
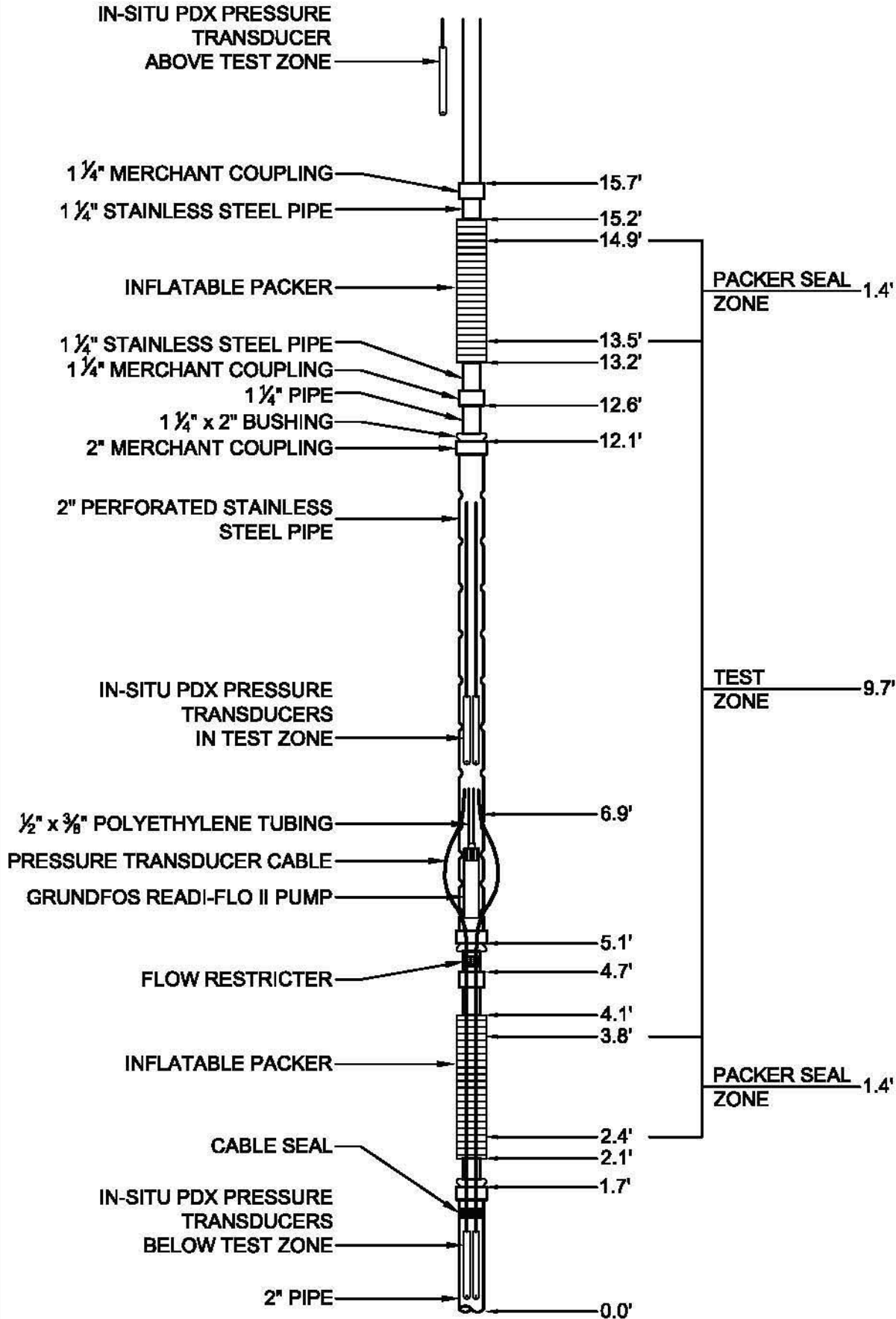


GZA-1717000-18,998\17889\17889-10\DWG\Figures\CAD\17889-10_Pneumatic Test Schematic.v2.DWG [A.1 Pneumatic Wellhead] December 27, 2007 - 7:25pm Elnora.Denohue

FIGURE NO. 4.1	JOB NO. 17889.10	INDIAN POINT ENERGY CENTER BUCHANAN, NEW YORK	PROJ MGR: MJB DESIGNED BY: SC REVIEWED BY: SC OPERATOR: GAS/EMD DATE: 12-27-2007	NOT TO SCALE
	PNEUMATIC SLUG TEST MANIFOLD SCHEMATIC		 GZA GeoEnvironmental, Inc. ONE EDGEWATER DRIVE NORWOOD, MA 02062 Ph.: (781) 278-3700 Fax: (781) 278-5701	



NOT TO SCALE

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PROJ MGR: MJB
 DESIGNED BY: SC
 REVIEWED BY: SC
 OPERATOR: GAS/EMD
 DATE: 12-27-2007

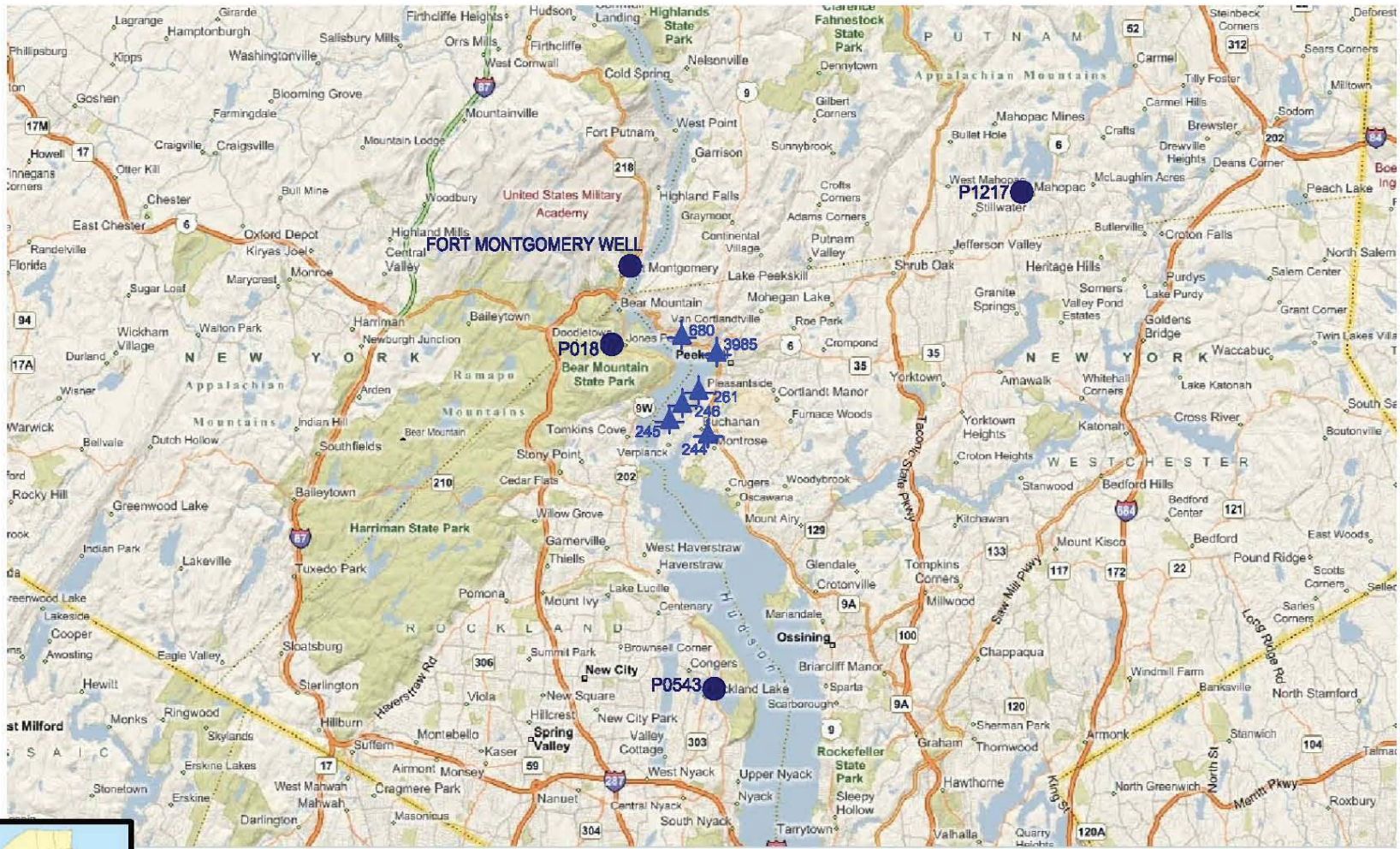
**INDIAN POINT ENERGY CENTER
 BUCHANAN, NEW YORK**

