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				

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				

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				

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	30.00	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				

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				

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				

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: 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				

Site Name: TEST PLOTS '88 — Exposure: E, S		Qualitative			Quantitative (8 Seperate Plots) Cover / % Composition: Total Living, Litter, Bareground, Rock, Shrubs, Forbs, Grasses, Density, Productivity
Year	Date	Slope	Animal Use	Erosion	
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

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

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 NO. 165651 — 3/20/03 DATE

LICENSED PROFESSIONAL ENGINEER — JOHN CHRISTENSEN — No. 165651 — STATE OF UTAH

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

DATE	REVISIONS	BY	CHK
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 ASCA NOTATIONS, ADDED ACCESS BRIDGES AT PONDS, 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	

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

COTTONWOOD MINE
SURFACE FACILITIES MAP
2002 VEGETATION MONITORING

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