

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE		
6-12-86		B. G. Stamp		J. Middleton		6834				3		1A		
AREA		TOPO MAP		STATE		COUNTY		RANGE		PPM		PARTY MANAGER		
MONTANA		SCOFFIN Butte-7 1/2		MONT.		Teton						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.	
RK	y-Intersect	EL.	4671.0 SCALED	-5-4	28.010	X-1,225,205				4671.0				y-428,010 x-1,225,205
	27		73 -	+21.0	5.5	-		+5.5			BS	+2	-27	
	27				5.4	270 -		+5.4	4676.4		BS			
20	3032		224 23	--	12.5	90 06	-5.3	-17.8		4658.6		-1263	-2756	426,749 1,222,422 B.O.L. Line # 3
21	2736		221 26	--	8.8	-		-8.8		4667.6		-1266	-2425	426,746 1,222,753
22	2453		217 45	--	6.6	-		-6.6		4669.8		-1273	-2097	426,739 1,223,081
23	2178		212 55	--	8.3	89 50	+6.3	-2.0		4674.4		-1283	-1760	426,729 1,223,418
24	1921		207 25	+21.0	8.8	89 22	+21.2	+12.4		4688.8		-1275	-1437	426,737 1,223,741
25	1595		206 45	--	10.1	89 30	+13.9	+3.8		4680.2		-1072	-1181	426,940 1,223,997
26	1265		207 25	--	11.0	89 45	+5.5	-5.5		4670.9		-840	-946	427,172 1,224,232
27	938		209 28	--	9.3	89 40	+5.5	-3.8		4672.6		-597	-723	427,415 1,224,455
28	612		213 20	--	11.4	89 40	+3.6	-7.8		4668.6		-357	-497	427,655 1,224,681
29	283		213 05	--	11.8	-		-11.8		4664.6		-166	-229	427,846 1,224,949
K	0				5.1	-		-5.1		4671.3	K	0	0	428,012 1,225,178
30	58		69 -	+21.0	6.5	-		-6.5		4669.9		+0	+58	428,012 1,225,236
31	382		55 30	--	4.4	-		-4.4		4672.0		+89	+371	428,101 1,225,549
32	712		54 50	--	5.7	TM	+3.6	-2.1		4674.3		+174	+690	428,186 1,225,868
TP33	1043		55 28 50	--	13.6	TM	+5.2	-8.4		4668.0	TP	+244	+1014	428,256 1,226,192
TP33	1043				13.5	270 TM	+5.2	-8.3			TP			
	2606		229 24 50	+21.0	5.7	87 50	-98.5	-92.8			BS	+873	+2453	
	2606				5.4	272 10	-98.5	-93.1	-93.0345250		BS			

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445'

Geosource Inc.

DATE 9-20-85	INSTRUMENT MAN B. Cotcamp	ROD MAN B. SALDIVAR	PARTY NUMBER 6834	NOTES CHECKED BY F.M.	LINE NO. 3	PAGE 1
AREA MONTANA	TOPO MAP SCOFFIN Butte-7 1/2'	STATE MONT.	COUNTY PONDERA	TWP	RANGE	PPM
				PARTY MANAGER W. Cassidy		

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	X			
TR. T-Intersect	Elev.		4512.0	y-429,830		x-1,231,630	(scaled)				4512.0	TR.			MONTANA NORTH ZONE COORD. System		
	791		55° 51' 12"	+21.0	1.2	-		+1.2	4513.2			BS	-180	-770			
	791			+1.1	270-		+1.1				BS						
41	2309		235° 28'	-	6.6	88° 26'	+63.1	+56.5		4569.7			-540	-2244	429,110	1,228,616	B.O.L. Line #3
42	1980		236° 01'	-	7.8	88° 50'	+40.3	+32.5		4545.7			-445	-1929	429,205	1,228,931	FIRST 40 STN. were to muddy to get to.
43	1650		-	-	9.0	89° 20'	+19.2	+10.2		4523.4			-371	-1608	429,279	1,229,252	
44	1320		-	-	9.3	89° 20'	+15.4	+6.1		4519.3			-297	-1286	429,354	1,229,574	
IC	1241		236° 16' 18"	+21.0	6.0	89° 20'	+14.4	+8.4		4521.6		IC	-273	-1210	429,377	1,229,649	429,400 x-1,229,695 IC BRIDGE
45	990		236° 03'	-	5.4	7M	+50	-0.4		4512.8			-222	-965	429,428	1,229,895	
46	660		-	-	3.8	-		-3.8		4509.4			-148	-643	429,502	1,230,217	
47	330		-	-	5.4	-		-5.4		4507.8			-74	-322	429,576	1,230,538	
48	0				5.1	-		-5.1		4508.1		A	0	0	429,650	1,230,860	
41	462		55° 53' 12"	+21.0	7.0	-		-7.0		4506.2		41	+105	+450	429,755	1,231,310	429,780 x-1,231,330 T-Inter.
49	330		56° 25'	-	7.8	-		-7.8		4505.4			+72	+322	429,722	1,231,182	
50	660		-	-	4.7	-		-4.7		4508.5			+144	+644	429,794	1,231,504	
IF	791		55° 51' 12"	-	1.2	-		-1.2		4512.0		IF	+180	+770	429,832	1,231,633	429,830 x-1,231,630 IF-Inter. EL 4512.0
IF	791				1.1	270-		-1.1				IF	+2	+3			

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445.

Geosource Inc.

DATE	9-20-85	INSTRUMENT MAN	B. Cotcamp	ROD MAN	B. SALDIVAR	PARTY NUMBER	6834	NOTES CHECKED BY	J.M.	LINE NO.	3	PAGE	2
AREA	MONTANA	TOPO MAP	SCOFFIN Butte-7k	STATE	MONT.	COUNTY	PONDERA	TWP		RANGE		PPM	
												PARTY MANAGER	W. Cassidy

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.	
										4512.0				
41	2458		228° 52' 16"	+20.6	7.1	90° 40'	+28.6	+35.7	4547.7		BS	+862	+2302	
41	2458				+7.0	267° 20'	+28.6	+35.6			BS	+2	+3	
51	2268		228° 05'	--	9.2	90° 40'	-26.4	-35.6		4512.1		-824	-2113	429,872 1,231,825
52	1941		226° 45'	--	10.3	90° 40'	-22.6	-32.9		4514.8		-747	-1791	429,948 1,232,147
53	1615		225° -	--	11.8	90° 40'	-18.8	-30.6		4517.1		-667	-1471	430,029 1,232,467
54	1293		222° 10'	--	13.0	90° 40'	-15.0	-28.0		4519.7		-592	-1150	430,104 1,232,788
55	975		217° 40'	--	11.0	90° 40'	-11.3	-22.3		4525.4		-513	-829	430,183 1,233,109
56	658		211° -	--	7.1	90° 40'	-7.7	-14.8		4532.9		-409	-516	430,287 1,233,422
57	330		207° 50'	--	6.1	90° 40'	-3.8	-9.9		4537.8		-219	-247	430,477 1,233,691
58	0				5.1	-	-	-5.1		4542.6	TP	0	0	430,696 1,233,937
59	330		27° 05'	+20.6	5.7	90° 20'	-1.9	-7.6		4540.1		+222	+244	430,918 1,234,182
41	394		26° -	-	6.3	90° 20'	-2.3	-8.6		4539.1		+271	+286	430,967 1,234,223 N Fence line EL. 4540.0
60	660		27° 05'	-	6.8	90° 20'	-3.8	-10.6		4537.1		+444	+488	431,140 1,234,425
61	990		-	-	9.7	89° 40'	+5.7	-4.0		4543.7		+666	+732	431,362 1,234,669
62	1320		-	-	11.0	89° 40'	+7.7	-3.3		4544.4		+889	+976	431,585 1,234,913
63	1650		-	-	12.1	TH	+8.3	-3.8		4543.9		+1111	+1220	431,807 1,235,157
64	1980		27° 05'	-	8.3	-	-	-8.3		4539.4		+1333	+1464	432,029 1,235,401
TP	2021		26° 37' 52"	-	10.1	-	-	-10.1			TP	+1371	+1484	432,069 1,235,424
TP	2021				10.0	270° -	-	-10.0		4537.7		+2	+3	

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GEO-445

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DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-20-85		B. Citeamp		B. SALDIVAR		6834		I.M.		3		3			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		SCOFFIN Butte-7 1/2'		MONT.		PONDERA								W. Cassidy	
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
									4537.7						
	2271		208° 02' 04"	+20.6	8.1	89° 30'	-19.8	-11.7	4526.0		BS	+1501	+1704		
	2271				8.0	270° 30'	-19.8	-11.8		+2		+3			
65	1980		207° 34'	-	6.3	TH	+9.9	+3.6		4529.6		-1321	-1475	432,252	1,235,656
66	1650		-	-	7.0	TH	+8.3	+1.3		4527.3		-1100	-1229	432,472	1,235,902
67	1320		-	-	10.7	89° 20'	+15.4	+4.7		4530.7		-880	-983	432,692	1,236,148
68	990		-	-	7.3	89° 20'	+11.5	+4.2		4530.2		-660	-738	432,912	1,236,394
Bm	1031		215° 52' 40"	-	6.4	89° 40'	+6.0	-0.4		4525.6	Bm	-569	-860	433,003	1,236,372
69	660		207° 34'	-	7.2	89° 20'	+7.7	+0.5		4526.5		-440	-492	433,132	1,236,640
70	330		-	-	5.8	89° 20'	+3.8	-2.0		4524.0		-220	-246	433,352	1,236,886
71	0				5.1	-	-	-5.1		4520.9	TP	0	0	433,572	1,237,132
72	330		27° 30'	+20.6	4.4	92° 00'	-11.5	-15.9		4510.1		+220	+245	433,792	1,237,377
73	660		-	-	9.3	92° -	-23.0	-32.3		4493.7		+441	+491	434,013	1,237,623
74	990		-	-	10.9	92° 20'	-40.3	-51.2		4474.8		+661	+736	434,233	1,237,868
75	1320		-	-	9.9	92° 20'	-53.7	-63.6		4462.4		+881	+982	434,453	1,238,113
76	1650		27° 55'	-	10.3	92° -	-57.6	-67.9		4458.1		+1092	+1235	434,665	1,238,367
77	1978		29° 03' 40"	+20.3	12.1	91° 30'	-51.8	-63.9				+1288	+1500	434,862	1,238,635
77	1978				12.0	268° 30'	-51.8	-63.8		4462.2	TP	+2	+3		
	2089		216° 54' 25"	-	7.7	70° 40'	+24.3	+32.0		4494.2		+1131	+1756		
	2089				7.6	269° 20'	+24.3	+31.9			BS	+2	+3		

Y=433,000 X=1,236,305
Bm EL. 4526.0

SCOFFIN Butte-7 1/2'
Dupuyer West-7 1/2'

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	9-20-85	INSTRUMENT MAN	B. Cotcamp	ROD MAN	R. Jones	PARTY NUMBER	6834	NOTES CHECKED BY	J.M.	LINE NO.	3	PAGE	5	
AREA	MONTANA	TOPO MAP	Dupuyer West-7 1/2	STATE	MONT.	COUNTY	PONDERA	TWP		RANGE		PPM	PARTY MANAGER	W. Cassidy

