

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc. Client-COCO RP

DATE 12/17/80	INSTRUMENT MAN G. Cotcamp		ROD MAN J. Cruz		PARTY NUMBER 6834		NOTES CHECKED BY G.W.C. J.D.W.		LINE NO. 10	PAGE 1 of 24
AREA OKLAHOMA	TOPO MAP Putnam 15'	STATE Oklahoma	COUNTY Dewey		TWP 16N	RANGE 17W	PPM	PARTY MANAGER L.O. 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	
TL 7F										1925.0	TK			302,330	1,712,814	→ scaled.
	2580		81° 27.7' +180°	+9.5°	+2.1	91° -	+45.0	+47.1			BS	+43+3	-2580+4			-4 Way Intersect. at 1925.0*
	2580				+14.0	90° -4'	+23.0	+47.0	1972.0		BS					*Line #8, page 20
1	330		81° 28'	+9.5°	11.5	91° -	-5.8	-17.3	1954.7			-6	+330	302,370	1,710,568	
2	0				5.4	-	-	-5.4	1966.6		π	0	0	302,376	1,710,238	Route #47
3	330		261° 18'	+9.5°	2.8	-	-	-2.8	1969.2			+3	-330	302,379	1,709,908	↓
4	660				6.8	-	-	-6.8	1965.2			+6	-660	302,382	1,709,578	
5	990				9.0	-	-	-9.0	1963.0			+9	-990	302,385	1,709,248	
6	1320				9.9	-	-	-9.9	1962.1			+12	-1320	302,388	1,708,918	
7	1650		261° 18'	+9.5°	14.2	-	-	-14.2	1957.8		TP	+15+3	-1650+4	302,394	1,708,592	
7	1650				5.9	BH	-8.3	-4.2			TP					
	1650		81° 14.5' +180°	+9.5°	+8.2	TH	-8.3	-0.1	1957.7		BS	+21+3	-1650+4			
	1650				+3.9	89° 52'	-2.8	+0.1			BS					
8	1320		81° 14.5'	+9.5°	11.2	-	-	-11.2	1946.5			-17	+1320	302,401	1,708,266	
9	990		" "	"	11.5	BH	-5.0	-16.5	1941.2			-13	+990	302,405	1,707,936	
10	660		" "	"	13.2	-	-	-13.2	1944.5			-7	+660	302,409	1,707,606	
TL 7F	595		82° 37'	+9.5°	11.7	-	-	-11.7	1946.0			-22	+595	302,396	1,707,591	T-rd (south)
11	330		81° 14.5'	+9.5°	6.7	-	-	-6.7	1951.0			-4	+330	302,414	1,707,276	
12	0				5.4	-	-	-5.4	1952.3		π	0	0	302,418	1,706,946	
13	330		261° 0.7'	+9.5°	14.1	-	-	-14.1	1943.6			+3	-330	302,421	1,706,616	
14	660		" "	"	14.8	91° -	-11.5	-26.3	1931.4			+6	-660	302,424	1,706,286	

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DATE 12/17/80	INSTRUMENT MAN G. Cotcamp	ROD MAN J. Cruz	PARTY NUMBER 6834	NOTES CHECKED BY Cuc. rlv	LINE NO. 10	PAGE 2 of 24
AREA Oklahoma	TOPO MAP Putnam/Aledo 15'	STATE Oklahoma	COUNTY Dewey	TWP 16N	RANGE 17W	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	
									1957.7							
15	990		261° 0.7'	+9.5°	13.7	91° 30'	-25.9	-39.6		1918.1		+9	-990	302,427	1705,956	
16	1320		"	"	14.8	91° 30'	-34.5	-49.3		1908.4		+12	-1320	302,430	1705,626	
17	1650	1649	261° 0.7'	+9.5°	12.0	91° 30'	-43.2	-55.2		1902.5	TP	+15+3	-1649+4	302,436	1705,301	
17	1650				14.8	91° 29'	-43.3	-45.1			TP					
	1650	1649	211° 20' +100'	+9.5°	14.2	87° 30'	-67.0	-54.7			BS	+24+2	-1649+4			
	1650				12.0	87° 40'	-67.1	-54.8	1847.7		BS					
18	1320	1319	261° 20'	+9.5°	1.5	00°	+46.0	+45.5		1893.2		-19	+1319	302,443	1704,375	
19	990	989	"	"	1.8	58°	+24.5	+27.7		1875.4		-14	+989	302,448	1704,645	
20	660		"	"	0.2	89°	+11.5	+11.3		1869.0		-10	+660	302,452	1704,316	
21	330		"	"	3.1	89°	+5.8	+2.7		1850.4		-5	+330	302,457	1703,986	↑
22	0				5.4	-	-	-5.7		1842.3	π	0	0	302,462	1703,656	Putnam Quad.
23	330		211° 70'	+9.3°	12.9	-	-	-10.9		1834.8		+2	-330	302,464	1703,326	Aledo Quad
24	660		"	"	8.2	91°	-11.5	-12.7		1828.0		+5	-660	302,467	1702,996	↓
25	990		"	"	15.2	-	-	-15.2		1822.5		+7	-990	302,467	1702,666	
26	1320		"	"	5.9	TH	+5.6	+0.7		1814.4		+10	-1320	302,472	1702,336	
27	1390		260° 33.3'	+9.5°	2.4	TH	+7.0	+4.6		1802.3		+1	-1390	302,463	1702,266	302,480 + 1,702,280 1-Way 2. Insect. 2', 1851.
27	1650		261° 75'	+9.3°	5.9	29° 20'	+19.2	+13.3		1861.0		+12	-1650	302,474	1702,006	
28	1980		"	"	3.3	89° 20'	+23.0	+19.7		1867.4		+15	-1980	302,477	1701,676	
29	2310		261° 78'	+9.3°	1.7	89° 20'	+26.9	+25.2			π	+17	-2310+3	302,479	1701,349	
29	2310		"	"	8.5	89°	+33.6	+25.1		1872.8	π					

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DATE 12/17/80	INSTRUMENT MAN G. Cotcamp		ROD MAN J. Cruz		PARTY NUMBER 6834		NOTES CHECKED BY Gwr rlw		LINE NO. 10	PAGE 3
AREA Oklahoma	TOPO MAP Aledo 15'	STATE Oklahoma	COUNTY Dewey		TWP 16N	RANGE 17W	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.	
29										1872.8				
	1100		21° 13.2' +180°	+9.3°	+7.5			+9.5	1882.3		BS	+15	-1650+3	
	1550				+1.0	BH	+8.3	+9.5			BS			
30	1200		53° 13.2'	+9.3°	14.6	-		-14.6		1867.7		-12	+1320	302,482 1,701,022
31	700				11.5	90°-	-17.3	-27.8		1859.5		-9	+990	302,485 1,700,692
32	650				7.2	90°-	-23.0	-30.2		1852.1		-6	+660	302,488 1,700,362
33	330				12.8	90°-	-5.8	-18.6		1863.7		-3	+330	302,491 1,700,032
34	0				54	-		-54		1876.9		0	0	302,494 1,699,702
35	830		20° 1.4'	+9.3°	6.1	-		-6.1		1873.2		+2	-330	302,496 1,699,372
36	610				11.0	90°-	-9.6	-20.4		1864.7		+4	-660	302,498 1,699,042
37	700				11.0	90°-	-14.4	-25.0		1857.3		+6	-990	302,500 1,698,712
38	320				12.2	90°30'	-11.5	-23.7		1848.6		+7	-1320	302,501 1,698,382
39	1650				7.3	BH	-8.3	-15.6		1846.7		+9	-1650	302,503 1,698,052
40	1980		201° 1.4'	-9.3°	9.1	-		-9.1		1873.2		+11	-1980+3	302,505 1,697,725
40	1380				12.7	89°52'	+4.6	-9.1						
	1550	1647	23° 44.4' +180°	+9.3°	+14.4	90°44'	-93.9	-79.5	1892.7		BS	+87	-1644+3	
	1500				+7.4	90°40'	-92.9	-79.5			BS			
41	300	1318	12° 44.4'	+9.3°	2.1	86°50'	+72.8	+70.7		1864.4		-70	+1316	302,522 1,697,900
42	995	993	91° 33'	+9.3°	2.4	80°50'	+54.9	+49.5		1842.2		-67	+991	302,525 1,697,075
42	990	988	53° 44.4'	+9.3°	5.5	80°50'	+54.6	+49.1		1842.8		-52	+987	302,540 1,697,071
43	1500	659			8.0	80°50'	+28.8	+25.8		1813.5		-35	+658	302,557 1,696,742

horiz. covered y=+14'
x=+32'
302,525 +1,697,075
horiz. covered el. 1841.

