

DATE: **3/21/79** INSTRUMENT MAN: **G. Cotcamp** ROD MAN: **R. Hulsey** PART NUMBER: **6834** NOTES CHECKED BY: **R. Hulsey** LINE NO.: **1-one** PAGE: **1 of 51**
 AREA: **OKLAHOMA** TOPO MAP: **Tipton SE 7 1/2'** STATE: **Oklahoma** COUNTY: **Tillman** TWP: **1N** RANGE: **18W** 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.		Y	X
										1325.0				439,555	1,672,295	439,555+1,672,295(s)
	2740		80° 2.5' +180°	+10.7°	+11.4	TH	-13.7	-2.3	1322.8		BS	+35	-2740			4-Way Intersect. R 325.
	2740				+13.8	89° 40'	-15.9	-2.1	-2.2		BS					
1	2640		79° 52'	+10.7°	12.4	TH	+13.2	+0.8		1323.6		-26	+2640	439,564	1,672,195	← 21 22
2	2310		" "	+10.7°	11.7	TH	+11.6	-0.1		1322.7		-23	+2310	439,567	1,671,865	28 27
3	1980		" "	+10.7°	0.5	-		-0.5		1322.3		-20	+1980	439,570	1,671,535	sta. 1-48 on paved
4	1650		" "	+10.7°	0.7	-		-0.7		1322.1		-16	+1650	439,574	1,671,205	road.
5	1320		" "	+10.7°	1.4	-		-1.4		1321.4		-13	+1320	439,577	1,670,875	
6	990		" "	+10.7°	2.8	-		-2.8		1320.0		-10	+990	439,580	1,670,545	
7	660		" "	+10.7°	2.8	-		-2.8		1320.0		-7	+660	439,583	1,670,215	
8	330		" "	+10.7°	3.4	-		-3.4		1319.4		-3	+330	439,587	1,669,885	
9	0				5.4	-		-5.4		1317.4	TP	0	0	439,590	1,669,555	
10	330		259° 56'	+10.7°	5.1	-		-5.1		1317.7		+4	-330	439,594	1,669,225	
11	660		" "	+10.7°	5.4	-		-5.4		1317.4		+7	-660	439,597	1,668,895	
12	990		" "	+10.7°	5.9	-		-5.9		1316.9		+11	-990	439,601	1,668,565	
13	1320		" "	+10.7°	6.1	-		-6.1		1316.7		+15	-1320	439,605	1,668,235	
14	1650		" "	+10.7°	6.9	-		-6.9		1315.9		+18	-1650	439,608	1,667,905	
15	1980		" "	+10.7°	7.0	-		-7.0		1315.8		+22	-1980	439,612	1,667,575	y = -4'
16	2310		" "	+10.7°	4.0	-		-4.0		1318.8		+26	-2310	439,616	1,667,245	x = +5'
	2530		259° 47'	+10.7°	6.9	-		-6.9		1315.9		+21	-2530	439,611	1,667,025	439,615+1,667,020(s) 4-Way Intersect.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
3/21/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		1	2					
AREA		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER						
Oklahoma		Tipton SE 7 1/2		Oklahoma		Tillman		18W		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.		Y	X
17	2640		259°56'	+10.7°	7.3	-		-7.3		1315.5	TP	+29	-2640	439,619	1,666,915	
17	2640				135	89°52'	+6.2	-7.3			TP					
	2640		79°48'+180°	+10.7°	+12.3	TH	-13.2	-0.9	1314.5		BS	+23	-2640			
	2640				+14.3	89°40'	-15.4	-1.1			BS					
18	2310		79°48'	+10.7°	11.4	TH	+11.6	+0.2		1314.7		-20	+2310	439,622	1,666,585	
19	1980		"	+10.7°	1.1	-	-	-1.1		1313.4		-17	+1980	439,625	1,666,255	
20	1650		"	+10.7°	1.9	-	-	-1.9		1312.6		-14	+1650	439,628	1,665,925	
21	1320		"	+10.7°	2.8	-	-	-2.8		1311.7		-12	+1320	439,630	1,665,595	
22	990		"	+10.7°	3.0	-	-	-3.0		1311.5		-9	+990	439,633	1,665,265	
23	660		"	+10.7°	3.3	-	-	-3.3		1311.2		-6	+660	439,636	1,664,935	
24	330		"	+10.7°	4.0	-	-	-4.0		1310.5		-3	+330	439,639	1,664,605	
25	0		"		5.4	-	-	-5.4		1309.1	X	0	0	439,642	1,664,275	
26	330		259°56'	+10.7°	5.2	-	-	-5.2		1309.3		+3	-330	439,645	1,663,945	
27	660		"	+10.7°	6.1	-	-	-6.1		1308.4		+7	-660	439,649	1,663,615	
28	990		"	+10.7°	8.7	-	-	-8.7		1305.8		+10	-990	439,652	1,663,285	
29	1320		"	+10.7°	11.0	-	-	-11.0		1303.5		+13	-1320	439,655	1,662,955	
30	1650		"	+10.7°	11.7	-	-	-11.7		1302.8		+17	-1650	439,659	1,662,625	
31	1980		"	+10.7°	13.7	-	-	-13.7		1300.8		+20	-1980	439,662	1,662,295	y=77'
32	2310		"	+10.7°	3.0	BH	-11.6	-14.6		1299.9		+24	-2310	439,666	1,661,965	x=+10
JL TF	2530		259°45.3	+10.7°	2.9	BH	-12.7	-15.6		1298.9		+20	-2530	439,662	1,661,745	4-way Intersect.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
3/21/79		G. Catcamp		R. Hulsey		6827		R. Hulsey		4	3						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Oklahoma		Tipton SF/Tipton		Oklahoma	Tillman		1N	18W/19W		L. C. 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		
									1314.5								
33	2640		259°53'	+10.7°	15.0	-		-15.0		1299.5	TP	+27	-2640	439,669	1,661,635		
33	2640				1.8	BH	-13.2	-15.0			TP						
	2640		79°55'+180°	+10.7°	+9.5	TH	-13.2	-3.7	1295.8		BS	+28	-2640				
	2640				+14.7	89°36'	-18.4	-3.7			BS					↑	
34	2310		79°55'	+10.7°	8.0	TH	+11.6	+3.6	1299.4			-25	+2310	439,672	1,661,305	Tipton SE	
35	1980		" "	+10.7°	7.2	TH	+9.9	+2.7	1298.5			-21	+1980	439,676	1,660,975	Tipton	
36	1650		" "	+10.7°	6.8	TH	+8.3	+1.5	1297.3			-18	+1650	439,679	1,660,645	↓	
37	1320		" "	+10.7°	6.7	TH	+6.6	-0.1	1295.7			-14	+1320	439,683	1,660,315		
38	990		" "	+10.7°	0.1	-		-0.1	1295.7			-11	+990	439,686	1,659,985		
39	660		" "	+10.7°	1.0	-		-1.0	1294.8			-7	+660	439,690	1,659,655		
40	330		" "	+10.7°	3.2	-		-3.2	1292.6			-4	+330	439,693	1,659,325		
41	0				5.4	-		-5.4	1290.4		TP	0	0	439,697	1,658,995		
42	330		259°59.8'	+10.7°	5.8	-		-5.8	1290.0			+4	-330	439,701	1,658,665		
43	660		" "	+10.7°	6.2	-		-6.2	1289.6			+8	-660	439,705	1,658,335		
44	990		" "	+10.7°	6.5	-		-6.5	1289.3			+12	-990	439,709	1,658,005		
45	1320		" "	+10.7°	5.8	-		-5.8	1290.0			+16	-1320	439,713	1,657,657		
46	1650		" "	+10.7°	6.0	-		-6.0	1289.8			+20	-1650	439,717	1,657,345	↑	
47	1980		" "	+10.7°	7.0	-		-7.0	1288.8			+24	-1980	439,721	1,657,015	R 18W Y +15'	
48	2310		" "	+10.7°	7.8	-		-7.8	1288.0			+28	-2310	439,725	1,656,685	R 19W Y +15'	
49	2540		259°55.3'	+10.7°	6.8	-		-6.8	1289.0			+28	-2540	439,725	1,656,455	439,710 + 1,656,445 4-Way Intersect. 12'	

Geosource Inc.

DATE 3/21/79	INSTRUMENT MAN G. Catcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 4
AREA Oklahoma	TOPO MAP Tipton	STATE Oklahoma	COUNTY Tillman	TWP 1N	RANGE 19W	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	
									1295.8							
49	2640		259° 59.8'	+10.6°	6.7	-		-6.7		1289.1	TP	+27	-2640	439,724	1,656,355	
49	2640				14.9	89° 50'	+7.7	-6.7			TP					
	2640		79° 54.7' + 180°	+10.6°	+2.3	-		+2.3	1291.4		BS	+24	-2640			
	2640				+3.9	89° 58'	-1.5	+2.4			BS					
50	2310		79° 54.7'	+10.6°	3.0	-		-3.0		1288.4		-21	+2310	439,727	1,656,025	
51	1980		" "	+10.6°	4.1	-		-4.1		1287.3		-18	+1980	439,730	1,655,695	
52	1650		" "	+10.6°	3.7	-		-3.7		1287.7		-15	+1650	439,733	1,655,365	
53	1320		" "	+10.6°	0.9	-		-0.9		1290.5		-12	+1320	439,736	1,655,035	
54	990		" "	+10.6°	1.1	-		-1.1		1290.3		-9	+990	439,739	1,654,705	
55	660		" "	+10.6°	0.9	-		-0.9		1290.5		-6	+660	439,742	1,654,375	
56	330		" "	+10.6°	4.0	-		-4.0		1287.4		-3	+330	439,745	1,654,045	
57	0				5.4	-		-5.4		1286.0	TP	0	0	439,748	1,653,715	
58	330		259° 33.9'	+10.6°	4.9	-		-4.9		1286.5		+1	-330	439,749	1,653,385	
59	660		" "	+10.6°	4.3	-		-4.3		1287.1		+2	-660	439,750	1,653,055	
60	990		" "	+10.6°	5.0	-		-5.0		1286.4		+3	-990	439,751	1,652,725	
61	1320		" "	+10.6°	5.7	-		-5.7		1285.7		+4	-1320	439,752	1,652,395	
62	1650		" "	+10.6°	6.9	-		-6.9		1284.5		+5	-1650	439,753	1,652,065	
63	1980		" "	+10.6°	7.9	-		-7.9		1283.5		+6	-1980	439,754	1,651,735	y=+10'
64	2310		" "	+10.6°	10.0	-		-10.0		1281.4		+7	-2310	439,755	1,651,405	x=0'
7F	2540		259° 27'	+10.6°	11.1	-		-11.1		1280.3		+2	-2540	439,750	1,651,175	4-way Intersect. el. 1280

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE			
3/22/79		R. Hulsey		G. Cotcamp		6834		R. Hulsey			1	5			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM	PARTY MANAGER		
Oklahoma		Tipton		Oklahoma		Tillman		1N		19W			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.		Y
									1291.4						
65	2640		259° 33.9'	+10.4	9.9	—		-9.9		1281.5	TP	-2	-2640	439746	1,651,075
65	2640				2.3	90°10'	-7.7	-10.0			TP				
	2640		80° 21.7'±180	+10.4	+12.5	89°30'	-23.0	-10.5	1271.0		BS	+35	-2640		
	2640				+10.9	89°32'	-21.5	-10.6			BS				
66	2310		80° 21.7'	+10.4	6.5	89°30'	+20.2	+13.7		1284.7		-31	+2310	439750	1,650,745
67	1980		" "	+10.4	5.3	TH	+9.9	+4.6		1275.6		-26	+1980	439755	1,650,415
68	1650		" "	+10.4	2.0	—		-2.0		1269.0		-22	+1650	439759	1,650,085
69	1320		" "	+10.4	4.6	—		-4.6		1266.4		-18	+1320	439763	1,649,755
70	990		" "	+10.4	5.2	—		-5.2		1265.8		-13	+990	439768	1,649,425
71	660		" "	+10.4	5.2	—		-5.2		1265.8		-9	+660	439772	1,649,095
72	330		" "	+10.4	5.5	—		-5.5		1265.5		-4	+330	439777	1,648,765
72	98		86° 18'	+10.4	4.4	—		-4.4		1266.6		-11	+97	439770	1,648,532 T-rod (north) 1267
73	0				5.4	—		-5.4		1265.6	T	0	0	439781	1,648,435
74	330		259° 52.7'	+10.4	4.9	—		-4.9		1266.1		+2	-330	439783	1,648,105
75	660		" "	+10.4	4.5	—		-4.5		1266.5		+3	-660	439784	1,647,775
76	990		" "	+10.4	4.1	—		-4.1		1266.9		+5	-990	439786	1,647,445
77	1320		" "	+10.4	4.0	—		-4.0		1267.0		+6	-1320	439787	1,647,115
78	1650		" "	+10.4	3.6	—		-3.6		1267.4		+8	-1650	439789	1,646,785
79	1980		" "	+10.4	2.9	—		-2.9		1268.1		+10	-1980	439791	1,646,455
80	2310		" "	+10.4	4.0	—		-4.0		1267.0		+11	-2310	439792	1,646,125

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
3/22/79		R. Hulsey		G. Cotcamp		0834		R. Hulsey		1	6					
AREA		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER						
Oklahoma		Tipton 7 1/2'		Oklahoma		Tillman		19W		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.		Y	X
80									1271.0							
79	2540		259° 43'	+10.4°	4.9	-		-4.9		1266.1		+5	-2540	439,786	1,645,895	Trail (south) 1267.
81	2640			+10.4°	5.0	-		-5.0		1265.9	TP	+13	-2640	439,794	1,645,795	y = +21'
81	2640		259° 52.7'		12.9	89° 50'	+7.7	-5.2			TP					x = +10'
	1650		79° 57.9'	+10.4°	7.1	-		+7.1	1273.0		BS	+11	-1650			
	1650		+180°		7.1			+7.1			BS					
82	1320		79° 57.9'	+10.4°	6.7	-		-6.7		1266.3		-8	+1320	439,797	1,645,465	
83	990		" "	+10.4°	6.8	-		-6.8		1266.2		-6	+990	439,799	1,645,135	
84	660		" "	+10.4°	5.9	-		-5.9		1267.1		-4	+660	439,801	1,644,805	
85	330		" "	+10.4°	5.8	-		-5.8		1267.2		-2	+330	439,803	1,644,475	
86	0				5.4	-		-5.4		1267.6	TP	0	0	439,805	1,644,145	
87	330		260° 33.3'	+10.4°	5.2	-		-5.2		1267.8		+6	-330	439,811	1,643,815	
88	660		" "	+10.4°	6.0	-		-6.0		1267.0		+11	-660	439,816	1,643,485	
89	990		" "	+10.4°	6.7	-		-6.7		1266.3		+17	-990	439,822	1,643,155	last sta. on main road
89	1082		260° 16'	+10.4°	6.5	-		-6.5		1266.5		+13	-1082	439,818	1,643,063	Trail (north)
90	1320		260° 33.3'	+10.2°	4.5	-		-4.5		1268.5	TP	+17	-1320	439,822	1,642,825	
90	1320				11.1	TH	+6.6	-4.5			TP					stas. 90-100 follow
	660		79° 55.3'	+10.2°	9.5	89° -	-11.5	-2.0	1266.5		BS	+1	-660			old Trail north of
	660		+180°		8.4	89° 06'	-10.4	-2.0			BS					E-W section line.
91	330		80° 47'	+10.2°	6.3	-		-6.3		1260.2		-6	+330	439,817	1,642,495	
92	0				5.4	-		-5.4		1261.1	TP	0	0	439,823	1,642,165	

