

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc. Client-COCORP

DATE 4/26/79	INSTRUMENT MAN <i>R. Hulsey</i>	ROD MAN <i>G. Cotcamp</i>	PARTY NUMBER <i>6834</i>	NOTES CHECKED BY <i>R. Hulsey</i>	LINE NO. 4	PAGE 1 of 26
AREA OKLAHOMA	TOPO MAP <i>Quanah 15'</i>	STATE <i>Oklahoma</i>	COUNTY <i>Jackson</i>	TWP <i>2 S</i>	RANGE <i>23 W</i>	PPM
					PARTY MANAGER <i>L. O. Davis</i>	

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	
				+10°48'						1430.0				389,275	1,511,035	instrument. wild T/A chaining 330' cable + steel arrows
<i>R</i>	2080		170° 21.6'	+10.8'	14.9	89°10'	-30.2	-15.3	1414.7		R	+2080	+42			→ scaled R
<i>R</i>	2080		+180°		10.0	89°18'	-25.4	-15.4			R					Take-off int. 90° bend el. 1430.
1	1980		170° 13'	+10.8'	4.7	89°30'	+17.3	+12.6		1427.3		-1980	-35	389,375	1,511,042	
2	1650		" "	"	1.8	TH	+8.3	+6.5		1421.2		-1650	-29	389,705	1,511,048	
3	1320		" "	"	2.5	TH	+6.6	+4.1		1418.8		-1320	-23	390,035	1,511,054	
4	990		" "	"	4.0	TH	+5.0	+1.0		1415.7		-990	-18	390,365	1,511,059	
5	660		" "	"	0.8	+ -		-0.8		1413.9		-660	-12	390,695	1,511,065	
6	330		" "	"	3.1	-		-3.1		1411.6		-330	-6	391,025	1,511,071	
7	0		" "	"	5.4	-		-5.4		1409.3	TP	0	0	391,355	1,511,077	
8	330		350° 22.5'	+10.8'	8.3	-		-8.3		1406.4		+330	+7	391,685	1,511,084	
9	660		" "	"	11.8	-		-11.8		1402.9		+660	+14	392,015	1,511,091	
10	990		" "	"	12.4	-		-12.4		1402.3		+990	+20	392,345	1,511,097	
11	1320		" "	"	12.4	-		-12.4		1402.3		+1320	+27	392,675	1,511,104	
12	1650		350° 22.5'	+10.8'	13.7	-		-13.7		1401.0	TP	+1650	+34	393,005	1,511,111	
12	1650		" "	"	5.5	BH	-8.3	-13.8			TP					
	1320		170° 13.7'+180°	+10.8'	+4.4	-		+4.4			BS	+1320	+24			
	1320		" "	"	+10.9	TH	-6.6	+4.3	1405.3		BS					
13	990		170° 13.7'	+10.8'	9.4	-		-9.4		1395.9		-990	-18	393,335	1,511,117	
14	660		" "	"	13.4	-		-13.4		1391.9		-660	-12	393,665	1,511,123	
15	330		" "	"	5.7	-		-5.7		1399.6		-330	-6	393,995	1,511,129	

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DATE 4-26-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 4	PAGE 2
AREA Oklahoma	TOPO MAP Quarah 15'	STATE Oklahoma	COUNTY Jackson	TWP 2S	RANGE 23W	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
									1405.3						
16	0				5.4	-		-5.4		1399.9	π	0	0	394,325	1,511,135
17	225		347° 39'	+10.8°	6.5	-		-6.5		1398.8		+225	-6	394,550	1,511,129
17	330		349° 55.1	+10.8°	8.6	-		-8.6		1396.7		+330	+4	394,655	1,511,139
18	660		" "	"	13.0	90° 30'	-5.8	-18.8		1386.5		+660	+8	394,985	1,511,143
19	990		" "	"	11.1	90° 50'	-14.4	-25.5		1379.8		+990	+12	395,315	1,511,147
20	1320		" "	"	12.0	90° 40'	-15.4	-27.4		1377.9		+1320	+17	395,645	1,511,152
20	1440		349° 42'	+10.8°	11.1	90° 40'	-16.7	-27.8		1377.5		+1440	+13	395,765	1,511,148
21	1650		349° 55.1'	+10.8°	10.2	90° 40'	-19.2	-29.4			TP	+1650	+21	395,975	1,511,156
21	1650				5.5	90° 50'	-24.0	-29.5		1375.8	TP				
	1650		169° 59.8' + 180°	+10.8°	+9.7	BH	+8.3	+18.0	1393.8		BS	+1650	+23		
	1650				+13.2	90° 10'	+4.8	+18.0			BS				
22	1320		169° 59.8'	+10.8°	11.1	BH	-6.6	-17.7		1376.1		-1320	-18	396,305	1,511,161
23	990		" "	"	11.2	BH	-5.0	-16.2		1377.6		-990	-14	396,635	1,511,165
24	660		" "	"	13.0	-		-13.0		1380.8		-660	-9	396,965	1,511,170
25	330		" "	"	10.5	-		-10.5		1383.3		-330	-5	397,295	1,511,174
26	0				5.4	-		-5.4		1388.4	π	0	0	397,625	1,511,179
27	330		350° 27.8'	+10.8°	5.3	-		-5.3		1388.5		+330	+7	397,955	1,511,186
28	660		" "	"	3.0	-		-3.0		1390.8		+660	+15	398,285	1,511,194
29	990		" "	"	3.4	88° 56'	+20.2	+16.8		1410.6		+990	+22	398,615	1,511,201
30	1320														

394,555 = 1,511,130(s)
T-rd (west) el. 1399.

SURVEY NOTES-HIGH RESOLUTION DATA

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DATE 4-26-79	INSTRUMENT MAN R. Hulsey		ROD MAN G. Cotcamp		PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey		LINE NO. 4	PAGE 3
AREA Oklahoma	TOPO MAP Quanah 15'	STATE Oklahoma	COUNTY Jackson	TWP 1/2 S	RANGE 23 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 TP	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS
												LAT.	DEP.	Y	X			
									1393.8									
30	1320		350° 27.8'	+10.8°	2.3	88° 10'	+42.2	+39.9	1398	1433.6	TP	+1320	+29	398,945	1,511,208			
30	1320				6.3	88° 00'	+46.0	+39.7			TP							
	1320		170° 35.6' ± 180°	+10.8°	+10.6	89° 10'	-19.2	-8.6	1425.0		BS	+1320	+32					
	1320				+14.5	89°	-23.0	-8.5			BS							
31	990		170° 35.6'	+10.8°	2.0	89° 20'	+11.5	+9.5		1434.5		-990	-24	399,275	1,511,216			↑
32	660		" "	"	4.1	89° 30'	+5.8	+1.7		1426.7		-660	-16	399,605	1,511,224			T 2 S
32	460		171° 20'	+10.8°	1.8	-	-	-1.8		1423.2		-460	-17	399,805	1,511,223			399,810 + 1,511,220(s) 4-Way Intersect. 1922
33	330		170° 35.6'	+10.8°	4.3	-	-	-4.3		1420.7		-330	-8	399,935	1,511,232			T 1 S
34	0				5.4	-	-	-5.4		1419.6	TP	0	0	400,265	1,511,240			↓
35	330		350° 42.3'	+10.8°	7.0	-	-	-7.0		1418.0		+330	+9	400,595	1,511,249			361.505
36	660		" "	"	11.9	-	-	-11.9		1413.1		+660	+17	400,925	1,511,257			
37	990		" "	"	11.6	BH	-5.0	-16.6		1408.4		+990	+26	401,255	1,511,266			
38	1320		" "	"	12.8	-	-	-12.8		1412.2		+1320	+35	401,585	1,511,275			
39	1650		350° 42.3'	+10.8°	5.6	-	-	-5.0	14.9	1420.1	TP	+1649	+43	401,914	1,511,283			
39	1650				13.1	TH	+8.3	-4.8			TP							
	2640		170° 19' ± 180°	+10.8°	+11.7	-	-	+11.7		1431.8		+2639	+51					
	2640				+14.9	89° 56'	-3.1	+11.8			BS							
40	2310		170° 19'	+10.8°	10.4	-	-	-10.4		1421.4		-2310	-45	402,243	1,511,289			
41	1980		" "	"	9.7	-	-	-9.7		1422.1		-1980	-39	402,573	1,511,295			
42	1650		" "	"	8.3	-	-	-8.3		1423.5		-1650	-32	402,903	1,511,302			

