL NM GPS #: S: E: Time: Quad 58 Quad 59 Quad 60 Elev:

	Quad 46	Quad 47	Quad 48	Quad 49	Quad 50	Quad 51	Quad 52	Quad 53	Quad 54	Quad 55	Quad 56	Quad 57	Quad 58	Quad 59	Quad 60
Gravels < 1 cm	45	35	30	12	57	26	25	18	25	4	5	15	24	59	60
Gravel 1-2	1	2	3	1	4	8	2	7		2	5	3		1.5	4
Gravel > 2-6		4				20			12	8	13	5	15		
Stones 6-15cm							19	15	25						
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	38	14	35.5	25	35	35	10	30	24	36.5	25	33	30	55	40
Sand	3			2			6				1		5		2
litter/debris							18					40	25	40	40
Woody debris 3-8cm								28							
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)	16	5								.5			1		
Lichen wolfoc	1														
Lichen white crumbles		(1)	(1)		(10)		(12)	(7)		(1)			1		
Lichen black crumbles						(16)		(10)		(5)					
Lichen green crumbles								(1)		(15)					
Lichen green crumbles								(1)		(1)					
Lichen brown crumbles								(.5)					2		
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
BRUNNIA															
YPOGONIA	15	4	1	2				2		7	6	4		3.5	8

Summer 1997

108 pts

Forest Service Cryptogamic Habitat Study

Site#: Roads Date: 7/25 Surveyors: _____

Gps: L072518A S: 37840783E Time: 1245 Elev: 2567 m

Directions to Site: 27.6 km W of Peak

General Site observations:

Slope and direction: 3.5% 88° Aspect: 88°

Canopy cover of site:

Mid-transsect: Open quarters facing: <u>(S)</u>	North: <u>84</u>	South: <u>81</u>	East: <u>96</u>	West: <u>96</u>	Posn: <u>2.8 m from A end</u>
<u>A</u> end: Open quarters facing: _____	North: <u>95</u>	South: <u>35</u>	East: <u>85</u>	West: <u>91</u>	
<u>(N)</u> <u>B</u> end: Open quarters facing: _____	North: _____	South: <u>93</u>	East: <u>67</u>	West: <u>68</u>	

Source

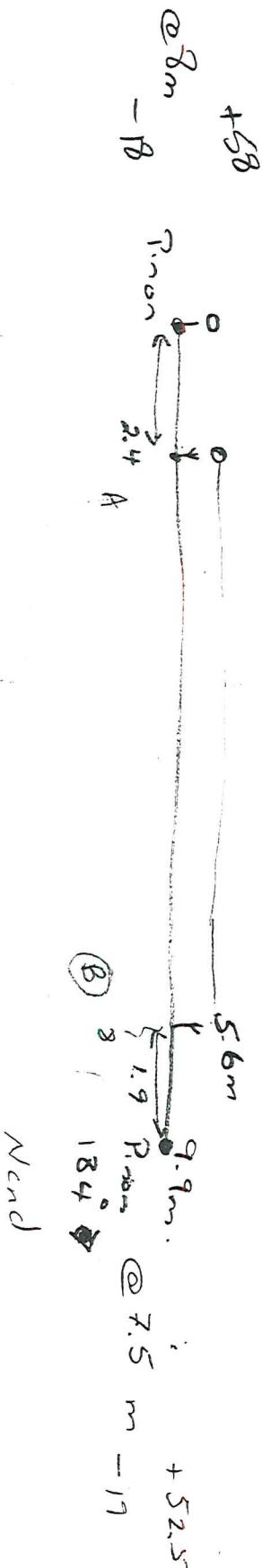
Community:

Plnts/burn/disturbance

Add seed Went's bin 3m Oxytropis disquerella Eragrostis Open

Sketch:

Plots 11
@ 220°



5.6
2.4
8.0

Forest Service Cryptogam Habitat Study

Site No. RMAOS

Date: 7/25

Surveyors: _____

GPS #: _____

S: _____

E: _____

Time: _____

Page 2 of 4
Elev: _____

	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	3	11	35	34	13	25	25	26	29	10	5	2	2.0	3.4	10
Gravel 1-2	3	2	2	3	2	3	5	3	8		1	2	2	6	
Gravel > 2-6		12	5	3			1	6			2				
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	15	40	53	30	40	42	52	50	54.5	36	3.1	35	54	49.5	50
Sand		5													
litter/branches	53	20	5	15	44	15	15	15	3	3	40	16	17.5	4	15
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)	1												1.5		
Lichen Xerops					1	15									
Lichen barkrock															
Lichen grass "												(12)			
Lichen grass "												(12)			
Lichen Brn Fw															0.5
Lichen															
Lichen															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae Nostoc									0.5						
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
Diaper	25			15	5										
Moss seedling		0.1					2			25	15	12			20
Wood fern (partial)											1				

Forest Service Cryptogam Habitat Study

Site No. R2005 Date: 7/25 Surveyors:

GPS #:

S:

E:

Time:

Page 1 of 4

Elev:

Start	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Start	10	22	20	10	14		17	23	15	20	29	30	15	6	2
Gravels < 1 cm	4	4	2	4	9		3	2	1	2	7	10	9		2
Gravel > 2-6	5							2.5	2.5	2			16		3
Stones 6-15cm									2.5						10
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	25	30	10	30	20	38	34	15	32	46	57	45	13	24	20
Sand	(52)	43.5	63	48.5	(64.5)	60	45	45	25	30	6	10	40	57	58
litter/leaf litter															
Woody debris 3-8cm	51				566										
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)						1.5									
Lichen Brn GMA	4	0.5		7	0.5		1	2	(1)			(1)			1
Lichen (sh. brn. GMA)					(2)									1	1
Lichen Xan par								7	(1)		(2)	(3)			
Lichen Calloana							1					(1)			
Lichen Gray brn on rock															
Lichen brn " "															
Moss Brn (star)				0.5											
Moss Wand								1							
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae Mastoc								0.5							
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
Bryoph	1		5			0.5		1						6	3

Forest Service Cryptogam Habitat Study

Site No. RN005 Date: 7/25

Surveyors: _____

GPS #: _____

S: _____

E: _____

Time: _____

Page 3 of 4
Elev: _____

	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravels < 1 cm	20.5	33.5	39	7	15	30	25	27	35	15	30	29	20	32	32
Gravel 1-2	2	1.5	3		1	5	5		1	5	3	4	1	5	3
Gravel > 2-6	4.5		3	5							7				
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	40	53	50	7.5	53	35	23	50	50.5	56	54	48	39	48	55
Sand		10	4	10	15	5	5	3	15	5	4	8	8	2	5
litter/leaf litter	15	2	1	2	2	15	10	2	3.5	(4)	2	10	25	8	(4)
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)				1									1		5
Lichen Xanpar bunny					14	8	22	18							
Lichen															
Lichen															
Lichen															
Lichen															
Lichen															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
Bamboo	10					2	10			3		1	6	2	

Site No. LA065 Date: 7/25 Surveyors: _____ GPS #: _____ E: _____ S: _____ Time: _____ Elev: _____

	Quad 47	Quad 48	Quad 49	Quad 50	Quad 51	Quad 52	Quad 53	Quad 54	Quad 55	Quad 56	Quad	Quad
Gravels < 1 cm	29	25	15	20	15	20	15	28	26	1		
Gravel 1-2	3	4		1			2	4	8			
Gravel > 2-6	3						3	3	5			
Stones 6-15cm					25	0						
Rocks 15cm-1m												
Boulder > 1m												
Bedrock												
Soil	49	50	37	48	30	11	40	32	20	2		
Sand	10		3	6	5	10	4	25	5			
litter/leaf	6	17	34	10	17	45	35	10	35	82		
Woody debris 3-8cm												
Woody debris 8-30cm												
Woody debris > 30 cm												
Scat (type and size)		1						2	25			
Lichen <i>Brya</i>												
Lichen <i>Brya</i>	0.5							0.5				
Lichen <i>Brya</i>					(15)							
Lichen <i>Brya</i>					(5)							
Lichen												
Lichen												
Lichen												
Moss												
Moss												
Moss												
Moss												
Moss												
Moss												
Moss												
Liverwort												
Algae												
Canopy-grass												
Canopy-forb												
Canopy-shrub												
Vascular Species												
<i>Brya</i>	1	3	11	15	8	1	1	3	15			

Summer 1997

Forest Service Cryptogamic Habitat Study

Site#: MA2085 Date: 7/25/97 Surveyors: NM/KS Gps: _____

Directions to Site: _____

S: _____

E: _____

Time: _____

Elev: _____

General Site observations:

Slope and direction: 174° W → E Aspect: 175°

Canopy cover of site: 21% 3° 27.1/2°

Mid-transect: Open quarters facing: North: 95 South: 94 East: 96 West: 86

A end: Open quarters facing: North: 78 South: 76 East: 96 West: 14

B end: Open quarters facing: North: 95 South: 94 East: 36 West: 96

Posn: 3.7m from A end

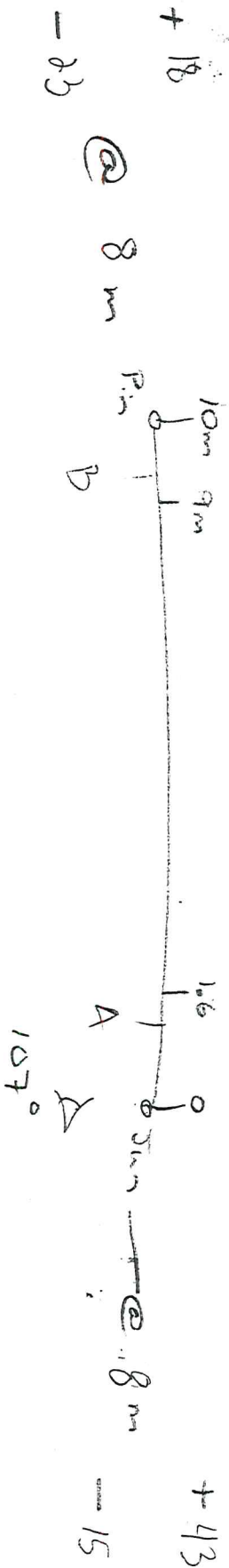
Community:

Plnts/burn/disturbance

Red ant hill visible in background @ 1.1m from west end
Large red ant hill south of line at 4.9m from west end (1.5 meters from line.)

Sketch:

photo 10 B end in foreground at $\approx 3/5^\circ$



	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	20	11	2	2	3	12	4	16	20	20	24	21	12	4	16
Gravel 1-2	4	3		3	2	3	2		14	15	5	2	2		
Gravel > 2-6												6			
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	70	71	66	62	72	53	59	10	59	50	22	54	75	79	37
Sand															
litter/basal veg	3	8	25	21	10	19	4	4	3	3	35	11	5	8	15
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm					16										
Scat (type and size)															
Rabbit															
Lichen Xan par	3	5		2	4	5	6	1	4	1		2	3	6	27
Lichen															
Lichen															
Lichen lt green (rock)													(15)		
Lichen orange crust (rock)												(1)			
Lichen white crust (rock)												(1)	(1)		
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
liver grass		2	7	10	3	7	2	1		1	14	4	3	3	3

Forest Service Cryptogam Habitat Study

KS / NW

S: E:

Time:

Page 3 of 5
Elev:

Site No. MAN05

Date: 7.25

Surveyors:

GPS #:

	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravels < 1 cm	13	3	15	40	6	7	3	6	30	15	60	80	38	5	25
Gravel 1-2	1	1		5	3	2		4	1	2	11		5		8
Gravel > 2-6	5			2	2					3	3	5	5		
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	69.5	38	29	29.5	43.5	48.5	8	19	44	16	11	10	12	45.5	55
Sand															
litter/branches	1.5	35	20	3	30	25	40	22	10	30	4	2	25	40	8
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Seat (type and size)	mm			.5	1.5	.5		1							
Lichen XNW	10	20	30	20	4	14	45	45	15	26	11	3	13	4.5	3
Lichen <i>St. gwyneddii</i>										(3)	(1)				
Lichen <i>Leckia omphala</i>											(1)				
Lichen <i>Wetia cincta</i>											(.5)	(2)			
Lichen <i>St. gwyneddii</i>											(1)	(1)			
Lichen															
Moss:															
Moss:															
Moss:															
Moss:															
Moss:															
Moss:															
Moss:															
Moss:															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
<i>BORAGE</i>	3	6		1	10	3	4	3		6		9	7		1

Forest Service Cryptogam Habitat Study

Site No. MAN 05 Date: 7.25.1977 Surveyors:

GPS #:

S:

E:

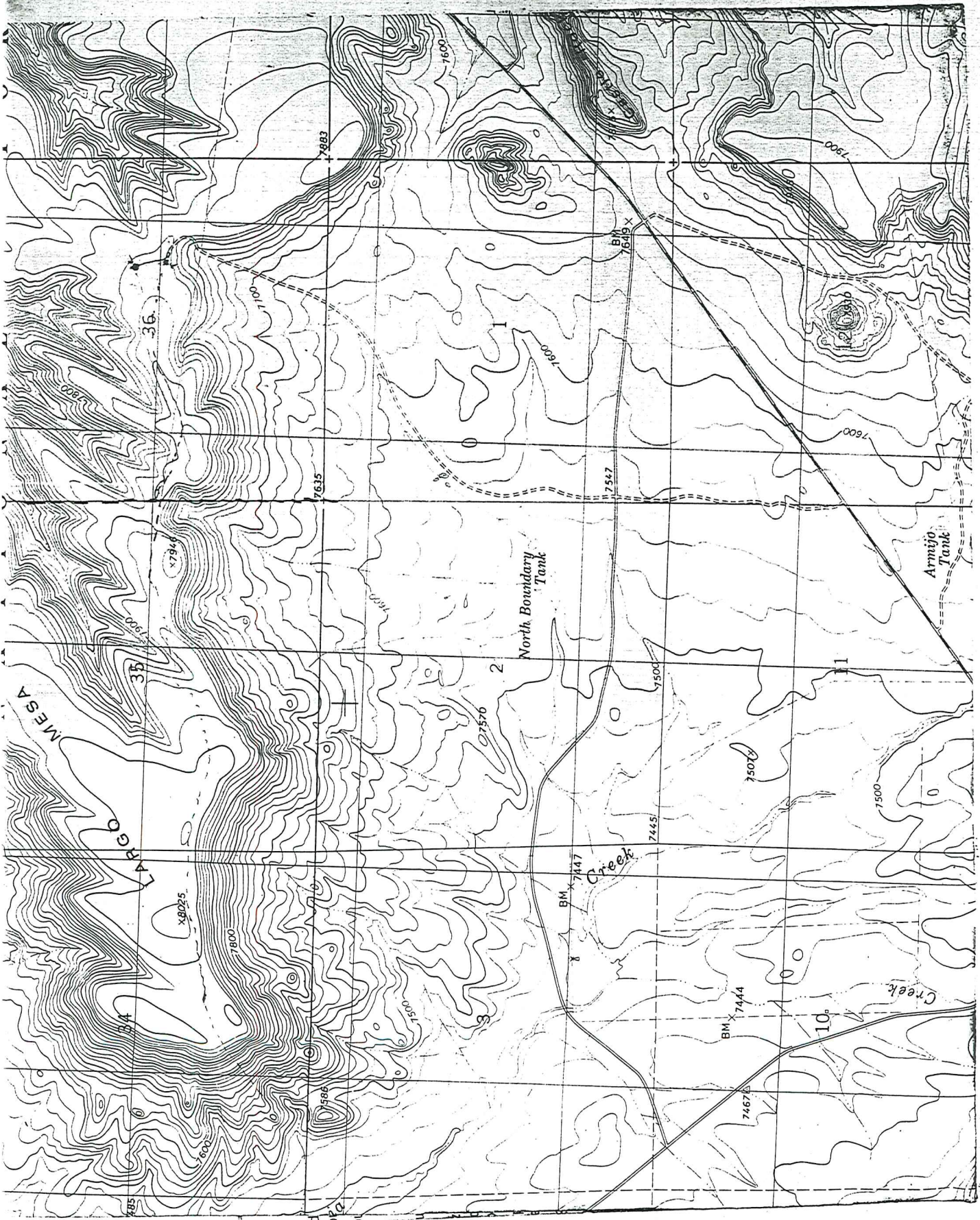
Time:

Page 4 of 5

Elev:

	Quad 46	Quad 47	Quad 48	Quad 49	Quad 50	Quad 51	Quad 52	Quad 53	Quad 54	Quad 55	Quad 56	Quad 57	Quad 58	Quad 59	Quad 60
Gravels < 1 cm	35	35	12	8	2	7	17	2	2	6	4	32	10	30	10
Gravel 1-2												4	2	1	
Gravel > 2-6															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	65	66	37	57	48	80	70	52	22	71	72	60.5	67	65	72.9
Sand															
litter/basal veg	2	4	6	20	210	10	5	40	65	18	20	2	15	4	14
Woody debris 3-8cm					36										
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat (type and size)															
Rabbit															
Lichen Xan par	3	2	43	12	2	1	6	3	2	1		.5			.1
Lichen															
Lichen															
Lichen															
Lichen															
Lichen white crust (calk)															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species															
50M SRA		3	2	3	12	2	2	3	9	4	4	1	6		3

	Quad 61	Quad 62	Quad 63	Quad 64	Quad 65	Quad 66	Quad 67	Quad 68	Quad 69	Quad 70	Quad 71	Quad 72	Quad 73	Quad 74	Quad 75
Gravels < 1 cm	6	7	10	35	39	3	20	25	10	30	35	28.5			
Gravel 1-2				3	2	2	2	4				3			
Gravel > 2-6															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	54	35.5	41	29	18	20	20	31.7	58.9	42	39	30	12	12	31.3
Sand															
litter/forest veg															
Woody debris 3-8cm	35	50	38	30	38	64.4	47.5	18	17	20	18	18	5.3	79.4	50
Woody debris 8-30cm						64.4									
Woody debris > 30cm															
Scat (type and size)	Y/M/V					.5	.5								
Lichen XAN	3	4.5	2			.1		20	10	3	4	20	28	.1	7
Lichen black cyanotox								.1				.5			
Lichen brown fur								.1							
Lichen brown dwarf								.1							
Lichen Cladonia								.1							
Lichen dark pine wood									.1						
Lichen Peltigera															
Moss white dwarf															
Moss black dwarf column															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae Nostoc															
Canopy-grass															
Canopy-forb															
Canopy-shrub															
Vascular Species	2	3	5	3	8	10	10	4	4	5	4		7	10	4



