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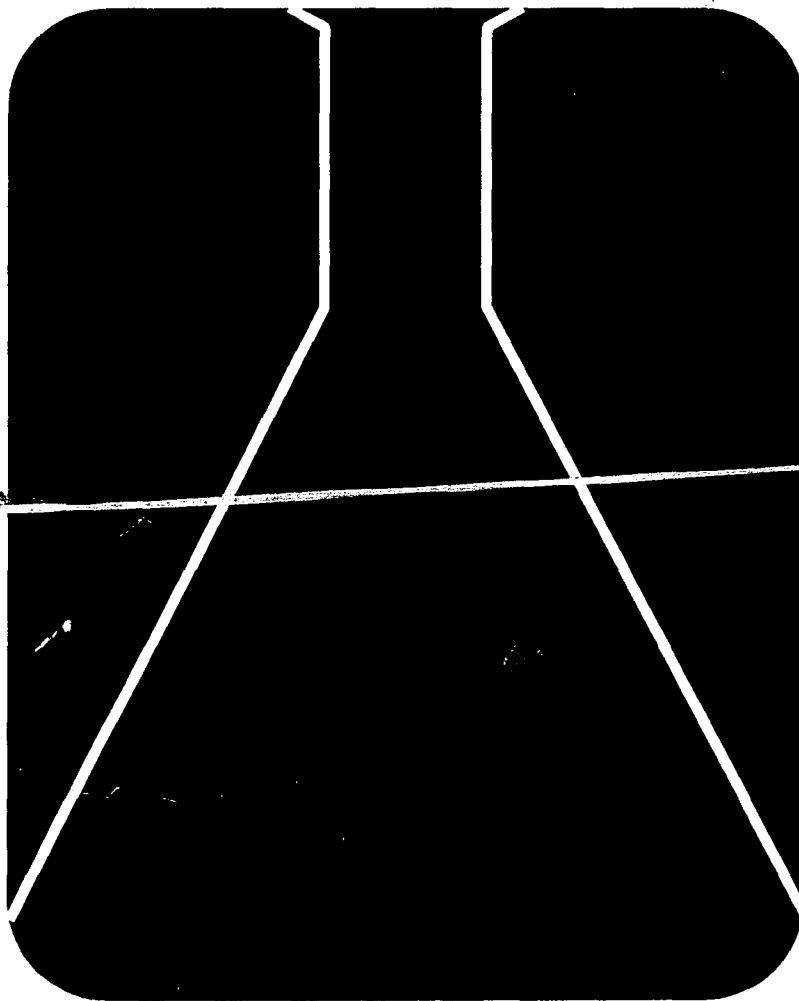
GEOCHEMICAL DATA
Huldra - Well 30/2-2 &
Screening and T

LTEK DOK.SENTER

L. NR. *99894 * 3310*

KODE *Well 30/2-2 N1-57*

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TITLE

Huldra - Well 30/2-2 and 30/2-3 Screening and TE-GC

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62484

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Comments -

Samples were received for hotshot analysis as follows:

NOCS well 30/2-2

Ten samples for Rock-Eval analysis and Thermal extraction-GC

NOCS well 30/2-3

Seventeen samples were received for Rock-Eval analysis and Thermal extraction-GC was performed on 10 samples

Experimental

Rock-Eval Pyrolysis

This analysis was performed using a Rock-Eval IV Pyrolyser. Approximately 100 mg crushed whole rock is analysed. The sample is first heated at 320°C for three min in an atmosphere of helium to release the free hydrocarbons present (S1 peak) and then pyrolysed by increasing the temperature from 320°C to 600°C (temp. gradient 25°C/min) (S2 peak). Both the S1 and S2 yields are measured using a flame ionization detector (FID).

Thermal Extraction - Gas Chromatography

The instrument used for this analysis is a Varian 3400 Gas Chromatograph interfaced to a pyrolysis oven (the pyrolyser). Up to 15 mg of whole rock sample is loaded on the pyrolyser and heated isothermally, at 300°C, for 4 min, during which time thermal extraction of the free hydrocarbons occurs (equivalent to the S1 peak of the Rock-Eval). The released gases pass to a 25 m OV1 column with a liquid nitrogen-cooled trap. The temperature program of the gas chromatograph oven, in which the columns are housed is -10°C to 290°C at a rate of 6°C/min. The column is linked to a FID.

APPENDIX 1 :

Table 1 Analytical Program

	Sample	Sample Type	Table 3 Litho. descr.	Table 4 Vitr. refl.	Table 5 TOC	Table 5 R-E	TE-GC	Table 6 Py-GC m/CD?	Table 7 Kerogen descr.	Table 8 Bulk comp.
30/2-2	3973,00	ccp	sst.			x	x			
	3975,00	ccp	sst.			x	x			
	3978,25	ccp	sst.			x	x			
	3979,40	ccp	sst.			x	x			
	3981,30	ccp	sst.			x	x			
	3983,70	ccp	sst.			x	x			
	3984,50	ccp	sst.			x	x			
	3988,50	ccp	sst.			x	x			
	3990,75	ccp	sst.			x	x			
	4014,10	ccp	sst.			x	x			
30/2-3	3890,05	ccp	sst.			x	x			
	3891,7	ccp	sst.			x	x			
	3895,6	ccp	sst.			x	x			
	3896,9	ccp	sst.			x	x			
	3899,1	ccp	sst.			x	x			
	3900,75	ccp	sst.			x	x			
	3905,45	ccp	sst.			x	x			
	3907,4	ccp	sst.			x	x			
	3920,18	ccp	sst.			x				
	3921,98	ccp	sst.			x	x			
	3925,8	ccp	sst.			x	x			
	3930,95	ccp	sst.			x				
	3954,75	ccp	sst.			x				
	3960,52	ccp	sst.			x				
	3965	ccp	sst.			x				
	3973,8	ccp	sst.			x				
	3982	ccp	sst.			x				
		Total	0	0	0	27	20	0	0	0

Table 5A: Rock-Eval table for well NOCS 30/2-2

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Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3973.00	ccp		bulk	1.05	0.80	-	-	-	-	-	1.9	0.57	431	0221-0B
3975.00	ccp		bulk	0.67	1.50	-	-	-	-	-	2.2	0.31	460	0216-0B
3978.25	ccp		bulk	0.40	0.40	-	-	-	-	-	0.8	0.50	454	0217-0B
3979.40	ccp		bulk	0.68	0.94	-	-	-	-	-	1.6	0.42	449	0224-0B
3981.30	ccp		bulk	0.25	0.40	-	-	-	-	-	0.7	0.38	444	0218-0B
3983.70	ccp		bulk	0.52	0.56	-	-	-	-	-	1.1	0.48	460	0225-0B
3984.50	ccp		bulk	0.46	0.34	-	-	-	-	-	0.8	0.57	458	0219-0B
3988.50	ccp		bulk	0.31	0.27	-	-	-	-	-	0.6	0.53	399	0220-0B
3990.75	ccp		bulk	0.22	0.39	-	-	-	-	-	0.6	0.36	464	0222-0B
4014.10	ccp		bulk	0.54	1.50	-	-	-	-	-	2.0	0.26	453	0223-0B

Table 5B: Rock-Eval table for well BLACK VEN MARL

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1.00	n/a		bulk	0.35	19.00	-	-	-	-	-	19.4	0.02	420	0212-0B
2.00	n/a		bulk	0.31	18.83	-	-	-	-	-	19.1	0.02	423	0213-0B

Table 5A: Rock-Eval table for well NOCS 30/2-3

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3890.05	ccp		bulk	1.31	0.89	-	-	-	-	-	2.2	0.60	429	0057-0B
3891.70	ccp		bulk	0.85	0.58	-	-	-	-	-	1.4	0.59	410	0053-0B
3895.60	ccp		bulk	1.06	0.68	-	-	-	-	-	1.7	0.61	419	0054-0B
3896.90	ccp		bulk	0.52	0.27	-	-	-	-	-	0.8	0.66	382	0055-0B
3899.10	ccp		bulk	1.38	0.88	-	-	-	-	-	2.3	0.61	403	0056-0B
3900.75	ccp		bulk	1.00	0.67	-	-	-	-	-	1.7	0.60	378	0058-0B
3905.45	ccp		bulk	0.39	0.47	-	-	-	-	-	0.9	0.45	427	0059-0B
3907.40	ccp		bulk	0.49	0.62	-	-	-	-	-	1.1	0.44	377	0060-0B
3920.18	ccp		bulk	0.14	0.22	-	-	-	-	-	0.4	0.39	378	0061-0B
3921.98	ccp		bulk	0.39	0.55	-	-	-	-	-	0.9	0.41	438	0062-0B
3925.80	ccp		bulk	0.26	0.63	-	-	-	-	-	0.9	0.29	444	0063-0B
3930.95	ccp		bulk	0.29	0.39	-	-	-	-	-	0.7	0.43	440	0064-0B
3954.75	ccp		bulk	0.28	0.34	-	-	-	-	-	0.6	0.45	428	0065-0B
3960.52	ccp		bulk	0.09	0.09	-	-	-	-	-	0.2	0.50	432	0066-0B
3965.00	ccp		bulk	0.29	0.35	-	-	-	-	-	0.6	0.45	442	0067-0B
3973.80	ccp		bulk	0.34	0.39	-	-	-	-	-	0.7	0.47	454	0068-0B

Table 5A: Rock-Eval table for well NOCS 30/2-3

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3982.00	ccp		bulk	0.43	0.55	-	-	-	-	-	1.0	0.44	447	0069-0B