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE 4/28/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 4	PAGE 4
AREA Oklahoma	TOPO MAP Quanah 15'	STATE Oklahoma	COUNTY Jackson	TWP 1 S	RANGE 23 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.	
									1431.8					
43	1320		170° 19'	+10.8°	10.1	-		-10.1		1421.7		-1320	-26	403,233 1,511,308
44	990		" "	"	5.4	-		-5.4		1426.4		-990	-19	403,563 1,511,315
45	660		" "	"	7.8	-		-7.8		1424.0		-660	-13	403,893 1,511,321
46	330		" "	"	10.6	91° -	-5.8	-16.4		1415.4		-330	-6	404,223 1,511,328
47	0				5.4	-		-5.4		1426.4	T	0	0	404,553 1,511,334
48	330		350° 10.6'	+10.8°	0.6	TH	+1.7	+1.1		1432.9		+330	+6	404,883 1,511,340
48	490		349° 15'	+10.8°	3.0	TH	+2.5	-0.5		1431.3		+490	0	405,043 1,511,334
49	660		350° 10.6'	+10.8°	3.2	TH	+3.3	+0.1		1431.9		+660	+11	405,213 1,511,345
50	990		" "	" "	1.1	TH	+5.0	+3.9		1435.7		+990	+17	405,543 1,511,351
51	1320		" "	" "	5.0	89° 30'	+11.5	+6.5		1438.3		+1320	+22	405,873 1,511,356
52	1650		" "	" "	6.2	89° 30'	+14.4	+8.2		1440.0		+1650	+28	406,203 1,511,362
53	1980		" "	" "	6.1	89° 30'	+17.3	+11.2		1443.0		+1980	+34	406,533 1,511,368
54	2310		" "	" "	6.0	89° 30'	+20.2	+14.2		1446.0		+2310	+39	406,863 1,511,373
55	2640		350° 10.6'	+10.4°	5.8	89° 30'	+23.0	+17.2	+17.3	1449.1	TP	+2640	+27	407,193 1,511,361
55	2640				14.9	89° 18'	+32.3	+17.4			TP			
	2640		170° 5' + 180°	+10.4°	+14.0	90° 16'	+12.3	+26.3	+17.3	1475.4	BS	+2640	+22	
	2640				+14.9	90° 15'	+11.5	+26.4			BS			
56	2310		170° 5'	+10.4°	12.3	90° 18'	-12.1	-24.4		1451.0		-2310	-19	407,523 1,511,364
57	1980		" "	"	12.2	90° 14'	-8.1	-20.3		1455.1		-1980	-17	407,853 1,511,366
58	1650		" "	"	9.8	90° 12'	-5.8	-15.6		1459.8		-1650	-14	408,183 1,511,369

405,010 + 1,511,330(s)
4-Way Intersect El. 1429

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE 4/28/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 5839	NOTES CHECKED BY R. Hulsey	LINE NO. 4	PAGE 5
AREA Oklahoma	TOPO MAP Quannah 15'	STATE Oklahoma	COUNTY Jackson	TWP 1 S	RANGE 23 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.	
									1475.4					
59	1320		170° 5'	+10.4°	10.5	-		-10.5		1464.9		-1320	-11	408,513 1,511,372
60	990		" "	"	6.1	-		-6.1		1469.3		-990	-8	408,843 1,511,375
61	660		" "	"	3.6	-		-3.6		1471.8		-660	-6	409,173 1,511,377
62	330		" "	"	3.7	-		-3.7		1471.7		-330	-3	409,503 1,511,380
63	0				5.4	-		-5.4		1470.0	X	0	0	409,833 1,511,383
64	330		349° 56.9'	+10.4°	5.2	-		-5.2		1470.2		+330	+2	410,163 1,511,385
64	484		349° 57.3'	+10.4°	4.2	-		-4.2		1471.2		+484	+3	410,317 1,511,386 4-Way Intersect. El. 1469
65	660		349° 56.9'	+10.4°	3.7	-		-3.7		1471.7		+660	+4	410,493 1,511,387
66	990		" "	"	10.0	-		-10.0		1465.4		+990	+6	410,823 1,511,389
67	1320		" "	"	11.7	BH	-6.6	-18.5		1456.9		+1320	+8	411,153 1,511,391
68	1650		" "	"	9.3	BH	-8.3	-17.6		1457.8		+1650	+10	411,483 1,511,393
69	1980		" "	"	11.6	-		-11.6		1463.8		+1980	+12	411,813 1,511,395
70	2310		" "	"	6.1	-		-6.1		1469.3		+2310	+14	412,143 1,511,397
71	2140		349° 56.9'	-10.4°	1.9	-		-1.9		1473.5	TP	+2640	+16	412,473 1,511,399
71	2640				15.1	TH	+13.2	-1.9			TP			
	1980		169° 54.2' +180°	+10.4°	+13.3	BH	+9.9	+23.2	1496.7		BS	+1980	+10	
	1980				+14.0	90° 16'	+9.2	+23.2			BS			
72	1650		169° 54.2'	+10.4°	11.8	BH	-8.3	-20.1		1476.6		-1650	-9	412,803 1,511,400
73	1320		" "	"	7.9	BH	-6.6	-14.5		1482.2		-1320	-7	413,133 1,511,402
74	990		" "	"	9.8	-		-9.8		1486.9		-990	-5	413,463 1,511,404

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE 4/28/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 4	PAGE 6
AREA Oklahoma	TOPO MAP Owens 15'	STATE Oklahoma	COUNTY Jackson	TWP 1 S	RANGE 23 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.	
									1496.7					
75	660		169°54.2'	+10.4°	7.8	-		-7.8		1488.9		-660	-3	413,793 1,511,406
76	330		" "	" "	6.3	-		-6.3		1490.4		-330	-2	414,123 1,511,407
77	0				5.4	-		-5.4		1491.3	TP	0	0	414,453 1,511,409
78	330		350°38'	+10.4°	13.7	91°-	-5.8	-19.5		1477.2		+330	+3	414,783 1,511,412
79	660		" "	" "	12.8	91°-	-11.5	-24.3		1472.4		+660	+5	415,113 1,511,414
80	990		" "	" "	4.0	91°-	-17.3	-21.3		1475.4		+990	+8	415,443 1,511,417
IF	1152		350°6.5'	+10.4°	13.0	BH	-5.8	-18.8		1477.9		+1152	+10	415,605 1,511,419 4-way Intersect
81	1320		350°3.8'	+10.4°	10.8	BH	-6.6	-17.4		1479.3		+1320	+11	415,773 1,511,420
82	1650		" "	" "	6.8	BH	-8.3	-15.1		1481.6		+1650	+13	416,103 1,511,422
83	1980		350°3.8'	+10.4°	13.1	-		-13.1		1483.6	TP	+1980	+16	416,433 1,511,425
83	1980				3.2	BH	-9.9	-13.1			TP			
	2640		169°52'+180°	+10.4°	8.2	-		+8.2	1491.8		BS	+2640	+12	
	2640				+14.5	82°52'	-6.2	+8.3			BS			
84	2310		169°52'	+10.4°	9.5	-		-9.5		1482.3		-2310	-11	416,763 1,511,426
85	1980		" "	" "	10.8	-		-10.8		1481.0		-1980	-9	417,093 1,511,428
86	1650		" "	" "	7.8	-		-7.8		1484.0		-1650	-8	417,423 1,511,429
87	1320		" "	" "	5.3	-		-5.3		1486.5		-1320	-6	417,753 1,511,431
88	990		" "	" "	6.1	-		-6.1		1485.7		-990	-5	418,083 1,511,432
89	660		" "	" "	5.3	-		-5.3		1486.5		-660	-3	418,413 1,511,434
90	330		" "	" "	5.9	-		-5.9		1485.9		-330	-2	418,743 1,511,435

