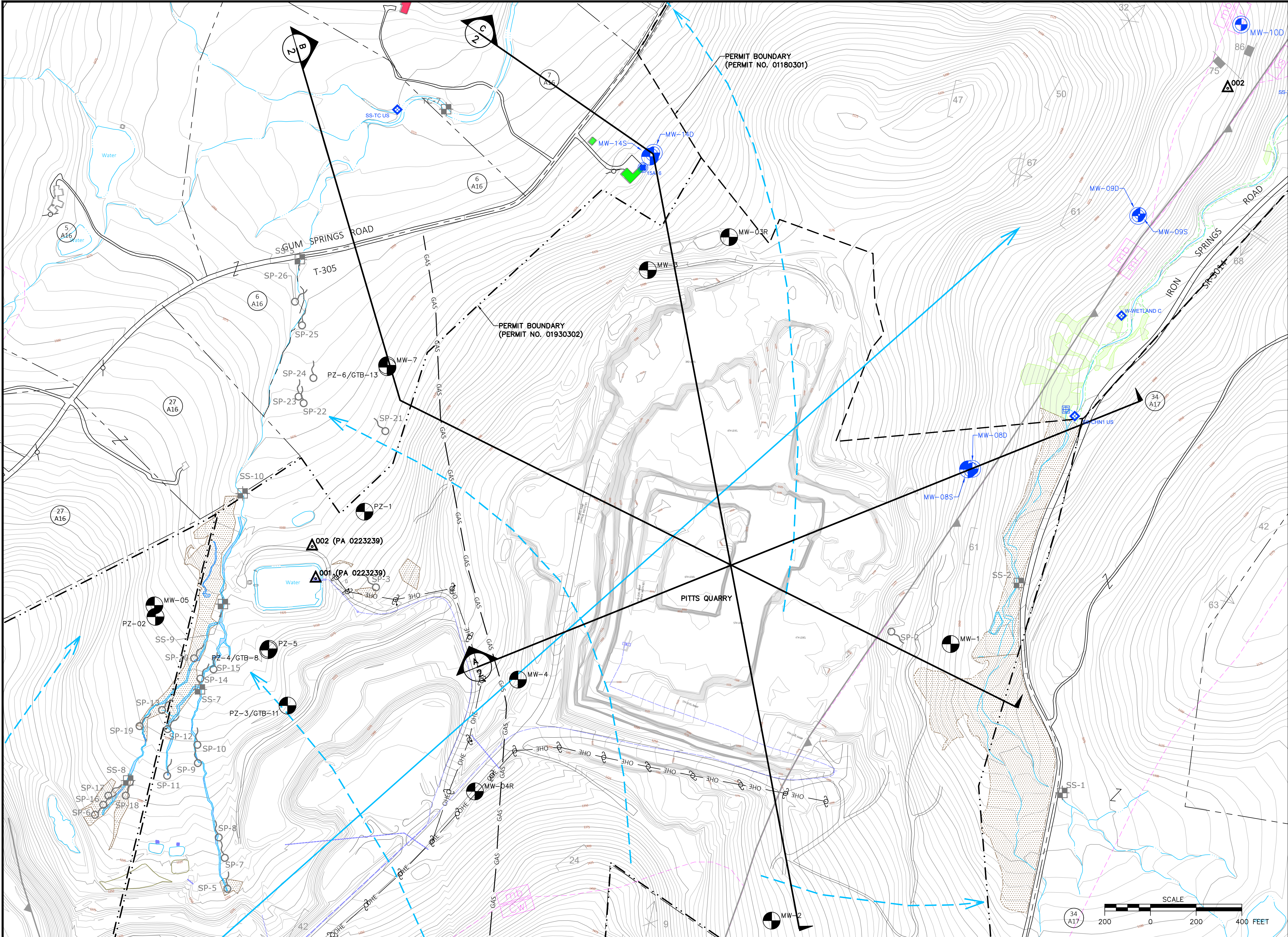


APPENDIX 1.1 – PITTS QUARRY MINING AREA DEVELOPMENT AND CROSS-SECTIONS (2013-2018)

Monday, October 15, 2018 12:56:56 PM

R: (2015)152596 - SGI Disposal Embankment Drawings Northern Tract Quarry Groundwater Conditions - 2013.dwg



LEGEND

- EXISTING TOPOGRAPHIC MAJOR CONTOUR (25' CONTOUR INTERVAL)
- EXISTING TOPOGRAPHIC MINOR CONTOUR (5' CONTOUR INTERVAL)
- PROPERTY BOUNDARY
- EXISTING PERMIT BOUNDARY
- PROPOSED PERMIT BOUNDARY
- EXISTING ROAD
- EXISTING GAS LINE
- LOCAL GROUNDWATER FLOW DIRECTION
- REGIONAL GROUNDWATER FLOW DIRECTION
- WATERS OF THE UNITED STATES
- STREAM

- WETLANDS (DELINEATED BY SKELLY & LOY 12/16/2015)
- WETLANDS (DELINEATED BY AECOM 1/2011 AND 5/2012)
- OCCUPIED STRUCTURE
- UNOCCUPIED STRUCTURE

- MW-3 MONITORING WELL OR PIEZOMETER
- 958B16 EXISTING PRIVATE WATER SUPPLY WELL

WATER SAMPLING LOCATION LEGEND

- MW-12D BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- MW-11D BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- SS-13 EXISTING STREAM SAMPLE LOCATION
- SP-3 EXISTING SPRING/SEEP LOCATION
- 001 NPDES DISCHARGE LOCATION
- BACKGROUND SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- BACKGROUND AND LONG TERM SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- 07A16 BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)
- 15A16 BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)

GEOLOGY LEGEND

- SECTION DESIGNATION
- REFERENCE DRAWING NUMBER
- HARRERS FORMATION
- GREENSTONE SCHIST
- WEVERTON AND LOUDOUN FORMATION, UNDIVIDED
- METABASALT
- METARHYOLITE
- FAULT (TEETH ON UPTHROWN BLOCK)

STRIKE AND DIP SYMBOL LEGEND

- REGIONAL AXIAL-PLANE CLEAVAGE (S1)
- INCLINED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
- INTERSECTION OF REGIONAL AXIAL-PLANE CLEAVAGE WITH DOMINANT SLIP (CRENULATION) CLEAVAGE (L1x2)
- OVERTURNED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
- INCLINED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
- MULTIPLE JOINT SYSTEM STRIKE AND DIP OF SYSTEMATIC JOINT IN THE CATOCTIN FORMATION (J5)
- OVERTURNED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
- SUBORDINATE SLIP OR CRENULATION CLEAVAGE (S2')
- STRIKE AND DIP CLEAVAGE
- MINERAL LINATION IN THE PLANE OF REGIONAL AXIAL-PLANE CLEAVAGE (L0)

SOURCE: FAUTH, JOHN L., 1978 GEOLOGIC MAP OF THE IRON SPRINGS AND BLUE RIDGE SUMMIT QUADRANGLES, ADAMS AND FRANKLIN COUNTIES, PENNSYLVANIA

NOTES / REVISIONS

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PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9535



PROJECT NUMBER: 152596A

FILE NAME: Pitts Quarry Groundwater Conditions - 2013.dwg

DRAWN BY: MJD

CHECKED BY:

DATE: 10/15/2018

DATE:

SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2013

SCALE: AS SHOWN

DRAWING NO. 1

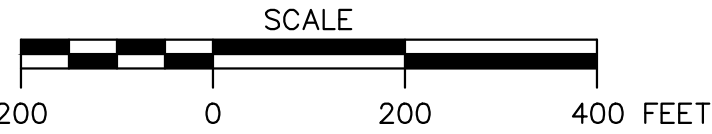
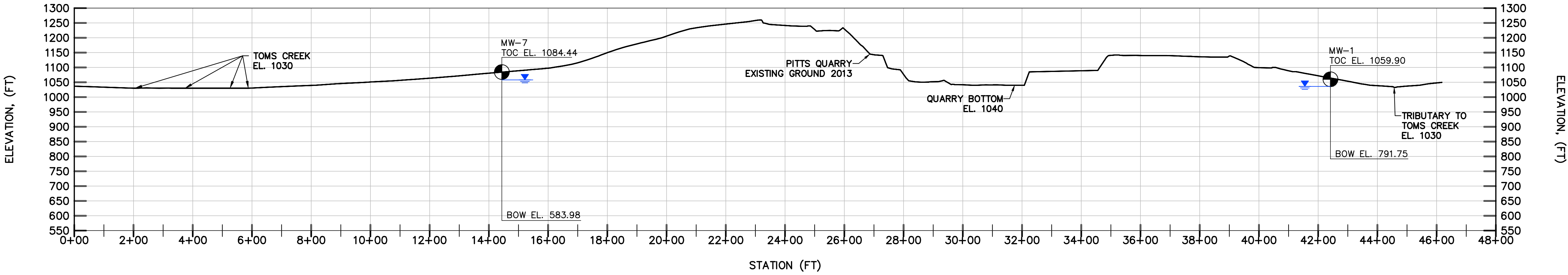
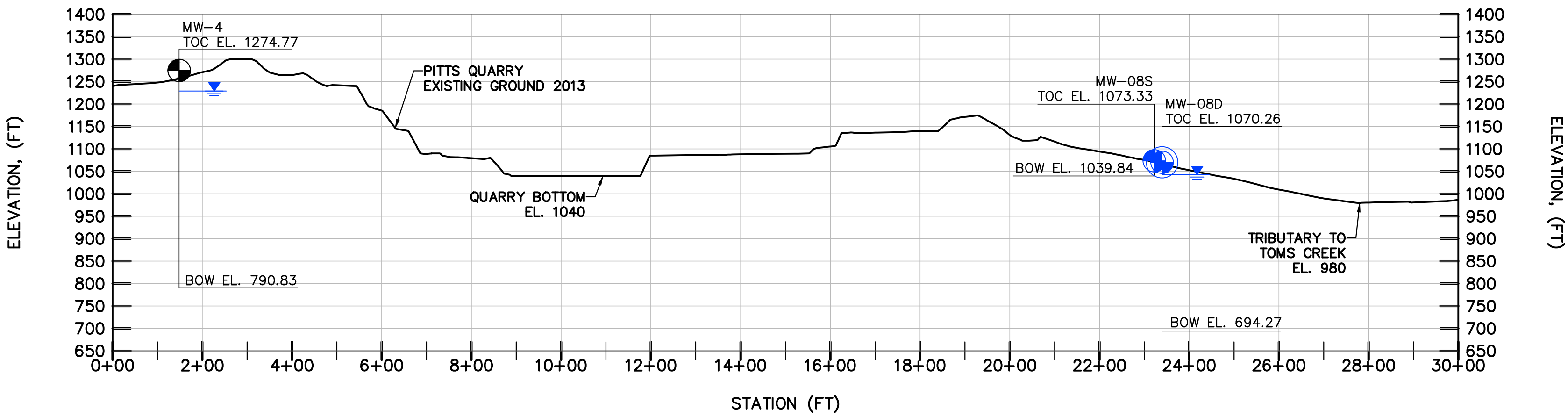
REV 0

LEGEND

- TOC
- TOP OF CASING
- BOW
- BOTTOM OF WELL
- 
- MEAN ANNUALIZED GROUNDWATER ELEVATION (FEET AMSL)
- 
- 
- 
- MONITORING WELL

Well ID	Mean Annualized Groundwater Elevation (Feet AMSL)
MW-1	1035.93
MW-2	1227.19
MW-3	N/A
MW-3R	1120.83
MW-4	1229.17
MW-4R	1269.95
MW-5	1134.83
MW-6	1320.01
MW-7	1057.89
MW-8D	1042.37*
MW-14D	1057.88

* Only one data point for MW-8D in 2013.



NOTES / REVISIONS

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		3				
		2				
		1				

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701 RODI ROAD, FLOOR 2
PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9635



PROJECT NUMBER: 152596A
FILE NAME: Pitts Quarry Groundwater Conditions - 2013.dwg

DRAWN BY: MJD
CHECKED BY:
DATE: 10/18/2018
DATE:

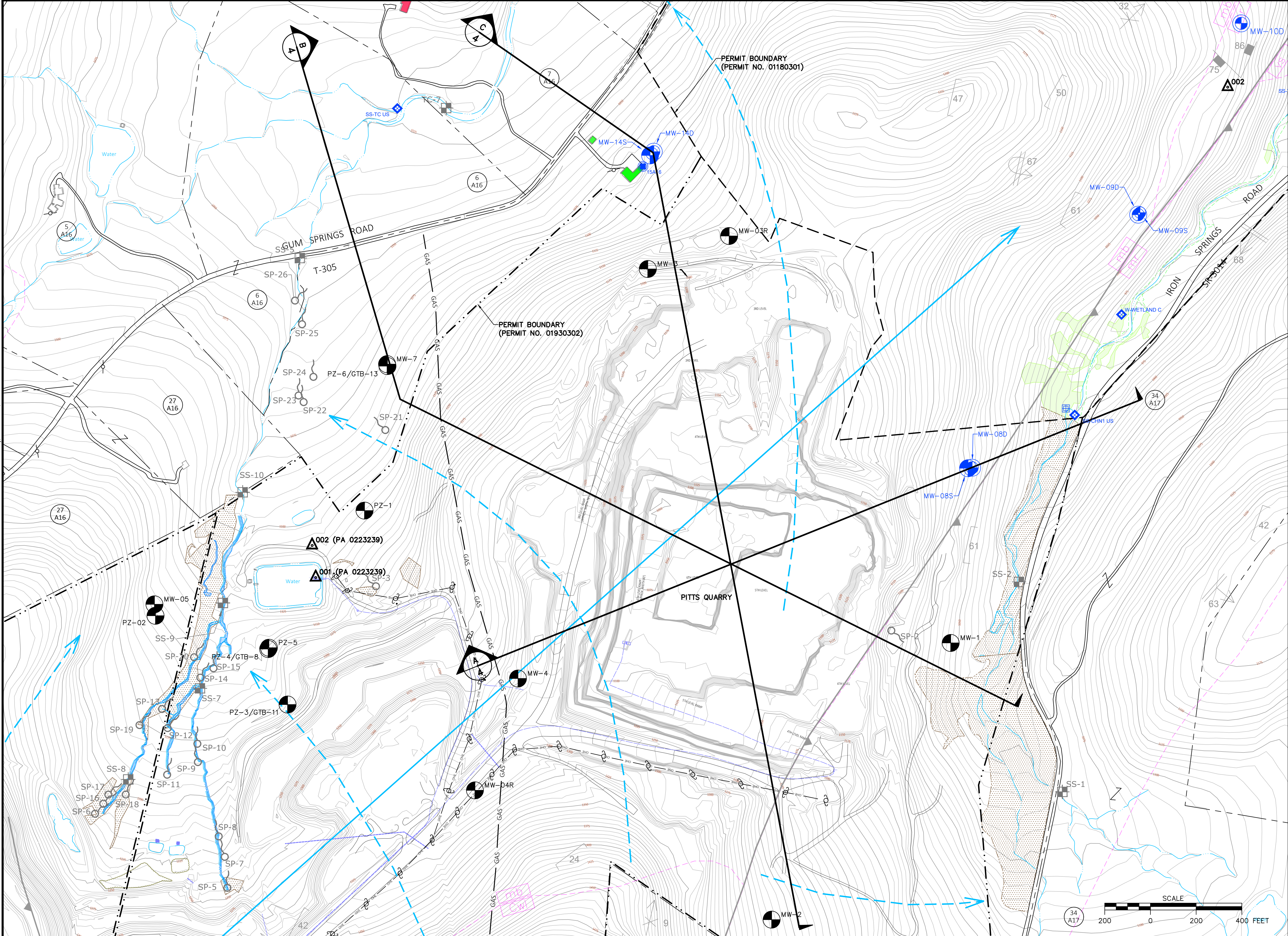
SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2013

SCALE: AS SHOWN
DRAWING NO. 2
REV 0

Monday, October 15, 2018 1:02:19 PM

R: (2015)152596 - SGI Disposal Embankment Drawings Northern Tract Quarry Groundwater Conditions - 2014.dwg



LEGEND

- EXISTING TOPOGRAPHIC MAJOR CONTOUR (25' CONTOUR INTERVAL)
- EXISTING TOPOGRAPHIC MINOR CONTOUR (5' CONTOUR INTERVAL)
- PROPERTY BOUNDARY
- EXISTING PERMIT BOUNDARY
- PROPOSED PERMIT BOUNDARY
- EXISTING ROAD
- EXISTING GAS LINE
- LOCAL GROUNDWATER FLOW DIRECTION
- REGIONAL GROUNDWATER FLOW DIRECTION
- WATERS OF THE UNITED STATES
- STREAM

- WETLANDS (DELINEATED BY SKELLY & LOY 12/16/2015)
- WETLANDS (DELINEATED BY AECOM 1/2011 AND 5/2012)
- OCCUPIED STRUCTURE
- UNOCCUPIED STRUCTURE

- MW-3 MONITORING WELL OR PIEZOMETER
- 958B16 EXISTING PRIVATE WATER SUPPLY WELL

WATER SAMPLING LOCATION LEGEND

- MW-12D BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- MW-11D BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- SS-13 EXISTING STREAM SAMPLE LOCATION
- SP-3 EXISTING SPRING/SEEP LOCATION
- 001 NPDES DISCHARGE LOCATION
- BACKGROUND SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- BACKGROUND AND LONG TERM SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- 07A16 BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)
- 15A16 BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)

GEOLOGY LEGEND

- SECTION DESIGNATION
- REFERENCE DRAWING NUMBER
- HARRERS FORMATION
- GREENSTONE SCHIST
- WEVERTON AND LOUDOUN FORMATION, UNDIVIDED
- METABASALT
- METARHYOLITE
- FAULT (TEETH ON UPTHROWN BLOCK)

STRIKE AND DIP SYMBOL LEGEND

- REGIONAL AXIAL-PLANE CLEAVAGE (S1)
- INCLINED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
- INTERSECTION OF REGIONAL AXIAL-PLANE CLEAVAGE WITH DOMINANT SLIP (CRENULATION) CLEAVAGE (L1x2)
- OVERTURNED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
- INCLINED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
- MULTIPLE JOINT SYSTEM STRIKE AND DIP OF SYSTEMATIC JOINT IN THE CATOCTIN FORMATION (J5)
- OVERTURNED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
- SUBORDINATE SLIP OR CRENULATION CLEAVAGE (S2')
- STRIKE AND DIP CLEAVAGE
- MINERAL LINATION IN THE PLANE OF REGIONAL AXIAL-PLANE CLEAVAGE (L0)

SOURCE: FAUTH, JOHN L., 1978 GEOLOGIC MAP OF THE IRON SPRINGS AND BLUE RIDGE SUMMIT QUADRANGLES, ADAMS AND FRANKLIN COUNTIES, PENNSYLVANIA

NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
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101 RUDI ROAD, FLOOR 2
PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9535



PROJECT NUMBER: 152596A

FILE NAME: Pitts Quarry Groundwater Conditions - 2014.dwg

DRAWN BY: MJD

CHECKED BY:

DATE: 10/15/2018

DATE:

SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2014

SCALE: AS SHOWN

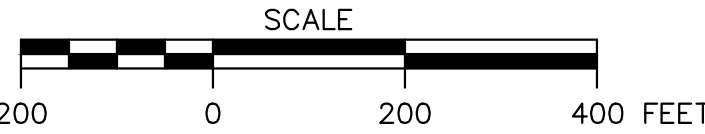
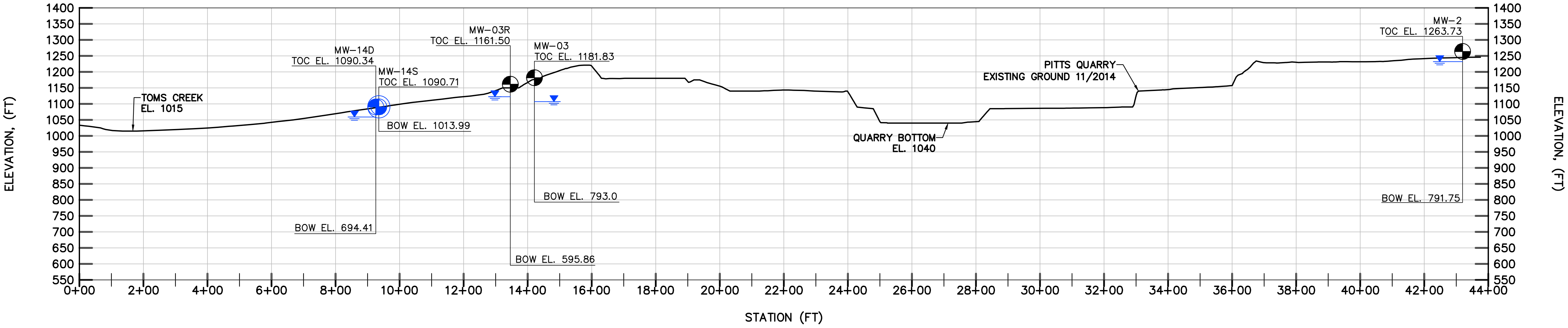
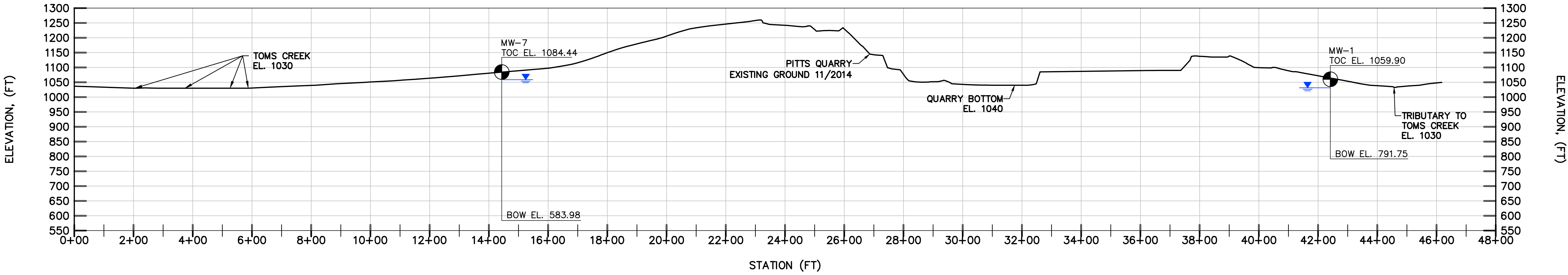
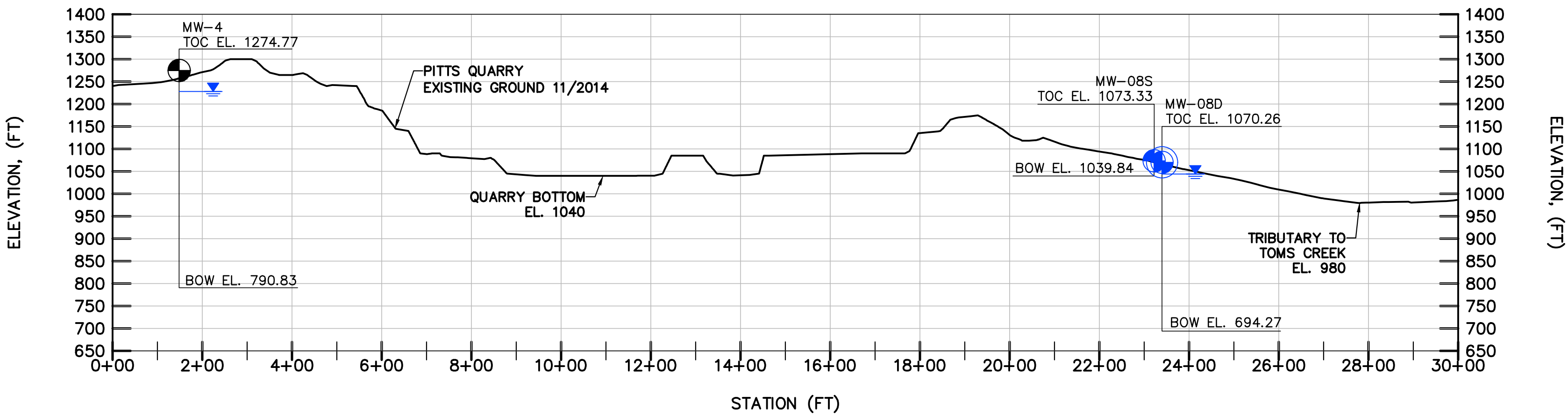
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REV 0

LEGEND

- TOC
- TOP OF CASING
- BOW
- BOTTOM OF WELL
- 
- MEAN ANNUALIZED GROUNDWATER ELEVATION (FEET AMSL)
- 
- MONITORING WELL

Well ID	Mean Annualized Groundwater Elevation (Feet AMSL)
MW-1	1031.43
MW-2	1232.08
MW-3	1106.99
MW-3R	1122.41
MW-4	1228.12
MW-4R	1266.18
MW-5	1136.32
MW-6	1314.53
MW-7	1058.63
MW-8D	1044.03
MW-14D	1059.06



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		2				
		1				

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PROJECT NUMBER: 152596A
FILE NAME: Pitts Quarry Groundwater Conditions - 2014.dwg

DRAWN BY: MJD
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DATE: 10/15/2018
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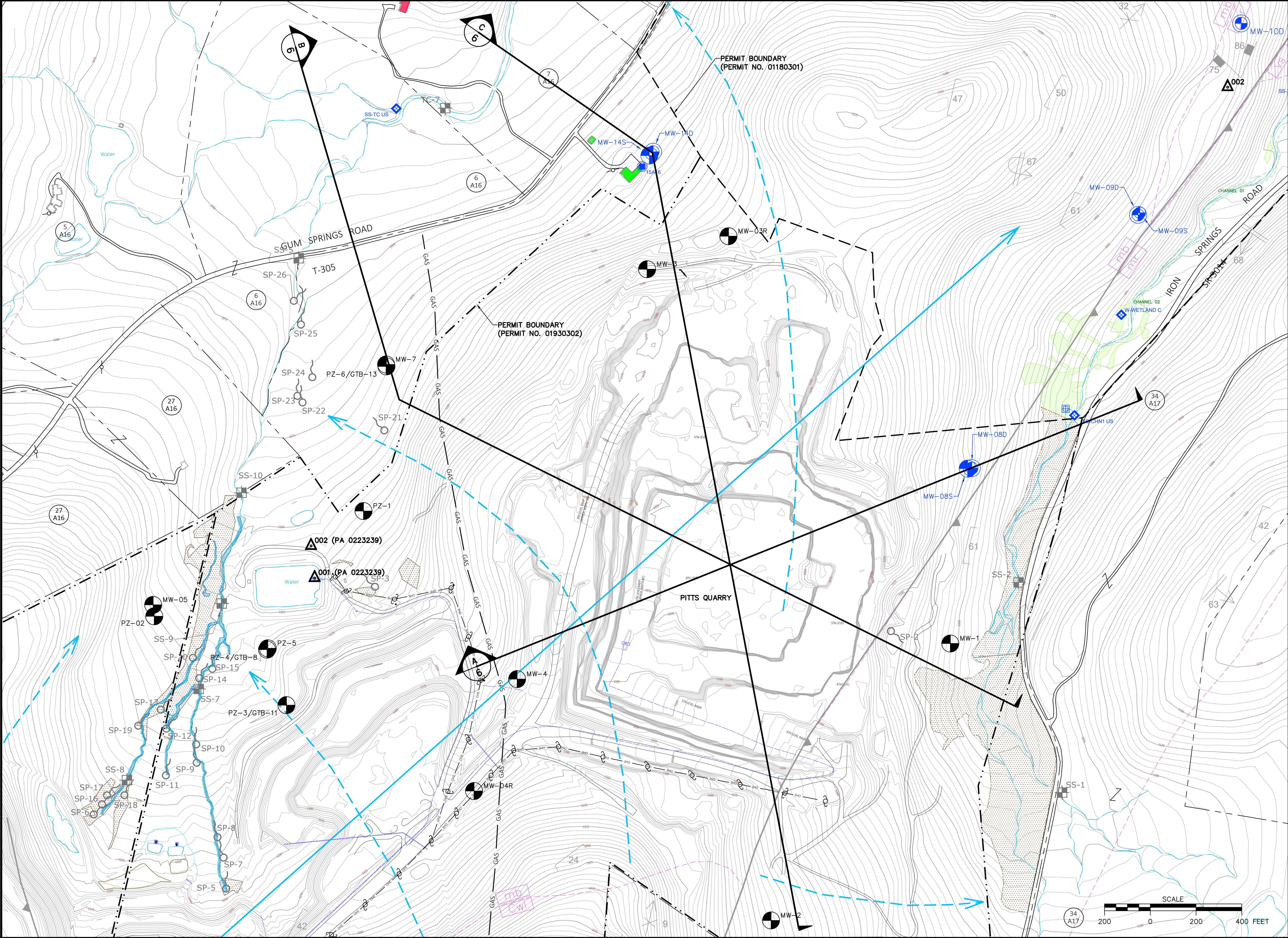
SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2014

SCALE: AS SHOWN
DRAWING NO. 4
REV 0

Monday, October 15, 2018 1:30:52 PM

R: (2015)152596 - SGI Disposal Embankment Drawings Northern Tract Quarry Groundwater Conditions - 2015.dwg



LEGEND

- 1200 EXISTING TOPOGRAPHIC MAJOR CONTOUR (25' CONTOUR INTERVAL)
- EXISTING TOPOGRAPHIC MINOR CONTOUR (5' CONTOUR INTERVAL)
- PROPERTY BOUNDARY
- EXISTING PERMIT BOUNDARY
- PROPOSED PERMIT BOUNDARY
- EXISTING ROAD
- GAS GAS EXISTING GAS LINE
- LOCAL GROUNDWATER FLOW DIRECTION
- REGIONAL GROUNDWATER FLOW DIRECTION
- WATERS OF THE UNITED STATES
- STREAM

- WETLANDS (DELINEATED BY SKELLY & LOY 12/16/2015)
- WETLANDS (DELINEATED BY AECOM 1/2011 AND 5/2012)
- OCCUPIED STRUCTURE
- UNOCCUPIED STRUCTURE

- MW-3 MONITORING WELL OR PIEZOMETER
- 958B16 EXISTING PRIVATE WATER SUPPLY WELL

WATER SAMPLING LOCATION LEGEND

- MW-12D BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- MW-11D BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- SS-13 EXISTING STREAM SAMPLE LOCATION
- SP-3 EXISTING SPRING/SEEP LOCATION
- 001 NPDES DISCHARGE LOCATION
- BACKGROUND SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- BACKGROUND AND LONG TERM SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- 07A16 BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)
- 15A16 BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)

GEOLOGY LEGEND

- SECTION DESIGNATION
- REFERENCE DRAWING NUMBER
- HARRERS FORMATION
- GREENSTONE SCHIST
- WEVERTON AND LOUDOUN FORMATION, UNDIVIDED
- METABASALT
- METARHYOLITE
- FAULT (TEETH ON UPTHROWN BLOCK)

STRIKE AND DIP SYMBOL LEGEND

- REGIONAL AXIAL-PLANE CLEAVAGE (S1)
 - INCLINED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
 - INTERSECTION OF REGIONAL AXIAL-PLANE CLEAVAGE WITH DOMINANT SLIP (CRENULATION) CLEAVAGE (L1x2)
 - OVERTURNED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
 - INCLINED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
 - MULTIPLE JOINT SYSTEM STRIKE AND DIP OF SYSTEMATIC JOINT IN THE CATOCTIN FORMATION (J5)
 - OVERTURNED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
 - SUBORDINATE SLIP OR CRENULATION CLEAVAGE (S2')
 - STRIKE AND DIP CLEAVAGE
 - MINERAL LINATION IN THE PLANE OF REGIONAL AXIAL-PLANE CLEAVAGE (L0)
- SOURCE: FAULT, JOHN L., 1978 GEOLOGIC MAP OF THE IRON SPRINGS AND BLUE RIDGE SUMMIT QUADRANGLES, ADAMS AND FRANKLIN COUNTIES, PENNSYLVANIA

NOTES / REVISIONS

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(412) 856-9440 FAX (412) 856-9535



PROJECT NUMBER: 152596A

FILE NAME: Pitts Quarry Groundwater Conditions - 2015.dwg

DRAWN BY: MJD

CHECKED BY:

DATE: 10/15/2018

DATE:

SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2015

SCALE: AS SHOWN

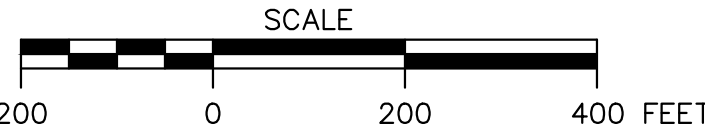
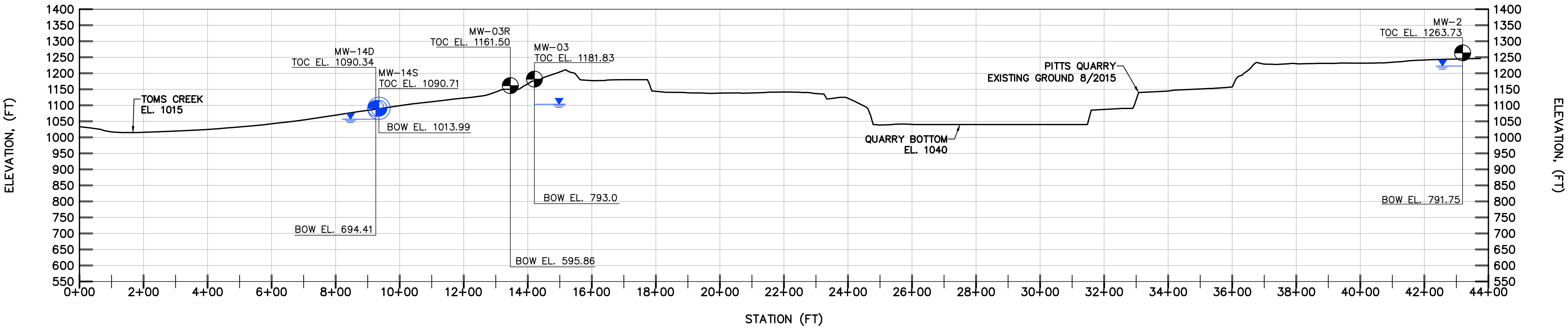
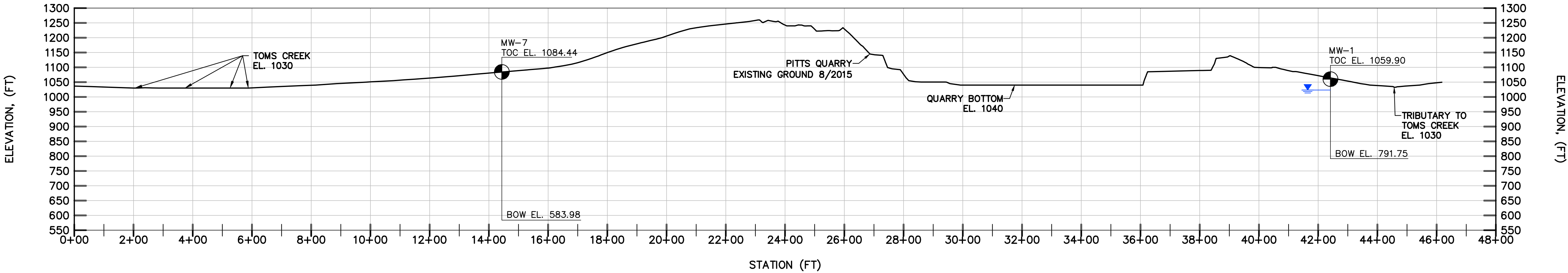
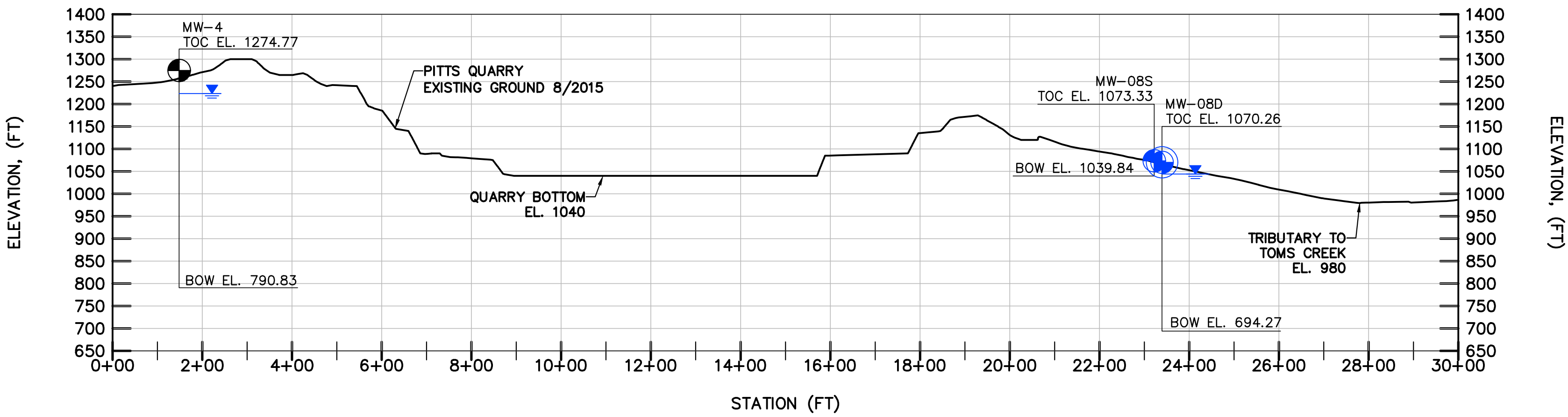
DRAWING NO. 5

REV 0

LEGEND

- TOC
- TOP OF CASING
- BOW
- BOTTOM OF WELL
- 
- MEAN ANNUALIZED GROUNDWATER ELEVATION (FEET AMSL)
- 
- MONITORING WELL

Well ID	Mean Annualized Groundwater Elevation (Feet AMSL)
MW-1	1023.25
MW-2	1222.70
MW-3	1103.45
MW-3R	N/A
MW-4	1223.45
MW-4R	N/A
MW-5	N/A
MW-6	N/A
MW-7	N/A
MW-8D	1044.60
MW-14D	1056.83



NOTES / REVISIONS

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		3				
		2				
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PROJECT NUMBER: 152596A
FILE NAME: Pitts Quarry Groundwater Conditions - 2015.dwg



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CHECKED BY:
DATE: 10/15/2018
DATE:

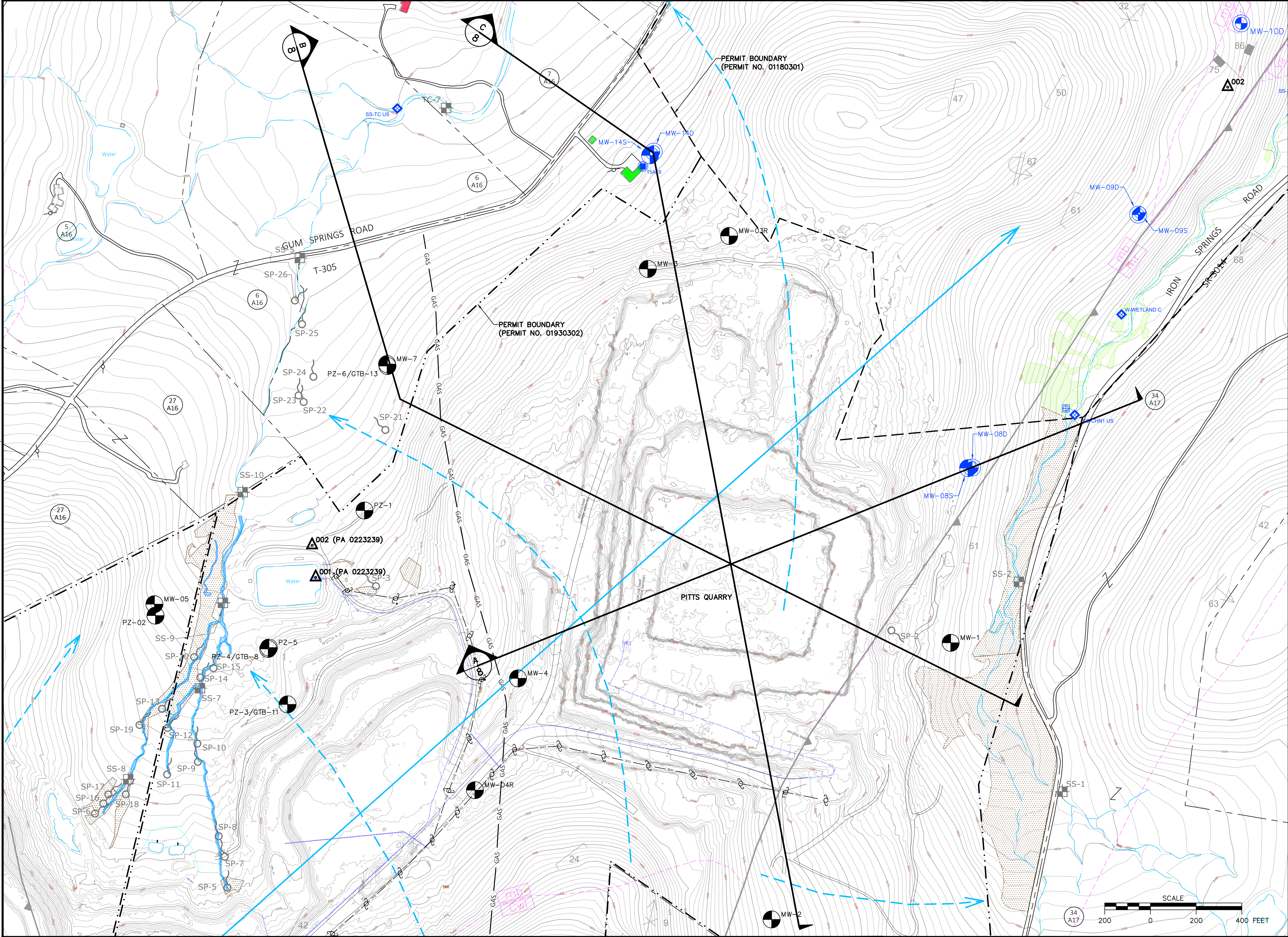
SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2015

SCALE: AS SHOWN
DRAWING NO. 6
REV 0

Monday, October 15, 2018 1:30:31 PM

R: (2015)152596 - SGI Disposal Embankment Drawings Northern Tract Quarry Groundwater Conditions - 2016.dwg



LEGEND

- 1200 EXISTING TOPOGRAPHIC MAJOR CONTOUR (25' CONTOUR INTERVAL)
- EXISTING TOPOGRAPHIC MINOR CONTOUR (5' CONTOUR INTERVAL)
- PROPERTY BOUNDARY
- EXISTING PERMIT BOUNDARY
- PROPOSED PERMIT BOUNDARY
- EXISTING ROAD
- GAS GAS EXISTING GAS LINE
- LOCAL GROUNDWATER FLOW DIRECTION
- REGIONAL GROUNDWATER FLOW DIRECTION
- WATERS OF THE UNITED STATES
- STREAM

- WETLANDS (DELINEATED BY SKELLY & LOY 12/16/2015)
- WETLANDS (DELINEATED BY AECOM 1/2011 AND 5/2012)
- OCCUPIED STRUCTURE
- UNOCCUPIED STRUCTURE
- MW-3 MONITORING WELL OR PIEZOMETER
- 958B16 EXISTING PRIVATE WATER SUPPLY WELL

WATER SAMPLING LOCATION LEGEND

- MW-12D BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- MW-11D BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- SS-13 EXISTING STREAM SAMPLE LOCATION
- SP-3 EXISTING SPRING/SEEP LOCATION
- 001 NPDES DISCHARGE LOCATION
- BACKGROUND SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- BACKGROUND AND LONG TERM SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- 07A16 BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)
- 15A16 BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)

GEOLOGY LEGEND

- SECTION DESIGNATION
- REFERENCE DRAWING NUMBER
- HAFFERS FORMATION
- GREENSTONE SCHIST
- WEVERTON AND LOUDOUN FORMATION, UNDIVIDED
- METABASALT
- METARHYOLITE
- FAULT (TEETH ON UPTHROWN BLOCK)

STRIKE AND DIP SYMBOL LEGEND

- REGIONAL AXIAL-PLANE CLEAVAGE (S1)
 - INCLINED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
 - INTERSECTION OF REGIONAL AXIAL-PLANE CLEAVAGE WITH DOMINANT SLIP (CRENULATION) CLEAVAGE (L1x2)
 - OVERTURNED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
 - INCLINED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
 - MULTIPLE JOINT SYSTEM STRIKE AND DIP OF SYSTEMATIC JOINT IN THE CATOCTIN FORMATION (J5)
 - OVERTURNED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
 - SUBORDINATE SLIP OR CRENULATION CLEAVAGE (S2')
 - STRIKE AND DIP CLEAVAGE
 - MINERAL LINATION IN THE PLANE OF REGIONAL AXIAL-PLANE CLEAVAGE (L0)
- SOURCE: FAULT, JOHN L., 1978 GEOLOGIC MAP OF THE IRON SPRINGS AND BLUE RIDGE SUMMIT QUADRANGLES, ADAMS AND FRANKLIN COUNTIES, PENNSYLVANIA

NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
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101 RUDI ROAD, FLOOR 2
PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9535



PROJECT NUMBER: 152596A

FILE NAME: Pitts Quarry Groundwater Conditions - 2016.dwg

DRAWN BY: MJD

CHECKED BY:

DATE: 10/15/2018

DATE:

SPECIALTY GRANULES LLC CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2016

SCALE: AS SHOWN

DRAWING NO. 7

REV 0

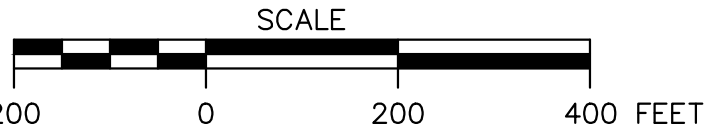
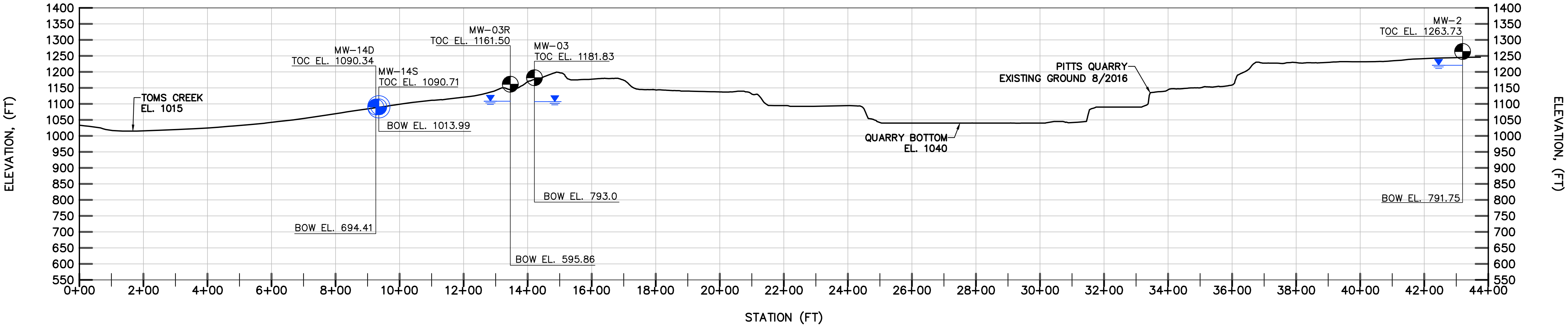
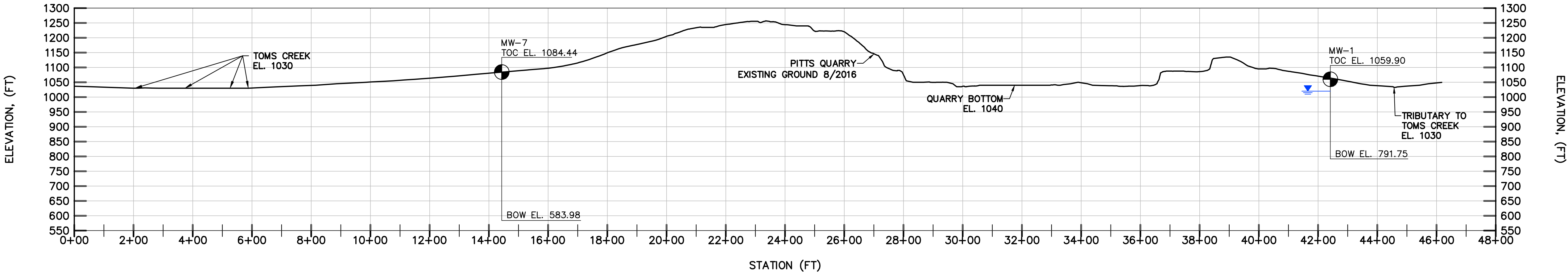
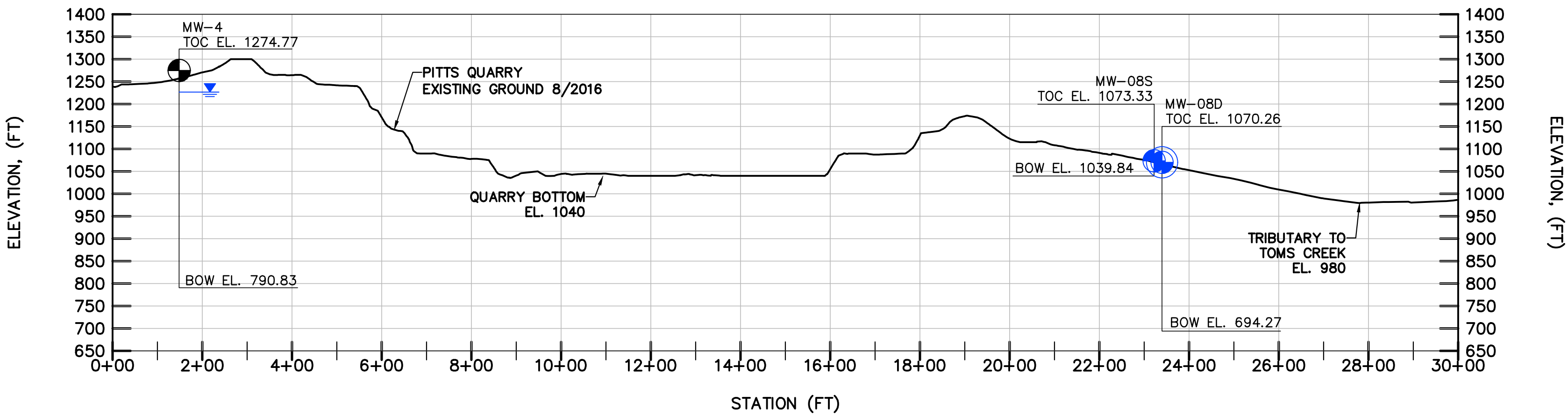
LEGEND

- TOC

TOP OF CASING
- BOW

BOTTOM OF WELL
- MEAN ANNUALIZED GROUNDWATER ELEVATION (FEET AMSL)
- MONITORING WELL

Well ID	Mean Annualized Groundwater Elevation (Feet AMSL)
MW-1	1019.83
MW-2	1220.73
MW-3	1106.97
MW-3R	1108.30
MW-4	1226.74
MW-4R	1255.05
MW-5	1130.06
MW-6	1317.62
MW-7	N/A
MW-8D	N/A
MW-14D	N/A



NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
		4				
		3				
		2				
		1				

SEAL:



D'APPOLONIA
701 RODI ROAD, FLOOR 2
PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9535



PROJECT NUMBER: 152596A
FILE NAME: Pitts Quarry Groundwater Conditions - 2016.dwg

DRAWN BY: MJD
CHECKED BY:
DATE: 10/15/2018
DATE:

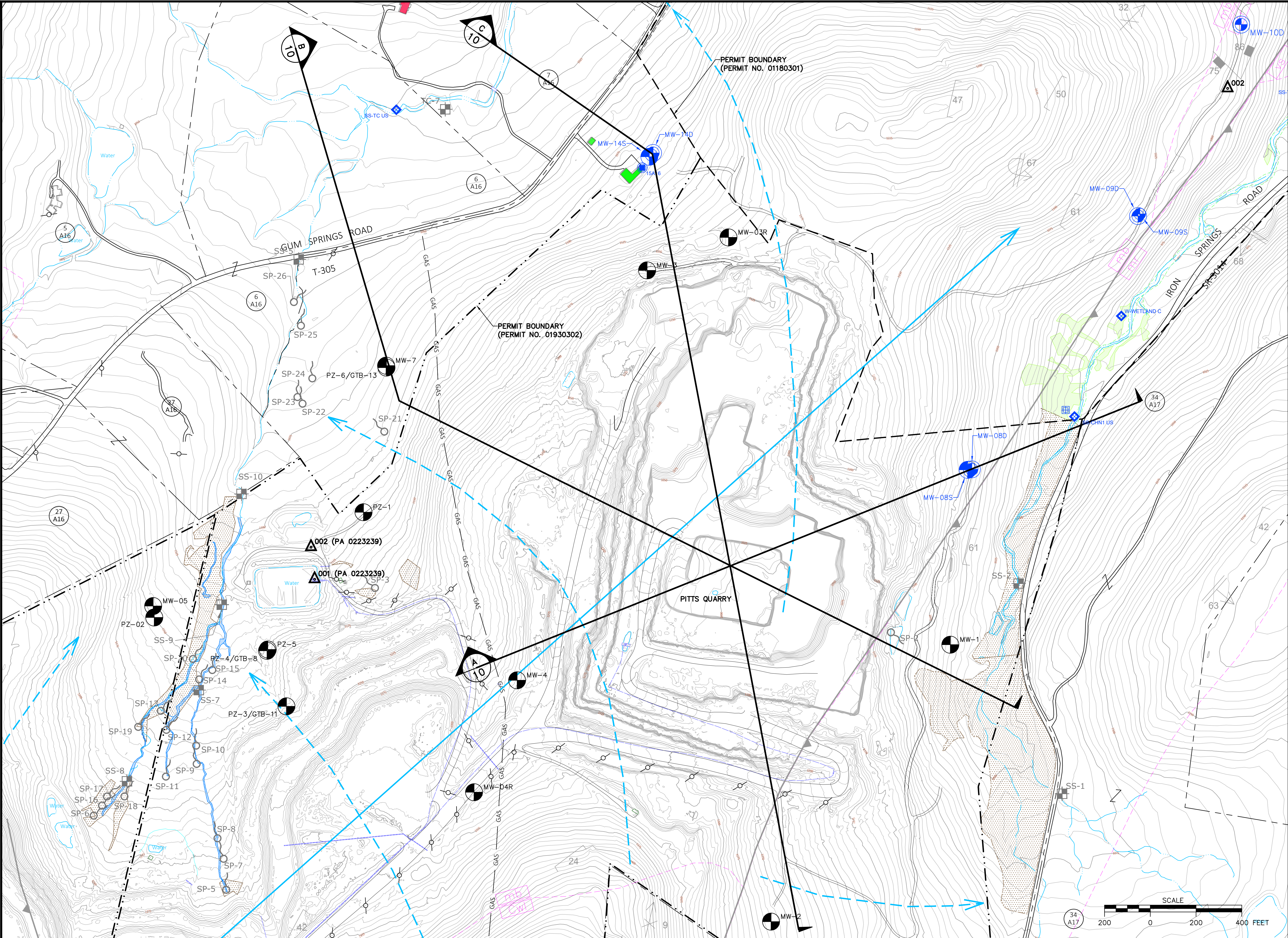
SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2016

SCALE: AS SHOWN
DRAWING NO. 8
REV 0

Monday, October 15, 2018 1:30:04 PM

R: (2015)152596 - SGI Disposal Embankment Drawings Northern Tract\Public Review Drawings\Pitts Quarry Groundwater Conditions - 2017.dwg



LEGEND

- EXISTING TOPOGRAPHIC MAJOR CONTOUR (25' CONTOUR INTERVAL)
- EXISTING TOPOGRAPHIC MINOR CONTOUR (5' CONTOUR INTERVAL)
- PROPERTY BOUNDARY
- EXISTING PERMIT BOUNDARY
- PROPOSED PERMIT BOUNDARY
- EXISTING ROAD
- EXISTING GAS LINE
- LOCAL GROUNDWATER FLOW DIRECTION
- REGIONAL GROUNDWATER FLOW DIRECTION
- WATERS OF THE UNITED STATES
- STREAM
- WETLANDS (DELINEATED BY SKELLY & LOY 12/16/2015)
- WETLANDS (DELINEATED BY AECOM 1/2011 AND 5/2012)
- OCCUPIED STRUCTURE
- UNOCCUPIED STRUCTURE

- MW-3 MONITORING WELL OR PIEZOMETER
- 958B16 EXISTING PRIVATE WATER SUPPLY WELL

WATER SAMPLING LOCATION LEGEND

- MW-12D BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- MW-11D BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- SS-13 EXISTING STREAM SAMPLE LOCATION
- SP-3 EXISTING SPRING/SEEP LOCATION
- 001 NPDES DISCHARGE LOCATION
- BACKGROUND SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- BACKGROUND AND LONG TERM SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- 07A16 BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)
- 15A16 BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)

GEOLOGY LEGEND

- SECTION DESIGNATION
- REFERENCE DRAWING NUMBER
- HAFFERS FORMATION
- GREENSTONE SCHIST
- WEVERTON AND LOUDOUN FORMATION, UNDIVIDED
- METABASALT
- METARHYOLITE
- FAULT (TEETH ON UPTHROWN BLOCK)

STRIKE AND DIP SYMBOL LEGEND

- REGIONAL AXIAL-PLANE CLEAVAGE (S1)
- INCLINED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
- INTERSECTION OF REGIONAL AXIAL-PLANE CLEAVAGE WITH DOMINANT SLIP (CRENULATION) CLEAVAGE (L1x2)
- OVERTURNED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
- INCLINED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
- MULTIPLE JOINT SYSTEM STRIKE AND DIP OF SYSTEMATIC JOINT IN THE CATOCTIN FORMATION (J5)
- OVERTURNED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
- SUBORDINATE SLIP OR CRENULATION CLEAVAGE (S2')
- STRIKE AND DIP CLEAVAGE
- MINERAL LINATION IN THE PLANE OF REGIONAL AXIAL-PLANE CLEAVAGE (L0)

SOURCE: FAUTH, JOHN L., 1978 GEOLOGIC MAP OF THE IRON SPRINGS AND BLUE RIDGE SUMMIT QUADRANGLES, ADAMS AND FRANKLIN COUNTIES, PENNSYLVANIA

NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
		1				
		2				
		3				
		4				

SEAL:



D'APPOLONIA

101 RODI ROAD, FLOOR 2
PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9535



PROJECT NUMBER: 152596A

FILE NAME: Pitts Quarry Groundwater Conditions - 2017.dwg

DRAWN BY: MJD

CHECKED BY:

DATE: 10/15/2018

DATE:

SPECIALTY GRANULES LLC

CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS

2017

SCALE: AS SHOWN

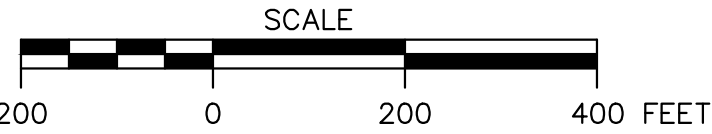
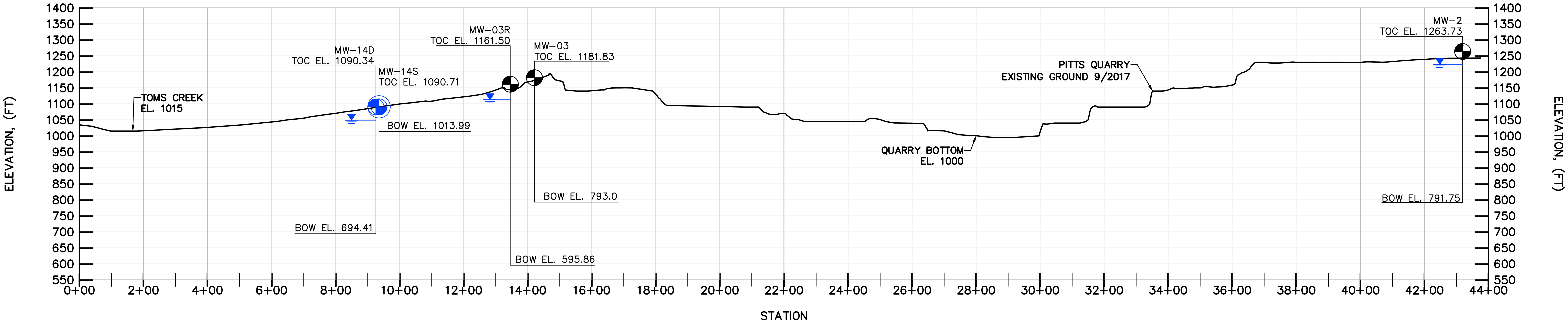
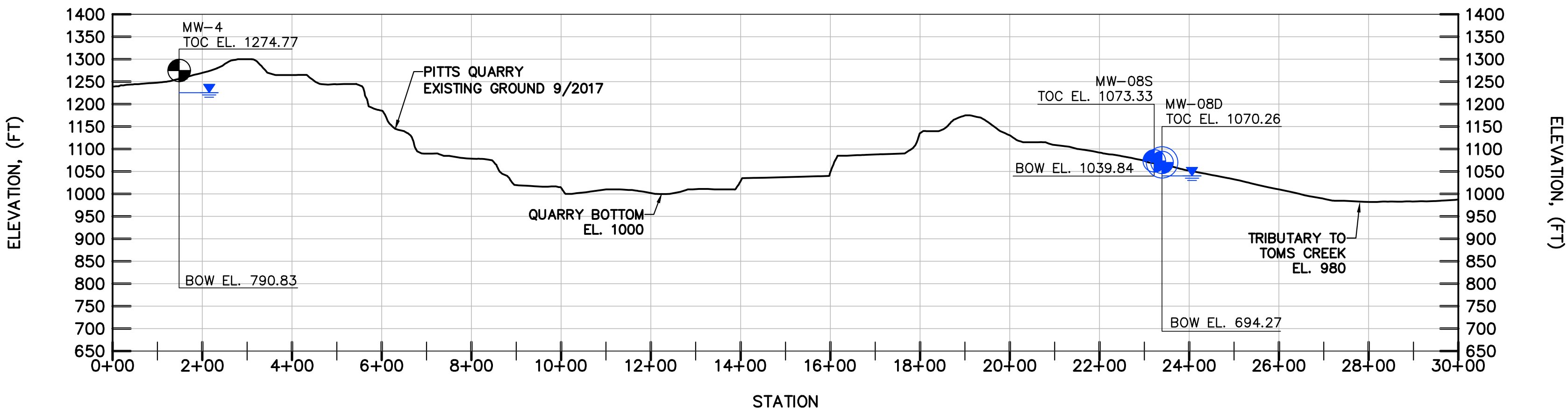
DRAWING NO. 9

REV 0

LEGEND

- TOC
- TOP OF CASING
- BOW
- BOTTOM OF WELL
- 
- MEAN ANNUALIZED GROUNDWATER ELEVATION (FEET AMSL)
- 
- MONITORING WELL

Well ID	Mean Annualized Groundwater Elevation (Feet AMSL)
MW-1	1031.85
MW-2	1223.81
MW-3	N/A
MW-3R	1112.95
MW-4	1225.47
MW-4R	1268.48
MW-5	1138.06
MW-6	1317.57
MW-7	1056.72
MW-8D	1040.29
MW-14D	1049.22



NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
		4				
		3				
		2				
		1				

SEAL:



D'APPOLONIA
701 RODI ROAD, FLOOR 2
PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9635



PROJECT NUMBER: 152596A
FILE NAME: Pitts Quarry Groundwater Conditions - 2017.dwg

DRAWN BY: MJD
CHECKED BY:
DATE: 10/15/2018
DATE:

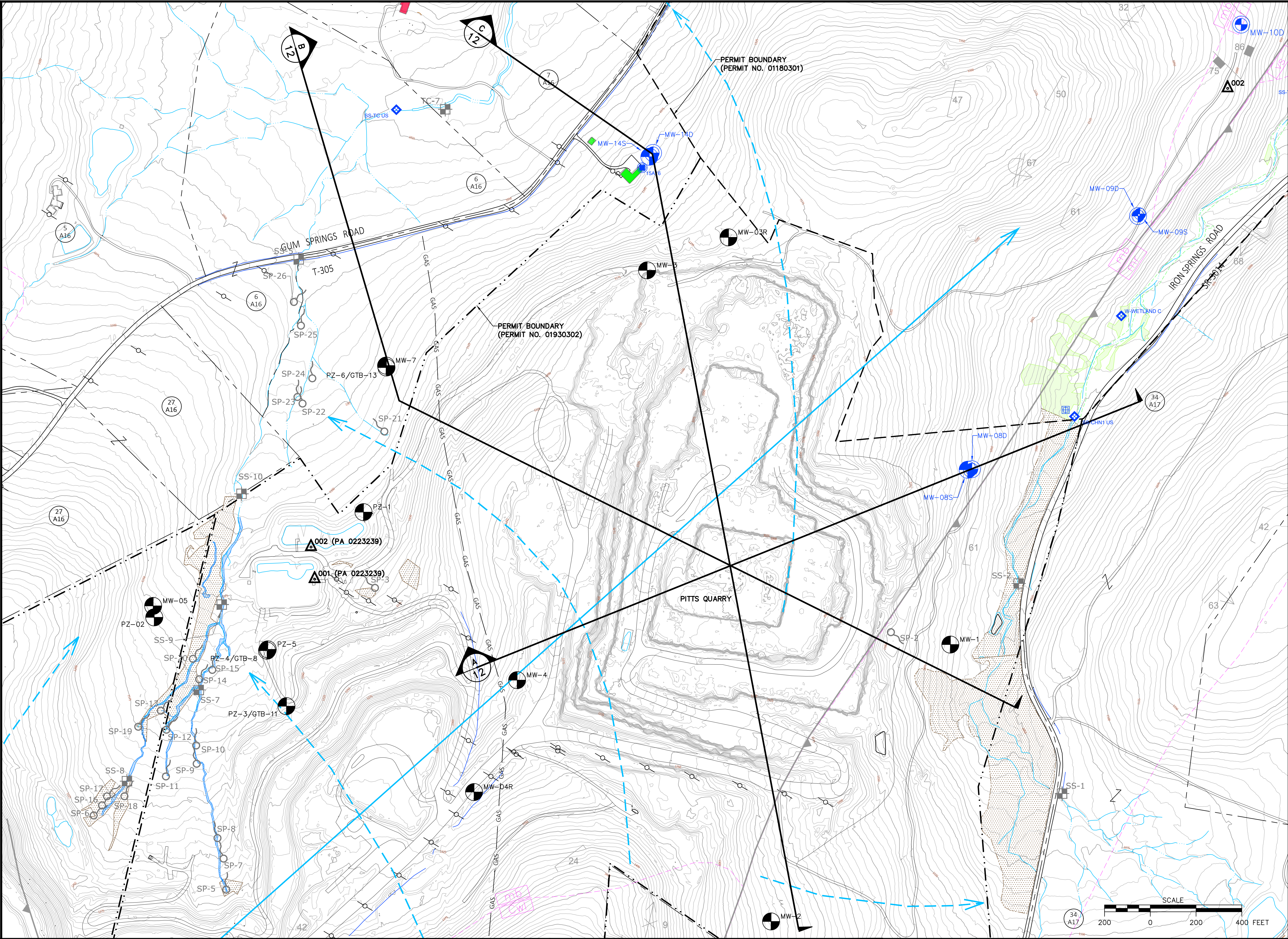
SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2017

SCALE: AS SHOWN
DRAWING NO. 10
REV 0

Monday, October 15, 2018 1:47:54 PM

R: (2015)152596 - SGI Disposal Embankment Drawings Northern Tract Quarry Groundwater Conditions - 2018.dwg



LEGEND

- 1200 EXISTING TOPOGRAPHIC MAJOR CONTOUR (25' CONTOUR INTERVAL)
- EXISTING TOPOGRAPHIC MINOR CONTOUR (5' CONTOUR INTERVAL)
- PROPERTY BOUNDARY
- EXISTING PERMIT BOUNDARY
- PROPOSED PERMIT BOUNDARY
- EXISTING ROAD
- GAS GAS EXISTING GAS LINE
- LOCAL GROUNDWATER FLOW DIRECTION
- REGIONAL GROUNDWATER FLOW DIRECTION
- WATERS OF THE UNITED STATES
- STREAM
- WETLANDS (DELINEATED BY SKELLY & LOY 12/16/2015)
- WETLANDS (DELINEATED BY AECOM 1/2011 AND 5/2012)
- OCCUPIED STRUCTURE
- UNOCCUPIED STRUCTURE

- MW-3 MONITORING WELL OR PIEZOMETER
- 958B16 EXISTING PRIVATE WATER SUPPLY WELL

WATER SAMPLING LOCATION LEGEND

- MW-12D BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- MW-11D BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (MONITORING WELL)
- SS-13 EXISTING STREAM SAMPLE LOCATION
- SP-3 EXISTING SPRING/SEEP LOCATION
- 001 NPDES DISCHARGE LOCATION
- BACKGROUND SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- BACKGROUND AND LONG TERM SURFACE WATER MONITORING STATION FOR NORTHERN TRACT QUARRY
- 07A16 BACKGROUND GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)
- 15A16 BACKGROUND AND PROPOSED LONG TERM GROUND WATER MONITORING STATION FOR NORTHERN TRACT QUARRY (EXISTING PRIVATE WATER SUPPLY WELL)

GEOLOGY LEGEND

- SECTION DESIGNATION
- REFERENCE DRAWING NUMBER
- HARRERS FORMATION
- GREENSTONE SCHIST
- WEVERTON AND LOUDOUN FORMATION, UNDIVIDED
- METABASALT
- METARHYOLITE
- FAULT (TEETH ON UPTHROWN BLOCK)

STRIKE AND DIP SYMBOL LEGEND

- REGIONAL AXIAL-PLANE CLEAVAGE (S1)
- INCLINED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
- INTERSECTION OF REGIONAL AXIAL-PLANE CLEAVAGE WITH DOMINANT SLIP (CRENULATION) CLEAVAGE (L1x2)
- OVERTURNED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
- INCLINED STRIKE AND DIP OF LAYERING OR FLOW (?) BANDING IN VOLCANIC ROCKS (S0)
- MULTIPLE JOINT SYSTEM STRIKE AND DIP OF SYSTEMATIC JOINT IN THE CATOCTIN FORMATION (JS)
- OVERTURNED STRIKE AND DIP OF BEDDING IN SEDIMENTARY ROCKS (S0)
- SUBORDINATE SLIP OR CRENULATION CLEAVAGE (S2')
- STRIKE AND DIP CLEAVAGE
- MINERAL LINATION IN THE PLANE OF REGIONAL AXIAL-PLANE CLEAVAGE (L0)

SOURCE: FAUTH, JOHN L., 1978 GEOLOGIC MAP OF THE IRON SPRINGS AND BLUE RIDGE SUMMIT QUADRANGLES, ADAMS AND FRANKLIN COUNTIES, PENNSYLVANIA

NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
		1				
		2				
		3				
		4				

SEAL:



D'APPOLONIA

101 RODI ROAD, FLOOR 2
PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9535



PROJECT NUMBER: 152596A

FILE NAME: Pitts Quarry Groundwater Conditions - 2018.dwg

DRAWN BY: MJD

CHECKED BY:

DATE: 10/15/2018

DATE:

SPECIALTY GRANULES LLC

CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS

2018

SCALE: AS SHOWN

DRAWING NO. 11

REV 0

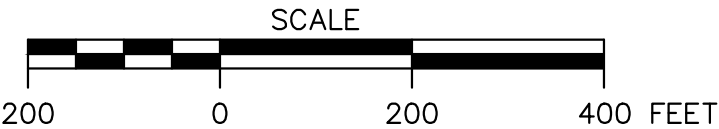
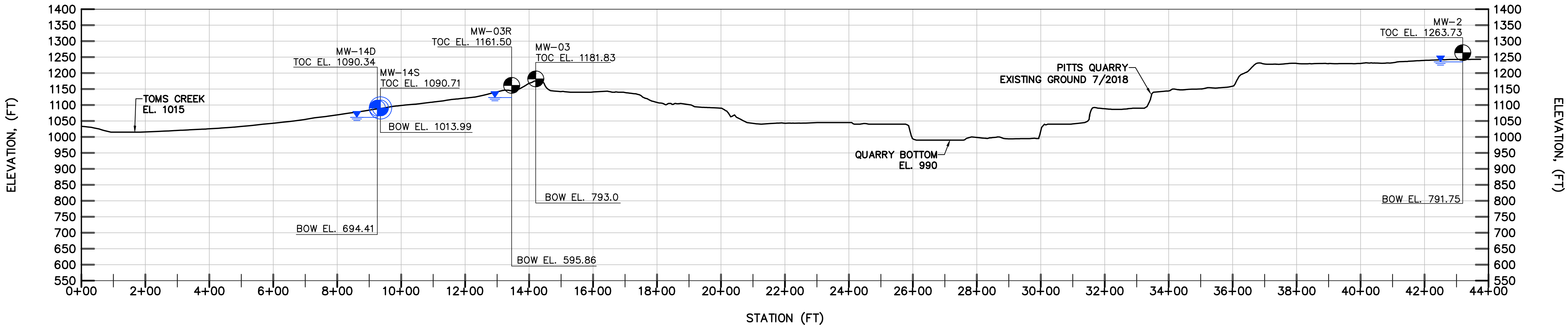
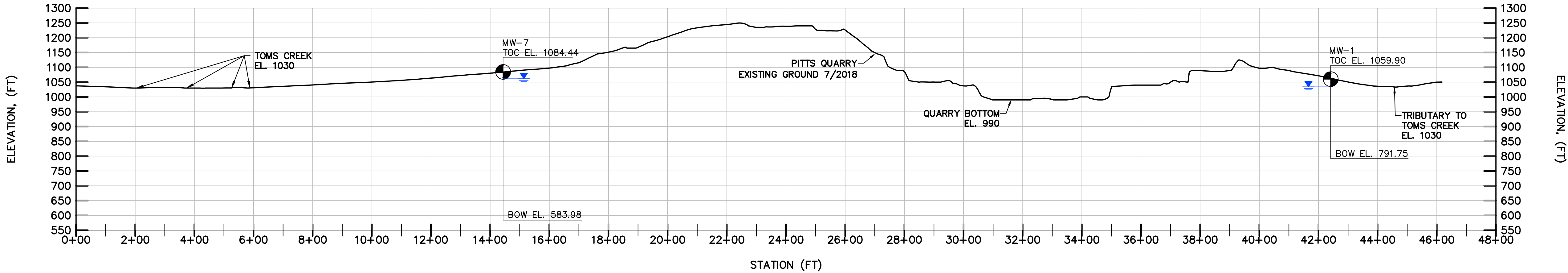
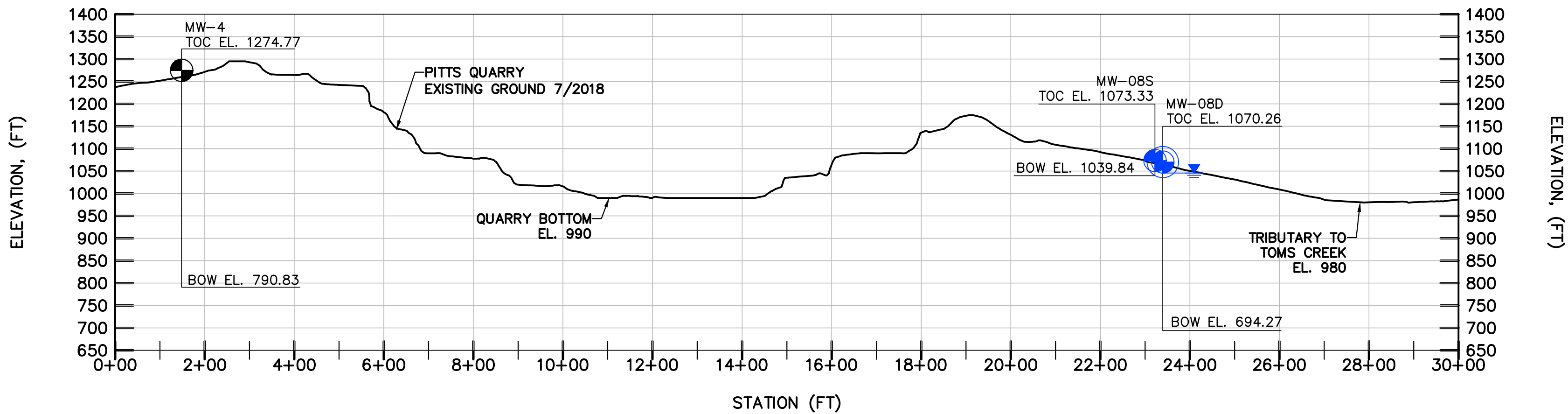
P:\2015\152596 - SGI Disposal Embankment\Drawings\Northern Tract\Public Review Drawings\Pitts Quarry Groundwater Conditions - 2018.dwg Tuesday, October 23, 2018 2:04:34 PM

Well ID	Mean Annualized Groundwater Elevation (Feet AMSL)
MW-1	1033.87
MW-2	1235.17
MW-3	N/A
MW-3R	1123.35
MW-4	N/A
MW-4R	1280.13
MW-5	N/A
MW-6	1320.23
MW-7	1061.30
MW-8D	1045.96
MW-14D	1061.28

LEGEND

- TOC TOP OF CASING
- BOW BOTTOM OF WELL
- MEAN ANNUALIZED GROUNDWATER ELEVATION (FEET AMSL)

MONITORING WELL



NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
		4				
		3				
		2				
		1				

SEAL:



D'APPOLONIA
701 RODI ROAD, FLOOR 2
PITTSBURGH, PENNSYLVANIA 15235-4559
(412) 856-9440 FAX (412) 856-9635



PROJECT NUMBER: 152596A
FILE NAME: Pitts Quarry Groundwater Conditions - 2018.dwg

DRAWN BY: MJD
CHECKED BY:
DATE: 10/18/2018
DATE:

SPECIALTY GRANULES LLC
CHARMIAN - NORTHERN TRACT QUARRY

PITTS QUARRY GROUNDWATER CONDITIONS
2018

SCALE: AS SHOWN
DRAWING NO. 12
REV 0