



EMPOWERED

KAYENTA MINE: J19 WEST RECLAMATION PROJECT

May 28, 2026

***Environmental and Reclamation
Department***



Kayenta Mine J19 West Reclamation Project

Topographic manipulation is a process of recontouring spoil after coal removal to minimize, the potential for soil erosion, establish a stable landform and develop a drainage network. Utilizing the methods described in Chapter 21 "Backfilling and Grading", an estimated postmining topography (PMT) is developed that approximates the original landform, creates a stable landform and depicts a preliminary drainage network that conforms to the geomorphic sideboards provided in Attachment A (see Drawing No. 85352). PWCC will rely on the estimated PMT and preliminary drainage network as a guide to develop grading plans that will be used to create a postmining topography and drainage network that mimics the estimated PMT within specified ranges or sideboards. PWCC believes developing PMT's and corresponding preliminary drainage networks that are based on the geomorphic sideboards contained in Attachment A, combined with sound grading plans that will result in drainages and overall hillslope configurations that approximate the preliminary drainage network, will result in stable reclaimed watersheds that will require minimal long-term maintenance.

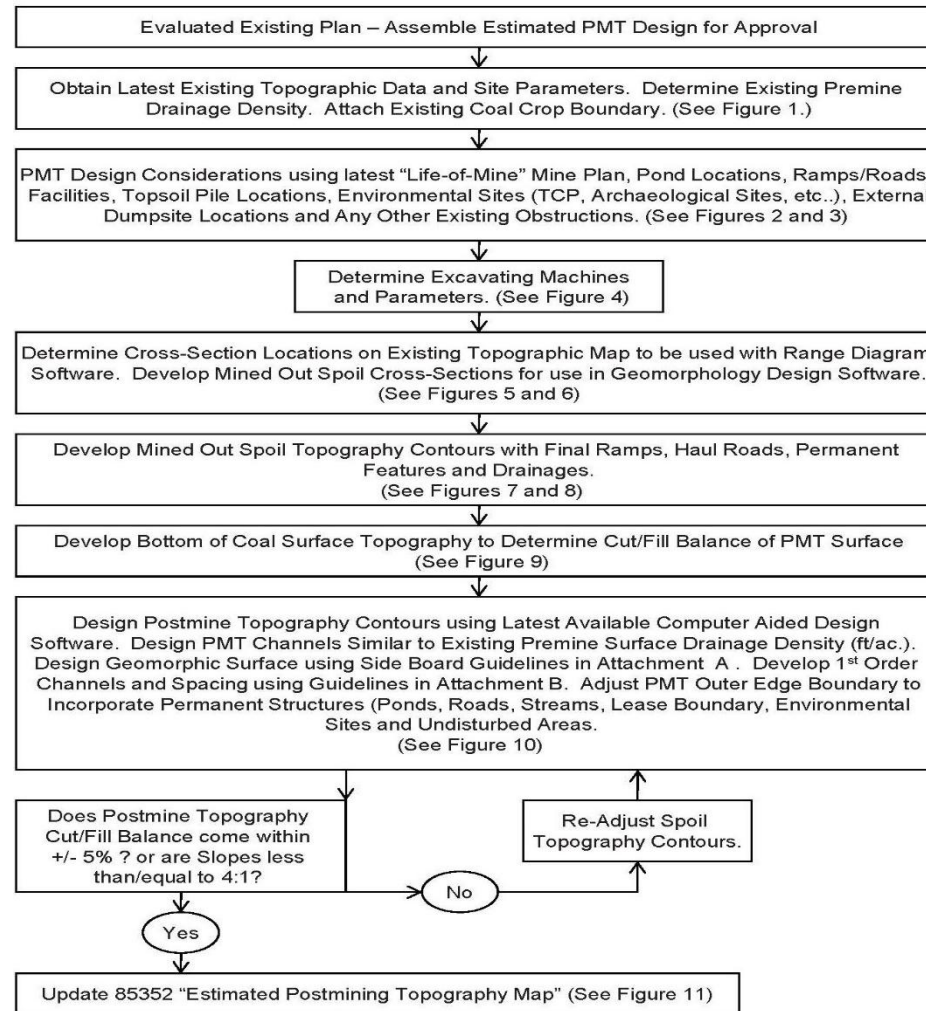
ATTACHMENT A – Geomorphic Characteristic Side-boards