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE	4/28/79	INSTRUMENT MAN	G. Catcamp	ROD MAN	R. Hulsey	PARTY NUMBER	6837	NOTES CHECKED BY	R. Hulsey	LINE NO.	4	PAGE	7	
AREA	Oklahoma	TOPO MAP	Quarah 15'	STATE	Oklahoma	COUNTY	Jackson	TWP	1 S	RANGE	23 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	
									1491.8							
91	0				5.4	-		-5.4		1486.4	π	0	0	419,073	1,511,437	
92	330		349°56.3'	+10.4°	2.5	-		-2.5		1489.3		+330	+2	419,403	1,511,439	
93	660		" "	"	5.0	-		-5.0		1486.8		+660	+4	419,733	1,511,441	
94	990		" "	"	5.0	-		-5.0		1486.8		+990	+6	420,063	1,511,443	
95	1320		" "	"	5.0	-		-5.0		1486.8		+1320	+8	420,393	1,511,445	
96	1650		" "	"	5.2	-		-5.2		1486.6		+1650	+10	420,723	1,511,447	
#	1830		349°41.3'	+10.4°	4.1	-		-4.1		1487.7		+1830	+3	420,903	1,511,440	4-Way Intersect. El. 1487
97	1980		349°56.3'	+10.4°	5.2	-		-5.2		1486.6		+1980	+12	421,053	1,511,449	
98	2310		" "	"	5.1	-		-5.1		1486.7		+2310	+14	421,383	1,511,451	
99	2640		349°56.3'	+10.4°	5.5	-		-5.5		1486.3	TP	+2640	+16	421,713	1,511,453	
99	2640				133	89°50'	+7.7	-5.6			TP					
	2310		170°10.3'+180°	+10.4°	+100	90°4'	+2.7	+12.7	1499.0		BS	+2310	+23			
	2310				+7.3	90°8'	+5.4	+12.7			BS					
100	1980		170°10.3'	+10.4°	13.1	-		-13.1		1485.9		-1980	-20	422,043	1,511,456	
101	1650		" "	"	12.8	-		-12.8		1486.2		-1650	-16	422,373	1,511,460	
102	1320		" "	"	8.2	-		-8.2		1490.8		-1320	-13	422,703	1,511,463	
103	990		" "	"	4.8	-		-4.8		1494.2		-990	-10	423,033	1,511,466	
#	770		170°40'	+10.4°	6.0	-		-6.0		1493.0		-770	-14	423,473	1,511,462	road
104	660		170°10.3'	+10.4°	6.3	-		-6.3		1492.7		-660	-7	423,363	1,511,469	
#	660		170°56'	+10.4°	6.3	-		-6.3		1492.7		-660	-15	423,363	1,511,461	4-Way Intersect.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	4/28/79	INSTRUMENT MAN	G. Cotcamp	ROD MAN	R. Hulsey	PARTY NUMBER	6837	NOTES CHECKED BY	R. Hulsey	LINE NO.	4	PAGE	8	
AREA	Oklahoma	TOPO MAP	Quanah/Prairie Hill	STATE	7/8 Oklahoma	COUNTY	Jackson	TWP	1 S	RANGE	23 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.	
									1499.0					
105	330		170° 10.3'	+10.4°	5.9	-		-5.9		1493.1		-330	-3	423,693 1,511,473
106	0				54	-		-5.4		1493.6	TP	0	0	424,023 1,511,476
107	330		350° 17.2'	+10.4°	10.8	-		-10.8		1488.2		+330	+4	424,353 1,511,480
108	660		" "	"	12.8	-		-12.8		1486.2		+660	+8	424,683 1,511,484
109	990		" "	"	13.8	-		-13.8		1485.2		+990	+12	425,013 1,511,488
110	1320		" "	"	15.6	BH	-6.6	-17.2		1481.8		+1320	+16	425,343 1,511,492
111	1650		" "	"	15.9	BH	-8.3	-19.2		1479.8		+1650	+20	425,673 1,511,496
112	1980		" "	"	9.7	BH	-9.9	-19.6		1479.4		+1980	+24	426,003 1,511,500
112	2160		350° 8.3'	+10.4°	8.1	BH	-10.8	-18.9		1480.1		+2160	+20	426,183 1,511,496
113	2310		350° 17.2'	+10.7°	14.2	90° 10'	-6.7	-20.9	-20.0	1479.0	TP	+2310	+40	426,333 1,511,516
113	2310				9.5	BH	-11.6	-21.1			TP			
	2310		170° 10.9' + 180°	+10.7°	+13.2	-		+13.2		1492.2	BS	+2310	+36	
	2310				+1.6	BH	+11.6	+13.2			BS			
114	1980		170° 10.9'	+10.7°	5.0	BH	-9.9	-14.9		1477.3		-1980	-30	426,463 1,511,522
115	1650		" "	"	5.9	BH	-8.3	-14.2		1478.0		-1650	-25	426,993 1,511,527
116	1320		" "	"	13.8	-		-13.8		1478.4		-1320	-20	427,323 1,511,532
117	990		" "	"	11.2	-		-11.2		1481.0		-990	-15	427,653 1,511,537
118	660		" "	"	8.0	-		-8.0		1484.2		-660	-10	427,983 1,511,542
119	330		" "	"	4.5	-		-4.5		1487.7		-330	-5	428,313 1,511,547
120	0				54	-		-5.4		1486.8	TP	0	0	428,643 1,511,552

426,155 + 1,511,485 (s)
4-Way Intersect. El. 1481

↑
Quanah Quad.
Prairie Hill

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
4/28/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		4	9						
AREA		TOPO MAP		STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER								
Oklahoma		Prairie Hill 7 1/2		Oklahoma	Jackson	1 S/N	23 W		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		
									492.2								
121	330		350° 21.2'	+10.7°	12.1			-12.1		1480.1		+330	+6	428,973	1,511,558		
122	660		" "		12.7			-12.7		1479.5		+660	+12	429,303	1,511,564		
123	990				10.4			-10.4		1481.8		+990	+18	429,633	1,511,570		
124	1320				12.0			-12.0		1480.2		+1320	+24	429,963	1,511,576		
125	1650				9.8			-9.8		1482.4		+1650	+30	430,293	1,511,582		
126	1980				4.3			-4.3		1487.9		+1980	+36	430,623	1,511,588	↑	
127	2310		350° 21.2'	+10.7°	3.6			-3.6		1488.6		+2310	+42	430,953	1,511,594	T 1 S	
TP	2387		350° 5.1'	+10.7°	3.2	-		-3.2			TP	+2387	+33	431,030	1,511,585	431,025 + 1,511,600 (S) T-intersect. el. 1487	
TP	2387				14.4	89° 44'	+11.1	-3.3		1488.9	TP						
	680		260° 38.1' - 180°	+10.5°	+12.4	0H	+3.4	+15.8			BS	-13	+680				
	680				+13.9	90° 10'	+2.0	+15.9	1504.8		BS						
⊥	0				5.4	-		-5.4		1499.4	⊥	○	○	431,017	1,512,265		
⊥	1620		80° 6'	+10.5°	13.4	90° 4'	-1.9	-15.3			TP	-17	+1620	431,000	1,513,865	431,015 + 1,513,910 (S) T-intersect. El. 1491	
⊥	1620				14.3	90° 2'	-0.9	-15.2		1489.6	TP					T 1 N	
	913		170° 5.1' - 180°	+10.8°	+6.8	91° -	+15.9	+22.7	1512.3		BS	+913-3	+14			↓	
	913				+14.7	90° 30'	+8.0	+22.7			BS						
128	660		169° 32'	+10.8°	5.4	91° -	-11.5	-16.9		1495.4		-660	-4	431,250	1,513,895		
129	330		" "	" "	6.9	-		-6.9		1505.4		-330	-2	431,580	1,513,897		
130	0				5.4	-		-5.4		1506.9	⊥	○	○	431,910	1,513,899		
131	330		350° 17.8'	+10.8°	12.7	91° -	-5.8	-18.5		1493.8		+330	+6	432,240	1,513,905		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	5/1/79	INSTRUMENT MAN	C. Cotcamp	ROD MAN	R. Hulsey	PARTY NUMBER	6834	NOTES CHECKED BY	R. Hulsey	LINE NO.	4	PAGE	10
AREA	Oklahoma	TOPO MAP	Prairie Hill	STATE	Oklahoma	COUNTY	Jackson	TWP	1 N	RANGE	23 W	PPM	
												PARTY MANAGER	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.	
									1512.3					
132	660		350° 17.8'	+10.8°	5.2	91°-	-11.5	-16.7		1495.6		+660	+13	432,570 1,513,912
133	990		" "	" "	7.8	91°-	-17.3	-25.1		1487.2		+990	+19	432,900 1,513,918
134	1320		" "	" "	2.4	91°-	-23.0	-25.4		1486.9		+1320	+25	433,230 1,513,924
135	1650		350° 17.8'	+10.8°	9.3	BH	-8.3	-17.6	-17.5	1494.8	TP	+1650-3	+32	433,557 1,513,931
135	1650				14.5	90°6'	-2.9	-17.4			TP			
	1980		170° 21' +180°	+10.8°	+8.2	TH	-9.9	-1.7	1493.1		BS	+1980-3	+40	
	1980				+4.1	89°50'	+5.8	-1.7			BS			
136	1650		170° 21'	+10.8°	1.3	-		-1.3		1491.8		-1650	-33	433,884 1,513,938
137	1320		" "	" "	5.4	-		-5.4		1487.7		-1320	-26	434,214 1,513,945
138	990		" "	" "	10.3	-		-10.3		1482.8		-990	-20	434,544 1,513,951
139	660		" "	" "	12.4	-		-12.4		1480.7		-660	-13	434,874 1,513,958
140	330		" "	" "	8.0	-		-8.0		1485.1		-330	-7	435,204 1,513,964
141	0				5.4	-		-5.4		1487.7	TP	0	0	435,534 1,513,971
142	330		349° 48.8'	+10.8°	9.8	-		-9.8		1483.3		+330	+4	435,864 1,513,975
143	660		" "	" "	6.2	-		-6.2		1486.9		+660	+7	436,194 1,513,978
143	740		349° 19'	+10.8°	6.8	-		-6.8		1486.3		+740	+2	436,274 1,513,973
144	990		349° 48.8'	+10.8°	9.1	-		-9.1		1484.0		+990	+11	436,524 1,513,982
145	1320		349° 48.8'	+10.7°	5.4	-		-5.4		1487.7	TP	+1320-3	+12	436,851 1,513,983
145	1320				12.0	TH	+6.6	-5.4			TP			