Table 5B: Rock-Eval table for well BLACK VEN MARL

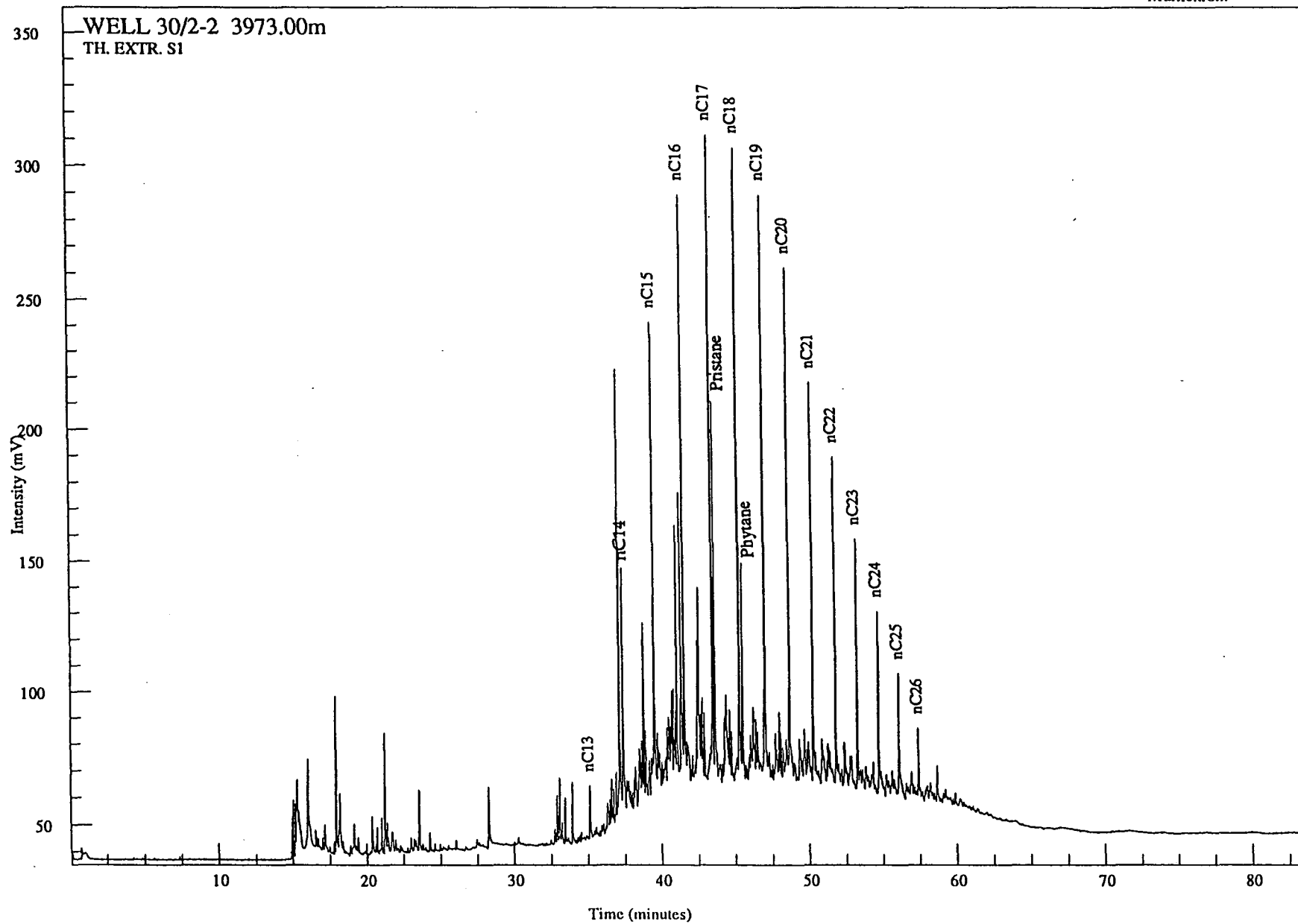
Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1.00	n/a		bulk	0.35	19.00	-	-	-	-	-	19.4	0.02	420	0212-0B
2.00	n/a		bulk	0.31	18.83	-	-	-	-	-	19.1	0.02	423	0213-0B

APPENDIX 2 :

