Site Name: 9TH EAST DEER CREEK BREAKOUT FINAL REC. DEC. '99 Exposure: V	Qualitative			Quantitative Cover				Quantitative % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
2000	AUG. 28–SEPT. 2	V	N	N	NOT SAMPLED				NOT SAMPLED				
2001	AUG. 31–SEPT. 1	V	N	N	26.00	14.00	30.50	29.50	11.52	59.38	29.10	–	–
2002	SEPT. 9–14	V	N	N	NOT SAMPLED				NOT SAMPLED				
2003	SEPT. 23	V	N	N	36.00	6.33	17.67	40.00	14.28	35.92	49.80	–	–

Site Name: PARKING LOT SLOPE '88 Exposure: E	Qualitative			Quantitative Cover				Quantitative % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	26°	N	S–M	29.50	8.00	8.50	54.00	6.11	70.11	23.78	–	–
2000	AUG. 28–SEPT. 2	26°	N	S–M	NOT SAMPLED				NOT SAMPLED				
2001	AUG. 31–SEPT. 1	26°	N	S–M	NOT SAMPLED				NOT SAMPLED				
2002	SEPT. 9–14	26°	N	S–M	NOT SAMPLED				NOT SAMPLED				
2003	OCT. 13–18	26°	N	S–M	NOT SAMPLED				NOT SAMPLED				

Site Name: ROAD/SILO PAD SLOPE '88 Exposure: SE	Qualitative			Quantitative Cover				Quantitative % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	35°	N	M	34.50	6.00	7.50	52.00	35.73	60.91	3.36	–	–
2000	AUG. 28–SEPT. 2	35°	N	M	NOT SAMPLED				NOT SAMPLED				
2001	AUG. 31–SEPT. 1	35°	N	M	NOT SAMPLED				NOT SAMPLED				
2002	SEPT. 9–14	35°	N	M	NOT SAMPLED				NOT SAMPLED				
2003	OCT. 13–18	35°	N	M	NOT SAMPLED				NOT SAMPLED				

Site Name: 4TH EAST ROAD '86 Exposure: N	Qualitative			Quantitative Cover				Quantitative % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	3–5°	N	N	68.00	17.00	7.00	8.00	0.00	29.99	70.01	–	–
2000	AUG. 28–SEPT. 2	3–5°	N	N	NOT SAMPLED				NOT SAMPLED				
2001	SEPT. 10	3–5°	N	N	NOT SAMPLED				NOT SAMPLED				

Site Name: TEST PLOTS '88 Exposure: E, S	Qualitative			Quantitative (8 Seperate Plots) Cover				Quantitative (8 Seperate Plots) % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	35°	N	S	REFER TO ANNUAL REPORT FOR COVER AND % COMPOSITION								
2000	AUG. 28–SEPT. 2	35°	N	S	REFER TO ANNUAL REPORT FOR COVER AND % COMPOSITION								
2001	AUG. 31–SEPT. 1	35°	N	S	REFER TO ANNUAL REPORT FOR COVER AND % COMPOSITION								
2002	SEPT. 9–14	35°	N	S	REFER TO ANNUAL REPORT FOR COVER AND % COMPOSITION								

Site Name: REFERENCE AREA Exposure: NE	Qualitative			Quantitative Cover				Quantitative % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	36°	S	N	31.67	12.00	5.67	50.67	29.75	8.67	61.58	–	–
2000	AUG. 28–SEPT. 2	36°	S	N	NOT SAMPLED				NOT SAMPLED				
2001	SEPT. 10	36°	S	N	NOT SAMPLED				NOT SAMPLED				
2002	SEPT. 9–14	36°	S	N	NOT SAMPLED				NOT SAMPLED				
2003	OCT. 13–18	V	N	N	NOT SAMPLED				NOT SAMPLED				

Site Name: STORAGE YARD SLOPE '88 Exposure: S & E	Qualitative			Quantitative Cover				Quantitative % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	30–40°	N	M	48.00	11.50	10.50	50.00	24.54	24.10	51.36	–	–
2000	AUG. 28–SEPT. 2	30–40°	N	M	NOT SAMPLED				NOT SAMPLED				
2001	AUG. 31–SEPT. 1	30–40°	N	M	NOT SAMPLED				NOT SAMPLED				
2002	SEPT. 9–14	30–40°	N	M	NOT SAMPLED				NOT SAMPLED				
2003	OCT. 13–18	30–40°	N	M	NOT SAMPLED				NOT SAMPLED				