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DATE	12/17/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	J. Cruz	PARTY NUMBER	6834	NOTES CHECKED BY	GWC, rlv	LINE NO.	10	PAGE	4	
AREA	Oklahoma	TOPO MAP	Aledo 15'	STATE	Oklahoma	COUNTY	Dewey	TWP	16N	RANGE	17W	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	
									1793.7							
44	330		263° 44.7'	+2.2°	2.4	21° -	+5.8	+3.4		1797.1		-18	+220	302,574	1,696,414	
45	0				5.4	-		-5.4		1788.3	π	0	0	302,592	1,696,084	
46	330		263° 38.7'	+2.2°	2.4	-		-3.4		1790.3		+17	-330	302,609	1,695,754	
47	660				2.9	87° -	+11.5	+7.6		1801.3		+34	-659	302,626	1,695,425	
48	990				1.1	82° 30'	+25.9	+24.8		1818.5		+51	-989	302,643	1,695,095	
49	1320		263° 38.7'	+8.8°	5.3	88° 30'	+34.5	+29.2		1822.9	TP	+56.3	-1312.3	302,645	1,694,768	
47	320				9.1	88° 20'	+38.4	+29.3			TP					
	2640	2639	81° 22.2' +180°	+8.8°	+5.5	91° 30'	+69.1	+74.6	1897.4		BS	-8.4	-2639.3			
	2640				14.5	91° 18'	+59.9	+74.4	+74.5		BS					
50	2310	2309	81° 22.2'	+8.8°	6.4	92° -	-80.6	-87.0		1810.4		-7	+2309	302,642	1,694,941	
51	1980	1978	"	"	4.0	92° 50'	-97.8	-101.8		1795.6		-6	+1978	302,643	1,694,110	
52	1650	1647	"	"	11.2	93° 10'	-91.0	-102.2		1795.2		-5	+1647	302,644	1,693,779	
53	1320	1318	"	"	13.3	93° 20'	-76.6	-89.9		1807.5		-4	+1318	302,645	1,693,450	
54	990	988	"	"	10.2	93° 20'	-57.5	-67.7		1829.7		-3	+988	302,646	1,693,120	
55	660	659	"	"	10.5	93° -	-34.5	-45.0		1852.4		-2	+659	302,647	1,692,791	
56	330		"	"	10.8	92° -	-11.5	-22.3		1875.1		-1	+330	302,648	1,692,462	
57	0				5.4	-		-5.4		1892.0	π	0	0	302,649	1,692,132	
TP	302		258° 23'	+8.8°	2.5	86° 30'	+7.9	+5.4		1902.8		-15	-302	302,634	1,691,830	302,585 + 1,691,835 T-rod (cont'd) el. 1903.
58	330		261° 10.2'	+8.8°	2.5	88° 30'	+2.6	+6.1		1903.5		0	-330	302,649	1,691,802	
59	660		"	"	4.0	88° 30'	+17.3	+13.3		1910.7		0	-660	302,649	1,691,472	

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DATE	12/18/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	J. Cruz	PARTY NUMBER	6834	NOTES CHECKED BY	G.W.C. rlu	LINE NO.	10	PAGE	5	
AREA	Oklahoma	TOPO MAP	Aledo 15'	STATE	Oklahoma	COUNTY	Dewey	TWP	16N	RANGE	17W/18W	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			
									1897.4									
60	990		261°10.2'	-8.8°	4.0	88°30'	+25.9	+21.9		1919.3		-1	-990	302,648	1,691,142			
61	1320		"	"	8.1	88°30'	+34.5	+26.4		1923.8		-1	-1320	302,648	1,690,812			
62	1650		261°10.2'	-8.8°	14.7	88°40'	+38.4	+23.7		1921.1	TP	-1	-1650+3	302,648	1,690,985			
62	1650				13.7	88°42'	+37.4	+23.7			TP							
	1650		81°5' +180°	+8.8°	+8.0	-		+8.0	1929.1		BS	-3	-1650+3					
	1650				+14.8	89°46'	-6.7	+8.1			BS							
63	1320		81°5'	+8.8°	12.0	BH	-6.6	-18.6		1910.5		+3	+1320	302,648	1,690,158			
64	990		"	"	10.1	91°-	-17.3	-27.4		1901.7		+2	+990	302,647	1,689,828			
65	660		"	"	10.6	91°30'	-17.3	-27.9		1901.2		+1	+660	302,646	1,689,948			
66	330		"	"	14.9	TH	-1.7	-16.6		1912.5		+1	+330	302,646	1,689,168			
67	0				5.4	-		-5.4		1923.7	π	0	0	302,645	1,688,838			
68	330		261°55'	+8.8°	10.0	-		-10.0		1919.1		-1	-330	302,644	1,688,508			
69	660		"	"	14.7	91°-	-11.5	-25.2		1902.9		-3	-660	302,642	1,688,178			
70	990		"	"	14.3	91°40'	-22.8	-43.1		1886.0		-4	-990	302,641	1,687,848			
71	1320		"	"	11.5	91°44'	-32.7	-56.4		1872.7		-5	-1320	302,640	1,687,518			
72	1650		"	"	13.3	91°46'	-48.0	-61.3		1867.8		-7	-1650	302,638	1,687,188		↑	
73	1980		"	"	14.1	91°-	-34.6	-48.7		1880.4		-8	-1980	302,637	1,686,858		R 17W	
74	2180		260°36.3'	+8.8°	8.0	91°-	-38.0	-46.0		1883.1		-23	-2180	302,622	1,686,658	302,620 + 1,686,650	el. 1883.	
74	2310		261°58'	+9.3°	7.1	91°-	-40.3	-47.4		1881.7	TP	+11	-2310+4	302,656	1,686,532		R 18W	
74	2310				13.8	90°51'	-33.6	-47.4			TP							↓

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DATE		INSTRUMENT MAN			ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE			
12/18/80		G. Cotcamp			J. Cruz		6834		Cwc <i>rlw</i>			10	6			
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
Oklahoma		Aledo 15'		Oklahoma	Dewey		16N	18W		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	
74										1881.7						
	2440		91° 24.3' +180°	+9.3°	+14.9	89° 22'	-29.2	-14.4	1867.3		BS	+32	-2692.4			
	2440				+14.8	89° 26'	-26.1	-14.3		BS						
75	2310		81° 24.3'	+9.3°	11.2	TH	+11.6	+0.4		1867.7		-28	+2310	302660	1686206	
76	1980		"	"	12.4	BH	-9.9	-22.3		1845.0		-24	+1980	302667	1685876	
77	1650		"	"	13.0	91°-	-28.8	-41.8		1825.5		-20	+1650	302668	1685546	
78	1320	1319	"	"	4.4	92°-	-46.0	-50.4		1816.9		-16	+1319	302672	1685215	
79	990	989	"	"	13.9	92°-	-34.5	-48.4		1818.9		-12	+989	302676	1684885	
80	660		"	"	12.9	92°-	-23.0	-35.9		1831.4		-8	+660	302680	1684556	
81	330		"	"	15.0	BH	-1.7	-16.7		1850.6		-4	+330	302684	1684226	
82	0				5.4	-		-5.4		1861.9		0	0	302688	1683896	
83	330		261° 19.8'	+9.6°	9.4	-		-9.4		1857.9		+5	-330	302692	1683566	
84	660		"	"	11.1	91°30'	-47.3	-28.4		1838.9		+11	-660	302699	1683236	
85	990		"	"	12.5	91°30'	-25.9	-38.4		1828.9		+16	-990	302704	1682906	
86	1320		"	"	4.8	91°-	-23.0	-27.8		1839.5		+21	-1320	302709	1682576	
87	1650		"	"	6.4	-		-6.4		1860.9		+27	-1650	302715	1682246	
88	1980		"	"	7.8	TH	+9.9	+2.1		1859.4		+32	-1980	302720	1681916	
89	2310		261° 19.8'	+9.6°	14.7	TH	+11.6	-3.1			TP	+37	-2310.4	302725	1681590	
89	2310				14.0	89°44'	+10.7	-3.3		1864.0		TP				
	1980	1779	81° 20.6' +180°	+9.6°	+13.5	91°36'	+55.3	+68.8	18328		BS	+33	-1779.0			
	1980				+11.2	91°40'	+57.6	+68.8		BS						

