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Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

A geological model of the Chalk of East Kent

Volume 2 of 2 : Appendix

Integrated Geoscience Surveys (South)
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BRITISH GEOLOGICAL SURVEY

COMMISSIONED REPORT CR/04/092N

A geological model of the Chalk of East Kent

Volume 2 of 2 : Appendix

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Key words

Kent; Great Stour; North Downs;
Chalk; Palaeogene; structure;
geological model.

Front cover

Seaford Chalk in Denne's Chalk
Pit, Canterbury [TR148 566], in
1960. Three courses of flint are
offset by small faults. Brown
silty sand partly chokes the
fissures and has also washed
along the flint beds, where it
infills irregular cavities.

BGS Photograph A09664

Bibliographical reference

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Volume 1 of this report comprises the report text, figures and tables

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Appendix: Hydrogeological interpretations of geophysical borehole logs

Figure number	Borehole	BGS Registration number	Easting	Northing
A1-1	Boughton ABH1	TR05NW30	604790	158770
A1-2	Boughton ABH1	TR05NW30	604790	158770
A1-3	Boughton ABH2	TR05NW31	604610	158970
A1-4	Buckland Paper Mill bh 5	TR34SW123	630320	142970
A1-5	Capel le Ferne W4	TR23NW152	624590	139370
A1-6	Chilham PS bh3	TR05SE26	607770	153450
A1-7	Dover-Deal C3	TR34NE12	637370	145200
A1-8	Dover-Deal C6	TR34NE15	637480	149790
A1-9	Dover-Deal C8	TR34SE5	636670	144220
A1-10	Elms Vale Laundry bh 2	Not registered	Cow Lane, Dover	
A1-11	Ford PS Simpson well	TR26NW5	620397	165458
A1-12	Hoath obh	TR26SW6	620160	163870
A1-13	Hoplands Farm, bh1	TR26SW82	620580	161580
A1-14	Hoplands Farm, bh1	TR26SW82	620580	161580
A1-15	Hoplands Farm, abh2	TR26SW83	620580	161580
A1-16	Howfield Farm 1	TR15NW54	611950	156200
A1-17	Howfield Farm 2	TR15NW55	611980	156300
A1-18	Kettle Hill Farm trial bh	TQ95NE39	596580	155760
A1-19	Lower Venson Farm-borehole 2	TR35SW80	630240	153110
A1-20	Lower Venson Farm-borehole 3	TR35SW77	630240	153090
A1-21	Lower Venson Farm-borehole 4	TR35SW76	630230	153090
A1-22	Lower Venson Farm - vertical bh	TR35SW26	630210	153050
A1-23	Lower Venson Farm - inclined	TR35SW27	630210	153080
A1-24	Old Downs Farm	Not registered	635450	157480
A1-25	Ottinge PS well 1	TR14SE9	617230	142510
A1-26	Primrose PS bh 1	TR34SW91	630560	142320
A1-27	Primrose PS bh 2	Not registered		
A1-28	Reculver 1	TR26NW12	622943	169377
A1-29	Reculver 2	TR26NW15	623707	169419
A1-30	St Margarets PS bh2	TR34NE9	635590	145250
A1-31	Stodmarsh ABH2	TR26SW25	621020	161430
A1-32	Stonehall ABH	TR24NE37	626939	145673
A1-33	Stonehall obh (Lydden 3)	TR24NE36	627020	145680
A1-34	Thornton Farm 100m	TR25SE20	629260	152060
A1-35	Thornton Farm 150m	TR25SE21	629270	152070
A1-36	West Stourmouth obh 2	TR26SE11	625098	162651

Key to abbreviations used in text figures and Appendices

0.4mNR	16RES (ohm.m)
1.4mNR	64RES (ohm.m)
16RES	16 in normal configuration electrical resistivity (ohm.m)
ac-Flowmeter (m3/d)	Area-corrected flowrate (metres/day)
ac-Flowmeter-D	Area-corrected flowrate recorded when logging down
ac-FMDQ (m3/h)	Area-corrected flowrate when pumping and logging down
API	American Petroleum Institute gamma ray unit
Caliper (mm) (in)	Borehole diameter (mm) (in)
CCL	Casing collar locator
Density (sdu)	Bulk density of rock (sidewall density units)
Density (SFDU)	Formation density (sidewall formation density units)
Dsamp NO3-N	Depth-sampled nitrate-nitrogen content
EC	Fluid electrical conductivity
EGS	European Geophysical Services Ltd
EGS2000	Date of logging by EGS
Flowmtr SCQ (m/h)	Stop-count flowmeter measurement of fluid velocity (m/h)
Fluid EC 25	Fluid EC normalised to 25°C (SEC)
Fluid ECQ25	Fluid SEC when pumping
Fluid TEMPQ	Fluid temperature when pumping (Q)
Focus RES	Focused Resistivity (ohm.m)
Fv u7	Fluid velocity (mm/sec) recorded when logging up at 7m/min
Gamma (cps)	Gamma ray counts/second
GR	Gamma ray
HPFM	Heat-pulse flowmeter fluid velocity (m/h)
HPFMQ	HPFM velocity when pumping (m/h)
Induction	Induction resistivity (cps)
Kh (m/d)	Hydraulic conductivity (metres/day)
LITH	Lithology
mbd	Metres below datum
MSUS (cps)	Magnetic susceptibility (cps)
Neutron (API)	Neutron log scaled as (API units)
Neutron porosity (arb)	Arbitrary units from digitising unscaled neutron log
NGAM	Natural gamma ray
Point RES	Single point resistance (ohms)
PWL	Pumping water level (mbd)
Sgu	Standard gamma ray unit
Sonic (usecs/ft)	Sonic velocity (microsecs/ft)
Sonic DT	Sonic velocity (cps)
SP (mV)	Spontaneous potential (mV)
SWL	Static or non-pumping water level
TEMP	Fluid Temperature (°C)
TU	Tritium units
μS.cm ⁻¹	Microsiemens/cm

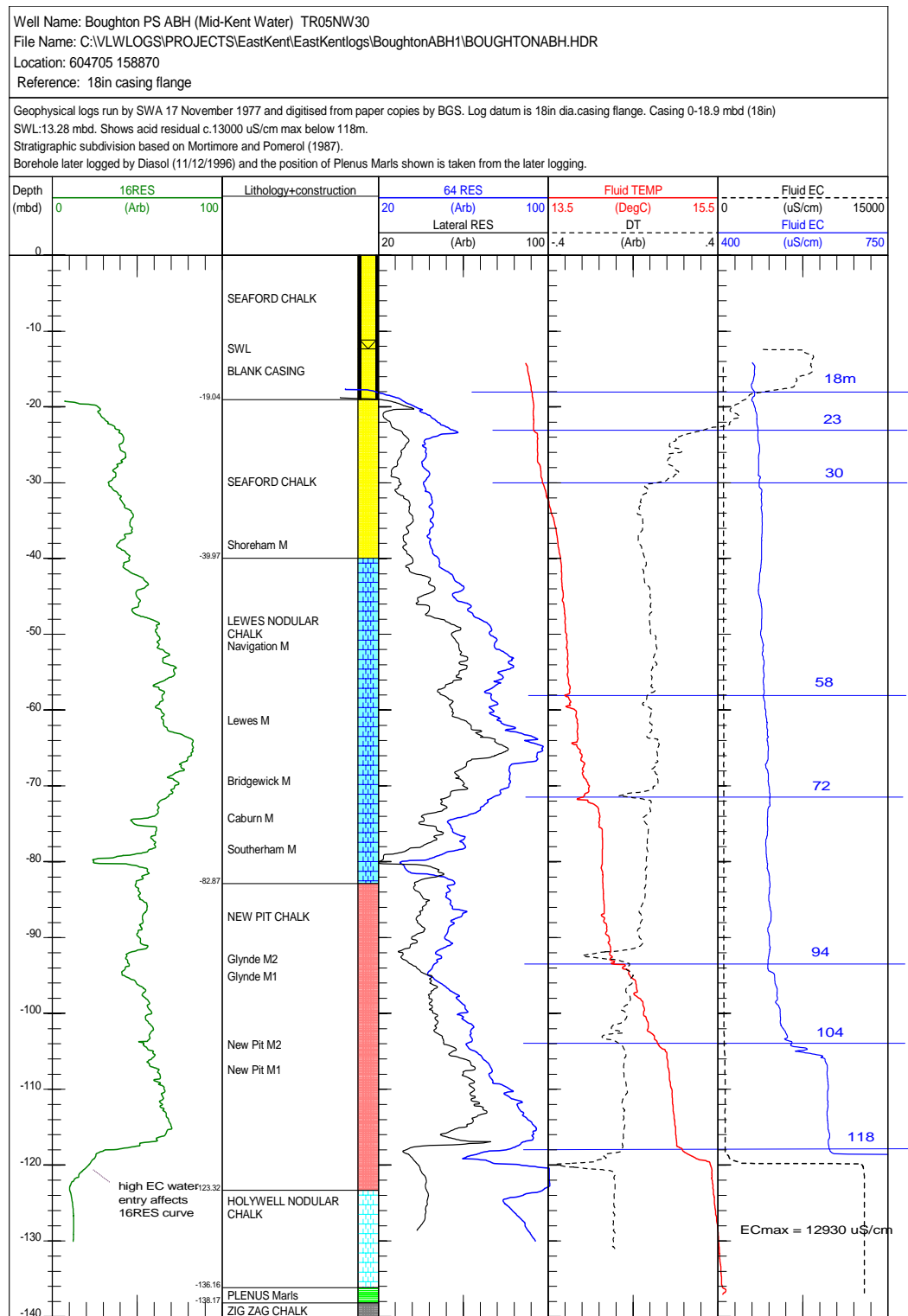
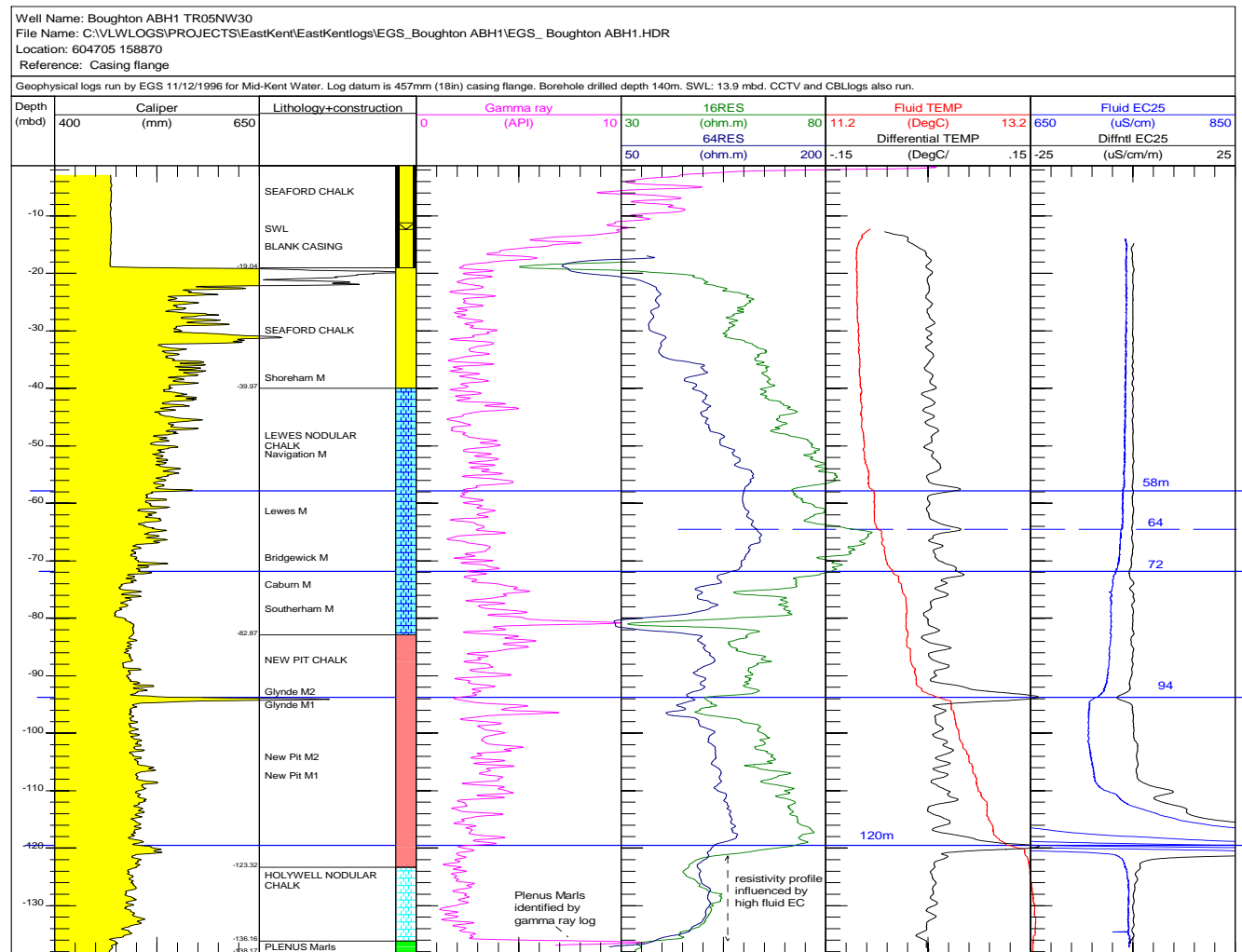


Figure A1-1 Boughton PS ABH1 (TR05NW30) Logs run by SWA 1977 and digitised by BGS



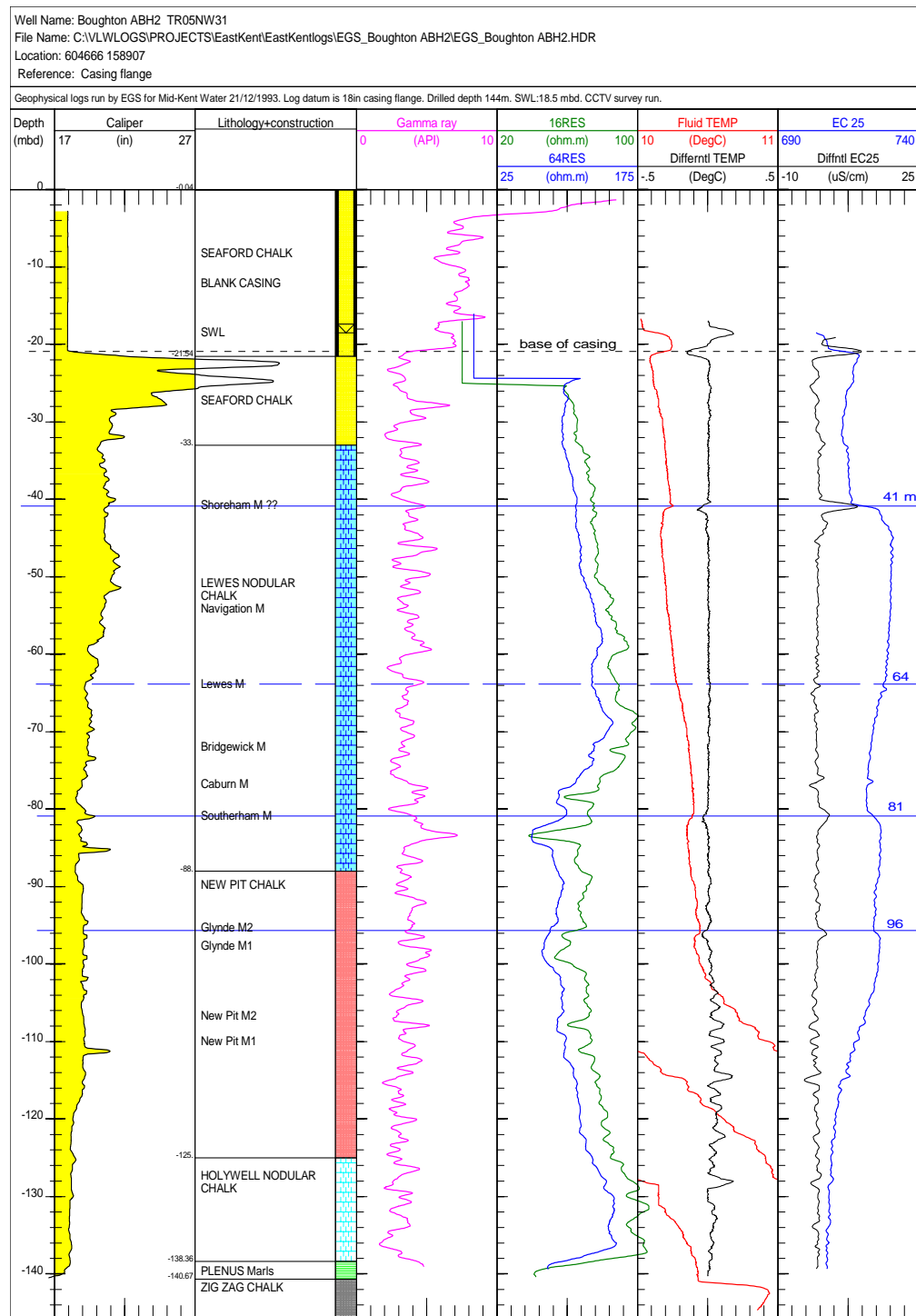


Figure A1-3 Boughton ABH2 TR05NW31 (Geophysical logs by EGS 21/12/1993)