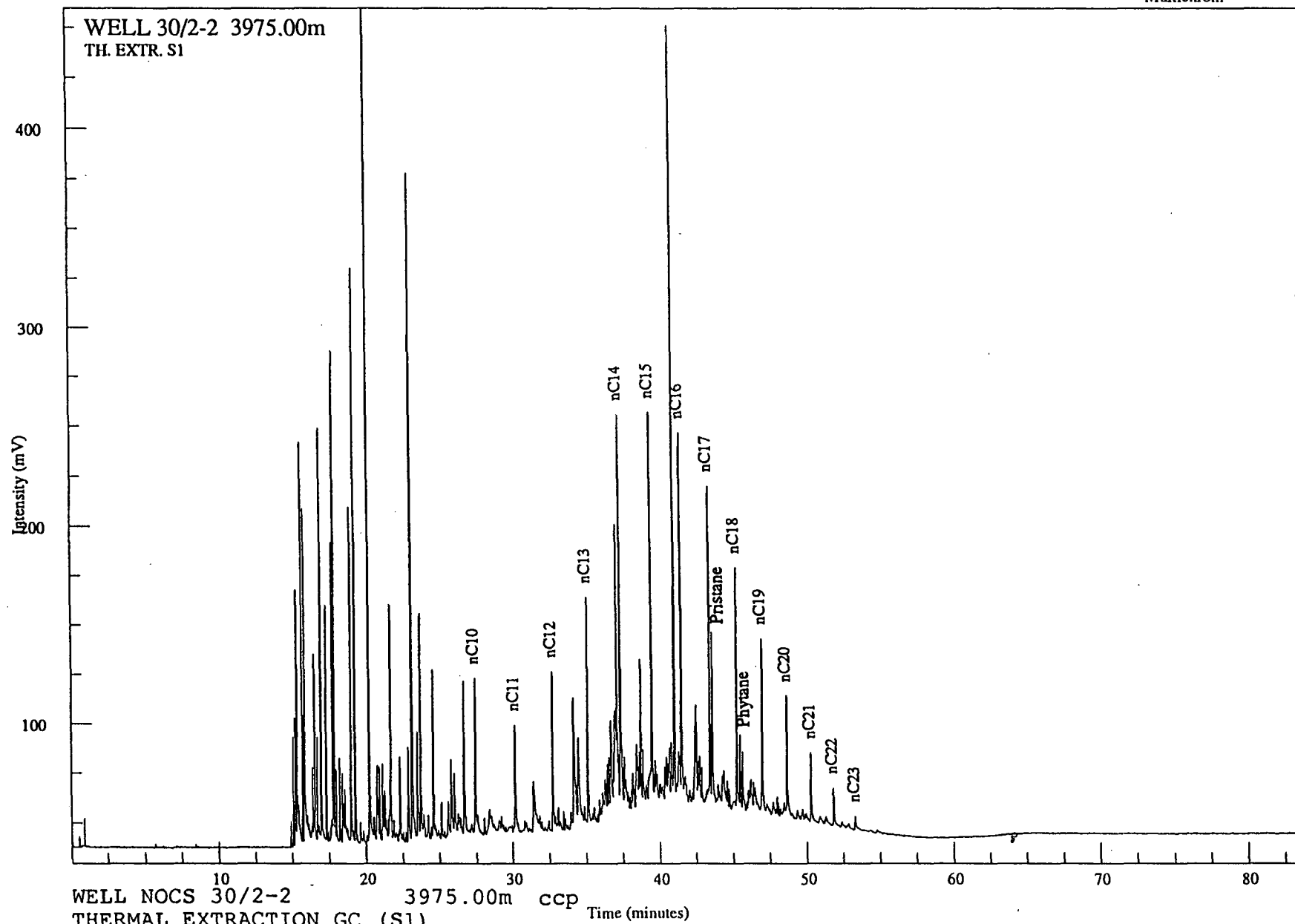
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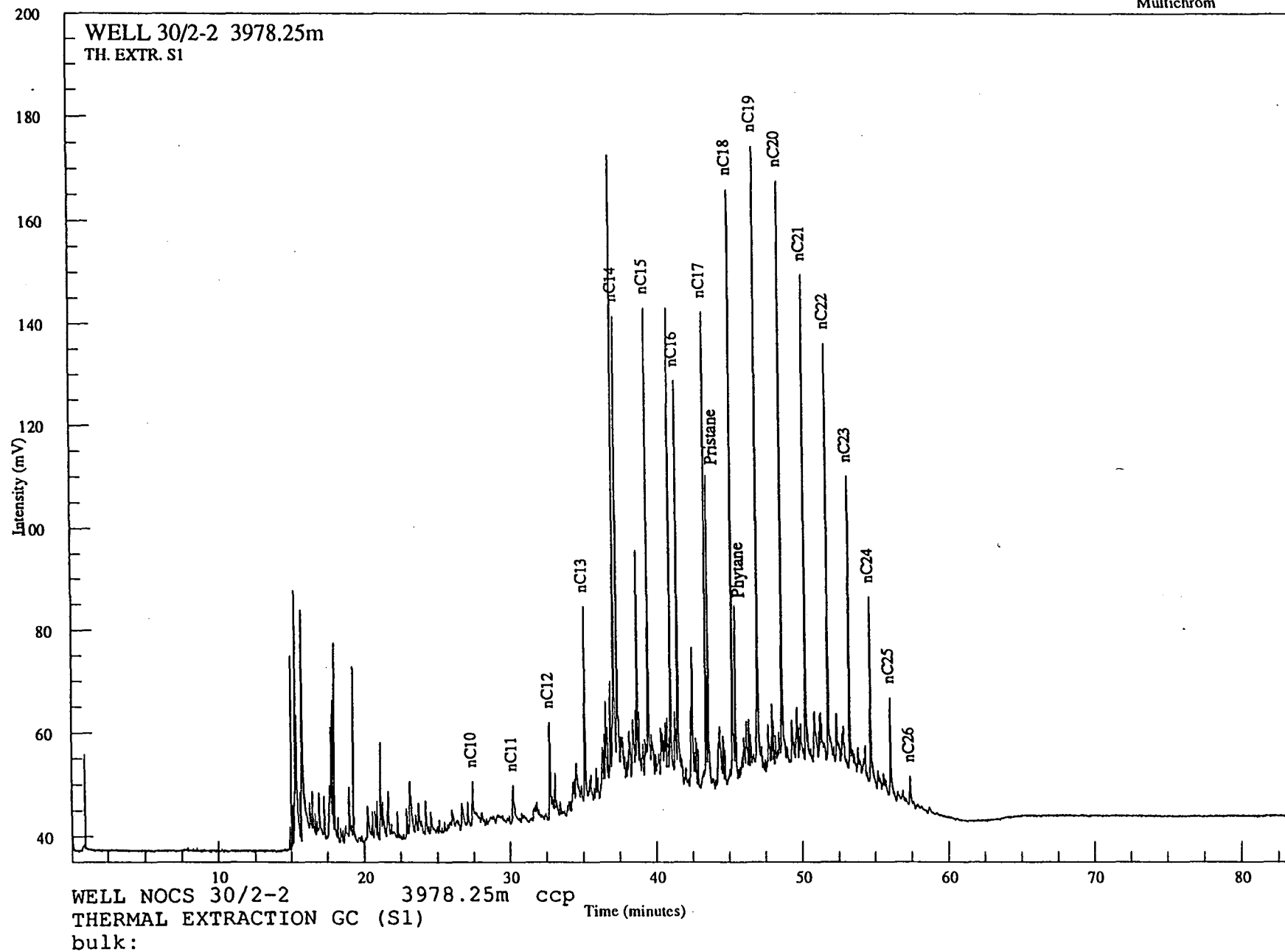
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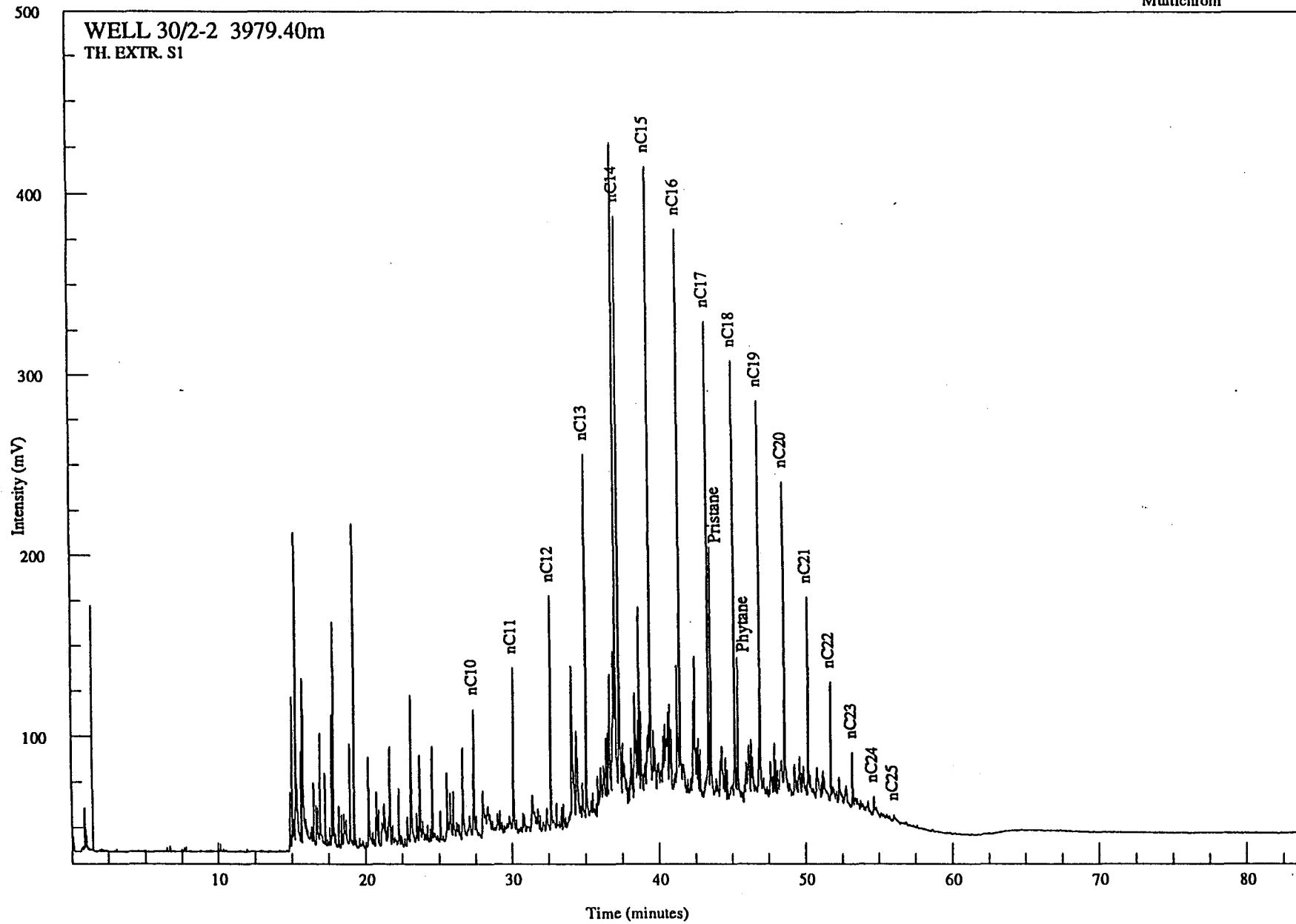
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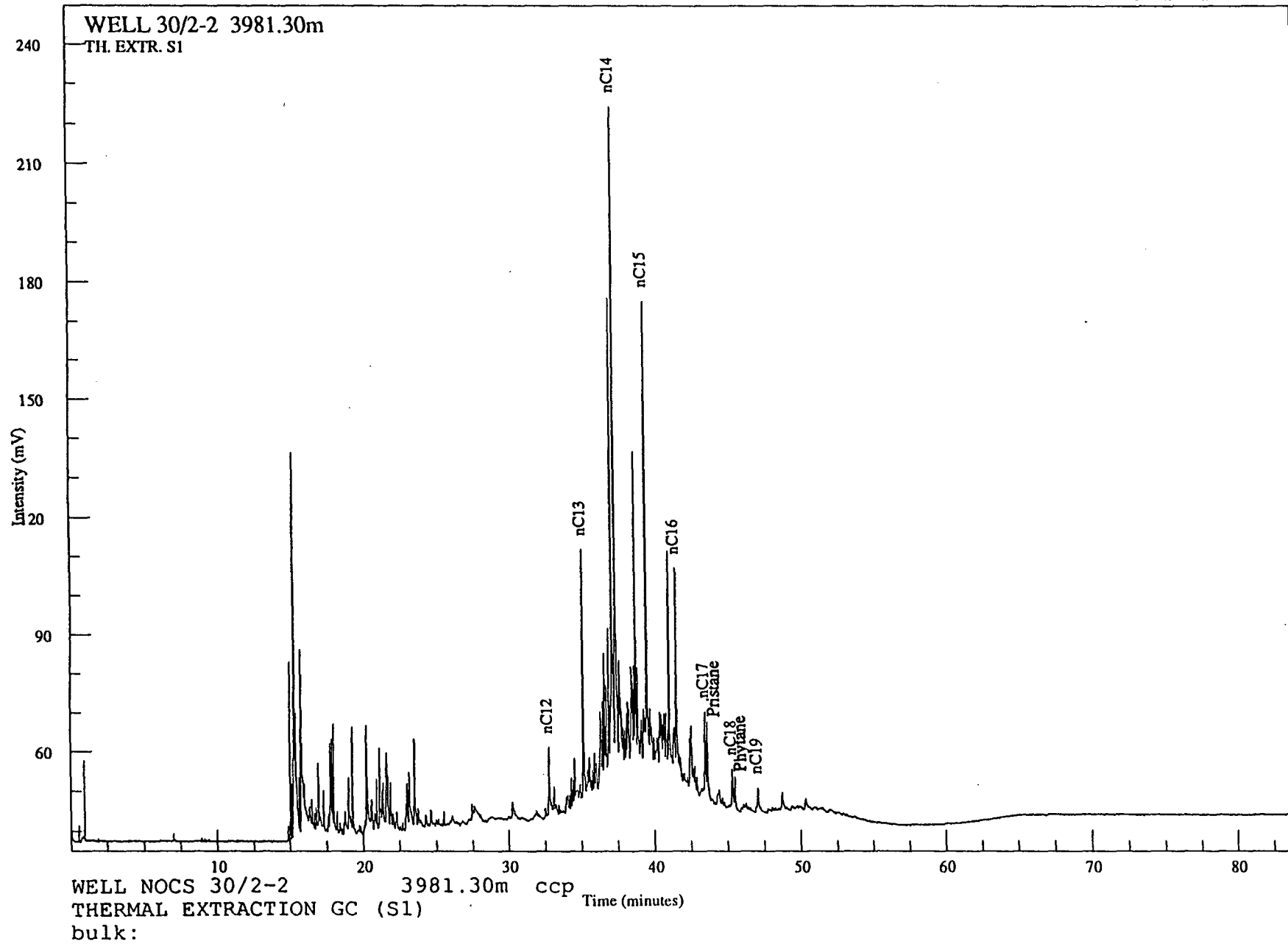
