

DATE		INSTRUMENT MAN			ROD MAN			PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE		
10-1-81		G. Catcamp			D. Harris			6834		DDH			11	1		
AREA		TOPO MAP		STATE	COUNTY			TWP	RANGE	PPM	PARTY MANAGER					
New England		Santaroni		15	New York			Essex			L. Davis					
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
Station 1										1782.0				1,488,720	572,820	→ scaled.
	330		348° 56' 180°	-9.5°	+6.3	-		+6.3	1788.3		BS	-309	+116			
	330				+4.6	BH	+1.7	+6.3			BS					paved road
2	0				5.4	-		-5.4		1782.9	TP	0	0	1,488,411	572,936	↓
3	330		171° 16'	-9.5°	10.9	-		-10.9		1777.4	TP	-313	+103-2	1,488,094	573,037	
3	330				12.6	TH	+1.7	-10.9			TP					
	283		354° 33' 180°	-9.5°	+5.0	88° -	-9.9	-4.9	1772.5		BS	-273	+73-3			
	283				+2.6	88° 30'	-7.4	-4.8			BS					
	π	0			5.4	-		-5.4		1767.1	TP	0	0	1,487,816	573,107	
4	59		220° 40'	-9.5°	10.2	-		-10.2		1762.3		-50	-31	1,487,766	573,076	
5	384		214° 49'	-9.5°	14.9	-		-14.9		1757.6	TP	-347	-164-3	1,487,464	572,940	
5	384				13.0	BH	-1.9	-14.9			TP					
	330		31° 43' 180°	-9.5°	+13.2	91° -	+5.8	+19.0	1776.6		BS	-306	-125-3			
	330				+11.3	91° 20'	+7.7	+19.0			BS					
4	153		35° 42'	-9.5°	9.7	-		-9.7		1766.9		+137	+68	1,487,290	572,880	Trail (east)
6	0				5.4	-		-5.4		1771.2	TP	0	0	1,487,153	572,812	
7	328		221° 52'	-9.5°	2.5	88° -	+11.4	+8.9		1785.5	TP	-277-4	-175-3	1,486,872	572,634	
7	328				1.0	88° 16'	+9.9	+8.9			TP					
	330		25° 34' 180°	-9.5°	+2.3	88° -	+11.5	-9.2	1776.3		BS	-317-4	-91-3			
	330				+4.2	87° 40'	+13.4	-9.2			BS					
8	0				5.4	-		-5.4		1770.9	TP	0	0	1,486,551	572,540	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
10-1-81		G. Cotcamp		D. Harris		6834		MPK		11	2			
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
New England		Santanoni		New York		Essex						L. Davis		
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1776.3					
9	328		214° 32'	-9.5°	12.4	-	-	-12.4		1763.9	TP	-297-4	-139-3	1,486,250 572,398
9	328				10.7	04	-1.6	-12.3			TP			
	330		11° 24' + 180°	-9.5°	+1.8	87° -	-17.2	-15.4	1748.5		OS	-329-4	-11-3	
	330				+0.4	87° 14'	-15.9	-15.5			OS			
10	0				5.4	-	-	-5.4		1743.1	X	0	0	1,485,917 572,384
11	330		169° 35'	-9.5°	6.3	87° -	+17.2	+10.9		1759.4	TP	-310-4	+112-3	1,485,603 572,493
11	330				3.4	87° 30'	+14.4	+11.0			TP			
	330		19° 13' + 180°	-9.5°	+14.5	85° 36'	-25.2	-10.7	1748.7		OS	-324-4	-56-3	
	330				+12.2	86° -	-23.0	-10.8			OS			
12	0				5.4	-	-	-5.4		1743.3	X	0	0	1,485,275 572,434
13	334		211° 55'	-9.5°	0.6	-	-	-0.6		1748.1	TP	-309-4	-127-3	1,484,962 572,304
13	334				2.3	74	+1.7	-0.6			TP			
	330		19° 33' + 180°	-9.5°	+2.0	88° -	-11.5	-9.5	1738.6		OS	-325-4	-58-3	
	330				+0.4	88° 16'	-10.0	-9.6			OS			
14	0				5.4	-	-	-5.4		1733.2	X	0	0	1,484,633 572,243
15	330		189° 47'	-9.5°	7.9	-	-	-7.9		1730.7	TP	-330-4	-2-3	1,484,299 572,238
15	330				9.6	74	+1.7	-7.9			TP			
	290		2° 06' + 180°	-9.5°	+14.1	04	+1.5	+15.6	1746.3		OS	-288-4	+37-3	
	290				+13.9	90° 20'	+1.7	+15.6			OS			
X	0				5.4	-	-	-5.4		1740.9	X	0	0	1,484,007 572,272

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
10-1-81		G. Cotcamp		D. Harris		6834		ODH		11		3			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
New England		Santoni		New York		Essex								L. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1746.3						
16	50		230° 41'	-9.5°	7.5	-		-7.5		1738.8		-38	-33	1,483,969	572,239
TP	262		220° 27'	-9.5°	8.7	-		-8.7		1737.6	TP	-225-4	-135-3	1,483,778	572,134
TP	<del>262</del> 262				10.0	TH	+1.3	-8.7			TP				
	452		70° 11' +180°	-9.5°	+5.9	89° 30'	+3.9	+2.0	1739.6		OS	-221-4	-394-3		
	452				+4.2	TH	-2.3	+1.9			OS				
17	330		70° 0'	-9.5°	0.8	TH	+1.7	+0.9		1740.5		+163	+287	1,483,716	572,024
18	0				5.4	-		-5.4		1734.2	X	0	0	1,483,553	571,737
19	329		255° 15'	-9.5°	12.5	-		-12.5		1727.1	TP	-135-4	-300-3	1,483,414	571,434
19	329				10.9	BH	-1.6	-12.5			TP				
	221		26° 41' +180°	-9.5°	+12.9	91° -	+3.9	+16.8	1743.9		OS	-211-4	-65-3		
	221				+11.6	91° 20'	+5.1	+16.7			OS				
X	0				5.4	-		-5.4		1738.5	X	0	0	1,483,199	571,366
20	89		191° 19'	-9.5°	10.8	-		-10.8		1733.1		-89	-3	1,483,110	571,363
21	427		185° 56'	-6.5°	3.1	-		-3.1		1740.8	TP	-427-4	+4-3	1,482,768	571,367
21	427				1.0	BH	-2.1	-3.1			TP				
	334		45° 13' +180°	-6.5°	+8.0	88° -	-11.6	-3.6	1737.2		OS	-260-4	-209-3		
	334				+6.1	88° 20'	-9.7	-3.6			OS				
21	174		45° 11'	-6.5°	3.4	88° -	+6.1	+2.7		1739.9		+136	+109	1,482,640	571,264 tra: 1 (west)
22	0				5.4	-		-5.4		1731.8	X	0	0	1,482,504	571,155
23	330		208° 10'	-6.5°	2.4	-		-2.4		1734.8		-307	-122	1,482,197	571,033

