

TABLE 3.1-5

SUITABLE GROWTH MATERIAL BALANCE BY LANDOWNER - LIFE OF MINE

Surface Land Ownership	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Gary & Barbara Medune	Area (acres)																				
	Required SPGM (cy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Required SPGM Thickness (ft)																				
	Total SPGM Removal Requirement (+10%)																				
	Lift 1 Salvage Soil (cy)																				
	Lift 1 Salvage Soil Thickness (ft)																				
	Lift 2 Salvage Soil (cy)																				
	Lift 2 Salvage Soil Thickness (ft)																				
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Excess (Deficit) Required Subsoil (cy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Excess (Deficit) Required Subsoil/Suitable Material																					
Available Suitable Overburden (cy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Available Suitable Overburden Thickness (ft)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Excess (deficit) Available of Suitable Material (cy)																					
James & Lisa Wagner	Area (acres)																1.59	1.39	1.34	1.29	
	Required SPGM (cy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,664.29	6,278.07	6,474.22	6,934.91	
	Required SPGM Thickness (ft)																2.72	2.55	2.73	3.03	
	Total SPGM Removal Requirement (+10%)																				
	Lift 1 Salvage Soil (cy)																1,148.75	598.04	1,021.65	1,013.22	
	Lift 1 Salvage Soil Thickness (ft)																0.45	0.27	0.47	0.49	
	Lift 2 Salvage Soil (cy)																4,168.76	5,940.38	5,411.68	1,013.61	
	Lift 2 Salvage Soil Thickness (ft)																1.63	2.65	2.51	0.49	
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,317.51	6,538.42	6,433.32	2,026.83	
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.08	2.92	2.98	0.97	
Excess (Deficit) Required Subsoil (cy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(2,346.78)	260.34	(40.90)	(4,908.08)		
Excess (Deficit) Required Subsoil/Suitable Material																					
Available Suitable Overburden (cy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,091.42	2,661.87	9,375.19	40,221.38		
Available Suitable Overburden Thickness (ft)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.95	0.35	0.75	2.85		
Excess (Deficit) Available of Suitable Material (cy)																					
James & Rosella Perdaens	Area (acres)	7.95	18.85	21.92	26.80	13.22		24.16	59.37					3.13	12.13	10.14					
	Required SPGM (cy)	38,415.50	97,053.53	141,572.35	189,096.59	72,589.60	-	-	94,534.76	257,832.86	-	-	-	-	16,735.20	73,626.21	53,219.01	-	-	-	-
	Required SPGM Thickness (ft)	2.72	2.90	3.64	3.98	3.09			2.21	2.45					3.01	3.42	2.96				
	Total SPGM Removal Requirement (+10%)																				
	Lift 1 Salvage Soil (cy)	11,618.55	22,901.86	21,469.54	34,646.00	13,588.46			27,517.75	57,632.46					2,746.31	10,432.98	7,992.28				
	Lift 1 Salvage Soil Thickness (ft)	0.91	0.75	0.61	0.80	0.64			0.71	0.60					0.54	0.53	0.49				
	Lift 2 Salvage Soil (cy)	19,126.29	48,635.48	73,797.09	96,980.71	53,353.05			76,468.49	233,992.88					12,827.97	47,153.44	35,824.78				
	Lift 2 Salvage Soil Thickness (ft)	1.49	1.60	2.09	2.24	2.50			1.96	2.41					2.54	2.41	2.19				
	Total Salvage SPGM (cy) Lift 1 and Lift 2	30,744.84	71,537.35	95,266.62	131,626.71	66,941.51	-	-	103,986.24	291,625.34	-	-	-	-	15,574.28	57,586.42	43,817.06	-	-	-	-
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	2.40	2.35	2.69	3.04	3.14	-	-	2.67	3.04	-	-	-	-	3.08	2.94	2.68	-	-	-	-
Excess (Deficit) Required Subsoil (cy)	(7,670.66)	(25,516.18)	(46,305.73)	(57,469.88)	(5,648.08)	-	-	9,451.49	33,792.48	-	-	-	-	(1,160.92)	(16,039.79)	(9,401.95)	-	-	-	-	
Excess (Deficit) Required Subsoil/Suitable Material																					
Available Suitable Overburden (cy)	151,986.18	652,455.12	434,840.97	190,211.80	271,259.26	-	-	1,110,385.49	2,938,078.78	-	-	-	-	58,517	66,528.47	128,978.92	-	-	-	-	
Available Suitable Overburden Thickness (ft)	13.46	3.18	1.84	1.46	2.74	-	-	4.14	4.07	-	-	-	-	1.48	0.87	1.51	-	-	-	-	
Excess (Deficit) Available of Suitable Material (cy)																					