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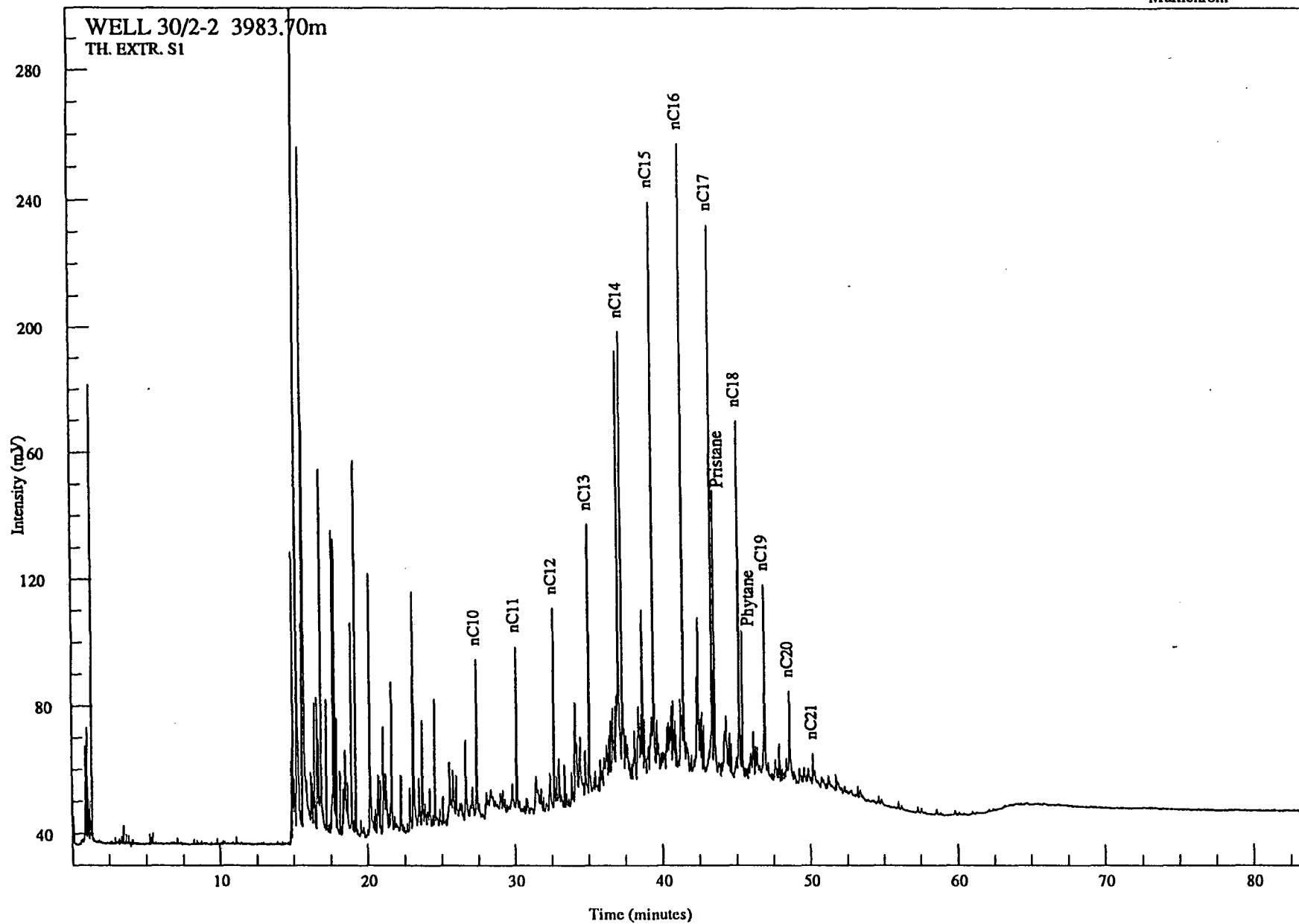
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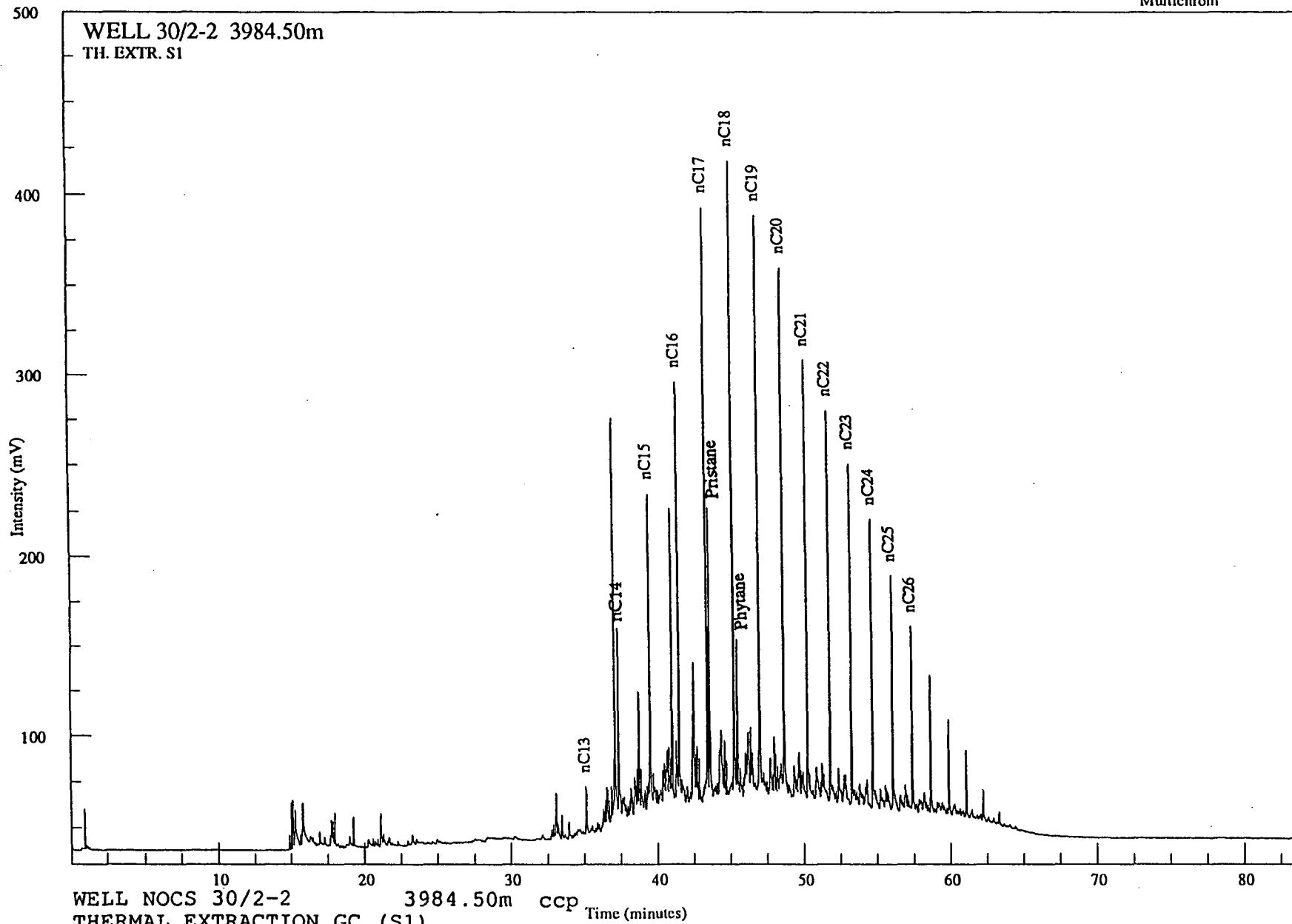
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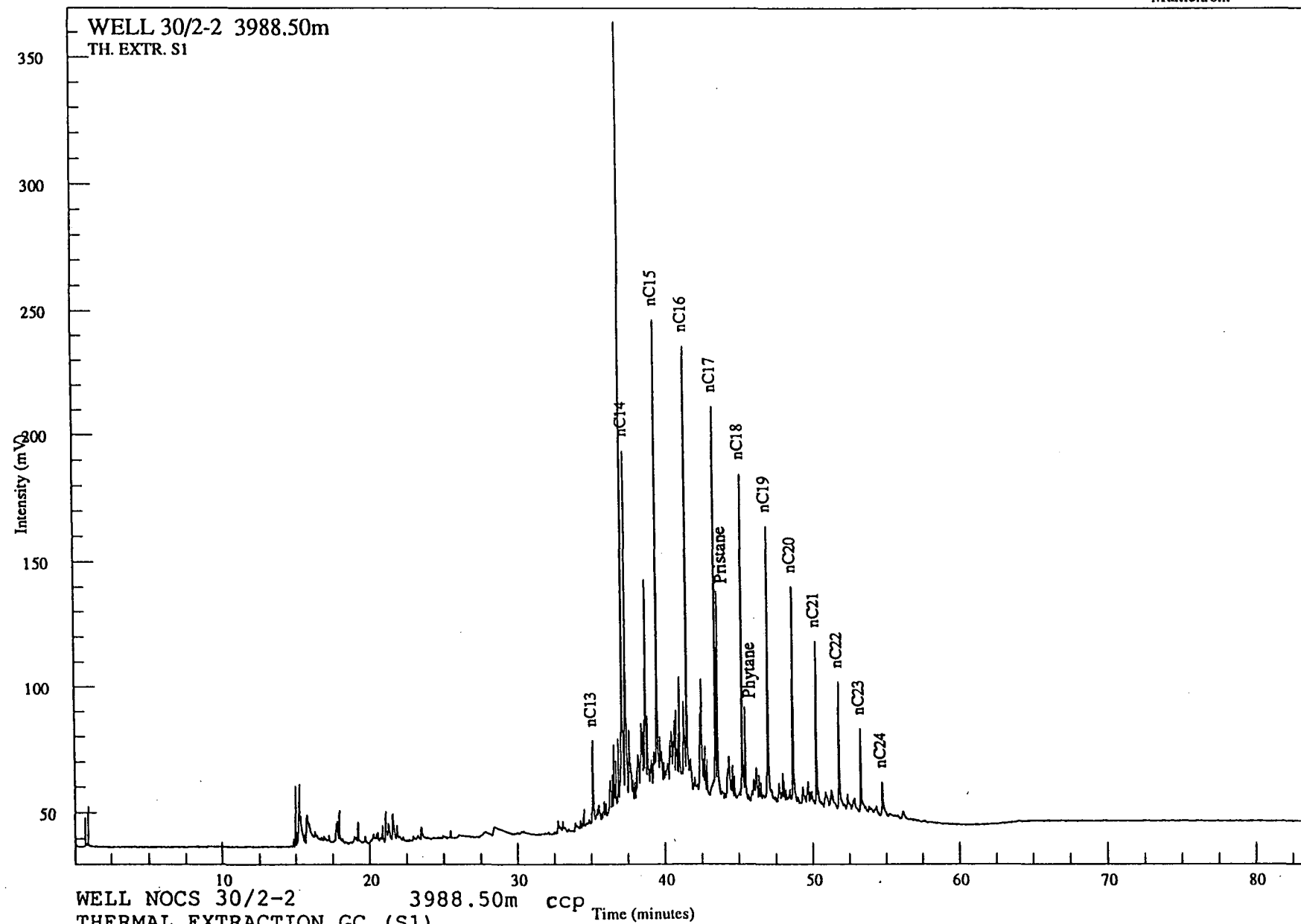
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WELL NOCS 30/2-2 3984.50m ccp
THERMAL EXTRACTION GC (S1)
bulk:

