



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

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

Service Company PROMPERFORATOR, LTD Explosive Weight 30 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 4.5" KPO 114, DP Max Temp, °F: 338 (170° C) 2hr 5hr 12hr 30hr 72hr
 Charge Name ZKPO-PP-30GP-01 Maximum Pressure Rating 1160 (80 MPa) psi, Carrier Material Steel
 Manufacturer Charge Part No. ZKPO-PP-30GP-01 Date of Manufacture 08/2011 Shot Density Tested 4.88 (16 shots/m) shots/ft 4.88 (16 shots/m)
 Gun Type Non Reusable Case Gun Recommended Minimum ID for Running 5.7 (145 mm) in.
 Phasing Tested 60 degrees, Firing Order: x Top Down Bottom up Available Firing Mode: Selective x Simultaneous
 Debris Description N/A Debris Weight 0 gm/charge, Debris 0 in/charge

Remarks/Exceptions per Section 11.1 168x8,9 mm (6,6x0,35") GOST 632-80 GRADE D

Casing Data 6.6" (168 mm) OD, Weight 24.5 (36.5 kg/m) lb/ft API Grade, N/A Date of Section 1 Test 03 October, 2011
 Target Data 106.3" (2700 mm) OD, Amount of Cement 13144 (5962 kg) lb, Amount of Sand 26290 (11925 kg) lb, Amount of Water 6837 (3101 kg)
 Date of Compressive Strength Test 03 October 2011 Briquette Compressive Strength 6266 (43.2 MPa) psi, Age of Target 31 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 (mm)	0.67 (17.0)	1.10 (28.0)	1.10 (28.0)	0.67 (17.0)	0.30 (7.5)	0.30 (7.5)	0.67 (17.0)	1.10 (28.0)	1.10 (28.0)	0.67 (17.0)	0.30 (7.5)
Casing Hole Diameter, Short Axis, in (mm)	0.41 (10.43)	0.36 (9.24)	0.39 (9.82)	0.41 (10.34)	0.40 (10.05)	0.37 (9.37)	0.38 (9.62)	0.39 (9.97)	0.39 (9.80)	0.40 (10.27)	0.38 (9.58)
Casing Hole Diameter, Long Axis, in (mm)	0.44 (11.25)	0.39 (10.00)	0.40 (10.17)	0.41 (10.42)	0.41 (10.47)	0.45 (11.41)	0.42 (10.62)	0.41 (10.48)	0.40 (10.18)	0.41 (10.35)	0.38 (9.58)
Average Casing Hole Diameter, in (mm)	0.43 (10.84)	0.38 (9.62)	0.39 (10.00)	0.41 (10.38)	0.40 (10.26)	0.41 (10.39)	0.40 (10.12)	0.40 (10.23)	0.39 (9.99)	0.41 (10.31)	0.38 (9.58)
Total Depth, in (mm)	43.66 (1109)	45.83 (1164)	46.22 (1174)	45.83 (1164)	46.42 (1179)	45.43 (1154)	43.86 (1114)		46.42 (1179)	45.43 (1154)	46.42 (1179)
Burr Height, in (mm)	0.05 (1.26)	0.04 (1.02)	0.05 (1.37)	0.06 (1.51)	0.08 (2.01)	0.05 (1.33)	0.05 (1.36)	0.06 (1.44)	0.05 (1.39)	0.07 (1.81)	0.08 (1.92)

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 (mm)	0.30 (7.5)	0.67 (17.0)	1.10 (28.0)	1.10 (28.0)	0.67 (17.0)							XXXXX XXXXX
Casing Hole Diameter, Short Axis, in (mm)	0.31 (7.92)	0.41 (10.50)	0.38 (9.67)	0.42 (10.76)	0.40 (10.18)							0.39 (9.85)
Casing Hole Diameter, Long Axis, in (mm)	0.34 (8.57)	0.43 (10.91)	0.41 (10.45)	0.57 (14.42)	0.40 (10.23)							0.42 (10.59)
Average Casing Hole Diameter, in (mm)	0.32 (8.25)	0.42 (10.71)	0.40 (10.06)	0.50 (12.59)	0.40 (10.21)							0.40 (10.22)
Total Depth, in (mm)	43.86 (1114)	47.01 (1194)	45.83 (1164)	47.20 (1199)	45.83 (1164)							45.68 (1160)
Burr Height, in (mm)	0.05 (1.31)	0.09 (2.21)	0.07 (1.87)	0.07 (1.83)	0.04 (1.04)							0.06 (1.54)

Remarks: Penetration normalized to 5000 psi by method of SPE 27424 (approx 3.8 % (1000 psi) = 47.83 in (1215 mm)

Manufacturer's Certification

Type of certification: x Self Third Party

I certify that these tests were made according to the procedures as outlined in API 19 B: 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 card, ect., 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 describes.

API Witness A.Tovmachenko 07 October, 2011

x CERTIFIED BY M.R.Khayrutdinov General Director 07 October, 2011 PROMPERFORATOR, LTD 41, Moscow highway, Samara, Russia, 443080
 RECERTIFIED BY (Company Official) (Title) (Date) (Company) (Address)

Name of test as it should appear on website: 4.5" KPO 114 w/charge ZKPO-PP-30GP-01, DP
 Name of test as it should appear on application and application date: 4.5" KPO 114 w/charge ZKPO-PP-30GP-01, DP



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



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

Service Company PROMPERFORATOR, LTD Explosive Weight 6 gm, RDX powder, Case Material Steel
 Gun OD & Trade Name 2.0" KPO 50, DP Max Temp, °F 302 (150° C) 2hr 5hr 12hr 30hr 72hr
 Charge Name ZKPO-PP-6GP-00 Maximum Pressure Rating 11600 (80 MPa) psi, Carrier Material Steel
 Manufacturer Charge Part No. ZKPO-PP-6GP-00 Date of Manufacture 08/2011 Shot Density Tested 4.88 (16 shots/m) shots/ft 4.88 (16 shots/m)
 Gun Type Non Reusable Case Gun Recommended Minimum ID for Running 2.4" (61 mm) in.
 Phasing Tested 60 degrees, Firing Order: x Top Down Bottom up Available Firing Mode: Selective x Simultaneous
 Debris Description N/A Debris Weight 0 gm/charge, Debris 0 in/charge

Remarks/Exceptions per Section 11.1 89x6,5 mm (3,5x0,26") GOST 633-80 GRADED

Casing Data 3.5" (89 mm) OD, Weight 9.14 (13.6 kg/m) lb/ft API Grade, N/A Date of Section 1 Test 03 October, 2011
 Target Data 47.2" (1200 mm) OD, Amount of Cement 2593 (1176 kg) lb, Amount of Sand 5185 (2352 kg) lb, Amount of Water 1349 (612 kg)
 Date of Compressive Strength Test 03 October 2011 Briquette Compressive Strength 6251 (43.1 MPa) psi, Age of Target 31 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 (mm).....	0.43 (11.0)	0.97 (24.6)	0.97 (24.6)	0.43 (11.0)	0.05 (1.2)	0.05 (1.2)	0.43 (11.0)	0.97 (24.6)	0.97 (24.6)	0.43 (11.0)	0.05 (1.2)
Casing Hole Diameter, Short Axis, in (mm).....	0.30 (7.73)	0.31 (7.83)	0.33 (8.40)	0.33 (8.45)	0.31 (7.85)	0.30 (7.74)	0.30 (7.73)	0.31 (7.79)	0.30 (7.71)	0.31 (7.94)	0.32 (8.16)
Casing Hole Diameter, Long Axis, in (mm).....	0.31 (7.83)	0.32 (8.05)	0.34 (8.59)	0.33 (8.49)	0.32 (8.20)	0.31 (7.97)	0.32 (8.23)	0.32 (8.07)	0.31 (7.93)	0.32 (8.04)	0.33 (8.39)
Average Casing Hole Diameter, in (mm).....	0.31 (7.78)	0.31 (7.94)	0.33 (8.50)	0.33 (8.47)	0.32 (8.03)	0.31 (7.86)	0.31 (7.98)	0.31 (7.93)	0.31 (7.82)	0.31 (7.99)	0.33 (8.28)
Total Depth, in (mm).....	16.00 (407)	15.02 (382)	16.00 (407)	16.00 (407)		15.41 (392)	15.22 (387)	15.83 (402)	16.42 (417)	17.40 (442)	19.57 (497)
Burr Height, in (mm).....	0.04 (1.04)	0.04 (1.01)	0.04 (1.02)	0.04 (1.11)	0.04 (1.89)	0.05 (1.35)	0.06 (1.49)	0.05 (1.20)	0.04 (1.02)	0.04 (1.04)	0.07 (1.78)

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 (mm).....	0.05 (1.2)	0.43 (11.0)	0.97 (24.6)	0.97 (24.6)	0.43 (11.0)							XXXX XXXXX
Casing Hole Diameter, Short Axis, in (mm).....	0.32 (8.14)	0.31 (7.91)	0.30 (7.66)	0.30 (7.63)	0.30 (7.66)							0.31 (7.90)
Casing Hole Diameter, Long Axis, in (mm).....	0.33 (8.50)	0.32 (8.10)	0.31 (7.91)	0.31 (7.86)	0.31 (7.95)							0.32 (8.13)
Average Casing Hole Diameter, in (mm).....	0.33 (8.32)	0.32 (8.01)	0.31 (7.79)	0.30 (7.75)	0.31 (7.81)							0.32 (8.01)
Total Depth, in (mm).....	15.83 (402)	16.42 (417)	15.83 (402)	16.02 (407)	15.04 (382)							16.13 (410)
Burr Height, in (mm).....	0.07 (1.76)	0.13 (3.30)	0.03 (1.80)	0.04 (1.02)	0.06 (1.57)							0.05 (1.34)

Remarks: Penetration normalized to 5000 psi by method of SPE 27424 (approx 3.8 % (1000 psi) = 16.89 in (429 mm)

Manufacturer's Certification

Type of certification: x Sel Third Party

I certify that these tests were made according to the procedures as outlined in API 19 B: 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 card, ect., 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 describes.

API Witness A.Tovmachenko 07 October, 2011

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

Name of test as it should appear on website: 2.0" KPO 50 w/charge ZKPO-PP-6GP-00, DP
 Name of test as it should appear on application and application date: 2.0" KPO 50 w/charge ZKPO-PP-6GP-00, DP



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



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

Service Company PROMPERFORATOR, LTD Explosive Weight 30 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 4.0" KPO 102, DP Max Temp, °F 338 (170° C) 2hr 5hr 12hr 30hr 72hr
 Charge Name ZKPO-PP-30GP-01 Maximum Pressure Rating 11600 (80 MPa) psi, Carrier Material Steel
 Manufacturer Charge Part No. ZKPO-PP-30GP-01 Date of Manufacture 08/2011 Shot Density Tested 4.88 (16 shots/m) shots/ft 4.88 (16 shots/m)
 Gun Type Non Reusable Case Gun Recommended Minimum ID for Running 5.12 (130 mm) in.
 Phasing Tested 60 degrees, Firing Order: x Top Down Bottom up Available Firing Mode: Selective x Simultaneous
 Debris Description N/A Debris Weight 0 gm/charge, Debris 0 in/charge

Remarks/Exceptions per Section 11.1 139,7x7,72 mm (5,5x0,3") API SCT-89 GRADE C75

Casing Data 5.5" (139.7 mm) OD, Weight 17.8 (26.5 kg/m) lb/ft, API Grade, C75 Date of Section 1 Test 03 October, 2011
 Target Data 106.3" (2700 mm) OD, Amount of Cement 13159 (5969 kg) lb, Amount of Sand 26321 (11939 kg) lb, Amount of Water 6843 (3104 kg)
 Date of Compressive Strength Test 03 October 2011 Briquette Compressive Strength 6237 (43.0 MPa) psi, Age of Target 31 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 (mm).....	0.43 (10.8)	0.58 (14.8)	0.58 (14.8)	0.43 (10.8)	0.28 (7.2)	0.28 (7.2)	0.43 (10.8)	0.58 (14.8)	0.58 (14.8)	0.43 (10.8)	0.28 (7.2)
Casing Hole Diameter, Short Axis, in (mm).....	0.39 (9.83)	0.41 (10.33)	0.36 (9.11)	0.38 (9.66)	0.41 (10.33)	0.37 (9.30)	0.36 (9.26)	0.50 (12.65)	0.45 (11.33)	0.45 (11.50)	0.40 (10.19)
Casing Hole Diameter, Long Axis, in (mm).....	0.39 (9.86)	0.42 (10.60)	0.45 (11.42)	0.41 (10.48)	0.42 (10.67)	0.39 (10.01)	0.40 (10.10)	0.53 (13.51)	0.48 (12.27)	0.46 (11.65)	0.41 (10.47)
Average Casing Hole Diameter, in (mm).....	0.39 (9.85)	0.41 (10.47)	0.40 (10.27)	0.40 (10.06)	0.41 (10.50)	0.38 (9.66)	0.38 (9.68)	0.51 (13.08)	0.46 (11.80)	0.46 (11.58)	0.41 (10.33)
Total Depth, in (mm).....	45.39 (1153)	46.97 (1193)	46.57 (1183)	45.59 (1158)	46.77 (1188)	43.62 (1108)	45.00 (1143)	46.57 (1183)	46.97 (1193)	45.59 (1158)	46.97 (1193)
Burr Height, in (mm).....	0.04 (1.10)	0.07 (1.75)	0.04 (1.02)	0.08 (1.98)	0.09 (2.18)	0.07 (1.80)	0.07 (1.77)	0.15 (3.72)	0.11 (2.70)	0.08 (2.15)	0.10 (2.43)

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 (mm).....	0.28 (7.2)	0.43 (10.8)	0.58 (14.8)	0.58 (14.8)	0.43 (10.8)							XXXXX XXXXXX
Casing Hole Diameter, Short Axis, in (mm).....	0.40 (10.14)	0.39 (9.97)	0.41 (10.53)	0.45 (11.34)	0.41 (10.42)							0.41 (10.37)
Casing Hole Diameter, Long Axis, in (mm).....	0.45 (11.46)	0.41 (10.35)	0.44 (11.24)	0.45 (11.37)	0.46 (11.66)							0.44 (11.07)
Average Casing Hole Diameter, in (mm).....	0.43 (10.80)	0.40 (10.16)	0.43 (10.89)	0.45 (11.36)	0.43 (11.04)							0.42 (10.72)
Total Depth, in (mm).....	43.23 (1098)	44.61 (1133)	46.57 (1183)	45.00 (1143)	46.77 (1188)							45.76 (1162)
Burr Height, in (mm).....	0.06 (1.64)	0.08 (1.93)	0.08 (1.91)	0.07 (1.79)	0.09 (2.19)							0.08 (2.00)

Remarks: Penetration normalized to 5000 psi by method of SPE 27424 (approx 3.8 % (1000 psi) = 47.91 in (1217 mm)

Manufacturer's Certification

Type of certification: x Sel Third Party

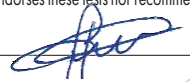
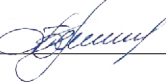
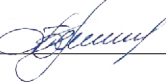
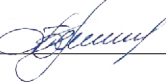
I certify that these tests were made according to the procedures as outlined in API 19 B: Recommended Practice for Evaluation of Well Perforators, Second Edition, September 2006. All of the equipment used in these tests, such as the guns, jet charges, detonator card, ect., was standard equipment with 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 describes.

API Witness A.Tovmachenko 07 October, 2011

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

Name of test as it should appear on website: 4.0" KPO 102 w/charge ZKPO-PP-30GP-01, DP
 Name of test as it should appear on application and application date: 4.0" KPO 102 w/charge ZKPO-PP-30GP-01, DP

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


API From 19B - Section 1		Conforms to All Requirements of Section 1		V Special Test - See Remarks/Exceptions below																						
Service Company <u>PROMPERFORATOR, LTD</u>		Explosive Weight <u>30</u> gm, <u>RDX</u> powder,		Case Material <u>Steel</u>																						
Gun OD & Trade Name <u>4.0" KPO 102, BH</u>		Max Temp, °F <u>302 (150° C)</u> 2hr 5hr 12hr 30hr 72hr																								
Charge Name <u>ZKPO-PP-30BO-00</u>		Maximum Pressure Rating <u>11600 (80 MPa)</u> psi,		Carrier Material <u>Steel</u>																						
Manufacturer Charge Part No. <u>ZKPO-PP-30BO-00</u> Date of Manufacture <u>08/2011</u>		Shot Density Tested <u>4.88 (16 shots/m)</u> shots/ft		<u>4.88 (16 shots/m)</u>																						
Gun Type <u>Non Reusable Case Gun</u>		Recommended Minimum ID for Running <u>5.12 (130 mm)</u> in.																								
Phasing Tested <u>60 degrees</u> , Firing Order: <u>x</u> Top Down Bottom up		Available Firing Mode: <u>Selective</u> <u>x</u> Simultaneous																								
Debris Description <u>N/A</u>		Debris Weight <u>0</u> gm/charge, Debris <u>0</u> in/charge																								
Remarks/Exceptions per Section 11.1		<u>139.7x7.72 mm (5.5x0.3") API 5CT-89 GRADE C75</u>																								
Casing Data <u>5.5" (139.7 mm) OD</u> , Weight <u>17.8 (26.5 kg/m)</u> lb/ft		API Grade, <u>C75</u>		Date of Section 1 Test <u>03 October, 2011</u>																						
Target Data <u>34.6" (880 mm) OD</u> , Amount of Cement <u>1365 (619 kg)</u> lb,		Amount of Sand <u>2732 (1239 kg)</u> lb,		Amount of Water <u>710 (322kg)</u>																						
Date of Compressive Strength Test <u>03 October 2011</u>		Briquette Compressive Strength <u>6280 (43.3 MPa)</u> psi,		Age of Target <u>31</u> 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 (mm).....	0.43 (10.8)	0.58 (14.8)	0.58 (14.8)	0.43 (10.8)	0.28 (7.2)	0.28 (7.2)	0.43 (10.8)	0.58 (14.8)	0.58 (14.8)	0.43 (10.8)	0.28 (7.2)															
Casing Hole Diameter, Short Axis, in (mm).....	0.86 (21.90)	0.86 (21.80)	0.85 (21.50)	0.86 (21.77)	0.85 (21.60)	0.85 (21.69)	0.86 (21.76)	0.82 (20.92)	0.84 (21.45)	0.86 (21.79)	0.86 (21.86)															
Casing Hole Diameter, Long Axis, in (mm).....	0.90 (22.89)	0.89 (22.57)	0.88 (22.43)	0.88 (22.47)	0.90 (22.77)	0.89 (22.54)	0.88 (22.47)	0.90 (22.78)	0.90 (22.89)	0.88 (22.43)	0.88 (22.46)															
Average Casing Hole Diameter, in (mm).....	0.88 (22.40)	0.87 (22.19)	0.86 (21.97)	0.87 (22.12)	0.87 (22.19)	0.87 (22.12)	0.87 (22.12)	0.86 (21.85)	0.87 (22.17)	0.87 (22.11)	0.87 (22.16)															
Total Depth, in (mm).....	7.40 (188)		8.58 (218)	7.60 (193)	7.99 (203)	7.99 (203)	7.80 (198)	7.80 (198)	7.60 (193)	7.80 (198)	8.19 (208)															
Burr Height, in (mm).....	0.07 (1.85)	(.00)	(.00)	0.06 (1.61)	0.08 (2.01)	0.09 (2.36)	0.09 (2.20)	(.00)	(.00)	0.05 (1.38)	0.09 (2.35)															
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 (mm).....	0.28 (7.2)	0.43 (10.8)	0.58 (14.8)	0.58 (14.8)	0.43 (10.8)							XXXXX XXXXXX														
Casing Hole Diameter, Short Axis, in (mm).....	0.86 (21.92)	0.86 (21.74)	0.85 (21.53)	0.86 (21.94)	0.87 (22.18)							0.85 (21.71)														
Casing Hole Diameter, Long Axis, in (mm).....	0.89 (22.55)	0.90 (22.91)	0.88 (22.45)	0.91 (23.05)	0.90 (22.81)							0.89 (22.65)														
Average Casing Hole Diameter, in (mm).....	0.88 (22.24)	0.88 (22.33)	0.87 (21.99)	0.89 (22.50)	0.89 (22.50)							0.87 (22.18)														
Total Depth, in (mm).....	7.60 (193)	7.99 (203)	7.99 (203)	7.60 (193)	7.80 (198)							7.85 (199)														
Burr Height, in (mm).....	0.09 (2.26)	0.10 (2.49)	(.00)	(.00)	0.06 (1.52)							0.08 (1.25)														
Remarks:		Penetration normalized to 5000 psi by method of SPE 27424 (approx 3.8 % (1000 psi) = 8.19 in (208 mm))																								
Manufacturer's Certification																										
Type of certification: _____ x _____ Sel _____ Third Party																										
I certify that these tests were made according to the procedures as outlined in API 19 B: 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 card, ect., 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 describes.																										
API Witness <u>A.Tovmachenko</u>  <u>07 October, 2011</u>																										
<table border="0" style="width:100%;"> <tr> <td style="width:10%;">x</td> <td style="width:15%;">CERTIFIED BY</td> <td style="width:20%;">M.R.Khayrutdinov </td> <td style="width:15%;">General Director</td> <td style="width:10%;">07 October, 2011</td> <td style="width:15%;">PROMPERFORATOR, LTD</td> <td style="width:25%;">41, Moscow highway, Samara, Russia, 443080</td> </tr> <tr> <td></td> <td>RECERTIFIED BY</td> <td>(Company Official)</td> <td>(Title)</td> <td>(Date)</td> <td>(Company)</td> <td>(Address)</td> </tr> </table>													x	CERTIFIED BY	M.R.Khayrutdinov 	General Director	07 October, 2011	PROMPERFORATOR, LTD	41, Moscow highway, Samara, Russia, 443080		RECERTIFIED BY	(Company Official)	(Title)	(Date)	(Company)	(Address)
x	CERTIFIED BY	M.R.Khayrutdinov 	General Director	07 October, 2011	PROMPERFORATOR, LTD	41, Moscow highway, Samara, Russia, 443080																				
	RECERTIFIED BY	(Company Official)	(Title)	(Date)	(Company)	(Address)																				
Name of test as it should appear on website: <u>4.0" KPO 102 w/charge ZKPO-PP-30BO-00, BH</u>																										
Name of test as it should appear on application and application date: <u>4.0" KPO 102 w/charge ZKPO-PP-30BO-00, BH</u>																										



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

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

Service Company PROMPERFORATOR, LTD Explosive Weight 22 gm, HMX powder, Case Material Steel
 Gun OD & Trade Name 3,5" KPO 89, DP Max Temp, °F 338 (170° C) 2hr 5hr 12hr 30hr 72hr
 Charge Name ZKPO-PP-22GP-01 Maximum Pressure Rating 11600 (80 MPa) psi, Carrier Material Steel
 Manufacturer Charge Part No. ZKPO-PP-22GP-01 Date of Manufacture 08/2011 Shot Density Tested 4,88 (16 shots/m) shots/ft 4,88 (16 shots/m)
 Gun Type Non Reusable Case Gun Recommended Minimum ID for Running 4,53 (115 mm) in.
 Phasing Tested 60 degrees, Firing Order: x Top Down Bottom up Available Firing Mode: Selective x Simultaneous
 Debris Description N/A Debris Weight 0 gm/charge, Debris 0 in/charge

Remarks/Exceptions per Section 11.1 127x7,5 mm (5x0,3") GOST 632-80 GRADE D

Casing Data 5" (127 mm) OD, Weight 17,5 (26 kg/m) lb/ft API Grade, N/A Date of Section 1 Test 03 October, 2011
 Target Data 88,2" (2240 mm) OD, Amount of Cement 9054 (1107 kg) lb, Amount of Sand 18106 (8213 kg) lb, Amount of Water 4709 (2136 kg)
 Date of Compressive Strength Test 03 October 2011 Briquette Compressive Strength 6266 (43,3 MPa) psi, Age of Target 31 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 (mm)	0.64 (16.3)	0.70 (17.9)	0.52 (13.2)	0.29 (7.4)	0.24 (6.0)	0.40 (10.2)	0.64 (16.3)	0.70 (17.9)	0.52 (13.2)	0.29 (7.4)	0.24 (6.0)
Casing Hole Diameter, Short Axis, in (mm)	0.44 (11.30)	0.47 (11.83)	0.48 (12.13)	0.46 (11.62)	0.43 (11.03)	0.45 (11.51)	0.42 (10.56)	0.45 (11.51)	0.44 (11.29)	0.48 (12.07)	0.50 (12.63)
Casing Hole Diameter, Long Axis, in (mm)	0.48 (12.11)	0.50 (12.58)	0.51 (12.97)	0.49 (12.53)	0.46 (11.61)	0.46 (11.64)	0.42 (10.78)	0.48 (12.24)	0.47 (11.94)	0.49 (12.45)	0.52 (13.27)
Average Casing Hole Diameter, in (mm)	0.46 (11.71)	0.48 (12.21)	0.49 (12.55)	0.48 (12.08)	0.45 (11.32)	0.46 (11.58)	0.42 (10.67)	0.47 (11.88)	0.46 (11.62)	0.48 (12.26)	0.51 (12.95)
Total Depth, in (mm)	38.31 (973)	38.70 (983)	37.52 (953)	38.39 (975)	38.90 (988)	38.50 (978)	37.20 (945)	38.50 (978)	38.50 (978)	38.11 (968)	39.29 (998)
Burr Height, in (mm)	0.12 (3.00)	0.10 (2.52)	0.09 (2.21)	0.11 (2.76)	0.07 (1.87)	0.08 (1.99)	0.05 (1.17)	0.08 (1.98)	0.08 (1.92)	0.10 (2.53)	0.05 (1.35)

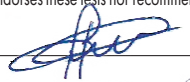
Shot No.	No 12	No 13	No 14	No 15	No 16	No 17	No 18	No 19	No 20	No 21	No 22	AVERAGE
Clearance, in (mm)	0.40 (10.2)	0.64 (16.3)	0.70 (17.9)	0.52 (13.2)	0.29 (7.4)							XXXXX XXXXX
Casing Hole Diameter, Short Axis, in (mm)	0.50 (12.66)	0.43 (11.03)	0.45 (11.45)	0.42 (10.75)	0.44 (11.15)							0.45 (11.53)
Casing Hole Diameter, Long Axis, in (mm)	0.52 (13.27)	0.49 (12.43)	0.47 (11.90)	0.45 (11.55)	0.47 (11.83)							0.48 (12.19)
Average Casing Hole Diameter, in (mm)	0.51 (12.97)	0.46 (11.73)	0.46 (11.68)	0.44 (11.15)	0.45 (11.49)							0.47 (11.86)
Total Depth, in (mm)	37.60 (955)	38.58 (980)	39.09 (993)		38.50 (978)							38.38 (975)
Burr Height, in (mm)	0.10 (2.52)	0.07 (1.90)	0.09 (2.21)	0.11 (2.72)	0.09 (2.32)							0.09 (2.19)


Remarks: Penetration normalized to 5000 psi by method of SPE 27424 (approx 3.8 % (1000 psi) = 40,20 in (1021 mm)

Manufacturer's Certification

Type of certification: x Sel Third Party

I certify that these tests were made according to the procedures as outlined in API 19 B: 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 card, ect., 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 describes.

API Witness A.Tovmachenko  07 October, 2011

x CERTIFIED BY M.R.Khayrutdinov  General Director 07 October, 2011 PROMPERFORATOR, LTD 41, Moscow highway, Samara, Russia, 443080
 RECERTIFIED BY (Company Official) (Title) (Date) (Company) (Adress)

Name of test as it should appear on website: 3,5" KPO 89 w/charge ZKPO-PP-22GP-01, DP
 Name of test as it should appear on application and application date: 3,5" KPO 89 w/charge ZKPO-PP-22GP-01, DP



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



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

Service Company PROMPERFORATOR, LTD Explosive Weight 22 gm, RDX powder, Case Material Steel
 Gun OD & Trade Name 3.5" KPO 89, BH Max Temp, °F 302 (150° C) 2hr 5hr 12hr 30hr 72hr
 Charge Name ZKPO-PP-22BO-00 Maximum Pressure Rating 11600 (80 MPa) psi, Carrier Material Steel
 Manufacturer Charge Part No. ZKPO-PP-22BO-00 Date of Manufacture 08/2011 Shot Density Tested 4.88 (16 shots/m) shots/ft 4.88 (16 shots/m)
 Gun Type Non Reusable Case Gun Recommended Minimum ID for Running 4.53 (130 mm) in.
 Phasing Tested 60 degrees, Firing Order: x Top Down Bottom up Available Firing Mode: Selective x Simultaneous
 Debris Description N/A Debris Weight 0 gm/charge, Debris 0 in/charge

Remarks/Exceptions per Section 11.1 127x7.5 mm (5x0.3") GOST 632-80 GRADED

Casing Data 5" (127 mm) OD, Weight 17.5 (26 kg/m) lb/ft, API Grade, N/A Date of Section 1 Test 03 October, 2011
 Target Data 34.6" (880 mm) OD, Amount of Cement 1373 (623 kg) lb, Amount of Sand 2745 (1245 kg) lb, Amount of Water 714 (324kg)
 Date of Compressive Strength Test 03 October 2011 Briquette Compressive Strength 6280 (43.2 MPa) psi, Age of Target 31 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 (mm)	0.64 (16.3)	0.70 (17.9)	0.52 (13.2)	0.29 (7.4)	0.24 (6.0)	0.40 (10.2)	0.64 (16.3)	0.70 (17.9)	0.52 (13.2)	0.29 (7.4)	0.24 (6.0)
Casing Hole Diameter, Short Axis, in (mm)	0.86 (21.85)	0.87 (22.15)	0.86 (21.76)	0.84 (21.26)	0.83 (21.04)	0.86 (21.85)	0.88 (22.31)	0.83 (21.15)	0.88 (22.32)	0.84 (21.39)	0.91 (23.11)
Casing Hole Diameter, Long Axis, in (mm)	0.89 (22.63)	0.91 (23.04)	0.91 (23.07)	0.90 (22.77)	0.88 (22.43)	0.91 (23.08)	0.93 (23.71)	0.90 (22.76)	0.90 (22.95)	0.97 (24.64)	0.93 (23.50)
Average Casing Hole Diameter, in (mm)	0.88 (22.24)	0.89 (22.60)	0.88 (22.42)	0.87 (22.03)	0.86 (21.74)	0.88 (22.47)	0.91 (23.01)	0.86 (21.96)	0.89 (22.64)	0.91 (23.02)	0.92 (23.31)
Total Depth, in (mm)	7.60 (193)	7.40 (188)	7.60 (193)		7.80 (198)	8.19 (208)	7.99 (203)	7.60 (193)	7.99 (203)	7.99 (203)	7.60 (193)
Burr Height, in (mm)	0.05 (1.32)	0.10 (2.44)	(.00)	(.00)	(.00)	0.04 (1.14)	(.00)	0.03 (.70)	0.05 (1.37)	(.00)	0.05 (1.22)

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 (mm)	0.40 (10.2)	0.64 (16.3)	0.70 (17.9)	0.52 (13.2)	0.29 (7.4)							XXXXX XXXXXX
Casing Hole Diameter, Short Axis, in (mm)	0.88 (22.31)	0.85 (21.47)	0.87 (22.19)	0.86 (21.91)	0.87 (22.12)							0.86 (21.89)
Casing Hole Diameter, Long Axis, in (mm)	0.90 (22.74)	0.87 (22.13)	0.92 (23.46)	0.88 (22.32)	0.93 (23.53)							0.91 (23.05)
Average Casing Hole Diameter, in (mm)	0.89 (22.53)	0.86 (21.80)	0.90 (22.83)	0.87 (22.12)	0.90 (22.83)							0.88 (22.47)
Total Depth, in (mm)	7.80 (198)	7.60 (193)	7.20 (183)	7.80 (198)	7.60 (193)							7.72 (196)
Burr Height, in (mm)	(.00)	0.12 (2.97)	(.00)	(0.05) (1.19)	0.11 (2.84)							0.07 (.95)

Remarks: Penetration normalized to 5000 psi by method of SPE 27424 (approx 3.8 % (1000 psi) = 8.07 in (205 mm))

Manufacturer's Certification

Type of certification: x Sel Third Party

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API Witness A.Tovmachenko 07 October, 2011

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