TABLE 3.1-5

SUITABLE GROWTH MATERIAL BALANCE BY LANDOWNER - LIFE OF MINE

Surface Land Ownership		2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	Grand Total	
Gary & Barbara Medune	Area (acres)	0.35	0.33	0.40								1.08	
	Required SPGM (cy)	2,331.89	2,332.13	2,839.00	-	-	-	-	-	-	-	7,503.02	
	Required SPGM Thickness (ft)	3.71	4.01	4.01								3.91	
	Total SPGM Removal Requirement (+10%)											8,300.00	
	Lift 1 Salvage Soil (cy)	75.02	139.75	246.66								461.43	
	Lift 1 Salvage Soil Thickness (ft)	0.13	0.26	0.38								0.26	
	Lift 2 Salvage Soil (cy)	75.02	139.75	246.66								461.43	
	Lift 2 Salvage Soil Thickness (ft)	0.13	0.26	0.38								0.26	
	Total Salvage SPGM (cy) Lift 1 and Lift 2	150.03	279.50	493.32	-	-	-	-	-	-	-	922.85	
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	0.26	0.53	0.77	-	-	-	-	-	-	-	0.53	
	Excess (Deficit) Required Subsoil (cy)	(2,181.86)	(2,052.63)	(2,345.68)	-	-	-	-	-	-	-	-	(6,580.17)
	Excess (Deficit) Required Subsoil/Suitable Material												(7,000.00)
	Available Suitable Overburden (cy)	8,526.61	22,766.79	11,431.33	-	-	-	-	-	-	-	-	42,724.74
	Available Suitable Overburden Thickness (ft)	0.98	1.92	3.20	-	-	-	-	-	-	-	-	2.03
Excess (deficit) Available of Suitable Material (cy)												35,725	
James & Lisa Wagner	Area (acres)	0.35										5.96	
	Required SPGM (cy)	2,089.50	-	-	-	-	-	-	-	-	-	29,441.00	
	Required SPGM Thickness (ft)	3.38										2.88	
	Total SPGM Removal Requirement (+10%)											32,400.00	
	Lift 1 Salvage Soil (cy)	262.41										4,044.06	
	Lift 1 Salvage Soil Thickness (ft)	0.47										0.43	
	Lift 2 Salvage Soil (cy)	262.41										16,796.84	
	Lift 2 Salvage Soil Thickness (ft)	0.47										1.55	
	Total Salvage SPGM (cy) Lift 1 and Lift 2	524.82	-	-	-	-	-	-	-	-	-	20,840.90	
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	0.93	-	-	-	-	-	-	-	-	-	2.17	
	Excess (Deficit) Required Subsoil (cy)	(1,564.68)	-	-	-	-	-	-	-	-	-	-	(8,600.10)
	Excess (Deficit) Required Subsoil/Suitable Material												(12,000.00)
	Available Suitable Overburden (cy)	8,652.44	-	-	-	-	-	-	-	-	-	-	74,002.30
	Available Suitable Overburden Thickness (ft)	2.19	-	-	-	-	-	-	-	-	-	-	1.42
Excess (Deficit) Available of Suitable Material (cy)												62,002	
James & Rosella Perdaems	Area (acres)							4.43	94.34	64.34		360.79	
	Required SPGM (cy)	-	-	-	-	-	-	25,516.44	660,657.28	390,924.65	-	2,111,773.97	
	Required SPGM Thickness (ft)							3.24	3.95	3.42		3.15	
	Total SPGM Removal Requirement (+10%)											2,323,000.00	
	Lift 1 Salvage Soil (cy)							5,094.30	85,499.76	90,974.67		392,114.93	
	Lift 1 Salvage Soil Thickness (ft)							0.71	0.56	0.88		0.67	
	Lift 2 Salvage Soil (cy)							18,071.10	271,700.32	203,174.86		1,191,106.46	
	Lift 2 Salvage Soil Thickness (ft)							2.53	1.79	1.96		2.13	
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	-	-	-	-	23,165.40	357,200.08	294,149.54	-	1,583,221.39	
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	-	-	-	-	3.24	2.35	2.83	-	2.72	
	Excess (Deficit) Required Subsoil (cy)	-	-	-	-	-	-	(2,351.04)	(303,457.20)	(96,775.12)	-	(528,552.58)	
	Excess (Deficit) Required Subsoil/Suitable Material											(740,000.00)	
	Available Suitable Overburden (cy)	-	-	-	-	-	-	38,762.43	333,708.28	624,045.83	-	6,999,758.20	
	Available Suitable Overburden Thickness (ft)	-	-	-	-	-	-	0.92	0.65	1.79	-	2.03	
Excess (Deficit) Available of Suitable Material (cy)												6,259,758	