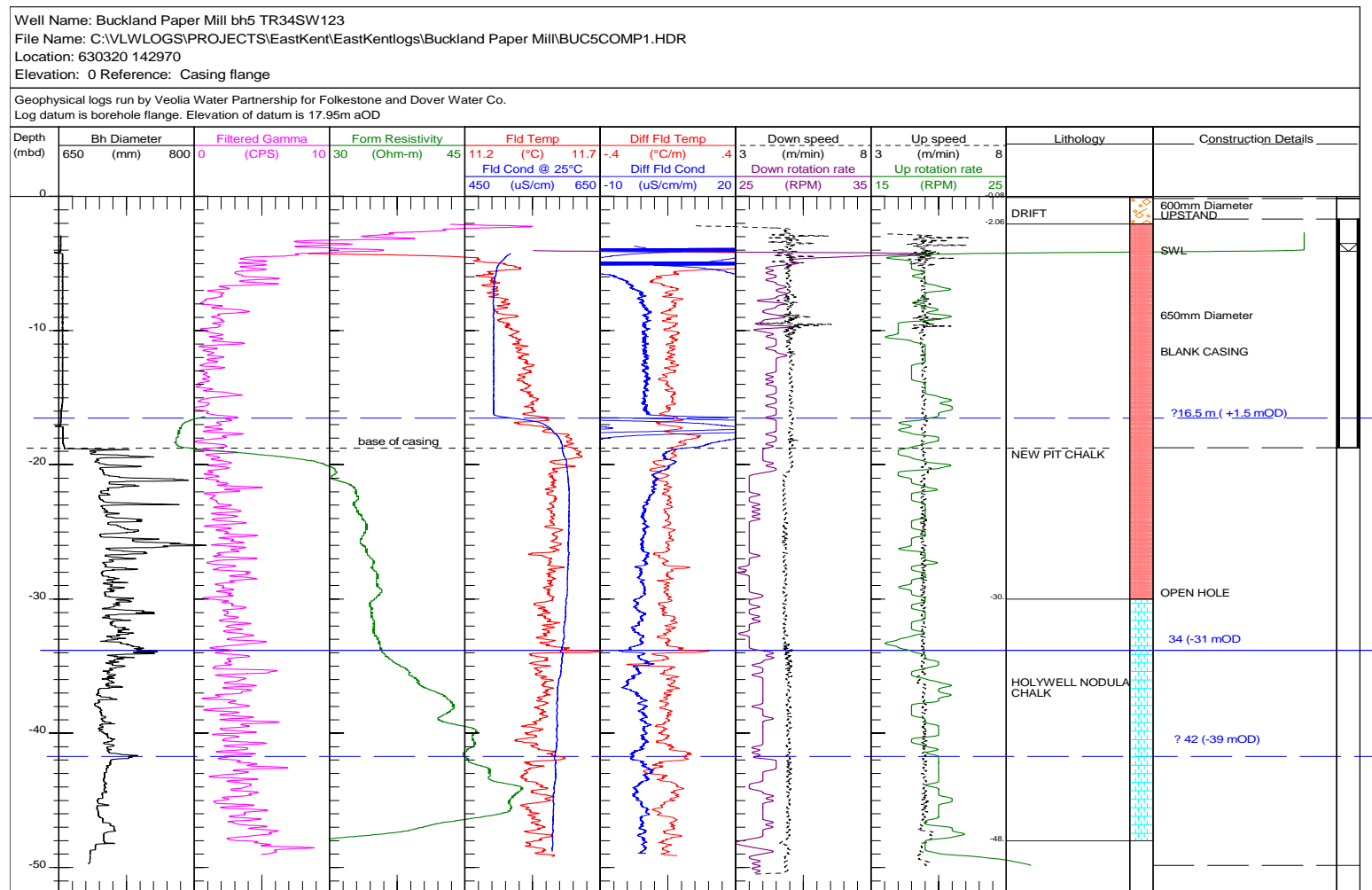


Figure A1-4 Buckland Paper Mill bh5 TR34SW123 (logs run by Veolia Water)

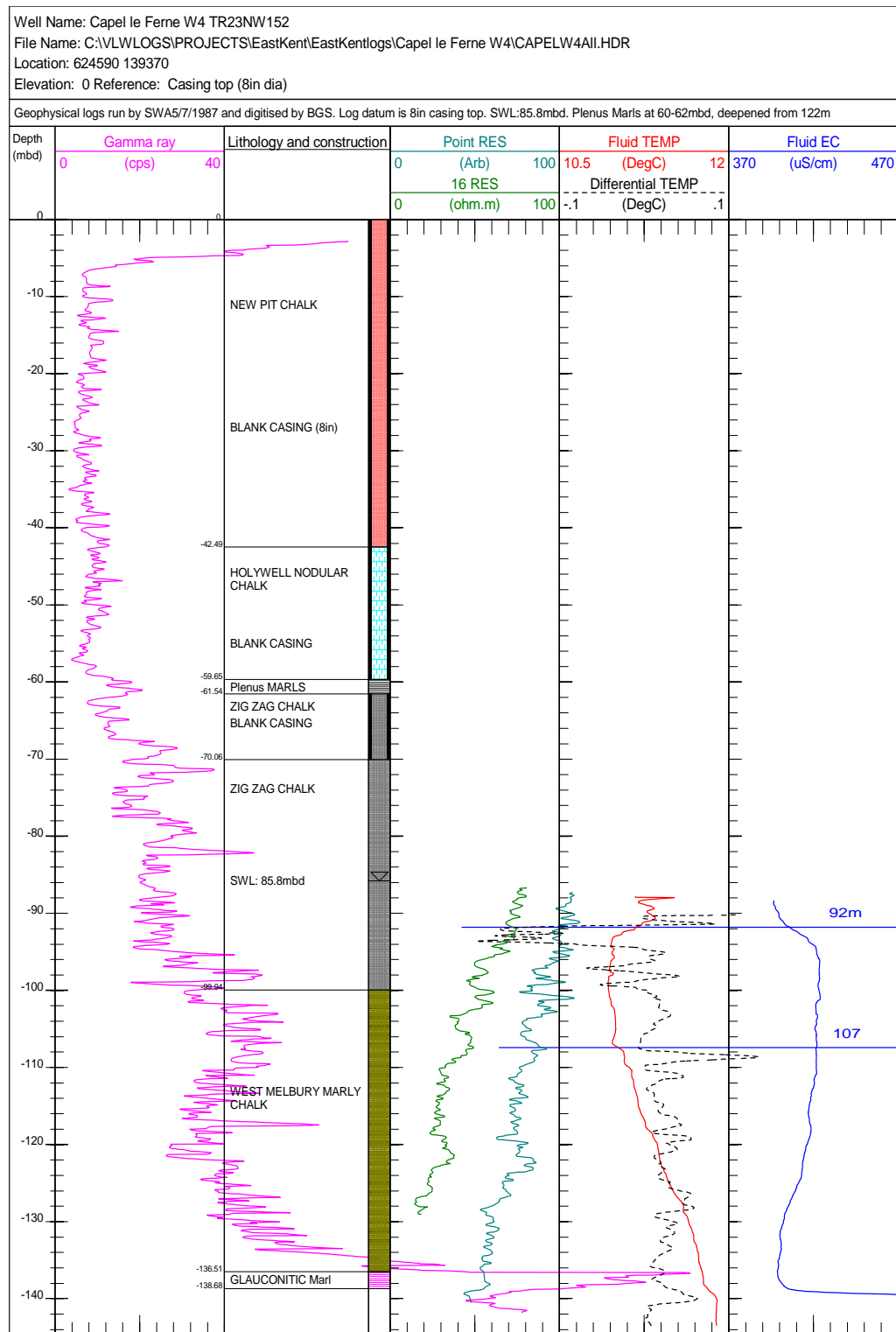
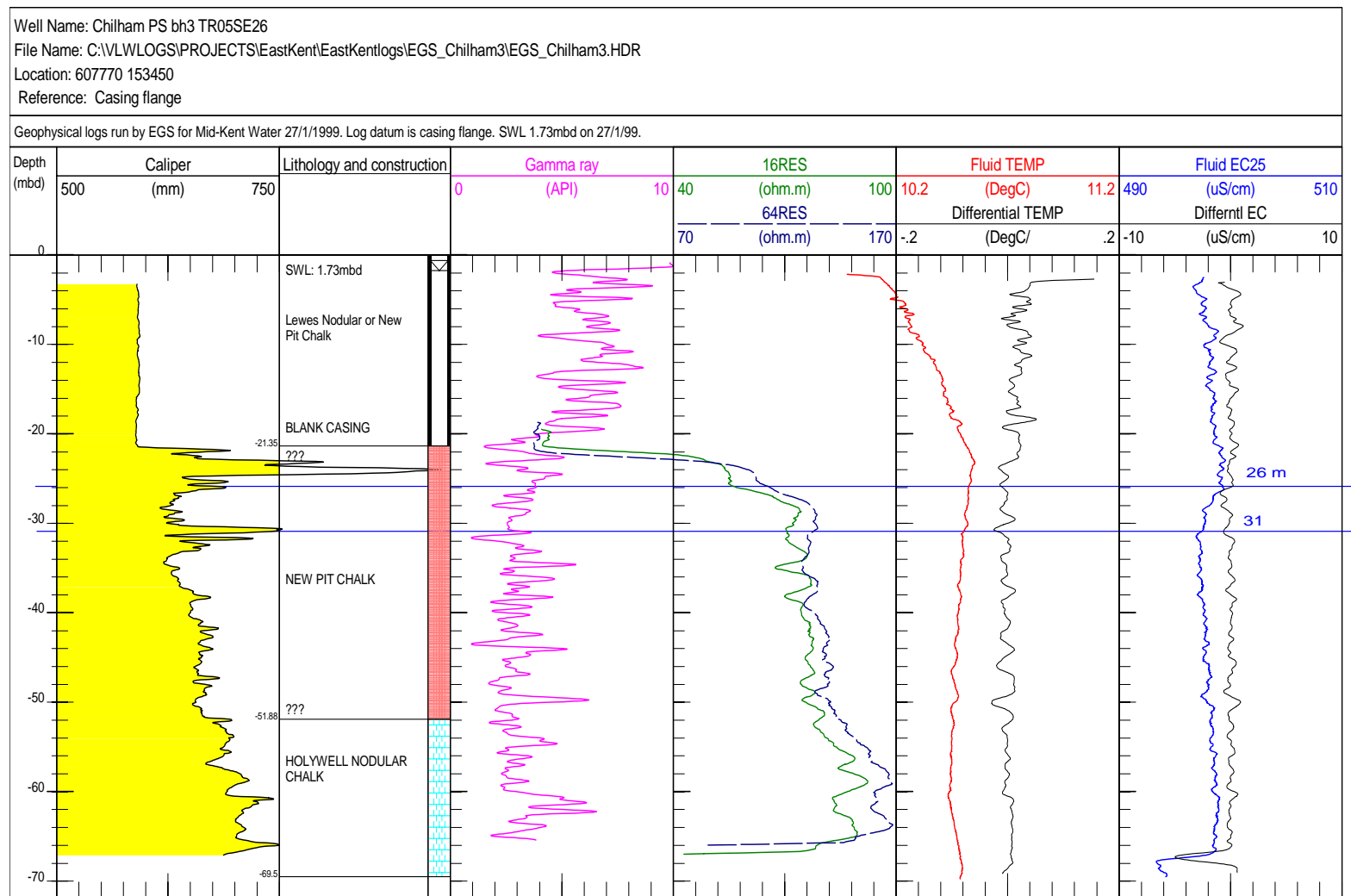


Figure A1-5 Capel le Ferne W4 (unregistered). Geophysical logs recorded by SWA 1987 and digitised by BGS



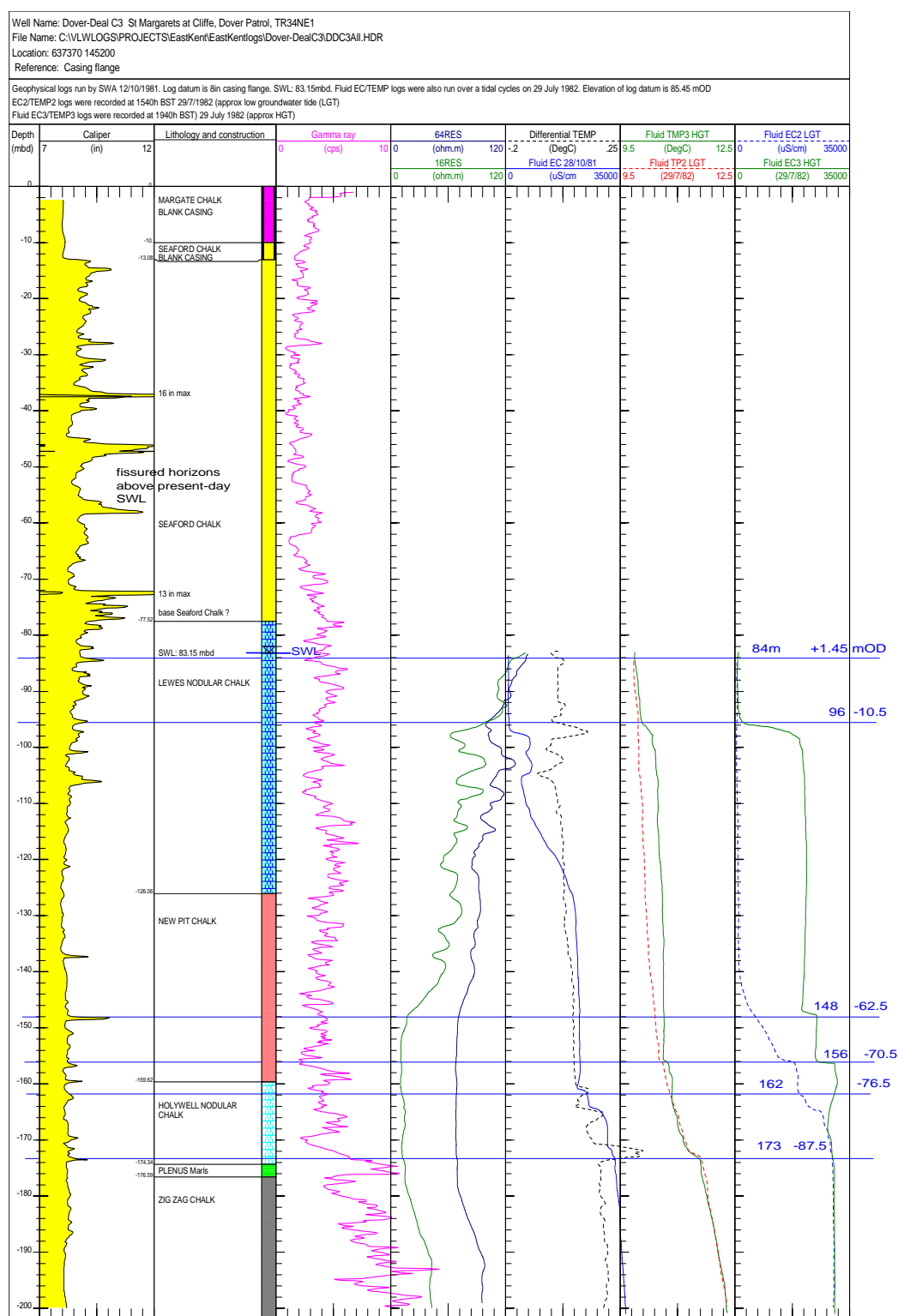


Figure A1-7 Dover-Deal C3 St Margarets at Cliffe (TR34NE1) logging by SWA 1981 and digitised by BGS

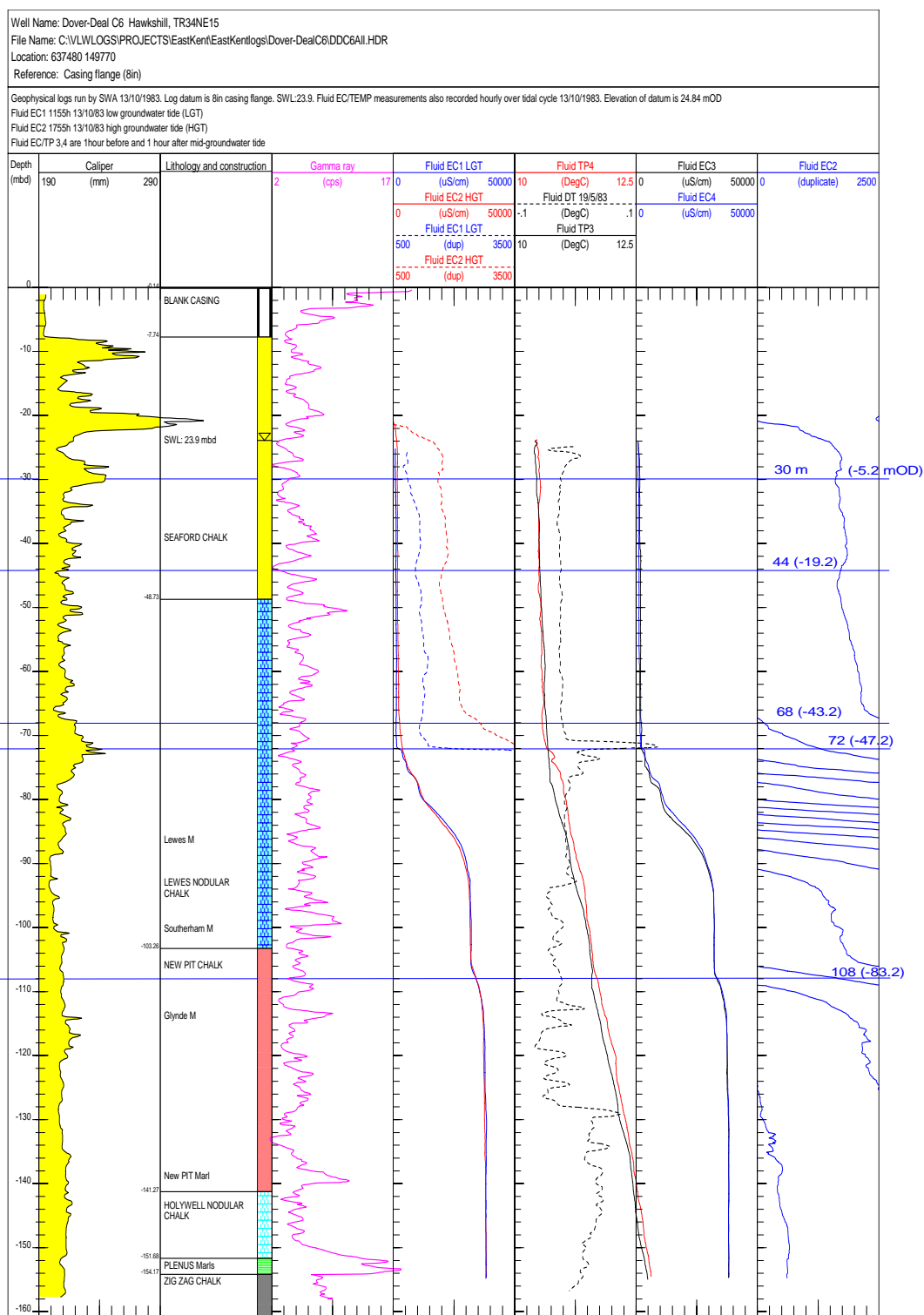


Figure A1-8 Dover-Deal C6 Hawks Hill (TR34NE15) Logs run by SWA and digitised by BGS