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DATE	12/18/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	J Cruz	PARTY NUMBER	6834	NOTES CHECKED BY	GWC.	LINE NO.	10	PAGE	7	
AREA	Oklahoma	TOPO MAP	Aledo 15'	STATE	Oklahoma	COUNTY	Dewey	TWP	16N	RANGE	18W	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	
									1932.6							
JL 75	1755		81° 47'	+9.6°	13.7	91° 46'	-54.1	-67.8		1825.0		-42	+1755	302,716	1,681,369	302,715 + 1,681,390. 4-way Intersect. el. 1863
90	1650		81° 20.6'	+9.6°	14.3	91° 46'	-50.8	-65.1		1867.7		-27	+1650	302,731	1,681,264	
91	1320		" "	"	11.9	91° 35'	-34.5	-46.4		1886.4		-22	+1320	302,736	1,680,921	
92	990		" "	"	13.0	91° 10'	-20.2	-33.2		1899.6		-16	+990	302,742	1,680,627	
93	660		" "	"	11.1	91° -	-11.5	-22.6		1910.2		-11	+660	302,747	1,680,274	
94	330		" "	"	12.0	-	-	-12.0		1920.8		-5	+330	302,753	1,679,941	
95	0		" "	"	5.4	-	-	-5.4		1927.4	TP	0	0	302,758	1,679,614	
96	330		261° 10.8'	+9.8°	9.0	-	-	-9.0		1923.8		+6	-330	302,764	1,679,284	
97	660		" "	"	8.0	91° -	-11.5	-19.5		1913.3		+11	-660	302,769	1,678,954	
98	990		" "	"	6.6	91° -	-17.3	-23.9		1908.9		+17	-990	302,775	1,678,624	
99	1320		" "	"	4.5	91° -	-23.0	-27.5		1905.3		+23	-1320	302,781	1,678,294	
100	1650		261° 10.8'	+9.8°	11.9	91° -	-23.8	-40.7			TP	+28	-1650	302,786	1,677,967	
100	1650		" "	"	15.0	90° 59'	-25.9	-40.9		1871.9	TP					
	1320		81° 24.0' + 180°	+9.8°	16.5	88° 30'	-24.5	-28.0	1863.9		BS	+28	-1320	302,786		
	1320		" "	"	10.4	88° 40'	-28.4	-28.0			BS					
101	990		81° 24'	+9.8°	8.8	89° -	+17.3	+8.5		1872.4		-21	+990	302,793	1,677,640	
102	660		" "	"	3.0	TH	+3.3	+0.3		1864.2		-14	+660	302,800	1,677,310	
103	330		" "	"	0.4	-	-	-0.4		1863.5		-7	+330	302,807	1,676,980	
104	0		" "	"	5.4	-	-	-5.4		1858.5	TP	0	0	302,814	1,676,650	
105	330		261° 54'	+9.8°	10.8	92° -	-11.5	-22.3		1841.6		+4	-330	302,818	1,676,320	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE					
12/18/80		G. Cotcamp		J. Cruz		6834		Gwc. <i>rlw</i>			10	8					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Oklahoma		Aledo 15'		Oklahoma	Dewey		16N	18W		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		
									1863.9								
106	460		259°3'	+9.8°	12.3	92°-	-16.0	-28.3		1835.6		-9	-460	302,805	1,676,190	302,805+1,676,190 -rd (north) el. '834	
107	660		260°54'	+9.8°	10.1	92°-	-23.0	-33.1		1830.8		+8	-660	302,822	1,675,990	hazie. correct, y=-7'	
108	990		"	"	8.2	91°-	-17.3	-25.5		1838.4		+12	-990	302,826	1,675,660	x=+33'	
109	1320		"	"	10.8	-		-10.8		1853.1		+16	-1320	302,830	1,675,330		
110	1650		"	"	3.9	TH	+8.3	+4.4		1868.3		+20	-1650	302,834	1,675,000		
111	1980		"	"	10.0	89°10'	+28.8	+18.8		1862.7		+24	-1980	302,838	1,674,670		
111	2310		260°54'	+9.5°	5.4	89°10'	+33.6	+28.2		1892.1	TP	+16	-2310.45	302,830	1,674,345		
111	2310				1.4	89°10'	+29.6	+28.2			TP						
	970		81°13.8'+180°	+9.5°	+10.2	89°-	-17.3	-7.1	1885.0		BS	+13	-990+4				
	990				14.5	89°20'	-11.5	-7.0			BS						
112	660		81°13.9'	+9.5°	6.6	89°-	+11.5	+4.9		1889.9		-8	+660	302,835	1,674,019		
113	330		"	"	5.1	89°-	+5.8	+0.7		1885.7		-4	+330	302,839	1,673,689		
114	0				5.4	-		-5.4		1879.6	TP	0	0	302,843	1,673,359		
115	330		260°54'	+9.5°	9.5	92°-	-11.5	-21.0		1864.0		+2	-330	302,845	1,673,029		
116	660		"	"	12.3	92°-	-23.0	-35.3		1849.7		+5	-660	302,848	1,672,699		
117	990	989	260°54'	+9.5°	3.8	92°-	-34.5	-38.3		1846.7	TP	+7	-989+4	302,850	1,672,374		
117	990				12.4	91°30'	-25.9	-38.3			TP						
	1650	1649	81°0'+180°	+9.5°	+6.0	91°30'	+43.2	+49.2	1895.9		BS	+14	-1649+4				
	1650				+13.7	91°14'	+35.5	+49.2			BS						
118	1320	1319	81°-	+9.5°	5.9	92°-	-46.0	-51.9		1844.0		-12	+1319	302,852	1,672,098		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 12/19/80	INSTRUMENT MAN G. Cotcamp	ROD MAN J. Cruz	PARTY NUMBER 6834	NOTES CHECKED BY GWC	LINE NO. 10	PAGE 9
AREA Oklahoma	TOPO MAP Aledo 15'	STATE Oklahoma	COUNTY Dewey	TWP 16N	RANGE 18W	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	
									1895.9							
119	990	989	81° -	+9.5°	151	92°	-24.5	-49.6		1846.3		-9	+989	302,855	1,671,718	
120	660		" "	"	12.3	92° -	-23.0	-35.3		1860.6		-6	+660	302,858	1,671,389	
121	330		" "	"	13.8	91° -	-5.8	-12.6		1876.3		-3	+330	302,861	1,671,059	
121	180		86° 6'	+9.5°	11.6	-		-11.6		1884.3		-18	+179	302,846	1,670,908	302,835 + 1,670,895 4-way Intersect. c. 1883.
122	0				54	-		-5.4		1890.5	TP	0	0	302,867	1,670,729	
123	330		261° 4.1'	+9.7°	2.9	89° -	+5.8	+2.9		1898.8		+4	-330	302,868	1,670,399	
124	660		" "	"	2.7	89° -	+1.5	+3.8		1904.7		+9	-660	302,877	1,670,069	
125	990		" "	"	4.7	89° -	+12.8	+12.6		1908.5		+13	-990	302,877	1,669,739	
126	1320		261° 4.1'	+9.7°	12.7	89° -	+23.0	+10.3		1906.2	TP	+18+3	-1320+4	302,885	1,669,413	
126	1320				14.3	88° 56'	+24.6	+10.3			TP					
	2640		80° 50.3' +150°	+9.7°	+13.9	90° 24'	+18.4	+32.5	1838.5		BS	+25+3	-2640+4			
	2640				+6.3	90° 34'	+26.1	+32.4			BS					
127	2310		80° 50.3'	+9.7°	7.3	90° 40'	-26.0	-34.2		1904.3		-22	+2310	302,891	1,669,087	
128	1960		" "	"	12.9	90° 40'	-23.0	-35.9		1902.6		-19	+1960	302,897	1,668,757	
129	1650		" "	"	9.1	91° -	-28.8	-37.9		1900.6		-16	+1650	302,897	1,668,427	
130	1320		" "	"	14.9	91° -	-23.0	-37.9		1900.6		-12	+1320	302,901	1,668,097	
131	990		" "	"	13.3	91° -	-17.3	-30.6		1907.9		-9	+990	302,904	1,667,767	
132	660		" "	"	9.6	91° -	-11.5	-21.1		1917.4		-6	+660	302,907	1,667,437	
133	330		" "	"	11.5	-		-11.8		1926.7		-3	+330	302,910	1,667,107	