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Surface Land Ownership	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Jerry & Sandra Perdaems	Area (acres)		12.26	59.20	28.07	0.61														
	Required SPGM (cy)	-	64,663.22	320,676.64	179,124.12	4,344.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Required SPGM Thickness (ft)		2.97	3.05	3.60	3.99														
	Total SPGM Removal Requirement (+10%)																			
	Lift 1 Salvage Soil (cy)		10,924.45	51,433.71	25,190.17	236.68														
	Lift 1 Salvage Soil Thickness (ft)		0.55	0.54	0.56	0.24														
	Lift 2 Salvage Soil (cy)		25,667.46	166,375.54	81,449.11	2,119.95														
	Lift 2 Salvage Soil Thickness (ft)		1.30	1.74	1.80	2.14														
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	36,591.90	217,809.25	106,639.28	2,356.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	1.85	2.28	2.35	2.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Excess (Deficit) Required Subsoil (cy)	-	(28,071.32)	(102,867.39)	(72,484.84)	(1,987.65)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Excess (Deficit) Required Subsoil/Suitable Material																				
Available Suitable Overburden (cy)	-	446,239.12	2,148,344.87	471,431.28	33,670.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Available Suitable Overburden Thickness (ft)	-	3.42	3.50	2.12	4.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Excess (Deficit) Available of Suitable Material (cy)																				
John Buckman	Area (acres)								4.17	0.36										
	Required SPGM (cy)	-	-	-	-	-	-	-	22,171.24	1,978.73	-	-	-	-	-	-	-	-	-	
	Required SPGM Thickness (ft)								3.00	3.07										
	Total SPGM Removal Requirement (+10%)																			
	Lift 1 Salvage Soil (cy)								2,598.76	337.00										
	Lift 1 Salvage Soil Thickness (ft)								0.39	0.57										
	Lift 2 Salvage Soil (cy)								20,382.32	2,311.29										
	Lift 2 Salvage Soil Thickness (ft)								2.83	3.94										
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	-	-	-	-	-	22,981.08	2,648.30	-	-	-	-	-	-	-	-	-	
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	-	-	-	-	-	3.42	4.52	-	-	-	-	-	-	-	-	-	
Excess (Deficit) Required Subsoil (cy)	-	-	-	-	-	-	-	809.84	669.56	-	-	-	-	-	-	-	-	-		
