

SURVEY NOTES - HIGH RESOLUTION DATA

GEO-445

Geosource Inc. Client: COCORP

U 24

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
11-11-80		GLITZINGER		G Cotcamp		6834		GWC. rlu		7	1 of 30					
AREA		TOPO MAP		STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER							
OKLAHOMA		Dillcity 15		OKlahoma	WASHITA	10 N	17 W		L. R. 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	
F				+9.3'						1692.0	K			729910	1,693,025	→ scaled.
	1190		261° 42.4' - 140	+9.3'	+11.3	-		+11.3	1703.3		BS	-21 -1	+1190 +5			90° bend (south) 1692.0
	1190				+5.3	BH	+6.0	+11.3			BS					
1	990		241° 24.7'	+9.3°	14.8	-		-14.8		1698.5		+12	-990	729,898	1,693,230	
2	660		"	"	14.7	BH	-3.3	-17.4		1695.7		+8	-660	729,894	1,693,560	
3	330		"	"	13.3	-		-13.3		1690.0		+4	-330	729,892	1,693,890	
4	0				5.4	-		-5.4		1697.9	T	0	0	729,888	1,694,220	
5	330		81° 28'	+9.3°	10.2	-		-10.2		1693.1		-4	+330	729,884	1,694,550	
6	660		"	"	4.1	-		-4.1		1699.2		-9	+660	729,879	1,694,880	
7	990		"	"	2.9	-		-2.9		1700.4		-13	+990	729,875	1,695,210	
8	1320		81° 28'	+9.3°	0.3	-		-0.3			TP	-18 -1	+1320 +5	729,869	1,695,545	
8	1320				6.8	TH	+6.6	-0.2		1703.1	TP					
	1880		261° 13.6' - 140	+9.3°	+4.8	-		+4.8	1707.9		BS	-18 -1	+1980 +5			
	1880				+14.6	TH	-9.9	+4.7			BS					
9	1650		261° 13.6'	+9.3°	6.0	-		-6.0		1701.9		+15	-1650	729,865	1,695,880	
10	1320		"	"	14.0	BH	-6.6	-20.6		1697.3		+12	-1320	729,862	1,696,210	
11	990		"	"	14.8	91°	-17.3	-32.1		1675.8		+9	-990	729,859	1,696,540	
12	660		"	"	14.4	91°	-11.5	-25.9		1682.0		+6	-660	729,856	1,696,870	
13	330		"	"	10.0	-		-10.0		1697.9		+3	-330	729,853	1,697,200	
14	0				5.4	-		-5.4		1702.5	T	0	0	729,850	1,697,530	
15	330		82° 8.6'	+9.3°	14.5	BH	-1.7	-16.2		1696.7		-8	+330	729,842	1,697,860	

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE 11-11-80	INSTRUMENT MAN G Litzinger	ROD MAN G Cotcamp	PARTY NUMBER 6934	NOTES CHECKED BY Gwl	LINE NO. 7	PAGE 2 of 30
AREA Oklahoma	TOPO MAP Dill City	STATE Oklahoma	COUNTY Washington	TWP 10 N	RANGE 17 W	PPM
			PARTY MANAGER 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.	
									1707.9					
16	660		82° 8.6'	+9.3°	9.4	91°	-11.5	-20.9		1487.0		-17	+660	729,833 1,698,190
17	990		"	"	3.4	91°	-17.3	-20.7		1481.2		-25	+990	729,825 1,698,520
19	1320		"	"	11.7	—		-11.7		1496.2		-33	+1320	729,817 1,698,850
19	1650		82° 8.6'	+9.3°	3.3	—		-3.3			TP	-42-1	+1649+5	729,807 1,699,184
19	1650				11.5	TH	+8.3	-3.2		1704.7	TP			
	990	989	261° 43.7' -180°	+9.3°	+7.2	87°	-51.7	-44.5	1640.2		BS	-18-1	+989+5	
	990				+10.0	86° 30'	-54.6	-44.6			BS			
20	660	659	241° 43.7'	+9.3°	2.7	87°	+34.5	+31.8		1692.0		+12	-659	729,800 1,699,519
21	330		"	"	3.1	87°	+17.2	+14.1		1674.3		+6	-330	729,794 1,699,848
22	0				5.4	—		-5.4		1654.8	TP	0	0	729,788 1,700,179
23	330		91° 13.7'	+9.3°	14.6	91°	-5.8	-20.4		1639.8		-60	+324	729,728 1,700,502
24	640		81° 26.4'	+9.3°	14.6	—		-14.6		1645.6		-8	+640	729,780 1,700,818
25	950		80° 34.9'	+9.3°	3.9	90° 10'	-2.8	-6.7	1608	1653.4	TP	+2-1	+950+5	729,789 1,701,133
25	980				9.7	89° 50'	+2.8	-6.9			TP			
	2310	2309	261° 3.2' -180	+9.3°	+4.5	88° 30'	-40.5	-56.0	1597.4		BS	-14-1	+2309+6	
	2310				+11.1	88° 20'	-67.2	-56.1			BS			
26	1980	1979	261° 3.2'	+9.3°	11.9	88° 30'	+51.8	+39.9		1637.3		+12	-1979	729,786 1,701,469
27	1650		"	"	14.5	88° 40'	+38.4	+23.9		1621.3		+10	-1650	729,784 1,701,798
28	1320		"	"	5.7	88° 40'	+30.7	+25.0		1622.4		+8	-1320	729,782 1,702,128
29	990		"	"	8.6	88° 30'	+25.9	+17.3		1614.7		+6	-990	729,780 1,702,458

BRIDGE OUT CURVE

CURVE

DILL CITY ROAD

COUNCIL ROAD

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SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE 11-11-80	INSTRUMENT MAN G Litzinger	ROD MAN G Cotcham	PARTY NUMBER 6824	NOTES CHECKED BY G.W.C. JLS	LINE NO. 7	PAGE 3 of 30
AREA OKLAHOMA	TOPO MAP Cordell 15'	STATE OKLAHOMA	COUNTY WASHITA	TWP 10 N	RANGE 17 W	PPM
				PARTY MANAGER 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.	
									1597.4					
30	660		261° 3.2'	+9.3°	3.5	88° 30'	+17.3	+13.8		1611.2		+4	-660	729,778 1,702,788
31	330		"	"	0.8	89°	+5.8	+5.0		1602.4		+2	-330	729,776 1,703,118
32	0				5.4	-		-5.4		1592.0	X	0	0	729,774 1,703,448
32	175		80° 4.3'	+9.3°	9.0	-		-9.0		1588.4		+2	+175	729,776 1,703,623 729,780 + 1,703,610 4 way el 1590
33	330		80° 30.4'	+9.5°	13.6	91°	-5.8	-19.4		1578.0		-2	+330	729,772 1,703,778
34	660		"	"	11.1	-		-11.1		1586.3		-4	+660	729,770 1,704,108
35	990		"	"	13.6	-		-13.6		1583.8		-6	+990	729,768 1,704,438
36	1320		"	"	10.3	84	-6.6	-16.9		1580.5		-8	+1320	729,766 1,704,768
37	1650		"	"	13.5	84	-8.3	-21.8		1575.6		-10	+1650	729,764 1,705,098
38	1980		"	"	10.3	90° 30'	-17.3	-27.6		1569.8		-12	+1980	729,762 1,705,428
39	2310		80° 50.4'	+9.5°	10.3	90° 30'	-20.2	-30.5		1566.9	TP	-14 -1	+2310.6	729,759 1,705,764
39	2310				3.4	90° 40'	-26.9	-30.5			TP			
	1980		260° 31.6' - 190°	+9.5°	+9.8	89° 20'	-23.0	-13.2	1553.7		BS	-1 -1	+1980.6	
	1980				+4.0	89° 30'	-17.3	-13.3			BS			
40	1650		260° 31.6'	+9.5°	5.6	89° 30'	+14.4	+8.8		1562.5		+1	-1650	729,758 1,706,100
RR	1360		260° 49.4'	+9.5°	8.8	89° 30'	+11.9	+3.6		1557.3		+7	-1360	729,764 1,706,390 RR CROSSING
41	1320		260° 31.6'	+9.5°	2.4	TH	+6.6	+4.2		1557.9		+1	-1320	729,758 1,706,430
42	990		"	"	6.7	-		-6.7		1547.0		0	-990	729,757 1,706,760
43	660		"	"	10.6	91°	-11.5	-22.1		1531.6		0	-660	729,757 1,707,090
44	330		"	"	13.4	-		-13.4		1540.3		0	-330	729,757 1,707,420

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Geosource Inc.

DATE 11-11-80	INSTRUMENT MAN G. Litzinger	ROD MAN G. Cot camp	PARTY NUMBER 6984	NOTES CHECKED BY CWC. <i>relw</i>	LINE NO. 7	PAGE 4
AREA OKlahoma	TOPO MAP Cordell 15'	STATE Oklahoma	COUNTY washita	TWP 10 N	RANGE 17 W	PPM
PARTY MANAGER 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.	
									1533.7					
45	0				5.4	-		-5.4		1548.3	T	0	0	729,757 1,757,740
46	330		80° 56.5'	+9.5°	7.8	-		-7.8		1546.9		-3	+330	729,754 1,708,080
47	660		"	"	3.1	TH	+3.3	+0.2		1553.9		-5	+660	729,752 1,708,410
48	990		"	"	4.8	89° 30'	+8.6	+3.8		1557.5		-8	+990	729,749 1,708,740
47	1180		80° 22.3'	+9.5°	7.7	89° 30'	+10.3	+2.6		1536.3		+1	+1180	729,758 1,708,930 729,750 + 1,708,910 AT 183 cL 1559
49	1320		80° 56.5	+9.5°	12.2	89° 30'	+11.5	-0.7		1553.0	TD	-10	+1320+6	729,747 1,709,076
49	1320				10.7	89° 34'	+10.0	-0.7			TD			
	1980		261° 10' - 180°	+9.5°	7.85	89° 30'	-17.3	-8.8			BS	-23	+1980+6	
	1940				+2.9	89° 40'	-11.5	-8.6	1574.3		BS			
50	1650		261° 10'	+9.5°	8.2	TH	+8.3	+0.1		1544.4		+19	-1650	729,743 1,709,412
51	1320		" "	"	6.0	-		-6.0		1588.3		+15	-1320	729,739 1,709,742
52	990		" "	"	7.4	-		-7.4		1536.9		+12	-990	729,736 1,710,072
53	660		" "	"	5.0	-		-5.0		1539.3		+8	-660	729,732 1,710,402
54	336		" "	"	7.4	-		-7.4		1536.9		+4	-330	729,728 1,710,732
55	0				5.4	-		-5.4		1538.9	T	0	0	729,724 1,711,062
56	330		81° 13.9'	+9.5°	11.5	-		-11.5		1532.8		-4	+330	729,720 1,711,392
57	660		"	"	12.6	8H	-3.3	-15.9		1528.4		-8	+660	729,716 1,711,722
58	990		"	"	12.7	-		-12.7		1531.6		-13	+990	729,711 1,712,052
59	1320		"	"	6.8	-		-6.8		1537.5		-17	+1320	729,707 1,712,382
60	1650		"	"	7.3	-		-7.3		1537.0		-21	+1650	729,703 1,712,712

