

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	8-28-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	B.C.	LINE NO.	9	PAGE	1
AREA	MONTANA	TOPO MAP	SCobey - 7 1/2'	STATE	MONT.	COUNTY	Daniels	TWP		RANGE	PPM	PARTY MANAGER	S. 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
K. #7	4way intersect		ELEVATION - 2452.0 (scaled)		y - 681.165	x - 2.985.675				2452.0					MONTANA NORTH ZONE Coordinate System y - 681.165 x - 2.985.675 K. #7 4way Int. EL. 2452.0
	4421		260 26 22	+10.5	14.9	91 10	+90.0	+104.9	+105.1		BS	-72	+4419		
	4421			+12.6	268 48	+92.6	+105.2		2552.1		BS				
1	4290		254 06	--	8.7	91 04	-79.9	-88.6		2468.5		-404	-4271	680.689	2985.843
2	3960		--	--	7.0	91 14	-85.2	-92.2		2464.9		-373	-3942	680.720	2986.172
3	3630		--	--	5.0	91 22	-86.6	-91.6		2465.5		-342	-3614	680.751	2986.500
4	3300		--	--	8.2	91 22	-78.7	-86.9		2470.2		-311	-3285	680.782	2986.829
5	2970		--	--	11.2	91 22	-70.8	-82.0		2475.1		-280	-2957	680.813	2987.157
6	2640		--	--	9.0	91 30	-69.1	-78.1		2479.0		-248	-2628	680.845	2987.486
7	2310		--	+10.5	7.7	91 38	-65.8	-73.5		2483.6		-217	-2300	680.876	2987.814
8	1980		--	--	9.8	91 44	-59.9	-69.7		2482.4		-186	-1971	680.907	2988.143
9	1650		--	--	9.9	91 50	-52.8	-62.7		2494.4		-155	-1643	680.938	2988.471
10	1320		--	--	8.7	91 50	-42.2	-50.9		2506.2		-124	-1314	680.969	2988.800
11	990		--	--	6.0	91 50	-31.7	-37.7		2519.4		-93	-986	681.000	2989.128
12	660		--	--	9.6	91 20	-15.4	-25.0		2532.1		-62	-657	681.031	2989.457
13	330		--	--	4.8	91 20	-7.7	-12.5		2544.6		-31	-329	681.062	2989.785
14	0		--	--	5.1	--	--	-5.1		2552.0	X	0	0	681.093	2990.114
15	330		74 05	~	5.5	89 -	+5.8	+0.3		2552.4		+31	+329	681.124	2990.443
16	660		--	~	6.7	89 -	+11.5	+4.8		2561.9		+62	+657	681.155	2990.771
17	990		--	~	8.0	89 -	+12.3	+9.3		2566.4		+93	+986	681.186	2991.100
18	1320		--	~	9.3	89 -	+23.0	+13.7		2570.8		+125	+1314	681.218	2991.428

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
8-28-86		B. Cotcamp		J. Middleton		6834		RC		9		2			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Scobey - 7 1/2'		MONT.		DANIELS								S. Binns	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS		
											NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
								2552.1							
19	1650		74 05	+10.5	11.0	89 -	+28.8	+17.8	2574.9		+156	+1643	681.249	2991.757	
20	1980		-	--	12.2	89 -	+34.6	+22.4	2579.5		+187	+1971	681.280	2992.085	-681.300 x -2992.290
1F	2194		73 33 51	--	12.7	89 -	+38.3	+25.6	2582.7	1F	+227	+2182	681.320	2992.296	1F - ROAD SOUTH BY 25840
21	2310		74 05	--	9.9	89 06	+36.3	+26.4	2583.5		+218	+2300	681.311	2992.414	
22	2640		-	--	10.2	89 06	+41.5	+31.3	2588.4		+249	+2628	681.342	2992.742	
23	2970		-	--	11.0	89 06	+46.7	+35.7	2592.8		+280	+2957	681.373	2993.071	
24	3300		-	+10.5	9.4	89 06	+51.8	+42.4	2599.5		+312	+3285	681.405	2993.399	
25	3630		-	--	9.8	89 -	+63.4	+53.6	2610.7		+343	+3614	681.436	2993.728	Scobey - 7 1/2' ↑
26	3962		73 56	--	8.4	88 56	+73.8	+65.4	2622.5		+384	+3943	681.477	2994.057	MADOC - 7 1/2' ↓
27	4292		73 35	--	8.6	88 52	+84.9	+76.3	2633.4		+442	+4269	681.535	2994.383	
28	4621		73 06	--	6.9	88 50	+94.1	+87.2	2644.3		+515	+4592	681.608	2994.706	
29	4946	4944.7	72 23 32	--	14.0	88 42	+112.2	+98.2	2655.3	TP	+612	+4907	681.705	2995.021	
29	4946				14.1	271 18	+112.2	+98.1		TP					
	3302	3300.5	238 36 22	+10.5	10.8	91 45	+100.8	+111.6	+111.8	BS	+1177	+3083			
	3302				11.1	268 15	+100.8	+111.9	2762.1	BS					
30	2970		238 36	--	9.6	91 45	-90.7	-100.3	2666.8		-1060	-2775	681.822	2995.329	
31	2640		-	--	9.1	91 45	-80.6	-89.7	2677.4		-942	-2466	681.940	2995.638	
32	2310		-	--	8.0	91 45	-70.5	-78.5	2688.6		-824	-2158	682.058	2995.946	
33	1980		-	--	7.0	91 45	-60.5	-67.5	2699.6		-706	-1850	682.176	2996.254	
34	1650		-	--	9.1	91 38	-47.0	-56.1	2711.0		-589	-1541	682.293	2996.563	

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
8-28-86		B. Cotcamp		J. Middleton		6834		BC		9		3			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		MADOC-7k		MONT.		DANIELS								S. B. INNS	
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
									2767.1						
235	1320		238 36	+10.5	7.3	91 38	-37.6	-44.9		2722.2		-471	-1233	682.411	2996.871
236	990		- -	--	10.7	91 20	-23.0	-33.7		2733.4		-353	-925	682.529	2997.179
37	660		- -	--	7.1	91 20	-15.4	-22.5		2744.6		-235	-617	682.647	2997.487
38	330		- -	--	9.8	90 20	-1.9	-11.7		2755.4		-118	-308	682.764	2997.796
39	0				5.1	-		-5.1		2762.0	X	0	0	682.882	2998.104
40	330		58 25	--	5.1	89 20	+3.8	-1.3		2765.8		+119	+308	683.001	2998.412
41	660		- -	--	6.9	89 20	+7.7	+0.8		2767.9		+237	+616	683.119	2998.720
42	990		- -	+10.5	8.8	89 20	+11.5	+2.7		2769.8		+356	+924	683.238	2999.028
43	1320		- -	--	10.8	89 20	+15.4	+4.6		2771.7		+475	+1232	683.357	2999.336
44	1650		- -	-	9.3	89 26	+16.3	+7.0		2774.1		+594	+1539	683.476	2999.643
45	1980		- -	--	10.4	89 26	+19.6	+9.2		2776.3		+712	+1847	683.594	2999.951
46	2310		- -	--	11.7	89 26	+22.8	+11.1		2778.2		+831	+2155	683.713	3,000,259
47	2327		58 03 14	-	11.2	89 26	+23.0	+11.8		2778.9	47	+851	+2166	683.733	3,000,270
47	2640		58 25	-	10.2	89 30	+23.0	+12.8		2779.9		+950	+2463	683.832	3,000,567
48	2970		- -	--	8.2	89 36	+20.7	+12.5		2779.6		+1668	+2771	683.950	3000,875
49	3301		58 30 10	+10.6	14.6	89 37	+22.1	+7.5		2774.6	TP	+1177	+3084	684.059	3,001,188
49	3301				14.7	270 23	+22.1	+7.4			TP				
	2627		243 32 47	--	11.2	-		+11.2		2785.8	BS	+718	+2527		
	2627				11.1	270 -		+11.1			BS				

y=683,720 x=3000,270
47 4 way int. 4. 2780

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8-28-86		B. Cotcamp		J. Middleton		6834		BC		9		4			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		MADOC-7 1/2'		MONT.		DANIELS								S. Binns	
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
									2785.8						
50	2301		244 15'	+10.6	9.1	90 10'	-6.7	-15.8		2770.0		-605	-2220	684,172	3,001,495
51	1970		245 18'	--	9.2	90 20'	-11.5	-20.7		2765.1		-483	-1910	684,294	3,001,805
52	1644		246 40'	--	11.8	90 20'	-9.6	-21.4		2764.4		-365	-1603	684,412	3,002,112
53	1315		248 15'	--	10.7	90 20'	-7.7	-18.4		2767.4		-257	-1290	684,520	3,002,425
54	987		249 55'	--	9.0	90 20'	-5.7	-14.7		2771.1		-164	-973	684,613	3,002,742
55	658		251 25'	--	7.1	90 20'	-3.8	-10.9		2774.9		-93	-651	684,684	3,003,064
56	330		253 20'	--	5.4	90 20'	-1.9	-7.3		2778.5		-35	-328	684,742	3,003,387
57	0				5.1	-		-5.1		2780.7	X	0	0	684,777	3,003,715
58	330		76 20'	+10.6	4.7	90 20'	-1.9	-6.6		2779.2		+18	+330	684,795	3,004,045
59	660		--	--	6.6	90 20'	-3.8	-10.4		2775.4		+36	+659	684,813	3,004,374
60	990		--	--	8.1	90 20'	-5.8	-13.9		2771.9		+55	+988	684,832	3,004,703
61	1320		--	--	9.5	90 20'	-7.7	-17.2		2768.6		+73	+1318	684,850	3,005,033
62	1650		76 20'	--	11.3	90 20'	-9.6	-20.9		2764.9		+91	+1647	684,868	3,005,362
63	1980		--	+10.6	9.7	90 20'	-11.5	-21.2		2764.6		+106	+1977	684,883	3,005,692
64	2310		--	--	4.8	90 20'	-13.4	-18.2		2767.6		+124	+2307	684,901	3,006,022
65	2640		--	--	11.2	90 04'	-3.1	-14.3		2771.5		+141	+2636	684,918	3,006,351
65	2842		75 56'	--	11.8	-		-11.8		2774.0	1/2	+172	+2837	684,949	3,006,552
66	2970		76 20'	--	11.1	-		-11.1		2774.7		+159	+2966	684,936	3,006,681
67	3300		--	--	9.6	-		-9.6		2776.2		+177	+3295	684,954	3,007,010
68	3630		--	--	9.8	-		-9.8		2776.0		+194	+3625	684,971	3,007,340

4-684,936 X-3,006,550
1/2 T-ROAD south EL. 2776.

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8-28-86		B. Cotcamp		J. Middleton		6834		J.M.		9		5			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		MADOC-7 1/2'		MONT.		DANIELS								S. Bivins	
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	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									2785.8						
69	3960		76 20	+10.6	10.0	-		-10.0		2775.8		+212	+3954	684.989	3007.669
70	4290		- -	-	10.2	-		-10.2		2775.6		+230	+4284	685.007	3007.999
71	4620		- -	-	10.9	-		-10.9		2774.9		+247	+4613	685.024	3008.328
72	4950		- -	-	11.2	-		-11.2		2774.6		+265	+4943	685.042	3008.658
73	5286		76 19 18	-	14.7	89 58	+3.1	-11.6	-11.4	2774.4	TP	+284	+5278	685.061	3008.993
73	5286				14.4	270 02	+3.1	-11.3			TP				
	4953		256 15 40	+10.6	10.7	-		+10.7	+10.6		BS	+271	+4946		
	4953				10.4	270 -		+10.4	2785.0		BS				
74	4620		256 16	-	11.2	-		-11.2		2773.8		-253	-4613	685.079	3009.326
75	4290		- -	-	8.1	90 06	-7.5	-15.6		2769.4		-234	-4284	685.098	3009.655
76	3960		- -	-	9.1	90 10	-11.5	-20.6		2764.4		-216	-3954	685.116	3009.985
77	3630		- -	-	7.3	90 18	-19.0	-26.3		2758.2		-198	-3625	685.134	3010.314
78	3300		- -	-	10.3	90 22	-21.1	-31.4		2753.6		-180	-3295	685.152	3010.644
79	2970		- -	-	11.0	90 22	-19.0	-30.0		2755.0		-162	-2966	685.170	3010.973
80	2640		- -	-	6.3	90 22	-16.9	-23.2		2761.8		-144	-2636	685.188	3011.303
81	2310		- -	-	9.7	90 10	-6.7	-16.4		2768.6		-126	-2307	685.206	3011.632
82	1980		- -	-	7.7	90 10	-5.8	-13.5		2771.5		-108	-1977	685.224	3011.962
83	1650		- -	-	11.8	-		-11.8		2773.2		-90	-1648	685.242	3012.291
84	1320		- -	-	10.3	-		-10.3		2774.2		-72	-1318	685.260	3012.621
85	990		- -	-	8.9	-		-8.9		2776.1		-54	-989	685.278	3012.950