436,275 + 1,513,985 (S)
4-Way Intersect El. 1485

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5/1/79	INSTRUMENT MAN G. Cotcamp		ROD MAN R. Hulsey		PARTY NUMBER 6834		NOTES CHECKED BY R. Hulsey			LINE NO. 4	PAGE 11
AREA Oklahoma	TOPO MAP Prairie Hill	STATE Oklahoma	COUNTY Jackson		TWP 1 N	RANGE 23 W	PPM	PARTY MANAGER 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	
145	2970		170° 10.2' + 180°	+10.7°	+130	89°	-51.8	-38.8		1487.7	BS	+2970	+45	436,851	1,513,983	
	2970				+60	89° 8'	-44.9	-38.9	1448.8		BS	-3				
146	2640		170° 10.2'	+10.7°	8.3	89° 10'	+38.4	+30.1		1478.9		-2640	-40	437,178	1,513,988	
147	2310		" "	" "	10.0	89° 10'	+33.6	+23.6		1472.4		-2310	-35	437,508	1,513,993	
148	1980		" "	" "	7.1	89° 10'	+28.8	+21.7		1470.5		-1980	-30	437,838	1,513,998	
149	1650		" "	" "	9.1	89° 10'	+24.0	+14.9		1463.7		-1650	-25	438,168	1,514,003	
150	1320		" "	" "	4.6	89° 30'	+11.5	+6.9		1455.7		-1320	-20	438,498	1,514,008	
151	990		" "	" "	4.2	TH	+5.0	+0.8		1449.6		-990	-15	438,828	1,514,013	
152	660		" "	" "	3.7	-	-	-3.7		1445.1		-660	-10	439,158	1,514,018	
153	330		" "	" "	4.2	-	-	-4.2		1444.6		-330	-5	439,488	1,514,023	
154	0		" "	" "	5.4	-	-	-5.4		1443.4	π	0	0	439,818	1,514,028	
155	330		350° 18.3'	+10.7°	12.0	-	-	-12.0		1436.8		+330	+6	440,148	1,514,034	
156	660		" "	" "	8.6	91°	-11.5	-20.1		1428.7		+660	+12	440,478	1,514,040	
157	990		" "	" "	9.2	91°	-17.3	-26.5		1422.3		+990	+17	440,808	1,514,045	
158	1320		" "	" "	5.2	91°	-23.0	-28.2		1420.6		+1320	+23	441,138	1,514,051	
159	1650		" "	" "	14.2	GH	-8.3	-22.5		1426.3		+1650	+29	441,468	1,514,057	
160	1740		349° 55.6'	+10.7°	12.3	GH	-8.7	-22.0		1426.8		+1740	+19	441,558	1,514,047	441,510 + 1,514,040 (s) T rd (east) E1,1426.4 Line #1 Tie
160	1980		350° 18.3'	+10.7°	12.5	90° 20'	-11.5	-24.0		1424.8		+1980	+35	441,798	1,514,063	first station pavement
161	2310		" "	" "	6.9	90° 40'	-26.9	-33.8		1415.0		+2310	+41	442,128	1,514,069	
162	2640		" "	" "	12.8	90° 40'	-30.7	-43.5		1405.3		+2640	+46	442,458	1,514,074	↓

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5/1/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 4	PAGE 12
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.	
									1448.8					
163	2970		350°18.3'	+10.7°	10.2	90°40'	-34.5	-44.7	-44.6	1404.2	TP	+2970-3	+52	442,785 1,514,080
163	2970				15.0	90°34'	-29.4	-44.4			TP			
	2310	2309	170°6'+180°	+10.7°	+146	91°10'	+47.0	+61.6	1465.8		BS	+2309-3	+32	
	2310				+5.3	91°24'	+56.4	+61.7			BS			
164	1980	1979	170°6'	+10.7°	121	91°20'	-46.1	-58.2		1407.6		-1979	-28	443,112 1,514,084
165	1650		" "	" "	8.3	91°20'	-38.4	-46.7		1419.1		-1650	-23	443,441 1,514,089
166	1320		" "	" "	8.8	91°20'	-30.7	-39.5		1426.3		-1320	-18	443,771 1,514,094
167	990		" "	" "	123	91°20'	-23.0	-35.3		1430.5		-990	-14	444,101 1,514,098
168	660		" "	" "	11.2	92°-	-23.0	-34.2		1431.6		-660	-9	444,431 1,514,103
169	330		" "	" "	13.9	91°-	-5.8	-19.7		1446.1		-330	-5	444,761 1,514,107
170	0				54	-		-5.4		1460.4	TP	0	0	445,091 1,514,112
171	330		350°23.8'	+10.7°	6.1	-		-6.1		1459.7		+330	+6	445,421 1,514,118
172	660		" "	" "	6.3	-		-6.3		1459.5		+660	+13	445,751 1,514,125
173	990		350°23.8'	+10.7°	11.6	90°30'	-8.6	-20.2		1445.6	TP	+990-3	+19	446,078 1,514,131
173	990				14.4	90°20'	-5.8	-20.2			TP			
	2310	2309	170°5.2'+180°	+10.7°	+5.1	88°40'	-53.7	-48.6	1396.9	-48.7	BS	+2309-3	+32	
	2310				+14.3	88°26'	-63.1	-48.8			BS			
174	1980	1979	170°5.2'	+10.7°	6.0	88°40'	+46.1	+40.1		1437.0		-1979	-27	446,405 1,514,136
175	1650		" "	" "	7.9	88°40'	+38.4	+30.5		1427.4		-1650	-23	446,734 1,514,140
175	1540		170°22.6'	+10.7°	6.9	88°40'	+35.8	+28.9		1425.8		-1540	-29	446,844 1,514,134

(sec. line)
E-W fence line El.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5/1/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 4	PAGE 13
AREA Oklahoma	TOPO MAP Prairie Hill 7.5'	STATE Oklahoma	COUNTY Jackson	TWP 1 N	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 TP	COORDINATES		REMARKS
												NORTH+ SOUTH- LAT.	EAST+ WEST- DEP.	
									1396.9					
176	1320		170° 5.2'	+10.7°	37	88° 40'	+30.7	+27.0		1423.9		-1320	-18	447.064 1.514.145
177	990		" "	" "	5.9	89° -	+17.3	+11.4		1408.3		-990	-14	447.394 1.514.149
178	660		" "	" "	3.3	-	-	-3.3		1393.6		-660	-9	447.724 1.514.154
179	330		" "	" "	7.7	-	-	-7.7		1389.2		-330	-5	448.054 1.514.158
≡	285		171° 27.5'	+10.7°	7.7	-	-	-7.7		1389.2		-285	-11	448.099 1.514.152 bridge
180	0				54	-	-	-5.4		1391.5	TP	0	0	448.384 1.514.163
181	330		350° 6.2'	+10.7°	2.1	-	-	-2.1		1394.8		+330	+5	448.714 1.514.168
182	660		" "	" "	2.9	89° -	+11.5	+8.6		1405.5		+660	+9	449.044 1.514.172
183	990		" "	" "	8.0	88° 30'	+25.9	+17.9		1414.8		+990	+14	449.374 1.514.177
184	1320		" "	" "	7.7	88° 30'	+34.5	+26.8		1423.7		+1320	+19	449.704 1.514.182
185	1650	1649	" "	" "	6.3	88° 30'	+43.2	+36.9		1433.8		+1649	+23	450.033 1.514.186
186	1980	1979	350° 6.2'	+10.7°	13.7	88° 30'	+51.8	+38.1			TP	+1979-3	+27	450.360 1.514.190
186	1980				16.4	88° 36'	+48.4	+38.0		1434.9	TP			
	2970		170° 18.3 + 180°	+10.7°	+14.3	-	-	+14.3			BS	+2970-2	+52	
	2970				+10.8	90° 4'	+3.4	+14.2	1449.1		BS			
187	2640		170° 18.3'	+10.7°	9.9	90° 10'	-7.7	-17.6		1431.5		-2640	-46	450.688 1.514.196
188	2310		" "	" "	13.2	90° 10'	-6.7	-19.9		1429.2		-2310	-41	451.018 1.514.201
189	1980		" "	" "	13.8	90° 10'	-5.8	-19.6		1429.5		-1980	-35	451.348 1.514.207
190	1650		" "	" "	13.4	90° 6'	-2.9	-16.3		1432.8		-1650	-29	451.678 1.514.213
191	1320		" "	" "	8.8	-	-	-8.8		1440.3		-1320	-23	452.008 1.514.219

