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C-60 well, Beaufort-Mackenzie Basin, Northern Canada**

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## **ABSTRACT**

Cuttings samples were collected from the Paktoa C-60 well of Beaufort-Mackenzie Basin for Rock-Eval/TOC analysis. As the samples have been hand-picked based on the lithology of the corresponding intervals and have been washed lightly with tap water, effect of drilling mud contamination on the Rock- Eval results, especially on Tmax and S2 values is considered minimal as evident from the shape of S2 peaks on hydrocarbon FID pyrograms.

Thermal maturity represented by Tmax indicates that the Tertiary Taglu sequence intersected at the Paktoa C-60 well is immature with respect to oil generation, even at the total depth of around 2400 m. A high content of volatile and semi-volatile hydrocarbons as reflected by production index (PI) is determined in the 1293-1311.5 m interval where significant oil discovery was made from drill stem test (DST#4).

## **INTRODUCTION**

A multi-disciplinary study of petroleum systems of the Beaufort-Mackenzie Basin has been carried out at the Geological Survey of Canada under the Geo-Mapping for Energy and Minerals (GEM) Program. As part of this research, Rock-Eval analyses were performed on cuttings and core samples from key petroleum exploration wells across the basin to help constrain quantitative models of thermal history and petroleum generation, and as a screening method to define quality potential source rock intervals for the purpose of oil-source correlation to better understand the petroleum systems of the basin.

Geological recycling of organic matter is a common phenomenon in the Mackenzie Delta region and therefore samples may contain multiple populations of organic macerals with different thermal maturity. Also, because cuttings samples are often used, there is potential of drilling-related mixing of sample material from different depths (e.g., borehole caving, recirculation of cuttings through mud system) and sample contamination by organic mud additives. These forms of sample contamination can have a significant adverse effect on the quality of results from bulk analytical procedures such as Rock-Eval pyrolysis. Where

possible, core samples should be used to minimize drilling-related sample contamination. When only cuttings are available, careful sample preparation such as handpicking to avoid caved cuttings and recirculated cuttings as well as sample washing with water to remove drilling mud can help to minimize contamination effect and improve data quality. Such sample preparation practice has been applied to the cuttings samples collected from Paktoa C-60 well.

Paktoa C-60 is a well drilled offshore in the Beaufort-Mackenzie Basin (Figure 1). The well was drilled to a total depth of 2382 m measured depth (2365 m TVD) into the Taglu sequence. A significant oil discovery resulted from drilling stem testing (DST #4) of the Upper Taglu at the depth of 1293-1311.5 m. Geochemical analysis showed that the DST#4 oil from Paktoa C-60 has experienced severe biodegradation (GSC internal data).

## **PROCEDURE OF ROCK-EVAL ANALYSIS**

Rock-Eval analysis has been used extensively for the assessment of hydrocarbon potential in sedimentary basins by characterizing the organic richness, type of organic matter and thermal maturity of the sedimentary rocks. It is a thermal desorption and pyrolysis technique developed to measure the amount of hydrocarbons, CO and CO<sub>2</sub> released from a powdered rock sample upon heating treatment under inert gas flow. At the GSC-Calgary, typical Rock-Eval analysis of well core and cuttings is performed on a Rock-Eval 6 Turbo device following the *Basic Method* as described by Lafrague *et al* (1998) and Behar *et al.* (2001). Drill cuttings samples, usually collected over certain depth intervals (e.g., every 3, 10 or 30 feet depending) by grabbing an aliquot from the composite cuttings bags/containers prepared at well site, are washed with tap water in an attempt to remove any residual drilling mud. In this study, a drill cuttings sample was collected over every 10 m interval by handpicking the material according to the major lithology as determined during well drilling and wireline logging. The handpicked samples were washed lightly with tap water to remove drilling mud. Since the penetrated sediments at Paktoa C-60 are not yet fully consolidated, care had been taken not to leave the cuttings soaked in water for too long. The cuttings samples were

then left standing in open air to dry out before being powdered. Aliquots of about 70 mg of each powdered cuttings sample were subjected to Rock-Eval analysis.

Initially samples are heated at 300°C for 3 minutes to volatilize any free hydrocarbons (HC) and these are represented by the Rock-Eval S1 peaks. Ideally, the area under the S1 pyrolysis curve (mg HC/g of initial rock) represents hydrocarbons generated *in situ* over geologic time, but sample impregnation by migrated hydrocarbons, expulsion and loss of hydrocarbons or organic drilling contaminants (e.g. oil-based drilling mud) can also affect the S1 results. Following this isothermal heating step, samples are heated linearly from 300°C to 650°C at a rate of 25°C/minute, yielding an S2 peak that represents thermal decomposition products from sedimentary organic matter called kerogen. Under ideal conditions, the area under the S2 curve (mg HC/g of initial rock) represents the remaining hydrocarbon potential of the rock sample at increased thermal maturity; however, the results can also be affected by the presence of heavy bitumen or oil impregnation. The temperature at the maximum of S2 peak (TpS2) varies with the thermal maturity of the sedimentary organic matter, and is converted to Tmax (°C), the thermal maturity parameter originally established on the older Rock-Eval 2 model and well accepted by petroleum geologists and geochemists.

The S3 curve corresponds to the amount of CO<sub>2</sub> (mg CO<sub>2</sub>/g of initial rock) generated from organic matter during the initial isothermal heating step and the programmed heating phase up to 400°C. CO<sub>2</sub> generated between 400°C and 650°C is from the thermal decomposition of carbonate minerals. The Rock-Eval 6 instrument also records the amount of CO generated during pyrolysis and attributes various proportions to organic carbon and mineral sources, depending on sample temperature (Behar *et al.*, 2001 for details). The amount of pyrolysable or productive organic carbon (PC) is determined by combining the S1, S2, S3, CO<sub>2</sub> and CO contributions according to a specific formula (Behar *et al.*, 2001). Pyrolysis mineral carbon is determined from the high temperature portions of the CO and CO<sub>2</sub> pyrolysis curves.

Following pyrolysis, samples are transferred to an oxidation furnace of the Rock-Eval 6 instrument where they are linearly heated from 300°C to 850°C under air flow to determine the amount of residual organic carbon (RC) and oxidation mineral carbon from CO and CO<sub>2</sub>

generated during oxidation. The total organic carbon (TOC, wt %) is the sum of the productive and residual organic carbon. Similarly, mineral carbon (MINC) is the sum of the pyrolysis and oxidation mineral carbon.

Other key Rock-Eval parameters included in this report are production index ( $PI = S1/(S1 + S2)$ ), hydrogen index ( $HI = (S2 \times 100)/TOC$  in mg HC/g TOC) and oxygen index ( $OI = (S3 \times 100)/TOC$  in mg  $CO_2$ /g TOC). PI is often used as a thermal maturity indicator because S1 and thus PI should increase with increasing maturation due to hydrocarbon generation. However, petroleum expulsion from a source rock at high maturation will result in lowered S1 and PI. In addition, a high PI may also indicate a pay zone due to oil accumulation. It should also be noted that S1 and PI can be affected by drilling mud contamination. Plot of HI versus OI (Espitalié *et al.*, 1977) has been used to determine the organic matter type and thermal maturity, and such plots are also included in this report. Sample contamination such as heavy bitumen impregnation, sample weathering and extremely low TOC content can affect HI and OI values, therefore these results must be interpreted carefully. HI versus Tmax plots (Espitalié *et al.*, 1984) can also be used to examine organic maturation pathways in situations where OI values are anomalously high due to contributions from mineral carbon or other factors (Peters, 1986).

Peters (1986) discusses various factors that influence Rock-Eval parameters and presents guidelines for interpreting Rock-Eval data. For immature rocks, sample contamination (natural or drilling related) is indicated by multi-modal S2 peaks and PI values  $> 0.2$ . For TOC values  $< 0.5$  wt%, pyrolysate adsorption on the mineral matrix can affect S1, S2 and Tmax values, an effect most significant for argillaceous rocks. Peters (1986) suggests that Tmax values are unreliable when S2 values are less than 0.2 mg HC/g rock, although this criterion likely varies depending on the type of organic matter and rock matrix. For example, Obermajer *et al.* (2007) suggested a minimum S2 value of 0.35 mg HC/g rock for correctly interpreting Tmax values based on data from the Arctic Islands, and Riediger *et al.* (2004) used a value of 0.5 mg HC/g rock in their study of Triassic rocks from north-eastern British Columbia.

## RESULTS AND DISCUSSIONS

Table 1 lists the Rock-Eval/TOC results for the cuttings samples from Paktoa C-60 well. Data are presented in the familiar Rock-Eval 2 format. These Rock-Eval parameters have also been plotted against depth in Figure 2. Hydrocarbon FID pyrograms showing the S1 and S2 peak curves are presented in Appendix A for all the samples.

No apparent bimodal S2 peaks occur in the analyzed cuttings samples. Other than those from 1275-1350m interval, the cutting samples have a minimal or negligible front shoulder to their S2 peaks, suggesting the impact of drilling mud contamination has been well minimized by handpicking and water washing. Thus the maturity related  $T_{max}$  values are considered not to have been significantly affected, and should represent the thermal maturation level of the samples. For samples from 1275-1350 m interval, an apparent front shoulder peak is present on their S2 peaks, most likely due to the presence of heavy hydrocarbon or bitumen (rather than drilling mud contamination), as a geochemical study of the DST recovered oil from this zone indicates that the accumulated oil has experienced severe biodegradation (GSC Internal data). In addition, samples from the 1275-1350 m interval also have much higher content of free hydrocarbons as indicated by their S1 and PI values (Table 1 and Figure 2). This is in agreement with the oil discovery from this zone during drill stem testing (Paktoa C-60 Final Well Report, 2006).

The Kugmallit-Richards-Taglu sequences penetrated at Paktoa C-60 have TOC contents typically below 1% with the exception of a thin bed of coal/carbonaceous deposit at 2350 and 2360 m interval (Table 1 and Figure 2). Plots of HI vs OI and HI vs  $T_{max}$  indicate the samples mainly contain type III (terrestrially-derived) organic matter (Figures 3-4). Furthermore, their thermal maturity parameter  $T_{max}$  is generally lower than 425°C. The coal sample from 2353 m has a  $T_{max}$  of 421°C (Table 1). In fact, this immature feature has support from the micropaleontological study by McNeil (2006) who reported a vitrinite reflectance of 0.45% for the sample at 1980m from Paktoa C-60 well. Therefore, the Tertiary

sections penetrated at Paktoa C-60 have poor source rock potential and have unlikely generated any significant volume of oil.

Overall, Rock-Eval data indicate low maturity and no hydrocarbon potential for the sedimentary sequences from Paktoa C-60 well, hence no detailed organic geochemical investigation is to be pursued on the cuttings samples for oil-source correlation purpose.

## **ACKNOWLEDGEMENTS**

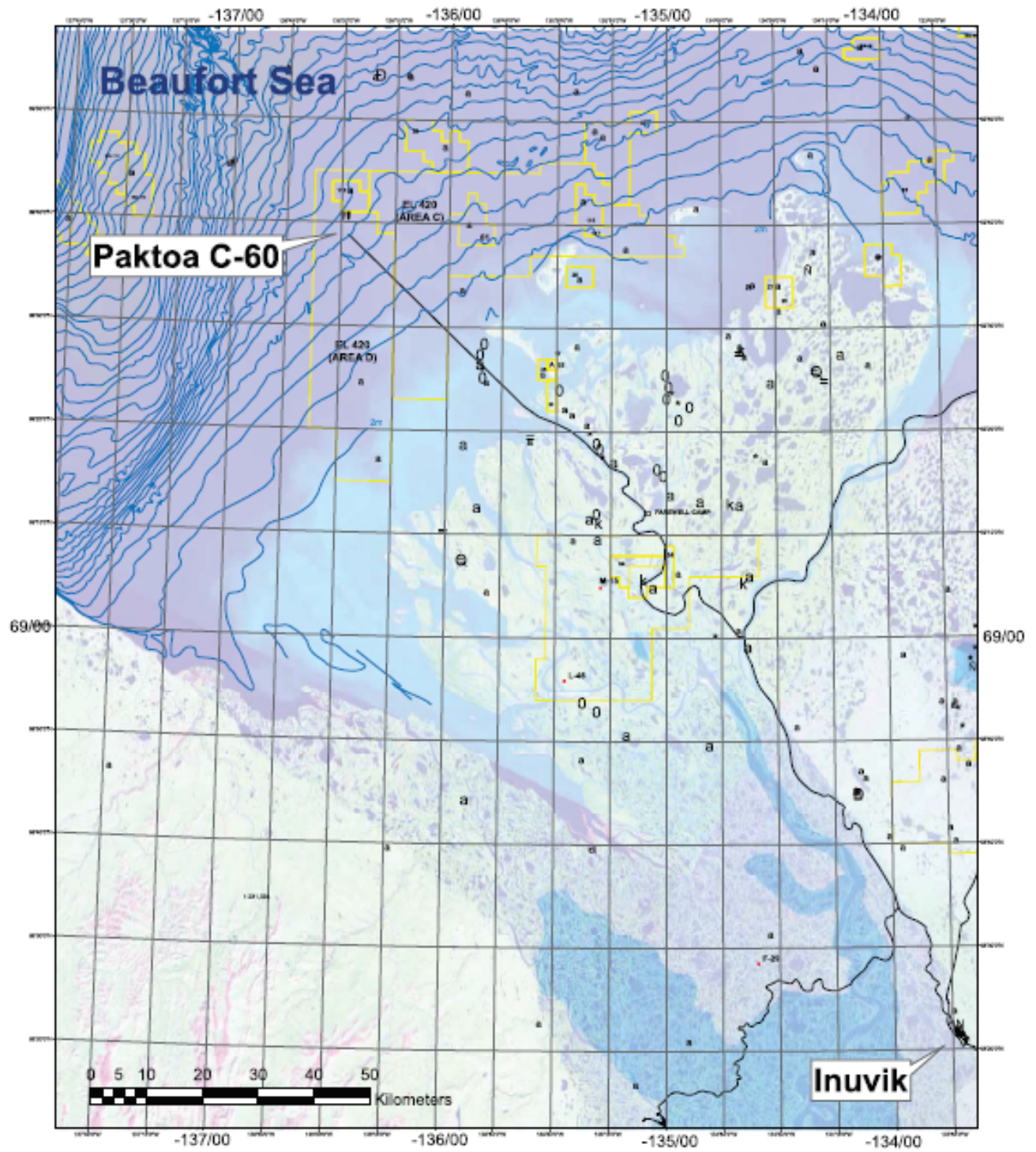
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**Figure 1.** Location of Paktoa C-60 well in the Beaufort-Mackenzie Basin, Northwest Territory (from Paktoa C-60 Final Report, Devon Canada Corporation, 2006)

Table 1. Rock-Eval/TOC results for the cuttings samples from Paktoa C-60 well, Beaufort-Mackenzie Basin

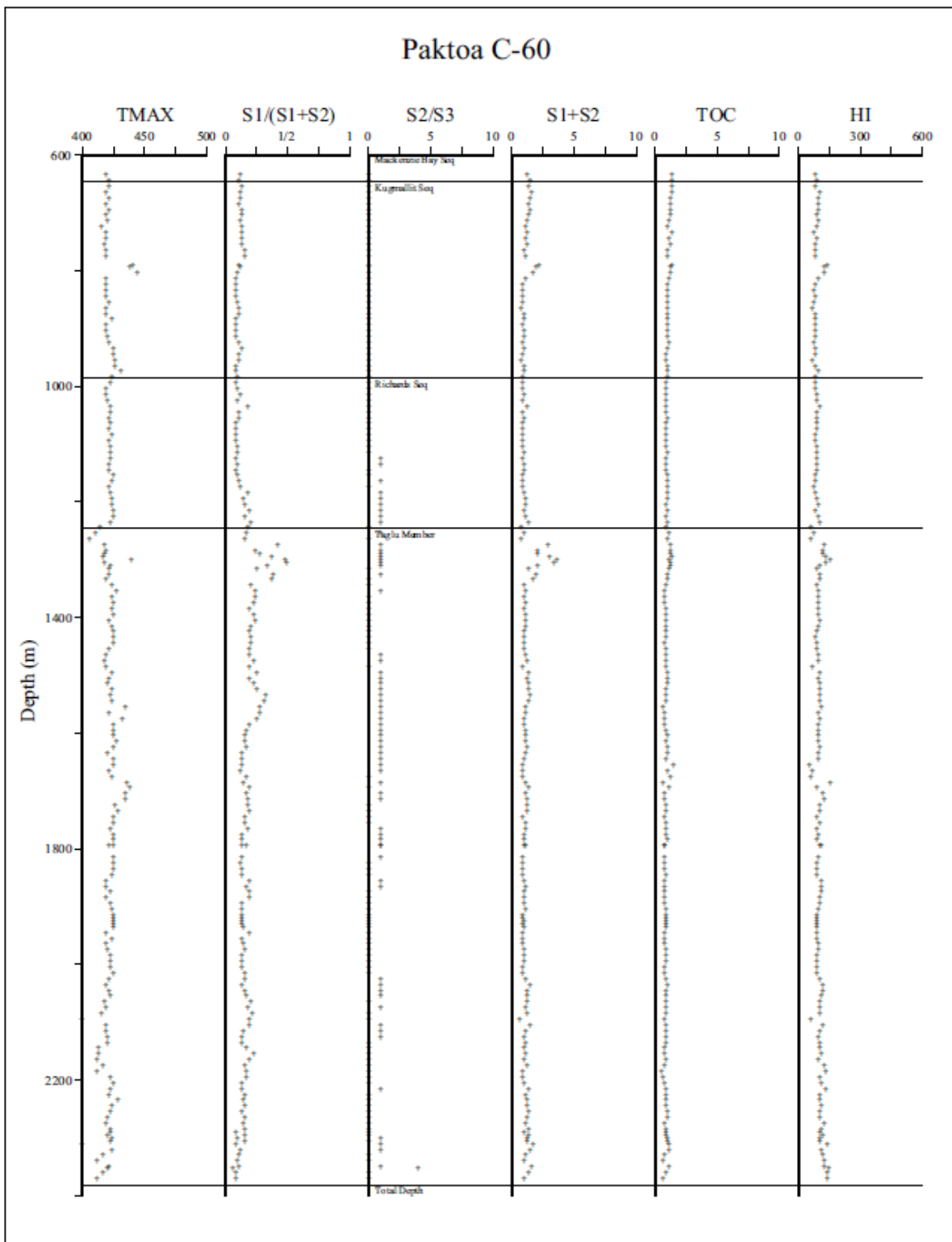
SAMPLE_ID	Depth (m)		TOC (wt %)	Tmax (C)	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	RC (wt%)	PC (wt%)	MINC (wt%)	HI (mg/g)	OI (mg/g)	PI
	from	to											
C-556063	635	645	1.42	420	0.16	1.16	2.53	1.21	0.21	0.58	82	178	0.12
C-556064	645	655	1.44	422	0.17	1.33	3.03	1.20	0.24	0.64	92	210	0.11
C-556065	655	665	1.40	422	0.19	1.19	3.63	1.16	0.24	0.65	85	259	0.14
C-556068	665	675	1.37	419	0.19	1.46	3.03	1.12	0.25	0.57	107	221	0.11
C-556069	675	685	1.32	422	0.17	1.27	3.84	1.07	0.25	0.66	96	291	0.12
C-556070	685	695	1.27	420	0.16	1.24	3.71	1.03	0.24	0.60	98	292	0.11
C-556071	695	705	1.30	422	0.19	1.27	3.70	1.05	0.25	0.63	98	285	0.13
C-556072	705	715	1.28	420	0.17	1.16	3.32	1.05	0.23	0.62	91	259	0.13
C-556073	715	725	1.11	421	0.15	1.09	2.90	0.91	0.20	0.56	98	261	0.12
C-556074	725	735	1.08	416	0.16	0.99	2.86	0.88	0.20	0.54	92	265	0.14
C-556075	735	745	1.38	420	0.17	1.08	2.76	1.18	0.20	0.51	78	200	0.14
C-556076	745	755	1.14	419	0.17	1.01	3.12	0.94	0.20	0.58	89	274	0.15
C-556077	755	765	1.29	418	0.17	1.06	3.33	1.07	0.22	0.59	82	258	0.14
C-556078	765	775	1.05	420	0.17	0.92	3.51	0.85	0.20	0.65	88	334	0.16
C-556079	775	785	1.06	419	0.18	0.93	3.81	0.85	0.21	0.66	88	359	0.16
C-556080	790	795	1.42	441	0.24	2.01	4.08	1.09	0.33	0.57	142	287	0.11
C-556081	795	805	1.34	438	0.23	1.73	4.28	1.03	0.31	0.67	129	319	0.12
C-556082	805	810	1.23	445	0.17	1.61	3.86	0.96	0.27	0.56	131	314	0.09
C-556083	815	825	1.13	420	0.11	1.08	4.37	0.89	0.24	0.55	96	387	0.09
C-556084	825	835	1.05	420	0.09	0.89	4.06	0.84	0.21	0.59	85	387	0.09
C-556085	835	845	1.00	420	0.08	0.78	3.09	0.83	0.17	0.63	78	309	0.10
C-556086	845	855	1.04	419	0.09	0.89	3.75	0.84	0.20	0.65	86	361	0.09
C-556087	855	865	1.04	422	0.09	0.83	2.72	0.87	0.17	0.68	80	262	0.10
C-556088	865	875	1.02	420	0.09	0.73	3.70	0.83	0.19	0.66	72	363	0.11
C-556089	875	885	1.04	419	0.11	0.91	3.26	0.85	0.19	0.65	88	313	0.11
C-556090	885	895	1.09	424	0.08	0.92	3.64	0.89	0.20	0.64	84	334	0.08
C-556091	895	905	1.03	420	0.08	0.90	3.86	0.82	0.21	0.57	87	375	0.08
C-556092	905	915	1.04	420	0.08	0.92	4.08	0.83	0.21	0.51	88	392	0.08
C-556093	915	925	1.07	421	0.09	0.94	4.17	0.85	0.22	0.61	88	390	0.09
C-556094	925	935	1.10	422	0.10	0.84	4.43	0.88	0.22	0.60	76	403	0.11
C-556095	935	945	1.07	425	0.13	0.89	3.93	0.86	0.21	0.69	83	367	0.13
C-556096	945	955	0.96	425	0.10	0.80	2.95	0.79	0.17	0.51	83	307	0.11
C-556097	955	965	0.95	427	0.08	0.68	3.59	0.77	0.18	0.68	72	378	0.11
C-556098	965	975	1.08	427	0.09	0.90	3.34	0.89	0.19	0.85	83	309	0.09
C-556099	975	985	1.01	431	0.09	0.97	3.79	0.80	0.21	0.56	96	375	0.08
C-556100	985	995	1.03	424	0.09	0.84	3.98	0.83	0.20	0.62	82	386	0.10
C-556101	995	1005	0.94	423	0.08	0.83	2.73	0.77	0.17	0.65	88	290	0.09
C-556102	1005	1015	0.94	420	0.09	0.83	2.97	0.77	0.17	0.67	88	316	0.10
C-556103	1015	1025	0.96	420	0.12	0.89	3.04	0.77	0.19	0.73	93	317	0.12
C-556104	1025	1035	0.88	421	0.09	0.84	2.00	0.73	0.15	0.73	95	227	0.10
C-556105	1035	1045	0.92	423	0.23	1.02	2.55	0.73	0.19	0.70	111	277	0.18
C-556106	1045	1055	0.89	423	0.10	0.84	1.90	0.74	0.15	0.80	94	213	0.10
C-556107	1055	1065	0.99	422	0.11	0.92	2.05	0.83	0.16	0.86	93	207	0.11
C-556108	1065	1075	0.92	423	0.08	0.85	2.65	0.75	0.17	0.92	92	288	0.09
C-556109	1075	1085	0.94	422	0.08	0.88	2.15	0.78	0.16	0.81	94	229	0.08
C-556110	1085	1095	0.92	424	0.08	0.78	2.21	0.77	0.15	1.06	85	240	0.09
C-556111	1095	1105	0.94	422	0.08	0.81	2.43	0.78	0.16	0.94	86	259	0.09
C-556112	1105	1115	0.94	423	0.09	0.84	2.24	0.79	0.15	1.00	89	238	0.10
C-556113	1115	1125	1.00	423	0.10	0.90	1.93	0.84	0.16	0.75	90	193	0.10
C-556114	1125	1135	0.93	423	0.08	0.87	1.61	0.79	0.14	0.70	94	173	0.08
C-556115	1135	1145	0.96	422	0.10	0.89	1.66	0.81	0.15	0.57	93	173	0.10
C-556116	1145	1155	0.97	422	0.08	0.92	1.91	0.81	0.16	0.72	95	197	0.08
C-556117	1155	1165	1.00	425	0.10	0.86	1.76	0.85	0.15	0.90	86	176	0.11
C-556118	1165	1175	0.99	424	0.11	0.87	1.46	0.85	0.14	0.58	88	147	0.11
C-556119	1175	1185	1.01	422	0.11	0.78	1.77	0.87	0.14	0.69	77	175	0.12
C-556120	1185	1195	0.99	423	0.18	0.81	1.57	0.85	0.14	0.65	82	159	0.18
C-556121	1195	1205	0.99	424	0.17	0.94	1.36	0.84	0.15	0.69	95	137	0.15
C-556122	1205	1215	0.98	424	0.18	0.94	1.62	0.83	0.15	0.78	96	165	0.16
C-556123	1215	1225	0.99	425	0.19	0.83	1.22	0.85	0.14	0.76	84	123	0.18
C-556124	1225	1235	0.96	425	0.18	0.92	1.30	0.81	0.15	0.55	96	135	0.17
C-556125	1235	1245	1.02	423	0.28	1.05	1.62	0.85	0.17	0.64	103	159	0.21
C-556126	1245	1255	0.98	415	0.14	0.66	1.46	0.85	0.13	0.47	67	149	0.18

Table 1. (continued)

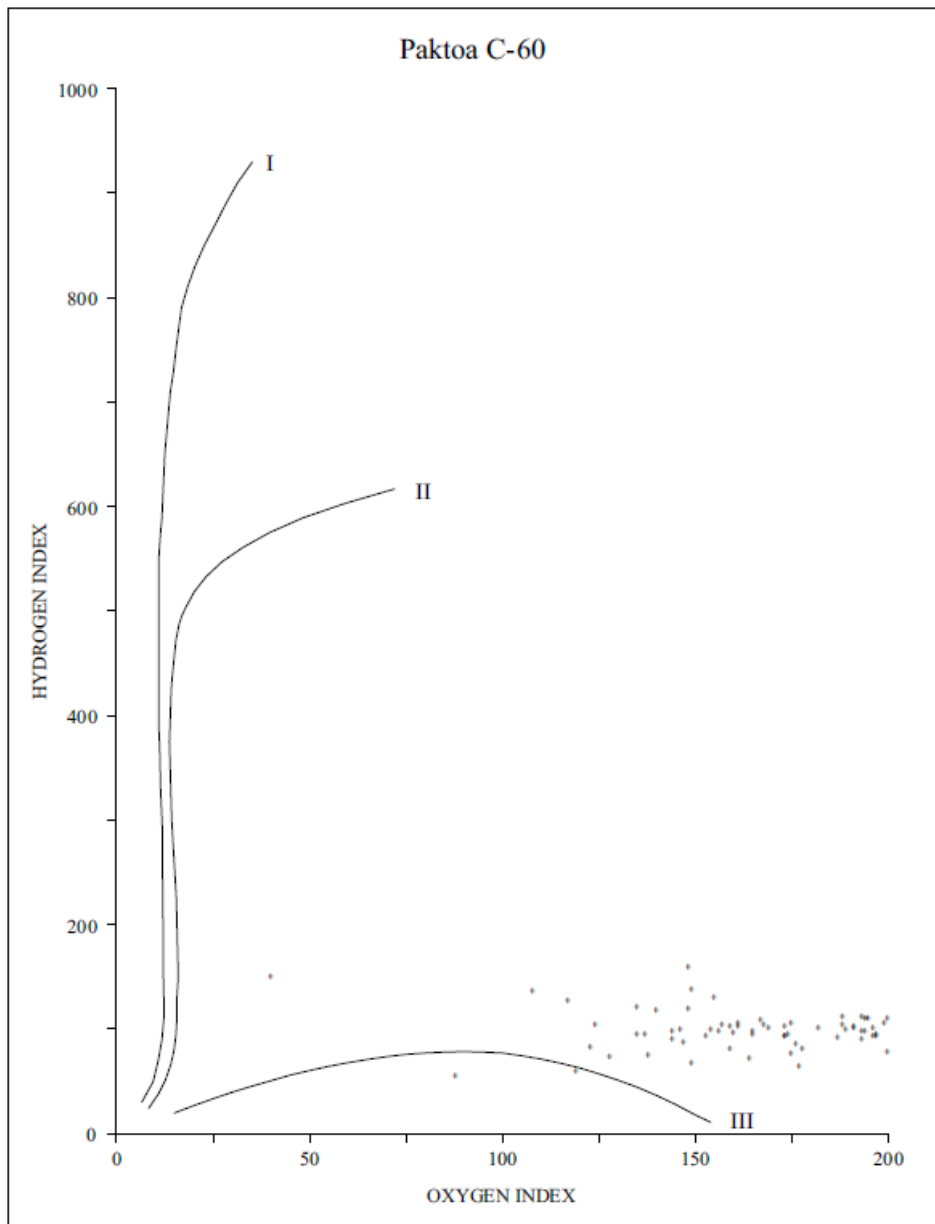
SAMPLE_ID	Depth (m)		TOC (wt %)	Tmax (C)	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	RC (wt%)	PC (wt%)	MINC (wt%)	HI (mg/g)	OI (mg/g)	PI
	from	to											
C-556127	1255	1265	1.10	411	0.17	0.84	1.52	0.94	0.16	0.35	76	138	0.17
C-556128	1265	1275	1.07	406	0.13	0.70	1.89	0.92	0.15	0.33	65	177	0.16
C-556129	1275	1285	1.32	418	1.21	1.69	1.55	1.01	0.31	1.06	128	117	0.42
C-556130	1285	1290	1.29	420	0.51	1.58	1.74	1.04	0.25	0.52	122	135	0.25
C-556131	1290	1295	1.26	418	0.59	1.50	1.77	1.01	0.25	0.49	119	140	0.28
C-556132	1295	1300	1.38	417	1.15	1.88	1.49	1.06	0.32	0.48	136	108	0.38
C-556133	1300	1305	1.18	440	1.77	1.88	1.75	0.81	0.37	0.56	159	148	0.49
C-556134	1305	1310	1.28	418	1.71	1.76	1.91	0.92	0.36	0.76	138	149	0.49
C-556135	1310	1315	1.26	423	0.72	1.40	2.45	0.99	0.27	0.71	111	194	0.34
C-556136	1315	1325	1.10	422	0.36	1.05	2.36	0.89	0.21	0.50	95	215	0.25
C-556137	1325	1335	1.08	422	0.78	1.20	2.11	0.84	0.24	0.69	111	195	0.39
C-556138	1335	1345	1.00	419	0.65	1.06	2.75	0.76	0.24	1.39	106	275	0.38
C-556139	1345	1355	0.89	424	0.21	0.81	2.10	0.73	0.16	0.70	91	236	0.21
C-556140	1355	1365	0.85	428	0.27	0.84	1.64	0.70	0.15	0.72	99	193	0.25
C-556141	1365	1375	0.82	424	0.25	0.81	2.13	0.65	0.17	1.32	99	260	0.24
C-556142	1375	1385	0.85	426	0.26	0.87	1.80	0.69	0.16	0.75	102	212	0.23
C-556143	1385	1395	0.89	424	0.20	0.87	2.15	0.73	0.16	0.72	98	242	0.19
C-556144	1395	1405	0.92	426	0.26	0.89	2.08	0.75	0.17	0.76	97	226	0.22
C-556145	1405	1415	0.88	422	0.29	0.92	1.92	0.71	0.17	0.69	105	218	0.24
C-556146	1415	1425	0.94	424	0.25	0.92	2.24	0.76	0.18	0.74	98	238	0.22
C-556147	1425	1435	0.91	426	0.22	0.86	1.92	0.75	0.16	0.77	95	211	0.20
C-556148	1435	1445	0.90	425	0.21	0.79	2.07	0.74	0.16	0.79	88	230	0.21
C-556149	1445	1455	0.87	425	0.21	0.81	1.95	0.72	0.15	0.67	93	224	0.21
C-556150	1455	1465	0.89	422	0.20	0.80	1.93	0.74	0.15	0.60	90	217	0.20
C-556151	1465	1475	0.93	420	0.22	0.94	1.78	0.76	0.17	0.41	101	191	0.19
C-556152	1475	1485	0.92	418	0.28	0.94	1.80	0.75	0.17	0.49	102	196	0.23
C-556153	1485	1495	0.95	420	0.17	0.69	1.56	0.81	0.14	0.36	73	164	0.20
C-556154	1495	1505	1.00	424	0.36	1.03	1.61	0.82	0.18	0.57	103	161	0.26
C-556155	1505	1515	0.99	422	0.25	0.99	1.52	0.82	0.17	0.53	100	154	0.20
C-556156	1515	1525	1.05	421	0.33	1.09	1.30	0.87	0.18	0.46	104	124	0.23
C-556157	1525	1535	0.97	424	0.37	1.06	1.62	0.79	0.18	0.69	109	167	0.26
C-556158	1535	1545	0.95	423	0.48	0.98	1.64	0.77	0.18	0.89	103	173	0.33
C-556159	1545	1555	0.91	424	0.45	0.95	1.53	0.74	0.17	0.80	104	168	0.32
C-556160	1555	1565	0.75	435	0.33	0.84	1.41	0.60	0.15	0.79	112	188	0.28
C-556161	1565	1575	0.87	422	0.34	0.86	1.25	0.72	0.15	0.61	99	144	0.28
C-556162	1575	1585	0.76	433	0.28	0.81	1.33	0.62	0.14	0.75	107	175	0.26
C-556163	1585	1595	0.83	426	0.19	0.83	1.57	0.69	0.14	0.89	100	189	0.19
C-556164	1595	1605	0.95	426	0.19	0.93	1.57	0.80	0.15	0.70	98	165	0.17
C-556165	1605	1615	1.01	425	0.18	0.98	1.62	0.85	0.16	0.74	97	160	0.15
C-556166	1615	1625	0.93	428	0.18	0.94	1.57	0.78	0.15	0.79	101	169	0.16
C-556167	1625	1635	1.00	426	0.21	1.04	1.57	0.84	0.16	0.70	104	157	0.17
C-556168	1635	1645	1.01	421	0.17	1.01	1.47	0.85	0.16	0.63	100	146	0.15
C-556169	1645	1655	0.92	426	0.14	0.88	1.60	0.77	0.15	0.63	96	174	0.14
C-556170	1655	1665	1.50	425	0.12	0.82	1.32	1.37	0.13	0.52	55	88	0.13
C-556171	1665	1675	1.09	422	0.11	0.81	1.40	0.95	0.14	0.55	74	128	0.12
C-556172	1675	1685	1.26	424	0.15	0.75	1.50	1.13	0.13	0.51	60	119	0.17
C-556173	1685	1695	0.65	436	0.18	1.02	1.85	0.48	0.17	0.79	157	285	0.15
C-556174	1695	1705	1.20	439	0.26	1.10	2.24	1.01	0.19	0.91	92	187	0.19
C-556175	1705	1715	0.85	435	0.20	1.01	1.98	0.68	0.17	0.86	119	233	0.17
C-556176	1715	1725	0.86	435	0.23	1.08	2.10	0.68	0.18	0.73	126	244	0.18
C-556177	1725	1735	0.92	427	0.22	1.00	2.46	0.73	0.19	0.69	109	267	0.18
C-556178	1735	1745	0.88	429	0.25	0.97	2.24	0.70	0.18	0.48	110	255	0.21
C-556179	1745	1755	0.87	426	0.15	0.78	1.87	0.73	0.14	0.61	90	215	0.16
C-556180	1755	1765	0.91	425	0.19	0.99	2.03	0.74	0.17	0.69	109	223	0.16
C-556181	1765	1775	0.97	423	0.20	0.90	1.48	0.82	0.15	0.68	93	153	0.18
C-556182	1775	1785	0.93	426	0.15	0.92	1.45	0.78	0.15	0.76	99	156	0.14
C-556183	1785	1795	0.99	426	0.14	0.89	1.43	0.85	0.14	0.62	90	144	0.14
C-556184	1795	1805	0.81	422	0.19	0.91	1.56	0.66	0.15	0.73	112	193	0.17
C-556185	1795	1805	0.82	426	0.14	0.88	1.63	0.68	0.14	0.78	107	199	0.14
C-556186	1815	1825	0.85	425	0.13	0.84	1.65	0.71	0.14	0.73	99	194	0.13
C-556187	1825	1835	0.86	426	0.11	0.82	1.76	0.72	0.14	0.78	95	205	0.12
C-556188	1835	1845	0.84	425	0.12	0.79	2.00	0.69	0.15	0.74	94	238	0.13

Table 1. (continued)

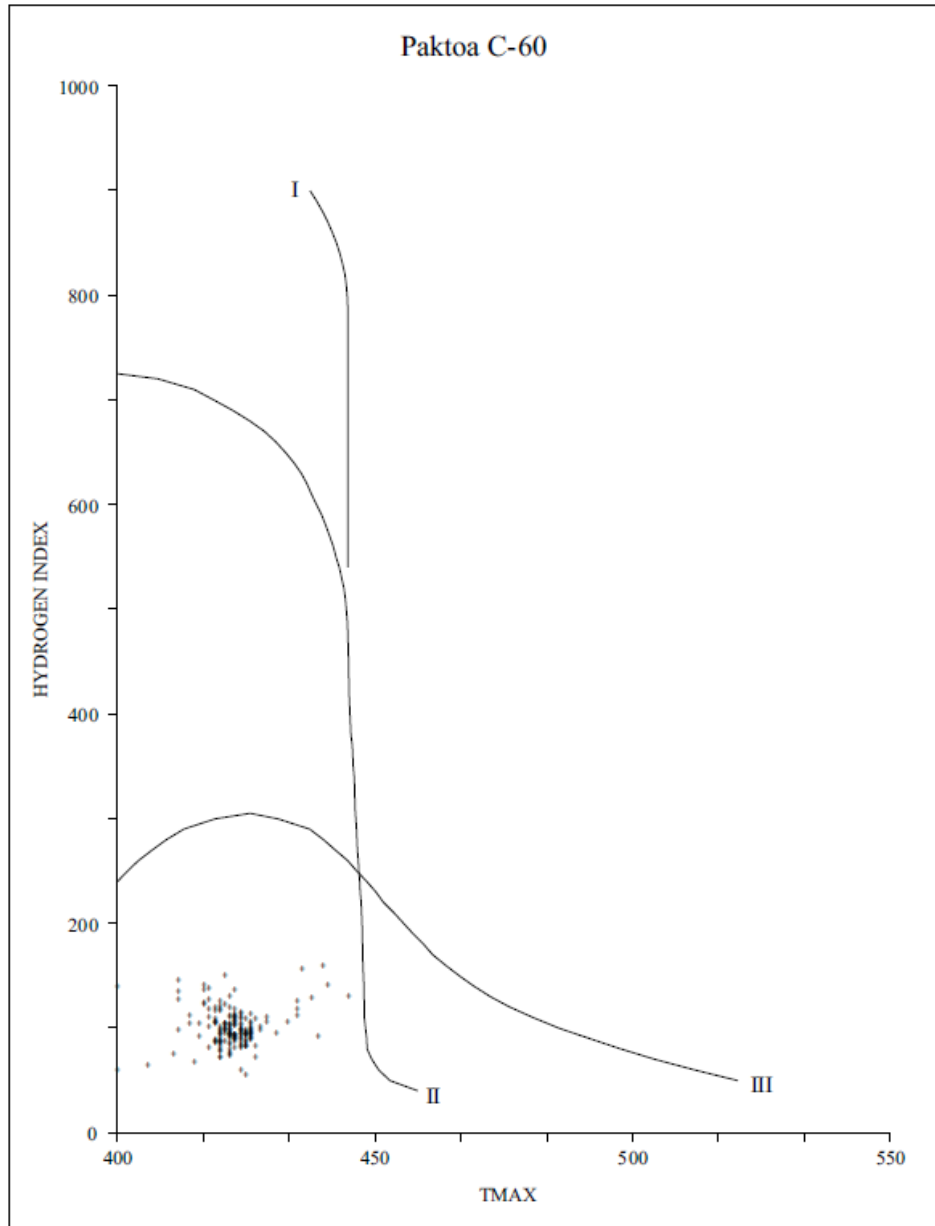
SAMPLE_ID	Depth (m)		TOC (wt %)	Tmax (C)	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	RC (wt%)	PC (wt%)	MINC (wt%)	HI (mg/g)	OI (mg/g)	PI
	from	to											
C-556189	1845	1855	0.92	424	0.13	0.84	1.98	0.77	0.15	0.70	91	215	0.14
C-556190	1855	1865	0.76	420	0.20	0.88	1.59	0.61	0.15	0.72	116	209	0.18
C-556191	1865	1875	0.81	419	0.20	0.95	1.75	0.65	0.16	0.70	117	216	0.18
C-556192	1875	1885	0.78	423	0.21	0.87	1.93	0.62	0.16	0.79	112	247	0.19
C-556193	1885	1895	0.77	419	0.20	0.84	1.82	0.62	0.15	0.67	109	236	0.19
C-556194	1895	1905	0.85	423	0.15	0.89	1.78	0.70	0.15	0.77	105	209	0.15
C-556195	1905	1915	0.95	424	0.16	0.95	2.09	0.78	0.17	0.74	100	220	0.15
C-556196	1915	1925	0.91	426	0.14	0.84	2.21	0.75	0.16	0.77	92	243	0.14
C-556197	1920	1925	0.94	426	0.14	0.84	2.20	0.78	0.16	0.72	89	234	0.14
C-556198	1925	1935	0.98	425	0.14	0.93	2.09	0.82	0.16	0.74	95	213	0.13
C-556199	1930	1935	0.95	425	0.13	0.85	2.11	0.80	0.15	0.72	89	222	0.13
C-556200	1935	1945	0.91	426	0.15	0.85	1.79	0.76	0.15	0.70	93	197	0.15
C-556201	1945	1955	0.79	420	0.19	0.75	1.70	0.65	0.14	0.82	95	215	0.20
C-556202	1955	1965	0.84	424	0.13	0.78	1.65	0.70	0.14	0.63	93	196	0.15
C-556203	1965	1975	0.84	420	0.14	0.82	1.97	0.69	0.15	0.74	98	235	0.15
C-556204	1975	1985	0.92	421	0.17	0.90	1.99	0.76	0.16	0.70	98	216	0.16
C-556205	1985	1995	0.95	423	0.13	0.86	2.14	0.79	0.16	0.81	91	225	0.13
C-556206	1995	2005	0.97	423	0.13	0.87	1.97	0.81	0.16	0.69	90	203	0.13
C-556207	2005	2015	0.85	423	0.13	0.79	2.22	0.69	0.16	0.74	93	261	0.14
C-556208	2015	2025	0.80	425	0.14	0.75	1.85	0.66	0.14	0.71	94	231	0.15
C-556209	2025	2035	0.89	422	0.18	0.92	1.70	0.73	0.16	0.68	103	191	0.16
C-556210	2035	2045	1.04	420	0.21	1.24	2.10	0.84	0.20	0.72	119	202	0.15
C-556211	2045	2055	0.88	422	0.20	1.06	1.94	0.70	0.18	0.73	120	220	0.16
C-556212	2055	2065	0.95	423	0.22	1.08	1.96	0.77	0.18	0.72	114	206	0.17
C-556213	2065	2075	0.93	418	0.27	1.02	2.22	0.74	0.19	0.57	110	239	0.21
C-556214	2075	2085	0.94	419	0.22	0.98	1.77	0.77	0.17	0.43	104	188	0.19
C-556215	2085	2095	0.97	416	0.28	1.02	2.22	0.78	0.19	0.42	105	229	0.21
C-556216	2095	2105	0.84	400	0.13	0.51	2.11	0.70	0.14	0.33	61	251	0.21
C-556217	2105	2115	0.98	419	0.28	1.18	1.45	0.80	0.18	0.35	120	148	0.19
C-556218	2115	2125	0.95	419	0.18	1.02	1.53	0.79	0.16	0.48	107	161	0.15
C-556219	2125	2135	0.88	421	0.14	0.89	1.60	0.73	0.15	0.62	101	182	0.14
C-556220	2135	2145	0.93	421	0.16	0.98	2.18	0.76	0.17	0.64	105	234	0.14
C-556221	2145	2155	0.83	414	0.17	0.86	2.50	0.65	0.18	0.72	104	301	0.17
C-556222	2155	2165	0.76	414	0.25	0.85	2.71	0.58	0.18	0.69	112	357	0.23
C-556223	2165	2175	0.89	412	0.22	0.87	3.19	0.69	0.20	0.61	98	358	0.20
C-556224	2175	2185	0.83	417	0.20	1.04	2.51	0.64	0.19	0.95	125	302	0.16
C-556225	2185	2195	0.55	412	0.15	0.74	2.06	0.40	0.15	0.71	135	375	0.17
C-556226	2195	2205	0.65	423	0.14	0.70	1.72	0.52	0.13	0.74	108	265	0.16
C-556227	2205	2215	0.81	426	0.15	0.92	2.16	0.65	0.16	0.82	114	267	0.14
C-556228	2215	2225	0.90	423	0.18	1.22	2.33	0.70	0.20	0.63	136	259	0.13
C-556229	2225	2235	0.95	422	0.19	0.98	2.98	0.75	0.20	0.62	103	314	0.16
C-556230	2235	2245	0.98	429	0.18	1.05	2.48	0.80	0.18	0.65	107	253	0.15
C-556231	2245	2255	0.91	424	0.20	1.04	2.51	0.72	0.19	0.66	114	276	0.16
C-556232	2255	2265	1.04	423	0.19	1.14	2.43	0.84	0.20	0.62	110	234	0.14
C-556233	2265	2275	1.04	421	0.21	1.09	2.30	0.85	0.19	0.51	105	221	0.16
C-556234	2275	2285	0.77	420	0.17	0.97	2.25	0.60	0.17	0.64	126	292	0.15
C-556235	2285	2295	0.98	423	0.22	1.16	2.46	0.77	0.21	0.82	118	251	0.16
C-556236	2290	2300	0.90	423	0.10	0.96	2.08	0.74	0.16	0.85	107	231	0.10
C-556237	2295	2305	0.93	421	0.22	1.14	2.35	0.73	0.20	0.75	123	253	0.16
C-556238	2305	2308	1.00	423	0.21	1.08	2.52	0.80	0.20	0.60	108	252	0.16
C-556239	2300	2310	1.04	424	0.13	1.15	2.08	0.86	0.18	0.97	111	200	0.10
C-556240	2310	2320	1.13	400	0.14	1.57	2.48	0.90	0.23	0.84	139	219	0.08
C-556241	2320	2330	1.17	424	0.18	1.35	2.37	0.96	0.21	0.83	115	203	0.12
C-556242	2330	2340	0.82	417	0.13	1.01	2.34	0.64	0.18	0.91	123	285	0.11
C-556243	2340	2350	0.70	412	0.10	0.89	2.57	0.53	0.17	0.90	127	367	0.10
C-556244	2353	2355	25.02	421	2.33	37.85	10.11	21.18	3.84	0.87	151	40	0.06
C-556245	2350	2360	1.13	422	0.18	1.47	1.75	0.92	0.21	0.78	130	155	0.11
C-556246	2360	2370	0.88	417	0.13	1.24	2.61	0.67	0.21	0.91	141	297	0.10
C-556247	2370	2380	0.68	412	0.10	0.99	2.33	0.50	0.18	1.07	146	343	0.09



**Figure 2.** Depth profiles of Rock-Eval parameters for the cuttings samples from Paktoa C-60 well, Beaufort-Mackenzie Basin.



**Figure 3.** Plot of hydrogen index (HI) vs oxygen index (OI) for the cuttings samples from Paktoa C-60 well, Beaufort-Mackenzie Basin. Tertiary sedimentary sequences penetrated contain immature Type III organic matter.



**Figure 4.** Plot of hydrogen index (HI) vs thermal maturity Tmax for the cuttings samples from Paktoa C-60 well, Beaufort-Mackenzie Basin. Tertiary sedimentary sequences penetrated contain immature Type III organic matter.

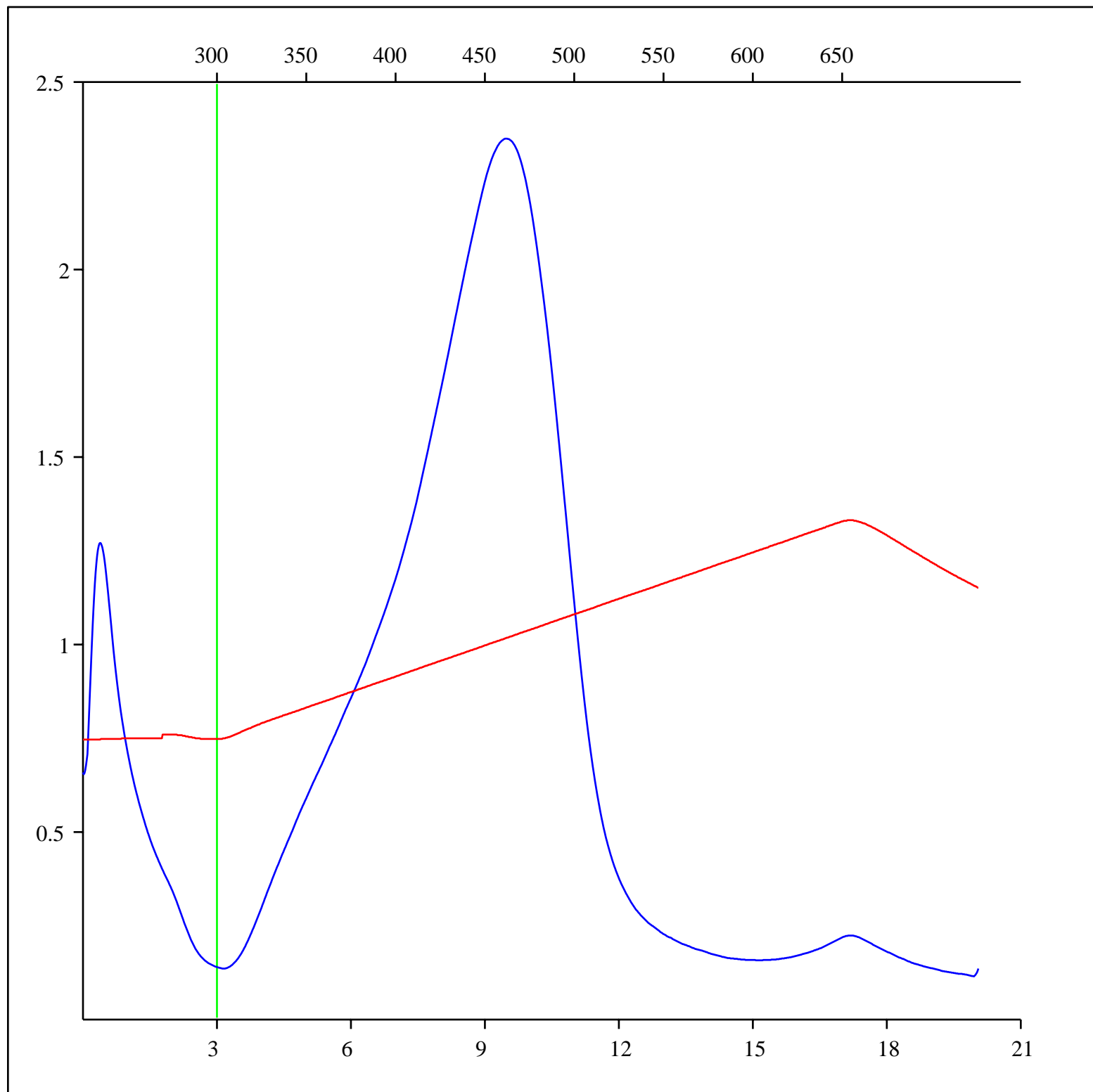


**Appendix A**

**Rock-Eval FID-pyrograms of S1 and S2 Hydrocarbon Peaks  
*for*  
Cuttings Samples from Paktoa C-60 well**

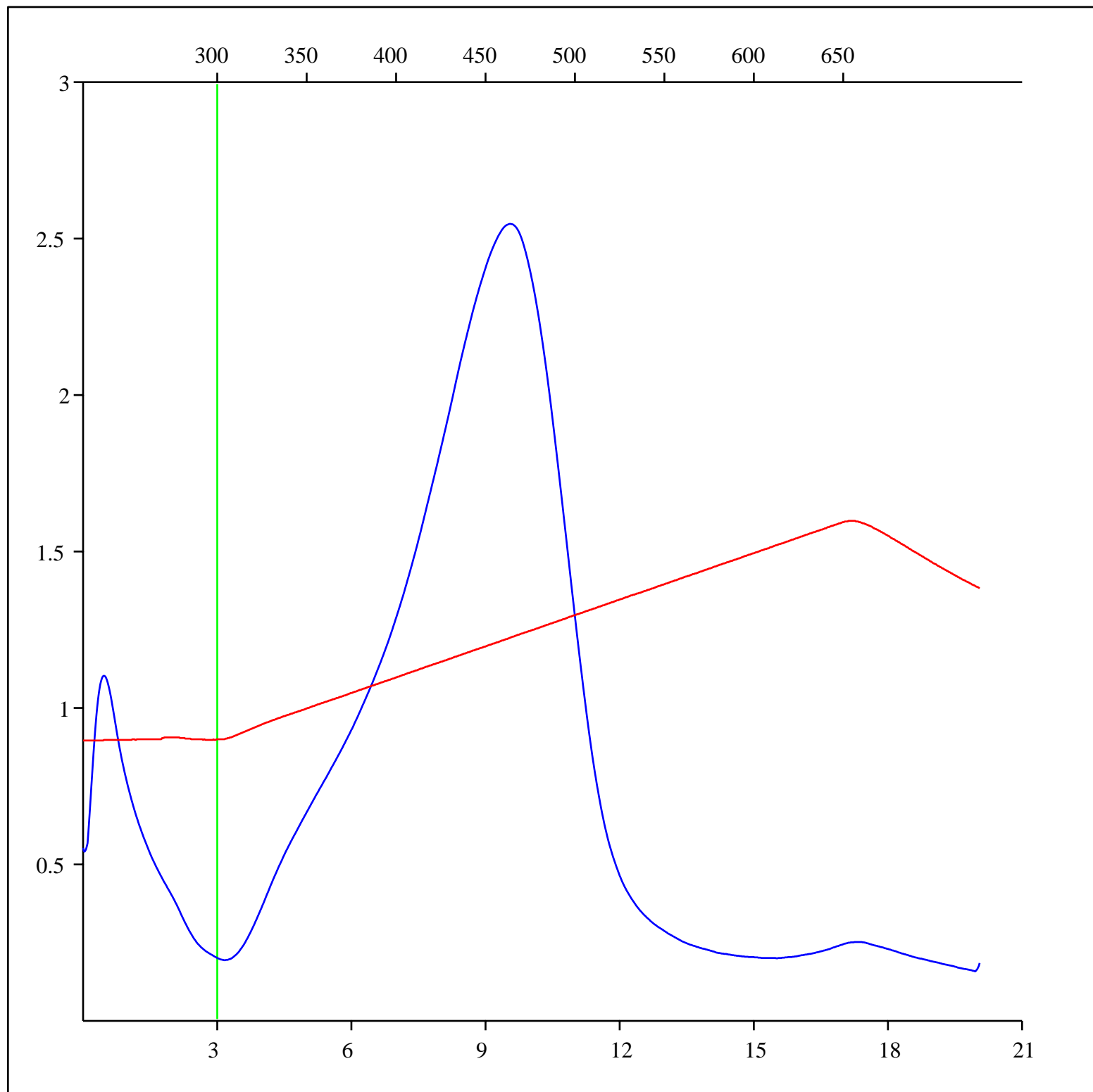
Sample: C-556063  
Acquisition Date: 21-NOV-2012  
Location: PAKTOA C-60  
Depth: 635 - 645 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



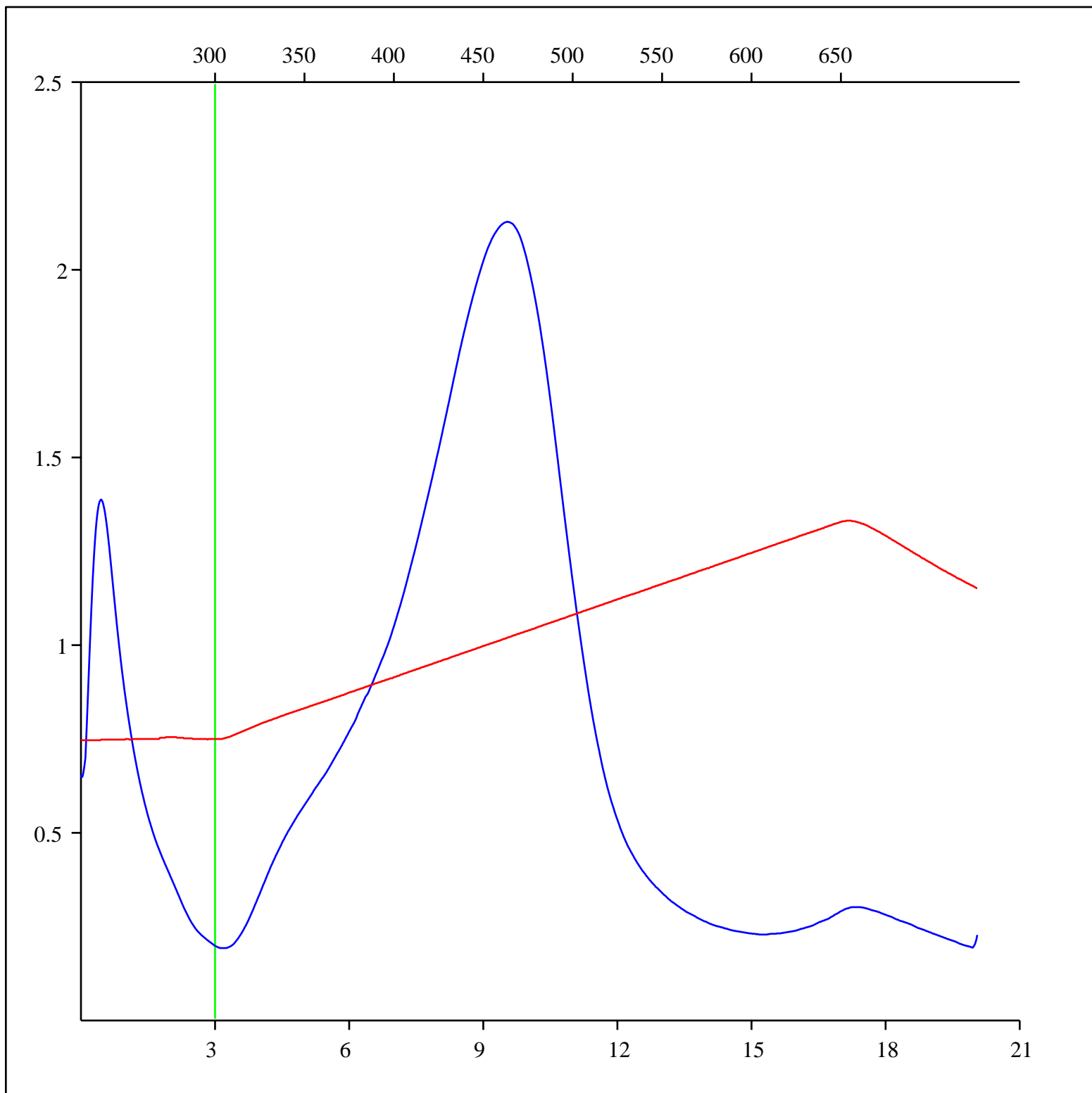
Sample: C-556064  
Acquisition Date: 21-NOV-2012  
Location: PAKTOA C-60  
Depth: 645 - 655 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



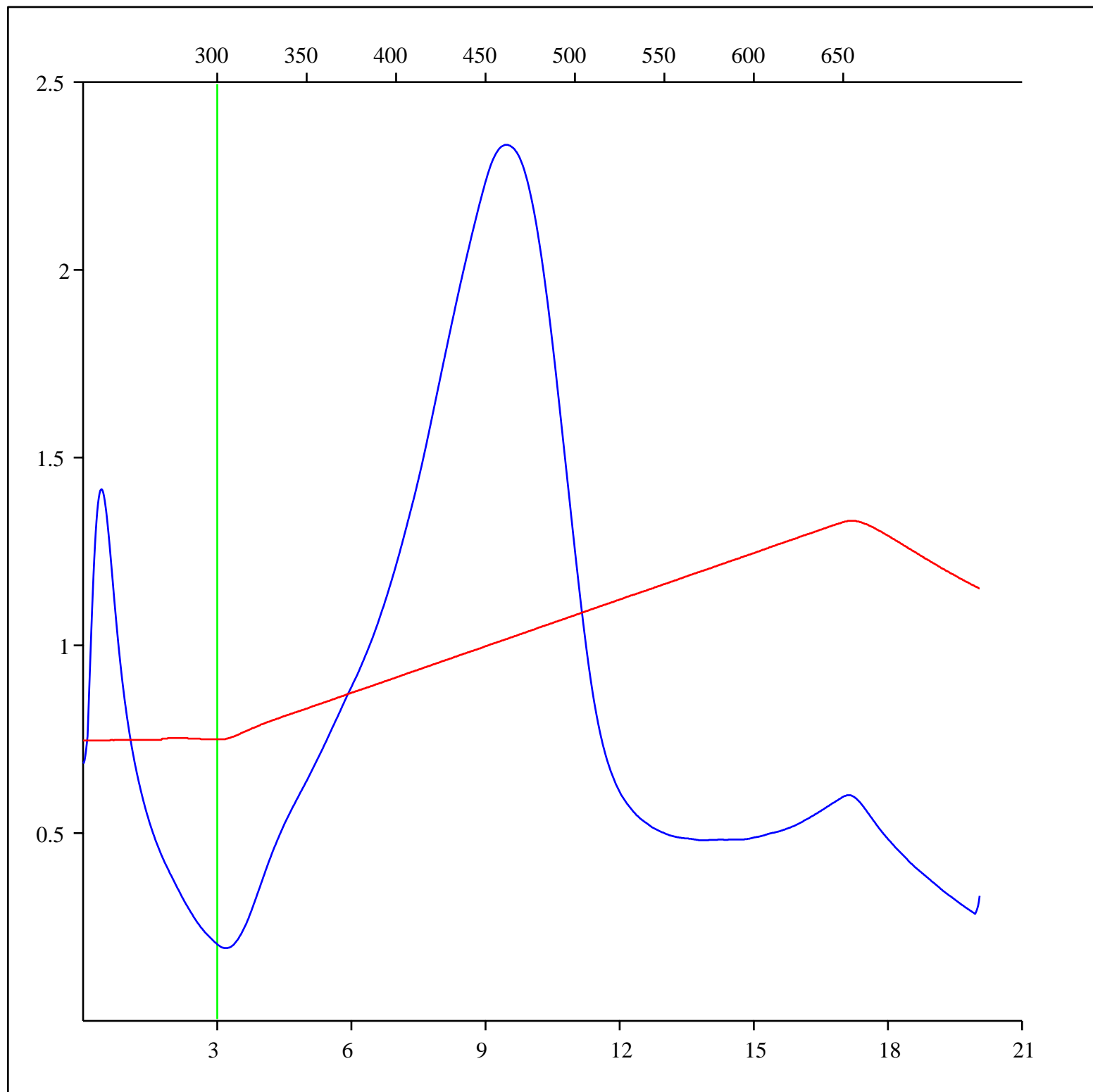
Sample: C-556065  
Acquisition Date: 21-NOV-2012  
Location: PAKTOA C-60  
Depth: 655 - 665 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



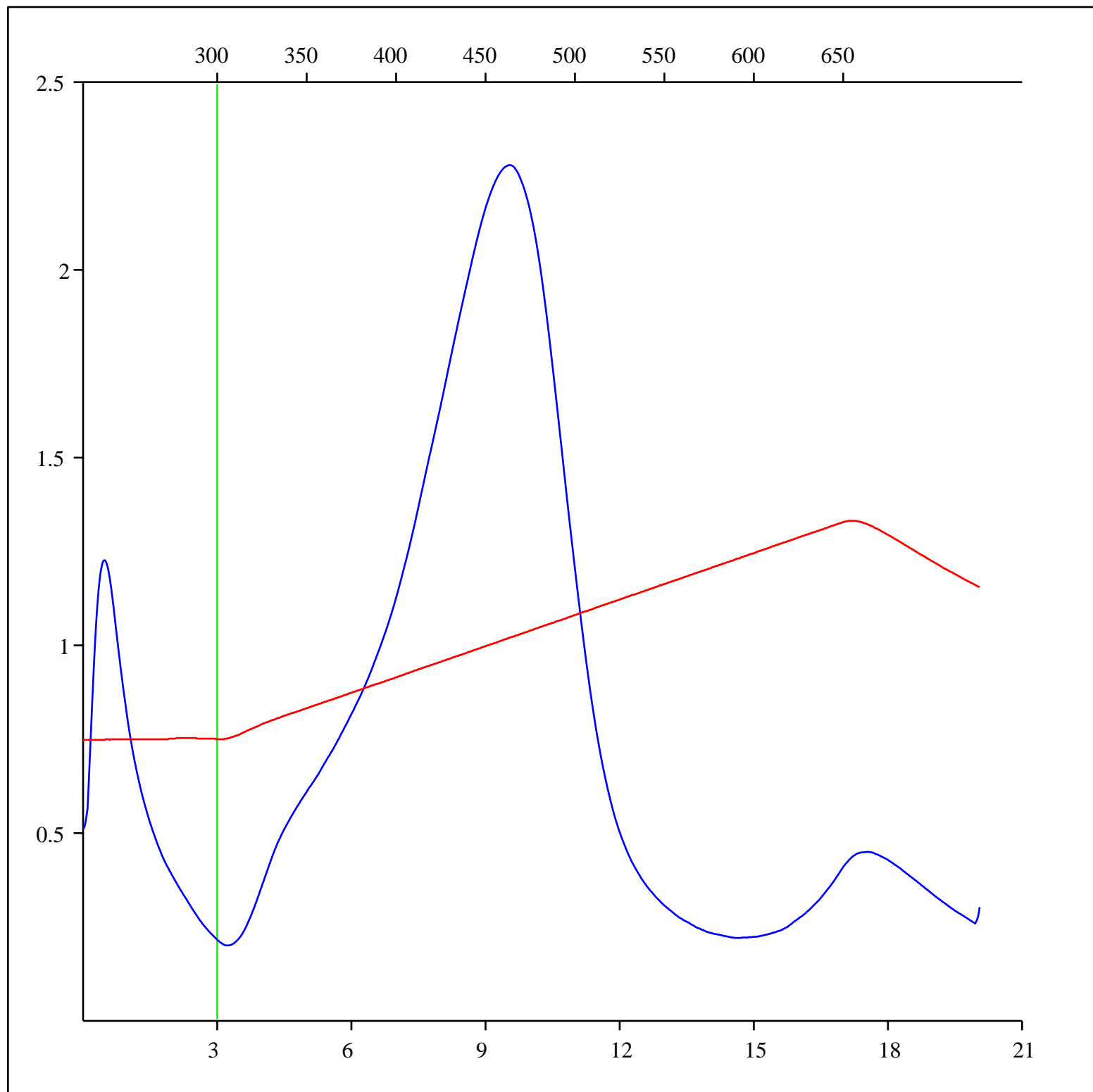
Sample: C-556068  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 665 - 675 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



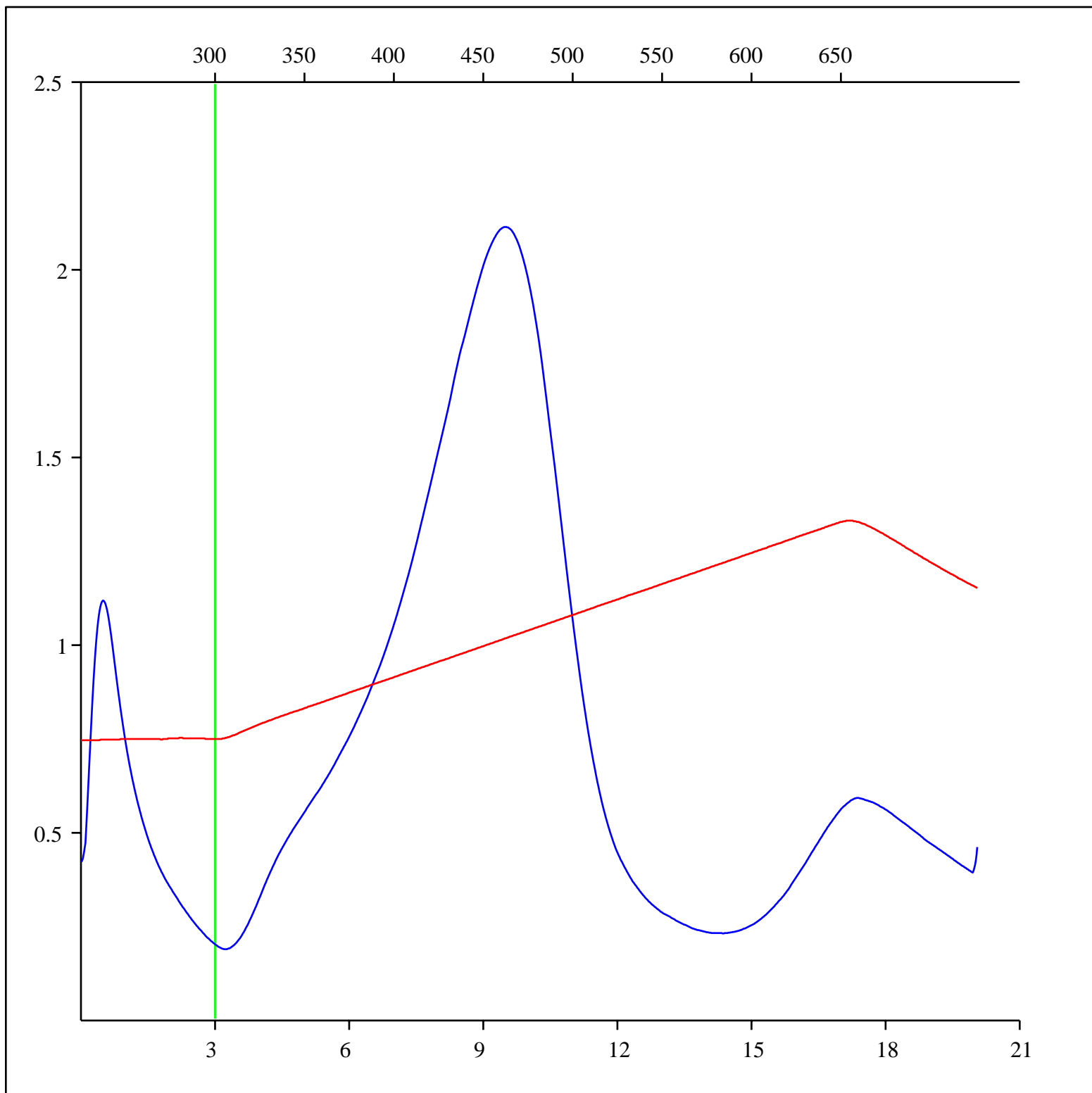
Sample: C-556069  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 675 - 685 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



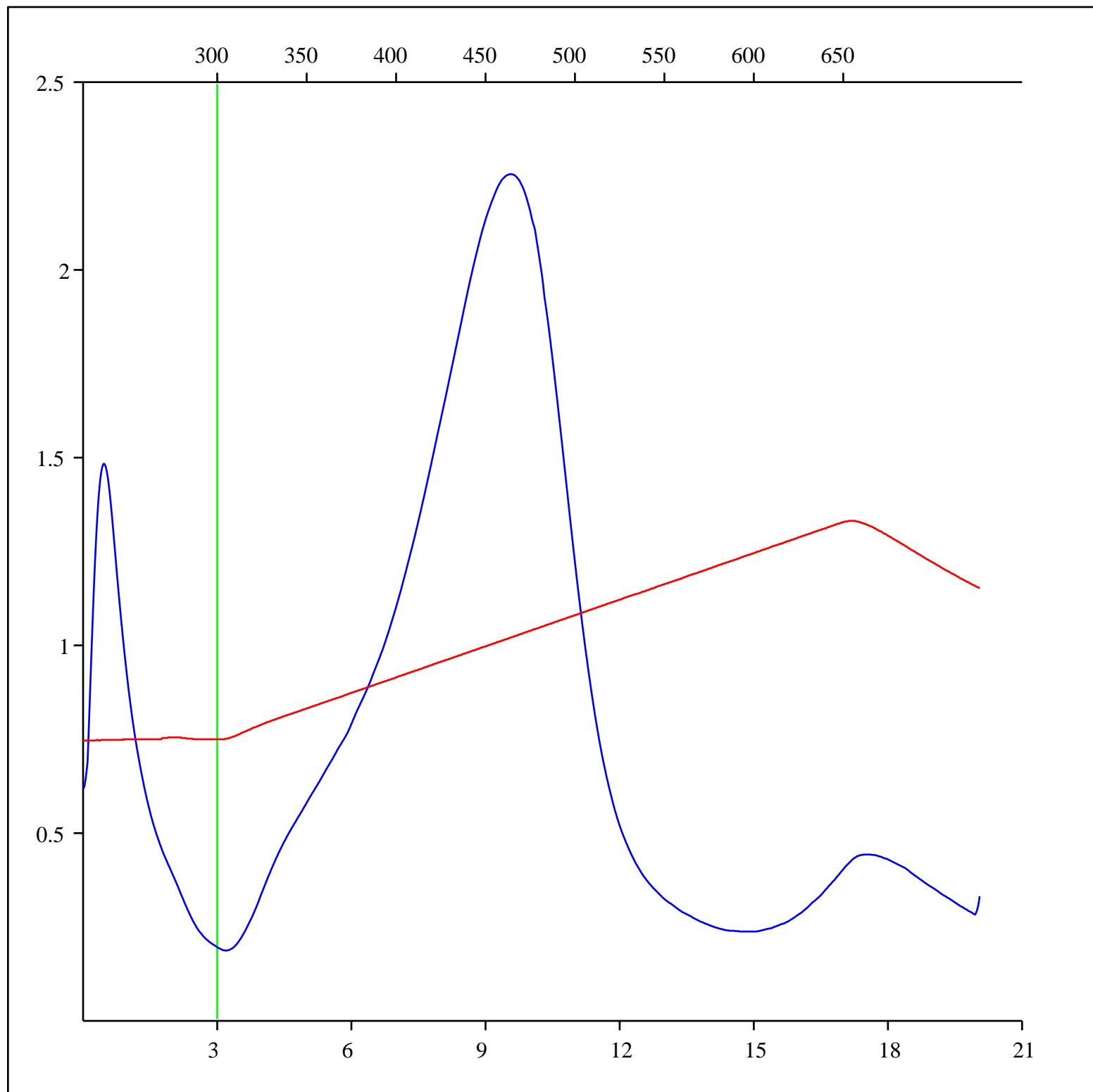
Sample: C-556070  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 685 - 695 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556071  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 695 - 705 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

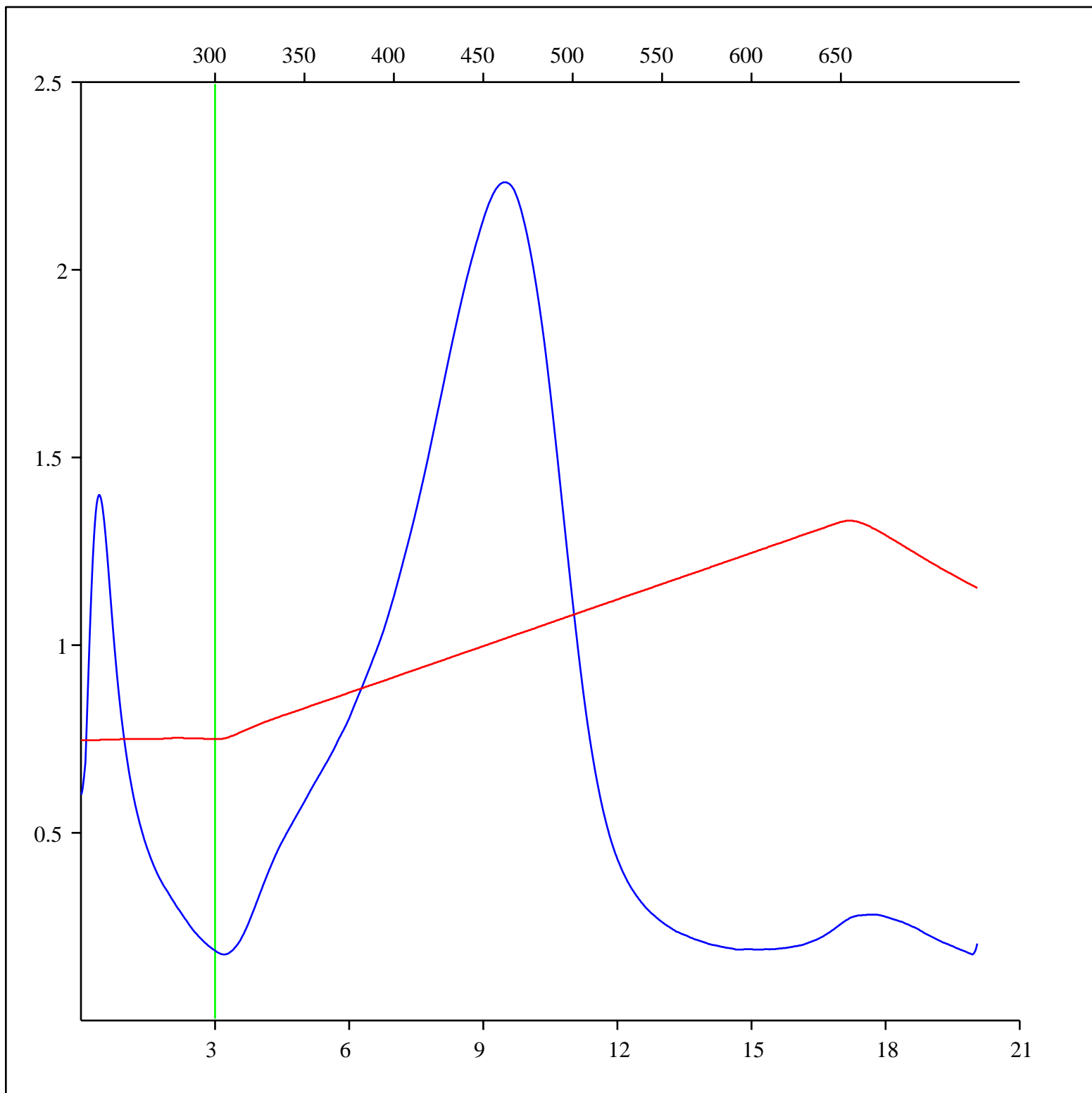
## FID hydrocarbons





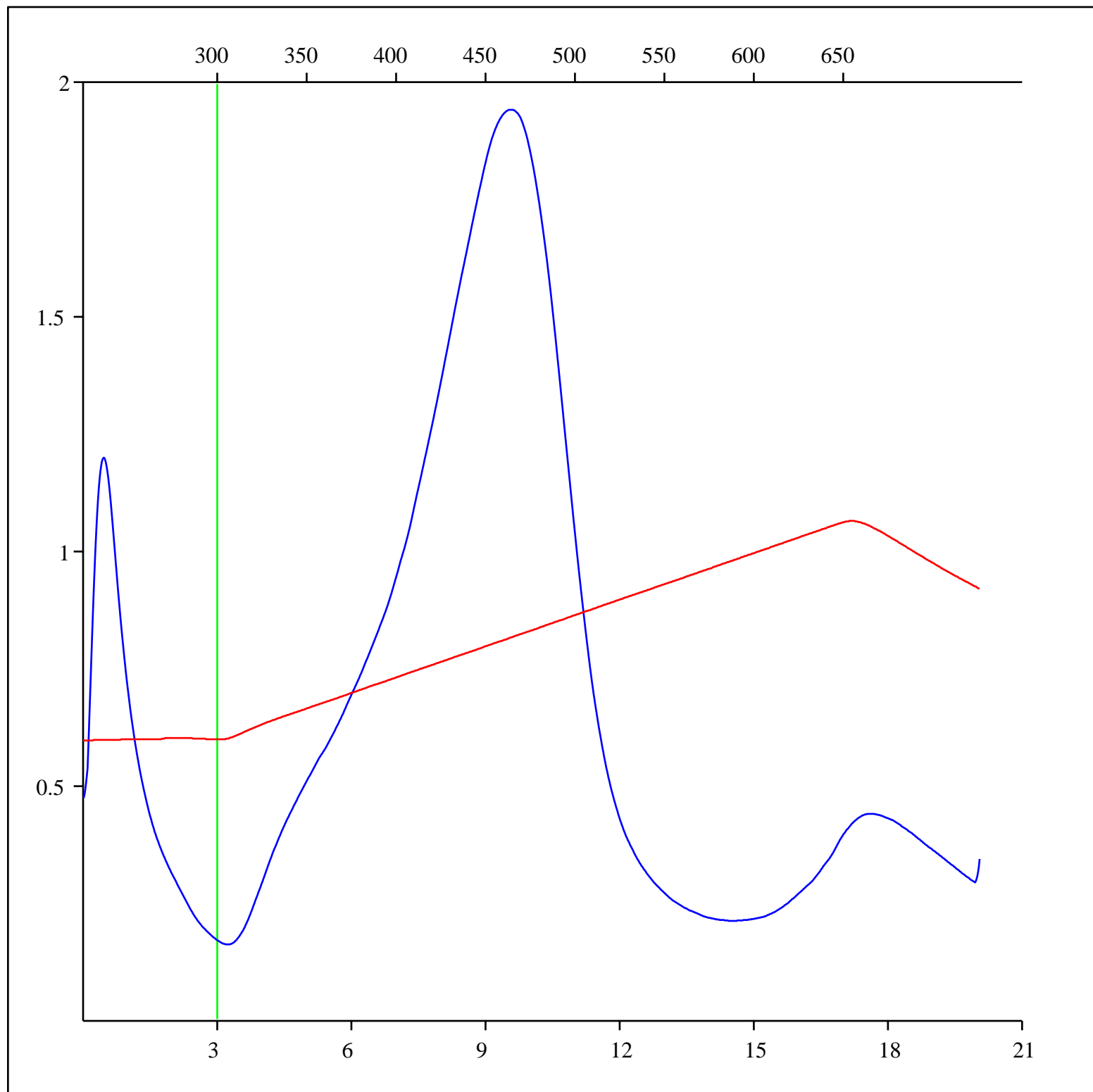
Sample: C-556072  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 705 - 715 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



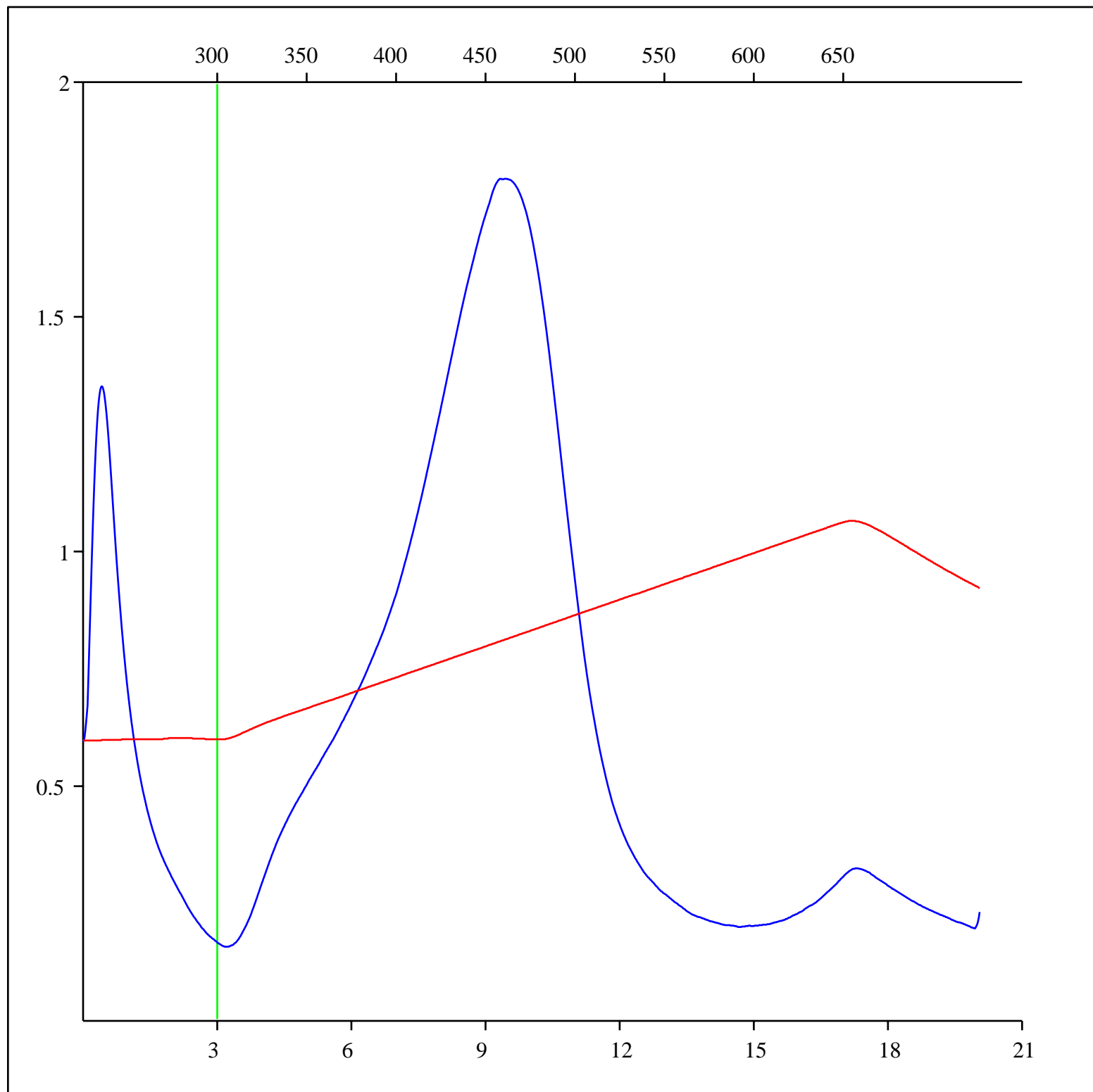
Sample: C-556073  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 715 - 725 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



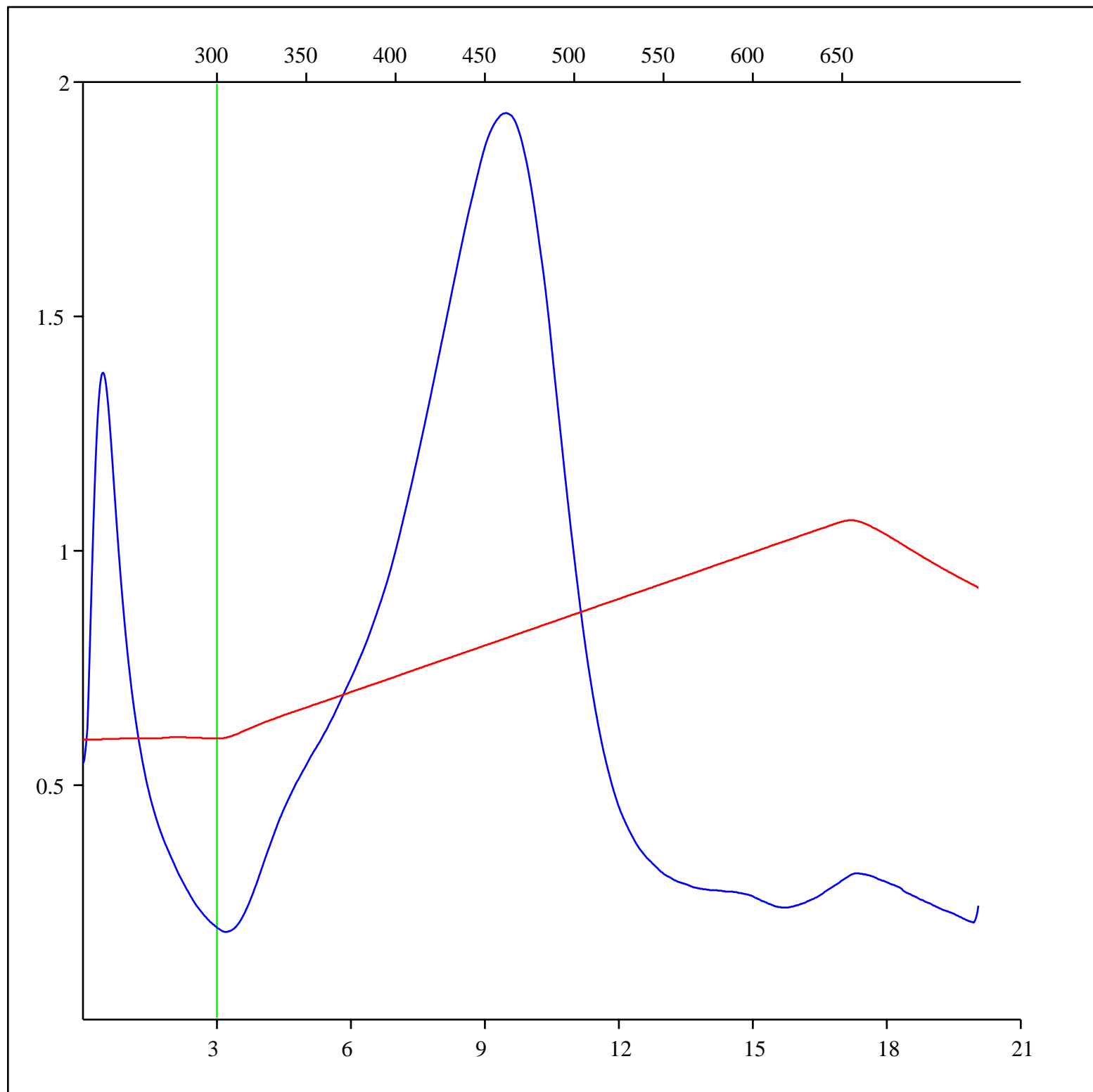
Sample: C-556074  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 725 - 735 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



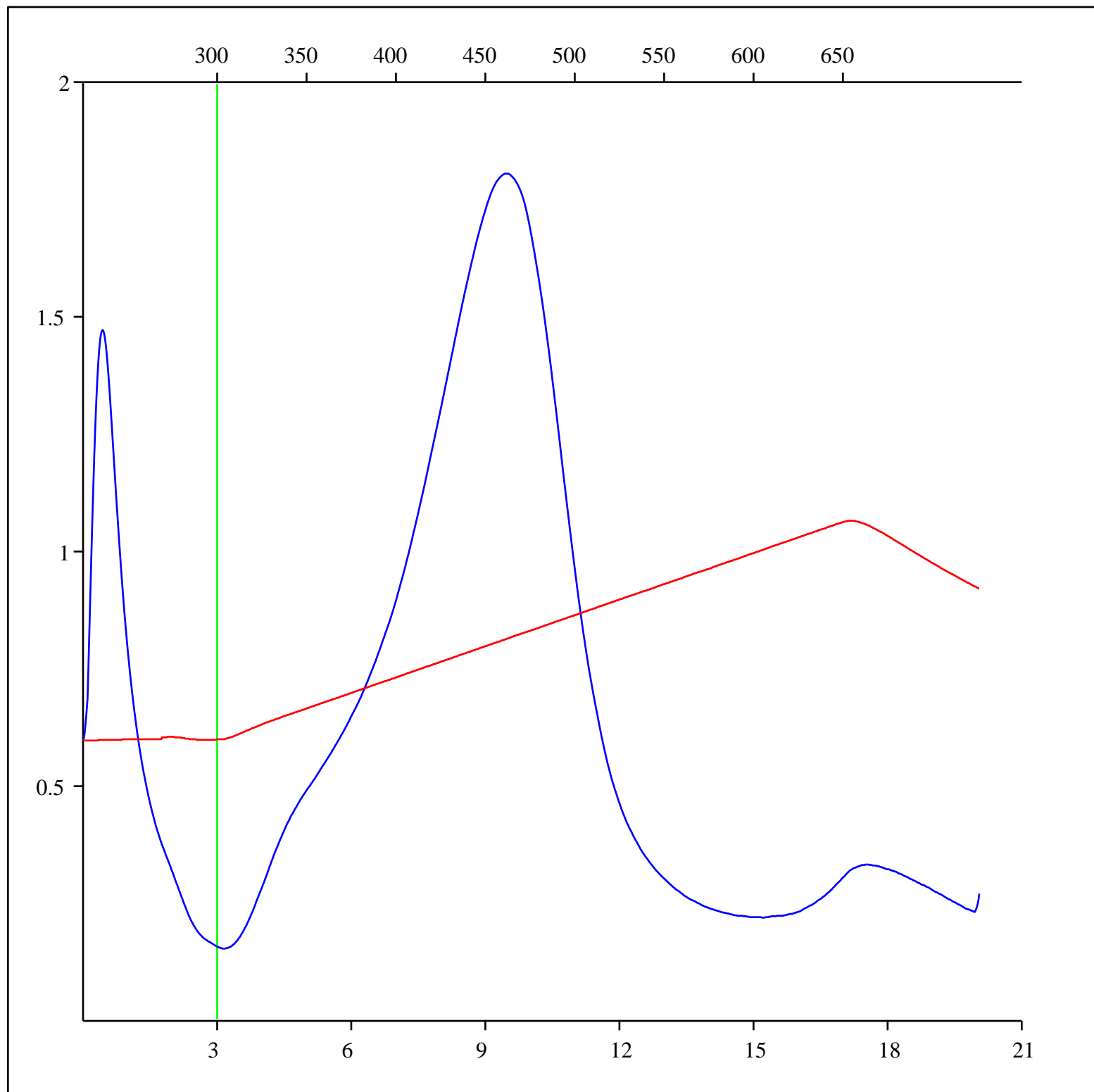
Sample: C-556075  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 735 - 745 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