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
10-1-81		G. Cotcamp		D. Harris		6834		MPK		11	4					
AREA		TOPO MAP		STATE	COUNTY		RANGE		PPM		PARTY MANAGER					
New England		Santanoni		New York	Essex						L. Davis					
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH +	EAST +	COORDINATES		REMARKS
												SOUTH -	WEST -	Y	X	
												LAT.	DEP.			
									1737.2							
24	660		204°51'	-6.5°	5.2	-		-5.2		1732.0	TP	-626-4	-208-3	1,481,874	570,944	
24	660				1.9	84	-3.3	-5.2			TP					
	453		11°54'+180°	-6.5°	+12.2	91°-	+7.9	+20.1	1752.1		BS	-451-4	-43-3			
	453				+14.0	90°46'	+6.1	+20.1			BS					
25	126		9°36'	-6.5°	11.9	91°-	-2.2	-14.1		1738.0		+125	+7	1,481,544	570,905	
π	0				5.4	-		-5.4		1746.7	π	0	0	1,481,419	570,898	
26	205		198°46'	-6.5°	11.4	91°-	-3.6	-15.0		1737.1		-200	-44	1,481,219	570,854	
27	535		196°38'	-6.5°	11.3	91°-	-9.3	-20.6		1731.5	TP	-527-4	+94-3	1,480,888	570,801	
27	535				14.4	90°40'	-6.2	-20.6			TP					
	330		2°50'+180°	-6.5°	+8.8	-		+8.8	1740.3		BS	-329-4	+21-3			
	330				+10.5	74	-1.7	+8.8			BS					
28	0				5.4	-		-5.4		1734.9	π	0	0	1,480,555	570,819	
29	330		215°49'	-6.5°	5.4	87°-	+17.2	+11.8		1752.1		-288	-162	1,480,267	570,657	
TP	482		214°46'	-6.5°	8.8	87°-	+25.2	+16.4		1756.7	TP	-424-4	-228-3	1,480,127	570,588	
TP	482				4.9	87°28'	+21.3	+16.4			TP					
	176		18°50'+180°	-6.5°	+0.2	86°-	-12.2	-12.0	1744.7		BS	-172-4	-38-3			
	176				+1.2	85°40'	-13.3	-12.1			BS					
30	0				5.4	-		-5.4		1739.3	π	0	0	1,479,951	570,547	
31	328		158°12'	-6.5°	4.9	-		-4.9		1739.8	TP	-289-4	+156-3	1,479,658	570,700	
31	328				6.6	74	+1.6	-4.9			TP					

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
10-1-81		G. Co. tcamp		D. Harris		6834		MPK		11	5			
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
New England		Santanoni		New York		Essex						L. Davis		
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
31										1739.8				
	208		358°40' - 180°	-6.5°	+4.5	-		+4.5	1744.3		BS	-206-4	+28-3	
	208				+5.6	TH	-1.0	+4.6			BS			
π	0				5.4	-		-5.4		1738.9	π	0	0	1,479,448 570,725
32	122		198°33'	-6.5°	7.9	-		-7.9		1736.4		-119	-25	1,479,329 570,700
33	452		196°08'	-6.5°	3.6	-		-3.6		1740.7	TP	-446-4	-76-3	1,478,998 570,646
33	452				5.9	TH	+2.3	-3.6			TP			
	338		32°18' + 180°	-6.5°	+4.3	93°26'	+20.2	+24.5	1765.2		BS	-304-4	-147-3	
	338				+3.5	93°34'	+21.0	+24.5			BS			
34	0				5.4	-		-5.4		1759.8	π	0	0	1,478,690 570,496
35	326		221°03'	-6.5°	1.7	TH	+1.6	-0.1		1765.1	TP	-269-4	-185-3	1,478,417 570,308
35	326				1.9	89°40'	+1.9	0.0			TP			
	988		22°59' + 180°	-6.5°	+14.0	88°46'	21.3	-7.3	1757.8		BS	-947-4	-280-3	
	988				+12.8	88°50'	20.1	-7.3			BS			
36	660		23°07'	-6.5°	2.8	89°-	+11.5	+8.7		1766.5		+632	+189	1,478,098 570,214
37	330		19°45'	-6.5°	0.9	TH	+1.7	+0.8		1758.6		+321	+76	1,477,787 570,101
38	0		<del>19°45'</del>		5.4	-		-5.4		1752.4	π	0	0	1,477,466 570,025
39	308		159°30'	-6.5°	10.2	87°-	+16.1	+5.9		1763.7	TP	-274-4	+140-3	1,477,188 570,162
39	308				9.3	87°10'	+15.2	+5.9			TP			
	332		312°31' - 180°	-6.5°	+7.4	88°-	-11.6	-4.2	1759.5		BS	-195-4	+268-3	
	332				+6.3	88°12'	-10.4	-4.1			BS			

**SURVEY NOTES-HIGH RESOLUTION DATA**

GEO-445

**Geosource Inc.**

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
10-1-81		G. Cotcamp		D. Harris		6834		D.H.		11		6			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
New England		Santanoni		New York		Essex								L. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1759.5						
40	0				5.4	-		-5.4		1754.1	π	0	0	1,476,989	570,427
41	330		156°44'	-9.5°	8.1	-		-8.1		1751.4	TP	-277-5	+179-3	1,476,707	570,603
41	330				9.8	TH	+1.7	-8.1			TP				
	1300		353°08'30"-180°	-9.5°	+13.6	89°-	-22.7	-9.1	1742.3		BS	-1247-6	+366-3		
	1300				+9.8	89°10'	-18.9	-9.1			BS				
42	975		353°08'	-9.5°	12.9	89°-	+17.0	+4.1		1746.4		+935	-275	1,476,389	570,691
43	644		352°32'	-9.5°	2.6	TH	+3.2	+0.6		1742.9		+616	-188	1,476,070	570,778
44	318		348°47'	-9.5°	3.0	-		-3.0		1739.3		+297	-112	1,475,751	570,854
45	0				5.4	-		-5.4		1736.9	π	0	0	1,475,454	570,966
46	336		146°54'	-9.5°	0.8	-		-0.8		1741.5	TP	-247-6	+227-3	1,475,201	571,190
46	336				2.5	TH	+1.7	-0.8			TP				
	340		350°22'+80°	-9.5°	+1.4	TH	-1.7	-0.3	1741.2		BS	-321-6	+111-3		
	340				+1.5	89°42'	-1.8	-0.3			BS				
47	0				5.4	-		-5.4		1735.8	π	0	0	1,474,874	571,298
48	310		183°36'	-9.5°	4.7	-		-4.7		1736.5	TP	-308-6	+32-3	1,474,560	571,327
48	310				3.2	8H	-1.6	-4.8			TP				
	321		324°07'-180°	-9.5°	+4.1	-		+4.1	1740.6		BS	-225-6	+228-3		
	321				+2.5	8H	+1.6	+4.1			BS				
49	0				5.4	-		-5.4		1735.2	π	0	0	1,474,329	571,552

