

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			2	3	5		10	7	3	5	5	15	5	5	4	5
Gravel 1-2cm						18					10					10
Gravel > 2-6cm																2
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil																
Sand																
litter																
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat																
Lichen white																
Lichen grey																
Lichen yellow soil crusts																
Lichen green crusts																
Lichen green w/leaves																
Lichen black crusts																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougainvillea																
Woody shrub																
Canopy shrub																
Canopy forb																
Canopy grass																

Site: No. RNN 11 Date: 8-6 Surveyors: NM/AS GPS #: 080822A Work on downslope side of line = SOUTH

Start at E of S end	AT	2m	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	25	20	35	28	10	4	2	2	6	5	4	2	2	2	12	8	6
Gravel 1-2cm	2	2	7	4	2	1											
Gravel > 2-6cm				3													
Stones 6-15cm																	
Rocks 15cm-1m																	
Boulder > 1m																	
Bedrock																	
Soil	69.9	66.9	49	55	66.5	74	64.9	70.4	70	72	67	43.9	72	75.9	62		
Sand																	
litter	3	7	9	10	15	15	20	23	17	15	22	45	8	12	25		
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm																	
Scat																	
Lichen black cr. (11)																	
Lichen white cr. (.5)																	
Lichen Collinsa			1														
Lichen Brown AKA			3														
Lichen brn clst							2	1	.5								
Moss																	
Moss																	
Moss																	
Moss																	
Moss																	
Moss																	
Moss																	
Liverwort																	
Algae SWINGH																	
Nostoc																	
Vascular Species																	
Basal veg: Bougrea	0	0	0	0	2	1	3	3	3	4	4	4	4	2	3	4	
Maid sealink	.1	.1					.1	.1									
Leguminella							.5										
Canopy-shrub	.1	.1															
Canopy-forb	.1	.1															
Canopy-grass	5	18	4	7	5	3	4	7	9	8	10	15	10	5	2		

STEP 2 of 6

	Start at <u>Back</u> end	<u>AX</u>	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant
			31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Gravels < 1 cm			4	6	2	3														
Gravel 1-2cm			5	4	1.5	2														
Gravel > 2-6cm			7		3															
Stones 6-15cm																				
Rocks 15cm-1m																				
Boulder > 1m																				
Bedrock																				
Soil			75	18.9	29.4	78.4	56.9	2.0	2.2	5.6	80.9	86.5	90.8	6.7	6.1	5.4	71.5			
Sand																				
litter			5	10	10	11	30	31.4	30	20	10	13	3	10	5	1.2	15			
Woody debris 3-8cm																				
Woody debris 8-30cm																				
Woody debris > 30 cm																				
Scat <u>rabbit</u>									2	1										
Lichen <u>Black crustose</u> (1)								(6)	(9)						(3)	(1)				
Lichen <u>White crustose</u> (1.5)								(4)	(13)						(6)	(3)				(1)
Lichen <u>Diplo</u>																				
Lichen <u>Spuma</u>																				
Lichen <u>Open crustose</u> (1)																				
Lichen <u>Black crustose</u> (1)																				
Moss																				
Moss																				
Moss																				
Moss <u>Stav</u>									2	2										
Liverwort																				
<u>Green algae</u>																				
<u>Algae Strands</u>																				
<u>Nostoc</u>																				
Vascular Species																				
Basal veg: <u>Bougera</u>			4		5	3	10	2.5	20	8										
<u>Bank of mulling</u>																				
Canopy-shrub																				
Canopy-forb																				
Canopy-grass			20	7	15	15	30	60	40	20			3	15	40	80				20

Site No: NKRNBKVA	Date: 8/6	Surveyors: NM/AS	GPS #s: 080522A	Work on downslope side of line =	Page 4	7	6	South								
Start at VZAF end	Quadr 6	Quadr 7	Quadr 8	Quadr 9	Quadr 10	Quadr 11	Quadr 12	Quadr 13	Quadr 14	Quadr 15	Quadr 16	Quadr 17	Quadr 18	Quadr 19	Quadr 20	
Gravels < 1 cm	4	3	2	8	6	5	8	18	11	8	16	14	3	8	9	17
Gravel 1-2 cm	1	4	3	10	8	5	5	2	4	8	6	6	3	8	4	3
Gravel > 2-6 cm																
Stones 6-15 cm			28													
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil	91	79.4	48.4	76.9	72	49	85.9	46.9	82.9	74.5	73	67.5	73	85.4	79.8	
Sand																
Litter	3	10	3	4	9	35		7	2	1	3	25	17			
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat																
Lichen white cr.		(.5)	(2)	(1)							(.5)					(.5)
Lichen black cr.			(5)	(3)							(11)					(.5)
Lichen hrv. fm				1												.1
Lichen Coliwa					1											.1
Lichen Soli/Bink																.5
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae SWINWY	1		1.5				1	1		.5	1			1		
Nostoc							.1									
Vascular Species																
Basal veg: Bougria	0	3	2	0	4	11	0		.1		0	4	2	0		
Wind seedling		.1	.1	.1					.1	.1					.1	
Canopy-shrub																
Canopy-forb																
Canopy-grass	0	7	6	1	12	40	4	.1	.5		4	13	5	.1	2	

17/05/17

Start at East end	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
Gravel < 1 cm	11	5	12	5	3	10	10	30	49	30	40	15	3	5	4
Gravel 1-2 cm	6	5	20	2			3	20	3		6	3	2		
Gravel > 2-6 cm			15	6											
Stones 6-15 cm			10												
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	63	60	40	69	52	87	80	49	90	66.9	49.9	67.9	86	69	61
Sand															
Litter	5	15	2	10	25	3	4	1	2	3	3	3	6	8	15
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat															
Lichen <u>Black crust</u> (3)			(8)	(3)				(0.5)		(3)		(0.5)			
Lichen <u>White crust</u> (5)			(4)					(1.5)							
Lichen <u>Grey crust</u>			(6)						1						
Lichen <u>Yellow</u>															
Lichen <u>Green</u>															
Lichen <u>Green</u>															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae <u>SR</u>															
Nostoc															
Vascular Species															
Basal veg. <u>Bougainvillea</u>	7	15	1	8	20		3					4	3	14	13
<u>WMA</u>															2
Canopy-shrub															
Canopy-forb															
Canopy-grass	15	40	17	25	50	15	8			10	8	12	6	20	10

Site No. RNP-11	Date: 8.6	Surveyors: NW/AS	GPS #:	6080522A	69	29.1	72.4	Work on downslope side of line = SOUTH							
Start at EAST end	41' 7.5m														
Gravels < 1 cm	Quad 76	Quad 77	Quad 78	Quad 79	Quad 80	Quad 81	Quad 82	Quad 83	Quad 84	Quad 85	Quad 86	Quad 87	Quad 88	Quad 89	Quad 90
Gravel 1-2cm	2	1	9	15	7	2	19	25	11	9	7	23	5	3	3
Gravel > 2-6cm						6	9	5							
Stones 6-15cm						6	9								
Rocks 15cm-1m						6	9								
Boulder > 1m						6	9								
Bedrock						6	9								
Soil	68	78.8	90.4	70	71	(69)	39.5	59.9		(60)	31	72.4			
Sand															
Litter	20	15		6	10		15	20	16	10	8				
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30cm															
Scat		1													
Lichen <i>Coliwa</i>	5				1										
Lichen <i>brn furtic</i>		.1													
Lichen <i>Clidmia</i>															
Lichen <i>blk crust</i>			(1)	2	(1)	(1)	(4)	(1)	(1)	(1)	(.5)				
Lichen <i>whke cr.</i>															
Lichen <i>gray CV</i>						(.5)		(.5)		(.5)	(.5)	(.5)			
Moss															
Moss															
Moss															
Moss 1+ gnr	2														
Liverwort															
Algae															
Nostoc								1							
Vascular Species															
Basal veg: <i>Bougera</i>	3	4	0	0	4	3	3	4	1	3					
msd seedling			.1			.1		.1							
Canopy-shrub															
Canopy-forb			.1												
Canopy-grass	6	8	12	3	10	1	5	8	5	6					

37. 2.1.2
0.8 7.0 0 12.1

() = 0.5m

3

PG 6 of 6

Forest Service Cryptogamic Habitat Study

Gps: _____ S: _____ E: _____ Site#: PNA 13 Date: 8.8 Surveyors: NM/JAS

Directions to Site: 20.7 m west of fence

General Site observations: _____

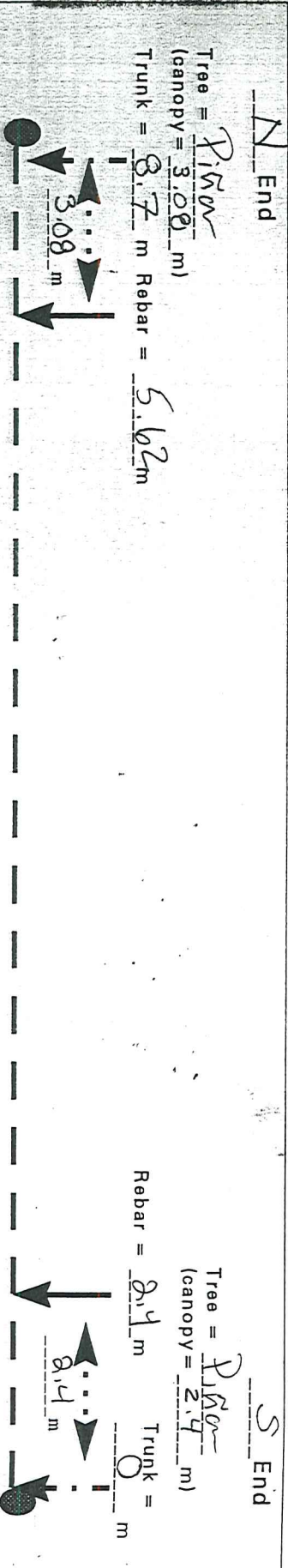
Primary Aspect: 20° Secondary Aspect: _____ Primary slope & direction: 2% Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transsect: 1.8 m from S end Open quarters facing: North: 96 South: 96 East: 96 West: 96
 Within 1m at N end. Open quarters facing: North: 86 South: 96 East: 96 West: 96
 Within 1m at S end. Open quarters facing: North: 94 South: 53 East: 78 West: 96

Plants (vascular and nonvascular) within 3m of transect: Xan par (50/50 Pison jumper)
 (Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)

Woody debris within: 1 m of transect; in what part of transect: from veg of S rebar to woody debris
 Woody debris within: 1.6 m of transect; in what part of transect: from veg of litter pile

Species: Pison Tree at at 2.6 S end. Standing: 5.8 m away + 70 - 28 (%; right side of clinometer)
 Species: Pison Tree at N end. Standing: 6.8 m away + 22 - 19 (%; right side of clinometer)



precise direction of line w.r.t. tree: BBB (NW-SE line)
 Length from tree trunk to tree trunk = 8.7 m
 Length from rebar to rebar = 3.53 m

precise direction of line w.r.t. tree: 348

Start at	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			10	5	10	2	3	4	5	25	20	25	6	10	2
Gravel 1-2 cm											5				4
Gravel > 2-6 cm															
Stones 6-15 cm															
Rocks 15 cm-1 m															
Boulder > 1 m															
Bedrock															
Soil	1	30	26	25	25	30	10	13							
Sand			5	5		5	2								
litter	87.9	59.8	47	59.3	50.9	51.5	73.5	62	44.5	26	25	10	10	25	30
Woody debris 3-8 cm															
Woody debris 8-30 cm															
Woody debris > 30 cm		58.5													
Scat	1	2.5	1		2.5	2	6	2		1					1
Lichen <i>Cladonia</i>															
Lichen <i>Xm parv</i>		1													
Lichen <i>Openbarko</i>		2	3	1	1										
Lichen <i>Hyponerw</i>			1.5												
Lichen <i>White Crusts</i>						1.5									
lichen <i>crusts</i>															
Moss															
Moss															
Moss <i>star</i>		1												2	3
Liverwort															
Algae															
Nostoc		1	2.5	5	5		16		5						1
Vascular Species															
Basal veg: <i>Boygra</i>	4	4	4	4	10	8	5	8	5	3	3	5	10	10	4
Wood <i>Walling</i>	.1			.1	.1										
Canopy-shrub															
Canopy-forb															
Canopy-grass	10	10	15	10	15	20	45	20	15	10	8	15	30	25	10

Site No. RNH13 Date: 8-8 Surveyors: NM AS GPS #:

Work on downslope side of line = EAST

Start at	Southend	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	4	4												
Gravel 1-2cm		2														
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil																
Sand		61.3 60.2	61 20	53 30	46 2	21.5 20	60.5 5	53.4	67.3	42	65.5	65	69	68.5	46	65
litter		15	15	12	40	20	25	40	45	50	20	20	7	15	35	15
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat		1.6														
Lichen dlv gnrl		(1.5)	(1.5)	(1.5)												
Lichen gn gnrl																
Lichen xan gnrl																
Lichen gn exs.																
Lichen s-lv exs.																
Lichen b-lv exs.																
Moss d-lv																
Moss s-lv ex																
Moss																
Moss																
Moss s-lv					2		.5									
Liverwort																
Algae																
Nostoc		.1					.5									
Vascular Species																
Basal veg: Bougra		3	0	1	7	2	2	4	10	5	2	6	3	5	6	4
Mid		.1														
Canopy-shrub		1														
Canopy-forb																
Canopy-grass		6	2	5	15	5	5	8	30	10	6	15	6	10	15	15

with 1.5
10 5.5

1.5
10 15

PS 2 of 3

Forest Service Cryptogamic Habitat Study
 Gps: G080719A s: 3784128.1

Site#: MAM18
 E: 722477.8

Date: 8.7
 Time: 14:14
 Elev: 8064 ft

Surveyors: NM/AAS

UTM 12

Directions to Site: 15 m E T to fence then bear 90° NE 24 m to site

General Site observations: (slope very difficult to dig over accurately) mostly debris and pine cone litter prevalent at NE end

Primary Aspect: 244° Secondary Aspect: _____
 Primary slope & direction: 1.8° Secondary slope and direction: _____

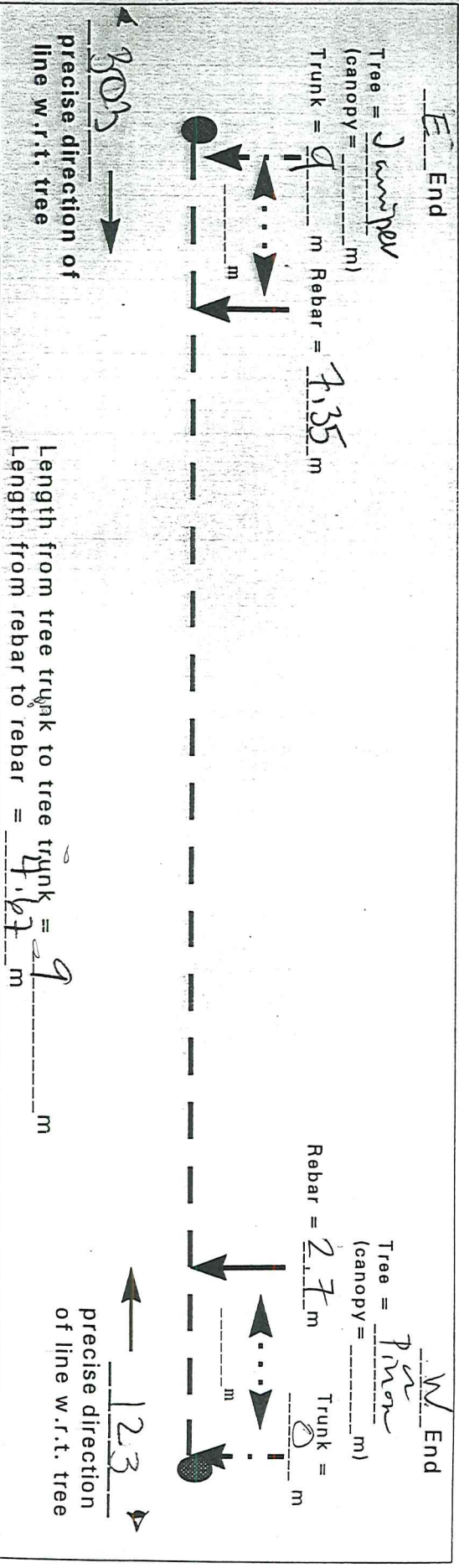
Canopy cover of site: _____
 Mid-transsect: 2.5 m from W end Open quarters facing: _____
 Within 1m at W end. Open quarters facing: _____
 Within 1m at E end. Open quarters facing: _____

