

VEY NOTES-HIGH RESOLUTION DATA

445

Geosource Inc. Client-COCORP

2-5-81
 ARKANSAS
 INSTRUMENT MAN: G. Cotcamp
 TOPO MAP: Athens 15'
 STATE: Arkansas
 COUNTY: Montgomery
 ROD MAN: B. Cotcamp
 PARTY NUMBER: 6834
 TWP: [blank]
 NOTES CHECKED BY: B.C.
 RANGE: [blank]
 PPM: [blank]
 LINE NO.: 4
 PARTY MANAGER: L. Davis
 PAGE: 1 of 34

STATION	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 - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS
														Y	X	
										1070.5				635,410	1,447,790	→ scaled.
	455		43°12' +180°	+6.9°	+1.3	-		+1.3	1071.8		BS	-295-	-347+			↳ intersect.
	455				+3.6	TH	-2.3	+1.3			BS					
	330		41°13'	+6.9°	10.8	-		-10.8		1067.0		+222	+244	635,336	1,447,638	
	0				5.4	-		-5.4		1066.4	TP	0	0	635,114	1,447,394	
	238	237.9	210°55'	+6.9°	7.2	88°-	+8.3	+1.1		1072.9	TP	-189-	-144+	634,924	1,447,251	curve + hill
	238				5.5	88°24'	+6.6	+1.1			TP					
	422	421.7	49°0' +180°	+6.9°	3.5	88°-	-11.7	-11.2			BS	-239-	-347+			
	422				+1.5	88°24'	-11.8	-10.3	1062.6		BS					
	330		51°0'	+6.9°	3.2	89°-	+5.8	+2.6		1065.2		+178	+278	634,862	1,447,183	
	0				5.4	-		-5.4		1057.2	TP	0	0	634,684	1,446,905	
	330		236°09'	+6.9°	9.3	-		-9.3		1053.3		-152	-293	634,532	1,446,612	
	660		" "	"	13.0	BH	-3.3	-16.3		1046.3		-304	-586	634,380	1,446,319	
	958		236°09'	+6.9°	2.6	-		-2.6		1060.0	TP	-442-	-850+	634,241	1,446,056	
	958				7.4	TH	+4.8	-2.6			TP					
	366	365.5	76°06' +180°	+6.4°	+2.8	87°-	-19.1	-16.3	1043.7		BS	-48-	-362+			
	366				+1.8	87°10'	-18.1	-16.3			BS					
	330		74°02'	+6.9°	1.4	87°-	+17.2	+15.8		1059.5		+55	+325	634,247	1,446,020	
	0				5.4	-		-5.4		1038.3	TP	0	0	634,192	1,445,695	
	320	319.8	261°41'	+6.4°	13.0	88°-	+11.2	-1.8		1041.9	TP	-11-	-320+	634,180	1,445,376	
	320				12.1	88°10'	+10.2	-1.9			TP					

KEY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
2/5/81		G. Cotcamp		B. Cotcamp		6834		rew B.C.		4	2			
STATE		TOPO MAP		COUNTY		TWP		RANGE	PPM	PARTY MANAGER				
Arkansas		Athens 15'		Montgomery						L. Davis				
STATION	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.	
									1041.9					
	321		102°42' +180°	+6.9°	+14.2	84	+1.6	+15.8	1057.7		BS	+105 -1	-303 +1	
	321				+13.9	90°20'	+1.9	+15.8			BS			
	0				5.4	-		-5.4	1052.3		X	0	0	634,284 1,445,074
	330		254°15'	+6.9°	6.6	87°-	+17.2	+10.6	1068.3			-54	-326	634,230 1,444,748
	660	659.1	254°15'	+6.9°	1.2	87°-	+34.5	+33.3	1091.0		TP	-107 -1	-650 +1	634,176 1,444,425
	660				0.0	87°6'	+33.3	+33.3			TP			
	330	329.8	74°27' +180°	+6.9°	+9.2	88°-	-11.5	-2.3	1088.7		BS	-52 -1	-326 +1	
	330				+6.5	88°28'	-8.8	-2.3			BS			
	0				5.4	-		-5.4	1083.3		X	0	0	634,123 1,444,100
	321		284°12'	+6.9°	6.3	89°-	+5.6	-0.7	1088.0		TP	+113 -1	-300 +1	634,235 1,443,801
	321				7.3	88°50'	+6.5	-0.8			TP			
	988		107°32'44" +180°	+6.9°	+10.1	89°24'	-10.3	-0.2			BS	+401 -1	-903 +1	
	988				+11.2	89°20'	-11.5	-0.3	1087.7		BS			
	660		102°52'	+6.9°	6.0	-		-6.0	1081.7			-218	+623	634,417 1,443,522
	330		99°57'	+6.9°	5.9	-		-5.9	1081.8			-93	+317	634,542 1,443,216
	0				5.4	-		-5.4	1082.3		X	0	0	634,635 1,442,899
	330		281°0'	+6.9°	0.5	-		-0.5	1087.2			+99	-315	634,734 1,442,584
	660		" "	"	7.3	89°-	+11.5	+4.2	1091.9			+197	-630	634,832 1,442,269
	985	984.9	278°10'	+6.9°	6.1	89°-	+17.2	+11.1	1098.8		TP	+248 -1	-953 +1	634,882 1,441,947
	985				3.8	89°8'	+14.9	+11.1			TP			

KEY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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DATE 2/5/81	INSTRUMENT MAN G. Cotcamp	ROD MAN D. Libenson	PARTY NUMBER 6834	NOTES CHECKED BY Jew BC	LINE NO. 4	PAGE 3
STATE Arkansas	TOPO MAP Athens 15'	STATE Arkansas	COUNTY Montgomery	TWP	RANGE	PPM
			PARTY MANAGER 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 - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS
														Y	X	
										10988						
	656	655.8	81°41' +180°	+6.9°	+10.3	91°27'	+16.0	+26.3			BS	-22 -1	-655 +1			
	656				+14.1	91°4'	+12.2	+26.3	1125.1		BS					
	330		87°30'	+6.9°	19.2	-		-19.2		1105.9		-22	+329	634,837	1,441,622	
2	0				5.4	-		-5.4		1119.7	X	0	0	634,859	1,441,293	
3	330		271°50'	+6.9°	10.9	-		-10.9		1114.2		+47	-327	634,906	1,440,966	
4	660		269°32'	+6.9°	11.7	-		-11.7		1113.4		+68	-656	634,927	1,440,637	
f	917		267°36'	+6.9°	4.1	-		-4.1		1121.0		+64	-912	634,923	1,440,381	T-intersect. el. 1121.0
f	920		271°35'20"	+6.9°	9.1	-		-9.1		1116.0	TP	+128 -1	-911 +1	634,986	1,440,383	
f	920				13.7	TH	+4.6	-9.1			TP					
	370		161°21' +180°	+6.9°	+11.9	-		+11.9	1127.9		BS	+362 -1	-79 +1			
	370				+10.0	BH	+1.9	+11.9			BS					
5	328		160°20'	+6.9°	13.6	-		-13.6		1114.3		-319	+75	635,029	1,440,380	
6	0				5.4	-		-5.4		1122.5	X	0	0	635,347	1,440,305	
7	330		324°40'	+6.9°	8.5	-		-8.5		1119.4	TP	+289 -1	-160 +1	635,635	1,440,146	
7	330				10.2	TH	+1.7	-8.5			TP					
	320		125°38' +180°	+6.9°	+1.7	-		+1.7	1121.1		BS	+214 -1	-238 +1			
	320				+3.3	TH	-1.6	+1.7			BS					
8	0				5.4	-		-5.4		1115.7	X	0	0	635,848	1,439,909	
9	330		278°49'	+6.9°	9.2	-		-9.2		1111.9	TP	+87 -1	-318 +1	635,934	1,439,592	
9	330				10.9	TH	+1.7	-9.2			TP					

FIELD NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
2/5/81		G. Cotcamp		B. Cotcamp		6834		B.C.		4	4					
TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
Arkansas		Athens 15'	Montgomery					L. Davis								
STATION	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	
										1111.9						
	322	321.8	88° 51' +180°	+6.9°	+3.9	88° -	-11.2	-7.37	1104.6		BS	+29 -1	-320 +1			
	322				+1.1	88° 30'	-8.4	-7.35			BS					
	0				5.4	-		-5.4	1099.2		T	0	0	635,962	1,438,273	
	330		259° 36'	+6.9°	5.2	92° -	-11.5	-16.7	1087.9			-23	-329	635,939	1,438,944	
	658	657.9	257° 30'	+6.9°	3.4	90° 50'	-9.6	-13.07	1091.6		TP	-70 -1	-654 +1	635,891	1,438,620	
	658				4.2	90° 46'	-8.8	-13.05			TP					
	330	329.8	78° 06' +180°	+6.9°	+5.1	88° -	-11.5	-6.47			BS	-32 -1	-328 +1			
	330				+3.1	88° 20'	-9.6	-6.55	1085.1		BS					
3	0				5.4	-		-5.4	1079.7		T	0	0	635,858	1,438,293	set-up opposite sta
4	332		263° 03'	+6.9°	8.2	-		-8.27	1076.9		TP	-3 -1	-332 +1	635,854	1,437,962	
4	332				9.9	TH	+1.7	-8.25			TP					
	990		103° 35' 20" +180°	+6.9°	+13.5	-		+13.57	1090.4		BS	+338 -1	-930 +1			
	990				+8.5	OH	+5.0	+13.55			BS					
5	660		103° 44'	+6.9°	7.9	92° -	-23.0	-30.9	1059.5			-227	+620	635,964	1,437,653	
6	330		"	"	12.6	92° -	-11.5	-24.1	1066.3			-114	+310	636,077	1,437,343	
7	0				5.4	-		-5.4	1085.0		T	0	0	636,191	1,437,033	
8	331	330.8	294° 12'	+6.9°	2.7	88° -	+11.5	+8.87	1099.2		TP	+168 -1	-285 +1	636,358	1,436,749	
8	331				0.8	88° 20'	+9.6	+8.85			TP					
	498	497.9	124° 05' +180°	+6.9°	+13.7	91° 10'	+10.1	+23.87	1123.0		BS	+323 -1	-379 +1			
	498				+12.2	91° 20'	+11.6	+23.85			BS					