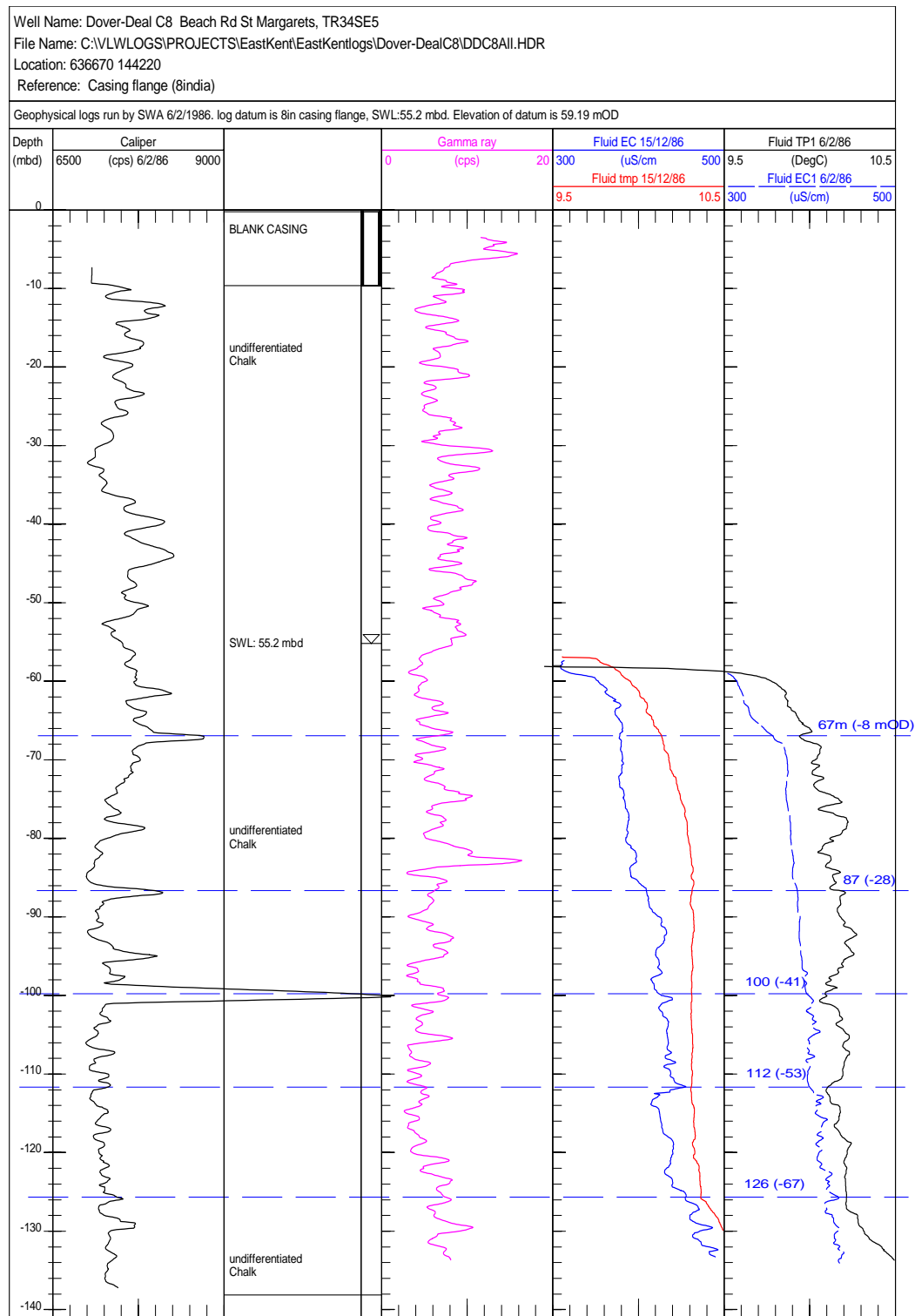


Figure A1-9 Dover-Deal C8 Beach Rd, St Margarets, TR34SE5, run by SWA 1986 and digitised by BGS

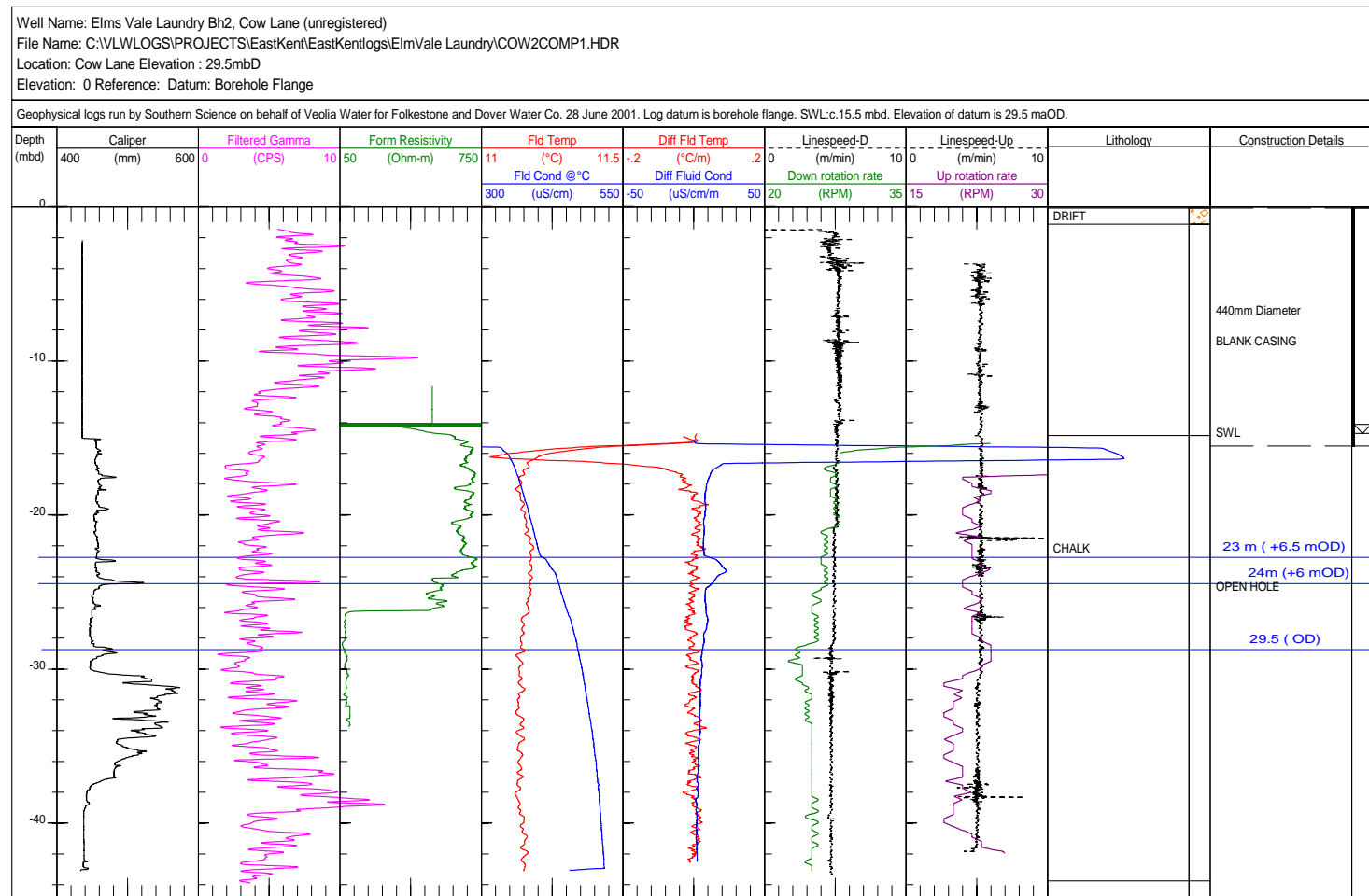


Figure A1-10 Elm Vale Laundry bh2, Cow Lane (unregistered) run by Southern Science June 2001

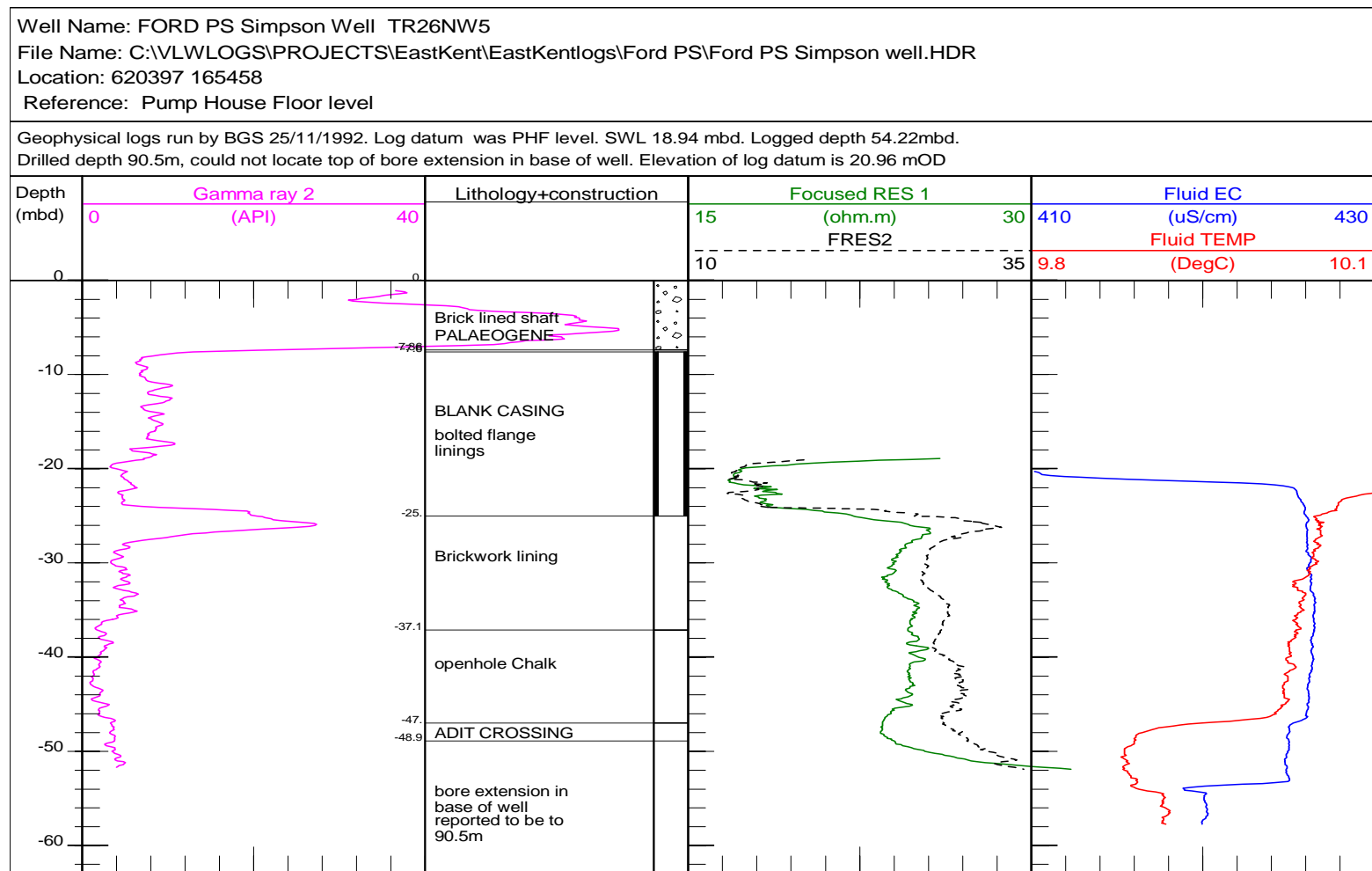
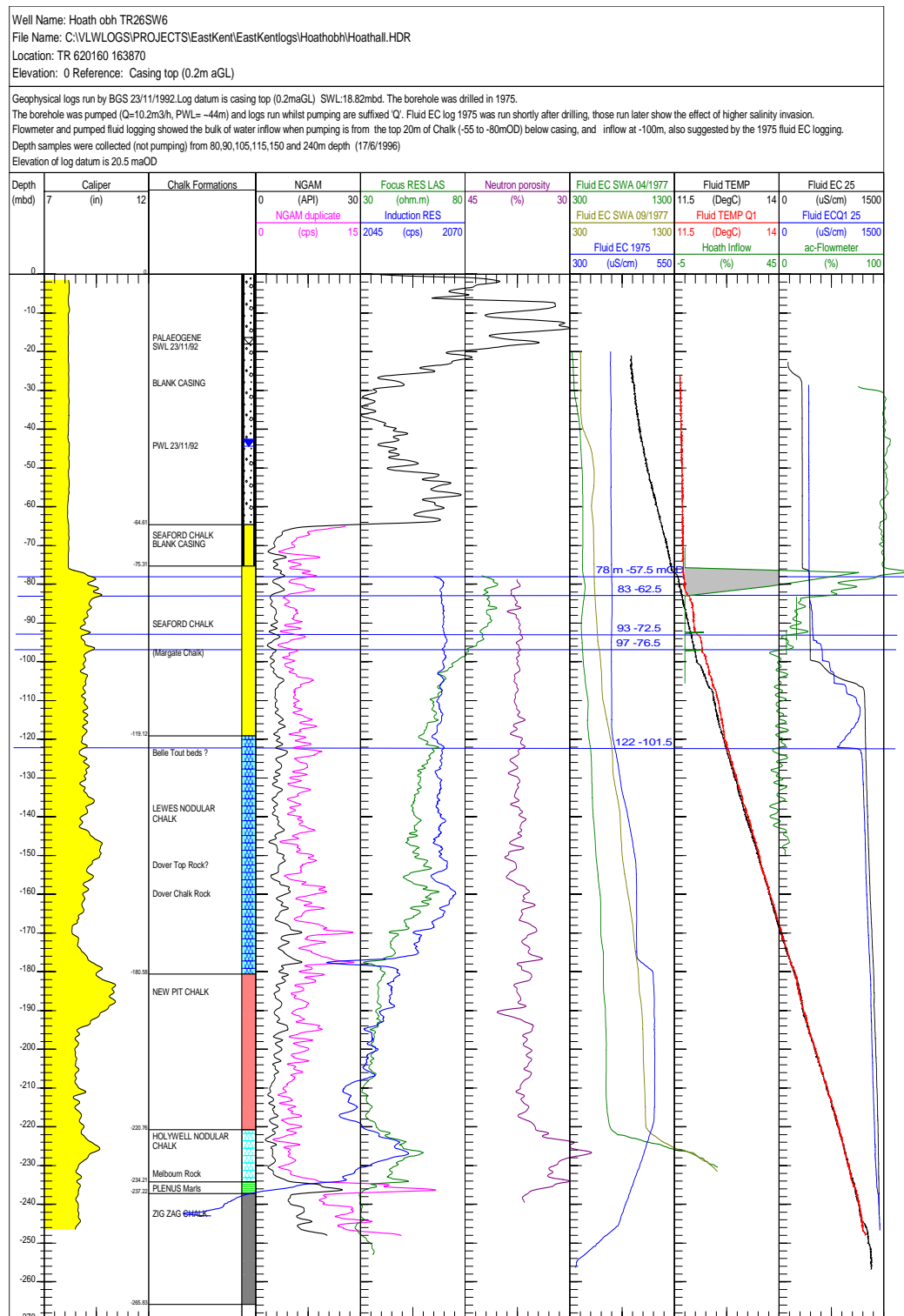


Figure A1-11 Simpson Well Ford PS (TR26NW5) Logs run by BGS November 1992



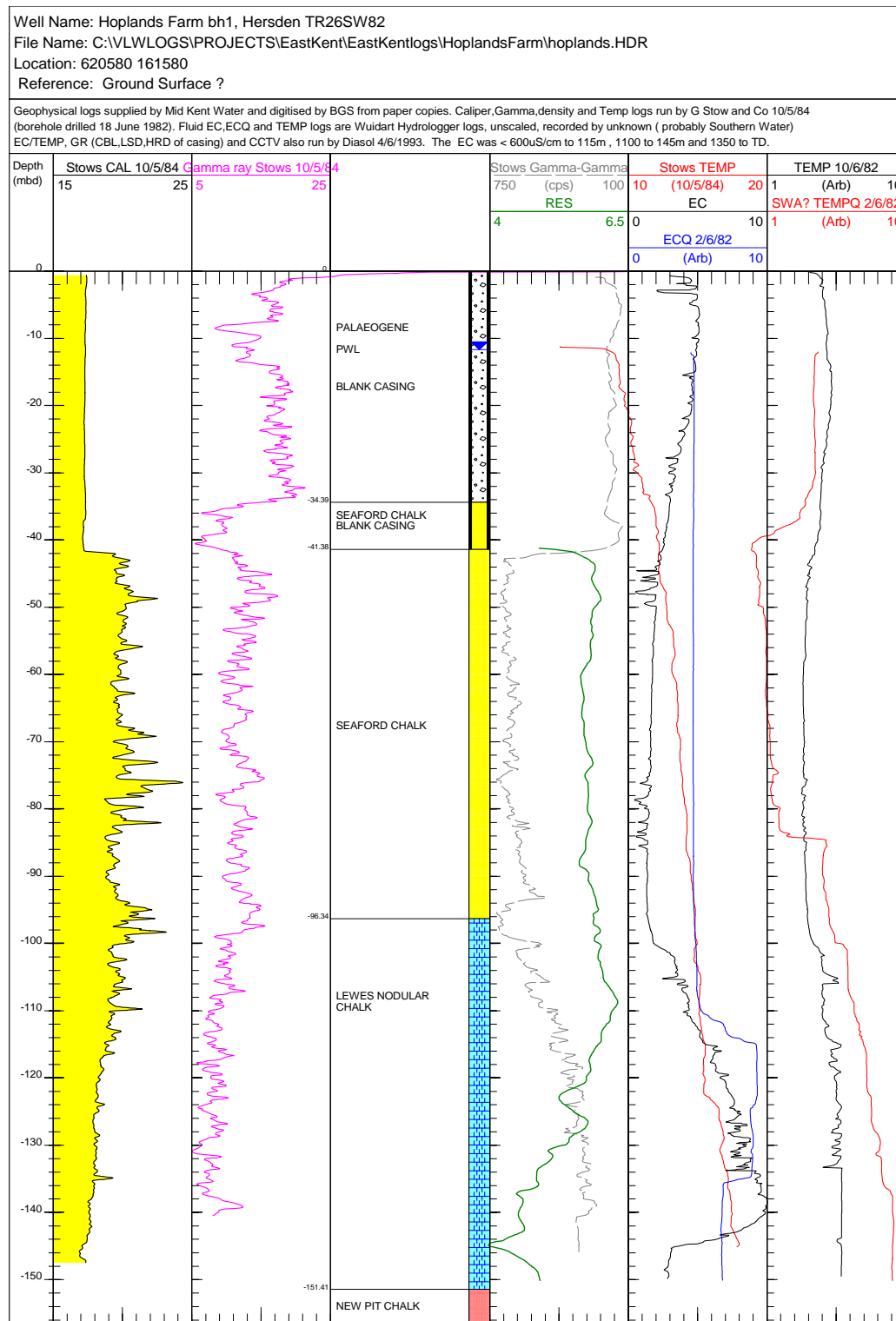


Figure A1-13 Geophysical logs of Hoplands Farm bh1 (TR26SW82) run by SWA? (1982) and G.Stow (1984) and digitised by BGS