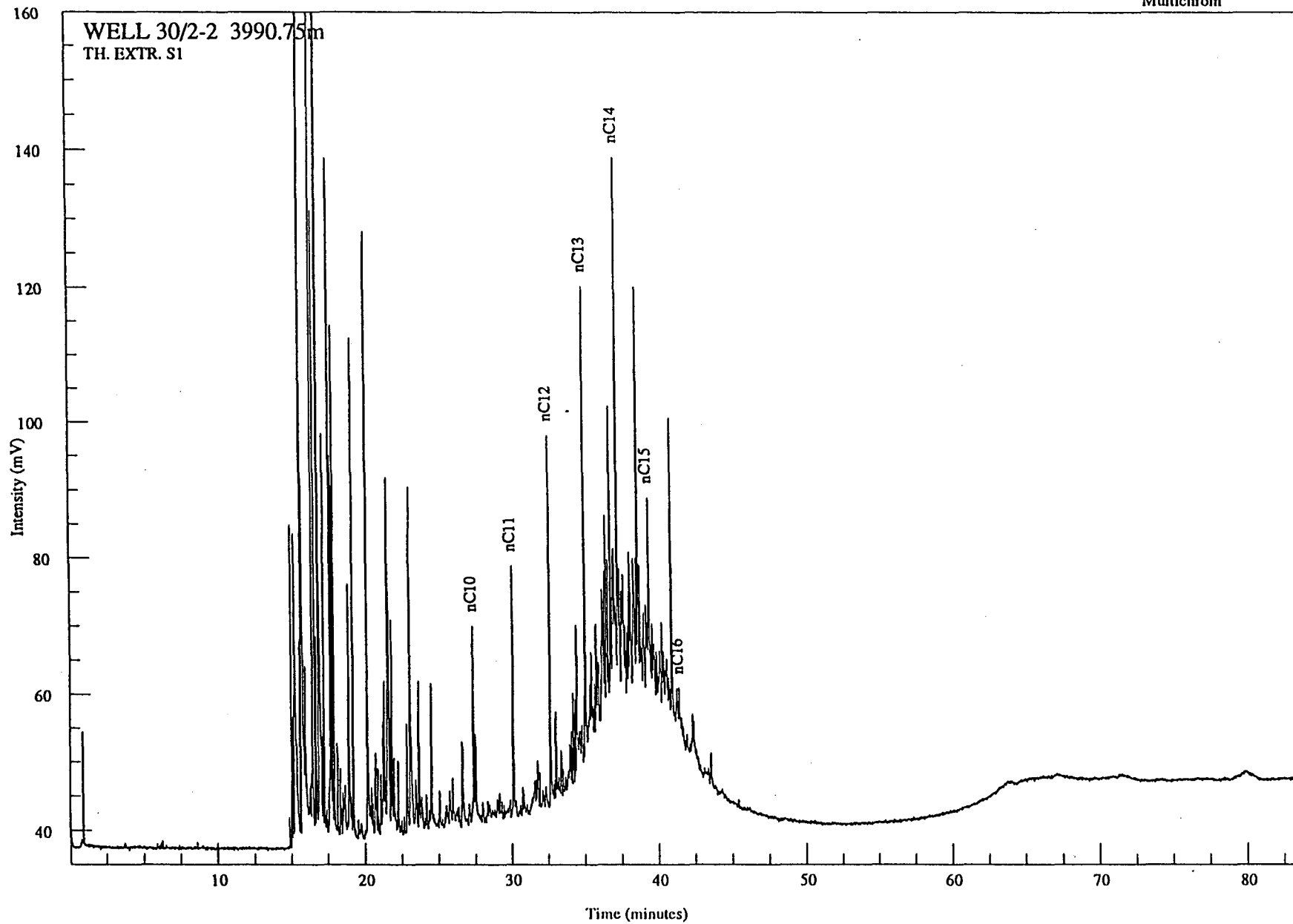
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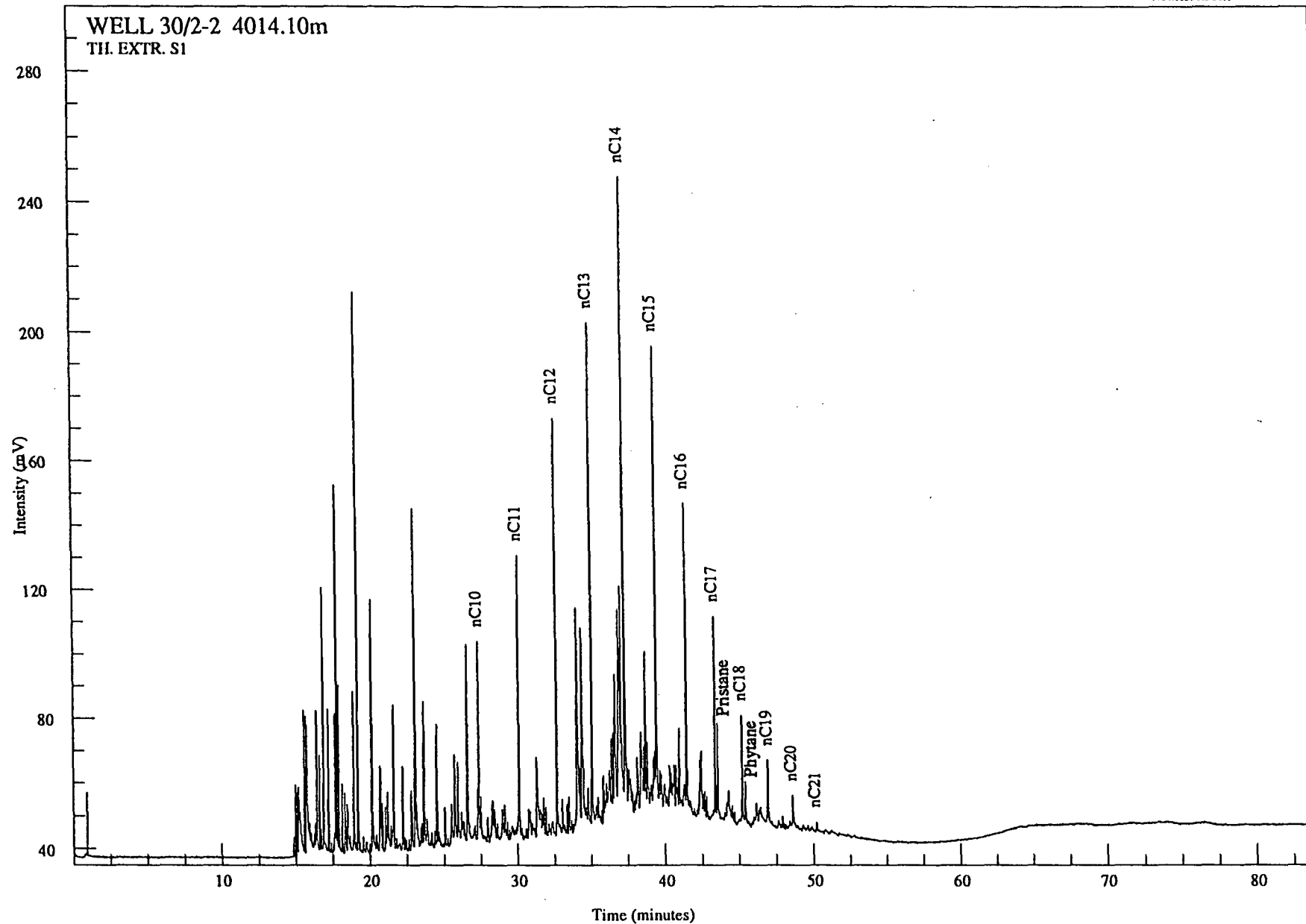
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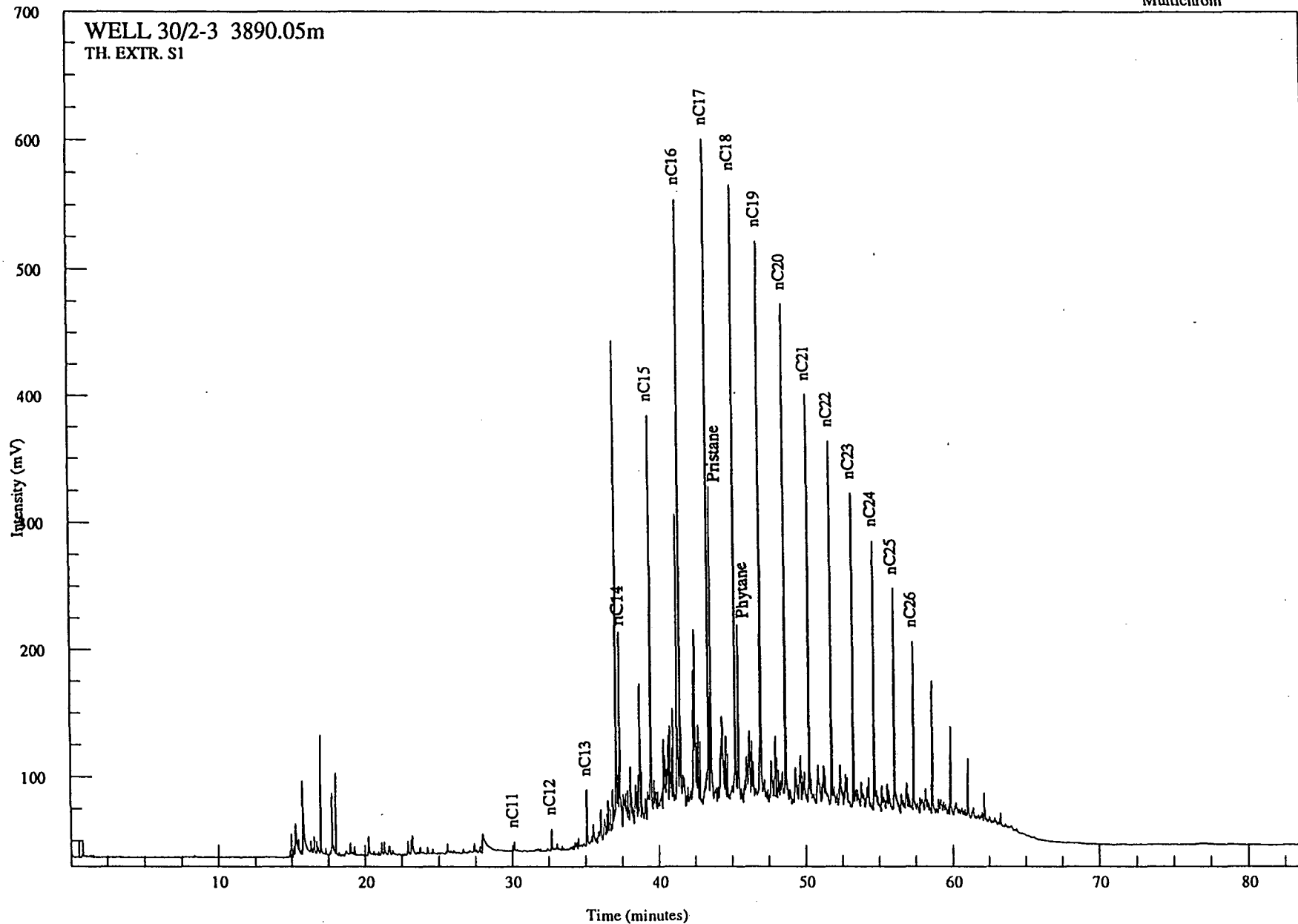
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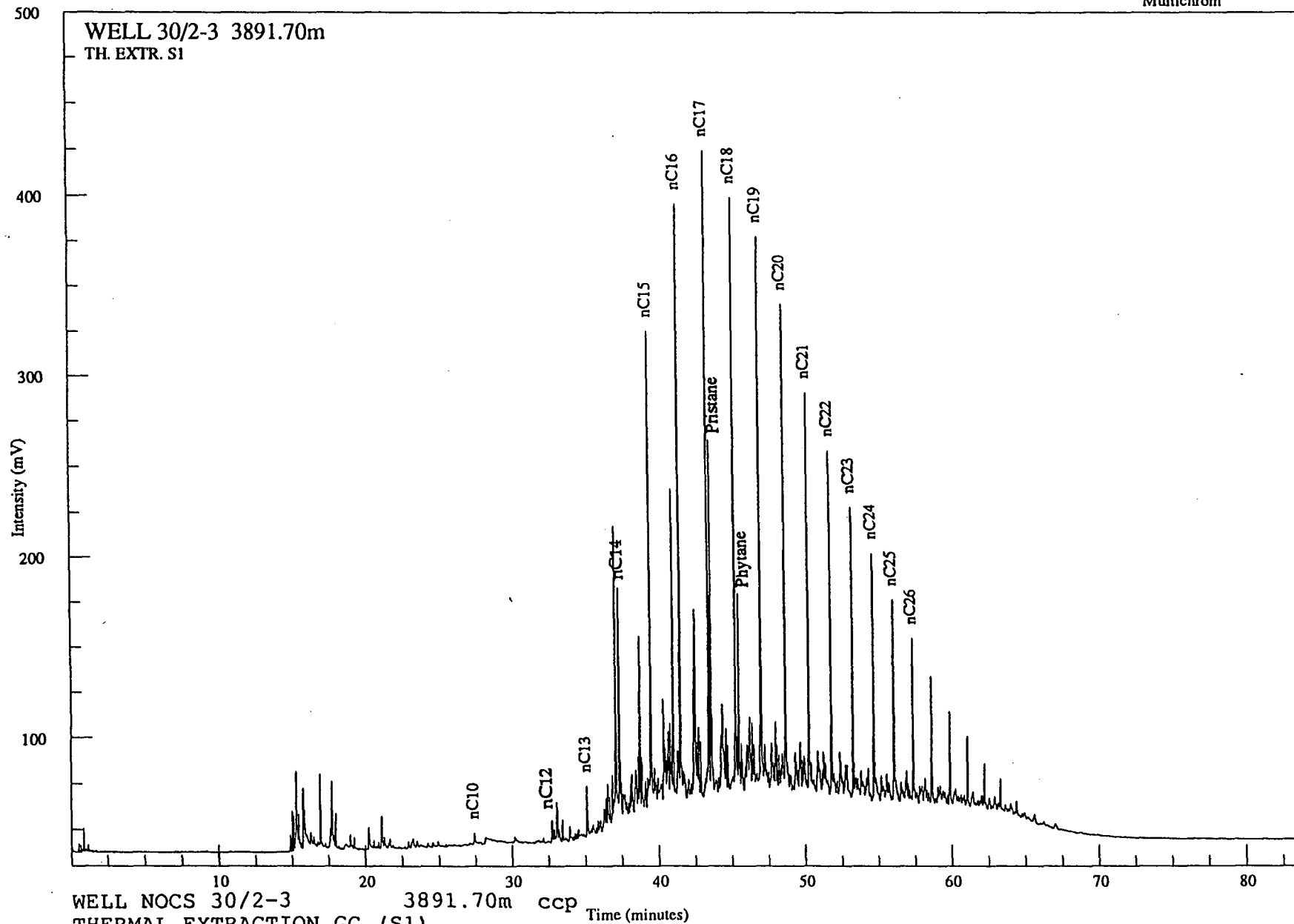
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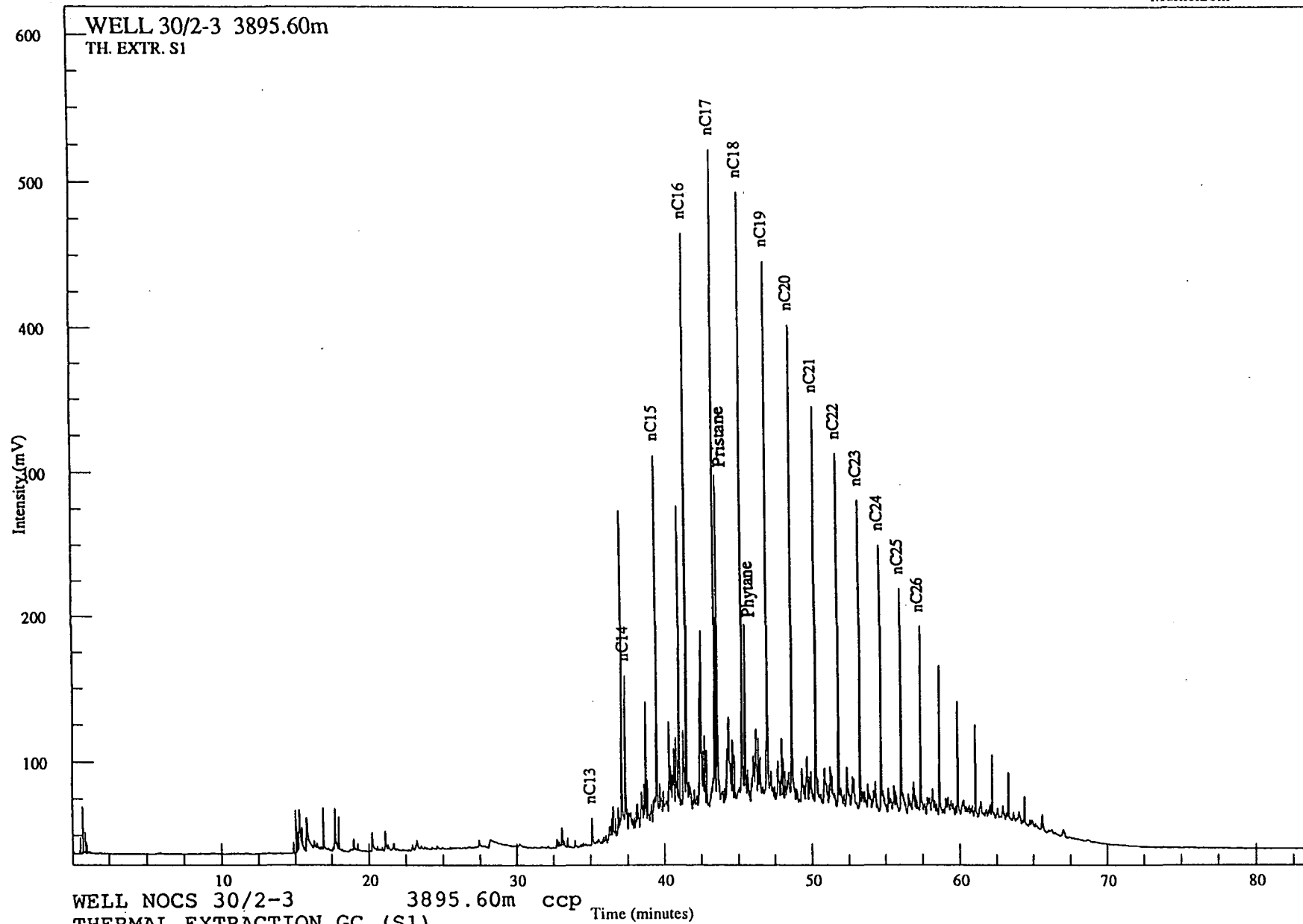
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WELL NOCS 30/2-3 3891.70m ccp
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bulk:

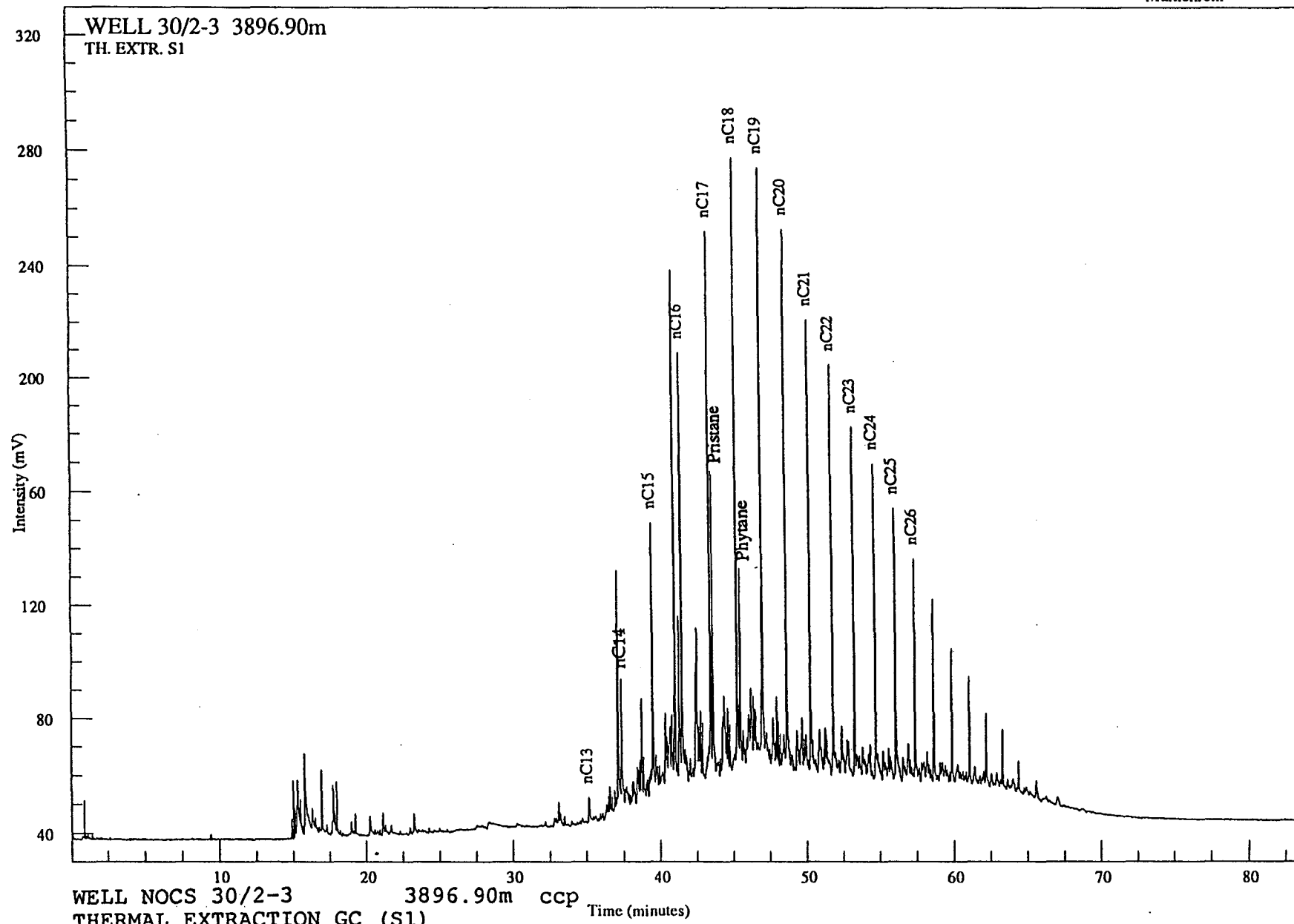
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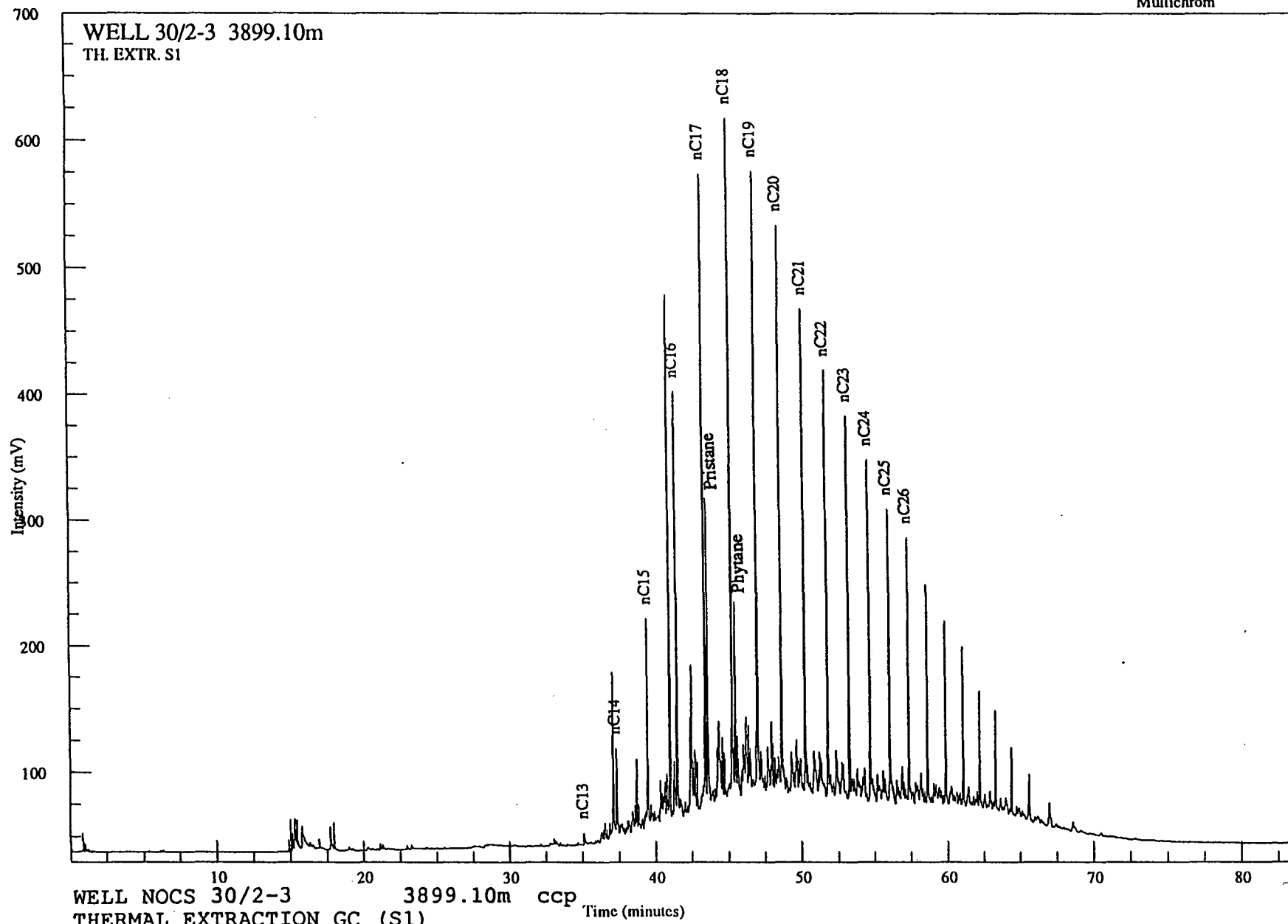
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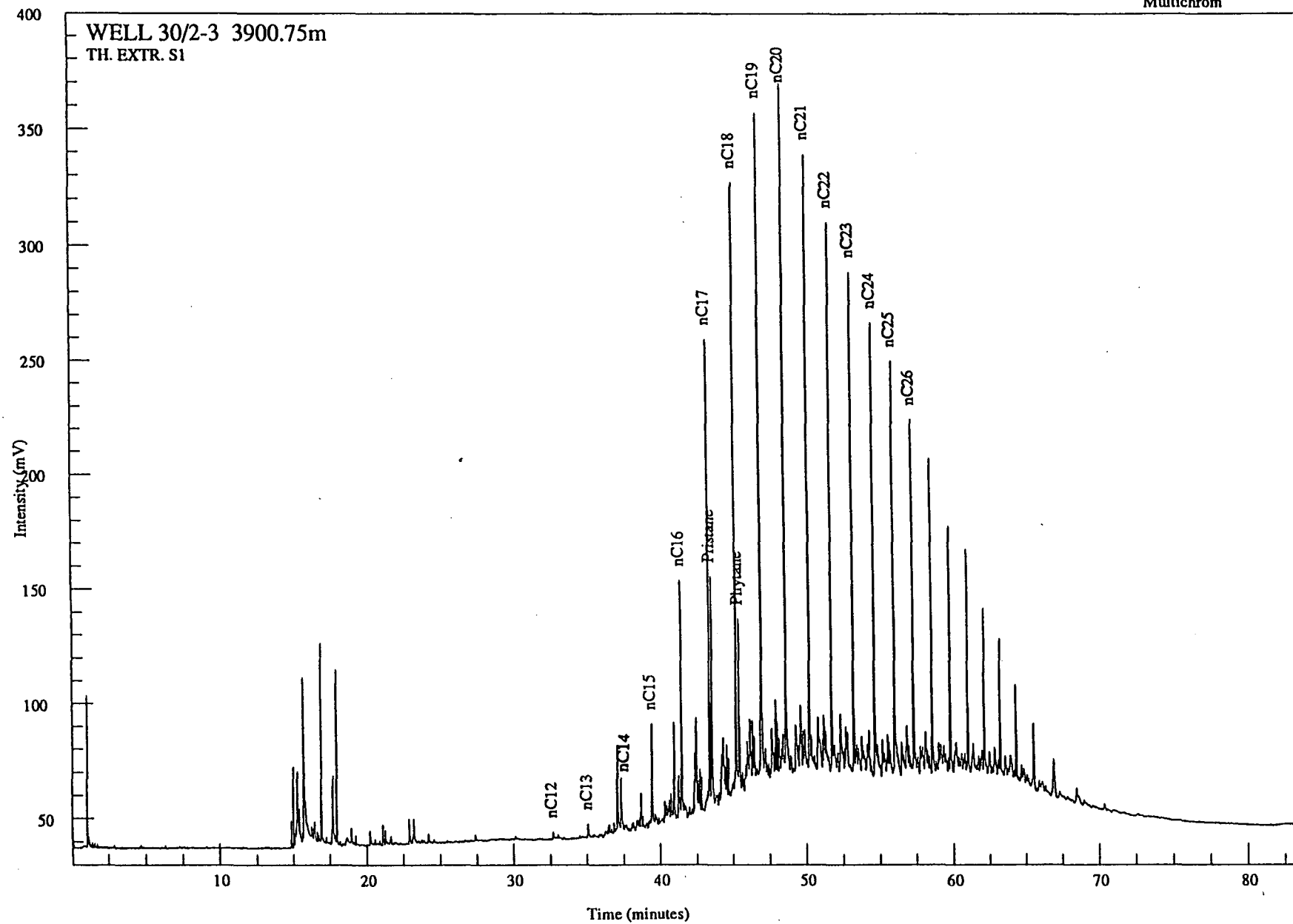
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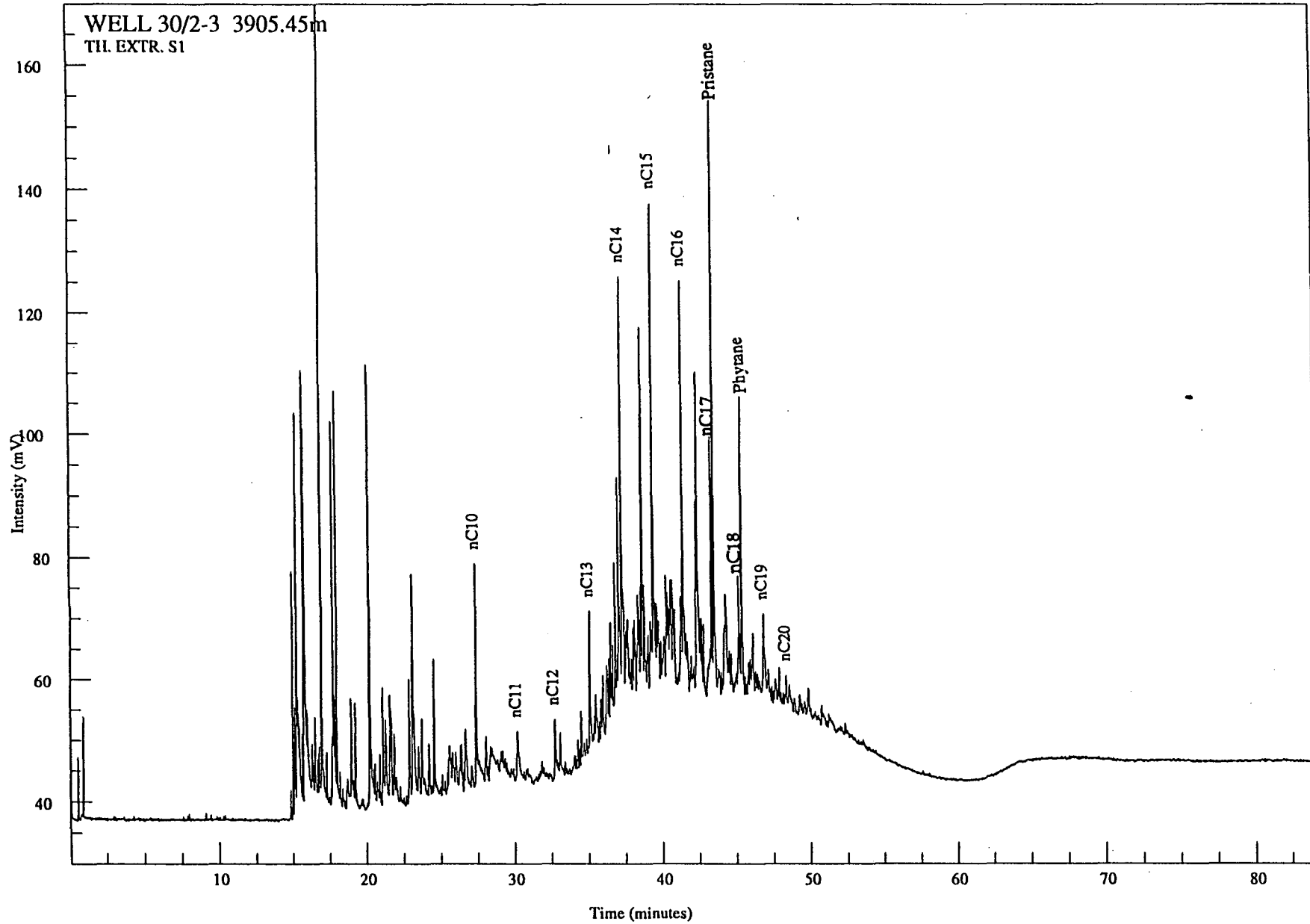