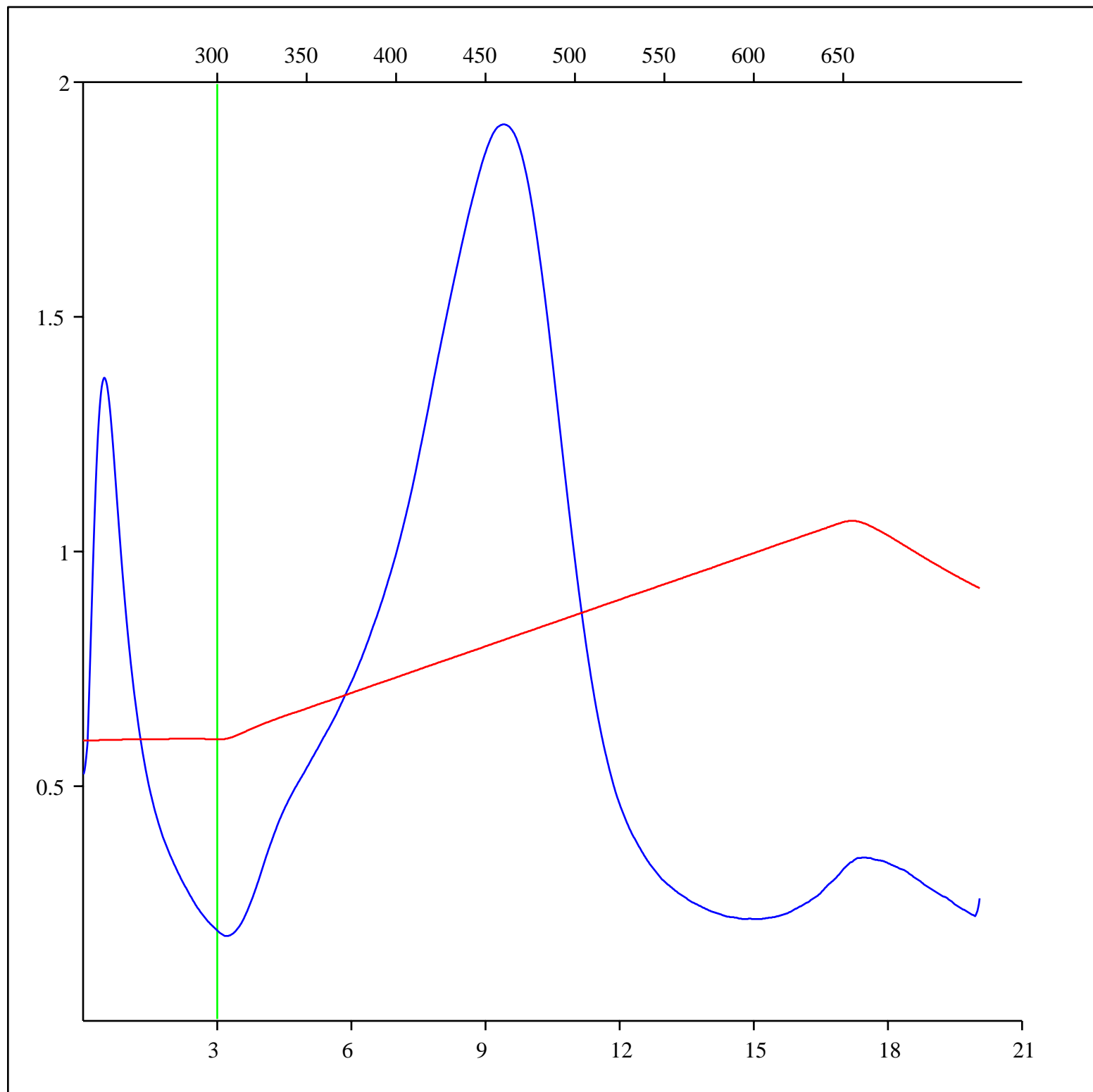
Sample: C-556076  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 745 - 755 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



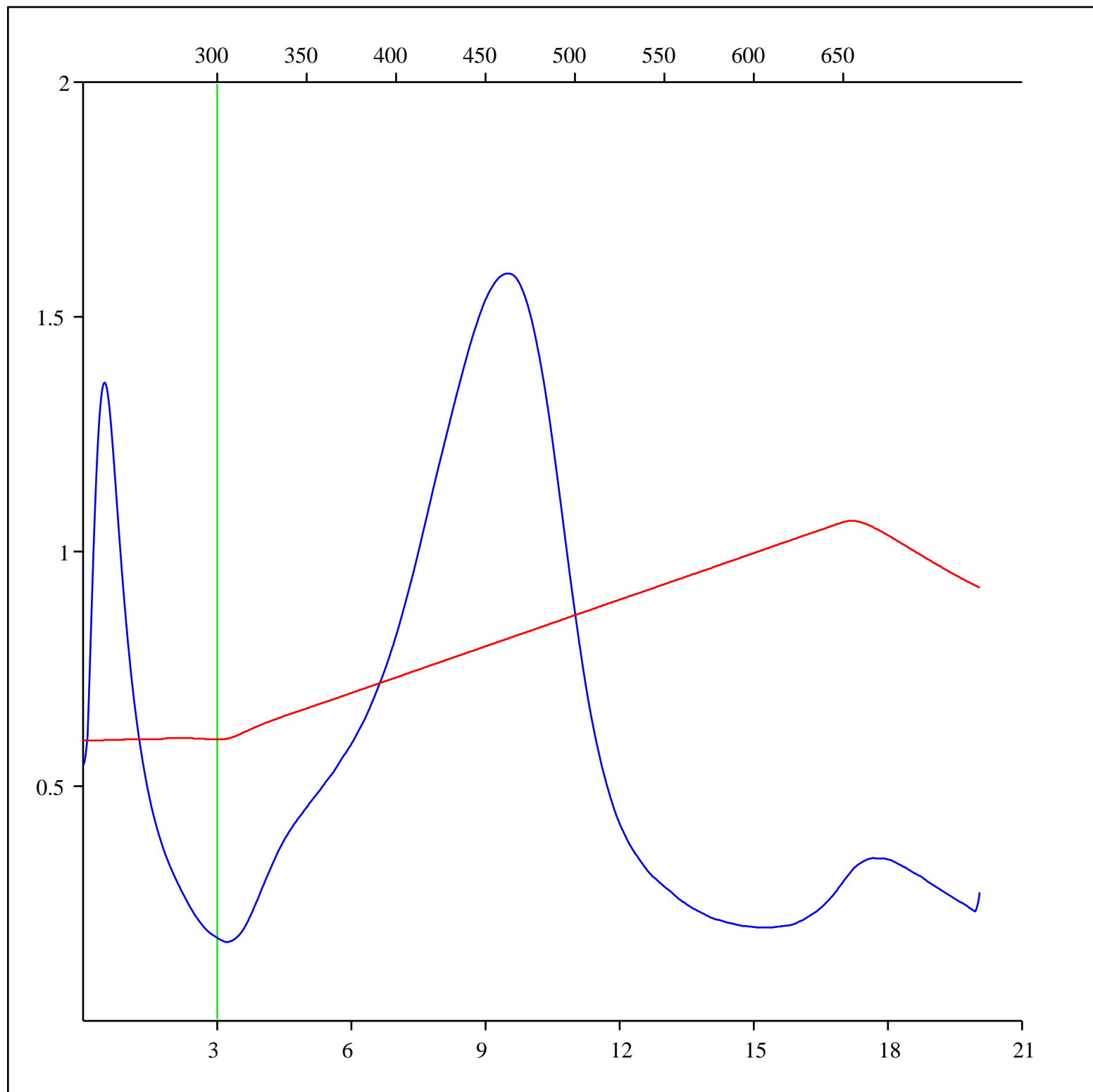
Sample: C-556077  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 755 - 765 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



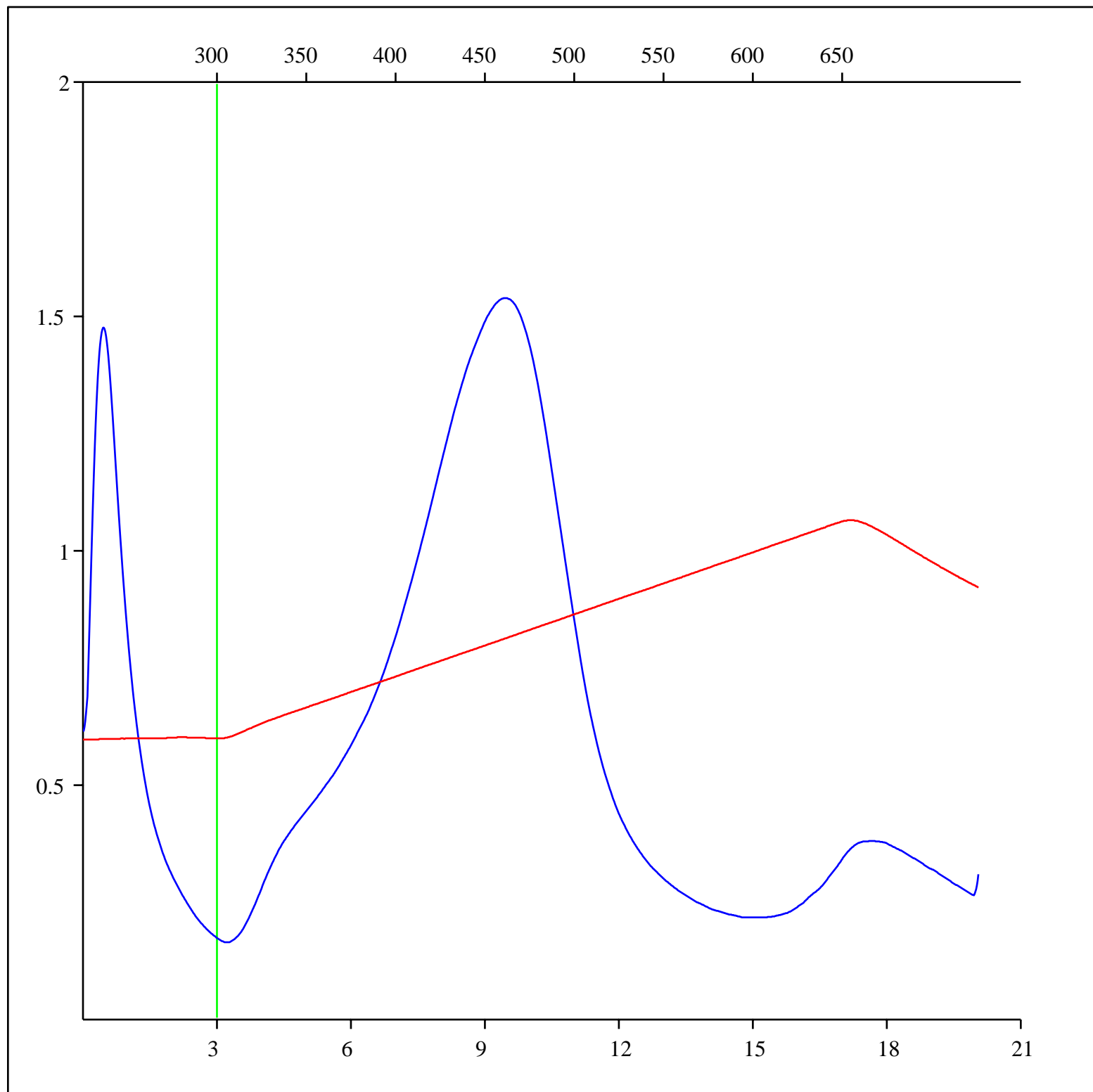
Sample: C-556078  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 765 - 775 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556079  
Acquisition Date: 22-NOV-2012  
Location: PAKTOA C-60  
Depth: 775 - 785 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

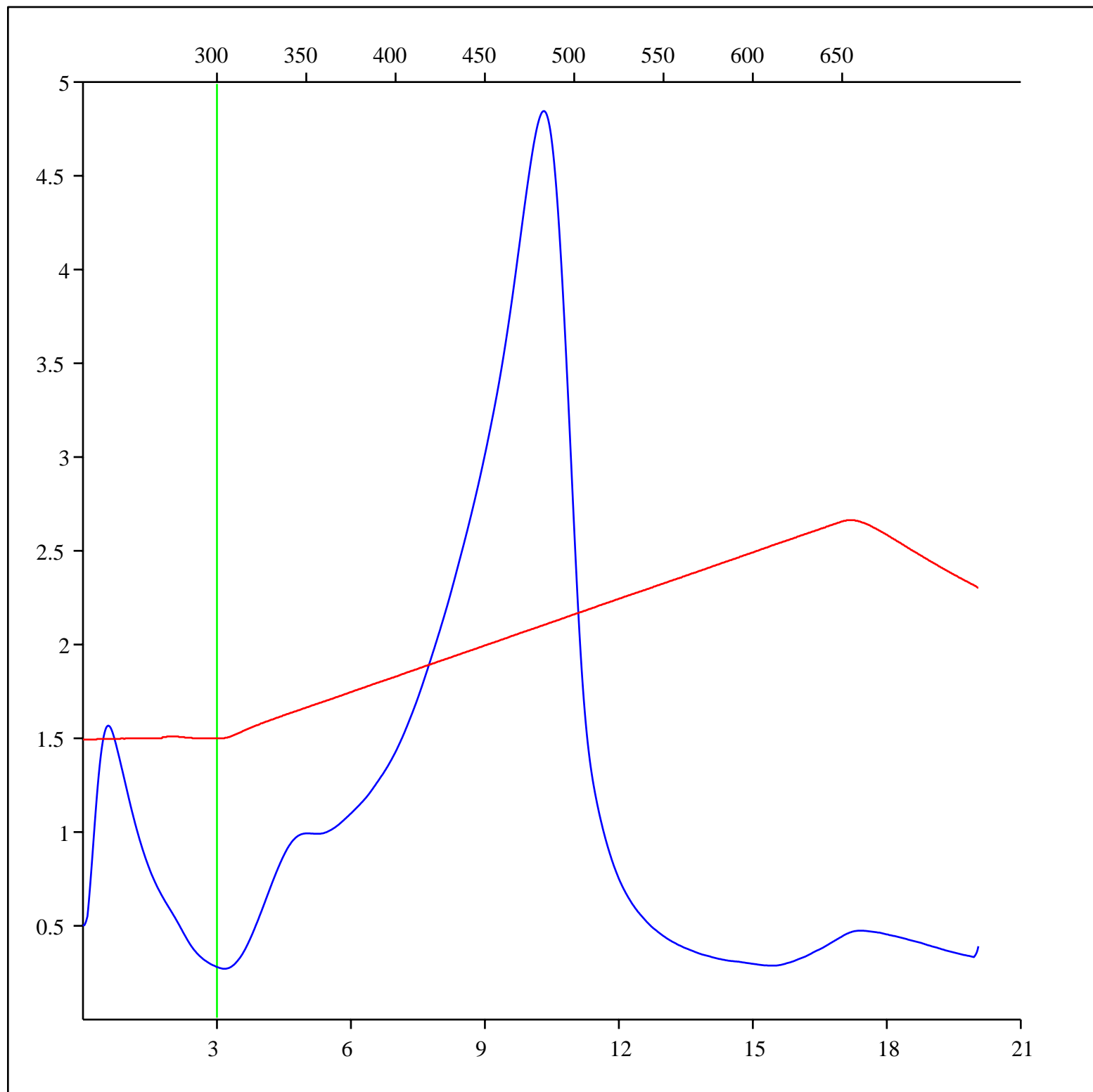
## FID hydrocarbons





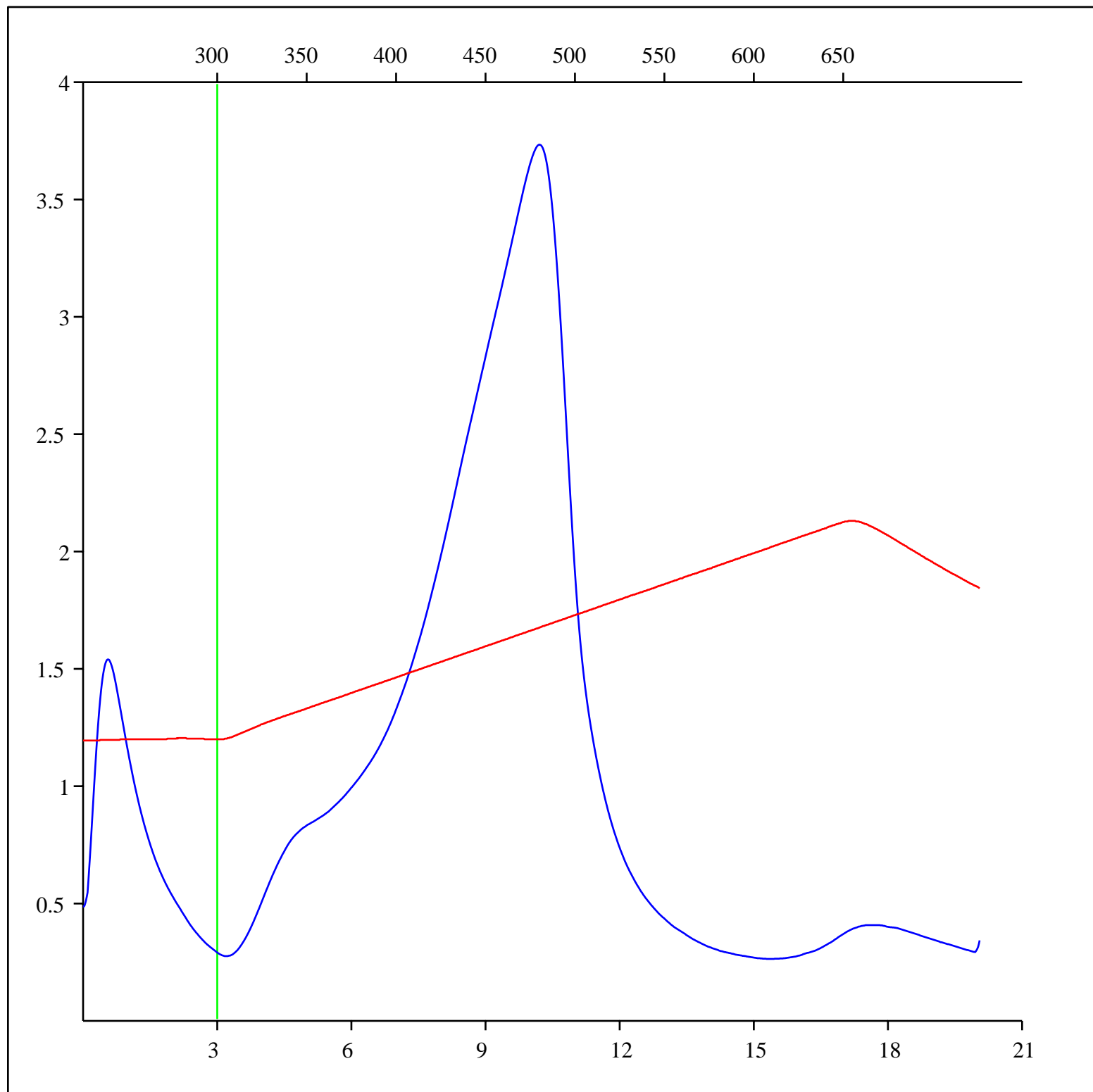
Sample: C-556080  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 790 - 795 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



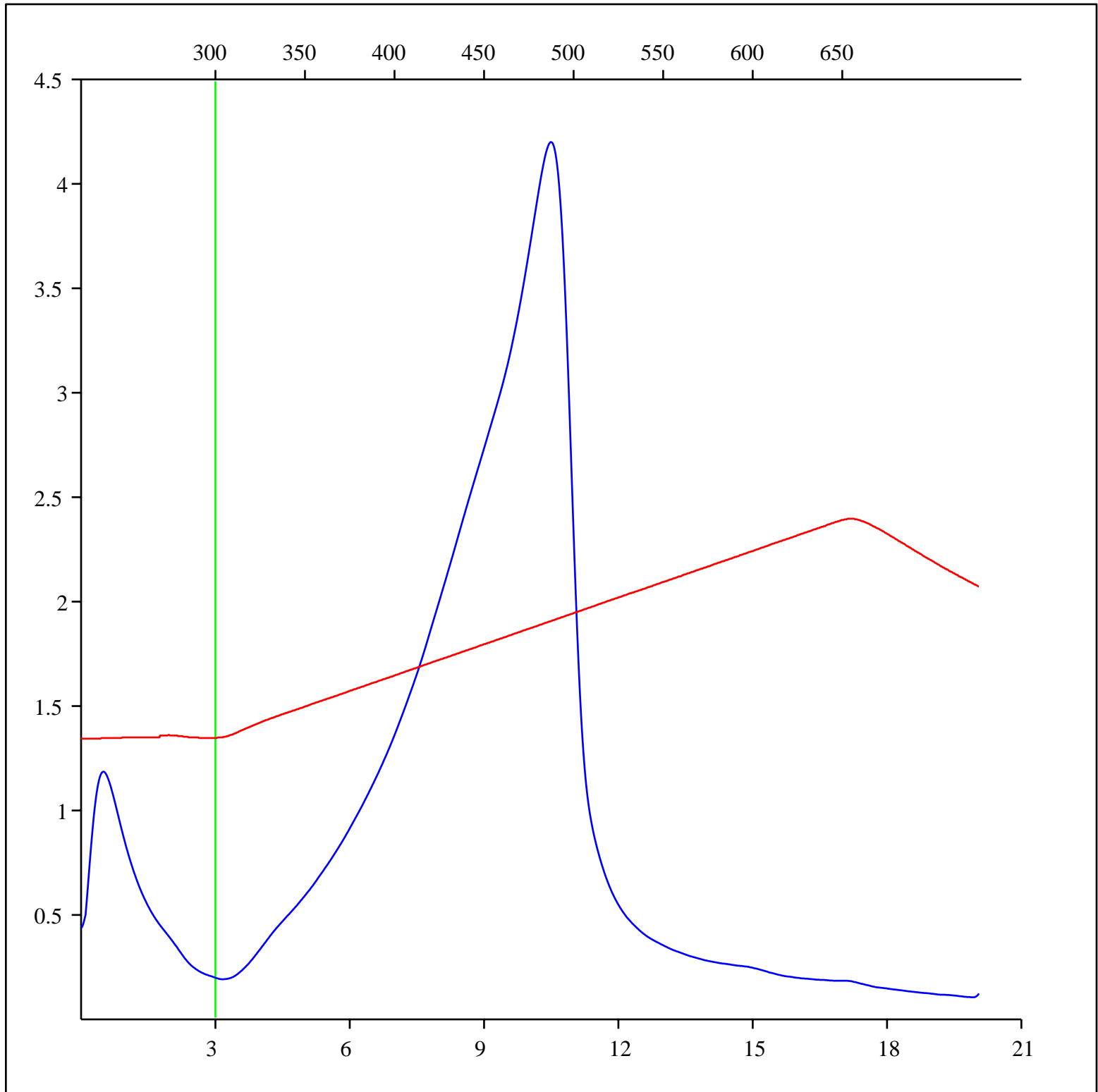
Sample: C-556081  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 795 - 805 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



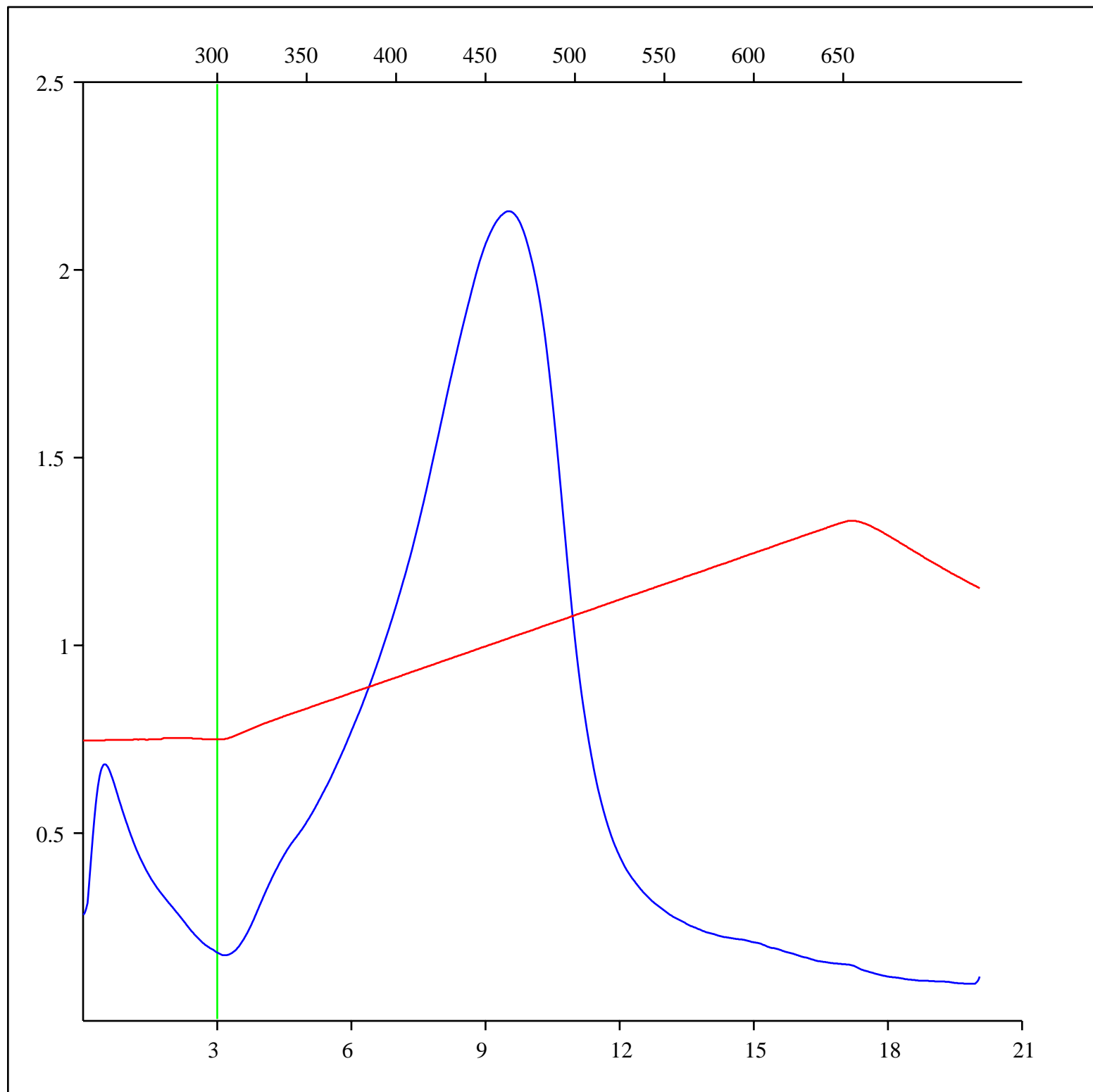
Sample: C-556082  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 805 - 810 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

### FID hydrocarbons



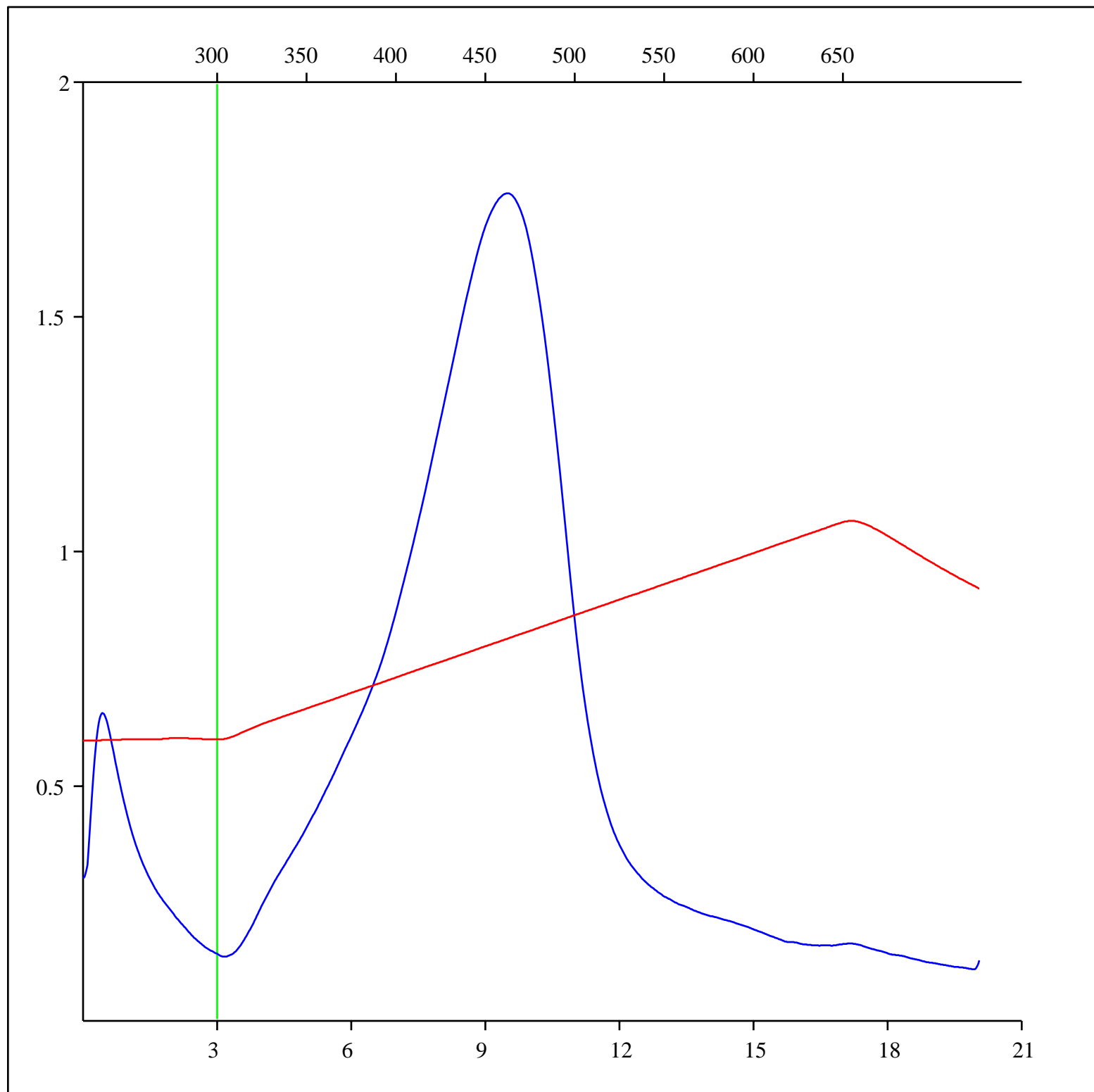
Sample: C-556083  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 815 - 825 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



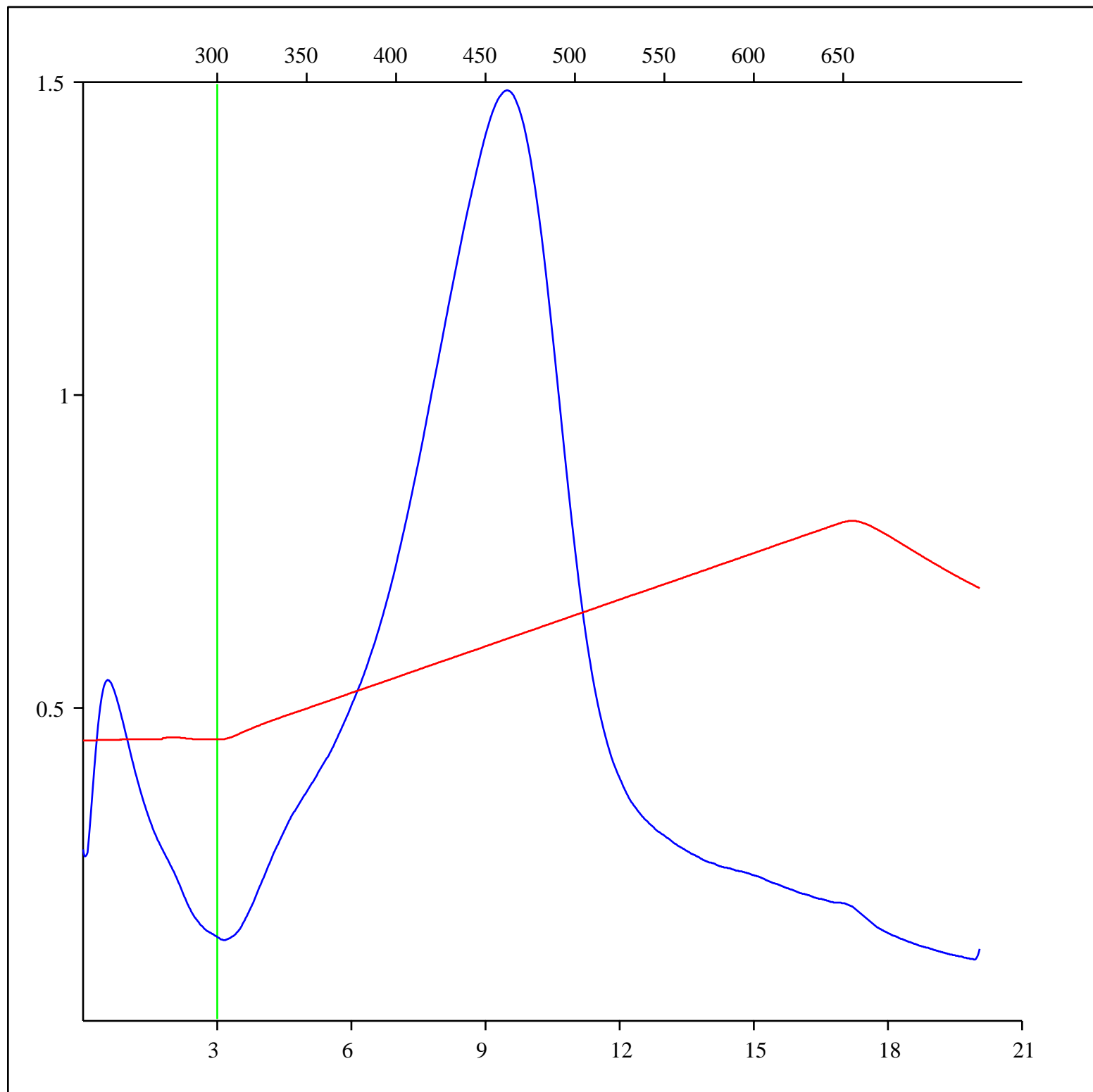
Sample: C-556084  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 825 - 835 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



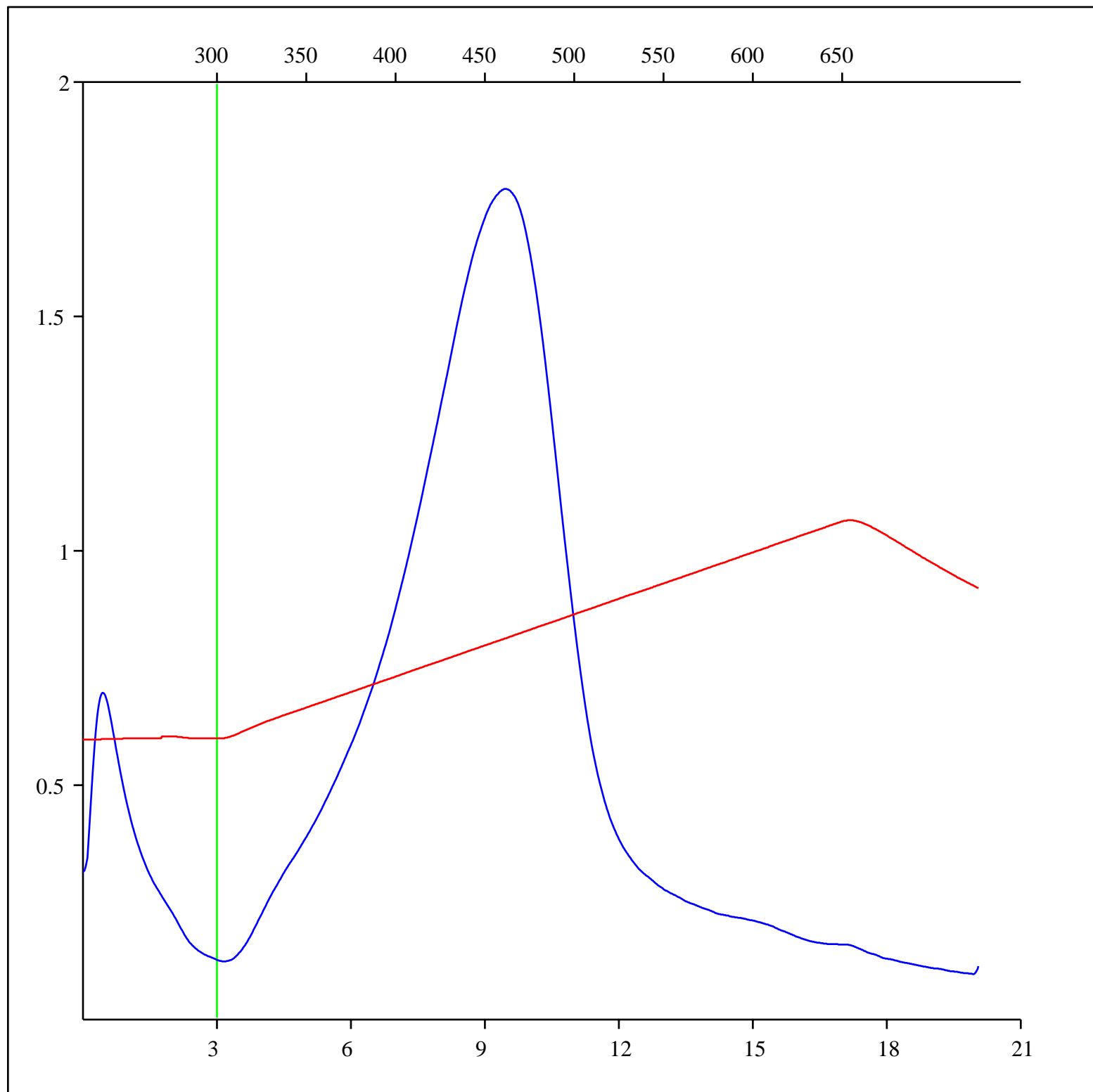
Sample: C-556085  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 835 - 845 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



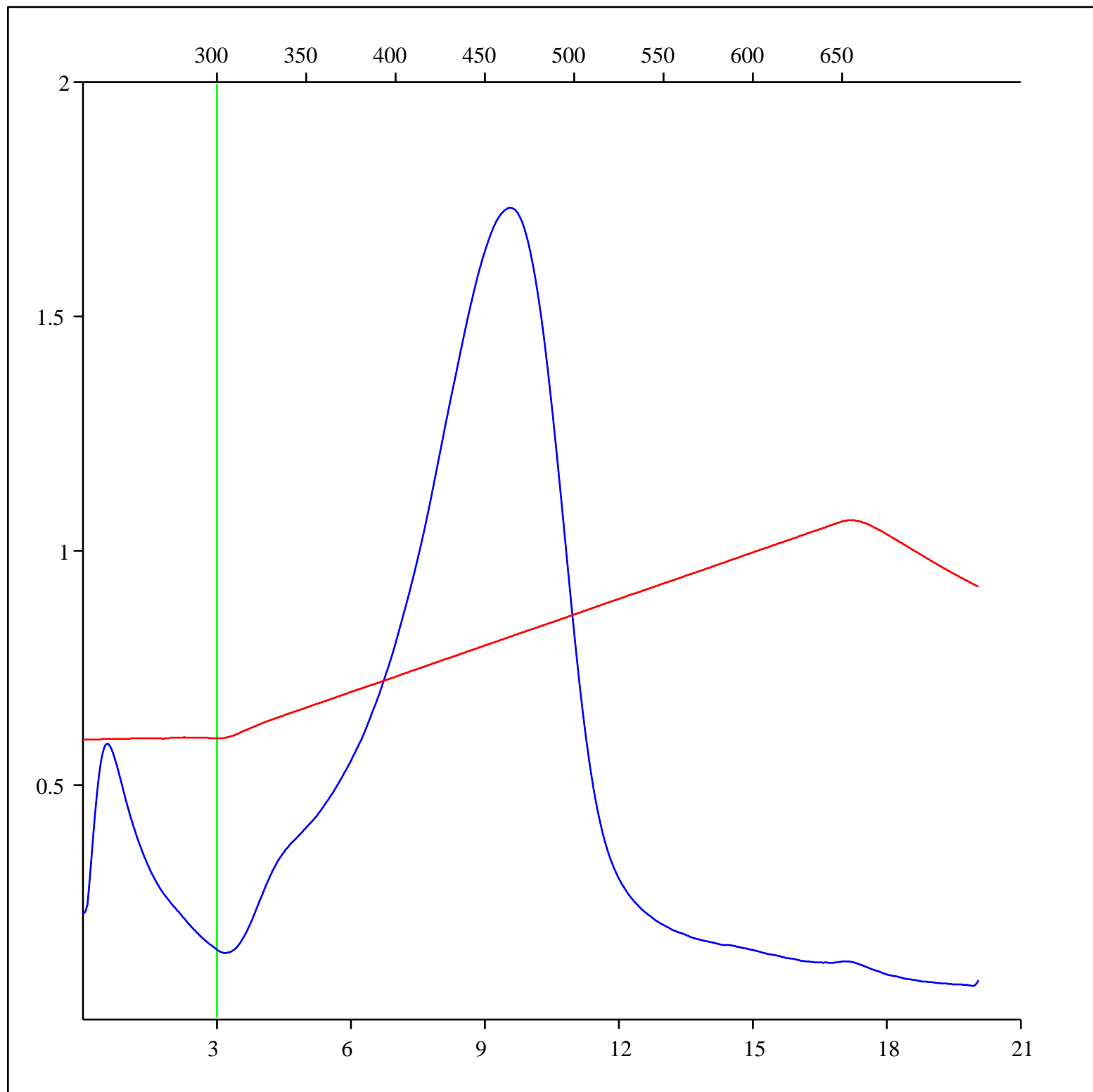
Sample: C-556086  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 845 - 855 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556087  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 855 - 865 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

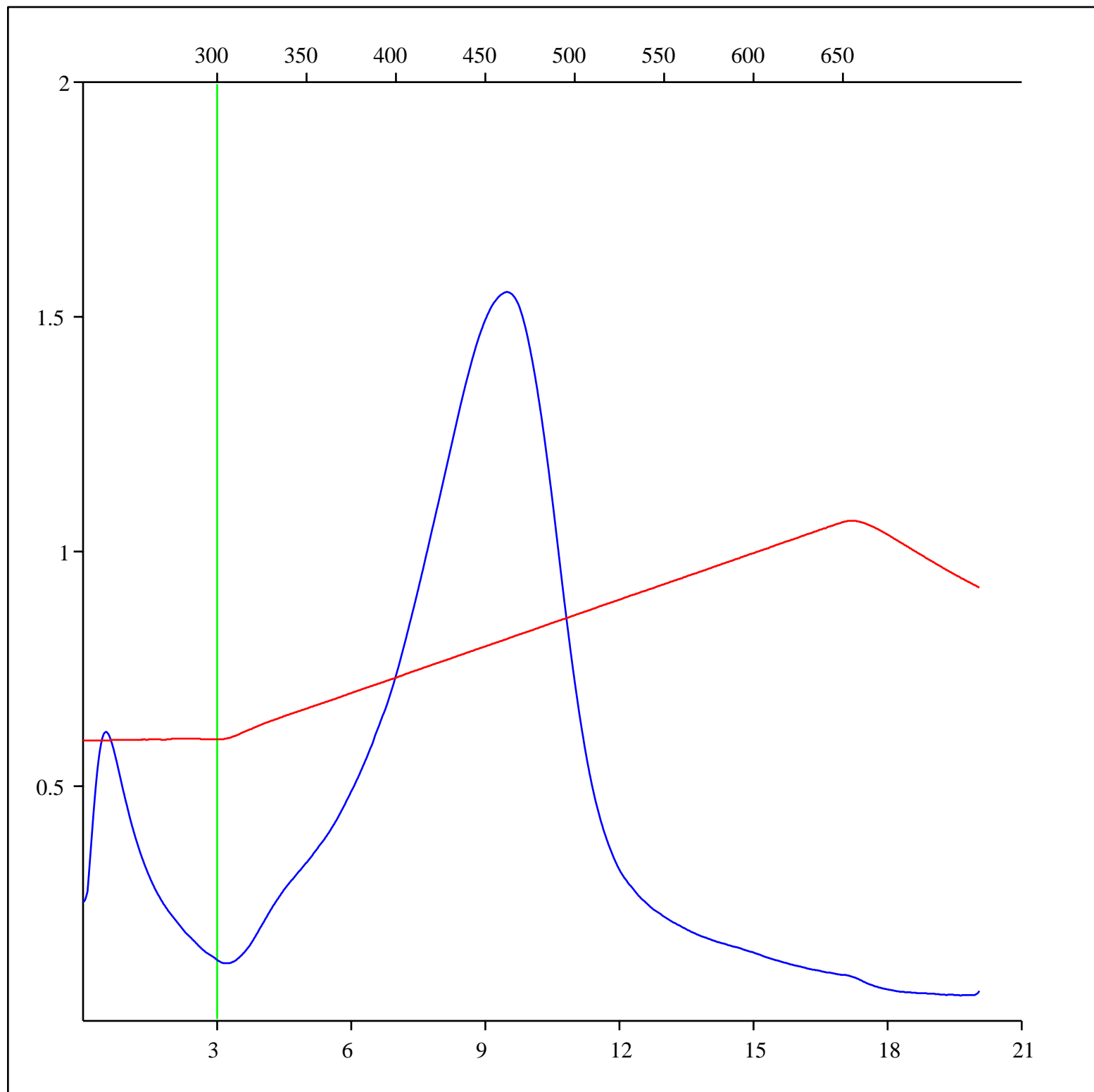
## FID hydrocarbons





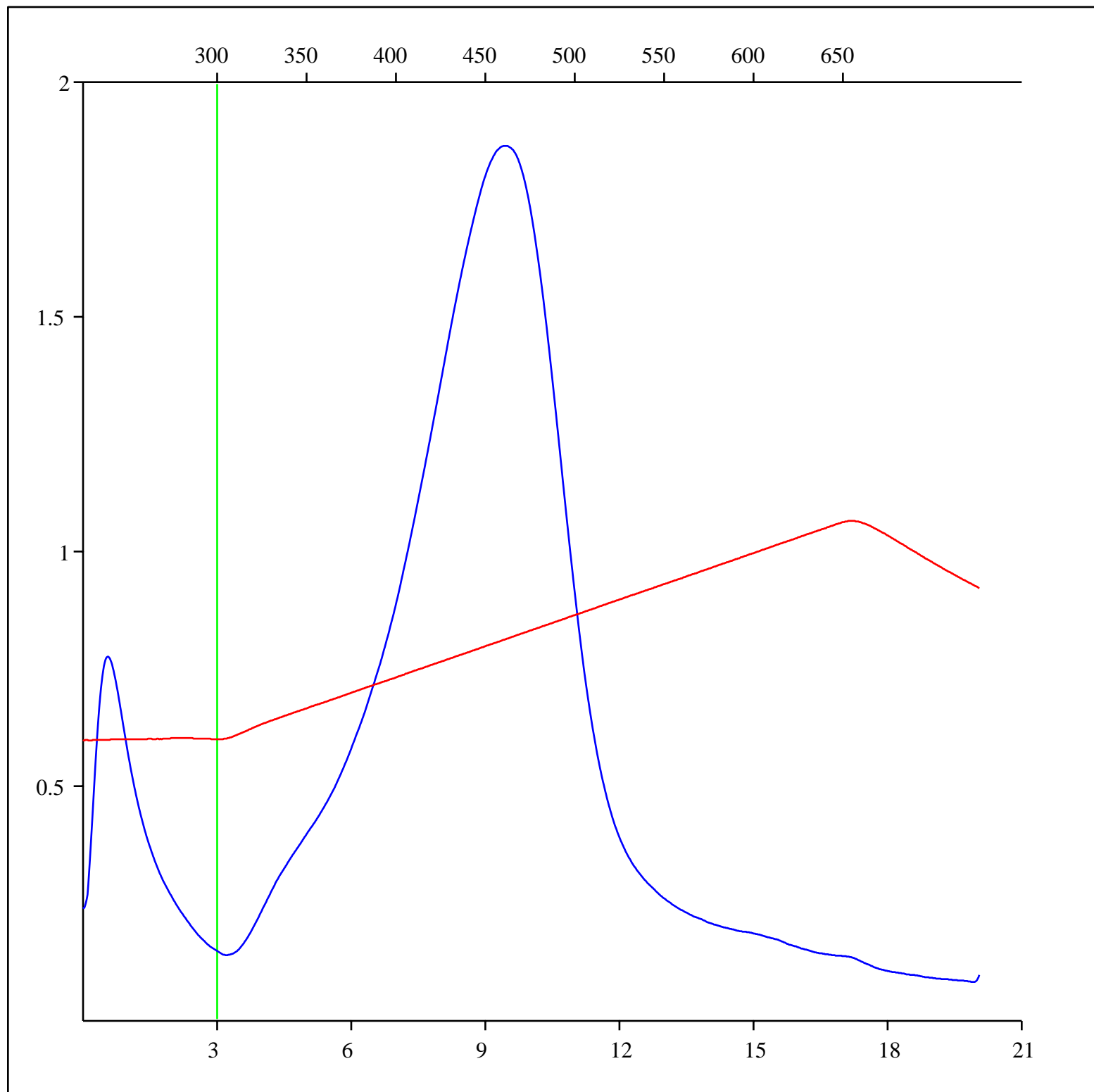
Sample: C-556088  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 865 - 875 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



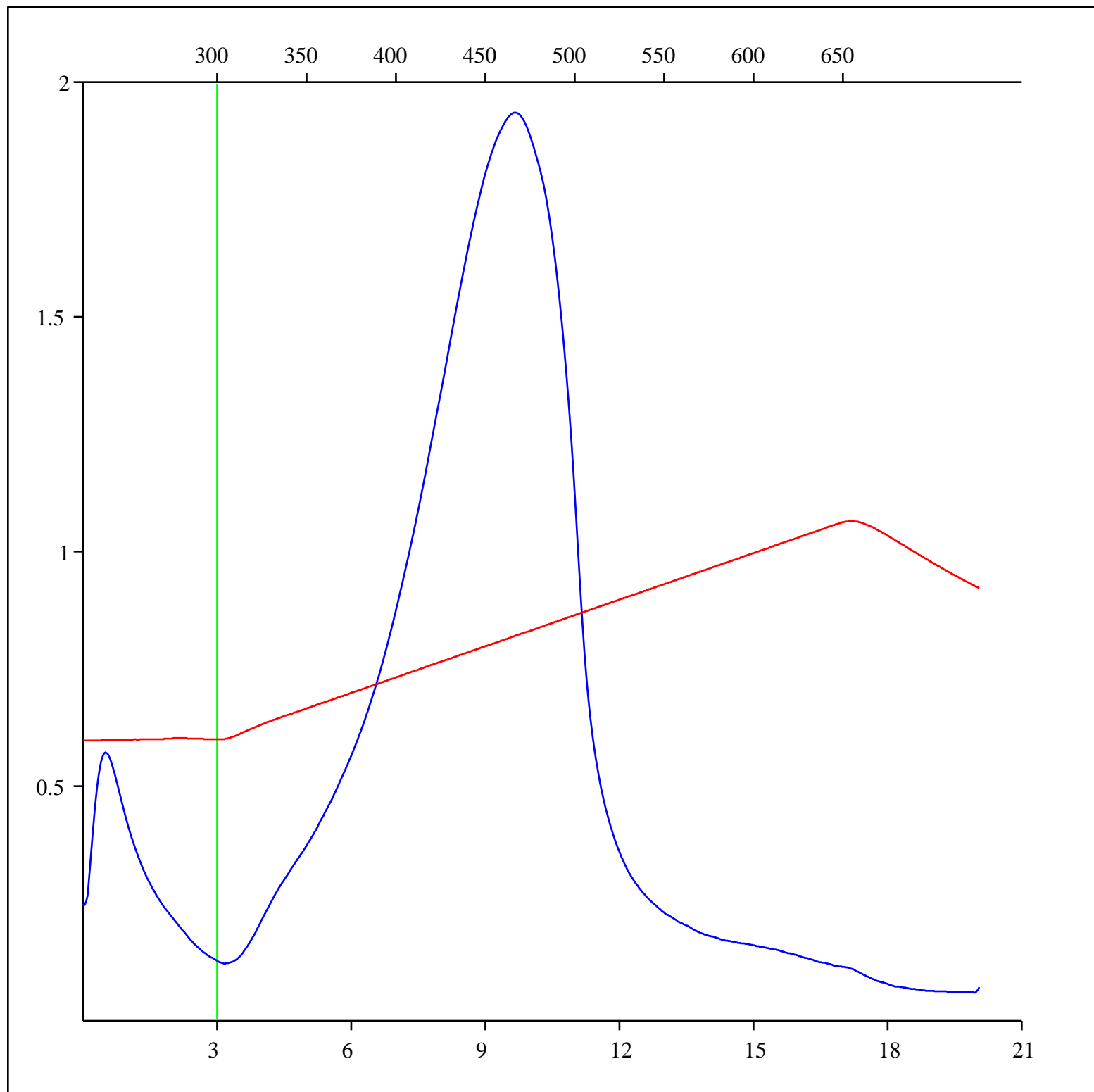
Sample: C-556089  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 875 - 885 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



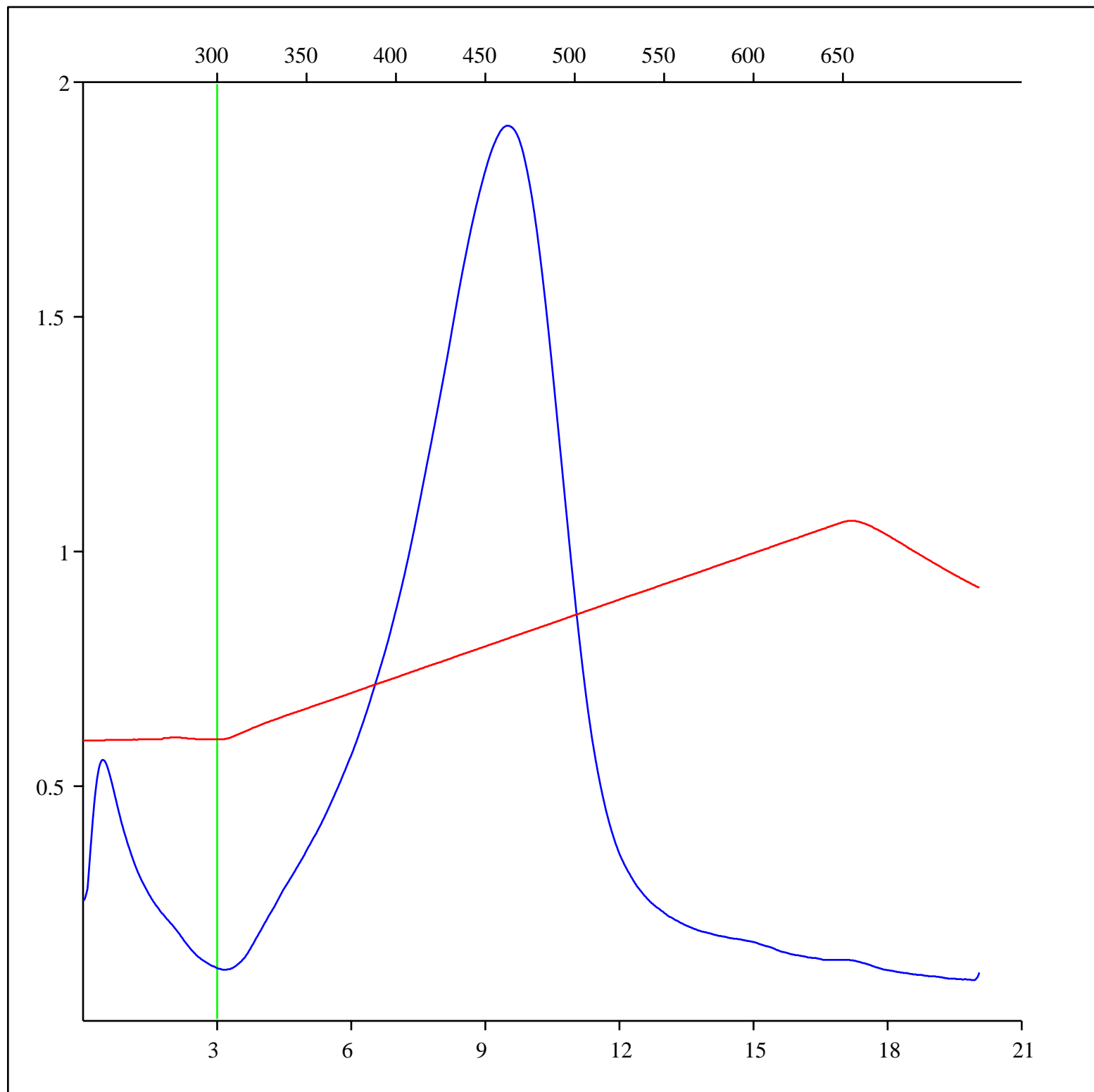
Sample: C-556090  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 885 - 895 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



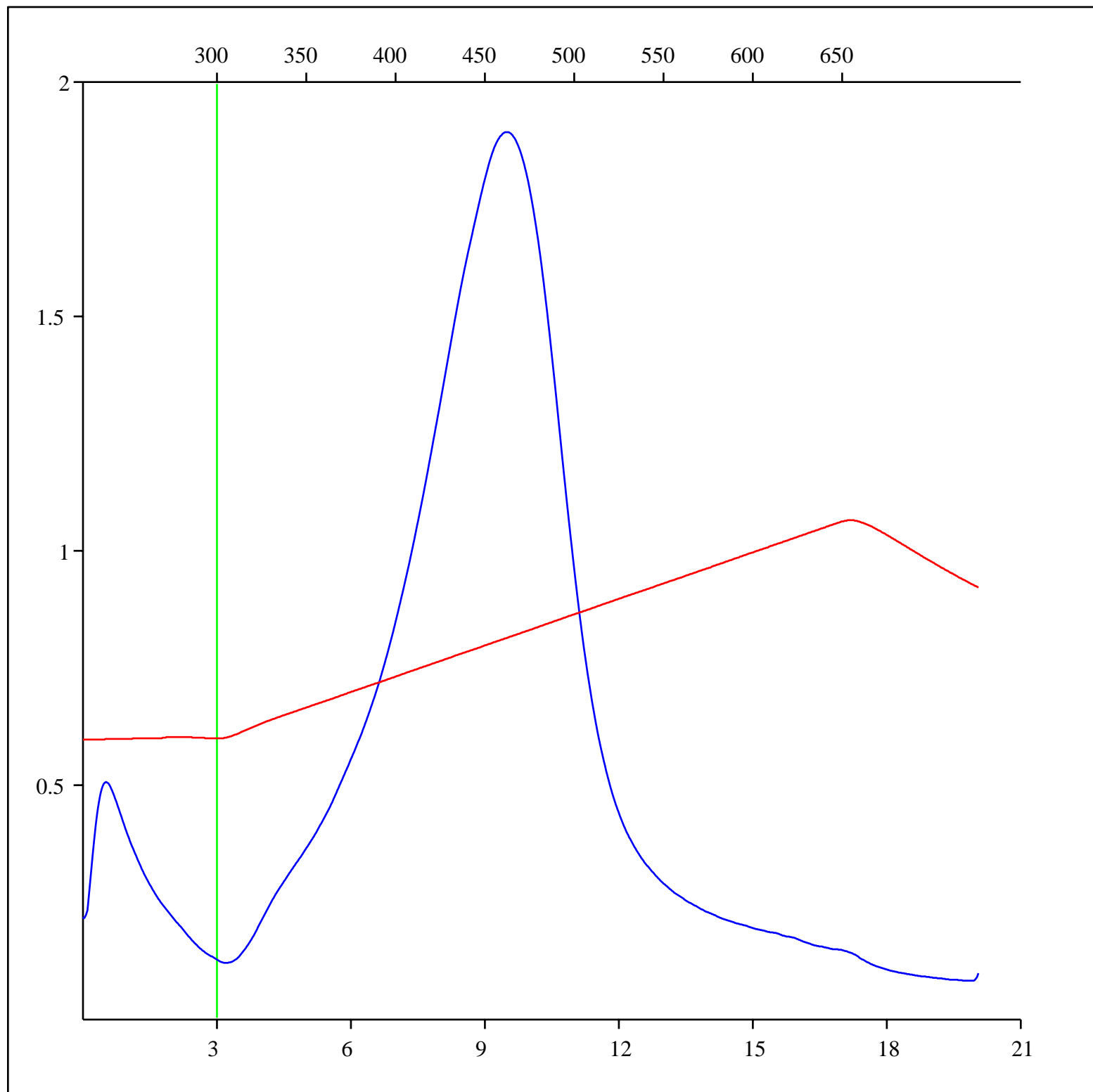
Sample: C-556091  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 895 - 905 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



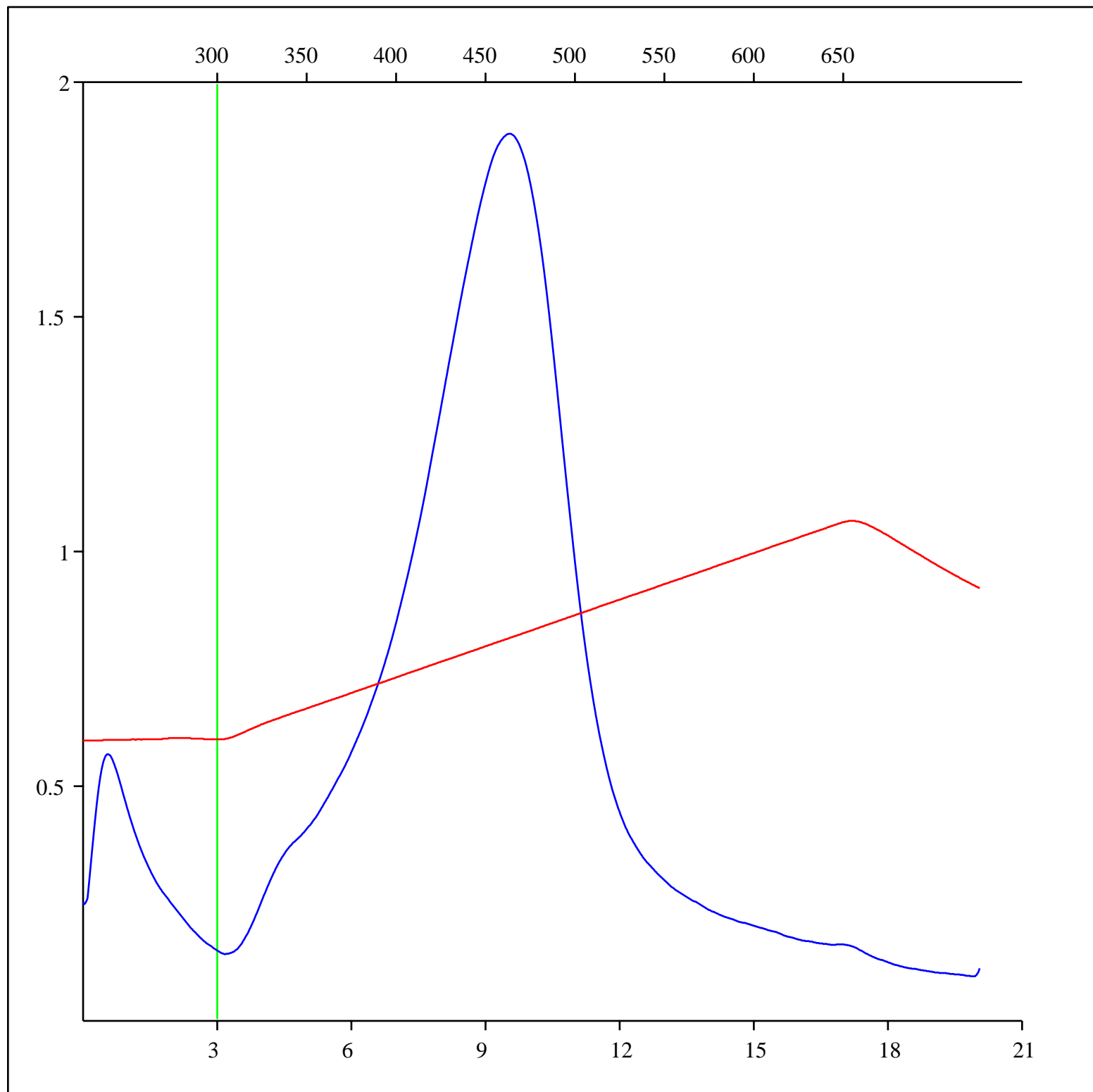
Sample: C-556092  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 905 - 915 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



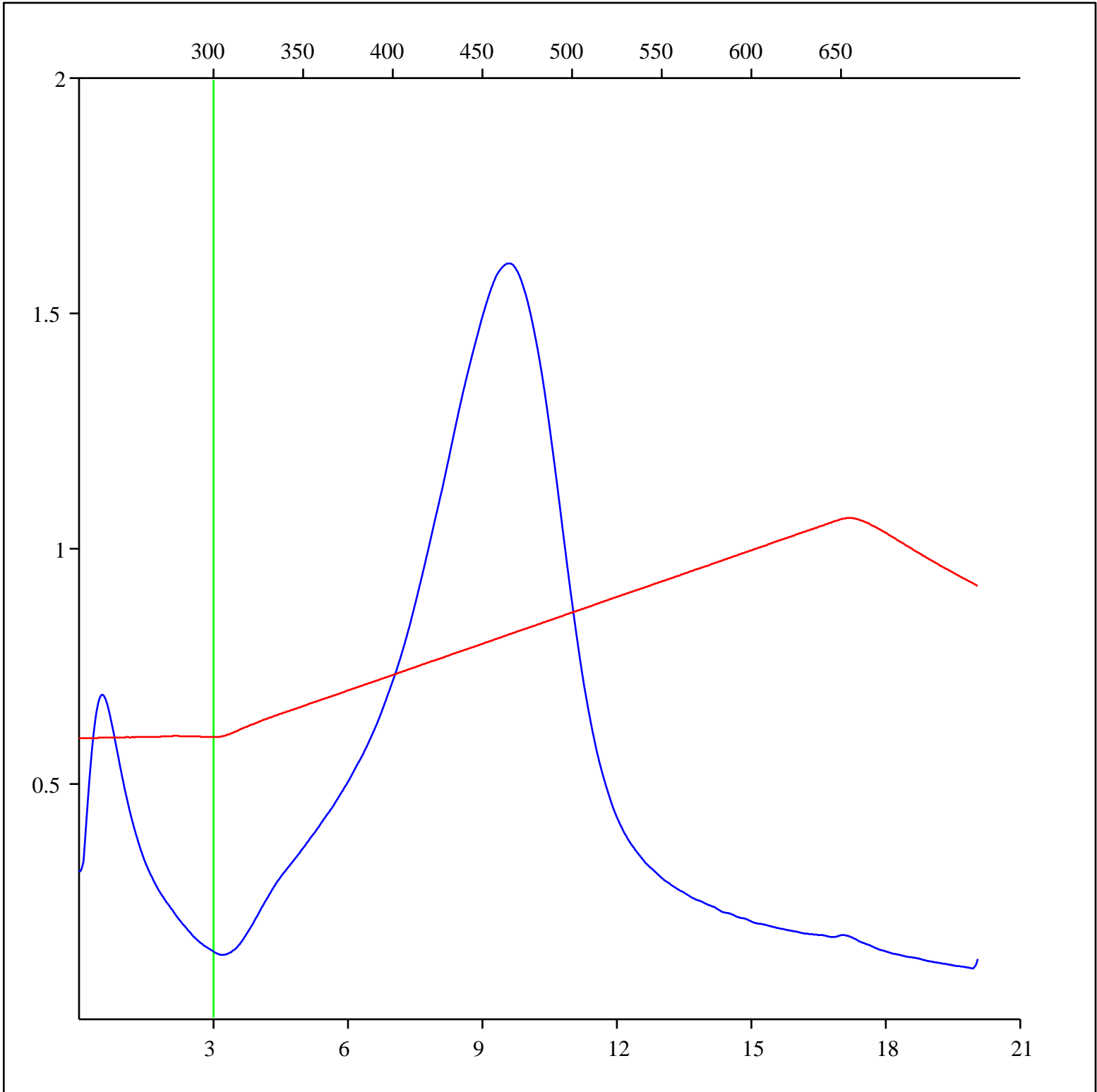
Sample: C-556093  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 915 - 925 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



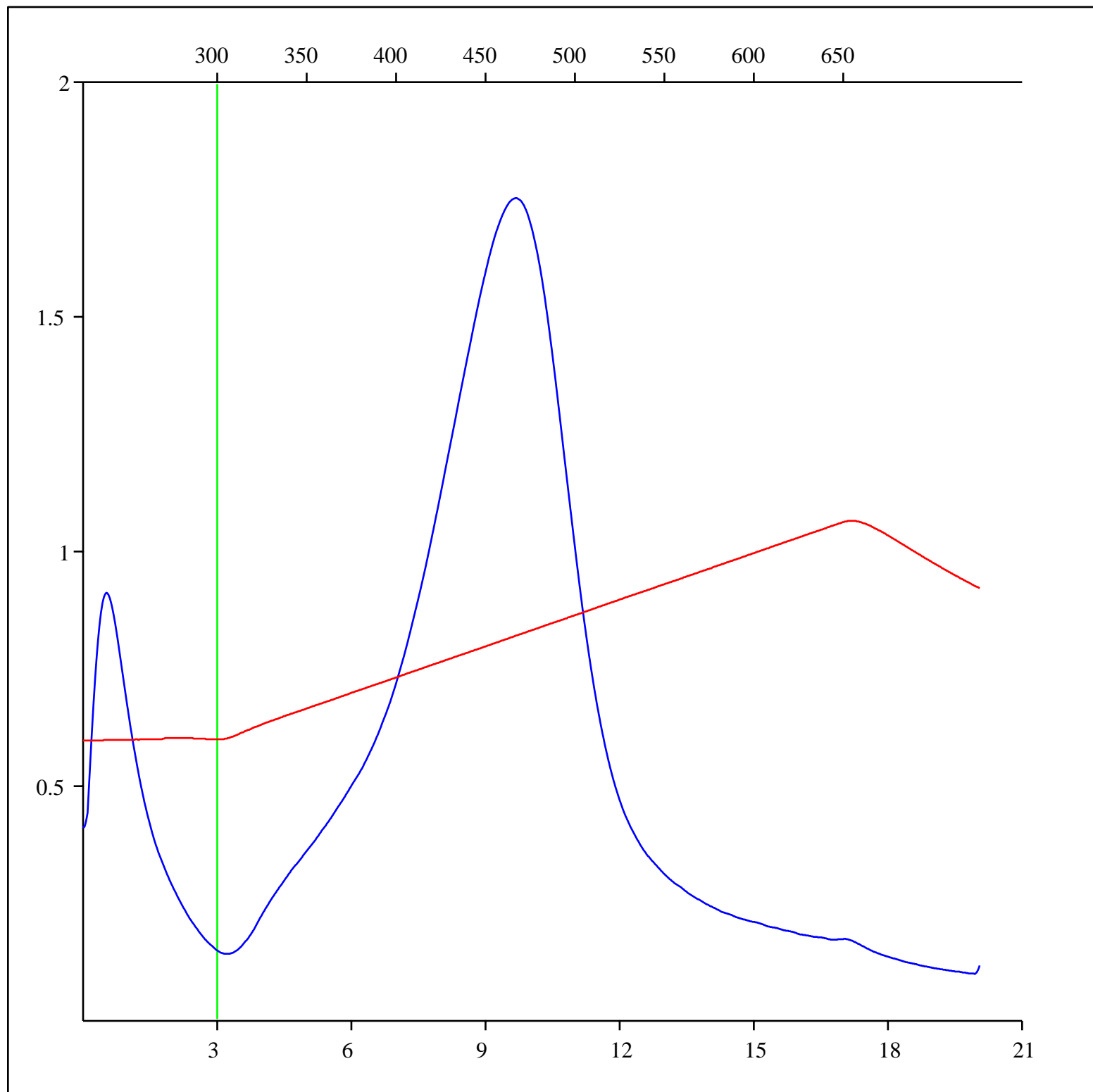
Sample: C-556094  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 925 - 935 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

### FID hydrocarbons



Sample: C-556095  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 935 - 945 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

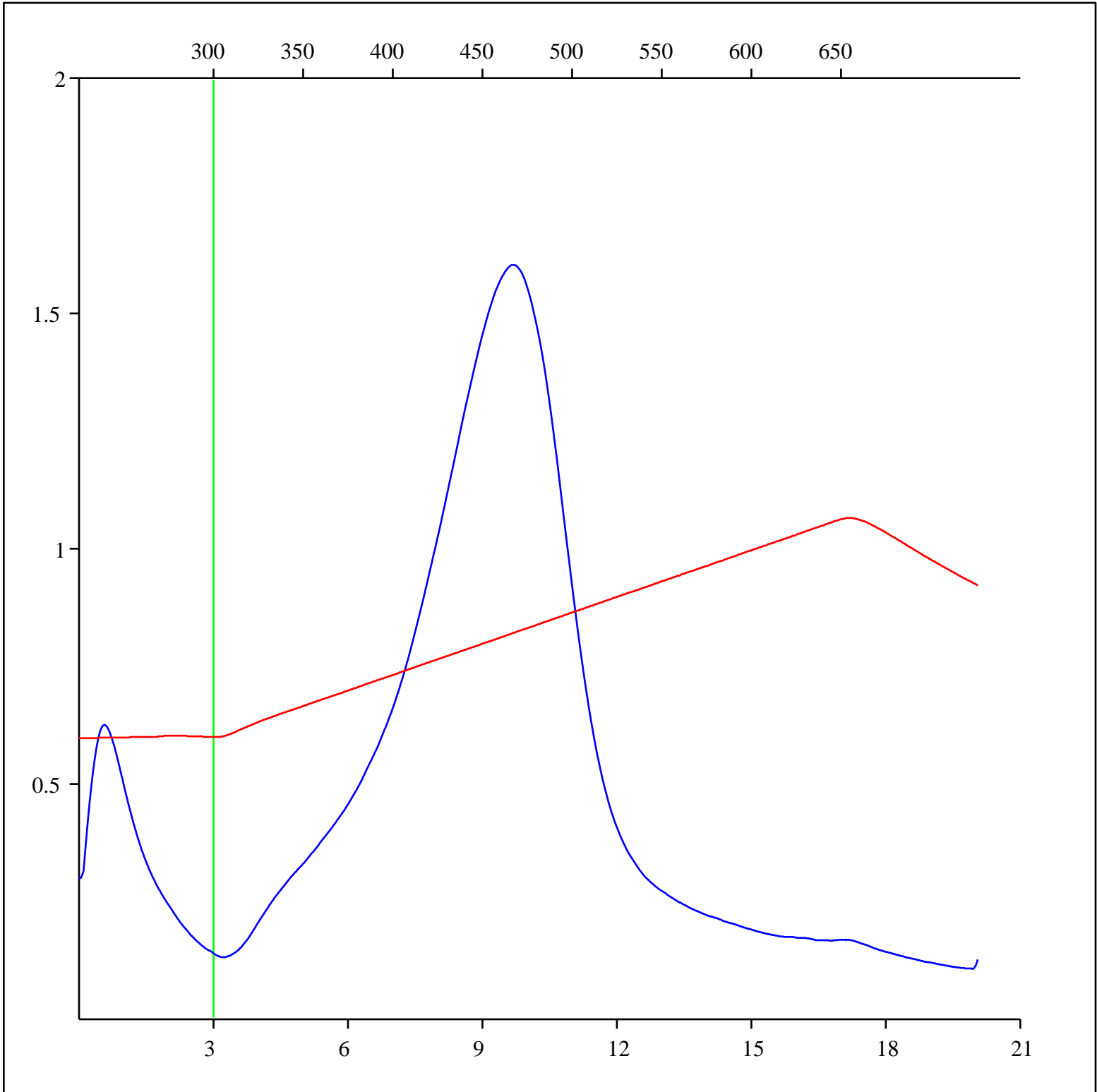
## FID hydrocarbons





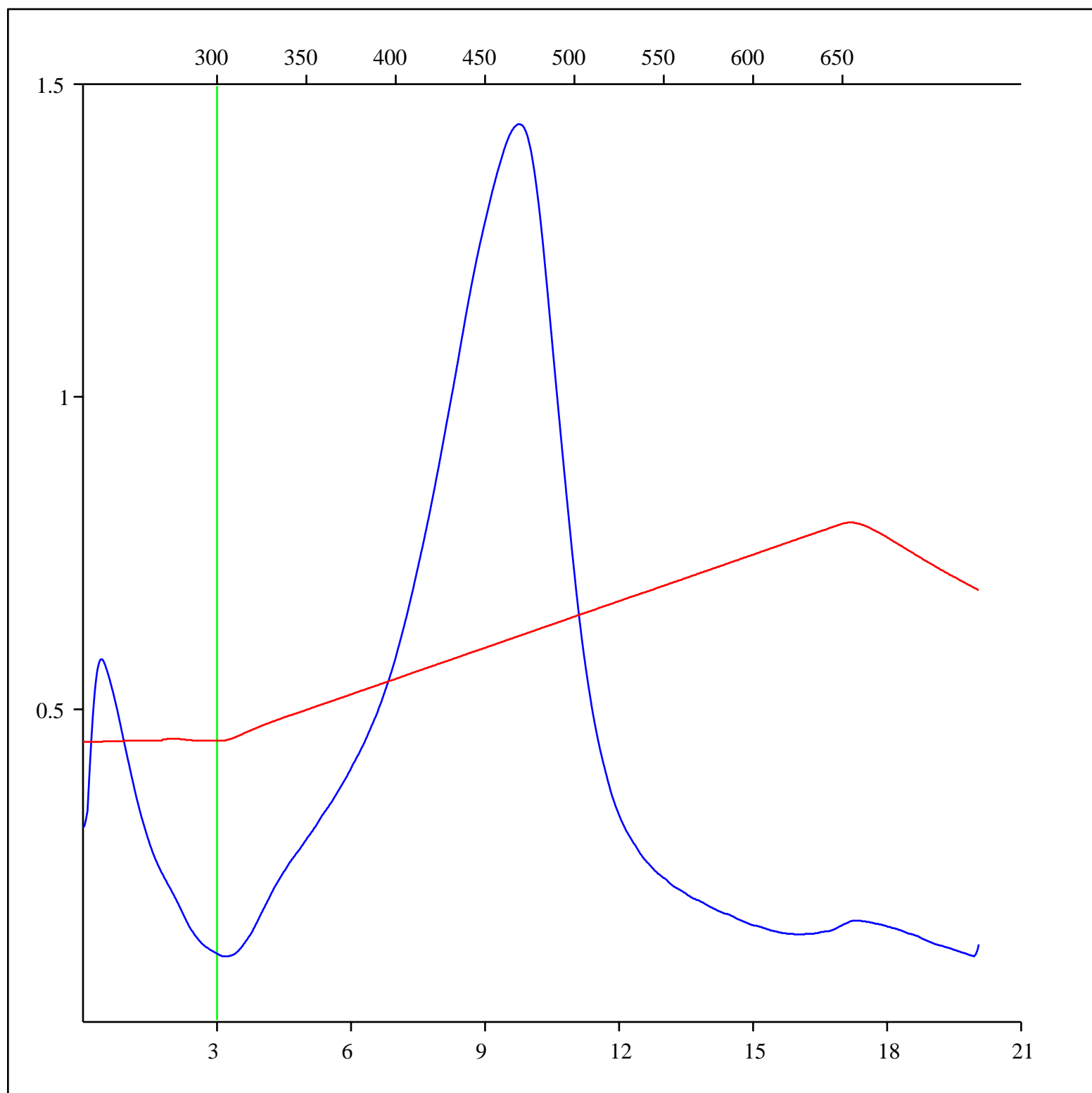
Sample: C-556096  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 945 - 955 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

### FID hydrocarbons



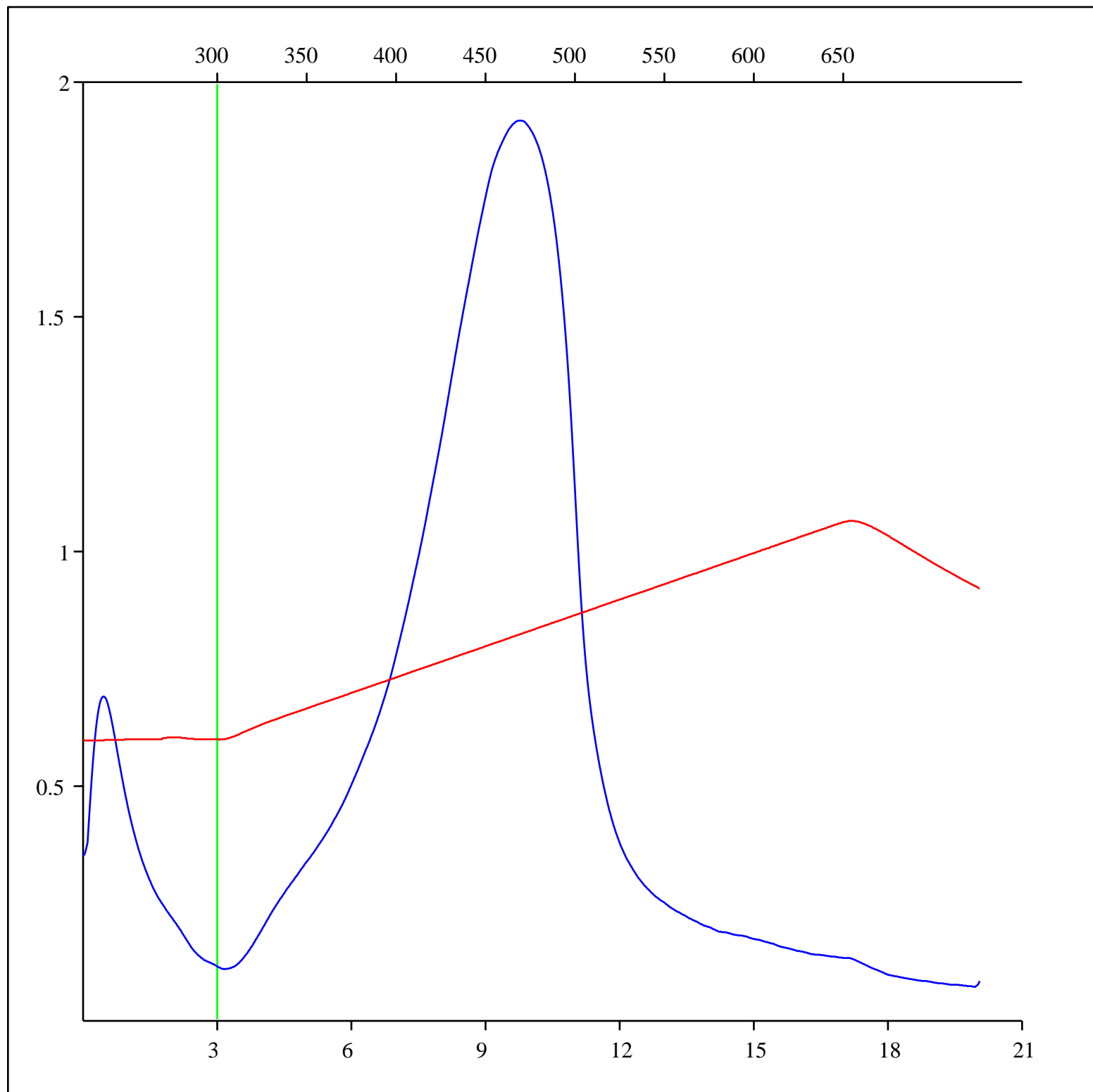
Sample: C-556097  
Acquisition Date: 23-NOV-2012  
Location: PAKTOA C-60  
Depth: 955 - 965 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



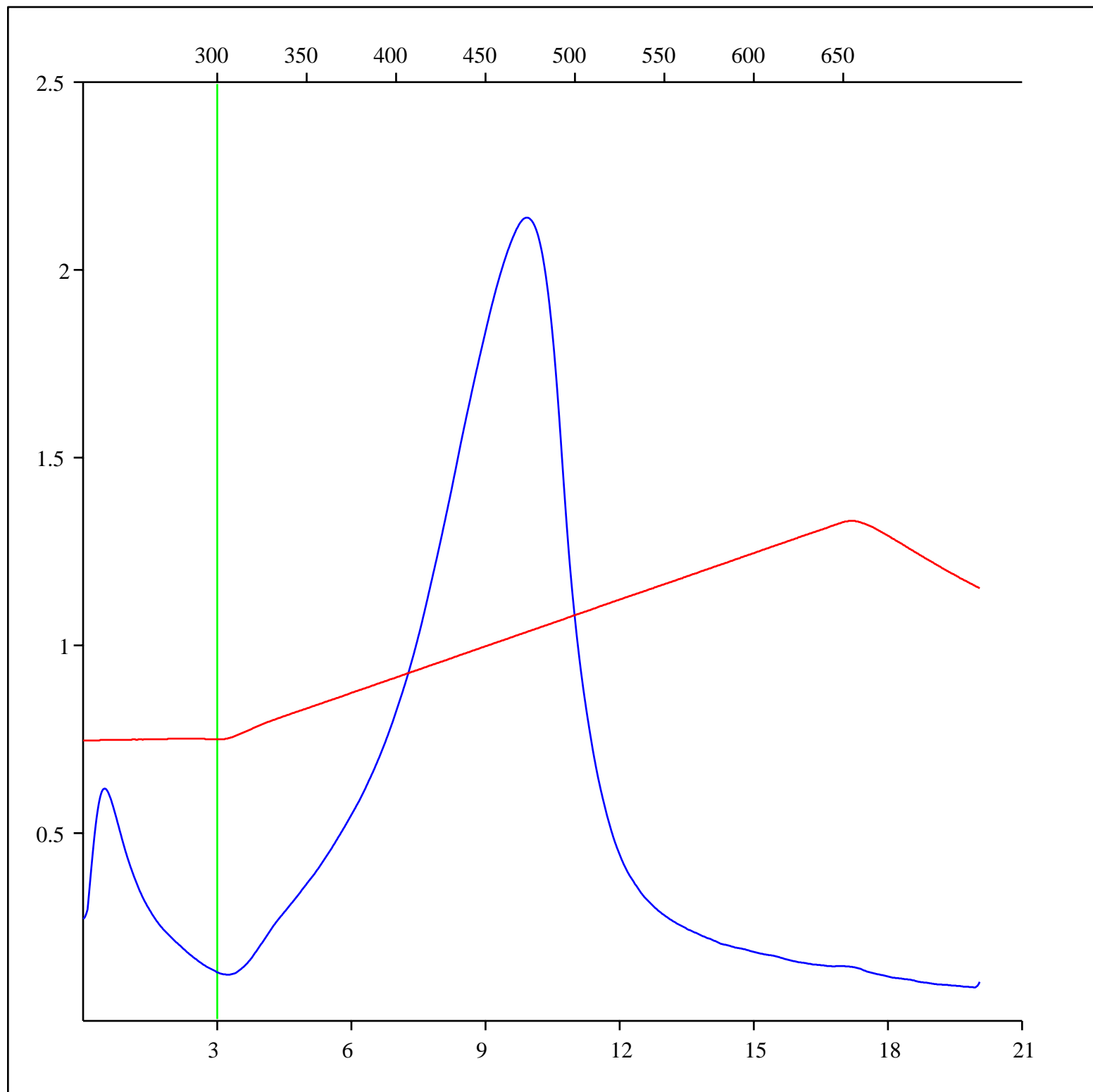
Sample: C-556098  
Acquisition Date: 24-NOV-2012  
Location: PAKTOA C-60  
Depth: 965 - 975 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



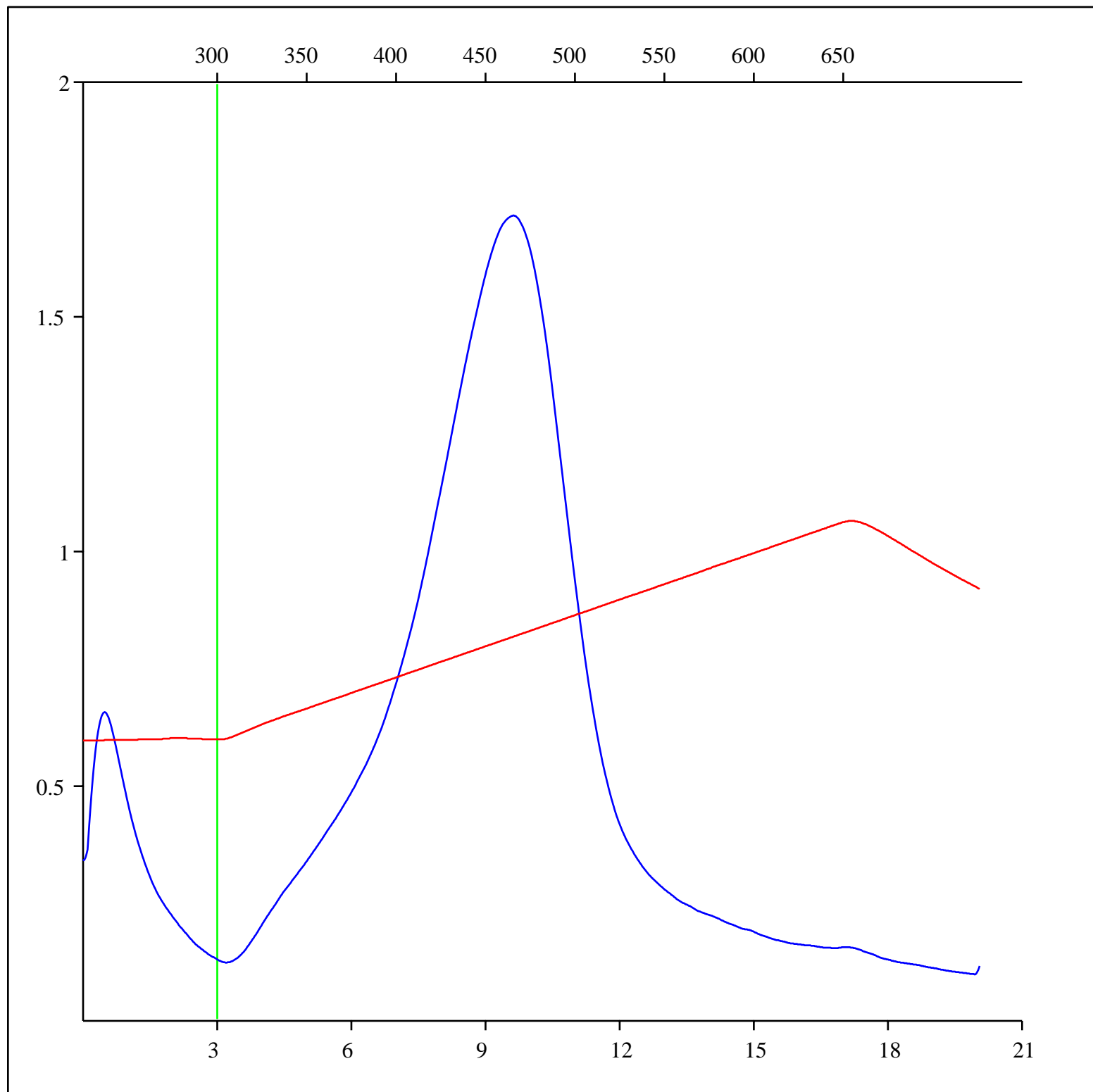
Sample: C-556099  
Acquisition Date: 24-NOV-2012  
Location: PAKTOA C-60  
Depth: 975 - 985 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



