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Natural Hazards  
and Earth System  
Sciences  
Discussions



*Supplement of*

## **Earthquakes and depleted gas reservoirs: which comes first?**

**M. Mucciarelli et al.**

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## ***Supplementary material***

<b>Well name</b>	<b>Well category</b>	<b>Falls inside CSS</b>	<b>Falls inside ISS</b>	<b>Sterile CSS</b>	<b>Productive CSS</b>	<b>Sterile background</b>	<b>Productive background</b>	<b>Sterile ISS</b>	<b>Productive ISS</b>
Albareto 1, 2	Sterile	-----	-----			2			
Alfino 1	Sterile	-----	-----			1			
Alfonsine 1-18, 20, 21, 22, 26-29, 33	Productive	-----	-----				26		
Alfonsine 19, 23, 24, 25, 31, 32, 30	Sterile	-----	-----			7			
Argenta 1	Sterile	-----	-----			1			
Baccarini 1	Sterile	ITCS012	-----	1					
Bagnolo in Piano 1, 2	Sterile	ITCS049	-----	2					
Bagnolo in Piano 3	Ambiguous <sup>o</sup>	ITCS049	-----						
Bando 1, 2, 3	Ambiguous <sup>oo</sup>	ITCS012	ITIS141						
Bando 4, 6, 7	Sterile	ITCS012	ITIS141					3	
Baricella 1, 3	Sterile	ITCS012	-----	2					
Baricella 2	Sterile	-----	-----			1			
Baura 1	Sterile	ITCS050	-----	1					
Bevilacqua 1	Sterile	ITCS051	-----	1					
Bignardi 1	Sterile	ITCS051	ITIS107					1	
Boreca 1	Sterile	-----	-----			1			
Boschi 24, 26, 27	Sterile	ITCS012	-----	3					
Boschi 25	Ambiguous <sup>oo</sup>	ITCS012	-----						
Bottoni 1	Ambiguous <sup>o</sup>	ITCS050	-----						
Bova 1, 3	Ambiguous <sup>oo</sup>	ITCS012	-----						
Bova 2, 4, 5	Sterile	ITCS012	-----	3					
Budrio 1	Sterile	-----	-----			1			
Campolungo 4	Ambiguous <sup>o</sup>	-----	-----						
Camposanto 1	Sterile	-----	-----			1			
Camposanto 1	Sterile	ITCS051	-----	1					
Camurana 1, 2	Sterile	ITCS051	ITIS107					2	
Candiano 1	Sterile	ITCS012	-----	1					
Carpi 1	Sterile	-----	-----			1			
Casaglia 1	Sterile	ITCS050	-----	1					
Cascina Buzzoni 1	Sterile	ITCS050	-----	1					

Well name	Well category	Falls inside CSS	Falls inside ISS	Sterile CSS	Productive CSS	Sterile background	Productive background	Sterile ISS	Productive ISS
Cascina Nuova 1	Sterile	ITCS050	-----	1					
Cascina S. Francesco 1	Sterile	-----	-----			1			
Case Borra 1, 2, 3	Sterile	-----	-----			3			
Case Chigi 1	Sterile	ITCS012	-----	1					
Case Pinelli 1	Sterile	-----	-----			1			
Castelfranco Emilia 1,4	Sterile	-----	-----			4			
Cavone 1-5, 9-13, 15-17, 19, 21	Productive	ITCS051	-----		15				
Cavone 6, 14, 18, 20	Sterile	ITCS051	-----	4					
Codigoro 1	Sterile	-----	-----			1			
Cona 1	Sterile	ITCS050	-----	1					
Concordia 1	Sterile	ITCS051	ITIS107					1	
Consandolo 1	Sterile	ITCS012	ITIS141					1	
Consandolo C151	Ambiguous°	ITCS012	ITIS141						
Corpo Reno 1*	Ambiguous°°	ITCS051	-----						
Correggio 1-5, 7-25, 28, 29, 31, 34*, 40	Productive	ITCS049	-----		29				
Correggio 6, 26, 27, 30, 32, 33	Sterile	ITCS049	-----	6					
Crevalcore 1	Sterile	-----	-----			1			
Diamantina 1, 8	Sterile	ITCS050	ITIS090					2	
Dogaro 1, 2	Sterile	ITCS051	-----	2					
Dosso degli Angeli 1	Ambiguous°	-----	-----						
Dosso degli Angeli 3*, 11*, 27*, 15*	Productive	-----	-----				4		
Fabbrico 1	Sterile	ITCS049	-----	1					
Ferrara 1	Sterile	ITCS050	-----	1					
Francolino 1	Sterile	ITCS050	-----	1					
Gaibana 1-4	Ambiguous°°	ITCS012	-----						
Gallare 2	Sterile	-----	-----			1			
Gallare 3, 4, 5	Productive	-----	-----				3		
Ghiarone 2	Productive	ITCS050	-----		1				
Lemizzone 1, 2	Sterile	ITCS049	-----	2					
Longastrino 1, 3, 4, 5, 6	Sterile	ITCS012	-----	5					
Longastrino 2	Ambiguous°	ITCS012	-----						
Madriole 1	Sterile	-----	-----			1			
Maiero 1, 2	Sterile	ITCS012	-----	2					
Malalbergo 1, 29, 30, 33, 35, 36, 39	Ambiguous°°	ITCS012	-----						
Malalbergo 23, 28, 32, 34, 37, 38, 40	Sterile	ITCS012	-----	7					