EY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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2/5/81	INSTRUMENT MAN G. CoTcamp	ROD MAN D. Libenson	PARTY NUMBER 6834	NOTES CHECKED BY B.C.	LINE NO. 4	PAGE 5
Arkansas	TOPO MAP At hens 15'	STATE Arkansas	COUNTY Montgomery	TWP	RANGE	PPM
				PARTY MANAGER L. Davis		

ION	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.		Y
									1123.0						
	168		126°22'	+6.9°	10.7	91°	-2.9	-13.6		1109.4		-114	+123	636,566	1,436,494
	0				5.4	-		-5.4		1117.6	TP	0	0	636,680	1,436,371
	165		334°0'	+6.9°	4.7	-		-4.7		1118.3		+155	-55	636,835	1,436,316
	501		332°33'	+6.9°	4.5	TH	+2.5	-2.0		1121.0	TP	+468-1	-180+1	637,147	1,436,192
	501				2.0	-		-2.0			TP				
	329		162°39'+180°	+6.9°	+14.4	90°30'	+2.9	+17.3	1138.3		BS	+323-1	-61+1		
	329				+11.6	91°-	+5.7	+17.3			BS				
-2	0				5.4	-		-5.4		1132.9	TP	0	0	637,469	1,436,132
3	330		331°02'	+6.9°	1.0	89°-	+5.8	+4.8		1143.1	TP	+305-1	-127+1	637,773	1,436,006
-3	330				2.9	88°40'	+7.7	+4.8			TP				
	327	326.9	143°32'+180°	+6.9°	+14.2	91°20'	+7.6	+21.8	1164.9		BS	+283-1	-164+1		
	327				+12.3	91°40'	+9.5	+21.8			BS				
4	0				5.4	-		-5.4		1159.5	TP	0	0	638,055	1,435,843
15	330	329.8	294°48'	+6.9°	2.3	88°-	+11.5	+9.2		1174.1	TP	+171-1	-282+1	638,225	1,435,562
15	330				0.3	88°20'	+9.6	+9.3			TP				
	330	329.8	100°40'+180°	+6.9°	+11.6	92°-	+11.5	+23.1	1197.2		BS	+97-1	-315+1		
	330				+14.5	91°30'	+8.6	+23.1			BS				
76	0				5.4	-		-5.4		1191.8	TP	0	0	638,321	1,435,248
47	330		279°23'	+6.9°	10.4	89°-	+5.8	-4.6		1192.6	TP	+90-1	-318+1	638,410	1,434,931
47	330				6.3	TH	+1.7	-4.6			TP				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
3/6/81		G. Cotcamp		B. Cotcamp		6839		B.L.		4		6		
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
Arkansas		Athens 15		Arkansas		Montgomery						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.	
47										1192.6				
	328		112°40' +180°	+6.1°	+4.3	89°-	-5.7	-1.4	1191.2		BS	+158 -1	-287 +1	
	328				+6.2	88°40'	-7.6	-1.4			BS			
48	0				5.4	-		-5.4		1185.8	X	0	0	638,567 1,434,645
49	330	329.8	304°09'	+6.1°	13.7	92°10'	-12.5	-26.2		1165.0	TP	+213 -1	-252 +1	638,779 1,434,394
49	330				12.7	92°20'	-13.4	-26.1			TP			
	329	328.6	113°15' +180°	+6.1°	+1.1	87°-	-17.2	-16.1	1148.9		BS	+161 -1	-286 +1	
	329				+3.6	86°40'	-19.1	-16.1			BS			
50	0				5.4	-		-5.4		1143.5	X	0	0	638,939 1,434,109
51	329		264°32'	+6.1°	7.3	91°-	-5.7	-13.0			TP	+4 -1	-329 +1	638,942 1,433,781
51	329				9.3	90°40'	-3.8	-13.1		1135.8	TP			
	219		79°48' +180°	+6.1°	+10.5	-		+10.5	1146.3		BS	-16 -1	-218 +1	
	219				+9.4	BH	+1.1	+10.5			BS			
<u>IL</u>	155		83°25'	+6.1°	10.3	-		-10.3		1136.0		+1	+155	638,926 1,433,719 T-rd (north)
X	0				5.4	-		-5.4		1140.9	X	0	0	638,925 1,433,564
52	111		268°46'	+6.1°	12.0	-		-12.0		1134.3		+9	-111	638,934 1,433,453
53	441		264°27'	+6.1°	5.4	-		-5.4		1140.9	TP	+4 -1	-441 +1	638,928 1,433,124
53	441				3.2	BH	-2.2	-5.4			TP			
	255	254.5	89°31' +180°	+6.1°	+7.0	86°36'	-15.5	-8.5			BS	+25 -1	-253 +1	
	255				+6.1	86°42'	-14.7	-8.6	1132.3		BS			
X	0				5.4	-		-5.4		1126.9	X	0	0	638,952 1,432,872

HIGH RESOLUTION DATA

Geosource Inc.

INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
G. Cotcamp		D. Libenson		6834		B.C.		4		7				
TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
Athens 15'		Arkansas		Montgomery								L. Davis		
STATION	PLOT 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
								1132.3						
5		290°35'	+6.1°	10.3	-		-10.3		1122.0		+34	-67	638,986	1,432,805
02		285°22'	+6.1°	5.2	TH	+2.0	-3.2		1129.1	TP	+147-1	-379+1	639,098	1,432,499
402				5.5	89°40'	+2.3	-3.2			TP				
660	659.6	85°19'30"+180°	+6.1°	+8.6	88°-	-23.0	-14.4	1114.7		BS	+16-1	-659+1		
660				+4.8	88°20'	-19.2	-14.4			BS				
330		80°24'	+6.1°	7.2	88°-	+11.5	+4.3		1119.0		+20	+329	639,133	1,432,170
0				5.4	-		-5.4		1109.3	π	0	0	639,113	1,431,841
330		259°52'	+6.1°	10.4	-		-10.4		1104.3		-23	-329	639,090	1,431,512
661		258°51'30"	+6.1°	6.5	-		-6.5		1108.2	TP	-58-1	-658+1	639,054	1,431,184 T.P. opposite sta.
661				9.8	TH	+3.3	-6.5			TP				
331		106°07'+180°	+6.1°	+2.0	-		+2.0	1110.2		BS	+125-1	-306+1		
331				+3.7	TH	-1.7	+2.0			BS				
20	0			5.4	-		-5.4		1104.8	π	0	0	639,178	1,430,879
TP	263	262.6	+6.1°	5.2	87°-	+13.7	+8.5		1118.7	TP	+89-1	-247+1	639,266	1,430,633
TP	263			4.0	87°16'	+12.5	+8.5			TP				
	390	68°01'+180°	+6.1°	+1.5	-		+1.5			BS	-107-1	-375+1		
	390			+3.4	TH	-2.0	+1.4	1120.1		BS				
61	330	68°01'	+6.1°	4.2	-		-4.2		1115.9		+90	+317	639,248	1,430,576
62	0			5.4	-		-5.4		1114.7	π	0	0	639,158	1,430,259

HIGH RESOLUTION DATA

Geosource Inc.

INSTRUMENT MAN <i>G. Cotcamp</i>	ROD MAN <i>G. Cotcamp</i>	PARTY NUMBER <i>6837</i>	NOTES CHECKED BY <i>BC</i>	LINE NO. <i>4</i>	PAGE <i>8</i>	
TOPO MAP <i>Athens 15</i>	STATE <i>Arkansas</i>	COUNTY <i>Montgomery</i>	TWP	RANGE	PPM	PARTY MANAGER <i>L. Davis</i>

STATION	PLOT 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
								1120.1							
30		256°34'	+6.1°	0.3	-		-0.3		1119.8	TP	-42	-327+1	639,115	1,429,933	
330				2.0	TH	+1.7	-0.3			TP					
330		89°02'+180°	+6.1°	+10.6	-		+10.6	1130.4		BS	+30-1	-329+1			
330				+8.9	BH	+1.7	+10.6			BS					
0				5.4	-		-5.4		1125.0	X	0	0	639,144	1,429,605	
330		276°28'	+6.1°	14.3	-		-14.3		1116.1	TP	+72	-322+1	639,216	1,429,284	
330				12.6	BH	-1.7	-14.3			TP					
330		103°33'+180°	+6.1°	+1.5	-		+1.5	1117.6		BS	+111	-311			
330				+3.2	TH	-1.7	+1.5			BS					
66	0			5.4	-		-5.4		1112.2	X	0	0	639,327	1,428,973	X opposite Sta.
67	330	278°0'	+6.1°	4.8	-		-4.8		1112.8		+80	-320	639,407	1,428,653	
68	656	277°38'	+6.1°	14.0	-		-14.0		1103.6	TP	+156	-637	639,483	1,428,336	
68	656			10.7	BH	-3.3	-14.0			TP					
330	329.8	96°43'+180°	+6.1°	+3.2	88°-	-11.5	-8.3	1095.3		BS	+73	-322			
330				+1.3	88°20'	-9.6	-8.3			BS					
69	0			5.4	-		-5.4		1089.9	X	0	0	639,556	1,428,014	
70	330	261°0'	+6.1°	7.0	-		-7.0		1088.3		-17	-330	639,539	1,427,684	
71	660	258°27'	+6.1°	11.9	BH	-3.3	-15.2		1080.1	TP	-63	-657	639,493	1,427,357	
71	660			14.0	90°6'	-1.2	-15.2			TP					

FIELD NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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3/6/81	INSTRUMENT MAN G. Cotcamp	ROD MAN B. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY B.C.	LINE NO. 4	PAGE 9
Athens 15'	TOPO MAP Athens 15'	STATE Arkansas	COUNTY Montgomery	TWP	RANGE	PPM
					PARTY MANAGER L. Davis	