Record of transects

11.6

Plot #	Date	AZIMUTH	Direction	Pair		Azimuth	Azimuth
				NW	NE		
RNA 1	7/22	320/140	NW / SE	1	0 3	352/172	0 3 352/172
MAN 1	7/22	350/170	NW / SE	1			
RNA 2	7/23	278/98	NW / SE	1			
MAN 2	7/23	350/170	NW / SE	1			
RNA 3	7/23	352/172	NW / SE	1			
MAN 3	7/23	352/172	NW / SE	1			
RNA 4	7/24	258/78	NE / SW	1			
MAN 4	7/24	66	NE / SW	1			
RNA 5	7/25	184/4	NE / SW	1			
MAN 5	7/25		NW / SE	1			
RNA 6	7/29	276/96	NW / SE	1			
MAN 6	7/29	222/42	NE / SW	1			
RNA 7		269/89	NE / SW	1	Check line direction		
MAN 7	7/31	257/77	NE / SW	1			
RNA 8	7/29	270/90	E / W				
MAN 8	7/31	201/21	NE / SW	1			
RNA 9	7-31	214/34	NE / SW	1			
MAN 9	7-31	217/37	NE / SW	1			
RNA 10	8-5	10/190	NE / SW	1			
MAN 10	8-1	244/64	NE / SW	1			
RNA 11	8.5	66/256	NE / SW	1			
MAN 11	8.6	22/202	NE / SW	1			
RNA 12	8.6	58/238	NE / SW	1			
MAN 12	8.6	6/186	NE / SW	1			
RNA 13	8.8	168/348	NW / SE	1			
MAN 13	8.8	303/123	NW / SE	1			
RNA 14			NE / SW	1			
MAN 14	8.8	332/152	NN / SE	1			
RNA 15							
MAN 15	8.18		NW / SE	1			
RNA 16			NW / SE				
MAN 16							
RNA 17			NW / SE	1			
MAN 17							
RNA 18			NE / SW	1			
MAN 18							
RNA 19			NW / SE				
MAN 19							
RNA 20			NE / SW				
MAN 20							

RNA
NW NE
5 27

MAN NE
NW 8
4
28

RNA
NW NE
11 1

MAN NE
NW NE

NE RNA NW
2 1 56

NE MAN NW
7 8 5 7 8

Forest Service Cryptogamic Habitat Study

Gps: 107-29-18A S: 3784231

E: 722437.1

Date: 7-29-97

Elev: 2462m

Site#: R50066
Time: 12:45
Surveyors: ES / WM

Directions to Site: 17.4 m W. of Fence.

General Site observations:

Downed woody material found on North of transect

Primary Aspect: 90° Secondary Aspect: Primary slope & direction: EAST Secondary slope and direction:

Canopy cover of site:

Mid-transect: 3.32m from E end Open quarters facing: North: 96 South: 80 East: 96 West: 75
 Within 1m at E end. Open quarters facing: North: 96 South: 68 East: 72 West: 96
 Within 1m at W end. Open quarters facing: North: 92 South: 72 East: 96 West: 76

Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)

Banana Eri glia Sitotia mystrix
 Van Par Usine (condensed wood)
 Unid #1 - spec taken
 Unid #2 - all egg leaves - small pink (leaves)

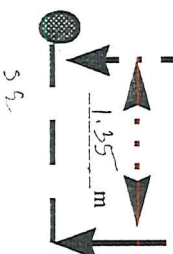
Woody debris within: 2.6 m of transect; in what part of transect: North of transect large downed tree
 Woody debris within: 2.4 m of transect; in what part of transect:

Species: Piñon Tree at east end. Standing: 7 m away + 10 - 24 (%: right side of clinometer)
 Species: Lavender Tree at west end. Standing: 4 m away + 24 - 28 (%: right side of clinometer)

West End

Tree = JUNIPER
 (canopy = 1.35 m)

Trunk = 8.1 m Rebar = 7.35 m



precise direction of line w.r.t. tree

Length from tree trunk to tree trunk = 8.7 m
 Length from rebar to rebar = 10.4 m

East End

Tree = Piñon
 (canopy = 7.1 m)

Rebar = 7.1 m Trunk = 0 m



precise direction of line w.r.t. tree

Length from tree trunk to tree trunk = 8.7 m
 Length from rebar to rebar = 10.4 m

Site No. <i>222A</i>	Date: <i>7-29-91</i>	Surveyors: <i>KS, MN</i>	GPS #:	Work on downslope side of line = <i>10/18</i>											
Start at <i>222A</i> end															
Gravels < 1 cm	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravel 1-2cm															
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulders > 1m															
Bedrock															
Soil	<i>84.7</i>	<i>76</i>	<i>18.5</i>	<i>12.8</i>	<i>42.9</i>	<i>50.8</i>	<i>60.9</i>	<i>58.9</i>	<i>33</i>	<i>35.5</i>	<i>50.5</i>	<i>62.8</i>	<i>50.9</i>	<i>48.9</i>	<i>20</i>
Sand															
litter	<i>8</i>	<i>22.9</i>	<i>(65)</i>	<i>65</i>	<i>50</i>	<i>40</i>	<i>23</i>	<i>26</i>	<i>38</i>	<i>25</i>	<i>22</i>	<i>22</i>	<i>30</i>	<i>22</i>	<i>55.4</i>
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm									<i>15</i>						
<i>Xan Pac</i>															
Scat <i>Kahli-</i>															
<i>C-Diplo</i>															
Lichen <i>Cladonia</i>															
Lichen <i>Myrmec</i>	<i>.1</i>		<i>.5</i>			<i>.1</i>	<i>1</i>	<i>.5</i>							
Lichen white crust				<i>2</i>			<i>1</i>	<i>.1</i>							
Lichen white crust					<i>.1</i>		<i>1</i>	<i>4</i>							
Lichen rock white crust							<i>(1)</i>	<i>4</i>			<i>.5</i>		<i>(1)</i>	<i>(1)</i>	
rock if sparse							<i>(1)</i>								
Moss <i>Star</i>	<i>.1</i>							<i>.5</i>				<i>.1</i>			
Moss															
Moss															
Moss															
Moss <i>Green</i>															
Moss <i>Green</i>															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougra	<i>2</i>	<i>1</i>	<i>15</i>	<i>22</i>	<i>7</i>		<i>7</i>	<i>4</i>	<i>4</i>	<i>3</i>	<i>35</i>	<i>8</i>	<i>7</i>	<i>8</i>	<i>5.5</i>
Wood <i>Red</i>	<i>(.1)</i>	<i>(.1)</i>		<i>.1</i>		<i>.1</i>	<i>.1</i>						<i>.1</i>	<i>.1</i>	<i>.1</i>
Canopy-shrub															
Canopy-forb															
Canopy-grass	<i>4</i>	<i>2</i>	<i>29</i>	<i>25</i>	<i>16</i>	<i>14</i>	<i>7</i>	<i>10</i>	<i>8</i>	<i>50</i>	<i>13</i>	<i>10</i>	<i>23</i>	<i>12</i>	<i>15</i>

Site No	Date	Surveyors	GPS #:	Work on downslope side of line =															
Start at	end			Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45	
Gravels < 1 cm	4																		
Gravel 1-2cm	6																		
Gravel > 2-6cm																			
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	82	81	49	67	69	65	80	82	64	82	78	77	69	71.5					
Sand																			
litter	5	2	22	17	10	24	11	4	1	2	2	14	12	15	20.				
Woody debris 3-8cm																			
Woody debris 8-30cm																			
Woody debris > 30 cm																			
Scat Rabbit																			
(Blow)																			
Lichen Brown RW	2																		
Lichen																			
Lichen																			
Lichen green crust (red)	(11)	(11)		(11)	(11)		(.5)	(.5)	(.07)	(11)	(11)								
white "Pole"	(11)	(11)		(11)	(.5)		(.5)	(.07)	(11)	(11)									
Moss XUAN PAN																			
Moss																			
Moss																			
Moss																			
Moss S+ac																			
Liverwort																			
Algae tenell																			
Nostoc																			
Vascular Species																			
Basal veg: Bougria	1		26	12	11	7	4												
Canopy-shrub																			
Canopy-forb																			
Canopy-grass	2	2	40	20	20	15	10	4	2	2	1	6	13	28	10				

Forest Service Cryptogam Habitat Study

Site No. <i>QMA #6</i>	Date: <i>7-29-97</i>	Surveyors: <i>L.S. / QMA</i>		GPS #:	Work on downslope side of line =										
Start at <i>East end</i>	Quad <i>6/1</i>	Quad <i>6/2</i>	Quad <i>6/3</i>	Quad <i>6/4</i>	Quad <i>6/5</i>	Quad <i>6/6</i>	Quad <i>6/7</i>	Quad <i>6/8</i>	Quad <i>6/9</i>	Quad <i>7/0</i>	Quad <i>7/1</i>	Quad <i>7/2</i>	Quad <i>7/3</i>	Quad <i>7/4</i>	Quad <i>7/5</i>
Gravels < 1 cm	27	23	25	8	10	5	13	40	22	45	40				
Gravel 1-2cm			2					10	3	8	1				
Gravel > 2-6cm			4												
Stones 6-15cm															
Rocks 15cm-1m															
Boulders > 1m															
Bedrock															
Soil	50.9	54	47.9	48.15	30.9	38	49	38.9	70	31	23.9				
Sand															
Litter	15	15	12	35	45	45	20	14	4	16	35				
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat <i>leaf litter</i>				1				1	1						
Lichen <i>hylocomium</i>		5													
Lichen <i>brachycom crust</i>				1											
Lichen															
Lichen <i>green crust rock (1)</i>		(1,1)	(5-)				(1,1)	(1)	(1)	(5)	(1,1)				
Lichen <i>white crust rock (1)</i>		(1,1)	(1,1)				(1,5)			(5)	(1,1)				
Lichen <i>gray crust rock</i>			(1,5)							(1,1)					
Moss															
Moss															
Moss															
Moss <i>star</i>	.1		.1	.5	15	2									
Moss															
Liverwort															
Algae <i>verruca</i>			2	2		4									
Nostoc															
Vascular Species															
Basal veg: <i>Bougra</i>	7	3	7	4	12.5	6	4								
<i>res. seedlings</i>					.1										
<i>ec1 9/4</i>						4									
<i>WOOD seedlings</i>															
Canopy-shrub															
Canopy-forb					1										
Canopy-grass	12	5	15	10	18	10	5	2	2		.5				

Forest Service Cryptogamic Habitat Study

Gps: 103 28-48 S: 200 800000 W

E: 72 137.1

Date: 1-29-97

Elev: 2462m

Site#: R00085
Time: 18:45
Surveyors: ES JWM

Directions to Site: 17.4 m N. of fence

General Site observations:

Downy wood pecker in hole in trunk of tree

Primary Aspect: 90° Secondary Aspect: Primary slope & direction: Secondary slope and direction:

Canopy cover of site:

Mid-transsect: 333m from E end Open quarters facing: North: 96 South: 82 East: 96 West: 25
 Within 1m at E end Open quarters facing: North: 96 South: 68 East: 72 West: 96
 Within 1m at W end Open quarters facing: North: 92 South: 42 East: 96 West: 16

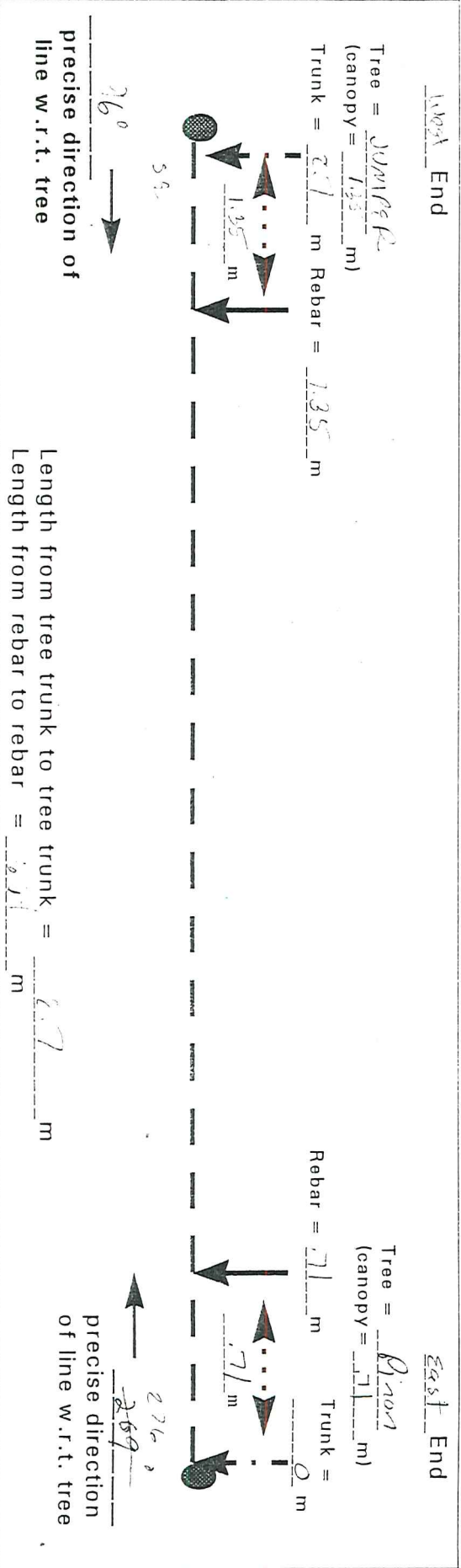
Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals in vicinity- if particularly abundant)

- W. S. G. A. (old spruce forest)
- E. S. G. A. (old spruce forest)
- S. S. G. A. (old spruce forest)
- Jun Per (downed wood)
- Und #1 - spruce

Woody debris within: 2.6 m of transect; in what part of transect: North of transect large downed tree
 Woody debris within: 2.4 m of transect; in what part of transect: "

Species: Pinon Tree at East end. Standing: 1 m away + 10 - 24 (%: right side of clinometer)
 Species: Pinon Tree at West end. Standing: 1 m away + 2 - 24 (%: right side of clinometer)



Site No. (LNA#)	Date:	7-29-97	Surveyors:	V.S.	N.M.	GPS #:	Work on downslope side of line = 10/19														
Start at	end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15					
Gravels < 1 cm			1					9	10	1											
Gravel 1-2cm																					
Gravel > 2-6cm																					
Stones 6-15cm																					
Rocks 15cm-1m																					
Boulder > 1m																					
Bedrock																					
Soil		31.1	76	18.5	17.2	42.9	50.2	60.9	57.1	33	35.5	50.5	62.8	50.9	62.9	7.2					
Sand																					
litter		8	22.9	(6.5)	6.5	50	40	23	210	38	25	32	22	30	22	50.9					
Woody debris 3-8cm																					
Woody debris 8-30cm																					
Woody debris > 30 cm										15											
Scat	Xan Pac																				
Scat	habitat																				
Scat	litter																				
Lichen	clay			15				1				.5									
Lichen	knob				2			1				.1									
Lichen	white						.1														
Lichen	fruit							1				4									
Lichen	rock							(1)													
Lichen	rock							(1)													
Lichen	rock							(1)													
Moss	clay								.5												
Moss																					
Moss																					
Moss																					
Moss																					
Moss																					
Moss																					
Liverwort																					
Liverwort																					
Algae																					
Nostoc																					
Vascular Species																					
Basal veg: Bougrea		2	1	15	22	7	7	4	4	3	25	8	7	8	8	5.5					
Mud		(.1)	(.1)		.1		.1	.1					.1	.1		.1					
Canopy-shrub																					
Canopy-forb																					
Canopy-grass		4	2	6.5	23	10	14	7	10	8	50	13	10	23	12	15					

Site No. R11A 06	Date: 7/29	Surveyors: 15/11/11										GPS #:	Work on downslope side of line = NORTH										
Start at	end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20		
Gravel < 1 cm		2	4	5	5	3	2			1		4	6	30	2	4	3	2	4	4			
Gravel 1-2cm			3	4	5	3																	
Gravel > 2-6cm			2	3	3																		
Stones 6-15cm																							
Rocks 15cm-1m																							
Boulder > 1m																							
Bedrock																							
Soil	50	11.5	52	79	62	20.5	3	28	40	38	38.5	56.5	25	49								60	
Sand																							
litter	39	3	25	10	15	55	67	61.5	45.9	3	2.5	2	55	25	25	25	25	25	25	25	25	25	
Woody debris 3-8cm																							
Woody debris 8-30cm																							
Woody debris > 30 cm																							
Scat					1				1														
Lichen			(11)	(11)											(2)	(11)							
Lichen		1								(3)													
Lichen			2.5	5	3	5	8	2		2.5	1			(1)		(5)							
Lichen																							
Lichen																							
Moss																							
Moss																							
Moss																							
Moss																							
Moss																							
Liverwort																							
Algae																							
Nostoc																							
Vascular Species																							
Basal veg: Bougra	9		6	3	6	10	20	8	10														
Canopy-shrub																							
Canopy-forb																							
Canopy-grass	25		8	15	12	25	40	25	12	6	4	4	35	25	30								

Site No. 11106	Date: 11/19/94	Surveyors: J. J. (110)	GPS #:	Work on downslope side of line =											
Start at	end														
Gravels < 1 cm	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravel 1-2cm	4	12	3	4	10	4	4	8	12	20	12	3	7	15	2
Gravel > 2-6cm	6	3													
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	82	81	49	67	69	65	80	82	84	82	82	78	77	69	71.5
Sand															
litter	5	2	22	17	10	24	11	4	1	2	2	14	12	15	20.
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat															
(shlunk)		.5					1					1			
Lichen <i>Lecanora</i>	2	.5													
Lichen															
Lichen															
Lichen <i>Gyrodia</i>	(11)	(11)	(11)	(11)	(.11)	(.5)	(.5)	(.5)	(11)	(11)	(11)	(11)	(11)	(11)	(.11)
Lichen <i>White Point</i>	(11)	(11)		(11)	(.5)			(.11)	(11)	(11)	(11)				
Moss <i>Xanthopann</i>															
Moss															
Moss															
Moss															
Moss <i>Sphac</i>														.1	.5
Liverwort															
Algae <i>Leptoc</i>															
Nostoc															
Vascular Species															
Basal veg: Bougra	1	1	26	12	11	7	4					4	4	16	6
Canopy-shrub															
Canopy-forb															
Canopy-grass	2	2	10	30	20	15	10	4	2	2	1	6	13	28	10