Geomorphic Characteristic	Stream Order	Range
Hillslope Gradient (%)	0 - 2	Less than 40 percent
	3 - 4	Less than 45 percent
Hillslope Length (ft)	0 - 2	Less than 650 feet
	3 - 4	Less than 550 feet
Channel Gradient (%)	1 – 2	2.5 – 28.0
	3 – 4	0.8 – 11.0
Sinuosity (channel length/valley length)	1 – 2	1.0 – 1.13
	3 – 4	1.06 – 1.15
Drainage Density (mi./sq. mi.)	1 – 2	5.0 – 18.0
	3 – 4	7.5 – 9.5
Terrace Gradients (%)	1	1.5 – 2.5
Terrace Lengths (ft)	1	Less than 2000 feet

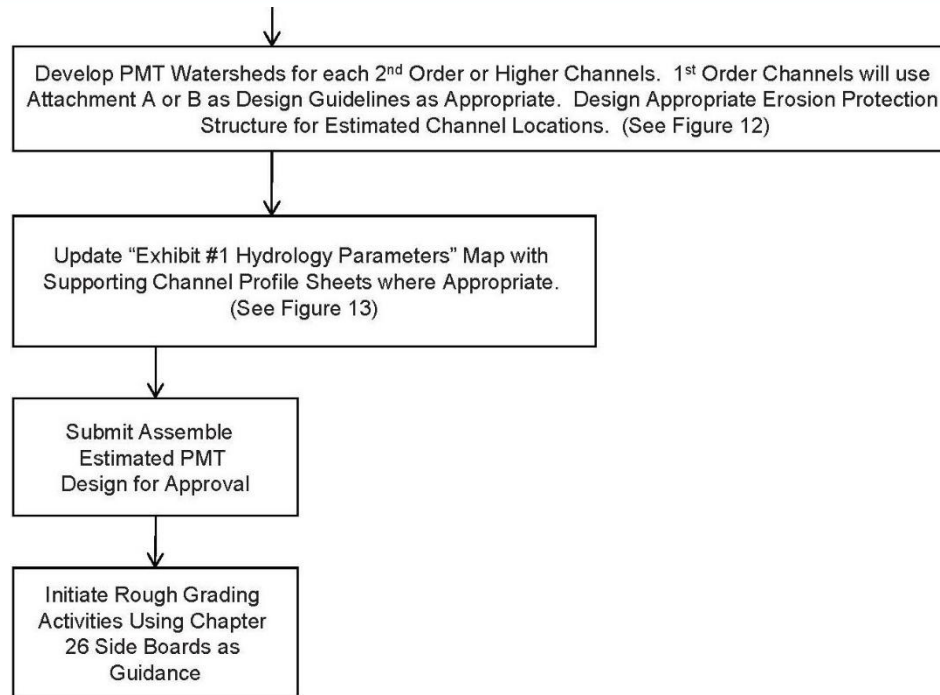
Geomorphic Side-Boards

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ATTACHMENT C Reclamation Surface Stabilization Design Process

