Test report

Product name	: Dynamite Digger (HTML5-Desktop-Tablet)
Jurisdiction	: Malta
Applicant	: Virtue Fusion Ltd
Test institute	: Trisigma B.V.
Type of product	: Slot game

Author: D. van der Wal

Authorised by: Ing. R. Hubregtse 22-07-2016
Quality Manager

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1. TEST INSTITUTE

Trisigma B.V. (here after Trisigma) provides compliance and type approval services to the gaming industry and authorities. The Trisigma test labs are located in The Netherlands and have extensive facilities for testing and approval of online and land based gaming systems. Trisigma has been accredited by the Dutch Council of Accreditation for both standards ISO/IEC 17020 (with identification I254) and ISO/IEC 17025 (with identification L531) within the scope of compliance testing and examination of gaming systems. It is Trisigma's policy to carry out all activities according to these high quality standards in order to assure the international recognition of Trisigma certifications, reports and declarations.

This report presents the Trisigma final conclusion of compliance, the scope of examination, the specific identification of the gaming system and an overview of the applicable requirements including the appraisal with regard to the gaming system under examination.

This report has been constructed under the supervision and responsibility of Trisigma's Quality Manager. Every effort has been made to ensure the quality and accuracy of the information contained in this report. If errors or omissions are discovered, please contact us with details. Trisigma B.V. reserves the right to issue revisions of this test report if additional information is presented or discovered.

2. TEST METHODS

Trisigma examines gaming systems using accredited and recognized assessment methods. These methods cover all applicable components and characteristics of the product under examination.

Qualified test engineers carry out a comprehensive compilation of test methods using documentation review, measurements, evaluation of calculations and simulations, statistical tests, functional tests, visual assessment and source code analyses and supervised builds in order to examine the product from a requirements point of view. These test methods comprises the functional and statistical behavior of the gaming system.

3. GENERAL REPORT DATA

Report number	3s.16.905_MT.R0
Jurisdiction	Malta
Requirements	Remote Gaming Regulations Subsidiary Legislation 438.04
Additional regulations or directions	Return to Player Directive 2016 Form MGA/51/2011-13
Test period	July 2016
Project Engineer	D. van der Wal
Revision information	-
References	3s.16.156_UK.R0 Report Dynamite Digger (HTML5)

4. APPLICANT DATA

Company name	Virtue Fusion Ltd
Address	10 Jamestown Road NW1 7BY LONDON UNITED KINGDOM
Contact	Mr C. Rhoades

5. CONCLUSION AND RECOMMENDATION

The game complies with the Malta Remote Gaming Regulations.

It is the recommendation of Trisigma that the game be approved for use in the jurisdiction of Malta.

This was a game only compliance test. Platform and RNG have been separately tested.

The game has been assessed on the English language version.

6. GAME INFORMATION

Type of game	Slot game
Game rules	Dynamite Digger is a 5-reel, 3-row video slot game with 20 win lines.
Jackpot	No
Game software identification	v16.3.0
Minimum bet	At operator's discretion
Maximum bet	At operator's discretion
Target percentage RTP	95.52%
Maximum autoplay games	100

7. PLATFORM AND TEST EQUIPMENT INFORMATION

Platform information:

Supplier	Virtue Fusion Ltd
Version	16.3.0

The game was tested with the following equipment:

Device	**OS**	**Browser**
PC HP ProDesk 490 G1 MT Intel i7 (12GB RAM)	Windows 7 Pro (64bit)	Google Chrome (version 47.0.2526.106 m) Mozilla Firefox (version 44.0)
Samsung Galaxy Tab S2	Android (version 5.0.2)	Android
Apple iPad Air 2	iOS (version 9.3.1)	Safari

8. REQUIREMENTS – TEST RESULTS OVERVIEW

Requirements within this scope are included in this test results overview. Where requirements are applicable to either game or platform these requirements are included in this test result overview, and are marked 'Not Applicable' when compliance is determined only by the platform.

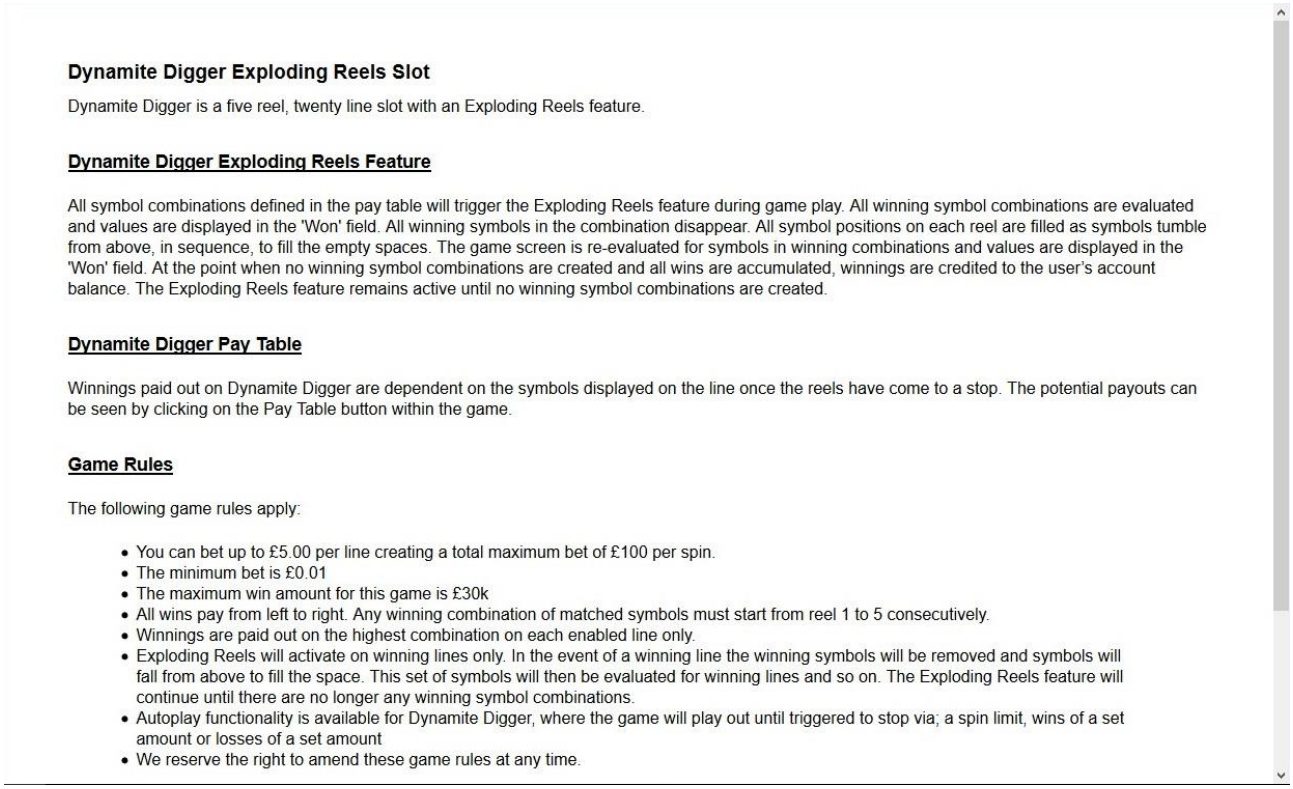
Test results overview		
Article	**Requirement Text**	**Verdict**
2. Definitions	In these regulations, unless the context otherwise requires: "remote betting" means the negotiation or receiving of any bet by a means of distance communications; "remote gaming" means any form of gaming by means of distance communications; "remote gaming equipment" means a machine or other device whether electronic, electrical or mechanical, computer software, or any other mechanism, device or item, used or suitable for use, in the operation of an authorised game and which is situated in Malta;	
	Remarks/Findings: This is a definition only.	
25. Conformity of gaming system	An applicant for a licence or a licensee shall, in respect of a new gaming system, and before any such system becomes operational, provide adequate certification that may be required by the Authority: Provided that the certification must show that gaming system has been found within the previous six months to comply with each and all the technical specifications laid down in the Third Schedule.	
	Remarks/Findings: This is an explanatory text only.	
44. Display of counters (1)	Where the game is displayed on a screen the licensee shall cause to be displayed on the screen, at all times during the game, a counter which automatically updates and shows the player's account balance.	**PASS**
	Remarks/Findings: The required information is presented correctly.	
44. Display of counters (2) (a)	The licensee shall also make available to every player an automatic reality check at intervals of one hour.	**Not Applicable**
	Remarks/Findings: This is a game only test report. Platform functions have not been tested.	
44. Display of counters (2) (b)	The automatic reality check shall:	**Not Applicable**
	Remarks/Findings: This is a game only test report. Platform functions have not been tested.	
44. Display of counters (2) (b) (i)	suspend play;	**Not Applicable**
	Remarks/Findings: This is a game only test report. Platform functions have not been tested.	
44. Display of counters (2) (b) (ii)	clearly indicate for how long the player has been playing;	**Not Applicable**
	Remarks/Findings: This is a game only test report. Platform functions have not been tested.	

