

# OBSERVER REPORT PETTY-RAY GEOPHYSICAL

GEO-252-D

CREW NO. 8834		LINE NO. 8		LEAVE TOWN/CAMP 7:00		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER CLOUDY + COOL		TRAIL CONDITIONS Shoulder		DATE 9 DAY 9 YEAR 86		CLIENT COCORP		OB MOORE FOREMAN		PM BINNS		
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS or "K"	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS		
		TR 1	TR 12	TR 13	TR 96				TAPE	MEMORY	SIZE	TOP	BOT.	NO CAPS	U. H. T.	N. UNITS	NO. SUMS	DRIVE						
900	ALLONES	1-6	SEC			756	48			B.O.T. #756				5	8		818/819			MONTANA DANIELS CO.				
933	PULSE	1-6	"															8:30		5 Vibs inline 82.5' spacing 41.25' move ups				
934/935	EINT	2-6	"																	1st Vib starts 2' past flag 8 SWEEPS 12 → 48 hz				
936/939	DRD	4-6	"																	SWEEP freq. 26 SEC. SWEEP 42 SEC RECORDED 1E.V.				
953/954	SUM	2-6	"																	grh 4ms SAMPLE RATE 62.5 hz 14Ais 9 hz				
960/961	NRJ	2-6	"																	low cut 18db/oct 5stagap between tr #12+13				
932	Similarity	1-26	"							Sims taken with camera at VIBS					1	30%		9:15		Vibs on shoulder of Hi way # 248				
373	Windstrip	1-42	"	238																1	60db			
374	758	744	755	761	844	238														8	30%		9:30	last halt
375	760	746	757	763	846	240															50%			STA # 846 OPEN DUE TO A BRIDGE
376	762	748	759	765	848	2															50%			
377	764	750	761	767	850	4															50%			
Skip	766	752	763	769	852	6															Skip			V.P. # 766 skipped due to a house + well
378	768	754	765	771	854	8															30%			last halt
379	770	756	767	773	856	10															50%			light rain is falling now
380	772	758	769	775	858	12															50%			
381	774	760	771	777	860	14															50%			
382	776	762	773	779	862	16															50%			
383	778	764	775	781	864	18															50%			
384	780	766	777	783	866	20															50%			
385	782	768	779	785	868	22															50%			
386	784	770	781	787	870	24	Windstrip														60db			
387	784	770	781	787	870	24	756														50%			E.O.T. # 756 TAPE MARKS
388	786	772	783	789	872	26	757														50%			B.O.T. # 757
389	788	774	785	791	874	28															50%			
390	790	776	787	793	876	30															50%			
391	792	778	789	795	878	32															50%			
392	794	780	791	797	880	34															50%			
393	796	782	793	799	882	36															50%			
394	798	784	795	801	884	38															50%			
395	800	786	797	803	886	40															50%			
396	802	788	799	805	888	42															50%			



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CREW NO. 6834		LINE NO. 8	LEAVE TOWN/CAMP 7:00	ARRIVE TOWN/CAMP	TOTAL TR. TIME	DOWN TIME	WEATHER CLEAR+COOL	TRAIL CONDITIONS Shoulder	DATE MONTH 9 DAY 8 YEAR 86	CLIENT COCORP	JOB MOORE FOREMAN	PM Biuus											
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P.	DIGITAL POSITION	GAIN REEL NO.	PARITY TAPE	MEMORY W/15 SEC SWEEPS	SHOOTING			SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS			
		TR 1	TR 12	TR 13	TR 96					SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE						
900	All ones	1	6		SEC		753	48			BO7	753.						72 1/2			5 Vib in line 8 2.5' spacing 41.25' move up		
933	PULSE	1	6		"						ARRIVE	field							8:40		1st Vib starts 21' past line 8 SWEEPS 12-748 Hz		
934/935	Exit	2	6		"																SWEEP FREQ. 26 SEC. SWEEP 42 SEC RECORD		
936/939	DRD	4	6		"																Length 4ms sample RATE 62.5 Hz Alais		
953/954	SUM	2	6		"																9 Hz low cut 18 db/OCT 5 STA. GAP BETWEEN		
960/961	NRT	2	6		"																TR # 12+13 Vib on shoulder of a paved rd.		
932	Similarity	1	26		"						Sims	taken	thru	line	with	CAMERA	RIA	5	1	30%	9:30	STA # 724 OPEN DUE TO A BRIDGE	
326	Windstrip	1	42		"	1																	
327	664	650	661	667	750	1											8	50%	9:45				
328	666	652	663	669	752	3												50%					
329	668	654	665	671	754	5												50%					
330	670	656	667	673	756	7												50%					
331	672	658	669	675	758	9									5			50%					
332	674	660	671	677	760	11									4			50%				Vib # 23652 DOWN PROBLEMS WITH BACK MOTOR	
333	676	662	673	679	762	13												50%					
334	678	664	675	681	764	15												50%					
335	680	666	677	683	766	17												50%					
336	682	668	679	685	768	19												50%					
337	684	670	681	687	770	21												50%					
338	686	672	683	689	772	23												50%					
339	688	674	685	691	774	25												50%					
340	690	676	687	693	776	27	753											50%				E.O.T. # 753 TAPE MARKS	
341	692	678	689	695	778	29	754								5			50%				B.O.T. # 754 Vib # 23652 BACK ONLINE	
342	694	680	691	697	780	31												50%					
343	696	682	693	699	782	33												50%					
344	698	684	695	701	784	35												50%					
345	700	686	697	703	786	37												50%					
346	702	688	699	705	788	39												50%					
347	704	690	701	707	790	41												50%					
348	706	692	703	709	792	43												50%					
349	708	694	705	711	794	1												50%	765/766				NEW RECORDER LOCATION
350	710	696	707	713	796	3												50%					