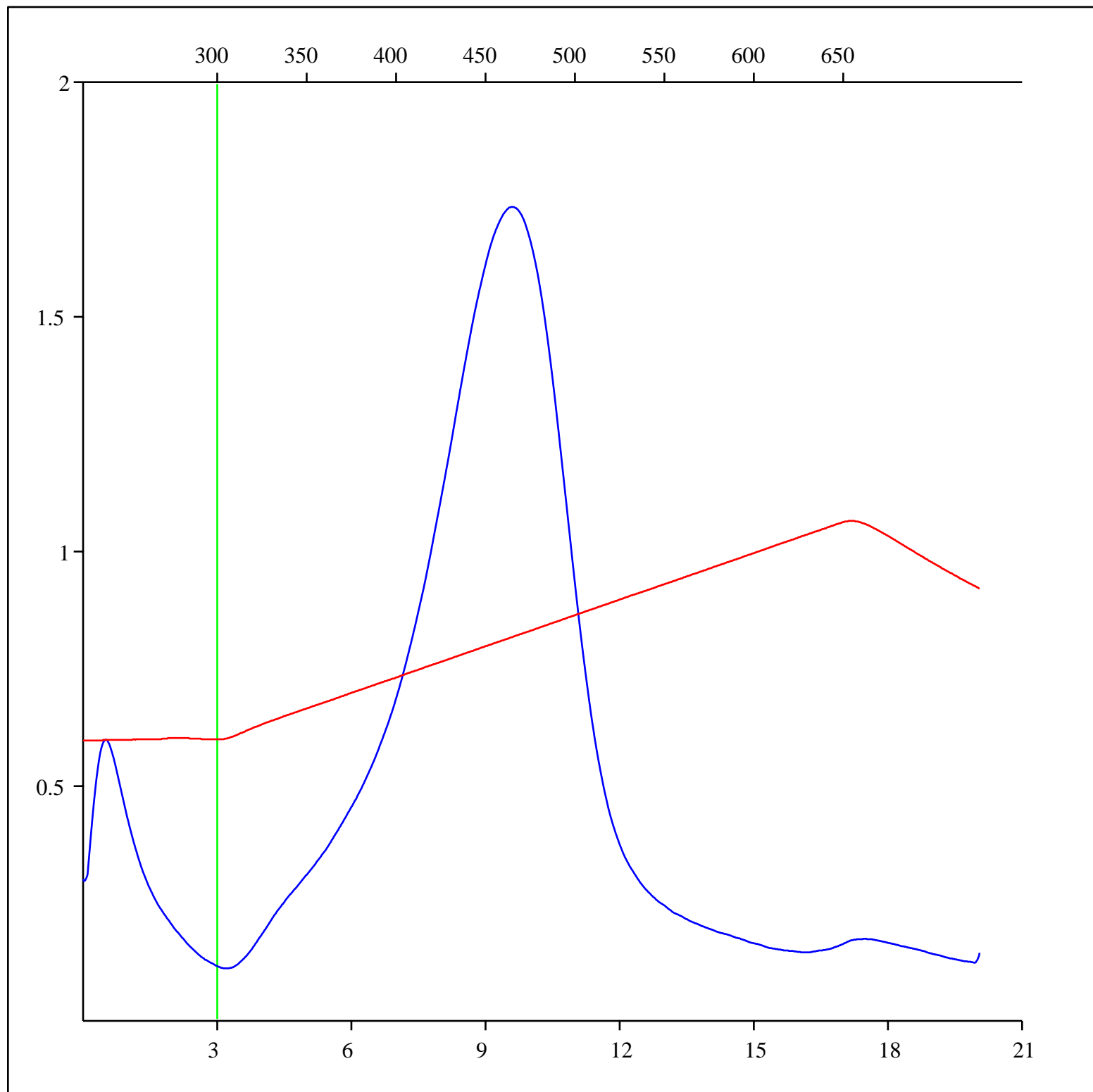
Sample: C-556100  
Acquisition Date: 24-NOV-2012  
Location: PAKTOA C-60  
Depth: 985 - 995 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



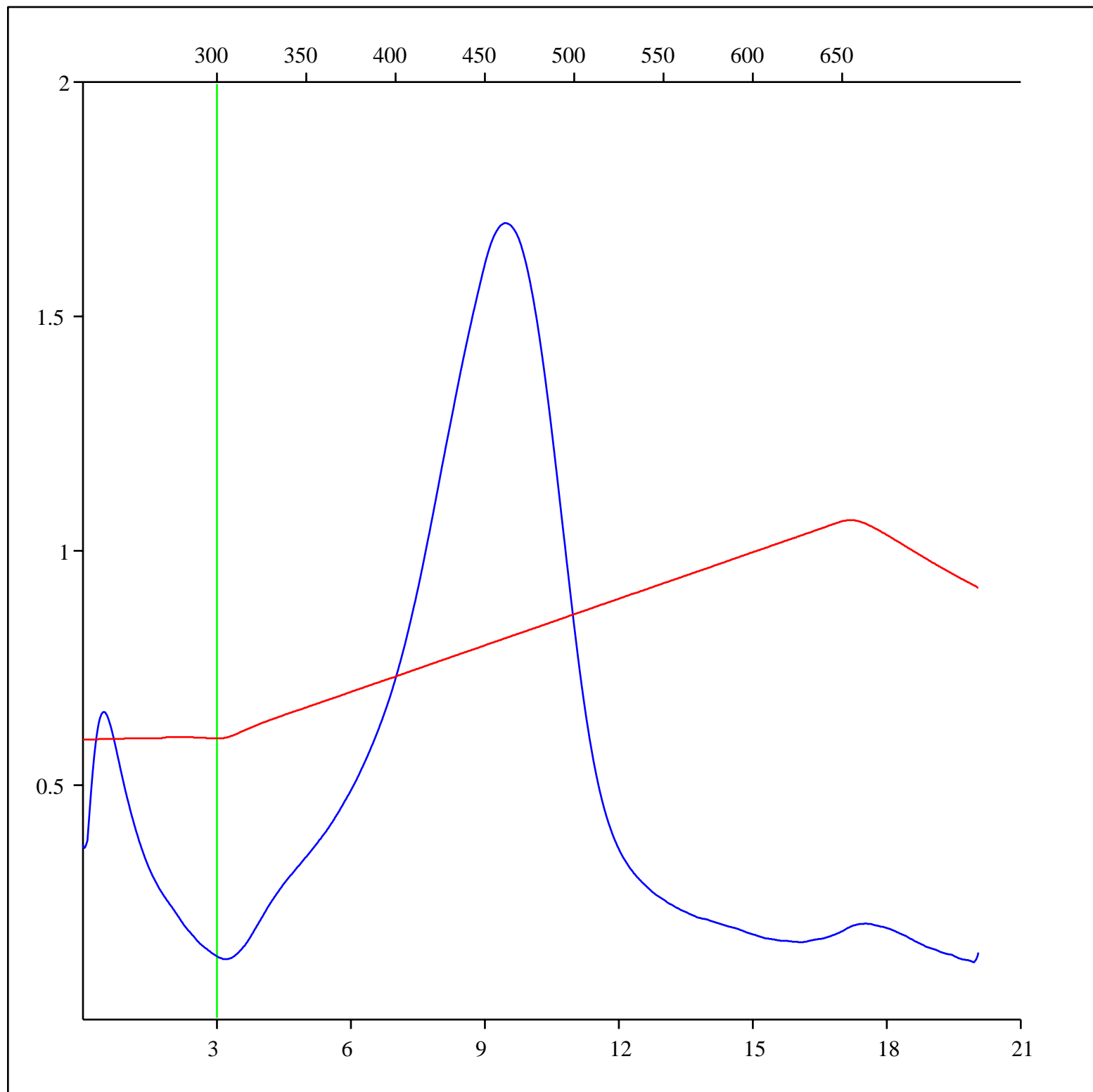
Sample: C-556101  
Acquisition Date: 24-NOV-2012  
Location: PAKTOA C-60  
Depth: 995 - 1005 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



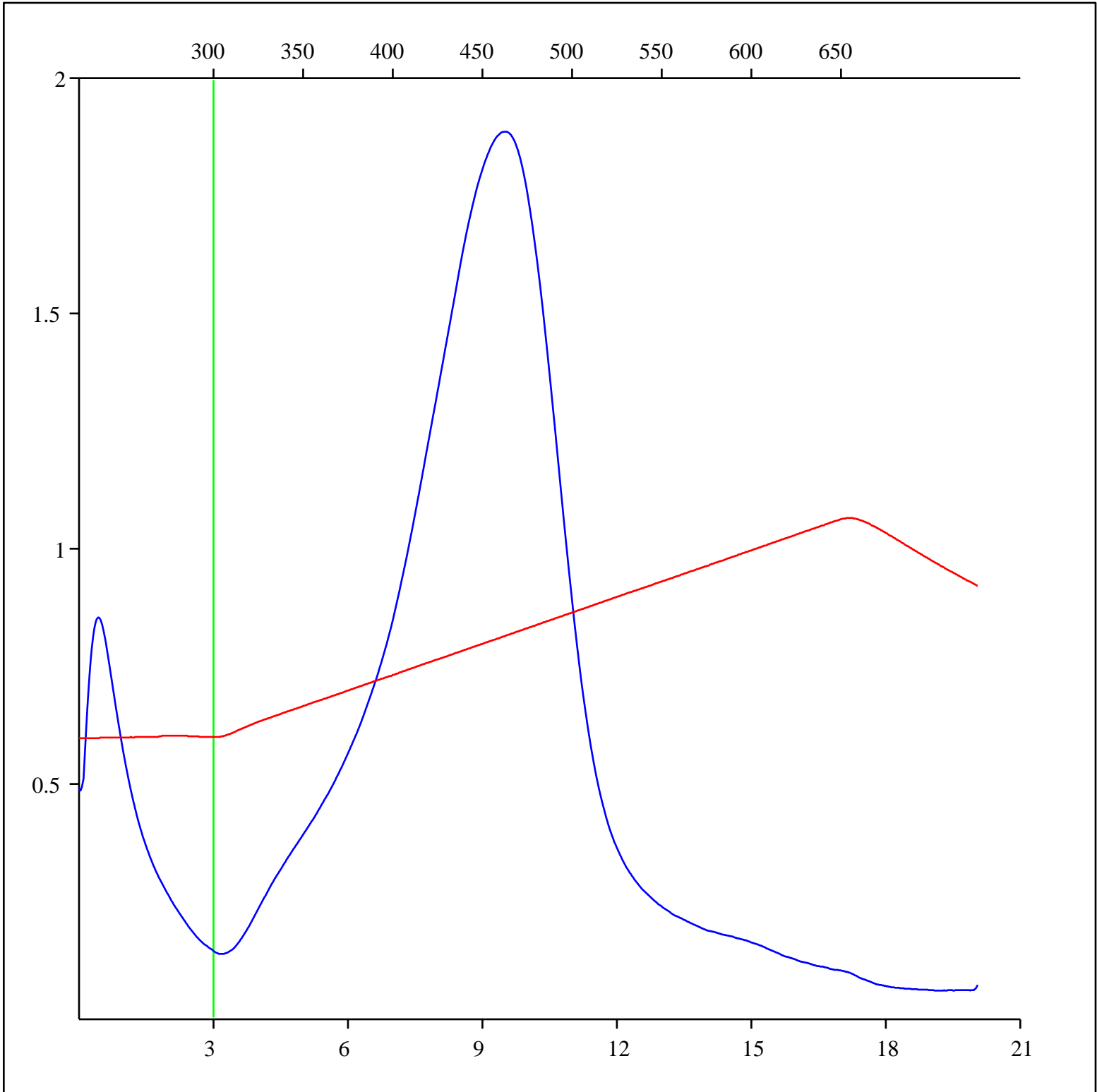
Sample: C-556102  
Acquisition Date: 24-NOV-2012  
Location: PAKTOA C-60  
Depth: 1005 - 1015 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556103  
Acquisition Date: 24-NOV-2012  
Location: PAKTOA C-60  
Depth: 1015 - 1025 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

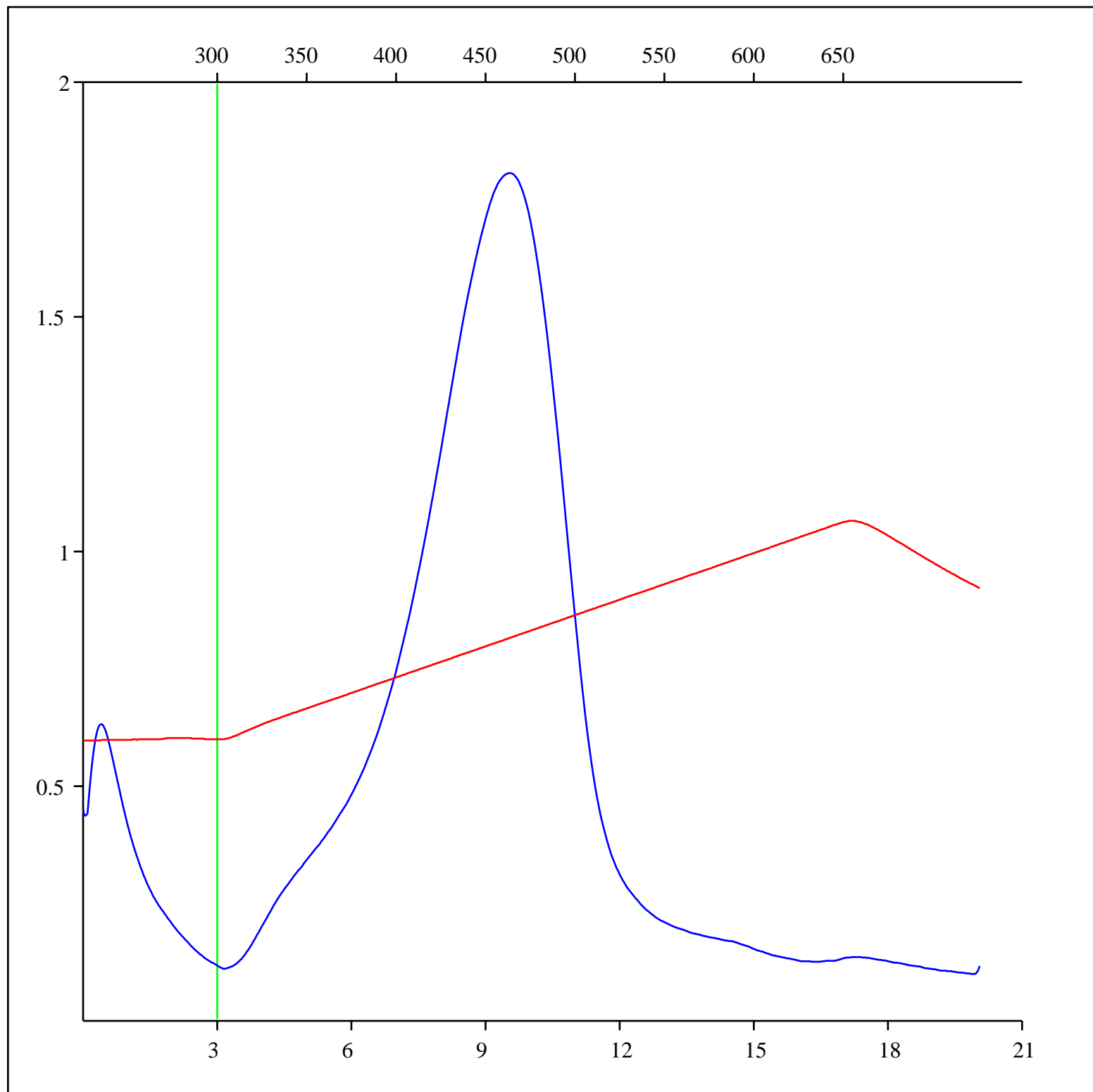
### FID hydrocarbons





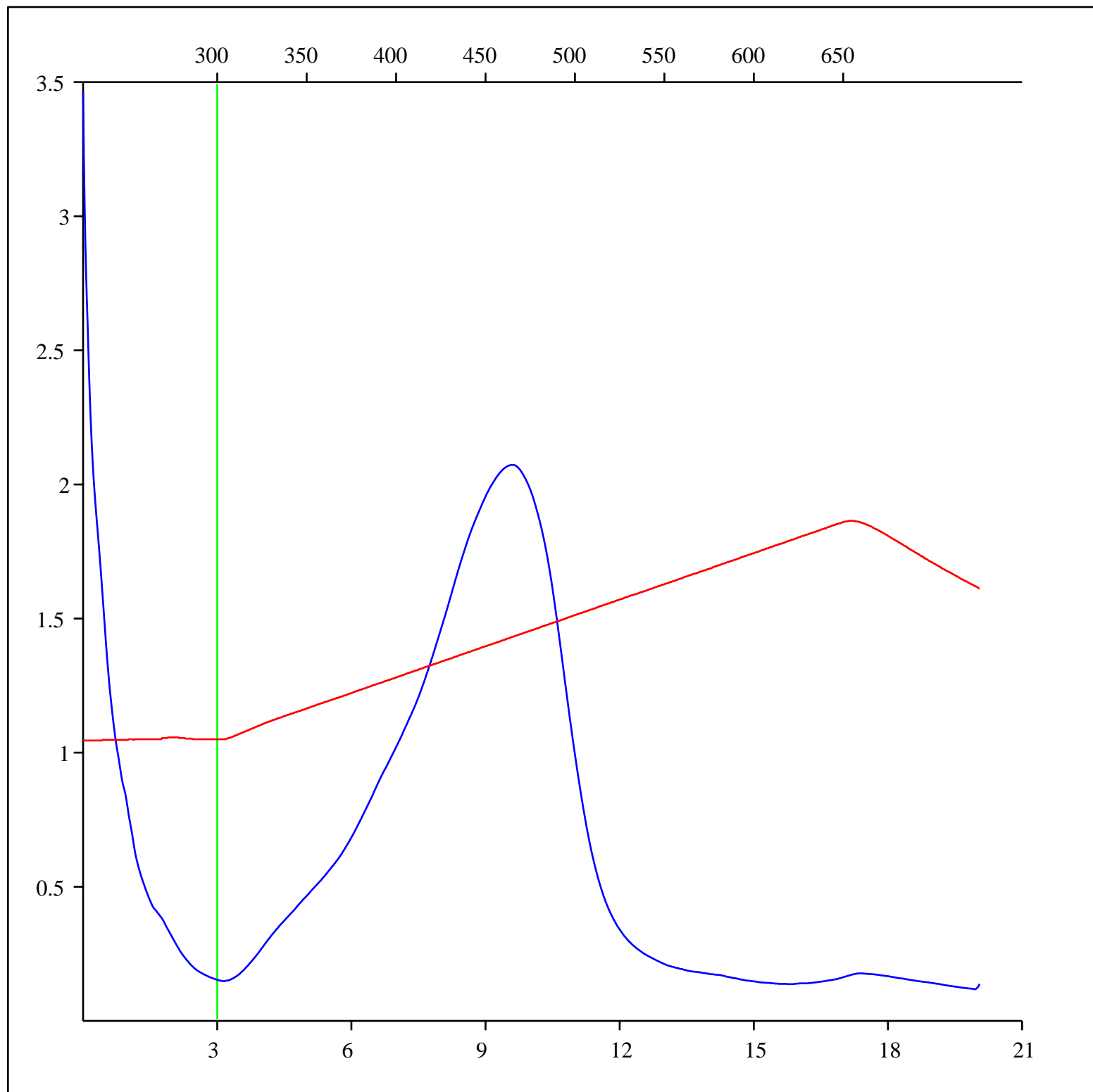
Sample: C-556104  
Acquisition Date: 25-NOV-2012  
Location: PAKTOA C-60  
Depth: 1025 - 1035 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



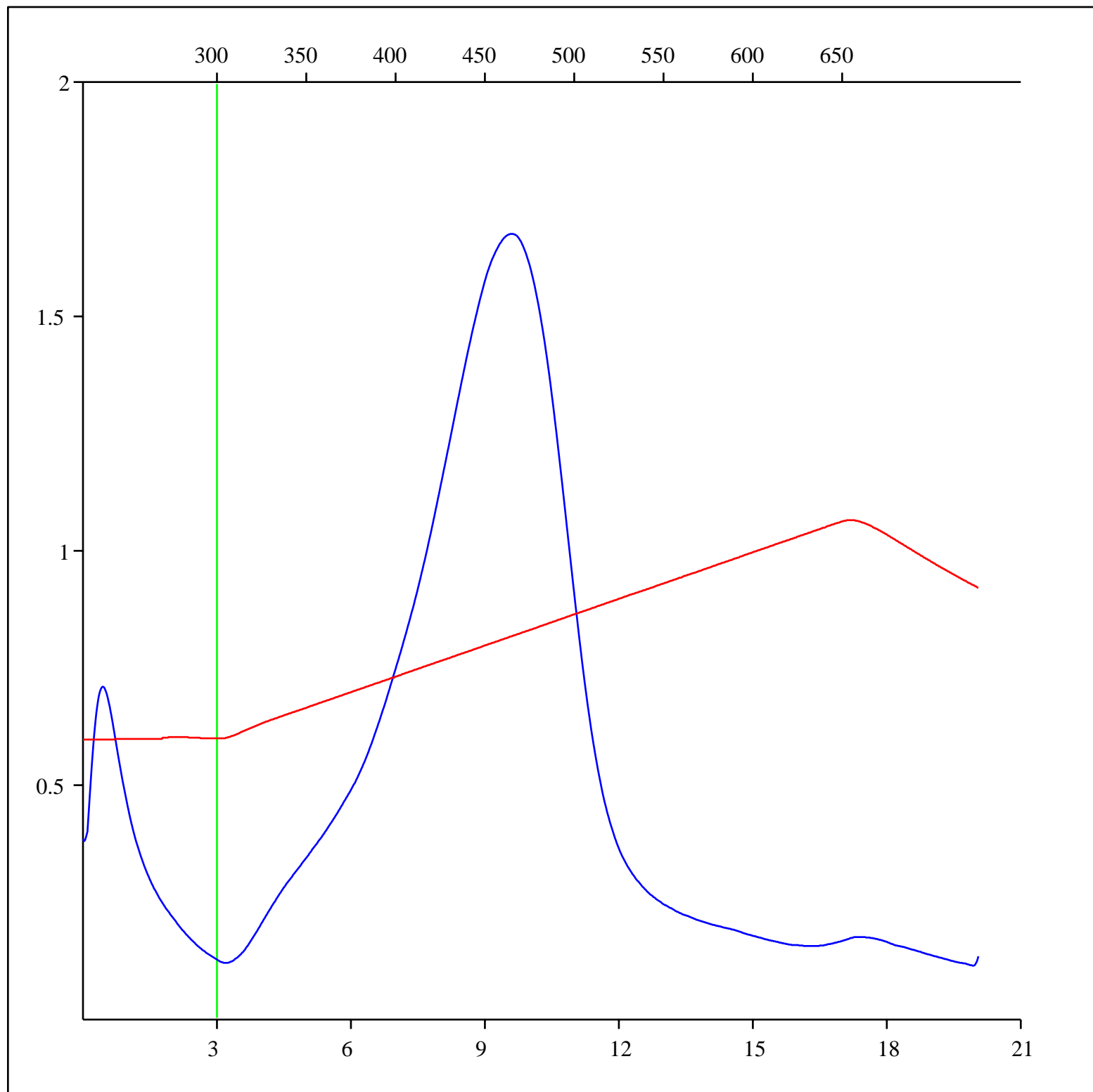
Sample: C-556105  
Acquisition Date: 25-NOV-2012  
Location: PAKTOA C-60  
Depth: 1035 - 1045 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



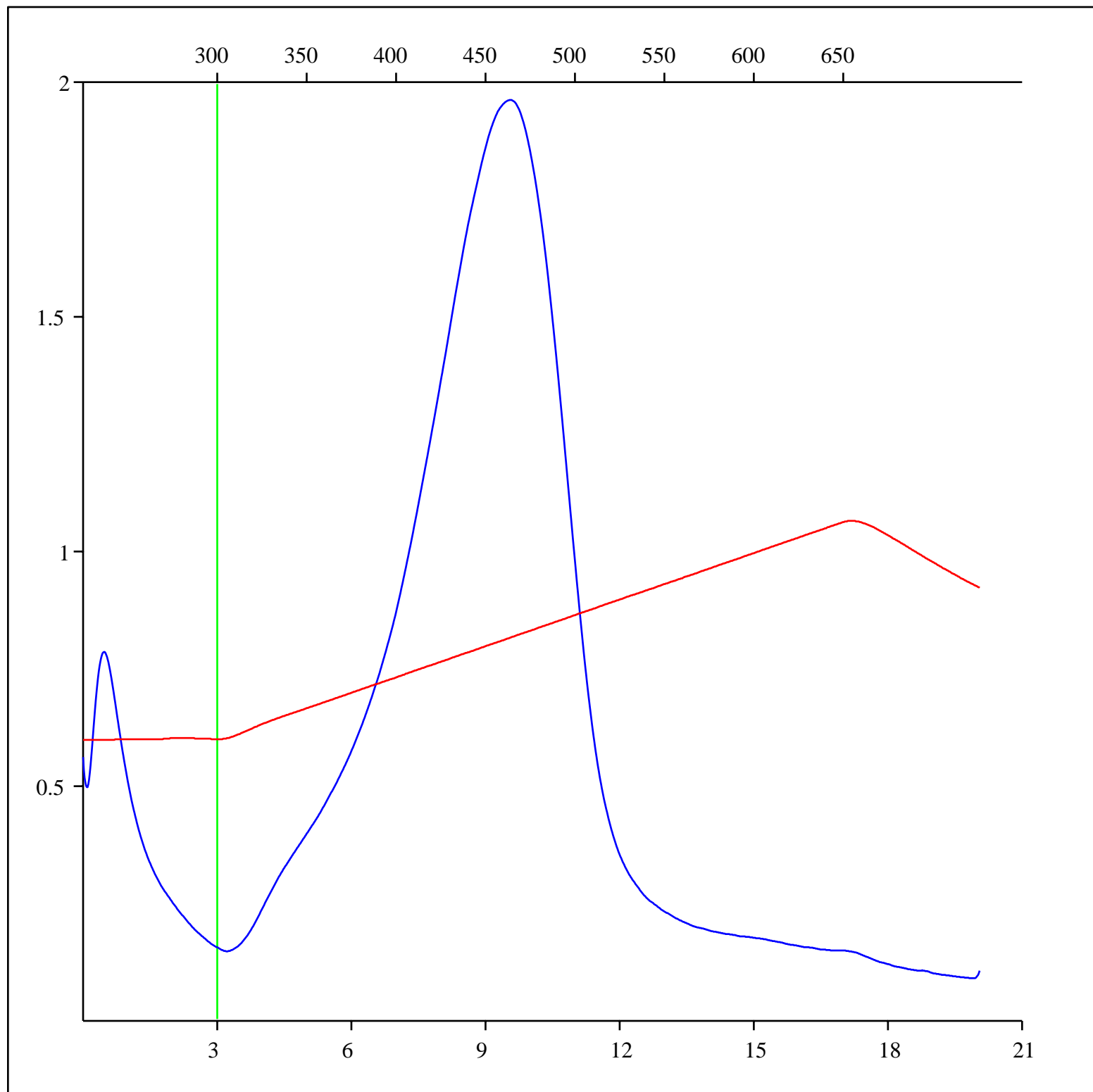
Sample: C-556106  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1045 - 1055 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



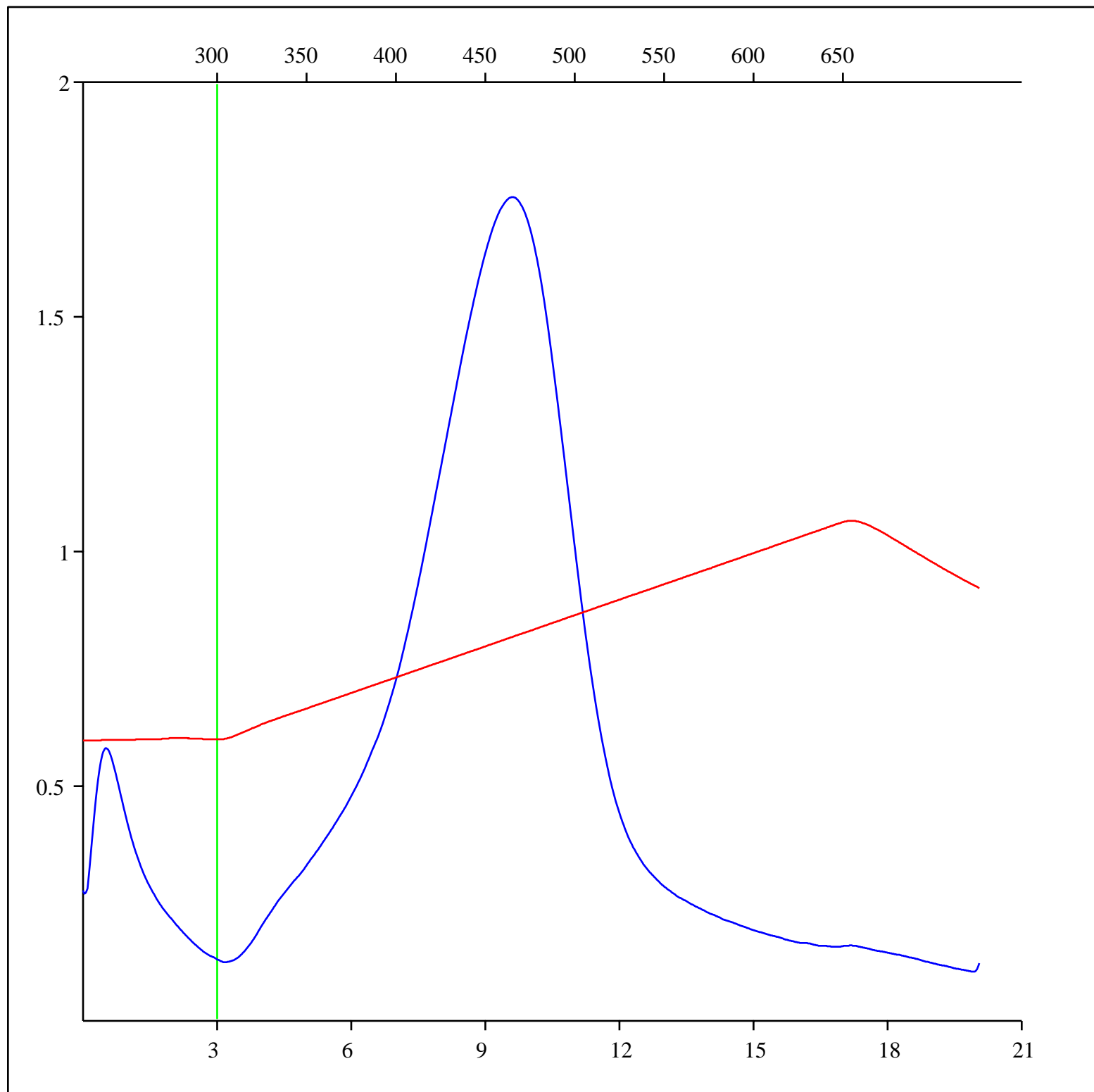
Sample: C-556107  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1055 - 1065 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



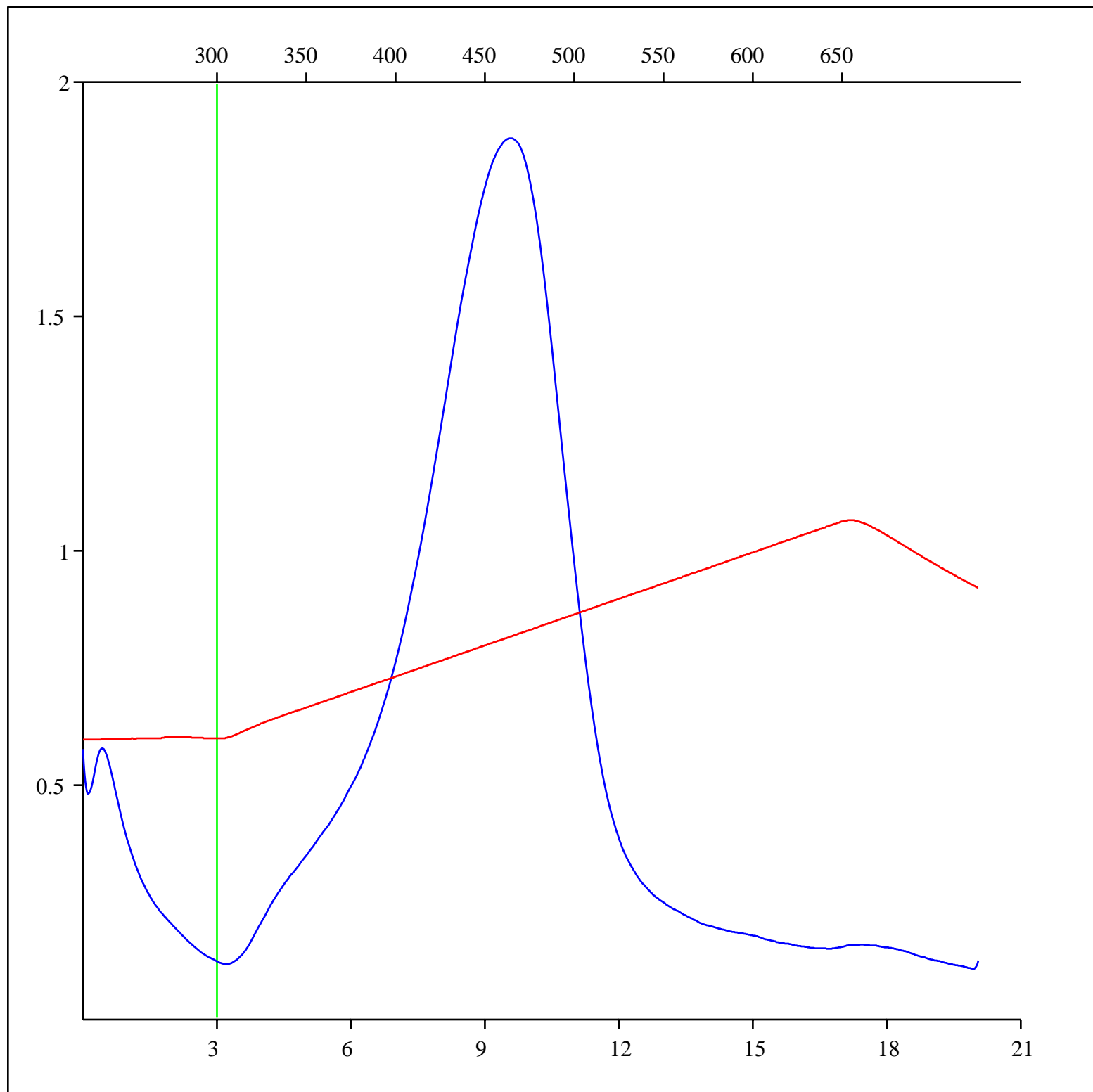
Sample: C-556108  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1065 - 1075 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



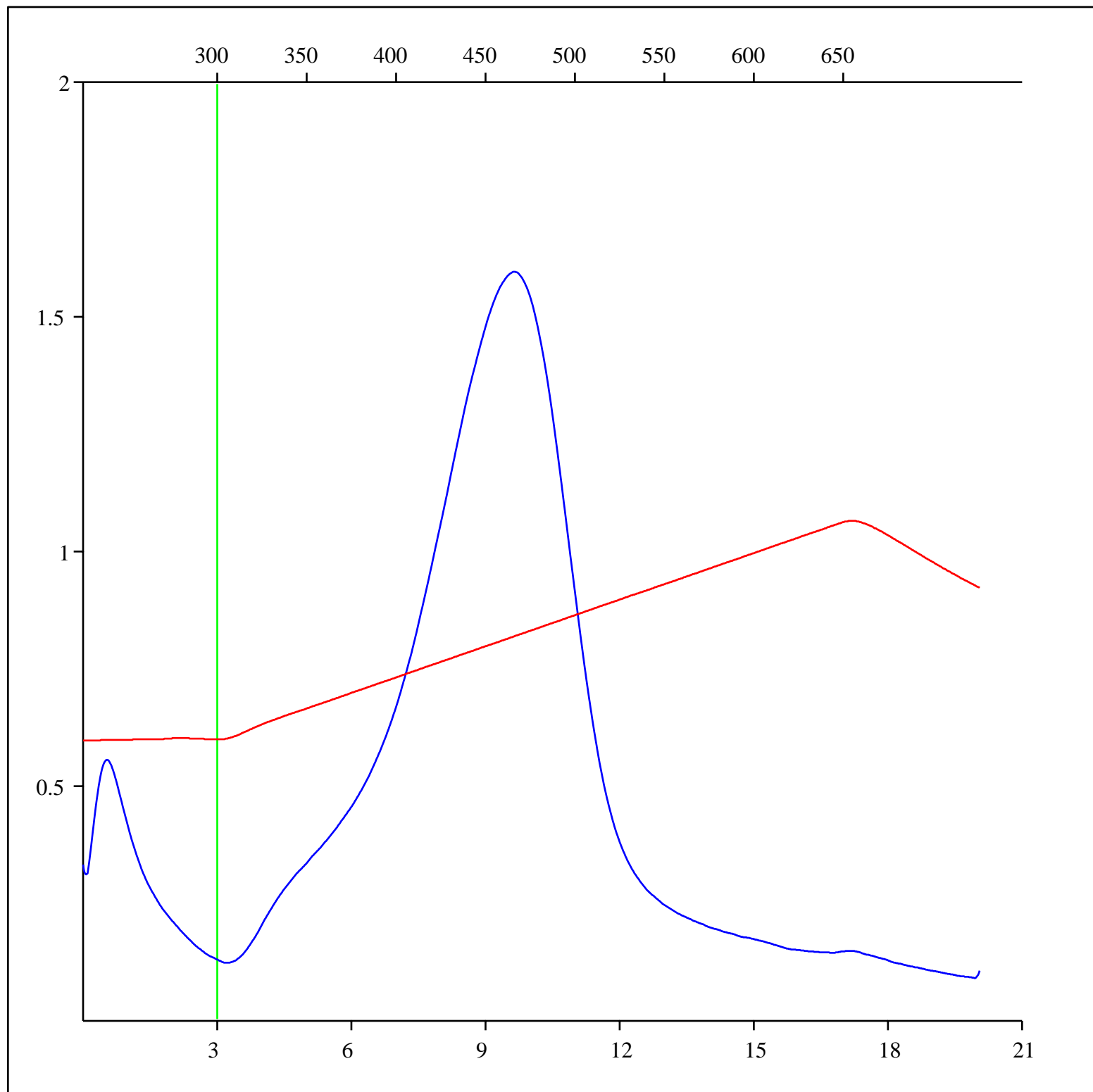
Sample: C-556109  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1075 - 1085 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



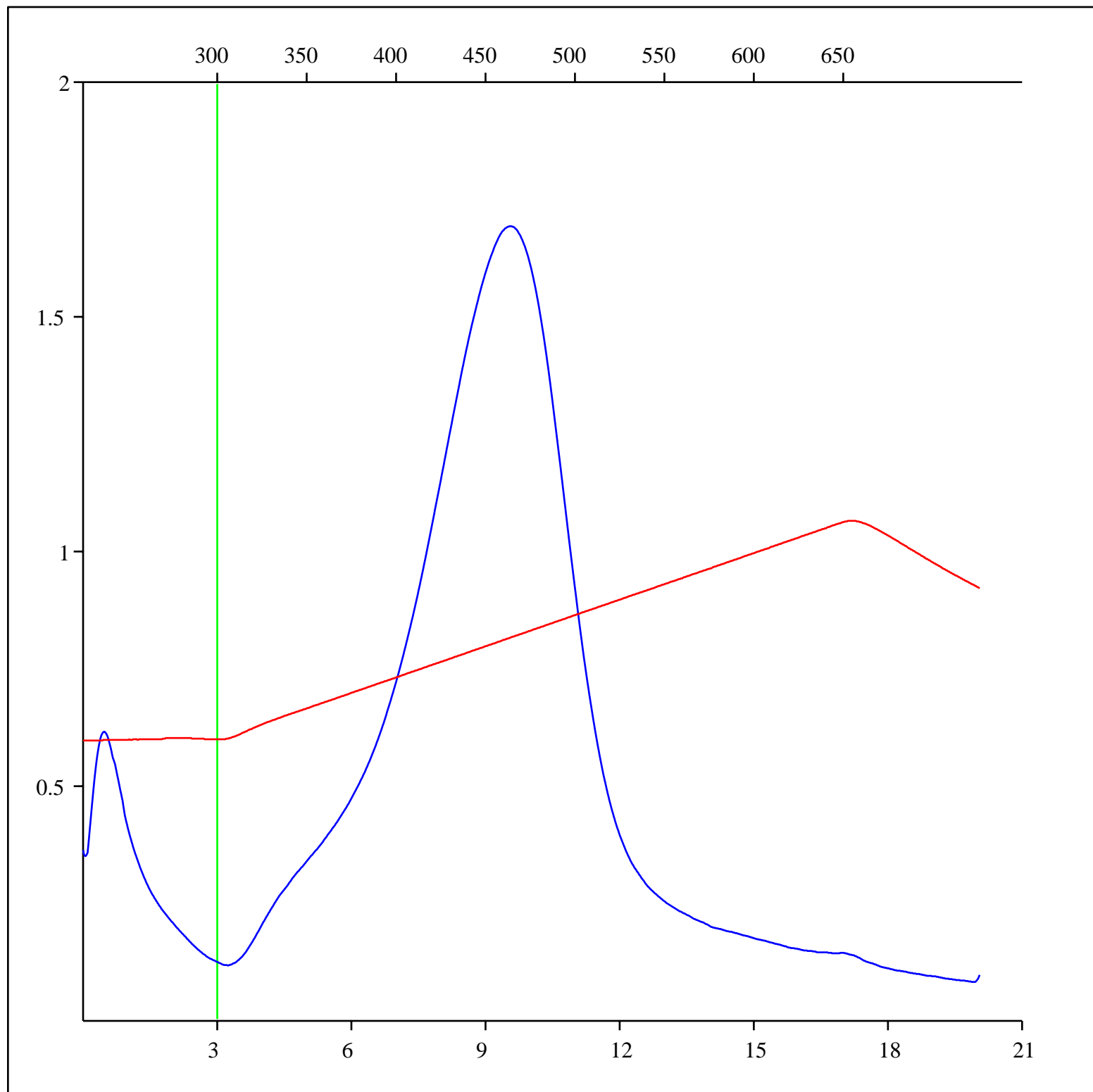
Sample: C-556110  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1085 - 1095 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556111  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1095 - 1105 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

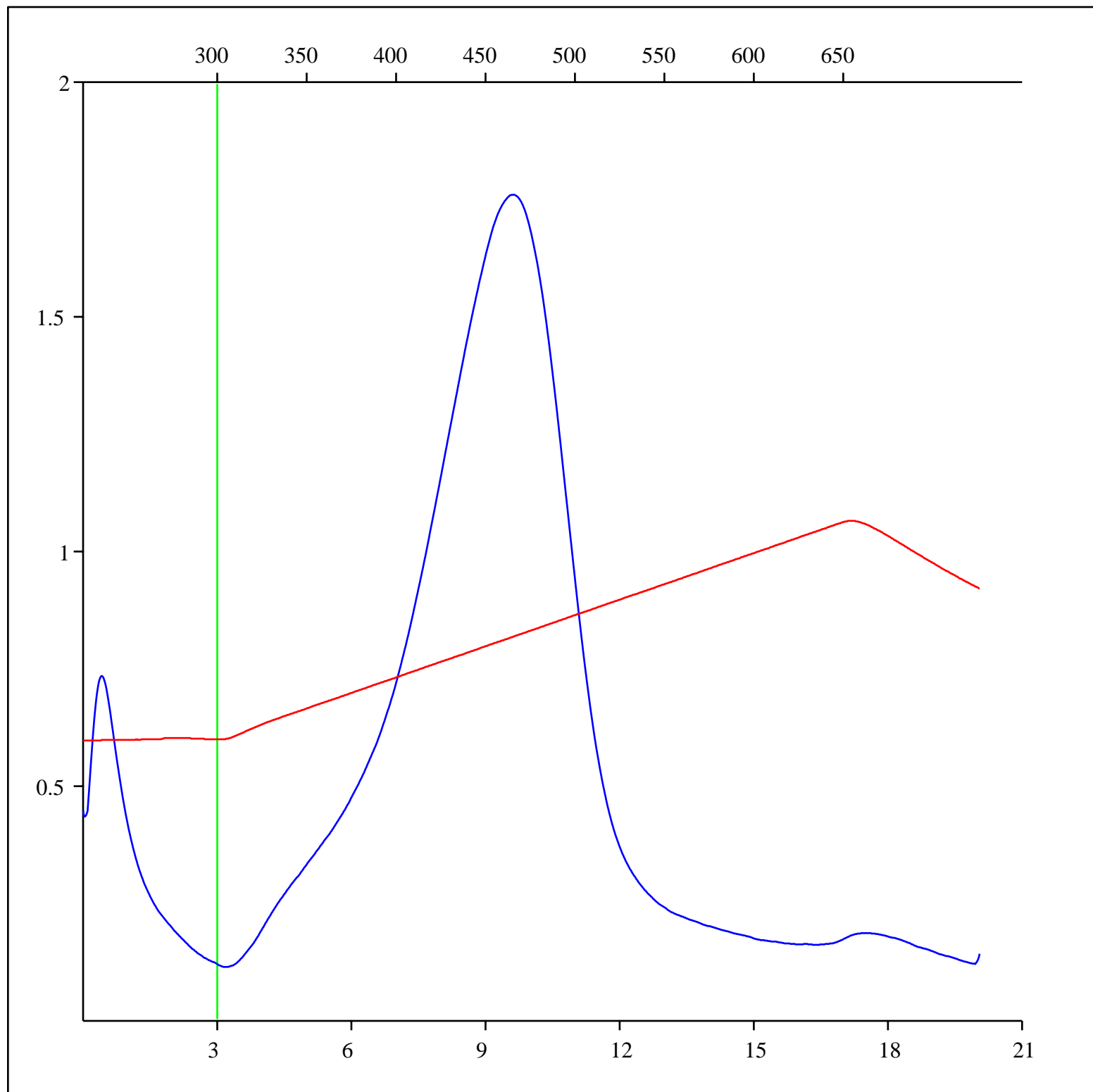
## FID hydrocarbons





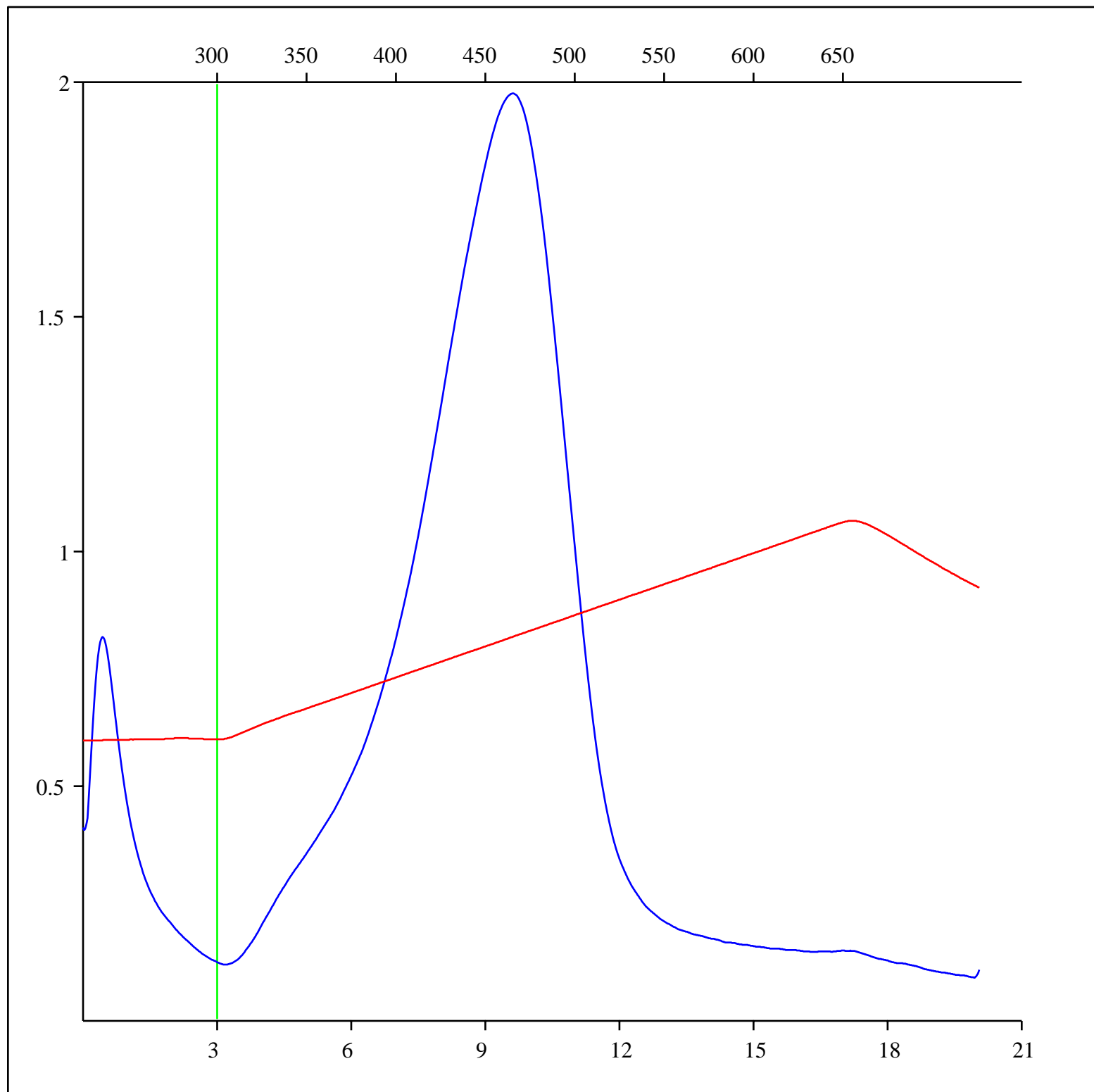
Sample: C-556112  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1105 - 1115 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



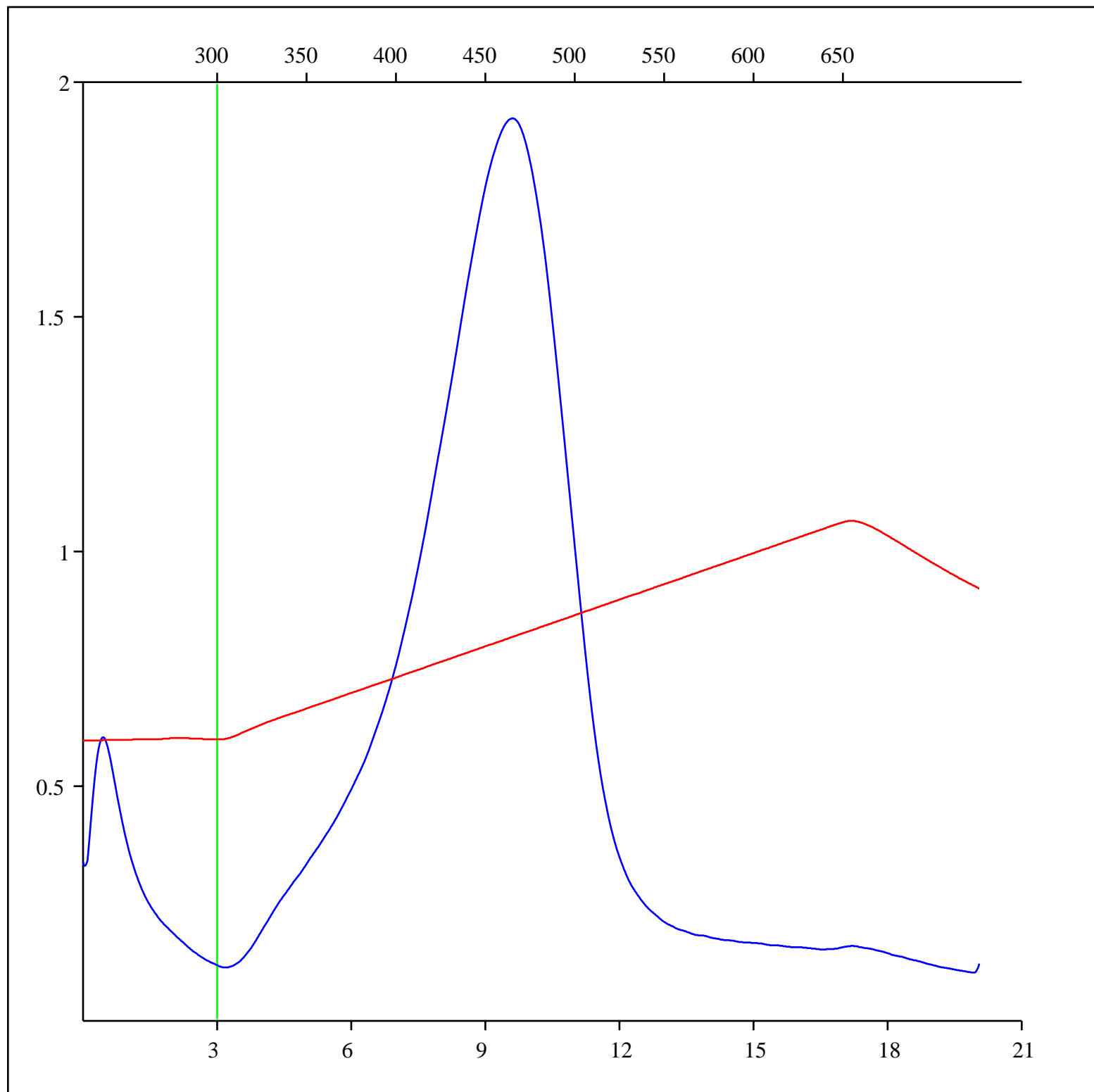
Sample: C-556113  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1115 - 1125 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



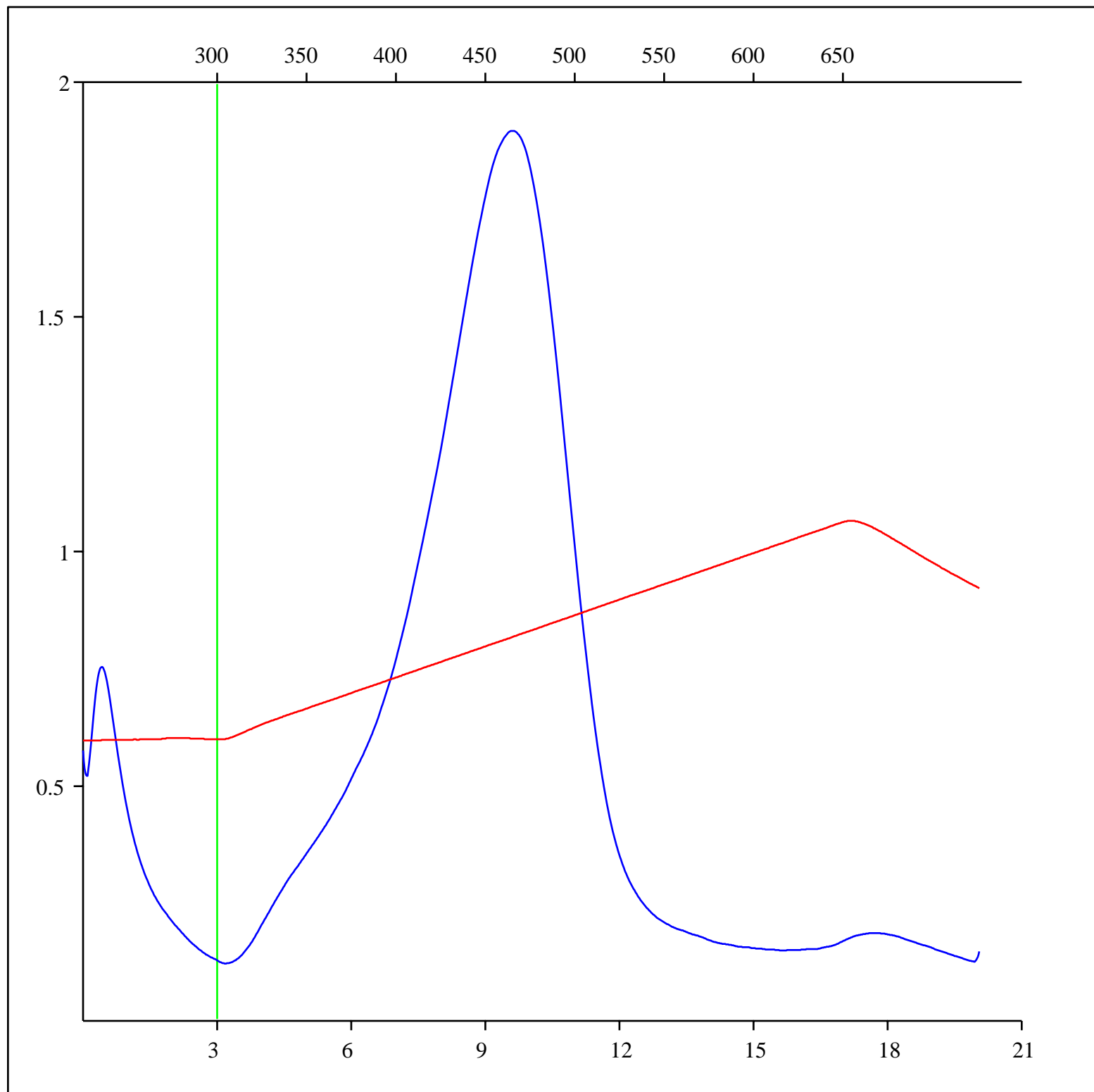
Sample: C-556114  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1125 - 1135 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



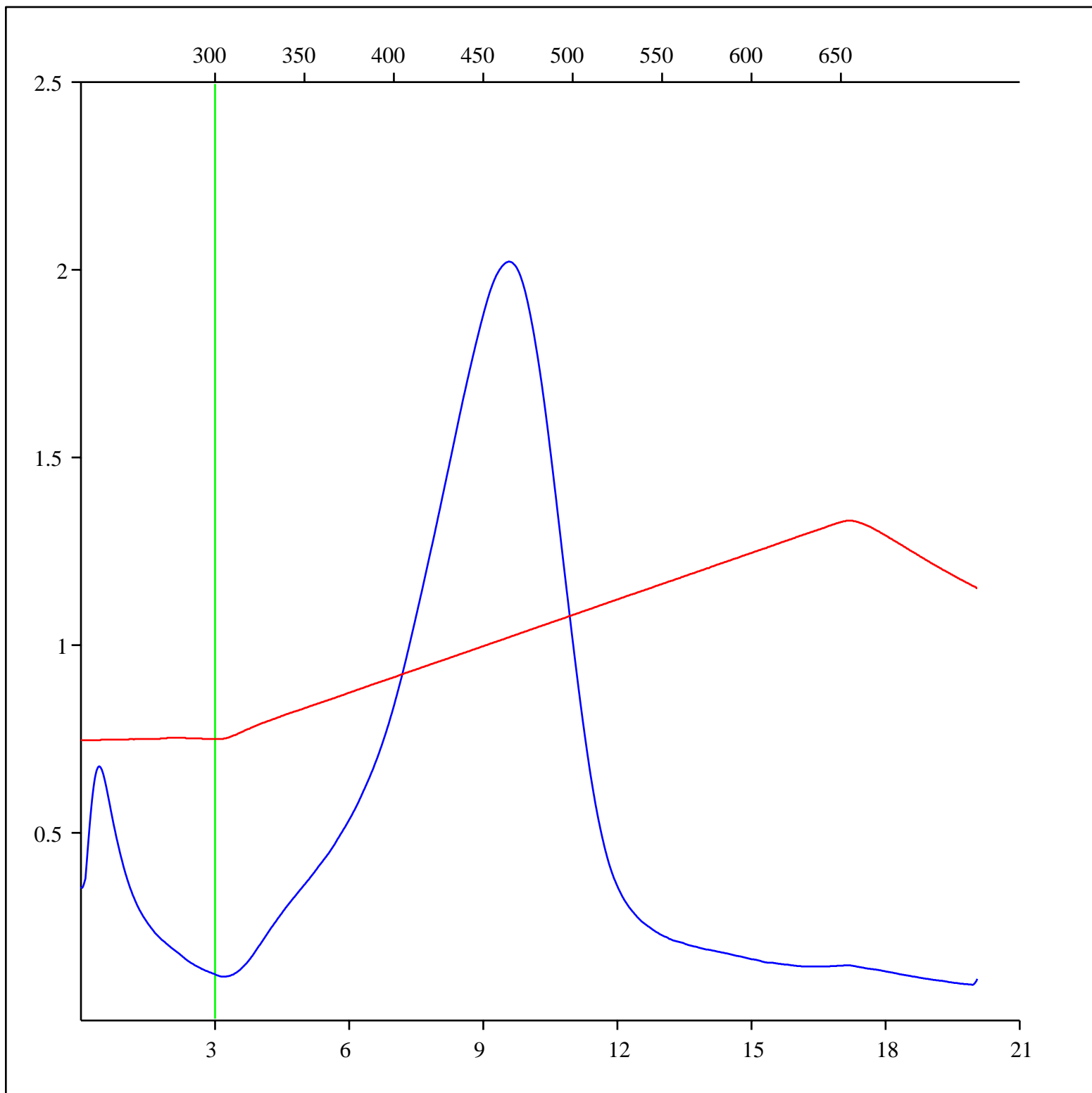
Sample: C-556115  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1135 - 1145 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



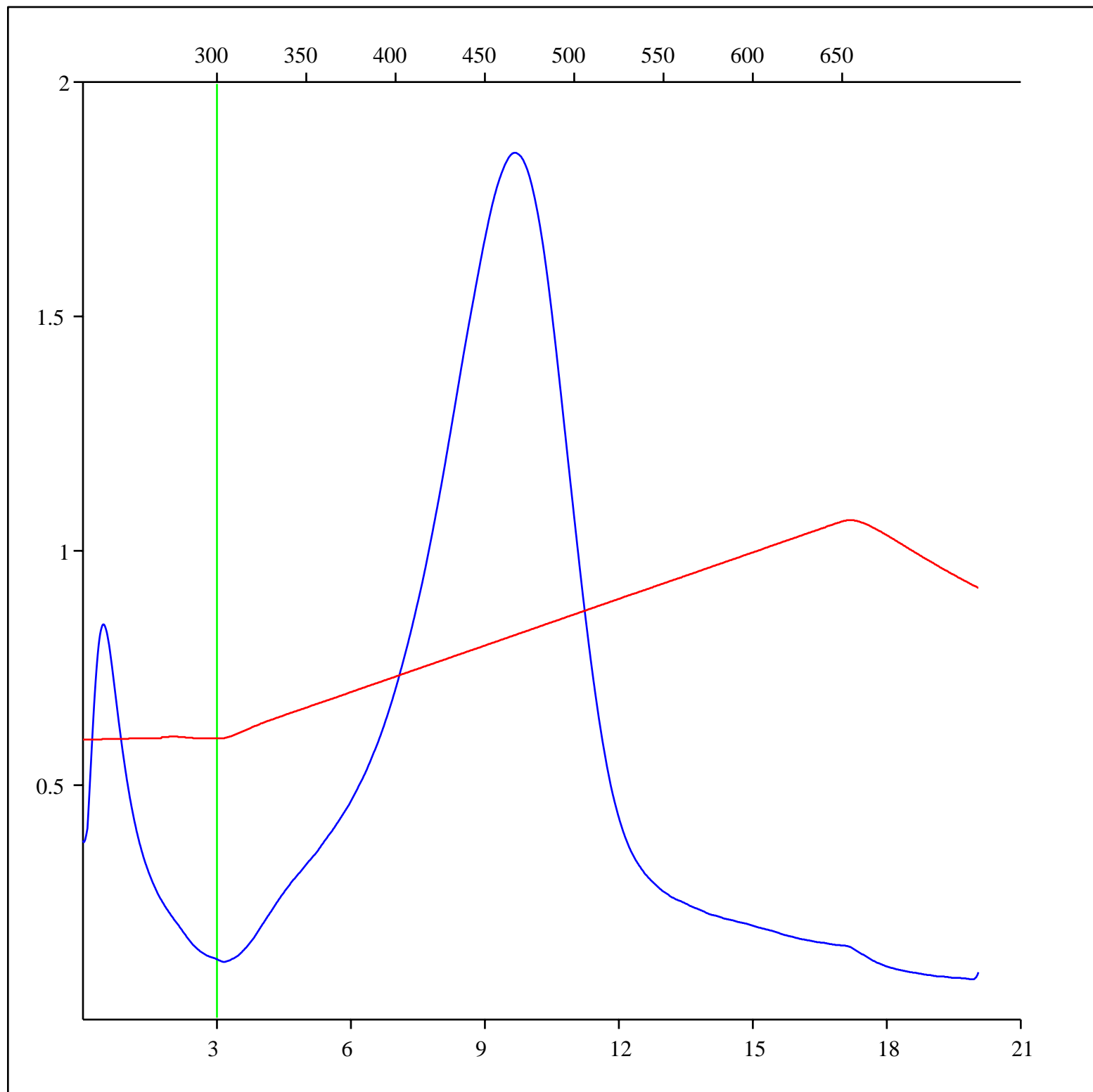
Sample: C-556116  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1145 - 1155 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



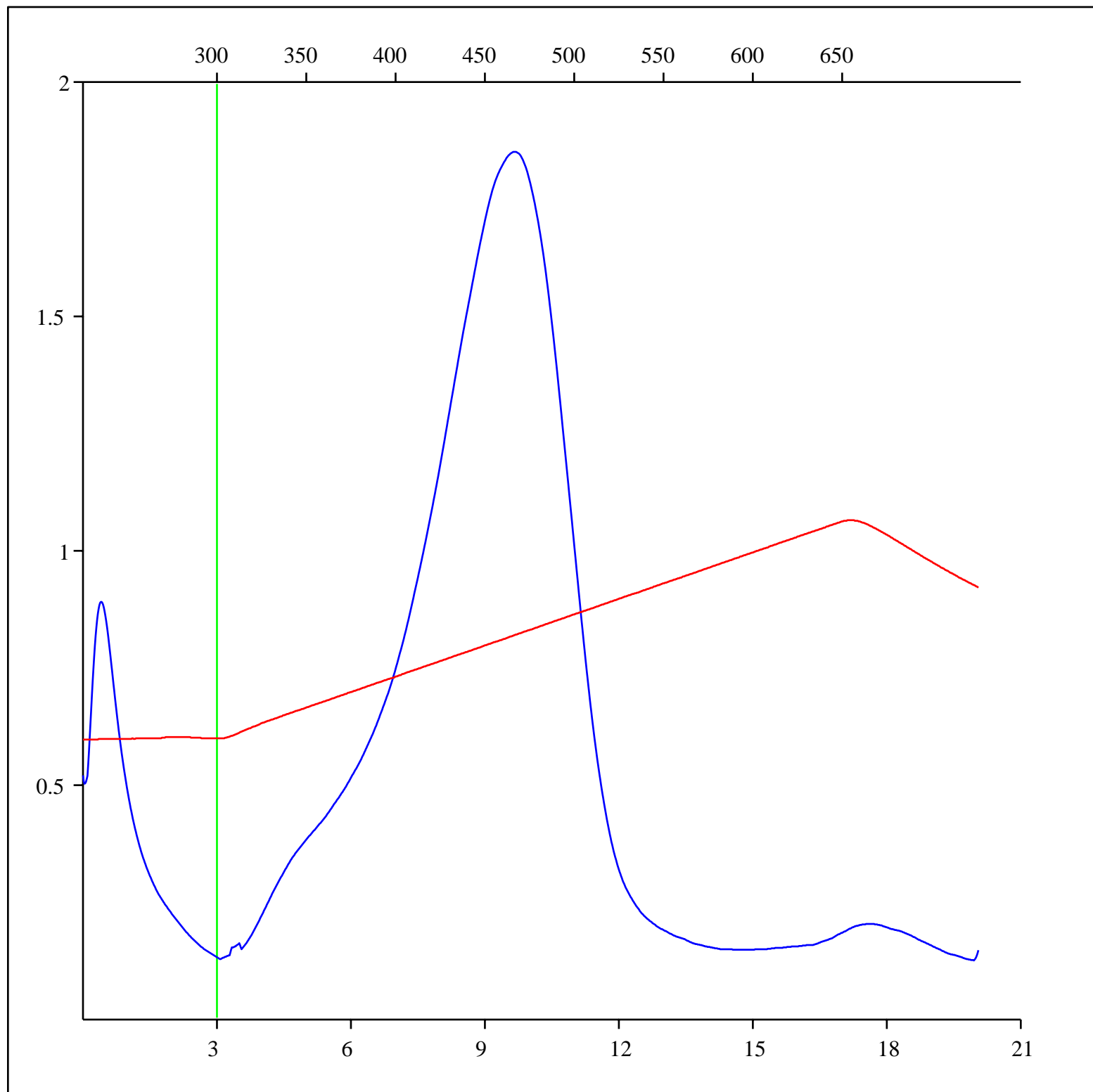
Sample: C-556117  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1155 - 1165 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



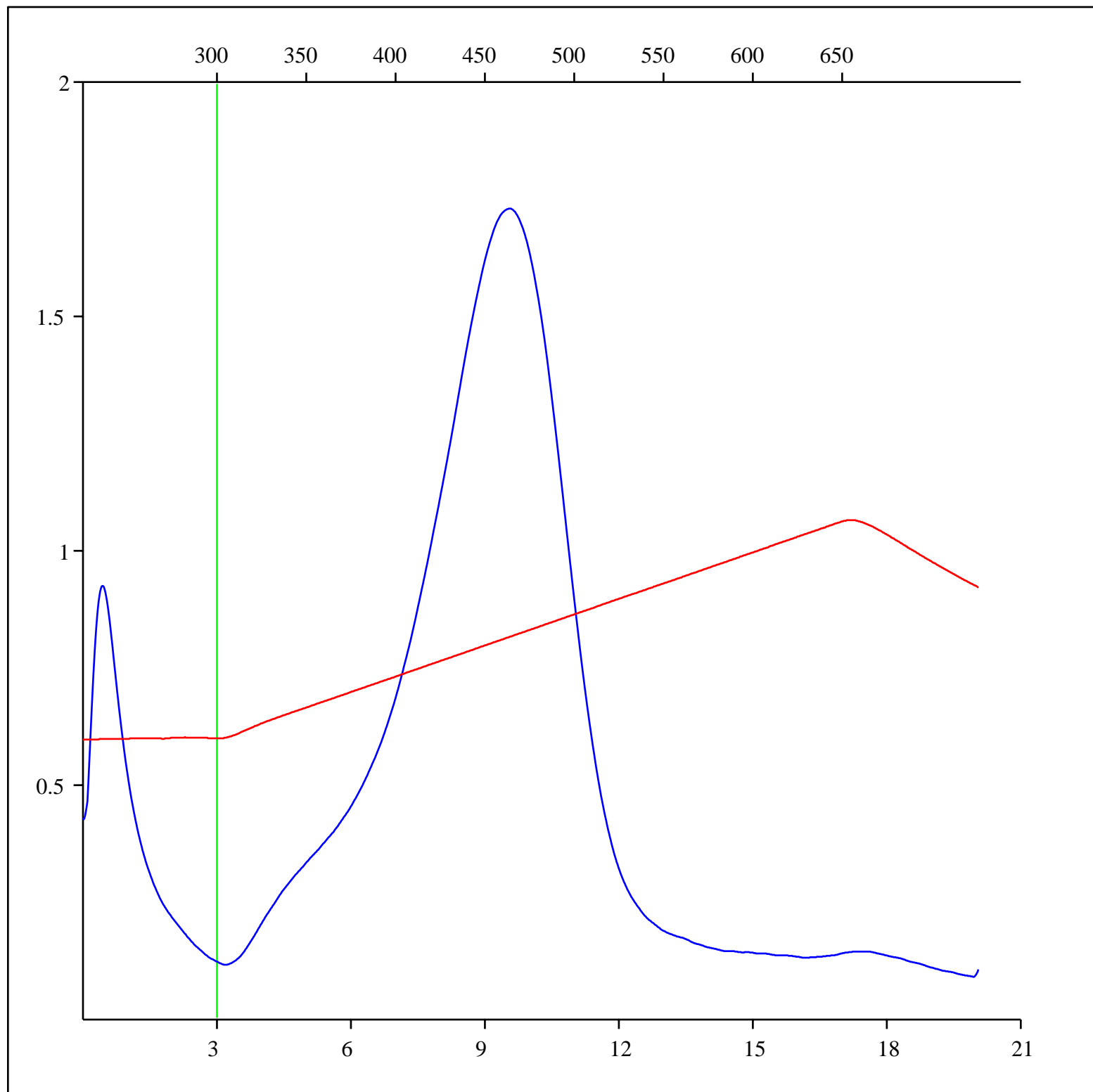
Sample: C-556118  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1165 - 1175 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556119  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1175 - 1185 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

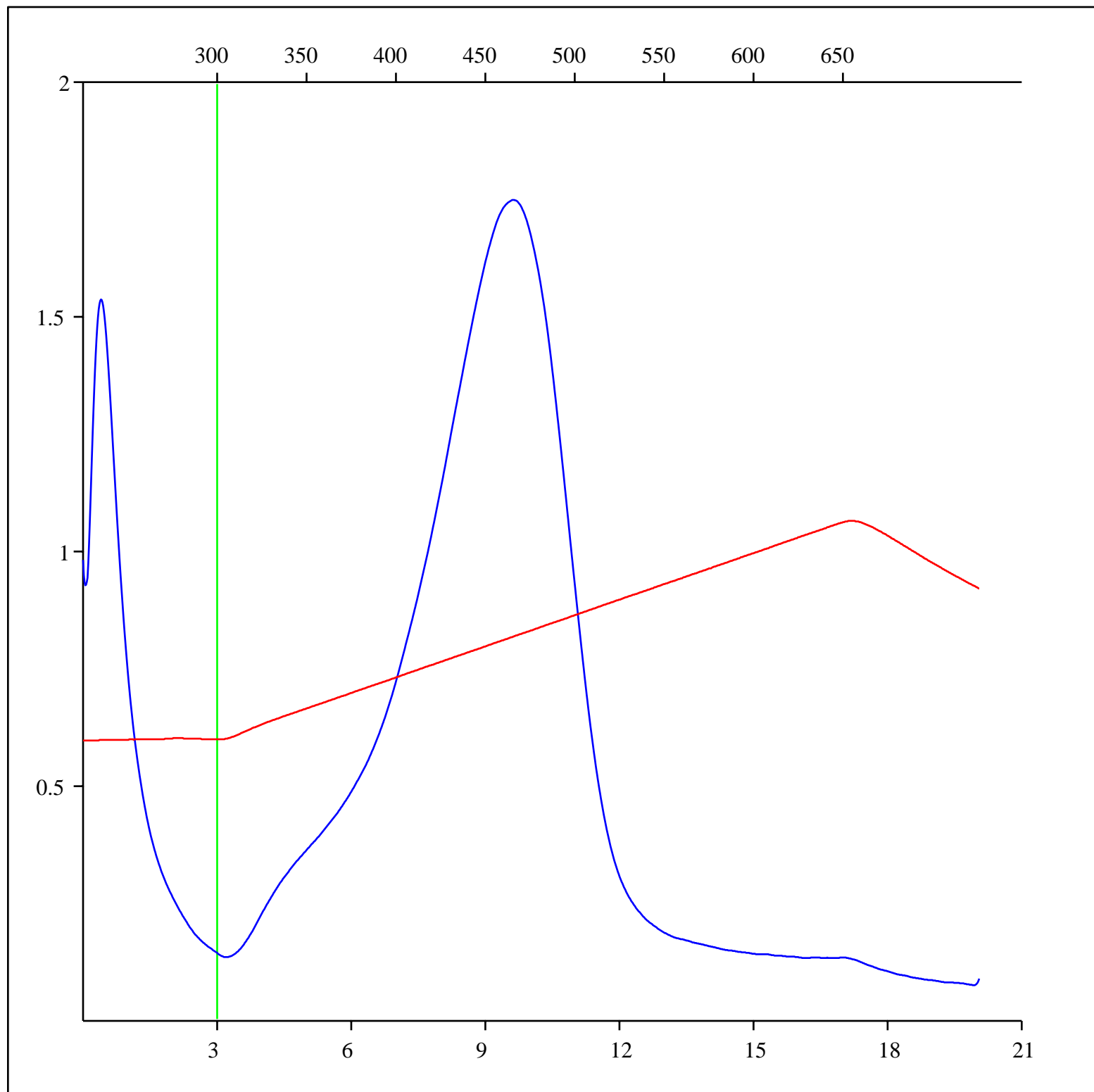
## FID hydrocarbons





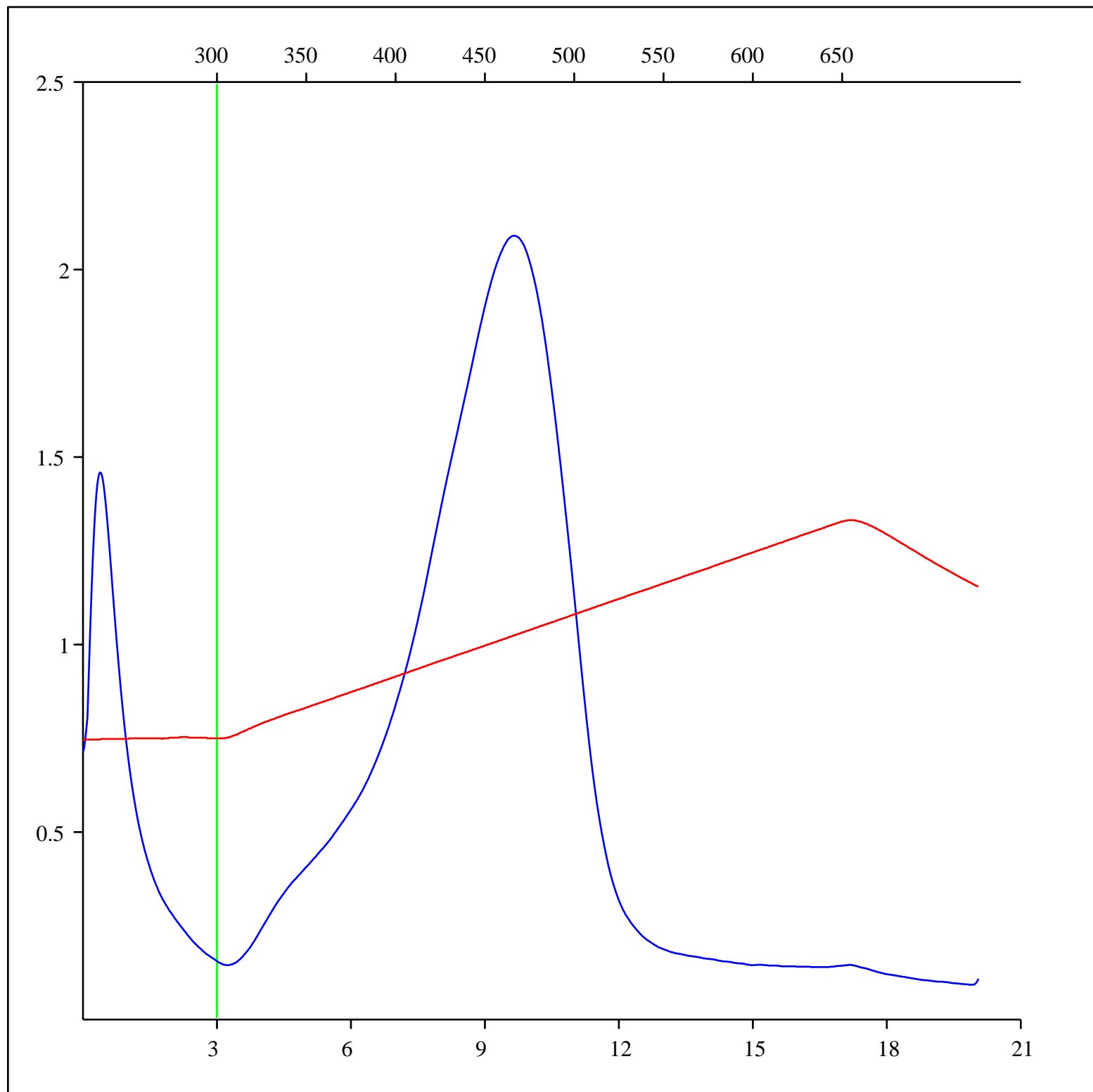
Sample: C-556120  
Acquisition Date: 26-NOV-2012  
Location: PAKTOA C-60  
Depth: 1185 - 1195 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



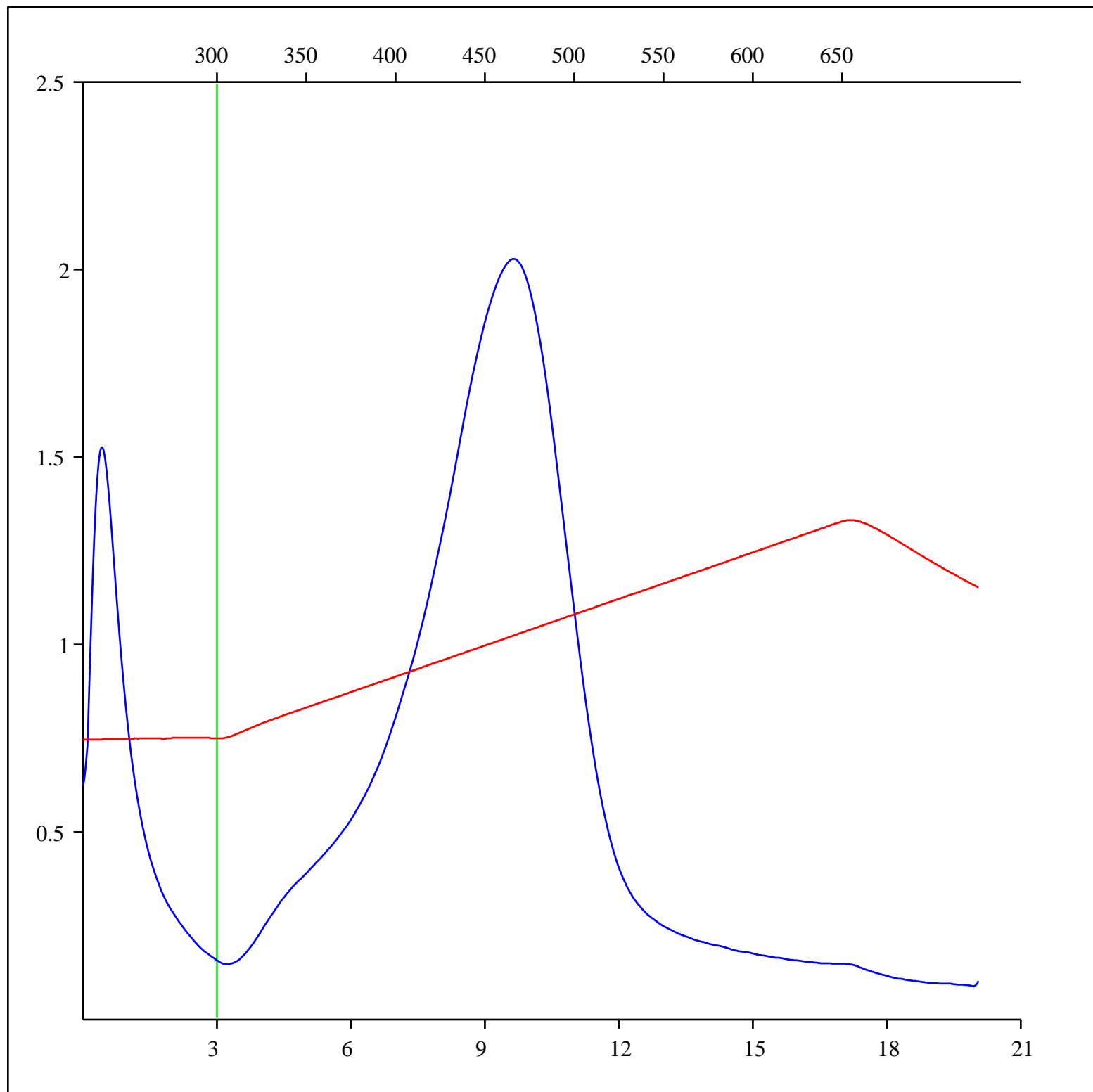
Sample: C-556121  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1195 - 1205 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



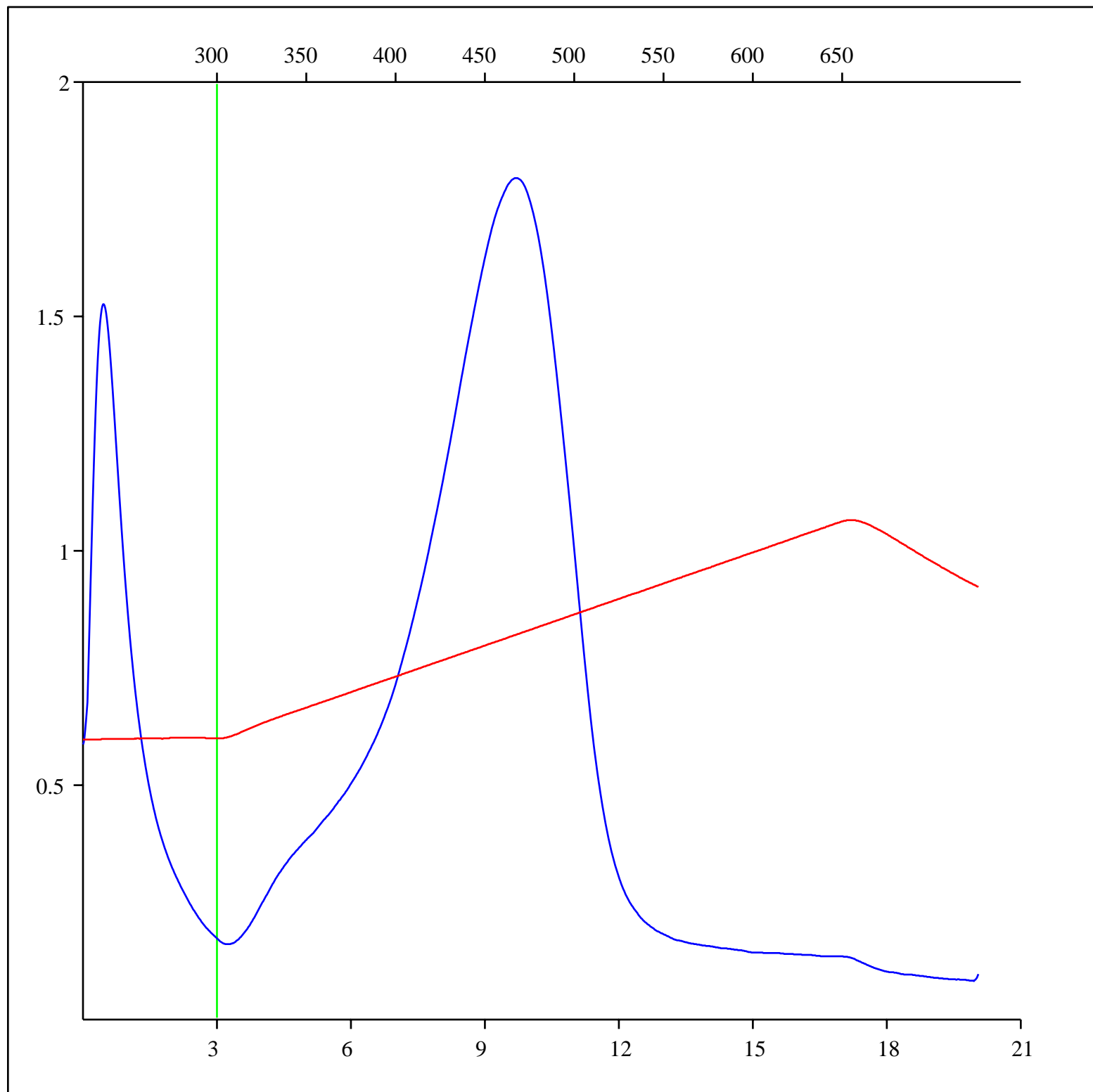
Sample: C-556122  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1205 - 1215 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



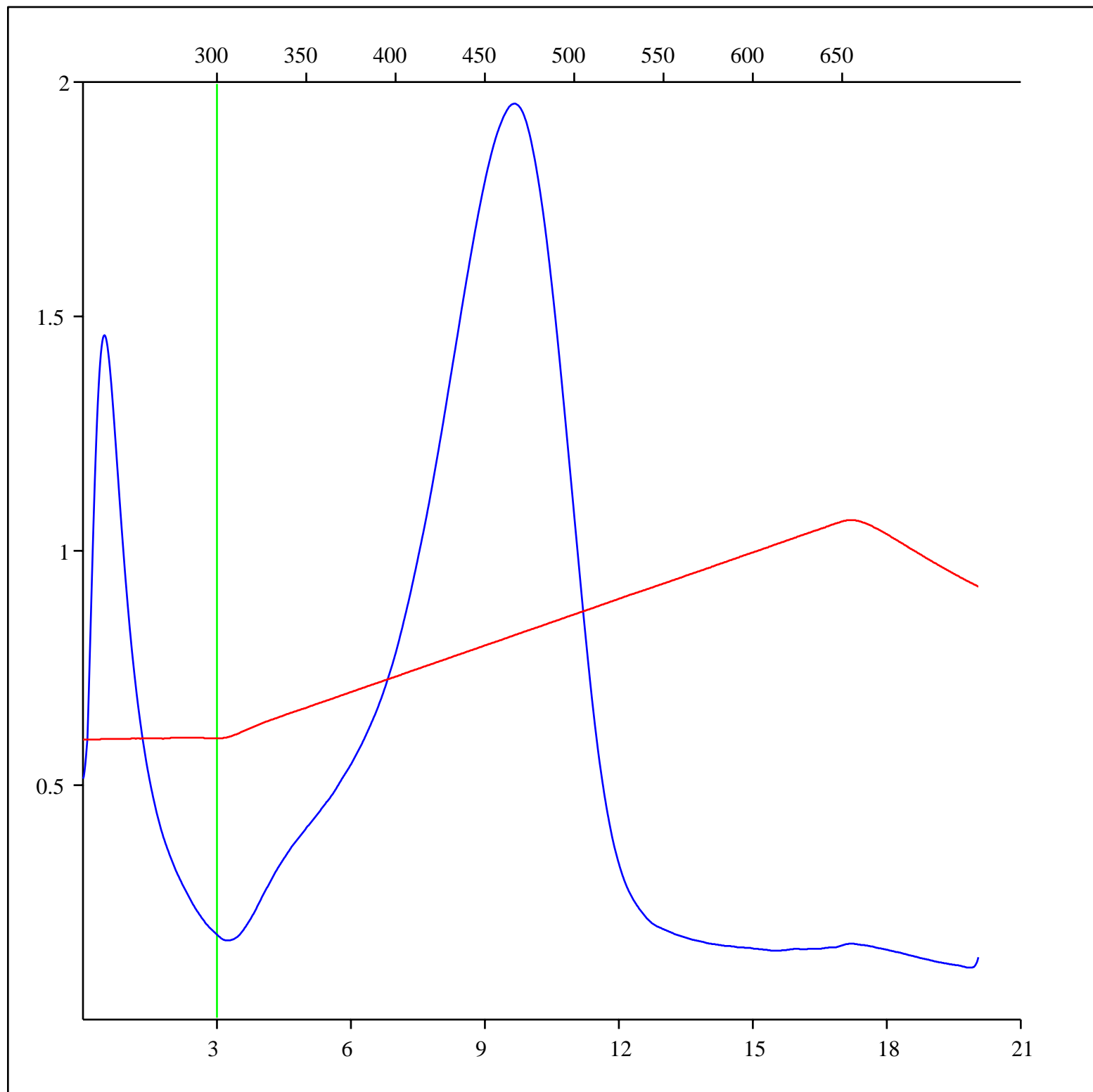
Sample: C-556123  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1215 - 1225 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



