

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc. Client - COCORP

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
1-25-81		G. Cotcamp		D. Libenson		6834		B.C.		2		1 of 39				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
ARKANSAS		Gravelly 15		Arkansas		Scott								L. Davis		
STATION NO.	SLOPE DISTANCE	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	NORTH + SOUTH - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS
														Y	X	
1										1596.4				223,352	1490,969	instrument - wild T/A chaining - 330' steel cable + pins.
	330		46°46' +180°	+7.3°	+2.8	-		+2.8	1599.2		BS	-194	-267			narrow jeep trail
	330				+4.5	74	-1.7	+2.9			BS					
2	0				5.4	-		-5.4		1593.8	X	0	0	223,158	1490,702	↓
3	330		229°23'	+7.3°	14.9	-		-14.9		1584.3		-181	-276	222,977	1490,426	
4	660		229°23'	+7.3°	6.8	92°-	-23.0	-29.8		1569.4	TP	-363	-552	222,795	1490,150	
4	660				4.8	92°10'	-24.9	-29.7			TP					
	330		66°30' +180°	+7.3°	+1.3	88°-	-11.5	-10.2	1559.2		BS	-92	-317			
	330				+2.3	87°50'	-12.5	-10.2			BS					
5	0				5.4	-		-5.4		1553.8	X	0	0	222,703	1489,833	
6	330		247°59'	+7.3°	15.0	91°-	-5.8	-20.8		1538.4	TP	-84	-319	222,619	1489,514	
6	330				9.3	92°-	-11.5	-20.8			TP					
	330		53°41' +180°	+7.3°	+2.8	87°-	-17.2	-14.4	1524.0		BS	-160	-289			
	330				+0.9	87°20'	-15.3	-14.4			BS					
7	0				5.4	-		-5.4		1518.6	X	0	0	222,459	1489,225	
8	330		234°14'	+7.3°	14.8	91°46'	-10.2	-25.0		1499.0	TP	-157	-290	222,302	1488,935	
8	330				3.9	93°40'	-21.1	-25.0			TP					
	180		64°53' +180°	+7.3°	+2.7	88°-	-6.3	-3.6	1495.4		BS	-55	-171			
	180				+0.6	88°40'	-4.2	-3.6			BS					
X	0				5.4	-		-5.4		1490.0	X	0	0	222,297	1488,764	split sta. - curve
9	152		266°45'	+7.3°	9.2	93°-	-7.9	-17.1		1478.3		+11	-152	222,258	1488,612	

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1/25/81		G. Cotcamp		D. Libenson		6839		recheck BoCo		2	2						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Gravelly 15'		Arkansas	Scott					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		
									1495.4								
10	482	481	266°45'	+7.3°	14.2	99°10'	-34.9	-49.1		1446.3	TP	+34	-480	222,281	1,488,284	narrow jeep trail	
10	482				12.8	99°20'	-36.3	-49.1			TP					↓	
	590	587	75°37'+180°	+7.3°	+1.0	84°-	-61.3	-60.3	1386.0		BS	-72	-583				
	590				+4.5	83°40'	-64.7	-60.2			BS						
11	260	259	75°37'	+7.3°	3.5	84°-	+27.0	+23.5		1409.5		+32	+257	222,241	1,487,958		
π	0				5.4	-		-5.4		1380.6	π	0	0	222,209	1,487,701		
12	70		269°02'	+7.3°	14.4	-		-14.4		1371.6		+8	-70	222,217	1,487,631		
13	403	401	269°02'	+7.3°	6.6	96°-	-41.9	-48.5	48.6	1337.4	TP	+44	-399	222,253	1,487,302		
13	403				13.7	95°-	-35.0	-48.7			TP						
	330		95°54'+180°	+7.3°	+4.5	87°-	-17.2	-12.7	1324.7		BS	+75	-321				
	330				+1.6	87°30'	-14.4	-12.8			BS						
14	0				5.4	-		-5.4		1319.3	π	0	0	222,328	1,486,981		
15	330		259°53'	+7.3°	9.3	92°-	-11.5	-20.8		1302.7		-16	-330	222,312	1,486,651		
16	660		259°53'	+7.3°	12.5	92°-	-23.0	-35.5		1289.2	TP	-32	-659	222,296	1,486,322		
16	660				14.8	91°48'	-20.7	-35.5			TP						
	330		80°30'+180°	+7.3°	+0.8	89°-	-5.8	-5.0	1284.2		BS	-13	-330				
	330				+2.8	88°40'	-7.7	-4.9			BS						
17	0				5.4	-		-5.4		1278.8	π	0	0	222,283	1,485,992		
B.M.	210		250°49'	+7.3°	11.2	-		-11.2		1273.0		-43	-206	222,240	1,485,786	el. 1273.0 U.S.G.S. 22 FS 1957 222,200 +1,485,810	
≡	200		238°16'	+7.3°	13.2	-		-13.2		1271.0		-83	-182	222,200	1,485,810	T-intersect.	

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
1/25/81		G. Cotcamp		D. Libenson		6837		B.C.		2	3						
AREA		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER							
Arkansas		Gravelly 15'		Arkansas		Scott				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		
									1284.2								
18	324		298° 19'	+7.3°	3.9	92° -	-11.3	-15.2			TP	-80	-314	222,203	1,485,678		
18	324				9.6	91° -	-5.7	-15.3		1268.9	TP						
	330		81° 02' +180°	+7.3°	+4.7	88° -	-11.5	-6.8	1262.1		BS	-10	-330				
	330				+0.9	88° 40'	-7.7	-6.8			BS						
19	0				5.4	-		-5.4		1256.7	X	0	0	222,193	1,485,348		
20	332		267° 31'	+7.3°	11.0	-		-11.0		1251.1	TP	+28	-331	222,221	1,485,017		
20	332				12.7	TH	+1.7	-11.0			TP						
	320	318.5	58° 02' +180°	+7.3°	+5.0	95° 32'	+30.7	+35.7	1286.9		BS	-133	-289				
	320				+13.6	94° -	+22.3	+35.9	+35.8		BS						
21	0				5.4	-		-5.4		1281.5	X	0	0	222,088	1,484,728		
TP	302	301	228° 55'	+7.3°	5.9	86° -	+21.0	+15.1		1302.0	TP	-167	-250	221,921	1,484,478		
TP	302				4.2	86° 20'	+19.3	+15.1			TP						
	360		66° 32' +180°	+7.3°	+13.7	91° 10'	+7.3	+21.0	1323.0		BS	-100	-346				
	360				+14.8	91° -	+6.3	+21.1			BS						
22	330		66° 32'	+7.3°	13.7	91° -	-5.8	-19.5		1303.5		+92	+317	221,913	1,484,449		
23	0				5.4	-		-5.4		1317.6	X	0	0	221,821	1,484,132		
24	330	329	244° 19'	+7.3°	7.1	86° -	+23.0	+15.9			TP	-104	-312	221,717	1,483,820		
24	330				1.4	87° -	+17.2	+15.8		1338.8	TP						
	330		54° 59' +180°	+7.3°	+13.9	92° 30'	+14.4	+28.3	1367.1		BS	-153	-292				
	330				+14.7	92° 22'	+13.6	+28.3			BS						

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1/25/81		G. Cotcamp		D. Libenson		6834		B.C.		2	4						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Gravelly 15		Arkansas	Scott					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		
									1367.1								
25	0				5.4	-		-5.4		1361.7	π	0	0	221,564	1,483,528		
26	330	329.5	232° 48'	+7.3°	3.2	87° -	+17.2	+14.0		1381.1	TP	-164	-286	221,400	1,483,242		
26	330				1.3	87° 20'	+15.3	+14.0			TP						
	330	329.5	48° 14' +180°	+7.3°	+10.1	93° -	+17.2	+27.3	1408.4		BS	-186	-272				
	330				+11.7	92° 46'	+15.9	+27.6			BS						
27	0				5.4	-		-5.4		1403.0	π	0	0	221,214	1,482,970		
28	301	299	210° 05'	+7.3°	7.6	83° 20'	+34.7	+27.1		1435.5	TP	-238	-182	220,976	1,482,788	curve	
28	301				8.5	83° 10'	+35.6	+27.1			TP						
	333	332	21° 21' +180°	+7.3°	+14.6	93° 40'	+21.3	+35.9	1471.4		BS	-291	-159				
	333				+12.7	94° -	+23.2	+35.9			BS						
29	0				5.4	-		-5.4		1466.0	π	0	0	220,685	1,482,629		
TP	111		237° 35'	+7.3°	1.3	89° -	+1.9	+0.6		1472.0	TP	-47	-101	220,638	1,482,528	curve	
TP	111				0.3	89° 30'	+1.0	+0.7			TP						
	224		99° 10' +180°	+7.3°	+13.8	91° -	+3.9	+17.7	1489.7		BS	+63	-215				
	224				+14.5	90° 50'	+3.3	+17.8			BS						
30	0				5.4	-		-5.4		1484.3	π	0	0	220,701	1,482,313		
31	322		272° 15'	+7.3°	10.1	91° -	-5.6	-15.7			TP	+53	-318	220,754	1,481,995		
31	322				12.6	90° 34'	-3.2	-15.8		1473.9	TP						
	330		75° 45' +180°	+7.3°	+2.0	89° -	-5.8	-3.8	1470.1		BS	-40	-328				
	330				+1.1	89° 10'	-4.8	-3.7			BS						

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1/25/81		G. Cotcamp		B. Cotcamp		6834		B.C.		2	5			
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER				
Arkansas		Gravelly 15		Arkansas	Scott					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.	
									1470.1					
32	0				5.4	-		-5.4		1464.7	π	0	0	220,714 1,481,667
33	328		249°59'	+7.3°	9.0	-		-9.0			TP	-72	-320	220,642 1,481,347
33	328				10.7	TH	+1.6	-9.1		1461.0	TP			
	270		60°31'+180°	+7.3°	+4.3	87°-	-14.1	-9.8	1451.2		BS	-102	-250	
	270				+2.0	87°30'	-11.8	-9.8			BS			
π	0				5.4	-		-5.4		1445.8	π	0	0	220,540 1,481,097
34	60		268°11'	+7.3°	10.4	-		-10.4		1440.8		+6	-60	220,546 1,481,037
35	373		255°57'	+7.3°	7.3	89°36'	+2.6	-4.7		1446.5	TP	-44	-370	220,496 1,480,727
35	373				6.9	89°40'	+2.2	-4.7			TP			
	660		52°03'+180°	+7.3°	+12.0	BH	+3.3	+15.3	1461.8		BS	-336	-568	
	660				+14.1	90°06'	+1.2	+15.3			BS			
36	330		52°03'	+7.3°	14.8	-		-14.8		1447.0		+168	+284	220,328 1,480,443
37	0				5.4	-		-5.4		1456.4	π	0	0	220,160 1,480,159
38	330		229°20'	+7.3°	0.3	-		-0.3		1461.5		-182	-276	219,978 1,479,883
39	660		229°20'	+7.3°	8.9	TH	+3.3	-5.6		1456.2	TP	-363	-551	219,797 1,479,608
39	660				11.3	89°30'	+5.8	-5.5			TP			
	660	659	50°52'+180°	+7.3°	+5.0	87°20'	-30.7	-25.7	1430.5		BS	-348	-560	
	660				+3.1	87°30'	-28.8	-25.7			BS			
40	330		50°52'	+7.3°	4.6	88°-	+11.5	+6.9		1437.4		+174	+280	219,623 1,479,328
41	0				5.4	-		-5.4		1425.1	π	0	0	219,449 1,479,048