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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE					
11-11-80		G. LITZING CA		G. COLCAMP		6834		G.W.C. <i>elw</i>			7	5					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
OKlahoma		Cordell 15'		oklahoma	washita		10	17 W		DRAVIS							
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		
									1574.3								
61	1980		81° 13.9'	+9.5°	6.0	-		-6.0		1538.3	TP	-25	+1980+6	729,699	1,713,048		
61	1980				11.9	89° 30'	+5.8	-6.1			TP						
	660		260° 50' - 180°	+9.5°	+1.3	89°	-11.5	-10.2			BS	-4	+660+5				
	440		260° 30' - 180°		+3.3	88° 30'	-13.4	-10.1	1528.2		BS						
62	330		260° 50'	+9.5°	3.6	89°	+5.8	+2.2		1530.4		+2	-330	729,697	1,713,383		
63	0				3.4	-		-5.4		1522.8	T	0	0	729,695	1,713,713	horiz. correct, y = -9' x = +76'	
64	330		81° 4'	+9.5°	8.4	-		-8.4		1579.8		-3	+330	729,692	1,714,043		
64	512		79° 53.3'	+9.5°	9.5	-		-9.5		1578.7		+5	+512	729,700	1,714,225	729,700 + 1,714,225 4 way c/L 1519	
65	660		81° 4'	+9.5°	12.2	-		-12.2		1576.0	TP	-7.2	+660-5	729,686	1,714,348		
65	660				8.9	BH	-3.3	-12.2			TP						
	2310		261° 24.3' - 180°	+9.5°	77.7	TH	-11.6	-3.9			BS	-36-2	+2310-5				
	2310				713.7	89° 34'	-17.5	-3.8	1572.2		BS						
66	1980		261° 24.3'	+9.5°	9.0	TH	+9.9	+0.9		1573.1		+31	-1980	729,679	1,714,693		
67	1650		"	"	4.5	-		-4.5		1507.7		+26	-1650	729,674	1,715,023		
68	1320		"	"	5.6	-		-5.6		1506.6		+21	-1320	729,669	1,715,353		
69	990		"	"	4.0	-		-4.0		1508.2		+16	-990	729,664	1,715,693		
70	660		"	"	2.7	-		-2.7		1509.5		+10	-660	729,658	1,716,013		
71	330		"	"	2.8	-		-2.8		1509.4		+5	-330	729,653	1,716,343		
72	0		"	"	5.4	-		-5.4		1506.8	T	0	0	729,648	1,716,673		
73	330		81° 25.5'	+9.5°	12.1	-		-12.1		1500.1		-5	+330	729,643	1,717,003		

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
11/12/80		G. Cotcamp		G. Litzinger		6834		Gwc. rlew		7		6			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Oklahoma		Cordell 15		Oklahoma		Washita				17W 16W				L. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									1572.2						
74	660		81° 25.5'	+9.5°	11.5	91° -	-11.5	-23.0		1489.2		-11	+660	729,437	1,717,333
75	990		" "	"	10.8	91° 20'	-23.0	-33.8		1479.4		-16	+990	729,432	1,717,663
76	1320		" "	"	12.6	91° 20'	-30.7	-43.3		1468.9		-21	+1320	729,627	1,717,993
77	1650		" "	"	11.9	91° 20'	-38.4	-50.3		1461.9		-27	+1650	729,621	1,718,323
78	1980		" "	"	14.1	91° -	-34.6	-48.7		1463.5		-32	+1980	729,616	1,719,653
79	2310		" "	"	10.9	90° 40'	-26.9	-37.8		1474.4		-37	+2310	729,611	1,718,983
80	2640		" "	"	13.5	90° 30'	-23.0	-36.5		1475.7		-43	+2640	729,605	1,719,313
71	2832		81° 13.6'	+9.5°	13.7	90° 30'	-24.7	-38.4		1473.8		-36 -2	+2832-5	729,610	1,719,500
71	2832				12.1	90° 32'	-26.4	-38.5							
															Note: 5,290' offset (scaled) north between sta. 80+81.
71				+9° 12'						1455.0				734,900	1,719,550
	2778		261° 42' -180°	+9.2°	+23	91° -	+48.5	+58.8			BS	-44	+2778		4-way Intersect. el. 1955
	2778				+138	90° 46'	+37.2	+51.0	+50.9	1505.9	BS				R 16 W
81	2640		261° 33'	+9.2°	11.9	90° 50'	-38.4	-50.3		1455.6		+35	-2640	734,891	1,719,688
82	2310		" "	"	9.2	91° -	-40.3	-49.5		1456.4		+30	-2310	734,884	1,720,018
83	1980	1979	" "	"	4.5	91° 20'	-46.1	-50.6		1455.3		+26	-1979	734,882	1,720,349
84	1650		" "	"	13.5	91° 20'	-38.4	-51.9		1454.0		+22	-1650	734,878	1,720,678
85	1320	1319	" "	"	9.4	92° -	-46.0	-55.4		1450.5		+17	-1319	734,873	1,721,009

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GEO-445

Geosource Inc.

DATE	11/11/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	G. Litzinger	PARTY NUMBER	6834	NOTES CHECKED BY	G.W.C. rlu	LINE NO.	7	PAGE	7	
AREA	Oklahoma	TOPO MAP	Cordell 15	STATE	Oklahoma	COUNTY	Washita	TWP	10N	RANGE	16W	PPM	PARTY MANAGER	L. Davis

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1505.9					
86	790	789	261°33'	+9.2°	6.9	93°	-51.7	-581.6		1447.3		+13	-989	734,849 1,721,339
87	660	659	" "	"	7.2	94°	-45.9	-531.1		1452.8		+9	-659	734,965 1,721,669
88	330		" "	"	14.3	93°	-17.2	-31.5		1474.4		+4	-330	734,860 1,721,978
89	0				5.4	-		-54		1500.5	TP	0	0	734,856 1,722,328
90	330		81°33'	+9.2°	9.2	-		-9.2		1496.7		-4	+330	734,852 1,722,658
91	660		" "	"	14.9	91°10'	-13.4	-28.3		1477.6		-9	+660	734,847 1,722,988
92	990		" "	"	20.9	91°10'	-20.2	-41.1		1464.8		-13	+990	734,843 1,723,318
93	1320		" "	"	15.0	91°20'	-30.7	-45.7		1460.2		-17	+1320	734,839 1,723,648
94	1650		" "	"	13.0	91°	-28.8	-41.8		1464.1		-22	+1650	734,834 1,723,978
95	1980		" "	"	15.2	90°30'	-17.3	-32.5		1473.4		-26	+1980	734,830 1,724,308
96	2310		" "	"	11.8	90°30'	-20.2	-32.0		1473.9		-30	+2310	734,826 1,724,638
97	2470		81°33.6'	+9.2°	7.3	90°30'	-21.6	-28.9		1477.0		-33	+2470	734,823 1,724,798
97	2640		81°33'	+9.2°	6.0	90°26'	-20.0	-26.0			TP	-35-2	+2640-2	734,819 1,721,986
97	2640				4.6	90°28'	-21.5	-26.1		1479.8	TP			
	1650		261°0.6'-180°	+9.2°	+9.1	90°50'	+24.0	+33.1			BS	-6-2	+1650-2	
	1650				+138	90°40'	+19.2	+33.0	1512.8		BS			
98	1320		261°0.6'	+9.2°	13.2	90°30'	-11.5	-24.7		1488.1		+5	-1320	734,816 1,725,294
99	990		" "	"	11.7	BH	-5.0	-16.7		1496.1		+4	-990	734,815 1,725,624
100	660		" "	"	11.5	-		-11.5		1501.3		+2	-660	734,813 1,725,954
101	330		" "	"	6.2	-		-6.2		1506.6		+1	-330	734,812 1,726,284

734,825 + 1,724,800
4-Way Intersect. pt. 1476.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/11/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	G. Litzinger	PARTY NUMBER	6834	NOTES CHECKED BY	Gmc rlu	LINE NO.	7	PAGE	8	
AREA	Oklahoma	TOPO MAP	Cordell 15'	STATE	Oklahoma	COUNTY	Washita	TWP	70 W	RANGE	16 W	PPM	PARTY MANAGER	L. Davis

