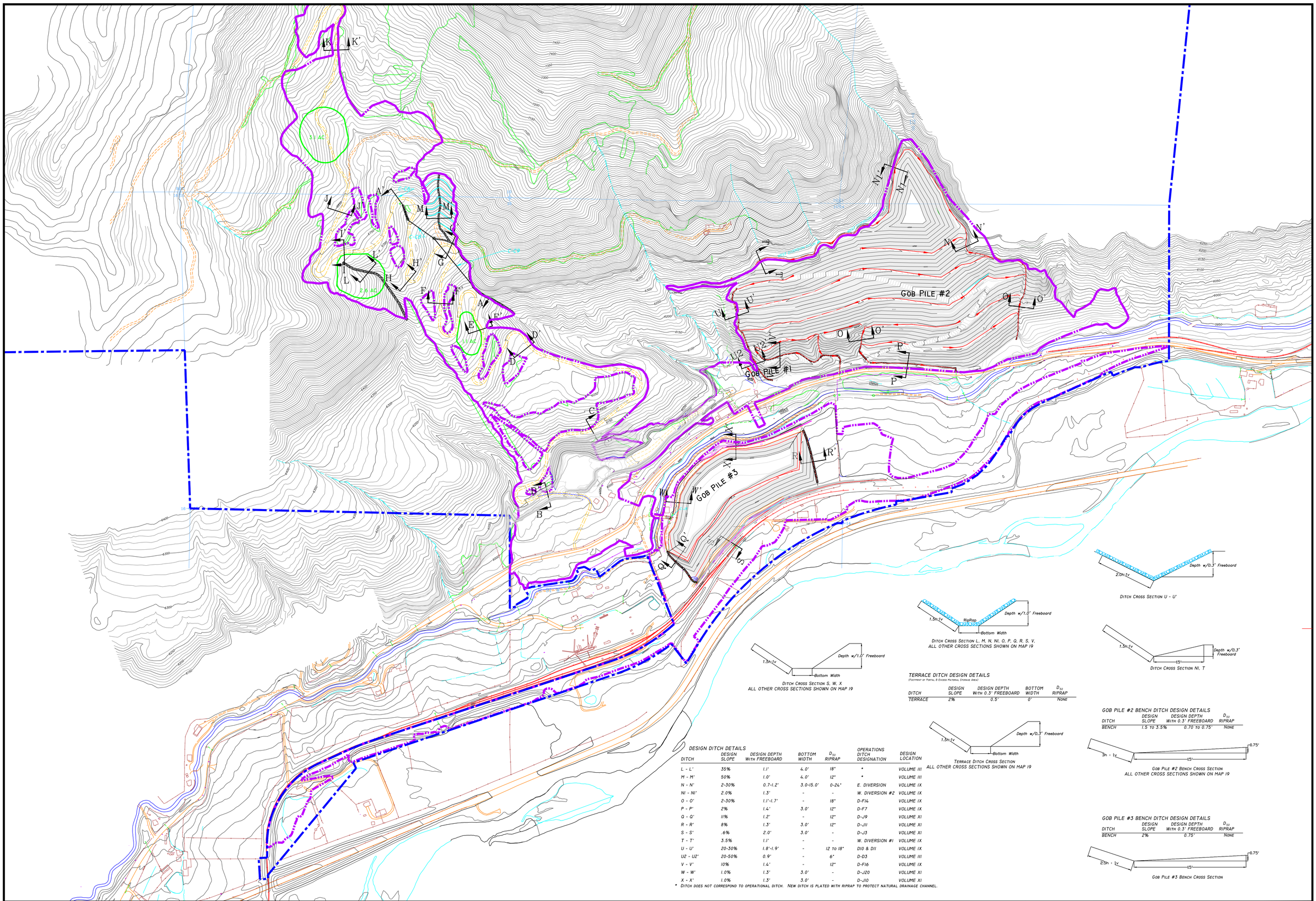

TERRACE DITCH DESIGN DETAILS

(FOOTPRINT OF PORTAL 8 EXCESS MATERIAL STORAGE AREA)

