



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Iron Mountain
Sale WL-341-2019-W00579-01

District: Western Lane

Date: October 04, 2018

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,502,336.08	\$780.25	\$1,503,116.33
		Project Work:	(\$104,689.00)
		Advertised Value:	\$1,398,427.33



Timber Sale Appraisal Iron Mountain Sale WL-341-2019-W00579-01

District: Western Lane

Date: October 04, 2018

Timber Description

Location: Portions of Section 10, T17S, R7W, W.M., Lane County, OR

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	97
Maple	14	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	2,904	820	0	3,724
Maple	0	0	25	25
Total	2,904	820	25	3,749

Comments: Pond Values Used: Forest to Market Prices August 2018.

Western hemlock and Other Conifers Stumpage Price = Pond Value minus Logging Costs:
\$286.42/MBF = \$658/MBF - \$371.58/MBF

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Costs:
\$1,008.42/MBF = \$1,380/MBF - \$371.58/MBF

Red alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Costs:
\$384.42/MBF = \$756/MBF - \$371.58/MBF

Pulp Price (Conifer and Hardwood) Price = \$25/MBF

Hauling Cost Allowance = equivalent to \$950 daily truck cost.

Other Costs (With Profit & Risk to be added):
None.

Other Costs (No Profit & Risk added):

BLM Road Use Fee = \$28,196.59

Final Road Maintenance = \$13,063

TOTAL Other Costs (No Profit and Risk added) = \$41,260



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Logging Conditions

Combination#: 1 Douglas - Fir 93.00%
 Maple 93.00%

Logging System: Cable: Large Tower >=70 **Process:** Harvester Head Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 8 **bd. ft / load:** 4000
cost / mbf: \$249.39
machines: Log Loader (A)
 Forwarder
 Harvester
 Tower Yarder (Large)

Combination#: 2 Douglas - Fir 7.00%
 Maple 7.00%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 7 **bd. ft / load:** 3100
cost / mbf: \$246.27
machines: Forwarder
 Harvester



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Timber Sale Appraisal Iron Mountain Sale WL-341-2019-W00579-01

District: Western Lane

Date: October 04, 2018

Logging Costs

Operating Seasons: 1.00	Profit Risk: 10%
Project Costs: \$104,689.00	Other Costs (P/R): \$0.00
Slash Disposal: \$0.00	Other Costs: \$41,260.00

Miles of Road

Road Maintenance: \$0.00

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	3.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.5
Maple	\$0.00	2.0	3.0



"STEWARDSHIP IN FORESTRY"

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Iron Mountain
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District: Western Lane

Date: October 04, 2018

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$249.17	\$3.15	\$1.17	\$72.48	\$0.00	\$32.60	\$0.00	\$2.00	\$11.01	\$371.58
Maple									
\$249.17	\$3.21	\$1.17	\$166.25	\$0.00	\$41.98	\$0.00	\$2.00	\$11.01	\$474.79

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$775.00	\$403.42	\$0.00
Maple	\$0.00	\$506.00	\$31.21	\$0.00



"STEWARDSHIP IN FORESTRY"

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Iron Mountain
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District: Western Lane

Date: October 04, 2018

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Maple	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,724	\$403.42	\$1,502,336.08
Maple	25	\$31.21	\$780.25

Gross Timber Sale Value

Recovery: \$1,503,116.33

Prepared By: Kevin Gehrig

Phone: 541-935-2283

Iron Mountain
WL-341-2019-W00579-01
Combined Project Costs

Project 1	New construction and rocking.	\$90,579.00
Project 2	Move-In.	\$4,500.00
Project 3	Spot rock and maintenance on the 17-7-9 rd.	\$5,645.00
Project 4	Roadside brushing on the 17-7-9 Rd.	\$3,965.00

TOTAL PROJECT COSTS	\$104,689.00
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Summary of "Other Costs" for Timber Sale Appraisals

Iron Mountain WL

WL-341-2019-W00579-01

"Other Costs" with Profit and Risk to be Added:

