

1989 GEOLOGICAL REPORT TRANSFER AND GRIZZLY, AND MESA NORTH EXTENSION AREAS

ADDENDUM III

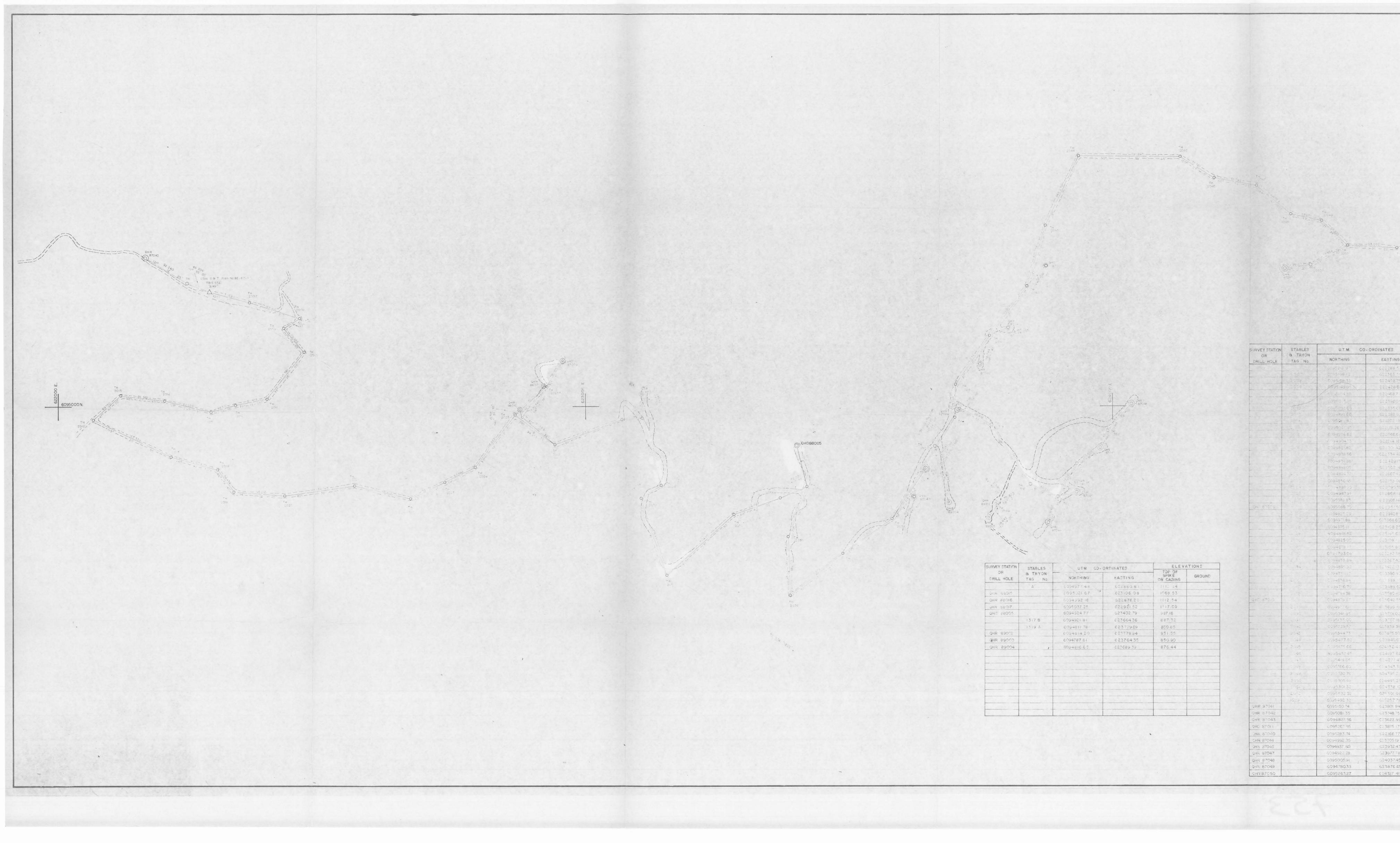
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Survey Control Maps - 1989 Data:

AREA	DRAWING NUMBER
Transfer	87-903-79-003 (Rev 4) 88-903-79-001 (Rev 3)
Hermann-Gething Area (Transfer)	86-605-79-002 (Rev 9)
Grizzly	86-905-79-001 (Rev 1) 89-905-79-001 (Rev 0) - missing
Wolverine Area	89-100-79-001 (Rev 0)

Note: The three Addenda are supplied to the Ministry of Energy. Mines and Petroleum Resources, Victoria, B.C., only (2 copies of each). Other copies and originals are on file at the Administration Building, Quintette Coal Limited, Tumbler Ridge, B.C.

(Mesa North Extension) 89-100-79-002 (Rev 2)



SURVEY STATION	STABLES	UTM 60-01	RDINATES	ELEVA	TIONS
OR DRILL HOLE	A TRYON TAG No.	NORTHING	EASTING	TOP OF SPIKE OR CASING GROUN 81 111. a4 08 1068.53 22 1112.54 32 1117.09 '9 987.16 6 887.32 59 850.85 14 851.55 35 850.90	GROUND
	Δ	6094977.48	622880.81	1112 04	
Drin saols		6095021 67	623106.08	1968.53	
QHR 88016		5094992 16	522676.22	1112.54	
UNH 58017		6095037.25	622921.52	1117.09	
QHD 88005		609492477	523402.79	987.16	
	1317 B	6094921 81	623664.36	887.32	
	1319 A	609481178	623779.69	850 85	
QHR 89002		6094814.20	623778.94	851.55	
QHR 89003		6094787,61	623764.35	850.90	
QHR 89004	1	6094816.65	623689.39	876.44	
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	2-18-1-B	THE REAL PROPERTY AND A DECIMAL OF THE DECIMAL OF THE REAL PROPERTY AND A DECIMAL OF T	34 - 20' - 9 Th			
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TION	STABLES	U.T.M. CC	- ORDINATES	TOP OF	VATIONS	
LE	A TRYON TAG No.	NORTHING	EASTING C22288.57	OR CASING	GROUND	
	190" 22e	019519812 0195198133 019514910*	622363 35 62245875 62242861	1330,48 (296,05 (294,39		u Te
		50250437 50353 507	62246877 62239603	28168 "		6C 35000 N
		205-5003-65 205-4907-66 0195041-4	02,33569 62136897 62320218	12.5 × 14 == 1.50 == 1.50 == 1.240 +5		
		0.095021.91 6.094974.62	623(15,26 622066(6)	2,18 %		
	an <u>stan</u> Sultan	6 19490413 6 194881.82 6 194838 56	52,2214,10 63,2301,42 62,2334,48	2043. Ioti 35 0		
		609485186 6094849,05	622429(5 622562 (4	11472-04 551-8	1213	
		0 09 4804 32 009 4856 45 00 - 4893 50	632753 09 623753 09 623750 52	+ += 80 *+ +*	1235	
		009498391 1095039.83	62286818 62292614	102.0° 197.92		NUTES Bearings are derived from according to TH (559 and Trig Station"AIRY"
		0095088 70 0 94925 20 0 94925 189	C1195750 C229428 C13068.60	0843 003.65 1587.29		
		609497511 6094848.52	623108.25 (23)45.62	1073 24 100016		SURVEYED August "" to August 1"" 198"
-		009482500 009461917	6,2108 403/65 80	-Кона 142-68		
	2	6194703.64 6194873.84 6094845.92	02128238 02336742 162346213	0.10106 0.03 53 995 94	1	F # 75 x04 8/5 2
		0 1947** 0+638.84	C 3386.40 AC 588 ¹³	+ 28164 		
	- Channel	0.94716.70 1.9475438 0.94875.01	023489.62 027580.42 013042.55	, (3° ⊂4 , (* 4 8 489		
		0094977'61 0095041'95	62370(-02	57310 201		
		0194135.00	61375718 627839-36	896 Tr		4 Forded WHR 89072, 89001 B 69004+ 27/0 3 Added DHC 88005 And DHR 86010 81016 And 88017 And TH "A" 22/0
	2	009522957	613875.50	886.4* 878.43		2 Added OHR 87040.87044.81045.87043.87043 And 87050 7.7 1 Added OHR 87041.87047.81043 And QH2.87011 4.7.03 No REV.011 EAT
	2 	6095229/57 6095344/73 6095477.82 6095477.66	623940.6 / 624(32)42	582-62		
	2 	0.9534473 0.95477.82 1.95475.66 609543245 905419.65	62413242 62419762 62427743	86 51 584 25		CONVIENTE COAL LIMITED
	2 1) 2) 4) 2) 42 44 2) 45 46 47 - 45 2) 45 2) 46 47 - 45 2) 42 46 47 - 45 46 47 - 45 - 4	0.95534473 0.95477.82 1.95475.66 6.9543245 1.954(9.65 0.95766.60 0.75352.76	62413242 62419762 62427743 61434333 6243952	887,51 884,25 876,71 874,75		OPINIELLE COVF TIMILED
	2 	0.95534473 0.95477.82 1.95475.66 6.9543245 0.9543245 0.95766.60 0.95766.60 0.935276 0.9305.49 0.94530132 0.9553232	62413242 02419762 02427743 61434333 62439621 02444520 62453812 62530109	887,51 884,25 876,71 874,75 865,07 867,13 772,98		PLAN SHOWING
	2 11 11 11 142 243 444 244 244 46 47 46 47 47 27 46 47 27 46 47 57 27 46 47 57 57 27 48 57 57 57 57 57 57 57 57 57 57	0.9534473 0.95477.82 0.95475.60 6.95475.60 6.9543245 0.9549.65 0.95560.60 0.9136276 0.9305.49 0.9553231 009553231 009515074	62413242 62419762 62427743 61434333 62439621 62439621 6243812 62453812 62630109 62525778 62380194	885751 88425 87871 87475 86507 86713 77298 77380 89133		PLAN SHOWING SURVEY CONTROL DRILL HOLES
	2 	0.955344.73 0.95477.82 0.95477.60 6.95475.60 6.95432.45 0.95436.60 0.753382.76 0.9305.49 0.95532.31 0.95532.31 0.95532.32	624132.42 014197.62 014277.43 0143433 6243962 024445.20 02453812 625301.09 625257.78	885751 58425 87871 87871 87475 86507 86713 77298 71380		PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS
22	2 	0.9534473 0.95477.82 0.95477.82 0.95475.60 0.95475.60 0.9549.65 0.95766.60 0.95305.49 0.9553231 009563231 009515074 009508135 0094827.36 0095283.74 0095283.74	62413242 01419762 01427743 61434333 6243952 02444520 62453812 62530109 02525778 62380194 023748.75 023622.99 01387517 022166.77 01370519	885751 88425 87871 67475 86507 86713 77298 77380 89133 89133 89110 90211 577.77 136119 840.04		PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA EVALUATION
1 2 3 0 4 5 7 3	2 	0.9534473 0.95477.82 0.95477.82 0.95475.66 0.95475.66 0.9549.65 0.95766.60 0.95305.49 0.95301.32 0.95532.32 0.95532.32 0.95567.45 0.955081.35 0.955081.35 0.955283.74	62413242 02419762 02427743 01434333 6243952 02444520 02453812 62630109 6275778 62380194 02374875 023622.99 02387517 02216677	885751 58425 87871 67475 66507 86713 77298 77380 89133 69110 90211 577.77 1361.19		PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

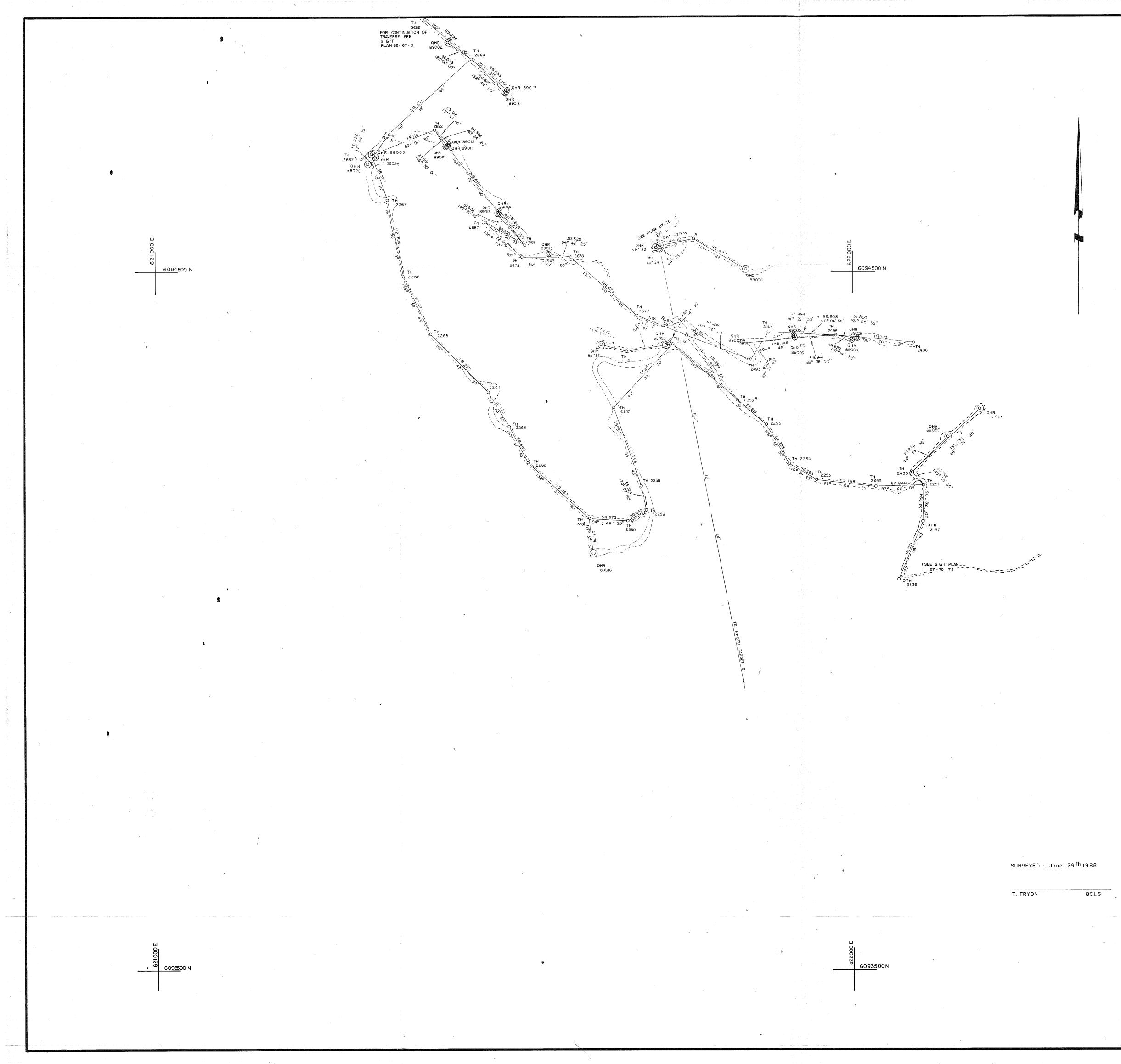
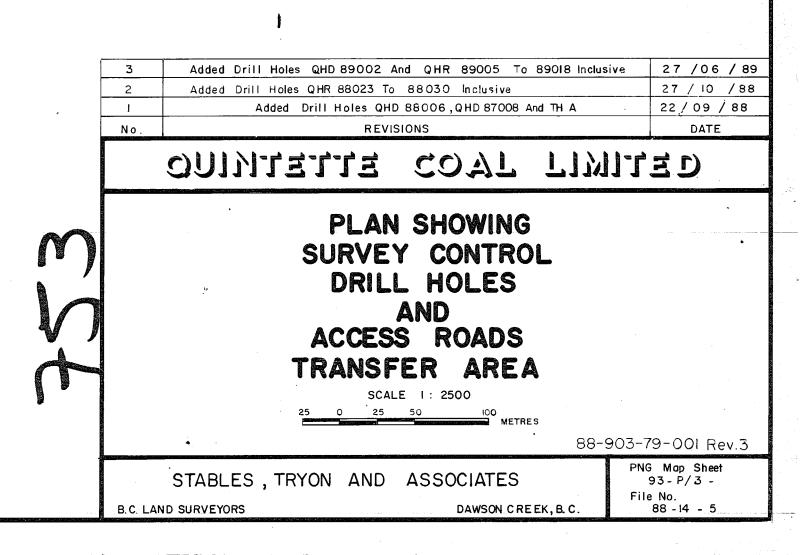
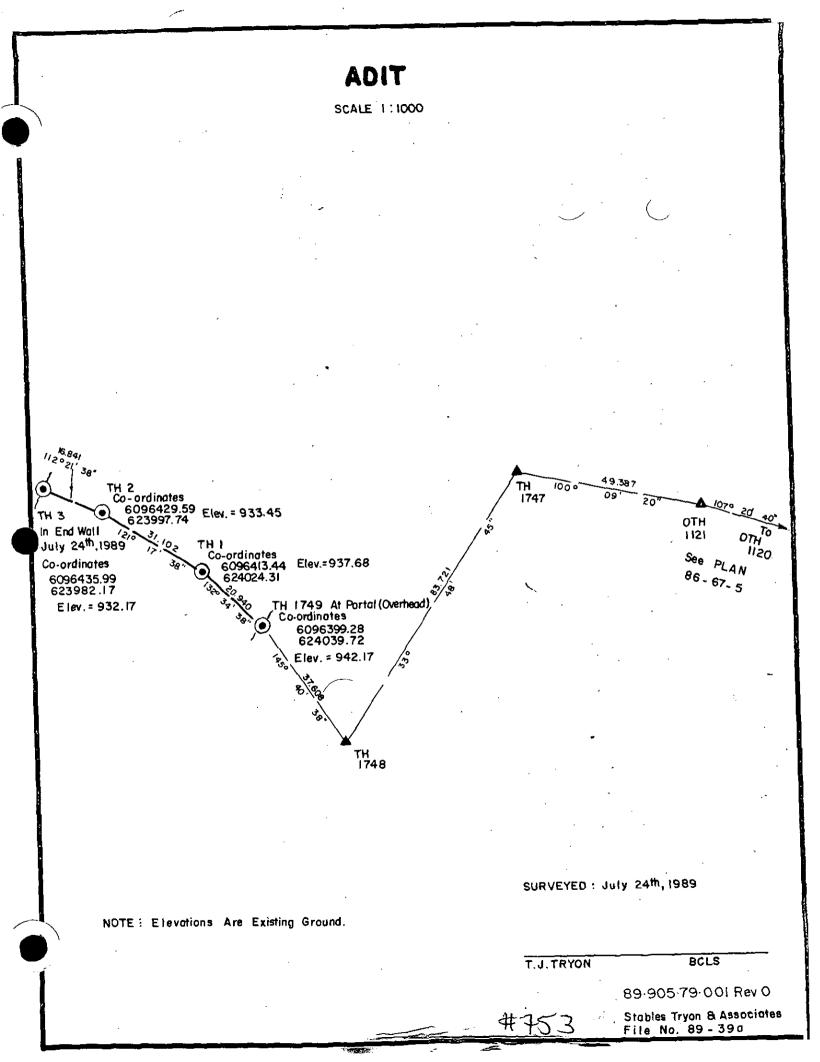
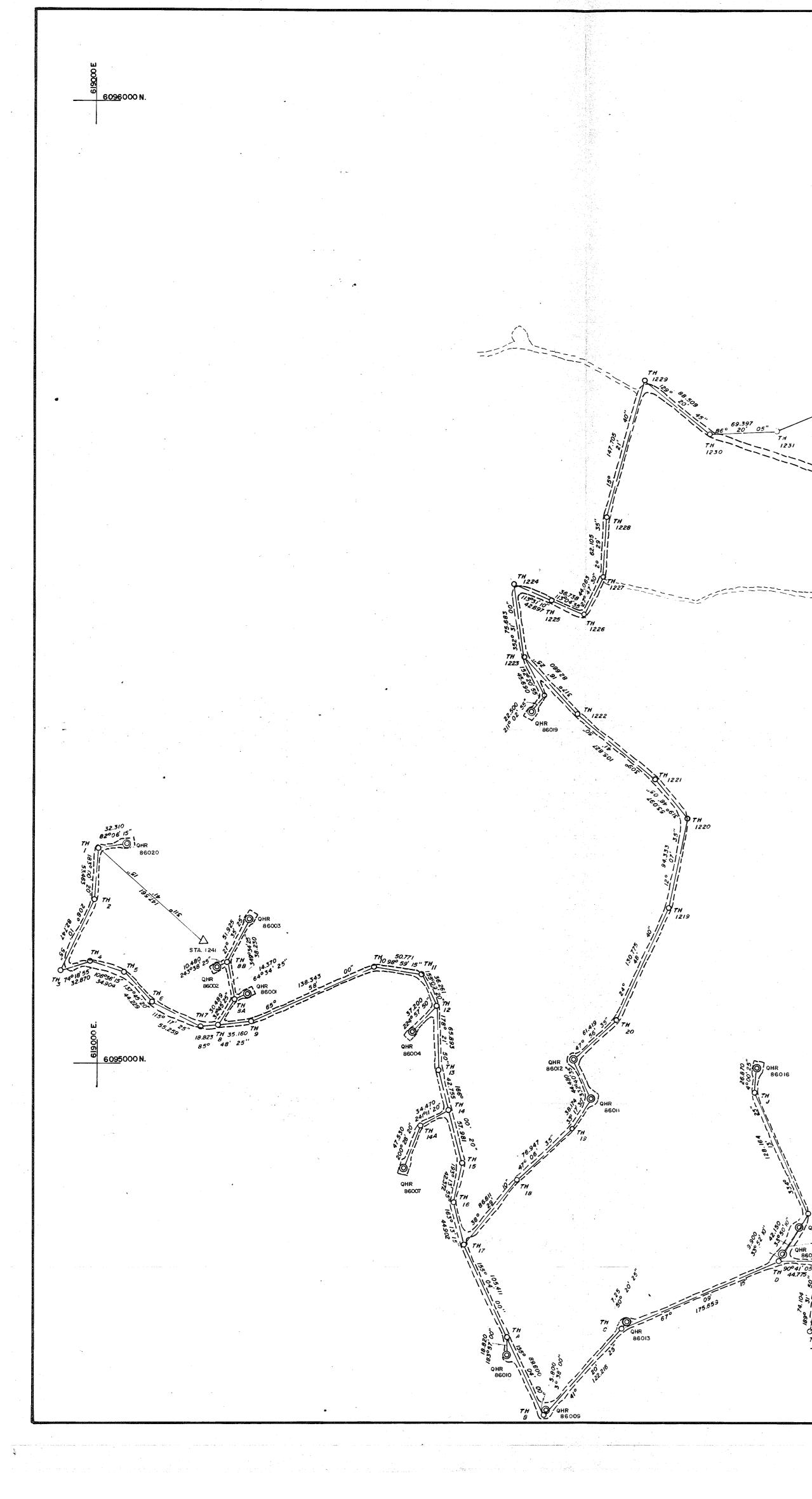


PHOTO TARGET	STABLES & TRYON	UTM C	0-ORDINATES				
DRILL HOLE	TAG NO.	NORTHING	EASTING	TOP OF IRON BAR OR CASING GROUN			
	21 36	6094059.38	622067.11	1033.75			
	2137	6094140.45	622100.09	1041.28			
	2251	6094194.42	622100.69	1047.81			
	2252	6094191.42	622032.93	1061.58			
	2253	6094201.66	621948.40	1074.02			
	2253		621998.51	107764			
		6094225.31		107284			
	2255	6094280.90	621876.35				
	2256	6094396.96	621741.35	1088.95			
	2257	6094305.91	6216 57. 71	1071.47			
	2258	C^94193.80	621698.52	1077.95			
	2259	094159.01	621704.58	1078.33			
	2 260	6094142.62	621678.46	1085.80			
	2261	0094147.21	621624.11	1099.79			
	2202	(194227.70	621536.44	1128.67			
	2.203	094279.06	621507.72	1 1 3 2.38			
	2264	6094327.39	021477.22	1151.93			
	2204	C 294411.10	C21395.61	1159.67			
			CC 1355-82	1163.91			
·	2266	<u> </u>		1166.79			
	2267	<u>C 094602.93</u>	61 1332.06				
QHR 88003		CO94667.8I	621309.94	1 17 [.43			
	Α	6094538.56	621771.27	1 165.15			
QHC 88006		6094505.45	621847.87	1168.49			
QHF 37008		6094538.83	621727.19	1157.00			
QHR 88023		6094536.19	621724.33	116€.96			
QHR 88024		6094535.45	621723 86	1167.16			
QHR 88025		E094661.31	621312.63	1170.74			
QHR 88026		0094653,58	621305.39	1171.61			
QHR 88027		CO 94 396.88	621638.42	1031.14			
		6094395.20	621732.08	1087.83			
QHR 33028				1072.37			
QHR 08029		<u>6094304.15</u>	622181.67				
QHR 32030		6094264.46	622137.27	1059.79			
·····	2435	6094212.69	622085.54	1050.03			
<u> </u>	2 256 A	6094386.75	621674.84	1 088.23			
	2255 B	609 4317.15	621834.26	1082.75			
	2493	6094374.44	621853.47	1116.10			
	2494	6094412.44	621878.65	1127.80			
	2495	6094409.92	621976.47	1129.20			
	2496	6094398.03	622087.56	1132.73			
	2676	6094410.03	621761.26	1100.11			
			621690.23	1109.32			
	2677	• <u>6094437.27</u>	621596.26	1131.75			
	2678	6094521.97	······				
	2679	6094520.85	621526.07	1137.38			
	2680	6094572.71	621475.88	1 147.94			
	2681	6094538.71	621532.48	1150.27			
	2682	6094703.13	621404.62	1183.21			
	2682A	6094662.25	621298.23	1177.57			
	2689	6094803.42	621456.73	12 53 .79			
	2688	6094861.62	621388.40	12 65 92			
QHD 89002		6094828.12	621422.73	1256.73			
QHR 89005		6094410.04	621916.89	1126.23			
QHR 89006		6094409.52	621916.55	1126.45			
		6094397.47	621840.95	1121.83			
QHR 89007		-					
QHR 89008	<u></u>	6094403.80	622007.66	1123.31			
QHR 89009		6094402.56	622000.16	1123.34			
QHR 89010		6094680.17	621419.82	1175.30			
QHR 89011		6094682.84	621421.40	1175.37 、			
GHR 89012		6094683.96	621422.05	1175.44			
OHR 89013		6094586.06	621493.24	1160.79			
		6094586.78	621493.67	1160.88			
QHR 89014	I						
QHR 89015	 	6094524.53	621565.86	1134.85			
-		6094095.54	621626.35	1078.01			
CHR 89016 CHR 89017		6094759.50	621506.67	1245.80			







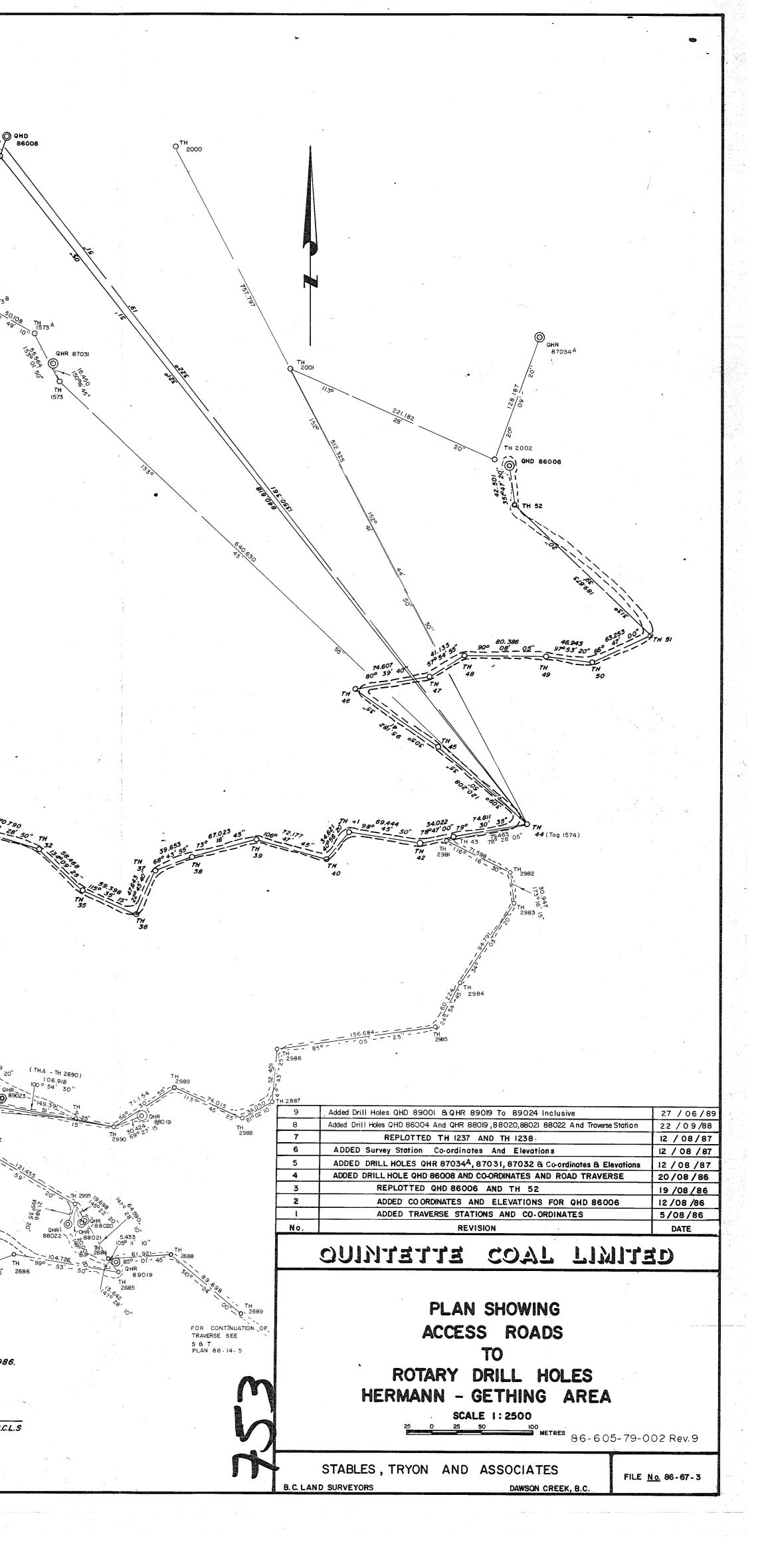
	ші О С 6096000 N.				65.465 13 68 13 15 15 17 12 12 12 12 12 12 12 12 12 12	73° 89.664 7H 1236	1237 TH 12 1760 60.037 1760 50 100 50 100 7H
	•		51.5 ³³ 05 63° 42 7H	33 33			
			TH 1232	-			•
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				See Plar	rdinates Of Stations I2 86-67-4.	I9 To I238	
		· • •		ROAD TRAVERSE STATION			
				No.	NORTHING 6095224.84	EASTING 619001.50	-
				2 3	6095171.48 6095097.25	618 998.70 618 962.20	
	N ₁			4	6095106.14 6095096.17	618993.83 619027.27	
	11			6	6095063.39	619057.03	
			•	7 	6095039.79 6095041.17	619106.97 619125.73	
	11/28			9	6095043.74 6095100.05	619160.78 619287.07	
					6095002.13	619337.20	
				2 3	<u>6095053.24</u> 6094993.40	6/9352.43 6/9354.3/	-
•				4 5	6094951.9 3 6094895.70	619364.64 619378.66	
				16	6094854.47	619368.96	
				17 18	6094811.50 6094879.27	£19381.92 619435.79	
					6094931.61 6095044.12	619492.14 619538.15	
				21	E095.99 8 .09	620580.11	
				22	6095960.89 6095909.59	620634.97 620694.98	
				24 25	6095859.81 6095771.12	620706.75 620705.93	
				<u>26</u> 27	60357 38 .52 0095706.65	C20723.90 620778.44	
	• •			28	£095602.73	620851.78	
			-	<u>29</u> 30	6095545.87 6095457.69	620917.73 620986.22	-
				3/	609 <u>53935</u> 1	621056.37	
	ш́ Х			31 32 33	6095351.94 6095284.61	621094.69 621187.98	•
•	50000			31 32	6095351.94	621094.69	•
•	ш 8 00 <u>6095</u> 000 N.			31 32 33 34 35 36	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19	621094.69 621187.98 621255.83 621297.76 621351.30	• •
	50000			31 32 33 34 35 36 37 38	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48	621094.69 621187.98 621255.83 621297.76 621351.30 621369.73 621406.66	•
	50000			31 32 33 34 35 36 37 38 39 40	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095254.90	621094.69 621187.98 621255.83 621297.76 621351.30 621369.73 621406.66 621470.82 621539.89	
	50000			31 32 33 34 35 36 37 38 39 40 41	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095254.90 6095254.90	621094.69 621187.98 621255.83 621297.76 621351.30 621369.73 621406.66 621470.82 621539.89 621562.56	P
	50000			31 32 33 34 35 36 37 38 39 40 40 41 42 43	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095275.75 6095254.90 6095281.05 6095270.47 6095277.08	621094.69 621187.98 621255.83 621297.76 621351.30 621369.73 621406.66 621470.82 621539.89 621562.56 621631.17 621664.52	
	50000			31 32 33 34 35 36 37 38 39 40 41 42	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095254.90 609 <u>5281.05</u> 6095270.47	621094.69 621187.98 621255.83 621297.76 621351.30 621369.73 621406.66 621470.82 621539.89 621562.56 621631.17	
	50000			$ \begin{array}{r} 31 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44(Tcc 1574) \\ 45 \\ 46 \\ \end{array} $	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095254.90 6095281.05 6095270.47 6095277.08 6095277.08 6095277.68 6095423.19	621094.69 621187.98 621255.83 621255.83 621351.30 621369.73 621406.66 621470.82 621562.56 621652.56 621664.52 621738.05 621645.80 621563.53	
	50000			$ \begin{array}{r} 31 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44(Tc\varsigma1574) \\ 45 \\ 46 \\ 47 \\ 48 \\ \end{array} $	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095275.490 6095270.47 6095270.47 6095277.08 6095290.70 6095367.68 6095423.19 6095423.19 6095425.29 6095457.13	621094.69 621187.98 621255.83 621255.83 621351.30 621369.73 621406.66 621470.82 621539.89 621562.56 621631.17 621664.52 621738.05 621645.80	
	50000			$ \begin{array}{r} 31 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44(Tc \varsigma 1574) \\ 45 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 49 \\ \end{array} $	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095254.00 6095281.05 6095281.05 6095270.47 6095290.70 6095367.68 6095423.19 6095423.19 6095457.13 6095456.94	621094.69 621187.98 621255.83 621255.83 621351.30 621369.73 621406.66 621470.82 621539.89 621562.56 621631.17 621664.52 621738.05 621738.05 621563.53 621563.53 621645.80 621569.53 621645.73	
	50000			$ \begin{array}{r} 31 \\ 32 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44(Tcc 1574) \\ 45 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 49 \\ 50 \\ 51 \\ \end{array} $	6095351.94 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095270.47 6095270.47 6095270.47 6095290.70 6095367.68 6095423.19 6095423.19 6095457.13 6095455.50 6095475.42	621094.69 621187.98 621255.83 621255.83 621351.30 621369.73 621406.66 621470.82 621539.89 621562.56 621631.17 621664.52 621738.05 621645.80 621569.53 621642.11 621676.95	
	5000			$ \begin{array}{r} 31 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44(Tcc1574) \\ 45 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 49 \\ 50 \\ 50 \\ \end{array} $	6095351.94 6095284.61 6095284.61 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095275.490 6095270.47 6095270.47 6095270.47 6095290.70 6095290.70 6095423.19 6095423.19 6095423.19 6095456.94 6095456.94 6095456.94 6095475.42 6095606.42	621094.69 621187.98 621255.83 621255.83 621351.30 621369.73 621406.66 621470.82 621539.89 621562.56 621631.17 621664.52 621738.05 621645.80 621645.80 621645.80 621669.53 621676.95 621757.30 621803.78 621861.88 621724.66	
	5000			$ \begin{array}{r} 31 \\ 32 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44(Tcc 1574) \\ 45 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 49 \\ 50 \\ 51 \\ \end{array} $	6095351.94 6095284.61 6095284.61 6095284.61 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095275.75 6095277.08 6095277.08 6095277.08 6095277.08 6095277.08 6095277.08 6095277.08 6095277.08 6095475.42 6095450.50 6095475.42 6095475.96 6094634.75	$\begin{array}{c} 621094.69\\ 621187.98\\ 621255.83\\ 621255.83\\ 621255.83\\ 621351.30\\ 621369.73\\ 621369.73\\ 621406.66\\ 621470.82\\ 621539.89\\ 621552.56\\ 621631.17\\ 621664.52\\ 621738.05\\ 621645.80\\ 621568.53\\ 621645.80\\ 621568.53\\ 621645.80\\ 621676.95\\ 621676.95\\ 621757.30\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621861.88\\ 621724.66\\ 619426.34\\ 619464.09\\ \end{array}$	
	5000			$ \begin{array}{c} 31 \\ 32 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44(Tcc1574) \\ 45 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 47 \\ 50 \\ 51 \\ 52 \\ A \\ \end{array} $	6095351.94 6095284.61 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095275.490 6095270.47 6095270.47 6095277.08 6095290.70 6095367.68 6095423.19 6095423.19 6095455.29 6095455.29 6095455.50 6095450.50 6095475.42 6095606.42 6094715.96	621094.69 621187.98 621255.83 621255.83 621351.30 621369.73 621406.66 621470.82 621539.89 621562.56 621631.17 621664.52 621738.05 621645.80 621645.80 621645.80 621645.73 621645.80 621645.73 621645.80 621757.30 621803.78 621861.88 621724.66 619426.34	
· · · · · · · · · · · · · · · · · · ·	5000			$ \begin{array}{c c} 31 \\ 32 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44 \\ 42 \\ 43 \\ 44 \\ 45 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 47 \\ 46 \\ 49 \\ 50 \\ 51 \\ 52 \\ A \\ B \\ C \\ D \\ E \\ \end{array} $	6095351.94 6095284.61 6095284.61 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095275.490 6095270.47 6095270.47 6095270.47 6095290.70 6095290.70 6095423.19 6095423.19 6095423.19 6095455.29 6095455.29 6095455.29 6095455.50 6095475.42 6095475.42 609475.42 6094634.75 6094734.63 6094854.17	$\begin{array}{c} 621094.69\\ 621187.98\\ 621255.83\\ 621255.83\\ 621255.83\\ 621351.30\\ 621369.73\\ 621369.73\\ 621406.66\\ 621470.82\\ 621539.89\\ 621552.56\\ 621631.17\\ 621664.52\\ 621738.05\\ 621645.80\\ 621569.53\\ 621645.80\\ 621676.95\\ 621757.30\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621861.88\\ 621724.66\\ 619426.34\\ 619464.09\\ 619544.78\\ 619706.58\\ 619739.84\\ \end{array}$	
· · · · · · · · · · · · · · · · · · ·	5000			$ \begin{array}{c c} 31 \\ 32 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44 \\ 42 \\ 43 \\ 44 \\ 50 \\ 51 \\ 52 \\ 46 \\ 47 \\ 45 \\ 49 \\ 50 \\ 51 \\ 52 \\ A \\ B \\ C \\ D \\ E \\ H \\ 1 \end{array} $	6095351.94 6095284.61 6095284.61 6095264.54 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095275.75 6095270.47 6095270.47 6095277.08 6095290.70 6095367.68 6095423.19 6095423.19 6095455.29 6095455.29 6095455.50 6095455.50 6095455.50 6095475.42 6095455.50 6095475.42 6094715.96 6094726.46 6094726.46 6094734.63 6094854.17 6094734.10 6094721.05	$\begin{array}{c} 621094.69\\ 621187.98\\ 621255.83\\ 621255.83\\ 621255.83\\ 621351.30\\ 621369.73\\ 621369.73\\ 621406.66\\ 621470.82\\ 621539.89\\ 621562.56\\ 621539.89\\ 621562.56\\ 621645.80\\ 621664.52\\ 621738.05\\ 621645.80\\ 621664.53\\ 621645.80\\ 621757.30\\ 621669.53\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 619426.34\\ 619426.34\\ 619706.58\\ 619739.84\\ 619751.33\\ 619739.07\\ \end{array}$	
QHR 86017	5000			$ \begin{array}{c c} 31 \\ 32 \\ 32 \\ 33 \\ 34 \\ 35 \\ 36 \\ 37 \\ 38 \\ 39 \\ 40 \\ 41 \\ 42 \\ 43 \\ 44 \\ 42 \\ 43 \\ 44 \\ 50 \\ 51 \\ 52 \\ 46 \\ 47 \\ 45 \\ 46 \\ 47 \\ 45 \\ 50 \\ 51 \\ 52 \\ A \\ B \\ C \\ D \\ E \\ H \\ \end{array} $	6095351.94 6095284.61 6095284.61 6095223.83 6095198.19 6095242.10 6095256.48 6095275.75 6095275.490 6095270.47 6095270.47 6095270.47 6095270.47 6095290.70 6095423.19 6095423.19 6095423.19 6095455.29 6095455.29 6095455.29 6095455.94 6095455.50 6095475.42 6095475.42 6094634.75 6094634.75 6094726.46 6094794.63 6094854.17 6094794.10	$\begin{array}{c} 621094.69\\ 621187.98\\ 621255.83\\ 621255.83\\ 621255.83\\ 621351.30\\ 621369.73\\ 621369.73\\ 621406.66\\ 621470.82\\ 621539.89\\ 621562.56\\ 621631.17\\ 621664.52\\ 621738.05\\ 621645.80\\ 621645.80\\ 621664.52\\ 621738.05\\ 621645.80\\ 621664.52\\ 621738.05\\ 621664.53\\ 621664.53\\ 621664.53\\ 621664.53\\ 621664.53\\ 621757.30\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621803.78\\ 621946.34\\ 619464.09\\ 619544.78\\ 619706.58\\ 619739.84\\ 619751.33\\ \end{array}$	

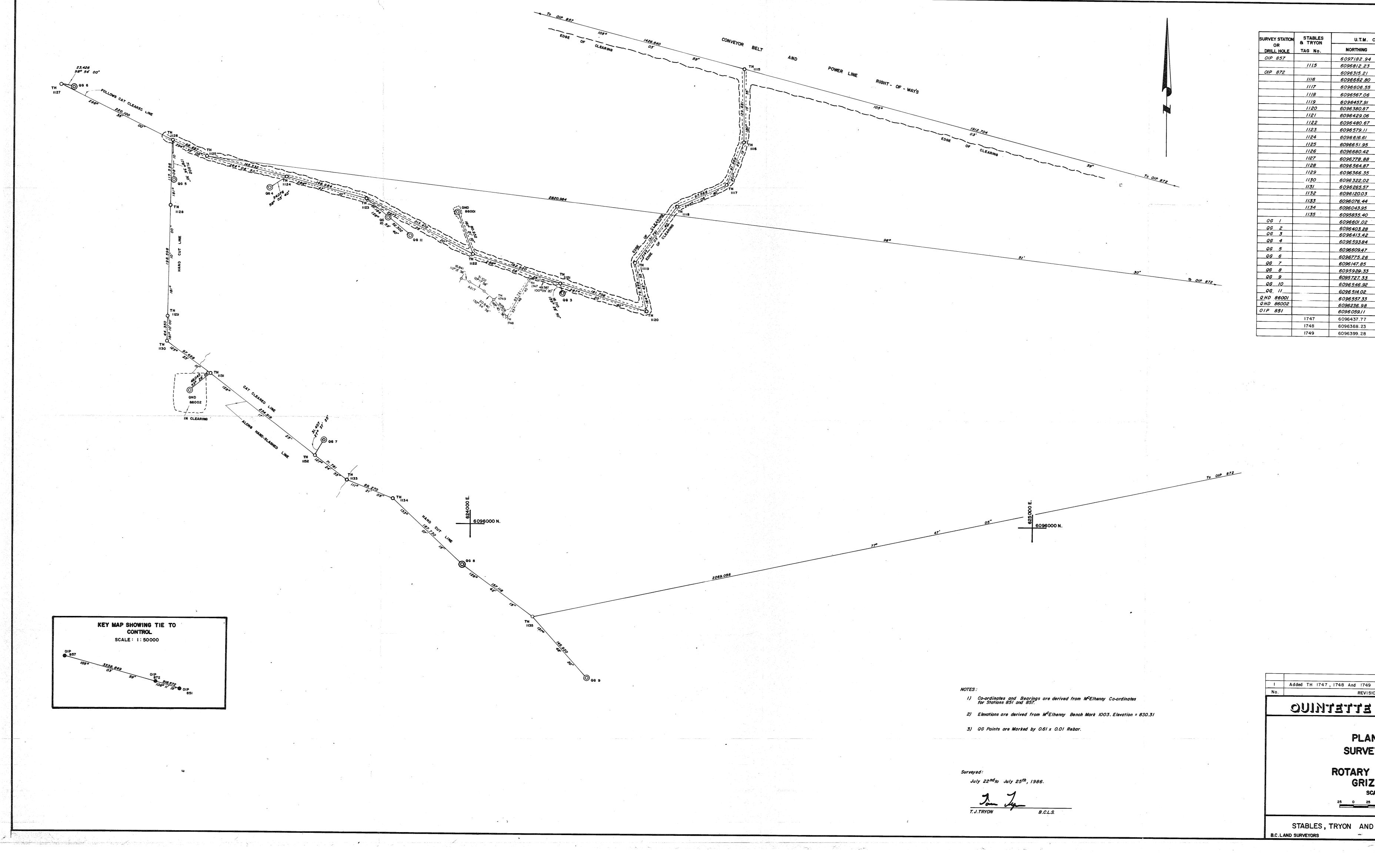
	Station	UTM Co.	ordinates	
	Or Hole	Northing	Easting	Elevations
20	00	6095963.78	621390.61	1371.40
20	01	6095745.93	621503.51	1345.45
20	02	6095657.87	621706.30	1325.81
QHR	87034 ^A	6095778.16	621750.45	1319.00
157	′3 *	. 6095.733.36	621275.35	1425.18
QHR	87031	6095747.64	621267.20	1425.42
157	зА	6095782.96	621250.16	1431.48
157	-3 B	6095807.77	621206.71	1436.47
QHR	87032	6095887.35	621106.04	1451.87
298	31	6095274.82	621660.23	1424.64
298	32	6095243.14	621724.40	1424.97
298	83	6095212.42	621728.02	1432.68
298	34	6095133.92	621674.96	1422.02
298	35	6095079.33	621649.61	1409.24
298	36	6095065.92	621493.57	1385.35
298	37	6095013.72	621489.25	1374.92
298	38	6094997.24	621459.47	1368.03
298	39	6095027.04	621391.76	. 1361.27
299	90	6094987.80	621332.44	1345.41
299) - -	6095015.93	621185.79	1318.14
299	92	6094973.12	621188.18	1306.26
299) 3	6094910.61	621292.26	1288.37
QHD	86004	6095039.36	621027.75	1329.61
OHR	88019	6094998.48	621360.92	1349.43
QHR	88020	6094894.41	621303.45	1283.06
QHR	88021	6094893.54	621302.67	1282.11
QHR	88 0 2 2	6094890.02	621286.52	1282.73
26	84	6094856.22	621326.86	1272.14
268	35	6094844.72	621334.19	1267.65
268	36	6094862.72	621231.07	1259.93
268	37	6094836.32	621164.00	1245.53
268	88	6094861.62	621388.40	1265.92
268	89	6094803.42	621456_73	1253.79
269	90	6095017.68	621185.69	1318.76
OHR	89019	6094854.80	621332.10	1271.65
QHR	89020	6094848.75	621193.66	1247.01
QHR	89021	6094857.59	621101.61	1238.05
OHR.	89022	6094857.17	621103.13	1237.81
QHR	89023	6095016.64	621219.38	1324.23
QHR	89024	6095024.06	620949.00	13 50.45
QHD	89001	6094965.93	621172.33	1305.05

SURVEYED: July 11th, to July 13th,1986.

<u>609</u>6000 N.

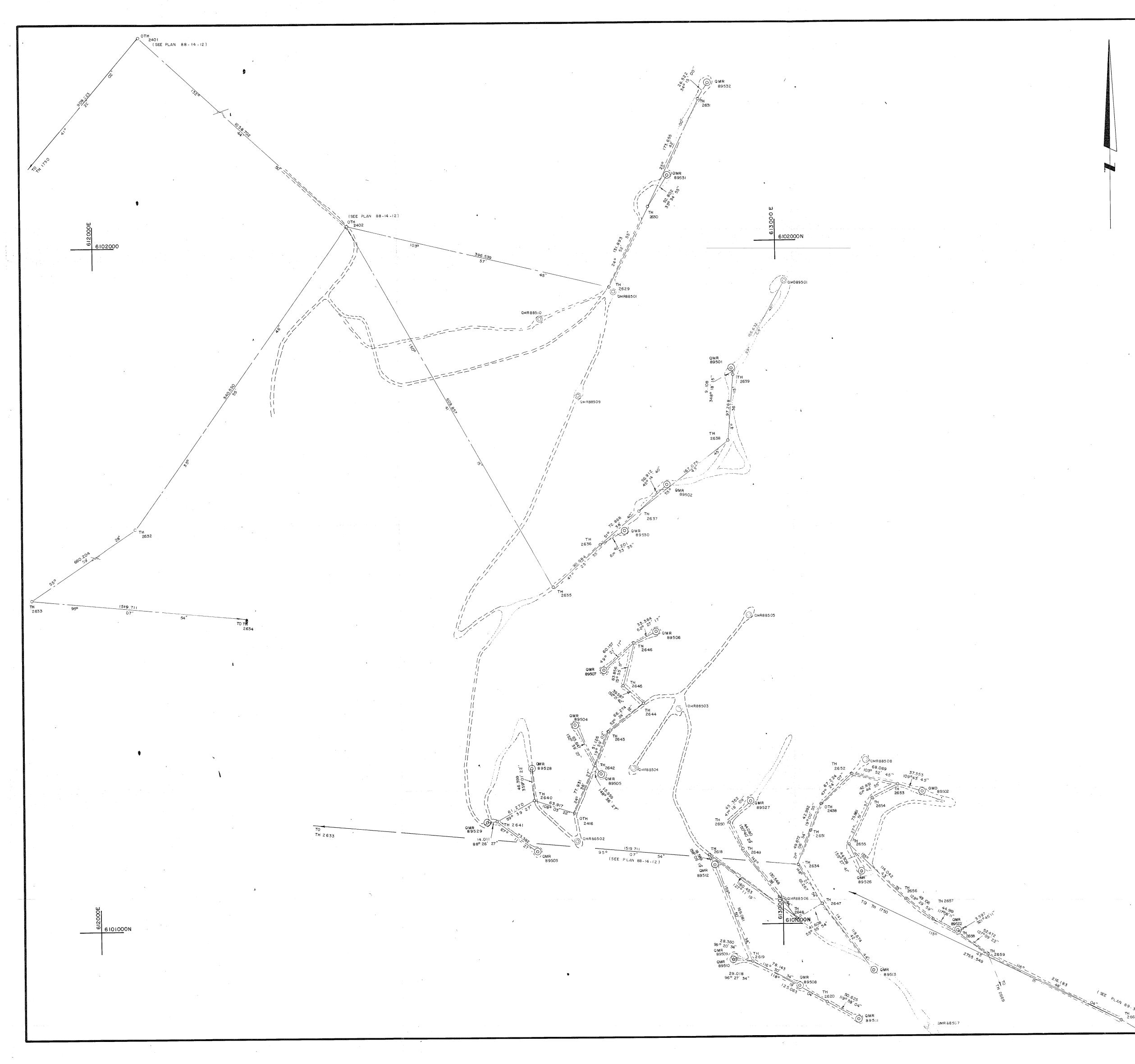
T.J. TRYON





U.T.M. CO-C		ELE	VATIONS
NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
6097182.94	623105.77		
6096812.23	624482.90	858.84	
6096315.21	626329.19	830.34	and the
6096682.80	624482.31	867.88	
6096606.55	624452.29	872.21	
6096567.06	624363.11	879.57	
6096457.91	624289.72	888.11	
6096380.87	624310.38	893.55	
6096429.06	624156.09	928.30	
6096480.67	624001.62	959.54	
6096579.11	623812.30	989.99	
6096616.61	623670.24	1022.86	
6096651.95	623529.34	1044.84	
6096680.42	623467.10	1050.25	
6096778.88	623270.34		
6096564.87	623464.8/	1061.69	
6096366.35	623460.77	1071.99	
6096 322.02		1097.00	
6096265.57	623459.87	1101.65	
6096120.03	<u> </u>	1091.86	
6096076.44		1069.55	
6096043.95	623780.62	1059.04	
6095835.40	623863.73	1055.31	
6096601.02	624/12.11	1003.45	077-0
6096403.28	<u> </u>	877.74	877.59
6096413.42	<u>624295.71</u> 624161.95	<u> </u>	893.84
6096593.84	623644.90	1029.75	927.84
6096609.47	-		
6096775.26	623468.87	1055.48	<u> </u>
6096147.85	623293.48	1060.95	· · · · · · · · · · · · · · · · · · ·
609592 9 :33	623738.40	1074.35	
6095727.33	623986.12	1021.04	
6096546.92	624 210.08	970.02	
	623852.07	984.69	
<u>6096 514.02</u>	<u>623892.70</u>	982.38	
6096557.33 6096236.92	623975.75	953.93	
<u>6096236.98</u> 6096059.11	623500.76 627211.25		1095.53
			·
6096437.77	624107.49		936.69
6096368.23	624060.92		941.22
6096399.28	624039.72	(IN CEILING-)	942.17

Added TH 1747, 1748 And 1749 REVISION OUINTETTE COAL LIMITED OUINTETTE COAL LIMITED PLAN SHOWING SURVEY CONTROL AND ROTARY DRILL HOLES GRIZZLY AREA SCALE 1: 2500 2 0 2 0 0 METRES STABLES, TRYON AND ASSOCIATES DAYSON CREEK, B.C. B6-905-79-001 Revi



URVEY STATION	STABLES & TRYON	UTM CO-ORD	DINATES	ELEVA	
OR DRILL HOLE	TAG NO.	NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
	2401	6102733.94	611611.88	844.59	
	2402	6102029.17	612374.36	835.74	
	2629	6101933,53	612759.04	865.55	
· · · · · ·	2630	6102053.13	612814.51	856.57	
	2631	6102209.55	612889.79	853.77	· · · · · · · · · · · · · · · · · · ·
	2632	6101591.56	612057.32	851.36	
	2633	6101222.35	611510.29	841.58	
	2634	6101086.47	613023.41	1138.75	
	2635	6101497.60	612672.81	941.27	
		6101559.17	612739.75	950.79	
· · · · · · · · · · · · · · · · · · ·	2636 2637	6101604.37	612796.87	953.38	
			612927.84	962.42	
	2638 2639	6101708.01 6101804.92	612935.64	958.10	
		6101166.82	612 97.25	101613	
	2416		612636.51	1001.84	
	2640	6101 18 6.62			· · · · ·
	2641	6101155.68	612583.65	980.48	
	2642	6101237.65	612729.69	10 28.26	
	2643	6101285.67	612747. 15	1031.76	
	2644 (6101326.09	612799.64	1041.14	
	2645	6101352.75	612770.40	1032.89	
	2646	6101414.14	612787.91	1022.32	
	2618	6101104.57	612895.40	1085.13	
	2619	6100945.91	612953.64	1073.76	
_	2620	6100886.61	613063 10	1083.52	
	2649	6101111.13	612943.70	1110.54	
	2650	6101149.54	612 922. 12	1105.40	
	2647	6101030.92	613057.63	1135.65	
	2648	6101007.62	613 023.18	1111.88	
	2651	6101132.78	613041.30	1139.55	
	2438	6101173.40	613055.30	1133.05	
	2652	6101218.89	613104.76	1137.01	
	2653	6101202.57	613170.82	1149.44	
	2654	6101182,30	613133.08	1155.15	
······	2655	6101115.28	613097.65	1169.08	
	2656	6101036.50	613180.02	1201.00	
	2657	6101005.62 *	6 32 8.17	1210.55	
			613258.13	1216.25	
<u> </u>	2658	6100985.15		1208.87	
	2659	6100953.47	613299.93		
	2660	6100856.06	613492.80	1250.84	
QMR 39501		6101813.84	612933.80	957.87	
QMR 39502		6101644.43	612837.27	947.79	
QMR 89503		6101111.34	612642.08	993.07	
QMR 89504		0101295.93	612 699. 55	1018.82	
QMR 89505		6101224.03	612738.00	1031.69	
QMR 89506		6101430.48	612819.26	1023.02	
QMR 89507		6101374.97	612742.29	1020.48	
QMR 89508		6100911.04	613023.54	107 9.76	
QMR 89509		6100 950.51	612925.67	1066.56	
QMR 39510		6100949.17	612924.82	1066.62	
QMR 89511		6100861.33	613107.54	1083.47	
QMR 89512		6101087.33	612902.33	1083.88	
QMR 89513		6100937.81	613131.13	1131.51	
2MR 89522		6100987.97	613255.90	1216.05	
QMR 89526		6101074.99	613116.04	1177.40	
QMR 89527		6101180.28	612955.44	1103.92	
QMR 89528		6101233.00	612635.71	993.85	
OMR 89529		6101155.30	612569.65	975.25	
QMR 89525		6101578.31	612775.09	951.99	
	<u> </u>	6102097.10	612843.71	852.63	
QMR 89531	<u> </u>	6102231.46	612904.71	851.85	
OMR 89532			613011.93	947.17	
QMD 89501	+	6101941.72	613205.96	1153.94	
QMD 89502	1	6101189.97	01203.90		1

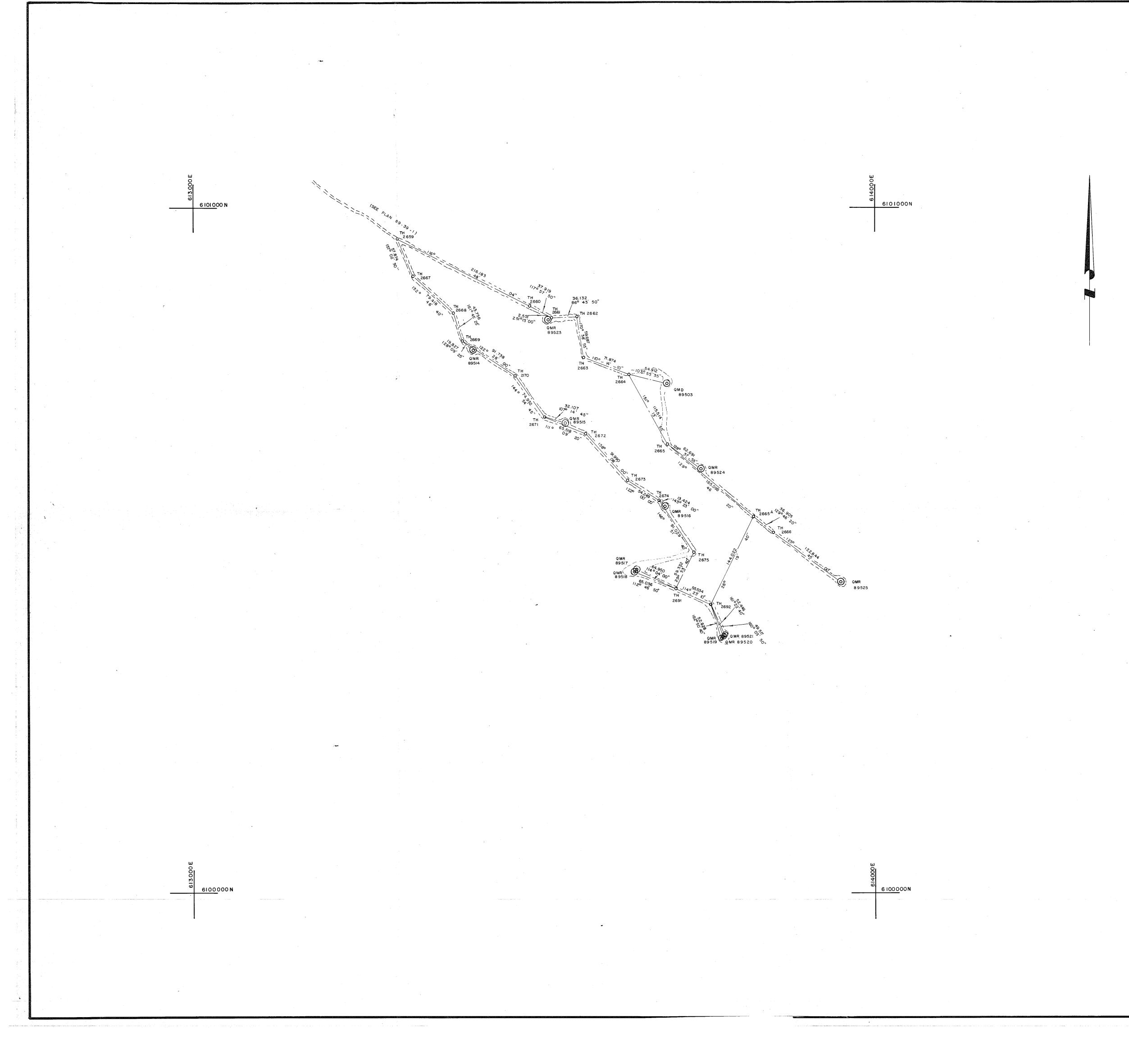
SURVEYED: July 24th ,To July 31st ,1989.

T.J. TRYON REVISIONS DATE No. ORIVITE COAF TIMILED PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS M **WOLVERINE AREA** SCALE 1 : 2500 25 0 25 50 100 Matrix 🛒 Metres 89-100-79-001 Rev. 0 FILE No.

89 - 39 - 1

Dawson Creek, B.C.

STABLES., TRYON AND ASSOCIATES B.C.Land Surveyors

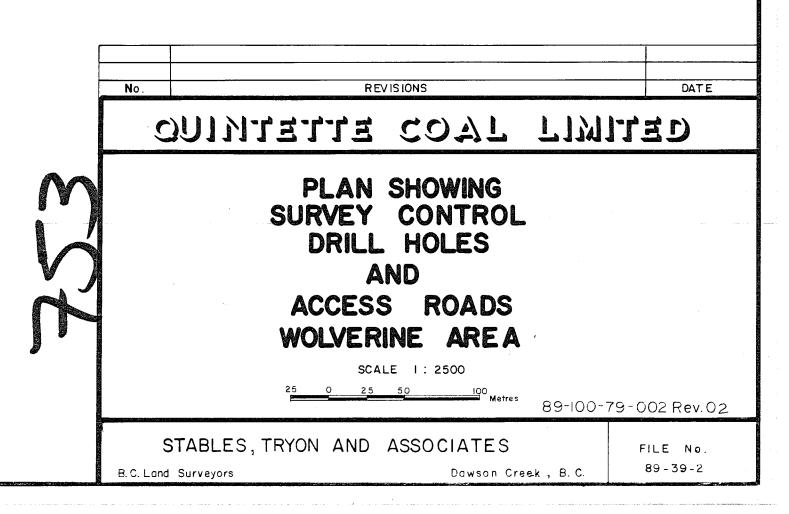


URVEY STATION STABLES OR & TRYON		UTM CO OR	DINATES	ELEVATIONS			
OR DRILL HOLE	8. TRYON TAG No.	NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND		
	2659	6100953.47	613299.93	1208.87			
	2660	6100856.06	613492.80	1250.84			
	2661	6100838.29	613526.28	1252.25			
	2662	6100840.35	613562.34	1251.40			
	2663	6100781.48	613572.03	1252.25			
	2664	6100756.63	613639.44	1258.07			
	2665	6100655.42	613695.01	1259.44			
	2665A	6100549.85	613821.84	1270.12			
	2666	6100526. 2 5	613850.20	1274.46			
	2667	6100900.24	613322.48	1196.06			
	2668	6100846.33	613380.74	1189.67			
	2669	6100804.79	613394.44	1185.26			
	2670	6100755.57	6 347 . 80	1196.80			
	2671 -	6100694.29	613514.86	1198.50			
	2672	6100670.64	613575.93	1201.78 ´			
	2673	6.100602.17	613637.30	1216.24			
	2674 -	6100573.43	613683.29	1221.60			
	2675	6100497.24	613733.03	1210.50			
	2691	6100443.74	613707.44	1223.93			
	2692	6100420.82	613758.00	1232.95			
QMD 89503		6100743.42	6 3 6 92 .7	i261.44			
QMR 89514		6100792.55	613410.02	1188.16			
QMR 89515		6100684.76	613545.51	1202.09			
QMR 89516		6100562.66	613691.29	1221.61			
QMR 89517		6100470.22	613648.16	1215.72			
QMR 89518		6100468.91	613647.50	1215.88			
QMR 89519		6100370.56	613773.52	1243.32			
QMR 99520		6100371.14	613774.74	124281			
QMR 89521		6100374.29	613774.87	1242.69			
QMR 89523		6100837.47	613523.87	1252.46			
QMR 89524		6100616.30	613743.96	1264.72			
QMR 89525		6100454.51	6 3949.85	1285.64			

SURVEYED : July 24th,To July 31st, 1989

BCLS

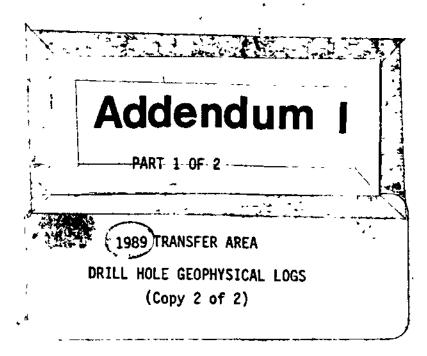
T.J.TRYON





The 222 pages following this page contain coal quality data and remain confidential under the terms of the *Coal Act Regulation*, Section 2(1). They have been removed from the public version.

http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/10_251_2004





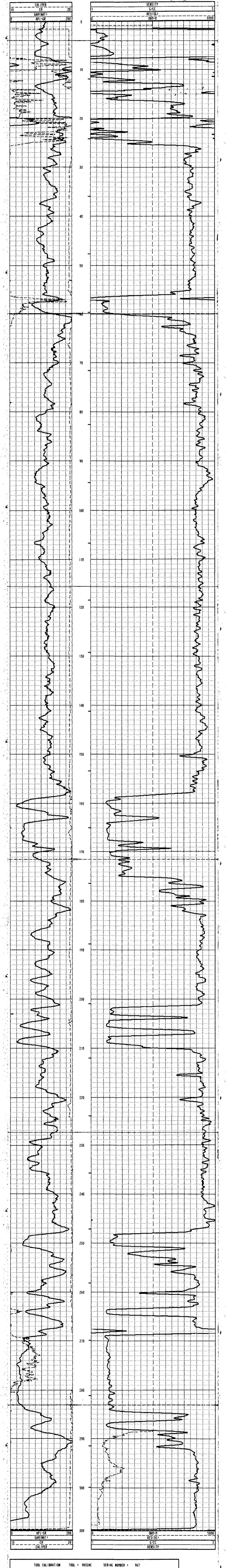
TRANSFER AREA DIAMOND DRILL HOLES

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QHD89001 GAM-DEN-RES-CAL

				Г				
COMPANY		QUINTETTE C			OTHER SERV	ICES:		
HELL	;	QHD89001 GA	M-DEN-RES-CAL					
LOCATION/FIELD	•				SCALE			
COUNTY	:	TRANSFER			1:200			
STATE	:	BRITISH COL	UMBIA	۴.,		<u></u>		
SECTION	:		TOWNSHIP	:		RANGE	:	
DATE	:	06/02/89	PERMANENT DATUM	:	00	ELEVAT	0	NS
DEPTH DRILLER	;	311	ELEV. PERM. DATUM	1:	00	КВ	:	00
LOG BOTTOM	:	308.66	LOG MEASURED FROM	1:	GL	DF	:	00
LOG TOP	:	30	DRL MEASURED FROM	1:	GL	GL	:	00
CASING DRILLER	:	9	LOGGING UNIT	:	8902			
CASING TYPE	:	STEEL	FIELD OFFICE	:	CALGARY			
CASING THICKNESS	3:	.05	RECORDED BY	:	D.ZANKL			
BIT SIZE	:	12.1	BOREHOLE FLUID	:	WATER	FILE	:	ORIGINAL
MAGNETIC DECL.	:	24.500	RM	:	00	TYPE	:	9032AC
MATRIX DENSITY	:	2.68	RM TEMPERATURE	:	00	LOG	:	5
FLUID DENSITY	:	1.0	MATRIX DELTA T		173			QUIN 12
NEUTRON MATRIX					690			20000
REMARKS	;							
LOGGED OPEN HOL	.E							
ANGLE HOLE								
	10	ES PROVIDED	SUBJECT TO STANDA	RD	TERMS AND	CONDIT	10	INS

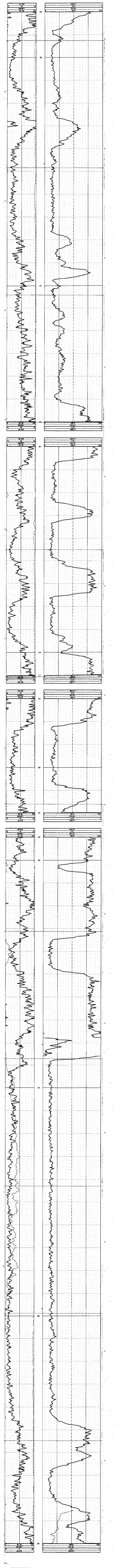
CAL IPER CM 20 10 GAM(NAT) 200 AP1-6R 10



	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPON	SE	STAND	ARD
0	05/04/89	10:17:51	Û	GAM(NAT)	0.000	CPS	0.000	AP1-GR
ŧ	05/04/89	10:17:51	0	GAM(NAT)	9.000	CPS	0.000	AP1-GR
2	05/04/89	12:11:56	0	DENSITY	6166.000	CPS	1.106	6/00
3	05/04/89	12:11:56	0	DENSITY	2439.000	CPS	2.120	G/CC
4	05/04/89	10:17:51	0	RES(SG)	0.000	CPS	0.000	088-11
5	05/04/89	10:25:07	0	RES(SG)	30275.000	CPS	178.500	OHM-M
6	05/04/89	10:46:11	0	CALIPER	353.000	CPS	7.620	CH
7	05/04/89	10:46:11	0	CALIPER	1906.000	CPS	17.800	CH
8	05/04/89	10:17:51	0	DENSITYH	0.000	CPS	0.000	G/CC
9	05/04/89	10:17:51	Û	DENSITYH	0.000	CPS	0.000	6700
10	05/04/89	10:17:51	Û	CALIPERL	0.000	CPS	0.000	CM
11	05/04/89	10:17:51	0	CALIPERL	0.000	CPS	0.000	CM

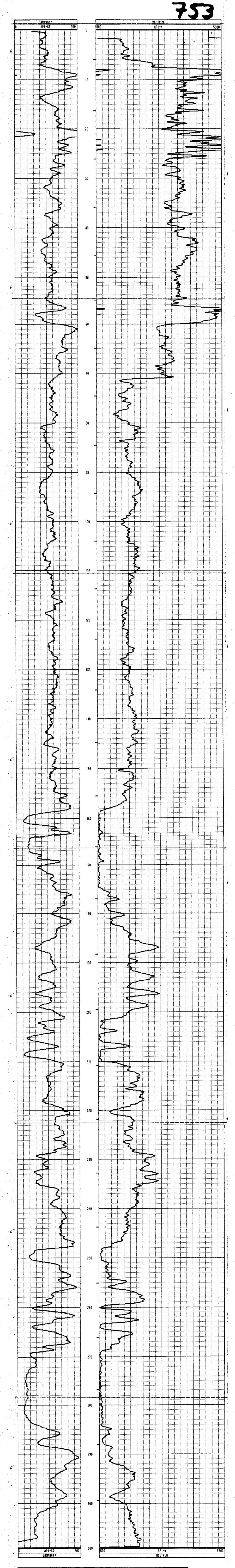
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	4							oraș de la servici de la s No servici de la servici de
	j.				Heimen gener	lan Sheatarca	arsth	ietzty i sindes, italy Valu
			QHD89001		EXP I	DENS	Ľ	TY 👔
			a ann an a	ann.	igalan na Ar		1530	นอาเวอร์แน เกมาะ
		QUINTETTE C	001 I TD	Г	OTHER SER	ILCES!		
	-	QND89001 EX			UTHER DER			
LOCATION/FIELD	-	WILDOVICO I EI	DENGIN	1	SCALE			
		TRANSFER			1:20	I		
		BRITISH COL	UMBIA	-				
SECTION	ł	•	TOWNSHIP	;		RANGE	;	
DATE		06702789	PERMANENT DATUM	:	00	ELEVAT	10	NS
			ELEV. PERM. DATU			KB	:	00
LOG BOTTOM			LOG MEASURED FRO			DF	:	00
		30	DRL MEASURED FRO			SL.	:	00
CASING DRILLER	:	9	LOGGING UNIT	:	6902			
			FIELD OFFICE					
CASING THICKNESS					D.2ANKL			
BIT SIZE		12.1	BOREHOLE FLUID	•	UATER	FILE	:	ORIGINAL
MAGNETIC DECL.			RM		00			9032AC
MATRIX DENSITY		2.68	RM TEMPERATURE		00	LOG		5
FLUID DENSITY		1.0	MATRIX DELTA T		173	PLOT	t	QUIN 14
			FLUID DELTA T		690	THRES	H:	20000
REMARKS	:							
LOGGED OPEN HOL	E							
ANGLE HOLE								



		/ /	QHD 8 9 0 0 1	G	GAMMA-	NEU	T I	RON
COMPANY	: 1	QUINTETTE C	OAL LID.		OTHER SERV		514 J.A.	laisan an a
HELL			MMA-NEUTRON					
LOCATION/FIELD COUNTY	•	TRANSFER			SCALE 1:200	1		
STATE		BRITISH COL	UMBIA	L				
SECTION	:		TOWNSHIP	:		RANGE	:	
DATE	: (06/02/89	PERMANENT DATUM	:	00	ELEVAT	ION	15
DEPTH DRILLER		311	ELEV. PERM. DATU			KB		00
LOG BOTTOM	:	309.10				DF		00
LOG TOP	:	0.30	DRL MEASURED FRO	M:	GL	GL	:	00
CASING DRILLER	: :	9	LOGGING UNIT	:	8902			
CASING TYPE	; ;	STEEL	FIELD OFFICE	:	CALGARY			
CASING THICKNES	5:	.05	RECORDED BY	:	D.ZANKL			
BIT SIZE	:	12.1	BOREHOLE FLUID	:	WATER	FILE	:	ORIGINAL
MAGNETIC DECL.	;	24.500	RM	;	00	τγρε	:	9055A
MATRIX DENSITY		2.68	RM TEMPERATURE		00	LOG		0
FLUID DENSITY		1.0	MATRIX DELTA T		173			QUIN 10
NEUTRON MATRIX	:	SANDSTONE	FLUID DELTA T	:	690	THRES	н:	20000
REMARKS	:							
LOGGED OPEN HO	LĽ							
ANGLE HOLE	11.05		CHD (201 TO STANK	4 0 0	TEDMO ANA	CONDIT	0	N S
MLL SERG	162	5 PROVIDED	SUBJECT TO STAND	עאר	ICKIIJ HNU	CONDI		

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		TO	IOL CALIBRA	TION	tool = 90	155A	SERIA	L NUMBER =		14	
		CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPO	<u>ISE</u>	S	TAND	ARD	
	0	05/04/89	08:10:36	0	GAM(NAT)	0.000	CPS	0	.000	AP1-GR	
1	1	05/04/89	08:10:36	0	GAM(NAT)	0.000	CPS	0	.000	AP1-GR	
	2	05/05/89	16:59:51	0	POROSITY	0.000	CPS	145	.000	CPS	
	3	05/04/89	98:15:10	0	RES	9707.000	CPS	0	.000	OHM	
ĺ	4	05/04/89	08:15:10	0	RES	5212.000	CPS	1000	.000	OHN	
	5	05/04/89	08:13:14	0	SP	-9.000	CPS	0	.000	NV	
Í	6	05/04/89	08:13:14	0	SP	4095.000	CPS	500	.000	MU	
1	7	05/04/89	08:10:36	0	NEUTRON	0.000	CPS	0	.000	AP I -N	
	8	05/04/89	08:53:24	Đ	NEUTRON	145.000	CPS	271	.000	API-N	

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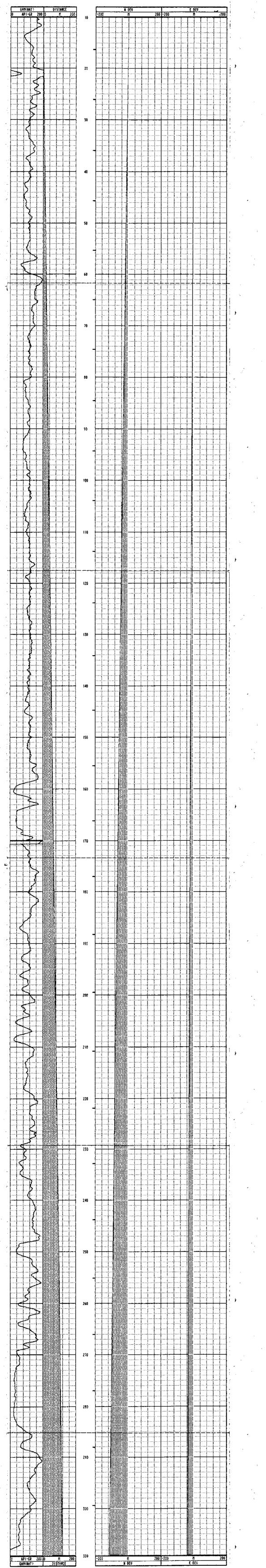
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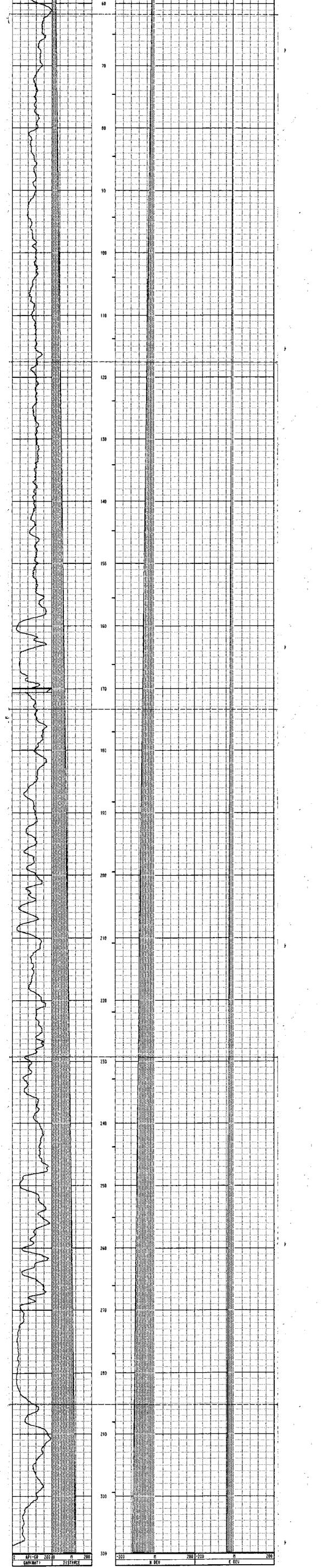
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	V		QHD 890	n 1	DEV	T A T T	ስ	N
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				101100				0.0001202000000000000000000000000000000
COMPANY		QUINTETTE (OTHER SER	WICES:		
WELL LOCATION/FIELD		QHD89001 DI	EVIATION					
COUNTY		TRANSFER			SCALE			
STATE		BRITISH COL	JIMB J O	L	1:200			
SECTION	;	041100 000	TOWNSHIP	:		RANGE	:	
DATE	:	06/03/89	PERMANENT DATUM	- ;	00	ELEVAT	10	NS
DEPTH DRILLER		311	ELEV. PERM. DATU			KB	:	00
LOC BOTTOM		309.10				ĎF		00
LOG TOP	;	0.30	DRL MEASURED FRO)M:	GL	GL	:	00
CASING DRILLER	:	9	LOGGING UNIT	:	8902			
CASING TYPE	:	STEEL	FIELD OFFICE	;	CALGARY			
CASING THICKNES	\$:	.05	RECORDED BY	:	D.ZANKL			
BIT SIZE	:	12.1	BOREHOLE FLUID	:	WATER	FILE	:	PROCESSED
MAGNETIC DECL.			RM		00	TYPE		9055A
MATRIX DENSITY	:	2.68	RM TEMPERATURE	:	00	LOG	;	1
FLUID DENSITY	:	1.0	MATRIX DELTA T	:	173	PLOT	:	QUIN 13
NEUTRON MATRIX	:	SANDSTONE	FLUID DELTA T		690	THRES	H :	20000
REMARKS	:							
LOGGED OPEN HO	L٤							
ANGLE HOLE								







	TO	OL CALIBRA	TION	T00L = 90	SSA SERI	IL NUMBER = 14	
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	05/04/89	00:10:36	0	GANCAATO	0.000 CPS	0.000 AP1-GR	
I.	05/04/89	08:10:36	0	Gah(NAT)	0.000 CPS	0.000 AP1-GR	
2	05/05/89	16:59:51	0	POROSITY	0.000 CPS	145.000 CPS	
3	05/04/89	08:15:10	0	RES	9707.000 CPS	0.000 OHM	
4	05/04/89	08:15:10	G	RES	\$212.000 CPS	1500.000 BHM	
\$	05/04/89	88:13:14	٥	SP	-9.000 CPS	0.000 MV	
6	05/04/89	08:13:14	0	SP	4095.000 CPS	500.000 MU	
7	05/04/89	08:10:36	0	NEUTRON	0.000 CPS	0.000 API-W	
8	05/04/89	08:53:24	Û	NEUTRON	145.000 CPS	271.000 API-N	

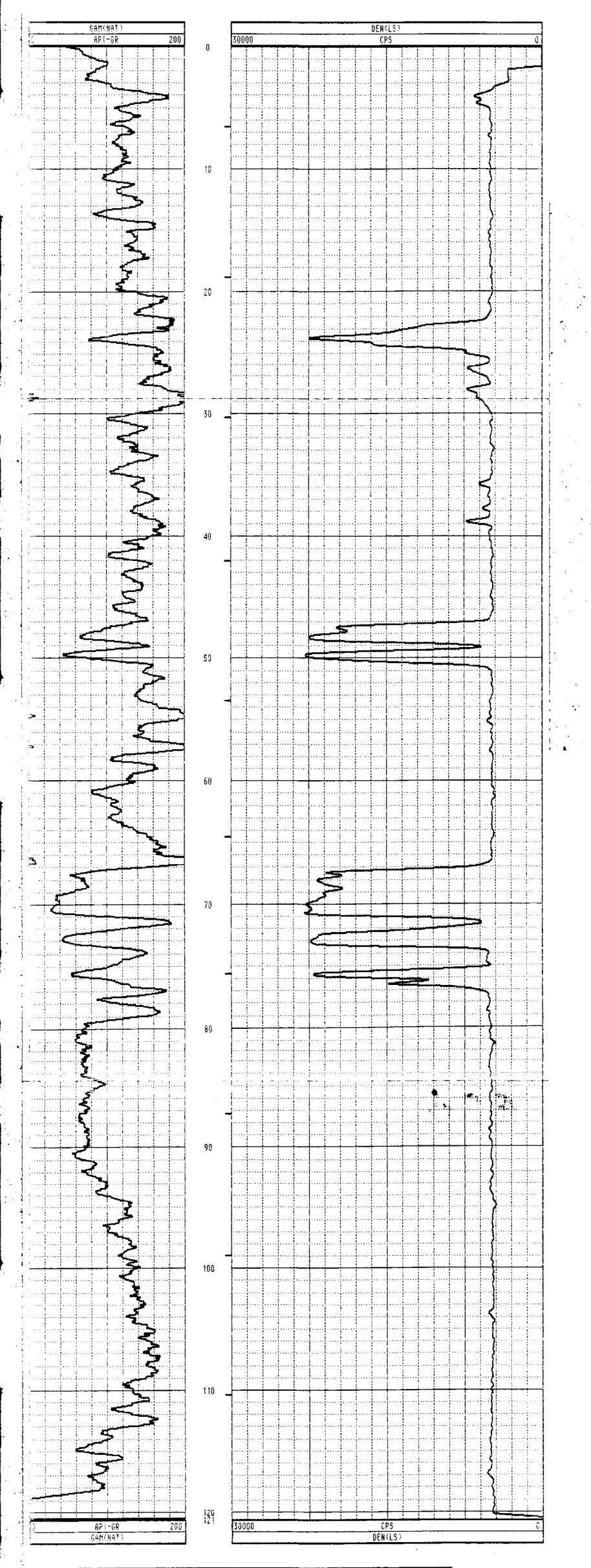
FIELD OFFI	ICE : CALGARY			F LOG 1 C		
DATA FROM	1		PROBE	-	7055A	, 14
MAG. DECL.	: 24.500	1	DEPTH UN	NITS : ME	TER L	.0 0 1
CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.			JTH SANG SA
10.0	9,27	1.66	0.08	1.7	2.9	24.3 197.3
20.0	18.41	-2.10	-1.23	2.4	210.3	24,5 198.8
30.0	27.47	-5.84	-2.22	6.2	200,8	25.0 201.
40.0	36.54	-9.88	-3,44	10.5	179.2	24.9 197.8
50.0	45.61	-13.90	-4,66	14.7	178.5	24.8 197.6
60.0	54.69	-17.83	-5,87	18.8	198.2	24.6 199.9
70.0	63.76	-21.71	-7.20	22.9	199.3	24.8 198.9
80.0	72.85	+25.66	-8.51	27.0	196.3	24.9 199.6
90.0	81.93	-27.62	-9.81	31.2	198.3	25.1 197.8
100.0	91.01	-33.61	-11.06	35.4	178.2	25.1 195.0
110.0	100.09	-37.59	-12,37	39.6	198.2	24.7 198.2
120.0	109.16	~41.56	-13.70	43,8	178.2	24.7 195.0
130.0	118.24	-45.50	-15.15	48.0	178.4	24.3 198.9
140.0	127.31	-49,47	-16.54	52.2	198.5	25.0 200.3
150.0	136.38	-53.43	-17.95	56.4	198.6	24.6 197.2
160.0	145.45	-57.40	-19.32	60.6	198.6	24.8 204.0
170.0	154.54	-61.26	-20,70	64.7	198.7	24.4 191.3
180.0	163.62	-65.16	-22.09	68.8	198.7	25.0 199.1
190.0	172.70	-69.05	-23.49	72.9	198.8	24.7 199.9
200.0	181.90	-72.95	-24.88	77.1	178.8	24.4 199.0
210.0	190.91	-76,83	-26,14	61.2	198.8	23,7 207.6
220.0	200.05	-80.68	-27.42	85.2	198.8	23.8 194.6
230.0	209.22	-84.49	-28.61	89.2	198.7	23.4 198.7
240.0	218.39	88.28	-29,75	93.2	198.6	23.1 192.2
250.0	227.58	~92.05	-30.90	97.1	198.6	23.2 196.2
260.0	236.79	-95.79	-32.00	101.0	198.5	22.8 195.3
270.0	246.03	-99.42	~33.08	104.8	198.4	22.0 189.5
280.0	255.26	-103.02	-34.18	108.5	198.4	22,7 194.9
290.0	264.50	-106.57	-35.25	112.2	198.3	22.6 204.4
300.0	273.75	-110.17	-36.36	116.0	198.3	22.4 190.3
309.1	282.17	-113.47	-37.30	117.4	198.2	0.0 0.0

	$\sum_{i=1}^{n}$				
		QHD 89002		<u> </u>	
HELL Location/Field County	: QUINTETTE C : QHD89002 GA : : TRANSFER : BRITISH COL	MMA-DENSITY	OTHER SI Scale 1:200	ERVICES:	
SECTION	9 N	TOWNSHIP PERMANENT DATUM	: : 01	RANGE :	
DEPTH DRILLER LOG BOTTOM	: 120		H: 00 H: GL	KB : DF :	00 00 00
CASING DRILLER Casing type Casing thickness	: STEEL	LOGGING UNIT FIELD OFFICE RECORDED BY	: CALGARY		
BIT SIZE MAGNETIC DECL. MATRIX DENSITY FLUID DENSITY NEUTRON MATRIX REMARKS LOGGED OPEN HOLI	: 24.500 : 2.68 : 1.0 : SANDSTONE :	RM RM TEMPERATURE MATRIX DELTA T	: 00 : 00 : 173	TYPE : LOG :	2 QUIN 11
ANGLE HOLE		SUBJECT TO STAND	ARD TERMS A	ND CONDITIC	DNS

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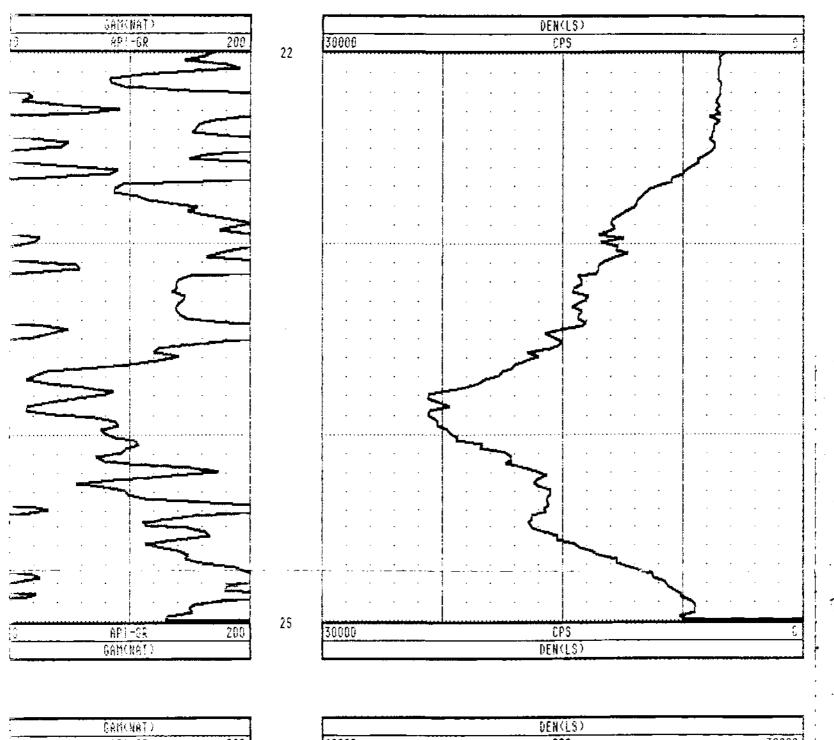
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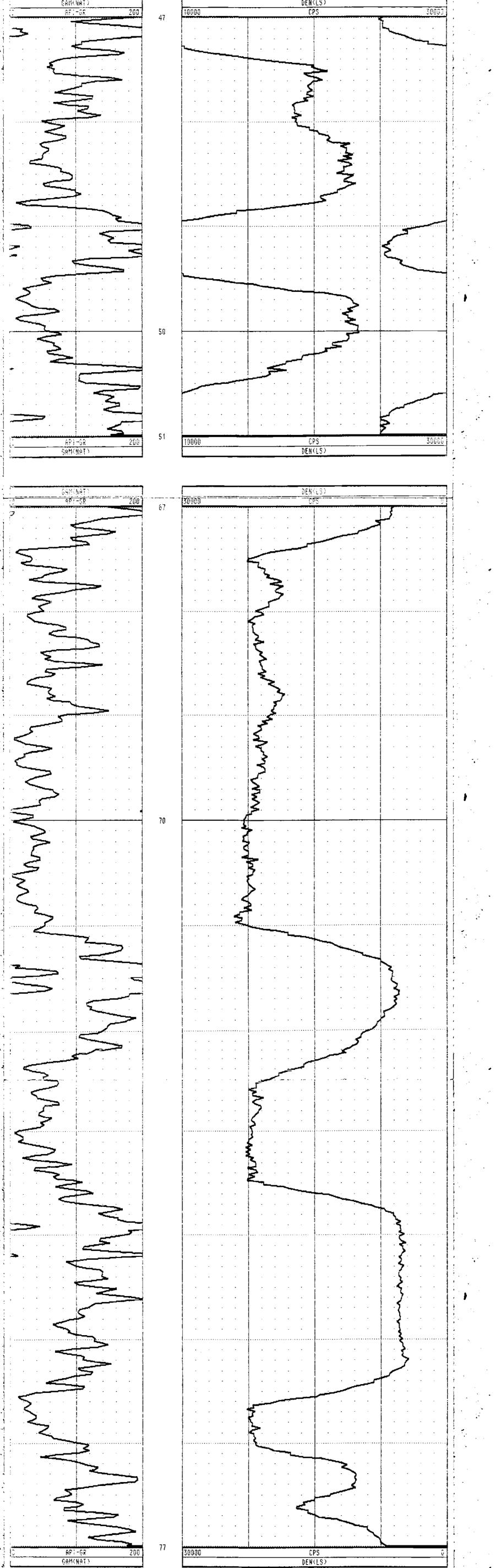


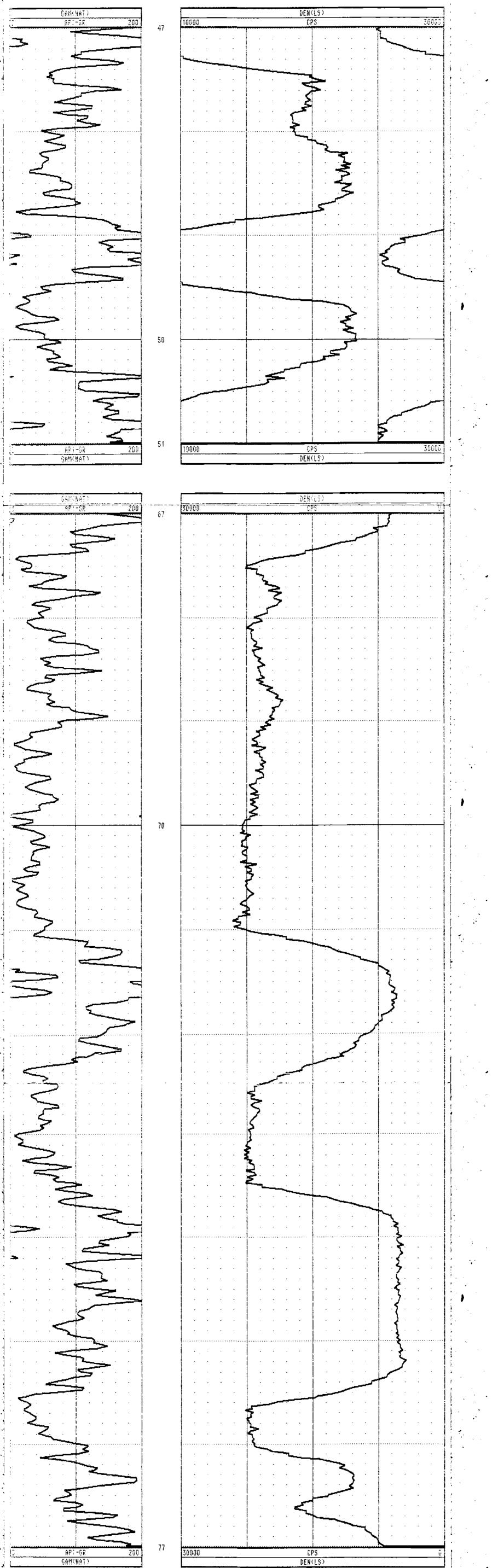
	TO	IGL CALIBRA	TION	TOOL = 9069	IA SERIAL NU	IMBER = 1029	
-	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD	
0	05/04/89	12:58:21	6	GAM(NAT)	0.000 CPS	0.000 AP1-6R	
	05/04/89	12:57:04	Û	GAM(NAT)	0.000 CPS	0.000 API-GR	

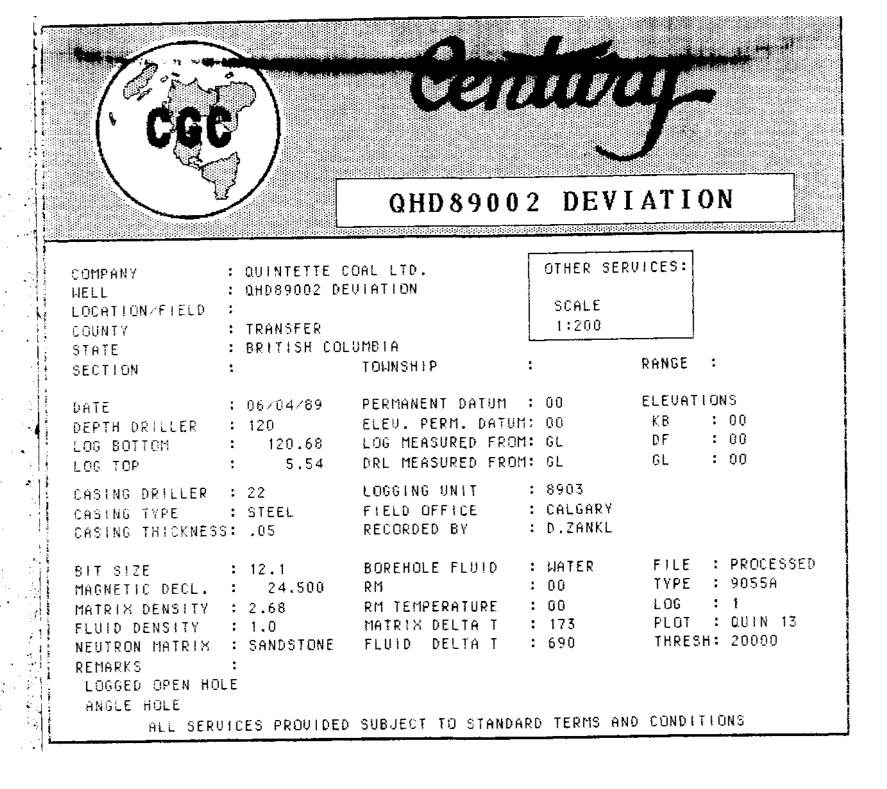
CO				Ţ.
		QHD89002		J
COMPANY HELL LOCATION/FIELD COUNTY STATE	: QUINTETTE CO : QHD89002 EXF : : TRANSFER : BRITISH COLU	DAL LTD. P DENSITY	OTHER SER SCALE 1:20	
SECTION DATE DEPTH DRILLER LOG DOTTOM SOG TOP	: 120	TOWNSHIP : PERMANENT DATUM : ELEV. PERM. DATUM: LOG MEASURED FROM: DRL MEASURED FROM:	00 GL	RANGE : ELEVATIONS KB : 00 DF : 00 GL : 00
CASING DRILLER Casing type Casing thicknes	: STEEL	FIELD OFFICE :	8902 Calgary D.zankl	
BIT SIZE MAGNETIC DECL. MATRIX DENSITY FLUID DENSITY NEUTRON MATRIX REMARKS LOGGED OPEN HC ANGLE HOLE	: 2.68 : 1.0 : Sandstone :	RM : RM TEMPERATURE : MATRIX DELTA T :	WATER 00 00 173 690	FILE : ORIGINAL TYPE : 9069A LOG : 2 PLOT : QUIN 15 THRESH: 50000



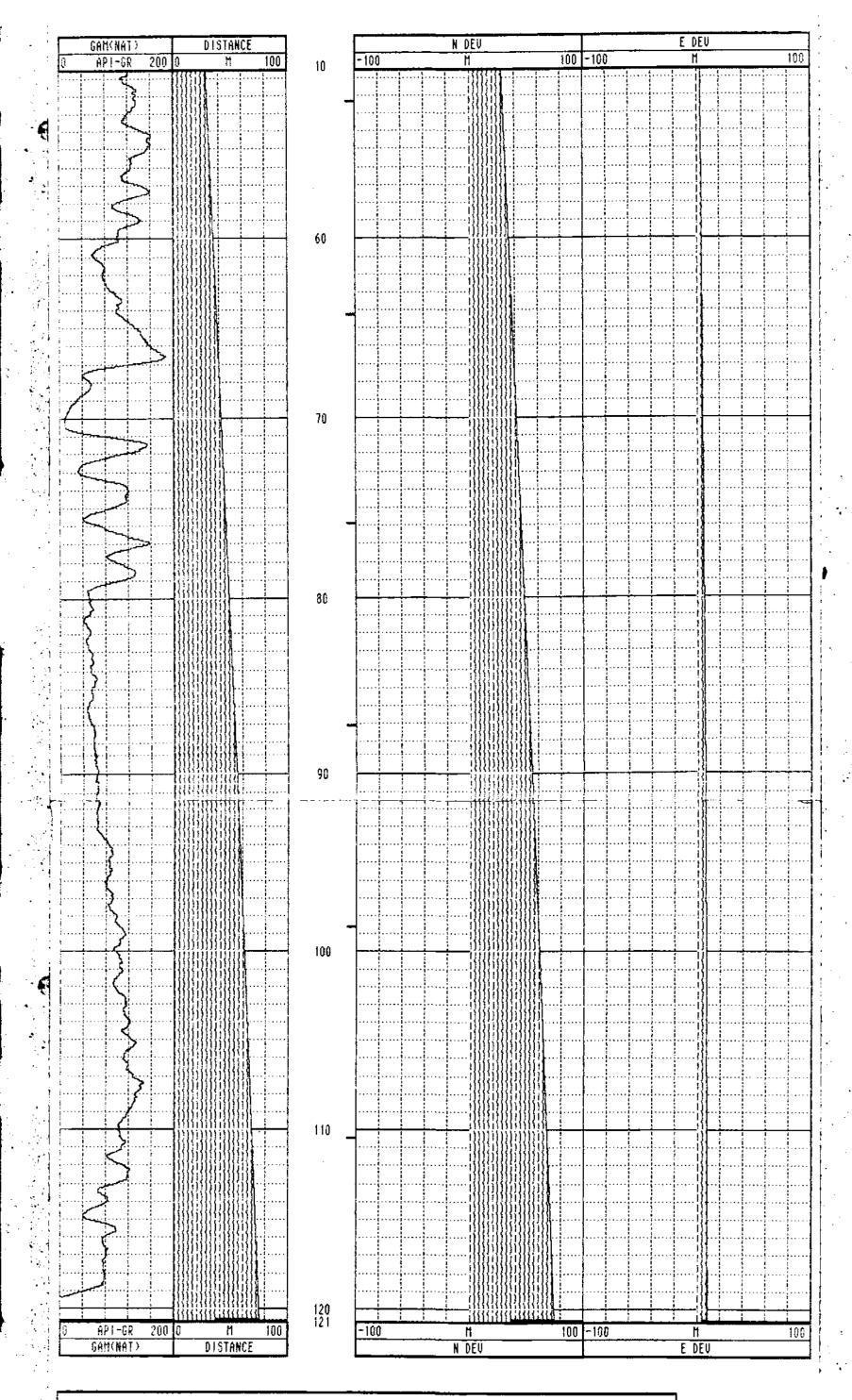












	TC	IOL CALIBRA	TION	100L = 90	155A SI	ERTAL NUMBER	:	14
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSI	Ē	STAND	ARD
0	05/04/89	08:10:36	Û	GAM(NAT)	0.000 81	PS	0.000	API-GR
1	05/04/89	68:10:36	Ð	GAM(NAT)	0.000 Ci	PS	0.000	AP1-GR
2	05/05/89	16:59:51	0	POROSITY	0.000 Ci	PS	45.000	CPS
3	05/04/89	08:15:10	0	RES	9707.000 CH	PS	0.000	OHM
4	05/04/89	08:15:10	0	RES	5212.000 CH	PS 16	000.000	OHM
5	05/04/89	08:13:14	0	SP	-9.000 CF	PS	0.000	MU
6	05/04/89	08:13:14	Ŭ	SP	4095.008 CF	PS t	500.000	MU
7	05/04/89	08:10:36	0	NEUTRON	0.000 CI	PS	0.000	API-N
8	05704789	88:53:24	0	NEUTRON	145.000 CK	PS 2	271.000	

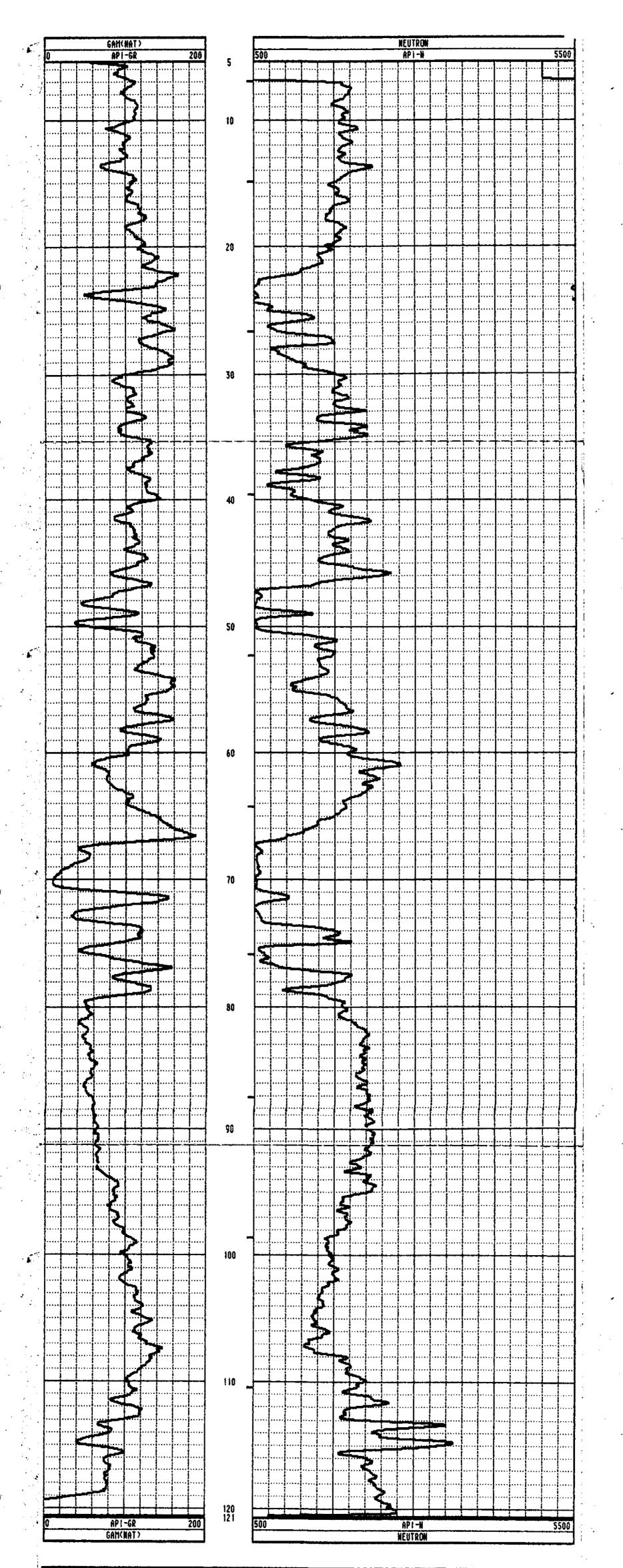
* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * * * *

| CLIENT | : QUINTET | TE COAL LTD. | HOLE ID. | : OHD89 | 002 DEVI | |
|-------------|---------------|--------------|-------------|-----------|--------------|------|
| FIELD OFF | ICE : CALGARY | | DATE OF L | OG : 0670 | 4/89 | |
| DATA FROM | l : | | PROBE | : 905 | 5A , 14 | |
| MAG, DECL. | : 24,500 | | DEPTH UNITS | | | |
| DABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. D | ISTANCE | AZIMUTH SANG | SANG |
| 475.75 | 213 m m | 1.000 | ~ * * | | | |

| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMU' | TH SANG | SANGB |
|---------------|----------------|------------|-----------|----------|--------|---------|-------|
| 10.0 | 9.25 | 1.95 | 0.16 | 2.0 | 4.6 | 41.7 | 6.2 |
| 15.0 | 12.98 | 5,26 | 0.57 | 5.3 | 6.2 | 41.7 | 7.2 |
| 20.0 | 16.72 | 8.55 | 1.02 | 8.6 | 6.8 | 41.7 | 8.3 |
| 25.0 | 20.46 | 11.84 | 1.49 | 11.9 | 7.2 | 41.5 | 9.2 |
| C.O.S | 24.19 | 15.12 | 1.97 | 15.2 | 7.4 | 41.7 | 6.0 |
| 35.0 | 27.93 | 18.41 | 2.45 | 18.6 | 7.6 | 41.6 | 8.9 |
| 40 "O | 31.67 | 21.70 | 2.93 | 21.9 | 7.7 | 41.6 | 7.3 |
| 45.0 | 35.41 | 24.98 | 3.39 | 25.2 | 7.7 | 41.5 | 6.3 |
| 50.0 | 39.15 | 28.26 | 3.84 | 28.5 | 7.7 | 41.5 | 9.0 |
| 55.0 | 42.90 | 31.55 | 4.27 | 31.8 | 7.7 | 41.5 | 7.3 |
| ~ 0.0 | 46.64 | 34.84 | 4.71 | 35.2 | 7.7 | 41.4 | 7.0 |
| 65.0 | 50.38 | 38.12 | 5.14 | 38.5 | 7.7 | 41.5 | 6.9 |
| 70.0 | 54.12 | 41.42 | 5.54 | 41.8 | 7.6 | 41.6 | 7.5 |
| 75.0 | 57.87 | 44,70 | 5,93 | 45.1 | 7.6 | 41.7 | 7.0 |
| 80 . 0 | 61.61 | 47.98 | 6.37 | 48.4 | 7.6 | 41.3 | 8.7 |
| 85.0 | 65.37 | 51.26 | 6.75 | 51.7 | 7.5 | 40.9 | 5.8 |
| 90.0 | 69. 1 3 | 54.54 | 7.11 | 55.0 | 7.4 | 41.2 | 4.2 |
| 95.0 | 72.89 | 57.91 | 7.50 | 58.3 | 7.4 | 41.2 | 5.8 |
| 100.0 | 76.66 | 61.08 | 7.85 | 61.6 | 7.3 | 41.0 | 6.0 |
| 105.0 | 80.43 | 64.34 | 8.19 | 64.9 | 7.3 | 41.1 | 5.8 |
| 110.0 | 84.20 | 67.61 | 8.54 | 68.1 | 7.2 | 41.0 | 6.2 |
| 115.0 | 87.96 | 70,88 | 8.84 | 71.4 | 7.1 | 41.2 | 4,4 |
| 120.0 | 91.73 | 74.14 | 9.15 | 74.7 | 7.0 | 41.0 | 3.1 |
| 120,7 | 92.26 | 74.54 | 9.20 | 75.1 | 7.0 | 0.0 | 0.0 |

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|------------|--|--------------|----------------------|----------------|--------------------|----------------------|
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| | | | QHD 89002 | | | B116198 |
| | <u>สมขัญชัญชัญชัญชัญชัญชัญชัญชัญ</u> ชัญชัญชัญชัญชัญชัญชัญ | | <u> </u> | <u></u> | | |
| C | OMPANY | : QUINTETTE | | OTHER SER | VICES: | |
| | IELL | : QHD89002 (| SAMMA-NEUTRON | SCALE | | |
| ! - | DCATION/FIELD
COUNTY | : TRANSFER | | 1:200 | | |
| | STATE | : BRITISH CO | DLUMBIA | L | ئ <u>ـــــ</u> ـــ | |
| | SECTION | : | TOWNSHIP | : | RANGE | 1 |
| n n | ATE | : 06/03/89 | PERMANENT DATUM | : 00 | ELEVATI | ONS |
| | EPTH DRILLER | : 120 | ELEU. PERM. DATUM | : 00 | | : 00 |
| | OG BOTTOM | : 120.68 | | | - | : 00 |
| ι ι | OG TOP | : 5.54 | DRL MEASURED FROM | : GL | GL | : 00 |
| 1 (| CASING DRILLER | : 22 | LOGGING UNIT | : 8903 | | |
| | CASING TYPE | : STEEL | FIELD OFFICE | : CALGARY | | |
| | CASING THICKNES | S: .05 | RECORDED BY | : D.ZANKL | | |
| !, | BIT SIZE | : 12.1 | BOREHOLE FLUID | : WATER | FILE | : ORIGINAL |
| | MAGNETIC DECL. | : 24.500 | RM | : 00 | TYPE | : 9055A |
| 1 | MATRIX DENSITY | : 2.68 | RM TEMPERATURE | : 00 | LOG | : 0 |
| | FLUID DENSITY | : 1.0 | MATRIX DELTA T | : 173 | | : QUIN 10
: 20000 |
| | | : SANDSTONE | FLUID DELTA T | : 690 | INKEON | • 40000 |
| ۱ I | REMARKS
Logged open ho | i
F | | | | |
| l I | ANGLE HOLE | - - | | | | |
| ł | | | ED SUBJECT TO STANDA | DN TEDMS AN | | IONS |





| 10 | IOL CALIBRA | TION | 100L = 90 | 155A | SERIA | L NUMBER = | 14 | |
|----------|--|--|--|--|---|---|--|--|
| CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD | |
| 05/04/89 | 08:18:36 | 0 | SAM(NAT) | 0.000 | CPS | 0.000 | API-GR | |
| 05/04/89 | 08:10:36 | Û | SAM(NAT) | 0.000 | CPS | 0.000 | AP1-GR | |
| 05/05/89 | 16:59:51 | 0 | POROSITY | 8.000 | CPS | 145.000 | CPS | |
| 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHH | |
| 85/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHH | |
| 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | HV. | |
| 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | MU | |
| 05/04/89 | 08:10:36 | Q | NEUTRON | 0.000 | CPS | 0.000 | API-N | |
| 05/04/89 | 08:53:24 | Û | NEUTRON | 145.000 | CPS | 271.000 | AP I -N | |
| | 05/04/89
05/05/89
05/05/89
05/04/89
05/04/89
05/04/89
05/04/89 | 05/04/89 08:10:36
05/04/89 08:10:36
05/05/89 16:59:51
05/04/89 08:15:10
05/04/89 08:15:10
05/04/89 08:13:14
05/04/89 08:13:14
05/04/89 08:10:36 | 05/04/89 08:18:36 0
05/04/89 08:10:36 0
05/05/89 16:59:51 0
05/04/89 08:15:10 0
05/04/89 08:15:10 0
05/04/89 08:15:10 0
05/04/89 08:13:14 0
05/04/89 08:13:14 0 | 05/04/89 08:10:36 0 GAM(NAT)
05/04/89 08:10:36 0 GAM(NAT)
05/05/89 16:59:51 0 POROSITY
05/04/89 08:15:10 0 RES
05/04/89 08:15:10 0 RES
05/04/89 08:15:14 0 SP
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05/04/89 08:13:14 0 SP | 05/04/89 08:10:36 0 GAN(NAT) 0.000 05/04/89 08:10:36 0 GAN(NAT) 0.000 05/04/89 08:10:36 0 GAN(NAT) 0.000 05/05/89 16:59:51 0 POROSITY 8.000 05/04/89 08:15:10 0 RES 9707.000 05/04/89 08:15:10 0 RES 5212.000 05/04/89 08:13:14 0 SP -9.000 05/04/89 08:13:14 0 SP 4095.000 05/04/89 08:13:14 0 SP 4095.000 05/04/89 08:10:36 0 NEUTRON 0.000 | 05/04/89 08:10:36 0 GAH(NAT) 0.000 CPS 05/04/89 08:10:36 0 GAH(NAT) 0.000 CPS 05/04/89 08:10:36 0 GAH(NAT) 0.000 CPS 05/05/89 16:59:51 0 PQROSITY 8.000 CPS 05/04/89 08:15:10 0 RES 9707.000 CPS 05/04/89 08:15:10 0 RES 5212.000 CPS 05/04/89 08:13:14 0 SP -9.000 CPS 05/04/89 08:13:14 0 SP 4095.000 CPS 05/04/89 08:10:36 0 WEUTRON 0.000 CPS | 05/04/89 08:10:36 0 GAN(NAT) 0.000 CPS 0.000 05/04/89 08:10:36 0 GAN(NAT) 0.000 CPS 0.000 05/04/89 08:10:36 0 GAN(NAT) 0.000 CPS 0.000 05/05/89 16:59:51 0 POROSITY 8.000 CPS 145.000 05/04/89 08:15:10 0 RES 9707.000 CPS 0.000 05/04/89 08:15:10 0 RES 5212.000 CPS 1000.000 05/04/89 08:13:14 0 SP -9.000 CPS 0.000 05/04/89 08:13:14 0 SP -9.000 CPS 0.000 05/04/89 08:13:14 0 SP 4095.000 CPS 500.000 05/04/89 08:10:36 0 NEUTRON 0.000 CPS 0.000 | 05/04/89 08:18:36 0 GAN(NAT) 0.000 CPS 0.000 AP1-GR 05/04/89 08:10:36 0 GAN(NAT) 0.000 CPS 0.000 AP1-GR 05/04/89 08:10:36 0 GAN(NAT) 0.000 CPS 0.000 AP1-GR 05/04/89 08:10:36 0 GAN(NAT) 0.000 CPS 0.000 AP1-GR 05/05/89 16:59:51 0 POROSITY 8.000 CPS 145.000 CPS 05/04/89 08:15:10 0 RES 9707.000 CPS 0.000 OHM 05/04/89 08:15:10 0 RES 5212.000 CPS 1000.000 OHM 05/04/89 08:13:14 0 SP -9.000 CPS 8.000 NV 05/04/89 08:10:36 0 NEUTRON 0.000 CPS 0.000 AP1-N |

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TRANSFER AREA ROTARY DRILL HOLES

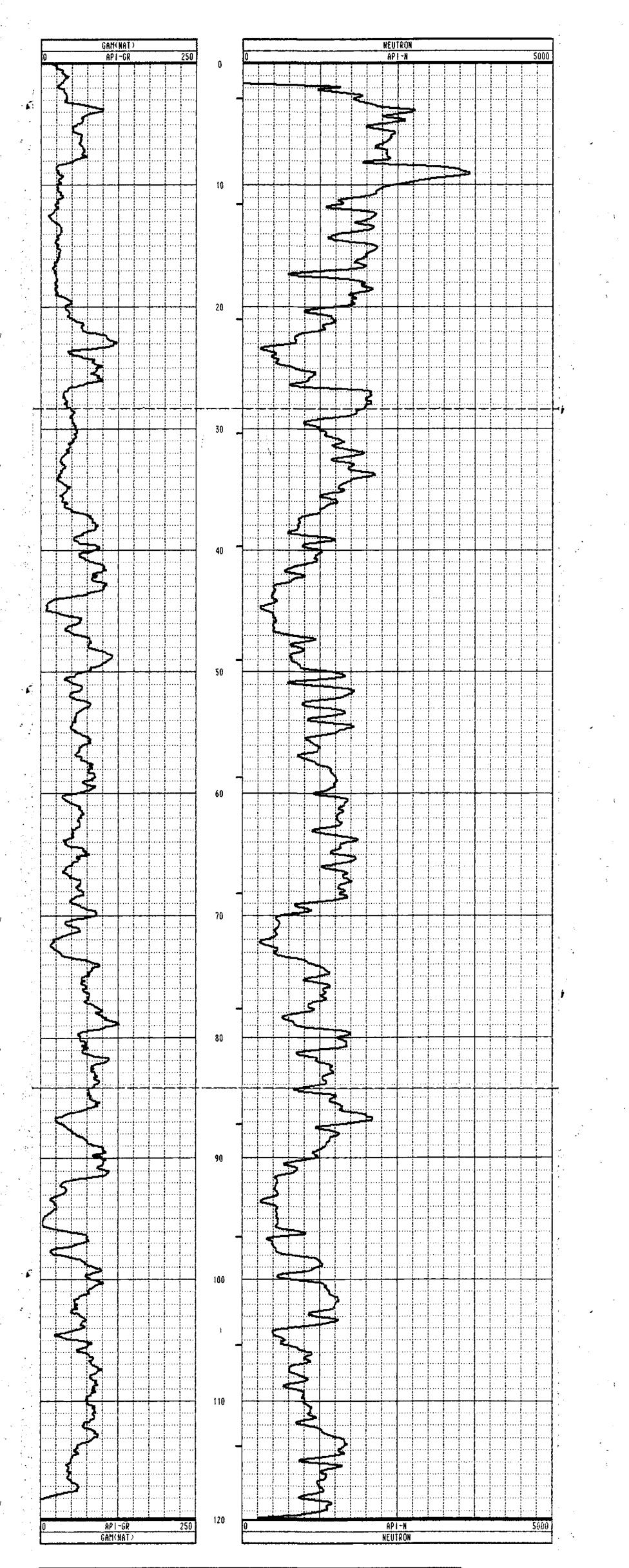
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| \ \\$ | A / | | | |
| | 8/ 5 | <u> </u> | CAMM | A-NEUTRON |
| | | QUK-02001 | UAMM | A NLUINON |
| | | | | |
| COMPANY | : QUINTETTE (| COAL LTD. | OTHER \$ | ERVICES: |
| WELL | •••••• | GAMMA-NEUTRON | | |
| LOCATION/FIELD | | 21750 | SCALE | |
| COUNTY | : TRANSFER | | 1:200 | |
| STATE | : BRITISH CO | | | RANGE : |
| SECTION | : | TOWNSHIP | · | KHNGL · |
| DATE | : 05/13/89 | PERMANENT DATUM | : 00 | ELEVATIONS |
| DEPTH DRILLER | : 122 | ELEV. PERM. DATU | 1 M: 00 | KB : 00 |
| LOG BOTTOM | : 119.70 | LOG MEASURED FRO |)11: GL | DF : 00 |
| LOG TOP | : 0.04 | DRL MEASURED FRO | OM: GL | GL : 00 |
| CASING DRILLER | : 3.5 | LOGGING UNIT | : 8902 | |
| CASING TYPE | : STEEL | FIELD OFFICE | : CALGARY | |
| CASING THICKNES | S: .05 | RECORDED BY | : D. ZANK | L |
| | | | : WATER | FILE : ORIGINAL |
| BIT SIZE | : 12.1 | BOREHOLE FLUID
RM | : 00 | TYPE : 9067A |
| MAGNETIC DECL. | | RM TEMPERATURE | : 00 | LOG : 1 |
| MATRIX DENSITY
Fluid Density | : 2.68
: 1.0 | MATRIX DELTA T | : 173 | FLOT : QUIN O |
| | | FLUID DELTA T | : 690 | THRESH: 20000 |
| REMARKS | : | | - | |
| LOGGED THROUGH | RODS | | | |
| | | | | |

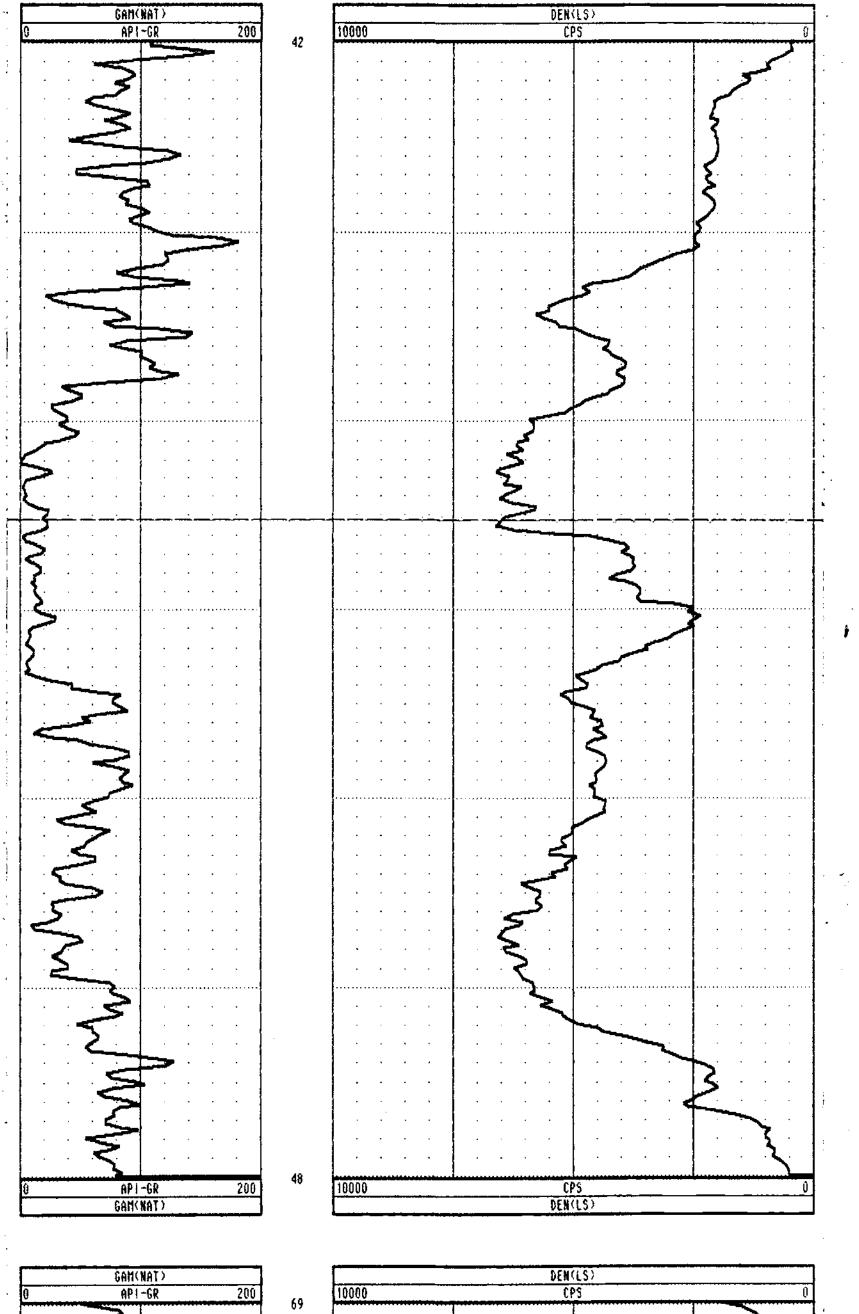


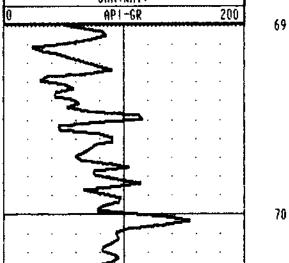
| | 10 | IOL CALIBRA | TION | 100L = 906 | 57A SERIAL | NUMBER = 513 | |
|---|----------|-------------|------|------------|-------------|---------------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| 0 | 05/04/89 | 13:32:05 | 0 | GAH(NAT) | 0.000 CPS | 0.000 AP1-GR | |
| 1 | 05/04/89 | 13:32:05 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-GR | |
| 2 | 05/04/89 | 13:32:05 | 0 | NEUTRON | 0.000 CPS | 0.000 API-N | |
| 3 | 05/04/89 | 13:36:12 | 0 | NEUTRON | 205.000 CPS | 271.000 API-N | |

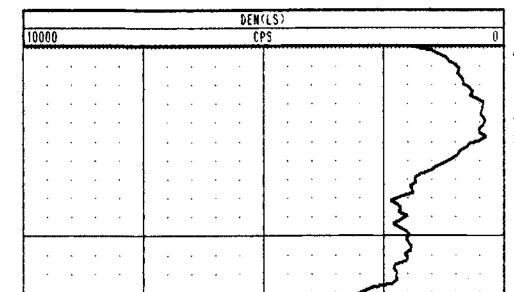
| CG | | | | | |
|--|---------------------------|--|---------------------------------|-----------------|----------------------|
| | <u>יי</u> ן ר | QHR-89001 | EXP | DENS | ΙΤΥ |
| LOCATION/FIELD
COUNTY | : QHR-89001 E | XP DENSITY
1750 | OTHER SER
Scale
1:20 | UICES: | |
| SECTION | : BRITISH CULI | TOWNSHIP | : | RANGE : | |
| DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 122 | LOG MEASURED FROM:
DRL MEASURED FROM: | : 00
: GL
: GL | DF : | NS
00
00
00 |
| | : STEEL | FIELD OFFICE : | 8902
Calgary
D. Zankl | | |
| MAGNETIC DECL.
MATRIX DENSITY | : 24.5
: 2.68
: 1.0 | RM : :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
00
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173
690 | TYPE :
LOG : | QUIN 15 |
| REMARKS | ł | IPE JOINTS CAUSE D | - | | |



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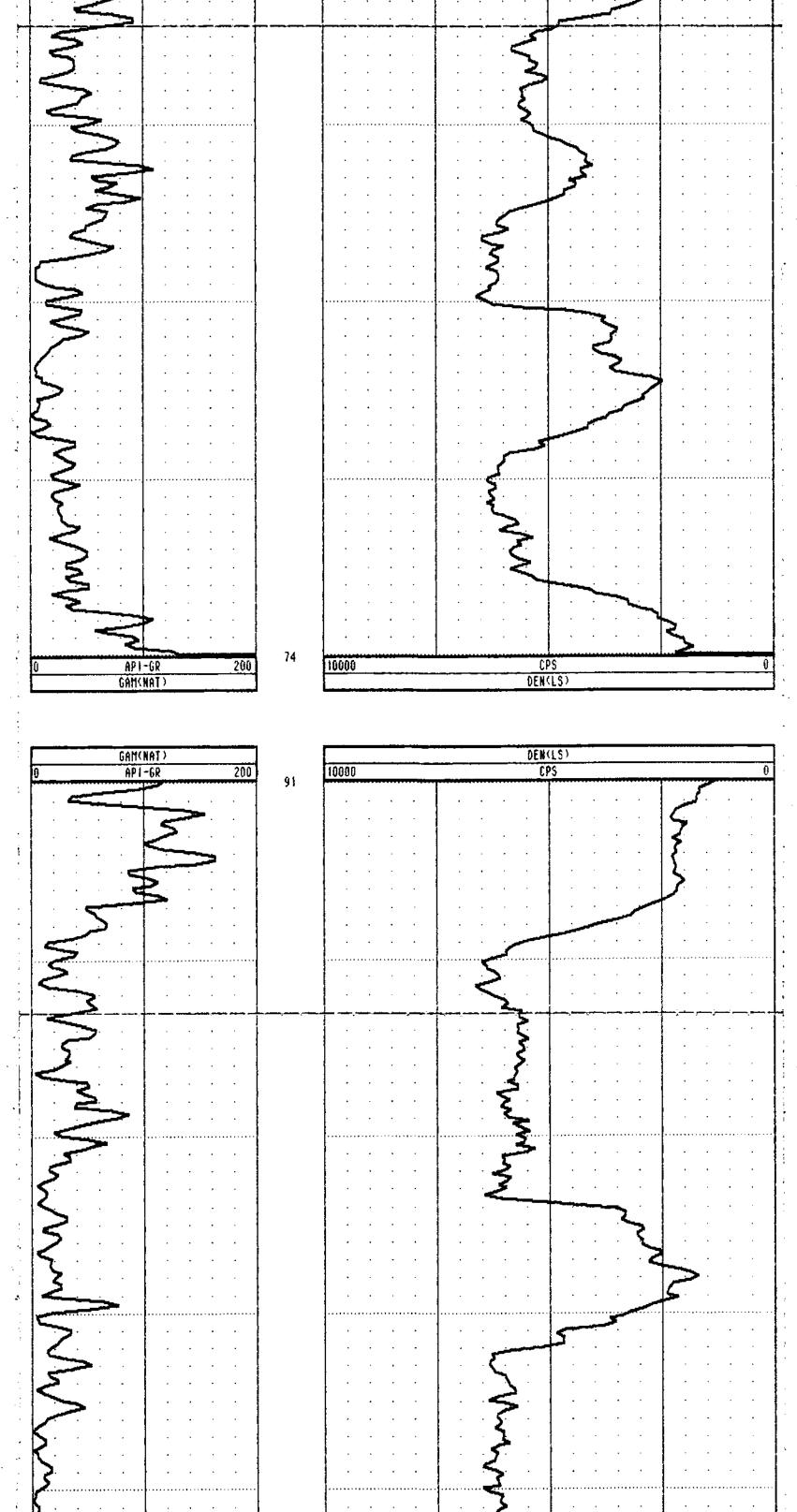


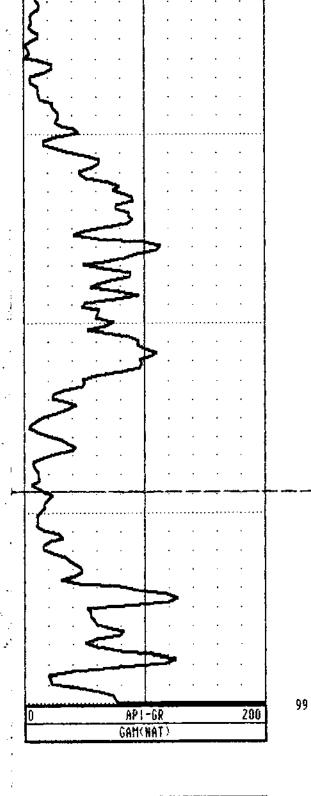


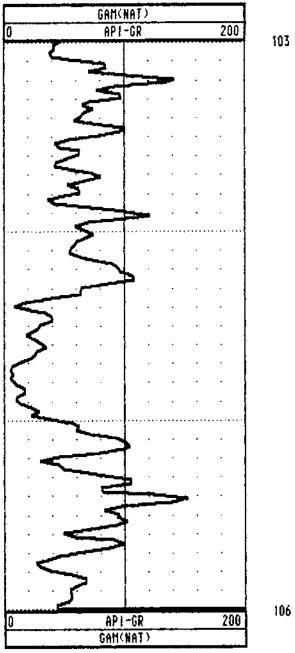


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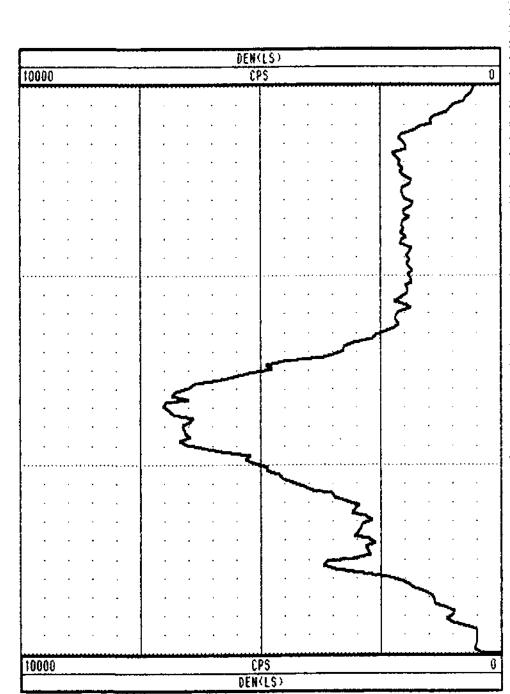
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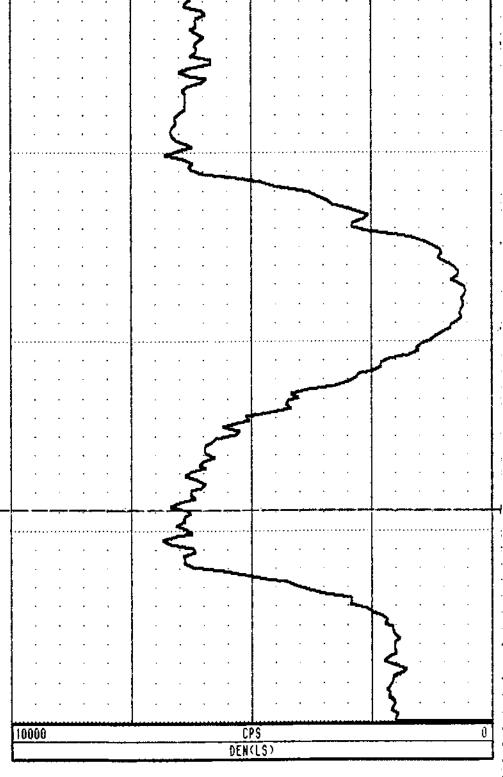






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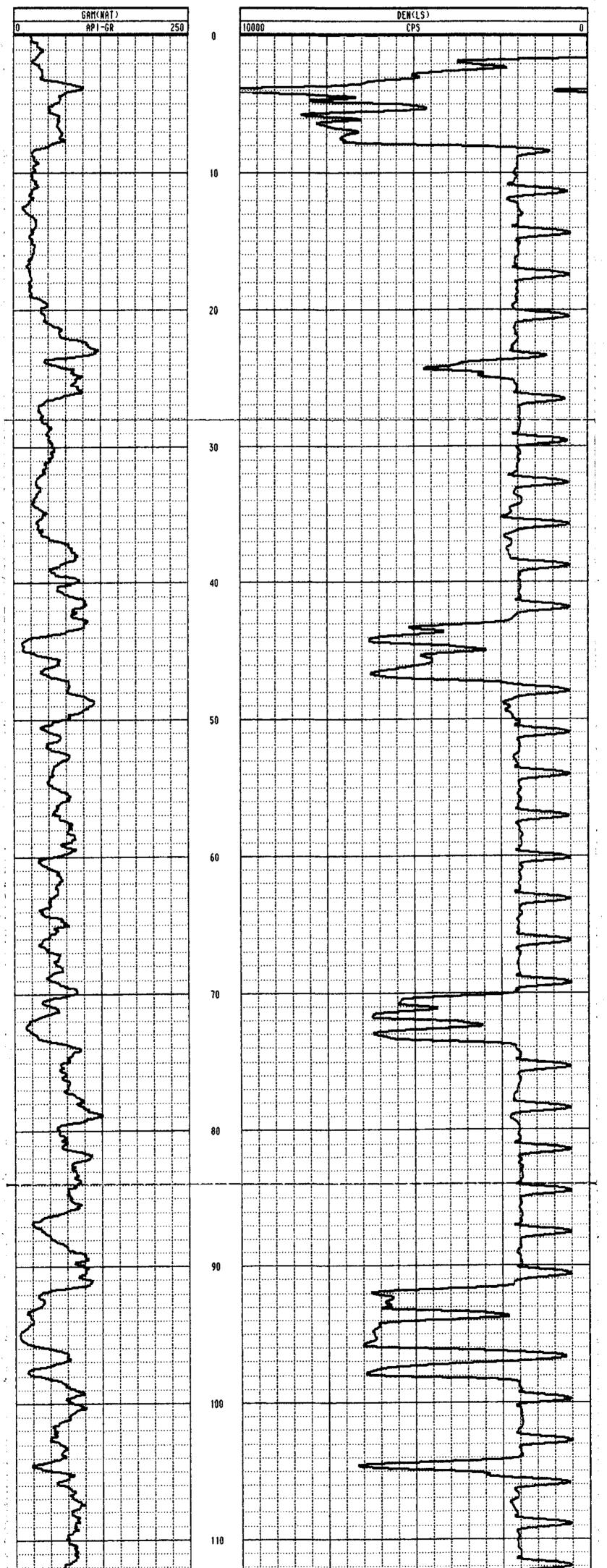


| CCC | | | | | |
|---|---|---|-----------------------------------|--|----------------------|
| | 2 | QHR-89001 | GAMMA | A-DENS | SITY |
| | | | dendetelenensenen er | | |
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QHR-89001
: SL26300/BL
: TRANSFER | GAMMA-DENSITY
21750 | OTHER SE
Scale
1:200 | RUICES: | |
| SECTION | : BRITISH CC
: | TOWNSHIP | : | RANGE : | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER
CASING TYPE | : 122
: 120.80
:40
: 3.5 | PERMANENT DATUM
ELEV. PERM. DATU
Log measured fro
DRL measured fro
Logging Unit
Field Office | M: 00
M: GL
M: GL
: 8902 | KB :
DF : | NS
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| CASING THICKNES | | RECORDED BY | | | |
| | : 24.5
: 2.68
: 1.0
: SANDSTONE
: | BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T | : 00
: 00
: 173 | FILE :
TYPE :
LOG :
PLOT :
THRESH: | 3
QUIN 11 |

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ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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| | TO | IOL CALIBRA | TION | tool = 900 | 57A SERIAL N | IUM8ER = S13 | |
|---|----------|-------------|------|------------|--------------|---------------|---|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| Ú | 05/04/89 | 13:32:05 | 0 | GRM(NAT) | 0.000 CPS | 0.000 API-GR | İ |
| 1 | 05/04/89 | 13:32:05 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-GR | : |
| 2 | 05/04/89 | 13:32:05 | 0 | NEUTRON | 8.800 CPS | 0.000 API-N | |
| 3 | 05/04/89 | 13:36:12 | 0 | NEUTRON | 205.000 CPS | 271.000 API-N | |

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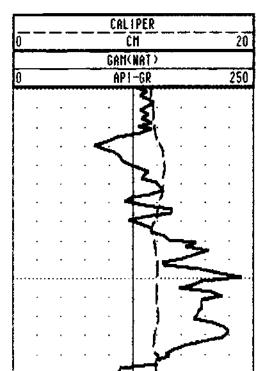
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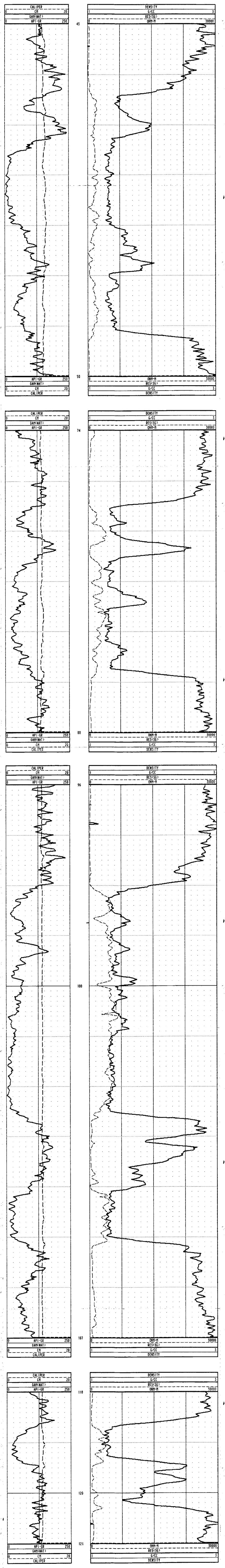
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|---|--|---|------------------------|--|
| | <u>y</u> | QHR-8900 | | DENSITY |
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QHR-89002 | COAL LTD.
EXP DENSITY
21750 | [" | SERVICES: |
| SECTION | · DKITISH LU | TOWNSHIP | ; | RANGE : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER | : 05/14/89
: 133
: 22.02
: -2.46
: 6.1 | ELEV. PERM. DATU | JM: 00
DM: GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING TYPE
Casing Thicknes | : STEEL
S: .05 | FIELD OFFICE
RECORDED BY | : CALGARY
: D. ZANK | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX | : 2.68
: 1.0 | | : 00
: 00
: 173 | FILE : ORIGINAL
TYPE : 9032AC
LOG : 8
PLOT : QUIN 14
THRESH: 20000 |
| | 6 DEGREES FRO | M THE HORIZONTAL
Subject to CGC stat | NAADA TERM | CAND CONDUCTIONS |



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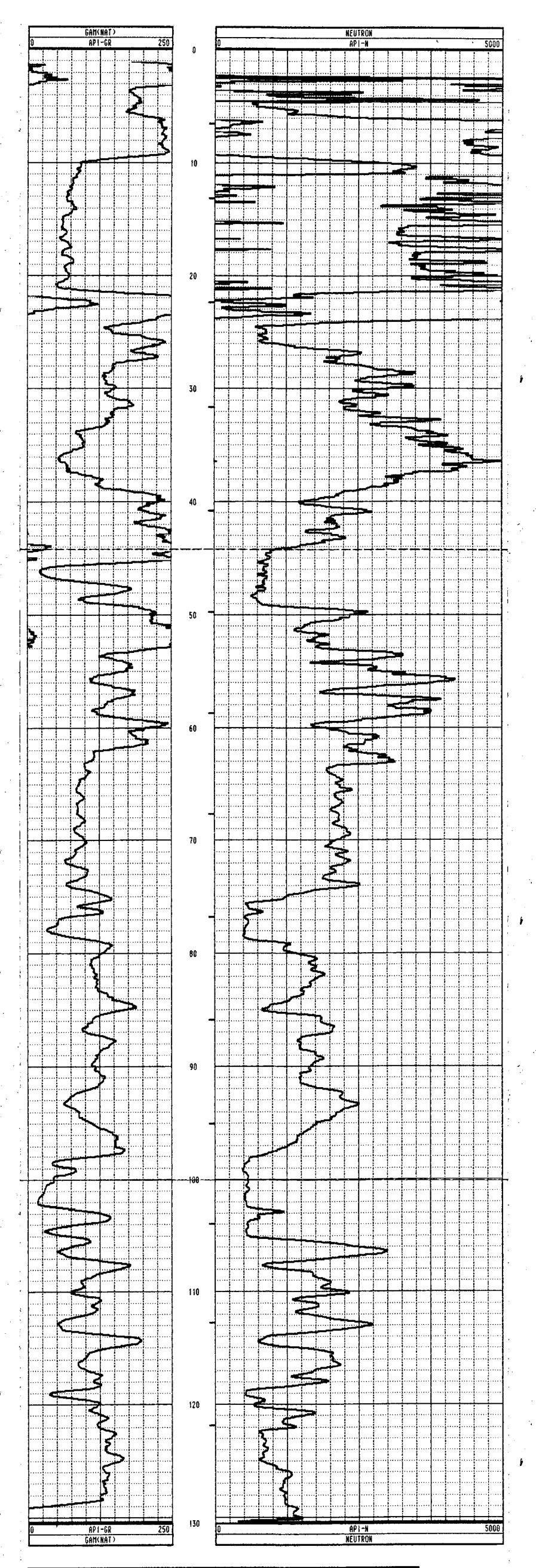




| CCC | | | | |
|---|-------------------------------------|--|---|---|
| | | QHR-89002 | GAMMA | -NEUTRON |
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QHR-89002 | GAMMA-NEUTRON
21750 | OTHER SER
Scale
1:200 | ······································ |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | | PERMANENT DATUM
ELEV. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM | : 00
: GL | |
| CASING DRILLER
Casing type
Casing thicknes | : STEEL | LOGGING UNIT
FIELD OFFICE
RECORDED BY | | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOI | : 2.68
: 1.0
: Sandstone
: | RM
RM TEMPERATURE
MATRIX DELTA T | : WATER
: 00
: 00
: 173
: 690 | FILE : ORIGINAL
TYPE : 9055A
LOG : 4
PLOT : QUIN 10
THRESH: 20000 |
| | | M THE HORIZONTAL
Subject to CGC stand | ARD TERMS A | ND CONDITIONS |

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| - | TOOL CALIBRATION | | | TOOL = 9055A SERIAL | | | NUMBER = | 14 | |
|---|------------------|----------|------|---------------------|----------|-----|----------|----------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | SE | STAND | IRD | |
| 0 | 05/04/89 | 08:10:36 | 8 | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-GR | |
| 1 | 05/04/89 | 08:10:36 | Ð | GAM(NAT) | 0.000 | CPS | 0.000 | AP -GR | |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.000 | CPS | |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM | |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212,000 | CPS | 1000.000 | OHM | |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | HU | |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | HU | |
| 7 | 05/04/89 | 08:10:36 | Q | NEUTRON | 0.000 | CPS | 0.000 | API-# | |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | 6P1-W | |

| | | HR-89002 | | |
|---|--|---|---|--|
| WELL
LOCATION∕FIELD
COUNTY
STATE | : QUINTETTE C
: QHR-89002 G
: SL26300/BL2
: TRANSFER
: BRITISH COL | OAL LTD.
AM-DEN-RES-CAL
1750 | OTHER SER
Scale
1:200 | ······································ |
| SECTION
DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 133
: 22.02 | ELEV. PERM. DATUM
LOG MEASURED FROM | : GL | RANGE :
ELEVATIONS
KB : DO
DF : DO |
| CASING DRILLER
Casing type
Casing thicknes | : -2.46
: 6.1
: STEEL
S: .05 | FIELD OFFICE | : GL
: 8902
: Calgary
: D. Zankl | GL : 00 |
| REMARKS
LOGGED OPEN HOU
ANGLE HOLE - 60 | : 2.68
: 1.0
: Sandstone
:
Le
6 Degrees from | RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T
THE HORIZONTAL | 690 | FILE : ORIGINAL
TYPE : 9032AC
LOG : 8
PLOT : QUIN 12
THRESH: 20000 |
| ALL SERVIC | ES PROVIDED SU | BJECT TO CGC STAND | ARD TERMS A | PD CONDITIONS |

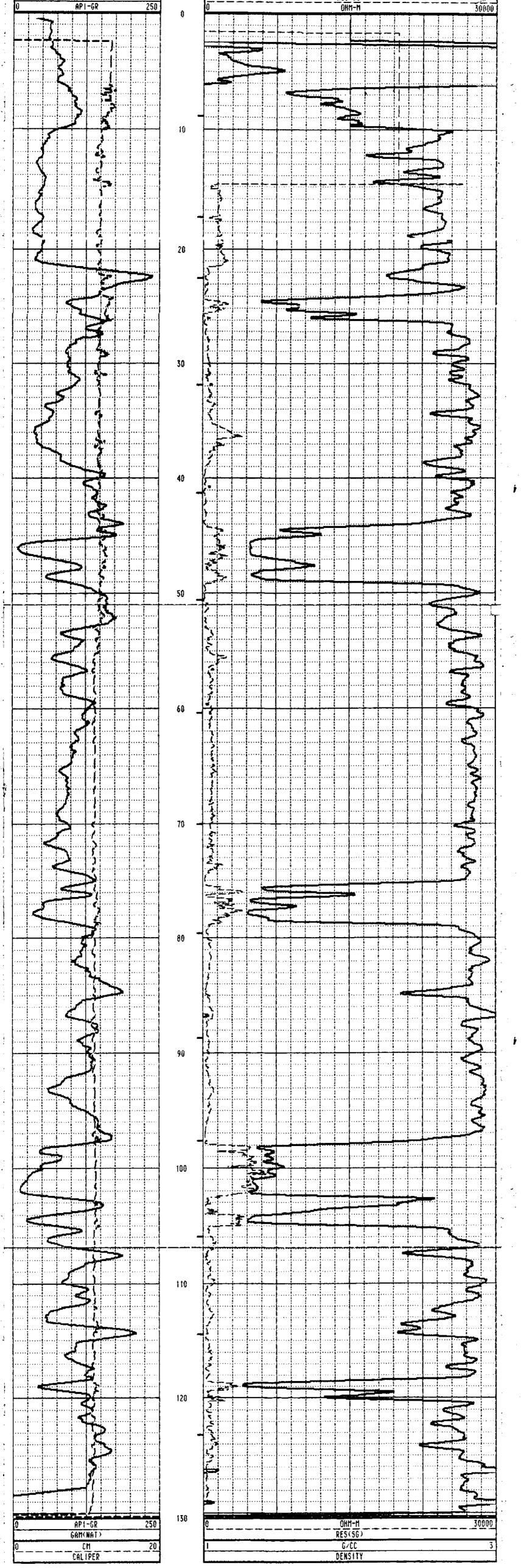
 CALIPER

 0
 CM
 20

 GAM(NAT)
 0
 API-GR
 250

| | DENSITY | |
|---|---------|---|
| | 1 G/CC | 3 |
| 1 | RES(SG) | |

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| | T | DOL CALIBRA | TION | 100L = 94 | 032AC | SERIAL | . NUMBER = 9 | 12 | |
|----|----------|-------------|------|-----------|-----------|--------|--------------|----------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STANDI | ARD | |
| Û | 05/04/89 | 09:42:55 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR | |
| 1 | 05/04/89 | 09:42:55 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 2 | 05/04/89 | 14:20:05 | 0 | DENSITY | 6341.000 | CPS | 1.106 | 6700 | |
| 3 | 05/04/89 | 14:20:05 | 0 | DENSITY | 2639.000 | CPS | 2,120 | 6/00 | |
| 4 | 05/04/89 | 16:08:12 | 0 | RES(SG) | 82.000 | CPS | 0.000 | ohm-m | |
| 5 | 05/04/89 | 16:08:12 | 0 | RES(SG) | 30390.000 | CPS | 178,500 | ohm-h | |
| 6 | 05/04/89 | 09:50:40 | 0 | CALIPER | 344.000 | CPS | 7.620 | CH | |
| 7 | 05/04/89 | 09:50:40 | 0 | CALIPER | 2025.000 | CPS | 17.800 | CH . | |
| 8 | 05/04/89 | 09:42:55 | Q | DENSITYH | 0.000 | CPS | Û,009 | 6700 | |
| 9 | 05/04/89 | 09:42:55 | 0 | DENSITYH | 0.000 | CPS | 0.000 | 6700 | |
| 10 | 05/04/89 | 09:42:55 | Q | CALIPERL | 0.000 | CPS | 0.000 | CH . | |
| 11 | | 09:42:55 | 0 | CALIPERL | 0.000 | CPS | 0.000 | CM | |
| | | | | | | | | | |

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| CCC | | QHR-890 | 02 | | IAT | |
|--|--|--|----------------------------------|-----------------------------|--------------------------|------------------------------|
| HELL :
LOCATION/FIELD :
COUNTY : | QUINTETTE (
QHR-89002 (
SL26300/BL2
TRANSFER
BRITISH COL | COAL LTD.
Deviation
21750 | | OTHER SER
Scale
1:200 | | : |
| DEPTH DRILLER :
LOG BOTTOM :
LOG TOP : | 05/14/89
133
130.46
1.10
6.1 | PERMANENT DATUM
ELEV. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM
LOGGING UNIT | 1: 0
1: G | 0
L
L | ELEVAT
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: 00
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| CASING TYPE :
Casing Thickness: | STEEL | FIELD OFFICE
RECORDED BY
BOREHOLE FLUID | : C
: D | ALGARY
. ZANKL | 5 11 5 | |
| MAGNETIC DECL. :
MATRIX DENSITY :
FLUID DENSITY :
NEUTRON MATRIX :
REMARKS : | 24.500
2.68
1.0 | RM
RM TEMPERATURE
MATRIX DELTA T | : 0(
: 0(
: 1 [°] | 0
73 | | : 9055A |
| LOGGED OPEN HOLE
ANGLE HOLE - 66 I
ALL SERVICES | | THE HORIZONTAL
Bject to CGC Stan | ARD | TERMS A | ND COND | ITIONS |

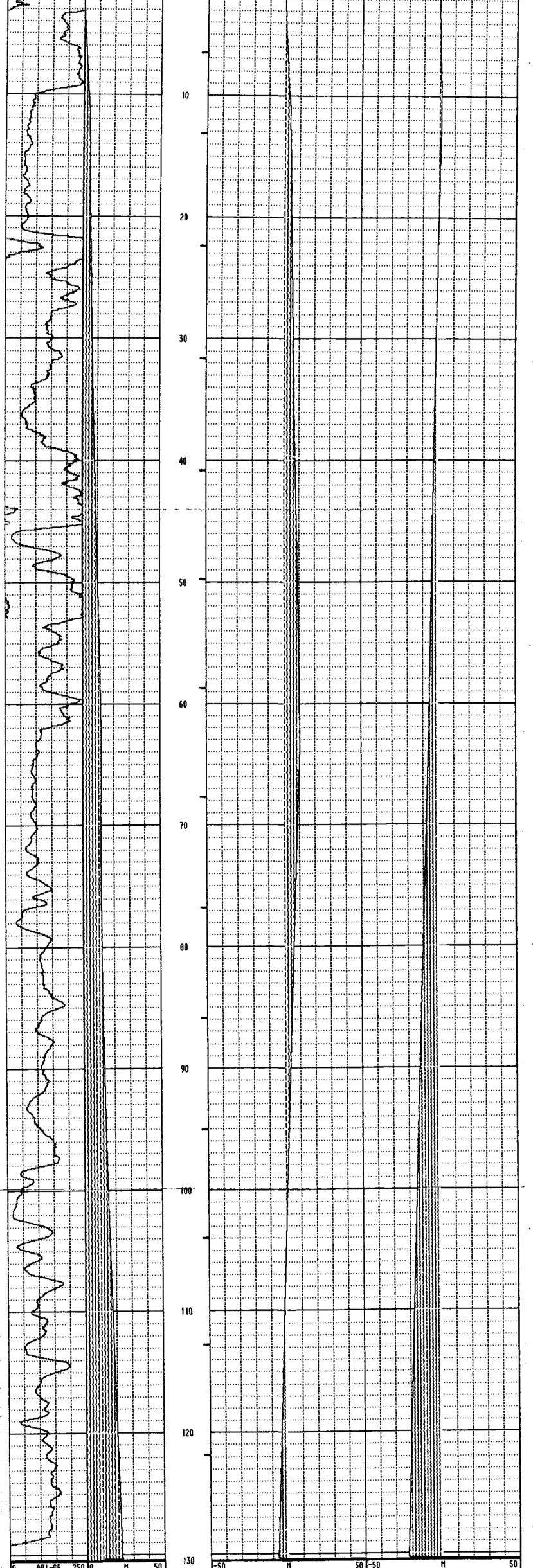
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| GAM(NAT) | | | | | | DISTANCE | | | | | |
|----------|--------|--|---|-----|---|----------|-----------|--|----|--|--|
| 0 | API-GR | | Ŕ | 250 | 0 | ň | | | 50 | | |
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| | GAM(HAT) | | 0 | ISTANCI | |

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|-----|-------|---------|-------|--|
| | N DEV | | E DEV | |
| | | | | |

| | TO | OL CALIBRA | TION | 100L = 90 | 55A SERIAL | NUMBER = 14 |
|---|----------|------------|------|-----------|--------------|---------------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CPS | 0.000 API-GR |
| 1 | 85/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CP5 | 0.000 AP1-GR |
| 2 | 05/05/89 | 16:59:51 | 8 | POROSITY | 0.000 CPS | 145.000 CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 CPS | 0.000 OHM |
| 4 | 05/04/89 | 08:15:10 | Û | RES | 5212.000 CPS | 1000.000 OHM |
| 5 | 05/04/89 | 08:13:14 | Û | SP | -9.000 CPS | 0.000 MV |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 CPS | 500.000 HV |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 CPS | 0.000 API-M |
| 8 | 05/04/89 | 08:53:24 | Ð | NEUTRON | 145.000 CPS | 271.000 API-N |

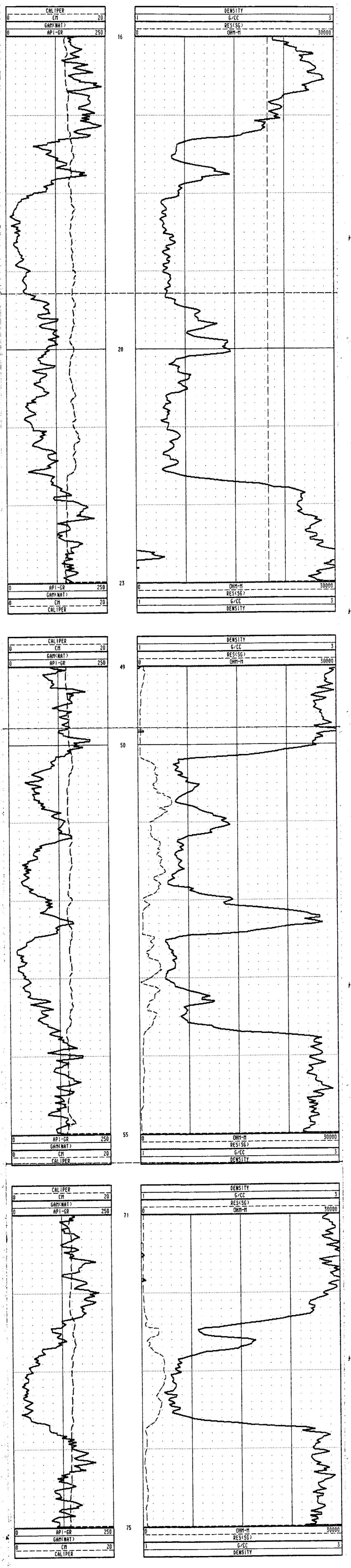
* * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * * *

| CLIENT
FIELD OFFICE
DATA FROM
MAG. DECL. | : | CALGARY | DATE
PROBE | OF LOG | 3
3 | QHR-89002 DEV
05/14/89
9055A , 14
FEET LDG 9 | |
|---|--------|---------|---------------|--------|--------|---|--|
| | :
: | 24.500 | · · · — | | | | |

| Ca | ble Depth | True Depth | North Dev. | East Dev. | Distance | Azimuth | SANG | SANGB |
|----------|-----------|------------|------------|-----------|----------|---------|------|-------|
| | 0.0 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| <i>.</i> | 5,0 | 4.48 | 0.66 | 0.64 | 0.9 | 44.3 | 0.0 | 114.5 |
| | 10.0 | 7.91 | 3.02 | 1.34 | 3.3 | 24.0 | 60.2 | 16.6 |
| | 15.0 | 11.58 | 4.22 | 0.96 | 4.3 | 12.8 | 24.9 | 224.0 |
| ; | 20.0 | 15.36 | 4.84 | 0.21 | 4.8 | 2,5 | 0.0 | 294.5 |
| | 25.0 | 19.18 | 5.49 | -,49 | 5.5 | 354.9 | 23.8 | 214.4 |
| | 30.0 | 23.11 | 6.03 | -1.26 | 6.2 | 348.2 | 24.9 | 238.6 |
| | 35.0 | 27.02 | 6.62 | -2.03 | 6.9 | 343.0 | 24.1 | 217.2 |
| · | 40.0 | 30.89 | 7.40 | -2.79 | 7.9 | 339.3 | 23.6 | 236.0 |
| | 45.0 | 34.81 | 8.25 | -3.54 | 9.0 | 336.8 | 50.8 | 12.7 |
| | 50.0 | 38.79 | 8.90 | -4.27 | 9.9 | 334.4 | 0.0 | 294.5 |
| с.
С | 55.0 | 42.82 | 9.59 | -5.08 | 10.9 | 332.1 | 22.7 | 230.3 |
| | 60.0 | 46.92 | 10.08 | -5,77 | 11.6 | 330.2 | 22.8 | 234.7 |
| - | 65.0 | 51.18 | 10.00 | -6.73 | 12.1 | 326.1 | 21.5 | 216.7 |
| | 70.0 | 55.82 | 8.68 | -7.94 | 11.8 | 317.5 | 21.4 | 223.5 |
| | 75.0 | 60.47 | 7.37 | -9.12 | 11.7 | 308.9 | 21.3 | 229.8 |
| | 80.0 | 65.14 | 6.07 | -10.34 | 12.0 | 300.4 | 21.1 | 204.3 |
| | 85.0 | 69.81 | 4.76 | ~11.53 | 12.5 | 292.4 | 20.6 | 219.1 |
| | 90.0 | 74.49 | 3.53 | -12.75 | 13.2 | 285.5 | 20.5 | 225.6 |
| | 95.0 | 79.18 | 2.27 | -13.93 | 14.1 | 279.2 | 20.2 | 226.3 |
| | 100.0 | 83.88 | 1.03 | -15.10 | 15.1 | 273.9 | 19.8 | 233.7 |
| | 105.0 | 88.58 | 18 | -16.25 | 16.3 | 269.4 | 21.5 | 237.2 |
| • | 110.0 | 93.28 | -1.38 | -17.43 | 17.5 | 265.5 | 19.7 | 230.4 |
| | 115.0 | 97.99 | -2.55 | -18.58 | 18.8 | 262.2 | 18.6 | 230.5 |
| | 120.0 | 102.71 | -3.75 | -19.71 | 20.1 | 259.2 | 19.8 | 226.6 |
| | 125.0 | 107.42 | -4.99 | -20.80 | 21.4 | 256.5 | 19.5 | 214.7 |
| | 130.0 | 112.14 | -6.20 | -21.90 | 22.8 | 254.2 | 14.0 | 215.1 |
| | 130.5 | 112.58 | -6.29 | -21.98 | 22.9 | 254.0 | 0.0 | 0.0 |
| | | | | | | | | |

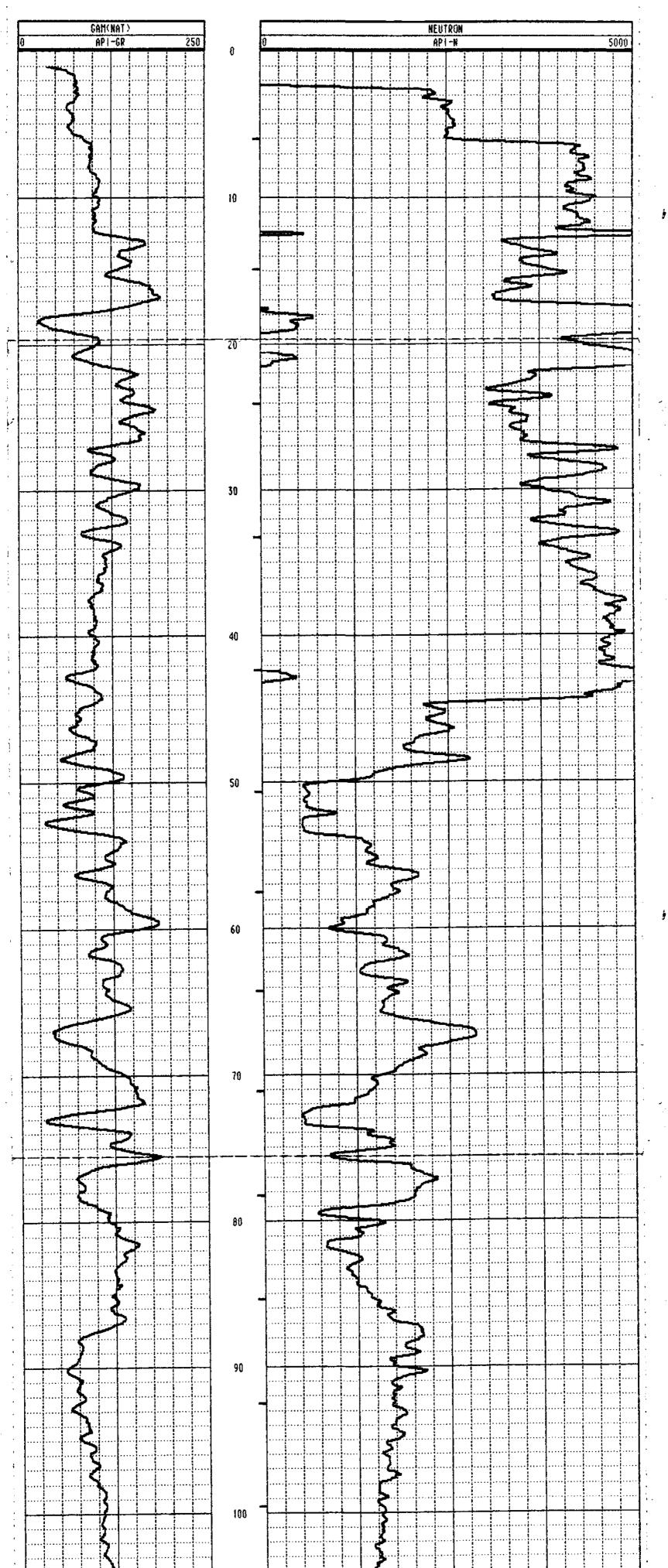
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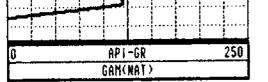
| CCC | | Cer i
HR-8900 | | | | | |
|---|--|----------------------------|----------|-----------------------------|--------------------------|--------------------|---|
| WELL :
LOCATION/FIELD : | | ENSITY | | OTHER SERU
Scale | | :*: : ::::: | |
| STATE :
Section : | TRANSFER
BRITISH COLUMBI
TOK
05/15/89 PER | INSH I P | : | 1:200 | | : | N C |
| DEPTH DRILLER :
LOG BOTTOM : | 105 ELE
105.84 LOG | V. PERM. DATUM | 1:
1: | 00
GL | ELEVAT
KB
DF
GL | :
: | 00
00
00 |
| CASING DRILLER :
Casing type :
Casing thickness: | STEEL FIE | | : | 8902
Calgary
D. Zankl | | | |
| BIT SIZE :
MAGNETIC DECL. : :
MATRIX DENSITY : :
FLUID DENSITY :
NEUTRON MATRIX : : | 24.5 RM
2.68 RM
1.0 MAT | TEMPERATURE
RIX DELTA T | : | | TYPE
Log
Plot | :: | ORIGINAL
9032AC
3
QUIN 14
20000 |
| REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DI | | HORIZONTAL | | | | | |



| CCC | | QHR-89003 | | -NEUTRON |
|---|--|--|-----------------------------|-------------------|
| COMPANY
NELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QHR-89003 0
: SL26300/BL2
: TRANSFER
: BRITISH COL
: | COAL LTD.
AMMA-NEUTRON
1710
UMBIA
TOWNSHIP | OTHER SER
Scale
1:200 | VICES:
Range : |
| DATE
DEDTH DD4450 | : 05/15/89 | PERMANENT DATUM : | 00 | ELEVATIONS |
| DEPTH DRILLER
Log bottom | • | ELEU. PERM. DATUM: | 00 | KB : 00 |
| LOG TOP | : 0.90 | LOG MEASURED FROM:
DRL MEASURED FROM: | | DF : 00 |
| CASING DRILLER
Casing type
Casing thickness | : 6.1
: STEEL | LOGGING UNIT :
FIELD OFFICE : | 8902
Calgary
D. Zankl | GL :00 |
| BIT SIZE | : 12.1 | BOREHOLE FLUID : | WATER | FILE : ORIGINAL |
| MAGNETIC DECL. | | | 00 | TYPE : 9055A |
| MATRIX DENSITY | : 2.68 | | 00 | LOG : 2 |
| FLUID DENSITY | | MATRIX DELTA T : | 173 | PLOT : QUIN 10 |
| | : SANDSTONE | FLUID DELTA T : | 690 | THRESH: 20000 |
| REMARKS | : | | | |
| LOGGED OPEN HOL | - | | | |
| ANGLE HOLE - 45 | | | | |
| HLL DERVIU | CO PROVIDED SU | BJECT TO CGC STANDA | ARD TERMS AI | ND CONDITIONS |

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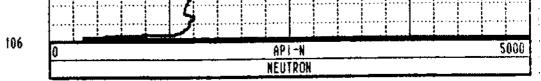


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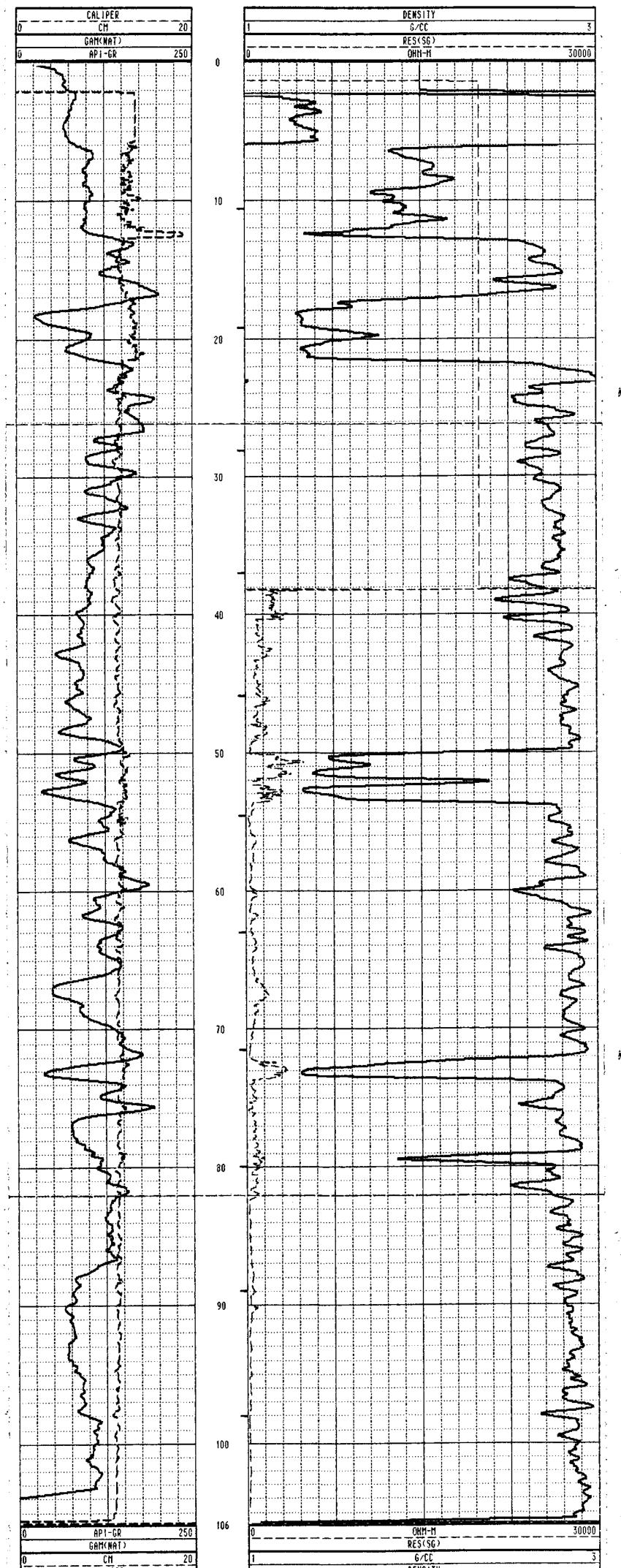
| | TOOL CALIBRATION | | | 100L = 90 |)55A | SERIA | L NUMBER = | NUMBER = 14 | | |
|---|------------------|----------|------|-----------|----------|-------|------------|-------------|--|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | SE | STAND | ARD | | |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR | | |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | | |
| 2 | 05/05/89 | 16:59:51 | Û | PORDSITY | 0.000 | CPS | 145.000 | CPS | | |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM | | |
| 4 | 05/04/89 | 08:15:10 | Û | RES | 5212.000 | CPS | 1000.000 | OHH | | |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | ~9.000 | CPS | 0.000 | HV | | |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | MV | | |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | API-N | | |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | AP1-N | | |

| (CC | | | | | |
|--|---|---|---|---------------------------|---|
| | <u> </u> | QHR-89003 | | | |
| LOCATION/FIELD
County | : QHR-89003
: SL26300/8
: TRANSFER | 5 GAM-DEN-RES-CAL
3L21710 | OTHER SE
SCALE
1:200 | ····· | |
| STATE
Section | : BRITISH (
: | COLUMBIA
TOWNSHIP | *
* | RANGE | ; |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER
CASING TYPE
CASING THICKNES | : 105
: 105.84
: 0.28
: 6.1
: STEEL | LOGGING UNIT
Field office | : 00
: GL
: GL | ELEVATI
Kb
DF
GL | ONS
: 00
: 00
: 00 |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HO | : 2.68
: 1.0
: Sandstone
: | RM
RM TEMPERATURE
MATRIX DELTA T | : WATER
: 00
: 00
: 173
: 690 | | : ORIGINAL
: 9032AC
: 3
: QUIN 12
: 20000 |
| ANGLE HOLE - 4 | 5 DEGREES FR | OM THE HORIZONTAL
SUBJECT TO CGC STAND | ARD TERMS | AND COND | ITIONS |

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CALIPER

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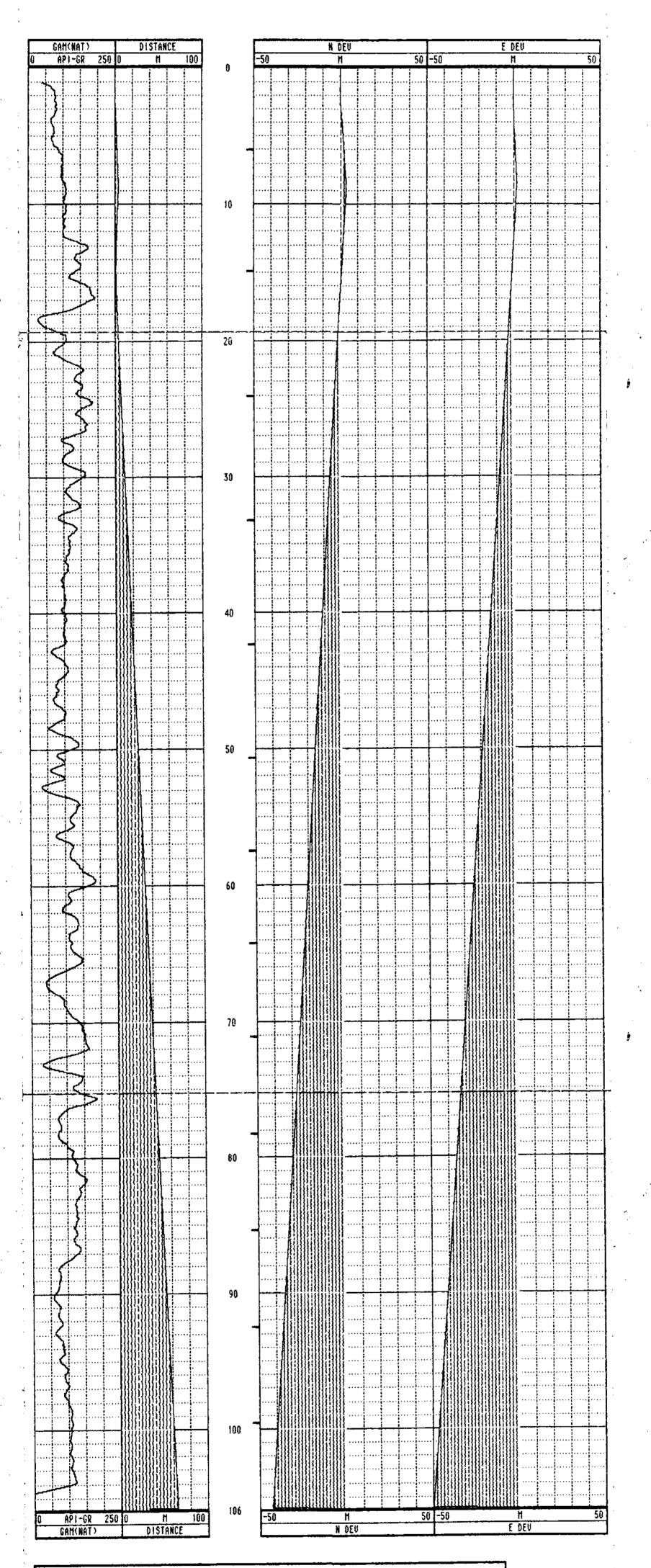
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DENSITY

| | TO | IOL CALIBRA | TION | 100L = 90 |)32AC | SERIAL | L NUMBER = 972 |
|----|----------|-------------|------|-----------|-----------|--------|----------------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | ISE | STANDARD |
| 0 | 05/04/89 | 09:42:55 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 AP1-68 |
| 1 | 05/04/89 | 09:42:55 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 API-GR |
| 2 | 05/04/89 | 14:20:05 | 0 | DENSITY | 6341.000 | CPS | 1.106 G/CC |
| 3 | 05/04/89 | 14:20:05 | 0 | DENSITY | 2639.000 | CPS | 2.120 G/CC |
| 4 | 05/04/89 | 16:08:12 | 0 | RES(SG) | 82.000 | CPS | 0.000 OHN-N |
| 5 | 05/04/89 | 16:08:12 | 0 | RES(SG) | 30390.000 | CPS | 178.500 OHN-M |
| 6 | 05/04/89 | 09:50:40 | 0 | CALIPER | 344.000 | CPS | 7.620 CM |
| 7 | 05/04/89 | 09:50:40 | 0 | CALIPER | 2025.000 | CPS | 17.800 CM |
| 8 | 05/04/89 | 09:42:55 | 0 | DENSITYH | 0.000 | CPS | 0.000 G/CC |
| 9 | 05/04/89 | 09:42:55 | 0 | DENSITYH | 0.000 | CPS | 0.000 6/CC |
| 10 | 05/04/89 | 09:42:55 | 0 | CALIPERL | 0.000 | CPS | 0.000 CM |
| 11 | 05/04/89 | 09:42:55 | 0 | CALIPERL | 0.000 | CPS | 0.000 CN |



| COMPANY
WELL
Location/Field
County
State | : QUINTETTE
: QHR-89003
: SL26300/8
: TRANSFER
: BRITISH C | DEVIATION
L21710 | OTHER SEL
Scale
1:200 | RVICES: |
|---|--|---|---|--|
| SECTION | : | TOWNSHIP | : | RANGE : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER
CASING TYPE | : 05/15/89
: 105
: 105.70
: 0.90
: 6.1
: STEEL | ELEV. PERM. DATUM | 1: 00
1: GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING THICKNESS | S: .05 | RECORDED BY | D. ZANKL | |
| MATRIX DENSITY
FLUID DENSITY | : 12.1
: 24.500
: 2.68
: 1.0
: SANDSTONE
: | RM
RM TEMPERATURE
MATRIX DELTA T | : HATER
: 00
: 00
: 173
: 690 | FILE : PROCESSED
TYPE : 9055A
LOG : 7
PLOT : QUIN 13
THRESH: 20000 |
| | | DM THE HORIZONTAL
Subject to CGC stand | ARD TERMS (| AND CONDITIONS |



| | TO | OL CALIBRA | TION | TOOL = 90 | 55A SERIAL | NUMBER = 14 |
|---|----------|------------|------|-----------|--------------|---------------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD |
| 0 | 05/04/89 | 08:10:36 | 0 | GAN(NAT) | 0.000 CPS | 0.000 API-GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CPS | 0.000 API-6R |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 CPS | 145.000 CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 CPS | 0.000 OHM |
| 4 | 05/04/89 | 08:15:10 | Ð | RES | 5212.000 CPS | 1000.000 OHM |
| 5 | 05/04/89 | 08:13:14 | Ð | SP | -9.000 CPS | 0.000 MV |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 CPS | 500.000 HV |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 CPS | 0.000 API-N |
| 8 | 05/04/89 | 08:53:24 | Û | NEUTRON | 145.000 CPS | 271.000 API-N |

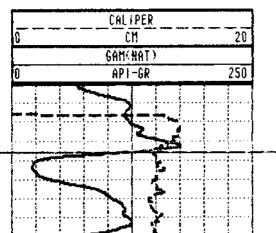
| 1 | * * * * * | * * * * 60 | MPU-LOG II - | VERTICAL D | EVIATION | * * * * * | * * * | * * * |
|-----|--------------|------------|--------------|--------------|----------------------|--------------------|-------|-------|
| | | : QUINTE | TTE COAL LTD | | . : QHR
LOG : 05/ | -87003 GA
15/87 | M | |
| 1 | DATA FROM | | • | PROBE | · 905 | | 14 | |
| | MAG. DECL | | 00 | | NITS : MET | ER LOG | 7 | |
| · | | | | Cash Davi | Distance | Azimuth | SANG | SANGB |
| ∏ a | | True Depth | North Dev. | East Dev. | 0.0 | 0.0 | 0.0 | 0.0 |
| ÷ . | 0.0 | 0.00 | 0.00 | 0.00 | 1.8 | 22.0 | | 40.9 |
| | 5.0 | 4.43 | 1.69 | 0.68 | | 24.9 | 47.1 | 189.3 |
| | 10.0 | 7.98 | 2.88 | 1.34 | 3.2 | 301.2 | 45.4 | 251.6 |
| | 15.0 | 11.53 | 0.53 | ~.87
7 70 | 1.0 | 241.4 | 43.7 | 232.2 |
| • | 20.0 | 15.08 | -1.85 | -3.39 | 3.9
7.2 | 234.3 | 45.3 | 234.7 |
| • | 25.0 | 18.61 | -4.21 | -5.87 | | 234.3 | 45.6 | 229.8 |
| | 30.0 | 22.15 | -6.50 | -8.49 | 10.7 | 232.0 | 45.5 | 235.1 |
| | 35.0 | 25.67 | -8.74 | -11.18 | 14.2 | | 44.2 | 232.9 |
| | 40.0 | 29.19 | -11.02 | -13.84 | 17.7 | 231.5 | 44.2 | 227.8 |
| Ż | 45.0 | 32.71 | -13.36 | | 21.2 | 230.9 | | 225.9 |
| , | 50.0 | 36.21 | -15.69 | -19.11 | 24.7 | 230.6 | 46.0 | 229.0 |
| | 55.0 | 39.70 | -17.97 | -21.83 | 28.3 | 230.5 | | 232.7 |
| | 60.0 | 43.15 | -20.33 | -24.53 | 31.9 | 230.4 | 47.3 | |
| : | 65.0 | 46.58 | -22.71 | -27.23 | 35.5 | 230.2 | 46.8 | 229.2 |
| | 70.0 | 50.00 | -25.02 | -29.96 | 39.0 | 230.1 | 46.1 | 234.5 |
| | 75. 0 | 53.40 | -27.43 | -32.66 | 42.6 | 230.0 | 47.3 | 234.4 |
| | 80.0 | 56.78 | -29.92 | -35.32 | 46.3 | 229.7 | 48.0 | 232.9 |
| ÷ | 85.0 | 60.08 | -32.29 | -38.09 | 49.9 | 229.7 | 49.0 | 217.6 |
| i | 90.0 | 63.32 | -34.81 | -40.87 | 53.7 | 229.6 | 49.7 | 226.2 |
| • • | 95.0 | 66.54 | -37.25 | -43.75 | 57.5 | 229.6 | 49.7 | 224.7 |
| | 100.0 | 69.79 | -39.80 | -46.55 | 61.2 | 229.5 | 48.4 | 225.5 |
| | 105.0 | 73.03 | -42.25 | -49.39 | 65.0 | 229.5 | 50.1 | 236.4 |
| • | 105.7 | 73.50 | -42.57 | -49.76 | 65.5 | 229.4 | 0.0 | 0.0 |
| | | | | | | | | |

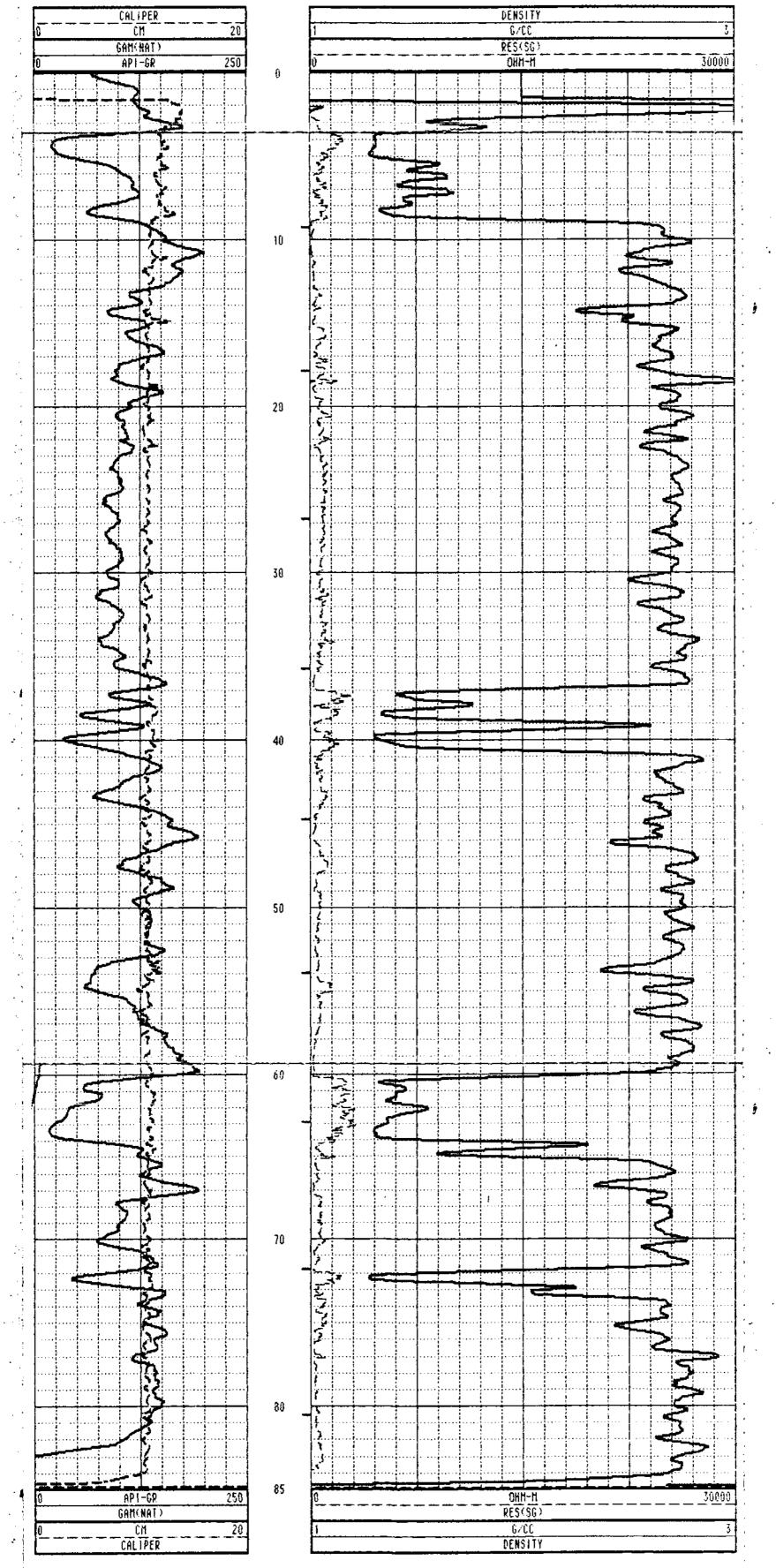
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| COMPANY | : QUINTETTE CI | DAL LTD. | OTHER SERV | JICES: | |
|------------------|----------------|---------------------|-------------|---------|------------|
| HELL | : QHR-89004 G | AM-DEN-RES-CAL | | ĺ | |
| LOCATION/FIELD | : SL26400/8L2 | 1680 | SCALE | | |
| COUNTY | : TRANSFER | | 1:200 | | |
| STATE | BRITISH COL | UMBIA ^L | | | |
| SECTION | : | TOWNSHIP : | | RANGE | : |
| DATE | : 05/16/89 | PERMANENT DATUM : | 00 | ELEVATI | ONS |
| DEPTH DRILLER | : 85.5 | ELEV. PERM. DATUM: | ម៌មំ | KВ | : 00 |
| LOG BOTTOM | : 84.90 | LOG MEASURED FROM: | GL | DF | : 00 |
| LOG TOP | 22 | DRL MEASURED FROM: | GL | 6L | : 00 |
| CASING DRILLER | : 3 | LOGGING UNIT : | 8902 | | |
| CASING TYPE | : STEEL | FIELD OFFICE : | CALGARY | | |
| CASING THICKNESS | : .05 | RECORDED BY : | D.ZANKL | | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID : | WATER | FILE | : ORIGINAL |
| MAGNETIC DECL. | : 24.5 | RM : | 00 | TYPE | : 9032AC |
| MATRIX DENSITY | : 2.68 | RN TEMPERATURE : | 00 | LOG | : 5 |
| FLUID DENSITY | : 1.0 | MATRIX DELTA T : | 173 | PLOT | : QUIN 12 |
| NEUTRON MATRIX | SANDSTONE | FLUID DELTA T : | 690 | THRESH | 1: 20000 |
| REMARKS | | | | | |
| LOGGED OPEN HOLI | E | | | | |
| ANGLE HOLE - 45 | | THE HORIZONTAL | | | |
| ALL SERVICE | S PROVIDED SU | IBJECT TO CGC STAND | ARD TERMS A | ND COND | ITIONS |





| | TOOL CALIBRATION | | TION | TOOL = 91 | D32AC | SERIA | L NUMBER = 9 | 67 | · · · · · · · · · · · · · · · · · · · | | |
|----|------------------|----------|------|-----------|-----------|-------|--------------|----------------|---------------------------------------|--|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD | | | |
| 0 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR | | | |
| t | 05/04/89 | 10:17:51 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | 821-6 2 | | | |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.106 | G /CC | | | |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.120 | 6700 | | | |
| 4 | 05/04/89 | 10:17:51 | Û | RES(SG) | 0.000 | ¢₽5 | 0.000 | ohm-m | | | |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 | CPS | 178.500 | OHM-M | | | |
| Ġ | 05/04/89 | 10:46:11 | Û | CALIPER | 353.000 | €₽S | 7.620 | CH | | | |
| 7 | 05/04/89 | 10:46:11 | Û | CALIPER | 1906.000 | CPS | 17.800 | ÛM | | | |
| 8 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | 6/00 | | | |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | 6/00 | | | |
| 10 | 05/04/89 | 10:17:51 | J | CALIPERL | 0.000 | CPS | 0,000 | CH | | | |
| 11 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 | CH | | | |

| CCC | Gent
QHR-89004 | EXP | DENSITY |
|---|---|----------------------------|--|
| COMPANY : QUINTETTE
WELL : QHR-89004
LOCATION/FIELD : SL26400/B
COUNTY : TRANSFER
STATE : BRITISH C
SECTION : | COAL LTD.
EXP DENSITY
L21680 | OTHER SE
SCALE
1:20 | ······································ |
| DEPTH DRILLER : 85.5 | PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | 00
GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING DRILLER : 3
Casing type : steel
Casing thickness: .05 | FIELD OFFICE : | 8902
Calgary
D.Zankl | |
| BIT SIZE : 12.1
MAGNETIC DECL. : 24.5
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
NEUTRON MATRIX : SANDSTONE
REMARKS :
LOGGED OPEN HOLE | RM :
RM TEMPERATURE :
MATRIX DELTA T : | | FILE : ORIGINAL
TYPE : 9032AC
LOG : 5
PLOT : QUIN 14
THRESH: 20000 |
| ANGLE HOLE - 45 DEGREES FR
ALL SERVICES PROVIDED | | RD TERMS | AND CONDITIONS |

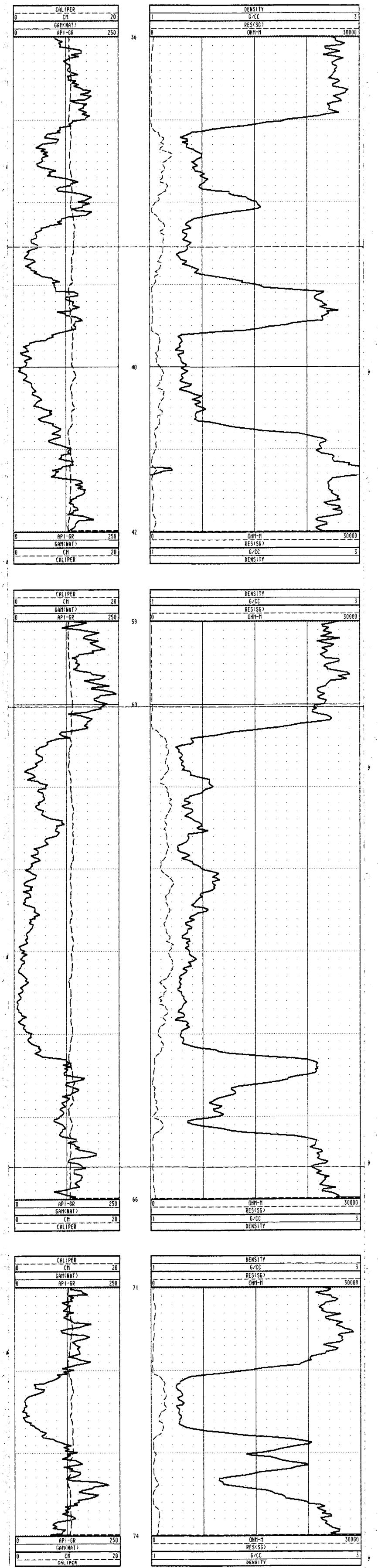
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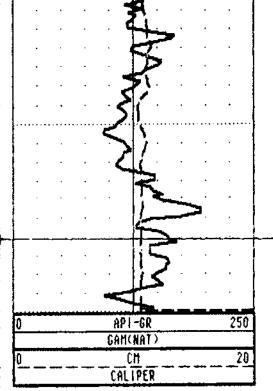
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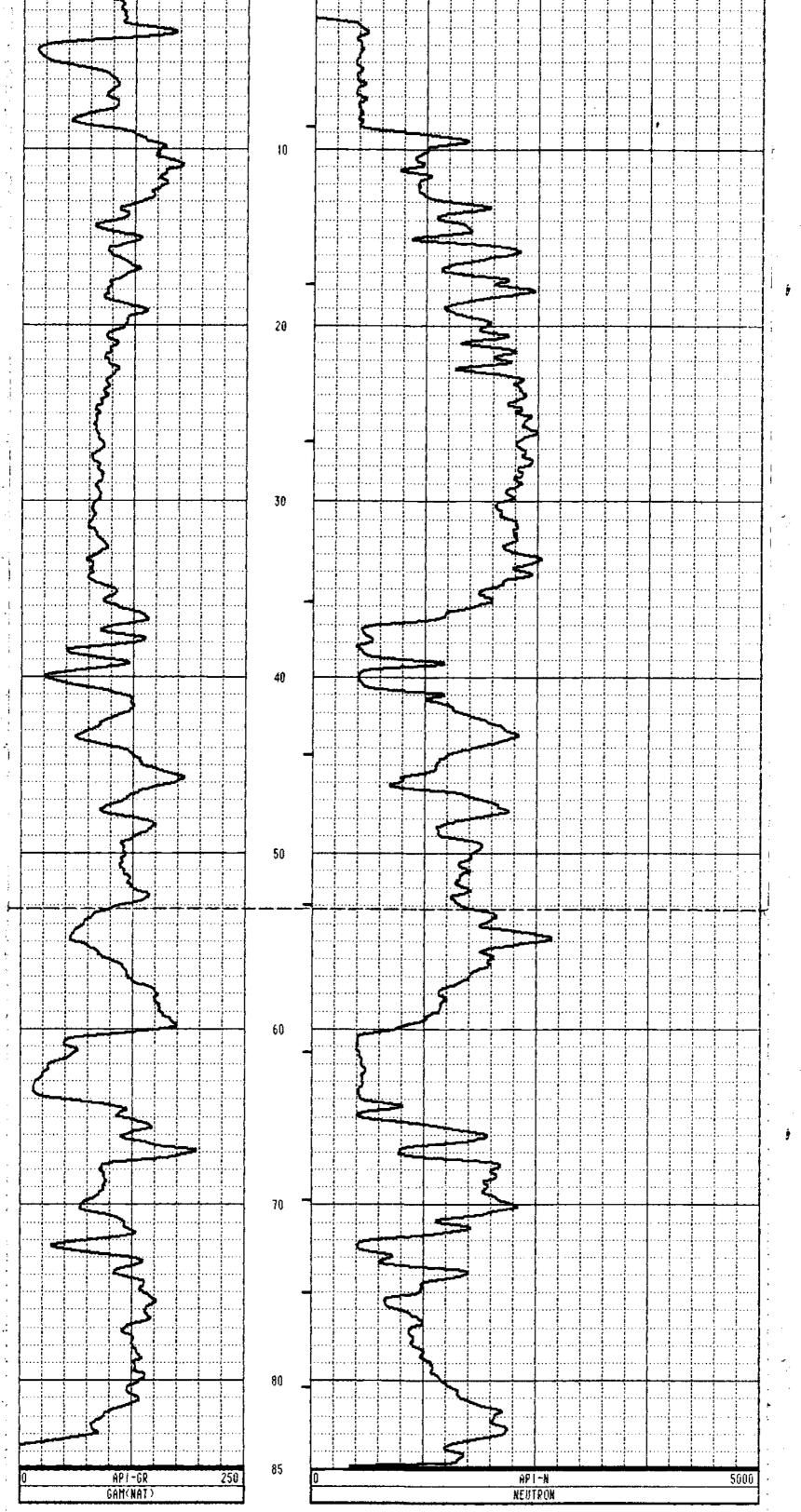


| | | | | | | Į | | |
|---------------------------------|---|-------------------------|-----------------------------|-------|--------------------|----------|-----|----------|
| | | / | QHR-89004 | 1 | GAMMA | -NEU | JT | RON |
| COMPANY | | QUINTETTE | |
[| OTHER SE | RUICES: | | |
| WELL
LOCATION/FIELD | | QHR-89004
SL26400/BL | GAMMA-NEUTRON
21680 | | SCALE | | | |
| COUNTY | | TRANSFER | | | 1:200 | | | |
| STATE | : | BRITISH CO | = | ۰. | | | | |
| SECTION | : | | TOWNSHIP | : | | RANGE | : | |
| DATE | : | 05/16/89 | PERMANENT DATUM | : | 00 | ELEVAT | 101 | NS |
| DEPTH DRILLER | : | 85.5 | ELEV. PERM. DAT | UM: | 00 | КΒ | : | 00 |
| LOG BOTTOM | | 84.96 | LOG MEASURED FR | | | DF | | 00 |
| LOG TOP | | 1.24 | DRL MEASURED FR | | | GL | : | 00 |
| CASING DRILLER | | | LOGGING UNIT | | | | | |
| CASING TYPE
Casing Thickness | | STEEL
.05 | FIELD OFFICE
RECORDED BY | | UALGARY
D.ZANKL | | | |
| BIT SIZE | : | 12.1 | BOREHOLE FLUID | : | WATER | FILE | : | ORIGINAL |
| MAGNETIC DECL. | | | RM | | 00 | TYPE | | 9055A |
| MATRIX DENSITY | | 2.68 | RM TEMPERATURE | | 00 | L06 | : | 2 |
| FLUID DENSITY | | | MATRIX DELTA T | | | | | QUIN 10 |
| NEUTRON MATRIX
REMARKS | : | SHNUSIUNE | FLUID DELTA T | : | 690 | THRESP | 1: | 20000 |
| LOGGED OPEN HOL | Ē | | | | | | | |
| | | EGREES FRO | M THE HORIZONTAL | | | | | |
| | | | SUBJECT TO CGC STA | NAA | PO TERMS | AND COND | ŝТ | ากกร |

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|--------------|---|---------|--|--|--|--|--|--|-------------|----|------|------|------|
| GAM(NAT) | | NEUTRON | | | | | | | | | | | |
| O AP1-GR 250 | • | 0 | | | | | | | <u>ap</u> i | -N | | | 5000 |
| ····· | U | | | | | | | | | |
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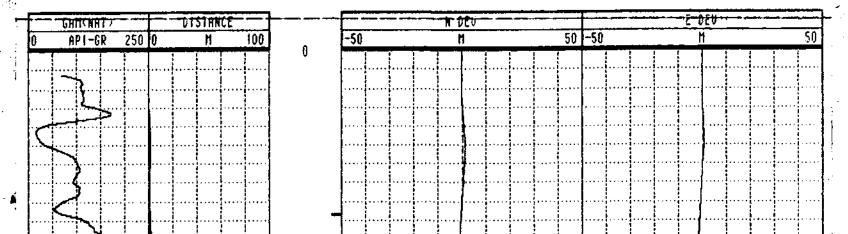
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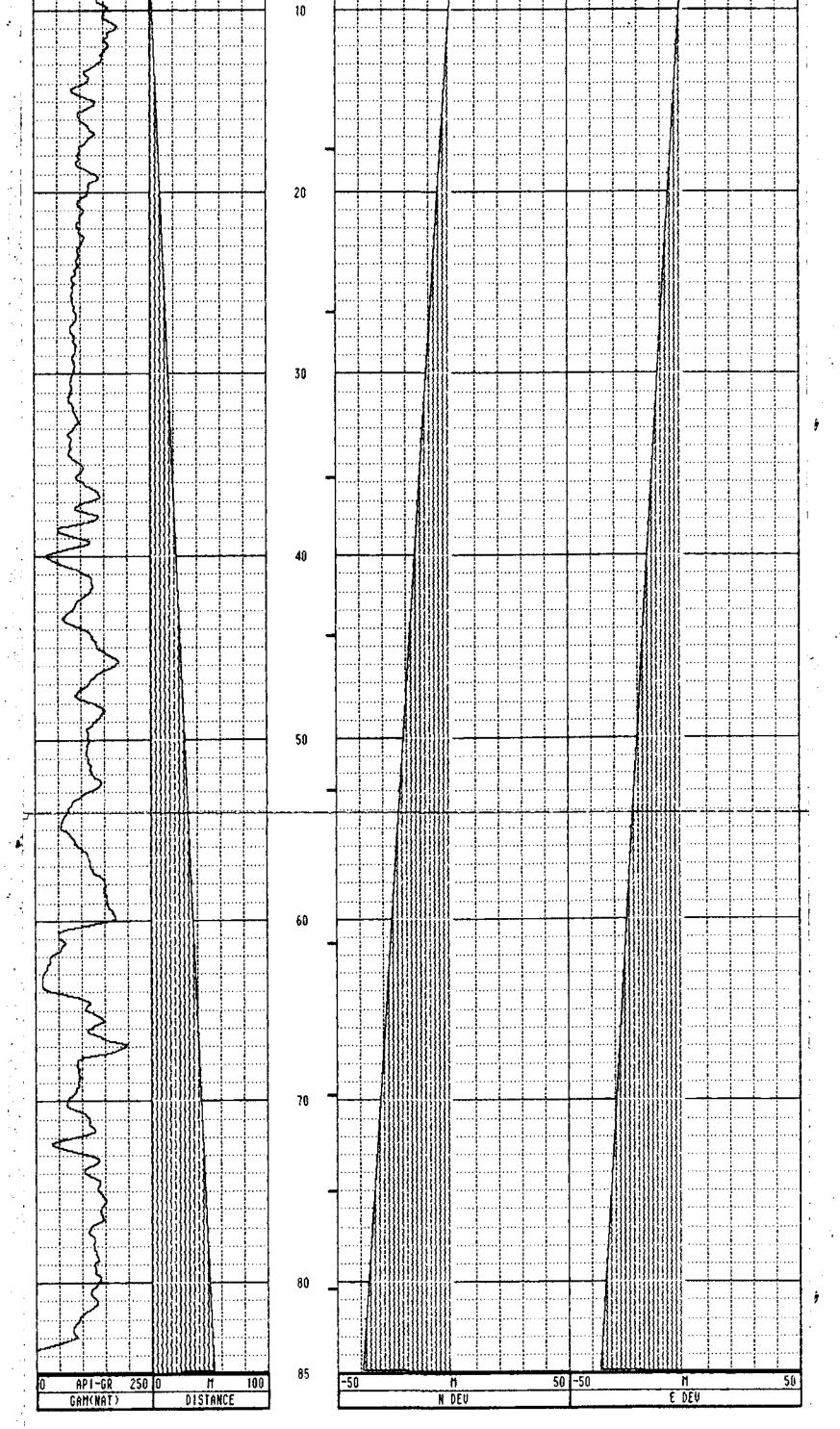


| | | TC | TOOL CALIBRATION | | 100L = 90 | 155A SERIAL | NUMBER = | 14 | |
|---|---|----------|------------------|------|-----------|--------------|----------|--------|--|
| | | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STAND | ARD | |
| | 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CPS | 0.000 | API-GR | |
| | 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CPS | 0.000 | AP1-GR | |
| | 2 | 05/05/89 | 16:59:51 | Ú | POROSITY | 0.000 CPS | 145.000 | CPS | |
| - | 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 CPS | 0.000 | OHM | |
| | 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 CPS | 1909.000 | OHM | |
| | 5 | 05/04/89 | 08:13:14 | Ð | SP | -9.000 CPS | 0.000 | HU | |
| | 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 CPS | 500.000 | HU | |
| l | 7 | 05/04/89 | 08:10:36 | Û | NEUTRON | 0.000 CPS | 0.000 | API-N | |
| | 8 | 05/04/89 | 08:53:24 | Û | NEUTRON | 145.000 CPS | 271.000 | API-N | |
| L | | | | | | | | | |

| COMPANY: QUINTETTE COAL LTD.
URR-89004 DEVIATION
LOCATION/FIELDDTHER SERVICES:
SCALE
1:200LOCATION/FIELD: SL26400/BL21680
STATE: SCALE
1:200COUNTY: TRANSFER
SECTION:DATE: D5/16/89PERMANENT DATUM: OO
ELEVATIONSDEPTH DRILLER: 85.5ELEV. PERM. DATUM: OO
ELEVATIONSDEPTH DRILLER: 85.5ELEV. PERM. DATUM: OO
ELEVATIONSLOG BOTTOM: 84.96LOG MOP: 1.24DR LMEASURED FROM: GLGLCASING DRILLER: 3LOGGING UNIT: 8902
CASING THICKNESS: .05CASING TYPE: STEELFIELD OFFICE: CALGARY
CASING THICKNESS: .05MARENTY: 2.68RM TEMPERATURE: OOLUG DENSITY: 1.0MATRIX DENSITY: 2.68RM TEMPERATURE: OOLUTON MATRIXSADSTONEFLUID DELTA TANDET OPEN HOLEANDET OPEN HOLEANDET OPEN HOLEANDET OPEN HOLEANDEL FLUIDARENTYSTATE | CCCC | QHR-8900 | 4 DEV | LATION |
|---|---|--|------------------------|--|
| DEPTH DRILLER:85.5ELEU. PERM. DATUM: 00KB:00LOG BOTTOM:84.96LOG MEASURED FROM: GLDF:00LOG TOP:1.24DRL MEASURED FROM: GLGL:00CASING DRILLER:3LOGGING UNIT:8902CASING TYPE:STEELFIELD OFFICE:CALGARYCASING THICKNESS:.05RECORDED BY:D.ZANKLBIT SIZE:12.1BOREHOLE FLUID:WATERMAGNETIC DECL.:24.500RM:00TYPEMATRIX DENSITY:2.68RM TEMPERATURE:00LOGMATRIX DENSITY:1.0MATRIX DELTA T:173PLOT<: | WELL : QHR-89004
LOCATION/FIELD : SL26400/BL
COUNTY : TRANSFER
STATE : BRITISH CO | DEVIATION
21680
DLUMBIA | SCALE | |
| CASING TYPE: STEELFIELD OFFICE: CALGARYCASING THICKNESS: .05RECORDED BY: D.ZANKLBIT SIZE: 12.1BOREHOLE FLUID: WATERFILEMAGNETIC DECL.: 24.500RM: 00TYPEMATRIX DENSITY: 2.68RM TEMPERATURE: 00LOGFLUID DENSITY: 1.0MATRIX DELTA T: 173PLOTNEUTRON MATRIX: SANDSTONEFLUID DELTA T: 690THRESH: 20000REMARKS:LOGGED OPEN HOLEANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL | DEPTH DRILLER : 85.5
LOG BOTTOM : 84.96
LOG TOP : 1.24 | ELEV. PERM. DATUM:
Log measured from:
DRL measured from: | 00
GL
GL | KB : 00
DF : 00 |
| MAGNETIC DECL.: 24.500RM: 00TYPE: 9055AMATRIX DENSITY: 2.68RM TEMPERATURE: 00LOG: 8FLUID DENSITY: 1.0MATRIX DELTA T: 173PLOT: QUIN 13NEUTRON MATRIX: SANDSTONEFLUID DELTA T: 690THRESH: 20000REMARKS::LOGGED OPEN HOLE:ANGLE HOLE - 45 DEGREES FROM THE HORIZONTAL | CASING TYPE : STEEL | FIELD OFFICE : | CALGARY | |
| | MAGNETIC DECL. : 24.500
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
NEUTRON MATRIX : SANDSTONE
REMARKS :
LOGGED OPEN HOLE
ANGLE HOLE - 45 DEGREES FRO | RM :
RM TEMPERATURE :
MATRIX DELTA T :
FLUID DELTA T :
DM THE HORIZONTAL | 00
00
173
690 | TYPE : 9055A
LOG : 8
PLOT : QUIN 13
THRESH: 20000 |

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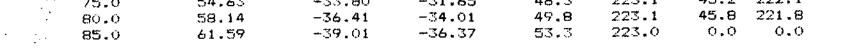




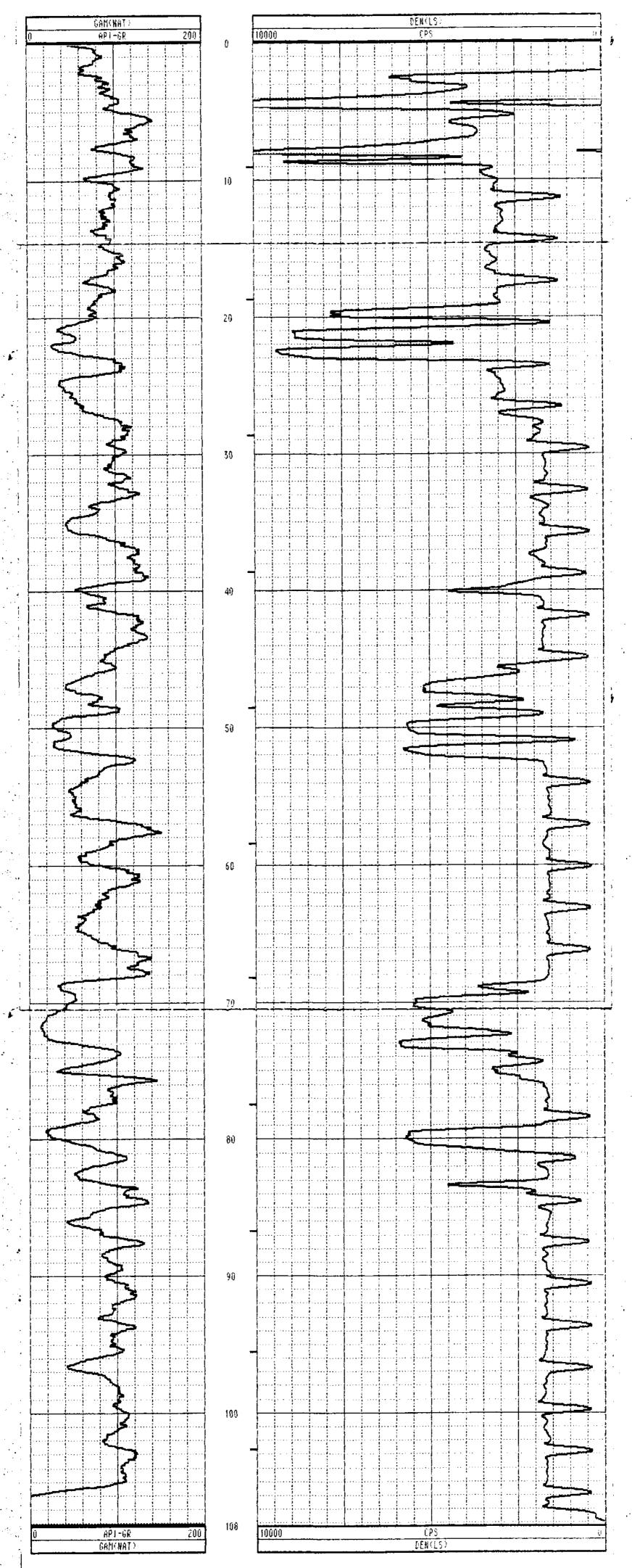
| CAL-DAT | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD |
|---------|------------|------|----------|----------|-----|----------|----------|
| 05/04/8 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| 05/04/8 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-GR |
| 05/05/8 | 16:59:51 | Û | POROSITY | 0.000 | CPS | 145.000 | CPS |
| 05/04/8 | 9 08:15:10 | Û | RES | 9707.000 | CPS | 0.000 | OHM |
| 05/04/8 | 9 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM |
| 05/04/8 | 9 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | HU |
| 05/04/8 | 9 08:13:14 | 9 | SP | 4095.000 | CPS | 500.000 | HŲ |
| 05/04/8 | 9 08:10:36 | Û | NEUTRON | 0.000 | CPS | 0.000 | AP I -N |
| 05/04/8 | 9 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | API-N |

- 6

| | * * * * * * | * * * * * CO | MPU-LOG II - | VERTICAL D | EVIATION | * * * * * | * * * | * * * |
|-------|-------------|--------------|--------------|------------|------------|-----------|----------------------|-------|
| | CLIENT | • OHINTE | TTE COAL LTD | . HOLE ID | . : QHR | -89004 GA | м | |
| | FIELD OFF | | | DATE OF | | 16/89 | | |
| • | DATA FROM | | | PROBE | : 905 | | 14 | |
| ۰. | MAG, DECL | | 00 | DEPTH U | NITS : MET | ER LOG | 8 | |
| | | | | | | | | |
| S. S. | able Depth | True Depth | North Dev. | East Dev. | Distance | Azimuth | SANG | SANGB |
| | 0.0 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| - : | 5.0 | 4.37 | 1.43 | 0.56 | 1.5 | 21.5 | 43.3 | 326.6 |
| | 10.0 | 7.97 | 90 | -1.63 | 1.9 | 241.2 | 44.4 | 220.9 |
| | 15.0 | 11.55 | -3.41 | -4.04 | 5.3 | 229.8 | 44.4 | 224.3 |
| | 20.0 | 15.14 | -5.92 | -6.39 | 8.7 | 227.2 | 44.0 | 224.4 |
| | 25.0 | 18.74 | ~8,39 | ~8.77 | 12.1 | 226.2 | 44.1 | 222.1 |
| | 30.0 | 22.33 | -10.94 | -11.03 | 15.5 | 225.2 | 44.3 | 228.7 |
| | 35.0 | 25.95 | -13,49 | -13.29 | 18.9 | 224.6 | 43.2 | 228.4 |
| 1 | 40.0 | 29.56 | -15.96 | -15.63 | 22.3 | 224.4 | 43.7 | 223.9 |
| | 45.0 | 33.17 | ~18.46 | -17.94 | 25.7 | 224.2 | 44,0 | 219.7 |
| | 50.0 | 36.77 | -21.07 | -20.15 | 29.1 | 223.7 | 40.3 | 231.7 |
| | 55.0 | 40.36 | -23.60 | -22.47 | 32.6 | 223.6 | 44.4 | 222.5 |
| | 60.0 | 43.94 | -26.15 | -24.74 | 36.0 | 223.4 | 44.4 | 204.2 |
| | 65.0 | 47.51 | -28.64 | -27.05 | 39.4 | 223.4 | 44.4 | 222.3 |
| | 70.0 | 51,08 | -31.24 | -29.30 | 42.8 | 223.2 | 44.4 | 227.9 |
| | 75.0 | 54.63 | -33,80 | -31.65 | 46.3 | 223.1 | 45.2 | 222.1 |
| · . | | | | | | | A 55 O | |



| CG | | | - Cen | | | y | | |
|---|-------------------|-------------------------------------|--|----|---------------------------------|--------------------------|-----|--|
| | 5 | | QHR-89005 | | | -DEN | I S | ;ITY |
| COMPANY
HELL
LOCATION/FIELD
COUNTY | : 0
: 0
: 0 | \HR~89005
8120270×81
Fransfer | | | OTHER SER
SCALE
1:200 | VICES: | | |
| STATE
Section | : E
: | SRITISH CO | ILUMBIA
Township | : | | RANGE | : | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : | 05/16/89
111
108.16
0.10 | PERMANENT DATUM
ELEV. PERM. DATUM
LOG MEASURED FROM
ØRL MEASURED FROM | : | GL | ELEVAT
Kb
DF
GL | : | NS
00
00
00 |
| CASING DRILLER
Casing type
Casing thickness | : 3 | STEEL | FIELD OFFICE | : | 8902
Calgary
D.Zankl | | | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX | : ;
: ;
: | 2.68 | RM
RM TEMPERATURE
MATRIX DELTA T | :: | WATER
00
00
173
690 | TYPE
LOG
PLOT | : | ORICINAL
9069A
7
Quin 11
20080 |
| | (p) | EGREES FRO | DM THE HORIZONTAL
Subject to CGC stand |)A | RD TERMS | AND CON | 011 | TIONS |

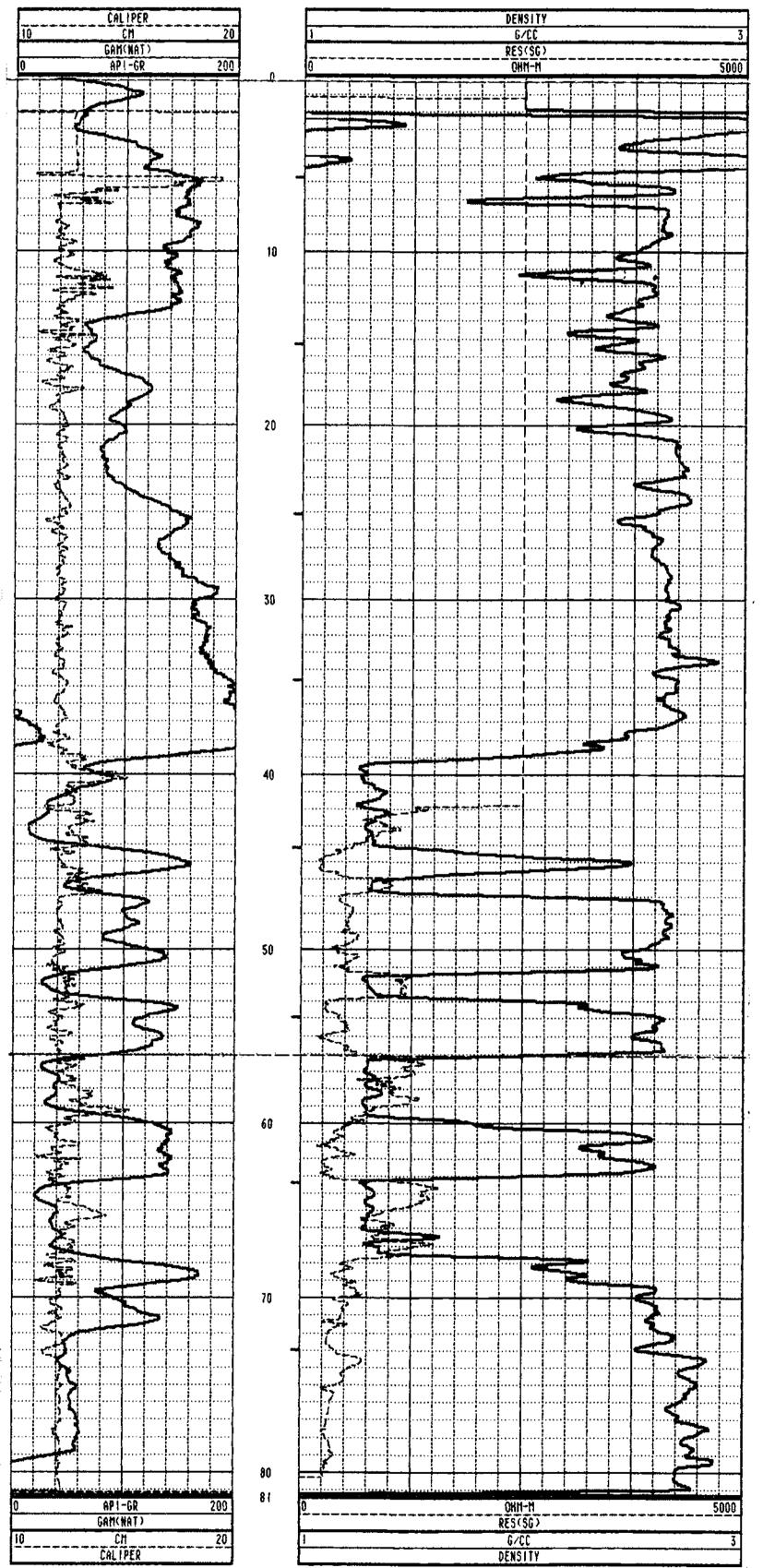


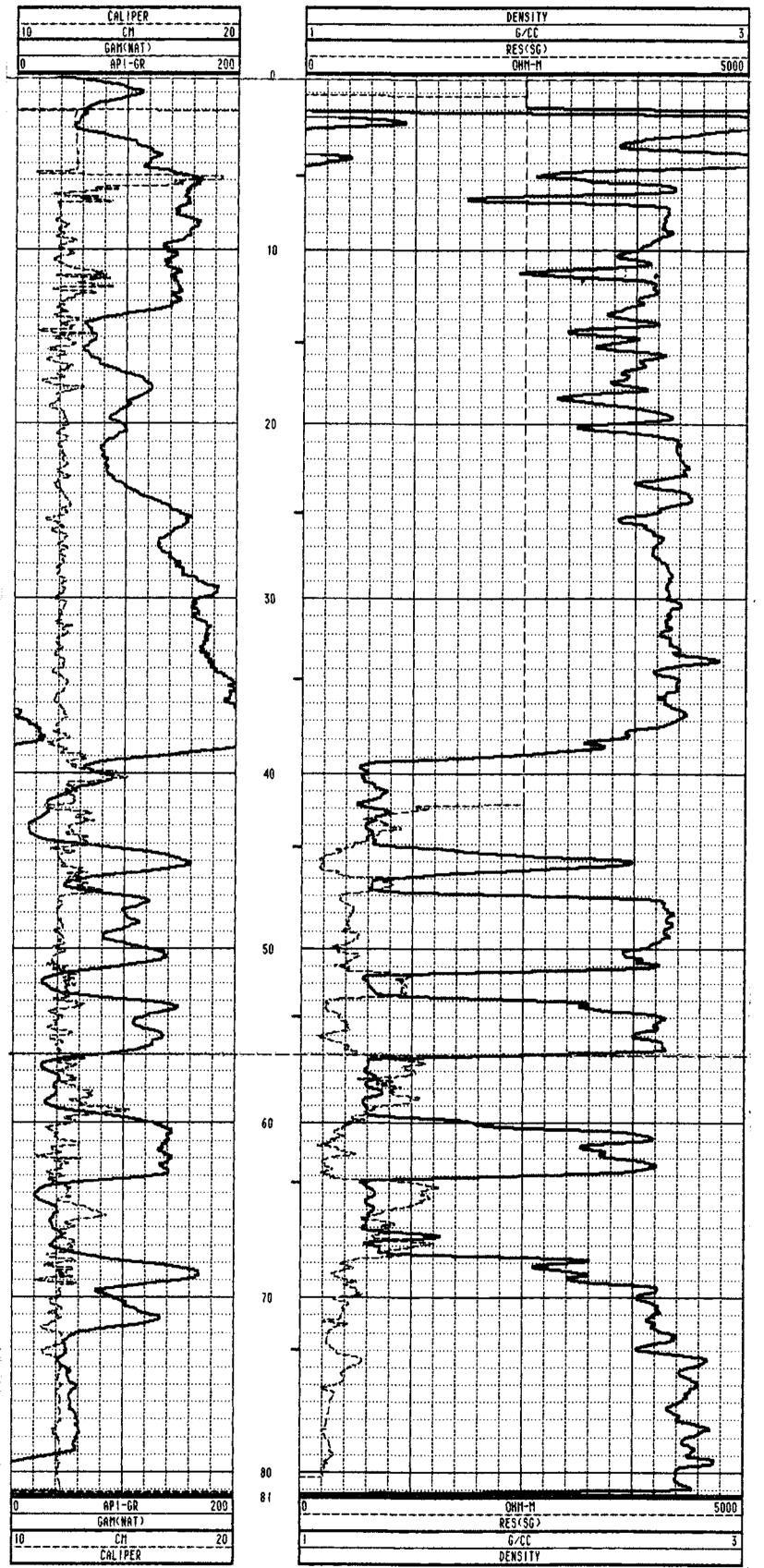
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| | TÛ | OL CALIBRA | TION | 700L = 9069 | A SERTAL NUI | 18ER = 1829 | |
|---|----------|------------|------|-------------|--------------|--------------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| 6 | 05/04/89 | 12:58:21 | Û | GAM(NAT) | 0.000 CPS | 0.000 AP}-GR | |
| 1 | 05/04/89 | 12:57:04 | Û | GAM(NAT) | 0.000 CPS | 0.000 AP1-6R | |

| C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C. | | QHR 89014 | GAM-D | EN-RES-CAL |
|--|---|---|---|--|
| COMPANY
WELL
Location/Field
County | : QHR89014
:
: TRANSFER | GAM-DEN-RES-CAL | OTHER S
Scale
1:200 | SERVICES: |
| STATE
Section | : BRITISH C
: | OLUMBIA
Township | : | RANGE : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 85 | PERMANENT DATUM
ELEV. PERM. DATU
LOG MEASURED FRO
DRL MEASURED FRO | M: 00
M: GL | KB : 00 |
| CASING DRILLER
Casing type
Casing thicknes | ; STEEL | LOGGING UNIT
Field office
Recorded by | : 8902
: Calgary
: D.Zankl | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HO | : 24.500
: 2.68
: 1.0
: SANDSTONE
: | BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T | : WATER
: 00
: 00
: 173
: 690 | FILE : ORIGINAL
TYPE : 9032AC
LOG : 5
PLOT : QUIN 12
THRESH: 20000 |
| VERTICAL HOLE | | ED SUBJECT TO STANDA | ARD TERMS | AND CONDITIONS |







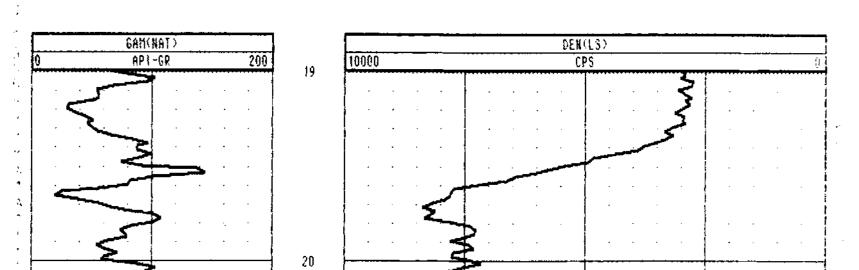
| | TO | TOOL CALIBRATION | | | TOOL = 9032AC SERIAL | | | 67 |
|----|----------|------------------|------|----------|----------------------|-----|---------|----------|
| | CAL-DATE | CAL-TINE | SRCE | SENSOR | RESPO | NSE | STAND | ARD |
| 0 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| i | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.106 | G/CC |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.120 | 6/CC |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.000 | OHM-M |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 | CPS | 178.500 | ohm-m |
| 6 | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7.620 | CH |
| 7 | 05/04/89 | 10:46:11 | 6 | CALIPER | 1906.000 | CPS | 17.800 | CH |
| 8 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | G/CC |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.900 | CPS | 0.000 | G/CC |
| 10 | 05/04/89 | 10:17:51 | Û | CALIPERL | 0.000 | CPS | 0.000 | CH |
| 11 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 | CH |

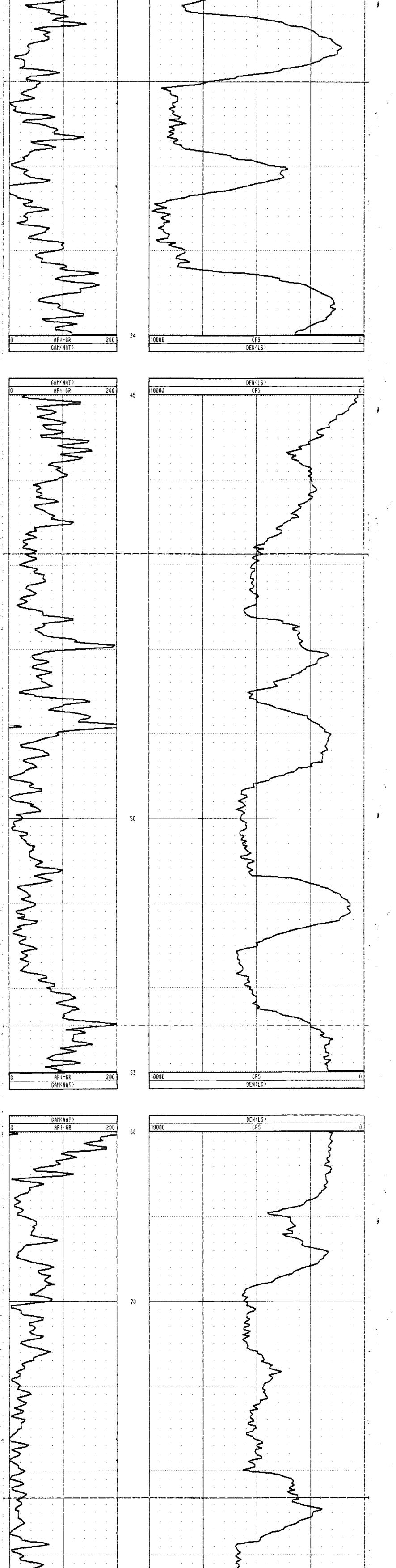
| (°CGE | | the second se | |
|---|---|---|--|
| | QHR-890 | 05 EXP DENSITY | |
| LOCATION/FIELD : BL
COUNTY : TR | R-89005 EXP DENSITY | OTHER SERVICES:
SCALE
1:20
: RANGE : | |
| DATE : 05
DEPTH DRILLER : 11
LOG BOTTOM : | 5/16/89 PERMANENT DATU
11 ELEV. PERM. DF
108.16 LOG MEASURED F
0.10 DRL MEASURED F
5 LOGGING UNIT
EEL FIELD OFFICE | UM : 00 ELEVATIONS
ATUM: 00 KB : 00
FROM: GL DF : 00
FROM: GL GL : 00
: 8902
: CALGARY | nanang ang ang ang ang ang ang ang ang a |
| REMARKS : | 1.5 RM
68 RM TEMPERATURE
0 MATRIX DELTA 1
NDSTONE FLUID DELTA 1 | : 00 TYPE : 9069A
E : 00 LOG : 7
F : 173 PLOT : 001N 15 | |
| ANGLE HOLE - 45 DEG | REES FROM THE HORIZONTAL | | |

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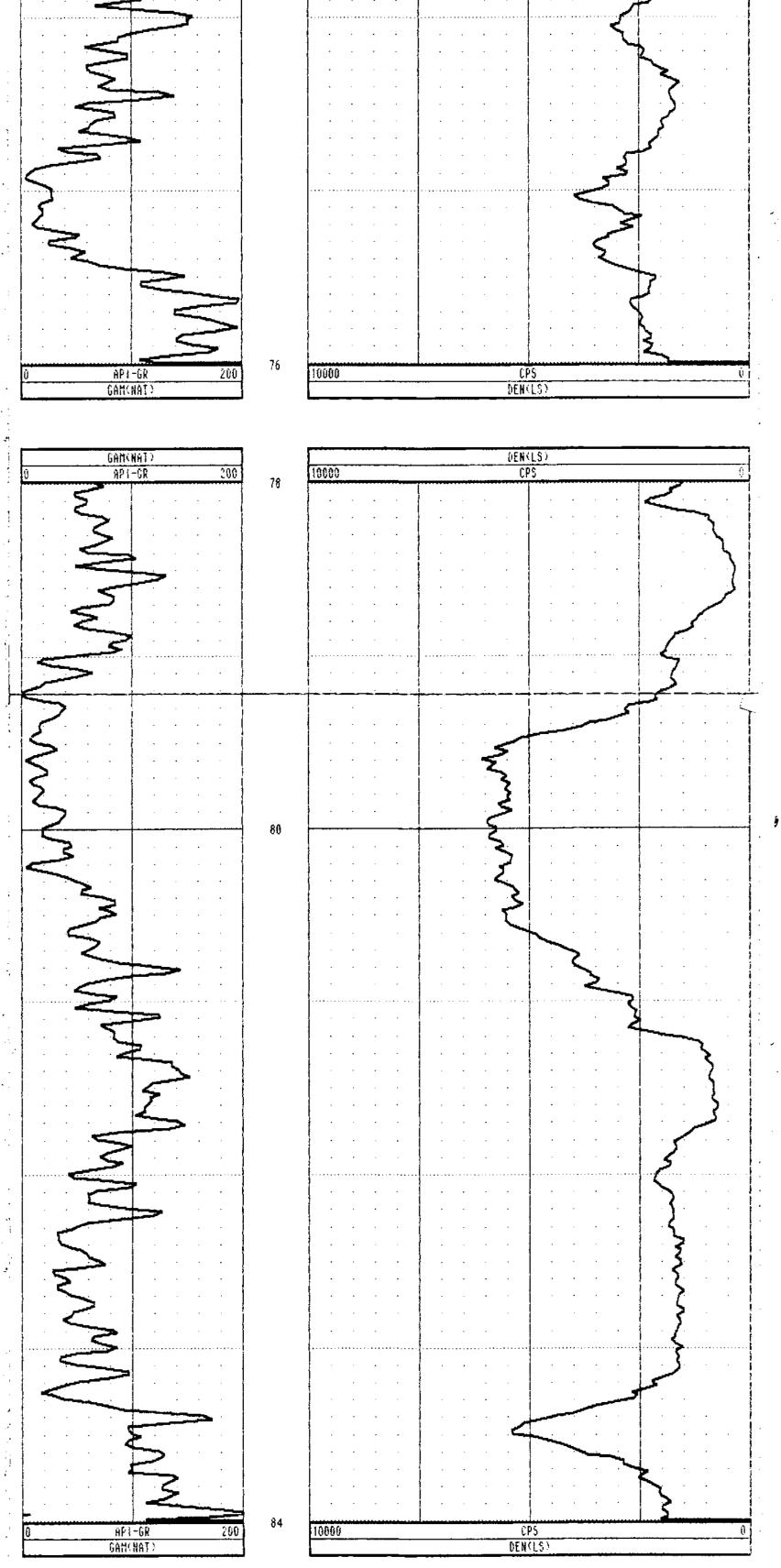
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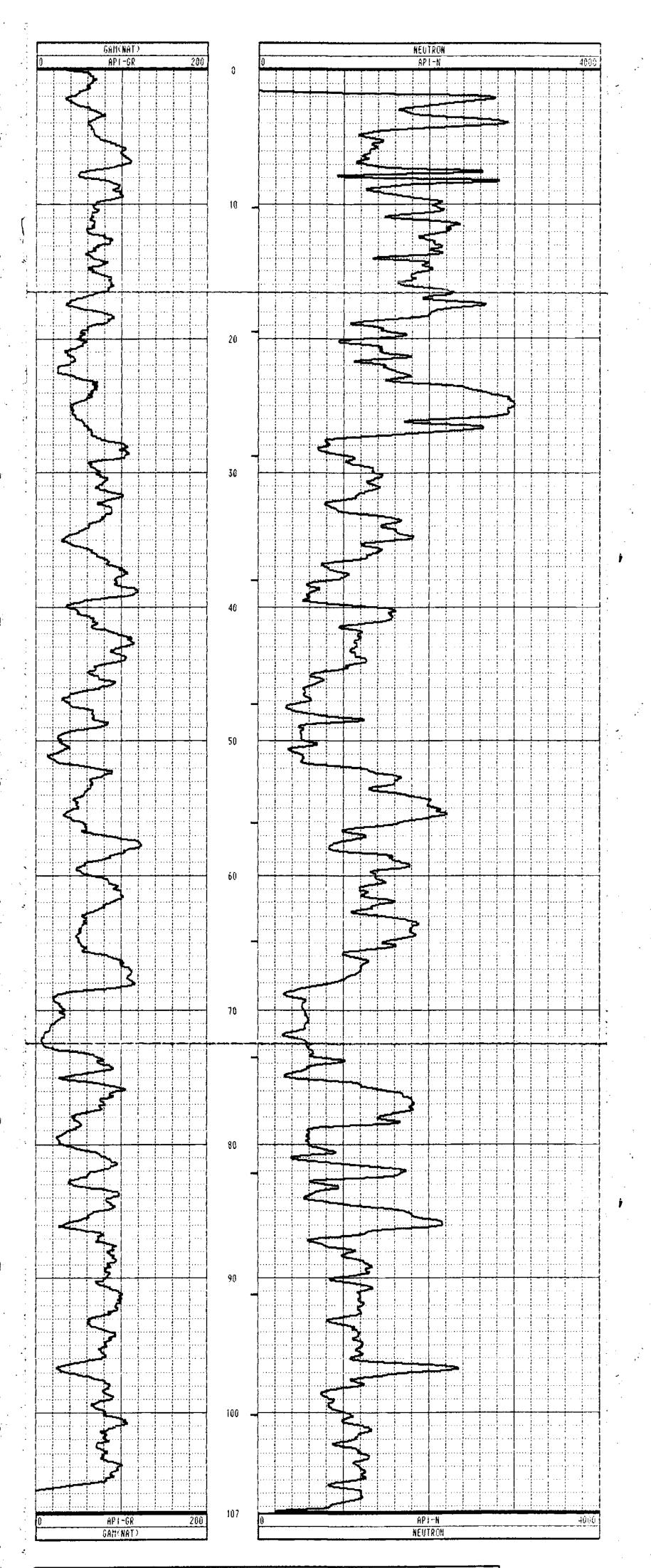
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|---|--------------|-----------------------------------|--|---------------------------------|--------------------------|------------|---|--|
| | 3 | | QHR-89005 | GAMM | 4-NEU | J 1 | RON | |
| COMPANY
NELL
LOCATION/FIELD
COUNTY | :
:
: | BL20270/SL2
TRANSFER | AMMA-NEUTRON
7550 | OTHER SE
SCALE
1:200 | RVICES: | | | |
| STATE
Section | : | BRITISH COL | UMBIA
Township : | | RANGE | : | | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : | 05×16×89
111
107.44
0.02 | ELEU. PERM. DATUM: | GL GL | ELEVAT
Kb
DF
GL | : | NS
00
00
00 | |
| CASING DRILLER
Casing type
Casing thicknes | : | 1.5
STEEL
.05 | LOGGING UNIT :
FIELD OFFICE : | 8902 | | | | ar) anggranng sang sang sang sang sang sang sang |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX | :
:
: | 2.68
1.0 | RM :
RM TEMPERATURE :
MATRIX DELTA T : | HATER
00
00
173
690 | | :: | CRIGINAL
9067A
6
QUIN 0
20000 | r felo ann 2014 ann Cai Iann Chineanairte, The |
| | 5 () | EGREES FROM | THE HORIZONTAL
Ibject to CGC standi | ARD TERMS | AND CON |) I T | ONS | anna an an Airtean an An An An An An |



| | TO | OL CALIBRA | TION | tool = 906 | 57A SERIAL N | UMBER = 513 | |
|---|----------|------------|------|------------|--------------|---------------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| Û | 05/04/89 | 13:32:05 | 9 | GAM(NAT) | 0.000 CPS | 0.000 API-GR | |
| 1 | 05/04/89 | 13:32:05 | 0 | GAM(NAT) | 0.000 CPS | 0.000 API-GR | |
| 2 | 05/04/89 | 13:32:05 | 0 | NEUTRON | 0.000 CP5 | 0.000 APi-N | |
| 3 | 05/04/89 | 13:36:12 | 0 | NEUTRON | 205.000 CPS | 271.000 API-N | |

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|---------------------------------------|------------------------|------------|------------------------------|-----------|----------|------------|--|
| · · · · · · · · · · · · · · · · · · · | | Į. | QHR-89006 | GAMM | A-DEN | ISITY | |
| - 1 | | | | | | | |
| ť | | | TE COAL LTD. | OTHER S | ERVICES: | | |
| , | HELL
LOCATION/FIELD | | 06 GAMMA-DENSITY
/SL27550 | SCALE | | | |
| | COUNTY | : TRANSFE | | 1:200 | | | |
| | STATE | : BRITISH | COLUMBIA | L | <u>,</u> | | |
| | SECTION | : | TOWNSHIP | : | RANGE | : | |
| | DATE | : 05/17/8 | 9 PERMANENT DATUM | : 00 | ELEVAT | IONS | |
| | DEPTH DRILLER | : 120 | ELEV. PERM. DATI | UM: 00 | KB | : 00 | |
| | LOG BOTTOM | : 117.6 | 6 LOG MEASURED FRI | DM: GL | DF | : 00 | |
| -: | LOG TOP | : 0.1 | 6 DRL MEASURED FRI | DM: GL | GL | : 00 | |
| | CASING DRILLER | : 1.5 | LOGGING UNIT | : 8902 | | | |
| , i | CASING TYPE | : STEEL | FIELD OFFICE | : CALGARY | | | |
| | CASING THICKNES | \$: .05 | RECORDED BY | : D.ZANKL | | | |
| • i
• | BIT SIZE | : 12.1 | BOREHOLE FLUID | : WATER | FILE | : ORIGINAL | |
| • | MAGNETIC DECL. | | RM | : 00 | TYPE | : 9069A | |
| | MATRIX DENSITY | : 2.68 | RM TEMPERATURE | : 00 | L06 | : 4 | |

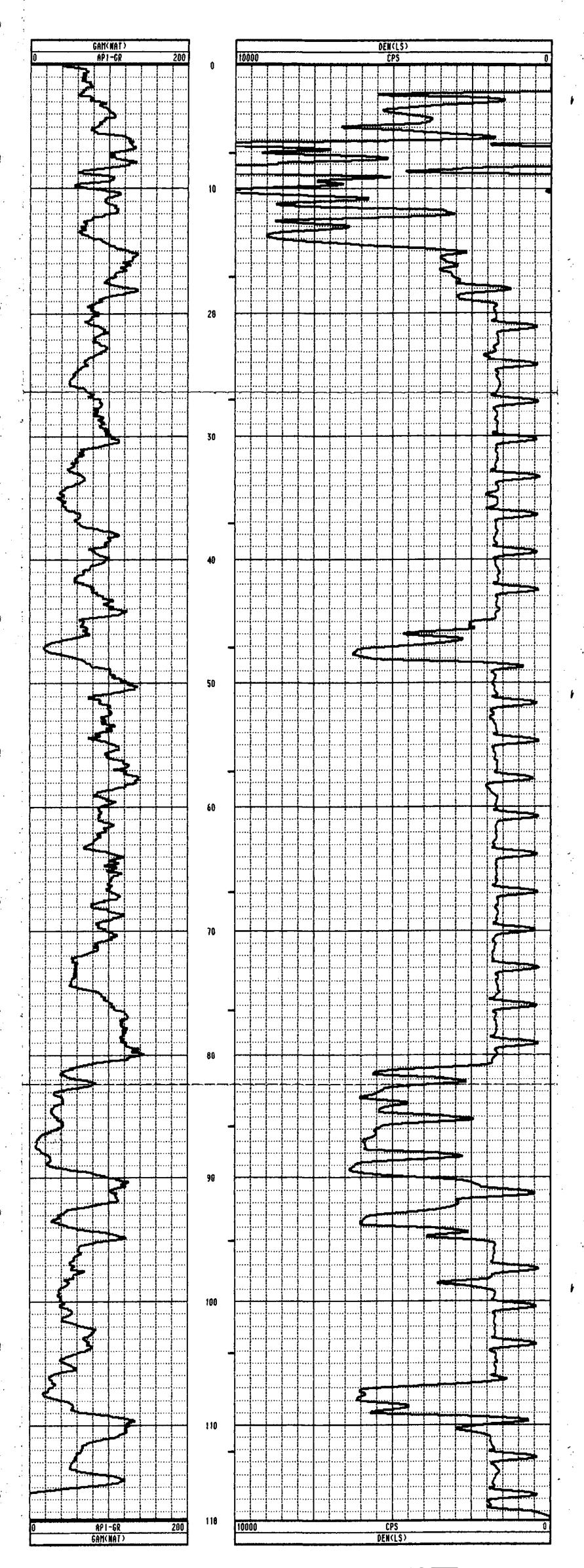
REMARKS

MATRIX DENSITY: 2.68RM TEMPERATURE: 00FLUID DENSITY: 1.0MATRIX DELTA T: 173NEUTRON MATRIX: SANDSTONEFLUID DELTA T: 690 LOG : 4 PLOT : QUIN 11 THRESH: 20000 : LOGGED THROUGH RODS VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



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| | TO | IOL CALIBRA | TION | TOOL = 90691 | A SERIAL NUM | IBER = | 1029 |
|---|----------|-------------|------|--------------|--------------|--------|------------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | ST | ANDARD |
| 0 | 05/04/89 | 12:58:21 | 0 | GAN(NAT) | 8.000 CPS | Û. | 000 AP1-68 |
| 1 | 05/04/89 | 12:57:04 | 8 | GAN(NAT) | 0.000 CPS | 0. | 000 AP1-6R |

| COMPANY: QUINTETTE COAL LTD.WELL: OHR-89006 GAMMA-NEUTRONLOCATION/FIELD: BL20270/SL27550COUNTY: TRANSFERSTATE: BRITISH COLUMBIASECTION:DATE: 05/17/89DEPTH DRILLER: 120KB: 00 | CE | | QHR-89006 | GAMMA | |
|--|---|---|---|--|---|
| LUG BUTTUM : 117.10 LOG MEASURED FROM: GL DF : 00
LOG TOP : 0.20 DRL MEASURED FROM: GL GL : 00 | WELL
LOCATION/FIELD
COUNTY
STATE
SECTION
DATE
DEPTH DRILLER
LOG BOTTOM | : QHR-89006 0
: BL20270/SL2
: TRANSFER
: BRITISH COU
:
: 05/17/89
: 120
: 117.10 | AMMA-NEUTRON
7550
UMBIA
TOWNSHIP
PERMANENT DATUM
ELEV. PERM. DATUM
LOG MEASURED FROM | SCALE
1:200
:
:
00
: 00
: 6L | RANGE :
ELEVATIONS
KB : 00
DF : 00 |
| CASING DRILLER1.5LOGGING UNIT: 8902CASING TYPE: STEELFIELD OFFICE: CALGARYCASING THICKNESS:.05RECORDED BY: D.ZANKLBIT SIZE: 12.1BOREHOLE FLUID: WATERFILEMAGNETIC DECL.: 24.5RM: 00TYPEMATRIX DENSITY: 2.68RM TEMPERATURE: 00LOGFLUID DENSITY: 1.0MATRIX DELTA T: 173PLOTNEUTRON MATRIX: SANDSTONEFLUID DELTA T: 690THRESH: 20000REMARKS::LOGGED THROUGH RODS.VERTICAL HOLE: | CASING DRILLER
CASING TYPE
CASING THICKNESS
BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED THROUGH | : 1.5
: STEEL
5: .05
: 12.1
: 24.5
: 2.68
: 1.0
: SANDSTONE
: | LOGGING UNIT
FIELD OFFICE
RECORDED BY
BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T | : 8902
: CALGARY
: D.ZANKL
: WATER
: 00
: 00
: 173 | FILE : ORIGINAL
TYPE : 9067A
LOG : 2
PLOT : QUIN O |

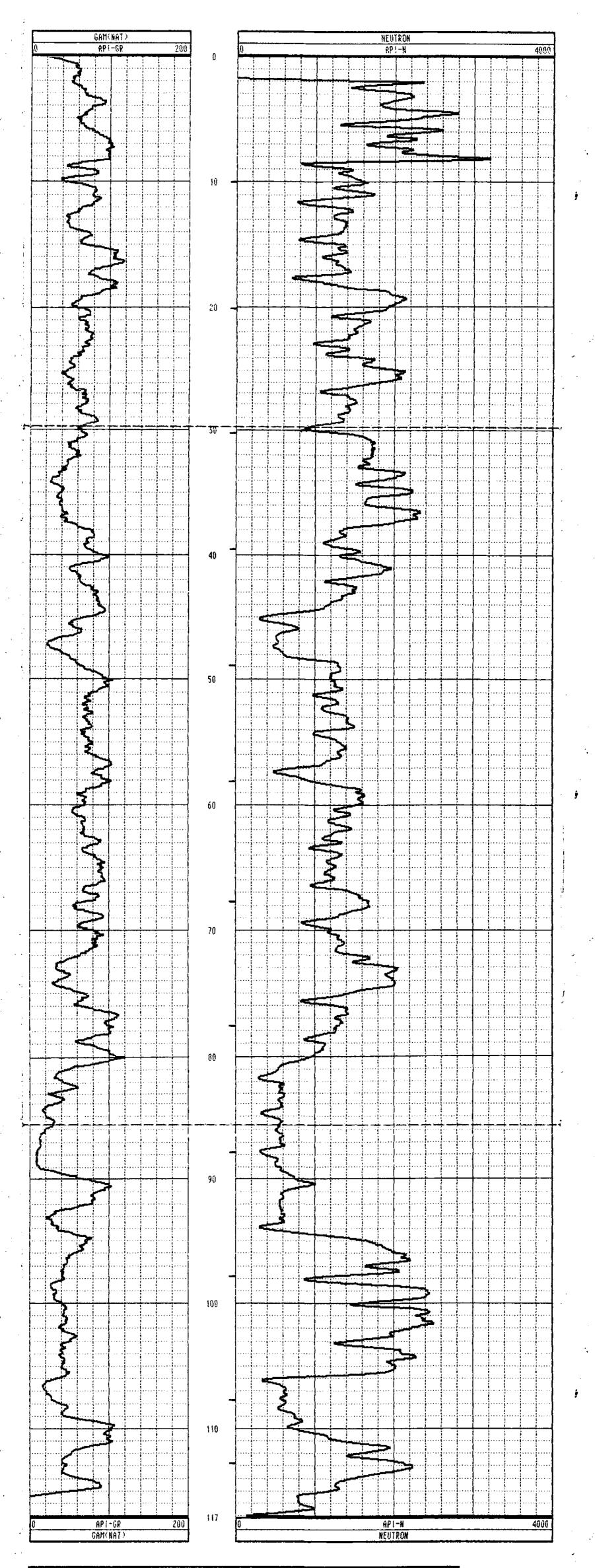
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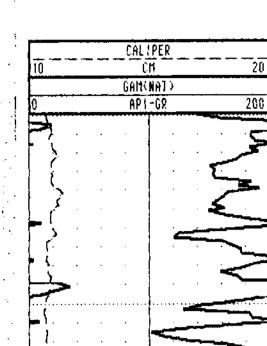
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| | TC | OL CALIBRA | TION | TOOL = 90(| 57A SERIAL H | IUMBER = 513 | |
|---|----------|------------|------|------------|--------------|---------------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| 0 | 05/04/89 | 13:32:05 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-6R | |
| 1 | 05/04/89 | 13:32:05 | 0 | GAM(NAT) | 0.000 CPS | 8.000 AP1-6R | |
| 2 | 05/04/89 | 13:32:05 | Û | NEUTRON | 0.000 CPS | 0.000 API-N | |
| 3 | 05/04/89 | 13:36:12 | 0 | NEUTRON | 205.000 CPS | 271.000 API-N | |

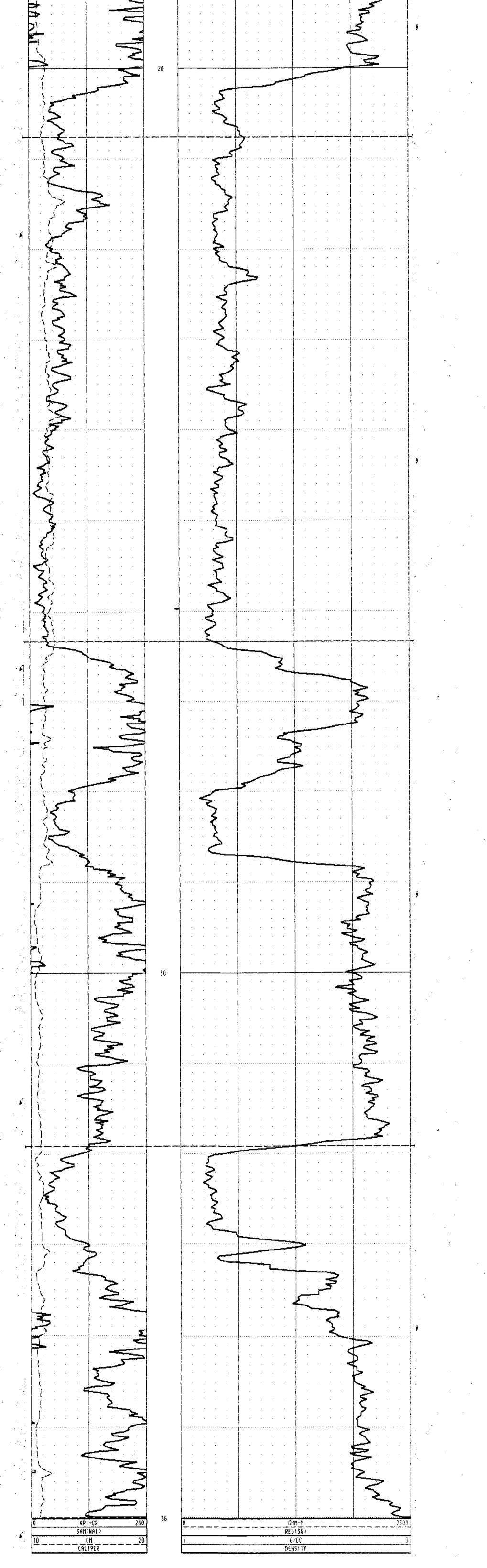
| (CG | j) | Cert | | y. |
|--|---|---|----------------------------------|--|
| | Y . | QHR-89007 | GAM-I | DEN-RES-CA |
| COMPANY
HELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QUINTETTI
: QHR-8900
: BL20225/
: TRANSFER
: BRITISH (
: | 7 GAM-DEN-RES-CAL
SL27600 | OTHER SI
SCALE
1:20. | ERVICES:
Range : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 05/17/89
: 48
: 48.32
: 0.20 | ELEV. PERM. DATU
LOG MEASURED FRO | M: 00
M: GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING DRILLER
Casing type
Casing thicknes | : 4,5
: STEEL
S: .05 | LOGGING UNIT
Field Office
Recorded by | : 8902
: Calgary
: D.Zankl | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS | : 2.68
: 1.0 | BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T
E FLUID DELTA T | : 00
: 00
: 173 | FILE : ORIGINAL
TYPE : 9032AC
LOG : 0
PLOT : QUIN 12
THRESH: 20000 |
| LOGGED OPEN HO
ANGLE HOLE - 6 | O DEGREES FI | ROM THE HORIZONTAL
• SUBJECT TO CGC STAN | NDARD TERMS | S AND CONDITIONS |

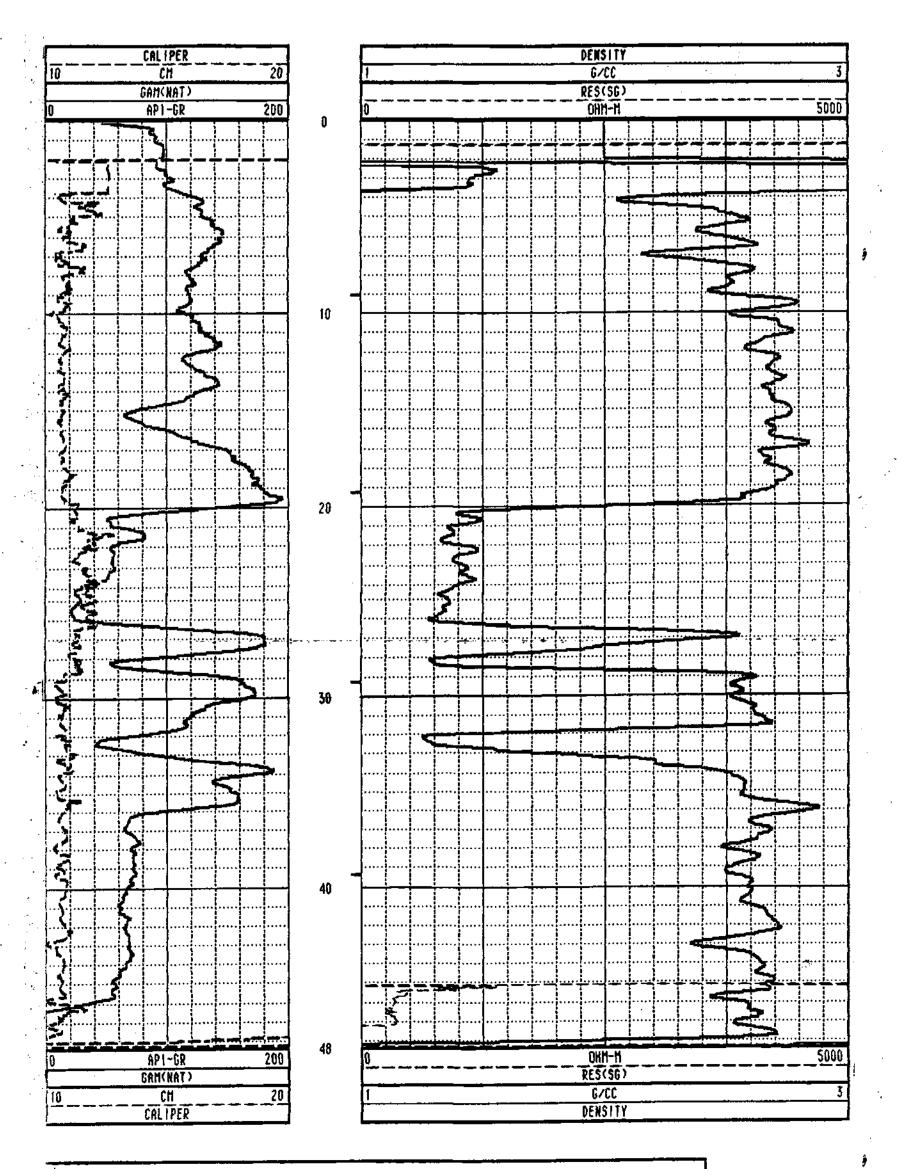




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|---|---|-----|-------|---|---|------|------------------|---|----------|-----|---------|------|
| | | | · · · | | | 610 | 0 | |
 | | | 3 |
| } | | | u | | | RES | <u>6)</u>
-11 | |
 | | | 7500 |
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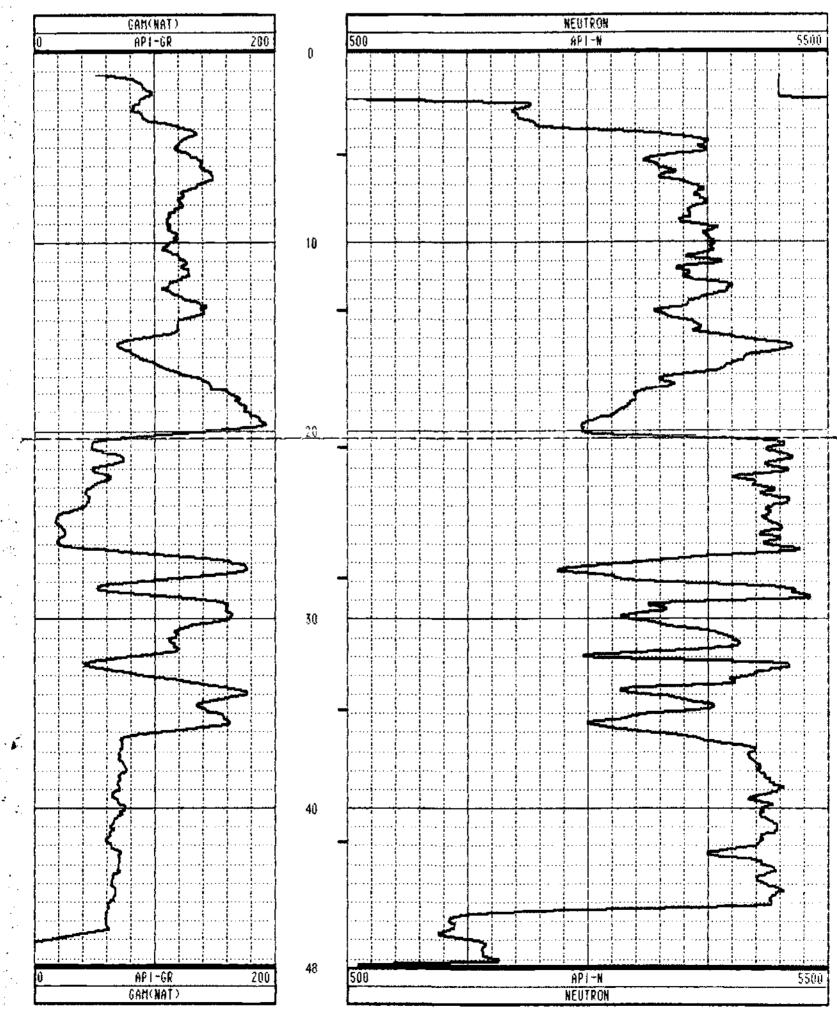


| | TO | OL CALIBRA | TION | 100L = 90 |)32AC | SERIA | NUMBER = 9 | 67 | |
|----|----------|------------|------|-----------|-----------|-------|------------|--------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD | |
| 0 | 05/04/89 | 10:17:51 | 0 | GAH(NAT) | 0.000 | CPS | 0.000 | API-GR | |
| 1 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR | |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.106 | G/CC | |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.120 | 6/00 | |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.000 | ohn-m | |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 | CPS | 178.500 | ohh-M | |
| 6 | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7.620 | CH | |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.800 | ĊĦ | |
| 8 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | G/CC | |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | 6/00 | |
| 10 | 05/04/89 | 10:17:51 | Û | CALIPERL | 0.000 | CPS | 0.000 | CH | |
| 11 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 | CH | |



| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QUINTETTE
: QHR89807 (
: BL20225/St
: TRANSFER
: BRITISH CC | GAMMA-NEUTRON
.27600 | OTHER SER
Scale
1:200 | RVICES: | |
|--|---|---|----------------------------------|-------------------|------------------------|
| SECTION | : | | : | RANGE : | |
| DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 05×17×89
: 48
: 48.42
: 1.16 | ELEU. PERM. DATUM
Log measured from
DRL measured from | : 00
: GL
: GL | DF : | DNS
00
00
00 |
| CASING DRILLER
Casing type
Casing thickness | : 4.5
: STEEL
3: .05 | FIELD OFFICE | : 8902
: Calgary
: D.Zankl | | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY | : 12.1
: 24.5
: 2.68 | RM | : WATER
: 00
: 00 | TYPE : | ORIGINAL
9055A
3 |
| FLUID DENSITY | : 1.0 | MATRIN DELTA T | : 173
: 690 | PLOT :
THRESH: | : QUIN - 0
: 20000 |
| LOGGED OPEN HOL
ANGLE HOLE - 60 | DEGREES FRO | OM THE HORIZONTAL
Subject to CGC stand | ARD TERMS | AND CONDI | 1 LONS |





| 0 <u> </u> | | | | | | | | | |
|---|---|------------|--|--|--|--|--|--|--|
| GAN(NAT) | Û | API-GR 200 | | | | | | | |
| • | | GAN(NAT) | | | | | | | |

| | Ţ | IOL CALIBRA | TION | 100L = 9 | 055A | SERIA | L NUMBER = | 14 | |
|---|----------|-------------|------|----------|----------|-------|------------|----------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD | |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 9.000 | CPS | 0.000 | AP I -GR | |
| 2 | 05/05/89 | 16:59:51 | Ģ | POROSITY | 0.000 | CPS | 145.000 | CPS | |
| 3 | 05/04/89 | 08:15:10 | Û | RES | 9707.000 | CPS | 0.000 | OHM | |
| 4 | 05/04/89 | 08:15:10 | 9 | RES | 5212.000 | CP3 | 1800.000 | OHM | |
| 5 | 05/04/89 | 08:13:14 | ٥ | SP | -9.000 | CPS | 0.000 | HV | |
| ó | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.00Ū | hu | |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | APT-N | |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | AP:-N | |

| (° CG | | - Cor | | 7 | |
|---|--|--|---------------------------------|--------------------------|---|
| | Y . | QHR-8900 | | | ION |
| | : QUINTETTE
: QHR-89007
: BL20225/SU
: TRANSFER | COAL LTD.
DEVIATION | OTHER SE
SCALE
1:200 | | ***** <u>********************************</u> |
| STATE
Section | : BRITISH CO
: | ILUMBIA I
Township : | | RANGE | : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 05×18×89
: 46
: 48.42
: 1.16 | ELEU. PERM. DATUM: | 00
GL | ELEVAT
Kb
DF
GL | : 08 |
| CASING DRILLER
Casing type
Casing thicknes | : STEEL | FIELD OFFICE : | 8902
Calgary
D.Zankl | | |
| BIT SIZE
MAGNETIC DECL,
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX | : 24.500
: 2.68
: 1.0 | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
00
00
173
690 | | |

ANGLE HOLE - 60 DEGREES FROM THE HORIZONTAL ALL SERVICES PROVIDED SUBJECT TO ESC STANDARD TERMS AND CONDITIONS

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LOGGED OPEN HOLE

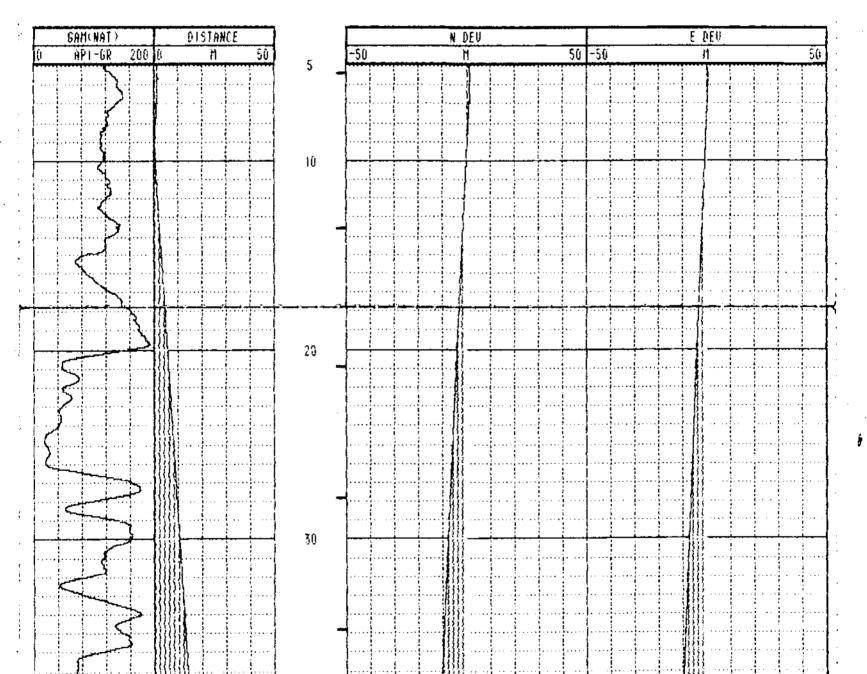
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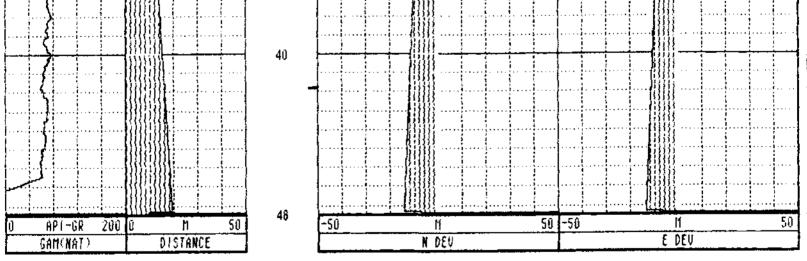
REMARKS

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| | 10 | OL CAEIBRA | TION | TOOL = 90 | 55A | SERIA | L NUMBER = | 14 |
|--------|-------|------------|------|-----------|----------|-------|------------|--------|
| CAL | DATE | CAL-TIME | SRCE | SENSOR | RESPON | SE | STAND | ard |
| 0 05/0 | }4/89 | 98:10:36 | 6 | GAM(NAT) | Ŭ.00Ù | CPS | 0.000 | AP)~GR |
| 1 0570 | 34/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-GR |
| 2 05/1 | 05789 | 16:59:51 | Û | POROSITY | 0.000 | CPS | 145.009 | CPS |
| 3 05/ | 04/89 | 08:15:10 | 0 | RES | 9707.000 | EPS | 0.000 | OHM |
| 4 05/ |)4/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | MKO |
| 5 05/ | 34/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | HU |
| 6 057 | 04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | HÜ |
| 7 05/ | 04/89 | 08:10:36 | Ū | NEUTRON | 0.000 | CPS | 0.009 | API-N |
| 8 057 | 04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | API~N |

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| * * * * * * | * * * * CO | MPU-LOG II - | VERTICAL D | EVIATION | * * * * * | * * * | * * * |
|---|--------------|--------------|------------|--------------------|-----------|-------|-------|
| CLIENT
FIELD OFF
DATA FROM
MAG. DECL | ICE : CALGAR | | | LOG : 05/
: 905 | SA , | 14 | |
| Cable Depth | True Depth | North Dev. | East Dev. | Distance | Azimuth | SANG | SANGB |
| 5.0 | 4.68 | 1.08 | 0,44 | 1.2 | 22.0 | 28.6 | 22.0 |
| 10.0 | 8,98 | -,02 | 64 | 0.6 | 268.4 | 31.0 | 218.3 |
| 15.0 | 13.27 | -1.98 | -2.30 | 3.0 | 229.2 | 30.6 | 213.7 |
| 20.0 | 17.57 | -3.91 | -3.95 | 5.5 | 225.3 | 30.2 | 223.7 |
| 25.0 | 21.90 | -5.78 | -5,60 | 8.0 | 224.1 | 29.9 | 221.8 |
| 30.0 | 26.24 | -7.64 | -7.24 | 10.5 | 223.5 | 29.9 | 220.5 |
| . 35.0 | 30.59 | -9.46 | ~8.68 | 13.0 | 223.2 | 29.9 | 203.3 |
| 40.0 | 34.94 | -11.22 | -10.51 | 15.4 | 223.1 | 29.1 | 223.1 |
| 45.0 | 39.30 | -12.95 | -12.21 | 17.8 | 223.3 | 29.1 | 227.3 |
| 48.4 | 42.29 | -14.15 | -13.32 | 19.4 | 223.3 | 0.0 | 0.0 |

| CGC | | | | | |
|---|----------------------------------|--|---|--------------------------|--------------|
| | / Q | HR-89008 | GAM-D | EN-R | ES-CA |
| WELL :
LOCATION/FIELD :
COUNTY : | SL27470/BL20
TRANSFER | AM-DEN-RES-CAL
3350 | OTHER SER
SCALE
1:200 | EVICES: | |
| STATE :
SECTION : | BRITISH COLI | JABIA
TOWNSHIP | : | RANGE | : |
| DEPTH DRILLER :
LOG BOTTOM : | 05/18/89
100
99.54
0.24 | PERMANENT DATUM
ELEU. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM | : 00
: GL | ELEVAT
KB
DF
GL | : 00
: 00 |
| | 4.5
STEEL
.05 | LOGGING UNIT
FIELD OFFICE
RECORDED BY | | | |
| NEUTRON MATRIX :
REMARKS : | 24.500
2.68
1.0 | RM
RM TEMPERATURE
MATRIX DELTA T | : WATER
: 00
: 00
: 173
: 690 | TYPE
Log
Plot | • |
| LOGGED OPEN HOLE
ANGLE HOLE - 50 I
ALL SERVICES | | THE HORIZONTAL
BJECT TO CGC STAND | ARD TERMS | AND CONC | TIONS |

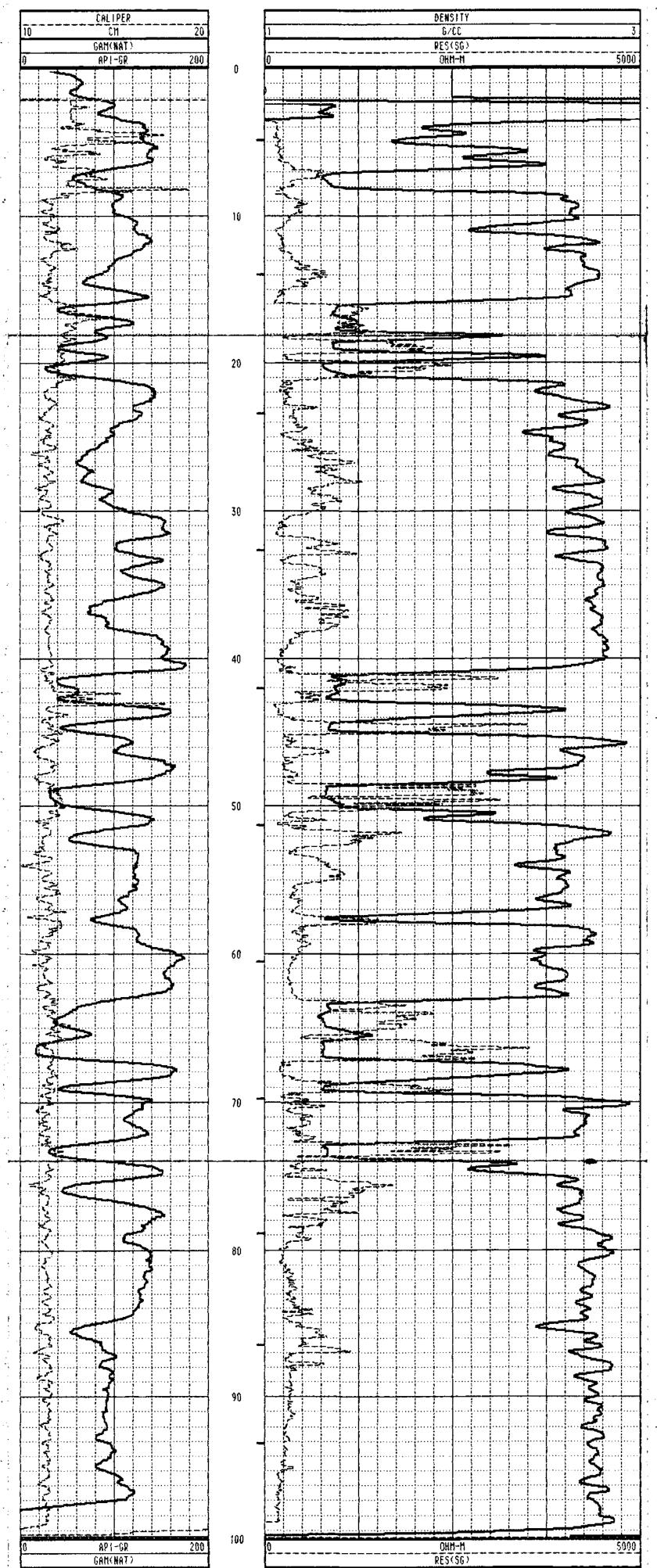
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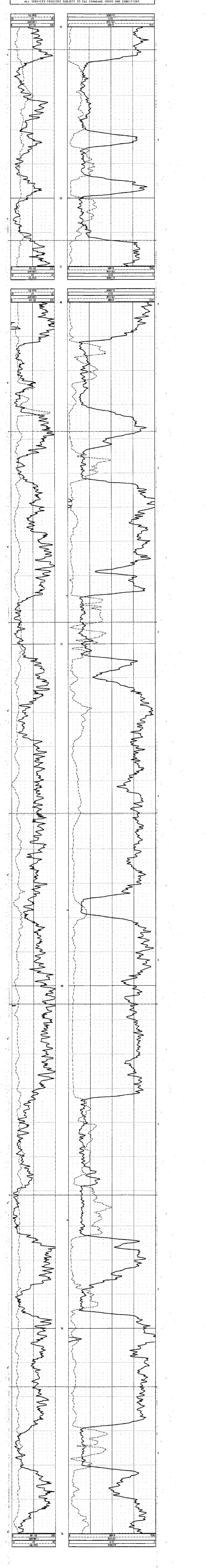
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| | REG/GO/ |
|---|---------|
| 3 | I G/CE |
| | DENSITY |
| | DENSITY |

| | ĨQ | IOL CALIBRA | TION | T00L = 9 | D32AC | SERIA | L NUMBER = | 967 | |
|----|----------|-------------|------|----------|-----------|-------|------------|----------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAN | DARD | |
| 0 | 05/04/89 | 10:17:51 | 0 | GAH(NAT) | 0.000 | CPS | 0.00 | O API-GR | |
| 1 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.00 | 0 API-GR | |
| 2 | Û5/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.10 | 6 6/00 | |
| 3 | 05/04/89 | 12:11:56 | ß | DENSITY | 2439,000 | CPS | 2.12 | 0 6/00 | |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.00 | o ohm-h | |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 | CPS | 178.50 | o ohn-m | |
| 6 | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7.62 | 9 CM | |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.80 | 0 CM | |
| 8 | 05/04/89 | 10:17:51 | Û | DENSITYH | 0.000 | CPS | 0.00 | 0 G/CC | |
| 9 | 05/04/89 | 10:17:51 | Û | DENSITYH | 0.000 | CPS | 0.00 | 0 6/88 | |
| 10 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.00 | 0 CH | |
| 11 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.00 | 0 CH | |

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I | | | | |
|-----------------|----|---------------|---|------------------|-----------|--------|---------|----------|
| a star | M | \mathcal{D} | | | | | | |
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Seconda da seconda da se | | | | NAVA NA | 4 |
| | J | / | | | | | 998 | |
| | | | QHR-890 | 08 | EXP | DENS | 51 | TY |
| | | | | al la sugge | | | 2010 | |
| OMPANY | : | QUINTETTE | COAL LTD. | ſ | OTHER SEP | UICES: | | |
| ELL | : | QHR-89008 | EXP DENSITY | | | | | |
| DCATION/FIELD | : | SL27470/BL | 20350 | | SCALE | | | |
| OUNTY | \$ | TRANSFER | | | 1:20 | | | |
| TATE | : | BRITISH CO | LUMBIA | L | | | | |
| ECTION | ; | | TOWNSHIP | : | | RANGE | : | |
| ATE | : | 05/18/89 | PERMANENT DATU | н: | 00 | ELEVAT | 10 | NS |
| EPTH DRILLER | : | 100 | ELEV. PERM. DA | TUM: | 00 | KB | : | បីម៉ |
| 06 80TTOM | z | 99.54 | LOG MEASURED F | ROM: | GL | DF | I | 00 |
| OG TOP | : | 0.24 | DRL MEASURED F | ROM: | GL | GL | : | 00 |
| ASING DRILLER | : | 4.5 | LOGGING UNIT | : | 8902 | | | |
| ASING TYPE | ; | STEEL | FIELD OFFICE | : | CALGARY | | | |
| ASING THICKNES: | 5: | .05 | RECORDED BY | : | D.ZANKL | | | |
| IT SIZE | : | 12.1 | BOREHOLE FLUID | : | WATER | FILE | : | ORIGINAL |
| AGNETIC DECL. | | | RM | | 00 | TYPE | | 9032AC |
| ATRIX DENSITY | | | RM TEMPERATURE | | 00 | LOG | | 5 |
| LUID DENSITY | | | MATRIX DELTA T | | | PLOT | | QUIN 14 |
| | | | FLUID DELTA T | | 690 | | | 20000 |

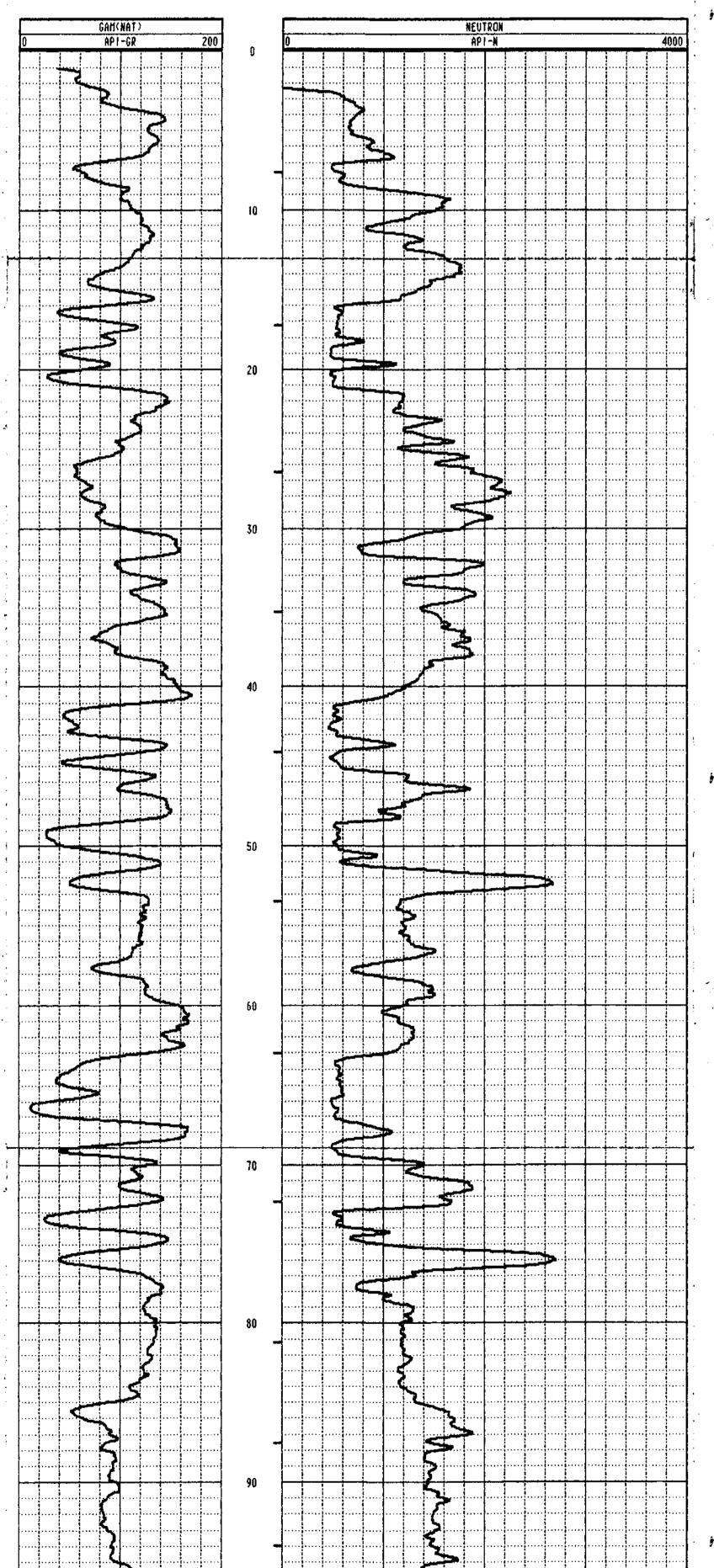


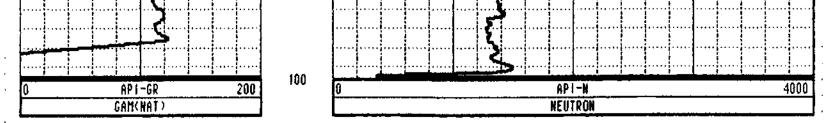


| WELL
LOCATION/FIELD
COUNTY | : QUINTETTE C
: QHR-89008 C
: SL27470/BL2
: TRANSFER
: BRITISH COL
: | AMMA-NEUTRON
10350 | OTHER
SCAL
1:20 | 0 | : |
|----------------------------------|---|-----------------------|-----------------------|-------------|------------|
| DATE | : 05/18/89 | PERMANENT DATUM | : 00 | ELEVAT | IONS |
| | : 100 | ELEV. PERM. DATUM | | КВ | : 00 |
| LOG BOTTOM | 99.62 | | | DF | : 00 |
| LOG TOP | : 1.10 | DRL MEASURED FROM | I: GL | GL | : 00 |
| CASING DRILLER | : 4.5 | LOGGING UNIT | : 8902 | | |
| CASING TYPE | : STEEL | FIELD OFFICE | : CALGA | AR Y | |
| CASING THICKNESS | : .05 | RECORDED BY | : D.ZAM | IKL | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID | : WATER | FILE | : ORIGINAL |
| MAGNETIC DECL. | | RM | : 00 | TYPE | : 9055A |
| MATRIX DENSITY | 2.68 | RM TEMPERATURE | : 00 | LOG | : 4 |
| FLUID DENSITY | : 1.0 | MATRIX DELTA T | : 173 | PLOT | : QUIN O |
| NEUTRON MATRIX | SANDSTONE | FLUID DELTA T | : 690 | THRES | H: 20000 |
| REMARKS | : | | | | |
| LOGGED OPEN HOLI | Ξ | | | | |
| ANGLE HOLE - 50 | DEGREES FROM | THE HORIZONTAL | | | |
| ALL SERVICE | S PROVIDED S | UBJECT TO CGC STAN | DARD TE | RMS AND CON | DITIONS |

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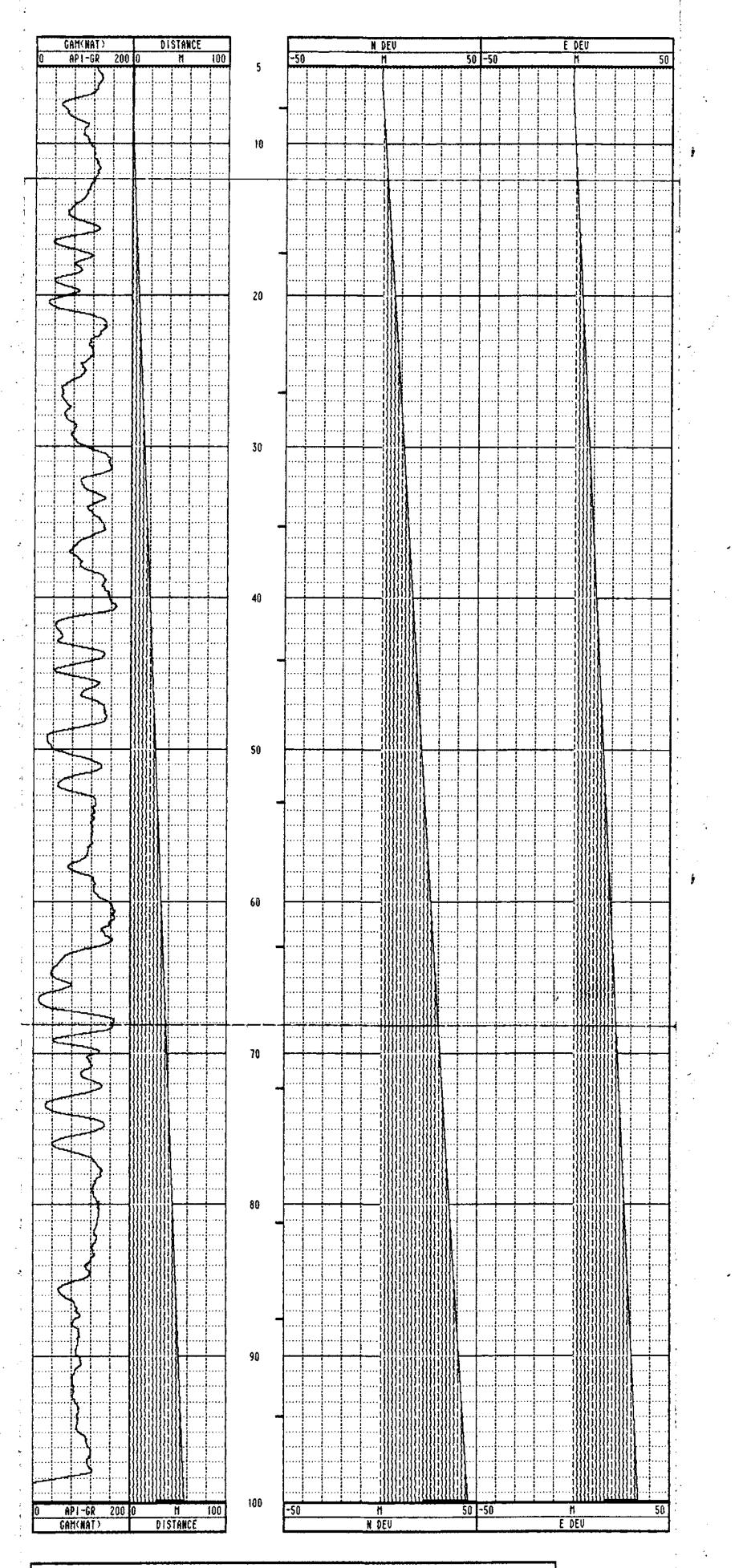
| | TO | DOL CALIBRA | TION | TOOL = 90 |)55A | SERIA | L NUMBER = | 14 | |
|---|----------|-------------|------|-----------|----------|-------|------------|----------|---|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | ISE | STAND | ARD | |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.000 | CPS | |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM | |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM | |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | HV | |
| 6 | 05/04/89 | 08:13:14 | Û | SP | 4095.000 | CPS | 500.000 | MU | : |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | AP!-N | |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | API-N | |

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| LOCATION/FIELD
County | : QHR-89008 D | EVIATION
0350 | OTHER SER
Scale
1:200 | RANGE : |
|--------------------------|---------------|--------------------|-----------------------------|------------------|
| 0201100 | - | TONIONIT | • | |
| DATE | : 05/18/89 | PERMANENT DATUM | : 00 | ELEVATIONS |
| DEPTH DRILLER | : 100 | ELEV. PERM. DATUM | : 00 | KB : 00 |
| LOG BOTTOM | 99.62 | LOG MEASURED FROM | : GL | DF : 00 |
| LOG TOP | : 1.10 | DRL MEASURED FROM | : GL | GL : 00 |
| CASING DRILLER | : 4.5 | LOGGING UNIT | : 8902 | |
| CASING TYPE | : STEEL | FIELD OFFICE | : CALGARY | |
| CASING THICKNESS | : .05 | RECORDED BY | : D.ZANKL | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID | : WATER | FILE : PROCESSED |
| MAGNETIC DECL. | | | : 00 | TYPE : 9055A |
| | : 2.68 | | : 00 | LOG : 6 |
| FLUID DENSITY | : 1.0 | | : 173 | PLOT : QUIN 13 |
| NEUTRON MATRIX | | | : 690 | THRESH: 20000 |
| REMARKS | * | | | |
| LOGGED OPEN HOLE | 5 | | | |
| ANGLE HOLE - 50 | DEGREES FROM | THE HORIZONTAL | | |
| ALL SERVICE | S PROVIDED SU | BJECT TO CGC STAND | ARD TERMS A | AND CONDITIONS |



| TO | OL CALIBRA | TION | TOOL = 90 | 55A | SERIAL | NUMBER = | 14 |
|----------|------------|------|-----------|----------|--------|----------|---------|
| CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | NSE | STAND | ARD |
| 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-GR |
| 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-GR |
| 05/05/89 | 16:59:51 | 0 | PORDSITY | 0.000 | CPS | 145.000 | CPS |
| 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM |
| 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM |
| 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | MV |
| 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | HU |
| 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | AP -N |
| 05/04/89 | 08:53:24 | Û | NEUTRON | 145.000 | CPS | 271,000 | AP1-N |

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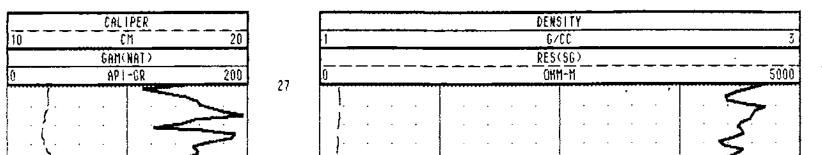
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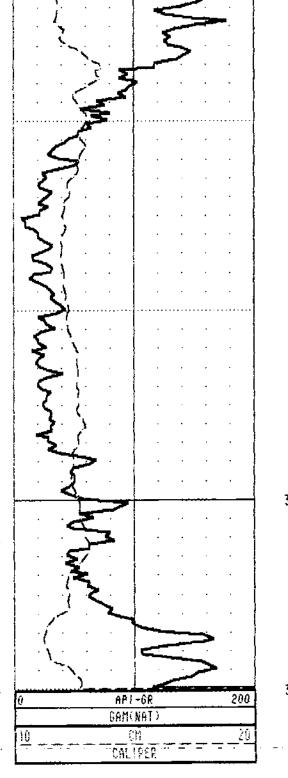
| * | * * * * * | * * * * CO | MPU-LOG II - | VERTICAL D | EVIATION | * * * * * | * * * | * * * |
|---------|----------------------------------|--------------|-------------------|------------------|--------------------|-----------|-------|-------|
| | CLIENT
FIELD OFF
DATA FROM | ICE : CALGAR | TTE COAL LTD
Y | DATE OF
PROBE | 10G : 05/
: 905 | • | 14 | ٤ |
| | MAG. DECL | | 00 | DEPTH U | NITS : MET | ER LOG | 6 | |
| Ca | ble Depth | True Depth | North Dev. | East Dev. | Distance | Azimuth | SANG | SANGE |
| 1,4 6-1 | 5.0 | 4.44 | 38 | -1.06 | | 250.4 | 40.9 | 213.6 |
| 1 | 10.0 | 8.30 | 1.30 | 11 | 1.3 | 355.3 | 40.1 | 34.4 |
| | 15.0 | 12.17 | 3.79 | 1.82 | 4.2 | 25.7 | 39.1 | 44.8 |
| i. | 20.0 | 16.06 | 6.25 | 3.77 | 7.3 | 31.1 | 38.9 | 34.3 |
| • | 25.0 | 19.94 | 8,75 | 5.68 | 10.4 | 33.0 | 39.2 | 35.2 |
| • | | 23.83 | 11.19 | 7.62 | 13.5 | 34.3 | 38.6 | 43.9 |
| | 30.0 | 27.74 | 13.62 | 9.56 | 16.6 | 35.1 | 38.3 | 38.4 |
| 1 | 35.0 | | 16.04 | 11.47 | 19.7 | 35.6 | 37.6 | 38.9 |
| | 40.0 | 31.67 | 18.46 | 13.41 | 22.8 | 36.0 | 39.1 | 38.6 |
| 1 j | 45.0 | 35.57 | | 15.33 | 25.9 | 36.2 | 37.8 | 36.2 |
| · · | 50.0 | 39.47 | 20.93 | | | 36.4 | 38.4 | 45.1 |
| · 1 | 55.0 | 43.36 | 23.40 | 17.24 | 29.1 | | | 36.4 |
| | 60.0 | 47.29 | 25.82 | 19.17 | 32.2 | 36.6 | 37.8 | |
| : | 65.0 | 51.23 | 28.24 | 21.05 | 35.2 | 36.7 | 37.7 | 33.1 |
| • | | | 70 / 0 | 77 00 | 707 | マム・フ | 37.6 | 39.3 |

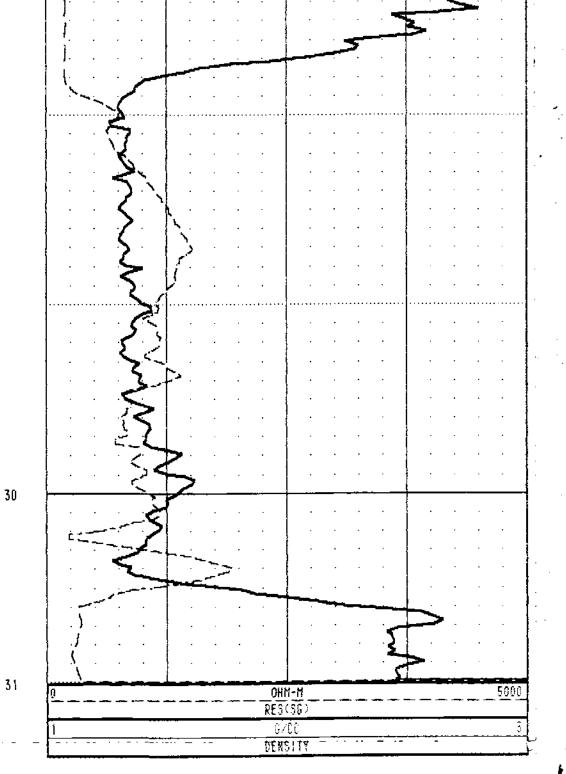
| 70.0
75.0
80.0
85.0
90.0
95.0 | 59.18
59.12
63.05
66.97
70.87
74.80 | 33.12
35.63
38.11
40.60
43.08 | 24.73
26.52
28.37
30.26
32.09 | 41.3
44.4
47.5
50.6
53.7 | 36.7
36.7
36.7
36.7
36.7
36.7 | 38.8
37.4
39.0
38.3
38.1 | 23.8
38.2
38.9
36.7
36.3 | |
|--|--|---|---|--------------------------------------|--|--------------------------------------|--------------------------------------|--|
| 99.6 | 78.46 | 45.32 | 33.77 | 56.5 | 36.7 | 0.0 | 0.0 | |

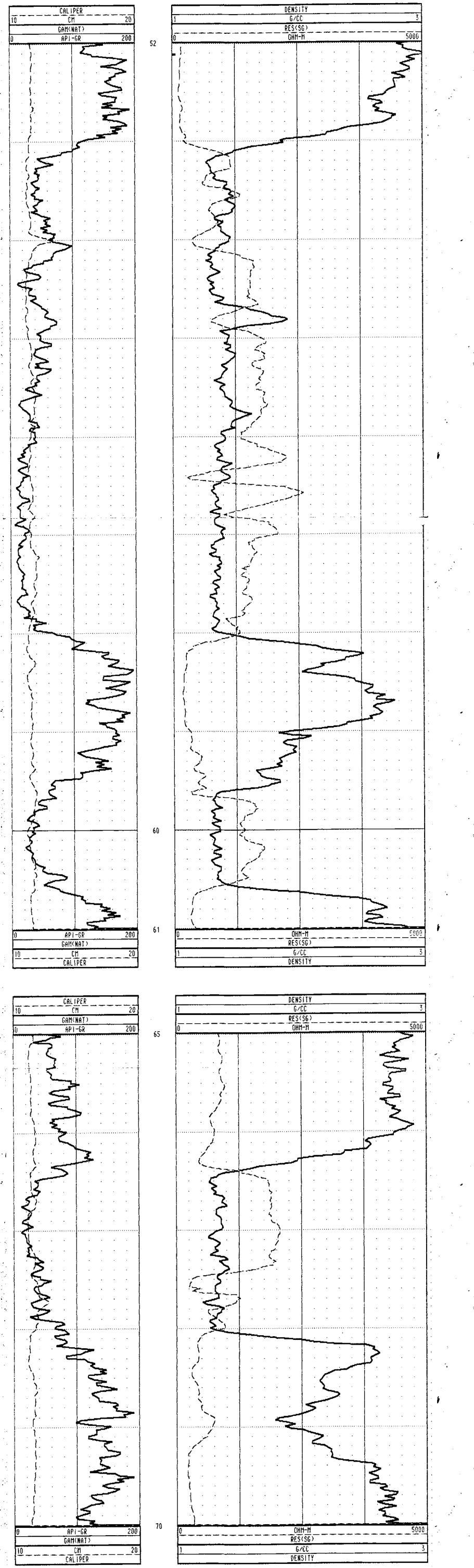
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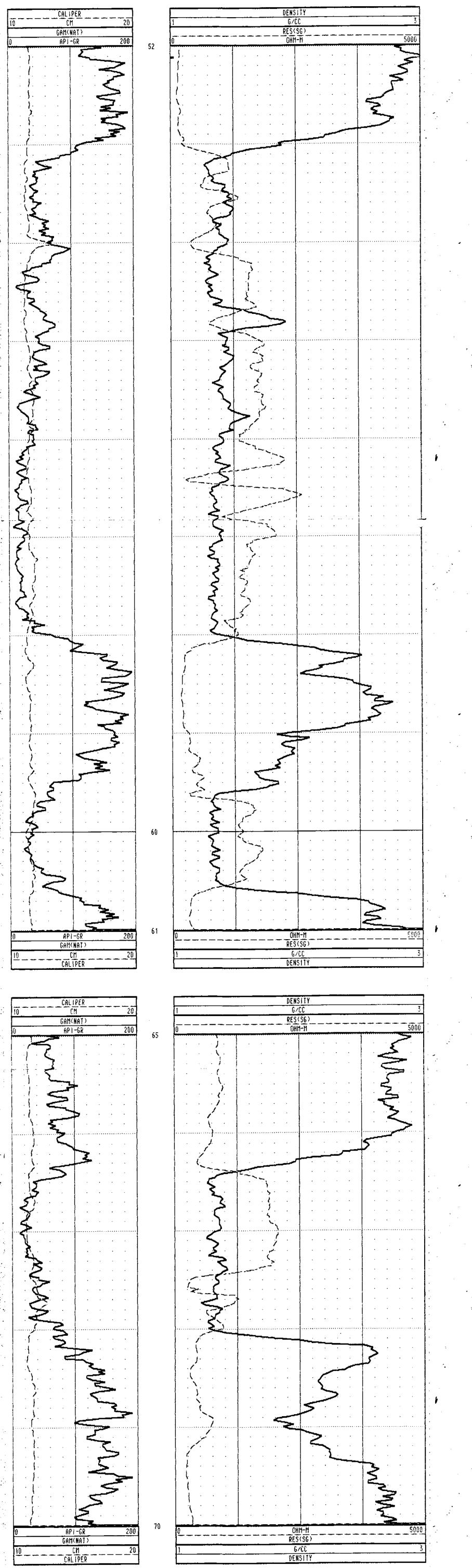
| (CG | | | | | | |
|--|--|--|--------------------------------|-----------------------------|--|--|
| | <u>s</u> / [| QHR 8 9 0 0 9 | | | ITY | |
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QHR89009 E) | KP DENSITY | OTHER S
Scale
1:20 | ERVICES:
Range | | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER | : 131
: 130.82
: 0.24
: 4.5 | PERMANENT DATUM
ELEV. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM
LOGGING UNIT | : 00
: GL
: GL
: 8902 | ELEVAT
KB
DF
GL | IONS
: 00
: 00 | |
| MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY | : .05
: 12.1
: 24.500
: 2.68
: 1.0 | RECORDED BY :
BOREHOLE FLUID :
RM : | | FILE
TYPE
LOG
PLOT | : ORIGINAL
: 9032AC
: 1
: QUIN 14
H: 20000 | |
| REMARKS
LOGGED OPEN HOL
VERTICAL HOLE | :
£ | UBJECT TO CGC STAND | | | | |



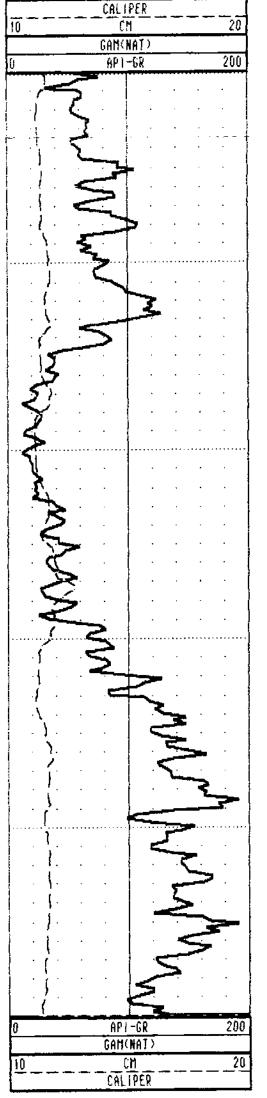








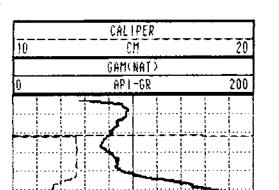
| 0 | 0HM-M | 5000 |
|---|---------|------|
| | RES(SG) | |
| 1 | 6700 | 3 |
| | DENSITY | |





| LOCATION/FIELD
COUNTY | : QHR89009 GA | M-DEN-RES-CAL | OTHER SERVI
SCALE
1:200 | ICES; |
|--|--|---|-------------------------------|--|
| SECTION | : | TOWNSHIP : | £ | RANGE : |
| DEPTH DRILLER | : 05/19/89
: 131
: 130.82
: 0.24 | PERMANENT DATUM :
ELEU. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | 00
GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING DRILLER
Casing Type
Casing Thickness | : STEEL | LOGGING UNIT :
FIELD OFFICE :
RECORDED BY : | | |
| MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOL
VERTICAL HOLE | : 24.500
: 2.68
: 1.0
: SANDSTONE
:
E | RM :
RM TEMPERATURE :
MATRIX DELTA T : | 00
00
173
690 | FILE : ORIGINAL
TYPE : 9032AC
LOG : 1
PLOT : QUIN 12
THRESH: 20000 |

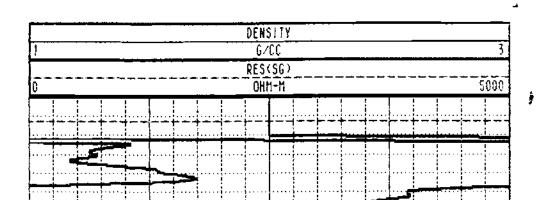
ĵ.

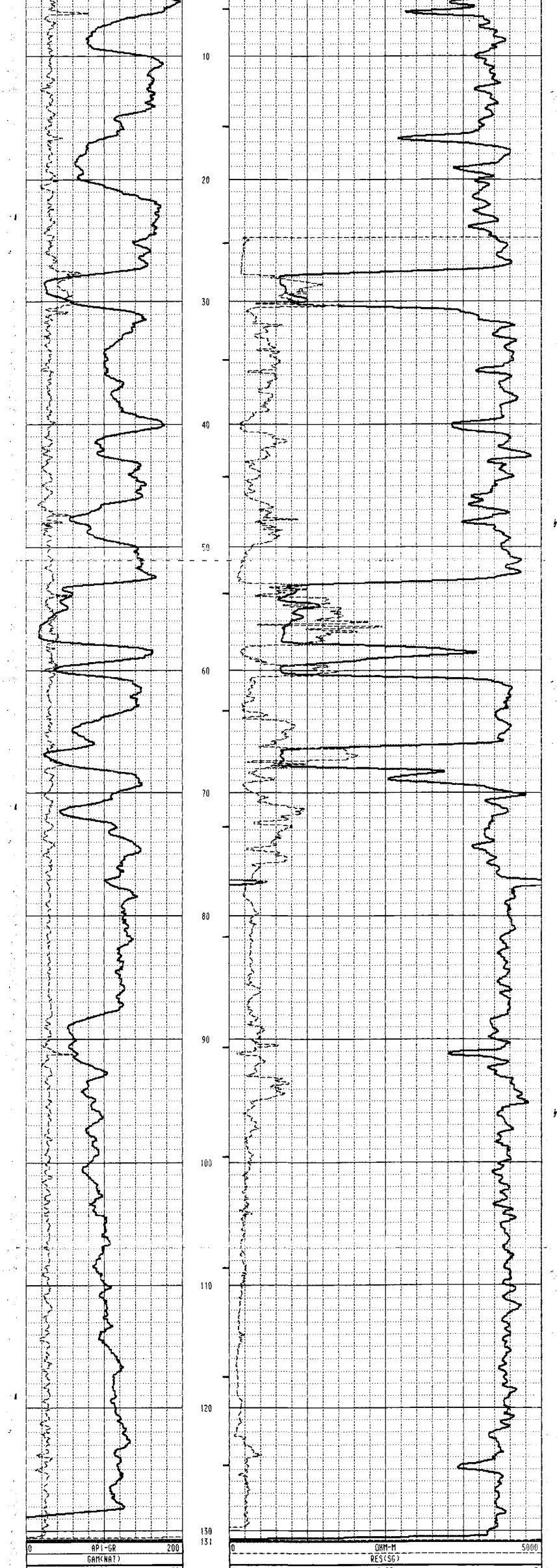


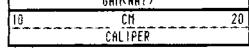
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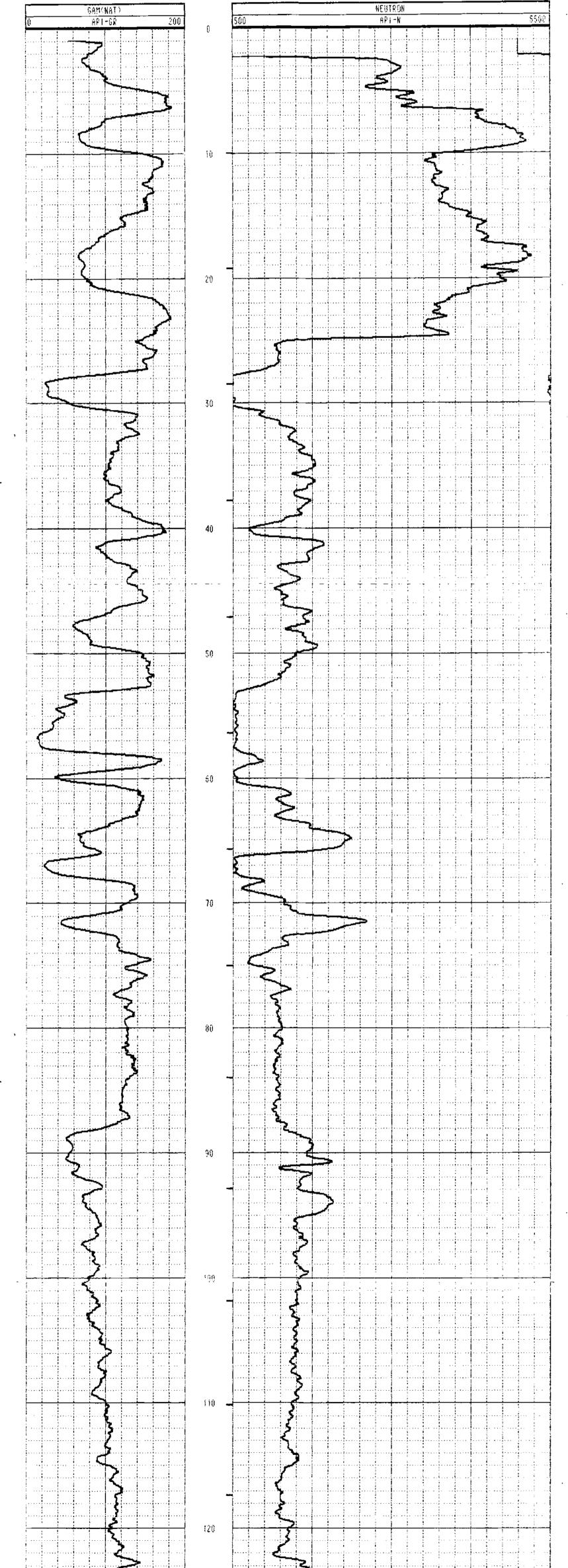
- (-

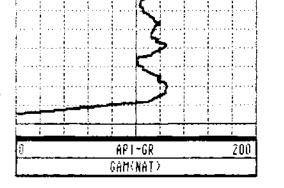
| | REJ 407 | 1 |
|---|---------|-----|
| i | 6766 3 |] · |
| i | DENSITY | |

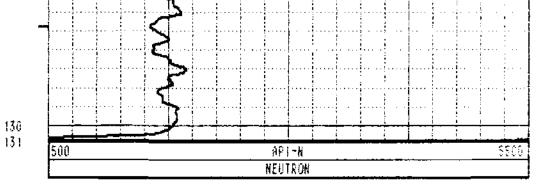
ģ

| | TOOL CALIBRATION | | | 100L = 90 | D32AC SEA | RIAL NUMBER = | 967 |
|----|------------------|----------|------|-----------|---------------|---------------|-----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STAN | DARD |
| Ű | Ú5/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 CPS | \$ 0.00 | 0 API-6R |
| i | 05/04/89 | 10:17:51 | 9 | GAM(NAT) | 0.000 CPS | S 0.00 | û API∽GR |
| 2 | 05/04/89 | 12:11:56 | Ð | DENSITY | 6166.000 CPS | S 1.10 | 6 6/00 |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 CPS | \$ 2.12 | 0 G/CC |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 CPS | s 0.00 | 0 0811-11 |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 CPS | s 178.50 | 0 081-11 |
| δ | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 CPS | S 7.62 | 0 CM |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 CPS | S 17.80 | 0 CM |
| 8 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 CPS | S Û.00 | 0 6/CC |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 CPS | s 0.00 | 0 6/00 |
| 10 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 CPS | S 0.00 | 0 CM |
| 11 | 05/04/89 | 10:17:51 | Ū | CALIPERL | 0.000 CPS | S 0.00 | 0 CM |

| | | ≥\ | Cen | | | | | |
|---------------------------|-----|--------------------------------|--|----------|------------|--------------|-----|-------------|
| | y | | | | | | | |
| \ 4 | Ì | 1 - | | | | | | |
| | | | QHR 89009 | G | AMMA- | -NEU | T | RON |
| | | | | <u>.</u> | | | | |
| COMPANY | | QUINTETTE C | | | OTHER SER | U:CES: | | |
| HELL
LOCATION/FIELD | : | QHR89009 GA | IMMA-NEUTRON | | SCALE | 1 | | |
| COUNTY | | TRANSFER | | | 1:200 | ا
ر | | |
| STATE | : | BRITISH COL | .UMBIA
Tounship | : | | RANGE | | |
| SECTION | • | | | • | | | | |
| ЭнтЕ | | 05/19/89 | | | 00
55 | ELEVAT
Ke | | NS
OO |
| DEPTH DRILLER | : | 131
130.82 | ELEV. PERM. DATUM
LOG MEASURED FROM | | | 50
01 | | 00
00 |
| LOG BOTTOM
Log top | : | 0.92 | DRL MEASURED FROM | | | 61. | : | 00 |
| CASING DRILLER | : | 4.5 | LOGGING UNIT | • | 8902 | | | |
| CASING TYPE | : | STEEL | | | CALGARY | | | |
| CASING THICKNES | 3: | .05 | RECORDED BY | : | D,ZANKL | | | |
| BIT SIZE | : | 12.1 | BOREHOLE FLUID | : | ИATER | FILE | | ORIGINAL |
| MAGNETIC DECL. | | 24.500 | • • • • | | 00 | TYPE | | 9055A
~ |
| MATRIN DENSITY | | | | | 00 | LOG
Alot | | u
Q⊎IN 0 |
| FLUID DENSITY | | 1.0
• • • • • • • • • • • • | | | 173
690 | | | 20000 |
| NEUTRON MATRIX | | SHNUSTONE | 75010 V5518 I | ٠ | 020 | | | |
| REMARKS
Logged open Ho | LE. | | | | | | | |
| VERTICAL HOLE | | | | | | | | |
| ALL SERVI | CES | PROUIDED S | UBJECT TO CGC STAND | ់អ | RD TERMS | AND CON | DII | TIONS |
| | | ····· | | | <u> </u> | | | |



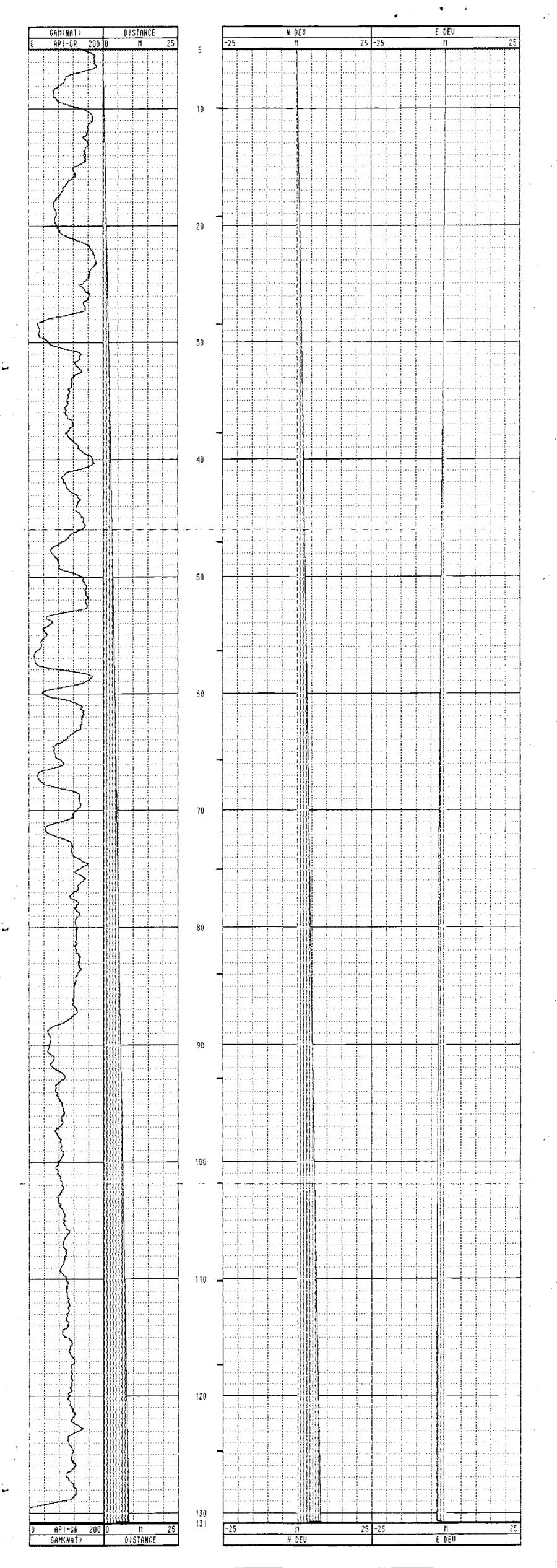




| | ŤŨ | IOL CALIBRA | ITION | 100L = 90 | 558 | SERIA | L NUMBER = | 14 |
|---|----------|-------------|-------|------------|----------|--------------|------------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | SE | STAND | ARD |
| Ū | 05/04/89 | 08:10:36 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | AP : -GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I-GR |
| 2 | 05/05/89 | 16:59:51 | Ũ | POROSITY | 0.000 | ĉ p s | 145.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | 06M |
| 4 | 05/84/89 | 08:15:10 | Ũ | RES | 5212.000 | CPS | 1000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | 0 | 5 P | -9.000 | CPS | 0.000 | MÜ |
| 5 | 05/04/89 | 08:13:14 | Ū | SP | 4095.000 | CPS | 500,000 | Mû |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | AP I -N |
| 8 | 05/04/89 | 08:53:24 | Û | NEUTRON | 145.000 | CPS | 27:.000 | API-N |



| LOCATION/FIELD
COUNTY | : QHR89009 (
:
: TRANSFER | DEVIATION | OTHER SEI
Scale
1:200 | RVICES: |
|---|---|---|---|--|
| STATE
Section | : BRITISH CI
: | TOWNSHIP : | | RANGE : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 131
: 130.82 | PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | 00
GL | KB : 00
DF : 00 |
| CASING DRILLER
Casing type
Casing thicknes | : 4.5
: STEEL
S: .05 | FIELD OFFICE : | 8902
Calgary
D.Zankl | |
| MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HO
UERTICAL HOLE | : 24.500
: 2.68
: 1.0
: SANDSTONE
:
LE | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER 00 00 173 690 | TYPE : 9055A
LOG : 2
PLOT : QUIN 13
THRESH: 20000 |



| | 10 | OL CALIBRA | TION | 100L = 90 | 55A | SERIA | L NUMBER ≈ | 14 |
|--------|----------|------------|------|-----------|----------|-------|------------|--------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD |
| | 05/04/89 | 08:10:36 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR |
| | 05/04/89 | 88:10:36 | Û | GAM(NAT) | 0.000 | CPS | 9.000 | API-GR |
| •
• | 05/05/89 | 16:59:51 | Û | POROSITY | 0.000 | CPS | 145.000 | CPS |
| ļ | 05/04/89 | 08:15:10 | Q | RES | 9707.000 | CPS | 0.000 | 0HH |
| ļ | 05/04/89 | 08:15:10 | Û | RES | 5212.000 | CPS | 1000.000 | OHM |
| ò | 05/04/89 | 08:13:14 | Û | SP | -9.000 | CPS | 0.000 | MV |
| j. | 05/04/89 | 08:13:14 | Ũ | SP | 4095.000 | CPS | 500.000 | HV |
| ł | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | API-N |
| \$ | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | API-N |

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * * * *

| CLIENT | ; QUINTETTE COAL LTD. | HOLE ID. : QHP | (89009 GAMM |
|--------------|-----------------------|-------------------|-------------|
| FIELD OFFICE | : CALGARY | DATE OF LOG : 05/ | 19/89 |
| DATA FROM | : | PROBE : 905 | J5A , 14 |
| MAG. DECL. | : 24,500 | DEPTH UNITS : MET | TER 1.06 2 |
| | | | |

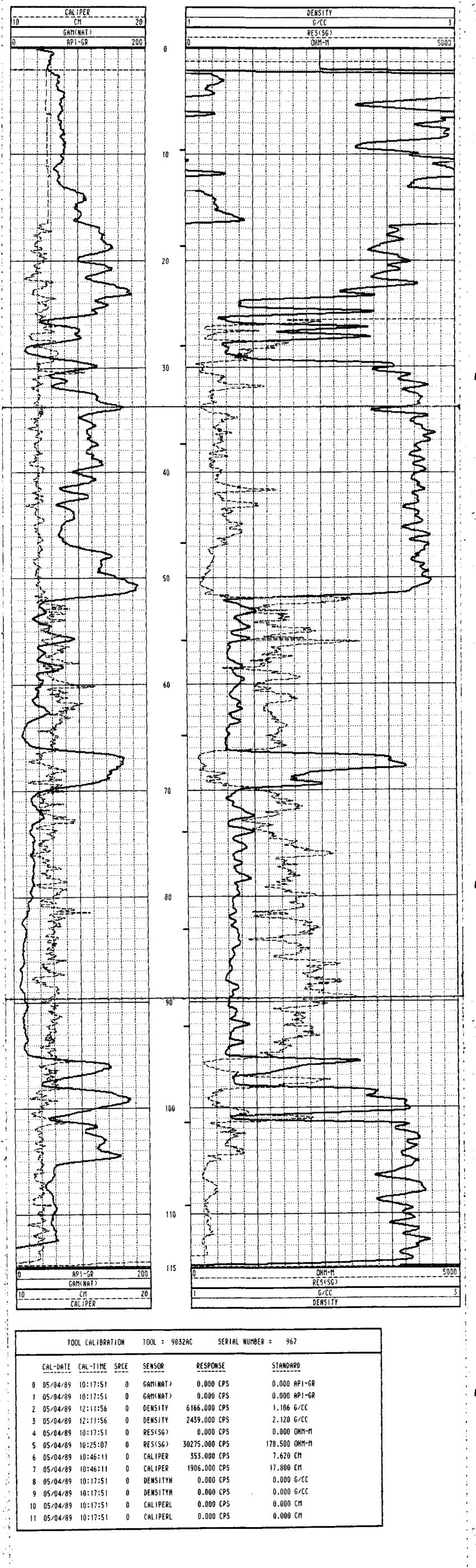
| Cable Depth | True Depth | North Dev. | East Dev. | Distance | Azimuth | SANG | SANGB |
|---------------|------------|------------|-----------|----------|---------|-------------|-------|
| 5.0 | 4.99 | 0.07 | 01 | 0.1 | 349.4 | 4.1 | 323.5 |
| , 10.Ö | 9.98 | 0.37 | 06 | Ō.4 | 350.2 | 4.2 | 339.2 |
| 15.0 | 14.96 | 0.70 | 23 | 0.7 | 341.8 | 4.1 | 341.2 |
| 20.0 | 19,95 | 1.04 | 41 | 1 . 1 | 338.5 | 4.3 | 328.0 |
| 25.0 | 24.94 | 1.37 | 59 | 1.5 | 336.7 | 4.6 | 326.5 |
| 30.0 | 29.92 | 1.70 | ~.78 | 1.9 | 335.4 | 4.3 | 323.8 |
| 35.0 | 34,91 | 2.00 | 97 | 2.2 | 334.1 | 4,2 | 326.0 |
| 40.0 | 39.90 | 2,28 | -1.18 | 2.6 | 332.7 | 3.5 | 314.9 |
| 45.0 | 44.88 | 2.56 | -1.38 | 2.9 | 331.6 | 3.6 | 320.3 |
| 50.0 | 49.87 | 2.84 | -1.58 | 3.2 | 330.9 | ः 4 | 305.6 |
| 55.O | 54.86 | 3.11 | -1.75 | 3.6 | 330.6 | 3.6 | 316.0 |
| 60 . 0 | 59.85 | 3.39 | -1.91 | 3.9 | 330.6 | 3.5 | 330.2 |
| 65.O | 64,84 | 3.67 | -2.07 | 4.2 | 330.6 | 3.5 | 323.7 |
| 70.0 | 69.83 | 3.94 | -2.21 | 4.5 | 330.7 | 3.6 | 335.9 |
| 75.0 | 74.82 | 4.21 | -2.34 | 4.8 | 330.9 | 3.4 | 337.0 |
| 80.0 | 79.81 | 4.48 | -2.46 | 5.1 | 331.2 | 3.7 | 342.8 |
| 85.0 | 84.80 | 4.78 | -2.57 | 5,4 | 331.8 | S.8 | 342.1 |
| 90.O | 89.79 | 5.09 | -2.67 | 5.8 | 332.3 | 3.9 | 342.3 |
| 95.0 | 94.78 | 5.42 | -2.77 | 6.1 | 332.9 | 4.0 | 343.6 |
| 100,0 | 99.77 | 5.75 | -2.85 | 6.4 | 333.6 | 3.6 | 352.3 |
| :05.0 | 104.76 | 6.07 | -2.94 | 6.7 | 334.2 | 3.7 | 354.2 |
| 110.0 | 109,74 | 6.40 | -3.02 | 7.1 | 334.7 | 4 .Õ | 346.7 |
| 115.0 | 114.73 | 6.72 | -3,09 | 7.4 | 335.3 | 3.9 | 356.4 |
| 120.0 | 119.72 | 7.05 | -3.14 | 7.7 | 336.0 | 3.8 | 355.6 |
| 125.0 | 124.71 | 7,40 | -3.18 | 8.0 | 336.8 | 4.2 | 349.0 |
| 130.0 | 129.70 | 7.73 | -3.20 | 8.4 | 337.5 | 3.9 | 357.4 |
| 130.8 | 130.52 | 7.79 | -3,20 | 8.4 | 337.6 | 0.0 | 0.0 |

, °



| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QHR8
:
: TRAN | TETTE COAL LTD.
3010 Gam-Den-Res-Cal
3fer
1sh columbia | OTHER SEA
Scale
1:200 | RUICES: |
|--|--|---|-----------------------------|--|
| SECTION | : | | : | RANGE : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 05/20
: 115
: 115
: 115 | ELEV. PERM. DATUM
5.06 LOG MEASURED FROM | : 00
: GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| | : 16.5
: STEEL
:: .05 | LOGGING UNIT
FIELD OFFICE | | |
| MATRIX DENSITY
Fluid density | : 24.
: 2.68
: 1.0
: SANDS
: | 500 RM
RM TEMPERATURE
MATRIX DELTA T | | FILE : ORIGINAL
TYPE : 9032AC
LOG : 6
PLOT : QUIN 12
THRESH: 20000 |
| | | S FROM THE HORIZONTAL
IDED SUBJECT TO CGC STAND | ARD TERMS (| AND CONDITIONS |





| 0 | AP 1-GR | 200 | 115 | <u>0</u> |
|----|----------|-----|-----|----------|
| | GAH(NAT) | | | |
| 10 | MC | 20 | | ſ |
| | CALIPER | | | |

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| OHH-M | 5000 |
|---------|-----------------|
| RES(SG) | |
| G/CC | 3 |
| DENSITY | |
| | RES(SG)
G/CC |

1

÷) 5 ł

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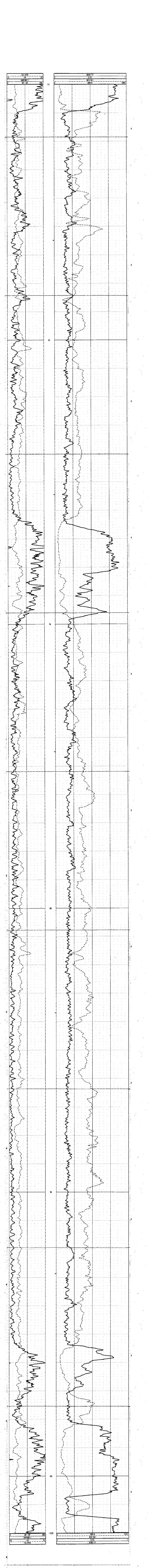
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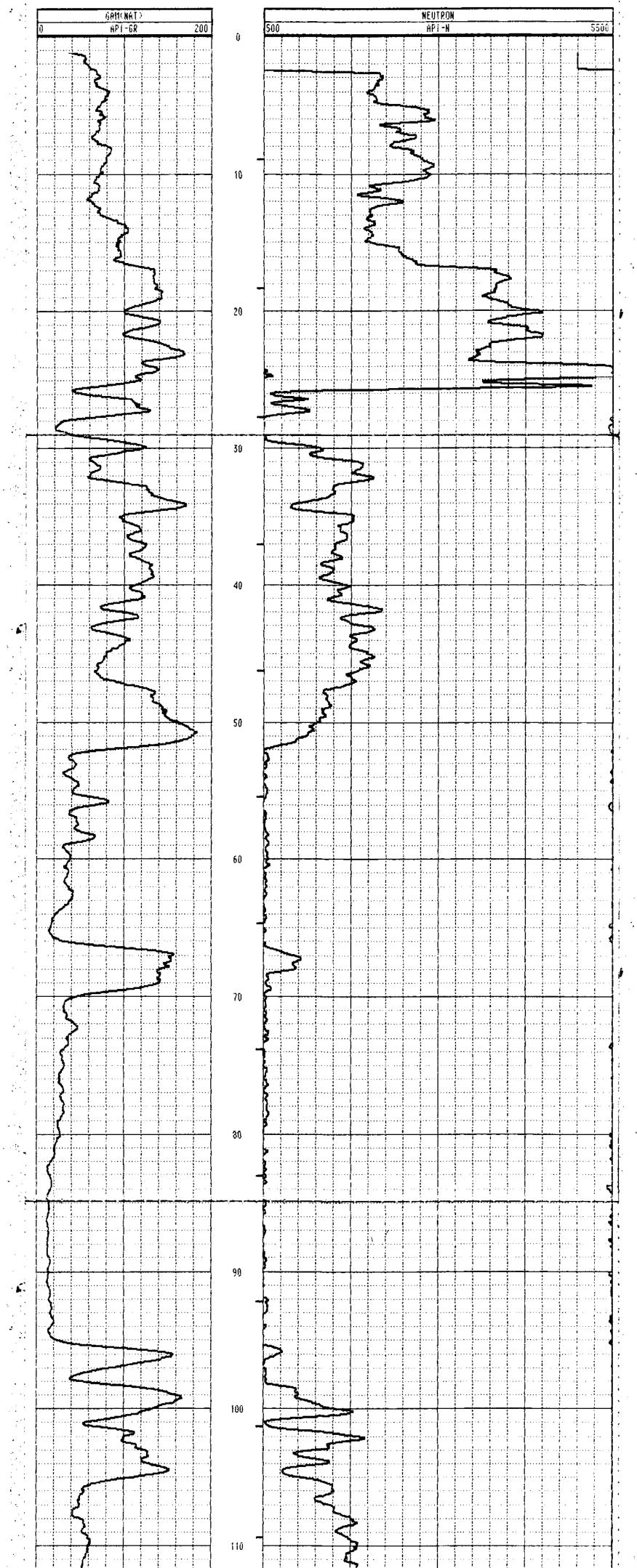
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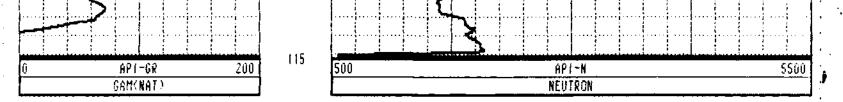
| | TOOL CALIBRATION | | | 100L = 90 |)32AC | SERIA | L NUMBER = 9 | 967 | |
|-----|------------------|----------|------|-----------|-----------|-------|--------------|----------|---|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | ISE | STAN | ARD | - |
| . 0 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 |) API-GR | |
| 1 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.009 | CPS | 0.000 |) AP1-GR | |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.100 | 6 6700 | |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.12 | 0 6700 | |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.00 | D OHM-M | |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 | CPS | 178.50 | O OHM-M | |
| 6 | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7.62 | D CM | |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.80 | 0 CM | |
| 8 | | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.001 | 0 6700 | |
| 9 | | 10:17:51 | Ð | DENSITYH | 0.000 | CPS | . 0.001 | 0 6/00 | |
| 10 | | 10:17:51 | Û | CALIPERL | 0.000 | CPS | 0.00 | 0 CM | |
| 11 | | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.00 | 0 CH | |

| (Cgt | | <i>Ceri</i> | | | ネリノ | | 3 |
|---|---|--|-------------|---------------------------------|--------------------------------------|-------|---|
| | | QHR 8 9 0 1 0 | 1044 | EXP D | ENS | I | TY |
| LOCATION/FIELD
COUNTY | : QUINTETTE C
: QHR89010 EX
:
: TRANSFER
: BRITISH COL
: | P DENSITY
Umbia | | OTHER SERU
Scale
1:200 | | | |
| DATE
Depth driller
Log bottom | ·
· 05/20/89
· 115
· 115.06
· 0.18 | TOWNSHIP
PERMANENT DATUM
ELEU. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM | : | 00
GL | RANGE
Elevat
KB
DF
GL | : | NS
DU
DD
00 |
| CASING DRILLER
Casing type
Casing thickness | : STEEL | LOGGING UNIT
Field office
Recorded by | : | 8902
Calgary
D.Zankl | | | |
| MAGNETIC DECL.
MATRIX DENSITY | : 2.68
: 1.0 | | 1
1
1 | WATER
00
00
173
690 | FILE
TYPE
LOG
PLOT
THRES | :: | ORIGINAL
9032AC
6
QUIN 14
20000 |
| LOGGED OPEN HOL
Angle Hole - 60
All Servi | DEGREES FROM | THE HORIZONTAL
SUBJECT TO STANDAD | 20 | TERMS AND | CONDI | , I E | INS 2 |



| - (Ca | | GHR 89010 | GAMM | A-NEUT | RON |
|---|---|---|---------------------------|---------------------|---|
| COMPANY
NELL
LOCATION/FIELD
COUNTY
STATE | : QUINTETTE
: QHR89010
:
: TRANSFER
: BRITISH C | GAMMA-NEUTRON
Olumbia | OTHER S
SCALE
1:200 | BERUICES: | |
| SECTION
DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | | TOWNSHIP
PERMANENT DATUM
ELEV. PERM. DATU
LOG MEASURED FRO
DRL MEASURED FRO | IM: 00
)M: GL | ELEVATI
KB
DF | - |
| CASING DRILLER
Casing type
Casing thicknes | : STEEL
S: .05 | LOGGING UNIT
FIELD OFFICE
RECORDED BY | : CALGAR)
: D.ZANKI | - | |
| | : 2.68
: 1.0 | BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T | : 00
: 00
: 173 | TYPE
Log
Plot | : ORIGINAL
: 9055A
: 5
: QUIN O
: 20000 |
| | O DEGREES FR | OM THE HORIZONTAL
SUBJECT TO CGC STA | NDARD TERM | S AND CONDI | TIONS |

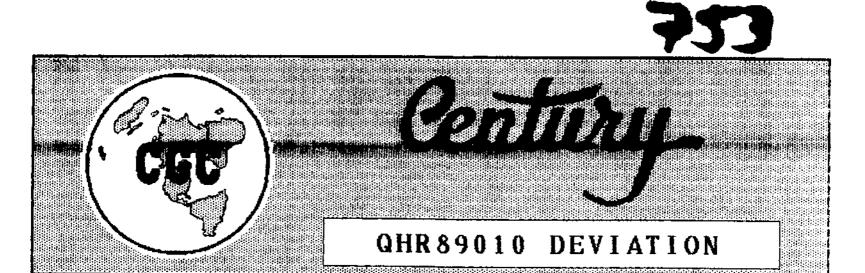




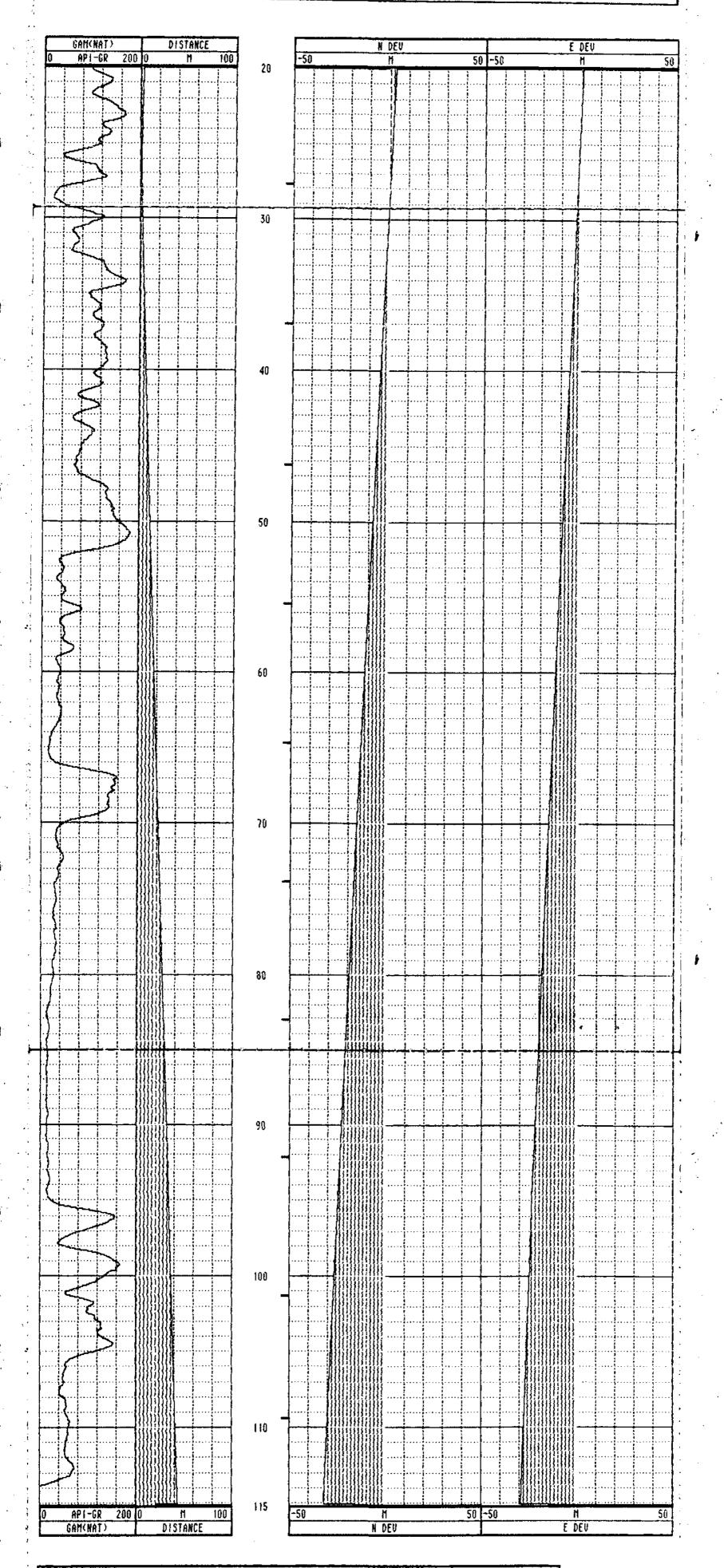
| | TOOL CALIBRATION | | | 108L = 9 | TOOL ≈ 9055A SERIAL | | | = | 14 |
|---|------------------|----------|------|----------|---------------------|-----|----|---------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | | STAND | ARD |
| Û | 05/04/89 | 08:10:36 | Ù | GAM(NAT) | 0.000 | CPS | | 0.000 | AP I -GR |
| ł | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | Ú.000 | CPS | | 0.000 | AP I -GR |
| 2 | 05705789 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | | 145.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | | 0.000 | OHM |
| 4 | 05/04/89 | 08:15:10 | Û | RES | 5212.000 | CPS | 1(| 00.000 | OHN |
| 5 | 05/04/89 | 08:13:14 | Û | \$P | ~9.000 | CPS | | 0.000 | nu |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 5 | 500.ÚOO | MU |
| 7 | 05/04/89 | 08:10:36 | Û | NEUTRON | 0.000 | CPS | | 0.000 | API-N |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 2 | 271.000 | API−N |

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| COMPANY
WELL
Location/Field
County
State | :: | QUINTETTE (
QHR89010 DE
TRANSFER
BRITISH COU | EVIATION | OTHER S
Scale
1:200 | BERVICES: | |
|--|-----|---|------------------------|---------------------------|-----------|-------------|
| SECTION | : | | TOWNSHIP | : | RANGE | : |
| DATE
DEPTH DRILLER | | 05/20/89
115 | | | ELEVAT | |
| LOG BOTTOM | | 115.18 | ELEV. PERM, DATUM | | KB | : 00 |
| LOG TOP | | | LOG MEASURED FROM | | DF | : 00 |
| LUG IGP | • | 1.18 | DRL MEASURED FROM | : 61 | GL | : 00 |
| CASING DRILLER | : | 16.5 | LOGGING UNIT | : 8902 | | |
| CASING TYPE | : | STEEL | FIELD OFFICE | : CALGARY | | |
| CASING THICKNES | 5: | .05 | • • • • • • • • | : D.ZANKL | | |
| BIT SIZE | | 12.1 | BOREHOLE FLUID | : WATER | FILE | : PROCESSED |
| MAGNETIC DECL. | : | 24.500 | RM | : 00 | TYPE | : 9055A |
| MATRIX DENSITY | | 2.68 | RM TEMPERATURE | : 00 | L06 | : 1) |
| FLUID DENSITY | | | MATRIX DELTA T | : 173 | PLOT | : QUIN 13 |
| NEUTRON MATRIX | : | SANDSTONE | FLUID DELTA T | 690 | THRESH | ····· |
| REMARKS | : | | | | , | 10000 |
| LOGGED OPEN HO | | | | | | |
| ANGLE HOLE - 60 | 0 C | EGREES FROM | THE HORIZONTAL | | | |
| ALL SERVIC | ΈS | PROVIDED SI | UBJECT TO CGC STAND | ARD TERMS | AND COND | เราเกมร |



| | TOOL CALIBRATION | | | 100L = 90 | 55A SERIF | NUMBER = | 4 |
|---|------------------|----------|------|-----------|--------------|----------|--------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDA | IRD |
| 0 | 05/04/89 | 08:10:36 | Û | GAM(NAT) | 0.000 CPS | 0.000 | API-GQ |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CPS | 0.000 | API-GR |
| 2 | 05/05/89 | 16:59:51 | Û | POROSITY | 0.000 CPS | 145.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | Û | RES | 9707.000 CPS | 0.000 | OHM |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 CPS | 1000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 CPS | 0.000 | MU |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 CPS | 500.000 | MV |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 CPS | 0.000 | API-N |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 CPS | 271.000 | API-N |

| | * * * * * * | **** 00 | MPU-LOG II - | VERTICAL D | EVIATION | * * * * * | * * * | * * * |
|---|-------------|--------------|--------------|------------|------------|-----------|-------|-------|
| ł | CLIENT | : QUINTE | TTE COAL LTD | . HOLE ID | . : QHR | 89010 GAM | M | |
| | FIELD OFF | ICE : CALGAR | Y | DATE OF | 1,06 : 05/ | 20/89 | | |
| | DATA FROM | | | PROBE | : 908 | isa , | 14 | |
| ļ | MAG. DECL | . : 24.5 | 00 | DEPTH U | NITS : MET | ER LOG | 0 | |
| ì | able Depth | True Depth | North Dev. | East Dev. | Distance | Azimuth | SANG | SANGB |
| | 20.0 | 17.64 | 3.34 | 0.88 | 3.4 | 14.8 | 32.5 | 227.7 |
| i | 25.0 | 21.96 | 1.43 | 73 | 1.6 | 333.0 | 29.9 | 221.2 |
| ÷ | 30.0 | 26.29 | 43 | -2.29 | 2.3 | 259.3 | 29.4 | 221.1 |
| | 35.0 | 30.62 | -2.29 | -3,84 | 4.5 | 239.2 | 30.7 | 199.7 |
| | 40.0 | 34.91 | -4.15 | -5.39 | 6.8 | 232.4 | 31.3 | 230.5 |
| | 45.0 | 39.17 | -5,96 | -7.13 | 9.3 | 230.1 | 31.1 | 227.3 |
| Ļ | 50.0 | 43.45 | -7.82 | -8.79 | 11.8 | 228.3 | 31.1 | 227.5 |
| į | 55.0 | 47.71 | -9.69 | -10.52 | 14.3 | 227.4 | 31.4 | 229.5 |
| | 60.0 | 51.97 | -11.66 | -12.05 | 16.8 | 225.9 | 31.2 | 218.9 |
| ŧ | 65.0 | 56.25 | ~13.52 | ~13.68 | 19.2 | 225.4 | 31.7 | 217.2 |
| | 70.0 | 60.52 | -15.44 | -15.33 | 21.8 | 224.8 | 30.9 | 224.4 |
| , | 75.0 | 64.BO | -17.21 | -17.03 | 24.2 | 224.7 | 31.5 | 229.0 |

| 1 | 80.0 | 69.07 | -19.14 | -18.58 | 26.7 | 224.1 | 31.2 | 203.4 |
|----|-------|-------|--------|--------|------|-------|------|-------|
| 1 | 85.0 | 73.35 | -21.04 | -20.26 | 29.2 | 223.9 | 31.2 | 215.6 |
| i | 90.0 | 77.65 | -22,90 | -21.91 | 31.7 | 223.7 | 30.7 | 220.9 |
| } | 95.0 | 81.95 | -24.67 | -23.64 | 34.2 | 223.8 | 30.1 | 183.1 |
| ÷, | 100.0 | 86.26 | -26.56 | -24.81 | 36.3 | 223.0 | 31.1 | 227.3 |
| i | 105.0 | 90.59 | -28.45 | -26.31 | 38.7 | 222.8 | 30.4 | 220.2 |
| į. | 110.0 | 94.93 | -30.21 | -27.77 | 41.0 | 222.6 | 29.4 | 249.0 |
| | 115.0 | 99.29 | -32.08 | -29.28 | 43.4 | 222.4 | 28.8 | 221.9 |
| | 115.2 | 99.46 | -32.13 | -29.32 | 43.5 | 222.4 | 0.0 | 0.0 |

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| COMPANY : QUINTETTE COAL LTD.
WELL : QHP89011 GAM-DEN-RES-CAL |
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| |
| |
| LOCATION/FIELD : SCALE |
| COUNTY : TRANSFER 1:200 |
| STATE : BRITISH COLUNDIA |
| SECTION : TOWNSHIP : RANGE : |
| DATE : 05/21/89 PERMANENT DATUM : 00 ELEVATIONS |
| DEPTH DRILLER : 134 ELEV. PERM. DATUM: 00 KB : 00 |
| LOG BOTTOM : 133.46 LOG MEASURED FROM: GL DF : 00 |
| LOG TOP : 0.24 DRL MEASURED FROM: GL GL : 00 |
| CASING DRILLER : 10.5 LOGGING UNIT : 8902 |
| CASING TYPE : STEEL FIELD OFFICE : CALGARY |
| CASING THICKNESS: .05 RECORDED BY : D.ZANKL |
| BIT SIZE : 12.1 BOREHOLE FLUID : WATER FILE : ORIGINAL |
| MAGNETIC DECL. : 24.500 RM : 00 TYPE : 9032AC |
| MATRIX DENSITY : 2.68 RM TEMPERATURE : 00 LOG : 0 |
| FLUID DENSITY : 1.0 MATRIX DELTA T : 173 PLOT : QUIN 12 |
| NEUTRON MATRIX : SANDSTONE FLUID DELTA T : 690 THRESH: 20000 |

LOGGED OPEN HOLE VERTICAL HOLE

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REMARKS

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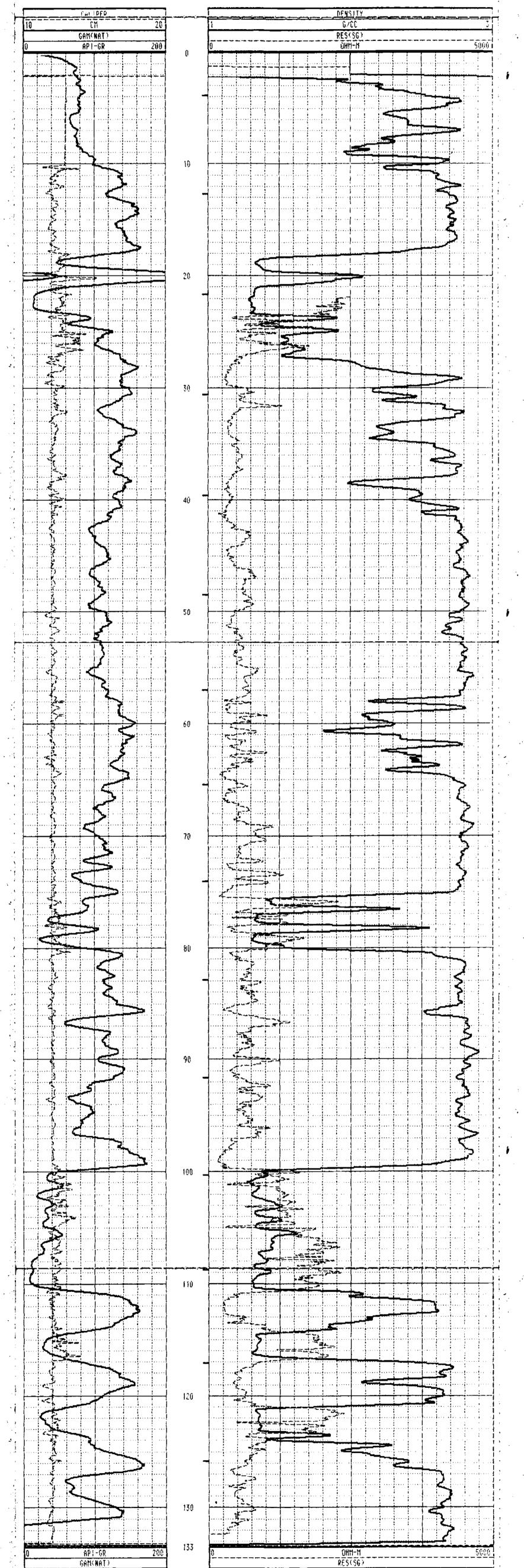
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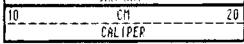
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ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS.

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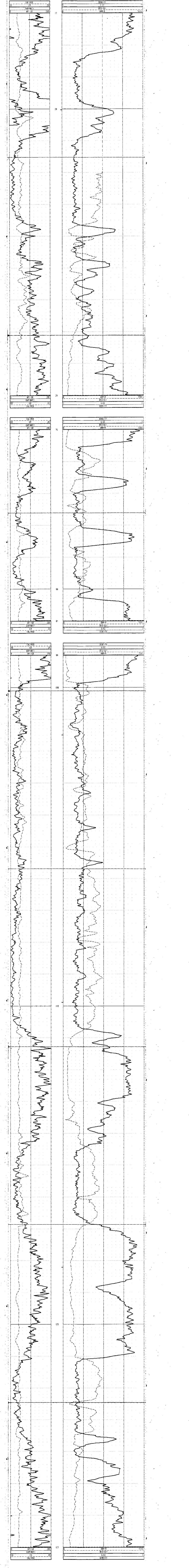
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| | DENCITY |
| - 1 | PENGALT A |
| | * EUX 1 |
| - 4 | |

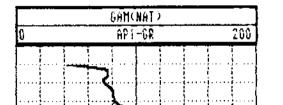
| | TO | OL CALIBRA | TION | 100L = 90 |)32AC | SERIAL | NUMBER = 90 | 57 | |
|----|----------|------------|------|-----------|-----------|--------|-------------|--------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STRNDI | IRD | |
| Û | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 9.000 | CPS | 600.0 | AP1-GR | |
| 1 | 85704789 | 10:17:51 | Û | 6aH(NAT) | 0.000 | CPS | 0.000 | ń₽1~6R | |
| 2 | 05/04/89 | 12:11:56 | Ŭ | DENSITY | 6166.000 | CPS | 1.106 | 6700 | |
| 3 | 95/04/89 | 12:11:56 | U | DENSITY | 2439,000 | EPS | 2.120 | 6700 | |
| 4 | 05/04/89 | 10:17:51 | 9 | RES(SG) | 0.000 | CPS | 0.000 | 0HM-M | |
| 5 | 05/04/89 | 10:25:07 | Û | RE\$(30) | 30275.000 | CPS | 178.500 | ohn-m | |
| 6 | 05/04/89 | 19:46:11 | 0 | CALIPER | 353.000 | CPS | 7.628 | £n | |
| 1 | Û5/04/89 | 10:46:11 | Û | CALIPER | 1906.000 | CPS | 17.800 | (H | |
| 8 | 05/04/89 | 10:17:51 | Ũ | DENSITYH | 0.000 | CPS | Ū.00Ū | 6/10 | |
| 9 | 05/04/89 | 10:17:51 | Û | DENSITYH | 0.000 | CPS | 0.000 | 6/00 | |
| 10 | 05/04/89 | 10:17:51 | 0 | CALTPERL | 0.000 | ĊPS | 0.000 | ûM . | |
| 11 | 05/04/89 | 10:17:51 | Ů | CALIPERL | 0.000 | CPS | 0.000 | CM | |

| (C9 | <u>;</u>) | Ceñ | tor | y. | |
|---|---|---|---------------------------------|---------------------|---|
| | シ [| QHR 89011 | | ENSI | |
| COMPANY
MELL
LOCATION/FIELD
COUNTY | : TRANSFER | P DENSITY | OTHER SERU
Schle
1:20 | ЛСЕЗ: | |
| STATE
Section | : BRITISH COL
; | UMBIA
Township : | | RANGE | : |
| DATE
DEPTH DRILLER
LOG BOTTON
LOG TOP | : 05/21/89
: 134
: 133.46
: 0.24 | PERMANENT DATUM :
Élev. Pern. Datum:
Log measured from:
DRL measured from: | 00
GL | DF | ONS
: 00
: 00
: 00 |
| CASING DRILLER
Casing type
Casing thicknes | : STEEL | FIELD OFFICE : | 8902
Calgary
D.2ankl | | |
| BIT SIZE
MAGNETIC DECL,
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX | : 2.68
: 1.0 | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
00
00
173
690 | TYPE
LOG
PLOT | : ORIGINAL
: 9032aC
: 0
: QUIN 34
: 20000 |
| REMARKS
LOGGED OPEN HO
VERTICAL HOLE
ALL SER | | SUBJECT TO STANDARI | O TEPNS AND | CONDITI | ON 5 |

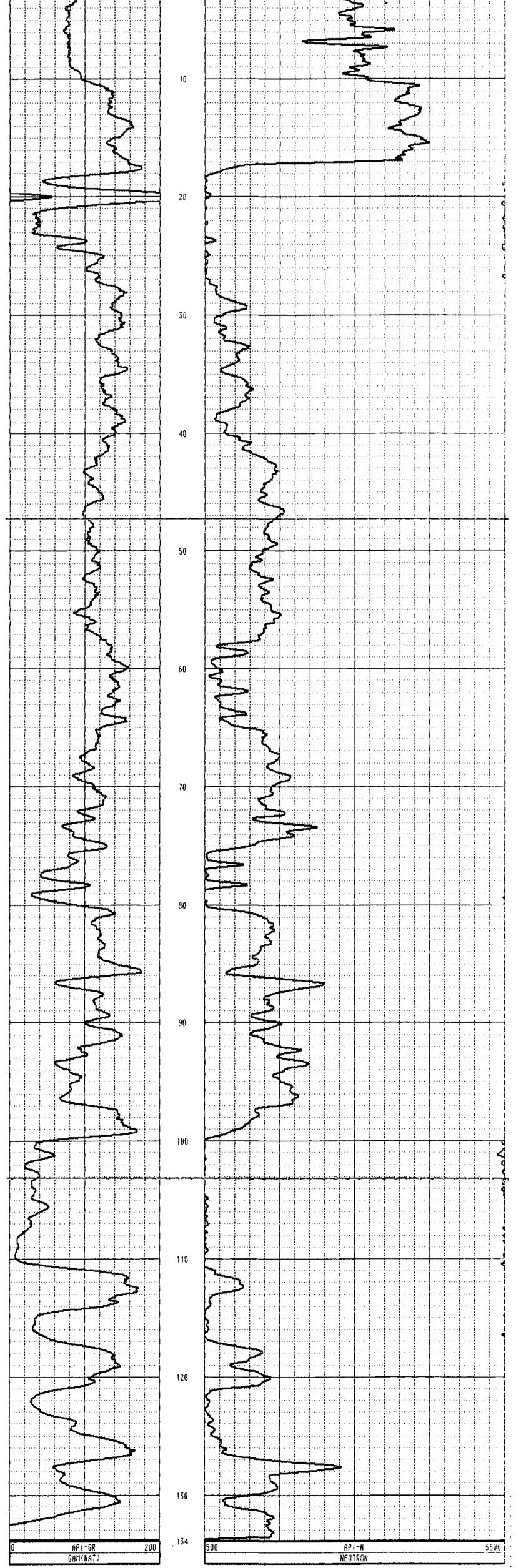


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| | | QHR 8 9 0 1 1 | GAMMA | -NEU | TRON |
|--|---|---|--|--------------------------|---|
| COMPANY
NELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QHR89011 G | AMMA-NEUTRON | OTHER SEA
Scale
1:200 | RANGE | : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER
CASING TYPE
CASING THICKNES | : 133.88
: 1.08
: 10.5
: STEEL | ELEV. PERM. DATUM
Log measured from
DRL measured from
Logging Unit | 1: 00
1: GL
1: GL
: 8902
: Calgary | ELEVAT
Kb
DF
Gl | : UO
: OO |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOM
UERTICAL HOLE | : 2.68
: 1.0
: Sandstone
: | RM
RM TEMPERATURE
MATRIX DELTA T | | TYPE
Log
Plot | : PROCESSED
: 9055A
: 6
: QUIN 0
H: 20000 |



| |
NEUTROM | |
|---------------------------------------|-------------|-------|
| 500 | API-N | 550 |
| |
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| <u> </u> |
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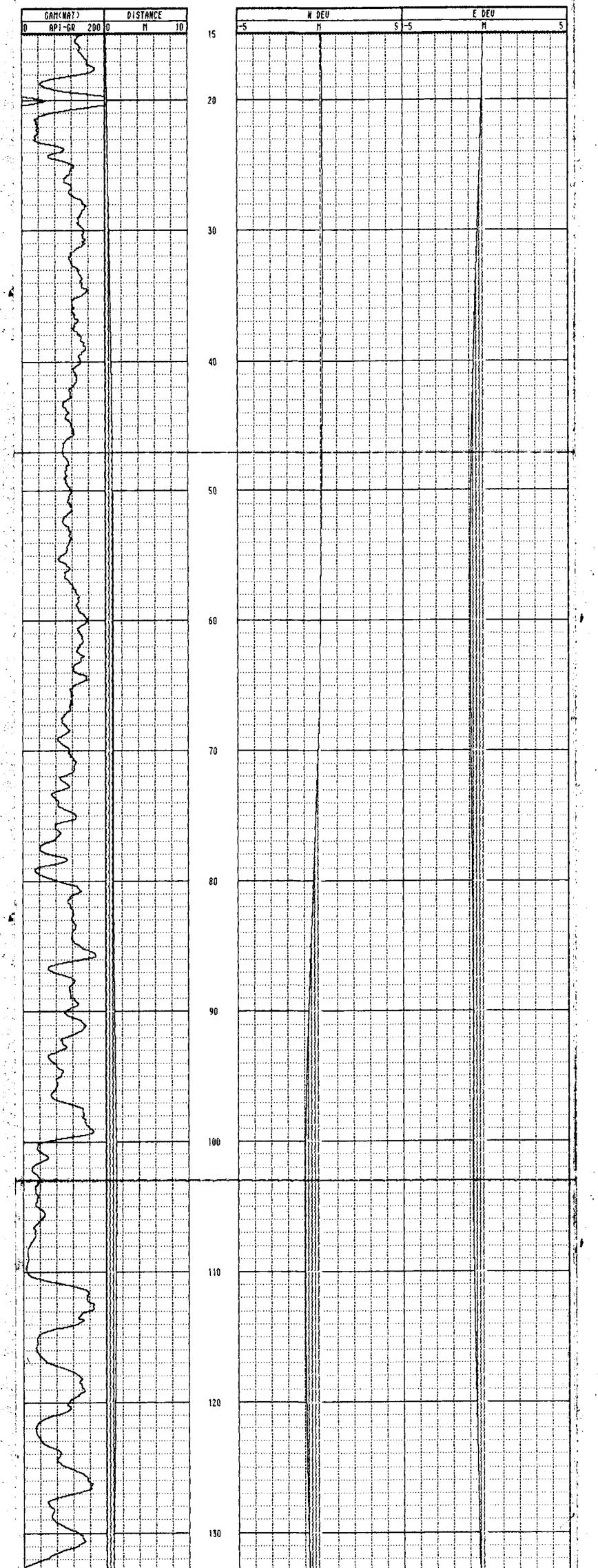


| | ĬŰ | OL CALIBRA | TION | TOOL = 90 | 55A | SERIAL | L NUMBER = | 14 |
|---|----------|------------|------|-----------|----------|--------|------------|----------|
| - | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I +SR |
| | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0,000 | CPS | 0.000 | AP1-GR |
| 2 | 05/05/89 | 16:59:51 | Û | POROSITY | 8.000 | EPS | 145.000 | EPS |
| 3 | 05/04/89 | 08:15:10 | Û | RES | 9707.000 | CPS | 0.000 | 08/1 |
| 1 | 05/04/89 | 08:15:10 | 0 | RES | 5212.009 | CPS | 1000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | Û | SP | -9.000 | CPS | 0.000 | MU |
| 5 | 05/04/89 | 08:13:14 | Û | SP | 4095.000 | EPS | 500.000 | HV |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | AP1-# |
| ŝ | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | EPS | 271.000 | API-N |

| | | QHR 8901 | | |
|---|--|---|----------------------------------|--|
| WELL :
LOCATION/FIELD :
COUNTY : | QUINTETTE CO
QHR89011 DEV
TRANSFER | JIATION | OTHER SER
SCALE
1:200 | UICES: |
| STATE :
SECTION : | BRITISH COLU | TOUNSHIP | : | RANGE : |
| | 05/22/89
134
133.88
1.08 | ELEV. PERM. DATUM | : GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| | 10.5
STEEL
.05 | FIELD OFFICE | : 8902
: Calgary
: D.zankl | |
| MAGNETIC DECL. :
MATRIX DENSITY :
FLUID DENSITY :
NEUTRON MATRIX :
REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE | 1.0
Sandstone | RM
RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T | : 690 | FILE : PROCESSED
TYPE : 9055A
LOG : 6
PLOT : QUIN 13
THRESH: 20000 |
| ALL SERVIC | ES PROVIDED | SUBJECT TO STANDAR | U TERAS AND | 753 |

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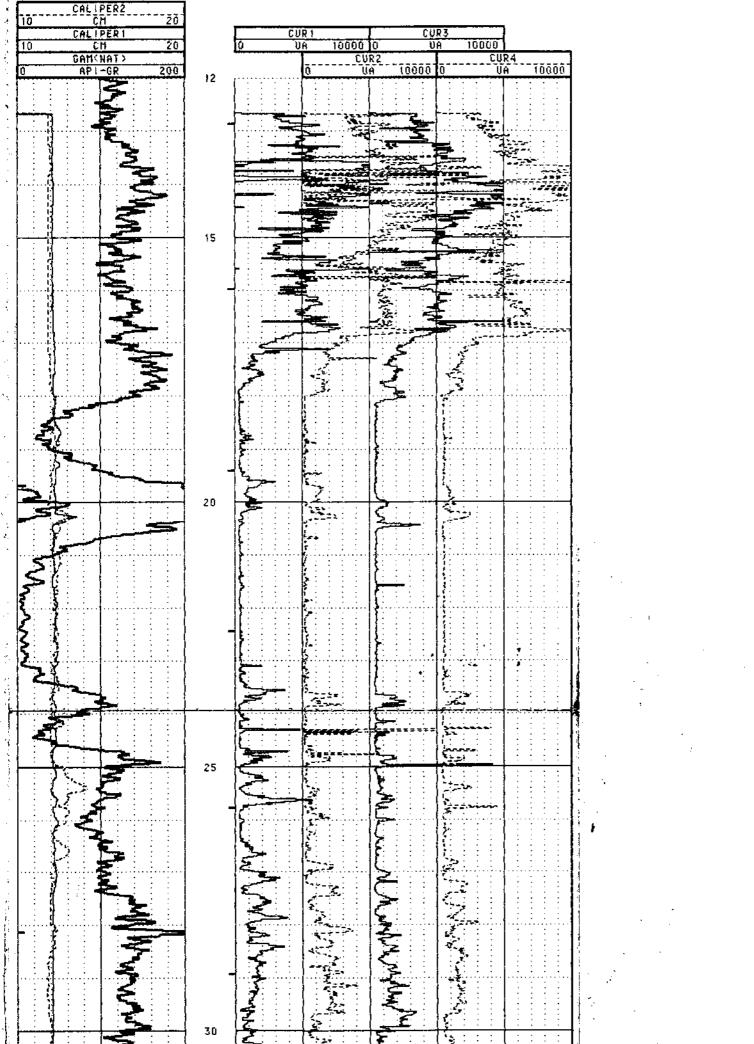


| | API-GR 2 | 00 0 | | 10 134 | -5 | | | 5 | -5 | | | |
|--------|----------|------------|--------|-----------|----------|--------|--------------|------------|----------|---|-------|------|
| | AM(NAT) | | STANCE | | | | N DEU | | | | E DEV |
 |
| | | | | <u> </u> | | | · | <u>u</u> e | <u> </u> | | 3 | |
| | TO | OL CALIBRA | TION | 100L = 90 | 55A | SERIAL | . NUMBER = 1 | 14 | | | | |
| • | CAL-DATE | CAL-TINE | SRCE | SENSOR | RESPO | NSE | STANDA | ARD | | ! | | |
| 0 | 05/04/89 | 08:10:36 | 0 | GAN(NAT) | 0.000 | CPS | 0.000 | API-GR | | |] | |
| ١ | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR | | | | |
| 2 | 05/05/89 | 16:59:51 | Q | POROSITY | 0.000 | CPS | 145.00Ŭ | CPS | | | | |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM | | | | |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM | | | | |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | HU | | | | |
| | 05/04/89 | 08:13:14 | Û | SP | 4095.000 | CPS | 500.000 | HV | | | | |
| 6 | | | | | | | | | | | | |
| 6
7 | 05/04/89 | 08:10:36 | Û | NEUTRON | 0.000 | CPS | 0.000 | AP IN | | | | |

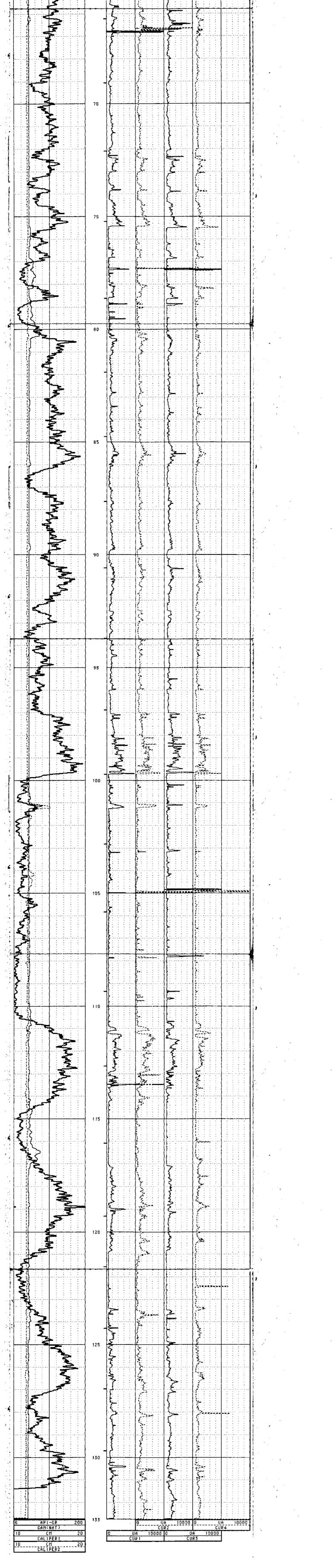
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| * * * * * * | (**** CO | MPU-LOG II - | VERTICAL D | EVIATION | * * * * * | * * * | * * * |
|-------------|-----------------|--------------|------------|------------|-----------|-------|-------|
| CLIENT | | TTE COAL LTD | . HOLE ID | I OHR | 89011 GAM | м | |
| | ICE : CALGAR | | | LOG : 05/ | | | |
| DATA FROM | | • | PROBE | : 905 | | 14 | |
| MAG. DECL | | 00 | | VITS : MET | - | 6 | |
| | | | | | | | |
| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGB |
| 4 15.0 | 15.00 | 0.09 | 12 | 0.1 | 308.3 | 1.2 | 300.9 |
| 20.0 | 19.99 | 0.13 | 21 | 0.2 | 301.6 | 1.6 | 288.3 |
| 25.0 | 24.99 | 0.15 | 33 | 0.4 | 293.9 | 1.6 | 277.5 |
| 30.0 | 29.99 | 0.16 | 48 | 0.5 | 288.4 | 1.5 | 266.6 |
| 35.0 | 34.99 | 0.16 | 61 | 0.6 | 284.4 | 1.7 | 263.2 |
| 40.0 | 39.99 | 0.14 | 74 | 0.7 | 281.1 | 1.1 | 223.7 |
| 45.0 | 44.99 | 0.12 | ~.83 | 0.8 | 278.0 | 1.1 | 247.3 |
| 50.0 | 49.99 | 0.08 | 89 | 0.9 | 275.1 | 1.0 | 239.6 |
| 55.0 | 54,99 | 0.03 | 93 | 0.9 | 271.9 | 0.8 | 201.2 |
| 60.0 | 59.99 | 00 | ~.94 | 0.9 | 269.7 | 0.4 | 168.4 |
| 63.0 | 64.99 | 04 | 92 | 0.9 | 267.4 | 0.9 | 164.8 |
| 70.0 | 69.98 | 15 | -,90 | 0.9 | 260.5 | 1.6 | 168.6 |
| 75.0 | 74.98 | 29 | 86 | 0.9 | 251.4 | 1.7 | 168.9 |
| 80.0 | 79.98 | 44 | 83 | 0.9 | 242.1 | 1.9 | 159.6 |
| 85.0 | 84.98 | 59 | 79 | 1.0 | 233.5 | 1.6 | 163.3 |
| 90.0 | 89,97 | -,73 | 78 | 1.1 | 226.9 | 1.5 | 185.1 |
| 95.0 | 94,97 | 87 | 7B | 1.2 | 222.0 | 1.2 | 178.1 |
| 100.0 | 99.97 | ~.95 | 80 | 1.2 | 220.0 | 0.7 | 202.8 |
| 105.0 | 104.97 | 97 | 80 | 1.3 | 219.5 | 0.7 | 52.9 |
| 110.0 | 10 9. 97 | 97 | 74 | 1.2 | 217.4 | 0.6 | 79.5 |
| 115.0 | 114.97 | 96 | 48 | 1.2 | 215.4 | 0.8 | 47.1 |
| 120.0 | 119.97 | 92 | 60 | 1.1 | 213.4 | 0.9 | 73.3 |
| 125.0 | 124.97 | ~.86 | 52 | 1.0 | 211.4 | 1.2 | 52.7 |
| 130.0 | 129.97 | 78 | 45 | 0.9 | 209.9 | 1.6 | 38.1 |
| 133.9 | 133.84 | 71 | 39 | 0.8 | 209.0 | 0.0 | 0.0 |
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| | V. | QHR 890 | | | |
| COMPANY
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Location/Field
County | : QUINTETTE
: QHR89011 1
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: TRANSFER | | OTHER SE
Scale
1:50 | RVICES: | |
| STATE
SECTION | : BRITISH CO | DLUMBIA
Township : | 1.50 | RANGE : | |
| DATE
DEPTH DRILLER
LOG BOTTON
LOG TOP | | PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | 00
GL | KB :
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| CASING DRILLER
Casing type
Casing thicknes | : STEEL | FIELD OFFICE : | 8902
Calgary
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| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS | : 24.500
: 2.68
: 1.0 | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
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690 | TYPE :
LOG : | CR161NAL
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OHR89811 DIPMETER

| COMPRNY : | QUINTETTE COAL LTD. | | OTHER SERVICES: | | |
|-------------------|----------------------|----------------------|---------------------|---------|------------|
| | QHR89011 DIPMETER | I | OTHER DERVICES. | | • |
| LOCATION/FIELD : | | | SCALE | | |
| COUNTY : | TRANSFER | I | 1:200 | | |
| STATE : | BRITISH COLUMBIA | | | | .* |
| SECTION : | | TOUNSHIP | | RANGE | : |
| DATE : | 05/21/89 | PERMANENT DATUM : | 00 | ELEUATI | ONS |
| DEPTH DRILLER : | 134 | ELEU. PERM. DATUM: | 00 | KB | : 00 |
| LOG BOTTOM : | 132.8 | LOG MEASURED FROM: | GL | DF | : 00 |
| LOG TOP : | 44 | DRL MEASURED FROM: | GL | GL | : 88 |
| CASING DRILLER : | 11.11 | LOGGING UNIT : | 8902 | | |
| CASING TYPE : | STEEL | FIELD OFFICE : | CALGARY | | |
| CASING THICKNESS: | .05 | RECORDED BY | D.ZANKL | | · |
| BIT SIZE : | 12.1 | BOREHOLE FLUID : | HATER | FILE | : ORIGINAL |
| MAGNETIC DECL. : | 24.500 | RM - | 00 | TYPE | : 9400A |
| MATRIX DENSITY : | 2,68 | rm temperature : | 00 | | : 0 |
| FLUID DEMSITY : | 1.0 | MATRIX DELTA T : | 173 | PLOT | : 9400 4 |
| NEUTRON MATRIX : | SANDSTONE | FLUID DELTA T : | 690 | THRESH | : 20000 |
| REMARKS : | | | | | |
| lagged open hole | vertical | | | | 1 |
| Window: 2м Step | : im Search Angle:8 | Ødeg Method-2 | | - | |
| | ILL SERVICES PROVIDE | O SUBJECT TO STANDAL | RD TERMS AND CONDIT | TIONS | |

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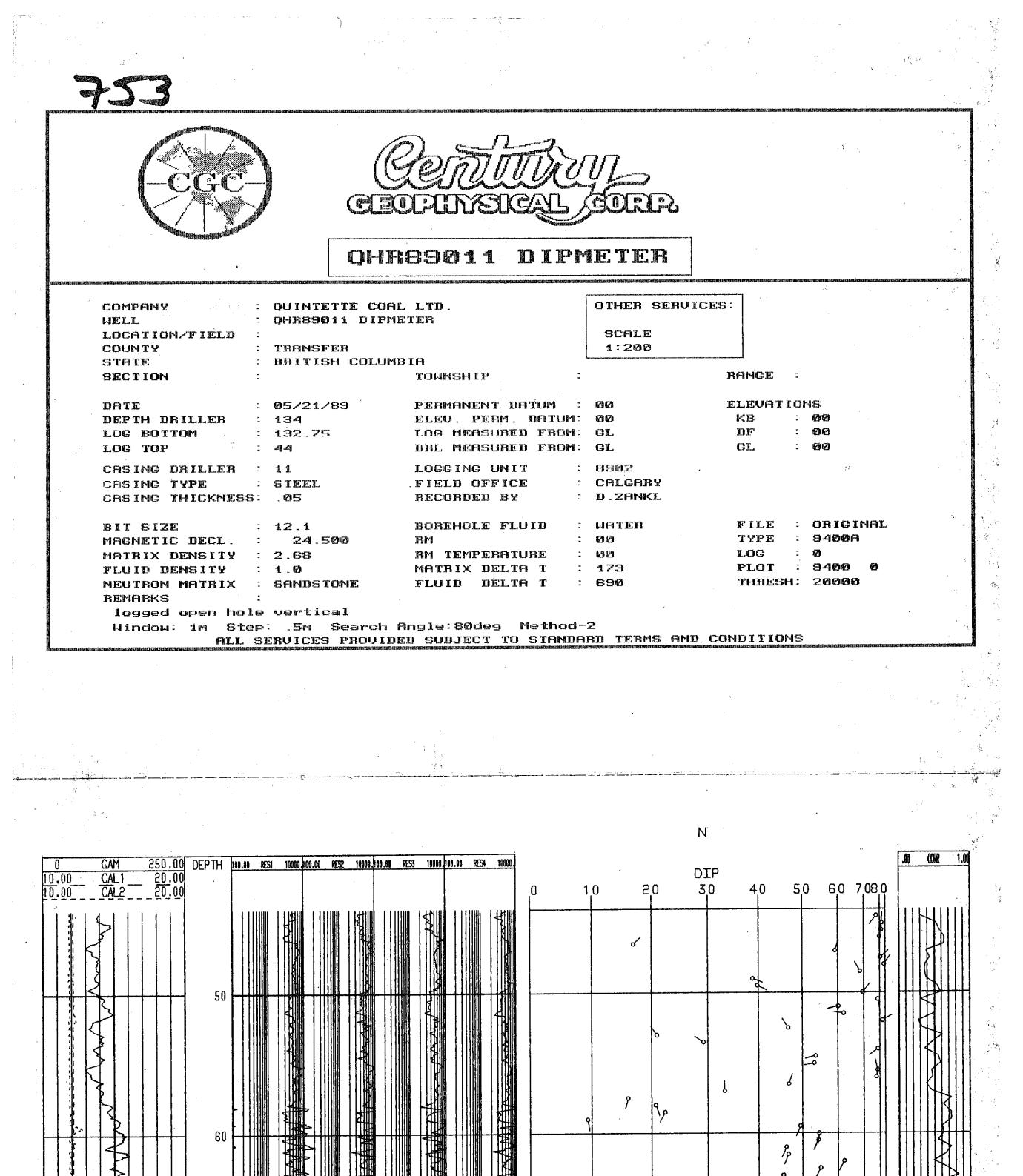
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10.00 <u>CAL2</u> 20.00 | 100,00 RCS1 10000,000 RCS2 10000,000 RES3 10000,00 RES4 10000, | DIP | LOO CORR 1.00 |
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e - ar jar

DIPMETER LIST FOR:QHR-89011 WINDOW:1m STEP:.5m SEARCH ANGLE:80deg MAGNETIC DECLINATION:24.5

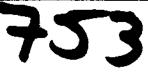
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| DEPTH | ON:24.5 | AZIM | CORR
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DEV. | HOLE
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AZIM | | | | |
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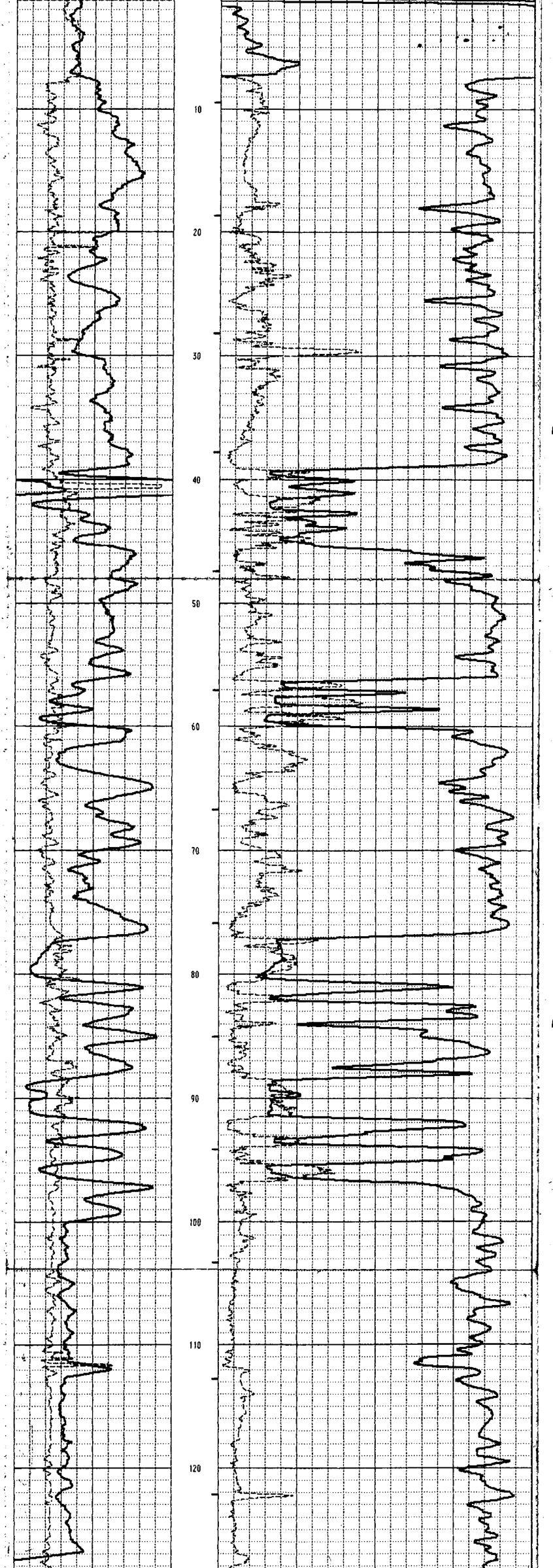


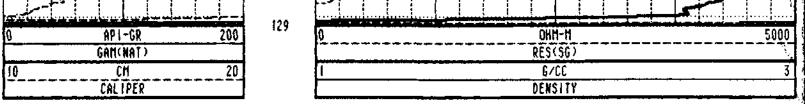
| COMPANY
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LOCATION/FIELD
COUNTY
STATE
SECTION | : QHR89012 GA
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1:200 | ICES: |
|---|----------------------------------|---------------------|------------------------------|-----------------|
| | | | | • |
| DATE | : 05/23/89 | PERMANENT DATUM : | 00 | ELEVATIONS |
| DEPTH DRILLER | : 131 | ELEV. PERM. DATUM: | 00 | KB : 00 |
| LOG BOTTOM | : 129.42 | LOG MEASURED FROM: | GL | DF : 00 |
| LOG TOP | :70 | DRL MEASURED FROM: | GL | GL : 00 |
| CASING DRILLER | : 10 | LOGGING UNIT : | 8902 | |
| CASING TYPE | : STEEL | FIELD OFFICE : | CALGARY | |
| CASING THICKNESS | : .05 | RECORDED BY : | D.ZANKL | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID : | UATER | FILE : OPICINAL |
| MAGNETIC DECL. | | | 00 | TYPE : 9032AC |
| MATRIX DENSITY | | | | LOG : 3 |
| | | MATRIX DELTA T : | | PLOT : QUIN 12 |
| | | FLUID DELTA T : | | THRESH: 20000 |
| REMARKS | | | 0.0 | |
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| | | SUBJECT TO STANDARD | TERMS AND | CONDITIONS |



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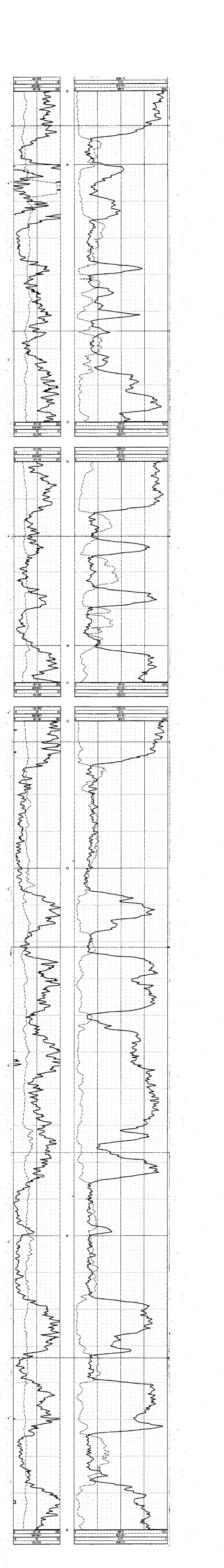
| | TOOL CALIBRATION | | TOOL = 90 |)32AC | SERIA | L NUMBER = 96 | 7 | | |
|------|------------------|----------|-----------|----------|-----------|---------------|---------|----------|---|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STANDA | RD | |
| 0 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR | |
| 1 | 95/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.106 | 6700 | |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.120 | 6700 | |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.000 | ohh-n | ; |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 | CPS | 178.500 | ohm-m | |
| . 6 | 05/04/89 | 10:46:11 | 0 | CAL 1PER | 353.000 | CPS | 7.620 | СМ | |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | EPS | 17,800 | CH | |
| 8 | 05/04/89 | 10:17:51 | 8 | DENSITYH | 0.000 | CPS | 0.000 | 6/00 | |
| 9 | 05/04/89 | 10:17:51 | Û | DENSITYH | 0.000 | CPS | 0.000 | 6766 | |
| 10 | 05/04/89 | 10:17:51 | Û | CALIPERL | 0.000 | CPS | 0.000 | CM | |
| e 11 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 | CM | |

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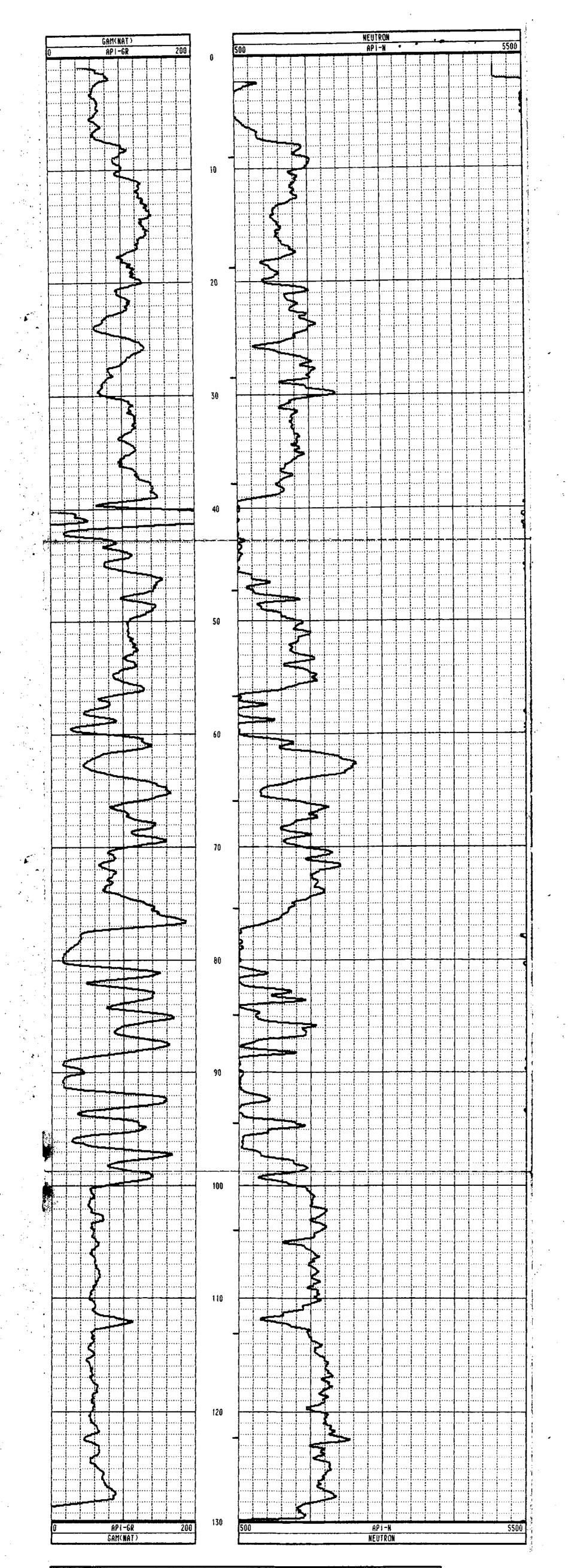
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| | HELL | : | QHR89012 EX | P DENSITY | | 5 6 AL F | | | |
| 1 | LOCATION/FIELD | : | TRANSFER | | İ. | SCALE
1:20 | | | |
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| ł | SECTION | : | | TOWNSHIP | : | | RANGE | : | |
| | DATE | : | 05/23/89 | PERMANENT DATUM | : | 00 | ELEVAT | 101 | 15 |
| Ĺ | DEPTH DRILLER | : | 131 | ELEU. PERM. DATU | 1: | 00 | KB | | 00 |
| | LOG BOTTOM | | 129.42 | | • | | DF | | 00 |
| ļ. | LOG TOP | ; | 70 | DRL MEASURED FROM | 1: | GL | GL | ī | 00 |
| | CASING DRILLER | 3 | 10 | LOGGING UNIT | : | 8902 | | | |
| | CASING TYPE | 4 | STEEL | FIELD OFFICE | | CALGARY | | | |
| | CASING THICKNES | s : | .05 | RECORDED BY | : | Ð.ZANKL | | | |
| Į | BIT SIZE | : | 12.1 | BOREHOLE FLUID | : | HATER | | | ORIGINAL |
| | MAGNETIC DECL. | ŧ | 24,500 | RM | : | 00 | | | 9032AC |
| | MATRIX DENSITY | | 2.68 | RM TEMPERATURE | | 00 | LOG | | 3 |
| ł | FLUID DENSITY | | 1.0 | MATRIX DELTA T | | 173
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20000 |
| | | | SANDSTONE | FLUID DELTA T | ÷ | 690 | INACO | | 20000 |
| | REMARKS | ÷ | | | | | | | |



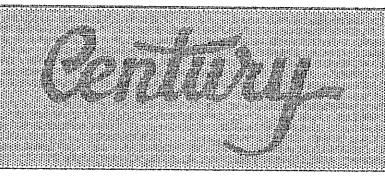
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COUNTY : TRANSFER | COAL LTD.
Amma-Neutron | OTHER SER
Scale
1:200 | VICES: | |
| STATE : BRITISH CO
SECTION : | DLUMBIA
Township | | RANGE | : |
| DATE : 05/23/89
DEPTH DRILLER : 131
LOG BOTTOM : 129.73
LOG TOP : 0.85 | PERMANENT DATUM
Eleu. Perm. Datum
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Drl measured from | : 00
: GL | ELEVAT
KB
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GL | IONS
: 00
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: 00 |
| CASING DRILLER : 10
Casing type : steel
Casing thickness: .05 | FIELD OFFICE | : 8902
: Calgary
: D.zankl | | |
| BIT SIZE : 12.1
MAGNETIC DECL. : 24.500
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
NEUTRON MATRIX : SANDSTONE | RM
RN TEMPERATURE
MATRIX DELTA T | : WATER
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ALL SERVICES PROVIDE | OM THE HORIZONTAL
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| | to | OL CALIBRA | TION | 100L ≈ 90 | IS5A | SERIAL | NUMBER = | 14 | |
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| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | ISE | STAND | ARD | |
| Û | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| i | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.000 | CPS | |
| 3 | 05/04/89 | 08:15:10 | Û | RES | 9707.000 | CPS | 0.000 | OHM | |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHH | |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | HV | |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | MU | |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | API-N | |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | API-N | |

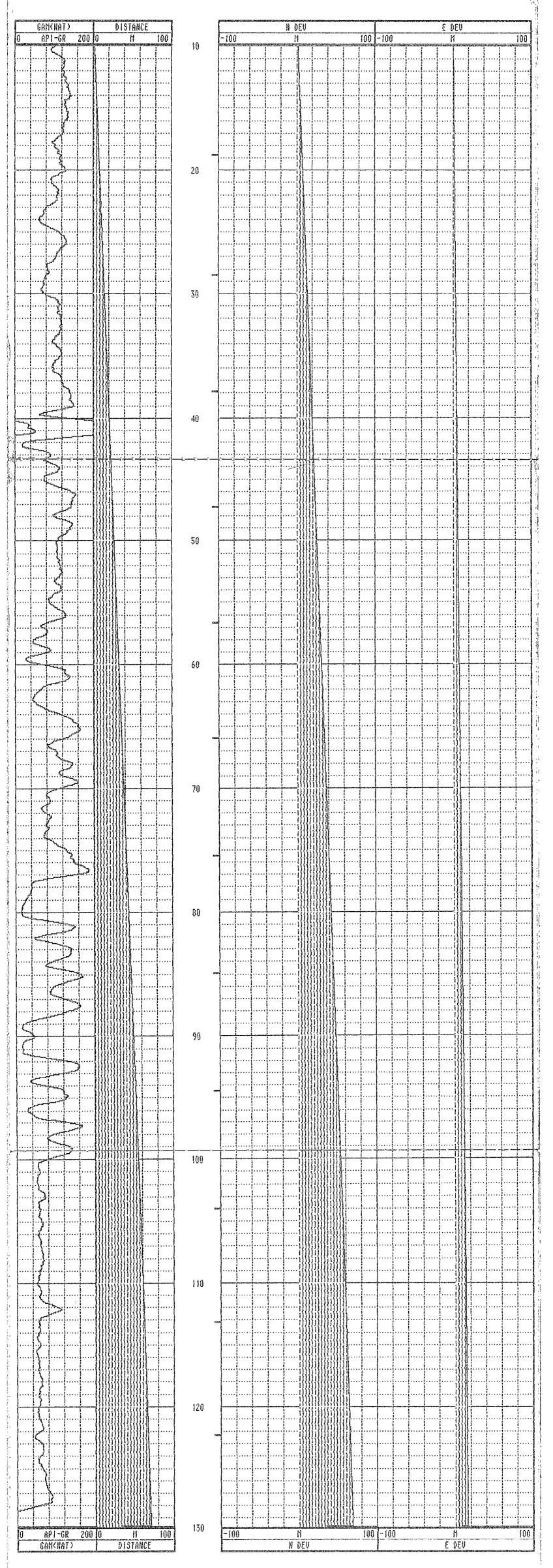




OHR89012 DEVIATION

112222241212111

| COMPANY
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: TRANSFER
: BRITISH COU
: | UNBIA | OTHER SE
Scale
1:200 | RUICES:
Range : |
|---|---|--|----------------------------------|--|
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 05/24/89
: 131
: 129.73
: 0.85 | | ≵ 00
≣ 6L | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING DRILLER
Casing type
Casing thicknes | : 10
: STEEL
3: ,05 | FIELD OFFICE : | : 8902
: CALGARY
: D.ZANKL | Sec." |
| REMARKS
LOGGED OPEN HOI
ANGLE HOLE - 51 | : 24.500
: 2.68
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: SANDSTONE
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_E
D DEGREES FROM | RM
RM TEMPERATURE
MATRIX DELTA T | : 173
: 690 | FILE : PROCESSED
TYPE : 9055A
LOG : 9
PLOT : QUIN 13
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| | | | | 753 |



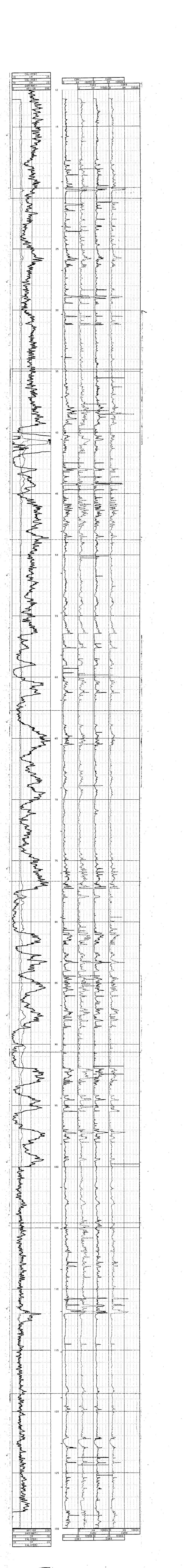
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| | TOO |)L CALIBRA | TION | T00L = 905 | 58 | SERIAL NUMB | ER = | 14 | | | |
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| CA | IL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | <u>ISE</u> | STANDI | 1RD | anna a tha an tha an tha an tha an tha an tha an tha an tha an tha an tha an tha an tha an tha an tha an tha an | | |
| 0 05 | 5704789 | 08:10:36 | Ŋ | GAH(NAT) | 0.000 | CPS | 0.000 | AP I -GR | | | |
| | | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | API-GR | | | |
| 2 05 | 5/05/89 | 16:59:51 | Ŭ | POROSITY | 0.000 | CPS | 145.000 | CPS | | | |
| 3 05 | 5/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHN | | | |
| 4 05 | 5/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHN | | | |
| 5 05 | 5704789 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | HV | | | |
| 6 05 | 5/04/89 | 08:13:14 | Û | SP | 4095.000 | CPS | 508.000 | MI
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| 7 05 | 5/04/89 | 08:10:36 | 0 | | 0.000 | | 0.000 | | | | |
| 8 05 | 5/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | API-N | | | |
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| | ىكىيى ر <u>امى</u> | 22. | <u>, , , , , , , , , , , , , , , , , , , </u> | <u>h</u> | Consideration poli | <u>'araa 1999 </u> | <u></u> | <u> </u> | <u></u> | <u></u> | an an an an an an an an an an an an an a |
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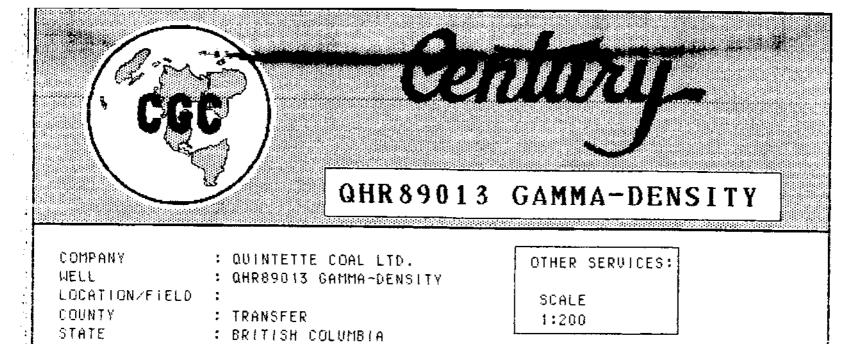


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| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | .706 36.3 $7.$ $.526$ 56.2 $17.$ $.929$ 36.9 $8.$ $.760$ 56.5 $60.$ $.769$ 36.2 $13.$ $.517$ 36.0 $14.$ $.682$ 36.7 $6.$ $.633$ $.36.0$ $14.$ $.808$ $.35.9$ $12.$ $.797$ $.35.9$ $10.$ $.628$ $.37.2$ $14.$ $.774$ $.35.7$ $12.$ $.829$ $.37.9$ $14.$ $.829$ $.37.9$ $14.$ $.815$ $.35.6$ $16.$ $.926$ $.35.8$ $.11.$ $.771$ $.36.1$ $.11.$ | 198.
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| 79.500 9.6 $244.$ 80.000 32.2 $81.$ 80.500 45.8 $111.$ 81.000 59.8 $191.$ 81.500 48.1 $184.$ 82.000 55.0 $187.$ 82.500 45.6 $201.$ 83.000 30.8 $208.$ 83.500 35.2 $192.$ 84.000 26.5 $156.$ 84.500 34.9 $177.$ 85.000 27.0 $216.$ 86.000 24.7 $215.$ 86.500 26.7 $205.$ 87.000 64.0 $136.$ 87.500 73.5 $216.$ | .261 35.1 $12.$ $.517$ $.50$ $12.$ $.584$ $.5.1$ $12.$ $.707$ $.34$ $9.$ $.768$ $.34.7$ $11.$ $.592$ $.35.1$ $.55.$ $.917$ $.35.1$ $1.5.$ $.861$ $.35.5$ $24.$ $.665$ $.35.2$ $.11.$ $.645$ $.50$ $12.$ $.511$ $.36.3$ $17.$ $.731$ $.34.9$ $.44.$ $.873$ $.34.8$ $14.$ $.819$ $.24.8$ $12.$ $.6.7$ $.34.7$ $13.$ $.517$ $.34.8$ $.11.$ | 136.
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| 88.000 73.6 $201.$ 89.500 52.3 $197.$ 89.000 45.3 $193.$ 89.000 80.5 $209.$ 89.500 80.5 $209.$ 90.000 88.2 $211.$ 90.500 61.4 $230.$ 91.000 75.9 $204.$ 91.000 75.9 $204.$ 91.500 31.7 $197.$ 91.500 36.0 $185.$ 92.500 54.8 $201.$ 93.500 54.8 $201.$ 93.500 80.1 $166.$ 94.000 30.5 $186.$ 94.000 31.2 $162.$ 95.000 31.0 $162.$ 95.000 31.0 $167.$ 95.000 31.3 $157.$ 95.000 31.3 $157.$ 95.000 31.3 $157.$ | $.626$ $.4.0$ $11.$ $.737$ 34.7 $15.$ $.716$ 34.5 $14.$ $.177$ 54.9 $12.$ $.347$ 34.7 $15.$ $.405$ 34.6 $9.$ $.397$ 34.6 $11.$ $.646$ 34.7 $13.$ $.665$ 35.5 $17.$ $.452$ 34.7 $14.$ $.654$ 34.6 $13.$ $.654$ 34.6 $13.$ $.721$ $.74.4$ $13.$ $.739$ $.24.3$ $12.$ $.633$ 34.3 $10.$ $.4\sqrt{7}$ 34.2 $1.7.$ | 125.
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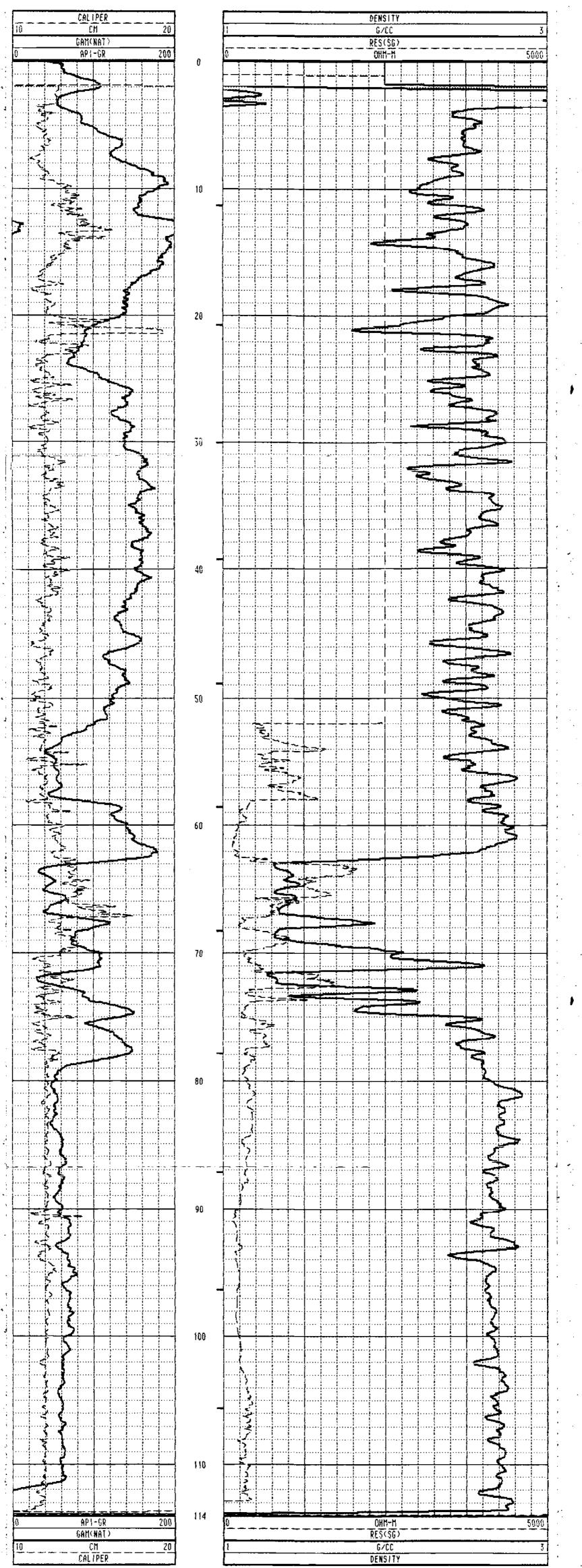


| SECTION | : | TOWNSHIP | : | RANGE | : |
|------------------|---------------------------------|-------------------|-----------|---------|------------|
| DATE | : 05/27/89 | PERMANENT DATUM | : 00 | ELEVATI | ONS |
| DEPTH DRILLER | : 125 | ELEV. PERM. DATUM | : 00 | КВ | : 00 |
| LOG BOTTOM | : 113.98 | LOG MEASURED FROM | : GL | DF | : 00 |
| LOG TOP | :02 | DRL MEASURED FROM | : GL | GL | : 00 |
| CASING DRILLER | : 6 | LOGGING UNIT | : 8902 | | |
| CASING TYPE | : STEEL | FIELD OFFICE | : CALGARY | | |
| CASING THICKNESS | : .05 | | : D.ZANKL | | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID | : WATER | FILE | : ORIGINAL |
| MAGNETIC DECL. | : 24.500 | | : 00 | TYPE | : 9032AC |
| MATRIX DENSITY | : 2.68 | | : 00 | LOG | : 2 |
| FLUID DENSITY | : 1.0 | | : 173 | PLÖT | : QUIN 12 |
| NENTOON MATOLY | COMPOSITION | CHUIN NELTA T | • 200 | THEFOL | |
| ИЕФІКОМ ННІКІА | SHMPSIGME | FLUID DELIM) | · 07U | TUKEON | · 20000 |
| REMARKS | : | | | | |

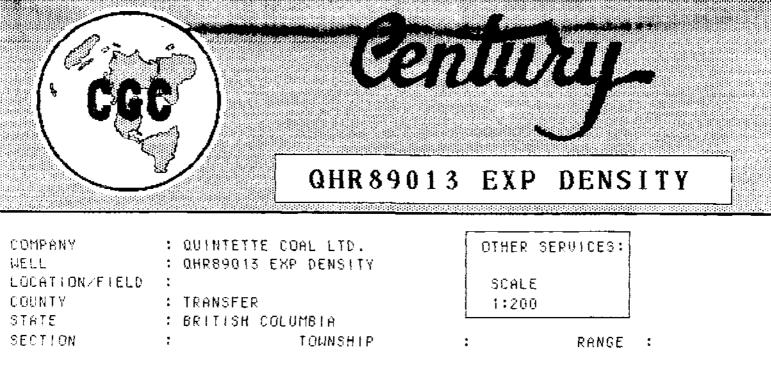
ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