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
3/22/79		R. Hulsey		G. Cotcamp		6834		R. Hulsey		1	7					
AREA		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER						
Oklahoma		Tipton		Oklahoma		Tillman/Jackson		19W		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.		Y	X
92									1266.5							
93	328		258° 21.5'	+10.2°	7.0	-		-7.0		1259.5	TP	-8	-328	439,815	1,641,837	Slight curve
93	328				5.3	BH	-1.6	-6.9			TP					
	330		81° 43.4'	+10.2°	+7.7	-		+7.7	1267.2		BS	+11	-330			
	330		+180°		+6.0	BH	+1.7	+7.7			BS					
94	0				5.4	-		-5.4		1261.8	TP	0	0	439,826	1,641,507	Set-up across road
95	325		263° 25.4'	+10.2°	7.4	-		-7.4		1259.8	TP	+21	-324	439,847	1,641,183	
95	325				5.8	BH	-1.6	-7.4			TP					
	660		78° 9.1'	+10.2°	+4.5	-		+4.5	1264.3		BS	-19	-660			
	660		+180°		+7.8	TH	-3.3	+4.5			BS					
96	330		78° 9.1'	+10.2°	5.3	BH	-1.7	-7.0		1257.3		+9	+330	439,837	1,640,853	
97	0				5.4	-		-5.4		1258.9	TP	0	0	439,828	1,640,523	
98	330		260° 16'	+10.2°	4.5	BH	-1.7	-6.2		1258.1		+3	-330	439,831	1,640,193	
99	660		" "	+10.2°	3.3	BH	-3.3	-6.6		1257.7		+5	-660	439,833	1,639,863	
100	990		259° 16.3'	+10.2°	12.8	-		-12.8		1251.5	TP	-9	-990	439,819	1,639,533	east bank - Red River
100	990				7.9	BH	-5.0	-12.9			TP					last sta. in Tillman Co.
	330		81° 43.5' +180°	+10.2°	+14.0	89°-	-5.8	+8.2	1259.8	+8.3	BS	+11	-330			
	330				+10.3	89°40'	-1.9	+8.4			BS					
101	0				5.4	-		-5.4		1254.4	TP	0	0	439,830	1,639,203	in brush/Jackson Co.
102	330		266° 38.6'	+10.2°	5.6	87°-	+17.2	+11.6		1271.4	TP	+39	-328	439,869	1,638,875	sta. back on dirt road
102	330				2.7	87°30'	+14.4	+11.7			TP					

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
3/23/79		G. Cotcamp		R. Hulsey		6837		R. Hulsey		1	8						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Oklahoma		Tipton		Oklahoma	Jackson		1N	19W		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		
102										1271.4 ✓							
	2640		80°38.3' +180°	+10.2°	7.7	TH	-13.2	-3.5	1268.0	-3.4	BS	+39	-2640				
	2640				+13.7	89°38'	-16.9	-3.2			BS						
103	2310		80°38.3'	+10.2°	8.9	TH	+11.6	+2.7		1270.7		-34	+2310	439,874	1,638,545		
104	1980		"	+10.2°	8.1	TH	+9.9	+1.8		1269.8		-29	+1980	439,879	1,638,215		
105	1650		"	+10.2°	7.4	TH	+8.3	+0.9		1268.9		-24	+1650	439,884	1,637,885		
106	1320		"	+10.2°	1.4	-		-1.4		1266.6		-19	+1320	439,889	1,637,555		
107	990		"	+10.2°	3.7	-		-3.7		1264.3		-14	+990	439,894	1,637,225		
108	660		"	+10.2°	5.1	-		-5.1		1262.9		-10	+660	439,898	1,636,895		
109	330		"	+10.2°	5.7	-		-5.7		1262.3		-5	+330	439,903	1,636,565		
≡	282		80°29'	+10.2°	5.6	-		-5.6		1262.4 ✓		-3	+282	439,905	1,636,517	bridge	
110	0				5.4	-		-5.4		1262.6 π		0	0	439,908	1,636,235		
111	330		260°27.3'	+10.2°	3.9	-		-3.9		1264.1		+4	-330	439,912	1,635,905		
112	660		"	+10.2°	3.4	-		-3.4		1264.6		+8	-660	439,916	1,635,575		
≡	920		260°21'	+10.2°	0.9	-		-0.9		1267.1 ✓		+9	-920	439,917	1,635,315	439,900 + 1,635,330 (s) 4-Way Inter. El. 1266	
113	990		260°27.3'	+10.2°	0.8	-		-0.8		1267.2		+11	-990	439,919	1,635,245	y = +17'	
114	1320		"	+10.2°	5.0	TH	+6.6	+1.6		1269.6		+15	-1320	439,923	1,634,915	x = -15'	
115	1650		"	+10.2°	4.2	TH	+8.3	+4.1		1272.1		+19	-1650	439,927	1,634,585		
116	1980		"	+10.2°	4.6	TH	+9.9	+5.3		1273.3		+23	-1980	439,931	1,634,255		
117	2310																
≡	2150		260°21.5'	+10.2°	4.8	TH	+10.8	+6.0		1274.0		+21	-2150	439,929	1,634,085	railroad El. 1273	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
3/23/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		1	9				
AREA		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER					
Oklahoma		Tipton		Oklahoma		Jackson		19W		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.		Y
									1268.0						
117	2310		260° 27.3'	+10.2°	5.2	TH	+11.6	+6.4		1274.4		+26	-2310	439,934	1,633,925
118	2640		260° 27.3'	+10°	6.3	TH	+13.2	+6.9		1274.9	TP	+21	-2640	439,929	1,633,595
118	2640				14.6	89° 32'	+21.5	+6.9			TP				
	2310		80° 35.8' + 180°	+10°	+6.1	BH	+11.6	+17.7			BS	+24	-2310		
	2310				+14.9	90° 04'	+2.7	+17.6	1292.5		BS				
119	1980		80° 35.8'	+10°	6.8	BH	-9.9	-16.7		1275.8		-21	+1980	439,932	1,633,265
120	1650		" "	+10°	7.0	BH	-8.3	-15.3		1277.2		-17	+1650	439,936	1,632,935
121	1320		" "	+10°	7.5	BH	-6.6	-14.1		1278.4		-14	+1320	439,939	1,632,605
122	990		" "	+10°	10.1	BH	-5.0	-15.1		1277.4		-10	+990	439,943	1,632,275
123	660		" "	+10°	13.0	BH	-3.3	-16.3		1276.2		-7	+660	439,946	1,631,945
124	330		" "	+10°	11.8	-		-11.8		1280.7		-3	+330	439,950	1,631,615
125	0		" "		5.4	-		-5.4		1287.1	π	0	0	439,953	1,631,285
126	330		260° 39'	+10°	2.7	-		-2.7		1289.8		+4	-330	439,957	1,630,955
127	660		" "	+10°	2.3	TH	+3.3	+1.0		1293.5		+7	-660	439,960	1,630,625
128	990		" "	+10°	10.3	89° -	+17.3	+7.0		1299.5		+11	-990	439,964	1,630,295
TL TP	1260		260° 21.8'	+10°	10.8	89° -	+22.0	+11.2		1303.7	✓	+8	-1260	439,961	1,630,025
BM	1280		244° 21'	+10°	1.7	89° 30'	+11.2	+9.5		1302.0	✓	-345	-1233	439,608	1,630,052
129	1320		260° 39'	+10°	11.2	89° -	+23.0	+11.8		1304.3		+15	-1320	439,968	1,629,965
130	1650		" "	+10°	6.2	89° 20'	+19.2	+13.0		1305.5		+19	-1650	439,972	1,629,635
131	1980		" "	+10°	9.3	89° 20'	+23.0	+13.7		1306.2		+22	-1980	439,975	1,629,305

y = +16'
x = -15'

439,945 + 1,630,040 (s)

4-Way (Humphreys)

BM El. 1302

U.S.G.S 14 DAW 1962

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
3/23/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		1	10						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Oklahoma		Tipton 7 1/2		Oklahoma	Jackson		1N	19W/20W		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 +	EAST +	COORDINATES		REMARKS	
												SOUTH -	WEST -	Y	X		
									1292.5								
132	2310		260°39'	+10°	12.8	89°20'	+26.9	+14.1			TP	+26	-2310	439,979	1,628,975		
132	2310				144	89°18'	+28.2	+13.8	+13.9	1306.4	TP						
	2640		80°29'+180°	+10°	+1.0	-		+1.0	1307.4		BS	+22	-2640				
	2640				+14.2	TH	-13.2	+1.0			BS						
133	2316		80°29'	+10°	0.9	-		-0.9		1306.5		-19	+2310	439,982	1,628,645		
134	1980		" "	+10°	1.6	-		-1.6		1305.8		-17	+1980	439,984	1,628,315		
135	1650		" "	+10°	2.6	-		-2.6		1304.8		-14	+1650	439,987	1,627,985		
136	1320		" "	+10°	4.6	-		-4.6		1302.8		-11	+1320	439,990	1,627,655		
137	990		" "	+10°	6.0	-		-6.0		1301.4		-8	+990	439,993	1,627,325		
138	660		" "	+10°	6.0	-		-6.0		1301.4		-6	+660	439,995	1,626,995		
139	330		" "	+10°	5.5	-		-5.5		1301.9		-3	+330	439,998	1,626,665		
140	0				54	-		-5.4		1302.0	π	0	0	440,001	1,626,335		
141	330		260°33.2'	+10°	4.6	-		-4.6		1302.8		+3	-330	440,004	1,626,005		
142	660		" "	+10°	4.8	-		-4.8		1302.6		+6	-660	440,007	1,625,675		
143	990		" "	+10°	4.3	-		-4.3		1303.1		+10	-990	440,011	1,625,345	↑ y=-11' x=-15'	
144	1320		" "	+10°	3.3	-		-3.3		1304.1		+13	-1320	440,014	1,625,015	R 19W 440,020+1,624,790(s) 4-Way Intersect. El. 1304	
144	1560		260°18'	+10°	1.6	-		-1.6		1305.8	✓	+8	-1560	440,009	1,624,775		
145	1650		260°33.2'	+10°	1.8	-		-1.8		1305.6		+16	-1650	440,017	1,624,685	R 20W	
146	1980		" "	+10°	0.2	-		-0.2		1307.2		+19	-1980	440,020	1,624,355	↓	
147	2310		" "	+10°	10.0	TH	+11.6	+1.6		1309.0		+22	-2310	440,023	1,624,025		

DATE 3/23/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY	LINE NO. 1	PAGE 11
AREA Oklahoma	TOPO MAP Tipton/Altus SE	STATE Oklahoma	COUNTY Jackson	TWP 1N	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 & TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									1307.4								↑
148	2640		260° 33.2'	+10.1°	9.9	TH	+13.2	+3.3			TP	+30	-2640	440,031	1,623,695	Tipton Quad.	
148	2640				13.7	89° 38'	+16.9	+3.2		1310.6	TP						
	2640		80° 39.0' +180°	+10.1°	+6.9	BH	+13.2	+20.1			BS	+35	-2640				
	2640				+12.1	90° 10'	+7.7	+19.8	1330.5	+19.9	BS					Altus SE Quad.	
149	2310		80° 39'	+10.1°	6.0	BH	-11.6	-17.6		1312.9		-30	+2310	440,036	1,623,365	↓	
150	1980		" "	+10.1°	5.2	BH	-9.9	-15.1		1315.4		-26	+1980	440,040	1,623,035		
151	1650		" "	+10.1°	11.9	-		-11.9		1318.6		-22	+1650	440,044	1,622,705		
152	1320		" "	+10.1°	9.8	-		-9.8		1320.7		-17	+1320	440,049	1,622,375		
153	990		" "	+10.1°	8.1	-		-8.1		1322.4		-13	+990	440,053	1,622,045		
154	660		" "	+10.1°	6.0	-		-6.0		1324.5		-9	+660	440,057	1,621,715		
155	330		" "	+10.1°	6.8	TH	+1.7	-5.1		1325.4		-4	+330	440,062	1,621,385		
156	0				5.4	-		-5.4		1325.1	TP	0	0	440,066	1,621,055		
157	330		260° 36.5'	+10.1°	6.1	-		-6.1		1324.4		+4	-330	440,070	1,620,725		
158	660		" "	+10.1°	7.0	-		-7.0		1323.5		+8	-660	440,074	1,620,395		
159	990		" "	+10.1°	7.1	-		-7.1		1323.4		+12	-990	440,078	1,620,065		
160	1320		" "	+10.1°	6.9	-		-6.9		1323.6		+16	-1320	440,082	1,619,735		
161	1650			+10.1°													
77	1530		260° 18.5'	+10.1°	4.9	-		-4.9		1325.6		+11	-1530	440,077	1,619,525	440,090 + 1,619,520 (s) 4-Way Intersect, 1324.	
161	1650		260° 36.5'	+10.1°	6.0	-		-6.0		1324.5		+20	-1650	440,086	1,619,405	y = -13'	
162	1980		" "	+10.1°	5.5	-		-5.5		1325.0		+24	-1980	440,090	1,619,075	x = +5'	