None

Total "Other Costs" with Profit and Risk to be Added:

\$0



"Other Costs" With No Additional Profit and Risk

	<u>Units</u>	<u>Quantity</u>	<u>Cost/Unit</u>	<u>Total Cost</u>
Final Road Maintenance	Operation			\$ 13,063
BLM Road Use Fee	Operation			\$ 28,196.59
Total "Other Costs" With No Additional Profit and Risk:				<u>\$ 41,260</u>
Cost per MBF	3,847	MBF		\$ 10.73

New Road Construction Costing

Summary:

Total construction Cost	\$ 35,195.00
Average cost per station	\$ 1,006

Road Spur 1 (Stationing 0+00 to 20+80)

Segment 0+00 to 20+80

				<u>Quantity</u>		<u>Sub total</u>
Clearing and Grubbing	\$140.19	per station	@	20.8 stations	=	\$ 2,916.00
note: Clearing debris may be scattered on slopes less than 50 percent						
<u>Balance/Standard Subgrade construction</u>						
Drift/Balance Cut	\$ 223.91	per station	@	18.8 stations	=	\$ 4,210.00
Landing Construction	\$ 446.47	per landing	@	1 landings	=	\$ 446.00
<u>End Haul Subgrade Construction</u>						
Stump End Haul/Clearing debris	\$ 7.56	per stump	@	24 stumps	=	\$ 181.00
Clearing debris	\$ 50.00	per Load	@	3 Loads	=	\$ 150.00
Waste End Haul	\$ 3.85	per Cu. Yd.	@	2860 Cu. Yds.	=	\$ 11,011.00
Subgrade preparation	\$ 51.82	per station	@	20.8 stations	=	\$ 1,078.00
Install Geo Fabric	\$ 450.00	per roll	@	1 roll	=	\$ 450.00
Subtotal Construction Cost						\$ 20,442.00
<u>Construction Cost per Station</u>						<u>\$ 983</u>

Road Spur 1a (Stationing 0+00 to 7+20)

				<u>Quantity</u>		<u>Sub total</u>
Clearing and Grubbing	\$140.19	per station	@	7.2 stations	=	\$ 1,009.00
note: Clearing debris may be scattered on slopes less than 50 percent						
<u>Balance/Standard Subgrade construction</u>						
Drift/Balance Cut	\$ 284.79	per station	@	7.2 stations	=	\$ 2,050.00
Landing Construction	\$ 446.47	per landing	@	1 landings	=	\$ 446.00
Subgrade preparation	\$ 51.82	per station	@	7.2 stations	=	\$ 374.00
Subtotal Construction Cost						\$ 3,879.00
<u>Construction Cost per Station</u>						<u>\$ 539</u>

Road Spur 1b (Stationing 0+00 to 5+00)

				<u>Quantity</u>		<u>Sub total</u>
Clearing and Grubbing	\$140.19	per station	@	5.0 stations	=	\$ 701.00
note: Clearing debris may be scattered on slopes less than 50 percent						
<u>Balance/Standard Subgrade construction</u>						
Drift/Balance Cut	\$ 252.11	per station	@	5.0 stations	=	\$ 1,261.00
Landing Construction	\$ 446.47	per landing	@	1 landings	=	\$ 446.00
Subgrade preparation	\$ 51.82	per station	@	5.0 stations	=	\$ 260.00
Subtotal Construction Cost						\$ 2,668.00
<u>Construction Cost per Station</u>						<u>\$ 534</u>

Road 17-7-9 Rd (Stationing 0+00 to 86+70)

Grading, Ditches, Inlets and outlets.	\$ 42.74	per station	@	86.7 stations	=	\$ 3,706.00
Equipment move in Costs:						\$ 4,500.00
Total Subgrade Construction Cost for Roads:						\$ 35,195.00

State Timber Sale Contract
Iron Mountain
WL-341-2019-W00579-01

Culvert Installation Costing

Summary:

Total pipe install cost	\$ 7,980.00
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Culvert List: Spur 1