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8-28-86		B. Cotcamp		J. Middleton		6834		J.M.		9	6				
AREA		TOPO MAP		STATE		COUNTY		TWP	RANGE	PPM	PARTY MANAGER				
MONTANA		MADOR-7 1/2'		MONT.		DANIELS					S. Binns				
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
									2785.0						y-685300 x-3013160
71	835		257 31 21	+10.6	8.1	-	-8.1		2776.9	71	-27	-835	685.305	3.013,104	71-INT. EL. 2778
86	660		256 16	--	7.6	-	-7.6		2772.4		-36	-659	685.296	3.013,280	
87	330		--	--	6.3	-	-6.3		2778.7		-18	-330	685.314	3.013,609	
88	0				5.1	-	-5.1		2779.9	TP	0	0	685.332	3.013,939	
89	330		76 17	--	5.3	TH	+1.2	-3.6	2781.4		+18	+330	685.350	3.014,269	
90	660		--	--	6.0	TH	+3.3	-2.2	2782.3		+36	+659	685.368	3.014,598	
91	990		--	+10.6	9.3	TH	+5.0	-4.3	2780.7		+54	+989	685.386	3.014,928	
92	1320		--	--	5.8	-	-5.8		2779.2		+22	+1318	685.404	3.015,257	
93	1650		--	--	6.9	-	-6.9		2778.1		+90	+1648	685.422	3.015,587	
94	1980		--	--	8.1	-	-8.1		2776.9		+108	+1927	685.440	3.015,916	
95	2310		--	--	9.7	-	-9.7		2775.3		+126	+2307	685.458	3.016,246	
96	2640		--	--	11.8	-	-11.8		2773.2		+144	+2636	685.476	3.016,575	
97	2970		--	--	12.5	-	-12.5		2772.5		+161	+2966	685.493	3.016,905	
77	3161		75 56 14	+10.6	12.3	-	-12.3		2772.2	77	+191	+3155	685.523	3.017,094	y-685500 x-3,017,120 77 4 way EL. 2775
98	3300		76 17	--	11.8	-	-11.8		2773.2		+179	+3295	685.511	3.017,234	
99	3630		--	--	10.9	-	-10.9		2774.1		+197	+3625	685.529	3.017,564	
100	3960		--	--	9.6	-	-9.6		2775.4		+215	+3954	685.547	3.017,893	
101	4290		--	--	8.7	-	-8.7		2776.3		+233	+4284	685.565	3.018,223	
102	4620		76 16 03	--	14.7	89 55	+6.2	-8.0	2772.9		+252	+4613	685.584	3.018,552	
102	4620				14.4	270 05	+6.2	-7.2			TP				

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8-28-86		B. Cotcamp		J. Middleton		6834		B.C.		9		7			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		MADOC-7 1/2		MONT.		DANIELS								S. Binns	
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
										2777.2					
	4292		256 39 45	+10.6	13.0	89 52	-10.0	+3.0	2780.2		BS	+205	+4287		
	4292				12.9	270 08	-10.0	+2.9			BS				
103	3960		256 40	--	10.1	89 54	+6.9	-3.2		2777.0		-189	-3955	685.600	3,018.884
104	3630		- -	--	9.1	89 54	+6.3	-2.8		2777.4		-173	-3626	685.616	3,019.213
105	3300		- -	--	8.9	89 54	+5.8	-3.1		2777.1		-157	-3296	685.632	3,019.543
106	2970		- -	--	9.0	89 54	+5.2	-3.8		2776.4		-142	-2967	685.647	3,019.872
107	2640		- -	--	9.6	89 54	+4.6	-5.0		2775.2		-126	-2637	685.663	3,020.202
108	2310		- -	--	10.1	89 54	+4.0	-6.1		2774.1		-110	-2307	685.679	3,020.532
109	1980		- -	+10.6	10.8	89 54	+3.5	-7.3		2772.9		-94	-1978	685.695	3,020.861
110	1650		- -	--	11.0	89 54	+2.9	-8.1		2772.1		-79	-1648	685.710	3,021.191
111	1320		- -	--	9.2	-	-	-9.2		2771.0		-63	-1319	685.726	3,021.520
112	990		- -	--	9.3	-	-	-9.3		2770.9		-47	-989	685.742	3,021.850
113	660		- -	--	6.8	-	-	-6.8		2773.4		-31	-659	685.758	3,022.180
71	464		261 14 10	--	5.4	-	-	-5.4		2774.8	71	+15	-464	685.804	3,022.375
114	330		259	--	5.7	-	-	-5.7		2774.5		-16	-330	685.773	3,022.509
115	0		- -	--	5.1	-	-	-5.1		2775.1	π	0	0	685.789	3,022.839
116	330		76 23	+10.6	5.2	-	-	-5.2		2775.0		+12	+330	685.806	3,023.169
117	660		- -	--	4.7	-	-	-4.7		2775.5		+35	+659	685.824	3,023.498
118	990		- -	--	8.4	TM	+5.0	-3.4		2776.8		+52	+989	685.841	3,023.828
119	1320		- -	--	6.0	-	-	-6.0		2774.2		+69	+1318	685.858	3,024.157

685.775 X-3,022.400
T-inter. EL. 2776

MADOC-7 1/2 ↑
FLAXVILLE-7 1/2 ↑

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO		PAGE				
8-28-86		B. Cotcamp		J. Middleton		6834		R 9		9		8				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
MONTANA		FLAXVILLE - 7 1/2'		MONT.		DANIELS								S. Binns		
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
									2780.2							
120	1650		76 23	+10.6	4.5	-	-4.5		2775.7		+87	+1648	685.876	3.024,487		
121	1980		- -	--	10.9	TH	+9.9	-1.0	2779.2		+104	+1977	685.893	3.024,816		
122	2310		- -	--	11.2	TH	+11.6	+0.4	2780.6		+122	+2307	685.911	3.025,146		
123	2640		- -	--	12.3	TH	+13.2	+0.9	2781.1		+139	+2636	685.928	3.025,475		
124	2975		76 27 02	--	13.7	TH	+14.9	+1.2			TP	+153	+2971	685.942	3.025,810	
124	2975				13.4	TH 270	+14.9	+1.5			TP					
	2312		256 17 04	+10.6	13.0	-	+13.0		2794.6		BS	+126	+2309			
	2312				12.9	270 -	+12.9				BS					
125	1980		256 17	--	4.8	BH	-9.9	-14.7	2779.9		-108	-1977	685.960	3.026,142		
126	1650		- -	--	7.5	BH	-8.3	-15.8	2778.8		-90	-1648	685.978	3.026,471		
127	1320		- -	--	9.5	BH	-6.6	-16.1	2778.5		-72	-1318	685.996	3.026,801		
128	990		- -	--	11.3	BH	-5.0	-16.3	2778.3		-54	-989	686.014	3.027,130		
129	660		- -	--	12.0	BH	-3.3	-15.3	2779.3		-36	-659	686.032	3.027,460		
#	467		257 40 48	--	11.2	-	-11.2		2783.4		#	-14	-467	686.054	3.027,652	3-686.050 x -3.027,640 #1 - enter. EL. of BM 2781.
130	330		256 17	--	8.2	-	-8.2		2786.4		-18	-330	686.050	3.027,789		
131	0				5.1	-	-5.1		2789.5		π	0	0	686.068	3.028,119	
132	330		76 12	+10.6	9.0	-	-9.0		2785.6		+18	+329	686.086	3.028,448		
133	660		- -	--	9.3	-	-9.3		2785.3		+32	+659	686.105	3.028,778		
134	990		- -	--	6.8	-	-6.8		2782.8		+55	+988	686.123	3.029,107		
135	1320		- -	--	8.0	-	-8.0		2786.6		+24	+1318	686.142	3.029,437		

SURVEY NOTES-HIGH RESOLUTION DATA
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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE					
8-28-86		B. Cotcamp		J. Middleton		6834		R. F.		9		9					
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER			
MONTANA		FLAXVILLE-7 1/2'		MONT.		DANIELS								S. B. WINS			
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	
									2794.6								
136	1650		76 12'	+10.6	10.8	-	-10.8		2783.8	+92	+1647	686.160	3.029.766				
137	1980		--	--	3.9	BH	-9.9	-13.8	2780.8	+111	+1977	686.199	3.030.096				
138	2310		--	--	6.1	BH	-11.6	-17.7	2776.9	+129	+2306	686.197	3.030.425				
139	2640		--	--	5.7	BH	-13.2	-18.9	2775.7	+147	+2636	686.215	3.030.755				
140	2970		--	--	11.0	90 08	-6.9	-17.9	2776.7	+166	+2965	686.234	3.031.084				
141	3300		--	--	10.8	90 08	-7.7	-18.5	2776.1	+184	+3295	686.252	3.031.414				
142	3630		--	--	7.1	90 08	-8.4	-15.5	2779.1	+203	+3624	686.271	3.031.743				
143	3960		--	--	6.2	90 08	-9.2	-15.4	2779.2	+221	+3954	686.289	3.032.073				
144	4291		76 14 33	+10.8	14.4	90 03	-3.7	-18.1	2779.3	2776.7	TP	+221	+4285	686.289	3.032.404		
144	4291		--	--	14.1	269 57	-3.7	-17.8			TP						
	2638		256 13 04	--	+6.2	-	+6.2	+6.2			BS	+137	+2634				
	2638		--	--	+6.3	270 -	+6.3	+6.3	BS								
145	2310		256 13	+10.8	7.7	-	-7.7	-7.7	2775.3	-120	-2307	686.306	3.032.731				
146	1980		--	--	9.0	-	-9.0	-9.0	2774.0	-103	-1977	686.323	3.033.061				
147	1650		--	--	8.0	-	-8.0	-8.0	2775.0	-86	-1648	686.340	3.033.390				
148	1320		--	--	6.8	-	-6.8	-6.8	2776.2	-69	-1318	686.357	3.033.720				
149	990		--	--	5.3	-	-5.3	-5.3	2777.7	-52	-989	686.374	3.034.049				
150	660		--	--	3.7	-	-3.7	-3.7	2779.3	-34	-659	686.392	3.034.379				
151	330		--	--	2.3	-	-2.3	-2.3	2780.7	-17	-330	686.409	3.034.708				
152	0		--	--	5.1	-	-5.1	-5.1	2777.9	TP	0	0	686.426	3.035.038			

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-3-86		B. Cotcamp		J. Middleton		6834		R G				10			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		FLAXVILLE-7 1/2'		MONT.		DANIELS								S. Binns	
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
									2783.0						
153	330		76° 12'	+10.8	10.5	-		-10.5		2772.5		+17	+330	686.443	3,035,368
2173	375		74° 13' 16"	--	10.6	-		-10.6		2772.4	41	+33	+374	686.459	3,035,412
154	660		76° 12'	--	10.2	-		-10.2		2772.8		+35	+659	686.461	3,035,697
155	990		-	--	9.5	BH	-5.0	-14.5		2768.5		+52	+989	686.478	3,036,027
156	1320		-	--	10.0	BH	-6.6	-16.6		2766.4		+69	+1318	686.495	3,036,356
157	1649		76° 14' 45"	-	11.4	BH	-8.2	-19.6		2763.4	TP	+85	+1647	686.511	3,036,685
157	1649				11.5	BH 270	-8.2	-19.7			TP				
	2637		257° 30' 15"	+10.8	14.7	BH	+13.2	+27.9			BS	+78	+2636		
	2637				14.8	BH 270	+13.2	+28.0	2791.4		BS				
158	2310		257° 48'	--	5.0	91°	-40.3	-45.3		2746.1		-56	-2309	686.533	3,037,012
159	1980	1979.2	257° 50'	--	7.9	91° 40'	-57.6	-65.5		2725.9		-47	-1979	686.542	3,037,342
160	1650	1649.0	258° 20'	--	12.4	92°	-52.6	-70.0		2721.4		-25	-1649	686.564	3,037,672
161	1320	1319.2	-	--	12.0	92°	-46.1	-58.1		2733.3		-20	-1319	686.569	3,038,002
162	990	989.4	258° 50'	--	8.8	92°	-34.6	-43.4		2748.0		-6	-989	686.583	3,038,332
163	660		-	--	5.7	92°	-23.0	-28.7		2762.7		-4	-660	686.585	3,038,661
164	330		-	--	8.9	91°	-5.8	-14.7		2776.7		-2	-330	686.587	3,038,991
165	0				5.1	-		-5.1		2786.3	TP	0	0	686.589	3,039,321
166	330		78° 55'	--	5.2	-		-5.2		2786.2		+2	+330	686.591	3,039,651
167	660		-	--	10.6	-		-10.6		2780.8		+3	+660	686.592	3,039,981
168	990		-	--	12.0	-		-12.0		2779.4		+5	+990	686.594	3,040,311