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS TP	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
									1572.8										
102	0				54	-		-5.4		1507.4	π	0	0	734,811	1,726,614				
103	330		80°58'	+9.2°	5.8	-		-5.8		1507.0		-1	+330	734,810	1,726,944				
104	660		" "	"	6.7	-		-6.7		1506.1		-2	+660	734,809	1,727,274				
105	990		" "	"	7.2	-		-7.2		1505.6		-3	+990	734,808	1,727,604				
106	1320		" "	"	7.7	-		-7.7		1505.1		-4	+1320	734,807	1,727,934				
107	1650		80°58'	+9.2°	9.0	-		-9.0		1503.8	TP	-5-2	+1650-2	734,804	1,728,262				
107	1650				0.7	B4	-8.3	-9.0			TP								
	1320		260°53'-180°	+9.2°	+7.0	-		+7.0	1510.8		BS	-2-2	+1320-2						
	1320				+13.6	TH	-6.6	+7.0			BS								
108	990		260°53'	+9.2°	8.0	-		-8.0		1502.8		+1	-990	734,801	1,728,590				
109	660		" "	"	5.7	-		-5.7		1505.1		+1	-660	734,801	1,728,920				
110	330		" "	"	1.9	-		-1.9		1504.9		0	-330	734,800	1,729,250				
111	0				54	-		-5.4		1505.4	π	0	0	734,800	1,729,580				
112	330		81°7.2'	+9.2°	14.8	B4	-1.7	-16.5		1494.3		-2	+330	734,799	1,729,910				
112	480		80°18'	+9.2°	12.2	91°-	-8.4	-20.6		1490.2		+4	+480	734,804	1,730,060				734,805 + 1,730,065 4-Way Intersect. C6 14 89
113	660		81°7.2'	+9.2°	7.1	92°-	-23.0	-30.1		1480.7		-4	+660	734,796	1,730,240				
114	990	989	" "	"	1.9	92°-	-34.5	-36.4		1474.4		-6	+989	734,794	1,730,569				
115	1320		" "	"	12.7	91°-	-23.0	-35.7		1475.1		-7	+1320	734,793	1,730,900				
116	1650		" "	"	14.2	90°20'	-9.6	-23.8		1487.0		-9	+1650	734,791	1,731,230				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/11/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	G. Litzinger	PARTY NUMBER	6834	NOTES CHECKED BY	G.W.L. rldw	LINE NO.	7	PAGE	9	
AREA	Oklahoma	TOPO MAP	Cordell 15'	STATE	Oklahoma	COUNTY	Washita	TWP	10 N	RANGE	16 W	PPM	PARTY MANAGER	L. Davis

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1510.8					
117	1980		81° 7.2'	+9.2°	6.9	-		-6.9		1503.9	TP	-11	+1980-2	734,789 1,731,558
117	1980				15.0	89° 46'	+8.1	-6.9			TP			
	1650		260° 42.4' - 180°	+9.2°	+9.1	90° 40'	+19.2	+28.3	1532.2		BS	+3	+1650-3	
	1650				+13.9	90° 30'	+14.4	+28.3			BS			
118	1320		260° 42.4'	+9.2°	14.7	BH	-6.6	-21.3		1570.9		-2	-1320	734,790 1,732,545
119	990		" "	"	10.7	BH	-5.0	-15.7		1576.5		-2	-990	734,790 1,732,875
120	660		" "	"	10.3	-		-10.3		1521.9		-1	-660	734,791 1,732,545
121	330		" "	"	7.1	-		-7.1		1525.1		-1	-330	734,791 1,732,875
122	0				5.4	-		-5.4		1526.8	X	0	0	734,792 1,733,205
123	330		81° 8'	+9.2°	12.7	-		-12.7		1519.5		-2	+330	734,790 1,733,535
124	660		" "	"	12.5	91° -	-11.5	-24.0		1508.2		-4	+660	734,788 1,733,865
125	990	789	" "	"	7.2	92° -	-34.5	-41.7		1490.5		-6	+989	734,786 1,734,194
126	1320		" "	"	10.0	91° -	-23.0	-33.0		1499.2		-8	+1320	734,784 1,734,525
127	1650		" "	"	9.5	BH	-8.3	-17.8		1574.4		-10	+1650	734,782 1,734,855 Horiz - CORR Y -8'
128	1980		" "	"	10.3	BH	-9.9	-20.2		1572.0		-12	+1780	734,780 1,735,185 X -13'
IL TL	2110		80° 50.6'	+9.2°	14.4	BH	-10.6	-25.0		1507.2		-2	+2110	734,790 1,735,315 734,790 1,735,315 4-Way Intersect. e 1.1505.
129	2310		81° 8'	+9.0°	13.3	BH	-11.6	-24.9		1507.3	TP	-5+2	+2310-3	734,789 1,735,512
129	2310				14.1	90° 16'	-10.7	-24.8			TP			
	1650		261° 14.9' - 180°	+9.0°	+11.1	90° 46'	+19.2	+30.3	1537.6		BS	-7+2	+1650-3	
	1650				+13.9	90° 34'	+16.3	+30.2			BS			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/18/80	INSTRUMENT MAN G. LITZINGER	ROD MAN G. CATCHER	PARTY NUMBER 6834	NOTES CHECKED BY [Signature]	LINE NO. 7	PAGE 10
AREA OKLAHOMA	TOPO MAP CORDELL	STATE OKLAHOMA	COUNTY WASHINGTON	TWP	RANGE 16W	PPM
			PARTY MANAGER 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.	
									1597.6					
130	1320		261° 14.9'	+9.0°	13.0	90° 30'	-11.5	-24.5		1573.1		+6	-1320	734,790 1,735,839
131	990		"	"	8.8	90° 30'	8.6	-14.4		1523.2		+4	-990	734,788 1,734,149
132	660		"	"	9.3	—		-9.3		1528.3		+3	-660	734,787 1,736,499
133	830		"	"	6.0	—		-6.0		1531.6		+1	-330	734,785 1,736,829
134	0				5.4	—		-5.4		1532.2	T	0	0	734,784 1,737,159
135	330		81° 5.9'	+8.8°	4.6	—		-4.6		1533.0		+1	+330	734,785 1,737,489
136	660		"	"	7.7	—		-7.7		1529.9		+1	+660	734,785 1,737,819
137	940		"	"	14.9	—		-14.9		1522.7		+2	+990	734,786 1,738,149
138	1320		"	"	13.4	90° 40'	-15.4	-28.8		1508.8		+2	+1320	734,786 1,738,479
139	1650		81° 6.9'	+8.8°	11.1	90° 40'	-19.2	-30.3	30.2	1507.4	TP	+3+2	+1650-3	734,787 1,738,804
139	1650				13.7	90° 34'	-16.3	-30.0			TP			
	1650		261° 23.7' -180	+8.8°	+6.2	—		+6.2	1513.6		BS	-6+2	+1650-3	
	1650				+14.5	TH	-8.3	+6.2			BS			
140	1320		261° 29.7'	+8.8°	10.4	—		-10.4		1503.2		+4	-1320	734,789 1,739,133
141	940		"	"	9.6	—		-9.6		1504.0		+3	-990	734,788 1,739,463
142	660		"	"	4.7	—		-4.7		1508.9		+2	-660	734,787 1,739,793
143	330		"	"	6.6	—		-6.6		1507.0		+1	-330	734,786 1,740,123
144	0				5.4	—		-5.4		1508.2	T	0	0	734,785 1,740,453
145	134		77° 34.9'	+8.8°	7.8	—		-7.8		1505.8		+8	+134	734,793 1,740,587
145	330		82° 6'	+8.8°	14.6	91° 20'	-7.7	-22.3		1491.3		-5	+330	734,780 1,740,783

734,800 + 1,740,570
4w/9/ CL 13-08

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/18/80	INSTRUMENT MAN	G LITZINGER	ROD MAN	O COTCHAMP	PARTY NUMBER	6834	NOTES CHECKED BY	SAW	LINE NO.	7	PAGE	11
AREA	Oklahoma	TOPO MAP	Cordell	STATE	OKLAHOMA	COUNTY	WASHITA	TWP		RANGE	PPM	PARTY MANAGER	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			
									1513.6									
146	460		82° 6'	+8.8°	12.3	91° 20'	- 15.4	- 27.7		1485.9		-10	+660	734.775	1,741.113			
147	990		"	"	11.7	91° 20'	- 23.0	- 34.7		1478.9		-16	+990	734.764	1,741.443			
148	1320	1319	"	+8.8°	13.5	91° 30'	- 42.2	- 55.7		1457.9		-21	+1319	734.764	1,741.772			
			82° 6'		5.5	91° 30'												
					12.7	91° 40'												
149	1650	1649	82° 6'	+8.8°	17.7	91° 40'	- 48.0	- 65.7		1447.9		-26	+1649	734.757	1,742.102			
150	1990	1979	" "	"	13.8	91° 30'	- 63.3	- 77.1		1436.5		-31	+1979	734.754	1,742.432			
151	2316	2309	82° 6'	+8.8°	12.1	91° 40'	- 67.2	- 79.3			TP	-36+2	+2309-3	734.751	1,742.759			
151	2310				3.5	91° 30'	- 73.9	- 79.4		1434.2	TP							
	790		261° 4.6' -180°	+8.8°	+12.9	88° 30'	- 25.9	- 13.0	1421.2		BS	+2+2	+990-3					
	990				+10.0	88° 40'	- 23.0	- 13.0			BS							
152	660		261° 4.6'	+8.8°	14.2	88°	+ 23.0	+ 8.8		1430.0		-1	-660	734.754	1,743.084			
153	330		"		4.6	88°	+ 11.5	+ 6.9		1428.1		-1	-330	734.754	1,743.414			
154	0				5.4	-		-5.4		1415.8	X	0	0	734.753	1,743.746			
155	327		71° 45.4'	+8.8°	7.5	-		-7.5		1413.7	TP	+54+1	+323-3	734.810	1,743.066			CURVE
155	327				9.1	TH	+ 1.4	- 7.5			TP							
	355		271° 18.2' -180°	+8.8°	+14.6	88° 30'	- 9.3	+ 5.3	1419.0		BS	-62	+349-3					CURVE
	355				+13.6	88° 40'	- 8.3	+ 5.3			BS							
156	55		303° 28.6	+8.8°	1.0	-		-1.0		1419.0		+37	-41	734.755	1,744.371			
15	79		310° 3.0	+8.8°	0.9	-		-0.9		1418.1		+59	-52	734.807	1,744.360			BRIDGE