STATION	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			
										1080.1								
	331		99°12' +180°	+6.1°	+9.6	89°-	-5.8	+3.8	1083.9		BS	+87	-319					
	331				+12.5	88°30'	-8.7	+3.8			BS							
2	0				5.4	-		-5.4		1078.5	X	0	0	639,580	1,427,038			
3	328		274°59'	+6.1°	1.6	89°-	+5.7	+4.1		1088.0	TP	+63	-322	639,643	1,426,716			
3	328				0.5	89°12'	+4.6	+4.1			TP							
	331		64°29' +180°	+6.1°	+13.5	BH	+1.7	+15.2	1103.2		BS	-110	-312					
	331				+14.2	90°10'	+1.0	+15.2			BS							
4	0				5.4	-		-5.4		1097.8	X	0	0	639,533	1,426,404	X opposite sta.		
TP	72		280°20'	+6.1°	10.0	-		-10.0		1093.2		+20	-69	639,553	1,426,335	trail (south)		
TP	183		287°49'	+6.1°	9.8	-		-9.8		1093.4	TP	+74	-167	639,607	1,426,237			
TP	183				10.7	TH	+0.9	-9.8			TP							
	488	487.5	135°31' +180°	+6.1°	+2.5	92°30'	+21.3	+23.8	1117.2		BS	+382	-303					
	488				+1.1	92°40'	+22.7	+23.8			BS							
75	330		135°31'	+6.1°	11.8	91°-	-5.8	-17.6		1099.6		-259	+205	639,730	1,426,139			
76	0				5.4	-		-5.4		1111.8	X	0	0	639,989	1,425,934			
77	320	319.9	310°0'	+6.1°	5.6	88°24'	+8.9	+3.3		1020.5	TP	+230	-222	640,219	1,425,712			
77	320				7.5	88°4'	+10.8	+3.3			TP							
	435	434.7	119°20' +180°	+6.1°	+9.1	92°-	+15.2	+24.3	1144.8		BS	+252	-354					
	435				+10.4	91°50'	+13.9	+24.3			BS							
78	33105		119°20'	+6.1°	11.2	-		-11.2		1133.6		-61	+86	640,416	1,425,444			

TRIP NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
3/6/81		G. Cotcamp		D. Libenson		6834		B.C.		4	10					
STATE		TOPO MAP		STATE		COUNTY		TWP		RANGE	PPM	PARTY MANAGER				
Arkansas		Athens 15		Arkansas		Montgomery						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	
									1144.8							
π	0				5.4	-		-5.4		1139.4	π	0	0	640,471	1,425,358	
79	225		318° 14'	+6.1°	4.2	-		-4.2		1140.6		+183	-131	640,654	1,425,227	
80	555		315° 55'	+6.1°	14.4	90° 34'	-5.5	-19.9		1124.9	TP	+437	-342	640,968	1,425,016	
80	555				13.4	90° 40'	-6.5	-19.9			TP					
	332		112° 04' +180°	+6.1°	+8.2	-		+8.2	1133.1		BS	+157	-293			
	332				+9.9	TH	-1.7	+8.2			BS					
1	0				5.4	-		-5.4		1127.7	π	0	0	641,065	1,424,723	π opposite sta.
TP	236		325° 45'	+6.9°	12.7	91° -	-4.1	-16.8		1116.3	TP	+209	-110	641,274	1,424,613	
8	236				14.1	90° 40'	-2.7	-16.8			TP					
	427		161° 57' +180°	+6.9°	+2.5	-		+2.5	1118.8		BS	+418	-86			
	427				+4.6	TH	-2.1	+2.5			BS					
82	330		160° 56'	+6.9°	6.2	-		-6.2		1112.6		-322	+72	641,370	1,424,599	
83	0				5.4	-		-5.4		1113.4	π	0	0	641,692	1,424,527	
84	321		308° 06'	+6.9°	7.1	TH	+1.6	-5.5		1113.3	TP	+225	-229	641,917	1,424,298	
84	321				3.9	BH	-1.6	-5.5			TP					
	316		165° 59' +180°	+6.9°	+12.9	90° 36'	+3.3	+16.2	1129.5		BS	+313	-42			
	316				+14.4	90° 20'	+1.8	+16.2			BS					
85	0				5.4	-		-5.4		1124.1	π	0	0	642,230	1,424,256	
86	330		1° 07'	+6.9°	2.2	88° -	+11.5	+9.3		1138.8		+327	+43	642,557	1,424,299	

NOTES-HIGH RESOLUTION DATA

Geosource Inc.

INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE					
16/81		G. Cotcamp		D. Libenson		6834		B.C.		4 11					
TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER			
Arkansas		Athens 15		Arkansas		Montgomery						L. Davis			
N	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
									1129.5						
	660	659.6	1° 15'	+6.9°	6.3	88° -	+ 23.0	+ 16.7		1146.2	TP	+654	+88	642,884	1,424,344
	660				2.5	88° 20'	+ 19.2	+ 16.7			TP				
	330	329.8	177° 31' +180°	+6.9°	+14.7	92° -	+ 11.5	+ 26.2	1172.4		BS	+329	+23		
	330				+12.8	92° 20'	+ 13.4	+ 26.2			BS				
	0				5.4	-		- 5.4		1167.0	X	0	0	643,213	1,424,367
'89	319	318.2	319° 08'	+6.9°	12.4	86° -	+ 22.2	+ 9.8		1182.2	TP	+262	-180	643,475	1,424,187
'89	319				10.5	86° 20'	+ 20.4	+ 9.9			TP				
	655		170° 30' +180°	+6.9°	+1.4	-		+ 1.4	1183.6		BS	+654	-35		
	655				+2.6	89° 59'	- 1.1	+ 1.5			BS				
10	327		172° 0'	+6.9°	9.1	92° -	- 11.4	- 20.5		1163.1		-327	+9	643,802	1,424,161
21	0				5.4	-		- 5.4		1178.2	X	0	0	644,129	1,424,152
TP	282	280.9	6° 36'	+6.9°	6.3	85° -	+ 24.5	+ 18.2		1201.8	TP	+274	+63	644,403	1,424,215
TP	282				5.8	85° 6'	+ 24.0	+ 18.2			TP				
	177		208° 58' -180°	+6.9°	+3.2	-		+ 3.2	1205.0		BS	+144	+102		
	177				+4.1	TH	- 0.9	+ 3.2			BS				
92	126		208° 58'	+6.9°	2.2	-		- 2.2		1202.8		-103	-73	644,444	1,424,244
X	0				5.4	-		- 5.4		1199.6	X	0	0	644,547	1,424,317
93	204		61° 09'	+6.9°	13.8	91° -	- 3.6	- 17.4		1187.6	TP	+78	+189	644,625	1,424,506
93	204				12.6	91° 20'	- 4.7	- 17.3			TP				

FIELD NOTES-HIGH RESOLUTION DATA

Geosource Inc.

3/6/81	INSTRUMENT MAN G. Cotcamp	ROD MAN D. Libenson	PARTY NUMBER 6834	NOTES CHECKED BY B.C.	LINE NO. 4	PAGE 12
Arkansas	TOPO MAP Athens 15'	STATE Arkansas	COUNTY Montgomery	TWP	RANGE	PPM
					PARTY MANAGER L. Davis	

STATION	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.	
										1187.6				
	272	271.9	166°45' +180°	+6.9°	+14.4	91°20'	+6.3	+20.7	1208.3		BS	+270	-32	horiz. correct, y = -97' x = +48'
	272				+13.6	91°30'	+7.1	+20.7			BS			
M	298		165°36'	+6.9°	11.6	-	-	-11.6		1196.7		-295	+41	644,600 1,424,515 U.S.G.S. M14 1989 ed. 1195
✓	261		156°12'	+6.9°	11.2	92°-	-9.1	-20.3		1188.0		-249	+78	644,646 1,424,552 T-intersect.
14	0				5.4	-	-	-5.4		1202.9	X	0	0	644,895 1,424,474
5	330	329.8	336°25'	+6.9°	0.8	88°-	+11.5	+10.7		1219.0	TP	+315	-97+2	645,210 1,424,379
15	330				1.8	87°50'	+12.5	+10.7			TP			
	295	294.9	111°14' +180°	+6.9°	+7.8	91°40'	+8.6	+16.4			BS	+136	-261+2	
	295				+6.4	91°56'	+9.9	+16.3	1235.3		BS			
96	0				5.4	-	-	-5.4		1229.9	X	0	0	645,346 1,424,120
97	330	329.8	271°53'	+6.9°	3.3	88°-	+11.5	+8.2		1243.5	TP	+48	-326+2	645,394 1,423,796
97	330				2.0	88°14'	+10.2	+8.2			TP			
	657	656.9	82°40' +180°	+6.9°	+10.9	91°-	+11.5	+22.4	1265.9		BS	-11	-657+2	
	657				5.2	91°30'	+17.2	+22.4			BS			
98	330		79°50'	+6.9°	11.0	91°-	-5.8	-16.8		1249.1		+22	+329	645,405 1,423,470
99	0				5.4	-	-	-5.4		1260.5	X	0	0	645,383 1,423,141
100	331	330.8	268°23'	+6.9°	3.3	88°-	+11.5	+8.2		1274.1	TP	+28	-330+2	645,411 1,422,813
100	331				1.4	88°20'	+9.6	+8.2			TP			
	330		101°14' +180°	+6.9°	+12.9	91°-	+5.8	+18.7	1292.8		BS	+100	-314+2	
	330				+13.9	90°50'	+4.8	+18.7			BS			

IRVEY NOTES-HIGH RESOLUTION DATA

EO-445

Geosource Inc.