9-686430 x-3,035426
T-Intersect EL.2773.0

SURVEY NOTES-HIGH RESOLUTION DATA
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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-3-86		B. Cotcamp		J. Middleton		6834		R. F.				11			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		FLAXVILLE-7 1/2'		MONT.		DANIELS								S. Blinn	
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
									2791.4						
169	1320		78 55	+10.8	6.5	-	-6.5		2784.9			+ 7	+1320	686.596	3.040.641
170	1650		-	--	6.3	-	-6.3		2785.1			+ 8	+1650	686.597	3.040.971
171	1980		-	--	11.0	-	-11.0		2780.4			+ 10	+1980	686.599	3.041.301
172	2310		-	--	9.3	-	-9.3		2782.1			+ 11	+2310	686.600	3.041.631
173	2640		-	--	8.2	-	-8.2		2783.2			+ 13	+2640	686.602	3.041.961
174	2970		-	--	6.0	-	-6.0		2785.4			+ 15	+2970	686.604	3.042.291
175	3304		78° 25' 35"	--	6.9	-	-6.9		2784.5		TP	+45	+3304	686.634	3.042.625
175	3304				7.0	270 -	-7.0				TP				
	1980		250 36 50	+10.8	7.6	89 30	-17.3	-9.7			BS	+296	+1958		
	1980				7.7	270 30	-17.3	-9.6	2774.9		BS				
176	1650		250 30	--	7.4	89 30	+14.4	+7.0	2781.9			-250	-1631	686.680	3.042.952
177	1320		-	--	9.7	89 30	+11.5	+1.8	2776.7			-200	-1305	686.730	3.043.278
178	990		251 15	--	8.8	89 30	+8.6	-0.2	2774.7			-137	-980	686.793	3.043.603
179	660		252 -	--	5.1	89 30	+5.8	+0.7	2775.6			-83	-655	686.847	3.043.928
180	330		-	--	4.9	89 -	+5.8	+0.9	2775.8			-41	-327	686.889	3.044.256
181	0				5.1	-	-	-5.1	2769.8		TP	0	0	686.930	3.044.583
182	330		74 05	--	6.3	91 -	-5.8	-12.1	2762.8			+ 29	+329	686.959	3.044.912
183	660		-	--	8.3	91 -	-11.5	-19.8	2755.1			+ 59	+657	686.989	3.045.240
184	990		-	--	4.6	91 -	-17.3	-21.9	2753.0			+ 88	+986	687.018	3.045.569
185	1320		-	--	6.1	90 50	-19.2	-25.3	2749.6			+ 118	+1315	687.048	3.045.898

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO		PAGE			
9-3-86		B. Cotcamp		J. Middleton		6834		BC		9		12			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		FLAXVILLE-74'		MONT.		DANIELS								S. Binns	
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
									2774.9						
186	1650		74 05'	+10.8	5.9	90 50'	-24.0	-29.9		2745.0		+147	+1643	687.077	3.046.226
187	1980		-	--	6.1	90 50'	-28.8	-34.9		2740.0		+177	+1972	687.107	3.046.555
188	2310		-	--	6.7	90 50'	-33.6	-40.3		2734.6		+206	+2301	687.136	3.046.884
189	2640		-	--	4.7	90 50'	-38.4	-43.1		2731.8		+235	+2629	687.165	3.047.212
190	2970		-	--	10.2	90 38'	-32.8	-43.0		2731.9		+265	+2958	687.195	3.047.541
191	3300		-	--	7.0	90 38'	-36.5	-43.5		2731.4		+294	+3287	687.224	3.047.870
192	3632		-	--	7.1	90 34'	-35.9	-43.0		2731.9		+324	+3618	687.254	3.048.201
TP	3857		74 13 40	--	10.5	90 28'	-31.4	-41.9		2733.0	TP	+334	+3842	687.264	3.048.425
TP	3857				6.1	269 28'	-35.9	-42.0			TP				
	3063	3062.7	267 01 13	+10.8	12.5	88 40'	-71.3	-58.8	58.73	2674.3	BS	-417	+3034		
	3063				12.8	271 20'	-71.3	-58.5			BS				
193	2958	2957.3	266 20'	--	6.8	88 46'	+63.7	+56.9		2731.2		+367	-2934	687.214	3.048.525
194	2629		265 30'	--	7.9	88 50'	+53.5	+45.6		2719.9		+288	-2613	687.135	3.048.846
195	2303		264 38'	--	8.3	89 08'	+34.8	+26.5		2700.8		+218	-2293	687.065	3.049.166
196	1977		263 20'	--	9.6	89 24'	+20.7	+11.1		2685.4		+143	-1972	686.990	3.049.487
197	1648		262 25'	--	11.0	89 24'	+17.3	+6.3		2680.6		+92	-1645	686.939	3.049.814
198	1320		-	--	10.9	89 24'	+13.8	+2.9		2677.2		+74	-1318	686.921	3.050.141
199	990		-	--	13.6	89 30'	+8.6	-5.0		2669.3		+56	-988	686.903	3.050.471
200	660		-	--	11.4	89 30'	+5.8	-5.6		2668.7		+37	-659	686.884	3.050.800
201	330		-	--	1.3	89 30'	+2.9	+1.6		2625.9		+19	-329	686.866	3.051.130

SURVEY NOTES-HIGH RESOLUTION DATA
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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
9-3-86		B. Cotcamp		J. Middleton		6834		B.P.		9		13				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
MONTANA		FLAXVILLE-7 1/2'		MONT.		DANIELS.								S. Binns		
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
1267	199		266° 23' 15"	+10.8	0.5	89° 30'	+1.7	+1.2	2674.3	2675.5	1	+25	-197	686.872	3,051,262	Y=686.850 X=3,051,285 IT-intersect EL.2677.0
202	0				5.1	-		-5.1		2669.2	π	0	0	686.847	3,051,459	
203	330		82° 27'	--	8.7	91° -	-5.8	-14.5		2659.8		-19	+329	686.828	3,051,788	
204	660		-	--	7.3	91° -	-11.5	-18.8		2655.5		-37	+659	686.810	3,052,118	
205	990		-	--	7.0	90° 40'	-11.5	-18.5		2655.8		-56	+988	686.791	3,052,447	
206	1320		-	--	9.7	90° 50'	-19.2	-28.9		2645.4		-75	+1318	686.772	3,052,777	
207	1650		-	--	10.1	91° -	-28.8	-38.9		2635.4		-94	+1647	686.753	3,053,106	
208	1980		-	--	7.8	91° -	-34.6	-42.4		2631.9		-112	+1977	686.735	3,053,436	
209	2310		-	+10.8	8.9	90° 50'	-33.6	-42.5		2631.8		-131	+2306	686.716	3,053,765	FLAXVILLE - 7 1/2'
210	2640		-	--	6.3	90° 50'	-38.4	-44.7		2629.6		-150	+2636	686.697	3,054,095	NAVAJO - 7 1/2'
211	2970		-	--	8.6	90° 50'	-43.2	-51.8		2622.5		-168	+2965	686.679	3,054,424	
212	3300		-	--	10.0	90° 50'	-48.0	-58.0		2616.3		-187	+3295	686.660	3,054,754	
213	3630		-	--	11.5	90° 50'	-52.8	-64.3		2610.0		-206	+3624	686.641	3,055,083	
214	3960		-	--	10.0	90° 50'	-57.6	-67.6		2606.7		-225	+3954	686.622	3,055,413	
215	4290		-	--	7.0	90° 50'	-62.4	-69.4		2604.9		-243	+4283	686.604	3,055,742	
216	4620		-	--	6.0	90° 50'	-67.2	-73.2		2601.1		-262	+4613	686.585	3,056,072	
217	4980		-	--	4.8	90° 50'	-72.0	-76.8		2597.5		-281	+4942	686.566	3,056,401	
218	5281		81° 57' 42"	+10.4	5.3	90° 50'	-76.8	-82.1	82.23	2592.1	TP	-218	+5276	686.629	3,056,735	
218	5281				11.7	269° 14'	-70.7	-82.4			TP					

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY			LINE NO.		PAGE		
9-3-86		B. Cotamp		J. Middleton		6834					9		14		
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		NAVAJO-7 1/2		MONT.		Daniels								S. Binns	
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
									2592.1						
	4200		235 09 58	+10.4	3.5	BH	+21.0	+24.5			BS	+1737	+3824		
	4200				+ 3.8	BH 27	+21.0	+24.8	2473	2616.8	BS				
219	3874		234 47	--	11.5	BH	-19.4	-30.9		2585.9		-1626	-3516	686.740	3.057,043
220	3545		235 20	--	9.1	90 28	-28.9	-38.0		2578.8		-1457	-3232	686.909	3.057,327
221	3235		236 56	--	9.0	90 36	-33.9	-42.9		2573.9		-1247	-2985	687.119	3.057,574
222	2930		239 30	--	10.7	90 36	-30.7	-41.4		2575.4		-1007	-2752	687.359	3.057,807
223	2621		241 50	--	6.9	90 36	-27.4	-34.3		2582.5		-800	-2496	687.566	3.058,063
224	2300		244 -	--	9.7	90 25	-16.7	-26.4		2590.4		-619	-2215	687.747	3.058,344
225	1975		245 40	+10.4	6.9	90 25	-14.4	-21.3		2595.5		-476	-1917	687.890	3.058,642
226	1650		246 47	--	7.2	90 25	-12.0	-19.2		2597.6		-366	-1609	688.000	3.058,950
227	1320		- -	--	10.4	90 25	-9.6	-20.0		2596.8		-293	-1287	688.073	3.059,272
228	990		- -	--	9.3	90 42	-12.1	-21.4		2595.4		-220	-965	688.146	3.059,594
229	660		- -	--	11.7	90 42	-8.1	-19.8		2597.0		-146	-644	688.220	3.059,915
230	330		- -	--	10.5	90 42	-4.0	-14.5		2602.3		-73	-322	688.293	3.060,237
231	0				5.1	-		-5.1		2611.7	X	0	0	688.366	3.060,559
232	330		66 55	+10.4	6.5	91 42	-9.8	-16.3		2600.5		+72	+322	688.438	3.060,881
233	660		- -	--	9.4	92 20	-26.9	-36.3		2580.5		+145	+644	688.511	3.061,203
234	990	989.1	- -	--	10.1	92 30	-43.2	-53.3		2563.5		+217	+965	688.583	3.061,524
235	1320	1318.7	- -	--	6.9	92 30	-52.6	-64.5		2552.3		+290	+1287	688.656	3.061,846
236	1650	1648.8	- -	--	10.9	92 10	-62.4	-73.3		2543.5		+362	+1609	688.728	3.062,168

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-3-86		B. Cotcamp		J. Middleton		6834		B.C.				15			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		NAVAJO - 7 1/2'		MONT.		DANIELS								S. Binns	
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
									2616.8						
237	1980		66° 55'	+10.4	9.8	91° 44'	-59.9	-69.7		2547.1		+435	+1932	688,801	3,062,491
238	2310		-	--	8.5	91° 18'	-52.4	-60.9		2555.9		+507	+2254	688,873	3,062,813
239	2640		-	--	9.0	90° 56'	-43.0	-52.0		2564.8		+580	+2576	688,946	3,063,135
240	2970		-	--	10.3	90° 40'	-34.6	-44.9		2571.9		+652	+2898	689,018	3,063,457
241	3300		-	--	7.9	90° 32'	-30.7	-38.6		2578.2		+725	+3219	689,091	3,063,778
242	3630		-	--	4.1	90° 32'	-33.8	-37.9		2578.9		+797	+3541	689,163	3,064,100
241	3817		66° 42' 38"	--	4.4	90° 32'	-35.5	-39.9		2576.9	TP	+851	+3721	689,217	3,064,280
243	3960		66° 55'	--	4.6	90° 32'	-36.9	-41.5		2575.3		+869	+3863	689,235	3,064,422
244	4290		-	--	6.6	90° 26'	-32.4	-39.0		2572.8		+942	+4185	689,308	3,064,744
245	4616		66° 26' 09"	+10.2	7.0	90° 26'	-34.9	-41.9		2574.9	TP	+1067	+4491	689,433	3,065,050
245	4616		-	--	7.1	269° 34'	-34.9	-42.0			TP				
	3957		230° 24' 52"	--	11.4	TH	-19.8	-8.4			BS	+1942	+3448		
	3957		-	--	11.5	TH 270	-19.8	-8.3	2566.6		BS				
246	3630		230° 17'	--	7.9	-		-7.9		2558.7		-1788	-3159	689,587	3,065,339
247	3300		-	--	5.3	BH	-16.5	-21.8		2544.8		-1626	-2872	689,749	3,065,626
248	2970		-	--	8.5	90° 26'	-22.5	-31.0		2535.6		-1463	-2585	689,912	3,065,913
249	2640		-	--	9.2	90° 38'	-29.2	-38.4		2528.2		-1301	-2297	690,074	3,066,201
250	2310		-	--	11.5	90° 40'	-26.9	-38.4		2528.2		-1138	-2010	690,237	3,066,488
251	1980		-	--	14.7	90° 40'	-23.0	-37.7		2528.9		-976	-1723	690,399	3,066,775
252	1650		-	--	18.0	90° 40'	-19.2	-37.2		2529.4		-813	-1436	690,562	3,067,062