Culvert No.	Purpose	Location	Diameter (in)	Length (ft)	Material Type	Gauge	Material		Installation	Sub Total
							Culvert Cost	Couplers		
1	Cross Drain	0+00	18	40	ACSP	16	\$ 610.00	\$ 30.00	\$ 640.00	\$ 1,280.00
2	Cross Drain	3+00	18	40	ACSP	16	\$ 610.00	\$ 30.00	\$ 640.00	\$ 1,280.00
3	Cross Drain	6+50	18	40	ACSP	16	\$ 610.00	\$ 30.00	\$ 640.00	\$ 1,280.00
4	Cross Drain	15+00	18	40	ACSP	16	\$ 610.00	\$ 30.00	\$ 640.00	\$ 1,280.00
5	Cross Drain	19+00	18	40	ACSP	16	\$ 610.00	\$ 30.00	\$ 640.00	\$ 1,280.00
							Pipe transport and delivery			\$ 300.00
									Total	\$ 6,700.00

Culvert List: Spur 1a

Culvert No.	Purpose	Location	Diameter (in)	Length (ft)	Material Type	Gauge	Material		Installation	Sub Total
							Culvert Cost	Couplers		
1	Cross Drain	0+00	18	40	ACSP	16	\$ 610.00	\$ 30.00	\$ 640.00	\$ 1,280.00

State Timber Sale Contract
Iron Mountain
WL-341-2019-W00579-01

Rock and Processing Costing

Summary:

Total Rocking Cost	\$	57,549.00
Quantity of loose truck aggregate. Cu. Yds.		2000.00

Road Spur 1 (Stationing 0+00 to 20+80)

Segment 0+00 to 20+80

Purpose	Location		Type	Loose Truck		Quantity per Station		Cost		Processing	Subtotal
Base	0+00	to 20+80	3"-0"	690	Cu. Yds.	@ 33	Cu. Yds. / sta	\$ 25.09	+	\$ 2.00 per Cu. Yds.	\$ 18,693.00
Cap	0+00	to 20+80	3/4"-0"	350	Cu. Yds.	@ 17	Cu. Yds. / sta	\$ 25.69	+	\$ 2.00 per Cu. Yds.	\$ 9,692.00
Landing		20+80	Jaw Run	40	Cu. Yds.			\$ 25.09	+	\$ 2.00 per Cu. Yds.	\$ 1,084.00
Curve Widening	Determined by STATE		3"-0"	50	Cu. Yds.			\$ 25.09	+	\$ 2.00 per Cu. Yds.	\$ 1,355.00
Turnout		10+29	3"-0"	10	Cu. Yds.			\$ 25.09	+	\$ 2.00 per Cu. Yds.	\$ 271.00
Turnout		16+60	3"-0"	10	Cu. Yds.	@ 10	Cu. Yds/Spot	\$ 25.09	+	\$ 2.00 per Cu. Yds.	\$ 271.00
Turnaround		19+30	3"-0"	10	Cu. Yds.	@ 10	Cu. Yds/Spot	\$ 25.09	+	\$ 2.00 per Cu. Yds.	\$ 271.00
Energy dissipator		At culvert outlets	Pit Run	50	Cu. Yds.			\$ 47.66	+	\$ 2.00 per Cu. Yds.	\$ 2,483.00
Subtotal Rock Cost										\$	34,120.00

Road Spur 1a (Stationing 0+00 to 7+20)