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
10-12-81		G. Cotcamp		D. Harris		6834		MPK		11		7			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
New England		Santanoni		New York		Essex								L. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1740.6						
50	333		130° 09'	-11°	0.7	TH	+1.7	+1.0		1742.6	TP	-162.6	+291.3	1,474,161	571,840
50	333				1.9	89° 30'	+2.9	+1.0			TP				
	336		13° 19' +180°	-11°	+10.0	89° 24'	-3.5	+6.5	1748.1		BS	-336.6	-14.3		
	336				+11.3	89° 10'	-4.9	+6.4			BS				
51	0				5.4	-		-5.4		1742.7	X	0	0	1,473,819	571,823
52	322		168° 37'	-11°	1.2	-		-1.2		1746.9	TP	-298.6	+123.3	1,473,515	571,943
52	322				3.9	TH	+1.6	-1.3			TP				
	330		318° 27' -180°	-11°	+0.6	88° -	-11.5	-10.9	1736.0		BS	-201.6	+262.4		
	330				+2.5	87° 40'	-13.4	-10.9			BS				
53	0				5.4	-		-5.4		1730.6	X	0	0	1,473,308	572,201
BM	240		31° 10'	-12.5'	8.0	-		-8.0		1728.0		+227	+77	1,473,535	572,278
Y	24		97° 05'	-12.5'	5.2	-		-5.2		1730.8		+2	+24	1,473,310	572,225
54	330		181° 14'	-12.5'	0.3	TH	+1.7	+1.4		1737.4	TP	-324.1	+64.2	1,472,985	572,267
54	330				1.5	89° 30'	+2.9	+1.4			TP				
	329		349° 39' -180°	-12.5'	+12.5	-		+12.5	1749.9		BS	-303.1	+128.2		
	329				+14.1	TH	-1.6	+12.5			BS				
55	0				5.4	-		-5.4		1744.5	X	0	0	1,472,683	572,397
56	330		157° 0'	-12.5'	4.1	-		-4.1		1745.8		-269	+192	1,472,414	572,589
57	662		158° 14'	-12.5'	4.2	TH	+3.3	-0.9		1749.0	TP	-547.1	+373.2	1,472,137	572,772
57	662				6.7	89° 20'	+5.8	-0.9			TP				

1942 W238  
U.S.G.S. el. 1728  
1,473,310 + 572,225  
intersect.

**SURVEY NOTES-HIGH RESOLUTION DATA**

GEO-445

**Geosource Inc.**

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
10-12-81		G. Cotcamp		M. Knapp		6834		D.H.		11	8						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
New England		Santanoni		New York	Essex					L. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
57										1749.0							
	332		356°13' -180°	-12.5°	+13.9	0H	+1.7	+15.6	1764.6		BS	-319	+93+2				
	332				+14.6	90°10'	+1.0	+15.6			BS						
58	0				5.4	-		-5.4		1759.2	π	0	0	1,471,818	573,867		
59	328		151°49'	-12.5°	5.8	89°-	+5.7	-0.1		1764.5	TP	-249	+214+2	1,471,569	573,083		
59	328				3.9	89°20'	+3.8	-0.1			TP						
	334		348°40' -180°	-12.5°	+3.0	-		+3.0	1767.5		BS	-306	+135+2				
	334				+4.7	TH	-1.7	+3.0			BS						
60	0				5.4	-		-5.4		1762.1	π	0	0	1,471,263	573,220		
61	330		174°01'	-12.5°	5.2	-		-5.2		1762.3	TP	-313	+105+2	1,470,950	573,327		
61	330				3.5	0H	-1.7	-5.2			TP						
	333		7°54' +180°	-12.5°	+3.0	89°-	-5.8	-2.8	1759.5		BS	-332	+27+2				
	333				+1.4	89°16'	-4.3	-2.9			BS						
62	0				5.4	-		-5.4		1754.1	π	0	0	1,470,618	573,356		
63	331		216°22'	-12.5°	9.2	92°-	-11.5	-20.7		1738.8		-303	-134	1,470,315	573,222		
64	661		216°22'	-12.5°	6.0	91°30'	-17.3	-23.3		1736.2	TP	-604	-267+2	1,470,014	573,091		
64	661				4.0	91°40'	-19.2	-23.2			TP						
	329		28°19' +180°	-12.5°	+1.5	-		+1.5	1737.7		BS	-317	-90+2				
	329				+3.1	TH	-1.6	+1.5			BS						
65	0				5.4	-		-5.4		1732.3	π	0	0	1,469,697	573,003		

