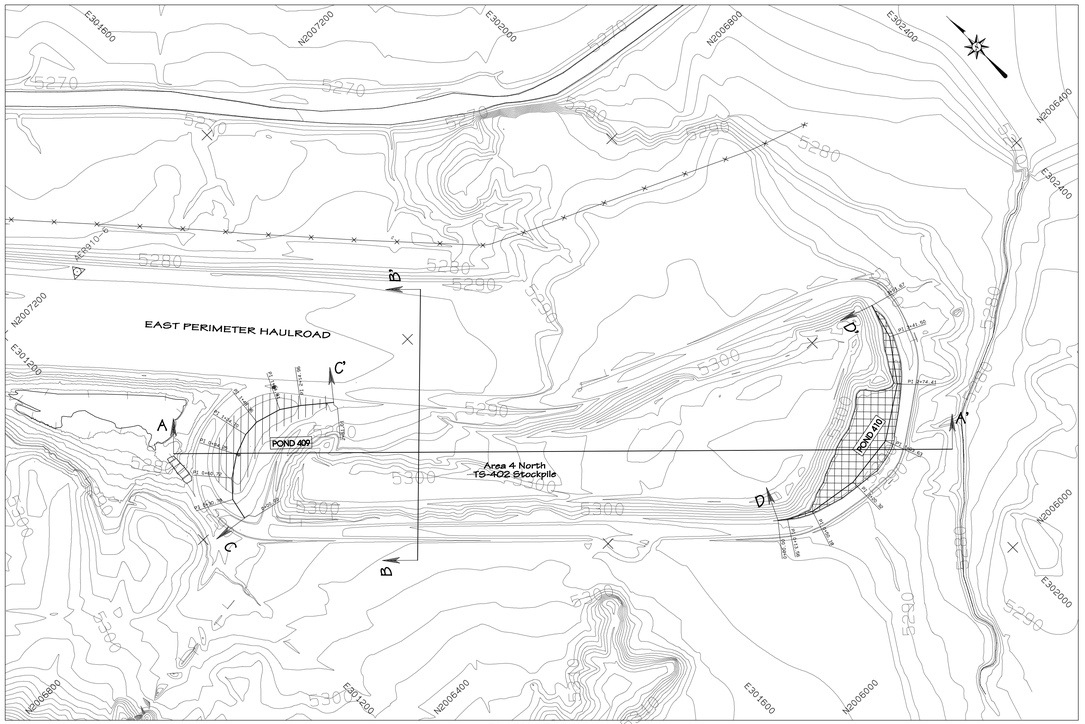
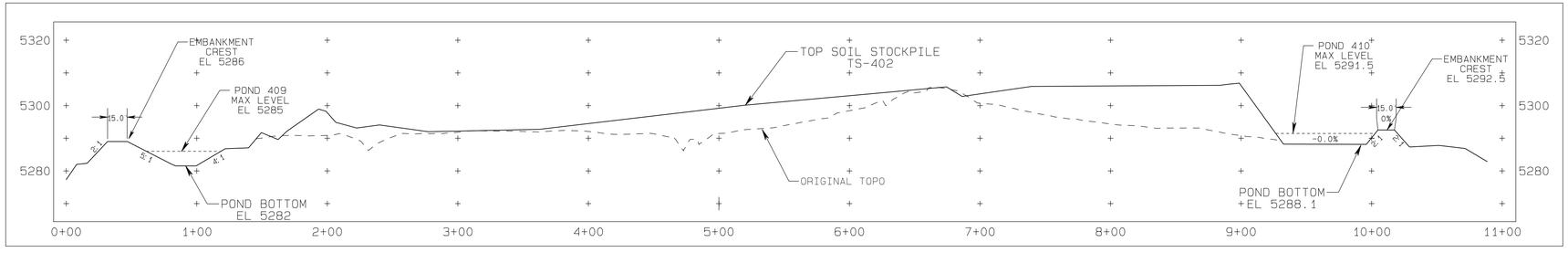


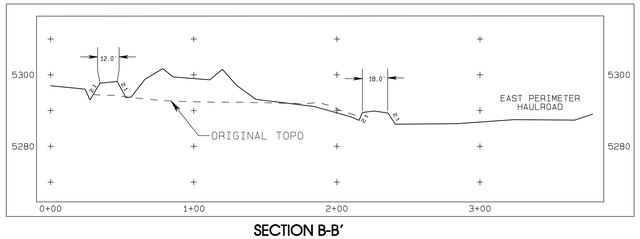
PLAN VIEW

SCALE 1"=100'
CONTOUR INTERVAL: 2 FT.