689,290 x - 3,064,285 intersect

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-3-84		B. Cotcamp		J. Middleton		6834		B.C.				16			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		NAVATO - 7 1/2'		MONT.		DANIELS								S. Binns	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS		
											NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
								2566.6							
253	1320		230 17'	+10.2	9.3	90 30	-11.5	-20.8	2545.8		-650	-1149	690,725	3,067,349	
#254	990		-	--	6.3	90 30	-8.6	-14.9	2551.0	7/8	-488	-861	690,887	3,067,637	
255	660		-	--	10.3	90 30	-5.8	-16.1	2550.5		-325	-574	691,050	3,067,924	
256	330		-	--	7.7	89 30	+2.9	-4.8	2561.8		-163	-287	691,212	3,068,211	
257	0				5.1	-		-5.1	2561.5	π	0	0	691,375	3,068,498	
258	330		50 19'	+10.2	7.1	91 -	-5.8	-12.9	2553.7		+162	+287	691,537	3,068,785	
259	660		-	--	5.7	91 -	-11.5	-17.2	2549.4		+325	+575	691,700	3,069,073	
260	990		-	--	8.0	91 -	-17.3	-25.3	2541.3		+487	+862	691,862	3,069,360	
261	1320		-	--	10.2	91 -	-23.0	-33.2	2533.4		+650	+1149	692,025	3,069,647	
262	1650		-	--	12.8	91 -	-28.8	-41.6	2525.0		+812	+1436	692,187	3,069,934	
263	1980		-	+10.2	9.7	91 10	-40.3	-50.0	2516.6		+975	+1724	692,350	3,070,222	
264	2310		-	--	10.2	91 10	-47.0	-57.2	2509.4		+1137	+2011	692,512	3,070,509	
265	2640		-	--	4.7	91 10	-53.8	-58.5	2508.1		+1299	+2298	692,674	3,070,796	
266	2970		-	--	6.0	91 -	-51.8	-57.8	2508.8		+1462	+2585	692,837	3,071,083	
267	3300		-	--	5.3	91 -	-57.6	-62.9	2503.7		+1624	+2873	692,999	3,071,371	
268	3630		-	--	5.9	91 -	-63.4	-69.3	2497.3		+1787	+3160	693,162	3,071,658	
269	3960	3959.4	-	--	7.3	91 -	-69.1	-76.4	2490.2		+1949	+3447	693,324	3,071,945	
270	4290	4289.4	-	--	10.0	91 -	-74.9	-84.9	2481.7		+2111	+3734	693,486	3,072,232	
2478	4482	4481.3	50 17 57	-	11.8	91 -	-78.2	-90.0	2476.6		+2207	+3900	693,582	3,072,398	

1/4 - 690,915 x - 3,067,600
1/4 way int.

693,600 x - 3,072,405
1/4 T - enter, EL. 2478.0

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-3-86		B. Cotcamp		J. Middleton		6834		B.C.		9		17			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		NAVAJO - 7 1/2'		MONT.		DANIELS								S. Binns	
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
									2566.6						
271	4623		50 47	+10.2	12.4	91 -	-80.7	-93.1		2473.5		+2242	+4043	693.617	3,072,541
272	4950		51 50	--	7.2	91 -	-86.4	-93.6		2473.0		+2321	+4372	693.696	3,072,870
273	5256		52 55	--	8.1	90 52	-79.5	-87.6		2479.0		+2377	+4688	693.752	3,073,186
274	5568		54 03 33	--	5.6	90 46	-74.5	-80.1	} 80.2 1/2	2486.4	TP	+2418	+5015	693.793	3,073,513
274	5568				5.9	269 14	-74.5	-80.4		TP					
	3299		247 58 35	+10.2	10.2	89 10	-48.0	-37.8	} 2448.6		BS	+676	+3229		
	3299				10.3	270 50	-48.0	-37.7		BS					
275	2970		247 42	--	8.9	89 10	+43.2	+34.3		2482.9		-623	-2904	693.846	3,073,838
276	2640		247 17	--	6.6	89 10	+38.4	+31.8		2480.4		-576	-2576	693.893	3,074,166
277	2310		246 40	--	3.7	89 10	+33.6	+29.9		2478.5		-525	-2250	693.944	3,074,492 Daniels County - ↑
278	1980		246 25	--	7.3	89 10	+28.8	+21.5		2470.1		-458	-1926	694.011	3,074,816 Sherman County ↓
279	1650		- -	--	7.2	89 30	+14.4	+7.2		2455.8		-382	-1605	694.087	3,075,137
280	1320		- -	--	8.6	-	-	-8.6		2440.0		-306	-1284	694.163	3,075,458
281	990		- -	--	11.5	BH	-5.0	-16.5		2432.1		-229	-963	694.240	3,075,779
282	660		- -	--	8.7	-	-	-8.7		2439.9		-153	-642	694.316	3,076,100
283	330		- -	--	3.0	-	-	-3.0		2445.6		-76	-321	694.393	3,076,421
284	0		- -	--	5.1	-	-	-5.1		2443.5	X	0	0	694.469	3,076,742
285	330		66 40	+10.2	7.8	-	-	-7.8		2440.8		+75	+321	694.544	3,077,063
2487 1/2	492		64 34 17	--	9.5	-	-	-9.5		2439.1	71	+129	+475	694.598	3,077,217 5-694,615 x = 3,077,255 1/2 T - enter El. 2437.0

SURVEY NOTES-HIGH RESOLUTION DATA

Geosource Inc.

GEO-445

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-3-86		B. Cotcamp		J. Middleton		6834		B.C.				18			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		NAVAJO - 7 1/2'		MONT.		SHERIDAN								S. D. WINS	
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
									2448.6						
286	660		66 40	+10.2	11.7	-	-11.7		2436.9			+150	+643	694.619	3,077,385
287	990		- -	--	8.3	91 -	-17.3	-25.6	2423.0			+225	+964	694.694	3,077,706
TP	1089		66 17 -	--	12.4	91 -	-19.0	-31.4	2417.2	TP		+254	+1059	694.723	3,077,801
TP	1089				12.5	269 -	-19.0	-31.5			TP				
	3381		248 19 40	--	12.7	89 30	-29.5	-16.8	-16.7 2400.5		BS	+672	+3313		
	3381				+13.0	270 30	-29.5	-16.5			BS				
288	3149		248 30	+10.2	4.8	89 50	+9.2	+4.4	2404.9			-617	-3088	694.778	3,078,626
289	2821		248 40	--	7.1	-	-7.1		2393.4			-545	-2768	694.850	3,078,346
290	2489		249 05	--	8.4	90 10	-7.2	-15.6	2384.9			-463	-2446	694.932	3,078,668
291	2161		249 22	--	8.0	90 20	-12.6	-20.6	2379.9			-391	-2125	695.004	3,078,989
292	1830		249 55	--	9.9	90 20	-10.6	-20.5	2380.0			-314	-1803	695.081	3,079,311
293	1498		250 40	--	11.6	90 20	-8.7	-20.3	2380.2			-238	-1479	695.157	3,079,635
294	1172		251 50	--	10.0	90 30	-10.2	-20.2	2380.3			-162	-1161	695.233	3,079,953
295	843		253 32	--	11.1	90 30	-7.4	-18.5	2382.0			-92	-838	695.303	3,080,276
296	513		255 25	--	3.9	90 30	-4.5	-8.4	2392.1			-39	-512	695.356	3,080,602
297	183		257 40	--	7.3	88 30	+4.8	-2.5	2398.0			-7	-183	695.388	3,080,931
π	0				5.1	-	-5.1		2395.4	π		0	0	695.395	3,081,114
298	148		76 50	--	6.4	91 -	-2.6	-9.0	2391.5			+8	+148	695.403	3,081,262
299	477		79 50	--	10.1	91 -	-8.3	-18.4	2382.1			±0	+477	695.395	3,081,591
300	807		81 25	-	9.6	91 20	-18.8	-28.4	2372.1			-23	+807	695.372	3,081,921

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	9-4-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	B.C	LINE NO.	9	PAGE	19
AREA	MONTANA	TOPO MAP	NAVAJO - 7 1/2'	STATE	MONT.	COUNTY	SHERIDAN	TWP		RANGE	PPM	PARTY MANAGER	S. Binns

STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS TP	COORDINATES		REMARKS		
											NORTH + SOUTH -	EAST + WEST -		Y	X
								2400.5							
301	1137		82° 28'	+10.2	12.0	91° 20'	-26.5	-38.5	2362.0		-53	+1136	695.342	3,082,250	
302	1468		83° 05'	--	10.1	91° 30'	-38.4	-48.5	2352.0		-84	+1466	695.311	3,082,580	
303	1798	1797.4	83° 25'	--	10.7	91° 30'	-47.1	-57.8	2342.7		-113	+1794	695.282	3,082,708	
304	2128	2127.3	83° 35'	--	11.6	91° 30'	-55.7	-67.3	2333.2		-140	+2123	695.255	3,083,237	
305	2458	2457.2	83° 50'	--	11.1	91° 30'	-64.3	-75.4	2325.1		-173	+2451	695.222	3,083,565	NAVAJO - 7 1/2' ↑
306	2788	2787.0	84° -	--	8.5	91° 30'	-73.0	-81.5	2319.0		-204	+2780	695.191	3,083,894	REDSTONE - 7 1/2' ↓
307	3120	3118.9	84° 05'	--	6.9	91° 30'	-81.7	-88.6	2311.9		-233	+3110	695.162	3,084,224	
TP	3186	3184.9	83° 47' 25"	--	6.4	91° 30'	-83.4	-89.8	2310.7	TP	-222	+3177	695.173	3,084,291	Y-695,160 X-3,084,255 # creek crossing
308	3448	3447.0	83° 22'	--	9.7	91° 22'	-82.2	-91.9	2308.6		-214	+3446	695.181	3,084,554	
TP	3684	3683.0	82° 13' 52"	-	10.3	91° 22'	-87.9	-98.2	2302.2	TP	-156	+3680	695.239	3,084,794	
TP	3684				10.6	268° 38'	-87.9	-98.5		TP					
	2063	2059.2	240° 45' 09"	+10.2	9.5	86° 30'	-125.9	-116.4		BS	+672	+1946			
	2063				9.6	273° 30'	-125.9	-116.3	2185.9	BS					
309	1981	1977.3	240° 45'	--	8.3	86° 30'	+120.9	+112.6	2298.5		-645	-1869	695.266	3,084,871	
310	1650	1646.9	-	--	6.7	86° 30'	+100.7	+94.0	2279.9		-538	-1557	695.373	3,085,183	
311	1320	1317.5	-	--	6.8	86° 30'	+80.6	+73.8	2259.7		-430	-1245	695.481	3,085,495	
312	970	988.2	-	--	5.8	86° 30'	+60.4	+54.6	2240.5		-323	-934	695.588	3,085,806	
313	660	658.8	-	--	5.7	86° 30'	+40.3	+34.6	2220.5		-215	-623	695.696	3,086,117	
314	330	329.4	-	--	4.1	86° 30'	+20.1	+16.0	2201.9		-108	-311	695.803	3,086,429	
315	0				5.1	-	-5.1		2180.8	TP	0	0	695.911	3,086,740	

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	9-4-86	INSTRUMENT MAN	B. Gtamp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	BC	LINE NO.	9	PAGE	20	
AREA	MONTANA	TOPO MAP	Redstone - 7 1/2'	STATE	MONT.	COUNTY	SHERIDAN	TWP		RANGE		PPM	PARTY MANAGER	S. Binns