DATE 3/7/81	INSTRUMENT MAN G. Cotcamp	ROD MAN B. Cotcamp	PARTY NUMBER 6839	NOTES CHECKED BY rdw B.C.	LINE NO. 4	PAGE 13
STATE Arkansas	TOPO MAP Athens 15'	STATE Arkansas	COUNTY Montgomery	TWP	RANGE	PPM
PARTY MANAGER 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.		Y
									1292.8						
01	0				5.4	-		-5.4		1287.4	π	0	0	645,511	1,422,501
02	330	329.9	292°25'	+6.9°	9.6	88°40'	+7.7	-1.9		1290.9	TP	+159	-289+2	645,670	1,422,214
02	330				8.6	88°50'	+6.7	-1.9			TP				
	990	989.7	101°48'30"+180°	+6.9°	+0.6	88°30'	-25.9	-25.3		1265.6	BS	+309	-940+2		
	990				+3.5	88°20'	-28.8	-25.3			BS				
03	660		101°49'	+6.9°	2.4	89°-	+11.5	+9.1		1274.7		-206	+627	645,773	1,421,903
04	330		" "	"	3.3	-		-3.3		1262.3		-103	+313	645,876	1,421,589
05	0				5.4	-		-5.4		1260.2	π	0	0	645,979	1,421,276
F	88		278°26'	+6.9°	4.3	-		-4.3		1261.3		+23	-85	646,002	1,421,191 T-rd (south)
06	330	329.9	284°29'	+6.9°	14.2	91°16'	-6.7	-20.9		1244.7	TP	+117	-308+2	646,096	1,420,970
06	330				13.2	91°20'	-7.7	-20.9			TP				
	328		94°41'+180°	+6.9°	+1.7	-		+1.7		1246.4	BS	+63	-322+2		
	328				+3.3	TH	-1.6	+1.7			BS				
08M	104		67°59'	+6.9°	4.8	-		-4.8		1241.6		+28	+100	646,187	1,420,750 U.S.G.S. W133-1935 BL 1241.0
107	0				5.4	-		-5.4		1241.0	π	0	0	646,159	1,420,650
108	330		276°46'	+6.9°	5.8	88°-	+11.5	+5.7		1252.1		+75	-321	646,234	1,420,329
109	660		" "	"	5.6	88°-	+23.0	+17.4		1263.8		+150	-693	646,309	1,420,007
110	990	989.4	276°46'	+6.9°	8.6	88°-	+34.5	+25.9		1272.3	TP	+225	-963+2	646,384	1,419,689
110	990				5.1	88°12'	+31.1	+26.0			TP				

KEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

E		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
3/7/81		G. Cotcamp		B. Cotcamp		6834		Jew DL		4	14				
A		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Arkansas		Athens		Arkansas		Montgomery								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
0										1272.3					
	330		96°39'+180°	+6.9°	+10.9	-	+	+10.9	1283.2		BS	+75	-321+2		
	330				+12.6	TH	-1.7	+10.9			BS				
1	0				5.4	-		-5.4		1277.8	π	0	0	646,459	1,419,370
2	330		270°25'	+6.9°	13.0	-		-13.0		1270.2		+39	-328	646,498	1,419,042
3	660	659.9	269°23'	+6.9°	14.3	90°50'	-9.6	-23.9		1259.3	TP	+67	-657+2	646,526	1,418,715
	660				10.5	91°10'	-13.4	-23.9			TP				
	330	329.8	112°22'+180°	+6.9°	+12.6	88°-	-11.5	+1.1	1260.4		BS	+159	-289+2		
	330				+13.6	87°50'	-12.5	+1.1			BS				
4	0				5.4	-		-5.4		1255.0	π	0	0	646,685	1,418,428
5	330		335°36'	+6.9°	6.2	-		-6.2		1254.2		+314	-102	646,999	1,418,326
6	660	659.7	333°53'	+6.9°	3.9	88°20'	+19.2	+15.3		1275.7	TP	+621	-223+2	647,306	1,418,207
6	660				5.8	88°10'	+21.1	+15.3			TP				
	329	328.9	136°26'+180°	+6.9°	+12.6	91°30'	+8.6	+21.2	1296.9		BS	+262	-199+2		
	329				+14.5	91°10'	+6.7	+21.2			BS				
7	0				5.4	-		-5.4		1291.5	π	0	0	647,588	1,418,010
8	330	329.8	312°30'	+6.9°	2.5	88°-	+11.5	+9.0			TP	+249	-217+2	647,817	1,417,795
18	330				1.8	88°8'	+10.7	+8.9		1305.8	TP				
	320		95°38'+180°	+6.9°	+3.7	-		+3.7	1309.5		BS	+67	-313+2		
	320				+2.1	8H	+1.6	+3.7			BS				
19	0				5.4	-		-5.4		1304.1	π	0	0	647,884	1,417,489

KEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

E 3/7/81		INSTRUMENT MAN G. Cotcamp		ROD MAN B. Cotcamp		PARTY NUMBER 6834		NOTES CHECKED BY J.D.W. B.C.		LINE NO. 4		PAGE 15				
A Arkansas		TOPO MAP Athens		STATE Arkansas		COUNTY Montgomery/Polk		TWP		RANGE		PPM		PARTY MANAGER 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
									1309.5							
2	330		268° 19'	+6.9°	5.4	88° -	+11.5	+6.1		1315.6		+27	-329	647,911	1417,155	↑
1	660		" "	"	8.2	88° -	+23.0	+14.8		1324.3		+54	-658	647,938	1,416,826	Montgomery Co
2	990		268° 19' 18"	+6.9°	11.9	88° -	+34.5	+22.67		1332.1	TP	+81	-987.2	647,965	1,416,499	Polk Co.
2	990				6.9	88° 20'	+28.8	+22.75			TP					↓
	660	659.8	85° 42' +180°	+6.9°	+5.9	91° 30'	+17.3	+23.2	1335.3		BS	+24	-659.2			
	660				+4.0	91° 40'	+19.2	+23.2	5		BS					
3	330		82° 45'	+6.9°	12.8	-	-	-12.8		1342.5		+5	+330	647,994	1,416,172	
4	0				5.4	-	-	-5.4		1349.9	π	0	0	647,989	1,415,842	
5	330		261° 46'	+6.9°	13.2	91° -	-5.8	-19.0		1336.3		-11	-330	647,978	1,415,512	
16	660		261° 46'	+6.9°	7.8	-	-	-7.8		1347.5	TP	-21	-660.2	647,968	1,415,184	
26	660				4.5	OH	-3.3	-7.8			TP					
	990	989.8	81° 11' +180°	+6.9°	+5.5	88° 46'	-21.3	-15.8	1331.7		BS	-42	-989.2			
	990				+3.1	88° 54'	-19.0	-15.9	5		BS					
27	660		81° 11'	+6.9°	3.5	89° -	+11.5	+8.0		1339.7		+28	+659	647,954	1,414,856	
28	330		" "	"	3.3	-	-	-3.3		1328.4		+14	+330	647,940	1,414,527	
129	0				5.4	-	-	-5.4		1326.3	π	0	0	647,926	1,414,197	
130	330	329.8	277° 52'	+6.9°	1.8	88° -	+11.5	+9.7		1341.4	TP	+81	-320.2	648,007	1,413,879	
130	330				0.5	88° 14'	+10.2	+9.7			TP					
	330	329.2	96° 07' +180°	+6.9°	+10.1	86° -	-23.0	-12.9	1328.5		BS	+71	-321.2			
	330				+9.1	86° 10'	-22.0	-12.9	5		BS					

ES-HIGH RESOLUTION DATA

Geosource Inc.

81		INSTRUMENT MAN G. Cotcamp		ROD MAN D. Libenson		PARTY NUMBER 6834		NOTES CHECKED BY W.D. B.C.		LINE NO. 4		PAGE 16					
arkansas		TOPO MAP Athens		STATE Arkansas		COUNTY Polk.		TWP		RANGE		PPM		PARTY MANAGER L. Davis			
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			
								1328.5									
0				5.4	-		-5.4		1323.1	π	0	0	648,078	1,413,560			
2	331	330.2	287° 22'	+6.9°	5.5	86° -	+23.0	+17.5	1346.0	TP	+133	-302	648,211	1,413,260			
2	331			0.7	86° 50'	+18.3	+17.6			TP							
	660		121° 06' +180°	+6.9°	+14.1	84	+3.3	+17.4	1363.4	BS	+401	-524					
	660			+14.4	90° 16'	+3.1	+17.5			BS							
33	330		121° 06'	+6.9°	10.9	-	-10.9		1359.5		-201	+262	648,411	1,413,000			
34	0			5.4	-		-5.4		1358.0	π	0	0	648,612	1,412,738			
135	327	325.8	292° 38'	+6.9°	6.2	85° -	+28.4	+22.2	1385.6	TP	+158	-285	648,770	1,412,455			
135	327			8.1	84° 40'	+30.3	+22.2			TP							
	330	329.6	103° 20' +180°	+6.9°	+13.1	93° -	+17.2	+30.3	1415.9	BS	+111	-310					
	330			+12.1	93° 10'	+18.2	+30.3			BS							
136	0			5.4	-		-5.4		1410.5	π	0	0	648,881	1,412,147			
137	320		254° 31'	+6.9°	8.4	-	-8.4		1407.5	TP	-51	-316	648,830	1,411,833			
137	320			10.0	74	+1.6	-8.4			TP							
	661	659.4	67° 40' +180°	+6.9°	+11.2	86° -	-46.0	-34.8		BS	-181	-634					
	661			+10.0	86° 6'	-44.9	-34.9	1372.6		BS							
138	330		67° 40'	+6.9°	4.8	86° -	+23.0	+18.2	1390.8		+91	+317	648,740	1,411,518			
139	0			5.4	-		-5.4		1367.2	π	0	0	648,649	1,411,201			
140	330		250° 46'	+6.9°	4.1	-	-4.1		1368.5	TP	-73	-322	648,576	1,410,881			
140	330			2.4	84	-1.7	-4.1			TP							

1 NOTES-HIGH RESOLUTION DATA

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
0/81		G. Cotcamp		B. Cotcamp		6837		DL		4	17					
STATE		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Athens	Arkansas	Polk					L. Davis							
STATION	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.	Y	X													
0										1368.5						
	330		78°03'+180°	+6.9°	+12.1	-		+12.1	1380.6		BS	-32	-328.2			
	330				+10.9	BH	+1.7	+12.1			BS					
1	0				5.4	-		-5.4	1375.2		X	0	0	648,544	1,410,555	
12	330		273°24'	+6.9°	2.9	-		-2.9	1377.7			+56	-325	648,600	1,410,230	
13	655		269°41'	+6.9°	5.2	89°22'	+7.2	+2.0	1382.6		TP	+69	-651.2	648,613	1,409,906	
13	655				6.7	89°14'	+8.8	+2.1			TP					
	330		82°50'+180°	+6.9°	+14.2	-		+14.2	1396.8		BS	-4	-330.2			
	330				+12.5	BH	+1.7	+14.2			BS					
44	0				5.4	-		-5.4	1391.4		X	0	0	648,609	1,409,578	
45	330		271°14'	+6.9°	1.1	-		-1.1	1395.7			+44	-327	648,653	1,409,251	
146	660	659.9	271°14'	+6.4°	4.9	89°	+11.5	+6.6	1403.4		TP	+88	-654.2	648,697	1,408,926	
146	660				2.9	89°10'	+9.6	+6.7			TP					
	660	659.9	87°07'+180°	+6.7°	+7.8	89°	-11.5	-3.7	1399.7		BS	+44	-658.2			
	660				+9.8	88°50'	-13.4	-3.6			BS					
147	330		85°05'	+6.7°	1.8	89°	+5.8	+4.0	1403.7			-10	+330	648,731	1,408,600	
148	0				5.4	-		-5.4	1394.3		X	0	0	648,741	1,408,270	
149	330		270°16'	+6.7°	12.3	-		-12.3	1387.4			+90	-320	648,781	1,407,942	
150	659		268°58'	+6.7°	14.0	BH	-3.3	-17.3	1382.4		TP	+65	-656.2	648,806	1,407,616	
150	659				13.4	90°20'	-3.8	-17.2			TP					