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
10-12-81		G. Cotcamp		M. Knapp		6834		MPK		11	9				
AREA		TOPO MAP		STATE		COUNTY		TWP		PARTY MANAGER					
New England		Santanoni		New York		Essex				L. Davis					
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1737.7						
66	326		174° 15'	-12.5°	5.4	-		-5.4		1732.3	TP	-310	+102+2	1469,387	573,107
66	326				7.0	TH	+1.6	-5.4			TP				
	331		326° 33' -180°	-12.5°	+12.4	-		+12.4	1744.7		BS	-230	+238+1		
	331				+14.1	TH	-1.7	+12.4			BS				
67	0				5.4	-		-5.4		1739.3	X	0	0	1469,157	573,346
68	335		173° 55'	-12.5°	2.4	89° -	+5.8	+3.4		1748.1	TP	-317	+107	1468,840	573,453
68	335				1.0	89° 14'	+4.5	+3.5			TP				
	331		21° 45' +180°	-12.5°	+8.5	-		+8.5	1756.6		BS	-327	-53		
	331				+10.2	TH	-1.7	+8.5			BS				
69	0				5.4	-		-5.4		1751.2	X	0	0	1468,513	573,400
70	330		208° 48'	-12.5°	10.4	-		-10.4		1746.2	TP	-317	-93	1468,196	573,307
70	330				12.0	TH	+1.7	-10.3			TP				
	990		40° 09' 36" +180°	-12.5°	+8.3	89° -	-17.3	-9.0	1737.2		BS	-877	-460		
	990				+11.1	88° 50'	-20.2	-9.1			BS				
71	660		38° 38'	-12.5°	4.1	89° -	+11.5	+7.4		1744.6		+593	+291	1467,912	573,138
72	330		"	-12.5°	1.5	89° -	+5.8	+4.3		1741.5		+296	+145	1467,615	572,992
71	112		43° 56'	-12.5°	3.3	89° -	+2.0	-1.3		1735.9		+96	+58	1467,415	572,905
73	0				5.4	-		-5.4		1731.8	X	0	0	1467,319	572,847
74	330		218° 43'	-12.5°	10.4	-		-10.4		1726.8		-296	-146	1467,023	572,701
75	660		"	"	8.8	-		-8.8		1728.4		-592	-292	1466,727	572,555

1467,415 + 572,905  
trail (west)  
horiz. correct. y = +3'  
x = +23'

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
10-12-81		G. Cotcamp		M. Knapp		6834		MPK		11	10				
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER					
New England		Santanoni		New York	Essex					L. Davis					
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1737.2						
76	990		218° 44'	-12.8°	2.7	-		-7.7		1729.5	TP	-890+2	-433+2	1,466,431	572,416
76	990				12.6	TH	+5.0	-7.6			TP				
	325		26° 06' +180°	-12.8°	+8.0	-		+8.0	1737.5		BS	-316+2	-75+2		
	325				+9.6	TH	-1.6	+8.0			BS				
77	0				5.4	-		-5.4		1732.1	TP	0	0	1,466,117	572,343
78	330		188° 30'	-12.8°	4.8	-		-4.8		1732.7		-329	+25	1,465,788	572,368
79	660		184° 08'	-12.8°	3.4	-		-3.4		1734.1	TP	-652+2	+99+2	1,465,467	572,444
79	660				6.7	TH	+3.3	-3.4			TP				
	657		344° 08' -180°	-12.8°	+1.3	92° -	+22.9	+24.2	1758.3		BS	-576+2	+315+2		
	657				+5.2	91° 40'	+19.1	+24.3			BS				
80	330		338° 32'	-12.8°	8.7	92° -	11.5	-20.2		1738.1		+273	-186	1,465,166	572,575
81	0				5.4	-		-5.4		1752.9	TP	0	0	1,464,893	572,761
82	334		148° 36'	-12.8°	2.1	88° -	+11.6	+9.5		1767.8	TP	-239+2	+233+2	1,464,656	572,996
82	334				1.2	88° 10'	+10.7	+9.5			TP				
	332		356° 12' -180°	-12.8°	+6.9	-		+6.9	1774.7		BS	-318+2	+95+2		
	332				+5.2	0H	+1.7	+6.9			BS				
83	0				5.4	-		-5.4		1769.8	TP	0	0	1,464,340	573,093
84	330		188° 14'	-12.8°	9.9	92° -	11.5	-21.4		1753.3		-329	+26	1,464,011	573,119
85	660		188° 14'	-12.8°	7.1	92° -	23.0	-30.1		1744.6	TP	-658+2	+53+2	1,463,684	573,148
85	660				11.3	91° 38'	18.8	-30.1			TP				



DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
10-13-81		G. Cotcamp		M. Knapp		6834		MPK		11	12						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
New England		Santanoni		New York	Essex					L. Davis							
STATION NO.	SLOPE DISTANCE	PLOTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
93										1735.4							
	339		41° 53' +180°	-128°	+2.5	-		+2.5	1737.9		BS	-292 +2	-165 +2				
	339				+4.2	TH	-1.7	+2.5		BS							
94	0				5.4	-		-5.4		1732.5	π	0	0	1,460,919	573,685		
95	328		202° 52'	-128°	7.7	-		-5.7		1732.2	TP	-323 +2	-57 +2	1,460,598	573,630		
95	328				7.4	TH	+1.6	-5.8			TP						
	330		348° 26' -180°	-128°	+8.9	-		+8.9	1741.1		BS	-301 +2	+136 +2				
	330				+10.6	TH	-1.7	+8.9		BS							
96	0				5.4	-		-5.4		1735.7	π	0	0	1,460,299	573,768		
97	328		161° 14'	-128°	3.6	89° -	+5.7	+2.1		1743.2	TP	-279 +2	+172 +2	1,460,022	573,942		
97	328				0.8	89° 30'	+2.9	+2.1			TP						
	332		345° 28' -180°	-128°	+7.4	-		+7.4	1750.6		BS	-295 +2	+152 +2				
	332				+9.1	TH	-1.7	+7.4		BS							
98	0				5.4	-		-5.4		1745.2	π	0	0	1,459,729	574,096		
99	334		192° 13'	-128°	11.4	91° -	-5.8	-17.2		1733.4		-334	+3	1,459,395	574,099		
100	664		192° 13'	-128°	12.2	90° 40'	-7.7	-19.9		1730.7	TP	-664 +3	+7 +3	1,459,068	574,106		
100	664				13.7	90° 32'	-6.7	-19.9			TP						
	660		20° 20' +180°	-128°	+8.7	-		+8.7	1739.4		BS	-654 +3	-87 +3				
	660				+12.0	TH	-3.3	+8.7		BS							
101	330		19° 0'	-128°	9.0	-		-9.0		1730.4		+328	+36	1,458,745	574,058		
102	0				5.4	-		-5.4		1734.0	π	0	0	1,458,417	574,022		