Excess (Deficit) Required Subsoil/Suitable Material																				
Available Suitable Overburden (cy)	-	-	-	-	-	-	-	190,447.60	9,148.40	-	-	-	-	-	-	-	-	-		
Available Suitable Overburden Thickness (ft)	-	-	-	-	-	-	-	3.79	2.10	-	-	-	-	-	-	-	-	-		
Excess (Deficit) Available of Suitable Material (cy)																				
Mary Louise Peters et Al	Area (acres)								24.82	87.60	87.21	83.75	84.72	86.28	79.70	80.11	77.12	80.19	77.93	73.68
	Required SPGM (cy)	-	-	-	-	-	-	-	125,271.59	531,441.73	614,587.86	594,554.07	550,644.86	472,764.10	516,767.99	515,305.42	482,548.14	526,919.47	522,301.17	488,740.73
	Required SPGM Thickness (ft)								2.84	3.42	3.97	4.00	3.66	3.09	3.65	3.62	3.53	3.70	3.78	3.74
	Total SPGM Removal Requirement (+10%)																			
	Lift 1 Salvage Soil (cy)								39,689.76	83,926.16	78,592.49	91,018.46	116,239.97	128,595.01	83,760.73	86,287.94	85,587.87	85,579.59	76,410.38	76,397.24
	Lift 1 Salvage Soil Thickness (ft)								0.99	0.59	0.56	0.67	0.85	0.92	0.65	0.67	0.69	0.66	0.61	0.64
	Lift 2 Salvage Soil (cy)								130,214.39	377,065.36	326,124.27	237,291.22	285,302.35	396,040.02	294,920.48	284,376.75	287,541.58	270,162.97	209,833.87	199,250.68
	Lift 2 Salvage Soil Thickness (ft)								3.25	2.67	2.32	1.76	2.09	2.85	2.29	2.20	2.31	2.09	1.67	
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	-	-	-	-	-	169,904.15	460,991.52	404,716.76	328,309.68	401,542.32	524,635.03	378,681.20	370,664.69	373,129.45	355,742.56	286,244.26	275,647.92
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	-	-	-	-	-	4.24	3.26	2.88	2.43	2.94	3.77	2.94	2.87	3.00	2.75	2.28	
Excess (Deficit) Required Subsoil (cy)	-	-	-	-	-	-	-	44,632.56	(70,450.21)	(209,871.11)	(266,244.39)	(149,102.54)	51,870.93	(138,086.79)	(144,640.73)	(109,418.69)	(171,176.91)	(236,056.91)	(213,092.81)	
Excess (Deficit) Required Subsoil/Suitable Material																				
Available Suitable Overburden (cy)	-	-	-	-	-	-	-	1,144,266.80	5,414,998.44	3,116,250.06	2,347,111.61	563,879	1,262,000	1,177,292.69	864,048.03	589,543.45	396,601.53	1,394,606.76	2,064,879.29	
Available Suitable Overburden Thickness (ft)	-	-	-	-	-	-	-	4.80	5.22	4.42	3.81	0.96	1.51	2.27	2.18	2.75	2.69	3.99	4.85	
Excess (Deficit) Available of Suitable Material (cy)																				

