CONFIDENTIAL

QUINTETTE COAL LIMITED
1988 GEOLOGICAL REPORT
TRANSFER, GRIZZLY, PERRY CREEK , MARMOT AND WOLVERINE VALLEY SOUTH AREAS
ADDENDUM III

Prepared by Technical Services Department
Quintette Coal Limited

746

Addendum III

1988 Geological Report

Survey Control Maps - 1988 Data

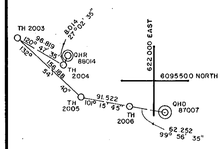
1988 GEOLOGICAL REPORT
TRANSFER, GRIZZLY, PERRY CREEK, MARMOT AND WOLVERINE VALLEY SOUTH AREAS

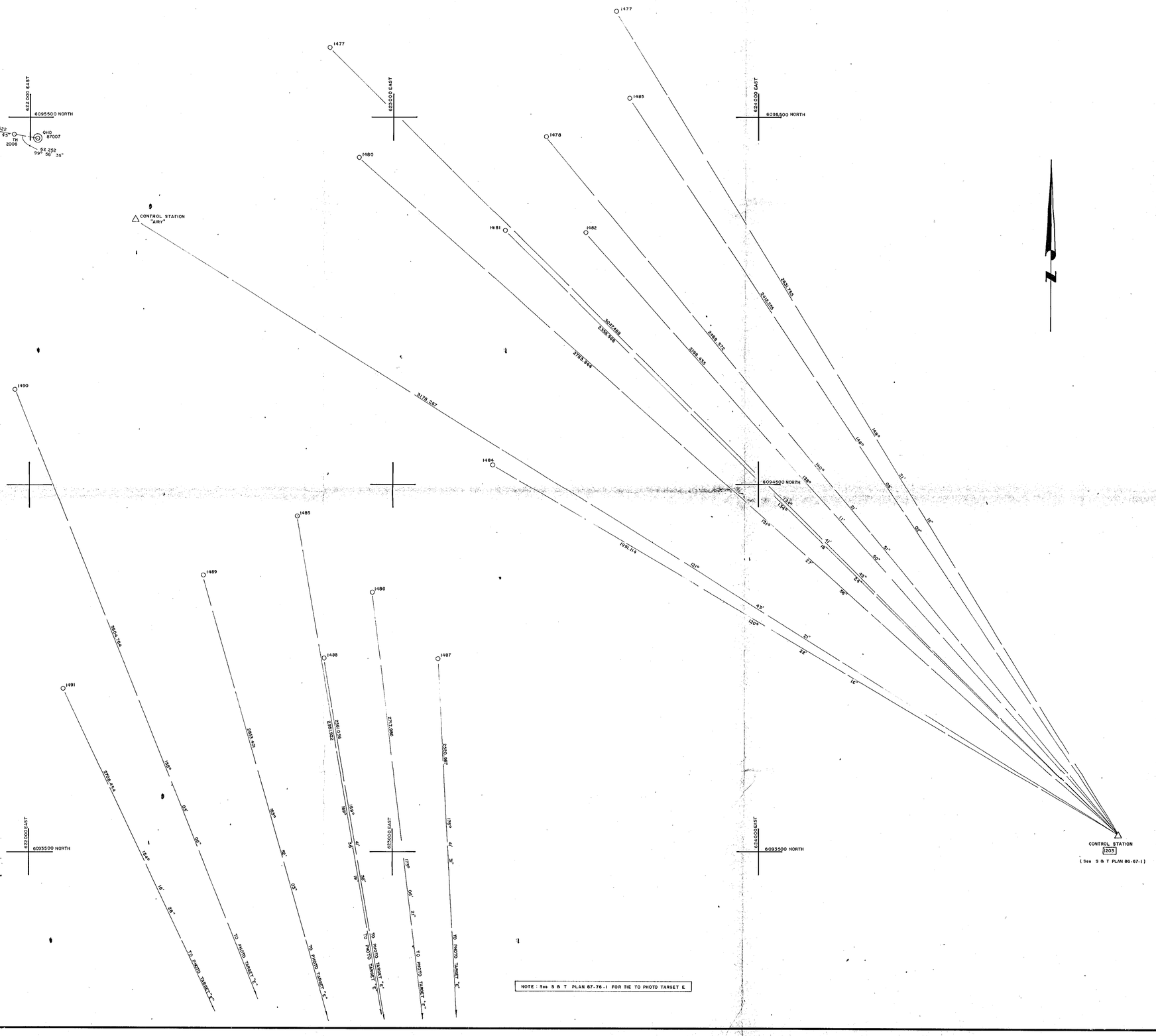
ADDENDUM III

Addendum III Survey Control Maps - 1988 Data:

AREA	DRAWING NUMBER
Transfer	87-903-79-001 (Rev 2) 87-903-79-003 (Rev 3) 87-903-79-005 (Rev 1) 88-903-79-001 (Rev 2) 88-903-79-002 88-903-79-003 (Rev 1) 88-903-79-004 88-903-79-005
Grizzly	88-905-79-001
Vicinity M19 Pit (Transfer)	88-902-79-001 (Rev 4)
East Mesa (Marmot)	88-601-79-001
Mesa Extension	88-100-79-002
Perry Creek	88-906-79-001 (Rev 3)

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.





NOTE : See S & T PLAN 87-76-1 FOR TIE TO PHOTO TARGET E

SURVEY STATION	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF IRON BAR	GROUND
"AIRY"		6095218.97	622288.57	1353.95	1353.9
	1203	6093548.48	624991.03	780.03	
PHOTO TARGET "E"		6091511.53	623269.74	775.70	
	1477	6095788.12	623610.72	1038.44	1038.3
	1478	6095448.88	623416.88	1110.08	1110.0
	1479	6095691.08	622825.51	1232.95	1232.9
	1480	6095391.25	622905.63	1181.50	1181.5
	1481	6095193.96	623305.24	1059.00	1059.0
	1482	6095186.72	623526.14	1011.38	1011.4
	1483	6095550.78	623647.26	1003.43	1003.3
	1484	6094554.83	623273.76	979.49	979.5
	1485	6094413.97	622737.32	1053.60	1053.6
	1486	6094208.92	622943.60	975.17	975.2
	1487	6094027.45	623124.32	916.49	916.5
	1488	6094030.40	622811.71	894.76	894.8
	1489	6094251.59	622477.18	1028.03	1028.0
	1490	6094761.06	621960.25	1256.12	
	1491	6093948.86	622095.39	1014.55	1014.5
	2003	6095577.28	621753.09	1326.52	
	2004	6095527.74	621836.23	1326.88	
	2005	6095471.00	621867.42	1342.41	
	2006	6095453.13	621957.14	1338.63	
QHD 87007		6095442.39	622018.43	1329.15	
QHR 88014		6095534.88	621839.87	1324.72	

SURVEYED : June 2nd, 1987

T.J. TRYON B.C.L.S.

No.	REVISIONS	DATE
2	Added Drill Hole 88014, Co-ordinates And Elevation	22 / 09 / 88
1	Plotted Traverse Stations 2003, 2004, 2005, 2006 & Drill Hole QHD 87007 Added Coordinates Elevations	12 / 08 / 87

QUINTETTE COAL LIMITED

PLAN SHOWING CONTROL POINTS TRANSFER AREA

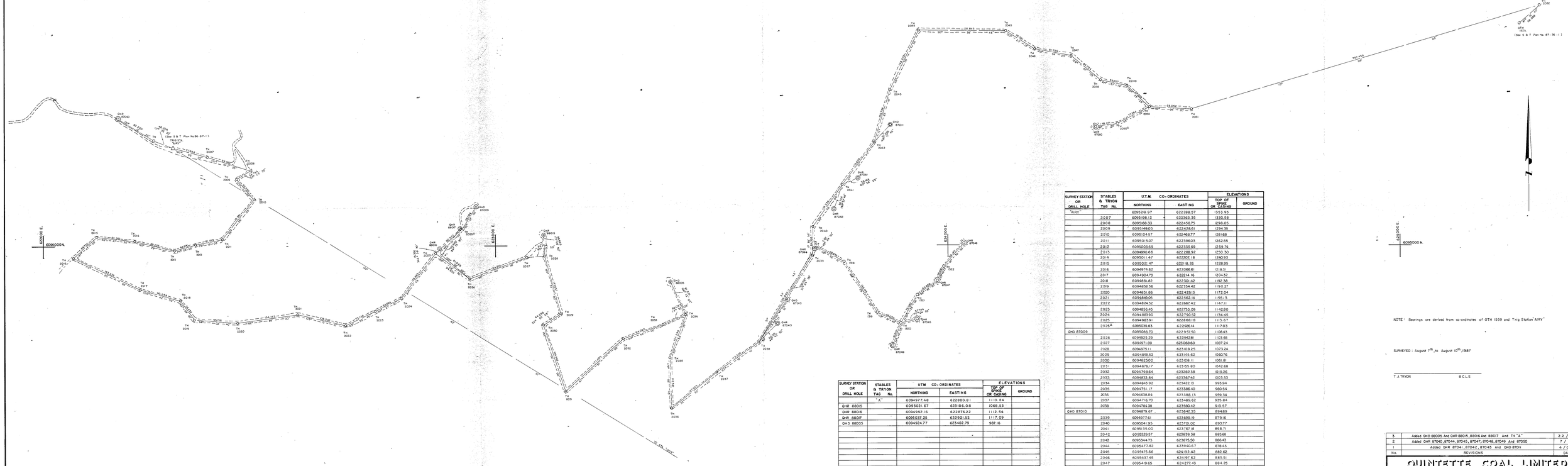
SCALE 1 : 5000

50 25 0 50 100 150 METRES

746

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS DAWSON CREEK, B.C.

87-903-79-001
FILE No. 87-76-2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625000 E.
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(See S & T Plan No. 87-76-11)
(See S & T Plan No. 86-67-11)
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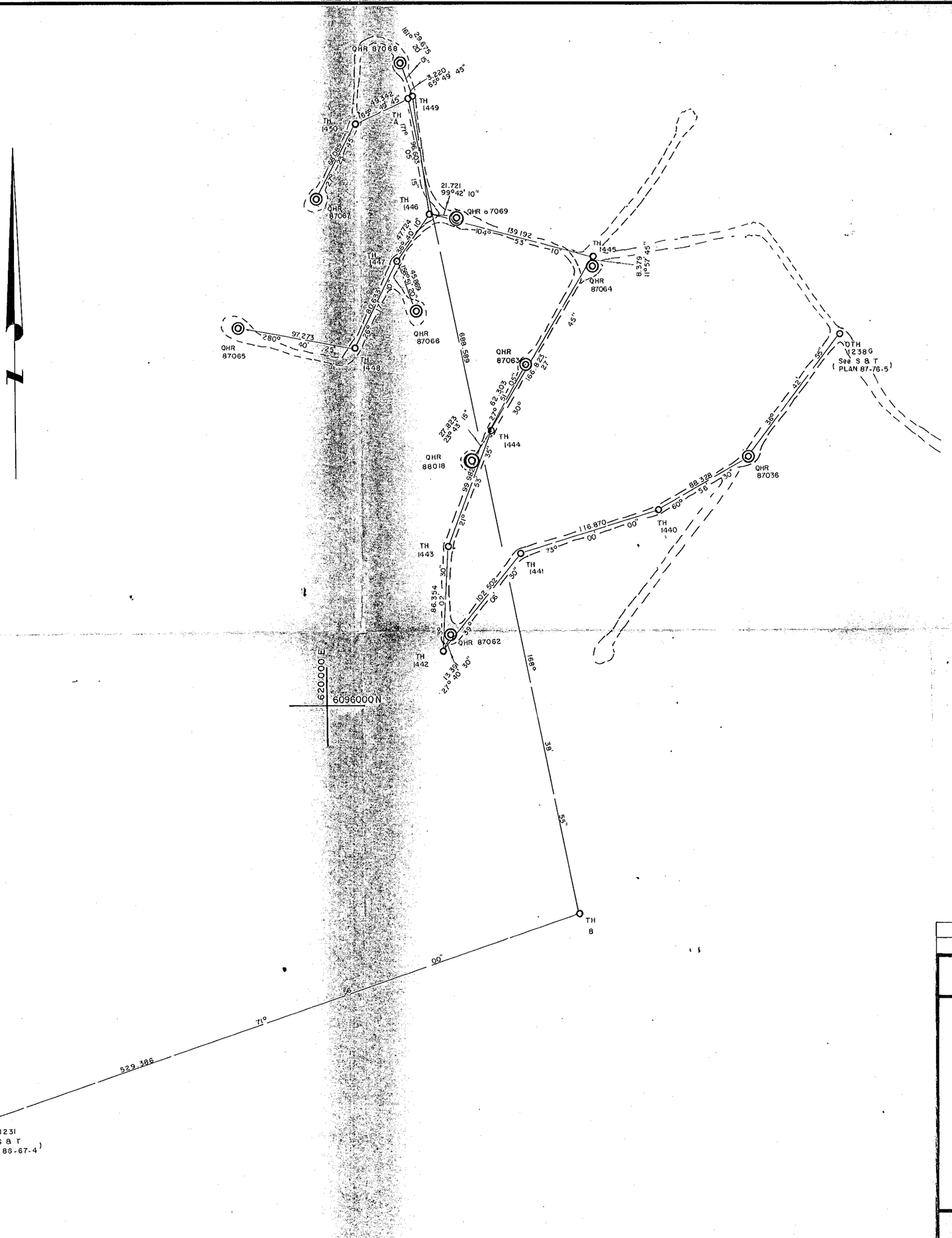


SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
QHR 87036		6096202.09	620351.14	1544.31	
	TH 1440	6096159.21	620273.97	1547.31	
	TH 1441	6096125.06	620162.25	1546.16	
	TH 1442	6096045.56	62009763	1546.70	
	TH 1443	6096131.75	620102.21	1532.78	
	TH 1444	6096224.48	620139.47	1517.31	
	TH 1445	6096368.21	620224.01	1499.56	
	TH 1446	6096403.95	620089.55	1494.87	
	TH 1447	6096365.69	620061.06	1501.55	
	TH 1448	6096293.42	620025.37	1516.27	
	TH 1449	6096499.34	620074.59	1483.56	
	TH 1450	6096477.83	620026.66	1493.06	
	TH A	6096498.02	620071.65		
	TH B	6095828.22	620207.12		
	OTH 1231	6095658.90	619704.37	1663.48	
QHR 87062		6096057.41	620103.84	1544.99	
QHR 87063		6096279.54	620168.56	1508.25	
QHR 87064		6096360.01	620222.27	1499.61	
QHR 87065		6096311.43	619929.82	1519.31	
QHR 87066		6096322.92	620077.60	1505.69	
QHR 87067		6096417.41	619995.34	1499.61	
QHR 87068		6096527.44	620065.10	1484.15	
QHR 87069		6096400.29	620110.95	1491.34	
QHR 88018		6096199.02	620128.28	1522.53	

NOTE · Drill Hole QHR 87069 is approximate location, was not drilled at time of survey.

SURVEYED December 18th and 19th, 1987

T. TRYON B.C.L.S.

No.	REVISIONS	DATE
1	Added Drill Hole QHR 88018	19/09/88

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

SCALE 1 : 2500

25 0 25 50 100 METRES

746

STABLES, TRYON AND ASSOCIATES

B.C. LAND SURVEYORS DAWSON CREEK, B.C.

87-903-79-005

FILE No. 87-76-9

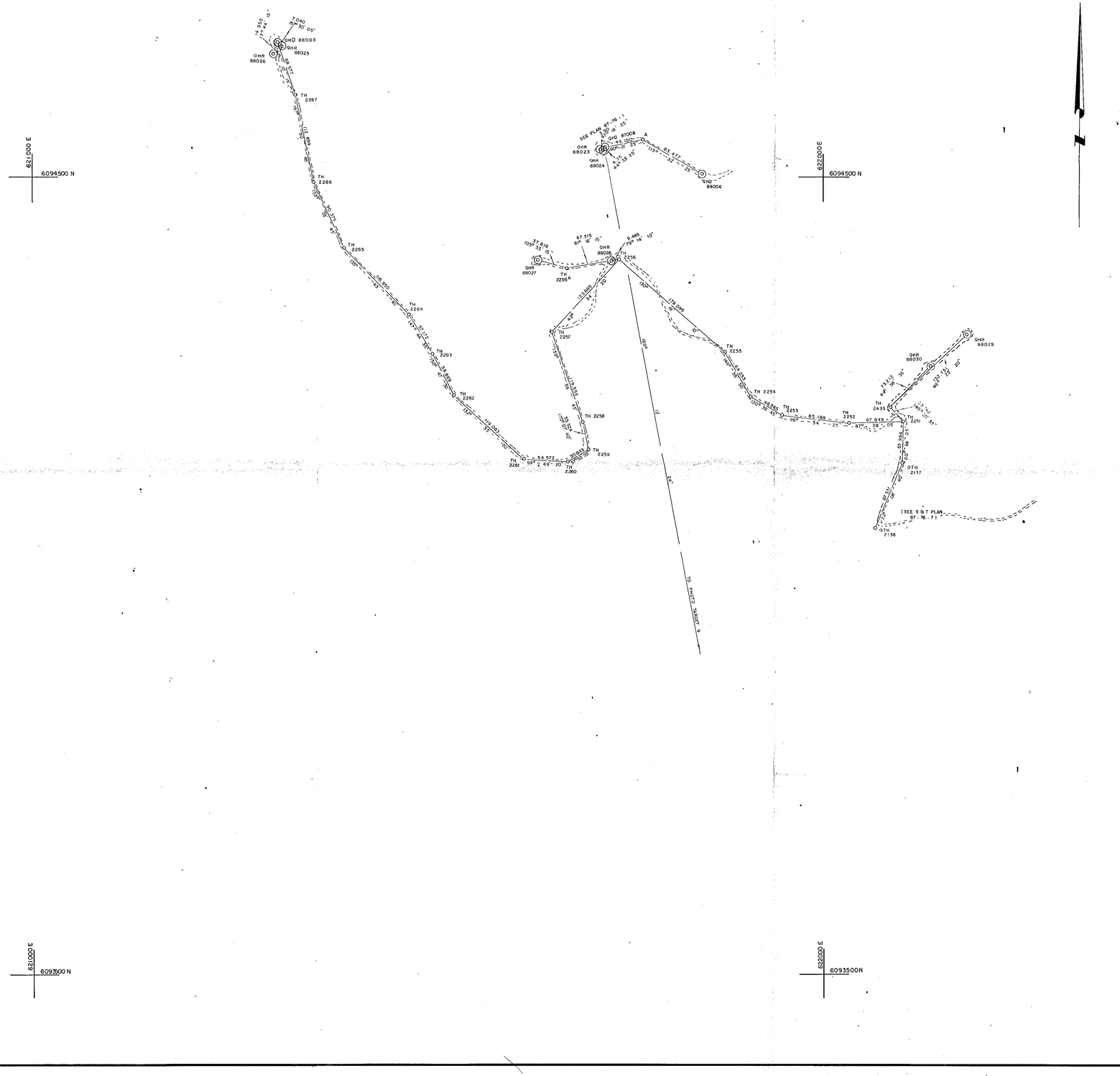


PHOTO TARGET OR DRILL HOLE	STABLES & TRYON TAG No.	U.T.M. CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF IRON BAR OR CASING	GROUND
	2136	6094059.38	622067.11	1033.75	
	2137	6094140.45	622100.09	1041.28	
	2251	6094194.42	622100.69	1047.81	
	2252	6094191.42	622032.93	1061.58	
	2253	6094201.66	621948.40	1074.02	
	2254	6094225.31	621908.51	1077.64	
	2255	6094280.90	621876.35	1081.53	
	2256	6094396.96	621741.35	1088.95	
	2257	6094305.91	621657.71	1071.47	
	2258	6094193.80	621698.52	1077.95	
	2259	6094159.01	621704.58	1078.33	
	2260	6094142.62	621678.46	1085.80	
	2261	6094147.21	621624.11	1099.79	
	2262	6094227.70	621536.44	1128.67	
	2263	6094279.06	621507.72	1132.38	
	2264	6094327.39	621477.22	1151.93	
	2265	6094411.10	621395.61	1159.67	
	2266	6094492.60	621355.82	1163.91	
	2267	6094602.93	621332.06	1166.79	
QHD 88003		6094667.81	621309.94	1171.43	
	A	6094538.56	621771.27	1165.15	
QHD 88006		6094505.45	621847.87	1168.49	
QHD 87008		6094538.83	621727.19	1167.00	
QHR 88023		6094536.19	621724.33	1166.96	
QHR 88024		6094535.45	621723.86	1167.16	
QHR 88025		6094681.31	621312.63	1170.74	
QHR 88026		6094653.58	621305.39	1171.61	
QHR 88027		6094396.88	621638.42	1081.14	
QHR 88028		6094395.20	621732.08	1087.83	
QHR 88029		6094394.15	622181.67	1072.37	
QHR 88030		6094264.46	622137.27	1059.79	
	2435	6094212.69	622085.54	1050.03	
	2256A	6094386.75	621674.84	1088.23	

SURVEYED : June 29th, 1988.

T. TRYON BCLS.

No.	REVISIONS	DATE
2	Added Drill Holes QHR 88023 To 88030 Inclusive	27 / 10 / 88
1	Added Drill Holes QHD 88006, QHD 87008 And TH A	22 / 09 / 88

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

SCALE 1 : 2500

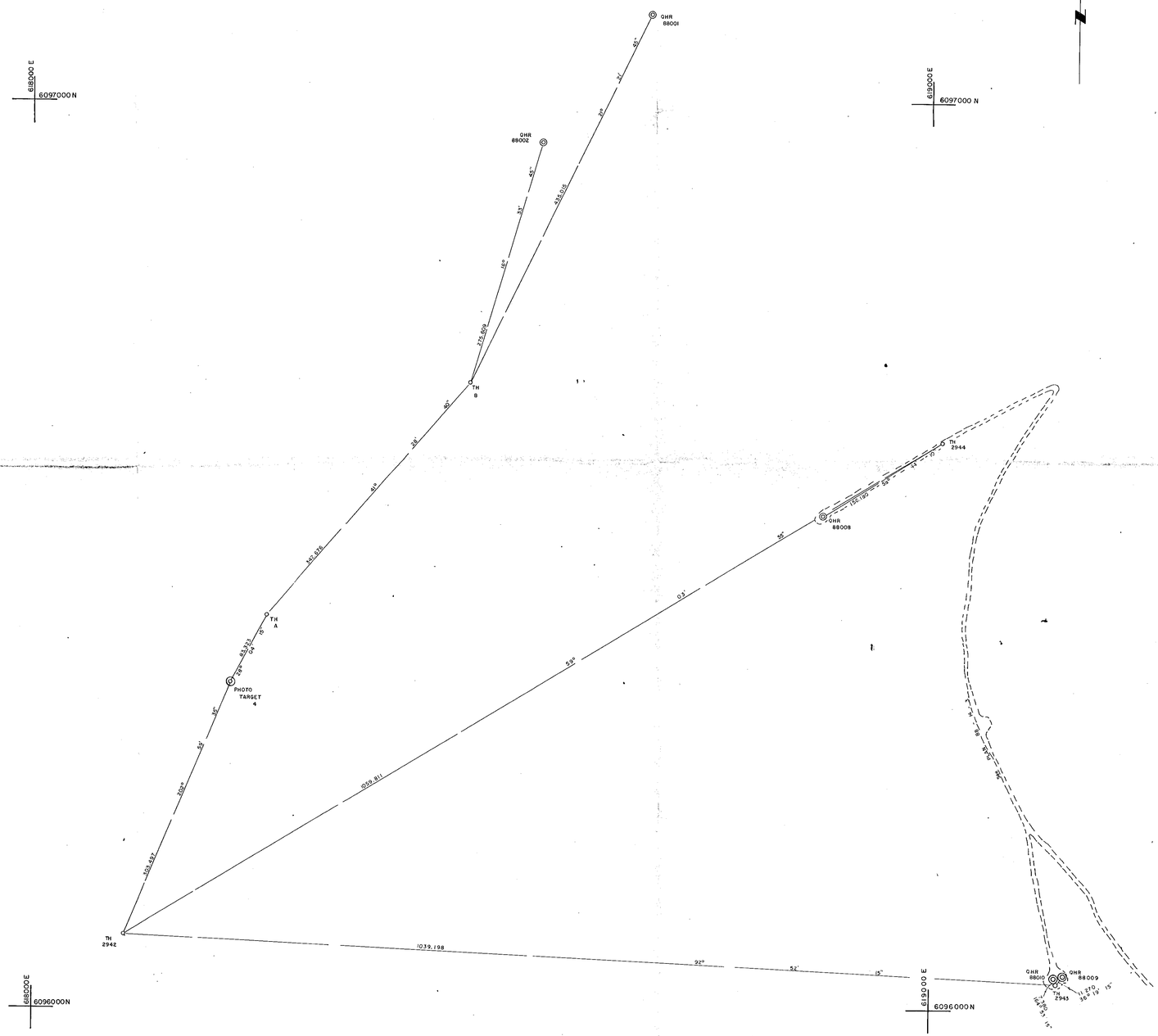
25 0 25 50 100 METRES

746

88-903-79-001 (Rev. 2)

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS
DAWSON CREEK, B.C.

PNG Map Sheet 93-P/3 -
File No. 88-14-5



SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	U.T.M. CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
Photo Target 4		6096359.37	618222.84	1447.33	
	4A	6096432.86	618262.03	1440.02	
	4B	6096689.48	618488.89	1389.29	
	2942	6096080.11	618104.34	1478.96	
	2943	6096028.09	619141.75	1565.77	
	2944	6096624.67	619012.98	1482.68	
QHR 88001		6097094.43	618647.29	1342.07	
QHR 88002		6096953.54	618567.42	1352.07	
QHR 88008		6096543.65	618879.54	1464.54	
QHR 88009		6096037.17	619148.43	1566.86	
QHR 88010		6096035.21	619139.83	1565.81	

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

SCALE 1 : 2500

25 0 25 50 100 METRES

746

88-903-79-002.

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS
DAWSON CREEK, B.C.

File No.
88-14-8
PNG Nos. 93-P

SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES NORTHING	UTM CO-ORDINATES EASTING	ELEVATIONS TOP OF SPIKE OR CASING	ELEVATIONS GROUND
	2941	6095470.83	619662.72	1627.34	
	2945	6095080.08	620452.23		
	2315	6094996.38	620501.87	1465.26	
	2946	6095003.98	62058362	1460.69	
	2947	6094967.38	620676.74	144588	
	2948	6094970.81	620709.42	1443.00	
	2949	6094952.17	620679.80	1438.36	
	2950	6094916.38	620572.99	1422.60	
	2951	6094906.60	620471.42	1409.42	
	2952	6094846.20	620532.74	1399.95	
	2953	6094814.62	620592.90	1396.96	
	2954	6094802.44	620656.66	1393.83	
	2955	6094793.89	620695.95	1386.35	
	2956	6094776.86	620736.18	1378.97	
	2957	6094755.67	620843.31	1361.22	
	2958	6094806.69	620901.69	1352.62	
	2959	6094894.31	620892.71	1354.54	
	2960	6094948.33	620899.05	1354.20	
	2957A	6094721.94	620779.98	1358.83	
	2957B	6094647.96	620597.62	1340.42	
QHR 88003		6094622.98	620565.27	1332.38	
QHR 88004		6094949.71	620890.49	1354.74	
QHR 88005		6094980.67	620710.03	1444.25	

SURVEYED : September 13th, 1988.

T. TRYON B.C.L.S.

REV.	REVISION	DATE
1	Corrected Co-ordinates For QHR 88004	Nov. 8th, 1988

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

SCALE 1 : 2500

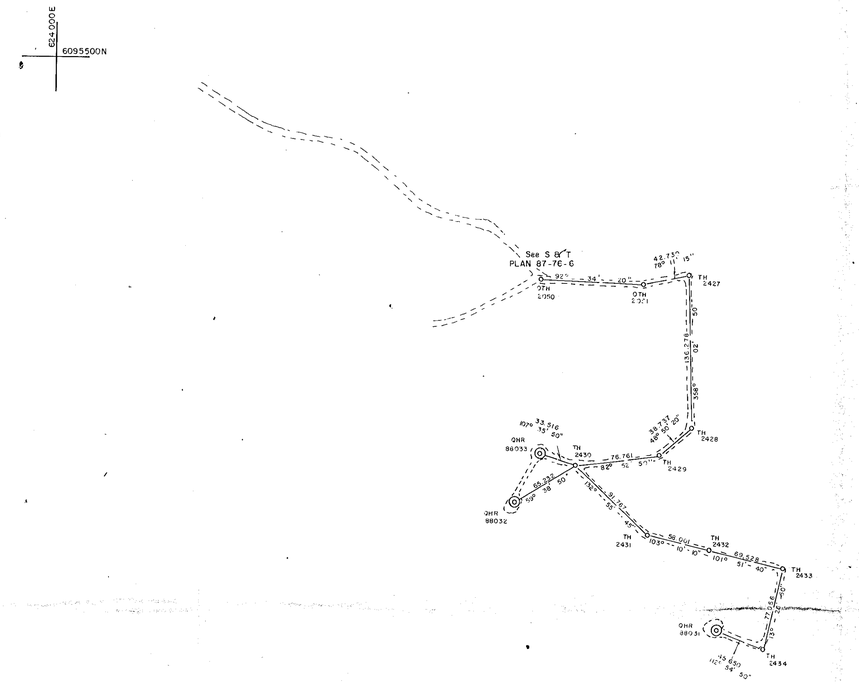
25 0 25 50 100 METRES

746

88-903-79-003 (Rev. 1)

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS DAWSON CREEK, B.C.

File No. 88-14-9
PNG Map 93-P/3



SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
	2051	6095301.32	624538.12	857.13	
	2427	6095310.06	624579.93	850.00	
	2428	6095173.91	624584.57	833.80	
	2429	6095148.43	624555.42	831.25	
	2430	6095138.92	624479.28	824.19	
	2431	6095076.43	624546.44	817.11	
	2432	6095063.22	624602.90	814.40	
	2433	6095048.94	624670.92	807.08	
	2434	6094974.02	624653.01	797.04	
QHR 88031		6094991.79	624610.97	797.34	
QHR 88032		6095105.97	624423.01	816.85	
QHR 88033		6095149.05	624447.34	822.08	

Surveyed : October 18th, 1988.

T. TRYON B.C.L.S.

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

SCALE 1 : 2500

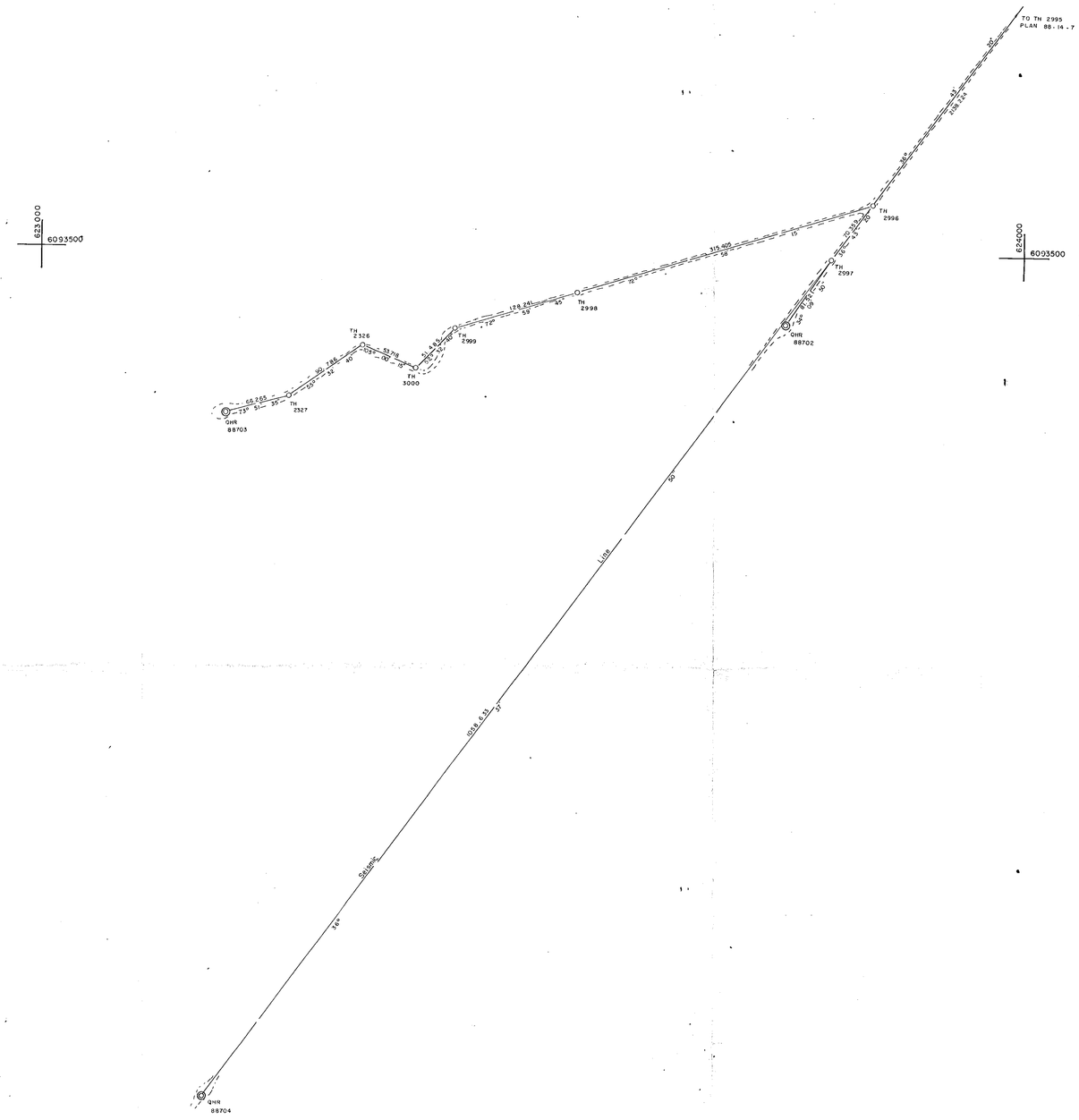
25 0 25 50 100 METRES

746

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS
DAWSON CREEK, B.C.

File No.
88 - 14 - 11

88:903:79:004



SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
	2996	6093551.22	623845.92	793.89	
	2997	6093494.84	623803.86	794.20	
	2998	6093458.88	623544.43	792.84	
	2999	6093421.39	623421.84	784.32	
	3000	6093390.09	623380.98	788.40	
	2326	6093403.99	623329.11	788.80	
	2327	6093352.64	623254.28	789.16	
QHR 88702		6093427.41	623758.10	793.49	
QHR 88703		6093334.23	623190.64	788.71	
QHR 88704		6092645.58	623172.44	781.02	

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS TRANSFER AREA

SCALE 1 : 2500

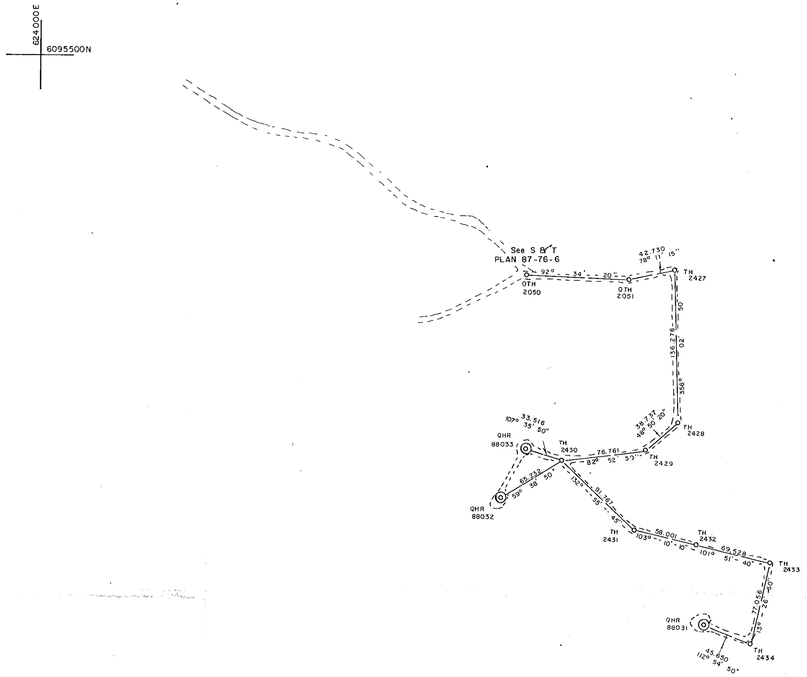
25 0 25 50 100 METRES

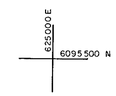
746

88-903-79-005

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS
DAWSON CREEK, B.C.

File No.
88-14-10
Plot M@ 93-P73;





SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
	2051	6095301.32	624538.12	857.13	
	2427	6095310.06	624579.93	850.00	
	2428	6095173.91	624584.57	833.80	
	2429	6095148.43	624555.42	831.25	
	2430	6095138.92	624479.28	824.19	
	2431	6095076.43	624546.64	817.11	
	2432	6095063.22	624602.90	814.40	
	2433	6095048.94	624670.92	807.08	
	2434	6094974.02	624653.01	797.04	
QHR 88031		6094991.79	624610.97	797.34	
QHR 88032		6095105.97	624423.01	816.85	
QHR 88033		6095149.05	624447.34	822.08	

Surveyed : October 18th, 1988

T. TRYON B.C.L.S.

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS

GRIZZLY AREA

SCALE 1 : 2500

25 0 25 50 100 METRES

746

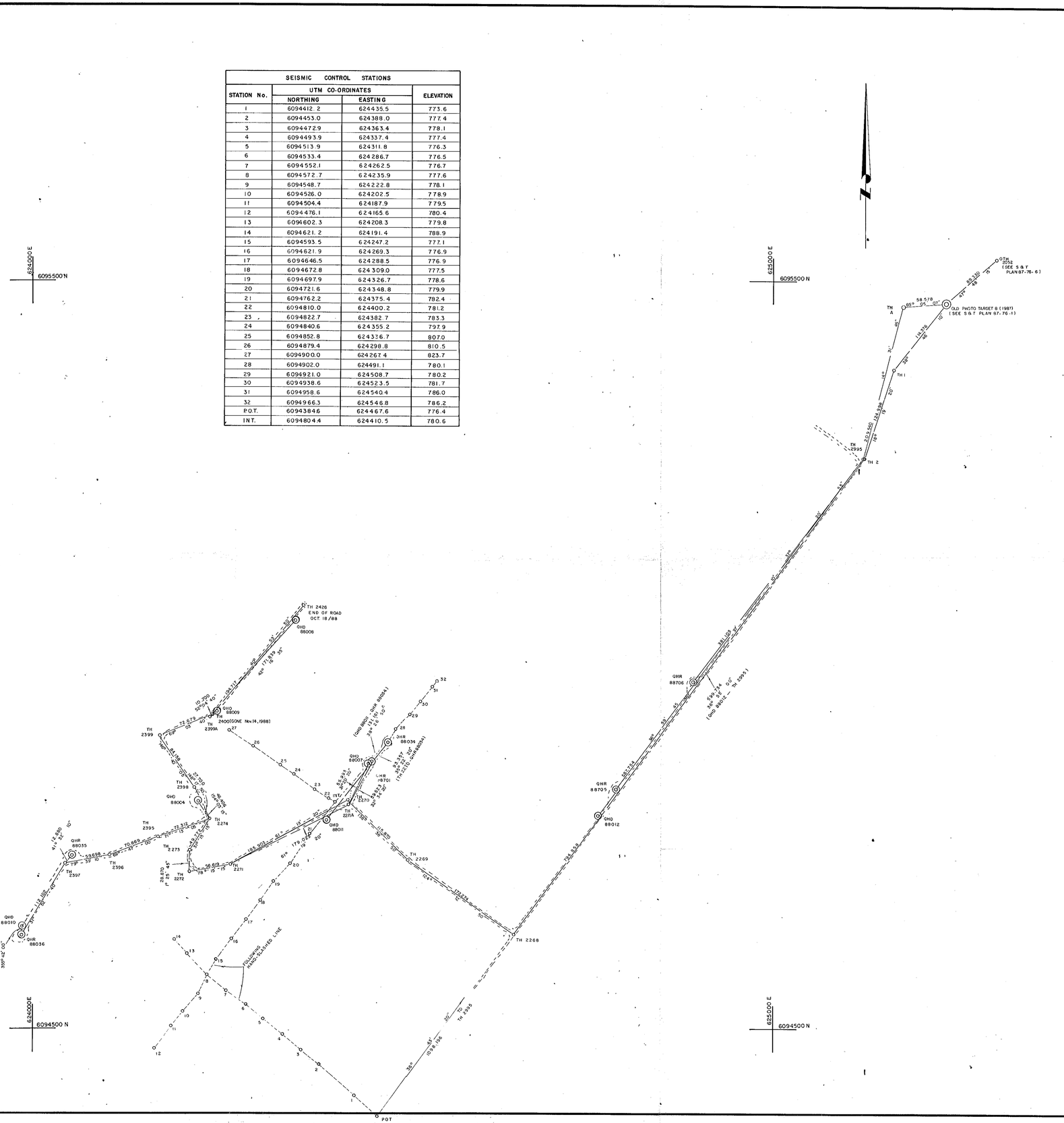
88-905-79-001

STABLES, TRYON AND ASSOCIATES

B.C. LAND SURVEYORS DAWSON CREEK, B.C.

File No. 88 - 14 - 11

SEISMIC CONTROL STATIONS			
STATION No.	UTM CO-ORDINATES		ELEVATION
	NORTHING	EASTING	
1	6094412.2	624435.5	773.6
2	6094453.0	624388.0	777.4
3	6094472.9	624363.4	778.1
4	6094493.9	624337.4	777.4
5	6094513.9	624311.8	776.3
6	6094533.4	624286.7	776.5
7	6094552.1	624262.5	776.7
8	6094572.7	624235.9	777.6
9	6094548.7	624222.8	778.1
10	6094526.0	624202.5	778.9
11	6094504.4	624187.9	779.5
12	6094476.1	624165.6	780.4
13	6094602.3	624208.3	779.8
14	6094621.2	624191.4	788.9
15	6094593.5	624247.2	777.1
16	6094621.9	624269.3	776.9
17	6094646.5	624288.5	776.9
18	6094672.8	624309.0	777.5
19	6094697.9	624326.7	778.6
20	6094721.6	624348.8	779.9
21	6094762.2	624375.4	782.4
22	6094810.0	624400.2	781.2
23	6094822.7	624382.7	783.3
24	6094840.6	624355.2	797.9
25	6094852.8	624336.7	807.0
26	6094879.4	624298.8	810.5
27	6094900.0	624267.4	823.7
28	6094902.0	624491.1	780.1
29	6094921.0	624508.7	780.2
30	6094938.6	624523.5	781.7
31	6094958.6	624540.4	786.0
32	6094966.3	624546.8	786.2
P.O.T.	6094384.6	624467.6	776.4
INT.	6094804.4	624410.5	780.6



SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF IRON BAR OR CASING	GROUND
	2052	6095532.32	625301.09		
OLD TARGET 8 (1987)		6095472.32	625234.91	773.71	
	1	6095383.17	625163.31	774.70	
	2	6095264.55	625124.03	775.26	
	2268	6094626.80	624650.06	778.35	
	2269	6094723.63	624507.64	775.50	
	2270	6094810.58	624431.11	778.89	
	2271	6094721.35	624268.10	794.94	
	2272	6094709.83	624212.68	806.65	
	2273	6094738.68	624213.40	811.51	
	2274	6094781.22	624239.21	814.11	
QHD 88004		6094804.78	624224.66	814.20	
	A	6095467.30	625176.57	770.49	
	2995	6095264.53	625124.02	775.26	
	2271A	6094807.23	624425.11	779.334	
QHR 88701		6094855.04	624454.22	778.42	
QHR 88705		6094819.21	624788.49	775.42	
QHR 88706		6094961.67	624892.89	775.85	
QHR 88035		6094732.38	624054.12	830.42	
QHR 88036		6094627.58	623986.40	827.92	
QHR 88034		6094883.33	624479.14	779.80	
QHD 88007		6094857.37	624457.14	778.71	
	2395	6094757.95	624170.77	825.36	
	2396	6094733.46	624104.29	829.06	
	2397	6094722.75	624045.58	830.16	
	2398	6094822.93	624218.91	814.96	
	2399	6094893.22	624172.68	823.31	
	2400	6094921.19	624242.75	829.01	
	2426	6095066.31	624367.97	828.62	
	2399A	6094919.19	624240.54	829.20	
QHD 88008		6095046.29	624356.10	826.84	
QHD 88009		6094925.76	624248.98	828.72	
QHD 88010		6094638.05	623985.61	827.92	
QHD 88011		6094780.64	624397.61	779.57	
QHD 88012		6094785.20	624765.91	776.48	

SURVEYED : May 17th And June 30th, 1988.

T. TRYON B.C.L.S.

No.	REVISIONS	DATE
4	Added Seismic Control Stations	22 / 11 / 88
3	Added QHD 88008 - 88012 Inclusive	22 / 11 / 88
2	Added QHR 88034, 88035, 88036, QHD 88007 And Road Traverse	27 / 10 / 88
1	Added Drill Holes QHR 88701, 88705 And 88706 And Traverse Stations	26 / 09 / 88

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS VICINITY M19 PIT

SCALE 1 : 2500

25 0 25 50 100 Metres

746

88-902-79-001 (Rev. 4)

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS DAWSON CREEK, B.C.

PNG Map Sheet 93 - P/3 -
File No. 88-14-7

PHOTO TARGET OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF IRON BAR OR CASING	GROUND
	Mon. 867	6097448.38	617814.12		
	Mon. 866	6097416.55	61853342	1361.41	
	2226	6097542.75	617102.11	1359.47	
	2227	6097566.57	617129.65	1359.73	
	2228	6097594.49	617141.88	1356.94	
	2229	6097661.38	617140.08	1354.82	
	2230	6097696.17	617216.92	1345.11	
	2231	6097749.90	617236.79	1349.52	
	2232	6097813.78	617228.06	1353.13	
	2233	6097849.77	617209.44	1357.51	
QMD 88002		6097936.50	617183.79	1360.90	

NOTE : Bearings And Starting Co-ordinates Are Derived From Information Supplied By McElhanney Group Limited.

SURVEYED: June 30th, and July 4th, 1988.

T.TRYON B.C.L.S.

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS EAST MESA AREA

SCALE 1 : 2500

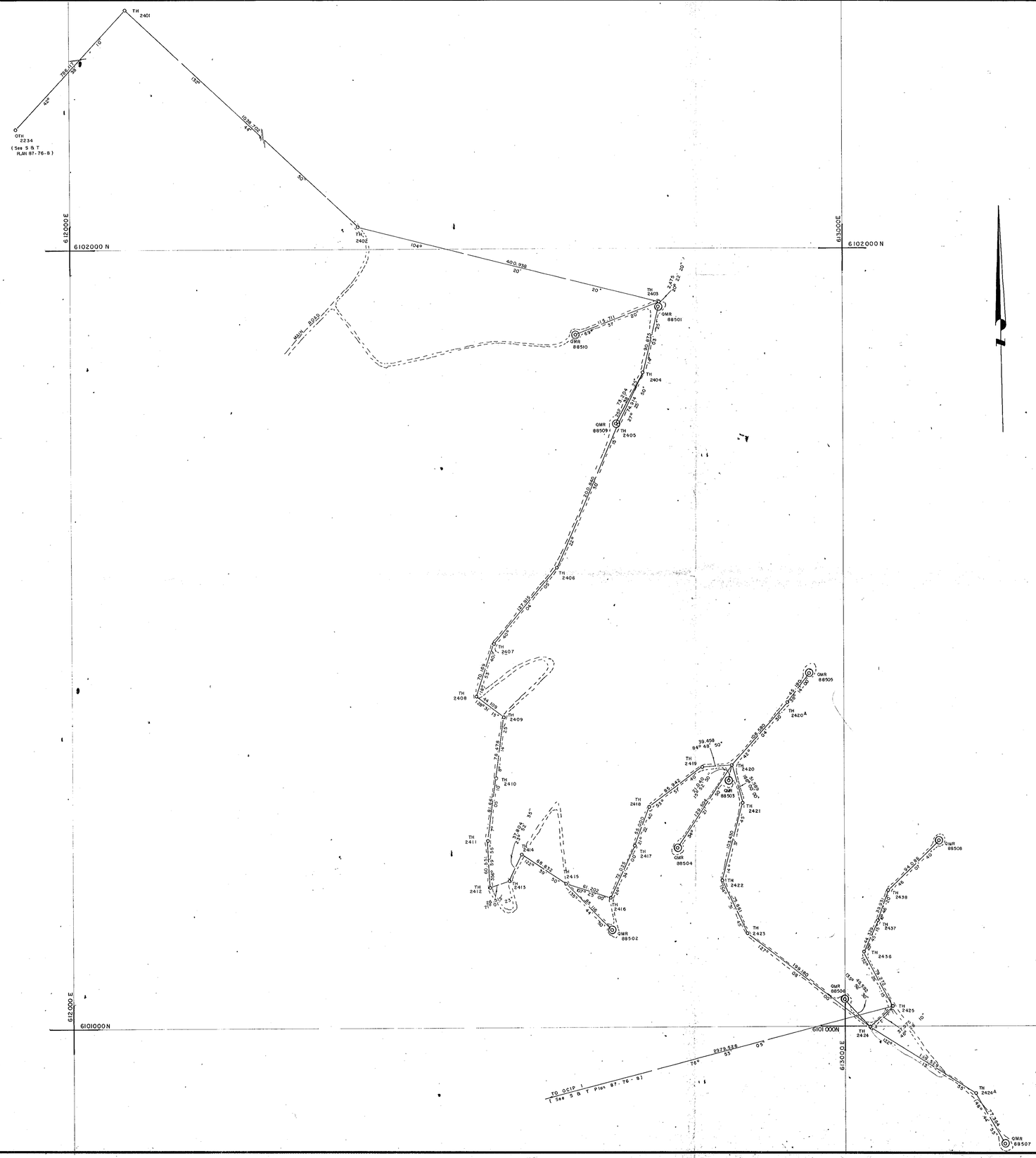
25 0 25 50 100 METRES

746

88-601-79-001

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS
DAWSON CREEK, B.C.

PNG Map Sheet 93- P/3 -
File No. 88-14-6



SURVEY STATION OR TEST HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF SPIKE OR CASING	GROUND
	2234	6102155.84	611079.61	843.93	
	2401	6102733.94	611611.88	844.59	
	2402	6102029.17	612374.36	835.74	
	2403	6101929.92	612762.67	866.14	
	2404	6101841.80	612740.60	876.47	
	2405	6101775.33	612706.10	885.11	
	2406	6101589.86	612629.26	906.60	
	2407	6101492.00	612546.96	917.90	
	2408	6101425.64	612524.24	925.42	
	2409	6101398.18	612558.74	948.00	
	2410	6101320.54	612547.50	956.25	
	2411	6101239.54	612537.43	961.47	
	2412	6101179.09	612540.60	966.07	
	2413	6101187.71	612565.66	978.47	
	2414	6101222.27	612580.95	980.74	
	2415	6101185.13	612638.88	1002.57	
	2416	6101166.82	612697.25	1016.13	
	2417	6101232.30	612727.18	1027.81	
	2418	6101283.50	612747.22	1032.23	
	2419	6101334.04	612816.68	1045.10	
	2420	6101337.60	612855.97	1050.82	
	2420A	6101416.68	612927.36	1057.32	
	2421	6101287.57	612868.44	1059.57	
	2422	6101187.53	612842.33	1072.41	
	2423	6101119.07	612874.94	1080.77	
	2424	6100998.88	613033.67	1114.53	
	2424A	6100913.83	613168.56	1138.44	
	2425	6101025.03	613061.19	1135.48	
	2436	6101095.28	613024.52	1139.05	
	2437	6101135.18	613043.78	1139.55	
	2438	6101173.40	613055.30	1133.14	
QMR 88501		6101927.60	612761.81	866.37	
QMR 88502		6101124.19	612698.25	1009.93	
QMR 88503		6101317.37	612850.22	1051.04	
QMR 88504		6101230.74	612782.90	1049.83	
QMR 88505		6101452.15	612955.31	1052.12	
QMR 88506		6101034.50	612999.20	1108.90	
QMR 88507		6100847.72	613208.68	1121.58	
QMR 88508		6101238.58	613123.09	1136.88	
QMR 88509		6101775.38	612708.72	885.30	
QMR 88510		6101889.64	612654.24	857.62	

SURVEYED October 17th, 18th, 19th, 20th And 21st, 1988.

T TRYON B.C.L.S

NOTE TITLE CHANGED FROM "WOLVERINE AREA" TO "MESA EXTENSION"

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL TEST HOLES AND ACCESS ROADS MESA EXTENSION

SCALE 1 : 2500

25 0 25 50 100 METRES

746

88-100-79-002

STABLES, TRYON AND ASSOCIATES
B.C. LAND SURVEYORS DAWSON CREEK, B.C.

FILE No. 88-14-12

SURVEY STATION OR DRILL HOLE	STABLES & TRYON TAG No.	UTM CO-ORDINATES		ELEVATIONS	
		NORTHING	EASTING	TOP OF IRON BAR OR CASING	GROUND
	2126	6100193.62	610712.88	882.50	
	2164	6105894.15	612792.32	947.68	
	2165	6106113.54	612820.62	960.17	
	2166	6106356.68	612676.05	981.23	
	2167	6106712.92	612118.41	1042.42	
	2168	6106584.53	611808.59	1068.58	
	2169	6106506.13	611281.79	1113.07	
	2170	6106427.22	611327.19	1117.33	
	2171	6106348.00	611371.93	1117.20	
	2172	6106276.86	611596.99	1098.16	
	2173	6106243.92	611657.54	1092.91	
	2176	6106194.97	611671.61	1087.14	
	2177	6106142.99	611741.18	1078.13	
	2178	6106130.43	611826.46	1075.43	
	2179	6106058.34	611886.28	1070.87	
	2180	6105976.38	612006.67	1067.14	
	2181	6105900.43	612124.81	1061.01	
	2182	6105882.32	612202.83	1067.26	
COAL SEAM		6105892.37	612164.46	1060.25	
	2909	6106387.83	611282.87	1122.21	
	2910	6106329.56	611256.28	1121.32	
	2911	6106264.08	611265.29	1114.87	
	2912	6106194.08	611239.05	1120.32	
	2913	6105994.24	611336.14	1122.80	
	2914	6105886.12	611460.22	1110.06	
	2915	6105771.06	611551.14	1098.60	
	2916	6105690.30	611568.01	1103.22	
PHOTO TARGET 6		6105886.49	612774.13	948.2	
PHOTO TARGET 9		6105650.71	611563.54	1098.98	
QPR 88001		6106415.93	611144.30	1134.47	
QPD 88002		6105650.94	611562.30	1099.31	
QPD 88001		6106067.99	611877.87	1071.32	
QPR 88002		6106305.68	611550.02	1101.47	
QPR 88003		6105851.15	612203.00	1054.24	
QPR 88004		6106535.48	611498.44	1092.31	
Top Of "J" Seam		6106602.08	611884.15	1067.02	

SURVEYED : May 15th, and 16th, 1988.

T. TRYON B.C.L.S.

No.	REVISION	DATE
3	Added Drill Holes QPR 88003 & 88004 & Coal Seam "J"	28 / 10 / 88
2	Added Photo Targets 6 And 9, Drill Holes QPD 88001, 88002 and QPR89001, 88002	14 / 07 / 88
1	*Added Traverse Hubs 2909 To 2916 Inclusive	14 / 07 / 88

QUINTETTE COAL LIMITED

PLAN SHOWING SURVEY CONTROL DRILL HOLES AND ACCESS ROADS PERRY CREEK AREA

SCALE 1 : 2500

25 0 25 50 100 METRES

746

88-906-79-001 (Rev. 3)

STABLES, TRYON AND ASSOCIATES

B.C. LAND SURVEYORS DAWSON CREEK, B.C.

PNG Map Sheet 93-P/1-B & C, 93-I/16-J & K

FILE No. 88-14-2

Quintette Coal Limited

P. O. Box 1500
Tumbler Ridge, B.C., Canada
V0C 2W0
Tel. (604) 242-3221

DENISON MINES LIMITED
MANAGER

July 6, 1989

Our File: 4.2.1.5

Mr. Paul Hagen, Coal Administrator
Ministry of Energy, Mines and
Petroleum Resources
412 - 617 Government Street
Victoria, British Columbia
V8V 1X4

Dear Mr. Hagen:

Re: 1988 Geological Report, Appendix 2

We are pleased to enclose two (2) copies of Appendix 2, of the 1988 Geological Report.

This Appendix documents the 1988 coal analysis, all of which was not available at the time of submission of the main body of the report.

We trust this addendum meets with your approval.

Yours truly,

QUINTETTE COAL LIMITED

J.H.H. Chamberlin
Manager,
Technical Services

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

JUL 10 1989

MINERAL RESOURCES DIVISION ROOM

DJ:wmc

Enclosure

746

Copy #1

CONFIDENTIAL

QUINTETTE COAL LIMITED
1988 GEOLOGICAL REPORT
TRANSFER, GRIZZLY, PERRY CREEK , MARMOT AND WOLVERINE VALLEY SOUTH AREAS
APPENDIX 2

Prepared by Technical Services Department
Quintette Coal Limited

746

1988 GEOLOGICAL REPORT
TRANSFER, GRIZZLY, PERRY CREEK , MARMOT AND WOLVERINE VALLEY SOUTH AREAS

INDEX - APPENDIX 2

DESCRIPTION

2.1 1988 Drill Core Analysis
- 2.1.1 Transfer and Grizzly - QHD88002 - QHD88012
- 2.1.2 Perry Creek - QPD88001 & QPD88002
- 2.1.3 Marmot - QHD88001 & QMD88002
- 2.1.4 Wolverine Valley South - QMD88003

Appendix 2.1

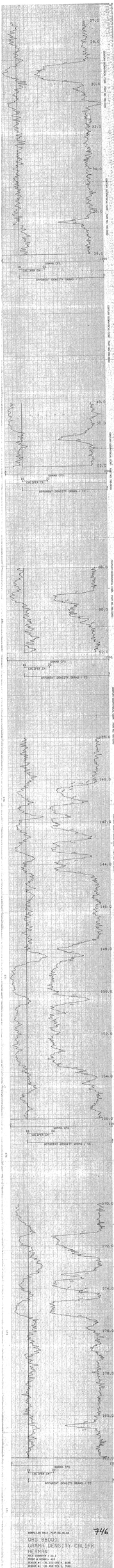
1988 Geological Report

1988 Drill Core Analysis

Appendix 2.1 of this report contains coal quality data and remains confidential under the terms of the *Coal Act Regulation*, Section 2(1). It has been removed from the public version.

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

MARMOT AREA



746

SCHLUMBERGER WELL SURVEYING CORPORATION

ORD 8800'

GAMMA DENSITY CALIPR

HERMAN

FILE DIRECTOR # 1&2

RUN NO. ONE

DRAGON #1 - EL 2572 KB - 6096

DRAGON #1 - EL 859 TD - 5200

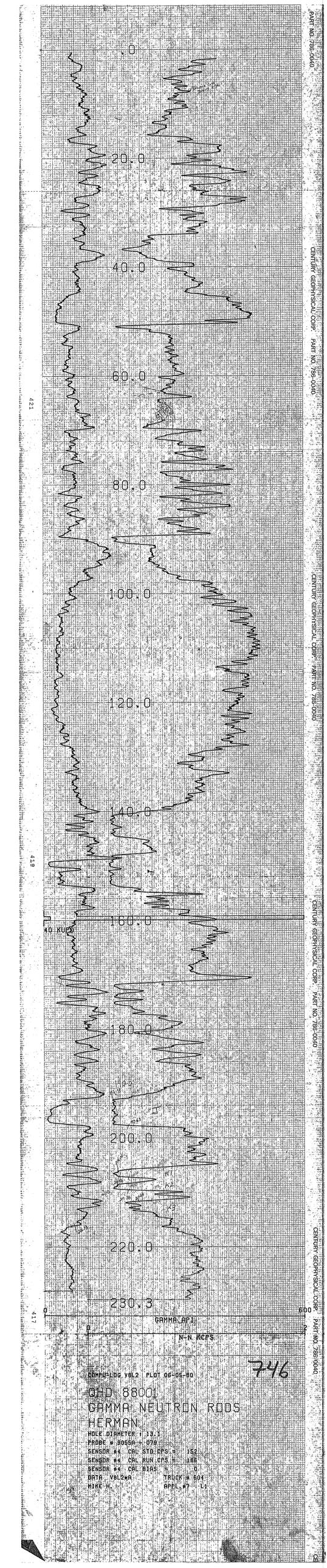
DRAGON #1 - EL 1716 - 4

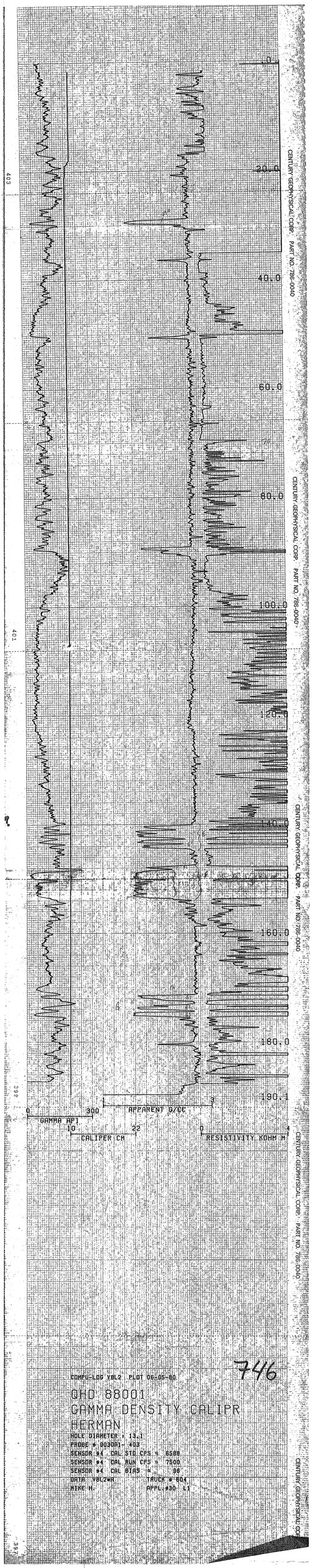
DATE: 1962JAN

RUN NO.

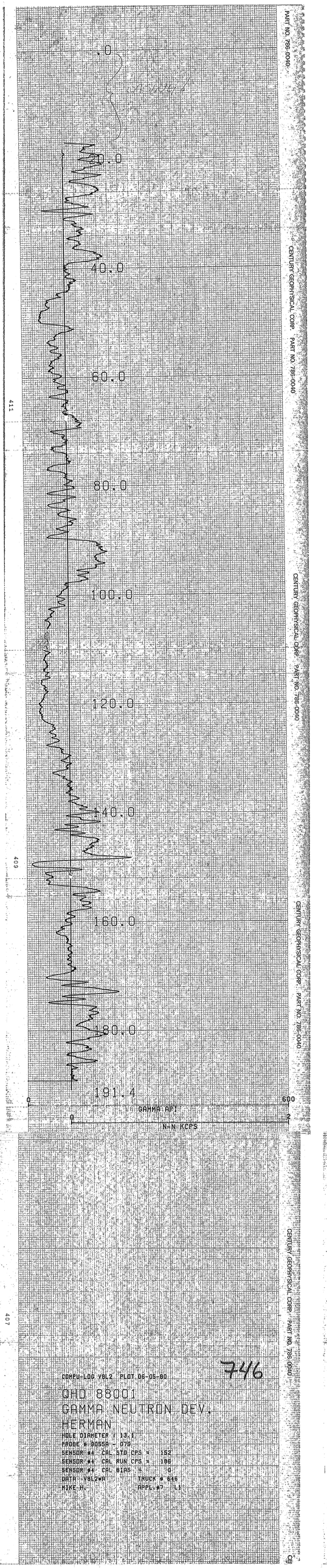
TRACK # 2&4

ANTL-ATTRIB.


PART NO. 786-0040
CENTURY GEOPHYSICAL CORP.
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
200.0
220.0
230.3
40 KUPS
0
600
GAMMA API
N-N KCPS
COMPU-LOG V8L2 PLOT 06-05-80
OHD 8800'
GAMMA NEUTRON RODS
HERMAN
HOLE DIAMETER = 13.1
PROBE # 8055A - 079
SENSOR #4 CAL STD CPS = 152
SENSOR #4 CAL RUN CPS = 186
SENSOR #4 CAL BIAS = 0
DATA V8L2KA TRUCK # 604
MIKE H. APPL #7 L1
746


0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
190.1
0
300
GAMMA API
APPARENT G/CC
10
22
CALIPER CM
0
4
RESISTIVITY KOHM M
COMPU-LOG V8L2 PLOT 06-05-80
QHD 88001
GAMMA DENSITY CALIPER
HERMAN
HOLE DIAMETER = 13.1
PROBE # 9030A1- 403
SENSOR #4 CAL STD CPS = 6500
SENSOR #4 CAL RUN CPS = 7500
SENSOR #4 CAL BIAS = 90
DATA V8L2WR TRUCK # 804
MIKE H. APPL.#30 L1
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP.
493
401
399
395

746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411
409
407
.0
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40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
191.4
0
600
GAMMA API
0
N-N KCPS
746
COMPU-LOG V8L2 PLOT 06-05-80
OHD 88001
GAMMA NEUTRON DEV.
HERMAN
HOLE DIAMETER = 13.1
PROBE # 0055A - 079
SENSOR #4 CAL STD CPS = 152
SENSOR #4 CAL RUN CPS = 106
SENSOR #4 CAL BIAS = 0
DATA V8L2WA TRUCK # 646
MIKE H. APPL.#7 L1

VERTICAL DEVIATION

#746

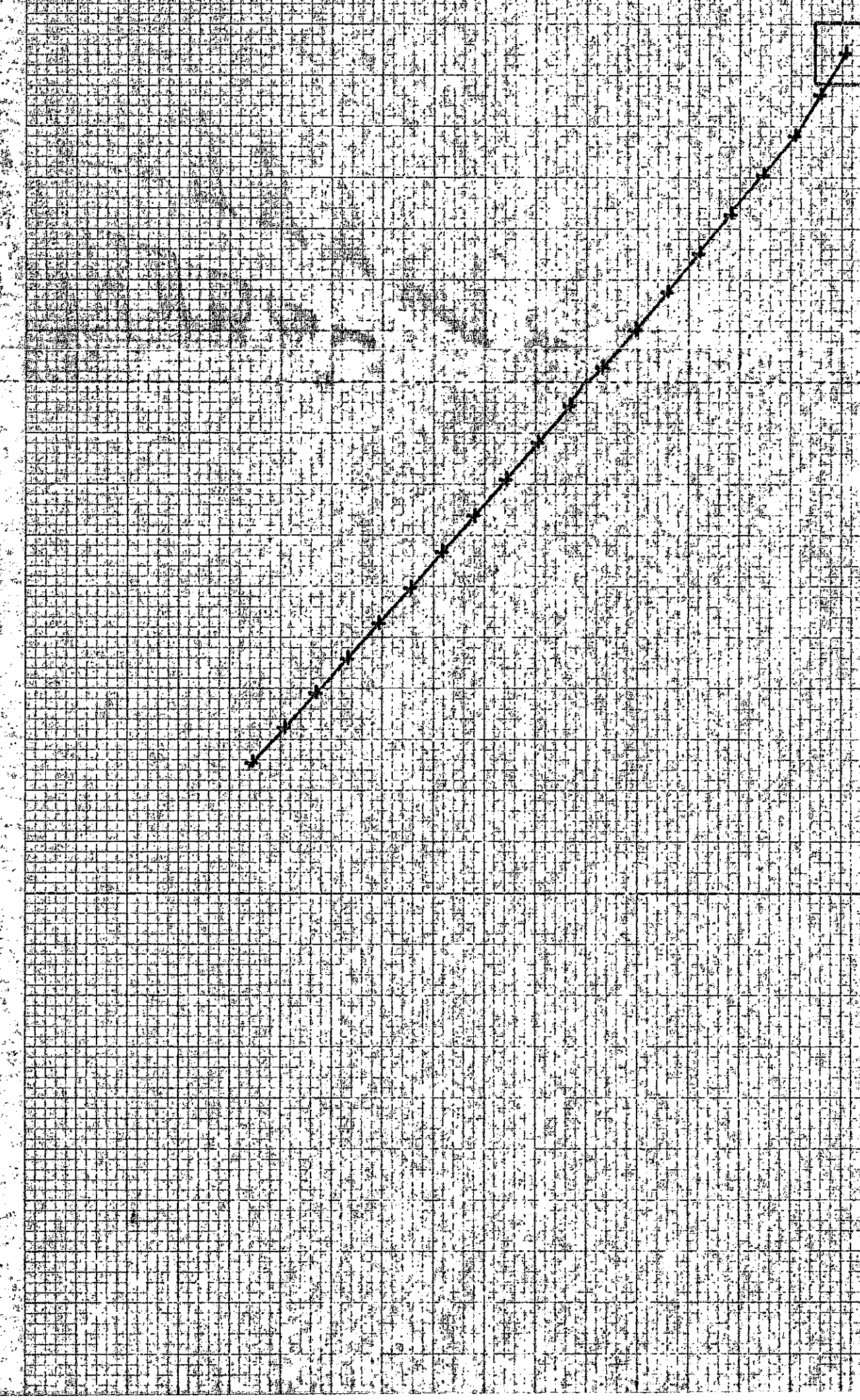
COMPU-LOG V8L1 DEVIATION
DATA FROM : V8L2*A

CLIENT : GAMMA NEUTRON DEV.
LOCATION : HERMAN
[redacted]
DATE OF LOG : 06-05-80
PROBE : 9055A 0079

SCALE: 5.00 M/DIV
MAG DECL: 24.5
TRUE DEPTH: 168.2 M
AZIMUTH: 219.9
DISTANCE: 90.94 M

+ = 10.0 M INCR
△ = TOP OF ZONE
◇ = BOTTOM OF ZONE

TRUE NORTH ↑



CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 78

CENTURY GEOPHYSICAL CORPORATION

* * * * * * * * VERTICAL DEVIATION * * * * * * * *

COMPU-LOG V8L1 DEVIATION

CLIENT : GAMMA NEUTRON DEV. HOLE ID : QHD 88001

LOCATION : HERMAN DATE OF LOG : 06-05-90

DATA FROM : V8L2*A PROBE : 9055A 0079

TD = TOTAL DEPTH
T = TOP OF ZONE
B = BOTTOM OF ZONE

DEPTH	TRUE DEPTH	NORTH DEV	EAST DEV	DISTANCE	AZIMUTH	SA	SAB
.00	.00	.00	.00	.00	.0	.0	.0
10.00	8.79	-4.07	-2.46	4.75	211.2	28.4	211.1
20.00	17.58	-8.13	-4.96	9.52	211.4	28.5	211.7
30.00	26.25	-12.02	-8.07	14.48	213.9	29.8	218.5
40.00	34.93	-15.83	-11.24	19.42	215.4	29.7	219.7
50.00	43.62	-19.64	-14.37	24.34	216.2	29.5	219.4
60.00	52.34	-23.43	-17.49	29.24	216.7	29.3	219.4
70.00	61.08	-27.14	-20.63	34.09	217.2	29.0	220.1
80.00	69.93	-30.80	-23.78	38.92	217.7	28.9	220.8
90.00	78.60	-34.48	-26.88	43.72	217.9	28.7	220.1
100.00	87.39	-38.09	-29.98	48.48	218.2	28.4	220.6
110.00	96.20	-41.68	-33.09	53.22	218.5	28.3	220.9
120.00	105.01	-45.21	-36.22	57.93	218.7	28.1	221.4
130.00	113.83	-48.74	-39.34	62.63	218.9	28.0	221.4
140.00	122.67	-52.24	-42.45	67.32	219.1	27.9	221.5
150.00	131.52	-55.68	-45.59	71.96	219.3	27.7	222.4
160.00	140.39	-59.14	-48.64	76.57	219.4	27.4	221.4
170.00	149.27	-62.54	-51.74	81.17	219.6	27.4	222.2
180.00	158.15	-65.95	-54.82	85.76	219.7	27.3	222.1
190.00	167.03	-69.33	-57.93	90.35	219.9	27.3	222.5
TD 191.30	168.19	-69.78	-58.31	90.94	219.9	27.0	220.2

VERTICAL DEVIATION

746

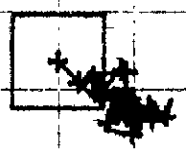
COMPU-LOG V8L1 DEVIATION
DATA FROM : V8L2*A

CLIENT : GAMMA-NEUTRON(DEV)
LOCATION : M19
HOLE ID : Q D88001
DATE OF LOG : 06-25-80
PROBE : 9055A 0079

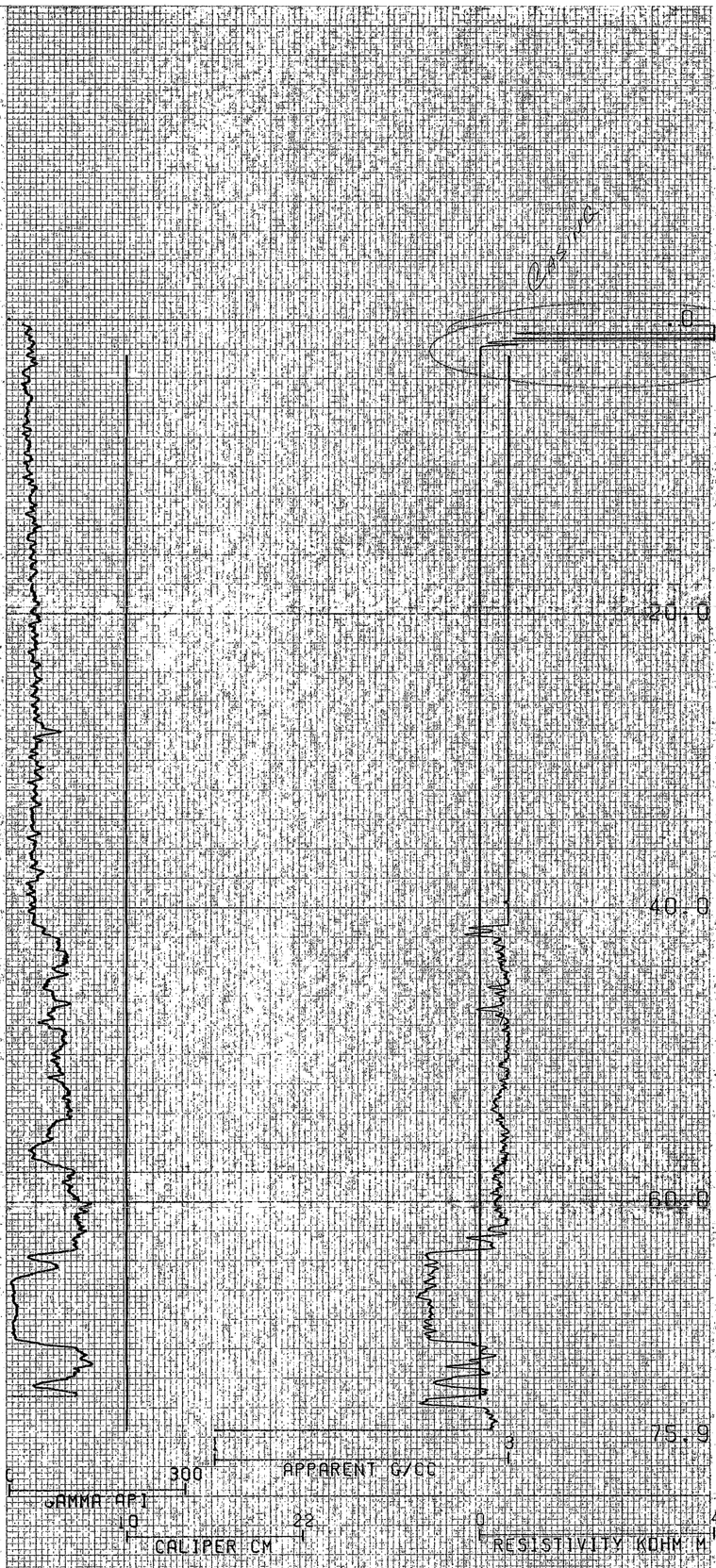
SCALE: .10 M/DIV
MAG DECL: 24.5
TRUE DEPTH: 47.1 M
AZIMUTH: 108.4
DISTANCE: .15 M

+ = 2.0 M INCR
△ = TOP OF ZONE
◇ = BOTTOM OF ZONE

TRUE NORTH ↑



PART NO. 795-0040



COMPU-LOG V8L2 PLOT 06-15-80

QMD88002

GAMMA-DENS(RODS)

HOLE DIAMETER : 10.0
PROBE # 9930A1 -403
SENSOR #4 CAL STD CPS = 6588
SENSOR #4 CAL RUN CPS = 8000
SENSOR #4 CAL BIAS = 98
DATA V8L2WA TRUCK # 646
L.Y APPL #30 L1

746

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-00

197

195

COMPU-LOG V8L2 PLOT 06-15-80

QMD88002A

GAMMA-NEUTRON(RODS)

HOLE DIAMETER : 10.0
PROBE # 9055A -079
SENSOR #4 CAL STD CPS = 152
SENSOR #4 CAL RUN CPS = 186
SENSOR #4 CAL BIAS = 0
DATA V8L2xA TRUCK # 646
L.Y APPL.#7 C1

746

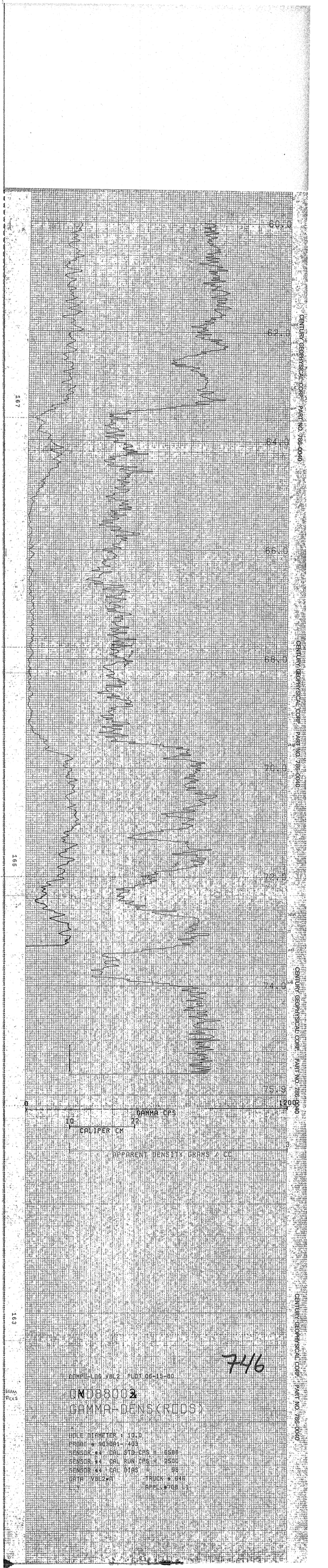
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

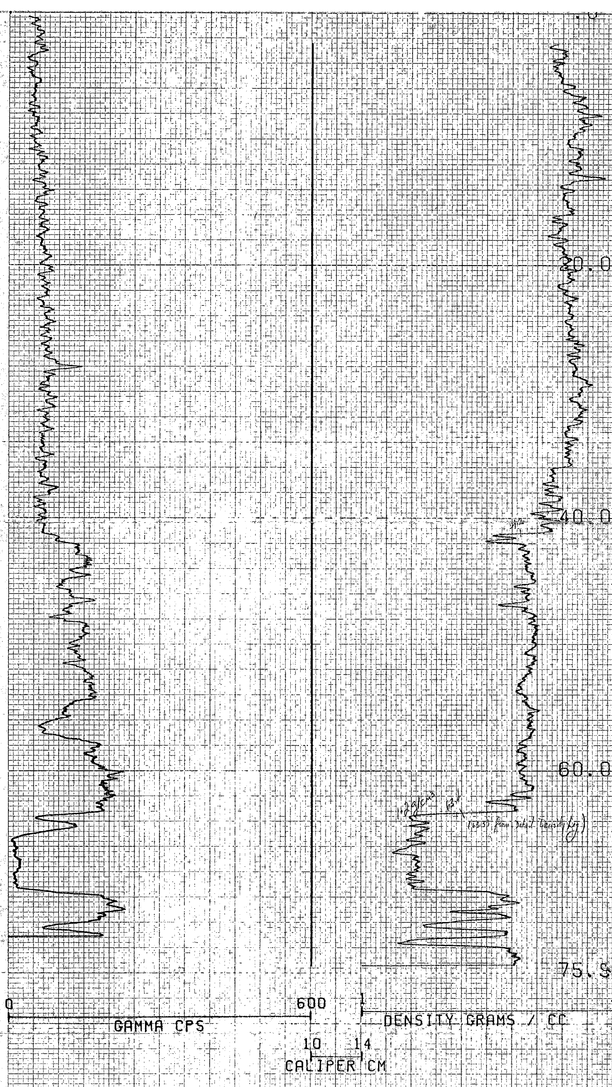
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP.

173

171


60.0
62.0
64.0
66.0
68.0
70.0
72.0
74.0
75.19
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
0
120
GAMMA CPS
10
22
CALIPER CM
3
APPARENT DENSITY GRAMS / CC
7416
COMPU-LOG VBL2 PLOT 06-15-80
GM880032
GAMMA-DENS(KREDS)
HOLE DIAMETER = 10.0
PROBE # 903081-403
SENSOR #4 CAL STD CPS = 6598
SENSOR #4 CAL RUN CPS = 2500
SENSOR #4 CAL BIAS = 98
DATA VBL2#A TRUCK # 848
LV APPL.#708 LX
167
165
163
GAMMA
TICKS



COMPU-LOG V8L2 PLOT 06-15-88

746

QMD88002

GAMMA-DENS(RODS)

HOLE DIAMETER : 10.0
PROBE # 9030A1- 403
SENSOR #4 CAL STD CPS = 6588
SENSOR #4 CAL RUN CPS = 2500
SENSOR #4 CAL BIAS = 98
DATA V8L2*A TRUCK # 646
L.Y APPL.#707 L1

RY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-00

Century

QHR88001 GAMMA-NEUTRON

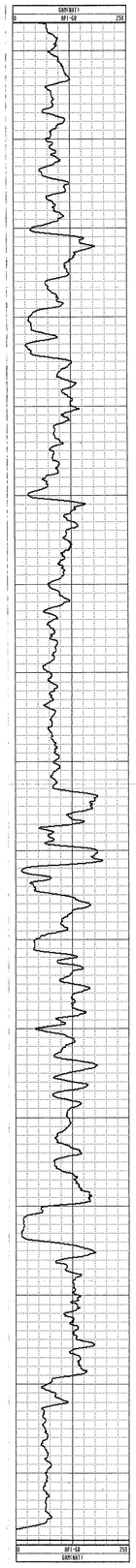
COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR88001 GAMMA-NEUTRON		
LOCATION/FIELD	: BL 20.000:SL 31.800/NABORS RD		
COUNTY	:		
STATE	: B. C.		
SECTION	:	TOWNSHIP :	RANGE :

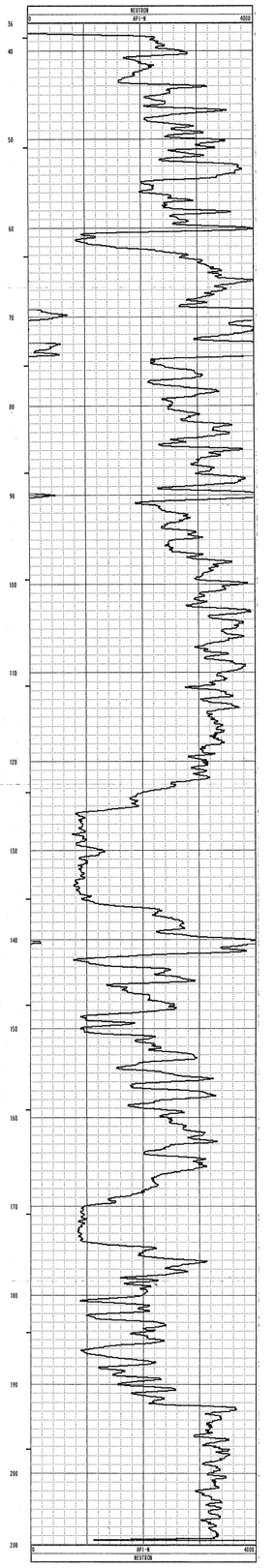
OTHER SERVICES:
GAM.DEN.
RES.CAL.
NEUT.DEV

DATE	: 08/01/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER	: 210	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 207.60	LOG MEASURED FROM: GL	DF :
LOG TOP	: 36.86	DRL MEASURED FROM: GL	GL :
CASING DRILLER	: 32.04	LOGGING UNIT : 62	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 00		RECORDED BY : W. STROEBEL	
BIT SIZE	: 12.7	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746





TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR88001 GAMMA-DENSITY

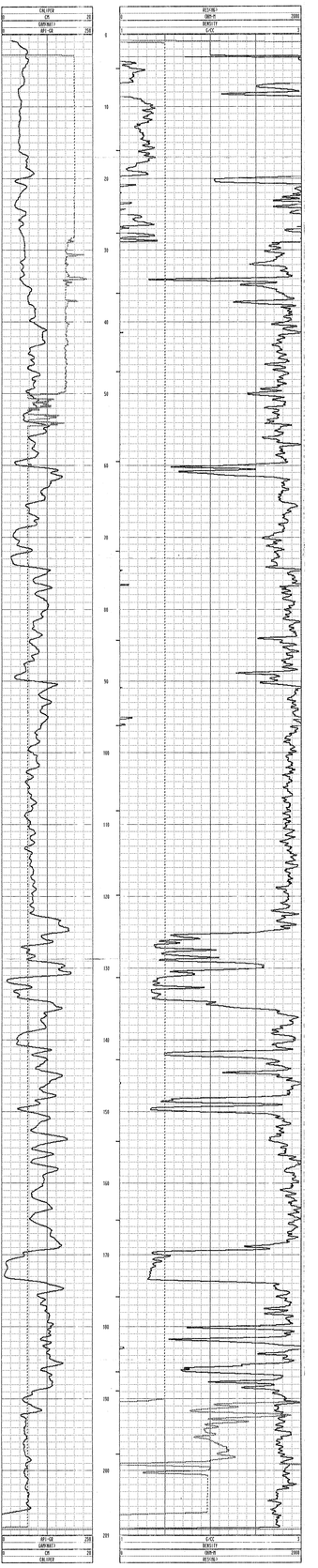
COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR88001 GAMMA-DENSITY		
LOCATION/FIELD	: 1 KL 20.000SSL 31.400/KHBORS RD		
COUNTY	:		
STATE	: B. C.		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 88/01/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER	: 210	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 206.28	LOG MEASURED FROM: GL	DF :
LOG TOP	: 0.00	ORIG MEASURED FROM: GL	GL :
CASING DRILLER	: 32.04	LOGGING UNIT	: 62
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS:	40	RECORDED BY	: W. STRUEBEL
BIT SIZE	: 12.2	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	PH	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		

OTHER SERVICES:
GAM,DEN.
RES.CAL.
NEUT.DEV

FILE : ORIGINAL
TYPE : 9030AA
LOG : 0
PLOT : QUIN 3
THRESH: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL : 9030AA SERIAL NUMBER = 445

	CAL-DATE	CAL-TIME	SECS	SENSOR	RESPONSE	STANDARD
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1	07/28/88	12:57:25	0	GAMMA RAY	0.000 CPS	0.000 API-GR
2	07/28/88	13:15:38	0	DENSITY	5432.600 CPS	1.155 G/CC
3	07/28/88	13:15:38	0	DENSITY	2146.000 CPS	2.120 G/CC
4	07/28/88	12:57:25	0	RESIS(L)	0.000 CPS	0.000 OHM-M
5	07/28/88	12:57:25	0	RESIS(L)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:53:40	0	CALIPER	200.200 CPS	7.600 CM
7	07/28/88	15:53:40	0	CALIPER	1795.550 CPS	17.800 CM
8	07/28/88	12:57:25	0	DENSITY#	0.000 CPS	0.000 G/CC
9	07/28/88	12:57:25	0	DENSITY#	0.000 CPS	0.000 G/CC
10	07/28/88	12:57:25	0	CALIPER1	0.000 CPS	0.000 CM
11	07/28/88	12:57:25	0	CALIPER1	0.000 CPS	0.000 CM

Century

GAMMA RAY/CCL

Century

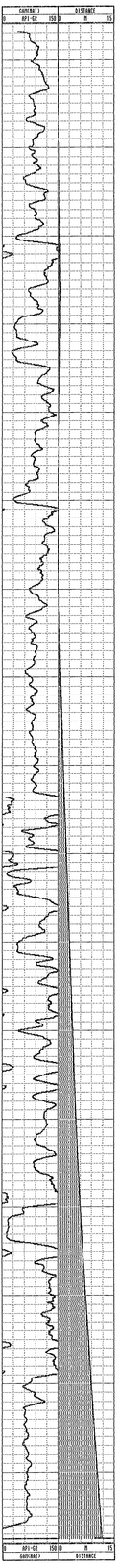
QHR88001 DEVIATION

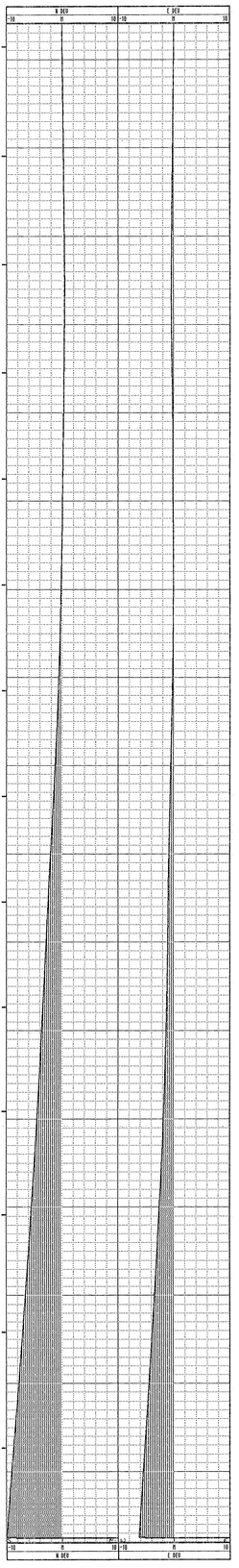
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR88001 DEVIATION	GAM.DEN.	
LOCATION/FIELD	: BL 20.000:SL 31.800/NABORS RD	RES.CAL.	
COUNTY	:	NEUT.DEV	
STATE	: B. C.		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 08/01/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 210	ELEV. PERM. DATUM:		KB	:
LOG BOTTOM	: 207.60	LOG MEASURED FROM:	GL	DF	:
LOG TOP	: 86.86	DRL MEASURED FROM:	GL	GL	:
CASING DRILLER	: 32.04	LOGGING UNIT	: 62		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	00	RECORDED BY	: W. STROEBEL		
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9055-D 1
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746





Century

QHR 88002 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR 88002 GAMMA-NEUTRON		
LOCATION/FIELD	: BS 2035O:SL51800/WABORS ROAD		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP :	RANGE :

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

DATE	: 08/04/88	PERMANENT DATUM :	ELEVATIONS
DEPTH DRILLER	: 200 M	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 200.94	LOG MEASURED FROM: GL	DF :
LOG TOP	: 16.12	DRL MEASURED FROM:	GL :
CASING DRILLER	: 11	LOGGING UNIT : 62	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0		RECORDED BY : W. STROEBEL	
BIT SIZE	: 13.34	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 1
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

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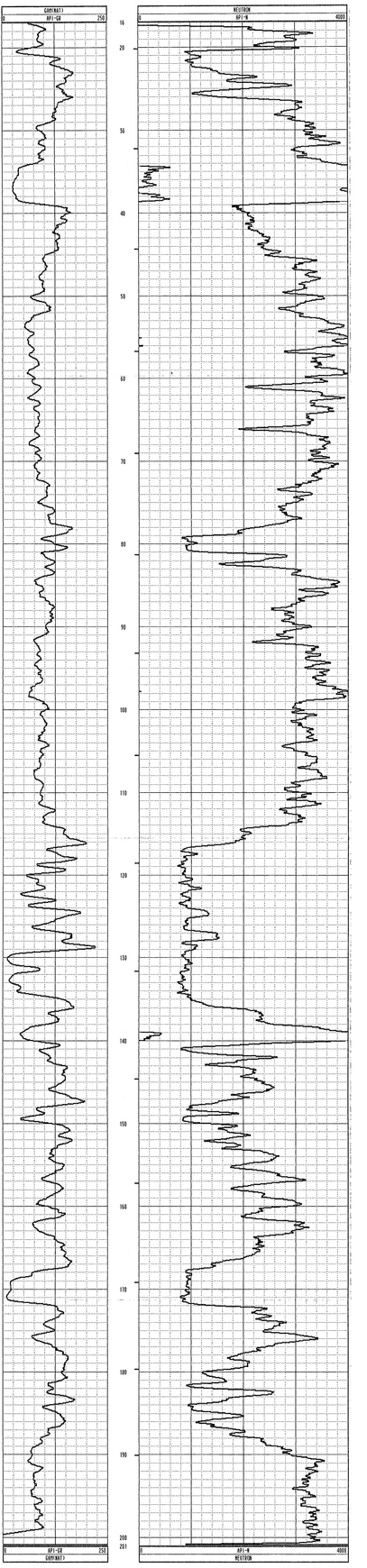

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88002 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88002 GAMMA-DENSITY	DEN.NEUT	
LOCATION/FIELD	: BS 203S013SL31800/NABORS ROAD	GAM.RES.	
COUNTY	:	CAL.DEV.	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 08/08/88	PERMANENT DATUM :	ELEVATIONS
DEPTH DRILLER	: 200 M	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 200.10	LOG MEASURED FROM: GL	DF :
LOG TOP	: 1.10	DRL MEASURED FROM:	GL :
CASING DRILLER	: 11	LOGGING UNIT	: 62
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS	: 0	RECORDED BY	: W. STROEBEL
BIT SIZE	: 13.34	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		

FILE : PROCESSED
TYPE : 9030AA
LOG : 1
PLOT : QUIN 3
THRESH: 2500

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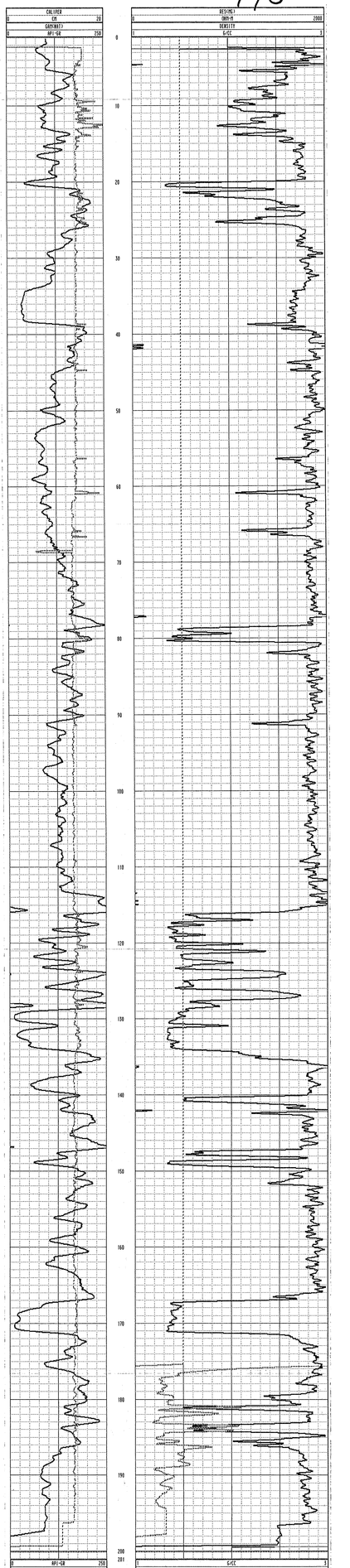
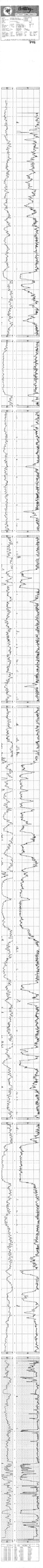


TOOL CALIBRATION

TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAMMAT)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAMMAT)	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5615.000 CPS	1.106 G/CC
3	07/28/88	14:13:46	0	DENSITY	2230.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RESIMD)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RESIMD)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1042.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM



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3	1.000	1.000	1.000
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7	1.000	1.000	1.000
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97	1.000	1.000	1.000
98	1.000	1.000	1.000
99	1.000	1.000	1.000
100	1.000	1.000	1.000

Century

QHR 58002 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 58002 DEVIATION	BCM,MEST	
LOCATION/FIELD	: 05 26S501E,5100S/HARDYS ROAD	GAM,RES,	
COUNTY	:	CAL,DEV	
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP :	RANGE :

DATE	: 05/06/88	PERMANENT DATUM :	ELEVATIONS
DEPTH DRILLER	: 208.0	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 200.94	LOG MEASURED FROM: GL	DF :
LOG TOP	: 16.42	DRL MEASURED FROM:	GL :
CASING DRILLER	: 11	LOGGING UNIT : 62	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0	RECORDED BY : M. STROEBEL	

BIT SIZE	: 13.54	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	WT	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9055-0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				

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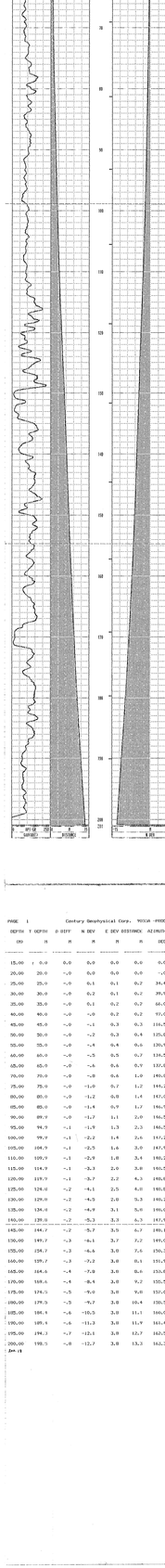

PAGE 1 Century Geophysical Corp. YCCA -PROCESSED

DEPTH	T DEPTH	D DIFF	N DEV	E DEV	DISTANCE	AZIMUTH	TOOL	SONAR
CM	M	M	M	M	M	DEG	DEG	DEG
15.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.00	20.0	+.0	0.0	0.0	0.0	-.0	1.2	36.1
25.00	25.0	+.0	0.1	0.1	0.2	39.4	1.3	35.6
30.00	30.0	+.0	0.2	0.1	0.2	39.9	0.8	179.6
35.00	35.0	+.0	0.1	0.2	0.2	66.0	1.2	155.2
40.00	40.0	+.0	+.0	0.2	0.2	97.0	1.3	194.8
45.00	45.0	+.0	-.1	0.3	0.3	116.5	1.5	180.4
50.00	50.0	+.0	-.2	0.3	0.4	125.8	1.7	165.4
55.00	55.0	+.0	-.4	0.4	0.6	126.9	1.7	180.1
60.00	60.0	+.0	-.5	0.5	0.7	134.5	2.0	166.5
65.00	65.0	+.0	-.6	0.6	0.9	137.0	1.9	152.7
70.00	70.0	+.0	-.8	0.6	1.0	140.8	2.2	163.7
75.00	75.0	+.0	-1.0	0.7	1.2	144.2	2.7	162.0
80.00	80.0	+.0	-1.2	0.8	1.4	147.0	3.0	154.2
85.00	85.0	+.0	-1.4	0.9	1.7	146.9	3.3	144.7
90.00	89.9	+.0	-1.7	1.1	2.0	146.5	3.2	144.4
95.00	94.9	+.1	-1.9	1.3	2.3	146.5	3.4	189.2
100.00	99.9	+.1	-2.2	1.4	2.6	147.2	4.0	150.9
105.00	104.9	+.1	-2.5	1.6	3.0	147.9	4.5	151.6
110.00	109.9	+.1	-2.9	1.8	3.4	148.2	5.0	149.8
115.00	114.9	+.1	-3.3	2.0	3.8	148.5	5.7	151.1
120.00	119.9	+.1	-3.7	2.2	4.3	148.8	5.9	152.0
125.00	124.8	+.2	-4.1	2.5	4.8	148.8	5.8	155.2
130.00	129.8	+.2	-4.5	2.8	5.3	148.2	5.6	145.1
135.00	134.8	+.2	-4.9	3.1	5.8	148.0	5.7	146.4
140.00	139.8	+.2	-5.3	3.3	6.3	147.9	5.1	147.7
145.00	144.7	+.2	-5.7	3.5	6.7	148.1	5.2	155.1
150.00	149.7	+.3	-6.1	3.7	7.2	149.0	5.5	160.4
155.00	154.7	+.3	-6.6	3.9	7.6	150.3	6.0	171.8
160.00	159.7	+.3	-7.2	3.8	8.1	151.9	6.7	179.6
165.00	164.6	+.4	-7.8	3.8	8.6	153.8	7.3	180.0
170.00	169.6	+.4	-8.4	3.8	9.2	155.5	7.3	177.0
175.00	174.5	+.5	-9.0	3.8	9.8	157.0	7.6	179.2
180.00	179.5	+.5	-9.7	3.8	10.4	158.3	8.4	181.3
185.00	184.4	+.6	-10.5	3.8	11.1	160.0	9.0	182.1
190.00	189.4	+.6	-11.3	3.8	11.9	161.4	9.4	179.1
195.00	194.3	+.7	-12.1	3.8	12.7	162.5	9.4	179.9
200.00	199.3	+.8	-12.7	3.8	13.3	163.3	9.3	175.2

for 1

Century

QHR 88008 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR 88008 GAMMA-NEUTRON		
LOCATION-FIELD	: BL 2150ISL 51260/TRANSFER W		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :

OTHER SERVICES:
GAMJDEN.
NEUT.RES
RES.CAL

DATE	: 08/18/88	PERMANENT DATUM : 1470	ELEVATIONS
DEPTH DRILLER	: 235 M	ELEV. PERM. DATUM: 1470	KB : 1470
LOG BOTTOM	: 235.26	LOG MEASURED FROM: 1470	DF : 1470
LOG TOP	: 11.70	DRL MEASURED FROM: 1470	GL : 1470
CASING DRILLER	: 6	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0		RECORDED BY : W. STROEBEL	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T : 175	PLOT : QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

ANGLE HOLE AZIMUTH 217 INCLINATION 60

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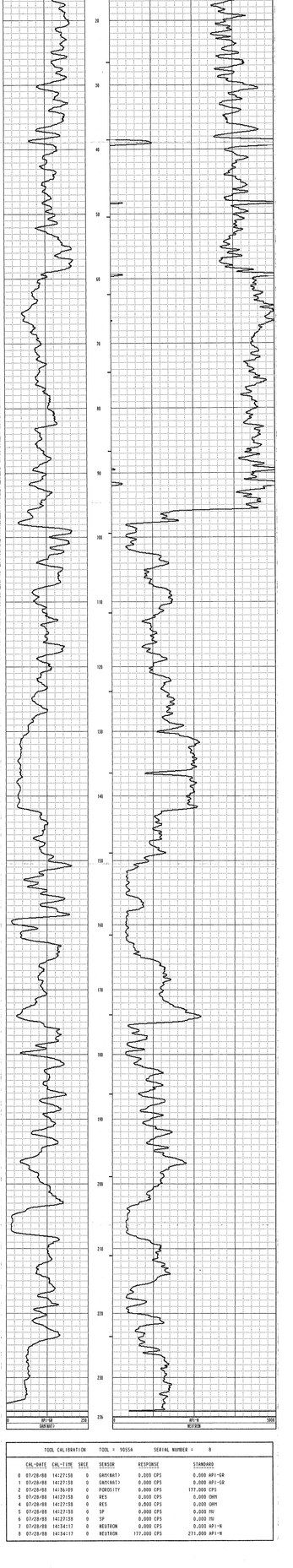

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 0

	CAL-DATE	CAL-TIME	SECS	SENSOR	RESPONSE	STANDARD
0	07/28/88	14:27:58	0	GAMMA1	0.000 CPS	0.000 API-GR
1	07/28/88	14:27:58	0	GAMMA1	0.000 CPS	0.000 API-GR
2	07/28/88	14:36:09	0	POROSITY	0.000 CPS	177.000 CPS
3	07/28/88	14:27:58	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	14:27:58	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	14:27:58	0	SP	0.000 CPS	0.000 MV
6	07/28/88	14:27:58	0	SP	0.000 CPS	0.000 MV
7	07/28/88	14:34:17	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	14:34:17	0	NEUTRON	177.000 CPS	271.000 API-N

Century

QHR 88008 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88008 GAMMA-DENSITY	GAMLDEN.	
LOCATION/FIELD	: BL 2150ISL 3126D/TRANSFER LI	NEUT.RES	
COUNTY	:	RES.CAL	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 08/10/88	PERMANENT DATUM	: 1470	ELEVATIONS	
DEPTH DRILLER	: 235 M	ELEV. PERM. DATUM:	1470	KB :	1470
LOG BOTTOM	: 235.34	LOG MEASURED FROM:	1470	DF :	1470
LOG TOP	: 0.08	DRL MEASURED FROM:	1470	GL :	1470
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: W. STROEBEL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: S
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

ANGLE HOLE AZIMUTH 217 INCLINATION 60

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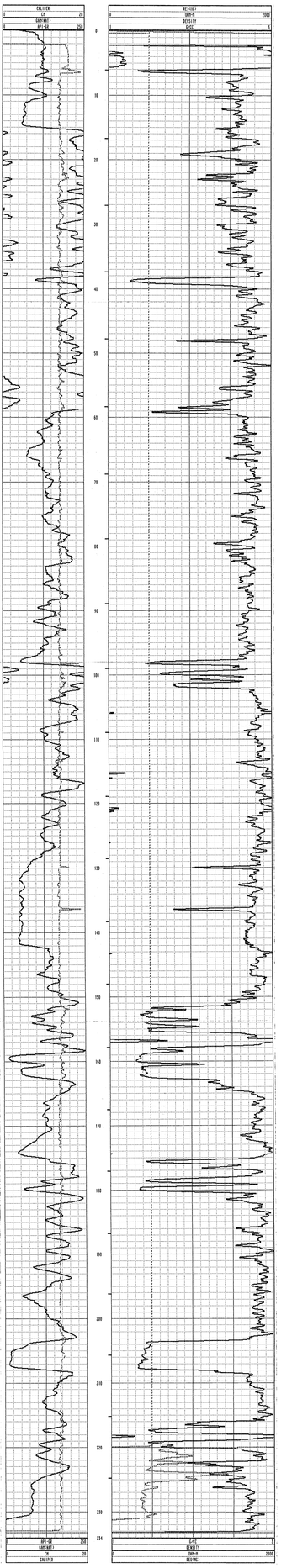


TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:56:46	0	GAMMA RAY	0.000 CPS	0.000 API-GR
1	07/28/88	15:56:46	0	GAMMA RAY	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5615.000 CPS	1.186 G/CC
3	07/28/88	14:13:46	0	DENSITY	2230.500 CPS	2.120 G/CC
4	07/28/88	15:56:46	0	RESYM1	0.000 CPS	0.000 OHM-M
5	07/28/88	15:56:46	0	RESYM1	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	215.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1042.500 CPS	17.800 CM
8	07/28/88	15:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	15:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	15:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	15:56:46	0	CALIPERL	0.000 CPS	0.000 CM

Century

2008 EAGLE CLAMMA-SIDELITT

COMPANY	ALLIANCE PETRO. CO.	DATE RECEIVED	
WELL	1-A STATE PETRO-MINERALS	DATE RUN	
FIELD	WILDCAT	DATE MEAS.	
COUNTY	BRITTIN COLORADO	DATE LOG.	

LOCATION	10-10-10	ELEVATION GROUND	4321
1320 FT. FSL OF	1320 FT.	ELEV. KELLY BUSH	4331
1320 FT. FEL OF	SEC. 1	ELEV. DERRICK FLOOR	4330
		ELEV. CASING FLANGE	4329
API NO.	00-000-00000		
PERMANENT DATUM	G.L.		
LOG MEASURED FROM	K.B. 10 FT. ABOVE PERM. DATUM		
DRILLING MEASURED FROM	K.B.		

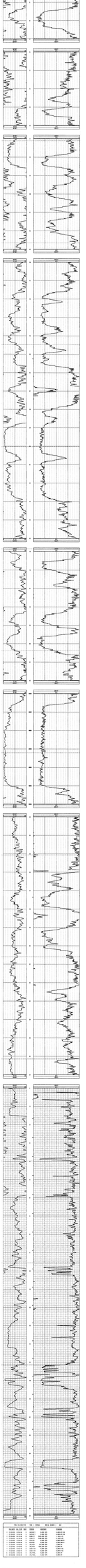
DEPTH DRILLER	7,410	DEPTH LOGGER	7,406
BTM. LOG INTERVAL	7,406	TOP LOG INTERVAL	1,000
CASING DRILLER	8 5/8 @ 1,000	TYPE FLUID IN HOLE	GEL-CHEM
SALINITY, PPM CL	1,000	DENSITY LB/GAL	9.0
RM @ MEAS. TEMP.	1.00 @ 70	RMF @ MEAS. TEMP.	1.00 @ 70
RMC @ MEAS. TEMP.	1.00 @ 70	SOURCE OF SAMPLE	FLOWLINE
RM @ BHT	0.50 @ 150	TIME SINCE CIRC.	12 HRS.
MAX. REC. TEMP.	150	EQUIP. LOCATION	10-10-10
RECORDED BY	J. SIMMONS	WITNESSED BY	J. STEVENS

RUN NO.	ONE	TYPE LOG	DUAL INDUCTION
DEPTH DRILLER	7,410	DEPTH LOGGER	7,406
SCHLUMBERGER	7,406	BOTTOM LOGGED INTERVAL	7,406
TOP LOGGED INTERVAL	1,000	TYPE FLUID IN HOLE	GEL-CHEM
SALINITY, PPM CL	1,000	DENSITY LB/GAL	9.0
LEVEL	FULL	MAX. REC. TEMP.	150
OPERATING RIG TIME	12 HRS.	RECORDED BY	J. SIMMONS
WITNESSED BY	J. STEVENS		

REMARKS

RUN ONE WITH 6 IN. AND 30 IN. SHORT NORMALS
ALL DATA HAS BEEN RECORDED DIGITALLY IN THE STANDARD CENTURY FORMAT

746



7,400	7,450	7,500	7,550
7,600	7,650	7,700	7,750
7,800	7,850	7,900	7,950
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8,600	8,650	8,700	8,750
8,800	8,850	8,900	8,950
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88,200	88,250	88,300	88,350
88,400	88,450	88,500	88,550
88,600	88,650	88,700	88,750
88,800	88,850	88,900	88,950
89,000	89,050	89,100	89,150
89,200	89,250	89,300	89,350
89,400	89,450	89,500	89,550
89,600	89,650	89,700	89,750
89,800	89,850	89,900	89,950
90,000	90,050	90,100	90,150
90,200	90,250	90,300	90,350
90,400	90,450	90,500	90,550
90,600	90,650	90,700	90,750
90,800	90,850	90,900	90,950
91,000	91,050	91,100	91,150
91,200	91,250	91,300	91,350
91,400	91,450	91,500	91,550
91,600	91,650	91,700	91,750
91,800	91,850	91,900	91,950
92,000	92,050	92,100	92,150
92,200	92,250	92,300	92,350
92,400	92,450	92,500	92,550
92,600	92,650	92,700	92,750
92,800	92,850	92,900	92,950
93,000	93,050	93,100	93,150
93,200	93,250	93,300	93,350
93,400	93,450	93,500	93,550
93,600	93,650	93,700	93,750
93,800	93,850	93,900	93,950
94,000	94,050	94,100	94,150
94,200	94,250	94,300	94,350
94,400	94,450	94,500	94,550
94,600	94,650	94,700	94,750
94,800	94,850	94,900	94,950
95,000	95,050	95,100	95,150
95,200	95,250	95,300	95,350
95,400	95,450	95,500	95,550
95,600	95,650	95,700	95,750
95,800	95,850	95,900	95,950
96,000	96,050	96,100	96,150
96,200	96,250	96,300	96,350
96,400	96,450	96,500	96,550
96,600	96,650	96,700	96,750
96,800	96,850	96,900	96,950
97,000	97,050	97,100	97,150
97,200	97,250	97,300	97,350
97,400	97,450	97,500	97,550
97,600	97,650	97,700	97,750
97,800	97,850	97,900	97,950
98,000	98,050	98,100	98,150
98,200	98,250	98,300	98,350
98,400	98,450	98,500	98,550
98,600	98,650	98,700	98,750
98,800	98,850	98,900	98,950
99,000	99,050	99,100	99,150
99,200	99,250	99,300	99,350
99,400	99,450	99,500	99,550
99,600	99,650	99,700	99,750
99,800	99,850	99,900	99,950
100,000	100,050	100,100	100,150
100,200	100,250	100,300	100,350
100,400	100,450	100,500	100,550
100,600	100,650	100,700	100,750
100,800	100,850	100,900	100,950
101,000	101,050	101,100	101,150
101,200	101,250	101,300	101,350
101,400	101,450	101,500	101,550
101,600	101,650	101,700	101,750
101,800	101,850	101,900	101,950
102,000	102,050	102,100	102,150
102,200	102,250	102,300	102,350
102,400	102,450	102,500	102,550
102,600	102,650	102,700	102,750
102,800	102,850	102,900	102,950
103,000	103,050	103,100	103,150
103,200	103,250	103,300	103,350
103,400	103,450	103,500	103,550
103,600	103,650	103,700	103,750
103,800	103,850	103,900	103,950
104,000	104,050	104,100	104,150
104,200	104,250	104,300	104,350
104,400	104,450	104,500	104,550
104,600	104,650	104,700	104,750
104,800	104,850	104,900	104,950
105,000	105,050	105,100	105,150
105,200	105,250	105,300	105,350
105,400	105,450	105,500	105,550
105,600	105,650	105,700	105,750
105,800	105,850	105,900	105,950
106,000	106,050	106,100	106,150
106,200	106,250	106,300	106,350
106,400	106,450	106,500	106,550
106,600	106,650	106,700	106,750
106,800	106,850	106,900	106,950
107,000	107,050	107,100	107,150
107,200	107,250	107,300	107,350
107,400	107,450	107,500	107,550
107,600	107,650	107,700	107,750
107,800	107,850	107,900	107,950
108,000	108,050	108,100	108,150
108,200	108,250	108,300	108,350
108,400	108,450	108,500	108,550
108,600	108,650	108,700	108,750
108,800	108,850	108,900	108,950
109,000	109,050	109,100	109,150
109,200	109,250	109,300	109,350
109,400	109,450	109,500	109,550
109,600	109,650	109,700	109,750
109,800	109,850	109,900	109,950
110,000	110,050	110,100	110,150
110,200	110,250	110,300	110,350
110,400	110,450	110,500	110,550
110,600	110,650	110,700	110,750
110,800	110,850	110,900	110,950
111,000	111,050	111,100	111,150
111,200	111,250	111,300	111,350
111,400	111,450	111,500	111,550
111,600	111,650	111,700	111,750
111,800	111,850	111,900	111,950
112,000	112,050	112,100	112,150
112,200	112,250	112,300	112,350
112,400	112,450	112,500	112,550
112,600	112,650	112,700	112,750
112,800	112,850	112,900	112,950
113,000	113,050	113,100	113,150
113,200	113,250	113,300	113,350
113,400	113,450	113,500	113,550
113,600	113,650	113,700	113,750
113,800	113,850	113,900	113,950
114,000	114,050	114,100	114,150
114,200	114,250	114,300	114,350
114,400	114,450	114,500	114,550
114,600	114,650	114,700	114,750
114,800	114,850	114,900	114,950
115,000	115,050	115,100	115,150
115,200	115,250	115,300	115,350
115,400	115,450	115,500	115,550
115,600	115,650	115,700	115,750
115,800	115,850	115,900	115,950
116,000	116,050	116,100	116,150
116,200	116,250	116,300	116,350
116,400	116,450	116,500	116,550
116,600	116,650	116,700	116,750
116,800	116,850	116,900	116,950
117,000	117,050	117,100	117,150
117,200	117,250	117,300	117,350
117,400	117,450	117,500	117,550
117,600	117,650	117,700	117,750
117,800	117,850	117,900	117,950
118,000	118,050	118,100	118,150
118,200	118,250	118,300	118,350
118,400	118,450	118,500	118,550
118,600	118,650	118,700	118,750
118,800	118,850	118,900	118,950
119,000	119,050	119,100	119,150
119,200	119,250	119,300	119,350
119,400	119,450	119,500	119,550
119,600	119,650	119,700	119,750
119,800	119,850	119,900	119,950
120,000	120,050	120,100	120,150
120,200	120,250	120,300	120,350
120,400	120,450	120,500	120,550
120,600	120,650	120

Century

QHR 88009 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88009 GAMMA NEUTRON			GAM.DEN.	
LOCATION/FIELD	: BRL 19900:SL 30830 TRANSFER W			NEUT	
COUNTY	:			RES.CAL	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/20/88	PERMANENT DATUM	: 1550	ELEVATIONS	
DEPTH DRILLER	: 97 M	ELEV. PERM. DATUM	: 1550	KB	: 1550
LOG BOTTOM	: 96.62	LOG MEASURED FROM	: 1660	DF	: 1550
LOG TOP	: 6.88	DRL MEASURED FROM	: 1550	GL	: 1550
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: W. STROEBEL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500
REMARKS	:				

VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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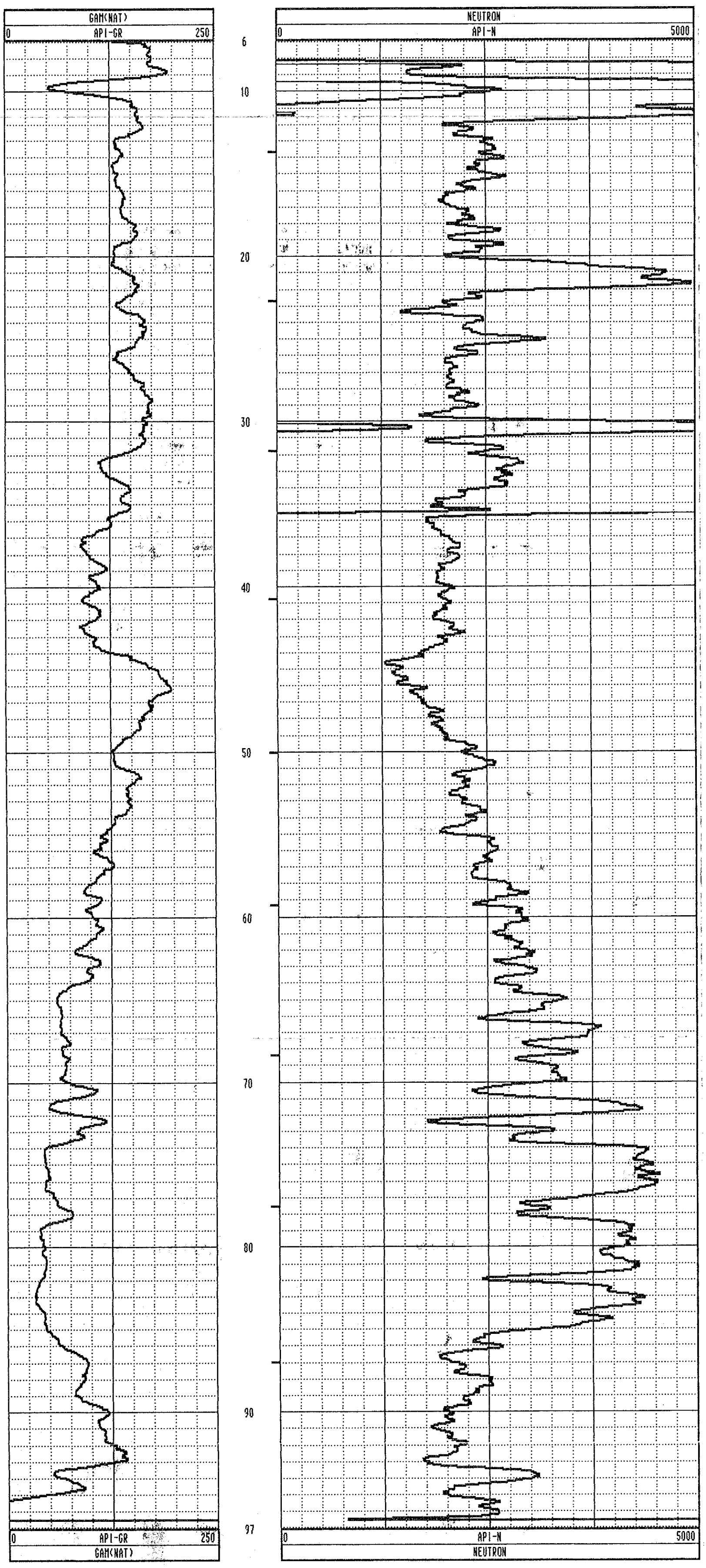

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

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QHR 88009 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88009 GAMMA-DENSITY			GAM.DEN.	
LOCATION/FIELD	: BRL 19900:SL 30830 TRANSFER W			NEUT	
COUNTY	:			RES.CAL	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/07/77	PERMANENT DATUM	: 1550	ELEVATIONS	
DEPTH DRILLER	: 97 M	ELEV. PERM. DATUM:	1550	KB	: 1550
LOG BOTTOM	: 96.56	LOG MEASURED FROM:	1560	DF	: 1550
LOG TOP	: 0.20	DRL MEASURED FROM:	1550	GL	: 1550
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: W. STROEBEL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500
REMARKS	:				

VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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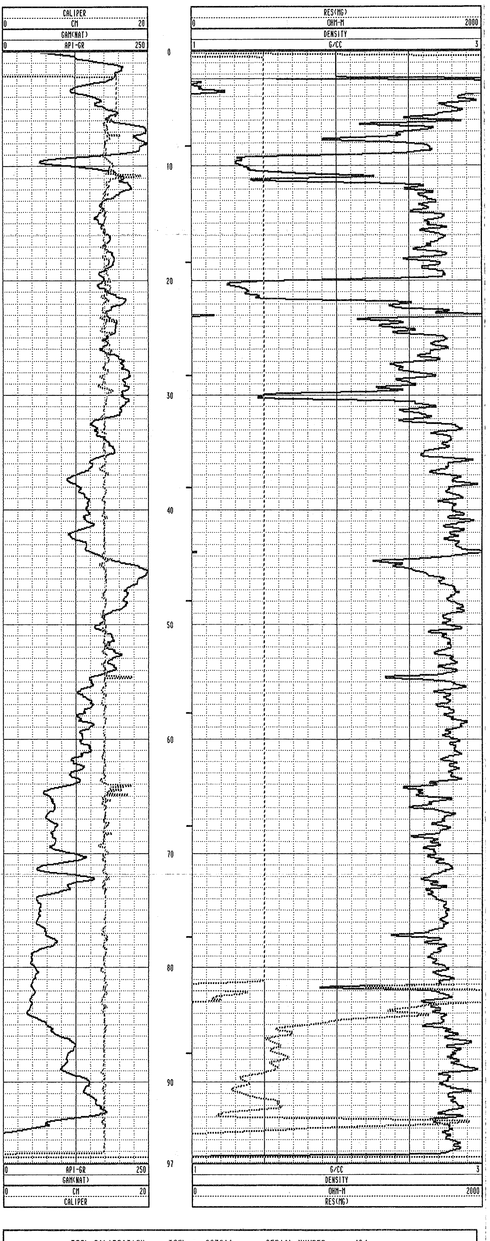

TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5615.000 CPS	1.106 G/CC
3	07/28/88	14:13:46	0	DENSITY	2230.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	215.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1842.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

QHR 88009 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88009 DEVIATION	GAM.DEN.	
LOCATION/FIELD	: BRL 19900:SL 30830 TRANSFER W	NEUT	
COUNTY	:	RES.CAL	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 08/20/88	PERMANENT DATUM : 1550	ELEVATIONS
DEPTH DRILLER	: 97 M	ELEV. PERM. DATUM: 1550	KB : 1550
LOG BOTTOM	: 96.62	LOG MEASURED FROM: 1660	DF : 1550
LOG TOP	: 6.88	DRL MEASURED FROM: 1550	GL : 1550
CASING DRILLER	: 6	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0		RECORDED BY : W. STROEBEL	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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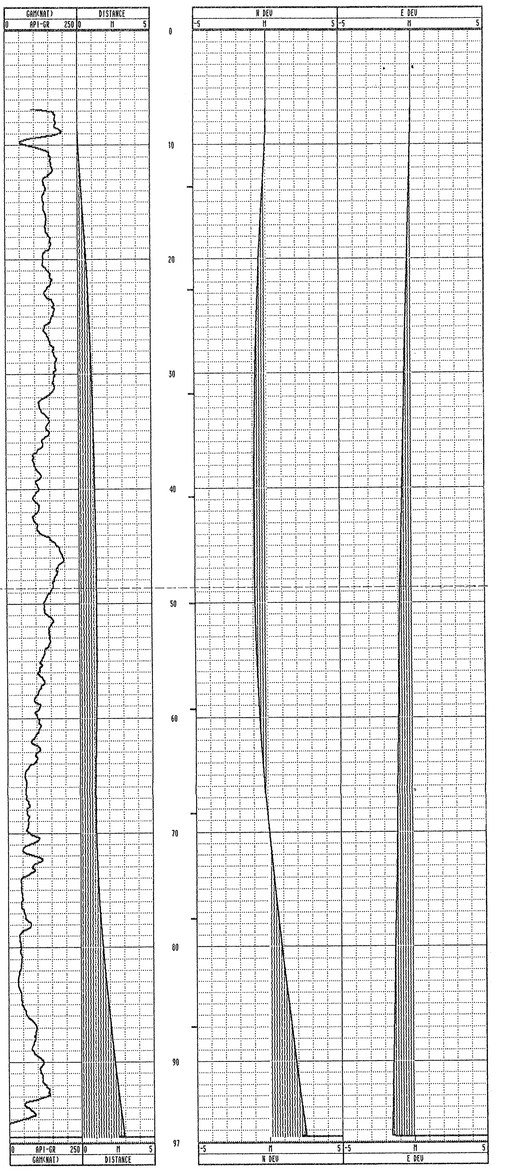

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88009 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 10/08/77
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 3

Cable 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	0.00	0.00	0.00	0.0	0.0	0.0	0.0
10.0	10.00	-.03	-.04	0.1	218.3	2.6	203.9
15.0	14.99	-.27	-.15	0.3	208.0	2.9	209.0
20.0	19.98	-.50	-.26	0.6	207.5	2.6	220.8
25.0	24.98	-.66	-.38	0.8	210.1	2.0	220.9
30.0	29.98	-.78	-.48	0.9	211.6	1.4	223.2
35.0	34.98	-.85	-.57	1.0	213.9	1.4	234.3
40.0	39.98	-.89	-.65	1.1	216.5	1.1	252.1
45.0	44.97	-.89	-.76	1.2	220.4	1.1	288.4
50.0	49.97	-.85	-.86	1.2	225.4	1.1	312.6
55.0	54.97	-.75	-.93	1.2	231.1	1.7	333.6
60.0	59.97	-.58	-.99	1.1	239.5	2.4	345.0
65.0	64.96	-.30	-1.04	1.1	253.7	4.2	352.1
70.0	69.95	0.05	-1.09	1.1	272.6	4.4	355.1
75.0	74.93	0.44	-1.17	1.2	290.9	5.0	349.2
80.0	79.91	0.88	-1.25	1.5	305.2	5.1	340.8
85.0	84.89	1.36	-1.33	1.9	315.7	5.5	332.0
90.0	89.86	1.84	-1.41	2.3	322.6	5.5	329.4
95.0	94.84	2.33	-1.51	2.8	327.3	6.8	351.1
96.6	96.45	2.52	-1.54	2.9	328.6	0.0	0.0

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QHR 88010 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88010 GAMMA-NEUTRON			GAM,DEN,	
LOCATION/FIELD	: RL 19900+3L 35890/TRANSFER N			NEUT,RES	
COUNTY	:			RES,CAL	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/22/88	PERMANENT DATUM	: 1550	ELEVATIONS	
DEPTH DRILLER	: 236 M	ELEV. PERM. DATUM	: 1550	KB	: 1550
LOG BOTTOM	: 235.22	LOG MEASURED FROM	: 1550	DF	: 1550
LOG TOP	: 11.94	DRL MEASURED FROM	: 1550	GL	: 1550
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: G. MURPHY		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 8
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

ANGLE HOLE AZIMUTH 217 INCLINATION 60

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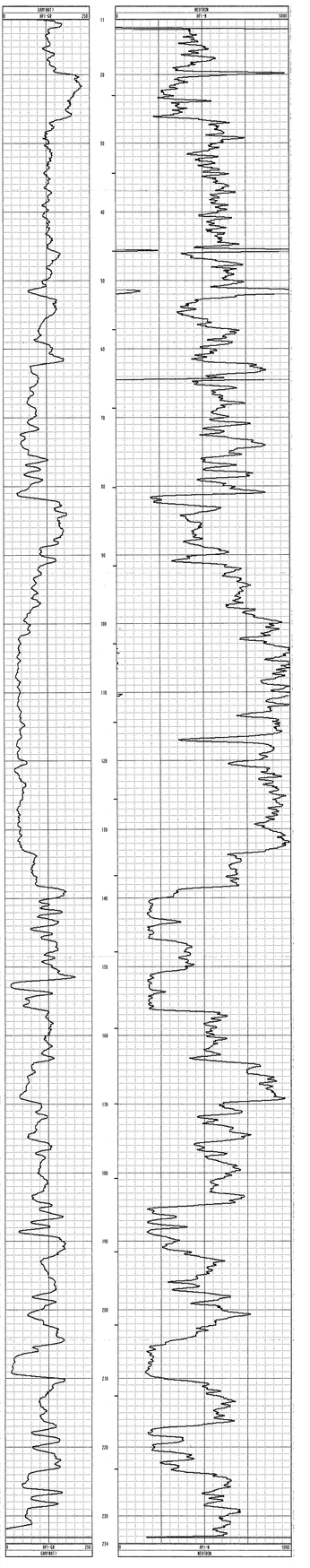

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SOCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:10	0	GAMMA1	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:10	0	GAMMA1	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:10	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:10	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:10	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:10	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88010 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR 88010 GAMMA-DENSITY		
LOCATION/FIELD	: BL 1990015L 30850/TRANSFER H		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP :	RANGE :

OTHER SERVICES:
GAMJEW.
NEUT.RES
RES.CAL

DATE	: 08/22/88	PERMANENT DATUM : 1550	ELEVATIONS
DEPTH DRILLER	: 256 M	ELEV. PERM. DATUM: 1550	KB : 1550
LOG BOTTOM	: 232.22	LOG MEASURED FROM: 1550	DF : 1550
LOG TOP	: 0.16	DRL MEASURED FROM: 1550	GL : 1550
CASING DRILLER	: 6	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0	RECORDED BY : G. MURPHY	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 9
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

ANGLE HOLE AZIMUTH 217 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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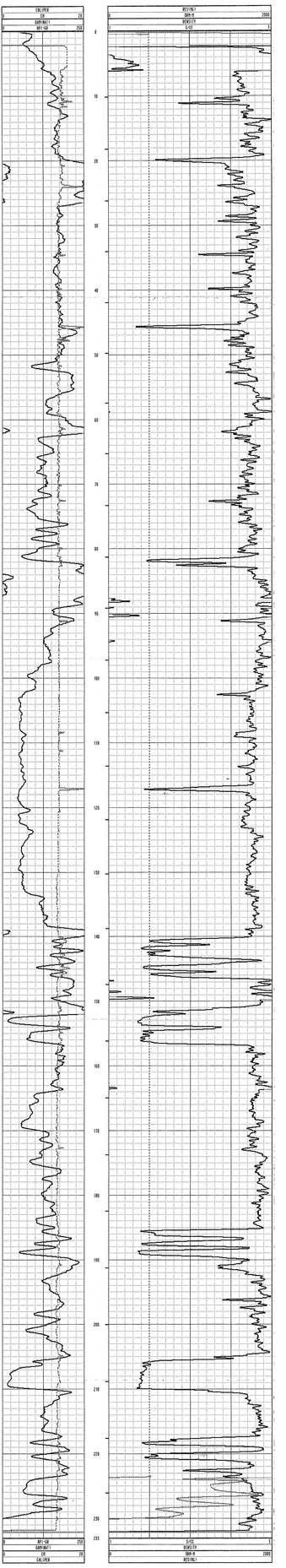


TOOL CALIBRATION	TOOL : 9030AA	SERIAL NUMBER : 404	

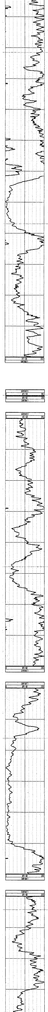
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAMMA(AT)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAMMA(AT)	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5635.000 CPS	1.156 G/CC
3	07/28/88	14:13:46	0	DENSITY	2250.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RES(NL)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RES(NL)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1842.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

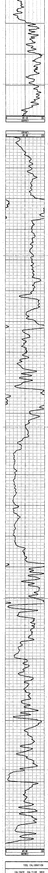
Century

CDC

CASE 8888 GAMMA-DENSITY

746





Century

QHR 88009 DEVIATION

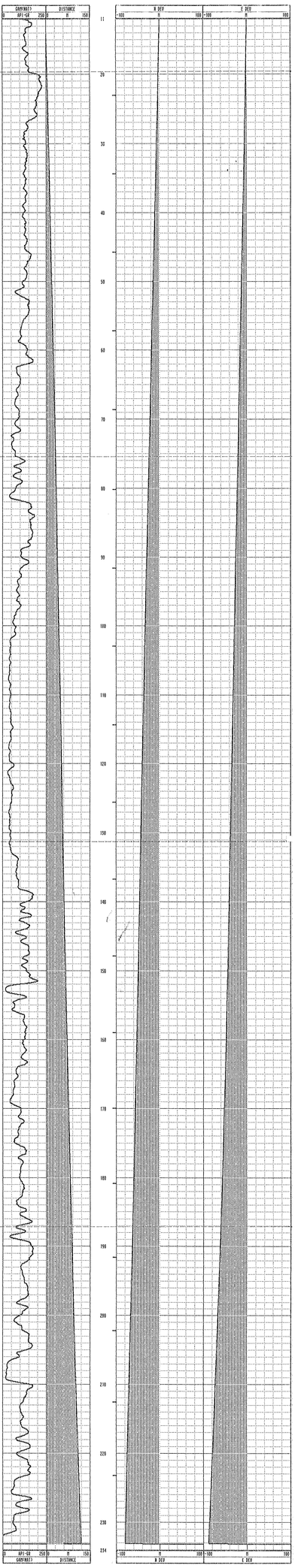
COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR 88009 DEVIATION		
LOCATION/FIELD	: BL 19900:SL 30830/TRANSFER W		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP :	RANGE :
DATE	: 06/22/88	PERMANENT DATUM : 1550	ELEVATIONS
DEPTH DRILLER	: 236 M	ELEV. PERM. DATUM: 1550	KB : 1550
LOG BOTTOM	: 233.22	LOG MEASURED FROM: 1550	DF : 1550
LOG TOP	: 11.94	DRL MEASURED FROM: 1550	GL : 1550
CASING DRILLER	: 6	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0		RECORDED BY : G. MURPHY	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

OTHER SERVICES:
GAM.DEN.
NEUT.RES
RES.CAL

ANGLE HOLE AZIMUTH 217 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT : QUINTETTE COAL LTD.
FIELD OFFICE : CALGARY
DATA FROM :
MAG. DECL. : 24.500

HOLE ID. : QHR 8810 GAM
DATE OF LOG : 08/22/88
PROBE : 9055A , 46
DEPTH UNITS : METER LOG 5

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
11.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
16.0	15.61	-1.08	-.83	1.4	217.5	31.8	224.6
21.0	19.85	-3.07	-2.44	3.9	218.5	31.9	205.3
26.0	24.09	-5.10	-4.11	6.6	218.9	32.0	222.1
31.0	28.33	-7.11	-5.78	9.2	219.1	32.3	233.5
36.0	32.59	-9.11	-7.38	11.7	219.0	30.9	218.4
41.0	36.86	-11.04	-9.06	14.3	219.4	31.6	217.6
46.0	41.13	-13.04	-10.72	16.9	219.4	30.9	219.1
51.0	45.40	-15.02	-12.39	19.5	219.5	31.3	219.3
56.0	49.68	-17.00	-14.06	22.1	219.6	30.9	218.1
61.0	53.97	-18.95	-15.72	24.6	219.7	30.6	218.8
66.0	58.26	-20.73	-17.39	27.1	220.0	30.9	220.9
71.0	62.59	-22.54	-18.94	29.4	220.0	30.2	222.7
76.0	66.91	-24.44	-20.57	31.9	220.1	30.1	223.9
81.0	71.25	-26.31	-22.22	34.4	220.2	29.3	175.1
86.0	75.58	-27.91	-23.92	36.8	220.6	30.4	222.0
91.0	79.92	-29.72	-25.51	39.2	220.6	28.9	222.3
96.0	84.31	-31.55	-27.05	41.6	220.6	28.5	218.8
101.0	88.72	-33.32	-28.55	43.9	220.6	28.7	222.5
106.0	93.12	-35.09	-30.12	46.2	220.6	28.1	222.3
111.0	97.54	-36.83	-31.67	48.6	220.7	27.8	218.2
116.0	101.98	-38.53	-33.22	50.9	220.8	27.4	223.3
121.0	106.42	-40.15	-34.71	53.1	220.8	27.2	198.9
126.0	110.89	-41.66	-36.12	55.1	220.9	26.9	231.9
131.0	115.36	-43.12	-37.57	57.2	221.1	24.5	182.8
136.0	119.82	-44.61	-39.16	59.4	221.3	28.1	209.0
141.0	124.26	-46.30	-40.70	61.6	221.3	28.2	227.9
146.0	128.66	-47.94	-42.38	64.0	221.5	29.6	228.1
151.0	133.02	-49.61	-44.17	66.4	221.7	30.7	228.0
156.0	137.32	-51.32	-46.03	68.9	221.9	31.8	235.0
161.0	141.58	-53.07	-47.93	71.5	222.1	32.5	222.7
166.0	145.77	-54.84	-50.01	74.2	222.4	33.7	247.0
171.0	149.92	-56.54	-52.20	77.0	222.7	34.3	241.1
176.0	154.03	-58.27	-54.45	79.7	223.1	35.3	238.2
181.0	158.08	-59.98	-56.82	82.6	223.4	36.8	239.0
186.0	162.05	-61.69	-59.30	85.6	223.9	37.9	228.7
191.0	165.95	-63.48	-61.86	88.6	224.3	39.4	228.4
196.0	169.75	-65.25	-64.57	91.8	224.7	42.2	245.0
201.0	173.43	-67.13	-67.37	95.1	225.1	43.8	238.9
206.0	176.97	-69.10	-70.28	98.6	225.5	45.9	239.6
211.0	180.41	-71.03	-73.35	102.1	225.9	46.9	245.0
216.0	183.73	-73.06	-76.45	105.7	226.3	49.4	242.1
221.0	186.93	-75.00	-79.75	109.5	226.8	50.7	238.3
226.0	190.04	-76.99	-83.12	113.3	227.2	52.1	240.9
231.0	193.11	-78.92	-86.54	117.1	227.6	52.4	234.5
233.2	194.47	-79.72	-88.05	118.8	227.8	0.0	0.0

CENTURY GEOPHYSICAL CORPORATION

* * * * * * * VERTICAL DEVIATION * * * * * * *

COMPU-LOG VSL1 DEVIATION

CLIENT : GAMMA-NEUTRON(DEV) HOLE ID : QPDS8001

LOCATION : PERRY CREEK DATE OF LOG : 05-22-80

DATA FROM : VSL2%A PROBE : 9055A 0079

TD = TOTAL DEPTH
T = TOP OF ZONE
B = BOTTOM OF ZONE

	DEPTH	TRUE DEPTH	NORTH DEV	EAST DEV	DISTANCE	AZIMUTH	SA	SAB
	.00	.00	.00	.00	.00	.0	.0	.0
	10.00	9.99	.01	-.05	.05	282.5	.2	282.4
	20.00	19.99	.14	-.01	.14	354.5	.8	15.0
	30.00	29.99	.23	.01	.23	3.5	.5	17.8
	40.00	39.99	.25	-.00	.25	358.1	.1	313.0
	50.00	49.99	.33	-.00	.33	359.5	.4	3.7
	60.00	59.99	.51	-.00	.51	359.1	1.0	358.4
	70.00	69.99	.71	-.05	.71	355.8	1.1	347.3
	80.00	79.98	.96	.01	.96	1.0	1.4	15.7
	90.00	89.98	1.26	.15	1.27	7.2	1.9	25.3
	100.00	99.97	1.60	.32	1.63	11.4	2.1	25.5
	110.00	109.96	1.93	.47	1.99	13.7	2.1	24.0
	120.00	119.96	2.24	.61	2.32	15.3	1.9	25.0
	130.00	129.95	2.55	.76	2.66	16.6	2.0	24.9
	140.00	139.95	2.86	.90	3.00	17.6	1.9	25.6
	150.00	149.94	3.15	1.04	3.32	18.4	1.8	25.7
	160.00	159.94	3.48	1.16	3.67	18.5	1.9	19.9
	170.00	169.93	3.85	1.28	4.06	18.4	2.2	17.0
TD	170.90	170.83	3.87	1.29	4.08	18.4	1.5	26.8

746

VERTICAL DEVIATION

COMPU-LOG V8L1 DEVIATION
DATA FROM : V8L2*A

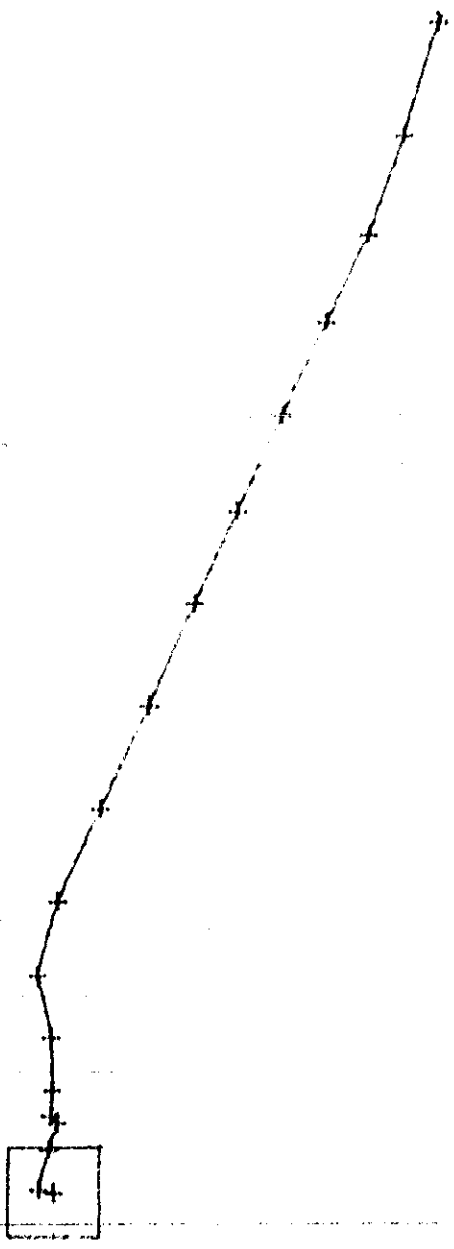
CLIENT : GAMMA-NEUTRON(DEV)
LOCATION : PERRY CREEK
HOLE ID : QPD88001
DATE OF LOG : 05-22-80
PROBE : 9055A 0079

SCALE: .25 M/DIV
MAG DECL: 24.5
TRUE DEPTH: 170.8 M
AZIMUTH: 18.4
DISTANCE: 4.08 M

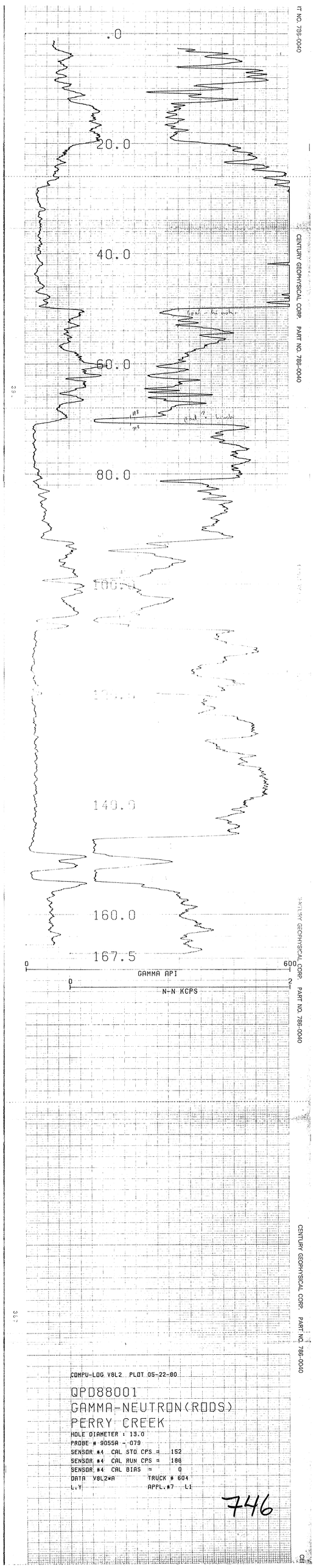
+ = 10.0 M INCR
△ = TOP OF ZONE
◇ = BOTTOM OF ZONE

TRUE NORTH ↑

746



CENTURY GEOPHYSICAL CORP. PART NO. 786-0040



COMPU-LOG V8L2 PLOT 05-22-80

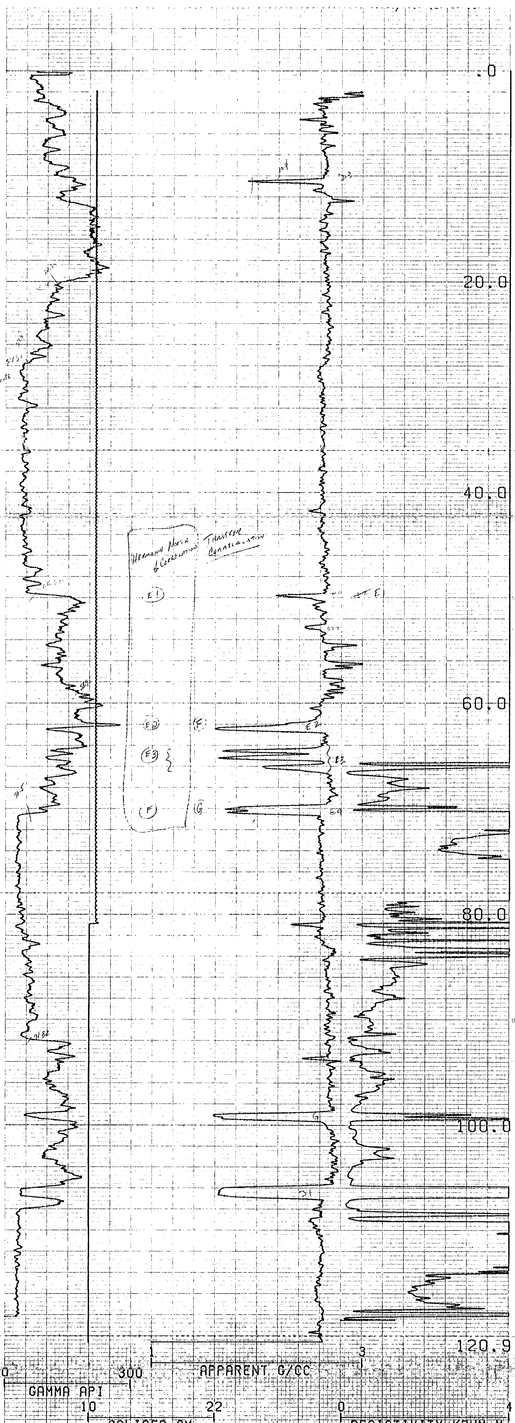
QPD88001

GAMMA-NEUTRON(RODS)

PERRY CREEK

HOLE DIAMETER : 13.0
PROBE # 9055A - 079
SENSOR #4 CAL STD CPS = 152
SENSOR #4 CAL RUN CPS = 188
SENSOR #4 CAL BIAS = 0
DATA V8L2*A TRUCK # 604
L.Y APPL.#7 L1

746



CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

COMPU-LOG V8L2 PLOT 06-03-90

QPD 88001

GAMMA DENSITY CALIPR

PERRY CREEK

HOLE DIAMETER : 13.1

PROBE # 9030A1- 403

SENSOR #4 CAL STD CPS = 6588

SENSOR #4 CAL RUN CPS = 7500

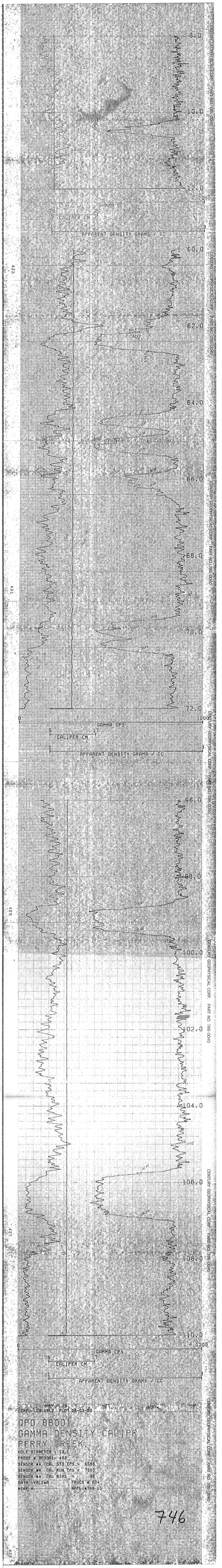
SENSOR #4 CAL BIAS = 98

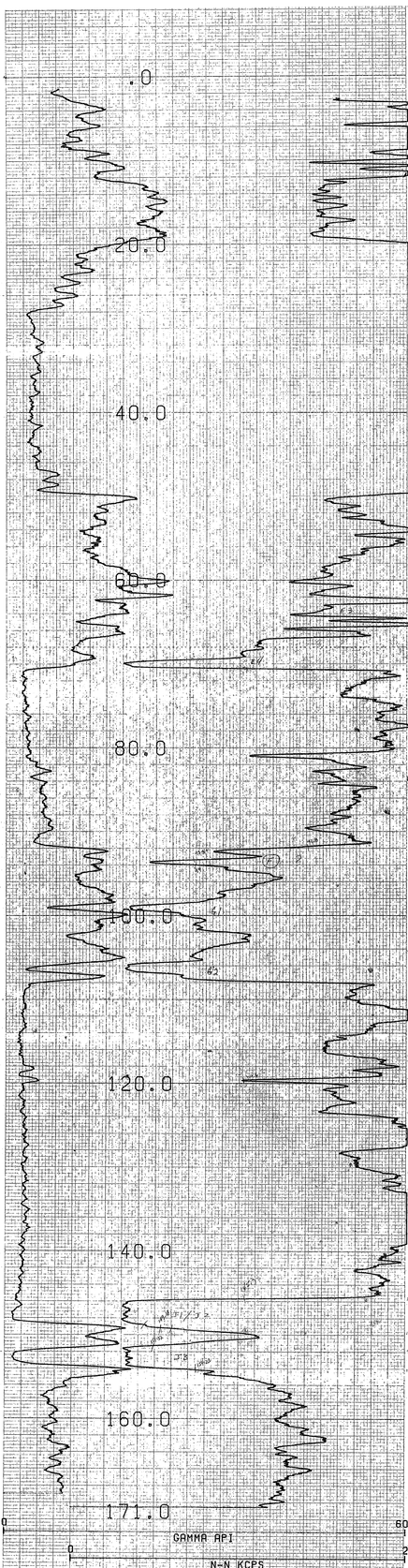
DATA V8L2#A TRUCK # 604

MIKE H. APPL.#30 L1

746

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040


GAMMA CPS
CALIPER CM
APPARENT DENSITY GRAMS / CC
8.0
10.0
12.0
60.0
62.0
64.0
66.0
68.0
70.0
72.0
96.0
98.0
100.0
102.0
104.0
106.0
108.0
110.0
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0050
CENTURY GEOPHYSICAL CORP. PART NO. 786-0060
CENTURY GEOPHYSICAL CORP. PART NO. 786-0070
CENTURY GEOPHYSICAL CORP. PART NO. 786-0080
CENTURY GEOPHYSICAL CORP. PART NO. 786-0090
CENTURY GEOPHYSICAL CORP. PART NO.



CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

381

379

377

COMPU-LOG V8L2 PLOT 05-22-80

QPD88001

GAMMA-NEUTRON(DEV)

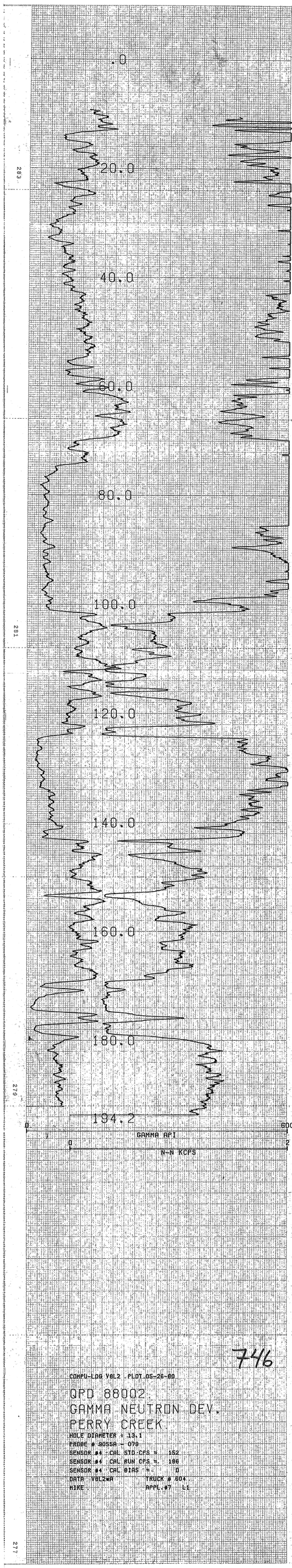
PERRY CREEK

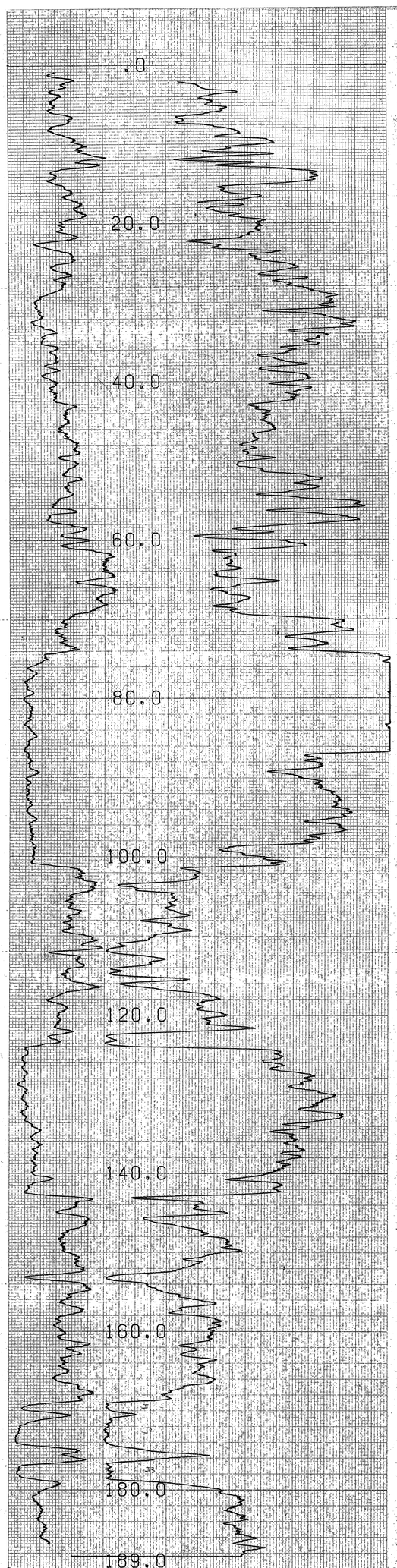
HOLE DIAMETER = 10.0
PROBE # 9055A - 079
SENSOR #4 CAL STD CPS = 152
SENSOR #4 CAL RUN CPS = 186
SENSOR #4 CAL BIAS = 0
DATA V8L2WR TRUCK # 604
L.Y APPL.#7 L1

746

DOUGLAS DETAIL
OLD 88001
746
8.0
10.0
12.0
0
120
GAMMA CPS
5
17
CALIPER CM
3
APPARENT DENSITY GRAMS / CC
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
60.0
62.0
64.0
66.0
68.0
70.0
72.0
96.0
98.0
100.0
102.0
104.0
106.0
108.0
110.0

PERRY CREEK


.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
194.2
0
600
GAMMA API
0
2
N-N KCPS
283
281
279
277
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART
746
COMPU-LOG V8L2 - PLOT 05-26-88
QPD 88002
GAMMA NEUTRON DEV.
PERRY CREEK
HOLE DIAMETER = 13.1
PROBE # 9055A - 079
SENSOR #4 CAL STD CPS = 152
SENSOR #4 CAL RUN CPS = 100
SENSOR #4 CAL BIAS = 0
DATA V8L2WA TRUCK # 604
MIKE APPL.#7 LI



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COMPU-LOG V8L2 PLOT 05-26-80

QPD 88002

GAMMA NEUTRON RODS

PERRY CREEK

HOLE DIAMETER = 13.1

PROBE # 9055A - 079

SENSOR #4 CAL STD CPS = 152

SENSOR #4 CAL RUN CPS = 106

SENSOR #4 CAL BIAS = 0

DATA V8L2WA TRUCK # 604

MIKE APPL.#7 L1

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CEI

291

283

267

VERTICAL DEVIATION

COMPU-LOG V8L1 DEVIATION
DATA FROM : V8L2*A

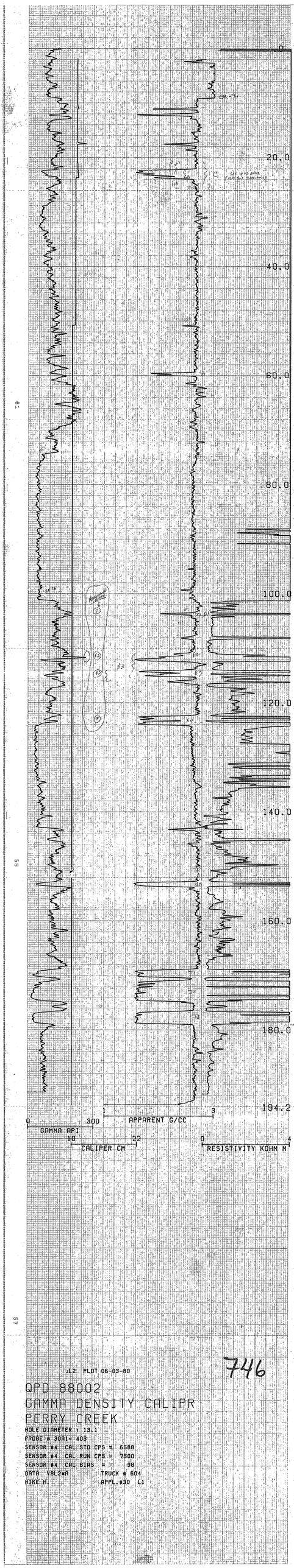
CLIENT : GAMMA NEUTRON DEV.
LOCATION : PERRY CREEK
HOLE ID : DGD-B002
DATE OF LOG : 05-26-80
PROBE : 9055A 0078

SCALE: .50 M/DIV
MAG DECL: 24.5
TRUE DEPTH: 193.8 M
AZIMUTH: 186.7
DISTANCE: 5.6 M

+ = 10.0 M INCH
Φ = TOP OF ZONE
Φ = BOTTOM OF ZONE
TRUE NORTH

746

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040



PART NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CEN

746

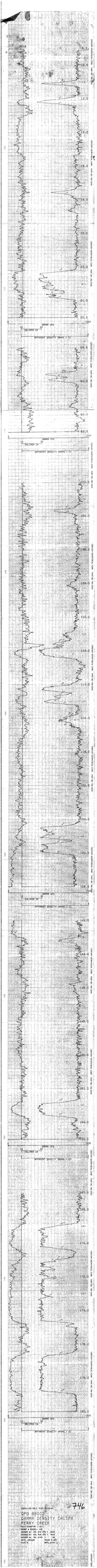
JL2 PLOT 06-03-80

QPD 88002

GAMMA DENSITY CALIPR

PERRY CREEK

HOLE DIAMETER : 13.1
PROBE # 30A1- 403
SENSOR #4 CAL STD CPS = 6588
SENSOR #4 CAL RUN CPS = 7500
SENSOR #4 CAL BIAS = 98
DATA V8L2WR TRUCK # 604
MIKE H. APPL.#30 LJ



DRILLED NOV. 7-21, 1980 (L.D.)

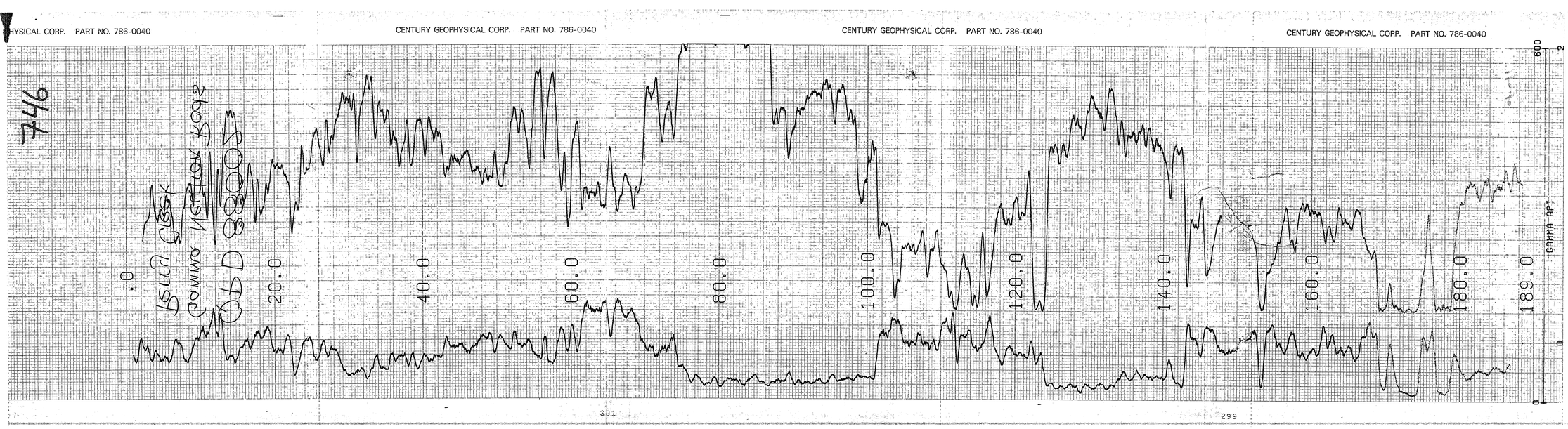
CPD 89002

GAMMA DENSITY CALIPER

PERRY CREEK

HOLE DIAMETER = 6.5"
CASING: 0 TO 20' = 8.625
GROUT AT 20' TO 170 = 6.5
GROUND AT 0'; DIA TO = 6.5
WATER LEVEL = 0' (DRY)
DATE LOGGED 10/22 & 23
TOOL #

746


Dawn Gas
Gamma Ray Log
Dec 8 1980
.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
189.0
600
0
GAMMA API
2
0

CENTURY GEOPHYSICAL CORPORATION

* * * * * * * * VERTICAL DEVIATION * * * * * * * *

COMPU-LOG V8L1 DEVIATION

CLIENT : GAMMA NEUTRON DEV. HOLE ID : GPD 88002

LOCATION : PERRY CREEK DATE OF LOG : 05-26-80

DATA FROM : V8L2*A PROBE : 9055A 0079

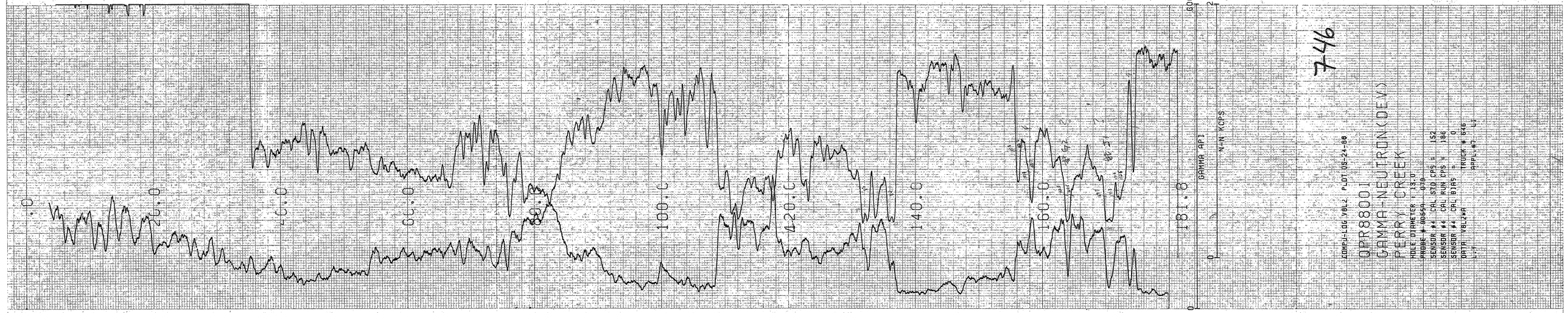
TD = TOTAL DEPTH
T = TOP OF ZONE
B = BOTTOM OF ZONE

DEPTH	TRUE DEPTH	NORTH DEV	EAST DEV	DISTANCE	AZIMUTH	SA	SAB
.00	.00	.00	.00	.00	.0	.0	.0
10.00	9.99	-.10	-.04	.11	201.7	.6	201.6
20.00	19.99	-.21	-.09	.24	204.5	.7	207.1
30.00	29.99	-.37	-.30	.48	219.7	1.4	233.7
40.00	39.99	-.44	-.53	.70	230.2	1.4	251.2
50.00	49.98	-.54	-.78	.95	235.5	1.5	249.7
60.00	59.98	-.66	-1.07	1.26	238.1	1.7	246.2
70.00	69.97	-.81	-1.36	1.58	239.2	1.8	243.4
80.00	79.97	-.96	-1.67	1.93	239.9	1.9	243.2
90.00	89.96	-1.02	-2.05	2.29	243.6	2.2	261.9
100.00	99.95	-1.12	-2.43	2.68	245.1	2.2	254.1
110.00	109.94	-1.54	-2.33	2.80	236.5	2.4	167.5
120.00	119.93	-1.99	-2.25	3.01	228.6	2.5	169.7
130.00	129.92	-2.44	-2.17	3.27	221.6	2.6	169.1
140.00	139.90	-2.90	-2.06	3.55	215.4	2.6	166.5
150.00	149.89	-3.34	-1.94	3.86	210.2	2.6	165.3
160.00	159.88	-3.80	-1.83	4.22	205.8	2.7	166.3
170.00	169.87	-4.27	-1.77	4.62	202.5	2.7	172.0
180.00	179.86	-4.72	-1.69	5.02	199.7	2.6	170.1
190.00	189.85	-5.20	-1.64	5.45	197.5	2.7	174.2
TD 194.10	193.94	-5.40	-1.61	5.63	196.7	2.7	172.9

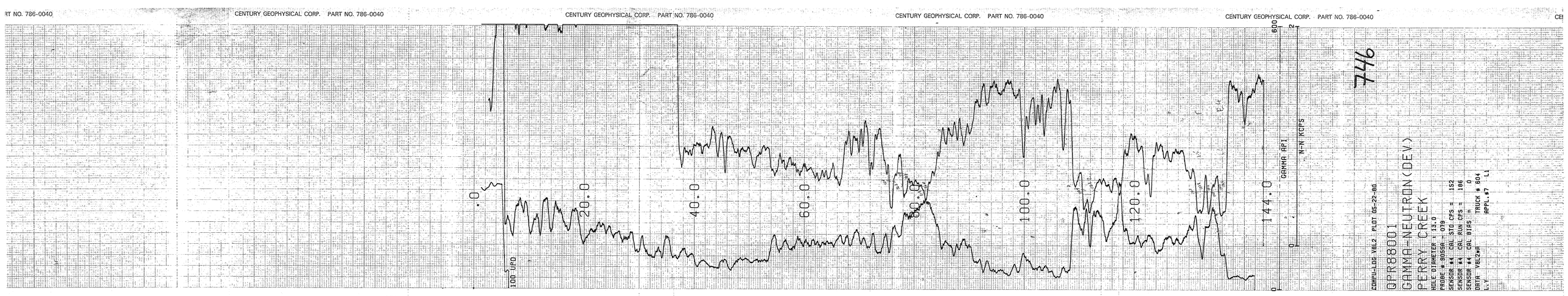
*

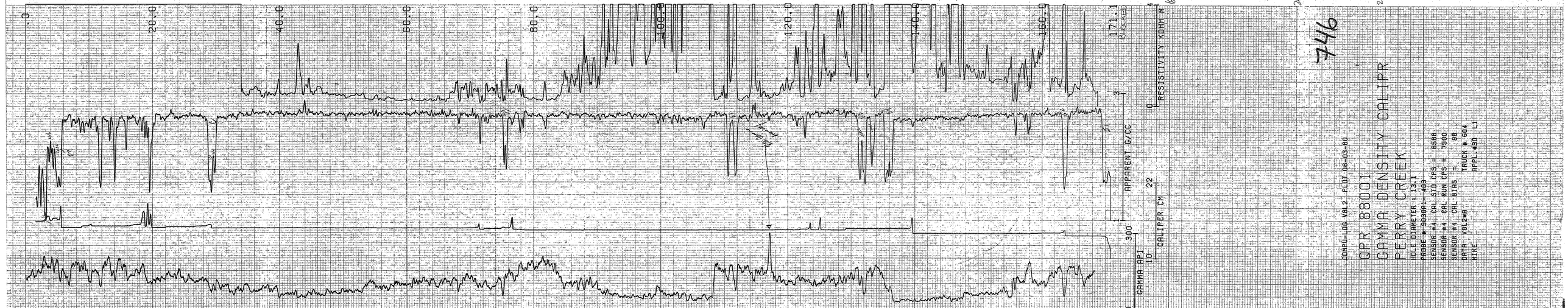
90° Turn

746


0
25.0
50.0
75.0
100.0
120.0
140.0
160.0
180.0
GAMMA API
N-N KCPS
0
2
6000
COMP-LOG V8L2 PLOT 05-24-80
QPR8801
GAMMA-NEUTRON(DEV)
PERRY CREEK
HOLE DIAMETER = 13.0
PROBE # 8665 DTA =
SENSOR #4 CAL STD CPS = 152
SENSOR #4 CAL RUN CPS = 186
SENSOR #4 CAL DIFF = 0
DATA V8L2XM TRUCK # 646
PPF=1.1
746

RT NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CENTURY GEOPHYSICAL CORP. PART NO. 786-0040 CE




0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
171.1
(BLOCKED)
RESISTIVITY KOHM-M
APPARENT G/CC
CALIPER CM
GAMMA API
300
22
3
0
10
4
16"
64"
16"N
64"N
COMPU-LOG VAL2 PLOT 06-03-80
HOLE DIAMETER : 13.1
PROBE # 980091 403
SENSOR #4 CAL STD CPS = 6568
SENSOR #4 CAL RUN CPS = 7500
SENSOR #4 CAL BIAS = 98
DATA VAL2mA TRUCK # 604
MIKE PPL #30 LI
QPR 8801
GAMMA DENSITY CALIPR
PERRY CREEK
746

VERTICAL DEVIATION

746

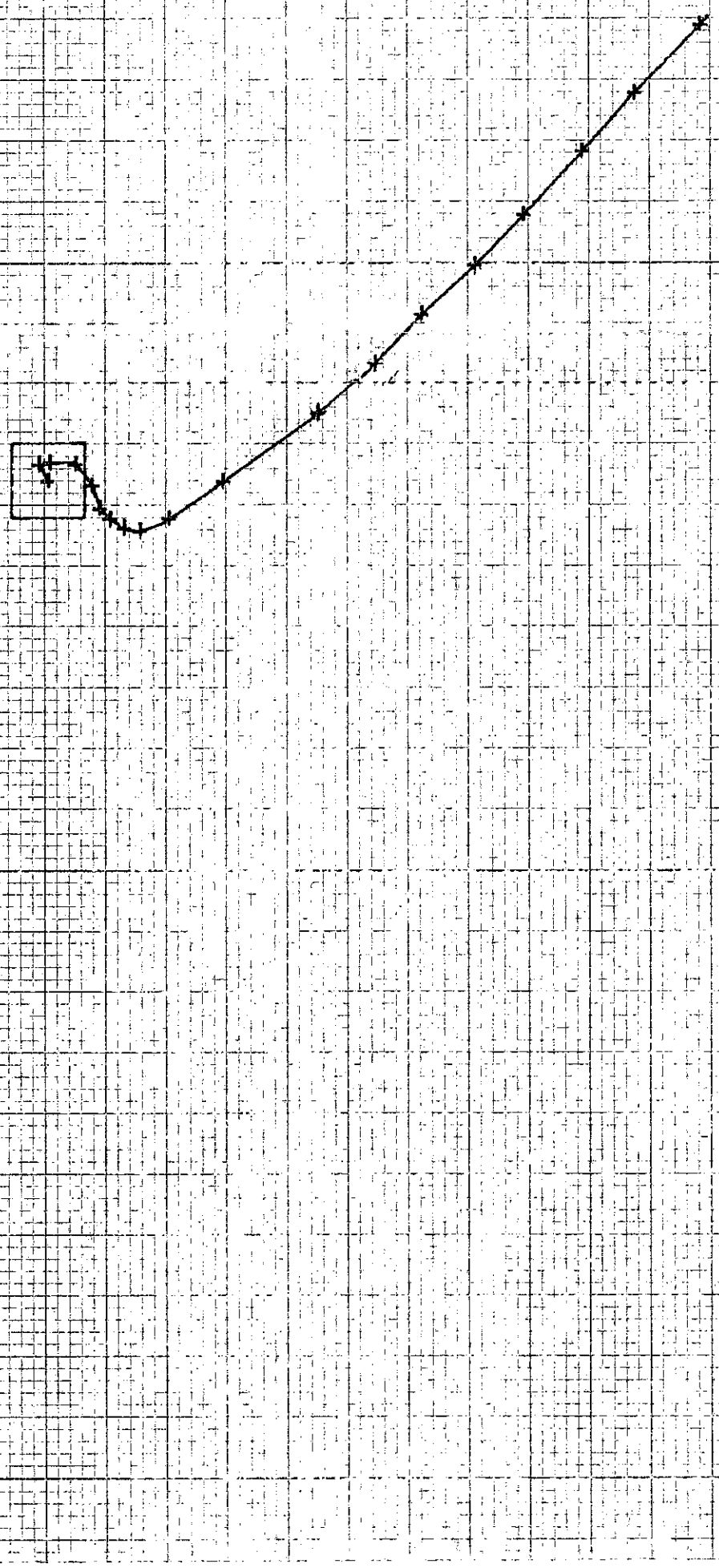
COMPU-LOG V8L1 DEVIATION
DATA FROM : V8L2*A

CLIENT : GAMMA-NEUTRON(DEV)
LOCATION : PERRY CREEK
HOLE ID : QPR88001
DATE OF LOG : 05-24-88
PROBE : 9055A 0079

SCALE: .75 M/DIV
MAG DECL: 24.5
TRUE DEPTH: 181.0 M
AZIMUTH: 55.1
DISTANCE: 9.96 M

+ = 10.0 M INCR
△ = TOP OF ZONE
◇ = BOTTOM OF ZONE

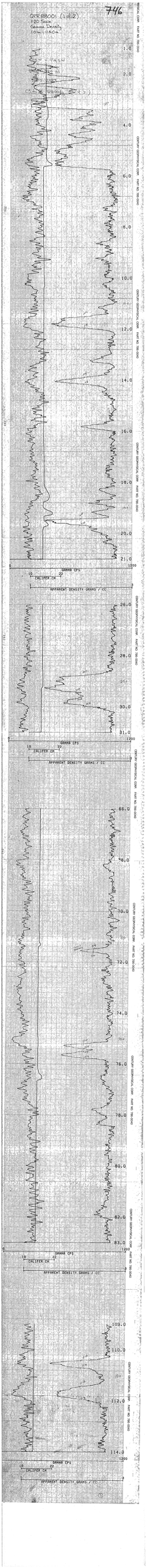
TRUE NORTH ↑

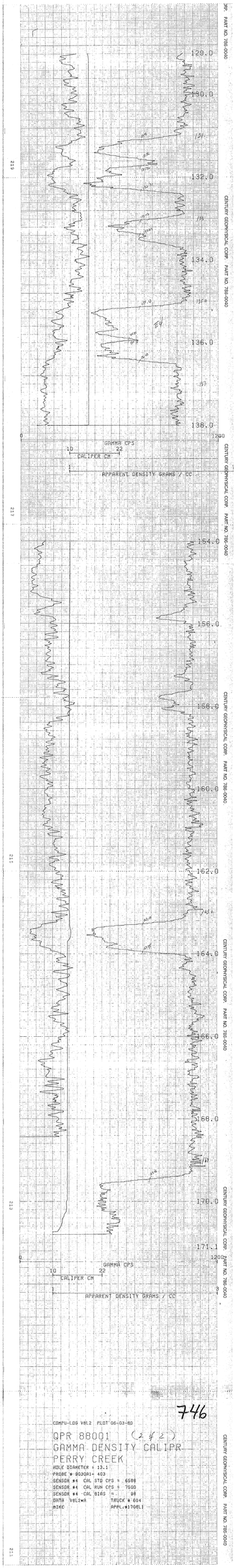


CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

746

ORR 8800' (1 of 2)
1:20 Scale
Gamma Density
10cm = 1MeV





746

COMPU-LOG V8L2 PLOT 06-03-80

QPR 88001 (2 of 2)

GAMMA DENSITY CALIPR

PERRY CREEK

HOLE DIAMETER = 13.1

PROBE # 8030A1= 403

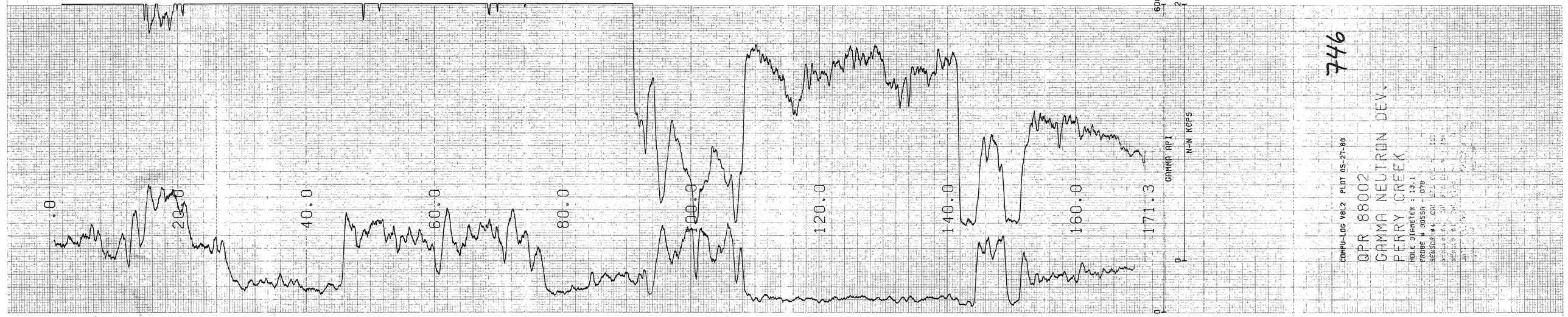
SENSOR #4 CAL STD CPS = 6500

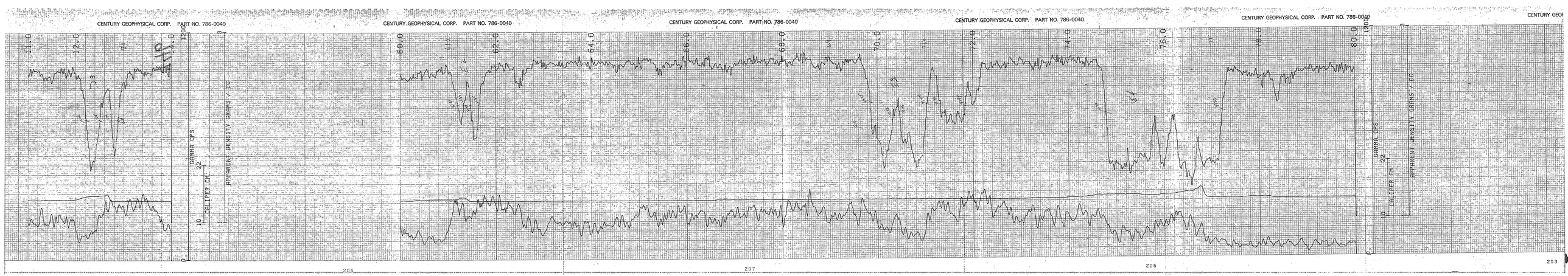
SENSOR #4 CAL RUN CPS = 7500

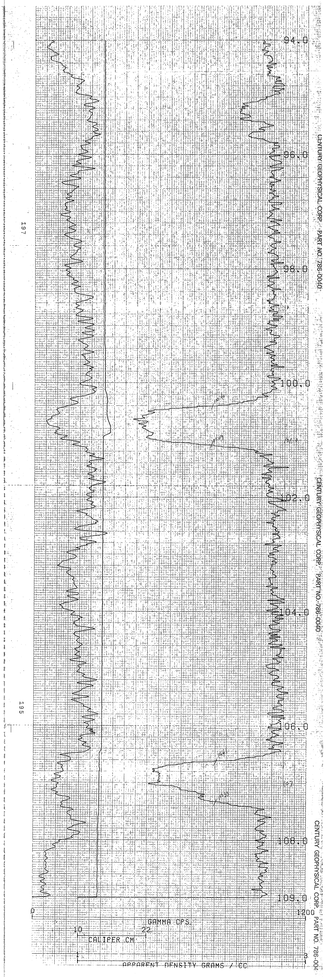
SENSOR #4 CAL BIAS (+ / -) 00

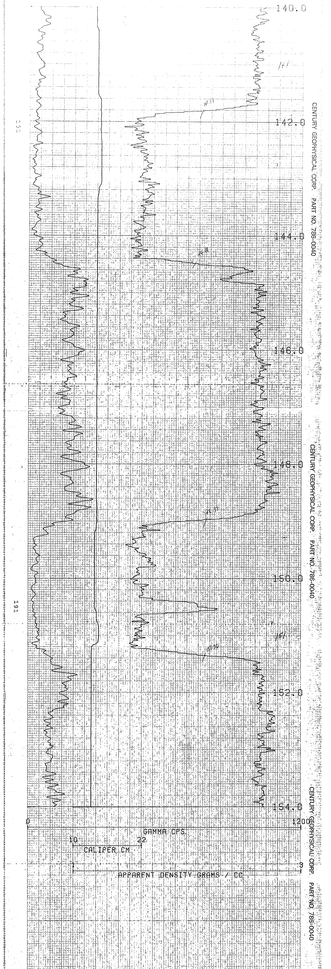
DATA V8L2#A TRUCK # 604

MIKE APPL.#1706LI


0.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
171.3
GAMMA API
N-N KCPS
600
0
2
0
7446
COMPU-LOG V8L2 PLOT 05-27-80
QPR 88002
GAMMA NEUTRON DEV.
PERRY CREEK
HOLE DIAMETER : 13.1
PROBE # 9055A - 079
SENSOR #1 CPS


CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
CENTURY GEOPHYSICAL CORP.
GAMMA CPS
CALIPER CM
APPARENT DENSITY GRAMS / CC
206
207
205
203





COMPU-LOG VOL2 PLOT 06-03-80

Western

QPR 88002
GAMMA DENSITY CALIPR
PERRY CREEK

HOLE DIAMETER 13.1
PROBE # 900581-489
SENSOR ## CAL STD CPS % 6588
SENSOR ## CAL RUN CPS % 7980
SENSOR ## CAL 9185 IN 88
DATA VOL2WA TRUCK # 604
MAKE #1 RPPL #1081

1:20 Example Log Data Plot

7.46

VERTICAL DEVIATION

COMPU-LOG V8L1 DEVIATION
DATA FROM : V8L2*A

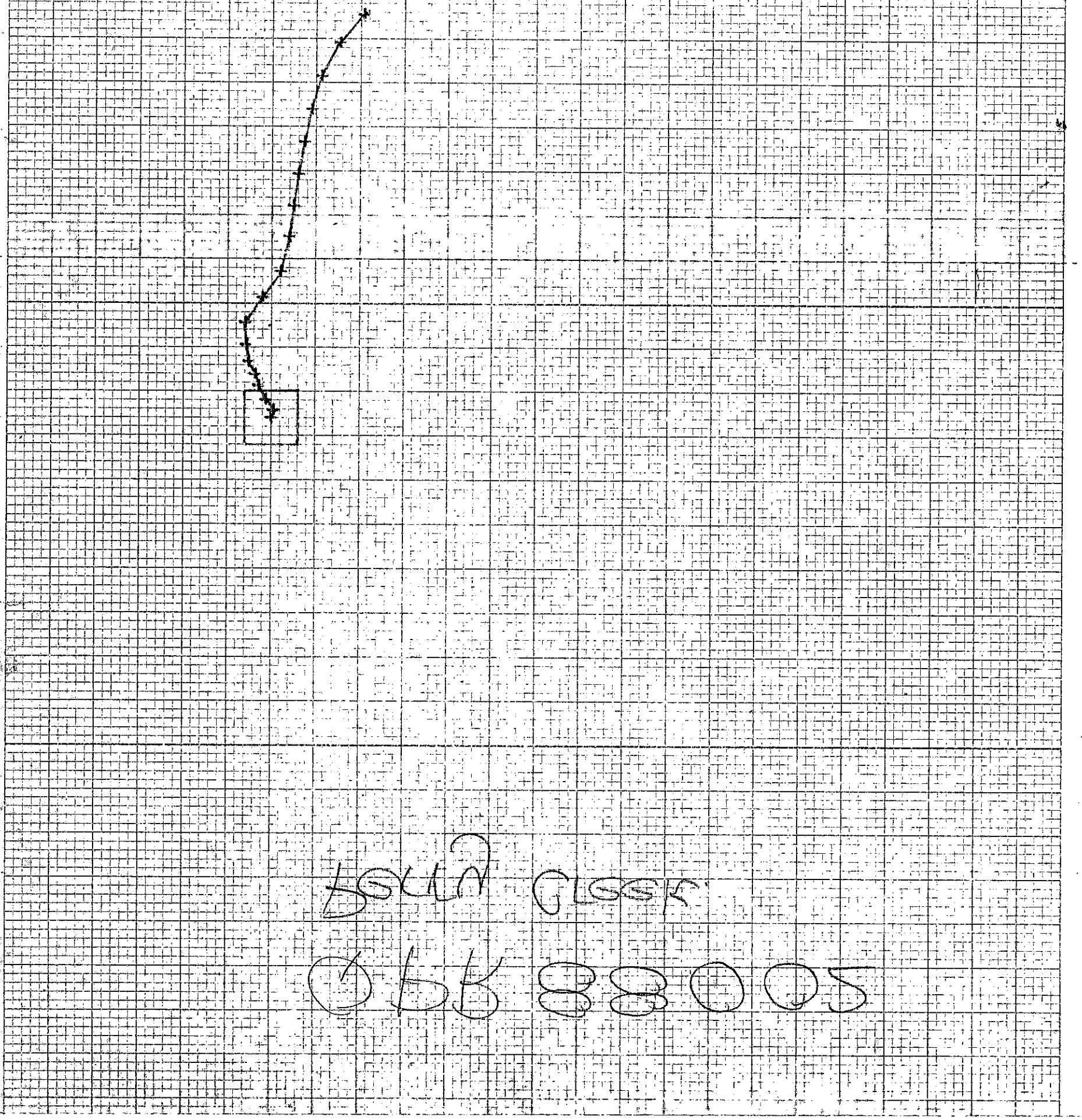
CLIENT : GAMMA NEUTRON DEV.
LOCATION : PERRY CREEK
[redacted]
DATE OF LOG : 05-27-80
PROBE : 9055A 0079

SCALE: 1.50 M/DIV
MAG DECL: 24.5
TRUE DEPTH: 170.4 M
AZIMUTH: 13.2
DISTANCE: 14.19 M

+ = 10.0 M INCR
Δ = TOP OF ZONE
◇ = BOTTOM OF ZONE

TRUE NORTH ↑

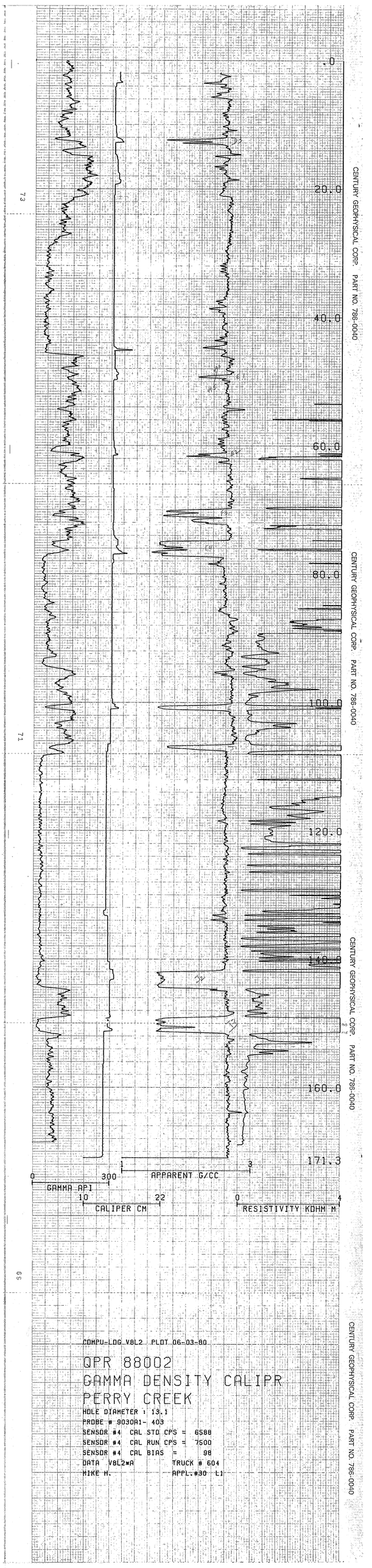
746



South Close
OBK 880005

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

NO. 786-0040



COMPU-LOG V8L2 PLOT 06-03-80

QPR 88002

GAMMA DENSITY CALIPR

PERRY CREEK

HOLE DIAMETER : 13.1
PROBE # 9030A1- 403
SENSOR #4 CAL STD CPS = 6588
SENSOR #4 CAL RUN CPS = 7500
SENSOR #4 CAL BIAS = 98
DATA V8L2*A TRUCK # 604
MIKE M. APPL.#30 L1

CENTURY GEOPHYSICAL CORPORATION

* * * * * * * * VERTICAL DEVIATION * * * * * * * * *

COMPU-LOG VSLI DEVIATION

CLIENT : GAMMA NEUTRON DEV.

LOCATION : PERRY CREEK

DATA FROM : VSL2*A

HOLE ID : GPR 80002

DATE OF LOG : 05-27-80

PROBE : 9055A 0079

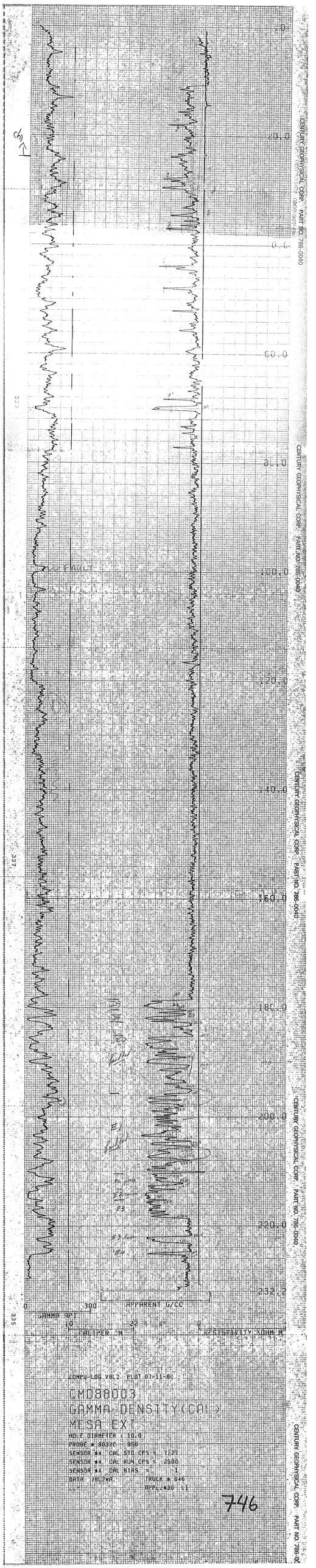
TD = TOTAL DEPTH
T = TOP OF ZONE
B = BOTTOM OF ZONE

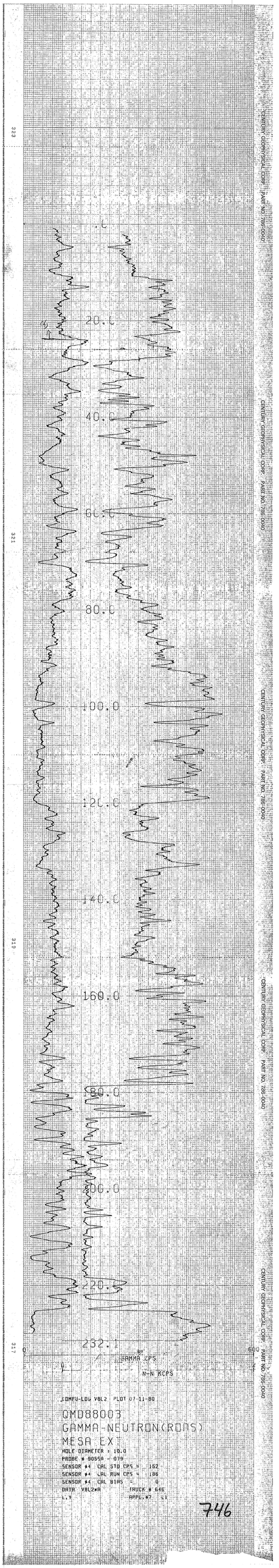
	DEPTH	TRUE DEPTH	NORTH DEV	EAST DEV	DISTANCE	AZIMUTH	SA	SAB
	.00	.00	.00	.00	.00	.0	.0	.0
	10.00	9.99	.25	.09	.27	20.2	1.5	20.1
	20.00	19.97	.60	-.17	.63	343.9	2.5	322.4
	30.00	29.96	1.08	-.42	1.16	338.6	3.0	332.4
	40.00	39.95	1.47	-.54	1.56	339.8	2.3	343.2
	50.00	49.93	1.89	-.76	2.04	338.0	2.7	332.2
	60.00	59.91	2.46	-.84	2.60	341.1	3.2	352.1
	70.00	69.88	3.22	-.87	3.33	344.8	4.3	357.6
	80.00	79.82	4.08	-.28	4.09	356.0	5.9	34.5
	90.00	89.76	4.97	.33	4.99	3.8	6.2	34.6
	100.00	99.69	6.13	.61	6.16	5.7	6.8	13.5
	110.00	109.63	7.19	.75	7.22	6.0	6.1	7.7
	120.00	119.57	8.26	.91	8.31	6.3	6.2	8.3
	130.00	129.51	9.34	1.12	9.41	6.9	6.3	10.9
	140.00	139.44	10.46	1.36	10.55	7.4	6.5	12.1
	150.00	149.37	11.60	1.70	11.72	8.3	6.7	16.4
	160.00	159.28	12.73	2.31	12.94	10.3	7.4	28.5
	170.00	169.19	13.70	3.13	14.05	12.9	7.2	40.1
TD	171.20	170.38	13.81	3.24	14.19	13.2	7.7	45.6

746

WOLVERINE VALLEY SOUTH

GRONDSLAG
GEOMECHANICAL
LOG
Well Name : 1
Field : Wildcat
Location : Gulf of Mexico
Elevation : 0 ft
Measured From : KB
Permanent Datum : MSL
Depth Unit : ft
Date : 1-Jan-2000
Run No. : One
Service Company : Schlumberger
Logging Engineer : J. Smith
Witness : M. Jones
Max Temperature : 250 °F
Max Pressure : 12000 psi
Mud Type : Water Based
Mud Weight : 9.5 ppg
Viscosity : 45 sec
Fluid Loss : 5 cc
Casing Shoe : 5000 ft
Bit Size : 8.5 in
Hole Size : 8.5 in
Logging Speed : 1800 ft/hr
Tool String : Gamma Ray, Resistivity, Density, Neutron, Sonic
Remarks : Good hole conditions, no washouts
Gamma Ray (API)
Resistivity (ohm-m)
Density (g/cc)
Neutron (%)
Sonic (us/ft)
Caliper (in)
Spontaneous Potential (mV)
Temperature (°F)
Pressure (psi)
Depth (ft)
Track 1
Track 2
Track 3
Track 4
Track 5
Track 6
Track 7
Track 8
Track 9
Track 10
Track 11
Track 12
Track 13
Track 14
Track 15
Track 16
Track 17
Track 18
Track 19
Track 20
Track


0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
200.0
220.0
232.2
APPARENT G/CC
GAMMA API
CALIPER "M"
RESISTIVITY NORM M
COMPU-LOG V8L2 PLOT 07-11-00
CMD88003
GAMMA DENSITY(CAL)
MESA EXT.
HOLE DIAMETER : 10.0
PROBE # 8032C 950
SENSOR #X CAL STD CPS = 1127
SENSOR #X CAL RUN CPS = 2500
SENSOR #X CAL BIAS = 1
DATA 78L2WR TRUCK # 846
APP:-K30 LL
CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
746


323
321
319
317
CENTURY GEOPHYSICAL CORP. PART NO. 796-0040
CENTURY GEOPHYSICAL CORP. PART NO. 796-0040
CENTURY GEOPHYSICAL CORP. PART NO. 796-0040
CENTURY GEOPHYSICAL CORP. PART NO. 796-0040
CENTURY GEOPHYSICAL CORP. PART NO. 796-0040
0.0
20.0
40.0
60.0
80.0
100.0
120.0
140.0
160.0
180.0
200.0
220.1
232.1
0
600
GAMMA CPS
N-N KCPS
JOMPU-LOG V8L2 PLOT 07-11-90
QMD88003
GAMMA-NEUTRON(RDNS)
MESA EXT
HOLE DIAMETER = 10.0
PROBE # 9055A - 079
SENSOR #4 CAL STD CPS = 182
SENSOR #4 CAL RUN CPS = 186
SENSOR #4 CAL BIAS = 0
DATA V8L2WR TRUCK # 646
L.Y APPL.#7 L1
746

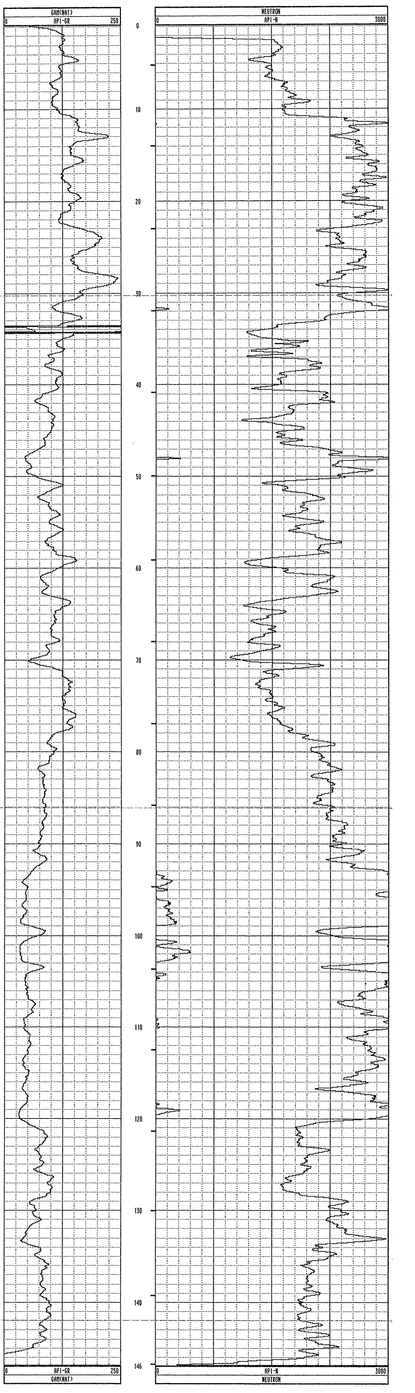
Century

GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: CORE HOLE CMQ92003				
LOCATION/FIELD	:				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 07/28/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	:	ELEV. PERM. DATUM:		KB :	
LOG BOTTOM	: 146.88	LOG MEASURED FROM:	GL	DF :	
LOG TOP	: 0.92	DRL MEASURED FROM:	GL	GL :	
CASING DRILLER	: 296	LOGGING UNIT	: 8602		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .2	RECORDED BY	: R. WHITTAKER		
BIT SIZE	: 13.34	BOREHOLE FLUID	: WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.5	RM	: 0	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 1	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : 055 0	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 54

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/15/88	08:07:28	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	07/15/88	08:07:28	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	07/15/88	14:13:31	0	POROSITY	0.000 CPS	224.000 CPS
3	07/15/88	08:07:28	0	RES	0.000 CPS	0.000 OHM
4	07/15/88	08:07:28	0	RES	0.000 CPS	0.000 OHM
5	07/15/88	08:07:28	0	SP	0.000 CPS	0.000 MV
6	07/15/88	08:07:28	0	SP	0.000 CPS	0.000 MV
7	07/19/88	01:26:27	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/15/88	08:15:19	0	NEUTRON	224.000 CPS	271.000 API-N

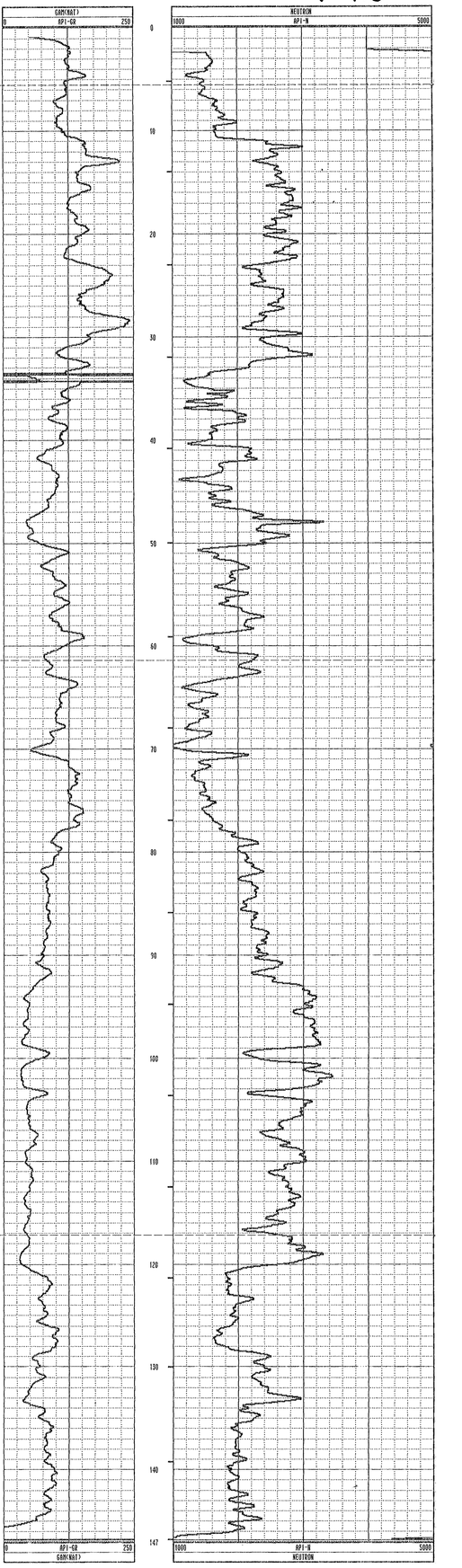
Century

QMD 88003 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMD 88003 GAMMA-NEUTRON				
LOCATION/FIELD	:				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 07/28/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	:	ELEV. PERM. DATUM:		KB	:
LOG BOTTOM	: 146.88	LOG MEASURED FROM:	GL	DF	:
LOG TOP	: 0.92	DRL MEASURED FROM:	GL	GL	:
CASING DRILLER	: 296	LOGGING UNIT	: 8602		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .2	RECORDED BY	: R. WHITTAKER		
BIT SIZE	: 13.34	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.5	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: Q55 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500
REMARKS	:				

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 54

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/15/88	08:07:28	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/15/88	08:07:28	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/15/88	14:13:31	0	POROSITY	0.000 CPS	224.000 CPS
3	07/15/88	08:07:28	0	RES	0.000 CPS	0.000 OHM
4	07/15/88	08:07:28	0	RES	0.000 CPS	0.000 OHM
5	07/15/88	08:07:28	0	SP	0.000 CPS	0.000 MV
6	07/15/88	08:07:28	0	SP	0.000 CPS	0.000 MV
7	07/19/88	01:26:27	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/15/88	08:15:19	0	NEUTRON	224.000 CPS	271.000 API-N

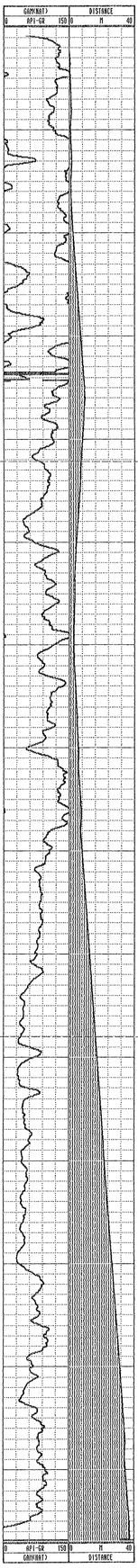
Century

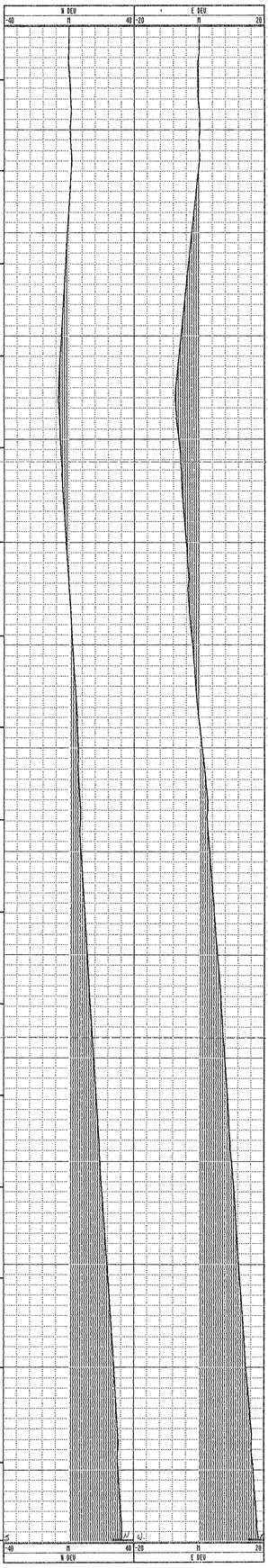
QMD 88003 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMD 88003 DEVIATION				
LOCATION/FIELD	:				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 07/31/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	:	ELEV. PERM. DATUM:		KB	:
LOG BOTTOM	: 146.88	LOG MEASURED FROM:	GL	DF	:
LOG TOP	: 0.92	DRL MEASURED FROM:	GL	GL	:
CASING DRILLER	: 296	LOGGING UNIT	: 8602		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS: .2		RECORDED BY	: R. WHITTAKER		
BIT SIZE	: 13.34	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9055-D 1
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746





Century

GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: DDH 88155		
LOCATION-FIELD	:		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 07/28/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER	: 297	ELEV.: PERM. DATUM:	KB :
LOG BOTTOM	: 297.14	LOG MEASURED FROM: GL	DF :
LOG TOP	: 0.86	DRL MEASURED FROM: GL	GL :

CASING DRILLER	: 0	LOGGING UNIT	: 8602
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS: 0		RECORDED BY	: R. WHITTAKER

BIT SIZE	: 15.14	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.5	RM	: @
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: @
FLUID DENSITY	: 1.0	MATRIC DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		
OPEN HOLE			

FILE	:	ORIGINAL
TYPE	:	90558
LOG	:	1
PLOT	:	055 0
THRESH:		2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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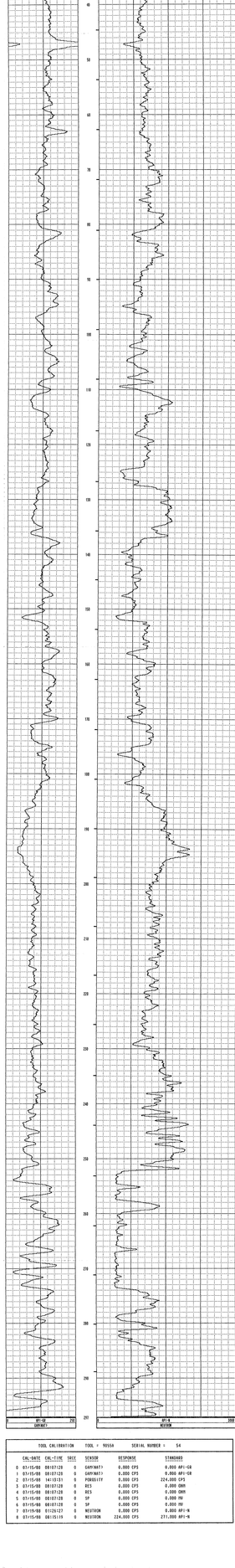

TOOL CALIBRATION		TOOL # 90558		SERIAL NUMBER # 54	
	CAL-DATE	CAL-TIME	SRCE	SENSOR RESPONSE	STANDARD
0	07/15/88	08107128	0	GAMMA87 0.000 CPS	0.000 API-GR
1	07/15/88	08107128	0	GAMMA87 0.000 CPS	0.000 API-GR
2	07/15/88	14:13:31	0	POROSITY 0.000 CPS	224.000 CPS
3	07/15/88	08107128	0	RES 0.000 CPS	0.000 OHM
4	07/15/88	08107128	0	RES 0.000 CPS	0.000 OHM
5	07/15/88	08107128	0	SP 0.000 CPS	0.000 MV
6	07/15/88	08107128	0	SP 0.000 CPS	0.000 MV
7	07/15/88	01:24:27	0	NEUTRON 0.000 CPS	0.000 API-N
8	07/15/88	08115119	0	NEUTRON 224.000 CPS	271.000 API-N

GAMMA-NEUTRON

OTHER SERVICES!

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QMU55				
LOCATION-F/FLD	: 86				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 07/28/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 296	ELEV., PERM. DATUM:		KB	:
LOG BOTTOM	: 296.76	LOG MEASURED FROM:	GL	DF	:
LOG TOP	: 0.96	DRL MEASURED FROM:	GL	GL	:
CASING DRILLER	: 296	LOGGING UNIT	: 8602		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .2	RECORDED BY	: R. WHITTAKER		
BIT SIZE	: 15.34	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MATRIX DENS.	: 2.65	PH	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.65	RM TEMPERATURE	: 0	RUN	: 1
FLUID DENSITY	: 1.00	MATRIX DELTA T	: 173	PLOT	: 055 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 698	THRESH:	2500
REMARKS	:				
TROUGH RODS					

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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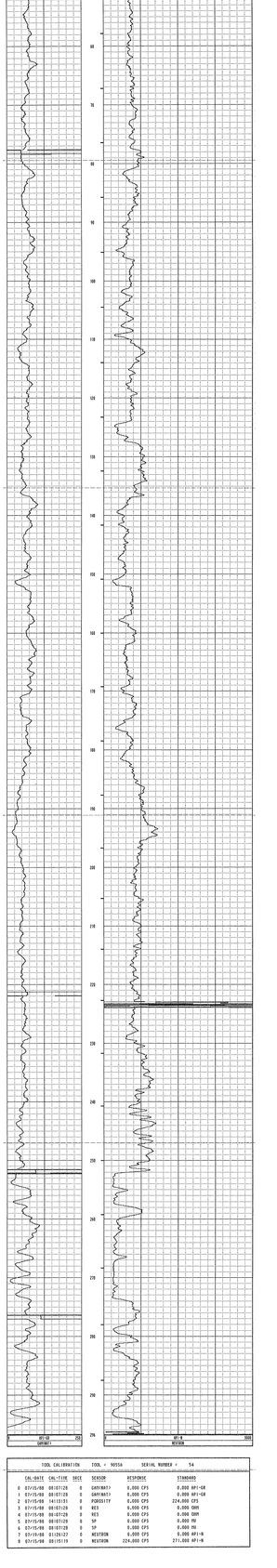

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 54

	CAL-DATE	CAL-TIME	DECI	SENSOR	RESPONSE	STANDARD
0	07/15/88	08:07:28	0	GAMMA#1	0.000 CPS	0.000 API-GR
1	07/15/88	08:07:28	0	GAMMA#2	0.000 CPS	0.000 API-GR
2	07/15/88	08:13:51	0	POROSITY	0.000 CPS	224.000 CPS
3	07/15/88	08:07:28	0	RES	0.000 CPS	0.000 OHM
4	07/15/88	08:07:28	0	RES	0.000 CPS	0.000 OHM
5	07/15/88	08:07:28	0	SP	0.000 CPS	0.000 MV
6	07/15/88	08:07:28	0	SP	0.000 CPS	0.000 MV
7	07/19/88	01:26:27	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/15/88	08:15:19	0	NEUTRON	224.000 CPS	271.000 API-N

Century

GMR 88155 GAMMA-NEUTRON

COMPANY	: QUINSETTE COAL LTD.	OTHER SERVICES:	
WELL	: GMR 88155 GAMMA-NEUTRON	DEN.NEUT	
LOCATION/FIELD	: EL 20-536110, 57,600/UESA EXT	GAS,RES.	
COUNTY	:	CAL,DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 07/28/88	PERMANENT DATUM : 1550	ELEVATIONS
DEPTH DRILLER	: 297	ELEV. PERM. DATUM: 1550	KB :
LOG BOTTOM	: 292.14	LOG MEASURED FROM: GL	DF :
LOG TOP	: 0.86	DRL MEASURED FROM: 1550	GL : 1550
CASING DRILLER	: 5	LOGGING UNIT : 8602	
CASING TYPE	: PVC	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0	RECORDED BY : R. WHITTAKER	
BIT SIZE	: 15.54	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 055 10
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

ANGLE HOLE AZIMUTH 217 : INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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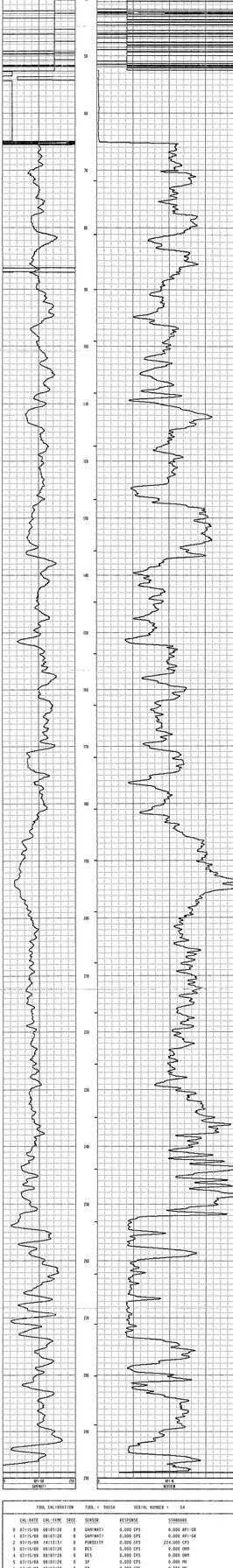

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 54

	CAL-DATE	CAL-TIME	SECT	SENSOR	RESPONSE	STANDARD
0	07/15/88	08:07:28	0	GAMMA67	0.000 CPS	0.000 API-GR
1	07/15/88	08:07:28	0	GAMMA13	0.000 CPS	0.000 API-GR
2	07/15/88	14:13:31	0	PORDIFF	0.000 CPS	224.000 CPS
3	07/15/88	08:07:28	0	RES	0.000 CPS	0.000 OHM
4	07/15/88	08:07:28	0	RES	0.000 CPS	0.000 OHM
5	07/15/88	08:07:28	0	SP	0.000 CPS	0.000 MV
6	07/15/88	08:07:28	0	SP	0.000 CPS	0.000 MV
7	07/19/88	01:26:27	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/15/88	08:15:19	0	NEUTRON	224.000 CPS	271.000 API-N

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Century

CGC

QMR 88155 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR 88155 GAMMA-DENSITY		
LOCATION/FIELD	:		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 07/31/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER	: 297	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 297.16	LOG MEASURED FROM: GL	DF :
LOG TOP	: -.00	DRL MEASURED FROM: GL	GL :
CASING DRILLER	: 0	LOGGING UNIT : 8602	
CASING TYPE	:	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0	RECORDED BY : R. WHITTAKER	

BIT SIZE	: 15.24	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	RM : 0	TYPE : 9032HC
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 7
FLUID DENSITY	: 1.0	MATRIX DELTA T : 175	PLOT : 652 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		
OPEN HOLE			

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CAL/HOLE
0 IN 20
GAMMA/T
API-GR 200

DENSITY
G/CC
0 BD/DT 3
OHM-M 1000

0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270
280
290
298

CAL/HOLE
0 IN 20

DEN/DT
G/CC
0 BD/DT 3

OHM-M
0 1000

TOOL CALIBRATION TOOL = 9032HC SERIAL NUMBER = 972

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/29/88	04:51:40	0	GAMMA/T	0.120 CPS	0.000 API-GR
1	07/29/88	17:40:50	0	GAMMA/T	1.750 CPS	5.000 API-GR
2	07/15/88	11:47:50	0	DENSITY	4856.000 CPS	1.100 G-CC
3	07/24/88	16:44:26	0	DENSITY	1774.000 CPS	2.120 G-CC
4	07/15/88	10:28:59	0	RESIS/1	0.000 CPS	0.000 OHM-M
5	07/15/88	10:28:59	0	RESIS/2	0.000 CPS	0.000 OHM-M
6	07/15/88	11:58:40	0	CALIPER	900.000 CPS	3.620 CM
7	07/15/88	11:58:40	0	CALIPER	1500.000 CPS	17.800 CM
8	07/15/88	10:28:59	0	DENSITM	0.000 CPS	0.000 G/CC
9	07/15/88	10:28:59	0	DENSITM	0.000 CPS	0.000 G/CC
10	07/15/88	10:28:59	0	CALIPER1	0.000 CPS	0.000 CM
11	07/15/88	10:28:59	0	CALIPER1	0.000 CPS	0.000 CM

Century

GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR 88155		
LOCATION/FIELD	:		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 07/28/88	PERMANENT DATUM	: GL	ELEVATIONS
DEPTH DRILLER	: 293	ELEV., PERM. DATUM:		KB :
LOG BOTTOM	: 297.16	LOG MEASURED FROM:	GL	DF :
LOG TOP	: -.08	DRL MEASURED FROM:	GL	GL :
CASING DRILLER	: 0	LOGGING UNIT	: 8602	
CASING TYPE	:	FIELD OFFICE	: CALGARY	
CASING THICKNESS: 0		RECORDED BY	: R. WHITTAKER	
BIT SIZE	: 15.54	BOREHOLE FLUID	: WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.5	PH	: 0	TYPE : 9032AC
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : 032 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 650	THRESH: 2500
REMARKS	:			
OPEN HOLE				

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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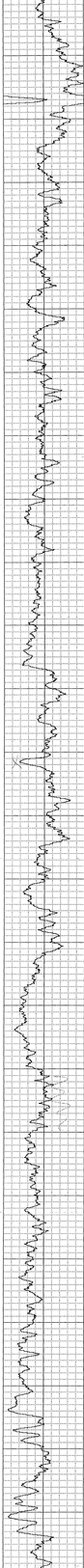

TOOL CALIBRATION			TOOL = 9032AC		SERIAL NUMBER = 972
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/27/88	04:51:40	0	GAMMA01	0.125 CPS	0.000 API-GR
1	07/28/88	11:46:50	0	GAMMA01	1.750 CPS	5.000 API-GR
2	07/15/88	11:47:30	0	DENSITY	4356.000 CPS	1.106 G/CC
3	07/24/88	16:44:26	0	DENSITY	1774.000 CPS	2.120 G/CC
4	07/15/88	10:20:59	0	RESIS01	0.000 CPS	0.000 OHM-M
5	07/15/88	10:20:59	0	RESIS02	0.000 CPS	0.000 OHM-M
6	07/15/88	11:58:40	0	CALIPER	980.000 CPS	7.625 CM
7	07/15/88	11:58:40	0	CALIPER	1980.000 CPS	17.800 CM
8	07/15/88	10:20:59	0	DENSITYM	0.000 CPS	0.000 G/CC
9	07/15/88	10:20:59	0	DENSITYM	0.000 CPS	0.000 G/CC
10	07/15/88	10:20:59	0	CALIPER1	0.000 CPS	0.000 CM
11	07/15/88	10:20:59	0	CALIPER1	0.000 CPS	0.000 CM

Century

GAMMA-DENSITY

COMPANY	: QUISTITE COAL LTD.	OTHER SERVICES:	
WELL	: DDH 59155		
LOCATION/FILE	:		
FIELD	:		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 07/29/88	PERMANENT DATUM : GL	ELEVATIONS
DEPTH DRILLER	: 297	ELEV. PERM. DATUM :	KB :
LOG BOTTOM	: 297.16	DEPTH DATUM : GL	DF :
LOG TOP	: 1.00	LOG MEASURED FROM: GL	GL :
CASING DRILLER	: 6	LOGGING UNIT : 9602	
CASING TYPE	:	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0	RECORDED BY : R. SMITHAKER	
BIT SIZE	: 15.54	NORMALIZE FLUID : WATER : PIVE : ORIGINAL	
MAGNETIC DECL.	: 24.5	DR : 0 : TYPE : 9602AC	
MATRIX DENSITY	: 2.68	MATRIX TEMPERATURE : 0 : RUN : 1	
FLUID DENSITY	: 1.0	PRIMARY DELTA T : 175 : MCH : 552 1	
LOG DENSITY MATRIX	: SANDSTONE	FLUID DELTA T : 650 : TIMEMK! 2500	
REMARKS	:		
OPEN HOLE			

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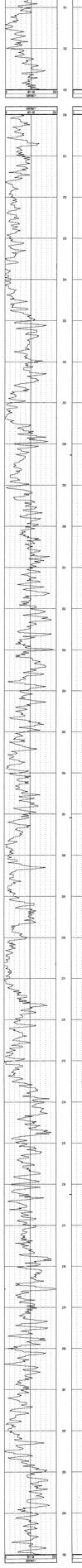

Century Geophysical Corp.

QMR 88155 DEVIATION

COMPANY	: SUPERSTITE CONS LTD.
WELL	: QMR 88155 DEVIATION
LOCATION/FILE	: 0, 2032E/0, 3590N/WARREN ROAD
COUNTY	:
STATE	: BRITISH COLUMBIA
ELEVATION	: TOWNSHIP
	RANGE :

OTHER SERVICES: GAM,RES, DIL,SFL

DATE	: 08/08/88	PERMANENT DATUM : 1950	ELEVATIONS
DEPTH DRILLER	: 297.	ELEV. PERM. DATUM : 1950	KB : 1950
LOG BOTTOM	: 297.16	LOG MEASURED FROM: 1950	DF : 1950
LOG TOP	: 0.00	DRL MEASURED FROM: 1950	GL : 1950
CASING DRILLER	: 5	LOGGING UNIT : 8602	
CASING TYPE	: CASING	RECORDED BY : R.L.WHITAKER	
CASING THICKNESS	: 0	WITNESSED BY : R.L.WHITAKER	

BIT SIZE	: 15.24	BOREHOLE FLUID : WATER	FILE : PROCESSED
FLUID LOSS	: 24.500	DR : 0	TYPE : 60550
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T : 172	PLOT : 9855-9 1
MODIFIED MATRIX	: SANDSTONE	FLUID DELTA T : 690	TAMISH: 2500
REMARKS	:		
	OPEN HOLE		

ALL SERVICES PERFORMED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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DEPTH	D DEV	N DEV	E DEV	DISTANCE	AZIMUTH	SAMPS	SAMPS
(M)	M	M	M	M	DEG	DEG	DEG
0.00	0.0	0.0	0.0	0.0	0.0	0.0	0
5.00	1.0	1.0	0.0	0.0	90.1	0.1	60.7
10.00	1.0	1.0	0.0	0.0	60.5	0.1	59.7
15.00	1.0	1.0	0.0	0.0	57.5	0.1	59.2
20.00	1.0	1.0	0.0	0.0	57.1	0.1	51.0
25.00	25.0	1.0	0.0	0.0	54.6	0.1	39.1
30.00	30.0	1.0	0.0	0.0	52.0	0.1	55.3
35.00	35.0	1.0	0.0	0.1	51.1	0.1	47.7
40.00	40.0	1.0	0.0	0.1	51.7	0.1	51.6
45.00	45.0	1.0	0.0	0.1	53.1	0.1	54.6
50.00	50.0	1.0	0.0	0.1	52.7	0.1	44.7
55.00	55.0	1.0	0.0	0.1	53.7	0.1	70.7
60.00	60.0	1.0	0.1	0.1	54.0	0.1	16.2
65.00	65.0	1.0	0.1	0.1	52.1	0.1	55.1
70.00	69.9	1.1	0.1	0.1	51.7	0.1	166.7
75.00	74.9	1.6	0.0	0.1	0.4	225.5	25.4	221.5
80.00	79.9	2.1	0.0	0.2	0.3	221.9	24.8	223.8
85.00	84.9	2.5	0.0	0.2	0.3	221.7	23.4	221.5
90.00	89.9	2.9	0.0	0.2	0.3	221.6	23.0	221.1
95.00	94.8	3.4	0.0	0.2	0.3	221.5	22.6	221.7
100.00	99.8	3.8	0.0	0.2	0.3	221.4	22.2	221.5
105.00	104.8	4.3	0.0	0.2	0.3	221.3	21.9	221.3
110.00	109.8	4.8	0.0	0.2	0.3	221.2	21.5	221.3
115.00	114.8	5.2	0.0	0.2	0.3	221.1	21.2	221.3
120.00	119.7	5.7	0.0	0.2	0.3	221.0	20.9	221.3
125.00	124.7	6.2	0.0	0.2	0.3	220.9	20.6	221.3
130.00	129.7	6.6	0.0	0.2	0.3	220.8	20.3	221.3
135.00	134.7	7.1	0.0	0.2	0.3	220.7	20.0	221.3
140.00	139.6	7.5	0.0	0.2	0.3	220.6	19.7	221.3
145.00	144.6	8.0	0.0	0.2	0.3	220.5	19.4	221.3
150.00	149.6	8.4	0.0	0.2	0.3	220.4	19.2	221.3
155.00	154.6	8.9	0.0	0.2	0.3	220.3	18.9	221.3
160.00	159.5	9.3	0.0	0.2	0.3	220.2	18.7	221.3
165.00	164.5	9.8	0.0	0.2	0.3	220.1	18.4	221.3
170.00	169.5	10.2	0.0	0.2	0.3	220.0	18.2	221.3
175.00	174.4	10.7	0.0	0.2	0.3	219.9	18.0	221.3
180.00	179.4	11.1	0.0	0.2	0.3	219.8	17.8	221.3
185.00	184.4	11.6	0.0	0.2	0.3	219.7	17.6	221.3
190.00	189.3	12.0	0.0	0.2	0.3	219.6	17.4	221.3
195.00	194.3	12.5	0.0	0.2	0.3	219.5	17.2	221.3
200.00	199.3	12.9	0.0	0.2	0.3	219.4	17.0	221.3
205.00	204.2	13.4	0.0	0.2	0.3	219.3	16.8	221.3
210.00	209.2	13.8	0.0	0.2	0.3	219.2	16.7	221.3
215.00	214.2	14.3	0.0	0.2	0.3	219.1	16.5	221.3
220.00	219.1	14.7	0.0	0.2	0.3	219.0	16.3	221.3
225.00	224.1	15.2	0.0	0.2	0.3	218.9	16.2	221.3
230.00	229.1	15.6	0.0	0.2	0.3	218.8	16.0	221.3
235.00	234.0	16.1	0.0	0.2	0.3	218.7	15.9	221.3
240.00	239.0	16.5	0.0	0.2	0.3	218.6	15.7	221.3
245.00	244.0	17.0	0.0	0.2	0.3	218.5	15.6	221.3
250.00	249.0	17.4	0.0	0.2	0.3	218.4	15.4	221.3
255.00	253.9	17.9	0.0	0.2	0.3	218.3	15.3	221.3
260.00	258.9	18.3	0.0	0.2	0.3	218.2	15.2	221.3
265.00	263.9	18.8	0.0	0.2	0.3	218.1	15.0	221.3
270.00	268.8	19.2	0.0	0.2	0.3	218.0	14.9	221.3
275.00	273.8	19.7	0.0	0.2	0.3	217.9	14.8	221.3
280.00	278.8	20.1	0.0	0.2	0.3	217.8	14.6	221.3
285.00	283.7	20.6	0.0	0.2	0.3	217.7	14.5	221.3
290.00	288.7	21.0	0.0	0.2	0.3	217.6	14.4	221.3
295.00	293.7	21.5	0.0	0.2	0.3	217.5	14.3	221.3
297.00	295.7	21.7	0.0	0.2	0.3	217.5	14.2	221.3

PAGE 1 Century Geophysical Corp. 9000A -PROCESSED

Century

QMR88501 GAMMA DENSITY

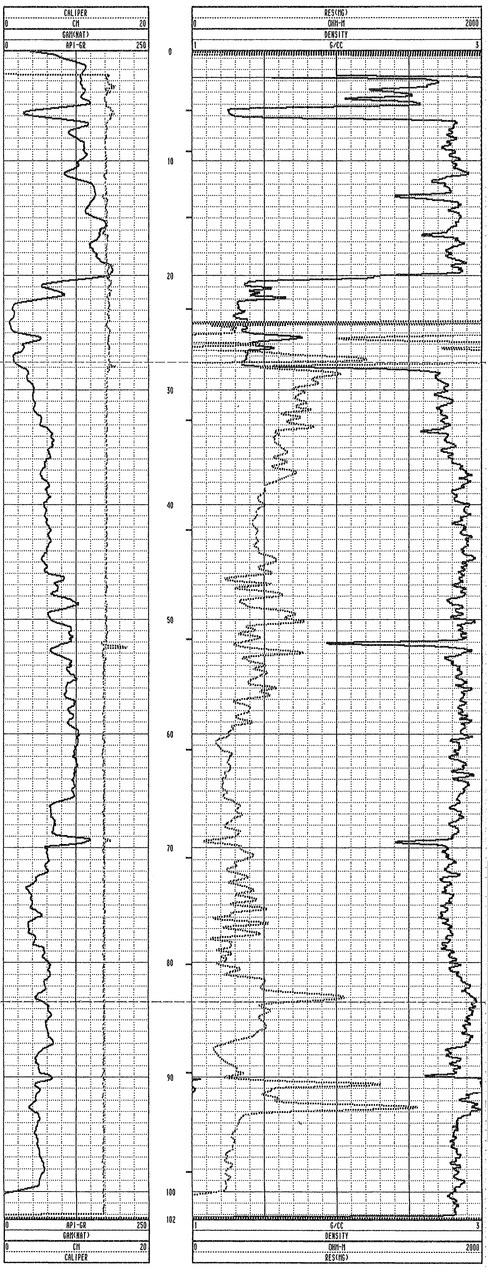
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QMR88501 GAMMA DENSITY				
LOCATION/FIELD	: WOVERINE VALLY/MESA EXT.				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/06/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 102	ELEV. PERM. DATUM	: 860	KB	: 0
LOG BOTTOM	: 102.36	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.46	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 8000
REMARKS	:				

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

VERTICAL HOLE
LOG OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(ING)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(ING)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

GMR88501 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: GMR88501 GAMMA DENSITY	DEN.NEUT	
LOCATION/FIELD	: WOUVERINE VALLY/MESA EXT.	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

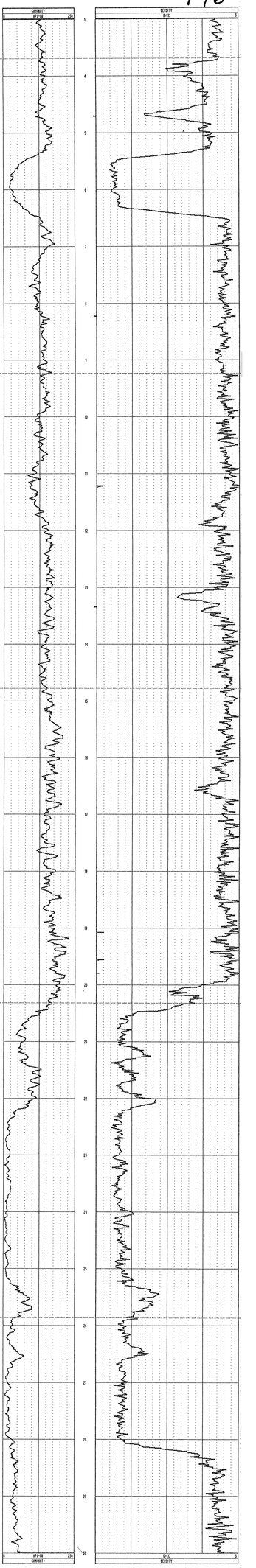
DATE	: 10/06/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 102	ELEV. PERM. DATUM	: 860	KB	: 0
LOG BOTTOM	: 102.36	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.46	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		

BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: QUIN 5
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	8000
REMARKS	:				

VERTICAL HOLE
LOG OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



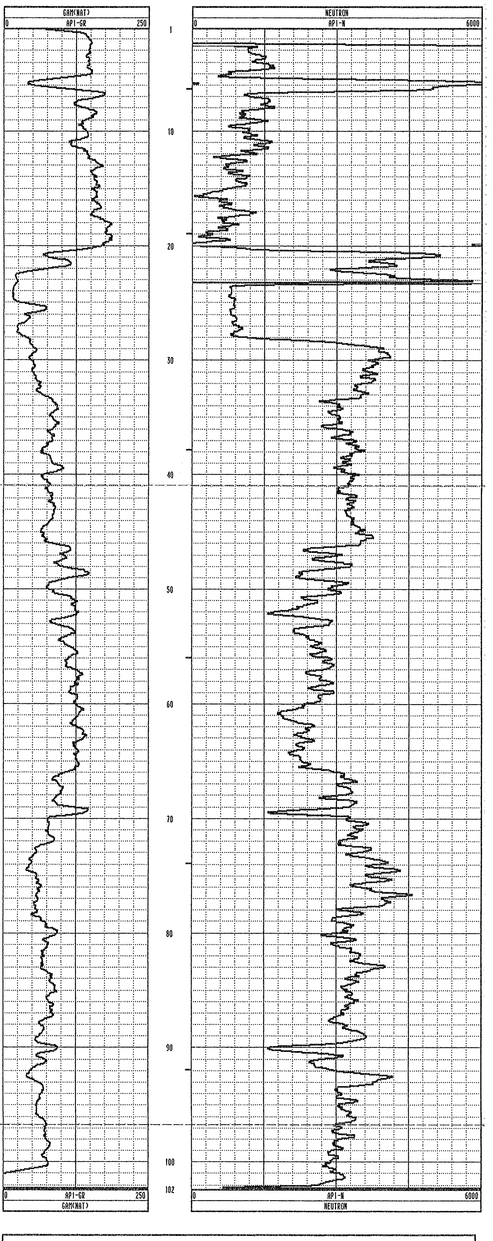
QMR88501 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88501 GAMMA NEUTRON			DEN.NEUT	
LOCATION/FIELD	: WOVERINE VALLY/MESA EXT.			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/06/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 102	ELEV. PERM. DATUM:	860	KB	: 0
LOG BOTTOM	: 102.34	LOG MEASURED FROM:	0	DF	: 0
LOG TOP	: 1.24	DRL MEASURED FROM:	0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	8000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 39450/20900

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QMR88501 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88501 DEVIATION			DEN.NEUT	
LOCATION-FIELD	: WOVERINE VALLY/MESA EXT.			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 11/28/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 102	ELEV. PERM. DATUM:	860	KB	: 0
LOG BOTTOM	: 102.34	LOG MEASURED FROM:	0	DF	: 0
LOG TOP	: 1.24	DRL MEASURED FROM:	0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: 90% 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	8000
REMARKS	:				
TEST CAL HOLE					
LOGGED OPEN HOLE 3945/ 20900					

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746

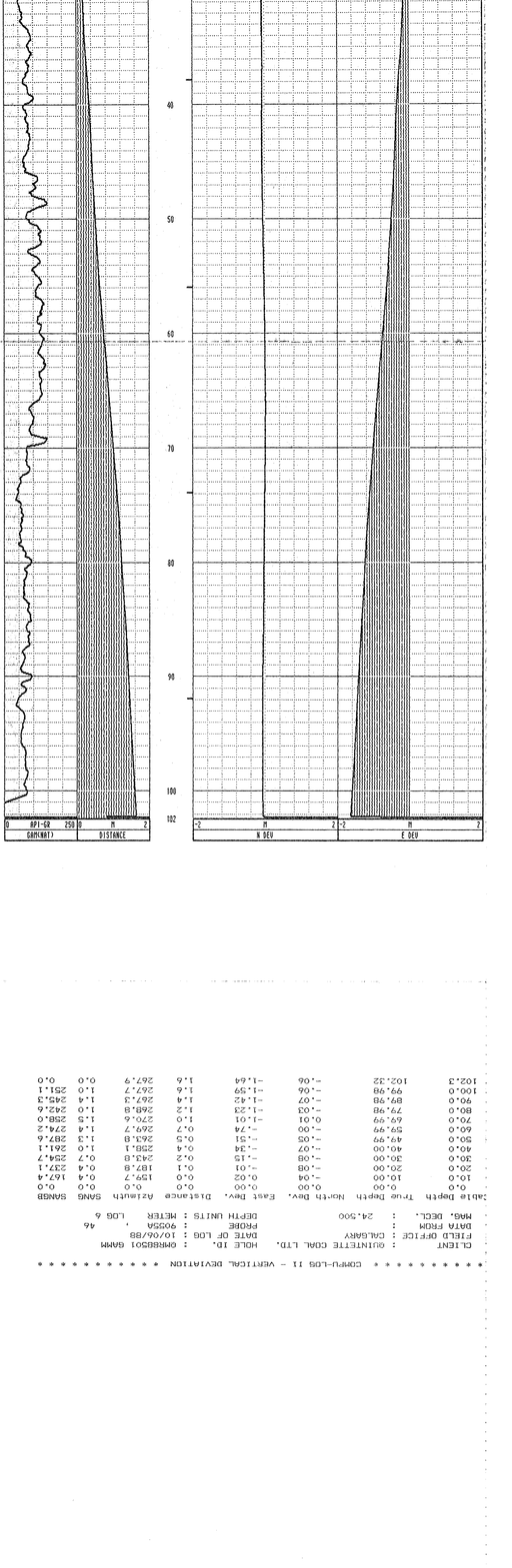


Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
10.0	10.00	-.04	0.02	197.7	0.4	167.4	
20.0	20.00	-.08	-.01	187.8	0.4	237.1	
30.0	30.00	-.13	0.2	243.8	0.7	284.7	
40.0	40.00	-.17	0.4	258.1	1.0	261.1	
50.0	49.99	-.22	0.5	263.8	1.3	287.6	
60.0	59.99	-.28	0.7	269.7	1.4	274.2	
70.0	69.99	-.34	0.9	270.6	1.5	288.0	
80.0	79.98	-.40	1.2	268.8	1.6	282.6	
90.0	89.98	-.47	1.4	267.3	1.4	283.3	
100.0	99.98	-.53	1.6	267.7	1.6	281.1	
102.3	102.32	-.54	1.6	267.9	1.6	0.0	0.0

```
COMPU-LOG II - VERTICAL DEVIATION
CLIENT          : QUINTETTE COAL LTD.          HOLE ID.    : QMR88501 GAMM
DATA FROM       : CALGARY                      PROBE       : 9055A      ,  46
FIELD OFFICE    : CALGARY                      DATE OF LOG : 10/06/88
MAG. DECL.      :  24.500                      DEPTH UNITS : METER      LOG 6
```