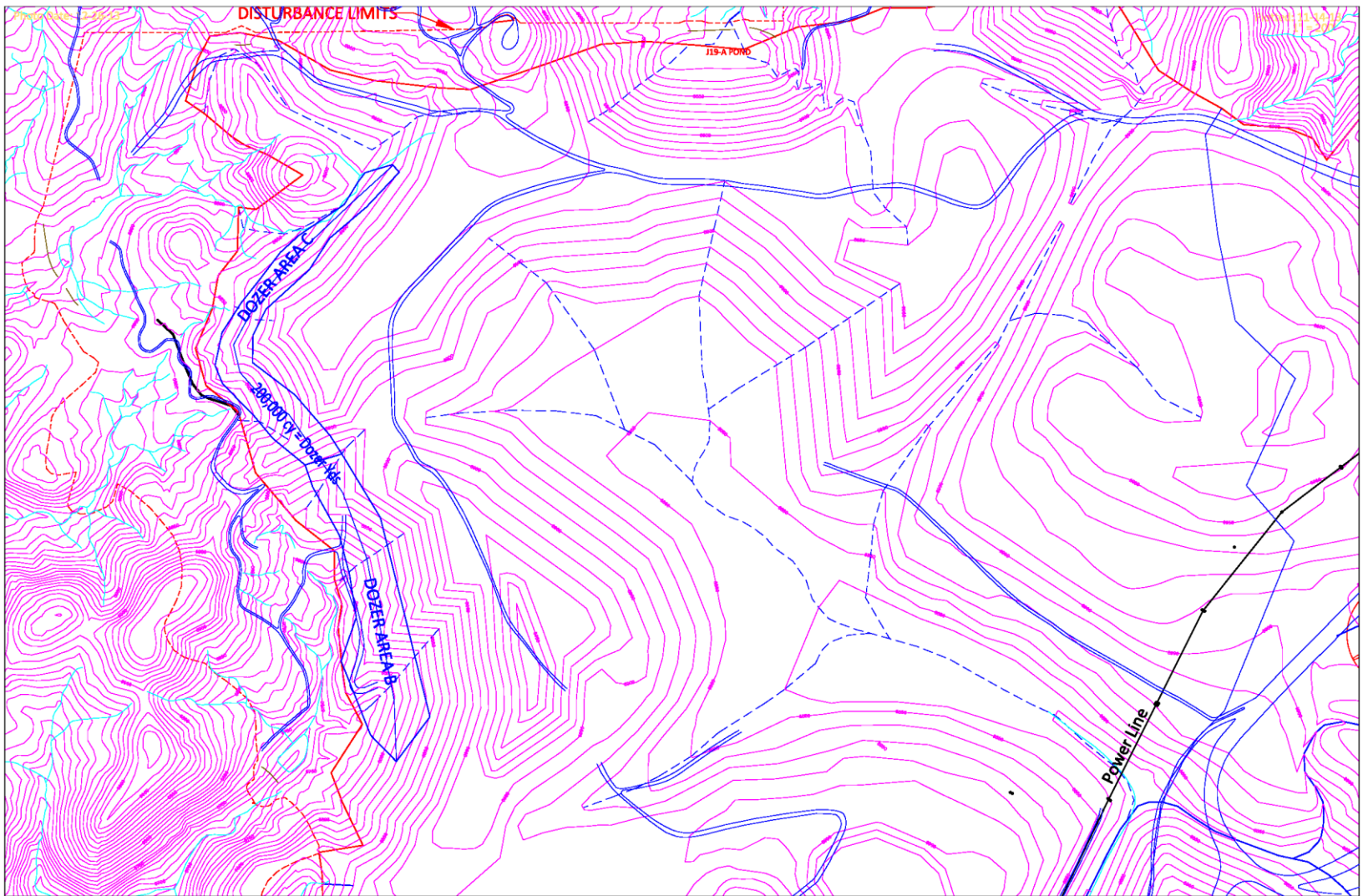


PMT Design Process



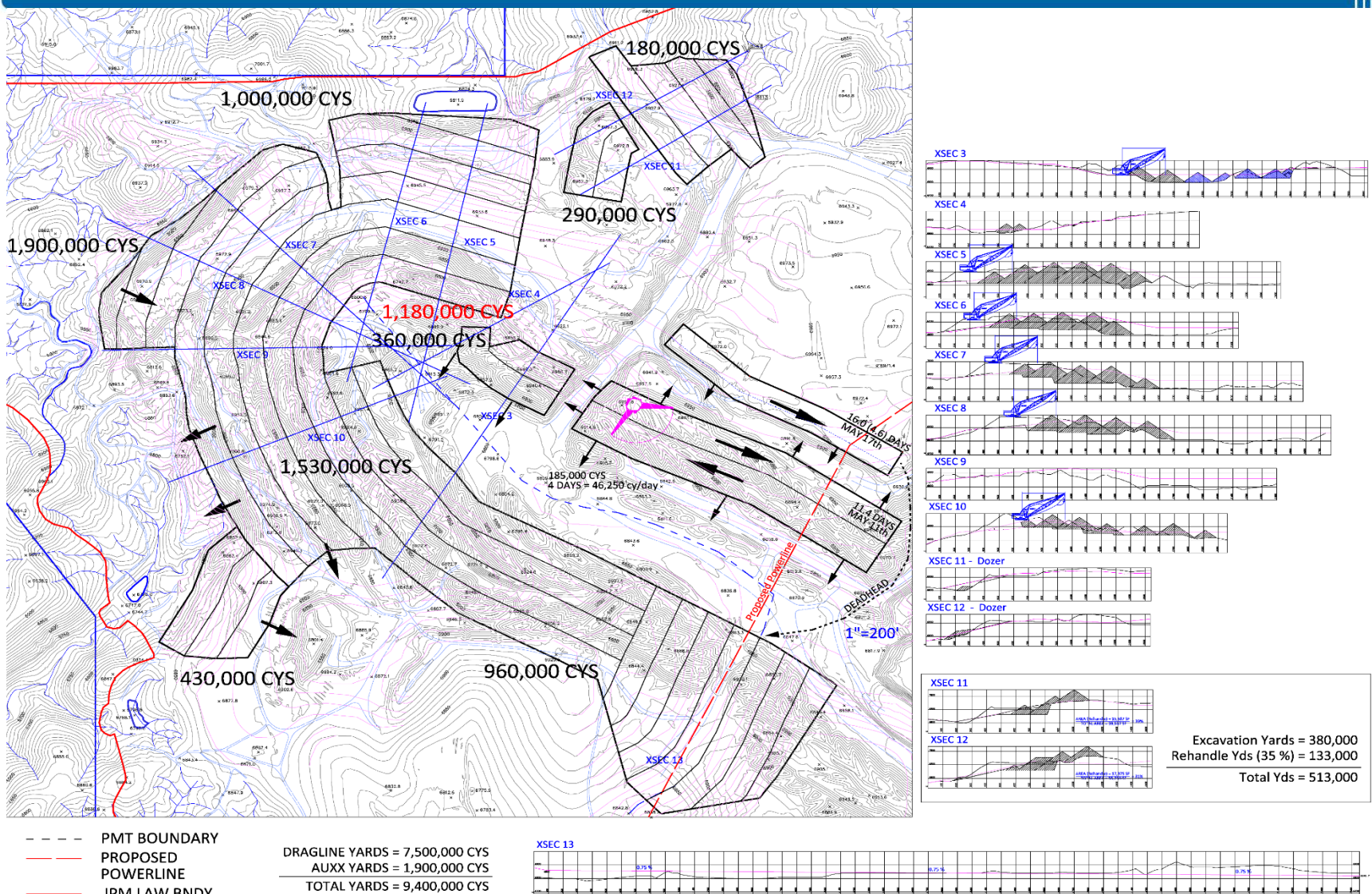
PMT Design Process

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POSTMINE TOPOGRAPHY DESIGN

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J19 West Stripping Plan

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BEFORE - MAIN DRAINAGE CHANNEL RAMP 55

Kayenta Mine J19 West Reclamation Project



AFTER - MAIN DRAINAGE CHANNEL RAMP 55



MAIN DRAINAGE CHANNEL RAMP 55 RECLAIMED

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BEFORE - MAIN DRAINAGE CHANNEL RAMP 54
SOUTH



AFTER - MAIN DRAINAGE CHANNEL RAMP 54 SOUTH

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MIDDLE - MAIN DRAINAGE CHANNEL RAMP 54 SOUTH

Kayenta Mine J19 West Reclamation Project



AFTER - MAIN DRAINAGE CHANNEL RAMP 54 SOUTH

Kayenta Mine J19 West Reclamation Project



BEFORE - MAIN DRAINAGE CHANNEL RAMP 63

Kayenta Mine J19 West Reclamation Project



AFTER - MAIN DRAINAGE CHANNEL RAMP 63



AFTER RAMP 55 WEST



RAMP 55 WEST RECLAIMED

Kayenta Mine J19 West Reclamation Project



BEFORE - FEBRUARY 2012 AERIAL PHOTO

Kayenta Mine J19 West Reclamation Project



AUGUST 2013 AERIAL PHOTO

Kayenta Mine J19 West Reclamation Project



JANUARY 2014 AERIAL PHOTO

Kayenta Mine J19 West Reclamation Project



MAY 2026 AERIAL PHOTO

Kayenta Mine J19 West Reclamation Project



J19 West Aerial Video

- ***Project Overview:***

- ***Project start date : February 2012***
- ***Project completion date (Grading only): February 2014***
- ***Cubic yards moved by 8200 Dragline = 11,300,000 CY***
- ***Graded acres by 8200 Dragline at completion = 520 acres***
- ***Approximate total graded acres by 8200, Dozers and Scrapers = 625 acres***
- ***Topsoiled Acres= 525 and Avg Topsoiled Depth= 3.4***
- ***Redrock Acres= ~100 with Cultural Acres= 26.2***

Kayenta Mine J19 West Reclamation Project



Special Jackets and T-Shirts were given to the Dragline, Dozer and Scraper crews for completing J19 West Reclamation Safely.



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2023 Excellence in Surface Coal Mining Reclamation Award



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