Y NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
11/08/81		G. Cotcamp		B. Cotcamp		6834		DL		4	18					
TOPO MAP		STATE		COUNTY		TWP		RANGE	PPM	PARTY MANAGER						
Arkansas		Arkansas		Polk						L. Davis						
ON	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	
										1382.4						
	660	659.6	85°25' +180°	+6.7°	+4.9	88°-	-23.0	-18.1			BS	+24	-659.2			
	660				+1.0	88°20'	-19.2	-18.2	1364.2		BS					
	330		84°31'	+6.7°	5.8	88°-	+11.5	+5.7		1369.9		-7	+330	648,823	1,407,289	
2	0				5.4	-		-5.4		1358.8	π	0	0	648,830	1,406,959	
3	330		267°43'	+6.7°	6.3	-		-6.3		1357.9		+25	-329	648,855	1,406,630	
4	660		266°29'	+6.7°	1.2	89°30'	+5.8	+4.6		1368.8	TP	+37	-659.2	648,867	1,406,302	
4	660				3.1	89°20'	+7.7	+4.6			TP					
	659		86°31' +180°	+6.7°	+5.2	-		+5.2	1374.0		BS	+37	-658.2			
	659				+8.5	TH	-3.3	+5.2			BS					
55	330		86°31'	+6.7°	8.4	-		-8.4		1365.6		-19	+329	648,885	1,405,975	
56	0				5.4	-		-5.4		1368.6	π	0	0	648,904	1,405,646	
57	324		262°45'	+6.7°	1.7	89°-	+5.7	+4.0		1378.0	TP	-3	-324.2	648,901	1,405,324	
157	324				3.0	88°46'	+7.0	+4.0			TP					
	620	619.9	78°44' +180°	+6.7°	+5.1	91°-	+10.8	+15.9	1393.9		BS	-49	-618.2			
	620				+9.5	90°36'	+6.5	+16.0			BS					
158	290		78°44'	+6.7°	12.3	91°-	-5.1	-17.4		1376.5		+23	+289	648,875	1,404,997	
π	0				5.4	-		-5.4		1388.5	π	0	0	648,852	1,404,708	
159	48		305°08'	+6.7°	3.8	-		-3.8		1390.1		+32	-36	648,884	1,404,672	
160	378		310°31'	+6.7°	3.5	89°-	+6.6	+3.1		1397.0		+277	-257	649,129	1,404,451	

VEY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

-445

DATE 3/10/81	INSTRUMENT MAN G. Cotcamp	ROD MAN B. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY B.C.	LINE NO. 4	PAGE 19
STATE Arkansas	TOPO MAP Athens	STATE Arkansas	COUNTY Polk	TWP	RANGE	PPM
				PARTY MANAGER 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.	
									1393.9					
1	704	703.5	309° 11'	+6.7°	5.4	87° 50'	+26.6	+21.2		1415.1	TP	+505	-490	649,357 1,404,218
1	704				7.4	87° 40'	+28.6	+21.2			TP			
	330		110° 52' +180°	+6.7°	+13.7	91° -	+5.8	+19.5	1434.6		BS	+153	-292	
	330				+11.8	91° 20'	+7.7	+19.5			BS			
2	0				5.4	-		-5.4		1429.2	X	0	0	649,510 1,403,926
3	330		282° 0'	+6.7°	3.7	88° -	+11.5	+7.8		1442.4		+106	-313	649,616 1,403,613
4	658	657.6	278° 20' 30"	+6.7°	6.2	88° -	+23.0	+16.8		1451.4	TP	+171	-635	649,681 1,403,291
64	658				8.1	87° 50'	+24.9	+16.8			TP			
	229	228.7	62° 02' +180°	+6.7°	+10.9	93° -	+12.0	+22.9	1474.3		BS	-83	-213	
	229				+13.6	92° 20'	+9.3	+22.9			BS			
X	0				5.4	-		-5.4		1468.9	X	0	0	649,598 1,403,078
165	103		298° 0'	+6.7°	2.6	-		-2.6		1471.7		+59	-85	649,657 1,402,993
TP	346	345.8	297° 48'	+6.7°	4.0	88° -	+12.1	+8.1		1480.4	TP	+196	-285	649,794 1,402,793
TP	346				5.6	87° 44'	+13.7	+8.1			TP			
	438	437.9	162° 29' +180°	+6.7°	+14.0	91° -	+7.6	+21.6	1504.0		BS	+430	-82	
	438				+11.5	91° 20'	+10.2	+21.7			BS			
166	330		162° 06'	+6.7°	11.8	91° -	-5.8	-17.6		1486.4		-324	+64	649,900 1,402,775
167	0				5.4	-		-5.4		1498.6	X	0	0	650,284 1,402,711
168	311	310.6	285° 27'	+6.7°	4.0	87° -	+16.3	+12.3		1516.3	TP	+117	-288	650,341 1,402,423
168	311				2.2	87° 20'	+14.5	+12.3			TP			

1 NOTES-HIGH RESOLUTION DATA

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
1/10/81		G. Cotcamp		B. Cotcamp		6839		B.C.		4	20					
TOPO MAP		STATE		COUNTY		TWP		RANGE	PPM	PARTY MANAGER						
Arkansas		Arkansas		Polk						L. Davis						
DN	△ SLOPE DISTANCE	△ PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	△ VERTICAL CHANGE	DIFFER- ENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH+ SOUTH - LAT.	EAST+ WEST - DEP.	COORDINATES Y X		REMARKS
										1516.3						
	660		74°54' +180°	+6.7°	+10.0	-		+10.0	1526.3		BS	-96	-653			
	660				+3.3	TH	-3.3	+10.0			BS					
1	330		73°36'	+6.7°	12.7	BH	-1.7	-14.4		1511.9		+56	+325	650,301	1,402,075	
0	0				5.9	-		-5.4		1520.9	π	0	0	650,245	1,401,770	
11	330		260°29'	+6.7°	12.2	91°-	-5.8	-18.0		1508.3		-16	-330	650,229	1,401,440	
12	660		260°29'	+6.7°	8.6	-		-8.6		1517.7	TP	-32	-659	650,213	1,401,111	
72	660				5.3	BH	-3.3	-8.6			TP					
	660	659.9	87°01'30" +180°	+6.7°	+6.6	89°-	-11.5	-4.9	1512.8		BS	+43	-659			
	660				+2.8 +0.8	89°20'	-7.7	-4.9			BS					
173	330		85°0'	+6.7°	0.1	-		-0.1		1512.7		-10	+330	650,246	1,400,782	
174	0				5.4	-		-5.4		1507.4	π	0	0	650,256	1,400,452	
175	330	329.6	274°15'	+6.7°	6.4	87°-	+17.2	+10.8		1522.6	TP	+63	-324	650,311	1,400,128	
175	330				0.7	88°-	+11.5	+10.8			TP					
	259		107°19' +180°	+6.7°	+7.5	-		+7.5	1531.1		BS	+105	-237			
	259				+8.8	TH	-1.3	+7.5			BS					
π	0				5.4	-		-5.4		1525.7	π	0	0	650,404	1,399,881	
176	71		253°0'	+6.7°	12.5	91°-	-1.2	-13.7		1517.4		-13	-70	650,411	1,399,821	
177	397		245°32'	+6.7°	9.6	91°-	-6.9	-16.5		1514.6		-121	-378	650,303	1,399,513	
178	731	730.5	244°25'	+6.7°	13.6	92°10'	-27.6	-41.2		1489.9	TP	-236	-691	650,188	1,399,200	
178	731				12.3	92°16'	-28.9	-41.2			TP					

HIGH RESOLUTION DATA

Geosource Inc.

		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
		G. Cotcamp		B. Cotcamp		6834		DL		4	21				
		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
		1595	Athens	Arkansas		Polk			L. Davis						
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	
									1489.9						
529	528.9	59°40' +180°	+6.7°	+7.9	91° -	+9.2	+16.6	1506.5		BS	-212	-485			
529				+5.9	91°10'	+10.8	+16.7			BS					
200		58°0'	+6.7°	9.0	-		-9.0		1497.5		+85	+181	650,061	1,398,896	
0				5.4	-		-5.4		1501.1	π	0	0	649,976	1,398,715	
0	134	263°0'	+6.7°	9.0	-		-9.0		1497.5		-1	-134	649,975	1,398,581	
81	464	463.9	262°04'	+6.7°	10.6	91° -	-8.1	-18.7	1487.8	TP	-10	-464	649,966	1,398,251	
81	464				14.7	90°30'	-4.1	-18.8		TP					
	660		103°06' +180°	+6.7°	+9.9	TH	-3.3	+6.5	1494.3	BS	+224	-621			
	660				+3.2	BH	+3.3	+6.5		BS					
182	330		103°06'	+6.7°	7.8	-	-7.8		1486.5		-112	+310	650,078	1,397,940	
183	0				5.4	-	-5.4		1488.9	π	0	0	650,190	1,397,630	
184	330		277°42'	+6.7°	0.7	-	-0.7		1493.6		+82	-320	650,272	1,397,310	
185	657	656.9	275°24'	+6.7°	1.1	89° -	+11.5	+10.4	1504.7	TP	+138	-642	650,329	1,396,988	
185	657				3.0	88°50'	+13.4	+10.4		TP					
	660	659.9	89°11' +180°	+6.7°	+10.5	91° -	+11.5	+22.0	1526.7	BS	+68	-656			
	660				+14.3	90°40'	+7.7	+22.0		BS					
186	330		89°11'	+6.7°	12.7	BH	-1.7	-14.4	1512.3		-34	+328	650,362	1,396,660	
187	0				5.4	-	-5.4		1521.3	π	0	0	650,396	1,396,332	
188	330		270°0'	+6.7°	0.2	-	-0.2		1526.5		+39	-328	650,435	1,396,004	
189	660		" "	"	0.1	TH	+3.3	+3.2	1529.9		+77	-655	650,473	1,395,677	