Site Name: TIPPLE AREA SLOPE '88 Exposure: V	Qualitative			Quantitative Cover				Quantitative % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	35°	N	M	30.50	7.00	9.50	53.00	32.11	45.97	21.92	–	–
2000	AUG. 28–SEPT. 2	35°	N	M	NOT SAMPLED				NOT SAMPLED				
2001	AUG. 31–SEPT. 1	35°	N	M	NOT SAMPLED				NOT SAMPLED				
2002	SEPT. 9–14	35°	N	M	NOT SAMPLED				NOT SAMPLED				
2003	OCT. 13–18	35°	N	S	NOT SAMPLED				NOT SAMPLED				

Site Name: SEDIMENT POND BANKS '88 Exposure: V	Qualitative			Quantitative Cover				Quantitative % Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	35°	N	C	56.67	8.67	7.33	27.33	18.43	37.37	37.53	–	–
2000	AUG. 28–SEPT. 2	35°	N	S	NOT SAMPLED				NOT SAMPLED				
2001	AUG. 31–SEPT. 1	35°	N	S	NOT SAMPLED				NOT SAMPLED				
2002	SEPT. 9–14	35°	N	S	NOT SAMPLED				NOT SAMPLED				
2003	OCT. 13–18	35°	N	S	NOT SAMPLED				NOT SAMPLED				

NOTE:
QUALITATIVE AND QUANTITATIVE DATA PROVIDED BY MT. NEBO SCIENTIFIC, INC.

LEGEND

- WATER LINE
- SEWER LINE
- CULVERT
- SURFACE DRAINAGE
- CANYON DRAINAGE
- INLET
- DROP INLET
- THRUST BLOCK
- MANHOLE
- POWER LINE
- POWER POLES
- CD CULVERT (DISTURBED)
- CU CULVERT (UNDISTURBED)
- DISTURBED AREA BOUNDARY
- DIRT BERM

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LICENSED PROFESSIONAL ENGINEER JOHN CHRISTENSEN No. 165651 STATE OF UTAH

I, JOHN CHRISTENSEN BEING A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF UTAH, DO HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THIS DRAWING IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

John Christensen 3/16/04
JOHN CHRISTENSEN NO. 165651 DATE

DATE	REVISIONS	BY	CHK
3–5–04	ADDED QUALITATIVE AND QUANTITATIVE DATA FOR 2003	KJL	
3–20–03	ADDED QUALITATIVE AND QUANTITATIVE DATA FOR 2002	KJL	
4–3–02	ADDED QUALITATIVE AND QUANTITATIVE DATA FOR 2001, AND REVISED NOTATION FOR 9TH EAST DEER CREEK BREAKOUT	KJL	
12–13–99	REVISED AREA NOTATIONS, ADDED ACCESS BRIDGES AT POWER, REVISED SURFACE DRAINAGE, ADDED D.C. 9TH EAST RECLAMATION	KJL	
4–19–96	ADDED FAN MOTOR BASE & POWER POLES/REMOVED STORAGE BIN	KJL	
3–14–96	ADDED 4" AND 6" SEWER LINES FROM TRAIL MOUNTAIN MINE	KJL	
9–30–93	REMOVED SLOTTED DRAIN BY DIESEL MAINT. BLDG.	PKB	
3–15–93	ADDED 48" BYPASS BELT AND HOPPERS	PKB	
8–13–91	REVISED TO REFLECT CURRENT CONDITIONS	KJL	
5–21–91	REVISED TO REFLECT CURRENT CONDITIONS	KJL	
2–26–91	GENERAL REVISIONS TO SURFACE FACILITIES AND DRAINAGE	KJL	
9–28–90	ADDED SEDIMENT TRAPS AND MANHOLE AT TRUCK LOADOUT	KJL	
1–17–90	ADDED AUTOMATED PROPERTY ACCESS GATES	KJL	
1–10–90	ADDED ASCA AREAS 1–5 AND ASCA LEGEND	KJL	
11–13–89	REVISED TO REFLECT AS BUILT CONDITIONS	KJL	
6–24–87	ADDED CONTOUR LINES	KJL	

CAD FILE NAME/DISK#: USERS\KJL\VEGMAPS\CWVEG.DWG

ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH 84528

COTTONWOOD MINE
SURFACE FACILITIES MAP
2002 VEGETATION MONITORING

DRAWN BY:	K. LARSEN		WS449D
SCALE:	1"=100'	DRAWING #:	
DATE:	APRIL 25, 1994	SHEET 1 OF 1	REV. ___