Seedling Compliance

Seedling Label	Seedlot	BEC	Min Elevation	Max Elevat	GBST/CBST Rules Apply	Seedlings out of Compliance
FDI, 2020DSE0019	63792	ICHdw1	400	1200	CBST	-
PY, 2020DSE0023	63776	ICHdw1	300	1000	CBST	-

Seedlings Planted

Site Name	Seedling Label	Seedlot	Nursery	Planted	Fertilized	Planting ($/Tree)	Fertilizer ($/Tree)	Planting with Fertilizer ($)
A90392-1, santa rosa drought	FDI, 2020DSE0019	63792	Purple Springs	8,800	4,400	$ 0.900	$ 0.080	$ 8,272.00
A90392-1, santa rosa drought	PY, 2020DSE0023	63776	LANDING	12,980	6,980	$ 0.900	$ 0.080	$ 12,240.40
			Total	21,780	11,380			$ 20,512.40

Species Composition

Species	From Planting Stems	From Planting SPH	From Planting %	From Plot Regen Total Planted Stems	From Plot Regen Total Planted SPH	From Plot Regen Total Planted %
FDI	8,800	371	40%	48	480	48%
PY	12,980	548	60%	51	510	52%
Total	21,780	919		99	990	

Planting Quality

		Audit			Check		
Audit Plots 24	Satisfactory Trees:	93	=	92.08 % Quality	96	=	96.97 % Quality
	Plantable Spots:	101			99		
Check Plots 24	Excess Trees:	6	=	6.06 % Excess	0	=	0.00 % Excess
	Trees Planted:	99			99		
		Payment =		99.41 %	Payment =		100.00 %

Planting Map Legend

Block:	1	**Location:**	Santa Rosa	**Survey Date:**	28-May-21
Timbermark:	90392	**Mapsheet:**	82F001-028	**Opening ID:**	1644756
CP Number:	APR-90392	**Contractor:**	Dark Star Forestry Ltd	**Scale:**	1: 5 000
Project ID:	IM21TFG006	**Surveyor(s):**	CB	**Printed:**	July 19, 2021 **Map By:** Jaz Gatin

Str	Ha	Plts
1a	23.7	24

Recommendations for Stratum 1a:

1a) SU RG PLOT 2022
Alternative
2a) SU RG PLOT 2023

Access: From Rossland, Travel West on HWY 22 for 0.4km, staying slightly right onto the Old Cascade WHY. Continue 22.6km on Old Cascade HWY, which turns into Santa Rosa FSR. Turn sharp left onto Santa Rosa 1000, which is just before the rec site at Santa Rosa Creek. Procedd 200m to Old road junction. Block 1 is on the left.

Comments

DARK STAR FORESTRY LTD
• 601-N Front St, Nelson BC V1L4B6
• 250 352 7212
darkstarltd@netidea.com

TSL	Block ID
A90392	1
Business Area: Kootenay	UBI: BF5D6
Operating Area: South Arrow TSA	Management Unit: Arrow
Gross Block Area: 28.47	NAR: 23.67
Min. Elev.: 1140 / Max. Elev.: 1280	Geographic Center Latitude: 49 00 12 Longitude: -117 59 10
Location: Santa Rosa	Opening: 82F001-28

Planting Unit: 1 — Fill Planting

BCTS All Blocks; Block of Interest; Ecology Unit; Biogeoclimatic Zone

BCTS GPS Stations: GPS Station; Block Bdy Hub; Falling Corners; Reference Trees

BCTS Layout Points: Ecology Plot; Block Centre; Woody Debris; Landing Cable; Landing Ground; R/W Landing; Slump/Slide Area; Rock Outcrops; Cross Ditch; Arch Pipe; Arch Pipe, Proposed; Culvert; Culvert, Proposed; Bridge; Bridge, Proposed; Bridge, Condemned; Removed Structures; Gate; Road Barrier; Cattle Guard; Pipeline Crossing; Cave/ Den; Mineral Lick; Nest; Wildlife Tree; Wildlife Feature

BCTS Line Features: Fence Line; Other Trail; Pipe Line; Rec Trail; Seismic Line; Cliff; Draw; Embankment; Gully; Ridge; Slope Break; Cultural/Heritage Feature

BCTS Streams Class: Unknown; INT,NCD; S1,S2,S3,S4; S5,S6

BCTS Roads - Road State: Deactivated Road; Existing Road; Proposed Road; Unknown/NULL; Rehab Road

TRIM Features: River or Stream - Definite; River or Stream - Indefinite; Contour - Index; Contour - Intermediate; Road Permit; Forest Service Road; Highway/Main/Paved Road; Gravel/Resource Road; Trail; Snow Shed (Railway); Tunnel; Bridge; Airstrip; Rail Line; Pipeline / Wellsite

CLA; WTP; WTRA; NP Permanent Access; Reserve; NP Immature; Area of Concern; Slope Area (>35%); SAR Cliff; SAR Forested; SAR Rare Ecosystems; Special MgmtArea; Tailing Pond; Lake/Watercourse; Marsh; Swamp; Private Land; Protected Areas/ Parks

Riparian Features: MFZ / MSZ; RMZ; RRZ

POC; Wallchrough Route

0 50 100 150 200 250 Meters
1:5,000

Date August 25, 2020 **User** KSCHENIN
Template Name BlockPlantingMap_NextFiscal_11x17L
Coordinate System NAD 1983 UTM Zone 11N

Plot Details

Project			Site		Plot												Regen					Errors	Comments
Project Name	Year	Season	Site Label	Area	Plot	Initials	Type	Date	Planted	Spots	Excess	Sat	UnSat	NP Spots	Dropped	Penalty	Spp	WS Plant	WS Nat	TS Plant	TS Nat	Error Code	Plot Comments
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C1	CB	Audit	May 22, 2021	1	1	0	1	0	0		0	FDI	0	0	1	0		6 nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C10	CB	Audit	May 22, 2021	1	1	0	1	0	0		0	PY	0	0	1	0		Natural void, unable to locate plantable spots in a reasonable timeframe. NP rock [photo: c10 non-productive rock]
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C10F	CB	Check	May 22, 2021	1	1	0	1	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C11	CB	Audit	May 22, 2021	6	6	0	6	0	0		0	PY	0	0	6	0		Nat. Nice use of Py in rock ground
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C11F	CB	Check	May 22, 2021	6	6	0	6	0	0		0							Some fert bags are touching plugs but the ground is so rocky, I can't penalize for that here
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C12	CB	Audit	May 22, 2021	8	8	0	8	0	0		0	PY	0	0	8	0		Nat. Shallow, not easily fixed
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C12F	CB	Check	May 22, 2021	8	8	0	8	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C13	CB	Audit	May 22, 2021	3	2	1	2	0	0		0	PY	0	0	3	0		Redrot shot to excess. Honestly it's impressive somebody even planted here, this plot was just dank to get to.
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C13F	CB	Check	May 22, 2021	3	3	0	3	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C14	CB	Audit	May 22, 2021	0	0	0	0	0	0		0							6 nat, missed to slash
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C14F	CB	Check	May 22, 2021	0	0	0	0	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C15	CB	Audit	May 22, 2021	10	10	0	10	0	0		0	FDI	0	0	9	0		A bit high density but good work getting trees in here
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C15	CB	Audit	May 22, 2021	10	10	0	10	0	0		0	PY	0	0	1	0		A bit high density but good work getting trees in here
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C15F	CB	Check	May 22, 2021	10	10	0	9	1	0		0							Creamy spot, pressed against plug
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C16	CB	Audit	May 22, 2021	4	5	0	4	0	0		0	PY	0	0	4	0		Bedrock. Missed creamy stump.
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C16F	CB	Check	May 22, 2021	4	4	0	4	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C17	CB	Audit	May 22, 2021	9	8	1	8	0	0		0	FDI	0	0	4	0		B1@100
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C17	CB	Audit	May 22, 2021	9	8	1	8	0	0		0	PY	0	0	5	0		B1@100
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C17F	CB	Check	May 22, 2021	9	9	0	9	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C18	CB	Audit	May 22, 2021	2	2	0	2	0	0		0	FDI	0	0	1	0		5 nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C18	CB	Audit	May 22, 2021	2	2	0	2	0	0		0	PY	0	0	1	0		5 nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C18F	CB	Check	May 22, 2021	2	2	0	2	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C19	CB	Audit	May 22, 2021	7	6	1	6	0	0		0	FDI	0	0	4	0		Too close to nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C19	CB	Audit	May 22, 2021	7	6	1	6	0	0		0	PY	0	0	3	0		Too close to nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C19F	CB	Check	May 22, 2021	7	7	0	5	2	0		0							Bottom of hole
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C1F	CB	Check	May 22, 2021	1	1	0	1	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C2	CB	Audit	May 22, 2021	4	4	0	4	0	0		0	FDI	0	0	4	0		3 nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C20	CB	Audit	May 22, 2021	5	5	0	5	0	0		0	PY	0	0	5	0		Nat. Rocky shnarb. Borderline shallow
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C20F	CB	Check	May 22, 2021	5	5	0	5	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C21	CB	Audit	May 22, 2021	0	0	0	0	0	0		0							Bedrock with angular glacial deposits on top, no plantable spots
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C21F	CB	Check	May 22, 2021	0	0	0	0	0	0		0							

