

SURVEY NOTES-HIGH RESC.
GEO-445

Geosource Inc.

DATE 3-27-86	INSTRUMENT MAN B. Cotcamp	ROD MAN B. SALDIVAR	PARTY NUMBER 6834	NOTES CHECKED BY J.M.	LINE NO. 6	PAGE 1
AREA ARIZONA	TOPO MAP WINSLOW-15	STATE AZ.	COUNTY NAVAJO	TWP	RANGE	PPM
				PARTY MANAGER J. Mc CLELLAN		

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.	
K	U.S.C+G.S.	Δ SHELL	#2 FL. 4859.0 (SCALED)		4-145	7.675	X-358.945			4859.0	K			ARIZONA EAST ZONE COORDINATE SYSTEM y-1457.675 x-358.945
	4701		180 19 53	+12.6	8.7	90 27 08	+37.1	+45.8			BS	+4582	+1052	
	4701				+8.7	269 32 57	+37.0	+45.7	4904.7		BS	+1	-1	
1	2640		196 57	-	5.2	90 50	-38.4	-43.6		4861.1		-2296	-1302	1,459,961 358,694
2	2310		- -	-	9.3	90 50	-33.6	-42.9		4861.8		-2009	-1139	1,460,248 358,857
3	1980		196 47	-	12.2	90 50	-28.8	-41.0		4863.7		-1725	-971	1,460,533 359,025
4	1650		196 35	-	9.5	91 -	-28.8	-38.3		4866.4		-1440	-804	1,460,817 359,192
5	1320		196 10	+12.6	10.9	91 -	-23.0	-33.9		4870.8		-1157	-635	1,461,101 359,361
6	990		195 50	-	11.1	91 -	-17.3	-28.4		4876.3		-870	-471	1,461,387 359,525
7	660		195 -	-	10.1	91 -	-11.5	-21.6		4883.1		-585	-306	1,461,673 359,690
8	330		193 -	-	7.6	91 -	-5.8	-13.4		4891.3		-298	-143	1,461,960 359,853
9	0				5.1	-		-5.1		4899.6	K	0	0	1,462,258 359,996 ACROSS STATION
10	335		24 10	+12.6	3.6	88 50	+6.8	+3.2		4907.9		+268	+200	1,462,526 360,196
11	665		21 58	-	3.5	88 50	+13.5	+10.0		4914.7		+547	+377	1,462,805 360,373
12	995		- -	-	4.9	88 50	+20.3	+15.4		4920.1		+819	+564	1,463,077 360,560
13	1325		- -	-	6.3	88 50	+27.0	+20.7		4925.4		+1091	+752	1,463,349 360,748
14	1655 1655 862		22 20	-	7.3	88 50	+33.7	+26.4		4931.1		+1357	+947	1,463,614 360,943
15	1985		22 45	-	8.6	88 50	+40.4	+31.8		4936.5		+1619	+1148	1,463,876 361,144
16	2316		23 10	-	10.0	88 50	+47.2	+37.2		4941.9		+1879	+1353	1,464,136 361,349
17	2646		23 20	-	10.8	88 50	+53.9	+43.1		4947.8		+2142	+1552	1,464,406 361,548

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
3-27-86		B. Cotcamp		B. SALDIVAR		6834		J.M.		6		2			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		WINSLOW - 15'		AZ.		NAVAJO								J. McCLELLAN	
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									Y	X	
										4904.7					
TP	2848	2847.4	22 32 32		+12.6	11.9	88 50	+58.0	+46.1			TP	+2328	+1639	1,464,587 361,634
TP	2848					12.0	271 10	+58.0	+46.0		4950.7	TP	+1	-1	
	6415		213 27 15		-	+9.6	90 34	+63.4	+73.0	5023.8		BS	+4452	+4619	
	6415					+9.9	269 26	+63.4	+73.3			BS	+1	-1	
18	6276		^{B.G.C.} 213 29 212 54		-	10.6	90 34	-62.1	-72.7		4951.1		-4398	-4476	1,464,641 361,775
19	5940		213 10		-	10.7	90 34	-58.7	-69.4		4954.4		-4143	-4256	1,464,896 361,996
20	5610		213 18		-	12.3	90 34	-55.5	-67.8		4956.0		-3904	-4028	1,465,136 362,223
21	5280		213 29		-	8.6	90 38	-58.4	-67.0		4956.8		-3662	-3803	1,465,378 362,448
22	4950		-		+12.6	11.2	90 38	-54.7	-65.9		4957.9		-3433	-3566	1,465,607 362,686
23	4620		-		-	14.1	90 38	-51.1	-65.2		4958.6		-3204	-3328	1,465,835 362,924
24	4290		213 29		-	9.6	90 44	-55.0	-64.5		4959.3		-2975	-3090	1,466,064 363,161
25	3960		-		-	12.8	90 44	-50.7	-63.5		4960.3		-2746	-2852	1,466,293 363,399
26	3630		-		-	9.8	90 50	-52.8	-62.6		4961.2		-2518	-2615	1,466,522 363,637
27	3300		-		-	12.8	90 50	-48.0	-60.8		4963.0		-2289	-2377	1,466,751 363,875
28	2970		213 29		+12.6	13.9	90 50	-43.2	-57.1		4966.7		-2060	-2139	1,466,980 364,112
29	2640		-		-	14.1	90 50	-38.4	-52.5		4971.3		-1831	-1902	1,467,209 364,350
30	2310		-		-	13.8	90 50	-33.6	-47.4		4976.4		-1602	-1664	1,467,438 364,588
31	1980		-		-	12.1	90 50	-28.8	-40.9		4982.9		-1373	-1426	1,467,666 364,825
32	1650		-		-	10.7	90 50	-24.0	-34.7		4989.1		-1144	-1188	1,467,895 365,063
33	1320		-		-	9.3	90 50	-19.2	-28.5		4995.3		-915	-951	1,468,124 365,301

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE		
3-27-86		B. Cotcamp		B. SALDIVAR		6834		J.M.			6		3		
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		WINSLOW-15		AZ.		NAVAJO								J. McLELLAN	
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
									5023.8						
34	990		213 29	+12.6	8.0	90 50	-14.4	-22.4		5001.4		-687	-713	1,468,353	365,538
35	660		- -	-	6.7	90 50	-9.6	-16.3		5007.5		-458	-475	1,468,582	365,776
36	330		- -	-	6.2	90 50	-4.8	-11.0		5012.8		-229	-238	1,468,811	366,014
37	0				5.1	-		-5.1		5018.7	TP	0	0	1,469,040	366,252
38	330		33 29	+12.6	5.3	89 20	+3.8	-1.5		5022.3		+229	+238	1,469,269	366,489
39	660		- -	-	7.7	89 20	+7.7	-0.0		5023.8		+458	+475	1,469,497	366,727
40	990		- -	-	3.6	89 50	+2.9	-0.7		5023.1		+687	+713	1,469,726	366,965
41	1320		- -	-	6.6	89 50	+3.8	-2.8		5021.0		+916	+951	1,469,955	367,202
42	1650		33 29	-	9.7	89 50	+4.8	-4.9		5018.9		+1144	+1189	1,470,184	367,440
43	1980		- -	+12.6	12.8	89 50	+5.8	-7.0		5016.8		+1373	+1426	1,470,413	367,678
44	2310		- -	-	12.3	89 56	+2.7	-9.6		5014.2		+1602	+1664	1,470,642	367,916
TP	2312		33 23 10	-	12.3	89 56	+2.7	-9.6			TP	+1606	+1663	1,470,647	367,913
TP	2312				12.4	270 04	+2.7	-9.7		5014.1	TP	+1	-1		
	5286		213 28 56	+12.6	11.6	90 20	+30.8	+42.4	5056.6		BS	+3666	+3808		
	5286				11.9	269 40	+30.8	+42.7	442.5		BS	+1	-1		
45	4950		213 29	-	10.7	90 24	-34.6	-44.8		5011.8		-3433	-3566	1,470,881	368,154
46	4620		- -	-	9.7	90 28	-37.6	-47.3		5009.3		-3204	-3328	1,471,110	368,392
47	4290		- -	-	14.2	90 28	-34.9	-49.1		5007.5		-2975	-3090	1,471,339	368,630
48	3966		- -	-	7.3	90 38	-43.8	-51.1		5005.5		-2747	-2852	1,471,568	368,867
49	3630		- -	-	13.2	90 38	-40.1	-53.3		5003.3		-2518	-2615	1,471,797	369,105

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DATE	3-27-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	B. SARDIAR	PARTY NUMBER	6834	NOTES CHECKED BY	F.M.	LINE NO.	6	PAGE	4
AREA	ARIZONA	TOPO MAP	WINSLOW-15	STATE	AZ.	COUNTY	NAVASO	TWP		RANGE		PPM	
												PARTY MANAGER	J. McCLELLAN

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			
									5056.6									
50	3300		213 29		7.8	90 50	-48.0	-55.8		5000.8		-2289	-2377	1,472,026	369,343			
51	2970		- -		13.1	90 50	-43.2	-56.3		5000.3		-2060	-2139	1,472,255	369,581			
52	2640		- -		9.0	91 -	-46.1	-55.1		5001.5		-1831	-1901	1,472,483	369,818			
53	2310		213 29		12.2	91 -	-40.3	-52.5		5004.1		-1602	-1664	1,472,713	370,056			
54	1980		- -		12.4	91 -	-34.6	-47.0		5009.6		-1373	-1426	1,472,941	370,294			
55	1650		- -		11.1	91 -	-28.8	-39.9		5016.7		-1144	-1188	1,473,170	370,531			
56	1320		- -		8.0	91 -	-23.0	-31.0		5025.6		-915	-951	1,473,399	370,769			
Bm	1299		213 16 57		7.4	91 -	-22.7	-30.1		5026.5		-904	-932	1,473,410	370,787			AZ Highway Dep. E.L. 5024.2
57	990		213 29		11.7	90 40	-11.5	-23.2		5033.4		-687	-713	1,473,628	371,007			
58	660		- -		8.0	90 40	-7.7	-15.7		5040.9		-458	-475	1,473,857	371,244			
59	330		- -		5.8	90 40	-3.8	-9.6		5047.0		-229	-238	1,474,086	371,482			
60	0				5.1	-		-5.1		5051.5	π	0	0	1,474,315	371,720			
61	330		33 29		5.6	89 20	+3.8	-1.8		5054.8		+229	+238	1,474,543	371,958			
62	660		- -		7.7	89 20	+7.7	-0.0		5056.6		+458	+475	1,474,772	372,195			
63	990		- -		10.6	89 20	+11.5	+0.9		5057.5		+687	+713	1,475,001	372,433			
64	1320		- -		13.4	89 20	+15.4	+2.0		5058.6		+915	+951	1,475,230	372,671			
65	1650		33 29		6.9	89 40	+9.6	+2.7		5059.3		+1144	+1189	1,475,459	372,908			
66	1980		- -		8.7	89 40	+11.5	+2.8		5059.4		+1373	+1426	1,475,688	373,146			
67	2310		- -		10.0	89 40	+13.4	+3.4		5060.0		+1602	+1664	1,475,917	373,384			
68	2640		- -		11.2	89 40	+15.4	+4.2		5060.8		+1831	+1902	1,476,146	373,622			

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
3-27-86		B. Cotcamp		B. SALDANAR		6834		J.M.		6		5			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		WINSLOW-15		AZ.		NAVAJO								J. McCLELLAN	
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
									5056.6						
69	2970		33 29	+12.6	12.6	89 40	+17.3	+4.7		5061.3		+2060	+2139	1,476,375	373,859
70	3300		- -	-	13.7	89 40	+19.2	+5.5		5062.1		+2289	+2377	1,476,603	374,097
71	3630		- -	-	14.1	89 40	+21.1	+7.0		5063.6		+2518	+2615	1,476,832	374,335
72	3960		33 29	-	11.7	89 40	+23.0	+11.3		5067.9		+2747	+2853	1,477,061	374,572
73	4290		- -	-	5.8	89 40	+25.0	+19.2		5075.8		+2976	+3090	1,477,290	374,810
74	4620		- -	-	9.0	89 30	+40.3	+31.3		5087.9		+3204	+3328	1,477,519	375,048
75	4950		- -	-	12.2	89 22	+54.7	+42.5		5099.1		+3433	+3566	1,477,748	375,285
76	5286		33 28 32	-	14.4	89 16	+67.7	+53.3			TP	+3667	+3807	1,477,982	375,526
76	5286				14.7	270 44	+67.7	+53.0	+53.13	5109.7	TP				
	3632	3630.3	213 53 48	+12.4	13.7	91 46	+112.0	+125.7	+125.83	5235.5	BS	+2508	+2624		
	3632				14.0	268 14	+112.0	+126.0			BS				
77	3300	3298.5	213 53	-	13.7	91 44	-99.8	-113.5		5122.0		-2280	-2384	1,478,212	375,765
78	2970	2968.4	- -	-	12.2	91 44	-89.8	-102.0		5133.5		-2052	-2146	1,478,446	376,004
79	2640	2638.8	- -	-	11.1	91 44	-79.9	-91.0		5144.5		-1824	-1907	1,478,668	376,242
80	2310	2308.9	- -	-	10.1	91 44	-69.9	-80.6		5155.5		-1596	-1669	1,478,896	376,480
81	1980	1979.1	213 53	+12.4	8.4	91 44	-59.9	-68.3		5167.2		-1368	-1430	1,479,124	376,719
82	1650	1649.3	- -	-	9.1	91 40	-48.0	-57.1		5178.4		-1140	-1192	1,479,352	376,957
83	1320	1319.4	- -	-	7.3	91 40	-38.4	-45.7		5189.8		-912	-954	1,479,580	377,196
84	990		- -	-	5.9	91 40	-28.8	-34.7		5200.8		-684	-715	1,479,808	377,434
85	660		- -	-	10.0	91 10	-13.4	-23.4		5212.1		-456	-477	1,480,035	377,672

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3-27-86		B. Cotamp		B. SALDIVAR		6834		J.M.		6		6							
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER					
ARIZONA		WINSLOW-15		AZ.		NAVAJO								J. McCLELLAN					
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				
									5235.5										
86	330		213 50	+12.4	6.0	91 10	-6.7	-12.7		5222.8		-228	-238	1,480,263	377,911				
87	0				5.1	-		-5.1		5230.4	TP	0	0	1,480,491	378,149				
88	330		33 54	-	5.9	89 10	+4.8	-1.1		5234.4		+228	+239	1,480,719	378,388				
89	660		- -	-	10.2	89 10	+9.6	-0.6		5234.9		+456	+477	1,480,947	378,626				
90	990		- -	-	7.8	89 40	+5.8	-2.0		5233.5		+684	+716	1,481,175	378,865				
91	1320		- -	-	11.1	89 40	+7.7	-3.4		5232.1		+912	+954	1,481,403	379,104				
92	1650		- -	-	10.8	89 48	+5.8	-5.0		5230.5		+1140	+1193	1,481,631	379,342				
93	1980		- -	-	13.7	89 48	+6.9	-6.8		5228.7		+1368	+1431	1,481,859	379,581				
94	2312		33 55 12	-	14.8	89 50	+6.7	-8.1			TP	+1597	+1672	1,482,089	379,820				
94	2312				14.9	270 10	+6.7	-8.2		5227.3	TP	+1	-1						
	5609		213 50 50	+12.4	12.3	90 24	+39.2	+51.5	5278.9		BS	+3879	+4051						
	5609				+12.6	269 36	+39.2	+51.8			BS	+1	-1						
95	5280		213 50	-	9.8	90 28	-43.0	-52.8		5226.1		-3652	-3813	1,482,317	380,058				
96	4950		- -	-	13.6	90 28	-40.3	-53.9		5225.0		-3424	-3575	1,482,545	380,296				
97	4620		- -	-	9.5	90 34	-45.7	-55.2		5223.7		-3196	-3336	1,482,773	380,535				
98	4290		- -	-	14.2	90 34	-42.4	-56.6		5222.3		-2967	-3098	1,483,002	380,773				
99	3960		- -	-	7.4	90 44	-50.7	-58.1		5220.8		-2739	-2860	1,483,230	381,011				
100	3630		- -	-	13.0	90 44	-46.5	-59.5		5219.4		-2511	-2621	1,483,458	381,250				

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DATE	3-27-86	INSTRUMENT MAN	B. Camp	ROD MAN	B. SALDIVAR	PARTY NUMBER	6834	NOTES CHECKED BY	J.M.	LINE NO.	6	PAGE	7
AREA	ARIZONA	TOPO MAP	WINSLOW - 15'	STATE	AZ	COUNTY	NAVAJO	TWP		RANGE		PPM	
												PARTY MANAGER	J. Mc CLELLAN

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			
									5278.9									
101	3300		213 50	+12.4	7.5	90 54	-51.8	-59.3		5219.6		-2282	-2383	1,483,687	381,488			
102	2976		- -	-	11.8	90 54	-46.7	-58.5		5220.4		-2054	-2145	1,483,915	381,726			
103	2640		- -	-	13.1	90 54	-41.5	-54.6		5224.3		-1826	-1906	1,484,143	381,964			
104	2310		- -	-	12.7	90 54	-36.3	-49.0		5229.9		-1598	-1668	1,484,371	382,203			
105	1980		213 50	+12.4	11.0	90 54	-31.1	-42.1		5236.8		-1369	-1430	1,484,600	382,441			
106	1650		- -	-	9.3	90 54	-25.9	-35.2		5243.7		-1141	-1191	1,484,827	382,679			
107	1320		- -	-	9.4	90 50	-19.2	-28.6		5250.3		-913	-953	1,485,056	382,918			
108	990		- -	-	7.1	90 50	-14.4	-21.5		5257.4		-685	-715	1,485,284	383,156			
109	660		- -	-	5.2	90 50	-9.6	-14.8		5264.1		-456	-477	1,485,513	383,394			
110	330		- -	-	9.4	89 50	+1.0	-8.4		5270.5		-228	-238	1,485,741	383,632			
111	0				5.1	-		-5.1		5273.8	TP	0	0	1,485,969	383,871			
112	330		33 50	+12.4	6.0	89 50	+1.0	-5.0		5273.9		+228	+238	1,486,197	384,109			
113	660		- -	-	8.5	89 50	+1.9	-6.6		5272.3		+457	+477	1,486,426	384,347			
114	990		- -	-	7.9	-		-7.9		5271.0		+685	+715	1,486,654	384,586			
115	1320		- -	-	9.1	-		-9.1		5269.8	or elev	+913	+953	1,486,882	384,824			EL. 5267.0
116	1650		33 50	+12.4	10.4	-		-10.4		5268.5		+1142	+1192	1,487,110	385,062			
117	1980		- -	-	10.7	-		-10.7		5268.2		+1370	+1430	1,487,339	385,301			
118	2310		- -	-	10.3	-		-10.3		5268.6		+1598	+1668	1,487,568	385,539			
119	2640		- -	-	10.3	-		-10.3		5268.10		+1826	+1907	1,487,795	385,777			
120	2970		- -	-	10.0	-		-10.0		5268.9		+2054	+2145	1,488,023	386,016			