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.	
									4494.2					
94	3519		38 55 39	+19.9	9.9	91 -	-61.4	-71.3			TP	+1821	+3010	437,819 1,243,408
94	3519				9.6	269 -	-61.4	-71.0	71.1	4423.1	TP	+2	+3	
	4621		219 33 57	--	+7.4	89 06	-72.6	-65.2		4357.9	BS	+2347	+3980	
	4621				+7.3	270 54	-72.6	-65.3			BS	+2	+3	
95	4290		219 37	--	12.2	89 -	+74.9	+62.7		4420.6		-2176	-3696	437,992 1,243,694
96	3960		-	--	11.6	89 -	+69.1	+57.5		4415.4		-2009	-3412	438,159 1,243,978
97	3630		-	--	5.0	89 10	+52.8	+47.8		4405.7		-1841	-3128	438,327 1,244,262
98	3300		-	--	7.3	89 20	+38.4	+31.1		4389.0		-1674	-2843	438,474 1,244,547
99	2970		219 37	-	7.9	89 30	+25.9	+18.0		4375.9		-1507	-2559	438,661 1,244,831
100	2640		-	-	12.0	89 30	+23.0	+11.0		4368.9		-1339	-2275	438,829 1,245,115
101	2310		-	-	12.7	89 30	+20.2	+7.5		4365.4		-1171	-1991	438,996 1,245,400
102	1980		-	-	13.1	89 30	+17.3	+4.2		4362.1		-1004	-1706	439,164 1,245,684
IF	1955		219 51 20	-	5.9	TH	+9.8	+3.9		4361.8	IF	-985	-1689	439,185 1,245,704
108	0				5.1	-		-5.1		4352.8	K	0 ²	0 ³	440,168 1,247,390

IF -439,185 X -1,245,705
IF -Inter. EL 4362.0
Horiz y +18
CORR. X -21

NOTE - END OF MAGNETIC SURVEY
DUE TO LOCAL ATTRACTION DOWN LINE
PLATE ANGLE SURVEY BEGAN AT INTERSECT @ 102

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotcamp		B. SALDIVAR		6834		F.M.		3		6			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Dupuyer West-7 1/2'		MONT.		PONDERA								W. Cassidy	
STATION NO.	SLOPE DISTANCE	PLOTTING DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	C ROD READING	D 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
			Plates (G.R.O)												239° 48' 50"
Telephone pole.			0 00 00							4362.0					SUNSHOT TAKEN @ this X FOR T.R. GRID AZIMUTH
K 1	0				+5.15	M.		+5.2	4367.2		K	0	0	439,180	1,245,715
103	303		179 30 (59 19)		8.4	91 -	-5.3	-13.7		4353.5		+155	+261	439,335	1,245,976
104	633		-- (--)		9.0	91 -	-11.0	-20.0		4347.2		+323	+544	439,503	1,246,259
105	963		-- (--)		6.1	91 -	-16.8	-22.9		4344.3		+492	+828	439,672	1,246,543
106	1293		-- (--)		4.7	90° 40'	-15.0	-19.7		4347.5		+661	+1112	439,841	1,246,827
107	1623		-- (--)		6.4	90° 20'	-9.4	-15.8		4351.4		+829	+1396	440,009	1,247,111
108	1953		-- (--)		8.8	90° 10'	-5.6	-14.4		4352.8		+998	+1680	440,178	1,247,395
109	2283		179 27 37		12.4	90° 10'	-6.5	-18.9			TP	+1166	+1963	440,346	1,247,678
109	2283		(59° 16' 27")		12.3	269° 50'	-6.5	-18.8		4348.4	TP				
K			0 00 00												
109	0				+5.05	M.		+5.1	4353.5		K	0	0	440,346	1,247,678
110	330		179 39 (58 55)		8.1	90° 40'	-3.8	-11.9		4341.6		+170	+283	440,516	1,247,961
111	660		-- (--)		10.8	90° 40'	-7.7	-18.5		4335.0		+341	+565	440,687	1,248,243
112	990		-- (--)		10.7	90° 40'	-11.5	-22.2		4331.3		+511	+848	440,857	1,248,526
113	1320		179 39 (58 55)		8.4	90° 40'	-15.3	-23.7		4329.8		+682	+1130	441,028	1,248,808
114	1650		-- (--)		9.0	90° 40'	-19.1	-28.1		4325.4		+852	+1413	441,198	1,249,091
115	1980		-- (--)		8.3	90° 40'	-23.0	-31.3		4322.2		+1022	+1696	441,368	1,249,374
116	2310		-- (--)		9.4	90° 40'	-26.8	-36.2		4317.3		+1193	+1978	441,539	1,249,656

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DATE		INSTRUMENT MAKE		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotamp		B. SALDIVAR		6834		J.M.		3		7			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Dupuyer West-7 1/2'		MONT.		PONDERA								W. CASS. dy	
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
			PLATES (GR.D)						4353.5						
TP	2466		179° 56' 29"		11.9	90° 40'	-28.6	-40.5			TP	+1262	+2118	441,608	1,249,796
TP	2466		(59° 12' 56")		11.8	269° 20'	-28.6	-40.4		4313.7	TP				
109			0 00 00												
TP	0				+5.1	M.		+5.1		4318.2	TP	0	0	441,608	1,249,796
117	176		190° 10' (69° 23')		6.0	91° -	-3.1	-9.1		4309.1		+62	+165	441,670	1,249,961
118	505		193° 50' (73° 03')		6.7	90° 40'	-5.9	-12.6		4305.6		+147	+483	441,755	1,250,279
119	835		194° 55' (74° 08')		9.1	-		-9.1		4309.1		+228	+803	441,836	1,250,599
120	1165		195° 11' 04"		6.9	-		-6.9			TP	+313	+1122	441,921	1,250,918
120	1165		(74° 24')		6.8	270° -		-6.8		4311.4	TP				
TP			0 00 00												
120	0				+5.1	M.		+5.1		4316.5	TP	0	0	441,921	1,250,918
121	330		180° 55' (75° 19')		10.1	-		-10.1		4306.4		+84	+319	442,005	1,251,237
122	660		- - (-)		10.8	-		-10.8		4305.7		+167	+638	442,088	1,251,556
HI	845		180° 19' 45" (74° 43' 45")		3.4	90° 30'	-7.4	-10.8		4305.7	HI	+223	+815	442,144	1,251,733
123	990		180° 55' (75° 19')		4.5	90° 30'	-8.6	-13.1		4303.4		+251	+958	442,172	1,251,876
124	1320		- - (-)		6.3	90° 30'	-11.5	-17.8		4298.7		+335	+1277	442,256	1,252,195
125	1650		- - (-)		7.0	90° 30'	-14.3	-21.3		4295.2		+418	+1596	442,339	1,252,514
126	1980		- - (-)		9.4	90° 30'	-17.2	-26.6		4289.9		+502	+1915	442,423	1,252,833
127	2310		- - (-)		7.8	90° 30'	-20.0	-27.8		4288.7		+586	+2235	442,507	1,253,153
B.M.	2454		180° 04' 52" (74° 28' 52")		7.4	90° 30'	-21.3	-28.7		4287.8	B.M.	+657	+2364	442,578	1,253,282

442,130 x = 1,251,730
T-J, TEL. EL. 4306.0

442,578 x = 1,253,290
B.M. EL. 4288.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotcamp		B. SALDIVAR		6834		J.M.		3		8			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Dupuyer West-7 1/2		MONT.		PONDERA								W. Cass, Jr	
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
			PLATES → (9 Rids)						4316.5						
128	2640		180° 55' (75' 19")		6.6	90° 30'	-22.9	-29.5		4287.0		+669	+2554	442,590	1,253,472
129	2970		-- (--)		11.9	90° 30'	-25.7	-37.6		4278.9		+753	+2873	442,674	1,253,791
130	3300		-- (--)		12.2	90° 34'	-32.4	-44.6		4271.9		+836	+3192	442,757	1,254,110
131	3630		-- (--)		12.9	90° 34'	-35.6	-48.5		4268.0		+920	+3511	442,841	1,254,429
132	3960		180° 55' (75' 19")		9.7	90° 34'	-38.8	-48.5		4268.0		+1004	+3831	442,925	1,254,749
133	4290		-- (--)		11.2	90° 30'	-37.1	-48.3		4268.2		+1087	+4150	443,008	1,255,068
134	4620		-- (--)		7.7	90° 30'	-39.9	-47.6		4268.9		+1171	+4469	443,092	1,255,387
135	4950		-- (--)		11.1	90° 26'	-36.9	-48.0		4268.5		+1255	+4788	443,176	1,255,706
136	5280		-- (--)		10.0	90° 26'	-39.4	-49.4		4267.1		+1338	+5108	443,259	1,256,026
137	5610		-- (--)		9.2	90° 26'	-41.8	-51.0		4265.5		+1422	+5427	443,343	1,256,345
138	5940		-- (--)		6.8	90° 26'	-44.2	-51.0		4265.5		+1506	+5746	443,427	1,256,664
139	6268		180° 56' 52"		14.2	90° 18'	-32.0	-46.2			TP	+1585	+6064	443,506	1,256,982
139	6268		(75° 20' 52")		13.9	269° 42'	-32.0	-45.9	-46.0	4270.5	TP				
120			0 00 00												
139	0				+5.05	H.		+5.1	4275.6		π	0	0	443,506	1,256,982
#1	68		170° 59' 29" (66° 20' 21")		3.9	--		-3.9		4271.7	#1	+27	+62	443,533	1,257,044
140	330		175° 35' (70° 56")		5.9	--		-5.9		4269.7		+108	+312	443,614	1,257,294
141	657		171° 45' (67° 06")		9.2	90° 40'	-7.6	-16.8		4258.8		+256	+605	443,762	1,257,587
142	987		170° - (65° 21")		12.0	90° 40'	-11.5	-23.5		4252.1		+412	+897	443,918	1,257,879
143	1316		169° 05' (64° 26")		8.7	90° 30'	-11.4	-20.1		4255.5		+568	+1187	444,074	1,258,169

Y=443,520 X=1,257,070
T-INT. EL. 4272.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. C. Camp		B. Saldívar		6834		J.M.		3		9			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Dupuyer West - 7 1/2		MONT.		Pondera								W. Cassidy	
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
			PLATES → (9 rios)						4275.6						
144	1647		168° 45' (64° 06')		12.1	7H	+8.2	-3.9		4271.7		+719	+1482	444,225	1,258,464
141	1713		168° 13' 33" (63° 34' 25")		1.9	-		-1.9		4273.7	11	+762	+1534	444,268	1,258,516
145	1974		168° 19' 15"		7.6	-	+0.1	-7.5			TP	+876	+1769	444,382	1,258,751
145	1974		(63° 40' 07")		7.5	270°	+0.1	-7.4		4268.2	TP				
139			0° 00' 00"												
145	0				+5.15	H.		+5.2	4273.4		π	0	0	444,382	1,258,751
146	330		178° 30' (62° 10')		7.0	90° 20'	-7.7	-14.7		4258.7		+154	+292	444,536	1,259,043
147	660		-- (--)		7.1	91° 20'	-15.3	-22.4		4251.0		+308	+584	444,690	1,259,335
148	986		181° 13' 09"		4.2	91° 20'	-22.9	-27.1		4246.3	TP	+418	+893	444,800	1,259,644
148	986		(64° 53' 16")		7.0	91° 10'	-20.1	-27.1			TP				
145			0° 00' 00"												
148	0				+5.05	H.		+5.1	4251.4		π	0	0	444,800	1,259,644
149	330		206° 40' (91° 33')		8.9	90° 30'	-2.9	-11.8		4239.6		-9	+330	444,791	1,259,974
150	660		-- (--)		11.2	91°	-11.5	-22.7		4228.7		-18	+660	444,782	1,260,304
151	990		-- (--)		11.6	91°	-17.3	-28.9		4222.5		-27	+990	444,773	1,260,634
152	1320		-- (--)		9.2	91°	-23.0	-32.2		4219.2		-36	+1320	444,764	1,260,964
153	1650		-- (--)		9.8	90° 50'	-23.9	-33.7		4217.7		-45	+1649	444,755	1,261,293
154	1980		-- (--)		6.6	90° 30'	-17.2	-23.8		4227.6		-54	+1979	444,746	1,261,623
11	1977		206° 27' 24"		6.7	90° 30'	-17.2	-23.9		4227.5	11	-46	+1976	444,754	1,261,620
			(91° 20' 40")												