Forest Service Cryptogam Habitat Study

Site No. <i>PH 46</i>	Date: <i>7/29/97</i>	Surveyors: <i>JMM</i>	GPS #:	Work on downslope side of line =										
Start at <i>0.1</i> end	Quad <i>6e1</i>	Quad <i>6e2</i>	Quad <i>6e3</i>	Quad <i>6e4</i>	Quad <i>6e5</i>	Quad <i>6e6</i>	Quad <i>6e7</i>	Quad <i>6e8</i>	Quad <i>6e9</i>	Quad <i>7e0</i>	Quad <i>7e1</i>	Quad	Quad	Quad
Gravels < 1 cm	27	23	25	3	10	5	13	40	22	45	40			
Gravel 1-2cm			2					6	3					
Gravel > 2-6cm			4											
Stones 6-15cm														
Rocks 15cm-1m														
Boulder > 1m														
Bedrock														
Soil	50.9	54	47.9	48.15	30.9	38	49	48.9	70	31	23.9			
Sand														
litter	15	15	12	35	45	45	20	14	4	10	35			
Woody debris 3-8cm														
Woody debris 8-30cm														
Woody debris > 30 cm														
Scat <i>fruit</i>				1					1					
Lichen <i>brodiaea</i>		5												
Lichen <i>brevern crust</i>				1										
Lichen														
Lichen <i>green crust rock (1)</i>														
Lichen <i>white crust rock (1)</i>														
Lichen <i>white crust rock (1)</i>														
Lichen <i>gray crust rock (1)</i>														
Moss														
Moss														
Moss <i>e</i>														
Moss														
Moss <i>Sfar</i>	.1		.1	.5	15	2								
Moss														
Liverwort														
Algae <i>venner</i>			2	2		4								
Nostoc														
Vascular Species														
Basal veg: <i>Bougrea</i>	1	3	7	4	12.5	6	4							
<i>105, seedlings</i>					.1		4							
<i>201 q/a</i>							4							
<i>1000 seedlings</i>											1			
Canopy-shrub														
Canopy-forb					1		5	2	2		.5			
Canopy-grass	12	5	15	10	18	10	10	2	2		2			

Forest Service Cryptogamic Habitat Study

Gps: L072915A S: 3784014.1

E: 722410.6

Time: 9:15

Elev: 2487m

Site#: MAN 25

Date: 7-29-97

Surveyors: JS/AM

Directions to Site: 21.2 m E. of Fence

General Site observations: Pinus-juniper large and downed wood up slope 10-15 m from transect

Primary Aspect: 59° Secondary Aspect: 118° Primary slope & direction: 50° NW → SE Secondary slope and direction: S 0° NW → SE

Canopy cover of site:

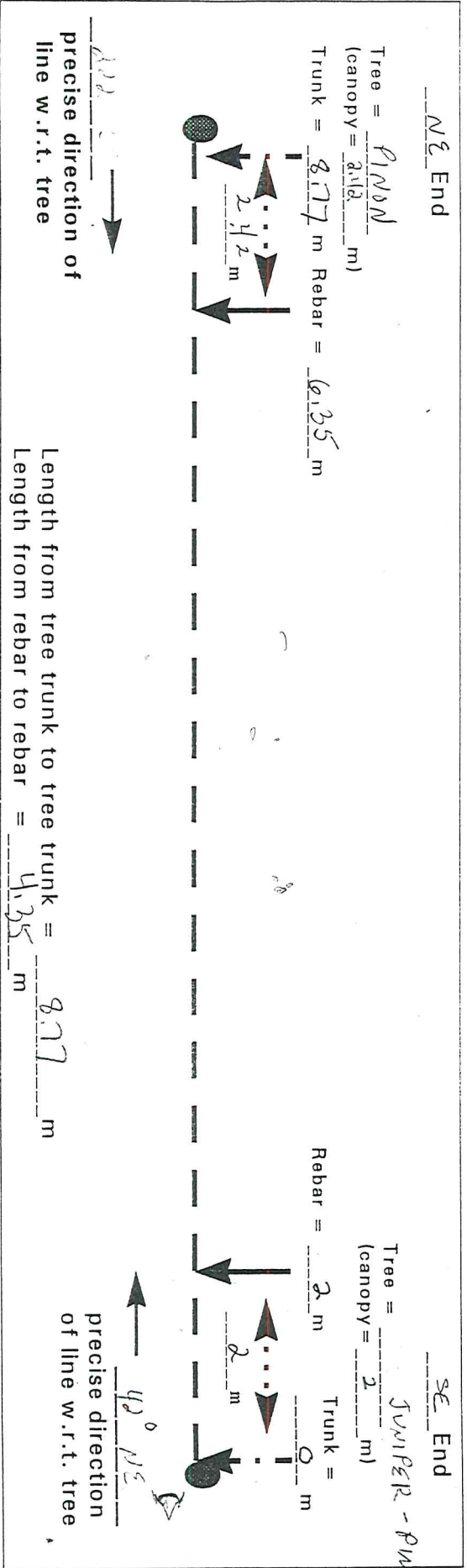
Mid-transect: 21.7m from W end Open quarters facing: North: 96°70' South: 92°07' East: 70°70' West: 89°70'
 Within 1m at West end. Open quarters facing: North: 93°00' South: 61°00' East: 76°00' West: 72°00'
 Within 1m at East end. Open quarters facing: North: 86° South: 92° East: 46°70' West: 85°

Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant):
15m Gra.
Rock spore lichen Star Moss Astragalus
(Oak) screen pine Xanthox
Endo. Alata
Des
Usnea on down wood

Woody debris within: 11m NE
 Woody debris within: 2.2 m of transect; in what part of transect: SE
 Woody debris within: 1.2 m of transect; in what part of transect: SE

Species: JUNIPER Tree at SW end. Standing: 10 m away + 80 - 21 (%: right side of clinometer)
 Species: PINON Tree at NE end. Standing: 7 m away + 63 - 25 (%: right side of clinometer)



Forest Service Cryptogam Habitat Study

Site No. 011910	Date: 7-29-97	Surveyors: KS/MM	GPS #:	Work on downslope side of line = SE											
Start at 58 end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm	2	3	4	4	3										
Gravel 1-2cm		2													
Gravel > 2-6cm			3												
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	2	2	2	3	3	3	6	15	21.5	32	15	32	75.5	12	60.5
Sand															
litter	77	90.4	85.5	86.8	86.5	88	81.5	30	15	(57)	8	12	62	76.9	(26)
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat v4 habit	2	1.5	.5						.5				.5	.5	.5
Lichen green (w/td) rock			(1)		(.1)		(1)	(.5)	(1)		(.5)				
Lichen black (w/td) - wood			(.1)				(1)	(.5)	(1)		(.5)				
Lichen black (w/td) - trees				2											
Lichen Xanthopar				.1											
Lichen white (w/td) (.1)					(.5)	(.5)	(.5)	(1)	(2)		(.5)				
Cladonia					.5	2.5	(.1)					.1	.5	.5	
Moss 1															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort				.1											
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougrea	7	1	5	4	6	8	4	6	3	10	3	4	10	10	9
Wood Audrey		.1												.1	
Canopy-shrub															
Canopy-forb															
Canopy-grass	20	4	20	18	25	21	6	18	4	14	8	5	.1	15	14

Site No. <i>NAN 016</i>	Date: <i>7.29.97</i>	Surveyors: <i>ES NM</i>	GPS #:	Work on downslope side of line = <i>SE</i>											
Start at <i>SE</i> end															
Gravels < 1 cm	Quad 11e	Quad 17	Quad 18	Quad 14	Quad 22e	Quad 21	Quad 17	Quad 23	Quad 21	Quad 23	Quad 24	Quad 27	Quad 48	Quad 29	Quad 50
Gravel 1-2cm	30	2	2	6	25	10	14	15	12	4	30	32	4	8	12
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	25	6	15	40	55	51.9	50	80	78	42.9	46.9	58	72	48	40
Sand															
litter	35	<i>(6)</i>	74	45	4	25	27	<i>(7)</i> 41.9	7	27	10	4	8	20	<i>(10)</i>
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															<i>(20)</i>
Scat <i>chick</i>	1	1		1	1	1	1			1	1				
Lichen															
Lichen															
Lichen															
Lichen <i>Crustace white rock (A)</i>						(.1)	(.1)				(.1)	(.1)	(.1)		(.5)
Lichen <i>Crustace sc rock (A)</i>						(.1)	(.1)				(.1)	(.1)	(.1)		(.1)
Lichen <i>Crustace cr slope rock</i>															(.5)
Moss <i>slar</i>	1					.1									
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
<i>Algal vegetation</i>															3
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougrea	8	9	9	8	2	12	8			25	6	2	9	18	12
<i>UNID 533 DFW6</i>								.1		.1					
Canopy-shrub															
Canopy-forb															
Canopy-grass	15	15	12	18	6	25	17	1	2	40	12	7	19	40	27

Site No. WAK/16 Date: 7/29 Surveyors: NM GPS #: Work on downslope side of line = SE

Start at	end	Quad 21	Quad 22	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 52	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravel < 1 cm		5	30	15	1			5	3	1	2	8	2	3	6	
Gravel 1-2cm		5	8	2	1			2	1	1	2	8	2	4	6	
Gravel > 2-6cm		3	2								3		5		7	
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		51	34	25 25	30	20	15	22	50.8	25	36.5	50	50	39.9	20	
Sand																
litter		25	22	25	51.4	56.9	71.9	54.3	86	66.5	45	30	35	50	55.9 54.9	
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat	<i>valvif</i>			1.5		3	6	5				4.5				
Lichen	<i>var. rosea</i> <i>crust.</i> (0.1)		(.1)													
Lichen	<i>l'p. rosea</i> <i>crust.</i> (0.5)		(.1)													
Lichen	<i>st. grayana</i> (1.1)															
Lichen	<i>exilis</i> <i>crust.</i> (1.5)		(.5)			5		(.5)				5	.5		4	
Lichen	<i>lycom. fr.</i>							1.5	1	1.5	.5		.5			
Lichen	<i>colinus</i>															
Moss	<i>cladonia</i>															
Moss																
Moss																
Moss																
Moss	<i>str.</i>					.1		1	.1							
Liverwort																
Algae																
Nostoc								3								
Vascular Species																
Basal veg: Bougrea		11	4	5	14	15	10	6	8	6	11	7	7	6	4	
<i>var. oval</i> <i>seckm.</i>				.1	.5											
<i>var. oval</i> <i>seckm.</i>					.1		.1	.1						.1	.1	
ERICA																
Canopy-shrub																
Canopy-forb																
Canopy-grass		12	10	8	19	30		8	12	16	20		13	10	10	

Forest Service Cryptogam Habitat Study

Site No. <i>NAN 96</i>	Date: <i>7-29-97</i>	Surveyors: <i>NM/RS</i>	GPS #:	Work on downslope side of line =												
Start at <i>0</i> end																
Gravels < 1 cm	Quad <i>4/6</i>	Quad <i>4/7</i>	Quad <i>4/8</i>	Quad <i>4/9</i>	Quad <i>4/9</i>	Quad <i>5/0</i>	Quad <i>5/1</i>	Quad <i>5/2</i>	Quad <i>5/3</i>	Quad <i>5/4</i>	Quad <i>5/5</i>	Quad <i>5/6</i>	Quad <i>5/7</i>	Quad <i>5/8</i>	Quad <i>5/9</i>	Quad <i>6/0</i>
Gravel 1-2cm	8	10	6	15	15	30	41	10	6	35	30	4	15	50		
Gravel > 2-6cm	11	11	4	7	15	7	5	8	5	13	12	13	13			
Stones 6-15cm	10	4		9												
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil	<i>1.2</i>	<i>54.5</i>	<i>52.9</i>	<i>52</i>	<i>46</i>	<i>17.9</i>	<i>1/6</i>	<i>25</i>	<i>65</i>	<i>60.4</i>	<i>54.4</i>	<i>55</i>	<i>54</i>	<i>25</i>	<i>23.8</i>	
Sand																
litter	<i>7</i>	<i>3</i>	<i>2.5</i>	<i>10</i>	<i>25</i>	<i>40</i>	<i>8</i>	<i>22</i>	<i>18</i>	<i>8</i>	<i>4</i>	<i>2</i>	<i>23</i>	<i>42.9</i>	<i>12</i>	
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30cm																
Scat <i>(Purpur)</i>																
<i>/an Par</i>			<i>.1</i>	<i>.5</i>			<i>2</i>									
Lichen <i>Parva frx</i>			<i>.5</i>	<i>2.5</i>				<i>1</i>		<i>1</i>					<i>.1</i>	
Lichen																
Lichen <i>blat rod rot</i>																
Lichen <i>white crust frx</i>																
Lichen <i>green crust rod (D)</i>																
Lichen <i>rod (D)</i>																
Lichen <i>rod (D)</i>																
Moss <i>Clivia</i>																
Moss <i>Peltigera</i>																
Moss																
Moss <i>SVR</i>																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: <i>Bougra</i>																
<i>Maia 1</i>																
<i>Maia coolia</i>																
Canopy-shrub																
Canopy-forb																
Canopy-grass	<i>2.5</i>		<i>15</i>	<i>10</i>	<i>25</i>	<i>30</i>	<i>2</i>	<i>15</i>	<i>15</i>	<i>10</i>	<i>10</i>	<i>2</i>	<i>15</i>	<i>10</i>	<i>2</i>	

Forest Service Cryptogamic Habitat Study
 Gps: L 07 29 15 A S: 378 40 14.1

Site#: MAN 26 E: 7 22 42 0.6

Date: 7-29-97 Time: 9:35

Elev: 2182m Surveyors: JS / AM

Directions to Site: 21.2 m E. of Pines

General Site observations: River valley - forest - low road - gully - no vegetation

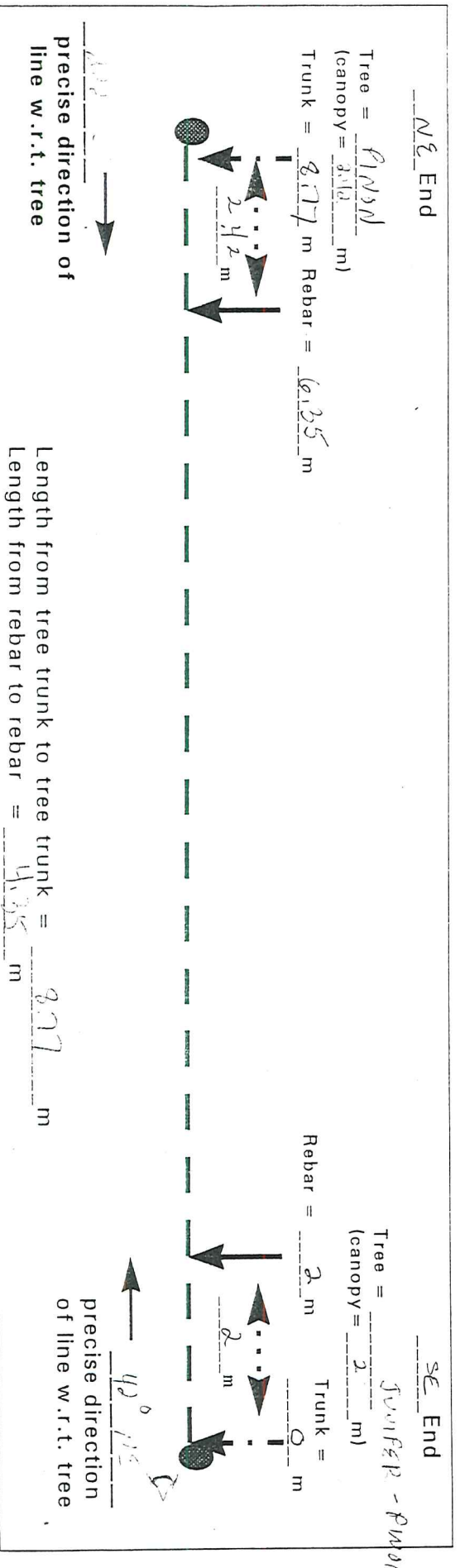
Primary Aspect: 59° Secondary Aspect: 118° Primary slope & direction: 50° → 125° Secondary slope and direction: 5° NW → SE

Canopy cover of site:
 Mid-transect: 217m from W end Open quarters facing: North: 96° 0' 0" South: 92° 0' 0" East: 70° 0' 0" West: 89° 0'
 Within 1m at West end. Open quarters facing: North: 330° South: 0° 0' 0" East: 16° 0' 0" West: 72° 0' 0"
 Within 1m at East end. Open quarters facing: North: 86° South: 92° East: 16° 0' 0" West: 85°

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)
Wood/leaves hidden Starbloss Astragalus
10 (all) species for Xan Par Urea on down wood
Erige. Alata

Woody debris within: 22 m of transect; in what part of transect: SE
 Woody debris within: 1.2 m of transect; in what part of transect: SE

Species: W/MPGL Tree at SW end. Standing: 10 m away + 80 - 21 (%; right side of clinometer)
 Species: ANOV Tree at NE end. Standing: 7 m away + 63 - 25 (%; right side of clinometer)