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
3-27-86		B. Cotamp		B. SALDIVAR		6834		B. D. J.M.		6		8			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		WINSLOW -15'		AZ.		NAVAJO								J. McCLELLAN	
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
									52789						
121	3300		33 50	+12.4	10.1	-	-10.1		5268.8			+2283	+2383	1,488,252	386,254
122	3630		- -	-	16.5	-	-10.5		5268.4			+2511	+2621	1,488,486	386,492
123	3960		- -	-	16.7	-	-10.7		5268.2			+2739	+2860	1,488,708	386,731
124	4290		- -	-	16.8	-	-10.8		5268.1			+2967	+3098	1,488,936	386,969
125	4620		33 50	+12.4	10.9	-	-10.9		5268.0			+3196	+3336	1,489,165	387,207
126	4950		- -	-	16.0	-	-10.0		5268.9			+3424	+3575	1,489,393	387,445
127	5280		- -	-	8.0	-	-8.0		5270.9			+3652	+3813	1,489,621	387,684
128	5610		- -	-	3.7	-	-3.7		5275.2			+3881	+4051	1,489,850	387,922
129	5940		- -	-	6.1	89 55	+8.6	+2.5	5281.4			+4109	+4296	1,490,078	388,160
130	6270		- -	-	6.3	89 52	+14.6	+8.3	5287.2			+4337	+4528	1,490,306	388,399
131	6605		33 49 33	-	14.6	89 47	+25.0	+10.4	5289.3	TP		+4566	+4766	1,490,536	388,635
131	6605				14.9	270 13	+25.0	+10.1	5289.1	TP		+1	-1		
	2970		213 37 09	+12.4	12.6	-	+12.6	+10.2	5301.8	BS		+2062	+2137		
	2970			+12.9	270 -	-	+12.9	+12.7		BS		+1	-1		
132	2640		213 38	-	10.9	-	-10.9		5290.9			-1833	-1900	1,490,767	388,871
133	2316		- -	-	10.2	-	-10.2		5291.6			-1604	-1663	1,490,996	389,109
134	1980		- -	-	9.1	-	-9.1		5292.7			-1375	-1425	1,491,225	389,347
135	1650		- -	-	8.5	-	-8.5		5293.3			-1146	-1188	1,491,454	389,584
136	1320		- -	-	7.9	-	-7.9		5293.9			-916	-950	1,491,683	389,822
137	990		- -	-	7.1	-	-7.1		5294.7			-687	-713	1,491,912	390,059

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 3-27-86	INSTRUMENT MAN B. Cotcamp	ROD MAN B. SALDIVAR	PARTY NUMBER 6834	NOTES CHECKED BY B.S J.M.	LINE NO. 6	PAGE 9
AREA ARIZONA	TOPO MAP WINSLOW - 15'	STATE AZ.	COUNTY NAVAJO	TWP	RANGE	PPM
				PARTY MANAGER J. McLELLAN		

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
									5301.8						
138	660		33 38	+12.4	6.4	-		-6.4		5295.4		-458	-475	1,492,141	390,297
139	330		--	-	5.7	-		-5.7		5296.1		-229	-238	1,492,370	390,534
140	0				5.1	-		-5.1		5296.7	Λ	0	0	1,492,599	390,772
Bm	888		318 36 34	-	4.9	90 20	-5.2	-10.1		5291.7	5.9 BM	+777	-430	1,493,376	390,341
141	330		33 38	-	4.6	-		-4.6		5297.2		+229	+238	1,492,829	391,009
142	660		--	+12.4	4.0	-		-4.0		5297.8		+458	+475	1,493,058	391,247
143	990		--	-	8.4	TH	+5.0	-3.5		5298.3		+687	+713	1,493,287	391,484
144	1320		--	-	9.7	TH	+6.6	-3.1		5298.7		+916	+950	1,493,516	391,722
145	1650		33 38	+12.4	10.8	TH	+8.3	-2.6		5299.2		+1146	+1188	1,493,745	391,959
146	1980		--	-	11.9	TH	+9.9	-2.0		5299.8		+1375	+1425	1,493,974	392,197
147	2310		--	-	12.9	TH	+11.6	-1.4		5300.4		+1604	+1663	1,494,203	392,434
148	2640		--	-	8.8	89 50	+13.2	+4.4		5306.2		+1833	+1700	1,494,432	392,672
149	2970		--	-	9.1	89 50	+8.6	-0.5		5301.3		+2062	+2138	1,494,661	392,909
150	3303		33 40 45	-	10.2	89 50	+9.6	-0.6			TP	+2291	+2379	1,494,891	393,151
150	3303				10.5	270 10	+9.6	-0.9	0.83	5301.0	TP				
											BS				
											BS				

9-1,493,380 X-390,340
U.G.S. Bm. 1954 EL. 5270.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-3-86		B. Cotcamp		B. SANDIVAR		6834		J.M.		6		10			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		WINSLOW -15		AZ.		NAVAJO								J.M.	
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
									5301.0						
	5285		213 44 21	+12.5	13.9	90° 04'	+6.1	+20.0	5321.2		BS	+3655	+3817		
	5285				14.4	269° 56'	+6.1	+20.5		BS		-5			
151	4950		213 44	-	8.2	90° 08'	-11.5	-19.7		5301.5		-3424	-3575	1,495,117	393,370
152	4620		- -	-	8.2	90° 08'	-10.8	-19.0		5302.2		-3196	-3336	1,495,346	393,629
153	4290		- -	-	8.2	90° 08'	-10.0	-18.2		5303.0		-2967	-3098	1,495,574	393,867
154	3960		- -	-	8.6	90° 08'	-9.2	-17.8		5303.4		-2739	-2860	1,495,802	394,105
155	3630		- -	-	8.9	90° 08'	-8.4	-17.3		5303.9		-2511	-2621	1,496,030	394,344
156	3300		213 44	+12.5	8.0	90° 08'	-7.7	-15.7		5305.5		-2283	-2383	1,496,259	394,582
157	2970		- -	-	14.2	-	-	-14.2		5307.0		-2054	-2145	1,496,487	394,820
158	2640		- -	-	12.6	-	-	-12.6		5308.6		-1826	-1907	1,496,715	395,058
159	2310		- -	-	11.0	-	-	-11.0		5310.2		-1598	-1668	1,496,943	395,297
160	1980		- -	-	9.5	-	-	-9.5		5311.7		-1370	-1430	1,497,172	395,535
161	1650		213 44	+12.5	8.2	-	-	-8.2		5313.0		-1141	-1192	1,497,400	395,773
162	1320		- -	-	6.8	-	-	-6.8		5314.4		-918	-953	1,497,628	396,012
163	990		- -	-	6.2	-	-	-6.2		5315.0		-685	-715	1,497,857	396,250
164	660		- -	-	5.7	-	-	-5.7		5315.5		-457	-477	1,498,085	396,488
165	330		- -	-	5.3	-	-	-5.3		5315.9		-228	-238	1,498,313	396,727
166	0		- -	-	5.1	-	-	-5.1		5316.1	X	0	0	1,498,541	396,965
167	330		33° 45'	-	4.3	-	-	-4.3		5316.9		+228	+238	1,498,770	397,203
168	660		- -	-	6.9	TH	+3.3	-3.6		5317.6		+456	+477	1,498,998	397,440

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-3-86		B. Cotcamp		B. SALDIVAR		6834		J.M.		6		11			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		WINSLOW - 15'		AZ.		NAVATO								J. McCLELLAN	
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
									5321.2						
169	990		33 44	+12.5	8.0	TH	+5.0	-3.0		5318.2		+685	+715	1,499,226	397,680
170	1320		-	-	9.1	TH	+6.6	-2.5		5318.7		+913	+953	1,499,454	397,918
171	1650		-	-	10.1	TH	+8.3	-1.9		5319.3		+1141	+1192	1,499,683	398,157
172	1980		-	-	10.1	TH	+9.9	-0.2		5321.0		+1370	+1430	1,499,911	398,395
173	2310		33 44	+12.5	8.8	TH	+11.6	+2.8		5324.0		+1598	+1668	1,500,139	398,633
174	2640		-	-	8.0	TH	+13.2	+5.2		5326.4		+1826	+1907	1,500,367	398,872
175	2970		-	-	7.4	TH	+14.9	+2.5		5328.7		+2054	+2145	1,500,595	399,110
176	3300		-	-	6.7	TH	+16.5	+9.8		5331.0		+2283	+2383	1,500,824	399,348
177	3630		33 44	+12.5	6.0	TH	+18.2	+12.2		5333.4		+2511	+2621	1,501,052	399,586
178	3960		-	-	5.5	TH	+19.8	+14.3		5335.5		+2739	+2860	1,501,280	399,825
179	4290		-	-	5.1	TH	+21.5	+16.4		5337.6		+2967	+3098	1,501,508	400,063
180	4620		-	-	5.0	TH	+23.1	+18.1		5339.3		+3196	+3336	1,501,737	400,301
181	4950		-	-	4.8	TH	+24.8	+20.0		5341.2		+3424	+3575	1,501,965	400,540
182	5284		33 45 39	-	5.9	TH	+26.4	+20.5		5341.7	TP	+3653	+3818	1,502,189	400,780
182	5284				4.6	270 16 18	+25.1	+20.5			TP	-5	-3		
	700 Rollover		213 44 58	+12.5	13.6	90 30	+63.4	+77.0	5418.8		BS	+5022	+5245		
	7262				+13.9	269 30	+63.4	+77.3			BS	-5	-3		
183	6930		213 46	-	13.9	90 30	-60.5	-74.4		5344.4		-4791	-5007	1,502,415	401,015
184	6600		-	-	7.8	90 34	-65.3	-73.1		5345.7		-4563	-4769	1,502,643	401,253
185	6270		-	-	10.1	90 34	-62.0	-72.1		5346.7		-4334	-4530	1,502,872	401,492

WINSLOW - 15 ↑
STANDING HORSE MESA - 76 ↓

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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-3-86		B. Cotcamp		B SALDIVAR		6834		J.M.		6		12			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		STANDING HORSE MESA 7.5		AZ.		NAVAJO								J. McCLELLAN	
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
									5418.8						
186	5940		213 46	+12.5	12.8	90° 34'	-58.7	-71.5		5347.3		- 4106	- 4292	1,503,100	401,730
187	5610		- -	-	5.8	90° 40'	-65.3	-71.1		5347.7		- 3878	- 4054	1,503,328	401,968
188	5280		- -	-	9.0	90° 40'	-61.4	-70.4		5348.4		- 3650	- 3815	1,503,556	402,207
189	4950		- -	-	12.3	90° 40'	-57.6	-69.9		5348.9		- 3422	- 3577	1,503,284	402,445
190	4620		213 46	+12.5	10.0	90° 44'	-59.1	-69.1		5349.7		- 3194	- 3338	1,504,012	402,684
191	4290		- -	-	12.3	90° 44'	-54.9	-67.2		5351.6		- 2966	- 3100	1,504,240	402,922
192	3960		- -	-	11.4	90° 44'	-50.7	-62.1		5356.7		- 2738	- 2861	1,504,468	403,161
193	3630		- -	-	10.6	90° 44'	-46.5	-57.1		5361.7		- 2509	- 2623	1,504,697	403,399
194	3300		213 46	+12.5	9.7	90° 44'	-42.2	-51.9		5366.9		- 2281	- 2384	1,504,925	403,638
195	2970		- -	-	8.8	90° 44'	-38.0	-46.8		5372.0		- 2053	- 2146	1,505,153	403,876
196	2640		- -	-	7.8	90° 44'	-33.8	-41.6		5377.2		- 1825	- 1908	1,505,381	404,114
197	2310		- -	-	6.8	90° 44'	-29.6	-36.4		5382.4		- 1597	- 1669	1,505,609	404,353
198	1980		213 46	+12.5	5.8	90° 44'	-25.3	-31.1		5387.7		- 1369	- 1431	1,505,837	404,591
199	1650		- -	-	11.4	90° 30'	-14.4	-25.8		5393.0		- 1141	- 1192	1,506,065	404,830
200	1320		- -	-	9.2	90° 30'	-11.5	-20.7		5398.1		- 913	- 954	1,506,293	405,068
201	990		- -	-	7.0	90° 30'	-8.6	-15.6		5403.2		- 684	- 715	1,506,522	405,307
202	660		- -	-	6.0	90° 30'	-5.8	-11.8		5407.0		- 456	- 477	1,506,750	405,545
203	330		- -	-	5.7	90° 30'	-2.9	-8.6		5410.2		- 228	- 238	1,506,978	405,784
204	0				5.1	-		-5.1		5413.2	π	0	0	1,507,206	406,022

SURVEY NOTES-HIGH RESOLUTION DATA
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Geosource Inc.

DATE 4-3-86		INSTRUMENT MAN B. Cotcamp		ROD MAN B. SALDIVAR		PARTY NUMBER 6834		NOTES CHECKED BY J.M.		LINE NO. 6		PAGE 13			
AREA ARIZONA		TOPO MAP STANDING Horse Mega-74		STATE AZ.		COUNTY NAVAJO		TWP		RANGE		PPM		PARTY MANAGER J. Mc CLELLAN	
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
									5418.8						
205	330		33 47	+125	5.0	89 30	+2.9	-2.1		5416.7		+228	+239	1,507,434	406,261
1F	603		32 28 14	-	4.7	89 30	+5.3	+0.6		5419.4	1F	+427	+426	1,507,633	406,448
206	660		33 47	-	5.1	89 30	+5.8	+0.7		5419.5		+456	+477	1,507,662	406,499
207	990		-	-	7.9	89 30	+8.6	+0.7		5419.5		+684	+716	1,507,890	406,738
208	1320		-	-	12.0	89 30	+11.5	-0.5		5418.3		+912	+954	1,508,118	406,976
209	1650		33 47	+125	11.1	89 40	+9.6	-1.5		5417.3		+1140	+1193	1,508,346	407,215
210	1980		-	-	14.2	89 40	+11.5	-2.7		5416.1		+1368	+1431	1,508,574	407,453
211	2310		-	-	12.0	89 48	+8.1	-3.9		5414.9		+1596	+1670	1,508,802	407,692
212	2640		-	-	13.3	89 48	+9.2	-4.1		5414.7		+1824	+1908	1,509,030	407,930
213	2970		33 47	-	12.0	89 48	+10.4	-1.6		5417.2		+2053	+2147	1,509,259	408,169
214	3300		-	-	9.0	89 48	+11.5	+2.5		5421.3		+2281	+2385	1,509,487	408,407
215	3630		-	+125	6.1	89 48	+12.7	+6.6		5425.4		+2509	+2624	1,509,715	408,646
216	3960		-	-	12.2	89 40	+23.0	+10.8		5429.6		+2737	+2862	1,509,943	408,884
217	4290		-	-	10.4	89 40	+25.0	+14.6		5433.4		+2965	+3101	1,510,171	409,123
218	4620		-	-	8.3	89 40	+26.9	+18.6		5437.4		+3193	+3339	1,510,399	409,361
219	4950		33 47	-	6.2	89 40	+28.8	+22.6		5441.4		+3421	+3578	1,510,627	409,600
220	5280		-	-	4.2	89 40	+30.7	+26.5		5445.3		+3649	+3816	1,510,855	409,838
21	5155		33 37 33	-	4.8	89 46	+30.0	+25.2		5444.0	21	+3573	+3716	1,510,779	409,738

1,507,600 x 406,455
1F T. Inter. EL. 5421.0

1,510,740 x 409,680
1F T. Inter.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-3-86		B. Cotamp		B. SALDIVAR		6834		J.M.		6		14			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		Standing Horse Mesa - 74'		AZ.		NAVAJO								J.M. CLELLAN	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH -	EAST + WEST -		Y
									5418.8						
221	5610		33 47	+12.5	11.7	89 34	+42.4	+30.2		5449.5		+ 3877	+ 4055	1,511,083	410,077
222	5940		- -	-	11.0	89 34	+44.9	+33.9		5452.7		+ 4105	+ 4293	1,511,311	410,315
223	6270		- -	-	10.2	89 34	+47.4	+32.2		5456.0		+ 4333	+ 4532	1,511,539	410,554
224	6600		- -	-	9.3	89 34	+49.9	+40.6		5459.4		+ 4561	+ 4770	1,511,762	410,792
225	6930		- -	-	8.9	89 34	+52.4	+43.5		5462.3		+ 4789	+ 5009	1,511,995	411,031
226	700 ⁷²⁶² _{runner}		33 47 03	-	14.8	89 31	+61.3	+46.5	+46.4	5465.2	TP	+ 5018	+ 5249	1,512,219	411,268
226	700 7262				15.1	270 29	+61.3	+46.2			TP	-5	-3		
	1981		213 33 39	+12.5	13.1	-		+13.1		5478.3	BS	+1375	+1426		
	1981				13.0	270 -		+13.0			BS	-5	-3		
227	1650		213 34	-	9.7	-		-9.7		5468.6		- 1145	- 1188	1,512,444	411,502
228	1320		- -	-	6.2	-		-6.2		5472.1		- 916	- 951	1,512,673	411,740
229	990		- -	-	7.7	TH	+5.0	-2.8		5475.5		- 687	- 713	1,512,902	411,978
230	660		- -	-	11.9	89 -	+11.5	-0.4		5477.9		- 458	- 475	1,513,131	412,216
231	330		- -	-	6.9	89 -	+5.8	-1.1		5477.2		- 229	- 238	1,513,360	412,453
232	0				5.1	-		-5.1		5473.2	N	0	0	1,513,589	412,691
233	330		33 35	+12.5	5.7	91 -	-5.8	-11.5		5466.8		+ 229	+ 238	1,513,818	412,929
234	660		- -	-	9.0	91 -	-11.5	-20.5		5457.8		+ 458	+ 475	1,514,042	413,166
235	990		- -	-	12.6	91 -	-17.3	-29.9		5448.4		+ 687	+ 713	1,514,276	413,404
236	1320		- -	-	14.1	91 -	-23.0	-37.1		5441.2		+ 916	+ 951	1,514,505	413,642
237	1650		- -	-	12.6	91 -	-28.8	-41.4		5436.9		+ 1144	+ 1189	1,514,733	413,880

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 4-3-86 INSTRUMENT MA B Cotcamp ROD MAN B. SALDIVAR PARTY NUMBER 6834 NOTES CHECKED BY J.M. LINE NO. 6 PAGE 15
 AREA ARIZONA TOPO MAP STANDING Horse Mesa - 7 1/2 STATE AZ. COUNTY NAVAJO TWP RANGE PPM PARTY MANAGER J. Mc CLELLAN

