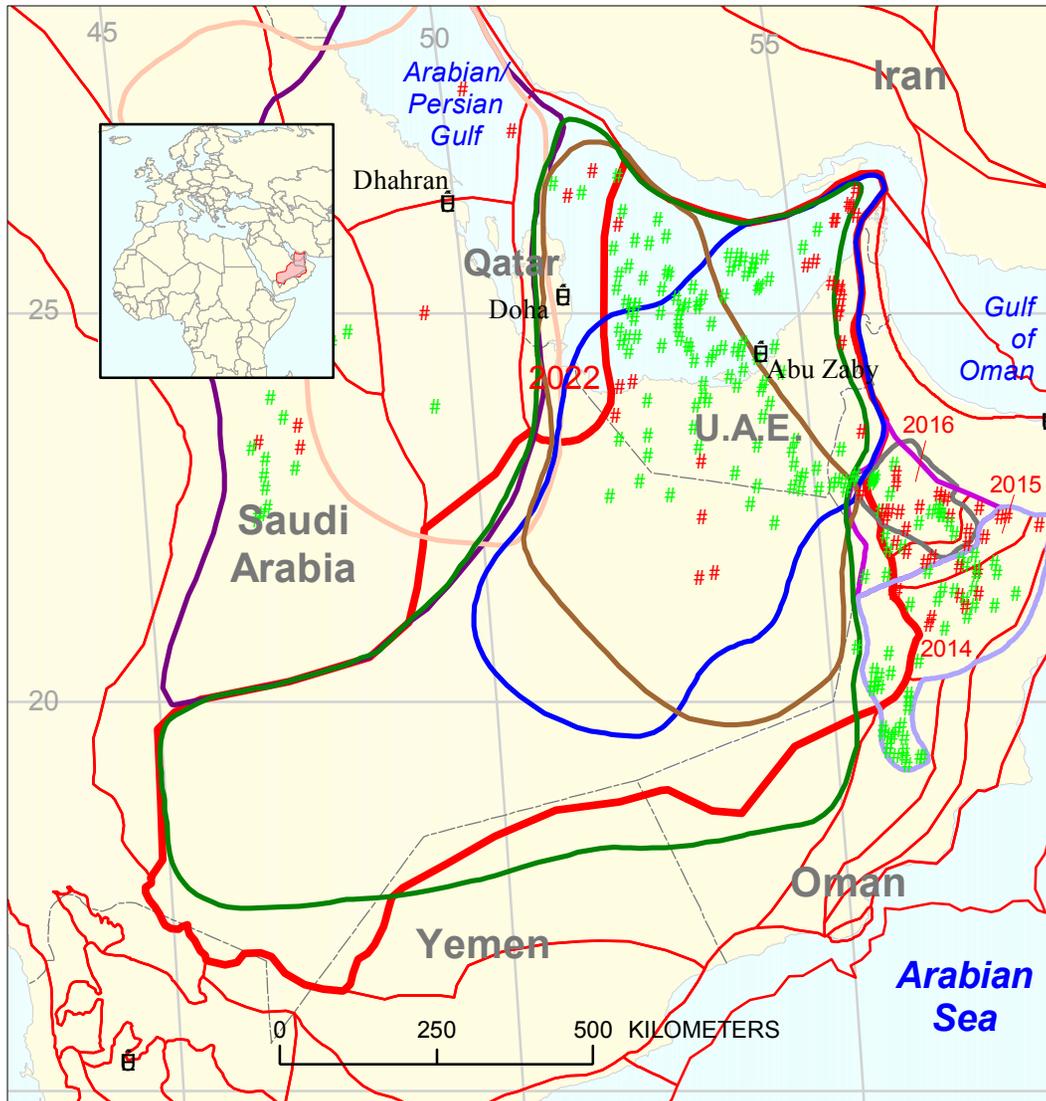


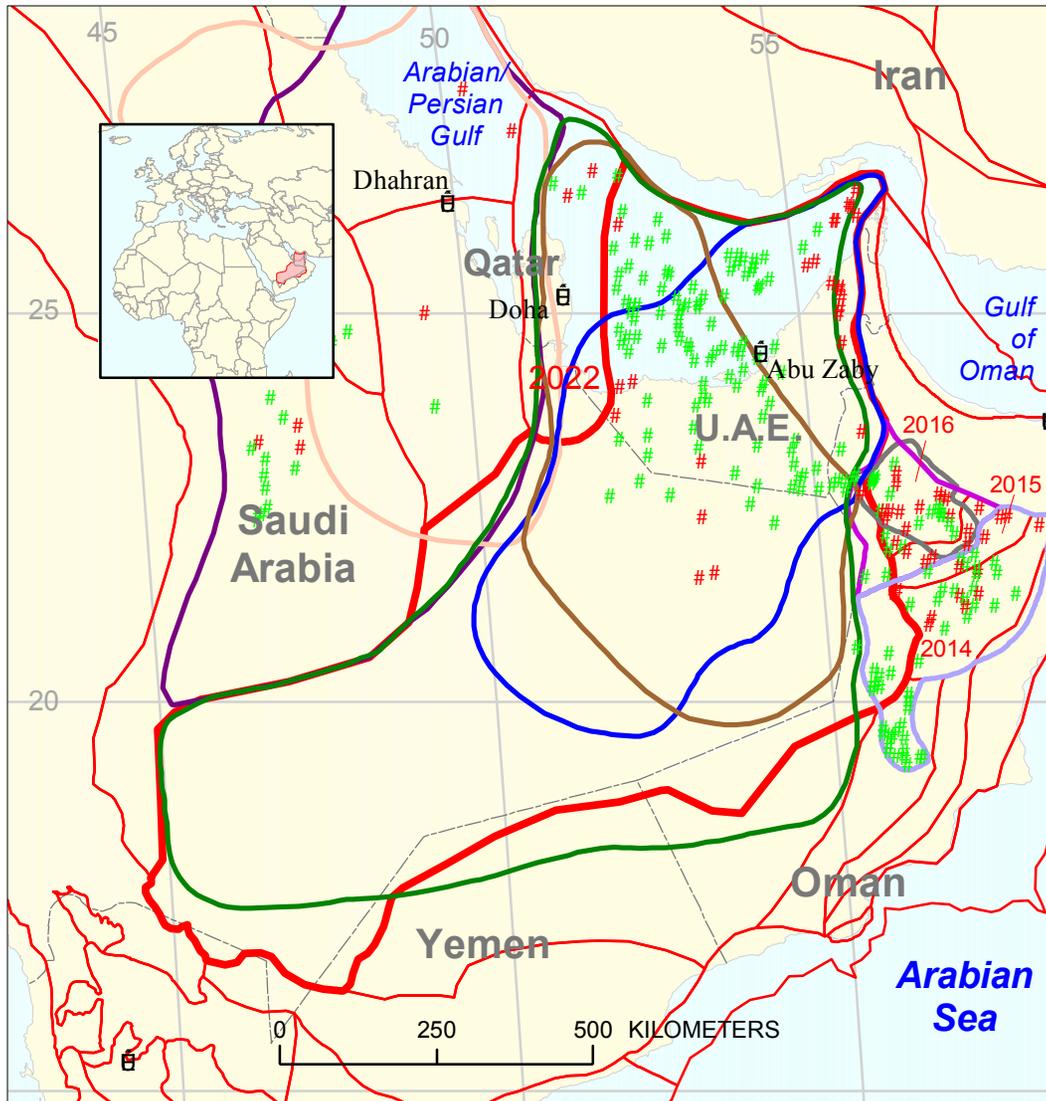
# Rub Al Khali Basin Geologic Province 2019



- Cretaceous Thamama/Wasia Total Petroleum System 201901
- Jurassic Hanifa/Diyab-Arab Total Petroleum System 201902
- Silurian Qusaiba Total Petroleum System 201903
- North Oman Huqf/'Q'-Haushi Total Petroleum System 201401