Segment 0+00 to 7+20

Purpose	Location			Type	Loose Truck		Quantity per Station			Cost		Processing		Subtotal
Base	0+00	to	5+00	3"-0"	170	Cu. Yds.	@	33	Cu. Yds. / sta	\$	25.09	+	\$ 2.00 per Cu. Yds.	\$ 4,606.00
Base	5+00	to	7+20	3"-0"	100	Cu. Yds.	@	44	Cu. Yds. / sta	\$	25.09	+	\$ 2.00 per Cu. Yds.	\$ 2,709.00
Cap	0+00	to	5+00	3/4"-0"	90	Cu. Yds.	@	17	Cu. Yds. / sta	\$	25.69	+	\$ 2.00 per Cu. Yds.	\$ 2,493.00
Landing	7+20			Jaw Run	60	Cu. Yds.				\$	25.09	+	\$ 2.00 per Cu. Yds.	\$ 1,626.00
Curve Widening	Determined by STATE			3"-0"	20	Cu. Yds.				\$	25.09	+	\$ 2.00 per Cu. Yds.	\$ 542.00
Turnout/Turnaround	Between 5+00 to 7+20			3"-0"	20	Cu. Yds.	@	10	Cu. Yds/Spot	\$	25.09	+	\$ 2.00 per Cu. Yds.	\$ 542.00
Subtotal Rock Cost														\$ 12,518.00

Road Spur 1b (Stationing 0+00 to 5+00)

Segment 0+00 to 5+00

Purpose	Location		Type	Loose Truck		Quantity per Station			Cost		Processing		Subtotal
Base	0+00	to 3+00	3"-0"	100	Cu. Yds.	@ 33	Cu. Yds. / sta	\$ 25.09	+	\$ 2.00	per Cu. Yds.	\$ 2,709.00	
Base	3+00	to 5+00	3"-0"	90	Cu. Yds.	@ 44	Cu. Yds. / sta	\$ 25.09	+	\$ 2.00	per Cu. Yds.	\$ 2,439.00	
Cap	3+00	to 5+00	3/4"-0"	50	Cu. Yds.	@ 17	Cu. Yds. / sta	\$ 25.69	+	\$ 2.00	per Cu. Yds.	\$ 1,385.00	
Landing	5+00		Jaw Run	60	Cu. Yds.			\$ 25.09	+	\$ 2.00	per Cu. Yds.	\$ 1,626.00	
Curve Widening	Determined by STATE		3"-0"	20	Cu. Yds.			\$ 25.09	+	\$ 2.00	per Cu. Yds.	\$ 542.00	
Turnout/Turnaround	Between 3+00 to 5+00		3"-0"	10	Cu. Yds.	@ 10	Cu. Yds/Spot	\$ 25.09	+	\$ 2.00	per Cu. Yds.	\$ 271.00	
Subtotal Rock Cost												\$ 8,972.00	

Road 17-7-9 Rd (Stationing 0+00 to 86+70)

Segment 0+00 to 86+70

Purpose	Location		Type	Loose Truck		Quantity per Station		Cost		Processing	Subtotal
Spot Rock	Determined by STATE		1 1/2"-0"	70	Cu. Yds.	@ 10	Cu. Yds. / sta	\$ 25.69	+	\$ 2.00 per Cu. Yds.	\$ 1,939.00
Turnout		85+60	3"-0"	20	Cu. Yds.	@ 10	Cu. Yds. / sta	\$ 25.09	+	\$ 2.00 per Cu. Yds.	\$ 542.00
Subtotal Rock Cost										\$	1,939.00

State Timber Sale Contract
 WL-341-2019-W00579-01
 Iron Mountain

Final Road Maintenance Cost Summary

Totals	Spur 1	Spur 1a	Spur 1b	17-7-9	TOTAL
Stations	20.80	7.20	5.00	87.00	
Cost/Sta	\$ 118.22	\$ 199.82	\$ 271.35	\$ 66.76	
Total Cost	2459	1439	1357	5808	\$ 11,063

Spot Rocking	Spur 1	Spur 1a	Spur 1b	17-7-9	TOTAL
Total Yds	50	30	30	100	
Rock Size	1 1/2"-0"	1 1/2"-0"	1 1/2"-0"	1 1/2"-0"	
\$/yd	\$25.69	\$25.69	\$25.69	\$25.69	
Subtotal	\$ 1,284	\$ 771	\$ 771	\$ 2,569	\$ 5,395