134	0				54	-		-5.4		1933.1	TP	0	0	302,918	1,666,777	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	12/19/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	J. Cruz	PARTY NUMBER	6834	NOTES CHECKED BY	CWC	NEW	LINE NO.	10	PAGE	10
AREA	Oklahoma	TOPO MAP	Aledo 15'	STATE	Oklahoma	COUNTY	Noway	TWP	16N	RANGE	18W	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+	EAST+	COORDINATES		REMARKS
												SOUTH -	WEST -	Y	X	
												LAT.	DEP.			
									1938.5							
135	330		260°49.2'	+9.7°	10.3	-		-10.3		1928.2		+3	-330	302916	1666497	
136	660		"	"	9.3	91°-	-11.5	-20.8		1917.7		+6	-660	302919	1666117	
137	990		"	"	14.2	91°-	-17.3	-31.5		1907.0		+9	-990	302922	1665787	
75	1140		260°2.6'	+9.7°	12.4	91°10'	-23.2	-35.6		1902.9		-5	-1140	302925	1665637	302925+1665650 4-Way Intersect e. 1901.
138	1320		260°7.2'	+9.7°	14.7	91°10'	-26.9	-41.3		1897.2		+12	-1320	302928	1665957	
139	1650		"	"	12.5	91°10'	-33.6	-46.1		1892.4		+15	-1650	302931	1665127	
140	1980		"	"	7.5	91°-	-34.6	-46.4		1896.1		+18	-1980	302934	1664797	
141	2310		"	"	11.2	90°30'	-20.2	-31.4		1907.1		+21	-2310	302937	1664967	
142	2640		260°49.2'	+9.7°	8.1	90°20'	-15.4	-23.5		1915.0	TP	+24+2	-2640.4	302939	1664141	
142	2640		"	"	14.3	90°12'	-9.2	-23.5			TP					
	2310		81°20.4'+180°	+9.7°	7.7	8H	+11.6	+19.3	1934.3		BS	+42+2	-2310+4			
	2310		"	"	+13.9	90°8'	+5.4	+19.3			BS					
143	1980		81°20.4'	+9.7°	11.3	8H	-9.9	-21.2		1913.1		-3.6	+1980	302947	1663815	
144	1650		"	"	12.6	90°30'	-14.4	-27.0		1907.3		-30	+1650	302953	1663985	
145	1320		"	"	14.2	90°30'	-11.5	-25.7		1908.6		-24	+1320	302959	1663155	
146	990		"	"	13.6	8H	-5.0	-18.6		1915.7		-18	+990	302965	1662825	
147	660		"	"	11.7	-		-11.7		1922.6		-12	+660	302971	1662495	
148	330		"	"	6.2	-		-6.2		1928.1		-6	+330	302977	1662165	
149	0		"	"	5.4	-		-5.4		1928.9	↑	0	0	302983	1661835	
150	330		260°58.7'	+9.7°	8.2	-		-8.2		1926.1		+4	-330	302987	1661505	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 12/19/80	INSTRUMENT MAN G. Cotcamp	ROD MAN J. Cruz	PARTY NUMBER 6834	NOTES CHECKED BY GWC <i>dlw</i>	LINE NO. 10	PAGE 11
AREA Oklahoma	TOPO MAP Aledo 15'	STATE Oklahoma	COUNTY Dewey	TWP 16N	RANGE 18W	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	
									1934.3							
151	660		260° 58.7	+9.7°	14.2	-		-14.2		1920.1		+8	-660	302,991	1,664,175	
152	990		"	"	11.1	-		-11.1		1923.2		+12	-990	302,975	1,660,895	
153	1320		"	"	0.4	-		-0.4		1933.9		+16	-1320	302,999	1,660,515	
JL 75	1488		260° 38.8'	+9.7°	1.7	TH	+7.4	+5.7		1940.0		+9	-1488	302,992	1,660,347	303,000 + 1,660,370 7-way Intersect. e.l. 1939.
154	1650		260° 59.7	+9.7°	4.9	89°30'	+14.4	+9.5		1943.8		+20	-1650	303,003	1,660,185	
155	1980		"	"	4.8	89°30'	+17.3	+12.5		1946.8		+23	-1980	303,006	1,659,855	
156	2310		260° 55.7	+9.7°	6.0	89°30'	+20.2	+14.2			TP	+27+2	-2310+4	303,012	1,659,529	
156	2310				11.4	89°22'	+25.5	+14.1		1948.9	TP					
	1650		80° 46.8 + 180°	+9.7°	+7.6	-		+7.6	1956.0		BS	+14+2	-1650+4			
	1650				+4.7	90°6'	+2.9	+7.6			BS					
157	1320		80° 46.8'	+9.7°	6.4	-		-6.4		1949.6		-11	+1320	303,017	1,659,203	
158	990		"	"	5.6	-		-5.6		1950.7		-8	+990	303,020	1,658,873	
159	660		"	"	4.6	-		-4.6		1951.4		-6	+660	303,022	1,658,543	
160	330		"	"	3.4	-		-3.4		1952.6		-3	+330	303,025	1,658,213	
161	0		"	"	5.4	-		-5.4		1950.6	TP	0	0	303,028	1,657,883	
162	330		260° 35'	+9.7°	7.2	-		-7.2		1948.8		+2	-330	303,030	1,657,553	
163	660		"	"	9.1	-		-9.1		1946.9		+3	-660	303,031	1,657,223	
164	990		"	"	11.4	-		-11.4		1944.6		+5	-990	303,033	1,656,893	
165	1320		"	"	13.6	-		-13.6		1942.4		+7	-1320	303,035	1,656,563	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 12/20/80	INSTRUMENT MAN G. Cotcamp		ROD MAN J. Cruz		PARTY NUMBER 6839		NOTES CHECKED BY GWC JAW		LINE NO. 10	PAGE 12
AREA Oklahoma	TOPO MAP Aledo 15		STATE Oklahoma	COUNTY Dewey		TWP 16N	RANGE 18W/19N	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.	
									1956.0					
166	1650		260°35'	+9.7°	7.3	0H	-8.3	-15.6		1940.4	TP	+8+2	-1650+4	303,038 1,656,237
166	1650				13.7	90°4'	-1.9	-15.6			TP			
	1320		80°44.8'+180°	+9.7°	+10.9	89°-	-23.0	-12.1			BS	+10+1	-1320+4	
	1320				+9.2	89°4'	-21.5	-12.3	1928.1		BS			
167	990		80°44.8'	+9.7°	7.3	89°-	+17.3	+10.0		1938.1		-8	+990	303,041 1,655,911
168	660		"	"	3.7	89°-	+11.5	+7.8		1935.9		-5	+660	303,044 1,655,581 Horiz. curved. y = +17' x = +9'
169	330		"	"	1.3	89°-	+5.8	+4.5		1932.6		-3	+330	303,046 1,655,251
7F	260		84°29'	+9.7°	0.5	89°-	+4.5	+4.0		1932.1		-19	+259	303,030 1,655,180 303,030+1,663,180 4-Way Intersect e.l. 1920.
170	0				5.4	-	-	-5.4		1922.7	TP	0	0	303,047 1,654,921
171	330		267°32'	+9.7°	14.5	0H	-1.7	-16.2		1911.9		+42	-327	303,091 1,654,594
172	656		272°54'	+9.7°	11.2	91°30'	-17.2	-28.4		1899.7		+143	-640	303,192 1,654,281 Curve
173	980		277°9.8'	+9.7°	14.1	91°30'	-25.6	-39.7			TP	+284-3	-938+2	303,330 1,653,985
173	980				11.3	91°40'	-28.5	-32.2		1888.3	TP			
	1970		129°27'+180°	+9.7°	+4.0	89°30'	-17.2	-13.2			BS	+1490-3	-1289+2	
	1970				+9.6	89°20'	-22.9	-13.3	18750		BS			
174	1645		131°32'	+9.7°	7.1	TH	+8.2	+1.1		1876.1		-1283	+1030	303,534 1,653,728
175	1320		133°4'	+9.7°	9.8	-	-	-9.8		1865.2		-1051	+799	303,766 1,653,497
176	990		"	"	12.2	90°30'	-8.6	-20.8		1854.2		-788	+599	304,029 1,653,297
177	660		"	"	11.3	91°30'	-17.3	-28.6		1846.4		-525	+399	304,292 1,653,097
178	330		"	"	14.7	90°30'	-2.9	-17.6		1857.4		-263	+200	304,554 1,652,898