Forest Service Cryptogam Habitat Study

Site No. 011110	Date: 1/27/97	Surveyors: KS/AMM	GPS #:	Work on downslope side of line = <u>SE</u>											
Start at <u>SE</u> end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm	2	3	4	4	3	1	2	3	3	4	6	5	14	4	
Gravel 1-2cm		2	3												
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulders > 1m															
Bedrock															
Soil	2	2	2	3	3	3	6	15	21.5	30	15	32	75.5	12	60.5
Sand															
litter	77	90.4	85.5	86.8	86.5	88	81.5	30	15	(57)	8	12	12	76.9	(26)
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat v. debris	2	1.5	.5						.5						1
Lichen green with black			(1)		(.1)		(1)	(.5)	(1)		(.5)				.5
Lichen black with wood			(.1)												.5
Lichen dark brown				2											
Lichen yellow green				.1											
Lichen with green (1)				(.5)			(.5)	(1)	(2)		(.5)				
Quadrant				.5			2.5	(.1)							.5
Moss															
Moss															
Moss															
Moss															
Moss				.1											
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougrea	7	1	5	4	6	8	4	6	3	10	3	4		10	9
Wood Aroids		.1												.1	
Canopy-shrub															
Canopy-forb															
Canopy-grass	20	4	20	8	25	21	6	18	4	14	8	5	.1	15	14

Forest Service Cryptogam Habitat Study

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Site No. (NAID #)	Date:	Surveyors:	GPS #:	Work on downslope side of line =															
Start at SE end	7.29.97	CS / NMA																	
Gravel < 1 cm	Quad 1/2	Quad 17	Quad 16	Quad 14	Quad 22	Quad 21	Quad 22	Quad 22	Quad 21	Quad 25	Quad 24	Quad 27	Quad 28	Quad 29	Quad 30				
Gravel 1-2cm	30	2	2	6	25	10	14	15	12	4	30	32	4	30	32	11	8	16	
Gravel > 2-6cm																		3	12
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	15	6	13	40	55	51.9	50	80	78	42.9	44.7	58	72	48.	40				
Sand																			
litter	35	62	74	45	4	25	27	41	7	27	10	4	8	20	(110)				
Woody debris 3-8cm																			
Woody debris 8-30cm																			
Woody debris > 30 cm																			
Scat	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Lichen																			
Lichen																			
Lichen																			
Lichen (Crustace)						(.1)	(.1)												
Lichen (Crustace)						(.1)	(.1)												
Lichen (Crustace)						(.1)	(.1)												
Moss	1					.1													
Moss																			
Moss																			
Moss																			
Moss																			
Liverwort																			
Algae																		3	
Nostoc																			
Vascular Species																			
Basal veg: Bougrea	8	9	9	8	2	12	8			25	6	2	9	18	12				
Canopy-shrub																			
Canopy-forb																			
Canopy-grass	15	15	12	18	9	25	17	1	2	40	12	7	19	40					27

Site No. <i>WANT 6</i>	Date: <i>7/29</i>	Surveyors: <i>NM</i>	GPS #:	Work on downslope side of line = <i>SE</i>											
Start at	end														
Gravels < 1 cm	Quad > 1	Quad 34	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
	5	30	15	1	5	2	3	1	2	2	8	2	3	3	6
Gravel 1-2cm	5	8	2	1	2	1	3	1	2	2	1	2	2	4	7
Gravel > 2-6cm	3	2								3		5			
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	5	34	15 <i>30</i>	30	20	15	22	50	8	25	36.5	50	50	39.9	20
Sand															
Litter	25	22	25	51.4	56.9	71.9	54.3	86	66.5	45	20	35	50	55.9 <i>54.9</i>	
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat	<i>1.5</i>		1.5	3	6	5					0.5	1	1		
Lichen <i>var. (1)</i>															
Lichen <i>bl. (1)</i>															
Lichen <i>st. (1)</i>															
Lichen <i>g. (1)</i>															
Lichen <i>var. (1)</i>															
Lichen <i>var. (1)</i>															
Moss <i>cl. (1)</i>															
Moss <i>cl. (1)</i>															
Moss															
Moss															
Moss <i>SV</i>															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: <i>Bougia</i>	11	4	5	14	15	10	6	8	6	11	7	7	6	4	
<i>var. (1)</i>															
<i>var. (1)</i>															
<i>var. (1)</i>															
<i>var. (1)</i>															
<i>var. (1)</i>															
Canopy-shrub															
Canopy-forb															
Canopy-grass	12	10	8	19	30		8	12	16	20		13	10	18	

Site No. N4446	Date: 7-29-97	Surveyors: LLM/KS	GPS #:	Work on downslope side of line =											
Start at	end														
Gravels < 1 cm	Quad 47a	Quad 47b	Quad 47c	Quad 47d	Quad 47e	Quad 47f	Quad 47g	Quad 47h	Quad 47i	Quad 47j					
Gravel 1-2cm	7	10	6	15	6	15	20	41	10	6	35	30	4	15	50
Gravel > 2-6cm	11	11	4	12	8	7	1	7	5	8	5	13	12	13	13
Stones 6-15cm	6	4		9											
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	62	54.5	52.7	52	47.6	17.9	46	23	65	60.4	34.1	55	54	25	23.8
Sand															
Litter	7	3	2.5	10	25	17.6			17	1	15	2	23	42.9	12
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat															
Scat															
Lichen Bryozoa Crust		5		2.5			7								1
Lichen															
Lichen Heterokonts															
Lichen w/h heterokonts															
Lichen crustacean crust															
Lichen															
Moss Collembola															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougainvillea	10	7	2	2	12	12	10	4	6	11	11	4	5	1	
Basal veg: Other															
Canopy-shrub															
Canopy-forb															
Canopy-grass	25	15	10	25	20	15	15	10	10	10	10	15	10	2	

Forest Service Cryptogamic Habitat Study

Gps: L071912B S: 3783985.3

E: 722369.3

Date: 7.29

Elev: 3459

Surveyors: PO/NM

Directions to Site: 51m W. of fence.

General Site observations:

Primary Aspect: 78°

Secondary Aspect: _____

Primary slope & direction: 37° WSE

Secondary slope and direction: _____

Mid-transsect: 35 m from _____ end Open quarters facing: _____

North: 89°

South: 91°

East: 93

West: 96

Within 1m at SW end. Open quarters facing: _____

North: 94°

South: 82°

East: 91°

West: 38°

Within 1m at NE end. Open quarters facing: _____

North: 91°

South: 66

East: 83

West: 96

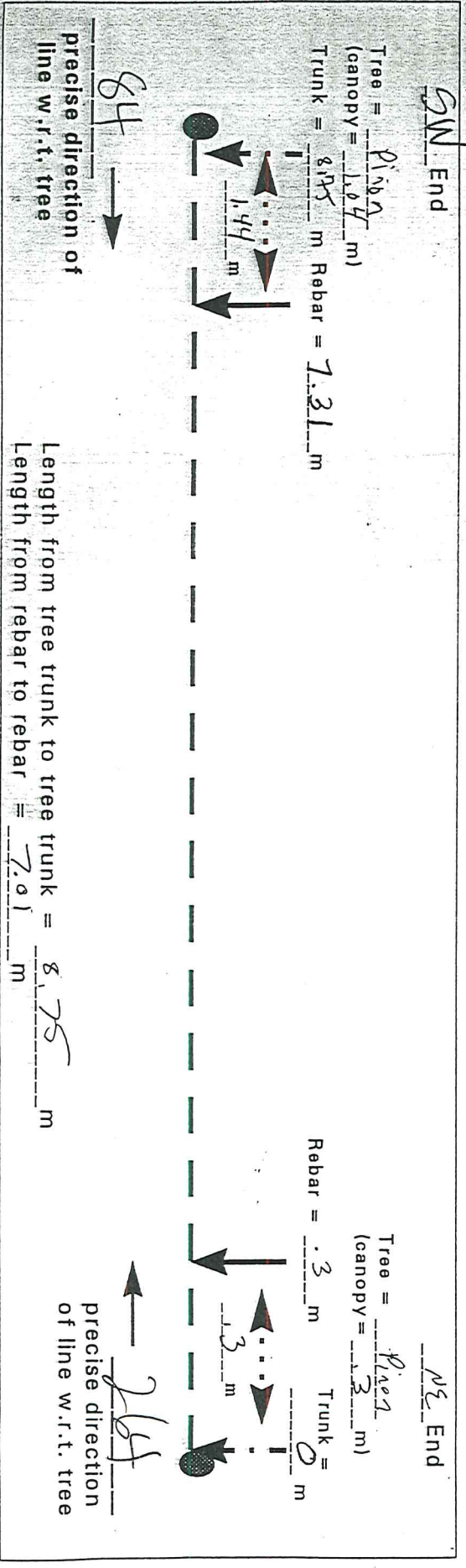
Plants (vascular and nonvascular) within 3m of transect:
(Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)

- Eriogonum (clay-dip)
- Eriodelpha (under tree)
- Xan Par star moss
- Brown fr
- USnea on downed wood

Woody debris within: 1.5 m of transect; in what part of transect: downed tree parallel to line (N) to 4.6 out

Species: Pursh Tree at NE end. Standing: 7 m away + 0 - 23 (%: right side of clinometer)

Species: Pursh Tree at SW end. Standing: 7 m away + 39 - 18 (%: right side of clinometer)



Forest Service Cryptogamic Habitat Study

Gps: L011912B S: 3782985.3

E: 722369.3

Time: 17:5

Elev: 3459

Site#: R20A 47

Date: 7.29

Surveyors: H/NM

Directions to Site: 51m W. of Pecos.

General Site observations:

Primary Aspect: 78° Secondary Aspect: _____ Primary slope & direction: 37° WSE Secondary slope and direction: _____

Canopy cover of site:

Mid-transsect: 3.5 m from _____ end Open quarters facing: North: 29% South: 91% East: 93 West: 96
 Within 1m at 512 end. Open quarters facing: North: 94% South: 82% East: 96% West: 38%
 Within 1m at N/E end. Open quarters facing: North: 91% South: 86 East: 83 West: 96

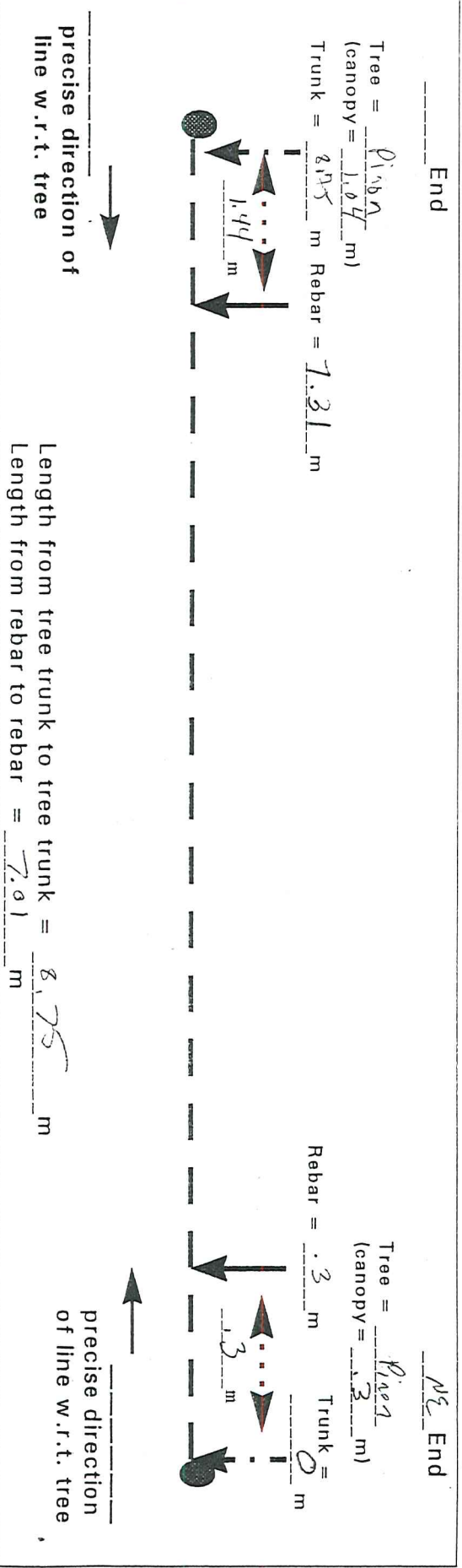
Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)

Ericaceae (Cladip colima - under tree)
Ericaceae
Xan Xar Star Moss Brown frond Usnea on downed wood

Woody debris within: 1.5 m of transect; in what part of transect: downed tree parallel to line (N) to 4.6 out
 Woody debris within: _____ m of transect; in what part of transect: _____

Species: Picea Tree at 11m end. Standing: _____ m away + 0 - 2% (%: right side of clinometer)
 Species: Picea Tree at 5m end. Standing: _____ m away + 3% - 1% (%: right side of clinometer)



Forest Service Cryptogam Habitat Study

Site No. RMA OF	Date: 7/30	Surveyors: VM/KS	GPS #:	Work on downslope side of line = SOUTH														
Start at East end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15			
SoortH side																		
Gravels < 1 cm	1		5	3	1.5	10	15	15	20	20	15	1	7	5	25			
Gravel 1-2cm	3		4	3	2	6	9	9	7	5	12	6	3	5	4			
Gravel > 2-6cm																		
Stones 6-15cm																		
Rocks 15cm-1m																		
Boulder > 1m																		
Bedrock																		
Soil	10	15	12	18	83.4	77.6	76.8	72.1	67.3	62.4	60.9	39.4	62.5	65.9	37.8			
Sand																		
litter	71.3	69.2	70.7	45.8	10	1	.5	.1	1	5	5	8	18	20	20			
Woody debris 3-8cm																		
Woody debris 8-30cm																		
Woody debris > 30 cm			54.2												24.1			
Scat																		
Lichen wood 0	2	3																
Lichen Xan PAR	20	33	25	15					3.5				2.5					
Lichen white crusts - 10-100	.1	.3		5					.1									
Lichen acadmia	.5	2	.1															
Lichen brown fru	3.5	1.5	12		.1	5	7	.1	2.5		1	6	.5					
green crusts .5				(1)					(1)	(2)	(1)				(2)			
Moss white crusts - rock																		
Moss grey crusts - rock															(1)			
Moss																		
Moss star	.1	.1	.1			.1								.5				
Liverwort																		
Algae													2.5					
Nostoc			2	.1		.1	.5	.1	.1	.5	.1							
Vascular Species																		
Basal veg: Bougrea	4.5	4		10									3.5	1	4			
Basal veg: R1 DM																		
Basal veg: seedling	.1	.1	.1	.1	2	12	.2	.1	.1	.1		.1		.1	.1			
Canopy-shrub																		
Canopy-forb	5	10	1	.1	2	.2	.2	.1	.1	.5		.1	9	.1	.1			
Canopy-grass	15	7	2	14						4	10	6		6	15			

Site No. <u>RNAP57</u>	Date: <u>7.30</u>	Surveyors: <u>NM/KS</u>	GPS #:	Work on downslope side of line = <u>South</u>											
Start at	end														
Gravels < 1 cm	Quand <u>16</u>	Quand <u>17</u>	Quand <u>18</u>	Quand <u>19</u>	Quand <u>20</u>	Quand <u>21</u>	Quand <u>22</u>	Quand <u>23</u>	Quand <u>24</u>	Quand <u>25</u>	Quand <u>26</u>	Quand <u>27</u>	Quand <u>28</u>	Quand <u>29</u>	Quand <u>30</u>
Gravel 1-2cm	<u>33</u>	<u>18</u>	<u>12</u>	<u>8</u>	<u>7</u>	<u>23</u>	<u>25</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>21</u>	<u>50</u>	<u>12</u>	<u>35</u>	<u>22</u>
Gravel > 2-6cm	<u>8</u>	<u>6</u>	<u>4</u>			<u>2</u>		<u>7</u>	<u>3</u>	<u>7</u>	<u>10</u>	<u>11</u>		<u>5</u>	<u>3</u>
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	<u>51.9</u>	<u>53.5</u>	<u>78.9</u>	<u>81.5</u>	<u>71.0</u>	<u>52.5</u>	<u>49.8</u>	<u>20.8</u>	<u>56.9</u>	<u>46.9</u>	<u>49.9</u>	<u>19.5</u>	<u>39.9</u>	<u>24.4</u>	<u>54.9</u>
Sand						<u>20</u>	<u>20</u>	<u>17</u>	<u>15</u>	<u>8</u>	<u>9</u>	<u>17</u>	<u>15</u>	<u>15</u>	<u>13</u>
litter	(<u>17</u>)	<u>5</u>	<u>2</u>	<u>2</u>	<u>4</u>	<u>2</u>	<u>3</u>	(<u>8.5</u>)		<u>10</u>	<u>6</u>	<u>2</u>	<u>20</u>	(<u>12</u>)	<u>3</u>
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm	<u>41.5</u>													<u>12.5</u>	
Scat	<u>5</u>														
Xan Parc	<u>2</u>	<u>11</u>	<u>3</u>	<u>4</u>	<u>7</u>		<u>.1</u>	<u>2</u>	<u>4</u>	<u>3</u>	<u>1</u>		<u>1</u>		
Lichen Bryozoa for		<u>15</u>	<u>.1</u>												
Lichen															
Lichen <i>Gyrocampa</i>		<u>(3)</u>													
Lichen <i>Acronia</i>															
Lichen <i>Scotinoclea</i>									<u>(.5)</u>						<u>(.5)</u>
Lichen <i>Arctia</i>									<u>(.5)</u>						<u>(.5)</u>
Lichen <i>Antrodia</i>									<u>(.5)</u>						<u>(.5)</u>
Lichen <i>Geopelia</i>									<u>(.5)</u>						<u>(.5)</u>
Moss <i>Leucobryum</i>															
Moss <i>Blasia</i>															
Moss <i>Palustrius</i>															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae <i>Ulothrix</i>										<u>3</u>	<u>1</u>				
Nostoc															
Vascular Species															
Basal veg: Bougrea		<u>3</u>		<u>1</u>	<u>1</u>		<u>2</u>	<u>2.2</u>		<u>12</u>	<u>3</u>		<u>12</u>	<u>8</u>	<u>.1</u>
VMB <i>Stellaria</i>	<u>.1</u>						<u>.1</u>	<u>.2</u>							<u>.1</u>
Canopy-shrub															
Canopy-forb	<u>.1</u>														
Canopy-grass		<u>7</u>	<u>5</u>	<u>3</u>	<u>3</u>		<u>.1</u>	<u>10</u>		<u>3.5</u>	<u>.1</u>	<u>1</u>	<u>.1</u>	<u>1</u>	<u>15</u>

Forest Service Cryptogam Habitat Study

Work on downslope side of line = south

Site No. 02A 07	Date: 7-20-97	Surveyors: ES/MM	GPS #:	Work on downslope side of line = south															
Start at	end	Quad 46	Quad 47	Quad 48	Quad 49	Quad 50	Quad 51	Quad 52	Quad 53	Quad 54	Quad 55	Quad 56	Quad 57	Quad 58	Quad 59	Quad 60			
Gravels < 1 cm	11	35	12	11	8	15	27	35	30	8	28	6	13	27	17				
Gravel 1-2cm	2	3	1		2	5	4	3	4	2	3			4	2	1			
Gravel > 2-6cm																			
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	68	49	72	61.5	75.5	59	41	41.8	41.9	52	36.4	44	35	34.9	41				
Sand	5	6	5	6	6	7	15	13	15	10	12	8	17	25	2				
litter	4	6	8	12	5	8	9	4	6	2-0	13	25	22	10	30				
Woody debris 3-8cm																			
Woody debris 8-30cm																			
Woody debris > 30 cm																			
Scat (birds)						.5										1			
Lichen																			
Lichen green cras rock																(1)			
Lichen white cras (rock)																(1)			
Lichen black cras rock																			
Lichen gray cras rock (1)																(1)			
Lichen green cras rock																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Liverwort																			
Algae vpon rock																			
Nostoc																			
Vascular Species																			
Basal veg: Bougrea																			
Grass	16		2	9	3	2	2	1	3	3	5	16	7	1	8				
Wet seed																			
Fr. MM																			
Canopy-shrub																			
Canopy-forb	14																		
Canopy-grass		3	3	10	4	5	4	2	4	15	4	35	10	4	14				

Forest Service Cryptogamic Habitat Study

Gps: 10110119 S: 37 83 985.3

E: 722 269.13

Time: 1:25

Elev: 8459

Site#: R30047

Date: 7.29

Surveyors: 1/1/11

Directions to Site: 51m W. of Pers.