Y=444,270 X=1,258,510
T-Inter. EL. 4273.0

Y=444,760 X=1,261,610
T-Inter. EL. 4228.0

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotcamp		B. SALDIVAR		6834		J. M.		3		10			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Dupuyer West - 7 1/2'		MONT.		PONDERA								W. Cassidy	
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
			PLATES (gr. 0)						4251.4						
155	2310		206° 42' (91° 35')		8.0	90° 20'	-13.3	-21.3		4230.1		-64	+2309	444,736	1,261,953
156	2640		- - (- -)		6.3	90° 20'	-15.2	-21.5		4229.9		-73	+2639	444,727	1,262,283
157	2970		- - (- -)		5.3	90° 20'	-17.1	-22.4		4229.0		-82	+2969	444,718	1,262,613
158	3300		- - (- -)		11.0	90° 10'	-9.4	-20.4		4231.0		-91	+3299	444,709	1,262,943
159	3630		- - (- -)		5.8	90° 10'	-10.3	-16.1		4235.3		-100	+3629	444,700	1,263,273
160	3958		206° 12' 23"		6.6	90° 10'	-11.2	-17.8			TP	-76	+3957	444,724	1,263,601
160	3958		(91° 05' 39")		6.3	269° 50'	-11.2	-17.5	-19.6	4233.8	TP				
148			0 00 00												
160	0				+5.05	11i		+5.1	4238.9		▲	0	0	444,724	1,263,601 B-T-st.
161	325		141° 55' (53° 01')		6.7	91° -	-5.7	-12.4		4226.5		+196	+260	444,920	1,263,861
162	642		130° 52' (41° 58')		8.0	91° 30'	-16.8	-24.8		4214.1		+477	+429	445,201	1,264,030
163	968		127° - (38° 06')		7.6	91° 50'	-30.9	-38.5		4200.4		+762	+597	445,486	1,264,198
164	1296		125° 10' (36° 16')		6.6	91° 50'	-41.4	-48.0		4190.9		+1045	+767	445,769	1,264,368
165	1626		124° - (35° 06')		5.2	91° 40'	-47.2	-52.4		4186.5		+1330	+935	446,054	1,264,536
166	1954		123° 20' (34° 26')		4.7	91° 30'	-51.1	-55.8		4183.1		+1612	+1105	446,336	1,264,706
167	2281		122° 10' (33° 16')		6.8	91° 20'	-53.0	-59.8		4179.1		+1907	+1251	446,631	1,264,852
168	2466		120° 00' 01" (31° 05' 40")		5.4	91° 20'	-57.3	-62.7		4176.2	1/2	+2111	+1273	446,835	1,264,874
168	2579		118° 50' (29° 56')		6.9	91° 20'	-59.9	-66.8		4172.1		+2235	+1287	446,959	1,264,888
169	2894		117° 18' 05"		11.3	91° 20'	-67.2	-78.5			TP	+2545	+1376	447,269	1,264,977
169	2894		(28° 23' 44")		11.0	268° 46'	-67.2	-78.2	-78.3	4160.6	TP				

446,770 x 1,264,875
y-inter. El. 4176.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotcamp		B. SALDIVAR		6834		F.M.		3		11			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Dupuyer West-7 1/2'		MONTANA		PENDERA								W. Cassidy	
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 -	EAST + WEST -		Y	X
			PLATES → (GRID)						4160.6						
160			0° 00' 00"												
169	0				+5.2	M.	+5.2	4165.8		X	0	0	447,269	1,264,977	
170	330		187° 35' (3559)		5.0	91° -	-5.8	-10.8	4155.0		+267	+194	447,536	1,265,171	
171	659		190° - (38' 24")		5.8	90° 50'	-9.8	-15.4	4150.4		+516	+409	447,785	1,265,386	
172	972		197° 28' (4552)		7.0	90° 40'	-11.3	-18.3	4147.5		+677	+698	447,946	1,265,675	
173	1272		204° 30' (5254)		6.3	90° 40'	-14.8	-21.1	4144.7		+767	+1015	448,036	1,265,972	
174	1596		206° 50' (5514)		5.7	90° 40'	-18.5	-24.2	4141.6		+910	+1311	448,179	1,266,288	
175	1924		208° 05' (5629)		5.1	90° 40'	-22.3	-27.4	4138.4		+1062	+1604	448,331	1,266,581	
176	2252		208° 58' (57' 22")		10.1	90° 30'	-19.5	-29.6	4136.2		+1214	+1897	448,483	1,266,874	
177	2397		209° 30' 06" (57' 53' 50")		10.3	90° 30'	-20.8	-31.1	4134.7		+1274	+2030	448,543	1,267,007	
177	2554		211° 43' 34"		10.4	90° 30'	-22.2	-32.6			+1272	+2214	448,541	1,267,191	
177	2554		(60° 07' 18")		10.3	269° 36'	-22.2	-32.5	4133.3						
169			0 00 00												
177	0				+5.15	M.	+5.2	4138.5		X	0	0	448,541	1,267,191	
178	330		212° 57' (93° 04')		7.5	-9°	-7.5		4131.0		-18	+330	448,523	1,267,521	
179	660		- - (- -)		9.2	-9°	-9.2		4129.3		-35	+659	448,506	1,267,850	
180	990		- - (- -)		10.0	-9°	-10.0		4128.5		-53	+989	448,488	1,268,180	
177	1303		212° 44' 05" (92' 51' 23")		10.3	-9°	-10.3		4128.2		-65	+1301	448,476	1,268,492	
181	1320		212° 57' (93° 04')		10.2	-9°	-10.2		4128.3		-71	+1318	448,470	1,268,509	
182	1650		- - (- -)		10.4	-9°	+0.1	-10.3	4128.2		-88	+1648	448,453	1,268,839	

448,530 x = 1,267,000
4-way inte. EL. 4135.0

Dupuyer West-7 1/2'

448,500 x = 1,268,500
4-way inte.

Penderoy-15'

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotcamp		B. SALDIVAR		6834		F.M.		3		12			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Pendroy - 15'		MONT.		PENDERA								W. Cassidy	
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
			PLATES → (grids)						4138.5						
183	1980		213 (93°07')		11.3	-	+0.1	-11.2		4127.3		-108	+1977	448,433	1,269,168
184	2310		- (-)		10.4	-	+0.1	-10.3		4128.2		-126	+2307	448,415	1,269,498
185	2640		- (-)		8.0	-	+0.1	-7.9		4130.6		-144	+2636	448,397	1,269,827
186	2970		- (-)		4.2	-	+0.2	-4.0		4134.5		-161	+2966	448,380	1,270,157
187	3300		212 56 (93°03')		9.0	89°50'	+9.8	+0.8		4139.3		-176	+3295	448,365	1,270,486
188	3630		- (-)		6.9	89°50'	+10.8	+3.9		4142.4		-193	+3625	448,348	1,270,816
189	3958		212 57 47		9.9	89°50'	+11.8	+1.9	} +2.13		TP	-213	+3952	448,328	1,271,143
189	3958		(93°05',05')		9.6	270°10'	+11.8	+2.2			TP				
177			0 00 00												
189	0				+5.1	H.		+5.1	4145.7		TP	0	0	448,328	1,271,143
190	330		179 50 (92 55)		6.9	-		-6.9		4138.8		-17	+330	448,311	1,271,473
191	660		- (-)		7.8	TH	+3.3	-4.5		4141.2		-34	+659	448,294	1,271,802
192	990		- (-)		7.0	TH	+5.0	-2.0		4143.7		-50	+989	448,278	1,272,132
193	1320		- (-)		8.0	89°30'	+11.6	+3.0		4149.3		-67	+1318	448,261	1,272,461
194	1650		- (-)		6.1	89°30'	+14.5	+8.4		4154.1		-84	+1648	448,244	1,272,791
195	1980		179 50 (92 55)		6.6	89°30'	+17.4	+10.8		4156.5		-101	+1977	448,227	1,273,120
196	2310		- (-)		11.4	89°36'	+16.2	+4.8		4150.5		-118	+2307	448,210	1,273,450
197	2640		- (-)		12.0	89°36'	+18.6	+6.0		4152.3		-134	+2637	448,194	1,273,780
198	2970		- (-)		5.3	89°36'	+20.9	+15.6		4161.3		-151	+2966	448,177	1,274,109

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotcamp		B. SALDIVAR		6834		J.M.		3		13			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Pendroy-15'		MONT.		PONDERA								W. Cassidy	
STATION NO.	SLOPE DISTANCE	PLOT DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
			PLATES → (GRIDS)						4145.7						
199	3300		179° 38' (92 43)		5.9	89° 30'	+29.0	+23.1		4168.8		-156	+3296	448,172	1,274,439
200	3629		179° 37' 46"		9.1	89° 30'	+31.9	+22.8			TP	-172	+3625	448,156	1,274,768
200	3629		(92 42' 51")		8.8	270° 30'	+31.9	+23.1	+23.0	4168.7	TP				
189			0° 00' 00"												
200	0				+5.0	M.		+5.0		4173.7	TP	0	0	448,156	1,274,768
201	330		179° 27' (92 10)		8.8	90° 30'	-2.9	-11.7		4162.0		-12	+330	448,144	1,275,098
202	660		-- (--)		9.6	90° 30'	-5.8	-15.4		4158.3		-25	+660	448,131	1,275,428
203	990		-- (--)		9.1	04	-5.0	-14.1		4159.6		-37	+989	448,119	1,275,757
204	1320		-- (--)		11.3	-		-11.3		4162.4		-50	+1319	448,106	1,276,087
205	1650		-- (--)		8.9	-	+0.1	-8.8		4164.9		-62	+1649	448,094	1,276,417
206	1980		179° 27' (92 10)		7.6	-	+0.1	-7.6 ¹⁵		4166.2		-75	+1979	448,081	1,276,747
207	2310		-- (--)		7.3	-	+0.1	-7.2		4166.5		-87	+2308	448,069	1,277,076
208	2640		-- (--)		6.9	-	+0.1	-6.8		4166.9		-100	+2638	448,056	1,277,406
209	2970		-- (--)		5.5	-	+0.2	-5.3		4168.4		-112	+2968	448,044	1,277,736
21	3203		179° 17' 22" (92 00 13)		2.7	-	+0.2	-2.5		4171.2	21	-112	+3201	448,044	1,277,969
210	3300		179° 10' (91 53)		6.3	89° 56'	+4.1	-2.2		4171.5		-108	+3298	448,048	1,278,066
211	3630		-- (--)		6.2	89° 56'	+4.5	-1.7		4172.0		-119	+3628	448,037	1,278,396
212	3960		-- (--)		6.8	89° 56'	+4.9	-1.9		4171.8		-130	+3958	448,026	1,278,726
213	4291		179° 11' 55"		4.6	89° 58'	+2.9	-1.7			TP	-143	+4289	448,013	1,279,057
213	4291		(91 54' 46")		4.3	270° 62'	+2.9	-1.4	-1.5	4172.2	TP				

448,015 x -1,278,005
HT-Inter. EL. 4170.0
Flags on north side of road. Due to no permit on south