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1/25/81		G. Cotcamp		B. Cotcamp		6839		B.C.		2	6						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Gravelly 15		Arkansas	Scott					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		
									1430.5								
42	333		262°23'	+7.3°	14.7	91°42'	-9.9	-24.6		1405.9	TP	-2	-333	219,447	1,478,715		
42	333				14.0	91°50'	-10.6	-24.6			TP						
	330	329	71°47'+180°	+7.3°	+14.9	85°-	-28.7	-13.8	1392.1		BS	-62	-323				
	330				+9.1	86°-	-23.0	-13.9			BS						
43	0				5.4	—		-5.4		1386.7	TP	0	0	219,385	1,478,352		
44	320		242°18'	+7.3°	3.3	89°56'	+0.4	-2.9		1389.2	TP	-112	-300	219,273	1,478,092		
44	320				2.9	—		-2.9			TP						
	180	Ⓟ	26°55' + 190°	+7.3°	+13.7	93°-	+9.4	+23.7	1412.3		BS	-149	-101				
	180	Ⓟ			+12.2	93°36'	+11.0	+23.2			BS						
X	0				5.4	—		-5.4		1406.9	TP	0	0	219,124	1,477,991	split sta. curve	
45	150		220°53'	+7.3°	5.7	83°56'	+15.8	+10.1		1422.4		-100	-112	219,024	1,477,879		
46	482	480	218°59'	+7.3°	2.8	84°50'	+43.2	+40.4		1452.7	TP	-332	-347	218,792	1,477,644		
46	482				4.2	84°46'	+44.6	+40.4			TP						
	187		56°56' + 180°	+7.3°	+11.2	93°36'	+11.4	+22.6	1475.3		BS	-81	-168				
	187				+9.6	94°-	+13.0	+22.6			BS						
X	0				5.4	—		-5.4		1469.9	TP	0	0	218,711	1,477,476	split sta. curve	
47	148		261°17'	+7.3°	4.2	88°-	+5.2	+1.0			TP	-9	-148	218,707	1,477,328		
47	148				2.1	88°50'	+3.0	+0.9		1476.2	TP						
	245		86°03' + 180°	+7.3°	+14.5	88°54'	-4.7	+9.8			BS	+14	-245				
	245				+9.8	—		+9.8	1486.6		BS						

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1/25/81		D. Libenson		G. Cotcamp		6834		B.C.		2	7						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Gravelly 15		Arkansas	Scott					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		
									1486.0								
π	0				5.4	—		-5.4		1480.6	π	0	0	218,721	1,477,083	split sta curve	
48	92		244° 36'	+7.3°	2.5	—		-2.5		1483.5		-25	-78	218,696	1,477,005		
49	410		236° 05' 30"	+7.3°	6.5	88° 10'	+13.1	+6.6		1492.6	TP	-184	-367	218,537	1,476,716		
49	410				7.6	88° -	+14.3	+6.7			TP						
	403		55° 34' +180°	+7.3°	3.3	88° 30'	-10.5	-7.2	1485.4		BS	-184	-359				
	403				1.0	88° 50'	-8.2	-7.2			BS						
50	75		54° 16'	+7.3°	5.6	—		-5.6		1479.8		+36	+66	218,389	1,476,423		
π	0				5.4	—		-5.4		1480.0	π	0	0	218,353	1,476,357	split sta curve	
51	255	254	254° 34'	+7.3°	3.2	86° -	+17.7	+14.5		1499.9	TP	-36	-251	218,317	1,476,106		
51	255				1.7	86° 20' @	+16.3	+14.6			TP						
	330		67° 45' +180°	+7.3°	8.6	89° 10'	-4.8	+3.8	1503.7		BS	-85	-319				
	330				11.5	88° 40'	-7.7	+3.8			BS						
52	0				5.4	—		-5.4		1498.3	π	0	0	218,232	1,475,787		
53	330		245° 25'	+7.3°	5.0	92° 17'	-13.1	-18.1		1485.6		-98	-315	218,134	1,475,472		
54	660		245° 46'	+7.3°	12.6	91° 10'	-13.4	-26.0		1477.7	TP	-192	-631	218,040	1,475,156		
54	660				4.9	91° 50'	-21.1	-26.0			TP						
	225		63° 47' +180°	+7.3°	2.0	88° -	-7.8	-5.8	1471.9		BS	-73	-213				
	225				0.7	88° 20'	-6.5	-5.8			BS						
π	0				5.4	—		-5.4		1466.5	π	0	0	217,967	1,474,943		
55	105		233° 13'	+7.3°	12.2	—		-12.2		1459.7		-52	-91	217,915	1,474,852		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/26/81		INSTRUMENT MAN G. Cotcamp		ROD MAN D. Libenson		PARTY NUMBER 6834		NOTES CHECKED BY B.C.		LINE NO. 2	PAGE 8				
AREA Arkansas		TOPO MAP Parks 15'		STATE Arkansas		COUNTY Scott		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
									1471.9						
56	435	434.4	233°13'	+7.3°	10.1	93°-	-22.7	-32.8			TP	-214	-378	217,753	1,474,565
56	435				13.9	92°30'	-19.0	-32.9		1439.0	TP				
	330		57°13'+180°	+7.3°	+11.0	91°-	+5.8	+16.8		1455.8	BS	-142	-298		
	330				+14.5	90°24'	+2.3	+16.8			BS				
57	0				5.4	-		-5.4		1450.4	π	0	0	217,611	1,474,267
58	330		243°29'	+7.3°	4.6	88°-	+11.5	+6.9		1462.7	TP	-109-1	-312	217,501	1,473,955
58	330				0.8	88°40'	+7.7	+6.9			TP				
	385		66°21'+180°	+7.3°	+10.9	92°-	+13.4	+24.3		1487.0	BS	-108-1	-369		
	385				+12.1	91°50'	+12.3	+24.4			BS				
59	55		66°21'	+7.3°	8.6	-		-8.6		1478.4		+15	+53	217,407	1,473,639
π	0				5.4	-		-5.4		1481.6	π	0	0	217,392	1,473,586
TP	204	203	224°20'	+7.3°	2.9	85°-	+17.7	+14.8		1501.8	TP	-126-1	-159	217,265	1,473,427
TP	204				0.5	85°40'	+15.4	+14.9			TP				curve
	225	224.5	6°01'+180°	+7.3°	+14.4	94°-	+15.7	+30.1		1531.9	BS	-218-1	-52		
	225				+13.8	94°10'	+16.3	+30.1			BS				
60	160		6°35'	+7.3°	11.7	94°-	-11.1	-22.8		1509.1		+155	+38	217,201	1,473,413
π	0				5.4	-		-5.4		1526.5	π	0	0	217,046	1,473,375
61	180	179	230°42'	+7.3°	6.2	84°-	+18.7	+12.5		1544.4	TP	-95-1	-152	216,950	1,473,223
61	180				1.5	85°30'	+14.1	+12.6			TP				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
1/26/81		G. Cotcamp		D. Libenson		6834		B.C.		2		9			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Arkansas		Parks 15		Arkansas		Scott								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
61									1544.4						
	330		67°08' +180°	+7.3°	+13.4	92°-	+11.5	+24.9	1569.3		BS	-89-1	-318		
	330				+12.8	92°06'	+12.1	+24.9			BS				
62	0				5.4	-		-5.4	1563.9		X	0	0	216,860	1,472,905
63	332		251°54'	+7.3°	6.9	91°38'	-9.5	-16.4	1552.9		TP	-62-1	-326	216,797	1,472,579
63	332				6.4	91°44'	-10.0	-16.4			TP				
	330	329	90°32' +180°	+7.3°	+4.8	89°48'	-29.8	-25.0	1527.9		BS	+45-1	-326		
	330				+5.5	89°40'	-30.5	-25.0			BS				
64	0				5.4	-		-5.4	1522.5		X	0	0	216,841	1,472,253
TP	240		275°04'	+7.3°	14.4	92°-	-8.4	-22.8	1505.1		TP	+51-1	-234+1	216,891	1,472,020
TP	240				13.0	92°20'	-9.8	-22.8			TP				
	318		62°01' +180°	+7.3°	+13.6	-		+13.6	1518.7		BS	-112-1	-298+1		
	318				+12.0	04	+1.6	+13.6			BS				
65	230		58°52'	+7.3°	14.9	84	-1.2	-16.1	1502.6			+93	+210	216,871	1,471,933
X	0				5.4	-		-5.4	1513.3		X	0	0	216,778	1,471,723
66	100		222°57'	+7.3°	2.6	88°-	+3.5	+0.9	1519.6			-64	-77	216,714	1,471,646
67	430	429	214°53'	+7.3°	2.0	85°35'	+33.0	+31.0	1549.7		TP	-318-1	-288+1	216,459	1,471,436
67	430				6.2	85°-	+37.3	+31.1			TP				
	178	177.5	61°02' +180°	+7.3°	+7.1	94°-	+12.4	+19.5			BS	-66-1	-165-1		
	178				+8.5	93°32'	+10.9	+19.4	1569.1		BS				
X	0				5.4	-		-5.4		1563.7	X	0	0	216,392	1,471,272



SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
1/26/81		G. Cotcamp		P. Libenson		6834		B.C.		2	11				
AREA		TOPO MAP		STATE		COUNTY		TWP	RANGE	PPM	PARTY MANAGER				
Arkansas		Parks 15'		Arkansas		Scott					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
									1504.1						
75	410		258° 08'	+7.3°	14.7	91° 22'	-9.8	-24.5		1479.6	TP	-33-1	-409+1	216,139	1,468,913
75	410				12.1	91° 44'	-12.4	-24.5			TP				
	230	229	77° 07' +180°	+7.3°	+5.0	85° -	-20.0	-15.0	1464.6		BS	-22-1	-228+1		
	230				+1.0	86° -	-16.0	-15.0			BS				
π	0				5.4	-		-5.4		1459.2	π	0	0	216,116	1,468,686
76	4100		248° 30'	+7.3°	7.2	94° -	-7.0	-14.2		1450.4		-25	-97	216,091	1,468,589
77	430	429	246° 30'	+7.3°	14.9	94° -	-29.9	-44.8		1419.8	TP	-120-1	-912+1	215,995	1,468,275
77	430				13.7	94° 10'	-31.2	-44.9			TP				
	220		63° 35' +180°	+7.3°	+1.8	88° -	-7.7	-5.9	1413.9		BS	-72-1	-208+1		
	220				+5.7	87° -	-11.5	-5.8			BS				
π	0				5.4	-		-5.4		1408.5	π	0	0	215,922	1,468,068
78	110		250° 39'	+7.3°	7.5	-		-7.5		1406.4		-23	-108	215,899	1,467,960
79	440		250° 39'	+7.3°	14.9	-		-14.9		1399.0	TP	-92-1	-430+1	215,829	1,467,639
79	440				12.7	BH	-2.2	-14.9			TP				
	330		71° 08' +180°	+7.3°	+7.2	88° -	-11.5	-4.3	1394.7		BS	-66-1	-323+1		
	330				+1.5	89° -	-5.8	-4.3			BS				
80	0				5.4	-		-5.4		1389.3	π	0	0	215,762	1,467,317
81	323		243° 37'	+7.3°	9.9	-		-9.9		1384.8	TP	-106-1	-305+1	215,655	1,467,013
81	323				8.3	BH	-1.6	-9.9			TP				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/26/81		INSTRUMENT MAN G. Cotcamp		ROD MAN B. Cotcamp		PARTY NUMBER 6834		NOTES CHECKED BY B.C.		LINE NO. 2	PAGE 12				
AREA Arkansas		TOPO MAP Parks 15'		STATE Arkansas		COUNTY Scott		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
81										1384.8					
	330	329	37°33'+180°	+7.3°	+7.1	94°10'	+23.9	+31.0	1415.8		BS	-233-1	-232+1		
	330				+5.2	94°30'	+25.8	+31.0		BS					
82	0				5.4	=		-5.4		1410.4	π	0	0	215,421	1,466,782
TP	210		166°25'	+7.3°	7.7	87°-	+11.0	+3.3		1419.1	TP	-208-1	+23+1	215,212	1,466,806
TP	210				5.8	87°30'	+9.2	+3.4			TP				
	236	234	290°21'+180°	+7.3°	+10.2	83°-	-28.5	-18.3	1400.8		BS	-109-1	+207+1		
	236				+5.1	84°14'	-23.6	-18.5		BS					
83	130		287°15'	+7.3°	1.7	86°-	+9.0	+7.3		1408.1		+54	-118	215,156	1,466,896
π	0				5.4	-		-5.4		1395.4	π	0	0	215,102	1,467,014
84	207		129°03'	+7.3°	14.3	93°-	-10.8	-25.1	1375.7		TP	-150-1	+143+1	214,951	1,467,158
84	207				13.7	93°10'	-11.4	-25.1		TP					
	233	231	5°04'+180°	+7.3°	+12.1	82°-	-32.1	-20.0	1355.7		BS	-225-1	-99+1		
	233				+9.0	82°46'	-29.1	-20.1		BS					
π	0				5.4	-		-5.4		1350.3	π	0	0	214,725	1,467,110
85	100		216°0'	+7.3°	13.0	92°-	-3.5	-16.5		1339.2		-73	-69	214,652	1,467,041
86	428	426	216°0'	+7.3°	14.3	95°-	-37.2	-51.5	1304.2		TP	-310-1	-292+1	214,414	1,466,819
86	428				13.0	95°10'	-38.4	-51.4		TP					
	326	325.4	54°50'+180°	+7.3°	+14.5	86°32'	-19.7	-5.2	1299.0		BS	-152-1	-288+1		
	326				+10.0	87°20'	-15.1	-5.1		BS					
87	0				5.4	-		-5.4		1293.6	π	0	0	214,261	1,466,532

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
1/26/81		G. Cotcamp		B. Cotcamp		6837		B.C.		2	13			
AREA		TOPO MAP		STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER					
Arkansas		Parks 15		Arkansas	Scott				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.	
									1299.0					
TP	194		213°22'	+7.3°	13.0	93°-	-10.1	-23.1		1275.9	TP	-147-1	-126+1	214,113 1,466,407
TP	194				11.1	93°34'	-12.0	-23.1			TP			
	237	235	23°03'+180°	+7.3°	+3.8	82°50'	-29.3	-25.5	1250.4		BS	-203-1	-119+1	
	237				+2.4	83°10'	-28.0	-25.6			BS			
88	107		22°55'	+7.3°	1.6	86°-	+7.4	+5.8		1256.2		+92	+59	214,001 1,466,343
π	0				5.4	-		-5.4		1245.0	π	0	0	213,909 1,466,289
89	221	220	191°16'	+7.3°	8.9	95°-	-19.2	-28.1		1222.3	TP	-209-1	-70+1	213,699 1,466,220
89	221				10.0	94°44'	-18.2	-28.2			TP			
	250	249	18°24'+180°	+7.3°	+0.9	85°-	-21.7	-20.8	1201.5		BS	-229-1	-108+1	
	250				+2.3	84°40'	-23.1	-20.8			BS			
π	0				5.4	-		-5.4		1196.1	π	0	0	213,474 1,466,113
90	80		212°40'	+7.3°	14.3	-		-14.3		1187.2		-61	-51	213,413 1,466,062 last sta. on jeep trail
91	398	397	192°37'	+7.3°	5.0	94°20'	-30.0	-35.0		1166.5	TP	-373-1	-135+1	213,100 1,465,979
91	398				6.6	94°06'	-28.4	-35.0			TP			
	329	327.7	18°02'+180°	+7.3°	+14.9	95°10'	+29.5	+44.4	1210.9		GS	-296-1	-190-1	
	329				+12.9	95°30'	+31.4	+44.3			GS			
92	0				5.4	-		-5.4		1205.5	π	0	0	212,803 1,465,846
93	330		213°19'	+7.3°	1.9	85°-	+28.7	+26.8		1237.7		-251	-215	212,552 1,465,625
94	660	657.5	213°19'	+7.3°	0.4	85°-	+57.3	+56.9		1267.8	TP	-499-1	-428+1	212,303 1,465,413
94	660				4.3	84°40'	+61.1	+57.0			TP			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
1/26/81		G. Cotcamp		B. Cotcamp		6834		B.C.		2	14						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Parks		Arkansas	Scott					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		
94										1267.8							
	360	659	37°45' +180°	+7.3°	+14.6	93°40'	+42.1	+56.7	1324.5		BS	-465.1	-466.1				
	660				+12.7	93°50'	+44.0	+56.7			BS						
95	330		37°45'	+7.3°	12.0	93°-	-17.2	-29.2		1295.3		+233	+234	212,070	1,465,182	horiz. correct. y = -90' x = +32'	
96	0				5.9	-		-5.4		1319.1	TP	0	0	211,837	1,464,948		
97	202		219°53'	+7.3°	2.3	89°-	+3.5	+1.2		1325.7		-137	-198	211,700	1,464,800	211,700 + 1,464,800 intersect.	
97	330		226°46'	+6.9°	4.4	89°-	+5.8	+1.4		1325.9	TP	-196	-266	211,641	1,464,682	unable to locate BM.	
97	330				5.3	88°50'	+6.7	+1.4			TP						
	330		64°04' +180°	+6.9°	+0.5	-		+0.5	1326.4		BS	-108	-312				
	330				+2.2	TH	-1.07	+0.6			BS						
98	0				5.4	-		-5.4		1321.0	TP	0	0	211,533	1,464,370		
99	330		225°24'	+6.9°	2.1	-		-2.1		1324.3	TP	-201	-262	211,332	1,464,108		
99	330				3.8	TH	+1.07	-2.2			TP						
	330		38°28' +180°	+6.9°	+14.9	91°-	+5.8	-20.7		1345.0	BS	-232	-235				
	330				+14.0	91°10'	+6.7	+20.7			BS						
100	0				5.4	-		-5.4		1339.6	TP	0	0	211,100	1,463,873	set-up opposite sta.	
101	330		242°10'	+6.9°	2.3	88°-	+11.5	+9.2		1354.2	TP	-118	-308	210,982	1,463,565		
101	330				0.8	88°16'	+10.0	+9.2			TP						
	660	659	73°50' +180°	+6.9°	+2.6	93°-	+34.5	+37.1		1391.3	BS	-106	-651				
	660				+3.9	92°54'	+33.3	+37.2			BS						
102	330		75°35'	+6.9°	13.1	91°30'	-8.6	-21.7		1369.6		+43	+327	210,919	1,463,241		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
1/27/81		G. Cotcamp		B. Cotcamp		6837		B.C.		2	15						
AREA		TOPO MAP		STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER								
Arkansas		Parks 15'		Arkansas	Scott				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		
									1391.3								
103	0				5.4	-		-5.4		1385.9	π	0	0	210,876	1,462,914		
104	330		247°39'	+6.9°	0.9	TH	+1.7	+0.8		1392.1		-88	-318	210,788	1,462,596		
105	660		247°39'	+6.5°	4.7	88°30'	+17.3	+12.6		1403.9	TP	-180-2	-635	210,694	1,462,279		
105	660				0.9	88°50'	+13.4	+12.5			TP						
	660		63°45' +180°	+6.5°	+9.1	92°-	+23.0	+32.1		1436.0	BS	-223-2	-621				
	660				+14.8	91°30'	+17.3	+32.1			BS						
106	330		63°45'	+6.5°	10.6	91°30'	-8.6	-19.2		1416.8		+111	+310	210,580	1,461,968		
107	0				5.4	-		-5.4		1430.6	π	0	0	210,469	1,461,658		
108	330		255°09'	+6.5°	1.5	89°-	+5.8	+4.3		1440.3	TP	-48-2	-327	210,419	1,461,331		
108	330				3.4	88°40'	+7.7	+4.3			TP						
	660		77°04'30" +180°	+6.5°	+14.0	87°52'	-24.6	-10.6		1429.7	BS	-74-2	-656				
	660				+12.0	88°02'	-22.6	-10.6			BS						
109	330		78°52'	+6.5°	1.9	89°-	+5.8	+3.9		1433.6		+27	+329	210,370	1,461,004		
110	0				5.4	-		-5.4		1424.3	π	0	0	210,343	1,460,675		
111	330		252°23'20"	+6.5°	1.9	89°-	+5.8	+3.9		1433.6		-64	-324	210,279	1,460,351		
112	660		252°53'	+6.5°	2.9	88°30'	+17.3	+14.4		1444.1		-122	-648	210,221	1,460,027		
113	990		252°53'20"	+6.5°	2.7	88°20'	+28.8	+26.1		1455.8	TP	-182-2	-973	210,159	1,459,702		
113	990				1.6	88°24'	+27.6	+26.0			TP						
	660		71°01' +180°	+6.5°	+14.7	90°2'	+0.4	+15.1		1470.9	BS	-143-2	-644				
	660				+13.6	90°8'	+1.5	+15.1			BS						