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.	
									5478.3					
238	1980		33 35	+12.5	9.0	91 -	-34.6	-43.6		5434.7		+1373	+1426	1,514,962 414,117
239	2310		-	-	5.0	91 -	-40.3	-45.3		5433.0		+1602	+1664	1,515,191 414,355
240	2640		-	-	8.7	90 50	-38.4	-47.1		5431.2		+1831	+1902	1,515,420 414,593
241	2970		-	-	4.2	90 50	-43.2	-47.4		5430.9		+2060	+2139	1,515,649 414,830
242	3300		-	-	9.9	90 40	-38.4	-48.3		5430.0		+2289	+2377	1,515,878 415,068
243	3630		-	-	9.0	90 40	-42.2	-51.2		5427.1		+2518	+2615	1,516,107 415,306
*	3744		33 20 52	-	8.2	90 40	-43.6	-51.8		5426.5		+2608	+2686	1,516,197 415,377
244	3960		33 35	+12.5	7.0	90 40	-46.1	-53.1		5425.2		+2747	+2853	1,516,336 415,544
245	4290		-	-	5.0	90 40	-50.0	-54.9		5423.4		+2976	+3090	1,516,565 415,781
246	4620		-	-	10.2	90 34	-45.7	-55.9		5422.4		+3204	+3328	1,516,793 416,019
247	4950		-	-	8.0	90 34	-49.0	-57.0		5421.3		+3433	+3566	1,517,022 416,257
248	5280		33 26	-	5.9	90 34	-52.2	-58.1		5420.2		+3672	+3794	1,517,261 416,485
249	5608		33 05	-	8.1	90 30	-48.9	-57.0		5421.3		+3925	+4006	1,517,514 416,697
250	5934		32 30	-	10.1	90 26	-44.9	-55.0		5423.3		+4196	+4196	1,517,285 416,887
251	6256		31 55	-	6.3	90 26	-42.3	-53.6		5424.7		+4468	+4378	1,518,057 417,069
252	E.P.M. 13 6575		31 02 27	-	12.8	90 20	-38.3	-51.1	-51.23	5427.1	TP	+4766	+4529	1,518,350 417,217
252	13 6575		-	-	13.1	269 40	-38.3	-51.4			TP	-5	-3	
	1782		183 34 46	+12.3	11.5	91 30	+46.6	+58.1		5485.2	BS	+1713	+487	
	1782		-	-	11.4	268 30	+46.6	+58.0			BS	-5	-3	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-3-86		B. Cotcamp		B. SALDIVAR		6834		J.M.		6		16			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		STANDING HORSE MESA-7 1/2 AZ		AZ		NAVAJO								J. McCLELLAN	
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
									5485.7						
253	1456		181° 40'	+12.3	13.3	91° 30'	-38.1	-51.4		5433.8		-1413	-351	1,518,645	417.350
254	1127		180° 10'	-	12.3	91° 30'	-29.5	-41.8		5443.4		-1100	-243	1,518,958	417.458
255	798		178° 30'	-	8.7	91° 30'	-20.9	-29.6		5455.6		-784	-150	1,519,274	417.551
256	469		177° -	-	11.8	90° 30'	-4.1	-15.9		5469.3		-463	-76	1,519,595	417.625
257	139		177° 20'	-	5.8	90° 30'	-1.2	-7.0		5478.2		-137	-23	1,519,921	417.678
π	0				5.1	-		-5.1		5480.1	π	0	0	1,520,058	417.701
258	191		350 -	+12.3	5.4	89° -	+3.3	-2.1		5483.1		+191	+8	1,520,349	417.709
259	522		349 -	-	9.0	89° -	+9.1	+0.1		5485.3		+522	+12	1,520,580	417.713
260	852		348 -	-	13.2	89° -	+14.9	+1.7		5486.9		+852	+4	1,520,910	417.705
261	1182		347° 25'	-	10.2	89° 20'	+13.8	+3.6		5488.8		+1182	-6	1,521,240	417.695
262	1512		347° 10'	-	9.8	89° 20'	+17.6	+7.8		5493.0		+1512	-14	1,521,570	417.687
263	1842		347 -	-	5.4	89° 20'	+21.4	+16.0		5501.2		+1842	-17	1,521,900	417.684
264	2173		- -	+12.3	10.0	89° -	+37.9	+27.9		5513.1		+2173	-27	1,522,231	417.674
265	2503		347° 20'	-	9.4	88° 50'	+51.0	+41.6		5526.8		+2503	-16	1,522,561	417.685
266	2833	2832.2	347° 40'	-	12.2	88° 40'	+65.9	+53.7		5538.9		+2832	-2	1,522,890	417.699
267	3163	3162.1	348° 10'	-	9.3	88° 40'	+73.6	+64.3		5549.5		+3162	+26	1,523,220	417.727
268	3493	3492.1	348° 45'	-	8.7	88° 40'	+81.3	+72.6		5557.8		+3492	+64	1,523,550	417.765
269	3822	3821.0	349° 20'	-	8.7	88° 40'	+88.9	+80.2		5565.4		+3819	+109	1,523,877	417.810
270	4151	4149.9	349° 55'	-	8.8	88° 40'	+96.6	+87.8		5573.0		+4147	+161	1,524,205	417.862

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-3-86		B. C. Camp		B. SALDIVAR		6834		F.M.		6		17			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		STANDING HORSE MESA 7 1/2'		AZ.		NAVAJO								J. M. CLELLAN	
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
									5485.2						
271	4476	4474.7	350 28 40	+12.3	14.4	88° 36'	+109.4	+95.0		5580.2	TP	+4469	+217	1,524,522	417,915
271	4476				14.3	271 24'	+109.4	+95.1			TP	-5	-3		
	4956		176 51 24	-	+11.8	90° 34'	+49.0	+60.8	5600.9		BS	+4893	+789		
	4956				+11.5	269 26'	+49.0	+60.5			BS	-5	-3		
272	4620		176 50	-	7.0	90° 34'	-45.7	-52.7		5588.2		-4561	-733	1,524,849	417,968
273	4290		-	-	4.3	90° 34'	-42.4	-46.7		5594.2		-4236	-681	1,525,124	418,020
274	3960		-	-	5.3	90° 34'	-39.2	-44.5		5596.4		-3910	-629	1,525,500	418,072
275	3630		-	-	7.5	90° 34'	-35.9	-43.4		5597.5		-3584	-576	1,525,826	418,125
276	3300		176 50	+12.3	9.8	90° 34'	-32.6	-42.4		5598.5		-3258	-524	1,526,152	418,177
277	2970		-	-	12.1	90° 34'	-29.4	-41.5		5599.4		-2932	-471	1,526,478	418,230
278	2640		-	-	9.8	90° 40'	-30.7	-40.5		5600.4		-2607	-419	1,526,803	418,282
279	2310		-	-	12.4	90° 40'	-26.9	-39.3		5601.6		-2281	-367	1,527,129	418,334
280	1980		176 50	-	9.1	90° 50'	-28.8	-37.9		5603.0		-1955	-314	1,527,455	418,387
281	1650		-	-	12.7	90° 50'	-24.0	-36.7		5604.2		-1629	-262	1,527,781	418,439
282	1320		-	-	10.7	91° -	-23.0	-33.7		5607.2		-1303	-210	1,528,107	418,491
283	990		-	-	9.8	91° -	-12.3	-27.1		5613.8		-977	-157	1,528,433	418,544
284	660		-	-	8.0	91° -	-11.5	-19.5		5621.4		-652	-105	1,528,758	418,596
285	330		-	-	6.4	91° -	-5.8	-12.2		5628.7		-326	-52	1,529,084	418,649
286	0				5.1	-		-5.1		5635.8	TP	0	0	1,529,410	418,701

SURVEY NOTES-HIGH RESOLUTION DATA

GFO-445

Geosource Inc.

DATE	4-3-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	B. SALDIVAR	PARTY NUMBER	6834	NOTES CHECKED BY	F.M.	LINE NO.	6	PAGE	18
AREA	ARIZONA	TOPO MAP	STANDING HORSE MESA-7 1/2	STATE	AZ.	COUNTY	NAVAJO	TWP	RANGE	PPM	PARTY MANAGER	J. Mc Clellan	

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.	
									5640.9					
287	330		356 52	+12.3	7.7	88° 20'	+9.6	+2.4		5643.3		+326	+53	1,529,776 418.754
288	660		- -	-	9.3	88° 20'	+19.2	+9.9		5650.8		+652	+105	1,530,062 418.806
289	990		- -	-	10.7	88° 20'	+28.8	+18.1		5659.0		+977	+158	1,530,387 418.859
290	1320	1319.4	- -	-	9.1	88° 20'	+38.4	+29.3		5670.2		+1303	+210	1,530,713 418.911
291	1650	1649.3	356 52	+12.3	5.6	88° 20'	+48.0	+42.4		5683.3		+1628	+263	1,531,038 418.964
292	1980	1979.2	- -	-	3.3	88° 20'	+57.6	+54.3		5695.2		+1954	+315	1,531,364 419.016
293	2310	2308.8	- -	-	7.2	88° 10'	+73.9	+66.7		5707.6		+2279	+368	1,531,689 419.069
294	2640	2638.7	- -	-	10.0	88° 10'	+84.5	+74.5		5715.4		+2605	+420	1,532,015 419.121
294	2930	2928.7	356 32 32	-	11.0	88° 18'	+86.9	+75.9		5716.8	TP	+2894	+450	1,532,304 419.151
295	2973	2971.7	356 48 24	-	12.8	88° 18'	+88.2	+75.4		5716.3	TP	+2934	+470	1,532,339 419.168
295	2973				12.9	271 42	+88.2	+75.3			TP	-5	-3	
	5281	5280.4	180 02 30	+12.6	14.9	89° 10'	-76.8	-61.9	620 5654.3		BS	+5152	+1156	
	5281				14.6	270 50	-76.8	-62.2			BS	-5	-3	
296	4950		180 16	-	8.2	89° 14'	+66.2	+58.0		5712.3		-4826	-1102	1,532,660 419.219
297	4620		180 30	-	8.8	89° 14'	+61.8	+53.0		5707.3		-4500	-1047	1,532,986 419.274
298	4290		180 55	-	9.3	89° 14'	+52.4	+48.1		5702.4		-4171	-1003	1,533,315 419.318
299	3960		181 08	-	9.8	89° 14'	+53.0	+43.2		5697.5		-3847	-940	1,533,639 419.381
300	3630		- -	+12.6	10.3	89° 14'	+48.6	+38.3		5692.6		-3526	-862	1,533,960 419.459
301	3300		- -	-	5.0	89° 20'	+38.4	+33.4		5687.7		-3206	-783	1,534,280 419.538
302	2970		- -	-	6.2	89° 20'	+34.6	+28.4		5682.7		-2885	-705	1,534,601 419.616

1,532,300 x - 419,130
4 way center EL. 5717.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-3-86		B. Cotcamp		B. SALDIVAR		6834		JMB		6		19			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		Standing Horse Mesa-7 1/2		AZ.		NAVAJO								J. Mc CLEUAN	
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
									5654.3						
303	2640		181° 08'	+12.6	7.3	89° 20'	+30.7	+23.4		5677.7		-2565	-627	1,534,921	419,694
304	2310		- -	-	8.2	89° 20'	+26.9	+18.7		5673.0		-2244	-548	1,535,242	419,723
305	1980		- -	-	9.7	89° 20'	+23.6	+13.3		5667.6		-1923	-470	1,535,563	419,851
306	1650		- -	-	10.7	89° 20'	+19.2	+8.5		5662.8		-1603	-392	1,535,883	419,929
307	1320		181° 08'	+12.6	10.1	89° 20'	+15.4	+5.3		5659.6		-1282	-313	1,536,204	420,028
308	990		✓ -	-	8.7	89° 20'	+11.5	+2.8		5657.1		-962	-235	1,536,524	420,086
309	660		- -	-	7.1	89° 20'	+7.7	+0.6		5654.9		-641	-157	1,536,845	420,164
310	330		- -	-	6.2	89° 20'	+3.8	-2.4		5651.9		-321	-78	1,537,165	420,243
311	0				5.1	-		-5.1		5649.2	π	0	0	1,537,486	420,321
312	330		1° 11'	+12.6	4.7	90° 30'	-2.9	-7.6		5646.7		+321	+79	1,537,807	420,400
1f	712		359° 55' 21"	-	5.1	90° 30'	-6.2	-11.3		5643.0	1f	+695	+154	1,538,180	420,475
313	660		1° 11'	-	5.1	90° 30'	-5.8	-10.9		5643.4		+641	+157	1,538,127	420,478
314	990		- -	-	6.8	90° 30'	-8.6	-15.4		5638.9		+961	+236	1,538,447	420,557
315	1320		- -	-	8.0	90° 30'	-11.5	-19.5		5634.8		+1282	+314	1,538,768	420,635
316	1650		- -	-	9.6	90° 30'	-14.4	-24.0		5630.3		+1602	+393	1,539,088	420,714
317	1980		1° 11'	+12.6	11.0	90° 30'	-17.3	-28.3		5626.0		+1923	+472	1,539,409	420,793
318	2310		- -	-	12.2	90° 30'	-20.2	-32.4		5621.9		+2243	+550	1,539,729	420,871
319	2640		- -	-	7.0	90° 40'	-30.7	-37.7		5616.6		+2564	+629	1,540,050	420,950
320	2970		- -	-	8.9	90° 40'	-34.6	-43.5		5610.8		+2884	+708	1,540,370	421,029
321	3300		- -	-	10.7	90° 40'	-38.4	-49.1		5605.2		+3205	+786	1,540,691	421,107

y-1,538,180 x-420,475
T-Inter. EL. 5643.0
Horiz y - -57'
corr. x - -33'

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE					
4-3-86		B. Cotamp		B. SALDIVAR		6834		J.M.		6		20					
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER			
ARIZONA		Standing Horse Mesa-7 1/2		AZ.		NAVAJO								J. McCLELLAN			
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		
									5654.3								
322	3630		1° 10'	+12.6	12.1	90° 40'	-42.2	-54.3		5600.0		+3526	+864	1,541,012	421,185		
323	3960		-	-	13.8	90° 40'	-46.1	-59.9		5594.4		+3846	+942	1,541,332	421,263		
324	4295		0° 53' 14"	-	10.6	90° 44'	-55.0	-65.6			TP	+4176	+1002	1,541,659	421,322		
324	4295				10.3	269° 16'	-55.0	-65.3	65.4	5588.9	TP	-3	-1				
	5939		170° 24' 48"	+12.6	7.6	89° 36'	-41.5	-33.9	5554.9		BS	+5931	+312				
	5939				7.3	270° 24'	-41.5	-34.2			BS	-3	-1				
325	5610		170° 02'	-	7.5	89° 38'	+35.9	+28.4		5583.3		-5604	-258	1,541,983	421,375		
326	5286		169° 42'	-	12.1	89° 38'	+33.8	+21.7		5576.6		-5276	-212	1,542,311	421,421		
327	4950		169° 21'	-	7.0	89° 46'	+20.2	+13.2		5568.1		-4947	-168	1,542,640	421,465		
328	4620		169° 12'	-	7.9	89° 52'	+10.8	+2.9		5557.8		-4618	-145	1,542,969	421,488		
329	4290		-	+12.6	7.0	-		-7.0		5547.9		-4288	-135	1,543,299	421,498		
330	3960		-	-	4.6	90° 10'	-11.5	-16.1		5538.8		-3958	-124	1,543,629	421,509		
331	3630		-	-	10.7	90° 10'	-10.6	-21.3		5533.6		-3628	-114	1,543,959	421,519		
332	3300		169° 12'	-	12.9	90° 10'	-9.6	-22.5		5532.4		-3298	-104	1,544,289	421,529		
333	2970		-	-	13.8	90° 10'	-8.6	-22.4		5532.5		-2969	-93	1,544,618	421,540		
334	2640		-	-	13.1	90° 10'	-7.2	-20.8		5534.1		-2639	-83	1,544,948	421,550		
335	2310		-	-	12.8	90° 10'	-6.7	-19.5		5535.4		-2309	-73	1,545,278	421,560		
336	1980		-	-	11.6	90° 10'	-5.8	-17.4		5537.5		-1979	-62	1,545,608	421,571		
337	1650		-	-	10.1	90° 10'	-4.8	-14.9		5540.0		-1649	-52	1,545,938	421,581		
338	1320		-	-	8.7	90° 10'	-3.8	-12.5		5542.4		-1319	-41	1,546,268	421,592		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	4-3-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	B. SALDIVAR	PARTY NUMBER	6834	NOTES CHECKED BY	F.M. B.S.	LINE NO.	6	PAGE	21
AREA	ARIZONA	TOPO MAP	Standing Horse Mesa 7 1/2	STATE	AZ.	COUNTY	NAVAGO	TWP		PARTY MANAGER	J. McCLELLAN		

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		
									5554.9								
339	1271		169 52 16	+12.6	8.2	90 10	-3.7	-11.9		5543.0	#1	-1270	-55	1,546,317	421,578	1,546,310 x - 421,590	
340	990		169 12	-	7.1	90 10	-2.9	-10.0		5544.9		-990	-31	1,546,597	421,602	Chimney Butte 7 1/2	
341	660		-	-	5.9	90 10	-1.9	-7.8		5547.1		-660	-21	1,546,927	421,612	↓	
342	330		-	-	10.1	89 10	+4.8	-5.3		5549.6		-330	-10	1,547,257	421,623		
343	0				5.1	-		-5.1		5549.8	X	0	0	1,547,587	421,633		
344	330		349 11	+12.6	5.6	90 50	-4.8	-10.4		5544.5		+330	+10	1,547,917	421,643		
345	660		-	-	9.7	90 50	-9.6	-19.3		5535.6		+660	+21	1,548,247	421,654		
346	990		-	-	14.1	90 50	-14.4	-28.5		5526.4		+990	+31	1,548,577	421,664		
347	1320		-	-	13.1	90 50	-19.2	-32.3		5522.6	#	+1319	+41	1,548,906	421,674		
348	1650		349 11	+12.6	4.6	90 50	-24.0	-28.6		5526.3		+1649	+51	1,549,236	421,684		
349	1980		-	-	11.6	90 16	-9.2	-20.8		5534.1		+1979	+62	1,549,566	421,695		
350	2310		-	-	12.1	90 10	-6.7	-18.8		5536.1		+2309	+72	1,549,896	421,705		
351	2640		-	-	11.2	90 10	-7.7	-18.9		5536.0		+2639	+82	1,550,226	421,715		
352	2970		349 11	+12.6	10.3	90 10	-8.6	-18.9		5536.0		+2969	+92	1,550,556	421,725		
353	3300		-	-	9.3	90 10	-9.6	-18.9		5536.0		+3298	+103	1,550,885	421,736		
354	3630		-	-	8.5	90 10	-10.6	-19.1		5535.8		+3628	+113	1,551,215	421,746		
355	3960		-	-	6.5	90 10	-11.5	-18.0		5536.9		+3958	+123	1,551,545	421,756		
356	4290		-	-	4.0	90 10	-12.5	-16.5		5538.4		+4288	+134	1,551,875	421,767		
357	4620		-	-	14.2	-		-14.2		5540.7		+4618	+144	1,552,205	421,777		
357	4950		-	-	11.9	-		-11.9		5543.0		+4948	+154	1,552,535	421,787		