Grade,Shape & Pull Ditches	Spur 1	Spur 1a	Spur 1b	17-7-9	TOTAL
Stations	20.80	7.20	5.00	87.00	
\$/STA	\$ 37.24	\$ 37.24	\$ 37.24	\$ 37.24	
Subtotal	\$ 775	\$ 268	\$ 186	\$ 3,240	\$ 4,469

Landing clean up	Spur 1	Spur 1a	Spur 1b	17-7-9	TOTAL
Stations	1.00	1.00	1.00		
\$/STA	\$ 400.00	\$ 400.00	\$ 400.00		
Subtotal	\$ 400	\$ 400	\$ 400	\$ -	\$ 1,200

Move In	Initial
Grader	\$ 500
Vibratory Rolloer	
D * Cat	
Excavator	\$1,500
Dump Truck	

Move in costs associated with one entry for the entire project

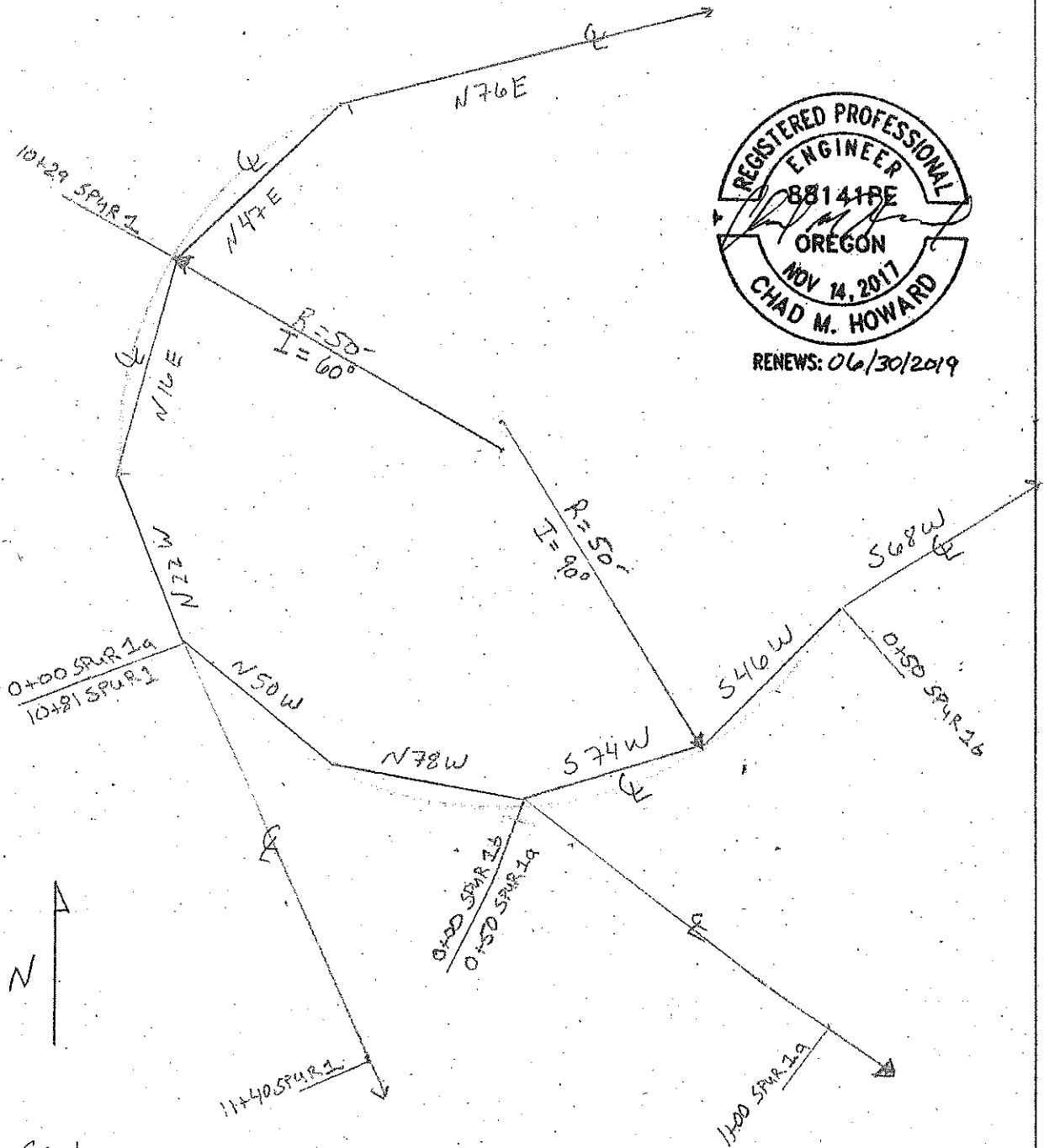
Total Final Maintenance Costs **\$ 13,063**