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GEO-252-D

CREW NO. 6834		LINE NO. 8		LEAVE TOWN/CAMP		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER (DOL & CLEAR SHOULDER OF PUMIT)		TRAIL CONDITIONS		DATE MONTH 9 DAY 7 YEAR 86		CLIENT COCORP		JOB NAME/FOREMAN MOORE/FOREMAN		PM BIRDUS		
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS or "K"	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS		
		TR 1	TR 2	TR 13	TR 96				TAPE	MISSED SWEEPS	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE						
292	598	584	595	601	684	1	750	48								5	8	50%	655/656					
293	600	586	597	603	686	3												50%						
294	602	588	599	605	688	5												50%						
295	604	590	601	607	690	7	750											50%					EOT 750 TAPE MARKS	
296	606	592	603	609	692	9	751											50%					BOT 751	
297	608	594	605	611	694	11												50%						
298	610	596	607	613	696	13												50%						
299	612	598	609	615	698	15												50%						
300	614	600	611	617	700	17												50%						
301	616	602	613	619	702	19												50%						
302	618	604	615	621	704	21												50%						
303	620	606	617	623	706	23												50%						
304	622	608	619	625	708	25												50%						
305	624	610	621	627	710	27												50%						
306	626	612	623	629	712	29												50%						
307	628	614	625	631	714	31												50%						
308	630	616	627	633	716	33												50%						
309	632	618	629	635	718	35												50%						
310	634	620	631	637	720	37												50%						
311	636	622	633	639	722	39	751											50%					EOT 751 TAPE MARKS	
312	638	624	635	641	724	41	752											50%					STA 724 OPEN DUE TO BRIDGE. BOT 752	
313	640	626	637	643	726	43												50%						
314	642	628	639	645	728	1												50%	699/700					NEW RECORDER LOCATION
315	644	630	641	647	730	3												50%						
316	646	632	643	649	732	5												50%						
317	648	634	645	651	734	7												50%						
318	650	636	647	653	736	9												50%						
319	652	638	649	655	738	11												50%						
320	WINDSTRIP					13																		
321	654	640	651	657	740	13												8	50%					
322	656	642	653	659	742	15												50%						
323	658	644	655	661	744	17												50%						