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotcamp		B. SALDIVAR		6834		J.M.		3		14			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Penderoy - 15'		MONT.		Pondera								W. Cassidy	
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
			plates → (grids)							4172.2					
200			0 00 00												
213	0				+5.05	41		+5.1	4177.3		TP	0	0	448,013	1,279,057
214	330		180° 27' (92 22)		5.0	90° 30'	-2.9	-7.9	4169.4			-14	+330	447,999	1,279,387
215	660		- - (- -)		8.7	90° 30'	-5.8	-14.5	4162.8			-27	+659	447,986	1,279,716
216	990		- - (- -)		9.8	90° 30'	-8.6	-18.4	4158.9			-41	+989	447,972	1,280,046
217	1320		- - (- -)		9.1	90° 30'	-11.5	-20.6	4156.7			-55	+1319	447,958	1,280,376
218	1650		- - (- -)		7.7	90° 30'	-14.3	-22.0	4155.3			-68	+1649	447,945	1,280,706
219	1980		- - (- -)		6.9	90° 30'	-17.2	-24.1	4153.2			-82	+1978	447,931	1,281,035
220	2310		180° 21' 45"		6.6	90° 35' 30"	-23.7	-30.3			TP	-92	+2308	447,921	1,281,365
220	2310		(92° 16' 31")		6.5	269° 24' 30"	-23.7	-30.2		4147.1	TP				
213			0 00 00												
220	0				+4.95	41		+5.0	4152.1		TP	0	0	447,921	1,281,365
221	330		180° 20' (92 37)		5.7	90° 40'	-3.8	-9.5	4142.6			-15	+330	447,906	1,281,695
222	660		- - (- -)		7.7	90° 40'	-7.7	-15.4	4136.7			-30	+659	447,891	1,282,024
223	990		- - (- -)		10.2	90° 40'	-11.5	-21.7	4130.4			-45	+989	447,876	1,282,354
41	1211		180° 43' 46" (93° 00' 17")		10.6	90° 40'	-14.1	-24.7	4127.4		41	-63	+1209	447,858	1,282,574
224	1320		180° 20' (92 37)		7.9	90° 50'	-19.2	-27.1	4125.0			-60	+1319	447,861	1,282,684
225	1650		- - (- -)		6.5	90° 50'	-23.9	-30.4	4121.7			-75	+1648	447,846	1,283,013
226	1980		- - (- -)		6.0	90° 50'	-28.7	-34.7	4117.4			-90	+1978	447,831	1,283,343
227	2310		- - (- -)		7.3	90° 50'	-33.5	-40.8	4111.3			-105	+2308	447,816	1,283,673

41-417.870 X = 1,282,555
HT Intersect EL. 4127.0

LAST FLAG IN
NORTH SIDE

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-25-85		B. Cotcamp		B. SALDIVAR		6834		F.M.		3		15			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Pendroy - 15'		MONT.		PENDORA								W. Cassidy	
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
			PLATES → (9 grids)						4152.1						
228	2639		180° 46' (92 57)		8.6	90° 50'	-38.2	-46.8		4105.3		-136	+2636	447.785	1,284.001
229	2969		-- (--)		9.3	90° 50'	-43.0	-52.3		4099.8		-153	+2965	447.768	1,284.330
230	3299		180° 35' (92 52)		9.7	90° 50'	-47.8	-57.5		4094.6		-165	+3295	447.756	1,284.660
231	3629		-- (--)		7.0	90° 50'	-52.5	-59.5		4092.6		-181	+3624	447.740	1,284.989
232	3959		-- (--)		12.8	90° 40'	-45.7	-58.5		4093.6		-198	+3954	447.723	1,285.319
233	4289		-- (--)		5.8	90° 40'	-49.5	-55.3		4096.8		-215	+4284	447.706	1,285.649
234	4617		180° 31' 22"		10.5	90° 30'	-39.9	-50.4			TP	-225	+4611	447.696	1,285.976
234	4617		(92° 47' 53")		10.0	269° 30'	-39.9	-49.9	-50.13	4102.0	TP				
220			0 00 00	+											
234	0			+	5.1	M'		+5.1	4107.1		TP	0	0	447.696	1,285.976
235	330		179° 48' (92 36)		4.8	89° 50'	+1.0	-3.8		4103.3		-15	+330	447.681	1,286.306
#1	442		178° 40' 27" (91 28' 20")		5.2	89° 50'	+1.3	-3.9		4103.2	#1	-11	+442	447.685	1,286.418
236	660		179° 48' (92 36)		6.2	89° 50'	+1.9	-4.3		4102.8		-30	+659	447.666	1,286.635
237	990		-- (--)		7.0	89° 50'	+2.9	-4.1		4103.0		-45	+989	447.651	1,286.965
238	1320		-- (--)		10.1	89° 50'	+3.9	-6.2		4100.9		-60	+1319	447.636	1,287.295
239	1650		-- (--)		12.1	89° 50'	+4.9	-7.2		4099.9		-75	+1648	447.621	1,287.624
240	1980		-- (--)		10.3	89° 50'	+5.8	-4.5		4102.6		-90	+1978	447.606	1,287.954
241	2310		-- (--)		7.4	89° 50'	+6.8	-0.6		4106.5		-105	+2368	447.591	1,288.284
242	2640		-- (--)		9.0	89° 50'	+7.8	-1.2		4105.9		-120	+2637	447.576	1,288.613
243	2970		-- (--)		10.6	89° 50'	+8.8	-1.8		4105.3		-135	+2967	447.561	1,288.943

#1 - 447.700 X - 1,286.455
#1 - Intersect EL. 4102.0

SURVEY NOTES - HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE			
9-25-85		B. Lotcamp		B. SALDIVAR		6834		F.M.		3	16			
AREA		TAPO MAP		STATE	COUNTY	TWP	RANGE	PPM	PARTY MANAGER					
MONTANA		Pendroy - 15		MONT.	PONDERA				W. Cassidy					
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.	
			PLATES 7 (grids)						4107.1					
244	3300		179° 49' (92 36)		10.7	89° 50'	+9.8	-0.9		4106.2		-150	+3297	447,516, 1,289,273
245	3630		-- (--)		10.8	89° 50'	+10.8	+0.0		4107.1		-165	+3626	447,531, 1,289,602
246	3960		-- (--)		9.0	89° 54'	+7.2	-1.8		4105.3		-180	+3956	447,516, 1,289,932
247	4290		-- (--)		8.3	89° 54'	+7.9	-0.4		4106.7		-195	+4286	447,501, 1,290,262
248	4619		179° 51' 31"		8.9	89° 50'	+13.9	+5.0			TP	-214	+4614	447,482, 1,290,590
248	4619		(92° 39' 24")		8.8	270° 10'	+13.9	+5.1		4112.2	TP			
234			0 00 00								BS			
248	0				+5.05	M.		+5.1	4117.3		BS	0	0	447,482, 1,290,590
249	330		179° 35' (92 14)		6.6	-		-6.6		4110.7		-13	+330	447,469, 1,290,920
250	660		-- (--)		11.9	-		-11.9		4105.4		-26	+660	447,456, 1,291,250
251	990		-- (--)		9.7	BH	-5.0	-14.7		4102.6		-39	+989	447,443, 1,291,579
252	1320		-- (--)		10.3	BH	-6.6	-16.9		4100.4		-51	+1319	447,431, 1,291,909
253	1650		179° 29' 33"		9.7	BH	-8.2	-17.9			TP	-62	+1649	447,420, 1,292,239
253	1650		(92° 08' 57")		9.6	BH 270	-8.2	-17.8		4099.5	TP			
248			0 00 00											
253	0				+5.15	M.		+5.2	4104.7		T	0	0	447,420, 1,292,239
254	330		179° 57' (92 06)		3.9	92°	-11.5	-15.4		4089.3		-12	+330	447,408, 1,292,569
255	660		-- (--)		5.7	92°	-23.0	-28.7		4076.0		-24	+660	447,396, 1,292,899
256	990		-- (--)		5.1	92°	-34.5	-39.6		4065.1		-36	+989	447,384, 1,293,228
257	1320		-- (--)		12.6	91° 40'	-38.4	-51.0		4053.7		-48	+1319	447,372, 1,293,558

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO		PAGE			
9-26-85		B. Cotcamp		B. SALDIVAR		6834		F.M.		3		17			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Pendroy - 15'		MONT.		PONDERA								W. Cassidy	
STATION NO.	SLOPE DISTANCE	PLOT DISTANCE	AZIMUTH FROM MAGNETIC NORTH	DEC	ROD READING	VERTICAL ANGLE	VERTICAL CHANGE	DIFFERENCE IN ELEVATION	ELEVATION OF INSTRUMENT	ELEVATION OF STATION	BS X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
			PLATES → (92105)						4104.7						
258	1650		180° 02' (92° 11')		12.4	91° 40'	-47.9	-60.3		4044.4	-	-63	+1649	447,357	1,293,888
259	1980		- - (- -)		7.4	91° 40'	-57.5	-64.9		4039.8	-	-75	+1979	447,345	1,294,218
260	2111		179° 46' 06" (91° 55' 03")		3.8	91° 40'	-61.3	-65.1		4039.6	TP	-71	+2109	447,349	1,294,348
261	2310		180° 04' (92° 13')		8.3	91° 30'	-60.4	-68.7		4036.0	-	-89	+2308	447,331	1,294,547
262	2640		- - (- -)		6.5	91° 30'	-69.0	-75.5		4029.2	-	-102	+2638	447,318	1,294,877
263	2970		- - (- -)		11.0	91° 20'	-68.9	-79.9		4024.8	-	-115	+2968	447,305	1,295,207
264	3300		- - (- -)		7.9	91° 20'	-76.6	-84.5		4020.2	-	-128	+3298	447,292	1,295,537
265	3630		180° 04' (92° 13')		12.3	91° 10'	-73.6	-85.9		4018.8	-	-140	+3627	447,280	1,295,866
266	3960		- - (- -)		5.7	91° 10'	-80.3	-86.0		4018.7	-	-153	+3957	447,267	1,296,196
267	4290		- - (- -)		9.1	91° -	-74.5	-83.6		4021.1	-	-166	+4287	447,254	1,296,526
268	4620		- - (- -)		9.9	90° 54'	-72.1	-82.0		4022.7	-	-179	+4617	447,241	1,296,856
269	4950		180° 04' (92° 13')		10.1	90° 50'	-71.5	-81.6		4023.1	-	-191	+4946	447,229	1,297,185
270	5280		- - (- -)		4.7	90° 50'	-76.2	-80.9		4023.8	-	-204	+5276	447,216	1,297,515
271	5610		- - (- -)		7.4	90° 46'	-74.4	-81.8		4022.9	-	-217	+5606	447,203	1,297,845
272	5940		- - (- -)		10.1	90° 42'	-71.8	-81.9		4022.8	-	-230	+5936	447,190	1,298,175
273	6270		- - (- -)		10.2	90° 42'	-75.8	-86.0		4018.7	-	-243	+6265	447,177	1,298,504
274	6600		- - (- -)		6.6	90° 42'	-79.7	-86.3		4018.4	-	-255	+6595	447,165	1,298,834
275	6930		- - (- -)		11.2	90° 34'	-67.5	-78.7		4026.0	-	-268	+6925	447,152	1,299,164
275	7256		180° 09' 25"		11.9	90° 30'	-62.2	-74.1			TP	-292	+7250	447,128	1,299,489
275	7256		(92° 18' 22")		11.8	269° 30'	-62.2	-74.0		4030.7	TP				