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
5/1/79		G. Cotcamp		R. Hulsey		6834		R. Hulsey		4	14						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Oklahoma		Prairie Hill 7.5'		Oklahoma	Jackson		1 N	23 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		
									1449.1								
191	1225		170° 31.2'	+10.7°	64	-		-6.4		1442.7		-1225	-26	452.103	1.514.216	452,100 + 1,514,210 (S)	
192	990		170° 18.3'	+10.7°	6.0	-		-6.0		1443.1		-990	-17	452.338	1.514.225	4-Way Intersect. Elev. 1442	
193	660		" "	" "	7.9	-		-7.9		1441.2		-660	-12	452.668	1.514.230		
194	330		" "	" "	3.2	-		-3.2		1445.9		-330	-6	452.998	1.514.236		
195	0				5.4	-		-5.4		1443.7	X	0	0	453.328	1.514.242		
196	330		350° 18.1'	+10.7°	2.1	-		-2.1		1447.0		+330	+6	453.658	1.514.248		
197	660		" "	" "	0.0	-		-0.0		1449.1		+660	+12	453.988	1.514.254		
198	990		" "	" "	4.6	TH	+5.0	+0.4		1449.5		+990	+17	454.318	1.514.259		
199	1320		" "	" "	7.6	TH	+6.6	-1.0		1448.1		+1320	+23	454.648	1.514.265		
200	1650		" "	" "	3.8	TH	+8.3	+4.5		1453.6		+1650	+29	454.978	1.514.271		
201	1980		" "	" "	12.0	TH	+9.9	-0.1		1449.0		+1980	+35	455.308	1.514.277		
202	2310		350° 18.4'	+10.5°	5.7	TH	+11.6	+5.9		1455.0	TP	+2310-2	+33	455.636	1.514.275		
202	2310				10.2	89° 36'	+16.1	+5.9			TP						
	2970		170° 19.8 + 180°	+10.5°	+5.9	TH	-14.9	-9.0	1446.1	-8.9	BS	+2970-2	+42				
	2970				+5.0	89° 41'	-13.8	-8.8			BS						
203	2640		170° 18.8'	+10.5°	11.6	TH	+13.2	+1.6		1447.7		-2640	-37	455.964	1.514.280		
204	2310		" "	" "	6.8	-		-6.8		1439.3		-2310	-33	456.294	1.514.284		
205	1980		" "	" "	11.2	-		-11.2		1434.9		-1980	-28	456.624	1.514.289		
206	1650		" "	" "	11.9	-		-11.9		1434.2		-1650	-23	456.954	1.514.294		
207	1320		" "	" "	12.5	-		-12.5		1433.6		-1320	-19	457.284	1.514.298		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5/1/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 7	PAGE 15
AREA Oklahoma	TOPO MAP Prairie Hill 7.5	STATE Oklahoma	COUNTY Jackson	TWP 1 N	RANGE 23 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
									1446.1							
1/2	1238		170° 51'	+10.5°	11.7	-		-11.7		1434.4		-1238	-29	457,366	1,514,288	457,365 + 1,514,275(S) 4-Way Intersect. E1. 1434
208	990		170° 18.8'	+10.5°	13.5	-		-13.5		1432.6		-990	-14	457,614	1,514,303	
209	660		" "	" "	10.9	BH	-3.3	-14.2		1431.9		-660	-9	457,944	1,514,308	
210	330		" "	" "	11.2	-		-11.2		1434.9		-330	-5	458,274	1,514,312	
211	0				5.4	-		-5.4		1440.7	π	○	○	458,604	1,514,317	
212	330		350° 37.4'	+10.5°	0.1	-		-0.1		1446.0		+330	+6	458,934	1,514,323	
213	660		" "	" "	7.2	89°-	+11.5	+4.3		1450.4		+660	+13	459,264	1,514,330	
214	990		" "	" "	6.3	89°-	+17.3	+11.0		1457.1		+990	+19	459,594	1,514,336	
215	1320		" "	" "	6.9	89°-	+23.0	+16.1		1462.2		+1320	+26	459,924	1,514,343	
216	1650		" "	" "	3.0	89°-	+28.8	+25.8		1471.9		+1650	+32	460,254	1,514,349	
217	1980		" "	" "	5.1	89°-	+34.6	+29.5		1475.6		+1980	+39	460,584	1,514,356	
218	2310		" "	" "	5.2	89°-	+40.3	+35.1		1481.2		+2310	+45	460,914	1,514,362	
219	2640		" "	" "	11.3	89°-	+46.1	+34.8		1480.9		+2639	+52	461,243	1,514,369	361.123
220	2770		350° 37.4'	+10.5°	12.7	89°4'	+48.4	+35.7		1481.8	π	+2969-2	+58	461,571	1,514,375	
220	2970'				14.4	89°2'	+50.1	+35.7			π					
	2640		170° 26' + 180°	+10.5°	+12.4	-		+12.4	1494.2		BS	+2640-2	+43			
	2640				+13.9	89°58'	-1.5	+12.4			BS					
221	2310		170° 26'	+10.5°	10.0	-		-10.0		1484.2		-2310	-38	461,899	1,514,380	
222	1980		" "	" "	14.0	-		-14.0		1480.2		-1980	-32	462,229	1,514,386	
223	1650		" "	" "	7.9	-		-7.9		1486.3		-1650	-27	462,559	1,514,391	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	5/1/79	INSTRUMENT MAN	G. Cotcamp	ROD MAN	R. Hulsey	PARTY NUMBER	6834	NOTES CHECKED BY	R. Hulsey	LINE NO.	4	PAGE	16
AREA	Oklahoma	TOPO MAP	Prairie Hill 7.5	STATE	Oklahoma	COUNTY	Jackson	TWP	2 N	RANGE	23 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
									1494.2							
TL TF	1570		170° 32.5'	+10.5°	8.8	-		-8.8		1485.4		-1570	-29	462,639	1,514,389	462,635 + 1,514,370 (S) 4-Way Intersect. El. 1485
224	1320		170° 26'	+10.5°	10.6	-		-10.6		1483.6		-1320	-22	462,889	1,514,396	
225	990		" "	" "	5.8	-		-5.8		1488.4		-990	-16	463,219	1,514,402	
226	660		" "	" "	4.7	-		-4.7		1489.5		-660	-11	463,549	1,514,407	
227	330		" "	" "	2.9	-		-2.9		1491.3		-330	-5	463,879	1,514,413	
228	0				5.4	-		-5.4		1488.8	X	0	0	464,209	1,514,418	
229	330		350° 16.8'	+10.5°	12.4	-		-12.4		1481.8		+330	+4	464,539	1,514,422	
230	660		" "	" "	10.2	91°	-11.5	-21.7		1472.5		+660	+9	464,869	1,514,427	
231	990		" "	" "	12.1	91°	-17.3	-29.4		1464.8		+990	+13	465,199	1,514,431	
232	1320		" "	" "	10.0	91°	-23.0	-33.0		1461.2		+1320	+18	465,529	1,514,436	
233	1650		" "	" "	5.1	91°	-28.8	-33.9		1460.3		+1650	+22	465,859	1,514,440	
234	1980		" "	" "	10.3	90° 40'	-23.0	-33.3		1460.9		+1980	+27	466,189	1,514,445	
235	2310		" "	" "	16.2	90° 40'	-26.9	-37.1		1457.1		+2310	+31	466,519	1,514,449	
236	2640		" "	" "	5.5	90° 40'	-30.7	-36.2		1458.0		+2640	+36	466,849	1,514,454	
237	2970		170° 16.8'	+10.3°	7.9	90° 30'	-25.9	-33.8		1460.4	TF	+2970-2	+30	467,177	1,514,448	
237	2970				19.8	90° 22'	-19.0	-33.8			TF					
	2970		170° 21.3' + 180°	+10.3°	+2.5	TH	-14.9	-12.4	1448.1	-12.3	BS	+2970-2	+34			
	2970				+5.1	89° 40'	-17.3	-12.2			BS					
238	2640		170° 21.3'	+10.3°	2.6	TH	+13.2	+10.6		1458.7		-2640	-30	467,505	1,514,452	
239	2310		" "	" "	3.0	TH	+11.6	+8.6		1456.7		-2310	-26	467,835	1,514,456	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	5/1/79	INSTRUMENT MAN	R. Hulsey	ROD MAN	R. Hulsey	PARTY NUMBER	1324	NOTES CHECKED BY	R. Hulsey	LINE NO.	17	PAGE	17
AREA	Oklahoma	TOPO MAP	Prairie Hill 7.5	STATE	Oklahoma	COUNTY	Jackson	TWP	2 N	RANGE	23 W	PPM	
PARTY MANAGER													