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CREW NO. 6834		LINE NO. 8		LEAVE TOWN/CAMP 7:00		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER CLEAR COOL		TRAIL CONDITIONS GRAVEL & PAVED ROAD		DATE 9 DAY 2 YEAR 86		CLIENT COCORP		OB FOREMAN/MOORE		PM BINNS			
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS or "K"	PARITY TAPE	MEMORY MISSED SWEEPS	SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS			
		TR 1	TR 12	TR 13	TR 96						SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE							
900	ALL	ONE	1-6	SEC		745	48							5	8		474/475			MONTANA VALLEY DANIELS			5 VIBS IN LINE 82.5' SPACING		
933	PULSE		1-6	SEC																			ARRIVE FIELD	41.25' MOVE UP FIRST VIB 21' PAST FLAG	
934/935	EI NT		2-6	SEC																				8 SWEEPS 26 SEC SWEEP LENGTH 12-40 HZ SWEEP FREQ	
936/939	DRP		4-6	SEC																				42 SEC REC LENGTH 4MS SAMPLE RATE	
953/954	SUM		2-6	SEC																				625 HZ ALIAS 9 HZ LOW CUT 10db/OCT	
960/961	NRT		2-6	SEC																				5 STA GAP BETWEEN 12 & 13	
932	SIMILARITY		1-26	SEC																				SIMS TAKEN WITH CAMERA AT VIBS 1 30% 9.45 VIBS IN BORROW DITCH OF GRAVEL OR PAVED ROAD	
203	WIND TEST STRIP																							60db	
204	416	402	413	419	502	240																		8 50% 10:00 VP # 416 RE-SHOOK FILE # 202 SEEMED BAD	
205	418	404	415	421	504	2																		50%	
206	420	406	417	423	506	4																		30%	
SKIP	422																								SKIP
SKIP	424																								SKIP
207	426	412	423	429	512	10																			50%
208	428	414	425	431	514	12																			50%
209	430	416	427	433	516	14																			50%
SKIP	432																								1ST HALF BRIDGE
SKIP	434																								STA 432 & 434 SKIPPED FOR BRIDGE & BUILDINGS
SKIP	434																								SKIP
210	436	422	433	439	522	20																			30%
211	438	424	435	441	524	22																			50%
212	440	426	437	443	526	24																			50%
213	442	428	439	445	528	26																			50%
214	444	430	441	447	530	28																			50%
215	446	432	443	449	532	30																			50%
216	448	434	445	451	534	32	745																		50%
217	450	436	447	453	536	34	746																		50%
218	452	438	449	455	538	36																			50%
219	454	440	451	457	540	38																			50%
220	456	442	453	459	542	40																			50%
221	458	444	455	461	544	42																			50%
222	460	446	457	463	546	44																			50%
223	462	448	459	465	548	240																			50% 520/521
																									NEW RECORDED LOCATION

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CREW NO. 6834		LINE NO. 8		LEAVE TOWN/CAMP 7:00		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER CLEAR COOL		TRAIL CONDITIONS PAVED ROAD		DATE MONTH 9 DAY 2 YEAR 86		CLIENT COCORP		OB FORSMAN/MORE		PM BURNS	
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS or "K"	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS	
		TR 1	TR 12	TR 13	TR 96				TAPE	MEMORY MISSED SWEEPS	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE					
224	464	450	461	467	550	2	746	48								5	8	50%	520/521				
225	466	452	463	469	552	4												50%					
226	468	454	465	471	554	6												50%					
227	470	456	467	473	556	8												50%					
228	472	458	469	475	558	10												50%					
229	474	460	471	477	560	12												50%					
230	476	462	473	479	562	14												50%					
231	478	464	475	481	564	16												50%					
232	480	466	477	483	566	18	746											50%					EOT # 746 TAPE MARKS
233	482	468	479	485	568	20	747											50%					BOT # 747
234	484	470	481	487	570	22												50%					
235	486	472	483	489	572	24												50%					
236	488	474	485	491	574	26												50%					
237	490	476	487	493	576	28												50%					
238	492	478	489	495	578	30												50%					
239	494	480	491	497	580	32												50%					
240	496	482	493	499	582	34												50%					
241	498	484	495	501	584	36												50%					
242	500	486	497	503	586	38												50%					
243	502	488	499	505	588	40												50%					
244	504	490	501	507	590	42												50%					
245	506	492	503	509	592	44												50%					
246	508	494	505	511	594	240												50%	566/567				NEW RECORDER LOCATION
247	510	496	507	513	596	2												50%					
248	512	498	509	515	598	4	747											50%					EOT # 747 TAPE MARKS
249	514	500	511	517	600	6	748											50%					BOT # 748
250	516	502	513	519	602	8												50%					
251	518	504	515	521	604	10												50%					
252	520	506	517	523	606	12												50%					
253	522	508	519	525	608	14												50%					
254	524	510	521	527	610	16												50%					
255	526	512	523	529	612	18												50%					