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- North Oman Huqf-Shu'aiba Total Petroleum System 201601
- Middle Cretaceous Natih Total Petroleum System 201602
- Central Arabia Qusaiba-Paleozoic Total Petroleum System 202101
- Arabian Sub-Basin Tuwaiq/Hanifa-Arab Total Petroleum Sytem 202102
- █ Rub Al Khali Basin Geologic Province 2019
- Other petroleum system boundary

# Rub Al Khali Basin Geologic Province 2019



- North Oman Huqf-Shu'aiba Total Petroleum System 201601
- Middle Cretaceous Natih Total Petroleum System 201602
- Central Arabia Qusaiba-Paleozoic Total Petroleum System 202101
- Arabian Sub-Basin Tuwaiq/Hanifa-Arab Total Petroleum System 202102

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- Rub Al Khali Basin Geologic Province 2019
- Other petroleum system boundary

**Rub Al Khali Basin, Province 2019**  
**Assessment Results Summary - Allocated Resources**

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Code and Field Type	MFS	Prob. (0-1)	Undiscovered Resources											
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)			
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean

**2019 Total: Assessed onshore portions of Rub Al Khali Basin Province**

Oil Fields		1.00	7,267	28,244	69,485	32,034	13,112	58,309	162,067	69,262	720	3,350	9,964	4,085
Gas Fields							85,572	302,677	649,029	327,853	6,054	22,254	52,301	24,805
Total		1.00	7,267	28,244	69,485	32,034	98,684	360,987	811,096	397,114	6,774	25,604	62,265	28,890

**2019 Total: Assessed offshore portions of Rub Al Khali Basin Province**

Oil Fields		1.00	1,409	4,276	8,926	4,613	2,000	6,703	15,563	7,484	112	392	981	450
Gas Fields							5,760	19,464	41,891	21,113	235	832	1,954	929
Total		1.00	1,409	4,276	8,926	4,613	7,759	26,167	57,454	28,598	347	1,224	2,935	1,379

**2019 Grand Total: Assessed portions of Rub Al Khali Basin Province**

Oil Fields		1.00	8,676	32,520	78,411	36,647	15,112	65,012	177,631	76,746	832	3,743	10,945	4,535
Gas Fields							91,332	322,142	690,920	348,966	6,289	23,086	54,255	25,734
Total		1.00	8,676	32,520	78,411	36,647	106,444	387,154	868,551	425,712	7,121	26,828	65,200	30,268

**Rub Al Khali Basin, Province 2019**  
**Assessment Results Summary - Allocated Resources**

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Code and Field Type	MFS	Prob. (0-1)	Undiscovered Resources											
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)			
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean

**201401 North Oman Huqf/Q'-Haushi Total Petroleum System**

20140101 Ghaba-Makarem Combined Structural Assessment Unit (20% of undiscovered oil fields and 20% of undiscovered gas fields allocated to ONSHORE province 2019)

Oil Fields	5	1.00	44	137	290	149	128	406	898	446	9	30	69	33
Gas Fields	30						440	1,478	3,037	1,576	15	51	109	55
Total			44	137	290	149	568	1,885	3,935	2,022	24	81	178	89

**201601 North Oman Huqf-Shu'aiba Total Petroleum System**

20160101 Fahud-Huqf Combined Structural Assessment Unit (22% of undiscovered oil fields and 22% of undiscovered gas fields allocated to ONSHORE province 2019)

Oil Fields	4	1.00	75	257	602	287	110	379	931	431	4	13	33	15
Gas Fields	24						454	1,268	2,633	1,374	15	44	94	48
Total			75	257	602	287	564	1,647	3,563	1,805	19	57	127	63

**201602 Middle Cretaceous Natih Total Petroleum System**

20160201 Natih-Fiqa Structural/Stratigraphic Assessment Unit (5% of undiscovered oil fields and 5% of undiscovered gas fields allocated to ONSHORE province 2019)

Oil Fields	1	1.00	3	16	43	19	1	8	22	9	0	0	1	0
Gas Fields	6						1	7	25	9	0	0	1	0
Total			3	16	43	19	3	14	47	18	0	1	2	1