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
									1448.1							
240	2240		170° 32.3'	+10.3°	4.0	74	+11.2	+7.2		1455.3		-2240	-33	467,905	1,514,449	467,905 + 1,514,435 (S) 4-way int. El. 1455
241	1980		170° 21.3'	+10.3°	5.8	74	+9.9	+4.1		1452.2		-1980	-23	468,165	1,514,459	
242	1650		" "	" "	6.2	74	+8.3	+2.1		1450.2		-1650	-19	468,495	1,514,463	
243	1320		" "	" "	17	-		-1.7		1446.4		-1320	-15	468,825	1,514,467	
244	990		" "	" "	3.2	-		-3.2		1444.9		-990	-11	469,155	1,514,471	
245	660		" "	" "	3.5	-		-3.5		1444.6		-660	-8	469,485	1,514,474	
246	330		" "	" "	4.5	-		-4.5		1443.6		-330	-4	469,815	1,514,478	
247	0				54	-		-5.4		1442.7	TP	0	0	470,145	1,514,482	
248	330		350° 28.3'	+10.3°	6.4	-		-6.4		1441.7		+330	+4	470,475	1,514,486	
249	660		" "	" "	6.7	-		-6.7		1441.4		+660	+9	470,805	1,514,491	
250	990		" "	" "	6.7	-		-6.7		1441.4		+990	+13	471,135	1,514,495	
251	1320		" "	" "	7.0	-		-7.0		1441.1		+1320	+18	471,465	1,514,500	
252	1650		" "	" "	9.3	-		-9.3		1438.8		+1650	+22	471,795	1,514,504	
253	1980		" "	" "	11.3	-		-11.3		1436.8		+1980	+27	472,125	1,514,509	
254	2310		" "	" "	12.4	-		-12.4		1435.7		+2310	+31	472,455	1,514,513	
255	2640		" "	" "	12.4	-		-12.4		1435.7		+2640	+36	472,785	1,514,518	
255	2970		350° 28.3'	+10.3°	13.0	-		-13.0			TP	+2970	+40	473,115	1,514,522	
255	2970				148	89° 58'	+1.7	-13.1		1435.0	TP					
	2970		170° 27.3' + 180°	+10.3°	+0.8	-		+0.8	1435.9	+0.9	BS	+2970	+39			
	2970				+148	89° 44'	-13.8	+1.0			BS					

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5/1/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Hulsey	PARTY NUMBER 6639	NOTES CHECKED BY R. Hulsey	LINE NO. 4	PAGE 18
AREA Oklahoma	TOPO MAP Duke 7.5'/Prairie Hill	STATE Oklahoma	COUNTY Jackson	TWP 2 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	X
									1435.9						Hor. corr. $x=0'$ $y=44'$	
FF	2885		170° 37.3'	+10.3°	0.7	-		-0.7		1435.2		-2885	-46	473,200	1,514,515	473,200 + 1,514,510 (S) 4-Way El. 1435
256	2690		170° 27.3'	+10.3°	1.8	-		-1.8		1434.1		-2640	-35	473,445	1,514,526	
257	2310		" "	" "	2.8	-		-2.8		1433.1		-2310	-30	473,775	1,514,531	Prairie Hill Quad
258	1980		" "	" "	3.5	-		-3.5		1432.4		-1980	-26	474,105	1,514,535	Duke Quad.
259	1650		" "	" "	4.3	-		-4.3		1431.6		-1650	-22	474,435	1,514,539	↓
260	1320		" "	" "	4.6	-		-4.6		1431.3		-1320	-17	474,765	1,514,544	
261	990		" "	" "	4.8	-		-4.8		1431.1		-990	-13	475,095	1,514,548	
262	660		" "	" "	5.1	-		-5.1		1430.8		-660	-9	475,425	1,514,552	
263	330		" "	" "	5.1	-		-5.1		1430.8		-330	-4	475,755	1,514,557	
264	0		" "	" "	5.4	-		-5.4		1430.5	X	○	○	476,085	1,514,561	
265	330		350° 31.4'	+10.3°	5.4	-		-5.4		1430.5		+330	+5	476,415	1,514,566	
266	660		" "	" "	5.8	-		-5.8		1430.1		+660	+9	476,745	1,514,570	
267	990		" "	" "	6.5	-		-6.5		1429.4		+990	+14	477,075	1,514,575	
268	1320		" "	" "	7.2	-		-7.2		1428.7		+1320	+19	477,405	1,514,580	
269	1650		" "	" "	7.6	-		-7.6		1428.3		+1650	+24	477,735	1,514,585	
270	1980		" "	" "	8.0	-		-8.0		1427.9		+1980	+28	478,065	1,514,589	
271	2310		" "	" "	8.8	-		-8.8		1427.1		+2310	+33	478,395	1,514,594	
FF	2395		350° 19.8'	+10.3°	8.2	-		-8.2		1427.7		+2395	+26	478,480	1,514,587	478,490 + 1,514,615 (S) 4-Way Intersect. El. 1428
272	2640		350° 31.4'	+10.3°	8.9	-		-8.9		1427.0		+2646	+38	478,725	1,514,599	
273	2970		350° 31.4'	+10.6°	9.2	-		-9.2		1426.7	TP	+2969	+58	479,054	1,514,619	E.O.D.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
5-2-79		R. Hulsey		G. Cotcamp		6834		Walt Krol		4		19				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM				
Oklahoma		Duke 7.5'		Oklahoma		Jackson		2 N		23 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
2	2970		170° 20.7' ± 180	+10.6	+2.9	-		+2.9			BS	+2970	+49	479,054	1,514,619	
	2970				+3.7	89° 58'	-1.7	+2.0	1,428.7		BS					
274	2640		170° 20.7'	+10.6	6.0	-		-6.0		1,422.7		-2640	-44	479,384	1,514,624	
275	2310		" "	+10.6	10.9	-		-10.9		1,417.8		-2310	-38	479,714	1,514,630	
276	1980		" "	+10.6	9.3	-		-9.3		1,419.4		-1980	-33	480,044	1,514,635	
277	1650		" "	" "	7.0	-		-7.0		1,421.7		-1650	-27	480,374	1,514,641	
278	1320		" "	" "	13.3	-		-13.3		1,415.4		-1320	-22	480,704	1,514,644	
279	990		" "	" "	10.3	BH	-5.0	-15.3		1,413.4		-990	-16	481,034	1,514,652	
280	660		" "	" "	12.7	-		-12.7		1,416.0		-660	-11	481,364	1,514,657	
281	330		" "	" "	9.5	-		-9.5		1,419.2		-330	-5	481,694	1,514,663	
282	0				5.4	-		-5.4		1,423.3	π	0	0	482,024	1,514,668	
283	330		350° 18.8'	+10.6	5.0	-		-5.0		1,423.7		+330	+5	482,354	1,514,673	
284	660		" "	" "	4.4	-		-4.4		1,424.3		+660	+11	482,684	1,514,679	
285	990		" "	" "	3.5	-		-3.5		1,425.2		+990	+16	483,014	1,514,684	
286	1320		" "	" "	3.1	-		-3.1		1,425.6		+1320	+21	483,344	1,514,689	
287	1650		" "	" "	2.1	-		-2.1		1,426.6		+1650	+26	483,674	1,514,694	
±±	1720		350° 9'	+10.6	2.1	-		-2.1		1,426.6		+1720	+23	483,744	1,514,691	483,745 + 1,514,705 (S) H-way int. El. 1427.0
288	1980		350° 18.8'	+10.6	1.9	-		-1.9		1,426.8		+1980	+32	484,004	1,514,700	
289	2310		" "	" "	0.8	-		-0.8		1,427.9		+2310	+37	484,334	1,514,705	
290	2640		" "	" "	0.2	-		-0.2		1,428.5		+2640	+42	484,664	1,514,710	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5-2-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY Walt Krol	LINE NO. 4	PAGE 20
AREA Oklahoma	TOPO MAP Duke 7.5	STATE Oklahoma	COUNTY Jackson	TWP 2 N	RANGE 23 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 -	EAST + WEST -	
									1.4287					
291	2970		350° 18.8'	+10.7	14.4	TH	+14.9	+0.5	+0.4	1429.1	TP	+2970	+53	484,994 1,514,721
291	2970				1.4	89° 58'	+1.7	+0.3			TP			
	2970		170° 4.4' + 180°	+10.7	+9.4	-		+9.4	+9.3		BS	+2970	+40	
	2970				+7.5	90° 02'	+1.7	+9.2	1.430.4		BS			
292	2640		170° 4.4'	+10.7	8.6	-		-8.6		1.429.8		-2640	-36	485,324 1,514,725
293	2310		" "	" "	6.3	-		-6.3		1.432.1		-2310	-31	485,654 1,514,730
294	1980		" "	" "	5.7	-		-5.7		1.432.7		-1980	-27	485,984 1,514,734
295	1650		" "	" "	5.9	-		-5.9		1.432.5		-1650	-22	486,314 1,514,739
296	1320		" "	" "	7.7	-		-7.7		1.430.7		-1320	-18	486,644 1,514,743
297	990		" "	" "	7.2	-		-7.2		1.431.2		-990	-13	486,974 1,514,748
298	660		" "	" "	6.9	-		-6.9		1.431.5		-660	-9	487,304 1,514,752
299	330		" "	" "	6.3	-		-6.3		1.432.1		-330	-4	487,634 1,514,757
300	0				5.4	-		-5.4		1.433.0	TP	0	0	487,964 1,514,761
301	330		350° 4.7'	+10.7	6.5	-		-6.5		1.431.9		+330	+4	488,294 1,514,765
302	660		" "	" "	5.7	-		-5.7		1.432.7		+660	+9	488,624 1,514,770
303	990		" "	" "	4.8	-		-4.8		1.433.6		+990	+13	488,954 1,514,774
FF	1070		349° 35'	+10.7	2.7	-		-2.7		1.435.7		+1070	+5	489,034 1,514,766 4-way int. elev. 1436
304	1320		350° 4.7'	+10.7	5.1	-		-5.1		1.433.3		+1320	+18	489,284 1,514,779
305	1650		" "	" "	5.0	-		-5.0		1.433.4		+1650	+22	489,614 1,514,783
306	1980		" "	" "	3.4	-		-3.4		1.435.0		+1980	+27	489,944 1,514,788