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CREW NO. 6834		LINE NO. 8		LEAVE TOWN/CAMP 7:00		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER CLEAR COOL GRAVEL ROAD		TRAIL CONDITIONS		DATE MONTH 8 DAY 28 YEAR 86		CLIENT COCORP		OB FOREMAN/MOORE		PM BINNS				
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS or "K"	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS				
		TR 1	TR 12	TR 13	TR 96				TAPE	MEMORY	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE								
900	ALL ONES	1-6SEC					741	48								5	8		363/349					MONTANA VALLEY	5VIBS IN LINE 82.5' SPACING	
933	PULSE	1-6SEC																							41.25' MOVE UP FIRST VIB 21' PAST FLAG	
934/935	EINT	2-6SEC																							BSWEEPS 26SEC SWEEP LENGTH 12-18HZ SWEEP FREQ	
936/939	DRD	4-6SEC																							42 SEC REC LENGTH 4MS SAMPLE RATE	
953/954	SUM	2-6SEC																							62.5HZ ALIAS FREQ 9HZ LOWCUT 18db/OCT	
960/961	NRJ	2-6SEC																							5STA GAP BETWEEN 12 & 13	
932	SIMILARITY	1-26SEC																							SIMS TAKEN WITH CAMERA AT VIBS	
146	WIND TEST STRIP					1																			1 30% 9:35	
147	306	292	303	309	392	1																			60db 9:45	
148	308	294	305	311	394	3																			50%	
149	310	296	307	313	396	5																			50%	
150	312	298	309	315	398	7																			50%	
151	314	300	311	317	400	9																			50%	
152	316	302	313	319	402	11																			50%	
153	318	304	315	321	404	13																			50%	
154	320	306	317	323	406	15																			50%	
155	322	308	319	325	408	17																			50%	
156	324	310	320	327	410	19	741																		50% EOT# 741 TAPE MARKS	
157	326	312	323	329	412	21	742																		50% BOT# 742	
158	328	314	325	331	414	23																			50%	
159	330	316	327	333	416	25																			50%	
160	332	318	329	335	418	27																			50%	
161	334	320	331	337	420	29																			50%	
162	336	322	333	339	422	31																			50%	
163	338	324	335	341	424	33																			50%	
164	340	326	337	343	426	35																			50%	
165	342	328	339	345	428	37																			50%	
166	344	330	341	347	430	39																			50%	
167	346	332	343	349	432	41																			50%	
168	348	334	345	351	434	43																			50%	
169	350	336	347	353	436	240																			50% 408/409	
170	352	338	349	355	438	2	742																		50% NEW RECORDER LOCATION	
																										EOT # 742 TAPE MARKS

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FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS or "K"	PARITY			SHOOTING					INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS	
		TR 1	TR 12	TR 13	TR 96				TAPE	MEMORY MISSED SWEETS	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS					NO. SUMS
171	354	340	351	357	440	4	743	48							5	8	50%	408/409		MONTANA VALLEY	BOT # 743
172	356	342	353	359	442	6											50%				
173	358	344	355	361	444	8											50%				
174	360	346	357	363	446	10											50%				
175	362	348	359	365	448	12											50%				
176	364	350	361	367	450	14											50%				
177	366	352	363	369	452	16											50%				
178	368	354	365	371	454	18											50%				
179	370	356	367	373	456	20											50%				
180	372	358	369	375	458	22											50%				
181	374	360	371	377	460	24											50%				
182	376	362	373	379	462	26											50%				
183	378	364	375	381	464	28											50%				
184	380	366	377	383	466	30											50%				
185	382	368	379	385	468	32											50%				
186	384	370	381	387	470	34	743										50%				EOT # 743 TAPE MARKS
187	386	372	383	389	472	36	744										50%				BOT # 744
188	388	374	385	391	474	38											50%				
189	390	376	387	393	476	40											50%				
190	392	378	389	395	478	42											50%				
SKIP	394																SKIP				STA # 394 & 396 SKIPPED CULVERTS &
SKIP	396																SKIP				ROUGH TERRAIN
191	398	384	395	401	484	9											50%	447/448			NEW RECORDER LOCATION
192	400	386	397	403	486	11											50%				
193	402	388	399	405	488	13											50%				
194	404	390	401	407	490	15											50%				
195	406	392	403	409	492	17											50%				
196	408	394	405	411	494	19											50%				
197	410	396	407	413	496	21											50%				
198	412	398	409	415	498	23											50%				
199	WIND	TEST	STRIP			25											60db				
200	414	400	411	417	500	25											50%				FILE 200 BAD PARITY