IRON MOUNTAIN

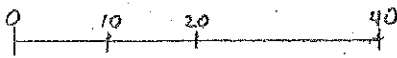
WL-341-2019-W00579-01

BY CHAD HOWARD P.E.

PLAN DRAWING



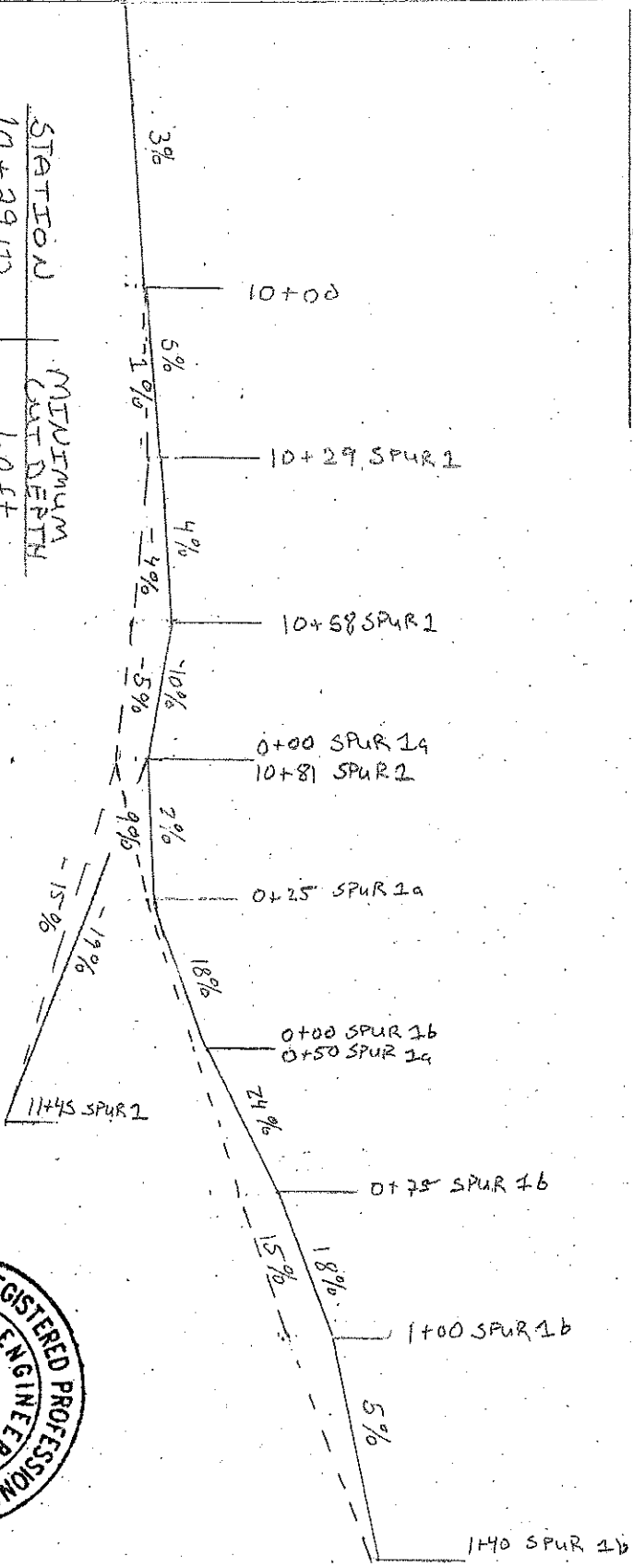
Scale



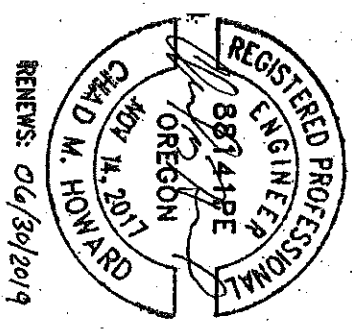
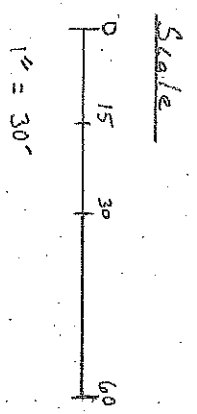
1" = 20'

IRON MOUNTAIN
 WL-341-2019-W00579-01
 BY: CHAD HOWARD PE
 PROFILE DRAWING

STATION	MINIMUM CUT DEPTH
10+29 (L)	1.0 ft
10+58 (R)	3.75 ft
10+81 (L)	2.0 ft
0+25 (L)	0.75 ft
0+50 (L/2)	1.5 ft
0+75 (L)	3.75 ft
1+00 (L)	4.5 ft
1+40 (L)	0.5 ft



LEGEND
 — EXISTING GRADE
 - - FINISHED GRADE



RENEW: 06/30/2019

Cruise Report

Iron Mountain

SALE # 341-2019-W00579

Sale Area: Portions of Section 10, T17S, R7W, W.M., Lane County, Oregon. The sale's net harvestable acres are 76. There are approximately 5 acres of stream buffers and roads. Acres were determined using a combination of aerial photos, GPS, GIS, and topographic maps.

Stand Description: Iron Mountain is dominated by 81 year old Douglas-fir. A small component of Bigleaf maple, western hemlock, western red cedar and Red alder are present. The majority of the hardwood component is concentrated near the draws. The understory consists of primarily sword fern, salal, Oregon grape, salmonberry, oxalis, and vine maple. The slopes are primarily 65% and above throughout the unit. There are three streams located in the timber sale area, one small type N in the Northern portion of the unit, one small type N in the NW portion of the unit, and one small type N that runs through the SW portion of the unit. This unit was appraised for cable based operations.

Cruise Method: Cut-out data from the Wildcat and Aha Pataha Timber Sales were used for grade volume percentage. Cut-out data from the South Chicken Timber Sale was used for total MBF and MBF/acre volume.

Volume Tables: Volumes were computed using the SuperACE program.