KEY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE					
3/10/81		G. Cotcamp		B. Cotcamp		6834		B.C.		4		22					
TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER					
Arkansas		Arkansas		Polk								L. Davis					
STATION	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 - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS	
														Y	X		
									1526.7								
2	990	989.9	268°39'	+6.7°	0.7	89°-	+17.3	+16.6		1543.3	TP	+92+2	-986	650,490	1,395,346		
0	990				6.5	88°40'	+23.0	+16.5			TP						
	330		86°42'+180°	+6.7°	+13.8	-		+13.8	1557.1		BS	+20+2	-329				
	330				+12.1	0H	+1.7	+13.8			BS						
1	0				5.4	-		-5.4		1551.7	TP	0	0	650,510	1,395,017		
2	330	329.8	290°02'	+6.7°	4.0	88°-	+11.5	+7.5			TP	+148+1	-295	650,661	1,394,722		
2	330				1.2	88°30'	+8.6	+7.4		1564.5	TP						
	660	659.9	95°46'+180°	+6.7°	+13.3	91°-	+11.5	+24.8	1589.3		BS	+142+1	-644				
	660				+9.5	91°20'	+15.4	+24.9			BS						horiz. correct. y = +6', x = +84'
3	330		95°46'	+6.7°	9.7	91°-	-5.8	-15.5		1573.8		-71	+322	650,733	1,394,400		
M	62		77°25'	+6.7°	1.5	-		-1.5		1587.8		+6	+62	650,810	1,394,140		650,810 + 1,394,140 U.S.G.G.S. V133 1935 ed. 1586.
T	0				5.4	-		-5.4		1583.9	TP	0	0	650,804	1,394,078		
5	330		279°35'	+6.7°	10.8	91°-	-5.8	-16.6		1572.7		+93	-317	650,897	1,393,761		
0	660		" "	"	10.6	91°-	-11.5	-22.1		1567.2		+185	-634	650,989	1,393,444		
7	990	989.9	279°34'40"	+6.9°	14.3	91°-	-17.3	-31.6		1557.7	TP	+272-2	-952+3	651,074	1,393,129		
7	990				10.2	91°14'	-21.3	-31.5			TP						
	655	654.4	99°21'+180°	+6.9°	+5.0	87°36'	-27.4	-22.4	1535.3		BS	+122-2	-643+3				
	655				+4.3	87°40'	-26.6	-22.3			BS						
8	330		91°0'	+6.9°	6.5	87°-	+17.2	+10.7		1546.0		-43	+327	651,151	1,392,816		
9	0				5.4	-		-5.4		1529.9	TP	0	0	651,194	1,392,489		

HIGH RESOLUTION DATA

Geosource Inc.

INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO	PAGE					
G. Cotcamp		D. Libenson		6834		DL		4	23					
TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
Umpire 15		Arkansas	Polk					L. Davis						
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.	Y	X											
							1535.3							
	268°50'	+6.9°	10.9	91°-	-5.8	-16.7		1518.6		+30	-329	651,224	1,392,160	
00	659.9	267°50'	+6.9°	6.6	91°-	-11.5	-18.1	1517.2	TP	+49-2	-658+3	651,241	1,391,834	
660				13.5	90°24'	-4.6	-18.1		TP					
329	328.9	101°46'+180°	+6.9°	+3.9	88°40'	-7.7	-3.8	1513.4	BS	+103-2	-313+3			
329				+2.0	89°-	-5.7	-3.7		BS					
0				5.4	-	-5.4		1508.0	X	0	0	651,342	1,391,524	
330		284°32'	+6.9°	10.3	91°-	-5.8	-16.1	1497.3		+118	-308	651,460	1,391,216	
659	658.9	282°27'	+6.9°	3.5	91°-	-11.5	-15.0	1498.4	TP	+213-2	-624+3	651,553	1,390,903	
659				15.0	-	-15.0			TP					
660	659.6	89°34'+180°	+6.9°	+3.1	88°-	-23.0	-19.9	1478.5	BS	+69-2	-656+3			
660				+1.2	88°10'	-21.1	-19.9		BS					
5	330	89°34'	+6.9°	0.3	-	-0.3		1478.2		-34	+328	651,586	1,390,578	
26	0			5.4	-	-5.4		1473.1	X	0	0	651,626	1,390,250	
07	330	267°23'	+6.9°	11.1	91°-	-5.8	-16.9	1461.6		+22	-329	651,642	1,389,921	
08	659	264°07'	+6.9°	14.5	91°-	-11.5	-26.0	1452.5	TP	+6-2	-659+3	651,624	1,389,594	
108	659			11.4	91°16'	-14.6	-26.0		TP					
	661	660.8	90°05'+180°	+6.9°	+10.3	88°44'	-14.6	-4.3	1448.2	BS	+75-1	-657+3		
	661			+9.2	88°50'	-13.5	-4.3		BS					
209	330	90°05'	+6.9°	4.3	89°-	-5.8	+1.5	1449.7		-37	+328	651,661	1,389,268	
210	0			5.4	-	-5.4		1442.8	X	0	0	651,698	1,388,970	

NOTES-HIGH RESOLUTION DATA

Geosource Inc.

10/81		INSTRUMENT MAN G. Cotcamp		ROD MAN D. Libenson		PARTY NUMBER 6834		NOTES CHECKED BY B.C.		LINE NO. 4		PAGE 29		
kansas		TOPO MAP Umpire 15		STATE Arkansas		COUNTY Polk		RANGE		PPM		PARTY MANAGER L. Davis		
N	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.	
									1448.2					
	324		268°41'	+6.1°	14.5	89°42'	+1.7	-12.87		1435.4	TP	+27	-323.3	651,725, 1,388,620
	324				14.6	89°40'	+1.9	-12.7			TP			
	660		80°30' +180°	+6.1°	+3.3	89°20'	-7.7	-4.47	1431.0		BS	-39	-659.3	
	660				+7.1	89°-	-11.5	-4.4			BS			
	330		80°30'	+6.1°	1.8	-		-1.8		1429.2		+20	+329	651,706, 1,388,293
	0				5.4	-		-5.4		1425.6	π	0	0	651,686, 1,387,964
4	325		277°57'	+6.1°	8.7	-		-8.77		1422.3	TP	+79	-315.3	651,765, 1,387,652
4	325				10.3	TH	+1.6	-8.7			TP			
	254	253.4	90°54' +180°	+6.1°	+12.6	86°-	-17.7	-5.17	1417.2		BS	+31	-251.3	
	254				+10.4	86°30'	-15.5	-5.1			BS			
π	0				5.4	-		-5.4		1411.8	π	0	0	651,796, 1,387,904
216	70		258°0'	+6.1°	6.3	-		-6.3		1410.9		-7	-70	651,789, 1,387,334
216	400		251°24'	+6.1°	14.8	-		-14.87		1402.4	TP	-87	-391.3	651,709, 1,387,016
216	400				12.8	TH	-2.0	-14.8			TP			
	330		91°47' +180°	+6.1°	+9.9	89°-	-5.8	+4.17	1406.5		BS	+45	-327.3	
	330				+8.0	89°20'	-3.8	+4.2			BS			
217	0				5.4	-		-5.4		1401.1	π	0	0	651,754, 1,386,692
218	330		276°0'	+6.1°	1.7	-		-1.7		1404.8		+69	-323	651,823, 1,386,369
218	590		273°12'	+6.1°	1.4	89°30'	+5.2	+3.8		1410.3		+95	-582	651,849, 1,386,110

651,855 + 1,386,130
Y-intersect. (Line #3) el. 1408.4
line #3 page 82

SH RESOLUTION DATA

Geosource Inc.

		INSTRUMENT MAN <i>G. Cotcamp</i>		ROD MAN <i>D. Libenson</i>		PARTY NUMBER <i>6834</i>		NOTES CHECKED BY <i>ilw B.C.</i>		LINE NO. <i>4</i>		PAGE <i>25</i>			
<i>as</i>		TOPO MAP <i>Umpire 15'</i>		STATE <i>Arkansas</i>		COUNTY <i>Polk</i>		TWP		RANGE		PPM		PARTY MANAGER <i>L. Davis</i>	
OPENANCE	PLOT 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.		Y	X
								1406.5							
250		273° 14'	+6.1°	7.9	89° 10'	+9.5	+11.6		1408.1	TP	+105	-641.3	651,859, 1,386,054	Line #3 overlap	
650				4.1	89° 30'	+5.7	+1.6			TP				↓	
332	331.6	79° 36' +180°	+6.1°	+1.3	87° -	-17.4	-16.1	1392.0		BS	-25	-331.1			
332				+3.2	86° 40'	-19.3	-16.1			BS					
0				5.4	-		-5.4		1386.6	TP	0	0	651,834, 1,385,724		
330		266° 17'	+6.1°	6.0	-		-6.0		1386.0		+14	-330	651,848, 1,385,394		
660		266° 17'	+6.1°	11.2	90° 40'	-7.7	-18.9		1373.1	TP	+27	-659	651,861, 1,385,065		
660				13.1	90° 30'	-5.8	-18.9			TP					
330		78° 24' +180°	+6.1°	+2.0	-		+2.0	1375.1		BS	-32	-328			
330				+3.7	TH	-1.7	+2.0			BS					
3	0			5.4	-		-5.4		1369.7	TP	0	0	651,829, 1,384,737		
4	328	327.8	228° 33'	+6.1°	12.0	88° -	+11.4	-0.6	1374.5	TP	-190	-267	651,639, 1,384,470		
4	328			9.1	88° 30'	+8.6	-0.5			TP					
	337	336.5	56° 53' +180°	+6.1°	+1.6	87° -	-17.6	-16.0	1358.5	BS	-153	-300			
	337			+0.6	87° 10'	-16.6	-16.0			BS					
25	0			5.4	-		-5.4		1353.1	TP	0	0	651,486, 1,384,170	TP opposite sta.	
26	330		268° 37'	+6.1°	12.8	-	-12.8		1345.7		+27	-329	651,513, 1,383,841		
27	660		267° 33'	+6.1°	11.6	91° -	-11.5	-23.1	1335.4	TP	+42	-659	651,528, 1,383,511		
27	660			14.7	90° 44'	-8.4	-23.1			TP					