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FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS or "K"	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS	
		TR 1	TR 12	TR 13	TR 9A				TAPE	MEMORY	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE					
900	ALL ONES	1-6SEC				737	48									5	8		243/244				5 VIBS IN LINE 82.5' SPACING
933	PULSE	1-6SEC																					ARRIVE FIELD
934/935	EINT	2-6SEC																					8 SWEEPS 26SEC SWEEP LENGTH 1240HZ SWEEP FREQ
936/939	DRD	4-6SEC																					42SEC REC LENGTH 4 NS SAMPLE RATE
953/954	SUM	2-6SEC																					62.5HZ ALIAS FREQ 9HZ LOW CUT 18db/OCT
960/961	NRJ	2-6SEC																					5 STA GAP BETWEEN 12 & 13
932	SIMILARITY	1-26 SEC																					SIMS TAKEN WITH CAMERA AT VIBS
084	WIND TEST STRIP																						1
085	186	172	183	189	272	1																	8
086	188	174	185	191	274	3																	50%
087	190	176	187	193	276	5																	50%
088	192	178	189	195	278	7																	50%
089	194	180	191	197	280	9																	50%
090	196	182	193	199	282	11																	50%
091	198	184	195	201	284	13																	50%
092	200	186	197	203	286	15	737																50%
093	202	188	199	205	288	17	738																50%
094	204	190	201	207	290	19																	50%
095	206	192	203	209	292	21																	50%
096	208	194	205	211	294	23																	50%
097	210	196	207	213	296	25																	50%
098	212	198	209	215	298	27																	50%
099	214	200	211	217	300	29																	50%
100	216	202	213	219	302	31																	50%
101	218	204	215	221	304	33																	50%
102	220	206	217	223	306	35																	50%
103	222	208	219	225	308	37																	50%
104	224	210	221	227	310	39																	50%
105	226	212	223	229	312	41																	50%
106	228	214	225	231	314	43																	50%
107	230	216	227	233	316	4																	50%
108	232	218	229	235	318	6	738																50%
																							284/285
																							NEW RECORDER LOCATION
																							EOT # 738 TAPE MARKS

# OBSERVER REPORT PETTY-RAY GEOPHYSICAL

GEO-252-D

CREW NO. 6834		LINE NO. 8		LEAVE TOWN/CAMP 7:00		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER CLEAR COOL		TRAIL CONDITIONS PAVEMENT		DATE MONTH 8 DAY 27 YEAR 86		CLIENT COCORP		QB FOREMAN/MOORE		PM BINNS	
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS or "K"	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS	
		TR 1	TR 12	TR 13	TR 96				TAPE	MEMORY MISSED SWEETS	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE					
109	234	220	231	237	320	8	739	48								5	8	50%	204/215				MONTANA VALLEY B.O.T. # 739
110	236	222	233	239	322	10												50%					
111	238	224	235	241	324	12												50%					
112	240	226	237	243	326	14												50%					
113	242	228	239	245	328	16												50%					
114	244	230	241	247	330	18												50%					
115	246	232	243	249	332	20												50%					
116	248	234	245	251	334	22												50%					
117	250	236	247	253	336	24												50%					
118	252	238	249	255	338	26												50%					
119	254	240	251	257	340	28												50%					
120	256	242	253	259	342	30												50%					2ND HALF RAILROAD
121	258	244	255	261	344	32												50%					
122	260	246	257	263	346	34												50%					
123	262	248	259	265	348	36												50%					
SKIP	264																	SKIP					STA # 264 SKIPPED FOR CEMETARY
124	266	252	263	269	352	40												50%					
125	268	254	265	271	354	42	739											50%					EOT # 739 TAPE MARKS
126	270	256	267	273	356	44	740											50%					BOT # 740
127	272	258	269	275	358	3												50%	327/328				NEW RECORDER SET UP
128	274	260	271	277	360	5												50%					
129	276	262	273	279	362	7												50%					
130	278	264	275	281	364	9												50%					
131	280	266	277	283	366	11												50%					
132	282	268	279	285	368	13												50%					
133	284	270	281	287	370	15												50%					
134	286	272	283	289	372	17												50%					
135	288	274	285	291	374	19												50%					
136	290	276	287	293	376	21												50%					
137	WIND TEST STRIP					23												60db					
138	292	278	289	295	378	23												50%					
139	294	280	291	297	380	25												50%					