Plot Details

Project			Site		Plot												Regen					Errors	Comments
Project Name	Year	Season	Site Label	Area	Plot	Initials	Type	Date	Planted	Spots	Excess	Sat	UnSat	NP Spots	Dropped	Penalty	Spp	WS Plant	WS Nat	TS Plant	TS Nat	Error Code	Plot Comments
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C22	CB	Audit	May 22, 2021	2	1	1	1	0	0		0	PY	0	0	1	0		5 nat. Too close to nat. DRA on live Lw and live Fdi, dead Fdi DRA just outside plot. [photo: c22N: Patchy shrubs herbaceous, Dispersed Np rock natural voids]
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C22	CB	Audit	May 22, 2021	2	1	1	1	0	0		0	FDI	0	0	1	0		5 nat. Too close to nat. DRA on live Lw and live Fdi, dead Fdi DRA just outside plot. [photo: c22N: Patchy shrubs herbaceous, Dispersed Np rock natural voids]
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C22F	CB	Check	May 22, 2021	2	2	0	2	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C23	CB	Audit	May 22, 2021	5	5	0	5	0	0		0	FDI	0	0	1	0		4 nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C23	CB	Audit	May 22, 2021	5	5	0	5	0	0		0	PY	0	0	4	0		4 nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C23F	CB	Check	May 22, 2021	5	5	0	5	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C24	CB	Audit	May 22, 2021	9	8	1	8	0	0		0	FDI	0	0	9	0		2 nat. B1@110
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C24F	CB	Check	May 22, 2021	9	9	0	9	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C2F	CB	Check	May 22, 2021	4	4	0	4	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C3	CB	Audit	May 22, 2021	4	3	1	3	0	0		0	FDI	0	0	4	0		5 nat. B1@140
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C3F	CB	Check	May 22, 2021	4	4	0	4	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C4	CB	Audit	May 22, 2021	2	2	0	2	0	0		0	PY	0	0	2	0		6 nat. Borderline shallow
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C4F	CB	Check	May 22, 2021	2	2	0	2	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C5	CB	Audit	May 22, 2021	8	8	0	8	0	0		0	PY	0	0	4	0		Rocky draw, nice work.
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C5	CB	Audit	May 22, 2021	8	8	0	8	0	0		0	FDI	0	0	4	0		Rocky draw, nice work.
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C5F	CB	Check	May 22, 2021	8	8	0	8	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C6	CB	Audit	May 22, 2021	0	0	0	0	0	0		0							7 nat
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C6F	CB	Check	May 22, 2021	0	0	0	0	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C7	CB	Audit	May 22, 2021	6	6	0	6	0	0		0	FDI	0	0	4	0		Bedrock, no ms
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C7	CB	Audit	May 22, 2021	6	6	0	6	0	0		0	PY	0	0	2	0		Bedrock, no ms
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C7F	CB	Check	May 22, 2021	6	6	0	6	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C8	CB	Audit	May 22, 2021	0	3	0	0	0	0		0							2 nat. Natural void, very rocky with few plantable spots. That said, 2 creamy stumps plus an additional nice soil spot were missed.
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C8F	CB	Check	May 22, 2021	0	0	0	0	0	0		0							
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C9	CB	Audit	May 22, 2021	3	7	0	3	0	0		0	PY	0	0	1	0		Rocky area, but 4 missed spots found with very little effort.
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C9	CB	Audit	May 22, 2021	3	7	0	3	0	0		0	FDI	0	0	2	0		Rocky area, but 4 missed spots found with very little effort.
2021 arrow south	2021	Spring	A90392-1, santa rosa drought	23.7	C9F	CB	Check	May 22, 2021	3	3	0	3	0	0		0							