447,330 X - 1,294,345
IF 4WAY ENTER EL. 4041.0

E.D.M. Pondera
6561 + 695 = 7256

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-26-85		B. Cotcamp		B. SALDIVAR		6834		J.M.		3		18			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Pendroy - 15'		MONT.		PANDERA								W. Cassidy	
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
253			0° 00' 00"							4030.7					
275	0		PLATES → (92105)		+5.25	H/		+5.3	4036.0		π	0	0	447,128	1,299,487
276	119		173° 46' 25" (86° 44' 47")		6.4	-		-6.4	4029.6		π	+8	+119	447,136	1,299,608
277	330		179° 58' (92° 16')		7.7	91° 40'	-9.6	-17.3	4018.7			-13	+330	447,115	1,299,619
278	660		- - - (- - -)		13.1	91° 40'	-19.2	-32.3	4003.7			-26	+659	447,102	1,300,148
278	990		- - - (- - -)		8.3	91° 40'	-28.8	-37.1	3998.9			-39	+989	447,089	1,300,478
279	1320		179° 58' (92° 16')		8.0	91° 10'	-26.8	-34.8	4001.2			-52	+1319	447,076	1,300,808
280	1650		- - - (- - -)		9.5	90° 40'	-19.1	-28.6	4007.4			-65	+1649	447,063	1,301,138
281	1980		- - - (- - -)		8.4	90° 20'	-11.4	-19.8	4016.2			-78	+1978	447,050	1,301,467
282	2310		- - - (- - -)		12.6	-	+0.1	-12.5	4023.5			-91	+2308	447,037	1,301,797
283	2640		- - - (- - -)		6.8	-	+0.1	-6.7	4029.3			-104	+2638	447,024	1,302,127
284	2970		179° 58' (92° 16')		7.1	89° 50'	+8.8	+1.7	4037.7			-117	+2968	447,011	1,302,457
285	3300		- - - (- - -)		9.8	89° 40'	+19.4	+9.6	4045.6			-131	+3297	446,997	1,302,786
286	3630		- - - (- - -)		8.1	89° 40'	+21.4	+13.3	4049.3			-144	+3627	446,984	1,303,116
287	3960		- - - (- - -)		7.1	89° 40'	+23.4	+16.3	4052.3			-157	+3957	446,971	1,303,446
288	4284		179° 57' 45"		12.9	89° 40'	+25.3	+12.4			TP	-170	+4281	446,958	1,303,770
288	4284		(92° 16' 07")		12.6	270° 20'	+25.3	+12.7	+1253	4048.5	TP				
275			0° 00' 00"												
288	0				+5.1	H/		+5.1	4053.6		π	0	0	446,958	1,303,770
289	330		179° 55' (92° 11')		8.0	91° -	-5.8	-13.8		4039.8		-13	+330	446,945	1,304,100
290	660		- - - (- - -)		6.0	91° 50'	-21.1	-27.1		4026.5		-25	+660	446,933	1,304,430

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-27-85		B. Cotcamp		B. SALDIVAR		6834		J.M.		3		19			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Pendroy-15		MONT.		Pondera								W. Cassidy	
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
			plates → (92.05)						4053.6						
TP	884		180° 14' 46"		6.8	92° 10'	-33.4	-40.2	}	4013.4	TP	-39	+883	446,919	1,304,653
TP	884		(92° 30' 53")		6.7	267° 50'	-33.4	-40.1		TP					
288			0 00 00												
TP	0				5.25	M.		+5.2	}	4018.6	M. TP	0	0	446,919	1,304,653
291	106		180° 20' (92° 51')		6.6	93°	-5.5	-12.1			4006.5		-5	+106	446,914
292	436		182° 40' (95° 11')		10.4	93°	-22.8	-33.2		3985.4		-39	+434	446,880	1,305,087
293	761		187° 10' (99° 41')		9.0	93°	-39.8	-48.8		3969.8		-128	+750	446,791	1,305,403
294	1081		192° 08' 52"		7.8	93°	-56.6	-64.4	}	3954.2	TP	-273	+1044	446,646	1,305,697
294	1081		(104° 39' 45")		7.7	267°	-56.6	-64.3			TP				
TP			0 00 00												
294	0				5.2	M.		+5.2	}	3959.4	M. TP	0	0	446,646	1,305,697
295	330		201° 05' (125° 45')		6.9	92°	-11.5	-18.4			3941.0		-193	+268	446,453
296	660		- - (- -)		4.8	92°	-23.0	-27.8		3931.6		-386	+536	446,260	1,306,233
297	988		198° 25' (123° 05')		5.6	91° 40'	-28.7	-34.3		3925.1		-539	+828	446,107	1,306,525
298	1309		194° 41' 06"		8.8	91° 30'	-34.2	-43.0	}	3916.4	TP	-641	+1141	446,005	1,306,838
298	1309		(119° 20' 51")		8.7	268° 30'	-34.2	-42.9			TP				
294			0 00 00												
298	0				5.1	M.		+5.1	}	3921.5	TP	0	0	446,005	1,306,838
299	330		158° 20' (97° 41')		5.0	91° 40'	-9.6	-14.6			3906.9		-44	+327	445,961
300	660		156° 25' (95° 46')		7.7	71° 10'	-13.4	-21.1		3900.4		-66	+657	445,939	1,307,495

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-27-85		B. Cotcamp		B. SALDIVAR		6834		J.M.		3		20			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Penobscot - 15'		MONT.		PONDERA								W. Cass. dy	
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
			PLATES → (98, 05)						3921.5						
301	989		155° 35' (94° 56')		4.6	91° 16'	-20.1	-24.7		3896.8		-85	+985	445,920	1,307,823
302	1319		154° 39' (93° 56')		7.9	90° 50'	-19.2	-27.1		3894.4		-90	+1316	445,915	1,308,154
303	1649		154° - (93° 21')		7.0	90° 50'	-24.0	-31.0		3890.5	JK	-96	+1646	445,909	1,308,484
304	1979		153° 50' (93° 11')		6.1	90° 46'	-23.0	-29.1		3892.4		-110	+1976	445,895	1,308,814
305	2309		153° 25' (92° 46')		4.5	90° 30'	-20.1	-24.6		3896.9		-111	+2306	445,894	1,309,144
306	2639		153° 15' (92° 36')		4.8	90° 20'	-15.2	-20.0		3901.5		-120	+2636	445,885	1,309,474
307	2969		153° 10' (92° 31')		13.2	-	+0.2	-13.0		3908.5		-130	+2966	445,875	1,309,804
308	3299		153° 05' (92° 26')		11.7	-	+0.2	-11.5		3910.0		-140	+3296	445,865	1,310,134
309	3627		153° 08' 44		16.7	-	+0.3	-16.7			TP	-158	+3626	445,847	1,310,464
309	3629		(92° 29' 35")		11.0	270° -	+0.3	-10.7	-10.18	3910.9	TP				
298			0 00 00												
309	0				+ 5.25	M.		+ 5.2	3916.1		TP	0	0	445,847	1,310,464
310	330		181° 05' (93° 35')		6.8	-		-6.8		3909.3		-21	+329	445,826	1,310,793
311	660		- - (- -)		9.1	-		-9.1		3907.0		-41	+659	445,806	1,311,123
312	990		- - (- -)		12.4	-		-12.4		3903.5		-62	+988	445,785	1,311,452
313	1320		- - (- -)		8.3	BH	-6.10	-14.9		3901.2		-83	+1317	445,764	1,311,781
314	1650		- - (- -)		12.3	BH	-8.3	-20.6		3895.5		-103	+1647	445,744	1,312,111
315	1980		181° 05' (93° 35')		8.1	90° 30'	-17.3	-25.4		3890.7		-124	+1976	445,723	1,312,440
316	2310		- - (- -)		6.7	90° 30'	-20.0	-26.7		3889.4		-144	+2305	445,703	1,312,769
317	2640		- - (- -)		11.0	90° 20'	-15.2	-20.2		3889.9		-165	+2635	445,682	1,313,099

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
9-27-85		B. Gtcamp		B. SALDIVAR		6834		J.M.		3		21			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Pendroy - 15'		Mont.		PONDERA								W. CASSIDY	
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
			PLATES → (GRIDS)						3916.1						
318	2970		181° 05' (93° 35')		8.9	90° 20'	-17.1	-26.0		3890.1		-186	+2964	445,661	1,313,428
319	3300		- (-)		6.2	90° 20'	-1.9.0	-25.2		3890.9		-206	+3294	445,641	1,313,258
320	3630		- (-)		12.5	90° 16'	-10.3	-22.8		3893.3		-227	+3623	445,620	1,314,082
321	3960		181° 05' (93° 35')		10.3	90° 16'	-11.2	-21.5		3894.6		-248	+3952	445,599	1,314,416
322	4290		- (-)		8.8	90° 16'	-12.1	-20.9		3895.2		-268	+4282	445,579	1,314,746
323	4620		- (-)		7.0	90° 10'	-13.0	-20.0		3896.1		-289	+4611	445,558	1,315,075
324	4950		- (-)		12.0	90° 04'	-5.3	-17.3		3898.8		-309	+4940	445,538	1,315,404
±	4934		181° 02' 27" (93° 32' 02")		12.0	90° 01'	-5.2	-17.2		3898.9		-304	+4925	445,543	1,315,389 ^{1/2} way _{4 way}
325	5280		181° 05' (93° 35')		6.9	90° 04'	-5.6	-12.5		3903.6		-330	+5270	445,517	1,315,734
326	5610		- (-)		6.6	-	+0.6	-6.0		3910.1		-351	+5599	445,496	1,316,063
327	5943		181° 06' 56"		6.7	90° -	+0.7	-6.0			TP	-374	+5931	445,473	1,316,395
327	5943		(93° 36' 31")		6.6	270° -	+0.7	-5.9		3910.2	TP				

445.485 x 1,315.390
EL. 3896.1

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.	PAGE								
5-30-86		B. Cotcamp		J. Middleton		6834		F.M. elev. check		3	22								
AREA		TOPO MAP	STATE	COUNTY		TWP	RANGE	PPM	PARTY MANAGER										
MONTANA		Pendroy - 15'	MONT.	Pondera					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	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
			(273 41 22)																
Telephone pole			0 00 00 plates → (grids)							3910.2									SUNSHOT TAKEN @ THIS Setup FOR NEW GRID AZIMUTH.
327	0				+5.15	41		+5.2	3915.4		κ	0	0	445,473	1,316,395				
328	330		182 35 (96 16)		7.7	90 30	-2.9	-10.6		3904.8		-36	+328	445,432	1,316,723				
329	660		184 20 (98 01)		8.3	90 30	-5.8	-14.1		3901.3		-92	+654	445,381	1,317,049				
330	990		184 50 (98 31)		9.2	90 30	-8.6	-17.8		3897.6		-147	+979	445,326	1,317,374				
TP	1175		184 54 23		14.5	90 30	-10.2	-24.7			TP	-176	+1162	445,297	1,317,557				
TP	1175		(98 35, 45)		14.4	269 30	-10.2	-24.6		3890.8	TP								
327			0 00 00																
TP	0				+5.2	41		+5.2	3896.0		κ	0	0	445,297	1,317,557				
331	145		177 55 (96 31)		6.7	92 30	-6.3	-13.0		3883.0		-16	+144	445,281	1,317,701				
332	475		- - (-)		5.7	93 30	-29.0	-34.7		3861.3		-54	+472	445,243	1,318,029				
333	805		- - (-)		8.1	93 -	-42.1	-50.2		3845.8		-91	+800	445,206	1,318,357				
334	1135		- - (-)		9.8	92 30	-49.5	-59.3		3836.7		-129	+1128	445,168	1,318,685				
335	1465		177 55 (96 31)		9.3	92 06	-53.6	-62.9		3833.1		-166	+1456	445,131	1,319,013				
336	1795		- -		8.8	91 50	-57.4	-66.2		3829.8		-204	+1783	445,093	1,319,340				
337	2125		- -		10.8	91 30	-55.5	-66.3		3829.7		-241	+2111	445,056	1,319,668				
338	2455		- -		7.0	91 20	-57.0	-64.0		3832.0		-279	+2439	445,018	1,319,996				
339	2785		- -		10.4	91 04	-51.7	-62.1		3833.9	κ	-316	+2767	444,981	1,320,324				
340	3115		- -		11.0	90 52	-46.9	-57.9		3838.1		-354	+3095	444,943	1,320,652				
341	3445		- -		11.9	90 40	-39.8	-51.7		3844.3		-391	+3423	444,906	1,320,980				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
5-30-86		B. Cotcamp		J. Middleton		6834		F.M.		3		23			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZONA		Pen Proj - 15'		MONT.		PONDERA								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 X TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
			PLATES → (92°05')						3896.0						
342	3779		177 52 (96 28)		9.8	90 32	-34.9	-44.7		3851.3		-426	+3755	444,871	1,321,312
343	4107		177 40 (96 J6)		10.1	90 20	-23.5	-33.6		3862.4		-448	+4082	444,849	1,321,639
344	4429		177 30 33		9.3	90 10	-12.5	-21.8			TP	471	+4405	444,826	1,321,962
344	4429		(96 06 18)		8.4	209 50	-12.5	-20.9	21.3	3874.7	TP				
TP			0 00 00												
344	0				+5.25	H:		+5.3	3880.0		X	0	0	444,826	1,321,962
41	132		171 20 46 (87 27 04)		4.4	88 26	+3.8	-0.6		3879.4		+6	+132	444,832	1,322,094 # 4-444,830 x-1,32
345	330		176 24 (92 30)		5.8	88 20	+9.6	+3.8		3883.8		-14	+330	444,812	1,322,292
346	660		- - (- -)		10.8	88 20	+19.2	+8.4		3888.4		-29	+659	444,797	1,322,621
347	990		- - (- -)		8.1	88 50	+20.2	+12.1		3892.1		-43	+989	444,783	1,322,951
348	1320		- - (- -)		11.8	88 50	+26.9	+15.1		3895.1		-58	+1319	444,768	1,323,281
349	1650		176 24 (92 30)		10.2	88 50	+33.7	+23.5		3903.5		-72	+1648	444,754	1,323,610
350	1980		- - (- -)		9.8	88 40	+46.2	+36.4		3916.4		-86	+1978	444,740	1,323,940
351	2310		- - (- -)		10.3	88 30	+60.6	+50.3		3930.3		-101	+2308	444,725	1,324,270
352	2640		- - (- -)		6.1	88 30	+69.3	+63.2		3943.2		-115	+2637	444,711	1,324,599
42	2795		176 14 40 (92 20 58)		6.3	88 30	+73.3	+67.0		3947.0	3947	-115	+2792	444,711	1,324,751 # 444,690 x-1,324,735 # 4 way into EL. 3947.0
353	2969		176 24 (92 30)		9.0	88 30	+77.9	+68.9		3948.9		-130	+2966	444,696	1,324,928
TP	3109		176 27 22		11.0	88 30	+81.6	+70.6	70.9	3950.9	TP	-139	+3105	444,687	1,325,067
TP	3109		(92 33 40)		10.5	271 30	+81.6	+71.1			TP				