# OBSERVER REPORT PETTY-RAY GEOPHYSICAL

GEO-252-D

CREW NO. 6834		LINE NO. 8		LEAVE TOWN/CAMP 7:00		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER CLEAR COOL		TRAIL CONDITIONS BLAKTOP		DATE MONTH 8 DAY 26 YEAR 86		CLIENT COCORP		OB FOREMAN/MORE		PM BINNS			
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS OF "K"	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS			
		TR 1	TR 12	TR 13	TR 96				TAPE	MEMORY MISSED SWEEPS	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE							
900	ALL ONES	1-6SEC					733	48								5	8		122/123				5VIBS IN LINE 82.5' SPACING		
933	PULSE	1-6SEC																					9:00	41.25' MOVE UP FIRST VIB 21' PAST FLAG	
934/935	EINT	2-6SEC																						8SWEEPS 26SEC SWEEP LENGTH 12-48HZ SWEEP FREQ	
936/939	DRD	4-6SEC																						42SEC REC LENGTH 4MS SAMPLE RATE	
953/954	SUM	2-6SEC																						62.5HZ ALIAS FREQ 9HZ LOWCUT 18db/OCT	
960/961	NRT	2-6SEC																						55TA GAP BETWEEN 12 & 13 VIBS IN BORROW DITCH	
932	SIMILARITY	1-26SEC														1	30%						9:45	CABLE CROSSING HIWAY #24 @ 150-151	
027	WIND TEST STRIP					1																		VIBS STARTING ON A GRAVEL RD.	
028	065	051	062	068	151	1																	10:00		
029	067	053	064	070	153	3	733																	EOT # 733 TAPE MARKS	
030	069	055	066	072	155	5	734																	BOT # 734	
031	071	057	068	074	157	7																			
032	073	059	070	076	159	9																			
033	075	061	072	078	161	11																			
034	077	063	074	080	163	13																			
035	079	065	076	082	165	15																			
036	081	067	078	084	167	17																			
037	083	069	080	086	169	19																			
038	085	071	082	088	171	21																			
039	087	073	084	090	173	23																			
040	089	075	086	092	175	25																			
041	091	077	088	094	177	27																			
042	093	079	090	096	179	29																			
043	095	081	092	098	181	31																			
044	097	083	094	100	183	33																			
045	099	085	096	102	185	35	734																		
046	101	087	098	104	187	37	735																		
047	103	089	100	106	189	39																			
048	105	091	102	108	191	41																			
049	107	093	104	110	193	43																			
050	109	095	106	112	195	1																			
051	111	097	108	114	197	3																			
																									NEW RECORDER LOCATION

# OBSERVER REPORT PETTY-RAY GEOPHYSICAL

GEO-252-D

CREW NO. 6834		LINE NO. 8		LEAVE TOWN/CAMP 7:00		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER CLEAR MODERATE		TRAIL CONDITIONS PAVEMENT		DATE MONTH 8 DAY 26 YEAR 86		CLIENT COLCORP		OB FOREMAN/MOORE		PM BINNS	
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN RAMP	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS	
		TR 1	TR 12	TR 13	TR 96				TAPE	MEMORY	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE					
052	113	099	110	116	199	5	735	48								5	8	30%	166/167				MONTANA VALLEY 2ND HALF HOUSE
053	115	101	112	118	201	7												50%					NOTE: 9/8 BETWEEN STA'S #149+150 1/4 MI S
054	117	103	114	120	203	9												50%					
055	119	105	116	122	205	11												50%					
056	121	107	118	124	207	13												50%					
057	123	109	120	126	209	15												50%					
058	125	111	122	128	211	17												50%					
059	127	113	124	130	213	19												50%					
060	129	115	126	132	215	21												50%					
061	131	117	128	134	217	23	735											50%					EOT # 735 TAPE MARKS
062	133	119	130	136	219	25	736											50%					BOT # 736
063	135	121	132	138	221	27												50%					
064	137	123	134	140	223	29												50%					
065	139	125	136	142	225	31												50%					
066	141	127	138	144	227	33												50%					
067	143	129	140	146	229	35												50%					
068	145	131	142	148	231	37												50%					
069	147	133	144	150	233	39												50%					
070	148	134	145	151	234	40												30%					1ST HALF
SKIP	149																	SKIP					STA 149 THRU 161 SKIPPED FOR VILLAGE OF
SKIP	THRU																	SKIP					OPHEIM MT, WELL & FARM BUILDINGS
SKIP	161																	SKIP					
071	162	148	159	165	248	13												50%	207/208				NEW RECORDER LOCATION 2ND HALF
072	163	149	160	166	249	14												50%					
073	165	151	162	168	251	16												50%					
074	167	153	164	170	253	18												50%					
075	169	155	166	172	255	20												50%					
076	170	156	167	173	256	21												30%					1ST HALF
SKIP	171																	SKIP					
077	172	158	169	175	258	23	736											30%					2ND HALF EOT # 736 TAPE MARKS
078	174	160	171	177	260	25	737											50%					BOTH # 737
079	176	162	173	179	262	27												50%					