**Rub Al Khali Basin, Province 2019**  
**Assessment Results Summary - Allocated Resources**

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Code and Field Type	MFS	Prob. (0-1)	Undiscovered Resources												
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)				
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	
<b>201901 Cretaceous Thamama/Wasia Total Petroleum System</b>															
20190101 Cretaceous Reservoirs in Northwest Desert Anticlines Assessment Unit (99% of undiscovered oil fields and 0% of undiscovered gas fields allocated to ONSHORE province 2019)															
Oil Fields	10	1.00	1,276	4,161	9,617	4,655	744	2,471	5,946	2,791	32	110	272	126	
Gas Fields	60						0	0	0	0	0	0	0	0	0
Total			1.00	1,276	4,161	9,617	4,655	744	2,471	5,946	2,791	32	110	272	126
20190102 Cretaceous Reservoirs in South Gulf Suprasalt Structural Assessment Unit (27.6% of undiscovered oil fields and 30% of undiscovered gas fields allocated to ONSHORE province 2019)															
Oil Fields	10	1.00	333	959	2,018	1,039	247	746	1,709	833	14	44	108	50	
Gas Fields	60						100	290	628	317	4	12	29	14	
Total			1.00	333	959	2,018	1,039	346	1,035	2,337	1,150	18	56	137	64
20190102 Cretaceous Reservoirs in South Gulf Suprasalt Structural Assessment Unit (64.4% of undiscovered oil fields and 70% of undiscovered gas fields allocated to OFFSHORE province 2019)															
Oil Fields	10	1.00	778	2,238	4,709	2,424	576	1,740	3,987	1,943	32	102	252	117	
Gas Fields	60						233	676	1,465	740	10	29	68	33	
Total			1.00	778	2,238	4,709	2,424	808	2,416	5,452	2,682	42	131	320	149
20190103 Mesozoic/Tertiary Foredeep Fold and Thrust Assessment Unit (63% of undiscovered oil fields and 61.75% of undiscovered gas fields allocated to ONSHORE province 2019)															
Oil Fields	10	1.00	66	278	728	323	373	1,624	4,582	1,943	21	95	285	117	
Gas Fields	60						1,653	6,848	16,147	7,616	68	292	750	335	
Total			1.00	66	278	728	323	2,026	8,472	20,730	9,560	89	387	1,034	452

**Rub Al Khali Basin, Province 2019**  
**Assessment Results Summary - Allocated Resources**

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Code and Field Type	MFS	Prob. (0-1)	Undiscovered Resources											
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)			
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
<b>20190103 Mesozoic/Tertiary Foredeep Fold and Thrust Assessment Unit (37% of undiscovered oil fields and 38.25% of undiscovered gas fields allocated to OFFSHORE province 2019)</b>														
Oil Fields	10	1.00	39	164	427	190	219	954	2,691	1,141	12	56	167	69
Gas Fields	60						1,024	4,242	10,002	4,718	42	181	464	208
Total		1.00	39	164	427	190	1,243	5,196	12,693	5,859	54	237	631	276
<b>201902 Jurassic Hanifa/Diyab-Arab Total Petroleum System</b>														
<b>20190201 Jurassic Reservoirs in Northwest Desert Anticlines Assessment Unit (100% of undiscovered oil fields and 100% of undiscovered gas fields allocated to ONSHORE province 2019)</b>														
Oil Fields	10	1.00	2,446	9,525	22,560	10,633	5,048	20,366	52,450	23,451	283	1,189	3,281	1,405
Gas Fields	60						6,264	20,642	45,831	22,608	257	879	2,121	994
Total		1.00	2,446	9,525	22,560	10,633	11,313	41,008	98,281	46,058	540	2,069	5,402	2,399
<b>20190202 Jurassic Reservoirs in South Gulf Suprasalt/Qatar Arch Structural Assessment Unit (13% of undiscovered oil fields and 13% of undiscovered gas fields allocated to ONSHORE province 2019)</b>														
Oil Fields	10	1.00	148	469	948	500	301	1,002	2,221	1,100	17	59	141	66
Gas Fields	60						129	462	1,100	519	5	20	51	23
Total		1.00	148	469	948	500	430	1,464	3,322	1,619	22	78	192	89
<b>20190202 Jurassic Reservoirs in South Gulf Suprasalt/Qatar Arch Structural Assessment Unit (52% of undiscovered oil fields and 52% of undiscovered gas fields allocated to OFFSHORE province 2019)</b>														
Oil Fields	10	1.00	592	1,874	3,790	2,000	1,205	4,009	8,886	4,401	68	235	562	264
Gas Fields	60						515	1,848	4,402	2,077	21	79	204	91
Total		1.00	592	1,874	3,790	2,000	1,719	5,857	13,288	6,477	89	314	766	356

**Rub Al Khali Basin, Province 2019**  
**Assessment Results Summary - Allocated Resources**

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Code and Field Type	MFS	Prob. (0-1)	Undiscovered Resources											
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)			
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean

**201903 Silurian Qusaiba Total Petroleum System**

20190301 Khuff Carbonates in Salt Structures Assessment Unit (0% of undiscovered oil fields and 22.96% of undiscovered gas fields allocated to ONSHORE province 2019)

Oil Fields	10	1.00	0	0	0	0	0	0	0	0	0	0	0	0
Gas Fields	60						1,551	4,938	10,119	5,281	63	211	473	232
Total			0	0	0	0	1,551	4,938	10,119	5,281	63	211	473	232

20190301 Khuff Carbonates in Salt Structures Assessment Unit (0% of undiscovered oil fields and 59.04% of undiscovered gas fields allocated to OFFSHORE province 2019)

Oil Fields	10	1.00	0	0	0	0	0	0	0	0	0	0	0	0
Gas Fields	60						3,989	12,698	26,021	13,579	162	543	1,217	597
Total			0	0	0	0	3,989	12,698	26,021	13,579	162	543	1,217	597

20190302 Paleozoic Reservoirs Assessment Unit (92% of undiscovered oil fields and 98% of undiscovered gas fields allocated to ONSHORE province 2019)

Oil Fields	10	1.00	1,938	10,223	29,001	12,176	5,488	29,662	90,394	36,559	311	1,736	5,627	2,193
Gas Fields	60						71,005	256,794	552,858	278,471	5,314	19,956	47,306	22,296
Total			1,938	10,223	29,001	12,176	76,494	286,456	643,253	315,030	5,625	21,692	52,934	24,489

**Rub Al Khali Basin, Province 2019**  
**Assessment Results Summary - Allocated Resources**

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Code and Field Type	MFS	Prob. (0-1)	Undiscovered Resources											
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)			
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean

**202101 Central Arabia Qusaiba Paleozoic Total Petroleum System**

20210101 Central Arch Horst-Block Anticlinal Oil and Gas Assessment Unit (2% of undiscovered oil fields and 5% of undiscovered gas fields allocated to ONSHORE province 2019)

