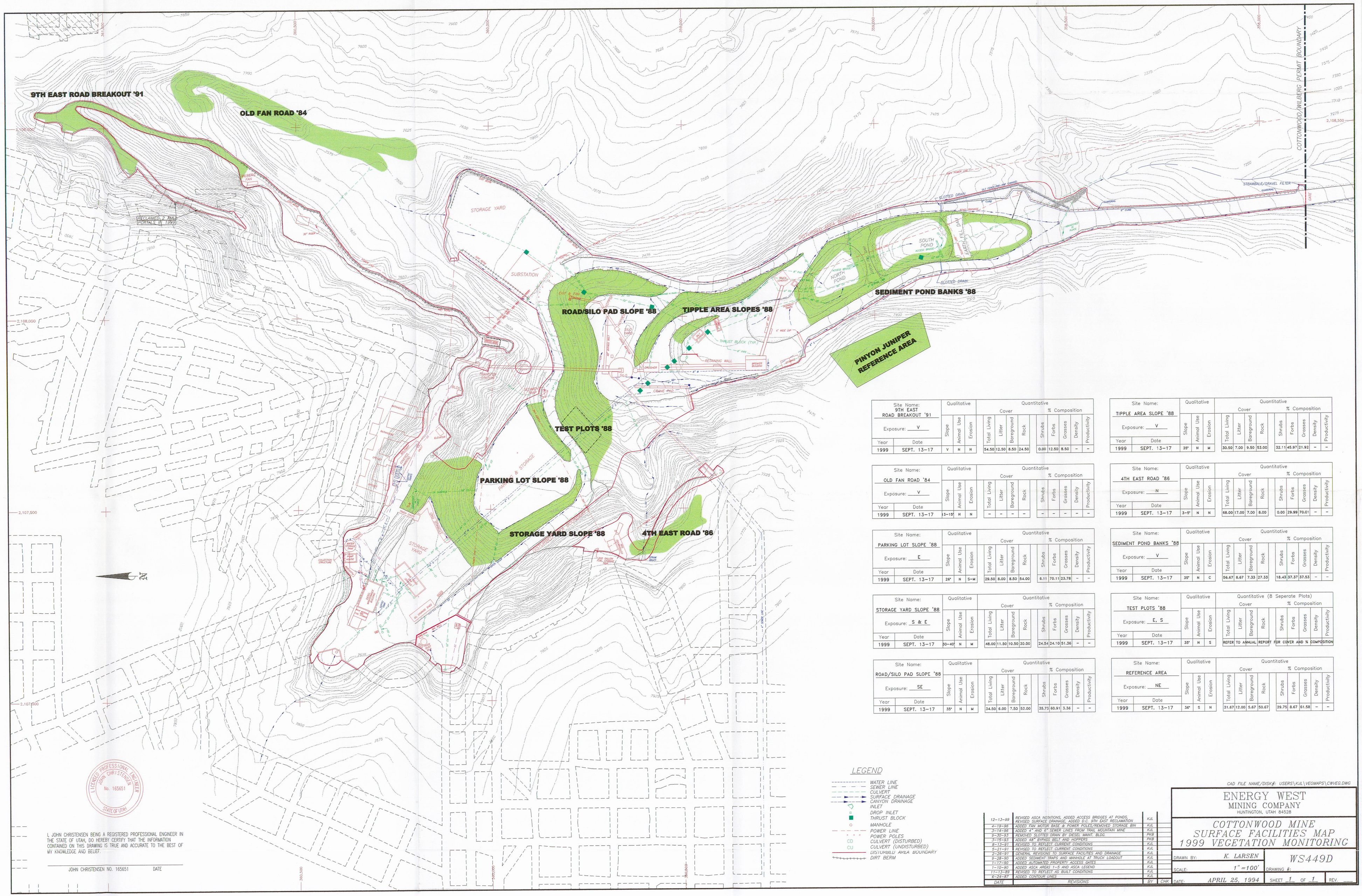

Site Name: 9TH EAST ROAD BREAKOUT '91		Qualitative			Quantitative								
Exposure: V					Cover				% Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	V	N	N	54.50	12.50	8.50	24.50	0.00	12.50	8.50	–	–

Site Name: TIPPLE AREA SLOPE '88		Qualitative			Quantitative								
Exposure: V					Cover				% 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	–	–

Site Name: OLD FAN ROAD '84		Qualitative			Quantitative								
Exposure: V					Cover				% Composition				
Year	Date	Slope	Animal Use	Erosion	Total Living	Litter	Bareground	Rock	Shrubs	Forbs	Grasses	Density	Productivity
1999	SEPT. 13–17	3–15°	H	N	–	–	–	–	–	–	–	–	–

Site Name: 4TH EAST ROAD '86		Qualitative			Quantitative								
Exposure: N					Cover				% 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	–	–

Site Name: PARKING LOT SLOPE '88		Qualitative			Quantitative								
Exposure: E					Cover				% 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	–	–

Site Name: SEDIMENT POND BANKS '88		Qualitative			Quantitative								
Exposure: V					Cover				% 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	–	–

Site Name: STORAGE YARD SLOPE '88		Qualitative			Quantitative								
Exposure: S & E					Cover				% 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	–	–

Site Name: TEST PLOTS '88		Qualitative			Quantitative (8 Seperate Plots)								
Exposure: E, S					Cover				% 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								

Site Name: ROAD/SILO PAD SLOPE '88		Qualitative			Quantitative								
Exposure: SE					Cover				% 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	–	–

Site Name: REFERENCE AREA		Qualitative			Quantitative								
Exposure: NE					Cover				% 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	–	–

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

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 NO. 165651 DATE

DATE	REVISIONS	BY	CHK
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	

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

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

COTTONWOOD MINE SURFACE FACILITIES MAP 1999 VEGETATION MONITORING

DRAWN BY: K. LARSEN

WS449D

SCALE: 1" =100'

DRAWING #:

DATE: APRIL 25, 1994

SHEET 1 OF 1

REV.