# OBSERVER REPORT PETTY-RAY GEOPHYSICAL

GEO-252-D

CREW NO. 6834		LINE NO. 8		LEAVE TOWN/CAMP 7:00		ARRIVE TOWN/CAMP		TOTAL TR. TIME		DOWN TIME		WEATHER OVERCAST COOL		TRAIL CONDITIONS GRAVEL ROAD		DATE MONTH 8 DAY 25 YEAR 86		CLIENT COCORP		OB FOREMAN/MOORE		PM BINNS			
FILE NO.	STA. NO.	STA. NO'S (LIVE GRPS.)				C. D. P. POSITION	DIGITAL REEL NO.	GAIN PAMPS OF "K"	PARITY		SHOOTING					SUR. SOURCES			INST. SET UP	TIME DAY	STA. OFFSET TO LINE	REMARKS			
		TR 1	TR 12	TR 13	TR 96				TAPE	MEMORY PULSED SWEEPS	SIZE	TOP	BOT.	NO CAPS	U.H.T.	N. UNITS	NO. SUMS	DRIVE							
900	ALL ONES			1-6SEC		732	48									5	8	072/103						5 VIBS IN LINE 82.5' SPACING	
933	PULSE			1-6SEC																				41.25' MOVE UP FIRST VIB 21' PAST FLAG	
934/935	EINT			2-6SEC																				8 SWEEPS 26 SEC SWEEP LENGTH 12-18 HZ SWEEP FREQ	
936/939	DRD			4-6SEC																				42 SEC REC LENGTH 4MS SAMPLE RATE	
953/954	SUM			2-6SEC																				62.5 HZ ALIAS 9 HZ LOW CUT 18db/OCT	
960/961	NRJ			2-6SEC																				5 STA GAP BETWEEN 12 & 13	
932	SIMILARITY			1-26 SEC												1	30%							STANDING BY FOR LAYOUT OF LINE 8	
001	WIND TEST STRIP																60db								
002	015	001	012	018	101												8	50%							1:45
003	017	003	014	020	103													50%							
004	019	005	016	022	105													50%							
005	021	007	018	024	107													50%							
006	023	009	020	026	109													50%							
007	025	011	022	028	111													50%							
008	027	013	024	030	113													50%							
009	029	015	026	032	115													50%							
010	031	017	028	034	117													50%							
011	033	019	030	036	119													50%							
012	035	021	032	038	121													50%							
013	037	023	034	040	123													30%						1ST HALF	
SKIP	039																	SKIP							STA #39 SKIPPED FOR HOUSE & BARN
014	041	027	038	044	127	732												30%						2ND HALF EOT #732 TAPE MARKS	
015	043	029	040	046	129	733												50%						BOT #733	
016	045	031	042	048	131													50%							
017	047	033	044	050	133													50%							
018	049	035	046	052	135													50%							
019	051	037	048	054	137													50%							
020	053	039	050	056	139													50%							
021	055	041	052	058	141													50%							
022	057	043	054	060	143													50%							
023	WIND TEST STRIP				15													60db	102/103						NEW RECORDER LOCATION
024	059	045	056	062	145													50%							





This cover sheet must be completed at the beginning of each line, or when parameters change.

GENERAL

Crew No. 6834 Contract No. 799  
 Client Cocorp  
 Area Montana  
 Country Montana  
 County Valley, Daniels, + Sheridan  
 State Montana  
 Party Mgr. Binns FOREMAN  
 OB/JO MDRE  
 Line No. 8 Date Start of Line 8-25-86  
 Sta. Int. 330' Feet Meters Fold 24%  
 Spread Dimensions 1-12 <sup>53th gap</sup> 13-96  
 VP's Increase N E S W  
 W  $\rightarrow$  E

GEOPHONES

Manufacture MD-100S Array Length 322'  
 Frequency 8hz Array Width in line  
 No. per string 2 @ 12 Array Across Between Sta  
 per trace 24 total Centered    
 Separation Ser Par Coil Res. 335 ohms  
 String Connected   String Phone  
 Shunt Res.    
 Connected at Sta Ser Par Separation between elements in the array 14.34'  
  14'