LOGGED OPEN HOLE

ANGLE HOLE

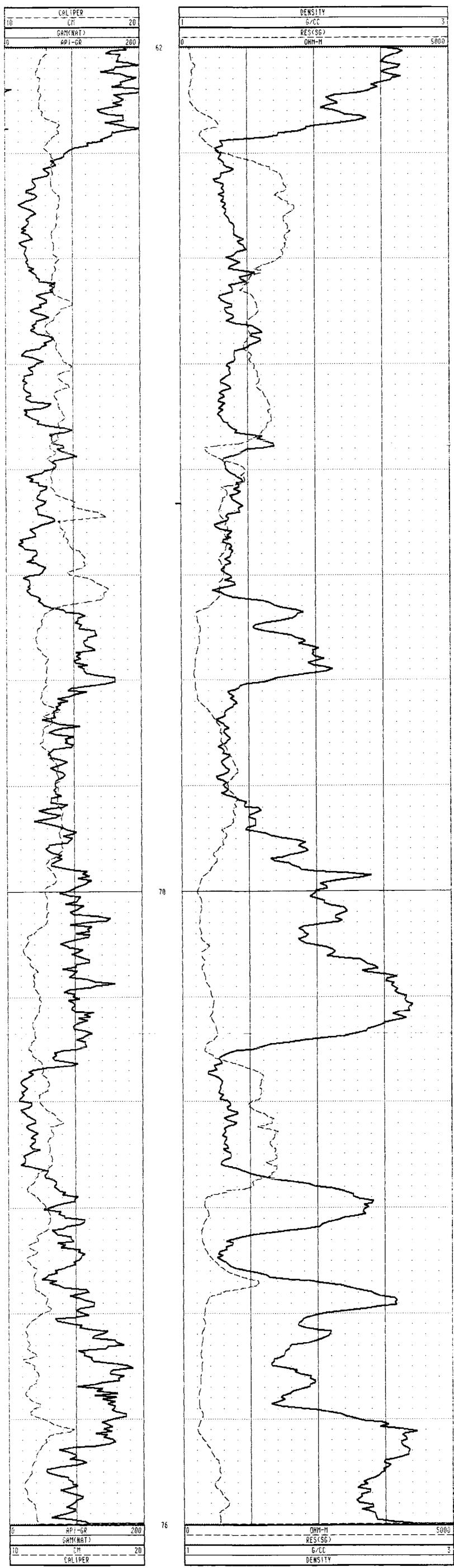


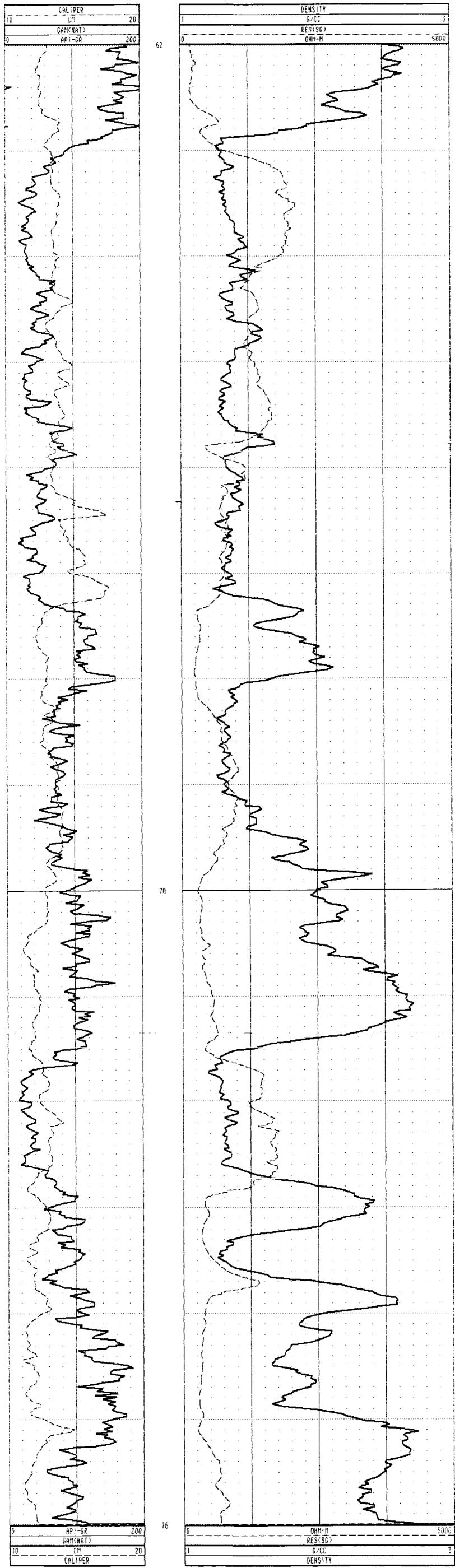
| | TOOL CALIBRATION | | | TOOL = 9032AC SERIAL | | | NUMBER = 967 | |
|----|------------------|----------|------|----------------------|-----------|-----|--------------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STANDA | RD |
| Q | 05/04/89 | 10:17:51 | Û | GAM(NAT) | 0.000 | EPS | 0.000 | AP I -GR |
| 1 | 05/04/89 | 19:17:51 | 8 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.106 | 6700 |
| 3 | 05/04/89 | 12:11:56 | 6 | DENSITY | 2439.000 | CPS | 2.120 | G/CC |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.000 | OHM-M |
| 5 | 05/04/89 | 10:25:07 | 6 | RES(SG) | 30275.000 | CPS | 178.500 | OHM-N |
| б | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7.620 | CM |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.800 | CM |
| 8 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | 6700 |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | 6700 |
| 10 | 05/04/69 | 10:17:51 | 0 | CALIPERL | 6.908 | CPS | 0.000 | СМ |
| 11 | 05/04/89 | 10:17:51 | Û | CALIPERL | 0.000 | CPS | 8.000 | CM |



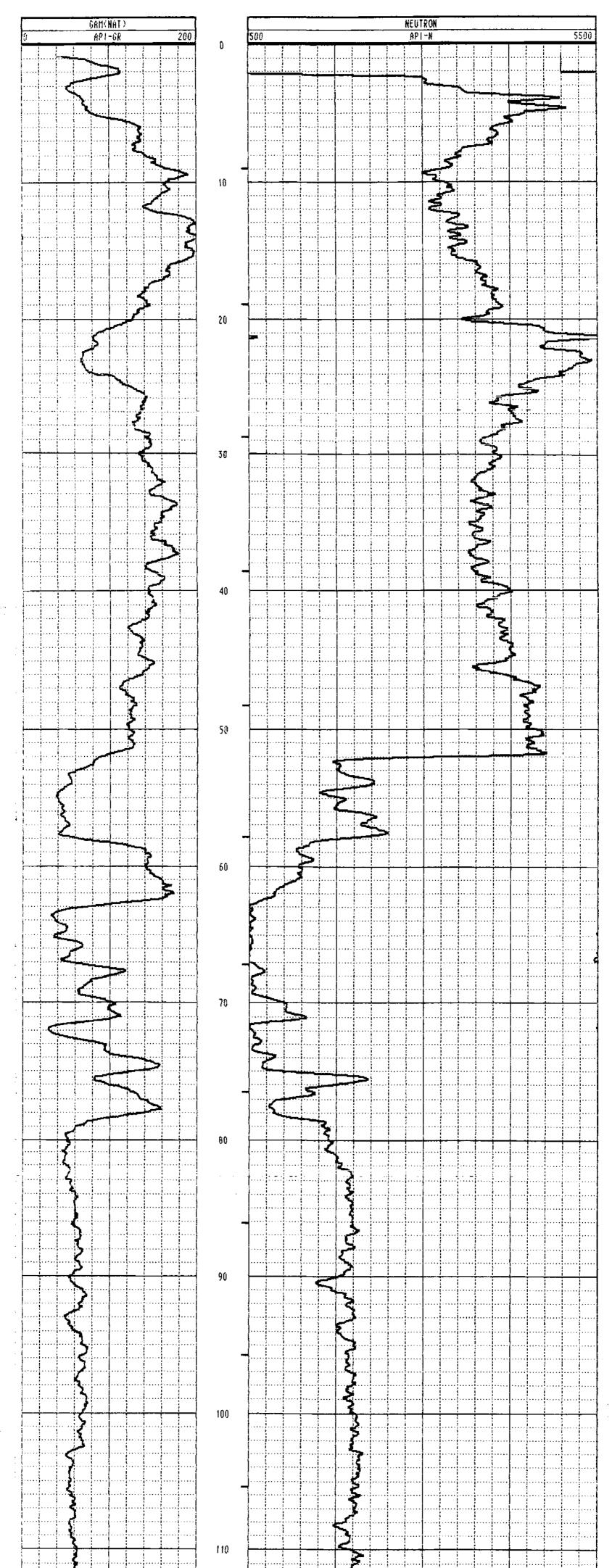
| DATE | : 05/27/ | 789 PERMANENT DATUM | : 00 | ELEVATIO | NS |
|------------------|----------|-------------------------|--------------|------------|----------|
| DEPTH DRILLER | : 125 | ELEV. PERM. DATU | M: 00 | кв : | 00 |
| LOG BOTTOM | : 113. | .98 LOG MEASURED FRO | M: GL | DF : | 00 |
| LOG TOP | : | .02 DRL MEASURED FRO | M: GL | GL : | 00 |
| CASING DRILLER | : 6 | LOGGING UNIT | : 8902 | | |
| CASING TYPE | : STEEL | FIELD OFFICE | : CALGARY | | |
| CASING THICKNESS | ::.05 | RECORDED BY | : D.ZANKL | | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID | : WATER | FILE : | ORIGINAL |
| MAGNETIC DECL. | : 24.5 | 500 RM | : 00 | TYPE : | 9032AC |
| MATRIX DENSITY | : 2.68 | RN TEMPERATURE | : 00 | LOG : | 2 |
| FLUID DENSITY | : 1.0 | MATRIX DELTA T | : 173 | PLOT : | QUIN 14 |
| NEUTRON MATRIX | ; SANDST | TONE FLUID DELTA T | : 690 | THRESH: | 20000 |
| REMARKS | : | | | | |
| LOGGED OPEN HOL | £ | | | | |
| ANGLE HOLE | | | | | |
| ALL SERU | ICES PRO | VIDED SUBJECT TO STANDA | RD TERMS ANI | D CONDITIC | DNS |







| CEC | | AR89013 | | |
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| WELL
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TRANSFER
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: | IMA-NEUTRON | OTHER SERU
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1:50
: | RANGE : |
| DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER | : 05/27/89
: 125
: 114.10
: 0.84
: 6 | PERMANENT DATUM
ELEV. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM
LOGGING UNIT
FIELD OFFICE | : 00
: GL
: GL
: 8902 | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX | : .05
: 12.1 | RECORDED BY
BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T | : D.ZANKL
: WATER
: OO
: OO
: 173
: 690 | FILE : ORIGINAL
TYPE : 9055A
LOG : 1
PLOT : QUIN 10
THRESH: 20000 |
| REMARKS
LOGGED OPEN HOL
VERTICAL HOLE
ALL SERV | | SUBJECT TO STANDA | RD TERMS AND | TONDITIONS |



| ····· | ك ىت | - | | • • • • • • | | | | |
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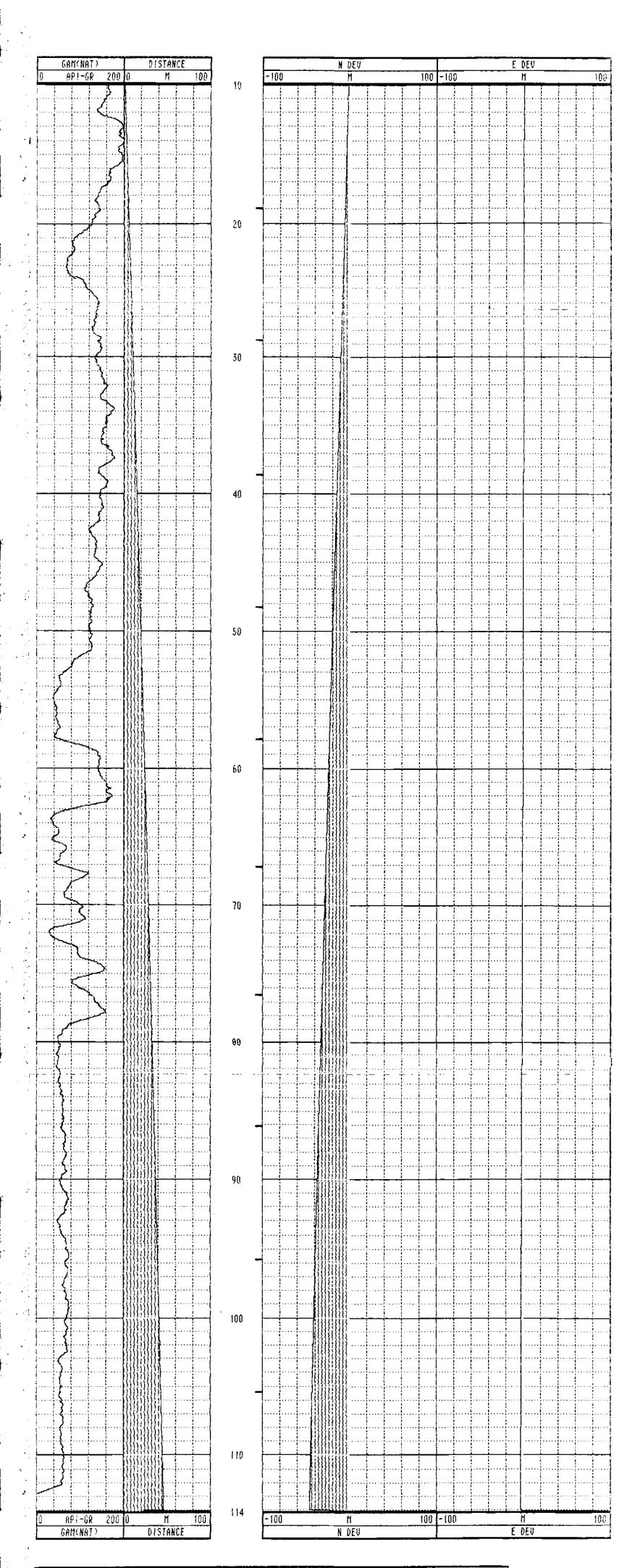
| 114 | 500 APÍ-N | | | | | | | | |
|-----|-----------|-----------|--|--|--|--|--|--|--|
| | ····· | 3 | | | | | | | |
| | | . <u></u> | | | | | | | |

| | 10 | TOOL CALIBRATION | | | TOOL = 9055A SERIAL (| | L NUMBER = | 14 |
|---|----------|------------------|------|----------|-----------------------|-----|------------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD |
|) | 05/04/89 | 08:10:36 | 0 | SAM(NAT) | 0.000 | CPS | 6.000 | AP I -GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHN |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | MV |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | MV |
| 1 | 05/04/89 | 08:10:36 | 8 | NEUTRON | 0.000 | CPS | 0.000 | 821-N |
| 8 | 05/04/89 | 08:53:24 | Û | NEUTRON | 145.000 | CPS | 271.000 | API-N |



| LOCATION/FIELD
COUNTY | : QHR89013 C
:
: TRANSFER | EVIATION | OTHER SEI
Scale
1:200 | RVICES: |
|--------------------------|---------------------------------|----------------------|-----------------------------|------------------|
| STATE
Section | : BRITISH CC
: | | • | RANGE : |
| 0203104 | • | Синзите | • | KRNOL - |
| DATE | : 05/31/89 | PERMANENT DATUM | : 00 | ELEVATIONS |
| DEPTH DRILLER | : 125 | ELEV. PERM. DATUM | : 00 | KB : 00 |
| LOG BOTTOM | : 114.10 | LOG MEASURED FROM | : GL | DF : 00 |
| LOG TOP | : 0.84 | DRL MEASURED FROM | : GL | GL : 00 |
| CASING DRILLER | : 6 | LOGGING UNIT | : 8902 | |
| CASING TYPE | : STEEL | FJELD OFFICE | : CALGARY | |
| CASING THICKNES | S: .05 | RECORDED BY | : D.ZANKL | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID | : ЦАТЕР | FILE : PROCESSED |
| MAGNETIC DECL. | : 24.500 | RM | : 00 | TYPE : 9055A |
| | | | : 00 | LOG : 3 |
| | | MATRIX DELTA T | | |
| | | | : 690 | |
| REMARKS | : | | | |
| LOGGED OPEN HO |)LE | | | |
| VERTICAL HOLE | | | | |
| ALL SERU | UICES PROVIDE | D SUBJECT TO STANDAR | D TERMS AN | ID CONDITIONS |
| | | | | |





| | TOOL CALIBRATION | | 100L = 90 | 55A | SERIA | L NUMBER = | 14 | |
|------|------------------|----------|-----------|----------|----------|------------|----------|----------|
| CAL- | DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD |
| 0570 | 4789 | 08:10:36 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | AP i -GR |
| 057(| 4/89 | 08:10:36 | Q | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-6R |
| 0570 |)5789 | 16:59:51 | Û | POROSITY | 0.000 | CPS | 145.000 | CPS |
| 0570 |)4/89 | 08:15:10 | Û | RES | 9707.000 | CPS | 0.000 | OHM |
| 0570 |)4/89 | 08:15:10 | Û | RES | 5212.000 | CPS | 1000.000 | OHM |
| 05/0 |)4/89 | 08:13:14 | Û | SP | -9,000 | CPS | 0.000 | MN |
| 05/0 |)4/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | HV |
| 0570 | 14/89 | 08:18:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | API-N |
| 0570 |)4/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | AP -N |

| · , # | * * * * * | * * * * CO | MPU-LOG II - | VERTICAL D | EVIATION | * * * * | * * * * * * * * | |
|-----------|---------------|--------------|--------------|------------------|-------------|----------|------------------|--|
| | DATA FROM | CE : CALGARY | | DATE OF
PROBE | LOG : (| 9055A , | MM
14
36 3 | |
| 106 | AN F DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTAN | CE AZIMU | TH SANG SANGB | |
| sari
S | 10.0 | 9,03 | -1.30 | 0.44 | 1.4 | 161.5 | 28.5 202.7 | |
| | 15.0 | 13.43 | -3.57 | 0.30 | 3.6 | 175.2 | 27.6 180.0 | |
| | 20.0 | 17.83 | -5.81 | Q.Q4 | 5.8 | 179.6 | 28.3 181.6 | |
| | 25.0 | 22.24 | -8.13 | 0.02 | 8.1 | 179.8 | 27.9 185.5 | |
| | 30.0 | 26.64 | -10.46 | 12 | 10.5 | 180.6 | 28.0 176.8 | |
| | 35.0 | 31.05 | -12.73 | 21 | 12.7 | 180.9 | 28.1 167.6 | |
| | 40.0 | 35.46 | -15.04 | 37 | 15.0 | 181.4 | 27.5 199.9 | |
| | 45.0 | 39.85 | -17.36 | 58 | 17.4 | 181.9 | 28.3 184.3 | |
| - | 50.0 | 44.26 | -19.68 | 78 | 19.7 | | 28.4 182.7 | |
| | 55.0 | 48.67 | -21.91 | →. 95 | 21.9 | 182.5 | 28.8 221.5 | |
| - , | 60.0 | 53.09 | -24.13 | ~.96 | 24.1 | 182.3 | 27.7 177.8 | |
| 2 1 | 6 5. 0 | 57.53 | -26.42 | -1.04 | 26.4 | 182.3 | 27.1 163.6 | |
| | 70.0 | 62.00 | -28.55 | -t . 22 | 28.6 | 182,4 | 25.9 182.3 | |
| • . | 75.0 | 66.49 | -30.66 | -1.37 | 30.7 | | 26.7 184.6 | |
| | 80.0 | 70.96 | -32,81 | -1.61 | 32.8 | 182.8 | 26.9 150.7 | |
| | 85.0 | 75.47 | -34.91 | -1.81 | | 183.0 | 25.6 196.8 | |
| • | 90.0 | 80.00 | -36.96 | 2.06 | | 183.2 | 24.6 173.4 | |
| · · | 95.0 | 84.55 | -38.95 | -2.34 | 39.0 | 183.4 | | |
| | 100.0 | 89.12 | 40.90 | | | 183.5 | 23.4 200.6 | |
| ÷. | 105.0 | 93.72 | -42,79 | | | | 23.0 195.7 | |
| | 110.0 | 98.33 | -44,67 | -3,10 | 44.8 | | 22.3 198.2 | |
| • ' | 114.1 | 102.13 | -46.13 | -3.41 | 46.3 | 184.2 | 0.0 0.0 | |

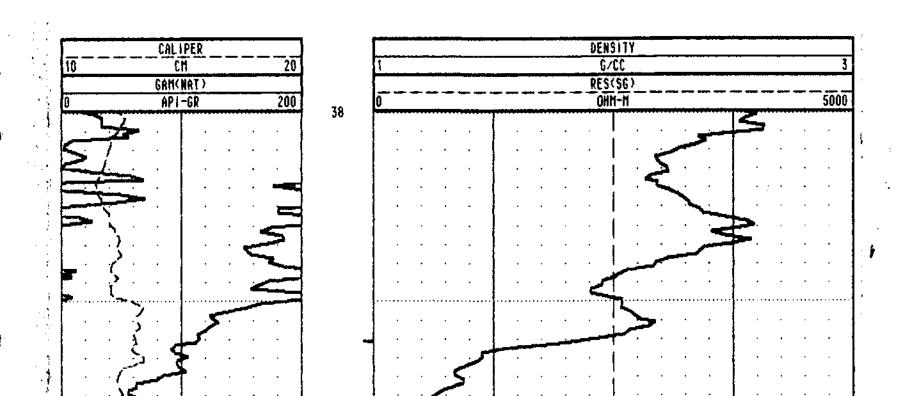
| CCC | | | | | | | | | |
|--------------------------|-----|--------------|----------|--------|--|---------------|----------|-----------|----------|
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| | 199 | | | | | | | 3,984,5 | |
| COMPANY | | QUINTETTE CO | | | | OTHER S | ERVICES: | | |
| WELL | : | QHR89014 EXP | DENSITY | I | | 600L 5 | | | |
| LOCATION/FIELD
COUNTY | • | TRANSFER | | | l l | SCALE
1:20 | | | |
| STATE | | BRITISH COLU | MBIA | | L | | | | |
| SECTION | ; | ···· | TOWNSHIP | • | : | | RANGE | : | |
| DATE | : | 05/24/89 | PERMANEN | T DAT | um : | 00 | ELEVAT | 10 | NS |
| DEPTH DRILLER | | | ELEV. PE | | | 00 | K8 | : | 00 |
| LOG BOTTOM | : | 81.38 | LOG MEAS | URED | FROM | GL | DF | : | 00 |
| LOG TOP | : | 0.12 | DRL MEAS | URED | FROM: | GL | GL | : | 00 |
| CASING DRILLER | : | 6 | LOGGING | UNIT | : | 8902 | | | |
| CASING TYPE | : | STEEL | FIELD OF | FICE | : | CALGARY | | | |
| CASING THICKNESS | ;: | .05 | RECORDED | BY | : | D.ZANKL | | | |
| BIT SIZE | : | 12.1 | BOREHOLE | FLUI | D : | WATER | FILE | : | ORIGINAL |
| MAGNETIC DECL. | : | 24.500 | RH | | : | 00 | TYPE | : | 9032AC |
| MATRIX DENSITY | : | 2.68 | RM TEMPE | RATUR | E : | 00 | LOG | : | 5 |
| FLUID DENSITY | | | MATRIX D | | | 173 | | | QUIN 14 |
| NEUTRON MATRIX | : | SANDSTONE | FLUID D | ELTA | т: | 690 | THRES | H: | 20000 |
| REMARKS | | | | | | | | | |
| LOGGED OPEN HOL | Ľ | | | | | | | | |
| VERTICAL HOLE | 10 | ES PROVIDED | | 10 et/ | NDODD | TEDMS 4 | NE CONEL | דור | INS |
| MLL JERU | ιĻ | LJ PROVIDED | | 10 91F | שחעווייייייייייייייייייייייייייייייייייי | ICKIIJ P | | ,) L
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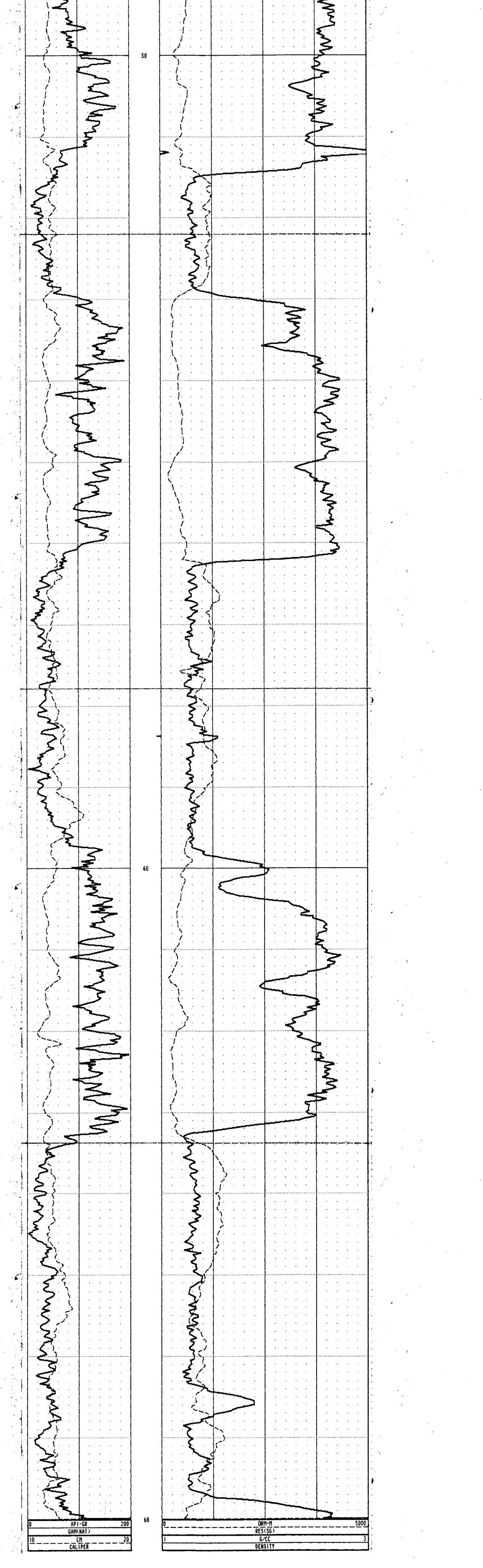
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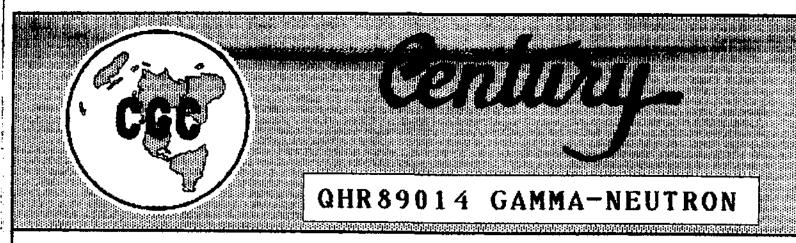


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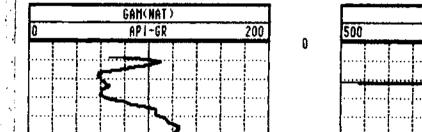
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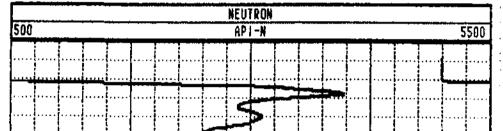


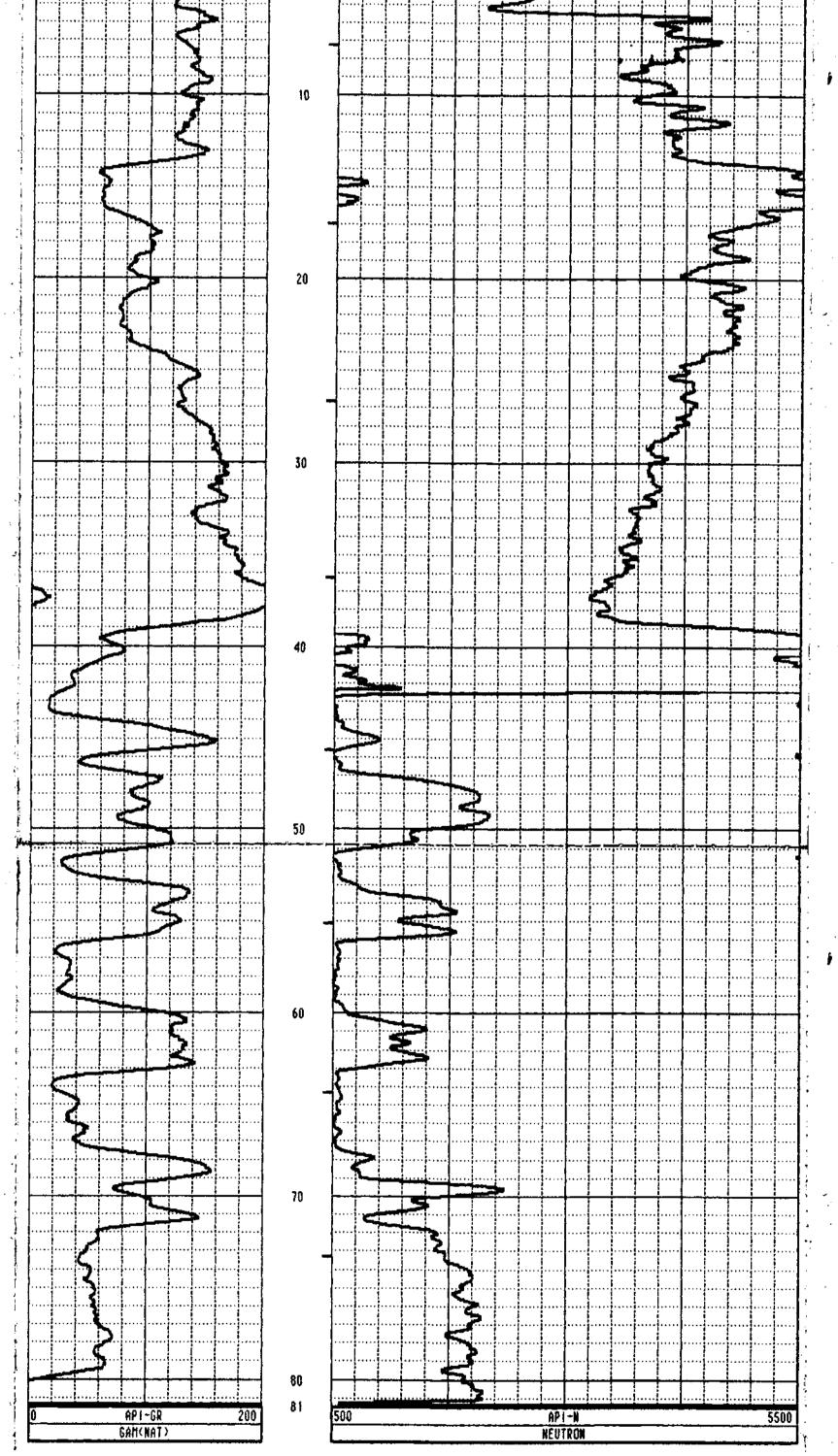


| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QHR89(
:
: TRANSF | 14 GAMMA-NEUTRON | OTHER SERVICES:
Scale
1:200 | |
|--|---------------------------|---|-----------------------------------|-------------------------------|
| SECTION | • BRIII: | TOWNSHIP | : RANGE : | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER
CASING TYPE
CASING THICKNES | : 6
: STEEL | ELEU. PERM. DATUM
40 LOG MEASURED FROM
86 DRL MEASURED FROM
LOGGING UNIT
FIELD OFFICE | GL DF : | 00
00 |
| MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOU
VERTICAL HOLE | | 00 RM
RM TEMPERATURE
MATRIX DELTA T | : 173 PLOT : (
: 690 THRESH: 2 | 9055A
4
201N 0
20000 |





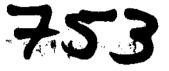


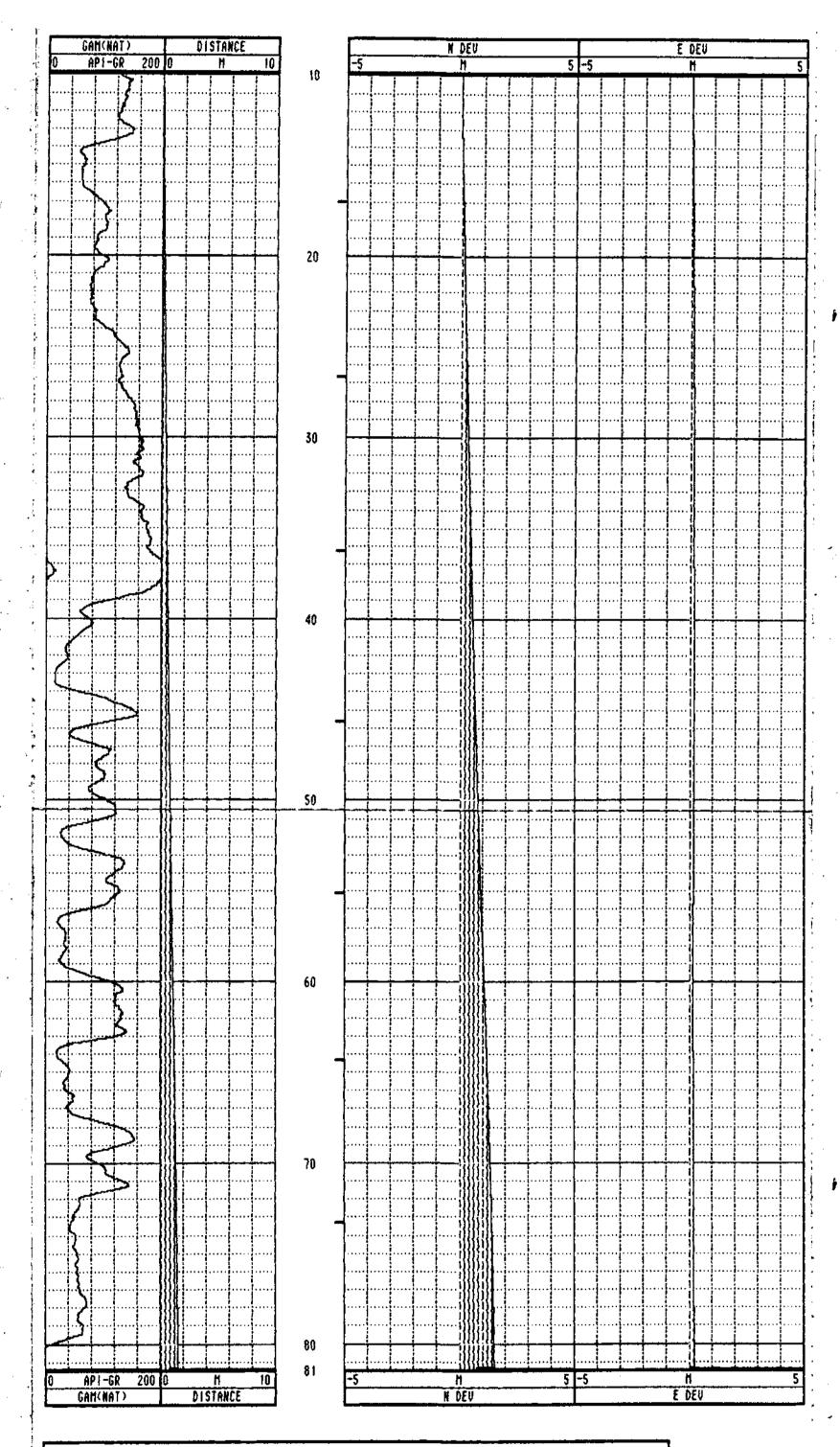


|
TOOL CALIBRATION | | | 100L = 9 | 9055A | SERIA | L NUMBER = | 14 | | |
|----------------------|----------|----------|----------|----------|----------|------------|----------|----------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | NSE | STAND | ARD | |
| Û | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 1 | 05/04/89 | 08:10:36 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-GR | |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.000 | CPS | |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM | |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM | |
| 5 | 05/04/89 | 08:13:14 | Q | SP | -9.000 | CPS | 0.000 | HU | |
| 6 | 05/04/89 | 08:13:14 | Û | SP | 4095.000 | CPS | 500.000 | MU | |
| 7 | 05/04/89 | 08:10:36 | Û | NEUTRON | 0.000 | CPS | 0.000 | AP I -N | |
| 8 | 05/04/89 | 08:53:24 | C | NEUTRON | 145.000 | CPS | 271.000 | API-N | |



| HELL
LOCATION∕FIELD
COUNTY | : QUINTETTE (
: QHR89014 DF
:
: TRANSFER
: BRITISH COL | EVIATION | OTHER SER
Scale
1:200 | VICES: |
|---|--|--|---------------------------------|--|
| SECTION | : | | : | RANGE : |
| DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER | : 05/24/89
: 85
: 81.40
: 0.86
: 6 | DRL MEASURED FROM | : 00
: GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING TYPE
Casing Thickness | : STEEL
: .05 | | CALGARY
D.ZANKL | |
| MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOLI
VERTICAL HOLE | - | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
00
00
173
690 | FILE : PROCESSED
TYPE : 9055A
LOG : 0
PLOT : QUIN 13
THRESH: 20000 |





| | TO | OL CALIBRA | IT I ON | 100L = 90 | 55A SE | RIAL NUMBER : | = 1 | 4 |
|---|----------|------------|---------|-----------|-------------|---------------|--------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | | STANDA | IRD |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CP | s | 0.000 | API-GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CP | s | 0.000 | AP I -GR |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 CP | ·s 14 | 45.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 CP | P S | 0.000 | OHM |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 CP | PS 100 | 00.000 | ONM |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 CP | PS | 0.000 | MV |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 CP | PS 51 | 00.000 | MV |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 CP | s | 0.000 | AP1-N |
| 8 | 05/04/89 | 08:53:24 | Ð | NEUTRON | 145.000 CP | 2 5 27 | 71.000 | API-₩ |

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546-55 1915 - 1915 1917 - 1917 - 1917

| * * * * * * | * * * * CO | MPU-LOG II - | VERTICAL D | EVIATION | * * * * * | * * * | * * |
|-------------|--------------|--------------|------------|------------|-----------|-------|------|
| CLIENT | : QUINTE | TTE COAL LTD | . HOLE ID | . : QHR | 89014 GAM | IM | |
| FIELD OFF | ICE : CALGAR | Y | DATE OF | LOG : 05/ | 24/89 | | |
| DATA FROM | 2 | | PROBE | : 905 | i5a , | 14 | |
| MAG. DECL | . : 24.5 | 00 | DEPTH U | NITS : MET | 'ER LOG | i () | |
| ABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANO |
| 10.0 | 10.00 | 01 | 0.03 | 0.0 | 108.3 | 0.5 | 151 |
| 15.0 | 15.00 | 0.04 | 0.07 | 0.1 | 57.8 | 1.1 | 28. |
| 20.0 | 20.00 | 0.13 | 0.10 | 0.2 | 38.0 | 1.1 | 21. |
| 25.0 | 25.00 | 0.23 | 0.14 | 0.3 | 30.7 | 1.4 | 26. |
| 30.0 | 30.00 | 0.33 | 0.16 | 0.4 | 25.9 | 1.2 | 2. |
| 35.0 | 34,99 | 0.44 | 0.18 | 0.5 | 22.2 | 1.0 | 16 |
| 40.0 | 39.99 | 0.55 | 0.19 | 0.6 | 19.1 | 1.4 | 354 |
| 45.0 | 44,99 | 0.66 | 0.19 | 0.7 | 16.0 | 1.0 | 8 |
| 50.0 | 49.99 | 0.79 | 0.19 | 0.8 | 13.5 | 1.8 | 356. |
| 55.0 | 54,99 | 0.92 | 0.18 | 0.9 | 11.4 | 1.7 | 0. |
| 60.0 | 59,99 | 1.07 | 0.18 | 1.1 | 9.5 | 1.7 | 359. |
| 65.0 | 64.98 | 1.21 | 0.18 | 1.2 | 8.7 | 1.4 | 345 |
| 70.0 | 69.98 | 1.34 | 0,20 | 1.4 | 8.3 | 1.3 | 11 |
| 75.0 | 74.98 | 1.44 | 0.21 | 1.4 | 8.2 | 0.9 | 23 |
| 80.0 | 79.98 | 1.50 | 0.22 | 1.5 | 8.4 | 0.2 | 43 |
| 81.4 | 81.38 | 1.52 | 0.23 | 1.5 | 8.3 | 0.0 | 0 |





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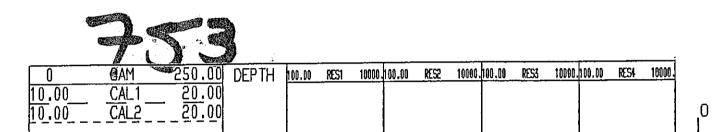
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1.00

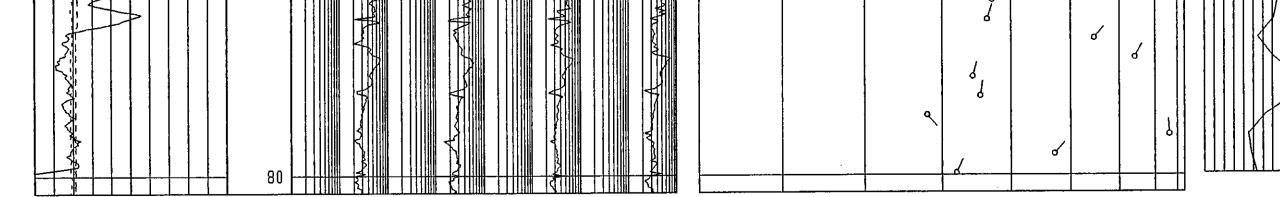
OHRSSO14 DIPMETER

| COMPANY | : QUINTETTE COAL LTD | - | OTHER SERVICES: | |
|------------------|---------------------------------------|--|--------------------|---|
| WELL | : OHR89014 DIPMETER | | | |
| LOCATION/FIELD | · · · · · · · · · · · · · · · · · · · | | SCALE | |
| COUNTY | : TRANSFER | | 1:200 | |
| STATE | : BRITISH COLUMBIA | | | · |
| SECTION | : | TOWNSHIP : | | RANGE : |
| DATE | : 05/24/89 | PERMANENT DATUM : | 88 | ELEVATIONS |
| DEPTH DRILLER | : 85 | ELEV. PERM. DATUM: | 09 | KB : 00 |
| LOG BOTTOM | : 81.00 | LOG MEASURED FROM: | GL | DF : 00 |
| LOG TOP | : 7.57 | DRL MEASURED FROM: | GL | GL : 00 |
| CASING DRILLER | : 6 | LOGGING UNIT : | 8902 | |
| CASING TYPE | : STEEL | FIELD OFFICE : | CALGARY | |
| CASING THICKNESS | 3: .05 | <u> </u> | D.ZANKL | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID : | WATER | FILE : ORIGINAL |
| MAGNETIC DECL. | : 24.500 | | 80 | TYPE : 9400A |
| MATRIX DENSITY | : 2.68 | | 00 | LOG : Ø |
| FLUID DENSITY | : 1.0 | | 173 | PLOT : 9400 4 |
| NEUTRON MATRIX | : SANDSTONE | | 690 | THRESH: 20000 |
| REMARKS | : | ······································ | | TIMPOL TRADIE |
| logged open hol | e vertical | | | |
| Window: 2m Ste | p: in Search Angle: | 80deg Method-2 | | -8 |
| | ALL SERVICES PROVIDE | | RD TERMS AND CONDI | T TONG |
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| $\frac{0}{10.00} \frac{64 \text{AM}}{230.00} \frac{230.00}{\text{DEPTH}} \frac{100.00}{100.00} \frac{8231}{10000} \frac{100.00}{100.00} \frac{8232}{10000} \frac{100.00}{100.00} \frac{8233}{10000} \frac{100.00}{100.00} \frac{8234}{10000}$ | <u>.</u> | | DI | | | | | I |
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10.00 <u>CAL2 20.00</u> | 0 | 10 20 | 30
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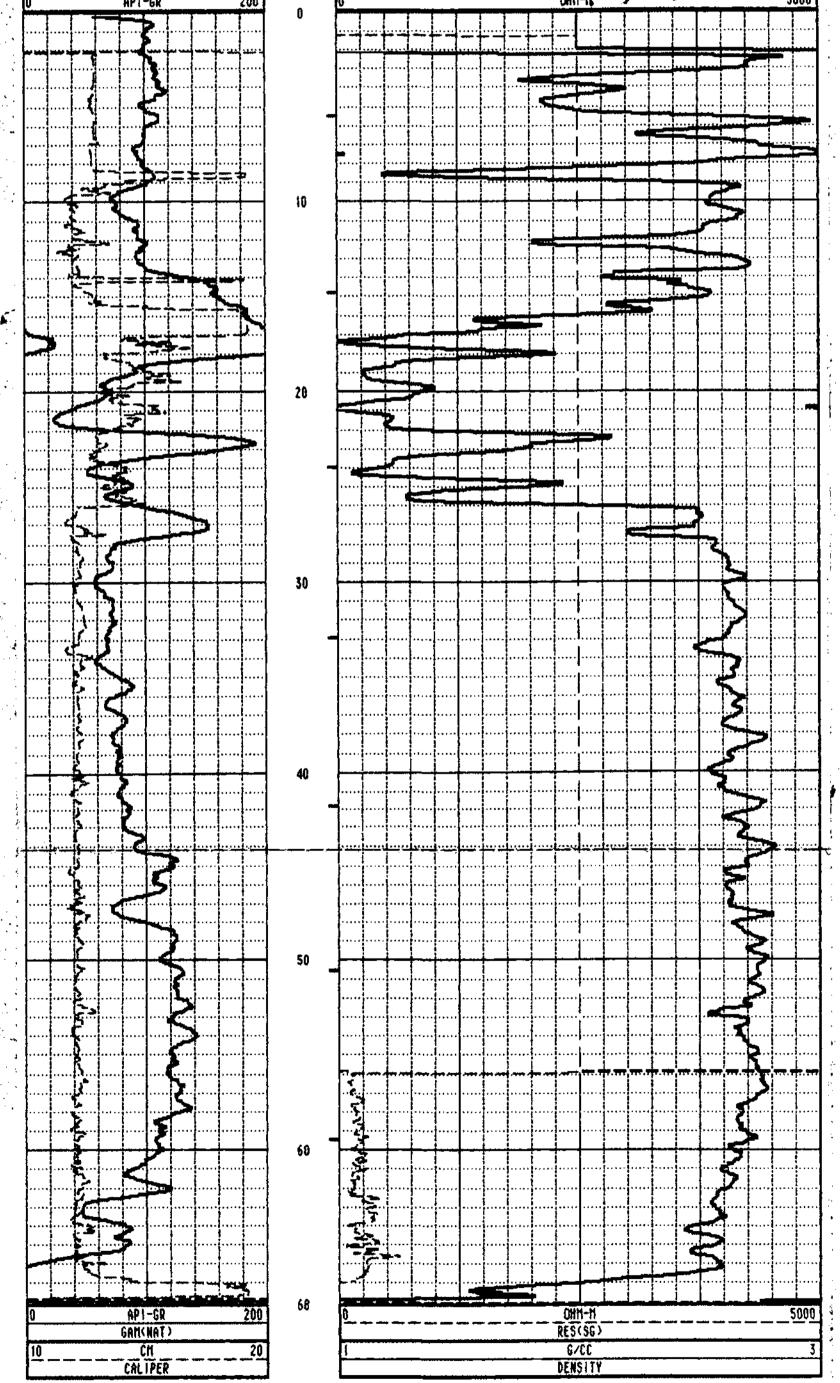
QHR89015 GAM-DEN-RES-CAL

អើមើរ អើមើនដែរជាមិនមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សមនុស្សន

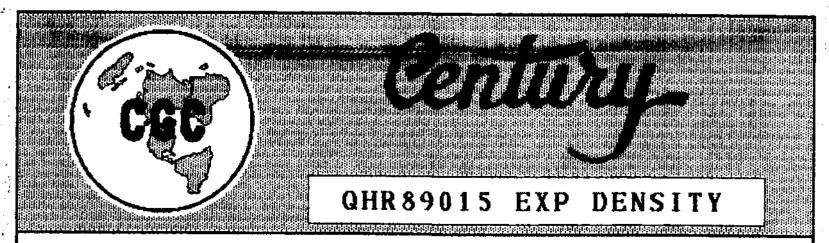
| WELL
LOCATION/FIELD | CUINTETTE C
Chrb9015 Ga
Transfer | DAL LTD.
M-DEN-RES-CAL | OTHER SET
Scale
1:200 | RUICES: |
|------------------------|--|---------------------------|-----------------------------|-----------------|
| STATE | BRITISH COL | UMBIA | | |
| SECTION | t i | TOUNSHIP | : | RANGE : |
| DATE | 05/28/89 | PERMANENT DATUM | : 00 | ELEVATIONS |
| DEPTH DRILLER | : 85 | ELEV. PERM. DATUM | : 00 | KB : 00 |
| LOG BOTTOM | 68.06 | LOG MEASURED FROM | : GL | DF : 00 |
| LOG TOP | : 0.20 | DRL MEASURED FROM | : GL | GL : 00 |
| CASING DRILLER | : 8 | LOGGING UNIT | : 8902 | |
| CASING TYPE | \$ STEEL | FIELD OFFICE | : CALGARY | |
| CASING THICKNESS | : .05 | RECORDED BY | : D.ZANKL | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID | : WATER | FILE : ORIGINAL |
| | : 24.500 | RM | : 00 | TYPE : 9032AC |
| | : 2.68 | RM TEMPERATURE | : 00 | LOG : 4 |
| FLUID DENSITY | : 1.0 | MATRIX DELTA T | : 173 | PLOT : QUIN 12 |
| NEUTRON MATRIX | : SANDSTONE | FLUID DELTA T | : 690 | THRESH: 20000 |
| REMARKS | : | | | |
| LOGGED OPEN HOL | E | | | |
| VERTICAL HOLE | | | | |
| ALL SERVI | CES PROVIDED | SUBJECT TO STANDA | RD TERMS AN | ID CONDITIONS |

| | CALIPER | |
|----|----------|-----|
| 10 | CM | 20 |
| | GAM(NAT) | |
| 0 | 401-00 | 200 |

| | DENSITY | ······································ |] , |
|---|---------|--|------------|
| 1 | 6/CC | 4 | 3 |
| | RES(SG) | | |
| | | 500 | 0 |



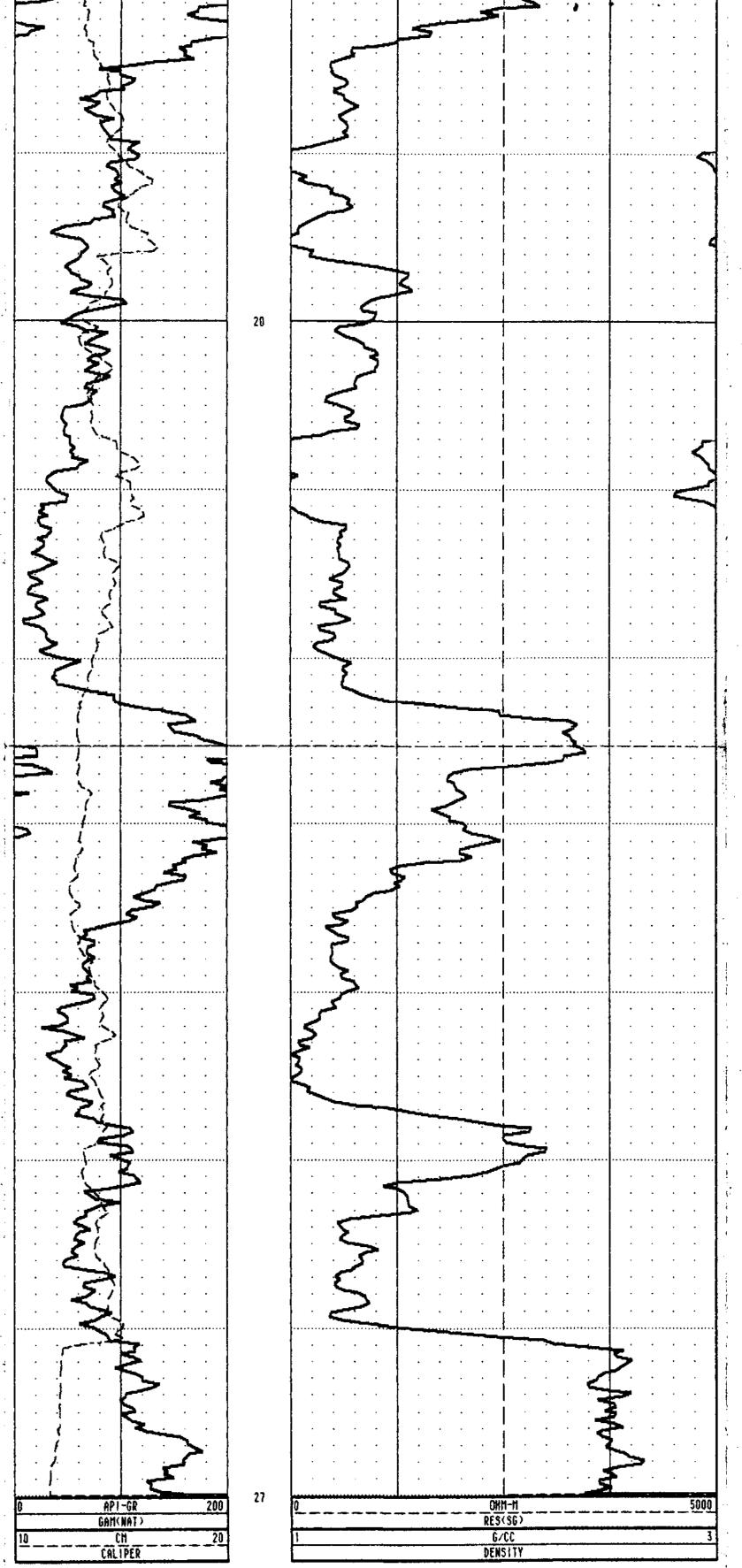
| | TO | OL CALIBRA | TION | tool = 90 |)32AC | SERIA | N. NUMBER = 967 |
|---|----------|------------|------|-----------|-----------|------------|-----------------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STANDARD |
| D | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 AP1~GR |
| I | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 API-GR |
| 2 | 05/04/89 | 12:11:56 | 9 | DENSITY | 6166.000 | CPS | 1.106 G/CC |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.120 6/00 |
| 4 | 05/04/89 | 18:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.000 OHH-H |
| 5 | 85/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 | CPS | 178.500 OHM-M |
| 6 | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7.620 CH |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.800 CM |
| 6 | 05/04/89 | 10:17:51 | ¢ | DENSITYH | 0.000 | CPS | 0.000 G/CC |
| 9 | 05/04/89 | 10:17:51 | Q | DENSITYH | 0.000 | CPS | 0.000 G/CC |
| 0 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 CM |
| 1 | 05/04/89 | 10:17:51 | Û | CAL IPERL | 0.000 | CPS | 0.000 CM |



| WELL
LOCATION/FIELD
COUNTY
STATE | : QUINTETTE C
: QHR89015 EX
:
: TRANSFER
: BRITISH COL | UMBIA | OTHER SERU
Scale
1:20 | |
|---|--|--------------------|-----------------------------|-----------------|
| SECTION | • | TOWNSHIP | : | RANGE : |
| | 05/28/89 | PERMANENT DATUM | 00 | ELEVATIONS |
| DEPTH DRILLER | : 85 | ELEV. PERM. DATUM: | : 00 | KB : 00 |
| LOG BOTTOM | 68.06 | LOG MEASURED FROM: | GL | DF : 00 |
| LOG TOP | 0.20 | DRL MEASURED FROM: | GL | GL : 00 |
| CASING DRILLER | : 6 | LOGGING UNIT : | 8902 | |
| CASING TYPE | STEEL | FIELD OFFICE : | CALGARY | |
| CASING THICKNESS: | .05 | RECORDED BY | D.ZANKL | |
| BIT SIZE : | : 12.1 | BOREHOLE FLUID : | WATER | FILE : ORIGINAL |
| MAGNETIC DECL. : | | | 00 | TYPE : 9032AC |
| | 2.68 | | 00 | LOG : 4 |
| FLUID DENSITY : | | | 173 | PLOT : QUIN 14 |
| NEUTRON MATRIX | | | 690 | THRESH: 20000 |
| REMARKS | | | 070 | |
| LOGGED OPEN HOLE | | | | |
| VERTICAL HOLE | | | | |
| ALL SERVI | CES PROVIDED | SUBJECT TO STANDAR | D TERMS AND | CONDITIONS |

| | CALIPER | |
|----|----------|-----|
| 10 | CH | 20 |
| | GAM(NAT) | |
| 0 | API-GR | 200 |

| | |
 | |
|---|---------|----------|---|
| | DENSITY |
 | 4 |
| 1 | 6/CC |
3 | |
| | RES(SG) |
 | • |
| 0 | |
5000 | • |
| | | | Í |

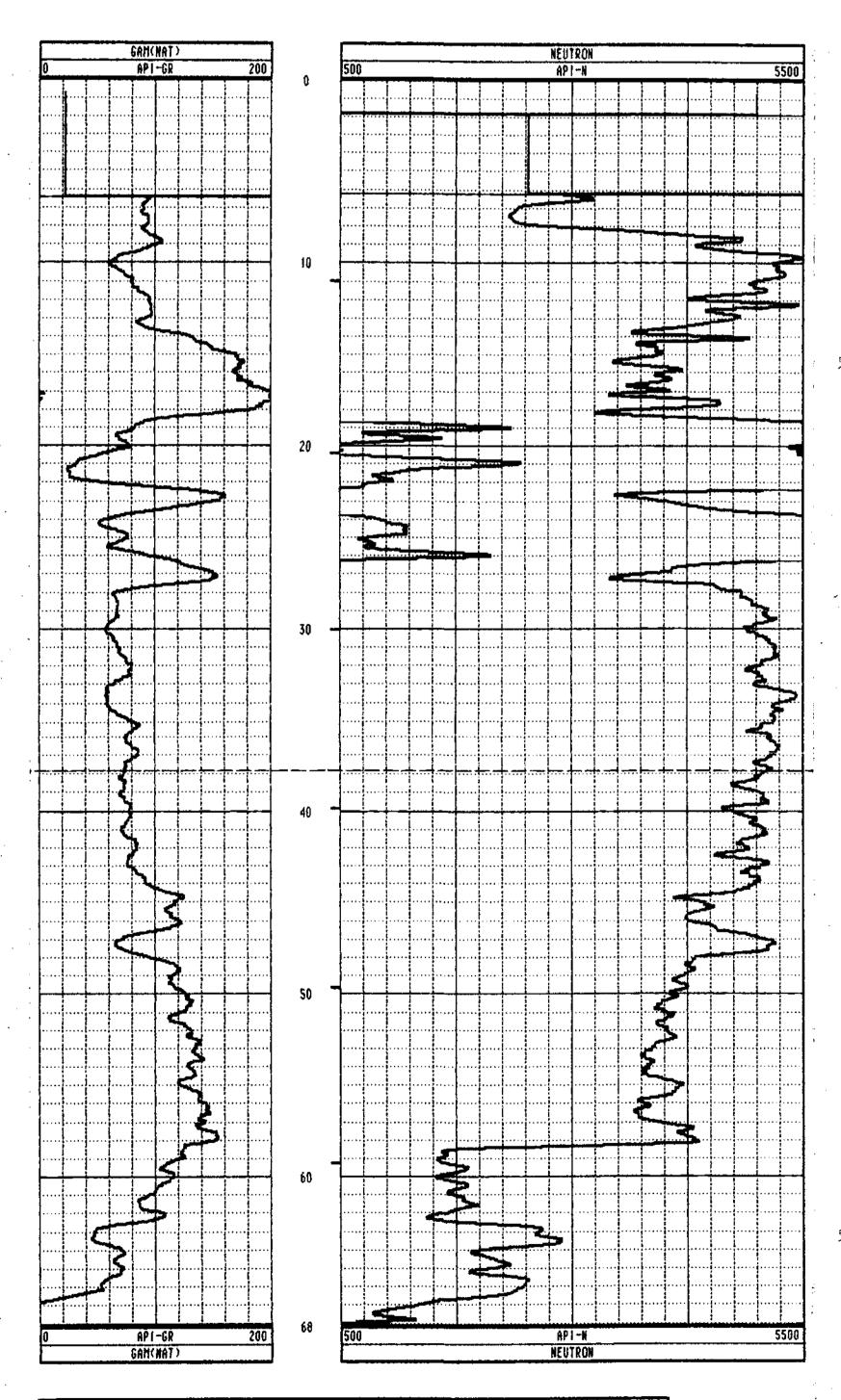


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|-------|------|---|--------|---------------|---|---|---|------------|------|--------|---|-------|------|---------|--|
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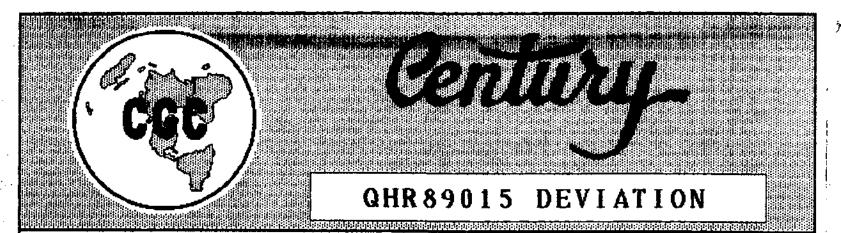


| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QUINTETTE
: QHR89015 (
:
: TRANSFER
: BRITISH C(| SAMMA-NEUTRON | OTHER SERV
Scale
1:200 | ICES: |
|--|--|---|---------------------------------|---|
| SECTION | | TOWNSHIP : | i | RANGE : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 05/28/89
: 85
: 68.14
: 0.70 | ELEU. PERM. DATUM: | 00
GL | ELEVATIONS
KO : 00
DF : 00
GL : 00 |
| CASING DRILLER
Casing type
Casing thickness | : 8
: STEEL
S: .05 | LOGGING UNIT :
FIELD OFFICE : | 8902
Calgary
D.zankl | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOL
VERTICAL HOLE | | RM TEMPERATURE :
MATRIX DELTA T :
FLUID DELTA T : | WATER
00
00
173
690 | FILE : ORIGINAL
TYPE : 9055A
LOG : 3
PLOT : QUIN 10
THRESH: 20000 |
| ALL SERV | ICES PROVIDE |) SUBJECT TO STANDARD | TERMS AND | CONDITIONS |





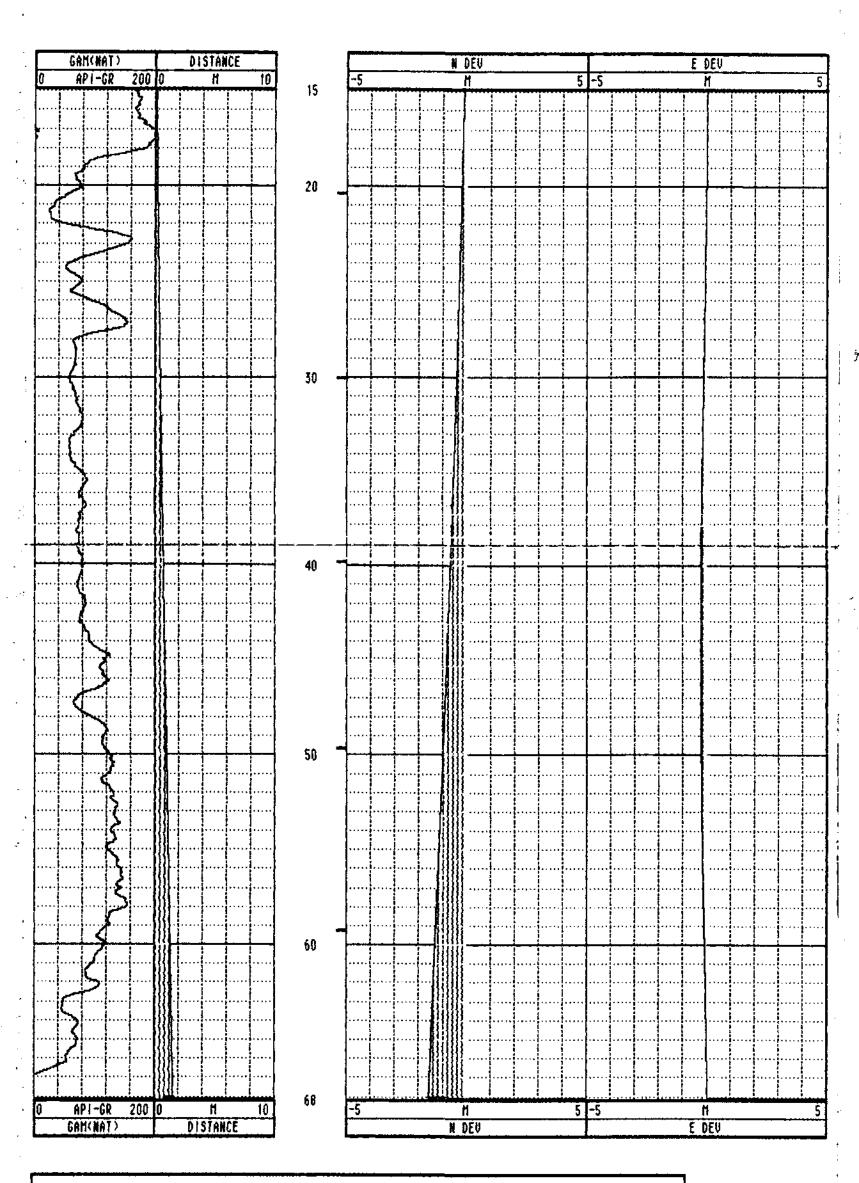
| | TO | TOOL CALIBRATION | | | TOOL = 9055A SERIAL | | | 14 | |
|---|----------|------------------|------|----------|---------------------|----|----------|----------|---|
| , | CAL-DATE | CAL-TINE | SRCE | SENSOR | RESPONSI | E | STAND | ARD | - |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CI | PS | 0.000 | AP I -GR | |
| ł | 95/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CI | PS | 0.000 | AP I -GR | |
| 2 | 05/05/89 | 16:59:51 | 8 | POROSITY | 0.000 CI | PS | 145.000 | CPS | |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 C | PS | 0.000 | OHM | |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 C | PS | 1000.000 | OHM | |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 C | PS | 0.000 | MU | |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 C | PS | 500.000 | MU | |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 C | PS | 0.000 | API-N | |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 C | PS | 271.000 | API-N | |



| COMPANY
WELL
Location/Field
County
State | : QUINTETTE
: QHR89015 D
:
: TRANSFER
: BRITISH CO | EVIATION | OTHER SER
Scale
1:200 | RUICES: |
|--|--|--|---------------------------------|--|
| SECTION | : | TOUNSHIP | : | RANGE : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 06/01/89
: 85
: 68.14
: 0.70 | PERMANENT DATUM
ELEV. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM | : 00
: GL | ELEVATIONS
KB:00
DF:00
GL:00 |
| CASING DRILLER
Casing type
Casing thickness | : 8
: STEEL
5: .05 | FIELD OFFICE | 8902
Calgary
D.Zankl | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED DPEN HOL
UERTICAL HOLE | | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
00
00
173
690 | FILE : PROCESSED
TYPE : 9055A
LOG : 8
PLOT : QUIN 13
THRESH: 20000 |

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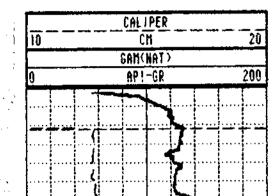
| | TOOL CALIBRATION | | | 100L = 90 | 155A SEI | RIAL NUMBER = | 14 |
|---|------------------|----------|------|-----------|--------------|---------------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STAND | ARD |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CP: | S 0.000 | AP I -GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CP: | S 0.000 | API-GR |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 CP: | S 145.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 CP | S 0.000 | ONN |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 CPS | S 1000.000 | они |
| 5 | 05/04/89 | 08:13:14 | Û | SP | -9.000 CP: | \$ 0,000 | HU |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 CPS | S 500.000 | HV |
| 7 | 05/04/89 | 08:10:36 | Q | NEUTRON | 0.000 CP: | 5 0.000 | API-N |
| 8 | 05/04/89 | 08:53:24 | C | NEUTRON | 145.000 CPS | S 271.000 | API-N |

| 1 | | | | | | | |
|----|----------------------|---------------|--------------|------------|-----------|------------|---|
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| ي. | ىلە بەلە بەر بەر بەر | * * * * 60 | Mollaine II | | CUTATION | . به به به | * * * * * * * * |
| | * * * * * | ት ቅ ቅ ቅ ት ርርብ | | VENITONE D | E.VIPO100 | ላ ጥጥ ጥ | אד זיי אין אד אין אין אין אין אין אין אין אין אין אין |
| | CLIENT | + OUINTET | TE COAL LTD. | HOLE ID. | : QH | IR89015 GA | MM |
| | | CE : CALGARY | | DATE OF | | | |
| | DATA FROM | | | PROBE | | 9055A . | 14 |
| 3 | MAG. DECL. | : 24.500 | | DEPTH UN | ITS : ME | | 36 8 |
| 2 | | | | | | | |
| CA | BLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTAN | CE AZIMU | TH SANG SANGB |
| 1 | 15.0 | 15.00 | 11 | 0.02 | 0.1 | 170.6 | 1.9 187.9 |
| | 20.0 | 19,99 | 21 | 01 | 0.2 | 183.8 | 1.2 218.4 |
| | 25.0 | 24.99 | 32 | 07 | 0.3 | 192.7 | 1.4 209.1 |
| ; | 30.0 | 29,99 | 42 | 13 | 0,4 | | 1.5 211.0 |
| ÷. | 35.0 | 34.99 | -,54 | 19 | 0.6 | 199.6 | 1.7 204.9 |
| 2 | 40.0 | 39,99 | 67 | 23 | 0.7 | 198.9 | 1.6 189.0 |
| ,i | 45.0 | 44.99 | 82 | 24 | 0.9 | 196,3 | 1.5 183.2 |
| 1 | 50.0 | 49.98 | 98 | 22 | 1.0 | 192.7 | 1.4 169.2 |
| ţ | 55.0 | 54.98 | -1.14 | 17 | 1.2 | 188.5 | 2.3 141.8 |
| 1 | 60.0 | 57.98 | -1.31 | ~.08 | 1.3 | 183.4 | 2.2 143.3 |
| 1 | 65.0 | 64.97 | -1.46 | 0.00 | 1.5 | 180.0 | 1.8 153.8 |
| : | 68.1 | 68.11 | -1.56 | 0.04 | 1.6 | 178.6 | 0.0 0.0 |

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| | | HR 8 9 0 1 6 G | | N-RES-CAL | |
|---|--|--|----------------------------------|--|--|
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QUINTETTE CO
: QHR09016 GAN
:
: TRANSFER
: BRITISH COLU
: | 1-DEN-RES-CAL | OTHER SER
Scale
1:200 | VICES:
Range : | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 05/28/89
: 192
: 182.96
: 0.28 | PERMANENT DATUM
ELEV. PERM. DATUM
Log measured from
DRL measured from | : GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 | |
| CASING DRILLER
Casing type
Casing thickness | : 8
: STEEL
: .05 | FIELD OFFICE
RECORDED BY | : 8902
: Calgary
: D.Zankl | | |
| NEUTRON MATRIX
REMARKS | : 1.0
: SANDSTONE
: | BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T
GED AT 183 METERS | : 690 | FILE : ORIGINAL
TYPE : 9032AC
LOG : 4
PLOT : QUIN 12
THRESH: 20000
NG 9055 TOOL | |
| | | THE HORIZONTAL
SUBJECT TO STANDAR | RD TERMS AND | CONDITIONS | |



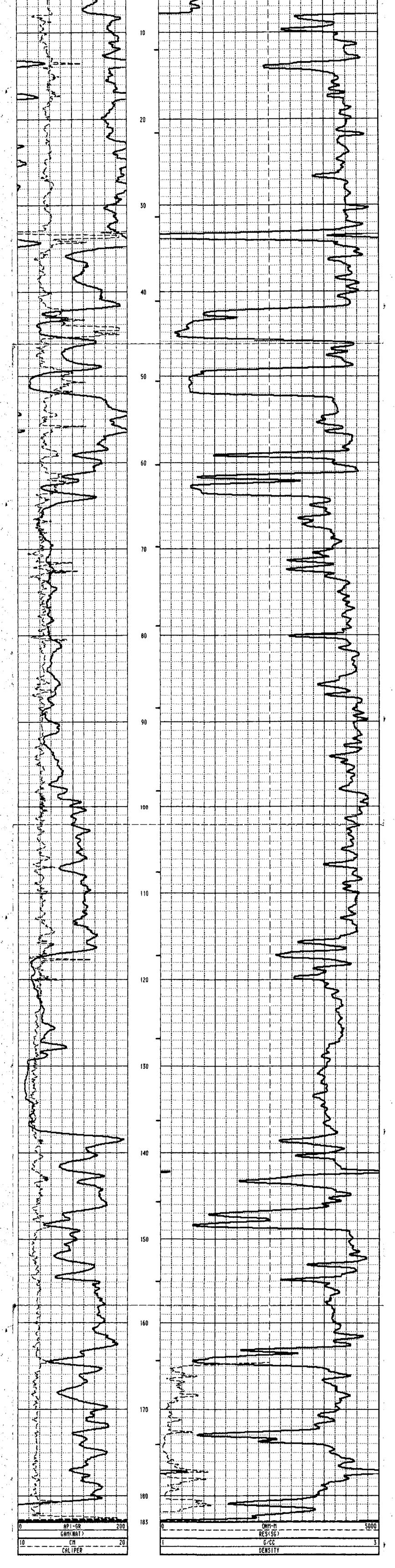


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|----------|----------|---------|----------|---------|----------|-----------|------------|---------|------------|---------|---|------|---------------|-------------|--------------|------|
| 1 | | | | | | | | G/ | ŪŪ. | | | | | | | 3 |
| | | | | | | | | RES | (SG) | | | |
 | | | |
| 0 | | | | | · — · | | | | <u>H-H</u> | | | |
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| | TČ | IOL CALIBRA | TION | 100L = 90 | B32AC | SERIA | L NUMBER = 9 | 67 | |
|----|----------|-------------|------|-----------|-----------|-------|--------------|----------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | NSE | STAND | ARD | |
| 0 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I-GR | |
| 1 | 05/04/89 | 10:17:51 | 0 | GAN(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.106 | 6/00 | |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.120 | G/CC | |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.000 | M-HKO | |
| 5 | 05/04/89 | 10:25:07 | Û | RES(SG) | 30275.000 | CPS | 178.500 | CHIM-M | |
| 6 | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7.620 | CH | |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.800 | CH | |
| 8 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.090 | CPS | 0.000 | 6760 | |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | 6700 | |
| 10 | 05/04/89 | 10:17:51 | Û | CALIPERL | 0.000 | CPS | 0.000 | CM | |
| 11 | 05/04/89 | 10:17:51 | Û | CALIPERL | 0.000 | | 0.000 | | |

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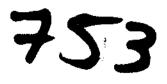
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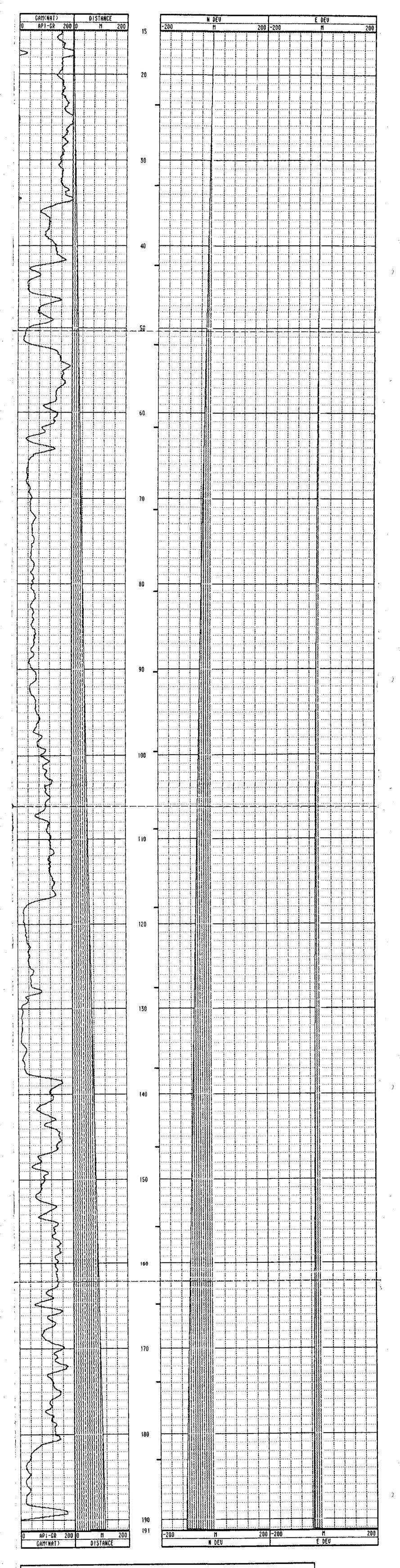


| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QUINTETTE
: QHR89016 C
:
: TRANSFER
: BRITISH CC | EVIATION | OTHER SEI
Scale
1:200 | RVICES: |
|---|--|---|--|--|
| SECTION | : | TOWNSHIP | : | RANGE : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER
CASING TYPE
CASING THICKNES: | : 192
: 191.24
: 1.00
: 8
: STEEL | ELEV. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM
LOGGING UNIT
FIELD OFFICE | : 00
: GL | ELEVATIONS
KB : OO
DF : OO
GL : DO |
| REMARKS
Logged open hol
Angle hole - 50 | : 2.68
: 1.0
: Sandstone
:
.E
) degrees from | RM
RM TEMPERATURE
MATRIX DELTA T | : WATER
: QO
: QO
: 173
: 690
D TERMS AND | FILE : PROCESSED
TYPE : 9055A
LOG : 5
PLOT : QUIN 13
THRESH: 20000 |

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| | TO | OL CALIBRA | TION | TOOL = 9055A SERIAL NU | | | L NUMBER | = | 14 |
|---|----------|------------|------|------------------------|----------|-------------|----------|---------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | SE | | STAND | ARD |
| 0 | 05/04/89 | 08:10:36 | Ð | GAM(NAT) | 0.000 | CPS | | 0.000 | AP (-GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(WAT) | 0.000 | C PS | | 0.000 | AP I -GR |
| 2 | 05/05/89 | 16:59:51 | Ð | POROSITY | 0.000 | CPS | 1 | 45.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | Û | RES | 9707.000 | CPS | | 0.000 | OHM |
| 4 | 05/04/89 | 08:15:10 | Û | RES | 5212.000 | CPS | 10 | 000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | | 0.000 | MU |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | Ę | 500.000 | NU |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | | 0.000 | API-N |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | i | 271.000 | API-N |

| · | | | | | | | |
|-----|------------|--------------|--------------|-----------|---------|----------|----------------|
| | CLIENT | : QUINTET | TE COAL LTD. | HOLE ID. | : QH | R89016 G | AMM |
| | | CE : CALBARY | | | L0G : (| | |
| · | DATA FROM | 1 | | PROBE | : | 9055A | . 14 |
| , | MAG. DECL. | | | DEPTH UN | | | .06 \$ |
| | | | | | | | |
| CF | BLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTAN | CE AZIML | ITH SANG SANOR |
| | 15.0 | 12.08 | ~.68 | -1.83 | 2.0 | 249.7 | 40,5 193,5 |
| | 20.0 | 15.93 | -3.72 | -2.60 | 4.5 | 215.0 | 38.4 220.3 |
| | 25.0 | 19.79 | -6.77 | -3.37 | 7.6 | 206,5 | 39.2 195.6 |
| | 30,0 | 23.64 | -9.84 | -4.13 | 10.7 | 202.8 | 39.8 195.5 |
| | 35.0 | 27.48 | -12.93 | -4.96 | 13.8 | 201.0 | 39.6 197.7 |
| | 40.0 | 31.33 | -16.00 | -5.72 | 17.0 | 199.7 | 39.6 195.1 |
| | 45,0 | 35.20 | -19.01 | -6.61 | 20.1 | 199.2 | 39.3 223.0 |
| | 50.0 | 39.06 | -21.76 | -7.54 | 23.0 | 199.1 | 38.5 196.9 |
| | 55.0 | 42.93 | -24.70 | -8.38 | 26.1 | 198.7 | 39.2 194.7 |
| | 60.0 | 46.82 | 27.69 | -9.29 | 29.2 | 198.5 | 39.0 197.1 |
| | 65.0 | 50.72 | -30.64 | -10,23 | 32.3 | 198.5 | 38.4 197.9 |
| | 70.0 | 54.59 | ~33.63 | -11.14 | 35.4 | 198.3 | 38.4 212.1 |
| | 75.0 | 58.50 | -36.60 | -11.89 | 38.5 | 198.0 | 38.5 195.6 |
| | 80.0 | 62.42 | -39,55 | -12.75 | 41.6 | 197.9 | 38.1 171.6 |
| | 85.0 | 66.38 | -42.45 | -13.60 | 44.6 | 197.8 | 37.2 201.6 |
| • | 90.0 | 70.37 | -45.28 | -14.55 | 47.6 | 197.8 | 37.3 202.8 |
| | 95.0 | 74.37 | -48.15 | -15.35 | 50.5 | 197.7 | 37.4 194.2 |
| | 100.0 | 78.38 | -50.99 | -16.17 | 53.5 | 197.6 | 35.0 204.2 |
| | 105.0 | 82.35 | -53.77 | -17.03 | 56.4 | 197.6 | 37.2 175.9 |
| | 110.0 | 86.27 | -56.49 | -18.09 | 59.3 | 197.8 | 39.0 166.5 |
| . • | 115.0 | 90.09 | -59.43 | -19,13 | 62.4 | 197.8 | 40.6 202.5 |
| | 120.0 | 93.88 | -62.52 | 19.95 | 65.6 | 197.7 | 41.3 194.5 |
| | 125.0 | 97.67 | -65.56 | -20.87 | 68.8 | 197.7 | 40.7 196.1 |
| | 130.0 | 101.45 | -68,65 | -21.72 | 72.0 | 197.6 | 41.0 198.5 |
| | 135.0 | 105.20 | -71.76 | -22.57 | 75.2 | 197.5 | 41.6 193.0 |
| | 140.0 | 108.96 | -74.91 | -23.33 | 78.5 | 197.3 | 41.2 199.4 |
| | 145.0 | 112.69 | -78.02 | -24.19 | 81.7 | 197.2 | 40.3 194.3 |
| | 150.0 | 116.41 | -81.11 - | 25.12 | 84.9 | 197.2 | 42.3 197.5 |
| | 155.0 | 120.11 | -84.31 | -26.07 | 88.2 | 197.2 | 42.7 202.4 |
| | 160.0 | 123.79 | -87.49 | -27.15 | 91.6 | 197.2 | 42.9 210.7 |
| | 165.0 | 127.45 | -90.62 | -28.24 | 94.9 | 197.3 | 40.2 189.9 |
| | 170.0 | 131.06 | -93.78 | 29.54 | 98.3 | 197.5 | 44.4 215.9 |
| - 1 | 175.0 | 134.66 | -96.89 | -30.93 | 101.7 | 197.7 | 44.6 228.7 |
| | 180.0 | 138.20 | | -32.34 | 105.2 | 197.9 | 45.2 205.7 |
| | 185.0 | 141.72 | | | 108.6 | 198.2 | 46.4 212.7 |
| | 190.0 | 145.13 | | | 111.6 | 198.4 | 47.8 230.6 |
| • · | 191.2 | 145.98 | | -35.60 | 112.5 | 198.5 | 0.0 0.0 |
| | | | | | | | |

