

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE			
9/27/79		G. Cotcamp		R. Turner		6834		RWT			6		1 of 33			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
WYOMING-LARAMIE		McGill Lakes 7 1/2		Wyoming		Albany		21. N.		744 W.				L.O. Davis		
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
BM				14°6'						6975				423,565	368,845	→ scaled
	1620		37°19'+180°	+14.1°	+11.1	-	+11.1	6986.1			BS	-1010	-1266+2			u.s.c.s.#233 e.l. 6975.
	1620				+3.0	9H	+8.1				BS					
π	0				54	-	-5.4		6980.7		π	0	0	422,555	367,581	
1	1150		214°334'	+14.1°	108	89°-	+20.1	+9.3		6995.4	TP	-760	-863+2	421,795	366,720	one lane grass trail
1	1150				6.2	89°14'	+15.4	+9.2			TP					↓
	990		24°46.6'+180°	+14.1°	+10.5	-	+10.5	7005.9			BS	-771	-621+2			
	990				+134	89°50'	-2.9	+10.5			BS					
2	660		24°9'	+14.1°	2.3	-	-2.3		7003.6			+518	+409	421,542	366,510	
3	330		" "	"	19	-	-1.9		7004.0			+259	+204	421,283	366,305	
4	0				54	-	-5.4		7000.5		π	0	0	421,024	366,101	
5	330		213°22'	+14.1°	7.0	-	-7.0		6998.9			-223	-243	420,801	365,858	
6	660		" "	"	4.7	-	-4.7		7001.2			-446	-486	420,578	365,615	
7	990		212°18.7'	+14.1°	1.8	-	-1.8				TP	-683	-717.2	420,341	365,386	
7	990				6.7	TH	+5.0	-1.7		7004.2	TP					
	1320		27°45.2'+180°	+14.1°	+3.8	90°30'	+19.2	+23.0	7027.2		BS	-983	-881+2			
	1320				+11.9	90°30'	+11.5	+22.9			BS					
8	990		27°46.2'	+14.1°	10.8	90°40'	-11.5	-22.3		7004.9		+737	+661	420,095	365,168	
9	660		" "	"	13.7	-	-13.7		7013.5			+492	+440	419,850	364,947	
10	330		" "	"	6.7	-	-6.7		7020.5			+246	+220	419,604	364,727	
11	0				54	-	-5.4		7021.8		π	0	0	419,358	364,507	

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
9/27/79		G. Cotcamp		R. Turner		6839		RWT		6	2						
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
Wyoming		McGill Lakes	Wyoming	Albany		21. N.	74. W.		L.O. Davis								
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									7027.2								
BM	528		95°33'	+14.1°	1.5	-		-1.5		7025.7		-178	+497	419,180	365,004	419,175 + 365,000 (e) USGARS 237 (elev) 7026'	
12	330		203°25'	+14.1°	3.5	-		-3.5		7023.7		-262	-201	419,096	364,306		
13	660		205°11'	+14.1°	1.3	-		-1.3		7025.9		-511	-418	418,847	364,089		
14	990		206° -	+14.1°	7.1	TH	+5.0	-2.1		7025.1		-757	-638	418,601	363,869		
15	1320		206°43'	+14.1°	6.8	TH	+6.6	-0.2		7027.0		-999	-863	418,359	363,644		
16	1650		206°43'	+14.1°	2.6	TH	+8.3	+5.7)			TP	-1249	-1079	418,109	363,428		
16	1650				4.0	89°20'	+9.6	+5.6)		7032.6	TP						
	1312		16°52.6' +180°	+14.1°	+7.3	-		+7.3)			BS	-1125	-675			curve	
	1312				+13.8	TH	-6.6	+7.2)	7039.8		BS						
17	990		14°7'	+14.1°	9.7	-		-9.7		7030.1		+872	+468	417,856	363,221		
18	660		12°43'	+14.1°	7.7	-		-7.7		7032.1		+589	+298	417,573	363,051		
19	330		" "	"	8.0	-		-8.0		7031.8		+295	+149	417,279	362,902		
20	0				5.4	-		-5.4		7034.4	X	0	0	416,984	362,753		
21	330		196°9'	+14.1°	8.3	-		-8.3		7031.5		-285	-166	416,699	362,587		
22	660		" "	"	7.3	-		-7.3		7032.5		-570	-332	416,414	362,421		
23	985		193°42'	+14.1°	13.4	-		-13.4		7026.4		-871	-459	416,113	362,294	curve	
24	1310		193° -	+14.1°	13.7	BH	-6.6	-20.3)		7019.5	TP	-1166	-597	415,818	362,156	" "	
24	1310				8.8	90°30'	-11.4	-20.2)			TP						
	657		358°59' -180°	+14.1°	+14.1	90°22'	+4.2	+18.3)			BS	-642	-139			curve	
	657				+14.8	90°18'	+3.4	+18.2)	7037.7		BS						

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
9/27/79		G. Cotcamp		R. Turner		6837		RWT		6	3						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		McGill Lakes		Wyoming	Albany		21 W	24 W		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									7037.7								
25	330		356° 4'	+14.1°	3.2	-		-3.2		7034.5		+325	+58	415,501	362,075		
26	0				5.4	-		-5.4		7032.3	X	0	0	415,176	362,017		
27	330		184° 42'	+14.1°	9.3	-		-9.3		7028.4		-312	-106	414,864	361,911		
28	660		187° 23'	+14.1°	10.4	-		-10.4		7027.3		-614	-242	414,562	361,775		
29	985		188° 1.3'	+14.1°	4.3	TH	+4.9	+0.6		7038.3	TP	-912	-371	414,264	361,646	curve	
29	985				5.1	89° 40'	+5.7	+0.6			TP						
	650		353° 42' -180°	+14.1°	+9.7	91° -	+11.3	+21.0	7059.3		BS	-644	-88			curve	
	650				+13.5	90° 40'	+7.6	+21.1			BS						
30	330		359° 37'	+14.1°	6.8	-		-6.8		7052.5		+321	+78	413,941	361,636		
31	0				5.4	-		-5.4		7053.9	X	0	0	413,620	361,558		
32	330		177° 46'	+14.1°	0.8	-		-0.8		7058.5		-323	-68	413,297	361,490		
33	655		181° 23'	+14.1°	1.7	TH	+3.3	+1.6		7060.9		-631	-175	412,989	361,383	S-curve	
34	980		178° 13.2'	+14.1°	1.8	TH	+4.9	+3.1		7062.4	TP	-957	-209	412,663	361,349	" "	
34	980				5.5	89° 30'	+8.6	+3.1			TP						
	642		2° 46.6' +180°	+14.1°	+8.1	89° -	-11.2	-3.1	7059.3		BS	-614+2	-186			sharp curve	
	642				+6.2	89° 10'	-9.3	-3.1			BS						
35	330		13° 19'	+14.1°	3.3	89° -	+5.8	+2.5		7061.8		+293	+152	412,344	361,315		
36	0				5.4	-		-5.4		7053.9	X	0	0	412,051	361,163		
37	330		191° 6'	+14.1°	13.6	92° -	-11.5	-25.1		7034.2		-299	-141	411,752	361,022		
38	660	659	195° 44'	+14.1°	8.0	93° -	-34.5	-42.5		7016.8		-572	-328	411,479	360,835		

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9/27/79		G. Cotcamp		R. Turner		6834		RWT		6		5			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
Wyoming		McGill Lakes		Wyoming		Albany		21. N.		74. W.				L.O. Davis	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
50										6995.5					
	980	979	30° 1.2' +180°	+14.1°	+8.8	88°-	-34.2	-25.4	6970.1		BS	-703+5	-682+2		curve
	980				+5.9	88°10'	-31.3	-25.4			BS				
¹⁵ / ₂₂ 14/23	985	984	8° 20'	+14.1°	0.3	88°-	+34.4	+34.1	7004.2			+910	+376	408,059	359,636 fence corner el. 7004
51	660		25° 11'	+14.1°	3.1	TH	+3.3	+0.2	6970.3			+511	+418	407,660	359,678
52	330		28° 42'	+14.1°	5.3	-		-5.3	6964.8			+242	+224	407,391	359,484
53	0				5.4	-		-5.4	6964.7		π	0	0	407,149	359,260
54	330		197° 20'	+14.1°	5.4	-		-5.4	6964.7			-282	-172	406,867	359,088 horiz. correct. y=+28' x=+17'
55	655		194° 29.7'	+14.1°	5.8	-		-5.8	6964.3			-575	-313	406,574	358,947
BM	1860	1859	241° 27'	+14.1°	6.1	88° 36'	+45.4	+39.3	7009.4			-464	-1800	406,685	357,460 406,685 + 357,460 (s) U.S.C. & G.S. #2306 (s) 7010
56	985		194° 29.7'	+14.3°	5.5	-		-5.5	6964.6		TP	-863-2	-474-2	406,284	358,784
56	985				10.4	TH	+4.9	-5.5			TP				
	950		10° 50' +180	+14.3°	+12.2	-		+12.2	6976.8		BS	-860-2	-403-2		
	950				+7.4	BH	+4.8	+12.2			BS				S-curve
57	630		13° 42'	+14.3°	12.7	-		-12.7	6964.1			+556	+296	405,978	358,675
58	330		23° 21'	+14.3°	9.4	-		-9.4	6967.4			+261	+202	405,683	358,581
59	0				5.4	-		-5.4	6971.4		π	0	0	405,422	358,379
60	330		198° 31'	+14.3°	4.7	-		-4.7	6972.1			-277	-179	405,145	358,200
61	660		198° 49'	+14.3°	3.8	-		-3.8	6973.0			-571	-331	404,851	358,098
62	980		191° -	+14.3°	4.1	-		-4.1	6972.7		TP	-886-1	-419-2	404,535	357,958 curve
62	980				9.0	TH	+4.9	-4.1			TP				

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9/28/79		G. Cotcamp			R. Turner			6839		RWT			6	6			
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
Wyoming		McGill Lakes	Wyoming	Albany		21N	74W		L.O. Davis								
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
62										6972.7							
	652		358°47.2'-180°	+14.3°	+5.9	-		+5.9	6978.6		BS	-635.1	-148.2				
	652				+9.2	TH	-3.3	+5.9			BS						curve
63	325		358°4'	+14.3°	6.9	-		-6.9	6971.7			+317	+70	404,216	357,878		" "
64	0				5.4	-		-5.4	6973.2		π	0	0	403,899	357,808		
65	330		193°6'	+14.3°	3.5	-		-3.5	6975.1			-293	-152	403,606	357,656		
66	655		190°15'	+14.3°	1.7	TH	+3.3	+1.6	6980.2			-596	-272	403,303	357,536		curve
67	980		187°27'	+14.3°	3.9	89°30'	+8.6	+5.2	6983.8		TP	-910.1	-363.2	402,988	357,443		" "
67	980				9.0	89°10'	+14.2	+5.2			TP						
	1312		355°14'-180°	+14.3°	+7.5	-		+7.5	6991.3		BS	-1294.1	-217.2				
	1312				+14.1	TH	-6.6	+7.5			BS						curve
68	987		356°37'	+14.3°	7.8	-		-7.8	6983.5			+969	+187	402,662	357,411		" "
69	660		359°59'	+14.3°	7.6	-		-7.6	6983.7			+640	+163	402,333	357,387		
70	330		" "		7.4	-		-7.4	6983.9			+320	+81	402,013	357,305		
71	0				5.4	-		-5.4	6985.9		π	0	0	401,693	357,224		
72	330		177°26'	+14.3°	0.9	-		-0.9	6990.4			-323	-67	401,370	357,157		
73	660		174°30'	+14.3°	2.7	TH	+3.3	+0.6	6991.9			-652	-101	401,091	357,123		
74	987		174°40'	+14.3°	3.6	TH	+4.9	+1.3	6992.6		TP	-975.1	-154.2	400,717	357,068		curve
74	987				4.4	89°40'	+5.7	+1.3			TP						
	970		9°13'+180°	+14.3°	+3.0	-		+3.0	6995.6		BS	-889.1	-387.1				sharp curve
	970				+7.9	TH	-4.9	+3.0			BS						

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9/28/79		G. Sotcamp		R. Turner		6834		RWT		6	7						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		McGill Lakes		Wyoming	Albany		21N	74W		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH +	EAST +	COORDINATES		REMARKS	
												SOUTH -	WEST -	Y	X		
									6995.6								
75	650		8° 6'	+14.3°	6.5	-		-6.5	6989.1			+601	+248	400,428	356,928	400,410 + 356,900	
75	610		7° 26'	+14.3°	6.9	-		-6.9	6988.7			+567	+226	400,394	356,906	(elev) 6990.5 4-Way Intersect.	
76	330		356° 10'	+14.3°	13.7	BH	-1.7	-15.4	6980.2			+325	+60	400,152	356,740		
77	0			-	5.4	-		-5.4	6990.2	π		0	0	399,827	356,680		
78	330		191° 46'	+14.5°	4.9	-		-4.9	6990.7			-296	-146	399,531	356,534		
BM	1040		99° 28.3'	+14.5°	7.1	91°	-18.1	-25.2	6970.4			-338	+984	399,489	357,664	(elev) 6971' U.S.C+G.S. Gauging sta.	
79	650		201° 50'	+14.5°	4.9	-		-4.9	6990.7			-524	-385	399,303	356,295	Curve	
80	970		208° -	+14.5°	3.8	-		-3.8	6991.8			-715	-655	399,112	356,025	" "	
81	1280		212° 54'	+14.5°	4.3	TH	+6.4	+2.1	6997.7	TP		-866	-942	398,961	355,738	" "	
81	1280				5.4	89° 40'	+7.4	+2.0			TP						
	945		51° 39.7' + 180°	+14.5°	+13.3	-		+13.3	7011.0		BS	-382	-864			sharp bend	
	945				+8.6	BH	+4.7	+13.3			BS						
82	635		45° 43'	+14.5°	7.7	-		-7.7	7003.3			+315	+551	398,894	355,425		
83	315		32° 15'	+14.5°	4.3	-		-4.3	7006.7			+216	+229	398,795	355,103		
84	160		333° 14'	+14.5°	3.6	-		-3.6	7007.4			+156	-34	398,735	354,840	398,760 + 354,850 4-Way Intersect	
84	0				5.4	-		-5.4	7005.6	π		0	0	398,579	354,874		
85	330		150° 14'	+14.5°	15.0	92°	-11.5	-26.5	6984.5			-318	+87	398,261	354,961		
86	660		153° 14'	+14.5°	11.0	92°	-23.0	-34.0	6977.0			-645	+140	397,934	355,014		
87	985		155° 18'	+14.5°	14.5	-		-14.5	6996.5			-969	+174	397,610	355,048		

Geosource Inc.

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9/28/79		G. Catcamp		R. Turner		6834		RWT			6	8				
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
Wyoming		McGill Lakes/Lake Tone		Wyoming	Albany		21N	74W		L.O. Davis						
STATION NO.	SLOPE DISTANCE	PLOT DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH+	EAST+	COORDINATES		REMARKS
												SOUTH-	WEST-	Y	X	
												LAT.	DEP.			
88	1300		150° 89'	+14.5°	4.7	-		-4.7	7011.0							
88	1300				11.2	TH	+6.5	-4.7		7006.3	TP	-1254.4	+344.3	397,321	355,215	curve
	1296		328° 19.1'-180°	+14.5°	+8.0	TH	-6.5	+1.5			TP					
	1296				+5.4	89° 50'	-3.8	+1.6	7007.9		BS	-1238.4	+385.3			
89	975		330° 5'	+14.5°	1.6	-		-1.6		7006.3		+940	-259	397,019	355,338	S-curve
90	645		328° 36'	+14.5°	5.4	-		-5.4		7002.5		+617	-187	396,696	355,410	" "
91	325		321° 28'	+14.5°	8.6	-		-8.6		6999.3		+297	-132	396,376	355,465	" "
92	0				5.4	-		-5.4		7002.5	π	0	0	396,079	355,597	
93	325		149° 51'	+14.5°	11.2	-		-11.2		6996.7		-313	+88	395,766	355,685	curve
94	650		163° 28'	+14.5°	3.0	89°	+11.3	+8.3		7016.2		-650	+23	395,429	355,620	↑ McGill Lakes Quad.
95	950		169° 47.7'	+14.5°	5.7	88° 36'	+23.2	+17.5		7025.4	TP	-947.4	-71 -3	395,128	355,523	↓ Lake Tone Quad.
95	950				10.1	88° 20'	+27.6	+17.5			TP					
	960		29° 1.6'+180°	+14.5°	+3.9	91°	+16.8	+20.2	7045.6		BS	-696.5	-661.4			
	960		"		+11.7	90° 30'	+8.4	+20.1			BS					curve
96	655		38° -	+14.5°	11.9	BH	-3.3	-15.2		7030.4		+399	+520	394,826	355,378	horiz. correct. y=-27 x=-28
BM	618		48° 44'	+14.5°	11.0	-		-11.0		7034.6		+278	+552	394,705	355,410	394,705+355,410 U.S. G.S. 228 (elev) 7035'
97	330		41° 13'	+14.5°	5.7	-		-5.7		7039.9		+186	+273	394,613	355,131	
98	0				5.4	-		-5.4		7040.2	π	0	0	394,427	354,858	
99	330		237° 13'	+14.5°	0.8	-		-0.8		7044.8		-104	-313	394,323	354,545	
100	660		240° 30'	+14.5°	2.7	89°	+11.5	+8.8		7054.4		-171	-638	394,256	354,220	

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9/28/79		G. Cotcamp		R. Turner		6834		RWT		6		9			
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER			
Wyoming		Lake Ione		Wyoming		Albany		74W				L. O. Davis			
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH -	EAST + WEST -		Y
												LAT.	DEP.		
101	990		242° 10.6'	+14.5°	5.4	88° 30'	+25.9	+20.5	7045.6						
101	990				11.1	88° 10'	+31.7	+20.6		7066.1	TP	-228	-963+3	394,199	353,898
	985		63° 9.3' +180°	+14.5°	+6.5	TH	-4.9	+1.6	7067.7		BS	-211	-962+2		
	985				+4.4	89° 50'	-2.9	+1.5			BS				
102	660		61° 18'	+14.5°	1.3	-	-1.3			7066.4		+162	+640	394,150	353,578
103	330		57° 34'	+14.5°	2.0	-	-2.0			7065.7		+102	+314	394,090	353,252
104	0				5.4	-	-5.4			7062.3	X	0	0	393,988	352,938
105	330		236° 26'	+14.5°	5.3	-	-5.3			7062.4		-108	-312	393,880	352,626
106	660		"	"	0.2	-	-0.2			7067.5		-216	-624	393,772	352,314
107	990		"	"	2.1	TH	+5.0	+2.9		7070.6		-323	-936	393,665	352,002
108	1320		236° 8.3'	+14.5°	4.5	89° 30'	+11.5	+7.0		7074.7	TP	-438	-1245+3	393,550	351,696
108	1320				14.4	89° 4'	+21.5	+7.1			TP				
	650	649	44° 50.7' +180°	+14.5°	+7.9	93° -	+34.0	+41.4	7116.1		BS	-331	-558+2		
	650				+131	92° 30'	+28.3	+41.4			BS				
109	325		49° 26'	+14.5°	11.9	92° -	+11.3	-23.2		7092.9		+143	+292	393,362	351,432
110	0				5.4	-	-5.4			7110.7	X	0	0	393,219	351,140
111	330		248° 58'	+14.5°	2.9	-	-2.9			7113.2		-38	-328	393,181	350,812
112	650		242° 38'	+14.5°	2.8	TH	+3.3	+0.5		7116.6		-145	-634	393,074	350,506
113	980		238° 23.7'	+14.5°	1.7	TH	+4.9	+3.2		7119.3	TP	-288	-937+3	392,931	350,206
113	980				6.3	89° 30'	+8.6	+3.3			TP				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN			ROD MAN			PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE		
9/28/79		G. Cotcamp			R Turner			6834		RW1			6	10		
AREA		TOPO MAP		STATE	COUNTY			TWP	RANGE	PPM	PARTY MANAGER					
Wyoming		Lake Ione		Wyoming	Albany			21N	74W		L.O. Davis					
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
113										7119.3						
	1310		65° 38.5' +180°	+14.5°	+7.3	-		+7.3	7126.6		BS	-236	-1289.2			
	1310				+13.9	TH	-6.6	+7.4		BS						
114	985		66° 43'	+14.5°	7.9	-		-7.9		7118.7		+150	+973	392,845	349,892	" "
115	660		70° 16'	+14.5°	7.3	-		-7.3		7119.3		+60	+657	392,755	349,576	
116	330		" "	"	6.8	-		-6.8		7119.8		+30	+329	392,725	349,248	
117	0				54	-		-5.4		7121.2	π	0	0	392,695	348,919	
118	330		248° 15'	+14.5°	5.4	-		-5.4		7121.2		-42	-327	392,653	348,592	
119	660		249° 40'	+14.5°	3.7	-		-3.7		7122.9		-67	-657	392,628	348,262	
120	985		248° 36'	+14.5°	5.8	TH	+4.9	-0.9		7125.7		-118	-978	392,577	347,941	curve
121	1310		247° 26.7'	+14.5°	6.7	TH	+6.5	-0.2		7126.4	TP	-184	-1297.3	392,511	347,625	" "
121	1310				5.6	89° 46'	+5.3	-0.3			TP					
	1320		70° 6.7' +180°	+14.5°	+15.0	-		+15.0	7141.4		BS	-124	-1314.2			
	1320				+8.4	TH	+6.6	+15.0			BS					
122	990		69° 45'	+14.5°	13.0	-		-13.0		7128.4		+99	+985	392,486	347,298	
123	660		" "	"	11.3	-		-11.3		7130.1		+66	+657	392,453	346,970	
124	330		" "	"	9.5	-		-9.5		7131.9		+33	+328	392,420	346,641	
125	0				5.4	-		-5.4		7136.0	π	0	0	392,387	346,313	
126	330		246° -	+14.5°	8.4	-		-8.4		7133.0		-54	-325	392,333	345,988	
127	660		" "	"	6.3	-		-6.3		7135.1		-109	-651	392,278	345,662	
T	920		243° 39'	+14.5°	4.1	TH	+4.6	+0.5		7141.9		-189	-900	392,198	345,413	fence corner

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE					
9/28/79		G. Cotcamp		R. Turner		6834		RWT			6	11					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		Lake Tione		Wyoming	Albany		20N	74W		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH +	EAST +	COORDINATES		REMARKS	
												SOUTH -	WEST -	Y	X		
												LAT.	DEP.				
									7141.4								
128	986		244°30'	+14.5°	1.6	TH	+4.9	+3.3		7144.7	TP	-188	-968+3	392,199	345,348	on cattle guard	
128	986				5.3	89°30'	+8.6	+3.3			TP						
	982		34°19.8'+180°	+14.5°	+9.3	-		+9.3			BS	-646	-739+2				
	982				+14.3	TH	-4.9	+9.4	7154.1		BS					curve	
129	657		30°26'	+14.5°	7.5	-		-7.5		7146.6		+465	+464	392,018	345,075		
130	330		26° -	+14.5°	5.7	-		-5.7		7148.4		+251	+214	391,804	344,825		
131	0				5.4	-		-5.4		7148.7	X	0	0	391,553	344,611		
132	330		197° -	+14.5°	10.5	-		-10.5		7143.6		-281	-172	391,272	344,439		
133	660		" "	"	5.3	-		-5.3		7148.8		-563	-345	390,990	344,266		
134	990		195°23'	+14.5°	3.7	-		-3.7		7150.4		-858	-993	390,695	344,118		
135	1310		192°56.9'	+14.5°	2.6	-		-2.6		7151.5	TP	-1163	-604	390,390	344,007	curve	
135	1310				9.2	TH	+6.6	-2.6			TP						
	1310		17°36.7'+180°	+14.5°	+6.7	-		+6.7	7158.2		BS	-1110	-696				
	1310				+13.2	TH	-6.6	+6.6			BS					S-curve	
136	985		19°8'	+14.5°	8.8	-		-8.8		7149.4		+820	+546	390,100	343,857		
137	660		21° -	+14.5°	6.9	-		-6.9		7151.3		+537	+383	389,817	343,694		
138	330		16°18'	+14.5°	6.7	-		-6.7		7151.5		+283	+169	389,563	343,480		
139	0				5.4	-		-5.4		7152.8	X	0	0	389,280	343,311		
140	330		191°25'	+14.5°	6.1	-		-6.1		7152.1		-297	-144	388,983	343,167		
141	660		" "	"	7.6	-		-7.6		7150.6		-594	-288	388,686	343,023		

Geosource Inc.

DATE 10/3/79		INSTRUMENT MAN G. Cotcamp		ROD MAN R. Turner		PARTY NUMBER 6839		NOTES CHECKED BY RW T		LINE NO. 6		PAGE 12	
AREA Wyoming		TOPO MAP LAKE FONE		STATE Wyoming		COUNTY Albany		TWP 20 N		RANGE 74 W		PPM	
										PARTY MANAGER L. O. Davis			

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
									7158.2										
142	990		191°25'	+14.5°	4.2	-		-4.2		7154.0		-890	-433	388,390	342,878				
143	1320		191°46.2'	+14.5°	1.1	-		-1.1		7157.1	TP	-1184	-584	388,096	342,727				
143	1320				7.7	TH	+6.6	-1.1			TP								
	2300		19°29.3'+100°	+14.5°	+12.0	-		+12.0			BS	-1907.33	-1286						
	2300				+14.8	89°56'	-2.7	+12.1	7169.2		BS								
144	1975		19°46'	+14.5°	11.1	-		-11.1		7158.1		+1632	+1112	387,824	342,553				curve
JL TF	1875		19°48'	+14.5°	9.9	-		-9.9		7159.3		+1549	+1057	387,741	342,498				
145	1650		19°46'	+14.5°	8.9	-		-8.9		7160.3		+1364	+929	387,556	342,370				
146	1320		" "	"	10.3	-		-10.3		7158.9		+1091	+743	387,283	342,184				
147	990		20°26'	+14.5°	12.0	-		-12.0		7157.2		+812	+567	387,004	342,008				
148	660		23°46'	+14.5°	7.7	-		-7.7		7161.5		+518	+409	386,710	341,850				
149	330		23°46'	+14.5°	3.0	-		-3.0		7166.2		+259	+204	386,451	341,645				
150	0				5.4	-		-5.4		7163.8	π	0	0	386,192	341,441				
151	330	329	182°38'	+14.5°	12.6	94°30'	-25.8	-38.4		7130.8		-314	-97	385,878	341,344				
152	660	658	" "	"	9.7	94°30'	-51.6	-61.3		7107.9		-629	-194	385,563	341,247				
153	990	988	" "	"	11.5	93°30'	-60.3	-71.8		7097.4		-944	-291	385,248	341,150				
154	1320	1319	" "	"	12.8	92°30'	-57.5	-70.3		7098.9		-1260	-389	384,932	341,052				
155	1650	1649	" "	"	11.2	92°10'	-62.3	-73.5		7095.7		-1576	-486	384,616	340,955				
156	1980	1979	" "	"	3.1	92°-	-69.1	-72.2		7097.0		-1891	-583	384,301	340,858				
157	2310	2309	" "	"	10.8	91°40'	-67.2	-78.0		7091.2		-2207	-680	383,985	340,761				

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE						
10/3/79		G. Cotcamp		R. Turner		6834		R.W.T.		6	13						
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		COOPER LAKE NORTH		Wyoming	Albany		20N	74W/75W		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									7169.2								
158	2640	2639	183° 16.7'	+14.5°	1.6	91° 40'	-76.7	-78.3			TP	-2513.4	-806	383,683	340,635		
158	2640				13.7	91° 24'	-64.5	-78.2		7091.0	TP						
	1310		12° 3.3' +180°	+14.5°	+12.5	88° 30'	-34.3	-21.8	7069.2		BS	-1172.4	-586				
	1310				+8.7	88° 40'	-30.5	-21.8			BS					curve	
159	985		14° 30'	+14.5°	8.8	88° 30'	+25.8	+17.0		7086.2		+862	+478	383,377	340,527	" "	
160	660		" "	"	5.9	89°	+11.5	+5.6		7074.8		+577	+320	383,092	340,369	" "	
161	330		" "	"	1.7	-	-	-1.7		7067.5		+289	+160	382,804	340,209	" "	
162	0				5.4	-	-	-5.4		7063.8	π	0	0	382,515	340,049	T-rod (east) (approximate location)	
163	325		176° 27'	+14.5°	13.9	84	-1.6	-15.5		7053.7		-319	-62	382,196	339,987	curve	
164	652		170° 25'	+14.5°	7.2	91°	-11.4	-18.6		7050.6		-650	-56	381,865	339,993	" "	
165	980		168° 17'	+14.5°	7.1	91°	-17.1	-24.2		7045.0		-979	-48	381,536	340,001	" "	
166	1307		168° 17.5'	+14.5°	5.8	91°	-22.8	-28.6		7040.6	TP	-1305.4	-64.3	381,214	339,988	" "	
166	1307				13.5	90° 40'	-15.2	-28.7			TP						
	1320		347° 9.3' -180°	+14.5°	+6.0	92°	+46.0	+52.0	(52.1)		BS	-1319.4	-38.2				
	1320				+13.8	91° 40'	+38.4	+52.2	7092.7		BS						
167	990		347° 42'	+14.5°	7.5	92°	-34.5	-42.0		7050.7		+989	+38	380,888	339,990		
168	660		" "	"	10.0	92° 30'	-28.8	-38.8		7053.9		+660	+25	380,559	339,977		
169	330		350° 2'	+14.5°	8.1	92°	-11.5	-19.6		7073.1		+329	+26	380,228	339,978		
170	0				5.4	-	-	-5.4		7087.3	π	0	0	379,899	339,952		
171	330		184° 52'	+14.5°	6.3	-	-	-6.3		7086.4		-311	-109	379,588	339,843		

DATE		INSTRUMENT MAN			ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE				
10/3/79		G. Cotcamp			R. Turner		6834		RWT			6	14				
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
Wyoming		COOPER LAKE NORTH	Wyoming	Albany		20N	75W		L. O. Davis								
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									7092.7								
172	660		186° ~	+14.5'	11.8	8H	-3.3	-15.1		7077.6		-618	-231	379,281	339,721		
173	990		" "	"	12.0	90°30'	-8.6	-20.6		7072.1		-927	-347	378,972	339,605		
174	1320		187° 28.8'	+14.5°	6.2	90°30'	-11.5	-17.7		7075.0	TP	-1224.19	-494	378,679	339,458		
174	1320				11.1	8H	-6.6	-17.7			TP						
	1313		21° 6.1' +180°	+14.8°	+4.3	89°30'	-11.5	-7.2	7067.8		BS	-1063.14	-770.12				
	1313				+11.9	89°10'	-19.1	-7.2			BS					curve	
175	987		20° 44'	+14.8°	1.3	TH	+4.9	+3.6		7071.4		+803	+574	378,423	339,264		
176	660		19° 11'	+14.8°	0.7	-	-0.7			7067.1		+547	+369	378,167	339,059		
177	330		17° 51'	+14.8°	5.9	-	-5.9			7061.9		+278	+178	377,898	338,868		
178	0				5.9	-	-5.4			7062.4	TP	0	0	377,620	338,690		
179	330		196° ~	+14.8°	8.9	93°-	-17.2	-26.1		7041.7		-283	-169	377,337	338,521		
180	660	659	191° 10'	+14.8°	10.0	92°30'	-28.8	-38.8		7029.0		-592	-289	377,028	338,401		
181	987		193° 4'	+14.8°	13.2	91°10'	-20.1	-33.3		7034.5		-873	-461	376,747	338,229	curve	
182	1315		198° 52'	+14.8°	2.2	91°-	-22.9	-25.1		7042.7		-1154	-631	376,466	338,059		
183	1642		199° 17.5'	+14.8°	7.2	90° 40'	-19.1	-26.3		7041.5		-1435	-798	376,185	337,892	" "	
184	1970		199° 17.5'	+14.8°	13.5	90°30'	-17.2	-30.7			TP	-1721.14	-958.13	375,903	337,735	" "	
184	1970				5.9	90° 44'	-25.2	-30.6		7037.2	TP						
	1635		41° 43.8' +180°	+14.8°	+3.6	88°50'	-33.3	-29.7	7007.5		BS	-902.14	-1364.12				
	1635				+13.0	88°30'	-42.8	-29.8			BS					curve	
185	1320		45° 48'	+14.8°	4.8	89°-	+23.0	+18.2		7025.7		+698	+1150	375,653	337,523		

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE					
10/3/79		G. Cotcamp		R. Turner		6834		RWT			6	15					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		Cooper Lake North		Wyoming	Albany		20N	75W		L. O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									7007.5								
186	990		45° 21'	+14.8°	11.9	89°	+17.3	+5.4		7012.9		+493	+859	375,498	337,232		
187	660		" "	"	2.7	TH	+3.3	+0.6		7008.1		+329	+572	375,334	336,945		
188	330		" "	"	4.4	-		-4.4		7003.1		+164	+286	375,169	336,659		
189	0				5.4	-		-5.4		7002.1	TP	0	0	375,005	336,373		
190	330		221° 13'	+14.8°	5.4	-		-5.4		7002.1		-184	-274	374,821	336,099		
191	652		212° -	+14.8°	5.1	-		-5.1		7002.4		-446	-475	374,559	335,898	curve	
192	978		209° 12'	+14.8°	0.3	TH	+4.9	+4.6		7012.1		-704	-679	374,301	335,694	" "	
193	1305		210° 40.8'	+14.8°	4.3	88° 40'	+30.4	+26.1		7033.6	TP	-915.4	-930.2	374,094	335,445	curve	
193	1305				8.1	88° 30'	+34.2	+26.1			TP						
	990		43° 26.7' +180°	+14.8°	+9.6	-		+9.6			BS	-521.4	-842				
	990				+14.6	TH	-4.9	+9.7	7043.3		BS						
194	660		43° 26.7'	+14.8°	10.4	-		-10.4		7032.9		+347	+561	373,924	335,164		
195	330		" "	"	6.8	-		-6.8		7036.5		+174	+281	373,751	334,884		
196	0				5.4	-		-5.4		7037.9	TP	0	0	373,577	334,603		
197	320		195° -	+14.8°	12.8	91° -	-5.6	-18.4		7024.9		-278	-159	373,299	334,444	sharp curve	
198	645		185° 32'	+14.8°	8.6	91° -	-11.3	-19.9		7023.4		-605	-224	372,972	334,379	" "	
199	970		189° 6'	+14.8°	8.8	91° -	-16.9	-25.7		7017.6		-918	-314	372,659	334,289	" "	
200	1297		182° 32.5'	+14.8°	14.4	BH	-6.5	-20.9		7022.4	TP	-1238.4	-386	372,343	334,217	" "	
200	1297				5.9	90° 40'	-15.1	-21.0			TP						

SURVEY NOTES - HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
10/3/79		G. Cotcamp		R. Turner		6834		RWT		6	16					
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		Cooper Lake North	Wyoming	Albany		20N	75W		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
200	962		359°10' - 180°	+148°	1.0	89° -	-16.8	-15.8		7022.4	BS	-933+4	-232+3			
	962				+6.7	88°30'	-22.4	-15.7	7006.7		BS					sharp curve
201	635		1°45'	+148°	4.8	-	-4.8		7001.9			+609	+181	372,023	334,169	horiz. correct. y=+51, x=+42
202	320		12°11'	+148°	3.8	-	-3.8		7002.9			+285	+145	371,699	334,133	
202	130		36°47'	+148°	4.9	-	-4.9		7001.8			+81	+102	371,495	334,090	371,495 + 334,090 (bridge elev) 7002
203	0				5.4	-	-5.4		7001.3		TP	0	0	371,414	333,988	
204	330		233°56'	+15.0°	2.9	-	-2.9		7003.8			-119	-308	371,295	333,680	
205	660		228°56'	+15.0°	0.7	-	-0.7		7006.0			-290	-593	371,124	333,395	S-curve
206	985		227°17'	+15.0°	3.0	TH	+4.9	+1.9	7008.6			-458	-872	370,956	333,116	"
207	1300		231°9.3'	+15.0°	3.3	89°30'	+11.3	+8.0	7014.7		TP	-526-1	-1189-1	370,887	332,798	"
207	1300				10.9	89°10'	+18.9	+8.0			TP					
	652		49°50.2' + 180°	+15.0°	+7.8	-	+7.8		7022.5		BS	-277	-590-1			curve
	652				+11.1	TH	-3.3	+7.8			BS					
208	330		46°58'	+15.0°	5.8	-	-5.8		7016.7			+155	+291	370,765	332,498	
209	0				5.4	-	-5.4		7017.1		TP	0	0	370,610	332,207	
210	330		230°15'	+15.0°	1.2	TH	+1.7	+0.5	7023.0			-138	-300	370,472	331,907	
211	660		226°33'	+15.0°	2.1	89° -	+11.5	+9.4	7031.9		TP	-314-1	-580-1	370,295	331,626	
211	660				7.8	88°30'	+17.3	+9.5			TP					
	660		15°55' + 180°	+15.0°	+14.5	-	+14.5		7046.4		BS	-566	-339-1			
	660				+11.2	BH	+3.3	+14.5			BS					

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE			
10/4/79		G. Cotcamp		R. Turner		6834		RWT			6	17			
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER					
Wyoming		Cooper Lake North		Wyoming	Albany		20N	75W		L.O. Davis					
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									7046.4						
212	330		15° 55'	+15.0°	12.3	-		-12.3		7034.1		+283	+170	370,012	331,456
213	0				5.4	-		-5.4		7041.0	π	0	0	369,729	331,286
214	330	329	207° 50'	+15.0°	4.2	87°-	+17.2	+13.0		7059.4		-241	-224	369,488	331,062
215	660	658	212° 18'	+15.0°	7.5	86°-	+45.9	+38.4		7084.8		-446	-484	369,283	330,802
216	983	980	208° 23.3'	+15.0°	8.1	85°-	+85.3	+77.2		7123.6	TP	-712-1	-673-1	369,016	330,612
216	983				5.2	85°10'	+82.5	+77.3			TP				
	605		39° 51' +180°	+15.0°	+7.0	91°30'	+15.8	+22.8	7146.4		BS	-348	-495-1		
	605				+12.2	91°-	+10.6	+22.8			BS				sharp curve
217	330		61° 59'	+15.0°	5.3	-		-5.3		7141.1		+74	+322	368,742	330,438
218	0				5.4	-		-5.4		7141.0	π	0	0	368,668	330,116
219	330		239° 14'	+15.0°	8.9	-		-8.9		7137.5		-90	-318	368,578	329,798
220	650		232° 35'	+15.0°	8.5	-		-8.5		7137.9		-248	-601	368,420	329,515
221	930		226° 9.6'	+15.0°	5.8	-		-5.8		7140.6	TP	-531-1	-763-1	368,136	329,352
221	930				10.5	TH	+4.7	-5.8			TP				
	650		13° 0.3' +180°	+15.0°	+8.7	88°-	-22.7	-14.0	7126.6		BS	-574	-305-1		
	650				+5.0	88°20'	-18.9	-13.9			BS				curve
222	330		22° 40'	+15.0°	5.7	88°-	+11.5	+5.8		7132.4		+261	+202	367,823	329,248
223	0				5.4	-		-5.4		7121.2	π	0	0	367,562	329,046
224	330		216° 33'	+15.0°	7.1	-		-7.1		7119.5		-205	-258	367,357	328,788

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DATE		INSTRUMENT MAN			ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE				
10/4/79		G. Cotcamp			R. Turner		6834		RWT			6	18				
AREA		TOPO MAP		STATE	COUNTY			TWP	RANGE	PPM	PARTY MANAGER						
Wyoming		Copper Lake North		Wyoming	Albany			20N	75W		L.O. Davis						
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									7126.6								
225	656		218°41'	+15.0°	12.5	-		-12.5		7114.1	TP	-394-1	-524-1	367,167	328,521	curve	
225	656				10.5	90°10'	-1.9	-12.4			TP						
	655		39°23'+180°	+15.0°	15.7	88°20'	-19.0	-13.3	7100.8		BS	-384	-531-1				
	655				19.5	88°	-22.8	-13.3			BS					curve	
226	325		41°-	+15.0°	0.3	-		-0.3		7100.5		+182	+269	366,965	328,258	" "	
227	0				54	-		-5.4		7095.4	π	0	0	366,783	327,989		
228	330		195°45'	+15.0°	6.3	-		-6.3		7094.5		-284	-169	366,499	327,820		
229	660		198°43.3'	+15.0°	4.4	-		-4.4		7096.4		-549	-366	366,234	327,623		
230	988		198°43.3'	+15.0°	4.6	TH	+4.9	+0.3		7101.1	TP	-822-1	-548-1	365,960	327,440		
230	988				54	89°46'	+5.8	+0.4			TP						
	970		34°11.8'+180°	+15.0°	+11.1	-		+11.1	7112.2		BS	-634	-734-1				
	970				+10.0	90°4'	+1.1	+11.1			BS					S-curve	
#	722		36°25'	+15.0°	4.3	-		-4.3		7107.9		+450	+564	365,776	327,289	west bound lane	
231	640		34°38'	+15.0°	2.1	-		-2.1		7110.1		+415	+488	365,741	327,193		
#	630		36°38'	+15.0°	24	-		-2.4		7109.8		+391	+494	365,717	327,199	east bound lane	
232	325		28°-	+15.0°	6.5	-		-6.5		7105.7		+238	+222	365,564	326,927		
233	0				54	-		-5.4		7106.8	π	0	0	365,326	326,705		
234	330		202°-	+15.0°	2.0	89°-	+5.8	+3.8		7116.0		-264	-199	365,062	326,506		
235	646		211°42'	+15.0°	8.0	88°-	+22.5	+14.5		7126.7	TP	-442-1	-469-1	364,883	326,235	north edge of R.R.	
235	645				43	88°20'	+18.8	+14.5			TP						

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE					
10/4/79		G. Cotcamp		R. Turner		6839		RWT			6	19					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		Cooper Lake North		Wyoming	Albany		20N	75W		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
235										7126.7							
	330		14° 0' +180°	+15.0°	+6.3	-		+6.3	7133.0		BS	-289	-160-1				Lookout
	330				+8.0	TH	-1.7	+6.3			BS						
236	0				5.9	-		-5.4		7127.6	X	0	0	364,594	326,074		
237	302		124° 10.3'	+15.0°	1.1	-		-1.1		7131.9	TP	-229	+197-1	364,365	326,270		sharp curve
237	302				2.6	TH	+1.5	-1.1			TP						
	606		25° 52.8' +180°	+15.0°	+14.9	90° 30'	+5.3	+20.2	7152.1		BS	-458	-397-1				Sharp curve
	606				+4.4	91° 30'	+15.9	+20.3			BS						horiz. correction y = -7' x = -16'
	450		37° 39.4'	+15.0°	9.2	-		-9.2		7142.9		+273	+358	364,180	326,230		4 Way Intersect.
238	330		36° 30'	+15.0°	7.4	-		-7.4		7144.7		+205	+258	364,112	326,130		
239	0				5.4	-		-5.4		7146.7	X	0	0	363,907	325,872		
240	325		242° 25'	+14.8°	1.8	-		-1.8		7150.3		-72	-317	363,835	325,555		
241	640		254° 16.6'	+14.8°	1.8	TH	+3.2	+1.4		7153.5	TP	-10.6	-640-5	363,891	325,227		curve
241	640				6.0	89° 20'	+7.4	+1.4			TP						
	660		86° 40.3' +180°	+14.8°	+11.6	91°	+11.5	+23.1	7176.6		BS	+131-7	-647-5				
	660				+5.9	91° 30'	+17.3	+23.2			BS						
242	330		89° 14'	+14.8°	14.4	BA	-1.7	-16.1		7160.5		-52	+326	363,963	324,901		
243	0				5.4	-		-5.4		7171.2	X	0	0	364,015	324,575		
244	330		264° 34'	+14.8°	6.5	-		-6.5		7170.1		+54	-326	364,069	324,249		
245	660		264° 29'	+14.8°	3.9	-		-3.9		7172.7	TP	+106-6	-651-5	364,115	323,919		
245	660				7.2	TH	+3.3	-3.9			TP						

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE			
10/5/79		G. Cotcamp		R. Turner		6834		RWT			6	20			
AREA		TOPO MAP	STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		Cooper Lake North	Wyoming	Albany	20N	75W		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH -	EAST + WEST -		Y
												LAT.	DEP.		
245										7172.7					
	1320		76°28.6' ±180°	+14.5°	+12.1	-		+12.1	7184.8		BS	+22.7	-1320.5		
	1320				+5.5	04	+6.6	+12.1			BS				
246	990		76°28.6'	+14.5°	11.2	04	-5.0	-16.2		7168.6		-17	+990	364,113	323,584
247	660		77°49'	+14.5°	14.0	-		-14.0		7170.8		-26	+659	364,104	323,253
248	330		"	"	6.7	-		-6.7		7178.1		-13	+330	364,117	322,924
249	0				54	-		-5.4		7179.4	π	0	0	364,130	322,594
250	330		253°26'	+14.5°	12.0	-		-12.0		7172.8		-12	-330	364,118	322,264
251	660		257°8'	+14.5°	0.8	-		-0.8		7184.0		+19	-660	364,149	321,934
252	980		253°32'	+14.5°	11.6	89°20'	+11.4	-0.2		7184.6	TP	-34.6	-979.5	364,090	321,610 S-curve
252	980				14.4	89°10'	+14.2	-0.2			TP				
	1625		62°2.8' ±180°	+14.5°	+5.0	91°20'	+37.8	+42.8	7227.4		BS	-378.7	-1580.5		
	1625				+14.5	91°	+28.4	+42.9			BS				curve
253	1300		64°19'	+14.5°	9.8	91°30'	-34.0	-43.8		7183.6		+252	+1275	363,957	321,300
254	980		65°25'	+14.5°	5.0	92°	-34.2	-39.2		7188.2		+172	+965	363,877	320,990
255	653		67°40'	+14.5°	9.4	92°	-22.8	-32.2		7195.2		+89	+647	363,794	320,672
256	325		78°43'	+14.5°	14.5	04	-1.6	-16.1		7211.3		-18	+324	363,687	320,349
257	0				54	-		-5.4		7222.0	π	0	0	363,705	320,025
258	330		278°	+14.5°	1.6	-		-1.6		7225.8		+126	-305	363,831	319,720
259	660		275°22'	+14.5°	3.2	TH	+3.3	+0.1		7227.5		+224	-621	363,929	319,404
260	990		273°10'	+14.5°	3.6	TH	+5.0	+1.4		7228.8		+300	-943	364,005	319,082

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
10/5/79		G. Cotcamp		R. Turner		6839		RWT		6	21					
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		Conper Lake North	Wyoming	Albany		20N	75W		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
									7227.4							
261	1310		271° 17.2'	+14.2°	3.7	TH	+6.6	+2.9	7227.4	7230.2	TP	+350.6	-1262.5	364,049	318,758	
261	1310				4.9	89° 40'	+7.6	+2.7			TP					
	1312		87° 13.1' +180°	+14.2°	11.6	-		+11.6	7241.8		BS	+260.7	-1286.5			curve
	1312				5.1	84	+6.6	+11.7			BS				
262	985		88° 54'	+14.2°	9.0	-		-9.0		7232.8		-223	+959	364,079	318,426	
263	660		92° 13'	+14.2°	7.4	-		-7.4		7234.4		-187	+633	364,115	318,100	
264	330		" "	"	6.3	-		-6.3		7235.5		-93	+317	364,209	317,784	
265	0				5.9	-		-5.4		7236.4	π	0	0	364,302	317,467	
266	330		178° 38'	+14.2°	5.2	-		-5.2		7236.6		+128	-304	364,430	317,163	
267	660		282° 47'	+14.2°	9.0	-		-9.0		7232.8		+299	-588	364,601	316,879	
268	990		285° 22'	+14.2°	4.9	-		-4.9		7236.9		+489	-861	364,791	316,606	
269	1290		279° 53.4'	+14.2°	0.9	-		-0.9		7240.9	TP	+526.6	-1178.5	364,822	316,284	sharp curve
269	1290				7.3	TH	+6.5	-0.8			TP					
	933	929	20° 9.1' +180°	+14.2°	9.4	85° -	-81.0	-71.6	7169.3		BS	-767.7	-524.5			
	933				6.7	85° 10'	-78.3	-71.6			BS					sharp curve
270	650	648	7° 23'	+14.2°	4.0	85° 20'	+52.7	+48.7		7218.0		+603	+238	364,651	315,993	
270	650	648	8° 9.8'	+14.2°	2.6	85° 30'	+50.8	+48.2		7217.5		+599	+247	364,647	316,002	intersect.
271	330	329	358° 15'	+14.2°	7.9	86° -	+23.0	+15.1		7184.4		+321	+71	364,369	315,826	
272	0				5.4	-		-5.4		7163.9	π	0	0	364,048	315,755	
273	330		178° 43'	+14.2°	14.7	91° -	-5.8	-20.5		7148.8		-322	-74	363,726	315,681	

Geosource Inc.