Payment Certificate

Project: 2021 arrow south
A90392-1

Contractor: West Arm Silviculture Inc
Planted: May 17, 2021 ***to*** May 19, 2021

Site Area: 23.70

Seedlings Planted

Site Name	Seedling Label	Nursery	Planted	Fertilized	Cost ($/Tree)	Planting ($/Tree)	Fertilizer ($/Tree)	Seedling Cost ($)	Planting with Fertilizer ($)
A90392-1, santa rosa drought	FDI, 2020DSE0019, ICH, 5	Purple Springs	8,800	4,400	$ -	$ 0.900	$ 0.080	$ -	$ 8,272.00
A90392-1, santa rosa drought	PY, 2020DSE0023, ICH, 4	LANDING	12,980	6,980	$ -	$ 0.900	$ 0.080	$ -	$ 12,240.40
		Total	**21,780**	**11,380**				**$ -**	**$ 20,512.40**

Planting Quality

	Audit				Check			
Audit Plots	Satisfactory Trees:	93	=	***92.08 %***	Satisfactory Trees:	96	=	***96.97 %***
24	Plantable Spots:	101		***Quality***	Plantable Spots:	99		***Quality***
Check Plots	Excess Trees:	6	=	***6.06 %***	Excess Trees:	0	=	***0.00 %***
24	Trees Planted:	99		***Excess***	Trees Planted:	99		***Excess***
	Payment =			***99.41 %***	***Payment =***			***100.00 %***

Payment Summary

Plot Type	Audit			Check		
Gross Pay (before penalties)		**$**	**19,602.00**		**$**	**910.40**
Quality Deduction	0.59%	$	116.22	0.00%	$	-
Excess Charge 1 (>7%)	0.00%	$	-	0.00%	$	-
Excess Charge 2 (>12%)	0.00%	$	-	0.00%	$	-
Unaccounted Tree Charge	-	$	-	-	$	-
Plot Penalties		$	-		$	-
(Total of deductions)			($116.22)			($0.00)
Net Pay		***$***	***19,485.78***		***$***	***910.40***
GST (5%)		**$**	**974.29**		**$**	**45.52**
Payment due to Contractor:		**$**	**20,460.07**		**$**	**955.92**

Summary of Faults

Code	Species Affected	Total	#/Ha	% of Faults	% of Plant
	Total	**0**	**0**		

Species Composition

	From Planting			From Plot Regen		
				Total Planted		
Species	Stems	SPH	%	Stems	SPH	%
FDI	8,800	371	40%	48	480	48%
PY	12,980	548	60%	51	510	52%
Total	**21,780**	**919**		**99**	**990**	