DITCH	DESIGN SLOPE	DESIGN DEPTH WITH 0.3' FREEBOARD	BOTTOM WIDTH	D_{50} RIPRAP
TERRACE	2%	0.5'	0'	NONE

GOB PILE #2 BENCH DITCH DESIGN DETAILS

DITCH	DESIGN SLOPE	DESIGN DEPTH WITH 0.3' FREEBOARD	D_{50} RIPRAP
BENCH	1.5 TO 3.5%	0.70 TO 0.75'	NONE

GOB PILE #3 BENCH DITCH DESIGN DETAILS

DITCH	DESIGN SLOPE	DESIGN DEPTH WITH 0.3' FREEBOARD	D_{50} RIPRAP
BENCH	2%	0.75'	NONE

DESIGN DITCH DETAILS

DITCH	DESIGN SLOPE	DESIGN DEPTH WITH FREEBOARD	BOTTOM WIDTH	D_{50} RIPRAP	OPERATIONS DITCH DESIGNATION	DESIGN LOCATION
L - L'	35%	1.1'	4.0'	18"	*	VOLUME III
M - M'	50%	1.0'	4.0'	12"	*	VOLUME III
N - N'	2-30%	0.7-1.2'	3.0-15.0'	0-24"	E. DIVERSION	VOLUME IX
NI - NI'	2.0%	1.3'	-	-	W. DIVERSION #2	VOLUME IX
O - O'	2-30%	1.1'-1.7'	-	18"	D-F14	VOLUME IX
P - P'	2%	1.4'	3.0'	12"	D-F7	VOLUME IX
Q - Q'	11%	1.2'	-	12"	D-J9	VOLUME XI
R - R'	8%	1.3'	3.0'	12"	D-J11	VOLUME XI
S - S'	.6%	2.0'	3.0'	-	D-J3	VOLUME XI
T - T'	3.5%	1.1'	-	-	W. DIVERSION #1	VOLUME IX
U - U'	20-30%	1.8'-1.9'	-	12 TO 18"	D10 & D11	VOLUME IX
U2 - U2'	20-50%	0.9'	-	6"	D-D3	VOLUME III
V - V'	10%	1.4'	-	12"	D-F16	VOLUME IX
W - W'	1.0%	1.3'	3.0'	-	D-J20	VOLUME XI
X - X'	1.0%	1.3'	3.0'	-	D-J10	VOLUME XI

* DITCH DOES NOT CORRESPOND TO OPERATIONAL DITCH. NEW DITCH IS PLATED WITH RIPRAP TO PROTECT NATURAL DRAINAGE CHANNEL.

REVISIONS No.	DESCRIPTION:	BY	DATE
30	TR-124 Haul Road realignment	T.K.B.	01/29/26
34	TR-118 Reduce size of gob pile #3	T.K.B.	02/05/19
33	TR-105, Adq. #1, revise dist boundary near B-Bench	T.K.B.	12/03/15
32	TR-105 Gob #3 east expansion	T.K.B.	09/15/15
31	TR-98 Adequacy response #1	T.K.B.	04/22/15
30	TR-98 Gob Pile #2 footprint increase, hydrology revision	T.K.B.	01/22/15

REFERENCES

2	SEE MAP 19 FOR CROSS SECTIONS EXCEPT L - L'	3	EXHIBIT 8 PAGE 190 - 196
1	VOLUME I, SECTION 2.05.4(2)(c)		

LEGEND:

- PERMIT BOUNDARY
- DISTURBED AREA BOUNDARY
- FENCE
- POWERLINE/TELEPHONE
- CULVERT
- LIGHT USE ROAD
- TERRACE DITCH
- BERM
- GOB PILE BENCH DITCH
- Shrub Clump Outline

NOTES:

1. SEE MAP NO. 19 FOR POSTMINING CROSS SECTIONS.
2. REFUSE PILE ROADS WILL BE BLENDED IN WITH ADJACENT SLOPES.

CERTIFICATION

I hereby certify that this drawing was done by me or under my direct supervision and that the information presented on this drawing is true and correct to the best of my knowledge and belief.

COLORADO LICENSED PROFESSIONAL ENGINEER 43402 TAMMY K. BISHOP 12/12/26

Tammy K. Bishop
Colorado #43402

Date

PREPARED FOR:

BRL BOWIE RESOURCES, LLC

BOWIE RESOURCES, LLC
BOWIE NO. 2 MINE
P.O. BOX 483
PAONIA, COLORADO 81428

PREPARED BY: J. E. STOVER & ASSOCIATES
2352 N. 7th Street, Unit B
Grand Jct., CO 81501

ONE INCH

DESIGNED BY:		
DRAWN BY:	L.K.J.	01/28/96
CHECKED BY:		

PROJECT: BOWIE NO. 2 MINE

TITLE: POSTMINING TOPOGRAPHY

DRMS I.D. No. C - 1996 - 083

SCALE: 1" = 300'

DWG. NAME: MAP NO. 18