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/18/80	INSTRUMENT MAN G. Litvinov	ROD MAN G. Cotchin	PARTY NUMBER 6834	NOTES CHECKED BY GHL	LINE NO. 7	PAGE 12
AREA OFLAND	TOPO MAP Cordell	STATE Oklahoma	COUNTY Washita	TWP	RANGE	PPM
				PARTY MANAGER 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	
									1419.0							
78	0				5.4	-		-5.4		1413.4	T	0	0	734,748	1,744,412	
157	267		94° 32'	+8.8°	5.9	-		-5.9		1413.1	TP	-62	+260-3	734,686	1,744,669	
157	267				5.6 5.6	BH	-1.3	-5.9			TP					curve
	1320		261° 27.8' - 180°	+8.8°	76.5	-		+6.5	1419.4		BS	-6	+1320-3			cu.
	1320				+13.1	TH	-6.6	+6.5			BS					
158	990		261° 27.8'	+8.8°	6.8	-		-6.8		1412.8		+5	-990	734,685	1,744,976	
159	660		"	"	7.1	-		-7.1		1412.5		+3	-660	734,683	1,745,324	
160	330		"	"	6.7	-		-6.7		1412.9		+2	-330	734,692	1,745,654	
161	6				5.4	-		-5.4		1414.2	T	0	0	734,680	1,745,986	
162	330		81° 39.9'	+8.8°	2.8	-		-2.8		1416.8		-3	+330	734,677	1,746,314	
163	660		"	"	10.6	88°	+23.0	+12.4		1432.6		-5	+660	734,675	1,746,646	
164	990	989	"	"	13.4	89°	+34.5	+21.1		1440.7		-8	+989	734,672	1,746,975	
165	1320		"	"	6.8	88° 30'	+34.5	+27.7		1447.3		-11	+1320	734,669	1,747,306	
164	1650	1649	81° 39.9'	+8.8°	7.3	88° 30'	+43.2	+33.9		1453.4	TP	-13	+1649-3	734,667	1,747,632	
166	1650				4.7	89° 40'	+38.4	+33.7	33.8		TP					
	2646		262° 0.3' - 180°	+8.8°	+7.5	90° 30'	+23.0	+30.5	30.4		BS	-37	+2640-3			
	2640				+2.6	90° 36'	+27.4	+30.2	1483.8		BS					
167	2310		262° 0.3'	+8.8°	13.6	90° 40'	-26.9	-40.5		1443.3		+32	-2310	734,662	1,747,989	
168	2980		"	"	12.8	91°	-34.6	-47.4		1436.4		+28	-1980	734,658	1,748,289	
169	1650		"	"	12.0	91° 20'	-38.4	-50.4		1433.4		+23	-1650	734,653	1,748,619	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/18/60	INSTRUMENT MAN	G LITZINGER	ROD MAN	G COTCAMP	PARTY NUMBER	6834	NOTES CHECKED BY	blj	LINE NO.	7	PAGE	13	
AREA	OKlahoma	TOPO MAP	CORDELL	STATE	OKLAHOMA	COUNTY	WASHTA	TWP		RANGE		PPM	PARTY MANAGER	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				
									1483.8										
170	1320	1319	262° 0.3'	+8.8°	11.8	91° 40'	-38.4	-50.2		1433.6		+19	-1319	734,649	1,748,950				
171	990		"	"	10.7	91° 40'	-28.8	-39.5		1444.3		+14	-990	734,644	1,749,279				
172	660		"	"	12.8	91° 40'	-19.2	-32.0		1451.8		+9	-660	734,639	1,749,609				
173	330		"	"	11.5	91° 40'	-9.6	-21.1		1462.7		+5	-330	734,635	1,749,939				
174	0				5.4	-		-5.4		1478.4	TP	0	0	734,630	1,750,269				
175	330		82° 16.5'	+8.6°	7.8	91°	-5.8	-13.6		1470.2		-5	+330	734,625	1,750,599				
176	660		"	"	8.6	-		-8.6		1475.2		-10	+660	734,620	1,750,929				
177	870		81° 56.2'	+8.8°	6.5	-		-6.5		1477.3		-11	+870	734,619	1,751,139				734,615+1,751,120. 4 way pt. 1478.7 Line #6
177	990		82° 16.5'	+8.6°	3.5	-		-3.5		1480.3		-15	+990	734,615	1,751,259				
178	1320		"	"	3.9	TH	+6.6	+2.7		1484.5		-20	+1320	734,610	1,751,589				
179	1650		"	"	3.4	TH	+8.3	+4.9		1488.7		-25	+1650	734,605	1,751,919				
180	1980		"	"	0.6	TH	+9.9	+7.3		1493.1		-30	+1980	734,600	1,752,249				
181	2310		"	"	1.7	89° 30'	+20.2	+18.3		1502.1		-35	+2310	734,595	1,752,579				
182	2640		82° 16.5'	+8.6°	7.9	89° 20'	+30.7	+22.8		1506.7	TP	-40+2	+2640-3	734,592	1,752,906				
182	2640				3.1	89° 26'	+26.1	+23.0			TP								
	1980		262° 19.5' -180	+8.6°	+9.8	89° 50'	-5.8	-1.0		1505.7	BS	-32+2	+1980-1						
	1980				+10.5	89° 40'	-11.5	-1.0			BS								
183	1650		262° 19.5'	+8.6°	2.0	-		-2.0		1503.7		+27	-1650	734,589	1,753,235				
184	1320		"	"	7.7	-		-7.7		1498.0		+21	-1320	734,583	1,753,565				
185	990		"	"	12.4	-		-12.4		1493.3		+16	-990	734,578	1,753,895				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/18/80	INSTRUMENT MAN G. Litzinger	ROD MAN G. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY GWC, JLD	LINE NO. 7	PAGE 14
AREA OKLAHOMA	TOPO MAP Cordell	STATE OKLAHOMA	COUNTY WAGONER	TWP	RANGE	PPM
				PARTY MANAGER J. D. ULS		

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.	
									1505.7					
184	660		262° 19.5'	+8.6°	8.0	-		-8.0		1497.7		+11	-660	734,573 1,754,275
187	330		"	"	3.8	-		-3.8		1501.9		+5	-330	734,567 1,754,535
188	0				5.4	-		-5.4		1500.3	X	0	0	734,562 1,754,885
189	330		82° 21'	+8.6°	10.7	-		-10.7		1495.0		-5	+330	734,557 1,755,215
190	660		"	"	10.2	-		-10.2		1495.5		-11	+660	734,551 1,755,545
191	990		"	"	4.1	-		-4.1		1501.6		-16	+990	734,546 1,755,875
192	1320		"	"	4.8	89° 30'	+11.5	+6.7		1572.4		-22	+1320	734,540 1,756,205
192	1435		82° 4.9'	+8.6°	1.3	89° 30'	+12.5	+11.2		1516.9		-17	+1435	734,545 1,756,320
193	1650		82° 21'	+8.8°	10.9	89° 10'	+24.0	+13.1		1518.7	TP	-33-2	+1650-3	734,527 1,756,532
193	1680				6.3	89° 20'	+19.2	+12.9	13.0		TP			
	2640		261° 37.4' -130°	+8.8°	70.6	-		+0.6	1519.3		BS	-20-2	+2640-3	
	2640				73.8	TH	-13.2	+0.6			BS			
194	2310		261° 37.4'	+8.8°	5.9	-		-5.9		1513.4		+17	-2310	734,522 1,756,859
195	1980		"	"	7.8	-		-7.8		1511.5		+15	-1980	734,520 1,757,189
196	1650		"	"	7.2	8H	-8.3	-15.5		1503.8		+12	-1650	734,517 1,757,519
197	1320		"	"	2.0	91° -	-23.0	-25.0		1494.3		+10	-1320	734,515 1,757,849
198	990		"	"	9.5	91° -	-17.3	-26.8		1492.5		+7	-990	734,512 1,758,179
199	660		"	"	15.3	-		-15.3		1504.0		+5	-660	734,510 1,758,509
200	330		"	"	10.1	-		-10.1		1509.2		+2	-330	734,507 1,758,839
201	0				5.4	-		-5.4		1513.9	X	0	0	734,505 1,759,169

horiz. correct. y=+17'
x=-40'
734,545+1,756,320
4way EL 1516

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/19/80	INSTRUMENT MAN G. Cotcamp	ROD MAN G. Litzinger	PARTY NUMBER 6834	NOTES CHECKED BY G.W.C. <i>mlw</i>	LINE NO. 7	PAGE 15
AREA Oklahoma	TOPO MAP Cordell 15'	STATE Oklahoma	COUNTY Washita	TWP	RANGE	PPM
				PARTY MANAGER L. Davis		

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1519.3					
202	330		81° 32.5'	+8.8°	3.7	-		-3.7		1515.6		-2	+330	734,503 1,759,499
203	660		" "	"	2.7	-		-2.7		1516.4		-4	+660	734,501 1,757,829
204	990		" "	"	1.8	-		-1.8		1517.5		-6	+990	734,499 1,760,169
205	1320		" "	"	1.3	-		-1.3		1518.0		-8	+1320	734,497 1,760,489
206	1650		" "	"	2.5	-		-2.5		1516.8		-10	+1650	734,495 1,760,819
207	1980		" "	"	19.3	-		-19.3		1500.0		-12	+1980	734,493 1,761,149
208	2310		" "	"	6.8	-		-6.8		1512.5		-14	+2310	734,491 1,761,479
FF	2447		81° 23'	+8.8°	1.3	-		-1.3		1518.0		-8	+2447	734,497 1,761,616
209	2640		81° 32.5'	+8.8°	4.3	89° 50'	+7.7	+3.4		1522.9	TP	-16-2	+2640-2	734,487 1,761,807
209	2640				14.7	89° 36'	+18.4	+3.7	+3.6		TP			
	2640		261° 45' -180°	+8.8°	+12.4	-		+12.4			BS	-25-2	+2640-2	
	2640				+14.0	89° 58'	-1.5	+12.5		1535.4	BS			
210	2310		261° 45'	+8.8°	9.3	-		-9.3		1526.1		+22	-2310	734,482 1,762,135
211	1980		" "	"	9.3	-		-9.3		1526.1		+19	-1980	734,479 1,762,465
212	1650		" "	"	14.1	-		-14.1		1521.3		+16	-1650	734,476 1,762,795
213	1320		" "	"	9.6	-		-9.6		1526.4		+13	-1320	734,473 1,763,125
214	990		" "	"	8.7	-		-8.7		1526.7		+10	-990	734,470 1,763,455
215	660		" "	"	10.9	-		-10.9		1524.5		+6	-660	734,466 1,763,785
216	330		" "	"	7.7	-		-7.7		1527.7		+3	-330	734,463 1,764,115
217	0				5.4	-		-5.4		1530.0	TP	0	0	734,460 1,764,445