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/27/81		INSTRUMENT MAN G. Cotcamp		ROD MAN B. Cotcamp		PARTY NUMBER 6834		NOTES CHECKED BY D. B.C.			LINE NO. 2		PAGE 16		
AREA Arkansas		TOPO MAP Parks 15		STATE Arkansas		COUNTY Scott		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
									1470.9						
114	330		71°01'	+6.5°	5.9	-		-5.9		1465.0		+71	+322	210,085	1459,380
115	0				5.4	-		-5.4		1465.5	T	0	0	210,014	1459,058
116	330		260°40'	+6.5°	6.7	-		-6.7		1464.2		-16	-330	209,998	1458,728
117	656		258°34'	+6.5°	7.0	-		-7.0		1463.9	TP	-56-2	-654	209,956	1458,404 curve
117	656				10.3	TH	+3.3	-7.0			TP				
	330		55°32' +180°	+6.5°	+6.5	87°30'	-14.4	-7.9		1456.0	BS	-155-2	-291		
	330				+5.5	87°40'	-13.4	-7.9			BS				
118	0				5.4	-		-5.4		1450.6	T	0	0	209,799	1458,113
119	330		275°25'	+6.5°	2.9	89°-	+5.8	+2.9		1458.9	TP	+68-2	-322	209,865	1457,791
119	330				2.0	89°10'	+4.8	+2.8			TP				
	330		89°05' +180°	+6.5°	+8.0	92°-	+11.5	+19.5		1478.4	BS	+32-2	-328		
	330				+9.9	91°40'	+9.6	+19.5			BS				
120	0				5.4	-		-5.4		1473.0	T	0	0	209,895	1457,463
121	330		230°38'	+6.5°	6.9	-		-6.9		1471.5		-179	-277	209,716	1457,186
122	660		230°38'	+6.5°	1.7	89°-	+11.5	+9.8		1488.2	TP	-358-2	-554	209,535	1456,909
122	660				3.6	88°50'	+13.4	+9.8			TP				
	660		55°15' +180°	+6.5°	+9.9	92°4'	+23.8	+33.7		1521.9	BS	-312-2	-581+2		
	660				+10.6	92°-	+23.0	+33.6			BS				
123	330		55°15'	+6.5°	11.0	91°-	-5.8	-16.8		1505.1		+156	+291	209,377	1456,621
124	0				5.4	-		-5.4		1516.5	T	0	0	209,221	1456,330 set-up opposite sta.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
1/27/81		G. Cotcamp		D. Libenson		6834		B.C.		2	17					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
Arkansas		Parks 15'		Arkansas	Scott					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	
									1521.9							
125	330		246°46'	+6.5°	2.8	-		-2.8		1519.1	TP	-95-2	-316+2	209,124	1,456,016	
125	330				4.5	TH	+1.7	-2.9			TP					
	330		71°42'+180°	+6.5°	+1.2	88°50'	-6.7	-5.5	1513.6		BS	-67-2	-323+2			
	330				+2.1	88°40'	-7.7	-5.6			BS					
126	0				5.4	-		-5.4		1508.2	TP	0	0	209,055	1,455,695	
127	330		257°32'	+6.5°	12.1	90°-	-17.2	-29.3			TP	-34-2	-328+2	209,019	1,455,369	
127	330				14.0	92°40'	-15.3	-29.3		1484.3	TP					
	660	659	85°05'+180°	+6.5°	+1.4	87°26'	-29.5	-28.1	1456.2		BS	+18-2	-659+2			
	660				+2.5	87°20'	-30.7	-28.2			BS					
128	330		85°05'	+6.5°	5.1	88°-	+11.5	+6.4		1462.6		-9	+330	209,026	1,455,092	
129	0				5.4	-		-5.4		1450.8	TP	0	0	209,035	1,454,712	
130	328		259°21'	+6.5°	12.0	TH	+1.6	-10.4		1445.8	TP	-52-2	-324+2	208,981	1,454,390	
130	328				9.7	TH	-1.6	-10.3			TP					
	660		55°33'+180°	+6.5°	+14.9	-		+14.9	1460.7		BS	-309-2	-583+2			
	660				+11.6	TH	+3.3	+14.9			BS					
131	330		55°33'	+6.5°	12.7	TH	-1.7	-14.4		1446.3		+155	+292	208,825	1,454,101	
132	0				5.1	-		-5.4		1455.3	TP	0	0	208,670	1,453,809	
133	330		235°29'	+6.5°	1.7	88°-	+11.5	+9.8		1470.5		-155	-291	208,515	1,453,518	
134	660	659	235°29'	+6.5°	4.1	87°-	+34.5	+30.4		1491.1	TP	-310-2	-582+2	208,358	1,453,229	
134	660				0.2	87°20'	+30.7	+30.5			TP					

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
1/27/81		G. Cotcamp		O. Libenson		6834		B.C.		2	18						
AREA		TOPO MAP		STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER								
Arkansas		Parks 15'		Arkansas	Scott				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		
134										1491.1							
	328		40°25' +180°	+6.5°	+13.7	92° -	+11.4	+25.1	1516.2		BS	-224 -2	-240 +2				curve
	328				+14.6	91°59' <sup>40'</sup> curve	+10.5	+25.1			BS						
135	0				5.4	-		-5.4		1510.8	TP	0	0	208,132	1,452,991		
136	330		222°13'	+6.5°	14.3	88° -	+11.5	-2.8		1513.4	TP	-218 -2	-248 +2	207,912	1,452,795		
136	330				12.4	88°20'	+9.6	-2.8			TP						
	331		56°35' +180°	+6.5°	+2.9	89° -	-5.8	-2.9	1510.5		BS	-150 -2	-295 +2				
	331				+1.0	89°20'	-3.8	-2.8			BS						
137	0				5.4	-		-5.4		1505.1	TP	0	0	207,760	1,452,452		
138	332		265°52'	+6.5°	14.0	89° -	+5.8	-8.2		1502.3	TP	+14 -2	-332 +2	207,772	1,452,122		
138	332				13.3	89°8'	+5.0	-8.3			TP						T.P. opposite sta.
	331	330	107°26' +180°	+6.5°	+6.3	85°54'	-23.6	-17.3	1485.0		BS	+134 -2	-302 +2				
	331				+7.7	85°40'	-24.9	-17.2			BS						
139	0				5.4	-		-5.4		1479.6	TP	0	0	207,904	1,451,822		
140	327	326	261°02'	+6.5°	10.9	95° -	-28.4	-39.3		1445.7	TP	-14 -2	-326 +2	207,888	1,451,498		
140	327				10.0	95°10'	-29.3	-39.3			TP						
	330	329	80°11' +180°	+6.5°	+3.8	85° -	-28.7	-24.9	1420.8		BS	-19 -2	-328 +2				
	330				+1.8	85°20'	-26.8	-25.0			BS						
141	0				5.4	-		-5.4		1415.4	TP	0	0	207,867	1,451,172		
142	330		254°10'	+6.5°	9.2	94° -	-23.0	-32.2		1388.6		-54	-326	207,813	1,450,846		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
1/27/81		G. Cotcamp		D. Libenson		6834		B.C.		2		19			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Arkansas		Parks 15'		Arkansas		Scott								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
									1420.8						
143	660	659	252°43'	+6.5°	7.9	93°-	-34.5	-42.4	}	1378.4	TP	-123-2	-647+2	207,792	1,450,527
143	660				13.7	92°30'	-28.8	-42.5		TP					
	990		67°23'36"+180°	+6.5°	+12.7	BH	+5.0	+17.7	}	1396.1	BS	-275-2	-951+2		
	990				+9.1	90°30'	+8.6	+17.7		BS					
144	660		67°23'36"	+6.5°	10.4	B4	-3.3	-13.7		1382.4		+183	+634	207,648	1,450,212
145	330		" "	"	6.2	-	-	-6.2		1389.9		+92	+317	207,557	1,449,895
146	0				5.4	-	-	-5.4		1390.7	TP	0	0	207,465	1,449,578
≡	340		237°25'	+6.5°	12.3	-	-	-12.3		1383.8		-149	-305	207,316	1,449,273
147	330		239°07'	+6.8°	13.0	-	-	-13.0	}	1383.1	TP	-135-2	-301+2	207,328	1,449,279
147	330				11.3	BH	-1.7	-13.0		TP					
	1320	1319	78°34'40"+180°	+6.8°	+5.1	87°40'	-53.7	-48.6	}	1334.5	BS	-106-2	-1315+3		
	1320				+6.5	87°36'	-55.2	-48.7		BS					
148	990		78°34'40"	+6.8°	2.1	88°-	+34.5	+32.4		1366.9		+80	+987	207,300	1,448,954
149	660		" "	"	2.7	89°-	+11.5	+8.8		1343.3		+53	+658	207,273	1,448,625
150	330		" "	"	5.3	-	-	-5.3		1329.2		+27	+329	207,247	1,448,296
151	0				5.4	-	-	-5.4		1329.1	TP	0	0	207,220	1,447,967
≡	250		260°01'	+6.8°	10.0	-	-	-10.0		1324.5		-14	-250	207,206	1,447,717
152	330		257°06'	+6.8°	11.9	-	-	-11.9		1322.6		-35	-328	207,185	1,447,639
153	660		257°06'	+6.8°	13.7	90°30'	-5.8	-19.5	}		TP	-70-2	-656+2	207,148	1,447,313
153	660				7.9	91°-	-11.5	-19.4		TP					

horiz. correct. y = -56'  
x = +34'  
207316 + 1,449,273  
intersect. (line #1) el. 1383.7

207210 + 1,447,725  
intersect. (line #1) el. 1324.0

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
1/28/81		G. Cotcamp		B. Cotcamp		6834		B.C.		2	20					
AREA		TOPO MAP		STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Parks 15'		Arkansas	Scott				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 A TP	NORTH+ SOUTH- LAT.	EAST+ WEST- DEP.	COORDINATES		REMARKS
														Y	X	
153										1315.1				207,148	1,447,313	
	330		80°36'+180°	+6.8°	+1.1	-		+1.1	2		BS	-15-2	-330+2			
	330				+2.8	TH	-1.7	+1.2	1316.3		BS					
154	0				5.4	-		-5.4		1310.9	A	0	0	207,131	1,446,985	
155	330		253°43'	+6.8°	11.3	-		-11.3		1305.0	TP	-54-2	-325+2	207,075	1,446,662	
155	330				9.6	BH	-1.7	-11.3			TP					
	330		53°06'+180°	+6.8°	+4.8	-		+4.8			BS	-165-2	-285+2			
	330				+6.5	TH	-1.7	+4.9	1309.9		BS					
156	0				5.4	-		-5.4		1304.5	A	0	0	206,908	1,446,379	
157	330		237°38'	+6.8°	0.3	-		-0.3		1309.6		-142	-298	206,766	1,446,081	
158	660	659.5	236°12'	+6.8°	3.9	87°52'	+24.6	+20.7		1330.6	TP	-299-2	-588+2	206,607	1,445,793	
158	660				3.2	87°56'	+23.8	+20.6			TP					
	178		52°04'+180°	+6.8°	+10.4	92°-	+6.2	+16.6	1347.2		BS	-92-2	-152+2			
	178				+11.4	91°40'	+5.2	+16.6			BS					
	0				5.4	-		-5.4		1341.8	A	0	0	206,513	1,445,643	
159	160		259°29'40"	+6.8°	2.3	-		-2.3		1344.9		-10	-160	206,503	1,445,483	
160	490		" "		4.8	-		-4.8		1342.4		-32	-489	206,481	1,445,154	
161	820		259°29'40"	+6.8°	8.9	-		-8.9		1338.3	TP	-53-2	-818+2	206,458	1,444,827	
161	820				4.8	BH	-4.1	-8.9			TP					
	660		69°58'+180°	+6.8°	+3.9	88°30'	-17.3	-13.4	1324.9		BS	-151-2	-692+2			
	660				+5.8	88°20'	-19.2	-13.4			BS					

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
1/28/81		G. Cotcamp		B. Cotcamp		6834		B.C.		2		21			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Arkansas		Parks 15'		Arkansas		Scott								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-	EAST+ WEST-		Y
												LAT.	DEP.		
									1324.9						
162	330		69°58'	+6.8°	7.0	88°20'	+9.6	+2.6		1327.5		+76	+321	206,381	1,444,508
163	0				5.4	-		-5.4		1319.5	TP	0	0	206,305	1,444,187
164	330		247°13'	+6.8°	3.8	-		-3.8		1321.1	TP	-107-2	-312+2	206,196	1,443,877
164	330				21	BH	-1.7	-3.8			TP				
	330		56°17'+180°	+6.8°	+13.6	90°24'	+2.3	+15.9	1337.0		BS	-149-2	-299+2		
	330				+12.1	90°40'	+3.8	+15.9			BS				
165	0				5.4	-		-5.4		1331.6	TP	0	0	206,045	1,443,585
166	329		223°39'	+6.8°	4.1	-		-4.1		1332.9	TP	-209-2	-254+2	205,834	1,443,333
166	329				5.7	TH	+1.6	-4.1			TP				
	330	329.5	37°53'+180°	+6.8°	+14.4	93°-	+17.2	+31.6			BS	-234-2	-232+2		
	330				+13.5	93°10'	+18.2	+31.7	1364.6		BS				
TP	280	279.5	39°49'	+6.8°	12.9	93°30'	-17.1	-30.0		1334.6		+192	+203	205,790	1,443,306 Y-intersect. of 1335.0
167	0				5.4	-		-5.4		1359.2	TP	0	0	205,598	1,443,103 set-up opposite Sta
168	330		231°07'	+6.8°	21	86°-	+23.0	+20.9				-175	-280	205,423	1,442,823
169	660	658	231°07'	+6.8°	5.3	85°22'	+53.0	+47.8		1412.4	TP	-349-2	-557+2	205,247	1,442,548
169	660				3.5	85°32'	+51.0	+47.7			TP				
	330		50°6'+180°	+6.8°	+7.0	92°-	+11.5	+18.5	1430.9		BS	-180-2	-276+2		
	330				+8.9	91°40'	+9.6	+18.5			BS				
170	0				5.4	-		-5.4		1425.5	TP	0	0	205,065	1,442,274

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
1/28/81		G. Patcamp		B. Cotcamp		6834		B.C.		2	22			
AREA		TOPO MAP		STATE		COUNTY		TWP	RANGE	PPM	PARTY MANAGER			
Arkansas		Parks 15'		Arkansas		Scott					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.	
									1430.9					
171	330		232°27'	+6.8°	3.0	89°30'	+2.9	-0.17		1430.8	TP	-169-2	-284+2	204,894   1,441,992
171	330				2.4	89°36'	+2.3	-0.1			TP			
	330		70°18'+180°	+6.8°	+6.2	84	+1.7	+7.9	1438.7		BS	-74-2	-322+2	
	330				+6.3	90°16'	+1.5	+7.8			BS			
172	0				5.4	-		-5.4		1433.3	X	0	0	204,818   1,441,672
TP	228		247°35'	+6.8°	4.4	-		-4.4			TP	-61	-220+2	204,757   1,441,454
TP	228				5.9	TH	+1.1	-4.3		1434.4	TP			
	246		85°19'+180°	+6.8°	+1.9	-		+1.9	1436.3		BS	+9	-246+2	
	246				+3.1	TH	-1.2	+1.9			BS			
173	140		83°42'	+6.8°	1.2	-		-1.2		1435.1		-1	+140	204,765   1,441,350
X	0				5.4	-		-5.4		1430.9	X	0	0	204,766   1,441,210
174	180		232°37'	+6.8°	2.7	-		-2.7		1433.6		-92	-155	204,674   1,441,055
175	510		232°37'	+6.8°	5.4	-		-5.4		1430.9	TP	-259	-439+2	204,507   1,440,773
175	510				8.0	TH	+2.6	-5.5			TP			
	330		65°12'+180°	+6.8°	+2.5	-		+2.5			BS	-102	-314+2	
	330				+4.2	TH	-1.7	+2.6	1433.5		BS			
176	0				5.4	-		-5.4		1428.1	X	0	0	204,405   1,440,461
177	330		241°53'	+6.8°	9.9	-		-9.9		1423.6		-120	-307	204,285   1,440,154
178	660		241°53'	+6.8°	1.2	91°20'	-15.4	-16.6			TP	-240	-615+2	204,165   1,439,848
178	660				4.2	91°4'	-12.3	-16.5		1417.0	TP			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
1/28/81		G. Cotcamp		B. Cotcamp		6834		B.C.		2	23			
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER				
Arkansas		Parks 15'		Arkansas	Scott					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.	
178										1417.0				
	332		76°54'+180°	+6.8°	+11.5	BH	+1.7	+13.2	1430.2		BS			
	332				+11.2	90°20'	+1.9	+13.1		BS	-36	-330+2		
179	0				5.4	-		-5.4		1424.8	T	0	0	204,129 1,439,520
180	330		253°03'	+6.8°	0.5	-		-0.5		1429.7	TP	-58	-325+2	204,071 1,439,197
180	330				2.2	TH	+1.7	-0.6			TP			
	660		67°03'+180°	+6.8°	+9.7	-		+9.7	1439.4		BS	-184	-634+2	
	660				+9.3	90°2'	+0.4	+9.7		BS				
181	330		67°03'	+6.8°	8.6	-		-8.6		1430.8		+92	+317	203,979 1,438,882
182	0				5.4	-		-5.4		1434.0	T	0	0	203,887 1,438,565
183	321		241°0'	+6.8°	1.7	-		-1.7	1437.7		TP	-121	-297+2	203,766 1,438,270
183	321				3.3	TH	+1.6	-1.7		TP				
	240		37°55'+180°	+6.8°	+2.3	-		+2.3	1440.0		BS	-171	-169+2	
	240				+1.1	BH	+1.2	+2.3		BS				
T	0				5.4	-		-5.4		1434.6	T	0	0	203,595 1,438,103
184	92		238°42'	+6.8°	7.7	-		-7.7		1432.3		-38	-84	203,557 1,438,019
185	422		238°42'	+6.8°	11.5	BH	-2.1	-13.6	1426.4		TP	-175	-384+2	203,420 1,437,721
185	422				11.1	90°20'	-2.5	-13.6		TP				
	990		68°01'35'+180°	+6.8°	+11.7	91°6'	+19.0	+30.7	1457.1		BS	-259	-955+2	
	990				+10.5	91°10'	+20.2	+30.7		BS				
186	660		68°0'	+6.8°	8.3	91°20'	-15.4	-23.7		1433.4		+173	+637	203,334 1,437,405

