

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

Steel 300 100 hr H.T. Steel Nots/ft 6 Nots/ft	RECERTIFIED (Company Efficial) (Title) (Date) (Company) Name of test as it should appear on website: 2.75in, EXP 6 SPF w/ EXP-2716-371T	President 5 August 2015 Hunting Titan	l 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.	Type of Certification: X Self Third Party	Manufacturer's Certification	Remarks	Burr Height, in	Total Depth, in	Average Casing Hole Diameter, in 0.33 0.31 0.31 0.35 0.29 0.34 0.34	Casing Hole Diameter, Long Axis, in 0.33 0.31 0.31 0.35 0.29 0.34 0.34	Casing Hole Diameter, Short Axis, in 0.33 0.31 0.31 0.34 0.29 0.34 0.33	Clearance, in	Shot No	Burr Height, in	18.29 30.79	Hole Diameter, in 0.30 0.33 0.33 0.29 0.35 0.34 0.30 0.32 0.35	Casing Hole Diameter, Long Axis, in 0.30 0.33 0.33 0.29 0.35 0.34 0.30 0.33 0.35 0.	Casing Hole Diameter, Short Axis, in 0.29 0.32 0.32 0.29 0.34 0.33 0.30 0.31 0.34 0.	Clearance, in	Shot No. 1 No. 2 No. 3 No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No.	Date of Compressive Strength Test 7 July 2015 Briquette Compressive Strength 5,690 psi, Age of Target	Target Data 66 OD, Amount of Cement 3,102 lb, Amount of Sand 6,204 lb, Amount of Water	Casing Data 4-1/2" OD, Weight 13.5 lb/ft, API Grade, P-110 Date of Section 1 Test 2	Remarks/Exceptions per Section 1.11Special casing used. 4-1/2" 13.5# P-110	Debris Description Small steel chips, usually retained in carrier Debris Weight n/a gm/charge, Debris	Phasing Tested 60 degrees, Firing Order: X Top down Bottom up Available Firing Mode: X Selective X	Gun Type Hollow Steel Carrier, Expendable (HC, E) Recommended Minimum ID for Running 3.00	Manufacturer Charge Part No. EXP-2716-371T Date of Manufacture 22 June 2015 Shot Density Tested6	Maximum Pressure Rating 23,000	Name	Service Company Available to all from Hunting Explosive weight 16 gm, RDX powder, Case Material	API Form 196-Section 1 Li Conforms to All Requirements of Section 1 Li Special Test - See Remains/Exceptions below
Joon John John John John John John John		nting Titan 143 HCR 4361, Milford, TX 76670, USA	Well Perforators, Second Edition, September 2006. All of the equin being tested and was not changed in any manner for the test. Finished to perforate a well for any operator. API neither endorses the				0.00	23.54	0.34	0.34			18 No 19 No 20 No 21	0.04 0.02 0.09	18.29 30.79 19.54	0.32 0.35 0.29	0.33 0.35 0.29	0.31 0.34 0.29	0.20 0.78 1.17	7 No 8 No 9 No 10	Age of Target	lb, Amount of Water		13.5# P-110	Debris			Shots/ft	psi, Carrier Material	375 3 hr 330 24 hr 300	powder, Case Material	1010 201011

Name of test as it appears on application and application date: