



Registered Data Sheet Perforating System Evaluation, API RP 19B Section 1

API Form 19B-Section 1 Conforms to All Requirements of Section 1 Special Test - See Remarks/Exceptions below

Service Company Oiltech Services Pte. Ltd. Explosive weight 15 gm, RDX powder, Case Material Steel

Gun OD & Trade Name 2-1/8" 6 SPF 0° Phase Carrier (2-1/8" Universal Strip Gun) Max Temp, °F 340 1 hr 3 hr 24 hr 100 hr 200 hr

Charge Name STR 15g RDX SDP Maximum Pressure Rating 20,000 psi, Carrier Material Steel

Manufacturer Charge Part No. OT60326 / OT06310 Date of Manufacture 12 Dec. 2011 Shot Density Tested 6 Shots/ft _____

Gun Type Wireline, Through Tubing Strip, semi expendable Recommended Minimum ID for Running 2.25 in.

Phasing Tested 0 degrees, Firing Order: Top down Bottom up Available Firing Mode: X Selective X Simultaneous

Debris Description N/A Debris Weight N/A gm/charge, Debris N/A in³/charge

Remarks/Exceptions per Section 1.11 N/A

Casing Data 5-1/2" OD, Weight 17 lb/ft, API Grade, L-80 Date of Section 1 Test 18 January 2012

Target Data 41" OD, Amount of Cement 2,403 lb, Amount of Sand 4,806 lb, Amount of Water 1,252 lb.

Date of Compressive Strength Test 17 January 2012 Briquette Compressive Strength 6,459 psi, Age of Target 30 days

Shot No.	No 1	No 2	No 3	No 4	No 5	No 6	No 7	No 8	No 9	No 10	No 11
Clearance, in.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Casing Hole Diameter, Short Axis, in	0.28	0.29	0.28	0.28	0.28	0.28	0.30	0.31	0.29	0.32	0.32
Casing Hole Diameter, Long Axis, in	0.28	0.30	0.29	0.29	0.31	0.29	0.31	0.32	0.31	0.34	0.35
Average Casing Hole Diameter, in.	0.28	0.29	0.28	0.28	0.28	0.28	0.30	0.31	0.30	0.33	0.33
Total Depth, in.	23.31	23.31	25.81	23.31	24.31	26.31	22.31	24.81	22.31	26.31	22.31
Burr Height, in.	0.01	0.03	0.03	0.02	0.02	0.01	0.03	0.02	0.01	0.01	0.01

Shot No.	No 12	No 13	No 14	No 15	No 16	No 17	No 18	No 19	No 20	No 21	No 22	Average
Clearance, in.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	XXXXXX
Casing Hole Diameter, Short Axis, in	0.29	0.30	0.30	0.29	0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.29
Casing Hole Diameter, Long Axis, in	0.31	0.33	0.31	0.31	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.31
Average Casing Hole Diameter, in.	0.30	0.31	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.29	0.29	0.30
Total Depth, in.	22.31	22.31	17.31*	24.31	23.81	23.81	22.31	20.31	20.31	20.31	20.31	23.53
Burr Height, in.	0.04	0.01	0.02	0.02	0.03	0.02	0.02	0.03	0.03	0.03	0.03	0.02

Remarks 100% penetration marked with "*" could not be determined, and are not included in the average. The average penetration with compressive strength of 5,000 psi is 25.24". The above charges were manufactured by Dahana Oiltech Joint Operation (DOJO), Indonesia

Manufacturer's Certification

Type of Certification: _____ Self Third Party

I certify that these tests were made according to the procedures as outlined in API 19B: Recommended Practice for Evaluation of Well Perforators, Second Edition, September 2006. All of the equipment used in these tests, such as the guns, jet charges detonator cord, etc., was standard equipment with our company for the use in the gun being tested and was not changed in any manner for the test. Furthermore, the equipment was chosen at random from stock and therefore will be substantially the same as the equipment that would be furnished to perforate a well for any operator. API neither endorses these tests nor recommends the use of the perforator system described.

CERTIFIED BY Frankie Teo AGM 31 Aug 2012 Oiltech Services Pte Ltd Loyang Offshore Supply Base 25 Loyang Crescent, Blk 302 TOPS Ave 3, #02-06, Singapore 508988

RECERTIFIED (Company Official) (Title) (Date) (Company) (Address)

Name of test as it should appear on website: 2-1/8", STR 15g RDX SDP, 0° Phasing, 6 SPF

Name of test as it appears on application and application date: Charge: STR 15g RDX SDP, Gun: 2-1/8", 6 SPF, 0° Phase Carrier