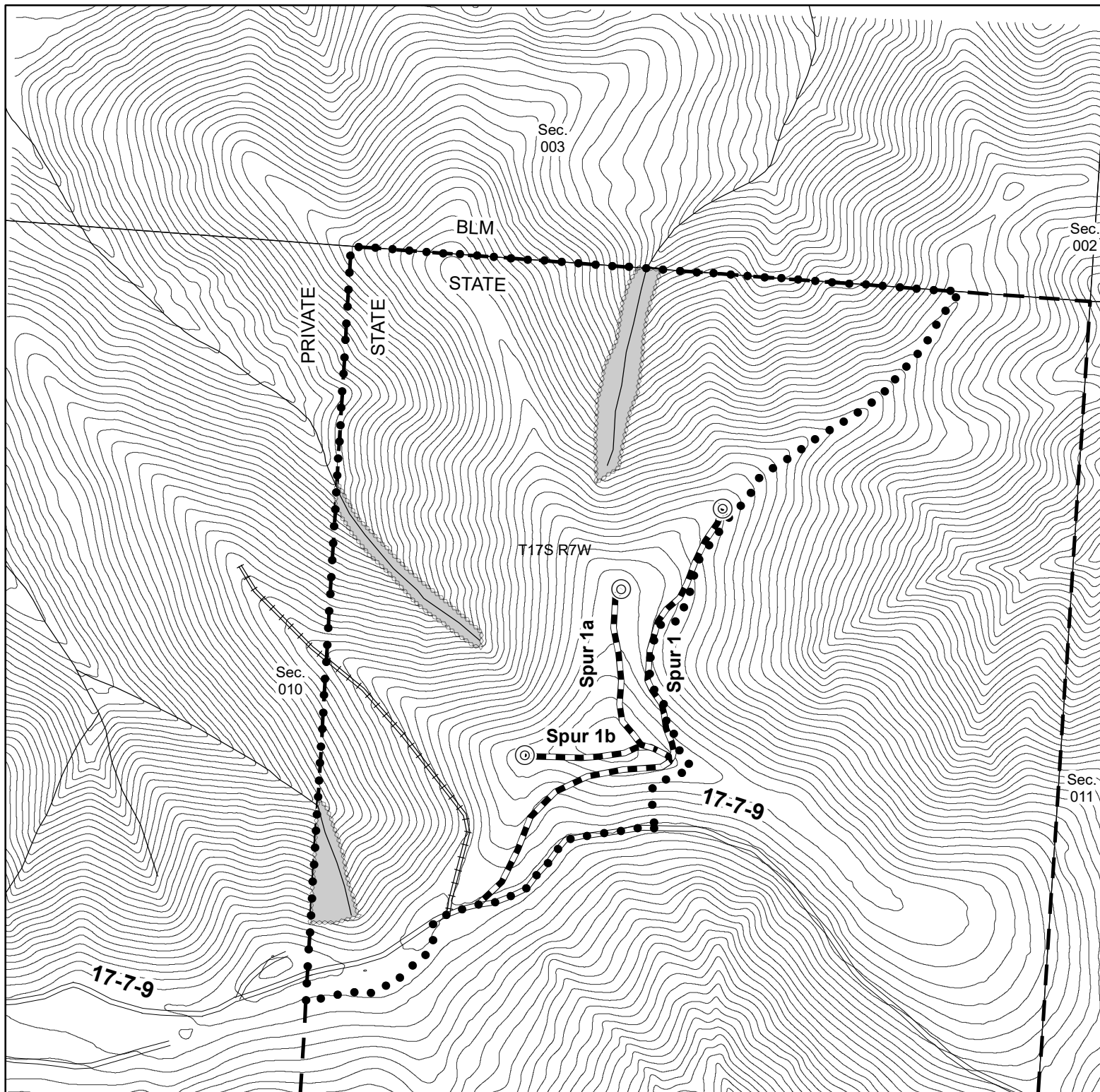
Area 1 Net Cruised Volume (MBF)

Species	Avg. DBH	Special Mill	2 Saw	3 Saw	4 Saw	Camp Run	Sub-Total
Douglas-fir	18		2904	745	75		3724
Big leaf maple	14					25	25

**Total
(MBF): 3749**

Note: A breakage and defect was applied to the volume in the appraisal.

Average MBF/Acre: 49



Logging Map

OF TIMBER SALE CONTRACT NO. 341-19-W00781
IRON MOUNTAIN
PORTIONS OF SECTION 10, T17S, R7W, W.M.
LANE COUNTY, OREGON

0 250 500 1,000
Feet

1 inch = 500 feet

This product is for informational use
and may not have been prepared
for or be suitable for legal, engineering
or surveying purposes. Users of this information should
review or consult the primary data and information
sources to ascertain the usability of this information.



Yarding
Ground base = 7%
Cable = 93%
Contours = 20ft



"STEWARDSHIP IN FORESTRY"

Legend

- Timber Sale Boundary
- ODF Ownership
- Surfaced road
- Old road bed - not driveable
- New Construct
- Nonfish
- Stream Buffer
- Landing to Construct