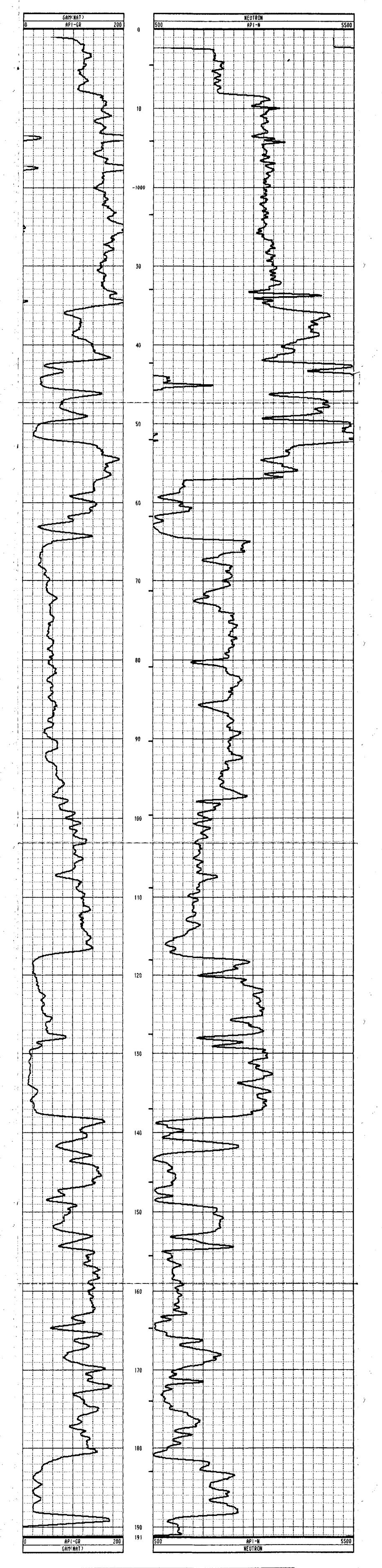
COMPU-LOG II - VERTICAL DEVIATION

* * *

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| COMPANY : | QUINTETTE C | OAL LTD. | OTHER SERVIC | ES: |
|-------------------|--------------|--------------------|---------------|----------------|
| WELL : | QHR89016 GA | MMA-NEUTRON | | |
| LOCATION/FIELD : | | | SCALE | |
| COUNTY : | TRANSFER | | 1:200 | |
| STATE : | | | | مسوس حمجه |
| SECTION : | | TOWNSHIP | R F | NGE : |
| DATE : | 05/28/89 | PERMANENT DATUM | : 00 EL | EVATIONS |
| DEPTH DRILLER : | 192 | ELEV. PERM. DATUM: | : 00 K | (B : 00 |
| LOG BOTTOM : | 191.24 | LOG MEASURED FROM: | : 6L D | F : 00 |
| LOG TOP : | 1.00 | DRL MEASURED FROM | GL C | SL : 00 |
| CASING DRILLER : | 8 | LOGGING UNIT : | 8902 | |
| CASING TYPE : | STEEL | FIELD OFFICE | CALGARY | |
| CASING THICKNESS: | .05 | RECORDED BY : | D.ZANKL | |
| BIT SIZE : | 12.1 | BOREHOLE FLUID : | WATER F | ILE : ORIGINAL |
| MAGNETIC DECL. : | 24.500 | RM : | 00 T | YPE : 9055A |
| MATRIX DENSITY : | 2.68 | RM TEMPERATURE : | 00 L | .OG : 3 |
| FLUID DENSITY : | 1.0 | MATRIX DELTA T | 173 P | LOT : QUIN 10 |
| NEUTRON MATRIX : | SANDSTONE | FLUID DELTA T | 690 T | HRESH: 20000 |
| REMARKS : | | | | |
| LOGGED OPEN HOLE | | | | |
| ANGLE HOLE - 50 | DEGREES FROM | THE HORIZONTAL | | |
| ALL SEDULI | TES DEGUINEN | SUBJECT TO STANDAR | N TEDMS AND C | |

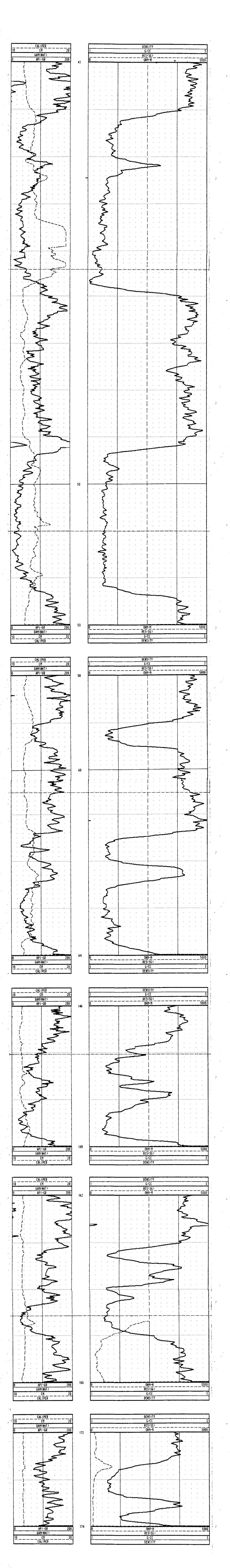


| | TOOL CALIBRATION | | 100L = 90 | TOOL = 9055A SERIAL | | | NUMBER = 14 | | |
|---|------------------|----------|-----------|---------------------|----------|-----|-------------|----------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD | |
|] | 05/04/89 | 08:10:36 | Û | GANCNATO | 0.000 | CPS | 0.000 | AP I -GR | |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-60 | |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.000 | CPS | |
| 3 | 05/04/89 | 08:15:10 | Ð | RES | 9707.000 | CPS | 0.000 | OHM | |
| 4 | 05/04/89 | 08:15:10 | Û | RES | 5212.000 | CPS | 1000.000 | OHM | |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | MU | |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | tių | |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | API-N | |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145,000 | CPS | 271.000 | API-N | |

-1

: 1

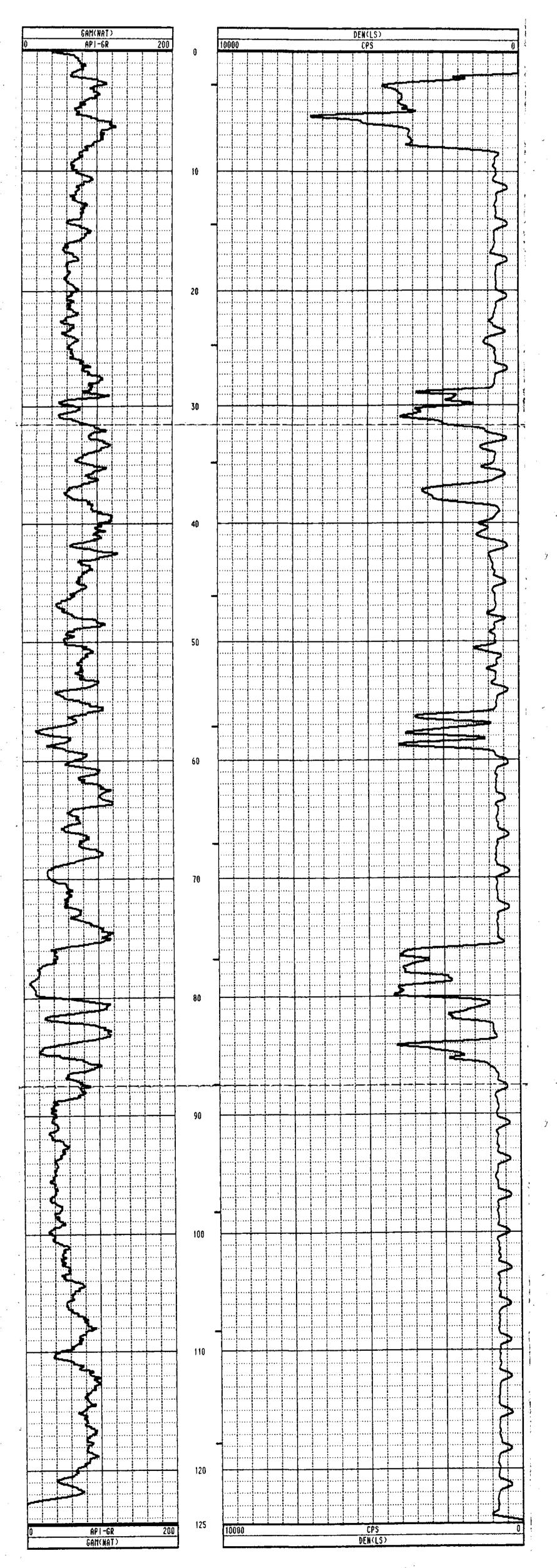
| CG | | | | | |
|------------------------|------------------|---------------------------------|---------------|-----------------|---|
| | - / | | | | |
| | | QHR 89016 | | DENSITY | |
| COMPANY | | | OTHER SE | ERVICES: | |
| HELL
LOCATION/FIELD | : 0HR89016 E | XP DENSITY | 00045 | | |
| COUNTY | : TRANSFER | | SCALE
1:20 | | |
| STATE | : BRITISH CO | LUMBIA | 1.20 | l | |
| SECTION | : | TOWNSHIP | • | RANGE : | |
| DATE | : 05/28/89 | PERMANENT DATUM | : 00 | ELEVATIONS | |
| DEPTH DRILLER | : 192 | | | KB : 00 | |
| LOG BOTTOM | : 182.96 | | | DF : 00 | |
| LOG TOP | : 0.28 | DRL MEASURED FROM | : GL | GL : 00 | |
| CASING DRILLER | : 8 | LOGGING UNIT | 8902 | | ļ |
| CASING TYPE | : STEEL | | CALGARY | | |
| CASING THICKNES | S: .05 | RECORDED BY | D.ZANKL | | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID | HATER | FILE : ORIGINAL | |
| MAGNETIC DECL. | | RM | 00 | TYPE : 9032AC | |
| MATRIX DENSITY | | | 00 | LOG : 4 | |
| | | MATRIX DELTA T
FLUID DELTA T | | PLOT : QUIN 14 | |
| REMARKS | • JARUJIUNE
: | ILUID DELIH (| 690 | THRESH: 20000 | |
| | LE - HOLE BRII | OGED AT 183 METERS A | FTER RUNN | ING 9055 TOOL | |
| | | 1 THE HORIZONTAL | | | |
| ALL SERV | VICES PROVIDED | SUBJECT TO STANDAR | D TERMS AI | ND CONDITIONS | |



Section - Mail March Anna (1999)

| CCC | | QHR 89017 | GAMMA- | |
|--|---|--|---|---|
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QUINTETTE (
: QHR89017 GA
:
: TRANSFER
: BRITISH COL
: | AMMA-DENSITY | OTHER SER
SCALE
1:200 | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 125 | PERMANENT DATUM
ELEV. PERM. DATUM
LOG MEASURED FROM
DRL MEASURED FROM | : 00
: GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING DRILLER
Casing type
Casing thicknes: | : 8
: STEEL
5: .05 | LOGGING UNIT
FIELD OFFICE
RECORDED BY | : 8902
: Calgary
: D.Zankl | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS | : 1.0 | RM
RM TEMPERATURE
MATRIX DELTA T | : WATER
: 00
: 00
: 173
: 690 | FILE : ORIGINAL
TYPE : 9069A
LOG : 1
PLOT : QUIN 11
THRESH: 20000 |
| LOGGED THROUGH
Angle Hole - 45 | 5 DEGREES | SUBJECT TO STANDAR | D TERMS AND | CONDITIONS |

Ż



| | | TO | OL CALIBRA | TION | TOOL = 90690 | A SERIAL NUP | 18ER = 1029 | |
|---|---|----------|------------|------|--------------|--------------|--------------|---|
| | | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| | 0 | 05/04/89 | 12:58:21 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-GR | |
| 1 | 1 | 05/04/89 | 12:57:04 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-6R | , |

| CCC | | Gent
QHR 89017 (| GAMMA- | | | |
|--|---|--|----------------------------------|--------------------------|------------------------------|--|
| WELL
LOCATION/FIELD
COUNTY | : QUINTETTE C
: QHR89017 GA
:
: TRANSFER
: BRITISH COL
: | MMA-NEUTRON | DTHER SERU
Scale
1:200 | | : | |
| DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 06/02/89
: 125
: 124.46
: 2.42 | ELEV. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | GL
GL | ELEVAT
KB
DF
GL | IONS
: 00
: 00
: 00 | |
| | : 8
: STEEL
: .05 | FIELD OFFICE : | : 8902
: Calgary
: D.Zankl | | | |

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

BOREHOLE FLUID : WATER

RM

MATRIX DENSITY: 2.68RM TEMPERATURE: 00FLUID DENSITY: 1.0MATRIX DELTA T: 173NEUTRON MATRIX: SANDSTONEFLUIDDELTA T: 690

: 00

BIT SIZE : 12.1 MAGNETIC DECL. : 24.500

LOGGED THROUGH RODS

ANGLE HOLE - 45 DEGREES

:

REMARKS

753

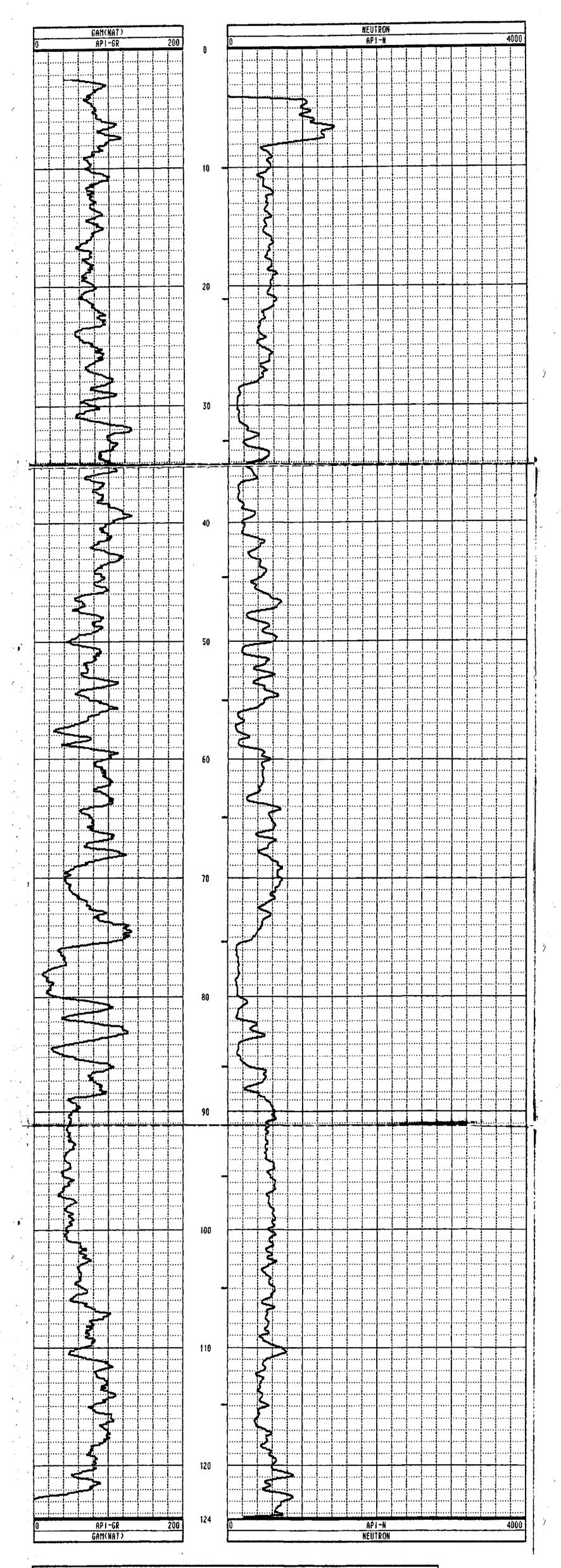
FILE : ORIGINAL

TYPE : 9067A

PLOT : QUIN O THRESH: 20000

LOG : 2

7



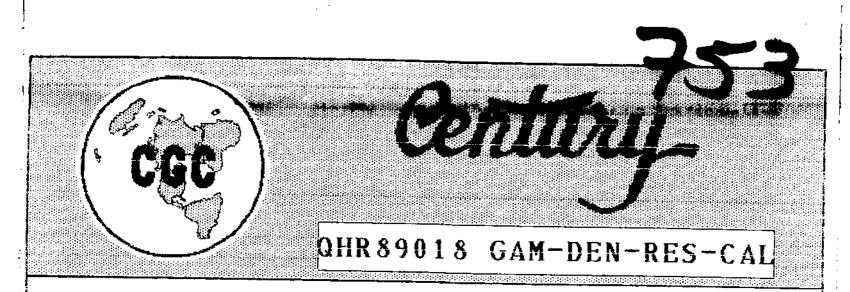
| | 10 | OL CALIBRA | TION | TOOL = 906 | 7A SERIAL N | UHBER = 528 | |
|---|----------|------------|------|------------|-------------|---------------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| 0 | 05/04/89 | 13:47:58 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-6R | |
| 1 | 05/04/89 | 13:47:58 | 0 | GAM(NAT) | 0.000 CPS | D.OCO API-GR | |
| 2 | 05/04/89 | 13:47:58 | 0 | NEUTRON | 0.000 CPS | 0.000 API-N | |
| 3 | 05/04/89 | 13:49:52 | 0 | NEUTRON | 134.000 CPS | 271.000 API-N | |

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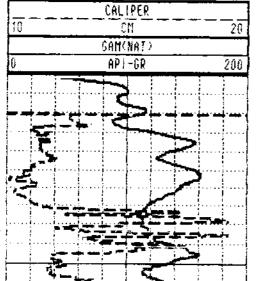
٦,

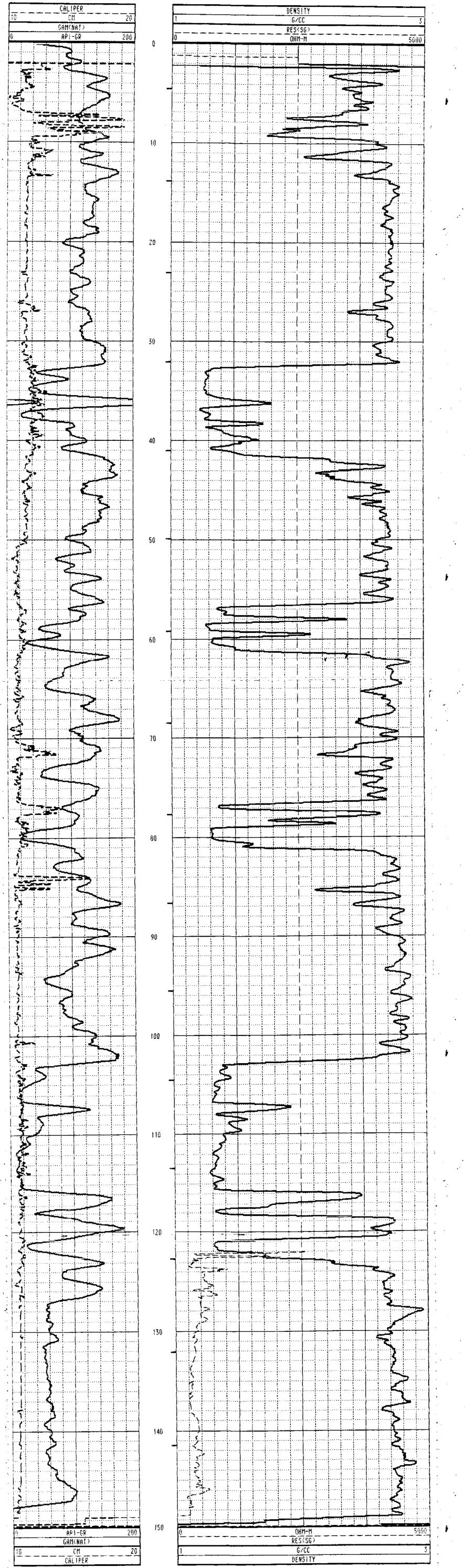
2

| . K | * * * * * | x x x x in | MPH-FOG II | VERTICAL D | EVIATION | * * * * | * * * | * * * * |
|------------|------------|--------------|--------------|--------------|------------|--------------|--------------|---------|
| | CLIENT | : QUINTET | TE COAL LTD. | HOLE ID. | : 0488 | 9017 GAN | 111 | |
| | FIRED OFFI | DF : CALGARY | | DATE OF | 1.06 ± 067 | 03789 | | |
| • | DATA FROM | : | | PROBE | : 90 | 55A . | 14 | |
| | MAG. DECL. | t Castor |) | DEFITH UN | ITS : METE | R LO | G 7 | |
| ିକ୍ଷ | ELF DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUT | H SANG | SANGE |
| •. | 0.9 | 0.92 | 0,00 | 0.00 | 0.0 | 0.0 | 0.0 | 0,0 |
| | 1.9 | 1.92 | 0.00 | 0.00 | 0.0 | - . O | 0 . 0 | 0.0 |
| | 2,9 | 2.77 | 0.32 | 0.17 | 0.4 | 28.6 | 44.7 | 19.5 |
| | 3.9 | 3.48 | 0,98 | Ó.4Ö | 1.1 | 21.9 | 44.3 | 34.9 |
| | 4.0 | 4,20 | 1.42 | 0.68 | 1.0 | 25.6 | 44.8 | 5.2 |
| | s, o | 4.92 | 2.11 | 0. 74 | 2.2 | 19.3 | 45.3 | 10.1 |
| | 6,9 | 5.64 | 2.80 | 0.74 | 2.9 | 14.7 | 45.4 | 347.6 |
| | 7.2 | 5.88 | 2.97 | 0.66 | 3.0 | 12.6 | 0.0 | 0.0 |



| COMPANY
WELL
LOCATION/FIELD
COUNTY | | ; | QUINTETTE C
QHR89018 GA | DAL LTD.
M-DEN-RES-CAL | -RES-CAL | | | | |
|---|---|----|-----------------------------------|---|----------|---------------------------------|-------------------------------|------------------|---|
| C
S | OUNTY
Tate | : | TRANSFER
BRITISH COL | UMBIR | | SCALE
1:200 | | | |
| S | ECTION | : | | TOUNSHIP | : | | RANGE | : | |
| D
L I | EPTH DRILLER | • | 05/30/89
150
149.66
0.20 | ELEV. PERM. DATUM
LOG MEASURED FROM | : | 00
GL | ELEVAT
KB
DF
GL | : | NS
00
00
00 |
| Ũ1 | ASING DRILLER
Asing type
Asing thickness | : | STEEL | FIELD OFFICE | : | 8902
Calgary
D.Zankl | | | |
| l'HE
Me
Fil
Ne
Re | RENETIC DECL.
ATRIX DENSITY
UID DENSITY
UTRON MATRIX
MARKS
DEGED OPEN HOL
JERTICAL HOLE | | 2.68
1.0
Sandstone | RM
RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T | | WATER
00
00
173
690 | TYPE
LOG
PLOT
THRESH | ;
;
;
; | ORIGINAL
9032AC
3
QUIN 12
20000 |
| | ALL SERVI | CI | ES PROUIDED | SUBJECT TO STANDAR | D | TERMS AND | CONDIT | ΙŨ | NS |





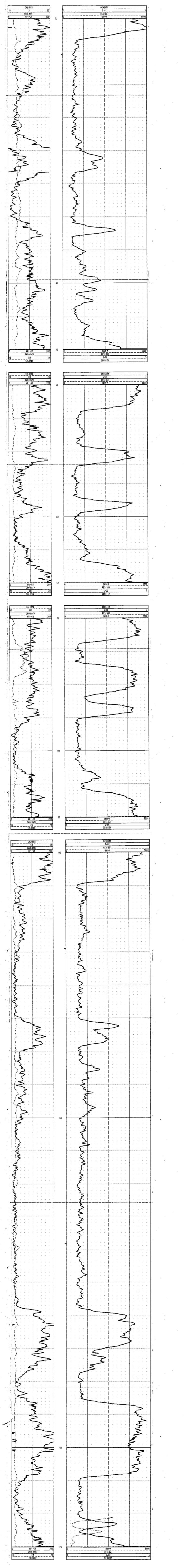
| | TOOL CALIBRATION | | | TOOL = 9032AC SERIAL | | | L NUMBER = 967 |
|----|------------------|----------|------|----------------------|-----------|-----|----------------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | SE | STANDARD |
| 0 | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.00D API-GR |
| í | 05/04/89 | 10:17:51 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 API-GR |
| 2 | 05704789 | 12:11:56 | Û | DENSITY | 6166.000 | CPS | 1.106 G/CC |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.120 G/CC |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SO) | 0.080 | CPS | 0.000 OHM-M |
| 5 | 05/04/89 | 10:25:07 | Û | RES(SG) | 30275.000 | CPS | 178.500 DHM-M |
| 6 | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7,620 CM |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.800 CM |
| 8 | 05/04/89 | 10:17:51 | Û | DENSITYH | 0.000 | CPS | 0.000 G/CC |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 G/CC |
| 10 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 CM |
| 11 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 CM |

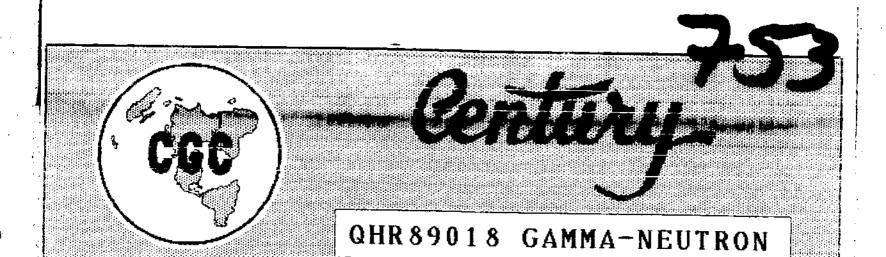
| | Y. | QHR 890 | | | | |
|--|------------------------------------|-------------------------------|-------------------|-------------|------------------------------|-----------------|
| COMPANY | : QUINTETT | E COAL LTD. | OTHER | SERVICES | | |
| WELL
LOCATION∕FIELD | | EXP DENSITY | 201 | | | |
| COUNTY | : TRANSFER | • | SCAL
(:20) | - 1 | | |
| STATE | : BRITISH | | | ······ | | - I |
| SECTION | : | TOWNSHIP | : | RANGE | : | |
| DATE | : 05/30/89 | PERMANENT DAT | UM : 00 | ELEVAT | IONS | |
| DEPTH DRILLER | : 150 | ELEV. PERM. D | ATUM: DO | KB | : 00 | |
| LOG BOTTOM | : 149.66 | | | DF | : 00 | |
| LOG TOP | : 0.20 | DRL MEASURED | FROM: GL | GL | : 00 | 1 |
| CASING DRILLER | : 8 | LOGGING UNIT | : 8902 | | | |
| CASING TYPE | : STEEL | FIELD OFFICE | | RY | | |
| CASING THICKNES | S: .05 | RECORDED BY | : D.ZAN | KL. | | |
| BIT SIZE | : 12.1 | BOREHOLE FLUI | D : WATER | FILE | : ORIGINAL | |
| MAGNETIC DECL. | | | : 00 | TYPE | : 9032AC | |
| | | | | LOG | - • | |
| | | | | | | |
| | : SANUSION | E FLUID DELTA | T : 690 | THRES | H: 20000 | |
| LOGGED OPEN HO | I F | | | | | |
| | 6 £ | | | | | 1 |
| MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS | : 2.68
: 1.0
: Sandston
: | RM TEMPERATUR
Matrix delta | E : 00
T : 173 | LOG
Plot | : 3
: QUIN 14
H: 20000 | |

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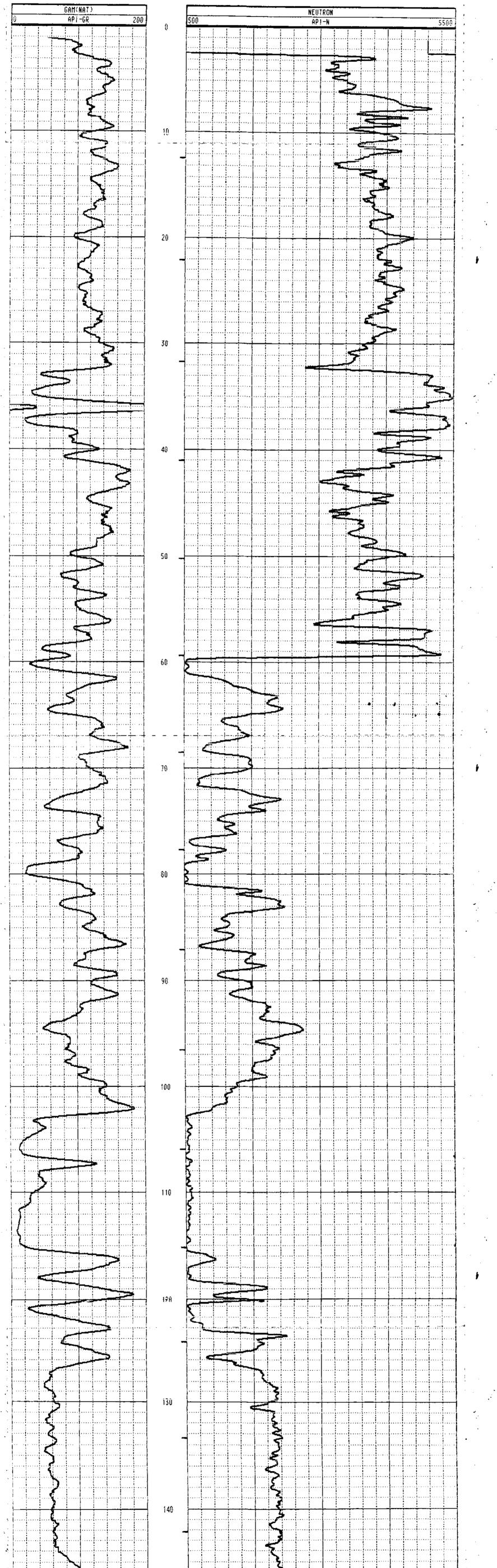
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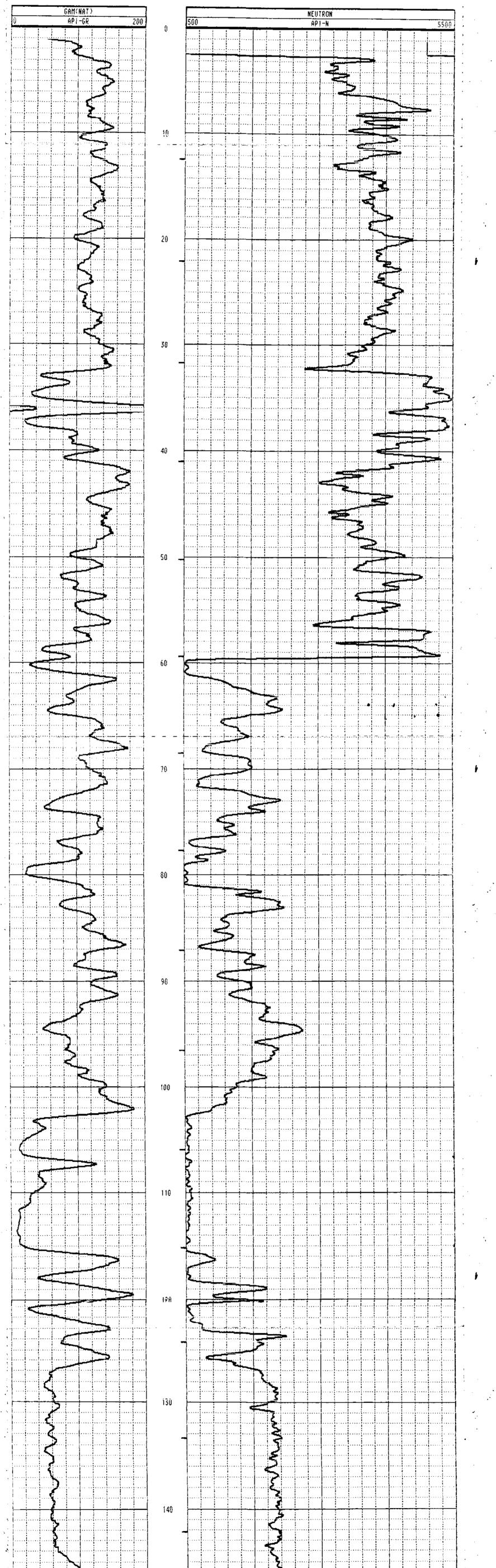
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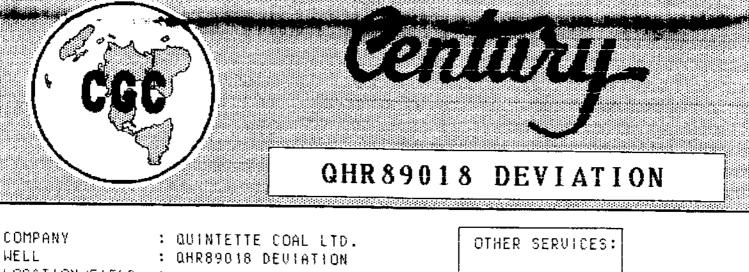
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QUINTETTE
: QHR89018 G
:
: TRANSFER
: BRITISH CO | AMMA-NEUTRON | OTHER SERV
Scale
1:200 | JICES: |
|--|--|---|---------------------------------|--|
| SECTION | :
: | TOWNSHIP : | | RANGE : |
| DATE
DEPTH DRILLER
LOG DOTTOM
LOG TOP | : 05/30/89
: 150
: 150.36
: 1.12 | PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | 00
00
GL
GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| CASING DRILLER
Casing type
Casing thicknes: | : 8
: STEEL
S: .03 | LOGGING UNIT :
FIELD OFFICE : | 8902
CALGARY
D.ZANKL | |
| MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOU
VERTICAL HOLE | | RM TEMPERATURE :
MATRIX DELTA T :
FLUID DELTA T : | WATER
00
00
173
690 | FILE : ORIGINAL
TYPE : 9055A
LOG : 2
PLOT : QUIN O
THRESH: 20000 |
| ALL SERU | ICES PROVIDED | • SUBJECT TO STANDARD | TERMS AND | CONDITIONS |



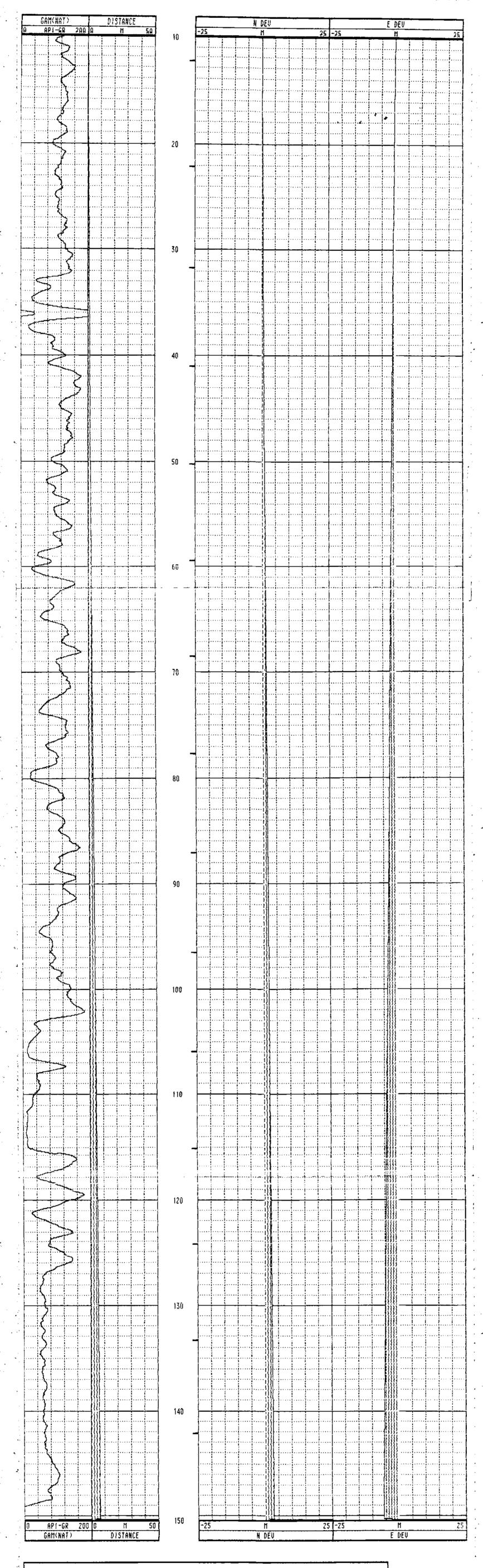




| | | ŤŎ | OL CAL{BRA | TION | TOOL = 9(| D55A | SERIAL | NUMBER | = | 14 | |
|---|---|----------|------------|------|-----------|----------|--------|--------|---------|----------|--|
| | | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | SE | | STAND | ARD | |
| | 6 | 05/04/89 | 08:10:36 | Û | GAM(NAT) | 0.000 | CPS | | Û.000 | AP I -GR | |
| | 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | | 0.000 | APT-GR | |
| | 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.008 | CPS | | 145.000 | CPS | |
| | 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | | 0.000 | OHM | |
| ļ | 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1 | 000.000 | OHM | |
| | 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | | 0.000 | MU | |
| | 6 | 05/04/89 | 08:13:14 | Û | SP | 4095.000 | CPS | : | 500.000 | MU | |
| | 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | | 0.000 | API-N | |
| | 8 | 05704789 | 08:53:24 | Ů | NEUTRON | 145.000 | CPS | | 271.000 | AP I -N | |



| COMPANY
Well | | ITETTE C
19018 DE | | | | OTHER SEA | RVICES: | | | |
|-----------------|---------|----------------------|---------|----------|-------|-----------|----------|-------|------------------|----|
| LOCATION/FIELD | : | | | | | SCALE | | | | |
| COUNTY | : TRAN | SFER | | | | 1:200 | | | | |
| STATE | : BRIT | ISH COL | IMBIA | | L | | | | | |
| SECTION | : | | TOWNSH | ۱P | : | | RANGE | ; | | |
| DATE | : 05/3 | 1/89 | PERMAN | ENT DATI | JM : | 00 | ELEVAT | IONS | 5 | |
| DEPTH DRILLER | : 150 | | ELEV. | PERM. DA | ATUM: | 00 | КB | : (| | |
| LOG BOTTOM | : 15 | 0.36 | LOG ME | ASURED I | ROM: | GL | ΰF | | | |
| LOG TOP | : | 1.12 | DRL ME | ASURED N | FROM: | GL | GL | : 6 | 00 | |
| CASING DRILLER | : 8 | | LOGGIN | G UNIT | : | 8902 | | | | |
| CASING TYPE | : STEE | L | FIELD | OFFICE | : | CALGARY | | | | |
| CASING THICKNES | 5: .05 | | RECORDI | ED BY | : | D.ZANKL | | | | |
| BIT SIZE | : 12.1 | | BOREHO | LE FLUIC | : | WATER | 5115 | . 5 | ROCESSE | 'n |
| MAGNETIC DECL. | | | RM | | | 00 | TYPE | | NOCESSE
10558 | U |
| MATRIX DENSITY | : 2.68 | | RM TEM | PERATURE | | 00 | LOG | - | | |
| FLUID DENSITY | : 1.0 | | | DELTA 1 | - | 173 | | - | ,
XUIN 13 | |
| NEUTRON MATRIX | : SAND | STÜNE | | | | 690 | THRES | | | |
| REMARKS | : | | | | | | | | | |
| LOGGED OPEN HOL | E | • | | | | | | | | |
| VERTICAL HOLE | | | | | | | | | | |
| ALL SERU | ICES PR | OUIDED | SUBJECT | TO STA | NDARD | TERMS AND | D CONDIT | I ON: | S | |



| | 10 | OL CALIBRA | TION | TOOL = 90 | 155A | SERIA | . NUMBER = | 14 |
|---|----------|------------|------|-----------|----------|-------|------------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | IRD |
| I | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.000 | CPS |
| 5 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM |
| ŧ | 05/04/89 | 08:15:10 | 0 | RES | 5212,000 | CPS | 1000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | ~9.000 | CPS | 0.000 | MU |
| | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | MV |
| ; | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | AP1-N |
| 3 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | API-N |

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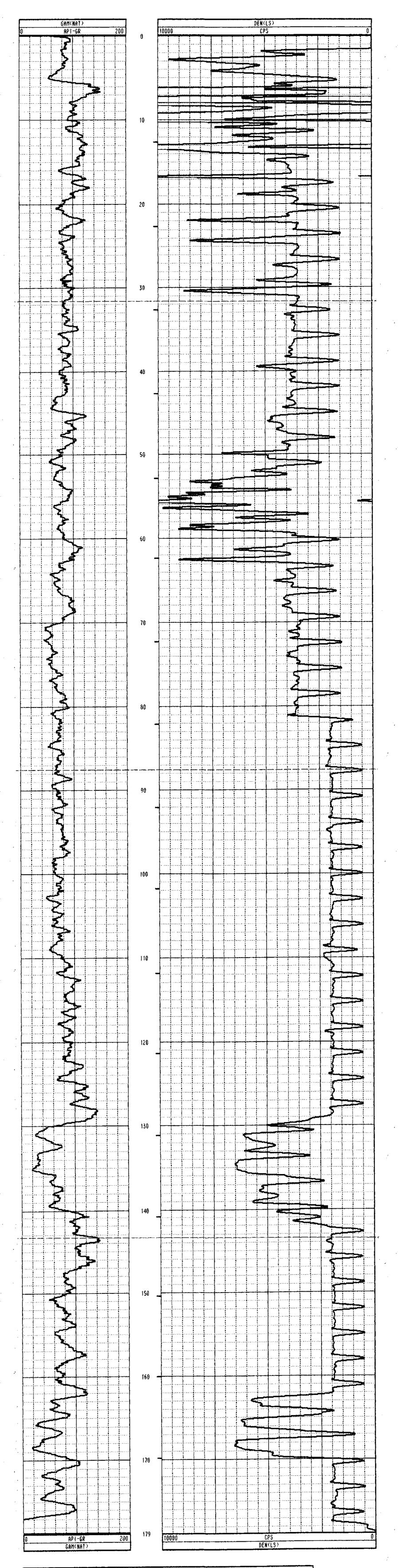
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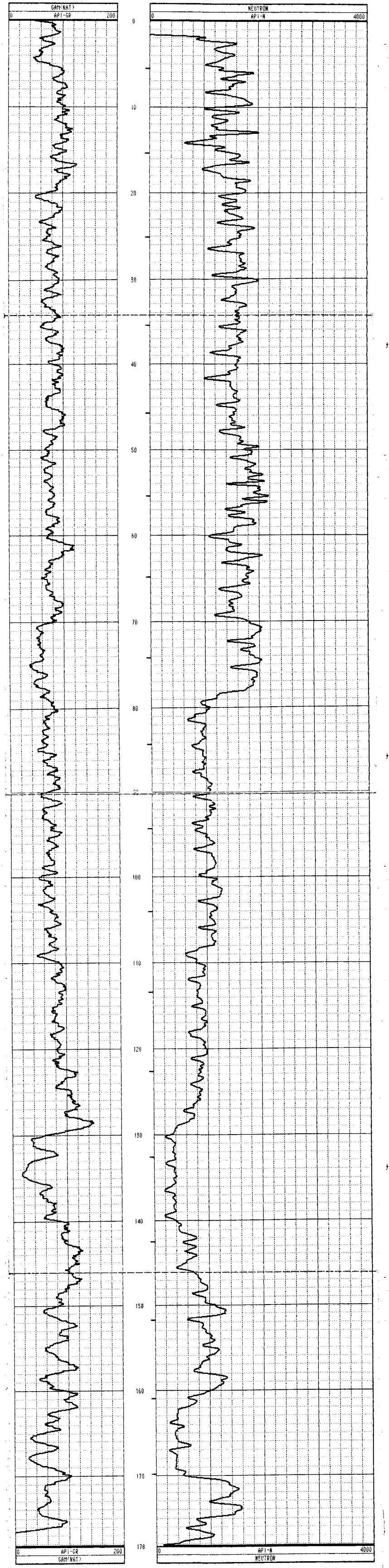
ſ * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * * * * * * * * : QHR89018 GAMM : QUINTETTE COAL LTD. HOLE ID. **CLIENT** FIELD OFFICE : CALGARY DATE OF LOG : 05/31/89 . : 9055A 14 PROBE DATA FROM * . LOG 5 DEPTH UNITS : METER 24,500 MAG. DECL. Ľ EAST DEV. DISTANCE AZIMUTH SANG SANGE SCABLE DEPTH TRUE DEPTH NORTH DEV. -.05 329.9 1.6 315.3 0.08 0.1 10 ÖÖ ÷ 10.0 310.9 2.8 296.1-.22 0.19 0.314.99 15.0 . 290.3 -.42 305.5 2.8 0.50.30 19.99 20.0 297.6 2.5 303.8 0,42 -.62 0.8 24.98 25.0 298.4 2.30.51-.82 1.0 301.7 29.98 30.0 300.1 2.3 294.5 0.58 -1.011.2 34.97 35.0 308.0 299.9 2.6 -1.19 1.4 0.69 40.0 39.97 300.6 307.2 2.5 -1.37 44.96 0.81 1.6 45.0 ~ 1 2.9 301.2 303.6 0.95 -1.56 1.849.96 50.0 - (301.4 2.7 308.6 -1.76 1.08 2.154.95 55.0 301.4 2.4 301.2 -1.96 2.3 59.95 1.2040**.**0 301.5 2.6 300.1 2.5 • -2.15 64.94 1.32 65.0 292.6 301.3 2.7 -2.35 ÷ 69.94 1.43 2.7 70.0 301.1 2.0 300.6 -2.54 3.0 74.93 1.53 75.0 -2.713.2300.8 2.1 307,6 79.93 1.62 80*0 ٠ 300.3 3.0 290.0 -2.90 1.70 3.4 85.0 84.92 295.9 3.0 299.8 -3.14 3.6 90.0 89.92 1.80 ٠. -3.38 299.3 3.1301.6 1.90 3.9 94.91 95.Û ۰. 2.9 296.9 -3.62 298.8 1.99 4.1 99.90 100.0 294.9 <u>,</u> 1 -3.86 4.4 298.6 2.9 2.10 104.90 105.0 298.7 į, 298.4 2.9 --4.09 4.7 2.21110.0 109.89 2.9 293.6 -4.33 4.9 298.2 2.32 ; 114.88 115.0295.1298.12.4 -4,55 5.2 2.43 120.0 119,88 2.1292.7 -4.75 298.1 124.87 5.4 2.53 125.0 313.2 5.6 298.2 2.6 --4.94 2.65 129.87 130.Ö 298.5 2,9 304.8 2.80 -5.15 5.9 134.86 135.0 2.8 307.5 $^{\circ}$. 298.9 2.95 139.86 -5.35 6.1 140.0 2.7 304.6 -5.53 299.2 6,3 3.10 144.85 • 145.0 299.5 2.6 307.4 -5.72 3.24 6.6 149.84 150.0 299.6 -5.73 0.0 0,Ŭ 6.6 3.25 150.20 150.4

| | QHR 89019 | | <u></u> | |
|---|---|--|--------------------------|------------------------------|
| COMPANY : QUINTETTE
WELL : QHR89019
LOCATION/FIELD : TRANSFER
COUNTY :
STATE : B.C.
SECTION : | COAL LTD
GAMMA-DENSITY
TOWNSHIP | OTHER SE
Scale
1:200 | | : |
| DATE : 05/31/89
DEPTH DRILLER : 180
LOG BOTTOM : 178.76
LOG TOP :06
CASING DRILLER : 6 | ELEV. PERM. DATUM
Log measured from
Drl measured from | :
: GL | ELEVAT
Kb
DF
GL | I DN S
:
: |
| CASING TYPE : STEEL
CASING THICKNESS: 00
BIT SIZE : 14.1
MAGNETIC DECL. : 24.5 | FIELD OFFICE
RECORDED BY
BOREHOLE FLUID | : CALGARY
: D.ZANKL
: WATER
: O | FILE
TYPE | : ORIGINAL
: 9069a |
| MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
• NEUTRON MATRIX : SANDSTONE
REMARKS :
LOGGED THROUGH RODS
ANGLE HOLE - 60 DEGREES FRO | MATRIX DELTA T
Fluid delta t | : 0
: 173
: 690 | | : 6
: QUIN 11
H: 10000 |



| | TO | OL CALIBRA | TION | TOOL = 9069 | A SERIAL NUM | ER = 1029 | |
|---|----------|------------|------|-------------|--------------|--------------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| 0 | 05/04/89 | 12:58:21 | 0 | GAN(NAT) | 0.000 CPS | 0.000 API-GR | |
| 1 | 05/04/89 | 12:57:04 | 0 | GAM(NAT) | 0.000 CPS | 0.000 API-GR | |

| CC | | | | | |
|--|--|--|----------------------------------|----------------------------|-------------|
| | <u> </u> | QHR 89019 | GAMMA- | -NEUT | RON |
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QUINTETTE C
: QHR89019 GA
: TRANSFER
:
: B.C.
: | | OTHER SER
Scale
1:200 | UICES: | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 05/31/89
: 180
: 178.24
: 0.04 | PERMANENT DATUM
ELEV. PERN. DATUM
LOG MEASURED FROM
DRL MEASURED FROM | :
61 | ELEVATIC
KB
DF
GL | |
| CASING DRILLER
Casing type
Casing thickness | | FIELD OFFICE : | : 8903
: Calgary
: D.Zankl | | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS | : 24.5
: 2.68
: 1.0 | RM TEMPERATURE :
MATRIN DELTA T : | 0
0 | TYPE :
Lũg : | 4
Quin g |
| LOGGED THROUGH
ANGLE HOLE - 60 | DEGREES FROM | THE HORIZONTAL
SUBJECT TO STANDAR | D TERMS AND | CONDITI | אכ |

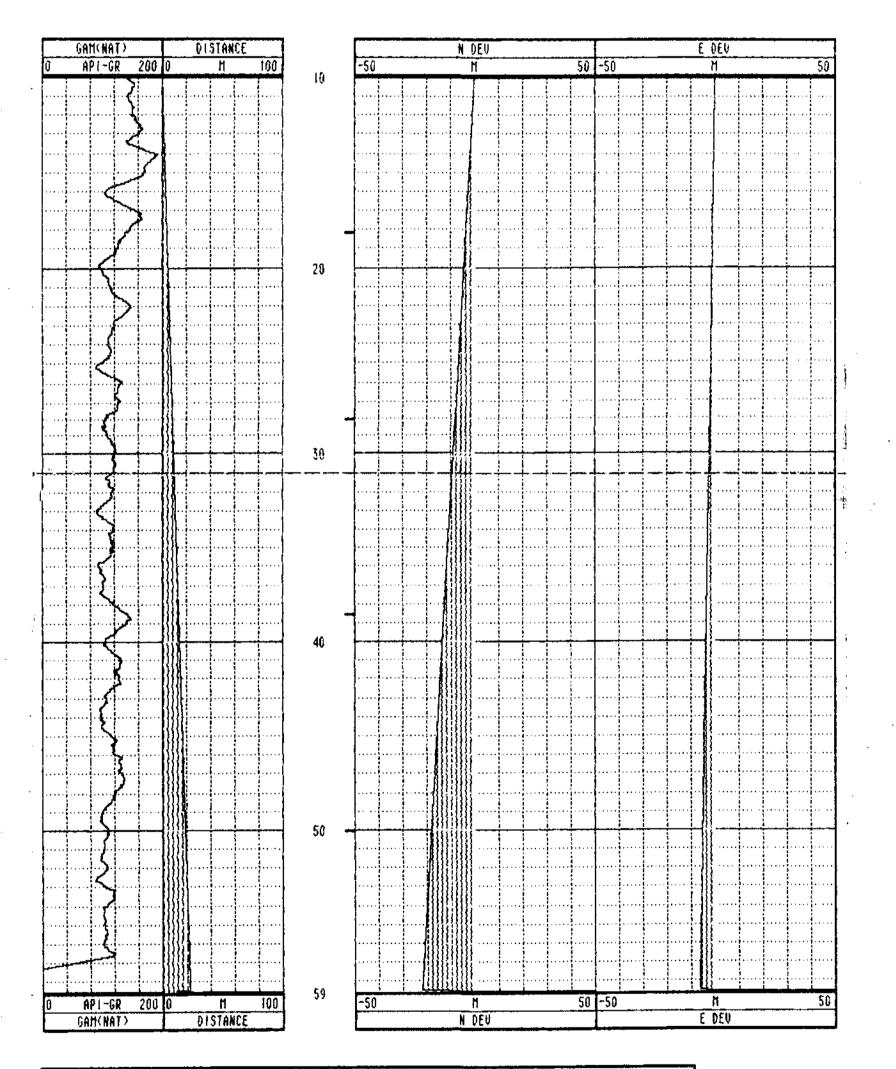


|
 | | TO | OL CALIBRA | TION | TOOL = 906 | 67A SERIAL N | UMBER = 528 | |
|------|---|----------|------------|------|------------|--------------|---------------|--|
| | | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| | 0 | 05/04/89 | 13:47:58 | រ | GAM(NAT) | 0.000 CPS | 0.000 AP+-GR | |
| | 1 | 05/04/89 | 13:47:58 | 0 | GAM(NAT) | 0.000 CPS | 0.000 8P1-6R | |
| | 2 | 05/04/89 | 13:47:58 | 0 | NEUTRON | 0.000 CPS | 8.000 API-N | |
| | 3 | 05/04/89 | 13:49:52 | 0 | NEUTRON | 134.000 CPS | 271.000 API-N | |



| COMPANY
WELL
Location/Field
County | :: | QUINTETTE C
QHR89019 DE
TRANSFER | VIATION | | OTHER SERU
Scale
1:200 | ICES; | | |
|---|-----|--|--------------------|---|---------------------------------------|--------|-----|-----------|
| STATE | : | BRITISH COL | | | · · · · · · · · · · · · · · · · · · · | l | | |
| SECTION | : | | TOUNSHIP | : | | RANGE | : | |
| DATE | : | 06/02/89 | PERMANENT DATUM | ; | 00 | ELEVAT | 101 | VS |
| DEPTH DRILLER | : | 234 | ELEU. PERM. DATUM | : | 00 | КВ | : | 00 |
| LOG BOTTOM | ; | 58.58 | LOG MEASURED FROM | : | 6L | DF | : | ០០ |
| LOG TOP | ; | 1.18 | DRL MEASURED FROM | : | GL | GL | : | 00 |
| CASING DRILLER | : | 8 | LOGGING UNIT | : | 8902 | | | |
| CASING TYPE | : | STEEL | FIELD OFFICE | : | CALGARY | | | |
| CASING THICKNESS | : | .05 | RECORDED BY | : | D.ZANKL | | | |
| BIT SIZE | : | 12.1 | BOREHOLE FLUID | : | HATER | FILF | : | PROCESSED |
| MAGNETIC DECL. | | | | | 00 | TYPE | | 9055A |
| MATRIX DENSITY | : | 2.68 | | | 00 | L 06 | | 8 |
| FLUID DENSITY | : | 1.0 | | | 173 | | | QUIN 13 |
| NEUTRON MATRIX | : | SANDSTONE | FLUID DELTA T | : | 690 | THRESH | :: | 20000 |
| REMARKS | : | | | | | | | |
| LOGGED OPEN HOL | Ē | | | | | | | |
| ANGLE HOLE | | | | | | | | |
| ALL SERV | I C | ES PROVIDED | SUBJECT TO STANDAR | 0 | TERMS AND | CONDIT | ΙŨ | NS |





| | TO | OL CALIBRA | TION | TOOL = 90 | 55A SERIAL | NUMBER = 14 | |
|---|----------|------------------|------|-----------|--------------|---------------|--|
| | CAL-DATE | CAL-TINE | SRCE | SENSOR | RESPONSE | STANDARD | |
| 0 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-GR | |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-6R | |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 CPS | 145.000 CPS | |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 CPS | 0.000 DHM | |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 CPS | 1000.000 OHM | |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 CPS | 0.000 HV | |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 CPS | 500.000 MV | |
| 7 | 05/04/89 | 08:10: 36 | Û | NEUTRON | 0.000 CPS | 0.000 AP1-N | |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 CPS | 271.000 API-N | |

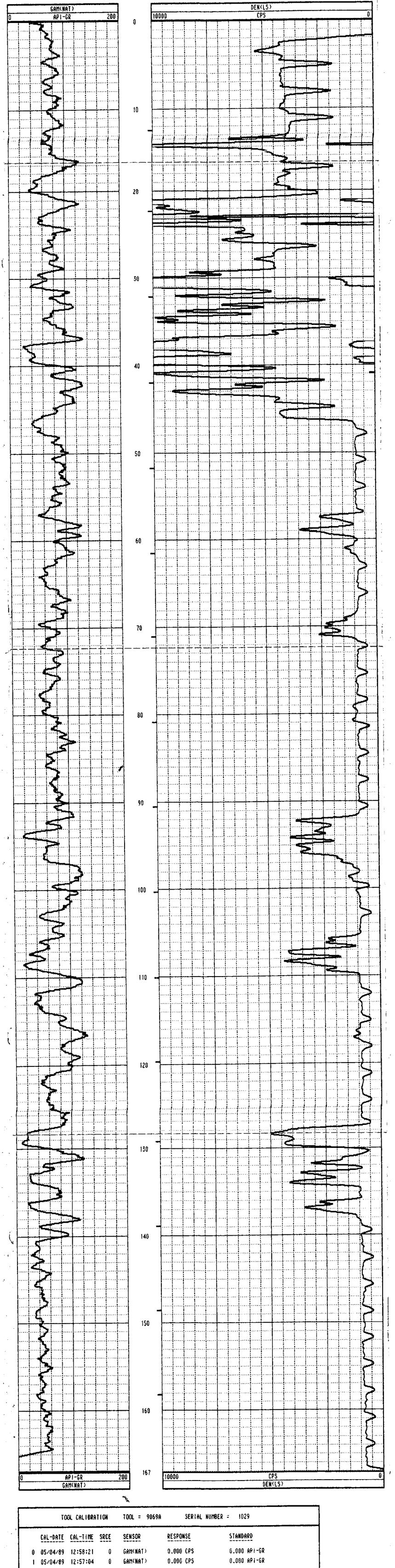
مينيونين د کار کار ش**م**

| • | | | | | | |
|--|----------------|---------------|--------------|--|--------------|-------------------|
| * * * * * * * * * * | COMPU-LOG II - | VERTICAL I | EVIATION | . * * * | * * * | * * * * * |
| CLIENT : QUINT
FIELD OFFICE : CALGA
DATA FROM :
MAG. DECL. : 24.5 | | | LOG : (| R89019 66
06702789
9055A
ITER L | . 1 | 4 |
| CABLE DEPTH TRUE DEPT | | EAST DEV. | DISTAN | | | NG SANGB
194.9 |
| 10.0 9.09
15.0 13.49 | 07
2.25 | 0.15
59 | $0.2 \\ 2.3$ | 115.7
194.7 | 27.9
28.3 | 214.5 |
| 15.0 13.49
20.0 17.88 | -4.47 | -1.15 | 4.6 | 194.5 | 28.2 | 196.9 |
| 25.0 22.28 | -6.70 | -1.73 | 6.9 | 194.5 | 29.0 | 208.8 |
| 30.0 26.69 | -8.97 | -232 | 9,3 | 194.5 | 28.1 | 195.1 |
| 35.0 31.06 | -11.25 | ~ ∴.08 | 11.7 | 195.3 | 28.9 | 197.6 |
| 40.0 35.45 | -13.51 | -3.86 | 14.0 | 195.9 | 28.4 | 197.6 |
| 45.0 39.84 | -15.76 | -4.58 | 16-4 | 196.2 | 28.8 | 200,5 |
| 50.0 44.21 | 18.06 | -5,22 | 18.8 | 196.1 | 29.3 | 193.8 |
| 55.0 48.59 | -20.37 | -5.87 | 21.2 | 196.1 | 28.5 | 191.6 |
| 58.6 51.73 | -21.93 | -6.39 | 22.8 | 196.2 | 0.0 | 0.0 |

| CC | | QHR 89020 | | -DENSITY |
|---|---|--|---|---|
| COMPANY
WELL
LOCATION/FIELD
COUNTY | : QUINTETTE C
: QHRB9020 GF
: BL20180/SL2
: TRANSFER | MMA-DENSITY | OTHER SER
Scale | |
| STATE
Section
Date | : BRITISH COL
:
: 06/03/89 | TOWNSHIP | : 00 | RANGE :
ELEVATIONS |
| DEPTH DRILLER
LOG BOTTOM
LOG TOP
CASING DRILLER | : 168
: 167.02
: 0.14
: 22 | DRL MEASURED FROM | I: 00
I: GL
I: GL | KB : 00
DF : 00
GL : 00 |
| CASING TYPE
Casing Thickness
Bit Size | : STEEL
5: .05 | FIELD OFFICE
RECORDED BY | : 8903
: Calgary
: D.zankl | |
| MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX | : 1.0 | RM
RM TEMPERATURE
MATRIX DELTA T | : WATER
: 00
: 00
: 173
: 690 | FILE : ORIGINAL
TYPE : 9069A
LOG : 2
PLOT : QUIN 11
THRESH: 20000 |
| REMARKS
Logged Through
Angle Hole - 75 | :
Rods
Degrees from | | | THRESH: 20000
Conditions |

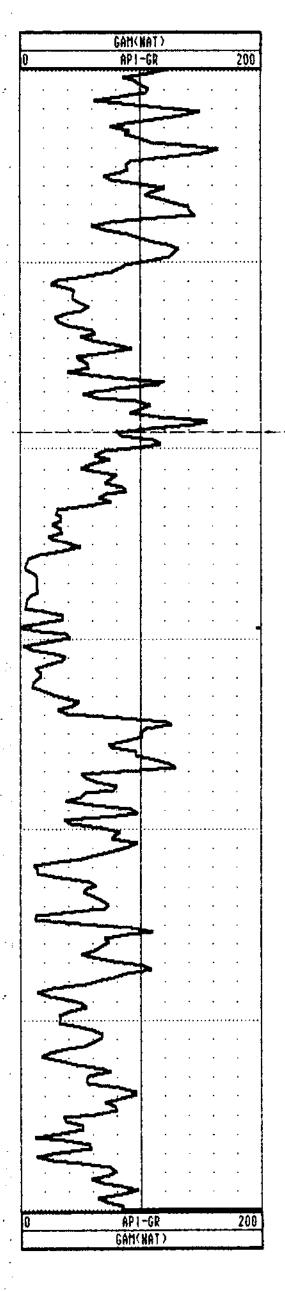
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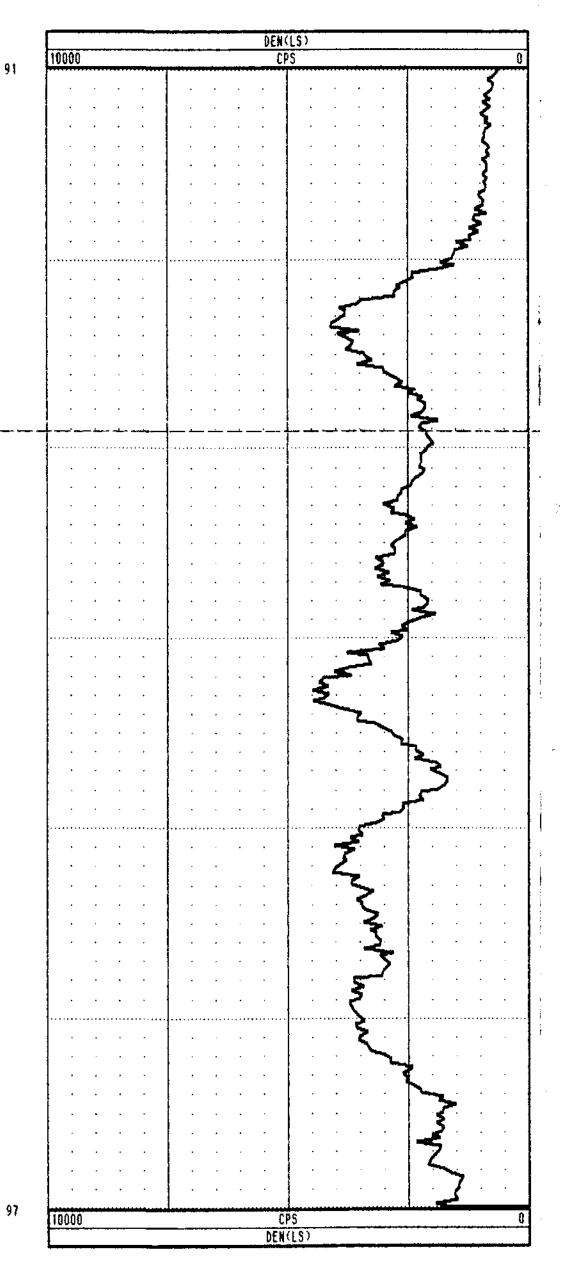
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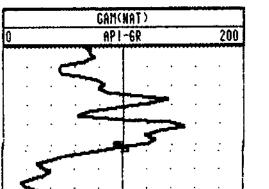


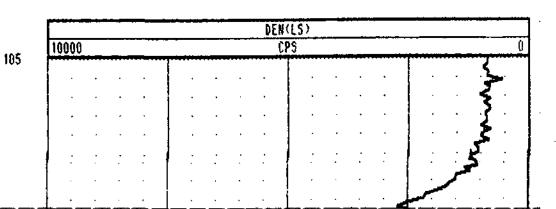
| | ¥. [| QHR 89020 | EXP | DENSI | |
|---|--|---|---------------------------------|---------------------|--|
| COMPANY
WELL
LOCATION/FIELD
COUNTY | : QUINTETTE (
: QHR89020 E)
: BL20180/SL
: TRANSFER | KP DENSITY
28400 | OTHER SE
Scale
1:20 | RUICES: | |
| STATE
Section | : BRITISH COL
: | LUMBIA
Township : | | RANGE | : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 06/03/89
: 168
: 167.02
: 0.14 | PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | GL | DF | ONS
: 80
: 80
: 80 |
| CASING DRILLER
Casing type
Casing thicknes | : 22
: STEEL
S: .05 | FIELD OFFICE : | 8903
Calgary
D.zankl | | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY | : 1.0 | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
00
00
173
690 | TYPE
Log
Plot | : ORIGINAL
: 9069A
: 2
: QUIN 15
: 20000 |

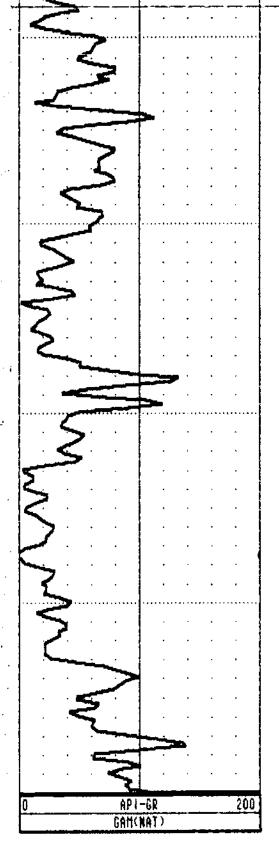


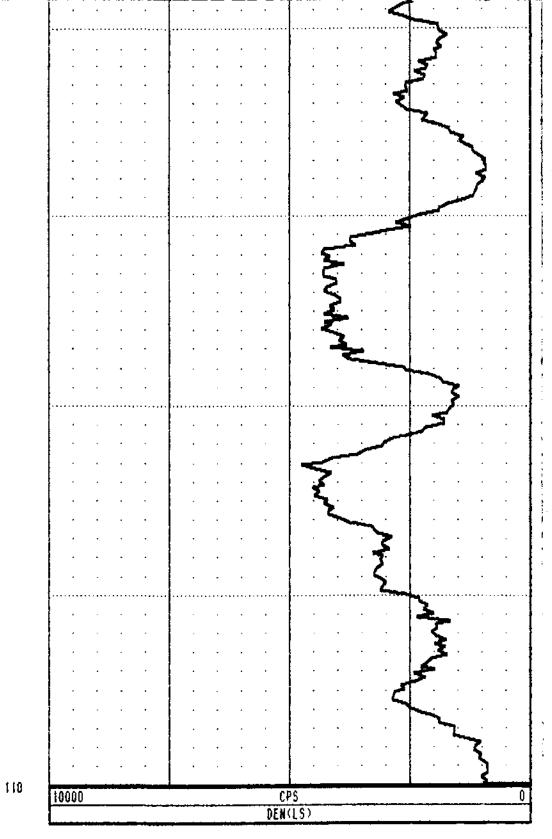


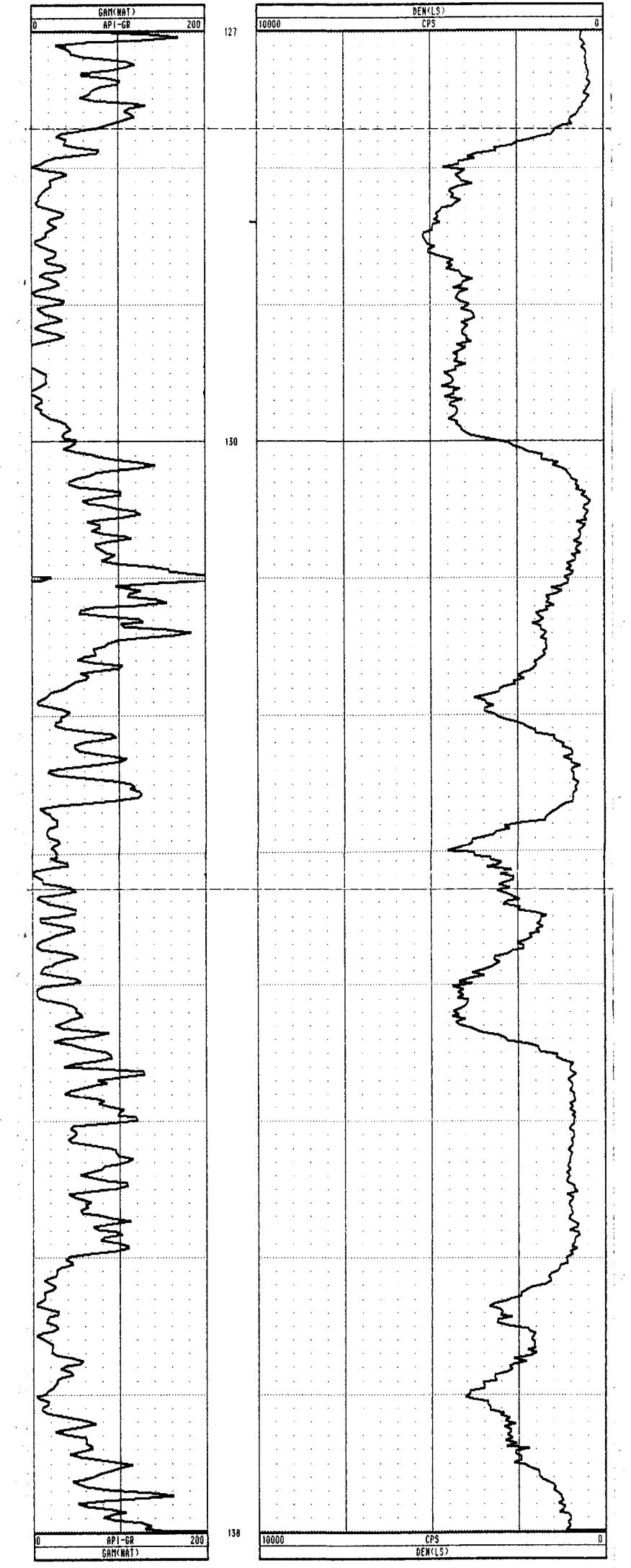


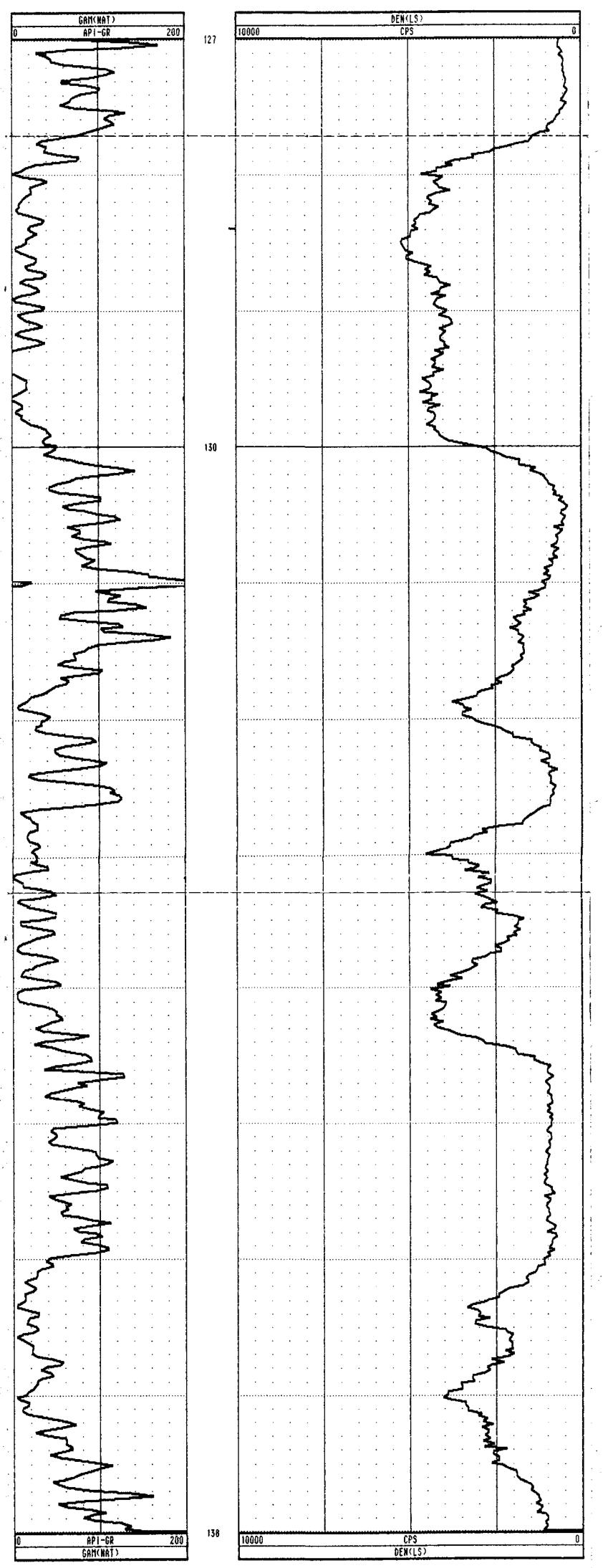






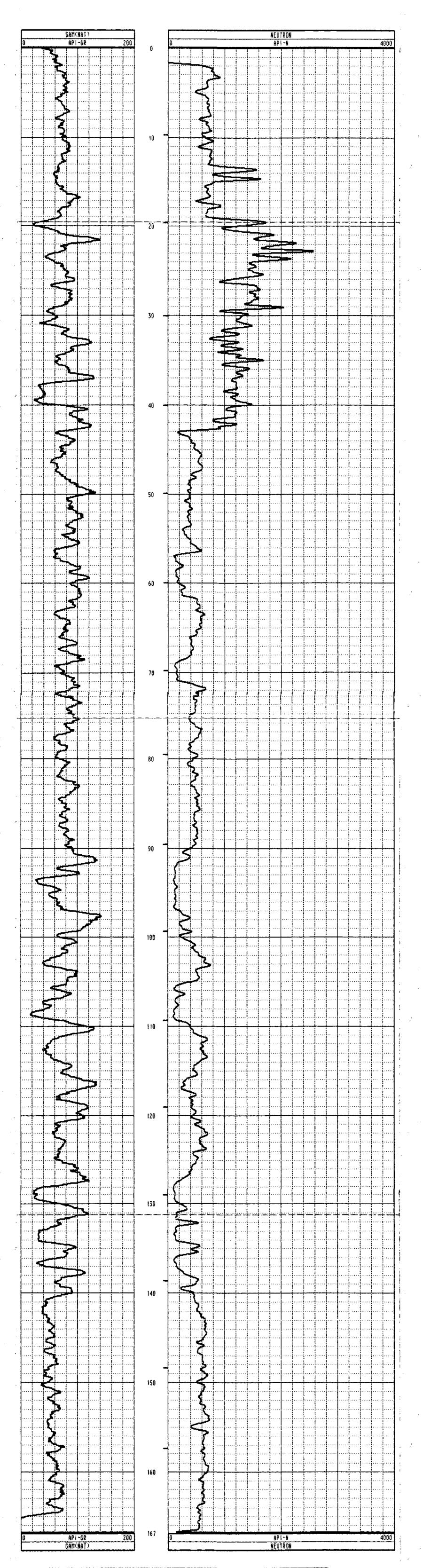






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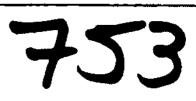
| COMPANY: QUINTETTE COAL LTD.
DHR899020 GAMMA-NEUTRON
LOCATION/FIELDDTHER SERVICES:
SCALE
1:200LOCATION/FIELD: BL20180/SL28400
SCALESCALE
1:200COUNTY: TRANSFER
BRITISH COLUMBIASCALE
1:200STATE: BRITISH COLUMBIASECTION: TOWNSHIPSECTION: TOWNSHIPDATE: 06/03/89
SCALEDATE: 06/03/89
SCALEDEPTH DRILLER: 168
SECENDMDEPTH DRILLER: 166
SCALEDETH DRILLER: 166
SCALEDG GOTOM: 166.82
SCALELOG BOTTOM: 166.82
SCALELOG TOP: 0.08
SCALEDRILLER: 22
SCALELOGGING UNIT: 8903
SCASING THICKNESS: .05
RECORDED BYBIT SIZE: 12.1
SCREHOLE FLUIDBIT SIZE: 12.1
SCREHOLE FLUIDMATRIX DENSITY: 2.68
RM TEMPERATUREBIT SIZE: 12.1
SCREHOLE FLUIDMATRIX DENSITY: 2.68
RM TEMPERATUREBIT SIZE: 1.0
SCANDSTONEMATRIX DENSITY: 1.0
SANDSTONEMATRIX DELTA T
LOGGED THROUGH RODS
ANGLE HOLE - 75 DEGREES FROM THE HORIZONTAL | CCCC | CCCC
QHR 890 2 0 | | | |
|---|---|---|---|---------------------------------------|---------------------------------------|
| DEPTH DRILLER: 168ELEU. PERM. DATUM: 00KB: 00LOG BOTTOM: 166.82LOG MEASURED FROM: GLDF: 00LOG TOP: 0.08DRL MEASURED FROM: GLGL: 00CASING DRILLER: 22LOGGING UNIT: 8903CASING TYPE: STEELFIELD OFFICE: CALGARYCASING THICKNESS:.05RECORDED BY: D.ZANKLBIT SIZE: 12.1BOREHOLE FLUID: WATERFILEMAGNETIC DECL.: 24.500RM: 00TYPEMATRIX DENSITY: 2.68RM TEMPERATURE: 00LOGMATRIX DENSITY: 1.0MATRIX DELTA T: 173PLGTNEUTRON MATRIX: SANDSTONEFLUID DELTA T: 690THRESH: 20000REMARKS::LOGGED THROUGH RODS: | WELL : QHR89020 G
LOCATION/FIELD : BL20180/SL
COUNTY : TRANSFER
STATE : BRITISH CO | AMMA-NEUTRON
28400
Lumbir | SCALE | | : |
| BIT SIZE: 12.1BOREHOLE FLUID: WATERFILE: ORIGINALMAGNETIC DECL.: 24.500RM: 00TYPE: 9067AMATRIX DENSITY: 2.68RM TEMPERATURE: 00LOG: 7FLUID DENSITY: 1.0MATRIX DELTA T: 173PLOT: QUIN0NEUTRON MATRIX: SANDSTONEFLUIDDELTA T: 690THRESH: 20000REMARKS::LOGGEDTHROUGH RODS: | DEPTH DRILLER : 168
LOG BOTTOM : 166.82
LOG TOP : 0.08
CASING DRILLER : 22
CASING TYPE : STEEL | ELEV. PERM. DATU
LOG MEASURED FRO
DRL MEASURED FRO
LOGGING UNIT
FIELD OFFICE | IM: 00
DM: GL
DM: GL
: 8903
: Calgary | KB
DF
GL | : 00
: 00 |
| ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS | BIT SIZE : 12.1
MAGNETIC DECL. : 24.500
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
NEUTRON MATRIX : SANDSTONE
REMARKS :
LOGGED THROUGH RODS
ANGLE HOLE - 75 DEGREES FRO | BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T
M THE HORIZONTAL | : NATER
: 00
: 00
: 173
: 690 | FILE
TYPE
LOG
PLOT
THRESH | : 9067A
: 7
: QUIN 0
: 20000 |



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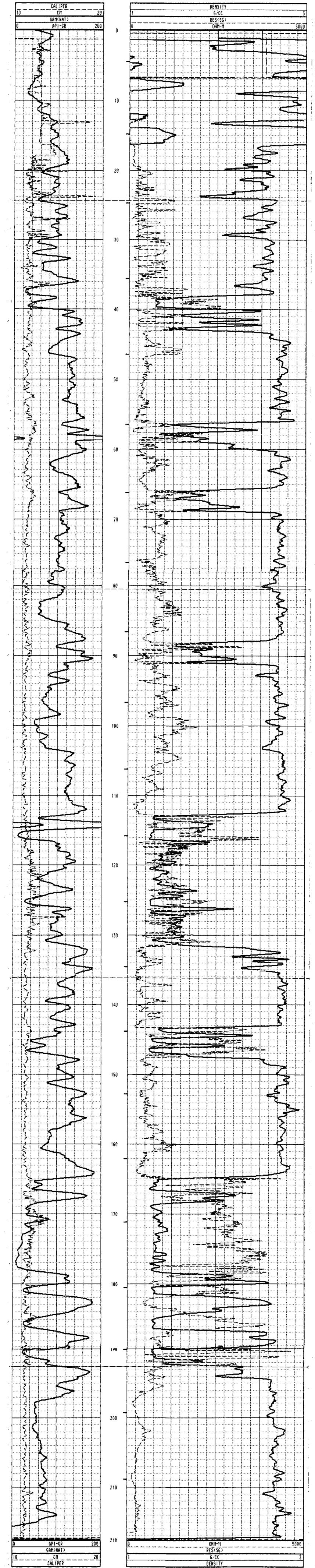
| | Ţ | IOL CALIBRA | TION | TOOL = 906 | 57A SERIAL N | UMBER = 528 | |
|---|----------|-------------|------|------------|--------------|---------------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDARD | |
| | 05/04/89 | 13:47:58 | 0 | GAN(NAT) | 0.000 CPS | 0.000 AP1-SR | |
| 1 | 05/04/89 | 13:47:58 | 0 | GAM(NAT) | 0.000 CPS | 0.000 AP1-GR | |
| | 05/04/89 | 13:47:58 | 0 | NEUTRON | 0.000 CPS | 0.000 API-N | |
| | 05/04/89 | 13:49:52 | 0 | NEUTRON | 134.000 CPS | 271.000 API-N | |

| CCC | | | | | |
|--|---|--|---|---------------------|-------|
| COMPANY
WELL
LOCATION/FIELD | : QHR89021
: | QHR89021 G
E COAL LTD.
GAM-DEN-RES-CAL | OTHER SE
Scale | | S-CAL |
| COUNTY
STATE
Section | : TRANSFER
: BRITISH I
: | TOWNSHIP | 1:200 | RANGE | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 218 | PERMANENT DATUM
ELEV. PERM, DATUM
LOG MEASURED FROM
DRL MEASURED FROM | : 00
: GL | | : 00 |
| CASING DRILLER
Casing type
Casing thickness | : STEEL | LOGGING UNIT
FIELD OFFICE
RECORDED BY | | | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS | : 24.500
: 2.68
: 1.0
: SANDSTONE
: | RM
RM TEMPERATURE
MATRIX DELTA T | : WATER
: 00
: 00
: 173
: 690 | TYPE
Log
Plot | |
| LOGGED OPEN HOL
VERTICAL HOLE
ALL SERV | | ED SUBJECT TO STANDAR | D TERMS AN | ID CONDIT | IONS |

