



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 Available to all from Hunting
 Gun OD & Trade Name 3-1/8" EXP Gun, 6 SPF 60 Degree
 Charge Name 3-3/8" 21 Gm HMX GH
 Manufacturer Charge Part No. EXP-3321-431 Date of Manufacture 25 Aug 2010
 Gun Type Hollow Steel Carrier, Expendable (HC, E)
 Phasing Tested 60 degrees, Firing Order: X Top down Bottom up
 Debris Description Small steel chips, usually retained in carrier

Explosive weight 21 gm, HMX powder, Case Material Steel
 Max Temp, °F 400 1 hr 3 hr 24 hr 100 hr 200 hr
 Maximum Pressure Rating 20,000 psi, Carrier Material H.T. Steel
 Shot Density Tested 6
 Recommended Minimum ID for Running 3.58 Shots/ft 6 in.
 Available Firing Mode: X Selective X Simultaneous
 Debris Weight n/a gm/charge, Debris n/a in³/charge

Remarks/Exceptions per Section 1.11

Casing Data 4-1/2" OD, Weight 11.6 lb/ft, API Grade, L-80 Date of Section 1 Test 30 Sept 2010
 Target Data 78" OD, Amount of Cement 6,354 lb, Amount of Sand 12,708 lb, Amount of Water 3,317 lb.
 Date of Compressive Strength Test 30 Sept 2010 Briquette Compressive Strength 6,375 psi, Age of Target 28 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	0.18	0.62	0.87	0.62	0.18	0.00	0.18	0.62	0.87	0.62
Casing Hole Diameter, Short Axis, in	0.58	0.60	0.50	0.46	0.60	0.49	0.56	0.61	0.48	0.50	0.50
Casing Hole Diameter, Long Axis, in	0.60	0.63	0.55	0.50	0.62	0.59	0.58	0.62	0.56	0.54	0.59
Average Casing Hole Diameter, in.	0.59	0.62	0.53	0.48	0.61	0.54	0.57	0.62	0.52	0.52	0.55
Total Depth, in.	31.25	22.25	29.75	30.63	28.00	31.00	31.75	26.50	30.13	30.25	28.25
Burr Height, in.	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.06	0.05	0.07	0.05

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.	0.18											XXXXXX
Casing Hole Diameter, Short Axis, in	0.56											0.54
Casing Hole Diameter, Long Axis, in	0.59											0.58
Average Casing Hole Diameter, in.	0.58											0.56
Total Depth, in.	31.00											29.23
Burr Height, in.	0.03											0.06

Remarks

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 T. B. [Signature] President, Hunting Titan 4/8/2014 143 HCR 4361, Milford, TX 76670, USA
 RECERTIFIED (Company Official) (Title) (Date) (Company) (Address)

Name of test as it should appear on website: 3.13-in. EXP 6 SPF w/ GH EXP-3321-431

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