



NATIONAL IRANIAN OIL COMPANY (NIOC)
RESEARCH INSTITUTE OF PETROLEUM INDUSTRY (RIPI)
CRUDE OIL AND PETROLEUM PRODUCTS EVALUATION DEPARTMENT

IRANIAN HEAVY CRUDE OIL

TABLE 1: CRUDE OIL GENERAL PROPERTIES ANALYSIS

CHARACTERISTICS	UNITS	RESULT	TEST METHOD
Specific Gravity @ 15.56 /15.56 °C	---	0.8785	ASTM D5002
API Gravity	°API	29.6	ASTM D5002
Sulfur Content (Total)	wt.%	2.24	ASTM D4294
H ₂ S Content	ppm	153	IP 570
Mercaptan Content	ppm	90	UOP 163
Nitrogen Content (Total)	wt.%	0.20	ASTM D 5762
Water & Sediment	vol.%	< 0.05	ASTM D4007
Water Content	vol.%	< 0.025	ASTM D4006
Salt Content	PTB	13	ASTM D3230
Kinematic Viscosity @ 10 °C	mm ² /s	30.53	ASTM D445
Kinematic Viscosity @ 20 °C	mm ² /s	19.42	
Kinematic Viscosity @ 40 °C	mm ² /s	10.070	
Pour Point (Upper)	°C	-18	ASTM D5853
Reid Vapor Pressure	psi	7.70	ASTM D323
Asphaltene Content	wt.%	3.6	IP 143
Wax Content	wt.%	5.4	BP 237
Drop Melting Point of Wax	°C	55	IP 133
Conradson Carbon Residue	wt.%	6.93	ASTM D189
Total Acid Number	mg KOH/g	0.15	UOP 565
Nickel Content	mg/kg	18	ASTM D5863
Vanadium Content	mg/kg	61	
Iron Content	mg/kg	1	
Lead Content	mg/kg	<1	
Sodium Content	mg/kg	20	
Zinc Content	mg/kg	<1	
Copper Content	mg/kg	<1	

Sampling Date: from 05 Day 1395 (25 Dec. 2016) to 10 Day 1395 (29 Dec. 2016)

Report Date: 07 Esfand 1395 (25 Feb. 2017)