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
3/24/79		R. Hulsey		G. Cotcamp		6834		G.W.C.		1		12			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Oklahoma		Altus SE 7 1/2		Oklahoma		Jackson		1N		20W				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.		Y
									1330.5						
163	2310		260° 36.5'	+10.1°	3.1	-	-3.1			1327.4		+29	-2310	440,095	1,618,745
164	2640		260° 36.5'	+10.1°	13.1	PH	+13.2	+0.1			TP	+33	-2640.5	440,099	1,618,720
164	2640				1.5	89° 58'	+1.5	+0.0		1330.5	TP				
	2640		80° 42.2'	+10.1°	11.0	BH	+13.2	+24.2	1354.6	+24.1	BS	+37	-2640.5		
	2640		+180°		+8.6	90° 20'	+15.4	+24.0			BS				
165	2310		80° 42.2'	+10.1°	9.1	BH	-11.4	-20.7		1333.9		-32	+2310	440,104	1,618,095
166	1980		" "	+10.1°	8.2	BH	-9.9	-18.1		1336.5		-28	+1980	440,108	1,617,765
167	1650		" "	+10.1°	7.9	BH	-8.3	-16.2		1338.4		-23	+1650	440,113	1,617,435
168	1320		" "	+10.1°	13.1	-	-13.1			1341.5		-19	+1320	440,117	1,617,105
169	990		" "	+10.1°	9.1	-	-9.1			1345.5		-14	+990	440,122	1,616,775
170	660		" "	+10.1°	7.7	-	-7.7			1346.9		-9	+660	440,127	1,616,445
171	330		" "	+10.1°	6.9	-	-6.9			1347.7		-5	+330	440,131	1,616,105
172	0				5.4	-	-5.4			1349.2	TP	0	0	440,136	1,615,785
173	330		260° 40.3'	+10.1°	3.4	-	-3.4			1351.2		+4	-330	440,140	1,615,455
174	660		" "	+10.1°	3.0	-	-3.0			1351.6		+9	-660	440,145	1,615,125
175	990		" "	+10.1°	3.2	-	-3.2			1351.4		+13	-990	440,149	1,614,795
176	1320		" "	+10.1°	4.3	-	-4.3			1350.3		+18	-1320	440,154	1,614,465
177	1650														
177	1510		260° 19.5'	+10.1°	3.9	-	-3.9			1350.7		+11	-1510	440,147	1,614,275
178	1650		260° 40.3'	+10.1°	4.9	-	-4.9			1349.7		+22	-1650	440,158	1,614,135

440,155+1,614,285(s)
4-way Intersect 1350.
Y=-8'
X=-10'

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
3/24/79		R. Hulsey		G. Cotcamp		6834		GwC.		1		13			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Oklahoma		Altus SE 7 1/2		Oklahoma		Jackson		1N		20W				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 & TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1354.6						
178	1980		260°40.3'	+10.1°	4.8	—	—	-4.8		1349.8		+27	-1980	440,163	1,613,805
179	2310		" "	+10.1°	4.5	—	—	-4.5		1350.1		+31	-2310	440,167	1,613,475
180	2640		260°40.3'	+10.1°	5.0	—	—	-5.0		1349.6	TP	+36	-2640.5	440,172	1,613,150
180	2640				1.8	90°04'	-3.1	-4.9			TP				
	2640		80°57.5'+180°	+10.1°	+14.5	TH	-13.2	+1.3	1351.0	+1.4	BS	+49	-2640.5		
	2640				+1.6	—	—	+1.6			BS				
181	2310		80°57.5'	+10.1°	2.0	—	—	-2.0		1349.0		-43	+2310	440,178	1,612,825
182	1980		" "	+10.1°	2.1	—	—	-2.1		1348.9		-37	+1980	440,184	1,612,495
183	1650		" "	+10.1°	10.2	TH	+8.3	-1.9		1349.1		-30	+1650	440,191	1,612,165
184	1320		" "	+10.1°	8.0	TH	+6.6	-1.4		1349.6		-24	+1320	440,197	1,611,835
185	990		" "	+10.1°	1.1	—	—	-1.1		1349.9		-18	+990	440,203	1,611,505
186	660		" "	+10.1°	0.4	—	—	-0.4		1350.6		-12	+660	440,209	1,611,175
187	330		" "	+10.1°	3.3	—	—	-3.3		1347.7		-6	+330	440,215	1,610,845
188	0				5.4	—	—	-5.4		1345.6	TP	0	0	440,221	1,610,515
189	330		260°47.4'	+10.1°	6.5	—	—	-6.5		1344.5		+5	-330	440,226	1,610,185
190	660		" "	+10.1°	7.7	—	—	-7.7		1343.3		+10	-660	440,231	1,609,855
191	990		" "	+10.1°	7.8	—	—	-7.8		1343.2		+15	-990	440,236	1,609,525
192	1320		" "	+10.1°	6.1	—	—	-6.1		1344.9		+21	-1320	440,242	1,609,195
193	1650														y=-9' x=0'
±±	1525		260°28'	+10.1°	5.2	—	—	-5.2		1345.8	✓	+15	-1525	440,236	1,608,990 (s) 4-Way Intersect. 1344

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 3/24/79		INSTRUMENT MAN R. Hulsey		ROD MAN G. Catcamp		PARTY NUMBER 6834		NOTES CHECKED BY G.C.			LINE NO. 1		PAGE 14		
AREA Oklahoma		TOPO MAP Altus SE 7 1/2'		STATE Oklahoma		COUNTY Jackson		TWP 1N		RANGE 20W		PPM		PARTY MANAGER L.O. Davis	
STATION NO.	SLOPE DISTANCE	PLOTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1351.0						
193	1650		260° 47.4'	+10.1°	6.1	—		-6.1		1344.9		+26	-1650	440,247	1,608,865
194	1980		" "	+10.1°	5.7	—		-5.7		1345.3		+31	-1980	440,252	1,608,535
195	2310		" "	+10.1°	5.8	—		-5.8		1345.2		+36	-2310	440,257	1,608,205
196	2640		260° 47.4'	+10.1°	5.4	—		-5.4			TP	+41	-2640	440,262	1,607,880
196	2640				2.4	90° 04'	-3.1	-5.5		1345.5	TP				
	2640		80° 48.2' +180°	+10.1°	+10.5	—		+10.5	1356.0		BS	+42	-2640		
	2640				+7.5	90° 04'	+3.1	+10.6			BS				
197	2310		80° 48.2'	+10.1°	9.9	—		-9.9		1346.1		-36	+2310	440,268	1,607,550
198	1980		" "	+10.1°	9.6	—		-9.6		1346.4		-31	+1980	440,273	1,607,220
199	1650		" "	+10.1°	9.3	—		-9.3		1346.7		-26	+1650	440,278	1,606,890
200	1320		" "	+10.1°	9.1	—		-9.1		1346.9		-21	+1320	440,283	1,606,560
201	990		" "	+10.1°	8.8	—		-8.8		1347.2		-16	+990	440,288	1,606,230
202	660		" "	+10.1°	8.0	—		-8.0		1348.0		-10	+660	440,294	1,605,900
203	330		" "	+10.1°	6.8	—		-6.8		1349.2		-5	+330	440,299	1,605,570
204	0		" "		5.4	—		-5.4		1350.6	TP	0	0	440,304	1,605,240
205	330		260° 49.2'	+10.1°	3.8	—		-3.8		1352.2		+5	-330	440,309	1,604,910
206	660		" "	+10.1°	2.1	—		-2.1		1353.9		+11	-660	440,315	1,604,580
207	990		" "	+10.1°	4.0	—		-4.0		1352.0		+16	-990	440,320	1,604,250
208	1320		" "	+10.1°	5.9	—		-5.9		1350.1		+21	-1320	440,325	1,603,920
±	1550		260° 34'	+10.1°	7.1	—		-7.1		1348.9		+18	-1550	440,322	1,603,690

440,320 + 1,603,690 (s)
 horiz correction y=0
 x=+25'
 4-Way Intersect. 1348

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 3/24/79		INSTRUMENT MAN R. Hulsey		ROD MAN G. Cotcamp		PARTY NUMBER 6834		NOTES CHECKED BY R. Hulsey		LINE NO. 1	PAGE 15						
AREA Oklahoma		TOPO MAP Altus SE		STATE OKlahoma	COUNTY Jackson		TWP 1N	RANGE 20W	PRM	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		
									1356.0								
209	1650		260° 49.2'	+10.1°	9.0	—		-9.0		1347.0		+26	-1650	440,330	1,603,590		
210	1980		" "	+10.1°	12.0	—		-12.0		1344.0		+32	-1980	440,336	1,603,260		
211	2310		" "	+10.1°	13.5	—		-13.5		1342.5		+37	-2310	440,341	1,602,930		
212	2640		260° 49.2'	+10.2°	14.0	90° 82'	-1.5	-15.5	-15.3	1340.7	TP	+47	-2640	440,351	1,602,600		
212	2640				12.0	90° 04'	-3.1	-15.1			TP						
	2640		80° 13.7' + 180°	+10.2°	46.8	TH	-13.2	-6.4	1334.4	-6.3	BS	+20	-2640				
	2640				46	89° 46'	-10.7	-6.1			BS						
213	2310		80° 13.7'	+10.2°	7.0	TH	+11.6	+4.6		1339.0		-17	+2310	440,354	1,602,270		
214	1980		" "	+10.2°	6.9	TH	+9.9	+3.0		1337.4		-15	+1980	440,356	1,604,940		
215	1650		" "	+10.2°	6.7	TH	+8.3	+1.6		1336.0		-12	+1650	440,359	1,601,610		
216	1320		" "	+10.2°	6.5	TH	+6.6	+0.1		1334.5		-10	+1320	440,361	1,601,280		
217	990		" "	+10.2°	1.4	-		-1.4		1333.0		-7	+990	440,364	1,600,950		
218	660		" "	+10.2°	3.4	-		-3.4		1331.0		-5	+660	440,366	1,600,620		
219	330		" "	+10.2°	5.6	-		-5.6		1328.8		-2	+330	440,369	1,600,290		
220	0				5.4	-		-5.4		1329.0	π	0	0	440,371	1,599,960	bridge	
221	330		260° 1.7'	+10.2°	4.9	-		-4.9		1329.5		+1	-330	440,372	1,599,630		
222	660		" "	+10.2°	5.8	-		-5.8		1328.6		+3	-660	440,374	1,599,300		
223	990		" "	+10.2°	6.2	-		-6.2		1328.2		+4	-990	440,375	1,598,970		
224	1320		" "	+10.2°	6.9	-		-6.9		1327.5		+5	-1320	440,376	1,598,640		
□	1520		260° 23.4'	+10.2°	6.8	-		-6.8		1327.6	—	+16	-1520	440,387	1,598,440	chiseled square El. 1326	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
3/27/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		1	16				
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER					
Oklahoma		Altus SE		Oklahoma	Jackson		1N	20W		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.		Y
									1334.4						y = -11' x = 75'
225	1565		259°50'	+10.2°	7.0	-		-7.0		1327.4		-2	-1565	440,369, 1,598,395	4-Way Intersect.
226	1650		260° 1.7'	+10.2°	6.9	-		-6.9		1327.5		+7	-1650	440,378, 1,598,310	Rt # 283
227	1980		" "	+10.2°	7.9	-		-7.9		1326.5		+8	-1980	440,379, 1,597,780	
228	2310		" "	+10.2°	8.8	-		-8.8		1325.6		+9	-2310	440,380, 1,597,650	
228	2640		260° 1.7'	+10.2°	9.2	-		-9.2			TP	+11	-2640	440,382, 1,597,320	
	1980		80° 30' +180°	+10.2°	3.6	-		+3.6	1328.7		BS	+24	-1980		
	1980				+13.5	TH	-9.9	+3.6			BS				
229	1650		80° 30'	+10.2°	4.0	-		-4.0		1324.7		-20	+1650	440,386, 1,596,990	
230	1320		" "	+10.2°	3.9	-		-3.9		1324.8		-16	+1320	440,390, 1,596,660	
231	990		" "	+10.2°	3.8	-		-3.8		1324.9		-12	+990	440,394, 1,596,330	
232	660		" "	+10.2°	4.2	-		-4.2		1324.5		-8	+660	440,398, 1,596,000	
233	330		" "	+10.2°	4.8	-		-4.8		1323.9		-4	+330	440,402, 1,595,670	
234	0				5.4	-		-5.4		1323.3	X	0	0	440,406, 1,595,340	
235	330		260° 37.2'	+10.2°	5.5	-		-5.5		1323.2		+5	-330	440,411, 1,595,010	
236	660		" "	+10.2°	6.0	-		-6.0		1322.7		+9	-660	440,415, 1,594,680	
237	990		" "	+10.2°	6.3	-		-6.3		1322.4		+14	-990	440,420, 1,594,350	
238	1320		" "	+10.2°	6.9	-		-6.9		1321.8		+19	-1320	440,425, 1,594,020	
239	1650		" "	+10.2°	7.0	-		-7.0		1321.7		+24	-1650	440,430, 1,593,690	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
3/27/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		1	17						
AREA		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER							
Oklahoma		Altus SE		Oklahoma		Jackson		20w/21w		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		
									1328.7								↑
240	1980		260° 37.2'	+10.2°	6.9	-		-6.9		1321.8	TP	+28	-1980	440,434	1,593,360		R.20w
240	1980				14.9	89° 46'	+8.1	-6.8			TP						
	1980		80° 35' + 180°	+10.2°	+10.6	TH	-9.9	+0.7	1322.6	+0.8	BS	+27	-1980				
	1980				+5.5	89° 52'	-4.6	+0.9			BS						
#	1940		80° 50'	+10.2°	9.5	TH	+9.7	+0.2		1322.8	✓	-35	+1940	440,426	1,593,320		rail road (N-S)
#	1740		80° 54'	+10.2°	4.0	-		-4.0		1318.6	-	-33	+1740	440,428	1,593,120		4-way Intersect. E. 1317
241	1650		80° 35'	+10.2°	5.1	-		-5.1		1317.5		-23	+1650	440,438	1,593,030		R.21w
242	1320		" "	+10.2°	6.9	-		-6.9		1315.7		-18	+1320	440,443	1,592,700		↓
243	990		" "	+10.2°	8.5	-		-8.5		1314.1		-14	+990	440,447	1,592,370		
244	660		" "	+10.2°	7.2	-		-7.2		1315.4		-9	+660	440,452	1,592,040		
245	330		" "	+10.2°	5.8	-		-5.8		1316.8		-5	+330	440,456	1,591,710		
246	0				5.4	-		-5.4		1317.2	π	0	0	440,461	1,591,380		
247	330		260° 47'	+10.2°	4.3	-		-4.3		1318.3		+6	-330	440,467	1,591,050		
248	660		" "	+10.2°	4.1	-		-4.1		1318.5		+11	-660	440,472	1,590,720		
249	990		" "	+10.2°	3.8	-		-3.8		1318.8		+17	-990	440,478	1,590,390		
250	1320		" "	+10.2°	3.8	-		-3.8		1318.8		+23	-1320	440,484	1,590,060		
251	1650		" "	+10.2°	4.0	-		-4.0		1318.6		+28	-1650	440,489	1,589,730		
252	1980		260° 47'	+10.2°	4.5	-		-4.5		1318.1	TP	+34	-1980	440,495	1,589,400		
252	1980			+10.2°	14.4	TH	+9.9	-4.5			TP						

DATE 3/27/79	INSTRUMENT MAN G. Colcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 18
AREA Oklahoma	TOPO MAP Altus SE/Olustee	STATE Oklahoma	COUNTY Jackson	TWP 1N	RANGE 21W	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+	EAST+	COORDINATES		REMARKS
												SOUTH-	WEST-	Y	X	
252										1318.1						
	1980		80°38.7'+180°	+10.2°	+2.6	-		+2.6	1320.7		BS	+29	-1980			
	1980				+13.5	TH	-9.9	+3.6			BS					
253	1650		80°38.7'	+10.2°	3.0	-		-3.0		1317.7		-24	+1650	440,500	1,589,070	
254	1320		" "	+10.2°	3.2	-		-3.2		1317.5		-19	+1320	440,505	1,588,740	
255	990		" "	+10.2°	3.8	-		-3.8		1316.9		-15	+990	440,509	1,588,410	
256	660		" "	+10.2°	4.5	-		-4.5		1316.2		-10	+660	440,514	1,588,080	
TH	428		81°48'	+10.2°	3.9	-		-3.9		1316.8	✓	-15	+428	440,509	1,587,848	4-way Intersect. El. 1316
257	330		80°38.7'	+10.2°	5.3	-		-5.3		1315.4		-5	+330	440,519	1,587,750	
258	0				5.4	-		-5.4		1315.3	X	0	0	440,524	1,587,420	
259	330		260°22.4'	+10.2°	4.8	-		-4.8		1315.9		+3	-330	440,527	1,587,090	
260	660		" "	+10.2°	3.2	-		-3.2		1317.5		+7	-660	440,531	1,586,760	
261	990		" "	+10.2°	6.6	-		-6.6		1314.1		+10	-990	440,534	1,586,430	↑
262	1320		" "	+10.2°	7.1	-		-7.1		1313.6		+13	-1320	440,537	1,586,100	Altus SE Quad.
263	1650		" "	+10.2°	7.8	-		-7.8		1312.9		+17	-1650	440,541	1,585,770	Olustee Quad.
264	1980		260°22.4'	+10.2°	9.5	-		-9.5	-9.6	1311.1	TP	+20	-1980	440,544	1,585,440	↓
264	1980				14.3	89°52'	+4.6	-9.7				TP				
	1980		80°6.1'+180°	+10.2°	+0.5	-		+0.5	1311.6		BS	+10	-1980			
	1980				+10.4	TH	-9.9	+0.5				BS				
265	1650		80°6.1'	+10.2°	2.1	-		-2.1		1309.5		-9	+1650	440,545	1,585,110	
266	1320		" "	+10.2°	2.9	-		-2.9		1308.7		-7	+1320	440,547	1,584,780	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
3/27/79		G. CoCamp		R. Hulsey		6834		R. Hulsey		1	19				
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER					
Oklahoma		Olustee		Oklahoma	Jackson		1N	21W		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.		Y
									1311.6						
267	990		79°26'	+10.2°	2.7	-		-2.7		1308.9		+6	+990	440,560	1,584,450
268	660		"	+10.2°	2.3	-		-2.3		1309.3		+4	+660	440,558	1,584,120
269	330		77°12'	+10.2°	2.7	-		-2.7		1308.9		+15	+330	440,569	1,583,790
270	0				5.4	-		-5.4		1306.2	TP	0	0	440,554	1,583,460
271	330		261°8'	+10.2°	7.3	-		-7.3		1304.3		+8	-330	440,562	1,583,130
272	660		"	+10.2°	8.2	-		-8.2		1303.4		+15	-660	440,569	1,582,800
272	850		260°23'	+10.2°	8.5	-		-8.5		1303.1		+9	-850	440,563	1,582,410
273	990		260°24.6'	+10.0°	8.6	-		-8.6			TP	+7	-990+3	440,561	1,582,473
273	990				13.5	TH	+5.0	-8.5		1303.1	TP				private trail (north of section line)

last sta. on County road.
440,565 + 1,582,610 (s)
Trd (north) El. 1301

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
3-28-79		R. Hulsey		G. Cotcamp		6834		R. Hulsey		1		20		
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PARTY MANAGER		
Oklahoma		Okluster		Oklahoma		Jackson		1N		21W		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.	
									1303.1					
	1980		81° 15.7' +180°	+10°	12.9	TH	-9.9	+3.0	1306.2	+3.1	BS	+44	-1979+6	
	1980				5.5	89° 56'	-2.3	+3.2				BS		
274	1650		81° 15.7'	+10°	9.2	TH	+8.3	-0.9		1305.3		-36	+1650	440,569 / 1,582,150
275	1320		" "	+10°	1.1	-		-1.1		1305.1		-29	+1320	440,576 / 1,581,820
276	990		" "	+10°	3.5	-		-3.5		1302.7		-22	+990	440,583 / 1,581,490
277	660		" "	+10°	3.9	-		-3.9		1302.3		-15	+660	440,590 / 1,581,160
278	330		" "	+10°	4.0	-		-4.0		1302.2		-7	+330	440,598 / 1,580,830
279	0				5.4	-		-5.4		1300.8	X	0	0	440,605 / 1,580,500
280	330		260° 41'	+10°	7.5	-		-7.5		1298.7		+4	-330	440,609 / 1,580,170
281	660		261° 7'	+10°	11.0	89° 42'	+3.5	-7.5		1298.7		+13	-660	440,618 / 1,579,840
282	990		260° 48.8'	+10°	0.8	-		-0.8		1305.4	TP	+14	-990+5	440,619 / 1,579,515
282	990				5.8	TH	+5.0	-0.8				TP		
	990		79° 53.1'	+10°	+5.2	89° 34'	-7.5	-2.3		1303.2	BS	-2	-990+6	
	990		+180°		+6.4	89° 30'	-8.6	-2.2				BS		
283	660		79° 28'	+10°	2.9	TH	+3.3	+0.4		1303.6		+6	+660	440,623 / 1,579,191
284	330		78° 48'	+10°	1.4	TH	+1.7	+0.3		1303.5		+7	+330	440,624 / 1,578,861
285	0				5.4	-		-5.4		1297.8	X	0	0	440,617 / 1,578,531
286	330		257° 16.2	+10°	7.0	89° 34'	+2.5	-4.5		1298.7	TP	-16	-330+3	440,601 / 1,578,201
286	330				6.8	89° 36'	+2.3	-4.5				TP		

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
3-28-79		R. Hulsey		G. Cotcamp		6834		R. Hulsey		1	21						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Oklahoma		Olustee		Oklahoma	Jackson					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 TP	NORTH + SOUTH - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS	
														Y	X		
286										1298.7							
	330		82° 14.0'	+10°	+7.6	-		+7.6			BS	+13	-330+4				
	330		+180°		+6.0	BH	+1.7	+7.7	1306.4		BS						
287	0				5.4	-		-5.4	1301.0		TP	0	0	440,614	1,577,878	Shooting across	
288	325		262° 29.1'	+10°	9.7	-		-9.7	1296.7		TP	+14	-325+3	440,628	1,577,556	creek	
288	325				8.1	BH	-1.6	-9.7			TP						
	160		80° 56.4'	+10°	+9.3	-		+9.3	1306.0		BS	+3	-160+3			Shooting across	
	160		+180°		+8.5	BH	+0.8	+9.3			BS					river	
	0				5.4	-		-5.4	1300.6		TP	0	0	440,631	1,577,399	Split sta. due	
289	170		279° 0.6'	+10°	9.0	90°22'	-1.1	-10.1	1295.9		TP	+55	-161+2	440,686	1,577,240	to brush	
289	170				9.1	90°20'	-1.0	-10.1			TP						
	159		102° 14.7'	+10°	+10.0	89°-	-2.8	+7.2	1303.1		BS	+60	-147				
	159		+180°		+10.5	88°48'	+3.3	+7.2			BS						
	0				5.4	-		-5.4	1297.7		TP	0	0	440,746	1,577,093	Split sta. due	
290	170		264° 21.0'	+10°	7.1	88°46'	+3.7	-3.4	1299.7		TP	+13	-169	440,756	1,576,924	to brush	
290	170				6.5	88°58'	+3.1	-3.4			TP						
	330		71° 20.2'	+10°	+10.1	89°46'	-1.9	+8.2	1307.9		BS	-50	-326				
	330		+180°		+9.5	89°46'	-1.3	+8.2			BS						
291	0				5.4	-		-5.4	1302.5		TP	0	0	440,709	1,576,598		
291	142		235° 55.0'	+10°	3.8	89°-	+2.5	-1.3	1306.6		TP	-58	-130	440,651	1,576,468	L-intersection El. 1307	

DATE 3-28-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 22
AREA Oklahoma	TOPO MAP Olustee	STATE Oklahoma	COUNTY Jackson	TWP 1N	RANGE 21W	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 - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS	
														Y	X		
291									1307.9								
292	330		253° 11.1'	+10°	4.9	89°04'	+5.4	+0.5	1308.3		TP	-39	-328.	440,670	1,576,270	First sta. on road & sec. line	
292	330				5.9	88°54'	+6.3	+0.4			TP						
	1980		80° 29.6'+180°	+10°	+14.1	—		+14.1		1322.4		BS	+17				-1980
	1980				+4.2	BH	+9.9	+14.1			BS						
293	1650		80° 29.6'	+10°	12.1	—		-12.1	1310.3			-14	+1650	440,673	1,575,940		
294	1320		" "	+10°	11.0	—		-11.0	1311.4			-11	+1320	440,676	1,575,610		
295	990		" "	+10°	10.8	—		-10.8	1311.6			-9	+990	440,678	1,575,280		
296	660		" "	+10°	9.8	—		-9.8	1312.6			-6	+660	440,681	1,574,950		
297	330		" "	+10°	8.9	—		-8.9	1313.5			-3	+330	440,684	1,574,620		
298	0				5.4	—		-5.4	1317.0		TP	0	0	440,687	1,574,290	.	
299	330		260° 28.7'	+10°	5.5	—		-5.5	1316.9			+3	-330	440,690	1,573,960		
300	660		" "	+10°	3.7	—		-3.7	1318.7			+6	-660	440,693	1,573,630		
301	990		" "	+10°	3.6	—		-3.0	1319.4			+8	-990	440,695	1,573,300		
302	1320		" "	+10°	2.1	—		-2.1	1320.3			+11	-1320	440,698	1,572,970		
303	1650		" "	+10°	2.1	—		-2.1	1320.3			+14	-1650	440,701	1,572,640		
304	1980		260° 28.7'	+10°	0.7	—		-0.7	1321.7		TP	+17	-1980	440,704	1,572,310		
304	1980				10.6	TH	+9.9	-0.7			TP						
	1980		80° 48.6'	+10°	+8.3	BH	+9.9	+18.2		1339.9		BS	+17			-1980	
	1980		+180°		+12.4	90°10'	+5.8	+18.2			BS					440,700+1,572,060(s)	
4F	1730		81° 1.0'	+10°	14.5	—		-14.5	1325.4			-31	+1730	440,690	1,572,060	4-way int. E1.1325	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
3/29/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		1		24				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM				
Oklahoma		Olustee		Oklahoma		Jackson		1 N		21 W		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 TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
									1353.4							
□	422		79°33'	+10°	4.9	-		-4.9		1348.5	—	+3	+422	440,775	1,566,809	chiseled X x=-12'
≡	405		81°59'	+10°	5.1	-		-5.1		1348.3	—	-14	+405	440,758	1,566,787	440,770+1,566,775(s) 4-Way Intersect. El. 1348
321	330		80°50.7'	+10°	5.4	-		-5.4		1348.0		-5	+330	440,767	1,566,712	
322	0				5.4	-		-5.4		1348.0	π	○	○	440,772	1,566,382	
323	330		260°55'	+10°	4.3	-		-4.3		1349.1		+5	-330	440,777	1,566,052	
324	660		" "	+10°	3.5	-		-3.5		1349.9		+11	-660	440,783	1,565,722	
325	990		" "	+10°	2.9	-		-2.9		1350.5		+16	-990	440,788	1,565,392	
326	1320		" "	+10°	2.1	-		-2.1		1351.3		+21	-1320	440,793	1,565,062	
327	1650		" "	+10°	1.7	-		-1.7		1351.7		+26	-1650	440,798	1,564,732	
328	1980		260°55'	+10°	1.7	-		-1.7	-1.8	1351.6	TP	+32	-1980	440,804	1,564,402	
328	1980				11.8	TH	+9.9	-1.9			TP					
	1980		80°54.9'+180°	+10°	10.1	-		+10.1			BS	+32	-1980			
	1980				13.7	89°54'	-3.5	+10.2	1361.8		BS					
329	1650		80°54.9'	+10°	9.1	-		-9.1		1352.7		-26	+1650	440,810	1,564,072	
330	1320		" "	+10°	8.9	-		-8.9		1352.9		-21	+1320	440,815	1,563,742	
331	990		" "	+10°	8.2	-		-8.2		1353.6		-16	+990	440,820	1,563,412	
332	660		" "	+10°	7.7	-		-7.7		1354.1		-11	+660	440,825	1,563,082	
333	330		" "	+10°	6.5	-		-6.5		1355.3		-5	+330	440,831	1,562,752	
334	0				5.4	-		-5.4		1356.4	π	○	○	440,836	1,562,422	
335	330		260°56.7'	+10°	3.5	-		-3.5		1358.3		+5	-330	440,841	1,562,092	

DATE 3/29/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 25
AREA Oklahoma	TOPO MAP Olustee 7.5'	STATE Oklahoma	COUNTY Jackson	TWP T-1N	RANGE R-22 W	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				
									1361.8										
336	660		260° 56.7'	+10°	2.0	-		-2.0		1359.8		+11	-660	440,847	1,561,762				↑
7L 7F	928		260° 15'	+10°	0.1	-		-0.1		1361.7	✓	+4	-928	440,840	1,561,494				R 21 W 440,850+1,561,495(s) 4-way Intersect
337	990		260° 56.7'	+10°	5.0	TH	+5.0	-0.0		1361.8		+16	-990	440,852	1,561,432				R 22 W Elev. 1362
338	1320		" "	+10°	4.6	TH	+6.6	+2.0		1363.8		+22	-1320	440,858	1,561,102				↓
339	1650		" "	+10°	3.9	TH	+8.3	+4.4		1366.2		+27	-1650	440,863	1,560,772				
340	1980		260° 56.7'	+10°	3.4	TH	+9.9	+6.5		1368.3	TP	+33	-1980	440,869	1,560,442				
340	1980				14.1	89° 24'	+20.7	+6.6			TP								
	1980		80° 56.8' + 180°	+10°	+12.3	TH	-9.9	+2.4	1370.8	+2.5	BS	+33	-1980						
	1980				+14.1	89° 40'	-11.5	+2.6			BS								
341	1650		80° 56.8'	+10°	8.3	TH	+8.3	-0.0		1370.8		-27	+1650	440,875	1,560,112				
342	1320		" "	+10°	5.8	TH	+6.6	+0.8		1371.6		-22	+1320	440,880	1,559,782				
343	990		" "	+10°	4.6	TH	+5.0	+0.4		1371.2		-16	+990	440,886	1,559,452				
344	660		" "	+10°	1.7	-		-1.7		1369.1		-11	+660	440,891	1,559,122				
345	330		" "	+10°	3.5	-		-3.5		1367.3		-5	+330	440,897	1,558,792				
346	0				5.4	-		-5.4		1365.4	π	0	0	440,902	1,558,462				
347	330		261° 2.5'	+10°	6.2	-		-6.2		1364.6		+6	-330	440,908	1,558,132				
348	660		" "	+10°	10.0	-		-10.0		1360.8		+12	-660	440,914	1,557,802				
349	990		" "	+10°	9.9	-		-9.9		1360.9		+18	-990	440,920	1,557,472				
350	1320		" "	+10°	7.3	-		-7.3		1363.5		+24	-1320	440,926	1,557,142				
351	1650		" "	+10°	7.7	-		-7.7		1363.1		+30	-1650	440,932	1,556,812				