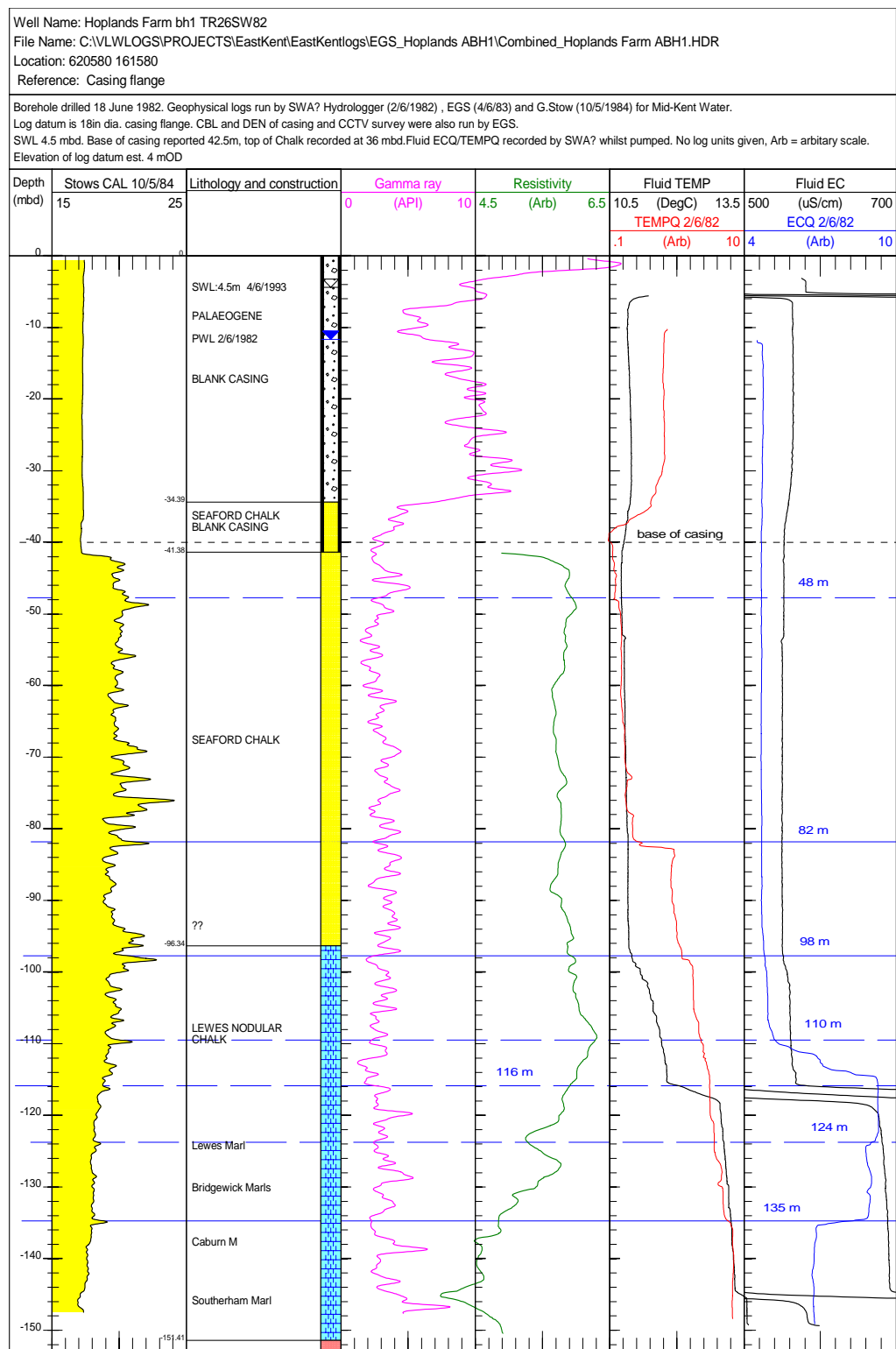
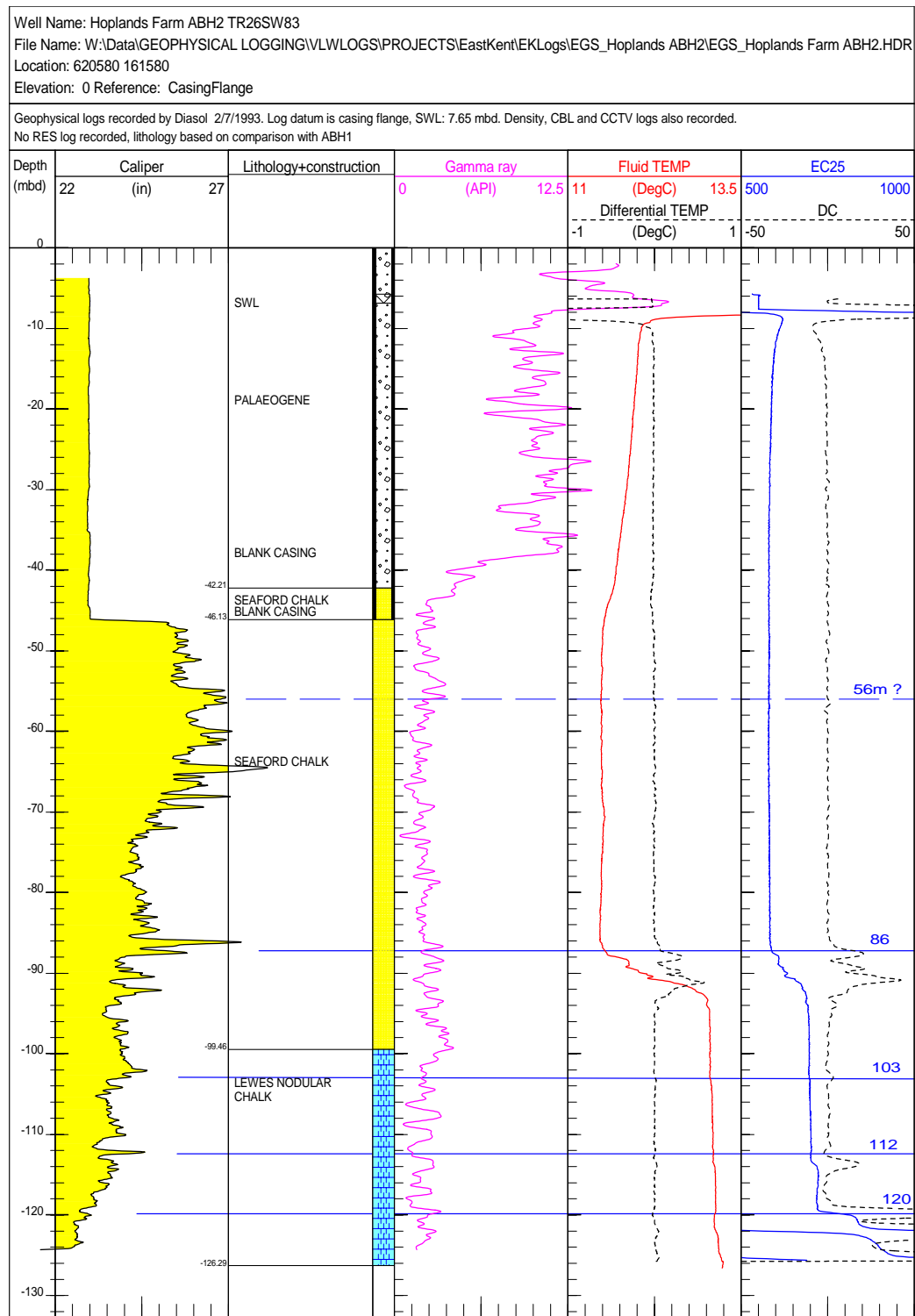


Figure A1-14 Hoplands Farm ABH1 TR26SW82. Logging by SWA, Stows and EGS, 1982-1984