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
10-13-81		G. Cotcamp		M. Knapp		6834		D.H.		11	13						
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
New England		Santanoni/Newcombs	New York	Essex					L. Davis								
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH +	EAST +	COORDINATES		REMARKS	
												SOUTH -	WEST -	Y	X		
									1739.4								
103	330		187° 30'	-12.8°	1.2	TH	+1.7	+0.5		1739.9							↑
104	659		183° 01'	-12.8°	8.2	89° -	+11.5	+3.3		1742.7	TP	-649 +3	+112 +3	1457,771	574,137	Santanoni Quad.	
104	659				4.4	89° 20'	+7.7	+3.3			TP						
	660		356° 07' +180°	-12.8°	+2.0	-		+2.0	1744.7		BS	-632 +3	+189 +3				
	660				+5.3	TH	-3.3	+2.0			BS						
105	330		356° 07'	-12.8°	4.6	-		-4.6		1740.1		+316	-95	1457,458	574,234	Newcombs Quad	
106	0				5.4	-		-5.4		1739.3	X	0	0	1457,142	574,329	↓	
107	330		194° 46'	-12.8°	4.0	-		-4.0		1740.7	TP	-330 +3	-11 +3	1456,815	574,321		
107	330				2.3	OH	-1.7	-4.0			TP						
	326		2° 45' +180°	-12.8°	+8.1	-		+8.1	1748.8		BS	-321 +3	+57 +3				
	326				+9.7	TH	-1.6	+8.1			BS						
108	0				5.4	-		-5.4		1743.4	X	0	0	1456,497	574,381		
109	330		175° 40'	-12.8°	4.7	-		-4.7		1744.1		-315	+97	1456,182	574,478		
110	660		175° 40'	-12.8°	0.7	-		-0.7		1748.1	TP	-631 +3	+194 +3	1455,869	574,578		
110	660				4.0	TH	+3.3	-0.7			TP						
	996		1° 12' +180°	-12.8°	+0.9	-		+0.9	1749.0		BS	-976 +3	+200 +3				
	996				+5.9	TH	-5.0	+0.9			BS						
111	660		0° 44'	-12.8°	4.0	-		-4.0		1745.0		+645	-138	1455,541	574,643		
112	330		" "	"	5.4	-		-5.4		1743.6		+323	-69	1455,219	574,712		
113	0				5.4	-		-5.4		1743.6	X	0	0	1454,896	574,781		

SURVEY NOTES-HIGH RESOLUTION DATA  
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
10-13-81		G. Cotcamp		M. Knapp		6824		MPK		11		14			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
New England		Newcomb		New York		Essex								L. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1749.0						
114	336		194°17'	-12.8°	2.1	89°-	+5.9	+3.8		1752.8		-336	-9	1,454,560	574,772
115	666		194°17'	-12.8°	2.9	88°40'	+15.5	+12.6		1761.6	TP	-666+3	-17+3	1,454,233	574,767
115	666				1.0	88°50'	+13.6	+12.6			TP				
	990		24°01' + 180°	-12.8°	+11.5	-		+11.5	1773.1		BS	-971+3	-193+4		
	990				+13.2	89°54'	7.7	+11.5			BS				
116	660		24°01'	-12.8°	3.3	-		-3.3		1769.8		+647	+128	1,453,912	574,706
117	330		"	"	1.3	-		-1.3		1771.8		+324	+64	1,453,589	574,642
BM	170		16°56'	-12.8°	3.7	-		-3.7		1769.4		+170	+12	1,453,435	574,590
118	0				5.4	-		-5.4		1767.7	π	0	0	1,453,265	574,578
119	330		204°22'	-12.8°	12.1	-		-12.1		1761.0		-323	-66	1,452,942	574,512
120	660		"	"	7.4	91°-	71.5	-18.9		1754.2		-647	-132	1,452,618	574,446
121	990		204°22'	-14.0°	7.2	91°-	77.3	-24.5		1748.6	TP	-974+4	-178+2	1,452,295	574,402
121	990				13.0	90°40'	71.5	24.5			TP				
	660		23°08' + 180°	-14.0°	+4.4	89°-	71.5	-7.1	1741.5		BS	-652+4	-105+2		
	660				+1.3	89°16'	8.4	-7.1			BS				
122	330		23°08'	-14.0°	0.7	TH	7.7	+1.0		1742.5		+326	+52	1,451,973	574,351
123	0				5.4	-		-5.4		1736.1	π	0	0	1,451,647	574,299
124	330		210°09'	-14.0°	11.4	-		-11.4		1730.1	TP	-317+5	-92+2	1,451,335	574,209
124	330				13.1	TH	7.7	-11.4			TP				

horiz. corrad. v=+66'  
v.=+67'  
1,453,435 + 574,590  
1942  
U.S.C. & G.S. A2401769.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
10-13-81		G. Cotcamp		M. Knapp		6834		DWH		11	15						
AREA		TOPO MAP		STATE		COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
New England		Newcomb		New York		Essex					L. Davis						
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH +	EAST +	COORDINATES		REMARKS	
												SOUTH -	WEST -	Y	X		
124										1,730.1							
	660		44°35'+180°	-14°	+3.6	-		+3.6	1,733.7		BS	-568+4	-336+2				
	660				+6.9	TH	-3.3	+3.6			BS						
125	330		44°35'	-14°	6.7	-		-6.7		1727.0		+284	+168	1,451,055	574,043		
126	0				5.4	-		-5.4		1728.3	π	0	0	1,450,771	573,875		
127	328		191°22'	-14°	0.6	TH	+1.6	+1.0			TP	-328+4	+15	1,450,447	573,890		
127	328				4.6	89°	+5.7	+1.1		1734.8	TP						
	1320		343°05'42"-180°	-14.8°	+9.8	-		+9.8	1744.6		BS	-1123+4	+694				
	1320				+3.2	TH	+6.6	+9.8			BS						
128	990		342°08'	-14.8°	9.7	-		-9.7		1734.9		+833	-534	1,450,161	574,050		
129	660		"	"	9.1	-		-9.1		1735.5		+556	-356	1,449,884	574,228		
130	330		"	"	7.6	-		-7.6		1737.0		+278	-178	1,449,606	574,406		
131	0				5.4	-		-5.4		1739.2	π	0	0	1,449,328	574,584		
132	330		177°36'	-14.8°	5.8	-		-5.8		1738.8		-315	+98	1,449,013	574,682		
133	662		177°36'	-14.8°	7.0	-		-7.0		1737.6	TP	-632+4	+196+2	1,448,700	574,782		
133	662				10.3	TH	+3.3	-7.0			TP						
	662		5°12'+180°	-14.8°	+3.5	-		+3.5	1741.1		BS	-653+4	+110				
	662				+6.8	TH	-3.3	+3.5			BS						
134	330		0°37'	-14.8°	5.1	-		-5.1		1736.0		+320	-81	1,448,371	574,811		
135	0				5.4	-		-5.4		1735.7	π	0	0	1,448,051	574,892		