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
4-3-86		B. Cotcamp		B. SALDIVAR		6834		B.S F.M.		6	22					
AREA		TOPO MAP		STATE		COUNTY		TWP	RANGE	PPM	PARTY MANAGER					
ARIZONA		Chimney Butte-7 1/2'		AZ.		NAVAJO					J. McCLELLAN					
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	
									5554.9							
358	5280		349 11	+12.6	10.0	-		-10.0		5544.9		+5277	+164	1,552,864	421,797	
359	5610		-	-	7.7	-		-7.7		5547.2		+5607	+175	1,553,194	421,808	
360	5940		-	-	5.8	-		-5.8		5549.1		+5937	+185	1,553,524	421,818	
361	6270		-	-	12.8	89 54	+10.9	-1.9		5553.0		+6267	+195	1,553,854	421,828	
362	6596.34 <small>from previous</small>		349 11 17	-	6.0	89 54	+11.5	+5.5			TP	+6593	+206	1,554,177	421,838	
362	6596.34			-	5.9	270 06	+11.5	+5.6		5560.5	TP	-3	-1			
	5269	5267.3	172 28 34	+12.6	12.6	91 28	+134.9	+147.5	5708.0		BS	+5246	+466			
	5269				12.5	268 32	+134.9	+147.4			BS	-3	-1			
363	4942		172 40	-	12.3	91 28	-126.5	-138.8		5569.2		-4921	-454	1,554,499	421,849	
364	4614		173 -	-	12.8	91 28	-118.1	-130.9		5577.1		-4592	-450	1,554,828	421,853	
365	4280		173 10	-	12.9	91 28	-109.5	-122.4		5585.6		-4258	-430	1,555,162	421,873	
366	3954		173 32	-	13.1	91 28	-101.2	-114.3		5593.7		-3931	-422	1,555,489	421,881	
367	3624		173 58	-	13.4	91 28	-92.8	-106.2		5601.8		-3600	-414	1,555,820	421,889	
368	3295		174 25	+12.6	13.8	91 28	-84.3	-98.1		5609.9		-3270	-403	1,556,150	421,900	
369	2965		175 -	-	11.9	91 30	-77.6	-89.5		5618.5		-2939	-392	1,556,481	421,911	
370	2638		175 40	-	12.7	91 30	-69.1	-81.3		5626.7		-2611	-379	1,556,809	421,924	
371	2309		176 30	-	12.5	91 30	-60.4	-72.9		5635.1		-2280	-365	1,557,140	421,938	
372	1979		177 20	-	13.0	91 30	-51.8	-64.8		5643.2		-1949	-341	1,557,471	421,962	
373	1650		178 10	-	13.1	91 30	-43.2	-56.3		5651.7		-1621	-308	1,557,799	421,995	
374	1320		178 55	-	12.7	91 30	-34.6	-47.3		5660.7		-1293	-264	1,558,127	422,039	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-4-86		B. Cotcamp		B. SALDIVAR		6834		B.S. J.M.		6		23			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		Chimney Butte - 7 1/2'		AZ.		NAVAJO								J. McClellan	
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
									5708.0						
375	990		179 40	+12.6	9.0	91 30	-25.9	-34.9		5673.1		-967	-210	1,558,453	422,093
376	660		180 10	-	6.0	91 30	-17.3	-23.3		5684.7		-644	-146	1,558,226	422,157
377	330		-	-	9.1	90 30	-2.9	-12.0		5696.0		-322	-73	1,559,098	422,230
378	0				5.1	-		-5.1		5702.9	TP	0	0	1,559,420	422,303
379	330		0 14	+12.6	5.2	89 20	+3.8	-1.4		5706.6		+322	+73	1,559,242	422,376
380	660		-	-	6.8	89 20	+7.7	+0.9		5708.9		+644	+147	1,560,064	422,450
381	990		-	-	8.2	89 20	+11.5	+3.3		5711.3		+965	+220	1,560,385	422,523
382	1320		-	-	9.8	89 20	+15.4	+5.6		5713.6		+1287	+293	1,560,707	422,596
383	1650		-	-	11.8	89 20	+19.2	+2.4		5715.4		+1609	+366	1,561,029	422,669
384	1980		-	-	13.2	89 20	+23.0	+9.8		5712.8		+1931	+440	1,561,351	422,743
385	2310		0 14	+12.6	13.2	89 20	+26.9	+13.2		5721.7		+2252	+513	1,561,672	422,816
386	2640		-	-	11.9	89 20	+30.7	+18.8		5726.8		+2574	+586	1,561,994	422,889
387	2970		-	-	10.8	89 20	+34.6	+23.8		5731.8		+2896	+660	1,562,316	422,963
388	3300		-	-	9.3	89 20	+38.4	+29.1		5737.1		+3218	+733	1,562,638	423,036
389	3630		-	-	9.7	89 20	+42.2	+32.5		5740.5		+3539	+806	1,562,959	423,109
390	3960		-	-	13.1	89 20	+46.1	+33.0		5741.0		+3861	+886	1,563,281	423,183
391	4289		0 10 30	-	9.9	89 20	+42.4	+32.5		5740.5	TP	+4183	+948	1,563,600	423,250
391	4289				10.0	270 30	+42.4	+32.4			TP	-3	-1		
	2309		179 13 28	+12.6	12.9	TH	-11.5	+1.4	5741.9		BS	+2260	+473		
	2309				12.8	TH 270	-11.5	+1.3			BS	-3	-1		

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-4-86		B. Cotcamp		B. SALDIVAR		2834		B.S. J.M.I.		6		24			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		Chimney Butte - 7 1/2'		AZ.		NAVAJO								J. McCLELLAN	
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
									5741.9						
392	1980		179 10	+12.6	10.6	TH	+9.9	-0.2		5741.2		-1938	-404	1,563,919	423,318
393	1650		179 05	-	8.8	TM	+8.3	-0.6		5741.3		-1616	-334	1,564,241	423,378
#	1577		179° 25' 44"	-	8.3	TH	+7.9	-0.4		5741.5	#	-1542	-329	1,564,315	423,393
394	1320		178° 55'	-	6.8	TH	+6.6	-0.2		5741.7		-1293	-264	1,564,564	423,458
395	990		178° 30'	-	5.0	TH	+5.0	0.0		5741.9		-971	-191	1,564,886	423,531
396	660		178° 05'	-	11.0	89 -	+11.5	+0.5		5742.4		-649	-122	1,565,208	423,600
397	330		177° 35'	-	6.4	89 -	+5.8	-0.6		5741.3		-325	-58	1,565,532	423,664
398	0				5.1	-		-5.1		5736.8	X	0	0	1,565,857	423,722
399	330		354 40	+12.6	7.0	90 20	-1.9	-8.9		5733.0		+327	+42	1,566,184	423,764
400	660		354 -	-	9.6	90 20	-3.8	-13.4		5728.5		+656	+76	1,566,513	423,798
401	990		353 10	-	12.0	90 20	-5.8	-12.8		5724.1		+985	+99	1,566,842	423,821
402	1319		352 25	-	10.6	90 30	-11.5	-22.1		5719.8		+1314	+115	1,567,171	423,837
403	1648		351 40	-	12.2	90 30	-14.4	-26.6		5715.3		+1643	+123	1,567,500	423,845
404	1975		350 50	+12.6	10.0	90 40	-23.0	-33.0		5708.9		+1971	+118	1,567,828	423,840
405	2304		350 10	-	13.1	90 40	-26.8	-39.9		5702.0		+2301	+111	1,568,158	423,833
406	2634		349 40	-	8.9	90 50	-38.3	-45.2		5694.7		+2632	+104	1,568,489	423,826
407	2964		348 55	-	11.0	90 50	-43.1	-54.1		5685.8		+2963	+78	1,568,820	423,800
408	3293		348° 47' 30"	-	13.0	90 80	-47.9	-60.9			TP	+3292	+80	1,569,146	423,801
408	3293				12.9	269 10	-47.9	-60.8		5681.1	TP	-3	-1		

5-1,567,300 x -423,390
H_{WASH}

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE						
4-4-86		B. Cotcamp		B. SALDIVAR		6834		B.S. J.M.		6		25						
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER				
ARIZONA		Chimney Butte-7 1/2		AZ.		NAVAJO								J.M.				
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			
										5681.1								
	2637		165° 52' 40"	+126	9.8	88° 50'	-53.7	-43.9	5637.2		BS	+2636	-70					
	2637				+9.7	271° 10'	-53.7	-44.0			BS	-3	-1					
409	2310		165° 50'	-	8.7	88° 50'	+47.0	+38.3		5675.5		-2309	+63	1,569,470	423,793			
Bm	2513		167° 18' 14"	-	11.6	88° 50'	+51.2	+39.6		5676.8	Bm	-2512	+4	1,569,267	423,734			Bm. 32 Lc El. 5677 1954
410	1980		165° 50'	-	7.9	88° 50'	+40.3	+32.4		5669.6		-1979	+54	1,569,800	423,784			
411	1650		- -	+126	6.7	88° 50'	+33.6	+26.9		5664.1		-1649	+45	1,570,130	423,775			
412	1320		- -	-	5.7	88° 50'	+26.9	+21.2		5658.4		-1320	+36	1,570,459	423,766			
413	990		- -	-	5.1	88° 50'	+20.2	+15.1		5652.3		-990	+27	1,570,789	423,757			
414	660		- -	-	6.1	88° 40'	+15.4	+9.3		5646.5		-660	+18	1,571,119	423,748			
415	330		- -	-	4.7	88° 40'	+7.7	+3.0		5640.2		-330	+9	1,571,449	423,739			
416	0				5.1	-		-5.1		5632.1		0	0	1,571,779	423,730			
417	180		171° 03' 21"	+126	4.1	88° 40'	+4.2	+0.1		5637.3		-180	-11	1,571,599	423,719			4-1,571,575 x-423,720 4-way Inter. El. 5638.0
418	330		345° 50'	-	5.5	91° 30'	-8.6	-14.1		5623.1		+330	-9	1,572,109	423,721			
419	660		- -	-	6.1	91° 30'	-17.3	-23.4		5613.8		+660	-18	1,572,439	423,712			
420	990		- -	-	6.8	91° 30'	-25.9	-32.7		5604.5		+990	-27	1,572,769	423,703			
421	1320		- -	-	6.7	91° 30'	-34.6	-41.3		5595.9		+1320	-36	1,573,099	423,694			
422	1650		345° 50'	+126	5.0	91° 30'	-43.2	-48.2		5589.0		+1649	-45	1,573,428	423,685			
423	1980		- -	-	8.6	91° 20'	-46.1	-54.7		5582.5		+1979	-54	1,573,758	423,676			
424	2310		- -	-	6.8	91° 20'	-53.8	-60.6		5576.6		+2309	-63	1,574,088	423,667			
424	2640		- -	-	10.8	91° 10'	-53.8	-64.6		5572.6		+2639	-72	1,574,418	423,658			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE							
4-4-86		B. Cotcamp		B. SALDIVAR		6834		BS J.M.			6		26							
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER						
ARIZONA		Chimney Butte - 7 1/2		AZ.		NAVAJO								J. McCLELLAN						
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	
			Y	X									LAT.	DEP.	Y	X				
										5637.2										
425	2970		345	50	+12.6	8.0	91.10	-60.5	-68.5		5568.7		+2969	-81	1,524,248	423,649				
426	3300		-	-	-	5.0	91.10	-67.2	-72.2		5565.0		+3299	-90	1,525,078	423,640				
427	3630		-	-	-	12.5	91.-	-63.4	-75.9		5561.3		+3629	-99	1,525,408	423,631				
#	3920		345	36 46	-	10.7	91.-	-68.4	-79.1		5558.1	#	+3918	-122	1,575.697	423,608				-1,575.700 x -423,605
428	3960		345	50	-	10.6	91.-	-69.1	-79.7		5552.5		+3959	-108	1,525,238	423,622				
429	4289	4288.4	345	49 43	-	8.7	91.-	-74.9	-83.6		5553.8	TP	+4287	-118	1,576.063	423,611				
429	4289					8.4	269.	-74.9	-83.3	-83.4	5553.8	TP	-3	-1						
	3631		165	57 32	+12.6	9.6	-		+9.6	1,453	5563.3	BS	+3630	-91						
	3631					9.3	270 -		+9.3			BS	-3	-1						
430	3300		165	56	-	11.1	-		-11.1		5552.2		-3299	+84	1,526,391	423,603				
431	2970		-	-	-	10.6	-		-10.6		5552.7		-2969	+76	1,526,221	423,595				
432	2640		-	-	-	10.0	-		-10.0		5553.3		-2639	+68	1,522,051	423,587				
433	2310		-	-	-	9.3	-		-9.3		5554.0		-2309	+59	1,522,381	423,578				
434	1980		165	56	+12.6	8.7	-		-8.7		5554.6	#	-1979	+51	1,577,711	423,570				-1,577,715 x -423,570
435	1650		-	-	-	8.0	-		-8.0		5555.3		-1649	+42	1,528,041	423,561				5555.6
436	1320		-	-	-	7.1	-		-7.1		5556.2		-1320	+34	1,528,320	423,553				
437	990		-	-	-	6.4	-		-6.4		5556.9		-990	+25	1,528,700	423,544				
438	660		-	-	-	6.2	-		-6.2		5557.1		-660	+17	1,529,030	423,536				
439	330		-	-	-	5.6	-		-5.6		5557.7		-330	+8	1,529,360	423,527				
440	0					5.1	-		-5.1		5558.2	^	0	0	1,529,690	423,519				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	4-4-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	B. SALDIVAR	PARTY NUMBER	6834	NOTES CHECKED BY	B.S. J.M.	LINE NO.	6	PAGE	27	
AREA	ARIZONA	TOPO MAP		STATE	AZ.	COUNTY	NAVAJO	TWP		RANGE		PPM	PARTY MANAGER	J. McCLELLAN

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		
									5563.3								
1/4	288		342 47 44	+12.6	4.0	-		-4.0		5559.3	1/4	+287	-23	1,579,922	423,496	Y=1,579,960 X=423,495 5559 T-inter.	
441	330		345 56'	-	5.9	TH	+1.7	-4.2		5559.1		+330	-8	1,580,020	423,511		
442	660		-	-	3.7	-		-3.7		5559.6		+660	-17	1,580,350	423,502		
443	990		-	-	3.9	-		-3.9		5559.4		+990	-25	1,580,680	523,494		
444	1320		-	-	4.5	-		-4.5		5558.8		+1320	-34	1,581,010	423,485		
445	1650		345 56	+12.6	4.7	-		-4.7		5558.6		+1649	-42	1,581,339	423,477		
446	1980		-	-	5.3	-		-5.3		5558.0		+1979	-51	1,581,669	423,468		
447	2310		-	-	6.2	-		-6.2		5552.1		+2309	-59	1,581,999	423,460		
448	2640		-	-	6.9	-		-6.9		5556.4		+2639	-68	1,582,329	423,451		
449	2970		-	-	7.7	-		-7.7		5555.6		+2969	-76	1,582,659	423,443		
450	3301		345 56 09	-	8.7	-		-8.7		5554.8	TP	+3300	-84	1,582,987	423,434		
450	3301		-	-	8.4	270		-8.4	5553	5554.8	TP	-3	-1				
	2308		166 02 20	+12.3	7.9	TH	-11.5	-3.6	5551.2	5551.2	BS	+2307	-67				
	2308		-	-	7.8	TH 270	-11.5	-3.7	5		BS	-3	-1				
#	2061		166 28 10	-	8.4	89 40	+12.0	+3.6		5554.8	#	-2060	+44	1,583,231	423,410	#wash Elev. 5555.0	
451	1980		166 02	-	8.1	89 40	+11.5	+3.4		5554.6		-1979	+58	1,583,231	423,424		
452	1650		-	-	6.8	89 40	+9.6	+2.8		5554.0		-1649	+48	1,583,642	423,414		
453	1320		-	-	9.1	89 30	+11.5	+2.4		5553.6		-1319	+38	1,583,972	423,404		
454	990		-	-	7.2	89 30	+8.6	+1.4		5552.6		-990	+29	1,584,301	423,395		
455	660		-	-	6.3	89 30	+5.8	-0.5		5550.7		-660	+19	1,584,631	423,385		

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE					
4-4-86		B. Cotcamp		B. SALDIVAR		6834		J.M.		6		28					
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER			
ARIZONA		Chimney Butte 7 1/2'		AZ.		NAVAJO								J. McCLELLAN			
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		
									5551.2								
456	330		166° 02'	+12.3	5.3	89° 30'	+2.9	-2.4		5548.8		-330	+10	1,584,961	423,376		
457	0				5.1	-		-5.1		5546.1	TP	0	0	1,585,291	423,366		
458	330		346° 01'	-	7.9	89° 30'	+2.9	-5.0		5546.2		+330	-10	1,585,621	423,356		
459	660		-	-	9.3	89° 30'	+5.8	-3.5		5547.7		+660	-19	1,585,751	423,347		
460	990		-	-	10.0	89° 30'	+8.6	-1.4		5549.8		+990	-29	1,586,281	423,337		
461	1320		-	+12.3	6.0	89° 30'	+11.5	+5.5		5556.7		+1319	-39	1,586,610	423,327		
462	1650		-	-	7.8	89° 10'	+24.0	+16.2		5567.4		+1649	-48	1,586,940	423,318		
463	1980		-	-	6.7	89° -	+34.6	+27.9		5579.1		+1979	-58	1,587,270	423,308		
464	2311		346° 00 46	-	2.8	89° -	+40.3	+37.5		5588.7	TP	+2310	-68	1,587,598	423,297		
464	2311				2.7	271° -	+40.3	+37.6			TP	-3	-1				
	3949		166° 03 39	-	14.0	90° 30'	+34.5	+48.5			BS	+3947	-113				
	3949				13.9	269° 30'	+34.5	+48.4	5637.1		BS	-3	-1				
465	3620		166° 04'	+12.3	11.7	90° 30'	-31.6	-42.8		5594.3		-3619	+103	1,587,923	423,286		
466	3292		-	-	10.0	90° 30'	-28.7	-38.7		5598.4		-3291	+94	1,588,251	423,277		
467	2964		-	-	8.6	90° 30'	-25.9	-34.5		5602.6		-2963	+84	1,588,579	423,267		
468	2636		-	-	7.2	90° 30'	-23.0	-30.2		5606.9		-2635	+75	1,588,907	423,258		
469	2307		-	-	5.7	90° 30'	-20.1	-25.8		5611.3		-2306	+66	1,589,236	423,249		
470	1977		166° 26 28	-	5.3	90° 30'	-19.8	-25.1		5612.0	47	-2264	+50	1,589,278	423,233		9-1,589,240 x -423,220 47 4 way Inter. EL. 5611.0
470	1977		166° 04'	-	12.0	BM	-9.9	-21.9		5615.2		-1976	+56	1,589,566	423,239		
471	1650		-	-	10.1	BM	-8.3	-18.4		5618.7	T	-1649	+47	1,589,893	423,230		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	4-7-86	INSTRUMENT MAN	B. Cotamp	ROD MAN	B. SALDIVAR	PARTY NUMBER	6834	NOTES CHECKED BY	F.M.	LINE NO.	6	PAGE	29	
AREA	ARIZONA	TOPO MAP	Chimney Butte-7 1/2	STATE	AZ.	COUNTY	NAVAJO	TWP		RANGE		PPM	PARTY MANAGER	J. McCLELLAN

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	
									5637.1							
472	1320		166 04	+12.3	8.9	89	-6.6	-15.5		5621.6		-1319	+38	1,590,223	423,221	
473	990		- -	-	12.7	-		-12.7		5624.4		-990	+28	1,590,552	423,211	
474	660		- -	-	10.1	-		-10.1		5627.0		-660	+19	1,590,882	423,202	
475	330		- -	-	7.2	-		-7.2		5629.9		-330	+9	1,591,212	423,192	
476	0				5.1	-		-5.1		5632.0	X	0	0	1,591,542	423,183	Chimney Butte-7 1/2
477	330		346 04	+12.3	6.7	89 10	+4.8	-1.9		5635.2		+330	-9	1,591,872	423,174	Shonto Butte-7 1/2
478	660		- -	-	9.1	89 10	+9.6	+0.5		5637.6		+660	-19	1,592,202	423,164	
479	990		- -	-	11.1	89 10	+14.4	+3.3		5640.4		+990	-28	1,592,532	423,155	
480	1320		- -	-	13.2	89 10	+19.2	+6.0		5643.1		+1319	-38	1,592,861	423,145	
481	1650		346 04	+12.3	14.0	89 10	+24.0	+10.0		5647.1		+1649	-47	1,593,191	423,136	
482	1980		- -	-	8.8	89 20	+23.0	+14.2		5651.3		+1979	-56	1,593,521	423,127	
483	2310		- -	-	8.1	89 20	+26.9	+18.8		5655.9		+2309	-66	1,593,851	423,117	
484	2640		- -	-	7.6	89 20	+30.7	+23.1		5660.2		+2639	-75	1,594,181	423,108	
485	2970		- -	-	7.2	89 20	+34.6	+27.4		5664.5		+2969	-85	1,594,511	423,098	
486	3300		346 04	+12.3	6.9	89 20	+38.4	+31.5		5668.6		+3299	-94	1,594,841	423,089	
487	3630		- -	-	6.3	89 20	+42.2	+35.9		5673.0		+3629	-103	1,595,171	423,080	
488	3960		- -	-	6.1	89 20	+46.1	+40.0		5677.1		+3958	-113	1,595,500	423,070	
489	4290		- -	-	4.8	89 20	+49.9	+45.1		5682.2		+4288	-122	1,595,830	423,061	
490	4620		- -	-	2.8	89 20	+53.8	+51.0		5688.1		+4618	-132	1,596,160	423,051	
491	4950		- -	-	12.2	89 12	+69.1	+56.9		5694.0		+4948	-141	1,596,490	423,042	

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
4-7-86		B. Cotcamp		B. SALDIVAR		6834		J.M.		6		30				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
ARIZONA		SHOWTO Butte-7 1/2'		AZ.		NAVAJO								J. McCLELLAN		
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
									5637.1							
#	5149		345 52 46	+12.3	11.1	89 12	+71.9	+60.8		5697.9	#	+5146	-164	1,596,688	423,019	y=1,596,700 x=423,000 # WASH
492	5280		346 04	-	10.7	89 12	+73.7	+63.0		5700.1		+5278	-151	1,596,820	423,032	
493	5610		-	-	8.9	89 12	+78.3	+69.4		5706.5		+5608	-160	1,597,150	423,023	
494	5940		-	-	5.0	89 12	+82.9	+77.9		5715.0		+5938	-169	1,597,480	423,014	
495	6270		-	-	10.1	89 06	+98.5	+88.4		5725.5		+6267	-179	1,597,809	423,004	
496	6600		-	-	5.0	89 06	+103.7	+98.7		5735.8		+6597	-188	1,598,139	422,995	
497	368 ^{E.P.A. removed}	6929.6	346 02 26	+12.2	15.0	88 59	+123.0	+108.0			TP	+6926	-213	1,598,465	422,970	
497	6930				14.9	271 01	+123.0	+108.1		5745.2	TP		-3			
	3631		166 03 44	-	15.0	90 30	+31.7	+46.7			BS	+3629	-110			
	3631				8.9	269 24	+38.0	+46.9	4683	5792.0	BS		-3			
498	3300		166 03	-	13.1	90 30	-28.8	-41.9		5750.1		-3298	+101	1,598,793	422,961	
499	2970		-	+12.2	12.2	90 30	-25.9	-38.1		5753.9		-2969	+91	1,599,122	422,951	
500	2640		-	-	11.4	90 30	-23.0	-34.4		5757.6		-2639	+81	1,599,452	422,941	
501	2310		-	-	10.7	90 30	-20.2	-30.9		5761.1		-2309	+71	1,599,782	422,931	
502	1980		-	-	9.8	90 30	-17.3	-27.1		5764.9		-1979	+60	1,600,112	422,920	
503	1650		166 03	-	8.7	90 30	-14.4	-23.1		5768.9		-1649	+56	1,600,442	422,910	
504	1320		-	-	7.8	90 30	-11.5	-19.3		5772.7		-1319	+40	1,600,772	422,900	
505	990		-	-	7.1	90 30	-8.6	-15.7		5776.3		-990	+30	1,601,101	422,890	
506	660		-	-	6.4	90 30	-5.8	-12.2		5779.8		-660	+20	1,601,431	422,880	
507	330		-	-	5.7	90 30	-2.9	-8.6		5783.4		-330	+10	1,601,761	422,870	

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
4-7-86		B Cotcamp		B. SALDIVAR		6834		J.M.		6		31				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
ARIZONA		SHOWTO Butte-7 1/2'		AZ.		NAVAJO								J. Mc CLELLAN		
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
									5792.0							
71	77		177 54 32	+12.2	4.7	90°30'	-0.7	-5.4		5786.6	#1	-76	-14	1,602,015	422,846	#1 - 1,602,015 x - 422,830 7 - Zifen.
508	0				5.1	-		-5.1		5786.9	X	0	0	1,602,091	422,860	
509	330		346 03	-	5.1	89°20'	+3.8	-1.3		5790.7		+330	-10	1,602,421	422,850	
510	660		-	-	4.9	89°20'	+2.2	+2.8		5794.8		+660	-20	1,602,751	422,840	
511	990		-	-	5.9	89°20'	+11.5	+5.6		5797.6		+990	-30	1,603,081	422,830	
512	1320		-	-	7.6	89°20'	+15.4	+7.8		5799.8		+1319	-40	1,603,410	422,820	
513	1650		346 03	+12.2	10.4	89°20'	+19.2	+8.8		5800.8		+1649	-50	1,603,740	422,810	
514	1980		-	-	12.9	89°20'	+23.0	+10.1		5802.1	#	+1979	-60	1,604,070	422,800	
515	2310		-	-	14.1	89°20'	+26.9	+12.8		5804.8		+2309	-71	1,604,400	422,789	
516	2640		-	-	12.0	89°20'	+30.2	+18.2		5810.7		+2639	-81	1,604,730	422,779	
517	2970		-	-	7.1	89°20'	+34.6	+27.5		5819.5		+2969	-91	1,605,060	422,769	
518	3300		-	-	5.4	89°20'	+38.4	+33.0		5825.0		+3298	-101	1,605,389	422,759	
519	3630		-	-	6.5	89°20'	+42.2	+35.2		5827.7		+3628	-111	1,605,719	422,749	
520	3957		346 02 03	-	9.7	89°20'	+46.0	+36.3		5828.3	TP	+3955	-122	1,606,043	422,738	
520	3957				9.8	270°40'	+46.0	+36.2			TP	-3				
	2303		168 45 38	+12.2	14.8	89°54'	-4.0	+10.8	5839.1		BS	+2303	+39			
	2303				14.7	270°06'	-4.0	+10.7			BS	-3				
521	1976		169 25	-	9.7	-		-9.7		5829.4		-1975	-56	1,606,368	422,721	
522	1648		170 -	-	9.0	-		-9.0		5830.1		-1647	-63	1,606,696	422,714	
523	1319		170 45	-	7.9	-		-7.9		5831.2		-1317	-68	1,607,026	422,710	

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE		
4-7-86		B. Cotcamp		B. SALDIVAR		6834		J.M.I			6		3A		
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		Shonto Butte - 7 1/2'		AZ.		NAVAJO								J. Mc Clellan	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH -	EAST + WEST -		Y
									5839.1						
524	990		171 30	+12.2	6.9	-	-6.9		5832.2			-988	-64	1,607,355	422,713
525	660		- -	-	6.2	-	-6.2		5832.9			-659	-43	1,607,684	422,734
526	330		- -	-	5.4	-	-5.4		5833.7			-329	-21	1,608,014	422,756
527	0		.		5.1	-	-5.1		5834.0	TP		0	0	1,608,343	422,777
528	330		352 47	-	4.6	-	-4.6		5834.5			+329	+29	1,608,672	422,806
529	660		- -	-	7.0	TH	+3.3	-3.7	5835.4			+658	+57	1,609,001	422,834
530	990		- -	-	8.0	TH	+5.0	-3.0	5836.1			+986	+86	1,609,329	422,863
531	1320		- -	-	4.8	-	-4.8		5834.3			+1315	+115	1,609,658	422,892
532	1650		352 47	+12.2	7.9	-	-7.9		5831.2	#		+1644	+143	1,609,987	422,920
533	1980		- -	-	11.5	-	-11.5		5827.6			+1973	+172	1,610,316	422,949
534	2310		- -	-	11.0	90° 06'	-4.0	-15.0	5824.1			+2301	+201	1,610,644	422,978
535	2640		- -	-	12.7	90° 06'	-4.6	-17.3	5821.8			+2630	+229	1,610,973	423,006
536	2970		- -	-	12.8	90° 06'	-5.2	-18.0	5821.1	#		+2959	+258	1,611,302	423,035
537	3300		- -	-	12.0	90° 06'	-5.8	-17.8	5821.3			+3288	+287	1,611,631	423,064
538	3630		- -	-	9.7	90° 06'	-6.3	-16.0	5823.1			+3616	+315	1,611,959	423,092
Bm	3859		351 08 47	-	13.9	-	-13.9		5825.2	Bm		+3852	+225	1,612,195	423,002
539	3763		352 46 54	-	14.3	-	-14.3		5824.8	TP		+3948	+344	1,612,288	423,121
539	3763		.		14.2	270	-	-14.2		TP		-3			
	3302		172 35 57	-	14.6	90° 04'	+3.8	+18.4	5843.0	DS		+3290	+276		
	3302				14.9	269 56	+3.8	+18.1		BS		-3			

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SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-7-86		B. Cotcamp		B. SALDIVAR		6834		J.M.		6		33			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		SHOWTO Butte-7 1/2		AZ.		NAVAJO								J. McCLELLAN	
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
									5843.0						
540	2970		172 35	+12.2	13.6	90 02'	-1.7	-15.3		5827.7		-2960	-248	1,612,615	423,149
541	2640		- -	-	13.1	-		-13.1		5829.9		-2631	-220	1,612,944	423,177
542	2310		- -	-	11.2	-		-11.2		5831.8		-2302	-193	1,613,273	423,204
543	1980		- -	-	9.7	-		-9.7		5833.3		-1973	-165	1,613,602	423,232
544	1650		172 35	+12.2	8.1	-		-8.1		5834.9		-1644	-138	1,613,931	423,259
545	1320		- -	-	6.5	-		-6.5		5836.5		-1315	-110	1,614,260	423,287
546	990		- -	-	5.0	-		-5.0		5838.0		-987	-83	1,614,588	423,314
547	660		- -	-	7.1	TH	+3.3	-3.8		5839.2		-658	-55	1,614,917	423,342
548	330		- -	-	5.8	TH	+1.7	-4.2		5838.8		-329	-28	1,615,246	423,369
549	0				5.1	-		-5.1		5837.9	K	0	0	1,615,575	423,397
550	330		352 35	+12.2	5.1	-		-5.1		5837.9		+329	+28	1,615,904	423,425
551	660		- -	-	5.9	-		-5.9		5837.1		+658	+55	1,616,233	423,452
552	990		- -	-	6.4	-		-6.4		5836.6		+987	+83	1,616,562	423,480
553	1320		- -	-	7.2	-		-7.2		5835.8		+1315	+110	1,616,890	423,507
554	1650		352 35	-	8.1	-		-8.1		5834.9		+1644	+138	1,617,219	423,535
555	1980		- -	-	8.7	-		-8.7		5834.3		+1973	+165	1,617,548	423,562
556	2310		- -	-	9.3	-		-9.3		5833.7		+2302	+193	1,617,877	423,590
557	2640		- -	-	10.4	-		-10.4		5832.6		+2631	+220	1,618,206	423,617
Bm	3059		355 21 39	-	10.0	-		-10.0		5833.0	Bm	+3032	+403	1,618,607	423,800
558	2970		352 35	-	11.2	-		-11.2		5831.8		+2960	+248	1,618,535	423,645

1,618,600 x 423,800
103 Apr 1981 5833.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-7-86		B. Cotcamp		B. SALDIVAR		6834		J.M.		6		34			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		SHONTO Butte - 7 1/2		AZ.		NAVAJO								J. McClellan	
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
									5843.0						
559	3301		352 33 27	+12.2	12.7	-		-12.7		5830.3	TP	+3290	+274	1,618,863	423,671
559	3301				12.6	270		-12.6			TP				
	3295		172 36 40	+12.3	14.2	TH	-16.5	-2.3			BS	+3283	+282		
	3295				13.9	TH 270	-16.5	-2.6	253	5827.8	BS				
560	2970		172 36	-	13.0	TH	+14.9	+1.9		5829.7		-2959	-254	1,619,187	423,699
561	2640		-	-	12.1	TH	+13.2	+1.1		5828.9		-2630	-226	1,619,516	423,727
562	2310		-	-	11.2	TH	+11.6	+0.4		5828.2		-2302	-197	1,619,844	423,756
563	1980		-	-	10.2	TH	+9.9	-0.3		5827.5		-1973	-169	1,620,173	423,784
564	1650		172 36	+12.3	9.4	TH	+8.3	-1.2		5826.6		-1644	-141	1,620,502	423,812
565	1320		-	-	8.2	TH	+6.6	-1.6		5826.2		-1315	-113	1,620,831	423,840
566	990		-	-	6.9	TH	+5.0	-2.0		5825.8		-986	-85	1,621,160	423,868
567	660		-	-	5.6	TH	+3.3	-2.3		5825.5		-658	-56	1,621,488	423,897
568	330		-	-	4.3	TH	+1.7	-2.7		5825.1		-329	-28	1,621,817	423,925
569	0				5.1	-		-5.1		5822.7	X	0	0	1,622,146	423,953
570	330		351 52	+12.3	8.3	-		-8.3		5819.5		+329	+24	1,622,475	423,977
571	660		-	-	12.2	-		-12.2		5815.6		+658	+48	1,622,804	424,001
572	990		-	-	11.2	BM	-5.0	-16.2		5811.6		+987	+72	1,623,133	424,025
573	1319		351 21	-	13.2	BM	-6.6	-19.8		5808.0		+1316	+84	1,623,462	424,037
574	1648		350 40	-	14.1	90 20	-9.6	-23.7		5804.1		+1646	+85	1,623,792	424,038
575	1976		350 10	-	10.1	90 30	-17.2	-27.3		5800.5		+1974	+85	1,624,120	424,038

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445.

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-7-86		B. Cotcamp		B. SALDIVAR		6834		B.S F.M.		6		35			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		SHOWTO Butte-7 1/2'		AZ.		NAVAJO								J. McCLELLAN	
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
									5827.8						
576	2300		349 15	+12.3	10.9	90 30	-20.1	-31.0		5796.8		+2299	+62	1,624,445	424,015
577	2630		348 30	-	12.1	90 30	-23.0	-35.1		5792.7		+2630	+37	1,624,726	423,990
578	2955		347 40	-	13.7	90 30	-25.8	-39.5		5788.3		+2955	-2	1,625,101	423,951
579	3284		346 55	-	9.3	90 36	-34.4	-43.7		5784.1		+3284	-45	1,625,430	423,908
Bm	3365		344 24 36	-	13.6	90 36	-35.2	-48.8		5779.0	Bm	+3359	-193	1,625,505	423,760
580	3612		346 08 54	+12.3	10.7	90 36	-37.8	-48.5	-48.4	5779.4	TP	+3610	-98	1,625,754	423,855
580	3612				10.4	269 24	-37.8	-48.2			TP				
	2974		152 27 16	-	+9.9	87 10	-43.3	-33.4			BS	+2869	-782		
	2974				+9.6	270 50	-43.3	-33.7	3363	5745.8	BS		"		
581	2640		152 -	-	8.6	89 10	+38.4	+29.8		5775.6		-2542	+714	1,626,083	423,788
582	2310		151 35	-	8.0	89 10	+33.6	+25.6		5771.4		-2219	+641	1,626,406	423,715
583	1980		151 15	-	7.5	89 10	+28.8	+21.3		5767.1		-1899	+561	1,626,726	423,635
584	1650		-	+12.3	7.1	89 10	+24.0	+16.9		5762.7		-1582	+467	1,627,043	423,541
585	1320		-	-	6.5	89 10	+19.2	+12.7		5758.5		-1266	+374	1,627,359	423,448
586	990		-	-	5.9	89 10	+14.4	+8.5		5754.3	#1	-949	+280	1,627,676	423,354
587	660		-	-	7.5	89 -	+11.5	+4.0		5749.8		-633	+187	1,627,992	423,261
588	330		-	-	6.0	89 -	+5.8	-0.2		5745.6		-316	+93	1,628,309	423,167
589	0				5.1	-		-5.1		5740.7	TP	0	0	1,628,625	423,074
590	330		331 11	+12.3	6.2	90 30	-2.9	-9.1		5736.7		+316	-94	1,628,941	422,980
591	660		-	-	7.9	90 30	-5.8	-13.7		5732.1		+633	-188	1,629,258	422,886

1,625,505 x 423,760
U.S.G.S. Bm Elevation 5779.0
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SURVEY NOTES-HIGH RESOLUTION DATA
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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE		
4-7-86		B. Cotcamp		B. SALDIVAR		6834		J.M.I.			6		36		
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		Monto Butte - 7 1/2		AZ.		NAVAJO								J. McCLELLAN	
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
									5745.8						
592	990		331 11	+123	9.2	90 30	-8.6	-12.8		5728.0		+ 949	-281	1,629,574	422,793
593	1320		--	-	10.8	90 30	-11.5	-22.3		5723.5		+ 1266	-375	1,629,891	422,699
594	1650		--	-	12.3	90 30	-14.4	-26.7		5719.1		+ 1582	-469	1,630,207	422,605
595	1980		--	-	14.1	90 30	-17.3	-31.4		5714.4		+ 1898	-563	1,630,523	422,511
596	2316		331 11	+123	9.0	90 40	-26.9	-35.9		5709.9		+ 2215	-657	1,630,840	422,417
597	2640		--	-	9.9	90 40	-30.7	-40.6		5705.2		+ 2531	-751	1,631,156	422,323
598	2970		--	-	10.7	90 40	-34.6	-45.3		5700.5		+ 2847	-844	1,631,472	422,230
599	3302		331 09 52	+126	11.6	90 40	-38.4	-50.0	49.9	5695.9	TP	+3170	-923	1,631,795	422,152
599	3302				11.3	269 20	-38.4	-49.7			TP		+		
	4616		150 55 43	--	13.6	89 26	-45.7	-32.1			BS	+4426	-1309		
	4616				13.5	270 34	-45.7	-32.2	5663.7		BS		+		
600	4296		150 55	+126	9.3	89 30	+32.4	+28.1		5691.8		-4114	+1217	1,632,107	422,061
601	3960		--	-	10.8	89 30	+34.6	+23.8		5687.5		-3797	+1124	1,632,424	421,968
602	3630		--	-	12.3	89 30	+31.7	+19.4		5683.1		-3481	+1030	1,632,740	421,874
603	3300		--	-	13.9	89 30	+28.8	+14.9		5678.6		-3164	+936	1,633,057	421,780
604	2970		150 55	+126	6.7	89 40	+17.3	+10.6		5674.3		-2848	+843	1,633,373	421,687
605	2640		--	-	7.1	89 40	+15.4	+8.3		5672.0		-2532	+749	1,633,689	421,593
606	2310		--	-	7.1	89 40	+13.4	+6.3		5670.0		-2215	+655	1,634,006	421,499
607	1980		--	-	7.0	89 40	+11.5	+4.5		5668.2		-1899	+542	1,634,322	421,406
608	1650		--	-	7.0	89 40	+9.6	+2.6		5666.3		-1582	+468	1,634,639	421,312

SURVEY NOTES-HIGH RESOLUTION DATA
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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE						
4-10-86		B. Cotcamp		B. SALDIVAR		6834		J.M.		6		38						
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER				
ARIZONA		EGLOFFSTEIN Butte-15		AZ.		NAVAJO								J. McCLELLAN				
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			
									5646.2									
	3964		151 00 52	+126	14.3	89 45	-17.3	-3.0			BS	+3803	-1118					
	3964				+15.1	270 16	-18.4	-3.3	5643.0		BS							
626	3630		151 00	-	13.1	89 44	+16.9	+3.8		5646.8		-3482	+1025	1,640,329	419,631			
627	3300		- -	-	10.8	89 44	+15.4	+4.6		5647.6		-3166	+932	1,640,645	419,538			
628	2970		- -	-	12.0	89 40	+17.3	+5.3		5648.3		-2849	+839	1,640,962	419,445			
629	2640		- -	-	9.3	89 40	+15.4	+6.1		5649.1		-2533	+745	1,641,278	419,351			
630	2310		- -	-	6.9	89 40	+13.4	+6.5		5649.5		-2216	+652	1,641,595	419,258			
631	1980		151 00	+126	10.4	89 30	+17.3	+6.9		5649.9		-1899	+559	1,641,912	419,165			
632	1650		- -	-	8.4	89 30	+14.4	+6.0		5649.0		-1583	+466	1,642,228	419,072			
633	1320		- -	-	7.2	89 30	+11.5	+4.3		5647.3		-1266	+373	1,642,545	418,979			
634	990		- -	-	5.9	89 30	+8.6	+2.7		5645.7		-950	+280	1,642,861	418,886			
635	660		- -	-	6.4	89 20	+7.7	+1.3		5644.3		-633	+186	1,643,178	418,792			
Bm	572		143 27 28	+126	4.7	89 20	+6.7	+2.0		5645.0	Bm	-523	+232	1,643,288	418,838	4.565. 100 DOR 1964 H	418.8	
636	330		151 -	-	6.3	89 -	+5.8	-0.5		5642.5		-317	+93	1,643,494	418,699			
637	0				5.1	-		-5.1		5637.9	TP	0	0	1,643,811	418,606			
638	330		331 03	-	4.7	91 40	-9.6	-14.3		5628.7		+317	-93	1,644,128	418,513			
639	660		- -	-	8.2	91 40	-19.2	-27.4		5615.6		+633	-186	1,644,444	418,420			
640	990		- -	-	9.8	92 -	-34.6	-44.4		5598.6		+950	-279	1,644,761	418,327			
641	1320		- -	-	13.8	92 10	-49.9	-63.7		5579.3		+1267	-372	1,645,078	418,234			
642	1650		- -	-	15.2	92 18	-66.2	-81.4		5561.6		+1583	-464	1,645,394	418,142			

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445.

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-10-86		B. Cotcamp		B. SALDIVAR		6834		F.M.		6		39			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		EGLOFFSTEIN Butte-15		ARIZ.		NAVAJO								J. McCLELLAN	
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
									5643.0						
643	1980		331° 03'	+12.6	12.0	92° 18'	-79.5	-91.5		5551.5		+1900	-557	1,645,711	418,049
644	2310		- -	-	12.3	92° -	-80.6	-92.9		5550.1		+2217	-650	1,646,028	417,956
645	2640		- -	-	10.0	91° 48'	-82.9	-92.9		5550.1		+2533	-743	1,646,344	417,863
646	2970		- -	-	13.3	91° 30'	-77.7	-91.0		5552.0		+2850	-836	1,646,661	417,770
647	3300		331° 03'	+12.6	13.5	91° 18'	-74.9	-88.4		5554.6		+3167	-929	1,646,978	417,677
648	3630		- -	-	12.0	91° 08'	-71.8	-83.8		5559.2		+3483	-1022	1,647,294	417,584
649	3960		- -	-	8.7	91° -	-69.1	-77.8		5565.2		+3800	-1115	1,647,611	417,491
650	4290		- -	-	9.0	90° 50'	-62.4	-71.4		5571.6		+4117	-1208	1,647,928	417,398
651	4620		331° 03'	-	11.3	90° 40'	-53.8	-65.1		5577.9		+4433	-1301	1,648,244	417,305
652	4949		331° 04' 01"	-	4.0	90° 40'	-57.6	-61.6			TP	+4749	-1392	1,648,560	417,216
652	4949				4.1	269° 20'	-57.6	-61.7		5581.3	TP				
	3296		150° 55' 15"	+12.8	14.7	89° 42'	-17.3	-2.6			BS	+3164	-924		
	3296				14.4	270° 18'	-17.3	-2.9	-283	5578.5	BS				
653	2970		150° 55'	-	12.9	89° 40'	+17.3	+4.4		5582.9		-2851	+833	1,648,823	417,127
654	2640		- -	-	11.1	89° 40'	+15.4	+4.3		5582.8		-2534	+740	1,649,190	417,034
655	2310		- -	-	9.0	89° 40'	+13.4	+4.4		5582.9		-2217	+648	1,649,507	416,942
656	1980		- -	+12.8	12.9	89° 30'	+17.3	+4.4		5582.9		-1901	+555	1,649,823	416,849
657	1650		- -	-	10.2	89° 30'	+14.4	+4.2		5582.7		-1584	+463	1,650,140	416,757
658	1320		- -	-	7.2	89° 30'	+11.5	+4.3		5582.8		-1267	+370	1,650,457	416,664
659	990		- -	-	4.9	89° 30'	+8.6	+3.2		5582.2		-950	+278	1,650,774	416,572

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445.

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE			
4-10-86		B. Cotcamp		B. SALDIVAR		6834		J.M.			6		40			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
ARIZ.		EGLOFFSTEIN Butte-15		AZ.		NAVAJO								J. Mc CLELLAN		
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	
									5578.5							
660	660		150 55	+12.8	7.1	89° 10'	+9.6	+2.5		5581.0		+634	+185	1,651,090	416,479	
661	330		--	-	5.9	89° 10'	+4.8	-1.1		5577.4		-317	+93	1,651,407	416,387	
662	0				5.1	-		-5.1		5573.4	X	0	0	1,651,724	416,294	
663	330		330 56	-	8.7	-		-8.7		5569.8		+317	-92	1,652,041	416,202	
664	660		- -	-	12.8	-		-12.8		5565.7		+634	-185	1,652,358	416,109	
665	990		- -	-	11.5	BH	-5.0	-16.5		5562.0		+950	-277	1,652,674	416,017	
666	1320		- -	-	12.0	BH	-6.6	-18.6		5559.9		+1267	-370	1,652,991	415,924	
667	1650		330 56	+12.8	10.6	BH	-8.3	-18.9		5559.6		+1584	-462	1,653,308	415,832	
668	1980		- -	-	8.5	BH	-9.9	-18.4		5560.1		+1901	-555	1,653,625	415,739	
669	2310		- -	-	6.6	BH	-11.6	-18.2		5560.3		+2218	-647	1,653,942	415,647	
670	2640		- -	-	4.8	BH	-13.2	-18.0		5560.5		+2534	-739	1,654,258	415,555	
671	2970		330 56	+12.8	2.7	BH	-14.9	-17.6		5560.9		+2851	-832	1,654,575	415,462	
672	3300		- -	-	7.4	90° 10'	-9.6	-17.0		5561.5		+3168	-924	1,654,892	415,370	
673	3630		- -	-	6.2	90° 10'	-10.6	-16.8		5561.7		+3485	-1017	1,655,209	415,277	
674	3960		- -	-	6.1	90° 10'	-11.5	-17.6		5560.9		+3801	-1109	1,655,525	415,185	
675	4290		- -	-	6.8	90° 10'	-12.5	-19.3		5559.2		+4118	-1202	1,655,842	415,092	
676	4620		- -	-	7.9	90° 10'	-13.4	-21.3		5557.2		+4435	-1294	1,656,159	415,000	
677	4950		- -	-	10.8	90° 10'	-14.4	-25.2		5553.3		+4752	-1387	1,656,476	414,907	
678	5277		330 54 08	-	14.2	90° 11'	-16.9	-31.1	31.0	5547.5	TP	+5065	-1481	1,656,789	414,815	
678	5277				13.9	269° 49'	-16.9	-30.8	-5		TP					

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445.

Geosource Inc.

DATE	4-10-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	B. Cotcamp	PARTY NUMBER	6834	NOTES CHECKED BY	J.M.	LINE NO.	6	PAGE	41	
AREA	NR12.	TOPO MAP	EGLOFFSTEIN Butte 15	STATE	AZ.	COUNTY	NAVATO	TWP		RANGE		PPM		
													PARTY MANAGER	J. McCLELLAN

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	
										5547.5						
	3963	3961.95	150 56 33	+128	15.0	88° 41'	-91.1	-76.1	5547.2		BS	+3804	-1109			
	3963				14.7	271 19	-91.1	-76.4			BS	-1	+2			
Bm	3870		149 31 57	-	3.9	88° 40'	+90.1	+86.2		5557.4	Bm	-3686	+1174	1,656,906	414,882	y = 1,656,915 x = 414,880 u.s.g.s. Bm EL. 5556.0
679	3630		150 57	-	10.1	88° 46'	+78.1	+68.0		5539.2		-3485	+1016	1,657,107	414,724	
680	3300		- -	-	12.8	88° 46'	+71.0	+58.2		5529.4		-3168	+923	1,657,424	414,531	
681	2970		- -	-	12.1	88° 50'	+60.5	+48.4		5519.6		-2851	+831	1,657,741	414,539	
682	2646		- -	-	7.8	89° -	+46.1	+38.3		5509.5		-2535	+739	1,658,057	414,447	
683	2310		- -	-	11.3	89° -	+40.3	+29.0		5500.2		-2218	+646	1,658,374	414,354	
684	1980		150 57	+128	12.8	89° -	+34.6	+21.8		5493.0		-1901	+554	1,658,691	414,262	
685	1650		- -	-	12.1	89° -	+28.8	+16.7		5487.9		-1584	+462	1,659,008	414,170	
686	1320		- -	-	10.9	89° -	+23.0	+12.1		5483.3		-1267	+369	1,659,325	414,077	
687	990		- -	-	9.3	89° -	+17.3	+8.0		5479.2		-950	+277	1,659,642	413,985	
688	660		- -	-	8.0	89° -	+11.5	+3.5		5474.7		-634	+185	1,659,958	413,893	
689	330		- -	-	6.5	89° -	+5.8	-0.7		5470.5		-317	+92	1,660,275	413,800	
690	0		- -	-	5.1	-	-	-5.1		5466.1	X	0	0	1,660,592	413,708	
691	330		330 57	+128	7.6	90° 20'	-1.9	-9.5		5461.7		+317	-92	1,660,909	413,616	
692	660		- -	-	9.1	90° 20'	-3.8	-12.9		5458.3		+634	-185	1,661,226	413,523	
Bm	691		331 23 32	-	9.5	90° 20'	-4.0	-13.5		5457.7	Bm	+665	-188	1,661,257	413,520	y = 1,661,295 x = 413,525 u.s.g.s. Bm EL. 5452
693	990		330 57	-	9.3	90° 20'	-5.8	-15.1		5456.1		+950	-277	1,661,542	413,431	
694	1320		- -	-	9.9	90° 20'	-2.2	-12.6		5453.6		+1267	-369	1,661,859	413,339	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE 4-10-86	INSTRUMENT MAN B. Cotcamp	ROD MAN B. SALOWAR	PARTY NUMBER 6834	NOTES CHECKED BY F.M.	LINE NO. 6	PAGE 42
AREA ARIZONA	TOPO MAP EGLOFFSTEIN Butte-15	STATE AZ.	COUNTY NAVAJO	TWP	RANGE	PPM
			PARTY MANAGER J. Mc CLELLAN			

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	
									5471.2							
695	1650		330 57	+12.8	10.3	90 20	-9.6	-19.9		5451.3		+1584	-462	1,662,176	413,246	
696	1980		- -	-	10.3	90 20	-11.5	-21.8		5449.4		+1901	-554	1,662,493	413,154	
697	2310		- -	-	9.3	90 20	-13.4	-22.7		5448.5		+2218	-646	1,662,810	413,062	
698	2640		- -	-	7.4	90 20	-15.4	-22.8		5448.4		+2535	-739	1,663,127	412,969	
699	2970		- -	-	5.8	90 20	-17.3	-23.1		5448.1		+2851	-831	1,663,443	412,877	
700	3301		330 57 51	-	13.6	90 10	-9.6	-23.2		5448.0	TP	+3169	-923	1,663,759	412,787	
700	3301				13.5	269 50	-9.6	-23.1			TP	-2	+2			
	4622		150 41 32	+12.8	12.9	89 56	-5.4	+7.5			BS	+4431	-1313			
	4622				12.8	270 04	-5.4	+7.4	5455.4		BS	-2	+2			
701	4290		150 42	-	8.9	-	-8.9			5446.5		-4113	+1218	1,664,075	412,694	
702	3960		- -	-	8.6	-	-8.6			5446.8		-3797	+1125	1,664,391	412,601	
703	3630		- -	-	8.2	-	-8.2			5447.2		-3481	+1031	1,664,707	412,507	
704	3300		- -	-	6.3	-	-6.3			5449.1		-3164	+937	1,665,024	412,413	
#	3123		151 01 40	-	5.5	-	-5.5			5449.9	#	-2999	+870	1,665,189	412,346	# Wash
705	2970		150 42	+12.8	5.9	-	-5.9			5449.5		-2848	+844	1,665,340	412,320	
706	2640		- -	-	5.8	-	-5.8			5449.6		-2531	+750	1,665,657	412,226	
707	2310		- -	-	5.7	-	-5.7			5449.7		-2215	+656	1,665,973	412,132	
708	1980		- -	-	5.4	-	-5.4			5450.0		-1898	+562	1,666,290	412,038	
709	1650		- -	-	5.3	-	-5.3			5450.1		-1582	+469	1,666,606	411,945	
710	1320		- -	-	5.1	-	-5.1			5450.3		-1266	+375	1,666,922	411,851	

y-1,665,200 x-412,320

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
4-10-86		B. Cotamp		B. SALDIVAR		6834		J.M.		6		43				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
ARIZONA		EGLOFFSTEIN		AZ		NAVADO								J. Mc Clellan		
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS A TP	NORTH + SOUTH - LAT.	EAST + WEST - DEP.	COORDINATES		REMARKS
														Y	X	
									5455.4							
711	990		150 42	+12.8	5.1	-	-5.1		5450.3		-949	+281	1,667,239	411,757		
712	660		- -	-	5.1	-	-5.1		5450.3		-633	+187	1,667,555	411,663		
713	330		- -	-	5.0	-	-5.0		5450.4		-316	+94	1,667,872	411,570		
714	0				5.1	-	-5.1		5450.3	X	0	0	1,668,188	411,476		
715	330		330 44	- -	5.2	-	-5.2		5450.2		+316	-94	1,668,504	411,382		
716	660		- -	-	6.0	-	-6.0		5449.4		+633	-187	1,668,821	411,289		
717	990		- -	-	6.9	-	-6.9		5448.5		+949	-281	1,669,137	411,195		
718	1320		- -	-	7.9	-	-7.9		5447.5		+1266	-374	1,669,454	411,102		
719	1650		336 44	+12.8	8.9	-	-8.9		5446.5		+1582	-468	1,669,770	411,008		
720	1980		- -	-	9.8	-	-9.8		5445.6		+1899	-561	1,670,087	410,915		
721	2310		- -	-	10.6	-	-10.6		5444.8		+2215	-655	1,670,403	410,821		
722	2640		- -	-	11.3	-	-11.3		5444.1		+2532	-748	1,670,720	410,728		
723	2970		330 44	-	10.1	-	-10.1		5445.3	±	+2848	-842	1,671,036	410,634		3-1671,935 x - 410,650 4WAY Inter
724	3300		- -	+12.8	5.9	-	-5.9		5449.5		+3165	-935	1,671,353	410,541		
725	3630		- -	-	12.1	89 50	+10.6	-1.5	5453.9		+3481	-1029	1,671,669	410,447		
726	3960		- -	-	9.0	89 50	+11.5	+2.5	5457.9		+3798	-1122	1,671,986	410,354		
727	4290		- -	-	5.3	89 50	+12.5	+7.2	5462.6		+4114	-1216	1,672,302	410,260		
728	4620		- -	-	10.8	89 44	+21.5	+10.7	5466.1		+4431	-1310	1,672,619	410,166		
729	4950		- -	-	7.5	89 44	+23.0	+15.5	5470.9		+4747	-1403	1,672,935	410,073		

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-11-86		B. Cotcamp		J. Middleton		6834		J.M.		6		44			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		EGLOFFSTEIN Butte-15		AZ		NAVAJO								J. Mc Clellan	
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
									5455.4						
730	5282		330 42 07	+12.8	14.6	89° 38'	+33.8	+19.2	5493.3	5474.7	TP	+5064	-1500	1,673,250	409,978
730	5282				14.3	270 22	+33.8	+19.5			TP	-2	+2		
	3954		150 40 12	-	+14.0	90° 24'	+27.6	+41.6	44.4 5516.1		BS	+3790	-1125		
	3954				+13.7	269 36	+27.6	+41.3			BS	-2	+2		
731	3630		150 40	-	11.2	90° 24'	-25.3	-36.5		5479.6		-3480	+1033	1,673,558	409,888
732	3300		- -	--	9.0	90° 24'	-23.0	-32.0		5484.1		-3164	+939	1,673,874	409,794
733	2970		- -	--	10.2	90° 20'	-17.3	-22.5		5488.6		-2847	+845	1,674,191	409,700
734	2640		- -	-	9.2	90° 20'	-15.4	-24.6		5491.5		-2531	+751	1,674,507	409,606
735	2310		- -	+12.8	9.2	90° 20'	-13.4	-22.6		5493.5		-2214	+657	1,674,824	409,512
736	1980		- -	-	9.0	90° 20'	-11.5	-20.5		5495.6		-1898	+563	1,675,140	409,418
737	1650		- -	-	8.8	90° 20'	-9.6	-18.4		5497.7		-1582	+470	1,675,456	409,325
738	1320		- -	-	8.0	90° 20'	-2.7	-15.7		5500.4		-1265	+376	1,675,773	409,231
Bm	1188		146 37	-	5.2	90° 20'	-6.9	-12.1		5504.0	Bm	-1112	+418	1,675,926	409,273
739	990		150 40	-	8.0	90° 20'	-5.8	-13.8		5502.3		-949	+282	1,676,089	409,137
740	660		- -	-	7.8	90° 20'	-3.8	-11.6		5504.5		-633	+188	1,676,405	409,043
741	330		- -	-	6.9	90° 20'	-1.9	-8.8		5507.3		-316	+94	1,676,722	408,949
742	0				5.1	-		-5.1		5511.0	T	0	0	1,677,038	408,855
743	330		330 40	+12.8	5.0	89° -	+5.8	+0.8		5516.9		+316	-94	1,677,354	408,761
744	660		- -	-	6.1	89° -	+11.5	+5.4		5521.5		+633	-188	1,677,671	408,667
745	990		- -	-	6.8	89° -	+17.3	+10.5		5526.6		+949	-282	1,677,982	408,573

5-1675950 X-409270
73 OK 1984 EL. 5502

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	4-11-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	F.M.	LINE NO	6	PAGE	45
AREA	ARIZONA	TOPO MAP	EGLOFFSTEIN Butte-15	STATE	AZ.	COUNTY	NAVAJO	TWP	RANGE	PPM	PARTY MANAGER J. McClellan		

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			
									5516.1									
746	1320		330 40	+128	7.3	89° -	+23.0	+15.0		5531.8		+1265	-376	1,678,303	408,479			
747	1650		- -	-	7.7	89° -	+28.8	+21.1		5537.2		+1582	-470	1,678,620	408,385			
748	1980		- -	-	8.8	89° -	+34.6	+25.8		5541.9		+1898	-563	1,678,936	408,292			
749	2310		- -	-	6.1	89° -	+40.3	+34.2		5550.3		+2214	-657	1,679,252	408,198			
750	2640		- -	-	12.4	88° 44'	+58.4	+46.0		5562.1		+2531	-751	1,679,569	408,104			
751	2970		330 40	+128	11.2	88° 40'	+69.1	+57.9		5574.0		+2847	-845	1,679,885	408,010			
752	3300		- -	-	8.9	88° 40'	+76.8	+67.9		5584.0		+3164	-939	1,680,202	407,916			
753	3630		- -	-	11.3	88° 40'	+84.5	+73.2		5589.3		+3480	-1033	1,680,518	407,822			
754	3953	3952.0	330 39 27	-	15.0	88° 44'	+87.4	+72.4			TP	+3788	-1125	1,680,824	407,732			
754	3953				15.3	271 16'	+87.4	+72.1	7223	5588.3	TP	-2	+2					
	4956		150 48 06	+128	14.5	90° 26'	+37.5	+52.0	5640.3		BS	+4754	-1399					
	4956				+14.6	269 34'	+37.5	+52.1			BS	-2	+2					
755	4620		150 48	-	6.2	90° 38'	-51.1	-57.3		5583.0		-4437	+1304	1,681,144	407,639			
Bm	4913		149 49 21	-	14.2	90° 25'	-35.7	-49.9		5590.4	Bm	-4689	+1467	1,680,887	407,802	y=1,680,930 x=407,800 u.S.G.S. Bm el. 5589.0		
756	4290		150 48	-	12.0	90° 42'	-52.4	-64.4		5575.9		-4115	+1211	1,681,461	407,546			
757	3960		- -	-	12.7	90° 48'	-55.3	-68.0		5572.3		-3799	+1118	1,681,777	407,453			
758	3630		- -	-	11.2	90° 54'	-52.0	-68.2		5572.1		-3482	+1025	1,682,094	407,360			
759	3300		- -	-	11.3	91° -	-52.6	-68.9		5571.4		-3166	+932	1,682,410	407,267			
760	2970		- -	-	10.0	91° 08'	-58.7	-68.7		5571.6		-2849	+839	1,682,727	407,174			
761	2640		- -	-	13.0	91° 08'	-52.2	-65.2		5575.1		-2533	+745	1,683,043	407,080			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-11-86		B. Stamp		J. Middleton		6834		J.M.		6		46			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		EGLOFFSTEIN Butte-15		AZ.		NAVAJO								J. McClellan	
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
									5640.3						
762	2310		150 48	+128	12.4	91 08	-45.7	-58.1		5582.2		-2216	+652	1,683,360	406,987
763	1980		- -	-	10.9	91 08	-39.2	-50.1		5590.2		-1899	+559	1,683,677	406,894
764	1650		- -	-	9.0	91 08	-32.6	-41.6		5598.7		-1583	+466	1,683,993	406,801
765	1320		- -	-	7.5	91 08	-26.1	-33.6		5604.7		-1266	+373	1,684,310	406,708
766	990		150 48	+128	8.1	91 -	-17.3	-25.4		5614.9		-950	+280	1,684,626	406,615
767	660		- -	-	5.9	91 -	-11.5	-17.4		5622.9		-633	+186	1,684,943	406,521
768	330		- -	-	9.8	-		-9.8		5630.5		-317	+93	1,685,259	406,428
769	0				5.1	-		-5.1		5635.2	X	0	0	1,685,576	406,335
770	330		330 49	-	4.7	89 30	+2.9	-1.8		5638.5		+317	-93	1,685,893	406,242
Bm	394		343 14 20	-	5.6	89 30	+3.4	-2.2		5638.1	Bm	+393	-27	1,685,969	406,308
771	660		330 49	-	6.2	89 30	+5.8	-0.4		5639.9		+633	-186	1,686,209	406,149
772	990		- -	+128	8.4	89 30	+8.6	+0.2		5640.5		+950	-279	1,686,526	406,056
773	1320		- -	-	10.6	89 30	+11.5	+0.9		5641.2		+1266	-372	1,686,842	405,963
774	1650		- -	-	12.7	89 30	+14.4	+1.7		5642.0		+1583	-465	1,687,159	405,870
775	1980		330 49	-	13.0	89 30	+17.3	+4.3		5644.6		+1900	-558	1,687,476	405,777
776	2310		- -	-	12.3	89 30	+20.2	+7.9		5648.2		+2216	-652	1,687,792	405,683
777	2640		- -	-	12.0	89 30	+23.0	+11.0		5651.3		+2533	-745	1,688,109	405,590
778	2970		- -	-	11.1	89 30	+25.9	+14.8		5655.1		+2849	-838	1,688,425	405,497
779	3300		- -	-	12.9	89 30	+28.8	+15.9		5656.2		+3166	-931	1,688,742	405,404

Y-1,685,990 X-406,320
U.S.G.S. DATE 1964 5636.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE	4-11-86	INSTRUMENT MAN	B Cotcamp	ROD MAN	B. SALDVAR	PARTY NUMBER	6834	NOTES CHECKED BY	F.M.	LINE NO.	6	PAGE	47
AREA	ARIZONA	TOPO MAP	EGLOFFSTEIN Butte-15	STATE	AZ	COUNTY	NAVAJO	TWP	RANGE	PPM	PARTY MANAGER	J.M. CLELLAN	

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		
									5640.3								
780	3632		330 47 24	+12.8	14.6	89 35	+26.4	+11.8			TP	+3484	-1026	1,689,058	405,311		
780	3632				13.9	270 24	+25.4	+11.5	5651.9		TP	-2	+2				
	3955	3953.4	150 52 09	-	+14.7	88 23	-111.6	-96.9	5555.1		BS	+3794	-1112			14.6	
	3955				+15.0	271 37	-111.6	-96.6			BS	-2	+2				
781	3630		150 52	-	6.8	88 30	+95.0	+88.2	5643.3			-3484	+1021	1,689,366	405,227		
782	3300		-	-	11.1	88 30	+86.4	+75.3	5630.4			-3167	+928	1,689,683	405,129		
783	2970		-	-	6.6	88 40	+69.1	+62.5	5617.6			-2850	+835	1,690,000	405,036		
784	2640		-	-	10.8	88 40	+61.4	+50.6	5605.7			-2533	+742	1,690,317	404,943		
Bm	2606		151 37 33	+12.8	11.4	88 40	+60.6	+49.2	5604.3	Bm		-2510	+699	1,690,340	404,900	3-1,690,310 x-404,800 760002 U.S.G.S. 6m 5603.0	
785	2310		150 52	-	12.2	88 40	+53.8	+41.6	5596.7			-2217	+650	1,690,633	404,851		
786	1980		-	-	13.1	88 40	+46.1	+33.0	5588.1			-1900	+557	1,690,950	404,758		
787	1650		-	-	13.8	88 40	+38.4	+24.6	5579.7			-1583	+464	1,691,267	404,665		
788	1320		-	-	12.2	88 40	+30.7	+18.5	5573.6			-1267	+371	1,691,583	404,572		
789	990		-	-	10.2	88 40	+23.0	+12.8	5567.9			-950	+278	1,691,900	404,479		
790	660		-	-	8.4	88 40	+15.4	+7.0	5562.1			-633	+186	1,692,217	404,387		
791	330		-	-	6.5	88 40	+7.7	+1.2	5556.3			-317	+93	1,692,533	404,294		
792	0				5.1	-		-5.1	5550.0		X	0	0	1,692,850	404,201		
793	330		330 52	+12.8	6.8	91 -	-5.8	-12.6	5542.5			+317	-93	1,693,167	404,108		
794	660		-	-	9.0	91 -	-11.5	-20.5	5534.6			+633	-186	1,693,483	404,015		
795	990		-	-	10.3	91 -	-17.3	-27.6	5527.5			+950	-278	1,693,800	403,923		

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-11-86		B. Cotcamp		J. Middleton		6834		J.M.		6		48			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		EGLOFFSTEIN Butte-15		AZ.		NAVATO								J. M. CLELAN	
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
									5555.1						
796	1320		330 52	+12.8	10.3	91 -	-23.0	-33.3		5521.8		+1267	-371	1,694,117	403,830
797	1650		- -	-	10.2	91 -	-28.8	-39.0		5516.1		+1583	-464	1,694,433	403,737
798	1980		- -	-	10.2	91 -	-34.6	-44.8		5510.3		+1900	-557	1,694,750	403,644
799	2310		- -	-	9.7	91 -	-40.3	-50.0		5505.1		+2217	-650	1,695,067	403,551
800	2640		330 52	+12.8	7.0	91 -	-46.1	-53.1		5502.0		+2533	-742	1,695,383	403,459
801	2970		- -	-	3.2	91 -	-51.8	-55.0		5500.1		+2850	-835	1,695,700	403,366
802	3300		- -	-	9.0	90 50	-48.0	-57.0		5498.1		+3167	-928	1,696,017	403,273
Bm	3508		329 09 32	-	6.2	90 50	-51.0	-57.2		5497.9	Bm	+3335	-1086	1,696,185	403,115
803	3625		330 52 28	-	14.8	90 44	-46.4	-61.2		5493.9	TP	+3479	-1019	1,696,329	403,182
803	3625				14.7	269 16	-46.4	-61.1			TP				
	3633	3631.7	150 53 30	+12.8	14.0	88 29	-96.2	-82.2			BS	+3486	-1020		
	3633				+13.7	271 31	-96.2	-82.5	5824.5	5411.5	BS				
804	3300		150 53	-	7.2	88 34	+82.5	+75.3		5486.8		-3167	+927	1,696,648	403,089
805	2970		- -	-	8.1	88 34	+74.3	+66.2		5477.7		-2850	+834	1,696,965	402,996
806	2640		- -	-	9.3	88 34	+66.0	+56.7		5468.2		-2534	+742	1,697,281	402,904
807	2310		- -	-	10.3	88 34	+57.8	+47.5		5459.0		-2217	+649	1,697,598	402,811
808	1980		150 53	+12.8	11.4	88 34	+49.5	+38.1		5449.6		-1900	+556	1,697,915	402,718
809	1650		- -	-	12.7	88 34	+41.3	+28.6		5440.1		-1584	+464	1,698,231	402,626
810	1320		- -	-	13.8	88 34	+33.0	+19.2		5430.7		-1267	+371	1,698,548	402,533
811	990		- -	-	10.1	88 50	+20.2	+10.1		5421.6		-950	+278	1,698,865	402,440

y=1,696,185 x=403,115
U.S.G.S 77 0021904 5496
#02, 3--17
CORR. Y=+30

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-449

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-11-86		B. Cotcamp		J. Middleton		6834		J.M.		6		49			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		EGLOFFSTEIN Butte-15		AZ.		NAVAJO								J. McLEMAN	
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
									5411.5						
812	660		150 53	+128	9.7	88 50	+13.4	+3.7		5415.2		-6 33	+185	1,699,182	402,347
813	330		-	-	7.1	88 50	+6.7	-0.4		5411.1		-317	+93	1,699,498	402,255
814	0				5.1	-		-5.1		5406.4	TP	0	0	1,699,815	402,162
815	330		330 53	-	7.3	90 20	-1.9	-9.2		5402.3		+317	-93	1,700,132	402,069
816	660		-	-	9.5	90 20	-3.8	-13.3		5398.2		+6 33	-185	1,700,448	401,977
817	990		-	-	12.0	90 20	-5.8	-17.8		5393.7		+950	-278	1,700,765	401,884
818	1320		-	-	10.4	90 30	-11.5	-21.9		5389.6		+1267	-371	1,701,082	401,791
819	1437		330 16 18	+128	10.9	90 30	-12.5	-23.4		5388.1	TP	+1375	-418	1,701,190	401,744
															1/2 -1,701,200 x -401,755 1/4 4 way Inter.
819	1650		330 53	-	12.0	90 30	-14.4	-26.4		5385.1		+1584	-464	1,701,399	401,698
820	1980		-	-	13.0	90 30	-17.3	-30.3		5381.2		+1900	-556	1,701,715	401,606
821	2310		-	-	12.0	90 30	-20.2	-32.2		5379.3		+2217	-649	1,702,032	401,513
822	2640		-	-	8.9	90 30	-23.0	-31.9		5379.6		+2532	-742	1,702,347	401,420
823	2970		-	-	6.1	90 30	-25.9	-32.0		5379.5		+2850	-834	1,702,665	401,328
824	3300		-	-	3.8	90 30	-28.8	-32.6		5378.9		+3167	-927	1,702,982	401,235
825	3630		-	-	11.0	90 20	-21.1	-32.1		5379.4		+3484	-1020	1,703,299	401,142
826	3963		330 52 27	-	9.0	90 20	-23.1	-32.1	120 1/2	5379.5	TP	+3803	-1114	1,703,618	401,048
826	3963				14.5	269 45	-17.3	-31.8			TP				
	3298		150 52 48	+126	14.8	89 48	-11.5	+3.3			BS	+3162	-938		
	3298				14.5	270 12	-11.5	+3.0	2.13	5382.6	BS				

EGLOFFSTEIN Butte
TOWARD MESA ↓

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-11-86		B. Cotamp		J.M. Dolew		6834		J.M.		6		50			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
AR'ZONA		TOWAR MESA-15'		AZ.		NAVAJO								J. McCLELLAN	
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
									5382.6						
827	2970		150 53	+12.6	12.0	89 50	+ 8.6	- 3.4		5379.2		-2847	+844	1,703,933	400,754
828	2640		- -	-	11.1	89 50	+ 7.7	- 3.4		5379.2		-2531	+751	1,704,249	400,861
829	2310		- -	-	10.1	89 50	+ 6.7	- 3.4		5379.2		-2215	+657	1,704,565	400,767
830	1980		- -	-	9.3	89 50	+ 5.8	- 3.5		5379.1		-1898	+563	1,704,882	400,673
831	1650		150 53	+12.6	9.8	89 50	+ 4.8	- 5.0		5377.6		-1582	+469	1,705,198	400,579
832	1320		- -	-	8.9	89 50	+ 3.8	- 5.1		5377.5		-1266	+375	1,705,514	400,485
833	990		- -	-	8.0	89 50	+ 2.9	- 5.1		5377.5		-949	+281	1,705,831	400,391
834	660		- -	-	6.9	89 50	+ 1.9	- 5.0		5377.6		-633	+188	1,706,147	400,298
835	330		- -	-	5.8	89 50	+ 1.0	- 4.8		5377.8		-316	+94	1,706,464	400,204
836	0				5.1	-		- 5.1		5377.5	X	0	0	1,706,780	400,110
837	330		330 54	+12.6	5.2	89 50	+ 1.0	- 4.2		5378.4		+316	-94	1,707,096	400,06
838	660		- -	-	6.3	89 40	+ 3.8	- 2.5		5380.1		+633	-187	1,707,413	399,923
839	990		- -	-	6.3	89 40	+ 5.8	- 0.5		5382.1		+949	-281	1,707,729	399,829
840	1320		- -	-	6.9	89 40	+ 7.7	+ 0.8		5383.4		+1266	-375	1,708,046	399,735
841	1650		- -	-	7.8	89 40	+ 9.6	+ 1.8		5384.4		+1582	-469	1,708,362	399,641
842	1980		330 54	-	8.3	89 40	+ 11.5	+ 3.2		5385.8		+1898	-562	1,708,678	399,548
843	2310		- -	-	9.0	89 40	+ 13.4	+ 4.4		5387.0		+2215	-656	1,708,995	399,454
844	2640		- -	-	9.8	89 40	+ 15.4	+ 5.6		5388.2		+2531	-750	1,709,311	399,360
845	2706		330 36 22	-	10.0	89 40	+ 15.7	+ 5.7		5388.3		+2591	-782	1,709,371	399,328
845	2970		330 54	-	10.8	89 40	+ 17.3	+ 6.5		5389.1		+2848	-844	1,709,628	399,266