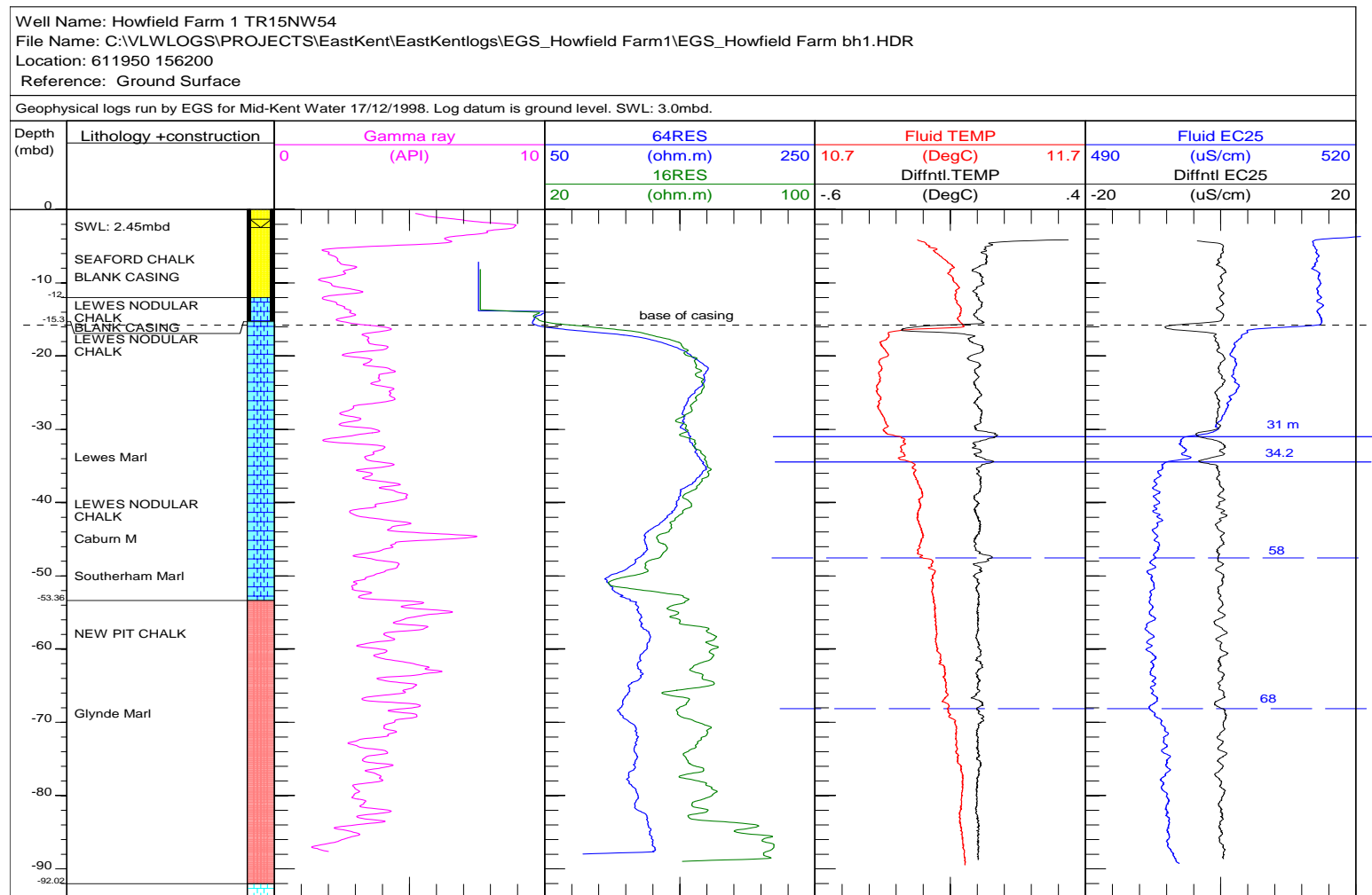


Figure A1-16 Howfield Farm PS ABH1 (TR15NW54) Logs run by EGS December 1998

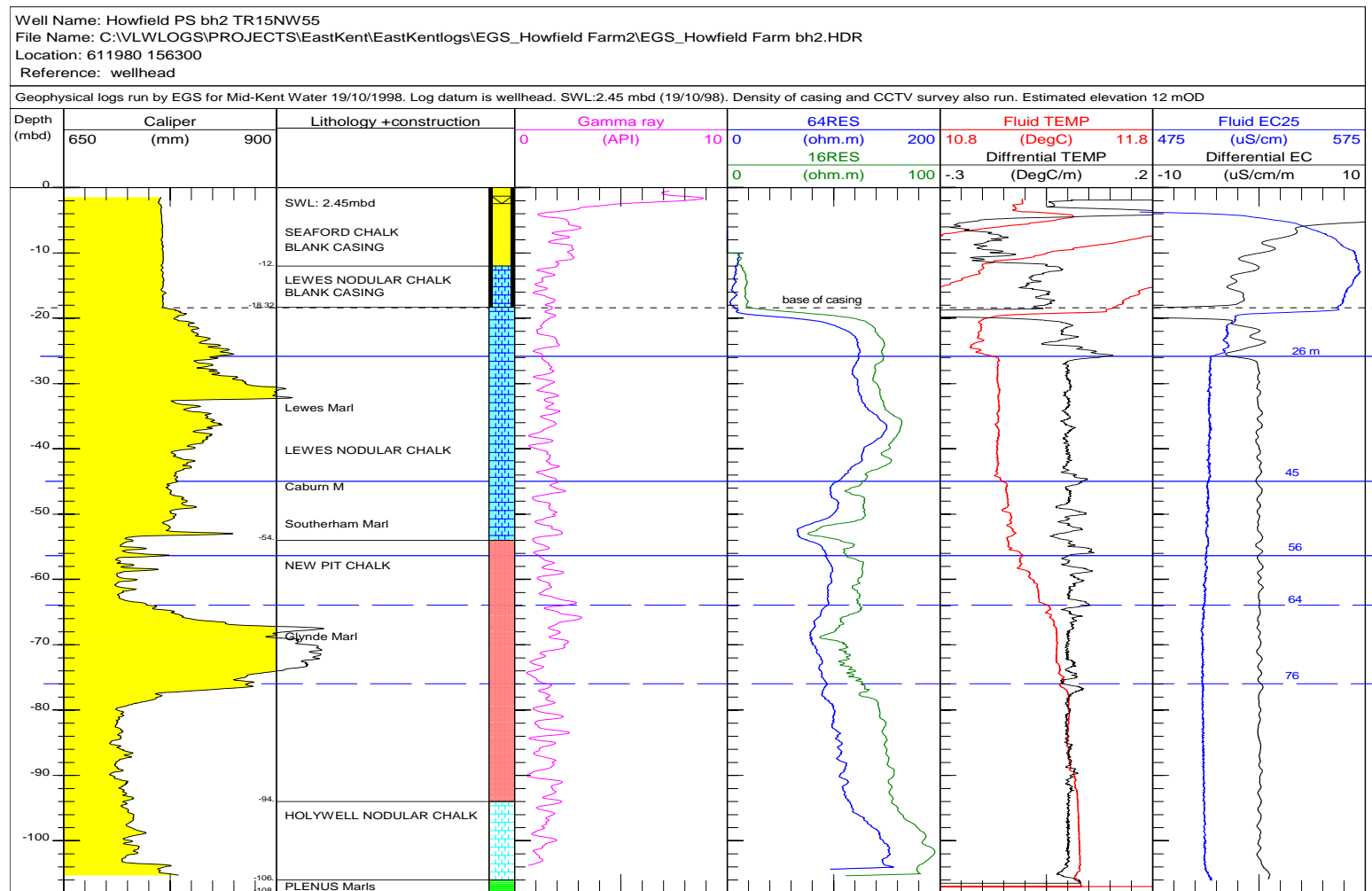


Figure A1-17 Howfield Farm PS ABH2 (TR15NW55) Logs run by EGS October 1998

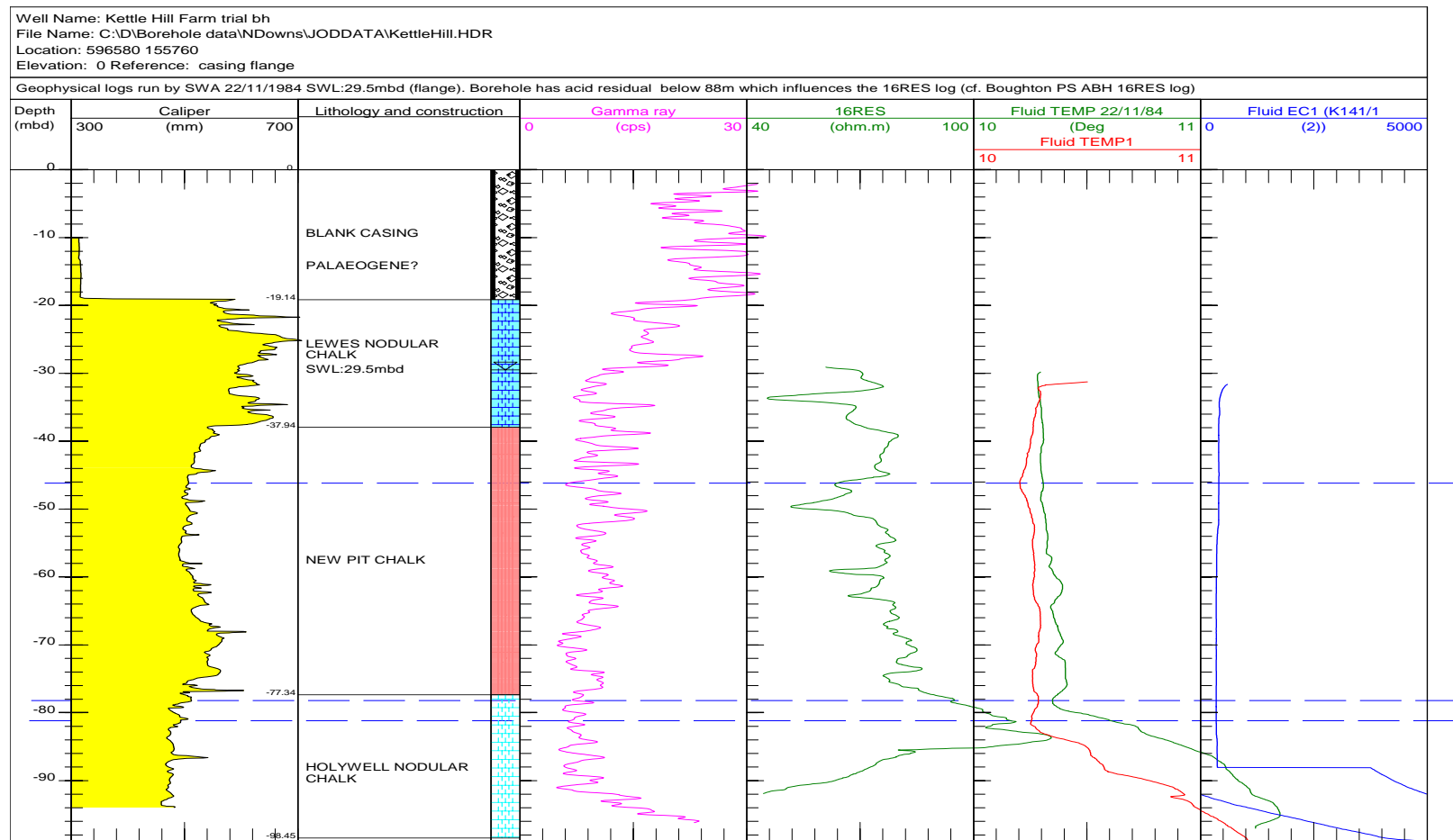


Figure A1-18 Kettle Hill Farm trial bh (unregistered) Logs run by SWA November 1984 and digitised by BGS

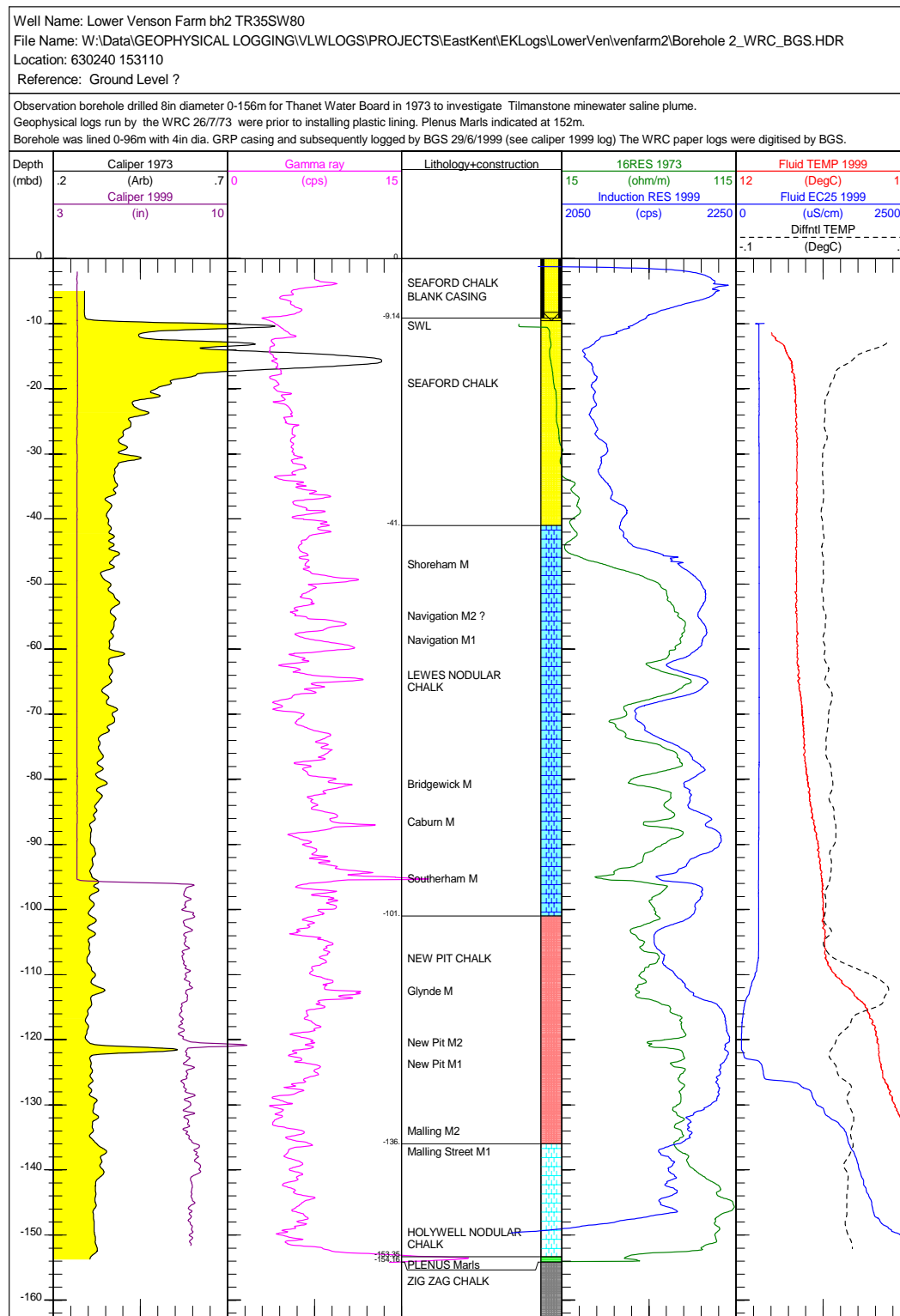


Figure A1-19 Lower Venson Farm bh 2 (TR35SW75). Logs run by WRC (1973) and by BGS (June 1999)

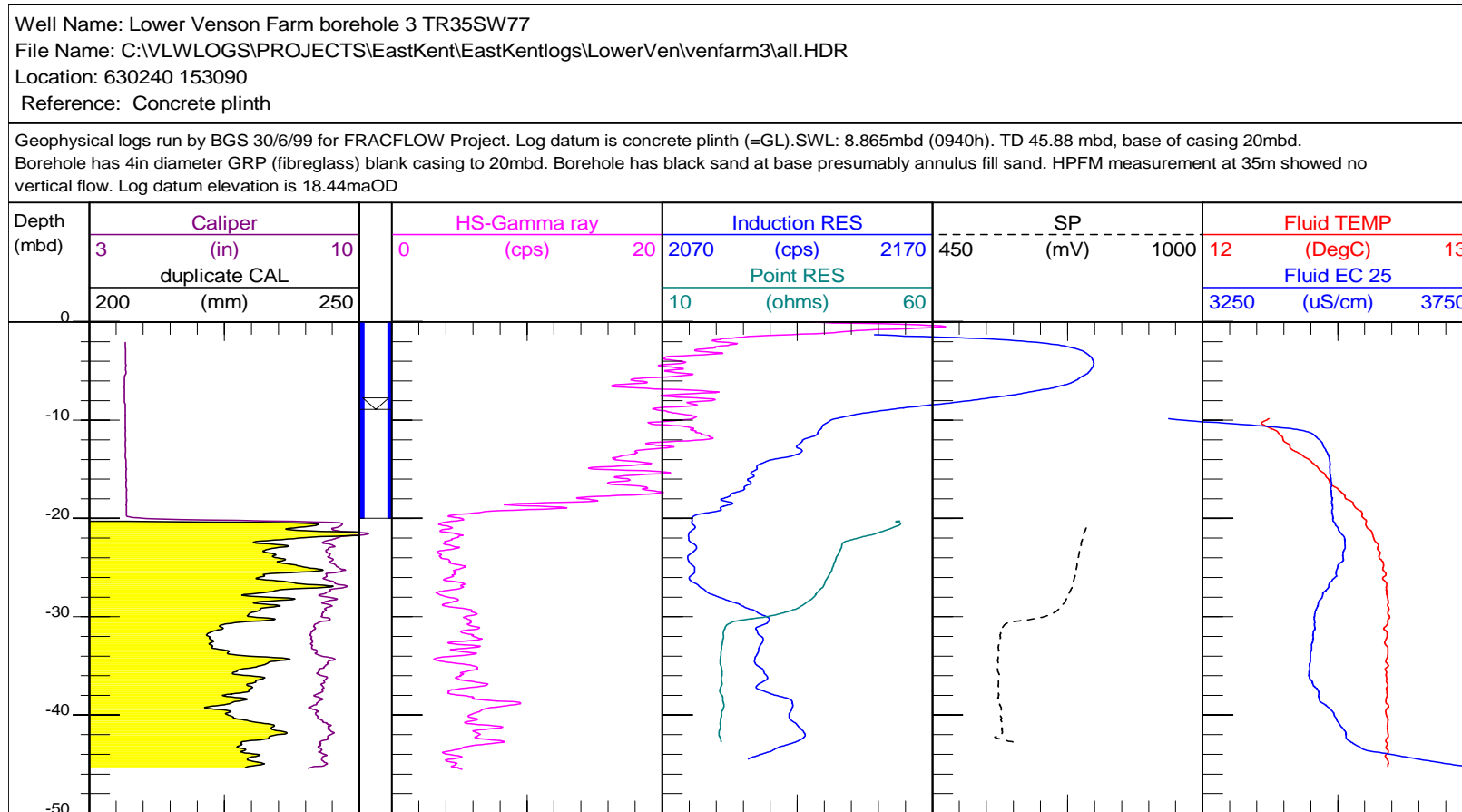


Figure A1-20 Lower Venson Farm bh3 (TR35SW77) Logs run by BGS June 1999

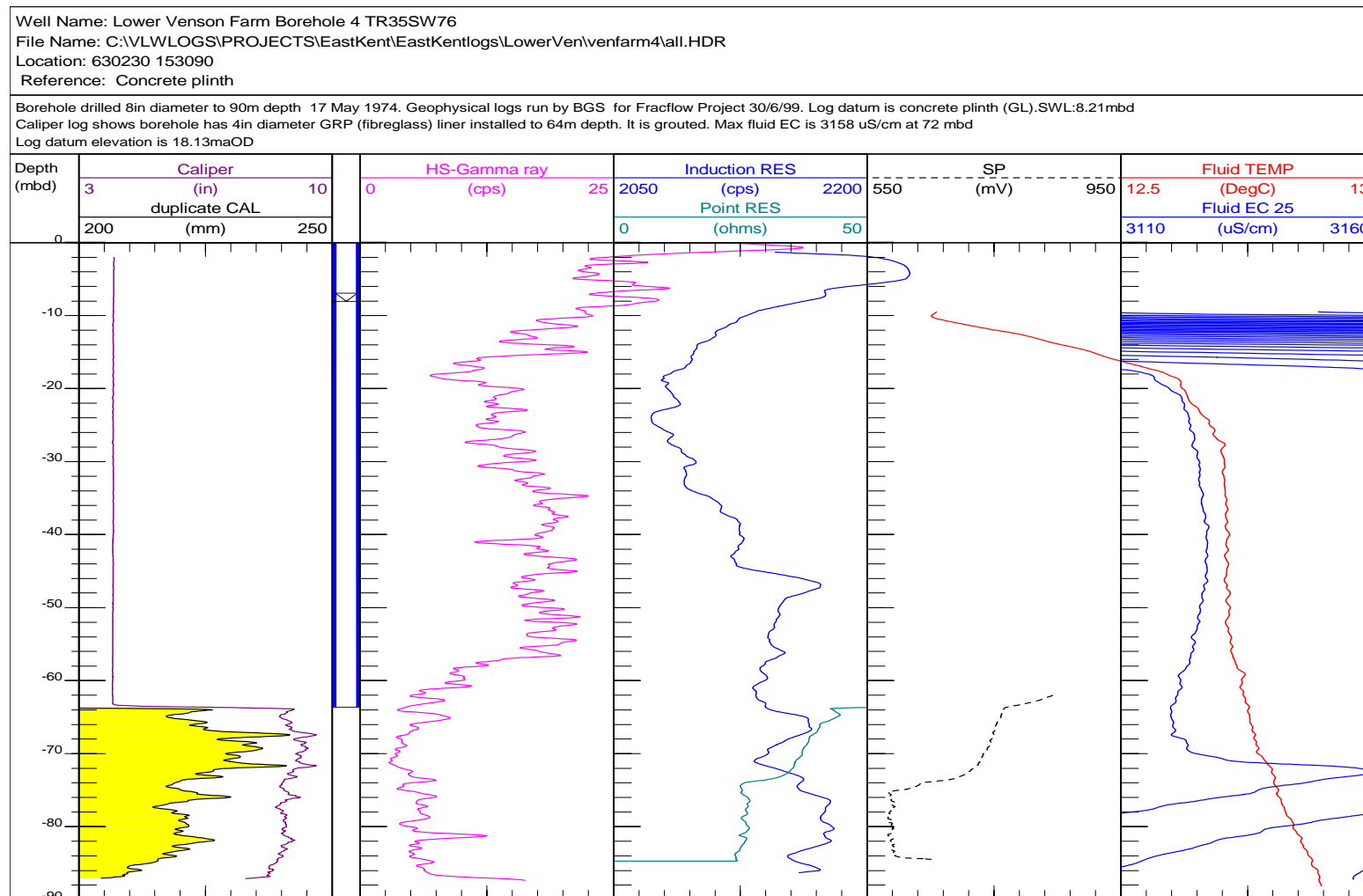


Figure A1-21 Lower Venson Farm bh4 (TR35SW76) Logs run by BGS 30 June 1999

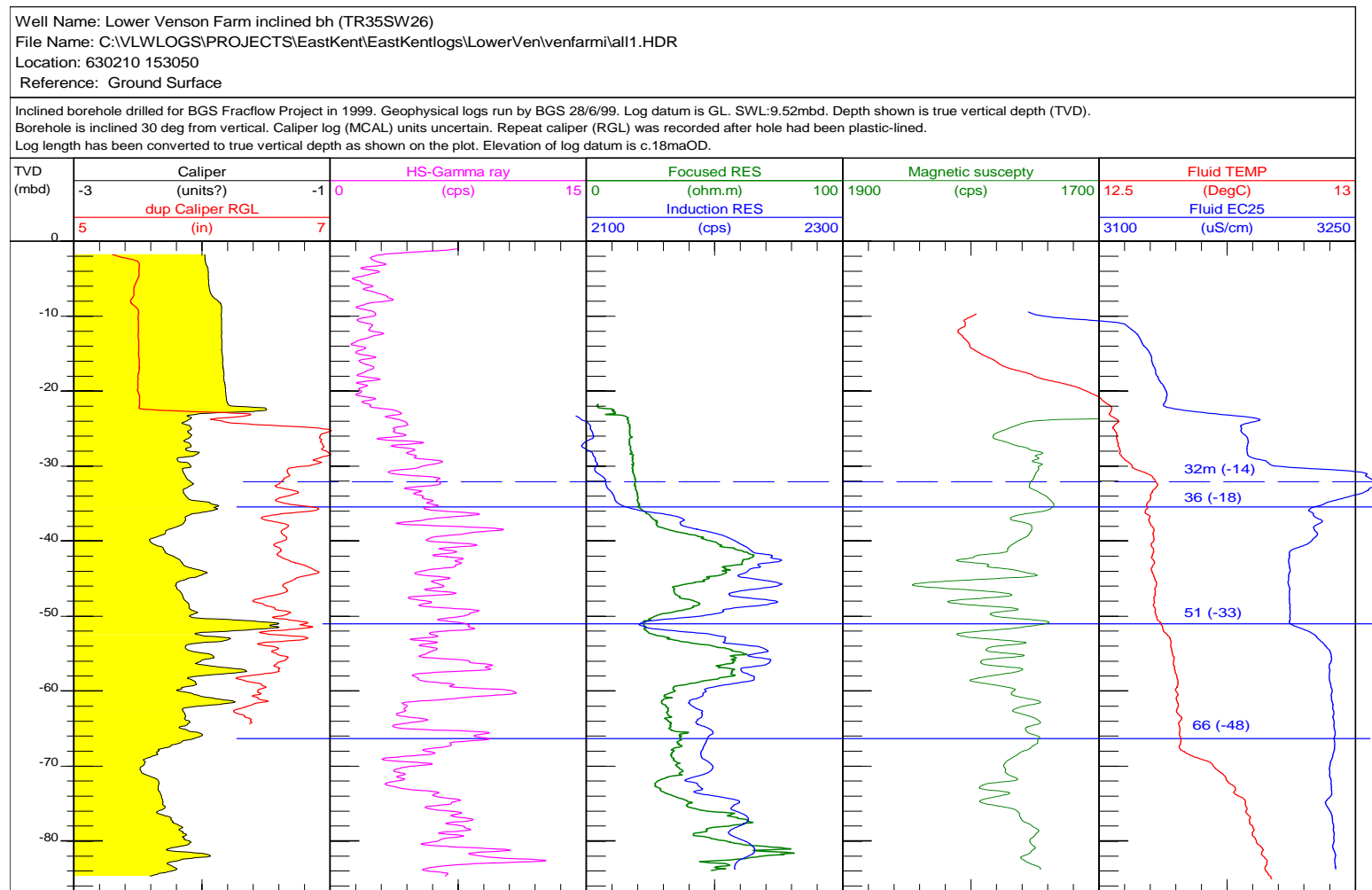


Figure A1-22 Lower Venson Farm inclined borehole (TR35SW27) Logs run by BGS 26 June 1999. Logs adjusted to true vertical depth