Y NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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3/10/81	INSTRUMENT MAN G. Cotcamp	ROD MAN D. Libenson	PARTY NUMBER 6834	NOTES CHECKED BY DL	LINE NO. 4	PAGE 26
Arkansas	TOPO MAP Umpire 15	STATE Arkansas	COUNTY Polk	TWP	RANGE	PPM
				PARTY MANAGER L. Davis		

IN	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
														Y	X	
										1335.4						
	330	329.8	98°56'+180°	+6.1°	+11.2	88°-	-11.5	-0.3	1335.1		BS	+86	-319			
	330				+9.3	88°20'	-9.6	-0.3			BS					
	0				5.4	-		-5.4	1329.7		T	0	0	651,619	1,383,192	horiz. correct. y=-15' x=+46'
	330		290°35'	+6.1°	6.7	-		-6.7	1328.4			+148	-295	651,762	1,382,877	
	351		289°20'	+6.1°	6.3	-		-6.3	1328.8			+151	-317	651,765	1,382,875	651,765, 1,382,875 intersect. (Line #3) el. 1326.9
2	658		286°56'	+6.4°	6.9	TH	+3.3	-3.6	1331.5		TP	+261+2	-604-	651,877	1,382,587	Line #3 page 83
0	658				8.2	89°36'	+4.6	-3.6			TP					
	330	329.8	75°01'+180°	+6.4°	+0.4	88°-	-11.5	-11.1	1320.4		BS	-49+2	-326-			
	330				+3.3	87°30'	-14.4	-11.1			BS					
1	0				5.4	-		-5.4	1315.0		T	0	0	651,830	1,382,260	
2	330		244°33'		7.8	-		-7.8	1312.6			-108	-312	651,722	1,381,940	
3	660		241°59'	+6.4°	9.1	-		-9.1	1311.3		TP	-243+2	-614-	651,589	1,381,695	
53	660				12.4	TH	+3.3	-9.1			TP					
	331		75°50'+180°	+6.4°	+4.1	89°-	-5.8	-1.7	1309.6		BS	-45+2	-328-			
	331				+0.3	89°40'	-1.9	-1.6			BS					
34	0				5.4	-		-5.4	1304.2		T	0	0	651,546	1,381,316	
35	330		269°42'		6.2	-		-6.2	1303.4			+35	-328	651,581	1,380,988	
36	660		269°42'	+6.4°	6.8	-		-6.8	1302.8		TP	+70+2	-656-	651,618	1,380,659	
36	660				3.5	BH	-3.3	-6.8			TP					

KEY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
3/11/81		G. Cotcamp		B. Cotcamp		6834		B.C.		4		27		
STATE		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
Arkansas		Vampire 15		Arkansas		Polk						L. Davis		
STATION	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.	
2										1302.8				
	330		95°58'+180°	+6.4°	+14.0	91°-	+5.8	+19.8	1322.6		BS	+71+2	-322-1	
	330				+12.1	91°20'	+7.7	+19.8			BS			
	0				5.4	-		-5.4		1317.2	TP	0	0	651,691 1,380,336
	331		277°35'	+6.4°	13.3	-		-13.3		1309.3	TP	+80+2	-321-1	651,773 1,380,014
	331				11.6	04	-1.7	-13.3			TP			
	330		109°23'+180°	+6.4°	+0.9	TH	-1.7	-0.8	1308.5		BS	+144+2	-297-1	
	330				+1.0	89°42'	-1.7	-0.7			BS			
1	0				5.4	-		-5.4		1303.1	TP	0	0	651,919 1,379,716
0	324	323.9	284°14'	+6.4°	11.2	91°40'	-9.4	-20.6		1287.9	TP	+114+2	-303-1	652,035 1,379,412
0	324				13.6	91°19'	-7.0	-20.6			TP			
	330		92°36'+180°	+6.4°	+1.1	TH	-1.7	-0.6	1287.3		BS	+52+2	-326-1	
	330				+1.2	89°42'	-1.7	-0.5			BS			
1	0				5.4	-		-5.4		1281.9	TP	0	0	652,089 1,379,085
2	330		258°12'		6.1	-		-6.1		1281.2		-31	-329	652,058 1,378,756
3	658		255°24'	+6.4°	3.7	-		-3.7		1283.6	TP	-94+2	-651-1	651,997 1,378,433
3	658				7.0	TH	+3.3	-3.7			TP			
	300	299.9	73°55'+180°	+6.4°	+14.5	91°20'	+7.0	+21.5	1305.1		BS	-50+2	-296-1	
	300				+13.2	91°36'	+8.4	+21.6			BS			
5	0				5.4	-		-5.4		1299.7	TP	0	0	651,949 1,378,136
4	33		309°19'		5.3	-		-5.3		1299.8		+24	-23	651,973 1,378,113

RESOLUTION DATA

Geosource Inc.

INSTRUMENT MAN G. Cotcamp		ROD MAN B. Cotcamp		PARTY NUMBER 6839		NOTES CHECKED BY DL		LINE NO. 4		PAGE 28					
TOPO MAP Umpire 15'		STATE Arkansas		COUNTY Polk		RANGE		PPM		PARTY MANAGER L. Davis					
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		
							1305.1								
368.9	302°28'	+6.4°	5.7	91°-	-6.4	-12.1		1293.0	TP	+232.2	-287.1	652,183	1,377,848		
			12.0	-		-12.0		TP							
659.5	106°31'+180°	+6.4°	+1.6	87°40'	-26.8	-25.2			BS	+257.2	-607.1				
060			+5.4	87°20'	-30.7	-25.3		BS							
330	106°31'		2.7	-		-2.7		1265.0		-129	+304	652,313	1,377,544		
334	333.9	110°17'	+6.4°	11.0	88°16'	+10.1	-0.9	1266.8		-150	+298	652,292	1,377,538	652,250+1,377,570 U.S.G.S. 7133+935 ^{EL. 1964}	
0			5.4	-		-5.4		1262.3	X	0	0	652,442	1,377,240		
330	286°46'	+6.4°	8.8	-		-8.8		1258.9	TP	+130.2	-303.1	652,574	1,376,936		
330			10.5	TH	+1.7	-8.8		TP							
330	112°49'+180°	+6.4°	+1.1	-		+1.1		1260.0	BS	+161.2	-288.1				
330			+2.8	TH	-1.7	+1.1		BS							
9	0		5.4	-		-5.4		1254.6	X	0	0	652,737	1,376,647		
50	322	282°46'	+6.4°	10.6	-	-10.6		1249.4	TP	+106.2	-304.1	652,845	1,376,342		
50	322		12.2	TH	+1.6	-10.6		TP							
458	72°26'+180°	+6.4°	+1.2	-		+1.2		1250.6	BS	-89.2	-449.1				
458			+3.5	TH	-2.3	+1.2		BS							
251	128	72°26'	+6.4°	3.6	-	-3.6		1247.0		+25	+126	652,783	1,376,018		
X	0		5.4	-		-5.4		1245.2	X	0	0	652,758	1,375,892		
252	201	280°47'	+6.4°	3.9	-	-3.9		1246.7		+59	-192	652,817	1,375,700		

KEY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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3/1/81	INSTRUMENT MAN G. Cotcamp	ROD MAN B. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY DL	LINE NO. 4	PAGE 29
Arkansas	TOPO MAP Vampire 15'	STATE Arkansas	COUNTY Polk	RANGE	PPM	PARTY MANAGER L. Davis

STATION	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			
									1250.6									
531			278°52'	+6.4°	5.1	-		-5.1		1245.5	TP	+140 +2	-512 +1	652,900	1,375,379			
531					7.8	TH	+2.7	-5.1			TP							
330			88°46'+180°	+6.4°	+1.9	89°-	-5.8	-3.9	1241.6		BS	+30 +2	-329 -1					
330					+0.6	89°14'	-4.4	-3.8			BS							
0					5.4	-		-5.4		1236.2	X	0	0	652,932	1,375,099			
330			256°35'	+6.4°	6.2	-		-6.2		1235.4		-40	-328	652,892	1,374,721			
660			256°35'	+6.4°	12.3	-		-12.3		1229.3	TP	-81 +2	-655 -1	652,853	1,374,393			
660					9.0	BH	-3.3	-12.3			TP							
659	658.9		67°21'+180°	+6.4°	+6.5	89°-	-11.5	-5.0			BS	-184 +2	-633 -1					
659					+5.3	89°6'	-10.4	-5.1	1224.2		BS							
330			64°30'	+6.4°	1.4	-		-1.4		1222.8		+108	+312	652,779	1,374,071			
0					5.4	-		-5.4		1218.8	X	0	0	652,671	1,373,759			
330			252°07'	+6.4°	8.6	-		-8.6		1215.6	TP	-66 +2	-323 -1	652,607	1,373,435			
330					10.3	TH	+1.7	-8.6			TP							
661			86°21'+180°	+6.4°	+3.3	-		+3.3	1218.9		BS	+32 +2	-660 -1					
661					+6.6	TH	-3.3	+3.3			BS							
330			86°21'	+6.4°	4.1	-		-4.1		1214.8		-16	+336	652,625	1,373,109			
0					5.4	-		-5.4		1213.5	X	0	0	652,691	1,372,779			
330			278°28'	+6.4°	2.3	-		-2.3		1216.6		+85	-319	652,726	1,372,455			