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5-2-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY Walt Krol	LINE NO. 4	PAGE 21
AREA Oklahoma	TOPO MAP Duke 7.5'	STATE Oklahoma	COUNTY Jackson	TWP 2 N/3 E	RANGE 23 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.	
									1.438.4					
307	2310		350° 4.7'	+10.7	1.9	-		-1.9		1.436.5		+2310	+31	490,274 1,514,792
308	2640		" "	" "	0.3	-		-0.3		1.438.1		+2640	+36	490,604 1,514,797
309	2970		350° 4.7'	+10.7	1.9	-		-1.9		1.436.5	TP	+2970	+40	490,934 1,514,801
309	2970				-3.7	89° 58'	+1.7	-1.9			TP			
	2970		169° 50.0' ± 180	+10.7	+0.8	-		+0.8			BS	+2970	+28	
	2970				+2.6	89° 58'	-1.7	+0.9	1.437.4		BS			
310	2640		169° 50'	+10.7	1.0	-		-1.0		1.436.4		-2640	-25	491,264 1,514,804
311	2310		" "	" "	0.8	-		-0.8		1.436.6		-2310	-22	491,594 1,514,807
312	1980		" "	" "	1.1	-		-1.1		1.436.3		-1980	-18	491,924 1,514,811
313	1650		" "	" "	0.7	-		-0.7		1.436.7		-1650	-15	492,254 1,514,814
314	1320		" "	" "	1.3	-		-1.3		1.436.1		-1320	-12	492,584 1,514,817
315	990		" "	" "	2.9	-		-2.9		1.434.5		-990	-9	492,914 1,514,820
316	660		" "	" "	4.1	-		-4.1		1.433.3		-660	-6	493,244 1,514,823
317	330		" "	" "	4.8	-		-4.8		1.432.6		-330	-3	493,574 1,514,826
318	0				5.4	-		-5.4		1.432.0	TP	0	0	493,904 1,514,829
319	330		349° 47.5'	+10.7	5.5	-		-5.5		1.431.9		+330	+3	494,234 1,514,832
319	420		349° 25'	+10.7	5.4	-		-5.4		1.432.0		+420	+1	494,324 1,514,830
320	660		349° 47.5'	+10.7	7.7	-		-7.7		1.429.7		+660	+6	494,564 1,514,835
321	990		" "	" "	12.2	BH	-5.0	-17.2		1.420.2		+990	+8	494,894 1,514,837
322	1320		" "	" "	12.1	90° 30'	-11.5	-23.6		1.413.8		+1320	+11	495,224 1,514,840

↑
T 2 N
494,315 1,514,835(6)
E-W fence line - 1432 elev.

T 3 N
↓

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5-2-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Catcamp	PARTY NUMBER 6834	NOTES CHECKED BY Walt Krol	LINE NO. 4	PAGE 22
AREA Oklahoma	TOPO MAP Duke 7.5'	STATE Oklahoma	COUNTY Jackson	TWP 3 N	RANGE 23 W	PPM
				PARTY MANAGER 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	COORDINATES		REMARKS
												NORTH+ SOUTH - LAT.	EAST+ WEST - DEP.	
									1.4374					
323	1650		349°47.5'	+10.7°	8.8	BH	-8.3	-17.1		1420.3		+1650	+14	495,554 1,514,843
324	1980		" "	" "	4.6	BH	-9.9	-14.5		1422.9		+1980	+17	495,884 1,514,846
325	2310		" "	" "	8.3	-	-	-8.3		1429.1		+2310	+20	496,214 1,514,849
326	2640		" "	" "	13.5	90°02'	-1.5	-15.0		1.422.4		+2640	+23	496,544 1,514,852
327	2970		349°47.5'	+10.8°	13.5	90°02'	-1.7	-15.2		1.422.2	TP	+2970	+31	496,874 1,514,860
327	2970				10.0	90°06'	-5.2	-15.2			TP			
	2970		169°25.6'+130	+10.8°	+3.6	BH	+14.9	+18.5	1.440.7		BS	+2970	+12	
	2970				+13.2	90°06'	+5.2	+18.4			BS			
328	2640		169°25.6'	+10.8°	4.5	BH	-13.2	-17.7		1423.0		-2640	-10	497,204 1,514,862
329	2310		" "	" "	7.0	BH	-11.6	-18.6		1422.1		-2310	-9	497,534 1,514,863
330	1980		" "	" "	9.3	BH	-9.9	-19.2		1.421.5		-1980	-8	497,864 1,514,864
331	1650		" "	" "	10.1	BH	-8.3	-18.4		1.422.3		-1650	-7	498,194 1,514,865
332	1320		" "	" "	13.8	BH	-6.6	-20.4		1.420.3		-1320	-5	498,524 1,514,867
333	990		" "	" "	9.9	BH	-5.0	-14.9		1.425.8		-990	-4	498,854 1,514,868
334	660		" "	" "	11.4	-	-	-11.4		1.429.3		-660	-3	499,184 1,514,869
335	330		" "	" "	8.6	-	-	-8.6		1.432.1		-330	-1	499,514 1,514,871
#	233		169°27'	+10.8°	7.8	-	-	-7.8		1.432.9		-233	-1	499,611 1,514,871 4-way int. 1433 elev.
336	0				5.4	-	-	-5.4		1.435.3	π	0	0	499,844 1,514,872
337	330		349°30.2'	+10.8°	2.6	-	-	-2.6		1.438.1		+330	+2	500,174 1,514,874
338	660		" "	" "	1.9	-	-	-1.9		1.438.8		+660	+3	500,504 1,514,875

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5-2-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY Walt Krol	LINE NO. 4	PAGE 23
AREA Oklahoma	TOPO MAP Duke 7.5'	STATE Oklahoma	COUNTY Jackson	TWP 3 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.	
									1.440.7					
339	990		349° 30.2'	+10.8°	4.9	-		-4.9		1.435.8		+990	+5	500,834 1,514,877
340	1320		" "	" "	6.0	-		-6.0		1.434.7		+1320	+7	501,164 1,514,879
341	1650		" "	" "	6.0	-		-6.0		1.434.7		+1650	+9	501,494 1,514,881
342	1980		" "	" "	5.9	-		-5.9		1.434.8		+1980	+10	501,824 1,514,882
343	2310		" "	" "	5.9	-		-5.9		1.434.8		+2310	+12	502,154 1,514,884
344	2640		" "	" "	7.0	-		-7.0		1.433.7		+2640	+14	502,484 1,514,886
345	2970		349° 30.2'	+10.9°	9.1	-		-9.1		1.431.6	TP	+2970	+21	502,814 1,514,893
345	2970				7.4	90°02'	-17	-9.1			TP			
	2970		168° 56.1' 1/2	+10.9°	+5.5	BH	+14.9	+20.4	+20.3		BS	+2970	-9	
	2970				+15.0	90°06'	+5.2	+20.2	1.451.9		BS			
346	2640		168° 56.1'	+10.9°	6.1	BH	-13.2	-19.3		1.432.6		-2640	+8	503,144 1,514,892
347	2310		" "	" "	7.0	BH	-11.6	-18.6		1.433.3		-2310	+7	503,474 1,514,891
348	1980		" "	" "	8.9	BH	-9.9	-18.8		1.433.1		-1980	+6	503,804 1,514,890
349	1650		" "	" "	10.3	BH	-8.3	-18.6		1.433.3		-1650	+5	504,134 1,514,889
350	1320		" "	" "	11.1	BH	-6.6	-17.7		1.434.2		-1320	+4	504,464 1,514,888
351	990		" "	" "	10.4	-		-10.4		1.441.5		-990	+3	504,794 1,514,887
351	860		169° 11'	+10.9°	8.9	-		-8.9		1.443.0		-860	-1	504,924 1,514,883 4-way int. 1.443 elev.
352	660		168° 56.1'	+10.9°	7.3	-		-7.3		1.444.6		-660	+2	505,124 1,514,886 Pavement starts
353	330		" "	" "	6.6	-		-6.6		1.445.3		-330	+1	505,454 1,514,885
354	0		" "	" "	5.4	-		-5.4		1.446.5	TK	0	0	505,784 1,514,884