**PACKER TEST
 ASSEMBLAGE SCHEMATIC**

JOB NO.
17889.10

FIGURE NO.
4.2

GZA-17,000-18,999\17869\17869-10.DWG Figures\CAD\3-USGS Well Locations_V2.dwg [Layout1] December 27, 2007 - 8:36pm Elaine.Donohue



LEGEND

- 680 ▲ FORMER PUMPING WELL WITH DESIGNATION
- P018 ● CURRENT USGS OBSERVATION WELL WITH DESIGNATION

JOB NO.
17869.10
 FIGURE NO.
4.3

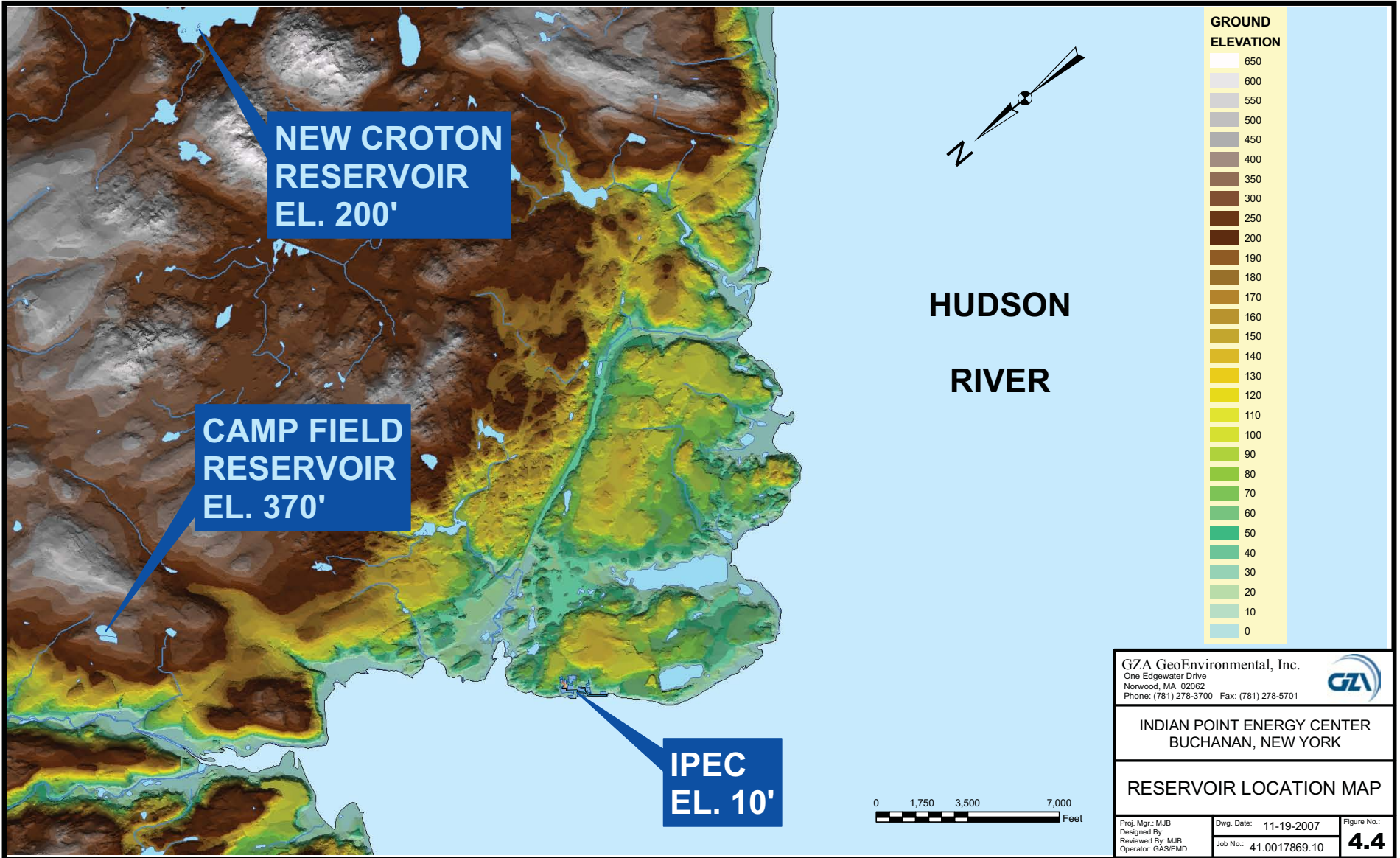
**INDIAN POINT ENERGY CENTER
 BUCHANAN, NEW YORK**

