Rock-eval pyrograms, total organic carbon data, rock-eval pyrolysis data, C15+ extractable organic matter (EOM) results, normalized percent distribution of the normal paraffins and isoprenoids, C10+ saturate gas chromatogram, and a geochemical summary report of cuttings (7280' - 7340', and 10880' - 10907') from the Chevron USA Inc. Chevron USA Koniag No. 1 well

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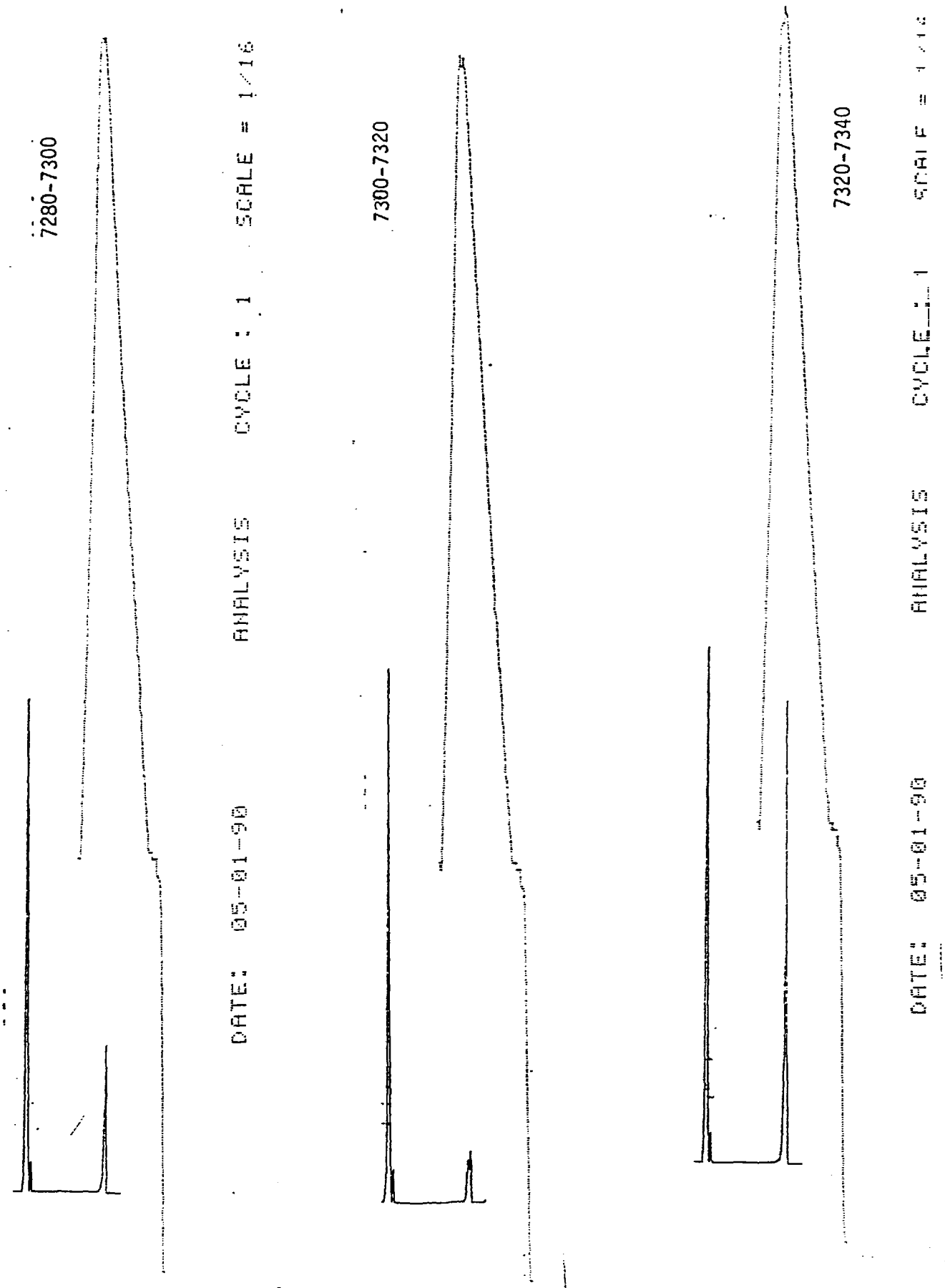
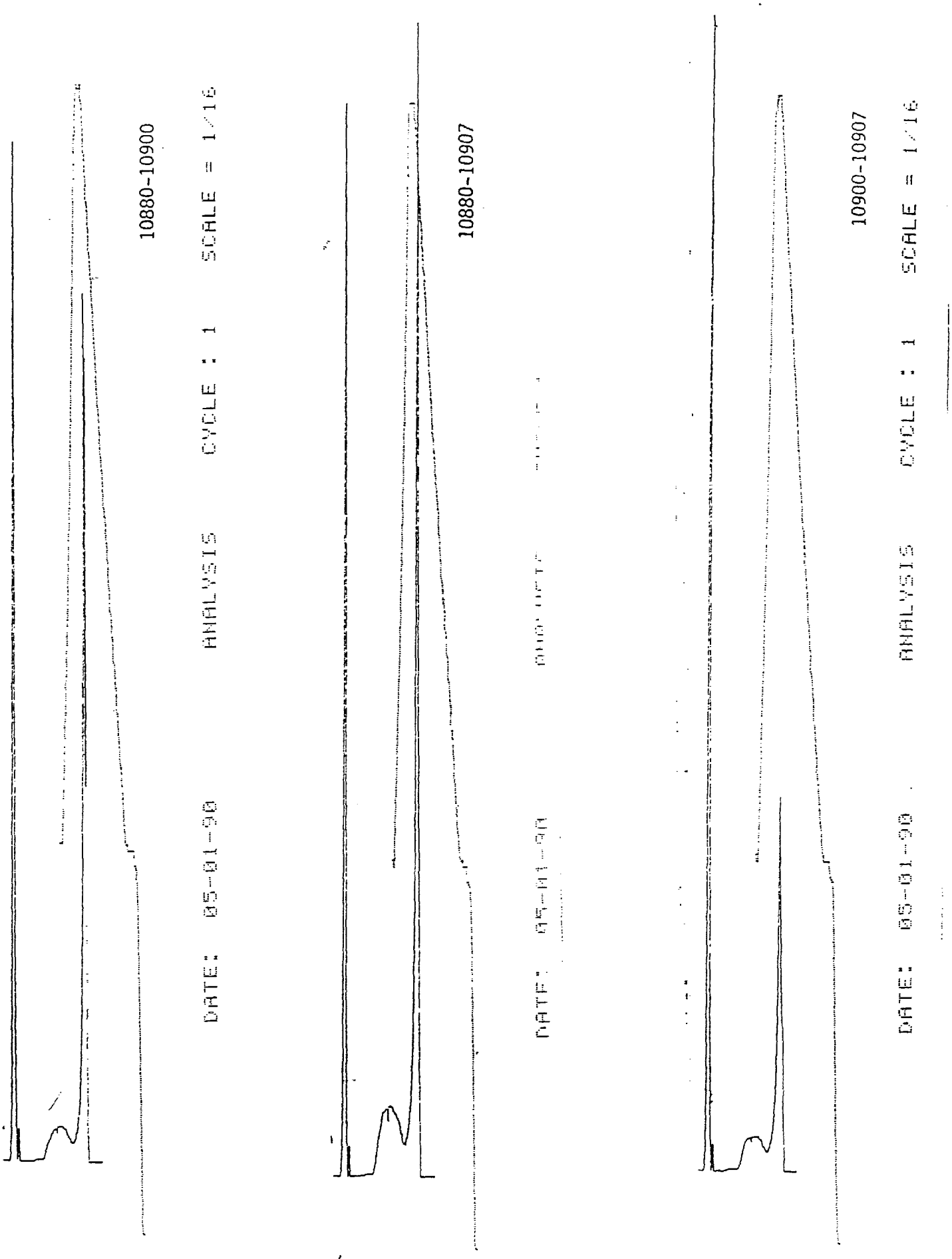
Alaska Geologic Materials Center Data Report No. 160

Rock-eval pyrograms for the samples from the Chevron USA No. 1 Koniag Well



Rock-eval pyrograms for the samples from the Chevron USA No. 1 Koniag Well



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GEOCHEMICAL SUMMARY REPORT

Two sets of samples (10880-10907' and 7280-7340') from the Chevron USA #1 Koniag well, Alaska, were submitted to Core Laboratories for geochemical evaluation. The analytical program included determination of total organic carbon content (%TOC) and analysis by Rock-Eval pyrolysis. Additionally, a composite sample from 10880-10907' was subjected to soxhlet extraction and the C10+ saturate hydrocarbon fraction isolated from the recovered bitumen was gas chromatographically analyzed.