DATE		INSTRUMENT MAN			ROD MAN			PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE			
3/29/79		G. Cotcamp			R. Hulsey			6834		R. Hulsey			1	26			
AREA		TOPO MAP		STATE	COUNTY			TWP	RANGE	PPM	PARTY MANAGER						
Oklahoma		Olustee 7.5'		Oklahoma	Jackson			1 N	22 W		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 TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									1370.8								
352	1980		261° 2.5'	+10°	7.9	-		-7.9			TP	+36	-1980	440,938	1,556,482	last station on road	
352	1980				13.8	89° 50'	+5.8	-8.0		1362.8	TP						
	2310		81° 23' + 180°	+10°	+14.9	TH	-11.6	+3.4		1366.2	BS	+56	-2309			y = +1 x = +2'	
	2310				+3.4	-		+3.4			BS						
IF	2040		81° 37'	+10°	13.4	TH	+10.2	-3.2		1363.0	✓	-58	+2039	440,936	1,556,212	T-intersect.	
353	1980		81° 22'	+10°	3.3	-		-3.3		1362.9		-47	+1979	440,947	1,556,152	in field	
354	1650		" "	+10°	2.1	-		-2.1		1364.1		-39	+1650	440,955	1,555,823		
355	1320		" "	+10°	4.3	-		-4.3		1361.9		-31	+1320	440,963	1,555,493	↓	
356	990		81° 10'	+10°	3.9	-		-3.9		1362.3		-20	+990	440,974	1,555,163	north edge of railroad	
357	660		" "	+10°	5.9	-		-5.9		1360.3		-13	+660	440,981	1,554,833	south edge of paved road	
357	470		84° 12.3'	+10°	5.1	-		-5.1		1361.1	✓	-34	+469	440,960	1,554,142	Y-intersect.	
358	330		81° 10'	+10°	4.5	-		-4.5		1361.7		-7	+330	440,987	1,554,503		
359	0				5.4	-		-5.4		1360.8	π	0	0	440,994	1,554,173	dirt road	
360	330		261° 30'	+9.7°	4.1	-		-4.1		1362.1		+7	-330	441,001	1,553,843	↓	
361	660		" "	+9.7°	2.2	-		-2.2		1364.0		+14	-660	441,008	1,553,513		
362	990		" "	+9.7°	2.8	TH	+5.0	+2.2		1368.4		+21	-990	441,015	1,553,183		
363	1320		" "	+9.7°	4.0	89° 30'	+11.5	+7.5		1373.7		+28	-1320	441,022	1,552,853		
364	1650		" "	+9.7°	1.7	89° 30'	+14.4	+12.7		1378.9		+35	-1650	441,029	1,552,523		
365	1980		" "	+9.7°	0.3	89° 30'	+17.3	+17.0		1383.2	TP	+41	-1980	441,035	1,552,193		
365	1980										TP						

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
3/29/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey			27						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Oklahoma		Olustee 7.5'		Oklahoma	Jackson		1 N	22 W		L. D. 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		
									1366.2								
366	2310		261°30'	+9.7°	14.0	89°8'	+34.9	+20.9		1387.1	TP	+48	-2309	441,042	1,551,864		
366	2310				12.7	89°10'	+33.6	+20.9			TP						
	1980		80°28.3'	+9.7°	44.7	89°58'	-1.1	+3.6	1390.6	+3.5	BS	+6	-1980				
	1980		+180		+2.3	90°02'	+1.1	+3.4			BS						
367	1650		80°28.3'	+9.7°	1.0	-		-1.0		1389.6		-5	+1650	441,043	1,551,534		
368	1320		" "	+9.7°	1.4	-		-1.4		1389.2		-4	+1320	441,044	1,551,204		
369	990																
FF	1040		80°51'	+9.7°	1.8	-		-1.8		1388.8	✓	-10	+1040	441,038	1,550,924	441,010 + 1,550,990 4-way int. (S)	
369	990		80°28.3'	+9.7°	2.9	-		-2.9		1387.7		-3	+990	441,045	1,550,874		
370	660		" "	+9.7°	2.9	-		-2.9		1387.7		-2	+660	441,046	1,550,544		
371	330		" "	+9.7°	3.1	-		-3.1		1387.5		-1	+330	441,047	1,550,214		
372	0				5.4	-		-5.4		1385.2	π	0	0	441,048	1,549,884		
373	330		260°38.9'	+9.9°	13.4	-		-13.4		1377.2		+3	-330	441,051	1,549,554		
374	660		" "	+9.9°	13.3	90°30'	-5.8	-19.1		1371.5		+6	-660	441,054	1,549,224		
375	990		" "	+9.9°	13.1	90°40'	-11.5	-24.6		1366.0		+9	-990	441,057	1,548,894		
376	1320		" "	+9.9°	11.1	90°40'	-15.4	-26.5		1364.1		+13	-1320	441,061	1,548,564		
377	1650		" "	+9.9°	12.1	90°30'	-14.4	-26.5		1364.1		+16	-1650	441,064	1,548,234		
378	1980		" "	+9.9°	7.1	90°30'	-17.3	-24.4		1366.2		+19	-1980	441,067	1,547,904		
379	2310		260°38.9'	+9.9°	4.1	BH	-11.6	-15.7	-15.6	1375.0	TP	+22	-2310	441,070	1,547,574		
379	2310				14.1	90°02'	-1.3	-15.4			TP						

DATE 3/29-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 28
AREA Oklahoma	TOPO MAP Prairie Hill 7.5'	STATE Oklahoma	COUNTY Jackson	TWP 1 N	RANGE 22 W	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			
379										1375.0								
	1650		80°46.6'+180°	+9.9°	+13.2	-		+13.2	1388.3	+13.3	BS	+19	-1650					
	1650				+5.1	BH	+8.3	+13.4			BS							
380	1320		80°46.6'	+9.9°	8.8	-		-8.8		1379.5		-16	+1320	441,073	1,547,244			
381	990		" "	+9.9°	7.0	-		-7.0		1381.3		-12	+990	441,077	1,546,914			
382	660		" "	+9.9°	11.8	-		-11.8		1376.5		-8	+660	441,081	1,546,584			
383	330		" "	+9.9°	13.5	-		-13.5		1374.8		-4	+330	441,085	1,546,254			
384	0				5.4	-		-5.4		1382.9	TP	0	0	441,089	1,545,924			
385	330																	
385	291		258°51'	+9.9	0.9	-		-0.9		1387.4	✓	-6	-291	441,083	1,545,633		441,080+1,545,630(s)	4-way int. El. 1386
385	330		260°25'	+10.1	2.3	TH	+1.7	-0.6		1387.7		+3	-330	441,092	1,545,594			
386	660		" "	+10.1	2.1	TH	+3.3	+1.2		1389.5		+6	-660	441,095	1,545,264			
387	990		" "	+10.1	7.3	TH	+5.0	-2.3		1386.0		+9	-990	441,098	1,544,934			
388	1320		259°28.7'	+10.1	14.3	89°20'	+15.4	+1.1			TP	-10	-1320 ₊₂	441,079	1,544,606			
388	1320				10.5	89°30'	+11.5	+1.0		1389.3	TP							
	330		74°58.3'+180°	+10.1	+11.9	-		+11.9		1401.2	BS	-28	-329 ₊₃					
	330				+13.6	TH	-1.7	+11.9			BS							
389	0				5.4	-		-5.4		1395.8	TP	0	0	441,051	1,544,280		Set-up middle of	
390	330		271°36.7'	+10.1	9.7	-		-9.7			TP	+67	-323 ₊₂	441,118	1,543,959		road	
390	330				8.1	BH	-1.7	-9.8		1391.4	TP							

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
3-29-79		R. Hulsey		G. Cotcamp		6034		R. Hulsey				29			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Okla homa		Prairie Hill 7.5		Okla homa		Jackson		1 N		22 W				L. O. Davis	
STATION NO.	SLOPE DISTANCE	PLOTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
390										1391.4					
	1320		80°50.2'+180°	+10.1°	+6.4	TH	-6.6	-0.2	1391.2		BS	+22	-1320+3		
	1320				+7.5	89°46'	-7.7	-0.2			BS				
391	990		80°50.2'	+10.1°	3.5	-		-3.5		1387.7		-16	+990	441,124	1,543,632
392	660		" "	+10.1°	7.1	-		-7.1		1384.1		-11	+660	441,129	1,543,302
393	330		" "	+10.1°	8.2	-		-8.2		1383.0		-5	+330	441,135	1,542,972
394	0				5.4	-		-5.4		1385.8	TP	0	0	441,140	1,542,642
395	330		258° 8.8'	+10.1°	13.2	BH	-1.7	-14.9		1376.3		-10	-330	441,130	1,542,312
396	660		" "	+10.1°	11.8	91°-	-11.5	-23.3		1367.9		-20	-660	441,120	1,541,982
397	990		" "	+10.1°	4.5	91°-	-17.3	-21.8		1369.4		-30	-990	441,116	1,541,652
398	1320		258° 8.8'	+10.1°	8.5	BH	-6.6	-15.1			TP	-40	-1319+2	441,100	1,541,325
398	1320				14.4	90°02'	-0.8	-15.2		1376.0	TP				
	990		82° 47.1'+180°	+10.1°	+3.0	89°30'	-8.6	-5.6	1370.4		BS	+50	-989+3		
	990				+5.9	89°26'	-11.5	-5.6			BS				
399	660		82° 47.1'	+10.1°	2.3	-		-2.3		1368.1		-33	+659	441,117	1,540,998
400	330		" "	+10.1°	3.8	-		-3.8		1366.6		-17	+330	441,133	1,540,669
401	59		73° 17'	+10.1°	5.1	-		-5.1		1365.3		+7	+59	441,157	1,540,398
401	0				5.4	-		-5.4		1365.0	TP	0	0	441,150	1,540,339
402	330		261° 44'	+10.3°	1.5	TH	+1.7	+0.2		1370.6		+12	-330	441,162	1,540,009
403	660		261° 15'	+10.3°	3.6	89°-	+11.5	+7.9		1378.3		+18	-660	441,168	1,539,679
404	990		260° 55'	+10.3°	6.9	88°40'	+23.0	+16.1		1386.5		+21	-990	441,171	1,539,349

First sta. after gate.

First sta. in wheat

Last sta. in wheat

Section Line E. 1365
441,155+1,540,900

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
3-29-79		R. Hulsey		G. Cotcamp		6834		R. Hulsey		1		31				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
Oklahoma		Prairie Hill 7.5		Oklahoma		Jackson		1 N		22 W				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.		Y	X
416									1415.0							
417	940		260° 30'	+10.3°	10.0	-	-10.0		1405.0		✓	+13	-940	441,210	1,535,116	T-rd E1.1405
417	990		260° 46.6'	+10.3°	11.3	-	-11.3				TP	+19	-990	441,216	1,535,066	441,215 + 1,535,120(s)
417	990				6.4	BH	-5.0	-11.4		1403.6	TP					
	1650		81° 5.3' +180°	+10.3°	+9.0	88° 30'	-43.2	-34.2	1369.4		BS	+40	-1650			
	1650				+13.8	88° 20'	-48.0	-34.2			BS					
418	1320		81° 5.3'	+10.3°	2.9	89° -	+23.0	+20.1		1389.5		-32	+1320	441,224	1,534,736	
419	990		" "	+10.3°	12.8	89° -	+17.3	+4.5		1373.9		-24	+990	441,232	1,534,406	
420	660		" "	+10.3°	0.0	-	-	-0.0		1369.4		-16	+660	441,240	1,534,076	
421	330		" "	+10.3°	2.6	-	-	-2.6		1366.8		-8	+330	441,248	1,533,746	
422	0				5.4	-	-	-5.4		1364.0	π	0	0	441,256	1,533,416	
423	330		260° 47.5'	+10.3°	5.9	-	-5.9			1363.5		+6	-330	441,262	1,533,086	
424	660		" "	+10.3°	6.5	-	-6.5			1362.9		+13	-660	441,269	1,532,756	
425	990		" "	+10.3°	7.7	-	-7.7			1361.7		+19	-990	441,275	1,532,426	
426	1320		" "	+10.3°	6.6	-	-6.1			1363.3		+25	-1320	441,281	1,532,096	
427	1650		260° 47.5'	+10.3°	4.5	89° 42'	+8.6	+3.6		1373.0	TP	+31	-1650	441,287	1,531,766	
427	1650				4.0	89° 44'	+7.7	+3.7			TP					
	330		81° 16.4' +180°	+10.3°	+13.8	-	-	+13.8	1386.8		BS	+9	-330			
	330				+12.2	BH	+1.7	+13.9			BS					
428	0				5.4	-	-	-5.4		1381.4	π	0	0	441,296	1,531,436	
429	330		261° 1.0'	+10.3°	13.5	91° -	-5.8	-19.3		1367.5		+8	-330	441,304	1,531,106	

DATE 3-29-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Catcamp	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 33
AREA Oklahoma	TOPO MAP Prairie Hill 7.5	STATE Oklahoma	COUNTY Jackson	TWP 1 N	RANGE 23 W	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				
441									1364.5										
	990		80° 2.1' +180°	+10.3°	+12.2	BH	+5.0	+17.2	1381.7		BS	+6	-990+3						
	990				+14.3	90° 10'	+2.9	+17.2			BS								
442	660		80° 2.1'	+10.3°	12.2	90° 40'	-7.7	-19.9		1361.8		-4	+660	441,366	1,526,855				
443	330		" "	+10.3°	12.9	91° 10'	-6.7	-19.6		1362.1		-2	+330	441,368	1,526,525				
444	0				5.4	-		-5.4		1376.3	TP	0	0	441,370	1,526,195				
445	330		259° 58'	+10.3°	13.1	90° 30'	-2.9	-16.0		1365.7		+2	-330	441,372	1,525,865				
445	550		259° 31'	+10.3°	14.5	90° 20'	-3.2	-17.7		1364.0		-2	-550	441,368	1,525,645				
446	610		256° 42.7'	+10.3°	10.9	91° -	-10.6	-21.5		1360.2	TP	-32	-609+2	441,338	1,525,588	Sharp curve			
446	610				9.8	91° 06'	-11.7	-21.5			TP								
	330		67° 56.6' +180°	+10.3°	+8.5	-		+8.5	1368.7		BS	-67	-323+3						
	330				+10.2	TH	-1.7	+8.5			BS								
447	0				5.4	-		-5.4		1363.3	TP	0	0	441,271	1,525,268				
448	330		280° 39.1'	+10.3°	6.6	-		-6.6		1362.1	TP	+118	-308	441,389	1,524,960				
448	330				5.0	BH	-1.7	-6.7			TP								
	1320		81° 4.1' +180°	+10.3°	+11.0	-		+11.0			BS	+32	-1320						
	1320				+4.5	BH	+6.6	+11.1	1373.2		BS								
449	990		81° 4.1'	+10.3°	10.9	-		-10.9		1362.3		-24	+990	441,397	1,524,630				
450	660		" "																
450	950		81° 8.0'	+10.3	10.7	-		-10.7		1362.5		-24	+950	441,397	1,524,590	Trail (S) El. 1364			
450	660		81° 4.1'	+10.3	9.2	-		-9.2		1364.0		-16	+660	441,405	1,524,300				

Hor. Corr. $\frac{1}{1000} \times 35' = 0.35'$
 441,395 + 1,524,590(s)
 Trail (S) El. 1364

DATE 3-29-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 34
AREA Oklahoma	TOPO MAP Prairie Hill 7.5'	STATE Oklahoma	COUNTY Jackson	TWP 1 N	RANGE 23 W	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.		Y
									1373.2						
451	330		81° 41'	+10.3°	7.0	-		-7.0		1366.2		-8	+330	441,413	1,523,970
452	0				5.4	-		-5.4		1367.8	TP	0	0	441,421	1,523,640
453	330		260° 57.1'	+10.3°	4.1	-		-4.1		1369.1		+7	-330	441,428	1,523,310
454	660		" "	+10.3°	2.5	-		-2.5		1370.7		+14	-660	441,435	1,522,980
455	990		" "	+10.3°	5.9	TH	+5.0	-0.9		1372.3		+22	-990	441,443	1,522,650
456	1320		260° 57.1	+10.1°	0.6	-		-0.6		1372.6	TP	+24	-1320	441,445	1,522,320
456	1320				7.2	TH	+6.6	-0.6			TP				
	504		122° 45.2' + 180°	+10.1°	+4.7	-		+4.7	1377.3		BS	+343	-369		shooting across 90° bend
	504				+7.2	TH	-2.5	+4.7			BS				
457	320		161° 50'	+10.1°	3.6	-		-3.6		1373.7		-317	+45	441,471	1,521,996
457	319		164° 51.8'	+10.1°	3.4	-		-3.4		1373.9		-318	+28	441,470	1,521,979
															90° Bend E.I. 1376
458	0				5.4	-		-5.4		1371.9	TP	0	0	441,788	1,521,951
459	308		303° 10.5'	+10.1°	8.6	-		-8.6		1368.7	TP	+211	-224	441,999	1,521,727
459	308				7.1	BH	-1.5	-8.6			TP				shooting across curve
	990		85° 43.3' + 180°	+10.1°	8.6	91°-	+17.3	+25.9	1394.6		BS	+100	-985		
	990				+14.4	90° 40'	+11.5	+25.9			BS				
460	660		84° 39'	+10.1°	8.7	91°-	-11.5	-20.2		1374.4		-55	+658	442,044	1,521,400
461	330		" "	+10.1°	12.3	-		-12.3		1382.3		-27	+329	442,072	1,521,071
462	0				5.4	-		-5.4		1389.2	TP	0	0	442,099	1,520,742
463	330		261° 43'	+10.1°	3.1	-		-3.1		1391.5		+10	-330	442,109	1,520,412

DATE 3/31/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO.	PAGE 35
AREA Oklahoma	TOPO MAP Prairie Hill 7.5	STATE Oklahoma	COUNTY Jackson	TWP 1N	RANGE 23 W	PPM
				PARTY MANAGER L.O. 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				
									1394.6										
464	660		261°43'	+10.1°	5.3	-		-5.3		1389.3	TP	+21	-660	442,120	1,520,082				
464	660				8.6	TH	+3.3	-5.3			TP								
	660		55°48.8'+180°	+10.1°	+7.1	-		+7.1	1396.4		BS	-269	-603						
	660				+10.4	TH	-3.3	+7.1			BS								
465	336		55°48.8'	+10.1°	8.1	-		-8.1		1388.3		+135	+301	441,986	1,519,780				
466	0				5.4	-		-5.4		1391.0	X	0	0	441,851	1,519,479				
TP	250		217°38'	+10.1°	1.5	-		-1.5			TP	-170	-183	441,681	1,519,296				split sta. - sharp curve
TP	250				2.7	TH	+1.3	-1.4		1395.0	TP								
	72		345°6.2'-180°	+10.1°	+8.3	-		+8.3	1403.3		BS	-72	+6						
	72				+7.9	BH	+0.4	+8.3			BS								
467	0				5.4	-		-5.4		1397.9	X	0	0	441,609	1,519,302				
≡	170		161°32.3'	+10.1°	0.6	88°	+5.9	+5.3			TP	-168	+25	441,441	1,519,327				TP-intersect. E1.1412
≡	170				3.5	87°	+8.9	+5.4		1408.7	TP								split sta. - 90° bend
	1570		82°26.3'+180°	+10.1°	+5.7	91°	+27.4	+33.1	1441.8		BS	+70	-1568						
	1570				+14.9	90°40'	+18.3	+33.2			BS								
468	1320		81°57'	+10.1°	6.4	91°20'	-30.7	-37.1		1404.7		-47	+1319	441,464	1,519,078				
469	990			+10.1°	5.3	92°	-34.5	-39.8		1462.0		-35	+989	441,476	1,518,748				
470	660			+10.1°	13.8	91°	-11.5	-25.3		1416.5		-24	+660	441,487	1,518,419				
471	330			+10.1°	9.5	91°	-5.8	-15.3		1426.5		-12	+330	441,499	1,518,089				
472	0				5.4	-		-5.4		1436.4	X	0	0	441,511	1,517,759				

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
3/31/79		G. Cotcamp		R. Hulsey		6834				1	36			
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
Oklahoma		Prairie Hill		Oklahoma		Jackson						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.	
									1441.8					
473	330		260°54.2'	+10.1°	2.9	-		-2.9		1438.9		+6	-330	441,517, 1,517,429
474	660		"	+10.1°	10.0	-		-10.0		1431.8		+12	-660	441,523, 1,517,099
475	990		"	+10.1°	9.5	BH	-5.0	-14.5		1427.3		+17	-990	441,528, 1,516,769
476	1320		"	+10.1°	6.1	-		-6.1		1435.7		+23	-1320	441,534, 1,516,439
477	1650		"	+10.1°	4.0	89°30'	+14.4	+10.4		1452.2		+29	-1650	441,540, 1,516,109
478	1980		260°54.2'	+10.1°	7.0	89°30'	+17.3	+10.3		1452.1	TP	+35	-1980	441,546, 1,515,999
478	1980		"		13.9	89°18'	+24.2	+10.3			TP			
	1320		81°2.1'+180°	+10.1°	+5.3	89°-	-23.0	-17.7	14344		BS	+26	-1320	
	1320		"		+3.8	89°4'	-21.5	-17.7			BS		+3	
479	990		81°2.1'	+10.1°	2.8	89°-	+17.3	+14.5		1448.9		-20	+990	441,552, 1,515,452
480	660		"	+10.1°	4.6	-		-4.6		1429.8		-13	+660	441,559, 1,515,122
481	330		"	+10.1°	12.4	-		-12.4		1422.0		-7	+330	441,565, 1,514,792
482	0		"		5.4	-		-5.4		1429.0	T	0	0	441,572, 1,514,462
483	330		261°9.3'	+10.1°	6.3	-		-6.3		1428.1		+7	-330	441,579, 1,514,132
F	428		259°51.2'	+10.1°	8.0	-		-8.0		1426.4	-	0	-428	441,572, 1,514,034
484	660		261°9.3'	+10.1°	15.0	90°30'	+5.8	-20.8		1413.6	TP	+14	-660+3	441,586, 1,513,805
484	660		"		13.1	90°40'	-7.7	-20.8			TP			
	990		80°59.6'+180°	+10.1°	+10.4	BH	+5.0	+15.4	1429.0		BS	+19	-990+3	
	990		"		+14.8	90°2'	+0.6	+15.4			BS			
485	660		80°59.6'	+10.1°	9.6	-		-9.6		1419.4		-13	+660	441,592, 1,513,978

last sta. on road
441,570 + 1,514,040
T-intersect. El. 1426

First sta. in field

Note - no permit for
sta. 484-495
↑
geophone vibrator gap

DATE 3/31/79		INSTRUMENT MAN G. Cotcamp		ROD MAN R. Hulsey		PARTY NUMBER 6834		NOTES CHECKED BY R. Hulsey		LINE NO. I		PAGE 37							
AREA Oklahoma		TOPO MAP		STATE Oklahoma		COUNTY Jackson		TWP		RANGE		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 TP	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
									1429.0										
486	330		80° 59.6'	+10.1°	4.4	-		-4.4		1424.6		-6	+330	441,599	1,513,148			Cross-country	
487	0				5.4	-		-5.4		1423.6	TP	0	0	441,605	1,512,818			(pasture.)	
488	330		261° 17.3'	+10.1°	5.6	-		-5.6		1423.4		+8	-330	441,613	1,512,488				
489	660			+10.1°	5.2	-		-5.2		1423.8		+16	-660	441,621	1,512,158				
490	990		261° 17.3'	+10.1°	4.3	-		-4.3			TP	+24	-990+3	441,629	1,511,831				
490	990				9.3	TH	+5.0	-4.4		1424.6	TP								
	1650		80° 16' +180°	+10.1°	+13.1	-		+13.1	1437.7		BS	+11	-1650+3						
	1650				+14.2	89° 58'	-1.0	+13.2			BS								
491	1320		80° 16'	+10.1°	13.0	-		-13.0		1424.7		-8	+1320	441,632	1,511,504				
492	990		" "	+10.1°	11.5	BH	-5.0	-16.5		1421.2		-6	+990	441,634	1,511,174				
493	660		" "	+10.1°	8.8	91°	-11.5	-20.3		1417.4		-4	+660	441,636	1,510,844				
494	330		" "	+10.1°	12.7	BH	-1.7	-14.4		1423.3		-2	+330	441,638	1,510,514				
495	0				5.4	-		-5.4		1432.3	TP	0	0	441,640	1,510,184			Sta. 495 is 75' east of	
496	330		260° 44'	+10.1°	5.4	-		-5.4		1432.3		+5	-330	441,645	1,509,854			N-S fence	
497	660		" "	+10.1°	11.7	BH	-3.3	-15.0		1422.7		+10	-660	441,650	1,509,524				
498	990		" "	+10.1°	3.9	-		-3.9		1433.8		+14	-990	441,654	1,509,194				
499	1320		260° 44'	+10.1°	11.8	TH	+6.6	-5.2		1432.5		+19	-1320	441,659	1,508,864			last sta. in field	
500	1400		260° 21.4'	+10.1°	13.9	89° 34'	+10.6	-3.3		1434.4	-	+11	-1400	441,651	1,508,784			441,650 + 1,508,800(s) T-intersect. El. 1434	
500	1650		260° 44'	+10.2°	14.8	89° 32'	+13.4	-1.4		1436.3	TP	+27	-1650+2	441,667	1,508,536			dirt road Y=+1 X=-16	
500	1650				13.9	89° 34'	+12.5	-1.4			TP								

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE 3/31/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 38
AREA Oklahoma	TOPO MAP	STATE Oklahoma	COUNTY Jackson	TWP	RANGE	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.	
500										1436.3				
	1650		80°41.6' +180°	+10.2°	+7.1	BH	+8.3	+15.4			BS	+26	-1650.3	
	1650				+14.3	90°2'	+1.0	+15.3	1451.6		BS			
501	1320		80°41.6'	+10.2°	12.9	-		-12.9		1438.7		-21	+1320	441,672 / 1,508,209
502	990		" "	+10.2°	9.1	-		-9.1		1442.5		-15	+990	441,678 / 1,507,879
503	660		" "	+10.2°	6.2	-		-6.2		1445.4		-10	+660	441,683 / 1,507,549
504	330		" "	+10.2°	4.1	-		-4.1		1447.5		-5	+330	441,688 / 1,507,219
505	0				5.4	-		-5.4		1446.2	X	0	0	441,693 / 1,506,889
506	330		260°52.8'	+10.2°	3.5	-		-3.5		1448.1		+6	-330	441,699 / 1,506,559
507	660		" "	+10.2°	2.4	-		-2.4		1449.2		+12	-660	441,705 / 1,506,229
508	990		" "	+10.2°	1.1	-		-1.1		1450.5		+19	-990	441,712 / 1,505,899
509	1320		260°52.8'	+10.2°	1.3	TH	+6.6	+5.3		1456.9	TP	+25	-1320.2	441,718 / 1,505,571
509	1320				4.7	89°34'	+10.0	+5.3			TP			
	1320		81°13' +180°	+10.2°	+4.0	-		+4.0	1460.9		BS	+33	-1320.3	
	1320				+10.6	TH	-6.6	+4.0			BS			
510	990		81°13'	+10.2°	5.1	-		-5.1		1455.8		-24	+990	441,727 / 1,505,244
511	660		" "	+10.2°	5.2	-		-5.2		1455.7		-16	+660	441,735 / 1,504,914
512	330		" "	+10.2°	5.1	-		-5.1		1455.8		-8	+330	441,743 / 1,504,584
513	0				5.4	-		-5.4		1455.5	X	0	0	441,751 / 1,504,254
514	330		260°36.3'	+10.2°	4.3	-		-4.3		1456.6		+5	-330	441,756 / 1,503,924
515	660		" "	+10.2°	3.5	-		-3.5		1457.4		+9	-660	441,760 / 1,503,594 last sta. on road

DATE 3/31/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 39
AREA Oklahoma	TOPO MAP	STATE Oklahoma	COUNTY Jackson	TWP	RANGE	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.		Y	X
									1460.9						-5'	
516	750		260°28.5'	+10.2°	1.9	-		-1.9		1459.0	TP	+9	-750	441,760	1,503,504	Intersect. El. 1469
516	990		260°36.3'	+10.2°	5.9	TH	+5.0	-0.9			TP	+14+2	-990+2	441,767	1,503,266	first sta. in field
516	990				9.6	89°30'	+8.6	-1.0		1459.9	TP					
	990		80°13.1'+180°	+10.2°	+3.6	-		+3.6			BS	+7+2	-990+3			
	990				+8.5	TH	-5.0	+3.5	1463.4		BS					
517	660		80°13.1'	+10.2°	9.0	-		-9.0		1454.4		-5	+660	441,771	1,502,939	in field (15' north of
518	330		" "	+10.2°	7.7	-		-7.7		1455.7		-2	+330	441,774	1,502,609	E-W fence line)
519	0				5.4	-		-5.4		1458.0	TP	0	0	441,776	1,502,279	
520	330		260°6.6'	+10.2°	7.8	-		-7.8		1455.6		+2	-330	441,778	1,501,949	
521	660		" "	+10.2°	4.4	-		-4.4		1459.0		+4	-660	441,780	1,501,619	
522	990		260°6.6'	+10.2°	3.6	-		-3.6		1459.8	TP	+5+2	-990+2	441,783	1,501,291	Y
522	990				8.6	TH	+5.0	-3.6			TP					
	1980		80°3'+180°	+10.2°	14.0	90°36'	+20.7	+34.7	1494.6	+34.8	BS	+9+2	-1980+3			
	1980				13.1	90°38'	+21.9	+35.0		+7.7	BS					
523	1650	fence	80°3'	+10.2°	13.1	90°40'	-19.2	-32.3		1462.3		-7	+1650	441,787	1,500,964	
524	1320		" "	+10.2°	11.4	90°50'	-19.2	-30.6		1464.0		-6	+1320	441,788	1,500,634	
525	990		" "	+10.2°	10.5	91°-	-17.3	-27.8		1466.8		-4	+990	441,790	1,500,304	
526	660		" "	+10.2°	9.7	91°-	-11.5	-21.2		1473.4		-3	+660	441,791	1,499,974	
527	330		" "	+10.2°	10.4	91°-	-5.8	-16.2		1478.4		-1	+330	441,793	1,499,644	Y
528	0				5.4	-		-5.4		1489.2	TP	0	0	441,794	1,499,314	first sta. in wheat