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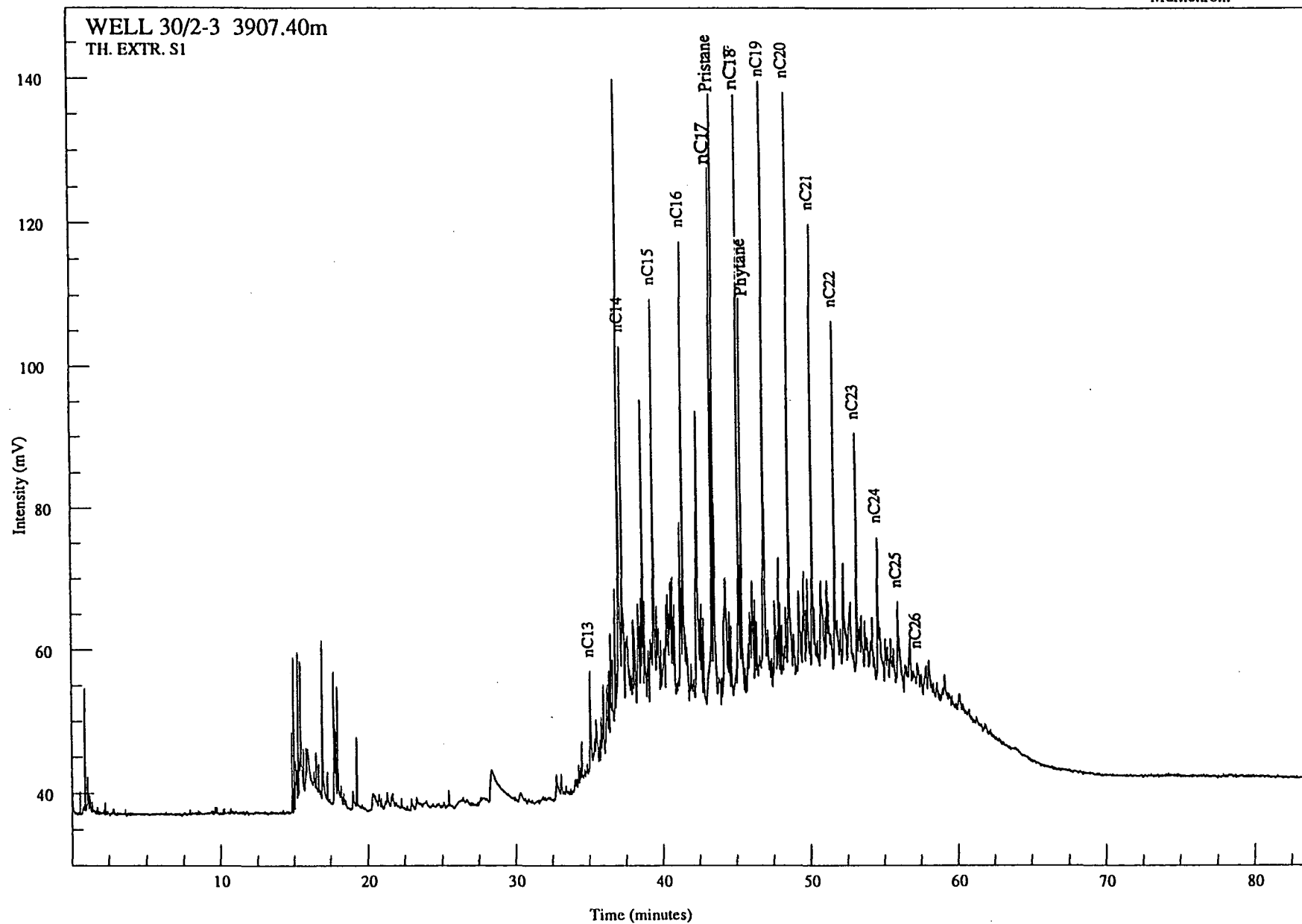
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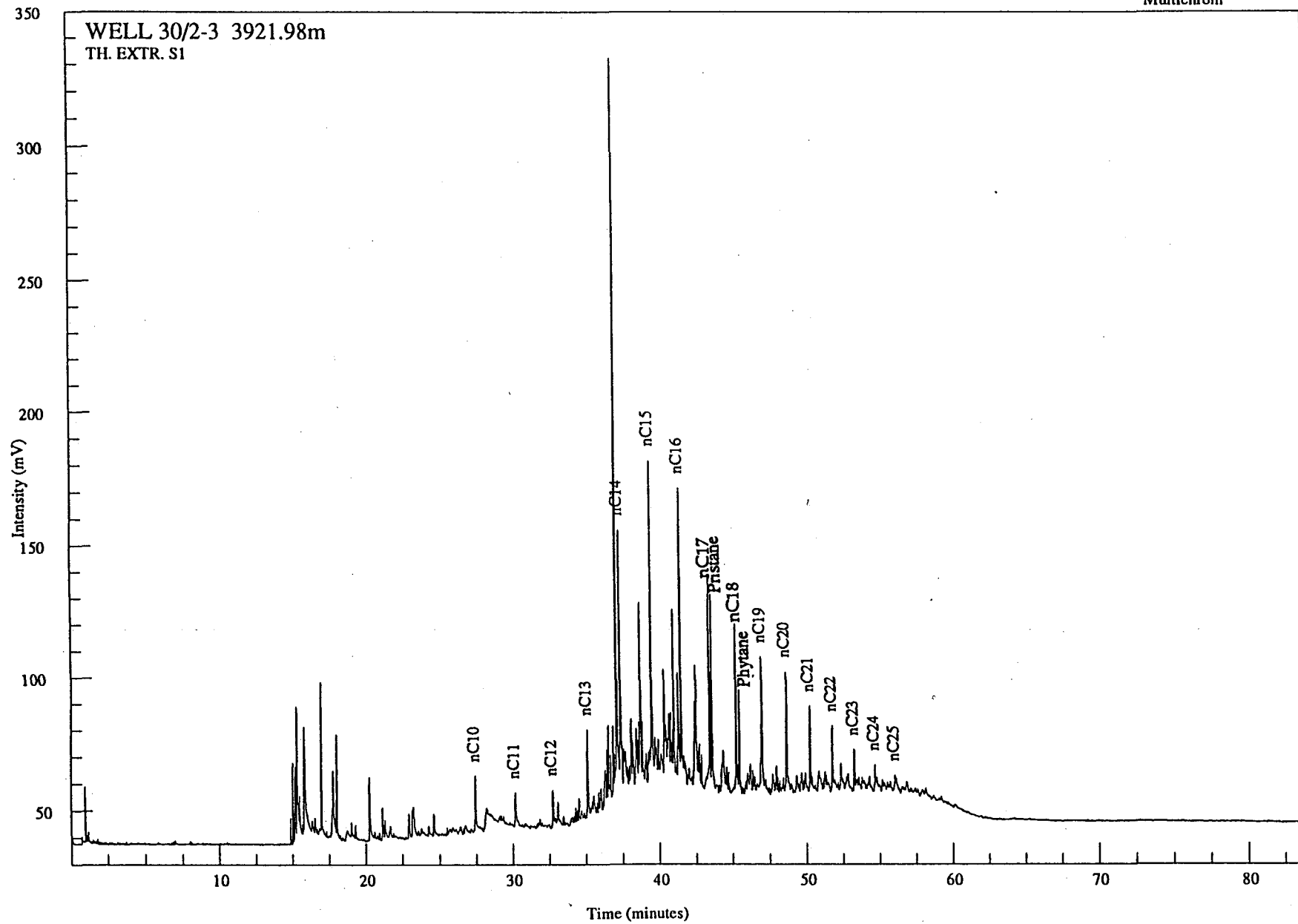
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