DATE 10/5/79	INSTRUMENT MAN G. Costcamp	ROD MAN R. Turner	PARTY NUMBER 6834	NOTES CHECKED BY RWT	LINE NO. 6	PAGE 22
AREA Wyoming	TOPO MAP Cooper Lake North	STATE Wyoming	COUNTY Albany	TWP 20N/19N	RANGE 75W	PPM
			PARTY MANAGER L. Davis			

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
									7169.3										
274	660		179°22'	+14.0°	12.8	92°-	-23.0	-35.8		7133.5		-642	-153	363,406	315,602				
275	985	984	181°38.2'	+14.0°	8.8	92°30'	-42.9	-51.7		7117.6	TP	-948.6	-265.5	363,094	315,485			Curve	
275	985				11.5	92°	-34.4	-48.9			TP								
	985		7°57.8' +180°	+14.0°	+4.9	88°40'	-22.9	-18.0			BS	-914.7	-368.5						misread rod
	985				+10.5	88°20'	-28.6	-18.1	7099.5		BS								
276	660		11°15'	+14.0°	7.8	89°-	+11.5	+3.7		7103.2		+597	+282	362,770	315,394				
277	330		15°-	+14.0°	11.2	89°-	+5.8	-5.4		7094.1		+289	+160	362,462	315,272				
278	0				5.4	-		-5.4		7094.1	X	0	0	362,173	315,112				
279	330		192°33'	+14.0°	8.6	92°-	-11.5	-20.1		7079.4		-295	-148	361,878	314,964				horiz. correct y=-78' x=-60'
JL TR	310		190°12.5'	+14.0°	8.5	92°-	-10.8	-19.3		7080.2		-283	-127	361,890	314,985				361,890 + 314,985 (3) 4-way Intersect
280	645		204°45'	+14.0°	8.2	91°-	-11.3	-19.5		7080.0		-503	-404	361,670	314,708				curve
281	970		208°-	+14.0°	6.5	91°-	-16.9	-23.4		7076.1		-721	-649	361,452	314,463				" "
282	1300		209°22.2'	+14.6°	5.1	90°46'	-17.4	-22.5		7077.0	TP	-936	-903.6	361,237	314,215				" "
	1300				11.0	90°30'	-11.3	-22.3			TP								
	632		16°46.3' +180°	+14.6°	+5.1	88°-	-22.0	-16.9			BS	-1540	-329.6						
	632				+3.2	88°16'	-20.2	-17.0	7060.0		BS								
283	315		25°25'	+14.6°	1.3	-		-1.3		7058.7		+241	+203	360,938	314,095				
284	0				5.4	-		-5.4		7054.6	X	0	0	360,697	313,892				
L	752		326°7.3'	+14.6°	1.0	89°-	+26.2	+25.2		7085.2		+710	-248	361,407	313,644				fence corner
285	330		279°32'	+14.6°	4.3	89°-	+5.8	+1.5		7061.5		+135	-301	360,832	313,591				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
10/5/79		G. Cotcamp		R. Turner		6839		RWT		6	23					
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER							
Wyoming		Cooper Lake North	Wyoming	Albany		19N/20N	75w		L.O. Davis							
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
									7060.0							
286	655		280° 9.8'	+14.6°	8.0	89° -	+11.4	+3.4		7063.4	TP	+274	-595.6	360,971	313,303	Curve
286	655				4.2	89° 20'	+7.6	+3.4			TP					
	1300		99° 26.6' +180°	+14.6°	+11.0	BH	+6.5	+17.5	7080.9		BS	+530	-1187.6			
	1300				+6.2	90° 30'	+11.3	+17.5			BS					S-curve
287	980		99° 27'	+14.6°	11.3	BH	-4.9	-16.2		7064.7		-399	+895	361,102	313,017	
288	660		96° 8'	+14.6°	14.3	-		-14.3		7066.6		-234	+617	361,267	312,739	
289	330		88° 15'	+14.6°	10.1	-		-10.1		7070.8		-73	+322	361,428	312,444	
290	0				5.4	-		-5.4		7075.5	π	0	0	361,501	312,122	
291	330		252° 6'	+14.6°	6.7	88° -	+11.5	+4.8		7085.7		-19	-329	361,482	311,793	
292	650	699	248° 15'	+14.6°	10.0	87° -	+34.0	+24.0		7104.9		-81	-694	361,420	311,478	S-curve
293	970	769	254° 21'	+14.6°	8.4	87° -	+50.7	+42.3		7123.2	TP	-18	-969.6	361,483	311,159	
293	970				5.6	87° 10'	+47.9	+42.3			TP					
	655		82° 12.9' +180°	+14.6°	+13.9	BH	+3.3	+17.2	7140.4		BS	+78	-650.6			curve
	655				+14.5	90° 14'	+2.7	+17.2			BS					
294	330		78° -	+14.6°	10.8	-		-10.8		7129.6		-15	+330	361,546	310,845	
294	212		81° -	+14.6°	6.4	-		-6.4		7134.0		-21	+211	361,540	310,726	Y-intersect.
295	0				5.4	-		-5.4		7135.0	π	0	0	361,561	310,515	
296	330		272° 54'	+14.6°	11.5	-		-11.5		7128.9		+99	-315	361,660	310,200	
297	655		281° 13'	+14.6°	14.6	-		-14.6		7125.8		+285	-590	361,846	309,925	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE					
10/8/79		C. Cotcamp		R. Turner		6824		RWT			6	24					
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
Wyoming		Cooper Lake N. / Rock River	Wyoming	Albany		20N	76w/75w		L. O. Davis								
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									7140.4								
298	975		284°37'	+14.9°	8.1	-		-8.1		7132.3	TP	+480	-898+6	362,041	309,673	curve	
298	975				13.0	TH	+4.9	-8.1			TP						
	968		91°55.7' +180°	+14.9°	+5.6	-		+5.6	7137.9		BS	+280	-926+6			curve	
	968				+10.4	TH	-4.8	+5.6			BS						
299	650		85°35'	+14.9°	7.6	-		-7.6		7130.3		-118	+639	362,203	309,392	"	
300	330		" "		9.6	-		-9.6		7128.3		-60	+324	362,261	309,077		
301	0				5.4	-		-5.4		7132.5	π	0	0	362,321	308,753		
302	330		275°40'	+14.9°	14.4	-		-14.4		7123.5		+116	-309	362,437	308,444		
303	650		267°19'	+14.9°	12.7	BH	-3.3	-16.0		7121.9		+138	-635	362,459	308,118		
304	980		264°16.6'	+14.9°	2.0	-		-2.0		7135.9	TP	+156	-967+6	362,477	307,792	curve	
304	980				6.9	TH	+4.9	-2.0			TP						
	990		93°18.3' +180°	+14.9°	+10.8	-		+10.8	7146.7		BS	+309	-940+6				
	990				+5.8	BH	+5.0	+10.8			BS						
305	660		95°10'	+14.9°	9.8	-		-9.8		7136.9		-226	+620	362,560	307,478		
306	330		97°53'	+14.9°	10.6	-		-10.6		7136.1		-128	+304	362,658	307,162		
307	0				5.4	-		-5.4		7141.3	π	0	0	362,786	306,858		
308	330		274°50'	+14.9°	7.9	-		-7.9		7138.8		+111	-311	362,897	306,547	↑ Cooper Lake N. Quad	
309	655		270°32'	+14.9°	3.3	-		-3.3		7143.4		+174	-631	362,960	306,227	↓ Rock River Quad	
310	985		267°32.7'	+14.9°	3.0	-		-3.0			TP	+212	-962+6	362,998	305,902	"	
310	985				8.0	TH	+4.9	-3.1		7143.6	TP						

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.


DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE					
10/8/79		G. C. Camp		R. Turner		6834		RWT			6	25					
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER								
Wyoming		Rock River 7 1/2'	Wyoming	Albany		20 N	76 W		L. O. Davis								
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
310										7143.6							
	1320		82° 57.1' +180°	+14.9°	+13.3	-		+13.3	7156.9		BS	+180	-1308.6				
	1320				+6.7	OH	+6.6	+13.3			BS						
311	990		82° 57.1'	+14.9°	11.2	-		-11.2		7145.7		-135	+981	363,043	305,581		
312	660		" "		9.6	-		-9.6		7147.3		-90	+654	363,088	305,254		
313	330		89° 5'	+14.9°	8.6	-		-8.6		7148.3		-52	+326	363,126	304,926		
314	0				5.9	-		-5.4		7151.5	X	0	0	363,178	304,600		
315	330		266° -	+14.9°	4.3	-		-4.3		7152.6		+62	-324	363,240	304,276		
316	660		" "		4.0	-		-4.0		7152.9		+125	-648	363,303	303,952		
317	990		" "		2.4	-		-2.4		7154.5		+187	-972	363,365	303,628		
318	1320		266° 50'	+14.9°	0.5	-		-0.5		7156.4		+268	-1292	363,446	303,308		
319	1650		266° 50'	+14.9°	2.8	TH	+8.3	+5.5	(5.4)	7162.3	TP	+336	-1616.6	363,514	302,990		
319	1650				4.3	89° 40'	+9.6	+5.3			TP						
	990		87° 59.7' +180°	+14.9°	+10.6	87° -	-17.3	-6.7	7155.6		BS	+221 +1	-965.6				
	990				+11.7	88° 46'	-21.3	-6.6			BS						
≠	950		88° 30'	+14.9°	9.6	89° -	+16.6	+7.0		7162.6		-220	+924	363,516	302,955	N-S fence	
320	660		89° 25'	+14.9°	2.1	89° -	+11.5	+9.4		7165.0		-163	+640	363,573	302,671		
321	330		" "		3.6	89° -	+5.8	+2.2		7157.8		-82	+320	363,654	302,351		
322	0				5.9	-		-5.4		7150.2	X	0	0	363,736	302,031		
323	330		258° -	+14.9°	4.9	-		-4.9		7150.7		+17	-330	363,753	301,701		
324	660		" "		1.9	-		-1.9		7153.7		+33	-659	363,769	301,372		

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
10/8/79		G. Cotcamp		R. Turner		6837		RWT		6	26					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
Wyoming		Rock River		Wyoming	Albany		20N	76W		L. O. Davis						
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
									7155.6							
325	986		253° 50.4'	+14.9°	1.3	TH	+4.9	+3.6		7159.2	TP	-22+1	-986+6	363,715	301,051	curve
325	986				5.0	89°30'	+8.6	+3.6			TP					
	1317		71° 23.8' +180°	+14.9°	+12.8	91°-	+23.0	+35.8	7195.0		BS	-85+1	-1314+5			
	1317				+5.2	91°20'	+30.6	+35.8			BS					horiz. correct. y=+3' x=-95'
X	1285		71°48'	+14.9°	13.7	91°-	-22.4	-36.1		7158.9		+74	+1283	363,705	301,025	363,705 + 301,025 (4) 4-Way Intersect.
326	988		72°59'	+14.9°	14.5	91°-	-17.2	-31.7		7163.3		+36	+987	363,667	300,729	
327	660		75°50'	+14.9°	12.1	91°-	-11.5	-23.6		7171.4		-6	+660	363,625	300,402	
328	330		" "	"	14.4	GN	-1.7	-16.1		7178.9		-3	+330	363,628	300,072	
329	0				5.4	-		-5.4		7189.6	X	0	0	363,631	299,742	
330	330		256°11'	+14.7°	1.9	-		-1.9		7193.1		+5	-330	363,636	299,412	
331	660		253°36'	+14.7°	3.0	TH	+3.3	+0.3		7195.3		-20	-660	363,611	299,082	
332	985		251°45'	+14.7°	2.0	TH	+4.9	+2.9		7197.9		-61	-983	363,570	298,759	curve
333	1312		251°21.1'	+14.7°	2.9	TH	+6.6	+3.7			TP	-90	-1309	363,541	298,433	" "
333	1312				4.0	89°40'	+7.6	+3.6		7198.6	TP					
	1640		69°10.6' +180°	+14.7°	+10.7	-		+10.9	7209.5		BS	-175	-1631			
	1640				+2.7	GN	+8.2	+10.9			BS					S-curve
334	1315		68°34'	+14.7°	9.5	-		-9.5		7200.0		+154	+1306	363,520	298,108	" "
335	987		68°-	+14.7°	8.7	-		-8.7		7200.8		+125	+979	363,491	297,781	
336	660		70°46'	+14.7°	8.0	-		-8.0		7201.5		+52	+658	363,418	297,460	
337	330		72°46'	+14.7°	7.2	-		-7.2		7202.3		+15	+330	363,381	297,132	

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE							
10/8/79		G. C. Camp		R. Turner		6834		RWT			6	27							
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER										
Wyoming		Rock River	Wyoming	Albany		20N	76W		L. O. Davis										
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
									7209.5										
338	0				5.4	-		-5.4		7204.1	π	0	0	363,366	296,802				
339	330		251° 52'	+14.7°	3.9	-		-3.9		7205.6		-20	-329	363,346	296,473				
340	655		296° 46'	+14.7°	0.5	-		-0.5		7209.0		-97	-648	363,269	296,154				
341	980		291° 51'	+14.7°	4.1	TH	+4.9	+0.8		2210.3		-228	-953	363,138	295,849				curve
342	1307		239° 32.8'	+14.7°	4.0	TH	+6.5	+2.5		7212.0	TP	-355	-1258	363,011	295,544				" "
342	1307				5.1	89° 40'	+7.6	+2.5			TP								
	1300		67° 32.7' +180°	+14.7°	+7.0	-		+7.0	7219.0		BS	-175	-1288						
	1300				+3.6	TH	-6.5	+7.0			BS								
343	980		69° 3'	+14.7°	5.0	-		-5.0		7214.0		+107	+974	362,943	295,230				curve
344	655		68° 15'	+14.7°	2.7	-		-2.7		7216.3		+80	+650	362,916	294,906				" "
345	330		63° -	+14.7°	3.6	-		-3.6		7215.4		+70	+322	362,906	294,578				
346	0				5.4	-		-5.4		7213.6	π	0	0	362,836	294,256				
347	330		230° 22'	+14.7°	0.4	-		-0.4		7218.6		-139	-299	362,697	293,957				
348	660		234° 48'	+14.7°	2.3	89° -	+11.5	+9.2		7228.2		-231	-618	362,605	293,638				
349	980		236° 15'	+14.7°	1.9	89° -	+17.1	+15.2		7234.2		-320	-926	362,516	293,330				curve
350	1310		236° 13.6'	+14.7°	6.5	89° -	+22.9	+16.4			TP	-428	-1238	362,408	293,018				" "
350	1310				12.7	88° 44'	+29.0	+16.3		7235.3	TP								
	950		85° 40.7' +180°	+14.7°	+5.1	TH	-4.8	+0.4	7235.7		BS	+171	-934						
	950				+4.8	89° 44'	-4.4	+0.4			BS								
351	645		93° 17'	+14.7°	5.7	-		-5.7		7230.0		-199	+613	362,380	292,697				sharp curve

DATE		INSTRUMENT MAN			ROD MAN			PARTY NUMBER		NOTES CHECKED BY			LINE NO.	PAGE			
10/8/79		G. Cotcamp			R. Turner			6834		RWT			6	28			
AREA		TOPO MAP		STATE	COUNTY			TWP	RANGE	PPM	PARTY MANAGER						
Wyoming		Rock River		Wyoming	Albany			19N/20N	76W		L.O. Davis						
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS	
												LAT.	DEP.	Y	X		
									7235.7								
351	350		105°44'	+14.7°	14.4	-		-14.4		7221.3		-177	+302	362,402	292,386	N-S fence	
352	327		105°49'	+14.7°	14.0	-		-14.0		7221.7		-166	+282	362,413	292,366		
353	0				5.4	-		-5.4		7230.3	π	0	0	362,579	292,084		
354	330		273°5'	+14.7°	3.1	88°-	+11.5	+8.4		7244.1		+101	-314	362,680	291,770		
355	645		260°40'	+14.7°	12.9	88°-	+22.5	+9.6		7245.3		+60	-692	362,639	291,442	curve	
356	965		254°24.8'	+14.7°	5.3	88°40'	+22.4	+17.1		7252.8	π	-15	-965	362,564	291,119		
356	965				8.1	88°30'	+25.3	+17.2			π						
	975		63°27.6'+180°	+14.7°	+13.2	-		+13.2	7266.0		BS	-200	-954				
	975				+8.3	BH	+4.9	+13.2			BS					curve	
357	650		60°4'	+14.7°	10.4	-		-10.4		7255.6		+171	+627	362,535	290,792		
358	330		50°52'	+14.7°	7.3	-		-7.3		7258.7		+136	+300	362,500	290,465		
359	0				5.4	-		-5.4		7260.6	π	0	0	362,364	290,165		
360	330		233°31'	+14.7°	4.8	-		-4.8		7261.2		-122	-306	362,242	289,859		
361	660		231°-	+14.7°	1.9	-		-1.9		7264.1		-272	-602	362,092	289,563		
362	980		231°44'	+14.7°	4.8	TH	+4.9	+0.1		7266.1		-392	-898	361,972	289,267		
363	1256		228°7.5'	+14.7°	4.8	TH	+6.3	+1.5		7267.5		-574	-1117	361,790	289,048	E-W fence	
363	1290		226°54.4'	+14.7°	4.7	TH	+6.5	+1.8			π	-613	-1135	361,751	289,030	curve	
363	1290				5.8	89°40'	+7.5	+1.7		7267.7	π						
	605		46°17.2'+180°	+14.7°	+8.5	-		+8.5			BS	-293	-529			sharp curve	
	605				+11.5	TH	-3.0	+8.5	7276.2		BS						