Century

QMR88502 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88502 GAMMA NEUTRON			DEN.NEUT	
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/07/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 84	ELEV. PERM. DATUM	: 1010	KB	: 0
LOG BOTTOM	: 83.86	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.12	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 8000

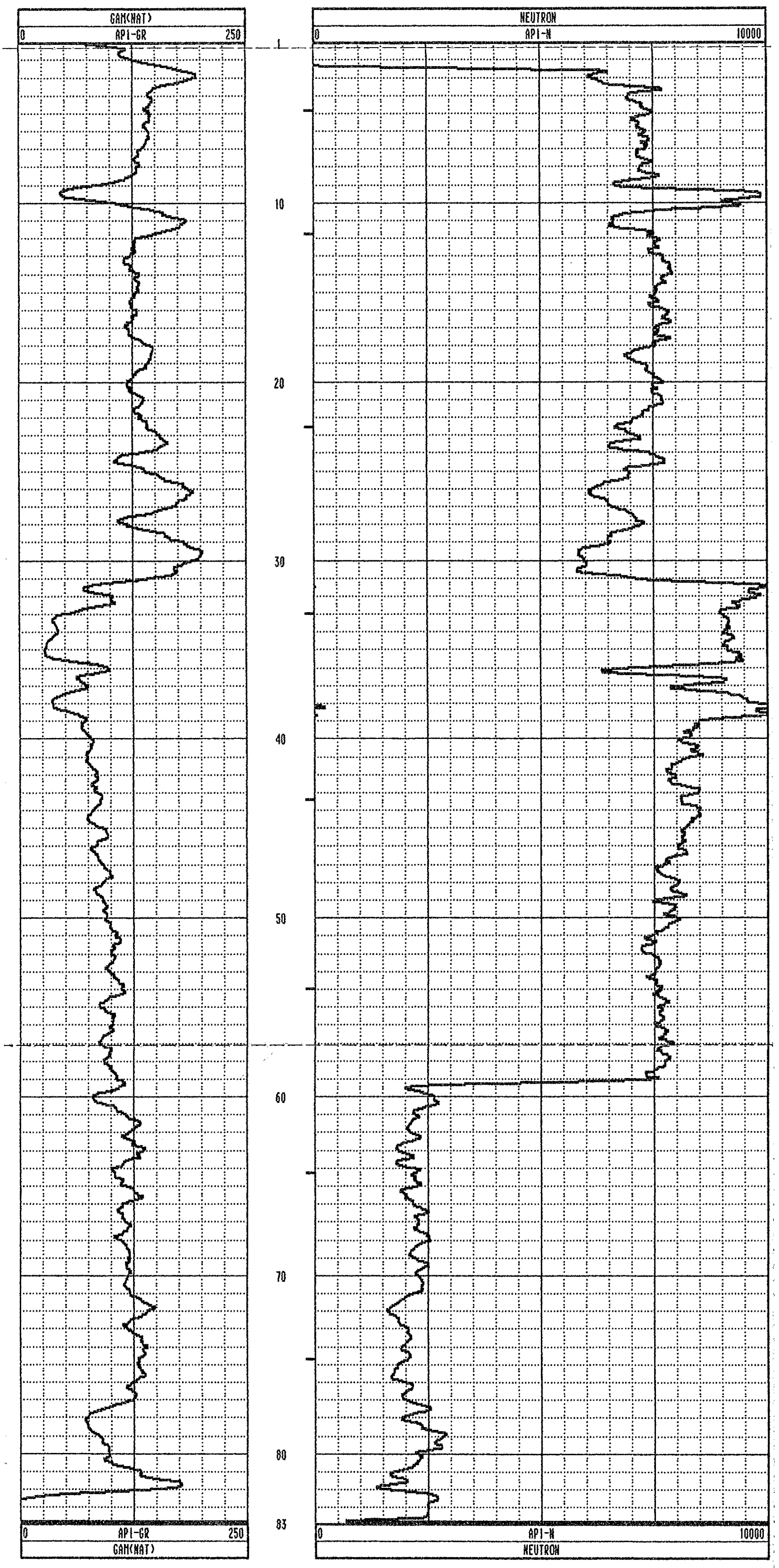
REMARKS :

VERTICAL HOLE

LOGGED OPEN HOLE 35950/20100

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

QMR88502 GAMMA DENSITY

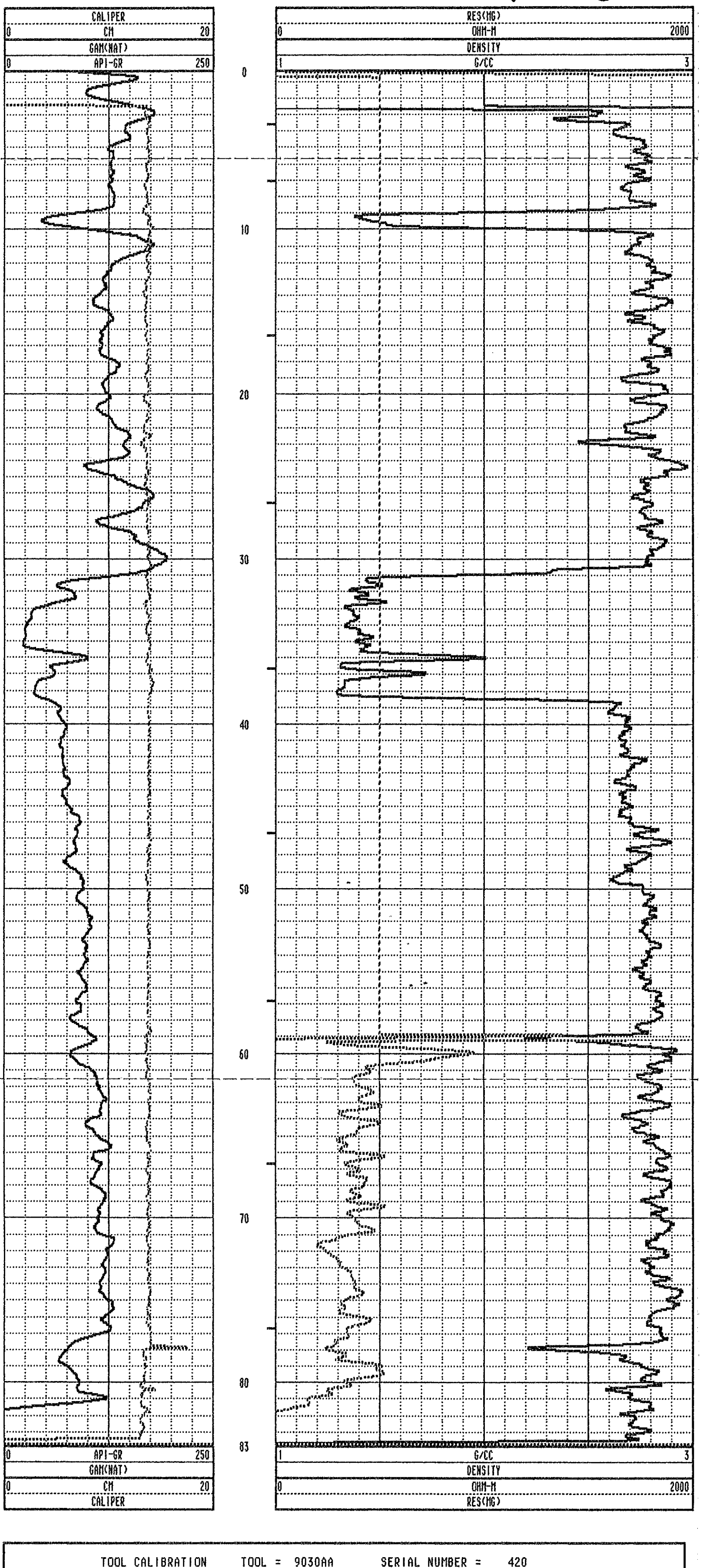
COMPANY	: QUINTETTE COAL LTD.
WELL	: QMR88502 GAMMA DENSITY
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT
COUNTY	:
STATE	: BRITISH COLUMBIA
SECTION	: TOWNSHIP : RANGE :

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

DATE	: 10/07/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 84	ELEV. PERM. DATUM	: 1010	KB	: 0
LOG BOTTOM	: 83.82	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.42	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 8000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 35950/20100
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

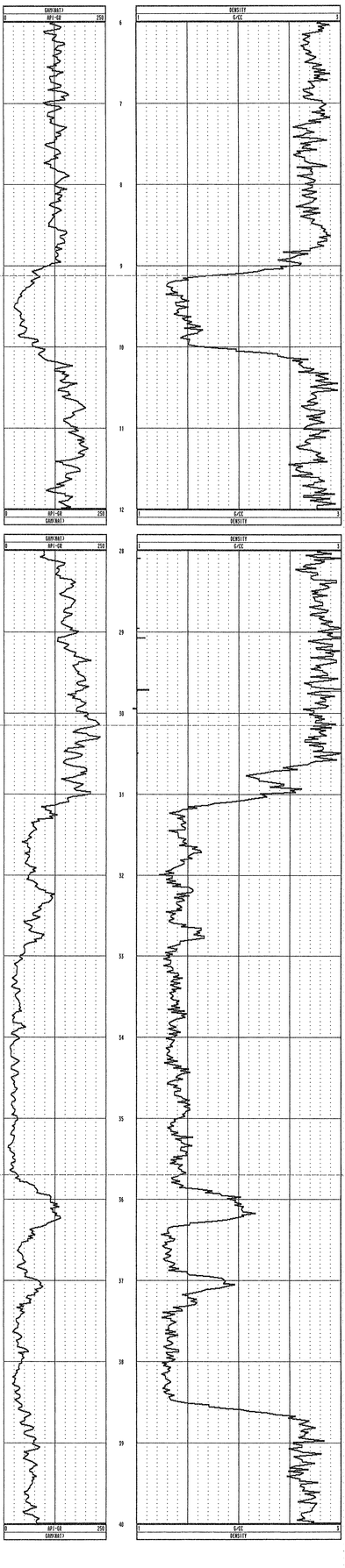
QMR88502 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88502 GAMMA DENSITY			DEN.NEUT	
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/07/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 84	ELEV. PERM. DATUM: 1010		KB	: 0
LOG BOTTOM	: 83.82	LOG MEASURED FROM: 0		DF	: 0
LOG TOP	: 0.42	DRL MEASURED FROM: 0		GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 0.5		RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 5
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 8000	
REMARKS	:				

VERTICAL HOLE
LOGGED OPEN HOLE 35950/20100

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



Century

QMR88502 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88502 DEVIATION	DEN.NEUT	
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 11/28/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 84	ELEV. PERM. DATUM: 1010	KB : 0
LOG BOTTOM	: 83.86	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 1.12	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 1	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0.5	RECORDED BY : C.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 6
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 8000
REMARKS	:		

VERTICAL HOLE
LOGGED OPEN HOLE 35950/20100

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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

CLIENT                : QUINTETTE COAL LTD.          MAG. DECL.   :    24.500
FIELD OFFICE : CALGARY                               DEPTH UNITS : METER     LOG 4
DATA FROM             :                              HOLE ID.     : QMR88502 GAMMA
                                                     PROBE        : 9055A  ,     46
                                                     DATE OF LOG  : 10/07/88

Table 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
   10.0        10.00        0.00       -.01       0.0      0.0  281.4    0.4  333.4
   20.0        20.00        0.07        0.01       0.1     10.2    0.5   22.0
   30.0        29.99        0.29        0.19       0.3     34.1    2.0   44.4
   40.0        39.99        0.55        0.50       0.7     42.2    2.1   42.4
   50.0        49.98        0.82        0.83       1.2     45.3    2.4   53.8
   60.0        59.96        1.11        1.24       1.7     48.2    3.4   48.2
   70.0        69.93        1.47        1.67       2.2     48.6    3.7   35.1
   80.0        79.93        1.86        2.15       2.8     49.2    3.2   30.0
   83.9        83.78        1.99        2.34       3.1     49.6    0.0    0.0
```

Century

QMR88503 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QMR88503 GAMMA DENSITY	OTHER SERVICES:	
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT	DEN.NEUT	
COUNTY	:	GAM.RES.	
STATE	: BRITISH COLUMBIA	CAL.DEV	
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 10/07/88 PERMANENT DATUM : 0	ELEVATIONS	
DEPTH DRILLER	: 76.5 ELEV. PERM. DATUM:	KB	: 0
LOG BOTTOM	: 76.46 LOG MEASURED FROM: 0	DF	: 0
LOG TOP	: -.48 DRL MEASURED FROM: 0	GL	: 0
CASING DRILLER	: 1 LOGGING UNIT : 8401		
CASING TYPE	: STEEL FIELD OFFICE : CALGARY		
CASING THICKNESS	: 0.5 RECORDED BY : G.PHILLIPS		
BIT SIZE	: 15.6 BOREHOLE FLUID : WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500 RM : 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68 RM TEMPERATURE : 0	LOG	: 0
FLUID DENSITY	: 1.0 MATRIX DELTA T : 173	PLOT	: Q 2
NEUTRON MATRIX	: SANDSTONE FLUID DELTA T : 690	THRESH	: 8000

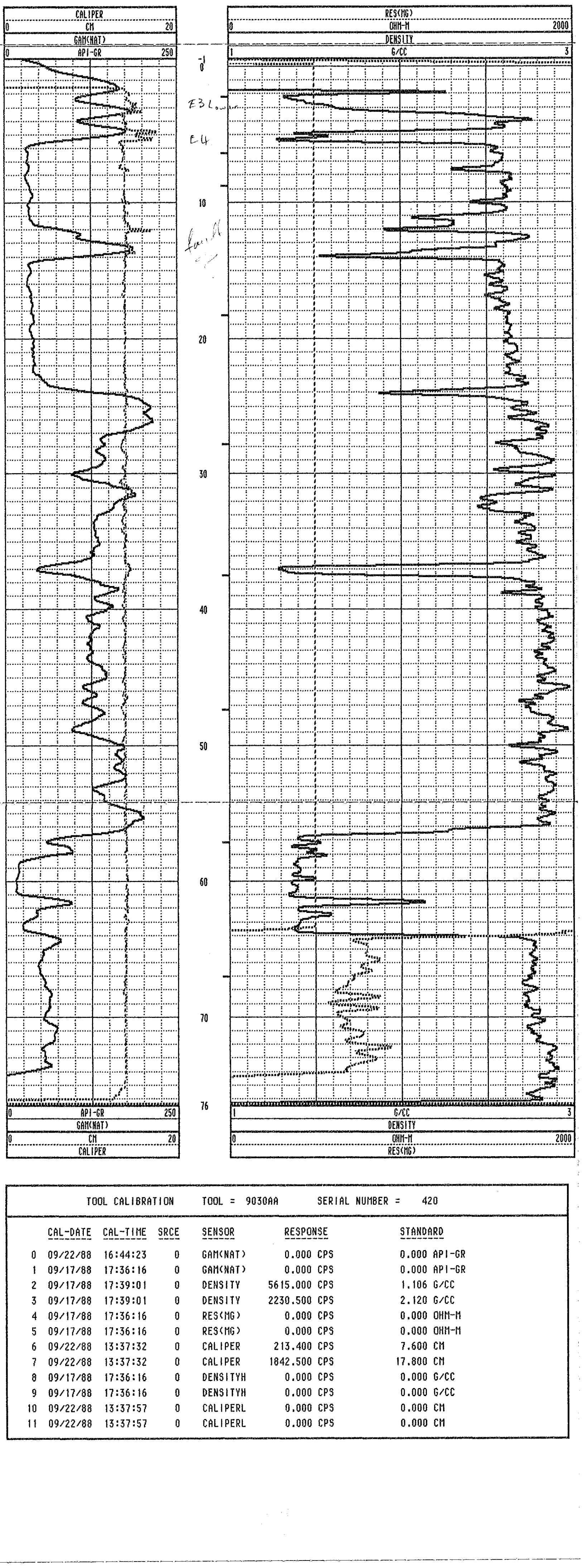
REMARKS :

VERTICAL HOLE

LOGGED OPEN HOLE 20400BL/39000SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

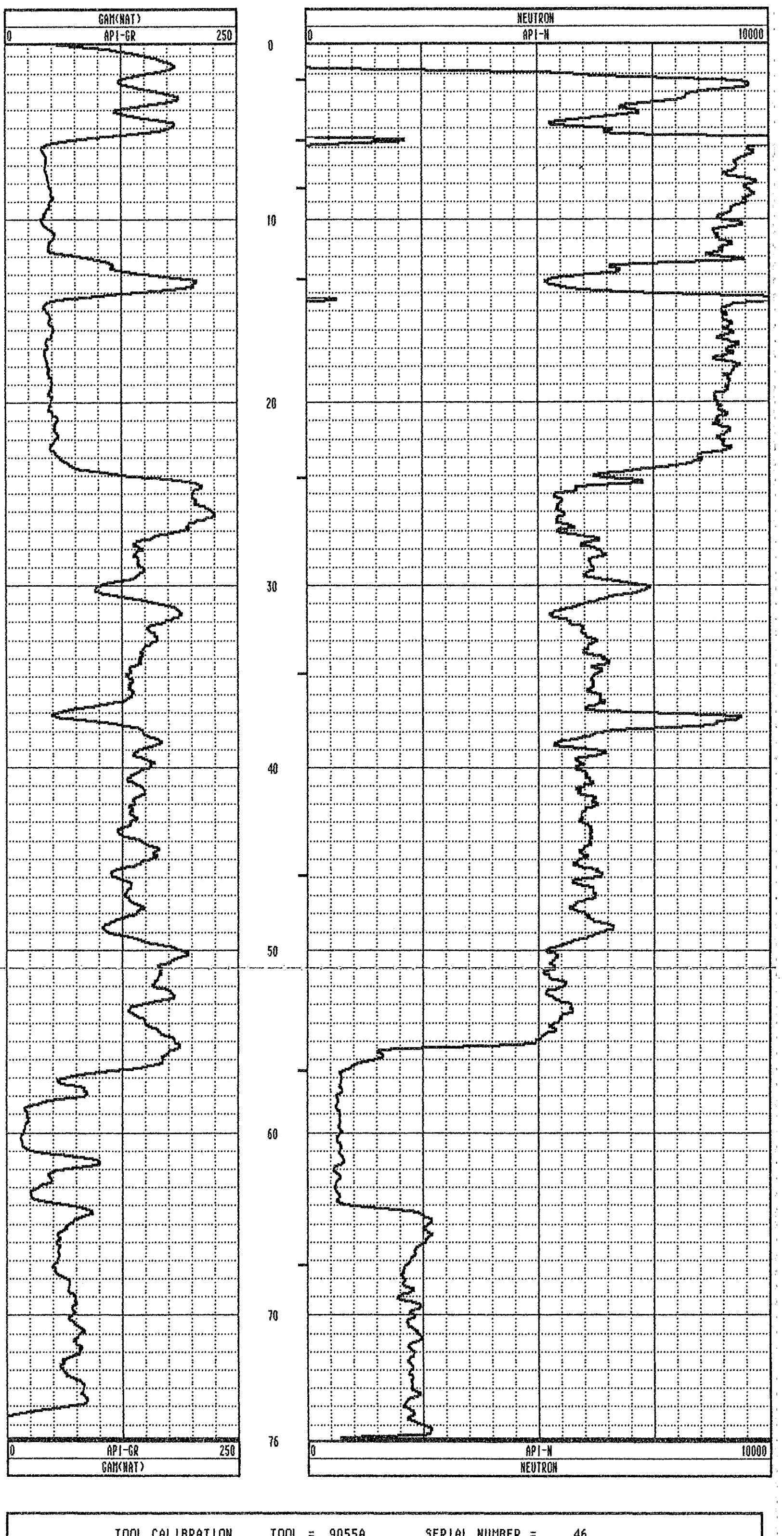
QMR88503 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QMR88503 GAMMA NEUTRON				
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/07/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 76.5	ELEV. PERM. DATUM:		KB	: 0
LOG BOTTOM	: 76.84	LOG MEASURED FROM:	0	DF	: 0
LOG TOP	: 0.44	DRL MEASURED FROM:	0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 8000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 20400BL/39000SL
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

GMR8503 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: GMR8503D GAMMA DENSITY	BHC-AMS	
LOCATION/FIELD	: ANDRITE VALLEY/PEACE RIV	CAL-AMS	
COUNTY	:	CAL-DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	RANGE :	

DATE	: 15-02-91	PERMANENT DATUM : G	ELEVATIONS
DEPTH DRILLER	: 74.9	ELOG MEASURED FROM: G	KB : 0
DEPTH LOGGER	: 74.8	DRL MEASURED FROM: G	DF : 0
LOG TOP	: -.08	DRL MEASURED FROM: G	GL : 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401
CASING TYPE	: STEEL	LOGGING BY	: SURVEY
CASING THICKNESS	: 0.3	RECORDED BY	: G.ZMYLUYK

BIT SIZE	: 15.4	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.000	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
MAXIMUM TEMP.	: 0	RMF	: 0
MAXIMUM HOUR	: SHORTTIME	FLUID DELTA T	: 0

FILE	: ORIGINAL
TYPE	: SESSION
LOG	: 0
RUN NUMBER	: 5
TIMESKI	: 0000

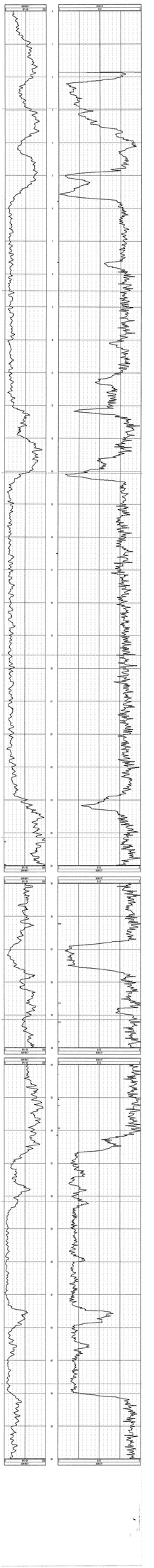
REMARKS

CASING SHOE

LOGGED OPEN HOLE 0540HR/090091.

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



QMR88503 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88503 DEVIATION			DEN.NEUT	
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 11/28/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 76.5	ELEV. PERM. DATUM:		KB	: 0
LOG BOTTOM	: 76.84	LOG MEASURED FROM:	0	DF	: 0
LOG TOP	: 0.44	DRL MEASURED FROM:	0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 3401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 0.5		RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 171	PLOT	: 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	8000
REMARKS	:				

VERTICAL HOLE

LOGGED OPEN HOLE 20400BL/39000SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746

Table 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
10.0	10.00	0.04	-.03	0.1	306.6	0.3	281.0
20.0	20.00	0.13	-.11	0.2	318.2	0.7	283.2
30.0	30.00	0.21	-.17	0.3	320.9	1.0	315.4
40.0	40.00	0.29	-.23	0.4	320.9	0.6	354.9
50.0	50.00	0.35	-.31	0.5	318.8	0.4	133.2
60.0	60.00	0.41	-.37	0.6	318.1	0.8	333.5
70.0	69.99	0.52	-.46	0.7	318.1	1.1	321.0
76.8	76.83	0.56	-.55	0.8	315.7	0.0	0.0

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR88503 GAMMA
FIELD OFFICE : CALGARY DATE OF LOG : 10/08/88
DATA FROM : PROBE : 9055A , 46
DEPTH UNITS : METER LOG 4
MAG. DECL. : 24.500

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

Centrify

QMR88504 GAMMA NEUTRON

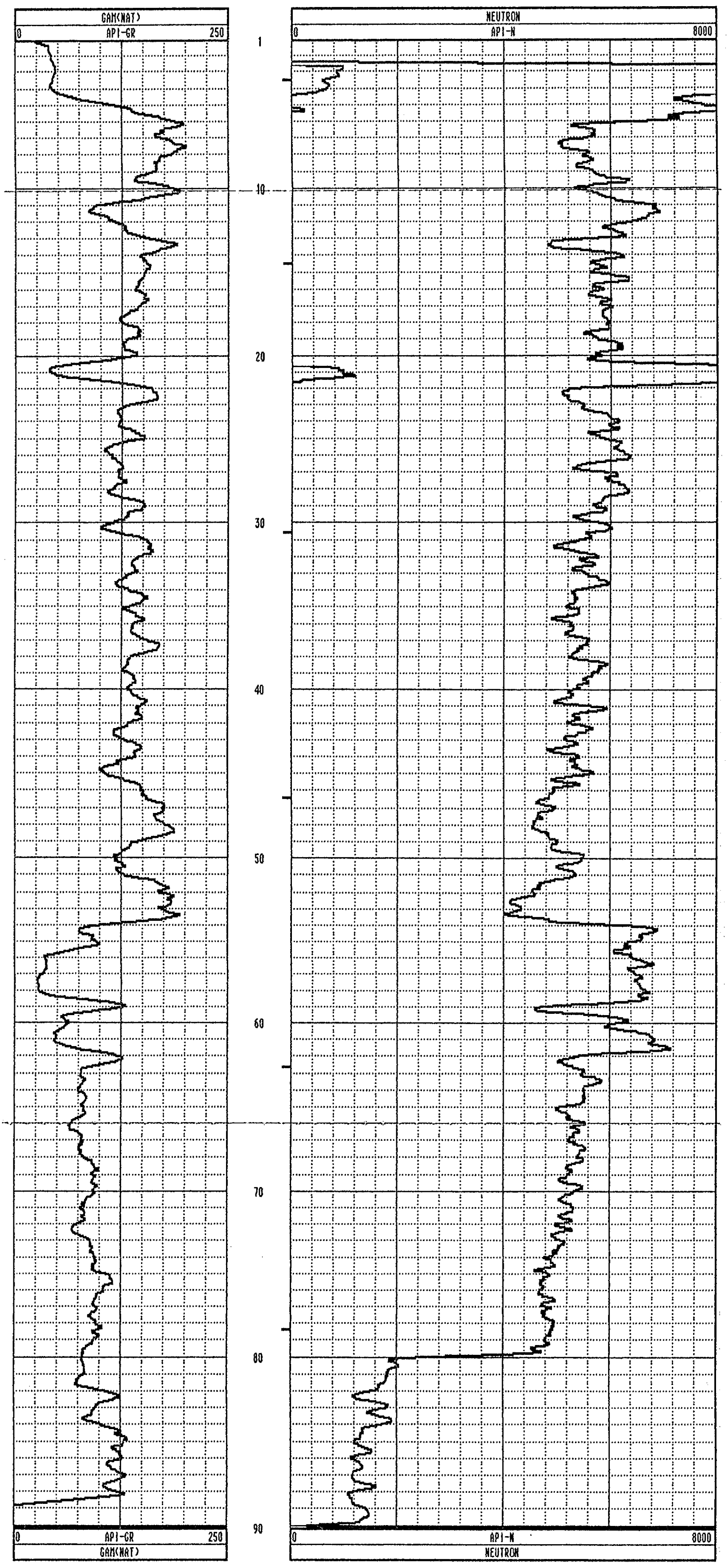
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QMR88504 GAMMA NEUTRON				
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/08/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 90.5	ELEV. PERM. DATUM	:	KB	: 0
LOG BOTTOM	: 90.14	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.14	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 8000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 20250BL/39000SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QMR88504 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88504 GAMMA DENSITY			DEN,NEUT	
LOCATION/FIELD	: WOUVERINE VALLEY/MESA EXT			GAM,RES,	
COUNTY	:			CAL,DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/08/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 90.5	ELEV. PERM. DATUM	:	KB	: 0
LOG BOTTOM	: 88.22	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.30	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 4
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 8000

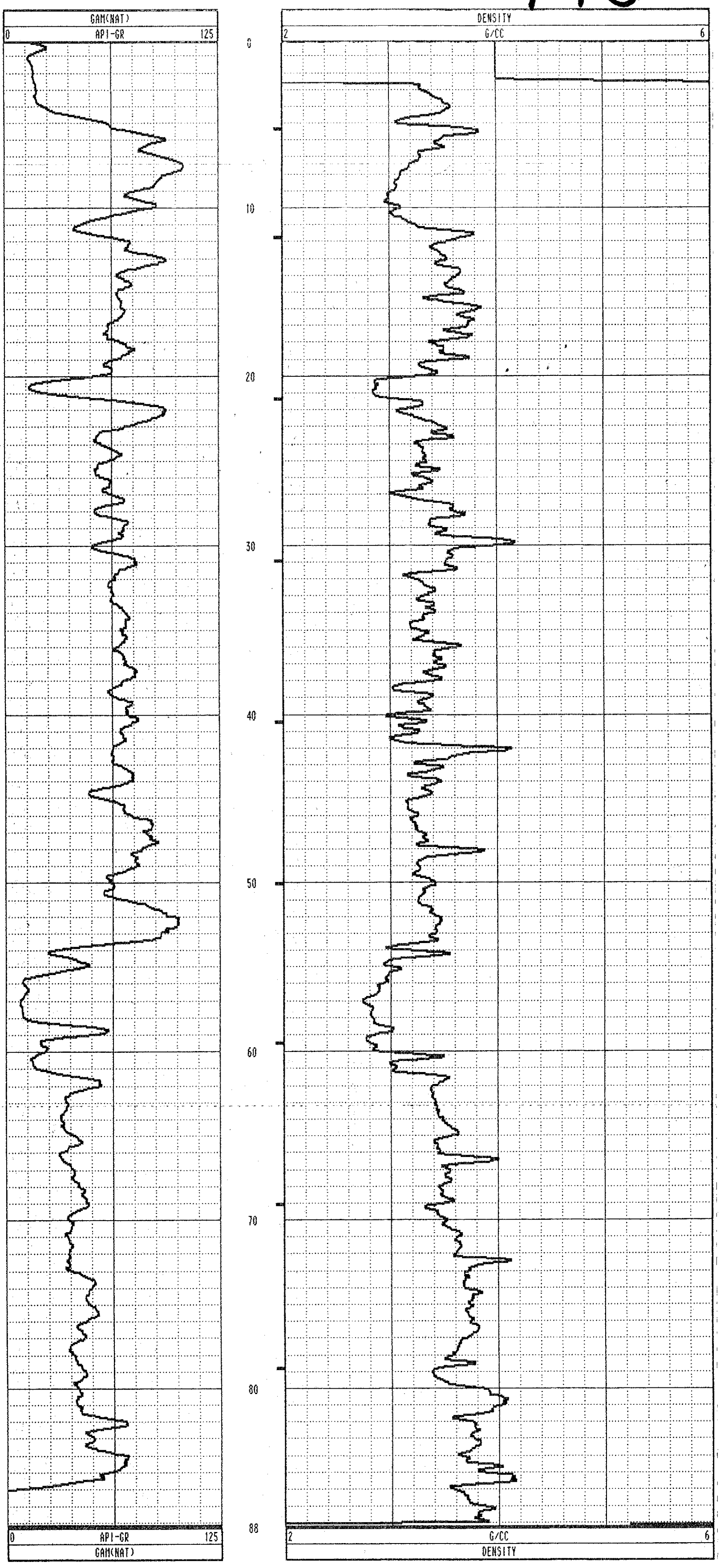
REMARKS :

VERTICAL HOLE

LOGGED THROUGH DRILL PIPE 20250BL/39000SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

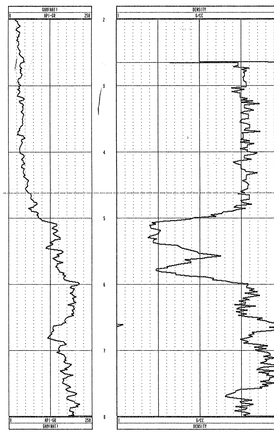
QMR88504 GAMMA DENSITY

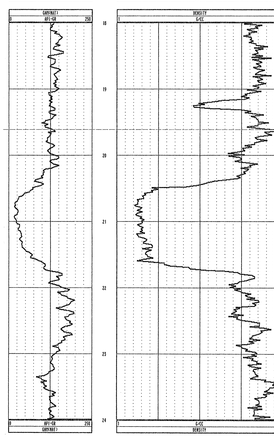
COMPANY	: QUINTETTE COAL LTD.		
WELL	: QMR88504 GAMMA DENSITY		
LOCATION/FIELD	: WOKERINE VALLEY-MESA EXT		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP :	RANGE :
DATE	: 10-08-88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 90.5	ELEV. PERM. DATUM:	KB : 0
LOG BOTTOM	: 90.12	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.30	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 1	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0.5		RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9050AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : GAIN 5
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 8000
REMARKS	:		
VERTICAL HOLE			
LOGGED OPEN HOLE 202508L/590005L			

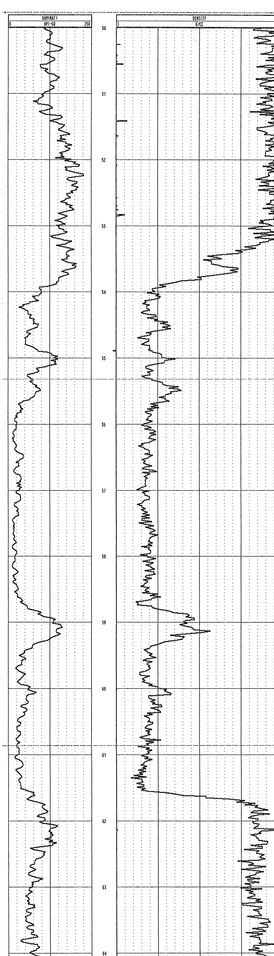
OTHER SERVICES: DEN.NEUT GAM.RES. CAL.DEV

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746







QMR88504 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88504 DEVIATION			DEN.NEUT	
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 11/28/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 90.5	ELEV. PERM. DATUM:		KB : 0	
LOG BOTTOM	: 90.14	LOG MEASURED FROM:	0	DF : 0	
LOG TOP	: 1.14	DRL MEASURED FROM:	0	GL : 0	
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE : PROCESSED	
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 8	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : 9055 12	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 8000	

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 20250BL/39000SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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COMPU-LOG II - VERTICAL DEVIATION

CLIENT : QUINTETTE COAL LTD.
FIELD OFFICE : CALGARY
DATA FROM : 9055A , 46
MAG. DECL. : 24.500

HOLE ID. : QMR88504 GAMM
DATE OF LOG : 10/09/88
PROBE
DEPTH UNITS : METER LOG 0

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGD
0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
10.0	10.00	-.00	-.01	268.6	0.2	41.2	
20.0	20.00	0.00	0.00	6.0	1.0	335.1	
30.0	30.00	-.01	0.02	128.1	0.6	347.8	
40.0	40.00	-.04	0.03	145.9	0.1	31.0	
50.0	50.00	-.11	0.06	150.7	0.7	92.8	
60.0	60.00	-.15	0.13	139.6	0.1	155.0	
70.0	70.00	-.21	0.17	140.2	0.2	209.2	
80.0	79.99	-.30	0.25	140.7	1.0	151.0	
90.0	89.99	-.42	0.35	140.5	1.0	161.6	
90.1	90.13	-.42	0.35	140.6	0.0	0.0	

Century

QMR88505 GAMMA NEUTRON

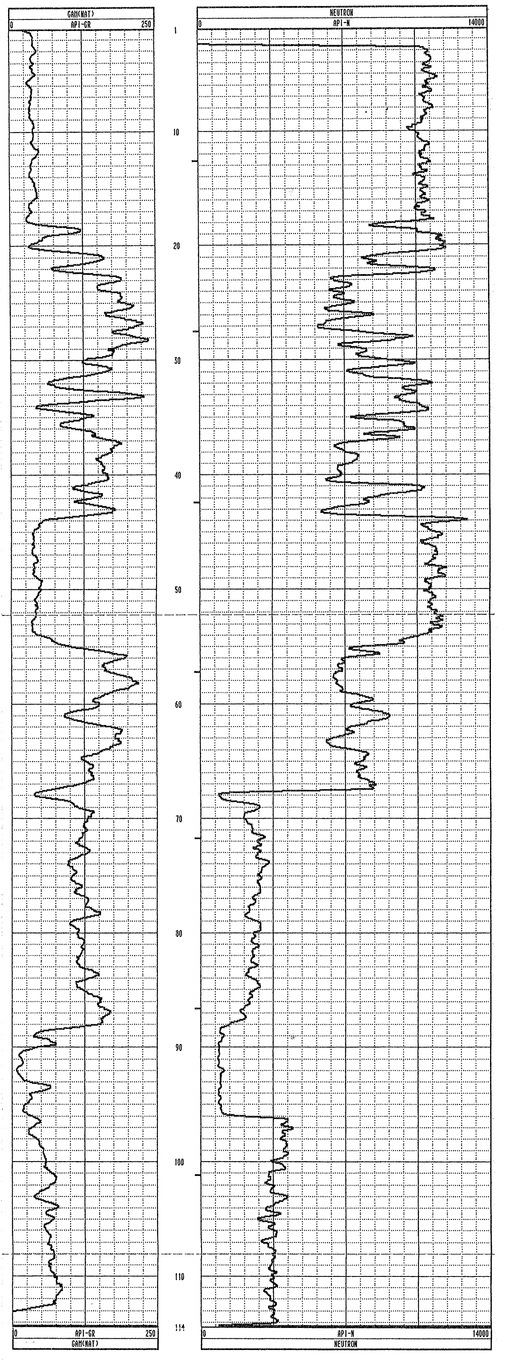
COMPANY	: QUINTETTE COAL LTD.		
WELL	: QMR88505 GAMMA NEUTRON		
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP :	RANGE :
DATE	: 10/09/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 113	ELEV. PERM. DATUM:	KB : 0
LOG BOTTOM	: 114.40	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 1.18	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 2	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0.5	RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 2
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 0 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 8000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 20600BL/39000SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION	TOOL = 9055A	SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QMR88505 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88505 GAMMA DENSITY	DEN.NEUT	
LOCATION/FIELD	: WOVERINE VALLEY/MESA EXT	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 10/09/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 113	ELEV. PERM. DATUM:	KB : 0
LOG BOTTOM	: 114.14	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.46	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 2	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0.5		RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 3
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 12000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 20600BL/39000SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

CGC

Century

GR6855S GAMMA DENSITY

COMPANY : QUIKFLTG COAL LTD.
WELL : BORROWED GAMMA DENSITY
FIELD/PLATFORM : BORROWED GAMMA RAY
COUNTY :
STATE : BRITISH COLUMBIA
SECTION : TOWNSHIP :
RANGE :

LOG MEASURED FROM : 0 FT ABOVE PERM. DATUM
DRILLING MEASURED FROM : KB
ELEVATION : PERM. DATUM : 0 FT
LOGGING UNIT : FEET
FIELD OFFICE : CALGARY
RECORDED BY : J. SMITH
WITNESSED BY :

RUN NO. : 1
DEPTH DRILLER : 0 FT
DEPTH LOGGER : 0 FT
BOTTOM LOGGED INTERVAL : 0 FT
TOP LOGGED INTERVAL : 0 FT
CASING TYPE : STEEL
CASING THICKNESS : 0 IN

BIT SIZE : 0 IN
DENSITY/VISC. : 0 LB/GAL
PH/FLUID LOSS : 0 CC
SOURCE OF SAMPLE : 0
RM @ MEAS. TEMP. : 0 OHMM
RMF @ MEAS. TEMP. : 0 OHMM
RMC @ MEAS. TEMP. : 0 OHMM
SOURCE : RMF : RMC :
RM @ BHT : 0 OHMM
TIME SINCE CIRC. : 0 HR
MAX. REC. TEMP. : 0 DEGF
EQUIP. LOCATION : 0
RECORDED BY : 0
WITNESSED BY : 0

DIAG SERVICES
DEN.REC
DEN.SRC
DEN.MEM

RECORDED WITH : 0
BASE LOGGING SCALE : 0 FT/IN
LOG MEASURED FROM : KB
PERMANENT DATUM : 0

LOGGING UNIT : FEET
FIELD OFFICE : CALGARY
RECORDED BY : J. SMITH
WITNESSED BY :

RUN NO. : 1
DEPTH DRILLER : 0 FT
DEPTH LOGGER : 0 FT
BOTTOM LOGGED INTERVAL : 0 FT
TOP LOGGED INTERVAL : 0 FT
CASING TYPE : STEEL
CASING THICKNESS : 0 IN

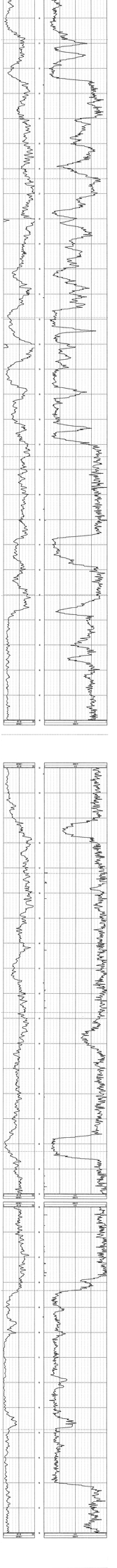
BIT SIZE : 0 IN
DENSITY/VISC. : 0 LB/GAL
PH/FLUID LOSS : 0 CC
SOURCE OF SAMPLE : 0
RM @ MEAS. TEMP. : 0 OHMM
RMF @ MEAS. TEMP. : 0 OHMM
RMC @ MEAS. TEMP. : 0 OHMM
SOURCE : RMF : RMC :
RM @ BHT : 0 OHMM
TIME SINCE CIRC. : 0 HR
MAX. REC. TEMP. : 0 DEGF
EQUIP. LOCATION : 0
RECORDED BY : 0
WITNESSED BY : 0

REMARKS: 0

CGC GAMMA RAY GAMMA/GAMMA.

ALL MEASURED READINGS SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



Century

QMR88505 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88505 DEVIATION	DEN.NEUT	
LOCATION/FIELD	: WOOERINE VALLEY/MESA EXT	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP : RANGE :		

DATE	: 11/28/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 115	ELEV. PERM. DATUM:	KB : 0
LOG BOTTOM	: 114.40	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 1.18	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 2	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0.5	RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 9
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 8000
REMARKS	:		

VERTICAL HOLE

LOGGED OPEN HOLE 20600BL/390005L

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746

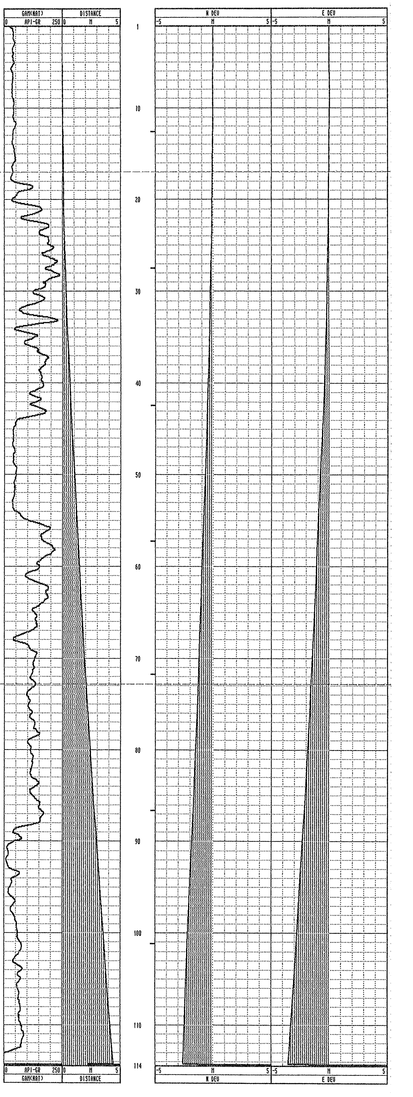


Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
10.0	10.00	-.02	0.02	0.0	141.4	0.9	313.2
20.0	20.00	-.10	-.06	0.1	209.4	0.2	291.3
30.0	29.99	-.25	-.20	0.3	217.7	1.2	321.9
40.0	39.96	-.44	-.43	0.6	222.5	2.0	333.8
50.0	49.98	-.69	-.78	1.0	228.4	2.8	305.4
60.0	59.97	-.98	-1.10	1.5	228.3	2.1	233.0
70.0	69.96	-1.31	-1.45	1.9	230.2	2.9	248.7
80.0	79.95	-1.52	-1.83	2.4	230.7	2.6	259.9
90.0	89.93	-1.84	-2.31	2.9	231.5	3.5	232.7
100.0	99.91	-2.19	-2.77	3.5	231.7	3.4	226.6
110.0	109.90	-2.47	-3.29	4.1	233.1	3.8	234.3
114.4	114.29	-2.61	-3.53	4.4	233.5	0.0	0.0

```
COMPU-LOG II - VERTICAL DEVIATION ********** ********** **********
CLIENT          : QUINTETTE COAL LTD.      HOLE ID.   : QMR88505 GAMMA
FIELD OFFICE    : CALGARY                  DEPTH UNITS : FEET
DATA FROM       :                          PROBE       : 9055A        .  46
MAG. DECL.      : 24.500                   DATE OF LOG : 10/09/88
                                                                      LOG 4
```

Century

QMR88506 GAMMA NEUTRON

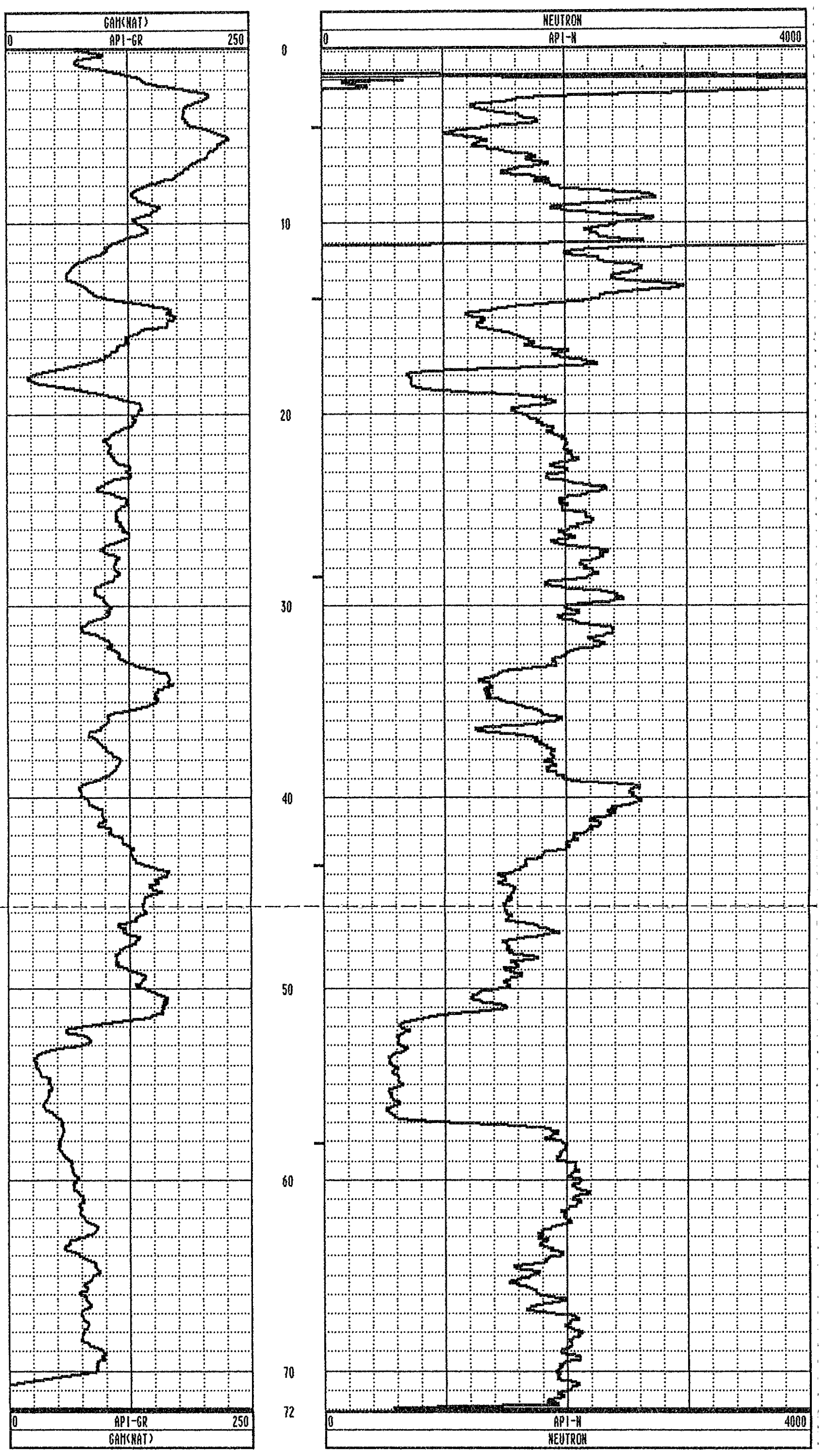
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QMR88506 GAMMA NEUTRON				
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/12/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 72	ELEV. PERM. DATUM:		KB	: 0
LOG BOTTOM	: 72.04	LOG MEASURED FROM:	0	DF	: 0
LOG TOP	: 0.96	DRL MEASURED FROM:	0	GL	: 1075M
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: Q 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 20200BL/38700SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QMR88506 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88506 DEVIATION			DEN.NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/12/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 72	ELEV. PERM. DATUM:		KB	: 0
LOG BOTTOM	: 72.04	LOG MEASURED FROM:	0	DF	: 0
LOG TOP	: 0.96	DRL MEASURED FROM:	0	GL	: 1075M
CASING DRILLER	: 2	LOGGING UNIT	: 8491		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	9000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 20200BL/38700SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746

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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QMR88506 GAMMA
DATA FROM	:	PROBE	: 9055A , 46
FIELD OFFICE	: CALGARY	DATE OF LOG	: 10/12/88
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 4

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	BANG	SANDB
1.0	0.96	0.00	0.00	0.0	0.0	0.0	0.0
11.0	10.96	0.03	0.08	0.1	59.8	0.9	86.5
21.0	20.96	0.12	0.23	0.3	62.8	0.9	63.7
31.0	30.93	0.24	0.44	0.5	61.5	1.2	69.4
41.0	40.93	0.37	0.70	0.8	61.9	1.6	80.2
51.0	50.94	0.58	1.03	1.2	60.7	2.4	54.7
61.0	60.93	0.79	1.40	1.6	60.5	3.4	71.0
71.0	70.92	1.05	1.80	2.1	59.8	2.3	53.2
72.0	72.00	1.07	1.83	2.1	59.7	0.0	0.0

Century

QMR88506 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QMR88506 GAMMA DENSITY				
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/12/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 72	ELEV. PERM. DATUM	:	KB	: 0
LOG BOTTOM	: 72.06	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: -.88	DRL MEASURED FROM	: 0	GL	: 1075M
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 20200BL/38700SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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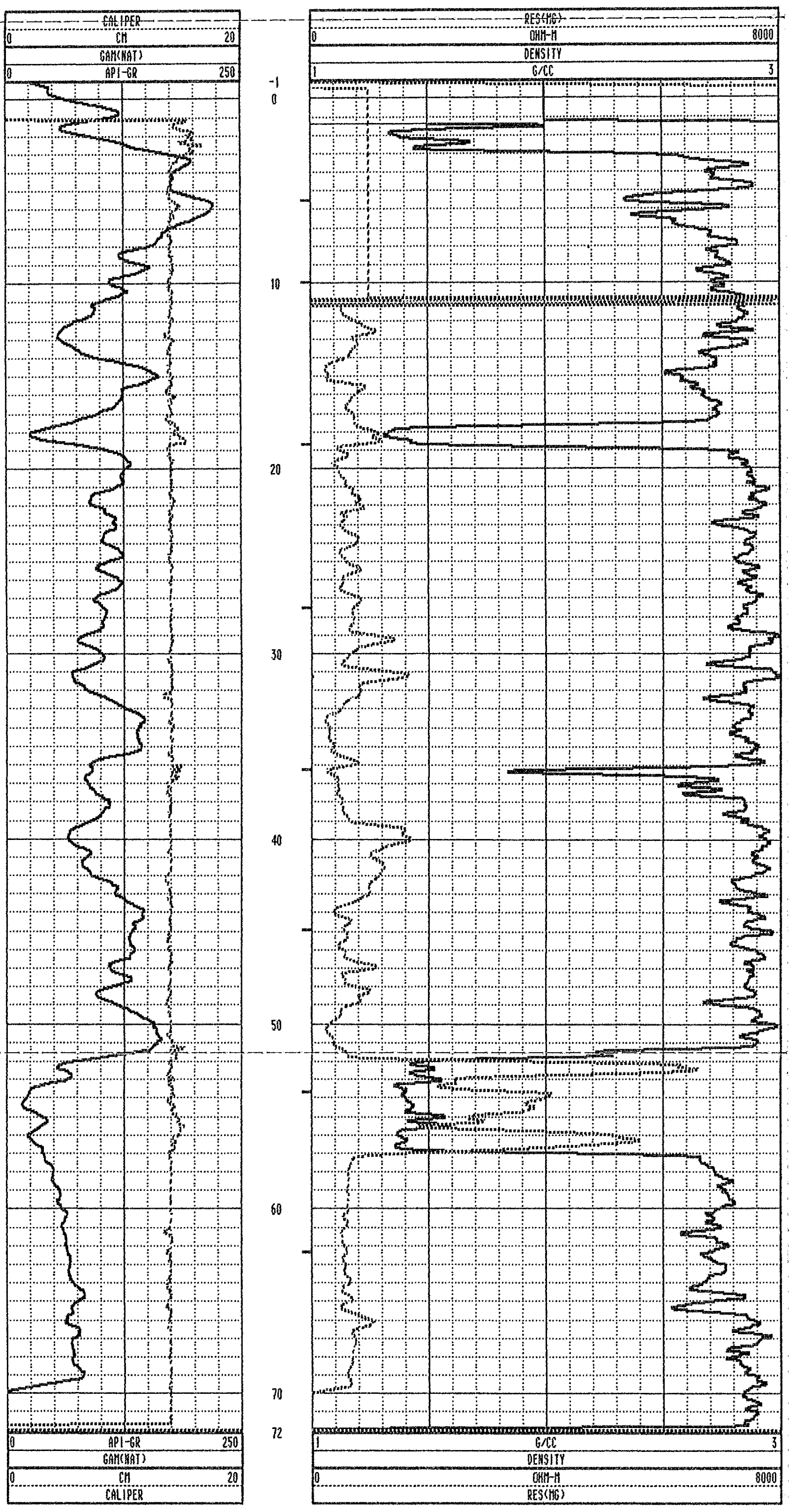

TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

QMR88506 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88506 GAMMA DENSITY	DEN.NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 10/12/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 72	ELEV. PERM. DATUM:	KB : 0
LOG BOTTOM	: 72.06	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: -.88	DRL MEASURED FROM: 0	GL : 1075M
CASING DRILLER	: 2	LOGGING UNIT	: 8401
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS: 0.5		RECORDED BY	: G.PHILLIPS
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN S
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 9000
REMARKS	:		

VERTICAL HOLE
LOGGED OPEN HOLE 20200BL/387005L

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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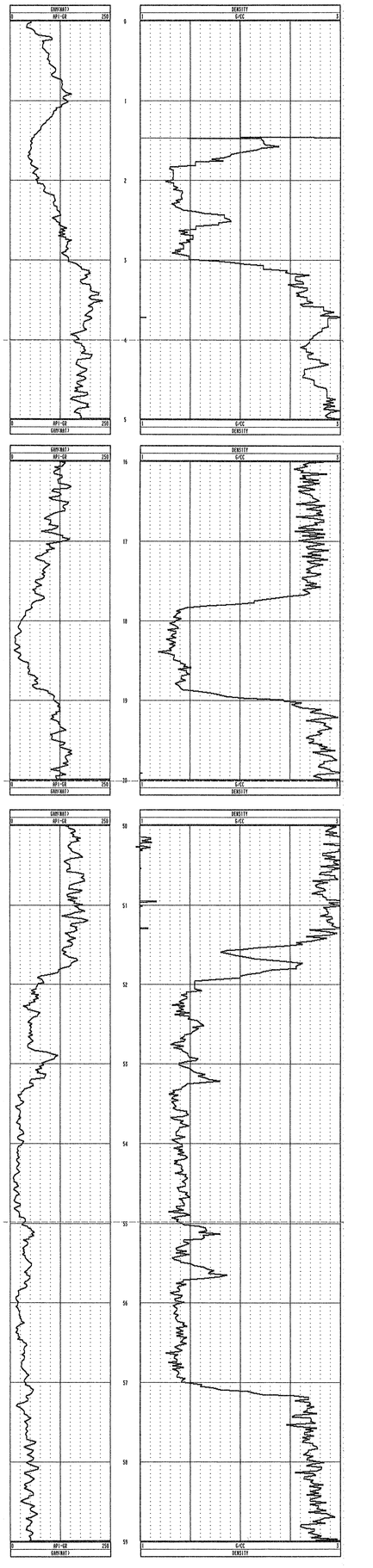

QMR88506 DEVIATION

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QMR88506 DEVIATION		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 10/12/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 72	ELEV. PERM. DATUM:	KB : 0
LOG BOTTOM	: 72.04	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.96	DRL MEASURED FROM: 0	GL : 1075M
CASING DRILLER	: 2	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0.5	RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 9000
REMARKS	:		

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

VERTICAL HOLE
LOGGED OPEN HOLE 20200BL/38700SL

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746

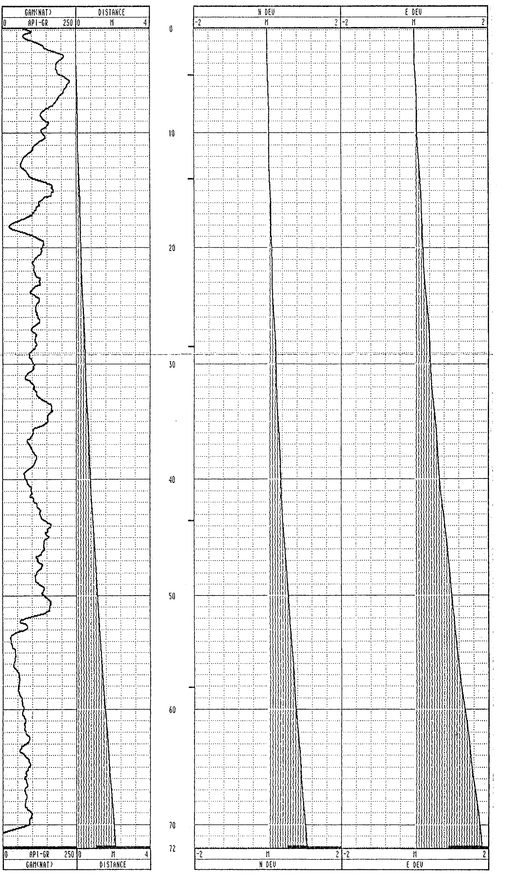

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
1.0	0.96	0.00	0.00	0.0	0.0	0.0	0.0
11.0	10.96	0.03	0.08	0.1	59.8	0.9	86.5
21.0	20.96	0.12	0.23	0.3	62.8	0.9	63.7
31.0	30.95	0.24	0.44	0.5	61.5	1.2	69.4
41.0	40.93	0.37	0.70	0.8	61.9	1.6	80.2
51.0	50.94	0.58	1.03	1.2	60.7	2.4	94.7
61.0	60.93	0.79	1.40	1.6	60.3	3.4	71.0
71.0	70.92	1.03	1.80	2.1	59.8	2.3	32.2
72.0	72.00	1.07	1.83	2.1	59.7	0.0	0.0

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

CLIENT          : QUINTETTE COAL LTD.          HOLE ID.      : QMR88506 GAMMA
FIELD OFFICE    : CALGARY                      DATE OF LOG   : 10/12/88
DATA FROM       :                              PROBE         : 9055A        , 46
                                               DEPTH UNITS   : METER    LOG 4
MAG. DECL.      :   24.500
```

Certify...

QMR88507 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QMR88507 GAMMA DENSITY				
LOCATION/FIELD	: WOLVERINE VALLEY/MESA EXT				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/14/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 60	ELEV. PERM. DATUM	: 1125M	KB	: 0
LOG BOTTOM	: 59.34	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.28	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: Q 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 38400/20200

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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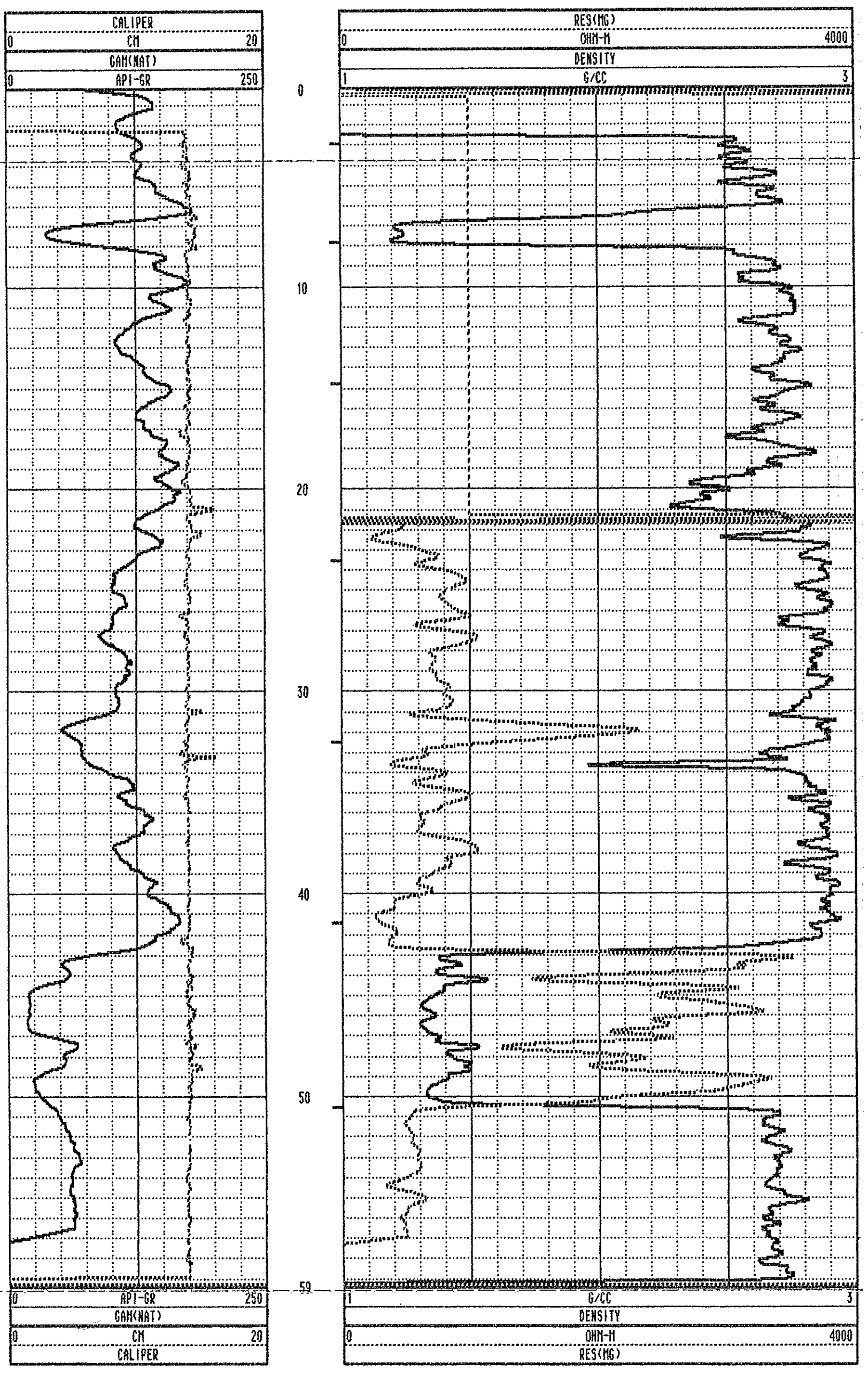


TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

QMR88507 GAMMA DENSITY

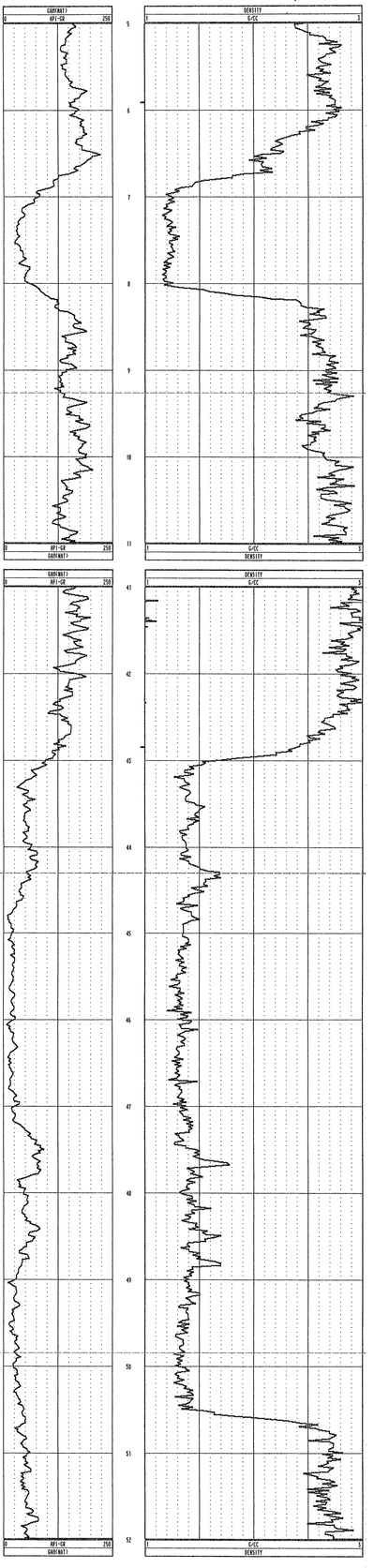
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88507 GAMMA DENSITY	DEN.NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY/MESA EXT	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 10/14/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 60	ELEV. PERM. DATUM: 1125M	KB : 0
LOG BOTTOM	: 59.34	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.28	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 1	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0.5	RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 2
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN S
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 9000
REMARKS	:		

VERTICAL HOLE

LOGGED OPEN HOLE 38400/20200

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



Century

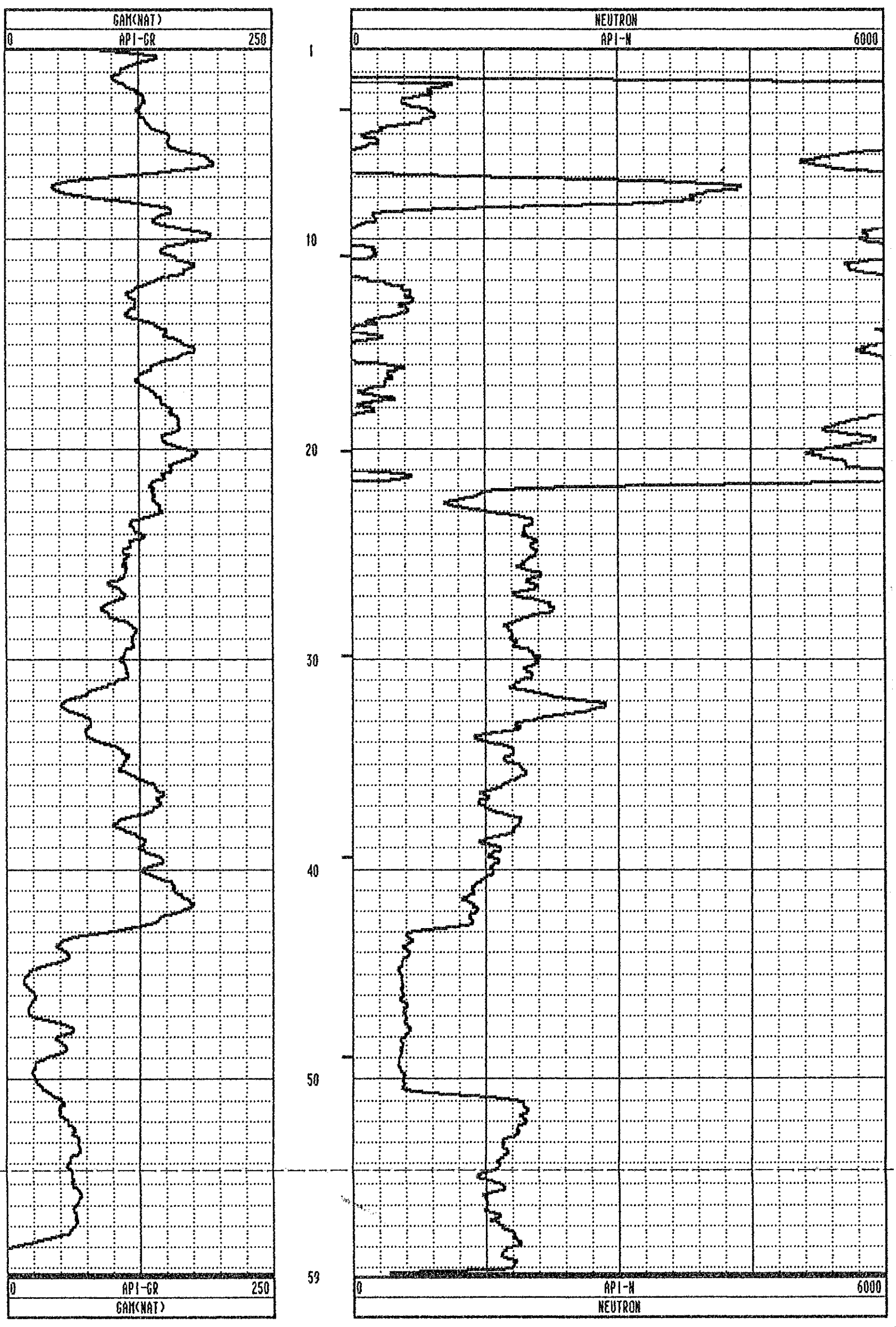
QMR88507 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88507 GAMMA NEUTRON			DEN.NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY/MESA EXT			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/14/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 60	ELEV. PERM. DATUM	: 1125M	KB	: 0
LOG BOTTOM	: 59.38	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.04	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE 38400/20200

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QMR88507 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88507 DEVIATION	DEN.NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY/MESA EXT	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 10/14/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 60	ELEV. PERM. DATUM: 1125M	KB : 0
LOG BOTTOM	: 59.38	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 1.04	DRL MEASURED FROM: C	GL : 0
CASING DRILLER	: 1	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS:	0.5	RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 1
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 9000
REMARKS	:		

VERTICAL HOLE
LOGGED OPEN HOLE 38400/20200

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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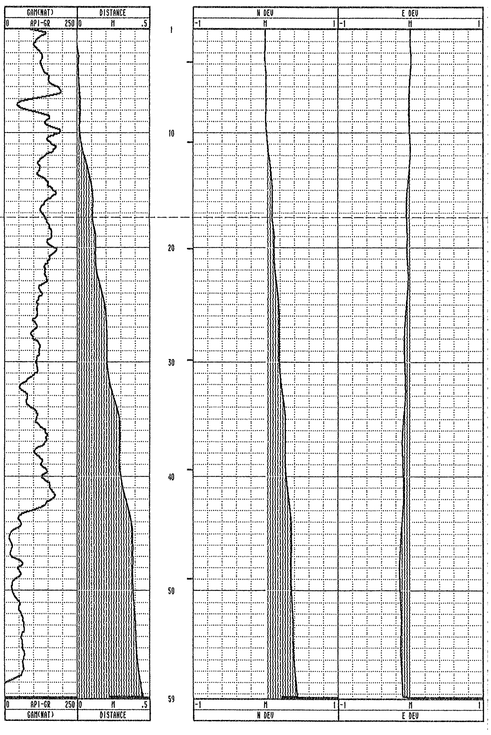

COMPU-LOG II - VERTICAL DEVIATION

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR88507 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 10/14/88
DATA FROM : PROBE : 9055A , 46
MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 3

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGD
1.0	1.04	0.00	0.00	0.0	0.0	0.0	0.0
11.0	11.04	0.03	-.00	0.0	354.1	1.1	35.0
21.0	21.04	0.12	-.04	0.1	340.2	0.4	62.4
31.0	31.04	0.20	-.07	0.2	340.2	0.8	20.8
41.0	41.04	0.30	-.09	0.3	343.1	1.0	1.8
51.0	51.03	0.37	-.13	0.4	339.9	0.8	18.5
59.4	59.37	0.44	-.11	0.4	346.5	0.0	0.0

QMR88508 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88508 GAMMA DENSITY	DEN.NEUT:	
LOCATION/FIELD	: WOLVERINE VALLEY / MESA EXT.	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 10/17/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 193	ELEV. PERM. DATUM: 1150M	KB : 0
LOG BOTTOM	: 192.48	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.02	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 2	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0.5		RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9050AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 6
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : 0 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 9000
REMARKS	:		
VERTICAL HOLE			
LOGGED OPEN HOLE BL2050D/SL3070D			

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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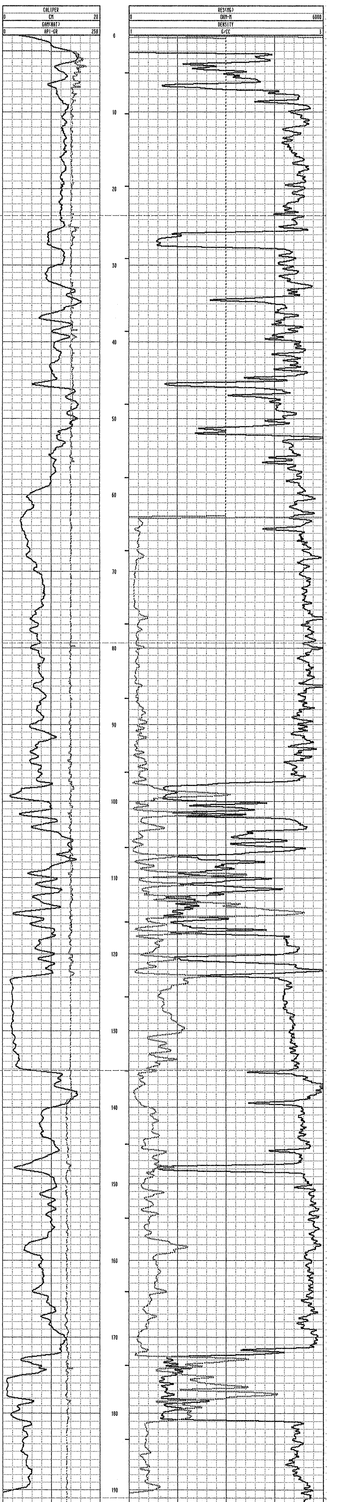

TOOL CALIBRATION			TOOL = 9050AA		SERIAL NUMBER = 420	
	CAL-DATE	CAL-TIME	SECS	SENSOR	RESPONSE	STANDARD
0	09-22-88	16:44:23	0	GAMMA(BE)	0.000 CPS	0.000 API-GR
1	09-17-88	17:36:16	0	GAMMA(BE)	0.000 CPS	0.000 API-GR
2	09-17-88	17:38:01	0	DENSITY	5635.000 CPS	1.106 G/CC
3	09-17-88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09-17-88	17:36:16	0	RESIS(I)	0.000 CPS	0.000 OHM-M
5	09-17-88	17:36:16	0	RESIS(I)	0.000 CPS	0.000 OHM-M
6	09-22-88	15:37:32	0	CALIPER	215.400 CPS	7.600 CM
7	09-22-88	15:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09-17-88	17:36:16	0	DENSITYM	0.000 CPS	0.000 G/CC
9	09-17-88	17:36:16	0	DENSITYM	0.000 CPS	0.000 G/CC
10	09-22-88	15:37:57	0	CALIPER1	0.000 CPS	0.000 CM
11	09-22-88	15:37:57	0	CALIPER1	0.000 CPS	0.000 CM

Century

CGC

QMR88508 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88508 GAMMA NEUTRON	DEN.NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY / MESA EXT.	DAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:

DATE	: 10/17/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 193	ELEV. PERM. DATUM	: 1150M	KB	: 0
LOG BOTTOM	: 194.98	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.12	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		

BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000
REMARKS	:				

VERTICAL HOLE
LOGGED OPEN HOLE BL20500/SL58700

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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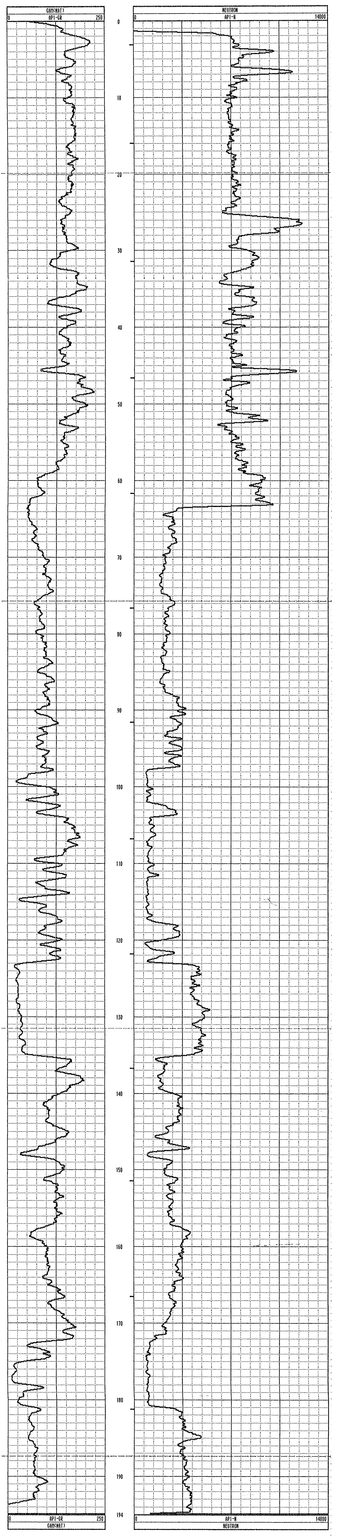

TOOL CALIBRATION TOOL # 9055A SERIAL NUMBER # 46

	CAL-DATE	CAL-TIME	SECT	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAMMA87	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAMMA87	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

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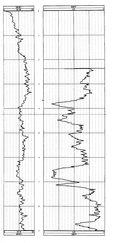
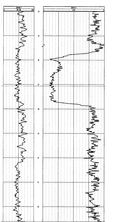
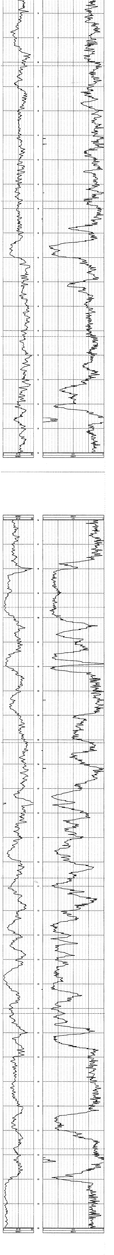
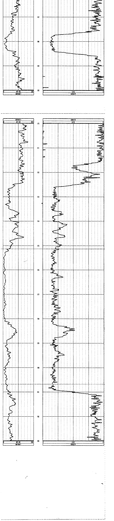
GAMMA RAY - NEUTRON