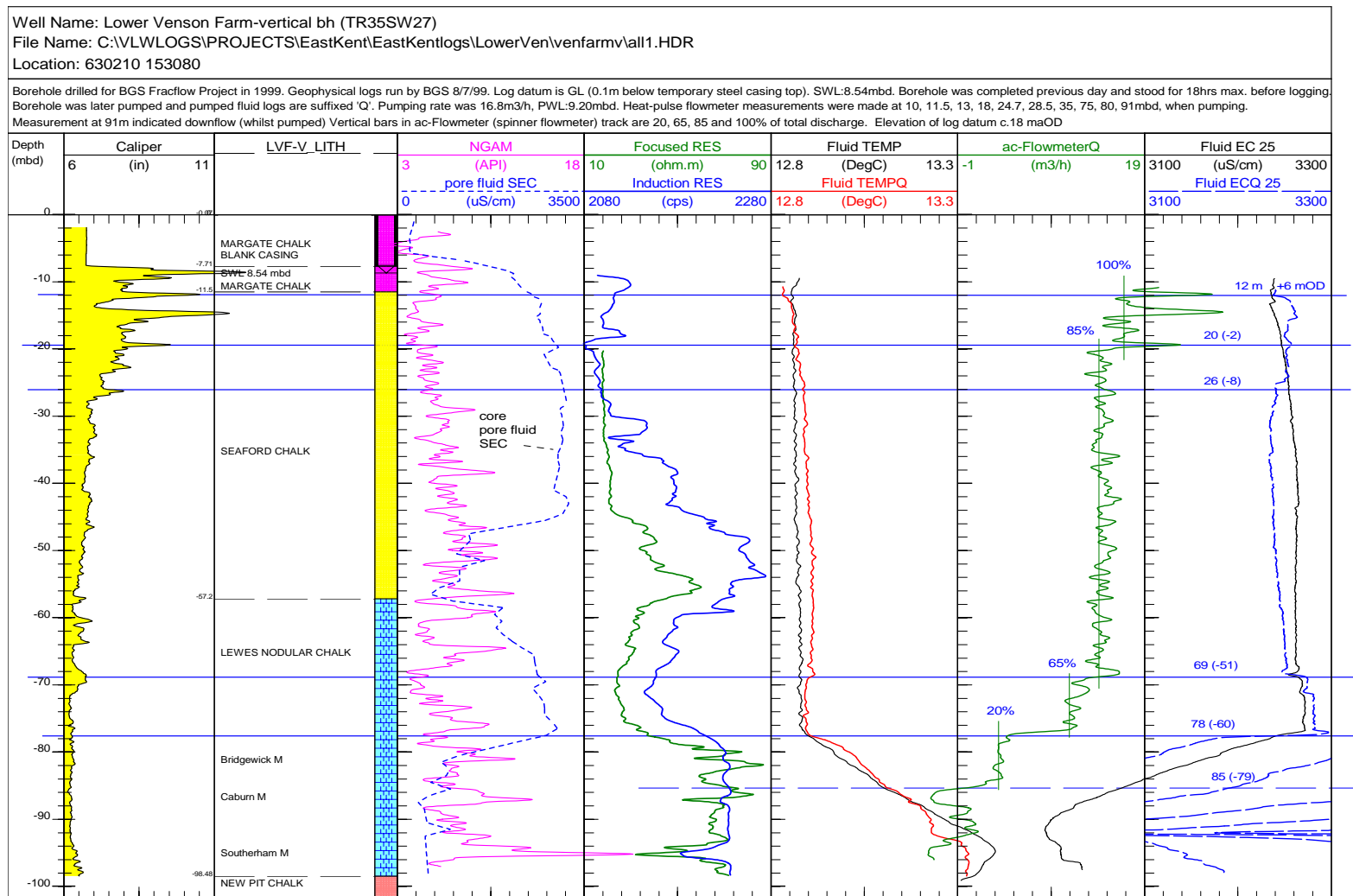
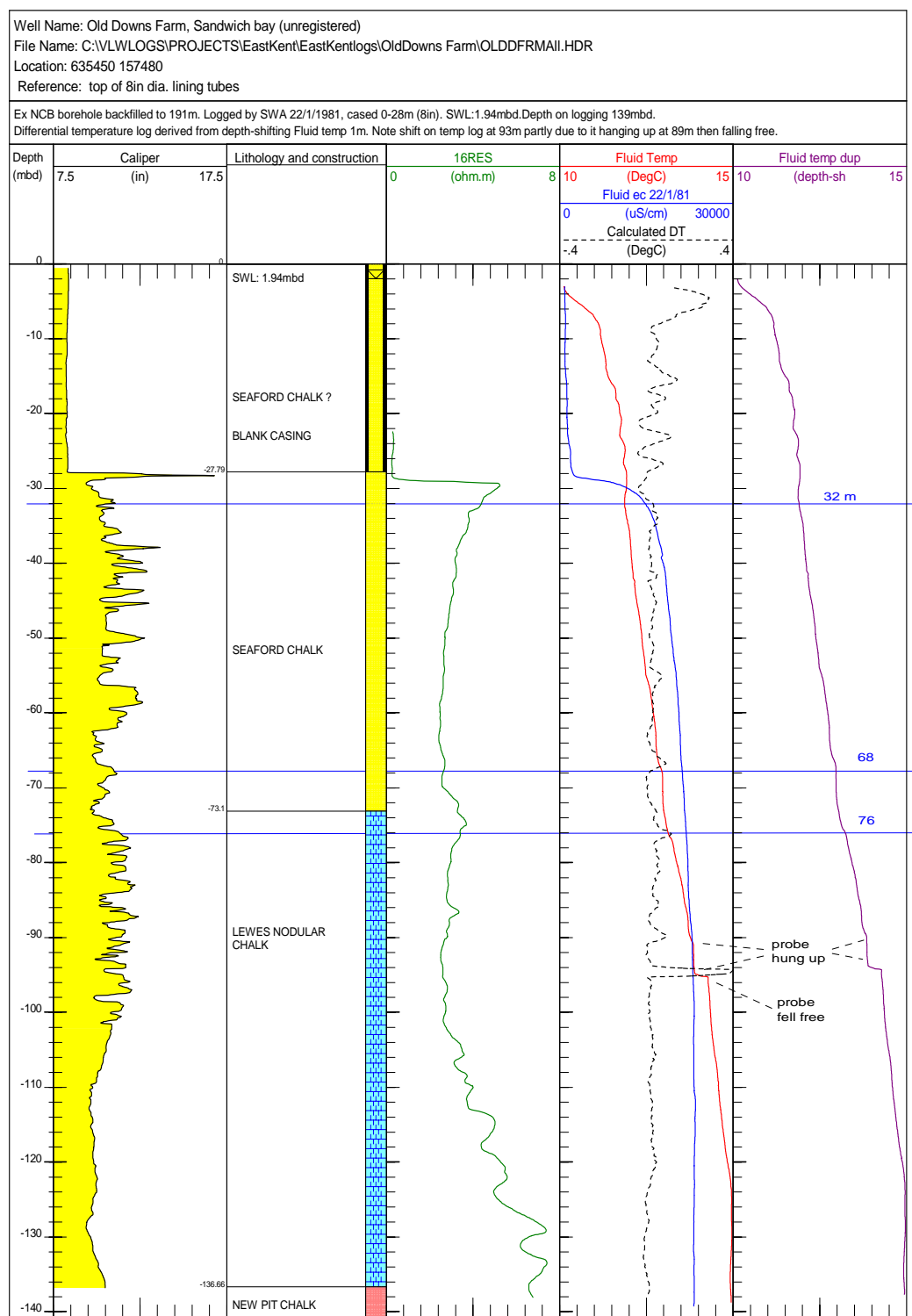


Figure A1-23 Lower Venson Farm-vertical borehole (TR35SW27) logs run by BGS July 1999.



FigureA1-24 Old Downs Farm bh, Sandwich Bay (unregistered) Logs run by SWA and digitised by BGS

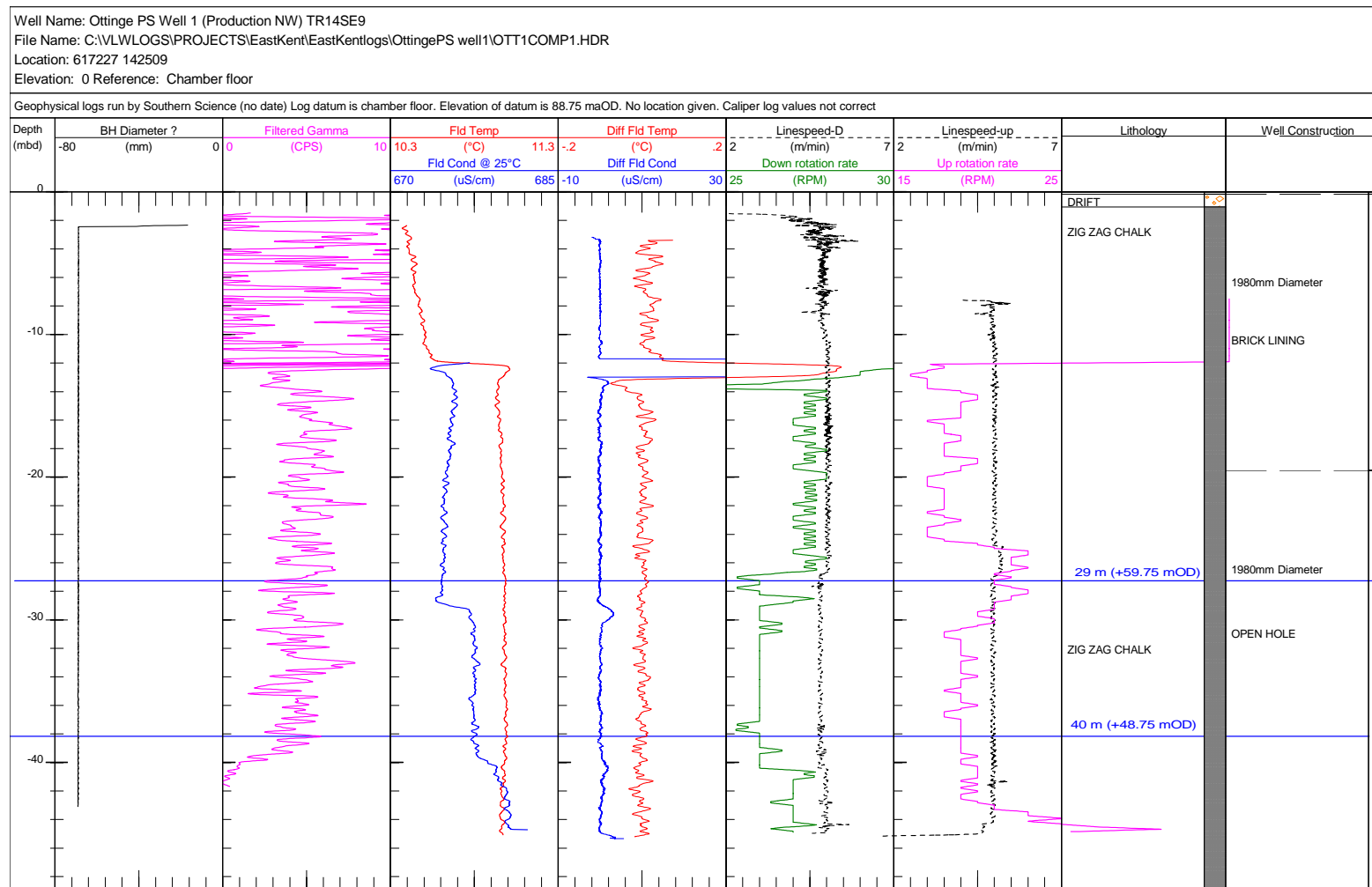


Figure A1-25 Ottinge PS well 1 (Production NW site, TR14SE9). Logs run by Southern Science

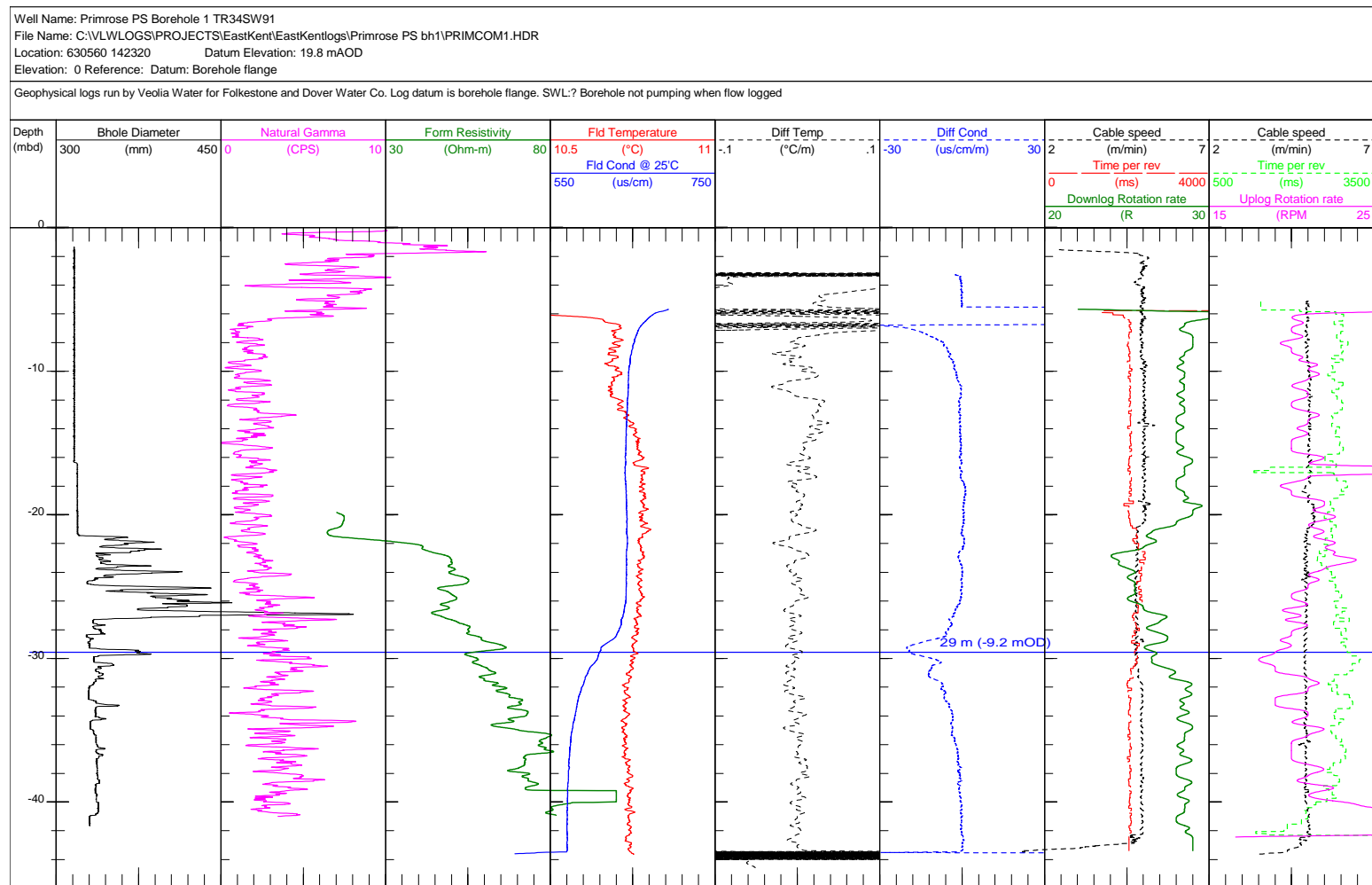
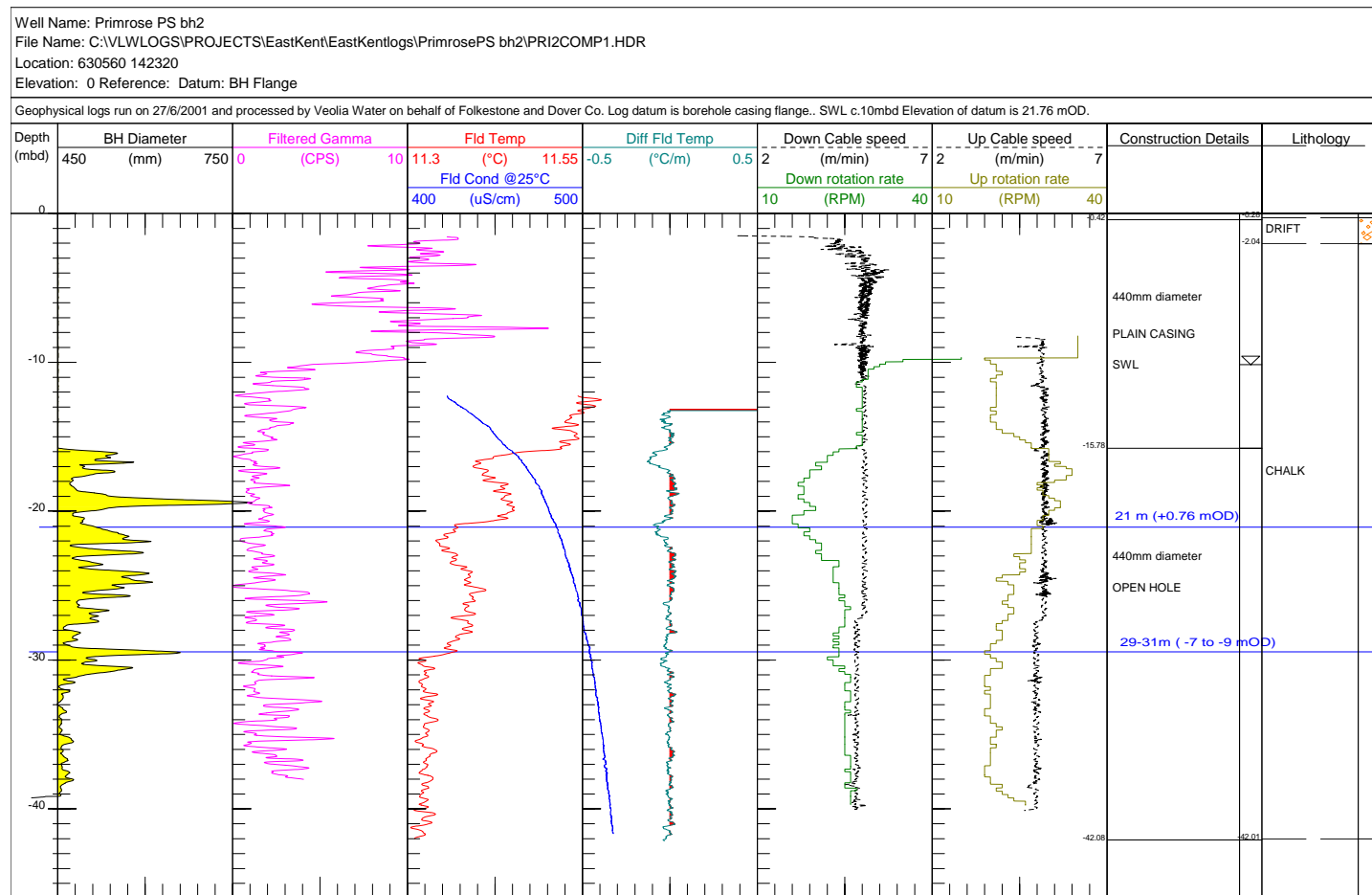