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SUITABLE GROWTH MATERIAL BALANCE BY LANDOWNER - LIFE OF MINE

Surface Land Ownership		2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	Grand Total
Jerry & Sandra Perdaems	Area (acres)							0.08				100.23
	Required SPGM (cy)	-	-	-	-	-	-	301.00	-	-	-	569,109.26
	Required SPGM Thickness (ft)							2.00				3.12
	Total SPGM Removal Requirement (+10%)											626,000.00
	Lift 1 Salvage Soil (cy)							30.32				87,815.32
	Lift 1 Salvage Soil Thickness (ft)							0.22				0.42
	Lift 2 Salvage Soil (cy)							98.63				275,710.69
	Lift 2 Salvage Soil Thickness (ft)							0.72				1.54
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	-	-	-	-	128.95	-	-	-	363,526.01
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	-	-	-	-	0.94	-	-	-	2.25
	Excess (Deficit) Required Subsoil (cy)	-	-	-	-	-	-	(172.05)	-	-	-	(205,583.25)
	Excess (Deficit) Required Subsoil/Suitable Material											(262,000.00)
	Available Suitable Overburden (cy)	-	-	-	-	-	-	-	-	-	-	3,099,685.89
Available Suitable Overburden Thickness (ft)	-	-	-	-	-	-	-	-	-	-	3.01	
Excess (Deficit) Available of Suitable Material (cy)											2,837,686	
John Buckman	Area (acres)											4.53
	Required SPGM (cy)	-	-	-	-	-	-	-	-	-	-	24,149.98
	Required SPGM Thickness (ft)											3.03
	Total SPGM Removal Requirement (+10%)											26,600.00
	Lift 1 Salvage Soil (cy)											2,935.77
	Lift 1 Salvage Soil Thickness (ft)											0.48
	Lift 2 Salvage Soil (cy)											22,693.61
	Lift 2 Salvage Soil Thickness (ft)											3.38
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	-	-	-	-	-	-	-	-	25,629.38
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	-	-	-	-	-	-	-	-	3.50
	Excess (Deficit) Required Subsoil (cy)	-	-	-	-	-	-	-	-	-	-	1,479.40
	Excess (Deficit) Required Subsoil/Suitable Material											(1,000.00)
	Available Suitable Overburden (cy)	-	-	-	-	-	-	-	-	-	-	199,596.01
Available Suitable Overburden Thickness (ft)	-	-	-	-	-	-	-	-	-	-	2.94	
Excess (Deficit) Available of Suitable Material (cy)											198,596	
Mary Louise Peters et Al	Area (acres)	34.51	31.23	13.02	0.02							1,001.90
	Required SPGM (cy)	232,087.47	221,481.29	92,421.33	124.28	-	-	-	-	-	-	6,487,961.50
	Required SPGM Thickness (ft)	3.79	4.00	4.00	4.00							3.67
	Total SPGM Removal Requirement (+10%)											7,136,800.00
	Lift 1 Salvage Soil (cy)	33,003.28	31,077.17	15,444.62	15.80							1,111,626.49
	Lift 1 Salvage Soil Thickness (ft)	0.59	0.62	0.74	0.56							0.69
	Lift 2 Salvage Soil (cy)	73,392.78	70,068.76	32,910.29	80.29							3,474,576.04
	Lift 2 Salvage Soil Thickness (ft)	1.32	1.39	1.57	2.84							2.14
	Total Salvage SPGM (cy) Lift 1 and Lift 2	106,396.06	101,145.92	48,354.91	96.09	-	-	-	-	-	-	4,586,202.53
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	1.91	2.01	2.30	3.40	-	-	-	-	-	-	2.84
	Excess (Deficit) Required Subsoil (cy)	(125,691.40)	(120,335.37)	(44,066.42)	(28.18)	-	-	-	-	-	-	(1,901,758.97)
	Excess (Deficit) Required Subsoil/Suitable Material											(2,551,000.00)
	Available Suitable Overburden (cy)	1,627,837.56	1,826,499.40	699,423.21	96.62	-	-	-	-	-	-	24,489,333.83
Available Suitable Overburden Thickness (ft)	5.84	4.97	5.39	0.86	-	-	-	-	-	-	3.65	
Excess (Deficit) Available of Suitable Material (cy)											21,938,334	