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
1/28/81		G. Cotcamp		D. Libenson		6839		rlw B.C.		2	24						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Parks 15'		Arkansas	Scott					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 T TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									1457.1								
187	330		68° 0'	+6.8°	14.6	-		-14.6		1442.5		+87	+318	203,248	1,437,086		
188	0				5.9	-		-5.4		1451.7	T	0	0	203,161	1,436,768		
189	330		249° 09'	+6.8°	4.1	-		-4.1		1453.0	TP	-80	-320 +2	203,081	1,436,450		
189	330				2.4	BH	-1.7	-4.1			TP						
	330		62° 08' +180°	+6.8°	+2.0	-		+2.0	1455.0		BS	-119	-308 +2				
	330				+3.6	TH	-1.7	+2.0			BS						
190	0				5.4	-		-5.4		1449.6	T	0	0	202,962	1,436,144		
191	330		252° 02'	+6.8°	14.9	BH	-1.7	-16.6		1438.4		-64	-324	202,898	1,435,820		
192	660		252° 02'	+6.8°	8.8	91° 10'	-13.4	-22.2		1432.8	TP	-128	-648 +2	202,834	1,435,498		
192	660				5.0	91° 30'	-17.3	-22.3			TP						
	494		66° 32' +180°	+6.8°	+7.1	91° -	+8.6	+15.7	1448.5		BS	-142	-473 +2				
	494				+9.9	90° 40'	+5.7	+15.6			BS						
193	164		66° 32'	+6.8°	9.0	-		-9.0		1439.5		+47	+157	202,739	1,435,184		
T	0				5.4	-		-5.4		1443.1	T	0	0	202,692	1,435,027		
194	166		256° 28'	+6.8°	0.9	-		-0.9		1447.6		-19	-165	202,673	1,434,862		
195	496		252° 20'	+6.8°	1.4	89° -	+8.7	+7.3		1455.8	TP	-93	-487 +2	202,599	1,434,542		
195	496				2.8	88° 50'	+10.1	+7.3			TP						
	332		71° 18' +180°	+6.8°	+12.6	-		+12.6	1468.4		BS	-68	-325 +2				
	332				+10.9	BH	+1.7	+12.6			BS						
196	0				5.4	-		-5.4		1463.0	T	0	0	202,531	1,434,219	set-up opposite sta.	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
1/28/81		G. Cotcamp		B. Cotcamp		6837		B.C.		2	25				
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER					
Arkansas		Parks 15'		Arkansas	Scott					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
									1468.4						
197	334	333.5	290° 25'	+6.8°	9.8	93° -	-17.5	-27.3		1441.1	TP	+153	-297+2	202,684	1,433,904
197	334				13.7	92° 20'	-13.6	-27.3			TP				
	332	331	122° 27' + 180°	+6.8°	+4.5	85° -	-28.8	-24.3	1416.8		BS	+209	-256+2		
	332				+1.6	85° 30'	-26.0	-24.4			BS				
198	0				5.4	-		-5.4		1411.4	X	0	0	202,893	1,433,670
199	330	329	306° 52'	+6.8°	14.4	94° -	-23.0	-37.4		1379.4	TP	+227	-238+2	203,120	1,433,434
199	330				12.5	94° 20'	-24.9	-37.4			TP				
	335	334	123° 16' + 180°	+6.8°	+0.7	85° -	-29.1	-28.4			BS	+215	-255+2		
	335				+2.7	84° 40'	-31.0	-28.3	1351.1		BS				
200	0				5.4	-		-5.4		1395.7	X	0	0	203,335	1,433,181
201	330		339° 11' 30'	+6.8°	11.5	91° 50'	-10.6	-22.1	22.0	1329.1	TP	+315	-79+2	203,650	1,433,104
201	330				9.4	92° 10'	-12.5	-21.9			TP				
	325	324	193° 02' - 180°	+6.8°	+10.2	94° -	+22.6	+32.8	1361.9		BS	+305	+110+2		
	325				+15.0	93° 08'	+17.7	+32.7			BS				
202	0				5.4	-		-5.4		1356.5	X	0	0	203,955	1,433,216
TP	184		306° 04'	+6.8°	4.9	88° 20'	+5.3	+0.4			TP	+125	-135+2	204,080	1,433,083
TP	184				5.9	88° -	+6.4	+0.5		1362.4	TP				
	136		105° 14' + 180°	+6.8°	+9.1	-		+9.1	1371.5		BS	+51	-126+2		
	136				+8.4	BH	+0.7	+9.1			BS				
203	0				5.4	-					X	0	0	204,131	1,432,959

set up opp station

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
1/28/81		O. Libenson		G. Cotcamp		6839		B.C.		2		26			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Arkansas		Parks 15'		Arkansas		Scott								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
									1371.5						
204	327	326.6	304°41'	+6.8°	0.7	87°	+17.1	+16.4		1387.9	TP	+216	-245 +2	204,347	1,432,716
204	327				2.7	86°40'	+19.0	+16.3			TP				
	330	329	108°36'+180°	+6.8°	+10.7	99°30'	+25.8	+36.5	1424.4		BS	+141	-297 +2		
	330				+10.1	99°36'	+26.9	+36.5			BS				
205	0				5.4	-		-5.7		1419.0	TP	0	0	204,488	1,432,421
206	326	325	280°33'	+6.8°	5.3	85°50'	+23.6	+18.3		1442.7	TP	+97	-310 +2	204,585	1,432,113
206	326				4.0	86°04'	+22.3	+18.3			TP				
	541	529	83°05'+180°	+6.8°	+5.2	99°30'	+42.3	+47.5	1490.2		BS	-1	-539		
	541				+3.6	99°40'	+43.9	+47.5			BS				
207	211		81°20'	+6.8°	19.9	93°	-11.0	-25.4		1464.8		+7	+211	204,591	1,431,785
TP	0				5.4	-		-5.7		1484.8	TP	0	0	204,584	1,431,574
208	123		284°20'	+6.8°	2.7	86°	+8.6	+5.9		1496.1		+44	-114	204,628	1,431,460
TP	370	368.6	280°17'	+6.8°	6.9	85°	+32.1	+25.2		1515.4	TP	+108	-352	204,692	1,431,222
TP	370				3.8	85°30'	+28.9	+25.1			TP				
	172		115°18'+180°	+6.8°	+2.3	TH	-0.9	+1.4	1516.8		BS	+91	-146		
	172				+2.4	89°40'	-1.0	+1.4			BS				
209	90		115°18'	+6.8°	2.3	-		-0.3		1516.5		-48	+76	204,735	1,431,152
TP	0			+6.8°	5.4	-		-5.4		1511.4	TP	0	0	204,783	1,431,076
210	238		274°45'	+6.8°	14.4	92°	-8.3	-22.7		1494.1	TP	+48	-233	204,831	1,430,843
210	238				12.3	92°30'	-10.4	-22.7			TP				