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
5-30-86		B. Cotamp		J. Middleton		6834		J.M. ew. (Lick)		3		24			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Pendroy - 15'		MONT.		PONDERA								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
344			0 00 00							3950.9					
TP ₂	0				+5.25	41		+5.3	3956.2		X	0	0	444,687	1,325,067
354	187		179 52 (92 26)		5.5	89 -	+3.3	-2.2		3954.0		-8	+187	444,679	1,325,254
355	517		- - (- -)		7.1	89 -	+9.0	+1.9		3958.1		-22	+517	444,665	1,325,584
356	847		- - (- -)		11.6	89 -	+14.8	+3.2		3959.4		-36	+846	444,651	1,325,913
357	1177		- - (- -)		10.9	89 20	+13.7	+2.8		3959.0		-50	+1176	444,637	1,326,243
358	1507		179 52 (92 26)		9.3	89 20	+17.6	+8.3		3964.5		-64	+1506	444,623	1,326,573
359	1837		- - (- -)		5.2	89 20	+21.4	+16.2		3972.4		-78	+1835	444,609	1,326,902
360	2167		- - (- -)		6.7	89 10	+31.6	+24.9		3981.1		-92	+2165	444,595	1,327,232
361	2497		- - (- -)		4.5	89 10	+36.4	+31.9		3988.1		-106	+2495	444,581	1,327,562
TP ₁	2655		179 56 59		7.8	89 10	+38.8	+31.0	+31.3	3987.5	TP	-116	+2652	444,571	1,327,719
TP ₂	2655		(92 30 39)		7.3	270 50	+38.8	+31.5			TP				
TP ₃	0		0 00 00												
TP ₃	0				+5.15	41		+5.1	3992.6		X	0	0	444,571	1,327,719
362	172		180 20 (92 51)		6.4	91 -	-3.0	-9.4		3983.2		-9	+172	444,562	1,327,891
363	502		- - (- -)		5.1	91 -	-8.8	-13.9		3978.7		-25	+501	444,546	1,328,220
364	832		- - (- -)		9.8	91 -	-14.5	-24.3		3968.3		-41	+831	444,530	1,328,550
365	1161		177 30 (90 01)		9.1	91 10	-23.6	-32.7		3959.9		±0	+1161	444,511	1,328,880
366	1463		171 55 (84 26)		7.2	91 -	-25.5	-32.7		3959.9		+142	+1456	444,713	1,329,175
367	1766		167 35 (80 06)		8.8	90 30	-15.3	-24.1		3968.5		+304	+1740	444,875	1,329,459

Pendroy - 15' ↑
GALLUP City 15'

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
5-30-86		B. Cotcamp		J. Middleton		6834		J.M. [initials]		3		25			
AREA		TOPGALAP city		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
ARIZO MONTANA		Pendera - 15'		MONT.		PONDERA								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
			plates → (9 grids)						3992.6						
368	2084		164.45 (77.16)		7.9	90 20	-12.0	-19.9		3972.7		+459	+2033	445,030	1,329,752
369	2405		163 26' 01"		16.9	90 20	-13.9	-24.8	24.53	3968.1	TP	+588	+2332	445,159	1,330,051
369	2405		(75° 50' 40")		10.4	269 40	-13.9	-24.3			TP				
TP			0 00 00												
369	0				+5.2	H.		+5.2	3973.3		TP	0	0	445,159	1,330,051
370	330		180 20' (76.11)		10.0	91 -	-5.8	-15.8		3957.5		+79	+320	445,238	1,330,371
371	660		180 40' (76.31)		10.8	91 -	-11.5	-22.3		3951.0		+154	+642	445,313	1,330,693
372	990		180 55' (76.46)		9.0	91 -	-17.3	-26.3		3947.0		+227	+964	445,386	1,331,015
373	1320		181 05' (76.56)		7.5	91 -	-23.0	-30.5		3942.8		+298	+1286	445,457	1,331,337
374	1649		182 05' (77.56)		10.7	91 10	-33.5	-44.2		3929.1		+345	+1613	445,504	1,331,664
TP	1702		181 52 44 (77 43 24")		10.1	91 10	-34.6	-44.7		3928.6		+362	+1663	445,521	1,331,714
375	1978		183 - (78.51)		11.7	90 40	-22.9	-34.6		3938.7		+383	+1941	445,542	1,331,992
376	2307		184 - (79.51)		7.0	90 30	-20.0	-27.0		3946.3		+407	+2271	445,566	1,332,322
377	2636		184 50' (80.41)		10.8	90 30	-22.9	-33.7		3939.6		+427	+2601	445,586	1,332,652
378	2966		185 25' (81.16)		11.0	90 20	-17.1	-28.1		3945.2		+450	+2932	445,609	1,332,983
379	3294		185 53' (81.44)		11.1	-	+0.2	-10.9		3962.4		+474	+3260	445,633	1,333,311
380	3618		186 19 05		3.0	-	+0.3	-2.7	24.3	3970.9	TP	+493	+3584	445,652	1,333,635
380	3618		(87° 09' 45")		2.3	270 -	+0.3	-2.0			TP				
369			0 00 00												
380	0				+5.25	H.		+5.2	3976.1		TP	0	0	445,652	1,333,635

3942.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE	5-30-86	INSTRUMENT MAN	B. C. Camp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	F.M. E.L.S. check	LINE NO.	3	PAGE	26	
AREA	MONTANA	TOPO MAP	GALLUP City-15	STATE	MONT.	COUNTY	PONDERA	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.	
			plates → (grids)						3976.1					
381	330		190 - (92 10)		8.1	89 40	+1.9	-6.2		3969.9		-12	+330	445,640 1,333,965
382	660		- - (- -)		9.8	89 40	+3.8	-6.0		3970.1		-25	+660	445,627 1,334,295
383	990		- - (- -)		12.1	89 40	+5.8	-6.2		3969.9		-37	+989	445,615 1,334,624
384	1320		- - (- -)		11.3	-		-11.3		3964.8		-50	+1319	445,602 1,334,954
385	1650		190 - (92 10)		5.6	-	+0.1	-5.5		3970.6		-62	+1649	445,590 1,335,284
386	1980		- - (- -)		9.2	TH	+9.9	+0.7		3976.8		-75	+1979	445,577 1,335,614
387	2310		- - (- -)		5.7	TH	+11.6	+5.9		3982.0		-87	+2308	445,565 1,335,943
388	2640		- - (- -)		7.0	89 30	+23.2	+16.2		3992.3		-100	+2638	445,552 1,336,273
389	2968		190 06 30		12.0	89 30	+26.1	+14.1			TP	-118	+2966	445,534 1,336,601
389	2968		(92 16 15)		11.5	270 30	+26.1	+14.6	+14.4	3970.5	TP			445,515 x - 1,336,645 # sec. line 3991.0
380			0 00 00											
389	0				+5.25	H.		+5.2	3995.7		X	0	0	445,534 1,336,601
390	330		179 57 (92 13)		9.0	-		-9.0		3986.7		-13	+330	445,521 1,336,931
391	660		- - (- -)		5.4	TH	+3.3	-2.1		3993.6		-24	+660	445,508 1,337,261
392	990		- - (- -)		5.7	89 30	+8.7	+3.0		3998.7		-38	+989	445,496 1,337,590
393	1320		- - (- -)		5.8	89 30	+11.6	+5.8		4001.5		-51	+1319	445,483 1,337,920
394	1650		179 50 (92 06)		10.1	89 30	+14.5	+4.4		4000.1		-60	+1649	445,474 1,338,250
395	1978		179 10 (91 26)		6.3	89 30	+17.3	+11.0		4006.7		-49	+1977	445,485 1,338,578
396	2307		178 12 (90 28)		10.0	89 12	+32.3	+22.3		4018.0		-19	+2307	445,515 1,338,908
397	2368		177 42 02 (89 58 17)		10.7	89 10	+34.6	+23.9		4019.6		+1	+2368	445,525 x - 1,339,015 4043.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
5-30-86		B. Cotcamp		J. Middleton		6834		J.M.		3		27			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		GALLUP city - 15'		MONT.		Pondera								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
			PLATES → (9rios)						3995.7						
397	2634		177 - (89 16)		8.0	89 16	+38.5	+30.5		4026.2		+34	+2634	445,568	1,339,935
398	2955		175 50 (88 06)		9.0	89 -	+51.8	+42.8		4038.5		+98	+2953	445,632	1,339,554
399	3278		174 38 (86 54)		7.4	88 50	+67.0	+59.6		4055.3		+177	+3273	445,711	1,339,874
400	3602		173 35 (85 51)		8.3	88 40	+84.1	+75.8		4071.5		+261	+3593	445,795	1,340,194
TP	3819		172 58 21		4.9	88 46	+82.5	+77.6	+77.9	4073.6	TP	+317	+3805	445,851	1,340,406
TP	3819		(85 14 36)		4.2	271 14	+82.5	+78.3			TP				
389			0 00 00												
TP	0				+5.2	H:		+5.2	4078.8		π	0	0	445,851	1,340,406
401	110		170 40 (75 55)		5.2	90 40	-1.3	-6.5		4072.3		+27	+107	445,878	1,340,513
402	440		- - (- -)		10.7	90 40	-5.1	-15.8		4063.0		+107	+427	445,958	1,340,833
403	770		- - (- -)		11.4	91 10	-15.7	-27.1		4051.7		+187	+747	446,038	1,341,153
404	1100		- - (- -)		9.9	91 10	-22.4	-32.3		4046.5		+268	+1067	446,119	1,341,473
405	1430		170 40 (75 55)		6.3	91 10	-29.1	-35.4		4043.4		+348	+1387	446,199	1,341,793
406	1760		- - (- -)		9.9	91 -	-30.7	-40.6		4038.2		+428	+1707	446,279	1,342,113
407	2090		- - (- -)		9.0	91 -	-36.4	-45.4		4033.4		+509	+2027	446,360	1,342,433
408	2418		- - (- -)		8.0	91 -	-42.1	-50.1		4028.7		+588	+2345	446,439	1,342,751
409	2747		169 51 (75 06)		11.0	91 07	-53.4	-64.4		4014.4		+706	+2655	446,557	1,343,061
410	3073		168 48 (74 03)		11.2	91 02	-55.2	-66.4		4012.4		+844	+2955	446,695	1,343,361
411	3393		167 30 (72 45)		7.9	90 50	-49.1	-57.0		4021.8		+1006	+3240	446,857	1,343,646
412	3713		166 13 (71 28)		9.1	90 36	-38.6	-47.7		4031.1		+1180	+3520	447,031	1,343,926

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
6-6-86		B. Cotcamp		J. Middleton		6834		F.M. EL. & Check		3		29			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		GALLUP city-15'		MONTANA		PONDERA								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 TP	COORDINATES		REMARKS	
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.		Y
			PLATES → (9 10s)							4022.4					
415			0 00 00												
426	0				+4.95	41'		+5.0	4027.4		TP	0	0	447,634	1,348,341
427	330		183 26 (92 13)		7.3	-		-7.3		4020.1		-13	+330	447,621	1,348,671
428	660		- - (- -)		5.7	-		-5.7		4021.7		-26	+660	447,608	1,349,001
429	990		- - (- -)		7.0	TH	+5.0	-2.0		4025.4		-38	+989	447,596	1,349,330
430	1320		183 26 (92 13)		9.6	89 20	+15.4	+5.8		4033.2		-51	+1319	447,583	1,349,660
431	1650		- - (- -)		7.1	89 10	+24.1	+17.0		4044.4		-64	+1649	447,570	1,349,990
432	1980		- - (- -)		8.3	89 10	+28.9	+20.6		4048.0		-77	+1979	447,557	1,350,320
TP	2172		183 32 44		4.6	89 20	+25.4	+20.8			TP	-88	+2170	447,546	1,350,511
TP	2172		(92 19 51)		4.5	270 40	+25.4	+20.9		4048.3	TP				
426			0 00 00												
TP	0				+5.0	41'		+5.0	4053.3		TP	0	0	447,546	1,350,511
433	136		180 68 (92 28)		5.7	-		-5.7		4047.6		-6	+136	447,540	1,350,647
434	466		- - (- -)		8.7	-		-8.7		4044.6		-20	+466	447,526	1,350,977
435	796		- - (- -)		8.8	BH	-4.0	-12.8		4040.5		-34	+795	447,512	1,351,306
436	1126		- - (- -)		7.0	90 30	-9.8	-16.8		4036.5		-48	+1125	447,498	1,351,636
437	1456		- - (- -)		5.0	90 30	-12.7	-17.7		4035.6		-63	+1455	447,483	1,351,966
438	1784		179 - (91 20)		4.3	90 30	-15.5	-19.8		4033.5		-42	+1784	447,504	1,352,295
439	2099		176 - (88 20)		7.2	90 24	-14.6	-21.8		4031.5		+61	+2098	447,607	1,352,609
440	2412		173 27 (85 47)		6.6	90 24	-16.7	-23.3		4030.0		+177	+2405	447,723	1,352,916

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO		PAGE							
6-6-86		B. Cotcamp		J. Middleton		6834		J.M. <small>el. Check</small>		3		30							
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER					
MONTANA		GALLUP city-15'		MONT.		PONDERA								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	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
			PLATES → (9.11.05)						4053.3										
441	2728		171 20 (83 40)		6.9	90 24	-18.9	-25.8		4027.5		+301	+2711	447,847	1,353,222				
442	3648		169 40 (82 -)		8.0	90 24	-21.1	-29.1		4024.2		+424	+3018	447,970	1,353,529				
443	3369		168 24 (80 44)		9.7	90 24	-23.3	-33.0		4020.3		+543	+3325	448,089	1,353,836				
444	3693		167 20 (79 40)		10.2	90 24	-25.5	-35.7		4017.6		+662	+3633	448,208	1,354,144				
445	4017		166 22 35		11.9	90 24	-27.7	-39.6			TP	+787	+3939	448,333	1,354,450				
445	4017		(78 42 26)		11.4	269 36	-27.7	-39.1	39.3	4014.0	TP								
TPA			0 00 00																
445	0				+4.95	N.		+5.0	4019.0		X	0	0	448,333	1,354,450				
446	3330		169 30 (68 12)		4.3	90 50	-4.8	-9.1		4009.9		+123	+306	448,456	1,354,736				
447	660		- - (-)		11.0	90 50	-9.6	-20.6		3998.4		+245	+613	448,578	1,355,063				
448	990		- - (-)		10.0	91 20	-23.0	-33.0		3986.0		+368	+919	448,701	1,355,369				
449	1320		- - (-)		11.7	91 -	-23.0	-34.7		3984.3		+490	+1226	448,823	1,355,626				
450	1647		168 30 (67 12)		5.0	91 -	-28.7	-33.7		3985.3		+638	+1518	448,971	1,355,968				
451	1968		166 15 (64 57)		6.4	90 50	-28.5	-34.9		3984.1		+833	+1783	449,166	1,356,233				
452	2291		164 25 (63 07)		4.9	90 50	-33.2	-38.1		3980.9		+1036	+2043	449,369	1,356,493				
453	2616		163 12 (61 54)		9.1	90 40	-30.3	-39.4		3979.6		+1232	+2308	449,565	1,356,758				
TPB	2865		163 05 55		9.9	90 44	-36.5	-46.4			TP	+1353	+2525	449,686	1,356,975				
TPB	2865		(61 48 21)		9.6	269 16	-36.5	-46.1	46.2	3972.8	TP								
445			0 00 00																
TPB	0				+4.9	N.		+4.9	3977.7		X	0	0	449,686	1,356,975				

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	6-6-86	INSTRUMENT MAN	B. Cotcamp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	F.M. <i>ecw. check</i>	LINE NO.	3	PAGE	31	
AREA	MONTANA	TOPO MAP	GALLUP city -15'	STATE	MONT.	COUNTY	PONDERA	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 TP	COORDINATES		REMARKS
												NORTH + SOUTH - LAT.	EAST + WEST - DEP.	
			PLATES → (gr.ios)						3977.7					
454	78		186 05 (67 53)		4.1	94 20	-5.9	-10.0		3967.7		+29	+72	449,715 1,352,047
455	408	406.8	- - (- -)		8.7	94 20	-30.8	-39.5		3938.2		+153	+377	449,839 1,352,352
456	738	735.9	- - (- -)		9.0	94 20	-55.8	-64.8		3912.9		+277	+682	449,963 1,352,657
	938	935.3	186 09 30 (67 57 51)		6.0	94 20	-70.9	-76.9		3900.8		+351	+867	450,037 1,357,812 <i>y. 450,085 x - 1,357,815</i>
457	1064	1061.0	188 30 (70 18)		5.3	94 20	-80.4	-85.5		3892.0		+358	+999	450,044 1,357,974
458	1379	1375.9	193 10 (74 58)		7.2	93 50	-92.2	-99.4		3878.3		+357	+1329	450,043 1,358,304
459	1699	1695.5	196 10 (77 58)		7.0	93 40	-108.6	-115.6		3862.1		+353	+1658	450,039 1,358,633
460	2023	2018.9	198 12 (80 -)		10.4	93 40	-129.3	-139.7		3838.0		+351	+1988	450,037 1,358,963
461	2347	2342.6	199 40 (81 28)		10.1	93 30	-143.2	-153.3		3824.4		+348	+2317	450,034 1,359,292
462	2674	2669.5	200 45 (82 33)		6.8	93 20	-155.3	-162.1		3815.6		+346	+2647	450,032 1,359,622
463	2999	2994.4	201 40 (83 28)		12.0	93 10	-165.5	-177.5		3800.2		+341	+2975	450,027 1,359,950
464	3327	3321.9	202 18 (84 06)		7.3	93 10	-183.6	-190.9		3786.8		+341	+3304	450,027 1,360,279
465	3655	3650.0	202 58 (84 46)		8.7	93 -	-191.0	-199.5		3778.0		+333	+3635	450,019 1,360,610
466	3983	3977.9	203 23 (85 11)		9.6	92 54	-201.2	-210.2		3767.5		+334	+3964	450,020 1,360,939
467	4311	4305.7	203 47 (85 35)		8.7	92 50	-212.5	-221.4		3756.3		+332	+4293	450,018 1,361,268
468	4640	4634.7	204 08 (85 56)		12.3	92 44	-220.8	-233.1		3744.6		+329	+4623	450,015 1,361,598
469	4969	4963.3	204 28 (86 16)		6.3	92 44	-236.5	-242.8		3734.9		+323	+4953	450,009 1,361,928
470	5296	5290.4	204 19 22 (86 07 43)		5.9	92 44	-236.7	-242.6		3735.1		+335	+4957	450,021 1,361,932 <i>y. 450,055 x - 1,361,915</i>
470	5296		(86 41 00)		7.9	267 20	-245.8	-253.7		3723.6	TP	+306	+5281	449,992 1,362,256 <i>TP 4WAY. EL. 3736.0</i>

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE 6-6-86	INSTRUMENT MAN B. Cotcamp	ROD MAN J. Middleton	PARTY NUMBER 6834	NOTES CHECKED BY F.M. Elva. Check	LINE NO. 3	PAGE 32
AREA MONTANA	TOPO MAP GALLUP City-15'	STATE MONT.	COUNTY PONDERA	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 TP	NORTH + SOUTH -	EAST + WEST -	COORDINATES		REMARKS
												LAT.	DEP.	Y	X	
			PLATES → (GRIDS)													
TP ₆			6 00 00							3723.6						
470	0				+4.8	M:		+4.8	3728.4		TP	0	0	449,992	1,362,256	
471	330		187 35 (94 16)		6.1	91 -	-5.8	-11.9		3716.5		-25	+329	449,967	1,362,585	
472	660		189 40 (96 21)		7.0	91 -	-11.5	-18.5		3709.9		-73	+656	449,919	1,362,912	
473	989		191 10 (97 51)		9.7	90 30	-8.6	-18.3		3710.1		-135	+980	449,857	1,363,236	
474	1319		191 40 (98 21)		7.0	90 16	-3.8	-10.8		3712.6		-192	+1305	449,800	1,363,561	
475	1647		190 35 (97 16)		12.4	89 30	+14.4	+2.0		3730.4		-208	+1634	449,784	1,363,890	
476	1887		189 36 16 (96 17 16)		9.2	89 30	+16.5	+7.3		3735.7		-207	+1876	449,785	1,364,132	449.730 x 1,364.100 T-Inter El. 3735.0
476	1976		189 45 (96 26)		9.0	89 30	+12.3	+8.3		3736.7		-221	+1964	449,771	1,364,220	
477	2305		189 13 (95 54)		9.2	89 30	+20.2	+11.0		3739.4		-237	+2293	449,755	1,364,549	
478	2635		188 50 (95 31)		6.6	89 30	+23.1	+16.5		3744.9		-253	+2623	449,739	1,364,879	
479	2964		188 35 (95 16)		6.0	89 30	+26.0	+20.0		3748.4		-272	+2951	449,720	1,365,207	
TP _c	3079		188 27 53		8.5	89 30	+27.1	+18.6	+18.8	3747.2	TP	-276	+3066	449,716	1,365,322	
TP _c	3079		(95 08 53)		8.0	270 30	+27.1	+19.1			TP					
470			0 00 00													
TP _c	0				+4.75	M:		+4.7	3751.9		TP	0	0	449,716	1,365,322	
480	216		177 24 (92 33)		5.2	-		-5.2		3746.7		-10	+216	449,706	1,365,538	
481	545		- (-)		5.4	-		-5.4		3746.5		-24	+544	449,692	1,365,866	
482	875		- (-)		6.2	-		-6.2		3745.7		-39	+874	449,677	1,366,196	

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
6-6-86		B. Cotcamp		J. Middleton		6834		F.M. [initials]		3		33			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		Gallup city-15'		MONT.		Pondera								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
									3751.9						
TP ₀	1018		177°30'00"		9.9	-		-9.9		3742.0	TP	-47	+1017	449,669	1,366,339
TP ₀	1018		(92°38'55")		15.0	TH	+5.1	-9.9			TP				
TP ₀			0°00'00"												
TP ₀	0				+5.15	hi		+5.1	3747.1		π	0	0	449,669	1,366,339
483	185		179°54'(92°33')		7.1	90°30'	-1.6	-8.7		3738.4		-8	+185	449,666	1,366,524
484	515		--(--)		7.8	90°30'	-4.5	-12.3		3734.8		-23	+514	449,646	1,366,853
485	845		--(--)		7.9	90°30'	-7.4	-15.3		3731.8		-38	+844	449,631	1,367,183
486	1175		--(--)		9.1	90°30'	-10.2	-19.3		3727.8		-52	+1174	449,617	1,367,513
487	1504		--(--)		12.7	90°30'	-13.1	-25.8		3721.3		-67	+1503	449,602	1,367,842
488	1834		179°54'(92°33')		9.8	90°46'	-24.5	-34.3		3712.8		-82	+1832	449,587	1,368,171
489	2164		--(--)		5.3	90°46'	-28.9	-34.2		3712.9		-96	+2162	449,573	1,368,501
490	2493		--(--)		6.9	90°40'	-28.9	-35.8		3711.3		-111	+2491	449,558	1,368,830
491	2823		--(--)		7.9	90°40'	-32.7	-40.6		3706.5		-126	+2820	449,543	1,369,159
492	3152		--(--)		7.7	90°40'	-36.5	-44.2		3702.9		-140	+3149	449,529	1,369,488
493	3482		179°54'(92°33')		7.9	90°40'	-40.3	-48.2		3698.9		-155	+3479	449,514	1,369,818
494	3812		--(--)		9.1	90°40'	-44.1	-53.2		3693.9		-170	+3808	449,499	1,370,147
495	4142		--(--)		8.9	90°40'	-47.8	-56.7		3690.4		-184	+4138	449,485	1,370,477
496	4471		--(--)		6.2	90°40'	-51.6	-52.8		3689.3		-199	+4467	449,470	1,370,806
497	4801		--(--)		8.3	90°34'	-42.0	-55.3		3691.8		-214	+4796	449,455	1,371,135

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE			
6-6-86		B. Cotcamp		J. Middleton		6834		J.M. E.M. check		3		34			
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MANAGER	
MONTANA		GALLUP city - 15'		MONTANA		PONDERA								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
			PLATES 7 (grids)						3747.1						
498	5130		179 54 (92 33)		9.3	90° 30'	-44.2	-53.5		3693.6		-228	+5125	449,441	1,321,464
499	5461		179 55 21		9.6	90° 30'	-47.0	-56.6	56.33	3690.8	TP	-245	+5455	449,424	1,371,794
499	5461		(92° 34' 16")		8.9	269° 30'	-47.0	-55.9			TP				
TP ₀			0 00 00												
499	0				+4.9	Hi		+4.9	3695.7		X	0	0	449,424	1,371,794
500	330		179 34 (92 08)		5.4	90° 50'	-4.8	-10.2		3685.5		-12	+330	449,412	1,322,124
501	660		- - (- -)		6.9	90° 50'	-9.6	-16.5		3679.2		-25	+660	449,399	1,322,454
502	990		- - (- -)		9.0	90° 50'	-14.4	-23.4		3672.3		-37	+989	449,387	1,322,783
503	1320		- - (- -)		9.6	90° 50'	-19.2	-28.8		3666.9		-49	+1319	449,375	1,323,113
504	1650		179 34 (92 08)		5.1	91° 10'	-33.5	-38.6		3657.1		-61	+1649	449,363	1,323,443
505	1980		- - (- -)		6.8	91° 10'	-40.2	-42.0		3648.7		-74	+1979	449,350	1,323,773
51	1927		179 28 56 (92 03 10")		6.2	91° 10'	-39.2	-45.4		3650.3	51	-69	+1925	449,355	1,373,719
506	2310		179 34 (92 08)		6.7	91° 10'	-46.9	-53.6		3642.1		-86	+2308	449,338	1,324,102
507	2640		- - (- -)		6.3	91° 10'	-53.6	-59.9		3635.8		-98	+2638	449,326	1,324,432
508	2970		- - (- -)		5.8	91° 10'	-60.3	-66.1		3629.6		-111	+2968	449,313	1,324,762
509	3300		- - (- -)		12.3	91°	-57.4	-69.7		3626.0		-123	+3298	449,301	1,325,092
510	3630		179 34 (92 08)		9.7	91°	-63.1	-72.3		3623.4		-135	+3627	449,289	1,325,421
511	3960		- - (- -)		4.1	91°	-68.8	-72.9		3622.8		-147	+3957	449,277	1,325,751
512	4290		- - (- -)		9.1	90° 50'	-62.0	-71.1		3624.6		-160	+4287	449,264	1,326,081
513															

449,386 x - 1,373,700
Intersect EL. 3649.0

SURVEY NOTES-HIGH RESOLUTION DATA

GEO-445

Geosource Inc.

DATE	6-6-86	INSTRUMENT MAN	B. Cotamp	ROD MAN	J. Middleton	PARTY NUMBER	6834	NOTES CHECKED BY	J.M. [check]	LINE NO.	3	PAGE	35
AREA	MONTANA	TOPO MAP	GALLUP City - 15'	STATE	MONT.	COUNTY	PONDERA	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 TP	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
			PLATES → (GRIDS)						3695.7										
513	4619		179 39 57		14.7	90 42	-56.0	-70.7	3695.7	3625.3	TP	-180	+4615	449,244	1,376,409				
513	4619		(92 14 13)		14.0	269 18	-56.0	-70.0			TP								
499			0 00 00																
513	0				+4.8	M.		+4.8	3630.1		TP	0	0	449,244	1,376,409				
514	330		179 35 (91 49)		4.0	90 30	-2.9	-6.9		3623.2		-10	+330	449,234	1,376,739				
515	660		- - (-)		3.1	90 30	-5.8	-8.9		3621.2		-21	+660	449,223	1,377,069				
516	990		- - (-)		4.8	90 30	-8.6	-13.4		3616.7		-31	+990	449,213	1,377,399				
517	1320		- - (-)		6.0	90 30	-11.5	-17.5		3612.6		-42	+1319	449,202	1,377,728				
518	1650		179 35 (91 49)		8.5	90 30	-14.3	-22.8		3607.3		-52	+1649	449,192	1,378,058				
519	1980		- - (-)		10.1	90 30	-17.2	-27.3		3602.8		-63	+1979	449,181	1,378,388				
520	2310		- - (-)		9.3	90 36	-24.1	-33.4		3596.7		-73	+2309	449,171	1,378,718				
521	2598		182 - (94 14)		9.9	90 36	-27.1	-37.0		3593.1		-192	+2591	449,052	1,379,000				
TP	2646		179 16 34 (91 30 47)		11.3	90 36	-27.6	-38.9		3591.2	TP	-70	+2645	449,174	1,379,054				
522	3220		203 37 47		10.6	90 20	-18.5	-29.1			TP	-1405	+2897	447,839	1,379,306				
522	3220		(115 52 00)		10.1	269 40	-18.5	-28.6		3601.3	TP								
513			0 00 00																
522	0				+4.9	M.		+4.9	3606.2		TP	0	0	447,839	1,379,306				
523	330		156 34 (92 26)		6.1	90 30	-2.9	-9.0		3597.2		-14	+330	447,825	1,379,636				
524	660		- - (-)		6.5	90 30	-5.8	-12.3		3593.9		-28	+659	447,811	1,379,965				
525	990		- - (-)		6.9	90 30	-8.6	-15.5		3590.7		-42	+989	447,797	1,380,295				

NOTE # 1320 offset
 South Sta. 521-522
 447,165 X - 1,379,085
 TP T-Inter EL. 3591.0

SURVEY NOTES-HIGH RESOLUTION DATA
GEO-445

Geosource Inc.

DATE		INSTRUMENT MAN		ROD MAN		PARTY NUMBER		NOTES CHECKED BY		LINE NO.		PAGE							
6-6-86		B. Cotcamp		J. Middleton		6834		J.M.		3		37							
AREA		TOPO MAP		STATE		COUNTY		TWP		RANGE		PPM		PARTY MGR					
MONTANA		GALLUP city-15'		MONT.		PONDERA								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	NORTH + SOUTH -		EAST + WEST -		COORDINATES		REMARKS	
												LAT.	DEP.	Y	X				
			PLATES=7 (9rips)						3577.7										
542	2969		179 55 46		3.4	-	+0.2	-3.2			TP	-126	+2966	447.555	1.385.894				
542	2969		(92° 25' 26")		2.9	270	+0.2	-2.7	3574.8		TP								
533			0 00 00																
542	0				+5.05	M.		+5.1	3579.9		π	0	0	447.555	1.385.894				
543	330		179 20 (91 45)		3.6	90 20	-1.9	-5.5		3574.4		-10	+330	447.545	1.386.224				
544	660		- - (-)		3.5	90 20	-3.8	-7.3		3572.6		-20	+660	447.535	1.386.554				
545	990		- - (-)		2.7	90 20	-5.0	-8.4		3571.5		-30	+990	447.525	1.386.884				
546	1320		- - (-)		9.8	89 40	+7.7	-2.1		3577.8		-40	+1319	447.515	1.387.213				
547	1650		- - (-)		8.7	89 40	+9.0	+1.0		3580.9		-50	+1649	447.505	1.387.543				
548	1980		- - (-)		9.2	89 40	+11.6	+2.4		3582.3		-60	+1979	447.495	1.387.873				
549	2307		179 22 46		6.3	89 50	+6.8	+0.5	3580.6		TP	-73	+2306	447.482	1.388.200				
549	2307		(91° 48' 12")		5.9	270 10	+6.8	+0.9			TP								
542			0 00 00																
549	0				+4.9	M.		+4.9	3585.5		π	0	0	447.482	1.388.200				
550	330		179 34 (91 22)		5.9	90 34	-3.3	-9.2		3576.3		-8	+330	447.474	1.388.530				
551	660		- - (-)		8.5	90 34	-6.5	-15.0		3570.5		-16	+660	447.466	1.388.860				
552	990		- - (-)		9.8	90 34	-9.8	-19.6		3565.9		-24	+990	447.458	1.389.190				
IF	1780		227 21 39		4.8	90 30	-15.5	-20.3			IF	-1347	+1164	446.135	1.389.364				
IF	1780		(139 09 51)		4.5	269 30	-15.5	-20.0	3565.4		IF								

E.O.L. Line # 3
446.130 x 1.389.370
IF-Inter. EL. 3566.0