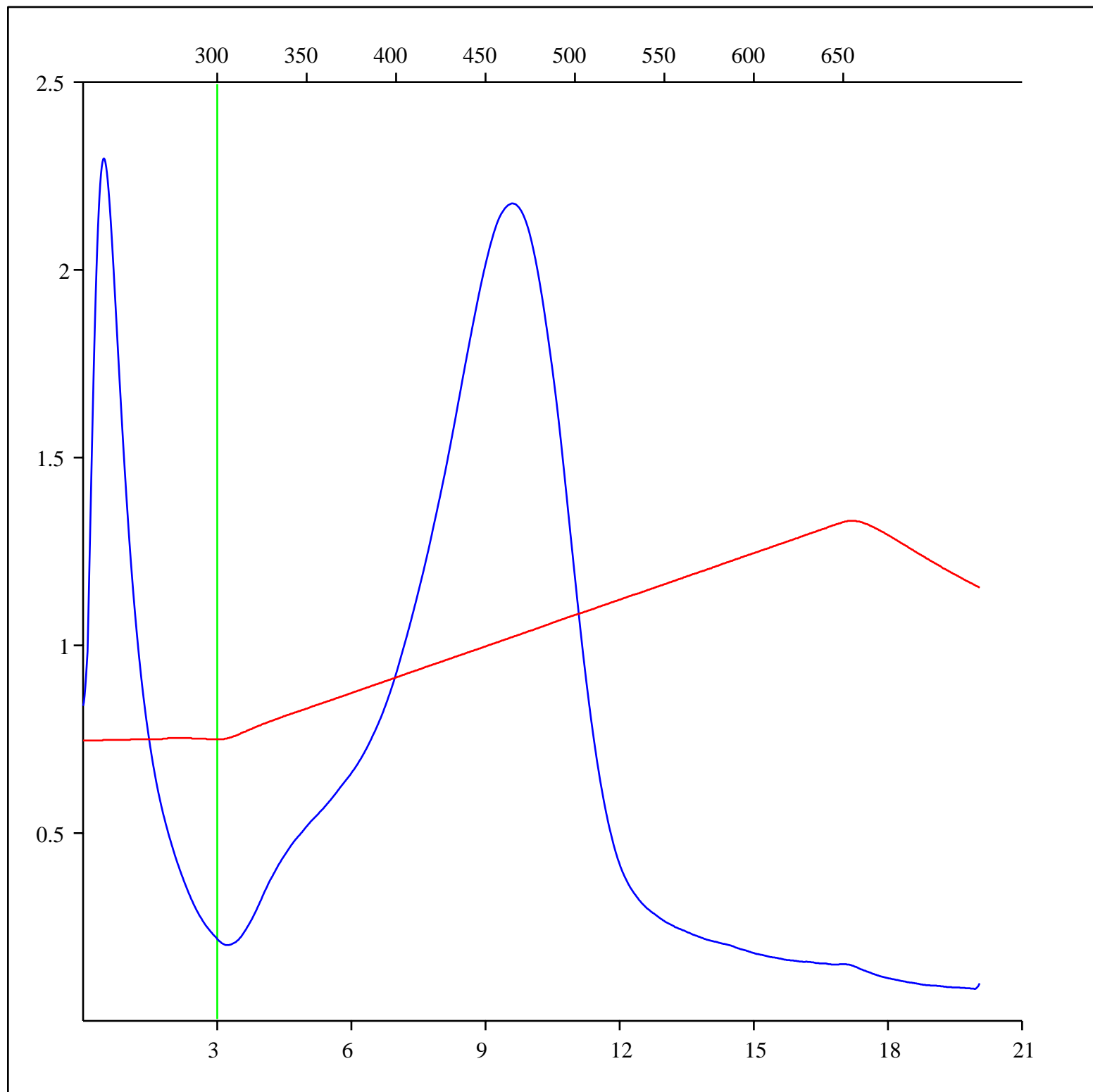
Sample: C-556124  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1225 - 1235 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



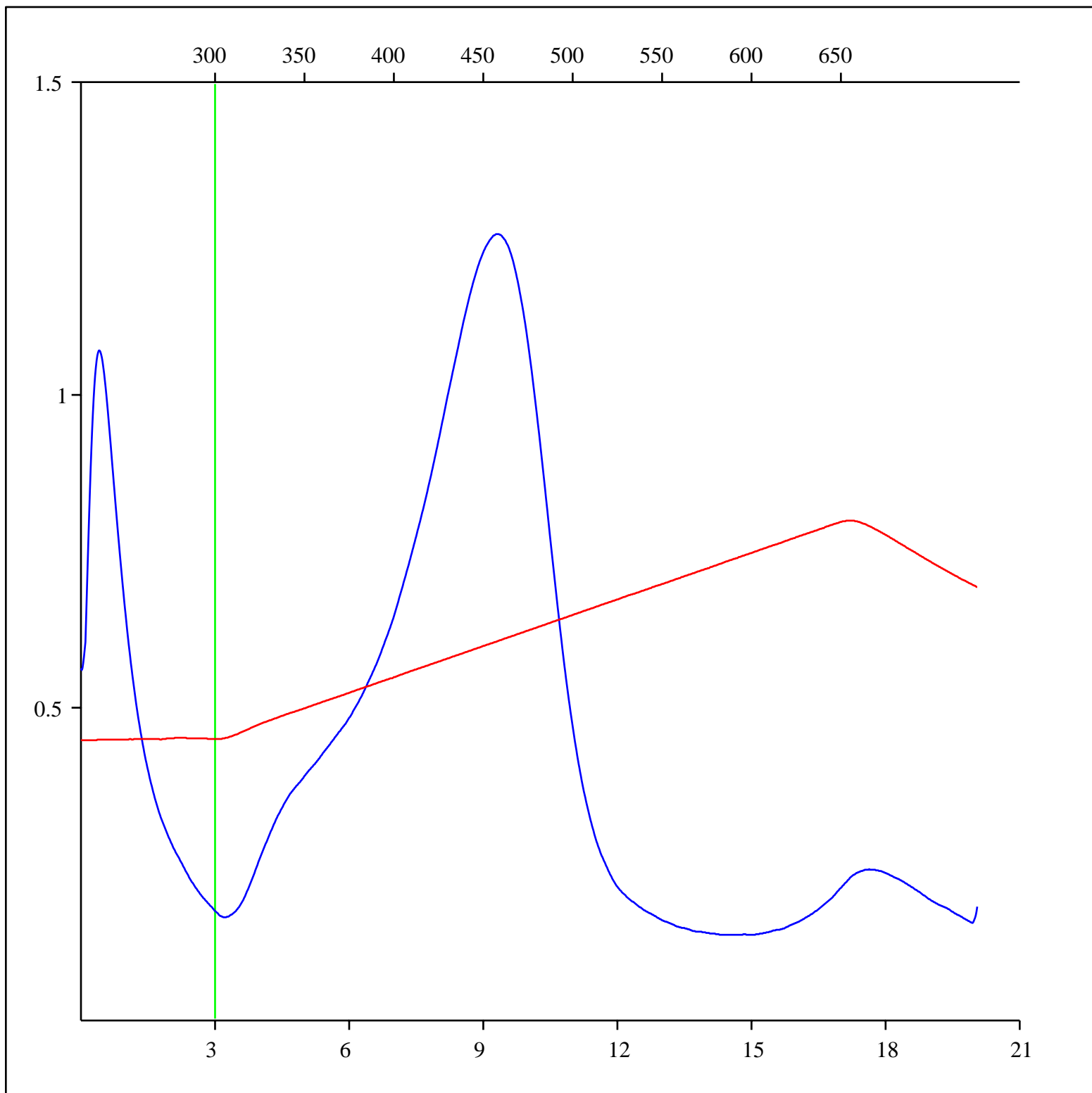
Sample: C-556125  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1235 - 1245 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



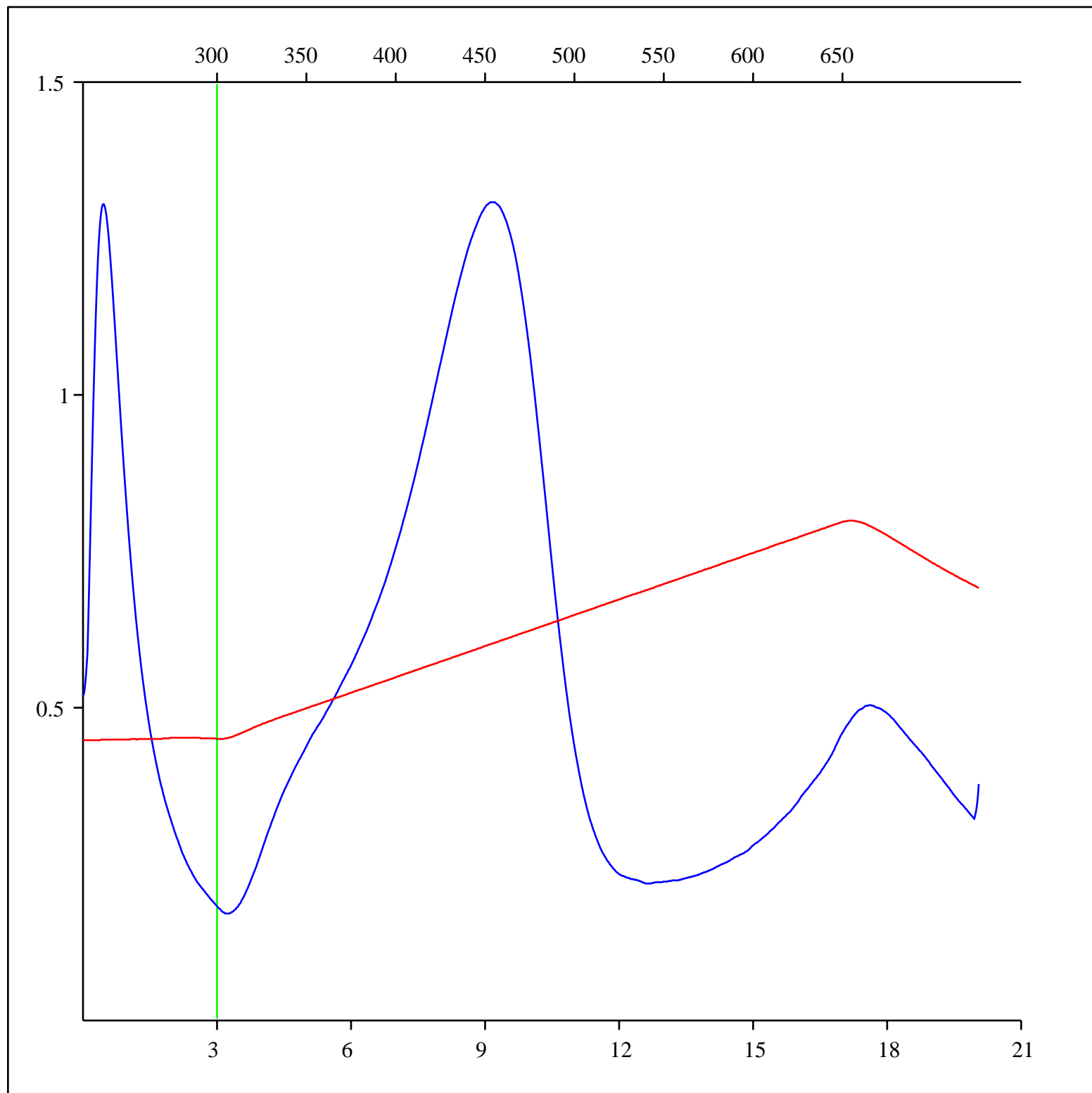
Sample: C-556126  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1245 - 1255 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556127  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1255 - 1265 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

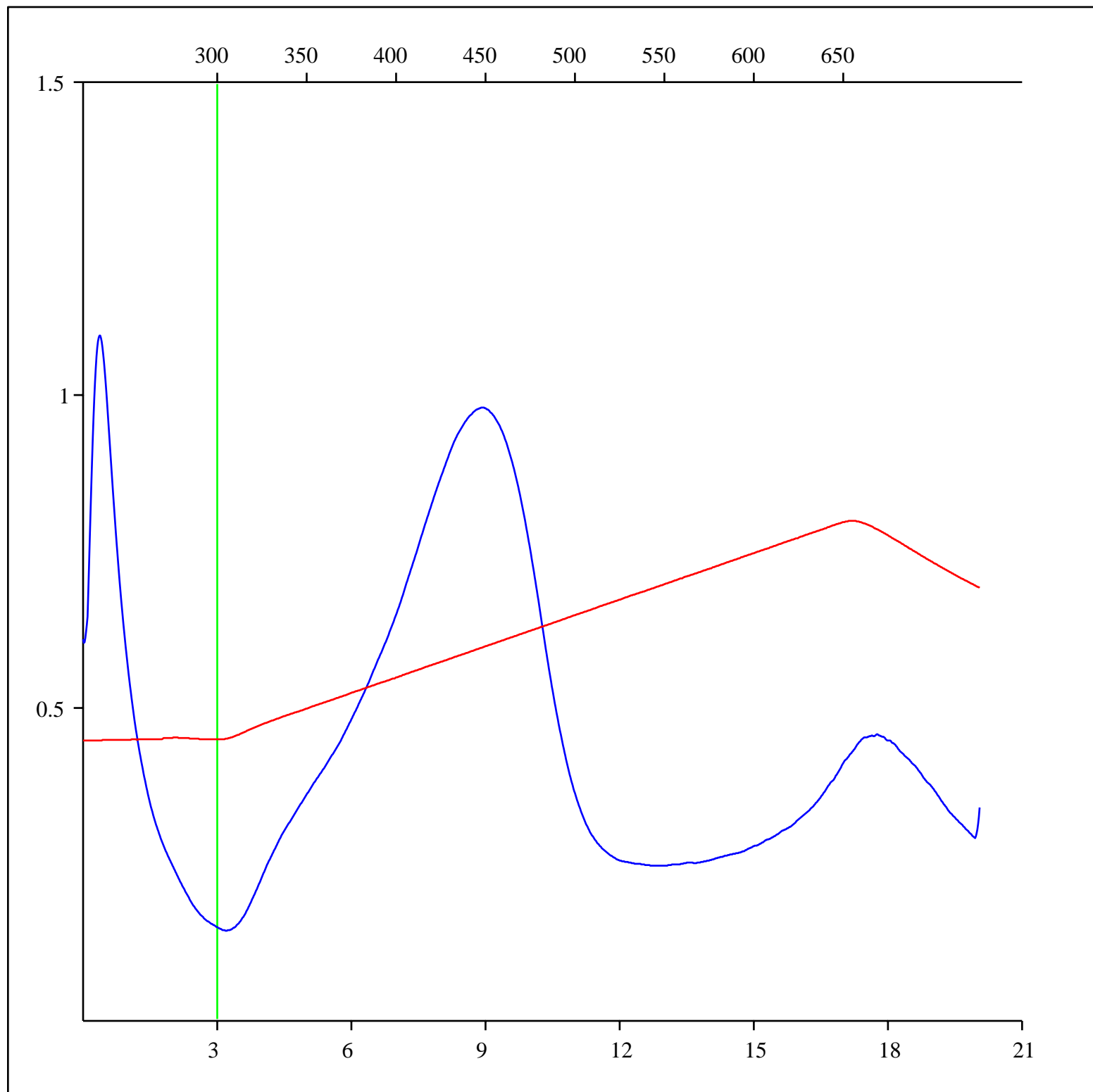
## FID hydrocarbons





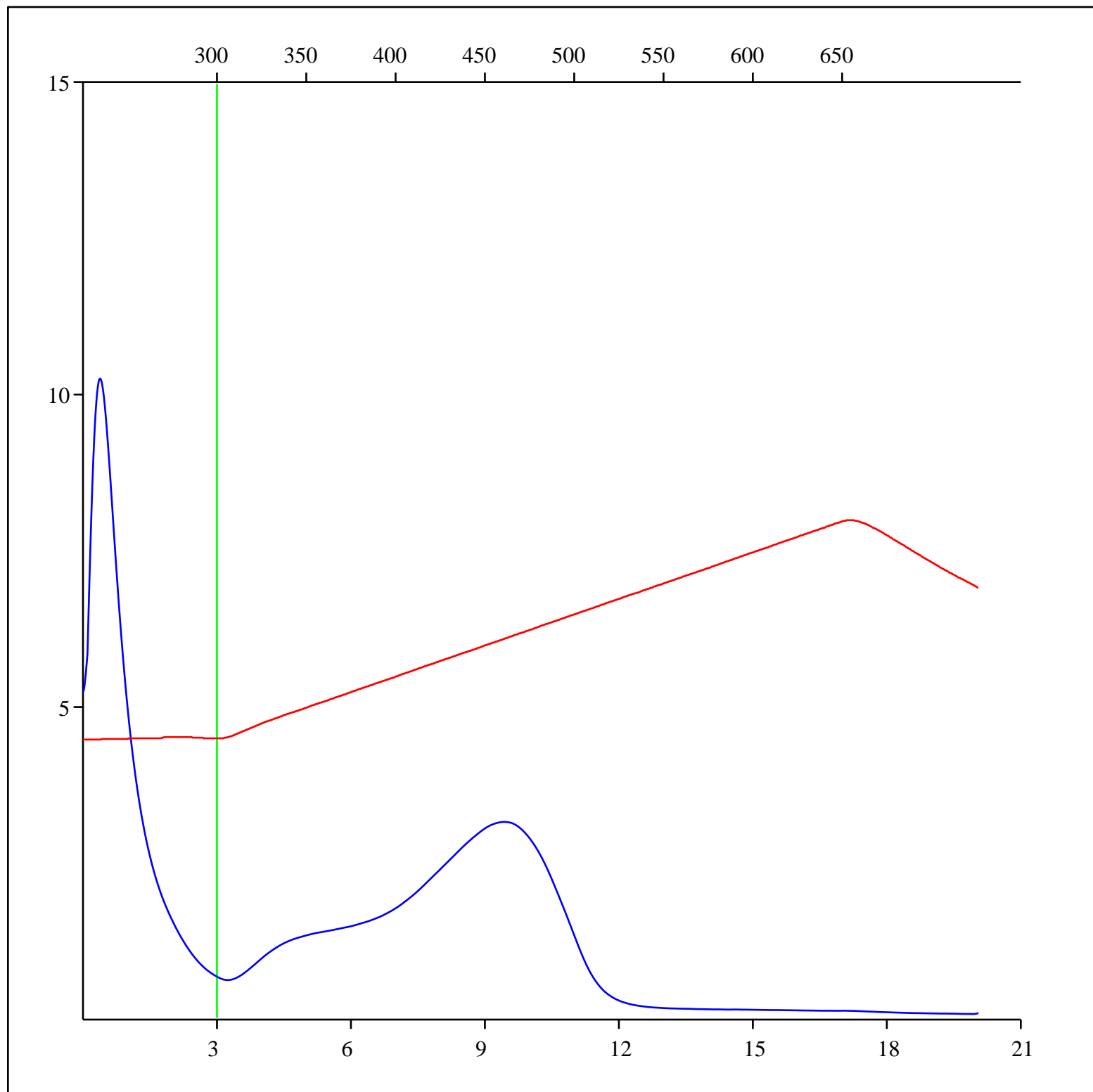
Sample: C-556128  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1265 - 1275 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



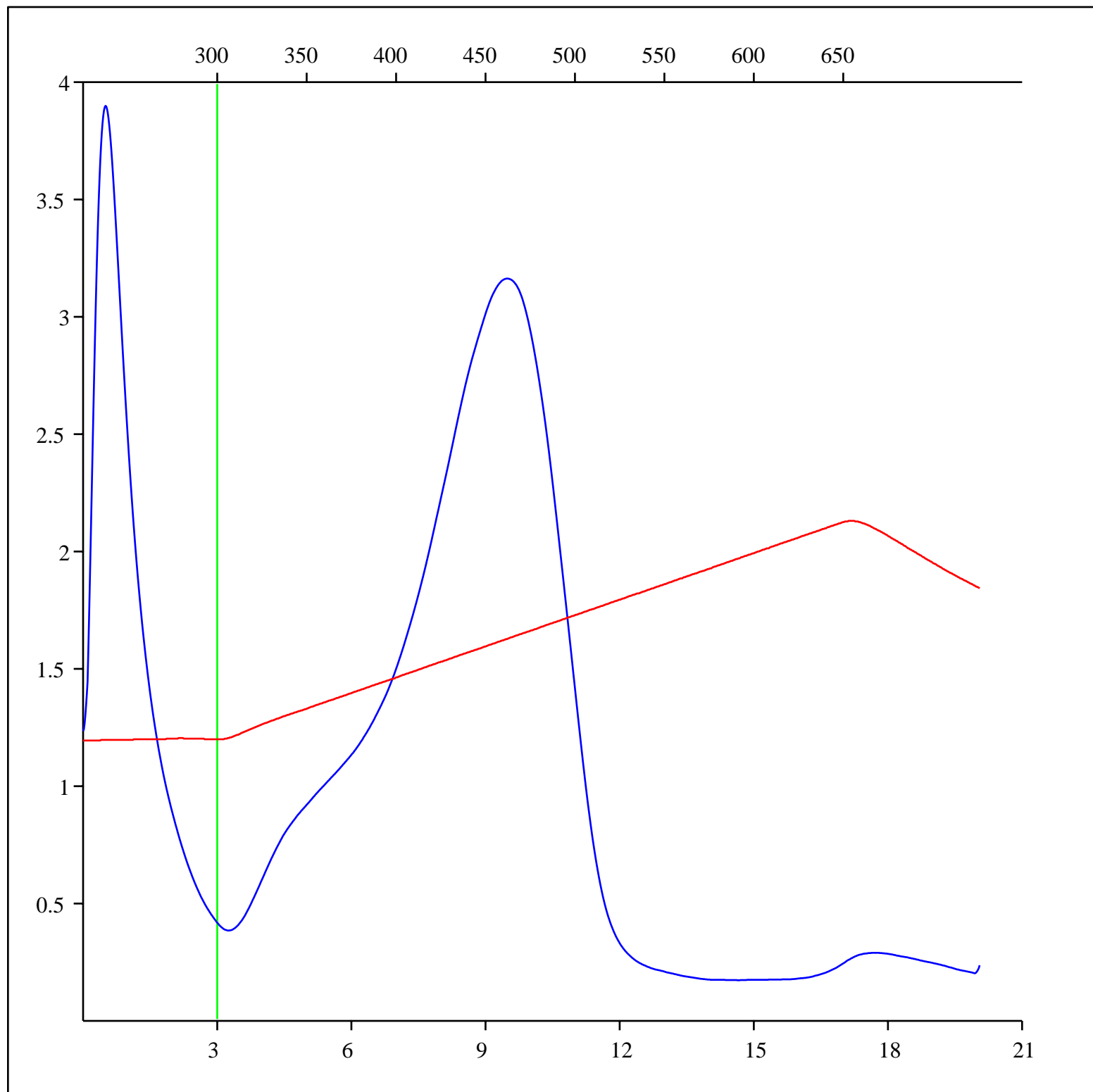
Sample: C-556129  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1275 - 1285 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



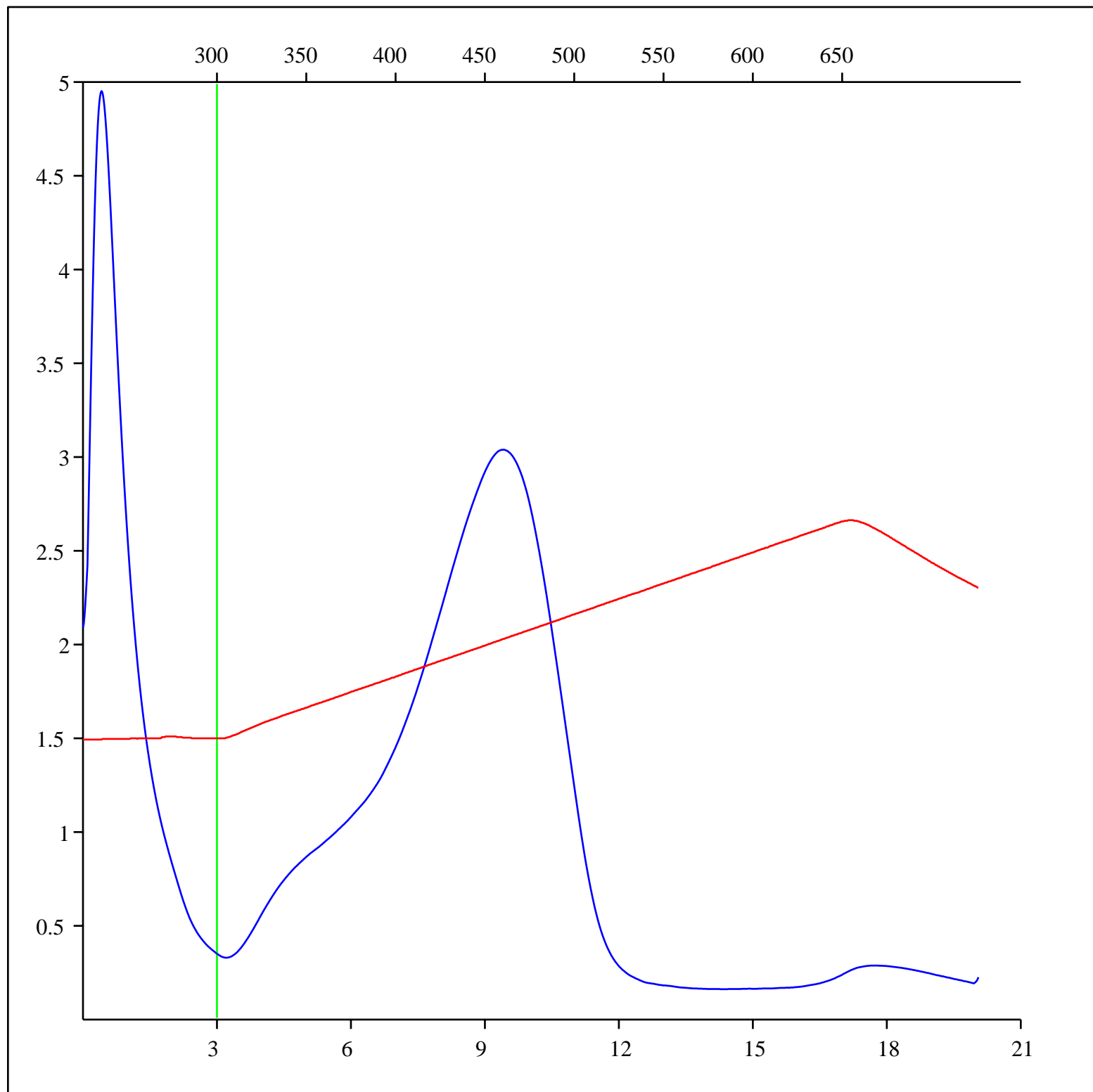
Sample: C-556130  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1285 - 1290 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



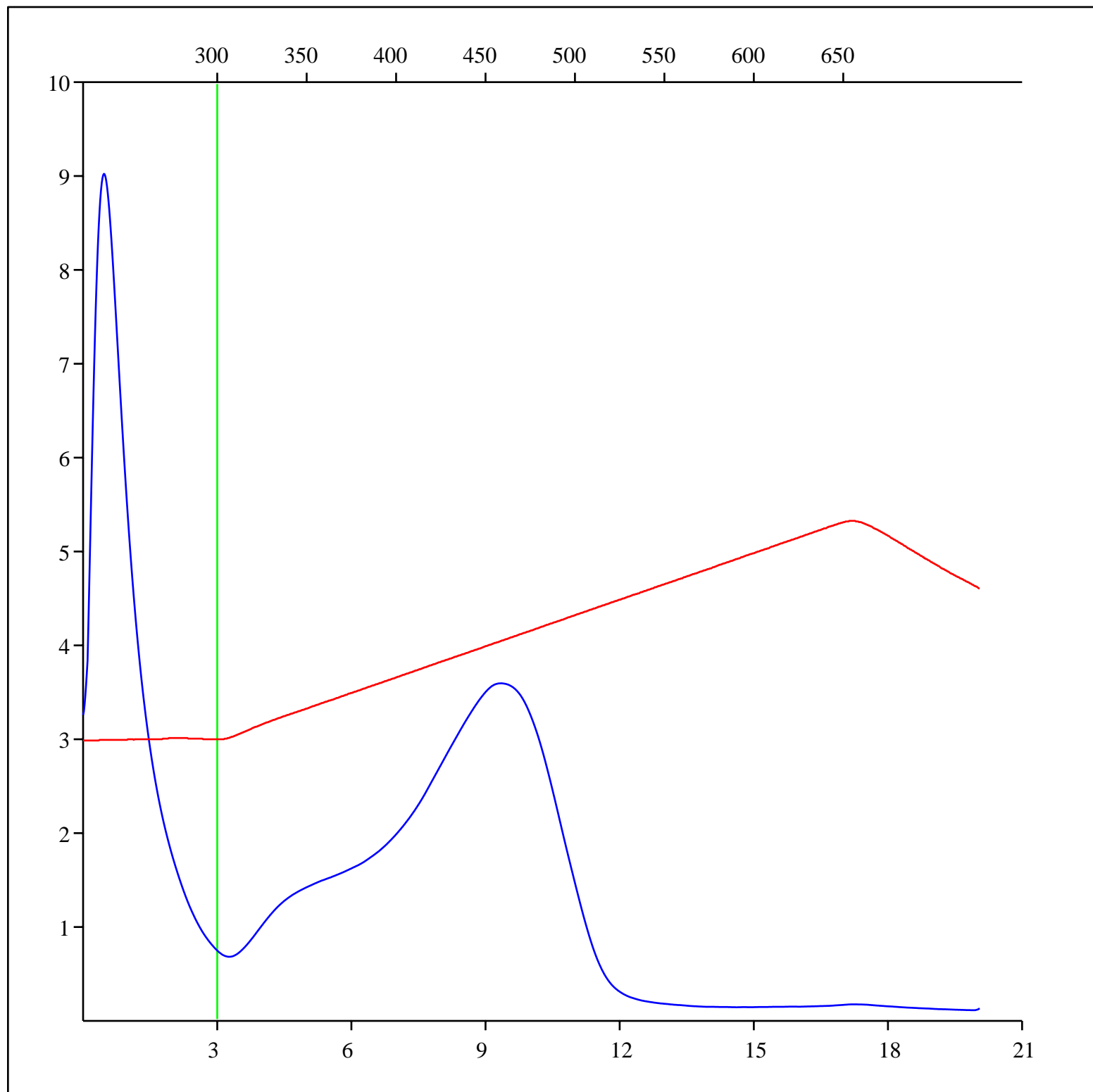
Sample: C-556131  
Acquisition Date: 27-NOV-2012  
Location: PAKTOA C-60  
Depth: 1290 - 1295 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



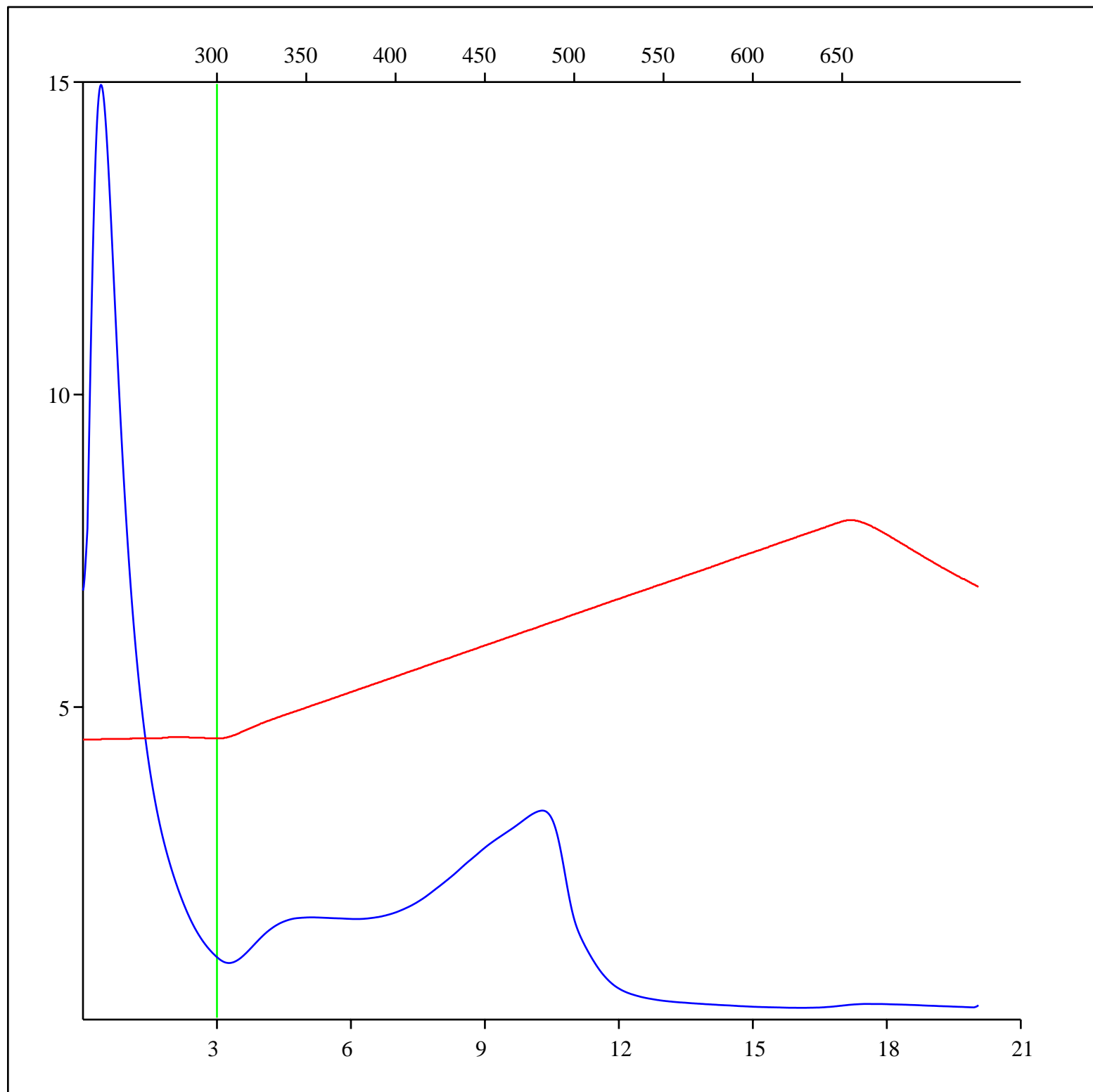
Sample: C-556132  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1295 - 1300 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



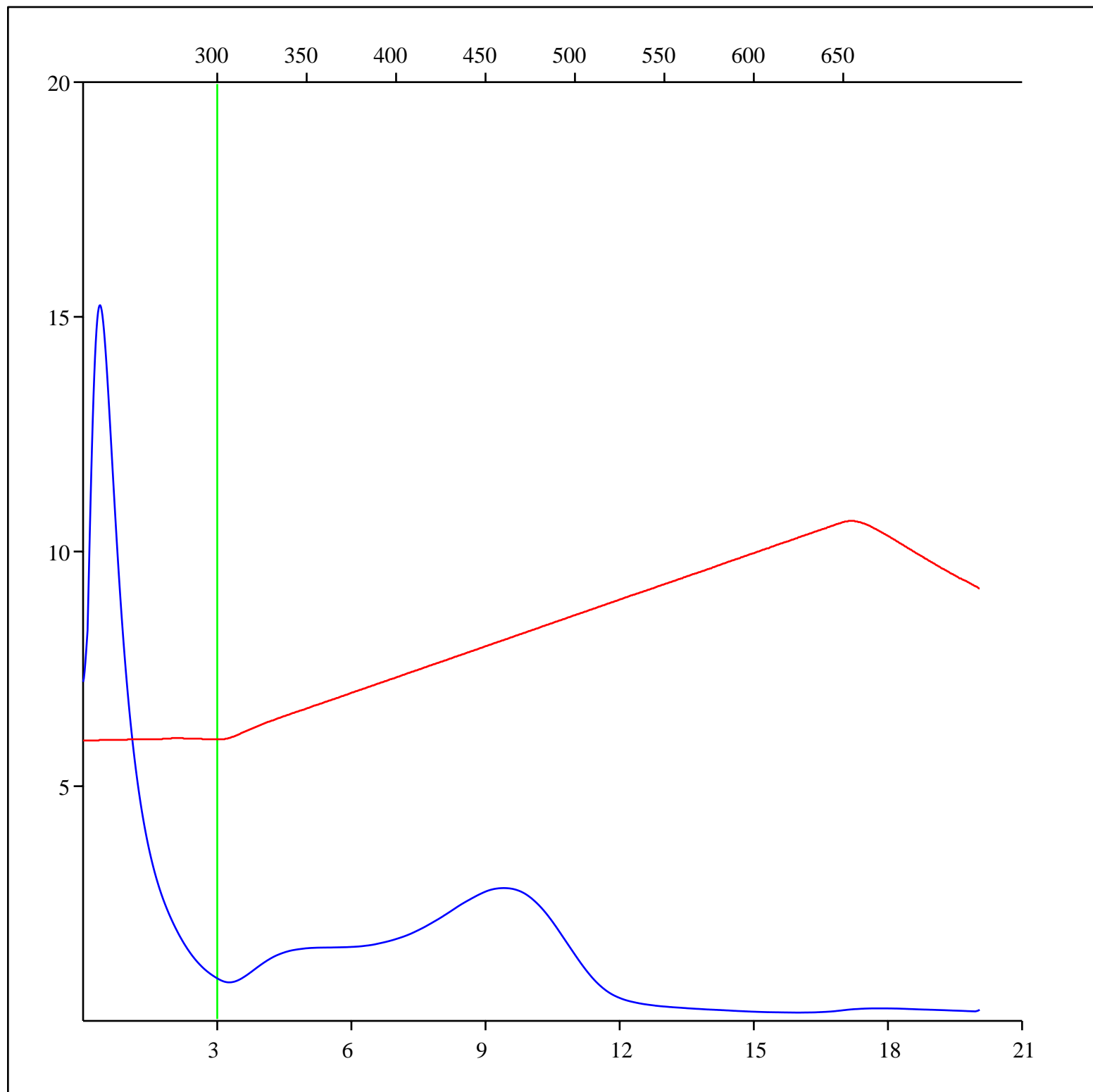
Sample: C-556133  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1300 - 1305 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



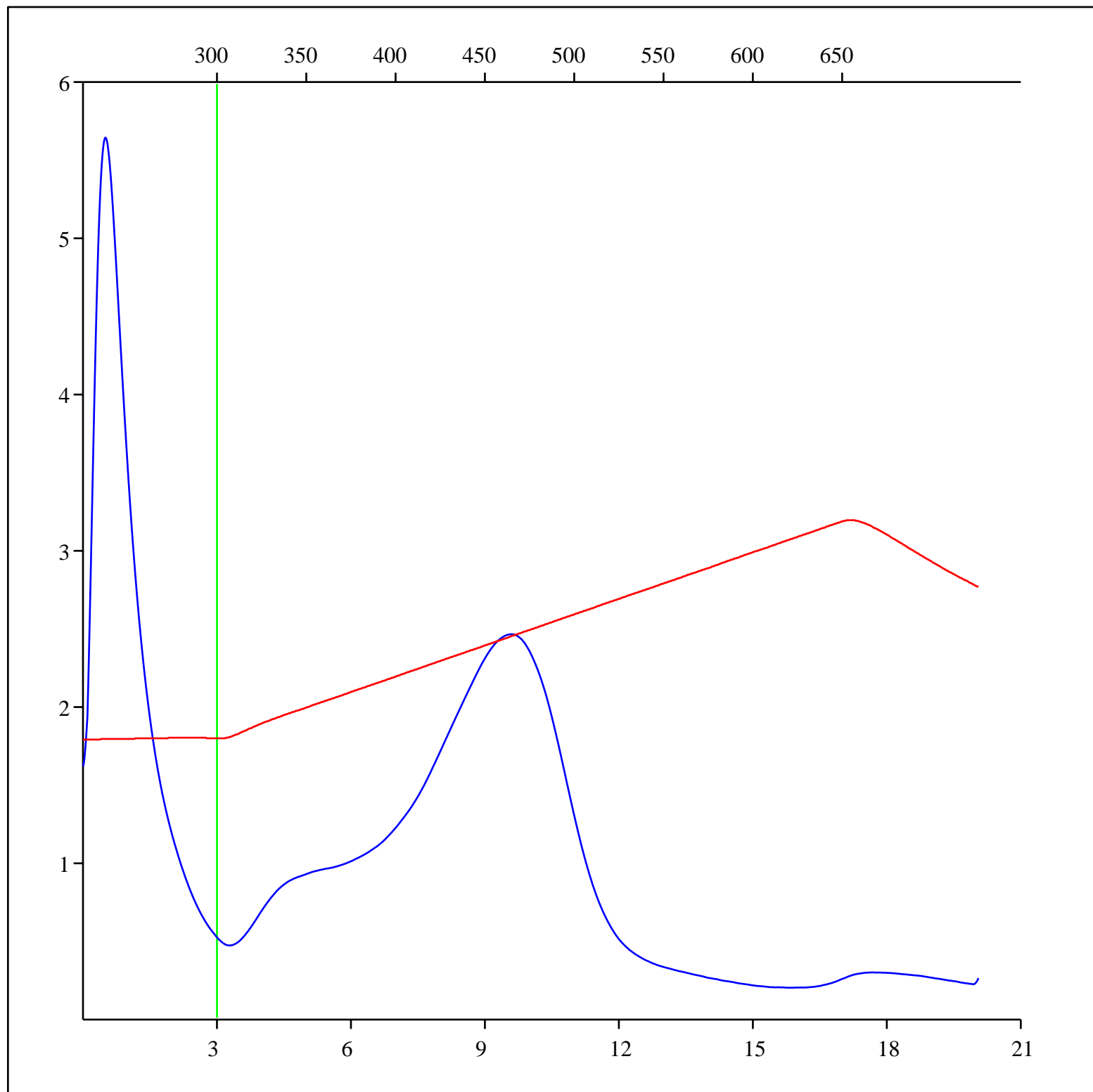
Sample: C-556134  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1305 - 1310 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556135  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1310 - 1315 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

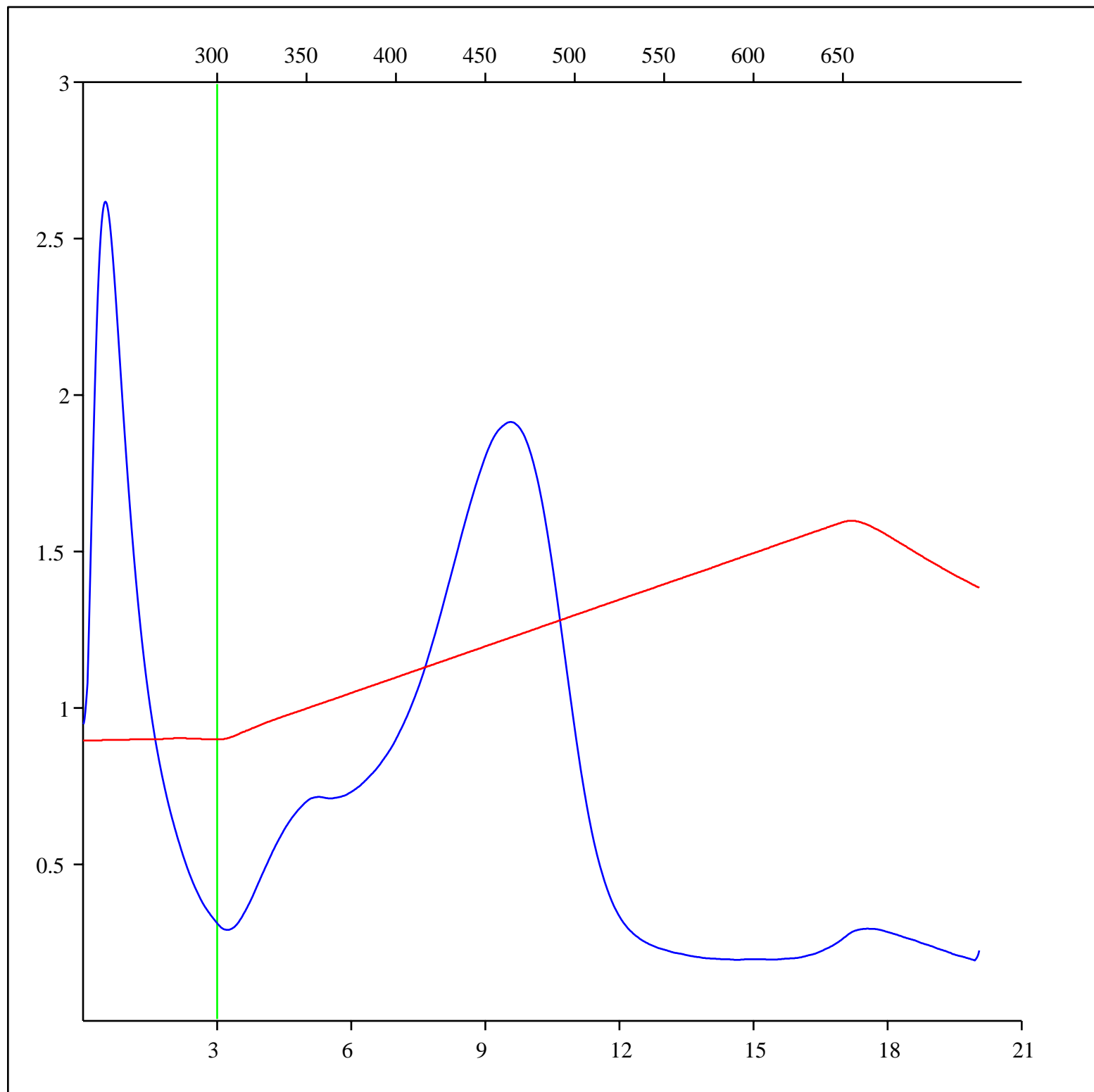
## FID hydrocarbons





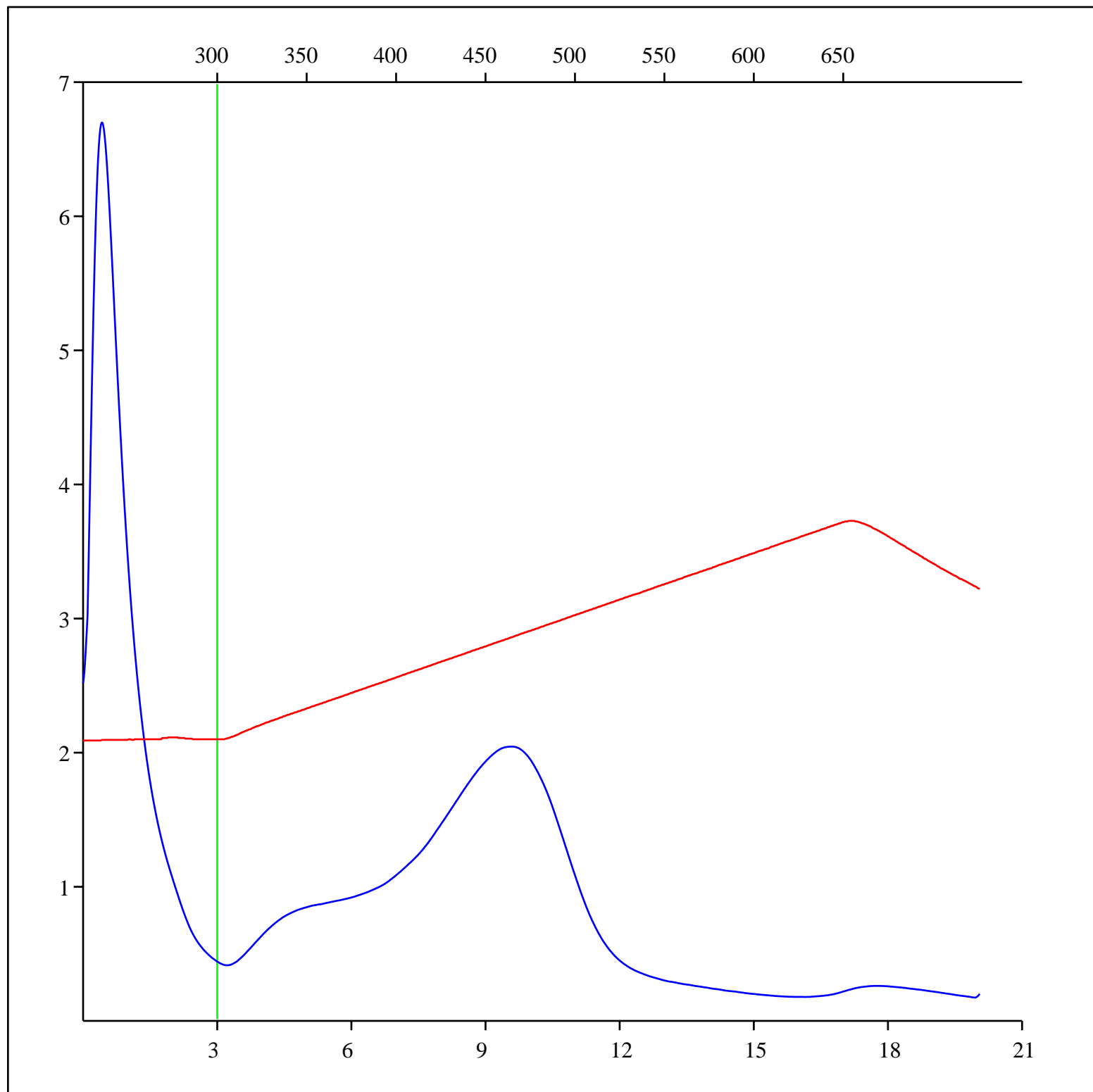
Sample: C-556136  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1315 - 1325 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



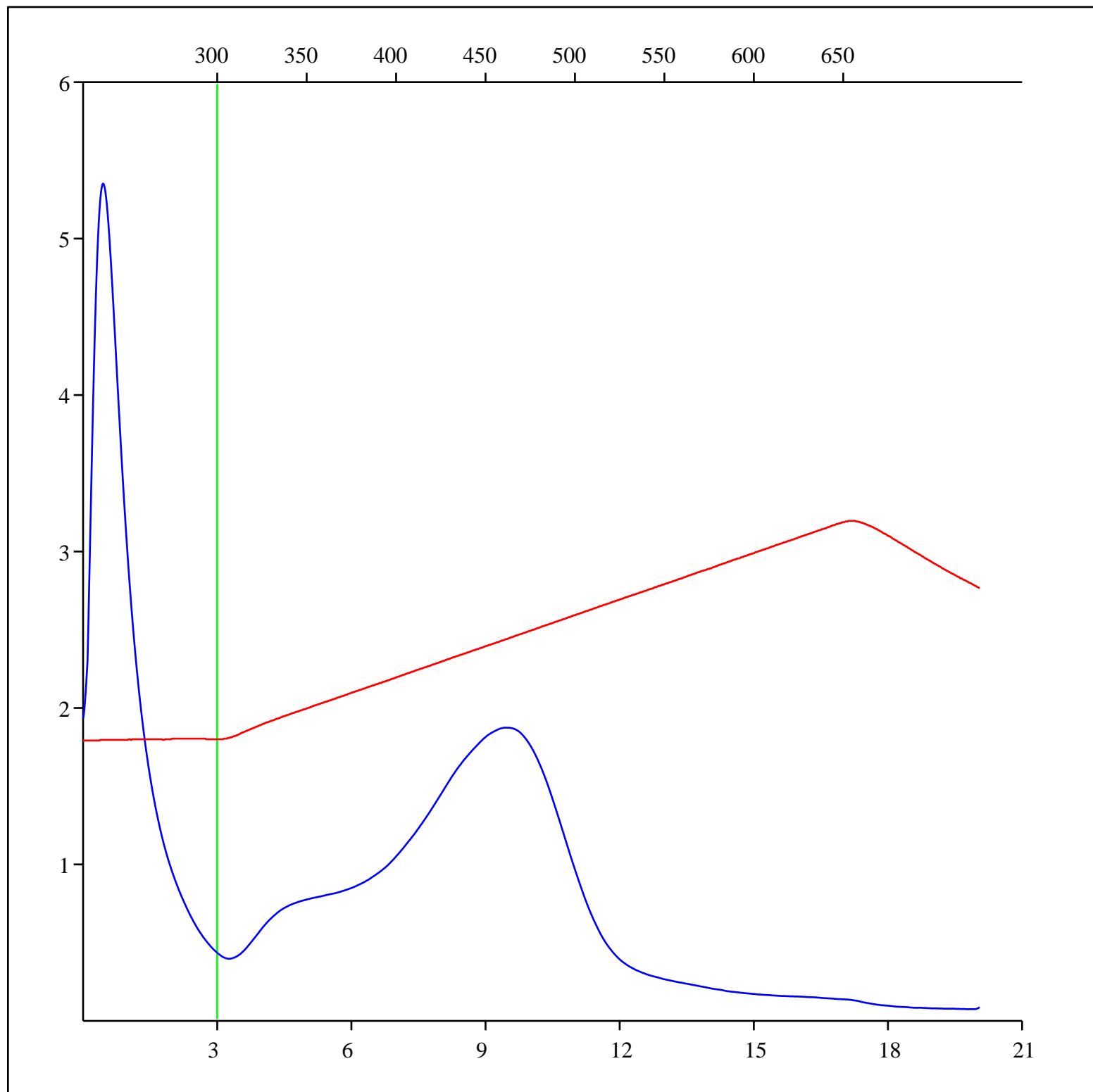
Sample: C-556137  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1325 - 1335 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



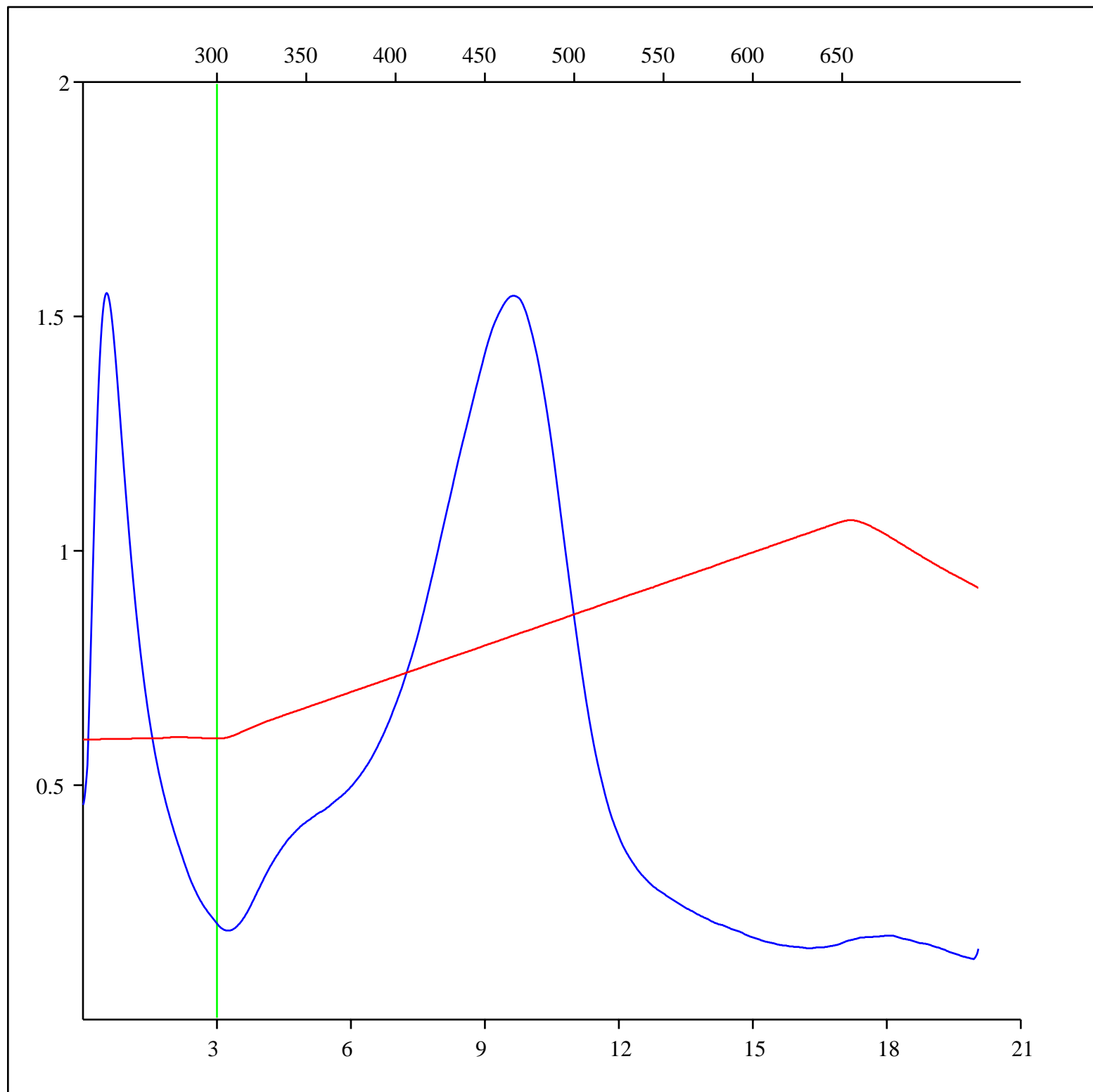
Sample: C-556138  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1335 - 1345 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



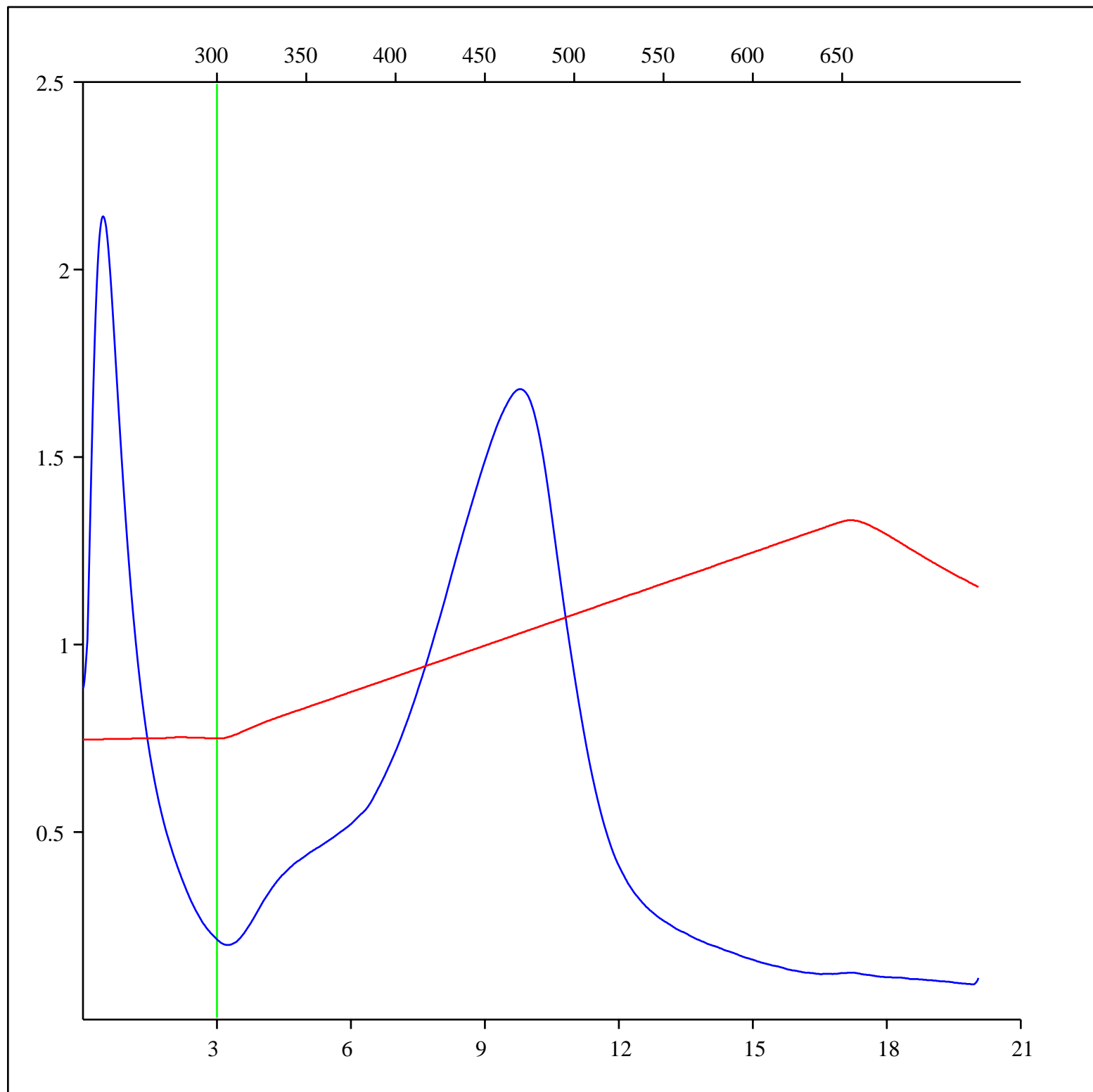
Sample: C-556139  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1345 - 1355 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



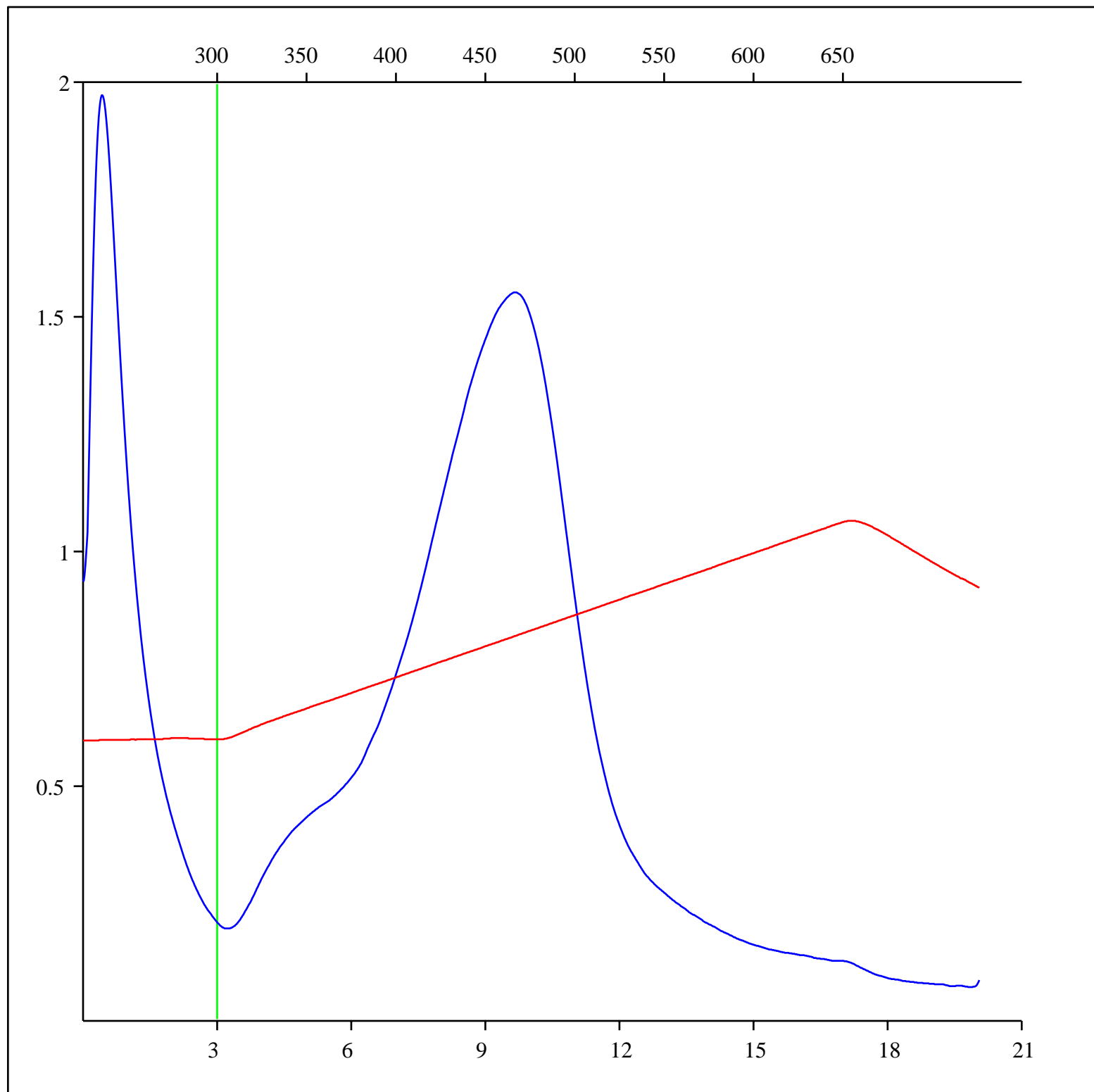
Sample: C-556140  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1355 - 1365 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



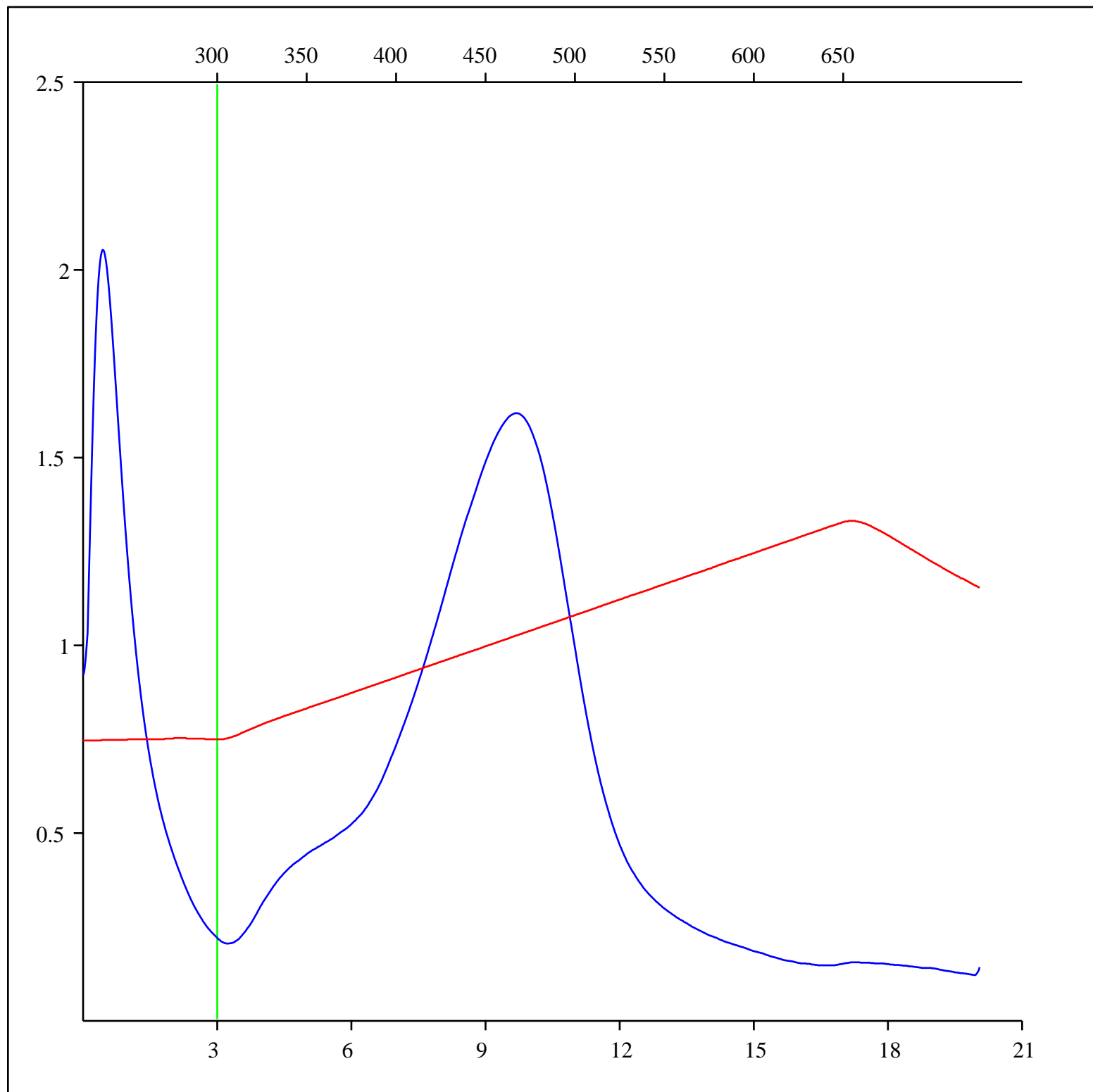
Sample: C-556141  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1365 - 1375 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



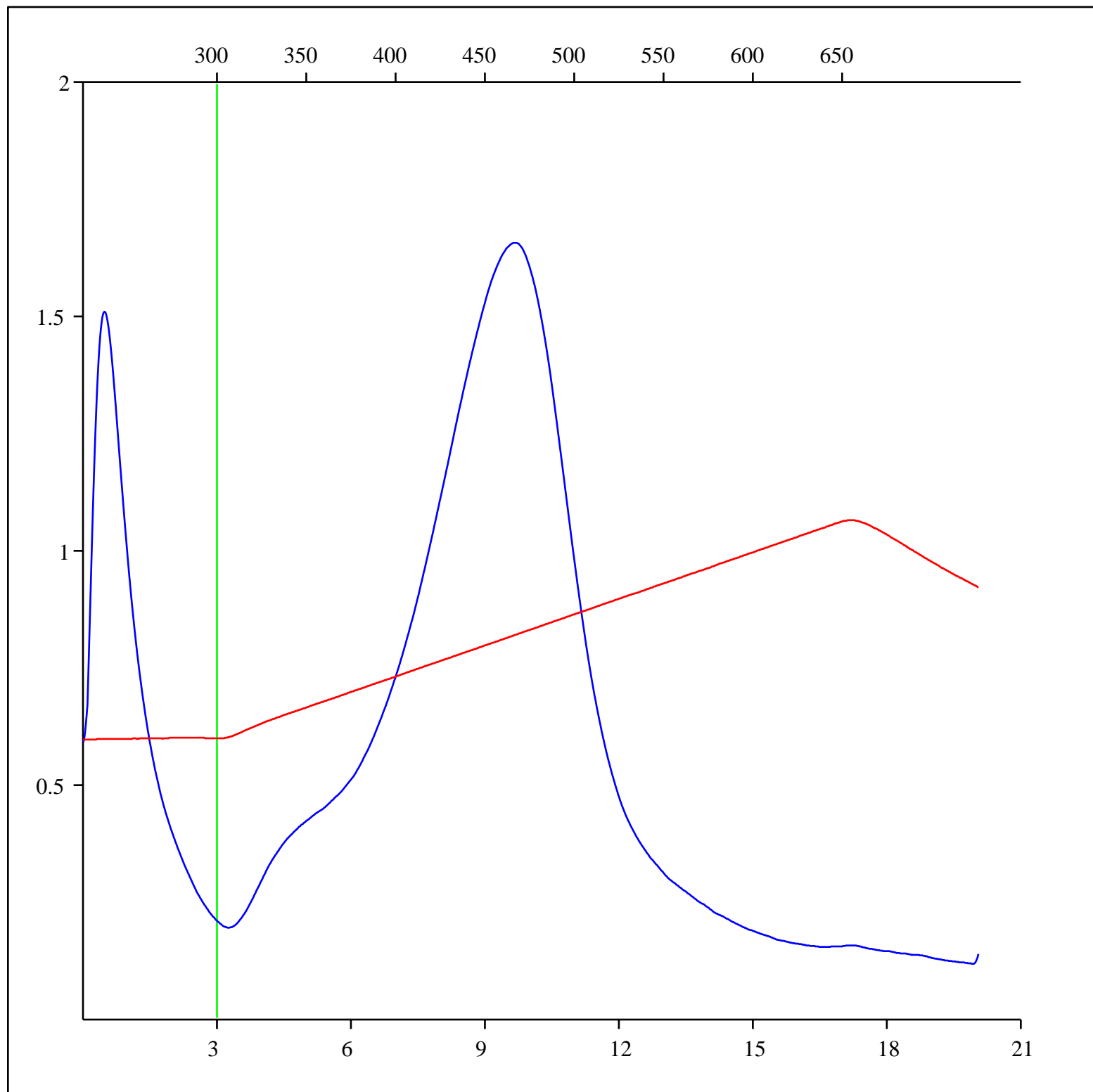
Sample: C-556142  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1375 - 1385 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556143  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1385 - 1395 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

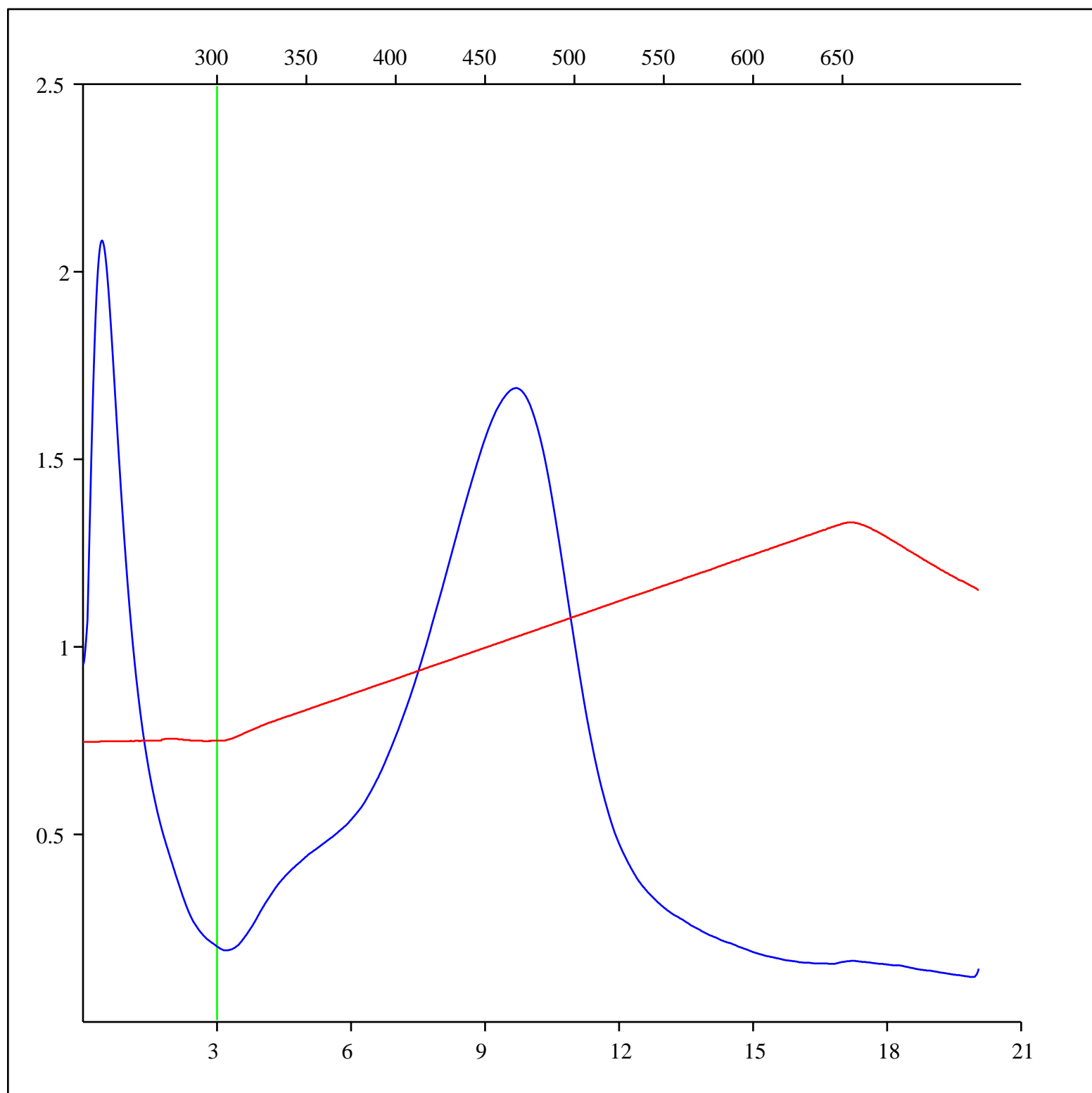
## FID hydrocarbons





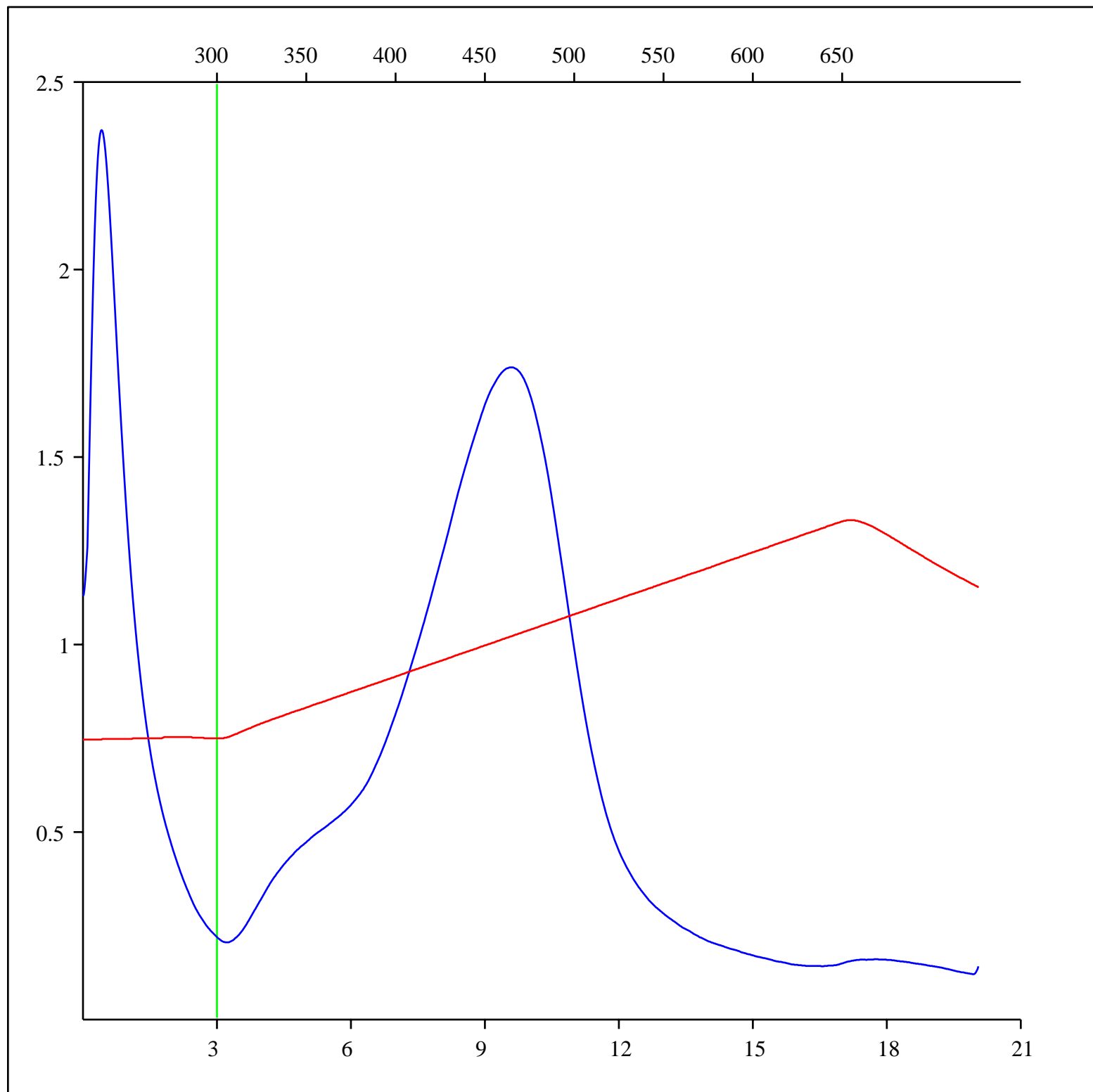
Sample: C-556144  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1395 - 1405 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



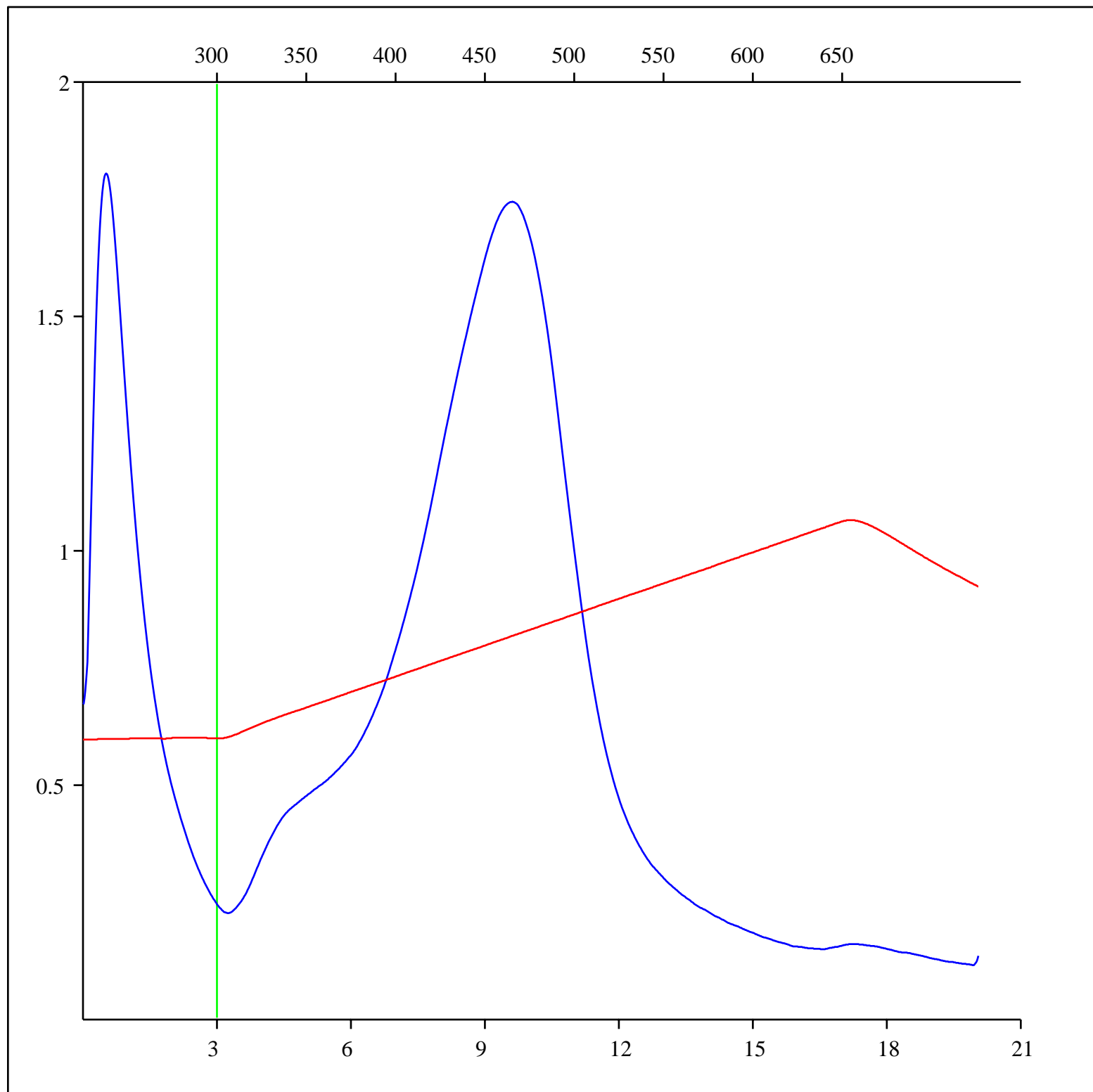
Sample: C-556145  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1405 - 1415 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



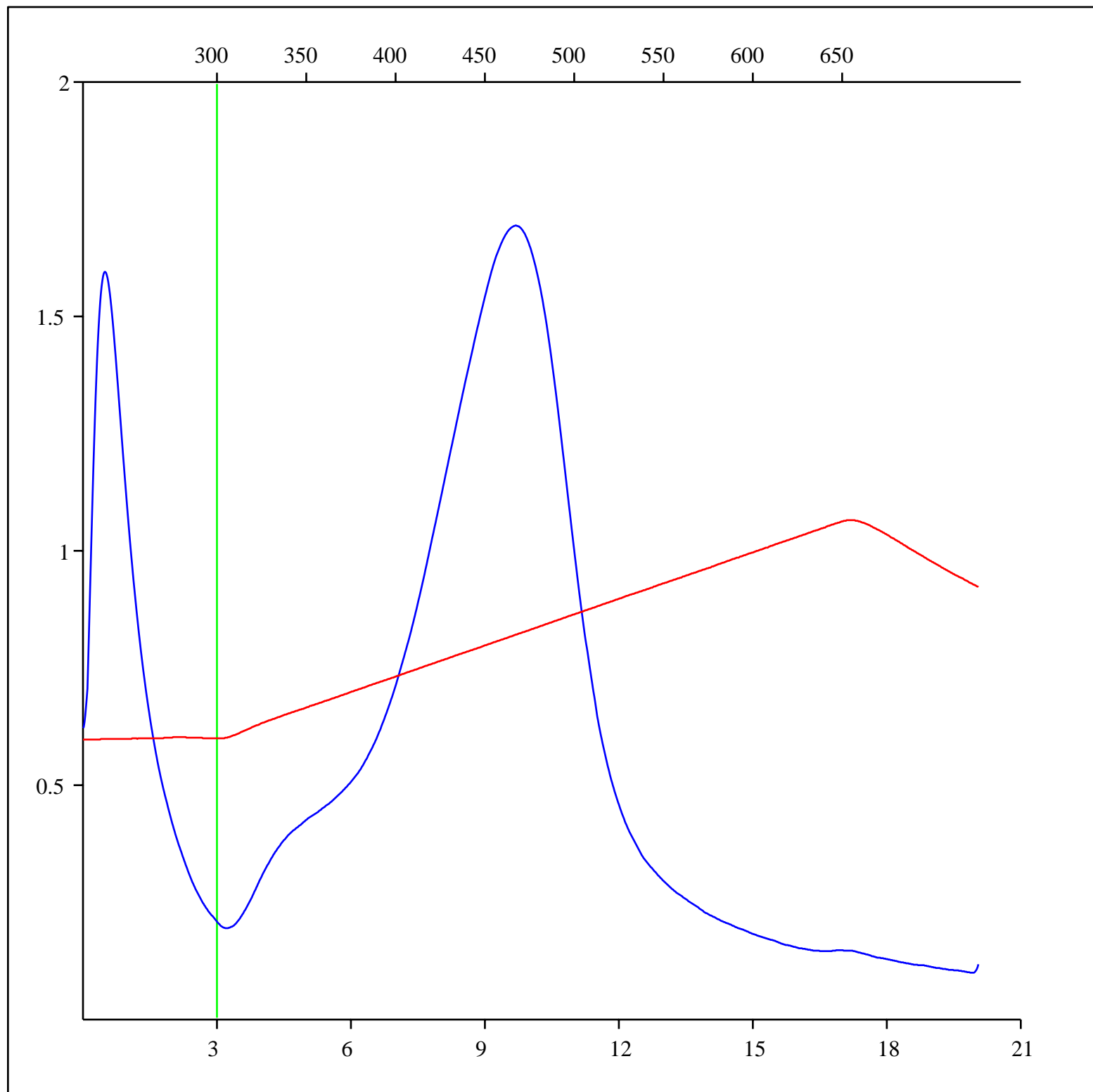
Sample: C-556146  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1415 - 1425 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



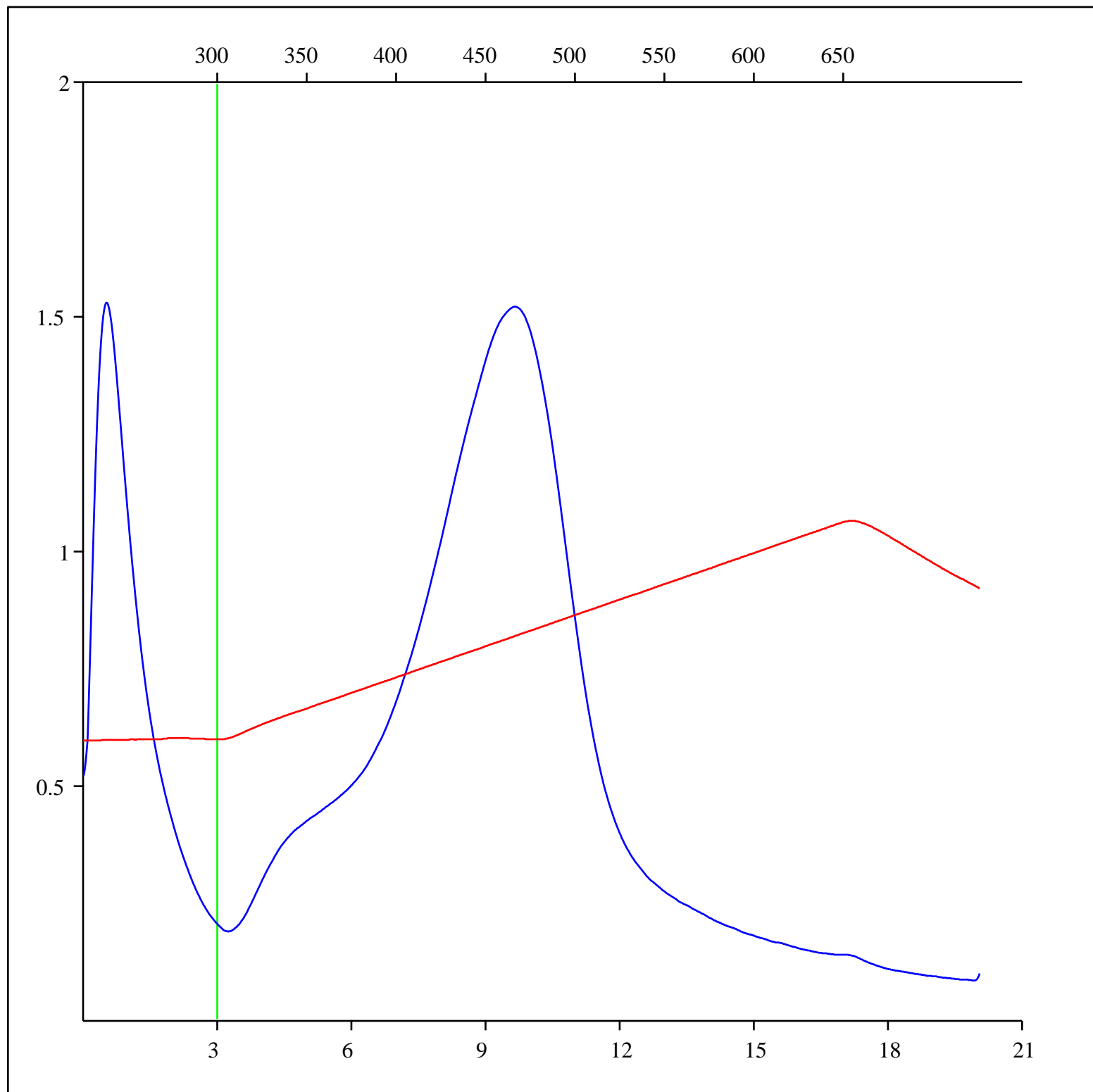
Sample: C-556147  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1425 - 1435 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



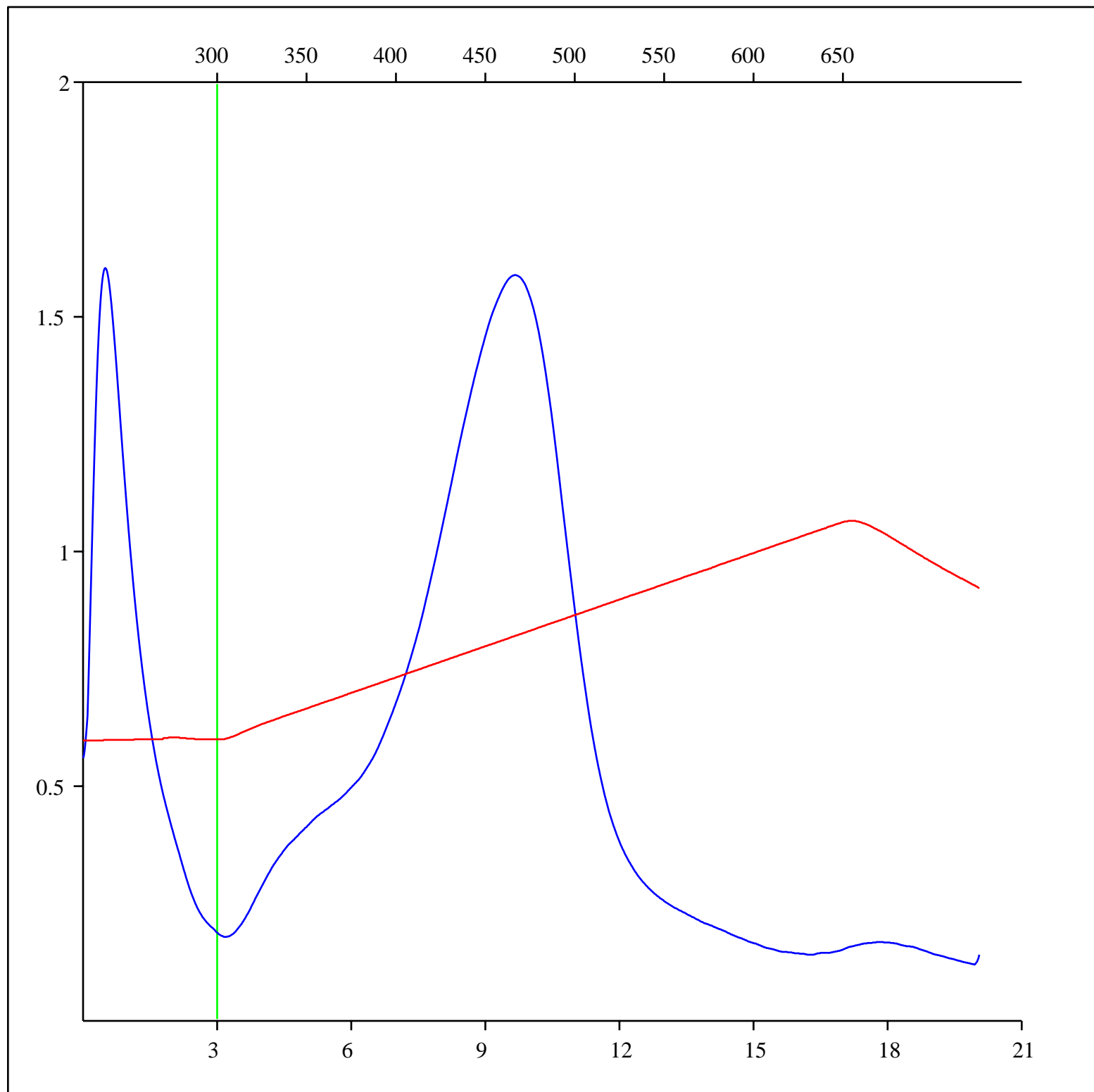
Sample: C-556148  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1435 - 1445 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