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Surface Land Ownership	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Patrick & Katherine Kuylen	Area (acres)		13.62	12.54	3.00																
	Required SPGM (cy)	-	72,149.19	66,745.51	15,960.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Required SPGM Thickness (ft)		2.99	3.00	3.00																
	Total SPGM Removal Requirement (+10%)																				
	Lift 1 Salvage Soil (cy)		12,595.83	11,616.44	2,144.00																
	Lift 1 Salvage Soil Thickness (ft)		0.57	0.57	0.44																
	Lift 2 Salvage Soil (cy)		17,867.87	15,398.12	3,482.06																
	Lift 2 Salvage Soil Thickness (ft)		0.81	0.76	0.72																
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	30,463.70	27,014.56	5,626.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	1.39	1.34	1.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Excess (Deficit) Required Subsoil (cy)	-	(41,685.49)	(39,730.95)	(10,334.55)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Excess (Deficit) Required Subsoil/Suitable Material																					
Available Suitable Overburden (cy)	-	347,619.48	121,134.60	237.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Available Suitable Overburden Thickness (ft)	-	2.70	2.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Excess (Deficit) Available of Suitable Material (cy)																					
Robert & Brenda Kuylen	Area (acres)			1.07	37.32	83.32	90.45	95.20	71.57							0.89	13.22	10.51	10.46	10.41	
	Required SPGM (cy)	-	-	5,703.65	221,906.47	527,512.12	584,227.19	549,380.81	413,009.30	-	-	-	-	-	-	-	3,859.23	50,929.61	41,993.65	43,500.80	42,510.85
	Required SPGM Thickness (ft)			3.00	3.35	3.57	3.64	3.25	3.25								2.43	2.17	2.25	2.34	2.30
	Total SPGM Removal Requirement (+10%)																				
	Lift 1 Salvage Soil (cy)			750.48	30,721.07	72,946.33	77,971.71	76,522.33	53,903.17								703.82	12,560.59	9,847.88	9,720.43	10,101.38
	Lift 1 Salvage Soil Thickness (ft)			0.43	0.51	0.54	0.53	0.50	0.47								0.49	0.59	0.58	0.58	0.60
	Lift 2 Salvage Soil (cy)			1,468.75	85,034.05	198,669.45	220,640.39	259,274.73	133,704.11								3,181.24	44,547.46	36,865.73	40,123.15	38,942.55
	Lift 2 Salvage Soil Thickness (ft)			0.85	1.41	1.48	1.51	1.69	1.04								2.20	2.09	2.17	2.38	2.32
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	2,219.23	115,755.11	271,615.78	298,612.10	335,797.06	187,607.28	-	-	-	-	-	-	-	3,885.06	57,108.04	46,713.61	49,843.58	49,043.93
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	1.28	1.92	2.02	2.05	2.19	1.62	-	-	-	-	-	-	-	2.69	2.68	2.75	2.95	2.92
Excess (Deficit) Required Subsoil (cy)	-	-	(3,484.42)	(106,151.36)	(255,896.35)	(285,615.10)	(213,583.76)	(225,402.01)	-	-	-	-	-	-	-	25.83	6,178.44	4,719.96	6,342.78	6,533.08	
Excess (Deficit) Required Subsoil/Suitable Material																					
Available Suitable Overburden (cy)	-	-	37,769.94	567,613.52	1,883,803.08	1,910,816.95	4,744,228.07	5,821,224.65	-	-	-	-	-	-	-	25,866.30	466,953.54	278,336.50	244,549.60	238,883.29	
Available Suitable Overburden Thickness (ft)	-	-	2.73	3.07	4.30	3.19	7.01	9.32	-	-	-	-	-	-	-	2.83	3.18	2.22	1.94	1.97	
Excess (Deficit) Available of Suitable Material (cy)																					
Total	Sum of Area (acres)	7.95	44.73	94.72	95.19	97.15	90.45	95.20	95.73	88.37	87.97	87.21	83.75	84.72	89.41	91.83	91.15	91.93	92.09	89.73	85.38
	Sum of Required Suitable SPGM (cy)	38,416	233,866	534,698	606,088	604,446	584,227	549,381	507,544	405,276	533,420	614,588	594,554	550,645	489,499	590,394	572,384	541,142	575,191	572,276	538,186
	Thickness Required Suitable Material (ft)	2.72	2.95	3.18	3.59	3.51	3.64	3.25	2.99	2.58	3.42	3.97	4.00	3.66	3.08	3.62	3.54	3.32	3.52	3.59	3.55
	Sum of Available Salvage SPGM (cy)	30,745	138,593	342,310	359,647	340,914	298,612	335,797	291,594	484,511	463,640	404,717	328,310	401,542	540,209	436,268	418,367	435,555	408,995	342,521	326,719
	Available Salvage SPGM Thickness (ft)	2.40	1.92	2.24	2.34	2.18	2.05	2.19	1.89	3.40	3.27	2.88	2.43	2.94	3.74	2.94	2.84	2.94	2.75	2.37	2.37
	Sum of Available Suitable Overburden (cy)	151,986	1,446,314	2,742,090	1,229,495	2,188,733	1,910,817	4,744,228	6,931,610	4,272,793	5,424,147	3,116,250	2,347,112	563,879	1,320,516	1,243,821	1,018,893	1,069,588	677,600	1,648,532	2,343,984