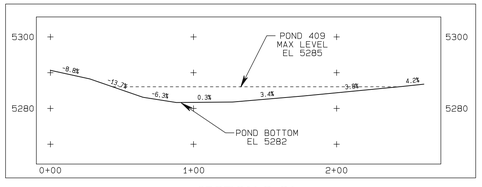
SECTION A-A'

SCALE HORIZ 1"=50'
VERT 1"=20



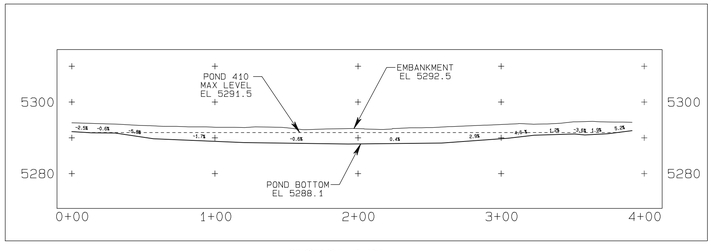
SECTION B-B'

SCALE HORIZ 1"=50'
VERT 1"=20



SECTION C-C'

SCALE HORIZ 1"=50'
VERT 1"=20



SECTION D-D'

SCALE HORIZ 1"=50'
VERT 1"=20

NOTES

1. For location of drainage control structures and watersheds, refer to Exhibit 11-13F
2. The hydrology and supporting design data for the drainage control structures are referened on Table 11-5 the NM PAP.

STAGE STORAGE DATA
A4 NORTH POND-409

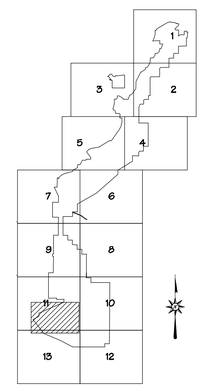
ELEV feet	AREA acres	VOLUME ac-ft	CUM. VOLUME ac-ft
5282	0.02	0.0	0.01
5283	0.06	0.0	0.05
5284	0.10	0.1	0.13
5285	0.15	0.1	0.26
5286	0.22	0.2	0.44

Crest Elevation 5286.0
Capacity @ Crest El.(Ac-Ft.) 0.44
Max. Water Elevation 5285.0
Capacity @ Max.Water Level(Ac-Ft.) 0.26

STAGE STORAGE DATA
A4 NORTH POND-410

ELEV feet	AREA acres	VOLUME ac-ft	CUM. VOLUME ac-ft
5288.1	0.00	0.0	0.00
5289	0.12	0.1	0.05
5290	0.21	0.2	0.21
5291	0.25	0.2	0.44
5292	0.29	0.3	0.71
5293	0.33	0.3	1.02

Crest Elevation 5292.5
Capacity @ Crest El.(Ac-Ft.) 0.9
Max. Water Elevation 5291.5
Capacity @ Max.Water Level(Ac-Ft.) 0.6



SCALE AS NOTED

CERTIFICATION STATEMENT

I, Ron C. VAN VALKENBURG, hereby certify that this Impoundment has been constructed in accordance with the Approved Design Plans except:
* Pond 409 capacity 0.44 Ac-Ft (Design was 0.2 Ac-Ft)
* Pond 410 capacity 0.9 Ac-Ft (Design was 0.4 Ac-Ft)

Ron C. VAN VALKENBURG
NEW MEXICO
9263
LICENSED PROFESSIONAL ENGINEER

	REVISION	DATE
1	SUBMITTED TO OSM FOR APPROVAL	12/27/06
2	SUBMITTED TO OSM FOR APPROVAL	09/31/09
3	PREPARED AS-BUILT SUBMITTED TO OSM FOR REVIEW	12/03/09
4	UPDATED AS-BUILT SUBMITTED TO OSM FOR REVIEW	8-11-10
5	UPDATED AS-BUILT FOR A4N POND 410, SUBMITTED TO OSM FOR REVIEW NOT SUBMITTED	11-02-10
11-4	SUBMITTED TO OSM FOR REVIEW AND APPROVAL	1-26-2011

PROJECT MANAGER: FG
ENGR. of RECORD: RCV
REG. NO: 6600
SRVYR of RECORD:
REG. NO:

bhpbilliton
BHP NAVAJO COAL CO.
NAVAJO MINE
PO BOX 1717, FRUITLAND, NEW MEXICO, 87416, PHONE 505-598-3009/FAX 505-598-3061

ACCOUNT:
DATE: Dec.03,2009
DESIGNED BY: P.Foster
DRAWN BY: P.Foster
CHECKED BY: RCV
APPROVED BY: RCV

PLAN, PROFILE AND SECTION

Exhibit 11-159
Area 4 North
Pond 409 AND 410
As-Built

DRAWING

SHEET 1
OF 1

G:\Gis\Permit Fil\Ch 11\Exh 11-159_A4N Pnds 409-410\OSM Subm-12011\Exh 11-159_TS-402_PD- 409-410_As-Built.pro
Wed Jan 26 12:51:44 2011