General Site observations:

Primary Aspect: 78° Secondary Aspect: _____ Primary slope & direction: 27° USSE Secondary slope and direction: _____

Canopy cover of site:

Mid-transect: 24 m from _____ end Open quarters facing:

Within 1m at 20 end. Open quarters facing:

Within 1m at N end. Open quarters facing:

North: <u>29%</u>	South: <u>9%</u>	East: <u>9%</u>	West: <u>9%</u>
North: <u>24%</u>	South: <u>7%</u>	East: <u>9%</u>	West: <u>38%</u>
North: <u>41%</u>	South: <u>6%</u>	East: <u>8%</u>	West: <u>9%</u>

Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)

Erica sp. Cladonia (under log)
St. John's wort Brown Owl USDA on downed wood

Woody debris within: 15 m of transect; in what part of transect: downed tree parallel to line (11) 5.4.6 out
 Woody debris within: _____ m of transect; in what part of transect: _____

Species: Pine Tree at 11 feet end. Standing: _____ m away + 0 - 8% (%: right side of clinometer)
 Species: Pine Tree at 5 feet end. Standing: 7 m away + 3% - 1% (%: right side of clinometer)

_____ End

N End

Tree = 0.1034 (canopy = 1.04 m)
 Trunk = 2.05 m Rebar = 1.31 m



Tree = 0.1034 (canopy = 1.04 m)
 Rebar = .3 m Trunk = 0 m



precise direction of line w.r.t. tree

Length from tree trunk to tree trunk = 8.75 m
 Length from rebar to rebar = 7.01 m

precise direction of line w.r.t. tree

Forest Service Cryptogam Habitat Study

Site No. PVA OF	Date: 7/30	Surveyors: NM/KS	GPS #:	Work on downslope side of line = SOUTH											
Start at East end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravel < 1 cm	1		5	3	1.5	10	15	15	20	20	15	8	7	5	25
Gravel 1-2cm	3		4	3	2			9	9	7	6	6	3	5	4
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	10	15	12	18	83.4	77.6	76.8	72.1	67.3	62.4	60.9	39.4	62.5	65.9	37.8
Sand															
litter	71.3	69.2	70.7	45.8	10		.5	.1	1	5	5	8	18	20	20
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm			54.2												24.1
Scat															
Lichen wood 1	2	3													
Lichen Xon PAR	20	33	25	15				3.5					2.5		
Lichen with wood	1	.5		5					.1						
Lichen gradines	5	2							2.5						
Lichen lichen fr	3.5	1.5	12	(1)	.1	5	7	.1	(1)	(2)	(1)	6	.5		(2)
Lichen crust	.5								(1)						
Moss bluish green															
Moss Pyrenopeziza															(1)
Moss															
Moss star	.1	.1	.1			.1								.5	
Liverwort															
Algae															2.5
Nostoc			2	.1		.1	.5	.1	.1	.5	.1				
Vascular Species															
Basal veg: Bougrea	4.5	4		10									5.5	1	4
Canopy shrub															
Canopy forb	5	10	.1	.1	2		.2	.1	.1	.1		.1	9	.1	.1
Canopy grass	15	7	2	14	2	2	.2	.1	.1	4	10	6	9	.1	15

Site No. <u>RNP/57</u>	Date: <u>7.30</u>	Surveyors: <u>NM/KS</u>	GPS #:	Work on downslope side of line = <u>South</u>												
Start at	end	Quand 16	Quand 17	Quand 18	Quand 19	Quand 20	Quand 21	Quand 22	Quand 23	Quand 24	Quand 25	Quand 26	Quand 27	Quand 28	Quand 29	Quand 30
Gravels < 1 cm		33	18	12	2	7	23	25	12	12	12	21	50	12	35	22
Gravel 1-2cm		8	6	4		4	2			7	7	10	11		5	3
Gravel > 2-6cm			2							1						
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		51.9	53.5	78.9	81.5	70	52.5	49.8	20.8	56.9	46.9	49.9	19.5	39.9	24.4	54.9
Sand							20	20	17	15	8	9	17	15	15	13
litter		(14)	5	2	2	4	2	3	(8.5)	10	10	6	2	20	(12)	3
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm		4.5													12.5	
Scat Moss																
Xan Parc		2	11	2	4	1			2	4	3	1		1		
Lichen <u>Parmelia</u> f.a			15	.1				.1								
Lichen																
Lichen <u>gyromitra</u> spp																
Lichen <u>glaucocarpus</u>																
Lichen <u>uromyces</u>																
Lichen <u>stictis</u> lichen										(.5)						(.5)
Lichen <u>uromyces</u>										(.5)						(.5)
Lichen <u>uromyces</u>										(.5)						(.5)
Moss <u>hypnum</u> spp												(.5)				(.5)
Moss <u>hypnum</u> spp												(.5)				(.5)
Moss <u>hypnum</u> spp												(.5)				(.5)
Moss																
Moss																
Moss																
Liverwort																
Algae <u>Chara</u>												3				
Nostoc													2			
Vascular Species																
Basal veg: <u>Bougera</u>			3		1	1		2	2.2		12	3		12		
<u>Vallisneria</u>								.1	.2			.1		.1		.1
Canopy-shrub																
Canopy-forb		.1									.1					
Canopy-grass			1	2	3	3					5.5			5.5		10

Site No	Date	Surveyors	GPS #	Work on downslope side of line = SOUTH												
Start at	end	Quad 31	Quad 32	Quad 35	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 45	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravels <1 cm	13	6	7	25	20	15	20	17	12	33	33	30	30	12	18	23
Gravel 1-2cm	5	2	13	9	10	7	7	17	7	14	8	20	20	6	7	
Gravel >2-6cm	7		1	23				3								
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil	5.9	10	15	8	20	26.9	20.9	42.9	30	41.4	32.8	32.7	4	26	39	
Sand	30	30	29.9	17.4	17.4	25	17	12	10.3	10	12	12	9	12	10	
Litter	30	41	25	7	15	20	16	23	8	6	4	3	35	28	20	
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris >30 cm																
Scat				.5									1			
Lichen <i>Xanthoparmelia</i> (2)			(1)	(.5)	(4)	(.5)		(.5)	(.5)							
Lichen <i>Xanthoparmelia</i>			2	1	7							3.5				
Lichen <i>Xanthoparmelia</i>						(.5)			(.5)	(.5)		(.5)				
Lichen <i>Xanthoparmelia</i>																
Lichen <i>Xanthoparmelia</i>																
Lichen <i>Xanthoparmelia</i>																
Lichen <i>Xanthoparmelia</i>																
Lichen <i>Xanthoparmelia</i>																
Moss						.5										
Moss										.1	.5					
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougainvillea	7	7	7	3	3	6	4	3		1				1	10	
Wood seedling	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	
Canopy-shrub																
Canopy-forb	.1	.5	.5	.1	.5	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	
Canopy-grass	36	20	12	16	16	16	12	8	10	3	4	7	3	28	3	

Forest Service Cryptogam Habitat Study

Site No. (0-100)	Date: 7/20/97	Surveyors: L.J./M.M.	GPS #:	Work on downslope side of line = 5007H												
Start at	end	Quad 46	Quad 47	Quad 48	Quad 49	Quad 50	Quad 51	Quad 52	Quad 53	Quad 54	Quad 55	Quad 56	Quad 57	Quad 58	Quad 59	Quad 60
Gravels < 1 cm	11	35	12	11	8	15	27	35	30	8	28	6	13	27	17	
Gravel 1-2cm	2	3	1				4	3	14	2	3			4	2	1
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil	60	49	72	61.5	75.5	59	41	41.9	41.7	52	36.4	44	35	34.9	41	
Sand	5	6	5	6	6	7	15	13	10	10	12	8	17	25	2	
litter	4	10	2	12	5	8	9	4	6	2-0	15	25	22	10	30	
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30cm																
Scat	(.9), (.1)					.5									1	
Lichen																
Lichen	9 (90% 50% 100%)	100%													(.1)	
Lichen spp 1-5 (10%)																
Lichen spp 6-15 (10%)																
Lichen spp 16-30 (11)																
Lichen spp 30-60 (10)																
Lichen spp 60-100 (10)																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae	100%														1	
Nostoc		1														
Vascular Species																
Basal veg: Bougrea																
Basal veg: Bougrea	15		2	9	3	2	2	1	3	8	5	16	7	1	8	
Unf seed								.1			.1			.1		
Flora															2	
Canopy-shrub																
Canopy-forb	14							.1			.1			.1		
Canopy-grass		3	3	10	2	2	4	2	4	15	7	35	10	4	14	

Forest Service Cryptogamic Habitat Study
 Gps: 1072116AS: 378409415 E: 72244217 Date: 7-31-97 Surveyors: MM/KS
 Site#: MAN147 Time: 1025 Elev: 2370

Directions to Site: 2.5m E. of Pans Luson NE of the Ringon Ho. (empty)

General Site observations: Small pool, 1.5m deep, down part of line west of line of debris, in the end of the line (ground was) of forest. From southwest end

Primary Aspect: 98 Secondary Aspect: _____ Primary slope & direction: 50% SE Secondary slope and direction: _____

Canopy cover of site: _____

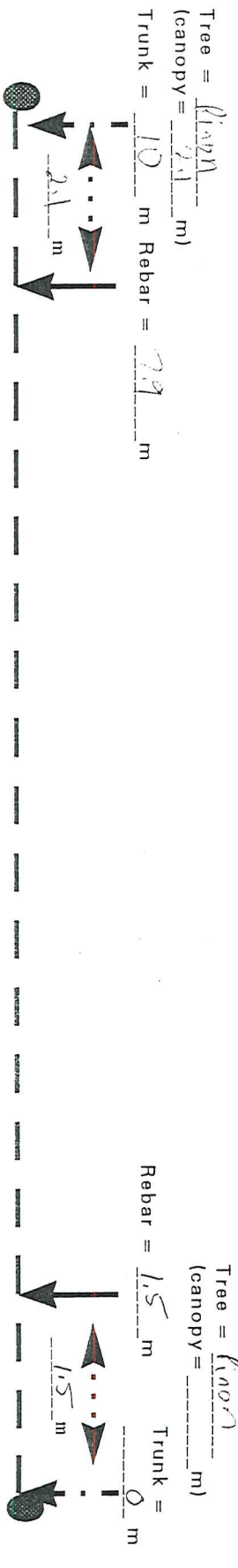
Mid-transsect: 3.15 m from 0 end Open quarters facing: North: 90 South: 81 East: 80 West: 74
 Within 1m at SW end. Open quarters facing: North: 90 South: 32 East: 85 West: 47
 Within 1m at NE end. Open quarters facing: North: 75 South: 81 East: 63 West: 92

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals)
 In vicinity (ie if particularly abundant):
2.5 NE of transect down tree Bryophytes Neurospora Composite - same as yellow near
2.5 mid transect scattered Epiphytes sp? canop ric? Bahia dis
1.9 Usuda Star moss Xan Psi

Woody debris within: 1.35 m of transect; in what part of transect: NW of line large fallen tree
1.9 m of transect; in what part of transect: SW of line large downed tree

Species: Rivina Tree at SW end. Standing: 8 m away + 17 - 15 (%: right side of clinometer)
Rivina Tree at NE end. Standing: 1 m away + 42 - 25 (%: right side of clinometer)

NW End SW End



251 SW → precise direction of line w.r.t. tree
 Length from tree trunk to tree trunk = 10 m
 Length from rebar to rebar = 6.4 m
 → 77° NE precise direction of line w.r.t. tree

Forest Service Cryptogam Habitat Study

Site No. MMN07 Date: 7.8 Surveyors: RS/NM GPS #: _____

Work on downslope side of line = South-East

	Start at <u>W/ct</u> end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm					2	3	2				1	25	20	20	4	10
Gravel 1-2cm						2					2	4	5	5	1.5	2
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil				8	15	20	8	20	18	35	13	26	46	39.8	47	49.8
Sand																
litter				20	89	11	20	20	73	53	835	5	25	30	(49)	35
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm				99	45										40.5	
Scat						1					0.5		1			
Lichen <u>variegata</u>																0.1
Lichen <u>Nidularia</u>																
Lichen <u>W. Myrmica</u>																0.1
Lichen																
Lichen																
Moss																
Moss																
Moss																
Moss <u>Sporopodium</u>																0.1
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougrea				3	2							4	3	5	7	3
<u>Wood chip</u>																
Canopy-shrub																
Canopy-forb																
Canopy-grass				6	6						15	2	8	15	18	18

Site No.	MAM 17	Date:	1/21	Surveyors:	MJM/KS	GPS #:	Work on downslope side of line = GROWTH TEAS									
Start at	end	Quad 21	Quad 22	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravels < 1 cm		15	18	25	10	11	30	70	10	8	20	25	25	10	15	52
Gravel 1-2cm		6	2	3		2.5	5	3		5	3	8	7.	5	1	20
Gravel > 2-6cm							2			4						4.
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		36.9	27.5	4	4	7.5	27	12	5	16	5	13	10.5	17	7.9	2
Sand		12	10	25	10	15	10	3	5	10	10	20	15	20	21	9.5
litter		15	35	35	65	60	20	5	72	50	47	30	30	45	45	8
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm		1.5														
Scal	1.5				2											.5
Lichen w/ B. sp. (rock)				(.5)	(.5)		(1.5)	(.5)	1							(.11)
Lichen w/ B. sp. (rock) - Vochl								(.5)								(.5)
Lichen																
Lichen																
Lichen																
Lichen																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougrea																
WVND MAM (M)	.1	6.	8	8	3	6	4	7	6	7	4	4	12	2	3	
ER1 ALA (V)										1	3					
LV PIN														.5		
Canopy-shrub																
Canopy-forb	.1															
Canopy-grass		12	14	15	8	12	10	11	5	12	25	20	30	4	10	

Forest Service Cryptogamic Habitat Study

Gps: L072116AS: 378409415

E: 72244217

Time: 1025

Elev: 2370

Site#: NAN07

Date: 7-31-97

Surveyors: RM/KS

Directions to Site: 2.5 m E. of Pava Lison NE of the Pavaon Da Pava

General Site observations:

Mostly pine, 1 sample large downed part of tree west of line
1 diagonal meter from southwest end. Areas of fourth wood at diagonal 2 from southwest end

Primary Aspect: 98

Secondary Aspect: _____

Primary slope & direction: 50% SE

Secondary slope and direction: _____

Canopy cover of site:

Mid-transsect: 3.15 m from 0 end Open quarters facing: _____

Within 1m at SW end. Open quarters facing: _____

Within 1m at NE end. Open quarters facing: _____

North: 90

South: 54

East: 80

West: 74

North: 90

South: 33

East: 85

West: 47

North: 75

South: 82

East: 103

West: 92

Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals)

In vicinity - ie if particularly abundant: NE of transect down tree

2.5 mid transect South tree

Bon sila Asterulus sp.? Composite - same as yellow near camp nic?
Bescheriana Ken. eri Eri. ela. Bahia dis.
Leguminos sp.? Star Moss Xan Par

Woody debris within: .36

Woody debris within: .36 m of transect; in what part of transect: SW of first large downed tree

Species: Pisona Tree at SW end. Standing: 8 m away

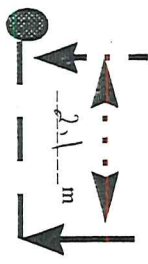
Species: Pisona Tree at NE end. Standing: 8 m away + 23 - 15 (%: right side of clinometer)

NE End

SW End

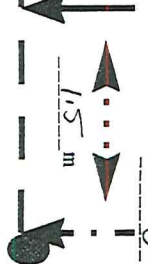
Tree = Pisona (canopy = 2.1 m)

Trunk = 1.0 m Rebar = 7.9 m



Tree = Pisona (canopy = _____ m)