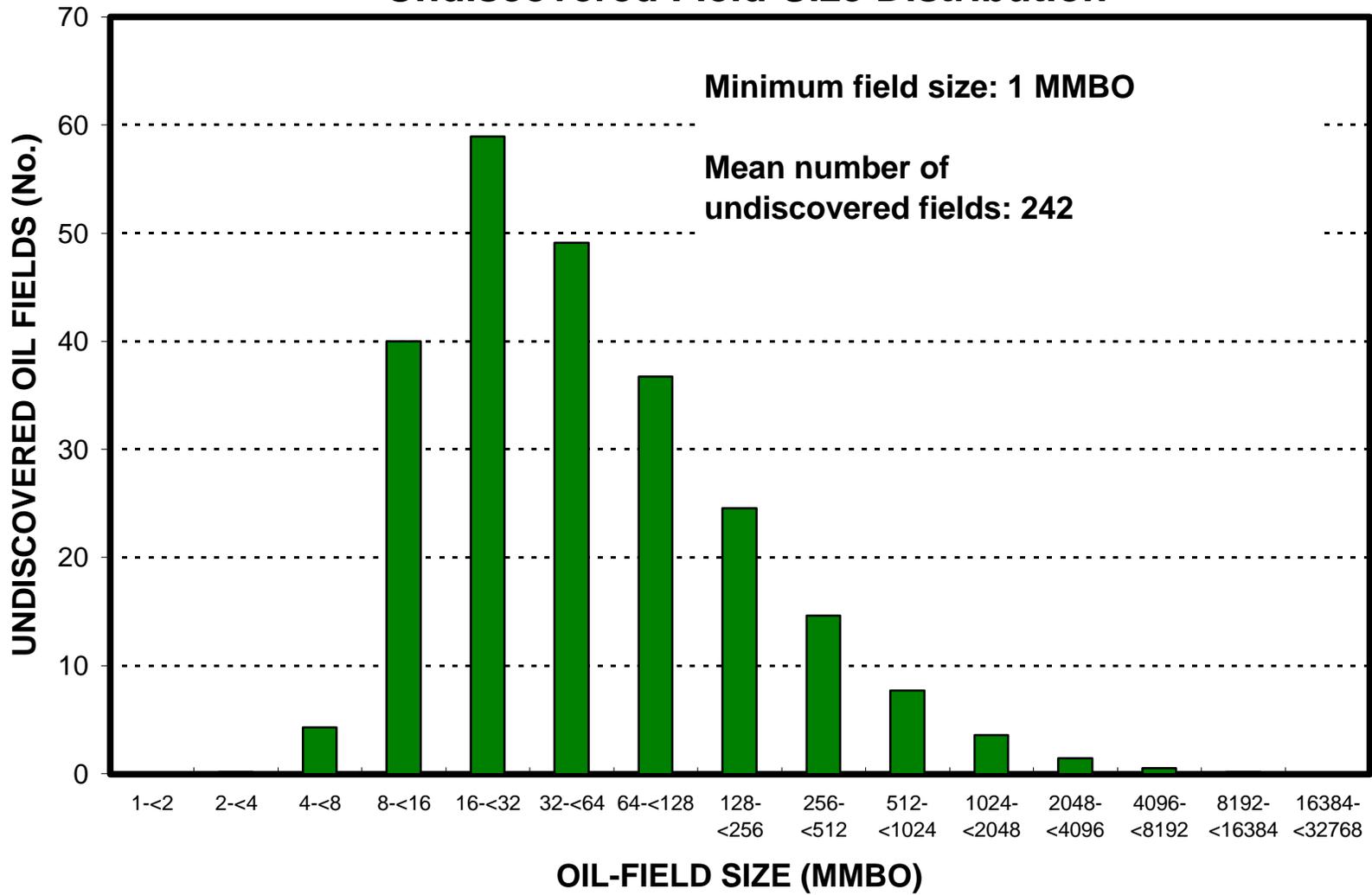
Oil Fields	20	1.00	146	372	657	384	212	550	1,022	575	12	32	66	34
Gas Fields	120						3,974	9,950	16,650	10,082	312	787	1,366	807
Total		1.00	146	372	657	384	4,186	10,500	17,673	10,657	324	819	1,432	841

**202102 Arabian Sub-Basin Tuwaiq/Hanifa-Arab Total Petroleum System**

20210201 Horst-Block Anticlinal Oil Assessment Unit (7% of undiscovered oil fields and 0% of undiscovered gas fields allocated to ONSHORE province 2019)

Oil Fields	20	1.00	791	1,849	3,022	1,870	460	1,095	1,892	1,124	17	42	82	45
Gas Fields	120						0	0	0	0	0	0	0	0
Total		1.00	791	1,849	3,022	1,870	460	1,095	1,892	1,124	17	42	82	45

# Rub Al Khali Basin, Province 2019 Undiscovered Field-Size Distribution



# Rub Al Khali Basin, Province 2019 Undiscovered Field-Size Distribution