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
10-14-81		G. Cotcamp		M. Knapp		6834		MPK		11	16						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
New England		Newcomb		New York	Essex					L. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH+ SOUTH -	EAST+ WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									1741.1								
136	338		202° 08'	-14.8°	6.5	-		-6.5		1734.6	TP	-335+4	-43	1,447,720	574,849		
136	338				4.8	BH	1.7	-6.5			TP						
	660		45° 01' +180°	-14.8°	+0.7	TH	-3.3	-2.6	1732.0		BS	-570+4	-332				
	660				+8.9	89°-	11.5	-2.6			BS						
137	330		40° 40'	-14.8°	1.8	-		-1.8		1730.2		+297	+144	1,447,451	574,661		
138	0				5.4	-		-5.4		1726.6	X	0	0	1,447,154	574,517		
139	330		207° 57'	-14.8°	4.4	-		-4.4		1727.6		-321	-75	1,446,833	574,442		
140	660		" "	" "	1.6	-		-1.6		1730.4		-643	-150	1,446,511	574,367		
141	990		207° 57'	-14.8°	0.5	-		-0.5		1731.5	TP	-964+4	-225	1,446,194	574,292		
141	990				5.5	TH	+5.0	-0.5			TP						
	330		13° 48' +180°	-14.8°	+1.8	-		+1.8	1733.3		BS	-330+4	+6				
	330				+3.5	TH	1.7	+1.8			BS						
142	0				5.4	-		-5.4		1727.9	X	0	0	1,445,868	574,298		
143	329		177° 14'	-14.8°	11.0	-		-11.0		1722.3	TP	-314+4	+99	1,445,558	574,397		
143	329				12.6	TH	+1.6	-11.0			TP						
	660		353° 13' -180°	-14.8°	+14.9	BH	+3.3	+18.2	1740.5		BS	-614+4	+243				
	660				+14.4	90° 20'	+3.8	+18.2			BS						
144	330		353° 13'	-14.8°	8.7	92°-	11.5	-20.2		1720.3		+307	-121	1,445,255	574,519	bridge	
145	0				5.4	-		-5.4		1735.1	X	0	0	1,444,948	574,640	rail road	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
10-14-81		G. Cotcamp		D. Harris		6834		DCH		11		17			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
New England		Newcomb		New York		Essex								L. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1740.5						
146	334		179°55'	-14.8°	5.4	86°	+23.2	+17.8			TP	-322+4	+86	1,444,630	574,726
146	334				0.5	86°50'	+18.4	+17.9		1758.4	TP				
	340		24°36'+180°	-14.8°	+7.7	91°	+5.9	+13.6			BS	-335+4	-58		
	340				+13.7	-		+13.7	1772.1		BS				
147	0				5.4	-		-5.4		1766.7	π	0	0	1,444,299	574,668
147	130		233°30'	-14.8°	7.8	-		-7.8		1764.3		-101	-81	1,444,198	574,587
148	334		242°31'	-14.8°	14.5	-		-14.5		1757.6	TP	-225+4	-247	1,444,078	574,421
148	334				12.8	BH	-1.7	-14.5			TP				
	660		74°28'+180°	-14.8°	+6.1	89°	-11.5	-5.4			BS	-333+4	-570		
	660				+2.2	89°20'	-7.7	-5.5	1752.1		BS				
149	330		74°28'	-14.8°	3.1	-		-3.1		1749.0		+67	+285	1,443,816	574,136
150	0				5.4	-		-5.4		1746.7	π	0	0	1,443,749	573,851
151	323		240°47'	-14.8°	3.7	-		-3.7		1748.4	TP	-224+4	-232	1,443,529	573,619
151	323				2.1	BH	-1.6	-3.7			TP				
	328		32°06'+180°	-14.8°	+7.1	-		+7.1	1755.5		BS	-313+4	-98		
	328				+8.7	TH	-1.6	+7.1			BS				
152	0				5.4	-		-5.4		1750.1	π	0	0	1,443,220	573,521
153	330		198°16'	-14.8°	3.9	-		-3.9		1751.6		-329	-20	1,442,891	573,501
154	658		191°42'	-14.8°	12.2	-		-12.2		1743.3	TP	-657+4	+36	1,442,567	573,557
154	658				8.9	BH	-3.3	-12.2			TP				

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
10-14-81		G. Cotcamp		M. Knapp		6834		MPK		11		18			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
New England		Newcomb		New York		Essex								L. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
154										1743.3					
	337		25°23' +180°	-14.8°	+5.6	89°	-5.9	-0.32	1743.0		BS	-331+4	-62		
	337				+3.6	89°20'	-3.9	-0.32			BS				
155	0				5.4	-		-5.4		1737.6	π	0	0	1,442,240	573,495
156	335		238°41'	-14.3°	13.6	-		-13.6		1729.4		-239	-234	1,442,001	573,261
#	424		236°11'	-14.3°	14.7	-		-14.7		1728.3		-316	-283	1,441,924	573,212
157	660		241°43'	-14.3°	7.6	-		-7.62		1735.4	TP	-447+4	-486	1,441,797	573,009
157	660				4.3	0H	-3.3	-7.62			TP				
	330		87°13' +180°	-14.3°	+12.9	-		+12.92	1748.3		BS	-97+4	-315		
	330				+14.6	TH	-1.7	+12.92			BS				
158	0				5.4	-		-5.4		1742.9	π	0	0	1,441,704	572,694
159	330		266°0'	-14.3°	13.0	91°	-5.8	-18.8		1729.5		-104	-313	1,441,600	572,381
160	660		264°0'	-14.3°	11.0	92°	-23.0	-34.02			TP	-229+4	-619	1,441,479	572,075
160	660				14.9	91°40'	-19.2	-34.12		1714.2	TP				
	329		57°48' +180°	-14.3°	+3.3	88°	-11.5	-8.22	1706.0		BS	-239+4	-226		
	329				+0.6	88°28'	-8.8	-8.22			BS				
161	0				5.4	-		-5.4		1700.6	π	0	0	1,441,244	571,849
162	337		236°19'	-14.3°	10.5	-		-10.52		1695.5	TP	-250+4	-226	1,440,998	571,623
162	337				12.2	TH	+1.7	-10.52			TP				
	665		87°31' +180°	-14.3°	+11.0	88°	-23.2	-12.22			BS	-192+4	-636		
	665				+5.1	88°30'	-17.4	-12.32	1683.2		BS				

DATE		INSTRUMENT MAN			ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE	
10-14-81		G. Cotcamp			M. Knapp		6834		DDH			11		19	
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
New England		Newcomb		New York		Essex								L. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1683.2						
163	330		87°31'	-14.3°	2.4	89°-	+5.8	+3.4		1686.6		+95	+316	1,440,905	571,303
164	0				5.4	-	-	-5.4		1677.8	π	0	0	1,440,810	570,987
165	323		259°45'	-14.3°	13.9	TH	+1.6	-12.3			TP	-134+4	-294	1,440,680	570,693
165	323				10.6	BH	-1.6	-12.2		1671.0	TP				
	330		70°59'+180°	-14.3°	+3.8	89°-	-5.8	-2.0			BS	-181+4	-276		
	330				+1.9	89°20'	3.8	-1.9	1669.1		BS				
166	0				5.4	-	-	-5.4		1663.7	π	0	0	1,440,503	570,417
167	330		263°50'	-14.3°	5.2	-	-	-5.2		1663.9		-115	-309	1,440,388	570,108
168	660		263°50'	-14.3°	2.6	-	-	-2.6		1666.5	TP	-231+4	-618	1,440,276	569,799
168	660				6.9	TH	+3.3	-2.6			TP				
	320		60°53'+180°	-14.3°	+9.9	-	-	+9.3	1675.8		BS	-220+4	-232		
	320				+10.9	TH	-1.6	+9.3			BS				
Sta. 287	180		51°52'	-14.3°	8.2	-	-	-8.2		1667.6		+143	+110	1,440,203	569,677
11	181		56°14'	-14.3°	8.6	-	-	-8.6		1667.2		+135	+121	1,440,195	569,688
169	0				5.4	-	-	-5.4		1670.4	π	0	0	1,440,060	569,567
170	325		207°11'	-13.8°	3.6	88°-	+11.3	+7.7		1683.5	TP	-316+2	-75-2	1,439,746	569,490
170	325				0.8	88°30'	+8.5	+7.7			TP				
	660		6°50'+180°	-13.8°	+13.1	-	-	+13.1	1696.6		BS	-655+2	+80-2		
	660				+9.8	BH	+3.3	+13.1			BS				
171	330		6°50'	-13.8°	4.2	-	-	-4.2		1692.4		+328	-40	1,439,421	569,528

Sta. 287 line 7 c. 16680  
1,440,195 + 569,688  
V. intersect pt 1669.0

# Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
10-14-81		G. Cotcamp		M. Knapp		6834				11	20					
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER				
New England		Newcomb		New York		Essex						L. Davis				
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
									1696.6							
172	0				5.4	-		-5.4		1691.2	π	0	0	1,439,093	569,568	
172	282		192° 44'	-13.8°	5.8	DM	-1.4	-7.2		1689.4		-282	+5	1,438,811	569,573	at 28 N Y-intersect.
173	301		190° 05'	-13.8°	7.8	-		-7.8		1688.8	TP	-300+2	+20-2	1,438,795	569,586	
173	301				9.3	TH	+1.5	-7.8			TP					
	662		299° 06' -180°	-13.8°	9.8	89°	-11.6	-1.8			BS	-175+2	+638-2			
	662				+4.8	89° 26'	-6.5	-1.7	1687.1		BS					
174	330		299° 06'	-13.8°	1.4	TH	+1.7	+0.3		1687.4		+87	-318	1,438,709	569,904	
175	0				5.4	-		-5.4		1681.7	π	0	0	1,438,622	570,222	
176	330		138° 0'	-13.8°	13.8	91°	-5.8	-19.6		1667.5		-185	+273	1,438,437	570,195	
177	660		136° 0'	-13.8°	12.1	91°	-11.5	-23.6		1663.5		-352	+558	1,438,270	570,780	
178	995		133° 38'	-13.8°	7.3	91°	-17.4	-24.7		1662.4	TP	-495+2	+863-2	1,438,129	571,083	
178	995				14.3	90° 36'	-10.4	-24.7			TP					
	1320		297° 43' 24" -180°	-13.8°	+0.7	-		+0.7	1663.1		BS	-318+2	+1281-2			
	1320				+7.3	TH	-6.6	+0.7			BS					
179	990		296° 16'	-13.8°	2.2	-		-2.2		1660.9		+214	-967	1,438,027	571,395	
180	660		"	"	3.3	-		-3.3		1659.8		+142	-644	1,437,955	571,718	
181	330		"	"	4.6	-		-4.6		1658.5		+71	-322	1,437,884	572,040	
182	0				5.4	-		-5.4		1657.7	π	0	0	1,437,813	572,362	
183	330		131° 48'	-13.8°	7.8	-		-7.8		1655.3		-155	+291	1,437,658	572,653	
184	660		"	"	9.1	-		-9.1		1654.0		-310	+583	1,437,503	572,945	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
10-15-81		G. Cotcamp		M. Knapp		6834				11	21						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
New England		Newcomb		New York	Essex					L. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH+	EAST+	COORDINATES		REMARKS	
												SOUTH-	WEST-	Y	X		
									1663.1								
185	1000		133°08'	-13.8°	9.5	-	-9.5			1653.6	TP	-490.2	+872.2	1437,325	573,232		
185	1000				14.5	TH	+5.0	-9.5			TP						
	1658	1657.0	334°23'44"-180°	-13.8°	+12.8	92°-	+57.8	+70.6			BS	-1280.2	+1052.2				
	1658				+10.0	92°6'	+60.7	+70.7	1724.3		BS						
186	1320		33.5°08'	-13.8°	8.8	92°40'	-61.3	-70.1		1654.2		+1031	-825	1437,078	573457		
187	990		" "	"	12.0	92°40'	-46.0	-48.0		1676.3		+773	-619	1436,820	573,663		
188	660		" "	"	7.7	92°40'	-30.7	-38.4		1685.9		+515	-412	1436,562	573,870		
189	330		" "	"	8.1	92°-	-11.5	-19.6		1704.7		+258	-206	1436,305	574,076		
190	0				5.4	-		-5.4		1718.9	X	0	0	1436,047	574,282		
191	330		148°0'	-13.5°	5.9	88°-	+11.5	+5.6		1729.9		-231	+235	1435,816	574,517		
192	660		144°13'	-13.5°	6.3	88°-	+23.0	+16.7		1741.0		-431	+500	1435,616	574,782		
193	983		140°52'	-13.5°	7.2	88°-	+34.3	+27.12			TP	-596.2	+781.2	1435,453	575,061		
193	983				1.4	88°20'	+28.6	+27.2		1751.5	TP						
	988		301°35'-180°	-13.5°	+10.2	91°20'	+23.0	+33.22	1784.7		BS	-307.2	+939.2				
	988				+7.3	91°36'	+25.9	+33.2			BS						
194	660		297°23'	-13.5°	10.4	91°-	-11.5	-21.9		1762.8		+158	-641	1435,306	575,357		
195	330		" "	"	13.2	-		-13.2		1771.5		+79	-320	1435,227	575,678		
196	0				5.4	-		-5.4		1779.3	X	0	0	1435,148	575,998		
197	330		117°15'	-13.5°	0.3	-		-0.3		1784.4		-78	+321	1435,070	576,319		

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
10-15-81		G. Cotcamp		M. Knapp		6834				11	22						
AREA		TOPO MAP		STATE		COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
New England		Newcomb		New York		Essex					L. Davis						
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH +	EAST +	COORDINATES		REMARKS	
												SOUTH -	WEST -	Y	X		
									1784.7								
198	662		119° 40'	-13.5	4.5	74	+3.3	-1.22		1783.5	TP	-184 +2	+636 -3	1434966	576,631		
198	662				5.4	89° 38'	+4.2	-1.2			TP						
	1658	1656.6	319° 38' -180°	-13.5	+9.9	87° 40'	-67.5	-57.62			BS	-977	+1338 <sub>2</sub>				
	1658				+5.1	87° 50'	-62.6	-57.5	1726.0		BS						
199	1320		319° 38'	-13.5	7.0	87° 40'	+53.7	+46.7		1772.7		+778	-1066	1434767	576,900		
200	990		" "	"	11.0	87° 40'	+40.3	+29.3		1755.3		+584	-800	1434573	577,166		
201	660		" "	"	13.9	88° -	+23.0	+9.1		1735.1		+389	-533	1434378	577,433		
202	330		" "	"	6.5	-		-6.5		1719.5		+195	-267	1434184	577,699		
203	0				5.4	-		-5.4		1720.6	X	0	0	1433989	577,966		
204	330		129° 34'	-13.5	2.9	89° -	+5.8	+2.9		1728.9		-145	+296	1433844	578,262		
205	660		" "	"	0.5	89° -	+11.5	+11.0		1737.0		-290	+593	1433699	578,559		
206	996		128° 39' 30"	-13.5	5.1	88° 30'	+26.1	+21.02		1747.0	TP	-423	+901 -3	1433566	578,864		
206	996				1.0	88° 44'	+22.0	+21.0			TP						
	669		333° 26' -180°	-13.5	+13.9	-		+13.92	1760.9		BS	-512	+431 -3				
	669				+10.5	84	+3.3	+13.8			BS						
207	335		335° 16'	-13.5	7.9	-		-7.9		1753.0		+263	-207	1433317	579,085		
208	0				5.4	-		-5.4		1755.5	X	0	0	1433054	579,292		
209	330		179° 14'	-13.5	13.1	-		-13.1		1747.8		-320	+81	1432734	579,373		
210	660		177° 23'	-13.5	3.5	92° -	-23.0	-26.5		1734.4		-634	+183	1432420	579,475		

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
10-15-81		G. Cotcamp		M. Knapp		6834				11	23				
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
New England		Newcomb	New York	Essex					L. Davis						
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH+ SOUTH - LAT.	EAST+ WEST - DEP.		Y
									1760.9						
211	990		174° 02'	-13.5°	1.7	92° -	34.5	36.2			TP	-933	+330-3	1,432,121	579,619
211	990				14.4	91° 16'	21.9	36.3			TP				
	1320		330° 32' 12" - 180°	-13.5°	+14.9	-		+14.9			BS	-966	+900-3		
	1320				+8.3	011	+6.6	+14.9			BS				
212	990		328° 50'	-13.5°	13.8	-		-13.8				+704	-696	1,431,859	579,820
213	660		"	"	11.4	-		-11.4				+469	-464	1,431,624	580,052
214	330		"	"	8.8	-		-8.8				+235	-232	1,431,390	580,284
215	0				5.4	-		-5.4			π	0	0	1,431,155	580,516
216	330		173° 10'	-13.5°	4.1	-		-4.1				-309	+115	1,430,846	580,631
217	670		175° 22'	-13.5°	0.3	-		-0.3			TP	-637	+209-2	1,430,518	580,722
217	670				3.6	TH	+3.4	-0.2			TP				
	990		14° 26' + 180°	-13.5°	+13.9	88° 10'	31.7	17.8			BS	-989	-16-3		
	990				+12.2	88° 16'	29.9	17.7			BS				
218	660		11° 48'	-13.5°	6.4	88° -	23.0	16.6				+660	-20	1,430,189	580,683
219	330		7° 46'	-13.5°	1.9	88° -	11.5	9.6				+328	-33	1,429,857	580,670
220	0				5.4	-		-5.4			π	0	0	1,429,529	580,703
221	330		171° 35'	-13.5°	12.4	92° -	11.5	23.9				-306	+123	1,429,223	580,826
222	659	658.1	164° 33'	-13.5°	9.4	93° -	34.4	43.8			TP	-576	+319-2	1,428,953	581,019
222	659				14.4	92° 34'	29.5	43.9			TP				

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE		
10-15-81		G. Cotcamp		M. Knapp		6834					11	24		
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER					
New England		Newcomb	New York	Essex					L. Davis					
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
222	992	990.5	327°59'-190°	-13.5°	+1.8	86°48'	-55.3	-53.5			BS	-694	+707.3	
	992				+5.3	86°36'	-58.7	-53.4			BS			
223	662		327°59'	-13.5°	1.0	87°-	+34.6	+33.6				+464	-472	1,428,723 581,251
224	330		"	"	3.8	87°-	+17.2	+13.4				+231	-235	1,428,490 581,488
225	0				5.4	-	-5.4				X	0	0	1,428,259 581,723
#	168		166°05'	-13.5°	14.1	-	-14.1					-149	+77	1,428,110 581,800
226	330		171°11'		12.2	91°-	-5.8	-18.8						horiz. correct, y=+22 x=-50
227	666		173°48'		14.3	-	-14.3				TP			
227	666				11.0	84	-3.3	-14.3			TP			
	661		10°19'+180°		+7.0	93°-	+34.5	+41.5			BS			
	661				+13.9	92°24'	+27.7	+41.6			BS			
228	330		6°36'		7.7	93°-	-17.2	-24.9						
229	0				5.4	-	-5.4				X			
230	330		174°27'		2.8	87°-	+17.2	+14.4						
231	660		170°16'		1.7	87°-	+34.5	+32.8						
232	992		170°53'		4.0	86°40'	+57.6	+53.6			TP			
232	992				6.9	86°30'	+60.4	+53.5			TP			
	333		17°41'+180°		+13.9	90°30'	+2.9	+16.8			BS			
	333				+12.9	90°40'	+3.8	+16.7			BS			
233	0				5.4	-	-5.4				X			