Figure A1-26 Primrose PS Borehole ABH1 (TR34SW91) Logs run by Southern Science 2001



A1-27 Primrose PS bh 2

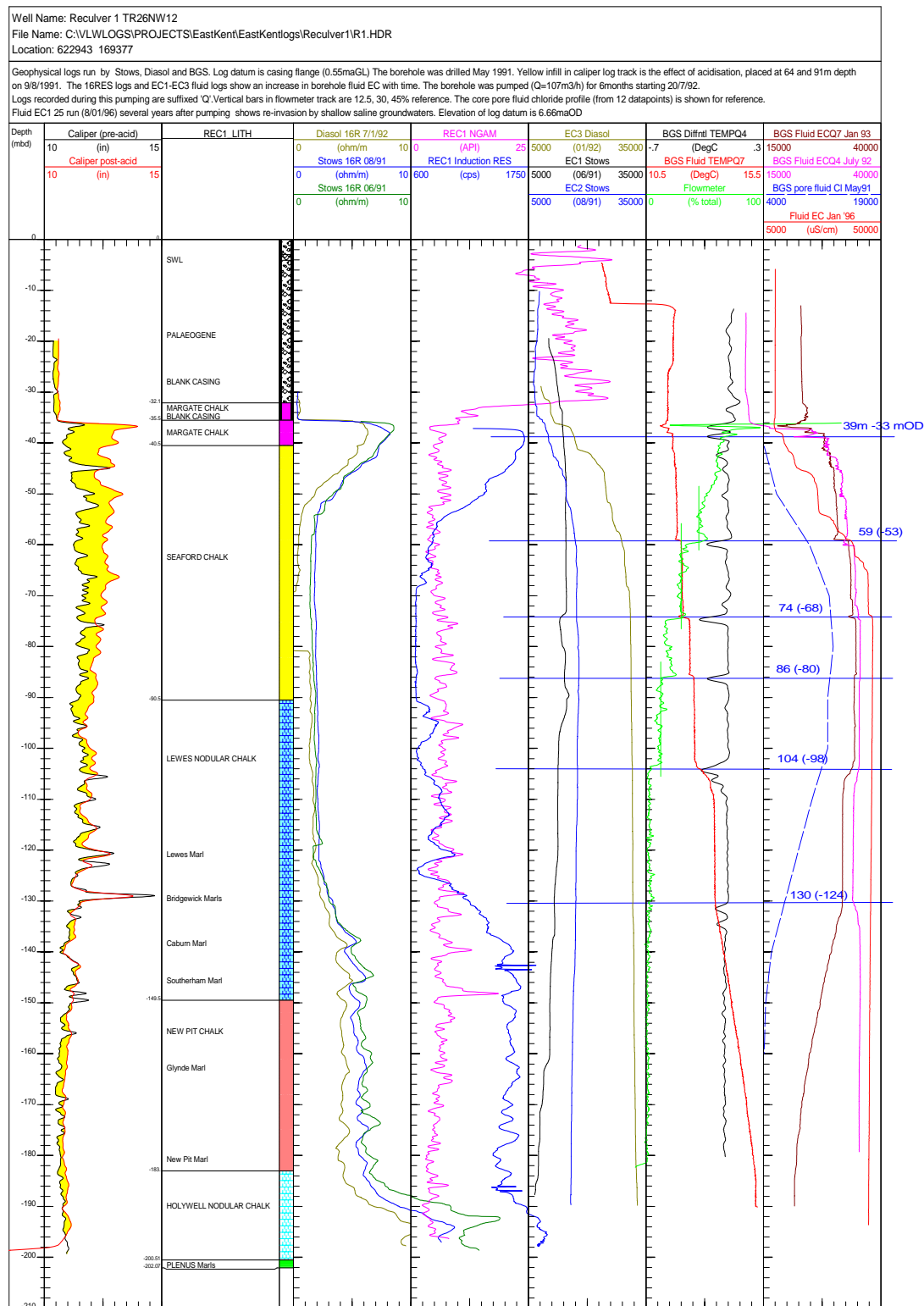


Figure A1-28 Reculver 1 borehole (TR26NW12) recorded by various organisations 1991-1996.

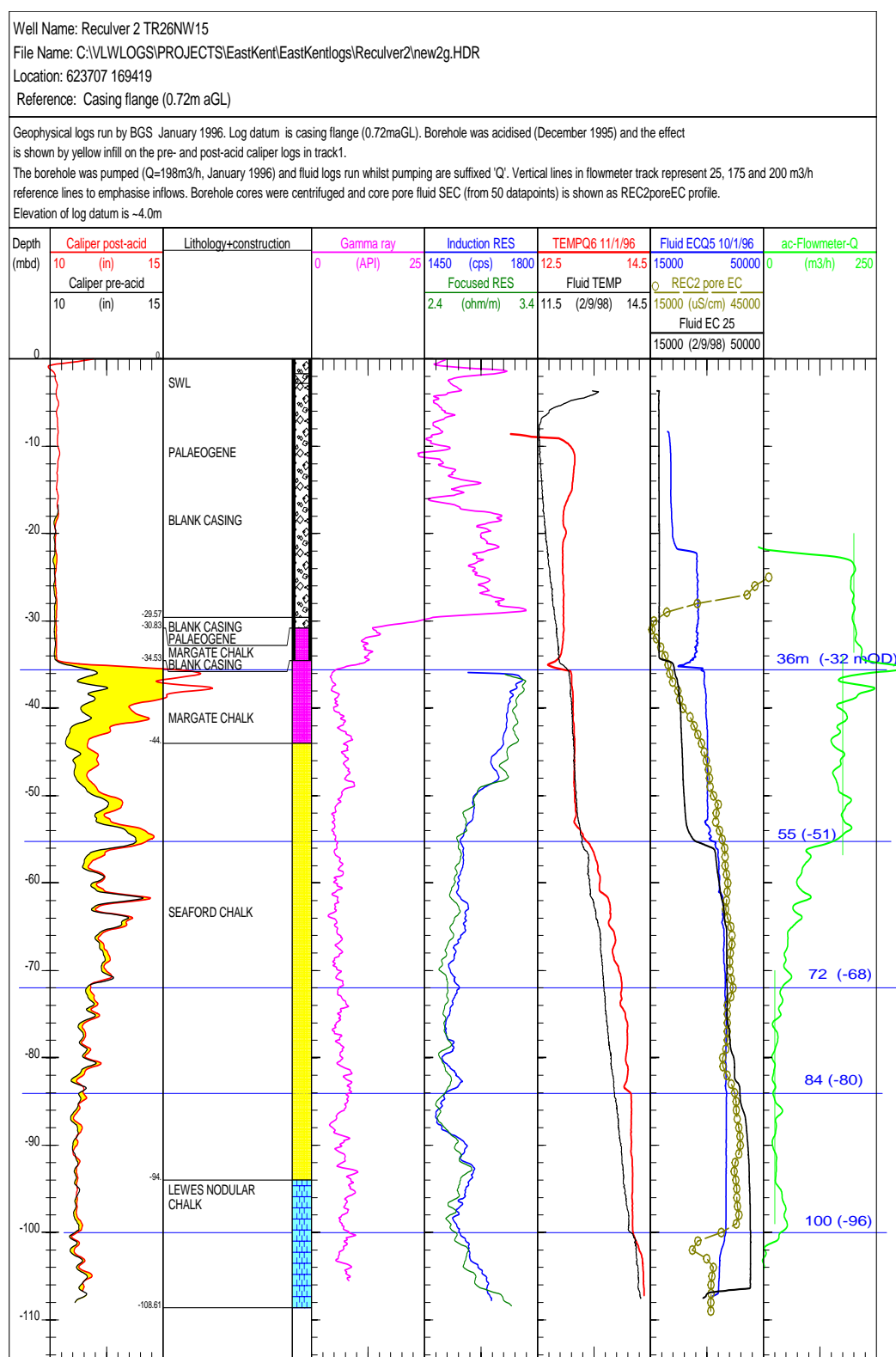
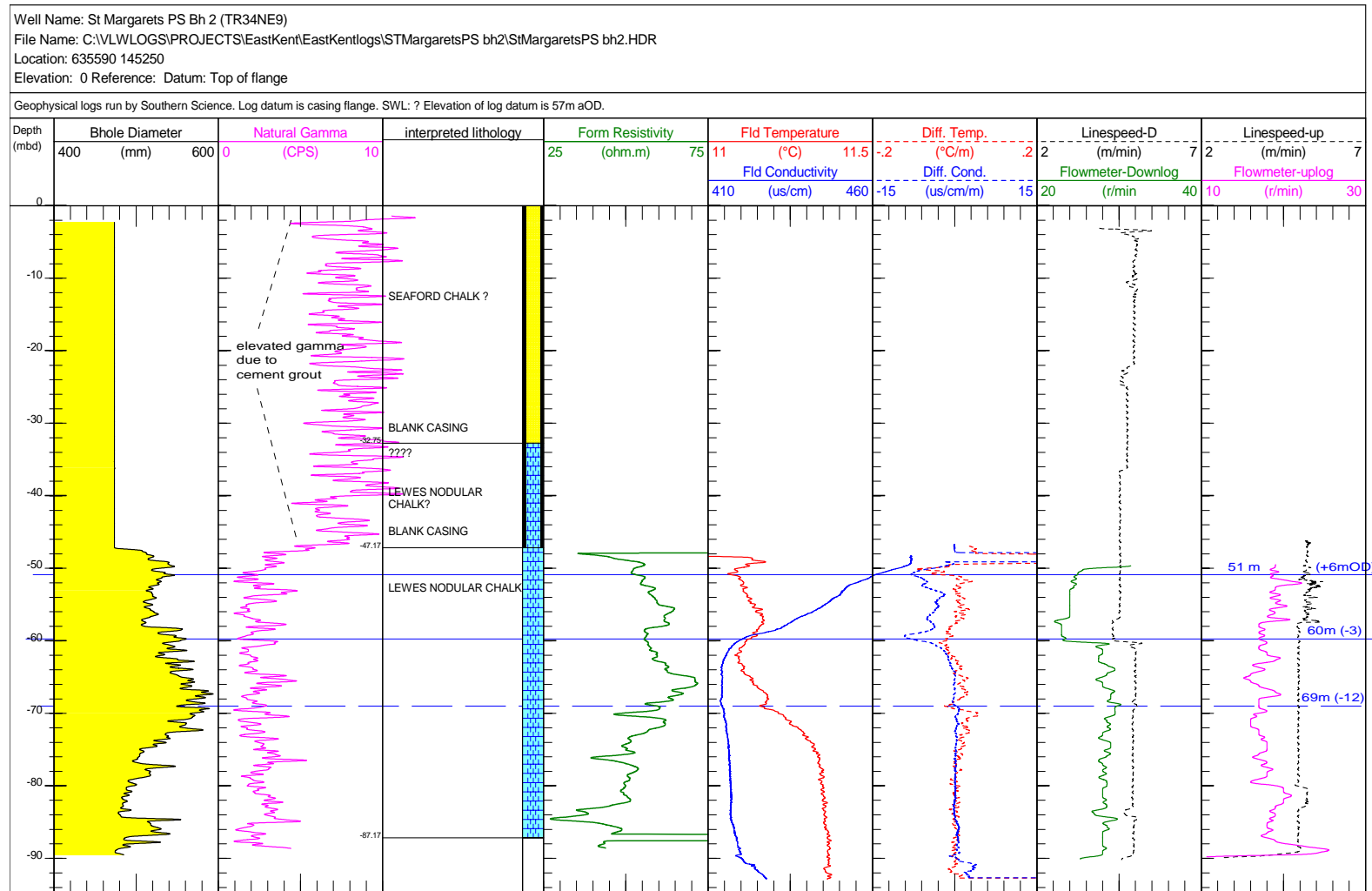


Figure A1-29 Reculver 2 (TR26NW15) Logs run by BGS 1996.