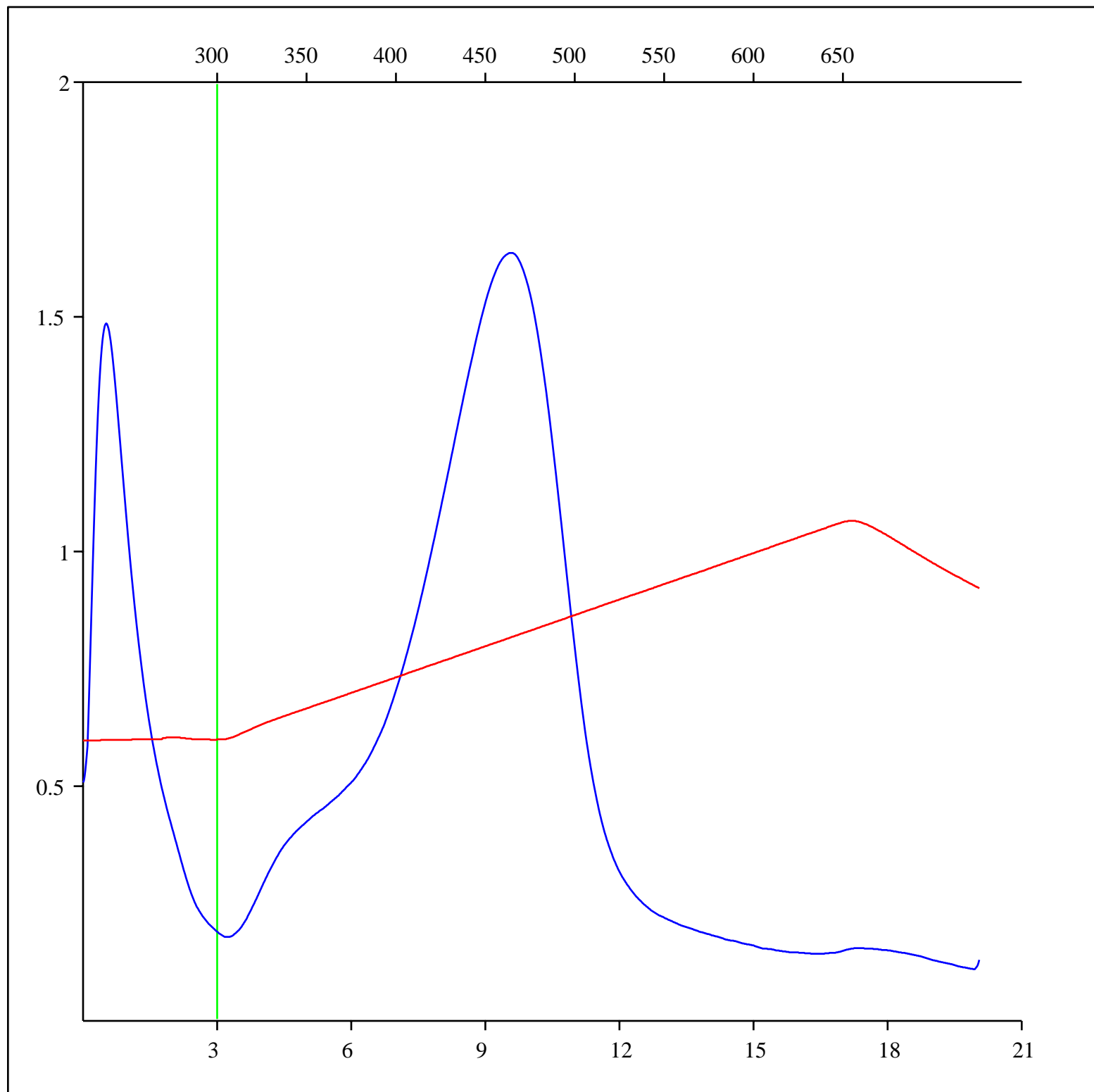
Sample: C-556149  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1445 - 1455 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



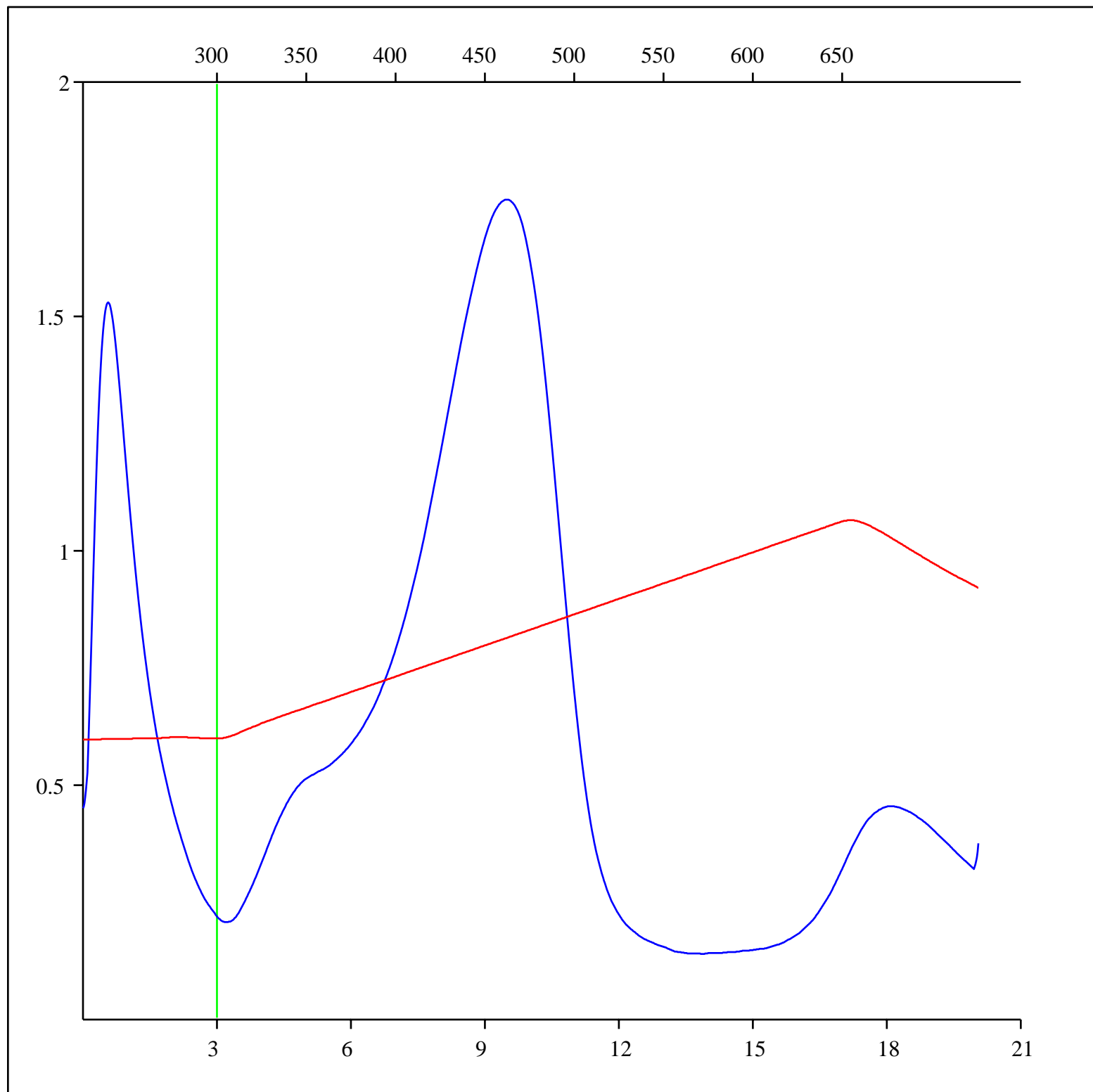
Sample: C-556150  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1455 - 1465 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556151  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1465 - 1475 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

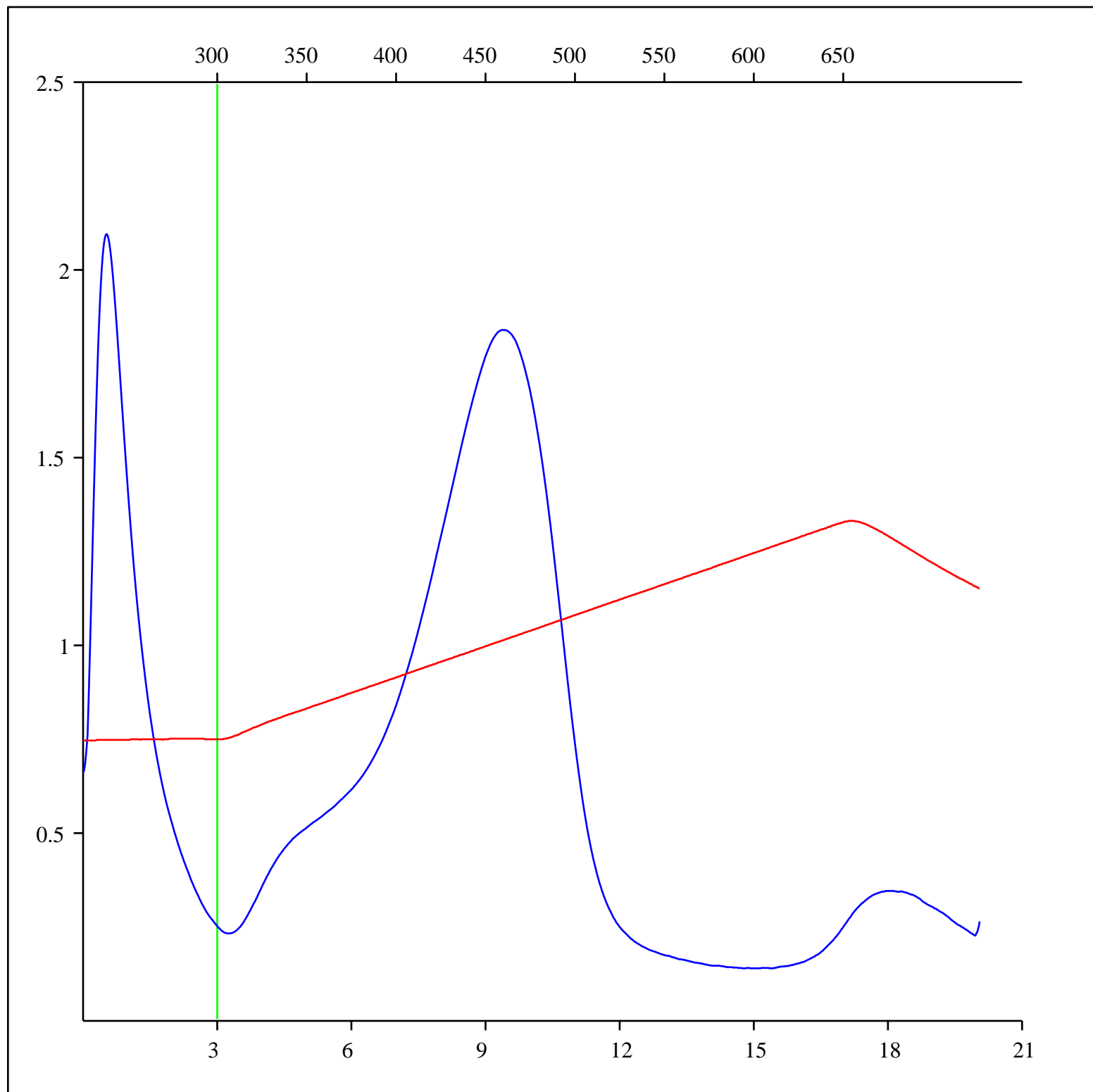
## FID hydrocarbons





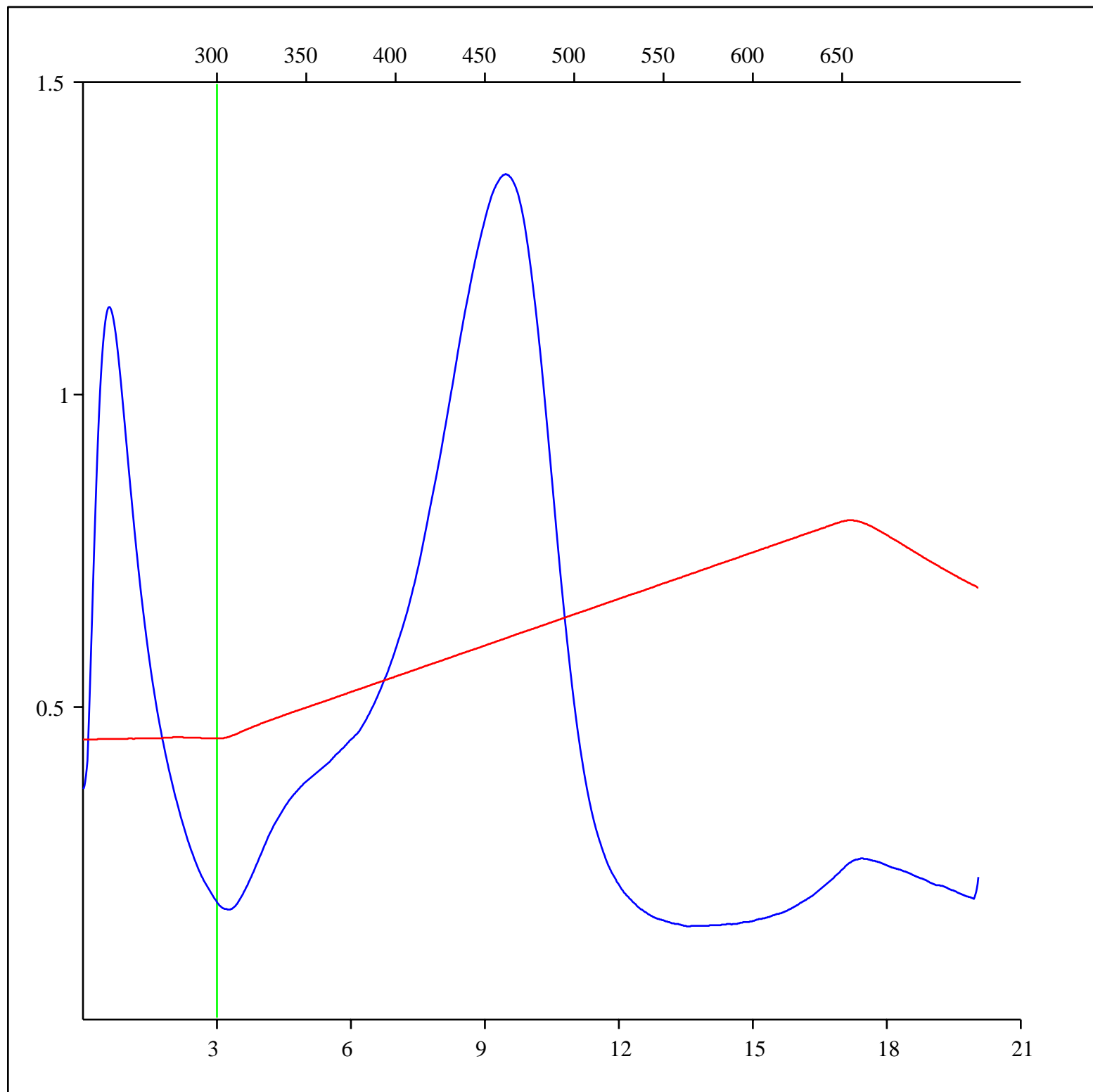
Sample: C-556152  
Acquisition Date: 28-NOV-2012  
Location: PAKTOA C-60  
Depth: 1475 - 1485 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



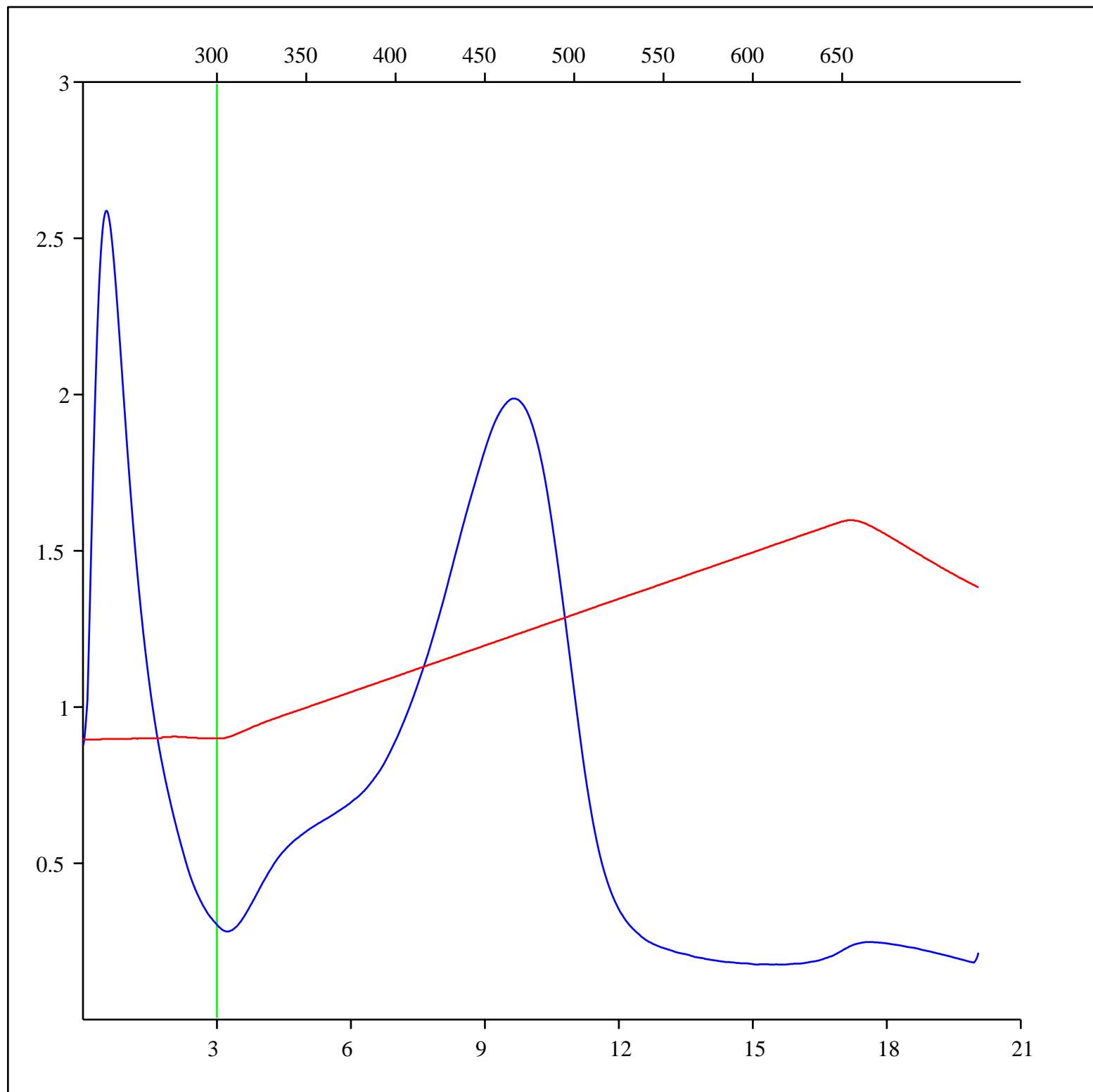
Sample: C-556153  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1485 - 1495 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



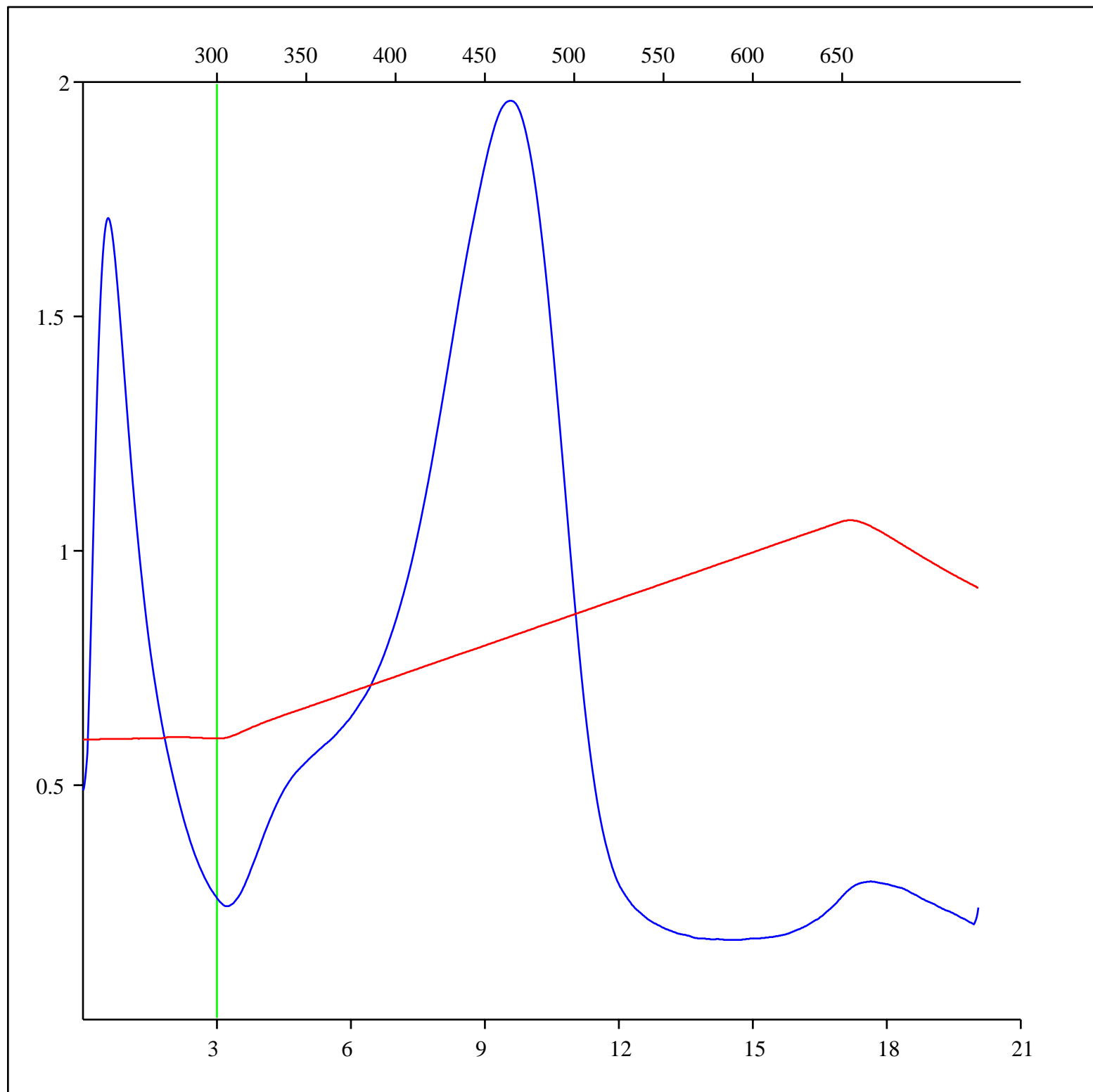
Sample: C-556154  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1495 - 1505 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



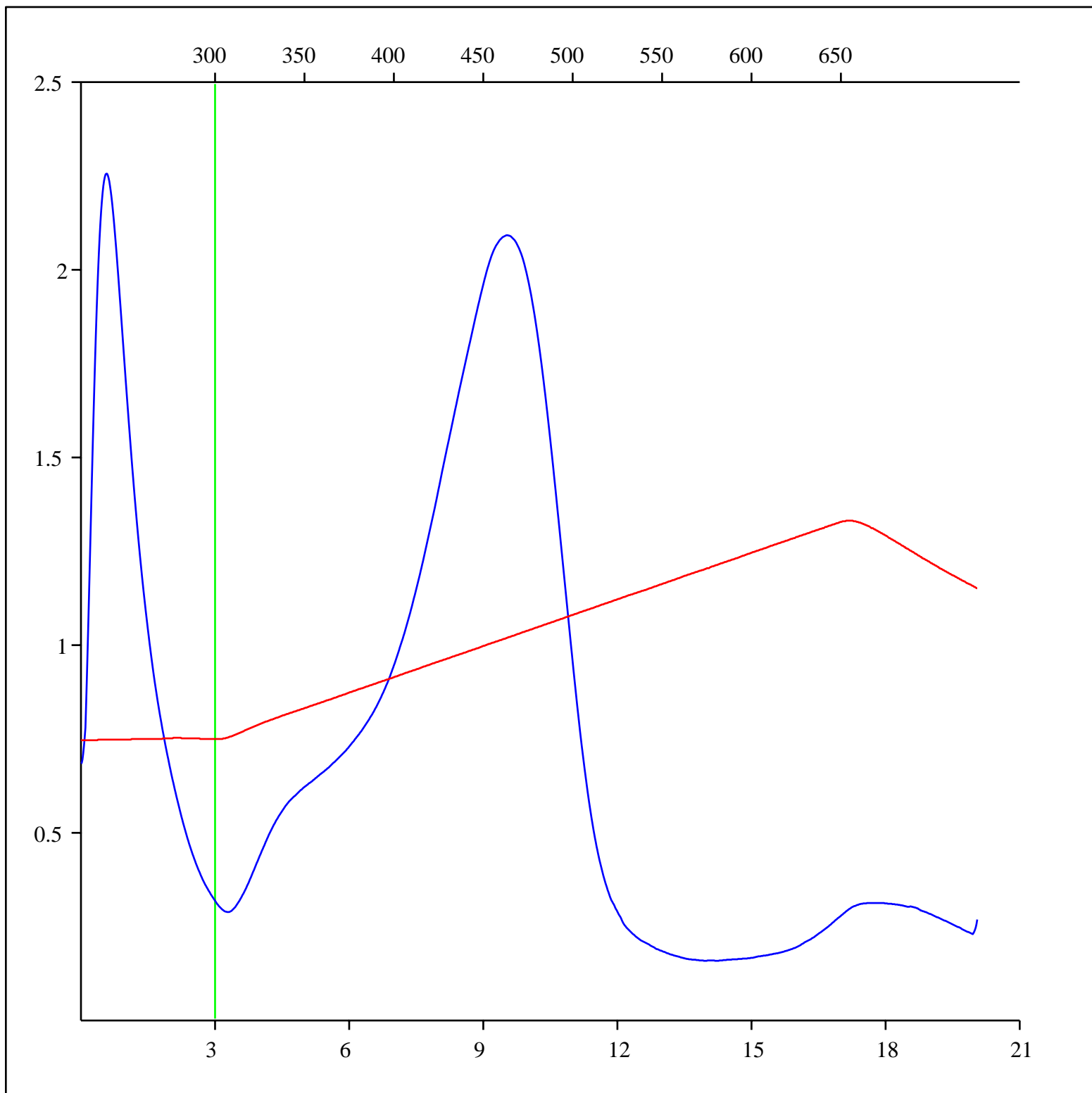
Sample: C-556155  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1505 - 1515 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



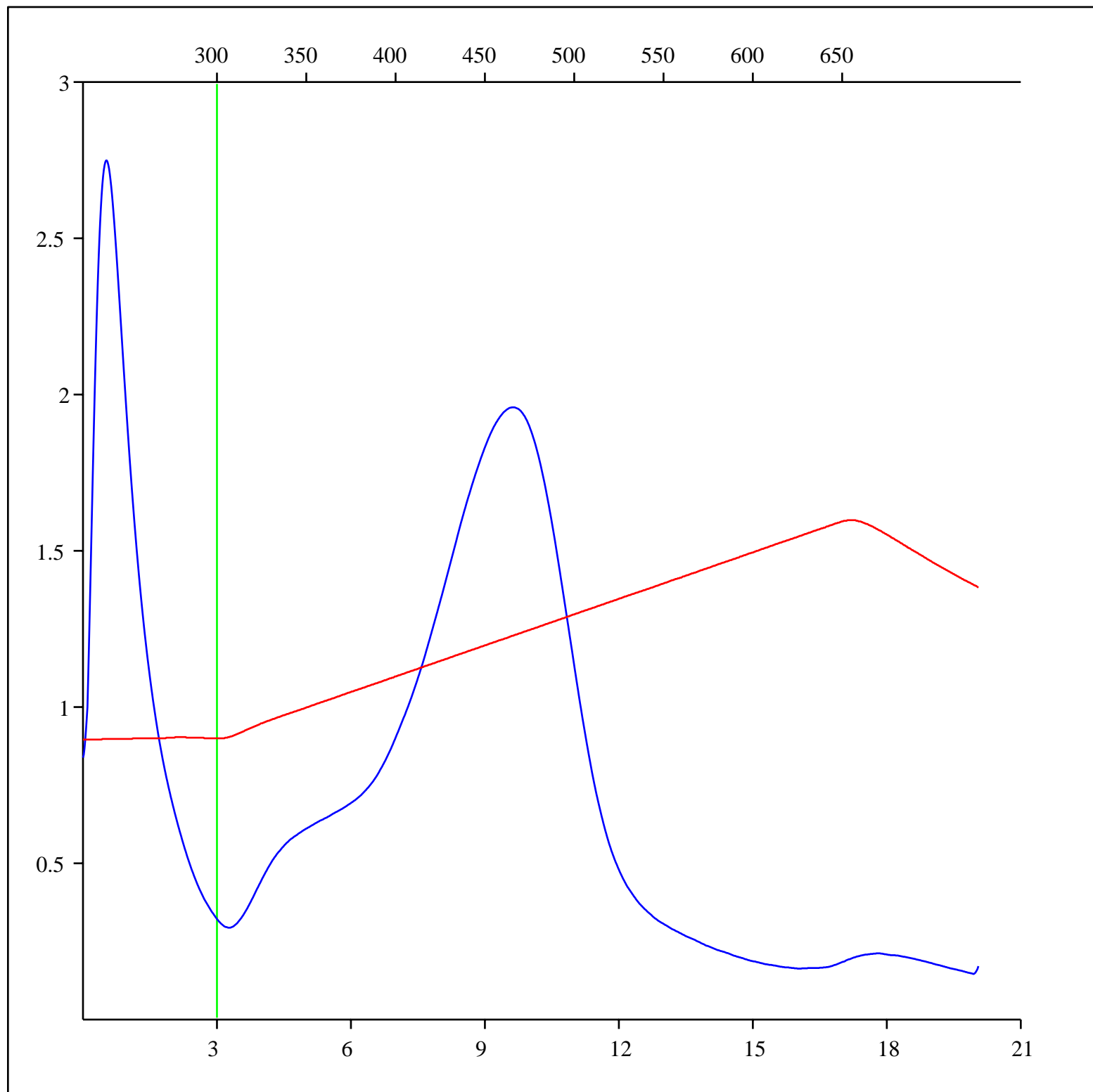
Sample: C-556156  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1515 - 1525 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



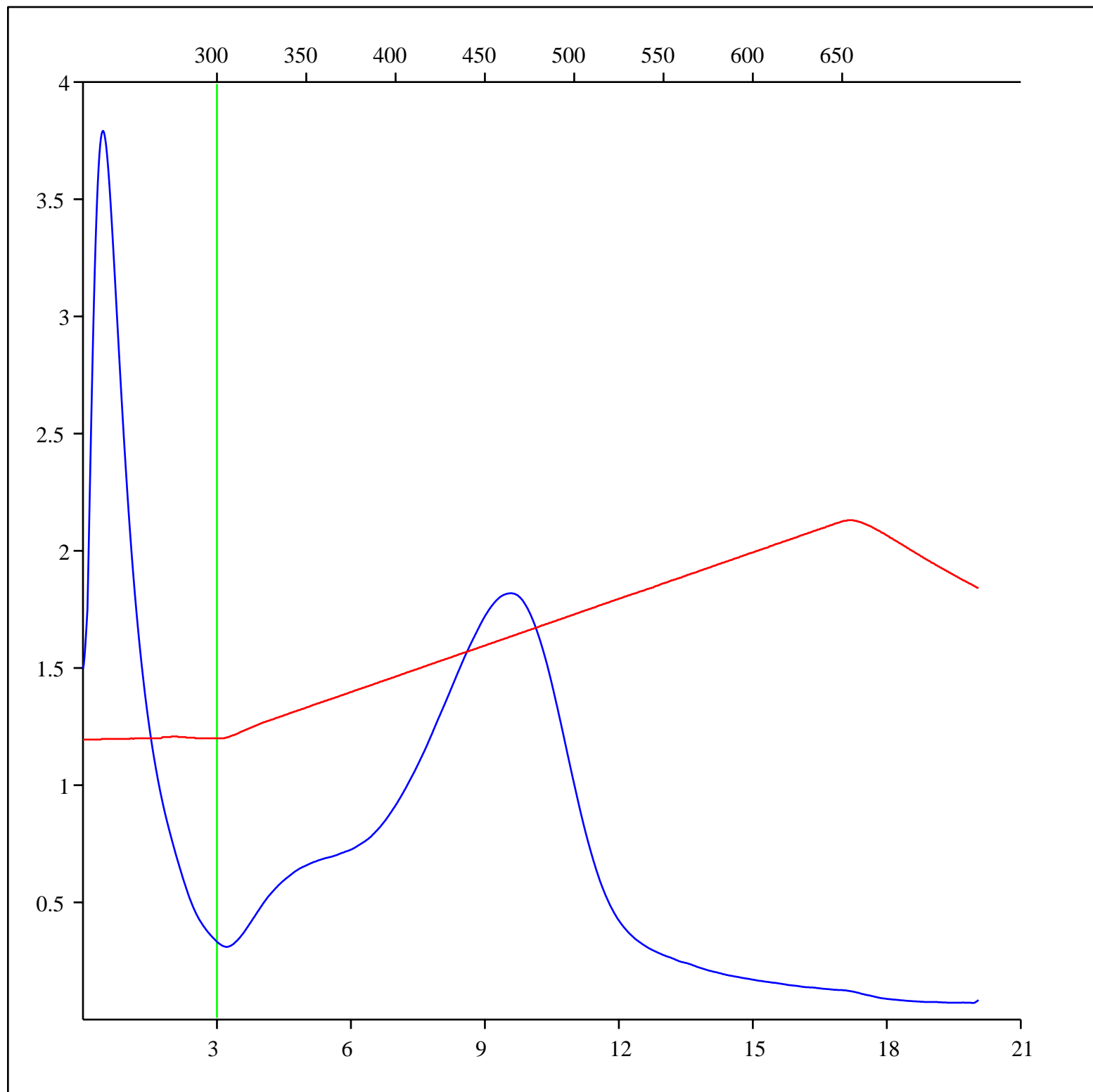
Sample: C-556157  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1525 - 1535 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



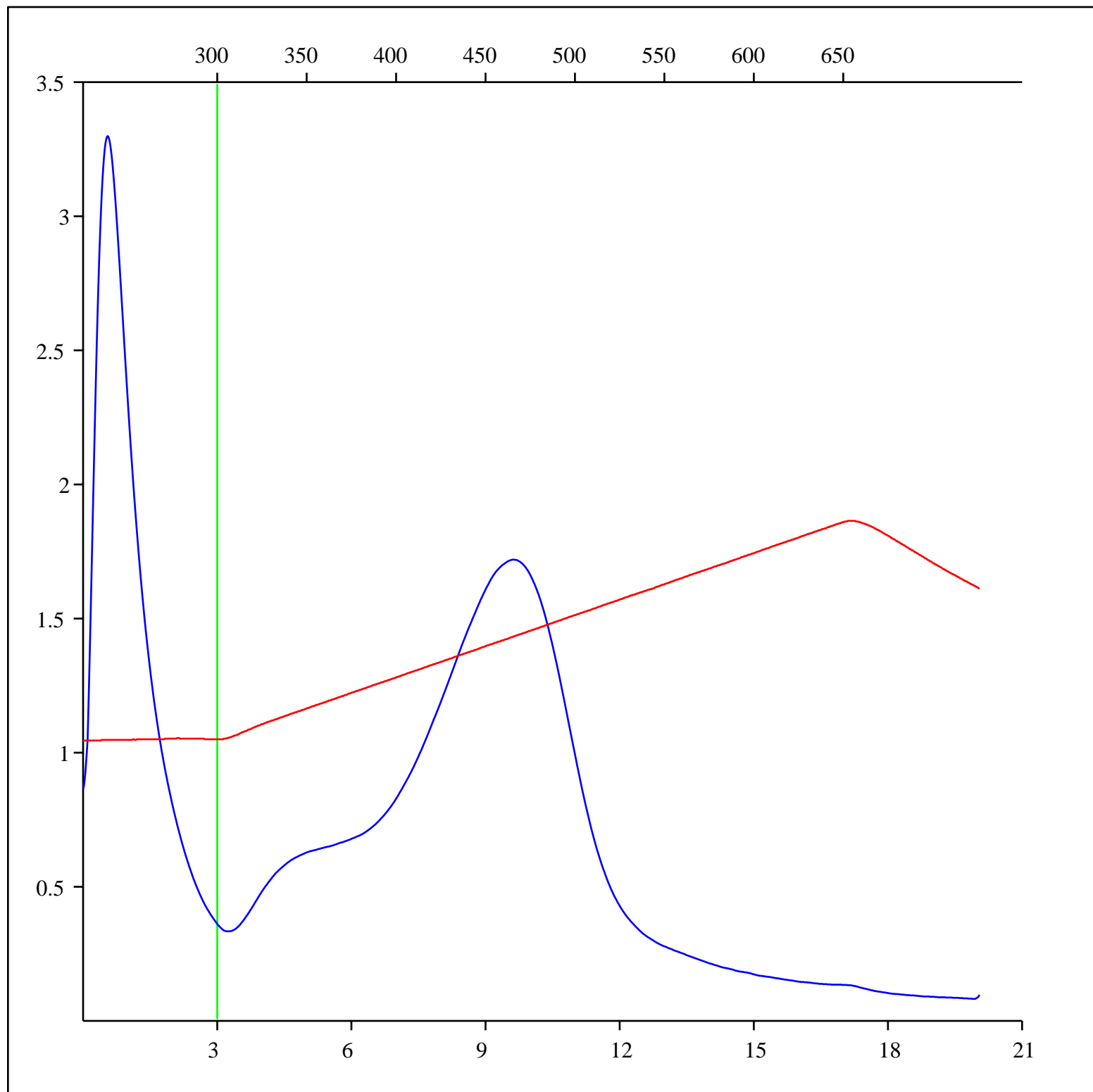
Sample: C-556158  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1535 - 1545 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556159  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1545 - 1555 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

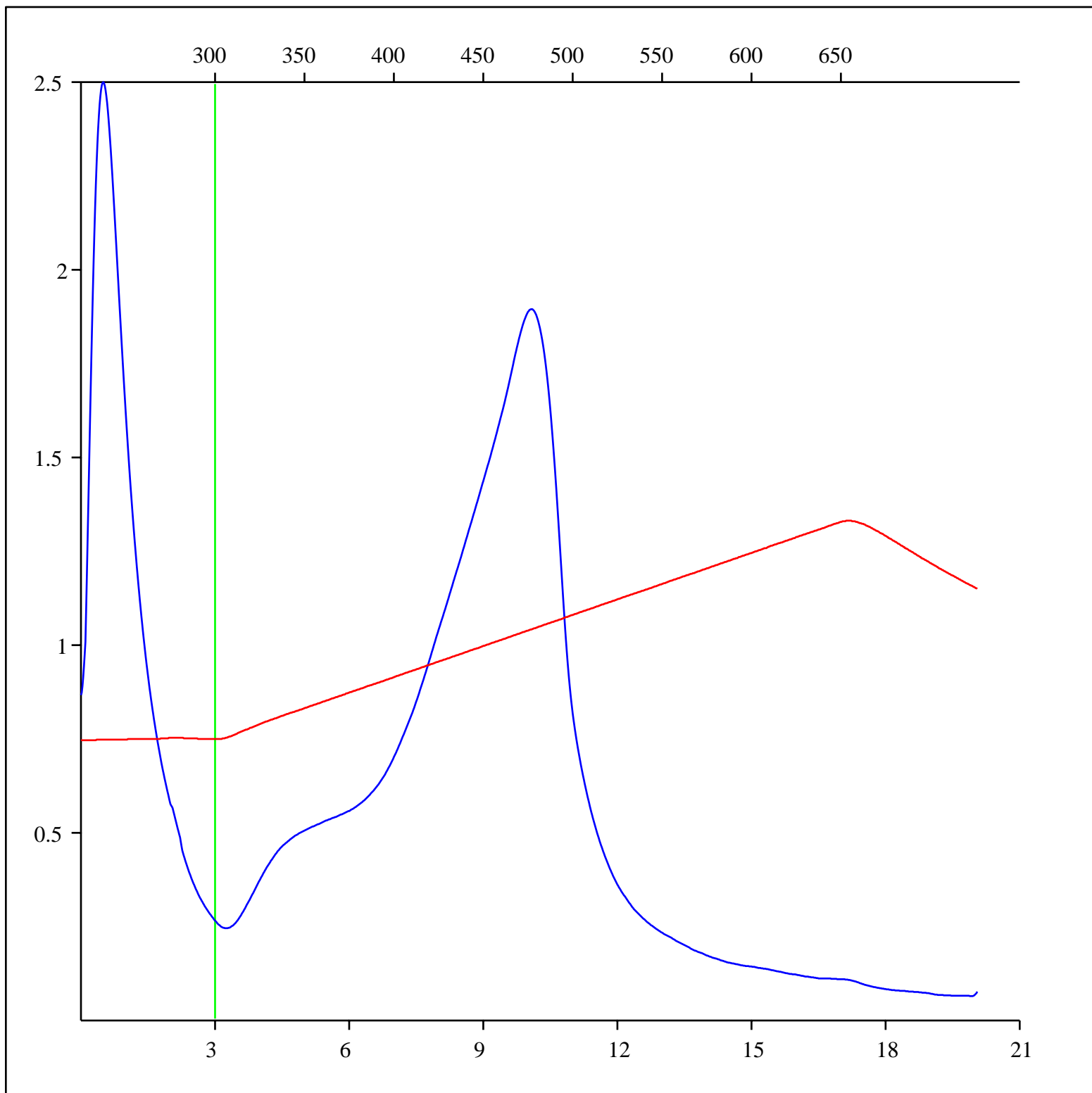
## FID hydrocarbons





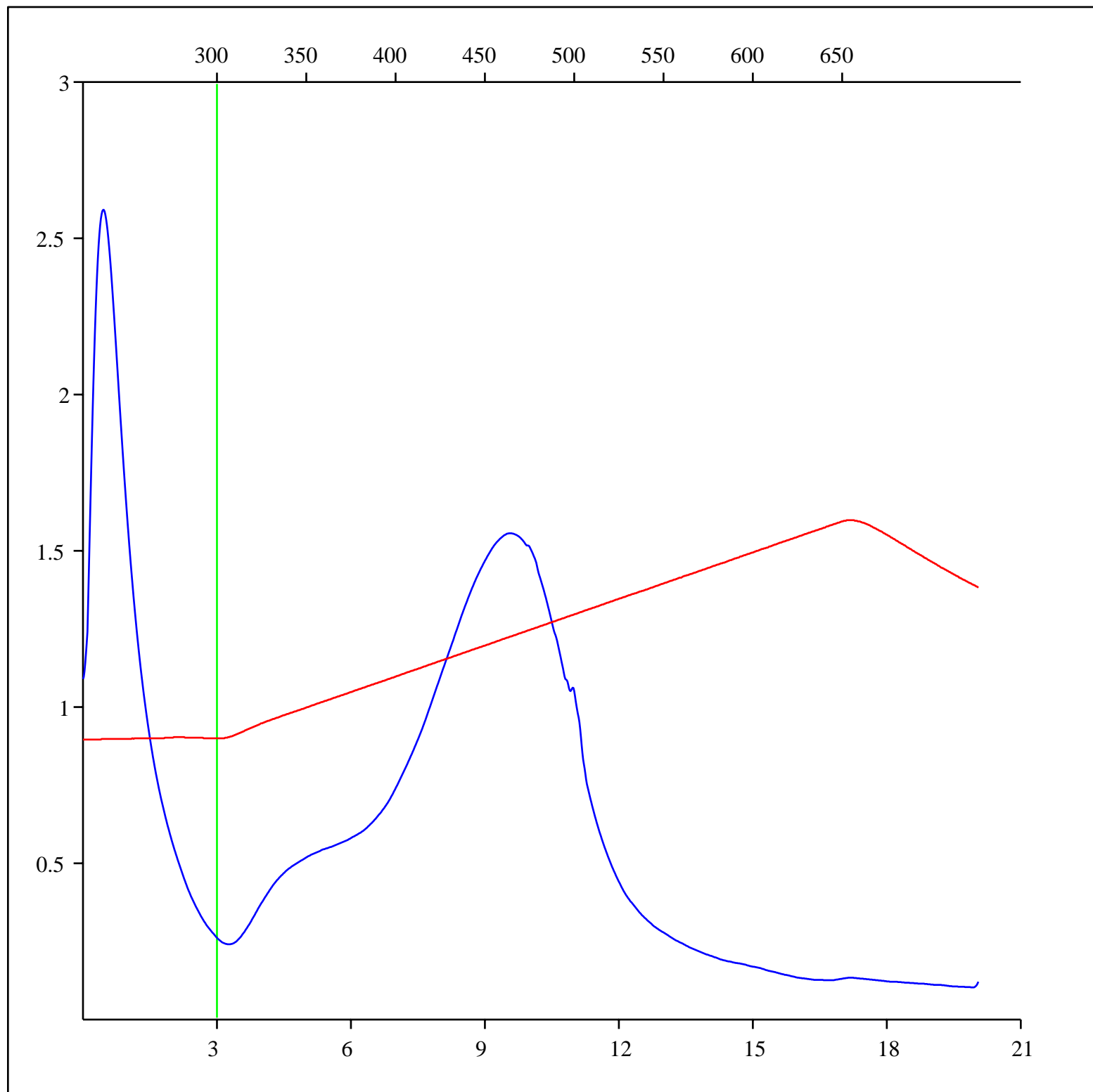
Sample: C-556160  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1555 - 1565 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



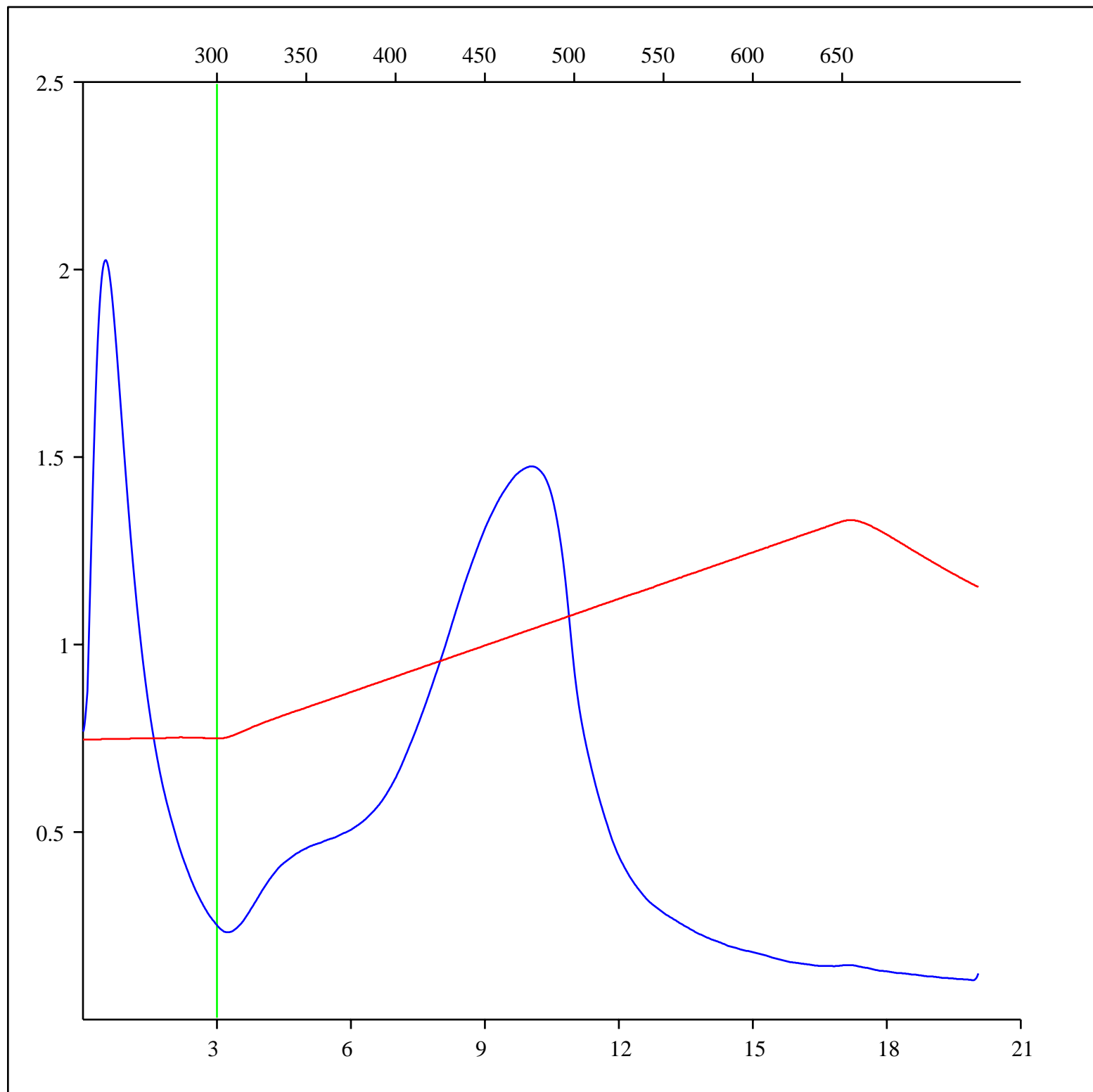
Sample: C-556161  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1565 - 1575 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



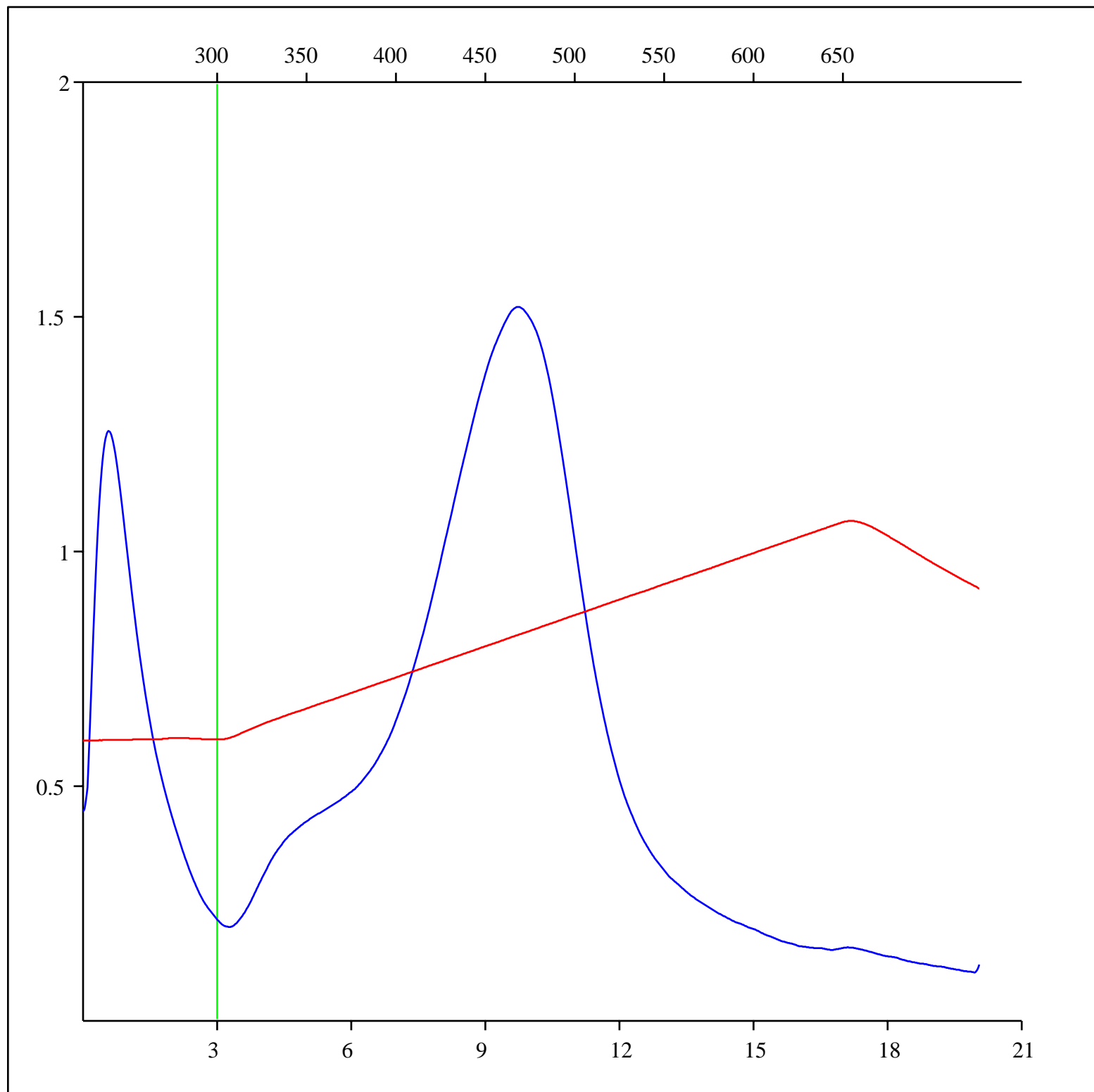
Sample: C-556162  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1575 - 1585 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



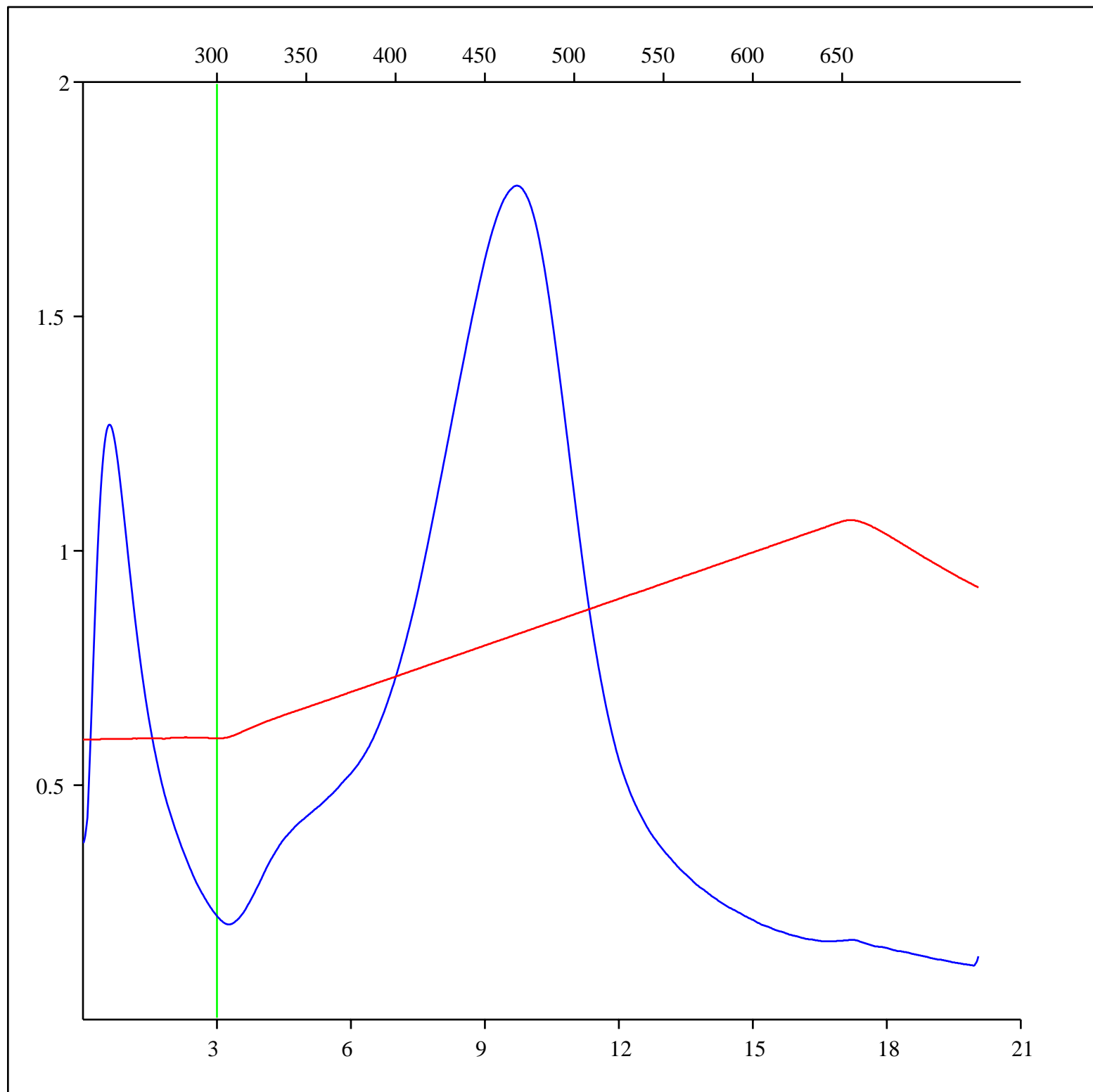
Sample: C-556163  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1585 - 1595 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



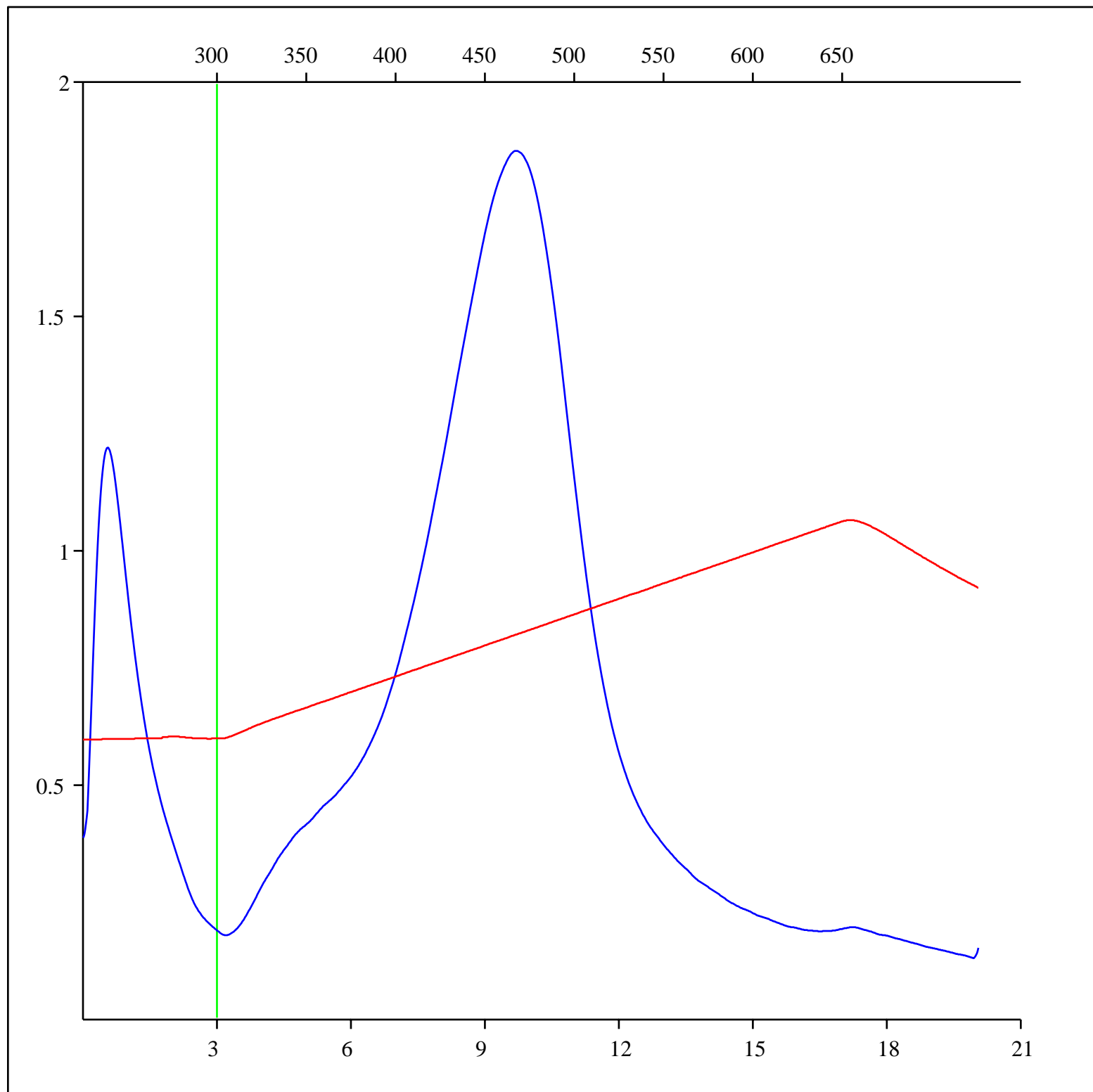
Sample: C-556164  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1595 - 1605 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



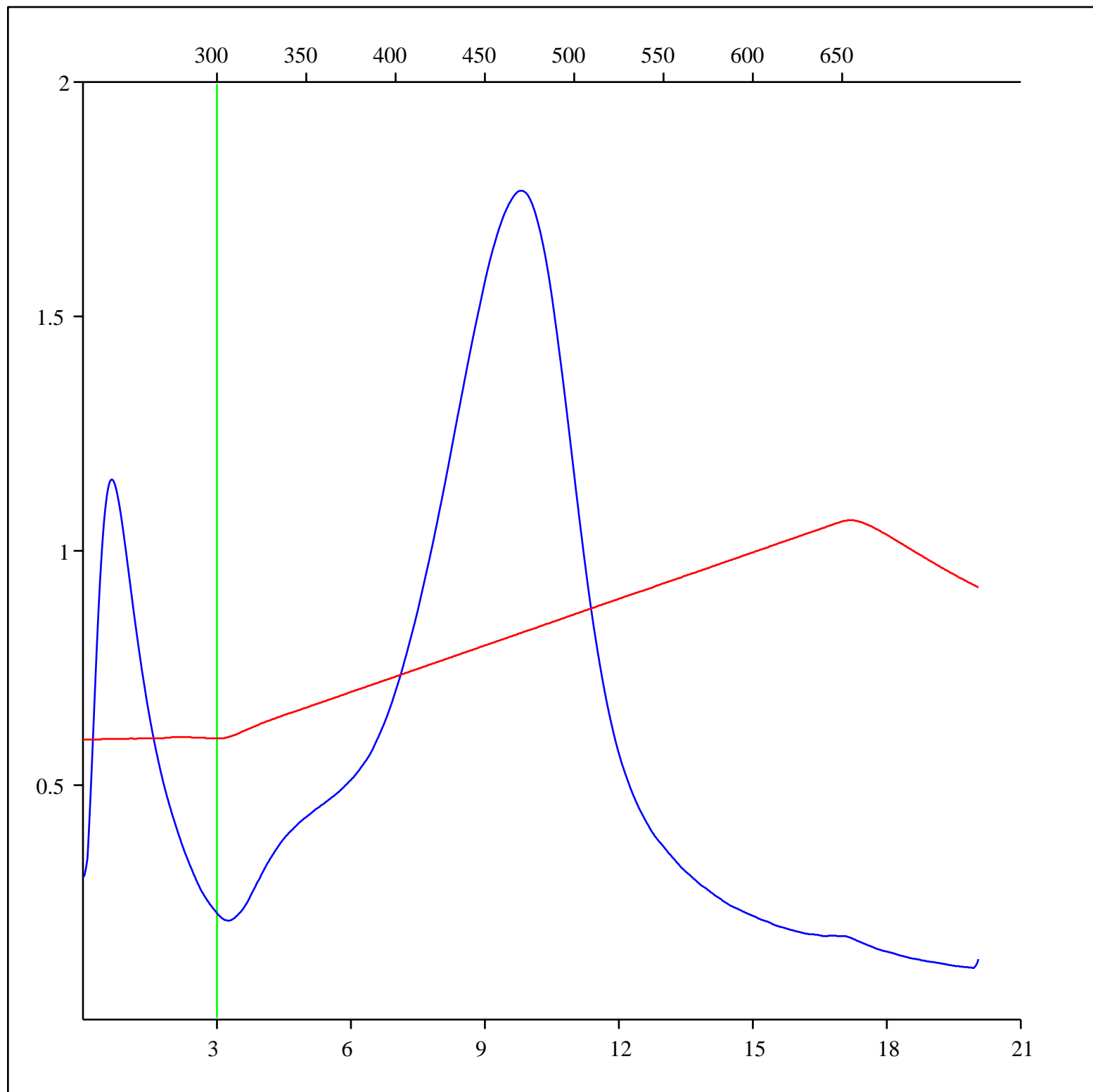
Sample: C-556165  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1605 - 1615 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



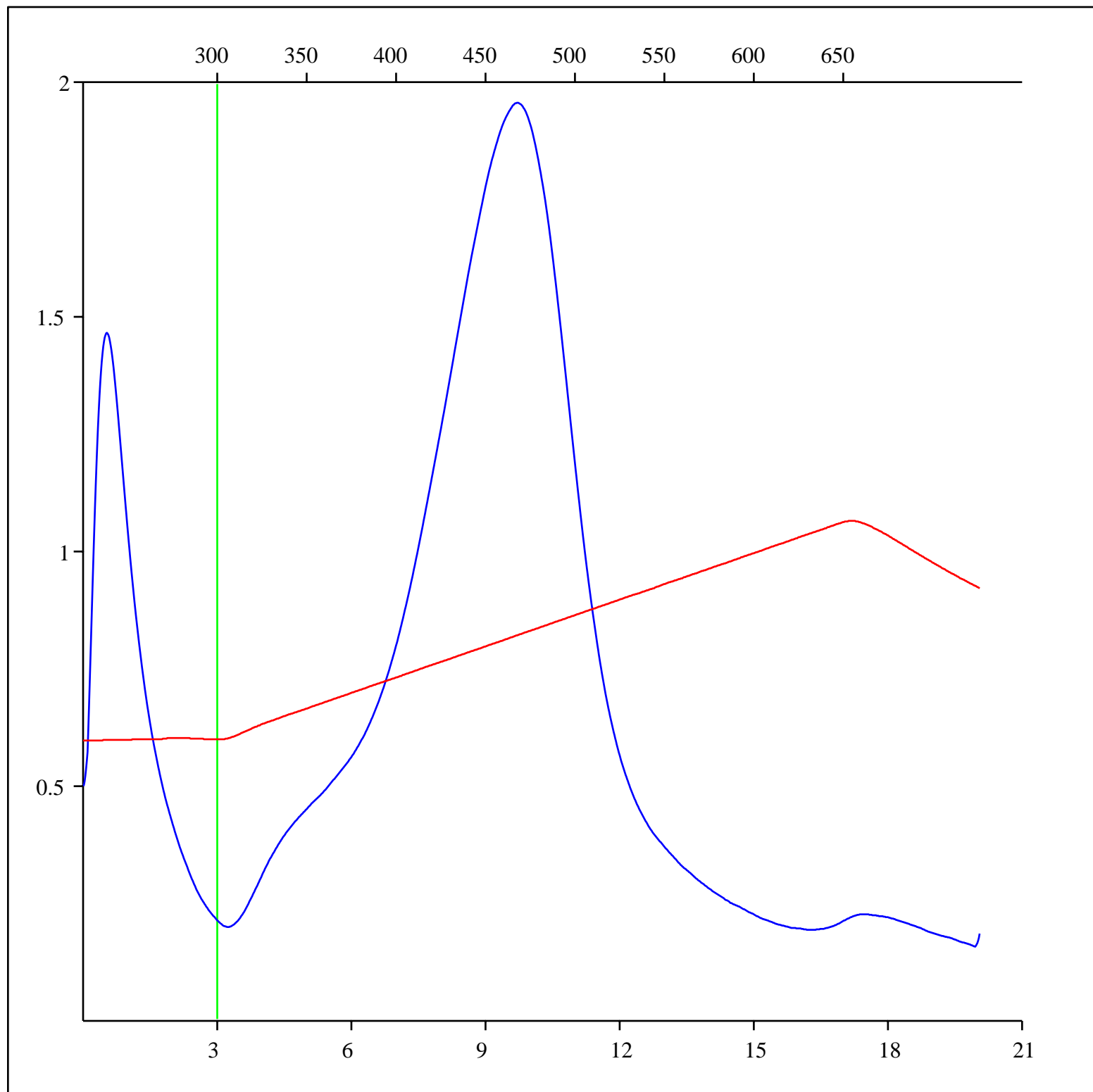
Sample: C-556166  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1615 - 1625 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556167  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1625 - 1635 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

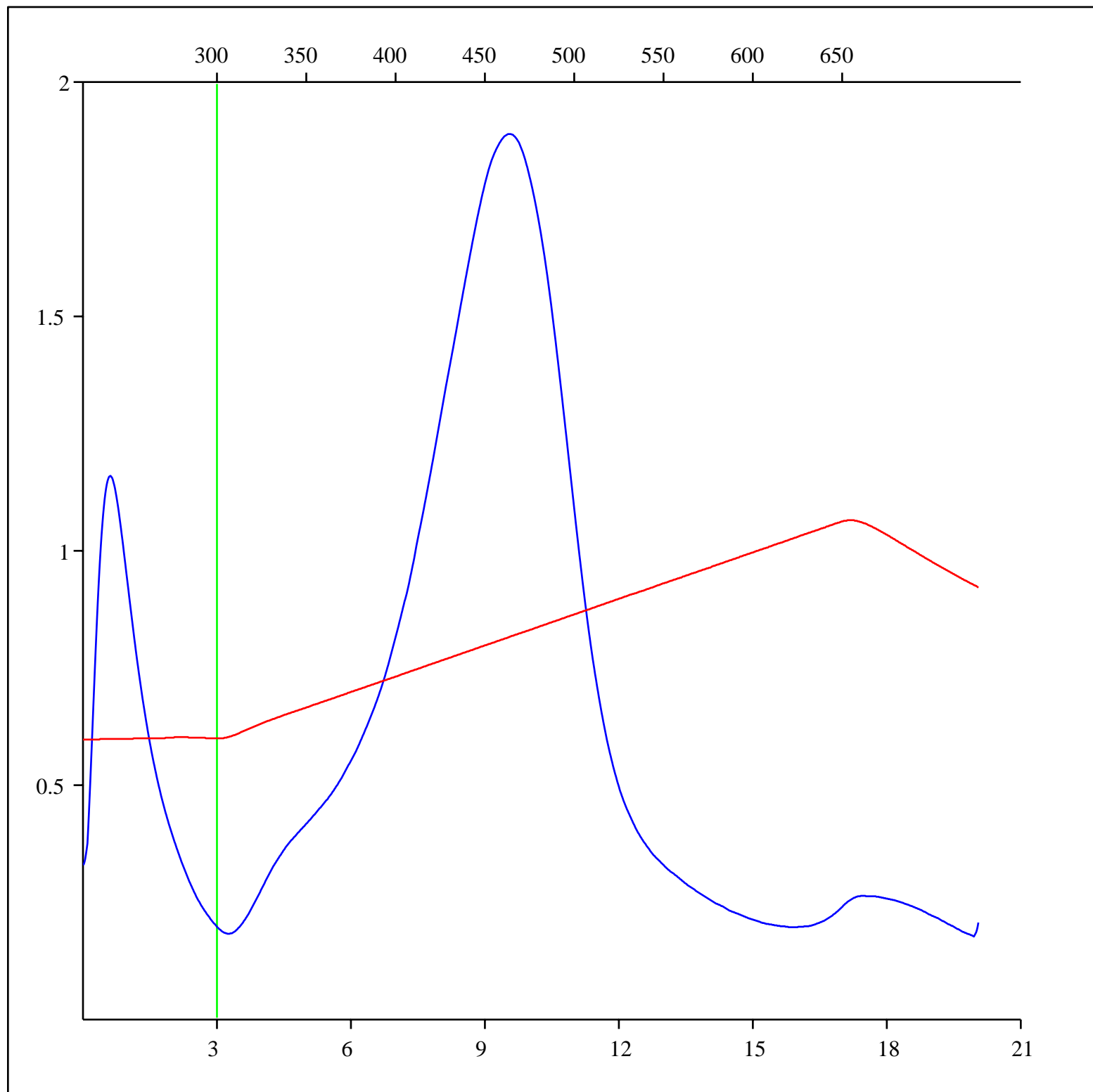
## FID hydrocarbons





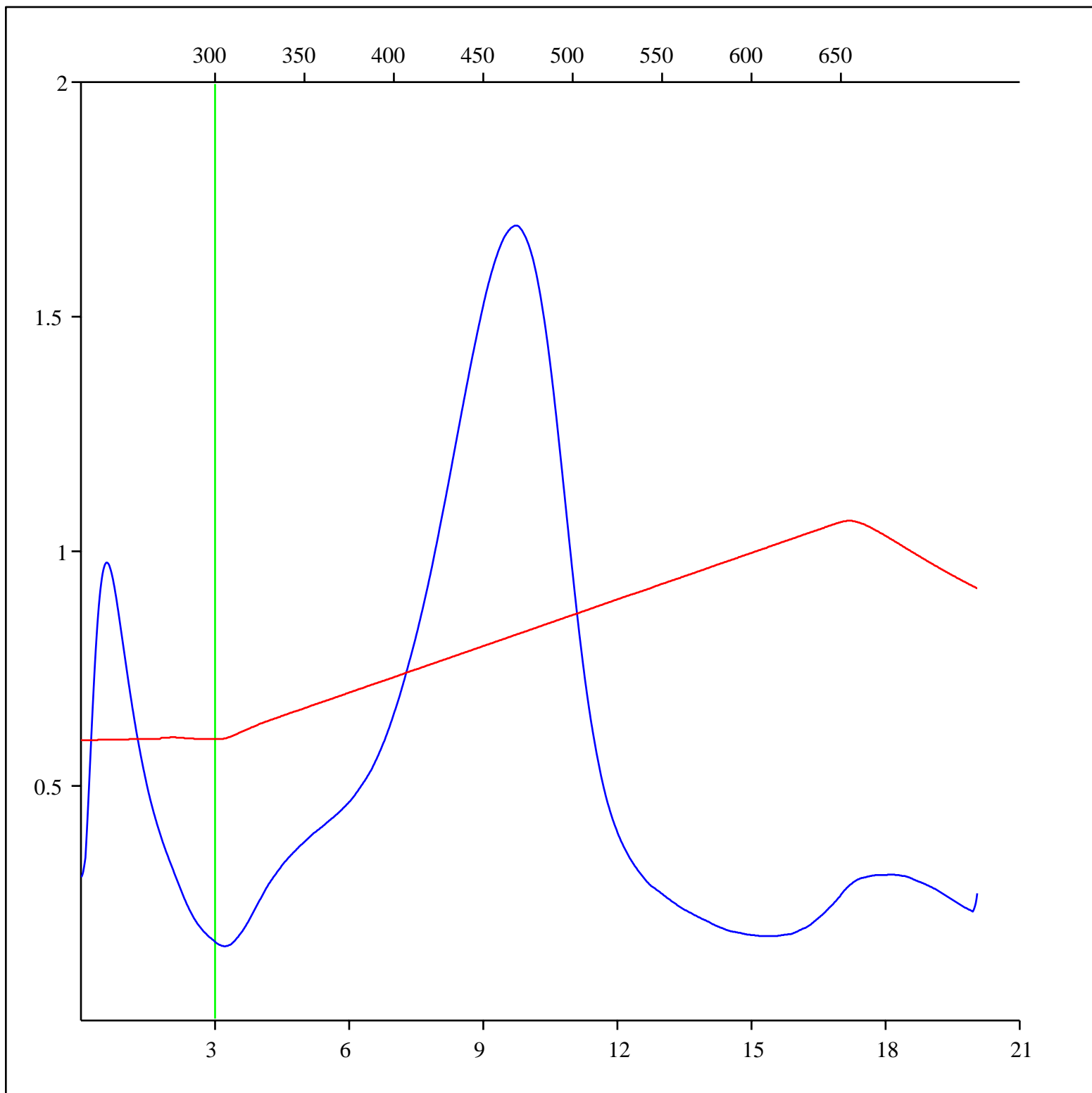
Sample: C-556168  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1635 - 1645 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



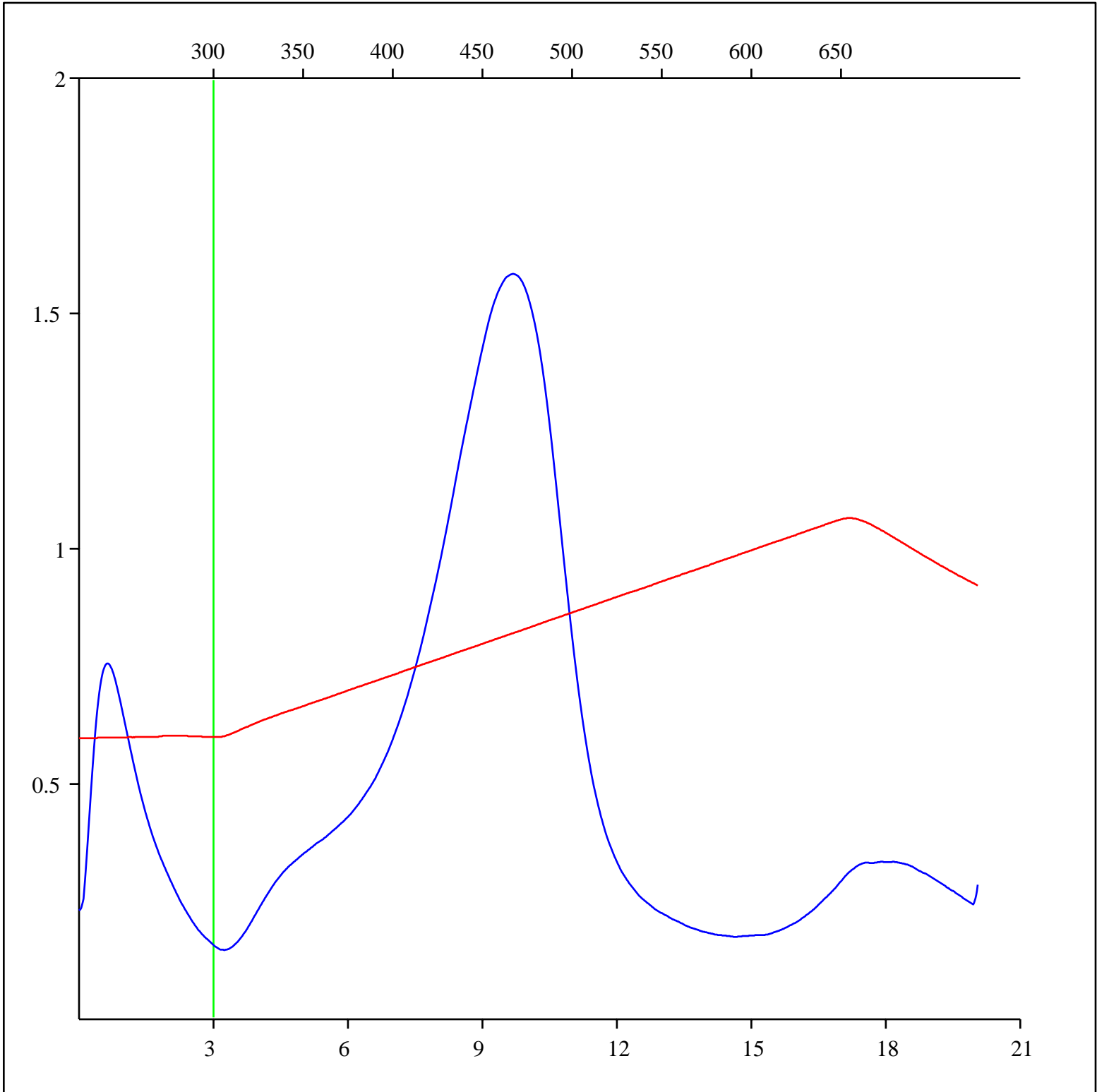
Sample: C-556169  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1645 - 1655 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



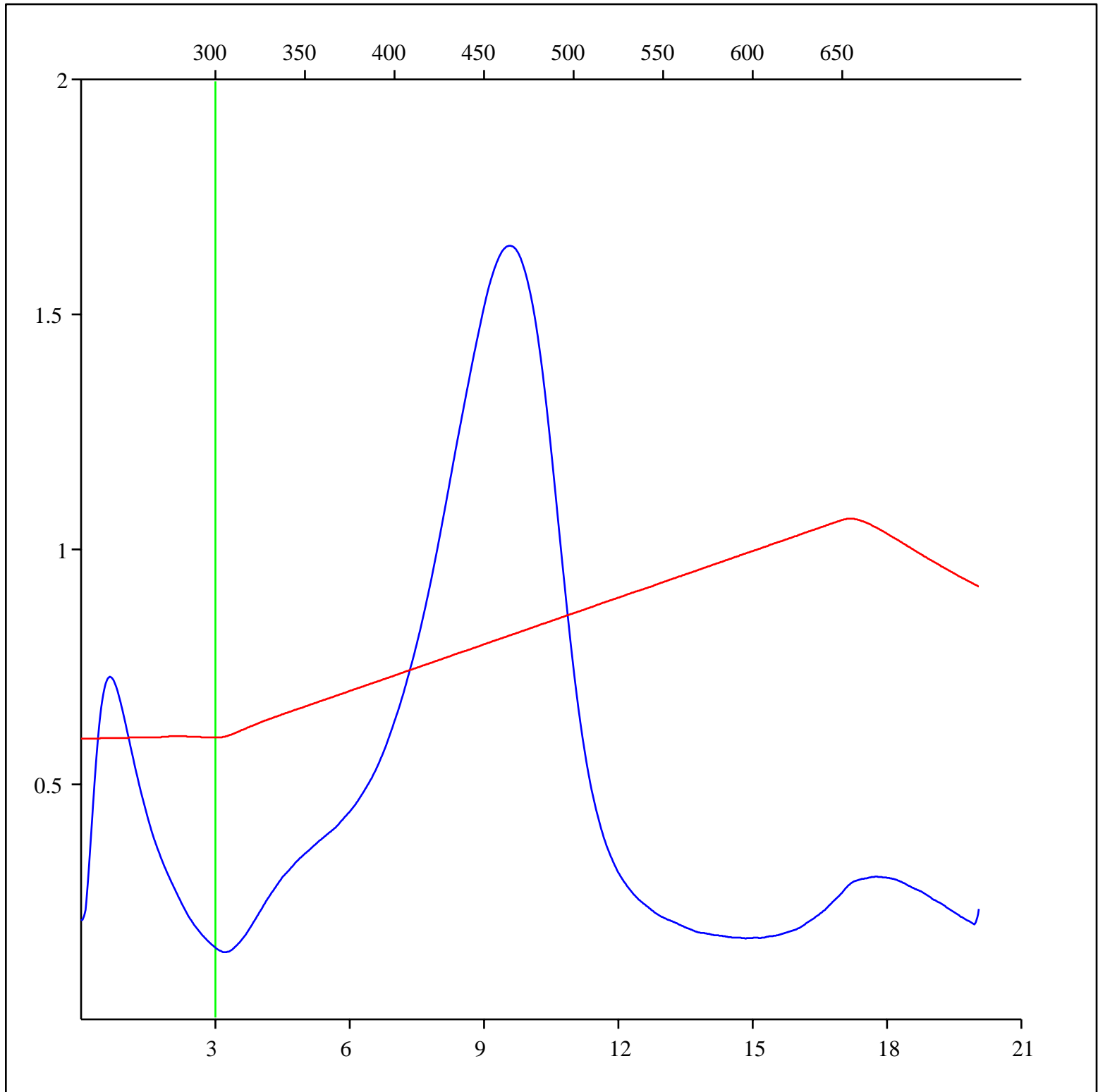
Sample: C-556170  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1655 - 1665 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

### FID hydrocarbons



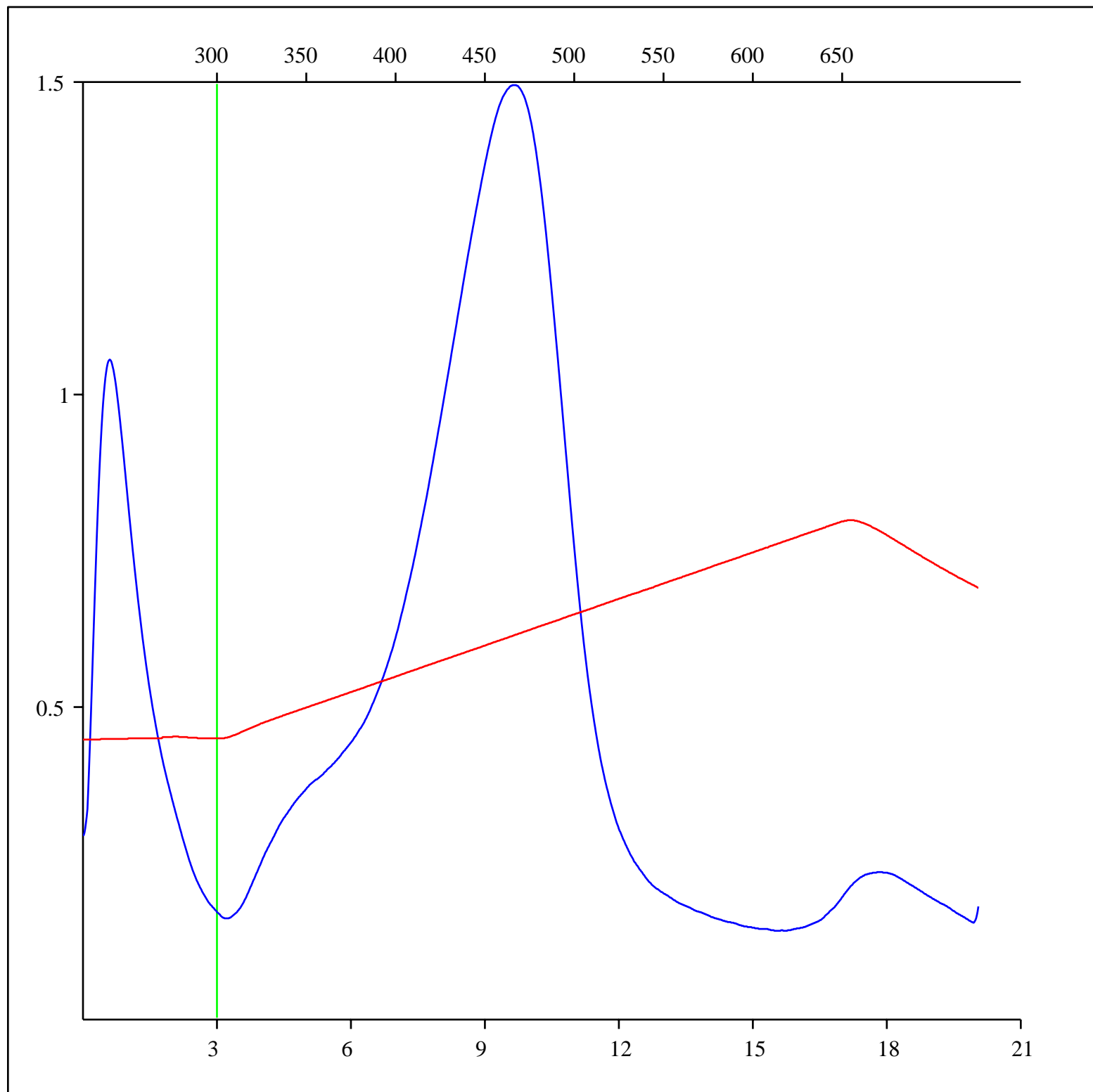
Sample: C-556171  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1665 - 1675 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

### FID hydrocarbons



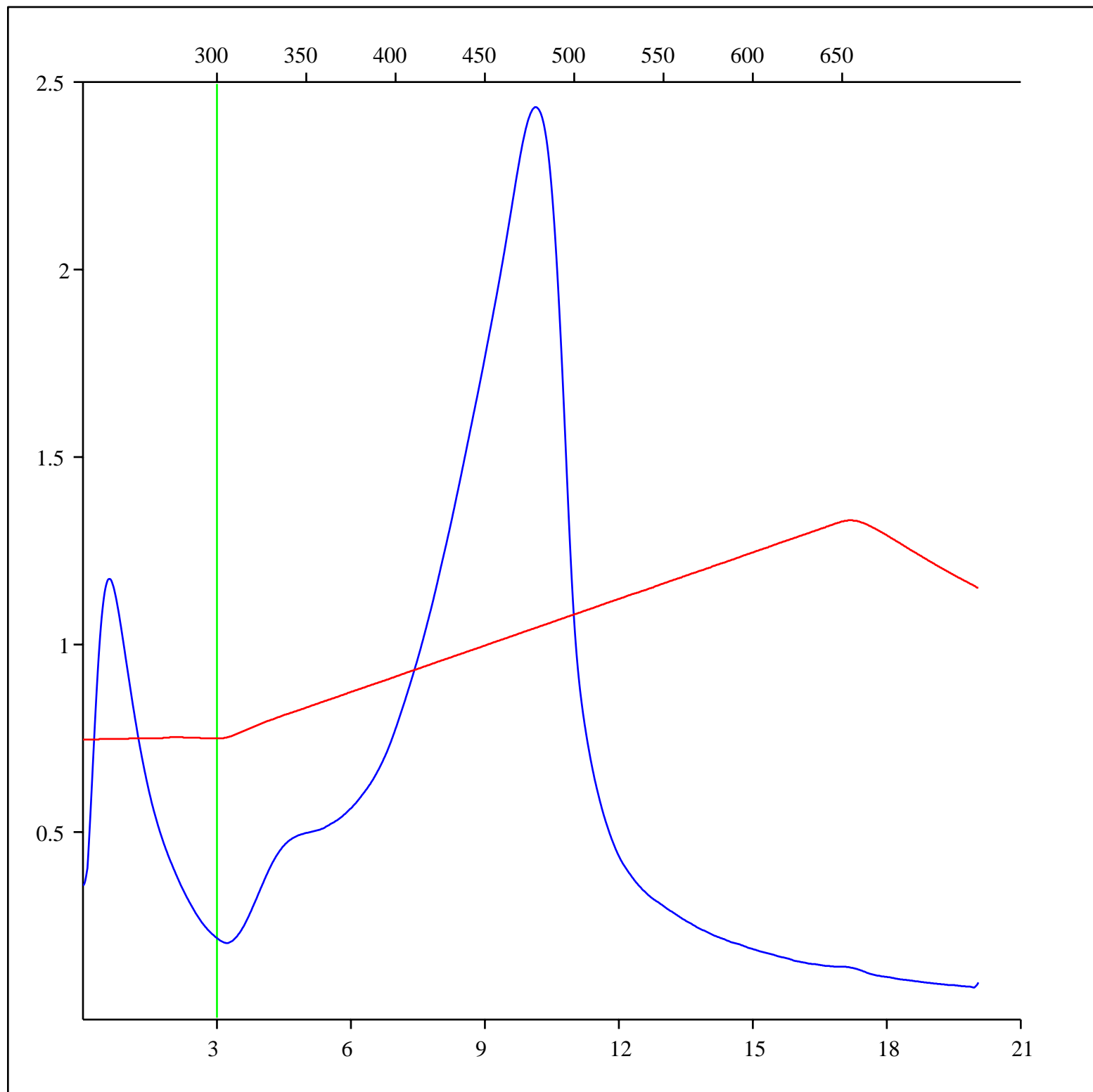
Sample: C-556172  
Acquisition Date: 29-NOV-2012  
Location: PAKTOA C-60  
Depth: 1675 - 1685 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



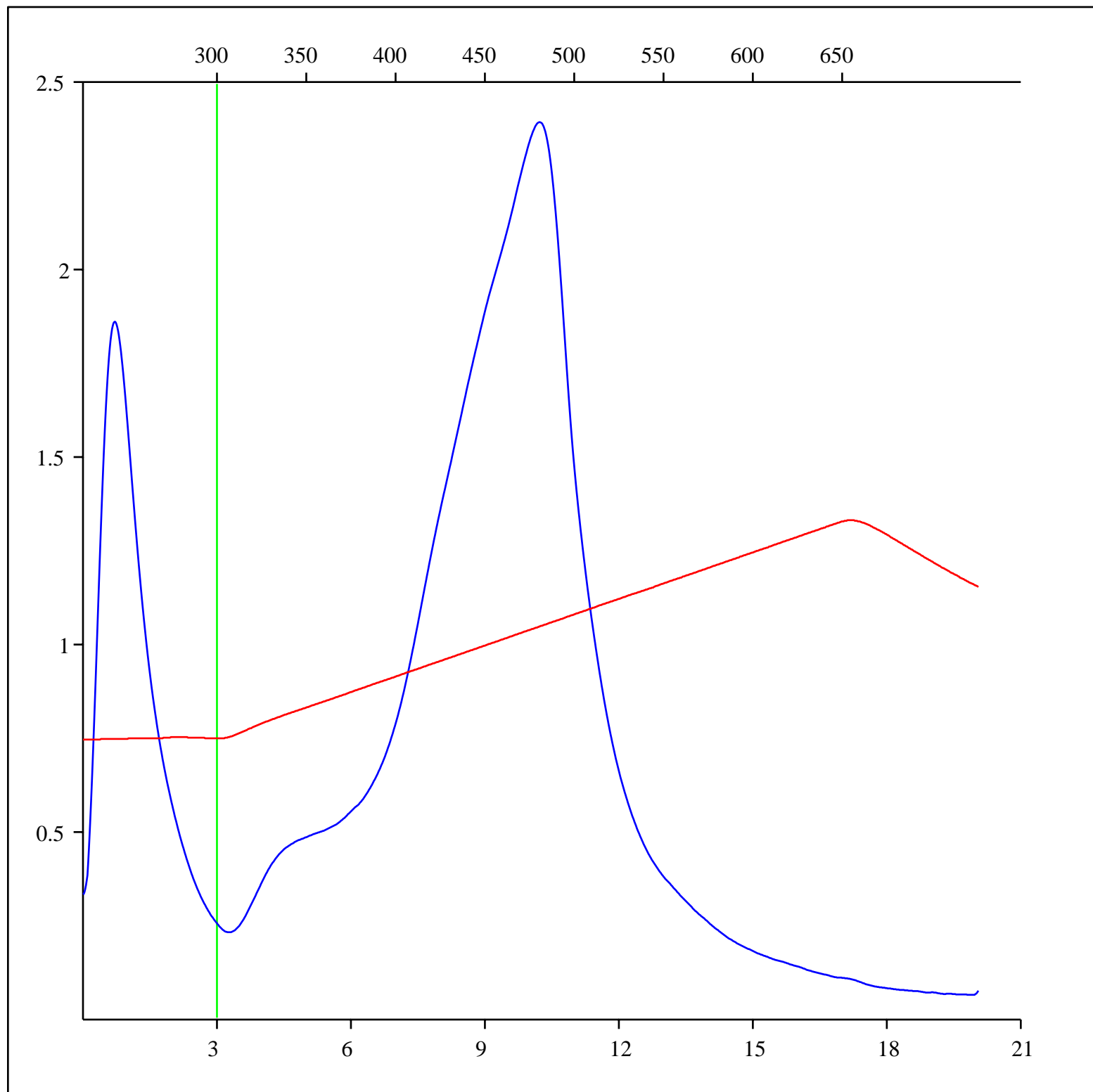
Sample: C-556173  
Acquisition Date: 30-NOV-2012  
Location: PAKTOA C-60  
Depth: 1685 - 1695 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



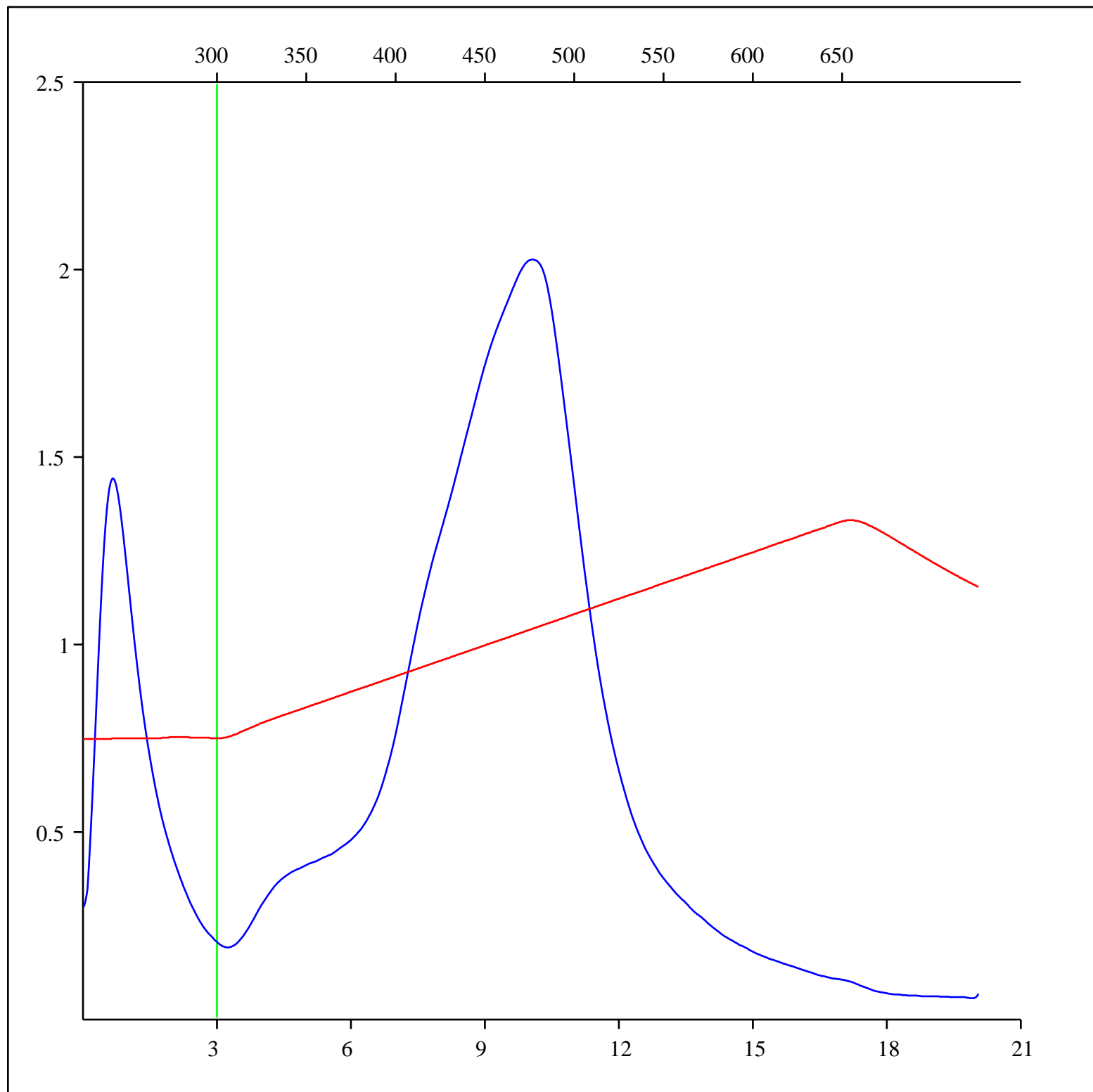
Sample: C-556174  
Acquisition Date: 30-NOV-2012  
Location: PAKTOA C-60  
Depth: 1695 - 1705 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556175  
Acquisition Date: 30-NOV-2012  
Location: PAKTOA C-60  
Depth: 1705 - 1715 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

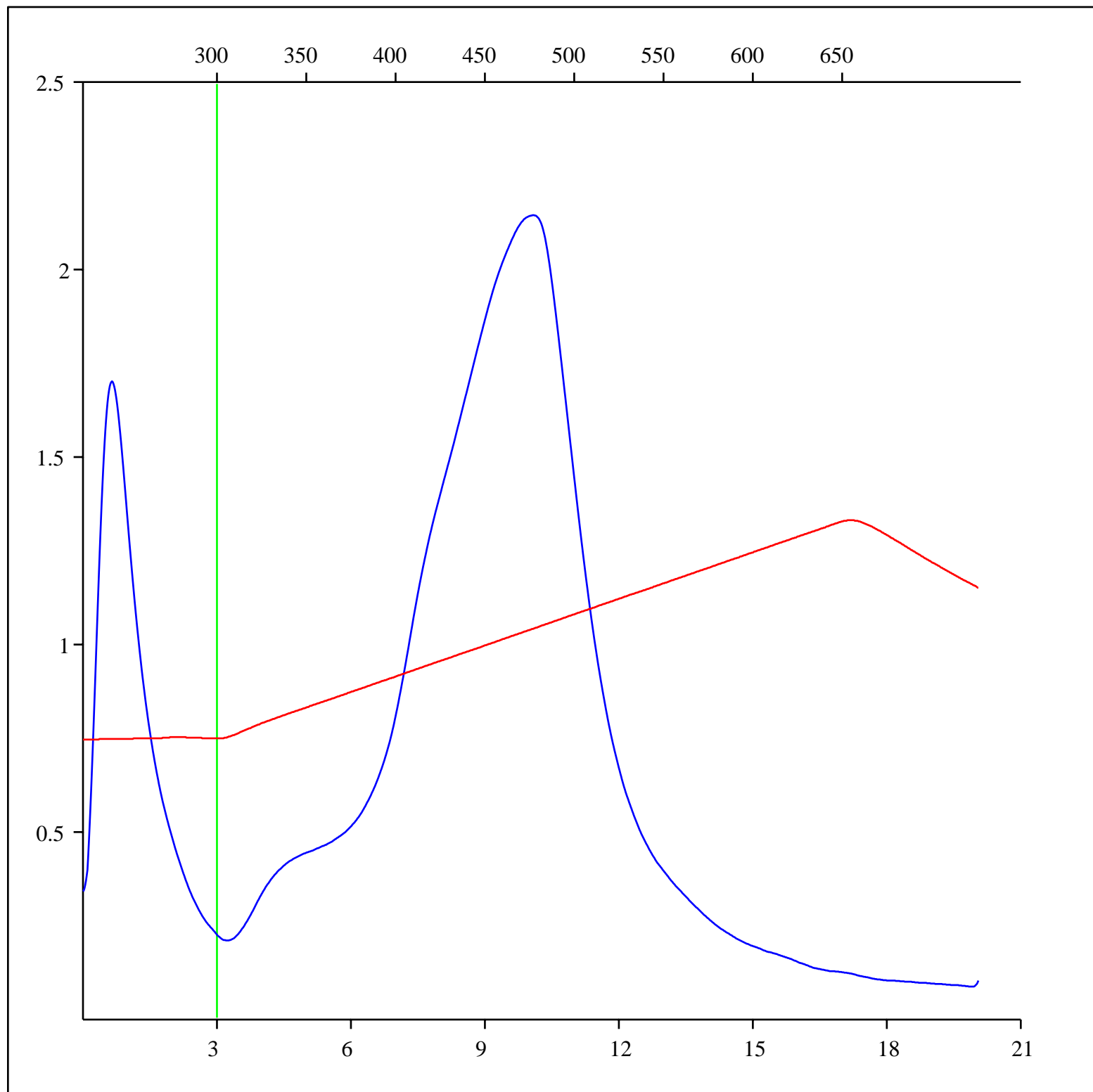
## FID hydrocarbons





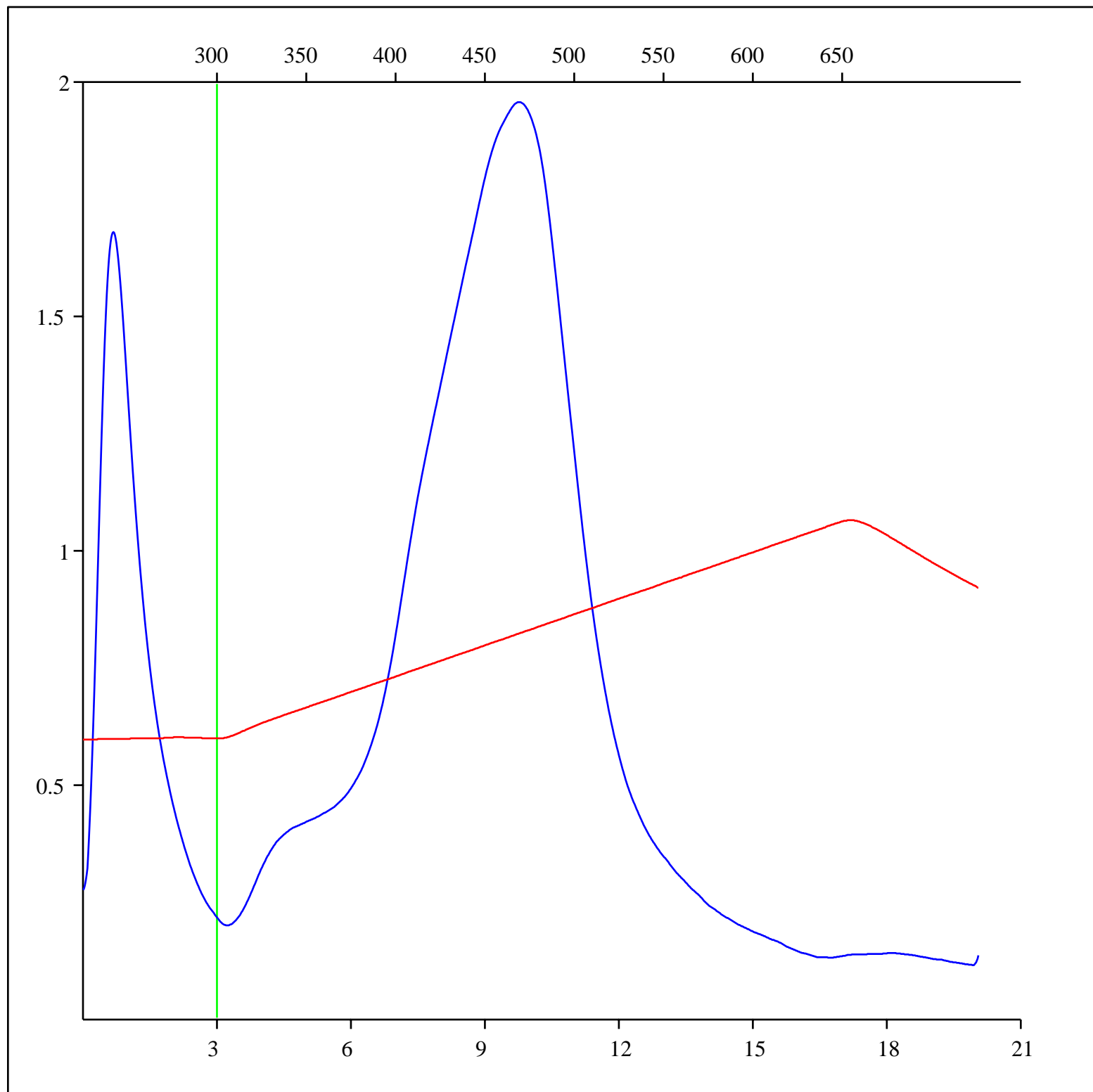
Sample: C-556176  
Acquisition Date: 30-NOV-2012  
Location: PAKTOA C-60  
Depth: 1715 - 1725 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



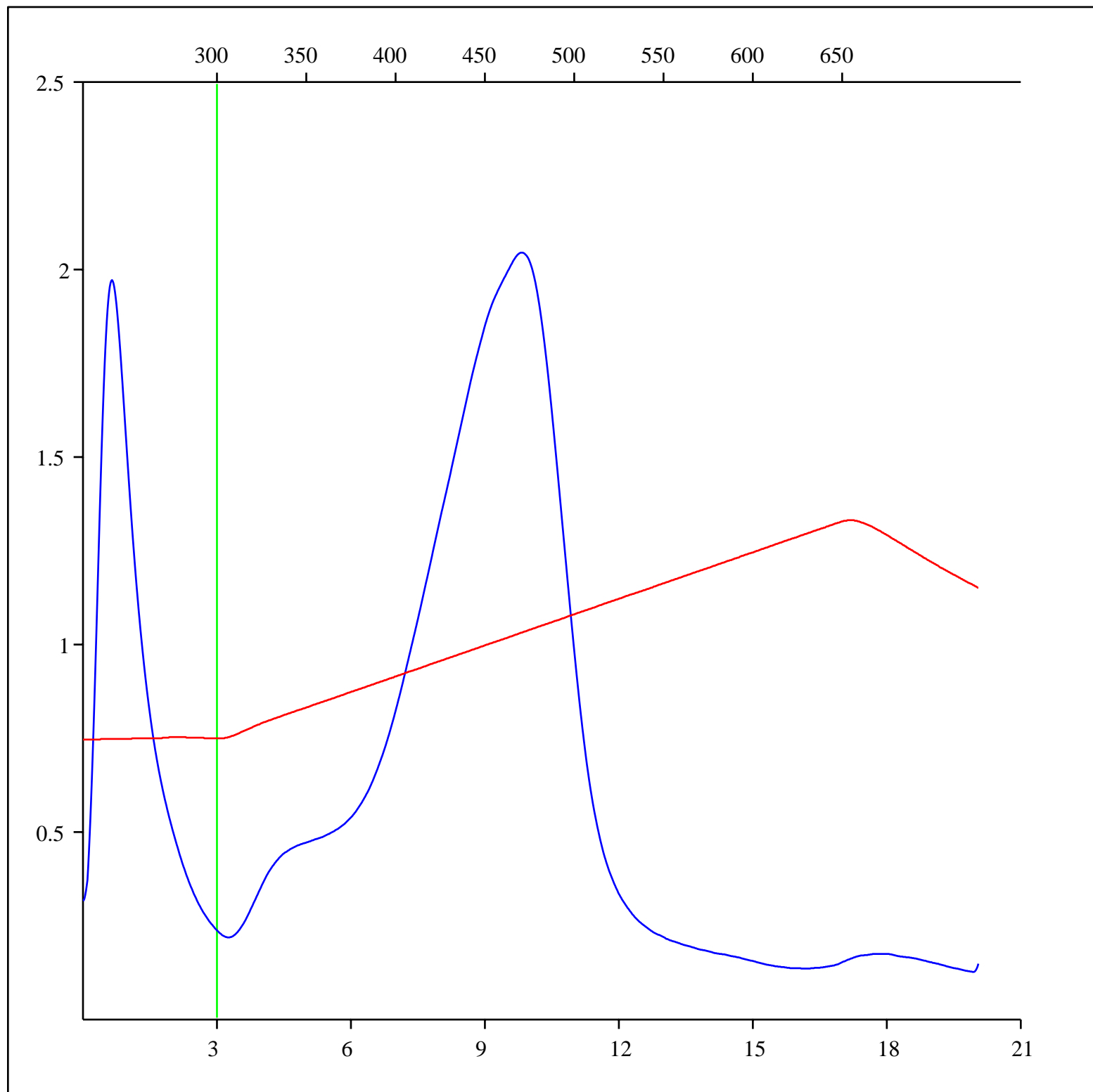
Sample: C-556177  
Acquisition Date: 30-NOV-2012  
Location: PAKTOA C-60  
Depth: 1725 - 1735 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



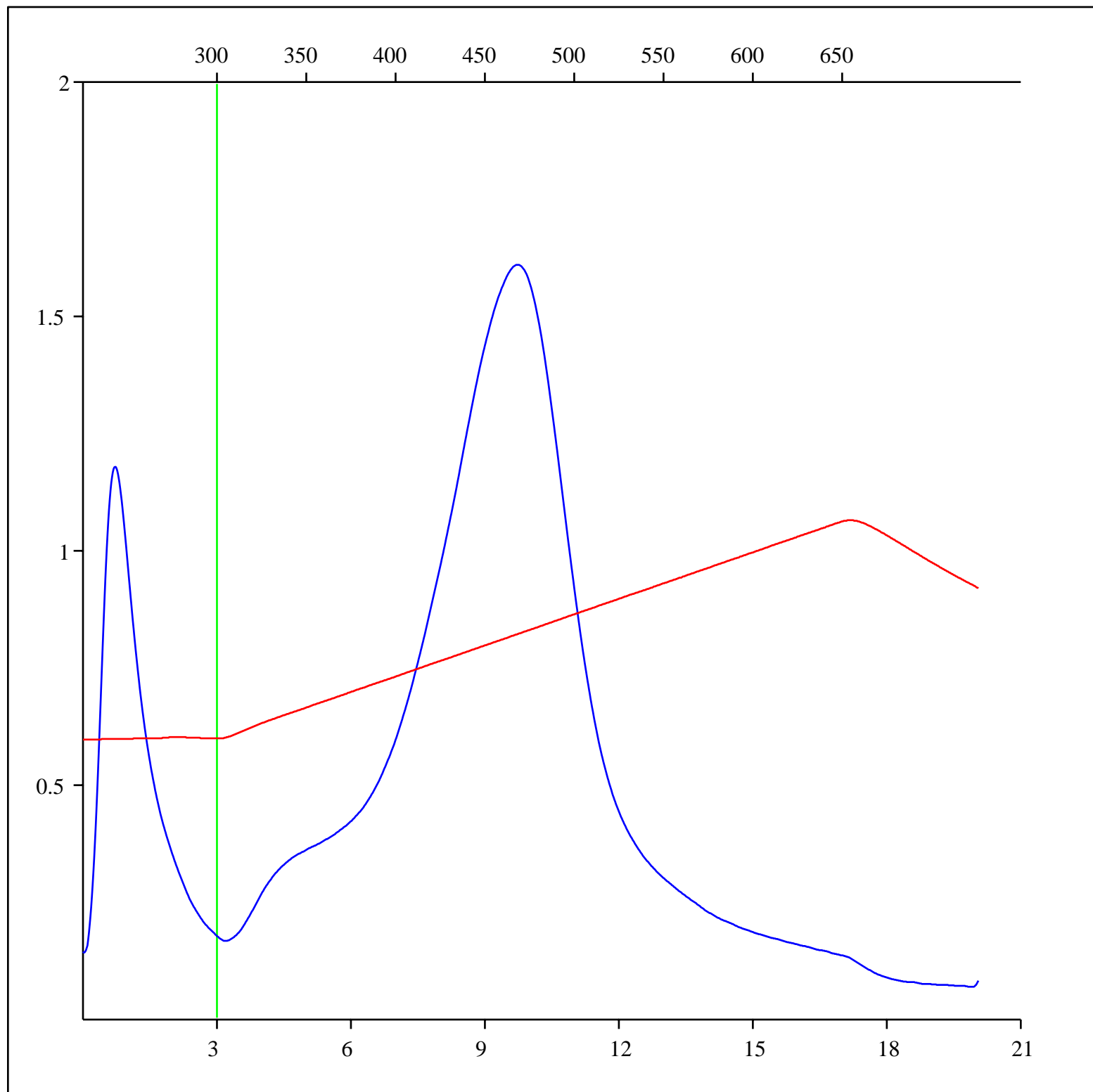
Sample: C-556178  
Acquisition Date: 30-NOV-2012  
Location: PAKTOA C-60  
Depth: 1735 - 1745 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



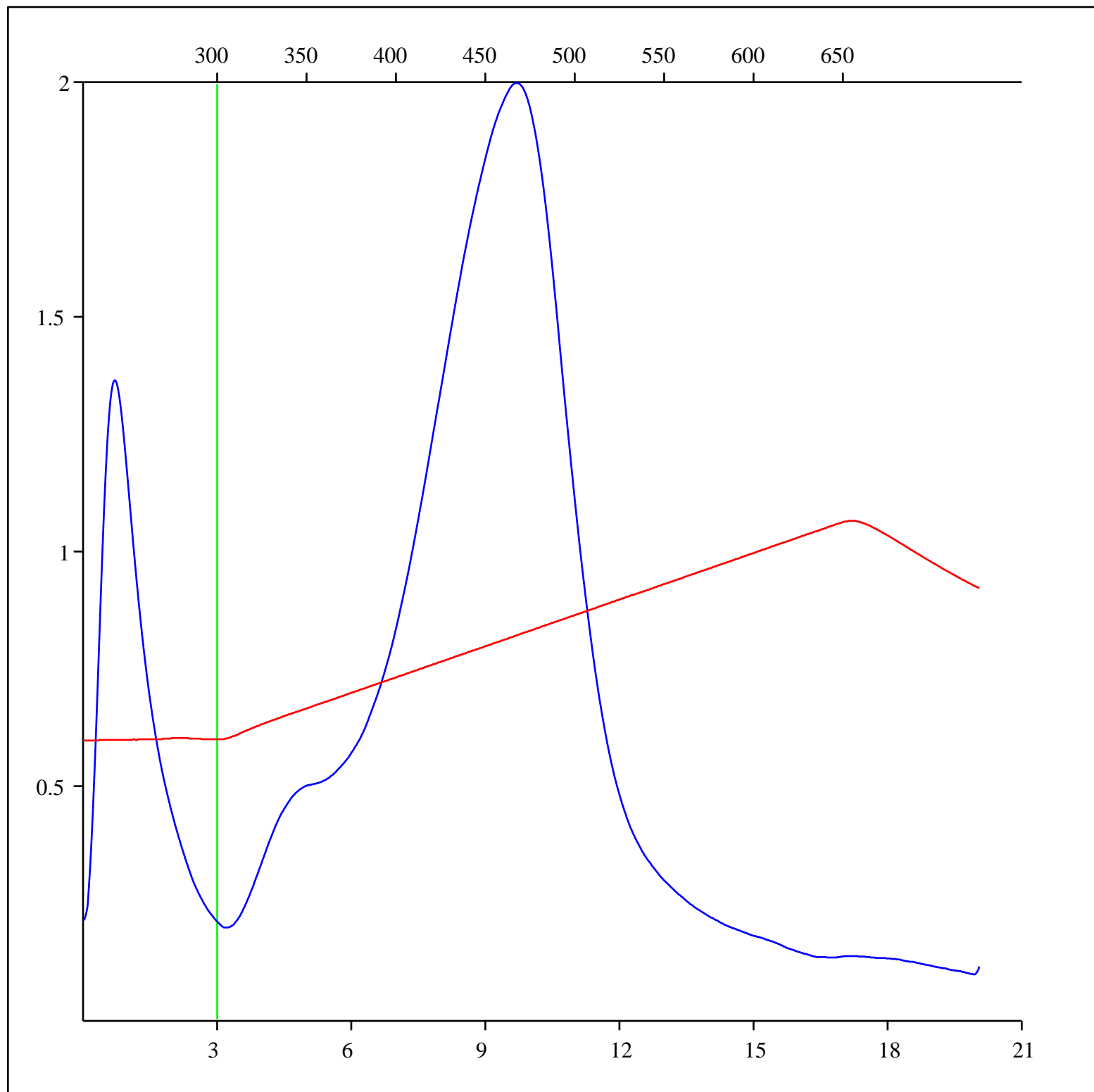
Sample: C-556179  
Acquisition Date: 30-NOV-2012  
Location: PAKTOA C-60  
Depth: 1745 - 1755 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



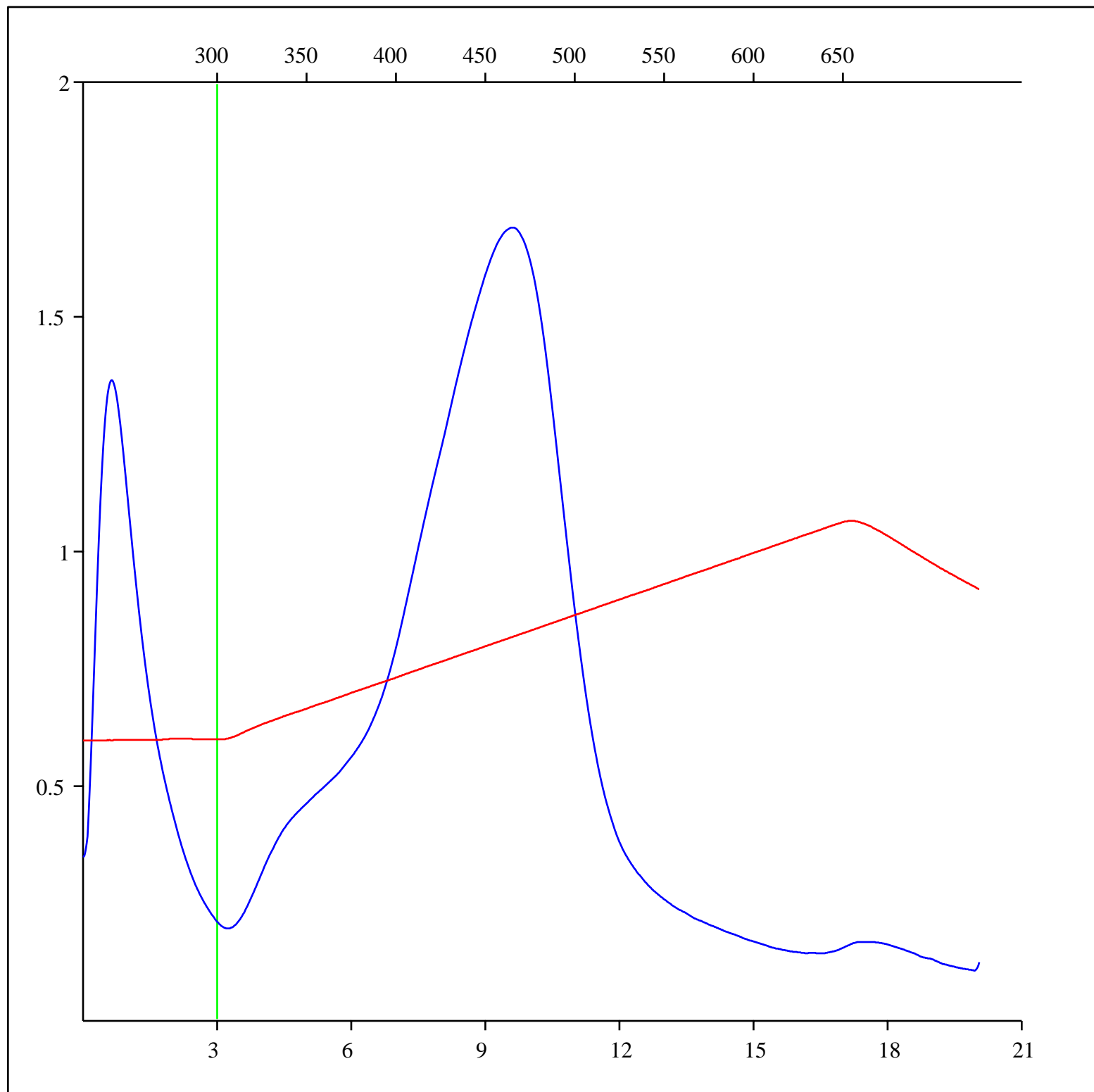
Sample: C-556180  
Acquisition Date: 30-NOV-2012  
Location: PAKTOA C-60  
Depth: 1755 - 1765 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



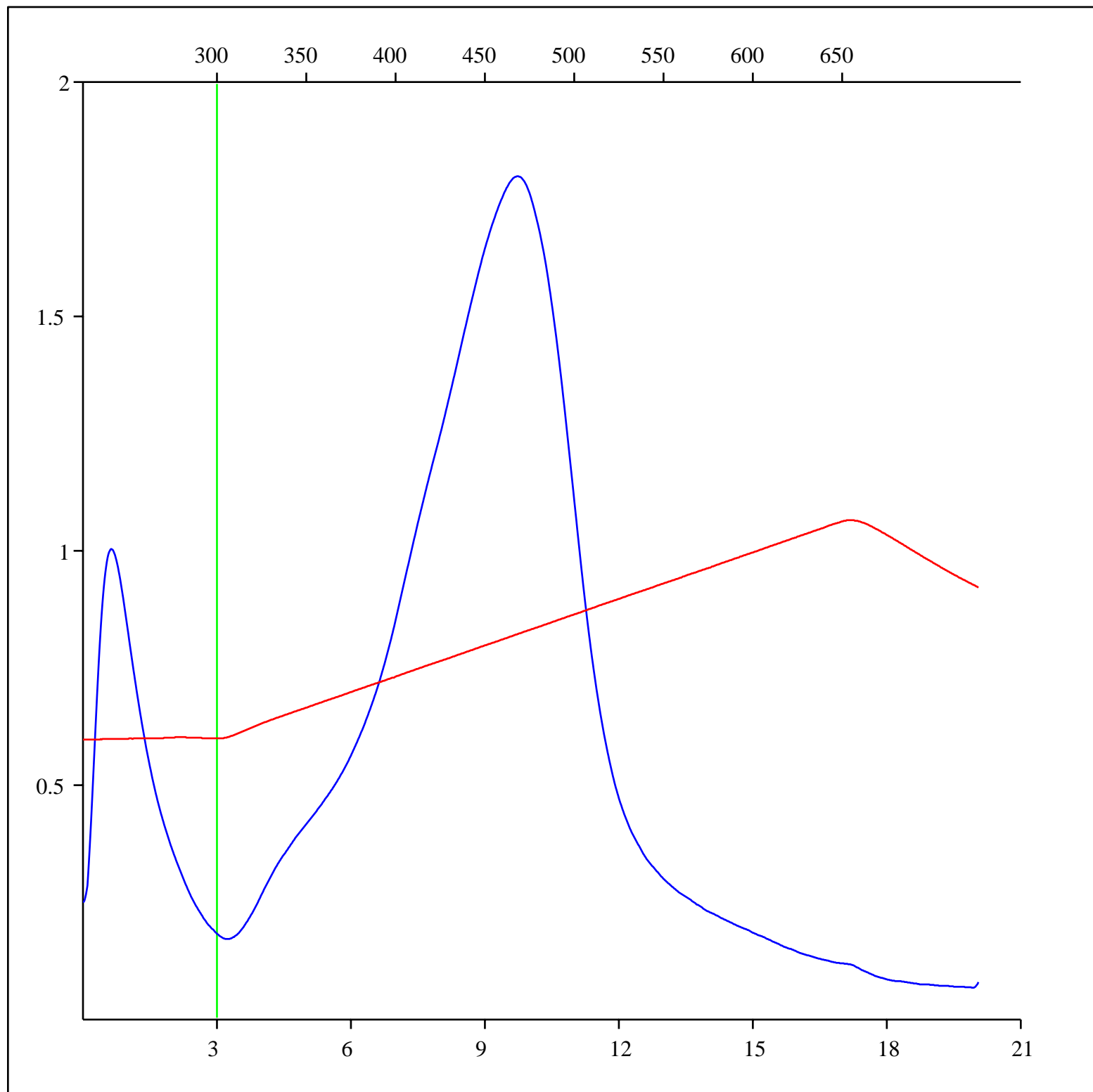
Sample: C-556181  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1765 - 1775 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



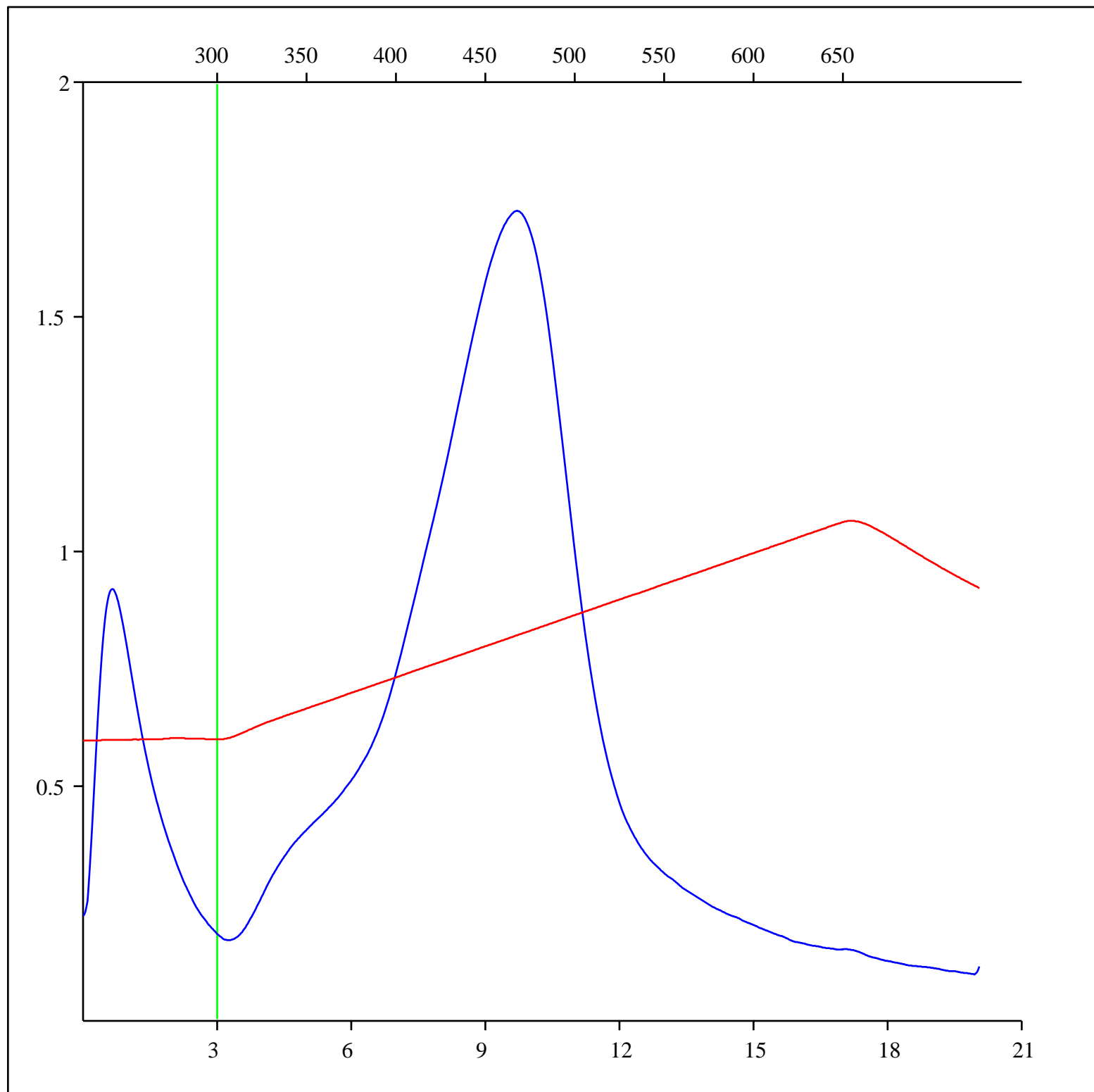
Sample: C-556182  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1775 - 1785 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556183  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1785 - 1795 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

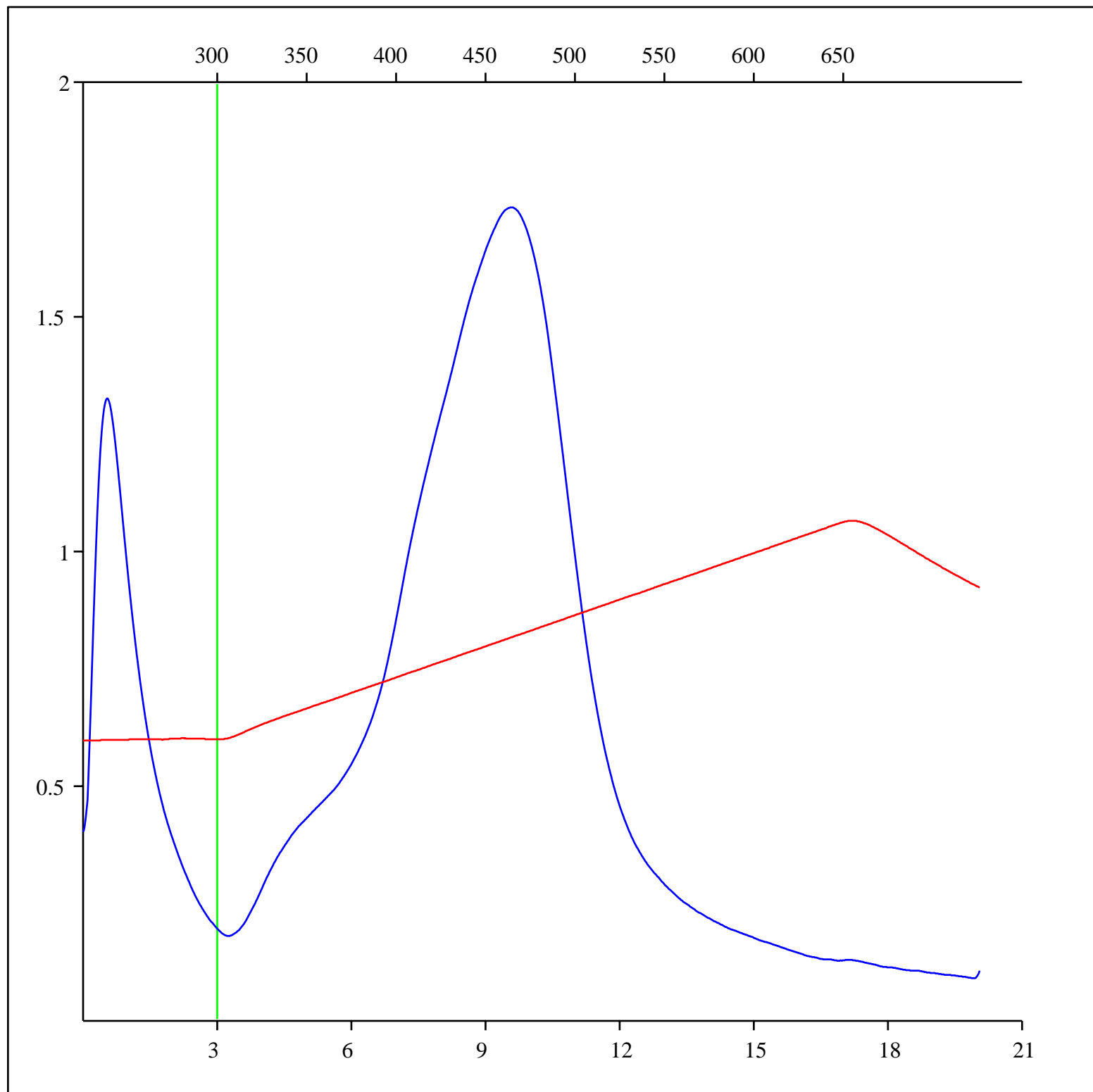
## FID hydrocarbons





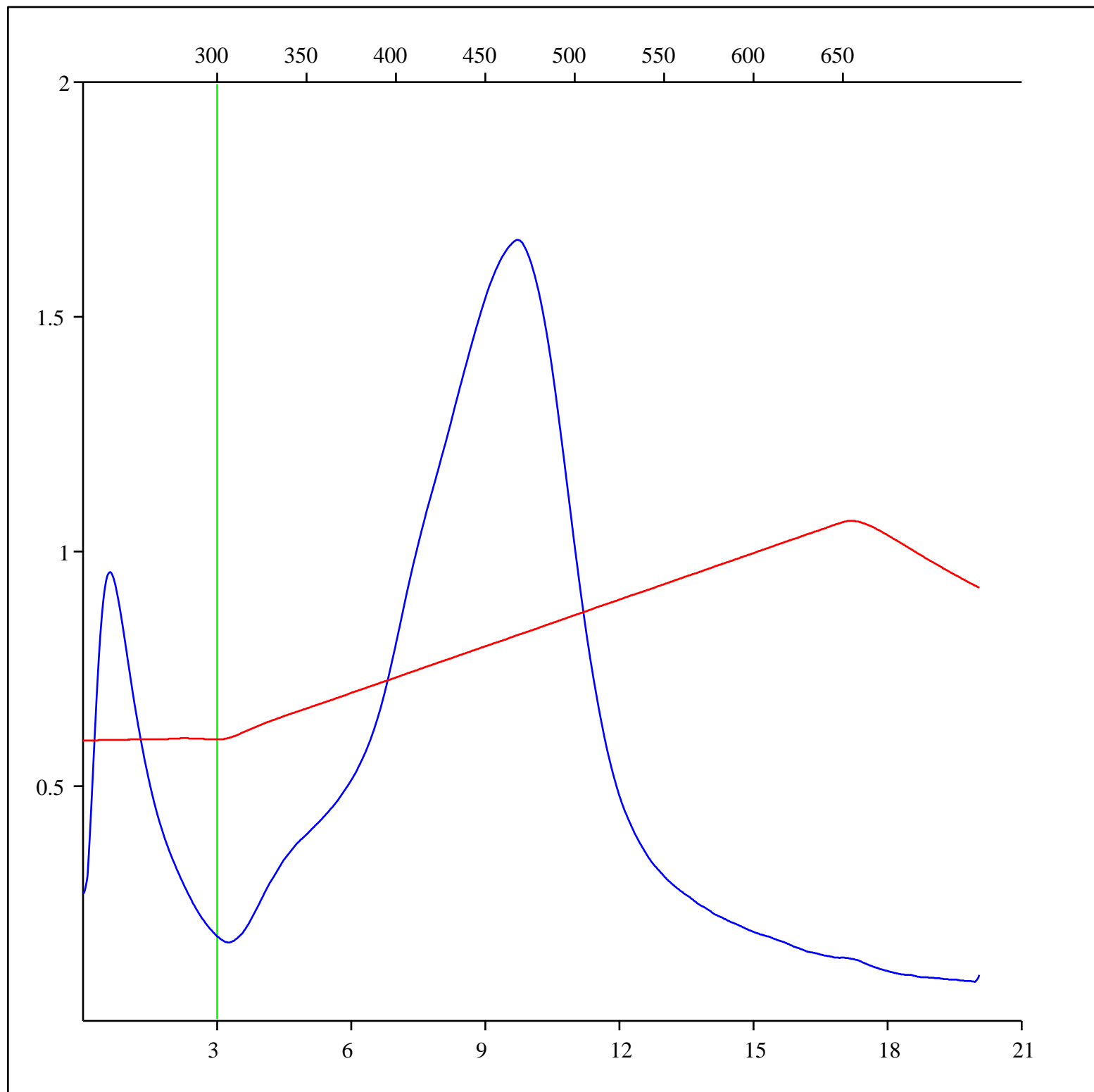
Sample: C-556184  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1795 - 1805 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



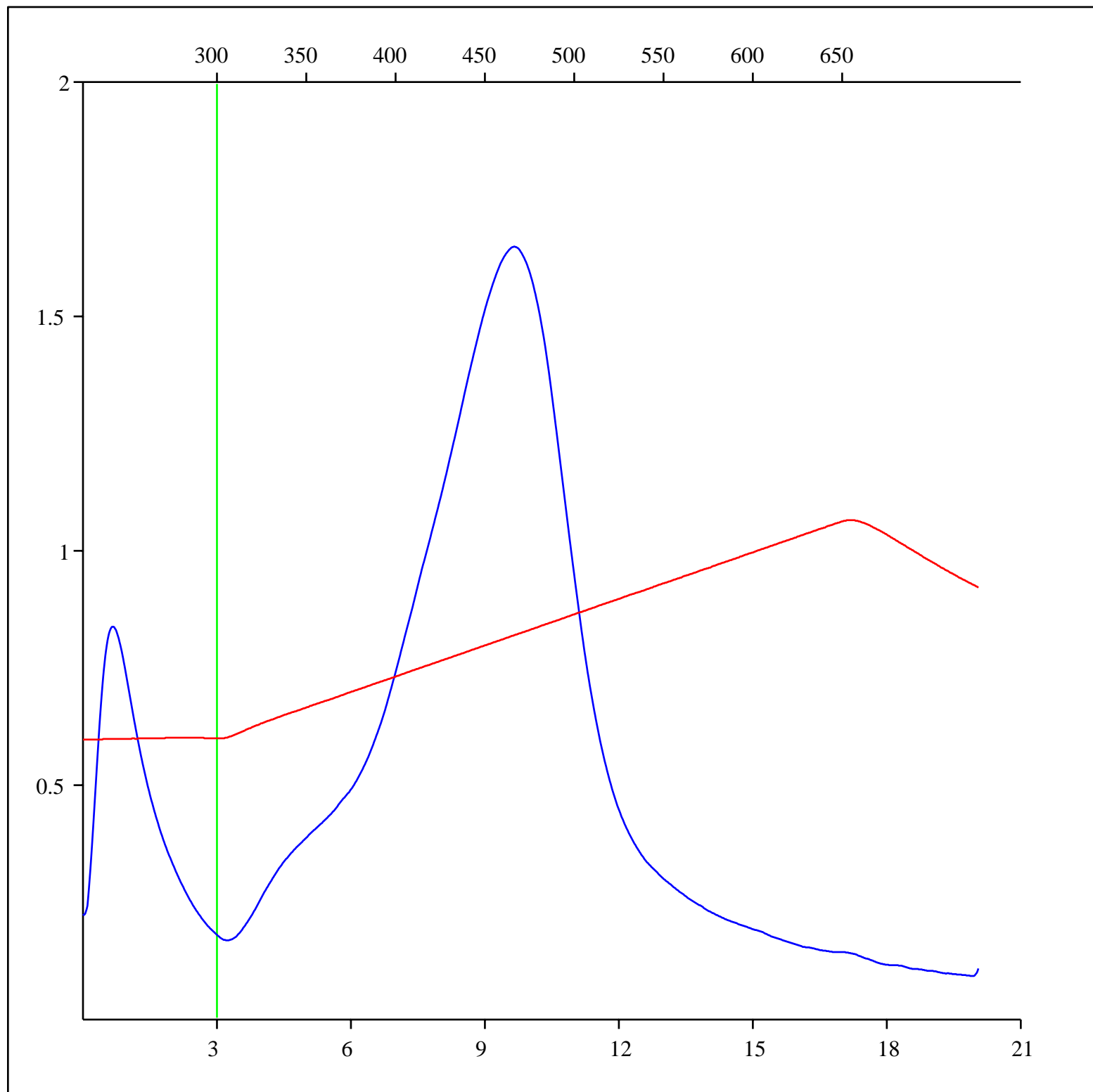
Sample: C-556185  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1795 - 1805 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



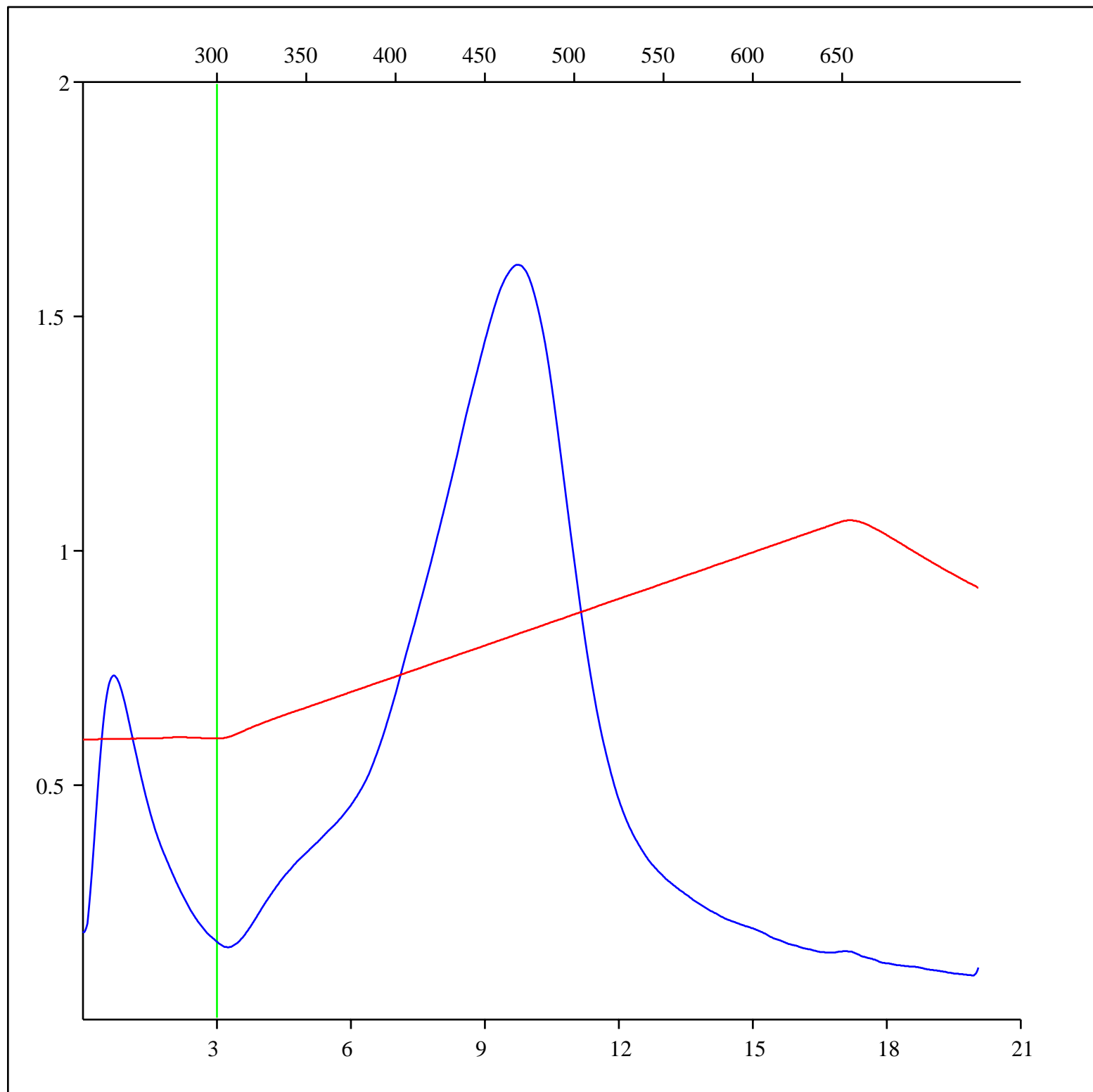
Sample: C-556186  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1815 - 1825 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



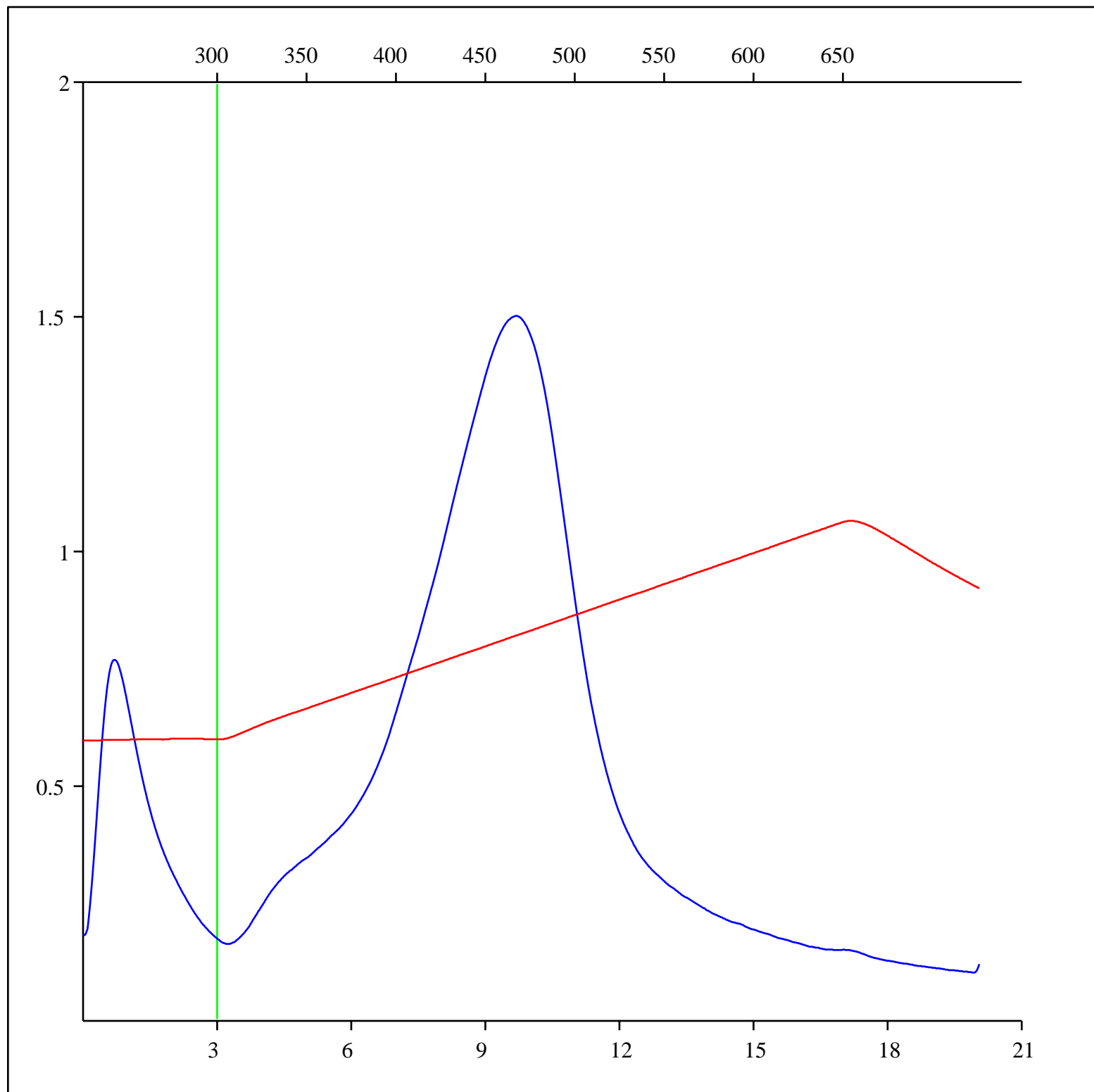
Sample: C-556187  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1825 - 1835 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



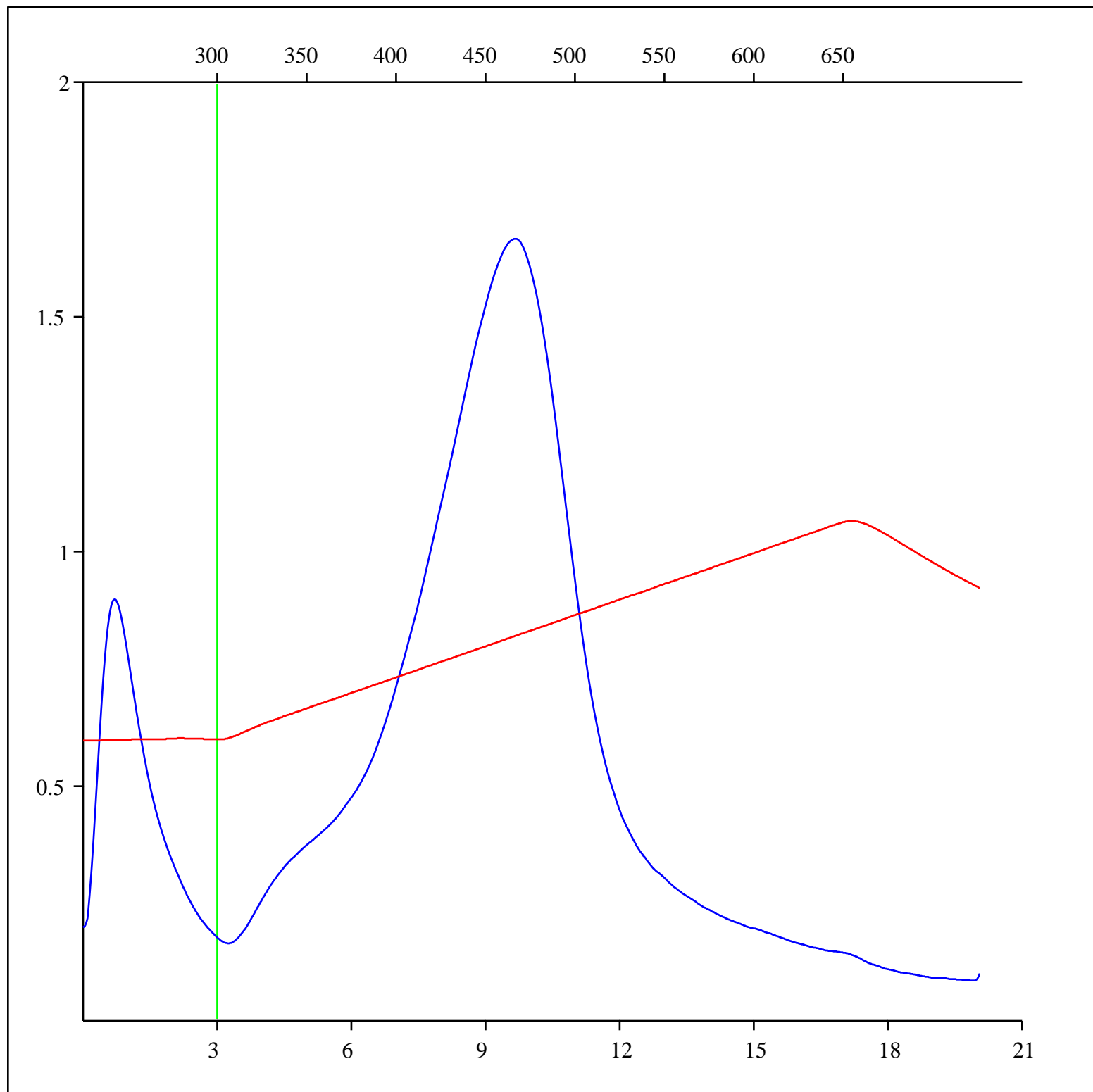
Sample: C-556188  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1835 - 1845 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



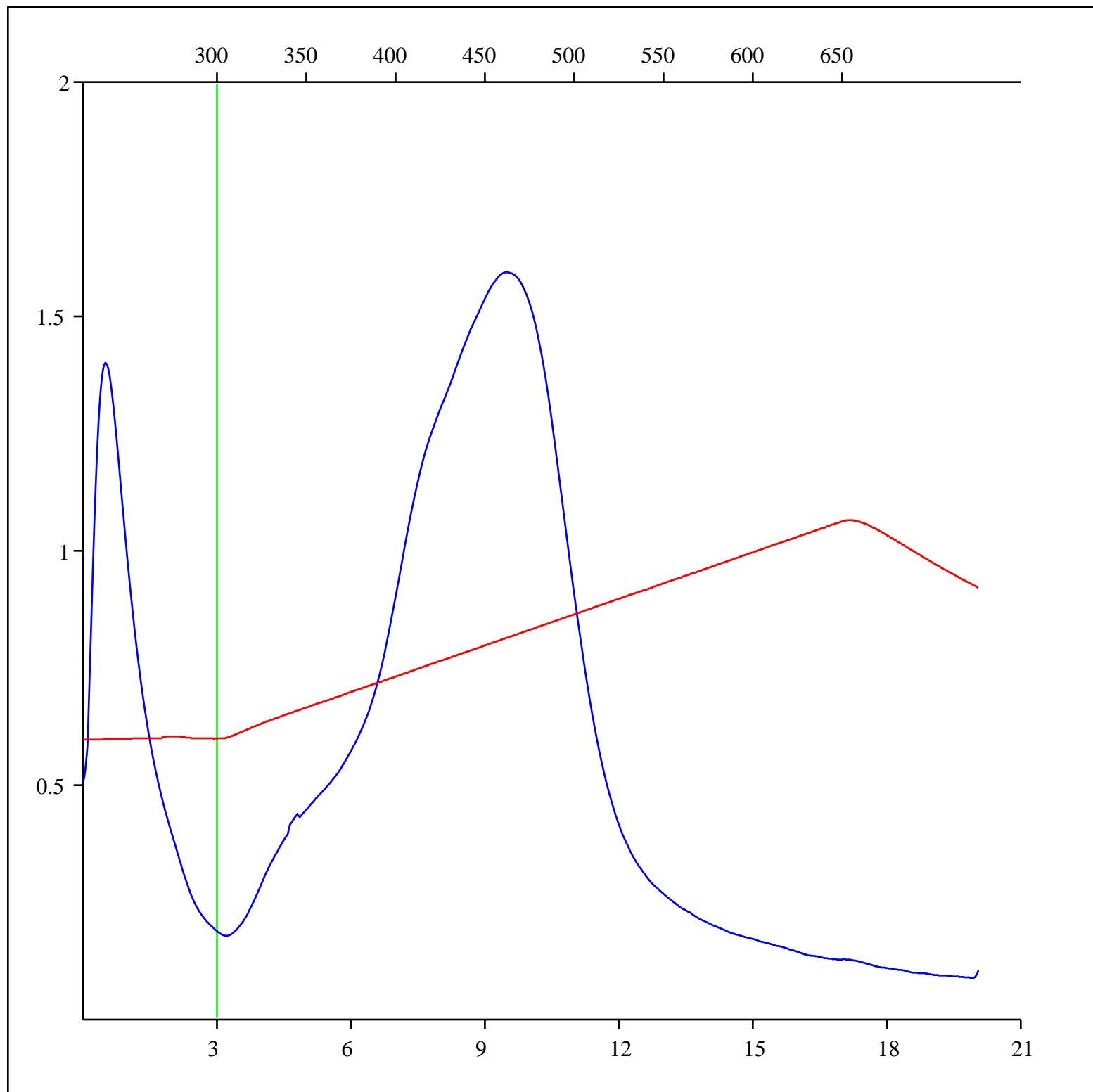
Sample: C-556189  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1845 - 1855 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



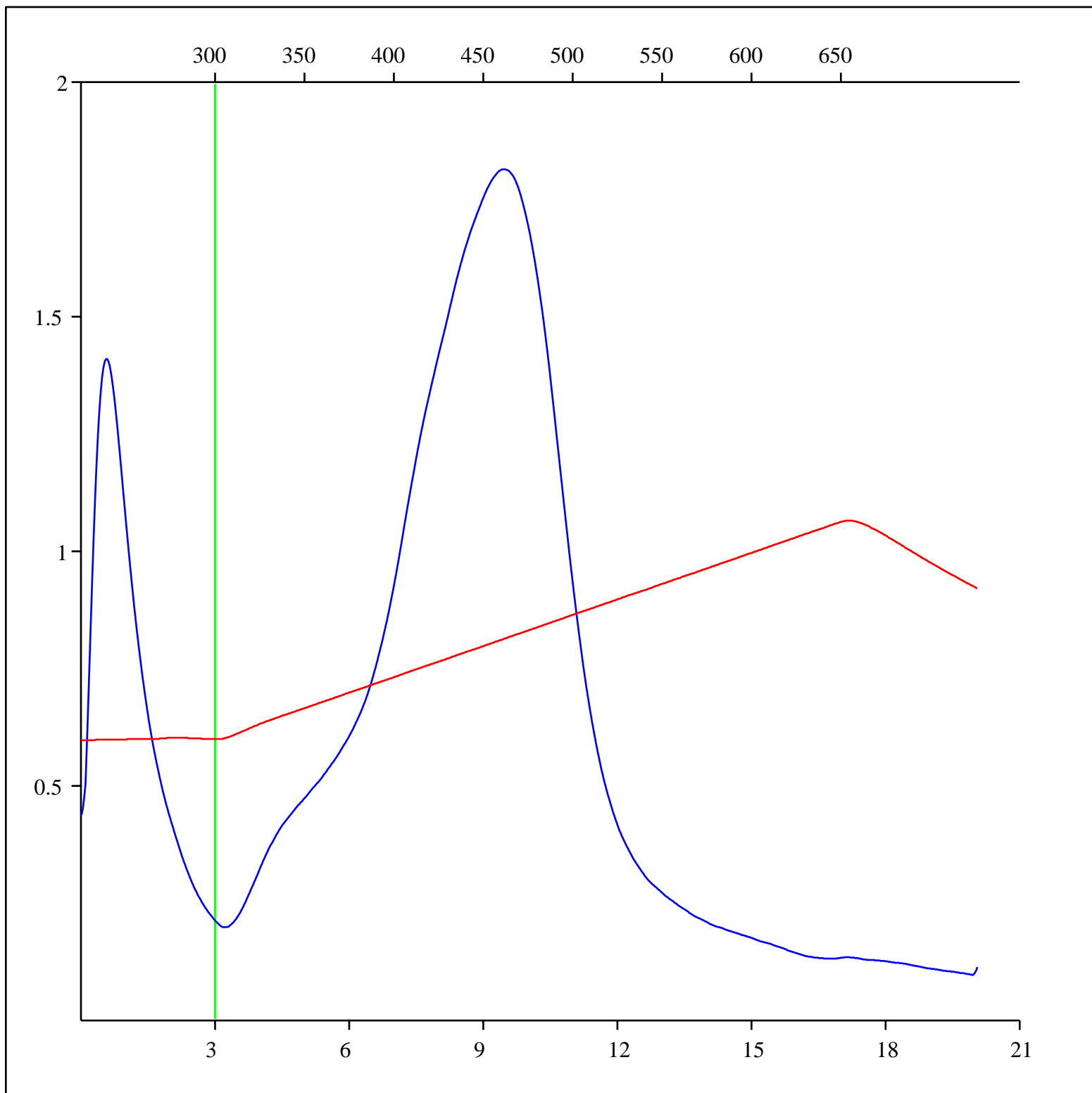
Sample: C-556190  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1855 - 1865 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556191  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1865 - 1875 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

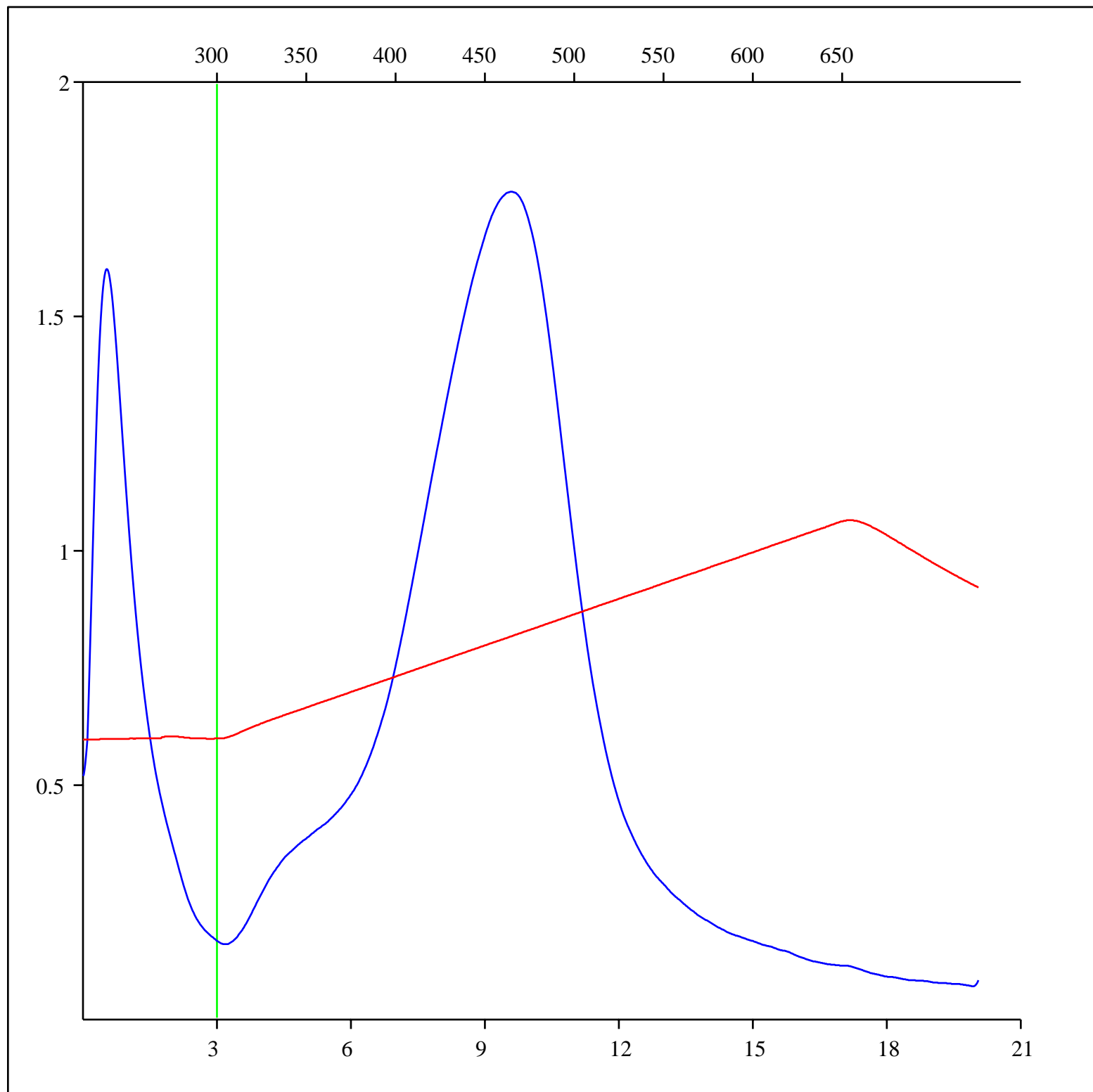
## FID hydrocarbons





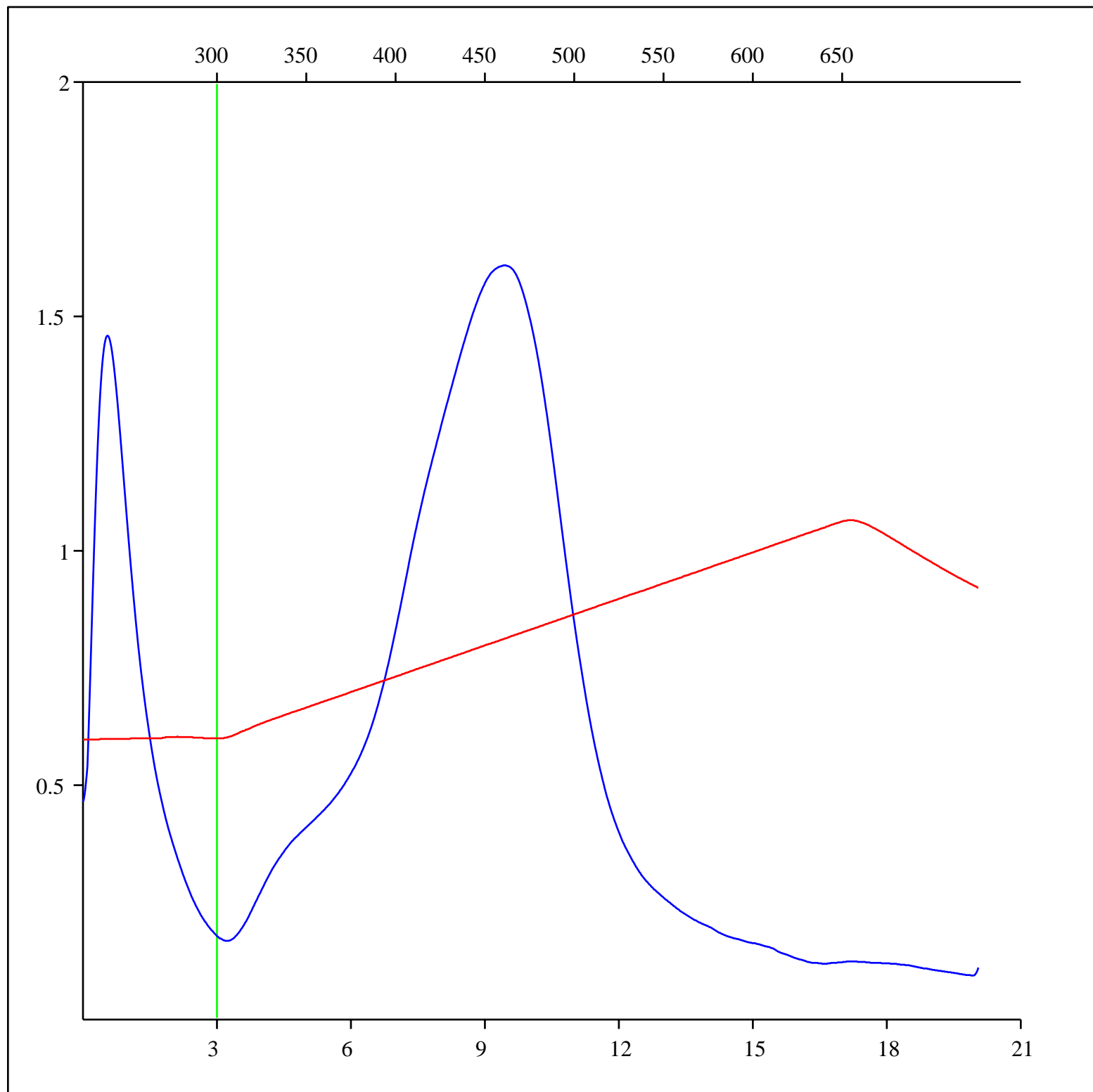
Sample: C-556192  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1875 - 1885 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



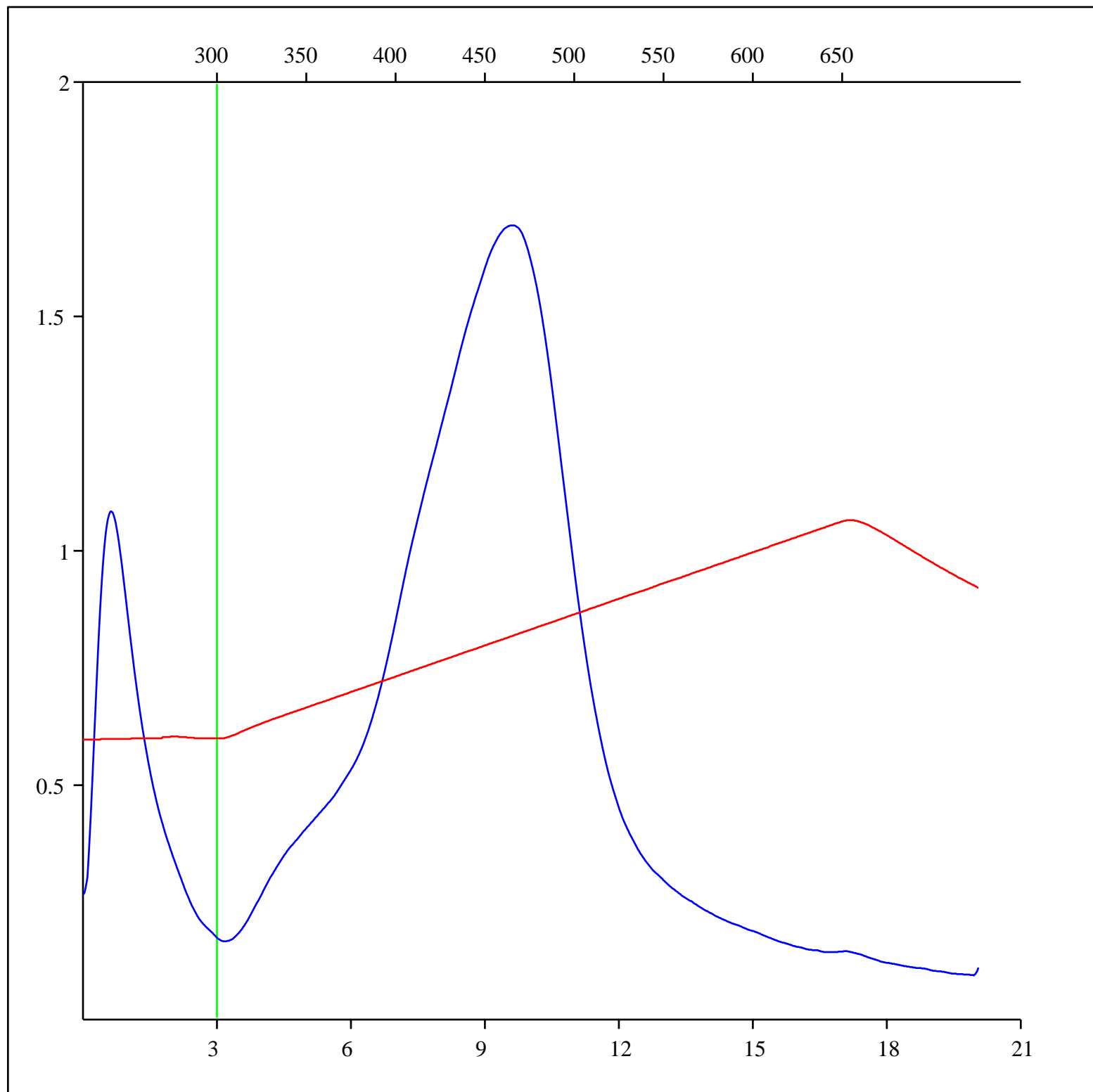
Sample: C-556193  
Acquisition Date: 01-DEC-2012  
Location: PAKTOA C-60  
Depth: 1885 - 1895 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



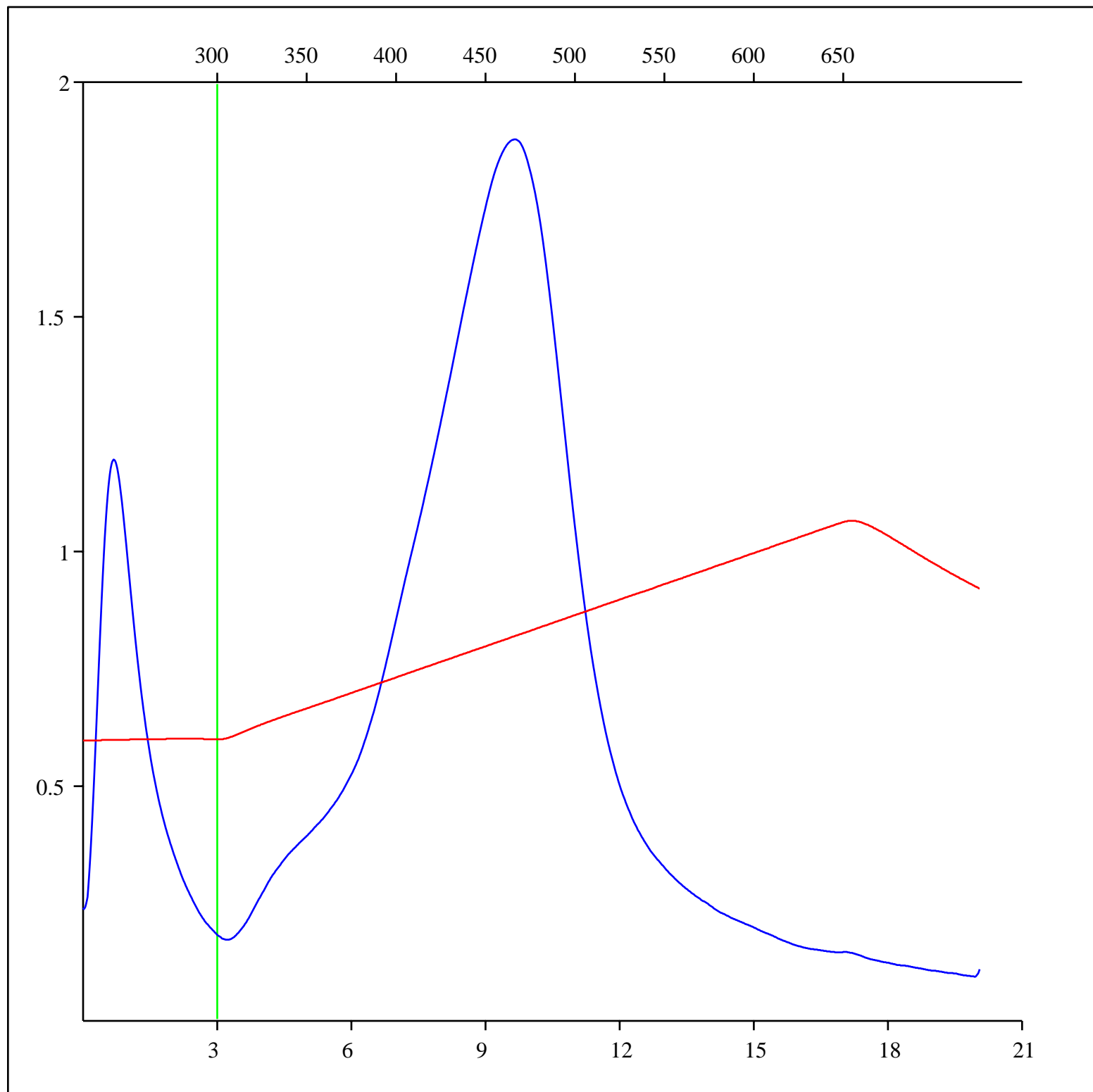
Sample: C-556194  
Acquisition Date: 02-DEC-2012  
Location: PAKTOA C-60  
Depth: 1895 - 1905 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



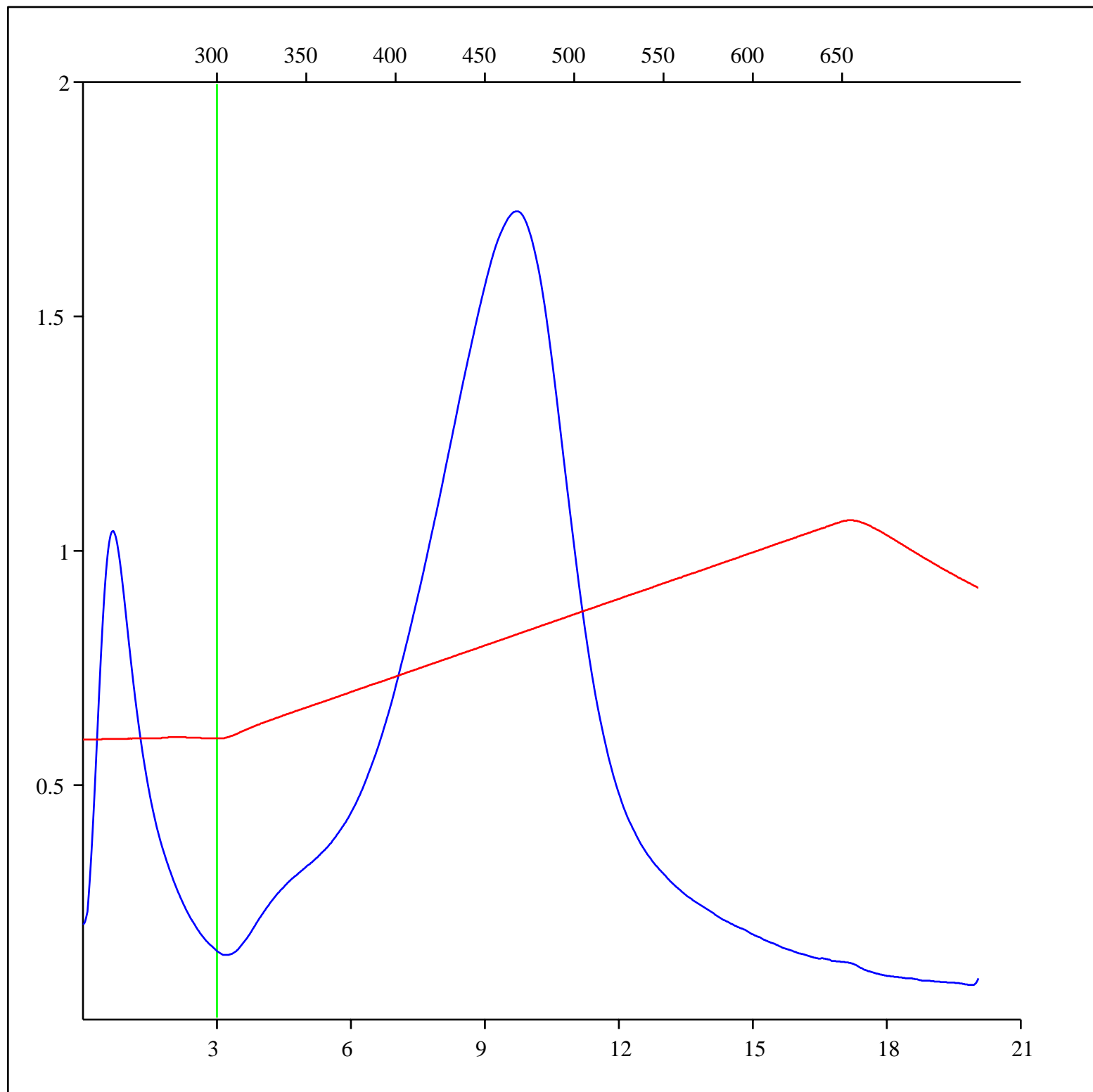
Sample: C-556195  
Acquisition Date: 02-DEC-2012  
Location: PAKTOA C-60  
Depth: 1905 - 1915 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



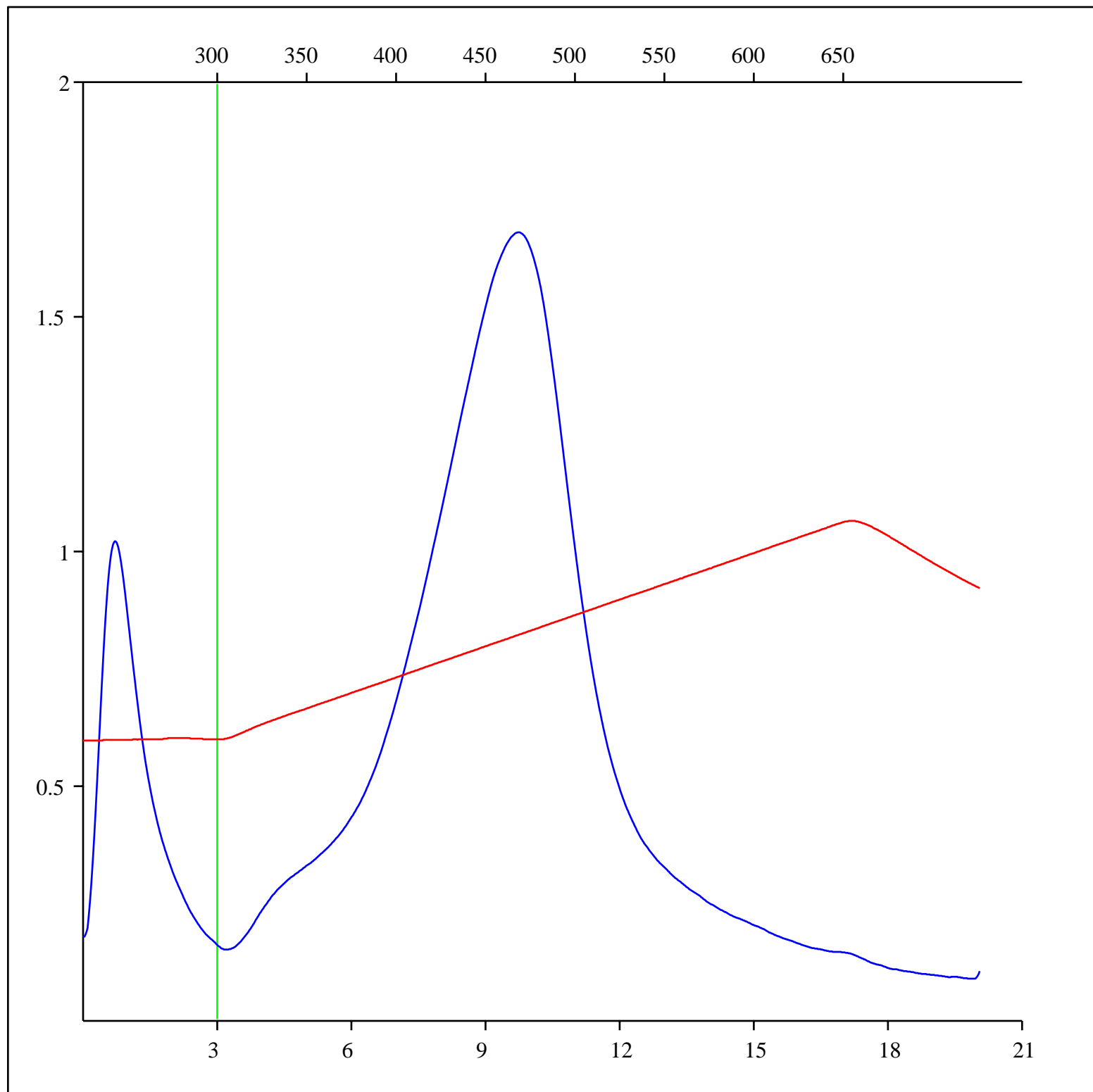
Sample: C-556196  
Acquisition Date: 02-DEC-2012  
Location: PAKTOA C-60  
Depth: 1915 - 1925 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



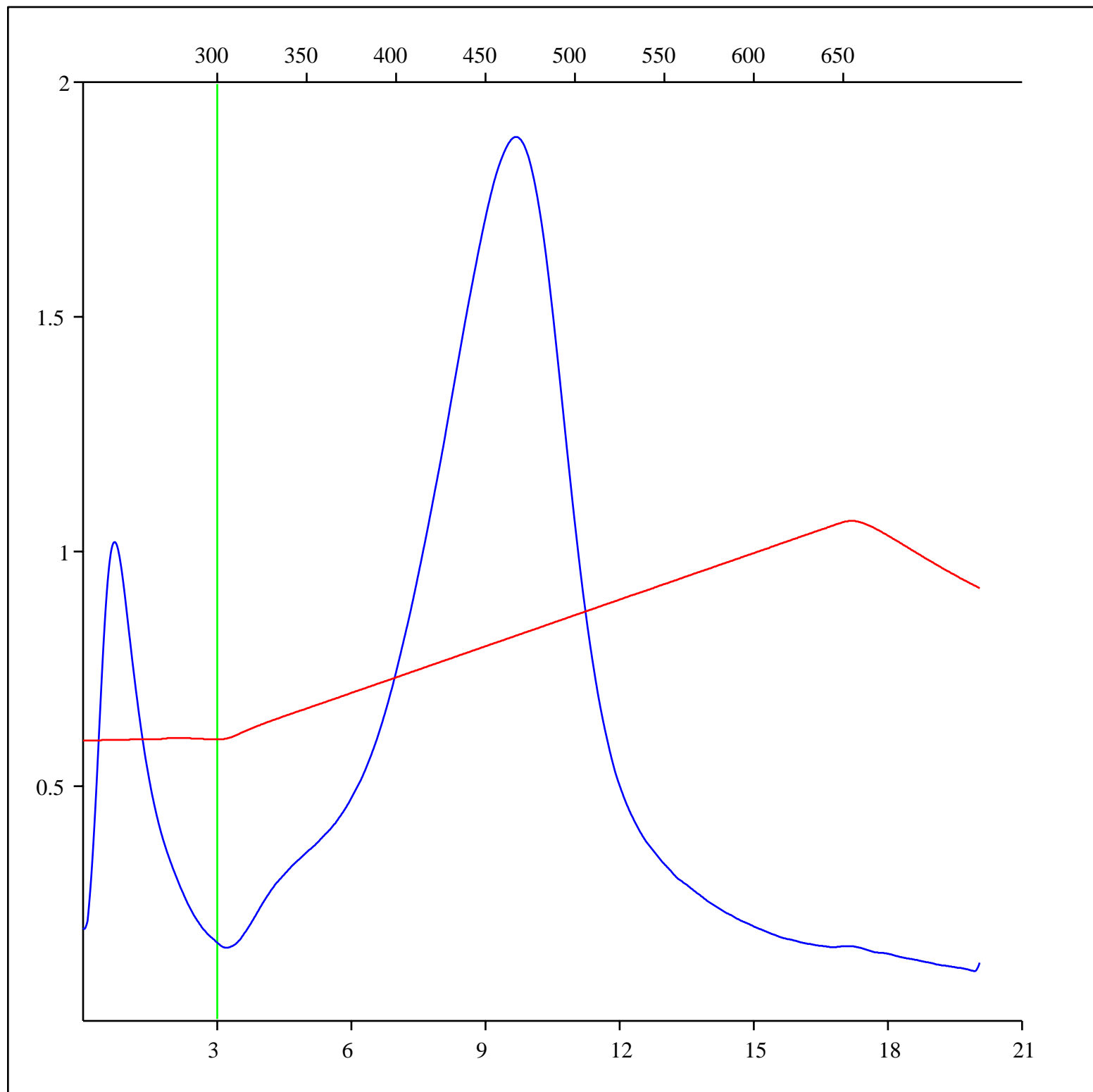
Sample: C-556197  
Acquisition Date: 02-DEC-2012  
Location: PAKTOA C-60  
Depth: 1920 - 1925 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



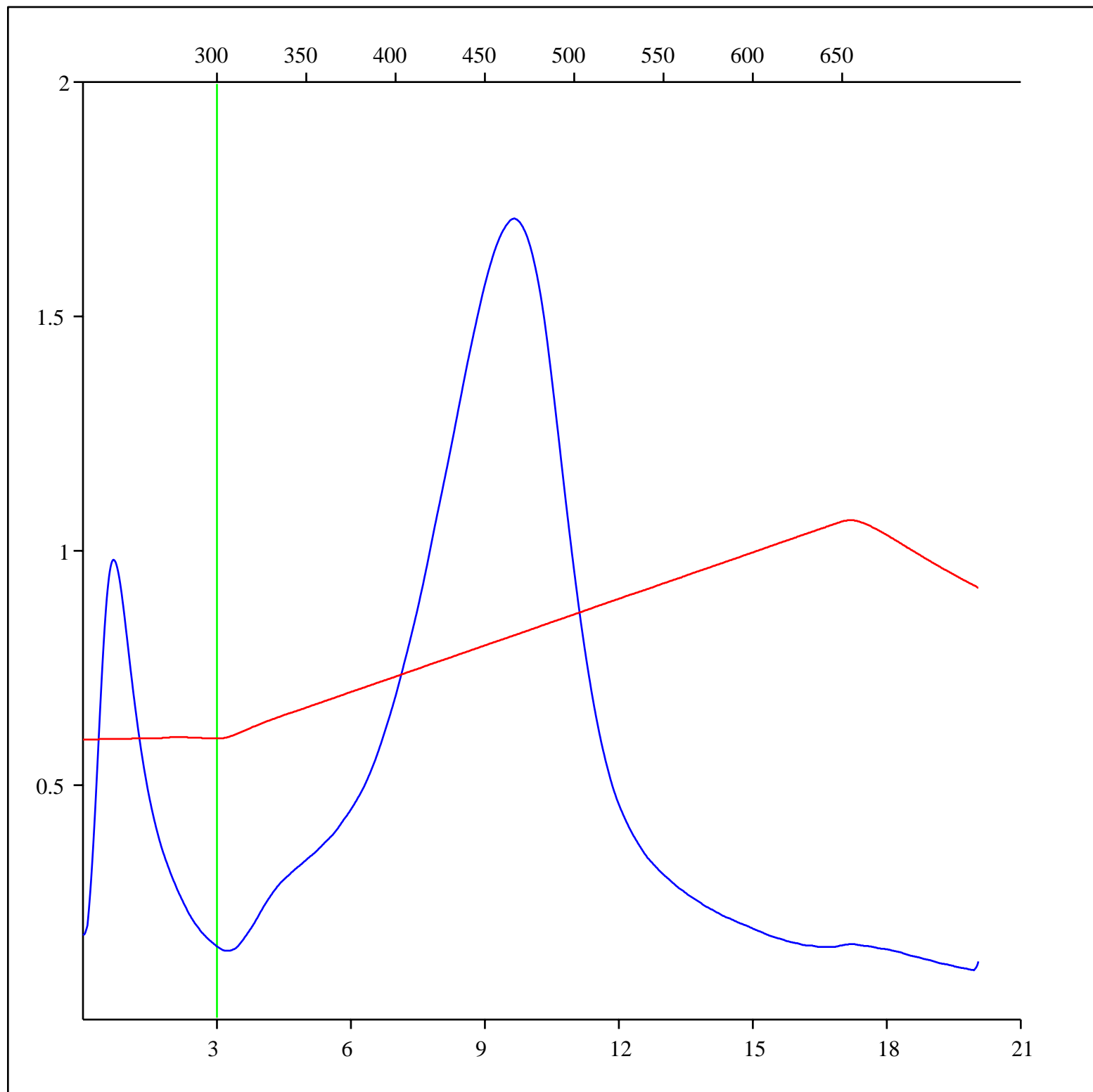
Sample: C-556198  
Acquisition Date: 02-DEC-2012  
Location: PAKTOA C-60  
Depth: 1925 - 1935 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556199  
Acquisition Date: 02-DEC-2012  
Location: PAKTOA C-60  
Depth: 1930 - 1935 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

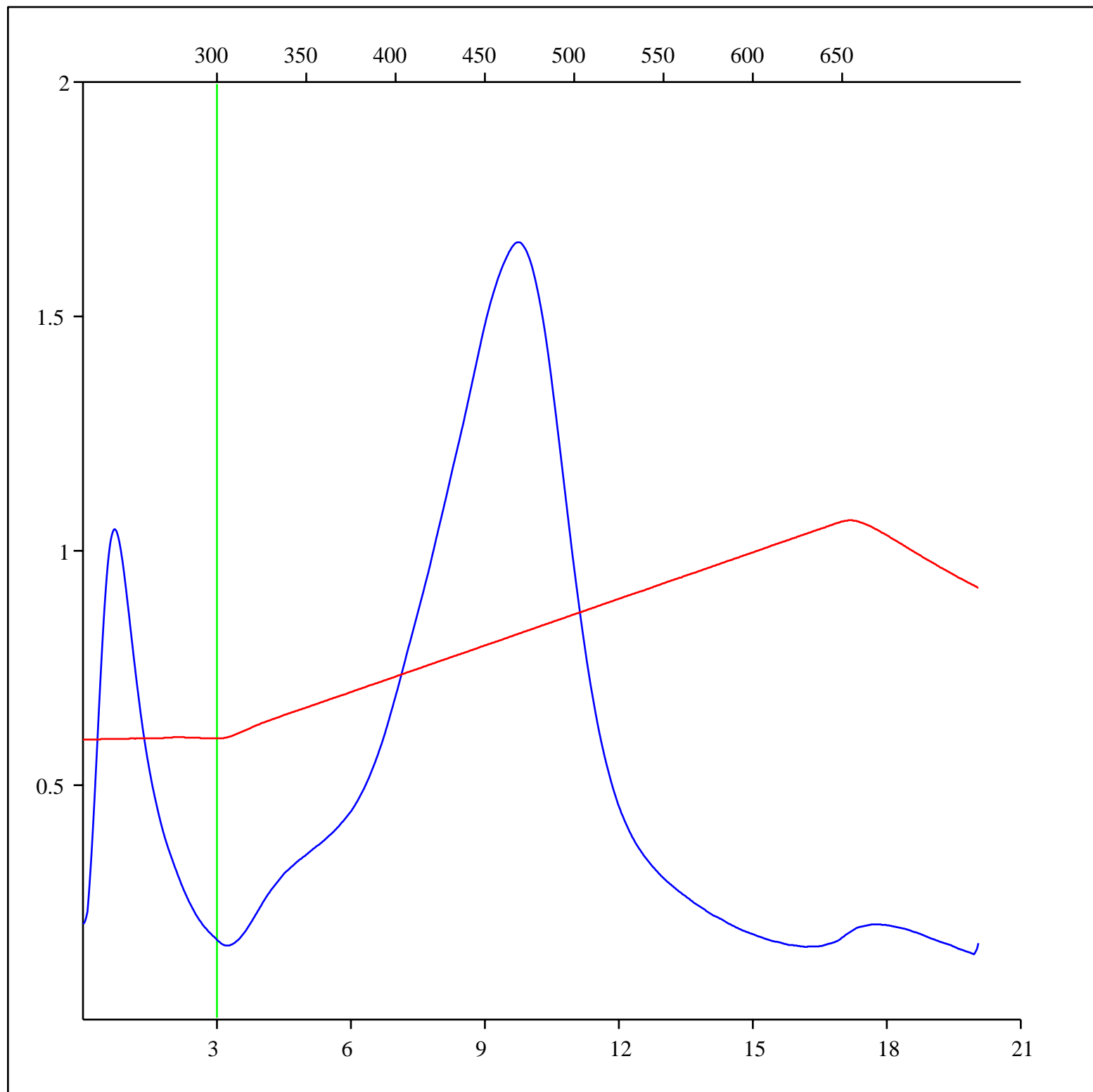
## FID hydrocarbons





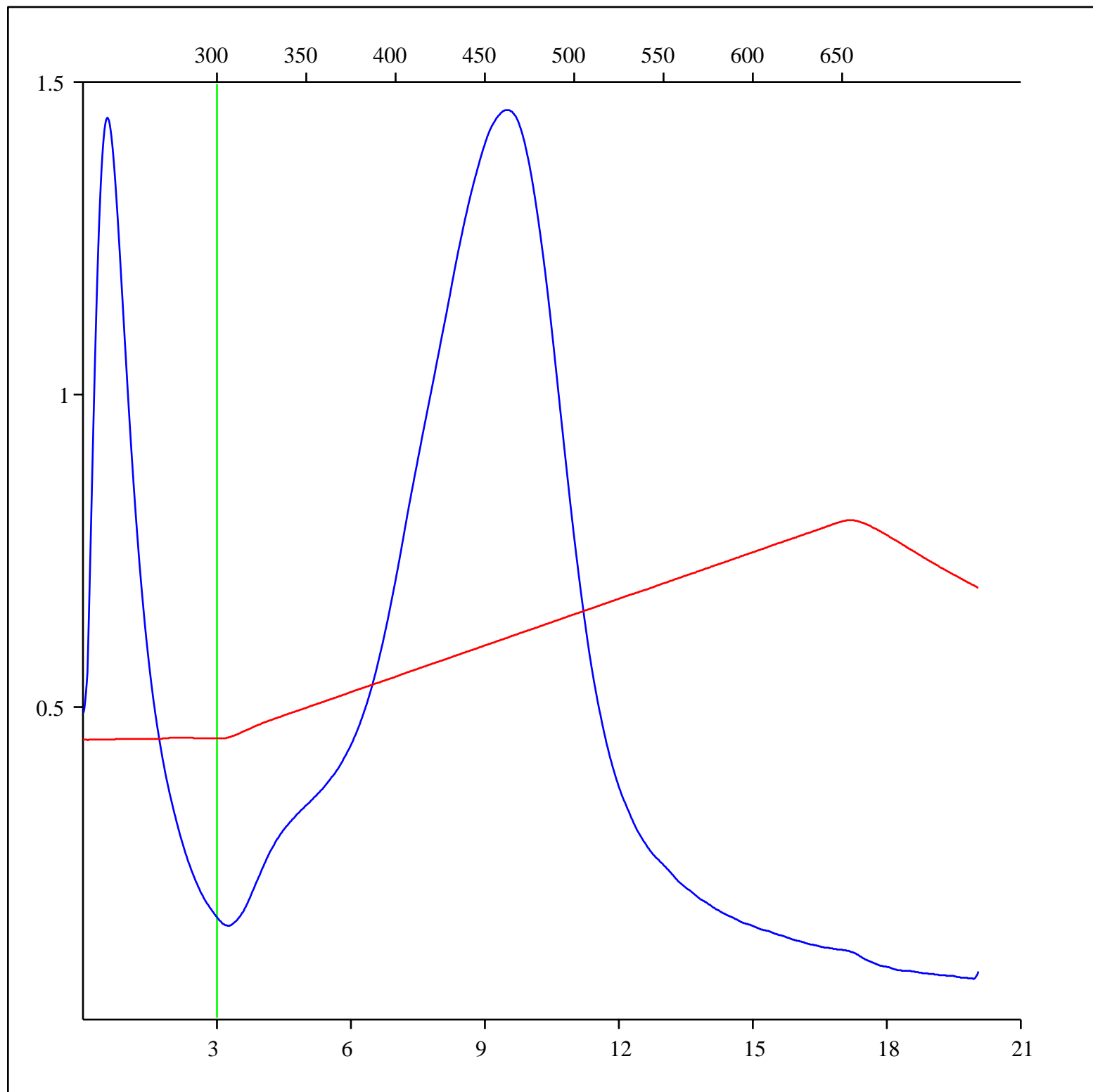
Sample: C-556200  
Acquisition Date: 02-DEC-2012  
Location: PAKTOA C-60  
Depth: 1935 - 1945 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



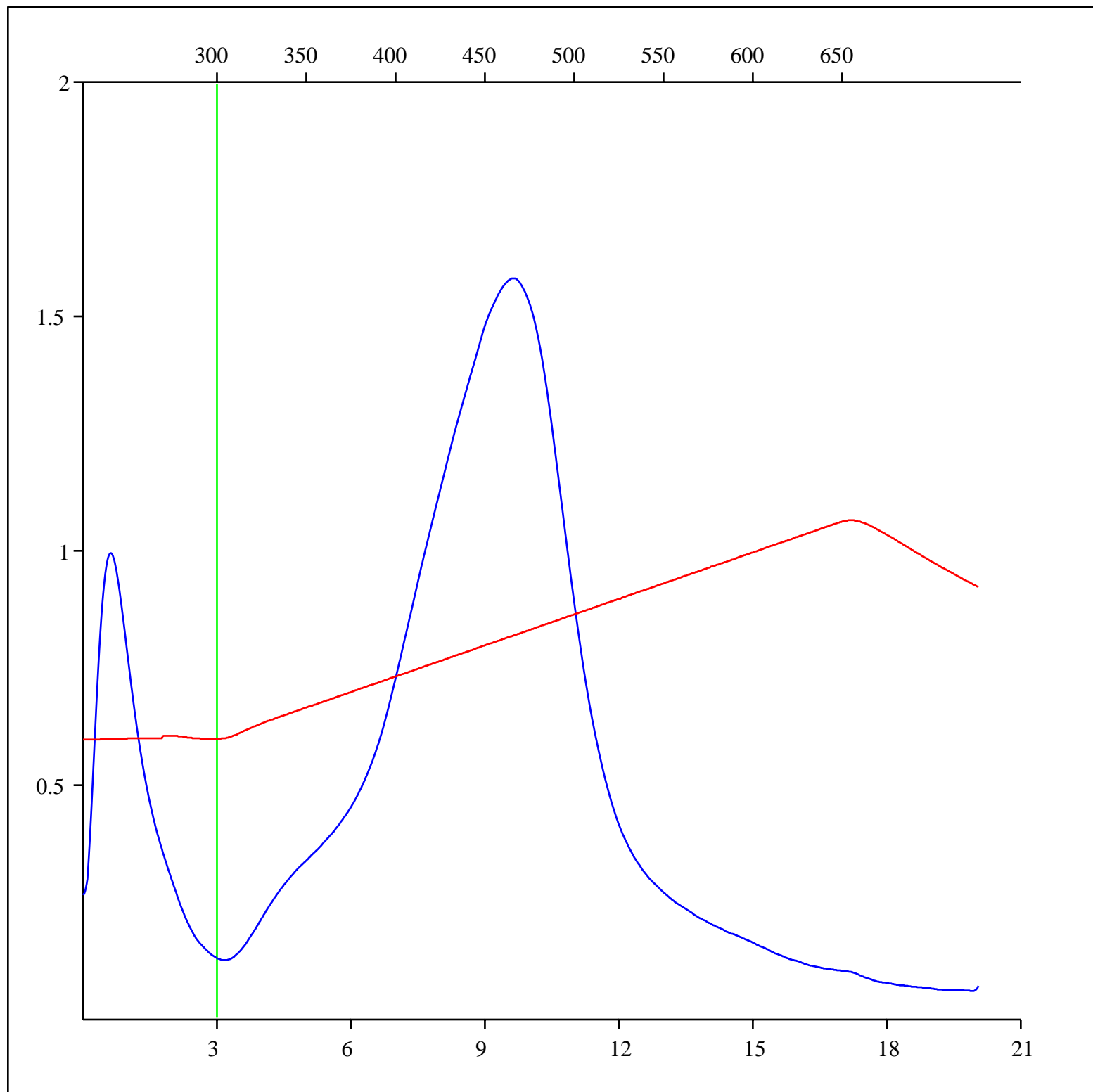
Sample: C-556201  
Acquisition Date: 02-DEC-2012  
Location: PAKTOA C-60  
Depth: 1945 - 1955 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



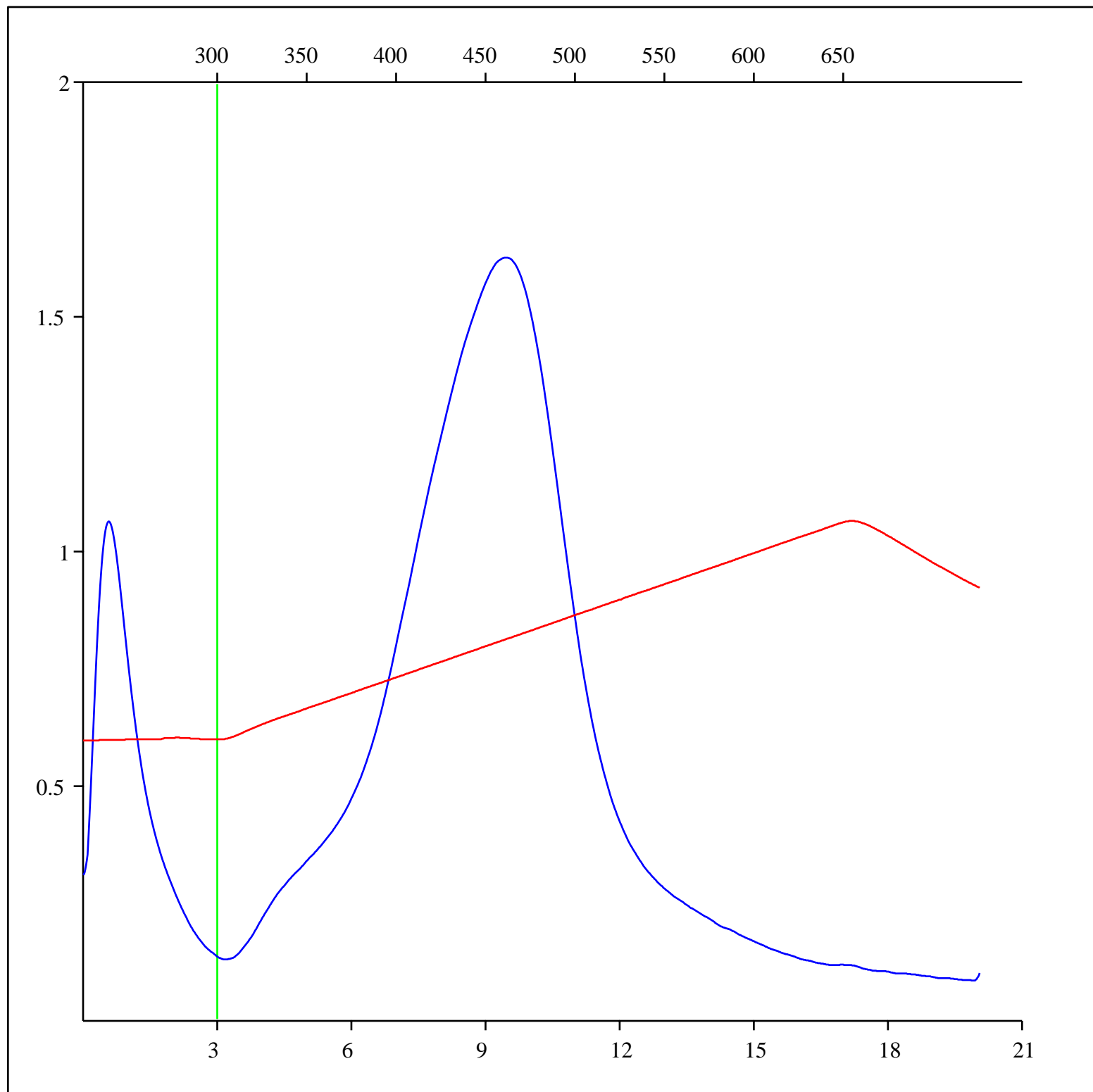
Sample: C-556202  
Acquisition Date: 13-DEC-2012  
Location: PAKTOA C-60  
Depth: 1955 - 1965 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



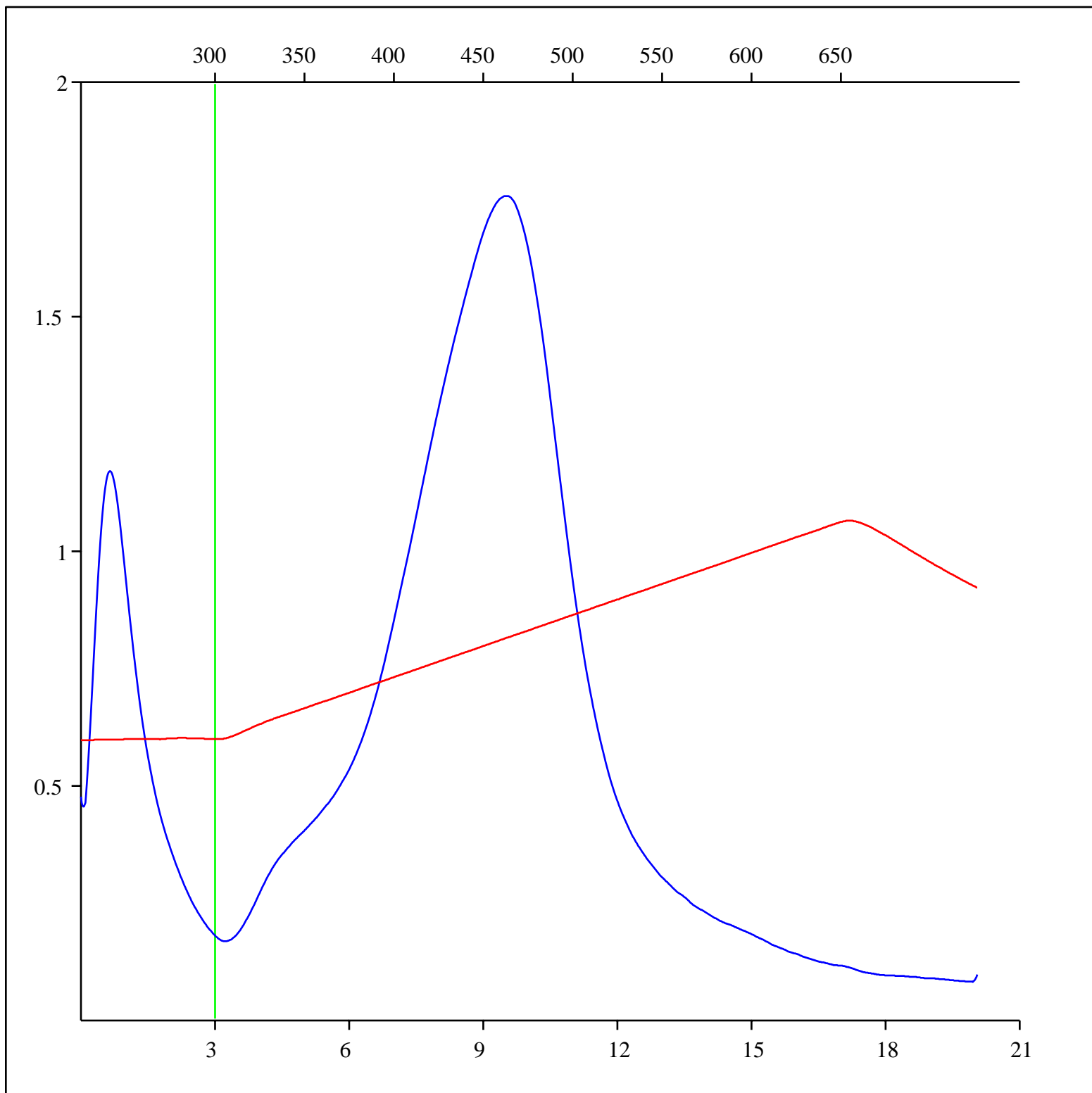
Sample: C-556203  
Acquisition Date: 13-DEC-2012  
Location: PAKTOA C-60  
Depth: 1965 - 1975 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



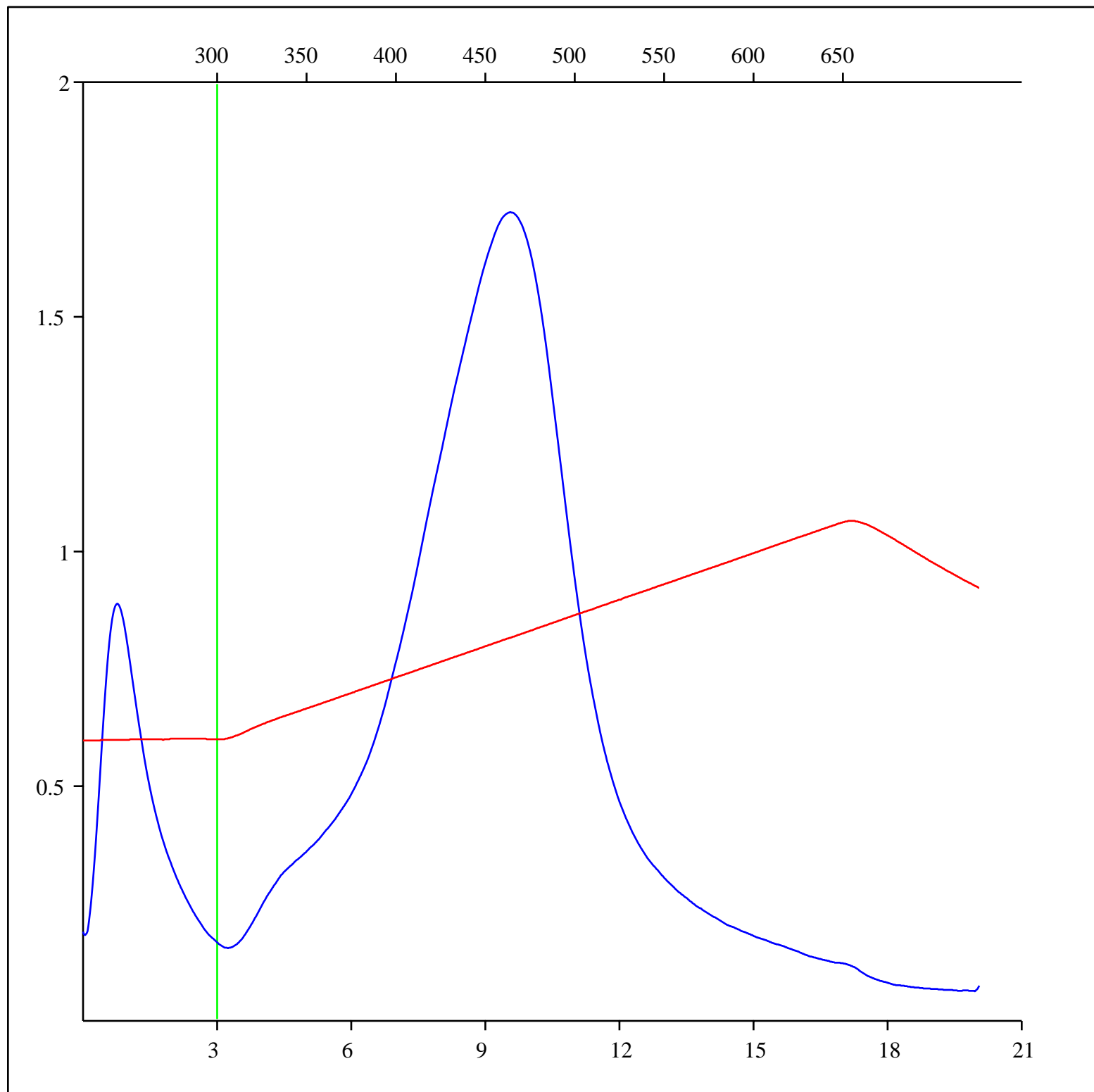
Sample: C-556204  
Acquisition Date: 13-DEC-2012  
Location: PAKTOA C-60  
Depth: 1975 - 1985 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



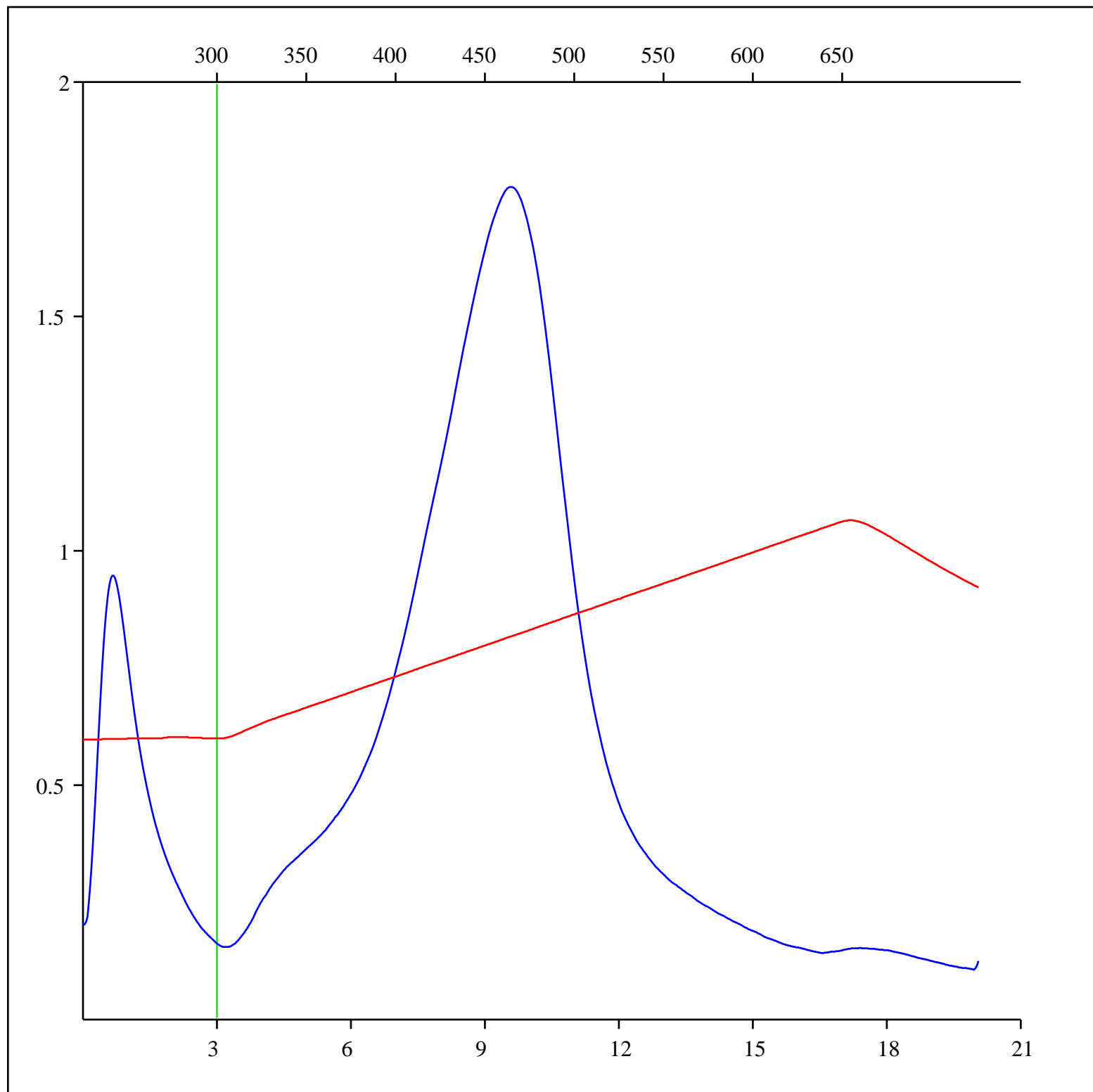
Sample: C-556205  
Acquisition Date: 13-DEC-2012  
Location: PAKTOA C-60  
Depth: 1985 - 1995 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



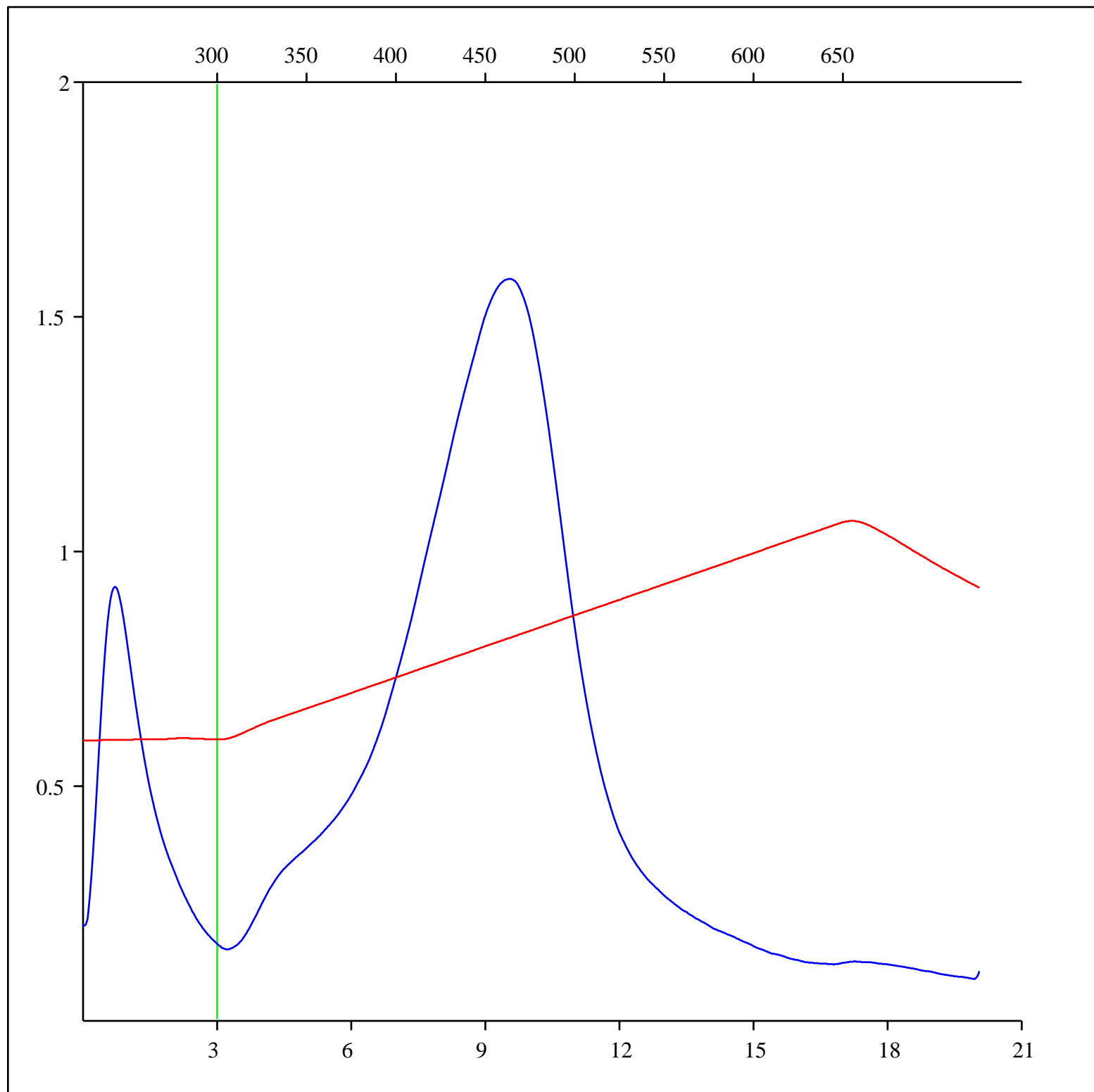
Sample: C-556206  
Acquisition Date: 13-DEC-2012  
Location: PAKTOA C-60  
Depth: 1995 - 2005 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556207  
Acquisition Date: 13-DEC-2012  
Location: PAKTOA C-60  
Depth: 2005 - 2015 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

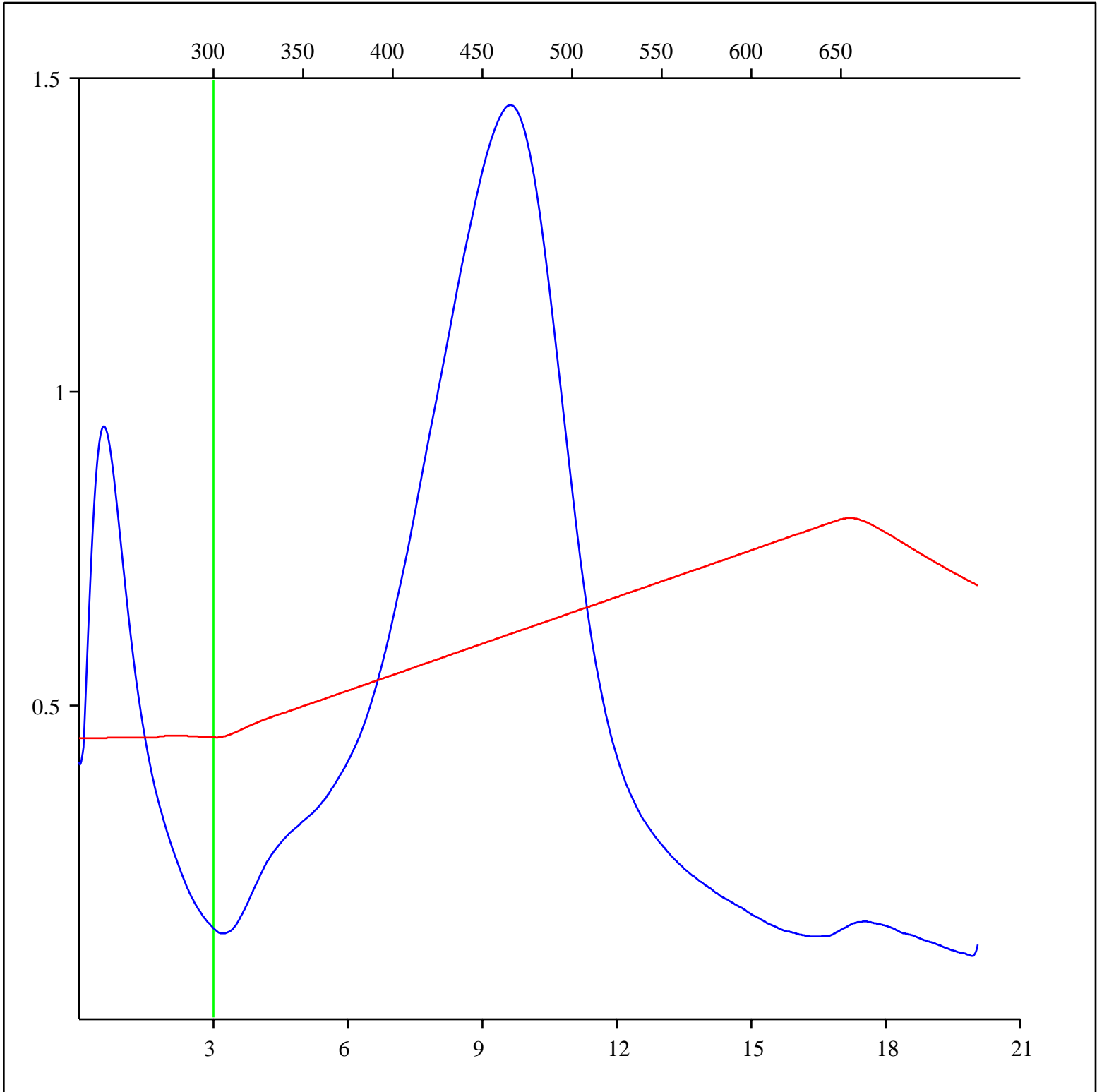
## FID hydrocarbons





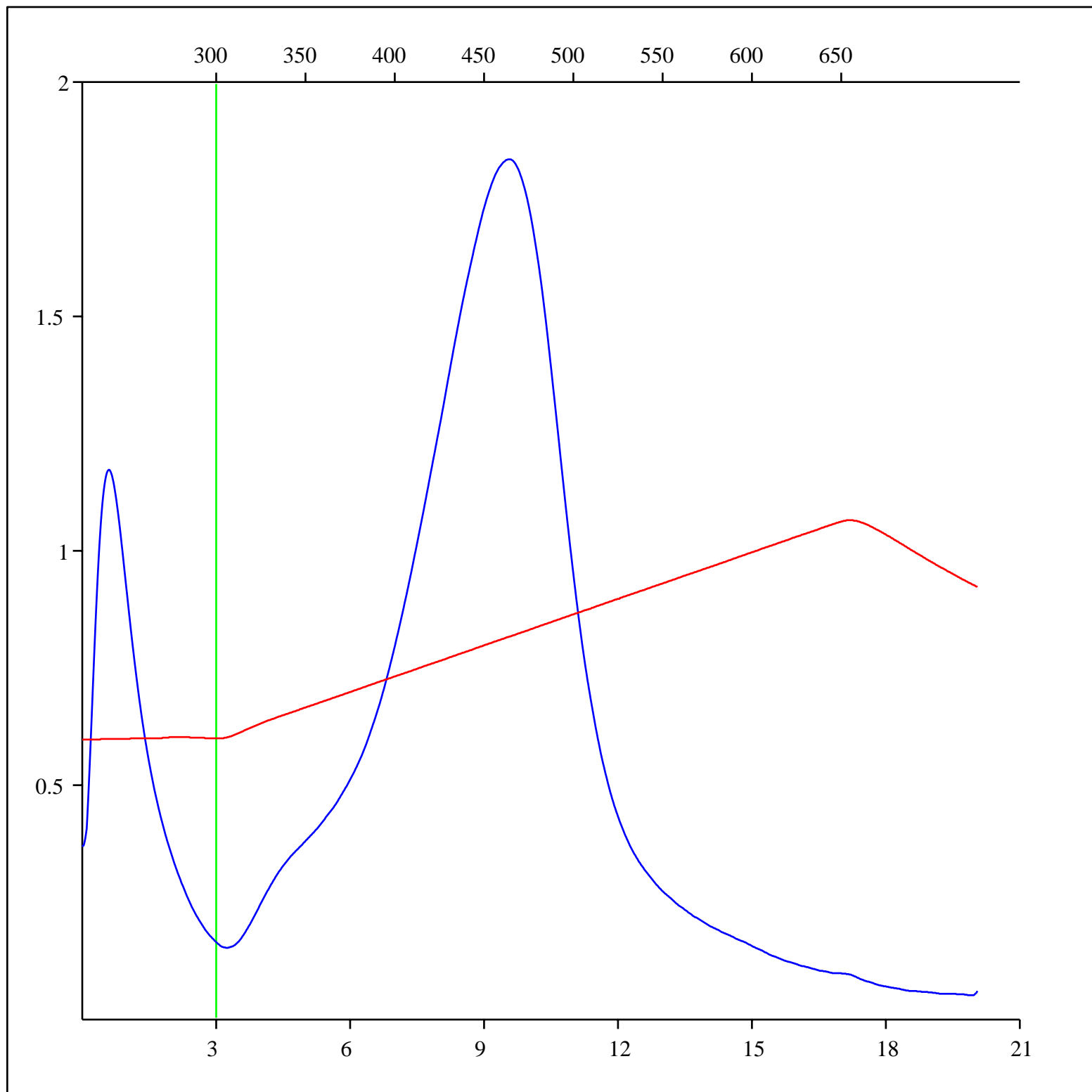
Sample: C-556208  
Acquisition Date: 14-DEC-2012  
Location: PAKTOA C-60  
Depth: 2015 - 2025 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

### FID hydrocarbons



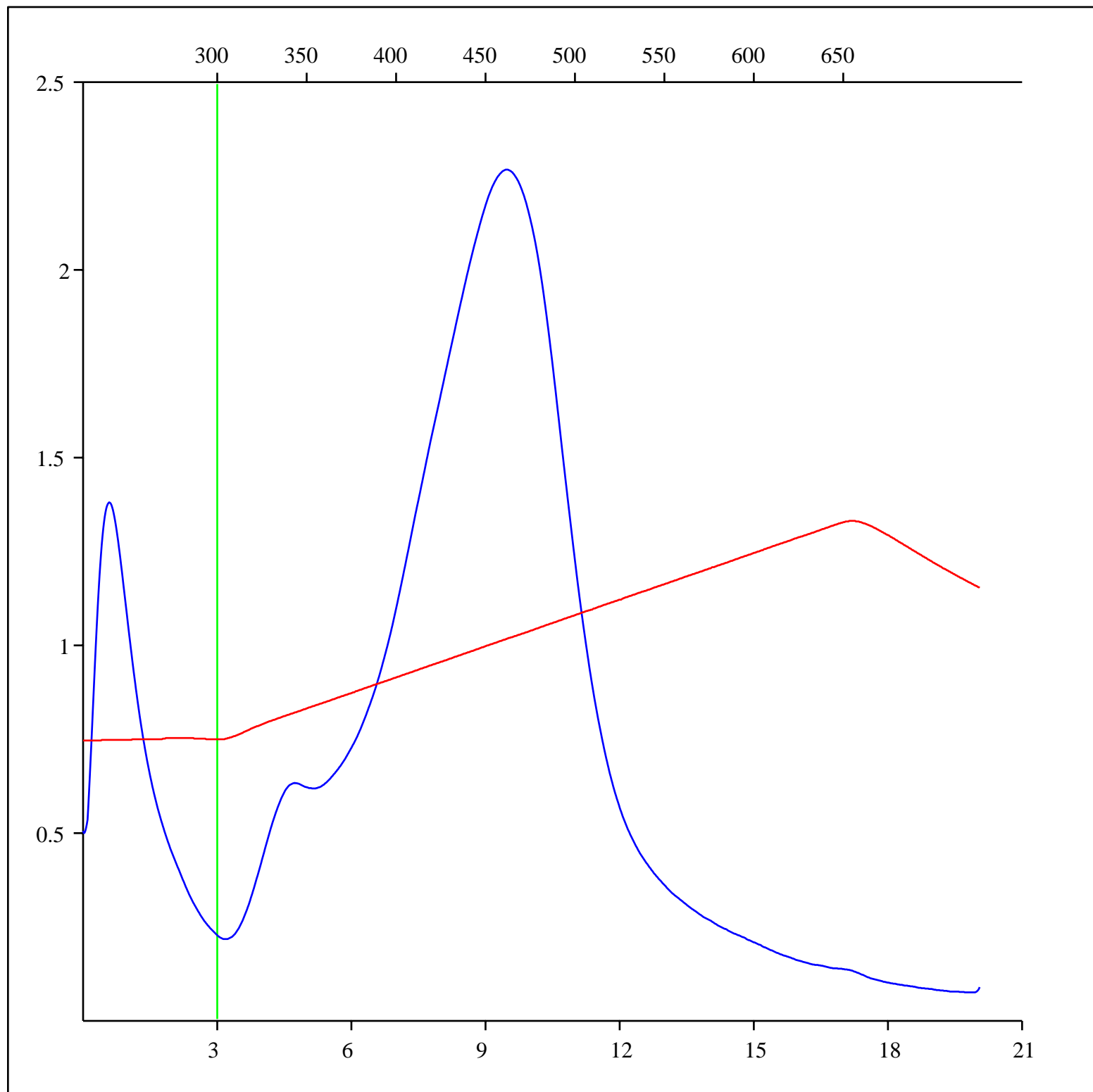
Sample: C-556209  
Acquisition Date: 14-DEC-2012  
Location: PAKTOA C-60  
Depth: 2025 - 2035 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



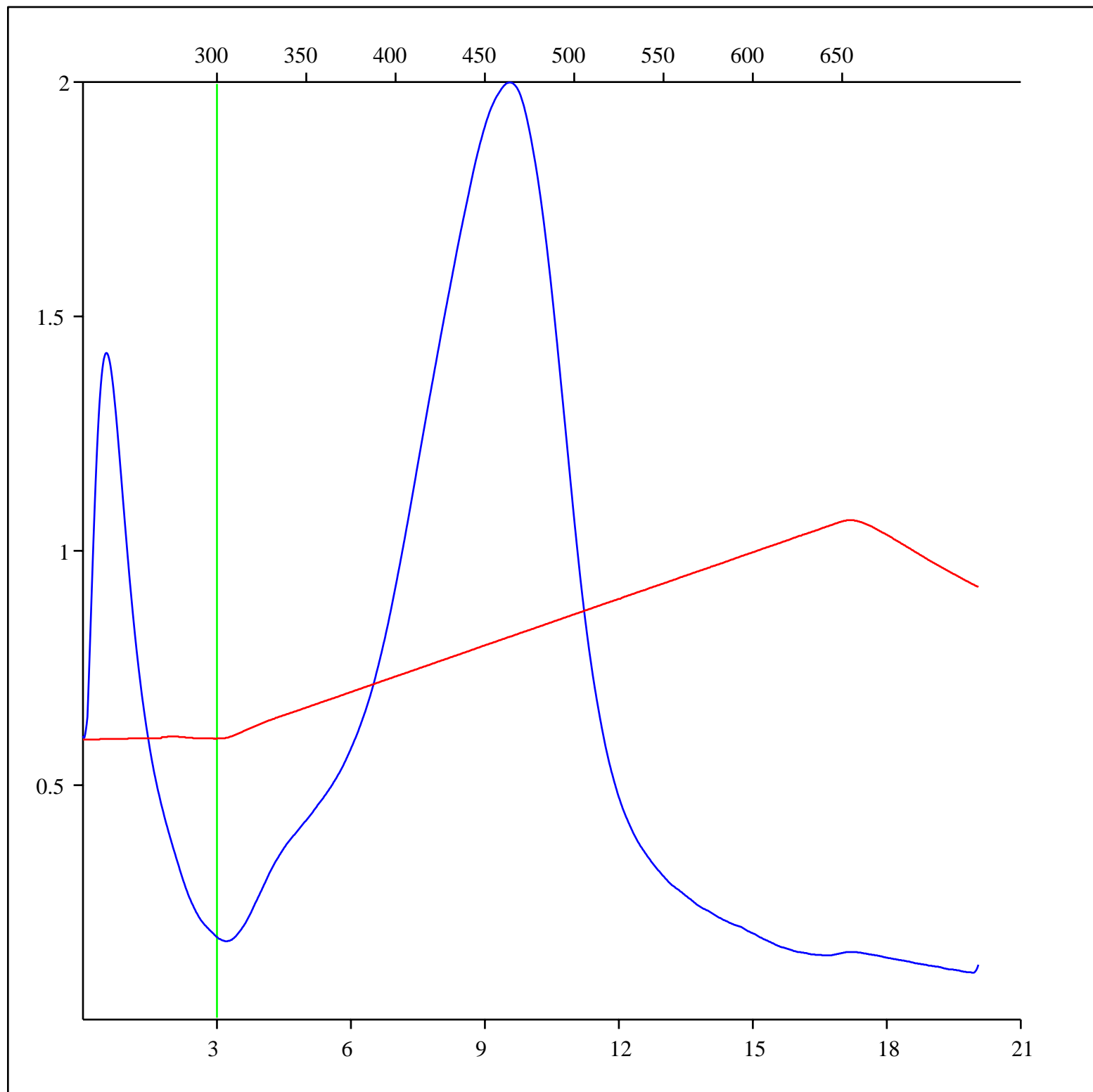
Sample: C-556210  
Acquisition Date: 14-DEC-2012  
Location: PAKTOA C-60  
Depth: 2035 - 2045 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



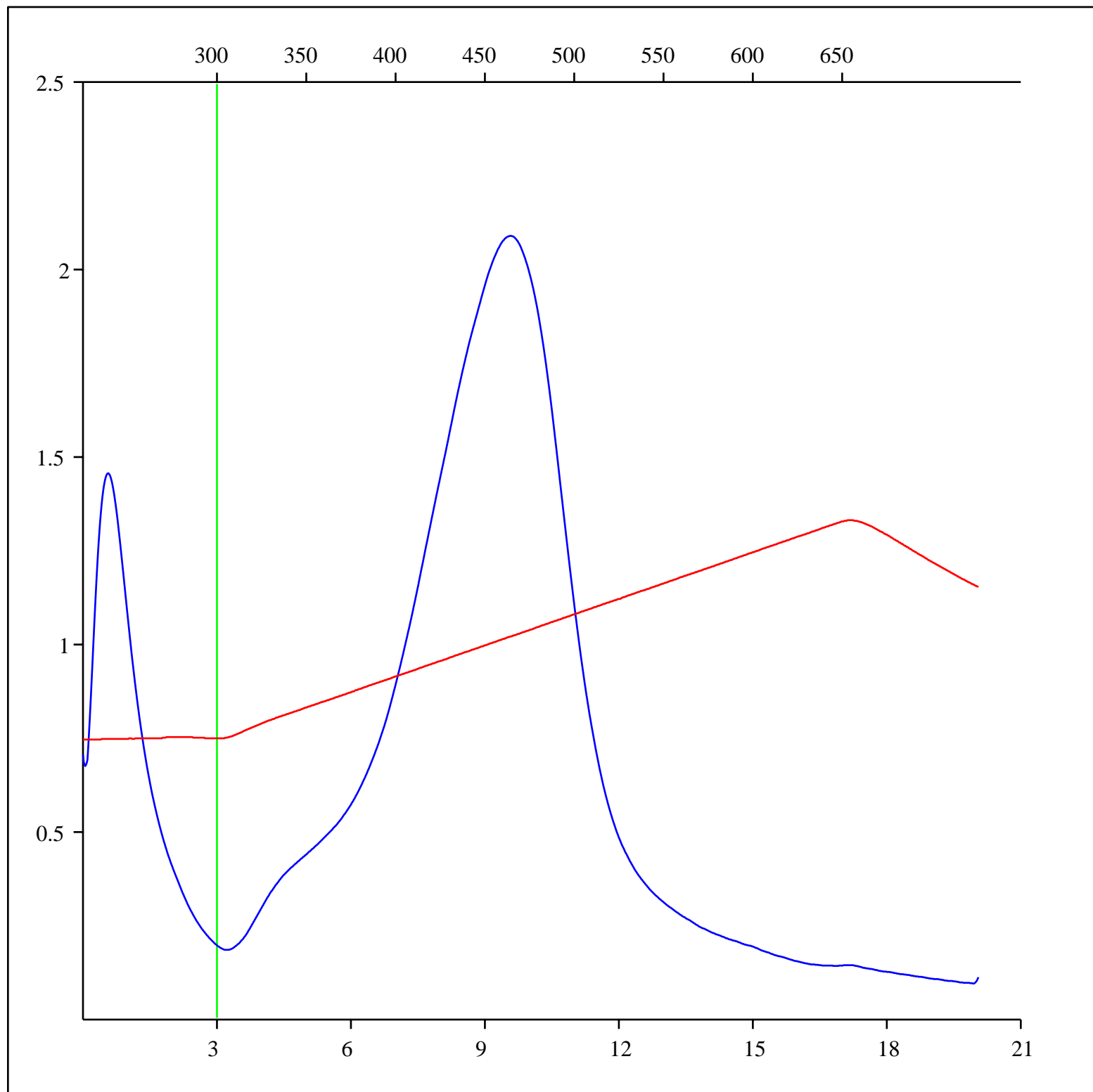
Sample: C-556211  
Acquisition Date: 14-DEC-2012  
Location: PAKTOA C-60  
Depth: 2045 - 2055 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



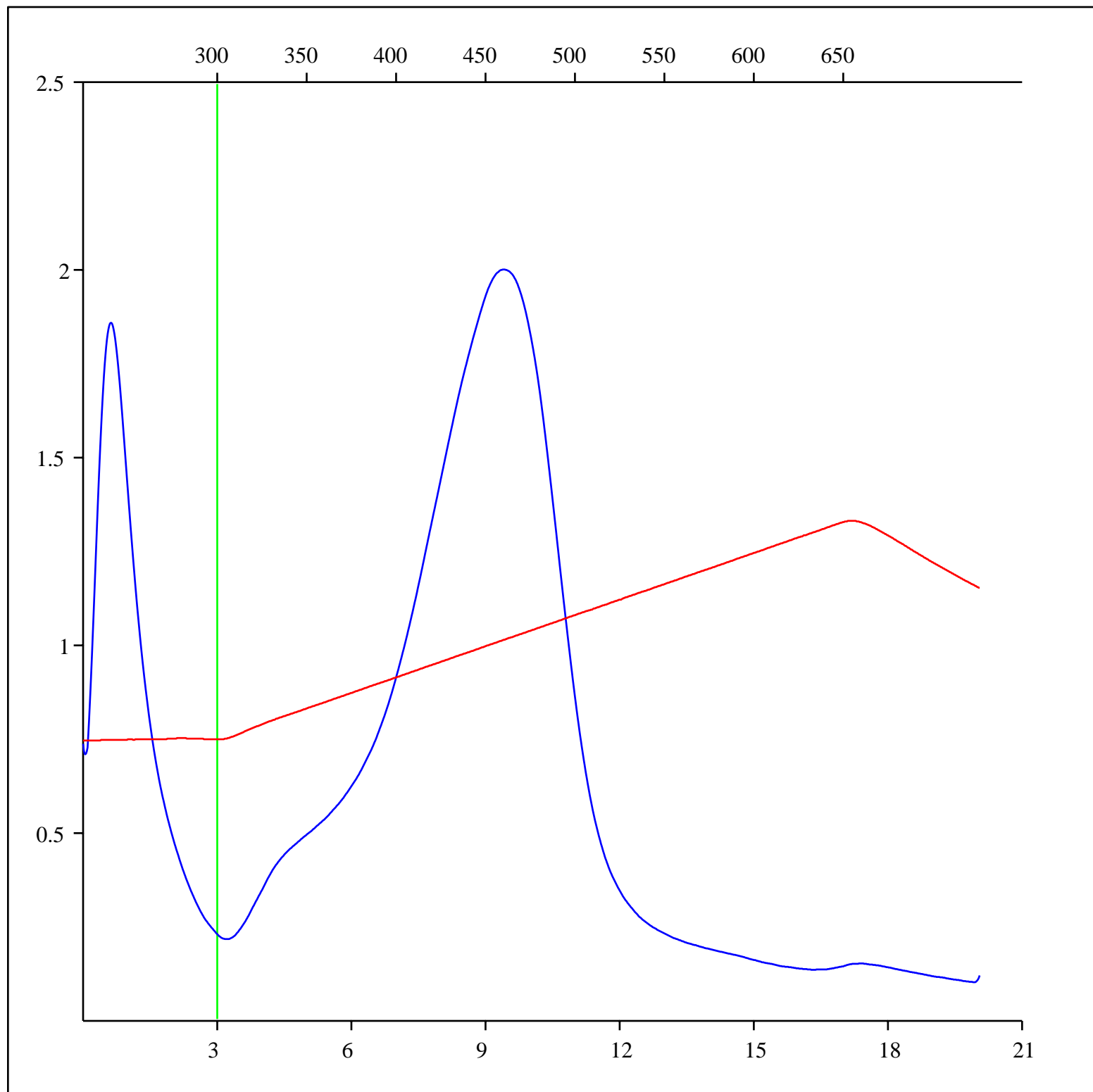
Sample: C-556212  
Acquisition Date: 14-DEC-2012  
Location: PAKTOA C-60  
Depth: 2055 - 2065 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



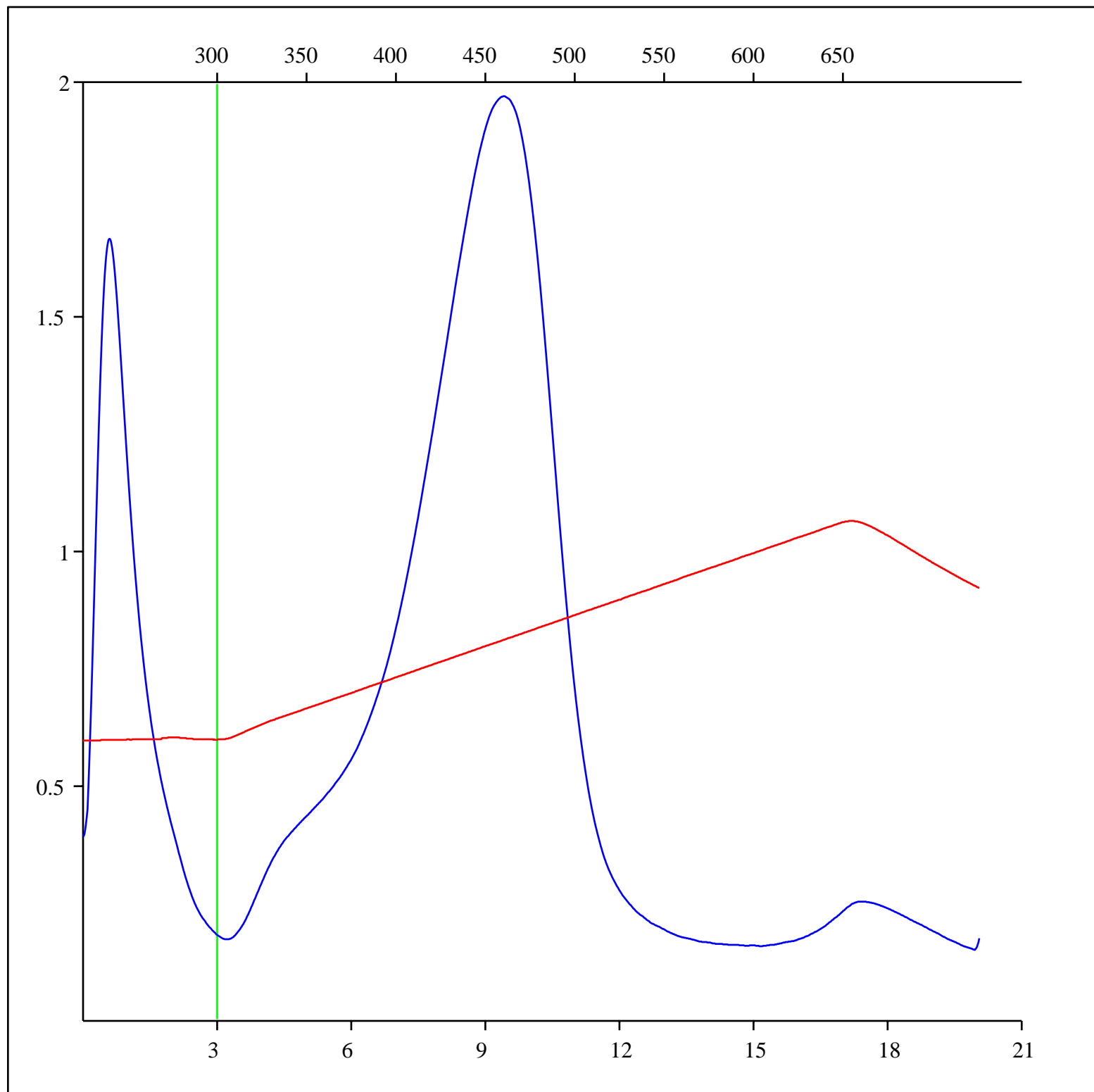
Sample: C-556213  
Acquisition Date: 14-DEC-2012  
Location: PAKTOA C-60  
Depth: 2065 - 2075 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



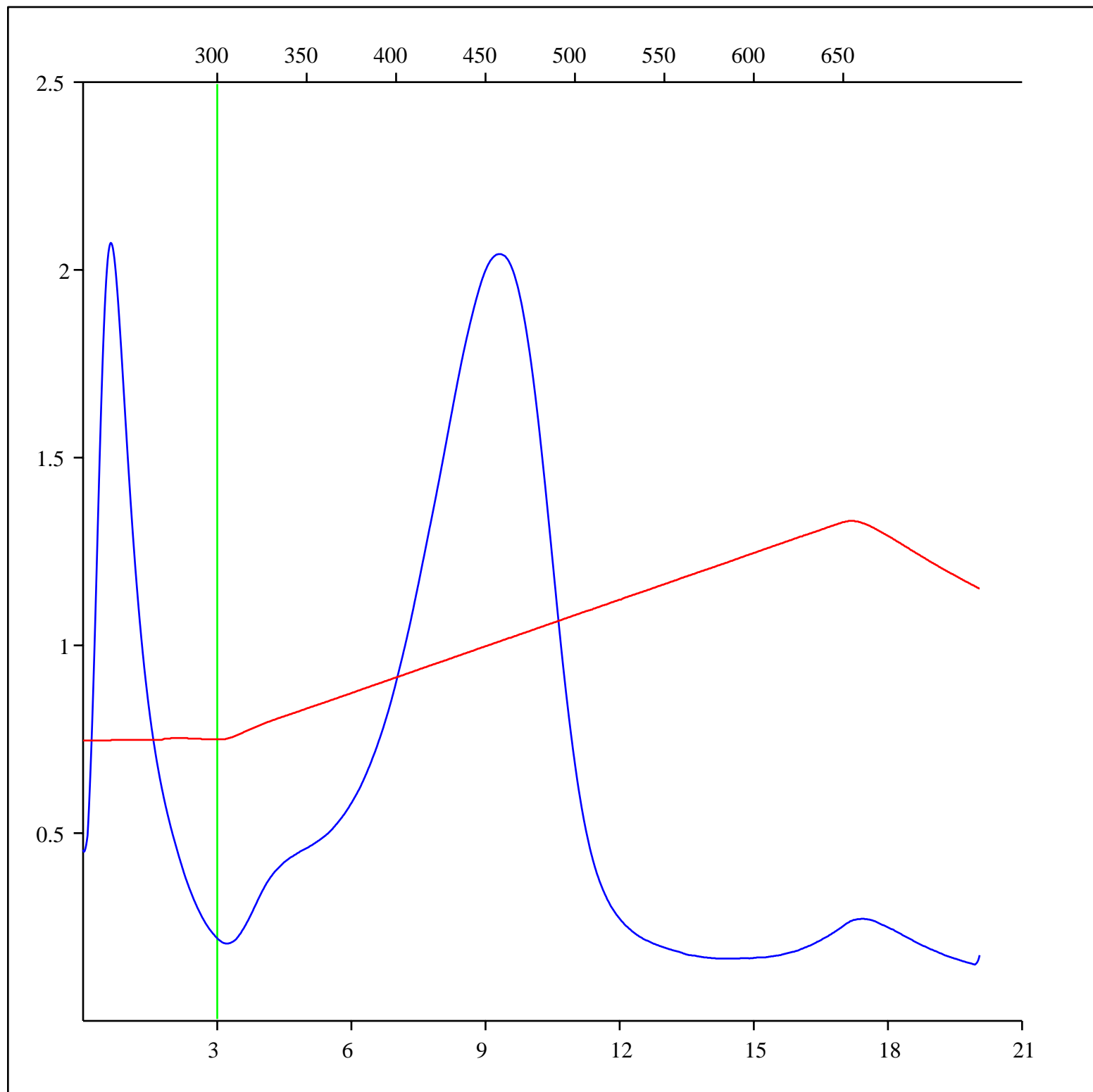
Sample: C-556214  
Acquisition Date: 14-DEC-2012  
Location: PAKTOA C-60  
Depth: 2075 - 2085 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556215  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2085 - 2095 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

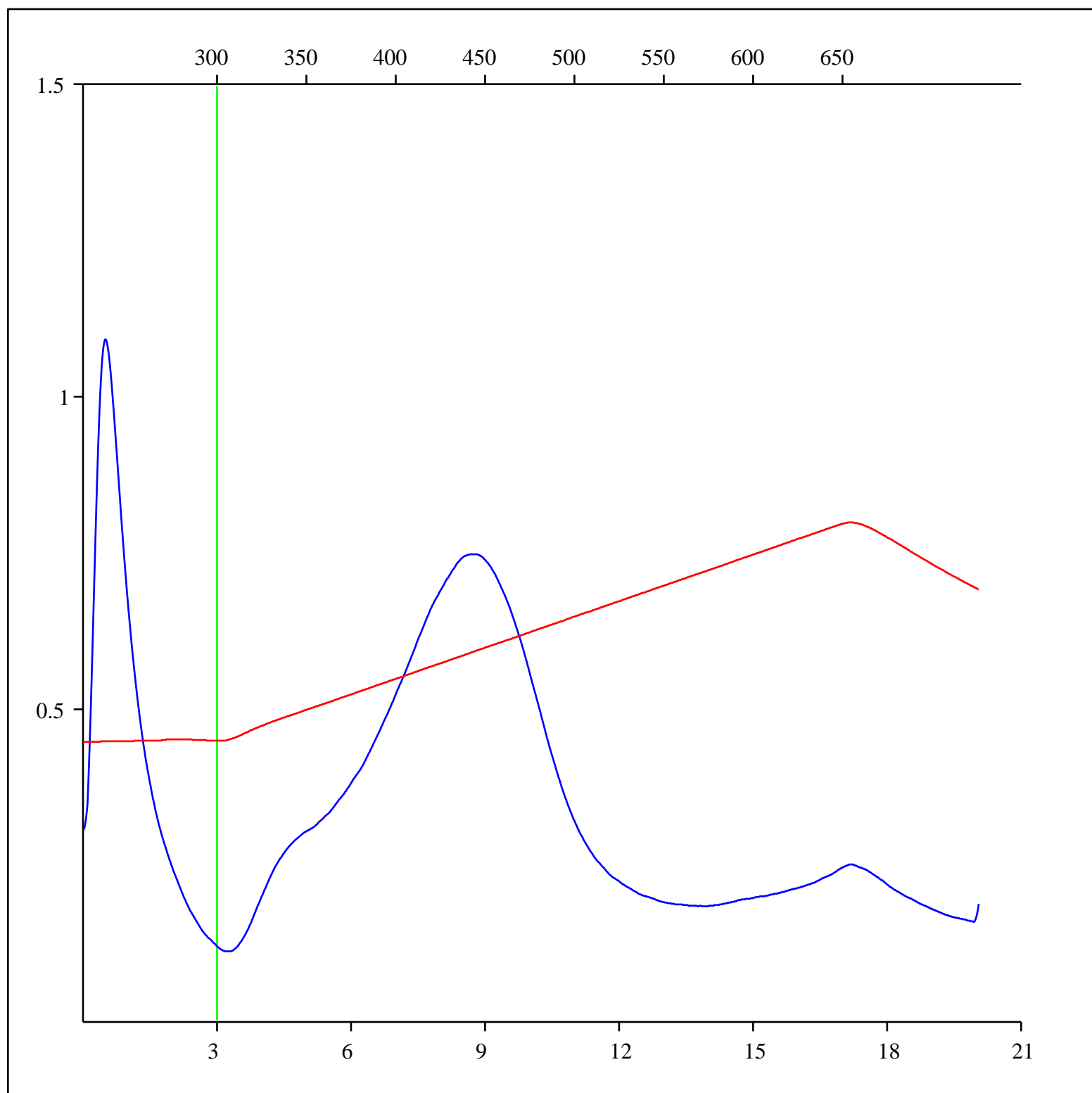
## FID hydrocarbons





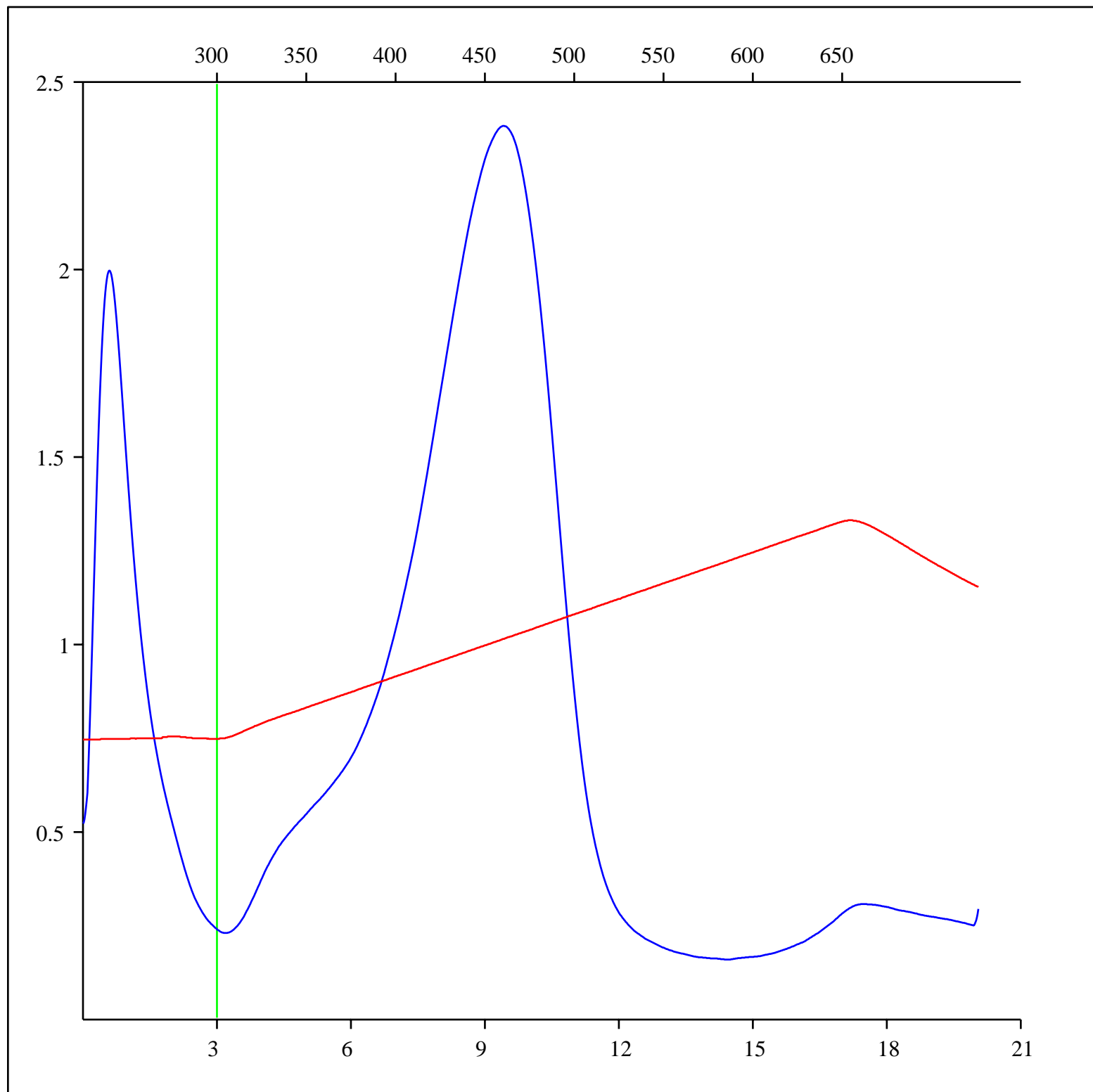
Sample: C-556216  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2095 - 2105 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



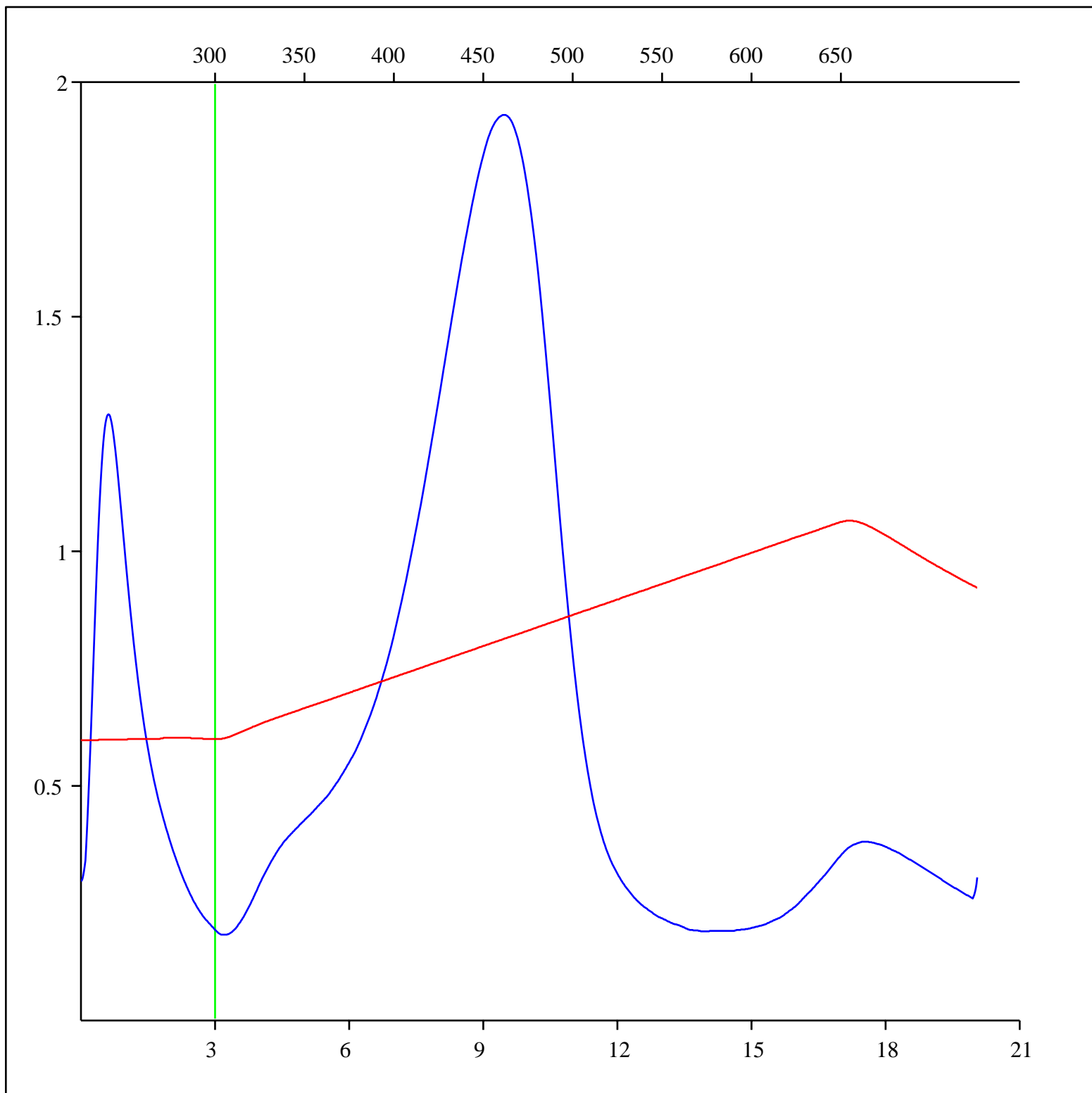
Sample: C-556217  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2105 - 2115 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



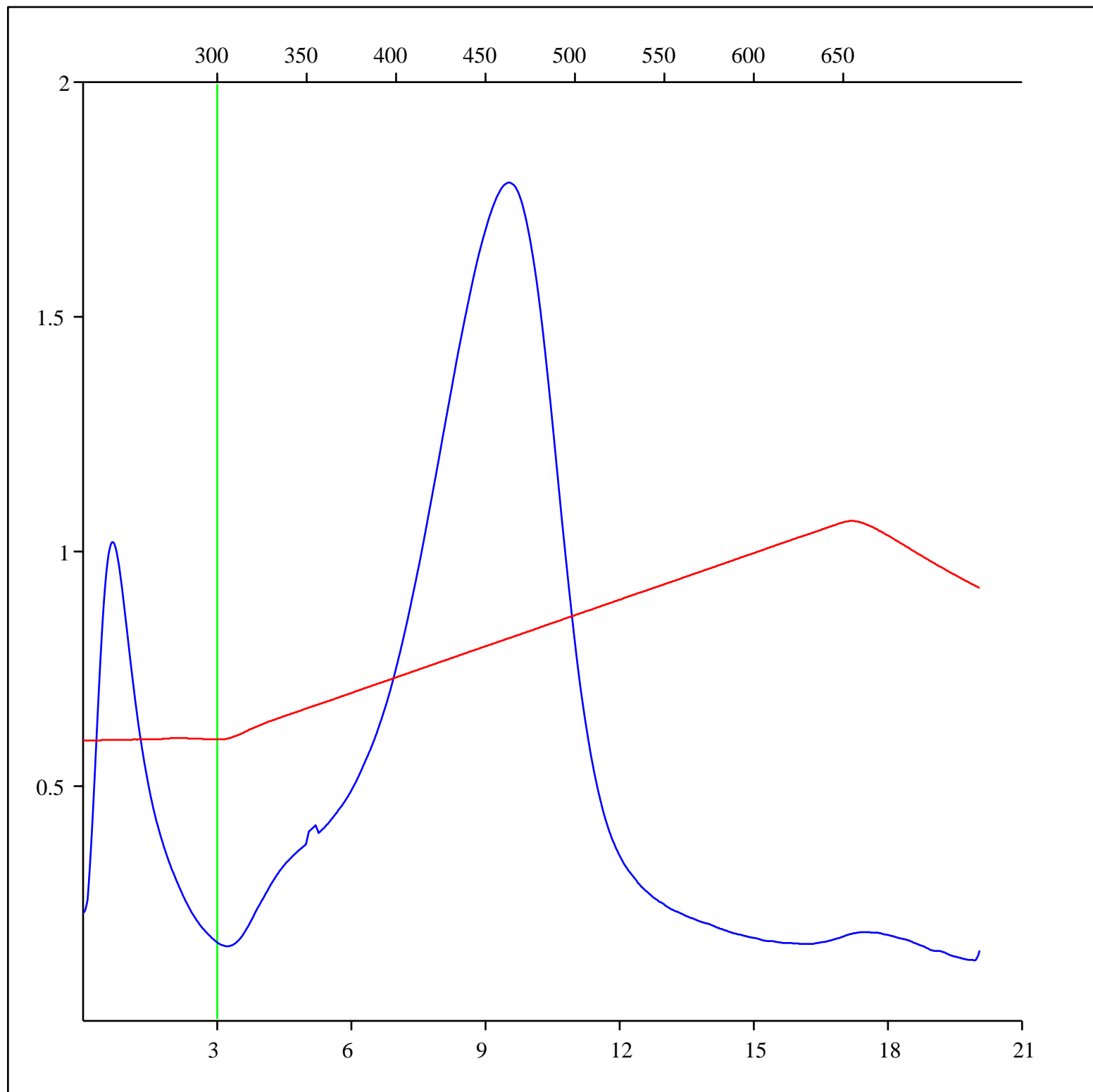
Sample: C-556218  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2115 - 2125 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



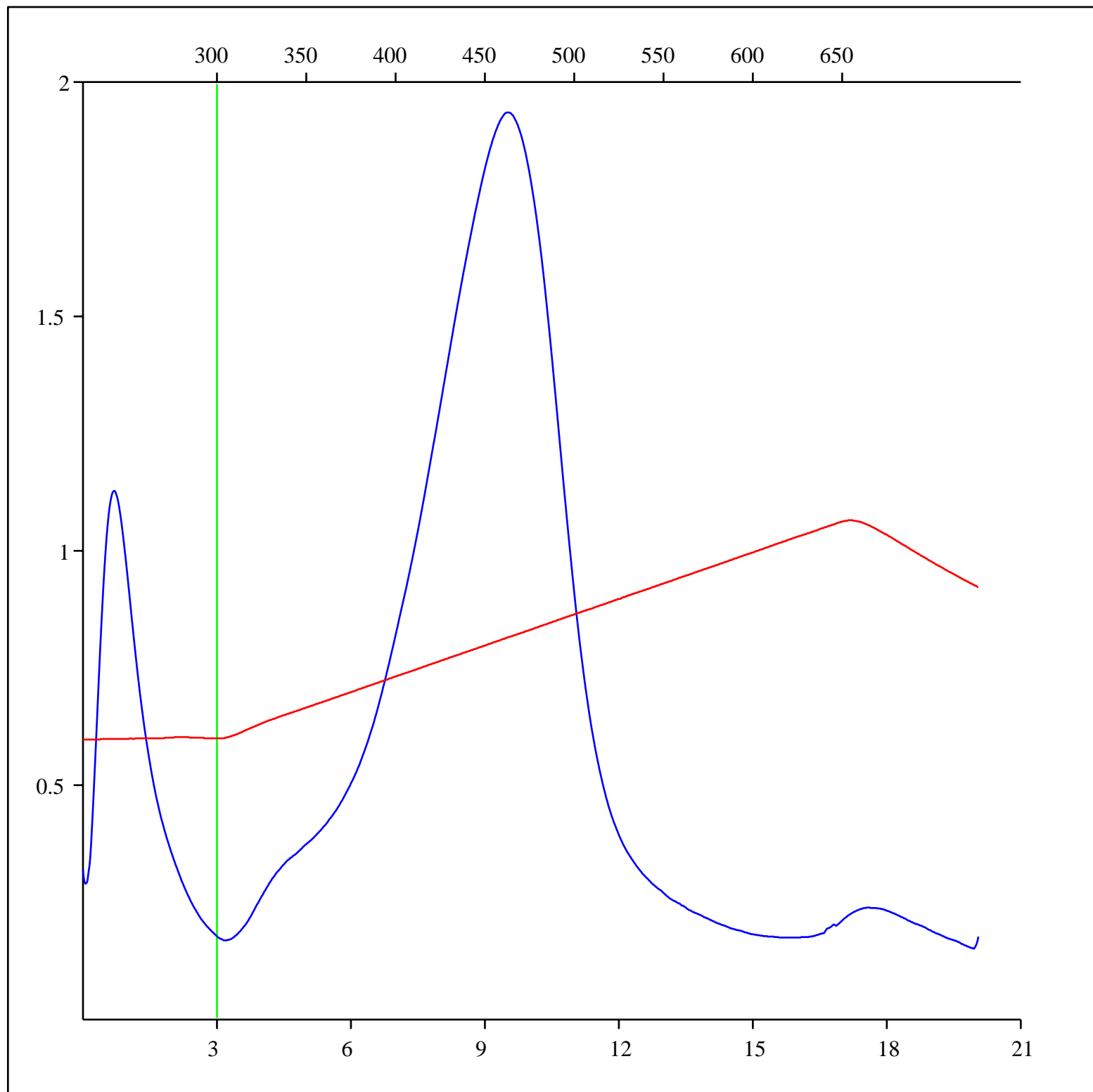
Sample: C-556219  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2125 - 2135 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



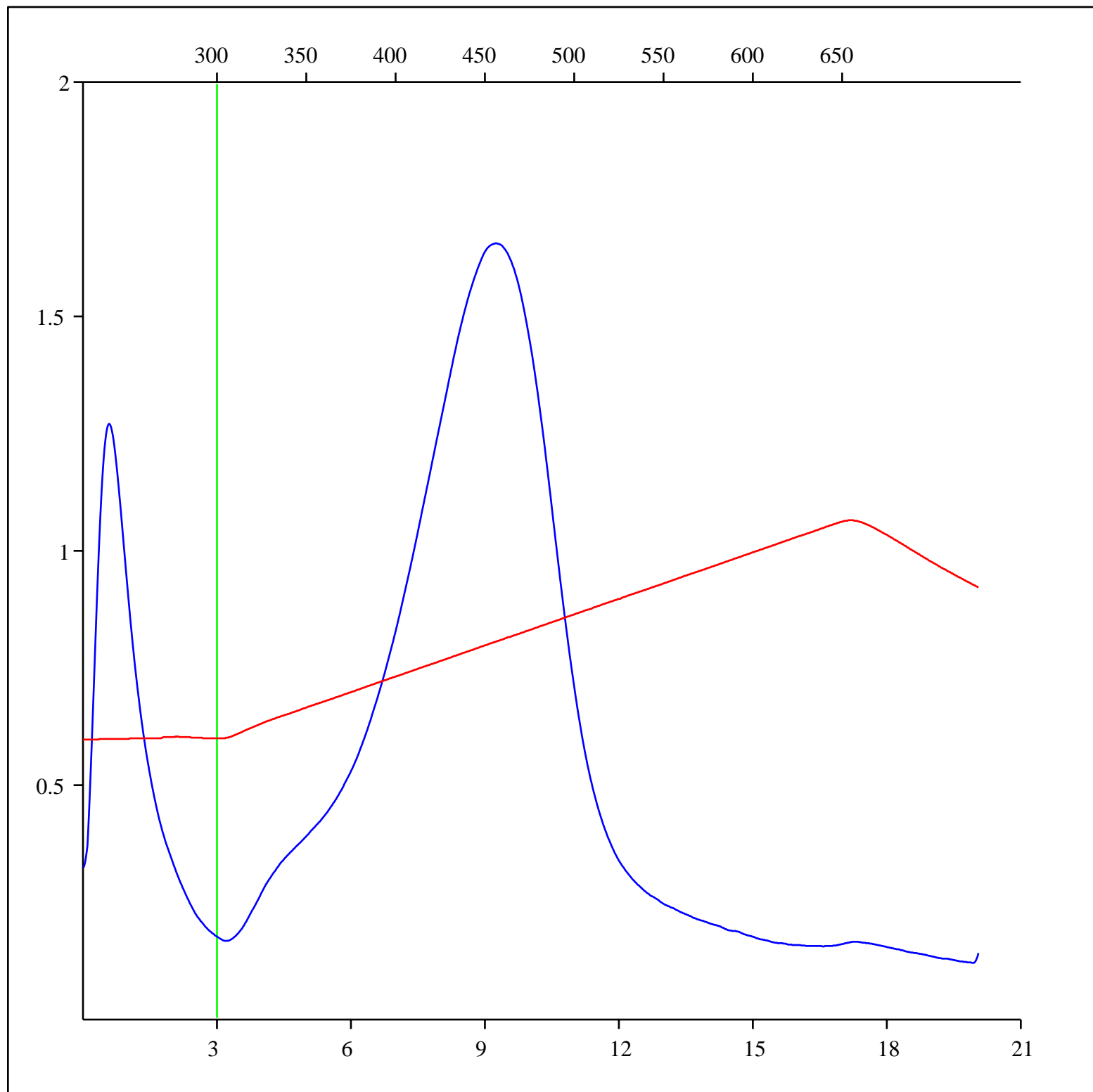
Sample: C-556220  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2135 - 2145 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



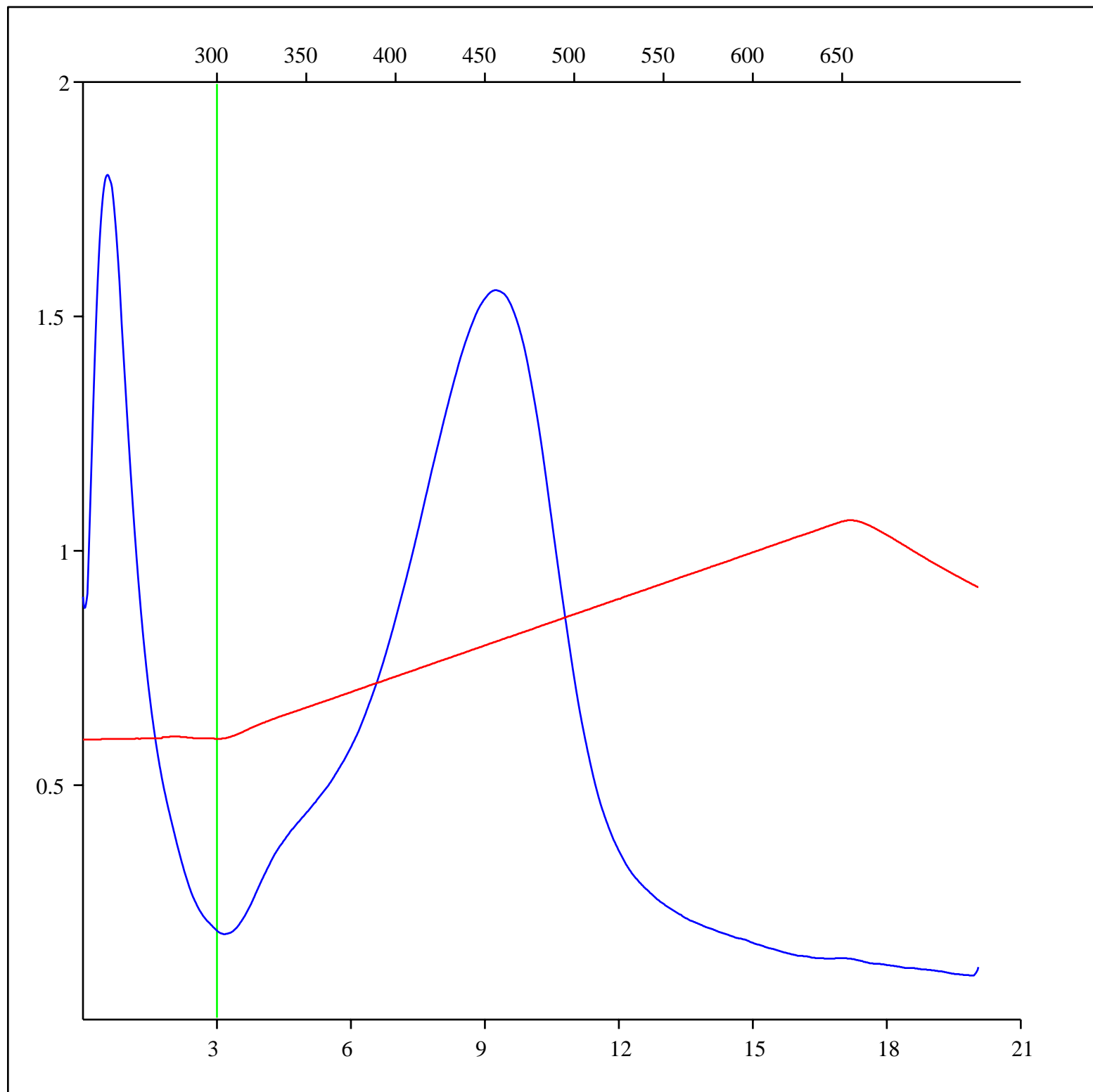
Sample: C-556221  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2145 - 2155 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



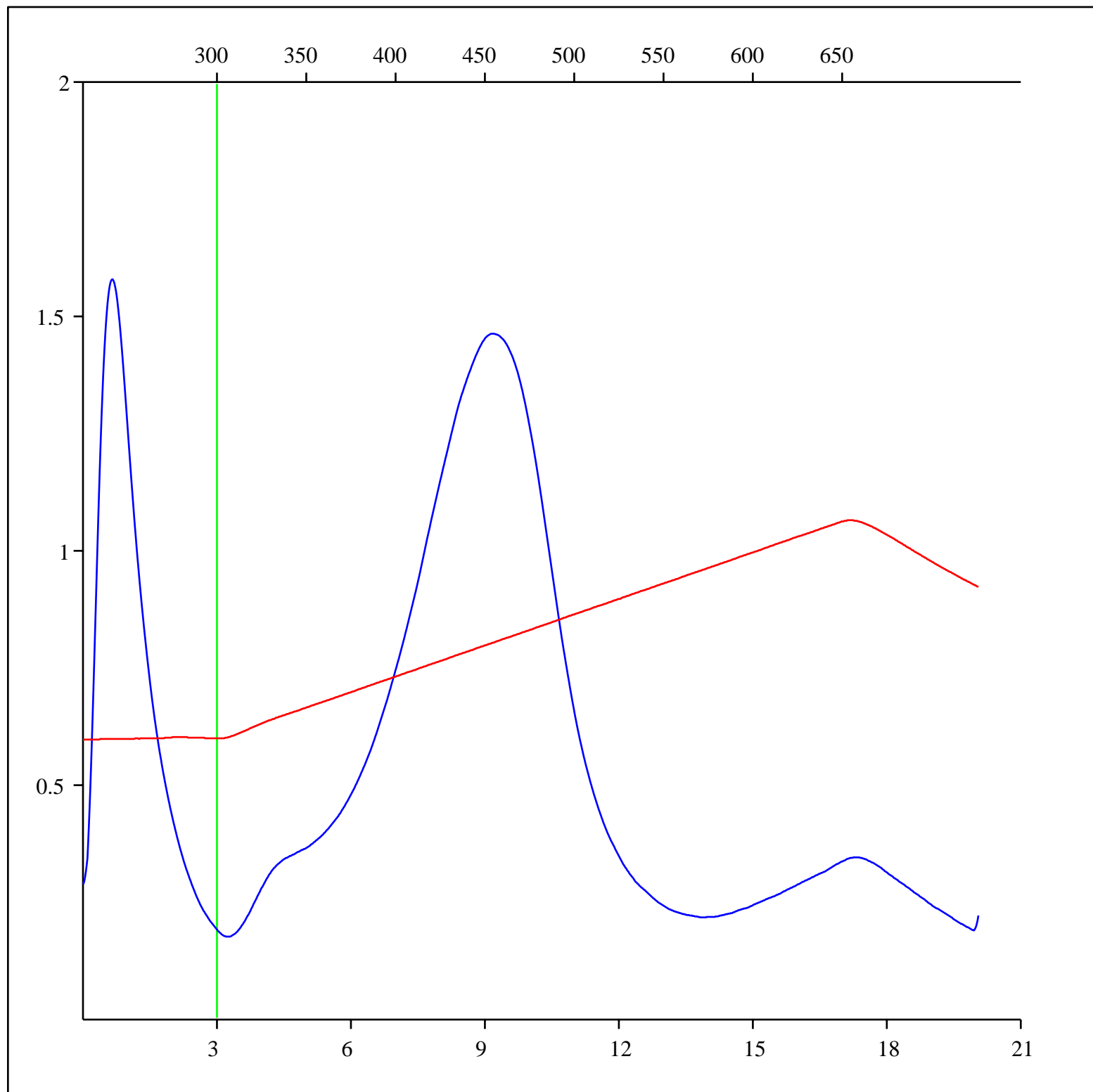
Sample: C-556222  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2155 - 2165 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556223  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2165 - 2175 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

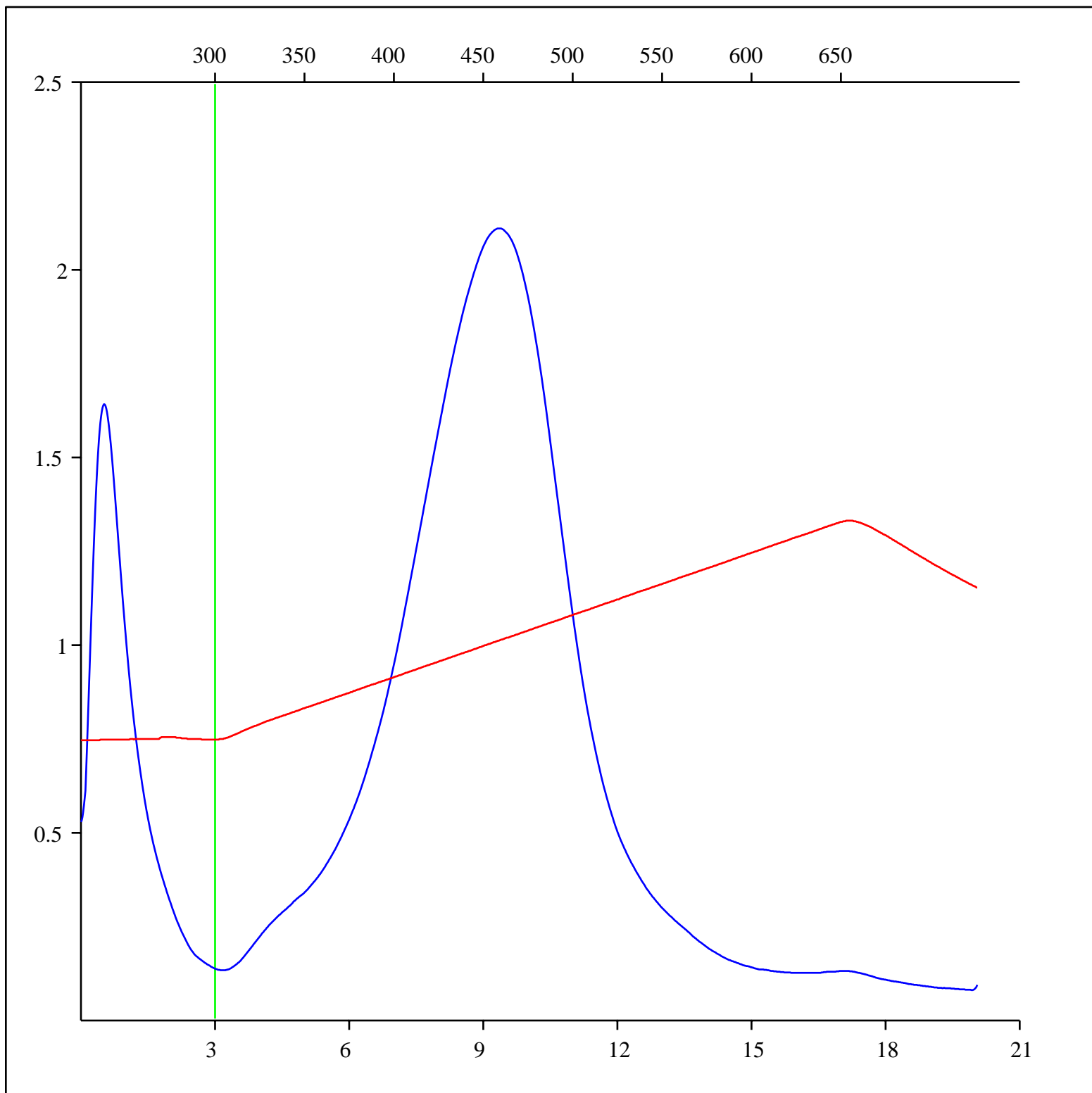
## FID hydrocarbons





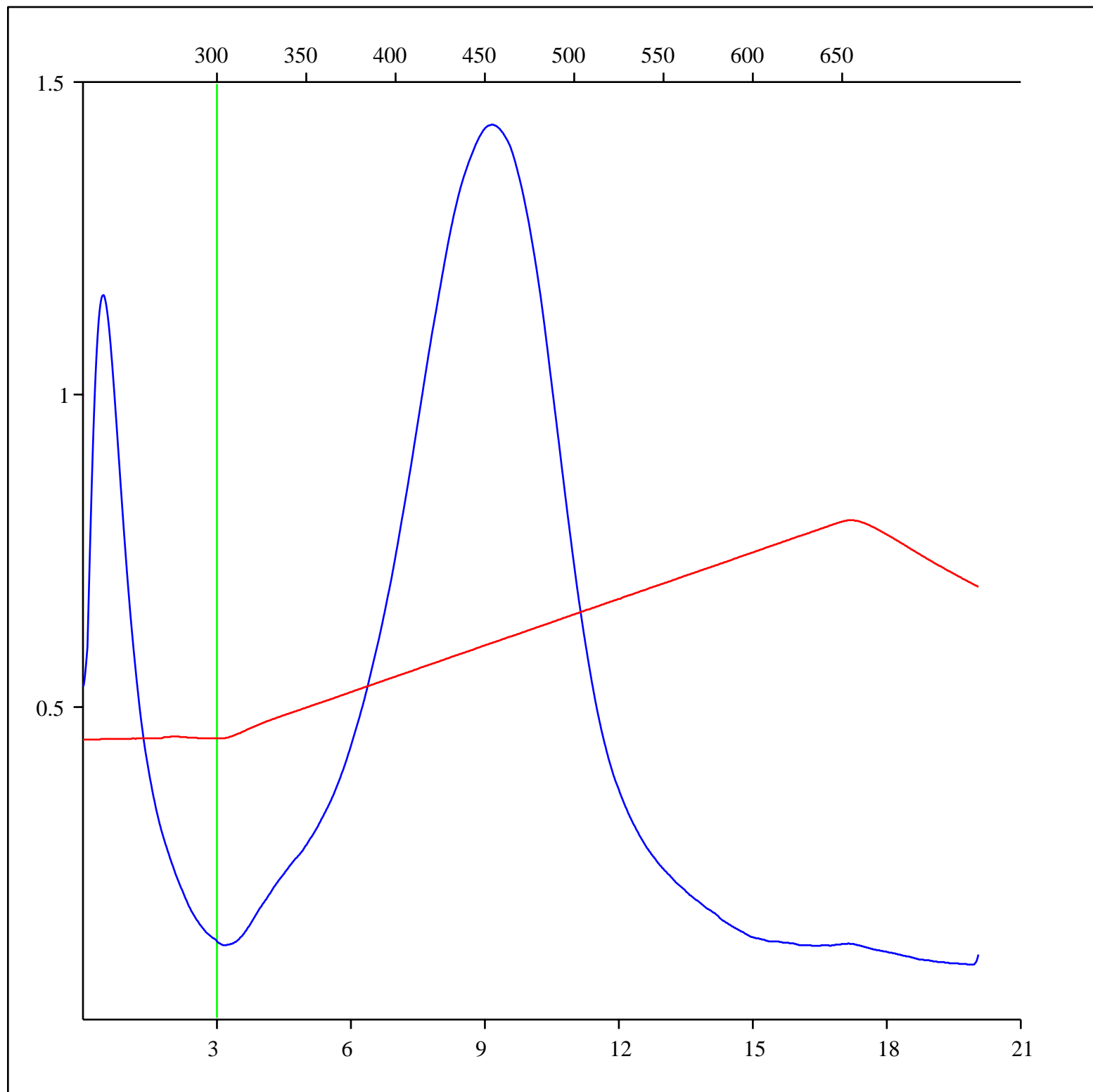
Sample: C-556224  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2175 - 2185 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



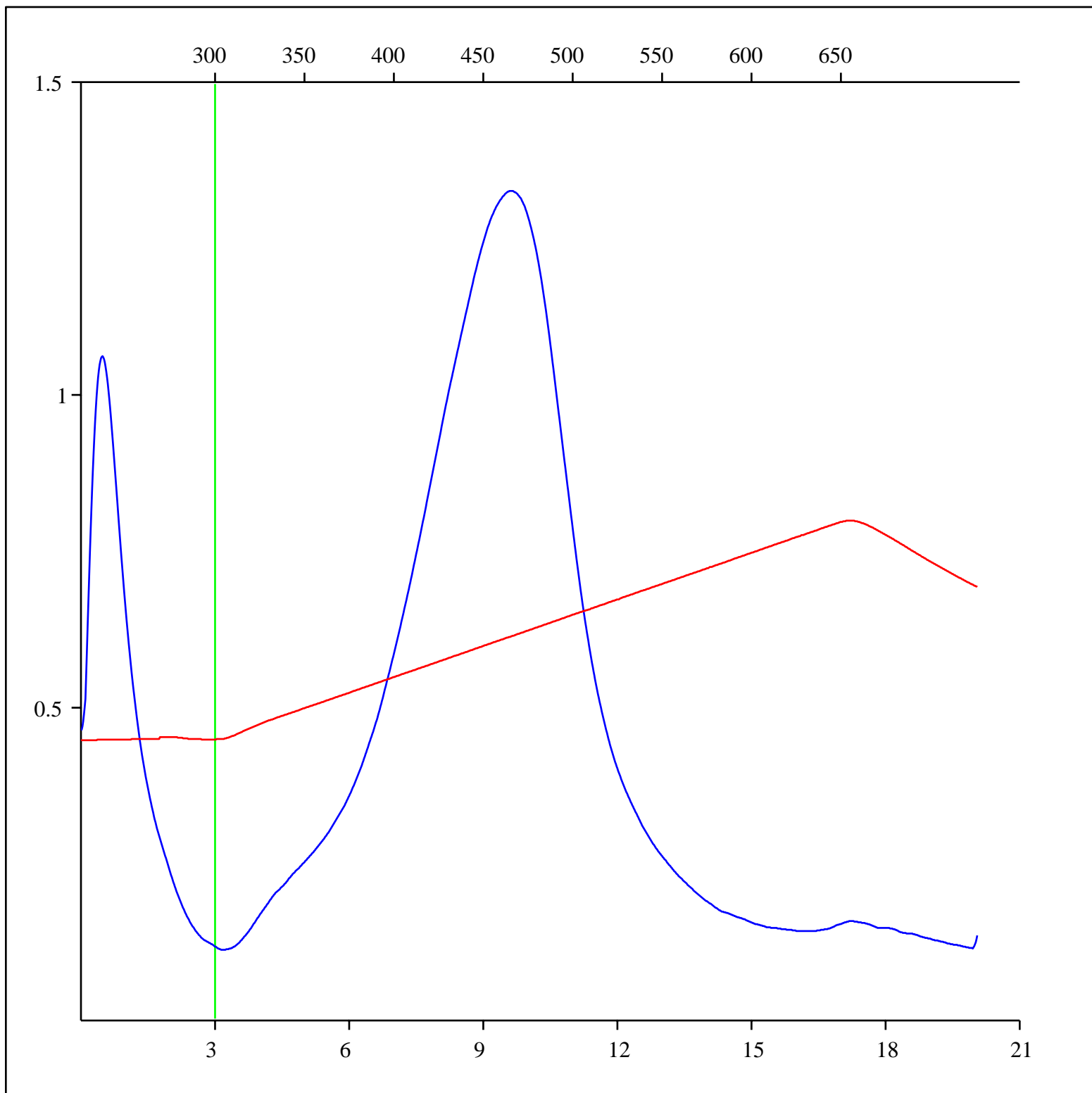
Sample: C-556225  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2185 - 2195 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



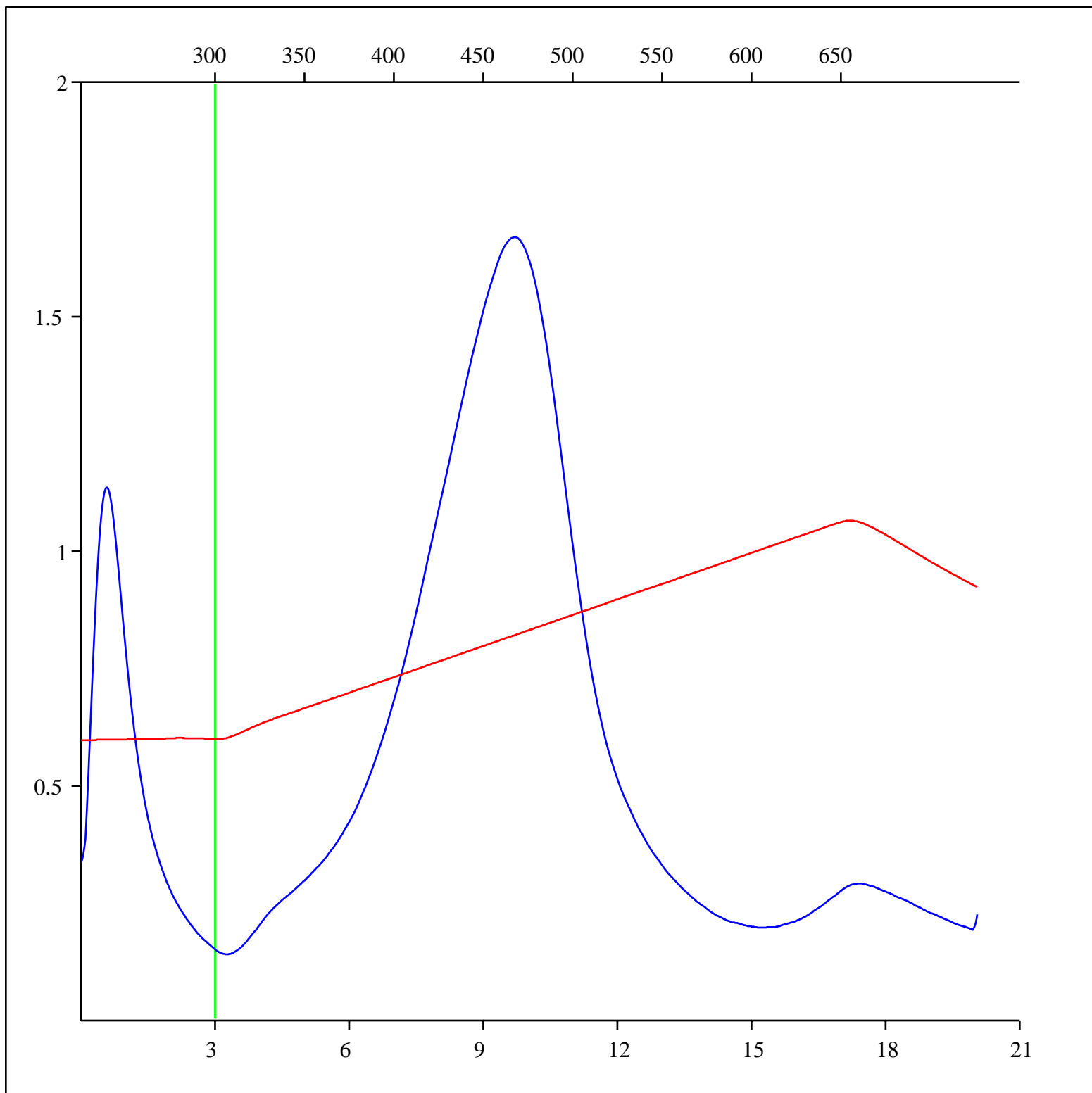
Sample: C-556226  
Acquisition Date: 15-DEC-2012  
Location: PAKTOA C-60  
Depth: 2195 - 2205 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



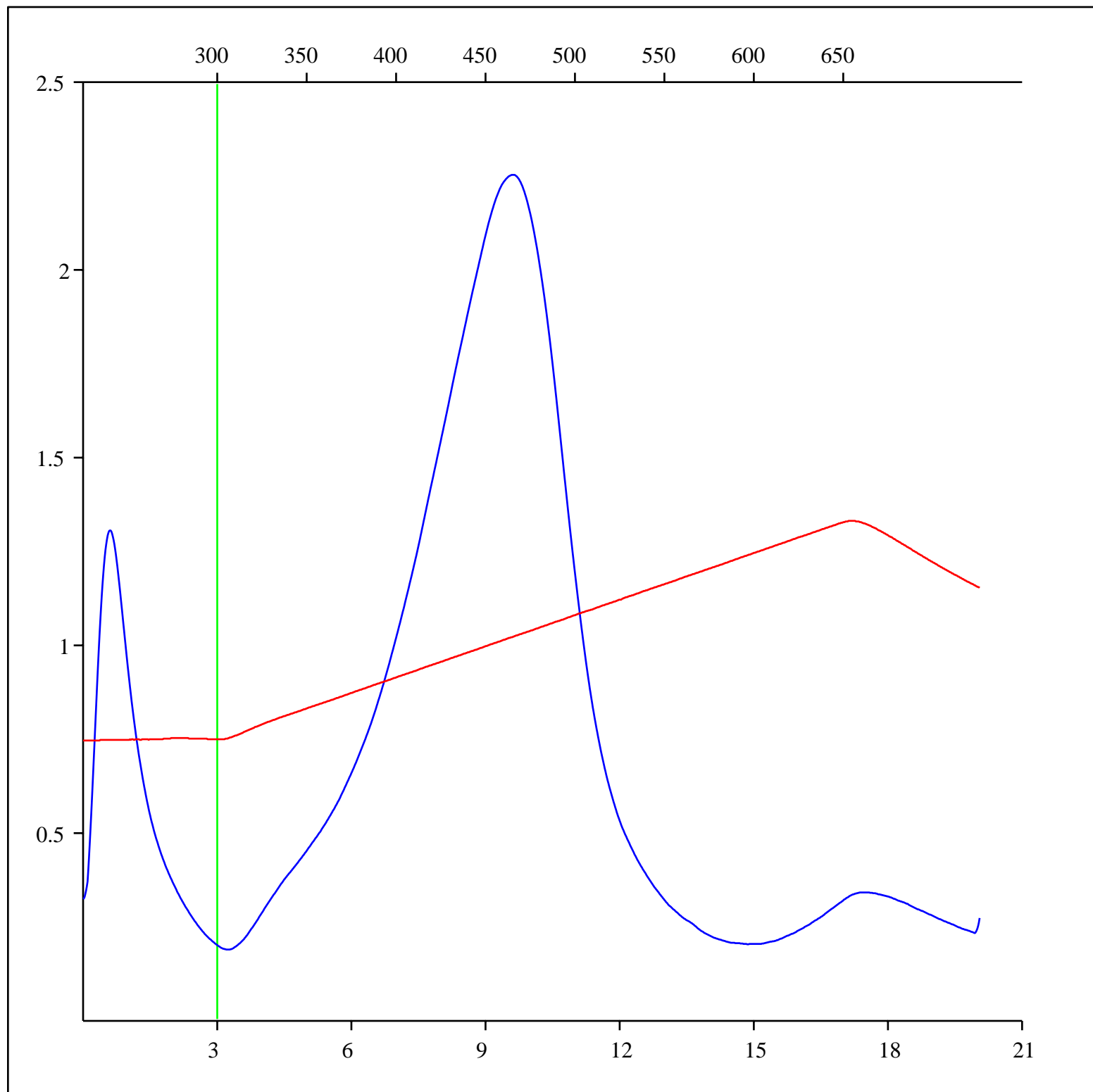
Sample: C-556227  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2205 - 2215 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



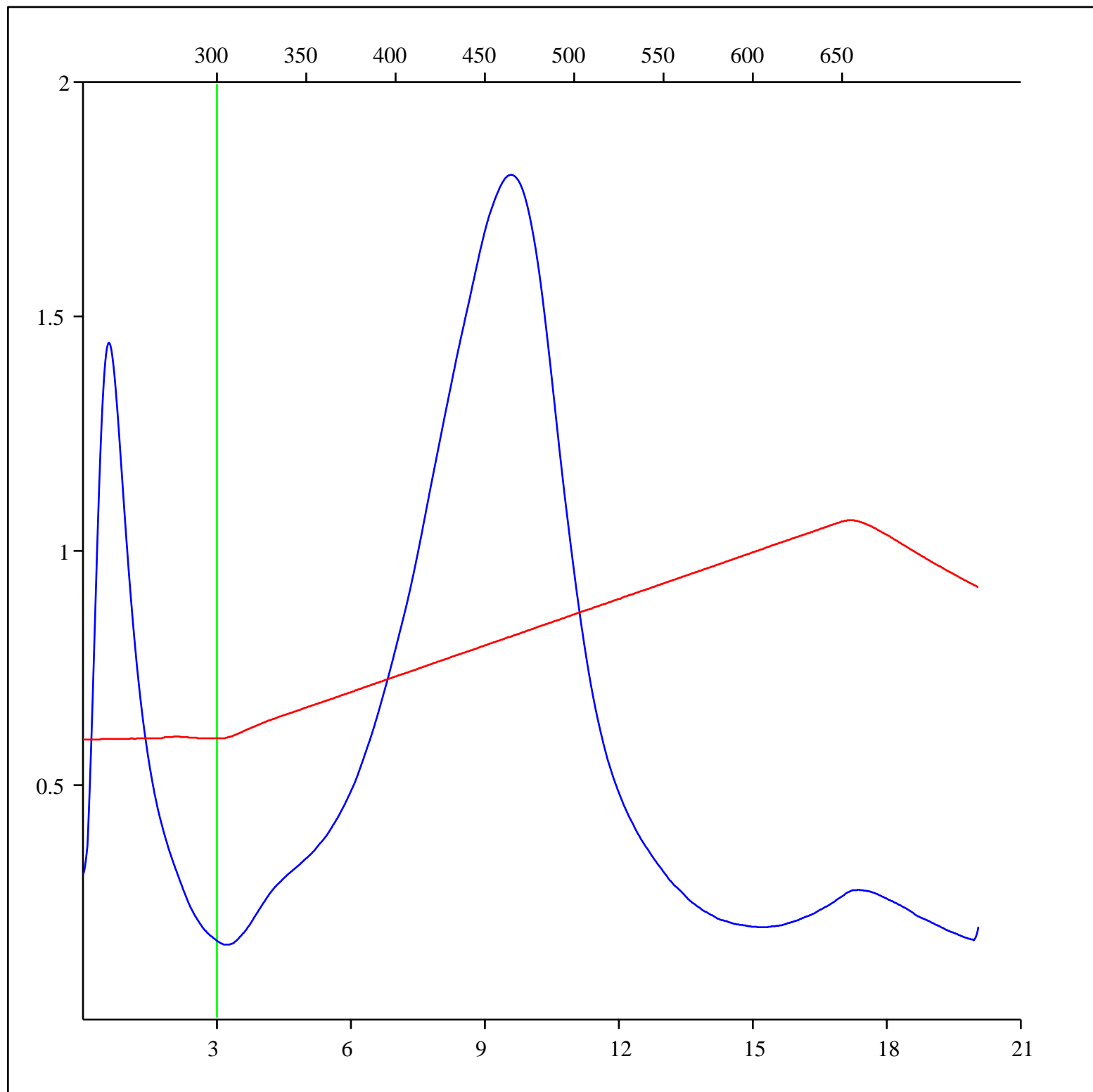
Sample: C-556228  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2215 - 2225 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



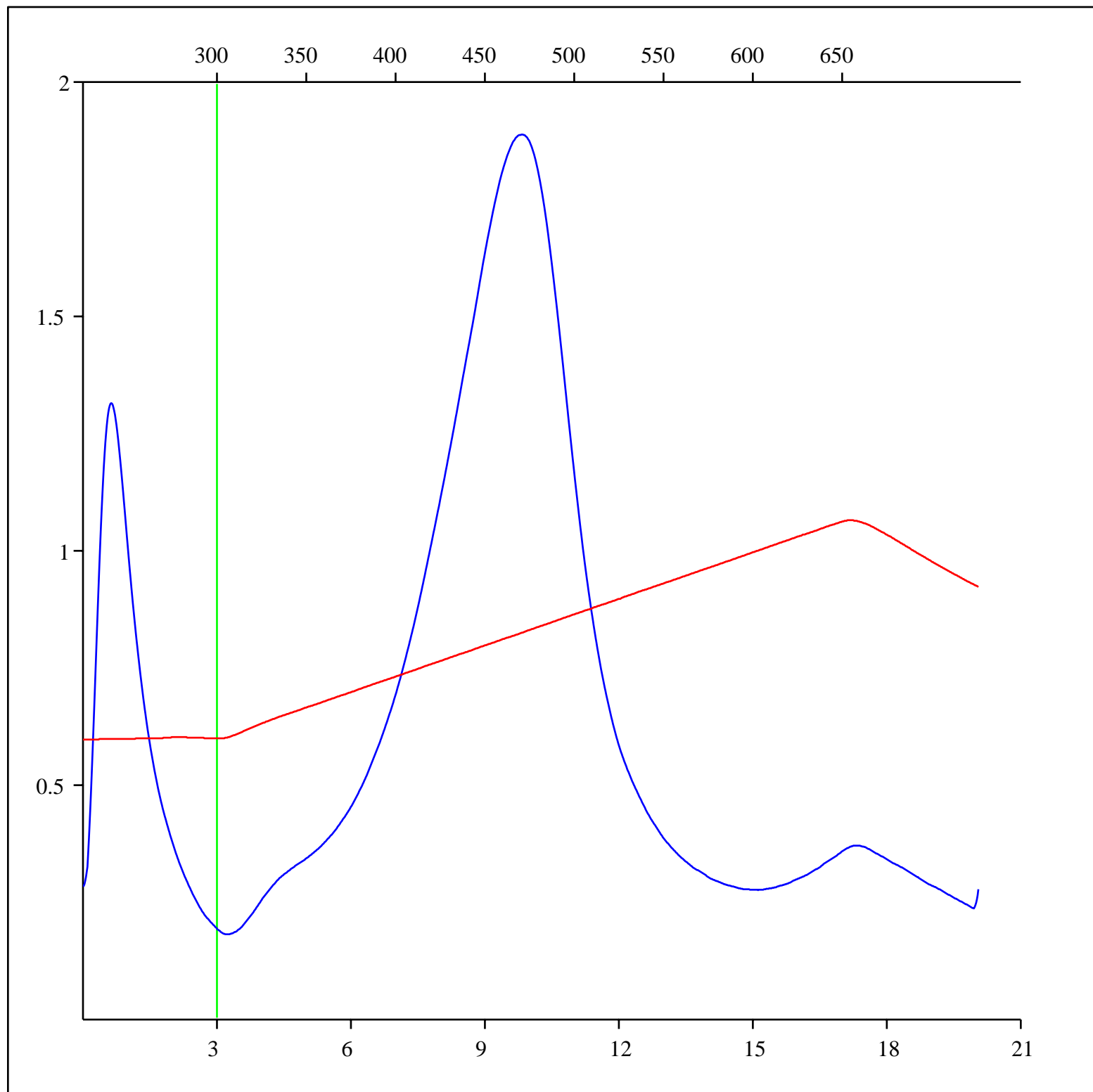
Sample: C-556229  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2225 - 2235 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



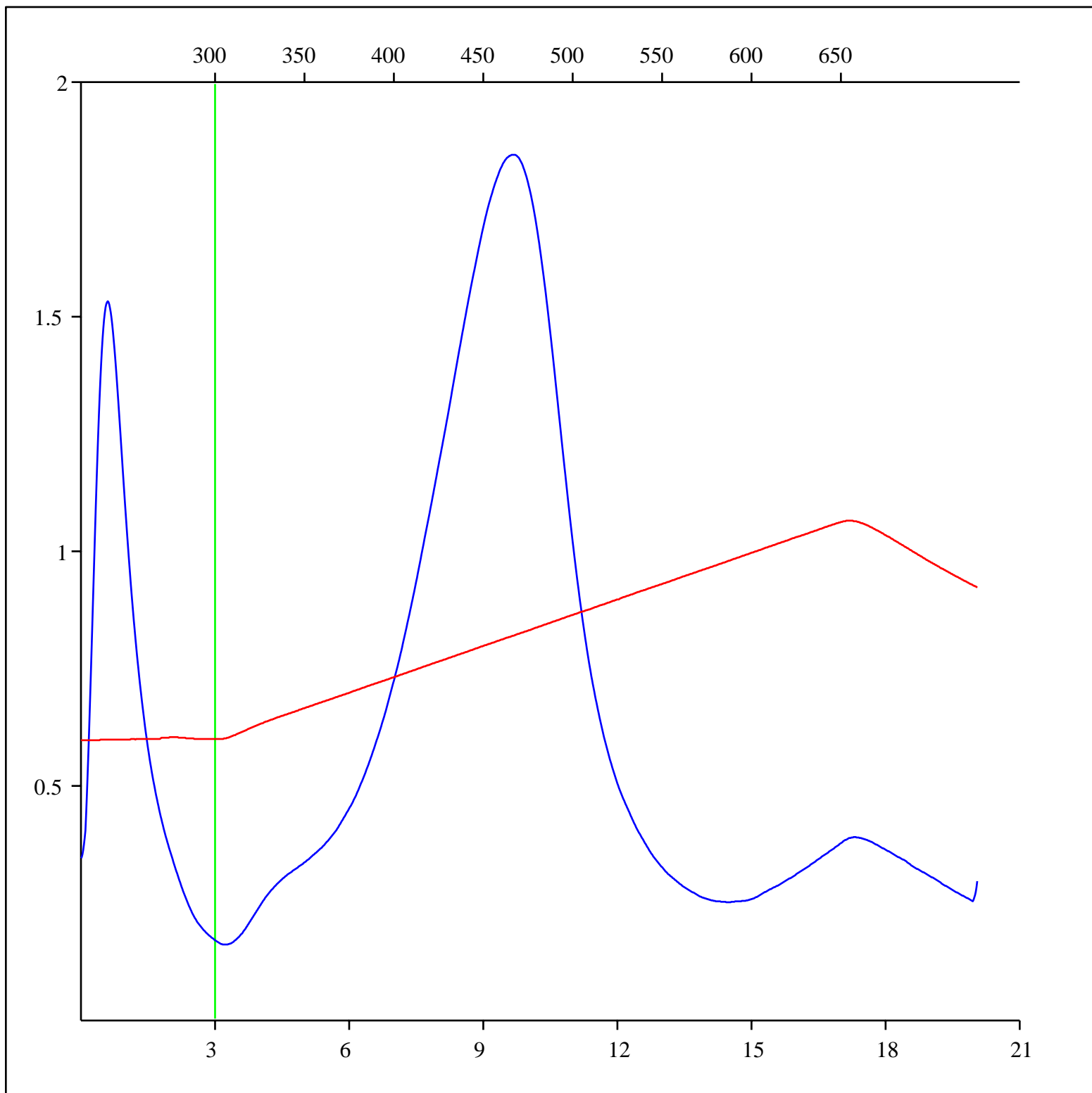
Sample: C-556230  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2235 - 2245 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556231  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2245 - 2255 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

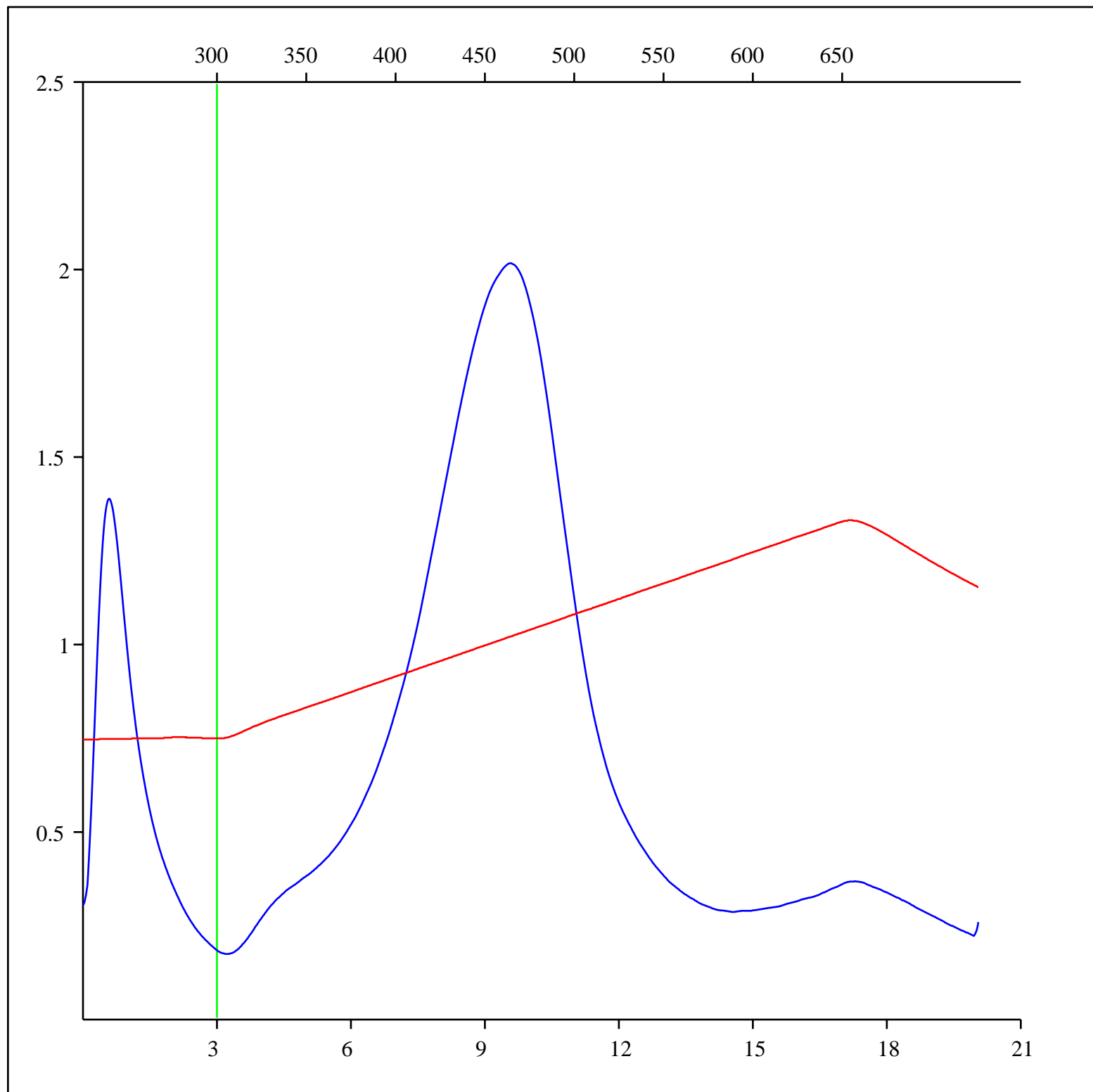
## FID hydrocarbons





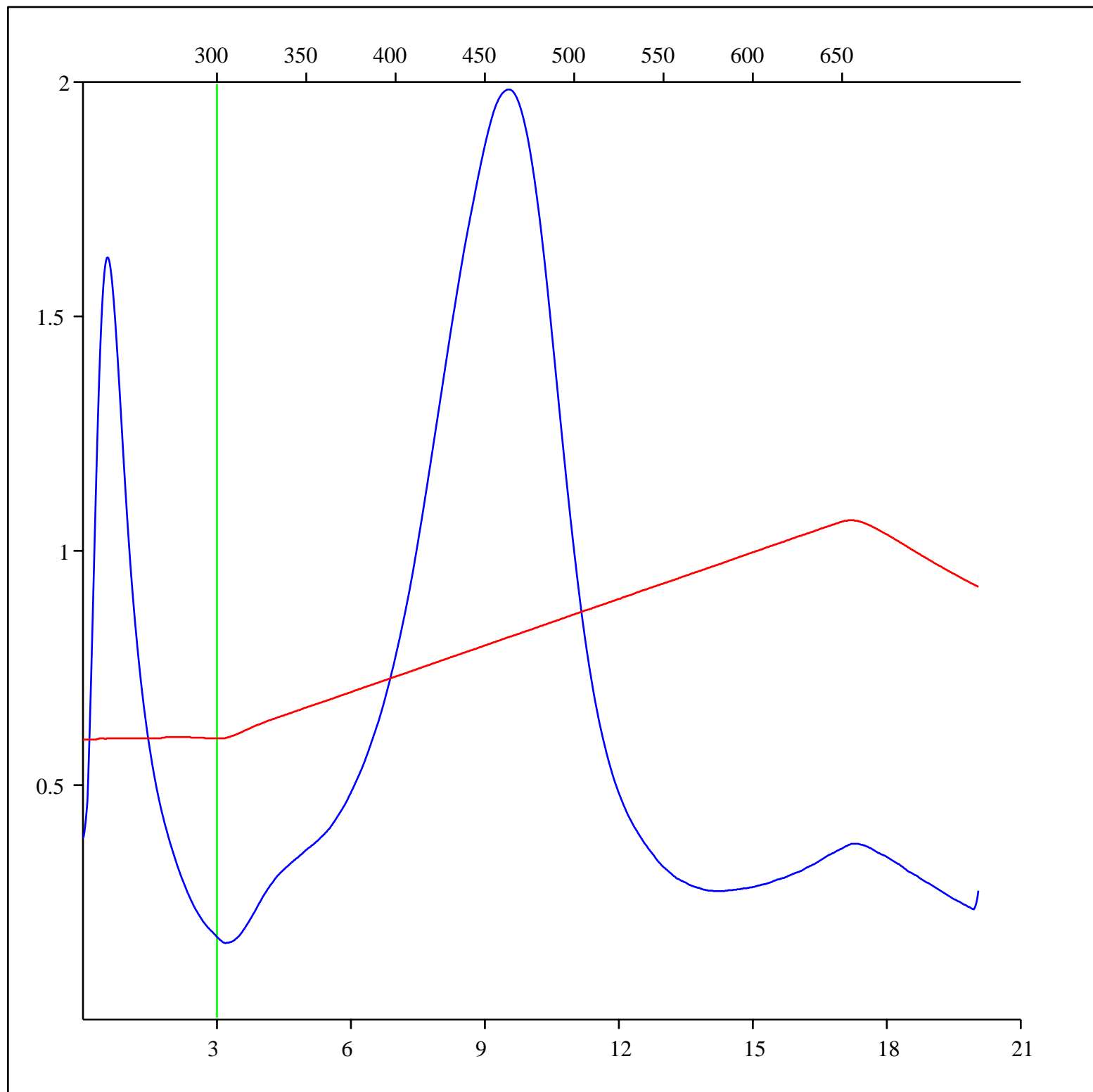
Sample: C-556232  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2255 - 2265 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



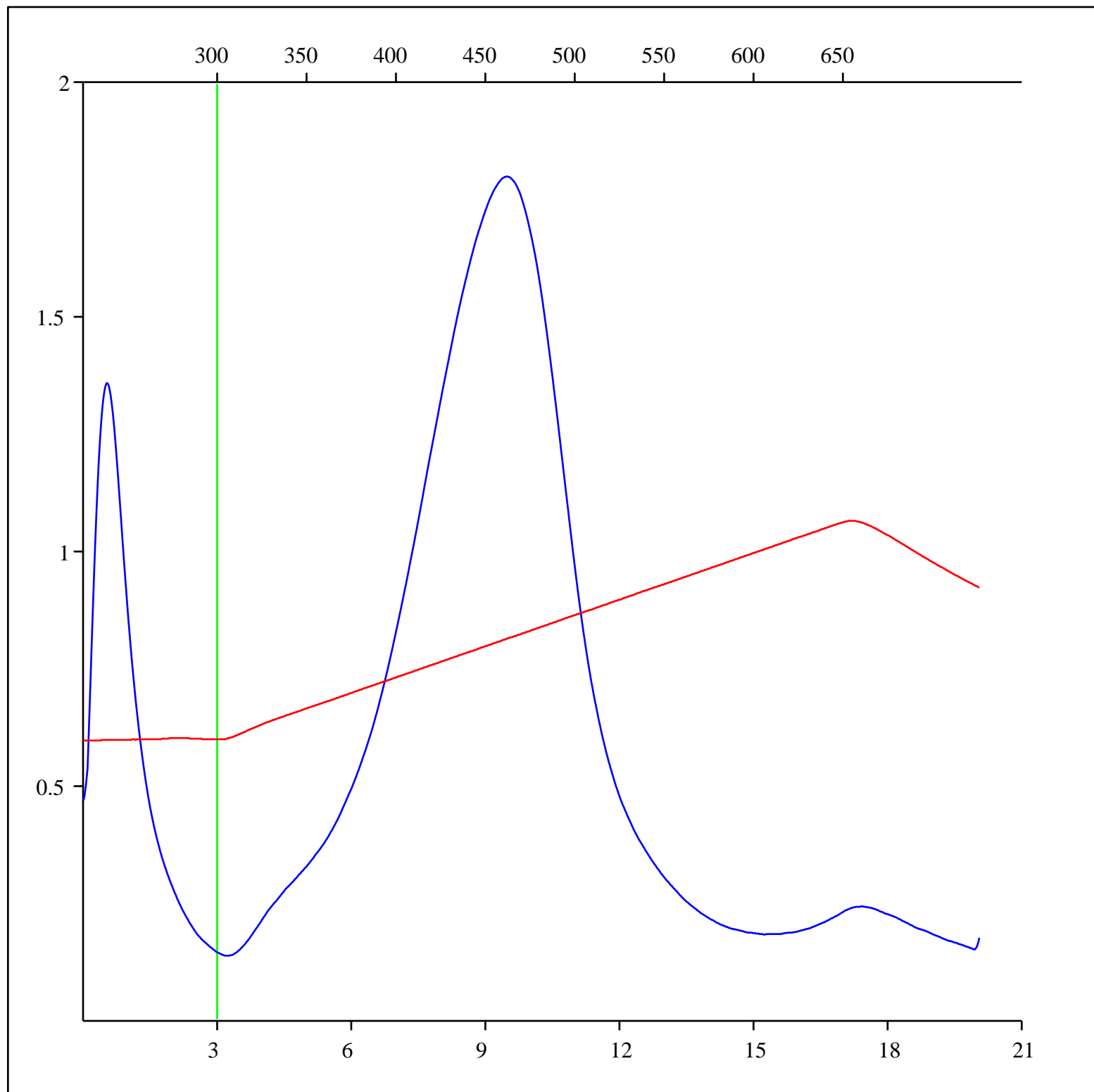
Sample: C-556233  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2265 - 2275 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



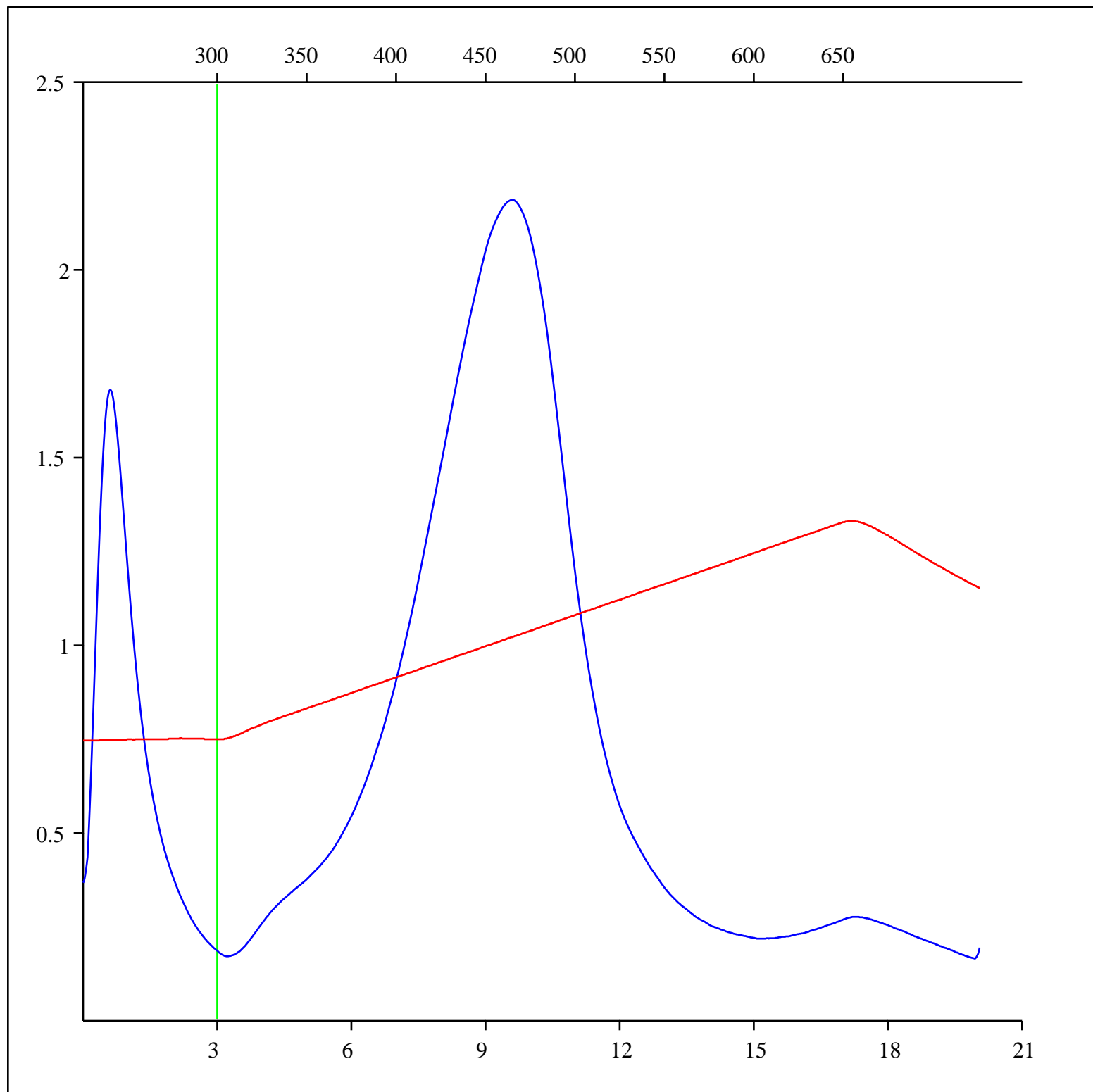
Sample: C-556234  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2275 - 2285 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



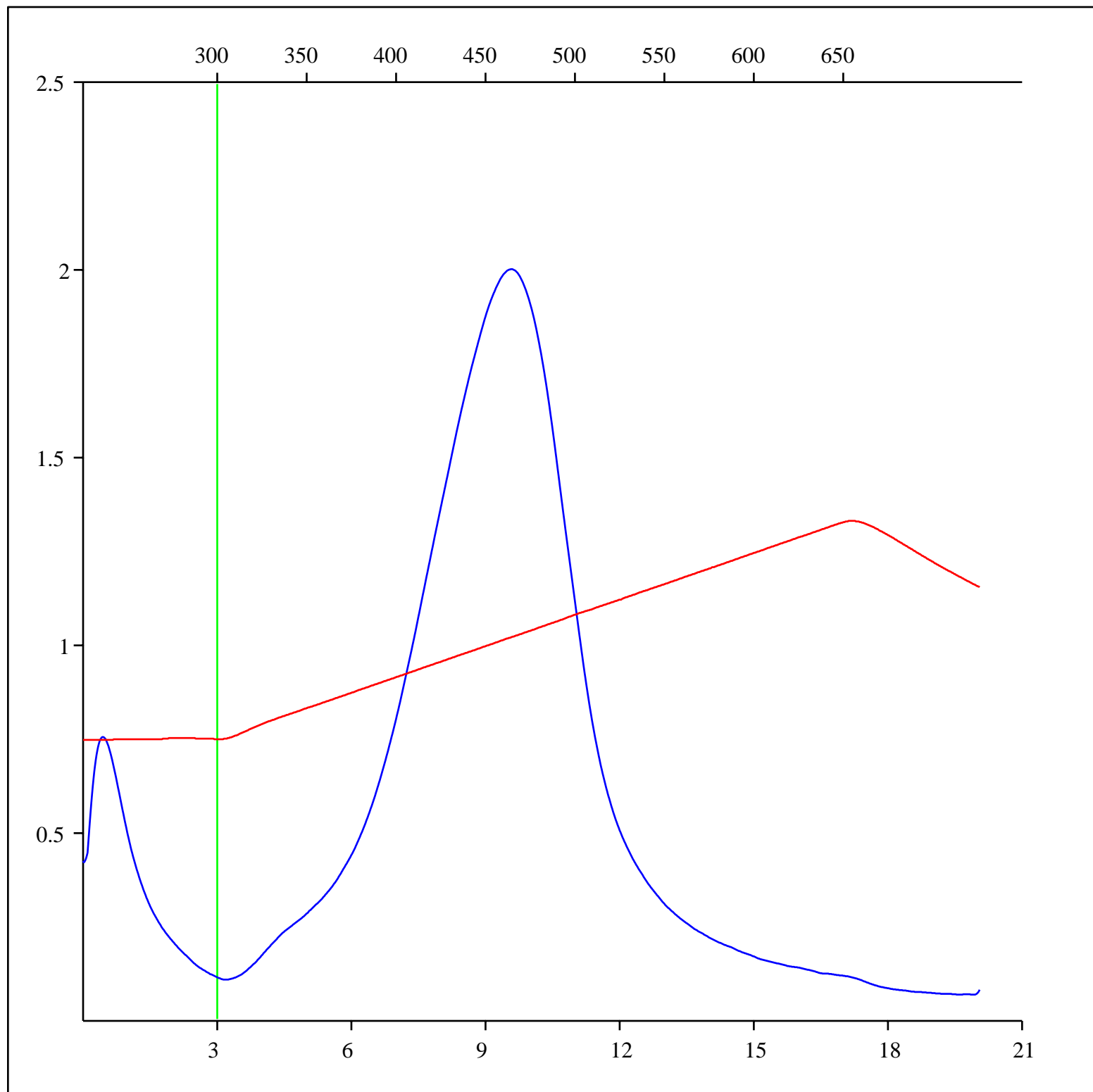
Sample: C-556235  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2285 - 2295 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



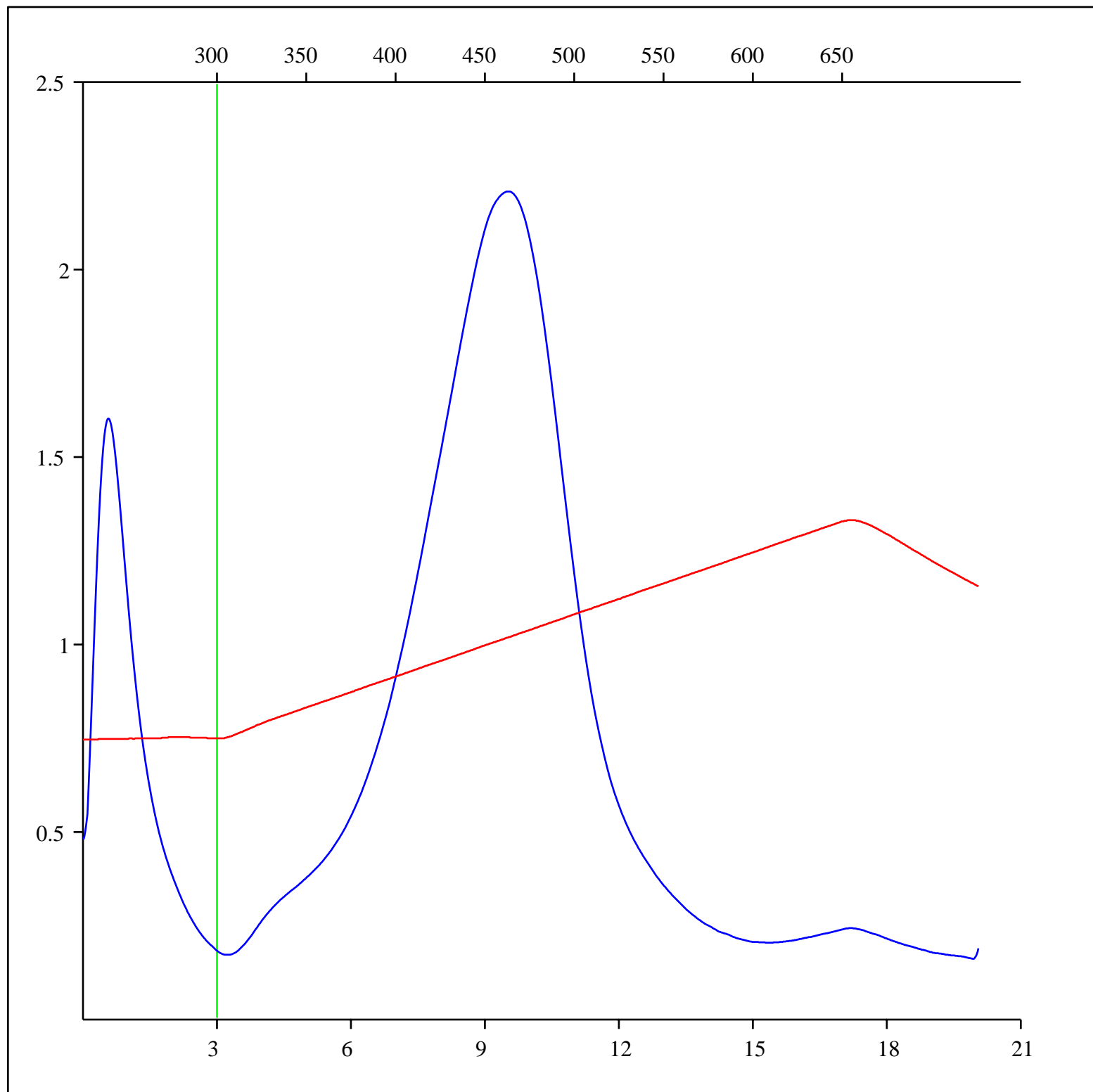
Sample: C-556236  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2290 - 2300 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



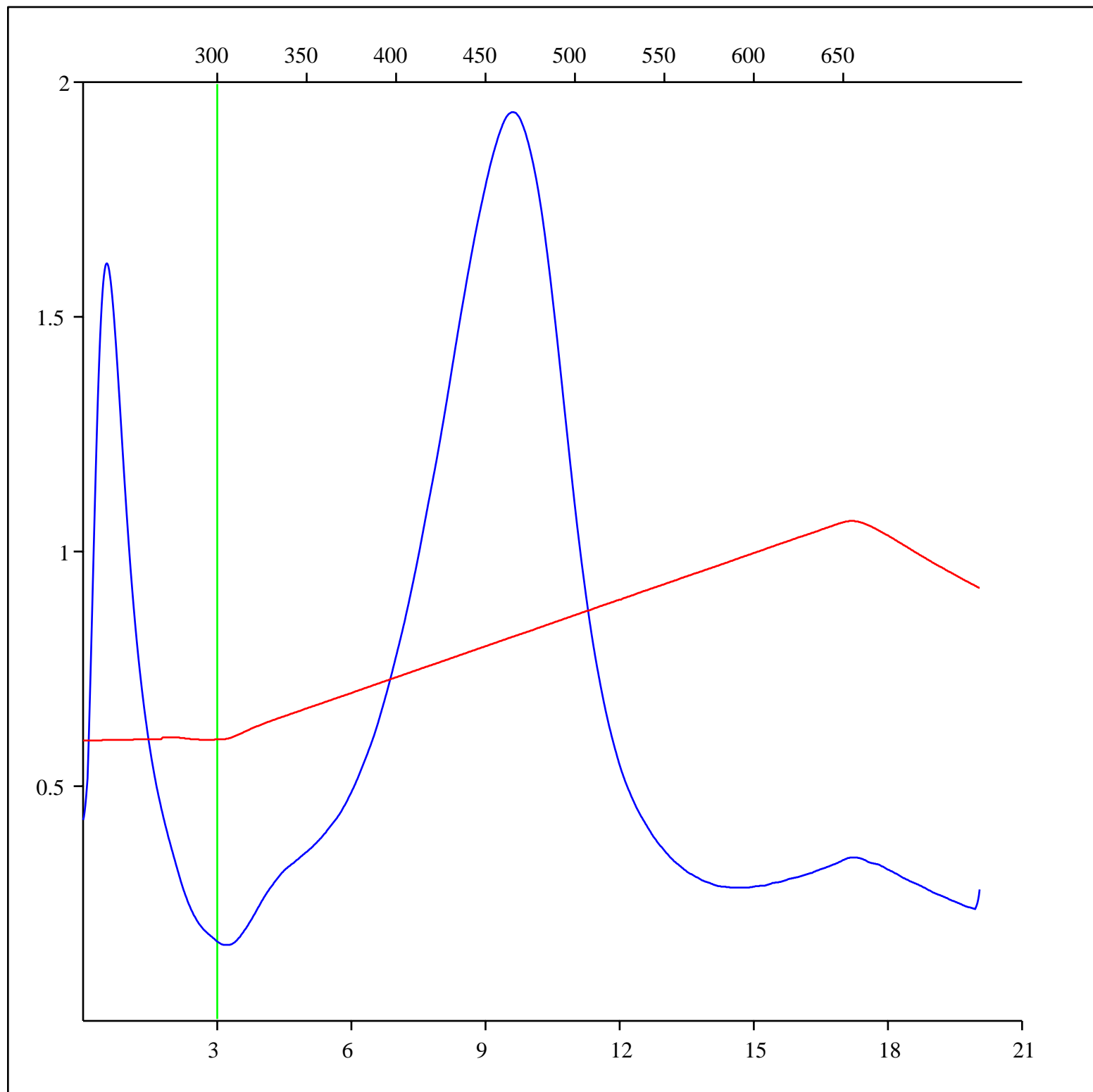
Sample: C-556237  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2295 - 2305 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



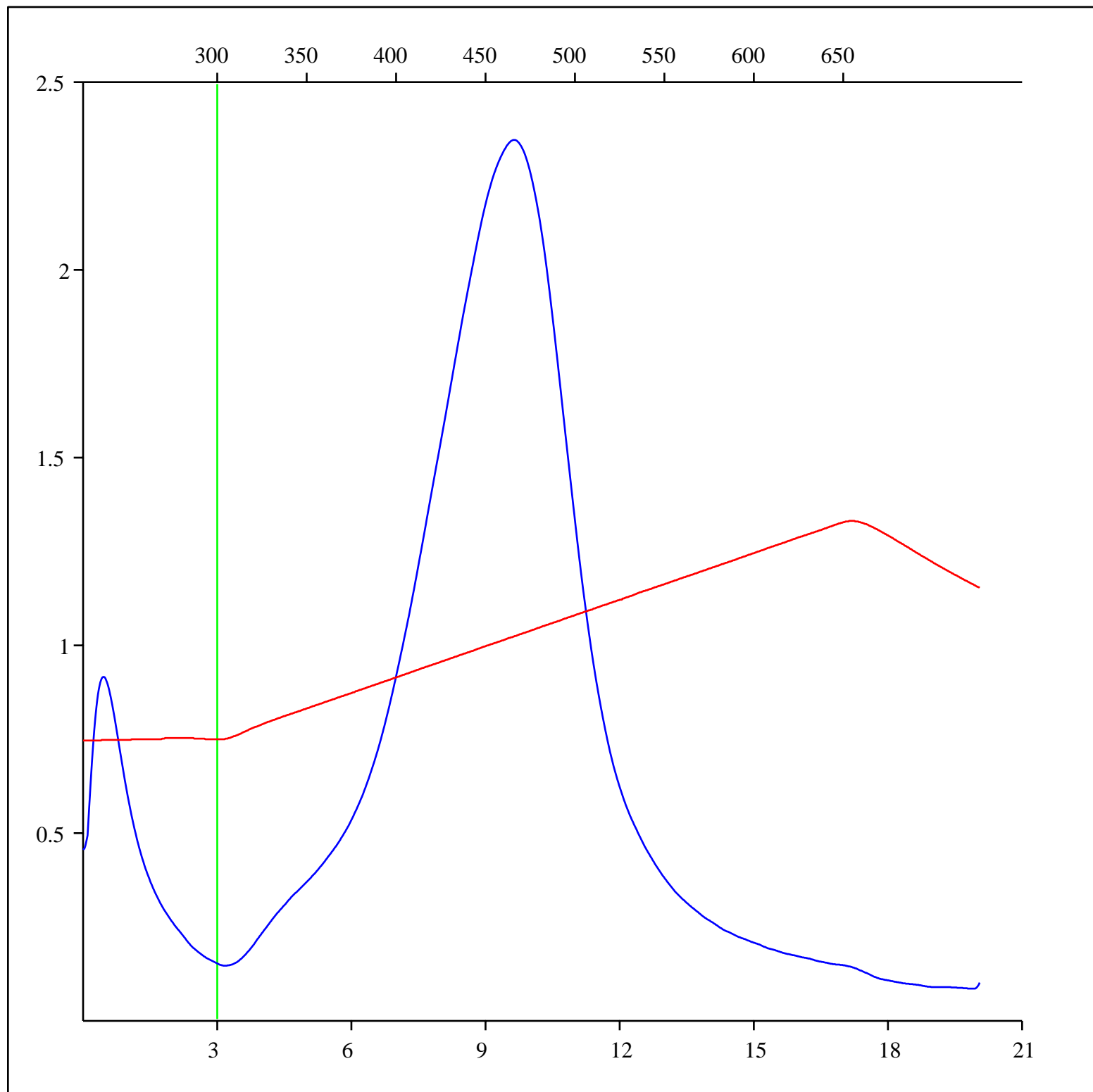
Sample: C-556238  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2305 - 2308 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556239  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2300 - 2310 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

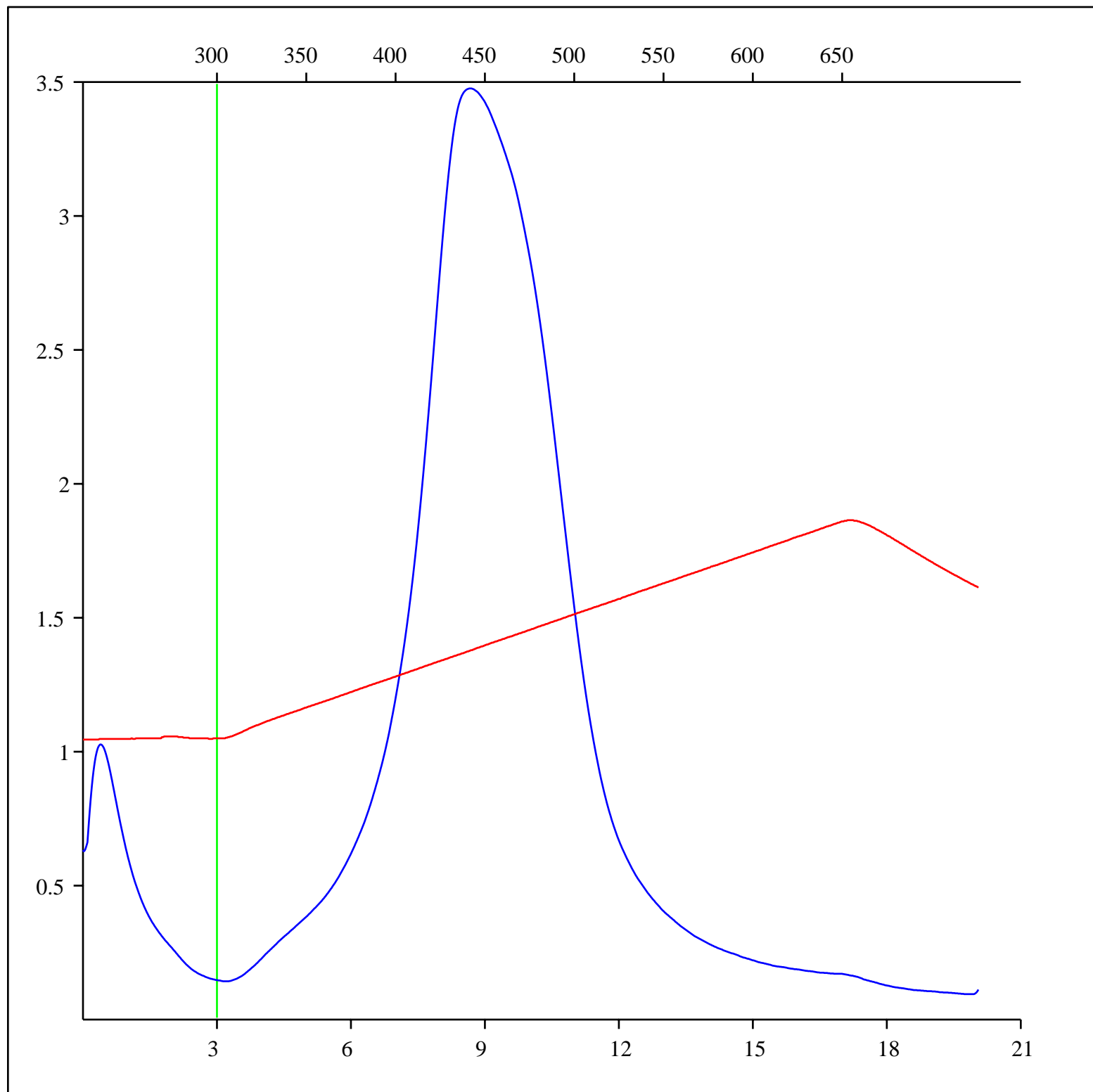
## FID hydrocarbons





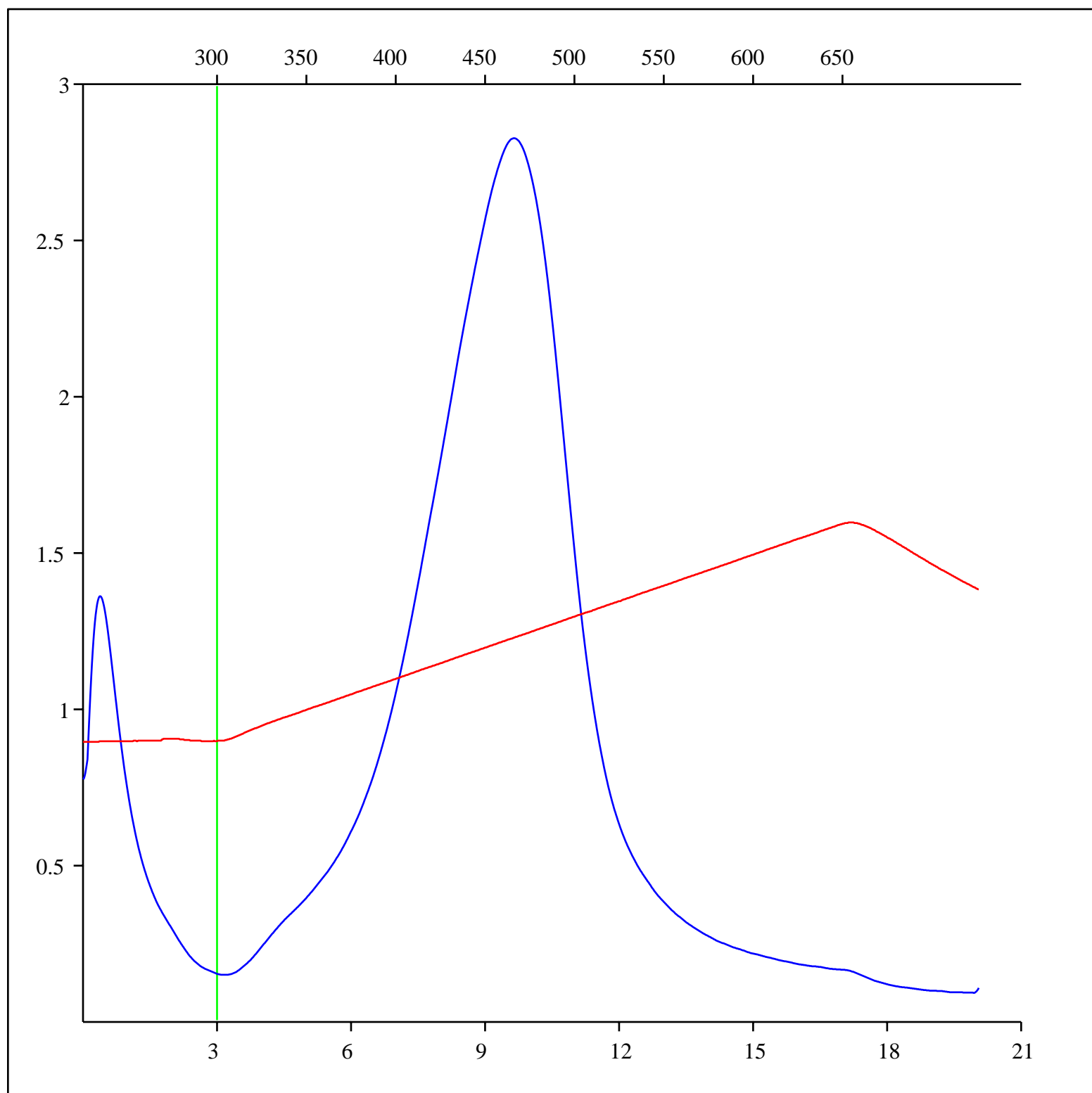
Sample: C-556240  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2310 - 2320 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



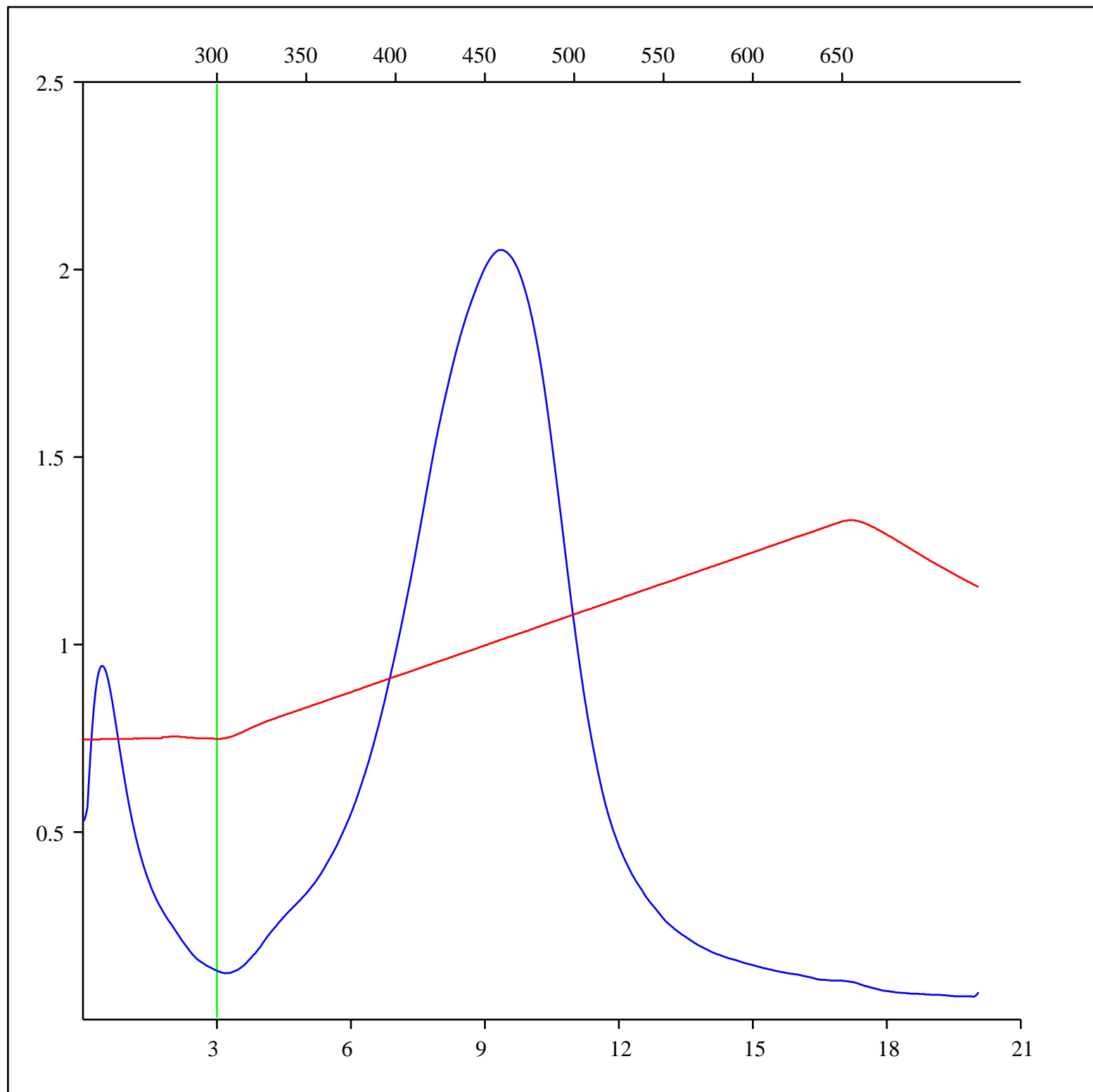
Sample: C-556241  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2320 - 2330 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



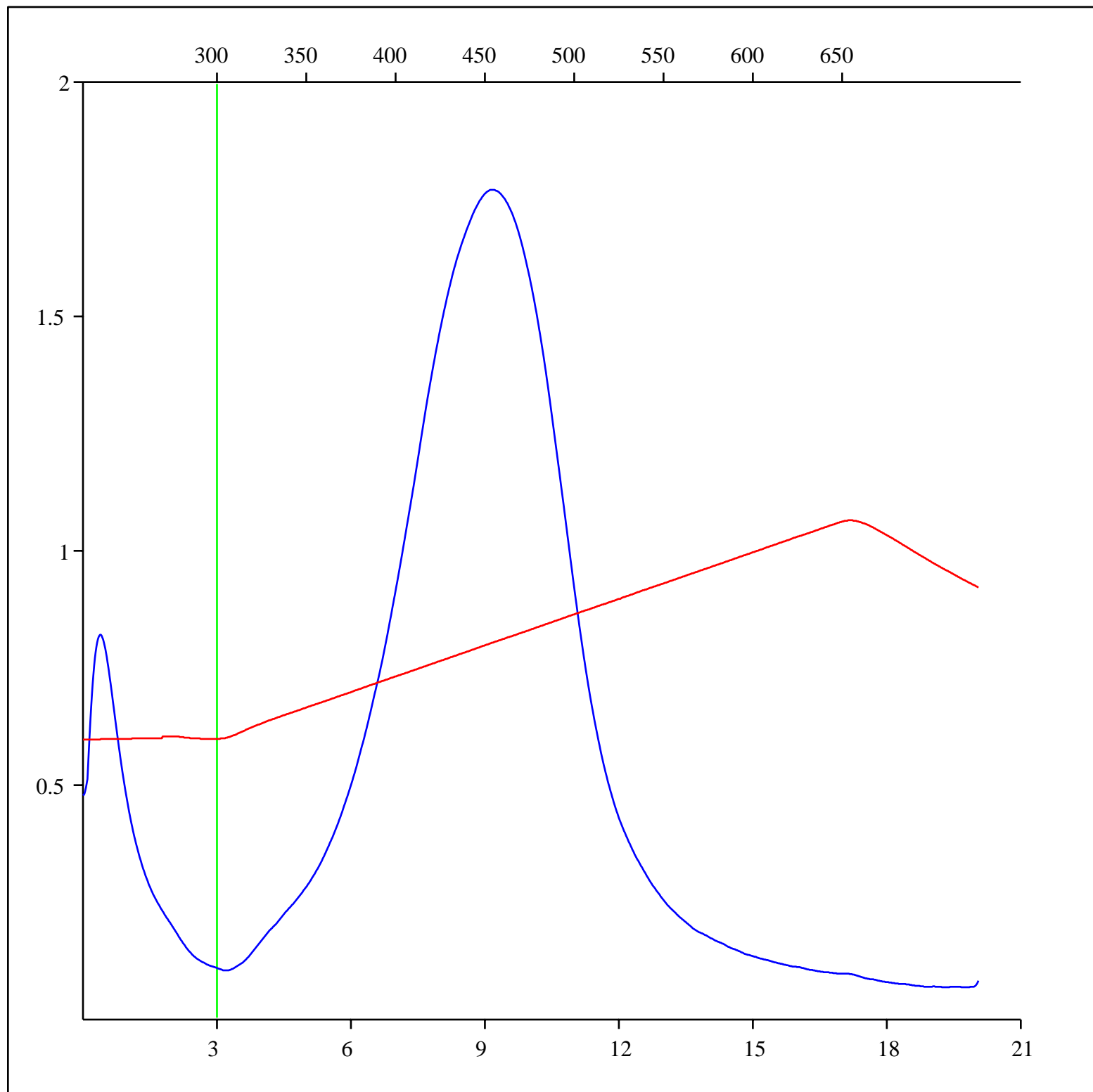
Sample: C-556242  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2330 - 2340 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



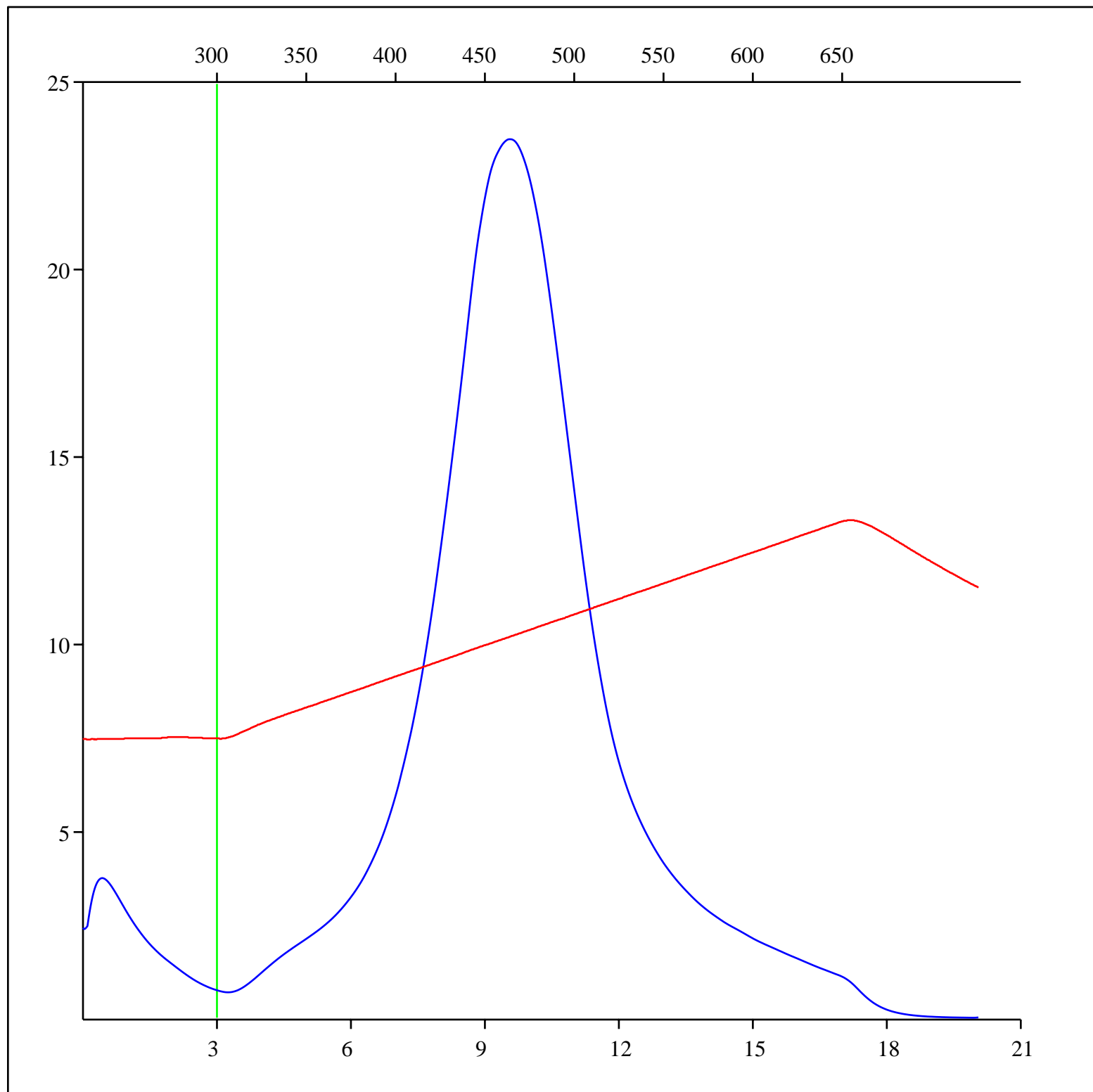
Sample: C-556243  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2340 - 2350 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



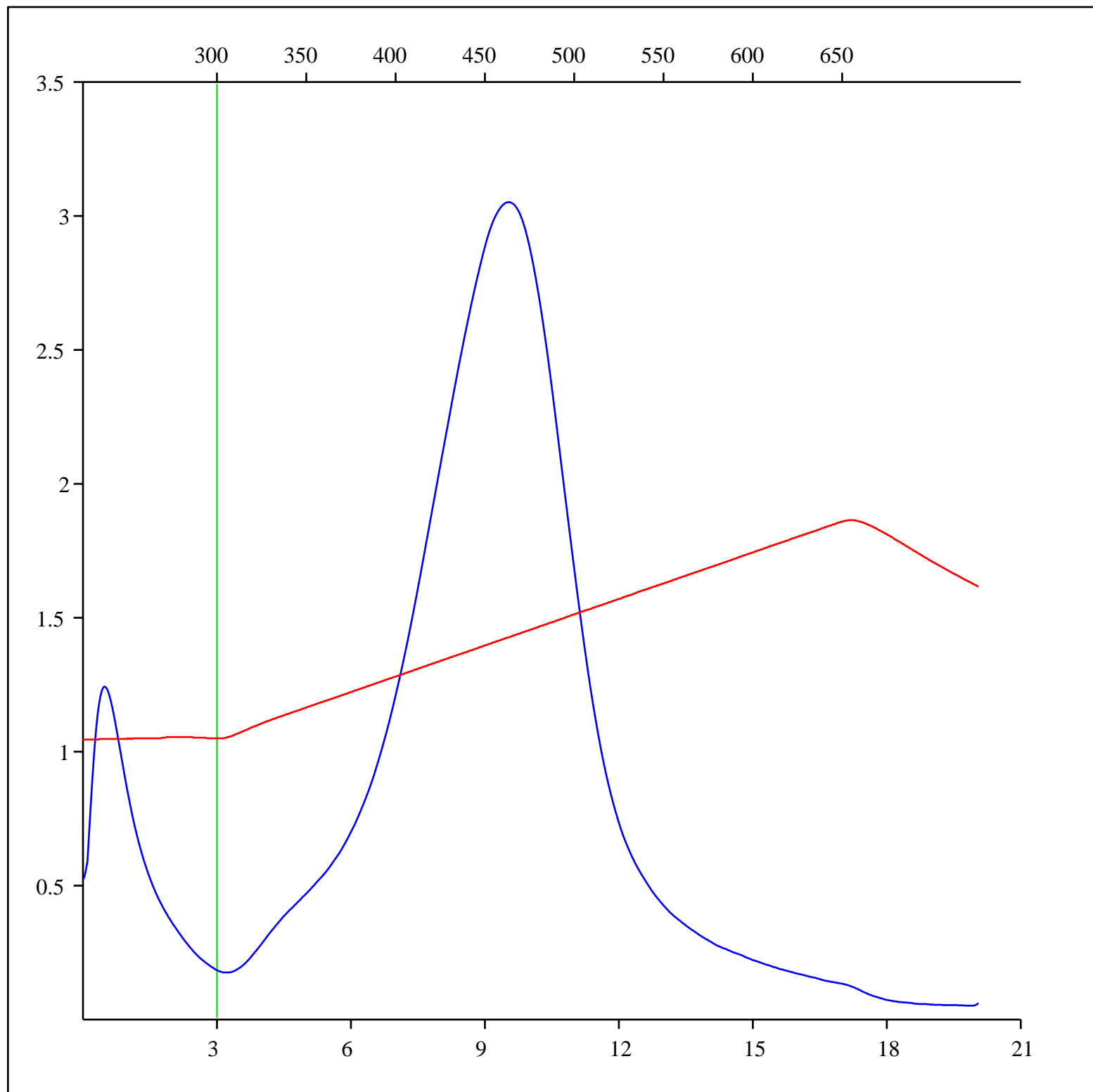
Sample: C-556244  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2353 - 2355 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



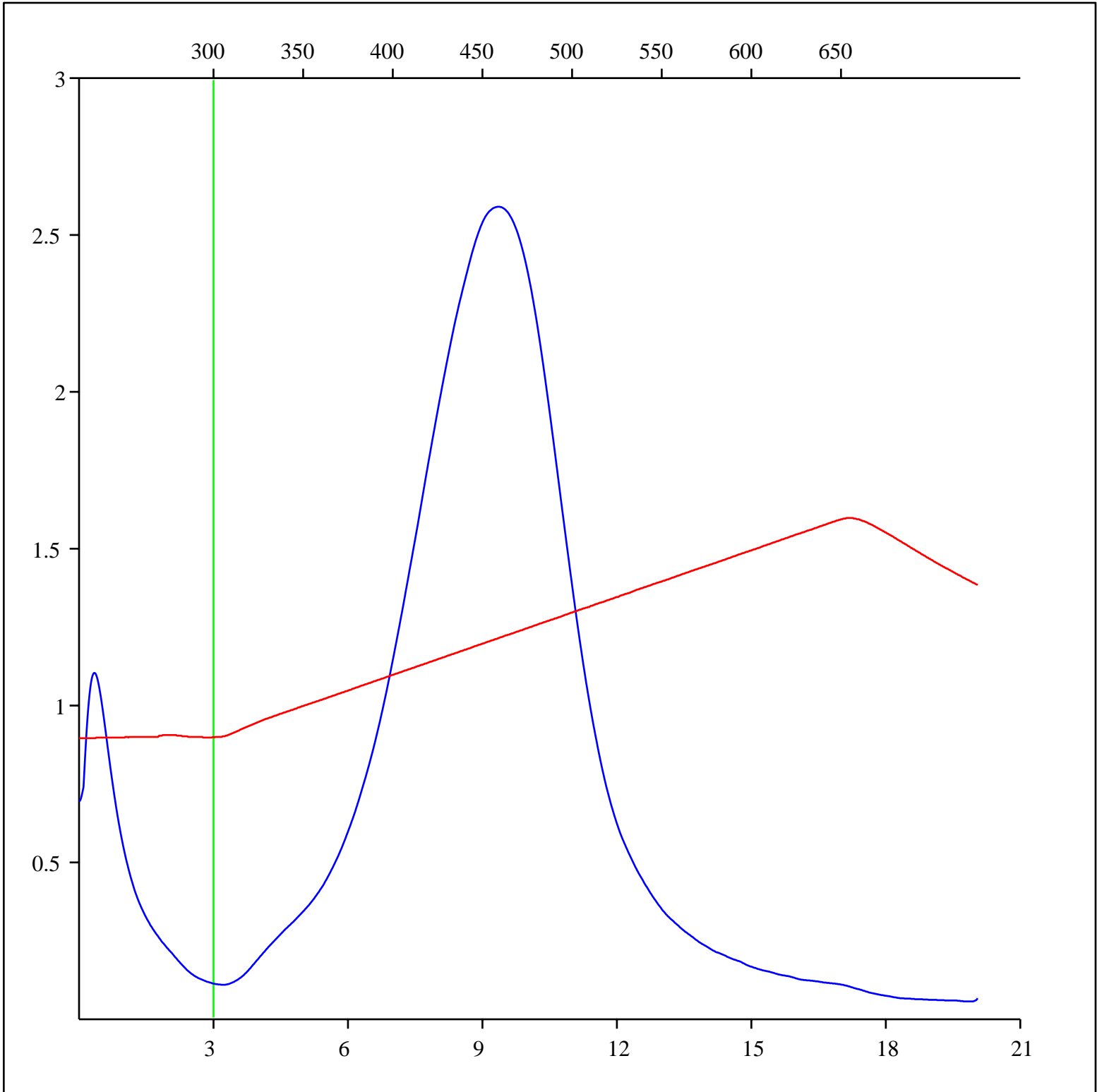
Sample: C-556245  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2350 - 2360 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons



Sample: C-556246  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2360 - 2370 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

### FID hydrocarbons



Sample: C-556247  
Acquisition Date: 16-DEC-2012  
Location: PAKTOA C-60  
Depth: 2370 - 2380 m  
Analysis  
Instrument: RockEval 6  
Data Processing Software: Vinci

## FID hydrocarbons