Based on %TOC and Rock-Eval pyrolysis results, the three samples from the 7280 to 7340' interval have little or no potential as hydrocarbon source rocks. %TOC and Hydrogen Index (HI) values for these samples are less than 0.60% and 13, respectively.

Elevated S1 (relative to S2; Table 1) and percent EOM/TOC values (Table 2), indicate that the two samples from 10880 to 10907', which contain less than 0.75% TOC, are stained. Examination of the C10+ saturate hydrocarbon gas chromatogram indicates the presence of an unusually large unresolved complex mixture (naphthenes?) in the C20 to C30 range, suggesting that a significant portion of the material staining this interval is nonindigenous.

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Table 1

Rock-Eval Pyrolysis

CHEVRON USA #1 KONIAG ALASKA

Depth (ft)	TOC	S1	mg/g rock S2	S3	Hydrogen Index	Oxygen Index	Oil Shows	or Gas Potential	Trans Ratio	Tmax (deg C)
7280-7300	0.36	0.16	0.03	0.15	8	42	0.16	0.19	0.84	400
7300-7320	0.34	0.08	0.01	0.29	3	85	0.08	0.09	0.89	457
7320-7340	0.56	0.13	0.07	0.35	13	63	0.13	0.20	0.65	409
10880-10900	0.49	1.91	0.54	0.58	110	118	1.91	2.45	0.78	368
10900-10907	0.72	1.30	0.67	1.01	93	140	1.30	1.97	0.66	371
10880-10907	0.57	3.05	0.98	0.58	172	102	3.05	4.03	0.76	375

TOC = Total Organic Carbon
Hydrogen Index = (S2/TOC) x 100
Oxygen Index = (S3/TOC) x 100
Oil or Gas Shows = S1
Oil or Gas Potential = S1+S2
Transformation Ratio = S1/(S1+S2)

Table 2

Results of C15+ Extractable Organic Matter (EOM) Analysis

CHEVRON USA #1 KONIAG ALASKA

Depth (ft)	TOC (wt%)	EOM (ppm)	HC (ppm)	Composition of C15+ Extractable Organic Matter (Normalized Percent) Sat	Aro	NSO	Asph	Percent EOM/TOC	HC/TOC	HC/EOM	Sat/Aro
0880-10907	0.57	1313						23.0			

OC = Total Organic Carbon; EOM = Extractable Organic Matter (C15+); HC = C15+ Hydrocarbons saturates + aromatics); Sat = Saturates; Aro = Aromatics; NSO = Resins; Asph = Asphaltenes

Table 3

Normalized Percent Distribution
Normal Paraffins & Isoprenoids

CHEVRON USA #1 KONIAG ALASKA

	Depth (ft)
	10880-10907
nC15	5.3
nC16	6.9
nC17	12.0
Pristane	7.1
nC18	11.0
Phytane	5.7
nC19	4.9
nC20	3.4
nC21	3.8
nC22	5.0
nC23	4.2
nC24	3.6
nC25	6.5
nC26	4.4
nC27	3.3
nC28	2.4
nC29	4.1
nC30	1.6
nC31	2.5
nC32	1.0
nC33	0.7
nC34	0.6
CPI	1.51
Isoprenoids	
ip13	1.6
ip14	1.8
ip15	3.7
ip16	6.0
ip18	16.6
Pristane	39.1
Phytane	31.2
Pris/Phy	1.25
nC17/Pris	1.69
nC18/Phy	1.93

C10+ SATURATED HYDROCARBON FRACTION
AMOCO Koniag Well 10880-10907ft