**USGS WELL
 LOCATION MAP**

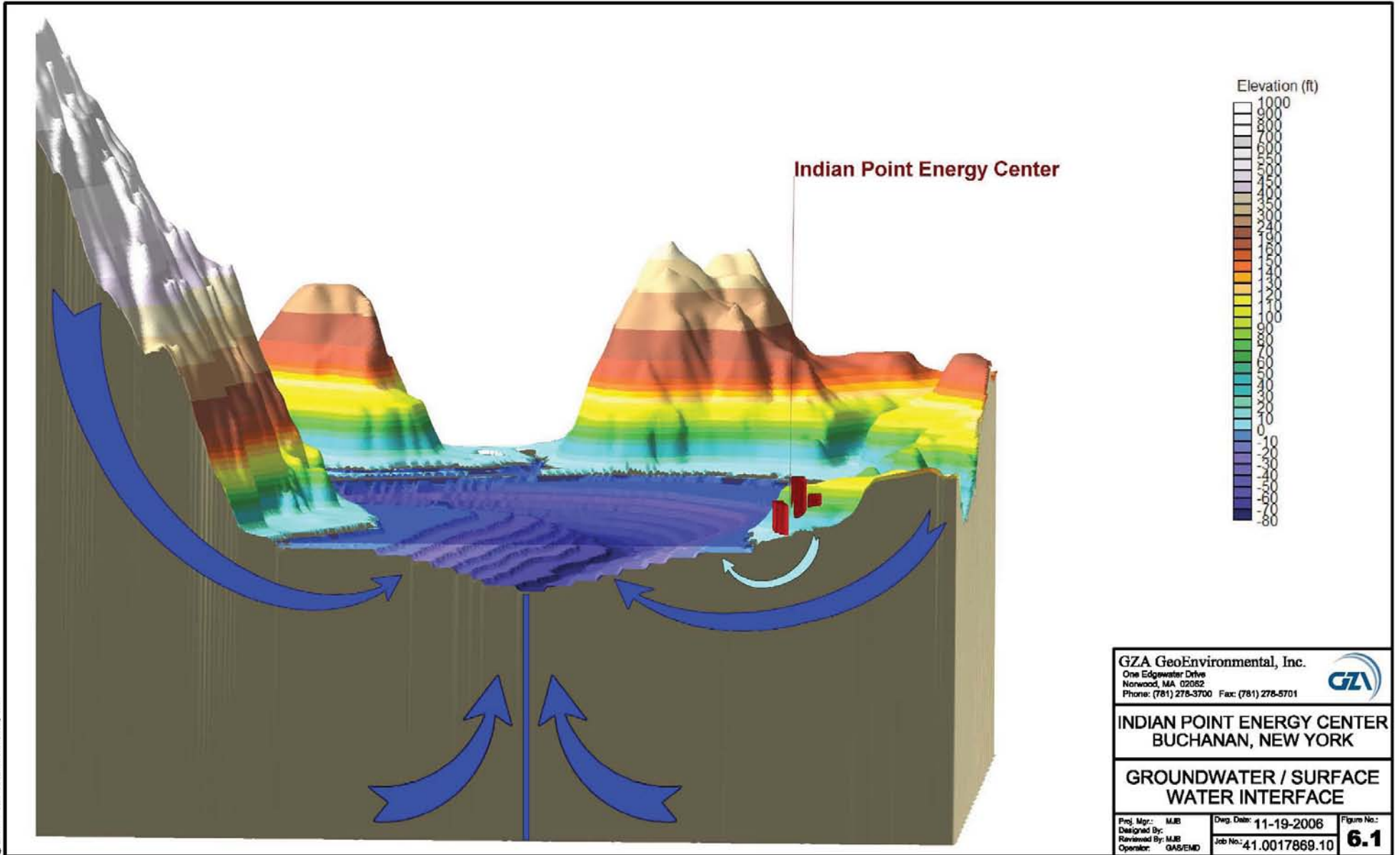
PROJ MGR: DMW
 DESIGNED BY: DMW
 REVIEWED BY: DMW
 OPERATOR: GAS/EMD
 DATE: 12-27-2007



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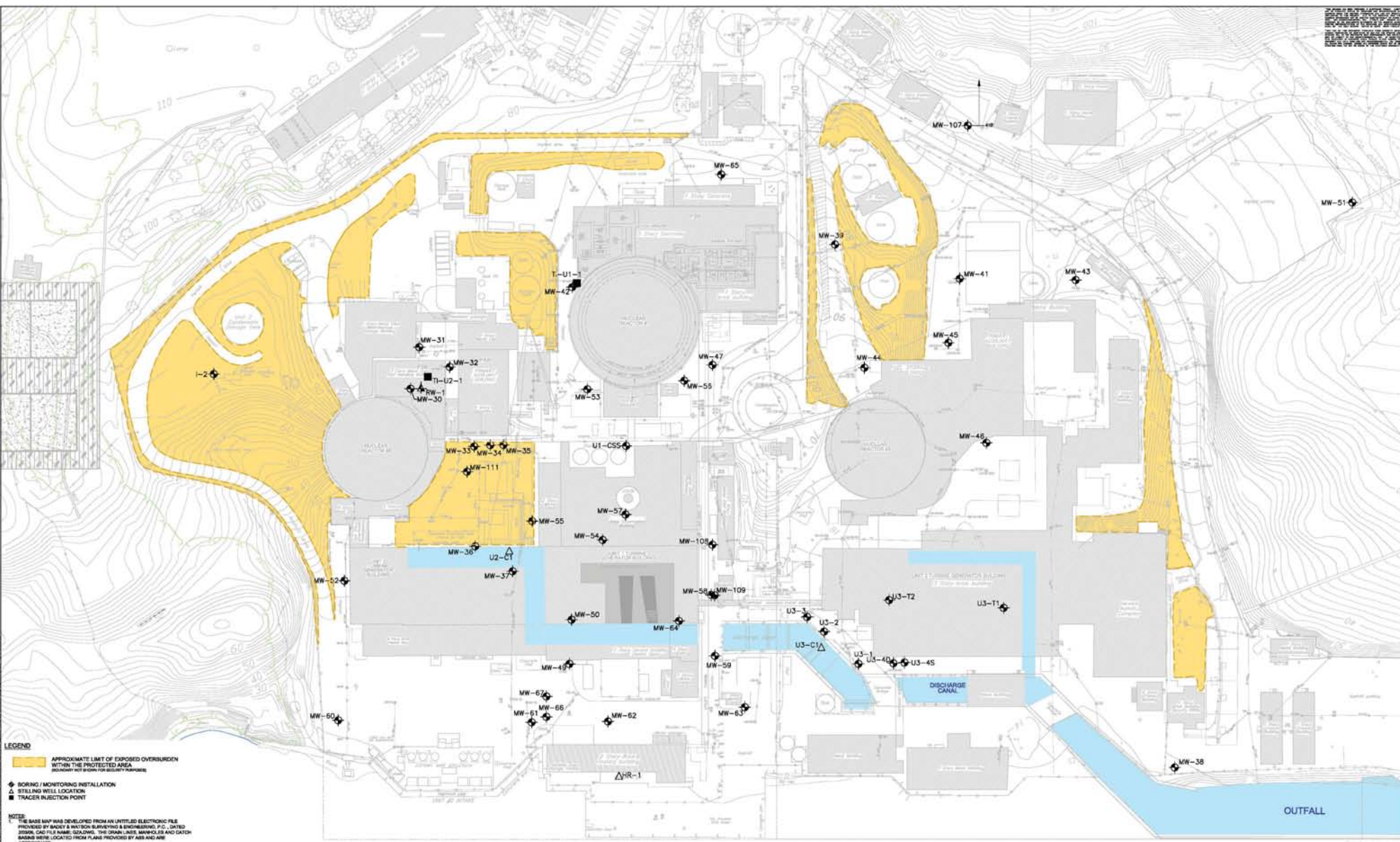
IPEC



GEOLOGIC MAP OF
NEW YORK, LOWER
HUDSON SHEET,
REPRINTED 1995,
NEW YORK STATE
MUSEUM AND
SCIENCE SERVICE,
MAP AND CHART
SERIES NO. 15.

GZA GeoEnvironmental, Inc. One Edgewater Drive Norwood, MA 02062 Phone: (781) 278-3700 Fax: (781) 278-9701		
INDIAN POINT ENERGY CENTER BUCHANAN, NEW YORK		
SITE AREA USGS GEOLOGIC MAP		
Proj. Mgr.: MJB Designed By: Reviewed By: MJB Operator: GAS/EMD	Dwg. Date: 11-19-2006 Job No.: 41.0017869.10	Figure No.: 6.2

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LEGEND

APPROXIMATE LIMIT OF EXPOSED OVERBURDEN WITHIN THE PROTECTED AREA (BOUNDARY NOT SHOWN FOR SECURITY PURPOSES)

BORING / MONITORING INSTALLATION

STELLING WELL LOCATION

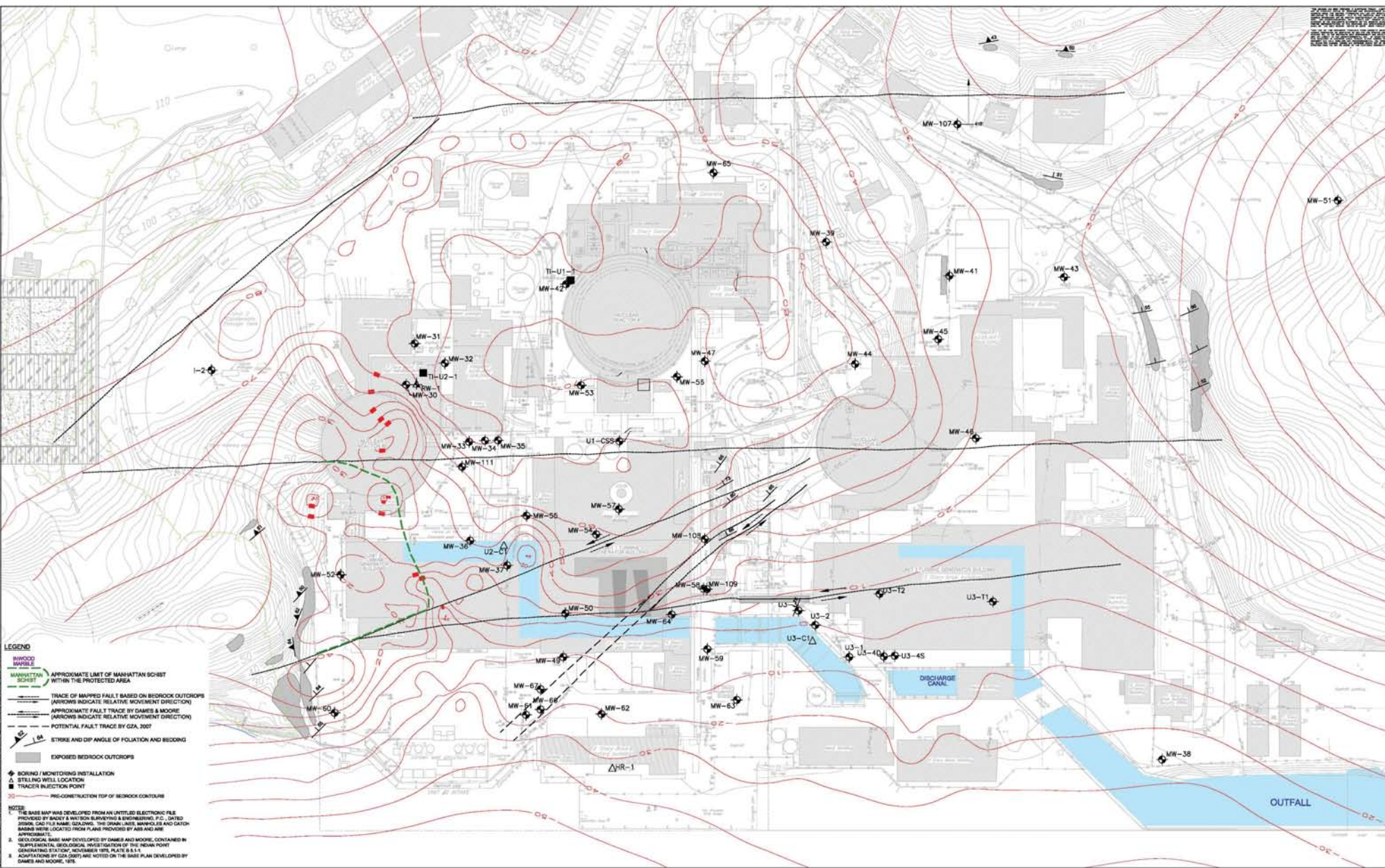
TRACER INJECTION POINT

NOTES:

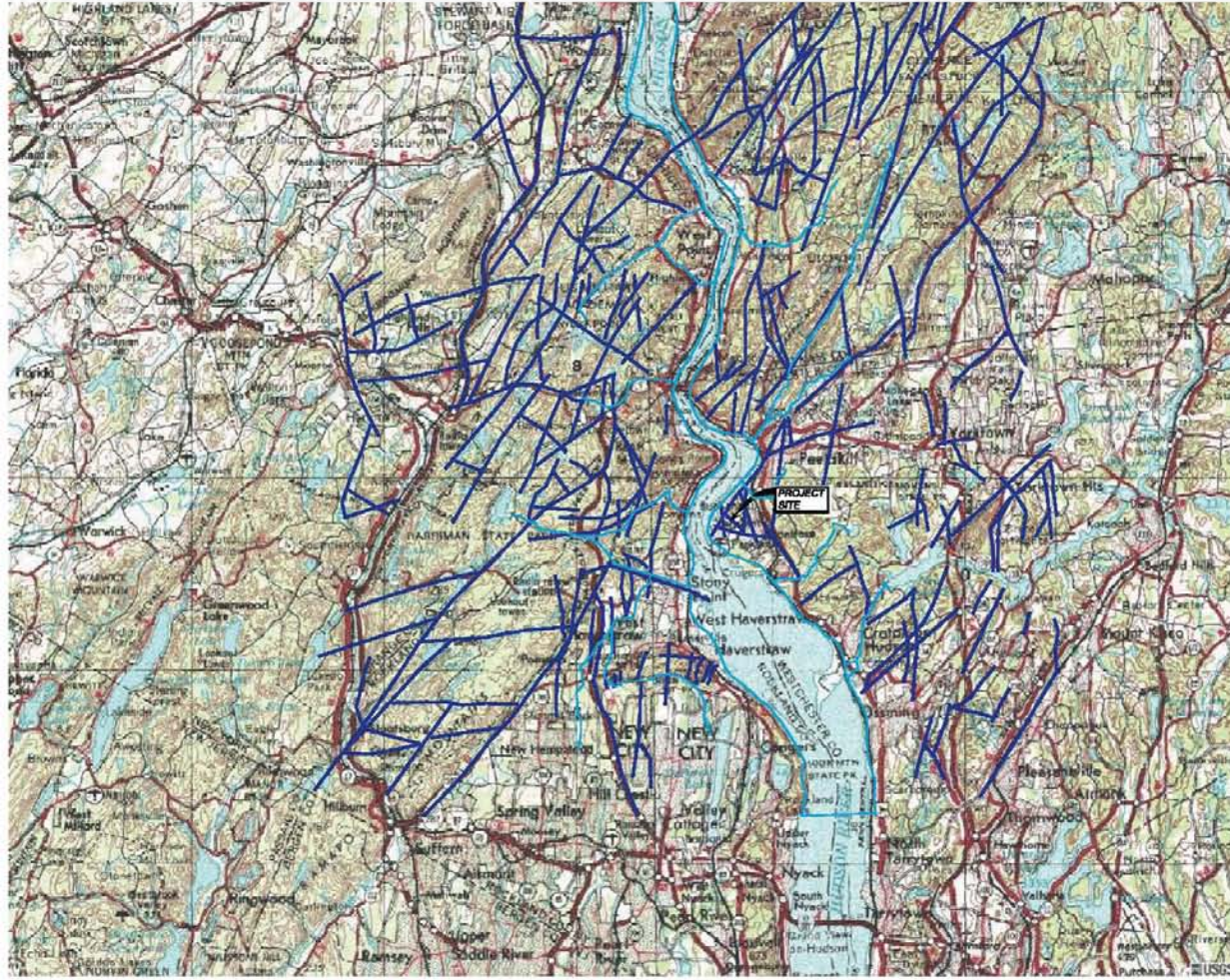
1. THE BASE MAP WAS DEVELOPED FROM AN UNLITTED ELECTRONIC FILE PROVIDED BY BARRY & WATSON SURVEYING & ENGINEERING, P.C., DATED 2006. CAD FILE NAME: 02040001.DWG. THE DRAINAGE MAINS, MANHOLES AND CATCH BASINS WERE LOCATED FROM PLANS PROVIDED BY ABB AND ARE APPROXIMATE.
2. GEOLOGICAL BASE MAP DEVELOPED BY DAMBS AND MOORE, CONTAINED IN SUPPLEMENTAL GEOLOGICAL INVESTIGATION OF THE INDIAN POINT GENERATING STATION, NOVEMBER 1978, PLATE 8 & 11.
3. ADAPTATIONS BY GSA (2007) ARE NOTED ON THE BASE PLAN DEVELOPED BY DAMBS AND MOORE, 1978.

INDIAN POINT ENERGY CENTER
ROCKAWAY, NEW YORK
SITE UNCONTAMINATED BIOLOGIC MAP

DATE: 08/11/10	SCALE: AS SHOWN	PROJECT NO: 17869	FIGURE NO: 6.3
DESIGNED BY: GSA	DATE: 08/11/10	PROJECT NO: 17869	FIGURE NO: 6.3
CHECKED BY: GSA	DATE: 08/11/10	PROJECT NO: 17869	FIGURE NO: 6.3
APPROVED BY: GSA	DATE: 08/11/10	PROJECT NO: 17869	FIGURE NO: 6.3
INDIAN POINT ENERGY CENTER ROCKAWAY, NEW YORK SITE UNCONTAMINATED BIOLOGIC MAP		PROJECT NO: 17869 FIGURE NO: 6.3	

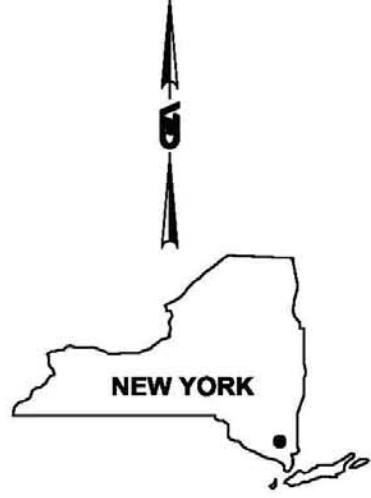


DATE: 10/20/10	SCALE: 1" = 100'
PROJECT NO: 17869-10	DATE: 10/20/10
FIGURE NO: 6.4	
INDIAN POINT ENERGY CENTER BUCHANAN, NEW YORK SITE GEOLOGICAL MAP	
PREPARED BY: GSA CHECKED BY: GSA APPROVED BY: GSA	



LEGEND

- LINEAMENTS
- TRIBUTARY STREAMS



NOTE:
 BASE MAP ADAPTED FROM U.S.G.S.
 TOPOGRAPHIC MAPS DOWNLOADED
 FROM TERRASERVER.MICROSOFT.COM.
 LINEAMENTS ADAPTED FROM "PHOTO
 LINEAMENT AND FAULT MAP" REPORTED
 BY DAMES & MOORE, DATED APRIL, 1965

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ONE INCH = 12,000 FEET
 0 6,000' 12,000' 24,000'

PROJ MGR: DMW
 DESIGNED BY: DEW
 REVIEWED BY: DMW

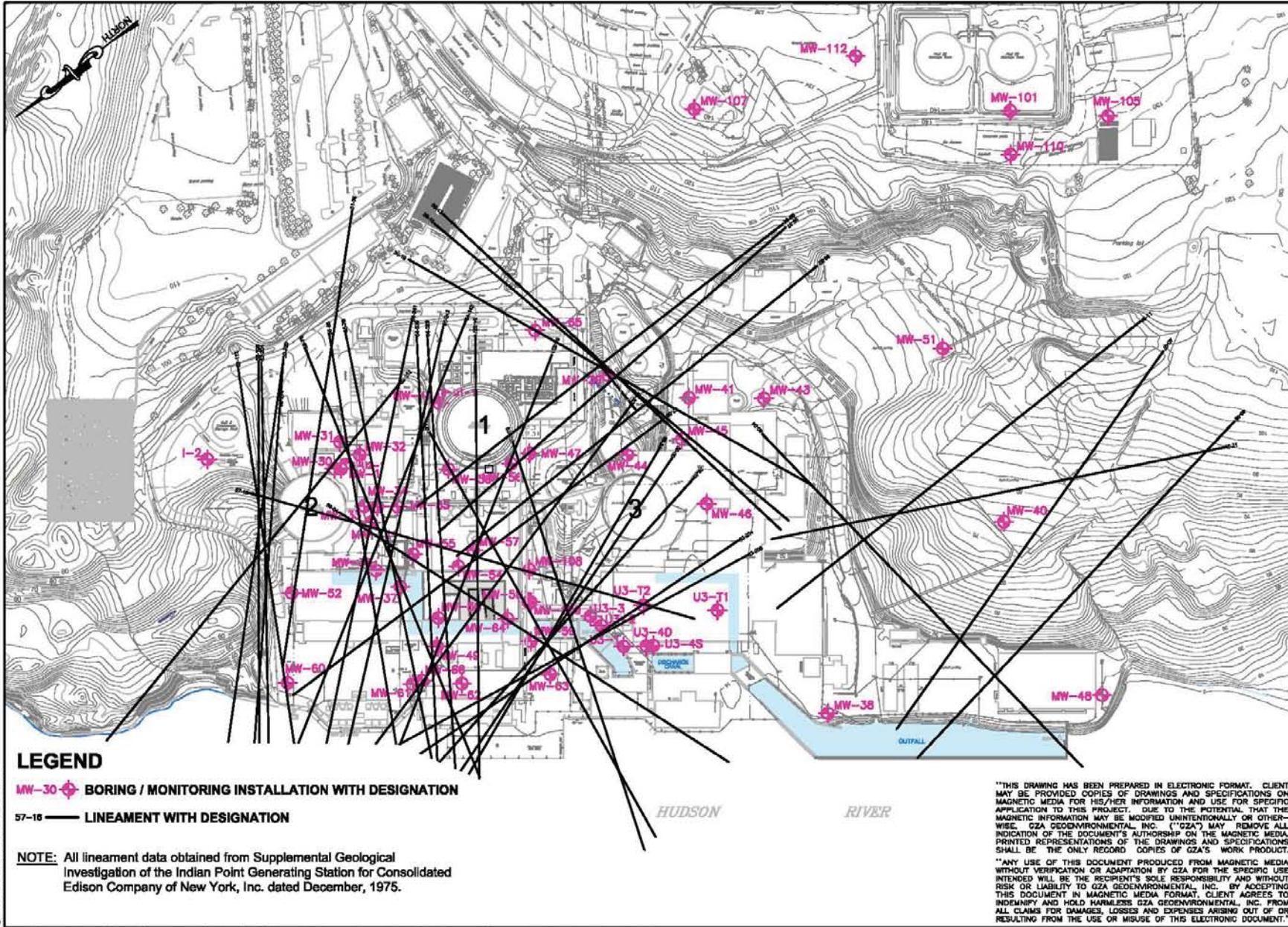
OPERATOR: DEW/GAS
 DATE : 11-19-2007

GZA GeoEnvironmental, Inc.
 ONE EDGEWATER DRIVE
 NORWOOD, MA 02062
 TEL: (781) 278-3700
 FAX: (781) 278-3701

**INDIAN POINT ENERGY CENTER
 BUCHANAN, NEW YORK
 REGIONAL LINEAMENT MAP**

PROJECT NO.
17869.10

FIGURE NO.
6.5



LEGEND

MW-30 BORING / MONITORING INSTALLATION WITH DESIGNATION

57-16 LINEAMENT WITH DESIGNATION

NOTE: All lineament data obtained from Supplemental Geological Investigation of the Indian Point Generating Station for Consolidated Edison Company of New York, Inc. dated December, 1975.

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SCALE IN FEET
0 100' 200' 400'

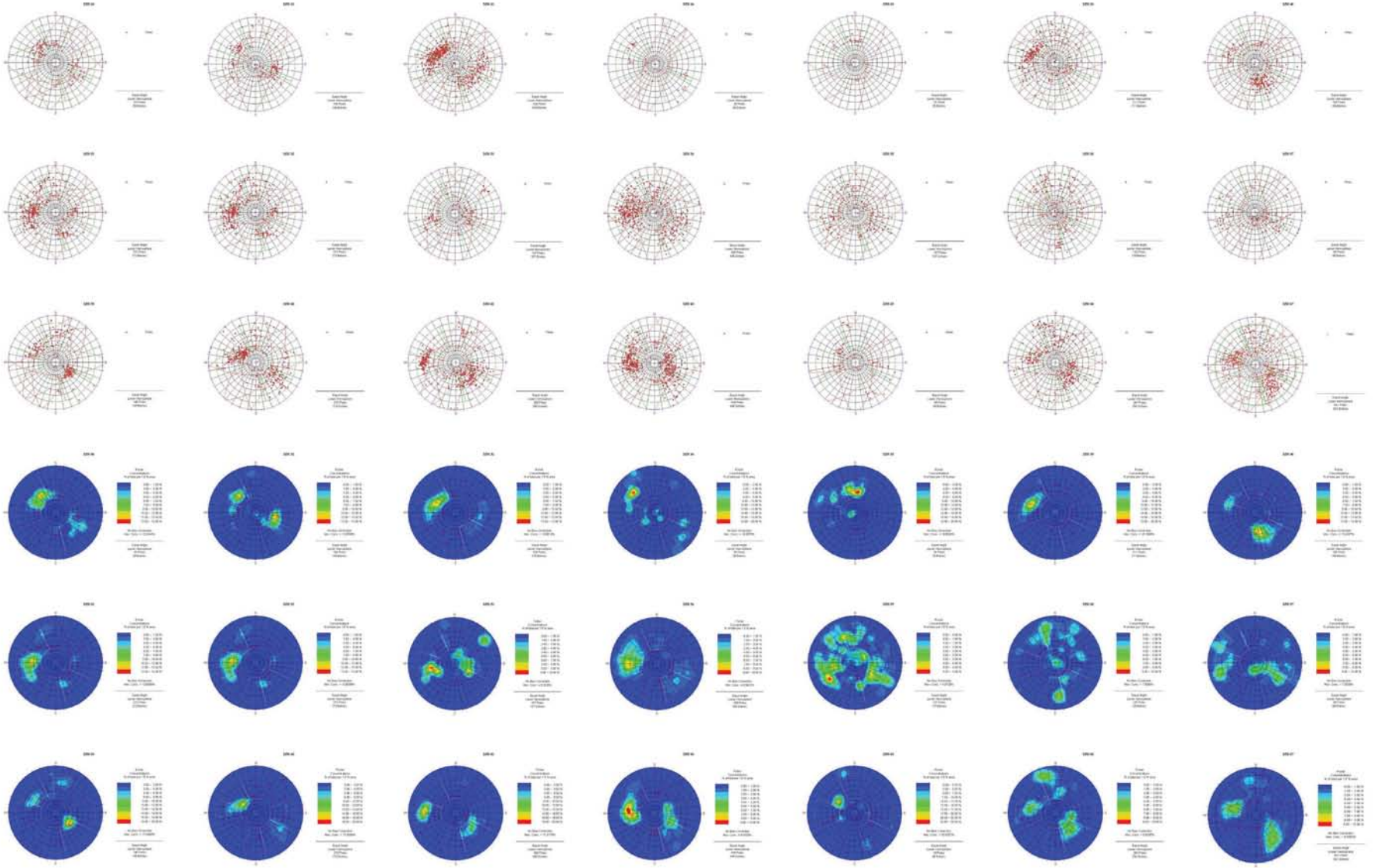
PROJ MGR: DMW OPERATOR: MDK
DESIGNED BY: MDK DATE : 01-04-2008
REVIEWED BY: DMW

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ROCKWOOD, MA 02068
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FAX: (781) 278-3701

INDIAN POINT ENERGY CENTER
BUCHANAN, NEW YORK
SITE LINEAMENT MAP

PROJECT NO.
17869.10

FIGURE NO.
6.6



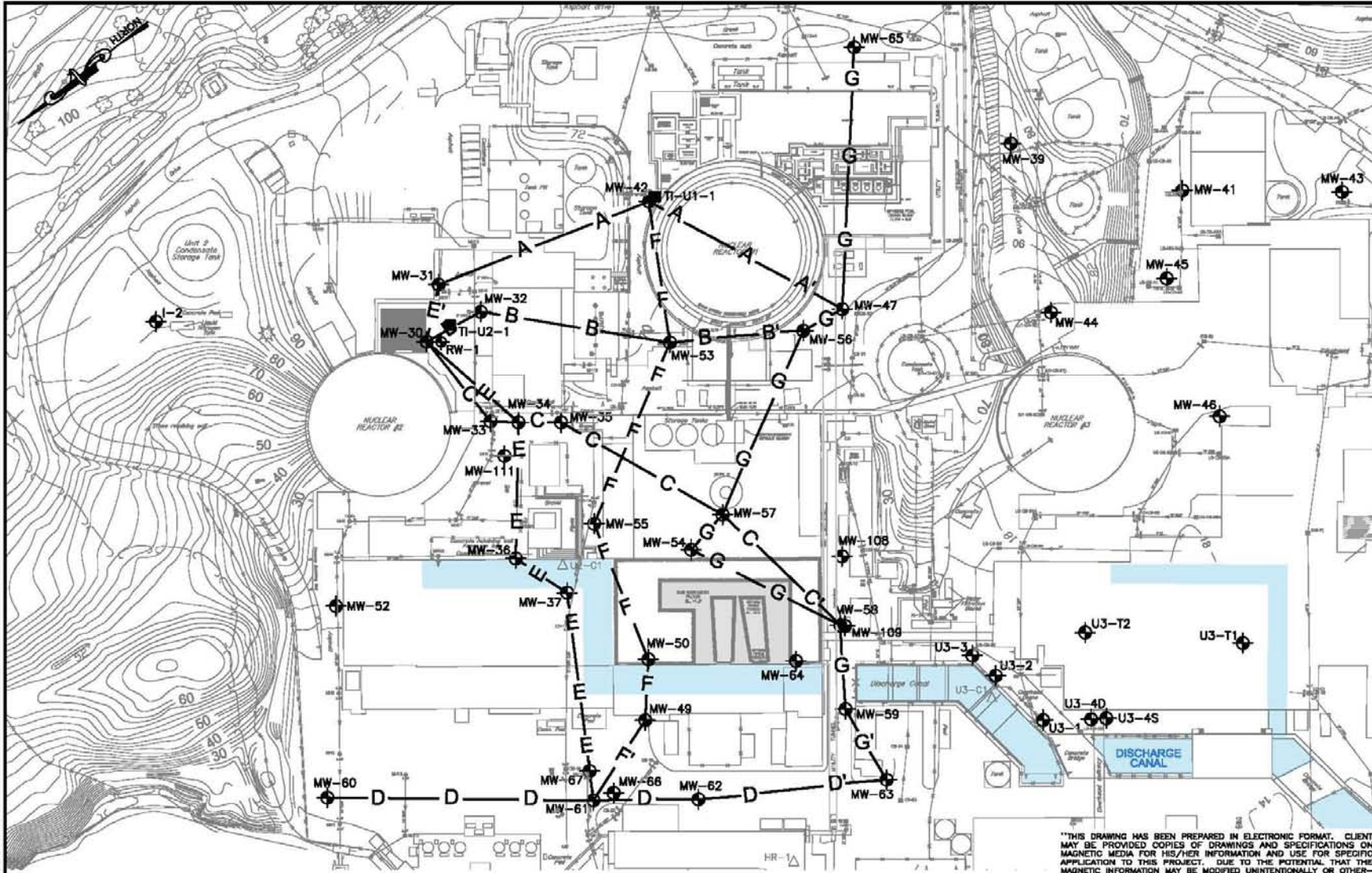
Small text block containing technical details or a legend for the plots.

Notes:
 1. This plot is based on geophysical data provided by Geophysical Applications, Inc. For details, refer to Appendices C and G.
 2. Site sets represent large scale interpretations of significant joint/fracture sets based on geophysical arrays. They correspond to dip direction angle ranges as follows with a dip angle range between 34° and 81°.

Set No.	1	2	3	4	5	6
Dip direction	SE	NW	E	W	S	N
Azimuth range	116-165	291-335	70-115	245-290	186-200	336-21

3. Pole plots use the equal-angle net (Wulff net) with the site set ranges represented as green windows. The average plane for the poles within each set is represented in red lines.
 4. Contour plots represent statistical pole concentrations (in percentages of the total surface area of the lower hemisphere) calculated using the Fisher distribution method.

INDIAN POINT ENERGY CENTER BUCHANAN, NEW YORK		POLAR PROJECTIONS	
PROJECT NO. 17869.10		FIGURE NO. 6.7	
PROD. BY: DMW DESIGNED BY: DMW CHECKED BY: DMW DATE: 01-04-2008		NOT TO SCALE GZA Geoenvironmental, Inc. ONE CONANT ST. 3RD FL. NEW YORK, NY 10017-3750 TEL: (212) 370-3200 FAX: (212) 370-3101	
REV. NO.	DESCRIPTION	BY	DATE



LEGEND

MW-30 BORING / MONITORING INSTALLATION AND DESIGNATION

A — A' — PROFILE LINE

SCALE IN FEET
0 50' 100' 200'

PROJ MGR: DMV OPERATOR: MDK/EMD
DESIGNED BY: MDK DATE: 01-04-2008
REVIEWED BY: DMV

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TEL: (781) 278-3700
FAX: (781) 278-3701

**INDIAN POINT ENERGY CENTER
BUCHANAN, NEW YORK
PROFILE LOCATIONS**

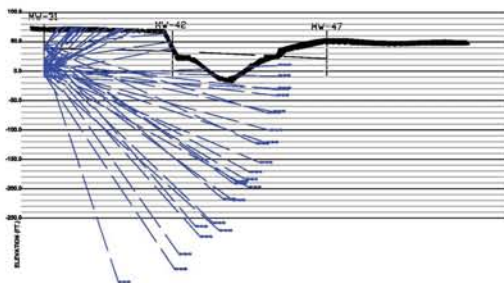
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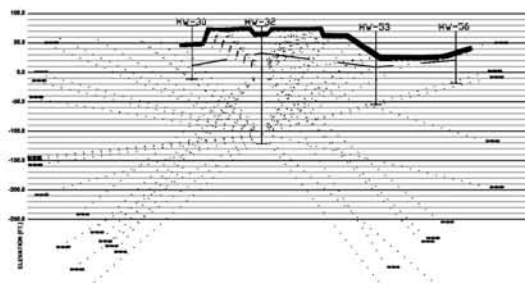
PROJECT NO.
17869.10

FIGURE NO.
6.8

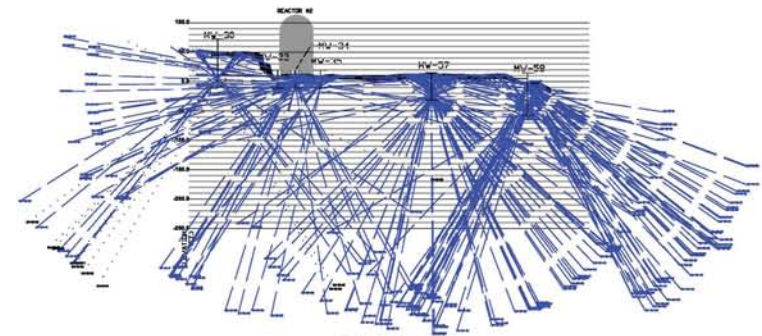
©2008 - GZA GeoEnvironmental, Inc.



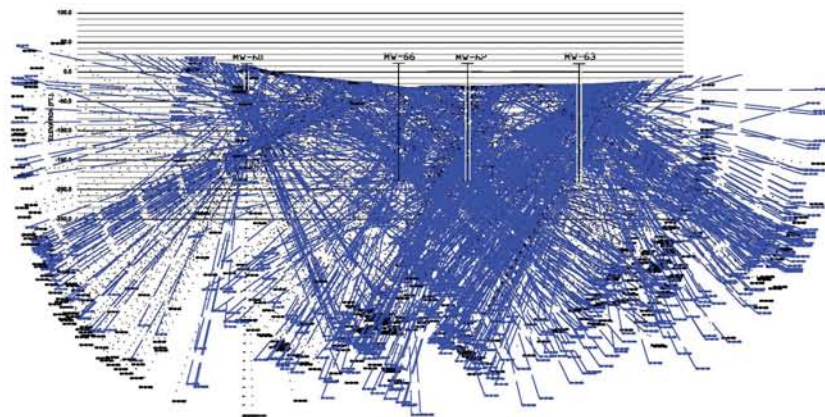
PROFILE A - A'



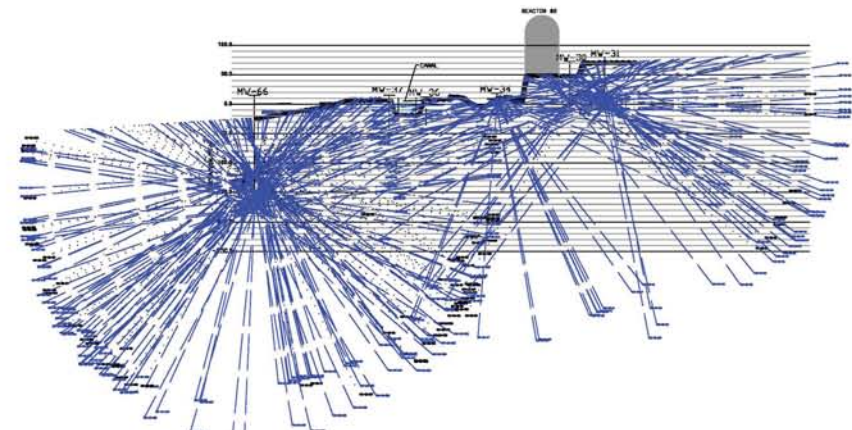
PROFILE B - B'



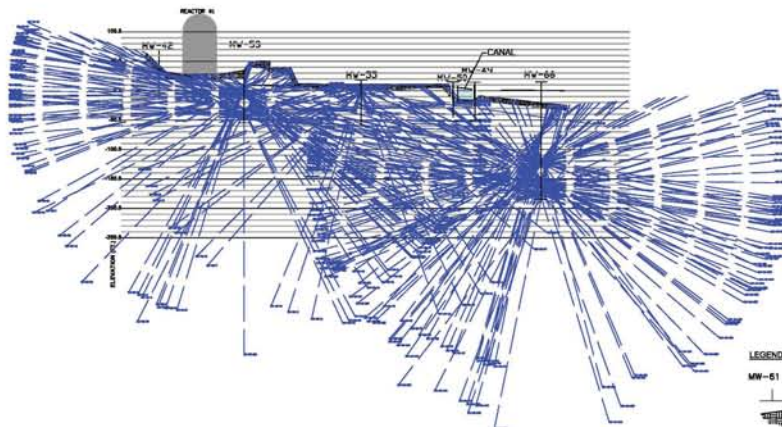
PROFILE C - C'



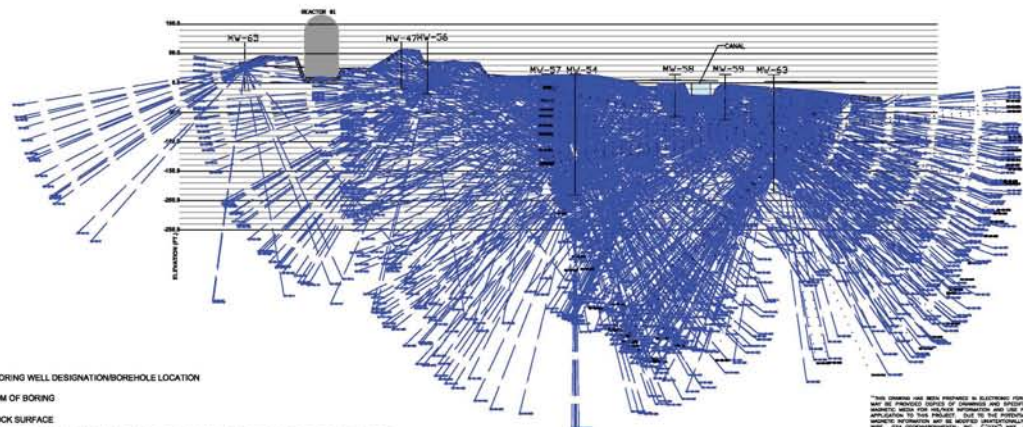
PROFILE D - D'



PROFILE E - E'



PROFILE F - F'



PROFILE G - G'

- LEGEND**
- MW-61 MONITORING WELL DESIGNATION/BOREHOLE LOCATION
 - BOTTOM OF BORING
 - BEDROCK SURFACE
 - REPRESENTS ATV BOREHOLE MEASURED PLANES EXTENDED ON EITHER SIDE OF THE BOREHOLE. THE JOINT/FRACTURE LINES REPRESENT THE TRACE OF THE PLANE PROJECTED ONTO A VERTICAL PROFILE. HYDRAULIC CONDUCTIVITY OF JOINT/FRACTURE IS GREATER THAN 8×10^{-5} cm/sec.
 - REPRESENTS ATV BOREHOLE MEASURED PLANES EXTENDED ON EITHER SIDE OF THE BOREHOLE. THE JOINT/FRACTURE LINES REPRESENT THE TRACE OF THE PLANE PROJECTED ONTO A VERTICAL PROFILE. HYDRAULIC CONDUCTIVITY OF JOINT/FRACTURE IS LESS THAN 8×10^{-5} cm/sec.

NOTE: REFER TO FIGURE NO. 6.8 FOR PROFILE LOCATIONS.

GSX-11_VT_000-1849517_1886-13201_Vpwr_GDS-6.9_Fracture Trace Section Projections.dwg [Export] January 07, 2008 - 8:38am wjprj200

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PROJECT NO. 17869.10		FIGURE NO. 6.9	
INDIAN POINT ENERGY CENTER BUCHANAN, NEW YORK		FRACTURE PROFILE PROJECTIONS	
PROJ. NO.: DWH	DESIGNED BY: DWH	REVIEWED BY: DWH	DATE: 01-04-2008
CREATED BY: GDS/JMD		DATE: 01-04-2008	
GZA GeoEnvironmental, Inc. ONE CONVENT PARK FLOOR 1000 NEW YORK, NY 10017-3700 TEL: (212) 370-2000 FAX: (212) 370-3101			
SCALE IN FEET	0	50	100
REV. NO.	DESCRIPTION	BY	DATE