734,490 + 1,761,595
4-Way Intersect. CL 1519

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/19/80	INSTRUMENT MAN G. Cotcamp	ROD MAN G. Litzinger	PARTY NUMBER 6834	NOTES CHECKED BY G.W.C. <i>rlw</i>	LINE NO. 7	PAGE 16
AREA Oklahoma	TOPO MAP Cordell 15'	STATE Oklahoma	COUNTY Washita	TWP	RANGE	PPM
				PARTY MANAGER L. Davis		

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1535.4					
218	330		81°52'	+8.8°	1.7	-		-1.7		1533.7		-4	+330	734,454 1,764,775
219	660		" "	"	1.3	TH	+3.3	+2.0		1537.4		-8	+660	734,452 1,765,105
220	990		" "	"	4.0	89°30'	+8.6	+4.4		1540.0		-12	+990	734,448 1,765,435
221	1320		" "	"	4.3	89°30'	+11.5	+7.2		1542.6		-15	+1320	734,445 1,765,765
222	1650		" "	"	4.5	89°30'	+14.4	+9.9		1545.7		-19	+1650	734,441 1,766,095
223	1980		" "	"	4.6	89°30'	+17.3	+12.7		1548.1		-23	+1980	734,437 1,766,425
224	2310		" "	"	6.0	89°30'	+20.2	+14.2		1549.6		-27	+2310	734,433 1,766,755
<i>JL</i> <i>75</i>	^{120°} 2403		81°41.3'	+8.8°	4.2	89°30'	+21.0	+16.8		1552.2		-20	+2403	734,440 1,766,848
225	2640		81°52'	+8.8°	2.0	89°30'	+23.0	+21.0	21.1	1556.5	TP	-31-2	+2640-2	734,427 1,767,083
225	2640				14.1	89°4'	+35.3	+21.2			TP			
	1650		262°12.5' -180°	+8.8°	+12.7	BH	+8.3	+21.0	20.9		BS	-29	+1650-2	
	1650				+15.0	90°12'	+5.8	+20.8	1577.4		BS			
226	1320		262°12.5'	+8.8°	10.0	BH	-6.6	-16.6		1560.8		+23	-1320	734,421 1,767,411
227	990		" "	"	10.1	-		-10.1		1567.3		+17	-990	734,415 1,767,741
228	660		" "	"	7.2	-		-7.2		1570.2		+12	-660	734,410 1,768,071
229	330		" "	"	6.9	-		-6.9		1570.5		+6	-330	734,404 1,768,401
230	0				5.4	-		-5.4		1572.0	X	0	0	734,398 1,768,731
231	330		82°24'	+8.8°	14.2	BH	-1.7	-15.9		1561.5		-7	+330	734,391 1,769,061
232	660		" "	"	12.8	91°30'	-17.3	-30.1		1547.3		-14	+660	734,384 1,769,391
233	990		" "	"	15.0	91°30'	-25.9	-40.9		1536.5		-21	+990	734,377 1,769,721

734,440 + 1,766,860
4-Way Intersect. cr. 1893

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/19/80	INSTRUMENT MAN G. Cotcamp	ROD MAN G. Litzinger	PARTY NUMBER 6834	NOTES CHECKED BY Gwl. <i>rlw</i>	LINE NO. 7	PAGE 17
AREA Oklahoma	TOPO MAP Cordell 15'	STATE Oklahoma	COUNTY Washita	TWP	RANGE	PPM
PARTY MANAGER L. Davis						

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
									1577.4							
234	1320		82° 24'	+8.8°	2.2	91° 30'	-34.5	-36.7		1540.7		-28	+1320	734,370	1,770,051	
235	1650		82° 24'	+8.8°	12.0	90° 30'	-14.4	-26.4			TP	-35	+1650-2	734,343	1,770,379	
235	1650				14.8	90° 24'	-11.5	-26.3		1537.1	TP					
	1900		261° 48.2'-150°	+8.8°	+0.1	-		+0.1	1537.2		BS	-20	+1900-2			shooting across curve
	1900				+9.5	TH	-9.5	+0.0			BS					
236	1570		261° 48.2'	+8.8°	10.8	-		-10.8		1540.4		+17	-1570	734,360	1,770,107	
237	1240		"		11.9	90° 30'	-10.8	-22.7		1528.5		+13	-1240	734,356	1,771,037	
238	960		252° 28'	+8.8°	13.4	90° 30'	-8.4	-21.8		1529.4		-146	-949	734,198	1,771,328	curve
239	650		251° 52'	+8.8°	14.8	90° 30'	-5.7	-20.5		1530.7		-105	-641	734,238	1,771,636	"
240	330		261° 48.2'	+8.8°	14.3	84	-1.7	-16.0		1535.2		+3	-330	734,346	1,771,947	
241	204		262° 37'	+8.8°	11.1	-		-11.1		1540.1		+5	-204	734,348	1,772,073	734,320 + 1,772,080 4-Way Intersect. p. 1542.
241	0				5.4	-		-5.4		1545.8	X	0	0	734,343	1,772,277	
242	330		81° 50.3'	+8.8°	0.9	TH	+1.7	+0.8		1532.0		-4	+330	734,339	1,772,607	
243	660		"		3.1	89° -	+11.5	+8.4		1559.6		-7	+660	734,336	1,772,937	
244	990		"		6.7	88° 30'	+25.9	+19.2		1570.4		-11	+990	734,332	1,773,267	
245	1320		"		4.0	88° 30'	+34.5	+30.5		1581.7		-15	+1320	734,328	1,773,597	
246	1650	1649	81° 50.3'	+8.8°	3.8	88° 30'	+43.2	+39.4		1590.6	TP	-18	+1649-2	734,325	1,773,924	
246	1650				13.4	88° 10'	+52.8	+39.4			TP					
	1320		261° 42.2'-180°	+8.8°	+13.3	91° -	+23.0	+36.3	1626.9		BS	-12	+1320-2			
	1320				+9.4	91° 10'	+26.9	+36.3			BS					

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/19/80	INSTRUMENT MAN G. Cotcamp	ROD MAN G. Litzinger	PARTY NUMBER 6834	NOTES CHECKED BY GWC rdw	LINE NO. 7	PAGE 18
AREA Oklahoma	TOPO MAP Cordell 15'	STATE Oklahoma	COUNTY Washita	TWP	RANGE	PPM
				PARTY MANAGER L. Davis		

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1626.9					
247	990		261°42.2'	+8.8°	12.5	91°-	-17.3	-29.8		1597.1		+9	-990	734,322 1,774,262
248	660		" "	"	12.4	91°-	-11.5	-23.9		1603.0		+6	-660	734,319 1,774,582
249	330		" "	"	14.0	BH	1.7	-15.7		1611.2		+3	-330	734,316 1,774,912
250	0				54	-		-5.4		1621.5	π	0	0	734,313 1,775,242
251	330		81°39.3'	+8.8°	8.3	-		-8.3		1619.4		-3	+330	734,316 1,775,572
252	660		" "	"	11.0	-		-11.0		1616.9		-5	+660	734,308 1,775,902
253	990		" "	"	8.0	-		-8.0		1618.9		-8	+990	734,305 1,776,232 Cordell Quad
254	1320		81°39.3'	+8.8°	4.2	TH	+6.6	+2.4		1629.3	TP	-10	+1320-2	734,303 1,776,560 EARLY OKLA
254	1320				9.2	89°30'	+11.5	+2.3			TP			
	660		261°17'-180°	+8.8°	+13.7	91°-	+11.5	+25.2	1654.5		BS	-1	+660	
	660				+2.1	92°-	+23.0	+25.1			BS			
255	330		261°17'	+8.8°	12.7	91°-	-5.8	-18.5		1636.0		0	-330	734,302 1,776,990 horiz. corrad. y=-10'
256	0				54	-		-5.4		1649.1	π	0	0	734,302 1,777,220 x=-24'
1/4	145		79°50'	+8.8°	1.0	-		-1.0		1653.5		+3	+145	734,305 1,777,365 734,305 + 1,777,365 4-Way Intersect.
257	330		82°38.3'	+8.6°	1.0	TH	+1.7	+0.7		1655.2		-7	+330	734,295 1,777,550
258	660		82°38.3'	+8.6°	6.9	89°-	+11.5	+4.6		1659.1	TP	-14-2	+660-2	734,286 1,777,878
258	660				3.1	89°20'	+7.7	+4.6			TP			
	990		261°10.1'-190	+8.6°	+0.9	-		+0.9	1660.0		BS	+4-2	+990-2	
	990				+5.8	TH	-5.0	+0.8			BS			
259	660		261°10.1'	+8.6°	9.2	~		-9.2		1658.8		-3	-660	734,285 1,779,206

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/20/80	INSTRUMENT MAN GLITZINGER	ROD MAN G Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY Shl JLW	LINE NO. 7	PAGE 19
AREA Oklahoma	TOPO MAP EARLY	STATE Oklahoma	COUNTY Washita	TWP	RANGE	PPM
				PARTY MANAGER L DAVIS		

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1460.0					
260	330		261° 10.1'	+8.6°	11.3	-		-11.3		1449.7		-1	-330	734,287 1,778,536
261	0				5.4	-		-5.4		1654.6	T	0	0	734,288 1,779,866
262	330		81° 57.8'	+8.6°	4.3	-		-4.3		1655.7		-3	+330	734,285 1,777,196
263	660		" "	"	13.6	-		-13.6		1646.4		-6	+660	734,282 1,779,584
264	990		81° 57.8'	+8.6°	12.4	90° 20'	-5.8	-18.2		1644.8	TP	-10-2	+990-2	734,276 1,779,854
264	990				7.7	90° 30'	-8.6	-18.3			TP			
	1320		261° 55.4' -180°	+8.6°	714.5	91° -	+23.0	+37.5	1679.3		BS	-12-2	+1320-2	
	1326				710.6	91° 10'	+26.9	+37.5			BS			
265	990		261° 55.4'	+8.6°	11.4	91° 20'	-23.0	-34.4		1644.9		+9	-990	734,271 1,780,182
266	660		" "	"	10.7	91° -	-11.5	-22.2		1657.1		+6	-660	734,268 1,780,157
267	330		" "	"	10.4	-		-10.4		1668.9		+3	-330	734,265 1,780,842
268	0				5.4	-		-5.4		1673.9	T	0	0	734,262 1,781,172
269	330		81° 58.5'	+8.6°	14.2	-		-14.2		1665.1		-3	+330	734,259 1,781,502
270	660		" "	"	14.1	BH	-3.3	-17.4		1661.9		-7	+660	734,255 1,781,832
271	990		" "	"	10.7	BH	-5.0	-15.7		1663.6		-10	+990	734,252 1,782,162
272	1320		" "	"	10.4	BH	-6.6	-19.0		1660.3		-13	+1320	734,249 1,782,492
27	1460		81° 42.5'	+8.6°	14.4	BH	-7.3	-21.7		1657.6		-8	+1460	734,254 1,782,632 734,260 + 1,782,610 4 WBY el. 1660
273	1650		81° 58.5'	+8.6°	14.0	BH	-8.3	-22.3		1657.0		-17	+1650	734,245 1,782,822
274	1980		81° 58.5'	+8.6°	15.0	90° 13'	7.5	-22.5		1656.8	TP	-20-2	+1980-1	734,240 1,783,151
274	1980				5.3	90° 30'	-17.3	-22.6			TP			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
11/20/80		G. Litzinger		G. Cotnam		6834		[Signature]		7	20						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Oklahoma		EARLY		Oklahoma	WASHITA					L. DAVIS							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
274									1656.8								
BS	2640		261° 46.2' - 180	+8.6°	78.9	89° -	-46.1	-37.2	1619.4		BS	-17-2	+2640				
BS	2640				+1.2	89° 10'	-38.4	-37.2			BS						
275	2310		261° 46.7'	+8.6°	11.1	89°	+40.3	+29.2		1648.8		+15	-2310	734,236	1,783,481		
276	1980		"	"	1.0	89° 30'	+17.3	+16.3		1635.9		+13	-1980	734,234	1,783,811		
277	1680		"	"	10.4	89° 30'	+14.4	+4.0		1623.6		+11	-1650	734,232	1,784,141		
278	1320		"	"	4.3	-	-	-4.3		1615.3		+9	-1320	734,230	1,784,471		
279	990		"	"	5.0	-	-	-5.0		1614.6		+6	-990	734,227	1,784,801		
280	660		"	"	3.3	-	-	-3.3		1616.3		+4	-660	734,225	1,785,131		
281	330		"	"	3.6	-	-	-3.6		1616.0		+2	-330	734,223	1,785,461		
282	0				5.4	-	-	-5.4		1614.2	TP	0	0	734,221	1,785,791		
283	330		81° 42.1'	+8.6°	5.5	-	-	-5.5		1614.1		-2	+330	734,219	1,786,121		
284	660		"	"	5.8	-	-	-5.8		1613.8		-3	+660	734,218	1,786,451		
285	990		"	"	6.6	-	-	-6.6		1613.0		-5	+990	734,216	1,786,781		
286	1320		"	"	5.8	-	-	-5.8		1613.4		-7	+1320	734,214	1,787,111		
287	1650		"	"	2.9	-	-	-2.9		1616.7		-9	+1650	734,212	1,787,441		
288	1980		"	"	2.2	TH	+9.9	+7.7		1627.3		-10	+1980	734,211	1,787,771		
TP	1998		81° 23.2'	+8.6°	3.1	89° 40'	+11.6	+8.5		1628.1		0	+1998	734,221	1,787,789		
289	2310		81° 42.1'	+8.6°	1.6	89° 40'	+13.4	+11.8			TP	-12	+2310	734,209	1,788,101		
289	2316				15.0	89° 20'	+26.9	+11.9		1631.5	TP						

734,230 + 1,787,800
T-rd (south) - cl. 1632.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
11/20/80		G. LITZINGER		G. COLEMAN		6434		JHJ		7	21					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
Oklahoma		EARLY		Oklahoma	WASHINGTON					L. DAVIS						
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
289										1631.5						
	1946		262°20.4' - 180°	+8.6°	+7.7	89°30'	-17.3	-9.6			BS	-32	+1980			
	1940				+2.0	89°40'	-11.5	-9.5	1622.0		BS					
290	1650		267°20.4'	+8.6°	2.4	TH	+8.3	+5.9		1627.9		+27	-1650	734,204	1,788,431	
291	1320		"	"	5.1	TH	+6.6	+1.5		1623.5		+22	-1320	734,199	1,788,761	
292	990		"	"	8.3	TH	+5.0	-3.3		1618.7		+16	-990	734,193	1,789,091	
293	660		"	"	6.0	-	-	-6.0		1616.0		+11	-660	734,188	1,789,421	
294	330		"	"	5.4	-	-	-5.4		1614.6		+5	-330	734,182	1,789,751	
295	0				5.4	-	-	-5.4		1616.6	T	0	0	734,177	1,790,081	
296	330		82°16.1'	+8.6°	10.9	-	-	-10.9		1611.1		-5	+330	734,172	1,790,411	
297	660		"	"	13.9	90°30'	-5.8	-19.7		1602.3		-10	+660	734,167	1,790,741	
298	990		"	"	13.5	90°40'	-11.5	-25.0		1597.0		-15	+990	734,162	1,791,071	
299	1320		"	"	3.8	90°40'	-15.4	-19.2		1602.8		-20	+1320	734,157	1,791,401	
300	1650		82°16.1'	+8.6°	9.3	TH	-8.3	-15.6			TP	-25	+1650	734,151	1,791,731	
300	1650		82°16.1'		10.7	90°10'	-4.8	-15.5		1606.5	TP					
	1980	1979	261°47.7' - 190	+8.6°	+1.2	88°40'	-46.1	-44.9	1561.6		BS	-14	+1979			
	1980				+6.7	88°30'	-57.8	-45.1			BS					
301	1650		261°47.7'	+8.6°	3.1	88°46'	+98.4	+35.3		1596.9		+11	-1650	734,146	1,792,060	
307	1320		"	"	8.5	88°40'	+30.7	+22.2		1583.8		+9	-1320	734,144	1,792,390	
303	990		"	"	6.6	89°	+17.3	+10.7		1572.3		+7	-990	734,142	1,792,720	
304	660		"	"	2.8	TH	+3.3	+0.5		1562.1		+5	-660	734,140	1,793,050	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 11/20/90	INSTRUMENT MAN G. LITZINGER	ROD MAN B. Cotcamp	PARTY NUMBER 6834	NOTES CHECKED BY blw	LINE NO. 7	PAGE 22
AREA Oklahoma	TOPO MAP EARLY	STATE Oklahoma	COUNTY WASHINGTON	TWP	RANGE	PPM
				PARTY MANAGER L. DAVIS		

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
									1561.6							
1	596		262° 48'	+8.6°	0.14	-		-0.4		1561.2		+15	-596	734,150	1,793,114	734,175 + 1,793,110 Frod (south) el. 1564
305	330		261° 47.7'	+8.6°	2.8	-		-2.8		1558.8		+2	-330	734,137	1,793,380	
306	0				374	-		-5.4		1556.2	T	0	0	734,135	1,793,710	
307	330		81° 41.8'	+8.8°	13.3	-		-13.3		1548.3		-3	+330	734,132	1,794,040	
308	660		"	"	5.8	92° -	-23.0	-28.8		1532.8		-6	+660	734,129	1,794,370	
309	990	989	"	"	7.6	92° -	-34.5	-42.1		1519.5		-9	+989	734,126	1,794,699	
310	1320	1319	"	"	0.9	92° -	-46.0	-46.9		1514.7		-11	+1319	734,124	1,795,029	
311	1680		81° 41.8'	+8.8°	13.1	91° 10'	-33.6	-46.7		1514.9	TP	-14-3	+1650	734,118	1,795,360	
311	1656				8.3	91° 20'	-38.4	-46.7			TP					
	1990		261° 35.4' - 190	+8.8°	+9.3	89° -	34.6	-26.3	1488.4		BS	-13-3	+1980			
	1990				+2.4	89° 10'	-28.8	-26.4			BS					
312	1450		261° 35.4'	+8.8°	10.3	89° -	+28.8	+18.5		1507.1		+11	-1650	734,113	1,795,690	
313	1320		"	"	0.7	TH	+6.6	+5.9		1494.5		+9	-1320	734,111	1,796,020	
314	990		"	"	3.8	TH	+5.0	+1.2		1489.8		+7	-990	734,109	1,796,350	BRIDGE
315	660		"	"	2.5	TH	+3.3	+0.8		1489.4		+4	-660	734,106	1,796,680	
316	330		"	"	0.2	-		-0.2		1488.4		+2	-330	734,104	1,797,010	
317	0				5.4	-		-5.4		1483.2	T	0	0	734,102	1,797,340	
318	330		81° 22.8'	+8.8°	11.5	-		-11.5		1477.1		-1	+330	734,101	1,797,670	
319	660		"	"	14.4	8H	-3.3	-17.7		1470.9		-2	+660	734,100	1,798,000	
320	990		"	"	4.2	91° -	-17.3	-21.5		1467.1		-3	+990	734,099	1,798,330	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
11/20/80		G. Litzinger		G. Cotcamp		6834		skl rls		7	23					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
Oklahoma		Eakly 15'		Oklahoma	Washita		10W	14W								
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
									1488.6						horiz. correct y = -21 x = -9'	
TP	103-0		80°46.4	+8.8°	3.3	91°-	-18.3	-21.6		1467.0		+8	+1050	734,110	1,798,390	734,110 + 1,798,390 Tid(south)
321	1320		81°22.8'	+8.8°	0.4	91°-	-23.0	-23.4		1465.2		-4	+1320	734,098	1,798,660	Town of Colony
322	1650		81°22.8'	+8.5°	3.9	90°50'	-24.0	-27.9		1460.7	TP	+3+2	+1650	734,107	1,798,990	↓
322	1650				8.7	90°40'	-19.2	-27.9			TP					
	1650		262°45.3' - 180°	+8.5°	4.6	89°50'	-4.8	-0.2	1460.5		BS	-36+3	+1650-3			
	1650				8.0	TH	-8.3	-0.3			BS					
323	1320		262°45.3'	+8.5°	3.8	-	-	-3.8		1456.7		+29	-1320	734,103	1,798,317	
324	990		"	"	4.5	-	-	-4.5		1456.0		+22	-990	734,096	1,799,647	
325	660		261°29'	+8.5°	5.1	-	-	-5.1		1455.4		-1	-660	734,073	1,799,977	
326	330		"	"	5.8	-	-	-5.8		1454.7		-1	-330	734,073	1,800,367	
327	0				5.4	-	-	-5.4		1455.1	TP	0	0	734,074	1,800,637	
328	330		89°11'	+8.5°	6.7	-	-	-6.7		1453.8		-44	+327	734,030	1,800,964	
329	660		87°22'	+8.5°	3.2	-	-	-3.2		1457.3		-67	+657	734,007	1,801,294	
330	990		86°28'	+8.5°	9.4	89°-	+17.3	+7.9		1468.4		-86	+986	733,988	1,801,623	
331	1320		85°38'	+8.5°	6.3	88°30'	+34.5	+28.2		1488.7		-95	+1317	733,979	1,801,954	
332	1650	1649	85°33'	+8.5°	1.9	88°30'	+43.2	+41.3			TP	-116+3	+1645-3	733,961	1,802,279	
332	1650				6.6	88°20'	+48.0	+41.4		1501.9	TP					
	2640		261°29.8' - 180°	+8.5°	7.3	-	-	+7.3			BS	0+3	+2640-3			
	2640				13.9	89°52'	-6.2	+7.7	1509.4		BS					
333	2310		261°29.8'	+8.5°	6.5	-	-	-6.5		1502.9		0	-2310	733,964	1,802,606	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/21/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	G. Litzinger	PARTY NUMBER	6834	NOTES CHECKED BY	Shd	LINE NO.	7	PAGE	24	
AREA	Oklahoma	TOPO MAP	Eakley	STATE	Oklahoma	COUNTY	Washita	TWP	10 N	RANGE	14 W	PPM	PARTY MANAGER	L. Davis

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
									1509.4							
334	1980		261° 29.8'	+8.5°	7.0	-		-7.0		1502.4		0	-1980	733,964	1,802,936	
335	1650		" "	"	8.1	-		-8.1		1501.3		0	-1650	733,964	1,803,266	
336	1320		" "	"	9.7	-		-9.7		1499.7		0	-1320	733,964	1,803,596	
337	1250		261° 57'	+8.5°	10.0	-		-10.0		1499.4		+10	-1250	733,974	1,803,666	739,035 + 1,803,680 4-way Intersect. of 1502
338	990		261° 29.8'	+8.5°	12.8	-		-12.8		1496.4		0	-990	733,964	1,803,924	
339	660		" "	"	13.0	BH	3.3	-16.3		1493.1		0	-660	733,964	1,804,254	
340	330		" "	"	12.5	-		-12.5		1496.9		0	-330	733,964	1,804,586	
341	0		" "	"	5.4	-		-5.4		1504.0	X	0	0	733,964	1,804,916	
342	330		81° 25'	+8.5°	4.0	-		-4.0		1505.4		0	+330	733,964	1,805,246	
343	660		" "	"	4.3	-		-4.3		1505.1		+1	+660	733,965	1,805,576	
344	990		" "	"	2.9	-		-2.9		1506.5		+1	+990	733,965	1,805,906	
345	1320		" "	"	5.9	TH	+6.6	+0.7		1510.1		+2	+1320	733,966	1,806,236	
346	1650		" "	"	3.6	TH	+8.3	+4.7		1514.1		+2	+1650	733,966	1,806,566	
347	1980		81° 25'	+8.5°	5.6	TH	+9.9	+4.3	+4.2	1513.4	TP	+3 +3	+1980-3	733,970	1,806,896	
348	1980		" "	"	7.4	89° 40'	+11.5	+4.1			TP					
349	2310		261° 30.4' - 180°	+8.5°	+8.5	-		+8.5			BS	0 +1	+2310-3			
350	2310		" "	"	+14.0	89° 52'	-5.4	+8.6	+4.2	1522.2	BS					
351	1980		261° 30.4'	+8.5°	6.0	BH	-9.9	-15.9		1506.3		0	-1980	733,971	1,807,220	
352	1650		" "	"	12.5	BH	-8.3	-20.8		1501.4		0	-1650	733,971	1,807,550	
353	1320		" "	"	12.2	90° 30'	-11.5	-23.7		1498.5		0	-1320	733,971	1,807,880	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/21/80	INSTRUMENT MAN	G. Cotcamp	ROD MAN	G. Litzinger	PARTY NUMBER	6834	NOTES CHECKED BY	SHL JDL	LINE NO.	7	PAGE	25	
AREA	Oklahoma	TOPO MAP	Eakly 15'	STATE	Oklahoma	COUNTY	Washita	TWP	10 N	RANGE	14 W	PPM	PARTY MANAGER	L. Davis

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1522.2					
350	990		261° 30.4'	+8.5°	12.8	90° 30'	-8.6	-21.4		1500.8		0	-990	733,971 1,808,210
351	660		"	"	12.8	-		-12.8		1509.4		0	-660	733,971 1,808,540
352	330		"	"	6.9	-		-6.9		1515.3		0	-330	733,971 1,808,870
352	248		264° 2'	+8.5°	6.5	-		-6.5		1515.7		+11	-248	733,982 1,808,952 4-Way Intersect. at 1518
353	0				5.4	-		-5.4		1516.8	TP	0	0	733,971 1,809,200
354	330		81° 35.4'	+8.8°	3.0	-		-3.0		1519.2		-2	+330	733,969 1,809,530
355	660		"	"	4.6	-		-4.6		1517.6		-4	+660	733,967 1,809,860
356	990		"	"	4.0	-		-4.0		1519.2		-7	+990	733,964 1,810,190
357	1320		"	"	5.5	TH	+6.6	+1.1		1523.3		-9	+1320	733,962 1,810,520
358	1650		"	"	8.5	TH	+8.3	-0.2		1522.0		-11	+1650	733,960 1,810,850
359	1980		"	"	10.9	TH	+9.9	-1.0		1521.2		-13	+1980	733,958 1,811,180
360	2310		"	"	8.2	TH	+11.6	+3.4		1525.6		-16	+2310	733,955 1,811,510
361	2640		81° 35.4'	+8.8°	4.0	TH	+13.2	+9.2		1531.4	TP	-18	+2640	733,953 1,811,837
361	2640				6.3	89° 40'	+13.7	+9.1			TP			
	2640		261° 35.6' - 180°	+8.8°	+3.1	-		+3.1			BS	-18	+2640	
	2640				+9.6	89° 52'	-6.2	+3.4	+3.3	1534.7	BS			
362	2310		261° 35.6'	+8.8°	4.5	-		-4.5		1530.2		+16	-2310	733,951 1,812,164
363	1980		"	"	12.7	-		-12.7		1522.0		+14	-1980	733,949 1,812,494
364	1650		"	"	10.0	BH	-8.3	-18.3		1516.4		+11	-1650	733,946 1,812,824
365	1320		"	"	11.1	BH	-6.6	-17.7		1517.0		+9	-1320	733,944 1,813,154

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/21/80	INSTRUMENT MAN	G. Catcamp	ROD MAN	G. Litzinger	PARTY NUMBER	6834	NOTES CHECKED BY	shl rdw	LINE NO.	7	PAGE	26	
AREA	Oklahoma	TOPO MAP	Fakly 15'	STATE	Oklahoma	COUNTY	Washita	TWP	10N	RANGE	14W, 13W	PPM	PARTY MANAGER	L. Davis

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATÉS		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1534.7					
366	990		261°35.6'	+8.8°	10.7	-	-10.7		1524.0		+7	-990	733,942	1,813,484
367	660		" "	"	9.0	-	-9.0		1525.7		+5	-660	733,940	1,813,814
368	330		" "	"	6.9	-	-6.9		1527.8		+2	-330	733,937	1,814,144
368	259		263°12'	+8.8°	6.0	-	-6.0		1528.7		+9	-259	733,944	1,814,215
369	0				5.4	-	-5.4		1529.3	TP	0	0	733,935	1,814,974
370	330		80°54.6'	+8.8°	9.3	92°-	-11.5	-20.8	1513.4		+2	+330	733,937	1,814,804
371	660		" "	"	11.1	92°-	-23.0	-34.1	1500.6		+3	+660	733,938	1,815,134
372	990	989	" "	"	5.0	92°-	-34.5	-39.5	1495.2		+5	+989	733,940	1,815,463
373	1320		" "	"	10.2	91°-	-23.0	-33.2	1501.5		+7	+1320	733,942	1,815,794
374	1650		" "	"	2.2	91°-	-28.8	-31.0	1503.7		+8	+1650	733,943	1,816,124
375	1980		" "	"	5.0	91°-	-34.6	-39.6	1495.1		+10	+1980	733,945	1,816,454
376	2310		" "	"	5.8	91°-	-40.3	-46.1	1488.4		+12	+2310	733,947	1,816,784
377	2640		" "	"	13.8	90°40'	-30.7	-44.5	1490.2		+13	+2640	733,948	1,817,114
378	2970		80°54.6'	+8.8°	0.7	90°40'	-34.5	-35.2	1499.5	TP	+15	+2970-3	733,950	1,817,441
378	2970				14.4	90°24'	-20.7	-35.1		TP				
	1980	1979	261°8.5'-180°	+8.8°	+11.1	87°50'	-74.8	-60.7	1438.8	BS	+2	+1979-3		
	1980				+12.7	87°52'	-73.7	-60.8		BS				
379	1650	1649	261°8.5'	+8.8°	3.6	87°50'	+62.3	+58.7	1497.5		-2	-1649	733,950	1,817,768
380	1320		" "	"	0.1	88°-	+46.0	+45.9	1484.7		-1	-1320	733,951	1,818,097
381	990		" "	"	1.5	88°-	+34.5	+33.0	1471.8		-1	-990	733,951	1,818,427

WASHITA CO, R14 W
733,920 + 1,814,220
4-Way Intersection 1/5/31

Caddo CO, R13 W

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/21/80	INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE
AREA	Oklahoma	G. Cotcamp		G. Litzinger		6834		shl dw		7	27
		TOPO MAP	STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER			
		Fakly 15'	Oklahoma	Caddo	10N	13W		L. Davis			

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									1438.8					
382	660		261° 8.5'	+88°	1.7	88° -	+23.0	+21.3		1460.1		-1	-660	733,951 1,818,757
383	330		" "	"	2.9	88° -	+11.5	+8.6		1447.4		0	-330	733,952 1,819,087
384	0				5.4	-	-	-5.4		1433.4	T	0	0	733,952 1,819,417
384	78		75° 35'	+88°	7.0	-	-	-7.0		1431.8		+8	+78	733,960 1,819,495
385	330		81° 7'	+88°	9.3	-	-	-9.3		1429.5		0	+330	733,952 1,819,797
386	660		" "	"	6.2	-	-	-6.2		1432.6		+1	+660	733,953 1,820,077
387	990		" "	"	0.8	TH	+5.0	+4.2		1443.0		+1	+990	733,953 1,820,407
388	1320		" "	"	5.0	89° -	+23.0	+18.0		1456.8		+2	+1320	733,954 1,820,737
389	1650	1649	" "	"	7.5	88° 30'	+43.0	+35.7		1474.5		+2	+1650	733,954 1,821,067
390	1980	1979	81° 7'	+9.0°	7.9	88° 30'	+51.8	+44.4		1483.2	TP	-4-2	+1979-4	733,946 1,821,392
390	1980				1.7	88° 30'	+46.1	+44.4			TP			
	660		261° 19.1' - 180	+9.0°	+8.8	92° -	+23.0	+31.8	1515.0		BS	-4-2	+660-4	
	660				+6.8	72° 10'	+24.9	+31.7			BS			
391	330		261° 19.1'	+9.0°	9.3	92° -	-11.5	-20.8		1494.2		+2	-330	733,942 1,821,718
392	0				5.4	-	-	-5.4		1509.6	T	0	0	733,990 1,822,048
393	330		81° 0.3'	+9.0°	1.0	-	-	-1.0		1514.0		0	+330	733,990 1,822,378
394	660		" "	"	7.8	89° -	+11.5	+3.7		1518.7		0	+660	733,990 1,822,708
395	990		81° 0.3'	+9.0°	11.5	89° -	+17.3	+5.8		1520.8	TP	0-2	+990-4	733,938 1,823,034
395	990				8.7	89° 10'	+14.4	+5.7			TP			

horiz. correct. y=15'
x=-27'
733,960 + 1,819,495
offset 4-way cl 1431

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
11/22/80		GLITZINGER		A. COTCHAMP		6834		bhl edw		7		28			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Oklahoma		Forkly 15'		Oklahoma		Caddo								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	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
395										1520.8					
	1320		261° 10.9' - 180	+9.0°	13.8	91°	+23.0	+36.8			BS	-4	+1320-4		
	1320				+10.0	91° 10'	+26.9	+36.9	1557.7		BS				
396	990		261° 10.9'	+9.0°	13.1	91° 10'	-20.2	-33.3		1524.4		+3	-990	733,937	1,823,360
397	666		"	"	12.6	91° 30'	-17.3	-29.9		1527.8		+2	-660	733,936	1,823,690
398	330		"	"	14.5	91° 20'	-7.7	-22.2		1535.5		+1	-330	733,935	1,824,020
399	8				5.4	-	-	-5.4		1552.3	T	0	0	733,934	1,824,350
400	330		81° 9.2'	+9.0°	0.2	88°	+11.5	+11.3		1569.0		-1	+330	733,933	1,824,680
401	660	659	79° 29.2'	+9.0°	2.9	87° 30'	+15.8	+12.9		1570.6		+10	+362	733,944	1,824,712
			81° 9.2'	+9.0°	4.0	87° 30'	+28.8	+24.8		1582.5		-2	+659	733,932	1,825,009
402	990	989			6.4	87° 30'	+43.1	+36.7		1594.4		-3	+989	733,931	1,825,339
403	1320	1319	81° 9.2'	+9.0°	14.9 +4.5	87° 40'	+53.7	+38.8		1596.5	TP	-4	+1319-4	733,930	1,825,665
	1320				13.4	87° 44'	+52.2	+38.8			TP				
	2310		261° 20.8' - 180	+9.0°	+4.3	89°	-40.3	-36.0	1560.5		BS	-14	+2310-4		
	2310				+11.0	88° 50'	-47.0	-36.0			BS				
404	1980		261° 20.8'	+9.0°	9.7	89°	+34.6	+24.9		1585.4		+12	-1980	733,928	1,825,991
405	1650		"	"	1.5	89° 30'	+14.4	+12.9		1573.4		+10	-1650	733,926	1,826,321
406	1320		"	"	5.6	89° 30'	+11.5	+5.9		1566.4		+8	-1320	733,924	1,826,651
407	990		"	"	4.6	7#	+5.0	+0.4		1560.9		+6	-990	733,922	1,826,981
408	660		"	"	3.0	-	-	-3.0		1557.5		+4	-660	733,920	1,827,311
409	330		"	"	4.0	-	-	-4.5		1556.0		+2	-330	733,918	1,827,641

733,920 + 1,829,755
TRD CK 1571

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
11/22/90		G LITZINGER		B Cotcamp		6834		BHL		7		29 of 30			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
OHLAhomg		Eakly 15'		Oklahoma		Caddo		10 N		13 W				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
									1560.5						
410	0				5.4	-		-5.4		1555.1	T	0	0	733,916	1,827,971
411	330		81° 41.1'	+9.0°	4.4	-		-4.4		1556.1		-4	+330	733,912	1,828,301
412	660		"	"	1.5	-		-1.5		1559.0		-8	+660	733,908	1,828,631
413	990		"	"	10.4	89° -	+17.3	+6.9		1567.4		-12	+990	733,904	1,828,961
414	1320		"	"	0.1	89° -	+23.0	+22.9		1583.4		-16	+1320	733,900	1,829,291
415	1650	1649	"	"	8.4	88° 30'	+43.2	+34.8		1595.3		-20	+1649	733,896	1,829,620
416	1980	1979	"	"	11.5	88° 30'	+57.8	+40.3		1600.8	T	-24	+1979	733,892	1,829,950
416	2040	2039	81° 21.8'	+9.0°	11.3	88° 30'	+53.4	+42.1		1602.6		-13	+2039	733,903	1,830,010
417	2310	2309	81° 41.1'	+8.8°	10.9	88° 30'	+60.5	+49.6	+49.4	1609.9	TP	-20	+2309-4	733,896	1,830,276
417	2310				4.5	88° 40'	+53.7	+49.2			TP				
	1650		261° 56.2' - 180°	+8.8°	7.0	88° 40'	-38.4	-28.3	-28.4		BS	-21	+1650-4		
	1650				7.1	88° 30'	-33.6	-28.5	1581.5		BS				
418	1320		261° 56.2'	+8.8°	8.1	88° 30'	+34.5	+26.4		1607.9		+17	-1320	733,892	1,830,602
419	990		"	"	2.7	88° 30'	+20.2	+17.5		1599.0		+13	-990	733,888	1,830,932
420	660		"	"	6.1	89° -	+11.5	+5.4		1586.9		+8	-660	733,883	1,831,262
421	330		"	"	3.5	-		-3.5		1578.0		+4	-330	733,879	1,831,592
422	0				5.4	-		-5.4		1576.1	T	0	0	733,875	1,831,922
423	330		82° 22.5'	+8.8°	7.7	-		-7.7		1573.8		-7	+330	733,868	1,832,252
424	660		"	"	11.9	-		-11.9		1569.6		-14	+660	733,861	1,832,582
425	990		"	"	15.0	-		-15.0		1566.5		-20	+990	733,855	1,832,912

733,885 + 1,830,000
421.5

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	11/22/80	INSTRUMENT MAN	G. Litzinger	ROD MAN	G. Cotcamp	PARTY NUMBER	6834	NOTES CHECKED BY	blj	LINE NO.	7	PAGE	30 of 30
AREA	OKLAHOMA	TOPO MAP	Eakly 15'	STATE	Oklahoma	COUNTY	Caddo	RANGE		PPM		PARTY MANAGER	DHUIS

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.	
									1581.5					
426	1320		82° 22.5'	+8.8°	9.7	84	-6.4	-14.3		1565.2		-27	+1320	733,848 1,833,242
427	1450		92° 22.5'	+8.8°	11.7	90° 20'	-9.4	-21.3		1560.2	TP	-34	+1650-4	733,841 1,833,568
427	1650				7.0	90° 30'	-14.4	-21.4			TP			
	768		261° 55'-180°	+8.8°	+2.7	TH	-3.8	-1.1	1559.1		BS	-10	+768-4	
	764				+3.4	89° 40'	-4.5	-1.1			BS			horiz. correct. y = -6' x = -4'
TP	0				5.4	-	-5.4	-5.4		1553.7	TP	0	0	733,831 1,834,332
TP	890		82° 33.2'	+8.8°	12.2	92° 30'	-38.8	-51.0		1508.1		-21	+889-1	733,810 1,835,220 4-way Intersect.
TP	1780				10.6	89° 20'	+20.7	+10.17			TP			
TP	1760				5.5	89° 30'	+16.5	+10.0		1569.1	TP			vertical traverse
	1980				+9.5	91°	+31.6	+44.1			BS			from 427 back
	1980				-13.5	91° 10'	+40.3	+43.8	144.0	1413.1	BS			west to 4-way.
TP	0				5.4	-	-	-5.4		1607.7				
TP	593				10.5	-	-	-10.5		1602.6				4 way el 1604