DATE 3/31/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 40
AREA Oklahoma	TOPO MAP Duke SW	STATE Oklahoma	COUNTY Jackson & Harmon	TWP 1N	RANGE 24 & 23 W	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 TP	NORTH + SOUTH - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS	
														Y	X		
									1494.6								
529	330		260°39'	+10.2°	10.8	-		-10.8		1483.8		+5	-330	441,799	1,498,984	wheat field	
530	660		" "	+10.2°	12.4	-		-12.4		1482.2		+10	-660	441,804	1,498,654	R 23 W ↑	
531	990		262°17'	+10.2°	10.2	-		-10.2		1484.4		+15	-990	441,809	1,498,324	Jackson Co ↑ last vsta. in field	
531	1080		262°46.1'	+10.2°	14.0	-		-14.0		1480.6		+56	-1079	441,850	1,498,235	intersect. el. 1478. R 24 W ↓	
532	1320		262°47'	+10.4°	10.7	BH	-6.6	-17.3			TP	+73	-1318.3	441,867	1,497,999	dist road horizon	
532	1320				14.9	90°6'	-2.3	-17.2		1477.4	TP					Correction	
	1980		80°14.7' + 180°	+10.4°	8.8	TH	9.9	-1.1	1476.2	-1.2	BS	+22	-1980.4			y = 8	
	1980				+2.2	89°54'	-3.5	-1.3			BS					x = +35'	
533	1650		80°14.7'	+10.4°	6.5	-		-6.5		1469.7		-19	+1650	441,870	1,497,673	Harmon Co.	
534	1320		" "	+10.4°	8.2	-		-8.2		1468.0		-15	+1320	441,874	1,497,343	↓	
535	990		" "	+10.4°	8.9	-		-8.9		1467.3		-11	+990	441,878	1,497,013		
536	660		" "	+10.4°	10.2	-		-10.2		1466.0		-7	+660	441,882	1,496,683		
537	330		" "	+10.4°	8.4	-		-8.4		1467.8		-4	+330	441,885	1,496,353		
538	0				5.4	-		-5.4		1470.8	TP	0	0	441,889	1,496,023		
539	330		260°33.3'	+10.4°	0.2	-		-0.2		1476.0		+6	-330	441,895	1,495,693		
540	660		" "	+10.4°	3.9	TH	+3.3	-0.6		1475.6		+11	-660	441,900	1,495,363		
541	990		" "	+10.4°	7.8	TH	+5.0	-2.8		1473.4		+17	-990	441,906	1,495,033		
542	1320		" "	+10.4°	11.3	TH	+6.6	-4.7		1471.5		+22	-1320	441,911	1,494,703		
543	1650		" "	+10.4°	10.5	TH	+8.3	-2.2		1474.0		+28	-1650	441,917	1,494,373		

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE		
4-2-79		R. Hulsey		G. Cotcamp		6834		R. Hulsey			1		41		
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Oklahoma		Duke SW		Oklahoma		Harmon		1 N		24 W				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.		Y
									1476.2						
544	1980		260° 33.3'	+10.4°	8.5	TH	+9.9	+1.4		1477.6	TP	+33	-1980.3	441,922	1,494,046
544	1980				10.2	89°40'	+11.5	+1.3			TP				
	1980		80°46.2'+180	+10.4°	+8.6	—		+8.6			BS	+40	-1980.3		
	1980				+5.2	90°06'	+3.5	+8.7	1486.3		BS				
545	1650		80° 46.2'	+10.4°	9.3	—		-9.3		1477.0		-34	+1650	441,928	1,493,719
546	1320		" "	+10.4°	8.2	—		-8.2		1478.1		-27	+1320	441,935	1,493,389
547	990		" "	+10.4°	9.6	—		-9.6		1476.7		-20	+990	441,942	1,493,059
7#	860		80° 56'	+10.4°	4.5	BH	-4.3	-8.8		1477.5	✓	-20	+860	441,942	1,492,929 4-way int. el. 1478.
548	660		80° 46.2'	+10.4°	8.9	—		-8.9		1477.4		-13	+660	441,949	1,492,729
549	330		" "	+10.4°	7.7	—		-7.7		1478.6		-7	+330	441,955	1,492,399
550	0				5.4	—		-5.4		1480.9	π	0	0	441,962	1,492,069
551	330		260° 4.9'	+10.4°	8.1	—		-8.1		1478.2		+3	-330	441,965	1,491,739
552	660		" "	+10.4°	12.0	—		-12.0		1474.3		+6	-660	441,968	1,491,409
553	990		" "	+10.4°	11.8	BH	-5.0	-16.8		1469.5		+8	-990	441,970	1,491,079
554	1320		" "	+10.4°	10.2	90°30'	-11.5	-21.7		1464.6		+11	-1320	441,973	1,490,749
555	1650		" "	+10.4°	8.0	90°30'	-14.4	-22.4		1463.9		+14	-1650	441,976	1,490,419
556	1980		260° 4.9'	+10.4°	12.5	90°20'	-11.5	-24.0		1462.3	TP	+17+3	-1980+4	441,982	1,490,093 Misc lead rod
556	1980				5.8	90°30'	-17.3	-24.0			TP				Reshot 4-3-79 (RH)
	1980		80° 11.8'+180°	+10.4°	+6.1	BH	+9.9	+16.0	1478.2	+15.9	BS	+21+3	-1980+3		
	1980				+14.6	90°03'	+1.1	+15.7			BS				

DATE 4-2-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 42
AREA Oklahoma	TOPO MAP Duke SW 7.5'	STATE Oklahoma	COUNTY Harmon	TWP 1 N	RANGE 24W	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.		Y	X
									1478.2							
557	1650		80° 11.8'	+10.9°	7.0	BH	-8.3	-15.3		1462.9		-17	+1650	441,989	1,489,766	
558	1320		" "	+10.9°	10.1	-		-10.1		1468.1		-14	+1320	441,992	1,489,736	
559	990		" "	+10.4°	8.4	-		-8.4		1469.8		-10	+990	441,996	1,489,166	
560	660		" "	+10.9°	7.9	-		-7.9		1470.3		-7	+660	441,999	1,488,776	
561	330		" "	+10.4°	6.5	-		-6.5		1471.7		-3	+330	442,003	1,488,446	
562	0				5.4	-		-5.4		1472.8	TP	0	0	442,006	1,488,116	
563	330		260° 8.2'	+10.4°	1.4	-		-1.4		1476.8		+3	-330	442,009	1,487,786	
564	660															
564	425		258° 50'	+10.4°	0.2	89° 30'	+3.7	+3.5		1481.7	-	-6	-425	442,000	1,487,691	442,010 = 1,487,700(s) 4-way int. el. 1482
564	660		260° 8.2'	+10.4°	6.1	89° -	+11.5	+5.4		1483.6		+6	-660	442,012	1,487,456	
565	990		" "	+10.4°	8.9	89° -	+17.3	+8.4		1486.6		+9	-990	442,015	1,487,126	
566	1320		" "	+10.4°	6.4	89° 20'	+15.4	+9.0		1487.2		+12	-1320	442,018	1,486,796	
567	1650		" "	+10.4°	8.0	89° 20'	+19.2	+11.2		1489.4		+15	-1650	442,021	1,486,466	
568	1980		260° 8.2'	+10.4°	6.3	89° 20'	+23.0	+16.7		1494.9	TP	+19 +3	-1980 +4	442,028	1,486,140	
568	1980				13.1	89° 08'	+29.9	+16.8			TP					
	1980		80° 36.1 + 180°	+10.4°	+14.0	90° 24'	+13.8	+27.8			BS	+35 +4	-1980 +3			
	1980				+15.0	90° 22'	+12.7	+27.7	1522.6		BS					
569	1650		80° 36.1'	+10.4°	8.4	90° 30'	-14.4	-22.8		1499.8		-29	+1650	442,038	1,485,813	
570	1320		" "	+10.4°	10.0	BH	-6.6	-16.6		1506.0		-23	+1320	442,044	1,485,483	
571	990		" "	+10.4°	9.4	BH	-5.0	-14.4		1508.2		-17	+990	442,050	1,485,153	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-2-79		R. Hulsey		G. Cotcamp		6834		R. Hulsey		7		43			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Oklahoma		Duke SW		Oklahoma		Harmon		1N		24W				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.		Y
									1522.6						
572	660		80° 36.1'	+10.9°	11.7	-	-11.7			1510.9		-12	+660	442,055	1,484,823
573	330		" "	+10.9°	7.9	-	-7.9			1514.7		-6	+330	442,061	1,484,493
574	0				5.4	-	-5.4			1517.2	X	0	0	442,067	1,484,163
575	330		260° 45.2'	+10.9°	4.8	-	-4.8			1517.8		+7	-330	442,074	1,483,833
576	660		" "	+10.9°	5.8	-	-5.8			1516.8		+13	-660	442,080	1,483,503
577	990		" "	+10.9°	6.5	-	-6.5			1516.1		+20	-990	442,087	1,483,173
578	1320		" "	+10.9°	4.8	-	-4.8			1517.8		+27	-1320	442,094	1,482,843
579	1650		260° 45.2'	+10.9°	4.1	-	-4.1			1518.5	TP	+33 +3	-1650 +3	442,103	1,482,516
579	1650				12.3	TH	+8.3	-4.0			TP				
	1650		80° 45.6' + 180°	+10.9°	+4.0	-	+4.0		1522.6	+4.1	BS	+33 +1	-1650 +1		
	1650				+12.5	TH	-8.3	+4.2			BS				
≠	1570		81° 4'	+10.9°	2.2	-	-2.2			1520.4		-40	+1569	442,097	1,482,439
580	1320		80° 45.6'	+10.9°	2.6	-	-2.6			1520.0		-27	+1320	442,110	1,482,190
581	990		" "	+10.9°	1.8	-	-1.8			1520.8		-20	+990	442,117	1,481,860
582	660		" "	+10.9°	1.8	-	-1.8			1520.8		-13	+660	442,124	1,481,530
583	330		" "	+10.9°	3.5	-	-3.5			1519.1		-7	+330	442,130	1,481,200
584	0				5.4	-	-5.4			1517.2	X	0	0	442,137	1,480,870
585	330		260° 44'	+10.9°	4.2	-	-4.2			1518.4		+7	-330	442,144	1,480,540
586	660		" "	+10.9°	4.5	-	-4.5			1518.1		+13	-660	442,150	1,480,210
587	990		" "	+10.9°	5.3	-	-5.3			1517.3		+20	-990	442,157	1,479,880

442,110 + 1,482,450(s)
4-Way Intersect.
El. 1520

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
4/3/79		G. Cotcamp		R. Hulsey		6837		R. Hulsey		1	44			
AREA		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER				
Oklahoma		Duke SW		Oklahoma		Harmon		24 W		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.	
									1522.6					
588	1320		260°44'	+10.9°	4.4	-		-4.4		1518.2		+26	-1320	442,163 1,479,550
589	1650		260°44'	+10.4°	6.1	-		-6.1		1516.5	TP	+33	-1650	442,170 1,479,220
589	1650				14.4	TH	+8.3	-6.1			TP			
	2640		80°16' + 160°	+10.4°	+3.2	TH	-13.2	-10.0	1506.5		BS	+31	-2640	
	2640		S		+14.5	89°28'	-24.6	-10.1			BS			
590	2310		80°16'	+10.4°	2.3	TH	+11.6	+9.3		1515.8		-27	+2310	442,174 1,478,890
591	1980		" "	+10.4°	2.9	TH	+9.9	+7.0		1513.5		-23	+1980	442,178 1,478,560
592	1650		" "	+10.4°	1.7	TH	+8.3	+6.9		1513.4		-19	+1650	442,182 1,478,230
593	1320		" "	+10.4°	1.8	TH	+6.6	+4.8		1511.3		-15	+1320	442,186 1,477,900
594	990		" "	+10.4°	3.9	TH	+5.0	+1.1		1507.6		-12	+990	442,189 1,477,570 horizontal correct. y=17 x=34
595	660		" "	+10.4°	1.9	-		-1.9		1504.6		-8	+660	442,193 1,477,240 442,190 + 1,477,140(s)
IF	560		80°41'	+10.4°	1.7	-		-1.7		1504.8		-11	+560	442,190 1,477,140 4-Way Intersect E1.1565
596	330		80°16'	+10.4°	4.4	-		-4.4		1502.1		-4	+330	442,197 1,476,910
597	0				5.4	-		-5.4		1501.1	X	0	0	442,201 1,476,580
598	330		260°37.9'	+10.4°	6.3	-		-6.3		1500.2		+6	-330	442,207 1,476,250
599	660		" "	+10.4°	8.3	-		-8.3		1498.2		+12	-660	442,213 1,475,920
600	990		" "	+10.4°	10.7	-		-10.7		1495.8		+18	-990	442,219 1,475,590
601	1320		" "	+10.4°	13.8	-		-13.8		1492.7		+24	-1320	442,225 1,475,260
602	1650		" "	+10.4°	12.4	BH	-8.3	-20.7		1485.8		+30	-1650	442,231 1,474,930
603	1980		" "	+10.4°	8.8	BH	-9.9	-18.7		1487.8		+36	-1980	442,237 1,474,600