Century

QMR88508 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR88508 DEVIATION	DEN.NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY / MESA EXT.	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:

DATE	: 10/17/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 195	ELEV. PERM. DATUM: 1130M	KB : 0
LOG BOTTOM	: 194.93	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.12	DRL MEASURED FROM: .	GL : 0

CASING DRILLER	: 2	LOGGING UNIT	: PIOT
CASING TYPE	: STEEL	FIELD OFFICE	: C+LGARY
CASING THICKNESS: 0.5		RECORDED BY	: G.PHILLIPS

BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: -24.500	RM	: 0	TYPE	: 9055M
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 9000	
REMARKS	:				

VERTICAL HOLE
LOGGED OPEN HOLE BL20500/3L10700
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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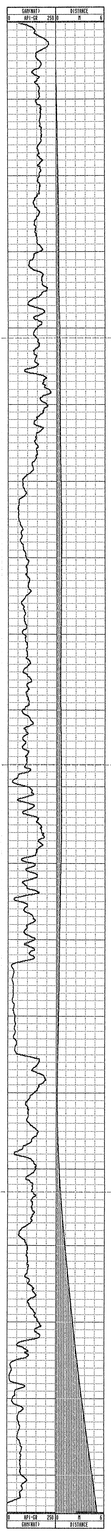


Hole Depth	True Depth	North Dev.	East Dev.	Inclination	Azimuth	DOGL	SAMPLE
0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
20.0	20.00	-.07	0.00	0.4	90.4	0.4	0.2
40.0	39.99	-.07	0.01	0.3	90.4	0.4	0.2
60.0	59.99	-.07	0.03	0.3	90.4	0.4	0.2
80.0	79.99	-.07	0.04	0.3	90.4	0.4	0.2
100.0	99.98	-.07	0.04	0.3	90.4	0.4	0.2
120.0	119.98	-.07	0.04	0.3	90.4	0.4	0.2
140.0	139.98	-.07	0.04	0.3	90.4	0.4	0.2
160.0	159.98	-.07	0.04	0.3	90.4	0.4	0.2
180.0	179.98	-.07	0.04	0.3	90.4	0.4	0.2
194.0	193.98	-.07	0.04	0.3	90.4	0.4	0.2

0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
20.0	19.99

Century

QMR88509 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.
WELL	: QMR88509 GAMMA DENSITY
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH
COUNTY	:
STATE	: BRITISH COLUMBIA
SECTION	: TOWNSHIP : RANGE :

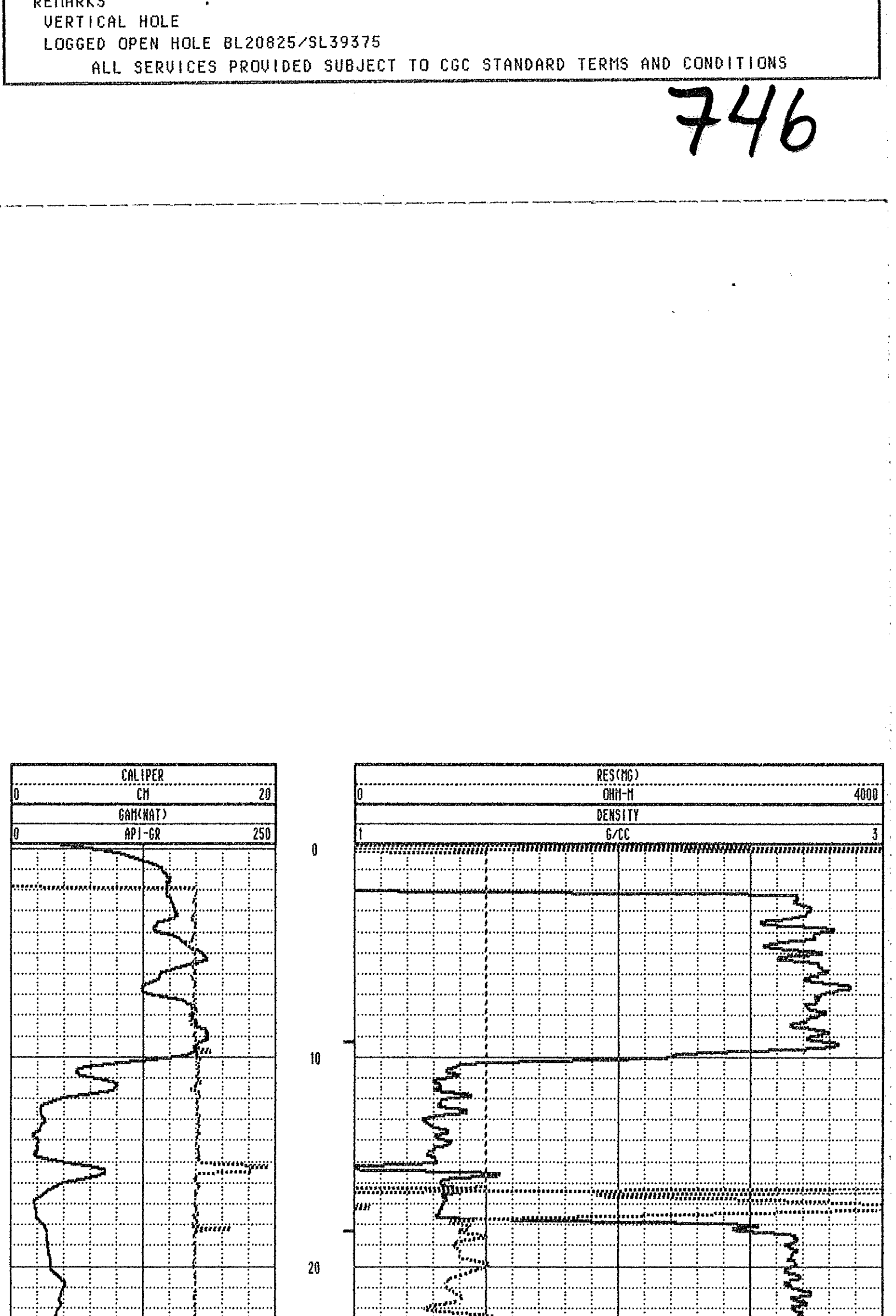
OTHER SERVICES:
DEN,NEUT
GAM,RES,
CAL,DEV

DATE	: 10/17/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 48	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 47.28	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: -.14	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: Q 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE BL20825/SL39375

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

1:20 Detail

Century

QMR88509 GAMMA DENSITY

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QMR88509 GAMMA DENSITY		
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 10/17/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 48	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 47.28	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: -.14	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 1	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS:	0.5	RECORDED BY : G.PHILLIPS	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 1
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 5
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 9000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE BL20025/SL39375

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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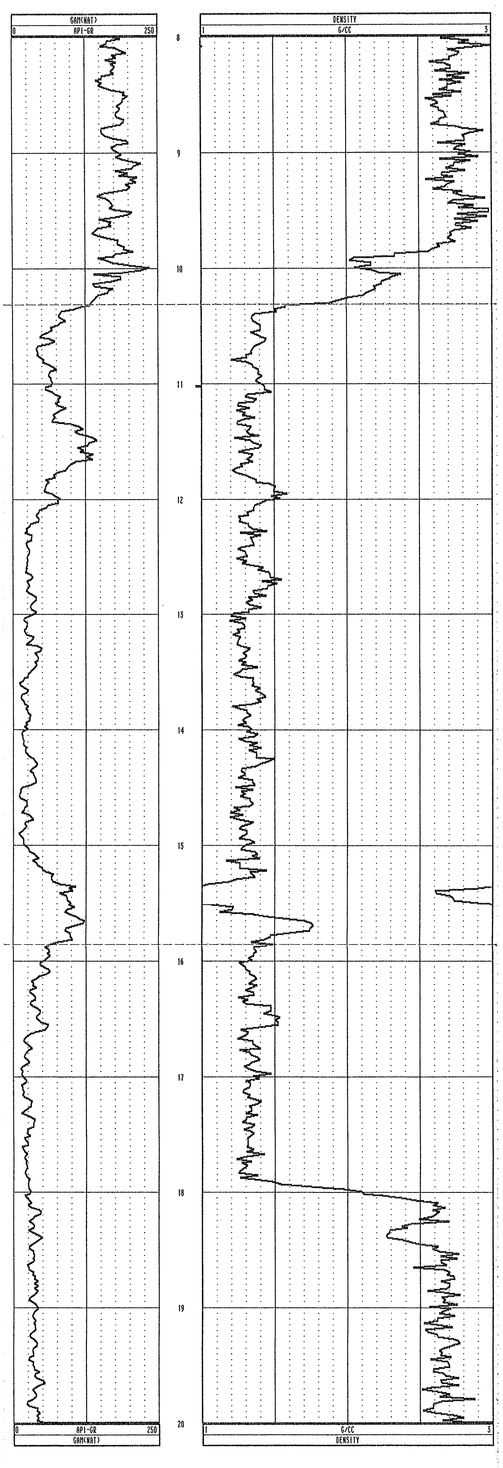


Certify

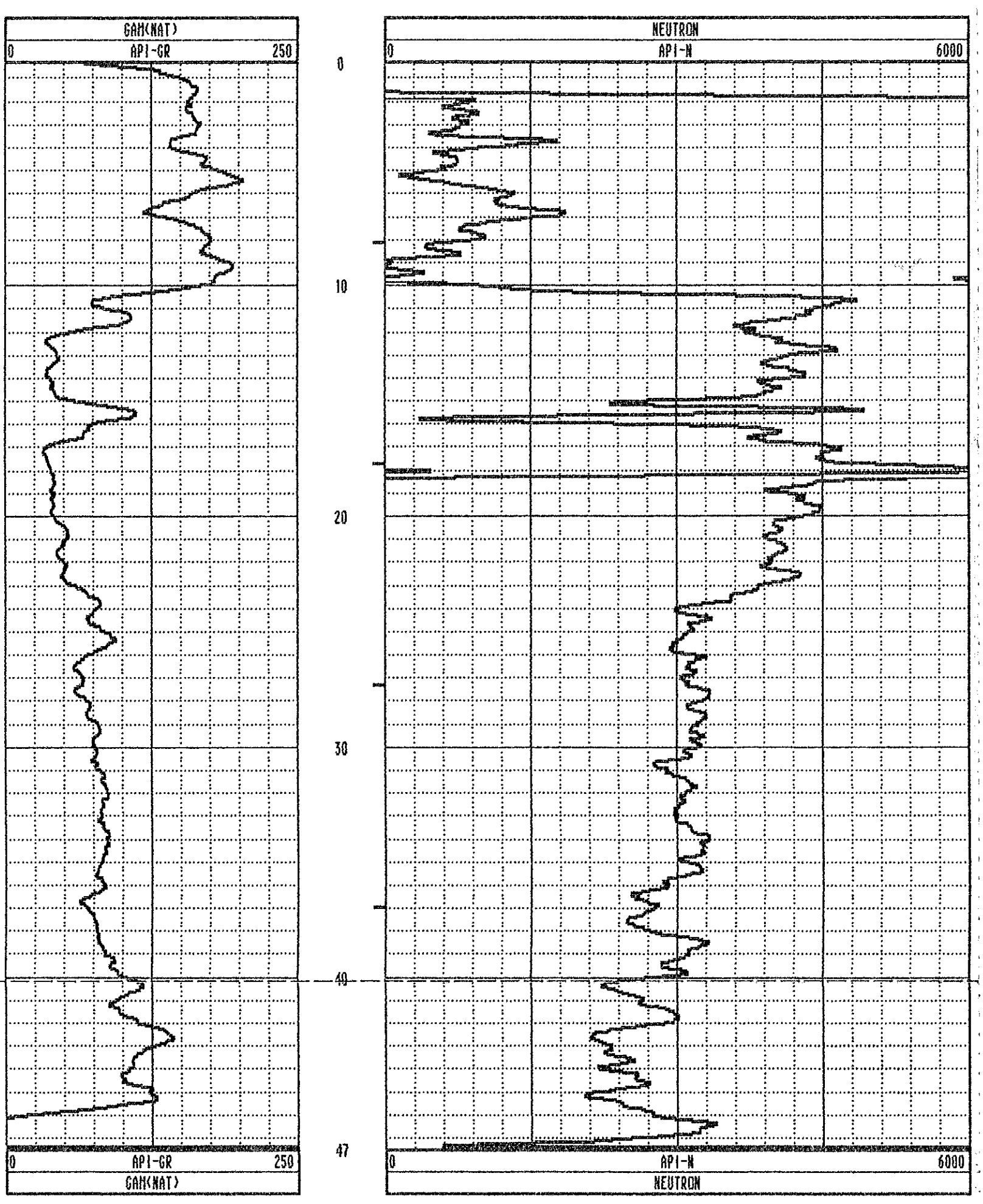
QMR88509 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88509 GAMMA NEUTRON			DEN,NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH			GAM,RES,	
COUNTY	:			CAL,DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/17/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 48	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 47.46	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.42	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE BL20825/SL39375

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	10/05/88	12:07:01	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

746

Century

QMR88509 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88509 DEVIATION			DEN,NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH			GAM,RES,	
COUNTY	:			CAL,DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/17/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 48	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 47.46	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.42	DRL MEASURED FROM	:	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 2401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE BL20825/SL39375

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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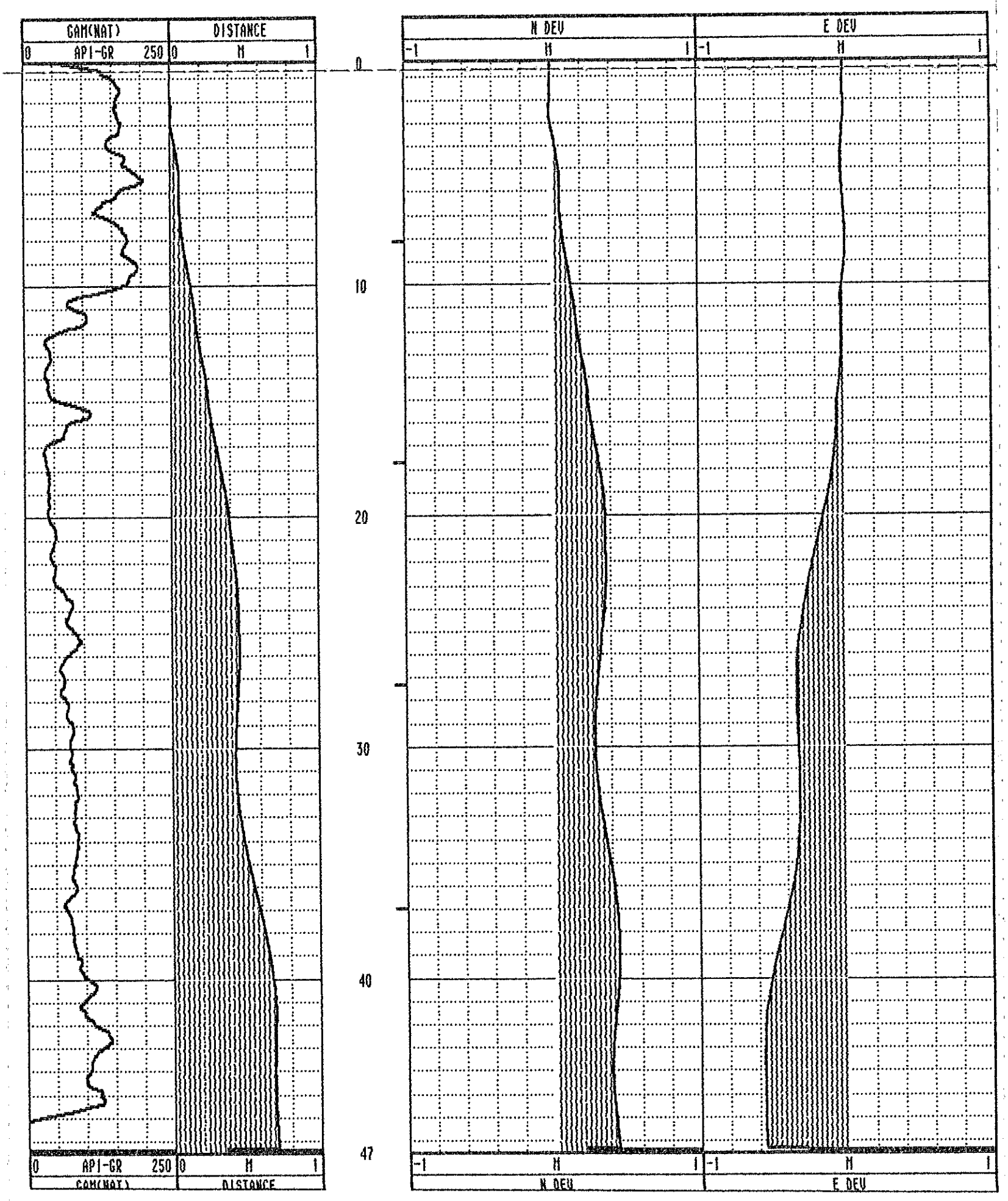

MAG. DECL. : 24.500 DEPTH UNITS : METER LOG 2

Table 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
10.0	10.00	0.13	-.01	0.1	355.4	2.0	308.6
20.0	19.99	0.36	-.14	0.4	338.6	1.7	283.4
30.0	29.99	0.29	-.32	0.4	312.0	0.4	72.0
40.0	39.98	0.44	-.51	0.7	311.0	1.5	245.8
47.5	47.44	0.44	-.55	0.7	308.4	0.0	0.0

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

CLIENT : QUINTETTE COAL LTD. HOLE ID. : QMR88509 GAMM
FIELD OFFICE : CALGARY DATE OF LOG : 10/17/88
DATA FROM : PROBE : 9055A , 46

Century

QMR88510 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QMR88510 DEVIATION			DEN.NEUT	
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/17/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 48	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 47.46	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.42	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

REMARKS :

VERTICAL HOLE

LOGGED OPEN HOLE BL20825/SL39375

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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Certify

QMR88510 DEVIATION

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QMR88510 DEVIATION				
LOCATION/FIELD	: WOLVERINE VALLEY SOUTH				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/17/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 48	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 47.46	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.42	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 1	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0.5	RECORDED BY	: G.PHILLIPS		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: 9055 12
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 9000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE BL20825/SL39375

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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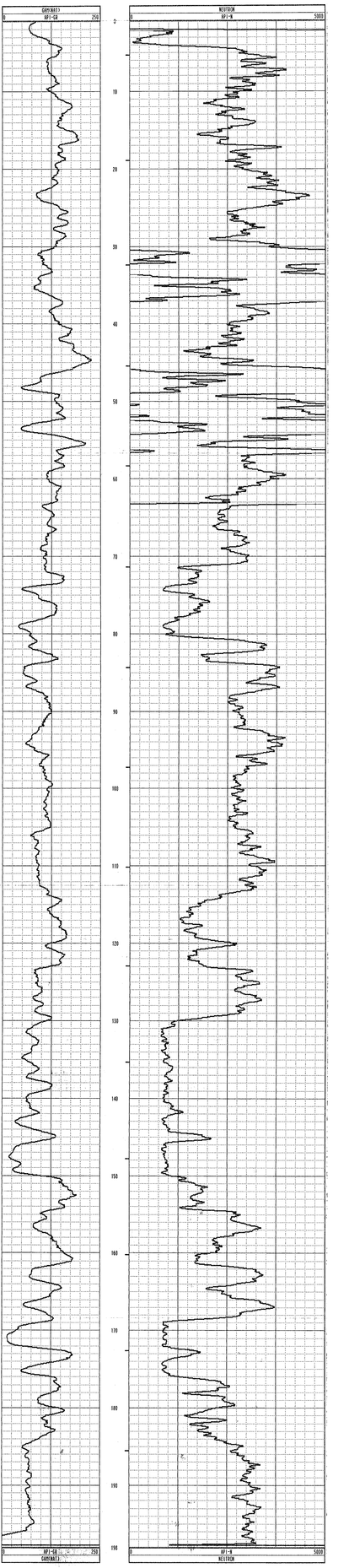
Century

QHR 88011 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88011 GAMMA-NEUTRON	GAM.DEN.	
LOCATION/FIELD	: BL 21150:SL 28300 TRANSFER W	NEUT.RES	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 08/25/88	PERMANENT DATUM : 1590	ELEVATIONS
DEPTH DRILLER	: 202.2	ELEV. PERM. DATUM: 1590	KB : 1590
LOG BOTTOM	: 197.82	LOG MEASURED FROM: 1590	DF : 1590
LOG TOP	: 0.72	DRL MEASURED FROM: 1590	GL : 1590
CASING DRILLER	: 5	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0		RECORDED BY : G. MURPHY	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 9
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

ANGLE HOLE AZIMUTH 217 INCLINATION 60
ANGLE HOLE AZIMUTH 217 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

746

Century

QHR 88011 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88011 GAMMA-DENSITY			GAN.DEN.	
LOCATION/FIELD	: BL 21150 SL 28300 TRANSFER W			NEUT.RES	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/25/88	PERMANENT DATUM	: 1590	ELEVATIONS	
DEPTH DRILLER	: 202.2	ELEV. PERM. DATUM:	1590	KB	: 1590
LOG BOTTOM	: 198.20	LOG MEASURED FROM:	1590	DF	: 1590
LOG TOP	: 0.12	DRL MEASURED FROM:	1590	GL	: 1590
CASING DRILLER	: 5	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: G. MURPHY		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

ANGLE HOLE AZIMUTH 217 INCLINATION 60
ANGLE HOLE AZIMUTH 217 INCLINATION 60

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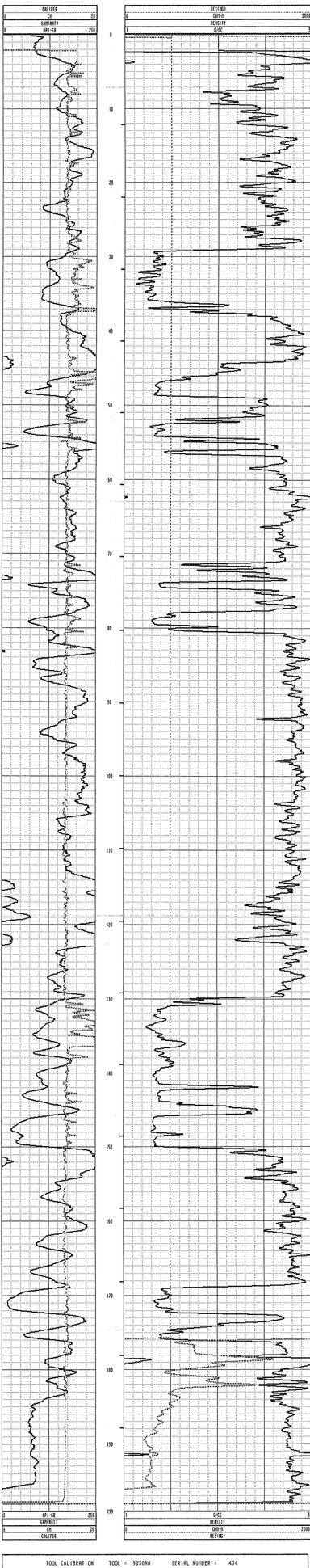
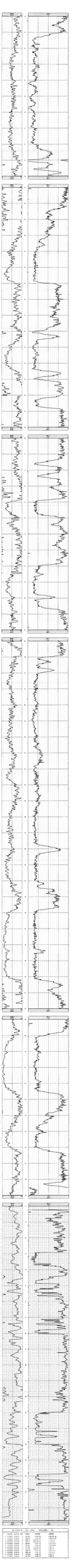


TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5615.000 CPS	1.106 G/CC
3	07/28/88	14:13:46	0	DENSITY	2250.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RESIS(M)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RESIS(M)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1042.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

Century
WIRELINE LOGS
GAMMA-DENSITY



Century

CGC

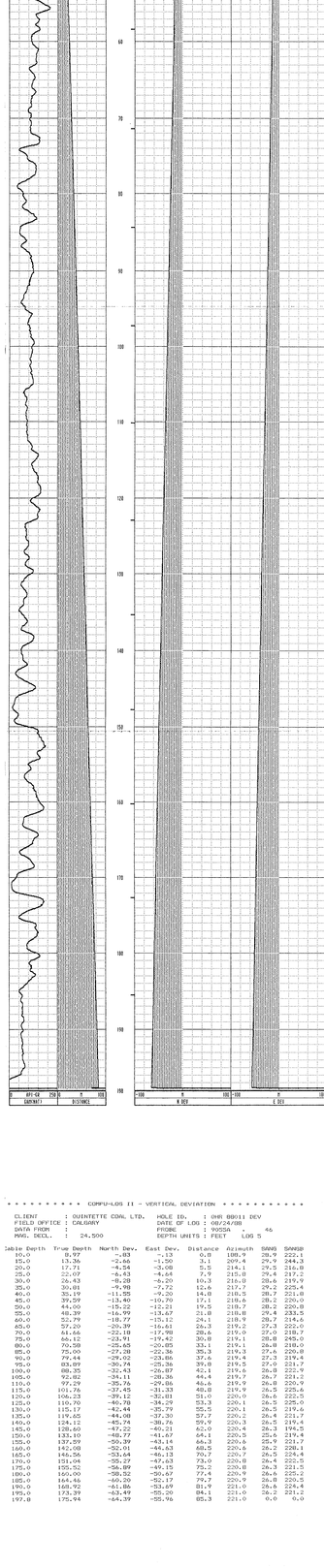
QHR 88011 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88011 DEVIATION	GAMMA-DEN.	
LOCATION-FIELD	: 8L 21150915L 20300 TRANSFER U	NEUT.RES	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE :	
DATE	: 88/24/88	PERMANENT DATUM : 1590	ELEVATIONS
DEPTH DRILLER	: 202.2	ELEV. PERM. DATUM: 1590	KB : 1590
LOG BOTTOM	: 197.82	LOG MEASURED FROM: 1590	DF : 1590
LOG TOP	: 0.72	DRL MEASURED FROM: 1590	GL : 1590
CASING DRILLER	: S	LOGGING UNIT	: 8401
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS: 0		RECORDED BY	: G. MURPHY
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS			
ANGLE HOLE AZIMUTH 217 INCLINATION 60			
ANGLE HOLE AZIMUTH 217 INCLINATION 60			

FILE : PROCESSED
TYPE : 9055A
LOG : S
PLOT : 001N 6
THRSH: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88011 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 08/24/88
DATA FROM	:	FROM	: 9055A - 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 5

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
10.0	9.97	-.83	-.13	0.8	188.9	28.9	222.1
15.0	13.36	-2.66	-1.50	3.1	209.4	29.9	244.3
20.0	17.71	-4.54	-3.08	5.5	214.1	29.5	216.8
25.0	22.07	-6.43	-4.64	7.9	215.8	29.4	217.2
30.0	26.43	-8.28	-6.20	10.3	216.8	28.6	219.9
35.0	30.81	-9.98	-7.72	12.6	217.7	29.2	225.4
40.0	35.19	-11.55	-9.20	14.8	218.5	28.7	221.8
45.0	39.59	-13.40	-10.70	17.1	218.6	28.2	220.0
50.0	44.00	-15.22	-12.21	19.5	218.7	28.2	220.8
55.0	48.39	-16.99	-13.67	21.8	218.8	29.4	233.5
60.0	52.79	-18.77	-15.13	24.1	219.0	28.3	222.5
65.0	57.20	-20.59	-16.61	26.5	219.2	28.3	222.0
70.0	61.66	-22.18	-17.98	28.6	219.0	27.0	218.7
75.0	66.12	-23.91	-19.42	30.8	219.1	28.8	245.0
80.0	70.58	-25.65	-20.85	33.1	219.1	26.8	218.0
85.0	75.00	-27.28	-22.36	35.3	219.3	27.6	220.8
90.0	79.44	-29.02	-23.86	37.6	219.4	27.3	219.4
95.0	83.89	-30.74	-25.36	39.8	219.5	27.0	221.7
100.0	88.35	-32.43	-26.87	42.1	219.6	26.8	222.9
105.0	92.82	-34.11	-28.36	44.4	219.7	26.7	221.2
110.0	97.29	-35.76	-29.86	46.6	219.9	26.8	220.9
115.0	101.76	-37.45	-31.33	48.8	219.9	26.5	225.6
120.0	106.23	-39.12	-32.81	51.0	220.0	26.6	222.5
125.0	110.70	-40.78	-34.29	53.3	220.1	26.5	225.0
130.0	115.17	-42.44	-35.79	55.5	220.1	26.5	219.6
135.0	119.65	-44.08	-37.30	57.7	220.2	26.4	221.7
140.0	124.12	-45.74	-38.76	59.9	220.3	26.5	219.4
145.0	128.60	-47.22	-40.21	62.0	220.4	26.3	194.5
150.0	133.10	-48.77	-41.67	64.1	220.5	25.6	219.4
155.0	137.60	-50.32	-43.14	66.3	220.6	26.2	221.7
160.0	142.08	-52.01	-44.63	68.5	220.6	26.2	228.1
165.0	146.56	-53.64	-46.13	70.7	220.7	26.5	224.4
170.0	151.04	-55.27	-47.63	73.0	220.8	26.4	222.5
175.0	155.52	-56.89	-49.15	75.2	220.8	26.3	221.5
180.0	160.00	-58.52	-50.67	77.4	220.9	26.6	225.2
185.0	164.46	-60.20	-52.17	79.7	220.9	26.8	220.5
190.0	168.92	-61.86	-53.69	81.9	221.0	26.6	224.4
195.0	173.39	-63.49	-55.20	84.1	221.0	26.2	221.2
197.8	175.94	-64.39	-55.96	85.3	221.0	0.0	0.0

Century

QHR 88012 GAMMA-DENSITY

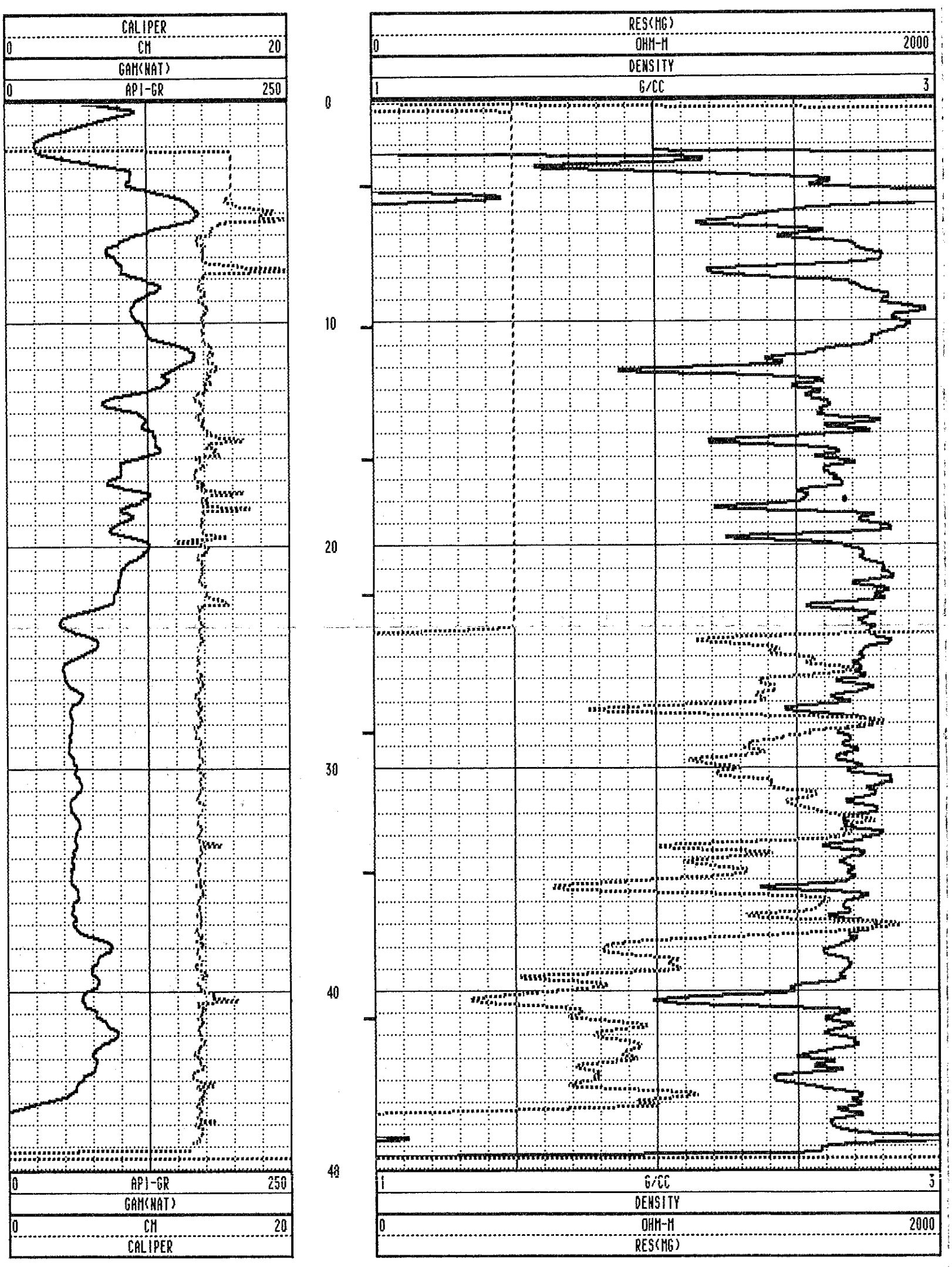
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88012 GAMMA-DENSITY				
LOCATION/FIELD	: BL 19950:SL 29760 TRANSFER W				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/25/88	PERMANENT DATUM	: 1590	ELEVATIONS	
DEPTH DRILLER	: 51	ELEV. PERM. DATUM	: 1590	KB	: 1590
LOG BOTTOM	: 47.58	LOG MEASURED FROM	: 1590	DF	: 1590
LOG TOP	: 0.20	DRL MEASURED FROM	: 1590	GL	: 1590
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: G. MURPHY		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
GAM,DEN,
NEUT,RES
CAL,DEV

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 45

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5615.000 CPS	1.106 G/CC
3	07/28/88	14:13:46	0	DENSITY	2230.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1842.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88012 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88012 GAMMA-NEUTRON			GAM,DEN,	
LOCATION/FIELD	: BL 19950:SL 29760 TRANSFER W			NEUT,RES	
COUNTY	:			CAL,DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/25/88	PERMANENT DATUM	: 1590	ELEVATIONS	
DEPTH DRILLER	: 51	ELEV. PERM. DATUM	: 1590	KB	: 1590
LOG BOTTOM	: 50.70	LOG MEASURED FROM	: 1590	DF	: 1590
LOG TOP	: 0.82	DRL MEASURED FROM	: 1590	GL	: 1590
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: G. MURPHY		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 45

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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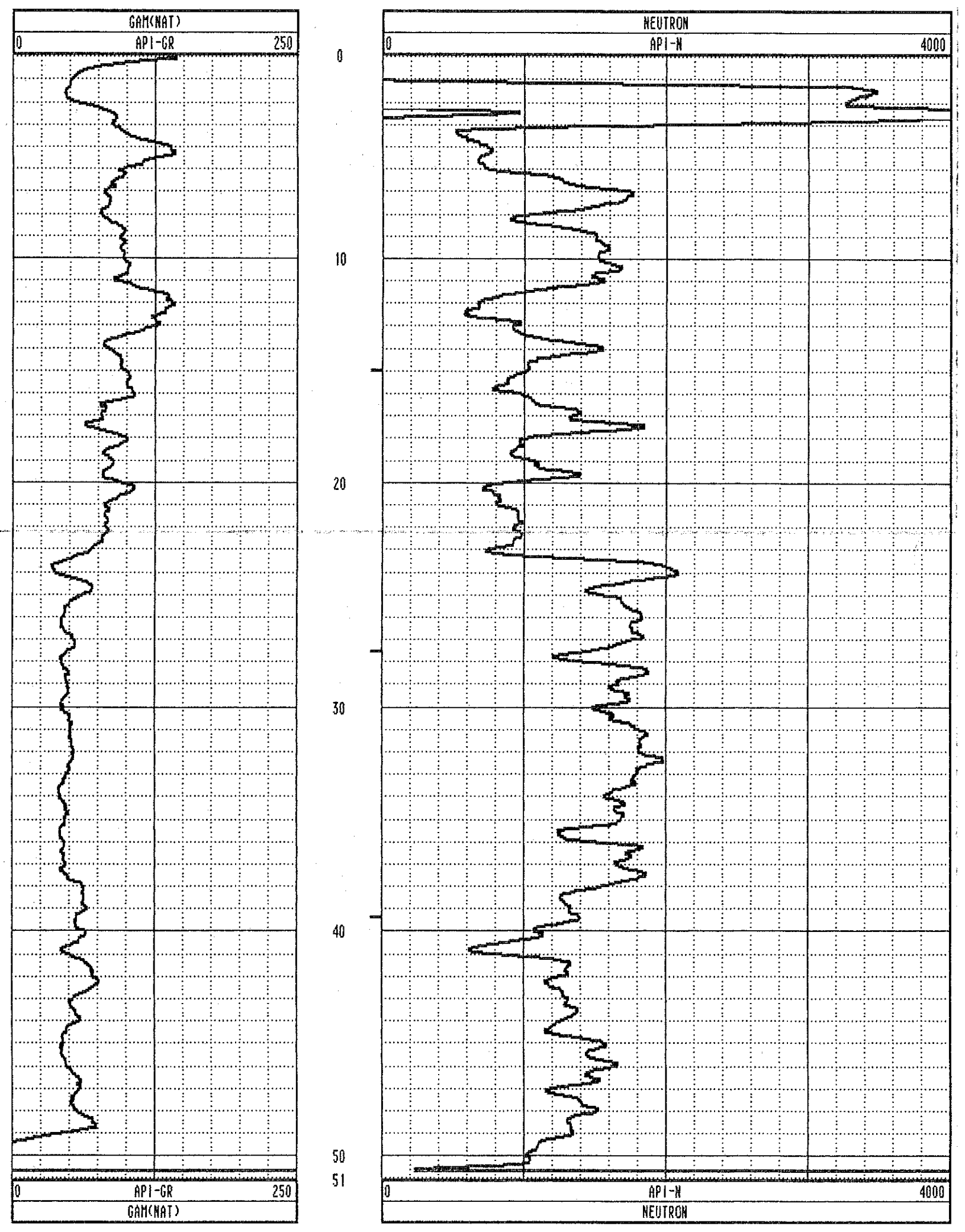

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

QHR 88012 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88012 GAMMA-DENSITY	GAMLOG%,	
LOCATION/FIELD	: BL 1995015L 29760 TRANSFER W	NEUT.RES	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:

DATE	: 08/25/88	PERMANENT DATUM	: 1590	ELEVATIONS	
DEPTH DRILLER	: 51	ELEV. PERM. DATUM	: 1590	KB	: 1590
LOG BOTTOM	: 47.58	LOG MEASURED FROM	: 1590	DF	: 1590
LOG TOP	: 0.20	DRL MEASURED FROM	: 1590	GL	: 1590
CASING DRILLER	: 6	LOGGING UNIT	: 940		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: G. MURPHY		

BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.60	RM TEMPERATURE	: 0	LOG	: 9
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: QUIK S
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

ANGLE HOLE AZIMUTH 57 INCLINATION 45

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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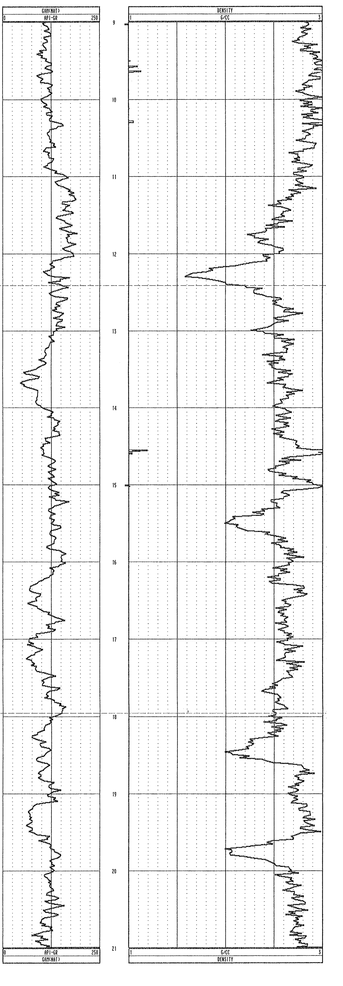

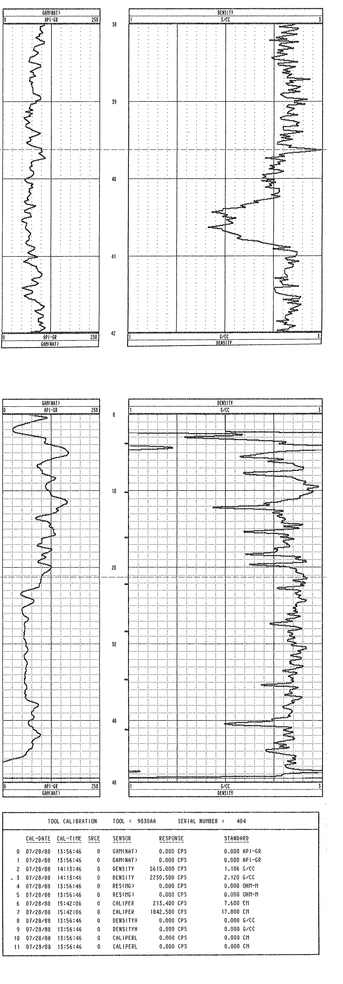

TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAMMAAT)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAMMAAT)	0.000 CPS	0.000 API-GR
2	07/28/88	14:15:46	0	DENSITY	5615.000 CPS	1.186 G/CC
3	07/28/88	14:15:46	0	DENSITY	2239.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RESING)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RESING)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	215.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1042.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYM	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYM	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88012 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88012 DEVIATION			GAM,DEN,	
LOCATION/FIELD	: BL 19950:SL 29760 TRANSFER W			NEUT,RES	
COUNTY	:			CAL,DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/25/88	PERMANENT DATUM	: 1590	ELEVATIONS	
DEPTH DRILLER	: 51	ELEV. PERM. DATUM	: 1590	KB	: 1590
LOG BOTTOM	: 50.70	LOG MEASURED FROM	: 1590	DF	: 1590
LOG TOP	: 0.82	DRL MEASURED FROM	: 1590	GL	: 1590
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: G. MURPHY		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 45

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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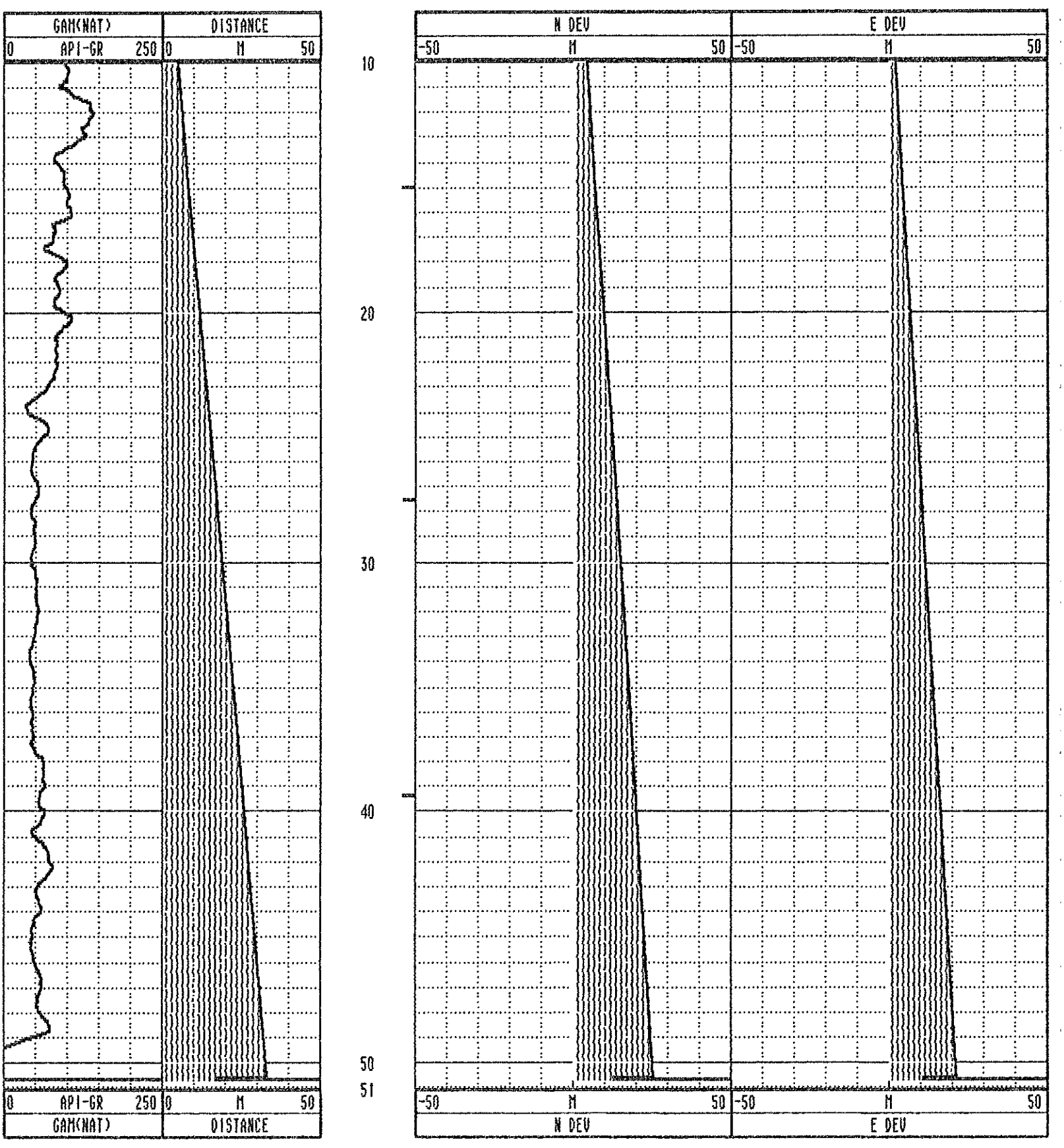

* * * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88012 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 08/26/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 0

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
10.0	7.75	4.54	2.12	5.0	25.0	44.4	32.0
11.0	8.46	5.07	2.57	5.7	26.9	44.9	38.1
12.0	9.18	5.60	3.02	6.4	28.3	44.1	22.7
13.0	9.90	6.06	3.49	7.0	30.0	44.9	44.7
14.0	10.61	6.53	3.95	7.6	31.2	44.5	40.3
15.0	11.32	7.07	4.39	8.3	31.9	44.8	42.0
16.0	12.02	7.60	4.85	9.0	32.5	48.5	40.2
17.0	12.72	8.16	5.29	9.7	32.9	45.1	40.8
18.0	13.43	8.69	5.75	10.4	33.5	44.8	42.5
19.0	14.14	9.22	6.21	11.1	34.0	45.2	38.4
20.0	14.85	9.77	6.66	11.8	34.3	45.3	45.0
21.0	15.55	10.30	7.12	12.5	34.7	45.4	39.8
22.0	16.25	10.85	7.57	13.2	34.9	45.7	40.9
23.0	16.96	11.37	8.05	13.9	35.3	46.8	36.7
24.0	17.66	11.89	8.53	14.6	35.6	45.5	41.4
25.0	18.36	12.42	9.01	15.3	36.0	45.3	43.6
26.0	19.06	12.94	9.49	16.0	36.3	45.3	43.0
27.0	19.77	13.46	9.98	16.7	36.6	45.5	44.6
28.0	20.47	13.99	10.46	17.5	36.8	45.3	40.3
29.0	21.17	14.51	10.94	18.2	37.0	45.8	39.1
30.0	21.87	15.05	11.40	18.9	37.1	45.9	38.8
31.0	22.58	15.59	11.86	19.6	37.3	45.3	44.7
32.0	23.28	16.11	12.34	20.3	37.4	45.6	41.3
33.0	23.98	16.63	12.83	21.0	37.6	45.4	42.0
34.0	24.68	17.15	13.31	21.7	37.8	45.2	42.3
35.0	25.39	17.66	13.81	22.4	38.0	45.4	48.8
36.0	26.09	18.14	14.30	23.1	38.3	44.5	0.5
37.0	26.80	18.63	14.79	23.8	38.5	44.6	42.4
38.0	27.52	19.10	15.30	24.5	38.7	43.7	49.3
39.0	28.23	19.59	15.78	25.2	38.8	44.5	37.5
40.0	28.95	20.08	16.28	25.9	39.0	43.6	47.9
41.0	29.67	20.58	16.77	26.5	39.2	43.1	48.0
42.0	30.39	21.02	17.21	27.2	39.3	45.7	40.0
43.0	31.09	21.52	17.67	27.8	39.4	45.3	51.5
44.0	31.79	22.02	18.17	28.5	39.5	46.4	44.0
45.0	32.48	22.55	18.64	29.3	39.6	45.7	32.3
46.0	33.18	23.03	19.14	29.9	39.7	44.4	48.3
47.0	33.88	23.54	19.59	30.6	39.8	46.1	44.2
48.0	34.58	24.05	20.04	31.3	39.8	46.3	29.8
49.0	35.28	24.53	20.55	32.0	40.0	44.7	66.8
50.0	36.00	25.03	20.98	32.6	40.0	48.3	61.1
50.7	36.49	25.36	21.30	33.1	40.0	0.0	0.0
51.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0

Century

QHR 88013 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88013 GAMMA/NEUTRON			GAM.DEN.	
LOCATION/FIELD	: BL 19900:SL 29900 TRANSFER W			NEUT.RES	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/27/88	PERMANENT DATUM	: 1615	ELEVATIONS	
DEPTH DRILLER	: 139.2	ELEV. PERM. DATUM:	1615	KB	: 1615
LOG BOTTOM	: 138.72	LOG MEASURED FROM:	1615	DF	: 1615
LOG TOP	: 9.74	DRL MEASURED FROM:	1615	GL	: 1615
CASING DRILLER	: 1.7	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: G. MURPHY		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 50

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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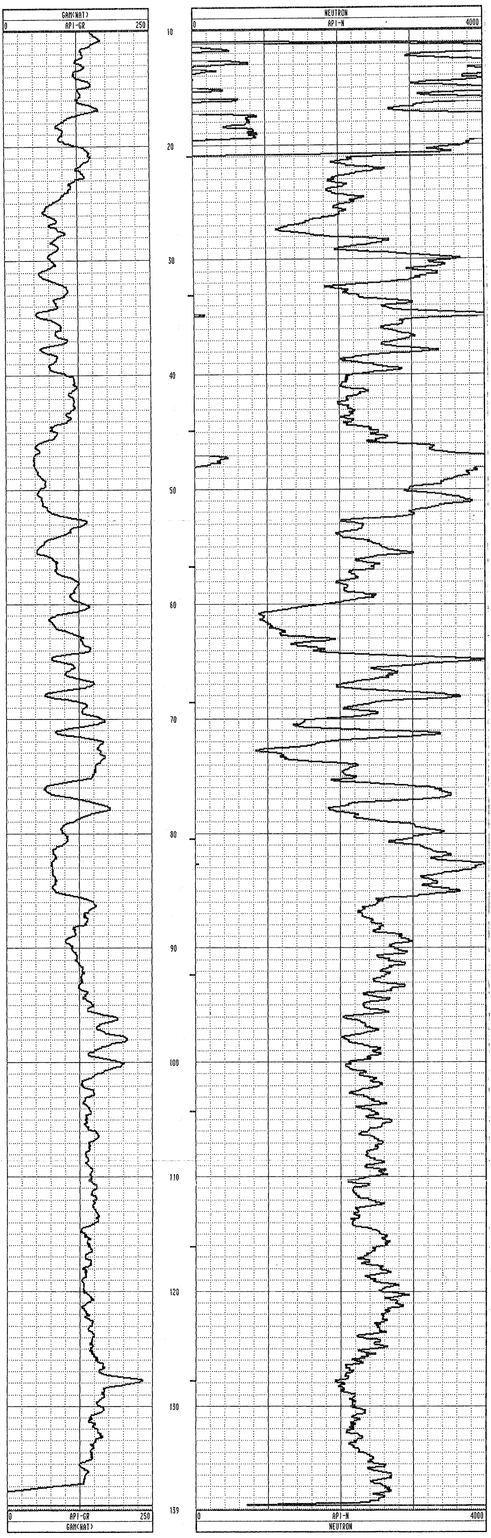

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

QHR 88013 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88013 GAMMA-DENSITY			GAM.DEN.	
LOCATION/FIELD	: BL 19900:SL 29900 TRANSFER W			NEUT.RES	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/27/88	PERMANENT DATUM	: 1615	ELEVATIONS	
DEPTH DRILLER	: 139.2	ELEV. PERM. DATUM:	1615	KB	: 1615
LOG BOTTOM	: 139.02	LOG MEASURED FROM:	1615	DF	: 1615
LOG TOP	: 0.20	DRL MEASURED FROM:	1615	GL	: 1615
CASING DRILLER	: 1.7	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: G. MURPHY		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

ANGLE HOLE AZIMUTH 37 INCLINATION 50

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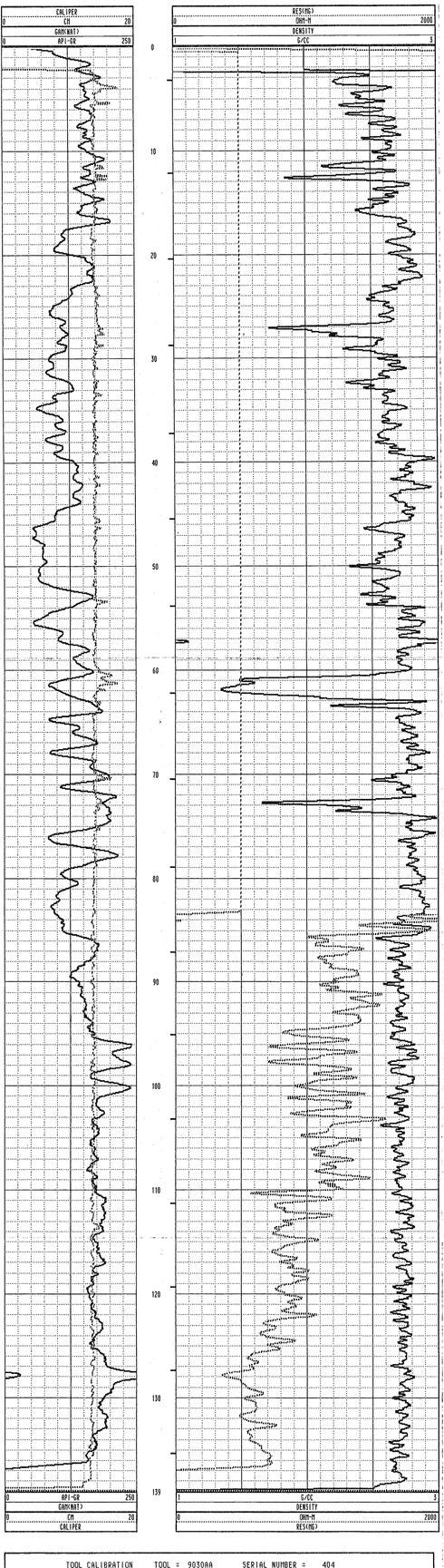

TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5615.000 CPS	1.106 G/CC
3	07/28/88	14:13:46	0	DENSITY	2230.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1842.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

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QHR 88013 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES	
WELL	: QHR 88013 GAMMA-DENSITY	GAMLOG+	
LOCATION/FIELD	: BL 1990015L 29900 TRANSFER W	NEUT+DES	
COUNTY	:	CALDES	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE :	

DATE	: 09/27/88	PERMANENT DATUM	: 1615
DEPTH DRILLER	: 139.2	ELEV. PERM. DATUM	: 1615
LOG BOTTOM	: 139.02	LOG MEASURED FROM	: 1615
LOG TOP	: 15.20	DRL MEASURED FROM	: 1615
CASING DRILLER	: 1.7	LOGGING UNIT	: 8481
CASING TYPE	: STEEL	LOGGED BY	: C.L.MURPHY
CASING THICKNESS	:	RECORDED BY	: C.L.MURPHY

BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
LITHOLOGY	: SANDSTONE	FLUID DELTA T	: 490
REMARKS			

ANGLE HOLE AZIMUTH 37 INCLINATION 50

ELEVATIONS		
KB	:	1615
DF	:	1615
GL	:	1615

FILE : ORIGINAL
TYPE : 9035BA
LOG : 2
PLOT : GAIN 5
THRESH: 2500

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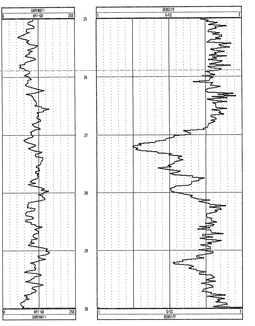

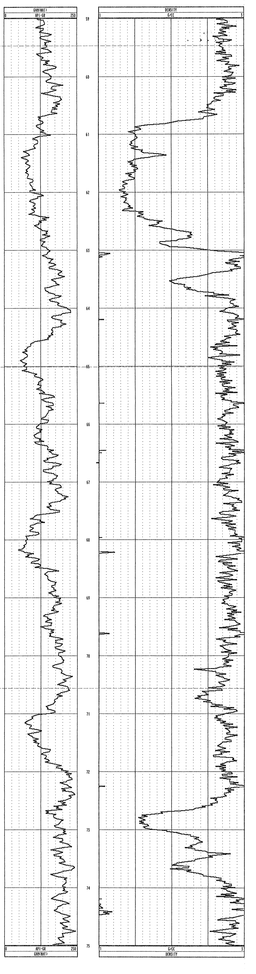

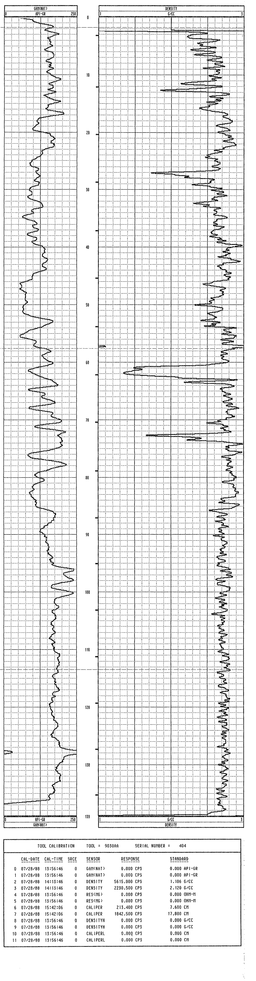

TOOL CALIBRATION TOOL = 9035BA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
1	07/29/88	15:56:46	D	GAMMATY	0.000 CPS	0.000 API-GR
2	07/29/88	15:57:06	D	GAMMATY	1615.000 CPS	200.000 API-GR
3	07/29/88	16:11:56	D	DENSITY	1615.000 CPS	1.100 G/CC
4	07/29/88	16:13:46	D	DENSITY	2200.500 CPS	2.120 G/CC
5	07/29/88	15:56:46	D	RESISTR1	0.000 CPS	0.000 OHM-M
6	07/29/88	15:56:46	D	RESISTR2	0.000 CPS	0.000 OHM-M
7	07/29/88	15:42:36	D	CALIPER	215.400 CPS	7.600 CM
8	07/29/88	15:42:56	D	CALIPER	1642.500 CPS	17.800 CM
9	07/29/88	15:56:46	D	RESISTR1	0.000 CPS	0.000 S/CC
10	07/29/88	15:56:46	D	RESISTR2	0.000 CPS	0.000 S/CC
11	07/29/88	15:56:46	D	CALIPER1	0.000 CPS	0.000 CM
12	07/29/88	15:56:46	D	CALIPER2	0.000 CPS	0.000 CM

Century

CGG

QHR 88013 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88013 DEVIATION	GAM.DEN.	
LOCATION-FIELD	: BL 1990S-19L 2990 TRANSFER W	KEUT.RES	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 08/28/88 PERMANENT DATUM : 1615	ELEVATIONS	
DEPTH DRILLER	: 139.2 ELEV. PERM. DATUM: 1615	KB : 1615	
LOG BOTTOM	: 138.72 LOG MEASURED FROM: 1615	DF : 1615	
LOG TOP	: 9.74 DRL MEASURED FROM: 1615	GL : 1615	
CASING DRILLER	: 7.7 LOGGING UNIT : 8401		
CASING TYPE	: STEEL FIELD OFFICE : CALGARY		
CASING THICKNESS	: 0 RECORDED BY : G. MURPHY		
BIT SIZE	: 15.6 BOREHOLE FLUID : WATER	FILE : PROCESSED	
MAGNETIC DECL.	: 24.500 RM : 0	TYPE : 9055A	
MATRIX DENSITY	: 2.68 RM TEMPERATURE : 0	LOG : 3	
FLUID DENSITY	: 1.0 MATRIX DELTA T : 173	PLOT : QUIN 6	
NEUTRON MATRIX	: SANDSTONE FLUID DELTA T : 690	THRESH: 2500	
REMARKS	:		

ANGLE HOLE AZIMUTH 37 INCLINATION 50

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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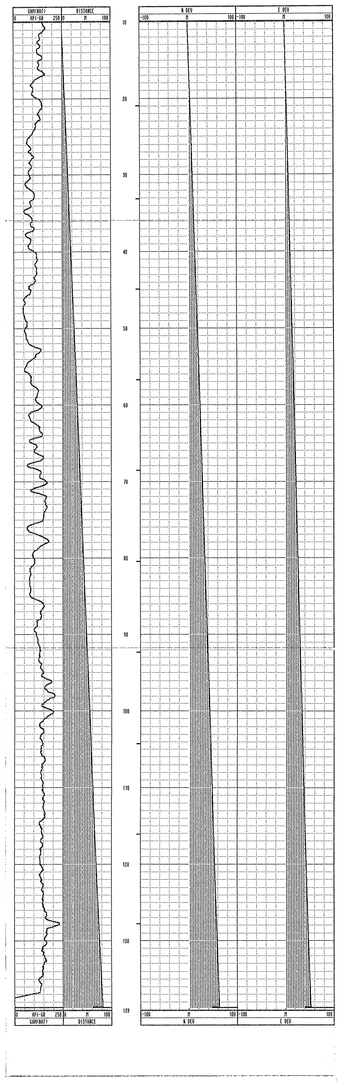
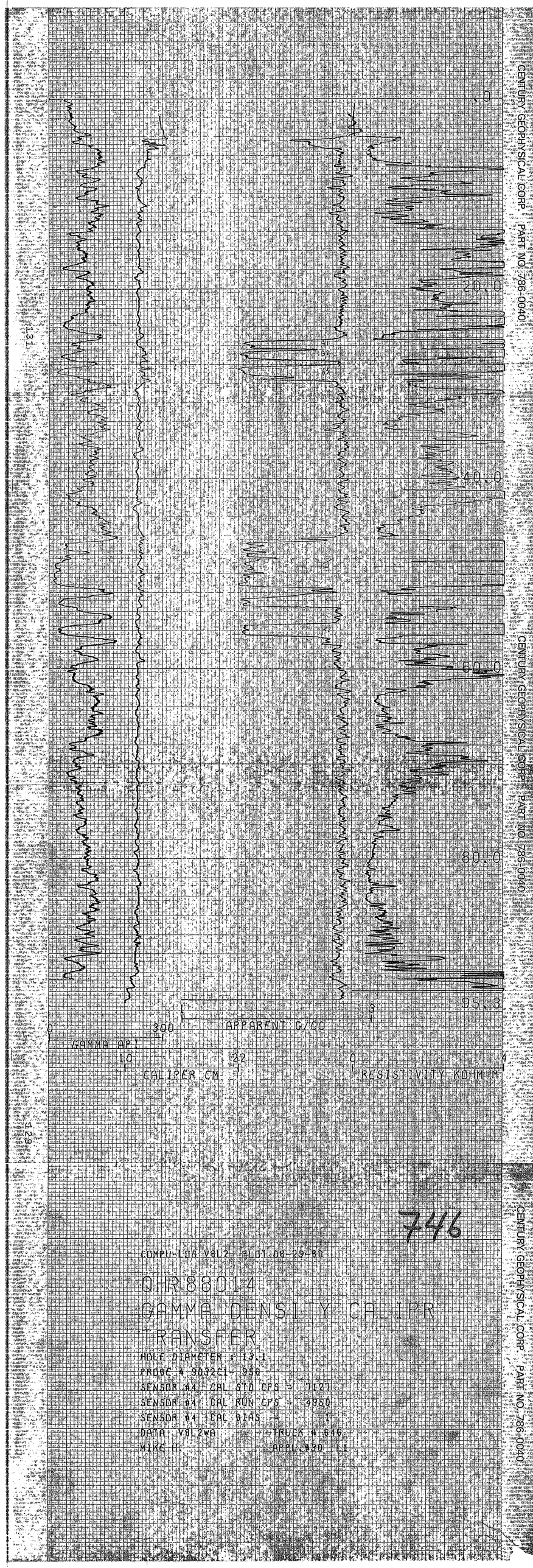
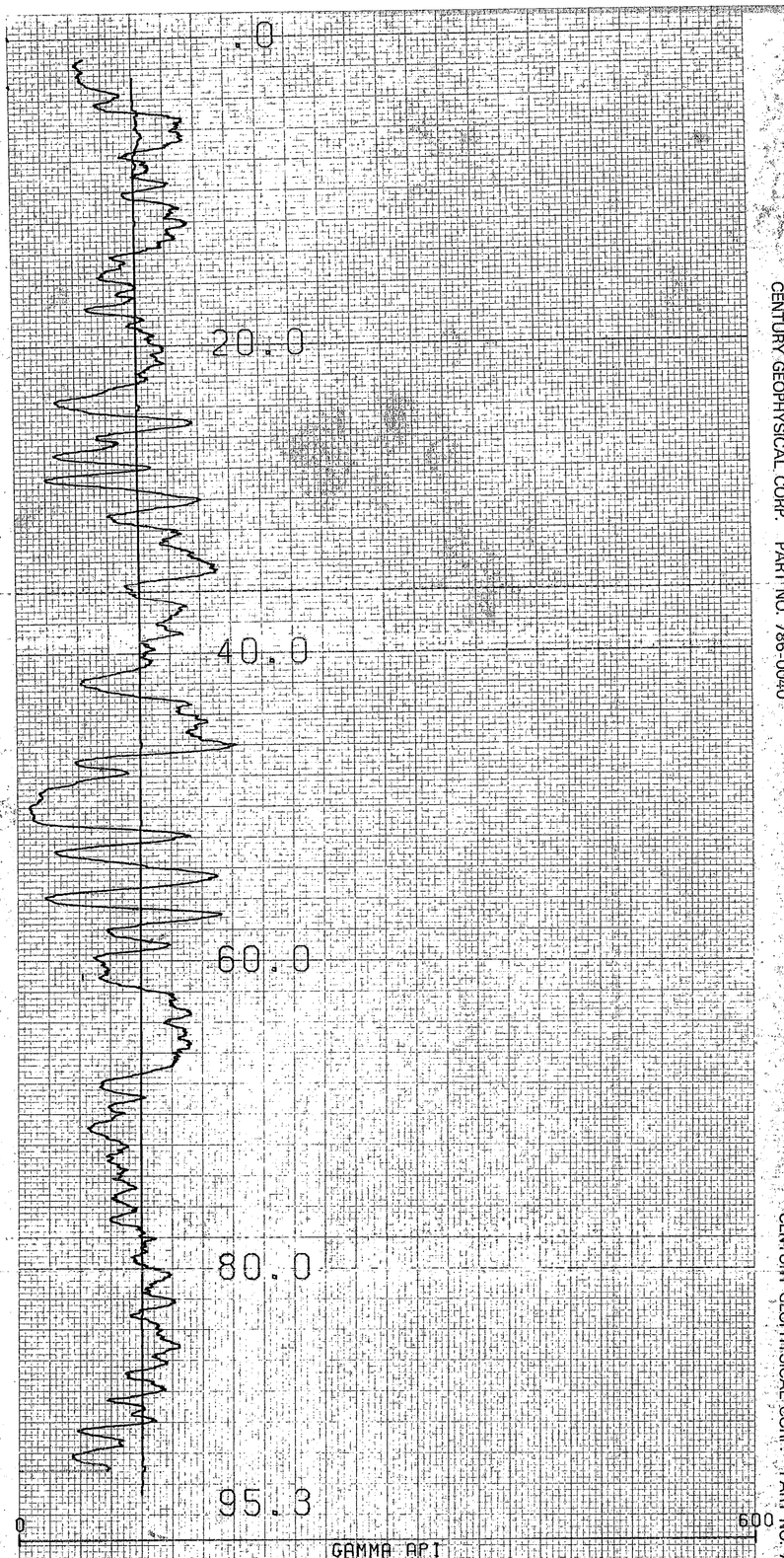


* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88013 GAM				
FIELD OFFICE	: CALGARY	DATE OF LOG	: 08/28/88				
DATA FROM	:	PROBE	: 9055A . 46				
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 3				

able Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
10.0	10.00	0.00	0.00	0.0	-.0	0.0	0.0
15.0	14.15	1.73	1.41	2.2	39.1	39.0	34.8
20.0	18.81	4.23	3.33	5.4	38.2	50.1	35.2
25.0	21.85	6.57	5.27	8.4	38.7	38.5	22.7
30.0	25.74	8.97	7.21	11.5	38.8	45.3	50.4
35.0	29.60	11.46	9.06	14.6	38.3	37.3	34.0
40.0	33.48	13.97	10.96	17.8	38.1	38.8	49.1
45.0	37.38	16.47	12.84	20.9	37.9	38.7	32.1
50.0	41.29	18.96	14.72	24.0	37.8	38.3	33.3
55.0	45.21	21.43	16.57	27.1	37.7	38.2	36.5
60.0	49.15	23.88	18.44	30.2	37.7	38.0	37.8
65.0	53.09	26.32	20.32	33.2	37.7	38.1	37.7
70.0	57.04	28.75	22.20	36.3	37.7	37.8	35.6
75.0	60.98	31.16	24.10	39.4	37.7	37.9	37.2
80.0	64.92	33.58	25.99	42.5	37.7	37.7	35.0
85.0	68.87	35.99	27.89	45.5	37.8	37.6	38.3
90.0	72.80	38.43	29.77	48.6	37.8	38.5	36.6
95.0	76.69	40.87	31.75	51.8	37.8	39.3	37.4
100.0	80.52	43.36	33.77	55.0	37.9	39.9	39.8
105.0	84.31	45.85	35.84	58.2	38.0	41.0	35.3
110.0	88.04	48.37	38.01	61.5	38.2	42.2	40.2
115.0	91.79	50.97	40.30	64.9	38.4	44.0	40.3
120.0	95.24	53.37	42.73	68.4	38.7	45.5	48.2
125.0	98.68	55.91	45.17	71.9	38.9	47.8	33.9
130.0	101.94	58.63	47.66	75.6	39.1	50.1	64.9
135.0	105.01	61.20	50.34	79.2	39.4	54.2	79.6
138.7	107.16	63.01	52.42	82.0	39.8	0.0	0.0


CENTURY GEOPHYSICAL CORP. PART NO. 786-0040
13.1
0
20.0
40.0
60.0
80.0
95.3
300
APPARENT G/CC
GAMMA API
LO
22
CALIPER CM
0
RESISTIVITY KOHM CM
746
COMPU-LOG V8L2 PLOT 08-29-80
OHR80014
GAMMA DENSITY CALIPR
TRANSFER
HOLE DIAMETER = 13.1
PROG # 9032E1-956
SENSOR #1 CAL STD CPS = 7127
SENSOR #1 CAL RUN CPS = 4950
SENSOR #1 CAL BIAS = -1
DATA V8L2WA TRUCK # 646
MIKE H APPL 439 LL



CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

137

135

746

COMPU-LOG V8L2 PLOT 08-29-80

QHR 88014
GAMMA NEUTRN DEV.
TRANSFER

HOLE DIAMETER : 13.1
PROBE # 9055A - 079
SENSOR #4 CAL STD CPS = 152
SENSOR #4 CAL RUN CPS = 186
SENSOR #4 CAL BIAS = 0
DATA V8L2*A TRUCK # 646
MIKE H. APPL.#7 L1

746

QHR88014
GAMMA - NEUTRON
TRANSFER

0"

20"

4"

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

143

147

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CORP. PART NO. 786-0040

CENTURY GEOPHYSICAL CO

143

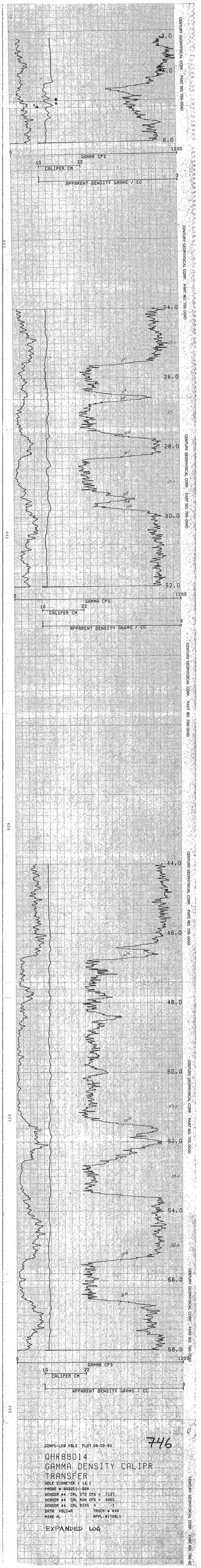
142

746

COMPU-LOG V8L2 PLOT 08-29-80

QHR 88014
GAMMA NEUTRON RODS
TRANSFER

HOLE DIAMETER : 13.1
PROBE # 9055A - 079
SENSOR #4 CAL STD-CPS = 152
SENSOR #4 CAL RUN CPS = 186
SENSOR #4 CAL BIAS = 0
DATA V8L2*A TRUCK # 646
MIKE H. APPL.#7 L1



COMPU-LOG VOL2 PLOT 08-29-90

746

QHR88014

GAMMA DENSITY CALIPR

TRANSFER

HOLE DIAMETER = 12.1

PROBE # 902601-866

SENSOR #4 CAL STD CPS = 3127

SENSOR #4 CAL RUN CPS = 4950

SENSOR #4 CAL BIAS = 21

DATA VOL2WR TRUCK # 646

MIKE-HL APPL.#11086.1

EXPANDED LOG

CENTURY GEOPHYSICAL CORPORATION

* * * * * * * * VERTICAL DEVIATION * * * * * * * *

COMPU-LOG V8L1 DEVIATION

CLIENT : GAMMA NEUTRN DEV. HOLE ID : QHR 89014

LOCATION : TRANSFER DATE OF LOG : 08-29-80

DATA FROM : V8L2*A PROBE : 9055A 0079

TD = TOTAL DEPTH
T = TOP OF ZONE
B = BOTTOM OF ZONE

	DEPTH	TRUE DEPTH	NORTH DEV	EAST DEV	DISTANCE	AZIMUTH	SA	SAB
	.00	.00	.00	.00	.00	.0	.0	.0
	5.00	4.26	-1.14	1.59	1.96	125.5	24.7	125.5
	10.00	8.49	-1.31	.40	1.37	162.9	15.9	261.9
	15.00	12.58	-3.24	-1.36	3.51	202.8	32.6	222.4
	20.00	16.72	-4.85	-3.47	5.97	215.6	32.7	232.7
	25.00	20.84	-6.15	-5.96	8.57	224.1	34.2	242.3
	30.00	25.01	-7.73	-8.17	11.24	226.6	32.9	234.4
	35.00	29.21	-9.36	-10.26	13.89	227.6	32.3	231.9
	40.00	33.38	-10.80	-12.51	16.52	229.2	32.5	237.5
	45.00	37.52	-12.18	-14.86	19.22	230.7	33.4	239.5
	50.00	41.75	-13.78	-17.00	21.88	231.0	32.2	233.0
	55.00	45.98	-15.34	-19.12	24.51	231.2	31.8	233.6
	60.00	50.21	-16.67	-21.39	27.12	232.1	31.8	239.7
	65.00	54.47	-18.16	-23.53	29.73	232.3	31.5	235.0
	70.00	58.71	-19.62	-25.70	32.34	232.6	31.6	236.1
	75.00	62.98	-21.35	-27.59	34.89	232.3	30.9	227.5
	80.00	67.30	-22.77	-29.61	37.36	232.4	29.8	234.9
	85.00	71.66	-24.35	-31.42	39.75	232.2	28.8	228.6
	90.00	75.96	-25.84	-33.42	42.24	232.3	30.0	233.4
	95.00	80.24	-27.14	-35.48	44.67	232.6	29.7	237.6
TD	95.20	80.41	-27.21	-35.56	44.78	232.6	31.7	234.2

746

copy

Century

QHR 88015 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL MINE LTD.		
WELL	: QHR 88015 GAMMA-DENSITY	OTHER SERVICES:	
LOCATION/FIELD	: BL 21500:SL 27000 TRANSFER W	DEV.CAL	
COUNTY	:	GAM.DEN	
STATE	:	NEUT.RES	
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 08/31/88	PERMANENT DATUM	: GL	ELEVATIONS
DEPTH DRILLER	: 114	ELEV. PERM. DATUM: 1080	KB : 1080
LOG BOTTOM	: 111.88	LOG MEASURED FROM: GL	DF : 1080
LOG TOP	: 0.12	DRL MEASURED FROM: GL	GL : 1080
CASING DRILLER	: 000	LOGGING UNIT	: 62	
CASING TYPE	:	FIELD OFFICE	: CALGARY	
CASING THICKNESS: 00		RECORDED BY	: G.MURPHY	
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 4
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT : QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500
REMARKS	:			

ANGLE HOLE AZIMUTH 217 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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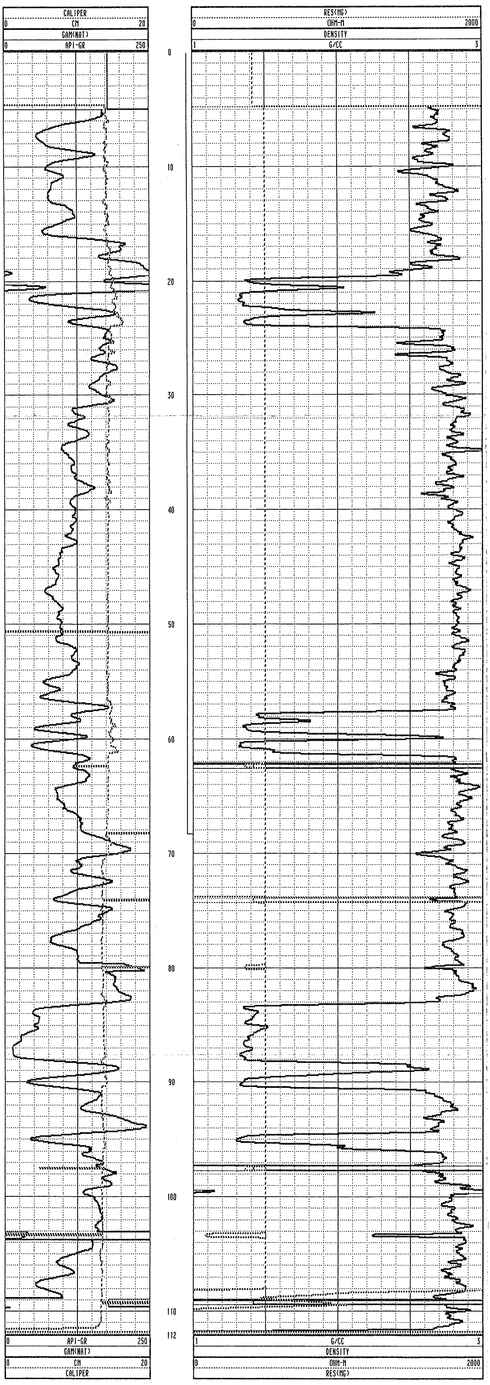


TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5615.000 CPS	1.106 G/CC
3	07/28/88	14:13:46	0	DENSITY	2230.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1042.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

Century

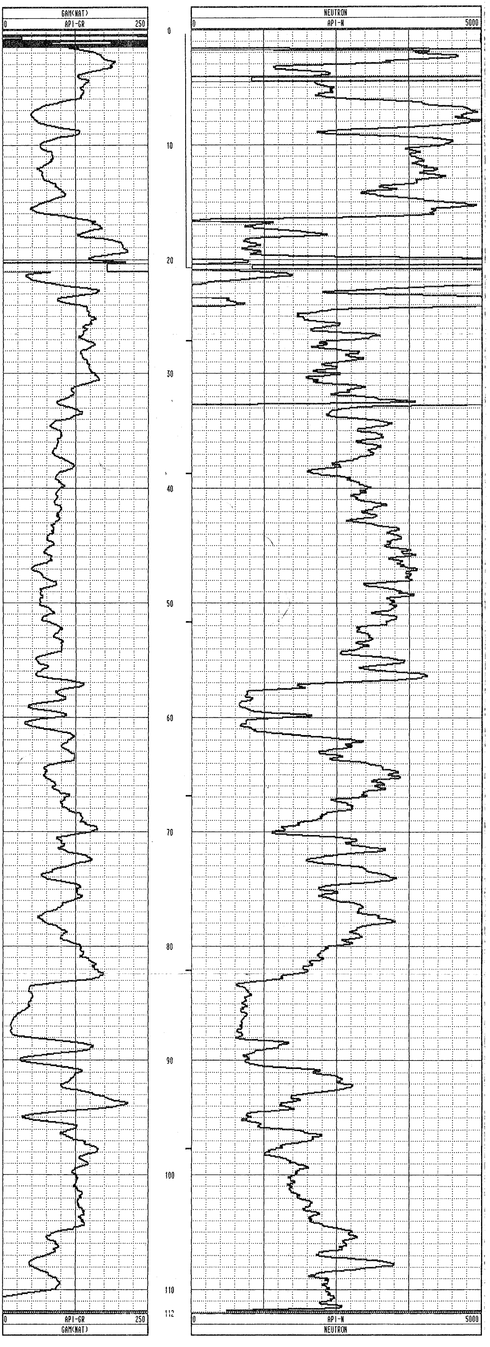
QHR 88015 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL MINE LTD.			OTHER SERVICES:	
WELL	: QHR 88015 GAMMA-NEUTRON			DEV.CAL	
LOCATION/FIELD	: BL 21500:SL 27000 TRANSFER W			GAM.DEN	
COUNTY	:			NEUT.RES	
STATE	:				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 08/31/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 114	ELEV. PERM. DATUM	: 1080	KB	: 1080
LOG BOTTOM	: 111.92	LOG MEASURED FROM	: GL	DF	: 1080
LOG TOP	: 0.36	DRL MEASURED FROM	: GL	GL	: 1080
CASING DRILLER	: 000	LOGGING UNIT	: 62		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 00	RECORDED BY	: G.MURPHY		
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
ANGLE HOLE AZIMUTH 217 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

CGC

Century

GHR 88015 GAMMA-DENSITY

COMPANY	: GLACIERTEL COAL MINE LTD.	OTHER SERVICES:	
WELL	: GHR 88015 GAMMA-DENSITY	DEN-GAL	
FIELD/AREA	: MT. STOOD/EL STOOD TOWNSITE	DEN-GR/A	
COMPANY	:	NEUT-GR/A	
STATE	:		
SECTION	: TOWNSHIP : RANGE :		

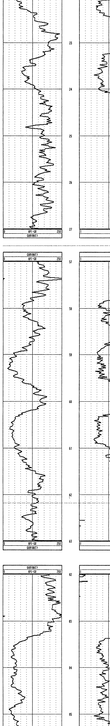
DATE	: 88/11/08	PERMANENT DATUM : GL		ELEVATIONS	
LOG MEASURED	: KB	ELEV.PERM.DATUM : 1080		KB	: 1090
LOG SECTION	: 11.89	LOG MEASURED FROM: GL		DF	: 1090
LOG TOP	: 8.10	DRL MEASURED FROM: GL		GL	: 1080
CASING DRILLER	: 000	LOGGING UNIT	: 62		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 00		RECORDED BY	: S.PERRY		

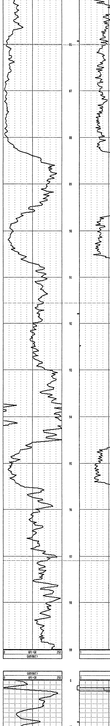
BIT SIZE	: 12	BOREHOLE FLUID	: WATER	FILE	: DB15HNL
MAX.REC.TEMP.DEGL.	: 24.500	PH	: 8	RUN	: ONE
MATRIX DENSITY	: 2.68	RM @ TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT	: DATA 5
MATRIX DELTA T	: SANDSTONE	FLUID DELTA T	: 400	TIMETAB	: 2000

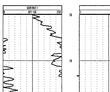
REMARKS
HOLE HOLE AZIMUTH 217 INCLINATION 60

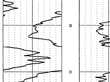
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

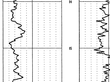
746

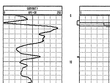


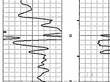


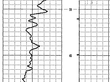


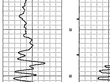


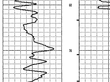


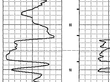


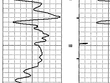


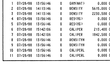












TOOL FILE IDENTIFICATION			TOOL + TOOLSTRING		TOOLSTRING NUMBER 1 - 454
FML/MNEM	FML/FILENAME	SERVICE	SERIAL/MODEL		STANDARDS
0	07/08/88	12:56:46	0	5491/GGT	0.000 API/GR
1	07/08/88	12:56:46	0	5491/GGT	0.000 API/GR
2	07/08/88	12:56:46	0	8008/CTF	5.000.000 CPS
3	07/08/88	12:56:46	0	8008/CTF	2.250.000 CPS
4	07/08/88	12:56:46	0	8012/RCI	0.000 CPS
5	07/08/88	12:56:46	0	8012/RCI	2.000 CPS
6	07/08/88	12:56:46	0	CAL/HTEN	1.000.000 LBS
7	07/08/88	12:56:46	0	CAL/HTEN	1.000.000 LBS
8	07/08/88	12:56:46	0	8008/TTM	0.000 CPS
9	07/08/88	12:56:46	0	8008/TTM	0.000 CPS
10	07/08/88	12:56:46	0	CAL/MTEM	0.000 CPS
11	07/08/88	12:56:46	0	CAL/MTEM	0.000 CPS

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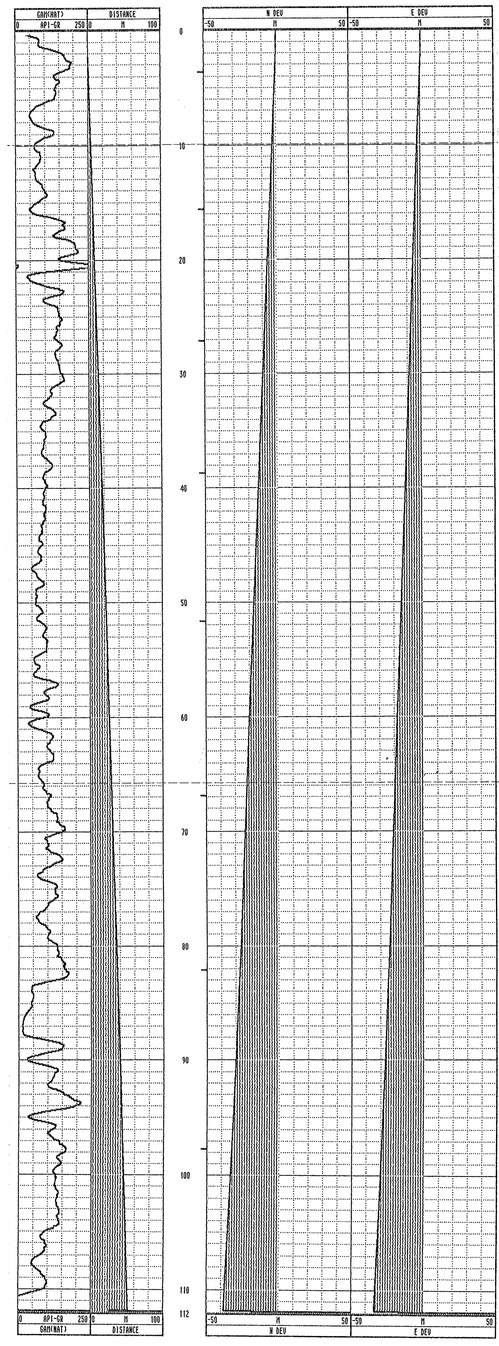
Century

QHR 88015 DEVIATION

COMPANY	: QUINTETTE COAL MINE LTD.	OTHER SERVICES:	
WELL	: QHR 88015 DEVIATION	DEV.CAL	
LOCATION/FIELD	: BL 21500:SL 27000 TRANSFER W	GAM.DEN	
COUNTY	:	NEUT.RES	
STATE	:		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 08/31/88	PERMANENT DATUM	: GL	ELEVATIONS
DEPTH DRILLER	: 114	ELEV. PERM. DATUM	: 1080	KB : 1080
LOG BOTTOM	: 111.92	LOG MEASURED FROM	: GL	DF : 1080
LOG TOP	: 0.56	DRL MEASURED FROM	: GL	GL : 1080
CASING DRILLER	: 000	LOGGING UNIT	: 62	
CASING TYPE	:	FIELD OFFICE	: CALGARY	
CASING THICKNESS	: 00	RECORDED BY	: G.MURPHY	
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 6
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT : QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500

REMARKS :
ANGLE HOLE AZIMUTH 217 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



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

CLIENT	: QUINTETTE COAL MINE	HOLE ID.	: QHR 88015 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/01/88
DATA FROM	:	PROBE	: 9055A . 46
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 6

Cable 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	4.99	-1.09	-.98	1.5	222.2	29.2	210.5
10.0	8.94	-2.72	-2.69	3.8	224.7	30.5	227.2
15.0	13.33	-4.44	-4.18	6.1	223.3	28.3	211.0
20.0	17.76	-6.20	-5.64	8.4	222.3	27.6	215.2
25.0	22.20	-7.97	-7.06	10.7	221.5	27.3	153.0
30.0	26.61	-9.72	-8.63	13.0	221.6	28.7	225.5
35.0	31.02	-11.47	-10.18	15.3	221.6	27.6	222.3
40.0	35.45	-13.20	-11.72	17.6	221.6	27.4	216.6
45.0	39.90	-14.91	-13.24	19.9	221.6	27.0	222.4
50.0	44.37	-16.58	-14.73	22.2	221.6	26.4	220.1
55.0	48.85	-18.25	-16.19	24.4	221.6	26.1	220.7
60.0	53.34	-19.87	-17.65	26.6	221.6	25.9	228.9
65.0	57.85	-21.46	-19.12	28.7	221.7	25.4	221.2
70.0	62.37	-23.06	-20.54	30.9	221.7	25.5	224.4
75.0	66.87	-24.66	-22.01	33.0	221.7	26.3	220.3
80.0	71.33	-26.31	-23.53	35.3	221.8	27.3	212.7
85.0	75.74	-28.08	-25.09	37.7	221.8	28.5	221.7
90.0	80.12	-29.86	-26.70	40.1	221.8	29.2	226.7
95.0	84.47	-31.66	-28.38	42.5	221.9	29.8	219.0
100.0	88.80	-33.55	-30.00	45.0	221.8	30.5	220.9
105.0	93.08	-35.52	-31.66	47.6	221.7	31.5	224.6
110.0	97.33	-37.47	-33.42	50.2	221.7	31.4	217.1
111.9	98.97	-38.20	-34.08	51.2	221.7	0.0	0.0

Century

QHR 88016 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL MINE LTD.			OTHER SERVICES:	
WELL	: QHR 88016 GAMMA-NEUTRON			DEV.CAL	
LOCATION/FIELD	: BL 21350:SL 27150 TRANSFER W			GAM.DEN	
COUNTY	: BRITISH COLUMBIA			NEUT.RES	
STATE	:				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/01/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 75	ELEV. PERM. DATUM	: 1080	KB	: 1080
LOG BOTTOM	: 74.90	LOG MEASURED FROM	: GL	DF	: 1080
LOG TOP	: 6.98	DRL MEASURED FROM	: GL	GL	: 1080
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 00	RECORDED BY	: G.MURPHY		
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 4
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500
REMARKS	:				

VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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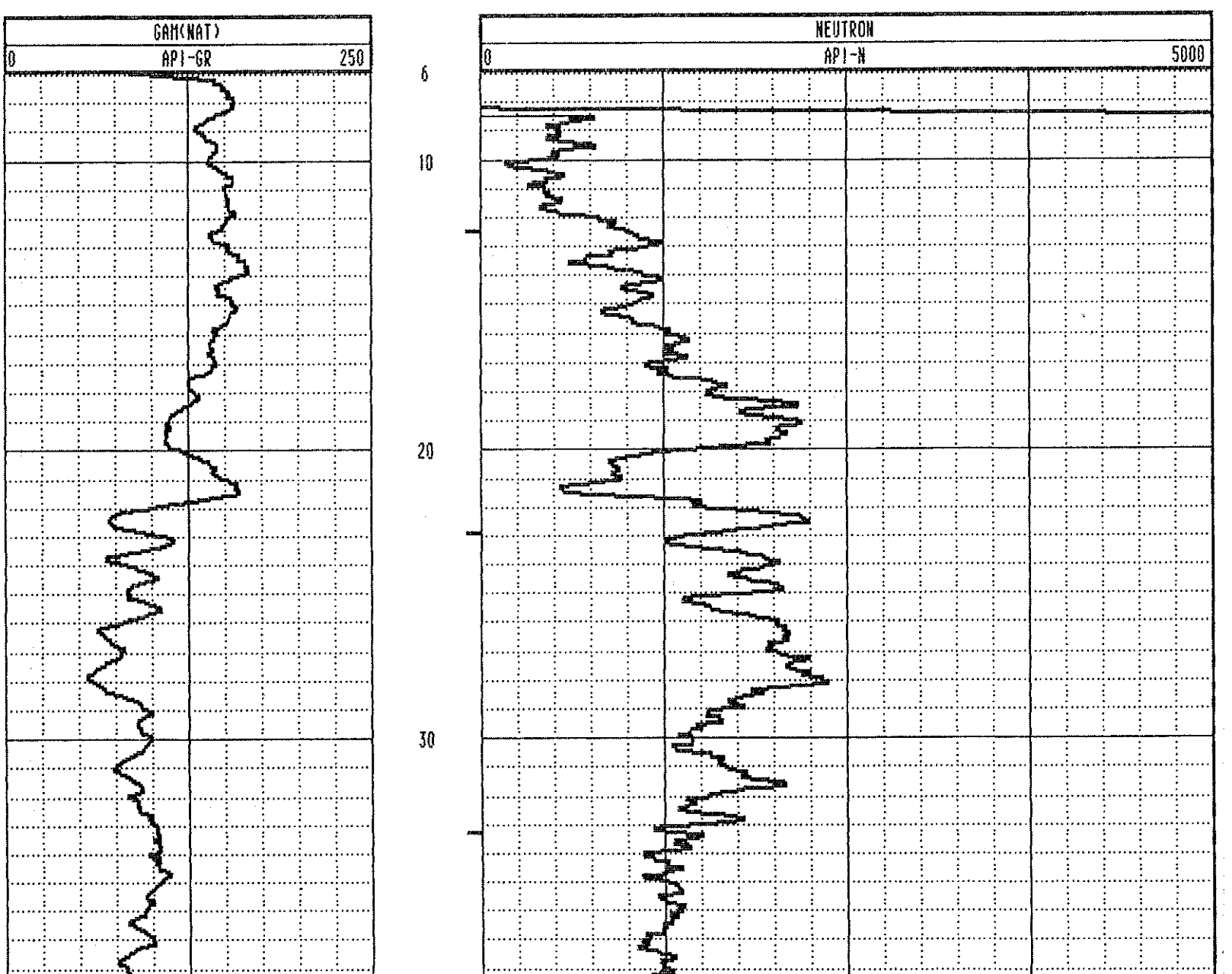

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88016 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL MINE LTD.			OTHER SERVICES:	
WELL	: QHR 88016 GAMMA-DENSITY			DEV.CAL	
LOCATION/FIELD	: BL 21350:SL 27150 TRANSFER W			GAM.DEN	
COUNTY	: BRITISH COLUMBIA			NEUT.RES	
STATE	:				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/01/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 75	ELEV. PERM. DATUM	: 1080	KB	: 1080
LOG BOTTOM	: 74.76	LOG MEASURED FROM	: GL	DF	: 1080
LOG TOP	: 0.30	DRL MEASURED FROM	: GL	GL	: 1080
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 00	RECORDED BY	: G.MURPHY		
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 5
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500
REMARKS	:				

VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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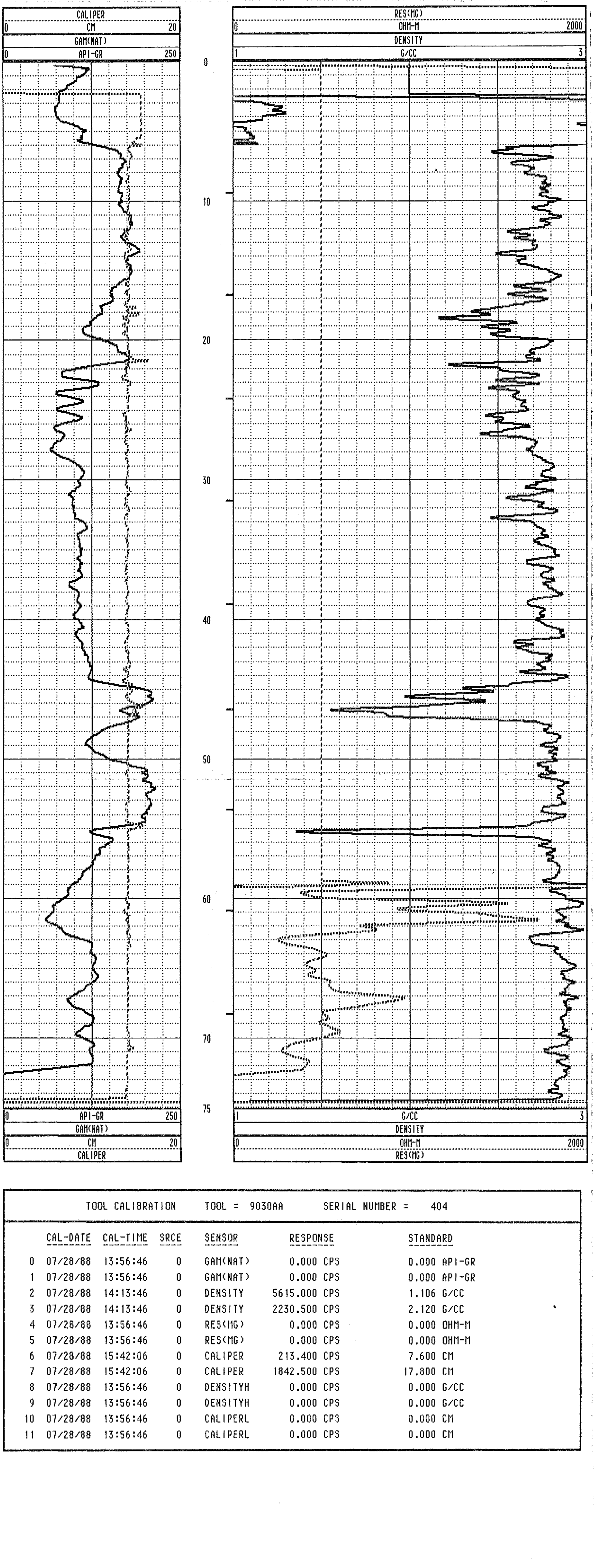

TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	14:13:46	0	DENSITY	5615.000 CPS	1.106 G/CC
3	07/28/88	14:13:46	0	DENSITY	2230.500 CPS	2.120 G/CC
4	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	07/28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1842.500 CPS	17.800 CM
8	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
9	07/28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
10	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88016 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL MINE LTD.		
WELL	: QHR 88016 GAMMA-DENSITY		
LOCATION/FIELD	: BL 2155DIG, 2715D TRANSFER LI		
COUNTY	: BRITISH COLUMBIA		
STATE	:		
SECTION	:	TOWNSHIP	:
			RANGE :
DATE	: 09/01/88	PERMANENT DATUM	: GL
DEPTH DRILLER	: 75	ELEV. PERM. DATUM:	1080
LOG BOTTOM	: 74.26	LOG MEASURED FROM:	GL
LOG TOP	: 0.30	DRL MEASURED FROM:	GL
CASING DRILLER	: 6	LOGGING UNIT	: 8401
CASING TYPE	:	FIELD OFFICE	: CALGARY
CASING THICKNESS	: 00	RECORDED BY	: G.MURPHY
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	PH	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 175
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		
VERTICAL HOLE			

ELEVATIONS		
KB	: 1080	
DF	: 1080	
GL	: 1080	
FILE	: ORIGINAL	
TYPE	: 9030AA	
LOG	: 4	
PLOT	: 601N S	
THRESH: 2500		

OTHER SERVICES: DEV.CAL GAM.DEN NEUT.RES

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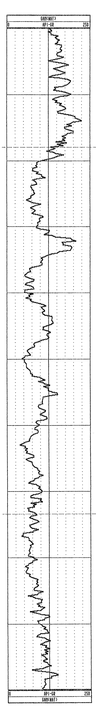
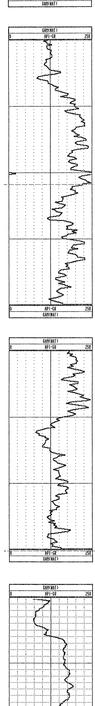
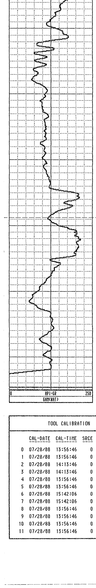






TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

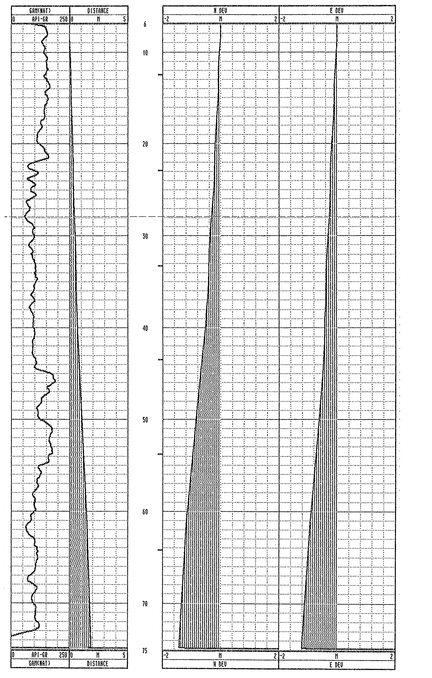
	CAL-DATE	CAL-TIME	SOCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:56:46	0	GAMMAAT=	0.000 CPS	0.000 API-GR
1	07/28/88	15:56:46	0	GAMMAAT=	0.000 CPS	0.000 API-GR
2	07/28/88	14:15:46	0	DENSITY	5615.000 CPS	1.106 G/CC
3	07/28/88	14:15:46	0	DENSITY	2230.500 CPS	2.128 G/CC
4	07/28/88	15:56:46	0	RESINS>	0.000 CPS	0.000 OHM-M
5	07/28/88	15:56:46	0	RESINS>	0.000 CPS	0.000 OHM-M
6	07/28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
7	07/28/88	15:42:06	0	CALIPER	1042.500 CPS	17.800 CM
8	07/28/88	15:56:46	0	DENSITYTH	0.000 CPS	0.000 G/CC
9	07/28/88	15:56:46	0	DENSITYTH	0.000 CPS	0.000 G/CC
10	07/28/88	15:56:46	0	CALIPERL	0.000 CPS	0.000 CM
11	07/28/88	15:56:46	0	CALIPERL	0.000 CPS	0.000 CM

QHR 88016 DEVIATION

COMPANY	: QUINTETTE COAL MINE LTD.			OTHER SERVICES:	
WELL	: QHR 88016 DEVIATION			DEV.CAL	
LOCATION/FIELD	: BL 21350'SL 27150 TRANSFER W			GAM.DEN	
COUNTY	: BRITISH COLUMBIA			NEUT.RES	
STATE	:				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/01/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 75	ELEV. PERM. DATUM: 1080		KB	: 1080
LOG BOTTOM	: 74.90	LOG MEASURED FROM: GL		DF	: 1080
LOG TOP	: 6.98	DRL MEASURED FROM: GL		GL	: 1080
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	:	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 00		RECORDED BY	: G.MURPHY		
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: S
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				
VERTICAL HOLE					

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL MINE	HOLE ID.	: QHR 88016 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/01/88
DATA FROM	:	PROBE	: 9055A 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG S

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
7.0	7.00	0.00	0.00	0.0	-.0	0.0	0.0
8.0	8.00	0.00	0.00	0.0	-.0	0.0	0.0
9.0	9.00	-.01	-.01	0.0	205.2	1.7	208.7
10.0	10.00	-.04	-.02	0.0	208.8	2.0	222.1
11.0	11.00	-.06	-.04	0.1	213.5	1.8	219.2
12.0	12.00	-.08	-.06	0.1	219.7	1.6	254.7
13.0	13.00	-.08	-.09	0.1	225.8	1.2	266.5
14.0	14.00	-.08	-.10	0.1	231.6	0.4	222.0
15.0	15.00	-.09	-.11	0.1	229.2	0.9	209.7
16.0	16.00	-.11	-.11	0.2	225.0	1.6	191.4
17.0	17.00	-.13	-.12	0.2	222.0	1.6	212.7
18.0	18.00	-.16	-.14	0.2	221.4	1.6	232.4
19.0	19.00	-.17	-.16	0.2	222.5	1.6	228.4
20.0	20.00	-.19	-.18	0.3	223.7	1.4	233.8
21.0	21.00	-.20	-.20	0.3	225.2	1.4	248.3
22.0	22.00	-.21	-.22	0.3	226.5	0.7	258.3
23.0	23.00	-.21	-.23	0.3	227.0	0.5	202.9
24.0	24.00	-.22	-.23	0.3	226.3	0.7	174.1
25.0	25.00	-.24	-.23	0.3	224.1	1.1	215.0
26.0	25.99	-.26	-.24	0.4	222.5	1.1	214.0
27.0	26.99	-.29	-.25	0.4	220.4	2.1	207.2
28.0	27.99	-.32	-.27	0.4	219.7	1.7	210.8
29.0	28.99	-.35	-.28	0.4	219.5	1.8	218.8
30.0	29.99	-.37	-.31	0.5	219.8	1.5	229.9
31.0	30.99	-.39	-.33	0.5	220.2	1.6	230.9
32.0	31.99	-.40	-.35	0.5	221.0	1.1	245.1
33.0	32.99	-.41	-.36	0.5	221.9	0.7	237.6
34.0	33.99	-.41	-.38	0.6	222.3	1.0	221.0
35.0	34.99	-.42	-.38	0.6	222.2	0.9	174.7
36.0	35.99	-.44	-.39	0.6	221.7	0.6	159.9
37.0	36.99	-.45	-.39	0.6	220.4	1.5	176.4
38.0	37.99	-.48	-.40	0.6	219.4	2.1	216.3
39.0	38.99	-.51	-.42	0.7	219.7	0.8	209.4
40.0	39.99	-.52	-.42	0.7	218.8	1.6	181.3
41.0	40.99	-.56	-.43	0.7	217.6	2.0	194.9
42.0	41.99	-.59	-.44	0.7	216.6	2.4	208.8
43.0	42.99	-.63	-.46	0.8	216.1	2.0	217.6
44.0	43.99	-.66	-.47	0.8	215.6	2.2	197.7
45.0	44.99	-.69	-.49	0.9	215.4	2.3	216.9
46.0	45.99	-.72	-.52	0.9	215.5	2.3	224.1
47.0	46.98	-.76	-.54	0.9	215.7	2.4	216.3
48.0	47.98	-.79	-.57	1.0	215.8	2.3	211.8
49.0	48.98	-.82	-.59	1.0	216.0	2.2	220.5
50.0	49.98	-.85	-.62	1.0	216.0	2.2	220.6
51.0	50.98	-.88	-.64	1.1	216.2	2.2	222.9
52.0	51.98	-.90	-.67	1.1	216.5	2.5	226.4
53.0	52.98	-.93	-.70	1.2	216.7	2.3	212.1
54.0	53.98	-.96	-.72	1.2	216.8	2.3	218.1
55.0	54.98	-.99	-.75	1.2	217.1	2.4	225.4
56.0	55.98	-1.03	-.78	1.3	217.3	2.5	218.7
57.0	56.98	-1.06	-.81	1.3	217.4	2.2	222.9
58.0	57.98	-1.08	-.83	1.4	217.6	2.4	217.6
59.0	58.98	-1.11	-.86	1.4	217.8	2.3	229.1
60.0	59.97	-1.14	-.89	1.4	217.8	2.4	226.9
61.0	60.97	-1.18	-.92	1.5	217.9	2.4	220.0
62.0	61.97	-1.20	-.94	1.5	218.1	1.5	231.9
63.0	62.97	-1.21	-.96	1.5	218.3	1.5	235.4
64.0	63.97	-1.23	-.98	1.6	218.5	1.6	232.6
65.0	64.97	-1.25	-1.00	1.6	218.7	1.6	228.8
66.0	65.97	-1.27	-1.02	1.6	218.9	1.9	233.7
67.0	66.97	-1.29	-1.05	1.7	219.1	1.7	231.8
68.0	67.97	-1.30	-1.07	1.7	219.3	1.6	231.0
69.0	68.97	-1.32	-1.09	1.7	219.4	1.7	225.7
70.0	69.97	-1.34	-1.11	1.7	219.6	1.5	226.1
71.0	70.97	-1.36	-1.13	1.8	219.7	1.8	228.5
72.0	71.97	-1.38	-1.15	1.8	219.9	1.5	225.9
73.0	72.97	-1.39	-1.17	1.8	220.0	1.7	232.2
74.0	73.97	-1.41	-1.19	1.8	220.2	1.6	228.4
74.9	74.87	-1.43	-1.21	1.9	220.3	0.0	0.0
75.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0

Century

QHR 88017 GAMMA NEUTRON

COMPANY	: QUINTETTE COAL MINE LTD.
WELL	: QHR 88017 GAMMA NEUTRON
LOCATION/FIELD	:
COUNTY	: BRITSH COLUMBIA
STATE	:
SECTION	:

OTHER SERVICES:
DEV,CAL
GAM,DEN
NEUT,RES

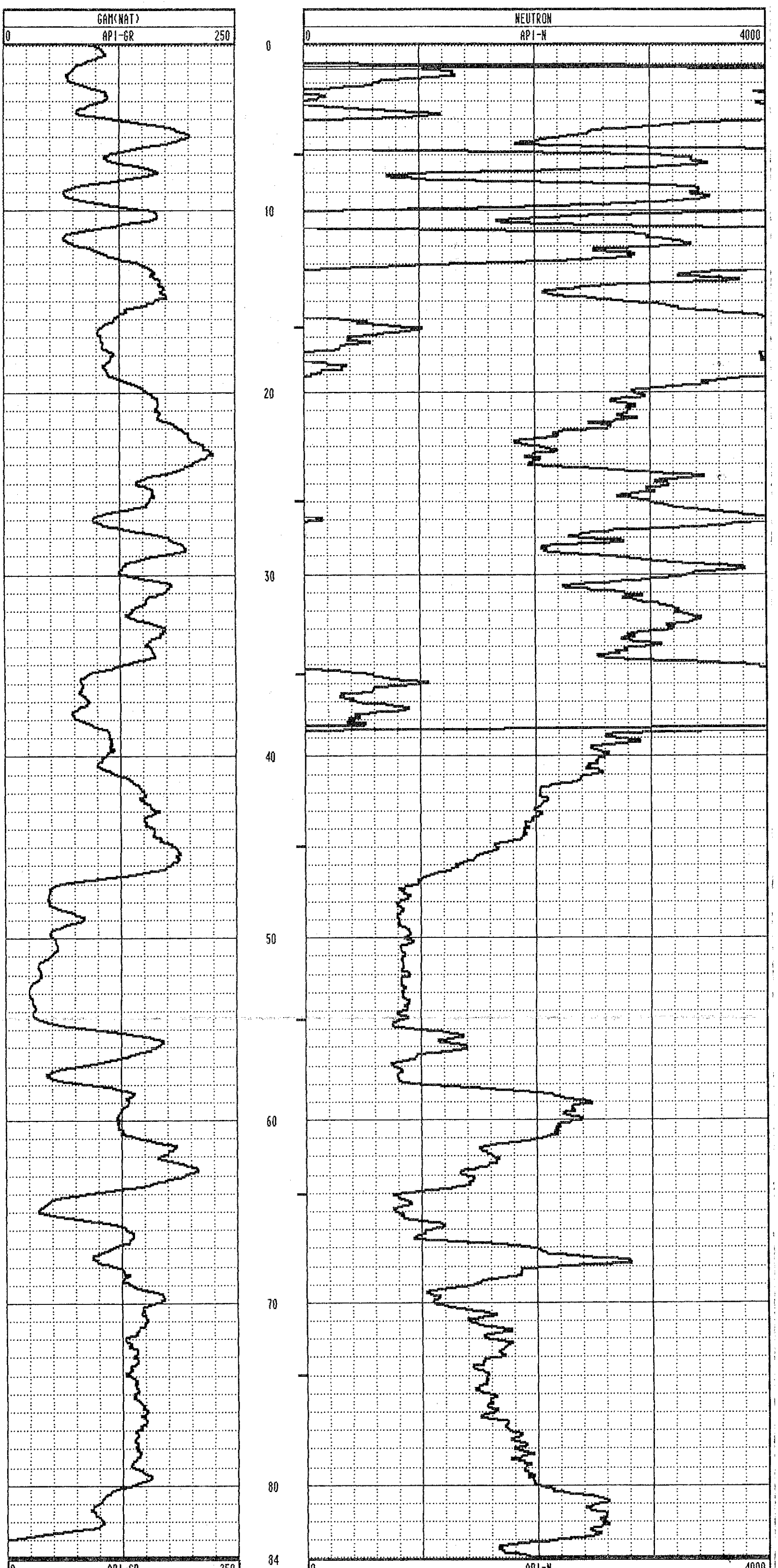
TOWNSHIP : RANGE :

DATE	: 09/02/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 84	ELEV. PERM. DATUM	:	KB	:
LOG BOTTOM	: 84.30	LOG MEASURED FROM	: GL	DF	:
LOG TOP	: 0.74	DRL MEASURED FROM	: GL	GL	:
CASING DRILLER	: 1.5	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 00	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 5
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
VERTICAL HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

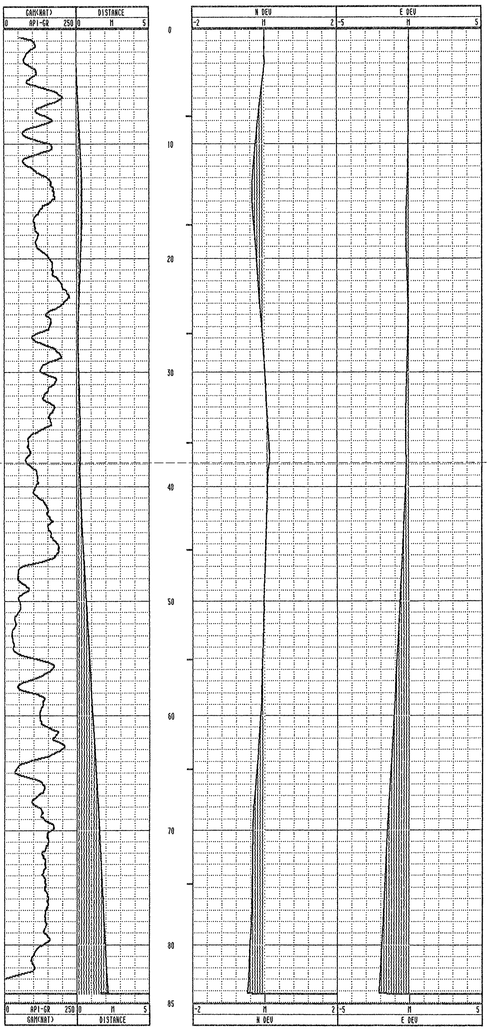
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

QHR 88017 DEVIATION

COMPANY	: QUINTETTE COAL MINE LTD.			OTHER SERVICES:	
WELL	: QHR 88017 DEVIATION			DEV.CAL	
LOCATION/FIELD	:			GAM.DEN	
COUNTY	: BRITSH COLUMBIA			NEUT.RES	
STATE	:				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/01/88	PERMANENT DATUM	: GL	ELEVATIONS	
DEPTH DRILLER	: 84	ELEV. PERM. DATUM:		KB	:
LOG BOTTOM	: 84.30	LOG MEASURED FROM:	GL	DF	:
LOG TOP	: 0.74	DRL MEASURED FROM:	GL	GL	:
CASING DRILLER	: 1.5	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	00	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 12.7	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				
VERTICAL HOLE					

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL MINE	HOLE ID.	: QHR 88017 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/01/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 3

Cable 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	5.00	-.06	-.01	0.1	191.6	2.1	176.4
10.0	9.99	-.24	-.05	0.2	191.4	2.2	193.6
15.0	14.99	-.34	-.17	0.4	206.4	1.9	287.9
20.0	19.99	-.22	-.18	0.3	218.7	1.6	42.0
25.0	24.99	-.11	-.09	0.1	219.1	1.7	9.9
30.0	29.98	0.01	-.16	0.2	273.3	1.6	316.5
35.0	34.98	0.09	-.24	0.3	291.6	1.2	343.1
40.0	39.98	0.08	-.25	0.3	288.6	2.0	240.4
45.0	44.98	0.04	-.43	0.4	274.8	2.4	255.6
50.0	49.97	-.02	-.65	0.6	267.9	2.6	245.9
55.0	54.97	-.06	-.86	0.9	265.9	2.9	247.1
60.0	59.96	-.12	-1.07	1.1	263.8	3.3	244.3
65.0	64.95	-.23	-1.30	1.3	260.1	3.0	242.3
70.0	69.95	-.33	-1.53	1.6	257.8	2.1	268.9
75.0	74.94	-.35	-1.71	1.7	258.4	2.2	253.6
80.0	79.94	-.41	-1.91	2.0	257.8	2.7	251.5
84.3	84.23	-.49	-2.10	2.2	256.9	0.0	0.0

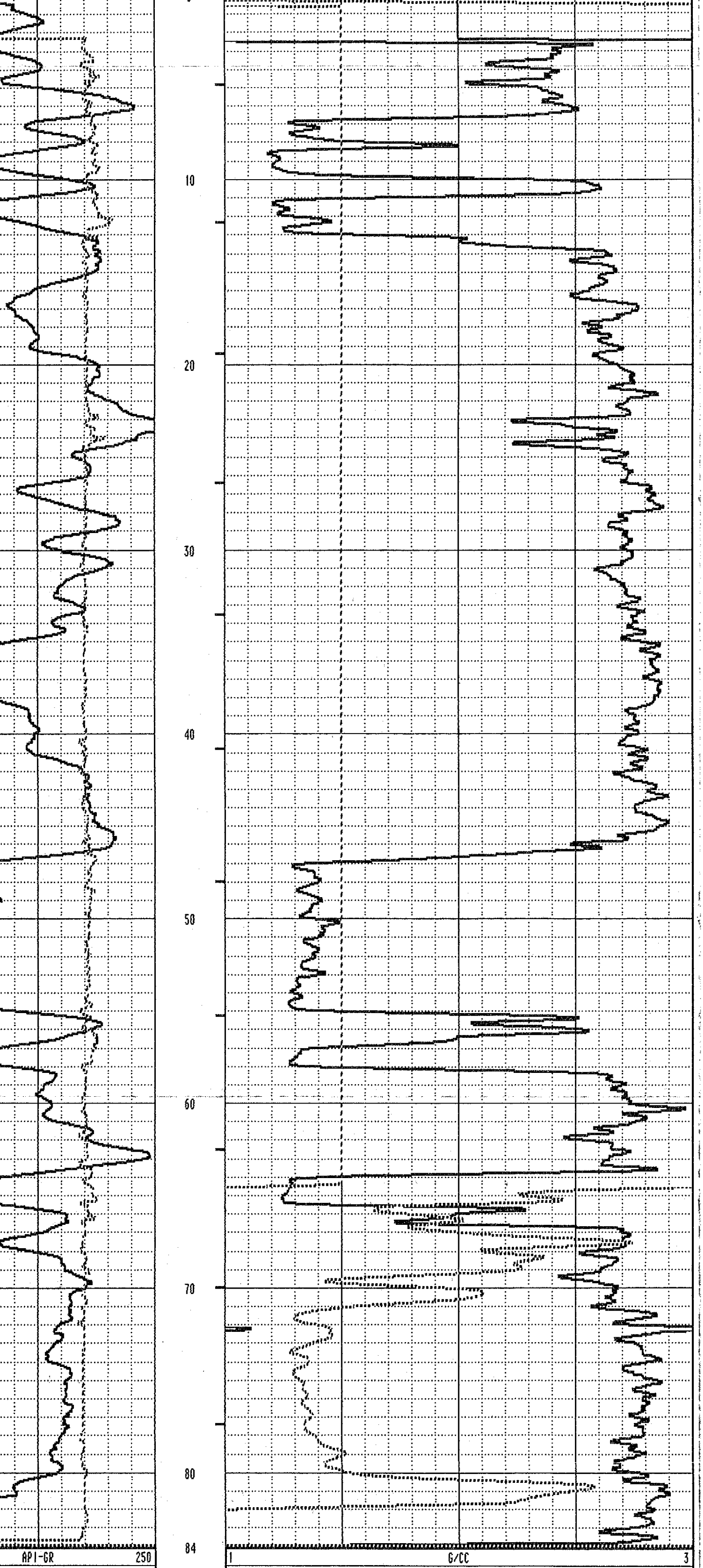
QHR 88017 GAMMA DENSITY

Y	: QUINTETTE COAL MINE LTD.				COMPAN
	: QHR 88017 GAMMA DENSITY				WELL
ON/FIELD	:				LOCATI
	: BRITSH COLUMBIA				COUNTY
	:				STATE
N	:	TOWNSHIP	:	RANGE :	SECTIO
	: 09/02/88	PERMANENT DATUM	: GL	ELEVATIONS	DATE
DRILLER	: 84	ELEV. PERM. DATUM:		KB :	DEPTH
TTOM	: 84.08	LOG MEASURED FROM:	GL	DF :	LOG BO
P	: 0.28	DRL MEASURED FROM:	GL	GL :	LOG TO
DRILLER	: 1.5	LOGGING UNIT	: 8401		CASING
TYPE	: STEEL	FIELD OFFICE	: CALGARY		CASING
THICKNESS	: 00	RECORDED BY	: E.SVEDLUND		CASING
ZE	: 12.7	BOREHOLE FLUID	: WATER	FILE : ORIGINAL	BIT SI
IC DECL.	: 24.500	RM	: 0	TYPE : 9030AA	MAGNET
DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 6	MATRIX
DENSITY	: 1.10	MATRIX DELTA T	: 173	PLOT : QUIN 3	FLUID
N MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	NEUTRO
S	:				REMARK
CAL HOLE					VERTI

OTHER SERVICES:
DEV,CAL
GAM,DEN
NEUT,RES

LL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 404

-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
28/88	13:56:46	0	GAM(NAT)	0.000 CPS	0.000 API-GR
28/88	14:13:46	0	DENSITY	5615.000 CPS	1.106 G/CC
28/88	14:13:46	0	DENSITY	2230.500 CPS	2.120 G/CC
28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
28/88	13:56:46	0	RES(MG)	0.000 CPS	0.000 OHM-M
28/88	15:42:06	0	CALIPER	213.400 CPS	7.600 CM
28/88	15:42:06	0	CALIPER	1842.500 CPS	17.800 CM
28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
28/88	13:56:46	0	DENSITYH	0.000 CPS	0.000 G/CC
28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM
28/88	13:56:46	0	CALIPERL	0.000 CPS	0.000 CM

	CAL
0	07/
1	07/
2	07/
3	07/
4	07/
5	07/
6	07/
7	07/
8	07/
9	07/
10	07/
11	07/

Century

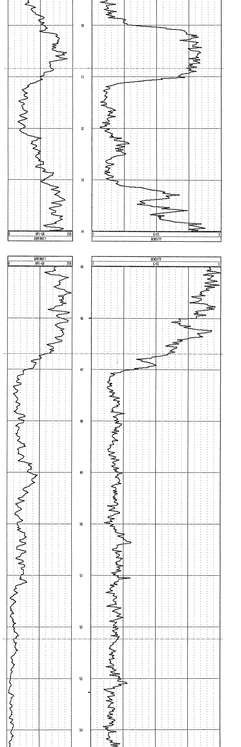
CGC

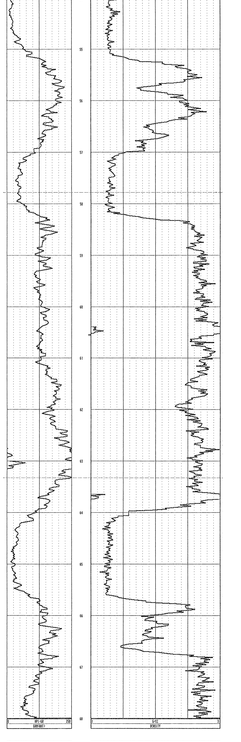
GHR 88017 GAMMA DENSITY

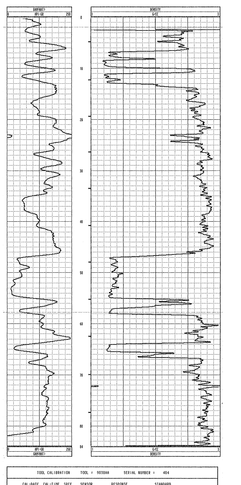
COMPANY	: QUINTETTE COAL MINE LTD.	OTHER SERVICES:	
WELL	: GHR 88017 GAMMA DENSITY	DIL-GR	
LOCATION-FIELD	:	SNP-GR	
COUNTY	: BRITISH COLUMBIA	NEUT-DEN	
STATE	:		
SECTION	: TOWNSHIP : RANGE :		
DATE	: 09-02-88 PERMANENT DATUM : GL	ELEVATIONS	
DEPTH DRILLER	: 84 ELEV., PERM. DATUM:	KB	:
DEPTH LOGGER	: 84.08 LOG MEASURED FROM: KB	DF	:
LOG TOP	: 81.28 DRL MEASURED FROM: KB	GL	:
CASING DRILLER	: 1.5 LOGGING UNIT : 8401		
CASING TYPE	: STEEL FIELD OFFICE : CALGARY		
CASING THICKNESS: 00	RECORDED BY : K.SVEDLUND		
BIT SIZE	: 12.2 BOREHOLE FLUID : WATER	FILE : ORIGINAL	
MAGNETIC DECL.	: 24.500 KB : 0	TYPE : NEBRAN	
MATRIX DENSITY	: 2.68 RM TEMPERATURE : 0	RUN : 1	
FLUID DENSITY	: 1.10 PARTIAL BELOW T : 133	PLOT : DATE 5	
RECORDED MATRIX	: SANDSTONE FLUID DELTA T : 490	THRESH: 2500	
REMARKS			
VERTICAL HOLE			

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

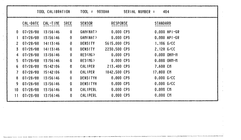
746







TOOL CALIBRATION	TOOL # : 90588A	SERIAL NUMBER # : 404	
CAL-DATE ON-TIME	DESCR	RESPONSE	STANDARD
1 07/05/88 13:36:46	B	GAMMART	0.000 CPS	0.000 API-GR
2 07/05/88 13:36:46	B	GAMMART	0.000 CPS	0.000 API-GR
3 07/05/88 14:11:46	C	DENSITY	5615.000 CPS	1.106 G/C
4 07/05/88 14:11:46	C	DENSITY	2.000 CPS	2.000 G/C
5 07/05/88 15:16:46	D	DENSITY	0.000 CPS	0.000 GM/M
6 07/05/88 15:16:46	D	DENSITY	0.000 CPS	0.000 GM/M
7 07/05/88 15:42:56	E	CALIPER	215.400 CPS	7.000 CO
8 07/05/88 15:42:56	E	CALIPER	1042.200 CPS	17.800 CO
9 07/05/88 15:56:46	A	GAMMATH	0.000 CPS	0.000 U/G
10 07/05/88 15:56:46	A	GAMMATH	0.000 CPS	0.000 U/G
11 07/05/88 15:56:46	E	CALIPER	0.000 CPS	0.000 CO
12 07/05/88 15:56:46	E	CALIPER	0.000 CPS	0.000 CO



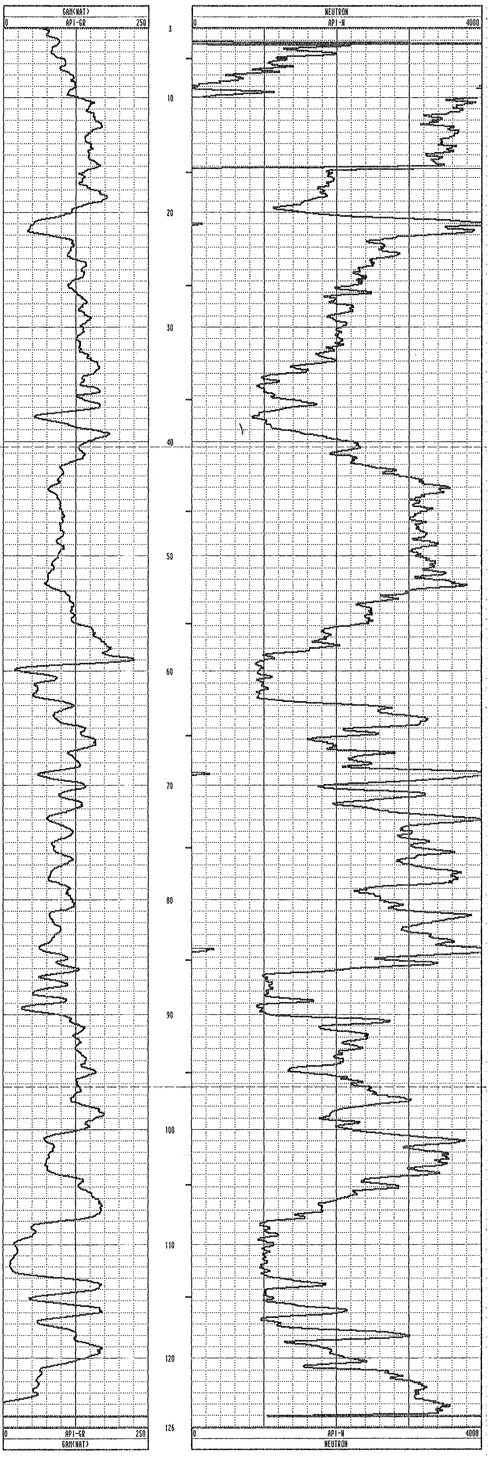
QHR 88018 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88018 GAMMA-NEUTRON			DEN.NEUT	
LOCATION/FIELD	:			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/10/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 127 M	ELEV. PERM. DATUM: 0		KB	: 0
LOG BOTTOM	: 125.16	LOG MEASURED FROM: 0		DF	: 0
LOG TOP	: 3.90	DRL MEASURED FROM: 0		GL	: 0
CASING DRILLER	: 4	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88018 GAMMA-DENSITY

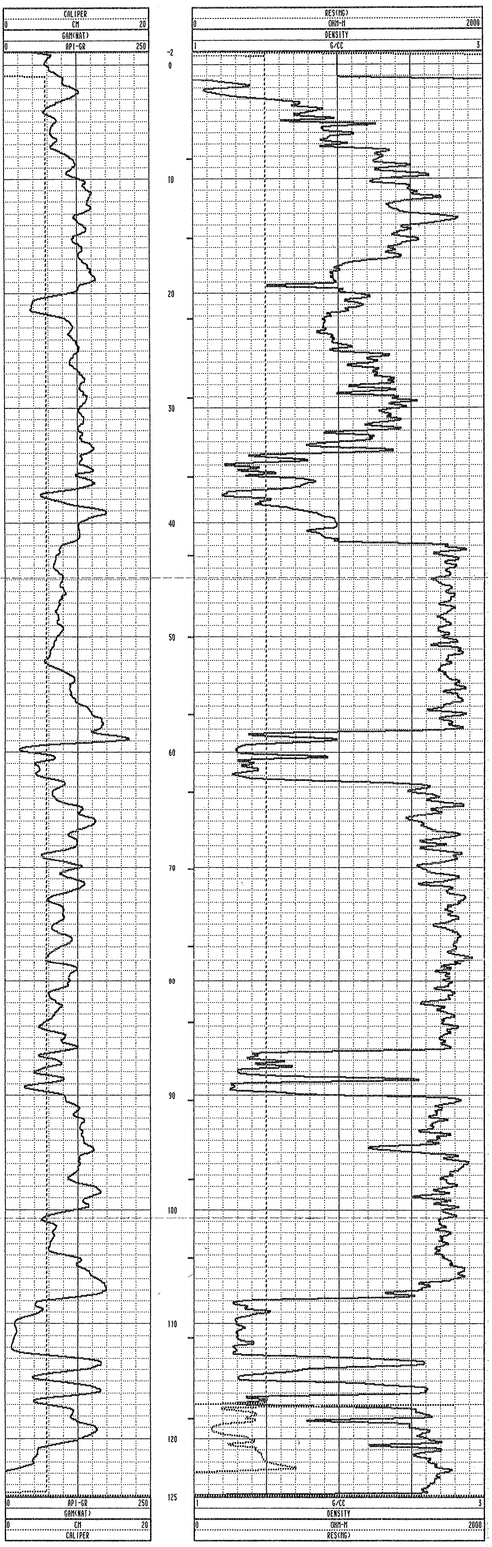
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88018 GAMMA-DENSITY	DEN.NEUT	
LOCATION/FIELD	:	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/11/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 127 M	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 125.02	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: -1.02	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 0	LOGGING UNIT	: 8401
CASING TYPE	: PVC	FIELD OFFICE	: CALGARY
CASING THICKNESS: 0		RECORDED BY	: E.SVEDLUND
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		

FILE : ORIGINAL
TYPE : 9030AA
LOG : 8
PLOT : QUIN 3
THRESH: 2500

VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 450

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/06/88	22:48:27	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/06/88	22:48:27	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/06/88	22:55:50	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/06/88	22:55:50	0	DENSITY	2230.000 CPS	2.120 G/CC
4	09/06/88	22:48:27	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/06/88	22:48:27	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/06/88	22:59:05	0	CALIPER	213.400 CPS	7.600 CM
7	09/06/88	22:59:05	0	CALIPER	1842.500 CPS	17.800 CM
8	09/06/88	22:48:27	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/06/88	22:48:27	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/06/88	22:48:27	0	CALIPERL	0.000 CPS	0.000 CM
11	09/06/88	22:48:27	0	CALIPERL	0.000 CPS	0.000 CM

COMPANY : OHMSETTE ENG. LTD.
WELL : OHM #A5815 (CRESCENT)
LOCATION/FIELD :
COUNTY :
STATE :
DIVISION : CALGARY

DATE : 09-11-82
DEPTH DRILLER : 615.0
DEPTH LOGGER : 615.0
LOG TOP : 77.62

CASING DRILLER : 0
CASING LOGGER : 0
CASING THICKNESS : 0

BIT SIZE : 15.6
TYPE FLUID : GEL-CHEM
MATRIX DENSITY : 2.65
FLUID DENSITY : 1.0
SOURCE OF SAMPLE : CRESCENT
REMARKS :
VERTICAL HOLE
CASED HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

CGC
CANADIAN GAMMA-DENSITY CO. LTD.

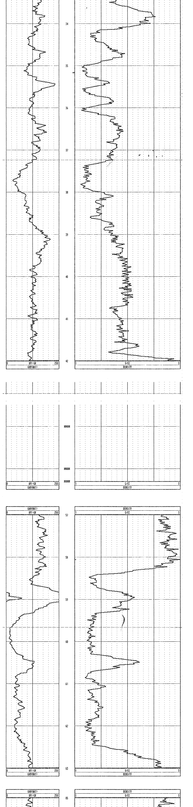
RANGE : 5

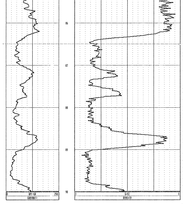
PERMANENT DATUM : G ELEVATIONS
ELEV. PERM. DATUM: 0 KB : 0
LOG MEASURED FROM: G DF : 0
ABV. MEASURED FROM: K GL : 0

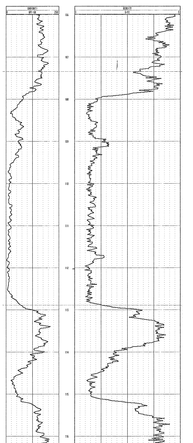
LOGGING UNIT : 0401
LOGGING ENGINEER :
RECORDED BY : C.JACOBLAND

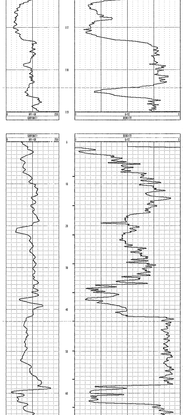
BOREHOLE FLUID : WATER
RM : 1.
RM TEMPERATURE : 0.
MATRIX DELTA T : 175
FLUID DELTA T : 698

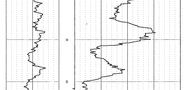
FILE : ORIGINAL
MATRIX : SAND
LOG : 1 RUN
PLOT : BOTH 5
SAMPLES : 2500











TOOL CALIBRATION - TOOL - 900886 - TOOLING NUMBER - 450

CAL.NUMB	CAL.TIME	UNIT	SOURCE	MICROREM	STANDARD
1	09-06-82	23:40:13	0	0.000 CPS	0.000 API-GR
2	09-06-82	23:40:13	0	0.000 CPS	0.000 API-GR
3	09-06-82	23:40:13	0	0.000 CPS	0.000 G/C
4	09-06-82	23:55:16	0	4000.00 CPS	2.150 G/C
5	09-06-82	23:40:13	0	0.000 CPS	0.000 GAM-R
6	09-06-82	23:40:13	0	0.000 CPS	0.000 GAM-R
7	09-06-82	23:55:16	0	333.400 CPS	1.000 G/C
8	09-06-82	23:55:16	0	666.800 CPS	17.000 GC
9	09-06-82	23:55:16	0	1333.600 CPS	17.000 GC
10	09-06-82	23:40:13	0	0.000 CPS	0.000 G/C
11	09-06-82	23:40:13	0	0.000 CPS	0.000 GC
12	09-06-82	23:40:13	0	0.000 CPS	0.000 GC

QHR 88018 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88018 DEVIATION			DEN.NEUT	
LOCATION/FIELD	:			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/11/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 127 M	ELEV. PERM. DATUM: 0		KB	: 0
LOG BOTTOM	: 125.16	LOG MEASURED FROM: 0		DF	: 0
LOG TOP	: 3.90	DRL MEASURED FROM: 0		GL	: 0
CASING DRILLER	: 4	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 0		RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				
VERTICAL HOLE					
LOGGED OPEN HOLE					

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88018 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/11/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 4

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
4.0	4.00	0.00	0.00	0.0	-.0	0.0	0.0
9.0	9.00	0.02	-.01	0.0	326.2	0.3	321.9
14.0	14.00	0.04	-.02	0.0	331.6	0.2	340.1
19.0	19.00	0.07	-.04	0.1	329.7	0.7	315.2
24.0	24.00	0.11	-.07	0.1	328.7	0.8	334.7
29.0	29.00	0.16	-.10	0.2	328.2	0.5	328.6
34.0	34.00	0.19	-.14	0.2	323.3	0.6	319.2
39.0	39.00	0.23	-.17	0.3	323.9	0.9	340.7
44.0	44.00	0.31	-.14	0.3	335.5	1.6	36.8
49.0	48.99	0.45	-.00	0.4	359.4	2.7	48.2
54.0	53.99	0.63	0.22	0.7	19.0	3.5	59.7
59.0	58.98	0.81	0.48	0.9	30.6	4.1	57.9
64.0	63.96	1.03	0.80	1.3	37.9	5.5	56.7
69.0	68.93	1.31	1.22	1.8	42.9	6.3	55.5
74.0	73.90	1.63	1.72	2.4	46.5	6.9	56.7
79.0	78.86	1.98	2.26	3.0	48.9	7.7	58.8
84.0	83.81	2.33	2.86	3.7	50.9	7.8	60.4
89.0	88.75	2.69	3.34	4.4	52.0	8.9	63.0
94.0	93.68	3.03	4.27	5.2	54.7	9.8	66.7
99.0	98.61	3.36	5.05	6.1	56.4	10.4	68.0
104.0	103.52	3.68	5.94	7.0	58.2	11.1	73.1
109.0	108.42	3.98	6.89	8.0	60.0	11.4	72.7
114.0	113.32	4.28	7.85	8.9	61.4	12.1	72.4
119.0	118.20	4.60	8.88	10.0	62.6	12.8	73.7
124.0	123.06	4.91	10.00	11.1	63.9	14.0	75.0
125.2	124.19	4.97	10.27	11.4	64.2	0.0	0.0

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Century

GAMMA-RES-DENSITY

COMPANY	: GUINETTE COAL LTD.
WELL	: GHE 88019 GAMMA-DENSITY
LOCATION/FIELD	: BL 20450ISL 20450 TRANSFER W
COUNTY	:
STATE	: BRITISH COLUMBIA
SECTION	: TOWNSHIP : RANGE :

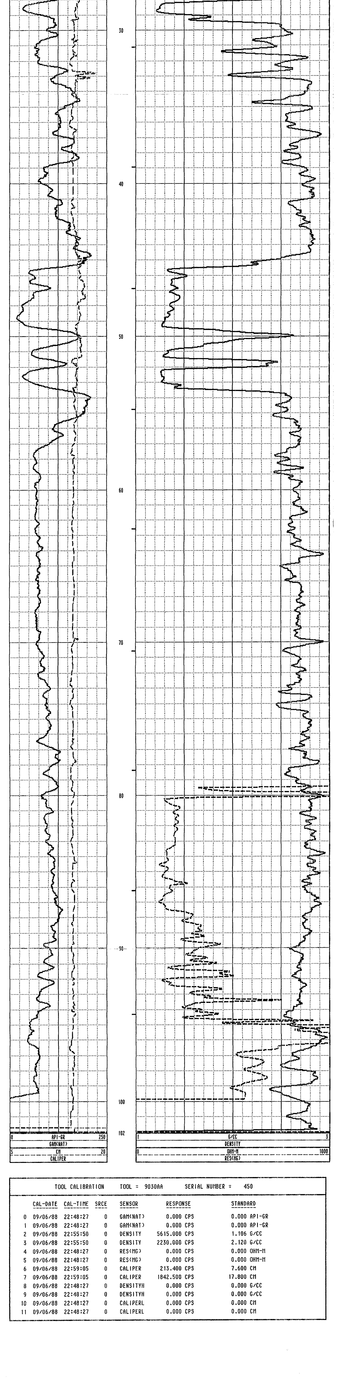
OTHER SERVICES:
DEN.NEUT
DAN.RES.
CAL.DEV

DATE	: 09/11/88	PERMANENT DATUM : 1375	ELEVATIONS
DEPTH DRILLER	: 102.6 M	ELEV. PERM. DATUM: 1375	KB : 1375
LOG BOTTOM	: 102.04	LOG MEASURED FROM: 1375	DF : 1375
LOG TOP	: 0.14	DRL MEASURED FROM: 1375	GL : 1375
CASING DRILLER	: 1	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0		RECORDED BY : E.OVERLUND	

BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 175	PLOT	: TESTHOLE 1
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 60
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL : 9030AA SERIAL NUMBER : 450

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/06/88	22:48:27	0	GAMMAAPI	0.000 CPS	0.000 API-GR
1	09/06/88	22:48:27	0	GAMMAAPI	0.000 CPS	45.000 API-GR
2	09/06/88	22:55:50	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/06/88	22:55:50	0	DENSITY	2230.000 CPS	2.320 G/CC
4	09/06/88	22:48:27	0	RESYNC1	0.000 CPS	0.000 OHM-M
5	09/06/88	22:48:27	0	RESYNC1	0.000 CPS	0.000 OHM-M
6	09/06/88	22:59:05	0	CALIPER	215.400 CPS	7.600 CM
7	09/06/88	22:59:05	0	CALIPER	1842.500 CPS	17.000 CM
8	09/06/88	22:48:27	0	DENSITYR	0.000 CPS	0.000 G/CC
9	09/06/88	22:48:27	0	DENSITYR	0.000 CPS	0.000 G/CC
10	09/06/88	22:48:27	0	CALIPERL	0.000 CPS	0.000 CM
11	09/06/88	22:48:27	0	CALIPERL	0.000 CPS	0.000 CM

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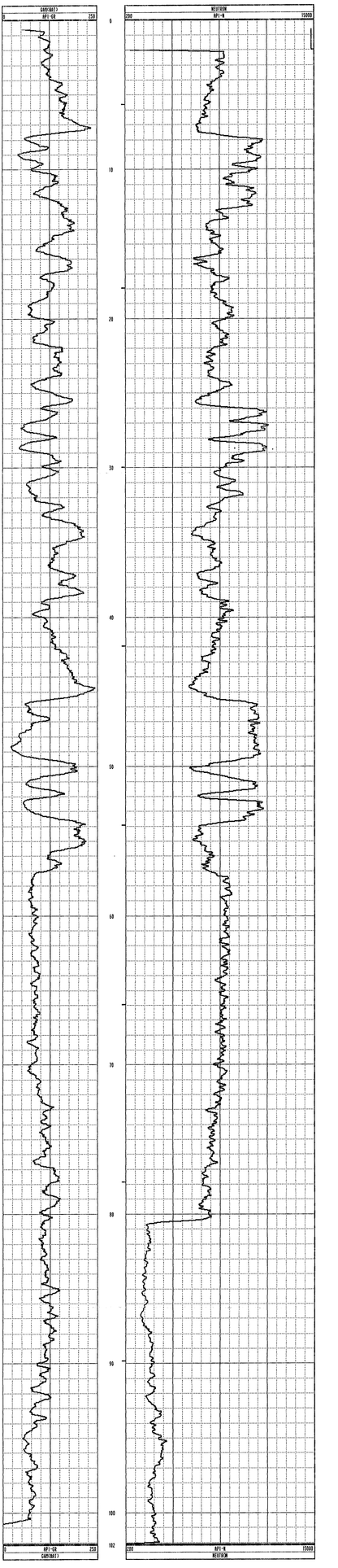
Century

GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88019 GAMMA-NEUTRON	DEN.NEUT	
LOCATION/FIELD	: BL 20450:SL 20450 TRANSFER W	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/11/88	PERMANENT DATUM : 1375	ELEVATIONS
DEPTH DRILLER	: 102.6 M	ELEV. PERM. DATUM: 1375	KB : 1375
LOG BOTTOM	: 102.14	LOG MEASURED FROM: 1375	DF : 1375
LOG TOP	: 0.60	DRL MEASURED FROM: 1375	GL : 1375
CASING DRILLER	: 1	LOGGING UNIT	: 8401
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS: 0		RECORDED BY	: E.SVEDLUND
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		

FILE : ORIGINAL
TYPE : 9055A
LOG : 0
PLOT : TESTHOLE 1
THRESH: 2500

ANGLE HOLE AZIMUTH 37 INCLINATION 60
LOGGED OPEN HOLE
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88020 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88020 GAMMA-NEUTRON			DEN.NEUT	
LOCATION/FIELD	: BL 20300:SL 28500 TRANSFER W			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/12/88	PERMANENT DATUM	: 1259	ELEVATIONS	
DEPTH DRILLER	: 127 M	ELEV. PERM. DATUM:	1250	KB	: 1250
LOG BOTTOM	: 127.38	LOG MEASURED FROM:	1250	DF	: 1250
LOG TOP	: 4.66	DRL MEASURED FROM:	1250	GL	: 1250
CASING DRILLER	: 15	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: E.SUEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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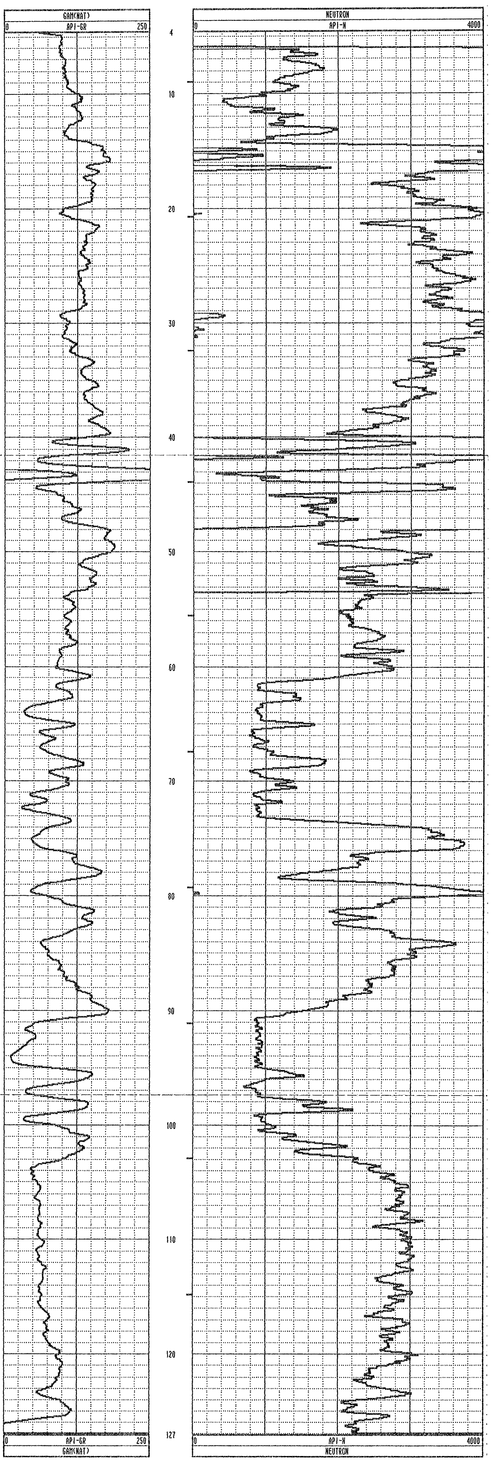

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88020 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88020 DEVIATION	DEN.NEUT	
LOCATION/FIELD	: BL 2030:3L 2830D TRANSFER W	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 09/12/88	PERMANENT DATUM	: 1259	ELEVATIONS	
DEPTH DRILLER	: 127 M	ELEV. PERM. DATUM:	1250	KB	: 1250
LOG BOTTOM	: 127.38	LOG MEASURED FROM:	1250	DF	: 1250
LOG TOP	: 4.66	DRL MEASURED FROM:	1250	GL	: 1250
CASING DRILLER	: 15	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

ANGLE HOLE AZIMUTH 37 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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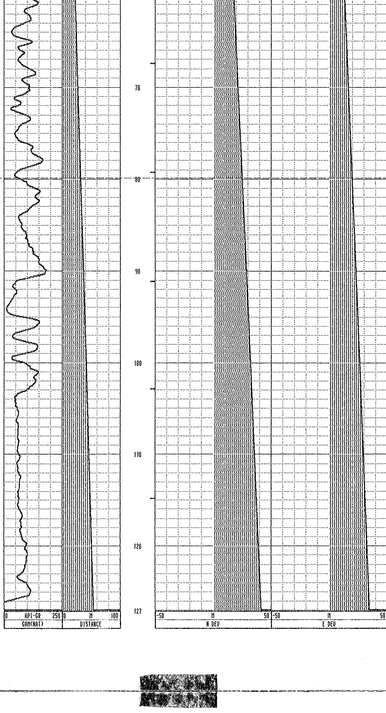

* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88020 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/13/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 2

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
5.0	5.00	0.00	0.00	0.0	-.0	0.0	-0.0
10.0	9.51	1.81	-.42	1.9	346.8	27.2	335.6
15.0	13.87	1.03	-.84	1.3	320.6	28.2	40.3
20.0	18.21	2.88	0.24	2.9	4.8	35.1	37.0
25.0	22.53	4.78	1.84	5.1	21.1	39.2	38.8
30.0	26.86	6.45	3.46	7.3	27.5	29.1	39.5
35.0	31.19	8.53	5.02	9.9	30.5	30.5	40.4
40.0	35.50	10.45	6.65	12.4	32.5	30.4	41.3
45.0	39.83	12.37	8.27	14.9	33.8	30.2	40.9
50.0	44.14	14.29	9.90	17.4	34.7	30.3	40.5
55.0	48.49	16.13	11.56	19.8	35.5	29.5	44.1
60.0	52.85	17.91	13.21	22.3	36.4	28.8	43.2
65.0	57.21	19.67	14.89	24.7	37.1	29.9	35.5
70.0	61.55	21.52	16.52	27.1	37.5	29.6	43.1
75.0	65.89	23.39	18.15	29.6	37.9	30.0	42.5
80.0	70.25	25.19	19.80	32.0	38.2	28.9	43.4
85.0	74.63	26.93	21.43	34.4	38.5	28.6	43.8
90.0	79.03	28.70	23.05	36.8	38.8	28.5	46.1
95.0	83.42	30.45	24.66	39.2	39.0	28.6	41.7
100.0	87.83	32.19	26.27	41.5	39.2	27.5	44.2
105.0	92.23	33.94	27.85	43.9	39.4	28.1	42.7
110.0	96.65	35.67	29.43	46.2	39.5	27.8	43.0
115.0	101.08	37.36	31.00	48.5	39.7	27.7	39.7
120.0	105.53	39.03	32.55	50.8	39.8	27.1	43.3
125.0 % 7	110.00	40.69	34.08	53.1	39.9	26.6	45.2
127.4	112.13	41.45	34.78	54.1	40.0	0.0	0.0

Century

QHR 88020 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88020 GAMMA-DENSITY	DEN.NEUT	
LOCATION/FIELD	: BL 20300:SL 28300 TRANSFER W	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/12/88	PERMANENT DATUM : 1259	ELEVATIONS
DEPTH DRILLER	: 127 M	ELEV. PERM. DATUM: 1250	KB : 1250
LOG BOTTOM	: 126.70	LOG MEASURED FROM: 1250	DF : 1250
LOG TOP	: -.60	DRL MEASURED FROM: 1250	GL : 1250
CASING DRILLER	: 15	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS:	0	RECORDED BY : E.SUEDLUND	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 8
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500
REMARKS	:		

ANGLE HOLE AZIMUTH 37 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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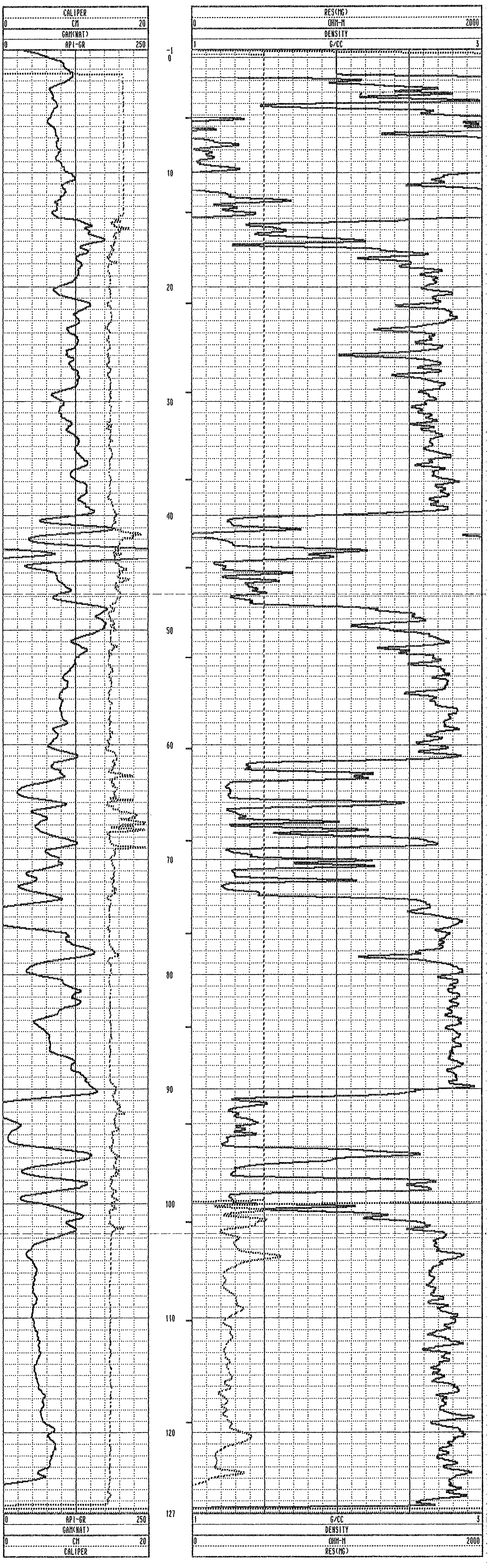


TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 450

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/06/88	22:48:27	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/06/88	22:48:27	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/06/88	22:55:50	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/06/88	22:55:50	0	DENSITY	2230.000 CPS	2.120 G/CC
4	09/06/88	22:48:27	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/06/88	22:48:27	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/06/88	22:59:05	0	CALIPER	213.400 CPS	7.600 CM
7	09/06/88	22:59:05	0	CALIPER	1842.500 CPS	17.800 CM
8	09/06/88	22:48:27	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/06/88	22:48:27	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/06/88	22:48:27	0	CALIPERL	0.000 CPS	0.000 CM
11	09/06/88	22:48:27	0	CALIPERL	0.000 CPS	0.000 CM

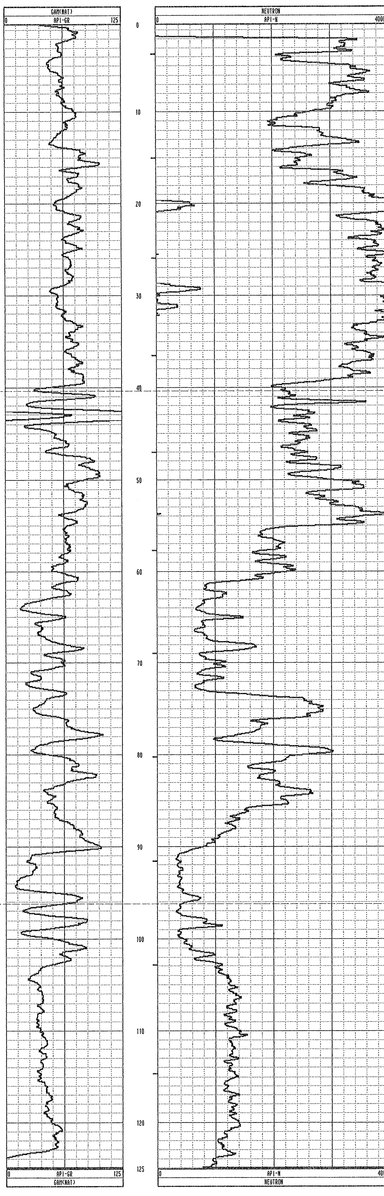
QHR 88020 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88020 GAMMA-NEUTRON			DEN.NEUT	
LOCATION/FIELD	: BL 20300:SL 28300 TRANSFER W			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/12/88	PERMANENT DATUM	: 1259	ELEVATIONS	
DEPTH DRILLER	: 127 M	ELEV. PERM. DATUM:	1250	KB	: 1250
LOG BOTTOM	: 125.16	LOG MEASURED FROM:	1250	DF	: 1250
LOG TOP	: 0.52	DRL MEASURED FROM:	1250	GL	: 1250
CASING DRILLER	: 15	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 0		RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.69	RM TEMPERATURE	: 0	LOG	: S
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				

ANGLE HOLE AZIMUTH 37 INCLINATION 60
LOGGED THROUGH RODS

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:10	0	GAMMA(T)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:10	0	GAMMA(T)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:10	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:10	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:10	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:10	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88020 GAMMA-DENSITY

COMPANY	: SCHLUMBERGER OVERSEAS, S.A.	OTHER SERVICES:	
WELL	: QUEST HOUSE RESEARCH HOLE	DIL	
FIELD/AREA	: ST. DAVIDS, HIGH TEMPERATURE W	BHC-AC	
COUNTY	:	LDL-CNL	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP : RANGE :		

DATE	: 09/12/88	PERMANENT DATUM	: GSL	ELEVATIONS	
RUN NUMBER	: ONE	LOG MEASURED FROM	: KB	KB	: GSL
DEPTH DRILLER	: TD	DRILLING MEASURED FROM	: KB	DF	: GSL
DEPTH LOGGER	: TD	CASING DRILLER	:	GL	: GSL
CASING DRILLER	: TD	LOGGING UNIT	: 8481		
BOTTOM LOGGED INTERVAL	: TD	LOGGING ENGINEER	: R.HARRY		
CASING THICKNESS	:	WITNESSED BY	: C.MCCLAM		

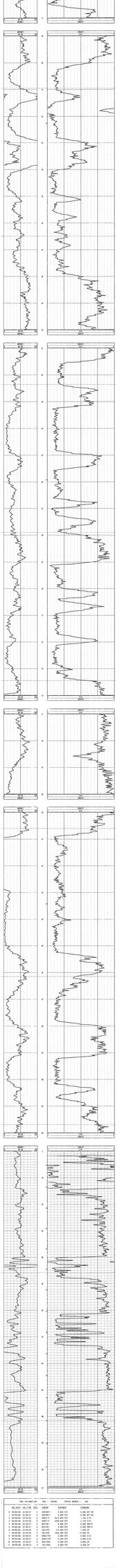
BIT SIZE	: 77.8	TURNTABLE FLUID	: WATER	FILE	: DEVIATED
MAGNETIC DECL.	: 24 NW		: 0	RUN	: VERSAN
FLUID TYPE	: WATER	MF CORRELATION	: 0	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 115	PLOT	: DATE 5
FLUID RESIS.	: SWEETENE	FLUID DELTA T	: 490	TAPE(S)	: 2000

RESIDUE

RADIUS HOLE WITNESS TI CNCL/SWITCH-ON

ALL DEPARTURES PERFORMED CONFORMITY TO CGC STANDARDS TERMS AND CONDITIONS

746



| | | | | |

247-5312

Century

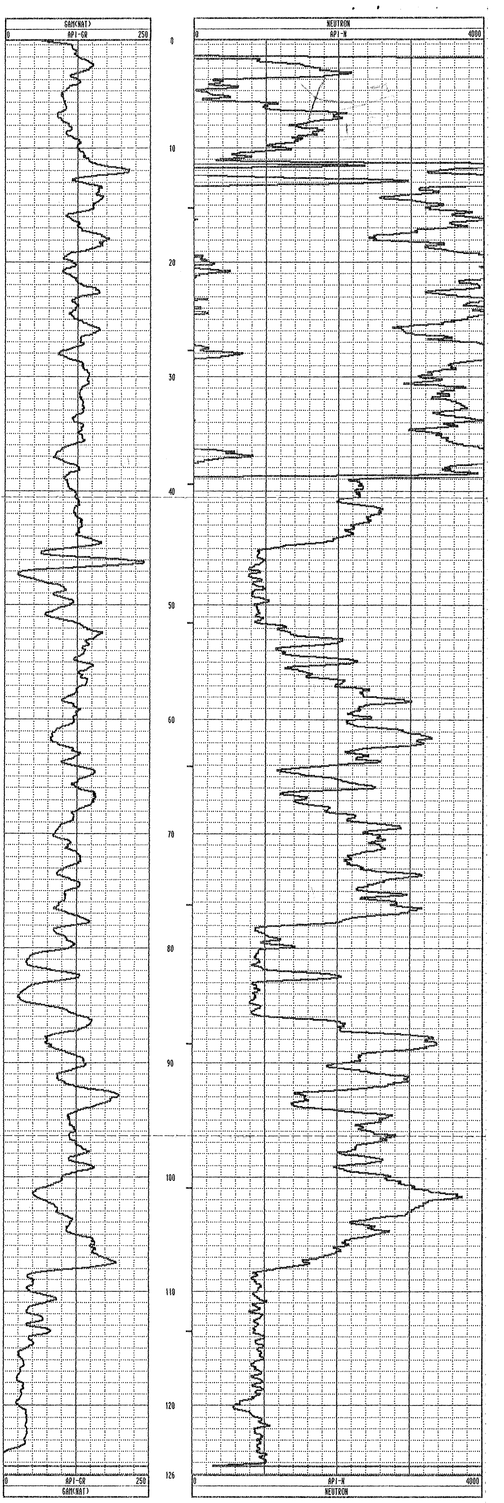
QHR 88021 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88021 GAMMA-NEUTRON				
LOCATION/FIELD	: BL 20300:SL 28300 TRANSFER W				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/13/88	PERMANENT DATUM	: 1250	ELEVATIONS	
DEPTH DRILLER	: 163 M	ELEV. PERM. DATUM:	1250	KB	: 1250
LOG BOTTOM	: 125.38	LOG MEASURED FROM:	1250	DF	: 1250
LOG TOP	: 0.72	DRL MEASURED FROM:	1250	GL	: 1250
CASING DRILLER	: 11	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 1
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500
REMARKS	:				
VERTICAL HOLE					

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAMCNAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAMCNAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88021 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88021 DEVIATION			DEN.NEUT	
LOCATION/FIELD	: BL 2030015L 2830D TRANSFER H			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 09/17/88	PERMANENT DATUM	: 1250	ELEVATIONS	
DEPTH DRILLER	: 163 M	ELEV. PERM. DATUM:	1250	KB : 1250	
LOG BOTTOM	: 125.38	LOG MEASURED FROM:	1250	DF : 1250	
LOG TOP	: 0.72	DRL MEASURED FROM:	1250	GL : 1250	
CASING DRILLER	: 11	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 0		RECORDED BY	: E.SUEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE : PROCESSED	
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 3	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 6	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				
VERTICAL HOLE					

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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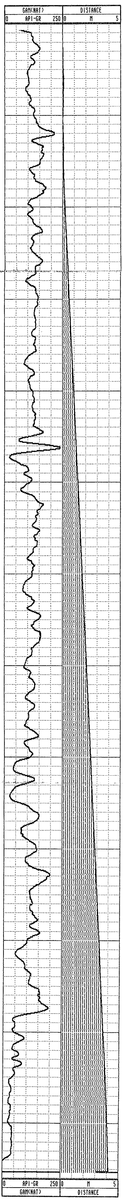
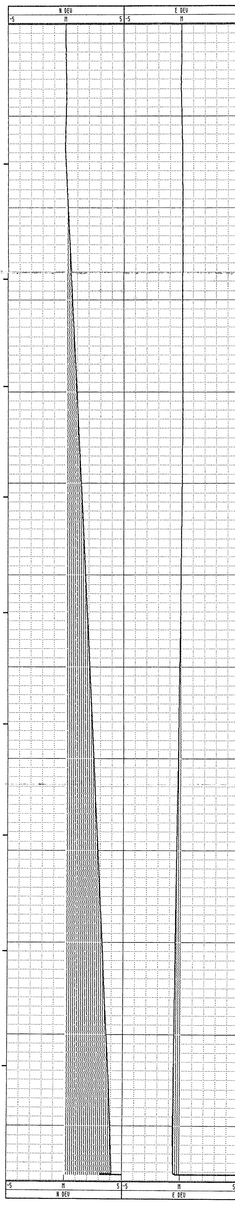




* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88021 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/17/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 3

Table 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	5.00	0.03	-.03	0.0	311.8	2.2	310.1
10.0	9.99	0.02	0.00	0.0	7.5	2.3	201.4
15.0	14.99	-.01	0.06	0.1	100.2	1.9	15.0
20.0	19.99	0.19	0.08	0.2	22.9	2.4	4.6
25.0	24.98	0.38	0.08	0.4	12.3	2.2	5.8
30.0	29.98	0.58	0.09	0.6	8.6	2.2	354.4
35.0	34.97	0.77	0.09	0.8	6.8	2.2	356.7
40.0	39.97	0.95	0.10	1.0	5.9	2.2	355.8
45.0	44.97	1.13	0.08	1.1	3.9	2.3	350.8
50.0	49.96	1.33	0.05	1.3	2.0	2.3	349.9
55.0	54.96	1.54	0.01	1.5	0.5	2.3	344.4
60.0	59.96	1.72	-.03	1.7	359.1	1.3	326.1
65.0	64.95	1.90	-.08	1.9	357.7	2.0	339.4
70.0	69.95	2.09	-.13	2.1	356.4	1.7	354.6
75.0	74.94	2.27	-.19	2.3	355.2	2.1	343.7
80.0	79.94	2.43	-.25	2.4	354.1	2.3	338.8
85.0	84.94	2.62	-.31	2.6	353.2	2.7	321.2
90.0	89.93	2.81	-.37	2.8	352.4	2.3	345.9
95.0	94.93	3.00	-.43	3.0	351.9	2.5	357.5
100.0	99.92	3.20	-.48	3.2	351.4	2.5	340.3
105.0	104.92	3.36	-.52	3.4	351.3	2.2	345.1
110.0	109.92	3.57	-.55	3.6	351.2	2.6	338.1
115.0	114.91	3.77	-.59	3.8	351.1	2.0	355.3
120.0	119.91	3.96	-.62	4.0	351.1	1.9	2.2
125.0	124.91	4.09	-.58	4.1	352.0	1.7	27.0
125.4	125.29	4.10	-.57	4.1	352.0	0.0	0.0

746

Century

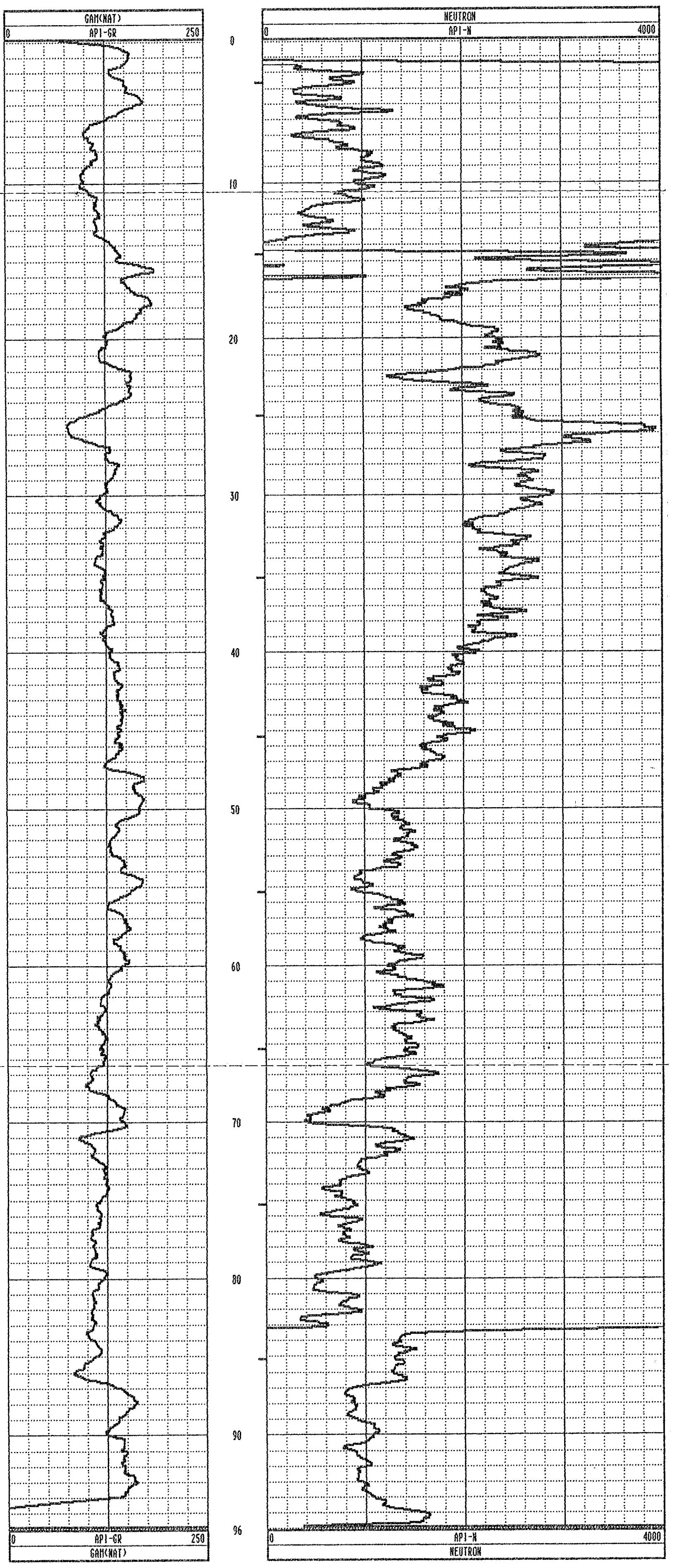
QHR 88022 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88022 GAMMA-NEUTRON				
LOCATION/FIELD	: BL 20300:SL 28300 TRANSFER W				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/14/88	PERMANENT DATUM	: 1250	ELEVATIONS	
DEPTH DRILLER	: 95.5	ELEV. PERM. DATUM	: 1250	KB	: 1250
LOG BOTTOM	: 95.92	LOG MEASURED FROM	: 1250	DF	: 1250
LOG TOP	: 0.96	DRL MEASURED FROM	: 1250	GL	: 1250
CASING DRILLER	: 14	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 0
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88022 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88022 GAMMA-DENSITY	DEN.NEUT	
LOCATION/FIELD	: BL 20300:SL 28300 TRANSFER W	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:

DATE	: 09/17/88	PERMANENT DATUM	: 1250	ELEVATIONS	
DEPTH DRILLER	: 95.5	ELEV. PERM. DATUM:	1250	KB	: 1250
LOG BOTTOM	: 96.00	LOG MEASURED FROM:	1250	DF	: 1250
LOG TOP	: 0.00	DRL MEASURED FROM:	1250	GL	: 1250
CASING DRILLER	: 14	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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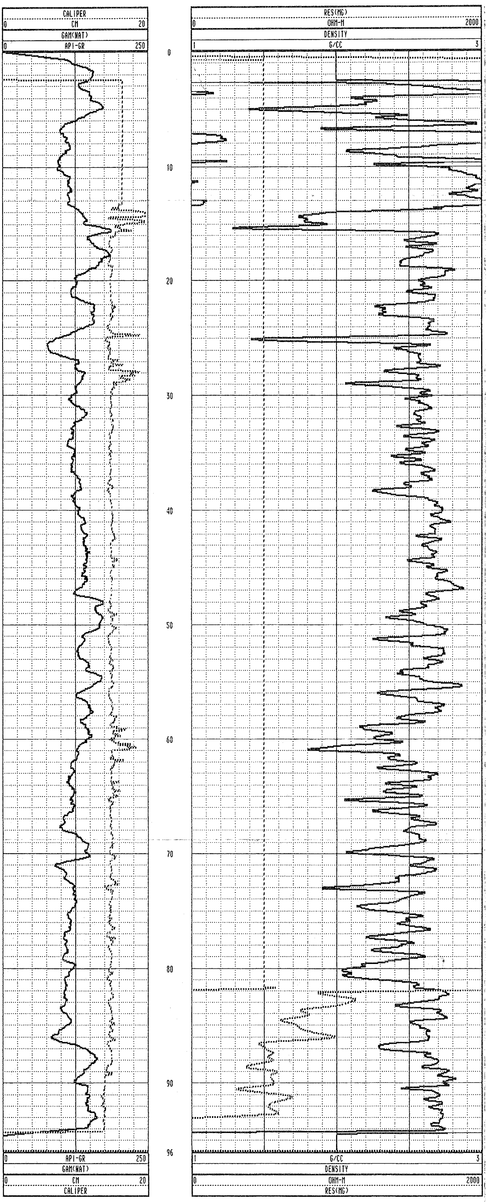

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88022 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88022 GAMMA-DENSITY			DEN.NEUT	
LOCATION/FIELD	: BL 20300SL 28300 TRANSFER W			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 09/17/88	PERMANENT DATUM	: 1250	ELEVATIONS	
DEPTH DRILLER	: 95.5	ELEV. PERM. DATUM:	1250	KB : 1250	
LOG BOTTOM	: 96.00	LOG MEASURED FROM:	1250	DF : 1250	
LOG TOP	: 0.00	DRL MEASURED FROM:	1250	GL : 1250	
CASING DRILLER	: 14	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: E.SUEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE : PROCESSED	
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 4	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN S	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				

ANGLE HOLE AZIMUTH 37 INCLINATION 60

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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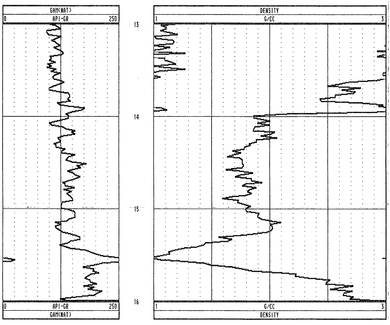

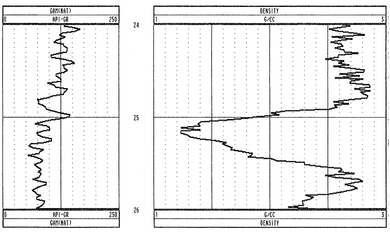

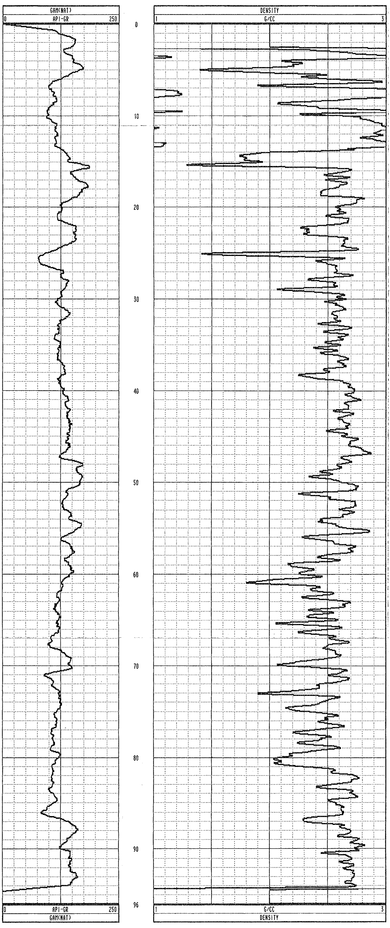

TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAMMA(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAMMA(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88022 DEVIATION

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR 88022 DEVIATION		
LOCATION/FIELD	: BL 20300:SL 28300 TRANSFER W		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP :	RANGE :

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

DATE	: 09/17/88	PERMANENT DATUM	: 1250	ELEVATIONS	
DEPTH DRILLER	: 95.5	ELEV. PERM. DATUM:	1250	KB	: 1250
LOG BOTTOM	: 95.92	LOG MEASURED FROM:	1250	DF	: 1250
LOG TOP	: 0.96	DRL MEASURED FROM:	1250	GL	: 1250
CASING DRILLER	: 14	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	2500

REMARKS :
ANGLE HOLE AZIMUTH 37 INCLINATION 60
217°

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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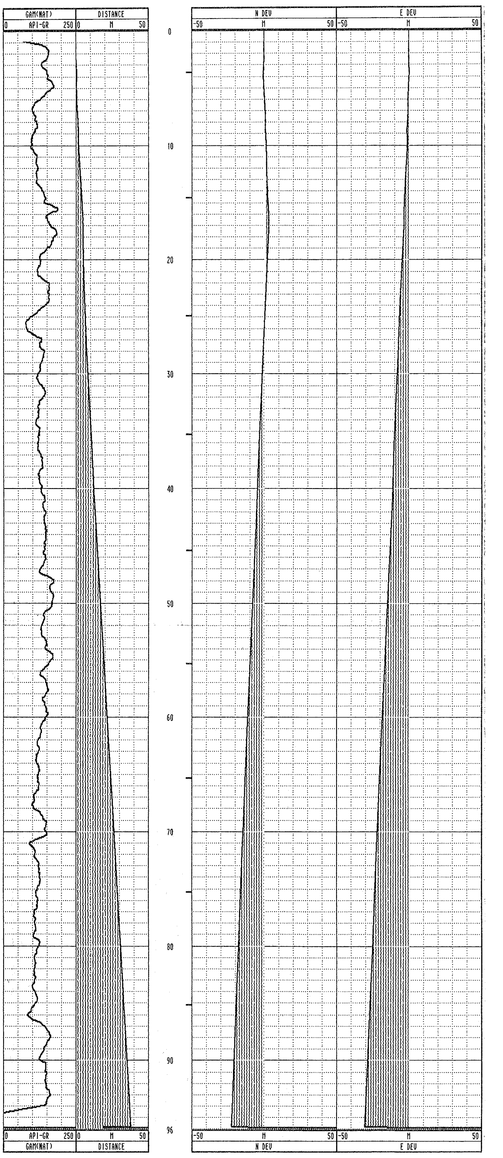


* * * * * * * * * * COMPU-LOG II - VERTICAL DEVIATION * * * * * * * * * *

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88022
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/17/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 6

Cable 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	4.63	-.24	-.31	0.4	232.1	32.5	-312.0
10.0	8.87	1.29	-1.28	1.8	315.3	33.1	-180.1
15.0	13.11	2.52	-3.24	4.1	307.9	32.2	338.2
20.0	17.38	2.26	-4.59	5.1	296.3	30.9	226.9
25.0	21.68	0.53	-6.44	6.5	274.7	32.2	-201.7
30.0	25.97	-1.25	-8.05	8.1	261.1	30.8	227.7
35.0	30.27	-3.02	-9.87	10.3	253.0	29.8	234.8
40.0	34.58	-4.69	-11.23	12.2	247.3	25.3	176.1
45.0	38.90	-6.32	-12.99	14.4	244.1	29.7	234.2
50.0	43.24	-7.98	-14.81	16.8	241.7	29.7	226.1
55.0	47.60	-9.71	-16.51	19.2	239.5	30.0	-222.6
60.0	51.95	-11.28	-18.32	21.5	238.4	29.1	228.6
65.0	56.33	-12.91	-20.11	23.9	237.3	28.5	225.8
70.0	60.71	-14.54	-21.81	26.2	236.3	28.7	232.7
75.0	65.12	-16.12	-23.46	28.5	235.5	27.9	237.9
80.0	69.54	-17.69	-25.03	30.6	234.8	27.8	-229.3
85.0	73.96	-19.24	-26.75	32.9	234.3	27.5	231.2
90.0	78.40	-20.73	-28.47	35.2	233.9	27.9	-225.9
95.0	82.82	-22.23	-30.22	37.5	233.7	28.0	230.8
95.9	83.64	-22.51	-30.50	37.9	233.6	0.0	0.0

Century

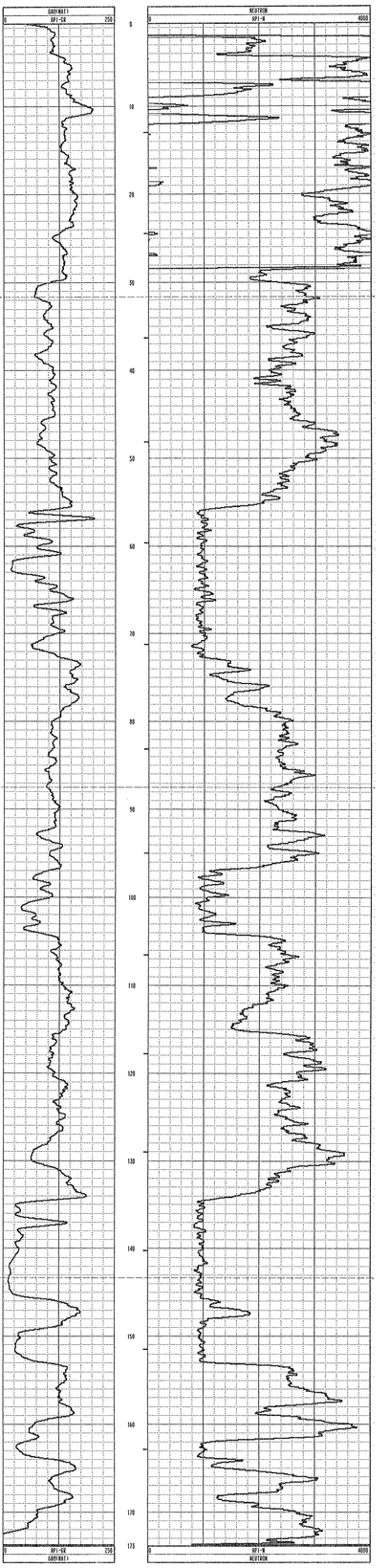
QHR 88023 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88023 GAMMA-NEUTRON	DEN.NEUT	
LOCATION/FIELD	:	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/15/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 171 M	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 173.78	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.68	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 0	LOGGING UNIT	: 8401
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS: 0		RECORDED BY	: E.SVEDLUND
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		

FILE : ORIGINAL
TYPE : 9055A
LOG : 6
PLOT : QUIN 2
THRESH: 2500

VERTICAL HOLE
LOGGED OPEN HOLE
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:18	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88023 GAMMA-DENSITY

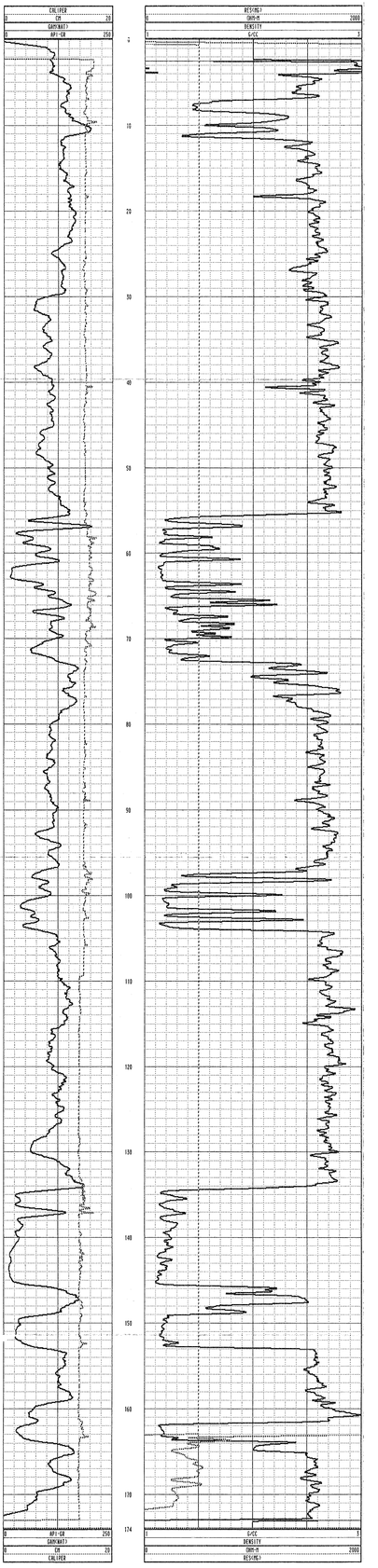
COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR 88023 GAMMA-DENSITY		
LOCATION/FIELD	:		
COUNTY	:		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP	: RANGE :
DATE	: 09/17/88	PERMANENT DATUM	: 0 ELEVATIONS
DEPTH DRILLER	: 171 M	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 174.00	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.00	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 0	LOGGING UNIT	: 8401
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS	: 0	RECORDED BY	: E.SVEDLUND
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0 TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0 LOG : 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 PLOT : QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 THRESH: 2500
REMARKS	:		

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



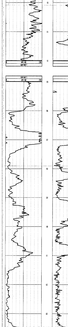
TOOL CALIBRATION TOOL : 9055A SERIAL NUMBER : 46

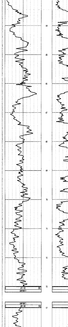
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:28:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

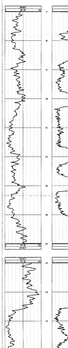
Century

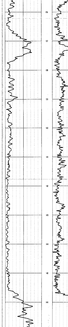
CASE 8021 GAMMA-DENSITY

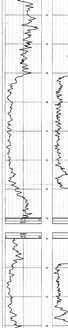
746

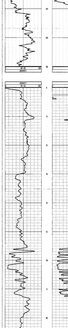


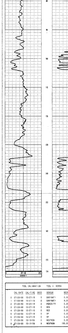












1 2/3/2021 10:17:15	1	1.000	1.000
2 2/3/2021 10:17:15	2	1.000	1.000
3 2/3/2021 10:17:15	3	1.000	1.000
4 2/3/2021 10:17:15	4	1.000	1.000
5 2/3/2021 10:17:15	5	1.000	1.000
6 2/3/2021 10:17:15	6	1.000	1.000

GAMMA	1.000	1.000
SPARE	1.000	1.000
SPARE	1.000	1.000
SPARE	1.000	1.000
SPARE	1.000	1.000
SPARE	1.000	1.000

Century

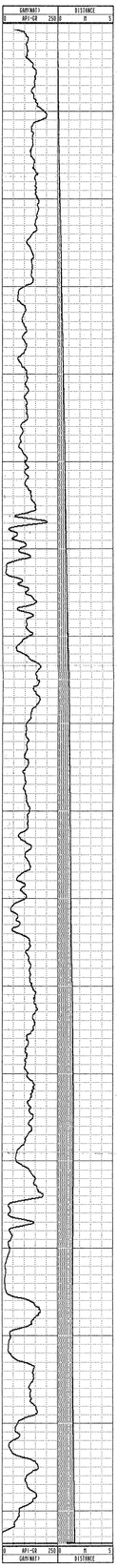
QHR 88023 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88023 DEVIATION			DEN.NEUT	
LOCATION/FIELD	:			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE :	
DATE	: 09/17/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 171 M	ELEV. PERM. DATUM	: 0	KB : 0	
LOG BOTTOM	: 173.78	LOG MEASURED FROM	: 0	DF : 0	
LOG TOP	: 0.68	DRL MEASURED FROM	: 0	GL : 0	
CASING DRILLER	: 0	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: E.SVEDLUND		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE : PROCESSED	
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE : 9055A	
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG : 3	
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT : QUIN 6	
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				

VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



Century

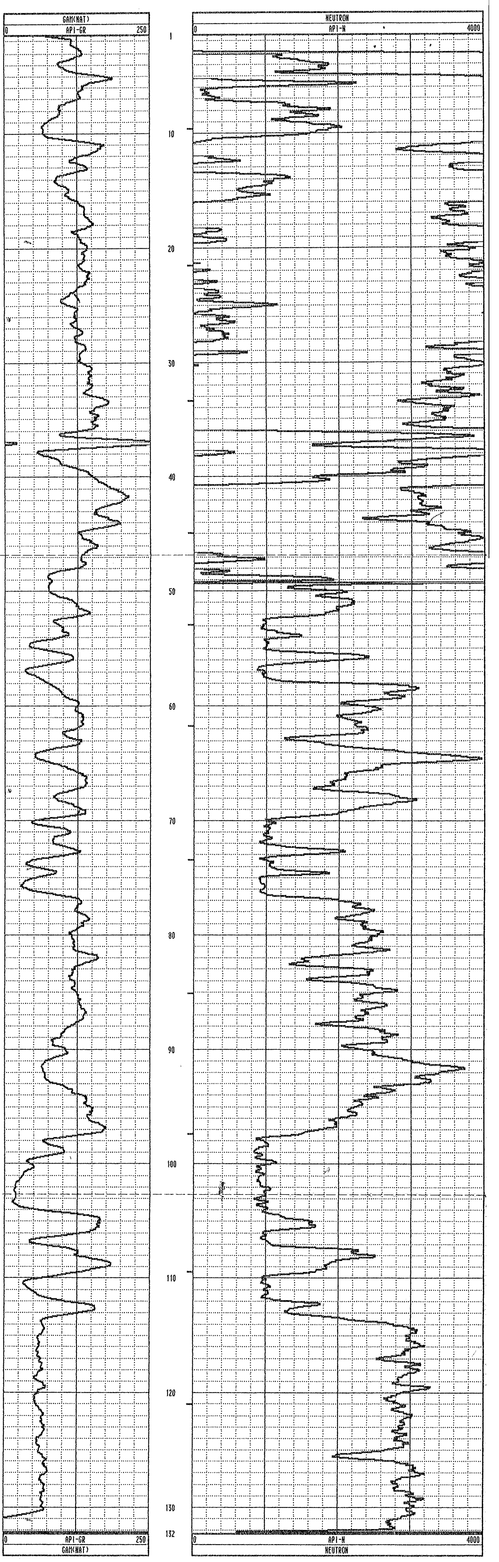
QMR 88024 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QMR 88024 GAMMA-NEUTRON	DEN.NEUT	
LOCATION/FIELD	: BL:20275:BL:27800	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 09/16/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 133 M	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 132.22	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 1.60	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 0	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0	RECORDED BY : E.SVEDLUND	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 2
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500

REMARKS :
ANGLE HOLE AT 60 DEGREES TO THE HORIZONTAL
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

Rods

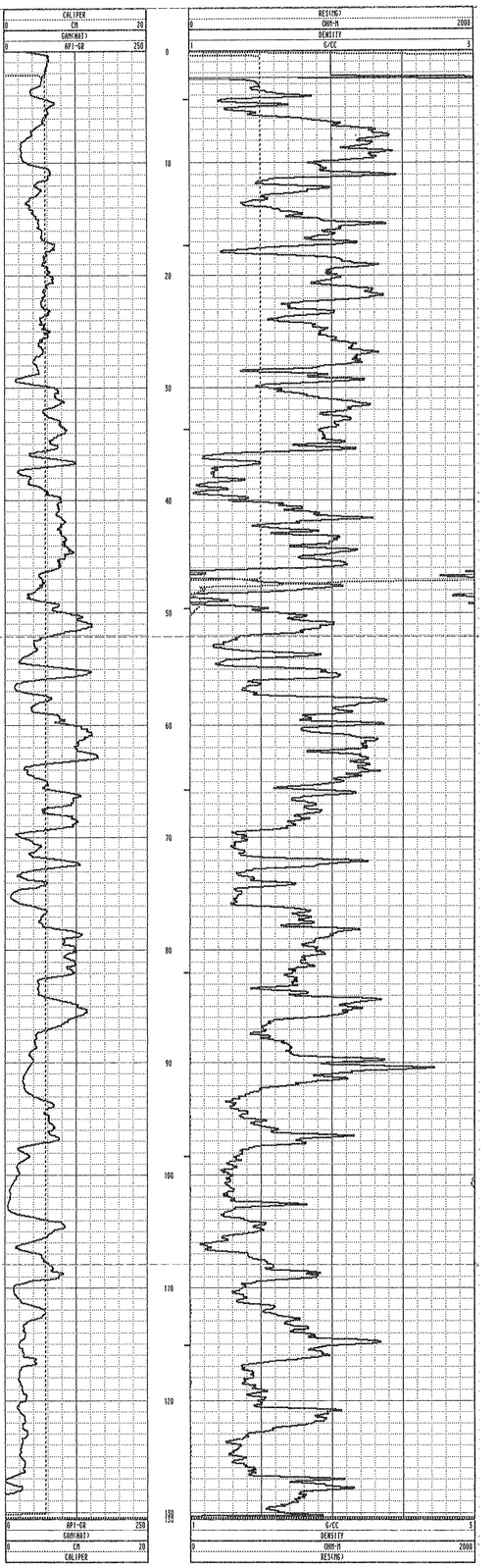
QHR 88024 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88024 GAMMA-DENSITY	DEN.NEUT	
LOCATION/FIELD	: BL:20275:BL:27800	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/16/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 115 M	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 130.56	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.20	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 0	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0	RECORDED BY : E.SVEDLUND	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 0
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500

REMARKS :
ANGLE HOLE AT 60 DEGREES TO THE HORIZONTAL
LOGGED THROUGH RODS

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746

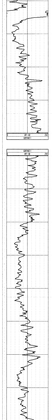
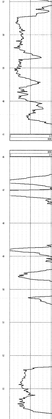
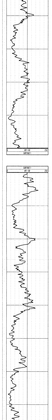
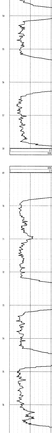


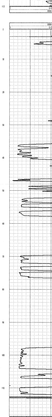
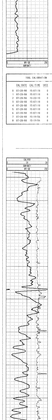
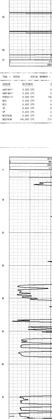
TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 450

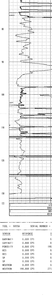
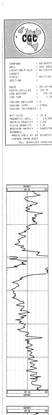
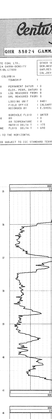
	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/06/88	22:48:27	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/06/88	22:48:27	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/06/88	22:55:50	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/06/88	22:55:50	0	DENSITY	2230.000 CPS	2.120 G/CC
4	09/06/88	22:48:27	0	RESIS(M)	0.000 CPS	0.000 OHM-M
5	09/06/88	22:48:27	0	RESIS(M)	0.000 CPS	0.000 OHM-M
6	09/06/88	22:59:05	0	CALIPER	213.400 CPS	7.600 CM
7	09/06/88	22:59:05	0	CALIPER	1842.500 CPS	17.800 CM
8	09/06/88	22:48:27	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/06/88	22:48:27	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/06/88	22:48:27	0	CALIPERL	0.000 CPS	0.000 CM
11	09/06/88	22:48:27	0	CALIPERL	0.000 CPS	0.000 CM

Century
GUIDE 88824 GAMMA-DENSITY

746

Century

QHR 88024 DEVIATION

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

COMPANY : QUINTETTE COAL LTD.
WELL : QHR 88024 DEVIATION
LOCATION/FIELD : BL1Z0275:BL1Z7000
COUNTY :
STATE : BRITISH COLUMBIA
SECTION : TOWNSHIP : RANGE :

DATE : 09/17/88
DEPTH DRILLER : 133 m
LOG BOTTOM : 132.22
LOG TOP : 1.60

PERMANENT DATUM : 0
ELEV. PERM. DATUM: 0
LOG MEASURED FROM: 0
DRL MEASURED FROM: 0

ELEVATIONS
KB : 0
DF : 0
GL : 0

CASING DRILLER : 0
CASING TYPE : STEEL
CASING THICKNESS: 0

LOGGING UNIT : 8401
FIELD OFFICE : CALGARY
RECORDED BY : E.SUEDLUND

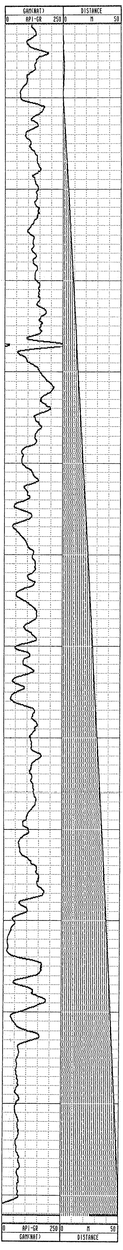
BIT SIZE : 15.6
MAGNETIC DECL. : 24.500
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
NEUTRON MATRIX : SANDSTONE
REMARKS :
ANGLE HOLE AT 60 DEGREES TO THE HORIZONTAL
LOGGED OPEN HOLE

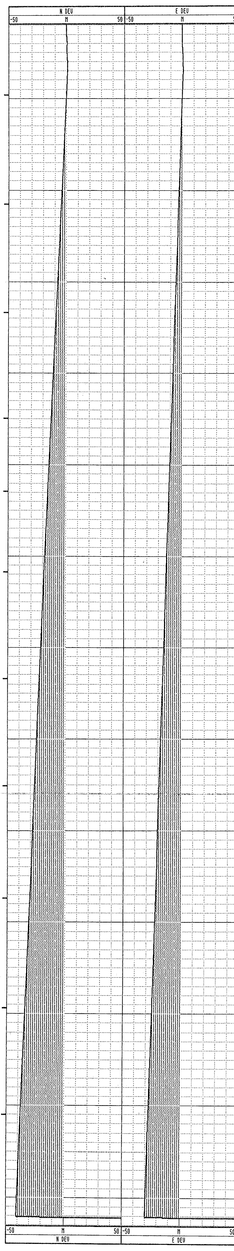
BOREHOLE FLUID : WATER
RM : 0
RM TEMPERATURE : 0
MATRIX DELTA T : 173
FLUID DELTA T : 690

FILE : PROCESSED
TYPE : 9055A
LOG : 4
PLOT : QUIN 6
THRESH: 2500

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746





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

CLIENT : QUINTETTE COAL LTD.
FIELD OFFICE : CALGARY
DATA FROM :
MAG. DECL. : 24.500

HOLE ID. : QHR 88024 DEV
DATE OF LOG : 09/17/88
PROBE : 9055A 46
DEPTH UNITS : FEET LOG 4

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGD
2.0	2.00	0.00	0.00	0.0	-.0	0.0	0.0
7.0	6.51	0.76	0.74	1.1	44.4	28.5	67.7
12.0	10.92	-.87	-.67	1.1	217.6	28.2	217.2
17.0	15.35	-2.74	-1.95	3.4	215.4	27.7	211.8
22.0	19.70	-4.58	-3.29	5.6	215.6	26.9	213.0
27.0	24.23	-6.37	-4.34	7.7	214.3	27.0	203.7
32.0	28.69	-8.16	-5.70	10.0	214.9	25.7	222.3
37.0	33.15	-9.93	-6.85	12.1	214.6	28.0	244.0
42.0	37.60	-11.72	-8.07	14.2	214.6	26.9	216.4
47.0	42.06	-13.54	-9.42	16.5	214.8	26.8	215.6
52.0	46.54	-15.33	-10.74	18.7	215.0	26.5	212.2
57.0	51.01	-17.08	-12.03	20.9	215.2	26.7	212.5
62.0	55.51	-18.84	-13.33	23.1	215.3	25.6	220.6
67.0	60.01	-20.48	-14.46	25.1	215.2	25.6	217.7
72.0	64.52	-22.07	-15.57	27.0	215.2	25.3	218.6
77.0	69.05	-23.76	-16.85	29.1	215.3	25.1	232.0
82.0	73.58	-25.41	-18.15	31.2	215.5	25.0	216.7
87.0	78.12	-27.07	-19.42	33.3	215.6	24.6	217.6
92.0	82.68	-28.72	-20.67	35.4	215.7	24.1	217.4
97.0	87.24	-30.22	-21.68	37.2	215.7	24.0	220.8
102.0	91.81	-31.83	-22.91	39.2	215.7	24.1	204.1
107.0	96.38	-33.45	-24.09	41.2	215.8	24.6	208.7
112.0	100.94	-34.99	-25.18	43.1	215.7	23.8	212.6
117.0	105.52	-36.54	-26.41	45.1	215.9	23.7	224.1
122.0	110.12	-38.08	-27.64	47.0	216.0	22.9	218.1
127.0	114.73	-39.58	-28.83	49.0	216.1	22.5	217.8
132.0	119.35	-41.07	-29.94	50.8	216.1	21.4	235.8
132.2	119.56	-41.12	-29.98	50.9	216.1	0.0	0.0

Century

QHR 88026 GAMMA-NEUTRON

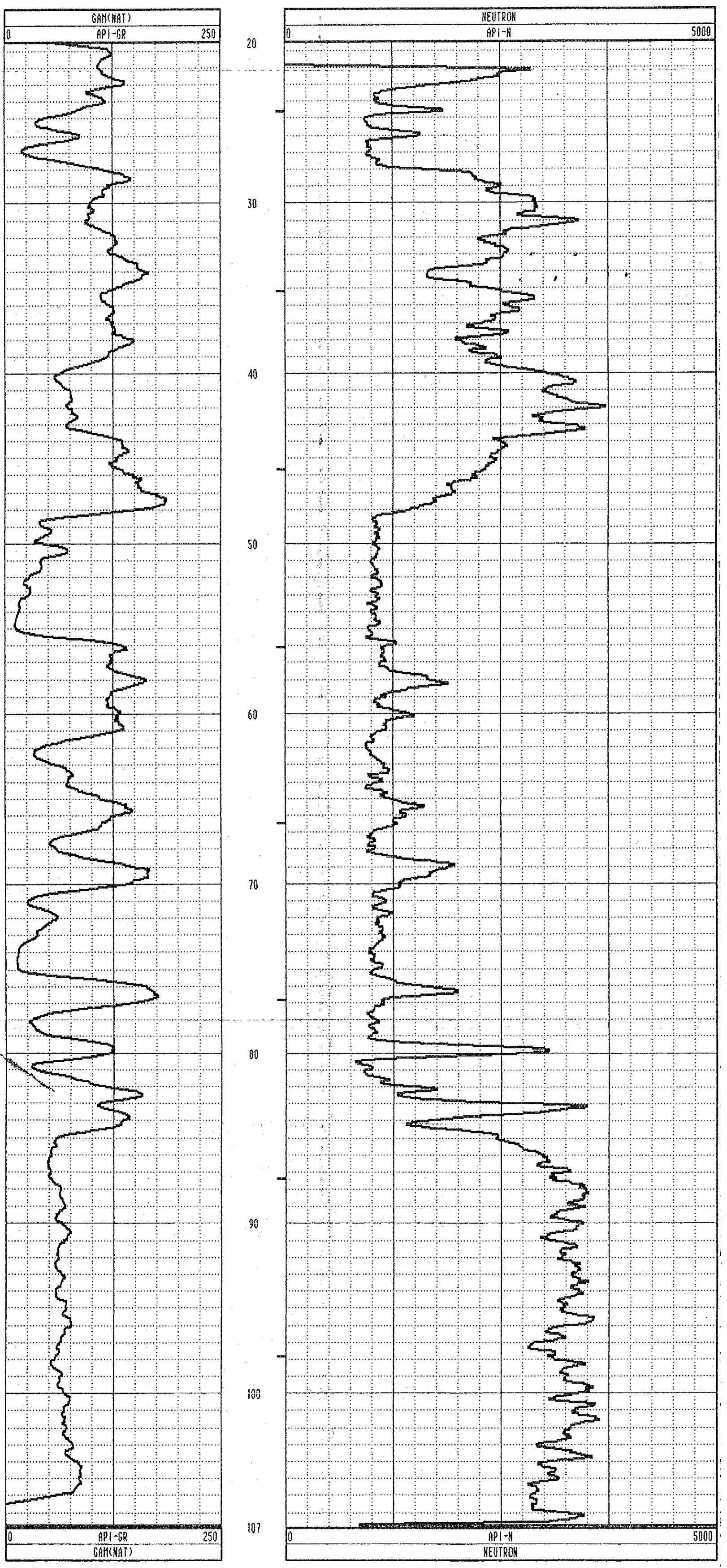
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88026 GAMMA-NEUTRON				
LOCATION/FIELD	: SL;20130:BL;28210				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/22/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 109	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 107.84	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 20.62	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
DEN,NEUT
GAM,RES,
CAL,DEV

REMARKS :
ANGLE HOLE AT 45 DEGREES TO THE HORIZONTAL
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88026 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88026 GAMMA-DENSITY			DEN.NEUT	
LOCATION/FIELD	: SL:20130:BL:28210			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/22/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 109	ELEV. PERM. DATUM: 0		KB	: 0
LOG BOTTOM	: 107.84	LOG MEASURED FROM: 0		DF	: 0
LOG TOP	: 0.22	DRL MEASURED FROM: 0		GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 0		RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	5000

REMARKS :
ANGLE HOLE AT 45 DEGREES TO THE HORIZONTAL
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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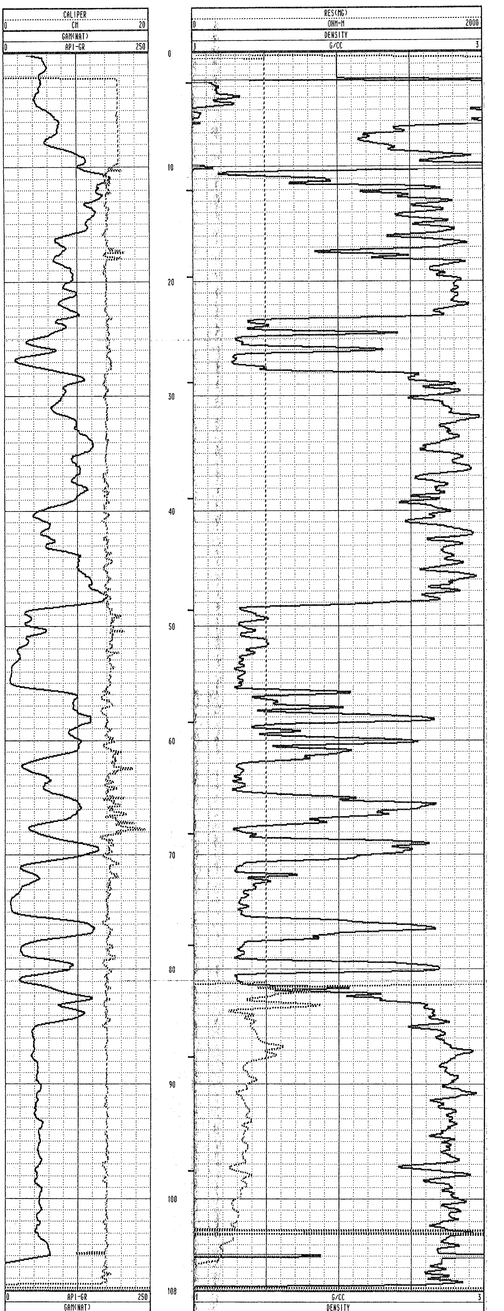


TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYM	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYM	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

GHR 55826 GAMMA-DENSITY

COMPANY	= ACHESETTE CAN. LTD.	OTHER SERVICES:	
WELL	= ACHESETTE 4 PROPERTY	GAM-DEN	
FIELD/AREA/FIELD	= 55.55'00.00.-120.00'	GAM-NEU	
COUNTY	=	TAL-DEV	
PROV.	= BRITISH COLUMBIA		
SECTION	= TOWNSHIP = RANGE =		

DATE	= 09/22/88	PERMANENT DATUM = G	ELEVATIONS
LOG MEASURED FROM	= KB	LOG MEASURED FROM = K	KB = 0
LOG BOTTOM	= 651.64	LOG MEASURED FROM = K	DF = 0
LOG TOP	= 0.32	LOG MEASURED FROM = K	GL = 0
TYPE OF DRILLER	= FLUID	= MUD	
CASING TYPE	= STEEL	= CASING	
CASING THICKNESS	=	= CASING	

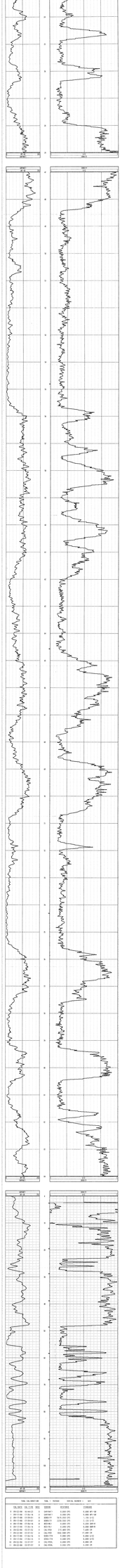
DENSITY	= 49.6	RUNNING PLOTS = UPPER	FILE = GR1SCHNL
MAGNETIC DECL. =	28.500	RM = 0	TIME = 032944
FLUID DENSITY =	2.68	RM TEMPERATURE = 0	LOG = 0
FLUID VISCOSITY =	0.0	RMF = 0	RMC = 0
RECORDED BEFORE =	SUBSTRUME	PLOT SCALE = 400	TIMEMAX 1600
RUN NUMBER =	ONE		

WHOLE HOLE AT 40 DEGREES TO THE HORIZONTAL

DISCLAIMER

ALL SERVICES PERFORMED SUBJECT TO OUR STANDARD TERMS AND CONDITIONS

746



CAL.DEN	CAL.CLYD	DEN	DENSITY	DEVIATION		STANDARD	
0	09:12:25	0.00	2.68/M3	0.000	CPS	0.000	APT.NO
1	09:12:30	0.00	2.68/M3	0.000	CPS	0.000	DEPTH
2	09:12:35	0.00	2.68/M3	0.000	CPS	0.000	TIME
3	09:12:40	0.00	2.68/M3	0.000	CPS	0.000	
4	09:12:45	17:52:16	2.68/M3	0.000	CPS	0.000	GAM/N
5	09:12:50	17:52:21	2.68/M3	0.000	CPS	0.000	GAM/F
6	09:12:55	17:52:26	2.68/M3	0.000	CPS	0.000	LOG
7	09:13:00	17:52:31	2.68/M3	0.000	CPS	0.000	FT
8	09:13:05	17:52:36	2.68/M3	0.000	CPS	0.000	GAM/N
9	09:13:10	17:52:41	2.68/M3	0.000	CPS	0.000	GAM/F
10	09:13:15	17:52:47	2.68/M3	0.000	CPS	0.000	LOG
11	09:13:20	17:52:51	2.68/M3	0.000	CPS	0.000	FT

Century

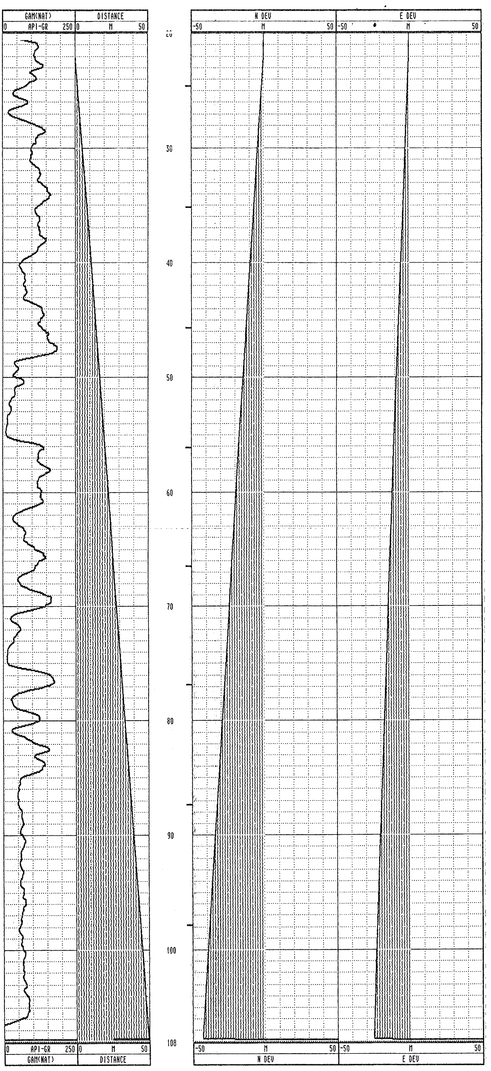
QHR 88026 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88026 DEVIATION	DEN.NEUT	
LOCATION/FIELD	: SL:20130:BL:28210	GAM.RES.	
COUNTY	:	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
DATE	: 09/22/88	PERMANENT DATUM	: 0 ELEVATIONS
DEPTH DRILLER	: 109	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 107.84	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 20.62	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0 TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0 LOG : 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173 PLOT : QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690 THRESH: 2500

REMARKS :
ANGLE HOLE AT 45 DEGREES TO THE HORIZONTAL
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88026 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/22/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: METER LOG 4

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
20.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
25.0	24.37	-1.51	-.90	1.8	210.9	38.2	208.4
30.0	28.31	-4.17	-2.44	4.8	210.4	37.9	212.6
35.0	32.28	-6.80	-3.97	7.9	210.3	37.5	212.1
40.0	36.21	-9.37	-5.57	10.9	210.7	38.1	211.7
45.0	40.17	-11.81	-7.14	13.8	211.2	38.6	237.6
50.0	44.11	-14.33	-8.68	16.7	211.2	37.4	207.2
55.0	48.13	-16.87	-10.15	19.7	211.0	36.1	208.9
60.0	52.16	-19.33	-11.66	22.6	211.1	36.5	231.7
65.0	56.19	-21.70	-13.03	25.3	211.0	34.4	198.0
70.0	60.22	-24.01	-14.48	28.0	211.1	35.7	200.4
75.0	64.29	-26.46	-15.81	30.8	210.9	35.0	208.4
80.0	68.37	-28.98	-17.22	33.7	210.7	35.7	205.6
85.0	72.43	-31.49	-18.69	36.6	210.7	36.1	209.8
90.0	76.49	-34.03	-20.13	39.5	210.6	36.0	220.1
95.0	80.52	-36.59	-21.57	42.5	210.5	36.1	213.4
100.0	84.57	-39.16	-23.00	45.4	210.4	35.7	211.4
105.0	88.60	-41.60	-24.15	48.1	210.1	35.5	209.4
107.8	90.92	-43.02	-24.93	49.7	210.1	0.0	0.0

Century

QHR 88027 GAMMA-NEUTRON

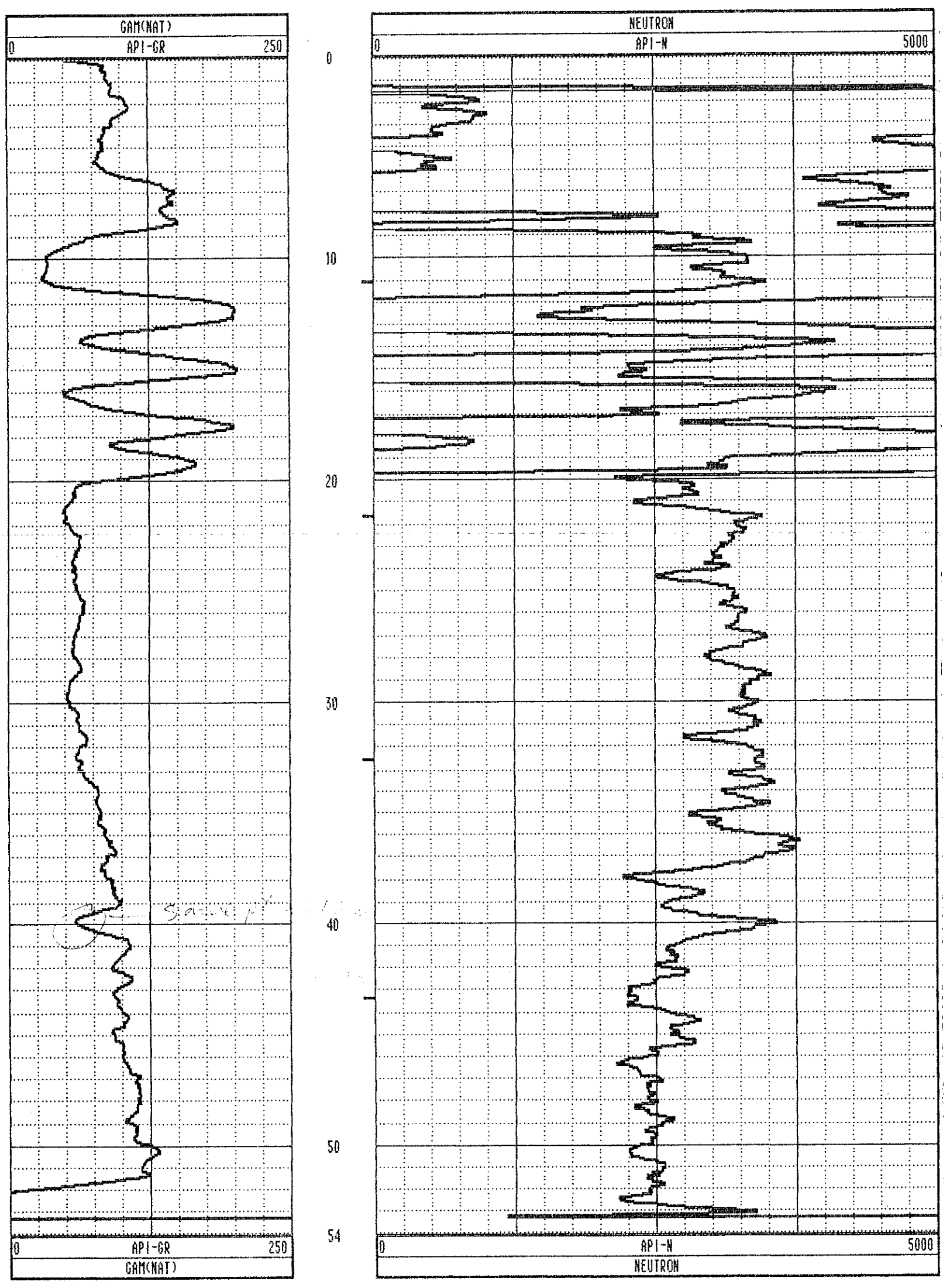
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88027 GAMMA-NEUTRON				
LOCATION/FIELD	: BL;20130:SL;27800				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 54	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.40	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.08	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 8
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
DEN,NEUT
GAM,RES,
CAL,DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88027 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88027 GAMMA-DENSITY				
LOCATION/FIELD	: BL;20130:SL;27800				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 54	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.44	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.32	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
DEN,NEUT
GAM,RES,
CAL,DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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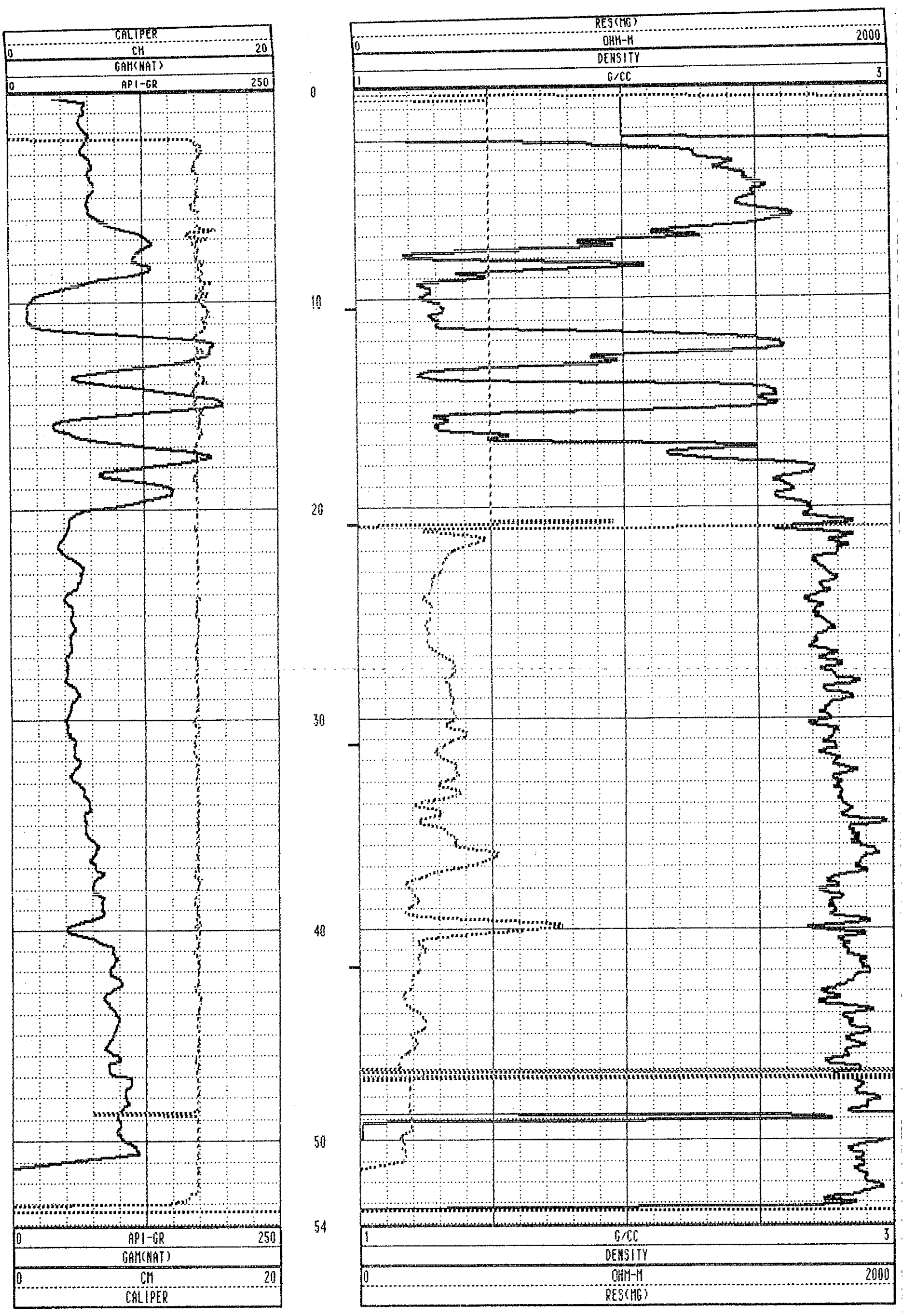

TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88027 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR 88027 GAMMA-DENSITY		
LOCATION/FIELD	: BL120130/5L127800		
COUNTY	: TRANSFER		
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 54	ELEV. PERM. DATUM: 0		KB	: 0
LOG BOTTOM	: 53.44	LOG MEASURED FROM: 0		DF	: 0
LOG TOP	: 0.32	DRL MEASURED FROM: 0		GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: 0		RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 5
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH: 2500	
REMARKS	:				

VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

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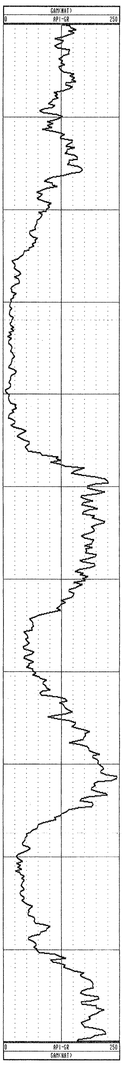
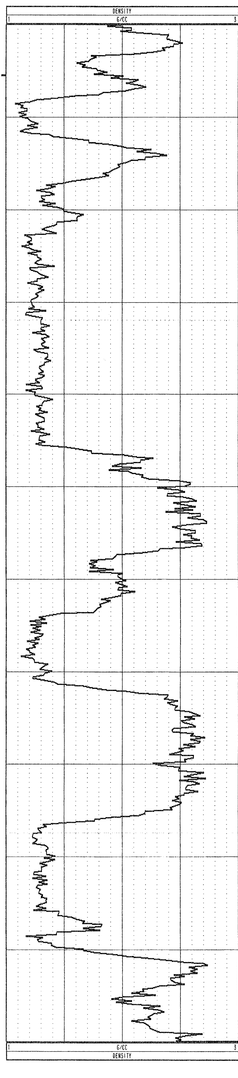
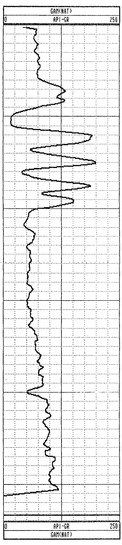
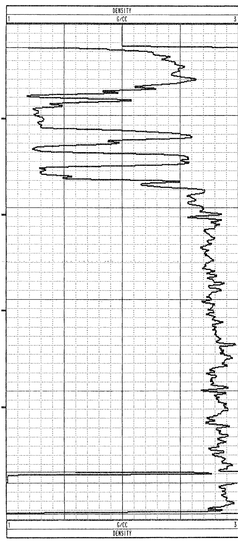








TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:25	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5435.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MS)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MS)	0.000 CPS	0.000 OHM-M
6	09/22/88	15:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	15:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYM	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYM	0.000 CPS	0.000 G/CC
10	09/22/88	15:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	15:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

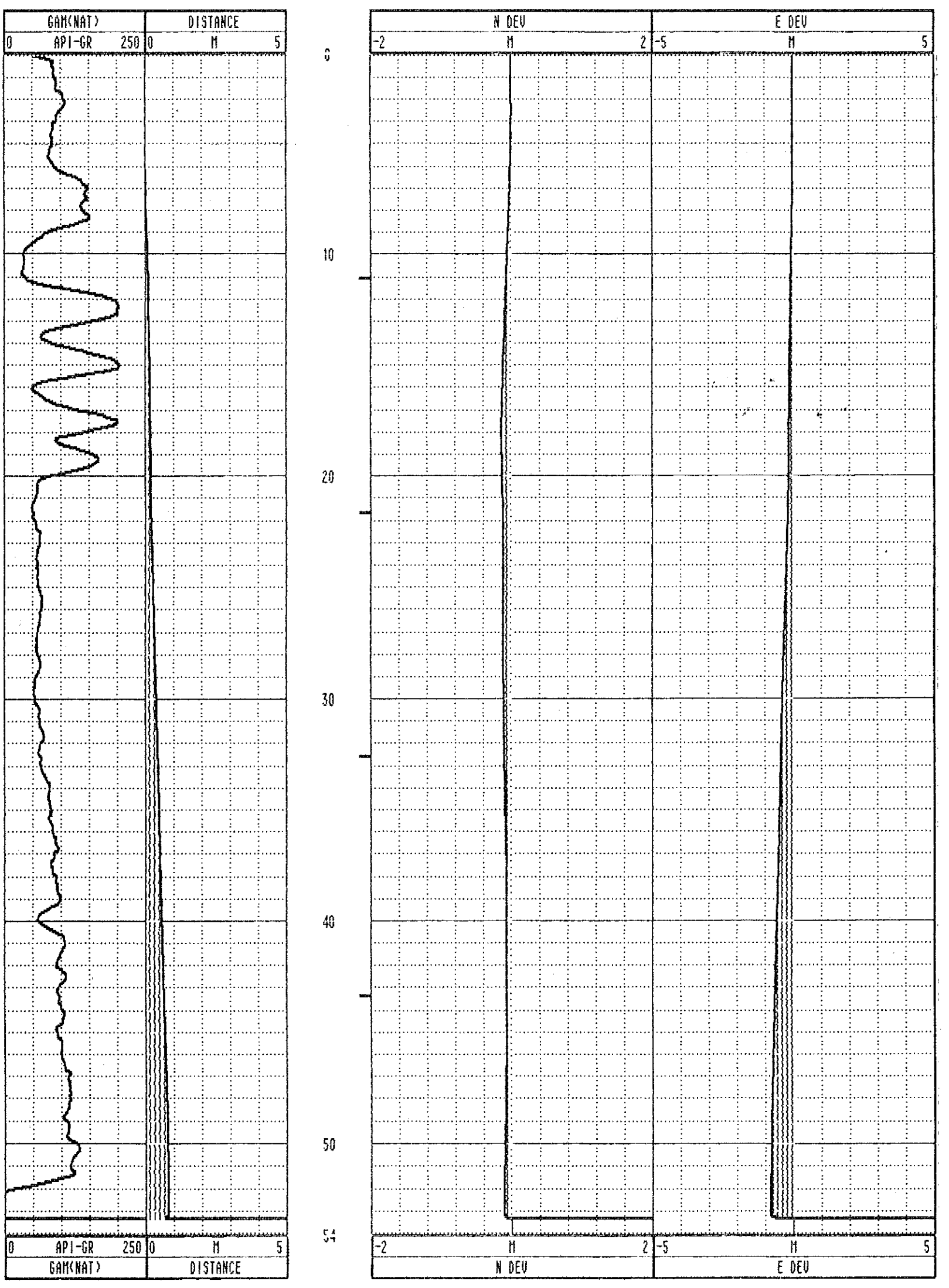
QHR 88027 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88027 DEVIATION			DEN.NEUT	
LOCATION/FIELD	: BL:20130:SL:27800			GAM.RES.	
COUNTY	: TRANSFER			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 54	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.40	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.08	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88027 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/23/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 0

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
1.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
6.0	6.00	-.00	0.00	0.0	164.5	0.9	181.5
11.0	11.00	-.07	-.07	0.1	226.7	1.2	218.4
16.0	16.00	-.12	-.12	0.2	225.9	0.5	187.1
21.0	21.00	-.12	-.16	0.2	233.2	0.8	306.2
26.0	26.00	-.12	-.28	0.3	247.1	1.4	274.2
31.0	30.99	-.10	-.39	0.4	255.6	1.1	270.2
36.0	35.99	-.08	-.49	0.5	260.5	1.1	288.9
41.0	40.99	-.06	-.60	0.6	263.8	1.1	278.3
46.0	45.99	-.07	-.71	0.7	264.2	1.9	267.8
51.0	50.99	-.10	-.78	0.8	262.9	0.5	215.3
53.4	53.39	-.10	-.79	0.8	263.0	0.0	0.0

Century

QHR 88028 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.
WELL	: QHR 88028 GAMMA-NEUTRON
LOCATION/FIELD	: BL:20120:SL:27600
COUNTY	: TRANSFER
STATE	: BRITISH COLUMBIA
SECTION	: TOWNSHIP : RANGE :

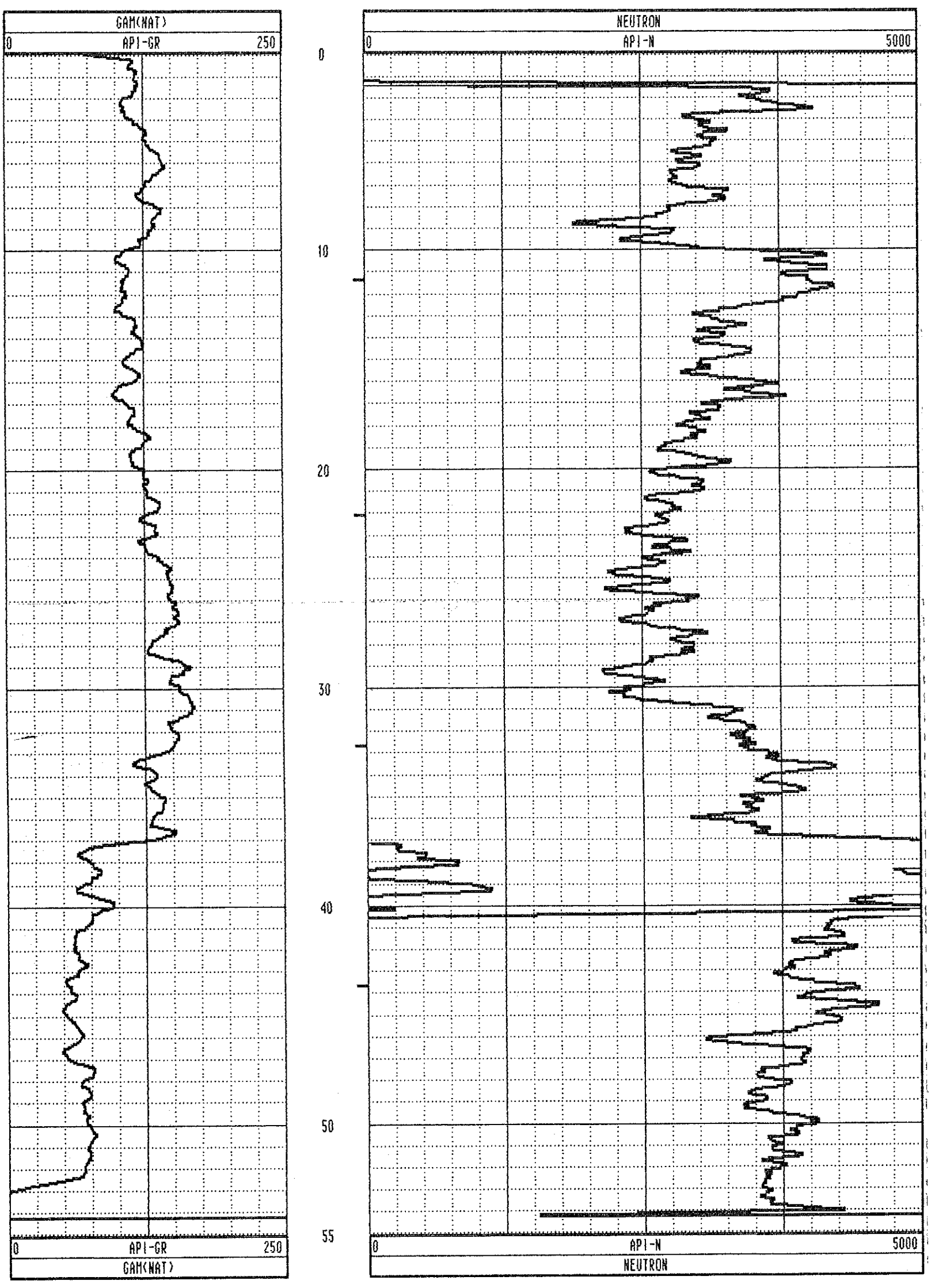
OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 54.32	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.02	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

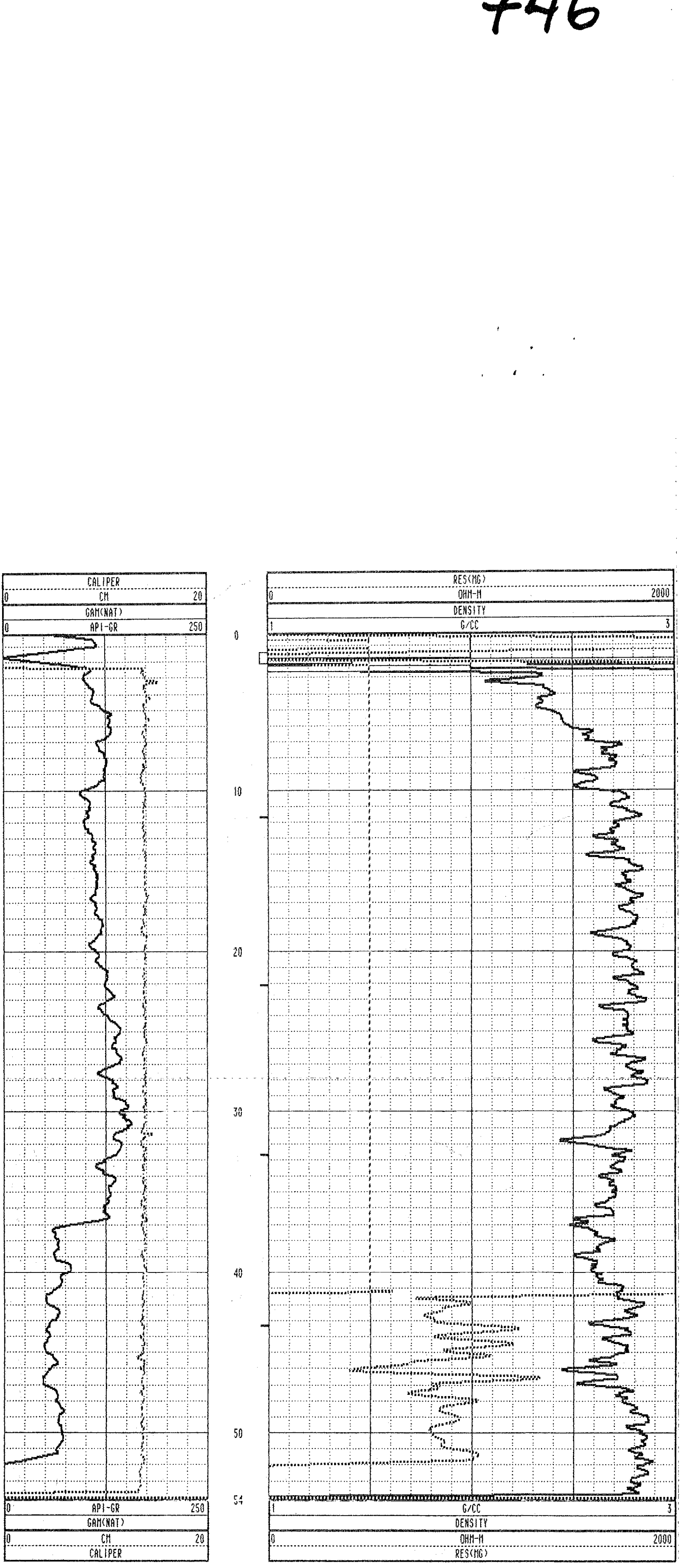
QHR 88028 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88028 GAMMA-DENSITY			DEN.NEUT	
LOCATION/FIELD	: BL:20120:SL:27600			GAM.RES.	
COUNTY	: TRANSFER			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 54.12	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.36	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88028 DEVIATION