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.	
									2185.9					
316	330		63 40	+10.2	8.8	92 40	-15.4	-24.2		2161.7		+92	+317	696.003 3.087.057
317	660	659.3	64 42	--	9.3	92 40	-30.7	-40.0		2145.9		+172	+637	696.083 3.087.377
318	990	989.4	65 50	--	9.7	92 -	-34.6	-44.3		2141.6		+239	+960	696.150 3.087.700
412143	1292		66 02 09	--	10.6	91 30	-33.8	-44.4		2141.5	41	+307	+1254	696.218 3.087.994 5-696.190 x 3.088.015 T-Intersect EL. 2143.0
319	1319		66 40	--	10.2	91 30	-34.5	-44.7		2141.2		+300	+1285	696.211 3.088.025
320	1649		67 05	+10.2	10.2	91 14'	-35.5	-45.7		2140.2		+363	+1609	696.274 3.088.349
321	1979		67 15	--	9.4	91 04	-36.8	-46.2		2139.7		+430	+1932	696.341 3.088.672
322	2309		67 37	--	11.6	90 52	-34.9	-46.5		2139.4		+487	+2257	696.398 3.088.997
323	2639		67 50	--	5.8	90 52	-39.9	-45.7		2140.2		+547	+2582	696.458 3.089.322
324	2970		67 40	--	6.9	90 46	-39.7	-46.6		2139.3		+624	+2904	696.535 3.089.644
325	3300		67 11 12	--	9.6	90 46	-44.2	-53.8	-53.8	2132.0	TP	+721	+3220	696.632 3.089.960
325	3300				9.9	269 14'	-44.2	-54.1			TP			
	4298		243 12	+10.2	3.0	TH	-21.5	-18.5			BS	+1228	+4119	
	4298				3.3	TH 270	-21.5	-18.2	-18.3	2113.7	BS			
326	3960		243 12	--	7.8	89 42	+20.7	+12.9		2126.6		-1131	-3795	696.729 3.090.284
327	3630		- -	--	7.8	89 42	+19.0	+11.2		2124.9		-1037	-3479	696.823 3.090.600
328	3300		- -	--	6.5	89 42	+17.3	+10.8		2124.5		-943	-3162	696.917 3.090.917
329	2970		- -	--	5.3	89 42	+15.6	+10.3		2124.0		-848	-2846	697.012 3.091.233
330	2640		- -	--	8.8	89 36	+18.4	+9.6		2123.3		-754	-2530	697.106 3.091.549
331	2310		- -	--	7.3	89 36	+16.1	+8.8		2122.5		-660	-2214	697.200 3.091.865

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		B.C.		9		21			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		REDSTONE-7 1/2'		MONT.		SHERIDAN								S. Binns	
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
									2113.7						
332	1980		243 12'	+10.2	7.1	89 36'	+13.8	+6.7		2120.4		-566	-1897	697.294	3.092,182
333	1650		--	--	7.3	89 36'	+11.5	+4.2		2117.9		-471	-1581	697.389	3.092,498
334	1320		--	--	8.0	89 36'	+9.2	+1.2		2114.9		-377	-1265	697.483	3.092,814
335	990		--	--	9.2	89 36'	+6.9	-2.3		2111.4		-283	-949	697.577	3.093,130
336	660		--	--	10.0	89 36'	+4.6	-5.4		2108.3		-189	-632	697.671	3.093,447
337	330		--	--	8.5	89 36'	+2.3	-6.2		2107.5		-94	-316	697.766	3.093,763
Bm ₂₁₁₂	106		177 22 05	--	3.3	89 36'	+0.7	-2.6		2111.1	Bm	-99	-13	697.761	3.094,066
338	0				5.1	-		-5.1		2108.6	TP	0	0	697.860	3.094,079
339	330		66 10	+10.2	5.6	89 20'	+3.8	-1.8		2111.9		+78	+321	697.938	3.094,400
340	655		72 25	--	6.0	89 20'	+7.6	+1.6		2115.3		+84	+650	697.944	3.094,729
341	975		79 -	--	6.3	89 20'	+11.3	+5.0		2118.5		+14	+975	697.874	3.095,054
342	1280		85. 30,	--	7.4	89 20'	+14.9	+7.5		2121.2		-127	+1274	697.733	3.095,353
343	1576		91 20 52	+10.4	13.4	89 30'	+13.8	+0.4			TP	-321	+1543	697.539	3.095,622
343	1576				13.5	270 30	+13.8	+0.3		2114.0	TP				across sta.
	4955		304 04 14	--	+10.6	89 48'	-17.3	-6.7			BS	-3471	+3536		
	4955				+10.5	270 12'	-17.3	-6.8		2107.2	BS				
344	4624		303 50'	--	7.1	89 54'	+8.1	+1.6		2108.2		+3225	-3313	697.293	3.095,845
345	4290		--	--	8.0	89 54'	+7.5	-0.5		2106.7		+2993	-3074	697.061	3.096,084
346	3960		303 54,	--	8.8	89 54'	+6.9	-1.9		2105.3		+2766	-2834	696.834	3.096,324
347	3630		303 58	--	9.2	89 54'	+6.3	-2.9		2104.3		+2538	-2595	696.606	3.096,563

S-697,800 X-3,094,355
U.S.C. & G.S. Bm E-34 & 2112

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		B.C.		9		22			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		KEOSTONE - 7 1/2'		MONT.		SHERIDAN								S. Bruns	
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
									2107.2						
348	3300		304 .	+10.4	10.6	89 54	+5.8	-4.8		2102.4		+2309	-2358	696.377	3,096.800
349	2970		304 .05	--	10.1	89 54	+5.2	-4.9		2102.3		+2081	-2119	696.149	3,097,039
350	2640		304 .24	--	11.1	89 54	+4.6	-6.5		2100.7		+1860	-1873	695.928	3,097,285
351	2310		304 31	--	11.0	89 54	+4.0	-7.0		2100.2		+1631	-1636	695.699	3,097,522
352	1980		- -	--	11.0	89 54	+3.5	-7.5		2099.7		+1398	-1402	695.466	3,097,756
353	1650		- -	--	10.8	89 54	+2.9	-7.9		2099.3		+1165	-1168	695.233	3,097,990
354	1320		- -	+10.4	10.3	89 54	+2.3	-8.0		2099.2		+932	-935	695.000	3,098,223
355	990		- -	--	8.7	-	-	-8.7		2098.5		+699	-701	694.767	3,098,457
356	660		- -	--	9.0	-	-	-9.0		2098.2		+466	-467	694.534	3,098,691
357	330		- -	--	7.6	-	-	-7.6		2099.6		+233	-234	694.301	3,098,924
358	0		- -	--	5.1	-	-	-5.1		2102.1	X	0	0	694.068	3,099,158
359	330		119 50	--	5.4	-	-	-5.4		2101.8		-213	+252	693.855	3,099,410
360	660		118 15	--	6.6	-	-	-6.6		2100.6		-412	+515	693.656	3,099,673
361	990		116 50	--	8.1	-	-	-8.1		2099.1		-599	+788	693.469	3,099,946
362	1319		115 10	--	9.3	-	-	-9.3		2097.9		-767	+1073	693.301	3,100,231
363	1648		113 35	+10.4	10.9	-	-	-10.9		2096.3		-921	+1367	693.147	3,100,525
364	1977		112 25	--	12.0	-	-	-12.0		2095.2		-1071	+1661	692.997	3,100,819
365	2305		111 35	--	8.8	90 06	-4.0	-12.8		2094.4		-1221	+1955	692.847	3,101,113
366	2634		111 -	--	9.0	90 06	-4.6	-13.6		2093.6		-1372	+2248	692.696	3,101,406
367	2964		110 23	--	8.8	90 06	-5.2	-14.0		2093.2		-1517	+2546	692.551	3,101,704

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		FM		9		23			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		REDSTONE - 7 1/2'		MONT.		SHERIDAN								S. Binns	
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
									2107.2						
368	3294		110 06'	+10.4	8.7	90 06'	-5.7	-14.4		2092.8		-1672	+2838	692,396	3,101,996
369	3624		109 47 42	--	9.8	90 06'	-6.3	-16.1	16.0 1/2	2091.2	TP	-1823	+3132	692,245	3,102,290
369	3624				9.5	269 54'	-6.3	-15.8			TP				
	5284		286 38 20	+10.4	12.9	89 54'	-9.2	+3.7			BS	-2402	+4706		
	5284				12.6	270 06'	-9.2	+3.4	3.53	2094.7	BS				
370	4950		286 38	--	10.7	89 55'	+7.2	-3.5		2091.2		+2250	-4409	692,093	3,102,587
371	4620		--	--	10.1	89 55'	+6.7	-3.4		2091.3		+2100	-4115	691,943	3,102,881
372	4290		--	--	10.0	89 55'	+6.2	-3.8		2090.9		+1950	-3821	691,793	3,103,175
373	3960		--	--	8.9	89 55'	+5.8	-3.1		2091.6		+1800	-3527	691,643	3,103,469
374	3630		--	--	9.2	89 55'	+5.3	-3.9		2090.8		+1650	-3233	691,493	3,103,763
375	3300		--	--	10.0	89 55'	+4.8	-5.2		2089.5		+1500	-2939	691,343	3,104,057
376	2970		--	--	9.3	89 55'	+4.3	-5.0		2089.7		+1350	-2646	691,193	3,104,350
377	2640		--	+10.4	8.6	89 55'	+3.8	-4.8		2089.9		+1200	-2352	691,043	3,104,644
378	2310		--	--	7.6	89 55'	+3.4	-4.2		2090.5		+1050	-2058	690,893	3,104,938
379	1980		--	--	7.3	89 55'	+2.9	-4.4		2090.3		+900	-1764	690,743	3,105,232
380	1650		--	--	7.8	89 55'	+2.4	-5.4		2089.3		+750	-1470	690,593	3,105,526
381	1320		--	--	7.6	89 55'	+1.9	-5.7		2089.0		+600	-1176	690,443	3,105,820
382	990		--	--	7.2	89 55'	+1.4	-5.8		2088.9		+450	-882	690,293	3,106,114
383	660		--	--	6.8	89 55'	+1.0	-5.8		2088.9		+300	-588	690,143	3,106,408
#	680		279 45 22	--	5.4	--	--	-5.4		2089.3	#	+234	-638	690,077	3,106,358

y-690,020 x-3,106,410
R.R. Inter. EL. 2089.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		R. P. 9		9		34			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		REDSTONE-1/2'		MONT.		SHERIDAN								S. Dinns	
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
									2094.7						
384	330		286 38	+10.4	5.4	-	-5.4		2089.3			+150	-294	689.993	3,106,702
385	0				5.1	-	-5.1		2089.6	X		0	0	689.843	3,106,976
386	330		101 30	--	5.3	-	-5.3		2089.4			-123	+306	689.720	3,107,302
387	660		- -	--	6.8	-	-6.8		2087.9			-246	+612	689.597	3,107,608
388	990		101 05	--	7.2	-	-7.2		2087.5			-363	+921	689.480	3,107,917
389	1320		101 -	--	7.8	-	-7.8		2086.9			-482	+1229	689.361	3,108,225
390	1650		100 55	--	7.4	-	-7.4		2087.3			-600	+1537	689.243	3,108,533
391	1980		99 40	--	8.0	-	-8.0		2086.7			-679	+1860	689.164	3,108,856
392	2300		97 19 04	-	9.1	-	-9.1		2085.6	TP		-700	+2191	689.143	3,109,187
392	2300				9.0	270 -	-9.0			TP					
	3306		250 54 48	+10.4	4.6	-	+4.6				BS	+499	+3268		
	3306				4.5	270 -	+4.5		2090.1		BS				
393	2970		250 55	--	4.3	-	-4.3		2085.8			-448	-2936	689.194	3,109,519
394	2640		- -	--	5.1	-	-5.1		2085.0			-399	-2610	689.243	3,109,845
395	2310		- -	--	4.9	-	-4.9		2085.2			-349	-2284	689.293	3,110,171
396	1980		- -	--	4.9	-	-4.9		2085.2			-299	-1957	689.343	3,110,498
397	1650		- -	--	5.0	-	-5.0		2085.1			-249	-1631	689.393	3,110,824
398	1320		- -	--	4.9	-	-4.9		2085.2			-199	-1305	689.443	3,111,150
X	1084		251 29 20	--	4.2	-	-4.2		2085.9	X		-153	-1073	689.489	3,111,382
399	990		250 55	-	4.1	-	-4.1		2086.0			-149	-979	689.493	3,111,476