FIELD NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
3/11/81		G. Cotcamp		B. Cotcamp		6834		DL		4	30				
STATE		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER					
Arkansas		Empire 15'		Arkansas		Polk				L. Davis					
STATION	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.		Y
									1218.9						
661			276°06'	+6.4°	11.3	-		-11.3		1207.6	TP	+143	-645	652,786	1,372,128
661					8.0	BH	-3.3	-11.3			TP				
332			112°18' +180°	+6.8°	+3.0	89°30'	-2.9	+0.1	1207.7		BS	+161	-290		
332					+4.0	89°20'	-3.9	+0.1			BS				
0					5.4	-		-5.4		1202.3	TP	0	0	652,999	1,371,837
330			308°39'	+6.8°	9.5	-		-9.5		1198.2	TP	+235	-232	653,186	1,371,604
330					11.2	TH	+1.7	-9.5			TP				
562			110°35' +180°	+6.8°	+3.1	TH	-2.8	+0.3	1198.5		BS	+258	-499		
562					+2.9	89°44'	-2.6	+0.3			BS				
232			106°36'	+6.8°	3.9	-		-3.9		1194.6		-91	+214	653,355	1,371,318
0					5.4	-		-5.4		1193.1	TP	0	0	653,496	1,371,104
98			274°0'	+6.8°	5.8	-		-5.8		1192.7		+18	-96	653,469	1,371,008
428			264°38'	+6.8°	7.1	-		-7.1		1191.4		+8	-428	653,954	1,370,676
758			263°12.30"	+6.8°	10.6	-		-10.6		1187.9	TP	± 0	-758	653,998	1,370,345
758					6.8	BH	-3.8	-10.6			TP				
662	661.9		114°24' +180°	+6.8°	+5.1	89°-	-11.6	-6.5	1181.4		BS	+343	-566		
662					+1.3	89°20'	-7.7	-6.4			BS				
0	330		114°24'	+6.8°	1.5	TH	+1.7	+0.2		1181.6		-169	+283	653,624	1,370,062
1	0				5.4	-		-5.4		1176.0	TP	0	0	653,793	1,369,779

FIELD NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
1/11/81		G. Cotcamp		D. Libenson		6834		DL		4	31						
STATE		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
Arkansas		Umpire 15'	Arkansas	Polk					L. Davis								
STATION	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		
									1181.4								
2	330		301°25'	+6.8°	12.3	-		-12.3		1169.1	TP	+204.2	-259	653,999	1,369,520	bridge	
2	330				10.6	BH	-1.7	-12.3			TP						
	308		87°26'+180°	+6.8°	+8.5	-		+8.5	1177.6		BS	+23.2	-307				
	308				+7.0	BH	+1.5	+8.5			BS						
3	0				5.4	-		-5.4		1172.2	TP	0	0	654,024	1,369,213		
4	330		244°07'	+6.8°	7.7	-		-7.7		1169.9		-110	-311	653,914	1,368,902		
5	660		" "	+6.8°	9.3	-		-9.3		1168.3		-220	-622	653,804	1,368,591		
6	990		243°08'34"	+6.8°	12.3	-		-12.3		1165.3	TP	-340.2	-930	653,686	1,368,283		
6	990				7.4	BH	-5.0	-12.4			TP						
	334		73°05'+180°	+6.8°	+2.7	-		+2.7	1168.0		BS	-59.2	-329				
	334				+1.0	BH	+1.7	+2.7			BS						
7	0				5.4	-		-5.4		1162.6	TP	0	0	653,629	1,367,954		
8	330		266°53'	+6.8°	8.6	-		-8.6		1159.4		+19	-329	653,648	1,367,625		
9	660		" "	+6.8°	11.7	-		-11.7		1156.3		+38	-659	653,667	1,367,295		
0	990		266°53'	+6.8°	14.7	-		-14.7		1153.3	TP	+64.2	-988	653,695	1,366,966		
0	990				9.7	BH	-5.0	-14.7			TP						
	990		96°58'+180°	+6.8°	+2.4	TH	-5.0	-2.6			BS	+236.2	-962				
	990				+6.1	89°30'	-8.6	-2.5	1150.8		BS						
1	660		95°0'	+6.8°	2.5	TH	+3.3	+0.8		1151.6		-130	+647	653,803	1,366,651		
2	330		92°20'	+6.8°	2.7	-		-2.7		1148.1		-50	+326	653,883	1,366,330		

NOTES-HIGH RESOLUTION DATA

Geosource Inc.

11/81		INSTRUMENT MAN G. Cotcamp		ROD MAN D. Libenson		PARTY NUMBER 6839		NOTES CHECKED BY DL		LINE NO. 4	PAGE 32				
Arkansas		TOPO MAP Umpire 15		STATE Arkansas		COUNTY Polk		RANGE PPM		PARTY MANAGER L. Davis					
N	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.		Y
									1150.8						
	0				5.4	-		-5.4		1145.4	π	0	0	653,933	1,366,004
	330		256°09'	+6.8°	9.5	-		-9.5		1141.3	TP	-41+2	-328	653,894	1,365,674
	330				7.8	BH	-1.7	-9.5			TP				
	331		95°37'+180°	+6.8°	+5.9	-		+5.9	1147.2		BS	+71+1	-323		
	331				+7.6	TH	-1.7	+5.9			BS				
5	0				5.4	-		-5.4		1141.8	π	0	0	653,966	1,365,353
6	330		284°58'	+6.8°	0.3	TH	+1.7	+1.4		1148.6		+120	-307	654,086	1,365,046
37	660		" "	+6.8°	9.9	88°-	+23.0	+13.1		1160.3		+240	-615	654,206	1,364,738
88	990	989.4	284°58'20"	+6.8°	8.6	88°-	+34.5	+25.9		1173.1	TP	+367	-919	654,333	1,364,434
88	990				4.5	88°14'	+30.5	+26.0			TP				
	330		106°48'+180°	+6.8°	+14.3	BH	+1.7	+16.0	1189.1		BS	+132	-302		
	330				+14.1	90°20'	+1.9	+16.0			BS				
289	0				5.4	-		-5.4		1183.7	π	0	0	654,465	1,364,132
290	330		296°14'	+6.8°	7.5	-		-7.5		1181.6		+178	-278	654,643	1,363,854
291	660		" "	+6.8°	11.0	-		-11.0		1178.1		+356	-556	654,821	1,363,574
292	981		292°50'40"	+6.8°	6.1	-		-6.1		1183.0	TP	+485	-853	654,950	1,363,279
292	981				12.8	89°36'	+6.8	-6.0			TP				
	1320	1319.7	101°13'40"+180°	+6.8°	+9.5	88°44'	-29.2	-19.7	1163.3		BS	+408	-1255		
	1320				+6.4	88°52'	-26.1	-19.7			BS				
298	990		101°14'	+6.8°	2.1	89°	+17.3	+15.2		1178.5		-300	+943	655,058	1,362,967

FIELD NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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DATE 3/11/81	INSTRUMENT MAN G. Cotcamp	ROD MAN D. Libenson	PARTY NUMBER 6837	NOTES CHECKED BY B.C.	LINE NO. 4	PAGE 33
STATE Arkansas	TOPO MAP Umpire	STATE Arkansas	COUNTY Polk	TWP	RANGE	PPM
PARTY MANAGER L. Davis						




STATION	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 - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS
														Y	X	
									1163.3							
	660		102°0'	+6.8°	3.6	89°-	+11.5	+7.9		1171.2		-208	+626	655,150	1,362,650	
	330		" "	+6.8°	2.8	-		-2.8		1160.5		-104	+313	655,254	1,362,337	
	0				5.4	-		-5.4		1157.9	TP	0	0	655,358	1,362,024	
	321		265°44'	+6.8°	10.2	-		-10.2		1153.1	TP	+14	-321	655,372	1,361,703	
7	321				11.8	TH	+1.6	-10.2			TP					
	330	329.4	83°31'+180°	+6.8°	+3.6	86°40'	-19.2	-15.6	1137.5		BS	+2	-329			
	330				+5.5	86°20'	-21.1	-15.6			BS					
8	0				5.4	-		-5.4		1132.1	TP	0	0	655,374	1,361,374	horiz. corrad. y = +75' x = -29'
19	330		273°07'		9.2	92°-	-11.5	-20.7		1116.8		+55	-325	655,429	1,361,049	
1	490	489.9	272°09'	+6.8°	14.7	91°-	-8.6	-23.3		1114.2		+76	-484	655,450	1,360,890	655,450 + 1,360,890 Trd (north)
20	660		273°07'	+6.8°	14.4	91°-	-11.5	-25.9		1111.6	TP	+109	-651	655,483	1,360,723	E.O.L.*4
20	660				10.5	91°20'	-15.4	-25.9			TP					
	398				+6.5	-		+6.5	1118.1		BS					vertical traverse
	398				+4.5	BH	+2.0	+6.5			BS					from sta. 300 south
TP	387				12.1	-		-12.1		1106.0	TP					to BM
TP	387				14.0	TH	+1.9	-12.1			TP					↓
	301				+3.4	89°-	-5.3	-1.9	1104.1		BS					
	301				+1.7	89°20'	-3.5	-1.8			BS					
TP	472				5.9	-		-5.9		1098.2	TP					
TP	472				8.3	TH	+2.4	-5.9			TP					

KEY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

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E 3/11/81	INSTRUMENT MAN G. Cotcamp	ROD MAN D. Libenson	PARTY NUMBER 6834	NOTES CHECKED BY B.C.	LINE NO. 4	PAGE 34 of 34
A Arkansas	TOPO MAP Umpire 15'	STATE Arkansas	COUNTY Polk	TWP	RANGE	PPM
PARTY MANAGER 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 - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS	
														Y	X		
72										1098.2							
	400				+5.1	-		+5.1	1103.3		BS						vertical traverse from sta. 300 south to BM ↓
	400				+7.1	TH	-2.0	+5.1			BS						
P	380				6.6	-		-6.6		1096.7	TP						
P	380				8.5	TH	+1.9	-6.6			TP						
	407				+3.5	89°-	-7.1	-3.6	1093.1		BS						
	407				+1.1	89°20'	-4.7	-3.6			BS						
TP	808				9.9	89°-	+14.1	+4.2			TP						
TP	808				7.6	89°10'	+11.7	+4.1		1097.2	TP						
	468				+5.0	88°-	-16.3	-11.3	1085.9		BS						
	468				+2.3	88°20'	-13.6	-11.3			BS						
TP	300				3.8	-		-3.8		1082.1	TP						
TP	300				5.3	TH	+1.5	-3.8			TP						
	402				+11.3	-		+11.3	1093.4		BS						
	402				+13.3	TH	-2.0	+11.3			BS						
TP	605				14.7	-		-14.7		1078.7	TP						
TP	605				11.7	BH	-3.0	-14.7			TP						
	487				+1.3	TH	-2.4	-1.1	1077.6		BS						
	487				+1.7	89°40'	-2.8	-1.1			BS						
BM	25				2.5	-		-2.5		1075.1							U.S.C+G.S. X132 1925 EL. 1075