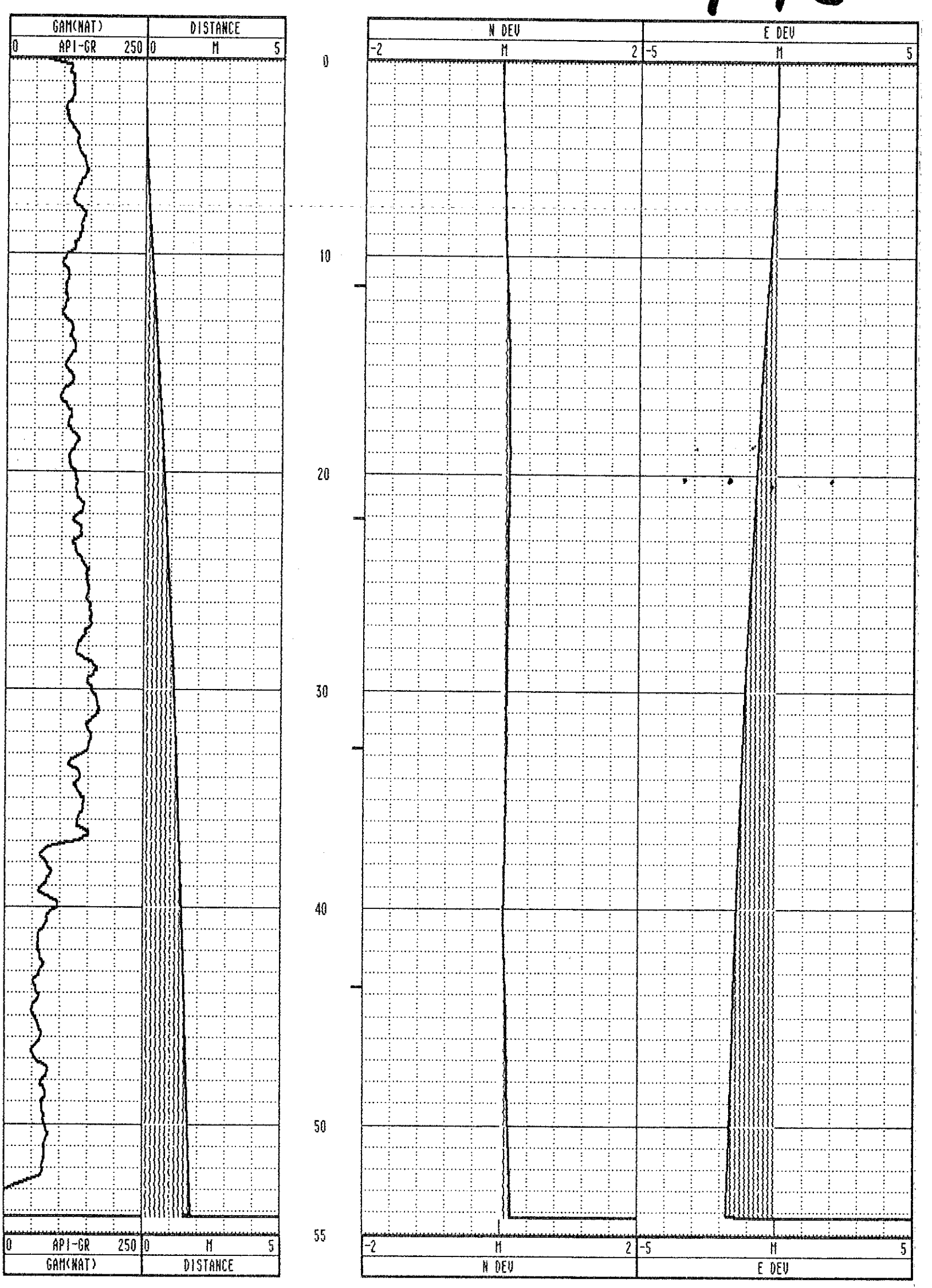
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88028 DEVIATION				
LOCATION/FIELD	: BL:20120:SL:27600				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/24/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 54.32	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.02	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 7
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88028 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/24/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 7

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
1.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
6.0	6.00	0.03	-.07	0.1	294.3	2.4	285.0
11.0	10.99	0.08	-.29	0.3	284.6	2.9	295.0
16.0	15.99	0.11	-.54	0.5	281.8	2.9	271.3
21.0	20.98	0.11	-.75	0.8	278.5	1.9	282.5
26.0	25.98	0.10	-.96	1.0	275.9	2.2	277.3
31.0	30.97	0.09	-1.14	1.1	274.3	1.8	269.2
36.0	35.97	0.07	-1.29	1.3	273.2	1.7	265.5
41.0	40.97	0.05	-1.44	1.4	272.0	1.3	291.1
46.0	45.97	0.09	-1.55	1.6	273.5	1.2	283.2
51.0	50.97	0.13	-1.67	1.7	274.4	1.6	294.3
54.3	54.28	0.16	-1.76	1.8	275.2	0.0	0.0

Century

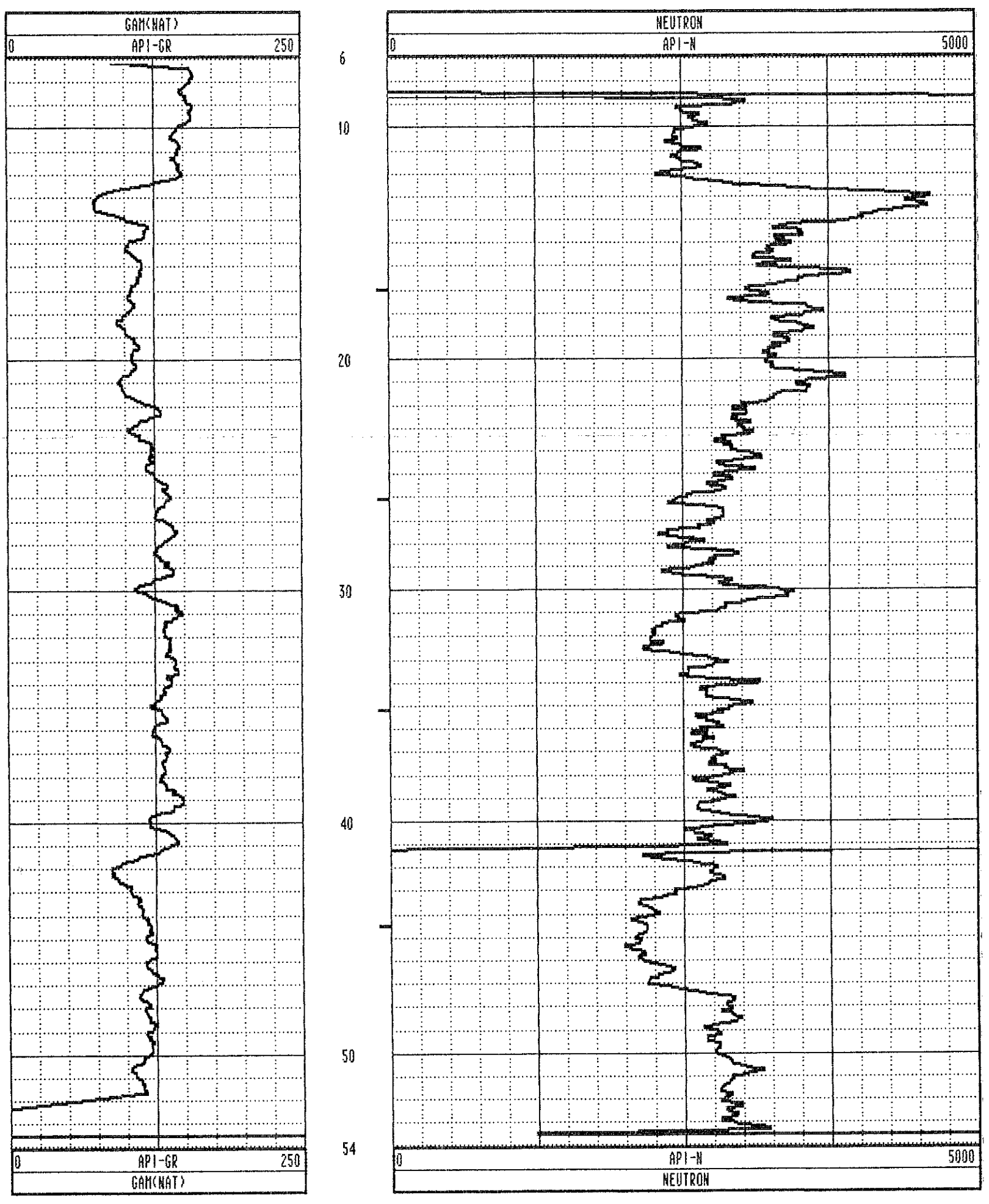
QHR 88029 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88029 GAMMA-NEUTRON			DEN.NEUT	
LOCATION/FIELD	: BL:20340:SL:27300			GAM.RES.	
COUNTY	: TRANSFER			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.62	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 7.24	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 6
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88029 GAMMA-DENSITY

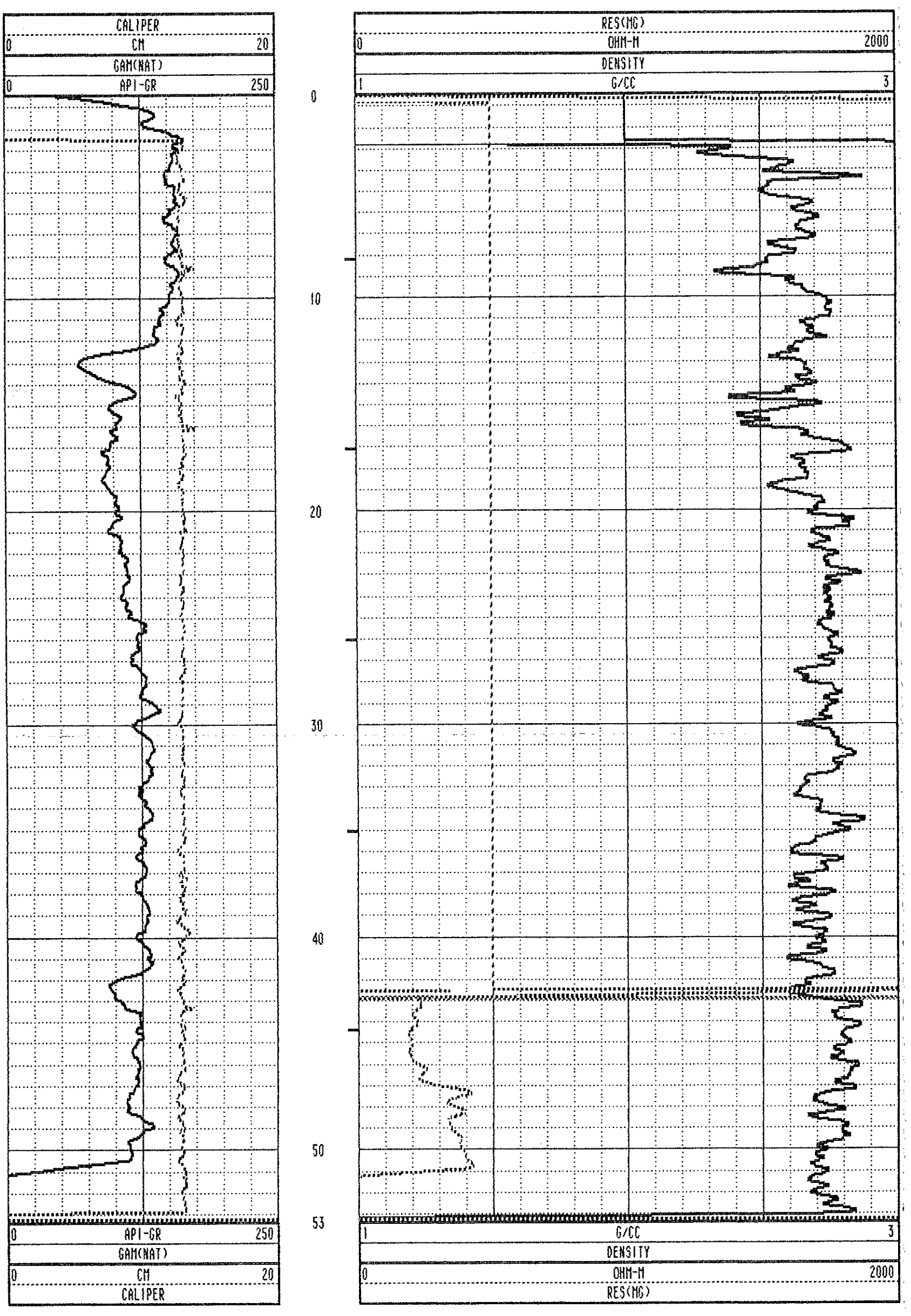
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88029 GAMMA-DENSITY				
LOCATION/FIELD	: BL;20340:SL;27300				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.32	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.54	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
DEN,NEUT
GAM,RES,
CAL,DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88029 GAMMA-DENSITY

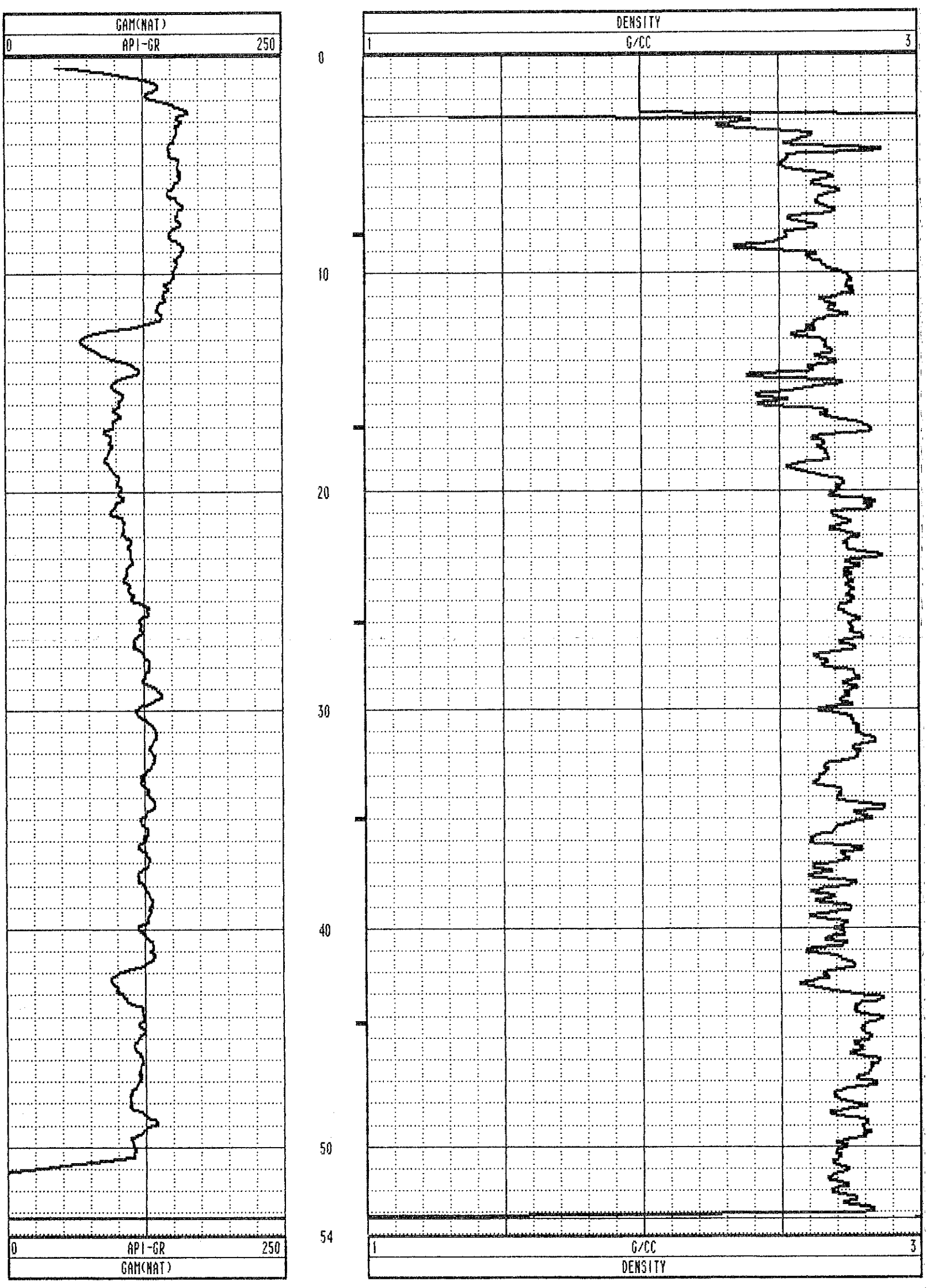
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88029 GAMMA-DENSITY				
LOCATION/FIELD	: BL:20340:SL:27300				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/23/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.32	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.54	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 13.3	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 4
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 4
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

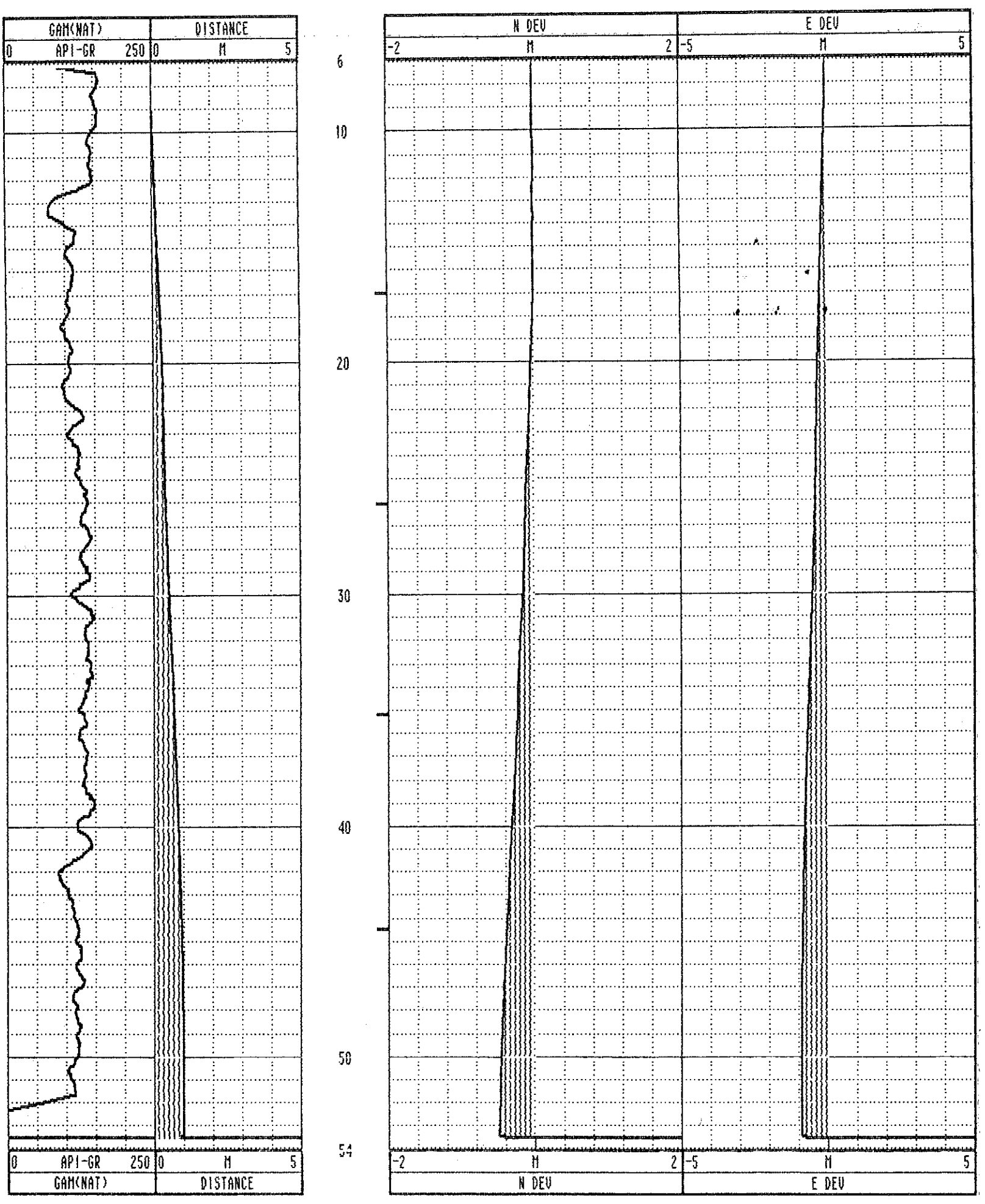
QHR 88029 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88029 DEVIATION			DEN,NEUT	
LOCATION/FIELD	: BL:20340:SL:27300			GAM,RES,	
COUNTY	: TRANSFER			CAL,DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/24/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.62	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 7.24	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88029 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/24/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 0

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
7.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
12.0	12.00	0.01	-.09	0.1	274.4	1.7	267.5
17.0	17.00	-.00	-.22	0.2	269.7	1.3	258.4
22.0	21.99	-.06	-.35	0.4	260.1	1.0	191.8
27.0	26.99	-.12	-.43	0.4	254.1	1.8	252.0
32.0	31.99	-.19	-.56	0.6	251.2	2.1	234.4
37.0	36.99	-.26	-.70	0.7	250.0	1.9	253.7
42.0	41.99	-.34	-.81	0.9	247.0	1.8	234.3
47.0	46.98	-.42	-.88	1.0	244.4	0.7	243.0
52.0	51.98	-.47	-.88	1.0	241.8	0.3	154.0
53.6	53.60	-.49	-.88	1.0	241.0	0.0	0.0

Century

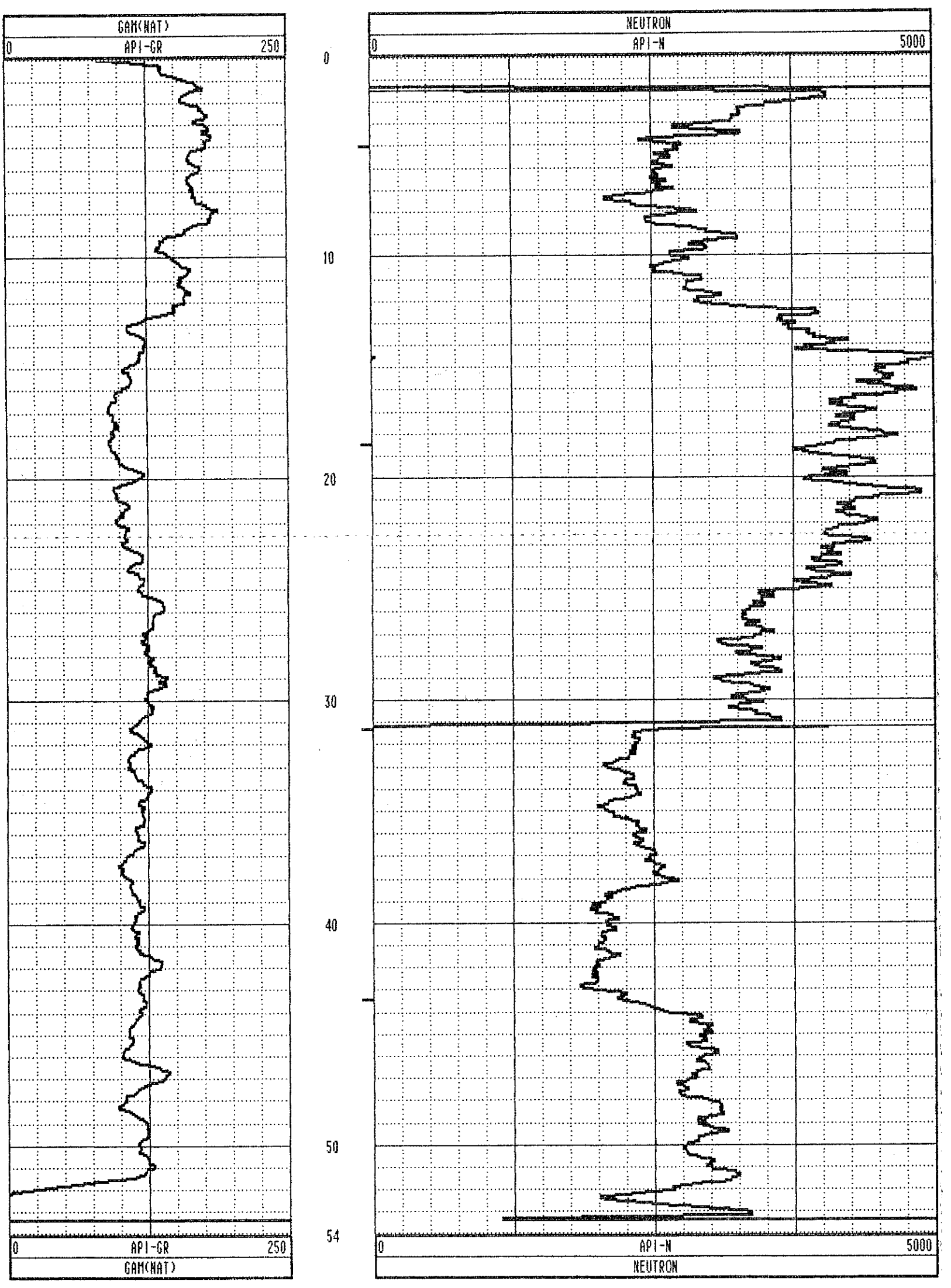
QHR 88030 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88030 GAMMA-NEUTRON			DEN,NEUT	
LOCATION/FIELD	: BL;20290:SL;27300			GAM,RES,	
COUNTY	: TRANSFER			CAL,DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/24/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.46	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.10	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88030 GAMMA-DENSITY

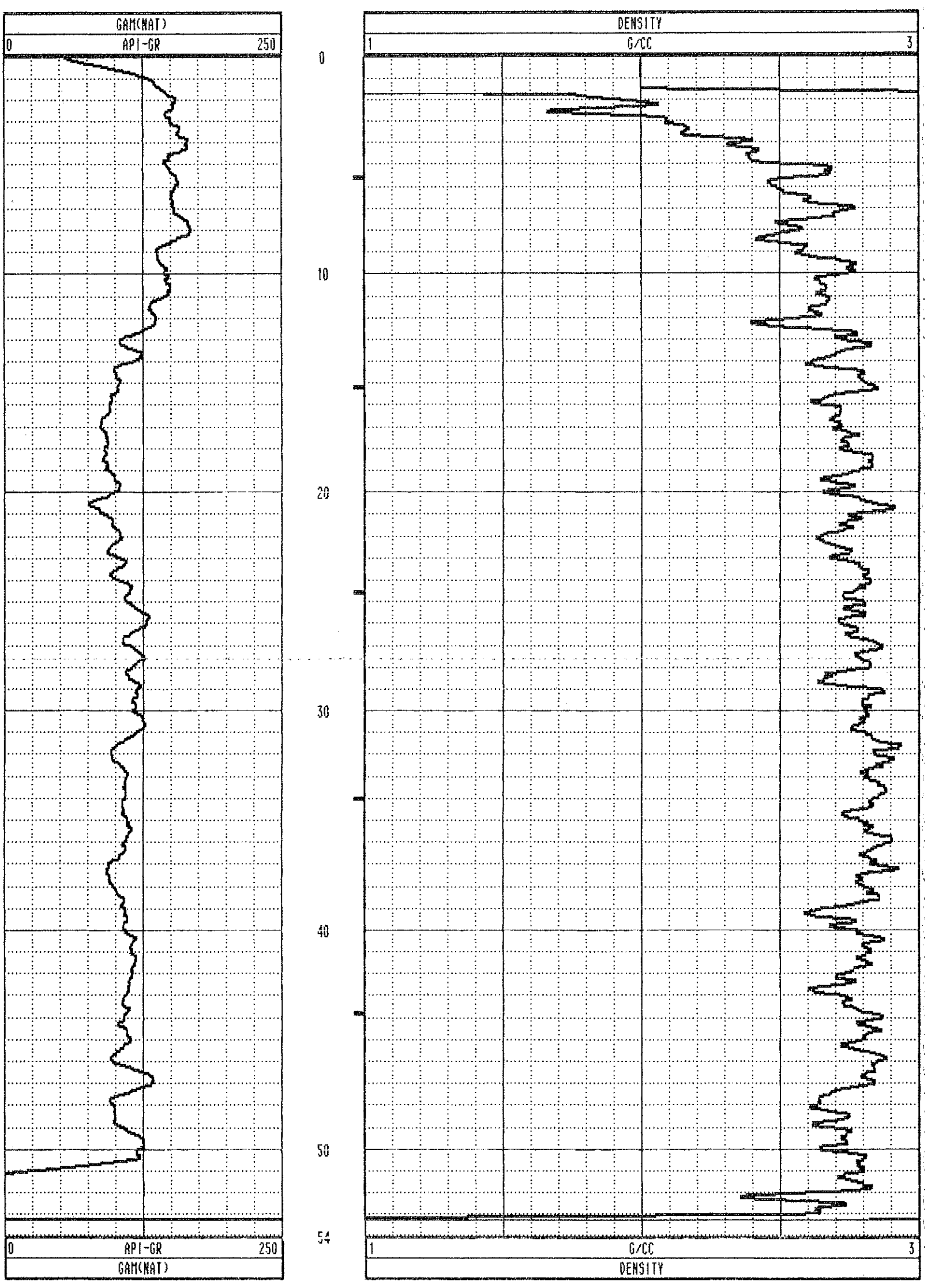
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88030 GAMMA-DENSITY				
LOCATION/FIELD	: BL:20290:SL:27300				
COUNTY	: TRANSFER				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/24/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 55	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 53.32	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: -.58	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 2	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 4
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 2500

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

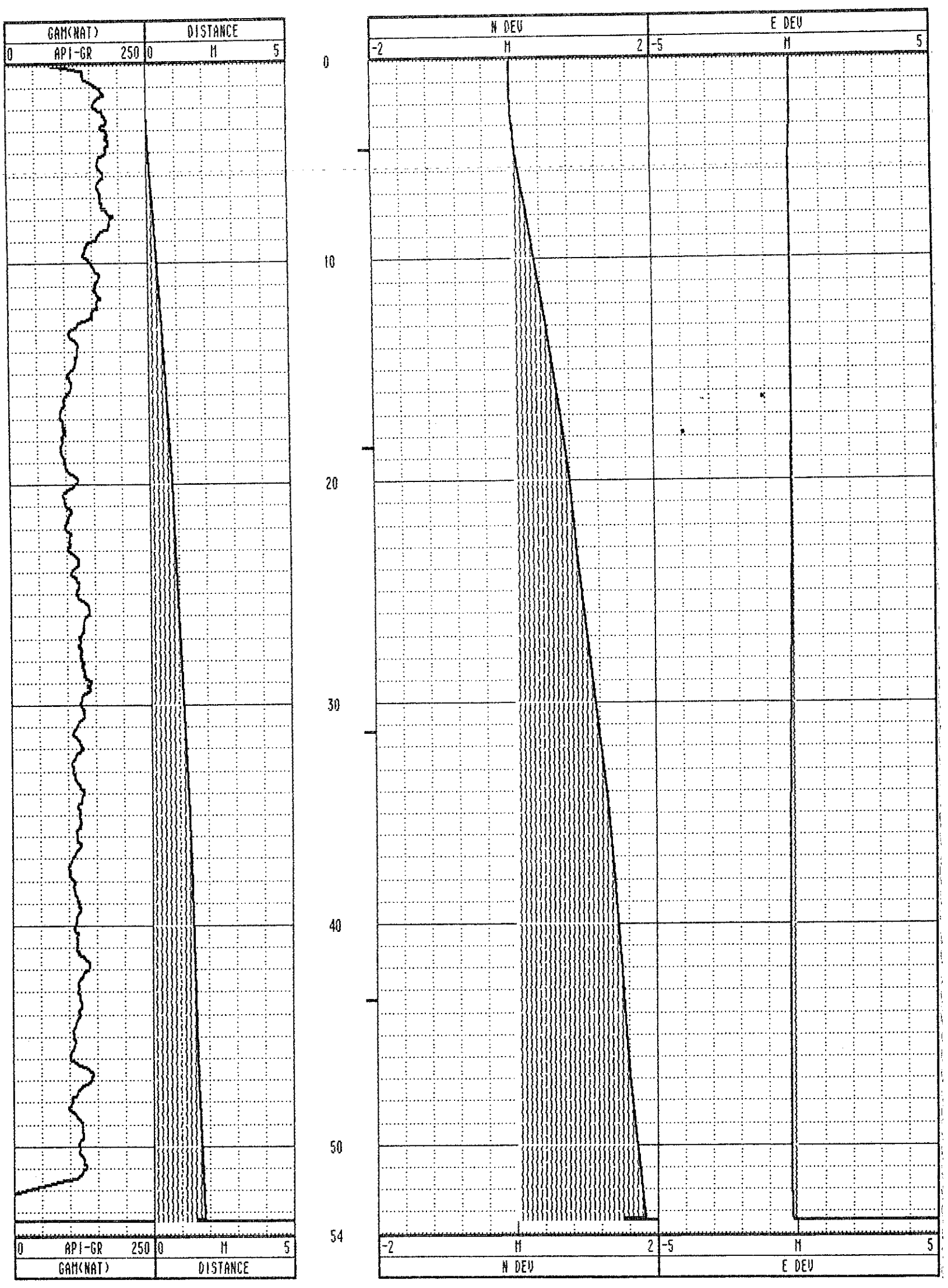
Century

QHR 88030 DEVIATION

COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88030 DEVIATION	DEN.NEUT	
LOCATION/FIELD	: BL:20290:SL:27300	GAM.RES.	
COUNTY	: TRANSFER	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/24/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 55	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 53.46	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 1.10	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 2	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS	: 0	RECORDED BY : D.ZANKL	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : PROCESSED
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 5
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 2500

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88030 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/24/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 5

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
1.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
6.0	6.00	0.10	-.06	0.1	330.6	2.9	352.4
11.0	10.99	0.37	-.05	0.4	351.6	3.5	355.1
16.0	15.98	0.62	-.06	0.6	354.5	2.9	349.1
21.0	20.98	0.82	-.09	0.8	353.7	1.7	348.3
26.0	25.98	0.99	-.11	1.0	353.4	2.1	347.6
31.0	30.97	1.18	-.16	1.2	352.3	2.2	345.6
36.0	35.97	1.35	-.19	1.4	351.8	1.4	333.4
41.0	40.97	1.48	-.20	1.5	352.3	1.6	9.9
46.0	45.97	1.59	-.21	1.6	352.4	1.2	347.1
51.0	50.96	1.75	-.19	1.8	353.7	2.1	4.0
53.5	53.42	1.83	-.18	1.8	354.3	0.0	0.0

Century

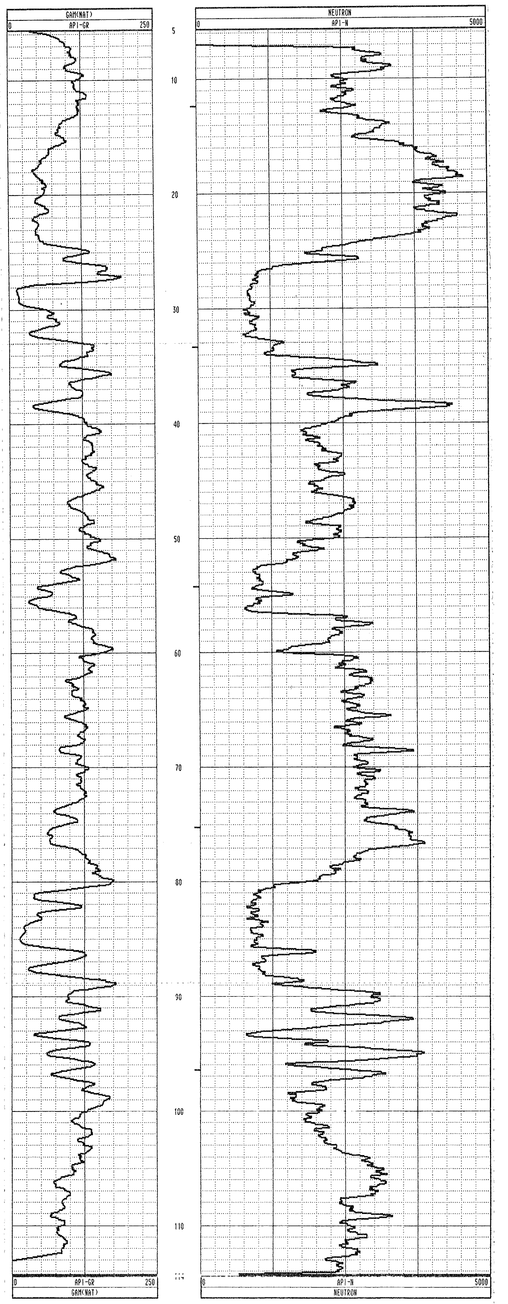
QHR 88031 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88031 GAMMA-NEUTRON			DEN.NEUT	
LOCATION/FIELD	: BL:223503SL:25790			GAM.RES.	
COUNTY	: GRIZZLY			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/25/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 114	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 114.36	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 5.78	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 5000
REMARKS	:				

VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

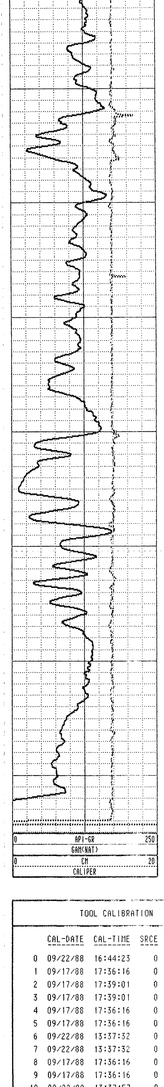
QHR 88031 GAMMA-DENSITY

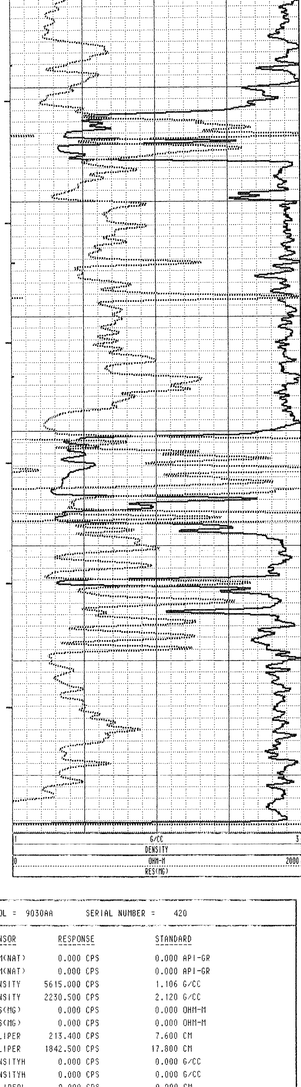
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88031 GAMMA-DENSITY	DEN.NEUT	
LOCATION/FIELD	: BL:22350:SL:25790	GAM.RES.	
COUNTY	: GRIZZLY	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/25/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 114	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 114.36	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.26	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 6	LOGGING UNIT : 8401	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: 0		RECORDED BY : D.ZANKL	
BIT SIZE	: 15.6	BOREHOLE FLUID : WATER	FILE : ORIGINAL
MAGNETIC DECL.	: 24.500	RM : 0	TYPE : 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE : 0	LOG : 1
FLUID DENSITY	: 1.0	MATRIX DELTA T : 173	PLOT : QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T : 690	THRESH: 5000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746





TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88031 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.
WELL	: QHR 88031 GAMMA-DENSITY
FIELD-ON-FIELD	: 082J/15 - 082J/15TWP
COUNTY	: GRID/15
STATE	: 8M1156 COLUMBIA
SECTION	: TOWNSHIP

OTHER SERVICES
DEN,NEUT
GAM,RES
CAL,DEV

RANGE :

DATE	: 89/25/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 114	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 114.36	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.26	DRL MEASURED FROM: 0	GL : 0

CASING DRILLER : 0
CASING LOGGER : 114
CASING THICKNESS: 0

LOGGING UNIT : 6401
LOGGING ENGINEER : BOB CRAWLEY
RECORDED BY : D.CAMPBELL

BIT SIZE : 15.6
MAGNETIC DECL. : 24.500
MATRIX DENSITY : 2.68
FLUID DENSITY : 1.0
MATRIX/MATRIX : 1340/2700E

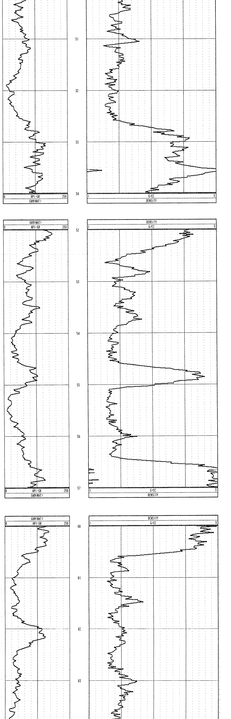
REMARKS
VERTICAL HOLE
LOGGED OPEN HOLE

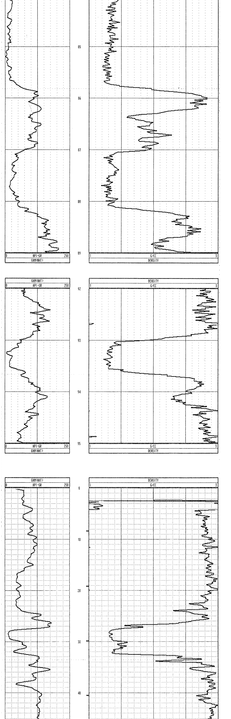
BOREHOLE FLUID : WATER
PH : 0
RM TEMPERATURE : 0
MATRIX DELTA T : 172
FLUID DELTA T : 490

FILE : ORIGINAL
TYPE : 1635BA
LOG : 1
PLOT : GAIN 5
THRESH: 5000

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746





TOOL CALIBRATION TOOL = 10356A SERIAL NUMBER = 420

	CAL.DATE	CAL.TIME	UNIT	SENSOR	RESISTANCE	STANDARD
0	89/22/88	16:44:25	0	GAMMA01	0.000 CPS	0.000 API-GR
1	89/15/88	17:28:16	0	DEN1756	0.000 CPS	0.000 GM/C3
2	89/15/88	17:28:16	0	DEN1177	7615.000 CPS	1.196 G/C
3	89/15/88	17:28:16	0	DEN1778	2230.550 CPS	2.720 G/C
4	89/15/88	17:28:16	0	RES1767	0.000 CPS	0.000 OHM-M
5	89/15/88	17:28:16	0	RES1963	0.000 CPS	0.000 OHM-M
6	89/22/88	15:32:52	0	CALIPER	7.000 CPS	7.000 CM
7	89/22/88	15:32:52	0	CALIPER	5565.000 CPS	11.000 CM
8	89/15/88	17:28:16	0	DEN1778	0.000 CPS	0.000 G/C
9	89/15/88	17:28:16	0	DEN1177	0.000 CPS	0.000 G/C
10	89/22/88	15:37:57	0	CALIPER	0.000 CPS	0.000 CM
11	89/22/88	15:37:57	0	CALIPER	0.000 CPS	0.000 CM

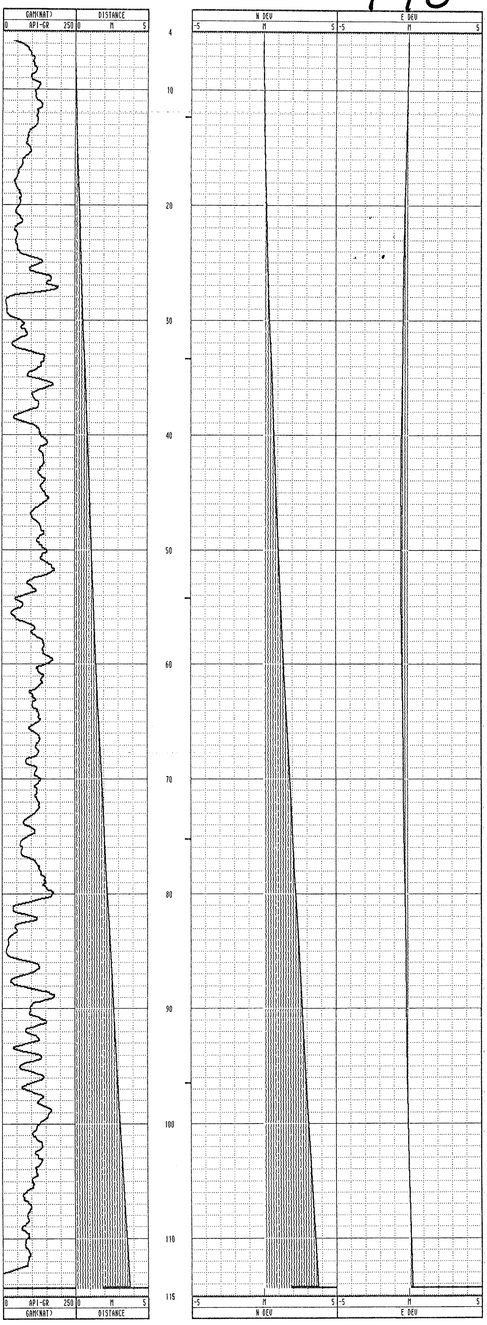
Century

QHR 88031 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88031 DEVIATION			DEN.NEUT	
LOCATION/FIELD	: BL122350:SL125790			GAM.RES.	
COUNTY	: GRIZZLY			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/26/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 114	ELEV. PERM. DATUM:	0	KB	: 0
LOG BOTTOM	: 114.36	LOG MEASURED FROM:	0	DF	: 0
LOG TOP	: 5.78	DRL MEASURED FROM:	0	GL	: 0
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS:	0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH:	5000
REMARKS	:				
VERTICAL HOLE					
LOGGED OPEN HOLE					

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88031 GAM
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/26/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 0

Table Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
5.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
10.0	10.00	0.04	-.05	0.1	313.2	1.1	307.4
15.0	15.00	0.11	-.12	0.2	313.5	1.4	313.0
20.0	20.00	0.21	-.23	0.3	312.8	1.5	314.3
25.0	24.99	0.31	-.31	0.4	315.0	1.3	321.7
30.0	29.99	0.43	-.35	0.6	320.4	1.8	342.2
35.0	34.99	0.60	-.40	0.7	326.0	1.9	314.9
40.0	39.99	0.73	-.47	0.9	327.4	1.8	337.0
45.0	44.98	0.88	-.50	1.0	330.3	1.7	356.0
50.0	49.98	1.04	-.48	1.1	335.2	1.9	356.8
55.0	54.98	1.22	-.48	1.3	338.6	2.0	9.2
60.0	59.97	1.40	-.43	1.5	342.8	2.2	16.9
65.0	64.97	1.62	-.36	1.7	347.3	2.4	359.2
70.0	69.96	1.83	-.35	1.9	349.2	2.4	356.1
75.0	74.96	2.01	-.31	2.0	351.2	2.0	12.9
80.0	79.95	2.22	-.23	2.2	354.1	3.2	14.3
85.0	84.95	2.45	-.18	2.5	355.8	2.4	355.3
90.0	89.94	2.67	-.14	2.7	357.1	2.4	8.6
95.0	94.94	2.88	-.09	2.9	358.1	2.4	18.4
100.0	99.93	3.10	-.02	3.1	359.6	3.1	15.9
105.0	104.93	3.34	0.06	3.3	1.0	2.6	37.1
110.0	109.92	3.55	0.15	3.5	2.5	2.8	18.4
114.4	114.28	3.74	0.24	3.7	3.7	0.0	0.0
115.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0

Century

QHR 88033 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.		
WELL	: QHR 88033 GAMMA-NEUTRON		
LOCATION/FIELD	:		
COUNTY	: GRIZZLY		
STATE	: BRITISH COLUMBIA		
SECTION	:	TOWNSHIP :	RANGE :

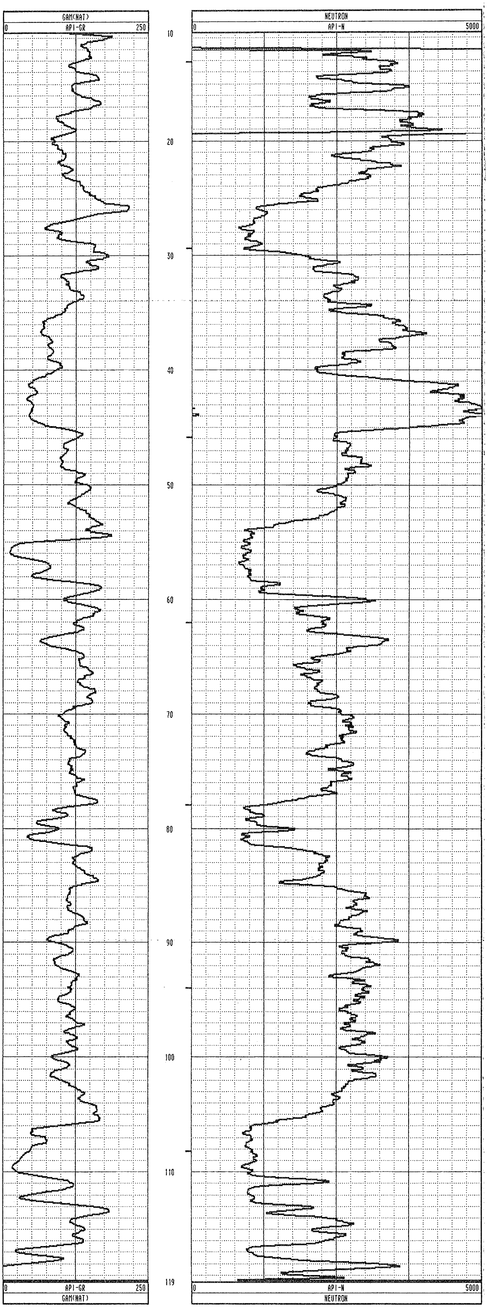
OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

DATE	: 09/27/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 121	ELEV. PERM. DATUM:	0	KB	: 0
LOG BOTTOM	: 119.54	LOG MEASURED FROM:	0	DF	: 0
LOG TOP	: 10.64	DRL MEASURED FROM:	0	GL	: 0
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 3
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 5000

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

QHR 88033 GAMMA-DENSITY

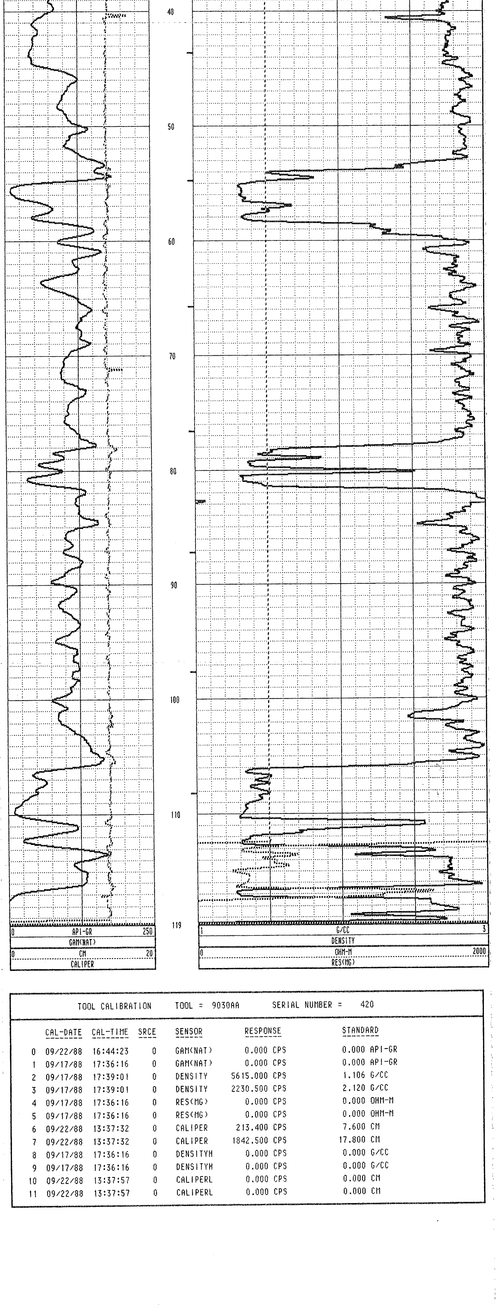
COMPANY	: QUINTETTE COAL LTD.	OTHER SERVICES:	
WELL	: QHR 88033 GAMMA-DENSITY	DEN.NEUT	
LOCATION/FIELD	:	GAM.RES.	
COUNTY	: GRIZZLY	CAL.DEV	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/27/88	PERMANENT DATUM : 0	ELEVATIONS
DEPTH DRILLER	: 121	ELEV. PERM. DATUM: 0	KB : 0
LOG BOTTOM	: 119.62	LOG MEASURED FROM: 0	DF : 0
LOG TOP	: 0.34	DRL MEASURED FROM: 0	GL : 0
CASING DRILLER	: 6	LOGGING UNIT	: 8401
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS: 0		RECORDED BY	: D.ZANKL
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690
REMARKS	:		

FILE : ORIGINAL
TYPE : 9030AA
LOG : 4
PLOT : QUIN 3
THRESH: 5000

VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88033 GAMMA-DENSITY

COMPANY	: QUINETTE CCGC LTD.	OTHER SERVICES:	
WELL	: QHR 88033 GAMMA-DENSITY	GR-DEN	
LOCATION-FIELD	:	GAM-DEN	
COUNTY	: GRIZZLY	CAL-DEN	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP : RANGE :		

DATE	: 05-27-90	PERMANENT DATUM : G	ELEVATIONS
DEPTH DRILLER	: 121	ELEV. PERM. DATUM: G	KB : 0
LOG BOTTOM	: 119.42	LOG MEASURED FROM: K	DF : 0
TOP	: 0.54	DRL MEASURED FROM: K	GL : 0
CASING DRILLER	: 6	LOGGING UNIT	: 3401
CASING LOGGER	: STEEL	LOGGING ENGINEER	: MACKAY
CASING THICKNESS	: 0	WITNESSED BY	: K.ZAMMIL

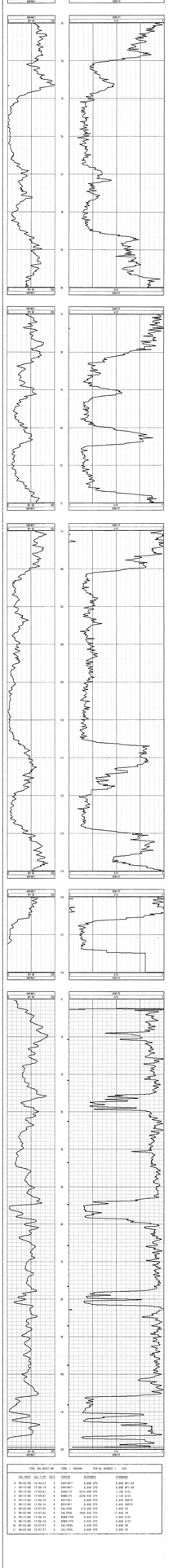
BIT SIZE	: 15.4	BOREHOLE FLUID	: WATER
MAGNETIC DECL.	: 24.500	RM	: 0
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0
MATRIX DT	: 55.5	RMF TEMPERATURE	: 0
NEUTRON MATRIX	: SANDSTONE	FLUID SALTS F	: 1450

FILE	: ORIGINAL
TYPE	: NEUTRON
SCALE	: 5
LOG	: DEN N
TIMES/HR	: 5000

REMARKS:
1 VERTICAL HOLE
LOGGED DRY& HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL : NEUTRON SERIAL NUMBER : 420

	CAL.TIME	DATE	TESTS	SETTINGS	STANDARD
1	09:25:00	05-17-90	1	GAM-SHORT : 0.000 CPS	0.000 API-GR
2	09:15:00	05-16-90	4	GAM-SHORT : 0.000 CPS	0.000 API-GR
3	09:15:00	05-09-91	0	DENS-TI : 3610.000 CPS	1.700 G/C
4	09:15:00	05-09-91	0	DENS-TD : 2250.000 CPS	2.120 G/C
5	09:15:00	05-16-91	0	NEU-RAT : 0.000 CPS	0.000 SHM-M
6	09:15:00	05-16-91	0	NEU-NEAR : 0.000 CPS	0.000 SHM-M
7	09:15:00	05-09-91	0	CAL-HIGH : 2125.000 CPS	1.000 IN
8	09:15:00	05-09-91	0	CAL-MID : 1042.000 CPS	11.000 IN
9	09:15:00	05-09-91	0	CAL-LOW : 0.000 CPS	20.000 IN
10	09:15:00	05-09-91	0	DENS-ULTRA : 0.000 CPS	0.000 G/C
11	09:15:00	05-09-91	0	CAL-PEAL : 0.000 CPS	0.000 IN
12	09:15:00	05-09-91	0	CAL-PEAL : 0.000 CPS	0.000 IN

746

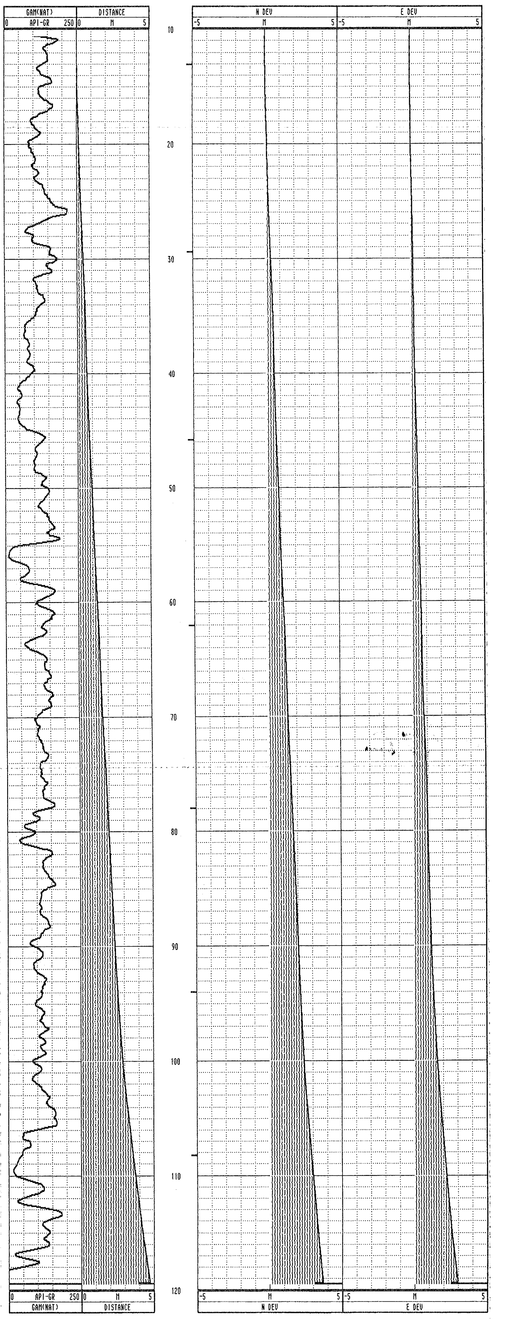
Century

QHR 88033 DEVIATION

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88033 DEVIATION			DEN.NEUT	
LOCATION/FIELD	:			GAM.RES.	
COUNTY	: GRIZZLY			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 09/27/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 121	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 119.54	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 10.64	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 5
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 6
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 5000
REMARKS	:				

VERTICAL HOLE
LOGGED OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS



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

CLIENT	: QUINTETTE COAL LTD.	HOLE ID.	: QHR 88033 DEV
FIELD OFFICE	: CALGARY	DATE OF LOG	: 09/27/88
DATA FROM	:	PROBE	: 9055A , 46
MAG. DECL.	: 24.500	DEPTH UNITS	: FEET LOG 5

Cable Depth	True Depth	North Dev.	East Dev.	Distance	Azimuth	SANG	SANGB
10.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0
15.0	15.00	0.03	0.01	0.0	25.8	1.0	53.7
20.0	20.00	0.14	0.06	0.2	23.6	1.4	36.5
25.0	25.00	0.22	0.13	0.3	30.6	1.7	29.2
30.0	29.99	0.38	0.19	0.4	27.2	1.6	2.7
35.0	34.99	0.50	0.22	0.5	23.5	0.9	11.2
40.0	39.99	0.58	0.28	0.6	25.4	1.6	37.9
45.0	44.99	0.68	0.37	0.8	28.5	1.7	31.5
50.0	49.99	0.84	0.45	1.0	28.4	2.5	22.6
55.0	54.98	0.97	0.55	1.1	29.5	2.1	37.8
60.0	59.98	1.14	0.63	1.3	29.2	2.6	30.7
65.0	64.98	1.29	0.69	1.5	28.3	1.8	22.4
70.0	69.97	1.40	0.78	1.6	29.2	1.9	49.7
75.0	74.97	1.55	0.92	1.8	30.7	2.5	34.5
80.0	79.97	1.72	1.01	2.0	30.4	2.1	29.3
85.0	84.96	1.88	1.09	2.2	30.2	2.5	41.6
90.0	89.96	2.04	1.21	2.4	30.7	2.5	31.5
95.0	94.95	2.20	1.39	2.6	32.2	2.5	38.3
100.0	99.94	2.40	1.59	2.9	33.6	3.6	53.2
105.0	104.93	2.69	1.89	3.3	35.2	5.8	45.2
110.0	109.90	3.01	2.21	3.7	36.3	5.5	48.4
115.0	114.88	3.34	2.56	4.2	37.5	6.7	49.1
119.5	119.39	3.69	2.99	4.7	39.0	0.0	0.0
120.0	0.00	0.00	0.00	0.0	0.0	0.0	0.0

Century

QHR 88035 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88035 GAMMA-NEUTRON			DEN.NEUT	
LOCATION/FIELD	:			GAM.RES.	
COUNTY	:			CAL.DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/03/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 30	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 13.72	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.12	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 8
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 5000

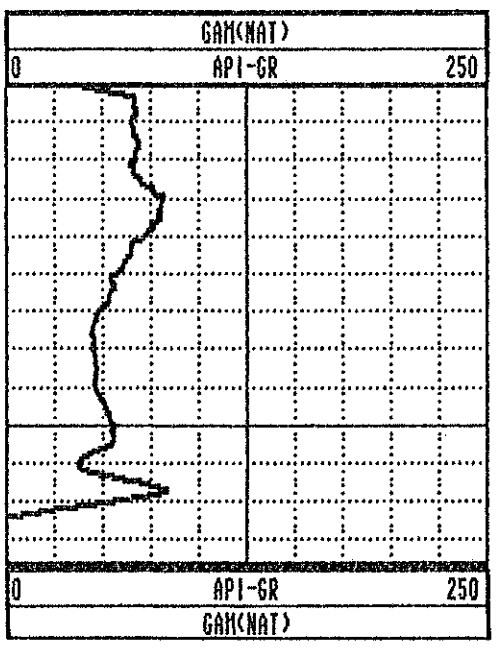
REMARKS :

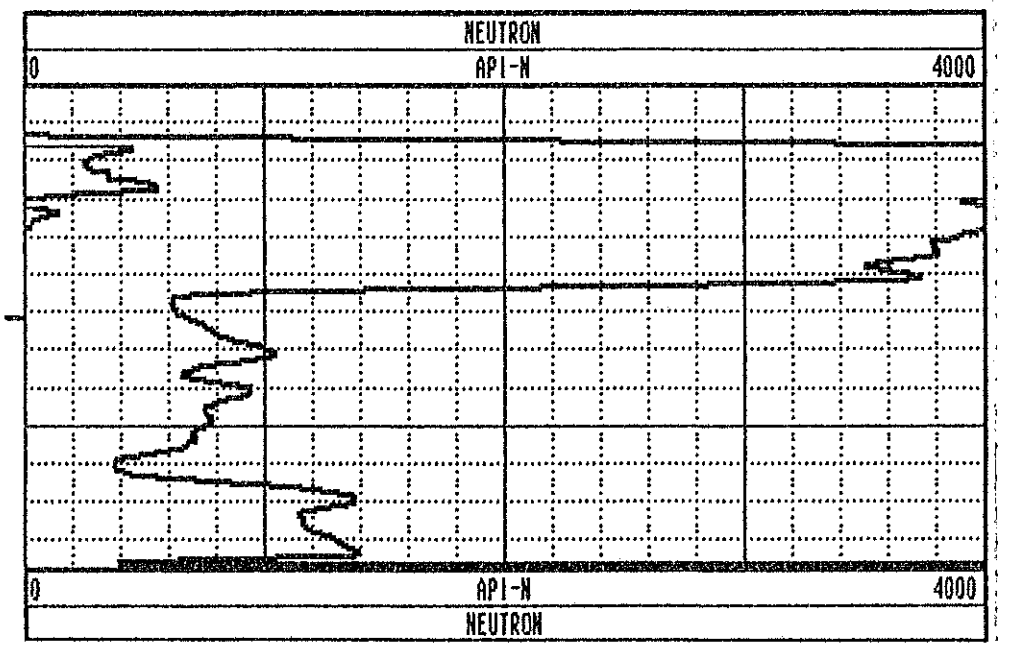
VERTICAL HOLE

LOGGED OPEN HOLE - ABANDONED HOLE

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746





TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N

Century

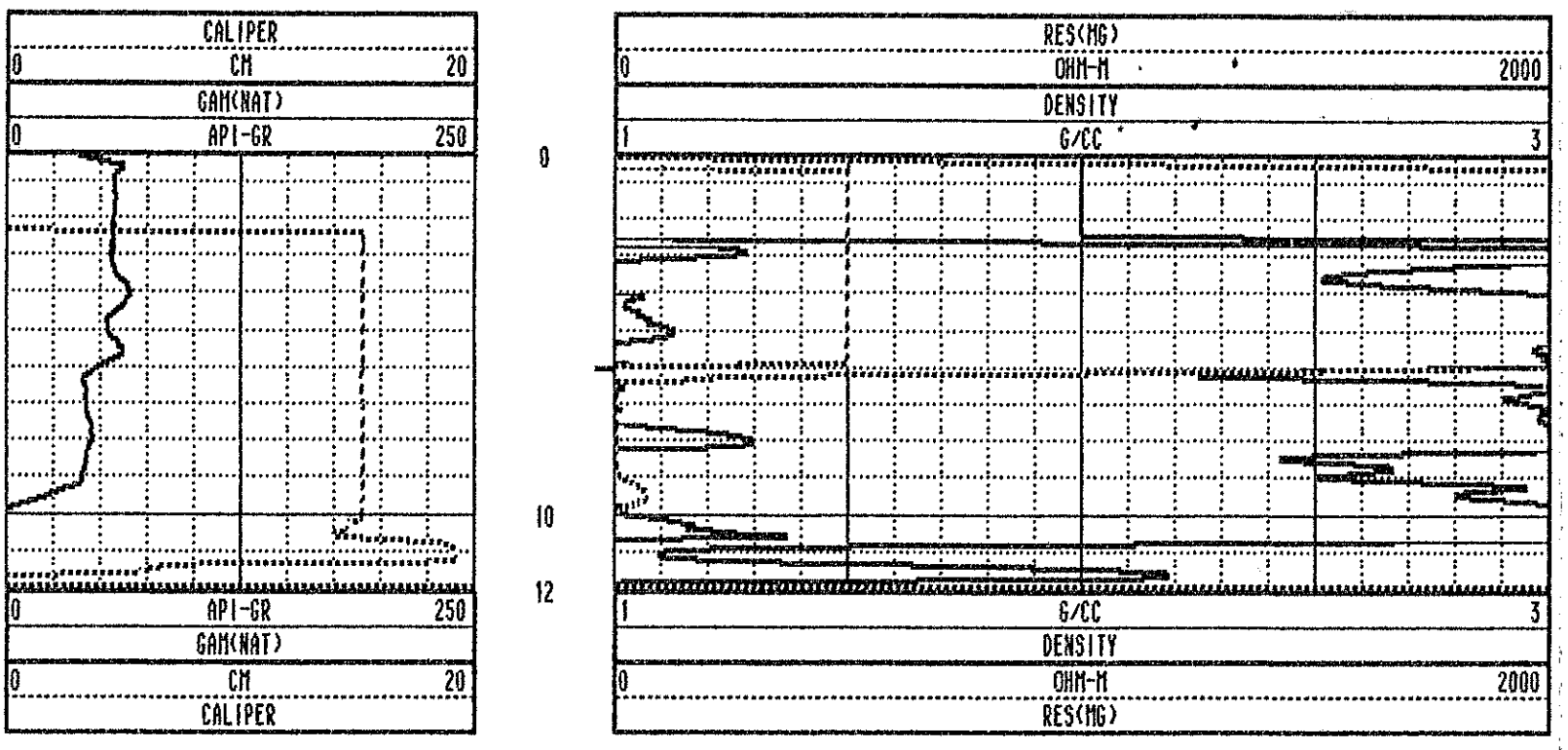
QHR 88035 GAMMA-DENSITY

COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88035 GAMMA-DENSITY				
LOCATION/FIELD	:				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/03/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 30	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 12.04	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.38	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 6	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 5000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED OPEN HOLE - ABANDONED HOLE
ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

Century

QHR 88036 GAMMA-DENSITY

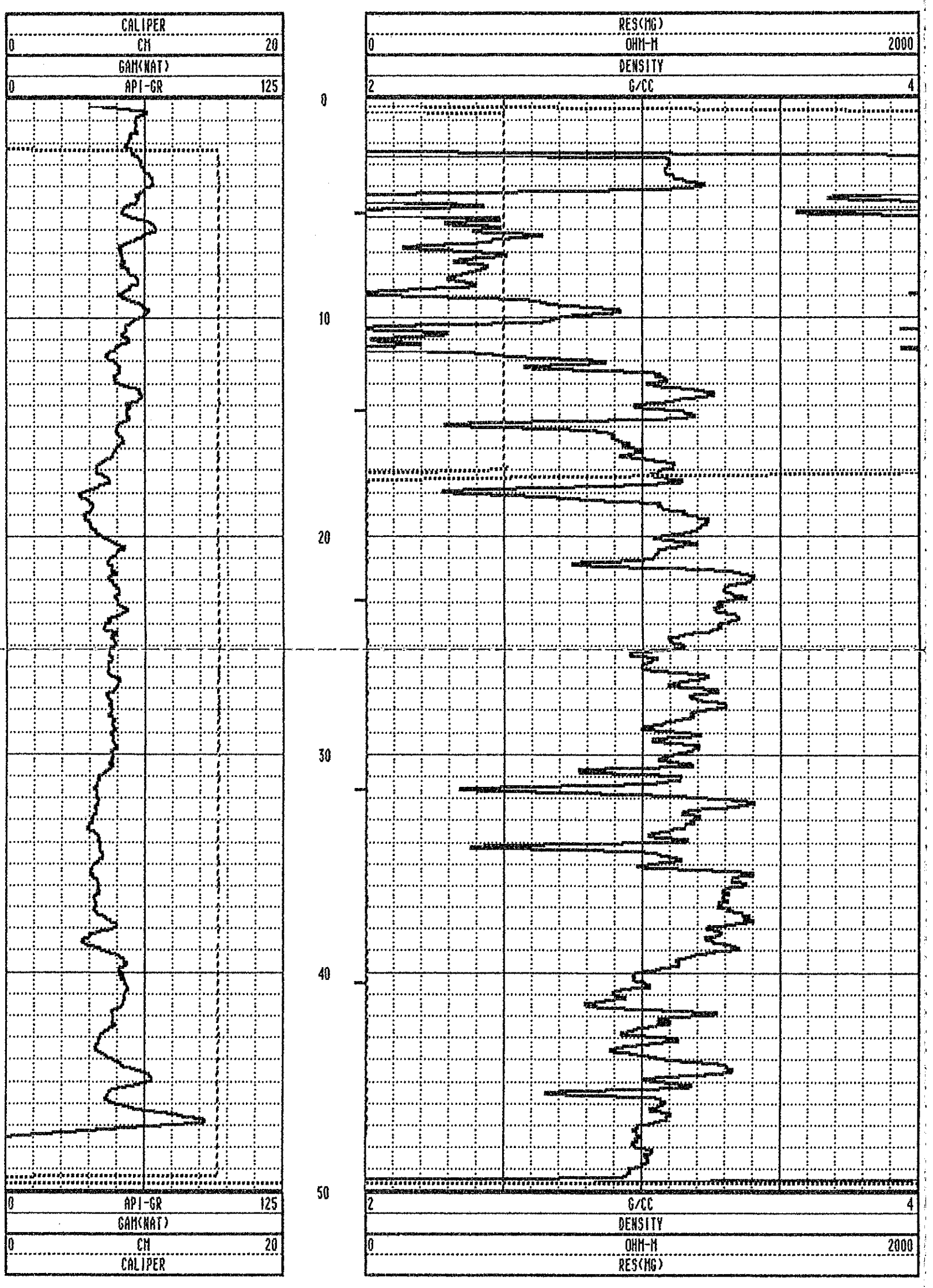
COMPANY	: QUINTETTE COAL LTD.				
WELL	: QHR 88036 GAMMA-DENSITY				
LOCATION/FIELD	:				
COUNTY	:				
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/04/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 51	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 49.70	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 0.34	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 51	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9030AA
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 8
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 3
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 5000

OTHER SERVICES:
DEN.NEUT
GAM.RES.
CAL.DEV

REMARKS :
VERTICAL HOLE
LOGGED THROUGH CASING

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9030AA SERIAL NUMBER = 420

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	09/22/88	16:44:23	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	09/17/88	17:36:16	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	09/17/88	17:39:01	0	DENSITY	5615.000 CPS	1.106 G/CC
3	09/17/88	17:39:01	0	DENSITY	2230.500 CPS	2.120 G/CC
4	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
5	09/17/88	17:36:16	0	RES(MG)	0.000 CPS	0.000 OHM-M
6	09/22/88	13:37:32	0	CALIPER	213.400 CPS	7.600 CM
7	09/22/88	13:37:32	0	CALIPER	1842.500 CPS	17.800 CM
8	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
9	09/17/88	17:36:16	0	DENSITYH	0.000 CPS	0.000 G/CC
10	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM
11	09/22/88	13:37:57	0	CALIPERL	0.000 CPS	0.000 CM

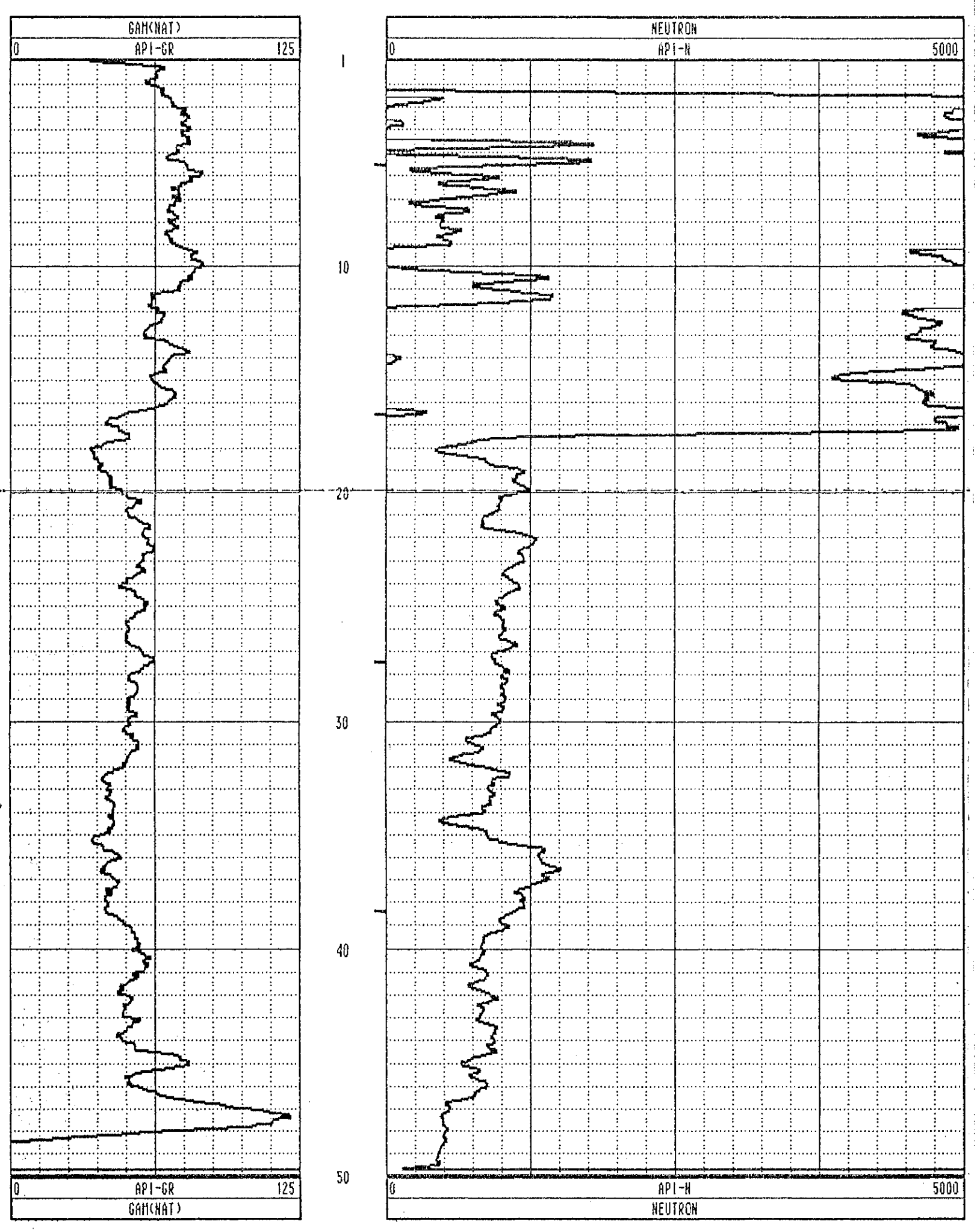
QHR 88036 GAMMA-NEUTRON

COMPANY	: QUINTETTE COAL LTD.			OTHER SERVICES:	
WELL	: QHR 88036 GAMMA-NEUTRON			DEN,NEUT	
LOCATION/FIELD	:			GAM,RES,	
COUNTY	:			CAL,DEV	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/04/88	PERMANENT DATUM	: 0	ELEVATIONS	
DEPTH DRILLER	: 51	ELEV. PERM. DATUM	: 0	KB	: 0
LOG BOTTOM	: 49.78	LOG MEASURED FROM	: 0	DF	: 0
LOG TOP	: 1.06	DRL MEASURED FROM	: 0	GL	: 0
CASING DRILLER	: 51	LOGGING UNIT	: 8401		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: 0	RECORDED BY	: D.ZANKL		
BIT SIZE	: 15.6	BOREHOLE FLUID	: WATER	FILE	: ORIGINAL
MAGNETIC DECL.	: 24.500	RM	: 0	TYPE	: 9055A
MATRIX DENSITY	: 2.68	RM TEMPERATURE	: 0	LOG	: 2
FLUID DENSITY	: 1.0	MATRIX DELTA T	: 173	PLOT	: QUIN 2
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: 690	THRESH	: 5000

REMARKS :
VERTICAL HOLE
LOGGED THROUGH CASING

ALL SERVICES PROVIDED SUBJECT TO CGC STANDARD TERMS AND CONDITIONS

746



TOOL CALIBRATION TOOL = 9055A SERIAL NUMBER = 46

	CAL-DATE	CAL-TIME	SRCE	SENSOR	RESPONSE	STANDARD
0	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
1	07/28/88	15:07:18	0	GAM(NAT)	0.000 CPS	0.000 API-GR
2	07/28/88	15:20:10	0	POROSITY	0.000 CPS	190.000 CPS
3	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
4	07/28/88	15:07:18	0	RES	0.000 CPS	0.000 OHM
5	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
6	07/28/88	15:07:18	0	SP	0.000 CPS	0.000 MV
7	07/28/88	15:19:56	0	NEUTRON	0.000 CPS	0.000 API-N
8	07/28/88	15:19:56	0	NEUTRON	190.000 CPS	271.000 API-N