y=689.425 x-3,111,400
X BRIDGE EL. 2085.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-82		B. C. Camp		J. Middleton		6834		J. M.		9		25			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		REDSTONE - 7 1/2'		MONT.		SHERIDAN								S. Binns	
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
									2090.1						
400	660		250 55	+16.4	5.1	-	-5.1		2085.0			-100	-652	689,542	3,111,803
401	330		--	--	5.2	-	-5.2		2084.9			-50	-326	689,592	3,112,129
402	0				5.1	-	-5.1		2085.0	TP		0	0	689,642	3,112,455
403	330		75 50	--	5.4	-	-5.4		2084.7	TP		+22	+329	689,664	3,112,784
404	660		78 22	--	6.9	-	-6.9		2083.2			+14	+660	689,656	3,113,115
405	989		81 -	--	6.8	-	-6.8		2083.3			-24	+989	689,618	3,113,444
406	1315		83 30	--	6.2	-	-6.2		2083.9			-89	+1312	689,553	3,113,767
407	1640		86 -	+10.4	6.0	-	-6.0		2084.1			-183	+1630	689,459	3,114,085 REDSTONE - 7 1/2 T
408	1963		88 -	--	5.0	-	-5.0		2085.1			-287	+1942	689,355	3,114,397 ARCHER - 7 1/2 L
409	2290		89 30	--	8.1	89 52	+5.3	-2.8	2087.3			-394	+2256	689,248	3,114,711
410	2617		90 30	--	6.7	89 52	+6.1	-0.6	2089.5			-495	+2570	689,147	3,115,025
411	2945		91 22	--	7.5	89 48	+10.3	+2.8	2092.9			-661	+2883	689,041	3,115,338
411	3070		91 25	--	6.4	89 48	+10.7	+4.3	2094.4			-629	+3005	689,013	3,115,460 5-689,005 x=3,115,500 JC BRIDGE EL. 2094.0
412	3271		92 05 10	--	7.9	89 48	+11.4	+3.5			TP	-707	+3194	688,935	3,115,649
412	3271				7.7	270 12	+11.4	+3.7	+363	2093.7	TP				
	3306		277 54 28	+10.4	15.1	BH	+16.5	+31.6	+3153	2125.2	BS	-1038	+3139		
	3306				14.8	BH 210	+16.5	+31.3			BS				
413	2970		277 54	--	7.7	90 30	-25.9	-33.6		2091.6		+933	-2820	688,830	3,115,968
414	2640		--	--	7.0	90 38	-29.2	-36.2		2089.0		+829	-2506	688,726	3,116,282
415	2310		--	--	5.8	90 50	-33.6	-39.4		2085.8		+725	-2193	688,622	3,116,595

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		F. M.		9		26			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		ARCHER-7 1/2'		MONT.		SHERIDAN								S. D. INNS	
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
									2125.2						
416	1980		277 54	+10.4	7.6	91 -	-34.6	-42.2		2083.0		+ 622	-1880	688.519	3,116,908
417	1650		- -	--	7.1	91 20	-38.4	-45.5		2079.7		+ 518	-1567	688.415	3,117,221
418	1320		- -	--	9.7	91 30	-34.6	-44.3		2080.9		+ 414	-1253	688.311	3,117,535
419	990		- -	--	9.3	91 30	-25.9	-35.2		2090.0		+ 311	-940	688.208	3,117,848
420	660		- -	--	5.8	91 30	-17.3	-23.1		2102.1		+ 207	-627	688.104	3,118,161
421	330		- -	--	9.6	90 30	-2.9	-12.5		2112.7		+ 104	-313	688.001	3,118,475
422	0				5.1	-		-5.1		2120.1	X	0	0	687.897	3,118,788
423	330		94 35	+10.4	5.5	89 30	+2.9	-2.6		2122.6		-85	+319	687.812	3,119,107
424	660		- -	--	6.9	89 30	+5.8	-1.1		2124.1		-171	+638	687.726	3,119,426
425	990		- -	--	8.7	89 30	+8.6	-0.1		2125.1		-256	+956	687.641	3,119,744
426	1320		- -	--	11.3	89 30	+11.5	+0.2		2125.4		-341	+1275	687.556	3,120,063
427	1650		- -	--	8.0	89 44	+7.7	-0.3		2124.9		-427	+1594	687.470	3,120,382
428	1980		- -	--	11.0	89 44	+9.2	-1.8		2123.4		-512	+1913	687.385	3,120,701
429	2310		- -	--	9.7	89 50	+6.7	-3.0		2122.2		-597	+2231	687.300	3,121,019
430	2640		- -	--	11.6	89 50	+7.7	-3.9		2121.3		-683	+2550	687.214	3,121,338
431	2970		94 29	--	11.1	89 52	+6.9	-4.2		2121.0		-763	+2870	687.134	3,121,658
432	3301		93 30 25	--	14.3	89 55	+4.8	-9.5	-9.3		TP	-793	+3204	687.104	3,121,992
432	3301				14.0	270 05	+4.8	-9.2			2115.9	TP			
	3961		248 05 11	--	14.4	89 24	-41.5	-27.1	-27.2 2088.7		BS	+791	+3881		
	3961				14.1	270 36	-41.5	-27.4				BS			

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE							
9-4-88		B. Cotcamp		J. Middleton		6834		F.M.		9		27							
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER					
MONTANA		ARCHER-7 1/2'		MONT.		SHERIDAN								S. Burns					
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				
									2088.7										
433	3632		247 30	+10.4	8.7	89 30	+31.7	+23.0		2111.7		-761	-3551	687.134	3,122,322				
434	3300		- -	--	6.9	89 30	+28.8	+21.9		2110.6		-692	-3227	687.203	3,122,646				
435	2970		- -	--	8.8	89 30	+25.9	+17.1		2105.8		-623	-2904	687.272	3,122,969				
436	2640		- -	--	6.7	89 44	+12.7	+5.6		2094.3		-553	-2581	687.342	3,123,292				
437	2310		- -	--	12.0	89 44	+10.8	-1.2		2087.5		-484	-2259	687.411	3,123,614				
438	1980		- -	--	11.3	89 44	+9.2	-2.1		2086.6		-415	-1936	687.480	3,123,937				
439	1650		- -	--	8.1	89 44	+7.7	-0.4		2088.3		-346	-1613	687.549	3,124,260				
440	1320		- -	--	6.7	89 44	+6.1	-0.6		2088.1		-277	-1291	687.618	3,124,582				
441	990		- -	--	5.4	89 44	+4.6	-0.8		2087.9		-208	-968	687.687	3,124,905				
442	660		- -	--	9.1	89 20	+2.7	-1.4		2087.3		-138	-645	687.757	3,125,228				
443	330		- -	--	6.6	89 20	+3.8	-2.8		2085.9		-69	-323	687.826	3,125,550				
444	0		- -	--	5.1	-	-	-5.1		2083.6	TP	0	0	687.895	3,125,873				
445	330		67 29	+10.4	7.8	90 40	-3.8	-11.6		2077.1		+69	+323	687.964	3,126,196				
446	660		- -	--	10.7	90 40	-7.7	-18.4		2070.3		+139	+645	688.034	3,126,518				
447	990		- -	--	9.7	90 40	-11.5	-21.2		2067.5		+208	+968	688.103	3,126,841				
448	1320		- -	--	7.3	90 40	-15.4	-22.7		2066.0		+277	+1291	688.172	3,127,164				
449	1650		- -	--	8.5	90 30	-14.4	-22.9		2065.8		+346	+1613	688.241	3,127,486				
BM	1905		69 06 28	--	8.2	90 30	-16.6	-24.8		2063.9	BM	+347	+1873	688.242	3,127,746				
450	1980		67 29	--	11.2	90 20	-11.5	-22.7		2066.0		+416	+1936	688.311	3,127,809				
451	2310		- -	--	9.1	90 20	-13.4	-22.5		2066.2		+485	+2259	688.380	3,128,132				

5-688,210 X-3,127,825
A-64 1934 U.S.G.N.S. 2064

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-82		B. Cotcamp		J. Middleton		6834		F.M.		9		28			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		ARCHER-7 1/2'		MONT.		SHERIDAN								S. Binns	
STATION NO.	SLOPE DISTANCE	PLOTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									2088.7						
452	2640		67 30	+10.4	7.2	90 20	-15.4	-22.6		2066.1		+553	+2581	688,448	3,128,454
453	2970		-	--	6.6	90 20	-17.3	-23.9		2064.8		+623	+2904	688,518	3,128,777
454	3300		-	--	4.8	90 20	-19.2	-24.0		2064.7		+692	+3227	688,587	3,129,100
455	3630		-	--	9.8	90 14	-14.8	-24.6		2064.1		+761	+3549	688,656	3,129,422
456	3960		-	+10.4	8.8	90 14	-16.1	-24.9		2063.8		+830	+3872	688,725	3,129,745
457	4290		-	--	8.2	90 14	-17.5	-25.7		2063.0	1#	+899	+4195	688,794	3,130,068
458	4620		-	--	7.2	90 14	-18.8	-26.0		2062.7		+968	+4517	688,863	3,130,390
459	4950		-	--	6.1	90 14	-20.2	-26.3		2062.4		+1038	+4840	688,933	3,130,713
460	5280		-	--	11.7	90 10	-15.4	-27.1		2061.6		+1107	+5163	689,002	3,131,036
461	5610		-	--	10.8	90 10	-16.3	-27.1		2061.6		+1176	+5485	689,071	3,131,358
462	5940		-	--	9.8	90 10	-17.3	-27.1		2061.6		+1245	+5808	689,140	3,131,681
463	6280		67 31 25	--	13.0	90 08	-14.6	-27.6	-27.5	2061.2	TP	+1314	+6141	689,209	3,132,014
463	6280		-	--	12.7	269 52	-14.6	-27.3			TP				
	4624		250 56 22	+10.1	14.0	89 52	-10.8	+3.2			BS	+720	+4568		
	4624		-		13.6	270 08	-10.8	+2.8	+30.3	2064.2	BS				
464	4290		251 07	--	10.7	89 54	+7.5	-3.2		2061.0		-655	-4240	689,274	3,132,342
465	3960		-	--	10.1	89 54	+6.9	-3.2		2061.0		-605	-3914	689,324	3,132,668
466	3630		-	--	11.2	89 52	+8.4	-2.8		2061.4		-554	-3587	689,375	3,132,995
467	3300		-	--	10.7	89 52	+7.7	-3.0		2061.2		-504	-3261	689,425	3,133,321
468	2970		-	--	10.1	89 52	+6.9	-3.2		2061.0		-454	-2935	689,475	3,133,647

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		J.M.		9		29			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		ARCHER-7 1/2'		MONT.		SHERIDAN								S. Binns	
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
									2064.2						
469	2640		251 17	+10.1	9.6	89 52	+6.1	-3.5		2060.7		-396	-2610	689,533	3,133,972
470	2310		--	--	9.1	89 52	+5.4	-3.7		2060.5		-346	-2284	689,583	3,134,298
471	1980		--	--	8.0	89 52	+4.6	-3.4		2060.8		-297	-1958	689,632	3,134,624
472	1650		--	--	5.7	89 52	+3.8	-1.9		2062.3		-247	-1631	689,682	3,134,951
473	1320		--	--	5.2	89 52	+3.1	-2.1		2062.1		-198	-1305	689,731	3,135,277
474	990		--	--	5.6	89 52	+2.3	-3.3		2060.9		-148	-979	689,781	3,135,603
475	660		--	--	5.7	89 52	+1.5	-4.2		2060.0		-99	-653	689,830	3,135,929
1F	428		253 06 34	--	5.8	89 52	+1.0	-4.8		2059.4	1F	-51	-425	689,878	3,136,157
476	330		251 17	--	6.7	89 40	+1.9	-4.8		2059.4		-49	-326	689,880	3,136,256
477	0				5.1	-		-5.1		2059.1	TP	0	0	689,929	3,136,582
478	330		71 15	+10.1	5.3	-		-5.3		2058.9		+50	+326	689,979	3,136,908
479	660		--	--	5.3	-		-5.3		2058.9		+99	+652	690,028	3,137,234
480	990		--	--	5.1	-		-5.1		2059.1		+149	+979	690,078	3,137,561
481	1320		--	--	5.2	-		-5.2		2059.0		+199	+1305	690,128	3,137,887
482	1650		--	--	6.8	-		-6.8		2057.4		+248	+1631	690,177	3,138,213
483	1980		--	--	7.1	-		-7.1		2057.1		+298	+1957	690,227	3,138,539
484	2310		--	--	7.3	-		-7.3		2056.9		+351	+2283	690,280	3,138,865
485	2642		71 30	--	7.0	-		-7.0		2057.2		+386	+2614	690,315	3,139,196
486	2972		72 10	--	5.9	-		-5.9		2058.3		+400	+2945	690,329	3,139,527
487	3300		73 15	--	4.6	-		-4.6		2059.6		+382	+3278	690,311	3,139,860

5-689,850 x-3,136,205
1F-Inter El. 2060.

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		F.M.		9		30			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		ARCHER-74'		MONT.		SHERIDAN								S. Binns	
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
									2064.2						
488	3622		74° 40'	+10.1	9.4	89° 52'	+8.4	-1.0		2063.2		+330	+3607	690,259	3,140,189
489	3937		76° 05'	--	5.2	89° 52'	+9.2	+4.0		2068.2		+262	+3928	690,191	3,140,510
490	4244		77° 50'	--	10.6	89° 44'	+19.8	+9.2		2073.4		+153	+4241	690,082	3,140,823
491	4543		79° 38' 52"	--	10.2	89° 42' 30"	+23.1	+12.9	} +13.0 1/3	2077.2	TP	+20	+4543	689,949	3,141,125
491	4543				9.9	270° 17' 30"	+23.1	+13.2				TP			
	3297		297° 51' 34"	+9.8	13.9	BN	+16.5	+30.4	} +30.3 1/3 2107.5	2107.5	BS	-2014	+2610		
	3297				+13.6	BN 270	+16.5	+30.1				BS			
492	2970		299° -	--	9.7	90° 20'	-17.3	-27.0		2080.5		+1861	-2315	689,796	3,141,420
493	2641		299° 48'	--	10.4	90° 20'	-15.4	-25.8		2081.7		+1683	-2035	689,618	3,141,700
494	2310		- -	--	7.6	90° 30'	-20.2	-27.8		2079.7		+1472	-1780	689,407	3,141,955
495	1980		- -	--	4.7	90° 50'	-28.8	-33.5		2074.0		+1262	-1526	689,197	3,142,209
496	1650		- -	--	10.9	91° -	-28.8	-39.7		2067.8		+1052	-1271	688,987	3,142,464
497	1320		- -	+9.8	13.0	91° -	-23.0	-36.0		2071.5		+841	-1017	688,776	3,142,718
498	990		- -	--	7.7	91° -	-17.3	-25.0		2082.5		+631	-763	688,566	3,142,972
499	660		- -	--	3.9	91° -	-11.5	-15.4		2092.1		+421	-509	688,356	3,143,226
500	330		- -	--	8.7	-	-	-8.7		2098.8		+210	-254	688,145	3,143,481
501	0				5.1	-	-	-5.1		2102.4	TP	0	0	687,935	3,143,735
IF	237		116° 42' 46"	--	2.6	-	-	-2.6		2104.9	IF	-141	+190	687,794	3,143,925
502	330		119° 52'	--	2.7	-	-	-2.7		2104.8		-211	+254	687,724	3,143,989
503	660		- -	-	6.9	TH	+3.3	-3.6		2103.9		-421	+508	687,514	3,144,243

IF 9-687,735 x -3,143,946
IF T - Intersect. EL. 2105.0

SURVEY NOTES-HIGH RESOLUTION DATA

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Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		R. 9		9		31			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Plewywood S.W.-7 1/2'		MONT.		SHERIDAN								S. Binns	
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
									2107.5						
504	990		119 52'	+9.8	9.1	TM	+5.0	-4.1		2103.4		-632	+762	687.303	3,144.497
505	1320		-	--	5.1	-		-5.1		2102.4		-843	+1016	687.092	3,144.751
506	1650		-	--	9.9	TM	+8.3	-1.6		2105.9		-1053	+1270	686.882	3,145.005
507	1980		-	--	4.3	TM	+9.9	+5.6		2113.1		-1264	+1524	686.671	3,145.259
508	2310		-	--	8.9	89 30	+20.2	+11.3		2118.8		-1475	+1778	686.460	3,145.513
509	2640		-	--	5.7	89 30	+23.0	+17.3		2124.8		-1685	+2032	686.250	3,145.767
510	2970		-	--	11.2	89 15	+38.9	+27.7		2135.2		-1896	+2286	686.039	3,146.021
511	3300		-	--	11.2	89 04	+53.8	+42.6		2150.1		-2106	+2540	685.829	3,146.275
512	3630		-	--	4.7	89 04	+59.1	+54.4		2161.9		-2317	+2794	685.618	3,146.529
513	3962	301.4	120 06 33	--	14.9	89 02	+66.8	+51.9			TP	-2542	+3039	685.393	3,146.774
513	3962			--	14.6	270 58	+66.8	+52.2	19.13	2159.6	TP				
	3960		301 46 05	+9.5	14.4	89 31	-33.4	-19.0	19.13	2140.5	BS	-2612	+2976		
	3960				14.1	270 29	-33.4	-19.3			BS				
514	3630		301 40	--	8.8	89 38	+23.2	+14.4		2154.9		+2389	-2733	685.170	3,147.017
515	3300		-	--	10.8	89 38	+21.1	+10.3		2150.8		+2172	-2484	684.953	3,147.266
516	2970		301 38	--	11.0	89 38	+19.0	+8.0		2148.5		+1954	-2237	684.735	3,147.513
517	2640		301 35	--	10.1	89 38	+16.9	+6.8		2147.3		+1735	-1996	684.516	3,147.760
518	2310		-	--	8.9	89 38	+14.8	+5.9		2146.4		+1518	-1741	684.299	3,148.009
519	1980		301 30	--	10.3	89 38	+12.7	+2.4		2142.9		+1299	-1494	684.080	3,148.256
520	1650		301 20	--	11.7	89 38	+10.6	-1.1		2139.4		+1079	-1248	683.860	3,148.502

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		F.M.		9		32			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		PLENTYWOOD S.W. 7 1/2'		MONT.		SHERIDAN								S. BINNS	
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
									2140.5						
521	1320		301 10'	+9.5	11.0	89 38'	+8.4	-2.6		2137.9		+860	-1001	683.641	3,148.749
46	1082		301 37 28'	--	9.7	89 40'	+6.3	-3.4		2137.1		+712	-815	683.493	3,148.935
522	990		300 50'	--	9.7	89 40'	+5.8	-3.9		2136.6		+641	-755	683.422	3,148.995
523	660		300 10'	--	8.9	89 40'	+3.8	-5.1		2135.4		+421	-508	683.202	3,149.242
524	330		298 35'	--	7.3	89 40'	+1.9	-5.4		2135.1		+204	-260	682.985	3,149.490
525	0				5.1	-		-5.1		2135.4	TP	0	0	682.781	3,149.750
526	329		102 25'	--	6.4	89 10'	+4.8	-1.6		2138.9		-123	+305	682.658	3,150.055
527	651		94 47 12	--	7.7	89 10'	+9.5	+1.8		2142.3	TP	-161	+631	682.620	3,150.381
527	652				7.6	270 50'	+9.5	+1.9			TP				
	4628		247 36 34	--	14.7	89 36 30'	-31.6	-16.9			BS	+1032	+4511		
	4628				14.2	270 23 30'	-31.6	-17.4		2125.2	BS				
528	4298		247 19'	--	6.3	89 50'	+12.5	+6.2		2131.4		-980	-4185	682.672	3,150.707
529	3960		--	+9.5	7.7	--		-7.7		2117.5		-903	-3856	682.749	3,151.036
530	3630		--	--	7.8	90 08'	-8.4	-16.2		2109.0		-828	-3534	682.824	3,151.358
531	3300		--	--	10.3	90 12'	-11.5	-21.8		2103.4		-753	-3213	682.899	3,151.679
532	2970		--	--	10.1	90 20'	-17.3	-27.4		2097.8		-677	-2892	682.975	3,152.000
533	2640		--	--	12.5	90 20'	-15.4	-27.9		2097.3		-602	-2570	683.050	3,152.322
534	2310		--	--	12.1	90 20'	-13.4	-25.5		2099.7		-527	-2249	683.125	3,152.643
535	1980		--	--	11.2	90 20'	-11.5	-22.7		2102.5		-452	-1928	683.200	3,152.964
536	1650		--	--	9.1	90 20'	-9.6	-18.7		2106.5		-376	-1607	683.276	3,153.285

1/2" - 683.430 x - 3,148.990
4 way int. EL. 2138.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		J.M.		9	33			
AREA		TOPO MAP		STATE		COUNTY		TWP	RANGE	PPM	PARTY MANAGER			
MONTANA		Plentywood S.W.-7 1/2'		MONT.		SHERIDAN					S Binns			
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.	
									2125.2					
537	1320		247 20'	+9.5	6.2	90 20'	-7.7	-13.9		2111.3		-301	-1285	683.351 3,153.607
538	990		--	--	9.7	-		-9.7		2115.5		-226	-964	683.426 3,153.928
539	660		--	--	6.4	-		-6.4		2118.8		-150	-643	683.502 3,154.249
540	330		--	--	4.8	-		-4.8		2120.4		-75	-321	683.577 3,154.571
541	0				5.1	-		-5.1		2120.1	K	0	0	683.652 3,154.892
542	330		67 18'	+9.5	6.1	-		-6.1		2119.1		+75	+321	683.727 3,155.213
543	660		--	--	6.8	-		-6.8		2118.4		+151	+643	683.803 3,155.535
544	990		--	--	7.6	-		-7.6		2117.6		+226	+964	683.878 3,155.856
545	1320		--	--	8.8	-		-8.8		2116.4		+301	+1285	683.953 3,156.177
546	1650		--	--	10.9	-		-10.9		2114.3		+377	+1606	684.029 3,156.498
547	1982		67 15 27	--	9.2	BH	-9.9	-19.1		2106.1	TP	+454	+1929	684.106 3,156.821
547	1982				9.1	BH 2m	-9.9	-19.0			TP			
	1650		247 12' 33"	+9.5	+2.8	-		+2.8			BS	+379	+1606	
	1650				+2.7	270 -		+2.7	2108.8		BS			
548	1320		247 13'	--	7.4	BH	-6.6	-14.0		2094.8		-303	-1285	684.182 3,157.142
549	990		--	--	5.7	91 -	-17.3	-23.0		2085.8		-227	-964	684.258 3,157.463
550	660		--	--	12.2	BH	-3.3	-15.5		2093.3		-152	-642	684.333 3,157.785
551	330		--	--	6.0	-		-6.0		2102.8		-76	-321	684.409 3,158.106
552	0				5.1	-		-5.1		2103.7	K	0	0	684.485 3,158.427

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		J.M.		9		34			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Perrywood S.W. 1/4		MONT.		SHERIDAN								S. Binns	
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
									2108.8						
553	330		68° 45'	+9.5	6.6	-		-6.6		2102.2		+67	+323	684.552	3,158.750
554	660		- -	--	8.7	-		-8.7		2100.1		+134	+646	684.619	3,159.073
555	990		- -	--	11.3	-		-11.3		2097.5		+202	+969	684.687	3,159.396
556	1320		69° 05'	--	6.9	BH	-6.6	-13.5		2095.3		+261	+1294	684.716	3,159.721
557	1650		69° 10'	--	6.7	BH	-8.3	-15.0		2093.8		+324	+1618	684.809	3,160.045
558	1980		- -	--	7.0	BH	-9.9	-16.9		2091.9		+389	+1941	684.874	3,160.368
IF	2224		68° 55' 20"	--	6.9	BH	-11.1	-18.0		2090.8	IF	+446	+2179	684.931	3,160.606
559	2310		69° 13' 51"	+9.8	7.5	BH	-11.6	-19.1			TP	+440	+2268	684.925	3,160.695
559	2310				7.4	BH	-11.6	-19.0		2089.8	TP				
	2310		246° 09' 48"	--	+14.9	89° 28'	-21.5	-6.6			BS	+560	+2241		
	2310				+14.7	270° 32'	-21.5	-6.8		2083.1	BS				
560	1980		245° 55'	--	8.4	89° 36'	+13.8	+5.4		2088.5		-489	-1919	684.996	3,161.017
561	1650		245° 40'	--	7.4	89° 36'	+11.5	+4.1		2087.2		-414	-1597	685.071	3,161.339
562	1320		245° 25'	--	8.6	89° 36'	+9.2	+0.6		2083.7		-337	-1276	685.148	3,161.660
563	990		244° 40'	--	7.7	89° 36'	+6.9	-0.8		2082.3		-265	-954	685.220	3,161.982
564	660		243° 50'	--	5.7	89° 36'	+4.6	-1.1		2082.0		-186	-633	685.299	3,162.303
565	330		242° 56'	--	3.6	89° 36'	+2.3	-1.3		2081.8		-98	-315	685.387	3,162.621
566	0				5.1	-		-5.1		2078.0	TP	0	0	685.485	3,162.936
567	330		60° 50'	+9.8	6.9	90° 50'	-4.8	-11.7		2071.4		+114	+310	685.599	3,163.246
568	660		60° 30'	--	8.0	90° 50'	-9.6	-17.6		2065.5		+222	+621	685.707	3,163.557

9-684,925 x=3,160,670
IF - enter. EL. 2091.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		F.M.		9		35			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Plentywood S.W-76'		MONT.		SHERIDAN								S. Binns	
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
									2083.1						
569	990		59 50	+9.8	5.4	90 50	-14.4	-19.8		2063.3		+345	+928	685.830	3.163.864
570	1320		58 50	--	9.2	90 50	-19.2	-28.4		2054.7		+481	+1229	685.966	3.164.165
571	1649		57 58 46	--	12.2	91 04	-30.7	-42.9		2040.2	TP	+624	+1526	686.109	3.164.462
571	1649				12.1	268 56	-30.7	-42.8			TP				
	4295		231 43 02	+9.8	15.0	TH	-21.5	-6.5	2033.6	2033.6	BS	+2048	+3775		
	4295				14.7	TH 220	-21.5	-6.8			BS				
572	3960		231 40	--	10.0	89 54	+6.9	-3.1		2030.5		-1892	-3479	686.265	3.164.758
573	3630		--	--	9.7	89 54	+6.3	-3.4		2030.2		-1734	-3189	686.423	3.165.048
574	3300		--	--	8.8	89 54	+5.8	-3.0		2030.6		-1576	-2899	686.581	3.165.338
575	2970		--	--	7.9	89 54	+5.2	-2.7		2030.9		-1419	-2609	686.738	3.165.628
576	2640		--	--	7.2	89 54	+4.6	-2.6		2031.0		-1261	-2319	686.896	3.165.918
577	2310		--	--	6.3	89 54	+4.0	-2.3		2031.3		-1103	-2029	687.054	3.166.208
578	1980		--	+9.8	7.5	89 50	+5.8	-1.7		2031.9		-946	-1740	687.211	3.166.497
579	1650		--	--	7.0	89 50	+4.8	-2.2		2031.4		-788	-1450	687.369	3.166.787
IF ₂₀₃₂	1625		232 -	--	6.8	89 50	+4.7	-2.1		2031.5	IF	-768	-1432	687.389	3.166.805
580	1320		231 40	--	6.9	89 50	+3.8	-3.1		2030.5		-631	-1160	687.526	3.167.077
581	990		--	--	6.5	89 50	+2.9	-3.6		2030.0		-473	-870	687.684	3.167.367
582	660		--	--	6.0	89 50	+1.9	-4.1		2029.5		-315	-580	687.842	3.167.657
583	330		--	--	5.6	89 50	+1.0	-4.6		2029.0		-158	-290	687.999	3.167.947
584	0				5.1	-		-5.1		2028.5	X	0	0	688.157	3.168.237

y=687.370 x=3.166820
IF - Inter. El. 2032.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		F.M.		9		36			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		PLENTYWOOD S.W. - 7 1/2'		MONT.		SHERIDAN								S. Binns	
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
									2033.6						
585	330		47 10'	+9.8	6.3	89 50	+1.0	-5.3		2028.3		+180	+277	688,337	3,168,514
586	660		--	--	8.5	89 50	+1.9	-6.6		2027.0		+360	+553	688,517	3,168,790
587	990		--	--	9.8	89 50	+2.9	-6.9		2026.7		+540	+830	688,697	3,169,067
588	1320		--	--	10.7	89 50	+3.8	-6.9		2026.7		+720	+1107	688,877	3,169,344
589	1650		--	--	6.9	-		-6.9		2026.7		+899	+1383	689,056	3,169,620
590	1980		--	--	7.6	-		-7.6		2026.0		+1079	+1660	689,236	3,169,897
591	2310		--	+9.8	7.9	-		-7.9		2025.7		+1259	+1937	689,416	3,170,174
592	2640		--	--	8.2	-		-8.2		2025.4		+1439	+2213	689,596	3,170,450
593	2970		--	--	8.1	-		-8.1		2025.5		+1619	+2490	689,776	3,170,727
594	3300		--	--	8.9	-		-8.9		2024.7		+1799	+2767	689,956	3,171,004
595	3630		--	--	8.4	-		-8.4		2025.2		+1979	+3043	690,136	3,171,280
596	3960		--	--	7.9	-		-7.9		2025.7		+2159	+3320	690,316	3,171,557
597	4294		--	--	8.1	-		-8.1		2025.5		+2341	+3600	690,498	3,171,837
598	4618		48 03 58	--	9.5	-		-9.5	9.43	2024.2	TP	+2456	+3911	690,613	3,172,148
598	4618			--	9.2	270 -		-9.2			TP				
	4949		256 13 22	+9.8	14.2	89 53	-10.1	+4.1			BS	+343	+4937		6.3 89 59'16"
	4949				13.5	270 07	-10.1	+3.4	9.37	2027.9	BS				
591F	4897		256 33 55	--	14.7	89 52	+11.4	-3.3		2024.6	IF	-310	-4887	690,646	3,172,198
599	4623		256 55'	--	10.1	89 55	+6.7	-3.4		2024.5		-265	-4615	690,691	3,172,470
600	4290		--	--	9.7	89 55	+6.2	-3.5		2024.4		-246	-4283	690,710	3,172,802

y=690,610 x=3,172,170
FT-Inter. @ 2026.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE				
9-4-86		B. Cotcamp		J. Middleton		6834		F.M.		9		37				
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER		
MONTANA		PLENTYWOOD S.W.-7 1/2		MONT.		SHERIDAN								S. Dinns		
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS & TP	COORDINATES		REMARKS		
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y	X
									2027.9							
601	3960		256 55'	+9.8	9.2	89 55'	+5.8	-3.4		2024.5		-227	-3954	690,729	3,173,131	
602	3630		- -	--	8.6	89 55'	+5.3	-3.3		2024.6		-208	-3624	690,748	3,173,461	
603	3300		- -	--	7.9	89 55'	+4.8	-3.1		2024.8		-189	-3295	690,767	3,173,790	
604	2970		- -	--	7.1	89 55'	+4.3	-2.8		2025.1		-170	-2965	690,786	3,174,120	PLENTYWOOD S.W.-7 1/2 ↑
605	2640		- -	--	6.7	89 55'	+3.8	-2.9		2025.0		-151	-2636	690,805	3,174,449	PLENTYWOOD -7 1/2 ↓
606	2310		256 55'	--	9.0	89 50'	+6.7	-2.3		2025.6		-132	-2306	690,824	3,174,779	
Bm	2187		254 51'	--	11.0	89 50'	+6.4	-4.6		2023.3	Bm	-204	-2177	690,752	3,174,908	690,730 x -3,174,900 Bm. U.S.C. & G.S. EL. 2023.6
607	1980		256 55'	+9.8	8.0	89 50'	+5.8	-2.2		2025.17		-113	-1977	690,843	3,175,108	
608	1650		- -	--	7.3	89 50'	+4.8	-2.5		2025.4		-95	-1647	690,861	3,175,438	
609	1320		- -	--	7.0	89 50'	+3.8	-3.2		2024.7		-76	-1318	690,880	3,175,767	
610	990		- -	--	6.7	89 50'	+2.9	-3.8		2024.1		-57	-988	690,899	3,176,097	
611	660		- -	--	6.2	89 50'	+1.9	-4.3		2023.6		-38	-659	690,918	3,176,426	
612	330		- -	--	5.4	89 50'	+1.0	-4.4		2023.5		-19	-329	690,937	3,176,756	
613	0				5.1			-5.1		2022.8	TP	0	0	690,956	3,177,085	
614	330		84 30'	--	5.5	89 50'	+1.0	-4.5		2023.4		-25	+329	690,931	3,177,414	
615	660		89 25'	--	5.8	89 50'	+1.9	-3.9		2024.0		-166	+651	690,850	3,177,736	
616	989		91 30'	--	6.0	89 50'	+2.9	-3.1		2024.8		-194	+970	690,762	3,178,055	
617	1319		92 40'	--	7.0	89 50'	+3.8	-3.2		2024.7		-285	+1288	690,671	3,178,373	
618	1649		93 10'	--	7.9	89 50'	+4.8	-3.1		2024.8		-370	+1607	690,586	3,178,692	
619	1978		93 43'	--	9.1	89 50'	+5.8	-3.3		2024.6		-462	+1923	690,494	3,179,008	

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		F.M.		9		38			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Plentywood -7 1/2'		MONTANA		SHERIDAN								S. Dinnis	
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	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
									2027.9						
620	2309		93° 55'	+9.8	10.3	89° 50'	+6.7	-3.6		2024.3		-548	+2243	690,408	3,179,328
621	2639		94° 10'	--	11.1	89° 50'	+7.7	-3.4		2024.5		-637	+2561	690,319	3,179,646
622	2969		94° 21'	-	9.0	89° 54'	+5.2	-3.8		2024.1		-726	+2879	690,230	3,179,964
623	3297		94° 24' 16"	+9.5	4.9	-	-	-4.9	-4.8 1/2	2023.1	TP	-792	+3200	690,164	3,180,285
623	3297				4.6	270°	-	-4.6			TP				
	2314		273° 53' 57"	--	+13.1	TH	-11.6	+1.5			BS	-536	+2251		
	2314				+13.0	TH 270°	-11.6	+1.4	2024.5		BS				
624	1980		273° 54'	--	10.7	TH	+9.9	-0.8		2023.7		+459	-1926	690,087	3,180,610
625	1650		--	--	9.1	TH	+8.3	-0.8		2023.7		+382	-1605	690,010	3,180,931
626	1320		--	--	8.3	TH	+6.6	-1.7		2022.8		+306	-1284	689,934	3,181,252
627	990		--	--	8.1	TH	+5.0	-3.1		2021.4		+229	-963	689,857	3,181,573
628	660		--	--	7.8	TH	+3.3	-4.5		2020.0		+153	-642	689,781	3,181,894
629	330		--	--	6.1	TH	+1.7	-4.4		2020.1		+76	-321	689,704	3,182,215
630	0				5.1	-	-	-5.1		2019.4	TP	0	0	689,628	3,182,536
631	330		93° 55'	+9.5	5.8	89° 30'	+2.9	-2.9		2021.6		-77	+321	689,551	3,182,857
632	660		--	--	6.4	89° 30'	+5.8	-0.6		2023.9		-153	+642	689,475	3,183,178
633	990		--	--	6.6	89° 30'	+8.6	+2.0		2026.5		-230	+963	689,398	3,183,499
Bm	1024		101° 16' 54"	--	12.1	89° 30'	+9.0	-3.1		2021.4	Bm	-364	+959	689,264	3,183,495
634	1320		93° 55'	-	7.0	89° 30'	+11.5	+4.5		2029.0		-306	+1284	689,322	3,183,820
635	1650		--		7.1	89° 30'	+14.4	+7.3		2031.8		-383	+1605	689,245	3,184,141

y=689,255x-3,183,505
M.63 1984 N.S.C. 165 ft. 2021.

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-4-86		B. Cotcamp		J. Middleton		6834		F.M.		9		39			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Plentywood - 7 1/2'		MONT.		SHERIDAN								S. Binns	
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
									2024.5						
636	1980		93 55	+9.5	7.8	89 30	+17.3	+9.5		2034.0		-459	+1926	689,169	3,184,462
637	2315		94 25	--	10.2	89 30	+20.2	+10.0		2034.5		-557	+2247	689,071	3,184,783
TP	2420		94 14 16	--	12.6	89 30	+21.1	+8.5			TP	-575	+2351	689,053	3,184,887
TP	2420				12.5	270 30	+21.1	+8.6		2033.1	TP				
	2877		301 58 52	--	+10.5	90 30	+25.1	+35.6	2068.7		BS	-1906	+2155		
	2877				+10.4	269 30	+25.1	+35.5			BS				
638	2642		302 15	+9.5	5.2	90 50	-38.4	-43.6		2025.1		+1759	-1971	688,906	3,185,071
639	2310		- -	--	11.1	90 54	-36.3	-47.4		2021.3		+1538	-1723	688,685	3,185,319
640	1980		- -	--	9.5	90 54	-31.1	-40.6		2028.1		+1318	-1477	688,465	3,185,565
641	1650		- -	--	21.1	90 54	-25.9	-47.0		2021.7		+1099	-1231	688,246	3,185,811
642	1320		- -	--	25.8	90 54	-20.7	-46.5		2022.2		+879	-985	688,026	3,186,057
643	990		- -	--	12.0	90 59	-17.0	-29.0		2039.7		+659	-739	687,806	3,186,303
644	660		- -	--	10.8	90 10	-1.9	-12.7		2056.0		+439	-492	687,586	3,186,550
645	330		- -	--	6.0	90 16	-1.0	-7.0		2061.7		+220	-246	687,367	3,186,796
646	0				5.1	-		-5.1		2063.6	X	0	0	687,147	3,187,042
647	330		118 35	--	6.3	89 40	+1.9	-4.4		2064.3		-204	+260	686,943	3,187,302
648	656		113 10	--	9.0	89 40	+3.8	-5.9		2063.5		-354	+552	686,793	3,187,594
Bm	4132		291 19 53	--	11.8	90 30	-36.1	-47.9			Bm	+2118	-3548	687,265	3,183,494
Bm	4132				11.5	269 30	-36.1	-47.6	47.73	2021.0	Bm				

E.O.L. Line #9
 689,255 x - 3,183,505
 U.S.C. & G.S. Bm EL. 2021.0