44. Display of counters (2) (b) (iii)	display the player's winnings and losses during such period of time;	**Not Applicable**
	Remarks/Findings: This is a game only test report. Platform functions have not been tested.	
44. Display of counters (2) (b) (iv)	require the player to confirm that the player has read the message;	**Not Applicable**
	Remarks/Findings: This is a game only test report. Platform functions have not been tested.	
44. Display of counters (2) (b) (v)	give an option to the player to end the session or return to the game.	**Not Applicable**
	Remarks/Findings: This is a game only test report. Platform functions have not been tested.	
45. Indication of currency	All amounts displayed relating to wagers and winnings shall be quoted with the symbol of currency that the player is playing with.	**PASS**
	Remarks/Findings: The required information is presented correctly.	
46. Full screen games restriction	Without prejudice to anything contained in regulation 45, full screen games cannot be offered to players unless a real time clock is displayed on the screen at all times and players are given the facility to exit the game.	**PASS**
	Remarks/Findings: The time of day is displayed on the game screen at all times.	
46A. RTP restriction	(1) A licensee offering games using repetitively generated random selection for determining winning combinations to players shall ensure that, in accordance with the way in which the game is designed, the licensee shall pay out on average a prize amounting to ninety two per centum (92%) or more of the money or money's worth wagered, or any such higher percentage as may be stipulated through a condition of the licence. (2) The Authority may issue a directive regulating the manner in which licensees are required to report, certify or comply with the requirements established in this regulation, and, or exempt types or categories of games from the requirements of this regulation: Provided that for the purposes of calculating and ensuring compliance with the percentage referred to in sub-regulation (1), a licensee shall take into consideration the transactions occurring from the 1st of January 2015 onwards.	**PASS**
	Remarks/Findings: Research demonstrates that the game shall pay out on average a prize above 92% of the money's worth wagered.	
1. Technical requirement for gaming system	The gaming system must:	
	Remarks/Findings: This is an explanatory text only.	
1. Technical requirement for gaming system (a)	faithfully follow the game rules published by the operator; and	**PASS**
	Remarks/Findings: The game tested operates under one fixed set of rules. The game's rules and RTP are not configurable by the Player or via the Admin System.	
1. Technical requirement for gaming system (b)	provide over time no more than the expected house advantage to the operator.	**PASS**
	Remarks/Findings: The expected house advantage is validated by use of simulation.	

2. Technical requirement for gaming system	Both the gaming and financial transactions must be congruent and secure.	**Not Applicable**
	Remarks/Findings: This is a game only test report. Platform functions have not been tested.	
3. Technical requirement for gaming system	The gaming system must satisfy the following criteria for randomness, following Schneier:	
	Remarks/Findings: This is an explanatory text only.	
3. Technical requirement for gaming system (a)	the data must be randomly generated, passing appropriate statistical tests of randomness;	**PASS**
	Remarks/Findings: Research demonstrates that events of chance are statistically random.	
3. Technical requirement for gaming system (b)	the data must be unpredictable, i.e. it must be computationally infeasible to predict what the next number will be, given complete knowledge of the algorithm or hardware generating the sequence, and all previously generated numbers;	**Not Applicable**
	Remarks/Findings: This is a game only test report. RNG has not been tested.	
3. Technical requirement for gaming system (c)	the series cannot be reliably reproduced, i.e. if the sequence generator is activated again with the same input (as exactly as is reasonably possible) it will produce two completely unrelated random sequences.	**Not Applicable**
	Remarks/Findings: This is a game only test report. RNG has not been tested.	
4. Technical requirement for gaming system	The outcome of any game event, and the return to the player, must be independent of the CPU, memory, disk or other components used in the playing device used by the player.	**PASS**
	Remarks/Findings: The game outcome is independent of the equipment of the participant.	
5. Technical requirement for gaming system	The game or any game event outcome must not be affected by the effective bandwidth, link utilisation, bit err or rate or other characteristic of the communication channel between the gaming system and the playing device used by the player.	**PASS**
	Remarks/Findings: The game outcome is determined at server side and is independent of communication characteristics or end user device.	
6. Technical requirement for gaming system	The gaming system must be able to display for each game the following information on the current page or on a page directly accessible from the current page via a hyperlink:	
	Remarks/Findings: This is an explanatory text only.	
6. Technical requirement for gaming system (a)	the name of the game;	**PASS**
	Remarks/Findings: The required information is displayed on the artwork.	
6. Technical requirement for gaming system (b)	restrictions on play;	**PASS**
	Remarks/Findings: The required information is displayed in the game information.	

6. Technical requirement for gaming system (c)	instructions on how to play, including a pay-table for all prizes and special features;	**PASS**
	Remarks/Findings: The required information is displayed in the game information.	
6. Technical requirement for gaming system (d)	the player's current account balance;	**PASS**
	Remarks/Findings: The required information is displayed on the artwork.	
6. Technical requirement for gaming system (e)	unit and total bets permitted;	**PASS**
	Remarks/Findings: The required information is displayed on the artwork.	
6. Technical requirement for gaming system (f)	the rules of the game.	**PASS**
	Remarks/Findings: The required information is displayed in the game information.	
6. Technical requirement for gaming system (g)	information relating to the average winnings paid out to players of the game over a period of time or a particular number of plays.	**PASS**
	Remarks/Findings: The required information is displayed in the game information.	

APPENDIX A: Game rules



Dynamite Digger Exploding Reels Slot

Dynamite Digger is a five reel, twenty line slot with an Exploding Reels feature.

Dynamite Digger Exploding Reels Feature

All symbol combinations defined in the pay table will trigger the Exploding Reels feature during game play. All winning symbol combinations are evaluated and values are displayed in the 'Won' field. All winning symbols in the combination disappear. All symbol positions on each reel are filled as symbols tumble from above, in sequence, to fill the empty spaces. The game screen is re-evaluated for symbols in winning combinations and values are displayed in the 'Won' field. At the point when no winning symbol combinations are created and all wins are accumulated, winnings are credited to the user's account balance. The Exploding Reels feature remains active until no winning symbol combinations are created.

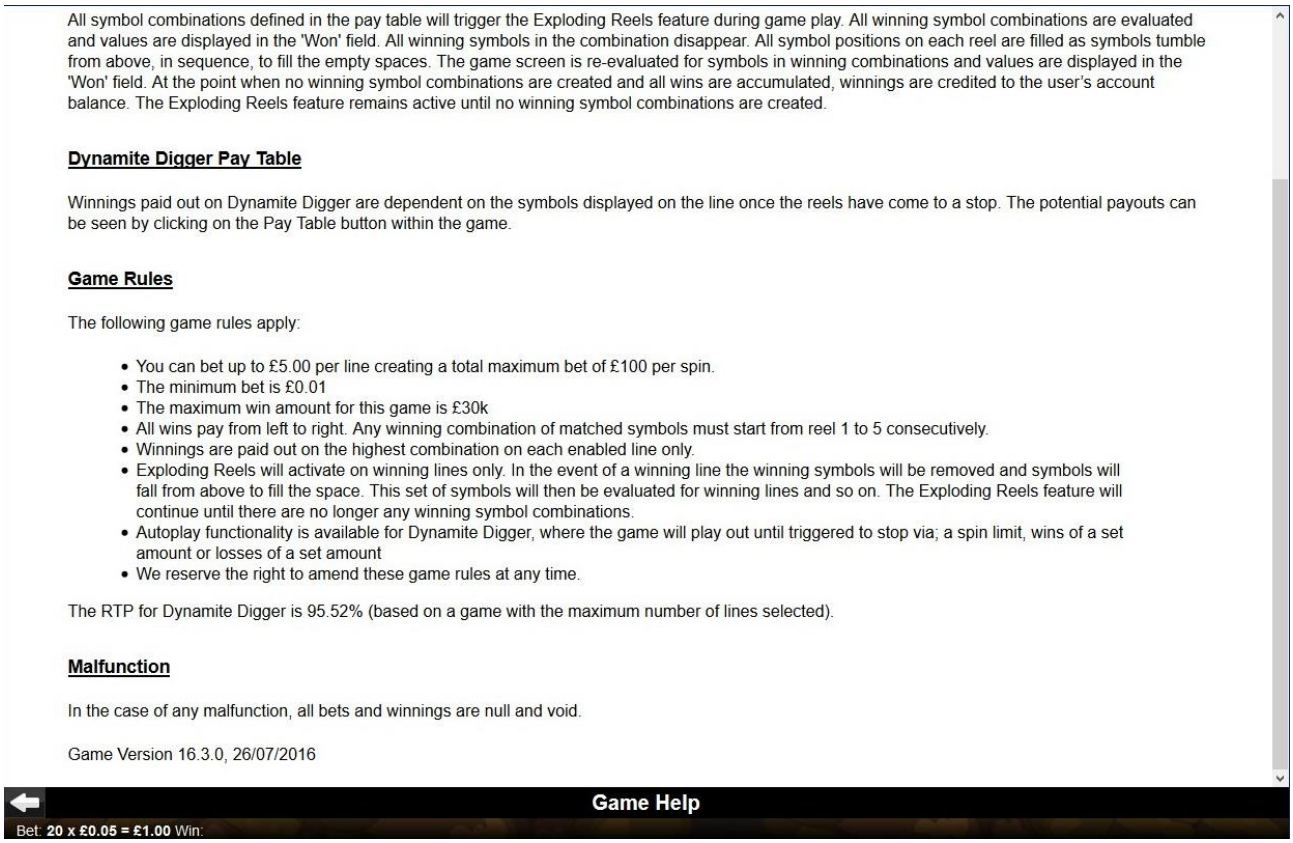
Dynamite Digger Pay Table

Winnings paid out on Dynamite Digger are dependent on the symbols displayed on the line once the reels have come to a stop. The potential payouts can be seen by clicking on the Pay Table button within the game.

Game Rules

The following game rules apply:

- You can bet up to £5.00 per line creating a total maximum bet of £100 per spin.
- The minimum bet is £0.01
- The maximum win amount for this game is £30k
- All wins pay from left to right. Any winning combination of matched symbols must start from reel 1 to 5 consecutively.
- Winnings are paid out on the highest combination on each enabled line only.
- Exploding Reels will activate on winning lines only. In the event of a winning line the winning symbols will be removed and symbols will fall from above to fill the space. This set of symbols will then be evaluated for winning lines and so on. The Exploding Reels feature will continue until there are no longer any winning symbol combinations.
- Autoplay functionality is available for Dynamite Digger, where the game will play out until triggered to stop via; a spin limit, wins of a set amount or losses of a set amount
- We reserve the right to amend these game rules at any time.



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- We reserve the right to amend these game rules at any time.

The RTP for Dynamite Digger is 95.52% (based on a game with the maximum number of lines selected).

Malfunction

In the case of any malfunction, all bets and winnings are null and void.

Game Version 16.3.0, 26/07/2016

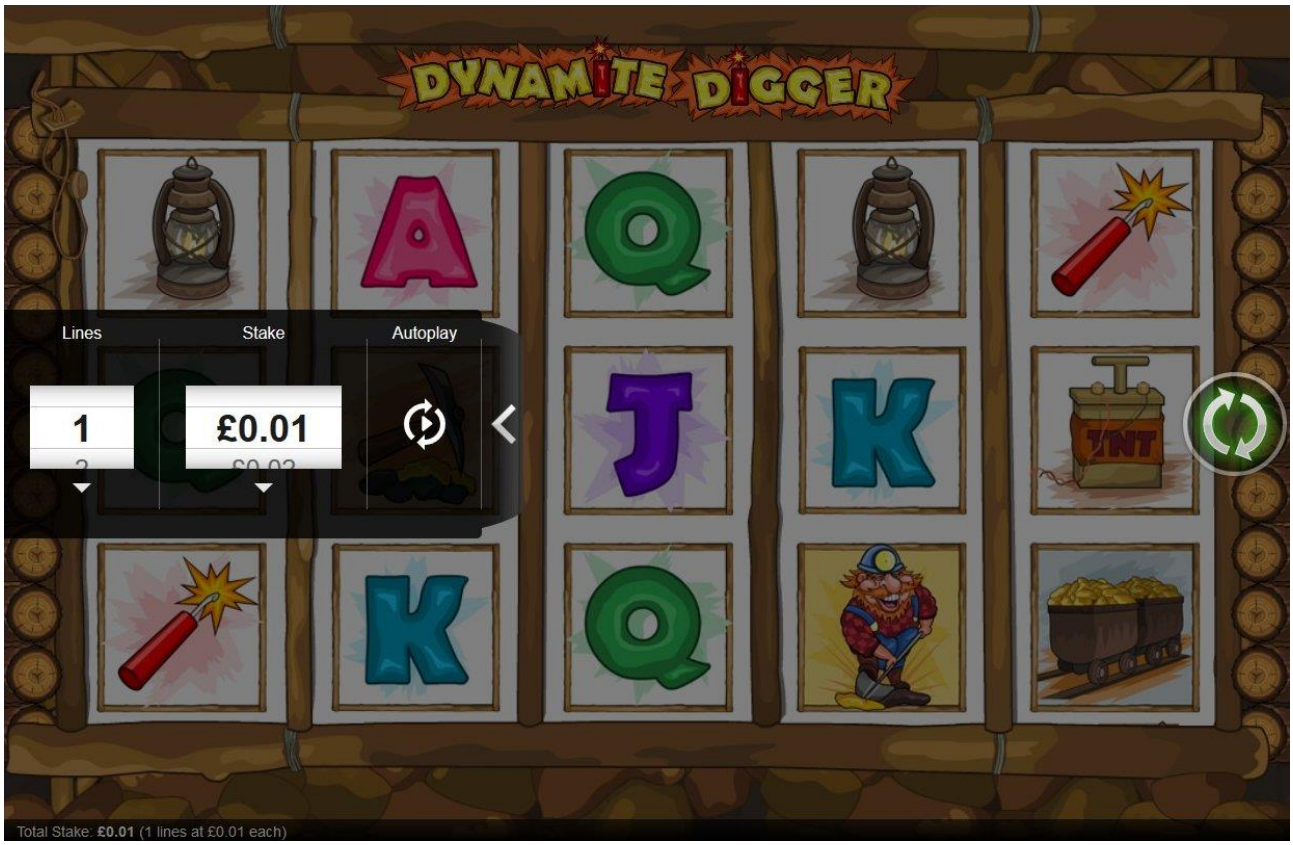
Game Help

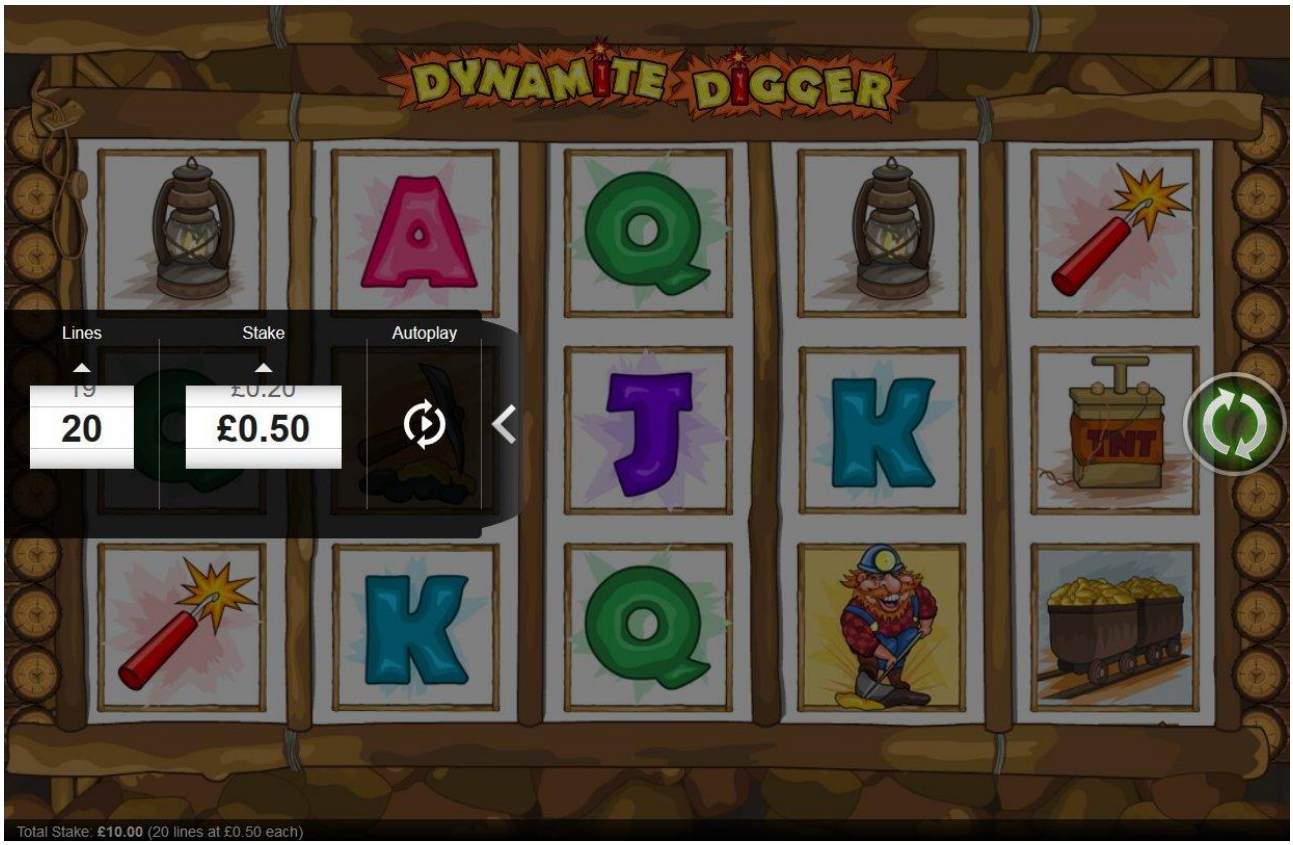
Bet: **20 x £0.05 = £1.00** Win:

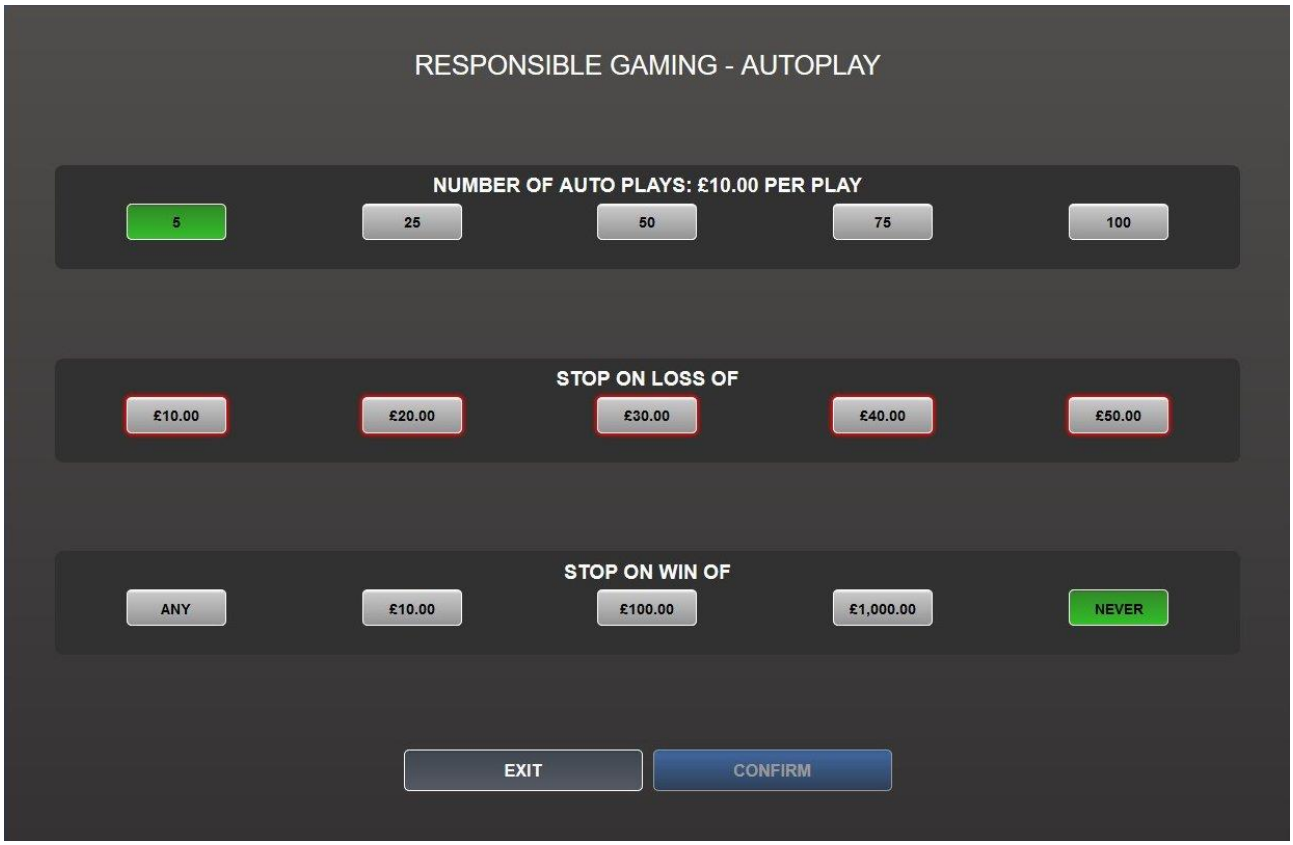
APPENDIX B: Game software identification

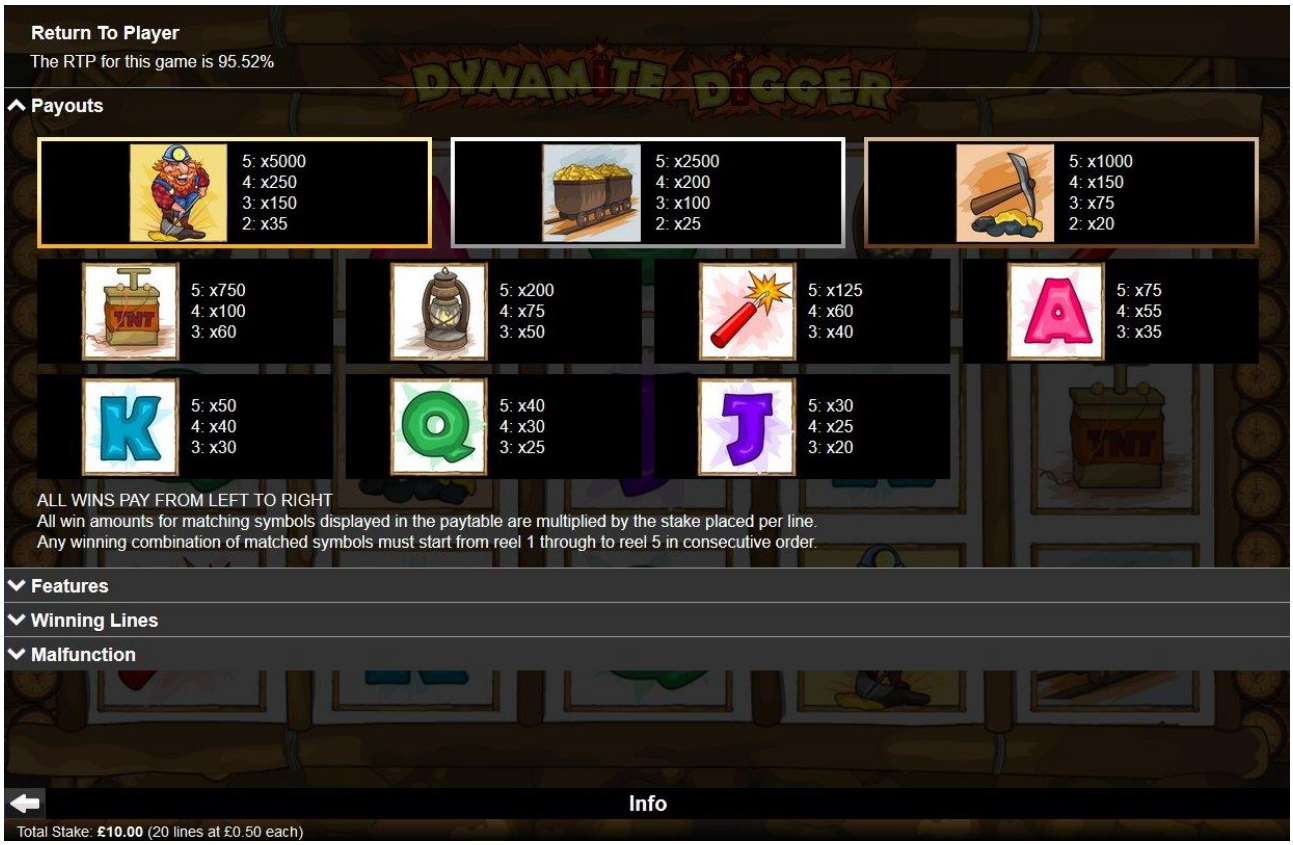
File name	SHA1
less-master.css	7ea40c5ed2c528059a6d1db0617ce9f6e01782b2

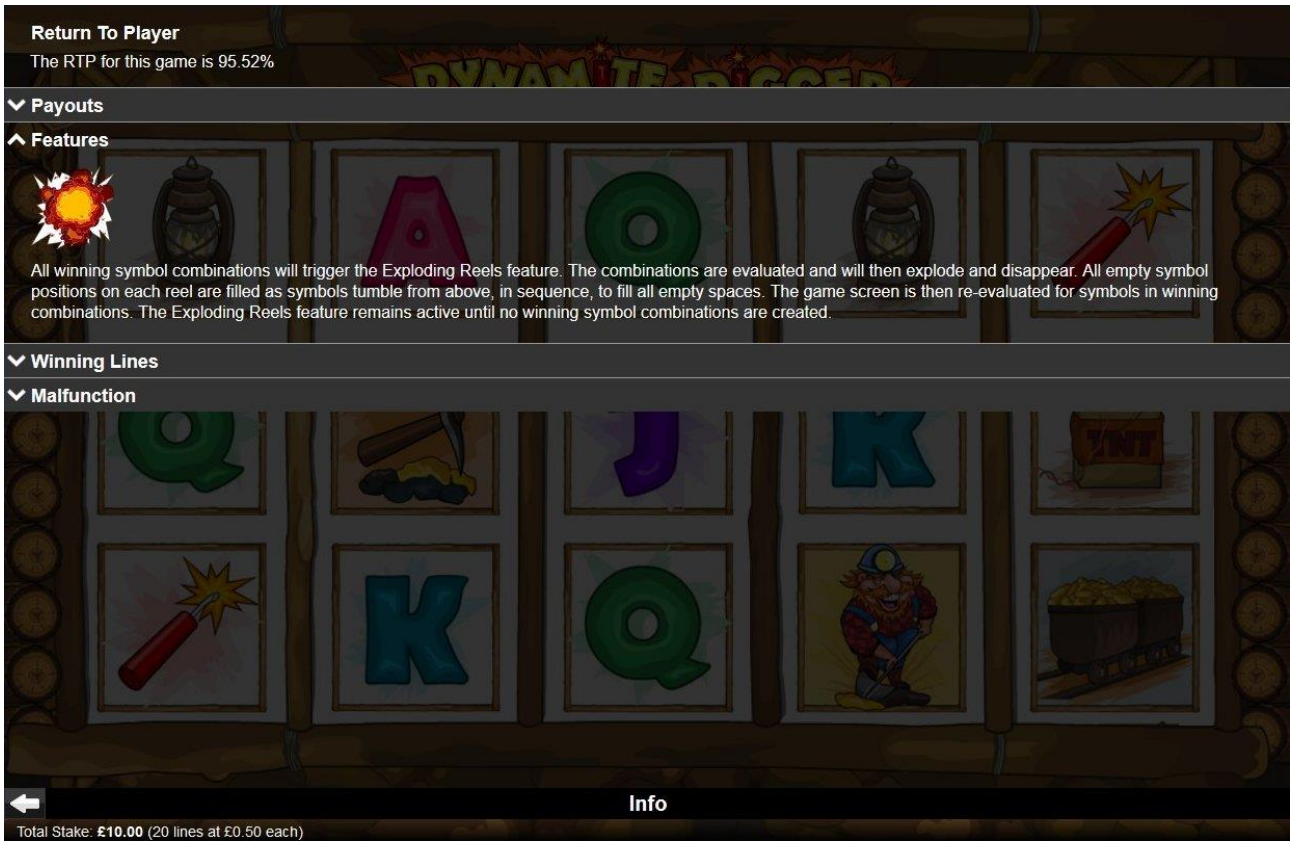
APPENDIX C: Screenshots

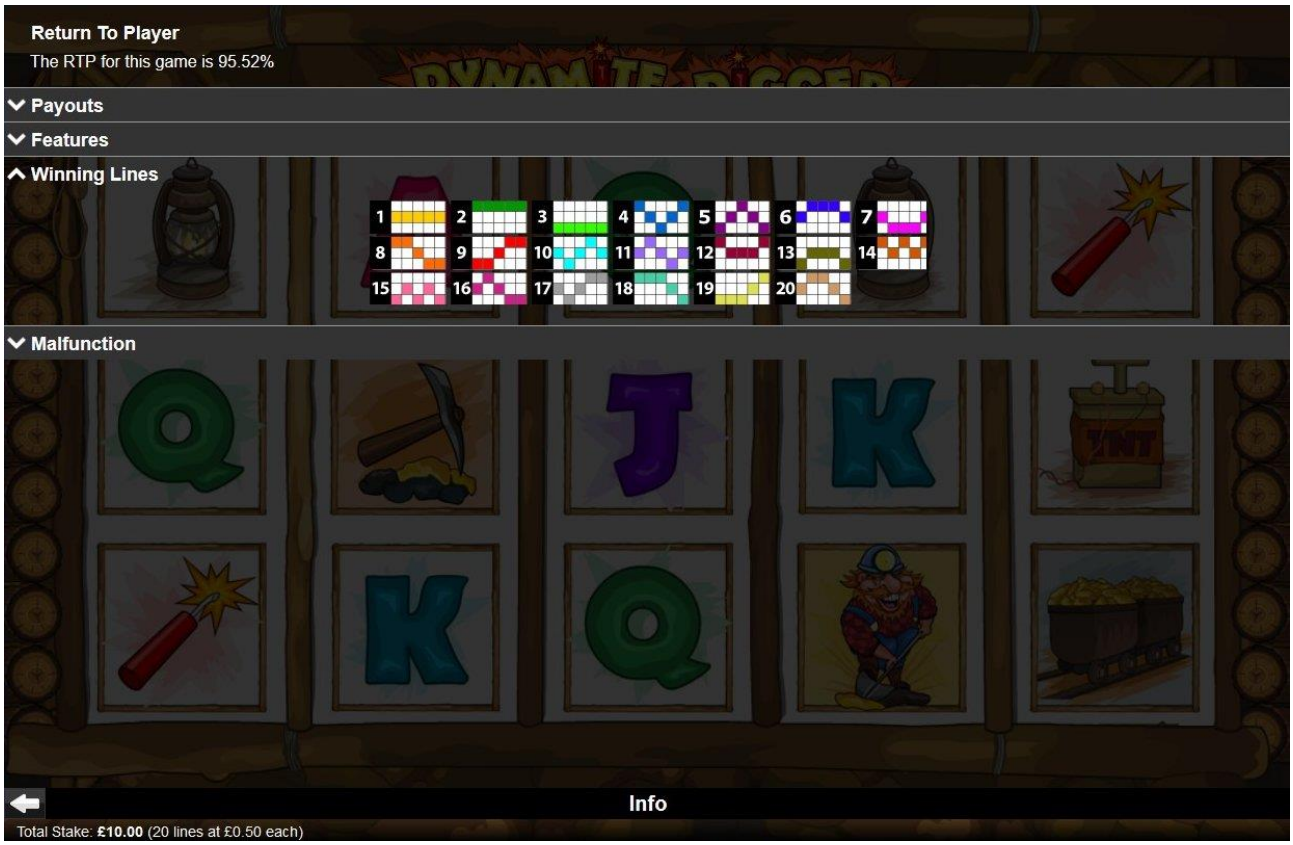

DYNAMITE DIGGER
Lines
Stake
Autoplay
1
£0.01
TNT
Total Stake: £0.01 (1 lines at £0.01 each)

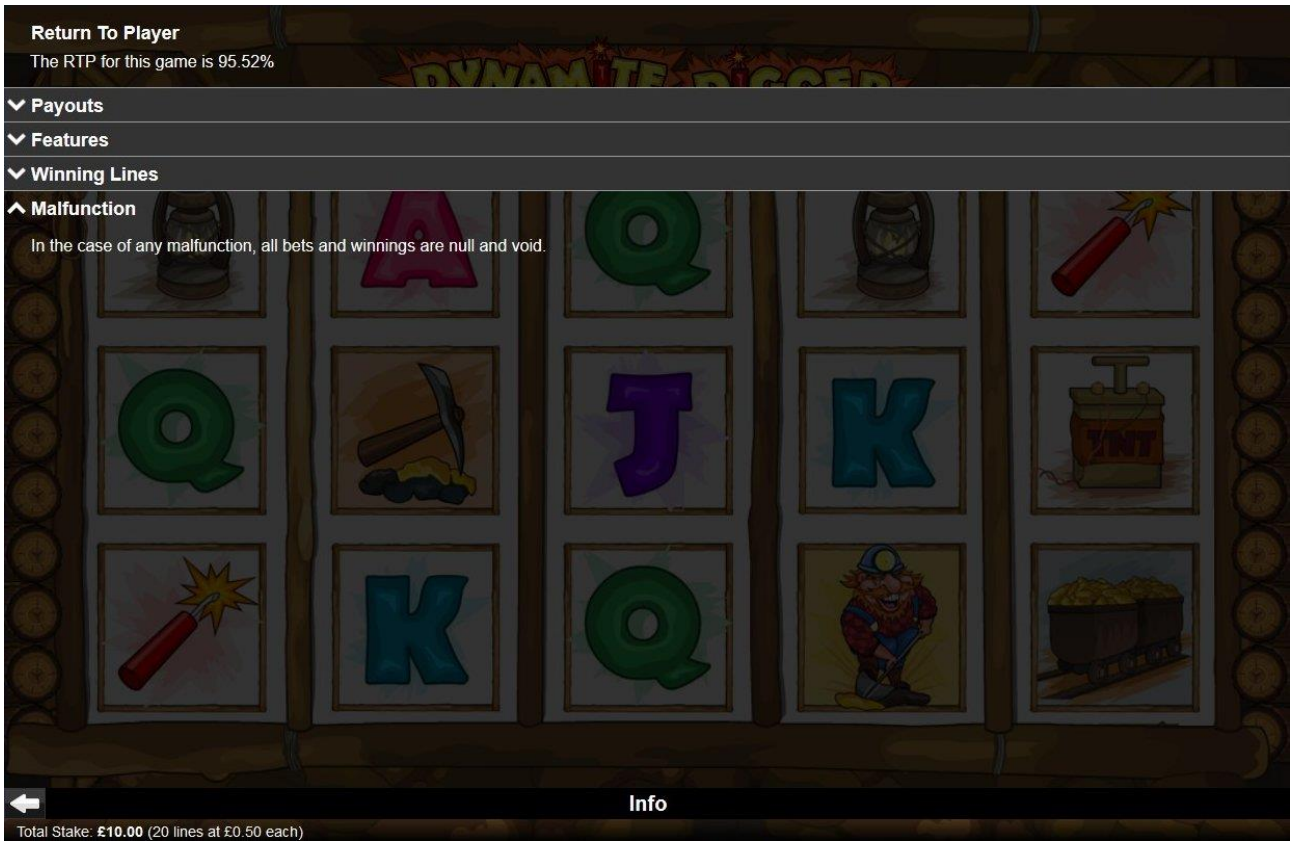

DYNAMITE DIGGER
Lines
Stake
Autoplay
20
£0.50
TNT
Total Stake: £10.00 (20 lines at £0.50 each)


RESPONSIBLE GAMING - AUTOPLAY
NUMBER OF AUTO PLAYS: £10.00 PER PLAY
5
25
50
75
100
STOP ON LOSS OF
£10.00
£20.00
£30.00
£40.00
£50.00
STOP ON WIN OF
ANY
£10.00
£100.00
£1,000.00
NEVER
EXIT
CONFIRM


Return To Player
The RTP for this game is 95.52%
DYNAMITE DIGGER
Payouts
5: x5000
4: x250
3: x150
2: x35
5: x2500
4: x200
3: x100
2: x25
5: x1000
4: x150
3: x75
2: x20
5: x750
4: x100
3: x60
5: x200
4: x75
3: x50
5: x125
4: x60
3: x40
5: x75
4: x55
3: x35
5: x50
4: x40
3: x30
5: x40
4: x30
3: x25
5: x30
4: x25
3: x20
ALL WINS PAY FROM LEFT TO RIGHT
All win amounts for matching symbols displayed in the paytable are multiplied by the stake placed per line.
Any winning combination of matched symbols must start from reel 1 through to reel 5 in consecutive order.
Features
Winning Lines
Malfunction
Info
Total Stake: £10.00 (20 lines at £0.50 each)

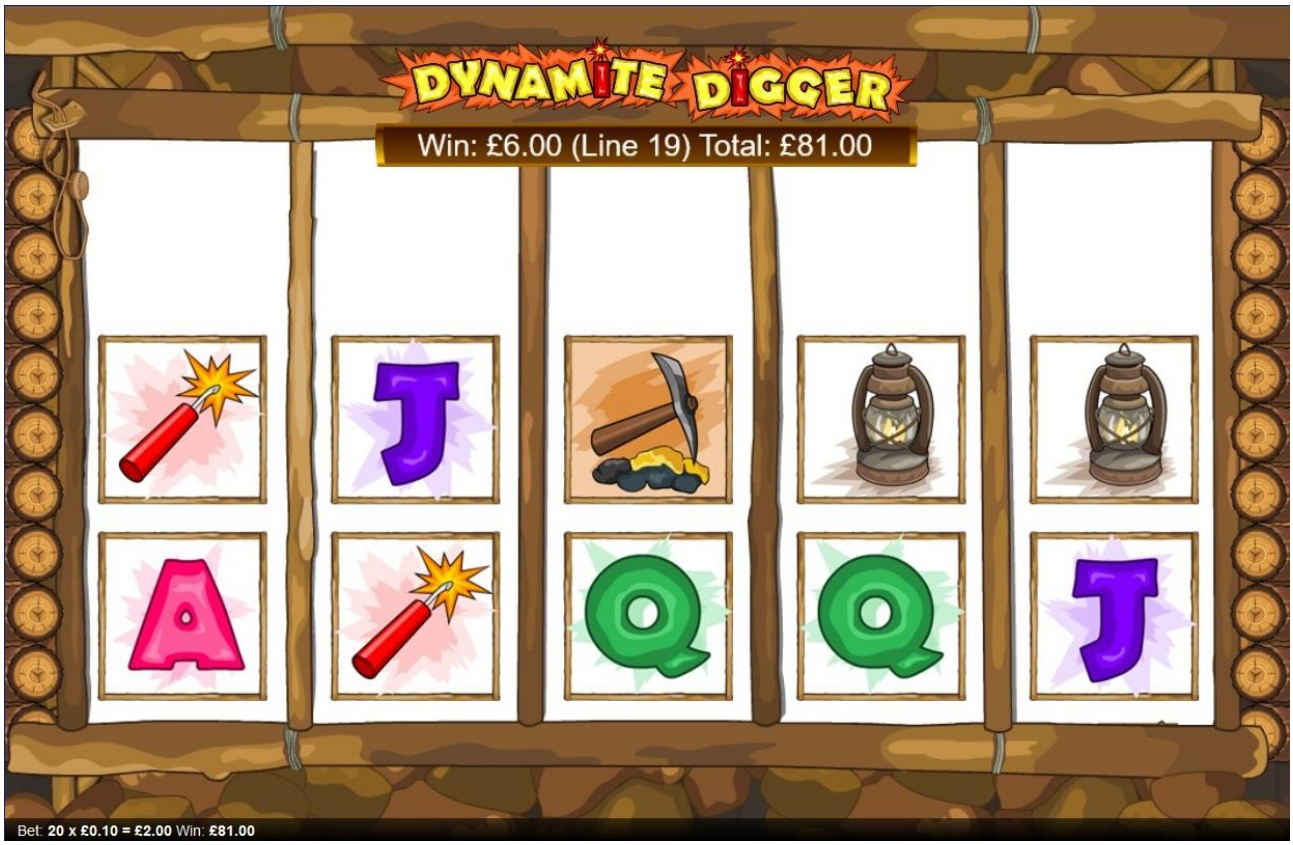

Return To Player
The RTP for this game is 95.52%
Payouts
Features
All winning symbol combinations will trigger the Exploding Reels feature. The combinations are evaluated and will then explode and disappear. All empty symbol positions on each reel are filled as symbols tumble from above, in sequence, to fill all empty spaces. The game screen is then re-evaluated for symbols in winning combinations. The Exploding Reels feature remains active until no winning symbol combinations are created.
Winning Lines
Malfunction
Info
Total Stake: £10.00 (20 lines at £0.50 each)


Return To Player
The RTP for this game is 95.52%
Payouts
Features
Winning Lines
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20
Malfunction
Q
J
K
TNT
K
Q
Info
Total Stake: £10.00 (20 lines at £0.50 each)


Return To Player
The RTP for this game is 95.52%
Payouts
Features
Winning Lines
Malfunction
In the case of any malfunction, all bets and winnings are null and void.
Info
Total Stake: £10.00 (20 lines at £0.50 each)

DYNAMITE DIGGER
Info
Sound
Deposit
Withdraw
Bet History
Help
18+
Responsible Gambling
Gamcare
TNT
Total Stake: £10.00 (20 lines at £0.50 each)

DYNAMITE DIGGER
Bet: 20 x £0.10 = £2.00 Win:


DYNAMITE DIGGER
Win: £6.00 (Line 19) Total: £81.00
Bet: 20 x £0.10 = £2.00 Win: £81.00

APPENDIX D: Reels

Outcome	Reel 0	Reel 1	Reel 2	Reel 3	Reel 4
0	King	Ace	Jack	Miner	Miner
1	Dynamite	Jack	Dynamite	Dynamite	Ace
2	Jack	Dynamite	TNT	Queen	Queen
3	Pick Axe	Queen	Queen	King	King
4	Lantern	Lantern	Pick Axe	Ace	TNT
5	Queen	King	King	Queen	Jack
6	TNT	Ace	Queen	Jack	Lantern
7	Ace	TNT	Ace	TNT	King
8	Dynamite	Dynamite	Lantern	Queen	Ace
9	Jack	Jack	Dynamite	Lantern	Queen
10	Lantern	Gold Cart	Jack	Jack	Jack
11	Queen	Queen	Lantern	King	Gold Cart
12	Gold Cart	Pick Axe	Dynamite	Ace	Ace
13	King	King	Queen	Queen	Jack
14	Dynamite	Lantern	King	Jack	Dynamite
15	Queen	Ace	Ace	Gold Cart	Queen
16	King	King	Queen	King	Lantern
17	TNT	Miner	Jack	Jack	King
18	Jack	Jack	Miner	Lantern	Jack
19	Miner	Lantern	King	Queen	Dynamite
20	Queen	Queen	Lantern	Dynamite	Queen

21	Ace	Dynamite	TNT	Jack	Pick Axe
22	Lantern	Jack	Jack	Pick Axe	Jack
23	King	TNT	Lantern	Ace	Ace
24	Ace	King	Gold Cart	Jack	Queen
25	Queen	Ace	Queen	TNT	TNT
26	Jack	Queen	TNT	Ace	Jack
27	Dynamite	Jack	Ace	King	King
28	Pick Axe	Gold Cart	King	Dynamite	Lantern
29	Jack	King	Pick Axe	Pick Axe	Dynamite
30	Gold Cart	Pick Axe	Jack	Queen	Queen
31	Queen	Jack	Ace	Lantern	Jack
32	Ace	Dynamite	Dynamite	Ace	
33	TNT	Lantern	Queen	King	
34	King	Queen	Jack	Dynamite	
35	Lantern	TNT	King	Jack	
36	Jack	King	Ace	Lantern	
37	Dynamite	Ace	Queen	Queen	
38	King	Queen			
39	Ace	Jack			
40	Queen	Dynamite			
41	Jack	Queen			