Rebar = 1.5 m Trunk = 0 m



precise direction of line w.r.t. tree 257 SW

Length from tree trunk to tree trunk = 10 m
 Length from rebar to rebar = 6.4 m

precise direction of line w.r.t. tree 77° NE

Site No. WPM 67	Date: 7.81	Surveyors: JS/NM	GPS #:												
Start at West end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm				2	3										
Gravel 1-2 cm					2										
Gravel > 2-6 cm															
Stones 6-15 cm															
Rocks 15 cm-1 m															
Boulder > 1 m															
Bedrock															
Soil			8	15	20	8	20	18	35	13	26	46	39.8	47	49.8
Sand															
litter	80	89	82	82	74	70	58	73	53	83.5		20	30	40	35
Woody debris 3-8 cm															
Woody debris 8-30 cm															
Woody debris > 30 cm			89	45											
Scat															
Lichen <i>Parm. lvn</i>															
Lichen <i>Nadleria</i>															
Lichen <i>W. W. wood</i>															
Lichen <i>W. W. wood</i>															
Lichen															
Lichen															
Lichen															
Moss															
Moss															
Moss															
Moss															
Moss <i>Flora</i>															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bouyera			3	2											
<i>Wood. st. d. l. v. g.</i>															
Canopy-shrub															
Canopy-forb															
Canopy-grass			6	6				10		15	2	8	15	18	15

Forest Service Cryptogam Habitat Study

Site No. MAM 07	Date: 4/21	Surveyors: NW/KS	GPS #:	Work on downslope side of line = SOUTH EAS															
Start at	end	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45			
Gravels < 1 cm	15	14	25	10	11	30	70	10	8	25	25	25	10	15	52				
Gravel 1-2cm	6	2	3		2.5	5	3	3	5	3	3	8	7	5	1	7			
Gravel > 2-6cm																			
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	36.9	27.5	4	4	7.5	2.7	12	5	16	5	13	10.5	17	7.9	2				
Sand	12	10	25	10	15	10	3	5	10	10	20	15	20	21	9.5				
litter	(15)	35	35	65	60	20	5	72	50	47	30	30	45	45	8				
Woody debris 3-8cm																			
Woody debris 8-30cm																			
Woody debris > 30 cm																			
Scat	1.5			2															
Lichen yellow-green - rock			(.5)	(.5)	(1.5)	(.5)	1									(.5)			
Lichen yellow-green - rock																			
Lichen																			
Lichen																			
Lichen																			
Lichen																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Liverwort																			
Algae																			
Nostoc																			
Vascular Species																			
Basal veg: Bougrea		6.1	8	8	3	6	4	7	6	7	4	12	2	3					
WVIA (MADON)	.1																		
ERIAL (LX)									1	3									
LV PIN														.5					
Canopy-shrub																			
Canopy-forb	1																		
Canopy-grass		12	14	15	8	12	10	11	5	6	20	30	4	10					

Site No. WDM 4	Date: 3/31	Surveyors: MJK/S	GPS #:	Work on downslope side of line = SOUTH EAST															
Start at W/SE end	Quad 46	Quad 47	Quad 48	Quad 49	Quad 50	Quad 51	Quad 52	Quad 53	Quad 54	Quad 55	Quad 56	Quad 57	Quad 58	Quad 59	Quad 60				
Gravels < 1 cm	19	12	25	3	11	18	35	5	13	10	20	7	10	35	29				
Gravel 1-2cm	9	4	2			3			5	3	4			6	3				
Gravel > 2-6cm														3	4				
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil																			
Sand	58	65	61	8	37	55	25	13.9	49	55	45.9	57.5	43	53	58.9				
litter	10	15	4	8	5	15	8	4	2	2	2.3	3.0	4.0	3	4				
Woody debris 3-8cm																			
Woody debris 8-30cm																			
Woody debris > 30 cm																			
Scat Rubbish																			
Xan Oak		1						1											
Lichen Xsnea					1				3	2	2	2							
Lichen H-green cr's cork										(3)				(1)					
Lichen H-green cr's cork									(.5)	(1)	(.5)			(1)	(1)				
Lichen gr cr's cork						(.5)			(.5)		(1)			(1)	(.5)				
Lichen white cr's cork						(.5)			(1)		(1)			(1)	(.5)				
Brown q spn																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Liverwort																			
Algae																			
Nostoc																			
Vascular Species																			
Basal veg: Bougna	1	5		3	10		2	1	3		5	3	8						
JMID Sphynna																			
Erica spm										4									
Lygia Jelic										2									
Urid Asteragalus																			
Canopy-shrub																			
Canopy-forb																			
Canopy-grass	7	12	8	10	4	8	4	7	20-5	4+1	12	10	9	25	4				

Forest Service Cryptogamic Habitat Study
 Gps: 20329229 S: 3784003.9 E: 722367.9 Site#: RND/3 Date: 7/29 Surveyors: 1/1M
 Directions to Site: 30.3 m W. of Pines Time: 1630 Elev: 2805 m

General Site observations: Rain - younger, downed wood

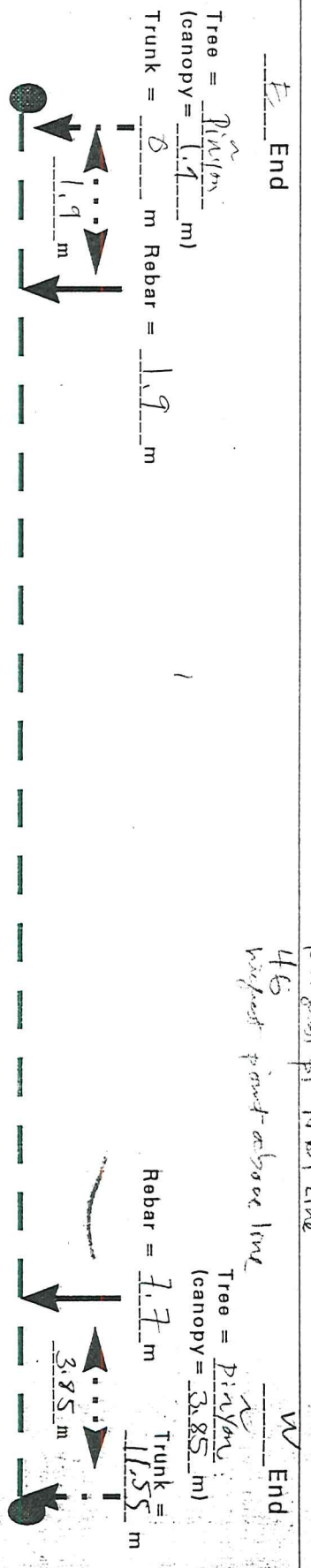
Primary Aspect: W Secondary Aspect: W Primary slope & direction: 4% Secondary slope and direction: W

Canopy cover of site: _____
 Mid-transsect: 2.5 m from E end Open quarters facing: North: 86 South: 86 East: 55 West: 74
 Within 1m at E end. Open quarters facing: North: 80 South: 85 East: 44 West: 90
 Within 1m at W end. Open quarters facing: North: 32 South: _____ East: 96 West: 16

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity-if particularly abundant)
Brycea eriella Descurainia
Starr Moss
Xan Par
(Opuntia just outside 3m)

Woody debris within: 3 m of transect; in what part of transect: North 3 parts of downed trees parallel.
 Woody debris within: .05 + .7 m of transect; in what part of transect: SE 5.8
1.9

Species: Pinyon Tree at E end. Standing: 6 m away + 59 - 27 (%; right side of clinometer) 77
Juniper Tree at W end. Standing: 8 m away + 58 - 14 (%; right side of clinometer) 77
 to highest pt NW of line



Tree = Pinyon (canopy = 1.1 m) Trunk = 0.8 m Rebar = 1.9 m
 Tree = Pinyon (canopy = 3.85 m) Trunk = 1.7 m Rebar = 1.7 m
 precise direction of line w.r.t. tree 270°
 Length from tree trunk to tree trunk = 11.55 m
 Length from rebar to rebar = 5.8 m

11.55
 7.7
 3.85
 3.5
 1.9
 1.6

Forest Service Cryptogamic Habitat Study
 Gps: 120289229 S: 3784003.9 E: 722367.9 Site#: R009/3 Date: 7/29 Surveyors: 1/NN
 Directions to Site: 30.3 m W. of Lane Time: 1630 Elev: 2305 m

General Site observations: Some larger ground work

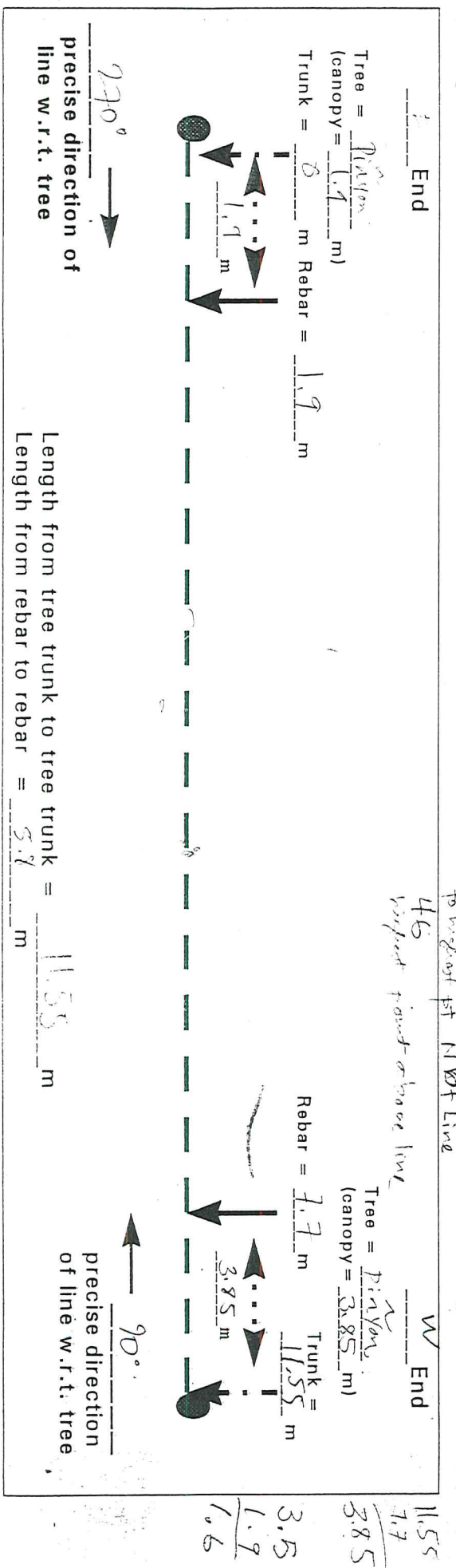
Primary Aspect: SE Secondary Aspect: W Primary slope & direction: 4% Secondary slope and direction: W

Canopy cover of site: _____
 Mid-transsect: 2.15 m from E end Open quarters facing: North: 86 South: 86 East: 55 West: 74
 Within 1m at E end. Open quarters facing: North: 80 South: 85 East: 44 West: 90
 Within 1m at W end. Open quarters facing: North: 32 South: 96 East: 95 West: 16

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)
Bryum Desmouza
Enigma Erica
Star moss
Xan Par
Open quarters just outside 3m

Woody debris within: 3 m of transect; in what part of transect: North Spots of burned trees parallel
 Woody debris within: .05 m of transect; in what part of transect: SE

Species: Polygon Tree at E end. Standing: 6 m away + 59 - 27 (%; right side of clinometer)
Polygon Tree at W end. Standing: 8 m away + 58 - 14 (%; right side of clinometer)
 to highest pt N of line



Forest Service Cryptogam Habitat Study

Site No. PNA 98	Date: 7-26-97	Surveyors: KS / MM	GPS #:	Work on downslope side of line = <u>not used</u>											
Start at <u>crest</u> end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm	1		2		4	1	4		2		2		3	3	3
Gravel 1-2cm	2												2		2
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulders > 1m															
Bedrock															
Soil	10.5	2.2	74.8	43	69.3	24.5	6.4	38	30	31	56.5	47	66	66	73
Sand															
litter	37	60	8	7	6	23	18	6	10	15	12	30	14	8	12
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm						21				25			15		
XNA Parc															
Scat <u>Kanab</u>	1	1							1.5	1		3		1	
<u>ten Clavaria</u>						1			.5						
Lichen <u>varicosa</u>	tblwt 3														
Lichen <u>kerwood</u>	9	10	12	40	17	40	65	55	50	40	25	11	10	19	1
Lichen <u>colima</u>				2	.5		.5			1					
Lichen <u>arctica</u>				1											
Lichen <u>light green crusts</u>	rock				(.5)		(.1)								
Lichen <u>light green crusts</u>	rock				(.1)								(.5)		
Moss <u>light green crusts</u>	rock												(.5)		
Moss															
Moss															
Moss															
Moss <u>shar</u>	.5		.1		.1										
Liverwort															
Algae <u>verder</u>	2	1	1	5											
Nostoc															
Vascular Species															
Basal veg: <u>Bougra</u>	5	6	2	2	3	12	0	1	4	3	3	8	4	2	2
Mid seedling			.01		.1	.5									
Mid Park											.5				
Canopy-shrub															
Canopy-lob					.1	.5									
Canopy-grass	1	10	10	10	7	25	11	2	7	7	5	15	2	4	4

Forest Service Cryptogam Habitat Study

Site No. RNA #8	Date: 7-30-97	Surveyors: PM/KS	GPS #:	Work on downslope side of line = <u>North</u>															
Start at	end	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30			
Gravels < 1 cm		16	12	5	3		1	7	3										
Gravel 1-2cm	3		2					3	14	2	3	5	5	10	10	4			
Gravel > 2-6cm																			
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	55.9	63.4	49	31.9	67.5	35.9	19	42	51.9	42.5	35	36.5	75	65	67.9				
Sand	12	3	5				15	15	8	20	6	5	12	15	7				
litter	15	13	35	50	28	50	35	20	28	25	43	45	3	3	18				
Woody debris 3-8cm																			
Woody debris 8-30cm																			
Woody debris > 30 cm																			
Scat vabgif					1														
Lichen <i>varia</i> (va)	1	1		3		.1	2.5				.5	2.5							
Lichen <i>lemane</i>							1.5												
Lichen <i>Xan par</i>							8.												
Lichen																			
Lichen																			
Moss <i>s</i>																			
Moss																			
Moss																			
Moss <i>q tw</i>	.1	.5			.1	.5	3			.1	2	.5	.5		1.1				
Liverwort																			
Algae																			
Nostoc																			
Vascular Species																			
Basal veg: Botrya	7	5	10	12	8	10	9	6	7	6	8	8	8			2.5			
<i>Wald cistellu</i>																			
Canopy-shrub																			
Canopy-forb																			
Canopy-grass	12	10	8	8	13	35	15	14	13	14	12	10				8			

Forest Service Cryptogam Habitat Study

Site No. (NMA#)	Date:	Time	Surveyors:	GPS #:	Work on downslope side of line =															
					Quad 46	Quad 47	Quad 48	Quad 49	Quad 50	Quad 51	Quad 52	Quad 53	Quad 54	Quad 55	Quad 56	Quad 57	Quad 58	Quad 59	Quad	
Start at	end																			
Gravels < 1 cm	4	4	3	5	3															
Gravel 1-2cm	5	4	3	4	3															
Gravel > 2-6cm																				
Stones 6-15cm																				
Rocks 15cm-1m																				
Boulder > 1m																				
Bedrock																				
Soil	55	81	75	43.7	48.5	69.5	37	2	29	10	17	12	18							
Sand	10	5	9	18	5		8	2	29	10	17	12	18							
Litter	4	0	2	18	34	25	8	3	25	86	82.5	77.5	76							
Woody debris 3-8cm	16		15	13																
Woody debris 8-30cm																				
Woody debris > 30 cm																				
Scat	1		1																	
Lichen cslma																				
Lichen bryankm			15																	
Lichen																				
Lichen																				
Lichen																				
Lichen																				
Moss																				
Moss																				
Moss																				
Moss																				
Moss																				
Moss																				
Liverwort																				
Algae																				
Nostoc																				
Vascular Species																				
Basal veg: Boigra																				
Wind shrub																				
Wind herb																				
Canopy-shrub																				
Canopy-forb																				
Canopy-grass																				

Work on downslope side of line = Novel

* 2% of wood looks burnt

4

3.1
2.0

8
2

Forest Service Cryptogamic Habitat Study

Gps: Lot 3023A S: 378463518

E: 722381.3

Time: 1720

Elev: 2384m

Site#: MAN08

Date: 7-31-97

Surveyors: KS/MM

Directions to Site: 15.3 m E. of Pole

General Site observations: Pinus, small and young wood

Primary Aspect: 92° Secondary Aspect: _____ Primary slope & direction: 57° Secondary slope and direction: 42°

Canopy cover of site: _____

Mid-transsect: 1.2 m from SW end ^{rebar} Open quarters facing: North: 93 South: 89 East: 92 West: 75

Within 1m at SW end. Open quarters facing: North: 90 South: 25 East: 87 West: 65

Within 1m at NE end. Open quarters facing: North: 60 South: 90 East: 75 West: 96

Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals in vicinity -ie if particularly abundant)

- Parsonsia heueri 710
- Grass - stolon hystrix layia
- Ericaceae Descurainia
- Senecio
- Usnea Yankee Brown Red small and 2cm
- Asparagus sp 2

Woody debris within: 0 S m of transect; in what part of transect: NE Section end of fallen tree

Woody debris within: 1 2 m of transect; in what part of transect: Middle North side 2 SW X 15

Species: Pinus Tree at WEST end. Standing: 8 m away + 47 - 22 (%; right side of clinometer)

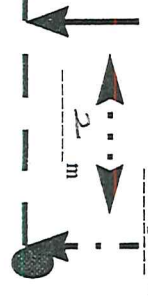
Species: Pinus Tree at WEST end. Standing: 8 m away + 60 - 19 (%; right side of clinometer)

Tree = Pinon (canopy = 2.15 m) Trunk = 11.3 m Rebar = 2.15 m Rebar = 2 m Trunk = 2 m



201 SW → precise direction of line w.r.t. tree

Length from tree trunk to tree trunk = 11.3 m
Length from rebar to rebar = 4.15 m



→ 21° NE precise direction of line w.r.t. tree

Site No. MAN 98 Date: 7-22-97 Surveyors: NM KS GPS #: _____ Work on downslope side of line = EAST