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
10/9/79		G. Cotsamp		R. Turner		6834		RWT		6		29		
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
Wyoming		Rock River		Wyoming		Albany		76w		19N		L.O. Davis		
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									7276.2					
364	325		68° -	+14.7°	74	-		-7.4		7268.8		+41	+322	361,499 288,823
365	0				54	-		-5.4		7270.8	π	0	0	361,458 288,501
366	330		254° 32'	+14.7°	3.9	-		-3.9		7272.3		-4	-330	361,454 288,171
367	655		245° -	+14.7°	1.5	-		-1.5		7274.7		-117	-644	361,341 287,857
368	980		246° 34'	+14.7°	0.6	-		-0.6		7275.6	TP	-157	-967-3	361,301 287,531 curve
368	980				5.5	TH	+4.9	-0.6			TP			
	1270		43° 36' +180°	+14.7°	+7.9	-		+7.9	72835		BS	-667	-1081-3	sharp curve
	1270				+14.2	TH	-6.4	+7.9			BS			" "
369	975		40° 28'	+14.7°	5.9	-		-5.9		7277.6		+557	+800	361,191 287,247 " "
370	650		33° 4'	+14.7°	5.5	-		-5.5		7278.0		+437	+481	361,071 286,928 " "
	900		22° 2'	+14.7°	5.5	-		-5.5		7278.0		+321	+239	360,955 286,686 360,950 + 286,700 (S) T-rd (N) e) 7276.0 Under powerline
371	330		17° 6'	+14.7°	5.9	-		-5.9		7277.6		+280	+174	360,914 286,621
372	0				5.4	-		-5.4		7278.1	π	0	0	360,634 286,447
373	330		188° 18'	+14.7°	4.7	-		-4.7		7278.8		-304	-129	360,330 286,318
374	660		194° -	+14.7°	4.9	-		-4.9		7278.6		-579	-317	360,055 286,130
375	945		203° 35.6'	+14.7°	14.4	-		-14.4		7269.1	TP	-742-1	-586-3	359,891 285,858 sharp curve
375	945				9.7	BH	-4.7	-14.4			TP			
	325	324	66° 46.7' +180°	+14.7°	+12.9	86° -	-22.6	-9.7	7259.4		BS	-48-1	-320-3	
	325				+11.1	86° 30'	-20.7	-9.6			BS			Curve
376	0				54	-		-5.4		7254.0	π	0	0	359,842 285,535

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE					
10/9/79		G. Cotcamp		R. Turner		6834		RWT		6	30					
AREA		TOPO MAP		STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER						
Wyoming		Rock River		Wyoming	Albany		19N	76W		L.O. Davis						
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
									7259.4							
377	302		221°26'	+47°	3.9	93°-	-15.8	-19.7		7239.7	TP	-168-1	-251-3	359,673	285,281	sharp curve
377	302				9.1	92°-	-10.5	-19.6			TP					
	1280		5°31.9'+180°	+14.7°	+54	88°40'	-29.8	-24.4	7215.3		BS	-1201-1	-443-3			
	1280				+9.1	88°30'	-33.5	-24.4			BS					curve
378	980		11°49'	+14.7°	2.4	TH	+4.9	+2.5		7217.8		+877	+438	359,348	285,273	"
379	660		17°58'	+14.7°	9.0	-	-	-9.0		7206.3		+556	+356	359,027	285,191	
380	330		" "	"	9.9	92°-	-11.5	-21.4		7193.9		+278	+178	358,749	285,013	
381	0				5.4	-	-	-5.4		7209.9	TP	0	0	358,471	284,835	
382	325		181°10'	+14.7°	3.2	88°-	+11.3	+8.1		7223.4		-313	-89	358,158	284,746	
383	640	639	175°43'	+14.7°	8.1	87°-	+33.4	+25.3		7240.6		-628	-116	357,843	284,719	sharp curve
384	860	859	193°48.8'	+14.7°	7.0	87°-	+44.9	+37.9		7253.2	TP	-755-1	-410-3	357,715	284,422	"
384	860				2.1	87°20'	+40.0	+37.9			TP					
	1300		38°21'+180°	+14.9°	+6.2	-	-	+6.2	7259.4		BS	-778-1	-1042-3			
	1300				+12.7	TH	-6.5	+6.2			BS					curve
385	980		34°12'	+14.9°	10.8	-	-	-70.8		7248.6		+642	+741	357,578	284,118	"
386	660		36°28'	+14.9°	6.1	-	-	-6.1		7253.3		+412	+516	357,348	283,893	
387	330		" "	"	4.7	-	-	-4.7		7254.7		+206	+258	357,142	283,635	
388	0				5.4	-	-	-5.4		7254.0	TP	0	0	356,936	283,377	
389	320		213°5'	+14.9°	2.9	-	-	-2.9		7256.5		-221	-245	356,715	283,132	
390	660		" "	"	2.9	-	-	-2.9		7256.5		-442	-490	356,494	282,887	

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE						
10/9/79		G. Cotcamp		R. Turner		6834		RWT		6		31						
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER				
Wyoming		Rock River		Wyoming		Albany		19N		76W				L.O. Davis				
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS
												LAT.	DEP.	Y	X			
									7259.4									
391	990		212° -	+14.9°	4.5	7H	+5.0	+0.5		7259.9		-676	-723	356,260	282,654			
392	1320		212° 40'	+14.9°	5.4	89° 30'	+11.5	+6.1		7265.5	TP	-891-1	-974-3	356,044	282,400			
392	1320				9.2	89° 30'	+15.4	+6.2			TP							
	1320		31° 33' +180°	+14.9°	6.0	89° 30'	-11.5	-5.5	7260.0		BS	-909-1	-957-3					
	1320				11.4	89° 16'	-16.9	-5.5			BS							
393	990		31° 33'	+14.9°	3.4	7H	+5.0	+1.6		7261.6		+682	+718	355,816	282,158			
394	660		30° 28'	+14.9°	3.1	7H	+3.3	+0.2		7260.2		+464	+470	355,598	281,910			
395	330		28° 12'	+14.9°	0.5	-		-0.5		7259.5		+241	+225	355,375	281,665			
396	0				5.4	-		-5.4		7254.6	π	0	0	355,134	281,440			
397	330		206° 39'	+14.9°	4.9	89° -	+5.8	+0.9		7260.9		-247	-219	354,887	281,221			
398	660		" "	"	9.9	89° -	+11.5	+1.6		7261.6		-494	-438	354,640	281,002			
399	985		204° 18'	+14.9°	10.4	89° -	+17.2	+6.8		7266.8	TP	-763-1	-623-3	354,370	280,814	curve		
399	985				4.7	89° 20'	+11.5	+6.8			TP							
	1310		32° 39.5' +180°	+14.9°	9.2	-		+9.2	7276.0		BS	-884.	-967-3					curve
	1310				2.7	8H	+6.6	+9.3			BS							
400	990		35° -	+14.9°	8.6	-		-8.6		7267.4		+638	+757	354,124	280,601			
401	660		35° 36'	+14.9°	6.6	-		-6.6		7269.4		+420	+509	353,906	280,353			
402	330		36° 35'	+14.9°	5.2	-		-5.2		7270.8		+206	+258	353,692	280,102			
403	0				5.4	-		-5.4		7270.6	π	0	0	353,486	279,844			
404	330		216° -	+14.9°	8.8	-		-8.8		7267.2		-208	-256	353,278	279,588			

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
10/9/79		G. Cotcamp		R. Turner		6834		RWT		6		32		
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
Wyoming		Rock River		Wyoming		Albany		76w. 177w.				L.O. Davis		
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
									7276.0					
405	6.55		211°48'	+14.9°	5.8	-		-5.8		7270.2		-449	-477	353,037 279,367 S-curve
406	982		215°13'	+14.9°	4.5	TH	+4.9	+0.4			TP	-630	-754.3	352,856 279,087 " "
406	982				5.4	89°40'	+5.7	+0.3		7276.3	TP			
	1315		45°12.8' +180°	+14.9°	+4.4	-		+4.4	7280.7		BS	-655	-1140.3	
	1315				+11.0	TH	-6.6	+4.4			BS			
407	988		44°52'	+14.9°	6.1	-		-6.1		7274.6		+497	+854	352,698 278,798
408	660		42°30'	+14.9°	5.3	-		-5.3		7275.4		+356	+556	352,557 278,500
409	380		38°30'	+14.9°	14.6	91°	-5.8	-20.4		7260.3		+197	+265	352,398 278,209
410	0				5.4	-		-5.4		7275.3	X	0	0	352,201 277,944
411	330		208°19'	+14.9°	3.2	-		-3.2		7277.5		-240	-226	351,961 277,718
412	660		212°40'	+14.9°	2.0	-		-2.0		7278.7		-445	-487	351,756 277,457
413	985		213°47'	+14.9°	5.4	-		-5.4		7275.3		-650	-740	351,551 277,204
414	1312		214°-	+14.9°	4.8	TH	+6.6	+1.8		7282.5		-862	-989	351,339 276,955 curve
415	1690		214°9.7'	+14.9°	3.7	TH	+8.2	+4.5		7285.2	TP	-1075	-1239.3	351,126 276,702 EOL # 6
415	1690				5.0	89°40'	+9.5	+4.5			TP			
	1150		42°1.2' +180°	+14.9°	+14.5	-		+14.5	7299.7		BS	-628	-964.3	
	1150				+8.7	TH	+5.8	+14.5			BS			
X	0				5.4	-		-5.4		7294.3	X	0	0	350,498 275,735
TP	1915		190°34.1'	+14.9°	3.9	TH	+9.6	+5.7			TP	-1729	-823.2	348,769 274,910
TP	1915				5.4	89°40'	+11.1	+5.7		7305.4	TP			

DATE 10/9/79	INSTRUMENT MAN G. Cotcamp	ROD MAN R. Turner	PARTY NUMBER 6874	NOTES CHECKED BY Ransom W. Turner	LINE NO 6	PAGE 33 of 33
AREA WYOMING-Laramie	TOPO MAP Big Judson / Bengough Hill	STATE Wyoming	COUNTY Albany	TWP 19N	RANGE 77W	PPM
					PARTY MANAGER L.O. Davis	

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
TP 1215										7305.4				
	2560	2559	12° 10.9' +180°		+4.7	88° 20'	-74.4	-69.7			BS	-2278	-1165	
	2560				+12.1	88° 16'	-81.9	-69.8	7235.6		BS			
π	0				5.4	-		-5.4		7230.2	π	0	0	346,491 273,745
BM	2595		250° 5.6'		14.9	89° 18'	+31.7	+16.8			BM	-226	-2585	346,265 271,160
BM	2595				13.4	89° 20'	+30.2	+16.8		7252.4	BM			346,265 + 271,160 (elev) 7252 U.S.G.S. 22 W.M. 1952