5387.0

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	4-11-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	J.M.	LINE NO.	6	PAGE	51
AREA	ARIZONA	TOPO MAP	TOVAR MESA - 15'	STATE	AZ.	COUNTY	NAVAJO	TWP	RANGE	PPM	PARTY MANAGER	J. McCLELLAN	

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				
									5382.6										
846	3296		330 55 09	+12.6	12.0	89 40	+19.2	+7.2		5389.8	TP	+3161	-935	1,709,941	399,175				
846	3296				11.9	270 20	+19.2	+7.3			TP								
	3633		150 50 53	-	14.3	89 58	-2.1	+12.2			BS	+3482	-1035						
	3633				+14.0	270 02	-2.1	+11.9	5401.8		BS								
847	3300		150 51	-	10.8	-	-	-10.8		5391.0		-3163	+940	1,710,260	399,080				
848	2970		-	-	10.0	-	-	-10.0		5391.8		-2847	+846	1,710,576	398,986				
849	2640		-	-	9.2	-	-	-9.2		5392.6		-2531	+752	1,710,892	398,892				
850	2310		-	-	8.9	-	-	-8.9		5392.9		-2214	+658	1,711,209	398,798				
851	1980		-	-	8.2	-	-	-8.2		5393.6		-1898	+564	1,711,525	398,704				
Bm	1873		148 29 52	+12.6	10.1	-	-	-10.1		5391.7	Bm	-1772	+607	1,711,651	398,747			v-1,711,616 x-398,745 80 POR U.S.G.S. EL. 5390. 1984	
852	1650		150 51	-	7.7	-	-	-7.7		5394.1		-1582	+470	1,711,841	398,610				
853	1320		-	-	7.1	-	-	-7.1		5394.7		-1265	+376	1,712,158	398,516				
854	990		-	-	6.5	-	-	-6.5		5395.3		-949	+282	1,712,474	398,422				
855	660		-	-	6.0	-	-	-6.0		5395.8		-633	+188	1,712,790	398,328				
856	330		-	-	5.7	-	-	-5.7		5396.1	#	-316	+94	1,713,107	398,234				
857	0		-	-	5.1	-	-	-5.1		5396.7	X	0	0	1,713,423	398,140				
858	330		330 52	+12.6	6.1	TH	+1.2	-4.4		5397.4		+316	-94	1,713,739	398,046				
859	660		-	-	6.6	TH	+3.3	-3.3		5398.5		+633	-188	1,714,056	397,952				
860	990		-	-	6.9	TH	+5.0	-1.9		5399.9		+949	-282	1,714,372	397,858				
861	1320		-	-	7.0	TH	+6.6	-0.4		5401.4		+1265	-376	1,714,688	397,764				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-448

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
4-11-86		B. Cotamp		B. SALDIVAR		6834		J.M.		6		52				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
ARIZONA		TOUPEL MESA - 15		AZ.		NAVAJO								J. Mc CLELLAN		
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	
									5401.8							
862	1650		330 52	+12.6	7.3	TH	+8.3	+1.0		5402.8		+1582	-470	1,715.005	397.670	
863	1980		-	-	7.8	TH	+9.9	+2.1		5403.9		+1898	-563	1,715.321	397.577	
864	2310		-	-	8.0	TH	+11.6	+3.6		5405.4		+2214	-657	1,715.637	397.483	
865	2640		-	-	7.0	TH	+13.2	+6.2		5408.0		+2531	-751	1,715.954	397.389	
866	2970		-	-	5.0	TH	+14.9	+9.9		5411.7		+2847	-845	1,716.270	397.295	
867	3303		330 52 32	-	5.4	89 40	+19.2	+13.8		5415.6	TP	+3167	-939	1,716.590	397.201	
867	3303				14.9	270 30	+28.8	+13.9			TP					
	3301		151 00 00	+12.6	15.0	BH	+16.5	+31.5			BS	+3167	-932			
	3301				+14.7	BH 270	+16.5	+31.2	3133	5446.9	BS					
868	2970		150 59	-	12.4	BH	-14.9	-27.3		5419.6		-2849	+839	1,716.908	397.108	
869	2640		-	-	11.1	BH	-13.2	-24.3		5422.6		-2532	+746	1,717.225	397.015	
870	2310		-	-	11.7	BH	-11.6	-23.3		5423.6	TP	-2216	+653	1,717.541	396.922	
871	1980		-	-	11.0	BH	-9.9	-20.9		5426.0		-1899	+560	1,717.858	396.829	
872	1650		150 59	+12.6	11.2	BH	-8.3	-19.5		5427.4		-1583	+466	1,718.174	396.735	
873	1320		-	-	10.9	BH	-6.6	-17.5		5429.4		-1266	+373	1,718.491	396.642	
874	990		-	-	9.6	BH	-5.0	-14.6		5432.3		-950	+280	1,718.807	396.549	
875	660		-	-	11.0	-		-11.0		5435.9		-633	+187	1,719.124	396.456	
876	330		-	-	7.9	-		-7.9		5439.0		-317	+93	1,719.440	396.362	
877	0				5.1	-		-5.1		5441.8	K	0	0	1,719.757	396.269	
878	330		330 59	+12.6	5.1	89 20	+3.8	-1.3		5445.6		+317	-93	1,720.074	396.176	

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE 4-11-86	INSTRUMENT MAN B. Cotcamp	ROD MAN J. Middleton	PARTY NUMBER 6834	NOTES CHECKED BY J.M.	LINE NO. 6	PAGE 53
AREA ARIZONA	TOPO MAP TOVAR MESA - 15'	STATE AZ.	COUNTY NAVAJO	TWP	RANGE	PPM
				PARTY MANAGER J. Mc CLELLAN		

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			
									5446.9									
879	660		330 59'	+126	5.8	89° 20'	+7.7	+1.9		5448.8		+633	-187	1,720,390	396,082			
880	990		331 33	-	6.3	89° 20'	+11.5	+5.2		5452.1		+952	-270	1,720,709	395,999			
881	1320		332 10	-	6.9	89° 20'	+15.4	+8.5		5455.4		+1274	-347	1,721,031	395,922			
882	1650		333 -	-	7.6	89° 20'	+19.2	+11.6		5458.5		+1598	-410	1,721,355	395,859			
883	1978		333 45'	-	8.0	89° 20'	+23.0	+15.0		5461.9		+1922	-467	1,721,679	395,802			
884	2305		334 30	+126	8.7	89° 20'	+26.8	+18.1		5465.0		+2247	-515	1,722,004	395,754			
885	2635		335 25	-	9.0	89° 20'	+30.7	+21.7		5468.6		+2578	-547	1,722,335	395,722			
886	2962		336 15'	-	9.7	89° 20'	+34.5	+24.8		5471.7		+2906	-573	1,722,663	395,696			
Bm	3025		338 35 40	-	10.6	89° 20'	+35.2	+24.6		5471.5	Bm	+2989	-463	1,722,746	395,806		1,722,765 x - 395,790	
887	3283		337 02 21	-	10.4	89° 20'	+38.2	+27.8		5474.8	TP	+3229	-590	1,722,986	395,679		USGS 82 DOR 1941 5470	
887	3283				10.1	276 40	+38.2	+28.1			TP							
	3282		173 14 18	+126	14.2	90 26'	+24.8	+39.0			BS	+3265	+334					
	3282				+13.9	269 34	+24.8	+38.7		5473.6	BS							
888	2958		174 08	-	10.9	90 28'	-24.1	-35.0		5478.6		-2938	-347	1,723,313	395,666			
889	2631		175 -	-	9.8	90 28'	-21.4	-31.2		5482.4		-2608	-348	1,723,643	395,665			
890	2304		175 55	-	8.5	90 28'	-18.8	-27.3		5486.3		-2279	-341	1,723,972	395,672			
891	1976		176 30	-	12.4	90 20'	-11.5	-23.9		5489.7		-1951	-313	1,724,300	395,700			
892	1648		177 25	-	11.2	90 20'	-9.6	-20.8		5492.8		-1623	-287	1,724,628	395,726			
893	1320		178 10	-	10.0	90 20'	-7.7	-17.7		5495.9		-1297	-247	1,724,954	395,766			
894	990		179 10	-	8.6	90 20'	-5.8	-14.4		5499.2		-969	-202	1,725,282	395,811			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
4-11-86		B. Cotcamp		J. Middleton		6834		J.M.		6	54						
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
ARIZONA		TOVAR MESA -15'	AZ.	NAVATO					J. Mc CLELLAN								
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		
									5513.6								
895	660		180 -	+12.6	7.2	90 20'	-3.8	-11.0		5502.6		-644	-144	1,725,607	395,869		
896	330		181 -	-	6.0	90 20'	-1.9	-7.9		5505.7		-321	-78	1,725,930	395,935		
897	0				5.1	-		-5.1		5508.5	π	0	0	1,726,251	396,013		
898	330		2 -	-	5.2	89 20'	+3.8	-1.4		5512.2		+319	+83	1,726,570	396,096		
899	660		2 55	-	6.0	89 20'	+2.7	+1.7		5515.3		+636	+177	1,726,887	396,190		
900	990		3 50	-	6.5	89 20'	+11.5	+5.0		5518.6		+950	+280	1,727,201	396,293		
901	1319		4 40	-	7.9	89 20'	+15.3	+2.4		5521.0		+1260	+392	1,727,511	396,405		
902	1649		5 15	+12.6	9.4	89 20'	+19.2	+9.8		5523.4		+1570	+505	1,727,821	396,518		
903	1978		5 40	-	11.3	89 20'	+23.0	+11.7		5525.3		+1878	+620	1,728,129	396,633	TOWAR MESA-15'	
904	2308		6 -	-	13.0	89 20'	+26.9	+13.9		5527.5		+2187	+736	1,728,438	396,749	ORABI-15 ↓	
905	2638		6 10	-	8.7	89 28'	+24.6	+15.9		5529.5		+2498	+849	1,728,749	396,862		
906	2968		6 15	-	9.9	89 28'	+22.6	+17.7		5531.3		+2809	+959	1,729,060	396,972		
907	3300		6 27 46	-	14.9	89 24'	+34.6	+19.7	19.8	5533.4	TP	+3119	+1078	1,729,370	397,091		
907	3300				14.6	270 36'	+34.6	+20.0			TP						
	3302		187 33 28	+12.6	14.8	90 23'	+22.1	+36.9			BS	+3100	+1138				
	3302				9.9	269 32'	+26.9	+36.8		5570.2	BS						
908	2970		187 33	-	11.4	90 26'	-22.5	-33.9		5536.3		-2788	-1023	1,729,682	397,206		
909	2640		- -	-	10.3	90 26'	-20.0	-30.3		5539.9		-2478	-909	1,729,992	397,320		
910	2310		- -	-	9.6	90 26'	-17.5	-27.1		5543.1		-2169	-796	1,730,301	397,433		
911	1980		- -	-	9.0	90 26'	-15.0	-24.0		5546.2		-1859	-682	1,730,611	397,547		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
4-11-86		B. Cotcamp		J. Middleton		6834		F.M.		6		55			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		ORAIBI - 15		AZ.		NAVAJO								J. McCLELLAN	
STATION NO.	SLOPE DISTANCE	PLOT DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									5570.2						
912	1650		187° 33'	+12.6	8.2	90° 26'	-12.5	-20.7		5549.5		-1549	-568	1,730,921	397,661
913	1320		-	-	7.6	90° 26'	-10.0	-17.6		5552.6		-1239	-454	1,731,231	397,775
914	990		-	-	6.9	90° 26'	-7.5	-14.4		5555.8		-929	-341	1,731,541	397,888
915	660		-	-	7.3	90° 20'	-3.8	-11.1		5559.1		-620	-227	1,731,850	398,002
916	330		-	-	6.2	90° 20'	-1.9	-8.1		5562.1		-310	-114	1,732,160	398,115
917	0				5.1	-		-5.1		5565.1	TP	0	0	1,732,470	398,229
918	330		7° 33'	+12.6	5.2	89° 20'	+3.8	-1.4		5568.8		+310	+114	1,732,780	398,343
Bm	584		358° 54' 15"	-	5.4	89° 20'	+6.8	+1.4		5571.6	Bm	+572	+116	1,733,042	398,345
919	660		7° 33'	-	5.0	89° 20'	+7.7	+2.7		5572.9		+620	+227	1,733,090	398,456
920	990		-	-	5.1	89° 20'	+11.5	+6.4		5576.6		+929	+341	1,733,399	398,570
921	1320		-	-	5.1	89° 20'	+15.4	+10.3		5580.5		+1239	+455	1,733,709	398,684
922	1650		-	-	5.1	89° 20'	+19.2	+14.1		5584.3		+1549	+568	1,734,019	398,797
923	1980		7° 33'	+12.6	5.1	89° 20'	+23.0	+17.9		5588.1		+1859	+682	1,734,329	398,911
924	2310		-	-	5.0	89° 20'	+26.9	+21.9		5592.1		+2169	+796	1,734,639	399,025
925	2640		-	-	5.1	89° 20'	+30.7	+25.6		5595.8		+2478	+909	1,734,948	399,138
926	2970		-	-	6.8	89° 20'	+34.6	+27.8		5598.0		+2788	+1023	1,735,258	399,252
927	3301		7° 32' 03"	-	9.0	89° 20'	+38.4	+29.4			TP	+3099	+1136	1,735,569	399,365
927	3301				14.9	270° 46'	+44.2	+29.3		5599.5	TP				
	4282		187° 30' 12"	+12.6	14.0	90° 22'	+27.4	+41.4		5640.9	BS	+4021	+1472		
	4282				14.1	269° 38'	+27.4	+41.5			BS				

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SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	4-11-86	INSTRUMENT MAN	B. Cotamp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	F.M.	LINE NO.	6	PAGE	56	
AREA	ARIZONA	TOPO MAP	ORAIBI-15'	STATE	AZ.	COUNTY	NAVAJO	TWP		RANGE		PPM		
													PARTY MANAGER	J. McCLELLAN

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			
									5640.9									
928	3960		187 30	+126	7.2	90 28	-32.3	-39.5		5601.4		-3719	-1361	1,735.871	399.476			
929	3630		-	-	7.9	90 28	-29.6	-37.5		5603.4		-3409	-1247	1,736.181	399.590			
930	3300		-	-	8.7	90 28	-26.9	-35.6		5605.3		-3099	-1134	1,736.491	399.703			
931	2970		-	-	9.3	90 28	-24.2	-33.5		5607.4		-2789	-1021	1,736.801	399.816			
932	2640		187 30	+126	10.2	90 28	-21.5	-31.7		5609.2		-2479	-907	1,737.111	399.930			
933	2310		-	-	11.0	90 28	-18.8	-29.8		5611.1		-2169	-794	1,737.421	400.043			
934	1980		-	-	10.8	90 30	-17.3	-28.1		5612.8		-1859	-680	1,737.731	400.157			
935	1650		-	-	11.7	90 30	-14.4	-26.1		5614.8		-1550	-567	1,738.040	400.270			
936	1320		-	-	12.7	90 30	-11.5	-24.2		5616.7		-1240	-454	1,738.350	400.383			
BM	1296		191 41 26	-	11.8	90 30	-11.3	-23.1		5617.8	BM	-1181	-533	1,738.409	400.304	y=1738400 x=400300 85 DOR 1964 ET. 5616		
937	990		187 30	+126	12.3	90 30	-8.6	-20.9		5620.0		-930	-340	1,738.660	400.497			
938	660		-	-	9.8	90 30	-5.8	-15.6		5625.3		-620	-227	1,738.970	400.610			
939	330		-	-	7.0	90 30	-2.9	-9.9		5631.0		-310	-113	1,739.280	400.724			
940	0				5.1	-	-	-5.1		5635.8	TP	0	0	1,739.590	400.837			
941	330		7 30	-	5.3	89 10	+4.8	-0.5		5640.4		+310	+113	1,739.900	400.950			
942	660		-	-	6.3	89 10	+9.6	+3.3		5644.2		+620	+227	1,740.210	401.064		ORAIBI -15' ↑	
943	990		-	+126	7.3	89 10	+14.4	+7.1		5648.0		+930	+340	1,740.520	401.177		POLACCA -15' ↓	
944	1320		-	-	8.3	89 10	+19.2	+10.9		5651.8		+1240	+454	1,740.830	401.291			
945	1650		-	-	9.2	89 10	+24.0	+14.8		5655.7		+1550	+567	1,741.140	401.404			
946	1980		-	-	8.1	89 10	+28.8	+20.7		5661.6		+1859	+680	1,741.449	401.517			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-245

Geosource Inc.

DATE 4-11-86	INSTRUMENT MAN B. Cotcamp	ROD MAN J. Middleton	PARTY NUMBER 6834	NOTES CHECKED BY B.S. J.M.	LINE NO. 6	PAGE 50
AREA ARIZONA	TORO MAP POLACCA - 15'	STATE AZ.	COUNTY NAVAJO	TWP	RANGE	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	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS
												LAT.	DEP.	Y	X			
									5640.9									
947	2310		7° 30'	+12.6	5.0	89° 10'	+33.6	+28.6		5669.5		+ 2169	+ 794	1,741,759	401,631			
948	2640		- -	-	9.0	89° -	+46.1	+32.1		5678.0		+ 2479	+ 907	1,742,069	401,744			
949	2970		- -	-	6.8	89° -	+51.8	+45.0		5685.9		+ 2789	+ 1021	1,742,379	401,858			
950	3300		- -	-	4.0	89° -	+52.6	+53.6		5694.5		+ 3099	+ 1134	1,742,689	401,971			
951	3629		7° 05'	-	10.2	88° 50'	+73.9	+63.7		5704.6		+ 3417	+ 1222	1,743,007	402,059			
952	3958		6° 23'	-	10.3	88° 44'	+87.5	+77.2		5718.1		+ 3743	+ 1288	1,743,333	402,125			
953	4285		5° 21'	-	8.8	88° 40'	+99.7	+90.9		5731.8		+ 4076	+ 1321	1,743,666	402,158			
Bm	4546		5° 32' 08"	-	14.6	88° 42'	+103.1	+88.5		5729.4	Bm	+4319	+1415	1,743,909	402,252		E.O.L. Line #6 9-1,143,895 X-402,270 8. DUR 1964 EL. 5728.	