Start at	end	Quadrant 14	Quadrant 17	Quadrant 18	Quadrant 19	Quadrant 20	Quadrant 21	Quadrant 22	Quadrant 23	Quadrant 24	Quadrant 25	Quadrant 26	Quadrant 27	Quadrant 28	Quadrant 29	Quadrant 30
Gravels < 1 cm	1b	12	14	12	3	18	25	11	2	25	7	5	15	12	15	33
Gravel 1-2cm	11	14	6	1	7	7	6	11	2	25	5	11	11	18	15	47
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m				44												
Bedrock																
Soil	54.5	54	(46)	46	47	42	28	54	21	36	52	58.5	42	66	26.4	
Sand	5	5	5	5	10	10	5	10	22	5	15	8	13	9	17	
litter	516	15	34	40	17	16	30	15	25	40	25	6	(5)	5	15	
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat	1.5			.5		1							1.5			
Lichen																
Lichen																
Lichen																
Lichen																
Lichen																
Lichen																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg. Bougrea				4.5	1		3	4	2	4	3					4.5
Wind seedling																
Canopy-shrub																
Canopy-forb																
Canopy-grass	5	4	15	7	7		6	7	6	15				2		1

Site No.	Date:	Surveyors:	GPS #:	Work on downslope side of line =											
Start at	end														
Gravels < 1 cm	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravel 1-2cm	10	7	8	3	9	8	12	23	10	10	6	12	7	5	3
Gravel > 2-6cm	3		2								4				
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	74	50	48.9	43	53.9	54.9	80	36	51.9	81.9	55.9	55.1	55	47.8	76
Sand			1	2	1	1		1							
litter	11	35	35	45	32	30	8	35	30	12	30	35	30	40	14
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															14
Scat				1											
Lichen															
Lichen															
Lichen															
Lichen															
Lichen (f. gray cross)															
Lichen (black cross)															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae v. Pore															
Noctoc															
Vascular Species															
Basal veg: Bougrea	8		2.	6	4	10		5	12		4	7	8	7	3
Leaf seedlings			.1		.1	.1			.1	.1	.1	.1		.1	
Leaf 11															
Canopy-shrub															
Canopy-forb															
Canopy-grass	3	12	.4	8	.1	15	4	11	.1	.1	.1	.1	30	4.1	20

Forest Service Cryptogamic Habitat Study

Gps: 407 31214 S: 37 8406216

E: 7223312

Date: 7.31

Time: 1525

Elev: 2393m

Site#: RNA69

Date: 7.31

Surveyors: NW/KS

Directions to Site: 42m W. of Pens

General Site observations: Pin. grove, large burned wood NW of pine forest parallel

Primary Aspect: 67 Secondary Aspect: _____ Primary slope & direction: 3° W→E Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transect: 3.5 m from 1/2 end ^{rebar} Open quarters facing: North: 82 South: 94 East: 95 West: 83
 Within 1m at 1/2 end. Open quarters facing: North: 61 South: 96 East: 51 West: 69
 Within 1m at SW end. Open quarters facing: North: 84 South: 10 East: 90 West: 68

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity- if particularly abundant)
Box Syc grass - oryxalis DES cur.
Eri. sp.
Erica
Yucca Star Moss Usnea Brown Fern

Woody debris within: 3.4 m of transect; in what part of transect: SW
 Woody debris within: 0-2 m of transect; in what part of transect: SW

Species: Juncus Tree at 1/2 end. Standing: 8 m away + 3 - 20 (%: right side of clinometer)
 Species: Pinus Tree at SW end. Standing: 9 m away + 57 - 15 (%: right side of clinometer)

SW End

NE End

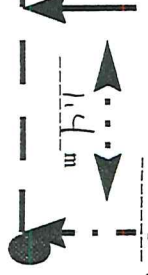
Tree = Juniper
 (canopy = 2 m)
 Trunk = 10.4 m Rebar = 8.4 m



precise direction of line w.r.t. tree

Length from tree trunk to tree trunk = 10.4 m
 Length from rebar to rebar = 7 m

Tree = Juniper
 (canopy = 1.4 m)
 Rebar = 1.4 m Trunk = 0 m



precise direction of line w.r.t. tree

Site No. <i>RM 89</i>	Date: <i>7-31-97</i>	Surveyors: <i>ES/AM</i>	GPS #:	Work on downslope side of line = <i>east - south</i>														
Start at <i>NZ end</i>	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15			
Gravels < 1 cm	3	4	3	1	4													
Gravel 1-2cm																		
Gravel > 2-6cm																		
Stones 6-15cm						6												
Rocks 15cm-1m	7	5								45	20							
Boulder > 1m																		
Bedrock																		
Soil	75	74		52	82	59	54.4	65	69	31	43	45	75	62.5	71			
Sand		4			2		2	12	7	31	7							
litter	10	7	22	42	10	35	30	18	10	20	7	45	5	11	20			
Woody debris 3-8cm																		
Woody debris 8-30cm																		
Woody debris > 30 cm									10	18								
Scat		1				1					1							
<i>Xan Par</i>																		
Lichen <i>Cladonia</i>	3					1								8	2			
Lichen <i>Brown PV</i>		(1)								1								
Lichen <i>yellow crust rock</i>	(14)	(1)								(20)								
Lichen <i>green pine bark</i>	(5)									(5)								
Lichen <i>H gray crust</i>		(2)								(5)								
<i>dark gray crust rock</i>										(2)								
Moss <i>black crust rock</i>										(2)								
Moss <i>gray crust rock</i>						(1)				(2)								
Moss <i>white crust rock</i>										(1)								
Moss <i>brown crust rock</i>										(1)								
Moss <i>star</i>							(1.1)			(2)								
<i>H green crust rock</i>										(2)								
Liverwort																		
<i>Colima</i>														5				
Algae																		
Nostoc																		
Vascular Species																		
Basal veg: <i>Bougra</i>	2	1	4	7	2	7	8	4	2	3		8	3	3	7			
<i>dark seedling</i>							.1											
Canopy-shrub																		
Canopy-forb																		
Canopy-grass	4	2	9	15	4	20	15	10	4	7	2	17	6	6	12			

Site No. 02NMA69 Date: 7-31-97 Surveyors: NW/KS GPS #: _____ Work on downslope side of line = 80% west

	Start at	end	Quad 16	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm			2	12	2	6	12	23	23	8	10	18	8	8	8	3	9
Gravel 1-2cm			2	8	1		2	2	3	2	2	12	8		2	11	8
Gravel > 2-6cm						15											
Stones 6-15cm																	
Rocks 15cm-1m																	
Boulder > 1m																	
Bedrock																	
Soil			57	69	69.5	58.7	65	59.9	29	319	10	26.4	37.5	52	46.9	35	
Sand			18	5		12	17	12	20	13	10	10	5	8	20	7	15
litter			13	12	25	9	3	3	19	28	44.5	30	35	25	20	42	35
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm			22.5														
Scal				brum	1											1	
Lichen <i>hymen tra</i>			1														
Lichen <i>calmar</i>			15														
Lichen <i>osella</i>				20	(2)												
Lichen <i>placode</i>				11													
Lichen <i>leptocarpus</i>				(1)													
Lichen <i>leptocarpus</i>				(1)													
Moss <i>brunneopeltis</i>				(1.5)													
Moss <i>brunneopeltis</i>						(4)	1										
Moss <i>brunneopeltis</i>						1											
Moss <i>cladonia</i>																	
Moss <i>ster</i>					15			0.1		8	15	0.1					
Liverwort																	
Algae																	
Nostoc																	
Vascular Species																	
Basal veg: Bougrea			5	4		4			6	6	20	5	6	7	8	1	9
liverwort																	
Canopy-shrub																	
Canopy-forb																	
Canopy-grass			12	12	16	12			12		4.5	1.5	1	2.6	0.1	3	22

Site No. KNA 09	Date: 7-31-97	Surveyors: KS / JMM	GPS #:	Work on downslope side of line = 550' ±											
Start at	end														
Gravel < 1 cm	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravel 1-2cm	4	3	5	8	4	1	5	2	2	5	5	4	10	16	11
Gravel > 2-6cm	6	2	2												
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	32	(52)	38.5	60	55	69.3	79.9	58	59	51.5	46	65	74	44	45
Sand				6	3	3	2	5			4	3	2		
litter	45	35	45	17	33	25	8	25	30	33	17	23	7	(22)	32
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat	1		1			1									
Lichen brown fr		1				1.5		3	3	1	1	2		(11)	
Lichen															
Lichen green crst rock															
Lichen black crst rock					17										
Lichen grey crst rock															
Lichen white crst rock															
Moss - green crst rock									(11)	1.5				(11)	(11)
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougra	12	3	7	3	4	0.1	3	7	5	10	4	2	3	6	8
VND Stepling															
Canopy-shrub															
Canopy-forb															
Canopy-grass	23	10	15	5	12	.1	.1	12	15	15	9	10	6	11	15

Forest Service Cryptogam Habitat Study

Site No	RNA #	Date:	7.3	Surveyors:	NM/KS	GPS #:	Work on downslope side of line =	SOOTL								
Start at	end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10					
Gravel < 1 cm	15	12	10	25	30	15	12	1	7	4	12	3	6	20	10	17
Gravel 1-2cm	14	14	17	8	7	4	7	1	8	4	12	5	3	12	3.5	17
Gravel > 2-6cm	5			8		4					4	5	8			2
Stones 6-15cm																
Rocks 15cm-1m							20	85	43							
Boulder > 1m																
Bedrock																
Soil	38	78.9	30	12.9	26	41.9	23.9	2.5	4.9	40.5	20	2.1	40.5	19	23.9	
Sand	30	20	20	15	25	15	15	2.4	30	25	57	54.5	41.5	20	20	
Litter	13	20	15	20	12	12	15	10	30	25	57	54.5	26	60	23	
Woody debris 3-8cm																
Woody debris 8-30cm	1								35	13						
Woody debris > 30 cm	23															
Scat	vat															
Lichen	Quin's Rock (3)	(.5)					(6)					(.5)				
Lichen	Wulfsch (1)	(.5)					(8)	(20)	(9)	(1)		(.5)		(1)	(1)	
Lichen	Of gully (1)	(.5)										(.5)		(1)	(1)	
Lichen	Arctostaphylos (1)	(.1)												(1)	(1)	
Lichen	Dark aspen (1)	(.1)												(1)	(1)	
Lichen	Prunella (1)	.5	4				11					(.5)				
Moss	Orange (1)	(.1)														
Moss	Cladonia		.5													
Moss	Prunella								.1	1.5						
Moss	Fan (1)															
Moss	Star															
Liverwort	Shrub (1)						(6)	(17)	(6)							
Liverwort	Open															
Algae	Prunella															
Nostoc	Prunella															
Vascular Species																
Basal veg: Bougrea	5						3									
Fish	.1		3.5							4	10	7	1.5	3		
Canopy-shrub																
Canopy-forb																
Canopy-grass	10	9	10	14	7		6	3	2	10	14	9	6	5		

Forest Service Cryptogamic Habitat Study

Gps: 4073118 A S: 3784082.2

E: 722437.2

Date: 7.3

Time: 1240

Elev: 2472

Site#: MND 9

Date: 7.3

Surveyors: NM/KCS

Directions to Site: 21.28 m E of Road

General Site observations: 50% Brown / green

Primary Aspect: SE

Secondary Aspect: _____

Primary slope & direction: SW 45

Secondary slope and direction: _____

Canopy cover of site: _____

Mid-transsect: 3.65 m from NE end Open quarters facing: _____

Within 1m at SW end. Open quarters facing: _____

Within 1m at NE end. Open quarters facing: _____

North: 54

South: 74

East: 76

West: 71

Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)

- Open Sta
- Erio Ela
- Stress - Siberian hybrid forest.
- 100 q's
- Brown Fern
- Cleistan
- Xan Bar
- Beltigera
- Spec Moss
- Nostoc
- Colina
- usnea
- WID #1

Woody debris within: 1.56 m of transect; in what part of transect: SW

Woody debris within: .9 m of transect; in what part of transect: SW

Species: Purpen Tree at SW end. Standing: 4

Species: Purpen Tree at NE end. Standing: 7

7 m away + 38 - 20

70 m away + 81 - 21

(%: right side of clinometer) + 48 - 15

N 1/2 End

S 1/2 End

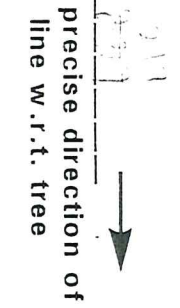
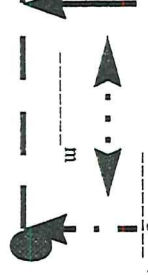
Tree = Purpen (canopy = _____ m)

Trunk = 11.23 m Rebar = 6.5 m



Tree = Purpen (canopy = _____ m)

Rebar = 1.4 m Trunk = 8 m



Length from tree trunk to tree trunk = _____ m

Length from rebar to rebar = _____ m

Site No. WMM 79 Date: 7.3) Survivors: NM/KS GPS #: Work on downslope side of line = 1295 T

	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Start at SW end															
Gravel < 1 cm		5	15	10	5	10	4	4							
Gravel 1-2 cm	4		2	3	4		1	4							
Gravel > 2-6 cm															
Stones 6-15 cm															
Rocks 15 cm- 1 m															
Boulder > 1 m															
Bedrock		7.4													
Soil	2.1	3.3	5.3	4	5.2	5.1	4.1	9.0							
Sand															
litter	5.0	2.0	1.0	2.5	2.3	4.0	2.8	3.0	6.0	2.0	2.0	3.0	4.0	2.5	5.2
Woody debris 3-8 cm															
Woody debris 8-30 cm															
Woody debris > 30 cm															
Scat v ash															
Lichen Cladonia	1.5		2.5	1.5											
Lichen hymanura															
Lichen w/d crust															
Lichen scilmar															
Lichen lf green															
Lichen w/d crust & p/oc lichens															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae veveran															
Nostoc															
Basal veg: Bougrea	10	5	8	4	5	3	7	6	6	15		5	5	3	
Yes q4															
wild seeds															
Canopy- shrub															
Canopy- forb		4.1	1		1	1	1	1	1	1	1	1	1	1	1
Canopy- grass	50			10	7	14	14	12	13	20		12	10	9	6

Site No. <i>WAW09</i>	Date: <i>7-31-97</i>	Surveyors: <i>NW/KS</i>	GPS #:	Work on downslope side of line = <i>EAST</i>															
Start at <i>S</i> end	Quad <i>31</i>	Quad <i>32</i>	Quad <i>33</i>	Quad <i>34</i>	Quad <i>35</i>	Quad <i>36</i>	Quad <i>37</i>	Quad <i>38</i>	Quad <i>39</i>	Quad <i>40</i>	Quad <i>41</i>	Quad <i>42</i>	Quad <i>43</i>	Quad <i>44</i>	Quad <i>45</i>				
Gravels < 1 cm																			
Gravel 1-2cm	<i>8</i>	<i>18</i>	<i>10</i>	<i>4</i>	<i>5</i>	<i>1</i>													
Gravel > 2-6cm																			
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	<i>70</i>	<i>77</i>	<i>80.9</i>	<i>63</i>	<i>85.4</i>	<i>45</i>	<i>15</i>	<i>57</i>	<i>81</i>	<i>46</i>	<i>22</i>	<i>79.9</i>	<i>45</i>	<i>22</i>	<i>25</i>				
Sand																			
Litter	<i>15</i>	<i>6</i>	<i>5</i>	<i>(25)</i>	<i>18</i>	<i>45</i>	<i>78</i>	<i>30</i>	<i>13</i>	<i>45</i>	<i>62</i>	<i>6</i>	<i>87.9</i>	<i>65</i>	<i>67.3</i>				
Woody debris 3-8cm																			
Woody debris 8-30cm																			
Woody debris > 30 cm																			
Scat <i>✓</i>									<i>1</i>				<i>2</i>	<i>.5</i>	<i>2.5</i>				
Lichen brown lmv				<i>.1</i>											<i>.1</i>				
Lichen <i>Urbaria</i>					<i>.1</i>														
Lichen <i>Xm</i> <i>var</i>													<i>.1</i>						
Lichen <i>Wurdl</i> <i>Cryptogam</i>											<i>3</i>								
Lichen															<i>1</i>				
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Liverwort																			
Algae																			
Nostoc																			
Vascular Species																			
Basal veg: <i>Bougra</i>	<i>7</i>			<i>4.5</i>	<i>5</i>	<i>8</i>	<i>5</i>	<i>6</i>		<i>8</i>	<i>11</i>	<i>1</i>	<i>9</i>	<i>9.5</i>	<i>7</i>				
<i>LESOR</i>													<i>.5</i>		<i>.1</i>				
Canopy-shrub																			
Canopy-forb																			
Canopy-grass	<i>29</i>			<i>9</i>	<i>12</i>	<i>25</i>	<i>13</i>	<i>15</i>	<i>12</i>	<i>16</i>	<i>40</i>	<i>12</i>	<i>20</i>	<i>22</i>	<i>1.5</i>				

Site No. (V&A) MO9	Date: 7-31	Surveyors: JWM/KS	GPS #:	Work on downslope side of line = EAST											
Start at 50	end														
Gravels < 1 cm	Quad 46	Quad 47	Quad 48	Quad 49	Quad 50	Quad 51	Quad 52	Quad 53	Quad 54	Quad 55	Quad 56	Quad 57	Quad 58	Quad 59	Quad 60
Gravel 1-2cm	1					6	25	2	1						10
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	411.8	49.4	48	40.7	45.3	50.9	37.9	45.9	43.8	33.9	17	32.9	64	69.9	56
Sand															
Litter	40	35	15	45	45	35	29	(37) 36	38	55	73.9	48	28	25	20
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30cm															
Scat	1	3						2	1						1
Lichen brown fru	.1	1	28	10	1	1	2	3	6	3	.1			2	1
Lichen green fru		5			1	.1									
Lichen Xan fru			2				1	3	10	1	5	12	1	2	110
Lichen foliosa			1												
Lichen Cladonia				.1	.1	(5)	1		.1						
Lt green crusts, rock						(5)									
Moss white crusts, rock						(5)									
Moss grey crusts, rock						(11)	(11)	(11)							
Moss green crusts, rock															
Moss atv		3	1	.1	.5						1			.1	
Liverwort															
Algae															
Nostoc			1						1						
Vascular Species															
Basal veg: Bougain	12	0	27	8	7	7	4	3	.1	10	3	5	2	1	1
Mid canopy tree	.1	.1		.1	.1			.1	.1	.1		.1			
LG								1							
Canopy-shrub															
Canopy-forb	.1	.1		.1	.1			2.1	.1	.1		.1			
Canopy-grass	30	15	9	17	17	12	9	10	3	12	8	12	4	4	5