Well name	Well category	Falls inside CSS	Falls inside ISS	Sterile CSS	Productive CSS	Sterile background	Productive background	Sterile ISS	Productive ISS
Manara 3*	Productive	-----	-----				1		
Mantello 1, 2, 3, 4	Sterile	ITCS012	-----	4					
Medelana 1	Sterile	ITCS050	-----	1					
Medolla 1	Sterile	ITCS051	ITIS107					1	
Mezzano 1	Sterile	-----	-----			1			
Migliarino 1	Ambiguous°	ITCS050	-----						
Migliarino 2	Sterile	ITCS050	-----	1					
Minerbio 1-11, 13-19, 21-23, 37*, 52*, 80*	Productive	-----	-----				24		
Minerbio 3, 12, 20, 24	Sterile	-----	-----			4			
Mirandola 1	Sterile	ITCS103	ITIS107					1	
Mirandola di Quarantoli 2	Sterile	ITCS103	ITIS107					1	
Molinella 1	Sterile	ITCS012	-----	1					
Monestirolo 2	Productive	ITCS012	-----		1				
Monestirolo 3, 4, 5	Sterile	ITCS012	-----	3					
Montalbano 1, 2, 4, 6, 9, 18	Ambiguous°°	ITCS012	-----						
Montalbano 20	Sterile	ITCS051	-----	1					
Montalbano 3, 5, 7, 8, 11, 20, 21	Sterile	ITCS012	-----	7					
Muzza 1*	Productive	-----	-----				1		
Muzza 2	Sterile	-----	-----			1			
Negrini 1	Sterile	-----	-----			1			
Nonantola 1	Sterile	-----	-----			1			
Novellara 1	Sterile	ITCS049	-----	1					
Novi Modenese 1, 2, 3, 4	Sterile	ITCS049	-----	4					
Ostellato 1	Sterile	-----	-----			1			
Palata Pepoli 1	Sterile	ITCS051	-----	1					
Palazzo Majanti 1	Sterile	ITCS050	-----	1					
Pavonara 1	Sterile	ITCS050	-----	1					
Pieve di Cento 1	Sterile	ITCS051	-----	1					
Pilastrini 1, 2	Sterile	ITCS050	-----	2					
Piombone 1	Sterile	ITCS012	-----	1					
Poggetto 1	Ambiguous°	ITCS051	-----						
Poggio Rusco 1-5	Sterile	ITCS050	-----	5					
Pomposa 3	Productive	-----	-----				1		
Porotto 1	Sterile	ITCS050	-----	1					

Well name	Well category	Falls inside CSS	Falls inside ISS	Sterile CSS	Productive CSS	Sterile background	Productive background	Sterile ISS	Productive ISS
Porto Corsini 1	Ambiguous°	ITCS012	-----						
Porto Corsini 2, 3, 4, 10, 11, 12	Sterile	ITCS012	-----	6					
Porto Corsini 5-8	Productive	ITCS012	-----		4				
Porto Verrara 1	Ambiguous°	ITCS012	ITIS141						
Porto Verrara 2, 3	Sterile	ITCS012	ITIS141					2	
Ravarino 2	Productive	-----	-----				1		
Ravenna 2, 12, 24, 32, 36, 37	Sterile	ITCS012	-----	6					
Ravenna 3, 4, 7-11, 13-17, 20-23, 25, 28-31, 33-35, 38-52	Productive	ITCS012	-----		39				
Ravenna 37	Sterile	-----	-----			1			
Ravizza 1	Productive	ITCS049	-----		1				
Riccardina 1	Sterile	-----	-----			1			
Rio Saliceto 1	Sterile	ITCS049	-----	1					
Rivara 1, 2	Sterile	ITCS051	-----	2					
S. Alberto 1, 2	Sterile	ITCS012	-----	2					
S. Biagio 1	Sterile	ITCS051	ITIS107					1	
S. Ermelinda 1	Sterile	ITCS012	ITIS141					1	
S. Felice sul Panaro 1	Sterile	ITCS051	-----	1					
S. Giacomo 1	Productive	ITCS051	ITIS107						1
S. Giorgio di Piano 1	Sterile	-----	-----			1			
S. Giovanni 1	Productive	ITCS049	-----		1				
S. Maddalena 1	Sterile	-----	-----			1			
S. Martino in Spino 1	Sterile	ITCS050	-----	1					
S. Pietro in Casale 1, 3-6, 8-11, 16, 17, 18, 20	Productive	ITCS051	-----		13				
S. Pietro in Casale 2, 7, 12-15, 19, 21, 22	Sterile	ITCS051	-----	9					
S. Possidonio 1	Sterile	-----	-----			1			
Sabbioncello 1-4, 6, 7, 8, 10	Sterile	ITCS050	-----	8					
Sabbioncello 5, 14, 35*, 23*, 31*, 13, 18	Productive	ITCS050	-----		7				
Schiorsi 1	Sterile	-----	-----			1			
Schiorsi 1	Sterile	ITCS012	-----	1					
Selva 2, 5-11, 17-21	Productive	-----	-----				13		
Selva 3, 4, 14, 15, 16, 23, 24	Sterile	-----	-----			7			
Sirocca 1	Sterile	-----	-----			1			
Spada 1	Sterile	ITCS051	-----	1					

Well name	Well category	Falls inside CSS	Falls inside ISS	Sterile CSS	Productive CSS	Sterile background	Productive background	Sterile ISS	Productive ISS
Spinazzino 1	Ambiguous <sup>°</sup>	ITCS012	-----						
Spinazzino 2, 3, 4	Sterile	ITCS012	-----	3					
Torri 1	Sterile	-----	-----			1			
Trava 1	Sterile	ITCS012	-----	1					
Travasona 1	Ambiguous <sup>°</sup>	-----	-----						
Travasona 2	Sterile	-----	-----			1			
Tre Motte 2	Ambiguous <sup>°</sup>	-----	-----						
Tre Motte 3	Productive	ITCS012	-----		1				
Tresigallo 2, 5, 14, 15	Productive	ITCS050	-----		4				
Tresigallo 3, 4, 6, 7, 8, 9-13	Sterile	ITCS050	-----	10					
Valle Isola 1	Sterile	-----	-----			1			
Valle Isola 1	Sterile	-----	-----			1			
Valle Lepri 1	Sterile	-----	-----			1			
Vallesina 1	Sterile	-----	-----			1			
Valletta 1	Sterile	-----	-----			1			
Valli di Comacchio 1, 2, 3	Sterile	ITCS012	-----	3					
Valli di Comacchio Nord Ovest 1, 2	Sterile	ITCS012	-----	2					
Valli di Comacchio NW 1, 2	Sterile	-----	-----			2			
Vallicella 1	Ambiguous <sup>°</sup>	ITCS050	-----						
Varano 1	Sterile	-----	-----			1			
Vicenza Nuova 1	Sterile	ITCS050	ITIS090					1	
Volano 1	Sterile	-----	-----			1			
Vulcano 1	Sterile	ITCS012	-----	1					
Zorabini 1,2	Ambiguous <sup>°</sup>	ITCS012	-----						
<b>Total</b>				<b>145</b>	<b>116</b>	<b>63</b>	<b>74</b>	<b>18</b>	<b>1</b>

<sup>°</sup> exploration borehole which revealed a gas/oil reservoir (never into production)

<sup>°°</sup> gas reservoir shallower than 500 m

 multiple wells