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 12/21/80	INSTRUMENT MAN G. Cotcamp		ROD MAN J. Cruz		PARTY NUMBER 6834	NOTES CHECKED BY G.W.C. J.W.		LINE NO. 13	PAGE 13
AREA Oklahoma	TOPO MAP Alado 15'	STATE Oklahoma	COUNTY Covey		TWP 16N	RANGE 19W	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	
									1875.0							
179	0				5.4	-		-5.4		1869.6	X	0	0	304,817	1,652,698	
180	330		312° 55'	+9.7°	6.0	-		-6.0		1869.0		+262	-200	305,079	1,652,998	
181	660		" "	"	7.3	91°-	-11.5	-18.8		1856.2		+524	-401	305,341	1,652,297	
182	990		" "	"	8.2	91°-	-17.3	-25.5		1849.5		+787	-601	305,604	1,652,097	
183	1320		" "	"	11.0	BH	-6.6	-17.6		1857.4		+1049	-801	305,866	1,651,897	
184	1650		" "	"	1.3	-		-1.3		1873.7		+1311	-1002	306,128	1,651,696	
185	1980		" "	"	2.6	89°30'	+17.3	+14.7		1889.7		+1573	-1202	306,390	1,651,496	
186	2310		312° 55'	+9.7°	6.2	89°20'	+26.9	+20.7		1895.7	TP	+1836.2	-1403.2	306,651	1,651,297	
186	2310		" "	"	12.9	89°10'	+33.6	+20.7			TP					
	1320		132° 49.7' +180°	+9.7°	+11.1	89°-	-23.0	-11.9			BS	+1048.2	-803.2			
	1320		" "	"	+3.4	89°20'	-15.4	-12.0	1883.7		BS					
187	990		132° 49.7'	+9.7°	10.2	89°-	+17.3	+7.1		1890.8		-786	+602	306,911	1,651,098	
188	660		" "	"	1.3	-		-1.3		1882.4		-524	+402	307,173	1,650,898	
189	330		" "	"	6.0	-		-6.0		1877.7		-262	+201	307,435	1,650,697	
190	0				5.4	-		-5.4		1878.3	X	0	0	307,697	1,650,496	
191	330		302° 24'	+9.7°	0.4	-		-0.4		1883.3		+221	-245	307,918	1,650,251	
$\frac{1}{2}$ $\frac{1}{5}$	618		297° 43'	+9.7°	5.5	89°-	+10.8	+5.3		1889.0		+376	-491	308,073	1,650,005	308,020 +1,650,000 4-Way Intersect.
192	655		298° 22'	+9.7°	4.9	89°-	+11.4	+6.5		1890.2		+404	-516	308,101	1,649,980	
193	982		293° 31'	+9.7°	3.9	89°-	+17.1	+13.2		1896.9		+538	-822	308,235	1,649,674	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE			
12/21/80		G. Cotcamp		T. Cruz		6834		CWC rlu			10		14			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
Oklahoma		Aledo 15'		Oklahoma		Dewey		16N		19W				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 -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
									1883.7							
194	1300		288° 34.7'	+9.7°	3.0	89° -	+22.7	+19.7			TP	+616	-1145+2	308,313	1,649,353	curve
194	1300				6.9	88° 50'	+26.5	+19.6		1903.3	TP					
	1650	1649	81° 29' +180°	+9.7°	+13.7	91° 30'	+43.2	+56.9			BS	+34	-1649+2			
	1650				+14.5	91° 38'	+42.2	+56.7	1960.0		BS					
195	1320		80° 41'	+9.7°	15.0	91° 30'	-34.5	-49.5		1910.5		-9	+1320	308,338	1,649,026	
196	990		" "	"	11.8	91° 30'	-25.9	-37.7		1922.3		-7	+990	308,340	1,648,696	
197	660		" "	"	14.4	90° 30'	-5.8	-20.2		1939.8		-4	+660	308,343	1,648,366	
198	330		" "	"	9.4	-	-	-9.4		1950.6		-2	+330	308,345	1,648,036	
199	0				5.4	-	-	-5.4		1954.6	TP	0	0	308,347	1,647,706	
200	330		260° 45.2'	+9.7°	7.3	-	-	-7.3		1952.7		+3	-330	308,350	1,647,376	
201	660		" "	"	11.1	-	-	-11.1		1948.9		+5	-660	308,352	1,647,046	
202	990		" "	"	12.9	-	-	-12.9		1947.1		+8	-990	308,355	1,646,716	
203	1320		" "	"	13.2	-	-	-13.2		1946.8		+10	-1320	308,357	1,646,386	
204	1650		" "	"	11.0	-	-	-11.0		1949.0		+13	-1650	308,360	1,646,056	
205	1980		" "	"	4.3	-	-	-4.3		1955.7		+16	-1980	308,363	1,645,726	
206	2310		260° 45.2'	+9.7°	11.3	TH	+11.6	+0.3			TP	+18	-2310+2	308,365	1,645,398	
206	2310				6.6	89° 50'	+6.7	+0.1		1960.1	TP					
	2640		81° 37.3' +180°	+9.7°	+13.7	89° 28'	-24.6	-10.9	1949.2		BS	+61	-2639+2			
	2640				+5.0	89° 40'	-15.4	-10.4			BS					
207	2310		81° 37.3'	+9.7°	3.8	89° 40'	+13.4	+9.6		1958.8		-53	+2309	308,373	1,645,070	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 12/21/80	INSTRUMENT MAN G. Cotcamp	ROD MAN J. Cruz	PARTY NUMBER 6834	NOTES CHECKED BY GNC JWS	LINE NO. 10	PAGE 15
AREA Oklahoma	TOPO MAP Aledo 15'	STATE Oklahoma	COUNTY Dewey	TWP 16N	RANGE 19W	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.	
									1949.2					
208	1980		81° 37.3	+9.7°	4.0	89° 40'	+11.5	+7.5		1956.7		-46	+1979	308,380 1,644,740
JK TF	1975		82° 12.7	+9.7°	4.0	89° 40'	+11.5	+7.5		1956.7		-66	+1974	308,360 1,644,735 308,370 + 1,644,715 4-Way Intersect. e.l. 1958
209	1650		81° 37.3	+9.7°	3.9	89° 40'	+9.6	+5.7		1954.9		-38	+1650	308,388 1,644,411
210	1320		"	"	3.8	89° 40'	+7.7	+3.9		1953.1		-30	+1320	308,396 1,644,081
211	990		"	"	4.0	89° 40'	+5.8	+1.8		1951.0		-23	+990	308,403 1,643,751
212	660		"	"	4.0	89° 40'	+3.8	-0.2		1949.0		-15	+660	308,411 1,643,421
213	330		"	"	2.2	-	-	-2.2		1947.0		-8	+330	308,418 1,643,091
214	0		"	"	5.4	-	-	-5.4		1943.8	X	0	0	308,426 1,642,761
215	330		261° 46.4'	+9.7°	13.1	-	-	-13.1		1936.1		+8	-330	308,434 1,642,431
216	660		"	"	12.2	91° -	-11.5	-23.7		1925.5		+17	-660	308,443 1,642,101
217	990		"	"	8.1	91° 30'	-25.9	-34.0		1915.2		+25	-990	308,451 1,641,771
218	1320		"	"	7.2	91° 30'	-34.5	-41.7		1907.5		+34	-1320	308,460 1,641,441
219	1650	1649	"	"	3.1	91° 30'	-43.2	-46.3		1902.9		+42	-1648	308,468 1,641,113
220	1980	1979	"	"	2.3	91° 30'	-51.8	-54.1		1895.1		+51	-1978	308,477 1,640,783
221	2310	2309	261° 46.4'	+9.7°	10.3	91° 30'	-60.5	-70.8		1878.4	TP	+59	-2308.3	308,485 1,640,456
221	2310		"	"	14.2	91° 24'	-56.4	-70.6			TP			
	1650		81° 57.9' + 180°	+9.7°	+6.5	89° -	-28.8	-22.3			BS	+48	-1649.3	
	1650		"	"	+1.6	89° 10'	-24.0	-22.4	1856.0		BS			
222	1320		81° 57.9'	+9.7°	4.0	TH	+6.6	+2.6		1858.6		-38	+1319	308,495 1,640,129
223	990		"	"	11.0	BH	+5.0	-6.0		1850.0		-29	+990	308,504 1,639,800

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	INSTRUMENT MAN	ROD MAN	PARTY NUMBER	NOTES CHECKED BY	LINE NO.	PAGE	
12/21/80	G. Cotcamp	J. Cruz	6834	GWC	10	16	
AREA	TOPO MAP	STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER
Oklahoma	Aledo 15'	Oklahoma	Dewey	16N	19W		L. Davis

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH+	EAST+	COORDINATES		REMARKS
												SOUTH-	WEST-	Y	X	
												LAT.	DEP.			
									1856.0							
224	660		83° 6'	+9.7°	11.2	91° -	-11.5	-22.7		1833.3		-32	+659	308,501	1,639,469	308,490 + 1,639,460 T-rd (north) el. 1833
225	330				11.3	91° -	-11.5	-22.8		1833.2		-19	+660	308,514	1,639,470	
226	0				10.1	91° -	-5.8	-15.9		1840.1		-10	+330	308,523	1,639,140	
227	330		261° 42'	+9.7°	5.4	-		-5.4		1850.6	TP	0	0	308,533	1,638,810	
228	660		"	"	7.0	-		-7.0		1849.0		+8	-330	308,541	1,638,480	
229	990		"	"	13.0	-		-13.0		1843.0		+16	-660	308,549	1,638,150	
230	1320		"	"	1.9	-		-1.9		1854.1		+24	-990	308,557	1,637,820	
231	1650		261° 42'	+9.7°	10.1	89° -	+23.0	+12.9		1868.9		+32	-1320	308,565	1,637,790	
231	1650				12.4	89° -	+28.8	+16.4		1872.4	TP	+40	-1650+4	308,573	1,637,164	
	1650		81° 39.8' + 180°	+9.7°	7.6	89° 10'	+24.0	+16.4			TP					
	1650				+13.9	91° 14'	+35.5	+49.4	1921.8		BS	+39	-1650*3			
	1650				+11.0	91° 20'	+38.4	+49.4			BS					
232	1320		81° 39.8'	+9.7°	12.5	91° 30'	-34.5	-47.0		1874.8		-31	+1320	308,581	1,636,837	
233	990		"	"	12.9	91° 30'	-25.9	-38.8		1883.0		-24	+990	308,588	1,636,507	
234	660		"	"	13.0	91° -	-11.5	-24.5		1897.3		-16	+660	308,596	1,636,177	
235	330		"	"	12.8	-		-12.8		1909.0		-8	+330	308,604	1,635,847	
236	0				5.4	-		-5.4		1916.4	TP	0	0	308,612	1,635,517	
237	330		261° 13.8'	+9.7°	0.6	TH	+1.7	+1.1		1922.9		+5	-330	308,617	1,635,187	
238	660		"	"	3.9	89° -	+11.5	+7.6		1929.4		+11	-660	308,623	1,634,857	
239	990		"	"	6.9	88° 30'	+25.9	+19.0		1940.8		+16	-990	308,628	1,634,527	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 12/21/80	INSTRUMENT MAN G. Cotcamp	ROD MAN J. Cruz	PARTY NUMBER 6834	NOTES CHECKED BY B. Co. (du)	LINE NO. 10	PAGE 17
AREA Oklahoma	TOPO MAP Aledo 15'	STATE Oklahoma	COUNTY Dewey	TWP 16N	RANGE 19W	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	
									1921.8							horiz. correct. y = -10' x = +29'
240	1320	1319	261° 13.8'	+9.7'	7.4	88° -	+46.0	+38.6		1960.4		+21	-1319	308,633	1,634,198	
$\frac{JL}{IT}$	1398	1347	260° 51.8'	+9.7'	6.6	88° -	+47.0	+40.4		1962.2		+13	-1347	308,625	1,634,170	308,625 + 1689,170 4-Way Intersect. el. 1961.
241	1650	1649	261° 13.8'	+9.7'	3.9	88° -	+57.6	+54.2			TP	+27	-1649.2	308,639	1,633,870	
241	1650				1.5	88° ±	+55.6	+54.1		1975.9	TP					
	660		80° 38.7' + 180°	+9.7'	+12.1	-		+12.1	1988.0		BS	+4	-660.2			
	660				+8.8	0H	+3.3	+12.15			BS					
242	330		80° 38.7'	+9.7'	6.6	-		-6.6		1981.4		-2	+330	308,641	1,633,542	
243	0				5.4	-		-5.4		1982.6	π	0	0	308,643	1,633,212	
244	330		260° 4.3'	+9.7'	9.7	-		-9.7		1978.3		-1	-330	308,642	1,632,882	
245	660		260° 4.3'	+9.7'	10.7	91° -	-11.5	-22.2			TP	-3	-660.2	308,690	1,632,554	
245	660				14.6	90° 40'	-7.7	-22.3		1965.7	TP					
	1650	1648	80° 22.3' + 180°	+9.7'	+5.8	86° 52'	-90.1	-84.3			BS	+2	-1648.2			
	1650				+14.2	86° 34'	-98.6	-84.4	1881.3		BS					
246	1320	1318	80° 22.3'	+9.7'	12.1	86° 30'	+80.4	+68.3		1949.6		-2	+1318	308,640	1,632,226	
247	990	988	" "	"	10.5	86° 30'	+60.3	+49.8		1931.1		-1	+988	308,641	1,631,896	
248	660	659	" "	"	7.7	87° -	+34.5	+26.8		1908.1		-1	+659	308,641	1,631,567	
249	330		" "	"	5.5	88° -	+11.5	+6.0		1887.3		0	+330	308,642	1,631,238	
250	0				5.4	-		-5.4		1875.9	π	0	0	308,642	1,630,908	
251	330		260° 18'	+9.7'	14.8	-		-14.8		1866.5		0	-330	308,642	1,630,578	
252	660				10.6	-		-10.6		1870.7		0	-660	308,642	1,630,248	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
1/3/81		G. Cotcamp		B. Cotcamp		6834		B.C. New		10		18				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
Oklahoma		Leedey 15' Aledo		Oklahoma		Dewey		16N		19W				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 TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
									1881.3							
253	990		260° 18'	+9.7°	6.8	89° -	+17.3	+10.5		1891.8		0	-990	308,642	1,629,918	↑
254	1320	1319	" "	"	12.7	88° -	+46.0	+33.3		1914.6		0	-1319	308,642	1,629,589	Aledo Quad.
255	1650	1699	260° 18'	+9.7°	1.1	88° -	+57.6	+56.5	+56.3	1937.6	TP	0	-1649+2	308,642	1,629,261	Leedey Quad
255	1650				4.2	87° 54'	+60.4	+56.2			TP					↓
	1980		80° 20' +180°	+9.7°	+14.5	90° 2'	+1.1	+15.6	1,953.2		BS	+1	-1980.1			
	1980				+13.3	90° 4'	+2.3	+15.6			BS					
256	1650		80° 20'	+9.7°	3.0	-		-3.0		1950.2		-1	+1650	308,642	1,628,932	
BM	1600		83° 57'	+9.7°	3.8	77	+8.0	+4.2		1957.4		-102	+1597	308,541	1,628,879	U.S.G.S. 1959
TL	1687		80° 49'	+9.7°	3.1	-		-3.1		1950.1	116°	-15	+1687	308,628	1,628,969	308,615+1,628,965 4-Way Intersect. of 1979
257	1320		25° 20'	+9.7°	1.8	-		-6.5		1946.7		-1	+1320	308,642	1,628,602	
258	990		" "	"	5.2	91° -	-17.3	-22.5		1930.7		-1	+990	308,642	1,628,272	
259	660		" "	"	12.1	90° -	-11.5	-23.6		1929.6		0	+660	308,643	1,627,942	
260	320		" "	"	9.6	-		-9.6		1943.6		0	+330	308,643	1,627,612	
261	320		" "	"	5.7	-		-5.4		1947.8	T	0	0	308,643	1,627,282	
262	380		260° 16.8'	+9.9°	8.7	-		-8.7		1944.05		+1	-330	308,644	1,626,952	
263	320		" "	"	12.4	-		-12.4		1940.8		+2	-660	308,645	1,626,622	
264	320		260° 16.8'	+9.9°	6.9	91° -	-17.3	-24.1		1929.1	TP	+3+2	-990	308,648	1,626,292	
264	990		" "	"	4.0	90° 34'	-9.8	-24.1			TP					
	1980	1978	80° 24.2' +180°	+9.9°	+2.3	87° 46'	-77.1	-74.8	1854.3		BS	+10+2	-1978			
	1980				+5.7	87° 40'	-80.5	-74.8			BS					

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/4/81	INSTRUMENT MAN G. Cotcamp	ROD MAN B. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY B.C. Allen	LINE NO. 10	PAGE 19
AREA Oklahoma	TOPO MAP Leedley 15'	STATE Oklahoma	COUNTY Dewey	TWP 16N	RANGE 19w/20w	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.	
									1854.3					
265	1650	1649	80°24.2'	+9.9°	7.9	87°40'	+67.1	+59.2		1913.5		-9	+1649	308,651 1,625,963
266	1320	1319	" "	"	10.0	87°40'	+53.7	+43.7		1898.0		-7	+1319	308,653 1,625,633
267	990	989	" "	"	6.0	88°-	+34.5	+28.5		1882.8		-5	+989	308,655 1,625,303
268	660		" "	"	9.9	88°-	+23.0	+13.1		1867.4		-3	+660	308,657 1,624,974
269	330		" "	"	1.7	-		-1.7		1852.6		-2	+330	308,658 1,624,644
270	0		" "	"	5.4	-		-5.4		1848.9	→	0	0	308,660 1,624,314 ↑
271	330		260°37.8'	+9.9°	4.2	88°-	+11.5	+7.3		1861.6		+3	-330	308,663 1,623,984 R19w
271	573	572	258°51'	+9.9°	0.8	87°30'	+25.0	+24.2		1878.5		-12	-572	308,648 1,623,742 308,650 + 1,623,740 4-way Intersect. of 1880
272	660	659	260°37.8'	+9.9°	5.0	87°-	+34.5	+29.5		1883.8		+6	-659	308,666 1,623,655 R20w
273	990	989	" "	"	3.2	87°-	+51.7	+48.5		1902.8		+9	-989	308,669 1,623,325 ↓
274	1320	1318	" "	"	4.5	87°-	+69.0	+64.5		1918.8		+12	-1318	308,672 1,623,996
275	1650	1648	260°37.8'	+9.9°	14.2	87°4'	+84.3	+70.1		1924.4	↑	+16+2	-1648	308,677 1,622,666
275	1650		" "	"	13.3	87°6'	+83.4	+70.1			↑			
	1980	1978	80°46.2' +180°	+9.9°	+14.7	87°46'	-77.1	-62.4	1862.0		BS	+23+2	-1978	
	1980		" "	"	+13.6	87°48'	-76.0	-62.4			BS			
276	1650	1649	80°46.2'	+9.9°	2.5	88°-	+57.6	+57.1		1919.1		-19	+1649	308,683 1,622,337
277	1320	1319	" "	"	7.2	88°-	+46.0	+38.8		1900.8		-15	+1319	308,687 1,622,007
278	990	989	" "	"	13.1	88°-	+34.5	+21.4		1883.4		-12	+989	308,690 1,621,677
279	660		" "	"	10.6	88°-	+23.0	+12.4		18874.4		-8	+660	308,694 1,621,348
280	330		" "	"	5.2	88°-	+11.5	+6.3		1868.3		-4	+330	308,698 1,621,018

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/4/81	INSTRUMENT MAN G. Cotcamp		ROD MAN B. Cotcamp		PARTY NUMBER 6834		NOTES CHECKED BY B.C. Dew		LINE NO. 10	PAGE 20
AREA Oklahoma	TOPO MAP Leedey 15'	STATE Oklahoma	COUNTY Dewey		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
									1862.0						
281	0				5.4	-		-5.4		1856.6	T	0	0	308,702	1,620,688
282	330		260° 40.7'	+9.9°	7.7	-		-7.7		1854.3		+3	-330	308,705	1,620,358
283	660		"	"	1.7	TH	+3.3	+1.6		1863.6		+7	-660	308,709	1,620,028
284	990	989	"	"	13.1	88° -	+34.5	+21.4		1883.4		+10	-989	308,712	1,619,699
285	1320	1319	"	"	5.1	88° -	+46.0	+40.9		1902.9		+13	-1319	308,715	1,619,369
286	1650	1649	260° 40.7'	+9.9°	4.8	88° -	+57.6	+52.8		1914.8	TP	+17+2	-1649	308,721	1,619,039
286	1650				1.7	88° 1'	+54.7	+52.8			TP				
	2640	2639	80° 42.2' +180°	+9.9°	+12.8	88° 50'	-53.8	-41.0	1873.8		BS	+28.2	-2639		
	2640				+14.3	88° 48'	-55.3	-41.0			BS				
287	2310	2309	80° 42.2'	+9.9°	4.2	88° 50'	+47.0	+42.8		1916.6		-24	+2309	308,727	1,618,709
287	2090	2089	81° 6.2'	+9.9°	3.7	88° 50'	+42.6	+38.9		1912.7		-37	+2089	308,717	1,618,989 308,715 + 1,618,985 4-way Intersect of 1914
288	1980		80° 42.2'	+9.9°	4.6	88° 50'	+40.3	+35.7		1909.5		-21	+1980	308,730	1,618,380
289	1650		"	"	2.2	89° -	+28.8	+26.6		1900.4		-17	+1650	308,734	1,618,050
290	1320		"	"	5.1	89° -	+23.0	+17.9		1891.7		-14	+1320	308,737	1,617,720
291	990		"	"	8.1	89° -	+17.3	+9.2		1883.0		-10	+990	308,741	1,617,390
292	660		"	"	2.9	TH	+3.3	+0.4		1874.2		-7	+660	308,744	1,617,060
293	330		"	"	4.9	-		-4.9		1868.9		-3	+330	308,748	1,616,730
294	0		"	"	5.4	-		-5.4		1868.4		0	0	308,751	1,616,400
295	330		260° 38.4'	+9.9°	4.9	-		-4.9		1868.9		+3	-330	308,754	1,616,070
296	660		"	"	5.4	-		-5.4		1868.4		+6	-660	308,757	1,615,740

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/4/81	INSTRUMENT MAN G. Cotcamp	ROD MAN B. Cotcamp	PARTY NUMBER 5834	NOTES CHECKED BY B.C. Davis	LINE NO. 10	PAGE 21
AREA Oklahoma	TOPO MAP Leedey 15'	STATE Oklahoma	COUNTY Dewey	TWP 16N	RANGE 20W	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	
									1873.8							
297	990		260° 38' 4"	+9.9°	4.9	-		-4.9		1868.9		+9	-990	308,760	1,615,910	
298	1320			"	2.1	-		-2.1		1871.7		+12	-1320	308,763	1,615,080	
299	1650			"	14.2	89°-	+28.8	+14.6		1888.4		+16	-1650	308,767	1,614,750	
300	1980			"	5.2	89°-	+34.6	+29.4		1903.2		+19	-1980	308,770	1,614,920	
301	2310		260° 38' 4"	+9.9°	2.0	89°-	+40.3	+38.3	1882	1912.0	TP	+22+2	-2310	308,775	1,614,090	
301	2310			"	6.2	88° 59'	+44.3	+38.1			TP					
	2310		80° 41' +180°	+9.9°	8.2	84	+11.6	+19.8	1931.6		TP	+24+2	-2310			
	2310			"	14.1	90° 2'	+5.4	+19.5	1916		TP					
302	1980		80° 41'	+9.9°	6.1	84	-9.9	-3.8		1927.8		-20	+1980	308,781	1,613,760	
303	1650			"	12.3	-		-12.3		1919.3		-17	+1650	308,784	1,613,430	
304	1465		81° 17'	+9.9°	10.2	-		-10.2		1921.4		-30	+1465	308,771	1,613,245	308,755 + 1,613,250 4 Way Intersect pt. 1922.
304	1320		80° 41'	+9.9°	9.2	-		-9.2		1922.4		-13	+1320	308,788	1,613,100	
305	990			"	10.5	-		-10.5		1921.1		-10	+990	308,791	1,612,770	
306	660			"	14.2	84	-3.3	-17.5		1914.1		-7	+660	308,794	1,612,490	
307	320			"	12.2	91°-	-5.8	-18.0		1913.6		-3	+320	308,798	1,612,110	
308	0			"	5.4	-		-5.4		1926.2	TP	0	0	308,801	1,611,780	
309	330		260° 38' 4"	+9.9°	0.7	88°-	+11.5	+10.8		1942.4		+3	-330	308,804	1,611,450	
310	660			"	7.1	87°-	+34.5	+27.4		1959.0		+6	-660	308,807	1,611,120	
311	990	989		"	8.2	87°-	+51.7	+43.5		1975.1		+9	-989	308,810	1,610,791	
312	1220	1318		"	13.8	87°-	+69.0	+55.2		1986.8		+12	-1318	308,813	1,610,462	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	1/4/81	INSTRUMENT MAN	G. Cotcamp	ROD MAN	B. Cotcamp	PARTY NUMBER	6834	NOTES CHECKED BY	B. Callan	LINE NO.	10	PAGE	22 of 24	
AREA	Oklahoma	TOPO MAP	Leedey 15'	STATE	Oklahoma	COUNTY	Dewey	TWP	16N	RANGE	20W	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.	
									1931.6					
313	1650	1648	260°37.8'	+9.9°	12.9	87°20'	+76.7	+62.8		1994.4	TP	+15.2	-1648	308,818 1,610,132
313	1650				12.0	87°24'	+74.8	+62.8			TP			
	1650		80°46' +180°	+9.9°	+13.3	04	+8.3	+21.6	2015.9		BS	+19	-1650	
	1650				+14.7	93°14'	+6.7	+21.4	21.5		BS			
314	1320		87°46'	+9.9°	10.1	04	+6.6	+16.7		2032.6		-15	+1320	308,822 1,609,802
315	990			"	12.4	-	-	-12.4		2003.5		-12	+990	308,825 1,609,472
316	660			"	9.3	-	-	-8.3		2007.6		-8	+660	308,829 1,609,192
317	330			"	4.7	-	-	-4.7		2011.2		-4	+330	308,833 1,608,812
318	0			"	5.4	-	-	-5.4		2010.5	TP	0	0	308,837 1,608,482
317	330		260°54.2'	+9.9°	7.2	-	-	-9.2		2006.7		+5	-330	308,842 1,608,152
317	502		259°4'	+9.9°	12.1	-	-	-10.1		2005.8	+6	-9	-502	308,828 1,607,980 308,820 + 1,607,990 4-Way Intersect. of 2006.
320	660		210°54.2'	+9.9°	11.3	-	-	-11.3		2004.6		+9	-660	308,846 1,607,822
321	990			"	6.0	-	-	-6.0		2009.9		+14	-990	308,851 1,607,492
322	1320			"	2.9	-	-	-2.8		2013.1		+19	-1320	308,856 1,607,162
323	1650			"	6.8	-	-	-6.8		2009.1		+23	-1650	308,860 1,606,832
324	1980		260°54.2'	+9.9°	11.0	-	-	-11.0		2004.9	TP	+28	-1980	308,865 1,606,502
324	1980				4.5	87°54'	+3.5	-11.0			TP			
	2640		81°8.7' +180°	+9.7°	+8.5	-	-	+8.5			BS	+39	-2640	
	2640				+0.7	90°10'	+7.7	+8.4	2013.3		BS			
325	2310		81°8.7'	+9.7°	13.2	-	-	-13.2		2000.1		-34	+2310	308,870 1,606,172

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 1/4/81	INSTRUMENT MAN G. Cotcamp	ROD MAN B. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY B. Cotcamp	LINE NO. 10	PAGE 23 of 24
AREA Oklahoma	TOPO MAP Leedey 15'	STATE Oklahoma	COUNTY Dewey	TWP 16N	RANGE 20W	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.	
									2013.3					
326	1980		81° 8.7'	+9.7°	11.1	04	-9.9	-21.0		1992.3		-29	+1980	308,875 1,605,892
327	1650		" "	"	4.4	91°	+28.8	+24.4		2037.7		-24	+1650	308,880 1,605,512
328	1320		" "	"	9.7	91° 30'	+34.5	+24.8		2038.1		-19	+1320	308,885 1,605,182
329	990		" "	"	13.5	91° 40'	+28.8	+15.3		2028.6		-15	+990	308,889 1,604,852
330	660		" "	"	10.2	91° 40'	+19.2	+9.0		2022.3		-10	+660	308,894 1,604,522
331	330		" "	"	14.8	-	-	-14.8		1998.5		-5	+330	308,899 1,604,192
332	0		" "	"	5.4	-	-	-5.4		2007.9	X	0	0	308,904 1,603,862
333	330		260° 54.7'	+9.7°	6.8	-	-	-6.8		2006.5		+4	-330	308,908 1,603,532
334	660		" "	"	10.3	-	-	-10.3		2003.0		+7	-660	308,911 1,603,202
335	990		" "	"	2.3	TH	+5.0	+2.7		2016.0		+11	-990	308,915 1,602,872
336	1212		260° 17'	+9.7°	2.4	89° 20'	+14.1	+11.7		2025.0	-1'	0	-1212	308,904 1,602,650 308,900 + 1,602,650 4-Way Intersect. el. 2025
336	1320		260° 54.7'	+9.7°	2.6	89° 20'	+15.4	+12.8		2026.1		+14	-1320	308,918 1,602,542
337	1650		260° 54.7'	+9.7°	12.0	89° 20'	+19.2	+7.2		2020.5	TP	+18	-1650	308,922 1,602,212
337	1650		" "	"	14.0	89° 14'	+22.1	+7.3			TP			
	2310	2309	80° 35.6' + 180°	+9.7°	+9.5	88° -	-80.6	-71.1	1949.4		BS	+12	-2309	
	2310		" "	"	+13.7	87° 54'	-84.6	-70.9			BS			
338	1980	1979	80° 35.6'	+9.7°	15.8	87° -	+69.1	+53.8		2003.2		-10	+1979	308,924 1,601,882
339	1650	1649	" "	"	8.1	88° 30'	+43.2	+35.1		1984.5		-8	+1649	308,926 1,601,552
340	1320		" "	"	4.0	88° 30'	+34.5	+25.5		1974.9		-7	+1320	308,927 1,601,223
341	990		" "	"	9.8	89° -	+17.3	+7.5		1956.9		-5	+990	308,929 1,600,893

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	1/4/81	INSTRUMENT MAN	G. Cotcamp	ROD MAN	B. Co's camp	PARTY NUMBER	6834	NOTES CHECKED BY	B.C. d.w.	LINE NO.	10	PAGE	24 of 24	
AREA	OKLAHOMA	TOPO MAP	Leedey 15'	STATE	Oklahoma	COUNTY	Dewey	TWP	16N	RANGE	20W	PPM	PARTY MANAGER	L.O. 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.	
									1949.4					
342	660		80°35.6'	+9.7°	4.2	-		-4.2		1945.2		-3	+660	308,931 1,600,563
343	330		"	"	5.7	-		-5.7		1943.7		-2	+330	308,932 1,600,233
344	0				5.4	-		-5.4		1944.0	π	0	0	308,934 1,599,903
345	330		260°32.3'	+9.7°	4.2	-		-4.2		1945.2		+1	-330	308,935 1,599,573
346	660		"	"	4.0	89°-	+11.5	+7.5		1956.9		+3	-660	308,937 1,599,243
347	990	989	"	"	5.0	88°-	+34.5	+29.5		1978.9		+4	-989	308,938 1,598,914
348	1320	1319	"	"	4.4	88°-	+46.0	+41.6		1991.0		+5	-1319	308,939 1,598,584
349	1650	1649	"	"	8.0	88°-	+57.6	+49.6		1999.0		+7	-1649	308,941 1,598,254
350	1980	1979	260°32.3'	+9.7°	2.7	88°-	+69.1	+66.4		2015.7	TP	+8	-1979	308,942 1,597,924
350	1980				8.6	87°50'	+74.8	+66.2	+66.3			TP		
	330		80°54'+180°	+9.7°	-12.4	-		+12.4		22028.1		BS	+3	-330
	330				+10.7	CH	+1.7	+12.4				BS		
351	0				5.4	-		-5.4		2022.7	π	0	0	308,945 1,597,594
±	190		255°55'	+9.7°	2.1	-		-2.1		2026.0		-15	-189	308,930 1,597,405

E.O.L. #10
 308,930 +1,597,405
 4-Way Int. raised. el. 2025
 horiz. correct. y=+18'
 x=+11'