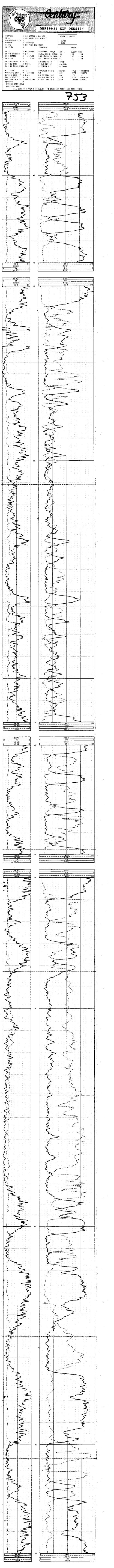


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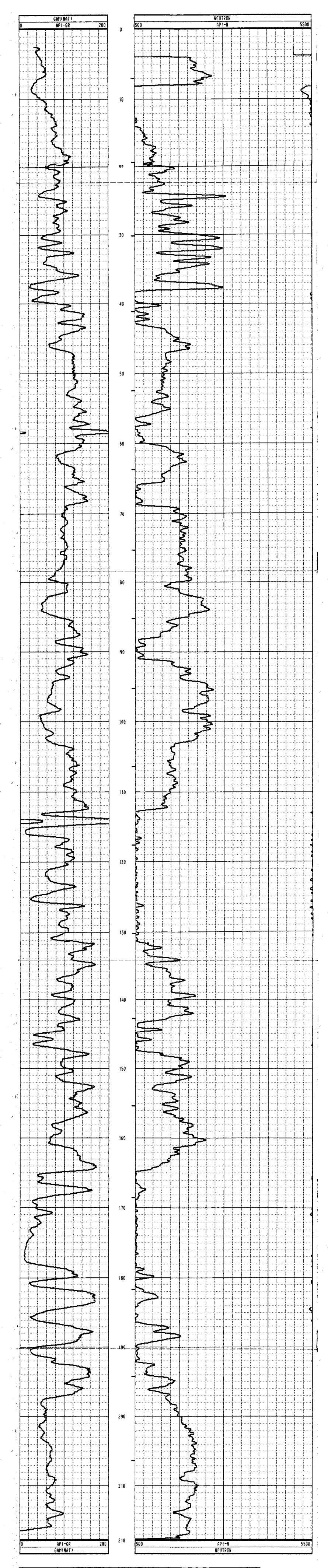
| | TO | OL CALIBRA | TION | 100L = 91 | TOOL = 9032AC SERIAL NUMB | | | 57 | |
|----|----------|------------|------|-----------|---------------------------|-----|---------|----------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | IRD | |
| 0 | 05/04/89 | 10:17:51 | 0 | GAH(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 1 | 05/04/89 | 10:17:51 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | AP1-GR | |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.106 | 6700 | |
| 3 | 05/04/89 | 12:11:56 | 0 | DENSITY | 2439.000 | CPS | 2.120 | 6700 | |
| 4 | 05/04/89 | 10:17:51 | 0 | RES(SG) | 0.000 | CPS | 0.800 | ohm-m | |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SG) | 30275.000 | CPS | 178.500 | OHM-M | |
| 6 | 05/04/89 | 10:46:11 | 0 | CALIPER | 353.000 | CPS | 7.620 | CM | |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.800 | CM | |
| 8 | 05/04/89 | 10:17:51 | Û | DENSITYH | 0.000 | CPS | 0.000 | 6/00 | |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.000 | 6700 | |
| 10 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 | CH | |
| 11 | 05/04/89 | 10:17:51 | 8 | CALIPERL | 0.000 | CPS | 0.000 | CM | |





| WELL :
LOCATION/FIELD :
COUNTY : | QUINTETTE CC
QHR89021 GAT
TRANSFER | 1MA-NEUTRON | OTHER SERV
Scale
1:200 | ICES: |
|---|--|---|---------------------------------|---|
| STATE :
SECTION : | BRITISH COLL | TOWNSHIP : | | RANGE : |
| DEPTH DRILLER : | 06/05/89
218
217.78
2.50 | PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | 00
GL | ELEVATIONS
KB : 00
DF : 00
GL : 00 |
| ••••• | 18
STEEL
.0S | FIELD OFFICE : | 8902
Calgary
D.Zankl | |
| MAGNETIC DECL. :
MATRIX DENSITY :
FLUID DENSITY :
NEUTRON MATRIX :
REMARKS :
LOGGED OPEN HOLE
VERTICAL HOLE | 24.500
2.68
1.0
SANDSTONE | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
00
00
173
690 | FILE : ORIGINAL
TYPE : 9055A
LOG : 0
PLOT : QUIN 10
THRESH: 20000 |



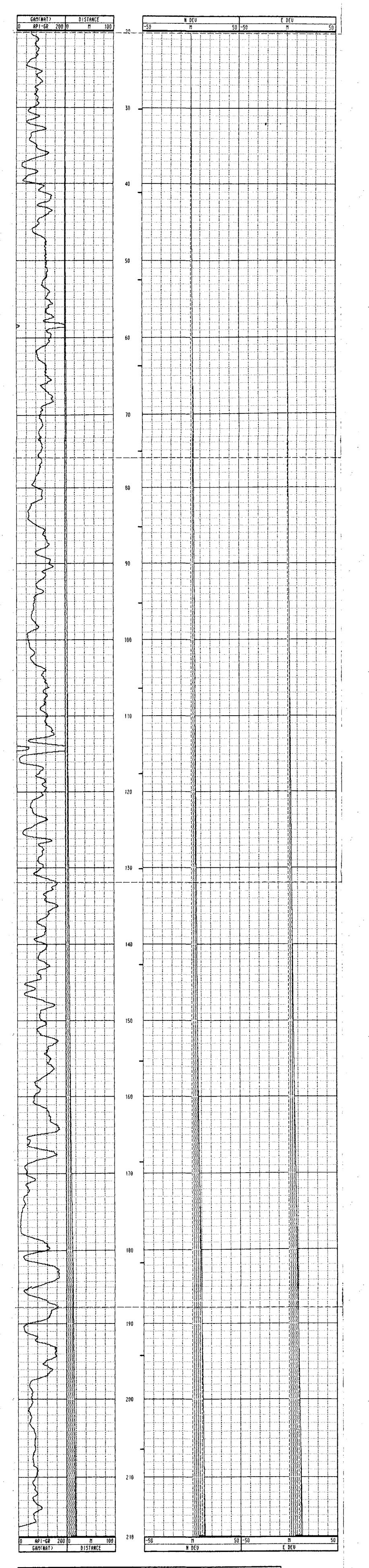


| | | TO | IOL CALIBRA | TION | 100L = 91 | 055R | SERIA | L NUMBER = | 14 | |
|---|---|----------|-------------|------|-----------|----------|-------|------------|----------|--|
| | · | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD | |
| 0 | } | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 1 | | 05/04/89 | 08:10:36 | Û | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR | |
| 2 | 2 | 05/05/89 | 16:59:51 | Û | POROSITY | 0.000 | CPS | 145.000 | CPS | |
| 3 | 5 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM | |
| 4 | 1 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM | |
| S | ; | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | NU | |
| 6 | 5 | 05/04/89 | 08:13:14 | Û | SP | 4095.000 | CPS | 500.000 | NU | |
| 7 | 1 | 05/04/89 | 08:10:36 | Ð | NEUTRON | 0.000 | CPS | 0.000 | AP I -N | |
| 8 | } | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | API-H | |

QHR89021 DEVIATION

| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE | : QHR89021 D
:
: TRANSFER | EVIATION | OTHER SER
SCALE
1:200 | UICES: | |
|--|---|---|-----------------------------|-------------------------------|--|
| SECTION | : | TOWNSHIP : | | RANGE | : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 218
: 217.78 | PERMANENT DATUM :
ELEV. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | 00
GL | ELEVATI
KB
DF
GL | : 00
: 00 |
| CASING DRILLER
Casing type
Casing thicknes | : STEEL | · · · · · · · · · | | | |
| FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOI
VERTICAL HOLE | : 24.500
: 2.68
: 1.0
: SANDSTONE
:
LE | RM :
RM TEMPERATURE :
MATRIX DELTA T :
FLUID DELTA T : | 00
00
173
690 | TYPE
LOG
PLOT
THRESH | : 9055A
: 3
: QUIN 13
: 20000 |
| HLL SERV | TILES PROVIDED |) SUBJECT TO STANDARD |) JERAIS AND | 7 | 53 |

Η



| | TOOL CALIBRATION | | | 100L = 90 | 155A | SERIA | L NUMBER = | 14 |
|---|------------------|----------|------|-----------|----------|-------|------------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD |
|) | 05/04/09 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 9.009 | CPS | 0.000 | AP I -GR |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 9.000 | CPS | 145.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | NV |
| 6 | 05/04/89 | 08:13:14 | Q | SP | 4095.000 | CPS | 500.000 | HŲ |
| 7 | 05/04/89 | 08:10:36 | Û | NEUTRON | 0.000 | CPS | 0.000 | AP IN |
| 8 | 05/04/89 | 08:53:24 | 0 | HEUTRON | 145.000 | CPS | 271.000 | 60 ~N |

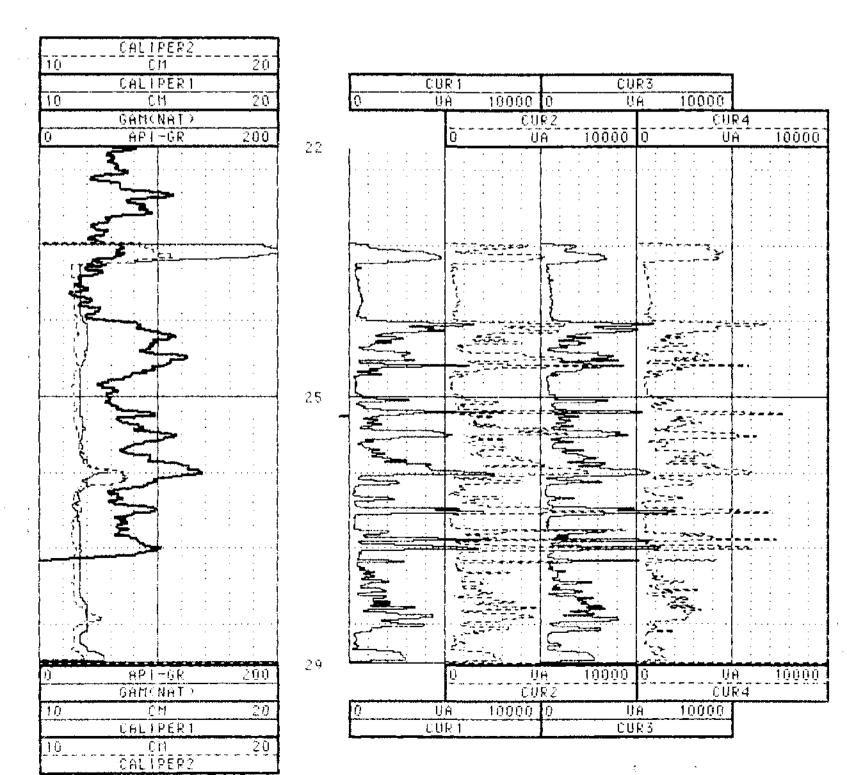
| | | | | | | | i ili ili ili |
|----------------|------------------|--------------|-----------------------|-----------------------------|--------------|--------------|---|
| * * * * * * | **** 00 | MPU-LOG II - | VERTICAL D | EVIATION | * * * | * * * * | *** |
| CLIENT | OUINTET | TE COAL LTD. | HOLE ID. | | 89021 GA | MM | |
| | ICE : CALGARY | | | LOG : 04 | | 14 | |
| DATA FROM | | | PROBE | ITS:MET | 055A , | DG 3 | t i i i i i i i i i i i i i i i i i i i |
| MAG. DECL. | . : 24.500 | | DEPTH UN | ulo inci | | 00 0 | |
| AGLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | E AZIMU | TH SAN | IG SAN |
| 20.0 | 19.99 | 0.13 | 01 | 0,1 | 357.1 | | 349.0 |
| 25.0 | 24.98 | 0.38 | 03 | 0.4 | 355.7 | 2.5 | 353.6 |
| 30.0 | 29.97 | 0.62 | 04 | 0.6 | 356.3 | 2.9 | 356.6 |
| 35.0 | 34.97 | 0.87 | 04 | 0.9 | 357.2 | 2.6 | 0.8 |
| 40.0 | 39.96 | 1.09 | ~.04 | 1.1 | 358.1 | 2.3 | 357.8 |
| 45.0 | 44.96 | 1.33 | ~.00
0.0 5 | 1.3 | 359.9 | 2.8 | 1.5
13.2 |
| 50.0 | 49.95 | 1.57 | 0.05 | 1.6 | 1.7
4.6 | 3.3
3.5 | 13.2
35.5 |
| 55.0 | 54.94 | 1.85 | 0.15
0. 7 0 | 1.9 | 4.0
7.8 | ె.ట | 22.6 |
| 60.0 | 59.93 | 2.13 | 0.29
0.46 | 2.2
2.5 | 10.8 | ा.
य.० | 38.4 |
| 65.0
70-0 | 44 . 92 | 2.42
2.69 | 0.48
0.66 | 2.8 | 13.8 | 3.7 | 34.5 |
| 70.0
75.0 | 69-91
74.90 | 2.94 | 0.88 | 3.1 | 16.6 | 3 . 9 | 39.4 |
| 80.0 | 79.88 | 3.20 | 1.10 | 3.4 | 19.0 | 3.9 | 41.4 |
| 85.0 | 84.87 | 3.46 | 1.34 | 3.7 | 21.1 | 4.1 | 41.5 |
| 90.0 | 89.86 | 3.70 | 1.58 | 4.0 | 23.1 | 3.8 | 46.7 |
| 95.0 | 94.85 | 3.91 | 1.82 | 4.3 | 25.0 | 3.6 | 51.6 |
| 100.0 | 99.84 | 4.10 | 2.08 | 4.6 | 26.9 | 3.9 | 61.2 |
| 105.0 | 104.83 | 4,27 | 2.34 | 4.9 | 28.7 | 3.5 | 59.4 |
| 110.0 | 109.82 | 4.45 | 2.64 | 5.2 | 30.6 | 4.1 | 55.9 |
| 115.0 | 114.80 | 4.63 | 2.95 | 5,5 | 32.5 | 3.7 | 65.5 |
| 120.0 | 119.79 | 4.80 | 3.25 | 5.8 | 34.1 | 4.0 | 57.0 |
| 125.0 | 124.78 | 4,98 | 3.54 | 6.1 | 35.4 | 3.8 | 63.8
62.9 |
| 130.0 | 129.77 | 5.19 | 3.83 | 6.4 | 36.4 | 4.0
4.5 | 63.0 |
| 135.0 | 134.75 | 5.40
5.62 | 4.13
4.49 | 6 ,8
7 , 2 | 37.4
38.6 | 5.3 | 60.9 |
| 140.0
145.0 | 139.74
144.71 | 5.87 | 4.90 | 7.6 | 39.9 | 5.8 | 60.2 |
| 150.0 | 149.68 | 6.14 | 5.34 | 8.1 | 41.0 | 6.5 | 51.4 |
| 155.0 | 154.65 | 6.50 | 5.83 | 8.7 | 41.9 | 7.1 | 56.3 |
| 160.0 | 159.60 | 6.89 | 6.39 | 9,4 | 42.8 | 7.7 | 61.7 |
| 165.0 | 164.54 | 7.37 | 6.98 | 10.1 | 43.5 | 9.8 | 47.3 |
| 170.0 | 169.47 | 7.95 | 7.60 | 11.0 | 43.7 | 10.6 | 46.1 |
| 175.0 | 174.39 | 8.56 | 8.23 | 11.9 | 43.9 | 10.0 | 45.7 |
| 180.0 | 179.32 | 9.15 | 8.83 | 12.7 | 43.9 | 10.4 | 38.5 |
| 185.0 | 184.24 | 9,78 | 9.44 | 13.6 | 44.0 | 9.7 | 45.0 |
| 190.0 | 189.17 | 10.34 | 10.06 | 14.4 | 44.2 | 9.4 | 49.9 |
| 195.0 | 194.10 | 10.85 | 10,69 | 15.2 | 44.6 | 9.6 | 57.1 |
| 200.0 | 199.03 | 11.35 | 11.35 | 16.1 | 45.0 | 9.4 | 53.2 |
| 205.0 | 203.97 | 11,83 | 12.02 | 16.9 | 45.5 | 9.4 | 54.4 |
| 210.0 | 208.90 | 12.27 | 12.68 | 17.6 | 45.9 | 9.3 | 53 . 9
60 . 1 |
| 215.0 | 213.84 | 12.73 | 13.36 | 18.4 | 46.4 | 9 .4 | 0.0 |
| 217.8 | 216.58 | 12,96 | 13.74 | 18.9 | 46.7 | 0.0 | 0.0 |



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| COMPANY
WELL
LOCATION/FIELD
COUNTY | | NTETTE C
89021 DI
NSEER | | • | | OTHER 3
SCALE
1:200 | ERVICES: | | |
|---|--------|-------------------------------|----------|--------|--------|---------------------------|----------|-----|----------|
| STATE | | TISH COL | UMB (A | | Ĺ. | | | | |
| SECTION | : | | TOWNSHI | p | : | | RANGE | : | |
| DATE | : 06/ | 07289 | PERMANE. | NT DAT | 'UM : | 00 | ELEVAT | 0 | 45 |
| DEPTH DRILLER | : 218 | | ELEV. P | ERM. i | ATUM | 00 | КB | : | 00 |
| LOG BOTTOM | : | 28.52 | LOG MEAT | SURED | FROM: | GL | DF | : | 00 |
| LOG TOP | : | 21.73 | DRL MEAS | SURED | FROM: | GL | GL | : | 00 |
| CASING DRILLER | : 18 | | LOSSING | UNIT | : | 8902 | | | |
| CASING TYPE | : STE | EL | FIELD OF | FFICE | : | CALGARY | | | |
| CASING THICKNESS | 8: .85 | | RECORDE | D BY | | D.ZANKL | | | |
| BIT SIZE | : 12. | 1 | BOREHOLI | E FLUI | р: | WATER | FILE | : | ÖRIGINAL |
| MAGNETIC DECL. | : 2 | 4.500 | RM | | | 00 | TYPE | | 9400A |
| MATRIX DENSITY | : 2.6 | 8 | RM TEMPI | ERATUR | E : | 00 | 1,06 | : | 0 |
| FLUID DENSITY | : 1.0 | | MATRIN | DELTA | т: | 173 | PLOT | : | 9400 0 |
| NEUTRON MATRIX | : SAN | DSTONE | FLUID | DELTA | T : | 690 | THRES | 1: | 50000 |
| REMARKS | : | | | | | | | | |
| LOGGED OPEN HOL | . E | | | | | | | | |
| VERTICAL HOLE | | | | | | | | | |
| ALL SERV | ICES P | POUIDED | SUBJECT | 10 S | TANDAR | D TERMS | AND COND | I T | FONS |



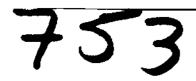




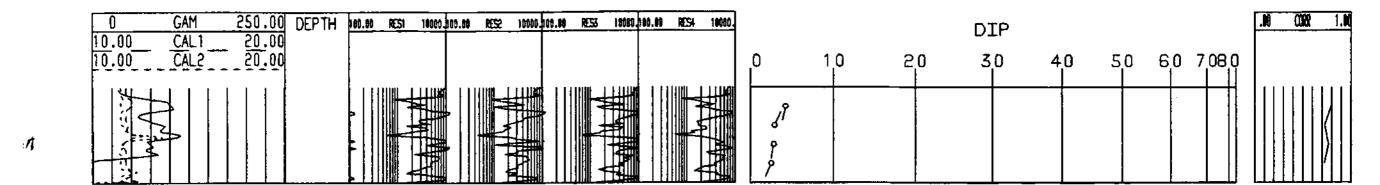


QHR89021 DIPMETER

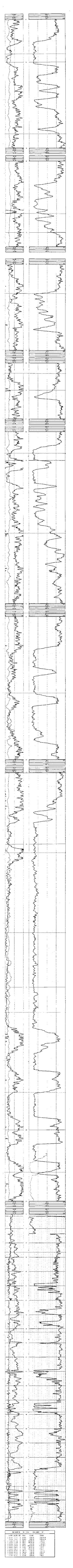
| COMPANY : | QUINTETTE COAL LTD. | | OTHER SERVICES: | |
|-------------------|----------------------|----------------------|----------------------|-----------------|
| | OHR89021 DIPMETER | | official oction des. | |
| LOCATION/FIELD : | | | SCALE | |
| COUNTY : | TRANSFER | | 1:200 | |
| STATE : | BRITISH COLUMBIA | | ····· | |
| SECTION : | | TOUNSHIP : | | RANGE : |
| DATE : | 06/07/89 | PERMANENT DATUM : | 00 | ELEVATIONS |
| DEPTH DRILLER : | 218 | ELEV. PERM. DATUM: | 00 | KB : ØØ |
| LOG BOTTOM : | 28.52 | LOG MEASURED FROM: | GL | DF : 00 |
| LOG TOP : | 21.73 | DRL MEASURED FROM: | GL | GL : 00 |
| CASING DRILLER : | 18 | LOGGING UNIT : | 8902 | |
| CASING TYPE : | STEEL | FIELD OFFICE : | CALGARY | |
| CASING THICKNESS: | .05 | RECORDED BY : | D.ZANKL | |
| BIT SIZE : | 12.1 | BOREHOLE FLUID : | WATER | FILE : ORIGINAL |
| MAGNETIC DECL. : | 24.500 | RM : | 00 | TYPE : 9400A |
| MATRIX DENSITY : | 2.68 | RM TEMPERATURE : | 00 | LÜ g : 0 |
| FLUID DENSITY : | 1.0 | MATRIX DELTA T : | 173 | PLOT : 9400 4 |
| NEUTRON MATRIX : | SANDSTONE | FLUID DELTA T : | 690 | THRESH: 50000 |
| REMARKS : | | | | |
| logged open hole | vertical | | | |
| Window: 2m Ste | p: 1m Search Angle: | 30deg Method-2 | | |
| | ALL SERVICES PROVIDE | D SUBJECT TO STANDAR | B TERMS AND CONDIT | TIONS |



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| CG | | <u>Cer</u> t | | y - | |
|--|-----------------|---|---------------------------------|--|--|
| | / [| QHR89022 (| | | |
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QHR89022 G | COAL LTD.
AMMA-NEUTRON | OTHER SERV
SCALE
1:200 | ······································ | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | | | 90
GL | ELEVATI
KB
DF
GL | ONS
: 00
: 00
: 00 |
| CASING DRILLER
CASING TYPE
CASING THICKNESS | : STEEL | LOGGING UNIT :
FIELD OFFICE :
RECORDED BY : | | | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS | : 2.68
: 1.0 | RM :
RM TEMPERATURE :
MATRIX DELTA T : | WATER
00
00
173
690 | TYPE
LOG
Plot | : ORIGINAL
: 9055A
: 5
: QUIN 10
: 50000 |

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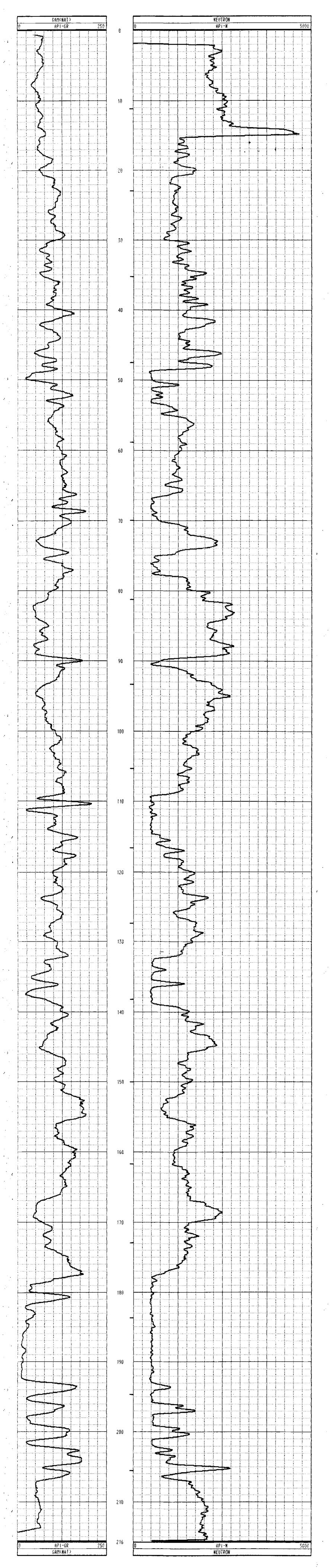
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| | TOOL CALIBRATION | | | TOOL = 90 | 155A SE | RTAL NUMBE | (R = | 14 |
|---|------------------|----------|------|-----------|-------------|------------|--------------|--------------|
| • | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | | STAND | ARD |
| 0 | 05/04/89 | 08:18:36 | 0 | GAM(NAT) | 0.000 CP | s | 0.000 | AP‡-GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 CP | ş | 0.000 | AP)-GR |
| 2 | 05/05/89 | 16:59:51 | Û | POROSITY | 0.000 CP | s | 145.000 | CPS |
| 3 | 05/04/89 | 08:15:10 | Û | RES | 9707.000 CP | S | 8.000 | OHM |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 CP | s | 1000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 CP | S | 0.000 | UM . |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 CP | \$ | 500.000 | ι Ν Ψ |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 CP | S | 0.000 | API-N |
| 8 | 05/04/89 | 08:53:24 | C | NEUTRON | 145.000 CP | 5 | 271.000 | API-N |

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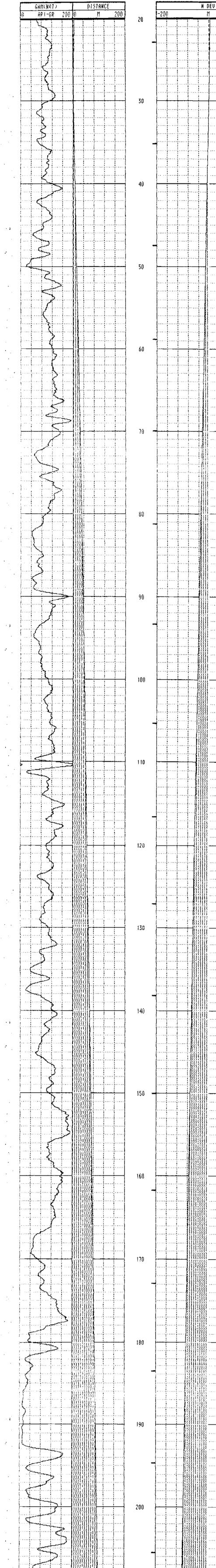
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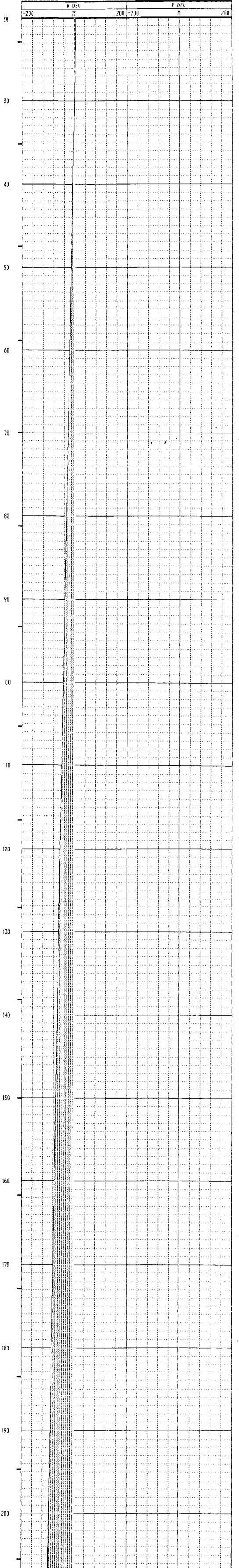
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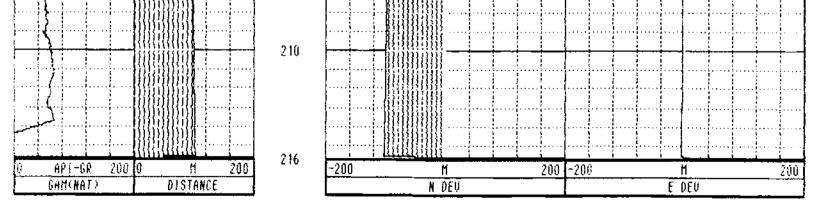
| CCC | | QHR 890 2 | 2 2 DEV | | |
|---|---|---|----------------------------|---------------------|---|
| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE
SECTION | : QUINTETTE C
: QHR89022 DE
:
: TRANSFER
: BRITISH COL
: | VIATION | OTHER SE
SCALE
1:200 | | : |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 218 | PERMANENT DATUM
Elev. Perm. Datu
Log measured fro
Drl measured fro | M: GL | K B
D F | ONS
: 00
: 00
: 00 |
| CASING DRILLER
Casing type
Casing thicknes | : STEEL | LOGGING UNIT
FIELD OFFICE
RECORDED BY | : CALGARY | | |
| | : 2.68
: 1.0 | BOREHOLE FLUID
RM
RM TEMPERATURE
MATRIX DELTA T
FLUID DELTA T | | TYPE
Log
Plot | : PROCESSED
: 9055A
: 6
: QUIN 13
: 50000 |
| LOGGED OPEN HO
ANGLE HOLE 45
ALL SERU | DEGREES | SUBJECT TO STAND | ARD TERMS AN | ND CONDIT | IONS |

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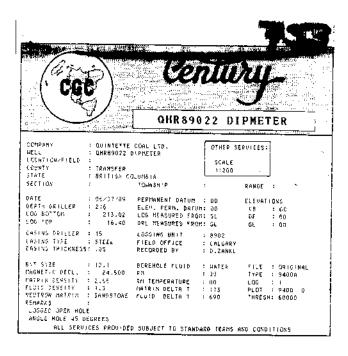
| | TO | OL CALIBRA | TION | TOOL = 9055A SERIAL NUMBE | | | L NUMBER = 1 | 4 |
|---|----------|------------|------|---------------------------|----------|-----|--------------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | ISE | STANDA | RD |
|) | 05/04/89 | 08:10:36 | 0 | SAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| ł | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| 2 | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.000 | CPS |
| Ş | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM |
| ļ | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | MV |
| 6 | 05/04/89 | 08:13:14 | 0 | sp | 4095.000 | CPS | 500.000 | MU |
| 7 | 05/04/89 | 08:10:36 | 0 | NEUTRON | 0.000 | CPS | 0.000 | AP I -N |
| 8 | 05/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 | CPS | 271.000 | AP1-N |

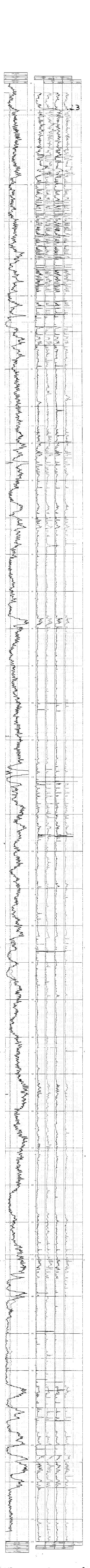
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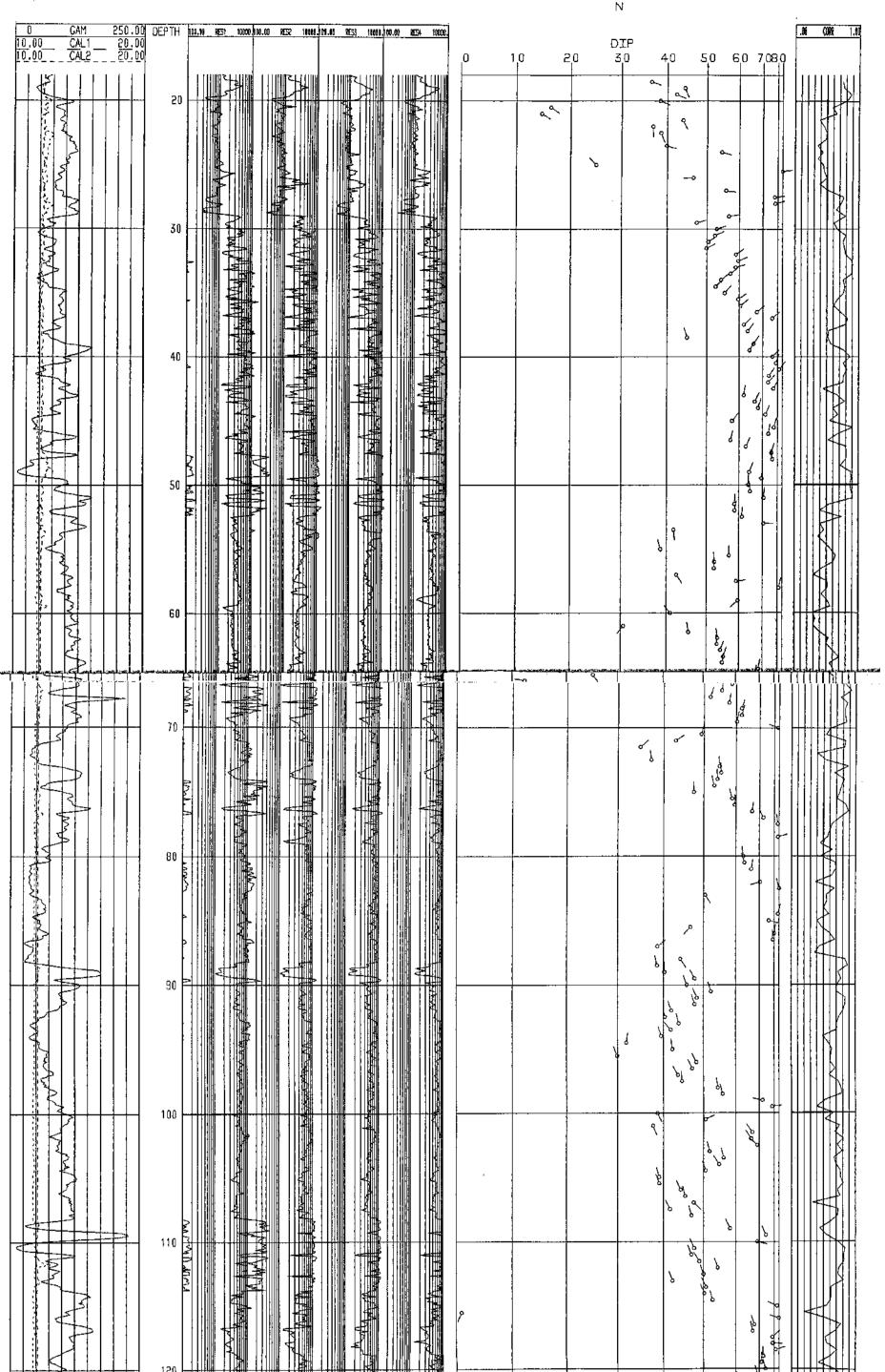
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| CLIENT | | TTE COAL LT | | | | | |
|--------------|----------------|-----------------|-----------|--------------|----------------|------|--------------|
| | JFFICE : CALGA | | | - LOG : 06/ | | | |
| DATA FF | | | PROBE | : 905 | | 14 | |
| MAG, DE | ECL. : 24.3 | 300 | | JNITS : MET | | | |
| CABLE DEPT | TH TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | | SANG |
| 20.0 | 14.91 | 6.01 | 50 | 6.0 | 355.3 | 43.5 | 182. |
| 25.0 | 18.55 | 2.60 | 68 | 2.7 | 345.3 | 43.3 | 192. |
| 30.0 | 22.22 | 78 | ,88 | 1.2 | 228.2 | 42.5 | 186. |
| 35.0 | 25.92 | -4.10 | -1.10 | 4.2 | 195.0 | 42.2 | 187. |
| 40.0 | 29.64 | -7.39 | -1.24 | 7.5 | 189.5 | 42.1 | 196. |
| 45.0 | 33.39 | -10.63 | | 10.7 | 187.3 | 41.1 | 157. |
| 50.0 | 37.18 | -13.79 | | 13.9 | 185.5 | 39.9 | |
| 55.0 | 41.03 | -16.94 | | 17.0 | 184.9 | 39.8 | 170. |
| 60.0 | 44.90 | -20.06 | | | 184.3 | 38.4 | 163. |
| 65.0 | 48.80 | -23.17 | | | 183.9 | 38.3 | 183. |
| 70.0 | 52.74 | -26,22 | -1.59 | | 183.5 | 37.4 | 157. |
| 75.0 | 56.71 | -29.23 | | | 183.1 | 37.5 | 177. |
| 80.0 | 60.71 | -32.19 | | | 182.8 | 36.3 | 181 |
| 85.0 | 64.74 | -35.13 | -1.59 | | 182.6 | 35.8 | 192. |
| 90.0 | 68.79 | -38.04 | -1.58 | | 182.4 | 35.7 | 179. |
| 90.0
95.0 | 72.88 | 40,90 | -1.67 | | 182.3 | 34.8 | 177. |
| | 77.00 | -43.71 | | | 182.2 | 34.0 | 174 |
| 100.0 | | -46.47 | | 46.5 | 182.1 | 33.7 | 181. |
| 105.0 | 81.14 | -49.20 | | | 182.0 | 33.4 | 187 |
| 110.0 | 85,32 | -51.88 | -1.73 | 51.9 | 181.9 | 32.4 | |
| 115.0 | 89.53 | | | | 181.7
181.8 | 31.7 | 182. |
| 120.0 | 93.77 | -54.52 | -1.76 | 54.5
57.2 | 181.8 | 32.0 | 175. |
| 125.0 | 98.01 | -57.13 | -1.83 | | 181.8 | 32.8 | 148 |
| 130.0 | 102.26 | ~59.74
(0.75 | -1.87 | 59.8 | | 32.0 | 192. |
| 135.0 | 106.51 | -62.35 | -2.00 | 62.4 | 181.8 | 31.2 | 193 |
| 140.0 | 110.76 | -64.93 | -2.12 | 65.0 | 181.9 | 31.0 | |
| 145.0 | 115.03 | -67.52 | -2.19 | 67.6 | 181.9 | | |
| 150.0 | 119.32 | -70.06 | -2.22 | 70.1 | 181.8 | 30.5 | 189. |
| 155.0 | 123.62 | -72.58 | -2.24 | 72.6 | 181.8 | 30.2 | 182.
182. |
| 160.0 | 127.93 | -75.07 | -2.42 | 75.1 | 181.8 | 30.3 | |
| 165.0 | 132.25 | -77.56 | ~2.48 | | 181.8 | 30.7 | |
| 170.O | 136.56 | -80.05 | -2.70 | 80.1 | 181.9 | 30.2 | 201 |
| 175.0 | 140.88 | -82.55 | -2.80 | 82.6 | 181.9 | 30.0 | 183. |
| 180.0 | 145.22 | -85.00 | -2.97 | 85.0 | 182.0 | 29.1 | 190 |
| 185.0 | 149.58 | 87.41 | -3.24 | 87.5 | 182.1 | 29.1 | 186. |
| 190.0 | 153.93 | -89.82 | -3.50 | 87.9 | 182.2 | 29.4 | 188. |
| 195.0 | 158.29 | -92.24 | -3.71 | 92.3 | 182.3 | 29.8 | 193 |
| 200.0 | 162.65 | -94.66 | -4.00 | 94.7 | 182.4 | 29.0 | 186 |
| 205.0 | 167.02 | -97.06 | -4.25 | 97.1 | 182.5 | 28.8 | 188 |
| 210.0 | 171.41 | -99.42 | -4.53 | 99.5 | 182.6 | 28.4 | 182 |
| 215.0 | 175.82 | -101.76 | -4.76 | 101.9 | 182.7 | 28.1 | 178. |
| 215.7 | 176.43 | -102.05 | -4.80 | 102.2 | 182.7 | 0.0 | Ó. |





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| SECTION | | | TOWNSHIP | : | | BANGE | : | |
| DATE | 06/07/ | 39 | FERMANENT DATUM | : | 02 | ELEUAI | 10 | NS |
| DEPTH DRILLER : | 218 | | ELEU. PERM. DAT | JM : | 00 | КВ | : | 00 |
| LOG BOTIOM : | 213. | ð2 | LOG MEASUBED FR | DM : | GL | DF | : | 00 |
| LOG TOP : | 16. | 40 | DRL MEASURED FR | IM: | GL | GL | : | 00 |
| CASING DRILLER | 15 | | LOGGING UNIT | : | 8902 | | | |
| | STEEL | | | | CALGARY | | | |
| CASING THICKNESS: | | | RECORDED BY | | D.ZANKL | | | |
| BIT SIZE : | | | BOREHOLE FLUID | | HATER | | : | PROCESSED |
| MAGNETIC DECL. | 24.5 | 30 | ВМ | = | 00 | TYPE | Ξ | 94008 |
| MATRIX DENSITY : | | | RM TEMPERATURE | | 00 | LOG | | Ø |
| FLUID DENSITY | 1.0 | | MATRIX DELTA T | | 173 | | | 9400 0 |
| NEUTRON MATRIX : | SANDST | DNE | FLUID DELTA T | : | 690 | THRES | :H | 60000 |
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DIPMETER LIST FOR: GHR-89022 WINDOW:1m STEP: Sm SEARCH ANGLE:80deg

MAGNETIC DECLINATION: 24.5

41,500

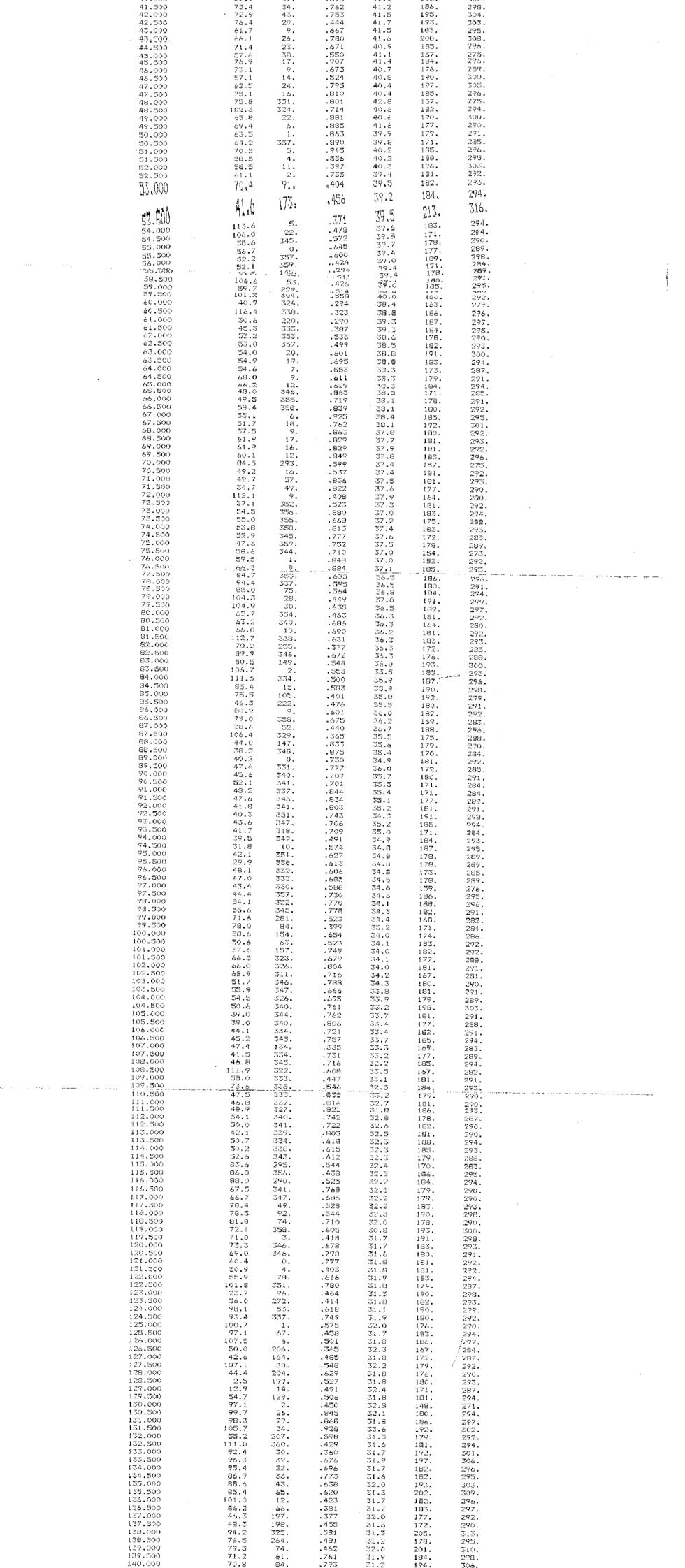
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DEV. | HOLE
AZIM | PAD1
AZIM |
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| 18.500 | 36.3 | 110. | .741 | 43.7 | 191. | 305. |
| 17.000 | 44.1 | 157. | .765 | 43.6 | 191. | 305. |
| 19.500 | 42.1 | 112 | .877 | 43.4 | 185. | 301. |
| 20.000 | 38.3 | 112. | .800 | 43.5 | 182. | 299. |
| 20.500 | 16.3 | 126 | .585 | 43.3 | 182. | 299. |
| 21.000 | 14.6 | 121 | .642 | 43.4 | 185. | 300. |
| 21.500 | 43.7 | 155. | .383 | 43.0 | 187. | 303. |
| 22.000 | 36.7 | 179. | .452 | 43.2 | 183. | 299. |
| 22.500 | 38.5 | 159 | .495 | 43.2 | 183. | 300. |
| 23.000 | 115.1 | 351. | .484 | 43.1 | 181. | 298. |
| 23.500 | 39.8 | 107. | .355 | 43.3 | 181. | 298. |
| 24.000 | 54.2 | 106. | .433 | 43.0 | 175. | 273. |
| 24.500 | 95.4 | 73. | .358 | 43.0 | | |
| 25.000 | | | | | 182. | 297. |
| | 24.9 | 315. | .439 | 43.3 | 192. | 307. |
| 25.500 | 87.4 | 82. | .453 | 43.0 | 182. | 299. |
| 26.000 | 46.3 | 267. | .500 | 43.0 | 184. | 301. |
| 26.500 | 120.4 | 347. | .383 | 43.0 | 184. | 300. |
| 27.000 | 55.5 | 78 . | - 523 | 42.8 | 185. | 301. |
| 27.500 | 77 - 4 | 85. | .764 | 42.8 | 183. | 227. |
| 28.000 | 77.7 | | -721 | 42.8 | 178. | 295. |
| 26.500 | 109.2 | 325. | . 646 | 42.7 | 186. | 302. |
| 29.000 | 56.4 | 81 | -788 | 42.5 | 182. | 298. |
| 29.500 | 47.2 | 76. | 613 | 42.0 | 188. | 302. |
| 30.000 | 52.7 | 71. | .660 | 42.5 | 186. | 301. |
| 30.500 | 52.2 | 66. | .790 | 42.4 | 182. | 298. |
| 31.000 | 50.3 | 55. | .752 | 42.5 | 173. | 291. |
| 31,500 | 49.8 | 54. | .777 | 42.0 | 185, | 301. |
| 32.000 | 58.8 | 54. | .793 | 42.4 | 181. | 278. |
| 32.500 | 57.6 | 68. | .895 | 42.3 | 197. | 309. |
| 33.000 | 58.7 | 75. | .893 | 42.2 | 205 . | 316. |
| 33.500 | 57.0 | 50, | ,894 | 41.5 | 181. | 297. |
| 34.000 | 54.0 | 51. | -756 | 40.8 | 186. | 300. |
| 34,500 | 52.4 | 45. | .785 | 42.0 | 184. | 299. |
| 35.000 | 55.1 | 41. | .760 | 42.2 | 187. | 301. |
| 35.500 | 59.6 | 54 | .665 | 42.1 | 183. | 298. |
| 36.000 | 6C.4 | 50, | . 605 | 41.8 | 177. | 293. |
| 36.500 | 67.0 | 49. | .717 | 41,9 | 188. | 301. |
| 37.000 | 75.5 | 49. | .823 | 41.7 | 189. | 302. |
| 37.500 | 61.7 | 45. | .790 | 39.4 | 185. | 299. |
| 38.000 | 63.2 | 35. | .523 | 41.9 | 178. | 293. |
| 38.500 | 44.3 | 344 | .521 | 42.1 | 177. | 292. |
| 37.000 | 65.5 | 34. | .562 | 41.7 | 179. | 294 |
| 39.500 | 63.9 | 27. | .765 | 41.9 | 175. | 291 |
| 40,000 | 75,7 | 45. | .864 | 42.1 | 196. | 307. |
| 40.500 | 78.5 | 18. | .760 | 41.5 | 170. | 286. |
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| | G12 • 1 | | | | | 1.00 Mar 10 |

34.

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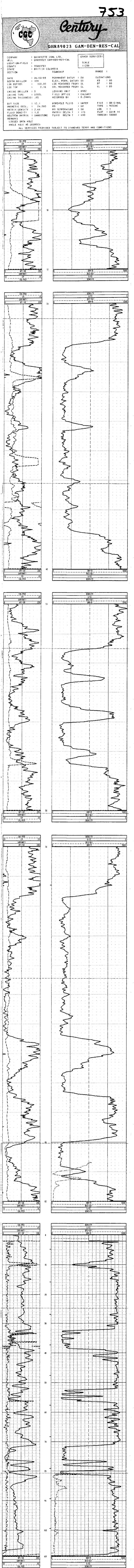
298.

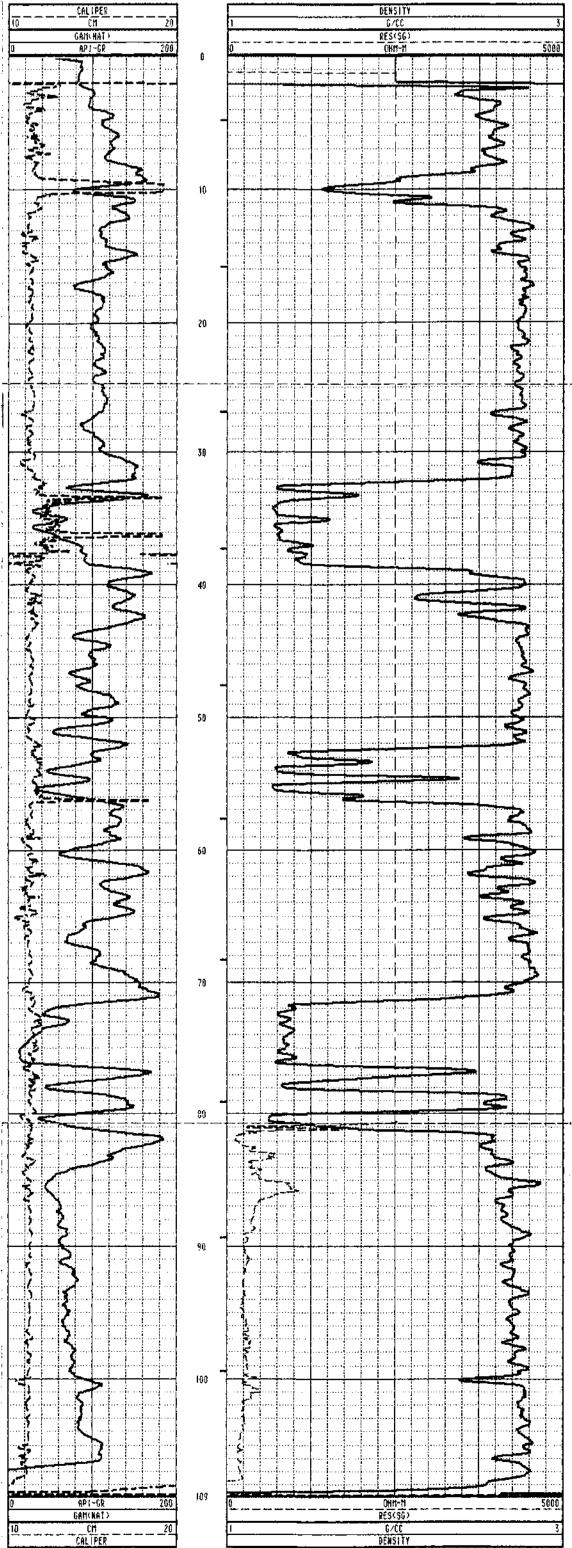


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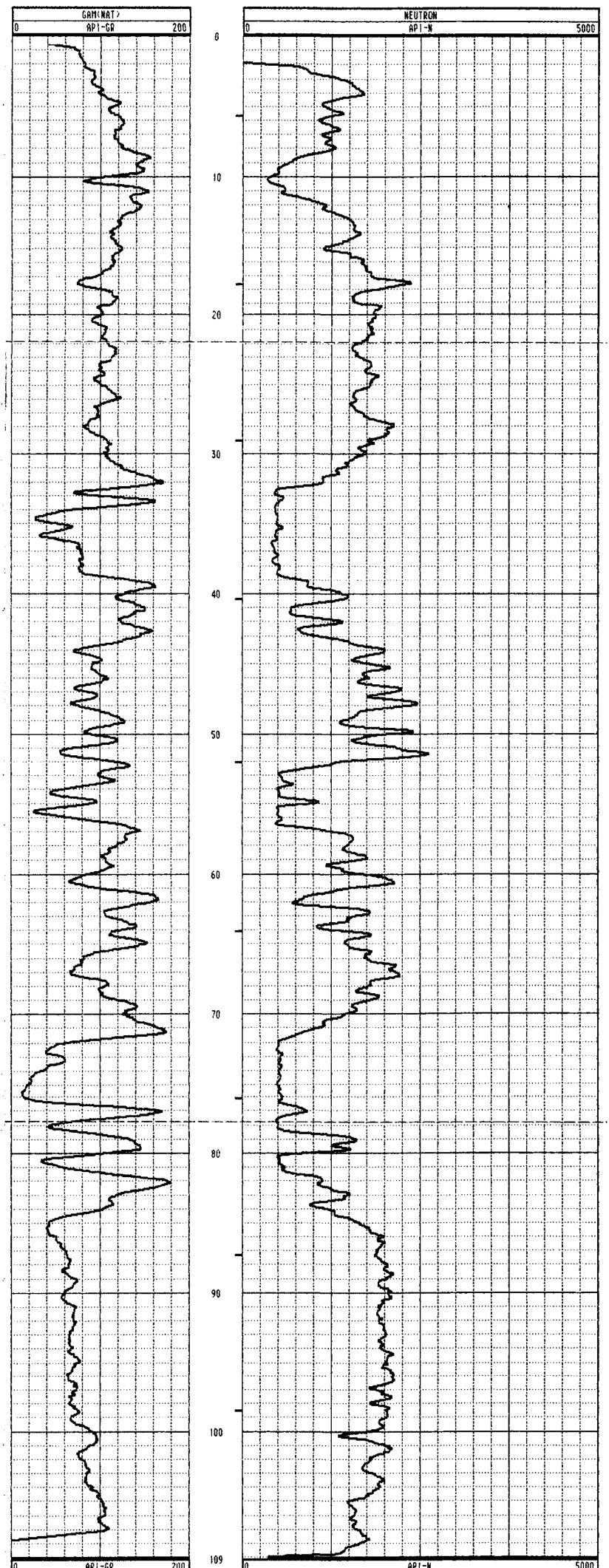


| | TO | TOOL CALIBRATION | | | TOOL = 9032AC SERIAL | | | \$7 | |
|----|----------|------------------|------|------------|----------------------|-----|---------|---------|--|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPO | ISE | STAND | ARD | |
| Q | 05/04/89 | 10:17:51 | 0 | GRM(NAT) | 0.000 | CPS | 0.000 | AP !-GR | |
| 1 | 05/04/69 | 10:17:51 | ¢ | GAN(NAT) | 0.660 | CPS | 0,000 | AP I-GR | |
| 2 | 05/04/89 | 12:11:56 | 0 | DENSITY | 6166.000 | CPS | 1.106 | 6700 | |
| 3 | 05/04/89 | 12:11:56 | Û | DENSITY | 2439.000 | CPS | 2.120 | 6700 | |
| 4 | 05/04/09 | 10:17:51 | Û | RES(56) | 0.000 | CPS | 0.000 | 0KH-H | |
| 5 | 05/04/89 | 10:25:07 | 0 | RES(SB) | 30275.000 | CPS | 178.500 | ohn-m | |
| 6 | 05/04/89 | 10:46:11 | Û | CAL IPER | 353.000 | CPS | 7.620 | CH | |
| 7 | 05/04/89 | 10:46:11 | 0 | CALIPER | 1906.000 | CPS | 17.800 | CH . | |
| 8 | 85/04/89 | 10:17:51 | 0 | DENSITYH | 0.000 | CPS | 0.008 | 6700 | |
| 9 | 05/04/89 | 10:17:51 | 0 | DENSITYS | 0.000 | CPS | 0.908 | 6700 | |
| 10 | 05/04/89 | 10:17:51 | Û | CAL I PERL | 0.000 | CPS | 0.000 | C11 | |
| 11 | 05/04/89 | 10:17:51 | 0 | CALIPERL | 0.000 | CPS | 0.000 | сн | |

QHR89023 GAMMA-NEUTRON

14.15.11.1.1

| COMPANY
WELL
LOCATION/FIELD
COUNTY
STATE
SECTION | QUINTETTE C QHR89023 GA TRANSFER BRITISH COL | MMA-NEUTRON | OTHER SERU
Scale
1:200 | RANGE : |
|---|---|---------------------------------------|------------------------------|-----------------|
| olo i i ch | - | | • | |
| DATE | : 06/08/89 | PERMANENT DATUM | : 00 | ELEVATIONS |
| DEPTH DRILLER | : 109 | ELEV. PERM. DATUM | : 00 | K8 : 00 |
| LOG BOTTOM | : 109.10 | LOG MEASURED FROM | : GL | DF : 00 |
| LOG TOP | : 0.64 | DRL MEASURED FROM | : GL | GL : 00 |
| CASING DRILLER | : 3 | LOGGING UNIT | : 8902 | |
| CASING TYPE | : STEEL | FIELD OFFICE | : CALGARY | |
| CASING THICKNESS | : .05 | RECORDED BY | D.ZANKL | |
| BIT SIZE | : 12.1 | BOREHOLE FLUID | : WATER | FILE : ORIGINAL |
| | : 24.500 | | : 08 | TYPE : 9055A |
| | : 2.68 | | : 00 | LOG : 0 |
| FLUID DENSITY | | · · · · · · · · · · · · · · · · · · · | : 173 | PLOT : QUIN 10 |
| NEUTRON MATRIX | : SANDSTONE | | : 690 | THRESH: 50000 |
| REMARKS | : | | | |
| LOGGED OPEN HOL | E | | | |
| ANGLE HOLE 45 D | EGREES | | | |
| ALL SERVI | ICES PROVIDED | SUBJECT TO STANDAR | D TERMS AND | CONDITIONS |



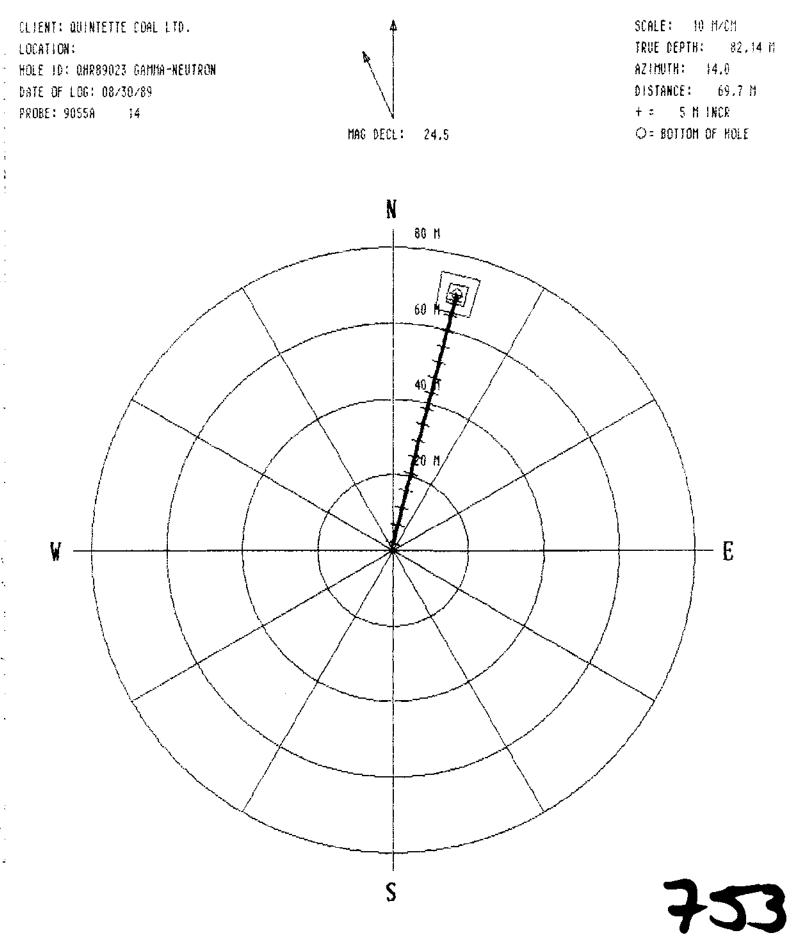
| U | HP1-0K | 200 |
|---|----------|-----|
| [| GAN(NAT) | |
| | | |

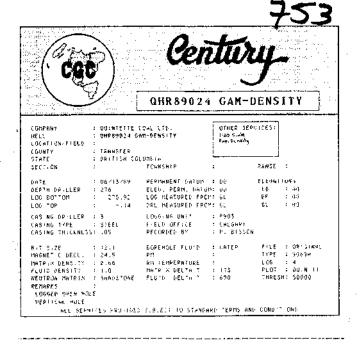
| 4121 - 11 | 2000 |
|-----------|------|
| | |
| NEUTRON | |
| | |

| | TO | TOOL CALIBRATION | | TOOL ≈ 9055A | | SERIA | 14 | |
|---|----------|------------------|------|--------------|----------|-------|----------|----------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPON | SE | STAND | ARD |
| 0 | 05/04/89 | 08:10:36 | 0 | SAM(NAT) | 0.000 | CPS | 0.000 | AP I -GR |
| 1 | 05/04/89 | 08:10:36 | 0 | GAM(NAT) | 0.000 | CPS | 0.000 | AP 1-GR |
| Ź | 05/05/89 | 16:59:51 | 0 | POROSITY | 0.000 | CPS | 145.008 | CPS |
| 3 | 05/04/89 | 08:15:10 | 0 | RES | 9707.000 | CPS | 0.000 | OHM |
| 4 | 05/04/89 | 08:15:10 | 0 | RES | 5212.000 | CPS | 1000.000 | OHM |
| 5 | 05/04/89 | 08:13:14 | 0 | SP | -9.000 | CPS | 0.000 | MV |
| 6 | 05/04/89 | 08:13:14 | 0 | SP | 4095.000 | CPS | 500.000 | MV |
| 7 | 05/04/89 | 08:10:36 | Û | NEUTRON | 0.000 (| CPS | 0.000 | AP I -N |
| 6 | 05/04/89 | 08:53:24 | Û | NEUTRON | 145,000 | CPS | 271.000 | A₽1-N |

| · * * * * * * | * * * * CO | MPU-LOG'II'- | VERTICAC | EVIATION | * * * * * | * * * | * * * |
|---------------|---------------|--------------|-----------|-----------|-----------|-------|-------|
| | | TTE COAL LTD | | . : OHR | | | |
| | ICE : CALGAR | | | LOG : 08/ | | | |
| DATA FROM | | | PROBE | : 905 | | 14 | |
| | | 00 | | | • | | |
| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | DISTANCE | AZIMUTH | SANG | SANGE |
| 1.0 | 1.00 | 0.00 | 0.00 | 0.0 | ~,0 | | 0.0 |
| 6.0 | 4.87 | 1.83 | 09 | 1.8 | 357.3 | 44.6 | 23.4 |
| 11.0 | 8.44 | 5.19 | 0.85 | 5.3 | 9.3 | 44 1 | 17.1 |
| 16.0 | 12.01 | 8.56 | 1.71 | 8.7 | | 44.0 | 12.0 |
| 21.0 | 15.63 | 11.90 | 2.59 | 12.2 | | 43.3 | 15.0 |
| 26.0 | 19.28 | 15.22 | 3.37 | 15.6 | 12.5 | 43.0 | 19.0 |
| 31,0 | 22.95 | 18.50 | 4.21 | 19.0 | 12.0 | 42.6 | 14,1 |
| 36.0 | 26.64 | 21.76 | 5.03 | 22.3 | 13.0 | 42.2 | 14.8 |
| 41.0 | 30.36 | 24.97 | 5,77 | 25.6 | 13.0 | 42.0 | 22.9 |
| 46.0 | 34.07 | 28,20 | 6.61 | 29.0 | 13.2 | 41.6 | 16.6 |
| 51.0 | 37.61 | 31.40 | 7.45 | 32.3 | 13.4 | 41.4 | 15.7 |
| 56.0 | 41.57 | 34.59 | 8.26 | 35.6 | 13.4 | 41.0 | 14.5 |
| 61 » O | 45.35 | 37,76 | 9.12 | 38.8 | 13.6 | 40.6 | 16.3 |
| 66.0 | 49.14 | 40.91 | 9.91 | 42.1 | 13.6 | 41.1 | 15.8 |
| 71.0 | 52,94 | 44.06 | 10.68 | 45.3 | 13.6 | 40.9 | 16.4 |
| 76.0 | 56.74 | 47.20 | 11.47 | 48.6 | 13.7 | 40,3 | 15.0 |
| 8i.O | 60. 54 | 50.34 | 12.30 | 51.8 | 13.7 | 40.7 | 12.7 |
| 86,0 | 64.34 | 53.49 | 13.08 | 55.1 | 13.7 | 41.1 | 14.0 |
| 91.0 | 68.15 | 56.61 | 13.89 | 58.3 | 13.8 | 39.9 | 13.5 |
| 96.0 | 72.00 | 59.69 | 14.72 | 61.5 | 13.8 | 39.3 | 14.1 |
| 101.0 | 75.88 | 62.74 | 15.53 | 64.6 | 13.9 | 39.1 | 14.9 |
| 106.0 | 79.77 | 65.76 | 16.37 | 67.8 | 14.0 | 38.8 | 14.6 |
| 109.1 | 82.20 | 67.60 | 16.86 | 69.7 | 14.0 | 0.0 | 0.O |

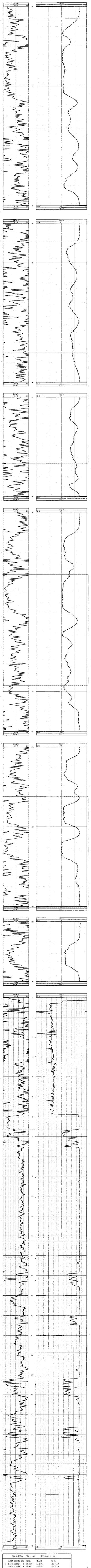
PLAN VIEW COMPU-LOG DEVIATION





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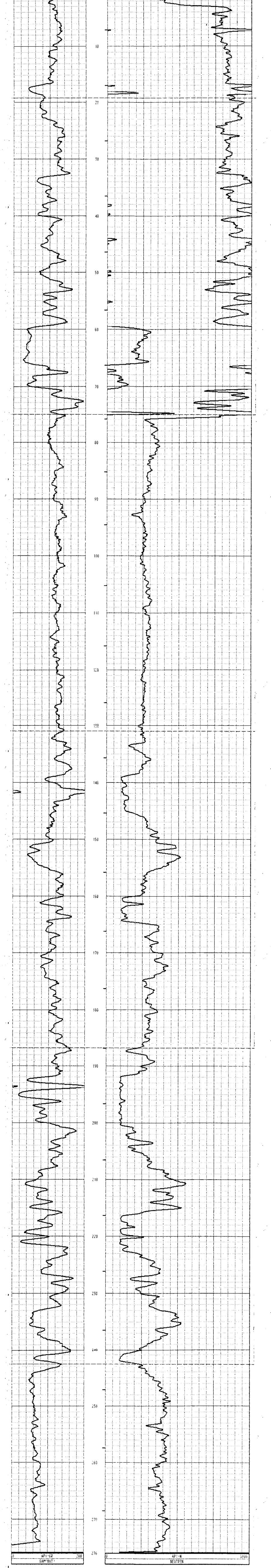


| (° CCC | | Centry. | | | | | |
|---|--|---|---------------------|---|--|--|--|
| | | QHR 89024 | GAM-N | EUTRON | | | |
| NELL
LOCATION/FIELD
COUNTY | : QUINTETTE
: QHR89024 G
:
: TRANSFER
: DOITISH CO | AM-NEUTRON | OTHER SER | VICES: | | | |
| STATE
Section | : BRITISH CO
: | TOWNSHIP : | | RANGE : | | | |
| DATE
DEPTH DRILLER
LOG BOTTOM
LOG TOP | : 276 | PERMANENT DATUM :
ELEU. PERM. DATUM:
LOG MEASURED FROM:
DRL MEASURED FROM: | 00
61. | ELEVATIONS
KB : 00
DF : 00
GL : 90 | | | |
| CHSING DRILLER
Casing type
Casing thickness | : STEEL | LOGGING UNIT :
FIELD OFFICE :
RECORDED BY : | САЕСнЮҮ | | | | |
| BIT SIZE
MAGNETIC DECL.
MATRIX DENSITY
FLUID DENSITY
NEUTRON MATRIX
REMARKS
LOGGED OPEN HOL | : 1.0
: SANDSTONE
: | PM :
RM TEMPERATURE :
MATRIX DELIA T : | WATER
173
690 | FILE : ORIGINAL
TYPE : 9055A
LOG : 3
PLOT : QUIN 10
THRESH: 59000 | | | |

| | | | { | AMC | NAT |) | | | |
|----|--------|--|---|-------|----------|---|--|--|-----|
| Û. | AP1-GR | | | | | | | | 200 |
| | | | | ••••• | \ | | | | |

IJ

| | NEUTRON | | | | | | | | | | | | | | |
|---|-------------|--|----------|----------|---|---|-----|--|--|-------|------|-----|------|-----|----------|
| Q | | | ŔP I - N | | | | | | | | 5000 | | | | |
| | | | | | | [| | | | | | | | | |
| | · • · • • • | | | | 4 | | | | | ••••• | | | •••• | | : |
| | | | | <u> </u> | | l | : : | | | | | : : | | i - | : |

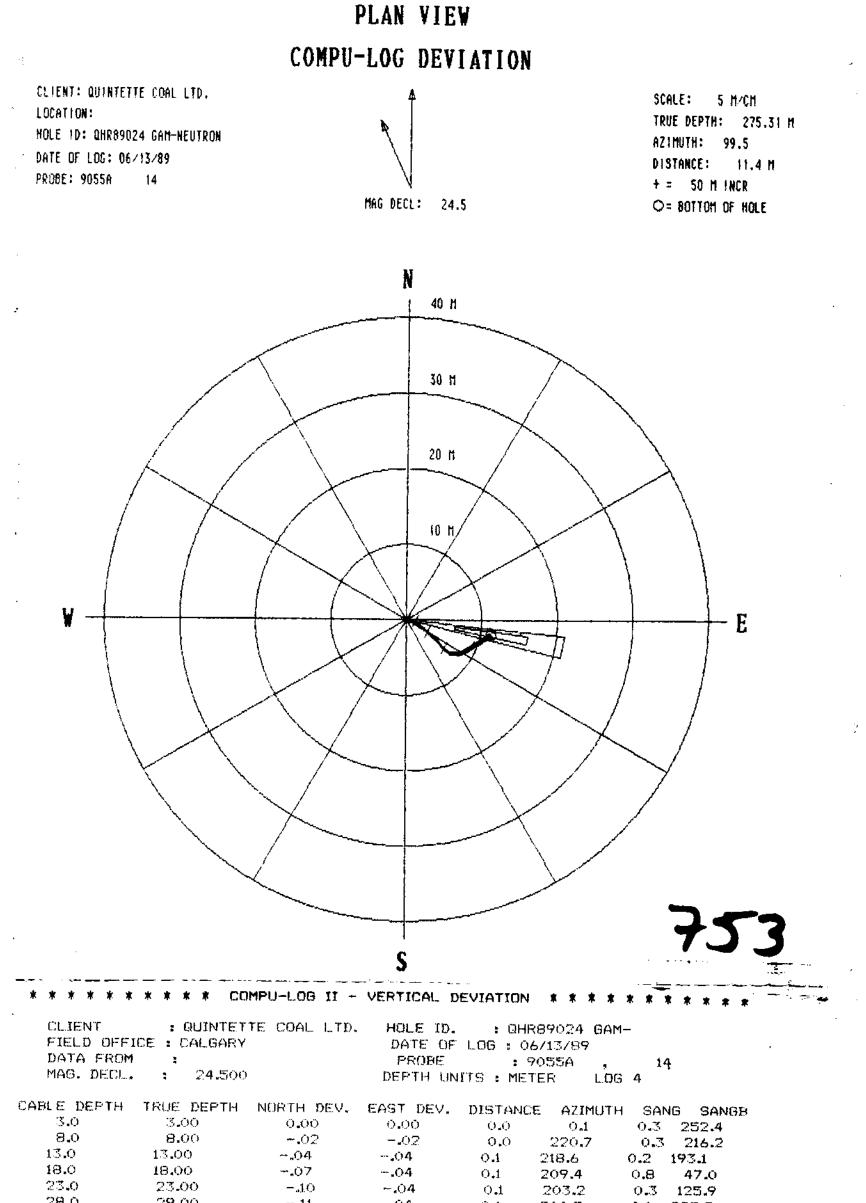


| | TOOL CALIBRATION | | | TOOL = 9055A SERIAL | | NUMBER = 14 | 4 |
|---|----------------------|----------|------|---------------------|--------------|--------------------|---------|
| | CAL-DATE | CAL-TIME | SRCE | SENSOR | RESPONSE | STANDAI | RD |
| Ű | 05704789 | 08:10:36 | Ð | GARI(NAT) | 0.000 CPS | Ú.QŮB (| AP 1-68 |
| | 05/04/89 | 88:18:36 | 0 | GAMCHAT / | 0.000 CPS | 0.000 0 | AP1-68 |
| 2 | 05/05/89 | 16:59:51 | Ů | POROSITY | 0.000 CPS | 145.000 1 | CPS |
| 3 | 05/04/89 | 88:15:10 | 6 | RES | 9707.000 CPS | 0.060 (| OHM |
| 4 | 05/04/89 | 88:15:10 | Û | RES | 5212.000 CPS | 1090.000 (| 085 |
| 5 | 05/84/8 9 | 08:13:14 | 0 | SP | -9.000 (PS | 0.000 1 | Mil |
| 6 | 05/04/89 | 08:13:14 | Û | SP | 4095.000 CPS | 50 0.0 00 / | 10 |
| 7 | 05/04/89 | 88:10:36 | 0 | NEUTRON | 0.000 CPS | 0.000 (| API-N |
| 8 | 85/04/89 | 08:53:24 | 0 | NEUTRON | 145.000 CPS | 271.000 (| 6月11日 |

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| 1 | 1 | -"FO | "(_)4 | Q . 1 | 203.2 | 0.3 125.9 |
|---------------|----------------|-------|-------------|--------------|-------|-----------------|
| 28.0 | 2 8. 00 | 11 | - 04 | 0.1 | 200.3 | 0.1 223.2 |
| 33.0 | 33.00 | 11 | . 04 | 0.1 | 198.1 | 0.4 82.9 |
| 3 8. 0 | 38.00 | 08 | Ö4 | o.t | 205.1 | 0.1 227.8 |
| 43.0 | 43.00 | ~.07 | 02 | 0.1 | 198.4 | 0.3 44.5 |
| 48.0 | 48.00 | 07 | 0.02 | O"J | 167.2 | 0.9 101.1 |
| 53.0 | 53.00 | 09 | 0.08 | Õ.1 | 139.9 | 0.6 96.0 |
| 58.0 | 59,00 | 11 | 0.17 | 0,2 | 121.2 | 1.5 85.9 |
| 63.0 | 63.00 | 10 | 0.28 | 0.3 | 109.0 | 1.1 90.1 |
| 68.0 | 68.00 | 10 | 0.37 | 0.4 | 105.0 | 0.9 98.2 |
| 73 . 0 | 72,99 | 11 | 0.43 | 0,4 | 103,9 | 0.9 110.0 |
| 78.0 | 77.99 | 13 | 0.52 | 0.5 | 104.3 | 1.3 109.9 |
| 83.0 | 82.99 | 16 | 0.64 | 0. 7 | 103.6 | 1.7 90.3 |
| 88.0 | 87.99 | 16 | 0.80 | 0.8 | 101.5 | 1.7 101.1 |
| 93.0 | 92.99 | - 19 | 0.96 | 1.0 | 101.2 | 2.0 98.7 |
| 98.0 | 97.98 | 23 | 1.12 | 1.1 | 101.6 | 1.9 111.1 |
| 103.0 | 102,98 | 31 | 1.28 | 1.3 | 103.6 | 2.1 118.7 |
| 108.0 | 107,98 | 41 | 1.41 | 1.5 | 105.2 | 1.9 126.2 |
| 113.0 | 112.97 | ~.52 | 1.55 | 1.6 | 108.5 | 2.3 128.8 |
| 118.0 | 117.97 | 64 | 1.71 | 1.9 | 110.7 | 2.4 130.8 |
| 123.0 | 122.97 | 78 | 1.87 | 2.0 | 112,5 | 2.5 136.4 |
| 128.0 | 127.96 | 93 | 2.02 | 2.2 | 114.8 | 2.4 137.8 |
| 133.0 | 132.96 | -1.08 | 2.18 | 2.4 | 116.4 | 2.7 121.2 |
| 138.0 | 137.95 | 1.23 | 2.37 | 2.7 | 117.6 | 2.9 129.1 |
| 143.0 | 142,94 | -1.37 | 2.56 | 2.9 | 118.3 | 2.7 133.1 |
| 148.0 | 147,94 | -1.54 | 2,72 | 3.1 | 119.5 | 3.2 136.0 |
| 153.0 | 152.93 | -1.72 | 2,90 | े.4 | 120.6 | 2.9 137.9 |
| 158.0 | 157.92 | -1.90 | 2.08 | 3.6 | 121.7 | 3.3 138.6 |
| 163.0 | 162.92 | -2.10 | 3,28 | 3.9 | 122.6 | 2.9 136.8 |
| 169.0 | 167.91 | -2.29 | 3.51 | 4.2 | 123.1 | 3.5 114.7 |
| 123.0 | 172.90 | -2.47 | 3.73 | 4.5 | 123.4 | 3.0 135.1 |
| 178.0 | 177.89 | -2.62 | 3.95 | 4.7 | 123.6 | 3.3 113.9 |
| 183.0 | 182.88 | -2.84 | 4.14 | 5.0 | 124.4 | 3.8 143.7 |
| 188.0 | 187.87 | -3.12 | 4.35 | 5.3 | 125.6 | 4,2 145,3 |
| 193.0 | 192.86 | -3.40 | 4.59 | 5.7 | 126.6 | 4.2 137.3 |
| 199.0 | 197.84 | -3.66 | 4.86 | 6.1 | 127.0 | 4.4 131.0 |
| 203.0 | 202.83 | -3.90 | 5.14 | 6.4 | 127.2 | 4.4 127.8 |
| 208.0 | 207.82 | -4.13 | 5.43 | 6.8 | 127.3 | 4.t 136.4 |
| 213.0 | 212.80 | -4.30 | 5.71 | 7.1 | 127.0 | 3.7 120.8 |
| 218.0 | 217.79 | ~4,40 | 6.01 | 7.4 | 126.2 | 3.6 95.8 |
| 223.0 | 222.78 | -4.44 | 6.32 | 7,7 | 125.1 | 3.5 106.2 |
| 228.0 | 227.77 | -4.46 | 6.63 | 8.0 | 124.0 | 3.8 82.6 |
| 233.0 | 232.76 | -4.42 | 6.98 | 8.3 | 122.4 | 4.0 83.3 |
| 238.0 | 237.74 | -4.31 | 7.37 | 8.5 | 120.3 | 5.3 62.9 |
| 243.0 | 242.72 | -4.07 | 7,83 | 8,8 | 117.4 | 6.2 58.1 |
| 248.0 | 247.68 | -3.76 | 8.31 | 9.1 | 114.3 | 6.5 60.3 |
| 253.0 | 252.65 | -3.46 | 8.79 | 9.4 | 111.5 | 6.2 70.5 |
| 258.0 | 257.62 | -3.15 | 9.28 | 9,8 | 108.7 | 6.6 59.1 |
| | | | | | | |

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * * * * *

| CLIENT
FIELD OFFI
DATA FROM
MAG. DECL. | CE : CALGARY | | · · · · · · · · · · | LOG : 0
; ' | 7055A | AM-
, 14
DG 4 | ţ. |
|---|---------------------------|----------------|---------------------|----------------|----------------|-----------------------|-------------|
| CABLE DEPTH | TRUE DEPTH | NORTH DEV. | EAST DEV. | | E AZIMU | TH SAN
7 .4 | IG SANGB |
| 263.0
268.0 | 262 . 58
267.54 | -2.84
-2.48 | 9.81
10.36 | 10.2
10.6 | 106.2
103.5 | 7.3 | 60.6 |
| 273.0
275.9 | 272.49 | -2.09
-1.88 | 10.90
11.21 | 11.1
11.4 | 100.9
99.5 | 7.6 | 40.7
0.0 |