North: <u>96</u>	South: <u>96</u>	East: <u>96</u>	West: <u>91</u>
North: <u>92</u>	South: <u>96</u>	East: <u>96</u>	West: <u>66</u>
North: <u>96</u>	South: <u>96</u>	East: <u>94</u>	West: <u>78</u>

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

Woody debris within: 1.2 m of transect; in what part of transect: NE quad, branches
 Woody debris within: 1.1 m of transect; in what part of transect: NW quad

Species: Juncus Tree at SE end. Standing: 6.3 m away + 8 - 28 (%: right side of clinometer)
 Species: Pinus Tree at NW end. Standing: 7 m away + 84 - 19 (%: right side of clinometer)



Site No. MAN13 Date: 8/7 Surveyors: NW/AS GPS #: 1000719A

Work on downslope side of line = South

pg 1 of 4

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		3	15	7	45	25	4	30	50	50	45	15	10	30	35	3
Gravel 1-2cm					3			2	2	7	3	2				
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		55	27	42	27	30	56.9	45	23	15	34	42	45	28	11	59.5
Sand																
litter		40	55	45	25	40	35	20	25	25	15	35	43	30	40	30
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat			1			1		1								1
Lichen white crusty																
Lichen black crusty			(.5)												(.5)	
Lichen grey crusty				(1)	(1)		.1				(1)	(1)	(.1)	(.1)	(2)	
Lichen Colima											(1)	(1)			(2)	
Lichen																1
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																1
Vascular Species																
Basal veg: Bougainvillea		2	2	6	0	3	4	2	0	3	3	6	2	4	5	5
FOYB																
Canopy-shrub																
Canopy-forb																
Canopy-grass		3	3	20	2	6	8	6	3	6	5	10	20	20	15	10

() = on VSLK

Site No. MAN19 Date: 8/19/03 Surveyors: NM/KS GPS #: 4080714D

Work on downslope side of line = SW

pg 2 of 4

Start at	end	16 th	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Gravel < 1 cm	25	20	10	40	30	20	20	8	20	20	5	10	19	7	10	20
Gravel 1-2 cm	4	11	2	3	5	3	3	2	2	20	5	10	3	4		
Gravel > 2-6 cm																
Stones 6-15 cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil	23	80	20	20	30	50	35	19	50	48	28	50	80	58.9	50	
Sand	40	24.5	23	20	10	65	5	25	10	25	20	15	15	1.8	5.4	
Litter	0	10	30	10	13	10	31	25	10	25	30	5	3	10	15	
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat	1				1				2		1					
Lichen BLE crustace	(.1)	(2)		(.5)	(2)		(.1)	(.1)								
Lichen Colima		.5				2.									.5	.5
Lichen var. woodw	(.1)			(.5)				(.1)	(.1)						.5	.5
Lichen woodw	1	1				3.5		(.1)	(.1)	1	1	1	1	1.5	2.5	1
Lichen woodw					(.1)			(.5)	(.5)	2	1	1	3	5		2.5
Moss woodw																
Moss																
Moss																
Moss Stal							1									
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Boigra		3		15	5	5	5	20	8	15	20	25	5	3	15	1
Wood scudling																
Canopy-shrub																
Canopy-forb																
Canopy-grass	1	5	50	25	10	10	30	8	60	60	45	15	5	1	25	

20/1m one dm of fuel or 15 a 10 cm. over

Forest Service Cryptogamic Habitat Study
 Gsp# 0806200 S: 3784 116.1
 Site#: MAN 11
 Date: 8.6
 Surveyors: NIN/AS
 E: 722461.3
 Time: 1420
 Elev: 8304 ft

Directions to Site: at fence face 66° and off 50 m. (Flagging away)
 General Site observations: Lots and lots of dead wood ringing site (very difficult site selection)

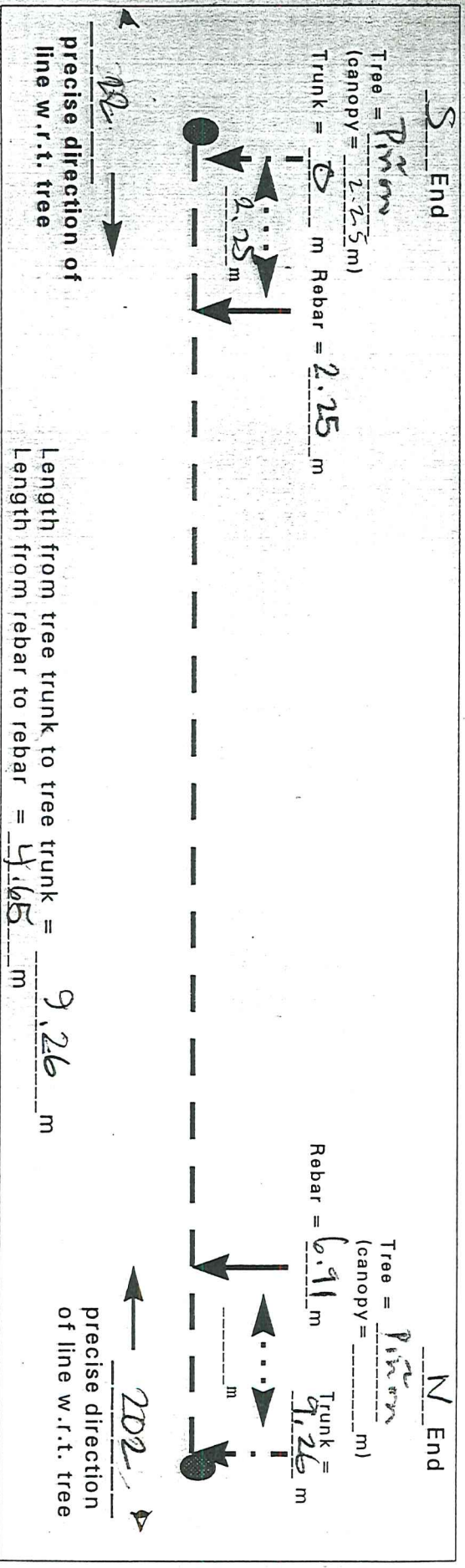
Primary Aspect: 96° Secondary Aspect: _____
 Primary slope & direction: 3% Secondary slope and direction: _____

Canopy cover of site:
 Mid-transsect: 2.3 m from S end Open quarters facing: North: 59 South: 85 East: 92 West: 86
 Within 1m at N end. Open quarters facing: North: 17 South: 96 East: 90 West: 36
 Within 1m at S end. Open quarters facing: North: 88 South: 55 East: 96 West: 88

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity- if particularly abundant)
 Lesqueria Astrolagosa
 2/3 snipey 1/3 Dicot
 LARBE rainmint hole @ low away (SW of site)

Woody debris within: 3/4 m of transect; in what part of transect: NW of transect (small knot)
 Woody debris within: 2 m of transect; in what part of transect: North of N rebar Parts of a fallen tree

Species: Pinon Tree at N end. Standing: 7.26 m away + 34 - 24 (%; right side of clinometer)
 Species: Pinon Tree at S end. Standing: 8 m away + 34 - 21 (%; right side of clinometer)



	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 4 out hand															
Gravels < 1 cm	25	25	15.1	10	8	20	3		15	15	15	15	10	10	20
Gravel 1-2cm			4		4				8	4			8		4
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	25	42	58.9	27	40.8	50.3	10	3	62	52	10	63.9	47	63.5	40.9
Sand															
litter	30	11	10	50	15	20	76	85	9	20	50	10	15	8	15
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm	30.9	11.4					45.9								
Scat				2		1	1								
Lichen <i>Selkima</i>															
Lichen <i>Dryas</i> (w)	1	18	8	5	3	2									
Lichen <i>Vktd. swako</i>			(1)						(.5)	(2)		(.5)	(1)	(.5)	(3)
Lichen <i>Bdyc. swako</i>			(.5)						(.1)	(.5)		(1)	(2)	(.5)	(1)
Lichen															
Moss															
Moss															
Moss															
Moss															
Moss <i>Star</i>								4							
Liverwort															
Algae <i>Str. v. d. g.</i>			2												
Nostoc	1	.5													
Vascular Species															
Basal veg: <i>Bougra</i>	15	8	2	6		5	16	4	6	9	25	8	10	8	15
<i>W. v. d. g.</i>	.1	.1	.1		.1	.1	.1		.1			.1			.1
Canopy-shrub															
Canopy-forb															
Canopy-grass	4.5	10	30	26	3	16	46	25	8	30	60	40			30

Start at	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
Start at 9601 Rand															
Gravels < 1 cm	40	35	35	60	10	12	10	110	10	8	5	14	18	20	15
Gravel 1-2 cm	4	11	4	10	2	2									
Gravel > 2-6 cm		3	4										2	3	1
Stones 6-15 cm															
Rocks 15cm-1m			45.5	21.5											
Boulder > 1m															
Bedrock															
Soil	42.4	35.3	20.5	10.5	10	37.9	74.4	58	37.9	52.3	52.9	51.4	54.5	53.5	37.4
Sand															
Litter	8	4	10	9	34	25	10	15	40	30	30	25	22	20	35
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat				1				1	1			.5			
Lichen blk crust	(2)					(2)	(1)					(1)	(.5)	(.5)	(.5)
Lichen white crust	(.5)					(.1)									
Lichen brn crust															
Lichen gray crust															
Lichen yellow crust															
Dark soil coverage										.5	2				
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae	5N1V31									.1	1		.5	.5	1.5
Nostoc															
Vascular Species															
Basal veg: Bougrea	5	1		3	44	23	5	10	11	9	7	7	3	2	10
Mid shrub	.1	.5		.5			.1		.1	.1	.1	.1	.1		.1
Deserv. seedling															
(2) Amaryg.															
Canopy-shrub															
Canopy-forb															
Canopy-grass	40	7		5	85	45	30	27	45	20	15	4	15	4	30

Start at (K&S) 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	10	30	5	5	4	8	3	15	10	10	9	5	30	25	8
Gravel 1-2 cm	5	2	5			3	8	2	5		3	14	10	5	3
Gravel > 2-6 cm	10		25	5		3	15	10				8	10	10	4
Stones 6-15 cm															
Rocks 15cm-1m															
Boulders > 1m															
Bedrock															
Soil	60	52	43	15	2	11	15	13	26	22.9	5	10	36.9	15.9	39.4
Sand	5	10	10	7	2	25	16	2	30	40	60	35	8	15	25
Litter	10	6		16.9		19									
Woody debris < 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat				5		3	1				1	3			1
Lichen brown fr.		1													
Lichen yellow			15	40	20	55	5	30	25	25	5	5	1	15	3
Lichen green	(5)		(2)	(1)	(1)	(1)	(2)	(5)	(1.5)	(1)	(5)	(2)	(2)	(1)	
Lichen white	(.1)		(4)	(5)		(1)	(2)	(3)	(2)	(5)	(2)	(2)	(1)	(.1)	
Lichen yellow			(2)			(1)	(2)	(1)					(3)		
Lichen white			(2)			(1)	(2)	(1)					(3)		
Moss green			(.5)			(.1)	(2)	(3)					(.5)	(.1)	1.5
Moss brown							(5)								
Moss orange															
Moss dark green															
Moss white															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg. Bougrea			2	15		5	6	10	4	6	20	20		8	15
BALEIA															
Wind Milling															
ESQ seedling															
Canopy-shrub															
Canopy-forb		2	20	1											
Canopy-grass				25		40	30	30	10	0.5	40	40	10	40	50

Site No. PNM12 Date: 8-8 Surveyors: PNM/AS GPS #: _____

Work on downslope side of line = NORTH

Start at	End	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant	Quadrant
Gravel < 1 cm		25	30	15	2	4	15	2	2	1	2	1	2	1	2	1	2	1	2	1
Gravel 1-2 cm		3	12	2																
Gravel > 2-6 cm		3	12	2																
Stones 6-15 cm				25																
Rocks 15cm-1m																				
Boulder > 1m																				
Bedrock																				
Soil		43	46.4	31	84.5	39	49	33	9.5											
Sand																				
Litter		5	2	10	50	30	5	48	200											
Woody debris 3-8cm																				
Woody debris 8-30cm																				
Woody debris > 30 cm																				
Scat					.5		1													
Lichen	<u>Xanthopar</u>	20	5	10	6	20	25	10	3											
Lichen	<u>blekeri</u>	(1)	(1)	(3)																
Lichen	<u>ayn on</u>	(1.5)	(5)	(1.5)				10	(30)	(40)	(25)	(30)	(20)	(50)						
Lichen	<u>Brown on</u>	(1.5)		2																
Lichen	<u>ayn on</u>	(1)																		
Lichen	<u>ayn on</u>																			
Moss	<u>White oxys</u>		(1)	(2)					(10)	(20)	(15)	(5)								
Moss	<u>orange</u>			(1.5)																
Moss	<u>dead gln par</u>			(5)																
Moss	<u>ayn par</u>			(3)																
Moss	<u>yellow chospar</u>								(3)	(1)	(20)	(2)	(14)							
Liverwort																				
Algae																				
Nostoc			.1																	
Vascular Species																				
Basal veg: Bougra		1		3	6	3	0	7	4											
<u>gln parvessii</u>							0													
<u>Leoboni</u>																				
Canopy-shrub																				
Canopy-forc				4																
Canopy-grass		3		20	20	6	2	20	8											

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30 15 2

Forest Service Cryptogamic Habitat Study

UTM 12

Gps: 60807164 S: 3784117.1

E: 722433.7

Site#: MBN12

Date: 8/7/47

Elev: 2140 ft

Surveyors: NWM/AS

Directions to Site: 26.5 m E of Fence

General Site observations: Near a lot of dead wood

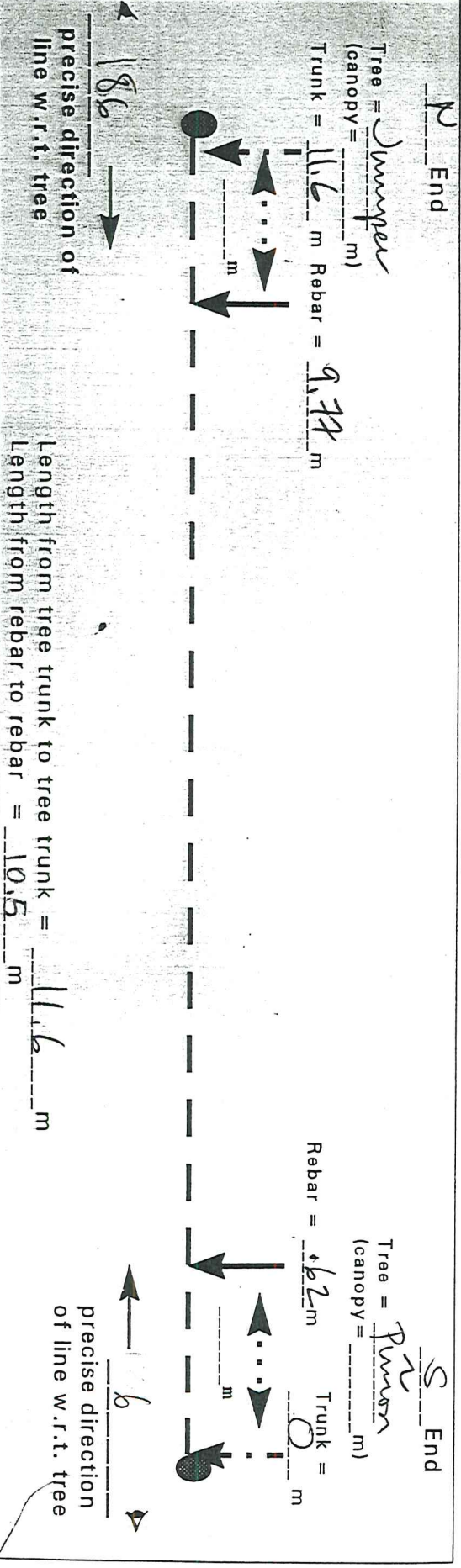
Primary Aspect: 72° Secondary Aspect: _____ Primary slope & direction: 3% Secondary slope and direction: 2%

Canopy cover of site: _____
 Mid-transsect: 4.5 m from S end Open quarters facing: North: 65 South: 96 East: 90 West: 77
 Within 1m at N end. Open quarters facing: North: 85 South: 96 East: 96 West: 77
 Within 1m at S end. Open quarters facing: North: 96 South: 76 East: 83 West: 88

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)
 Lesquerella, Calceolaria, Fleureville's Verb (F3), Bell. eri, Arab. viscaria, Vignardsemii (yellow camp)

Woody debris within: 0 m of transect; in what part of transect: NWQ, sd - branches of dead tree
 Woody debris within: 1.3 m of transect; in what part of transect: SEQ, sd running N to transect from mid to S end

Species: Pinus Tree at S end. Standing: 9 m away + 4 - 19 (%; right side of clinometer)
 Juniper Tree at N end. Standing: 10.6 m away + 9 - 15 (%; right side of clinometer)



Site No. MANIP Date: 8/9/98 Surveyors: NM / JS GPS #: 6080716A Work on downlope side of line = East

Start at	End	Quad 71	Quad 72	Quad 73	Quad 74	Quad 75	Quad 76	Quad 77	Quad 78	Quad 79	Quad 80	Quad 81	Quad 82	Quad 83	Quad 84	Quad 85
Gravels < 1 cm	4 m	19	40	30	10	20	15	15	5	15	5	8	30	40	40	45
Gravel 1-2cm	4		6	5			4	3								
Gravel > 2-6cm				3												
Stones 6-15cm																
Rocks 15cm-1m																
Boulders > 1m																
Bedrock																
Soil		50	33	42	45	34	56.5	57	55	57.9	41	54	39	33	35.8	30
Sand		10	15	10	10	10	4	5	10	4	10	5	15	15	15	20
litter		3	3	15	25	30	15	20	30	20	30	20	15	10	15	20
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat										1	2					
Lichen <i>Paraspongia</i>			(.1)	(.5)				(1)					(.1)			
Lichen <i>Leptogium</i>				(.5)												
Lichen <i>Xanthoparmelia</i>																
Lichen <i>Pyrenopeziza</i>																
Lichen																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougrea		4	3	5	10	0	5			5	12	10	5		2	
<i>Wickstrahlia</i>										1					.2	
<i>Leucospora</i>															1	
Canopy-shrub																
Canopy-forb																
Canopy-grass		25	25	28	46	25	15	3	3	15	40	25	10		10	15

pg 6 of 7

Site No. MANNIC Date: 8/7 Surveyors: NM/KS GPS #: 6080716A Work on downslope side of line = East

Start at	5	end	3m	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	
Gravel < 1 cm	3																		
Gravel 1-2cm	2																		
Gravel > 2-6cm																			
Stones 6-15cm																			
Rocks 15cm-1m																			
Boulder > 1m																			
Bedrock																			
Soil	75																		
Sand	10																		
litter	4																		
Woody debris 3-8cm																			
Woody debris 8-30cm																			
Woody debris > 30 cm																			
Scat	1																		
Lichen white crusts (S)																			
Lichen black crusts																			
Lichen yellow crusts																			
Lichen grey crusts																			
Lichen brown crusts																			
Xam Pom																			
Moss green																			
Moss																			
Moss																			
Moss																			
Moss																			
Liverwort																			
Algae																			
Nostoc																			
Vascular Species																			
Basal veg: Bougrea	5																		
Grass																			
Wood seedling																			
Canopy-shrub																			
Canopy-forb																			
Canopy-grass	20																		
	15																		
	1																		
	8																		
	25																		
	45																		
	4																		
	6																		
	50																		
	30																		
	25																		
	35																		
	17																		
	40																		
	20																		

Work on downslope side of line = East

PG 3 of 7

(1.5)

(0.5)

0.1

Start at	S	end	Quadrant 50	Quadrant 51	Quadrant 52	Quadrant 53	Quadrant 54	Quadrant 55	Quadrant 56	Quadrant 57	Quadrant 58	Quadrant 59	Quadrant 60	Quadrant 61	Quadrant 62	Quadrant 63	Quadrant 64	Quadrant 65	Quadrant 66	Quadrant 67	Quadrant 68	Quadrant 69	Quadrant 70
Gravel < 1 cm			4	3	2																		
Gravel 1-2 cm			3																				
Gravel > 2-6 cm																							
Stones 6-15 cm																							
Rocks 15cm-1m																							
Boulder > 1m																							
Bedrock																							
Soil																							
Sand			2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Litter			3	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Woody debris 3-8cm																							
Woody debris 8-30cm																							
Woody debris > 30 cm																							
Scat																							
Lichen bry fwh			.1	.1	.5																		
Lichen XAD PWR																							
Lichen bry crustace																							
Lichen blk crustace																							
Lichen																							
Moss																							
Moss																							
Moss																							
Moss																							
Liverwort																							
Algal Venetian																							
Algae SMV WYN																							
Nostoc																							
Vascular Species																							
Basal veg: Bougrea			0	3	3	3	3	2	1	0	1	2	1	1	1	1	1	1	1	1	1	1	0
(MVA spelling)																							
Canopy-slitub																							
Canopy-forb																							
Canopy-grass			4	6	5	6	6	2	2	3	3	4	4	4	3	3	3	3	3	3	3	3	1

Handwritten notes: () = on rock, 6.1, 0.1, 2.9, 2.1

	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 800m Bend															
Gravel < 1cm															
Gravel 1-2cm			10	5	10	2	3	4	5	25	20	25	6	10	2
Gravel > 2-6cm															
Stones 6-15cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	1	30	26	25	25	30	10	13	25	35	31	53	61.5	35.5	81
Sand			5	5		5	2		10	10	15	5	10	10	
litter		87.9	59.8	47	59.3	50.9	51.5	73.5	62	44.5	26	25	10	10	25
Woody debris 3-8cm															30
Woody debris 8-30cm															
Woody debris > 30cm															
Scat	2	2.5	1		2.5	2	6	2							
Lichen <i>Cladonia</i>															1
Lichen <i>Xm PAA</i>		1				.1									
Lichen <i>green lichen</i>		2	3			1		1							
Lichen <i>green lichen</i>		1	1.5												
Lichen <i>liverwort</i>					.5			1.5							
Lichen <i>liverwort</i>															
<i>Delmia</i>															
<i>Delmia</i>															
Moss <i>green</i>															
Moss															
Moss															
Moss <i>star</i>		1												2	3
Liverwort															
Algae															
Nostoc		1	12	.5	.5										1
Vascular Species															
Basal veg: <i>Boyeria</i>	4	4	4	4	10	8	5	8	5	3	3	5	10	10	4
<i>Wald. maling</i>	.1			.1	.1										
Canopy-shrub															
Canopy-forb															
Canopy-grass	10	10	15	10	15	20	45	20	15	10	8	15	20	25	10

Forest Service Cryptogamic Habitat Study
 Gps: G080719A S: 3784128.1

Site#: MAN18
 E: 722477.8

Date: 8.7
 Time: 14:14
 Elev: 8064 ft

Surveyors: NW/AS

UTM 12

Directions to Site: 15 m E T to fence then bear 90° NE 24 m to site

General Site observations: 1 slope very difficult to dig over accurately) woody debris and pine cone litter prevalent at NE end

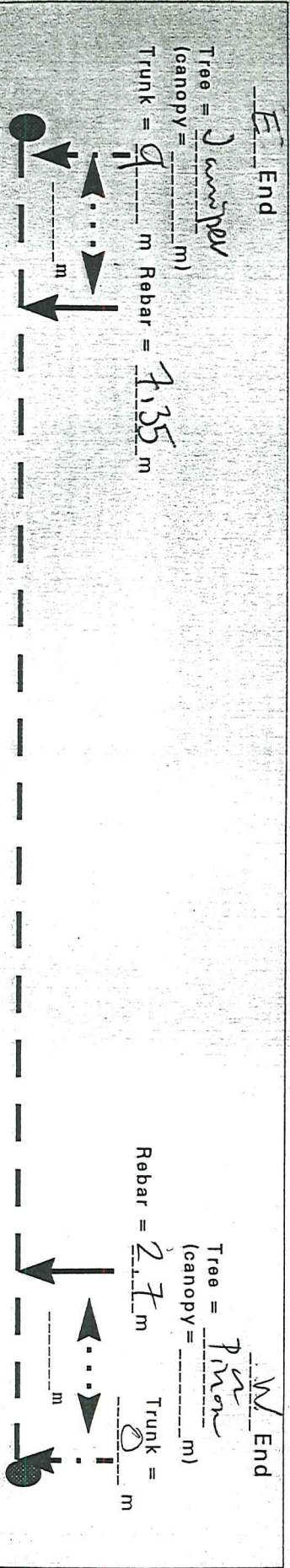
Primary Aspect: 244° Secondary Aspect: _____
 Canopy cover of site: _____
 Mid-transect: 2.5 m from W end Open quarters facing: _____
 Within 1m at W end. Open quarters facing: _____
 Within 1m at E end. Open quarters facing: _____

North: <u>96</u>	South: <u>96</u>	East: <u>96</u>	West: <u>91</u>
North: <u>92</u>	South: <u>96</u>	East: <u>96</u>	West: <u>66</u>
North: <u>96</u>	South: <u>96</u>	East: <u>94</u>	West: <u>78</u>

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity or particularly abundant)
Asteragaceae
Saxifragaceae
Juncaceae

Woody debris within: 1.2 m of transect; in what part of transect: NE quad, branches
 Woody debris within: 1.1 m of transect; in what part of transect: NW quad

Species: Juncus Tree at SE end. Standing: 6.3 m away + 8 - 28 (%; right side of clinometer)
 Species: Pinus Tree at NW end. Standing: 7 m away + 84 - 191 (%; right side of clinometer)



precise direction of line w.r.t. tree 303
 Length from tree trunk to tree trunk = 9 m
 Length from rebar to rebar = 4.67 m
 precise direction of line w.r.t. tree 123

Site No. **MAN15** Date: **8/7** Surveyors: **NM/AS** GPS #: **1000719A**

Work on downslope side of line = **South**

Page 1 of 4

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
Gravel < 1 cm		3	15	7	45	25	4	30	50	50	45	15	10	30	35	3
Gravel 1-2cm					3			2	2	7	3	2		7	6	1
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulders > 1m																
Bedrock																
Soil		55	27	42	27	30	56.9	45	23	15	34	42	45	28	11	59.5
Sand																
litter		40	55	45	25	40	35	20	25	25	15	35	43	30	40	30
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat			1			1										1
Lichen white crusty			(.5)											(.5)		
Lichen black crusty				(1)	(1)		.1			(1)	(1)	(.1)		(.1)	(2)	
Lichen gray crusty															(2)	
Lichen Colima															(2)	
Lichen																1
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougain		2	2	6	0	3	4	2	0	3	3	6	2	4	5	5
Forb 4						3										
Canopy-shrub						2										
Canopy-forb																
Canopy-grass		3	3	20	2	6	8	6	3	6	5	10	20	20	15	10

() = on rock

Site No. MAN 9 Date: 8/9/23 Surveyors: NIM / KS GPS #: 6080714 D

Work on downslope side of line = Saw

Page 2 of 4

	Start at	end	Quad 16	Quad 17	Quad 18	Quad 14	Quad 20	Quad 21	Quad 22	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravel < 1 cm	1.5	2.5	20	10	10	40	30	20	8	20	20	5	10	19	7	10	20
Gravel 1-2cm	4	11	2	2	3	5	3	3	2	2							4
Gravel > 2-6cm																	
Stones 6-15cm																	
Rocks 15cm-1m																	
Boulder > 1m																	
Bedrock																	
Soil	23	80	20	20	20	20	30	50	35	19	80	48	28	50	80	58.9	80
Sand	40	24.5	23	20	20	10	2.5	5	5	2.5	10	25	20	15	3	10	5.4
Litter	0	10	30			10	13	10	31	25			30	15			15
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm																	
Scat	1						1				2		1				
Lichen BLK crustace (0.1)	(2)				(0.5)	(2)			(0.1)	(0.1)							
Lichen Coliwa	0.5																
Lichen Lecanora (0.1)	1				(0.5)												
Lichen Parmelia (0.1)	1					(0.1)	3.5		(0.1)	(0.5)	2	1	1	(1)	1.5	20.5	1
Lichen Parmelia (0.1)	1																
Moss Parmelia (0.1)																	
Moss																	
Moss																	
Moss																	
Moss Star									1								
Liverwort																	
Algae																	
Nostoc																	
Vascular Species																	
Basal veg: Bouleia	3	15	5	5	5	5	20	8	15	20	25	5	5	3	15		1
Wood seedling																	
Canopy-shrub																	
Canopy-forest																	
Canopy-grass	1	5	50	2.5	10	10	30	8	60	60	45	15	5	5	25		

w/um one cm of 29 + 30 is a 10 cm over

PG 2 of 3

Start at SOUTHEAST	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	4	4	3	4	3	1	1		7	2	7	3	6	7
Gravel 1-2cm	2				2	2				4					5
Gravel > 2-6cm															4
Stones 6-15cm															
Rocks 15cm-1m	59.3							28.5							
Boulders > 1m															
Bedrock															
Soil	(60.3) 10	61	53	46	71.5	60.5	53.4	67.3	42	65.5	65	69	68.5	46	65
Sand		20	30	2		5			50			7			2
litter	15	15	12	40	20	25	40	45	50	20	20	7	15	35	15
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat	1.5							1		1			1	1	2
Lichen ANK GMM	(1.5)	(1.5)	(1.5)												
Lichen GYN GMM															
Lichen XAN PDI						2	1	4	2	.5	5	1		5	3
Lichen GRAY CVUS						(1.5)				(1)		(.5)		(1)	(1.5)
Lichen BLACK CVUS						(1.5)				(.5)		(.5)			(1)
Moss BYN FM															
Moss COLINK															
Moss WHITE CR															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Nostoc	.1					.5		.5							
Vascular Species															
Basal veg: Bougna	3	0	1	7	2	2	4	10	5	2	0	3	5	6	4
Mid	.1														
Canopy-shrub	1														
Canopy-fofb															
Canopy-grass	6	2	5	15	5	5	8	30	10	6	15	10	10	15	15

Handwritten notes: 2/15, 1/15, 1/15, 1/15

Forest Service Cryptogamic Habitat Study
 Gps: G080719A S: 3784128.1 E: 722477.8 Site#: MAN13 Date: 8.7 Surveyors: NW/AS
 Elev: 8064 ft Time: 14:14

Directions to Site: 15 m E T to fence then bear 90° NE 24 m to site

General Site observations: (slope very difficult to discern accurately) woody debris and pine cone litter prevalent at NE end

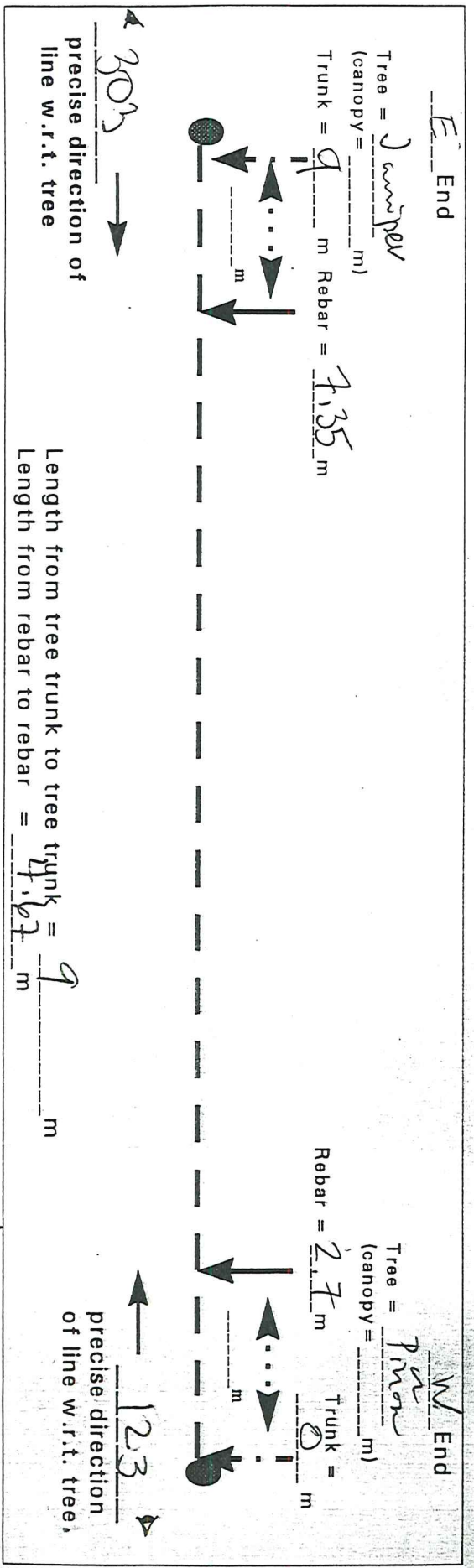
Primary Aspect: 244° Secondary Aspect: _____ Primary slope & direction: 1/8 Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transect: 2.5 m from W end Open quarters facing: North: 96 South: 96 East: 96 West: 91
 Within 1m at W end. Open quarters facing: North: 72 South: 96 East: 96 West: 66
 Within 1m at E end. Open quarters facing: North: 96 South: 96 East: 94 West: 78

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

Woody debris within: 1.2 m of transect; in what part of transect: NE quad, branches
 Woody debris within: 1.1 m of transect; in what part of transect: NW quad

Species: Juniper Tree at SE end. Standing: 6.3 m away + 8 - 28 (%; right side of clinometer)
 Species: Pine Tree at NW end. Standing: 7 m away + 84 - 19 (%; right side of clinometer)



Work on downslope side of line = 2001

pg 1 of 4

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		3	15	7	45	25	4	30	50	50	45	15	10	30	35	3
Gravel 1-2cm					3			2	8	7	3	2		7	6	1
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		55	27	42	27	30	56.9	45	23	15	34	42	45	28	11	59.5
Sand																
litter		40	55	45	25	40	35	20	25	25	15	35	43	30	40	30
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat			1			1		1								1
Lichen white crusty bog														(1.5)		
Lichen black crusty bog			(.5)											(.1)		
Lichen gray crusty bog				(1)	(1)		.1			(1)	(1)	(.1)		(.5)	(.2)	
Lichen Colima																1
Lichen																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougra		2	2	6	0	3	4	2	0	3	3	6	2	4	5	5
FOVB 4																
Canopy-shrub																
Canopy-forb																
Canopy-grass		3	3	20	2	6	8	6	3	6	5	10	20	20	15	10

() = on VSBK

pg 2 of 4

Start at N end	15m	30m	45m	60m	75m	90m	105m	120m	135m	150m	165m	180m	195m	210m	225m	240m	255m	270m	285m	300m
Gravel < 1 cm	25	20	19	40	30	50	20	30	19	25	19	50	58.9	50						
Gravel 1-2cm	4	11	2	3	5	3	5	5	2	2	5	15	3	8	10	20				
Gravel > 2-6cm																				
Stones 6-15cm																				
Rocks 15cm-1m																				
Boulder > 1m																				
Bedrock																				
Soil	23	30	20	20	30	50	35	19	50	48	28	50	80	58.9	50					
Sand	40	24.5	23	20	10	24.5	5	25	10	25	20	15	15	8	5.4					
litter	0	10	30	10	13	10	31	25	10	25	20	5	3	10	15					
Woody debris 3-8cm																				
Woody debris 8-30cm																				
Woody debris > 30 cm																				
Scat	1				1					2	1									
Lichen BLE CRUSTACE (0.1)	(2)			(0.5)	(2)		(0.1)	(0.1)		2										
Lichen Gillima	.5			(.5)		2		(0.1)												
Lichen ANAETH (0.1)	1			1				1												
Lichen Hypogymnia FIM	1					3.5														
Lichen rock crustace					(0.1)		(0.1)	(.5)	2											
Moss Xan Par																				
Moss brown/water																				
Moss																				
Moss																				
Moss Star							1													
Liverwort																				
Algae																				
Nostoc																				
Vascular Species																				
Basal veg: Bougra	3			15	5	5	20	8	15	20	25	5	5	15						
Wood seedling																				
Canopy-shrub																				
Canopy-forb																				
Canopy-grass	1	5	50	25	10	10	30	8	60	60	45	15	5	1						

within one cm of 29 + 30 is a 10 cm. over full of seed pods

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	8.5	10	18.0	2.5	15	1.8	30	10	3.7	20	3.5	3.5	2	1.5
Gravel 1-2 cm		6	10	2			1	4	12	1	5	6	2			3
Gravel > 2-6 cm			10						4							
Stones 6-15 cm																
Rocks 15 cm-1 m																
Boulder > 1 m																
Bedrock																
Soil		6.5	6.25	7.8	60.5	6.2	7.6	60.5	4.5	7.8	4.0	6.0	4.5	5.3	6.3	50.5
Sand		3			2							3.1				
litter		15	2	5	10	8	7	6	5	5	10	7.1	1.2	10	20	2.5
Woody debris 3-8 cm																
Woody debris 8-30 cm																
Woody debris > 30 cm																
Seal												1				
Lichen b/rn crust		3	1	2				3	1	1						
Lichen blk crust		(.5)	(2)					(1)	(1)	(.5)						(1)
Lichen white crust		(1)								(.5)						
Lichen b/rn fur			2	1	2			3		3		3	2	1	3	2
Lichen Gelima			1.5		1			.5								.5
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc					.5											
Vascular Species																
Basal veg: Bougrea		4	1	2	4	3	1	5	3	3	2	1	3	0	3	4
Canopy-shrub																
Canopy-forb																
Canopy-grass		10	5	6	8	6	2	13	8	5	5	5	6	2	12	8

Work on downslope side of line = 2001

pg 8 of 4

Handwritten notes on the left margin:

- 35.5
- 11.5
- 30
- 2.1
- 1.5
- 2.9
- 1.3
- 5.0
- 3.3
- 3.5
- 3.5

() = on rock

Start at	end	Quad 46	Quad 47	Quad	Quad	Quad	Quad	Quad	Quad	Quad	Quad	Quad	Quad	Quad	Quad	Quad	Quad	Quad
Gravels < 1 cm		18	15															
Gravel 1-2cm		3	3															
Gravel > 2-6cm																		
Stones 6-15cm																		
Rocks 15cm-1m																		
Boulder > 1m																		
Bedrock		40.5																
Soil			60.2															
Sand		6																
Litter		25	15															
Woody debris 3-8cm																		
Woody debris 8-30cm																		
Woody debris > 30 cm																		
Scat																		
Lichen (all)		1	1															
Lichen b/w/m																		
Lichen blk/dk		(1.5)	(1.5)															
Lichen yellow		(.5)																
Lichen																		
Moss																		
Moss																		
Moss																		
Moss																		
Moss																		
Liverwort																		
Algae																		
Nostoc		.5	1															
Vascular Species																		
Basal veg: Bougrea		5	3															
Canopy-shrub																		
Canopy-forb																		
Canopy-grass		11	6															

N420 S end

GPS LOG

File Name Session ID	# Way Pts	Date	Time (24hr)	20/30	Raw Field Position Easting	Northing	Record Notes	Corrected Position Easting	Northing	Cor. ELEV
G0805RPA155	18/5	11/14/15	11:44	3D	7223873.13	784114.6	RNA 10	UTM 12		
G080522A161	18/5	11/14/15	14:20	3D	7224537.5	3784102.0	RNA 11	UTM 12	7733ft	
G080620A167	18/6	11/20/15	14:20	3D	7224613.8	3784116.1	(UTM 12)	8304 ft	/	MAN 11
G080807A192	18/7	11/20/15	10:30	3D	722433.7	5378417.1	(UTM 12)	8140 ft	/	MAN 12
G080809A160	18/7	11/14/15	14:14	3D	722477.8	5378412.8	(UTM 12)	8064 ft	/	MAN 13
G081915A160	18/18	11/20/15	16:20	3D	722468.3	5378422.2	(UTM 12)	7963 ft	/	MAN 15
G081916A159	18/19	11/20/15	10:35	3D	722516.0	5378417.2	UTM 12	8228 ft	/	MAN 16
G081917A176	18/19	11/15/15	11:05	3D	722467.4	5378422.7	UTM 12		/	MAN 15
G081918A176	18/19	11/15/15	13:30	3D	722472.2	5378422.7	UTM 12	8182 ft	/	MAN 15
G081921A150	18/19	11/15/15	15:55	3D	722469.8	53784140.2	UTM 12	8186 ft	/	MAN 10
G081922A150	18/19	11/10/15	16:10	3D	722537.3	53784307.5	UTM 12	8044 ft	/	RNA 12
G081923A150	18/19	11/20/15	16:20	3D	722446.7	53784117.6	UTM 12	8079 ft	/	RNA 13
G081924A150	18/19	11/20/15	16:30	3D	722449.6	53784169.7	UTM 12	8237 ft	/	RNA 14
G082016A151	18/20	11/00/15	11:00	3D	722510.4	5378422.8	UTM 12	8238 ft	/	MAN 17
G082017A150	18/20	11/15/15	11:55	3D	722507.2	53784260.2	UTM 12	8025 ft	/	MAN 18
G082018A161	18/20	11/20/15	12:20	3D	722557.5	53784280.2	UTM 12	8012 ft	/	MAN 19
G082019A150	18/20	11/25/15	13:25	3D	722584.0	53784253.3	UTM 12	8140 ft	/	MAN 20
G082020A155	18/20	11/25/15	14:55	3D	722411.5	53784280.0	UTM 12	8189 ft	/	RNA 16
G082021A150	18/20	11/15/15	15:15	3D	722458.8	53784305.1	UTM 12	8258 ft	/	RNA 17
G082115A156	18/21	11/19/15	19:55	3D	722455.4	53784292.8	UTM 12	8051 ft	/	RNA 18

GPS

~~MAN 10~~ RNA 14

~~RNA 12~~

2

Forest Service Cryptogamic Habitat Study

Gps: G0810122C S: 3384169.7

E: 72249.6

Time: 16:30

Elev: 8297 ft

Site#: ENH14

Date: 820

Surveyors: Will

Directions to Site: parallel to fence - at a distance of 16.8m

General Site observations: 10/60 Pinon/Juniper

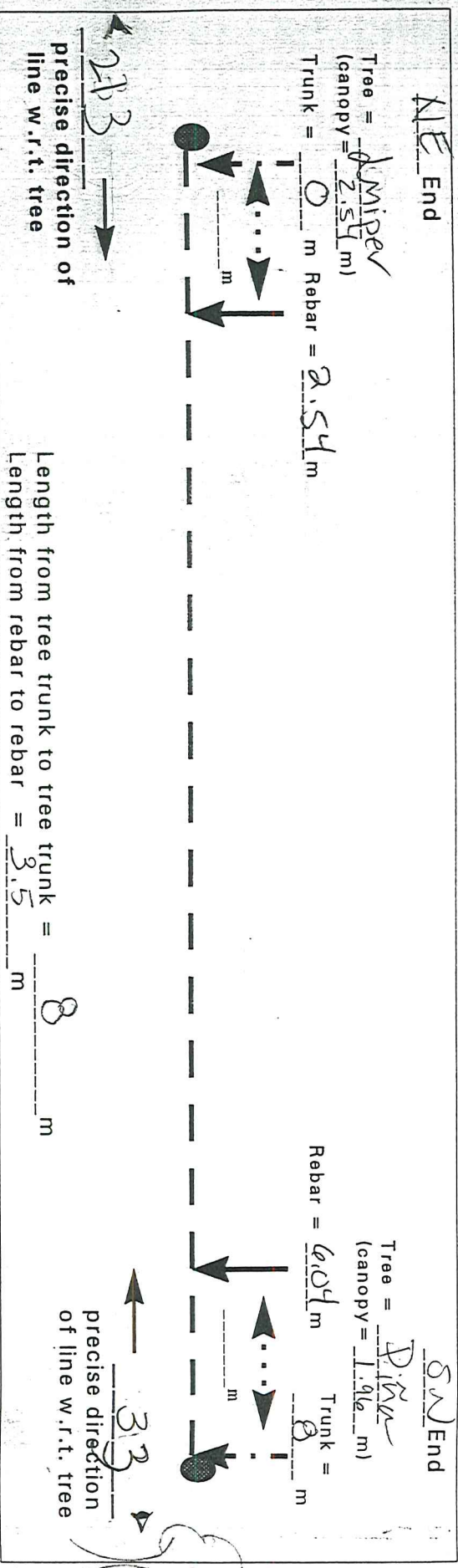
Primary Aspect: 298° Secondary Aspect: _____ Primary slope & direction: 1% Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transsect: 75 m from NE end Open quarters facing: _____ North: 84 South: 96 East: 92 West: 95
 Within 1m at NE end. Open quarters facing: _____ North: 48 South: 96 East: 34 West: 92
 Within 1m at SW end. Open quarters facing: _____ North: 91 South: 88 East: 96 West: 94

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity - if particularly abundant)
BAHDS / XANPAR / BOUGRA / YUCBAC / BRICKERH of weed grass (collected)

Woody debris within: 2 m of transect; in what part of transect: NW of transect downed tree.
 Woody debris within: 3 m of transect; in what part of transect: NE small amount of wood

Species: Pinon Tree at S end. Standing: 5.46 m away + 35 - 30 (%; right side of clinometer)
 Species: Juniper Tree at NE end. Standing: 6.04 m away + 90 - 30 (%; right side of clinometer)



Start at	5	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	7	6	8	3	5	6	2	6	2	1	2	2	4	8	6	20	15
Gravel 1-2cm	1							3				4			4		5
Gravel > 2-6cm																	
Stones 6-15cm																	
Rocks 15cm-1m																	
Boulder > 1m																	
Bedrock																	
Soil	574	81	73	39	54	61	56	27	20	58	53	82	59	27	47		
Sand		2	3	2	2	3					3						
Litter	30	10	15	40	30	20	35	45	63	25	30			25	40	20	
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm																	
Scat		1								1				1			
Lichen <i>Rockworts</i> (1)														(1)	(1)	(1)	(1)
Lichen <i>Xanthoparmelia</i>								2		4	(1)	3	3	(1)	(1)	(1)	(1)
Lichen <i>Open dwarf</i>																	
Lichen <i>Brown hair</i>																	
Lichen														2			
Moss																	
Moss																	
Moss																	
Moss																	
Moss <i>Star</i>								2									
Liverwort																	
Algae																	
Nostoc		0.5					1										
Vascular Species																	
Basal veg: <i>Bougru</i>	4			1	1	2	3	7	20	7	2	7	4	5	7	8	
<i>Quercus emilline</i>	0.1																
Canopy-shrub																	
Canopy-forb																	
Canopy-grass	10	3	5	30	5	7	20	60	20	20	7	20	10	15	25	17	

Forest Service Cryptogamic Habitat Study

Gps: 40809238 S: 3784846.8

E: 722518.1

Date: 8/7

Elev: 2874

Surveyors: NM/AS

Site#: MAN14

Time: 17:25

Elev: 2874

(51pts)

Directions to Site: 48.2 m E of fence

General Site observations:

heavy population of crypts near SE end of rebar. lots of dead wood in area, ant hill @ SW end

Primary Aspect: 72° Secondary Aspect: 150° Primary slope & direction: 3/6 Secondary slope and direction: 2/8

Canopy cover of site:

Mid-transsect: 2.8m from NW end Open quarters facing: North: 96 South: 95 East: 96 West: 92
 Within 1m at NW end. Open quarters facing: North: 93 South: 96 East: 96 West: 71
 Within 1m at SE end. Open quarters facing: North: 96 South: 65 East: 76 West: 96

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

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

- Hystrix Asplenium
- G1
- Xan Dav Zygogon graveol
- Lespedeza

Woody debris within: 0 m of transect; in what part of transect: NW rebar - dead log at angle a long + rugsect
 Woody debris within: 0.2 m of transect; in what part of transect: 4.8m from origin, fungus

Species: Jungfer Tree at SE end. Standing: 8 m away + 30 - 19 (%; right side of clinometer)
 Species: Jungfer Tree at NN end. Standing: 8 m away + 30 - 2 (%; right side of clinometer)

NW End

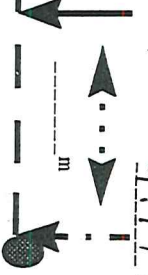
SE End

Tree = Jungfer
 (canopy = m)

Tree = Jungfer
 (canopy = m)

Trunk = 0 m Rebar = 2 m

Rebar = 2.74 m Trunk = 1.94 m



precise direction of line w.r.t. tree

152

precise direction of line w.r.t. tree

332

Length from tree trunk to tree trunk = 9.94 m
 Length from rebar to rebar = 5.76 m

Site No. MAN 14 Date: 8/7 Surveyors: NM/AS GPS #: 6080723A Work on downslope side of line = WEST

Start at	N	end	Quad 11	Quad 12	Quad 13	Quad 14	Quad 14	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	16														
Gravel 1-2 cm			3															
Gravel > 2-6 cm																		
Stones 6-15 cm																		
Rocks 15cm-1m																		
Boulder > 1m																		
Bedrock																		
Soil			60	40	50.9	40	80	30	40.5	54	45	53.5	10	20	25	42.1	40.9	
Sand																		
Litter			3	20	15	35	35	40	30	25	22.9	25	41	30	39	2	10	
Woody debris 3-8cm																		
Woody debris 8-30cm																		
Woody debris > 30 cm																		
Scat																		
Lichen Bryn fur			11	13	20	6	27	18	6	4	8	10	28	15	9	10	25	
Lichen XALP			3															
Lichen AN																		
Lichen bick																		
Lichen AYEONC																		
Lichen Zidem																		
Lichen white																		
Moss																		
Moss																		
Moss																		
Moss																		
Moss																		
Liverwort																		
Algae																		
Nostoc																		
Vascular Species																		
Basal Veg: Bougrea			0	3	2	8	7	0	6	3	7	4	7	2	15	0	3	
USDA SPECIAL																		
HYSS																		
Lesquer																		
Canopy-shrub																		
Canopy-forb																		
Canopy-grass			2	12	5	25	20	3	30	10	15	8	30	3	70	2	7	

Work on downslope side of line = WEST

(11) 1 dipole sheet

Site No. WLAN 14 Date: 6/7/19 Surveyors: DW AD GPS #: 6080723A

Work on downslope side of line = west (down) PG 3 of 4

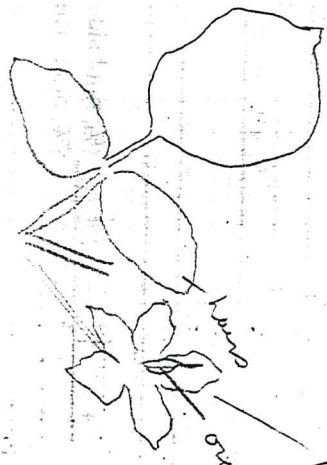
Start at	end	Quad 31	Quad 32	Quad 33	Quad 34	Quad 35	Quad 36	Quad 37	Quad 38	Quad 39	Quad 40	Quad 41	Quad 42	Quad 43	Quad 44	Quad 45
Gravel < 1cm		10	5	5	4		15	5	4	2	5	4	3	15	2	15
Gravel 1-2cm																
Gravel > 2-6cm				10												
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		15	39	45	5	5	38	15	5	10	65.5	40.9	20	52	54	53
Sand							5							3	5	
litter		40	15	5		10	15	5	15	15	15	5	15	10	10	5
Woody debris < 3-8cm																
Woody debris 8-30cm																
Woody debris > 30cm																
Scat									1		5	1				
Lichen <i>Xanthoparmelia</i>		10	10	5	25	10	15	15	5	4	5	6	25	25	1	25
Lichen <i>hypotrachyna</i>		15	15	30	46	55	20	41.4	45	4	4	35	35	25	10	25
Lichen <i>gyalectra</i>			(1)	(2)					(1)							
Lichen <i>Wetmoreana</i>				(5)												
Lichen <i>calycina</i>																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc			1													
Vascular Species																
Basal veg: <i>Bougera</i>		10	15		10	15	2	3	20	8		5	10	2	5	15
<i>ESAUER SCANDLING</i>								.6								
<i>ES-1</i>																
<i>WIND MULLING</i>																
Canopy-shrub																
Canopy-forest																
Canopy-grass		25		4	20	20	25	12	40	15		20	3	5	20	30

Site No. MN14 Date: 8/2/93 Surveyors: JM/KS GPS #: 4080723A Work on downslope side of line = west or east CYPBS

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	Quad
Gravel < 1 cm		2	1	1			5									
Gravel 1-2cm																
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		45	56	55.5	45	56	78	67	45.4	29.9	33.9	51	48	21.5		
Sand		1				2				3	13	1		10		
litter		25	25	30	35	30	3	20	45	60	40	40	45	65		
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm						29.9										
Scat			1	.5										1	1	
Lichen bryonia		15	8	2	4	7	12	6	5		6	2				
Lichen Cladonia		3									1	2				.5
Lichen Xanthoparmelia		4	2	5	1			3		1	2	2				
Lichen bryonia					10	2	1									
Lichen Colma					1											
Lichen Piptopeltis (white waxy)							1		.5	1						
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougainvillea		5	8	6	4	3	0	4	1	4	4	2	6			
Canopy-shrub																
Canopy-forest																
Canopy-grass		15	20	12	10	6	1	0	6	15	10	8	5			

78.5

over
R2A15



#15-2



Start at SE 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	3		10	5	8	6	8	2.5	40	4.5	7	5	12	2.5	20
Gravel 1-2cm	2		4	4	3	7	6	7	7	6	6	3	7	4	7
Gravel > 2-6cm			3			2		12				1	4		7
Stones 6-15cm															
Rocks 15cm-1m								60.5							
Boulder > 1m															
Bedrock															
Soil	5	4	19	25	45	61	34	61.5	36.9	34.5	50	45.9	43.5	51	55
Sand															
litter	(49.1)	92.5	50	10.5	(83.5)	13	41	3	5	6	30	(30)	(119)	10	19
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm	80.4		45		34.5							29	19.5		
Scat RABBIT	.5				1	1		.5	1		1	1			
Lichen white crusts					1.5		(.1)		(1)	.5				(1)	(1)
Lichen green crusts				(.1)	(.5)										
Lichen brown crusts						4	.2		.5	.5	1.5	4	5.5	2	
Lichen C LA DONIX									.5	.5					
Lichen gray crusts															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Nostoc							1	.5							
Vascular Species															
Basal veg: Bougain	9	2	14	4		6	8		5	5	5	10	9	2	4
IMD SEEDING	1	.5					.1								
ERA JAM			5		7										
LEU ELL			.5	.5				.5	.1			.5			
Canopy-shrub															
Canopy-forb	.1	2	10	4	11	10	.5	4	1		1.5	.5			10
Canopy-grass	14	4	2	10	10	10	15	4	4	2	2	20	15	10	10

Start at	S ₂	end	Quad 1b	Quad 17	Quad 18	Quad 14	Quad 20	Quadr 1	Quad 21	Quad 23	Quad 24	Quad 25	Quad 26	Quad 27	Quad 28	Quad 29	Quad 30
Gravels < 1 cm	3	7	10	15	17	9	2	5	15	12	5	12	7	10	1		
Gravel 1-2cm	10	15	7			10	7						3	3			
Gravel > 2-6cm													10				
Stones 6-15cm																	
Rocks 15cm-1m																	
Boulder > 1m																	
Bedrock																	
Soil	40.9	37				32	37	13	56	53.9	35	15	15	65	57	40	20
Sand	15	7				7	7		10	5		5					5
litter	25	20				40	50	70	12	25	53.9	55	60		25	41	43
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm																	
Scat							1						1				
Lichen brown fr	1						1	2	5				5	12	8	1	1
Lichen Min pit		2											1				
Lichen clethra													1				
Lichen gree n (rusty) (wks)																	
lily drushis rock (.1)																	
Moss																	
Moss																	
Moss																	
Moss																	
Moss																	
Moss																	
Liverwort																	
Algae																	
Nostoc																	
Vascular Species																	
Basal veg: Bougrea	6	5	4	8		5	10	2	4	1	6	12	5	6	10	10	
Unil seedlins																	
fern																	
Canopy-shrub																	
Canopy-forb																	
Canopy-grass	15	10	9	20	10	20	10	10	15	15	15	30	20	3	15	15	20

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		10	15	12	3		1	2	.5	3	20	5	10	4	3	8
Gravel 1-2cm		5	2	7					6	7	4	2	4	4	2	3
Gravel > 2-6cm			2								1	2	4	3		5
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		49.4	(49.3)	59	51	40	40	65	28	(42)	(45.5)	(41)	34	(47)	15	32
Sand				5						10						
litter		80	22	12	28	50	50	27	56	20	30	30	35	40	49.9	40
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat	<u>Rate by</u>			.5	1	3.5	3		.5	1	.5	1	1	1	1	
Lichen <u>Asplenium</u>		11.5	3.5	1	4	8	2			1		9		3	4	
Lichen <u>Xanthopar</u>			.1							.1		3				
Lichen <u>Clethronia</u>										(.1)						
Lichen <u>gemma oxizans</u>										(.1)						
Lichen <u>Wahlbergiana</u>																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc			.1													
Vascular Species																
Basal veg: Bougain		4	7	3	13	3	4	3	15	5	9	12	9	8	25	12
Wild seedling		.1		.5		.5									.1	
Canopy-shrub																
Canopy-forb		.1		.6		.5									.1	
Canopy-grass		2	18	6	28	2	7	5	35	10	25	30	20	18	60	22

Start at	52	end	Quadrant	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Gravels < 1 cm	7	35	20	12	7	23	30	10	17	10	5	10	10	5	10	15	10	2
Gravel 1-2cm		5	4	5		7	25	10	5									
Gravel > 2-6cm								3										
Stones 6-15cm																		
Rocks 15cm-1m																		
Boulder > 1m																		
Bedrock																		
Soil	63	49	51	54.5	75	52	30	62	53	63	61.5	57	34.9	48	41			
Sand	5	5	5		5	10	10	10	5	15	15	5	15	10	5			
litter	20	5	17	20	10	5	5	5	15	10	30	17	40	35	45			
Woody debris 3-8cm																		
Woody debris 8-30cm																		
Woody debris > 30 cm																		
Scat		2		1														
Lichen <i>cladonia</i>			(.1)															
Lichen <i>pruina</i>				15														
Lichen <i>Xanthopar</i>						3												
Lichen <i>white crust rock</i>																		
Lichen <i>yellow crust rock</i>																		
Moss																		
Moss																		
Moss																		
Moss																		
Moss																		
Liverwort																		
Algae																		
Nostoc																		
Vascular Species																		
Basal veg: Bougna	3	1	3	5	3				5	2	3	10	10	7	7			
Les. seedling																		
Canopy-shrub																		
Canopy-forest																		
Canopy-grass	6	3	10	15	5	2	2	10	10	6	15	25	15	12				

Forest Service Cryptogamic Habitat Study

Gps: 6081919A S: 3384276.7

E: 722472.7

Date: 8-19-97

Time: 1330

Elev: 8182ft

Site#: MAN #15

Date: 8-19-97

Surveyors: 1C8

Directions to Site: 21.5 m from fence

General Site observations: 2-1 Pinus jeffreyi

Primary Aspect: SW

Secondary Aspect: _____

Primary slope & direction: 19° NE

Secondary slope and direction: _____

Canopy cover of site: _____

Mid-transsect: _____ m from _____ end

Open quarters facing: _____

North: 90

South: 90

East: 19

West: 85

Within 1m at SE end.

Open quarters facing: _____

North: 92

South: 90

East: 19

West: 93

Within 1m at NW end.