NOTE: Reference Figure 1.3-2 for Surface Land Ownership Parcel Map

TABLE 3.1-5

SUITABLE GROWTH MATERIAL BALANCE BY LANDOWNER - LIFE OF MINE

Surface Land Ownership		2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	Grand Total
Patrick & Katherine Kuylen	Area (acres)					19.57	113.78	106.94				269.43
	Required SPGM (cy)	-	-	-	-	103,091.80	726,985.14	655,013.58	-	-	-	1,639,945.83
	Required SPGM Thickness (ft)					2.97	3.60	3.45				3.17
	Total SPGM Removal Requirement (+10%)											1,803,900.00
	Lift 1 Salvage Soil (cy)					14,390.00	92,059.33	113,468.56				246,274.17
	Lift 1 Salvage Soil Thickness (ft)					0.46	0.50	0.66				0.53
	Lift 2 Salvage Soil (cy)					31,308.43	215,440.36	265,928.79				549,425.63
	Lift 2 Salvage Soil Thickness (ft)					0.97	1.12	1.54				0.99
	Total Salvage SPGM (cy) Lift 1 and Lift 2	-	-	-	-	45,698.43	307,499.70	379,397.35	-	-	-	795,699.80
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	-	-	-	-	1.45	1.68	2.20	-	-	-	1.83
	Excess (Deficit) Required Subsoil (cy)	-	-	-	-	(57,393.38)	(419,485.44)	(275,616.23)	-	-	-	(844,246.03)
	Excess (Deficit) Required Subsoil/Suitable Material											(1,008,000.00)
	Available Suitable Overburden (cy)	-	-	-	-	276,210.21	332,722.77	2,097,494.88	-	-	-	3,175,419.93
Available Suitable Overburden Thickness (ft)	-	-	-	-	1.78	0.60	3.09	-	-	-	1.74	
Excess (Deficit) Available of Suitable Material (cy)											2,167,420	
Robert & Brenda Kuylen	Area (acres)	40.17	38.03	73.92	89.05	83.84				35.88	53.56	838.88
	Required SPGM (cy)	251,415.41	242,504.24	517,758.55	632,139.86	591,510.41	-	-	-	237,154.16	357,793.35	5,314,809.66
	Required SPGM Thickness (ft)	3.53	3.59	3.95	4.00	3.98				3.72	3.76	3.23
	Total SPGM Removal Requirement (+10%)											5,846,300.00
	Lift 1 Salvage Soil (cy)	29,097.49	21,566.23	45,898.97	61,792.73	82,288.08				36,797.27	55,180.23	688,370.19
	Lift 1 Salvage Soil Thickness (ft)	0.45	0.35	0.38	0.43	0.61				0.64	0.64	0.52
	Lift 2 Salvage Soil (cy)	91,630.15	64,684.20	105,588.77	130,587.58	217,338.58				115,233.59	181,063.91	1,968,578.37
	Lift 2 Salvage Soil Thickness (ft)	1.28	0.95	0.87	0.91	1.61				1.99	2.10	1.60
	Total Salvage SPGM (cy) Lift 1 and Lift 2	120,727.64	86,250.43	151,487.75	192,380.31	299,626.65	-	-	-	152,030.86	236,244.14	2,656,948.56
	Total Salvage SPGM Thickness (ft) Lift 1 and Lift 2	1.86	1.41	1.27	1.34	2.22	-	-	-	2.63	2.73	1.96
	Excess (Deficit) Required Subsoil (cy)	(130,687.77)	(156,253.81)	(366,270.80)	(439,759.55)	(291,883.76)	-	-	-	(85,123.30)	(121,549.21)	(2,657,861.10)
	Excess (Deficit) Required Subsoil/Suitable Material											(3,189,000.00)
	Available Suitable Overburden (cy)	630,429.27	781,182.95	517,310.19	371,000.77	613,079.75	-	-	-	309,813.28	614,282.10	20,057,143.75
Available Suitable Overburden Thickness (ft)	4.63	5.68	3.83	1.94	1.70	-	-	-	1.37	2.19	3.51	
Excess (Deficit) Available of Suitable Material (cy)											16,868,144	
Total	Sum of Area (acres)	75.38	69.58	87.34	89.06	103.40	113.78	111.45	94.34	100.22	53.56	2,582.80
	Sum of Required Suitable SPGM (cy)	487,924	466,318	613,019	632,264	694,602	726,985	680,831	660,657	628,079	357,793	16,184,694
	Thickness Required Suitable Material (ft)	3.65	3.78	3.96	4.00	3.79	3.60	3.44	3.95	3.53	3.76	3.53
	Sum of Available Salvage SPGM (cy)	227,799	187,676	200,336	192,476	345,325	307,500	402,692	357,200	446,180	236,244	10,032,991
	Available Salvage SPGM Thickness (ft)	1.87	1.67	1.42	1.34	2.07	1.68	2.24	2.35	2.76	2.73	2.41
	Sum of Available Suitable Overburden (cy)	2,275,446	2,630,449	1,228,165	371,097	889,290	332,723	2,136,257	333,708	933,859	614,282	58,137,665
Total Excess of Suitable Material (cy)											50,367,665	

NOTE: Reference Figure 1.3-2 for Surface Land Ownership Parcel Map