split station - curve

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
1/29/81		G. Cotcamp		E. Co. camp		6837		also B.C.		2	27						
AREA		TOPO MAP		STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER								
Arkansas		Parks 15'		Arkansas	Scott				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		
210										1494.1							
	332	330.6	171°45'+180°	+6.8°	+12.9	89°40'	-30.7	-17.87	1476.3		BS	+105	-313				
	332				+12.3	87°46'	-30.2	-17.95			BS						
	0				5.4	-		-5.4	1470.9		TP	0	0	204,936	1,430,530		
212	323		253°23'	+6.8°	5.1	89°26'	+1.7	-3.47	1472.9		TP	-55	-318	204,881	1,430,212		
212	323				4.7	89°46'	+1.3	-3.45			TP						
	330		63°04'+180°	+6.8°	+8.8	-		+8.87	1481.7		BS	-114	-310				
	330				+7.1	BH	+1.7	+8.85			BS						
213	0				5.4	-		-5.4	1476.3		TP	0	0	204,767	1,429,902	set up opposite sta.	
214	331		250°50'	+6.8°	7.4	-		-7.47	1474.3		TP	-71	-323	204,696	1,428,579		
214	331				5.7	BH	-1.7	-7.45			TP						
	329		80°49'+180°	+6.8°	+7.1	-		+7.17	1481.4		BS	-14	-329				
	329				+5.4	BH	+1.6	+7.05			BS						
215	0				5.4	-		-5.4	1476.0		TP	0	0	204,682	1,429,250		
	135		245°0'	+6.8°	2.4	-		-2.4	1479.0			-42	-128	204,640	1,429,122	Y-intersect.	
216	330		247°14'	+6.8°	0.9	-		-0.97	1480.5		TP	-91	-317	204,591	1,428,933		
216	330				2.6	TH	+1.7	-1.05			TP						
	660		74°35'+180°	+6.8°	+7.9	BH	+3.3	+11.27	1491.7		BS	-99	-653				
	660				+8.1	90°16'	+3.1	+11.25			BS						
217	330		72°48'	+6.8°	11.2	-		-11.2	1480.5			+60	+325	204,552	1,428,605		
218	0				5.4	-		-5.4	1486.3		TP	0	0	204,492	1,428,280		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
1/29/81		G. Cotcamp		G. Cotcamp		6834		B.C.		2	28			
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER				
Arkansas		Parkes 15'		Arkansas	Scott					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.	
									1491.7					
219	330		250° 13'	+6.8°	4.7	-		-4.77		1487.0	TP	-74	-322	204,418 1,427,958
219	330				6.4	7H	+1.7	-4.8			TP			
	660		74° 06' + 180°	+6.8°	+2.6	-		+2.67	1489.6		BS	-104	-652	
	660				+5.9	7H	-3.3	+2.6			BS			
220	330		74° 06'	+6.8°	6.1	-		-6.1		1483.5		+52	+326	204,366 1,427,638
221	0				5.4	-		-5.4		1484.2	TP	0	0	204,314 1,427,306
222	330		258° 30'	+6.8°	3.1	7H	+1.7	-1.57		1488.1	TP	-27	-329	204,287 1,428,977
222	330				4.4	89° 30'	+2.9	-1.5			TP			
	330		73° 51' + 180°	+6.8°	+6.5	-		+6.57			BS	-54	-326	
	330				+8.2	7H	-1.7	+6.6	1494.7		BS			
223	0				5.4	-		-5.4		1489.3	TP	0	0	204,233 1,426,651
224	330		260° 17'	+6.8°	12.9	-		-12.9		1481.8		-17	-330	204,216 1,426,321
225	658		259° 57'	+6.8°	5.6	90° 40'	-9.2	-14.87		1479.9	TP	-47	-656	204,186 1,425,995
225	658				4.1	90° 56'	-10.7	-14.8			TP			
	329		73° 07' + 180°	+6.8°	75.6	-		+5.67	1485.5		BS	-58	-324	
	329				4.0	BS	+1.6	+5.6			BS			
226	0				5.4	-		-5.4		1480.1	TP	0	0	204,128 1,425,671
227	320		266° 20'	+6.8°	7.6	-		-7.67		1477.9	TP	+17	-320	204,145 1,425,351
227	320				8.3	89° 52'	+0.7	-7.6			TP			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
1/29/81		G. Cotcamp		B. Cotcamp		6834		B.C.		2	29						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Arkansas		Parks 15		Arkansas	Scott					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		
227										1477.9							
	200		107°57' +180°	+6.8°	+2.8	-		+2.8	1480.7		BS	+84	-182				
	200				+3.8	TH	-1.0	+2.8			BS						
	π	6			5.4	-		-5.4		1475.3	π	0	0	204,229	1,425,169	curve	
228	130		270°20'	+6.8°	2.4	-		-2.4		1478.3		+16	-129	204,245	1,425,040		
229	460		266°20'	+6.8°	4.9	88°20'	+13.4	+8.5		1489.2	TP	+25	-459	204,254	1,424,710		
229	460				6.3	88°10'	+14.7	+8.4			TP						
	328		77°28' +180°	+6.8°	+10.5	-		+10.5	1499.7		BS	-33	-326				
	328				+8.9	BN	+1.6	+10.5			BS						
230	0				5.4	-		-5.4		1494.3	π	0	0	204,221	1,424,384		
231	330		245° 275°38' √90°	+6.8°	7.1	TH	+1.7	-5.5		1494.2	TP	-100	-315	204,121	1,424,069		
231	330				7.5	89°40'	+1.9	-5.6			TP						
	330		53°46' +180°	+6.8°	+6.2	88°30'	-8.6	-2.4	1491.8		BS	-162	-287				
	330				+7.2	88°20'	-9.6	-2.4			BS						
232	0				5.4	-		-5.4		1486.4	π	0	0	203,959	1,423,782		
233	328		241°17'	+6.8°	9.5	90°20'	-1.9	-11.4		1480.4	TP	-122	-304	203,837	1,423,478		
233	328				7.2	90°44'	-4.2	-11.4			TP						
	330		72°14' +180°	+6.8°	+1.0	-		+1.0			BS	-63	-324				
	330				+2.7	TH	-1.7	+1.1	1481.5		BS						
234	0				5.4	-		-5.4		1476.1	π	0	0	203,774	1,423,154		
235	330		257°28'	+6.8°	2.7	-		-2.7		1478.8		-33	-328	203,741	1,422,826		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
1/29/81		G. Cotcamp		P. Liberson		6839		B.C.		2		30		
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
Arkansas		Parks 15		Arkansas		Scott						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.	
									1481.5					
236	660		256°12'	+6.8°	2.6	-		-2.6		1478.9	TP	-80	-655	203,695 1,422,499
236	660				5.9	TH	+3.3	-2.6			TP			
	330		71°30' ±180°	+6.8°	+0.9	TU	-1.7	-0.8	1478.1		BS	-67	-323	
	330				+2.1	27°30'	-2.9	-0.8			BS			
237	0				5.9	-		-5.4		1472.7	X	0	0	203,629 1,422,176
238	330		241°15'	+6.8°	14.3	GH	-1.7	-16.0		1462.1	TP	-123	-306	203,507 1,421,870
238	330				13.1	90°30'	-2.9	-16.0			TP			
	330	329	71°46' ±180°	+6.8°	+7.1	86°42'	-19.0	-10.9	1451.2		BS	-65	-323	
	330				+10.2	86°20'	-21.1	-10.9			BS			
239	0				5.4	-		-5.4		1445.8	X	0	0	203,442 1,421,547
240	330		261°30'	+6.8°	13.2	-		-13.2		1438.0		-10	-330	203,432 1,421,217
241	657		257°27'	+6.8°	8.2	90°20'	-3.8	-12.0		1439.2	TP	-66	-654	203,376 1,420,893
241	657				6.3	90°30'	-5.7	-12.0			TP			
	660		71°28' ±180°	+6.8°	+9.9	-		+9.9	1449.1		BS	-134	-646	
	660				+6.6	GH	+3.3	+9.9			BS			
242	330		71°28'	+6.8°	7.2	-		-7.2		1441.9		+67	+323	203,309 1,420,570
243	0				5.4	-		-5.4		1443.7	X	0	0	203,242 1,420,247
244	332		253°08'	+6.8°	7.3	89°-	+5.8	-1.5		1447.6	TP	-58	-327	203,184 1,419,920
244	332				8.3	88°50'	+6.8	-1.5			TP			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
1/29/81		G. Cotcamp		D. Libenson		6839		sdw B.C.		2	31			
AREA		TOPO MAP	STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER						
Arkansas		Farks 15'	Arkansas	Scott				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.	
244										1447.6				
	330		80°15'+180°	+6.8°	+6.9	89°-	-5.8	+1.1	1448.7		BS	-17	-330-2	
	330				+4.0	89°30'	-2.9	+1.1			BS			
245	0				5.4	-		-5.4		1443.3	π	0	0	203,167 1,419,528
246	330		246°46'	+6.8°	2.9	-		-2.9		1445.8	TP	-93	-317	203,074 1,419,271
246	330				4.6	TH	+1.7	-3.0			TP			
	330		62°04'+180°	+6.8°	+2.1	TH	-1.7	+0.5	1446.3		BS	-119	-308	
	330				+3.3	89°30'	-2.9	+0.4			BS			
247	0				5.4	-		-5.4		1440.9	π	0	0	202,955 1,418,963
248	330		237°02'	+6.8°	14.8	BH	-1.7	-16.5		1429.8	TP	-146	-296	202,809 1,418,667
248	330				13.6	90°30'	-2.9	-16.5			TP			
	330	329.8	68°50'+180°	+6.8°	+9.9	87°50'	-12.5	-2.6	1427.2		BS	-82	-319	
	330				+10.8	87°40'	-13.4	-2.6			BS			
249	0				5.4	-		-5.4		1421.8	π	0	0	202,727 1,418,348
250	330		257°20'	+6.8°	5.4	-		-5.4		1421.8	TP	-34	-328	202,693 1,418,020
250	330				3.7	BH	-1.7	-5.4			TP			
	330		84°47'+180°	+6.8°	+14.9	88°8'	-10.7	+4.2	1426.0		BS	+9	-330	
	330				+14.1	88°16'	-10.0	+4.1			BS			
251	0				5.4	-		-5.4		1420.6	π	0	0	202,702 1,417,690
252	330		253°13'	+6.8°	8.9	-		-8.9		1417.1		-57	-325	202,645 1,417,365

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
1/29/81		S. Cotcamp		A. Liberson		6837		B.C.		2		32			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Arkansas		Paris 15		Arkansas		Scott								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
									1426.0						
253	660		251°44'	+6.8°	6.6	90°20'	-3.8	-10.4		1415.6	TP	-131	-697	202,571	1,417,043
253	660				4.7	90°30'	-5.8	-10.5			TP				
	660		72°33'+180°	+6.8°	+6.1	-		+6.1	1421.7		BS	-122	-699		
	660				+9.4	TH	-3.3	+6.1			BS				
254	330		72°33'	+6.8°	6.9	-		-6.9		1414.8		+61	+324	202,510	1,416,718
255	0				5.4	-		-5.4		1416.3	T	0	0	202,499	1,416,399
256	330		241°17'25"	+6.8°	1.6	TH	+1.7	+0.1		1421.8		-123	-306	202,326	1,416,088
257	660		"	"	1.2	TH	+3.3	+2.1		1423.8		-246	-612	202,208	1,415,782
258	712		241°17'20"	+6.8°	4.4	TH	+5.0	+0.6		1422.3	TP	-369	-918	202,080	1,415,476
258	902				5.3	89°40'	+5.8	+0.5			TP				
	329		59°43'+102°	+6.8°	+2.6	BT	+1.6	+4.2			BS	-157	-289		
	329				+5.9	TH	-1.6	+4.3	1426.6		BS				
259	?				5.4	-		-5.4		1421.2	T	0	0	201,923	1,415,187
260	330		242°15'	+6.8°	14.1	BT	-1.7	-16.3		1410.3	TP	-118	-308	201,805	1,414,879
260	330				13.4	90°30'	-2.9	-16.3			TP				
	330	328.3	65°07'+180°	+6.6°	-14.4	84°6'	-33.7	-19.3			BS	-103	-312		
	330	"			+13.0	84°20'	-32.4	-19.4	1390.9		BS				
261	0				5.4	-		-5.4		1385.5	T	0	0	201,702	1,414,567
262	330		228°45'	+6.6°	12.9	92°-	-11.5	-24.4		1366.5	TP	-188	-271	201,514	1,414,296
262	330				14.8	91°40'	-9.6	-24.4			TP				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
1/30/81		G. Cotcamp		B. Cotcamp		6837		B.C.		2		33		
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
Arkansas		Parks 15		Arkansas		Scott						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.	
262										1366.5				
	210	209.2	331°03' - 180°	+6.6°	+13.2	85° -	-18.2	-5.0	1361.5		BS	-178	+80	
	210				+14.0	84°46'	-19.1	-5.1			BS			
π	0				5.4	-		-5.4		1356.1	π	0	0	201,321 1,414,376 curve
263	90		120°36'	+6.6°	11.9	-		-11.9		1349.6		-54	+72	201,267 1,414,448
TP	336	335	119°45'	+6.6°	11.6	99° -	-23.4	-35.0		1326.5	TP	-199	+270	201,122 1,414,646
TP	336				12.6	93°50'	-22.4	-35.0			TP			
	91	90.8	347°40' - 180°	+6.6°	+2.6	86° -	-6.3	-3.7	1322.8		BS	-90	+9	
	91				+1.0	87° -	-4.8	-3.8			BS			
264	0				5.4	-		-5.4		1317.4	π	0	0	201,032 1,414,655
265	331		186°46'	+6.6°	13.5	92° -	-11.5	-25.0		1297.8	TP	-322	-76	200,710 1,414,579
265	331				14.5	91°50'	-10.6	-25.1			TP			
	331		21°24' + 180°	+6.6°	+13.9	91° -	+5.8	+19.7	1317.5		BS	-292	-155	
	331				+12.9	91°16'	+6.7	+19.6			BS			
266	0				5.4	-		-5.4		1312.1	π	0	0	200,918 1,414,924 set-up opposite sta
267	332	331.5	216°08'	+6.6°	3.1	87° -	+17.4	+14.3		1331.8	TP	-244	-225	200,174 1,414,199
267	332				1.1	87°30'	+15.4	+14.3			TP			
	330		63°13' + 180°	+6.6°	+8.6	-		+8.6	1340.4		BS	-114	-310	
	330				+6.9	84	+1.7	+8.6			BS			
268	0				5.4	-		-5.4		1335.0	π	0	0	200,060 1,413,889
269	330		247°50'	+6.6°	9.9	-		-9.9		1330.5		-89	-318	199,971 1,413,571

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/30/81	INSTRUMENT MAN G. Cotcamp	ROD MAN B. Cotcamp	PARTY NUMBER 6837	NOTES CHECKED BY rdw B.C.	LINE NO. 2	PAGE 37
AREA Arkansas	TOPO MAP Parks 15'	STATE Arkansas	COUNTY Scott	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.	
									1340.4					
270	660		245°18'	+6.6°	14.2	84	-3.3	-17.5		1322.9	TP	-205	-627	199,855 1,412,262
270	660				14.8	90°14'	-2.7	-17.5			TP			
	320		58°43'+180°	+6.6°	+4.5	-		+4.5		1327.4	BS	-138	-300	
	330				+6.2	TH	-1.7	+4.6			BS			
271	0				5.4	-		-5.4		1322.0	TP	0	0	199,717 1,412,962
272	330		263°18'	+6.6°	6.4	-		-6.4		1321.0	TP	-1	-330	199,716 1,412,632
272	330				4.7	84	-1.7	-6.4			TP			
	660		73°33'+180°	+6.6°	+11.9	88°24'	-18.4	-6.5		1314.5	BS	-113	-650	
	660				+12.7	88°20'	-19.2	-6.5			BS			
273	330		71°13'	+6.6°	3.9	89°-	+5.8	+1.9		1316.4		+70	+323	199,673 1,412,305
274	0				5.4	-		-5.4		1309.1	TP	0	0	199,603 1,411,982
275	330		245°39'	+6.6°	4.4	-		-4.4		1310.1	TP	-101	-314	199,502 1,411,668
275	330				6.1	TH	+1.7	-4.5			TP			
	330		74°34'+180°	+6.6°	+9.7	-		+9.7		1319.8	BS	-51	-326	
	330				+8.0	84	+1.7	+9.7			BS			
276	0				5.4	-		-5.4		1314.4	TP	0	0	199,451 1,411,342
277	330		238°03'	+6.6°	0.8	TH	+1.7	+0.9		1320.7	TP	-141	-298	199,310 1,411,044
277	330				1.1	89°40'	+1.9	+0.8			TP			
	331		69°52'+180°	+6.6°	+8.9	-		+8.9		1329.6	BS	-77	-322	
	331				+7.2	84	+1.7	+8.9			BS			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
1/30/81		G. Cotcamp		B. Cotcamp		6834		B.C.		2		35		
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
Arkansas		Parks 15'		Arkansas		Scott						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.	
									1329.6					
278	0				5.4	-		-5.4		1324.2	π	0	0	199,233 1,410,722
279	330		242°47'	+6.6°	0.8	-		-0.8		1328.8	TP	-116	-309	199,117 1,410,413
279	330				2.5	TH	+1.7	-0.9			TP			
	330		67°59'+180°	+6.6°	+9.2	-		+9.2			BS	-88	-318	
	330				+7.6	BH	+1.7	+9.3	1338.1		BS			
280	0				5.4	-		-5.4		1332.7	π	0	0	199,029 1,410,095
281	330		252°08'	+6.6°	8.0	-		-8.0		1330.1	TP	-64	-324	198,965 1,409,771
281	330				9.6	TH	+1.7	-8.0			TP			
	660	659.6	79°40'+180°	+6.6°	+4.6	88°-	-23.0	-18.4	1311.7		BS	-43	-658	
	660				+2.7	88°0'	-21.0	-18.4			BS			
282	330		79°49'	+6.6°	5.4	88°-	+11.5	+6.1		1317.8		+21	+329	198,993 1,409,442
283	0				5.4	-		-5.4		1306.3	π	0	0	198,922 1,409,113
284	330		263°0'	+6.6°	11.4	-		-11.4		1300.3		-2	-330	198,920 1,408,783
285	660		" "	"	13.4	BH	-3.3	-16.7		1295.0		-5	-660	198,917 1,408,453
286	990		261°58'	+6.6°	4.9	90°40'	-11.5	-16.4		1295.3	TP	-25	-990	198,897 1,408,123
286	990				7.8	90°30'	-8.6	-16.4			TP			
	988		69°50'+180°	+6.6°	+10.6	89°-	-17.2	-6.6	1288.7		BS	-232	-960	
	988				+4.8	89°20'	-11.5	-6.7			BS			
287	660		69°50'	+6.6°	4.7	89°30'	+5.8	+1.1		1289.8		+155	+642	198,820 1,407,805
288	330		" "	"	4.3	-		-4.3		1284.4		+77	+321	198,742 1,407,984

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
1/30/81		G. Cotcamp		P. Liberson		6834		rlw B.C.		2		36			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Arkansas		Parks 15'		Arkansas		Scott								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
									1288.7						
289	0				5.4	-		-5.4		1283.3	T	0	0	198,665	1407,163
290	330		253° 16'	+6.6°	1.6	-		-1.6		1287.1		-58	-325	198,607	1406,838
291	660		250° 52'	+6.6°	10.6	89° 16'	+8.4	-2.2		1286.5	TP	-143	-644	198,522	1406,519
291	660				13.7	89° -	+11.5	-2.2			TP				
	330		64° 28' +180°	+6.6°	+6.9	TH	-1.7	+5.3	1291.8		BS	-107	-312		
	330				+7.1	89° 46'	-1.9	+5.2			BS				
292	0				5.4	-		-5.4		1286.4	T	0	0	198,415	1406,207
293	327		239° 40'	+6.6°	11.1	TH	+1.6	-9.5		1282.3	TP	-132	-299	198,283	1405,908
293	327				6.6	90° 30'	-2.9	-9.5			TP				
	660		62° 04' +180°	+6.6°	+2.7	89° -	-11.5	-8.8	1273.5		BS	-240	-615		
	660				+5.3	88° 46' 49"	-14.2	-8.9			BS				
294	330		62° 04'	+6.6°	0.4	89° -	+5.8	+5.4		1278.9		+120	+307	198,163	1405,600
295	0				5.4	-		-5.4		1268.1	T	0	0	198,043	1405,293
296	330		236° 47'	+6.6°	13.8	91° -	-5.8	-19.6		1253.9		-148	-295	197,895	1404,998
297	660	659.6	236° 47'	+6.6°	9.6	92° -	-23.0	-32.6		1240.9	TP	-296	-590	197,747	1404,703
297	660				12.7	91° 44'	-20.0	-32.7			TP				
	649		79° 15' +180°	+6.6°	+4.0	90° 16'	+3.0	+7.0			BS	-47	-647		
	649				+2.2	90° 26'	+4.9	+7.1	1248.0		BS				Curve
298	330		71° 44'	+6.6°	8.9	-		-8.9		1239.1		+67	+323	197,767	1404,379
299	0				5.4	-		-5.4		1242.6	T	0	0	197,700	1404,056

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/30/81	INSTRUMENT MAN G. Cotcamp	ROD MAN O. Liberson	PARTY NUMBER 6834	NOTES CHECKED BY B.C.	LINE NO. 2	PAGE 37
AREA Arkansas	TOPO MAP Part 15	STATE Arkansas	COUNTY Scott	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.	
									1248.0					
300	330		237° 0'	+6.6°	8.3	-		-8.3		1239.7		-147	-296	197,553 1,403,760
301	660		234° 37'	+6.6°	6.8	91° -	-11.5	-18.3		1229.7		-318	-578	197,382 1,403,478
302	990		233° 03'	+6.6°	15.0	91° -	-17.3	-32.3		1215.7	TP	-500	-854	197,200 1,403,202
302	990		<del>233</del>		12.1	91° 10'	-20.2	-32.3			TP			
	330		70° 20' +180°	+6.6°	+2.1	88° -	-11.5	-9.4	1206.3		BS	-75	-321	
	330				+0.2	88° 20'	-9.6	-9.4			BS			
303	0				5.4	-		-5.4		1200.9	X	0	0	197,125 1,402,881
304	330		274° 56'	+6.6°	13.3	92° -	-11.5	-24.8		1181.5	TP	+66	-323	197,191 1,402,558
304	330				10.4	92° 30'	-14.4	-24.8			TP			
	329	328.2	119° 22' +180°	+6.6°	+0.1	86° -	-22.9	-22.8			BS	+193	-266	
	329				+3.0	85° 30'	-25.7	-22.7	1158.8		BS			
305	0				5.4	-		-5.4		1153.4	X	0	0	197,384 1,402,292
306	330		309° 07'	+6.6°	5.9	94° -	-23.0	-28.9		1129.9		+236	-230	197,620 1,402,062
307	660	658.4	310° 58'	+6.6°	5.1	94° -	-45.9	-51.0		1107.8	TP	+486	-444	197,870 1,401,848
307	660				14.7	93° 10'	-36.4	-51.1			TP			
	660	658.4	136° 12' +180°	+6.6°	+9.0	86° -	-45.9	-36.9	1070.9		BS	+524	-398	
	660				+2.1	86° 36'	-39.1	-37.0			BS			
308	330	329	136° 12'	+6.6°	5.6	86° -	+23.0	+17.4		1088.3		-262	+199	198,132 1,401,649 horiz. correct. y = -36' x = +94'
309	0				5.4	-		-5.4		1065.5	X	0	0	198,394 1,401,450
井	100		308° 47'	+6.6°	8.0	-		-8.0		1062.9		+71	-70	198,465 1,401,380 4-way Intersect.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/31/80	INSTRUMENT MAN G. Cotcamp	ROD MAN D. Libenson	PARTY NUMBER 6834	NOTES CHECKED BY B.C.	LINE NO. 2	PAGE 38
AREA Arkansas	TOPO MAP Parks 15'	STATE Arkansas	COUNTY Scott	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 -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
									1070.9							
310	325		339°55'	+6.6°	14.3	-		-14.3		1056.6		+316	-76	198,710	1,401,374	EOL #2
TP	124				6.3	-		-6.3		1064.6	TP					
TP	124				5.7	BH	-0.6	-6.3			TP					
	243				+11.0	92°34'	+10.9	+21.9			BS					vertical traverse
	243				+12.0	92°22'	+10.0	+22.0	1086.6		BS					from sta. 309 to
TP	208				3.0	89°22'	+2.3	-0.7		1085.9	TP					Y-intersect 1/2 mile
TP	208				1.9	89°40'	+1.2	-0.7			TP					west.
	170				+4.5	-		+4.5			BS					↓
	170				+3.7	BH	+0.9	+4.6	1090.5		BS					
TP	412				9.8	TH	+2.1	-7.7		1082.8	TP					
TP	412				4.1	90°30'	-3.6	-7.7			TP					
	260				+5.3	-		+5.3	1088.1		BS					
	260				+6.6	TH	-1.3	+5.3			BS					
TP	366				5.6	-		-5.6			TP					
TP	366				3.7	BH	-1.8	-5.5		1082.6	TP					
	166				+4.1	-		+4.1	1086.7		BS					
	166				+3.3	BH	+0.8	+4.1			BS					
TP	302				5.8	92°-	-10.5	-16.3		1070.4	TP					
TP	302				7.0	91°46'	-9.3	-16.3			TP					

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
1/31/81		G. Catcamp		B. Catcamp		6834		B.C.		2	39 of 39			
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER				
Arkansas		Parks 15'		Arkansas	Scott					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.	
TP										1070.4				
	392				+4.1	87°-	-20.5	-16.4	1054.0		BS			
	392				+0.7	87°30'	-17.1	-16.4			BS			
K	44				7.3	-		-7.3		1046.7				Y-intersect. el. 1048