Site No. WPM109	Date: 7.31	Surveyors: NM/KS	GPS #:	Work on downslope side of line = EAST															
Start at	end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15	Quad 16		
Gravels < 1 cm	3	3																	
Gravel 1-2cm	3																		
Gravel > 2-6cm																			
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	21.5	37.9	46.4	20	78.8	37	20	25	30	43	15								
Sand																			
litter	(30)	55	45	(54.5)	12	87	72.5	64	(59.9)	(43)	76.9								
Woody debris 3-8cm	1																		
Woody debris 8-30cm	728																		
Woody debris > 30 cm																			
Scat	1.5	2		3.5		(56)		2		2	1								
Lichen <i>hymn</i> (m)	b																		
Lichen <i>swpp</i>	25	1	.5	10	2	6	1.5	3		.1	.1								
Lichen																			
Lichen																			
Lichen																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Liverwort																			
Algae																			
Nostoc																			
Vascular Species																			
Basal veg: Bougra	2	4	7	2	4	3	6	6	12	3	7								
Wood scd/m	.1	.1	.1		.1				.1										
Canopy-shrub																			
Canopy-forb		.1	.1	.1	.1				.1										
Canopy-grass	4	10	12	4	11	5	12	9	15	12	15								

Forest Service Cryptogamic Habitat Study

Gps: L080115A S: 3

E: 1

Site#: MAN 188

Time: 9:35

Date: 8-1-97

Elev:

Surveyors: NW/KS

Directions to Site: 24 Meters from Fence line

General Site observations: NE Juniper is 3/4 dead and SE of it is

downed tree Equal Pinon and Juniper largest Pinon from SE of line about 20m

Primary Aspect: 83°

Secondary Aspect: 117°

Primary slope & direction: SW → NE 49%

Secondary slope and direction: NW → SE 49%

Canopy cover of site:

Mid-transsect: 3.7 m from SW end Open quarters facing:

North: 96

South: 83

East: 96

West: 42

Within 1m at SW end. Open quarters facing:

North: 73

South: 94

East: 196

West: 7

Within 1m at NE end. Open quarters facing:

North: 75

South: 93

East: 29

West: 86

Plants (vascular and nonvascular) within 3m of transect:

(Indicate when there are greater than 10 individuals in vicinity ie if particularly abundant)

Eriogon leuceri Bougain Composite (like near camp)
Eriola Astragalus sit kys Dese

Woody debris within: 1.1 m North of mid transect is YAN PR downed
1.6 m of transect; In what part of transect: bottom of trunk - tree falls (NE) of End rebar
 Woody debris within: 1.2 m of transect; in what part of transect: part of fallen tree SE of End rebar

Species: Pinon Tree at SW end. Standing: 7
Juniper Tree at NE end. Standing: 8

9	1	15	
m away	+ 84	- 19	(%: right side of clinometer)
m away	+ 16	- 25	(%: right side of clinometer)

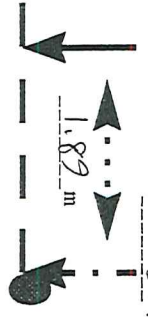
N2 End

Tree = Juniper
 (canopy = 4.69 m)
 Trunk = 10.27 m Rebar = 9.38 m



SW End

Tree = Pinon
 (canopy = 1.89 m)
 Trunk = 0 m
 Rebar = 1.89 m



242 SW →
 precise direction of line w.r.t. tree

Length from tree trunk, to tree trunk = 10.27 m
 Length from rebar to rebar = 9.49 m

← 64° NE
 precise direction of line w.r.t. tree,

Forest Service Cryptogam Habitat Study

Site No. <u>MANN00</u>	Date: <u>8-1-97</u>	Surveyors: <u>ES MM</u>	GPS #:	Work on downslope side of the = <u>SE</u>											
Start at <u>SW</u> end	Quad 1	Quad 2	Quad 3	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 13	Quad 14	Quad 15
Gravels < 1 cm	11	2	5	10	4	7	12	6	18	17	5	13	10	5	4
Gravel 1-2cm	5	2	1				7	3	6	5	4	10		2	
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	28	15	20	18	20	26	26.5	35	6	39	29	36.5	23	20	8
Sand															
litter	(43)	(54.8)	58	38.5	(36)	17	15	1	20	10	20	8	10	55	15
Woody debris 3-8cm															50
Woody debris 8-30cm	33	54			25	27	18	39	22	18	25	14	40		
Woody debris > 30 cm															
Scat	1												1	3	2
Lichen Xa Pa	18	25	10	28	30	13	18	12	18		4	14		7	5
Lichen															
Lichen															
Lichen green crust. L.				(15)											
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougrea	4		6	5.5	11	10	3	5	9	7	8	2.5	10	2	16
Wald peeling		1.5					1.5								
LCS Sinking		1.5													
Canopy-shrub															
Canopy-forb		3+2	2												
Canopy-grass	5		16	16	24	25	19	20	26	25	25	10	22	12	28

Site No. <i>NA 10</i>	Date: <i>8.1.97</i>	Surveyors: <i>BJ/M</i>	GPS #:	Work on downslope side of line = <i>5E</i>											
Start at (W) end	Quad 14	Quad 17	Quad 18	Quad 19	Quad 20	Quad 21	Quad 22	Quad 2-3	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	5	7	4	4	1	4.5	2	1	3	2	1	5	1		2
Gravel 1-2cm	1					3			2			9	9		
Gravel > 2-6cm												12	5		
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	12	23	12	4	10	5	20.9	5	2	8	4	12.9	31	5	16
Sand	42.5	54.5	15	25.9	26	24.5	22	17	27	3	27	23	7	36	30
litter	30	10	45	(53)	40	42	40	30	40	56.9	28	23	19	19	30
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat		1	1												
Lichen <i>Xan Par</i>	5	4	16	5	7	13	8	32	15	18	12	9	24	27	13
Lichen <i>Grav Par</i>								2	3						
Lichen															
Lichen															
Lichen															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae <i>Volvent</i>															
Nostoc															
Vascular Species															
Basal veg: <i>Bougra</i>	45		5	4	14	7	5	12	7	12	3	19	13	7	9
<i>UVID ssp. n. 106</i>		.5													
<i>Ca Erioselella</i>						1		1		.1		.1			
<i>UVID F008</i>												4	1	2	
<i>2 Lin Jan</i>															
Canopy-shrub															
Canopy-forb															
Canopy-grass	12	7	9	15	28	25	4	3	20	25	9	13+1	4	8	18

322
322
322

Forest Service Cryptogam Habitat Study

Site No. MYV #15	Date: 8-1-92	Surveyors:	GPS #:	Work on downslope side of line = SE											
Start at 5m end	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravel < 1 cm	7	3	3	2	4	10	15	5	3	5	4	10	22	20	20
Gravel 1-2cm															
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	54	76	87	59	78.5	74	73	57	84	43	43	81	67	66	68
Sand	12	5	6	4	6	3		12	5	10	13	7	10	12	3
litter	(10)	9		25	5	17	25	18	4	10	23	3		1	3
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm	12														
Scat	4				15										
Lichen <i>Xanthoparmelia</i>	7		4	2	2		15	6	4	7	1			1	
Lichen <i>Xanthoparmelia</i>															
Lichen															
Lichen															
Lichen <i>H. grayi</i> (crs) rock												(1)			(15)
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougrea	7			8	1			2		3	2				
Canopy-shrub															
Canopy-forb															
Canopy-grass	6	20	10	25	2		9	4	1	9	6				

Site No. <i>NM1012</i>	Date: <i>8.1.97</i>	Surveyors: <i>K/M/KS</i>	GPS #:	Work on downslope side of line =															
Start at	end	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant
Gravel < 1 cm	30	5	8	6	5	5	2	1	1	3	1	1	1	1	1	1	1	1	1
Gravel 1-2cm	8																		
Gravel > 2-6cm																			
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	51	81	81	72	81	43	51.8	85.9	86.9	63.9	67.9	45	83.9	76	62				
Sand	6	4	6	15	6	18	4	4	3	4	3	1	6	7	4				
litter	3	7	3	7	6	25	35	2	4	27	24	43	6	4	29				
Woody debris 3-8cm	1																		
Woody debris 8-30cm																			
Woody debris > 30 cm	5																		
Scat																			
Lichen <i>Yan Par</i>					2														
Lichen <i>Brown For</i>									4	1	2	2		2					
Lichen									.1										
Lichen																			
Lichen <i>H. sternovirid</i> (red) (5)																			
Lichen <i>H. gray</i> (rust) (5)																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Moss																			
Liverwort																			
Algae																			
Nostoc																			
Vascular Species																			
Basal veg: <i>Bouyria</i>						7	5												
<i>V. M. D. S. P. 11.16</i>							.1	.1	.1	.1	.1	.1	.1	.1	.1				
Canopy-shrub																			
Canopy-forb																			
Canopy-grass	1	3			1	15	7	.1	.1	.1	.1	.1	.1	.1	20	.1			

1420 S end

File Name Session ID	# Way Pts	Date	Time (24hr)	20/30 ?	RAW Field Easting	Position Northing	Records Notes	Corrected Position Easting	Corrected Position Northing	Cor. ELEV
40805PFA155	8/5	8/5	11:41	3D	722303	378414.6	PNA 10 UTM 12			
4080522A61	8/5	8/5	4:20	3D	7224574	3784182.0	PNA 11 UTM 12 73344			
640806DA16T	8.6	8.6	14:20	3D	7224613	378411.6	(UTM 12) 8304 ft / MAN 11			
640807FA 92	8.7	8.7	10:30	3D	722433.7	3784117.1	(UTM 12) 8140 ft / MAN 12			
66080219A40T	8.7	8.7	14:14	3D	7224477.8	3784128.1	(UTM 12) 8064 ft / MAN 13			

52.8
47
36.9
63.1

Exp.	Date	Subject	Azimuth	Location/description
4	7/29	site MAN 06	74°	West end in foreground
5	7/29	RNA 06	231	East end in foreground
6	7/29	RNA 08	230	East end in foreground
7	7/29	RNA 07	234	East end in foreground
8	7/30	site man 08	4	Sound west in foreground
9	7/30	camp site		Stormy sky at campsite
10	7/30	square mesa top		Stormy sky at camp site
11	7/31			some kind of weird bug thing
12	7/31	MAN 07	101	site MAN 07 west end in foreground
13	7/31	MAN 08		site MAN 08
14	7/31	RNA 09	191	northeast end in foreground
15	8/1	MAN 10	28	SW rebar in foreground
16	8/6	RNA 11		SE rebar in foreground
17	8/6	RNA 10		NE rebar in foreground
18	8/6	RNA 11	12(N)	SW rebar in foreground
19	8/7	MAN 12	142°	S rebar in photo w/ downed wood
20	8/8	MAN 13	185°	N rebar in foreground
21	8/8	between man 13 and man 14		cryptogram next to downed wood
22	8/8	MAN 14	135°	NW rebar in foreground
23	8/8	RNA 12	238°	SW rebar in foreground
? 24	8/8	RNA 13	106°	N rebar in foreground

Record of transects

11.6

Plot #	Date	AZIMUTH	Direction	Pair		Azimuth	Azimuth
				RNA	MAN		
RNA 1	7/22	320/140	NW/SE	1	∅ 3	352/172	∅ 3
MAN 1	7/22	350/170	NW/SE	1			
RNA 2	7/23	278/98	NW/SE	1			
MAN 2	7/23	350/170	NW/SE	1			
RNA 3	7/23	352/172	NW/SE	1			
MAN 3	7/23	352/172	NW/SE	1			
RNA 4	7/24	258/78	NE/SW	1			
* MAN 4	7/24	66	NE/SW	1			
RNA 5	7/25	184/4	NE/SW	1			
MAN 5	7/25		NW/SE	1			
RNA 6	7/29	276/96	NW/SE	1			
MAN 6	7/29	222/42	NE/SW	1			
* RNA 7					Check line direction		
MAN 7	7/31	257/77	NE/SW	1			
RNA 8	7/29	270/90	E/W				
MAN 8	7/31	201/21	NE/SW	1			
RNA 9	7-31	214/34	NE/SW	1			
MAN 9	7-31	217/37	NE/SW	1			
RNA 10	8-5	10/190	NW/SW	1			
MAN 10	8-1	244/104	NE/SW	1			
RNA 11	8-5	66/256	NE/SW	1			
MAN 11	8-6	22/202	NE/SW	1			
RNA 12	8-6	58/238	NE/SW	1			
MAN 12	8-6	6/186	NE/SW	1			
RNA 13	8-8	165/348	NW/SE	1			
MAN 13	8-8	303/123	NW/SE	1			
RNA 14							
MAN 14	8-8	332/152	NN/SE	1			
RNA 15							
MAN 15							
RNA 16							
MAN 16							
RNA 17							
MAN 17							
RNA 18							
MAN 18							
RNA 19							
MAN 19							
RNA 20							
MAN 20							

NE RNA NW
- 0 | 5

NE MAN NW
7 | 5

Forest Service Cryptogamic Habitat Study

Gps: A880517A S: 3789114.6

E: 722387.3

Time: 11:24

Elev: 8133

Site#: RNA 18

Date: 8/5

Surveyors: NW/AS

55°

Directions to Site: 15.5 m N of fence (287°)

General Site observations: Great amount of brown fr ~ 8 m E of transect.
about 4 large downed trees N ~ 6 m of transect.

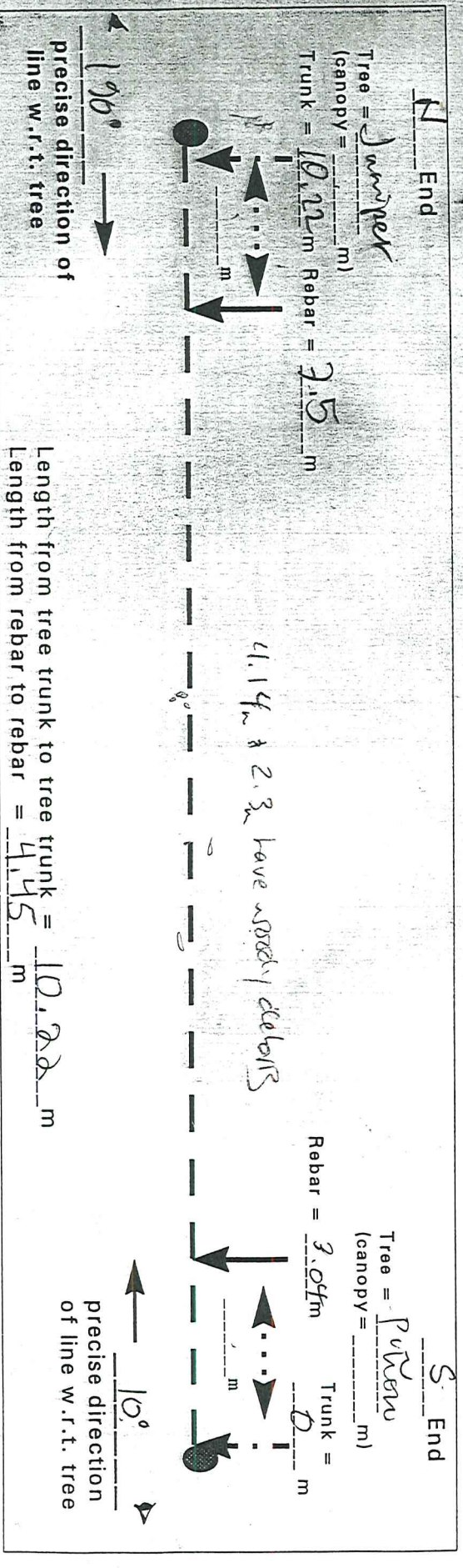
Primary Aspect: 123° Secondary Aspect: 154° Primary slope & direction: 3% Secondary slope and direction: 2%

Canopy cover of site:
 Mid-transect: 2.2m from S end Open quarters facing: North: 86 South: 79 East: 93 West: 83
 Within 1m at S end. Open quarters facing: North: 100 South: 72 East: 96 West: 74
 Within 1m at N end. Open quarters facing: North: 41 South: 85 East: 89 West: 93

Plants (vascular and nonvascular) within 3m of transect:
LES AUERUA
Avid fl

Woody debris within: 0 m of transect; in what part of transect: 4.14m and 2.4m
 Woody debris within: 1.8 m of transect; in what part of transect: due west at 2m

Species: Purpen Tree at N end. Standing: 8 m away + 35 - 20 (%: right side of clinometer)
 Species: Jumper Tree at S end. Standing: 7 m away + 15 - 17 (%: right side of clinometer)



Forest Service Cryptogamic Habitat Study
 Gps: 60805 22As: 3784182.0

Site# RNA# 11
 E: 722157.5

Date: 8/5/94
 Time: 16:08
 Elev: 7733 ft.

Surveyors: NW/AS

Directions to Site: 23.65 m west of home

General Site observations: 26.50 - 50 Juniper - Pinon

Primary Aspect: 353 Secondary Aspect: _____
 Primary slope & direction: 19° Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transsect: 4.3 m from E end Open quarters facing: North: 96 South: 96 East: 94 West: 96
 Within 1m at E end. Open quarters facing: North: 48 South: 88 East: 84 West: 71
 Within 1m at W end. Open quarters facing: North: 96 South: 94 East: 96 West: 78

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)
ERICA Some Xun par multiple dead fallen trees are 6 m away from transect
transsect entirely circled by trees at 2-3m N and S of line.

Woody debris within: 0 m of transect; In what part of transect: Wend at rebar (entire dead live on ground)
 Woody debris within: 15 m of transect; In what part of transect: SE area of transect

Species: Pinon Tree at E end. Standing: 10 (4 Pinon) m away + 210 - 15 (%; right side of clinometer)
 Species: Juniper Tree at W end. Standing: 9 (1 Pinon) m away + 18 - 19 (%; right side of clinometer)