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5-2-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY Walt Krol	LINE NO. 4	PAGE 24
AREA Oklahoma	TOPO MAP Duke 7.5'	STATE Oklahoma	COUNTY Jackson/Greer	TWP 3N	RANGE 23W	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.	
									1.451.9					
355	330		349° 2.5'	+10.9	4.6	-		-4.6		1.447.3		+330	0	506,114 1,514,884
356	660		" "	" "	4.0	-		-4.0		1.447.9		+660	-1	506,444 1,514,883
357	990		" "	" "	2.8	-		-2.8		1.449.1		+990	-1	506,774 1,514,883
358	1320		" "	" "	0.9	-		-0.9		1.451.0		+1320	-1	507,104 1,514,883
359	1650		" "	" "	0.1	-		-0.1		1.451.8		+1650	-2	507,434 1,514,884
360	1980		" "	" "	9.3	TH	+9.9	+0.6		1.452.5		+1980	-2	507,764 1,514,884
361	2310		" "	" "	10.0	TH	+11.6	+1.6		1.453.5		+2310	-2	508,094 1,514,884
362	2640		349° 2.5'	+10.8	11.9	TH	+13.2	+1.3	+1.2	1.453.1	TP	+2640	-7	508,424 1,514,877
362	2640				3.5	89°54'	+4.6	+1.1			TP			
	2640		168° 56.9' ± 180°	+10.8	+7.1	-		+7.1	1.460.2		BS	+2640	-12	
	2640				+5.6	90°02'	+1.5	+7.1			BS			
363	2310		168° 56.9'	+10.8	6.8	-		-6.8		1.453.4		-2310	+10	508,754 1,514,875
364	1980		" "	" "	7.4	-		-7.4		1.452.8		-1980	+9	509,084 1,514,874
365	1650		" "	" "	6.9	-		-6.9		1.453.3		-1650	+7	509,414 1,514,872
366	1320		" "	" "	6.7	-		-6.7		1.453.5		-1320	+6	509,744 1,514,871
367	990		" "	" "	6.3	-		-6.3		1.453.9		-990	+4	510,074 1,514,869
367	797		169° 48'	+10.8	6.2	-		-6.2		1.454.0		-797	-8	510,267 1,514,857 Jackson Co. 510,275 ± 1,514,845 4-way int. 1454 elev.
368	660		168° 56.9	+10.8	6.9	-		-6.9		1.453.3		-660	+3	510,404 1,514,868 Greer Co.
369	330		" "	" "	6.1	-		-6.1		1.454.1		-330	+1	510,734 1,514,866 ↓
370	0				5.4	-		-5.4		1.454.8	TP	0	0	511,064 1,514,865

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5-2-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY Walt Krol	LINE NO. 4	PAGE 25
AREA Oklahoma	TOPO MAP Duke 7.5'	STATE Oklahoma	COUNTY Greer	TWP 3N	RANGE 23W	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.	
									1.460.2					
371	330		349° 37.9'	+10.8	3.9	-		-3.9		1.456.3		+330	+7	511,394 1,514,867
372	660		" "	" "	3.4	-		-3.4		1.456.8		+660	+5	511,724 1,514,870
373	990		" "	" "	3.4	-		-3.4		1.456.8		+990	+7	512,054 1,514,872
374	1320		" "	" "	3.1	-		-3.1		1.457.1		+1320	+10	512,384 1,514,875
375	1650		" "	" "	2.6	-		-2.6		1.457.6		+1650	+12	512,714 1,514,877
376	1980		" "	" "	9.7	TH	+9.9	+0.2		1.460.4		+1980	+15	513,044 1,514,880
377	2310		" "	" "	10.2	TH	+11.6	+1.4		1.461.6		+2310	+17	513,374 1,514,882
378	2640		349° 37.9'	+10.7	11.9	TH	+13.2	+1.3	+1.2	1.461.4	TP	+2640	+15	513,704 1,514,880
379	2640				3.5	89°54'	+4.6	+1.1			TP			
	2310		169° 45.8'	+10.7	+12.2	BH	+11.6	+23.8	1.485.2		BS	+2310	+19	
	2310				+10.3	90°20'	+13.4	+23.7			BS			
379	2980		169° 45.8'	+10.7	13.0	BH	-9.9	-22.9		1.462.3		-1980	-16	514,034 1,514,883
380	1650		" "	" "	13.0	90°20'	-9.6	-22.6		1.462.6		-1650	-13	514,364 1,514,886
381	1320		" "	" "	10.4	90°30'	-11.5	-21.9		1.463.3		-1320	-11	514,694 1,514,888
382	990		" "	" "	11.7	BH	-5.0	-16.7		1.468.5		-990	-8	515,024 1,514,891
383	660		" "	" "	10.3	-		-10.3		1.474.9		-660	-5	515,354 1,514,894
384	410		170° 19'	+10.7	8.6	-		-8.6		1.476.6		-410	-7	515,604 1,514,892
384	330		169° 45.8'	+10.7	8.3	-		-8.3		1.476.9		-330	-3	515,684 1,514,896
385	0				5.4	-		-5.4		1.479.8	TP	0	0	516,014 1,514,899
386	330		350° 32.8'	+10.7	4.9	-		-4.9		1.480.3		+330	+7	516,344 1,514,906

515,600+1, 514,890 (S)
4-way int. 1477 elev.

SURVEY NOTES - HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 5-2-79	INSTRUMENT MAN R. Hulsey	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY R. Hulsey	LINE NO. 4	PAGE 26 of 26
AREA Oklahoma	TOPO MAP Duke 7.5/Mangum 7.5	STATE Oklahoma	COUNTY Greene	TWP 3N	RANGE 23k1	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.	
									1.485.2					
387	660		350° 32.8'	+10.7	5.6	-		-5.6		1.479.6		+660	+14	516,674 1,514,913
388	990		" "	" "	11.8	-		-11.8		1.473.4		+990	+22	517,004 1,514,921
389	1320		" "	" "	12.5	-		-12.5		1.472.7		+1320	+29	517,334 1,514,928
390	1650		" "	" "	11.6	-		-11.6		1.473.6		+1650	+35	517,664 1,514,934
391	1980		" "	" "	10.6	-		-10.6		1.474.6		+1980	+43	517,994 1,514,942
392	2310		350° 32.8'	+11.0°	8.8	-		-8.8			TP	+2309	+62	518,323 1,514,961
392	2310				7.4	90°02'	-1.3	-8.7		1476.5	TP			
	1320		170° 17.5'	+11.0°	+11.3	-		+11.3			BS	+1320	+30	
	1320		^{+180°}		+4.8	BH	+6.6	+11.4	1487.9		BS			
393	990		170° 17.5'	+11.0°	9.7	-		-9.7		1478.2		-990	-22	518,653 1,514,969
394	660		" "		7.2	-		-7.2		1480.7		-660	-15	518,983 1,514,976 ↑
395	330		" "		6.6	-		-6.6		1481.3		-330	-7	519,313 1,514,984 Duke 7.5'
396	0				5.4	-		-5.4		1482.5	TP	0	0	519,643 1,514,991 Mangum S. 7.5'
397	330		350° 13.6'	+11.0°	2.7	-		-2.7		1485.2		+330	+7	519,973 1,514,998 ↓
398	660		" "	" "	0.3	-		-0.3		1487.6		+660	+14	520,303 1,515,005
399	990		" "	" "	4.1	TH	+5.0	+0.9		1488.8		+990	+21	520,633 1,515,012
400	1320													
#	1230		349° 52'	+11.0°	3.5	TH	+6.2	+2.7		1490.6		+1230	+19	520,870 + 1,515,015 4-way int El. 1491
400	1320		350° 13.6'	+11.0°	4.3	TH	+6.6	+2.3		1490.2		+1320	+28	520,963 1,515,019 EOL
400	1320				1.5	89°50'	+3.8	+2.3						