Pre-Plant Site Notes

Site	Date	User	Notes
A90392-1, santa rosa drought	Apr 12, 2021 10:30 AM	colbybedford@gmail.com	Logged 2014, planted 2016 (burn piles planted in 2017). Drought mortality fill plant, remaining "naturals" should be of respectable quality, but the last survey did note some ungulate browse. Well spaced "naturals" are around 50cm height. Fill plant planting density: 1000sph, with a target of 1400sph including "naturals". Planters will need to utilize 1.7m spacing often to hit areas of soil amongst rock. Brush is establishing aggressively, providing shade for seedlings. Brush hazard will be assessed in 2022. Fert application here. Fert bag placement: 2.5-5cm below surface of mineral soil on uphill side of the planted seedling. Fert bags not buried in mineral soil are faults. Fert bags planted too deep are faults. The fert bag is ideally a few cm's away from the plug, but the tip of the bag can be touching the plug. Bags pressed against plugs are faults.

Post-Plant Site Notes

Site	Date	User	Notes
A90392-1, santa rosa drought	May 28, 2021 12:27 PM	colbybedford@gmail.com	92.1% PQ, 6.06% PQ. The unit was overall worked well aside from some too-close-spacing, and some missed spots discovered mainly in non-productive areas with bedrock and angular glacial deposits. There appears to be a dispersed Np Rock stratum within the NAR of the unit. Taking into account that this was a notably challenging unit, it is recommended to forgo the small payment reduction that occurred. Brush is patchy, the seedlings should be able to establish without treatment. CBST rules were applied for seed selection and all seedlings were planted in compliance.

Labels

Site	Silviculture Label	Inventory Label	Planted Density (from Plots)
92-1, santa rosa d	---17/-0(21)	PY50FDI50---17/--990(21)	825

Exported: May 28, 2021

Stratum 1a: Overview at plot C10 non-productive rock voids.

Stratum 1a: Plot C22 looking north to shrubs and herbaceous, dispersed non-productive rock voids.

Stratum 1a: Planted Fdi.

LARGE FORMAT

REGISTERED FOREST TECHNOLOGIST
PROVINCE OF BRITISH COLUMBIA
JUSTIN FRANK
NO. 2191

2021-07-19

Planting Map

BCTS
BC Timber Sales

TSL **A90392**	Block ID 1
Business Area Kootenay	UBI BF5D6
Operating Area South Arrow TSA	Management Unit Arrow
Gross Block Area 28.47	NAR 23.67
Min. Elev. 1140 / Max. Elev. 1280	Geographic Center Latitude 49 00 12 / Longitude -117 59 10
Location Santa Rosa	Opening 82F001-28

Planting Unit 1

Fill Planting

-117°59'40" -117°59'20" -117°59'0" -117°58'40"

49°02'0" 49°01'0"

5428800 5428700 5428600 5428500 5428400 5428300 5428200 5428100 5428000 5427900 5427800

427100 427200 427300 427400 427500 427600 427700 427800 427900 428000 428100 428200 428300 428400 428500 428600

A27179 1

A90392 2

A90392 3

A90392 1

A

1

ICHdw1

WTRA

WTRA

RAS 7874 05

2540460 FdlLw(SeBl) 745-O/18

2940571 CwFdPl(Py)Lw) 111-15/15 OU4

2940311 FdLw(SeBl) 745-O/18

2620340 FdlLwPli 426-O/14

2463038 PliFdlSxLw 111-22/22 OU4

2423012B FdlLw(Bl) 535-O/17 he

2610135 FdlSeLw(Bl) 745-O/17

2670037 FdlPli 733-O/11 he pr

2619950 FdlBl 623-O/12 he pr

734 FdlLw(Bl) 735-O/15

2940114 FdlSw(Pl)Li(Sx) 111-24/24 GU04

2940100 FdLw(Lw) 845-O/20

3140511 LwFdi 746-O/18

3140525 FdLw 735-O/17

3140335 fd

3160518 FdLw(SeBl) 835-O/18

3140202 fd

3127008 FdLw(Pl) 745-O/17

3134065 FdLw(Pl) 746-O/18

3134020 FdLw(Pl) 636-O/14

3134020 FdLw(Pl) 845-O/16

3134020 FdLw(Se) 845-O/17

3134020 FdLw(Se) 745-O/17 st

3134020 FdLw(Se) 845-O/17

3134020