Open quarters facing: _____

North: 96

South: 96

East: 90

West: 44

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

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

- Opuntia
- Des
- Penstemon sp.
- Star moss
- Brown fru
- Yun Pin

Woody debris within: 125

m of transect; in what part of transect: _____

Woody debris within: _____

m of transect; in what part of transect: NE

Species: Pinus Tree at _____

Tree at NW end. Standing: _____

Species: Pinus Tree at _____

Tree at SE end. Standing: _____

l6 m away

+ 12 - 22

(% right side of clinometer)

+ 71 - 25 (% right side of clinometer)

NW End

SE End

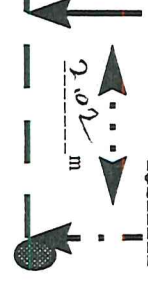
Tree = Juniper
(canopy = _____ m)

Trunk = _____ m Rebar = 2.0 m



Tree = Pinus
(canopy = _____ m)

Rebar = 6.5 m Trunk = 8.52 m



precise direction of line w.r.t. tree

Length from tree trunk to tree trunk = 8.52 m

Length from rebar to rebar = 4.5 m

precise direction of line w.r.t. tree

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			3	40	10	10	15	10			5	5	5	4	2	3
Gravel 1-2 cm			18	5					10	5						1
Gravel > 2-6 cm																
Stones 6-15 cm																
Rocks 15 cm-1 m																
Boulder > 1 m																
Bedrock																
Soil		79	64	40	50	69	76	79	55	40	52	77	11.4	11.8	26	33
Sand																
litter		15	29	10	35	15	5	15	10	30	20	7	10	8	20	7
Woody debris 3-8 cm																
Woody debris 8-30 cm																
Woody debris > 30 cm			27													
Scat rabbit																
Lichen luf' crusts				(1)	(1.5)			(1)	(1)							
Lichen cr. crusts																
Lichen black crusts																
Lichen brown PLO																
Lichen COLINA																
Moss																
Moss																
Moss																
Moss STRA AC'S											2				12	10
Moss green moss												1			25	45
Liverwort																
Algae																
Nostoc												5				
Vascular Species																
Basal veg: Bougna		6	5			10	4	1	25	25	20	4	5	3	8	
LEUCOK																
LEUCOK																
Canopy-shrub																
Canopy-forb		1	3										4	4		
Canopy-grass		20	20	7		35	25	10	60	70	70	12	15	8	20	3

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
Gravel < 1 cm		3	5	4	1	2	3	1								
Gravel 1-2 cm						2	3									
Gravel > 2-6 cm						2	3									
Stones 6-15 cm																
Rocks 15 cm-1 m			68													
Boulder > 1 m																
Bedrock																
Soil		32	10	70	42.5	38.5	52	16.9	50	70	74.5	57	60	62.4	67	70.9
Sand																
litter		10	7	2	8.5	8	15	20	25	5	10	30	10	13	12	18
Woody debris 3-8 cm																
Woody debris 8-30 cm																
Woody debris > 30 cm		31			26								20			
Scat																
Lichen COLIMA		2														
Lichen PROMFVA				1			6		3				4			
Lichen																4
Lichen																
Lichen																
Moss GRAY		15	15	5	8	17	10	2	3	10	5		10	5		
Moss STRAW		5	2	2	.5	.23		5	1							
Moss																
Moss																
Liverwort																
Algae																
Nostoc			1	1												
Vascular Species																
Basal veg: Bougrea		12	2	3	14	5	15	1	10	4	3	5	3	10	7	6
EUPHORB UNID								.1						.1		
LG500ER														.5		.1
Canopy-shrub																
Canopy-forb																
Canopy-grass		40	6	15	25	10	25	20	40	15	10	15	10	1	5	10.5

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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		2			2		3	5	3		5	7	5	3		2
Gravel 1-2 cm							2	1			4					3
Gravel > 2-6 cm																
Stones 6-15 cm																
Rocks 15 cm-1 m																
Boulder > 1 m																
Bedrock																
Soil	46	58	56.9	80	42.9	81	85	2.7	65	85	64.9	66.9	15	15		61
Sand																
litter	40	30	30	15	40	10	7	50	2.5	4	20					
Woody debris 3-8 cm																
Woody debris 8-30 cm	1															
Woody debris > 30 cm	29.9															
Scat	RAW															
Lichen Brown RWL																
Lichen Black RWL	1										2					8
Lichen Green RWL	.5															
Lichen Yellow RWL	.5															
Lichen COL W/A																
Lichen																
Moss																
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougain	10	12	12	3	17	4	1	20	8		6	2	15	3		1
LES QUERC	.1															
WIND SEEDLING					.1						.1	.1	.1	.1		
Canopy-shrub																
Canopy-forb	1				.5											
Canopy-grass	30	35	30	5	40	15	5	50	25	5	15	10	40	12		2

29.9
40
30
30
15
40
10
7
50
2.5
4
20
66.9
66.9
82.9
81.9

Forest Service Cryptogamic Habitat Study
 Gps: G082020DP S: 3784280.0 E: 722411.5 Site#: RNA16 Date: 8-19-97 Surveyors: JG
 Directions to Site: 46.3 m from fence Time: 1455 Elev: 2189ft

General Site observations: Pinus-juni per large ant downed wood parallel to belt distance of transect (18 meters from line)

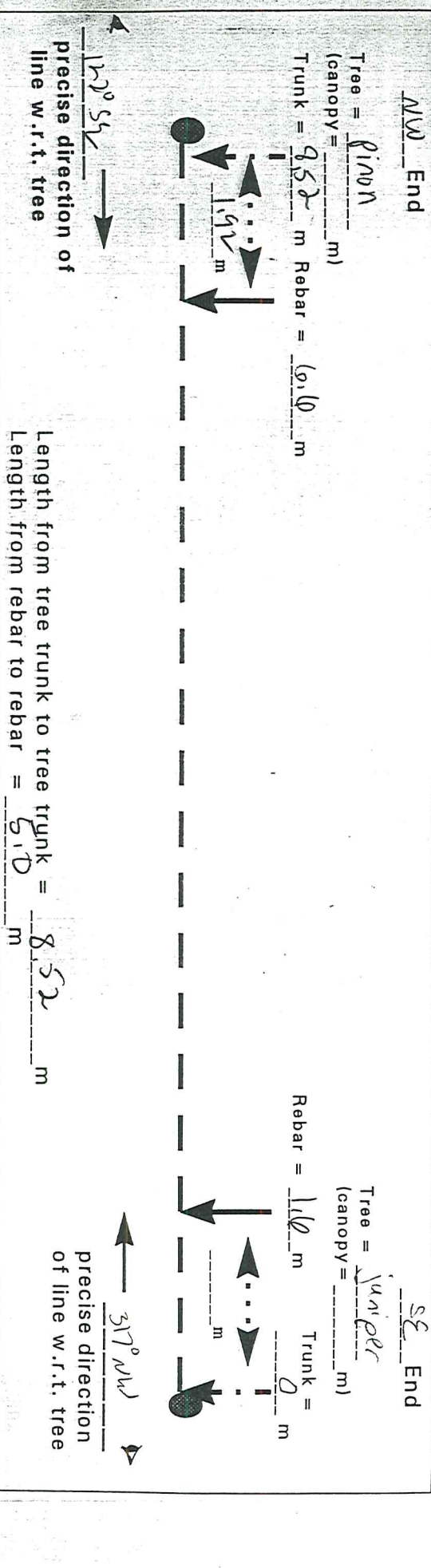
Primary Aspect: Unable to determine slope - measure 1070 from 58 + NW Secondary slope and direction: 58 + NW

Canopy cover of site: _____
 Mid-transect: 25 m from 52 end Open quarters facing: North: 74 South: 76 East: 93 West: 96
 Within 1m at NW end. Open quarters facing: North: 84 South: 57 East: 102 West: 89
 Within 1m at SE end. Open quarters facing: North: 65 South: 88 East: 96 West: 84

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity if particularly abundant)
Eri gran
San pla
San gra
Xan Par
Dipl.
Leu ei

Woody debris within: .8 m of transect; in what part of transect: NW
 Woody debris within: _____ m of transect; in what part of transect: _____

Species: Pinus Tree at NW end. Standing: 6 m away + 15 - 23 (%; right side of clinometer)
Juniper Tree at SW end. Standing: 6.5 m away + 35 - 20 (%; right side of clinometer)



Start at	E	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	3	2	1	5	6	7	3	2	7	4	6	2	12	9	3	3	11
Gravel 1-2cm	7	1	1	2	4	2	3	3	7	4	6	2	1	1	1	3	11
Gravel > 2-6cm																	
Stones 6-15cm																	
Rocks 15cm-1m																	
Boulder > 1m																	
Bedrock																	
Soil	54	22.5	84.5	61	(75)	79	99	46	43	53	50	47	74	87	70		
Sand																	
litter	05	19	7	25	(12)	2	35	48	(12)	24	28	30	13	2	4		
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm																	
Scat																	
Lichen <i>Xa. Dec</i>	10	2	15	1	1	1	3		1								
Lichen <i>Almondia</i>	5																
Lichen <i>Dry. Gm</i>	5	5	1	1	1	1	3										
Lichen <i>P. Mho</i>																	
Lichen																	
Green crust rock		(1)															
Moss: gray crust rock					(3)												(2)
Moss																	
Moss																	
Moss																	
Moss																	
Liverwort																	
Algae																	
Nostoc																	
<i>Mushroom</i>		2															
Vascular Species																	
Basal veg: Bougna			2	8	5	1	10	7	2	8	9	10	9	9	4		
<i>eri. jam</i>	2	2															
Canopy-shrub																	
Canopy-forb																	
Canopy-grass	9	8	15	17	10	2	04	25	7	30	20	15	25	4			

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Forest Service Cryptogamic Habitat Study
 Gps 80819164 S: 3784172.3

Site#: MAN#16
 E: 7225767

Date: 8-19-97 Surveyors: PS
 Time: 1035 Elev: 8228ft

Directions to Site: 21.1 m fr. forest Downhill slope - east side of line

General Site observations: Pinon-juniper + small ant dowered wood 1-3 meters

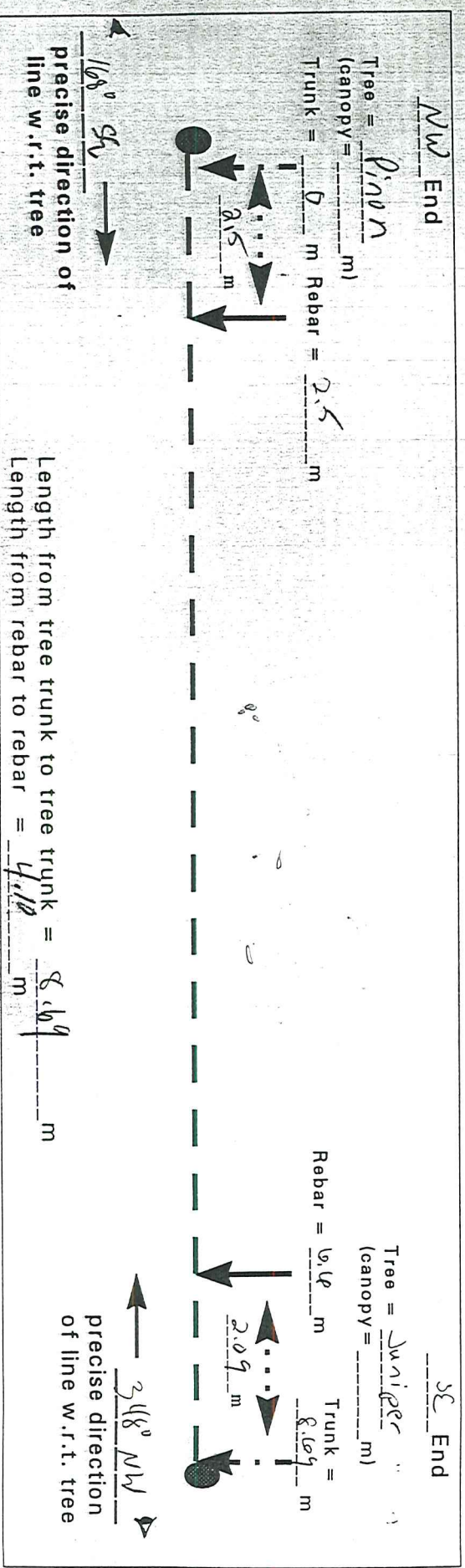
Primary Aspect: 108° SE Secondary Aspect: _____ Primary slope & direction: 25° SE Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transect: _____ m from _____ end Open quarters facing: North: 60 South: 94 East: 96 West: 69
 Within 1m at SE end. Open quarters facing: North: 81 South: 68 East: 90 West: 95
 Within 1m at NW end. Open quarters facing: North: 22 South: 95 East: 96 West: 19

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity-1e if particularly abundant)
agave Des
Boj sea
Grid Jam
Xan Pac

Woody debris within: .35 m of transect; in what part of transect: SW
 Woody debris within: .75 m of transect; in what part of transect: SW

Species: Pinon Tree at NW end. Standing: 6 m away + 92 - 22 (%; right side of clinometer)
 Species: Juniper Tree at SE end. Standing: 6 m away + 42 - 24 (%; right side of clinometer)



Start at	W	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			17	12	25	15	15	20	5	25	30	25	25	20	25	12	20
Gravel 1-2cm			10	2		4	5	3		7	5	3	5	4	4		3
Gravel > 2-6cm																	
Stones 6-15cm							40										
Rocks 15cm-1m																	
Boulders > 1m																	
Bedrock																	
Soil			20	26	10	8	35	52	52	52	39	39	18	30	43	43	42
Sand			25	20	13	8	20	5	5	5	3	5	10	5	15	20	20
litter			28	35	40	20	30	15	20	10	20	20	30	35	15	20	15
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm														15			
Scat																	
Scat <u>RAVBIT</u>			1														
Scat <u>BROWN PCD</u>																	
Lichen <u>WH. T. BRUSH</u>			(1)					1		(1.5)					(1.5)		
Lichen <u>GREEN CRUSTS</u>			(5)		(1.5)					(1)	(1.5)	(1)	(1)		(1)		
Lichen <u>BLACK CRUSTS</u>			(1.5)									(1.5)	(1.5)		(1.5)		
Lichen <u>ZW/FM</u>					2	4	1	3									(1.5)
Lichen <u>GA. PAN</u>						(9)											
<u>MA. CRUS.</u>						(2)											
<u>MA. CRUS.</u>						(2)											
Moss <u>GRY. CRUS.</u>						(2)				(2)	(1.5)	(3)					(1)
Moss																	
Moss																	
Moss																	
Moss																	
Liverwort																	
Algae																	
Nostoc																	
Vascular Species																	
Basal veg: <u>Bougra</u>			3	5	10	1	4	1	8	1	3	8	12	10	3	5	
Canopy-shrub																	
Canopy-forb																	
Canopy-grass			10	10	20	3	8	3	20	4	9	20	10	25	7	7	3

Forest Service Cryptogamic Habitat Study

Gps: B081021A S: 3784288.1

Site#: RNA 17

Date: 8.20

Time: 15:15

Elev: 8232ft

Surveyors: NM

Directions to Site: 26.47 m fr. fence

General Site observations: standing dead tree 4 m away; SE of line so/so PINON JUNIPER

Primary Aspect: 28° Secondary Aspect: _____ Primary slope & direction: 50% Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transsect: 3.5 m from SE end Open quarters facing: _____
 Within 1m at NW end. Open quarters facing: _____
 Within 1m at SE end. Open quarters facing: _____

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)
BOONIA / ERIYAM / ERIEVA / XANPAR
Leu eri
Wid seedling
WID-yellow / RNA # 17

Woody debris within: 2 m of transect; in what part of transect: parts of downed tree NW of transect
 Woody debris within: _____ m of transect; in what part of transect: top of fallen tree on transect going SE

Species: Pinon Tree at NW end. Standing: _____
Juniper Tree at SE end. Standing: _____

NW End
 Tree = Pinon
 (canopy = _____ m)
 Trunk = 10.94 m Rebar = 8.5 m
 Rebar = 117 m
 Tree = Juniper
 (canopy = _____ m)
 Trunk = _____ m