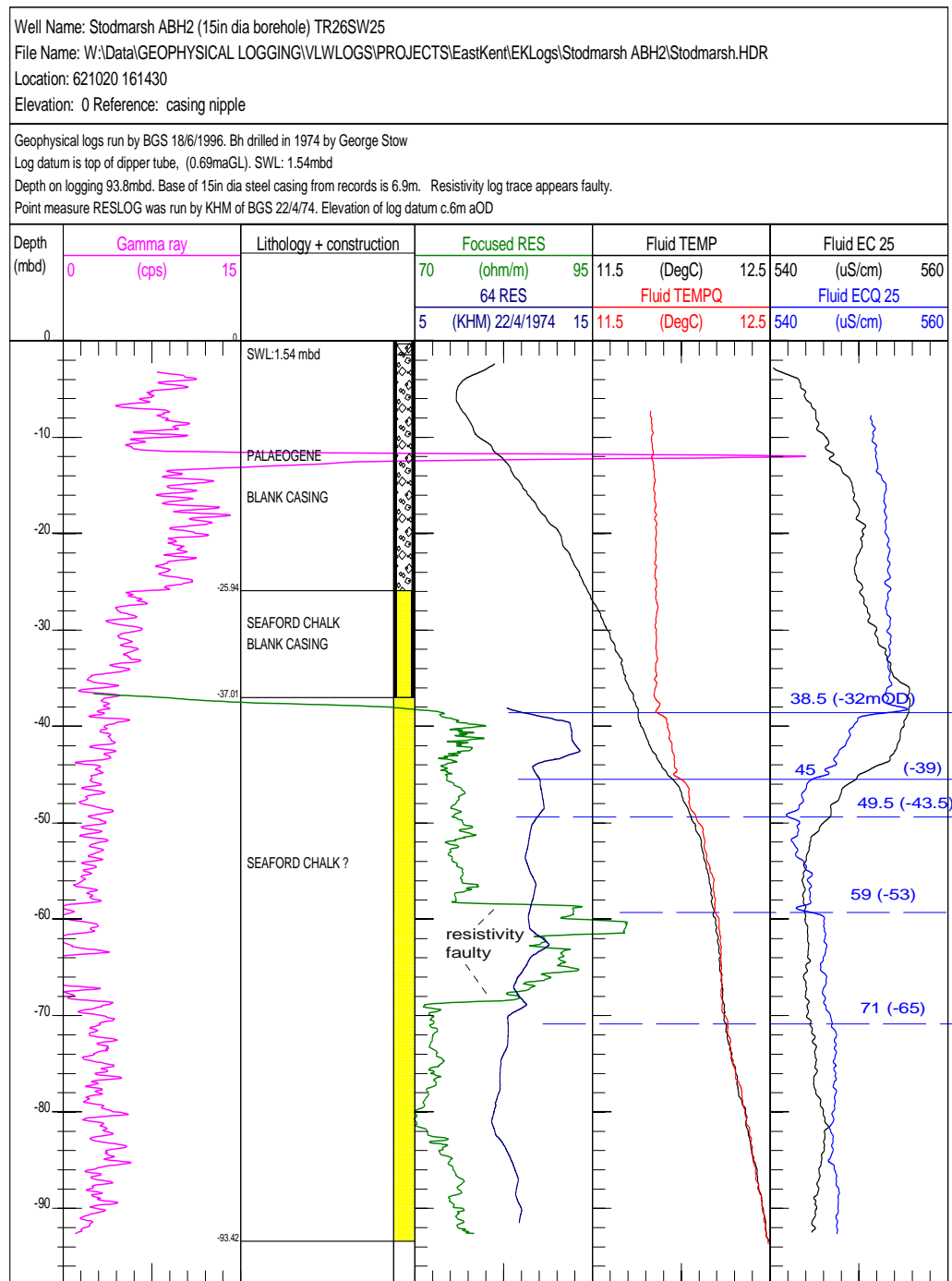


Figure A1-31 Stodmarsh ABH2 (TR26SW25) Logs run by BGS 1996

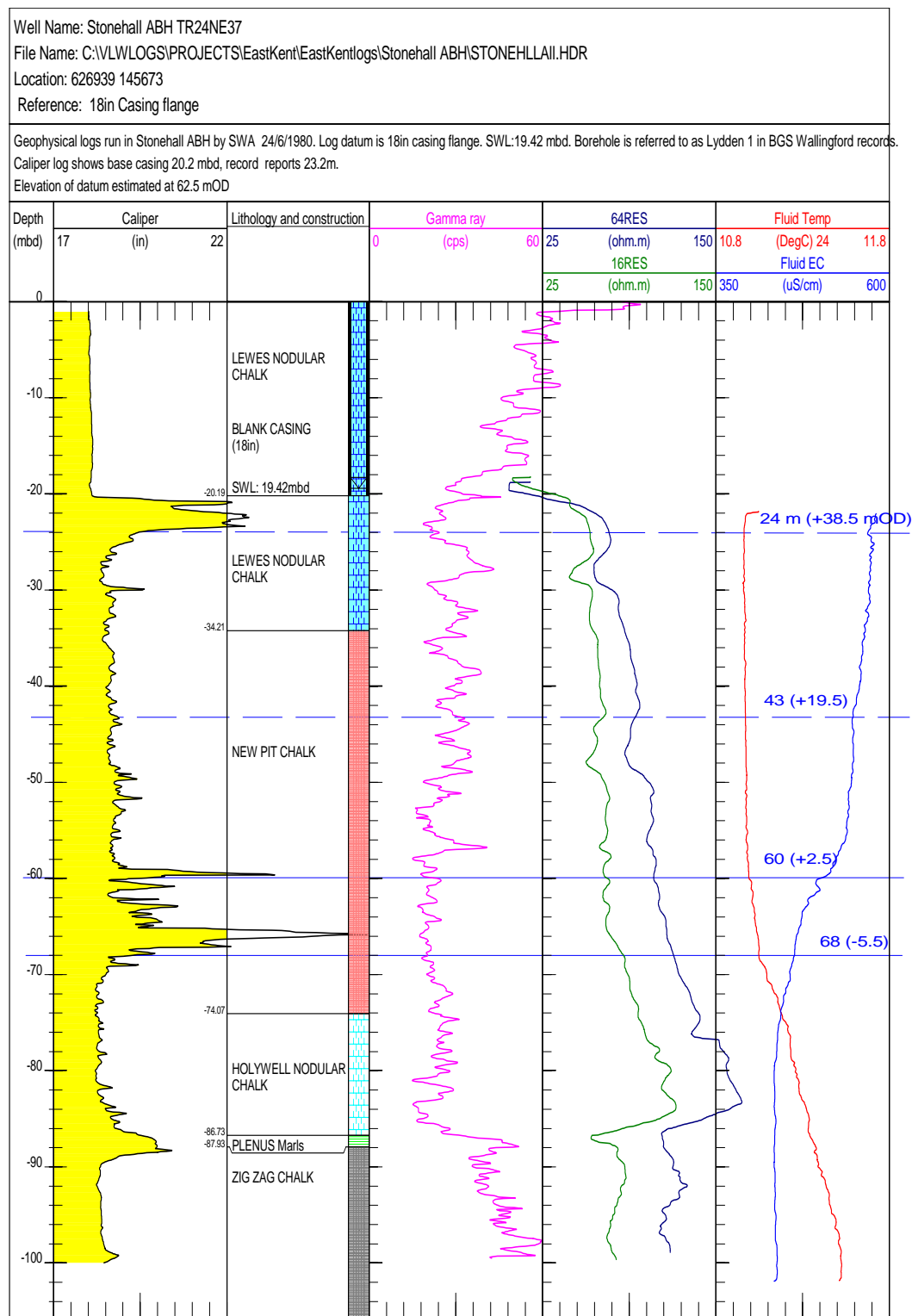


Figure A1-32 Stonehall PS ABH (TR24NE37) Logs run by SWA in 1980 and digitised

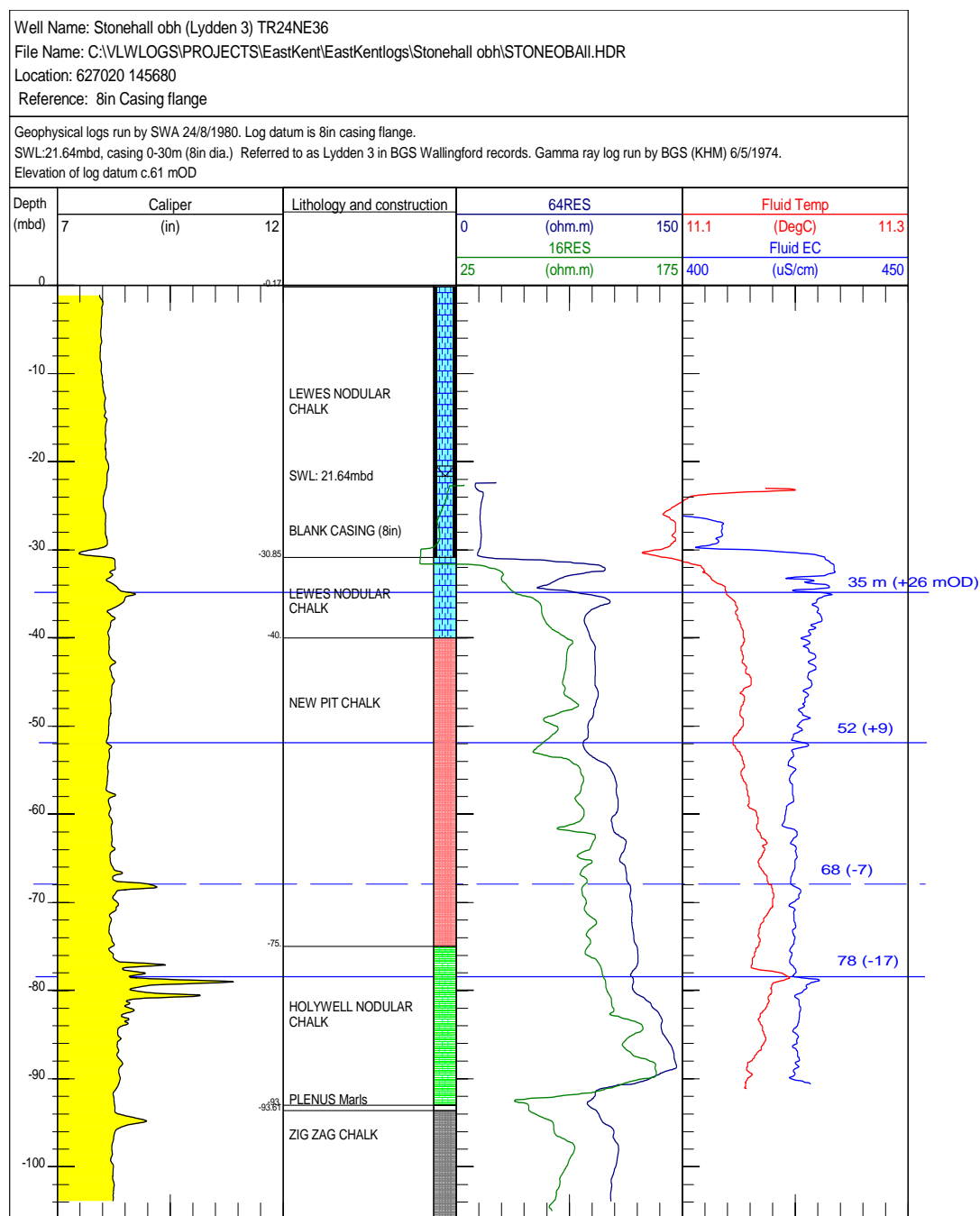


Figure A1-33 Stonehall obh (Lydden 3), TR24NE36) Logs run by SWA in 1980 and digitised by BGS

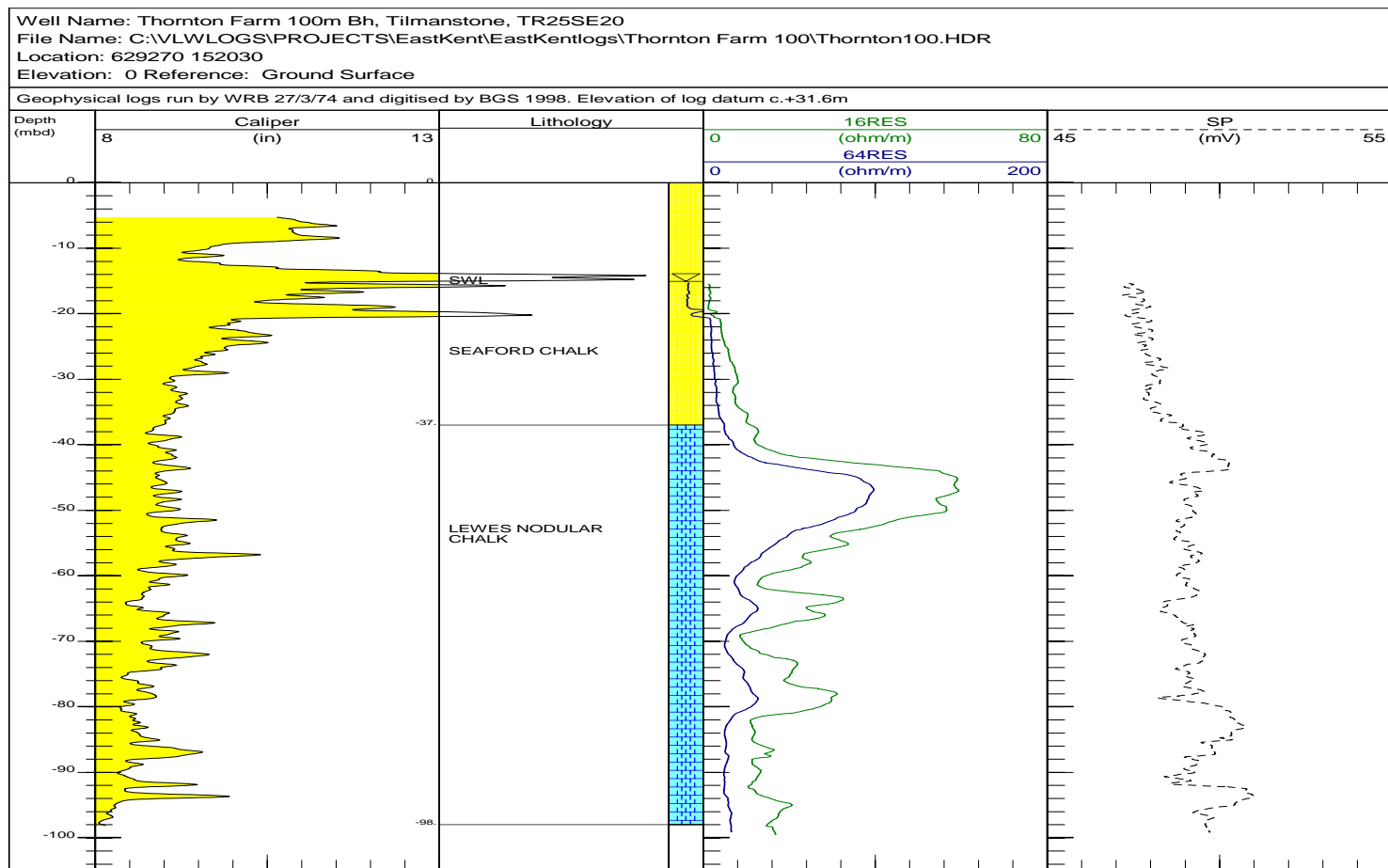


Figure A1-34 Thornton Farm 100m borehole (TR25SE20) Formation logs recorded by WRB in 1974 and digitised by BGS

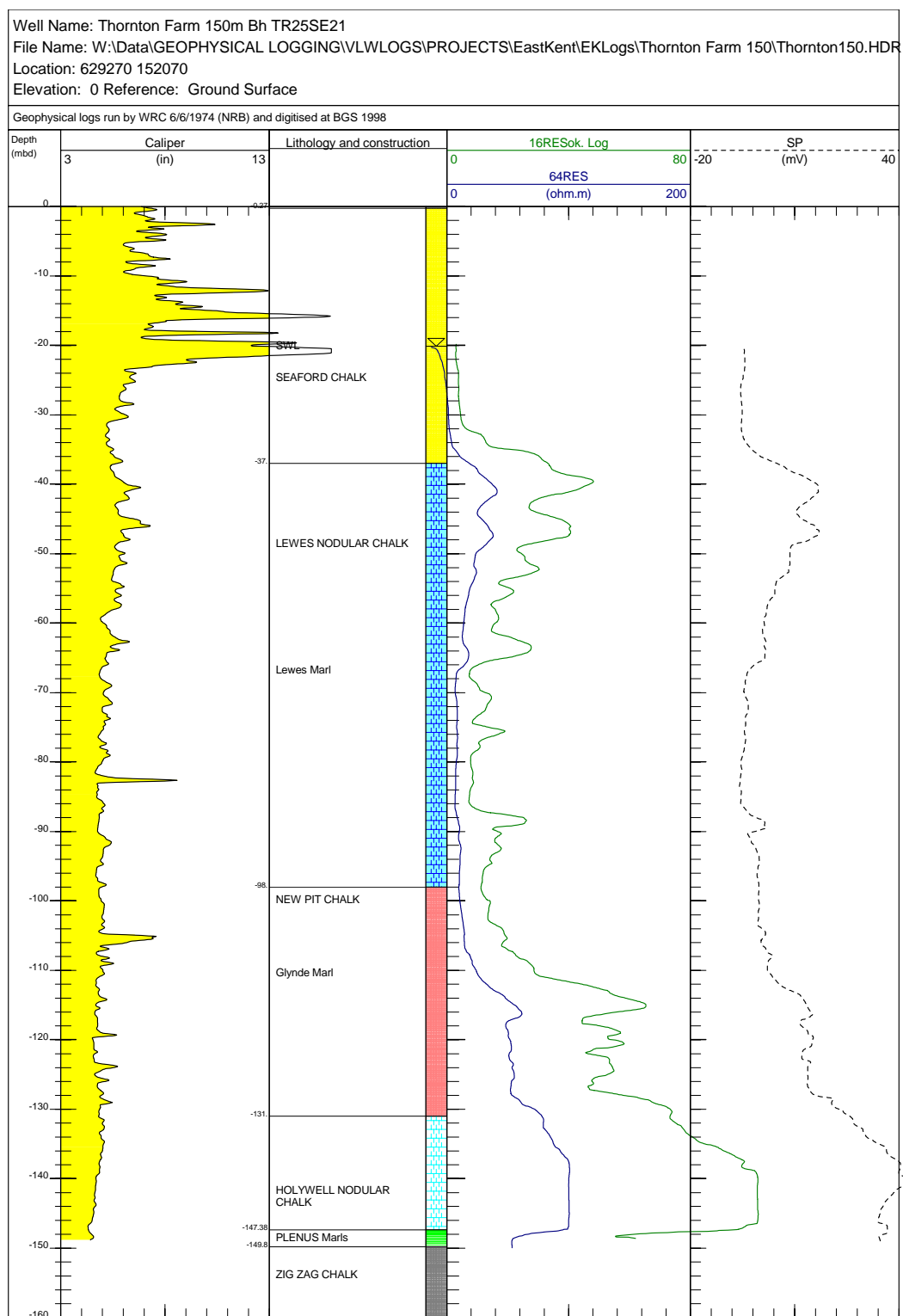


Figure A1-35 Thornton Farm 150m bh (TR25SE21) Logs run by WRB in 1974 and digitised by BGS

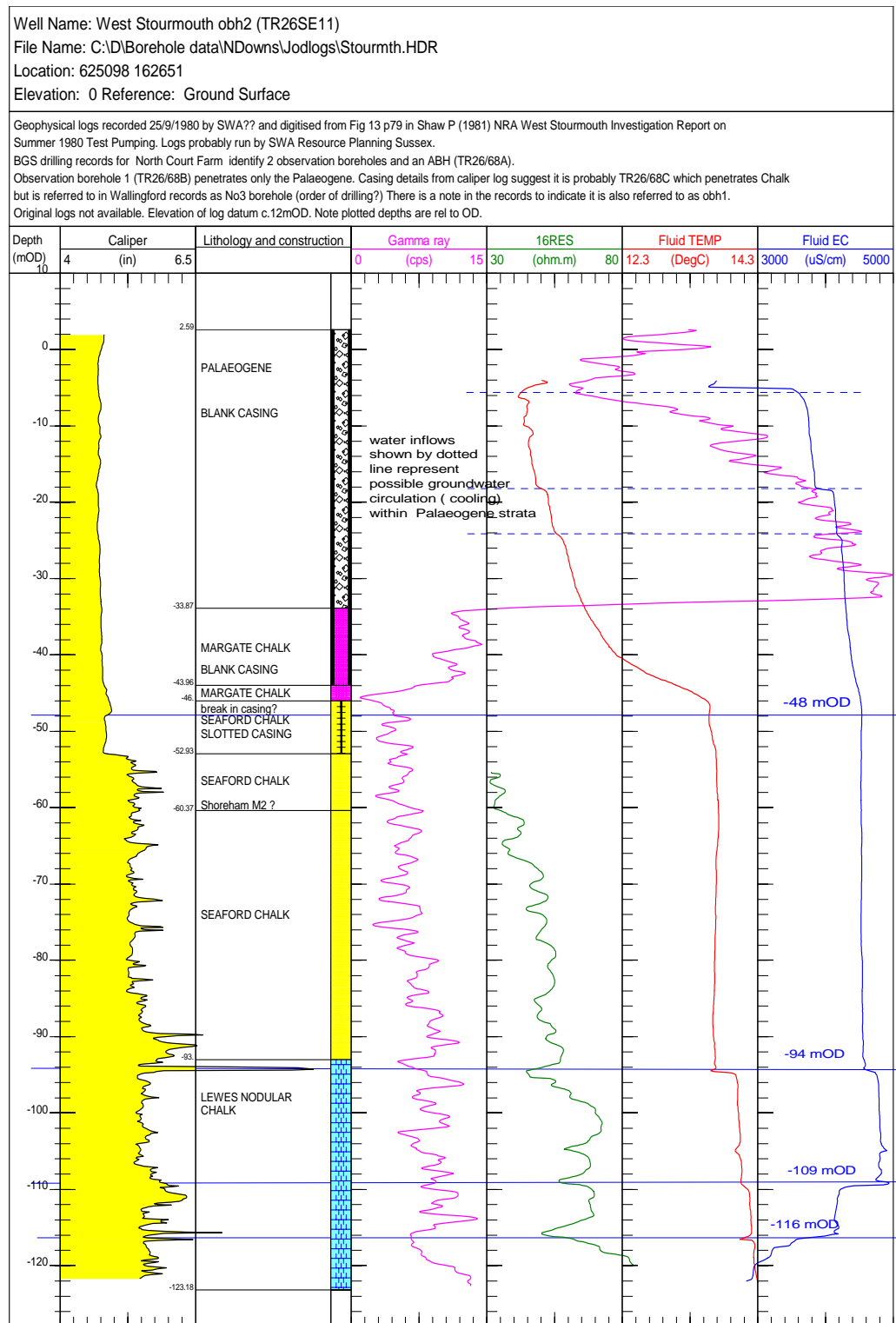


Figure A1-36 West Stourmouth obh2 (TR26SE11) Logs run by SWA? 1980 and digitised by BGS