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE				
4/3/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		1	45				
AREA		TOPO MAP		STATE		COUNTY		RANGE		PARTY MANAGER					
Oklahoma		Duke SW		Oklahoma		Harmon		24 W		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 TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1506.5						
604	2310		260°37.9'	+10.4°	12.3	8H	-11.6	-23.9		1482.6		+42	-2310	442,243	1,474,270
605	2640		260°37.9'	+10.4°	14.0	90°18'	-13.8	-27.8			TP	+48	-2640	442,249	1,473,990
605	2640				12.7	90°20'	-15.4	-28.1	-28.0	1478.5	TP				
	2310		80°304'+180°	+10.4°	+9.3	TH	-11.6	-2.3	1476.2		BS	+37	-2310		
	2310				+5.8	89°48'	-8.1	-2.3			BS				
606	1980		80°304'	+10.4°	9.2	TH	+9.9	+0.7		1476.9		-31	+1980	442,255	1,473,610
607	1650		" "	+10.4°	0.8	-		-0.8		1475.4		-26	+1650	442,260	1,473,280
608	1320		" "	+10.4°	2.8	-		-2.8		1473.4		-21	+1320	442,265	1,472,950
609	990		" "	+10.4°	4.2	-		-4.2		1472.0		-16	+990	442,270	1,472,620
610	660		" "	+10.4°	5.4	-		-5.4		1470.8		-10	+660	442,276	1,472,290
611	330		" "	+10.4°	7.0	-		-7.0		1469.2		-5	+330	442,281	1,471,960
FF	240		80°40'	+10.4°	7.0	-		-7.0		1469.2	5	-4	+240	442,282	1,471,870
612	0				5.4	-		-5.4		1470.8	π	0	0	442,286	1,471,630
613	330		260°28'	+10.6°	11.8	-		-11.8		1464.4		+6	-330	442,292	1,471,300
614	660		" "	+10.6°	8.9	-		-8.9		1467.3		+12	-660	442,298	1,470,970
615	990		" "	+10.6°	6.1	-		-6.1		1470.1		+18	-990	442,304	1,470,640
616	1320		" "	+10.6°	0.7	TH	+6.6	+5.9		1482.1		+25	-1320	442,311	1,470,310
617	1650		" "	+10.6°	2.3	TH	+8.3	+6.0		1482.2		+31	-1650	442,317	1,469,980
618	1980		" "	+10.6°	4.0	TH	+9.9	+5.9		1482.1		+37	-1980	442,323	1,469,650

442,275, 1,471,880(s)
4-way Intersect.
E.I. 1469

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE		
4/3/79		G. Cotcamp		R. Hulsey		587		R. Hulsey			1		46		
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Oklahoma		Hollis 15'		Oklahoma		Harmon		1 N		24 & 25 W				L.D. 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
									1476.2						
619	2310		260° 28'	+10.6°	2.5	TH	+11.6	+9.1		1485.3		+43	-2310	442,329	1,469,320
620	2640		260° 28'	+10.6°	13.5	89° 36'	+23.0	+9.5	+9.6	1485.8	TP	+49	-2640	442,335	1,468,990
620	2640				14.9	89° 28'	+24.6	+9.7			TP				
	2640		80° 21.5' +180°	+10.6°	+5.5	90° 30'	+23.0	+28.5	1514.3		BS	+44	-2640		
	2640				+14.6	90° 18'	+13.8	+28.4			BS				
621	2310		80° 21.5'	+10.6°	7.4	90° 30'	-20.2	-27.6		1486.7		-39	+2310	442,340	1,468,660
622	1980		" "	+10.6°	9.2	90° 30'	-17.3	-26.5		1487.8		-33	+1980	442,346	1,468,330
623	1650		" "	+10.6°	8.9	90° 30'	-14.4	-23.3		1491.0		-28	+1650	442,351	1,468,000
624	1320		" "	+10.6°	11.7	BH	-6.6	-18.3		1496.0		-22	+1320	442,357	1,467,670
625	990		" "	+10.6°	9.2	BH	-5.0	-14.2		1500.1		-17	+990	442,362	1,467,340
626	660		" "	+10.6°	10.7	-		-10.7		1503.6		-11	+660	442,368	1,467,010
627	530		" "	+10.6°	8.4	-		-8.4		1505.9		-6	+330	442,373	1,466,680
627	270		81° 36'	+10.6°	6.1	-		-6.1		1508.2		-10	+270	442,369	1,466,620
628	0				5.4	-		-5.4		1508.9	TP	0	0	442,379	1,466,350
629	330		260° 9.1'	+10.6°	4.3	-		-4.3		1510.0		+4	-330	442,383	1,466,020
630	660		" "	+10.6°	0.6	-		-0.6		1513.7		+9	-660	442,388	1,465,690
631	990		" "	+10.6°	4.9	89° 30'	+8.6	+3.7		1518.0		+13	-990	442,392	1,465,360
632	1320		" "	+10.6°	4.9	89° 30'	+11.5	+6.6		1520.9		+17	-1320	442,396	1,465,030
633	1650		" "	+10.6°	5.3	89° 30'	+14.4	+9.1		1523.4		+22	-1650	442,401	1,464,700
634	1980		" "	+10.6°	6.8	89° 30'	+17.3	+10.5		1524.8		+26	-1980	442,405	1,464,370

↑
R 24 W
442,370 + 1,466,615(s)
4-Way Intersect.
(Route #5) El. 1509

DATE 4/3/79	INSTRUMENT MAN G. Catcamp	ROD MAN R. Hulsey	PARTY NUMBER 2224	NOTES CHECKED BY R. Hulsey	LINE NO. 1	PAGE 47
AREA Oklahoma	TOPO MAP Hollis 15'	STATE Oklahoma	COUNTY Murray	TWP 1 N	RANGE 25 W	PPM
				PARTY MANAGER L. J. 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	
									1514.3							
635	2310		260° 9.1'	+10.6°	8.4	89° 30'	+20.2	+11.8		1526.1		+30	-2310	442,409	1,464,040	
636	2640		260° 9.1'	+10.6°	10.3	89° 30'	+23.0	+12.7	+12.8	1527.1	TP	+35	-2640	442,414	1,463,710	
636	2640				14.7	89° 24'	+27.6	+12.9			TP					
	2640		79° 49.1' + 130°	+10.6°	+3.9	-		+3.9	1530.9	+3.8	BS	+19	-2640			
	2640				+14.9	89° 46'	-10.7	+3.7			BS					
637	2310		79° 49.1'	+10.6°	3.2	-		-3.2		1527.7		-17	+2310	442,416	1,463,380	
638	1980		" "	+10.6°	2.9	-		-2.9		1528.0		-14	+1980	442,419	1,463,050	
639	1650		" "	+10.6°	3.0	-		-3.0		1527.9		-12	+1650	442,421	1,462,720	
640	1320		" "	+10.6°	3.5	-		-3.5		1527.4		-10	+1320	442,423	1,462,390	
641	990		" "	+10.6°	4.0	-		-4.0		1526.9		-7	+990	442,426	1,462,060	
642	660		" "	+10.6°	4.5	-		-4.5		1526.4		-5	+660	442,428	1,461,730	
643	330		" "	+10.6°	5.1	-		-5.1		1525.8		-2	+330	442,431	1,461,400	
4	261		80° 51'	+10.6°	4.3	-		-4.3		1526.6	π	-7	+261	442,426	1,461,331	4-Way Intersect. E1, 1526
644	0				5.4	-		-5.4		1525.5	π	0	0	442,433	1,461,070	
645	330		260° 8.8'	+10.6°	4.7	-		-4.7		1526.2		+4	-330	442,437	1,460,740	
646	660		" "	+10.6°	2.3	-		-2.3		1528.6		+9	-660	442,442	1,460,410	
647	990		" "	+10.6°	4.9	TH	+5.0	+0.1		1531.0		+13	-990	442,446	1,460,080	
648	1320		" "	+10.6°	5.5	TH	+6.6	+1.1		1532.0		+17	-1320	442,450	1,459,750	
649	1650		" "	+10.6°	6.4	TH	+8.3	+1.9		1532.8		+22	-1650	442,455	1,459,420	
650	1980		" "	+10.6°	8.0	TH	+9.9	+1.9		1532.8		+26	-1980	442,459	1,459,090	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE							
4/3/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		2		48							
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER					
Oklahoma		Hollis 15'		Oklahoma		Harmon		1N		25 W				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				
									1530.9										
651	2310		260° 8.8'	+10.6°	10.6	TH	+11.6	+1.0		1531.9		+30	-2310	442,463	1,458,760				
652	2640		260° 8.8'	+10.6°	12.1	TH	+13.2	+1.1		1532.0	π	+34	-2640	442,467	1,458,430				
652	2640				14.4	89° 40'	+15.4	+1.0			π								
	2640		80° 45' + 180°	+10.6°	+7.9	BH	+13.2	+21.1	1553.1		BS	+62	-2639						
	2640				+14.8	90° 8'	+6.2	+21.0			BS								
653	2310		80° 45'	+10.6°	8.3	BH	-11.6	-19.9		1533.2		-54	+2309	442,475	1,458,100				
654	1980		" "	+10.6°	7.0	BH	-9.9	-16.9		1536.2		-47	+1979	442,482	1,457,770				
655	1650		" "	+10.6°	7.1	BH	-8.3	-15.4		1537.7		-39	+1150	442,490	1,457,441				
656	1320		" "	+10.6°	13.0	-		-13.0		1540.1		-31	+1320	442,498	1,457,111				
657	990		" "	+10.6°	10.0	-		-10.0		1543.1		-23	+990	442,506	1,456,781				
658	660		" "	+10.6°	8.7	-		-8.7		1544.4		-16	+660	442,513	1,456,451				
659	330		" "	+10.6°	7.8	-		-7.8		1545.3		-8	+330	442,521	1,456,121				
660	285		81° 58'	+10.6°	7.2	-		-7.2		1545.9	-	-13	+285	442,516	1,456,076			4-way Intersect. El. 1547	
660	0				5.4	-		-5.4		1547.7	π	0	0	442,529	1,455,791				
661	330		260° 20.1'	+10.6°	3.6	-		-3.6		1549.5		+5	-330	442,534	1,455,461				
662	660		" "	+10.6°	1.9	-		-1.9		1551.2		+11	-660	442,540	1,455,131				
663	990		" "	+10.6°	2.5	TH	+5.0	+2.5		1555.6		+16	-990	442,545	1,454,801				
664	1320		" "	+10.6°	4.1	89° 30'	+11.5	+7.4		1560.5		+22	-1320	442,551	1,454,471				
665	1650		" "	+10.6°	4.1	89° 30'	+14.4	+10.3		1563.4		+27	-1650	442,556	1,454,141				
666	1980		" "	+10.6°	5.1	89° 30'	+17.3	+12.2		1565.3		+32	-1980	442,561	1,453,811				

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4/3/79		G. Cotcamp		R. Hulsey		6837		R. Hulsey				49			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Oklahoma		Hollis 15'		Oklahoma		Harmon		1N		25W				L.O. Paris	
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 -	EAST + WEST -		Y
									1553.1						
667	2310		260°20.1'	+10.6°	6.5	89°30'	+20.2	+13.7		1566.8		+38	-2310	442,567	1,453,481
668	2640		260°20.1'	+10.6°	6.1	89°30'	+23.0	+16.9	+17.1	1570.2	TP	+43	-2640	442,572	1,453,151
668	2640				15.0	89°18'	+32.3	+17.3			TP				
	1650		80°39.5'+180°	+10.6°	+10.7	BH	+8.3	+19.0	1589.1	+18.9	BS	+36	-1650		
	1650				+14.0	90°10'	+4.8	+18.8			BS				
669	1320		80°39.5'	+10.6°	9.0	BH	-6.6	-15.6		1573.5		-29	+1320	442,579	1,452,821
670	990		" "	+10.6°	12.0	-		-12.0		1577.1		-22	+990	442,586	1,452,491
671	660		" "	+10.6°	9.7	-		-9.7		1579.4		-14	+660	442,594	1,452,161
672	330		" "	+10.6°	7.8	-		-7.8		1581.3		-7	+330	442,601	1,451,831
673	0				5.4	-		-5.4		1583.7	X	0	0	442,608	1,451,501
674	330		259°53.5'	+10.6°	2.2	-		-2.2		1586.9		+3	-330	442,611	1,451,171
675	660		" "	+10.6°	2.4	TH	+3.3	+0.9		1590.0		+6	-660	442,614	1,450,841
FF	715		259°59'	+10.6°	2.8	TH	+3.6	+0.8		1589.9	-	+7	-715	442,615	1,450,786
676	990		259°53.8'	+10.6°	1.6	TH	+5.0	+3.4		1592.5		+9	-990	442,617	1,450,511
677	1320		" "	+10.6°	4.1	89°30'	+11.5	+7.4		1596.5		+11	-1320	442,619	1,450,181
△	1570		259°6.7'	+10.6°	14.2	89°-	+27.4	+13.2		1602.3	-	-8	-1570	442,600	1,449,931
678	1650		259°53.8'	+10.6°	14.5	89°10'	+24.0	+9.5		1598.6	TP	+14	-1650	442,622	1,449,851
678	1650				9.7	89°20'	+19.2	+9.5			TP				

442,620+1,450,780(s)
7-Way Intersect. El. 1589

U.S.C+G.S. Tri-station
"Campbell 2, 1967"
no coordinates available

DATE 4/4/79		INSTRUMENT MAN R. Hulsey		ROD MAN G. Cotcamp		PARTY NUMBER 6834		NOTES CHECKED BY R. Hulsey		LINE NO. 1	PAGE 51 of 51					
AREA Oklahoma		TOPO MAP Hollis 15'		STATE Oklahoma	COUNTY Harmon		TWP 1 N	RANGE 25 W	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.		Y	X
									1547.2							
690	325		250° 50.5'	+10.6°	10.5	-		-10.5		1536.7	TP	-48	-321	442,640	1,445,961	E.O.L. Shooting across curve
690	325				8.9	BH	-1.6	-10.5			TP					
	325		250° 50.5' + 180°	+10.6°	+10.5	-		+10.5	1547.2		BS	+48	+321			
	325				+8.9	BH	+1.6	+10.5			BS					Vertical + horizontal
689	0				5.4	-		-5.4		1541.8	TP	0	0	442,688	1,446,282	Traverse from sta.
688	332		55° 18.1'	+10.6°	1.1	87° 30'	+14.5	+13.4			TP	+136	+303	442,824	1,446,585	690 E.O.L. To
688	332				2.1	87° 20'	+15.4	+13.3		1560.5	TP					Tri-station Campbell?
	328		254° 29.7' - 180°	+10.6°	+10.2	-		+10.2			BS	+28	+327			
	328				+8.5	BH	+1.6	+10.1	1570.6		BS					
687	0				5.4	-		-5.4		1565.2	TP	0	0	442,852	1,446,912	
683	1320		79° 26.2'	+10.6°	12.4	90° 30'	-11.5	-23.9			TP	-1	+1320	442,851	1,448,232	
683	1320				8.6	90° 40'	-15.4	-24.0		1546.6	TP					
	660		276° 32.8' - 180°	+10.6°	+11.6	90° 50'	+9.6	+21.2	1567.8		BS	-195	+631			
	660				+13.5	90° 40'	+7.7	+21.2			BS					
681	0				5.4	-		-5.4		1562.4	TP	0	0	442,656	1,448,863	442,600 + 1,449,931
Δ	1080	1079	82° 27.5'	+10.6°	15.0	87° 22'	+49.6	+34.6				-58	+1077	442,598	1,449,940	Tri-station el. 1602.3
Δ	1080				14.4	87° 29'	+48.9	+34.5		1602.3						