Precise direction of line w.r.t. tree: 95°
 Length from tree trunk to tree trunk = 10.94 m
 Length from rebar to rebar = 6.8 m
 Precise direction of line w.r.t. tree: 275°

Start at	St. 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	1	.5			5	2						5	5
Gravel 1-2cm		3	3	2	3	2	5	5	2						20	20
Gravel > 2-6cm															5	10
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		64	42	34.5	20	10	20	20	25	22	.15				20	31
Sand		5	5	20	45.5	16	20	20	25	10	17	10	25	5	30	32
litter		25	40	35	25	70	49	42	42	40	30	40	17	15	5	2
Woody debris 3-8cm															15	
Woody debris 8-30cm										25						
Woody debris > 30 cm																
Scat				.5												
Lichen Brown/blk			4													.5
Lichen Xan Par					1	10		1								
Lichen																
Lichen black crust/blk																
Lichen, white crust/blk									(.2)						(.1)	(.5)
White crust/blk									(.1)							(.1)
Mosses gray crust/blk																
Mosses green crust/blk																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Mostoc					1		.5		4							
Vascular Species																
Basal veg: Bougrea		2	4	2	3	2	1	4		3	1	5	5			
Wind seedling																
Canopy-shrub																
Canopy-forb																
Canopy-grass		7	1	3	2	4	3	20	2	5	3	10	10			

Site No. 11A 17 Date: 8-21-97 Surveyors: MW LD GPS #: 6082021X Work on downslope side of line = NE

Start at	End	Quadrant 16	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		10	10	8	9	4	1	5	13	1	2	25	10	5	12	12
Gravel 1-2cm		15	9	4		9	3	4	10	1	3	10	18	3	10	3
Gravel > 2-6cm							10		17		5		9	10	15	3
Stones 6-15cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil		35	31	11.5	32.5	10	10	20	39.4	12	12	10	43	5	4	12
Sand		20	20	11.5	25	42.4	31	17	20	34	44	38.5	5	29	32	43
litter		20	18	34.5	23	11	35	20		40	24		10	30	13	20
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat			1		.5		2 (4)			1						
Lichen XANI PAR			.5		5	8		7			2	0.5	2	8	4	
Lichen WHITE CORUS		(.5)		(1)										.5		
Lichen PARKE																
Lichen AGRY											(1)	(.5)	(.5)	(.5)	(2)	
Lichen AGRY		(1.5)		(1)	(.5)	(3)	(1)	(.5)	(1.5)		(.5)	(.5)	(2)	(.5)	(2)	
Lichen AGRY																
Lichen AGRY																
Moss PRONV " "				(.5)								(2.5)	(.5)	(.5)	(1)	
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc				.5										.5		
Vascular Species																
Basal veg: Bougra		4	9	3	5	5	9			12	8	2	3	9	6	1
Vib 562444																
Canopy-shrub																
Canopy-forb																
Canopy-grass		2	7	25	10	14	12	20	8	28	18	4	30	10	14	12

Site No. PMA 19	Date:	Bl a1	Surveyors:	FS (MW)	GPS #:	h08R02VX	Work on downslope side of line =	NE							
Start at SE end	Quad 41	Quad 42	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	10	3	12		12	10	9	38	49	43	25	19	10	63	23.9
Gravel 1-2 cm	21	1	15	8	12	15	43	12	10	9	3	7	3	1	5
Gravel > 2-6 cm	15				3			5							3
Stones 6-15 cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	44	46	205	68	15	45	9	38	49	43	25	19	10	63	23.9
Sand	5		15	12	45	43	9	12	10	9	3	7	3	1	5
litter	3	35	38	8	20	20	12	12	14	14	10	7	30	20	3
Woody debris 3-8cm								29.5							
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat								.5							
Lichen XAN PRN															
Lichen GRWN RW	2					2	2						18	4	
Lichen GRGS GRYS										(1)					
Lichen GRWY															
Lichen WYHNE															(.1)
Moss															
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougra	12	15	8	4	8	4	2	10	2	9		5	10		
ERI JMM															
Canopy-shrub															
Canopy-forb															
Canopy-grass	12	40	12	2	18	25	14	28	9	20	12	11	18	10	

PMAE 4 of 5

Site No. RNP 17 Date: 8/21 Surveyors: KSL/mw GPS #: G0820214 Work on downslope side of line = AE

Start at SE end	Quad U1	Quad U2	Quad U3	Quad U4	Quad U5	Quad U6	Quad U7	Quad U8	Quad U9	Quad U10	Quad U11	Quad U12	Quad U13	Quad U14	Quad U15	Quad U16	Quad U17	Quad U18	Quad U19	Quad U20
Gravels < 1 cm	12	8	13	4	20	23	23	15	5b											
Gravel 1-2cm	13	11	14	3	5	30	23	18	11											
Gravel > 2-6cm	7					8														
Stones 6-15cm																				
Rocks 15cm-1m																				
Boulder > 1m																				
Bedrock																				
Soil	28	19	23.5	39	42.5	19	35.5	20	19											
Sand	5	10	8			5		5												
Litter	21	10	28	40	23	12	20	25	20											
Woody debris 3-8cm																				
Woody debris 8-30cm																				
Woody debris > 30 cm																				
Scat RNP 17						1.5			1											
Lichen XAN PNT							1.5	6	1											
Lichen ALUTE CAUSTE																				
Lichen																				
Lichen																				
Lichen																				
Moss																				
Moss																				
Moss																				
Moss																				
Moss																				
Moss																				
Liverwort																				
Algae																				
Nostoc																				
Vascular Species																				
Basal veg: Bougra	8	12	12	12	9	3	5	5												
150 Ga			1																	
Canopy-shrub																				
Canopy-forb																				
Canopy-grass	26	30	30	30	13	8	12	11												

PAN 5 of 5

Forest Service Cryptogamic Habitat Study
 GPS# 082016A S: 8784273.9

Site#: MANIF
 E: 722510.4

Date: 8/20
 Time: 11:00
 Elev: 8238

Surveyors: NMA MW
 NW/SE

Directions to Site: 15.3 w hr fence

General Site observations: large quantity bear dened wood 2 4m from NW rebar
 hostoc

50/50 Pinen/Juniper

Primary Aspect: 116 Secondary Aspect: 43 Primary slope & direction: 2% SE Secondary slope and direction: 1% NE

Canopy cover of site:

Mid-transsect: 4.5 m from NW end Open quarters facing: North: 96 South: 96 East: 96 West: 93

Within 1m at NW end. Open quarters facing: North: 96 South: 93 East: 94 West: 94

Within 1m at SE end. Open quarters facing: North: 96 South: 93 East: 83 West: 95

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

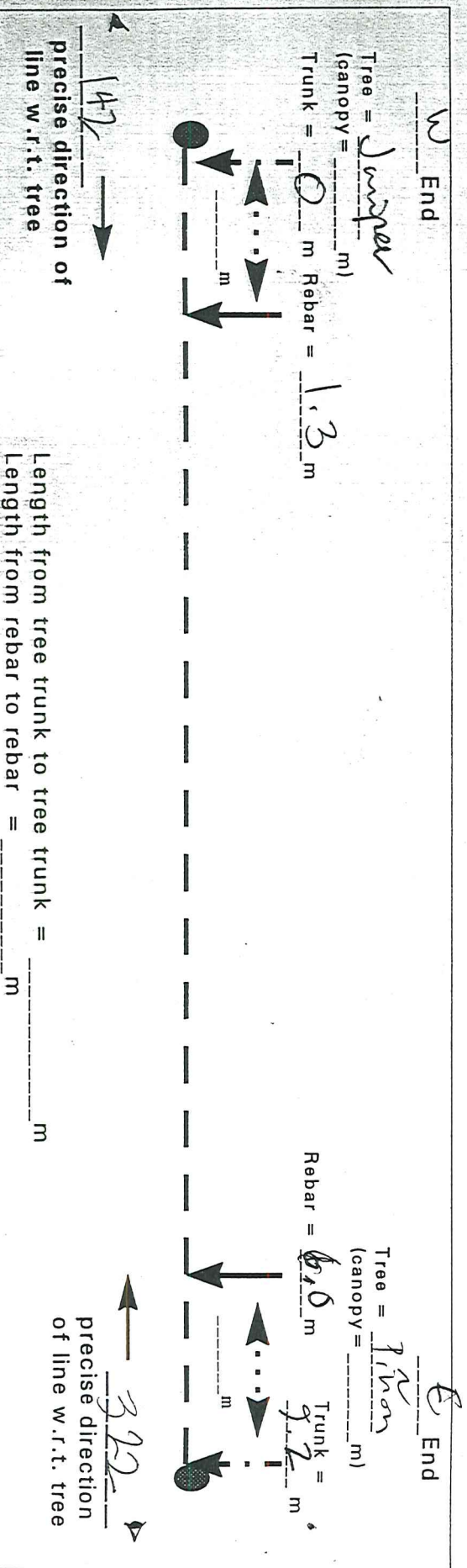
(Indicate when there are greater than 10 individuals in vicinity - ie if particularly abundant)

Kan Pan Bouyeria Lessyverella
 Achinoceros BRIDGMAN ERABELLA
 DIPLO, CLADONIA

1.4 m

Woody debris within: 1.4 m of transect; in what part of transect: down tree! NE of transect
 Woody debris within: m of transect; in what part of transect:

Species: JUNIPER Tree at NW end. Standing: 6m m away + 4 - 24 (%; right side of clinometer)
 Species: PINON Tree at SE end. Standing: 7m m away + 44 - 20 (%; right side of clinometer)



Site No: MANU 17 Date: 8-20-97 Surveyors: MW/LB GPS #: G08 2016 A Work on downslope side of line = NE

Start at NW end

Gravels < 1 cm Quad 46 Quad 47 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Gravel 1-2 cm Quad 3 Quad 12 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Gravel > 2-6 cm Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Stones 6-15 cm Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Rocks 15cm-1m Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Boulder > 1m Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Bedrock Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Soil Quad 30 Quad 29 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Sand Quad 23, 5 Quad 18 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

litter Quad 12 Quad 40 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Woody debris 3-8cm Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Woody debris 8-30cm Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Woody debris > 30 cm Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Seat PS Quad 15 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Lichen Xen Par Quad 3 Quad 5 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Lichen Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Lichen Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Lichen Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Lichen Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Moss Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Moss Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Moss Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Moss Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Moss Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Moss Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Liverwort Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Algae Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Nostoc Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Vascular Species Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Basal veg: Bougra Quad 3 Quad 4 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Canopy-shrub Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Canopy-forb Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

Canopy-grass Quad 7 Quad 6 Quad Quad Quad Quad Quad Quad Quad Quad Quad Quad

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Site No. MAN 17 Date: 8-20-97 Surveyors: AW ES GPS #: 5082016A Work on downslope side of line = N2

Start at NW 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	5	10	12	25	10	5	25	25	20	20	5	15	5	20	12
Gravel 1-2 cm	1	5	15	25	10	10	25	25	20	15	5	10	10	20	10
Gravel > 2-6 cm		3	4				3		10	10	3				
Stones 6-15 cm															
Rocks 15cm-1m															
Boulder > 1m															
Bedrock															
Soil	30	55.5	40	29	19	40	27	43	24	20.5	53.5	56	43	47	55
Sand			5			5	5				5	7	20	10	5
litter	59	25	20	17	15	30	10	25	20	25	25	10	15		13
Woody debris 3-8cm															
Woody debris 8-30cm															
Woody debris > 30 cm															
Scat					1										
Lichen XVA	2	1.5	1	2	HD	5	5	5		1.5	3.5		5	2	
Lichen															
Lichen orange crust rock									(1.1)						
Lichen gray crust rock									(5)						
White crust rock										(1.1)					
Moss black crust rock										(1.1)					
Moss										(1.1)					
Moss										(1.1)					
Moss										(1.1)					
Moss										(1.1)					
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Bougrea	3	1	3	2	5	5		2	10	4	5	2	2		3
KEU etc															
Canopy-shrub															
Canopy-forb															
Canopy-grass	7	4	5		15	20	20	15	10	7	15	5	5	1	15

PAGE 1 of 4

Site No. MM17 Date: 8.20 Surveyors: MMW/KS GPS #: G082016A Work on downslope side of line = NE

Start at	MM 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
Gravel < 1 cm		10	10	3	12	5	2	3	4	8	11	10	5	1	1	5
Gravel 1-2 cm		7	9	4	3	3	4		1.5	11	32	8	10	10	8	3
Gravel > 2-6 cm									3		9					
Stones 6-15 cm																
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil			44	49	42.9	63.5	53	54.8	48.5	40.9	20	50	38	48.5	29	59
Sand		10	10	8	10	15	8	4	2	5	8	10	3	5	3	3
litter		25	10	29	22	13	15	21	20	20	5	3	27	25	35	12
Woody debris 3-8cm																
Woody debris 8-30cm			14	20			20.5									
Woody debris > 30 cm																
Scat						.5										
OPAKE wuv.																
Lichen XAN PKR		.5	3	2	.1	6	6	3	10	9	5	2	7	5	10	6
Lichen Bleed CRUBS										(.2)	(.1)					
Lichen CR. CRUBS																
Lichen PAKOJ PV							.5		1		(.2)					
Lichen white CRUBS							.1									
ARKY Grass									1.9							
Moss (MADONIA)										.1						
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougrea		9	7	4	9	4	5	6	10	5	2		10	8	4	4
Urnid seed							.1									
Canopy-shrub																
Canopy-forb								.5								
Canopy-grass		16	12	9	22	8		15	30	18	16	10	20		20	13

PAGE 2 OF 4

Site No. MM 17 Date: 8-10-97 Surveyors: MW, KCS GPS #: G-082016A Work on downslope side of line = NE

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		10	25	5	5	15	25	12	20	30	15	3	7	5	10	15
Gravel 1-2cm		4	10		7	12	10	6	10	2.5	10				7	15
Gravel > 2-6cm																
Stones 6-15cm																
Rocks 15cm-1m																
Boulders > 1m					37											
Bedrock																
Soil		61	22	5	43	25	20	11	25	18	5	40.5	20	39.5	15	35
Sand		10	7	35	5	28	39	40	20	19	38	10	12	5	24	15
litter		12	150	25	40	15		20	15	3	25	35	43	50	35	25
Woody debris 3-8cm																
Woody debris 8-30cm			29													
Woody debris > 30 cm																14.9
Scat			1				1	1		1		1				
Lichen Xua Pyl		3	3	10	1		21.5		4		5.5	4	15	1	5	
Lichen Brown Pyl							1.5		3		1.5					
Lichen Cladonia																
Lichen																
Lichen Black crust rock				(1)		(2)			(1)		(2)					
White crust rock				(1)												
Moss green crust rock																
Moss white crust with black dots on rock						(1)			(1)						7	
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougain		3		10	5	5		10	3	1		4	3	4		5
Void vegetation															1	
Canopy-shrub																
Canopy-forb																
Canopy-grass		10	25	10	15		30		3		10		12	1		12

Aug 3 of 4

Site No. MM 17 Date: 8-20-97 Surveyors: MW, KCS GPS #: G082016A Work on downslope side of line = NE

Start at NW 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 10 25 5 5 15 25 12 20 30 15 3 7 5 10 15

Gravel 1-2cm 4 10 10 7 12 10 60 10 25 10 3 7 5 7 15

Gravel > 2-6cm

Stones 6-15cm

Rocks 15cm-1m 37

Boulder > 1m

Bedrock

Soil 61 22 5 37 25 20 11 25 18 5 40.5 20 29.5 15 35

Sand 10 7 35 5 28 39 40 20 19 38 10 12 5 1.24 15

litter 12 (50) 25 10 15 1 20 15 3 25 35 43 50 (3) 25

Woody debris 3-8cm

Woody debris 8-30cm

Woody debris > 30 cm 14.9

Seat 1 1 1 1

Lichen Xu Pu 3 3 10 1 5.5 10 15 1 5

Lichen Brown 1.5

Lichen Cladonia

Lichen Black crs rock (2) (11) (2)

Lichen White crs rock (1)

Moss Green crs rock

Moss White crs with black dots on rock (1) 7

Moss

Moss

Moss

Liverwort

Algae

Nostoc

Vascular Species

Basal veg: Bougain 3 10 5 5 10 3 1 4 3 4 4 1 5

Voik

Canopy-shrub

Canopy-forb

Canopy-grass 10 35 10 15 30 3 10 12 1 12 1 12 1 12

Aug 3 of 4

Forest Service Cryptogamic Habitat Study
 Gps: G-082115A S: 3784284.0 E: 722462.7 Site#: PNA 18 Date: 8-21 Surveyors: MW
 Directions to Site: 6.9 m from fence Time: 9:55 Elev: 8084 ft

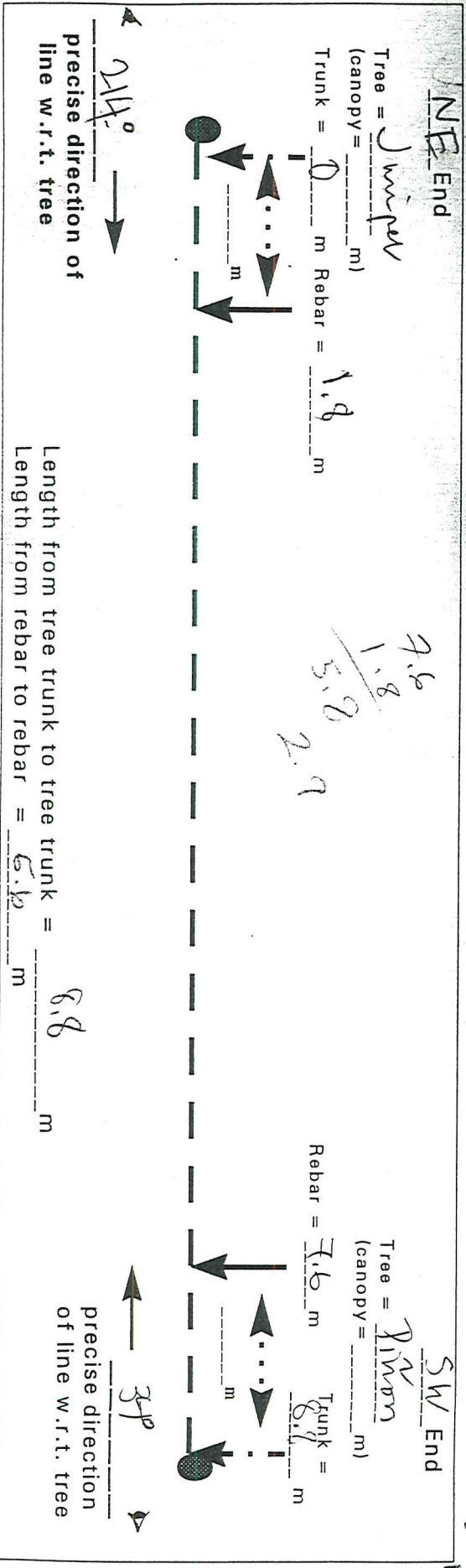
General Site observations: 50/50 Pinon/Juniper, abt of downed wood F end of line,

Primary Aspect: 344° Secondary Aspect: _____ Primary slope & direction: 10° Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transsect: 2.9 m from NE end Open quarters facing: North: 96 South: 96 East: 96 West: 95
 Within 1m at NE end. Open quarters facing: North: 46 South: 95 East: 48 West: 95
 Within 1m at SW end. Open quarters facing: North: 96 South: 41 East: 96 West: 65

Plants (vascular and nonvascular) within 3m of transect:
 (Indicate when there are greater than 10 individuals)
 In vicinity (ie if particularly abundant)
Quercus / XANPAR / ERIDM / ECHINOCERUS / BENTRO
Podocarpus
Pinus - Monophylla

Woody debris within: 15 m of transect; in what part of transect: SE of SW rebar parts of a fallen tree
 Woody debris within: 0.75 m of transect; in what part of transect: NE - parts of a fallen tree
 Species: Juniper Tree at NE end. Standing: 7.6 m away + 23 - 20 (%; right side of clinometer)
 Species: Pinon Tree at SW end. Standing: 7.0 m away + 27 - 19 (%; right side of clinometer)
 @ 1-2 m from small downed SE of line



Forest Service Cryptogamic Habitat Study
 Gps: G08215A S: 3784284.0 E: 722462.7 Site#: PNA18 Date: 8.21 Surveyors: NW
 Directions to Site: 16.9 m from fence Time: 9:55 Elev: 8084 ft

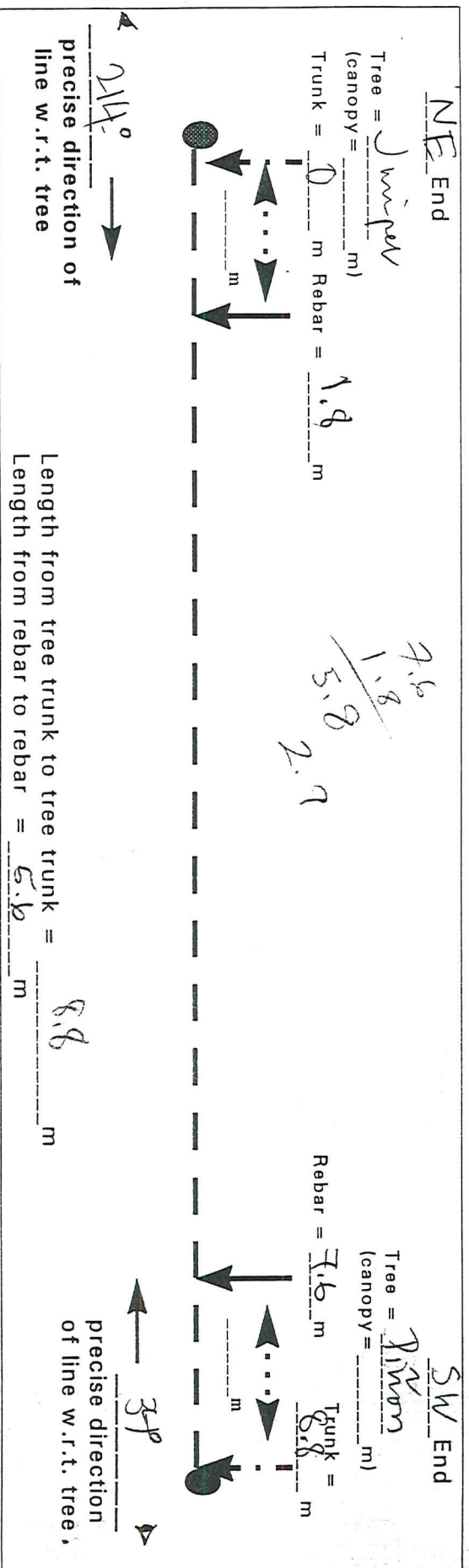
General Site observations: 50/50 Piñon/Juniper, alt of downed wood E end of line,

Primary Aspect: 344° Secondary Aspect: _____ Primary slope & direction: 10° Secondary slope and direction: _____

Canopy cover of site: _____
 Mid-transect: 2.9 m from NE end Open quarters facing: North: 96° South: 96° East: 96° West: 95°
 Within 1m at NE end. Open quarters facing: North: 46° South: 96° East: 78° West: 95°
 Within 1m at SW end. Open quarters facing: North: 96° South: 41° East: 96° West: 65°

Plants (vascular and nonvascular) within 3m of transect: ADGRA / XANPAR / ERDPM / ECHINOCERUS / BANTRO
 (Indicate when there are greater than 10 individuals in vicinity - if particularly abundant)
Podocarpus
Histrax - 04 species (leaves being)

Woody debris within: 15 m of transect; in what part of transect: SE of SW rebar parts of a fallen tree
 Woody debris within: 75 m of transect; in what part of transect: NB parts of a fallen tree
 @ 1-2 km open area of woody debris
 Species: Juniper Tree at NE end. Standing: 7.6 m away + 23 - 20 (%; right side of clinometer)
 Species: Paxton Tree at SW end. Standing: 7.0 m away + 27 - 19 (%; right side of clinometer)
 @ 2000 ft on EAST side of LINE



Start at: N.E. 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	20	7	25	15	12	7	53	4	7	5	5	7	1	2	
Gravel 1-2 cm	15	40	31	30	20	7	10	5	18	10	3	12	5	3	
Gravel > 2-6 cm				9	2										
Stones 6-15 cm															
Rocks 15 cm-1 m															
Boulder > 1 m															
Bedrock															
Soil	43	36	30	21	31	12	53	53	12	15	52	43	39	185	46
Sand	10	10	5	5	25	54	12	3	46.5	33.9	20	10	10	1	76
litter	10	5	5	AD	25	54	12	15	80	25	2	10	40	12	35
Woody debris 3-8 cm															
Woody debris 8-30 cm															
Woody debris > 30 cm				11											
Scat			1												
Lichen Van Der					6	2	15	15	15	5	7	10	9		25
Lichen Bryorrhiza															10
Lichen															3
Lichen															
Lichen green rust rock			(1)										(2)	(2)	
Moss															
Moss															
Moss															
Moss															
Moss															
Liverwort															
Algae															
Nostoc															
Vascular Species															
Basal veg: Botrya	2	2	3	4	4	25	3	5	4	1	1	5	5	3	
Shilke padding															
Canopy-shrub															
Canopy-forb															
Canopy-grass	7	4	5	10	7	100	7	16		10	10	7	8	7	1

Work on downslope side of line = west

Page 1 of 4

Start at	1/2 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	20	7	25	15	12	7	10	4	5	18	5	5	7	1	2	4
Gravel 1-2 cm	15	40	31	30	20	7	10	5	10	7	10	3	12	5	3	2
Gravel > 2-6 cm					19	2										
Stones 6-15 cm																
Rocks 15cm-1m																
Boulders > 1m																
Bedrock																
Soil	43	36	30	31	31	12	53	53	12	15	15	52	43	39	65	46
Sand	10	10	5	10	3	46.5	33.9	20	10	10	10	10	10	10	10	10
litter	10	5	5	10	25	54	12	15	80	25	25	2	10	40	12	35
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat			1													
Lichen <i>Xanthopar</i>								6	2	15	15	.5	5	10	9	25
Lichen <i>Crocinifera</i>																10
Lichen																
Lichen																
Lichen <i>gypsa crust rock</i>			(.1)													
Moss																
Moss																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc																
Vascular Species																
Basal veg: Bougainvillea	2	2	3	4	4	25	3	5	4	6	1	5	5	5	3	
<i>Unil. parviflora</i>																
Canopy-shrub																
Canopy-forb																
Canopy-grass	7	4	5	10	7	10	7	10	10	10	6	7	8	7	7	10

K5/MW

GPS #:

608 2115A

Work on downslope side of line = rock

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	Quad 4	Quad 5	Quad 6	Quad 7	Quad 8	Quad 9	Quad 10	Quad 11	Quad 12	Quad 15	Quad 14	Quad 15
Soil	5	12	7	53	53	12	15	57	43	39	155	44
Sand	10	20	7	10	3	16.5	33.9	30	10	10	1	2
litter	10	25	54	12	15	20	25	2	10	110	12	35
Woody debris												
Woody debris 8-30cm												
Woody debris > 30 cm												
Scat												
Lichen Xan Par												
Lichen Bryunfow			6	2	15	15	5	7	10	9		25
Lichen									3	1		10
Lichen												3
Lichen green crust rock										(1.1)	(1.2)	(1.3)
Moss												
Moss												
Moss												
Moss												
Moss												
Liverwort												
Algae												
Nostoc												
Vascular Species												
Basal veg: Bougra	2	2	3	4	4	25	3	5	4	4	1	5
Unidentified												
Canopy-shrub												
Canopy-forb												
Canopy-grass	7	4	5	10	7	100	7	16	10	10	6	7

Site No./MVA B Date: 8-21-91 Surveyors: K5, M10 GPS #: G082115A Work on downslope side of line = E

Start at	Mc	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
Gravel < 1 cm	3	20	15	15	12	7	5	8	1	2	10	14	7	12	5		
Gravel 1-2 cm	4	40	20	12	30	11	3	1	1	1	1	7	11				
Gravel > 2-6 cm																	
Stones 6-15 cm																	
Rocks 15cm-1m																	
Boulder > 1m																	
Bedrock																	
Soil	40	33	47.5	51.5	79	5	11	33	15.5	27.7	2.5	31.5	31	33			
Sand																	
litter	50		12	15	25	19	14	14	10	15	11	10	3	5	30	12	15
Woody debris 3-8cm																	
Woody debris 8-30cm																	
Woody debris > 30 cm	40							27.9		10		24.8	20.5				48.5
Seat	Q4421T							1	1		.5					2	
Lichen Xon Pur	3	5	4	2	10	25	50	110	45	12	4	15	13	8			45
Lichen Brown km	15	1	1.5	2.5	1	1.5	11	7	3	1	3	1	1.5	1.5			1.5
Lichen																	
Lichen white crust																	
Lichen black crust	collc																
green crust	collc																
Moss - Sph/DM/VA	1			(1.2)	(1.5)	0.5		0.5							(1.5)	1.5	
Moss 5-1Aa						.1		.5		.1	.5						1.5
Moss																	
Moss																	
Moss																	
Liverwort																	
Algae																	
Nostoc													1				
Vascular Species																	
Basal veg: Bougra	4	1	2	4	3	11	5	3	7	8	7	9	9	5	10	8	
Grp Plg																	
1WU W1																	
Canopy-shrub																	
Canopy-forb																	
Canopy-grass	12	4	4	8	10	25	10	10	3	12	15	15				25	1

Site No. PNT-12	Date:	8.21	Surveyors:	K5/AMJ	GPS #:	GO82	15A	Work on downslope side of line =	E							
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	1															
Gravel 1-2cm	2															
Gravel > 2-6cm	5															
Stones 6-15cm	4															
Rocks 15cm-1m																
Boulder > 1m																
Bedrock																
Soil	34	42	35	20	24	4	12	16	21.9	10	12	31	20	29	29	30
Sand	28	10	5	20	10	20	5	5	5	3	10	5	10	18	10	10
litter																
Woody debris 3-8cm																
Woody debris 8-30cm																
Woody debris > 30 cm																
Scat																
Lichen XAN PAR	13	8	20	15	1	25	60	35	30	28	15	20	33	7	13	
Lichen BPOPIN PR	1		3	1	.5	1	.5									
Lichen A/ADN/IX	.5	2	1	5	.5	.1										
Lichen GREEN/CO/STK																
Lichen ORANGE "																
Lichen WHITE "																
Moss STAA	.5															
Moss- COLLINA																
Moss																
Moss																
Moss																
Liverwort																
Algae																
Nostoc	3															
Vascular Species																
Basal veg: Bougra	16	5	4	6	5	12	1.5	15	10	10	8	7	4			
ASPH/AMUS ?																
UNID 566DVINA																
Canopy-shrub																
Canopy-forb																
Canopy-grass	25	10	9	15	9	15	8	12	18	20	20	16	7	14		

* WALK LINE GREEN LEAVES

8°

2