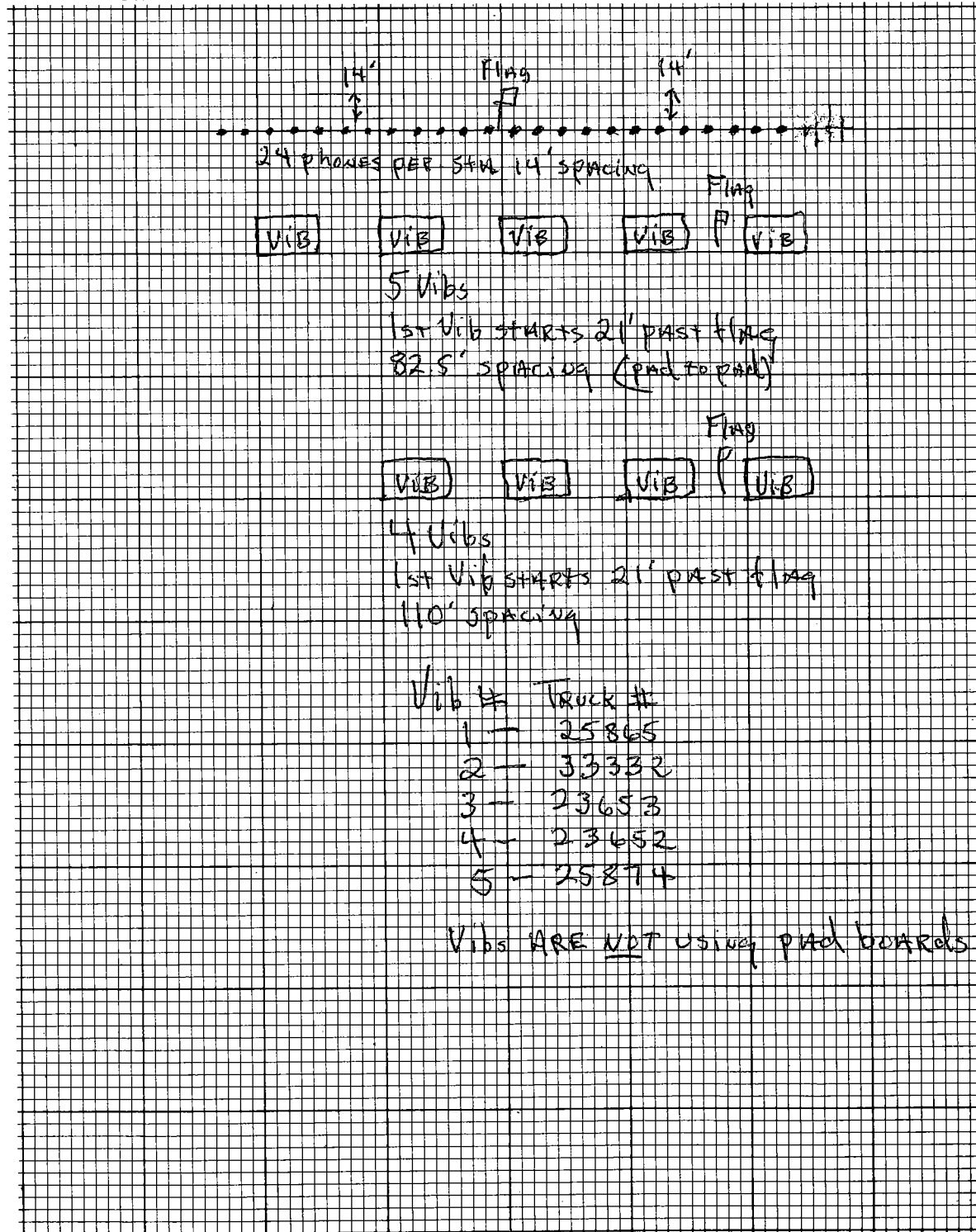
RECORDING SYSTEM

Type: MD5-10  
 Format: SEG-B  
 No. of Channels: 96  
 Sample Rate: 4ms  
 Record Length: 42 SEC  
 BPI: 1600  
 Low-Cut Filter Freq: 9hz Slope: 18db  
 High-Cut Filter Freq: 62.5hz Slope: 72db  
 Static Filter In  Out   
 Notch Filter In  Out  60 Hz  
 UH Ch. Wireline On Tape N/A  
 On Tape Radio On Tape N/A  
 Sweep Ch. AUX # 2 1 1 2  
 On Tape 11 4 11 S2

ENERGY SOURCE

Type: Y-1100'S Vib  
 Manufacturer: Failing  
 Source Control: RCV-310  
 Dynamite Holes/Shotpoint: N/A  
 Charge/Shotpoint: N/A  
 Pattern Length: N/A Feet Meters  
 Array Length: 489' Feet Meters  
 No. of drops, sweeps, etc. in array: 8  
 Sweep Freq: 12  $\rightarrow$  48 Hz  
 Sweep Length: 26 SEC  
 Unit Separation: 82.5' Feet Meters  
 Unit Moveup: 41.25' Feet Meters  
 Array Centered: Across Sta  Between Sta

LINE COVER SHEET: DRAW DIAGRAM OF GEOPHONE ARRAY AND SOURCE ARRAY



REMARKS: Air Gun Delay, etc.

VARI SOURCE USED Yes  No  Invalid Channels: