

PhazeComp-Generated L^AT_EX Report Template

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Contents

List of Tables	ii
List of Figures	iii
1. Executive Summary	1
2. Introduction	2
2.1. A New Section	2
3. A New Chapter	3
3.1. A New Section	3
3.1.1. A new sub-section	3
4. Conclusions	5
Acknowledgements	6
Nomenclature	7
References	8
Tables	9
Figures	14

List of Tables

1.	Essential Properties for Characterization “Reservoir”	9
2.	Binary Interaction Parameters for Characterization “Reservoir”	9
3.	Essential Properties for Characterization “Surface”	11
4.	Binary Interaction Parameters for Characterization “Surface”	11
5.	Mixture “GOC_Oil” Compositions	13
6.	Mixture “GOC_Gas” Compositions	13
7.	Mixture “Recycle_Gas” Compositions	13

List of Figures

1.	Specific Gravity vs. Molecular Weight for EOS Fluid Characterization “Reservoir.”	14
2.	Boiling Temperature vs. Molecular Weight for EOS Fluid Characterization “Reservoir.”	15
3.	Critical Z-Factor vs. Molecular Weight for EOS Fluid Characterization “Reservoir.”	15
4.	Viscosity Z-Factor vs. Molecular Weight for EOS Fluid Characterization “Reservoir.”	16
5.	Liquid Viscosity vs. Molecular Weight for EOS Fluid Characterization “Reservoir.”	16
6.	Specific Gravity vs. Molecular Weight for EOS Fluid Characterization “Surface.”	17
7.	Boiling Temperature vs. Molecular Weight for EOS Fluid Characterization “Surface.”	17
8.	Critical Z-Factor vs. Molecular Weight for EOS Fluid Characterization “Surface.”	18
9.	Viscosity Z-Factor vs. Molecular Weight for EOS Fluid Characterization “Surface.”	18
10.	Liquid Viscosity vs. Molecular Weight for EOS Fluid Characterization “Surface.”	19
11.	Liquid Saturation vs. Pressure for CVD for Generation of Oil Rim Black Oil Tables.	20
12.	Liquid Saturation vs. Pressure for CVD of Gas for Generation of Gas Cap Tables.	20
13.	Liquid Saturation vs. Pressure for CVD of Gas for Generation of Gas Cap Gas Tables.	21
14.	Liquid Saturation vs. Pressure for CVD of Condensate for Generation of Gas Cap Oil Tables.	21
15.	R_s vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.	22
16.	B_o vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.	22
17.	R_v vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.	23
18.	$1/B_g$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.	23
19.	Viscosity vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim. . . .	24
20.	Density vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim. . . .	24
21.	R_s and $1/R_v$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim. .	25
22.	R_s vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.	26
23.	B_o vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.	26
24.	R_v vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.	27
25.	$1/B_g$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.	27
26.	Viscosity vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1. .	28
27.	Density vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1. . .	28
28.	R_s and $1/R_v$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.	29
29.	R_s vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.	30
30.	B_o vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.	30
31.	R_v vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.	31
32.	$1/B_g$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.	31
33.	Viscosity vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2. .	32

34.	Density vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2. . .	32
35.	R_s and $1/R_v$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.	33
36.	R_s vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.	34
37.	B_o vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.	34
38.	R_v vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.	35
39.	$1/B_g$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.	35
40.	Viscosity vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim. . . .	36
41.	Density vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim. . . .	36
42.	R_s and $1/R_v$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim. .	37
43.	R_s vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.	38
44.	B_o vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.	38
45.	R_v vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.	39
46.	$1/B_g$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.	39
47.	Viscosity vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1. . .	40
48.	Density vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1. . .	40
49.	R_s and $1/R_v$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.	41
50.	R_s vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.	42
51.	B_o vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.	42
52.	R_v vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.	43
53.	$1/B_g$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.	43
54.	Viscosity vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2. . .	44
55.	Density vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2. . .	44
56.	R_s and $1/R_v$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.	45

1. Executive Summary

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2. Introduction

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4. Conclusions

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Nomenclature

References

Tables

Table 1: Essential Properties for Characterization “Reservoir”

Component	MW	Tc (R)	Pc (psia)	AF	VTran	ZcVis	Pchor
CO2	44.010	547.42	1069.51	0.22500	0.00191	0.27433	80.00
C1	16.043	343.01	667.03	0.01100	−0.14996	0.28620	71.00
C2	30.070	549.58	706.62	0.09900	−0.06280	0.27924	111.00
C3	44.097	665.69	616.12	0.15200	−0.06381	0.27630	151.00
C4	57.526	767.19	564.18	0.18391	−0.05763	0.27699	173.06
C5	71.459	848.76	505.26	0.22824	−0.03281	0.27152	206.50
C6-C7	90.253	943.40	447.79	0.27872	−0.00408	0.26537	251.61
C8-C10	125.094	1084.15	373.32	0.36624	0.03625	0.25802	335.23
C11-C14	173.081	1228.46	305.44	0.48715	0.07330	0.25466	450.39
C15-C19	234.994	1362.65	248.33	0.63036	0.10338	0.25460	598.98
C20-C29	333.292	1508.32	193.27	0.84297	0.12703	0.25845	834.90
C30+	613.585	1733.80	123.80	1.31355	0.12802	0.27844	1507.60

Table 2: Binary Interaction Parameters for Characterization “Reservoir”

	CO2	C1	C2	C3
C1	0.12500			
C2	0.12500	0.00254		
C3	0.12500	0.00836	0.00170	
C4	0.12500	0.01469	0.00508	0.00091
C5	0.12500	0.02117	0.00920	0.00302
C6-C7	0.12500	0.02929	0.01487	0.00659
C8-C10	0.12500	0.04263	0.02495	0.01383
C11-C14	0.12500	0.05811	0.03739	0.02358
C15-C19	0.12500	0.07428	0.05094	0.03477
C20-C29	0.12500	0.09335	0.06745	0.04894
C30+	0.12500	0.12396	0.09482	0.07325

Table 2: Binary Interaction Parameters for Characterization “Reservoir” (cont.)

	C4	C5	C6-C7	C8-C10
C5	0.00062			
C6-C7	0.00262	0.00070		
C8-C10	0.00771	0.00399	0.00136	
C11-C14	0.01539	0.00992	0.00539	0.00135
C15-C19	0.02476	0.01773	0.01149	0.00499
C20-C29	0.03708	0.02845	0.02046	0.01141
C30+	0.05895	0.04818	0.03780	0.02525

Table 2: Binary Interaction Parameters for Characterization “Reservoir” (cont.)

	C11-C14	C15-C19	C20-C29
C15-C19	0.00116		
C20-C29	0.00496	0.00133	
C30+	0.01513	0.00799	0.00282

Table 3: Essential Properties for Characterization “Surface”

Component	MW	Tc (R)	Pc (psia)	AF	VTran	ZcVis	Pchor
CO2	44.010	547.42	1069.51	0.22500	0.00191	0.27433	80.00
C1	16.043	343.01	667.03	0.01100	−0.14996	0.28620	71.00
C2	30.070	549.58	706.62	0.09900	−0.06280	0.27924	111.00
C3	44.097	665.69	616.12	0.15200	−0.06381	0.27630	151.00
C4	57.526	767.19	564.18	0.18391	−0.05763	0.27699	173.06
C5	71.459	848.76	505.26	0.22824	−0.03281	0.27152	206.50
C6-C7	90.253	944.04	449.13	0.27717	−0.00464	0.26610	251.61
C8-C10	125.094	1088.07	380.94	0.35815	0.02863	0.26618	335.23
C11-C14	173.081	1236.31	319.06	0.47254	0.05163	0.27069	450.39
C15-C19	234.994	1374.77	266.30	0.60936	0.06440	0.27888	598.98
C20-C29	333.292	1525.71	214.06	0.81046	0.06552	0.29364	834.90
C30+	613.585	1810.30	122.69	1.40716	0.19696	0.31292	1507.60

Table 4: Binary Interaction Parameters for Characterization “Surface”

	CO2	C1	C2	C3
C1	0.11000			
C2	0.11000	0.00210		
C3	0.11000	0.00691	0.00140	
C4	0.11000	0.01214	0.00420	0.00075
C5	0.11000	0.01751	0.00760	0.00249
C6-C7	0.11000	0.02418	0.01225	0.00541
C8-C10	0.11000	0.03474	0.02018	0.01109
C11-C14	0.11000	0.04666	0.02969	0.01848
C15-C19	0.11000	0.05894	0.03988	0.02682
C20-C29	0.11000	0.07341	0.05227	0.03733
C30+	0.11000	0.10517	0.08046	0.06223

Table 4: Binary Interaction Parameters for Characterization “Surface” (cont.)

	C4	C5	C6-C7	C8-C10
C5	0.00051			
C6-C7	0.00214	0.00057		
C8-C10	0.00611	0.00311	0.00103	
C11-C14	0.01189	0.00753	0.00399	0.00097
C15-C19	0.01881	0.01323	0.00838	0.00357
C20-C29	0.02786	0.02104	0.01483	0.00814
C30+	0.05016	0.04108	0.03239	0.02221

Table 4: Binary Interaction Parameters for Characterization “Surface” (cont.)

	C11-C14	C15-C19	C20-C29
C15-C19	0.00082		
C20-C29	0.00351	0.00094	
C30+	0.01404	0.00815	0.00358

Table 5: Mixture “GOC_Oil” Compositions

Component	Mole Fractions	Mass Fractions
CO2	0.069900	0.025775
C1	0.414600	0.055730
C2	0.054000	0.013605
C3	0.036000	0.013301
C4	0.024500	0.011809
C5	0.017300	0.010358
C6-C7	0.041100	0.031080
C8-C10	0.078100	0.081858
C11-C14	0.071600	0.103833
C15-C19	0.063500	0.125027
C20-C29	0.058600	0.163642
C30+	0.070800	0.363983
MW		119.35

Table 6: Mixture “GOC_Gas” Compositions

Component	Mole Fractions	Mass Fractions
CO2	0.086129	0.159305
C1	0.774081	0.521914
C2	0.063308	0.080006
C3	0.029904	0.055420
C4	0.014236	0.034418
C5	0.007228	0.021707
C6-C7	0.011128	0.042210
C8-C10	0.009778	0.051407
C11-C14	0.003252	0.023652
C15-C19	0.000830	0.008200
C20-C29	0.000122	0.001710
C30+	1.95e−06	5.03e−05
MW		23.79

Table 7: Mixture “Recycle_Gas” Compositions

Component	Mole Fractions	Mass Fractions
CO2	0.040000	0.093415
C1	0.850000	0.723619
C2	0.100000	0.159566
C3	0.010000	0.023400
MW		18.84

Figures

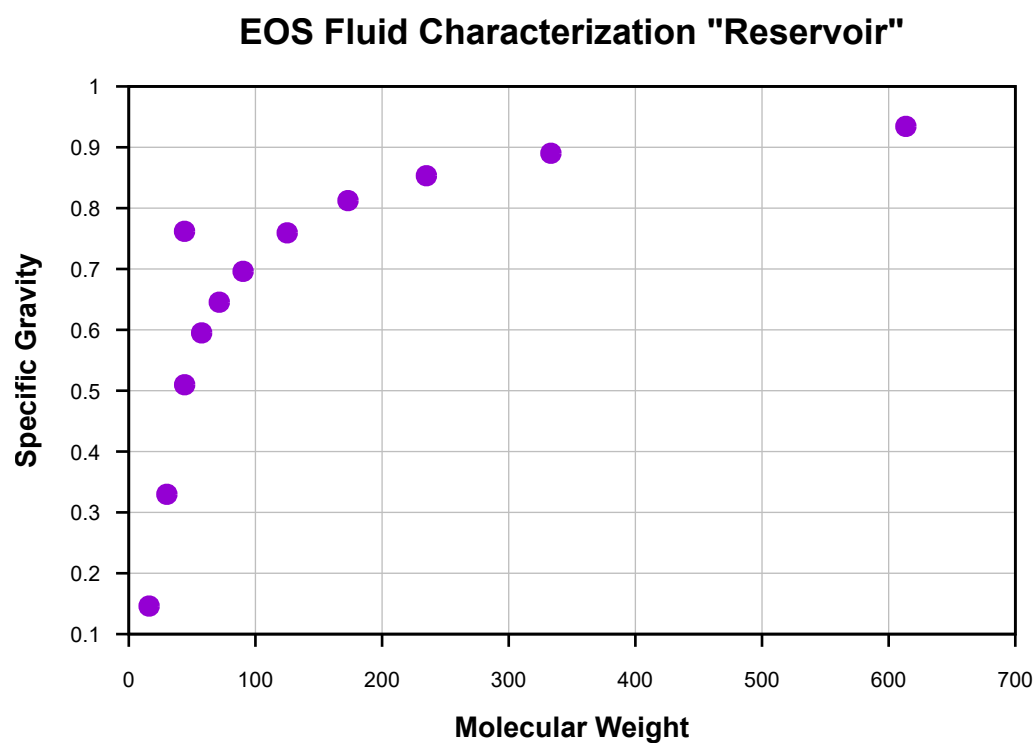


Figure 1: Specific Gravity vs. Molecular Weight for EOS Fluid Characterization "Reservoir."

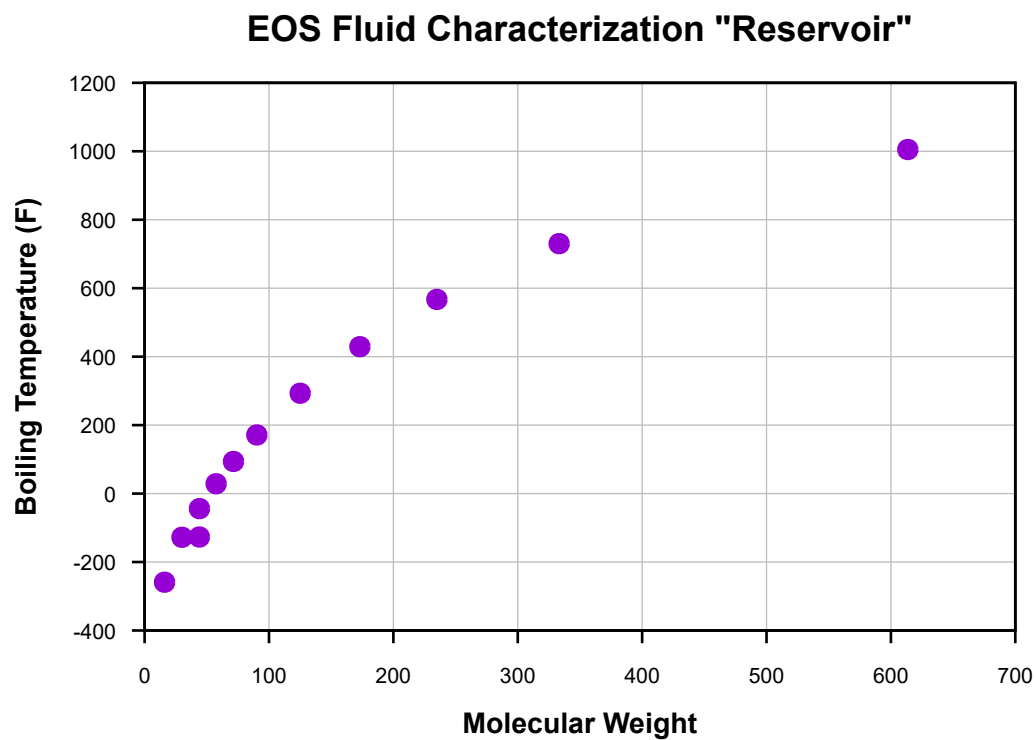


Figure 2: Boiling Temperature vs. Molecular Weight for EOS Fluid Characterization "Reservoir."

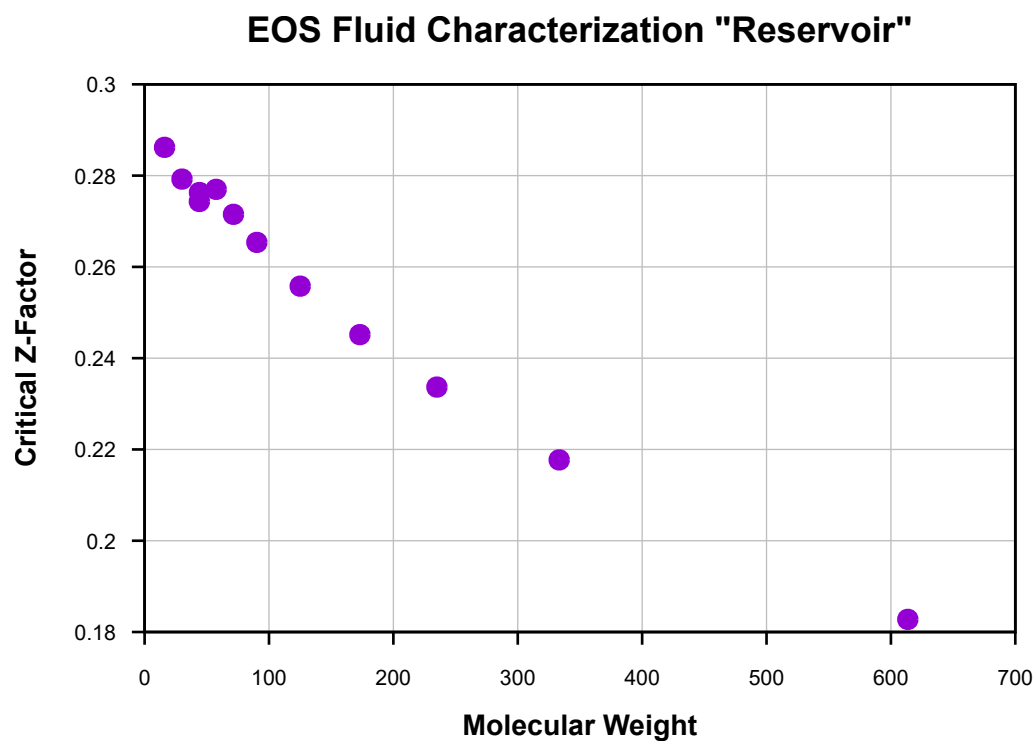


Figure 3: Critical Z-Factor vs. Molecular Weight for EOS Fluid Characterization "Reservoir."

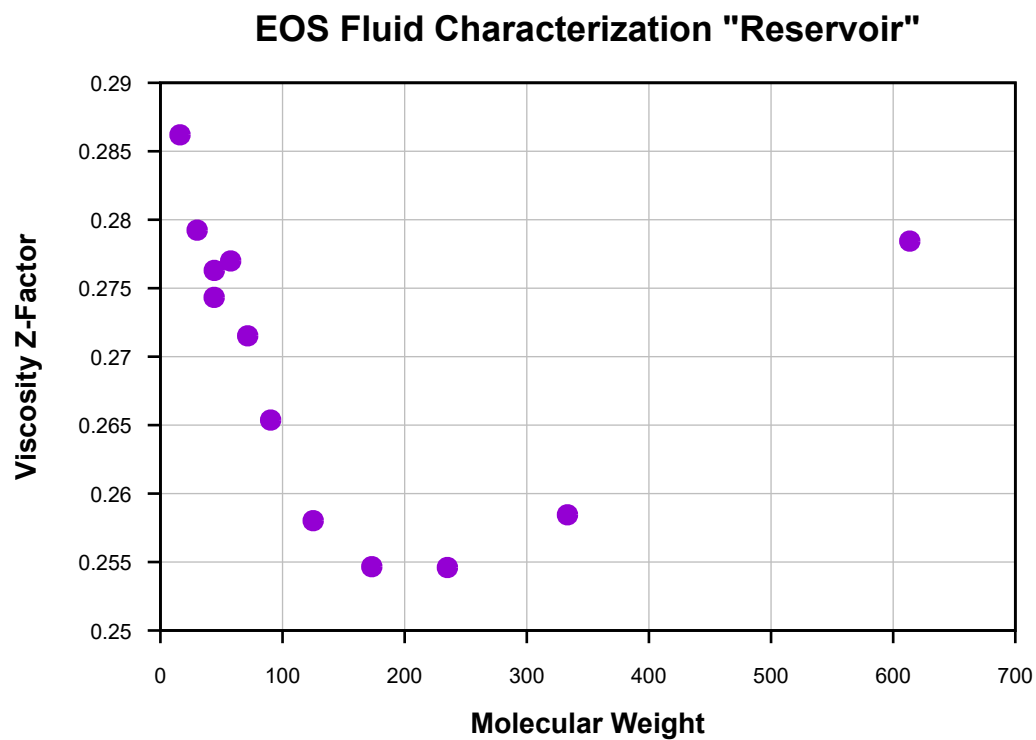


Figure 4: Viscosity Z-Factor vs. Molecular Weight for EOS Fluid Characterization "Reservoir."

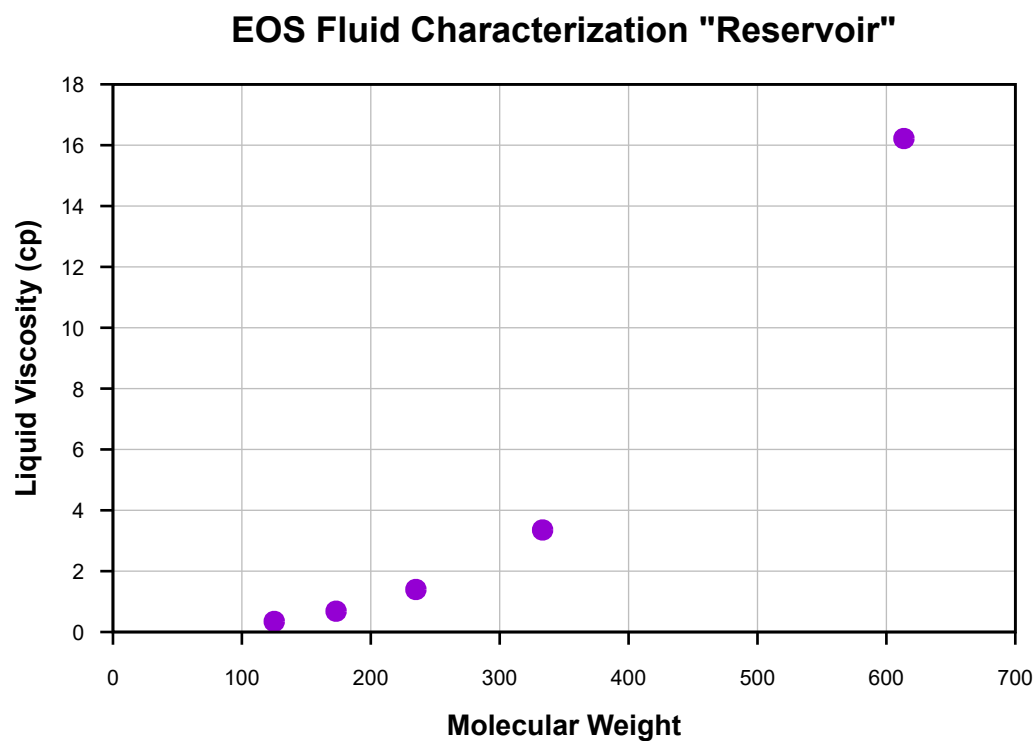


Figure 5: Liquid Viscosity vs. Molecular Weight for EOS Fluid Characterization "Reservoir."

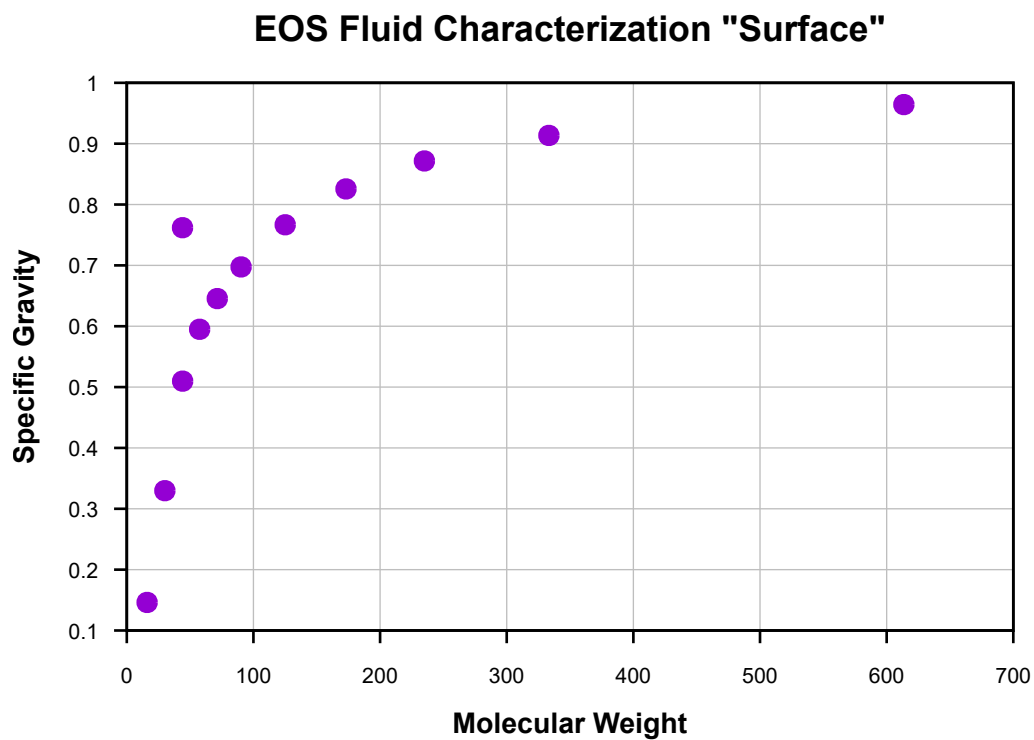


Figure 6: Specific Gravity vs. Molecular Weight for EOS Fluid Characterization “Surface.”

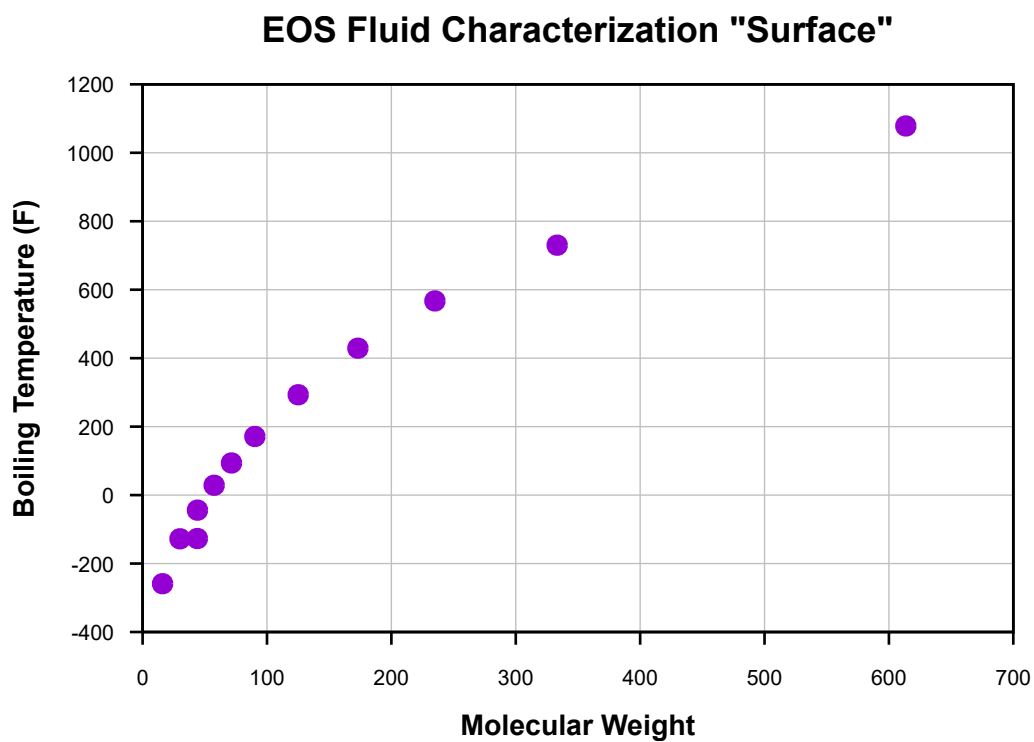


Figure 7: Boiling Temperature vs. Molecular Weight for EOS Fluid Characterization “Surface.”

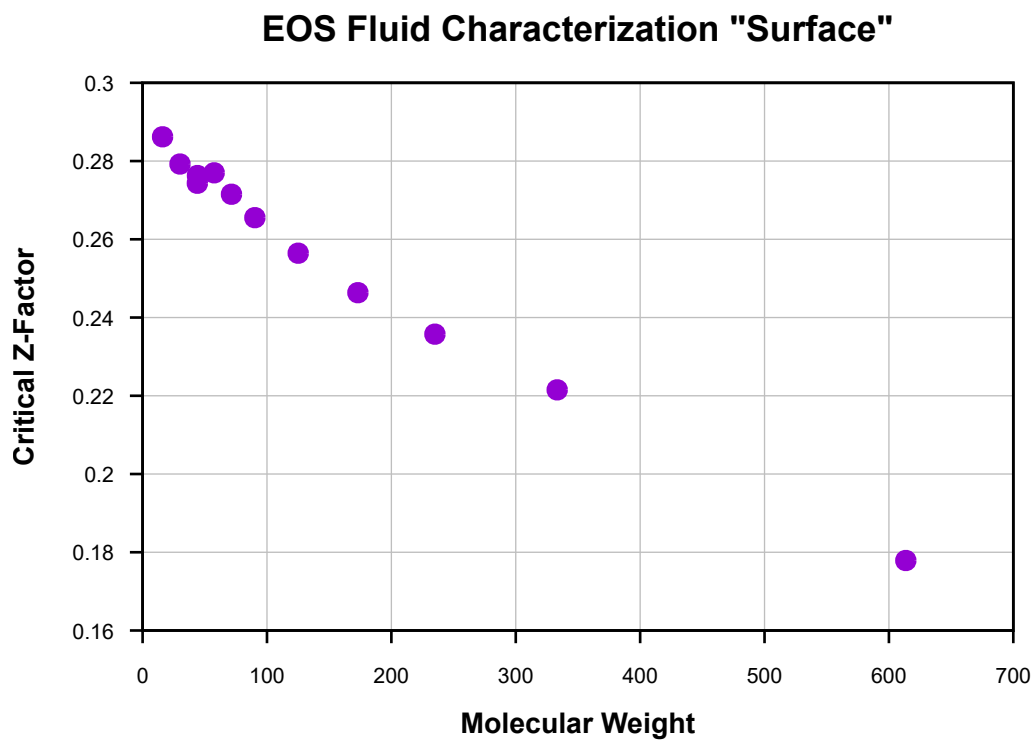


Figure 8: Critical Z-Factor vs. Molecular Weight for EOS Fluid Characterization “Surface.”

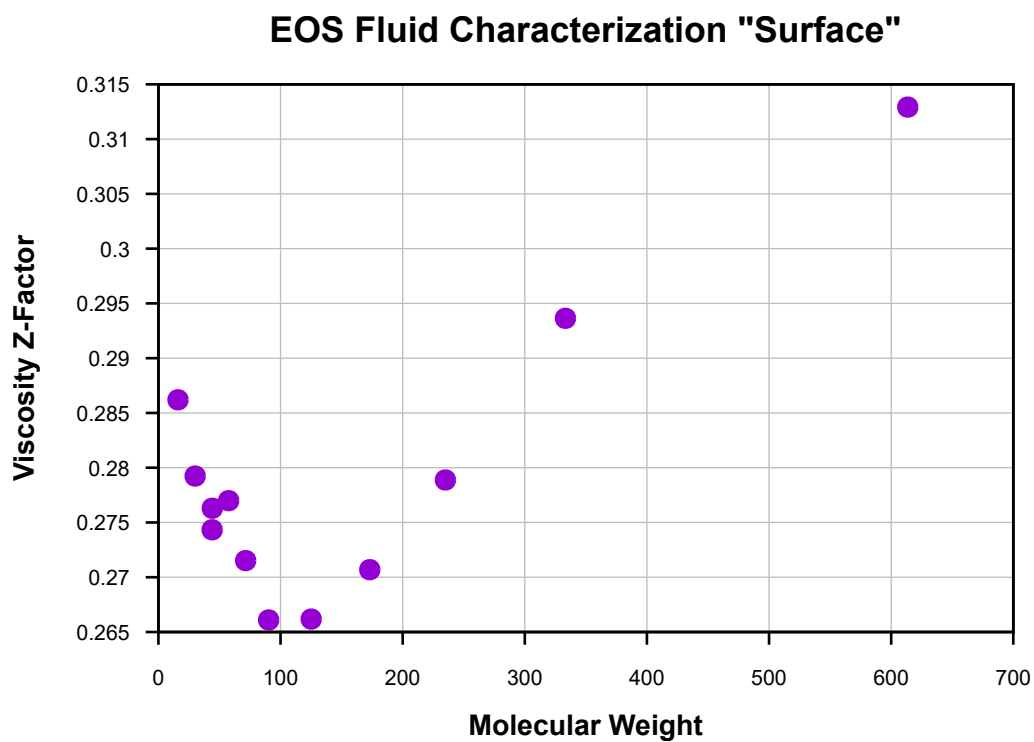


Figure 9: Viscosity Z-Factor vs. Molecular Weight for EOS Fluid Characterization “Surface.”

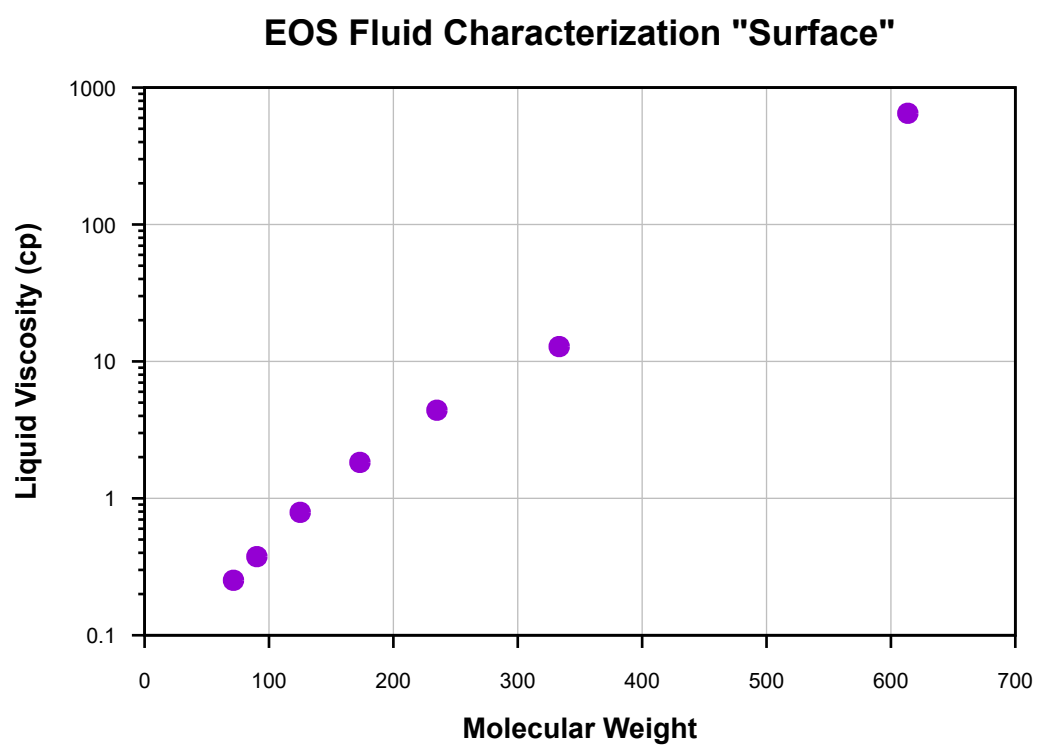


Figure 10: Liquid Viscosity vs. Molecular Weight for EOS Fluid Characterization “Surface.”

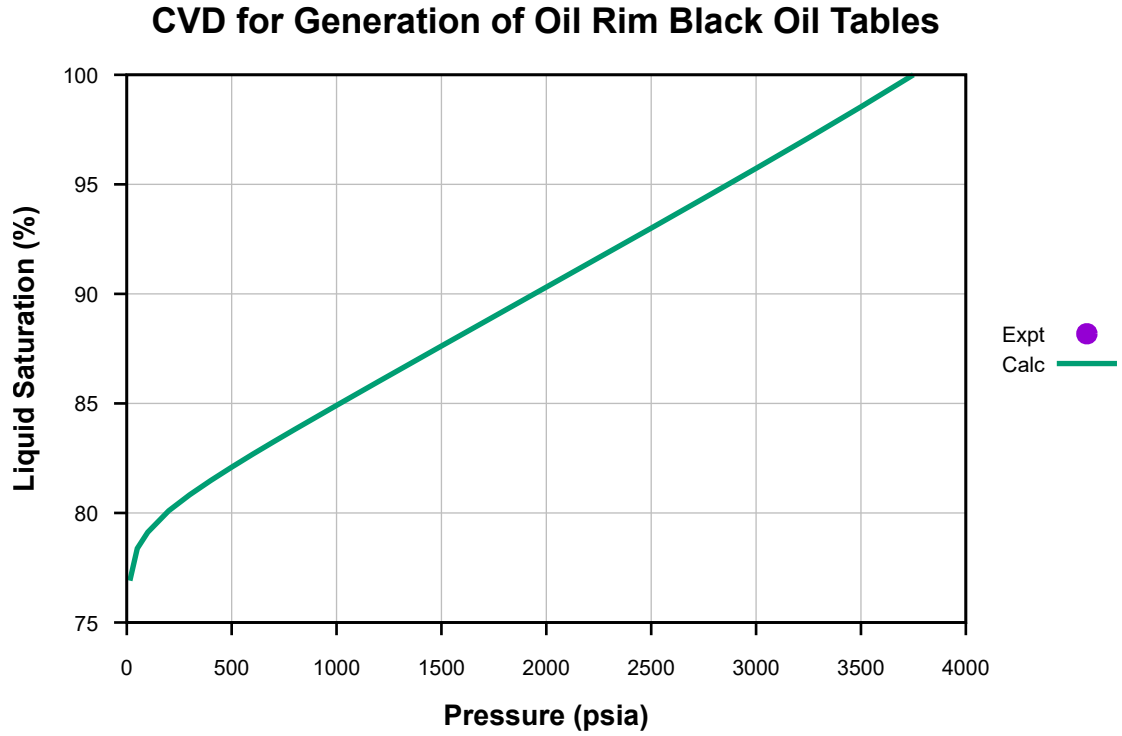


Figure 11: Liquid Saturation vs. Pressure for CVD for Generation of Oil Rim Black Oil Tables.

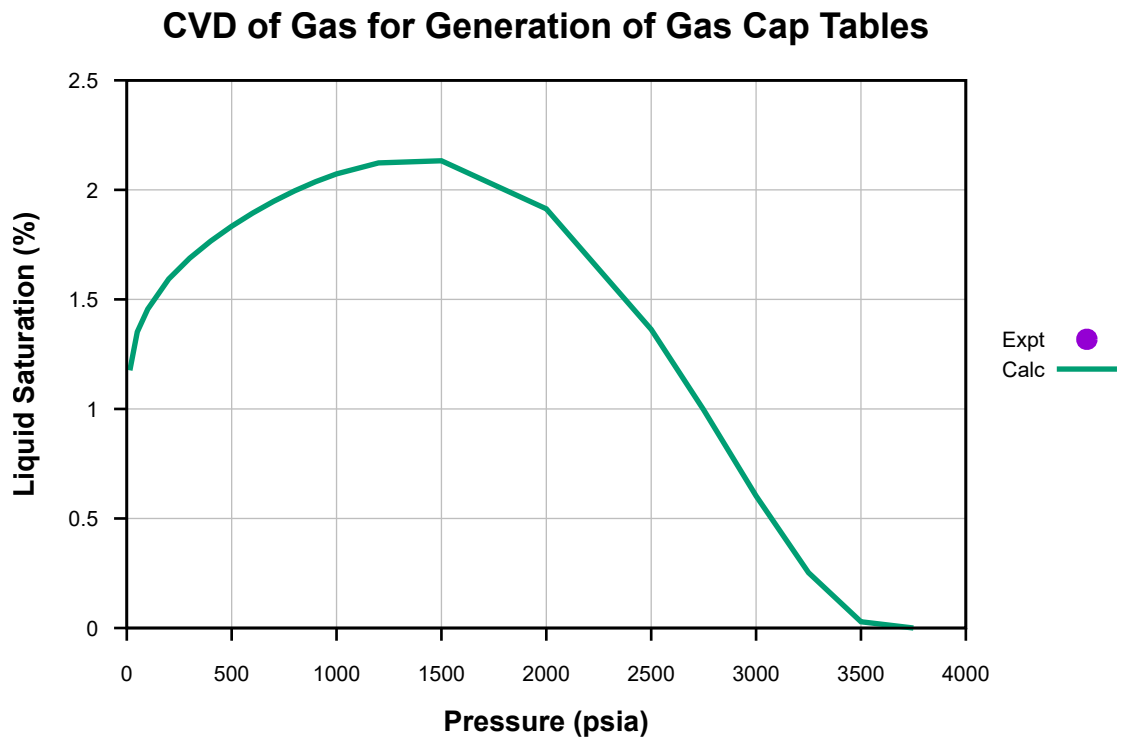


Figure 12: Liquid Saturation vs. Pressure for CVD of Gas for Generation of Gas Cap Tables.

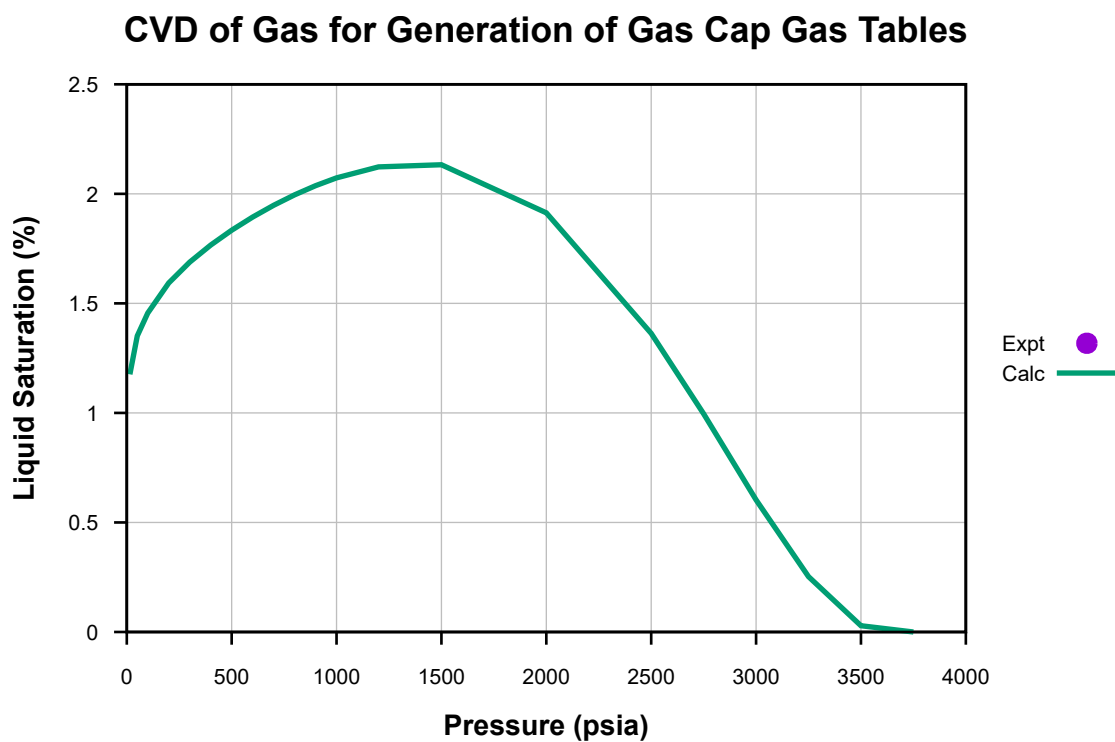


Figure 13: Liquid Saturation vs. Pressure for CVD of Gas for Generation of Gas Cap Gas Tables.

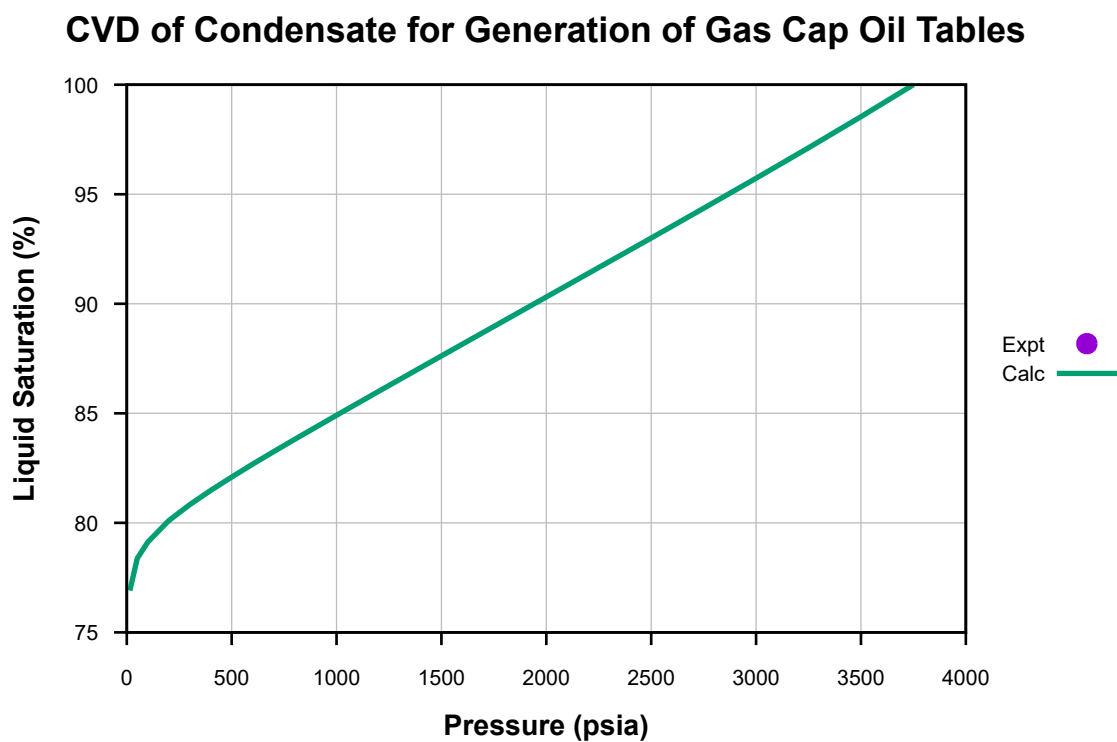


Figure 14: Liquid Saturation vs. Pressure for CVD of Condensate for Generation of Gas Cap Oil Tables.

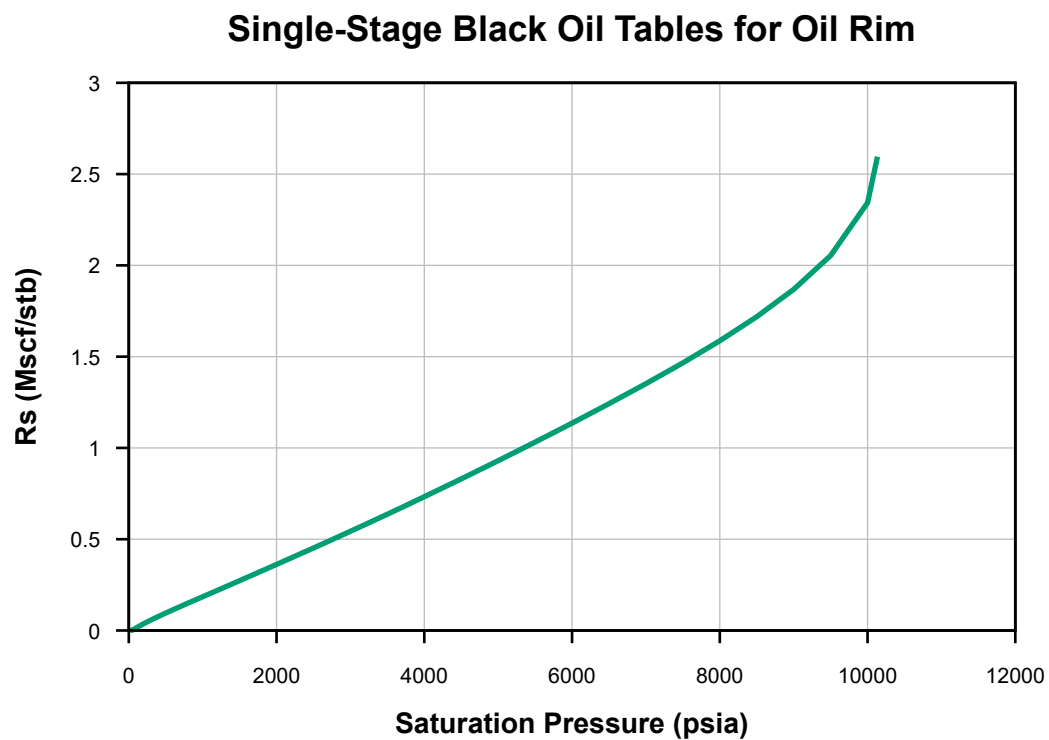


Figure 15: R_s vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.

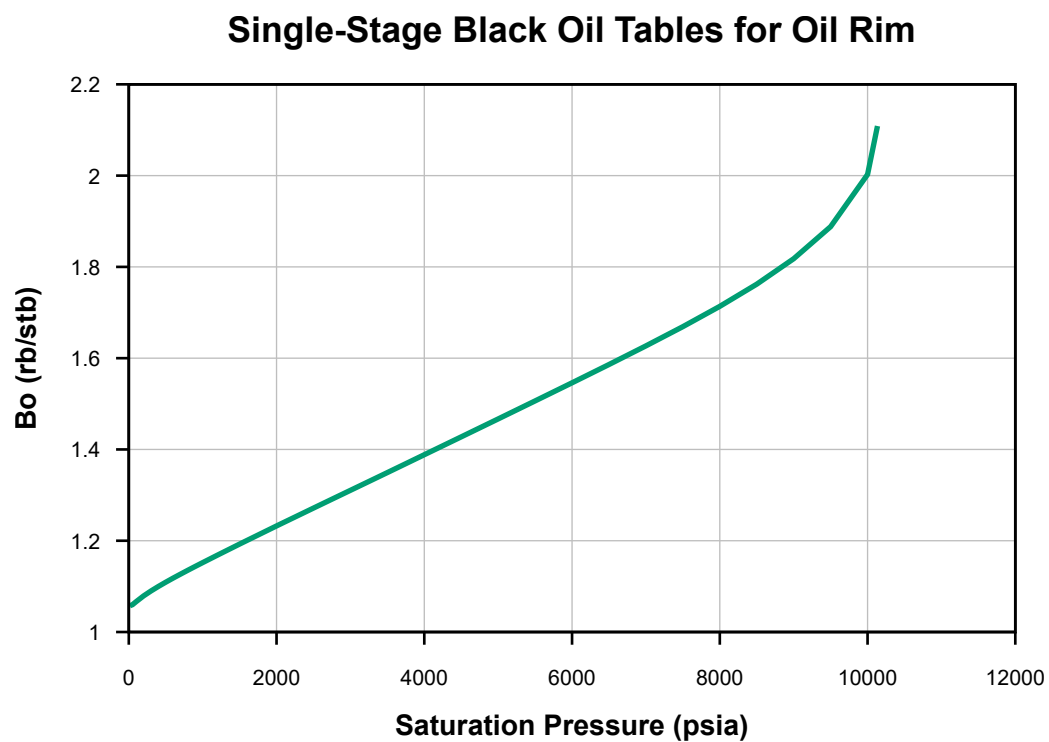


Figure 16: B_o vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.

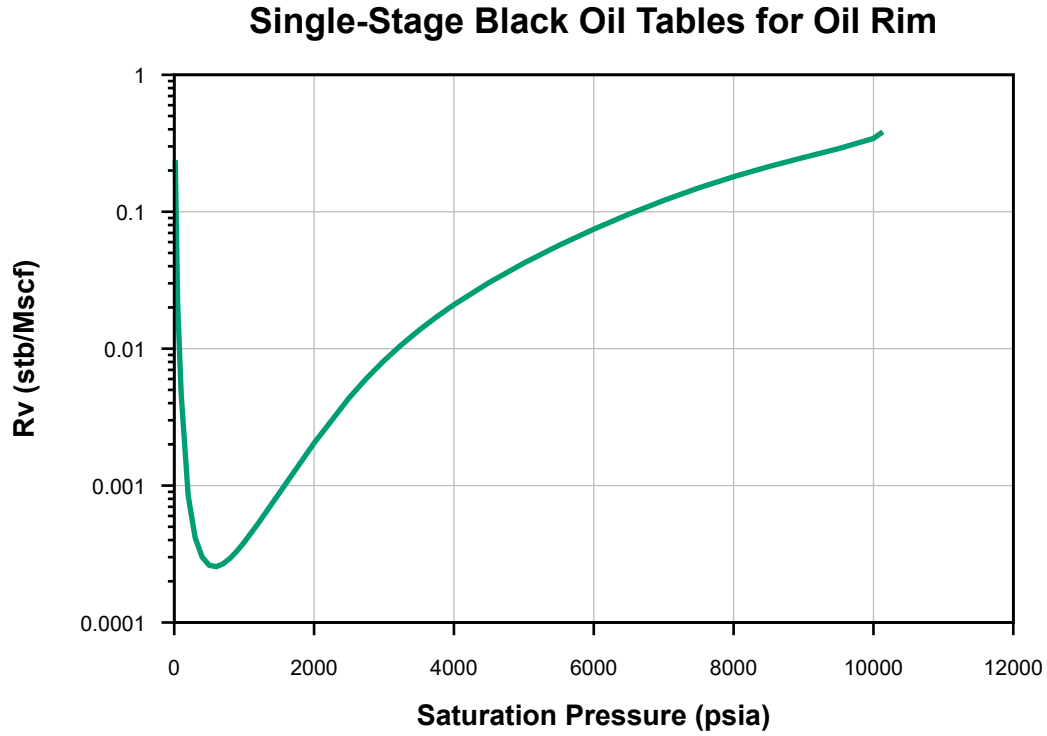


Figure 17: R_v vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.

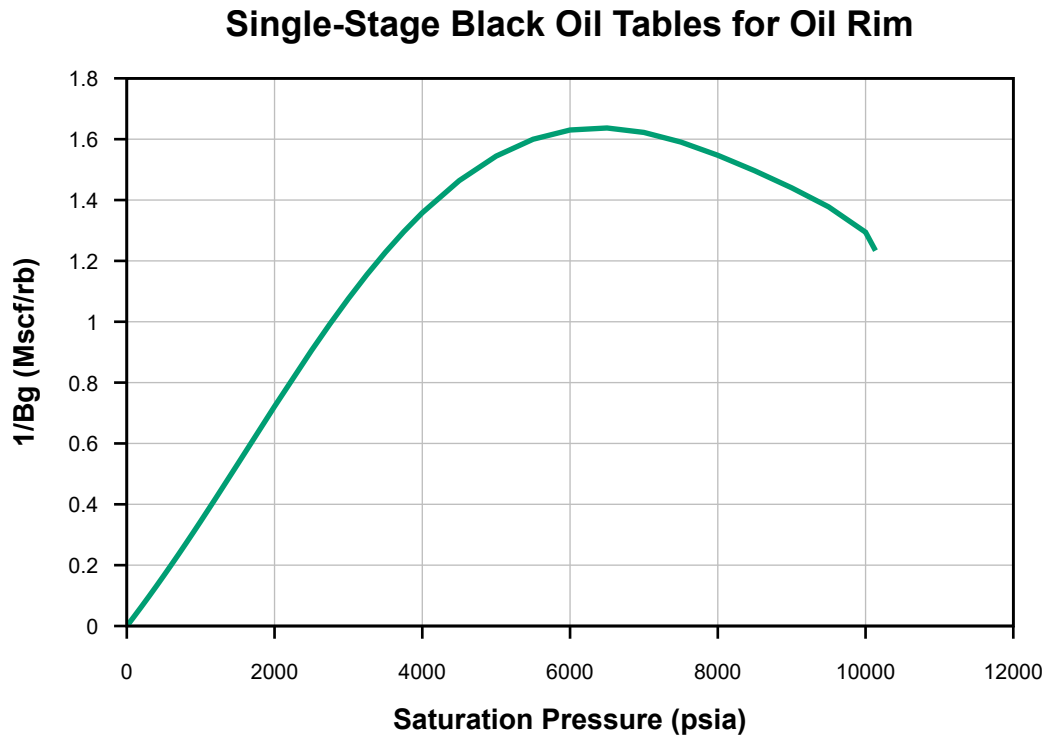


Figure 18: $1/B_g$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.

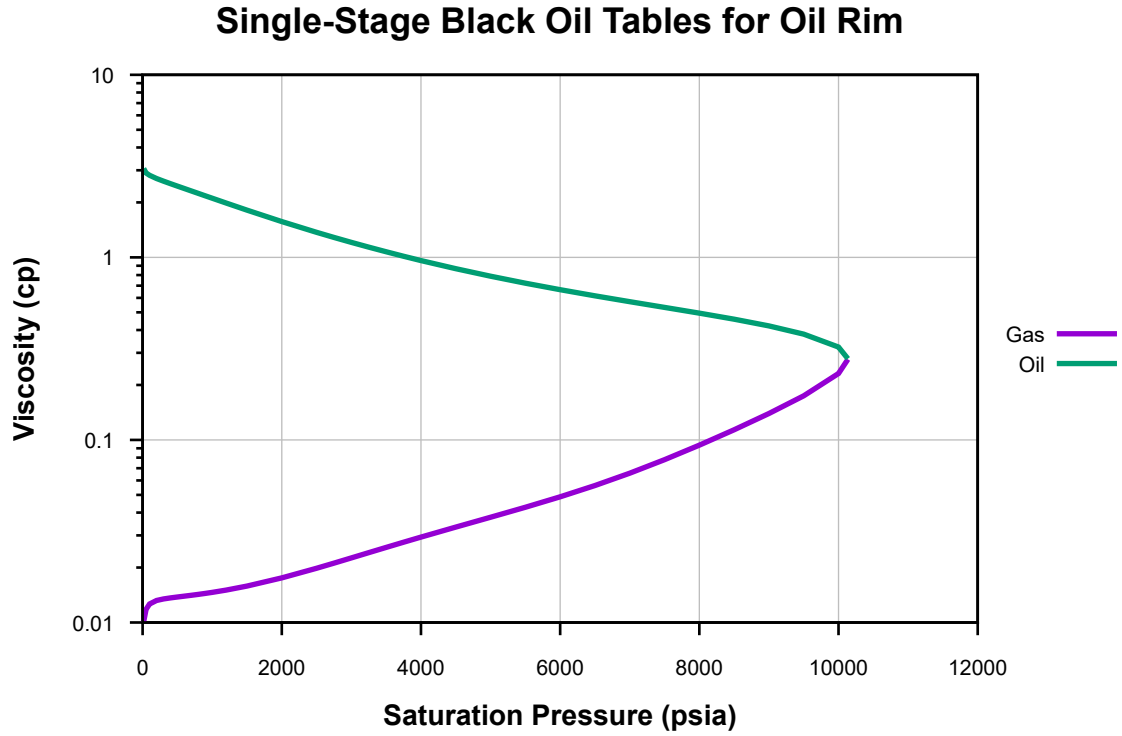


Figure 19: Viscosity vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.

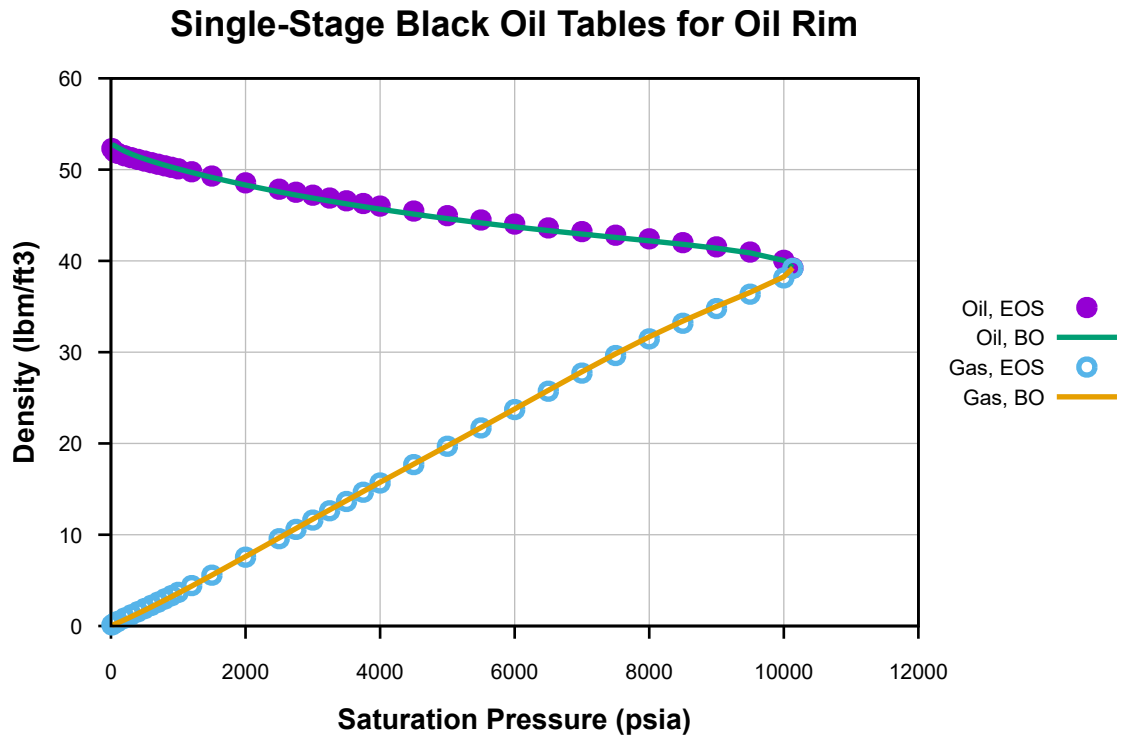


Figure 20: Density vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.

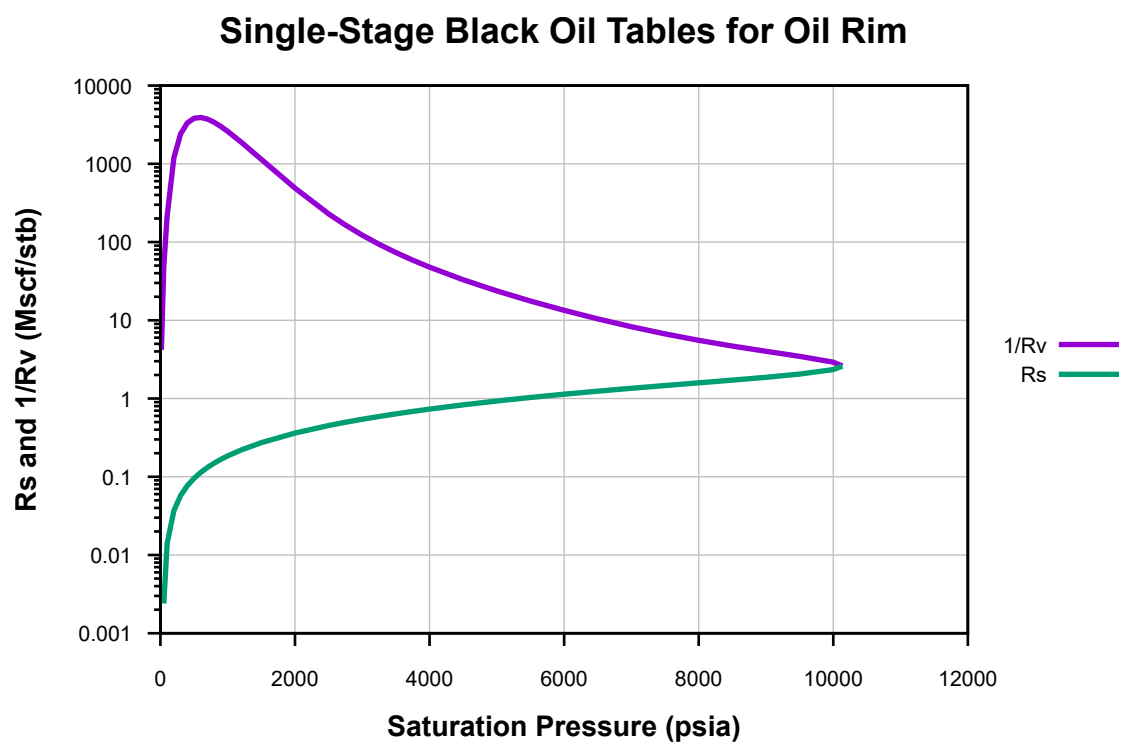


Figure 21: R_s and $1/R_v$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Oil Rim.

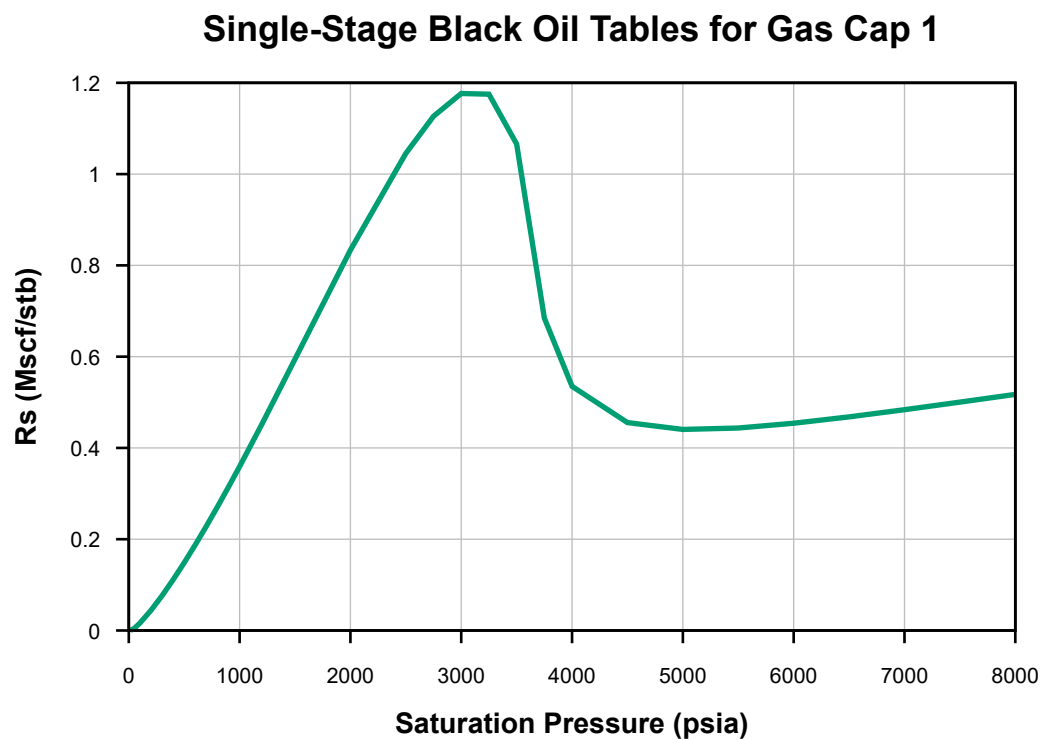


Figure 22: R_s vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.

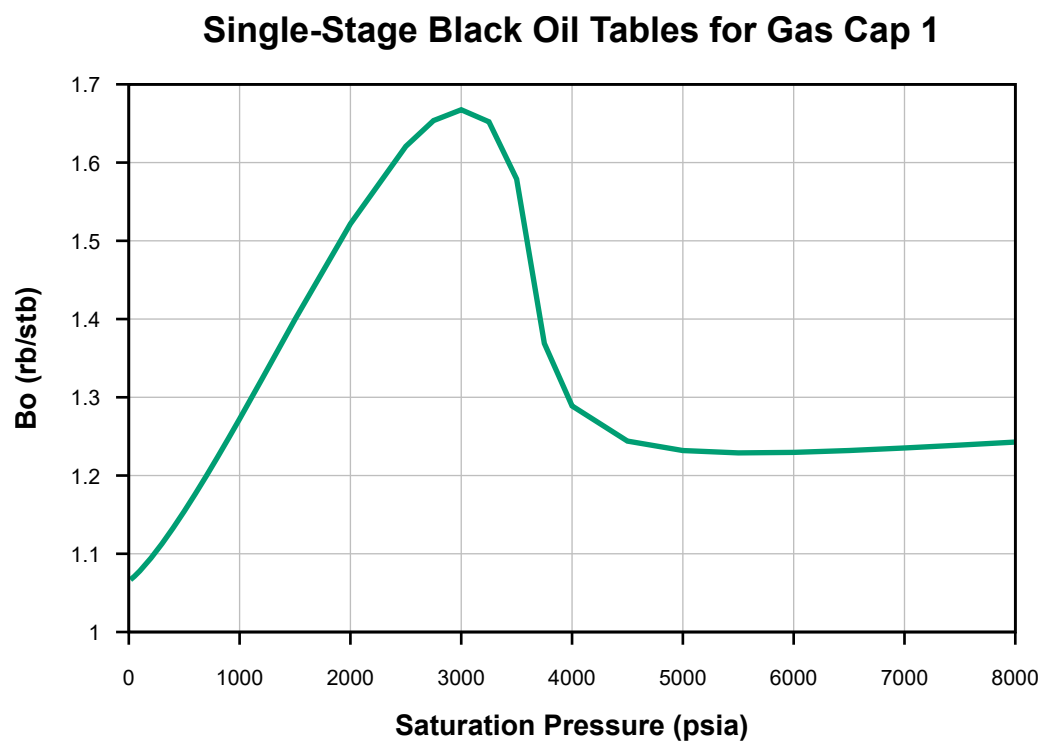


Figure 23: B_o vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.

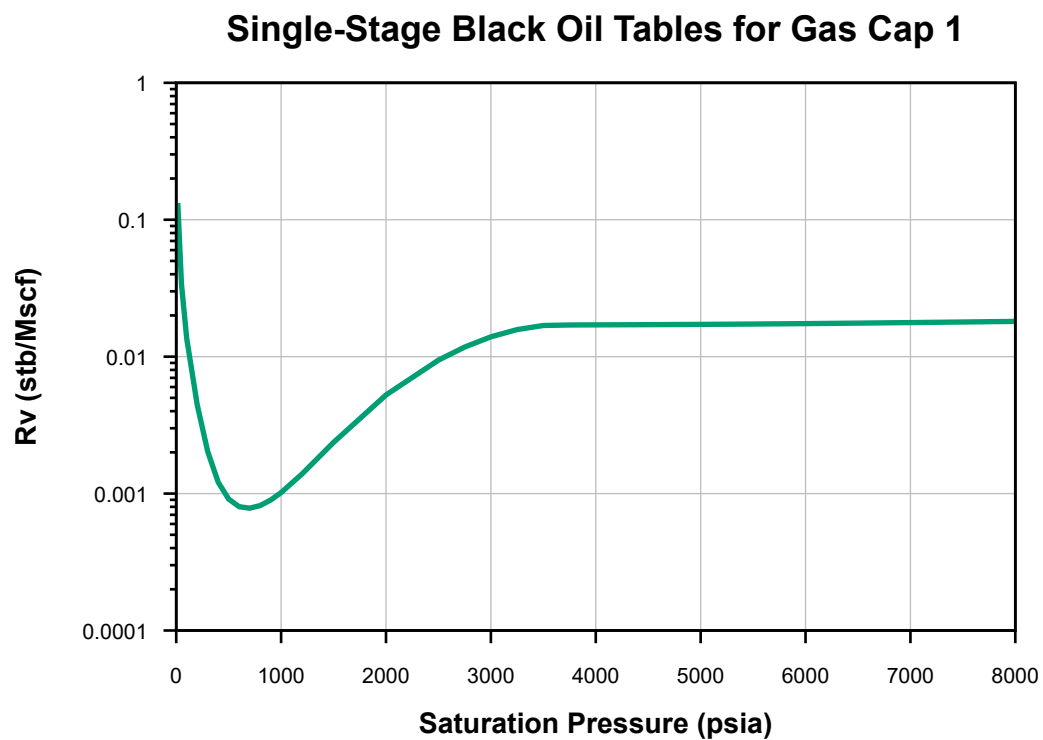


Figure 24: R_v vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.

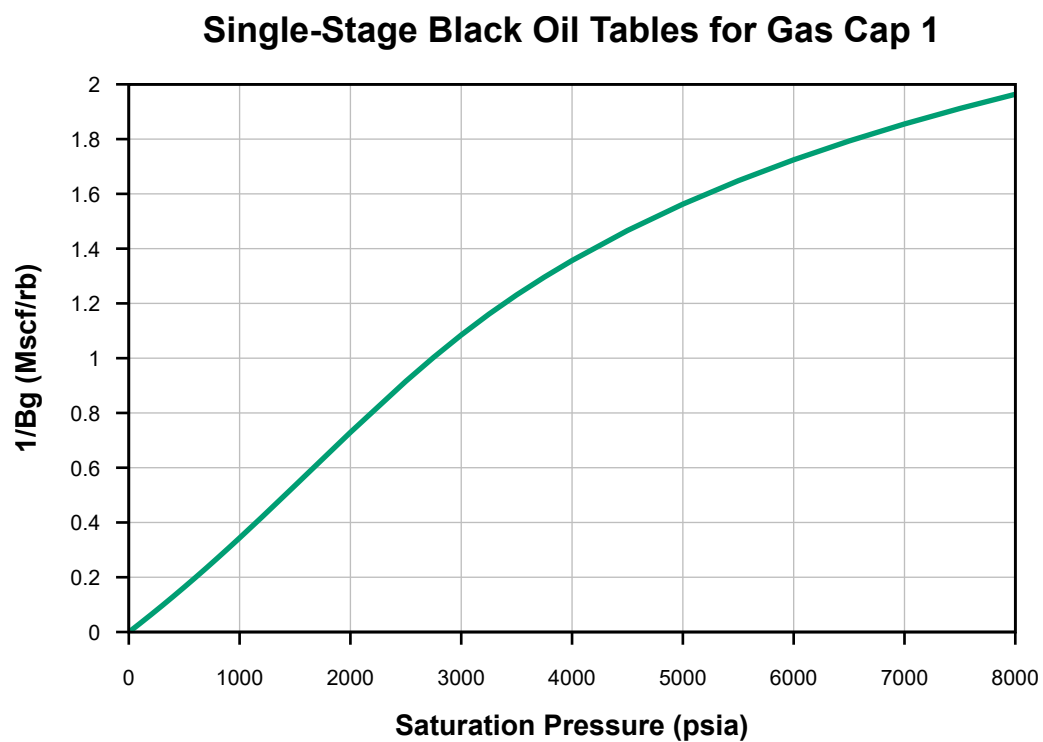


Figure 25: $1/B_g$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.

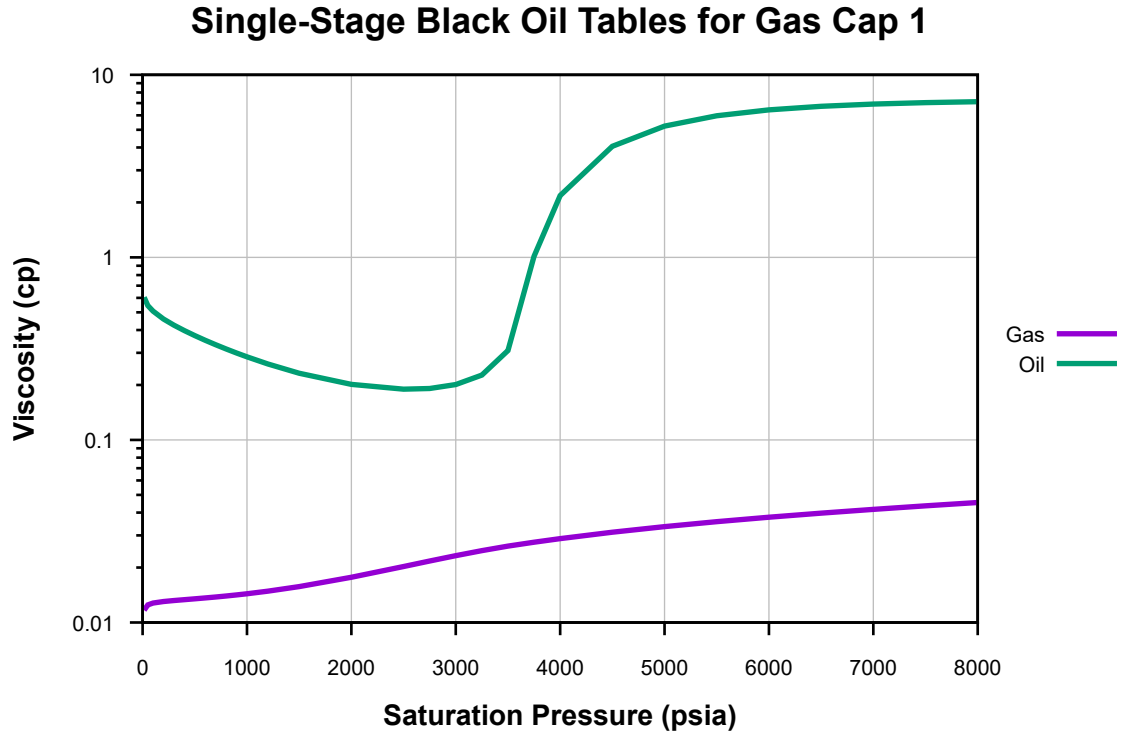


Figure 26: Viscosity vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.

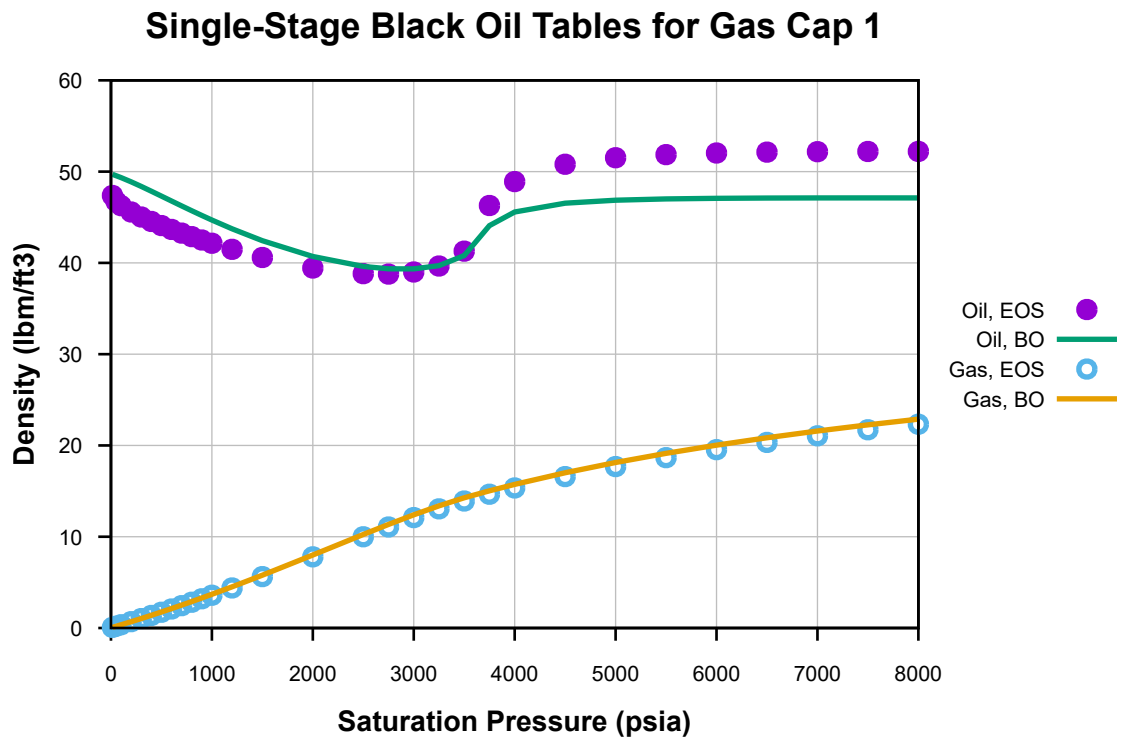


Figure 27: Density vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.

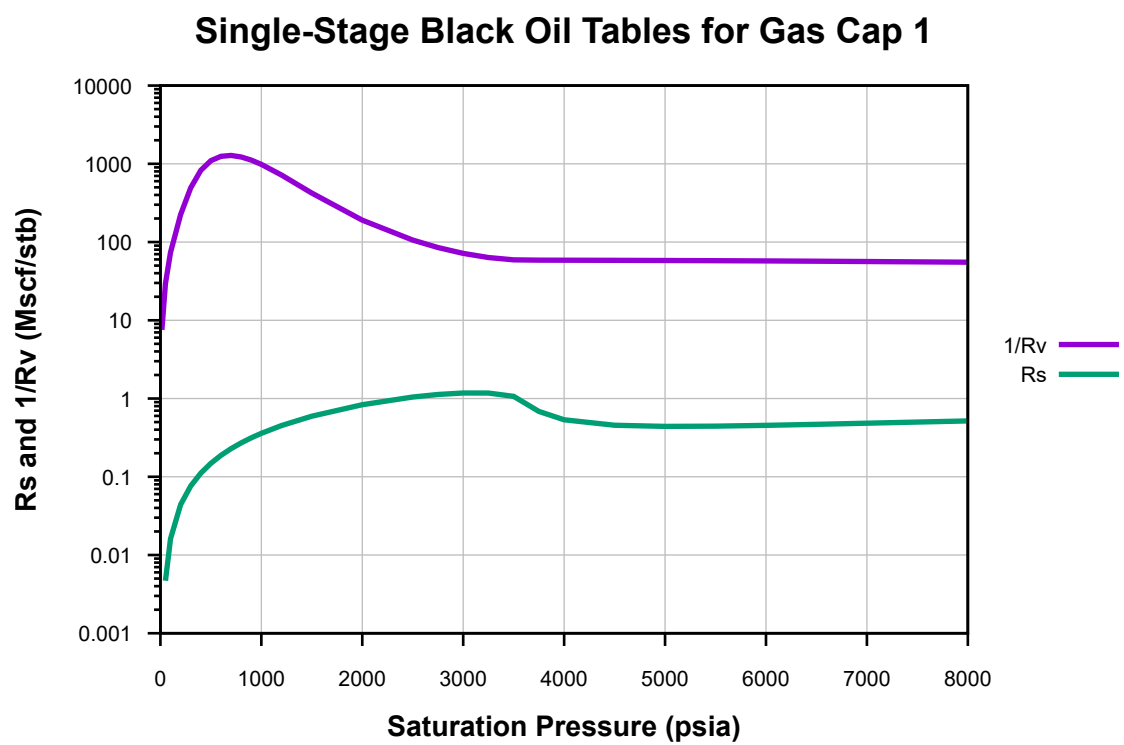


Figure 28: R_s and $1/R_v$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 1.

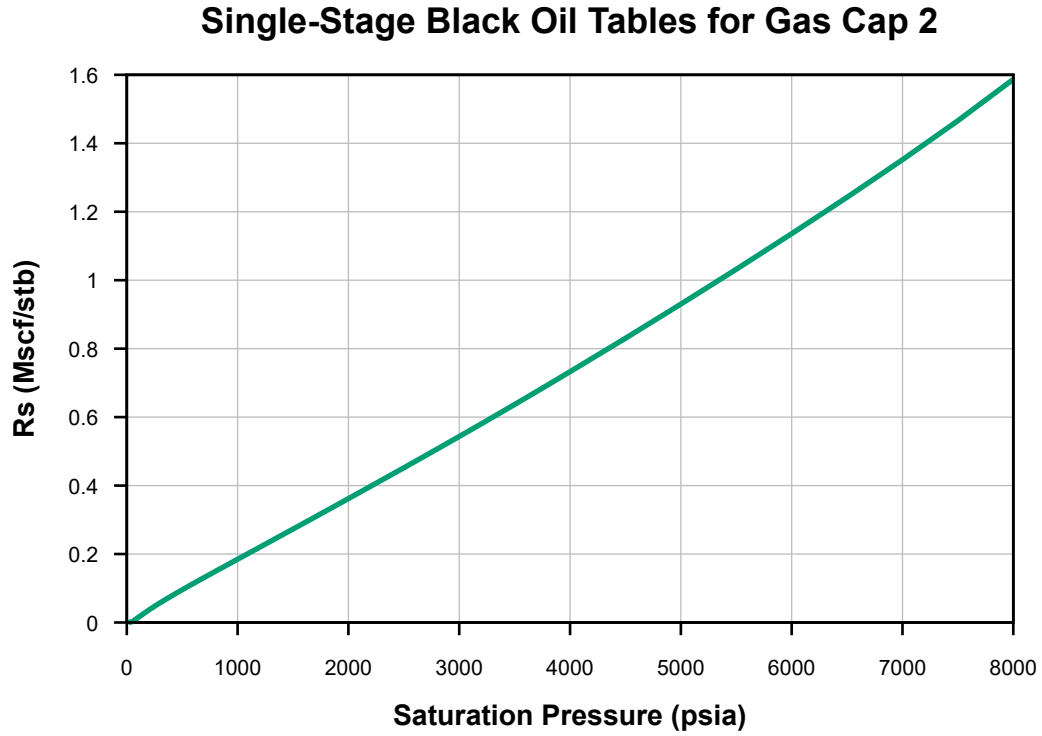


Figure 29: R_s vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.

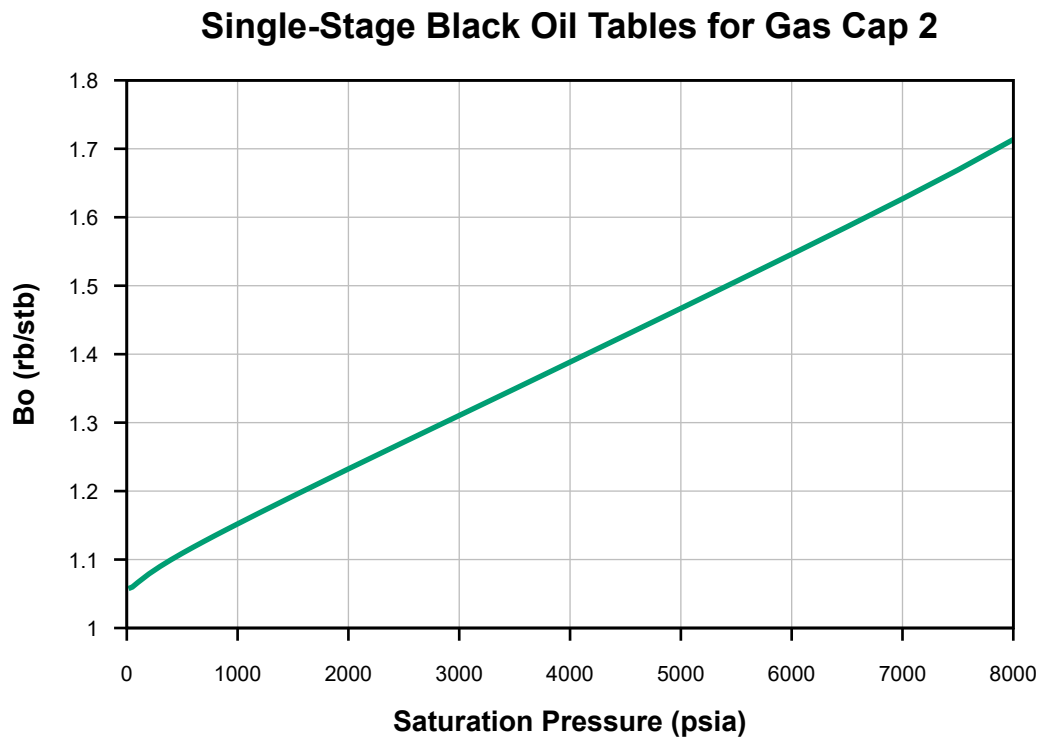


Figure 30: B_o vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.

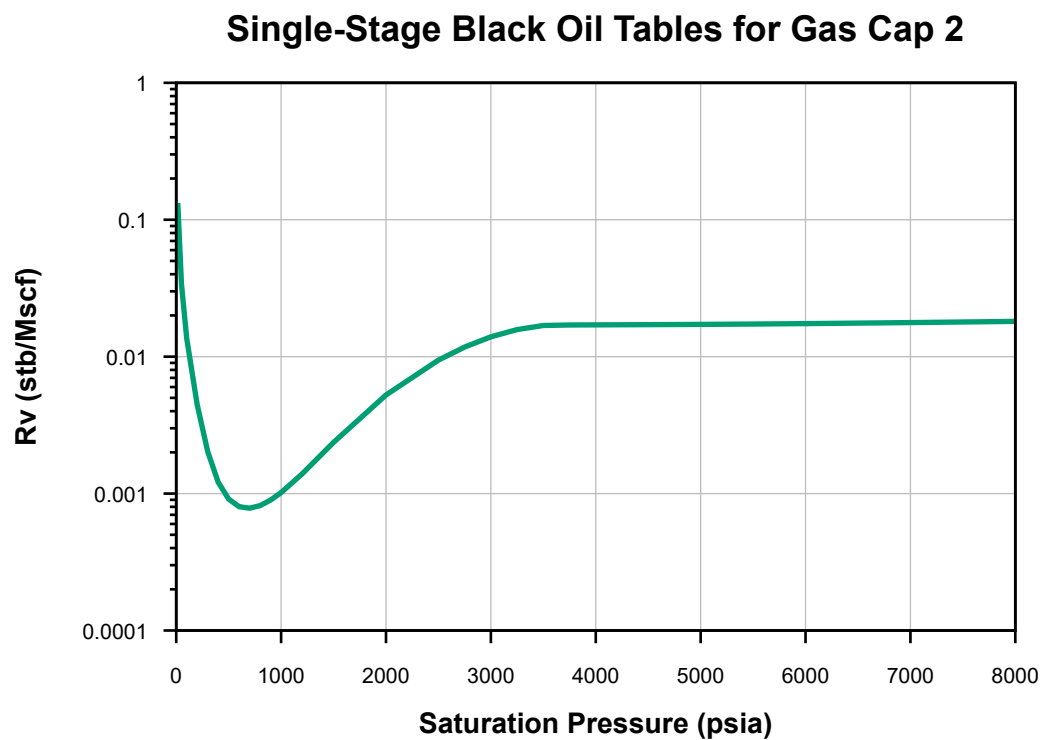


Figure 31: R_v vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.

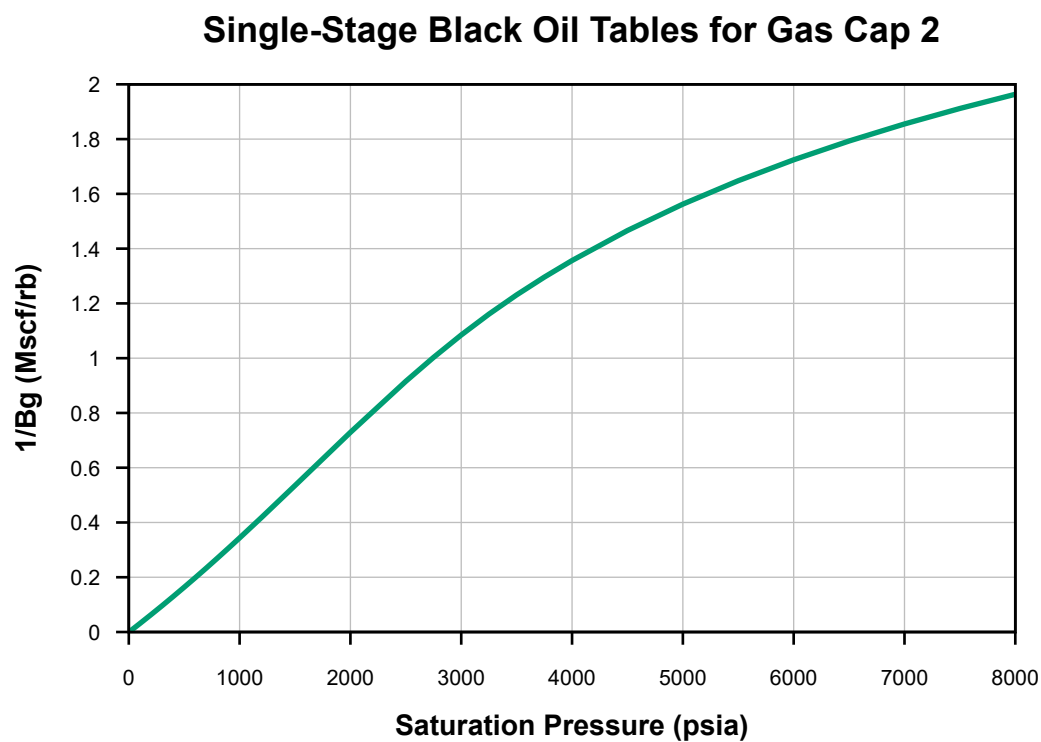


Figure 32: $1/B_g$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.

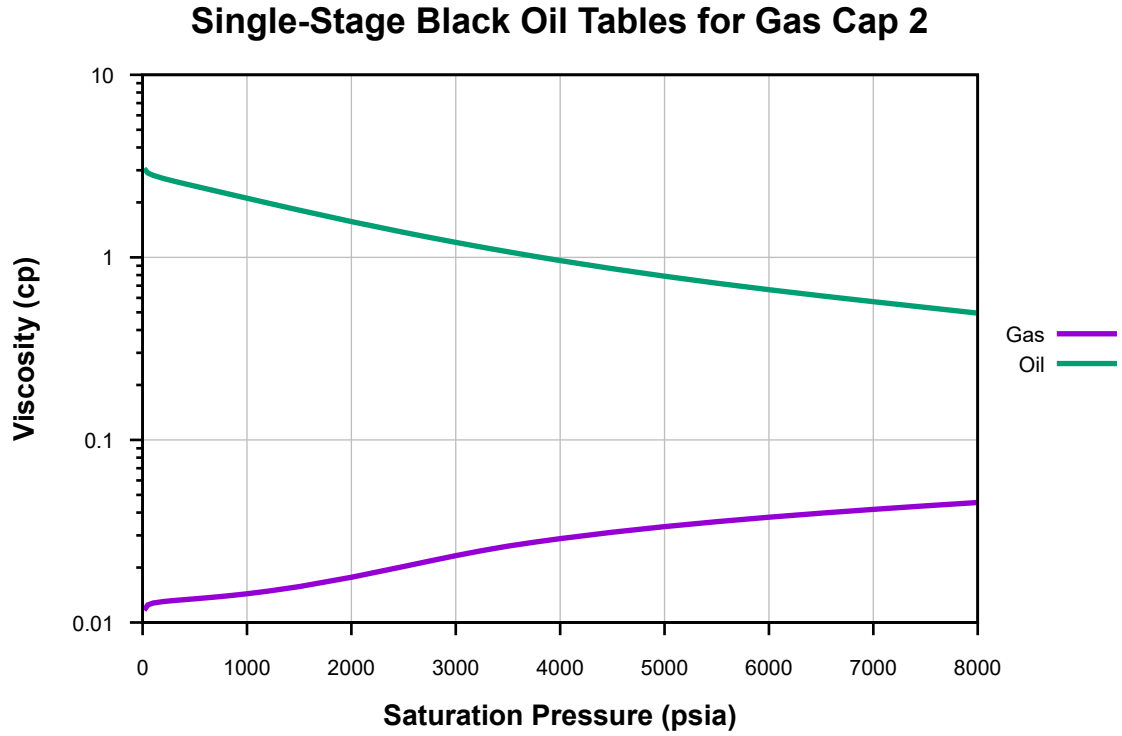


Figure 33: Viscosity vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.

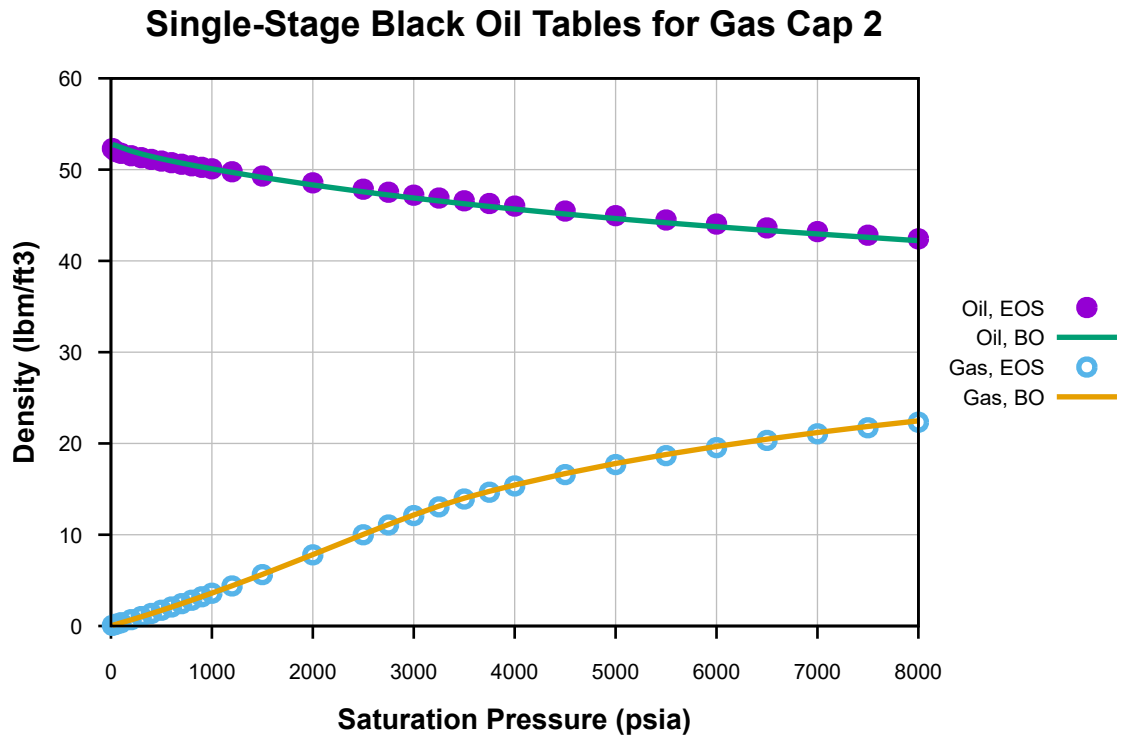


Figure 34: Density vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.

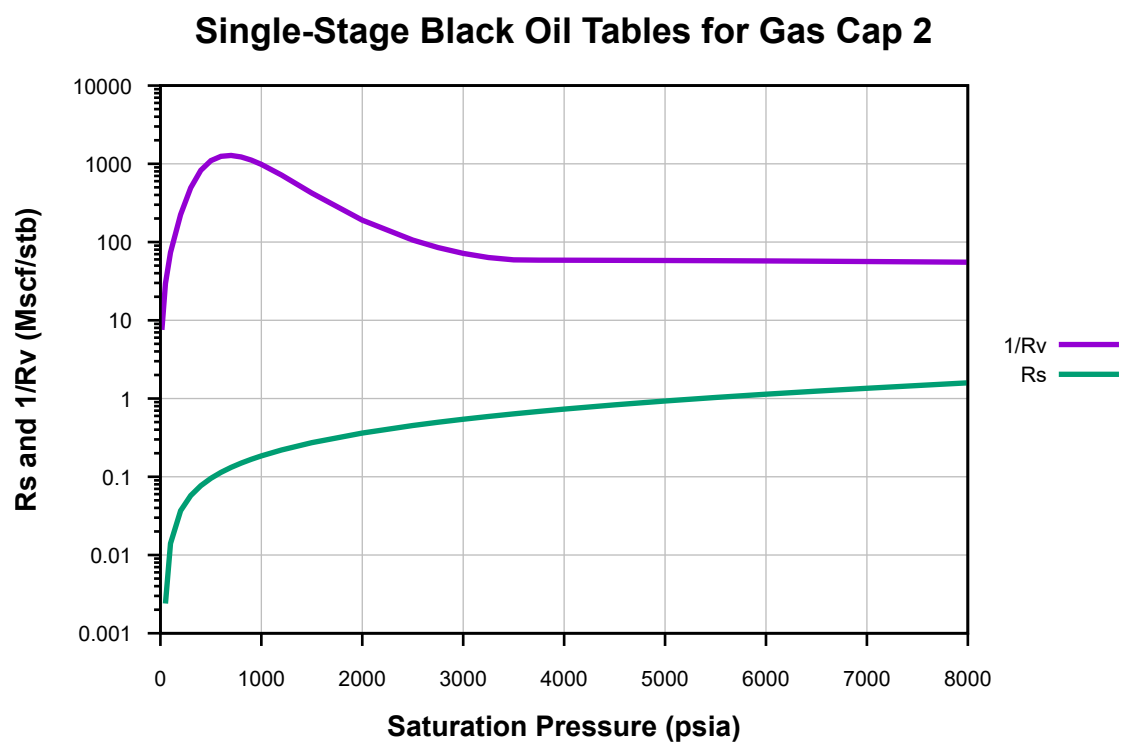


Figure 35: R_s and $1/R_v$ vs. Saturation Pressure, Single-Stage Black Oil Tables for Gas Cap 2.

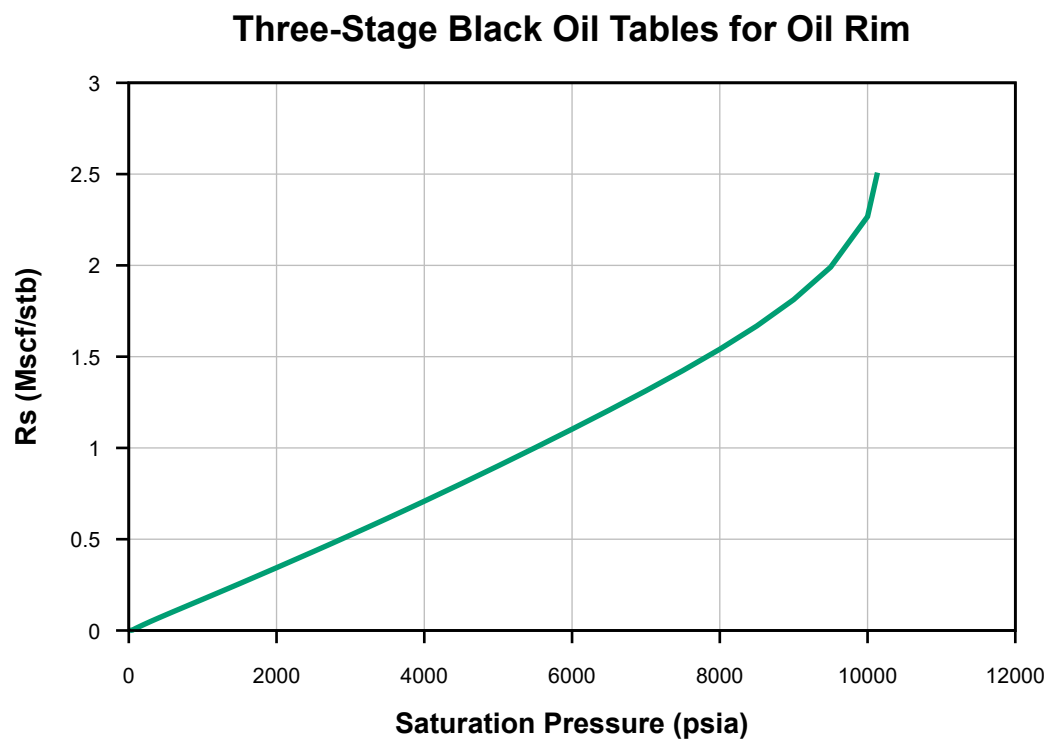


Figure 36: R_s vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.

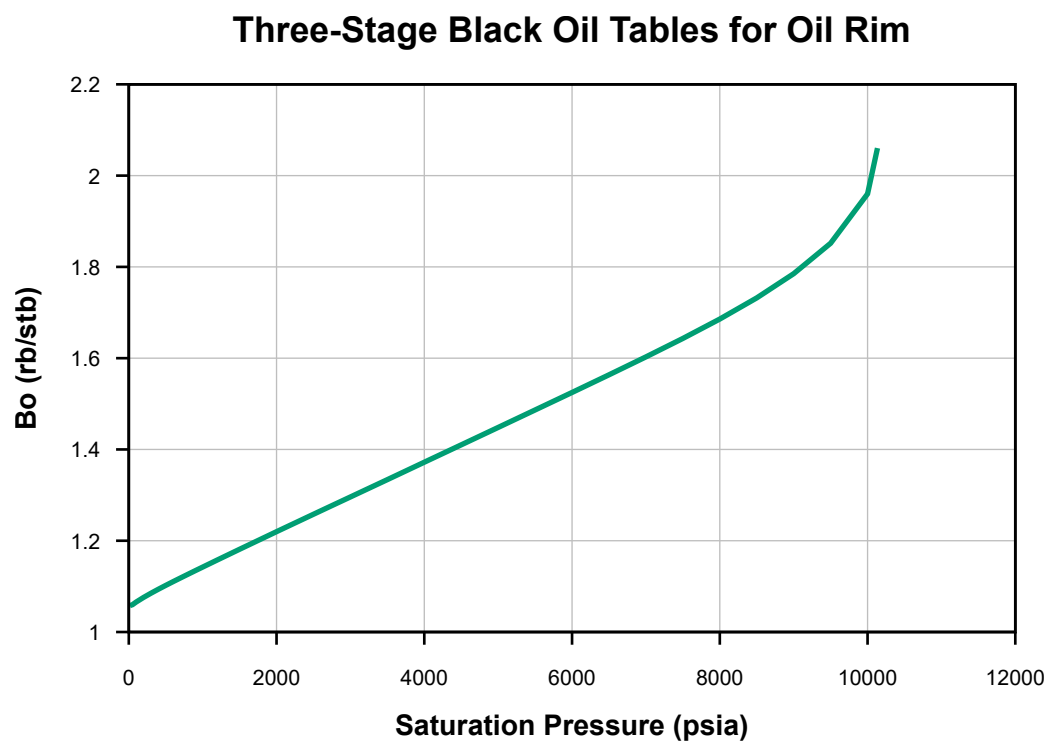


Figure 37: B_o vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.

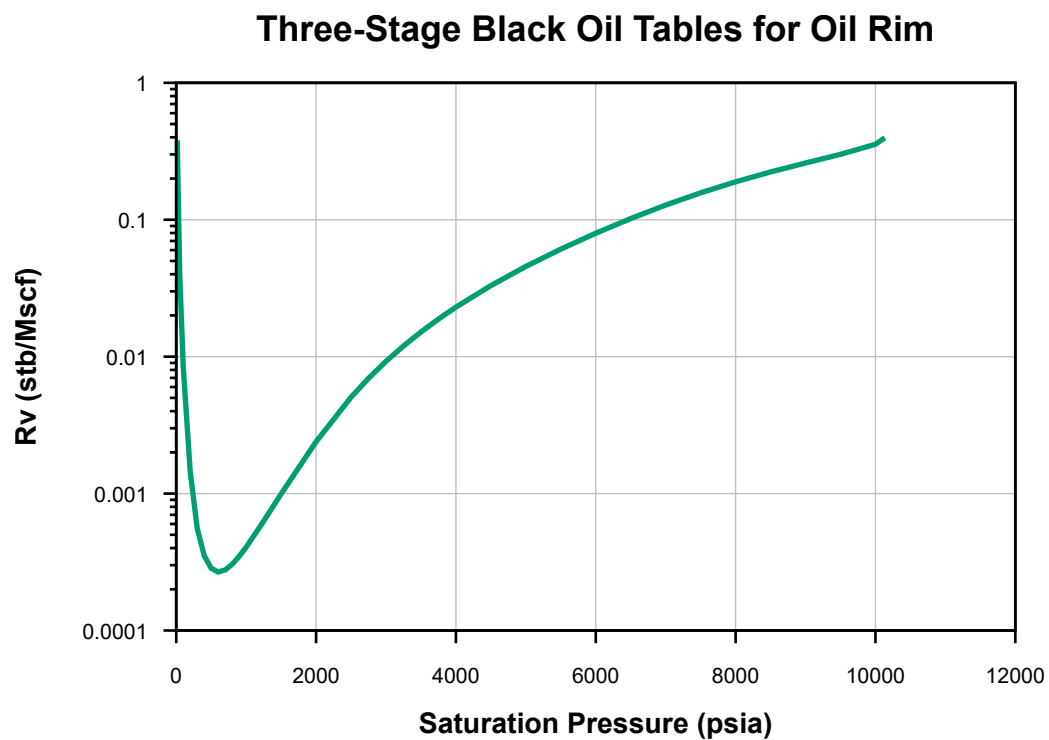


Figure 38: R_v vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.

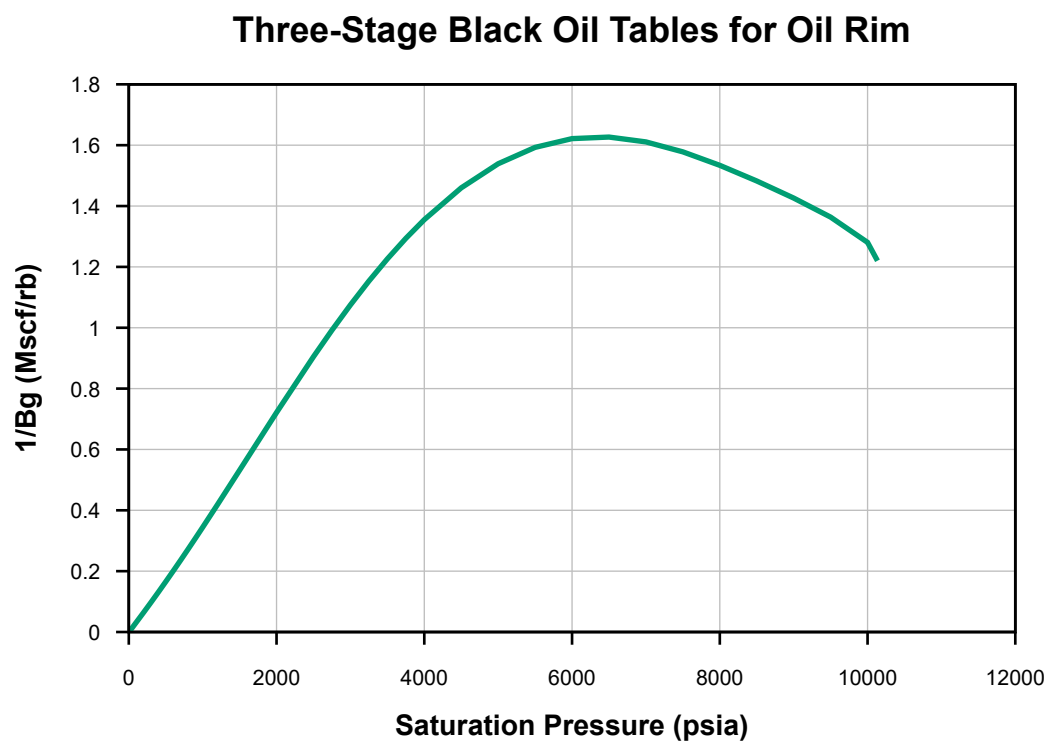


Figure 39: $1/B_g$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.

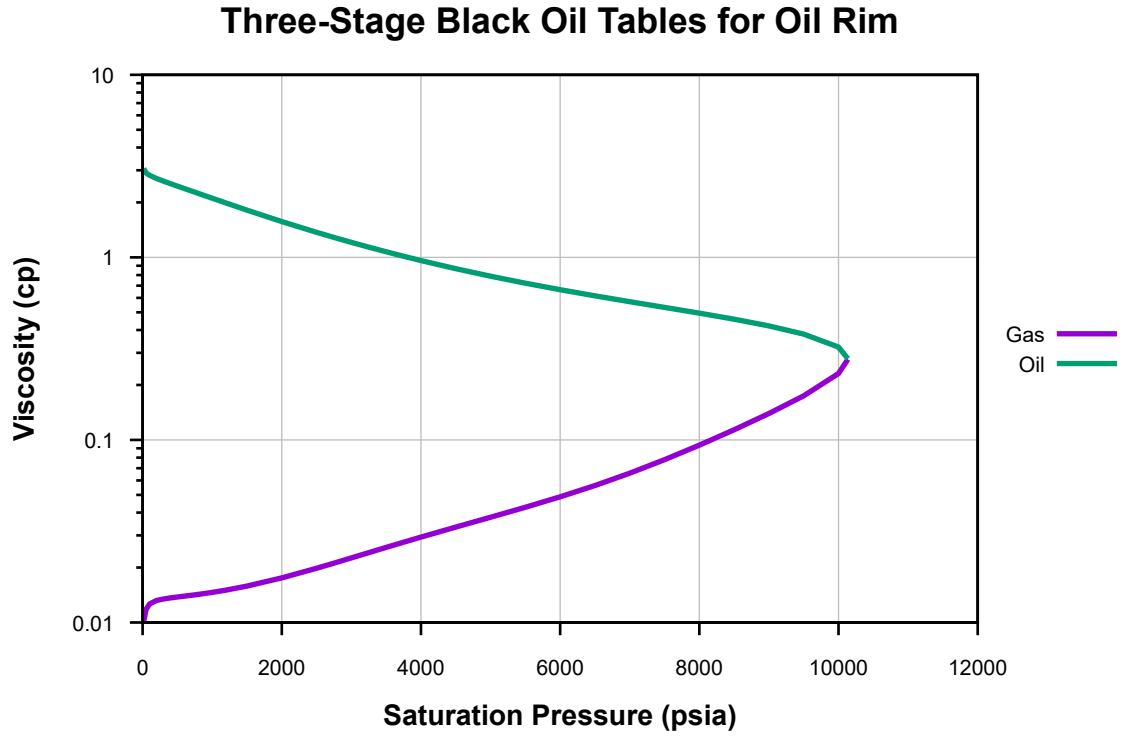


Figure 40: Viscosity vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.

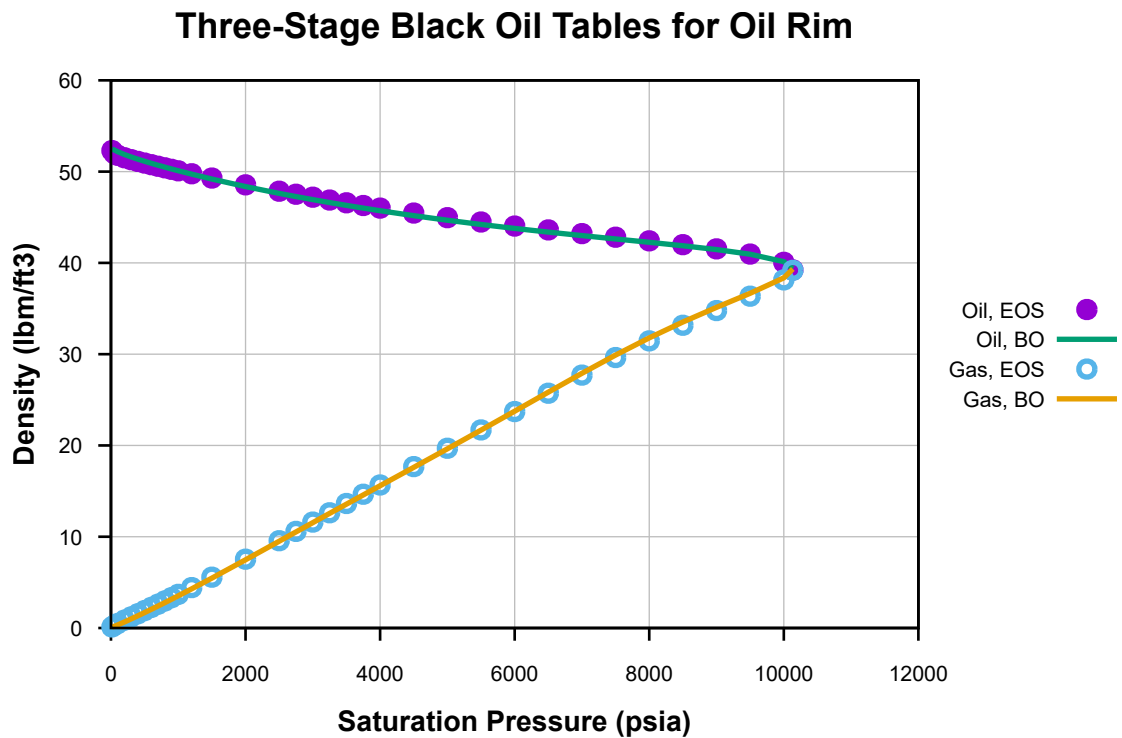


Figure 41: Density vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.

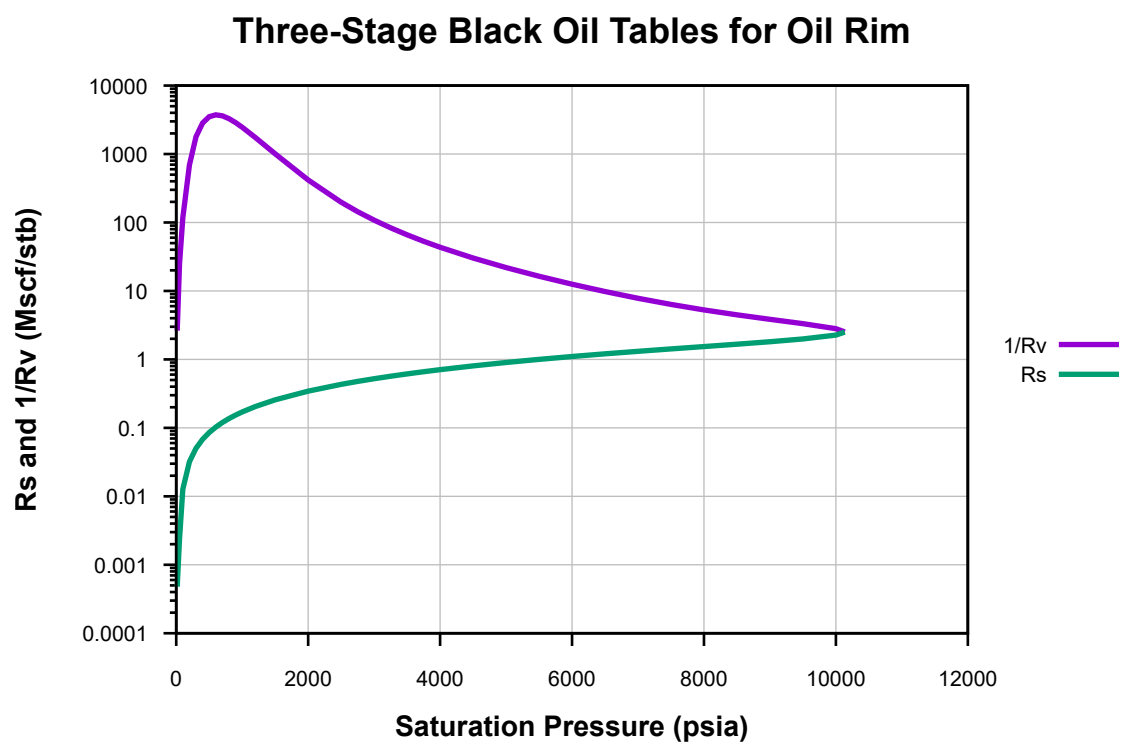


Figure 42: R_s and $1/R_v$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Oil Rim.

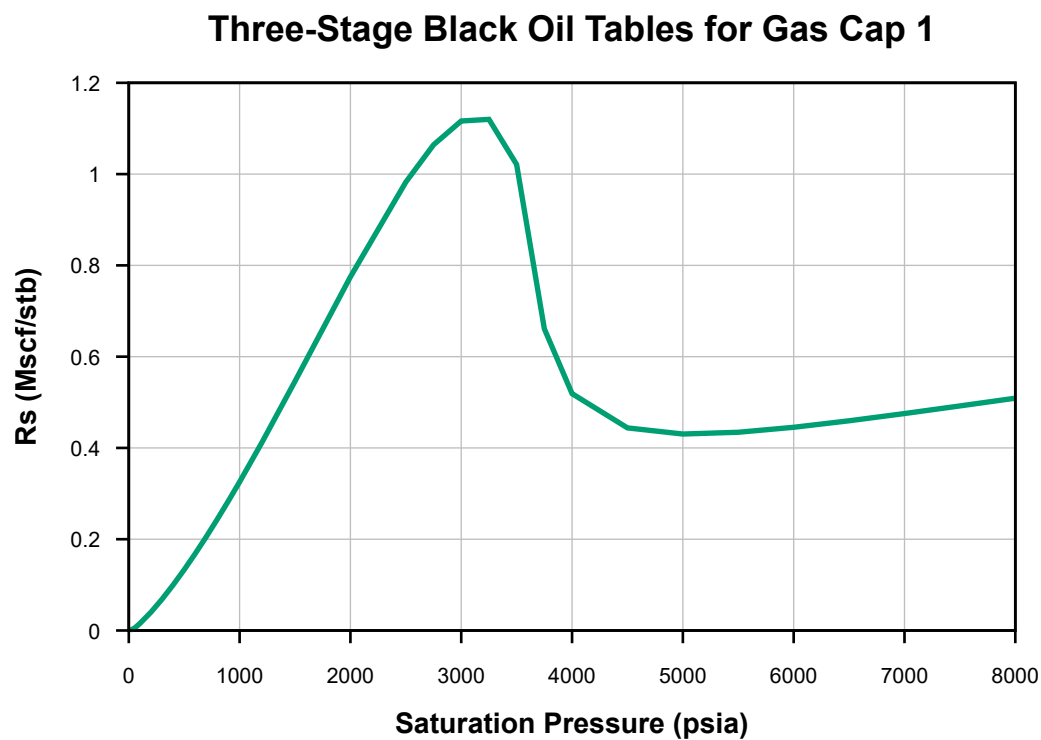


Figure 43: R_s vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.

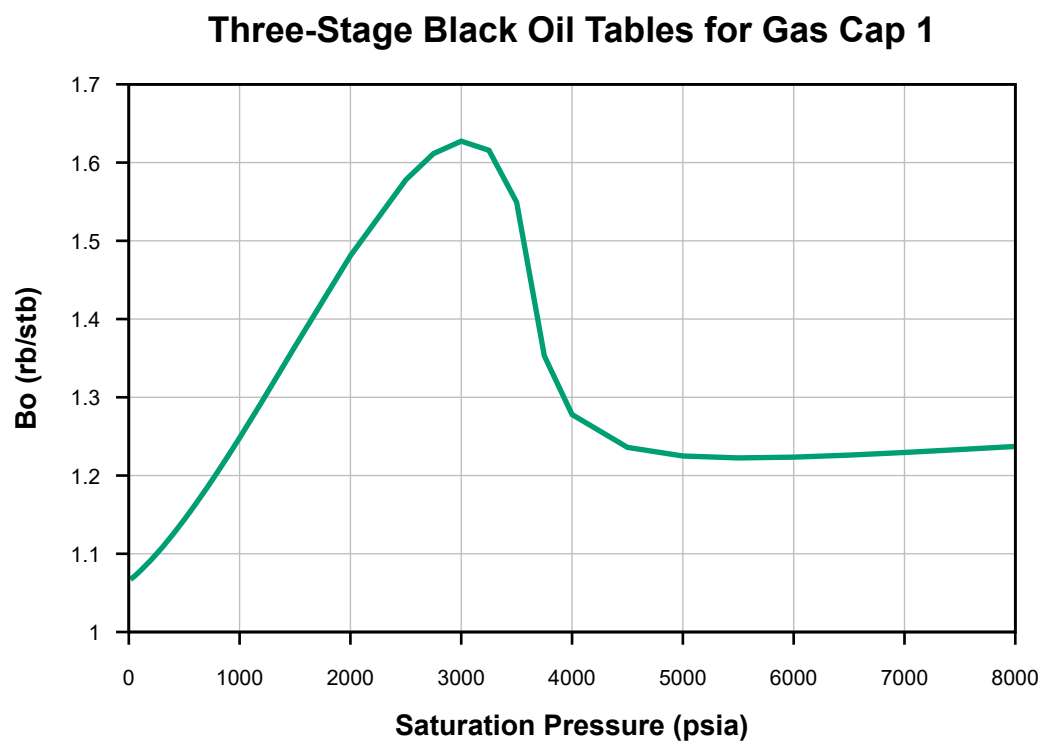


Figure 44: B_o vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.

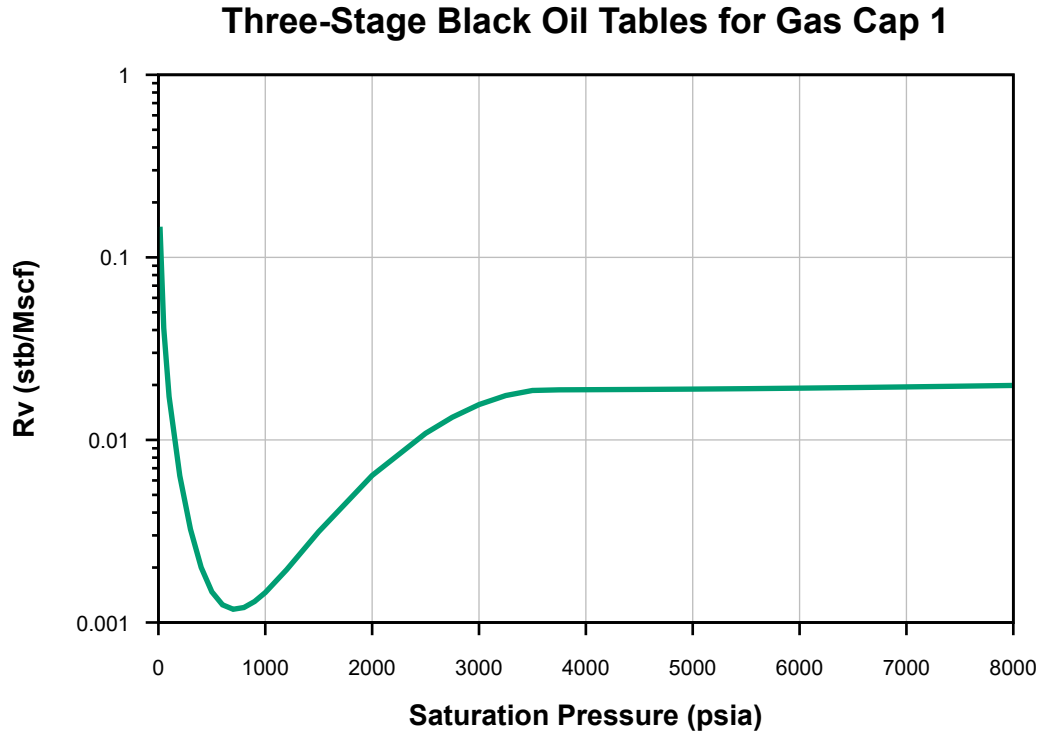


Figure 45: Rv vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.

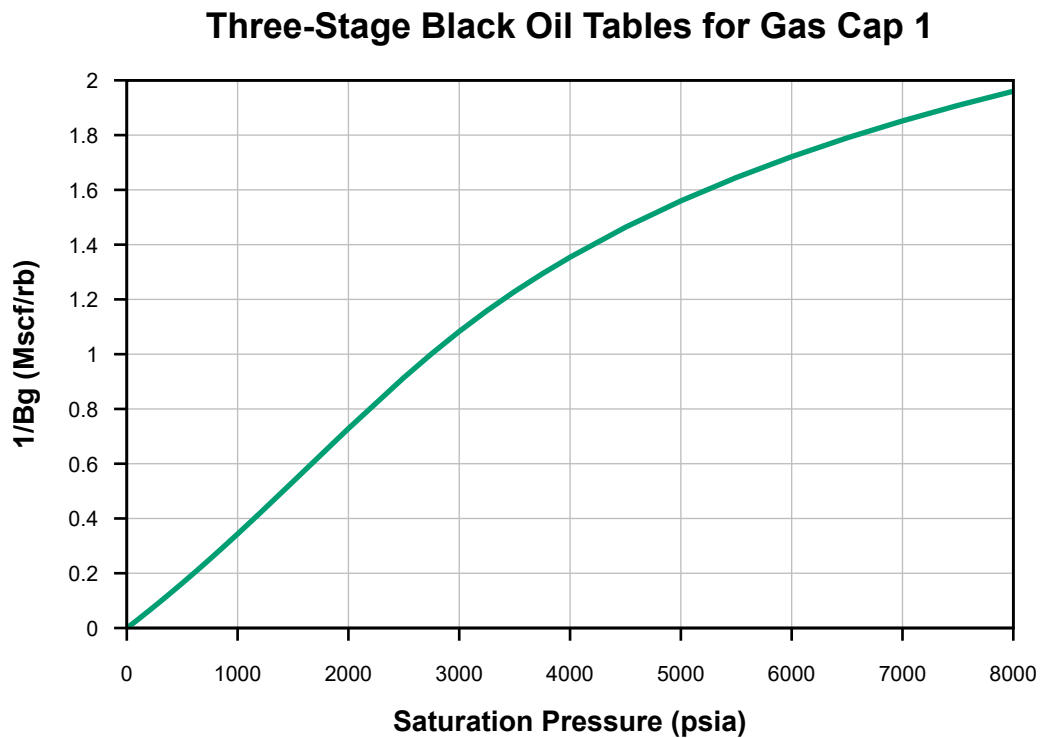


Figure 46: 1/Bg vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.

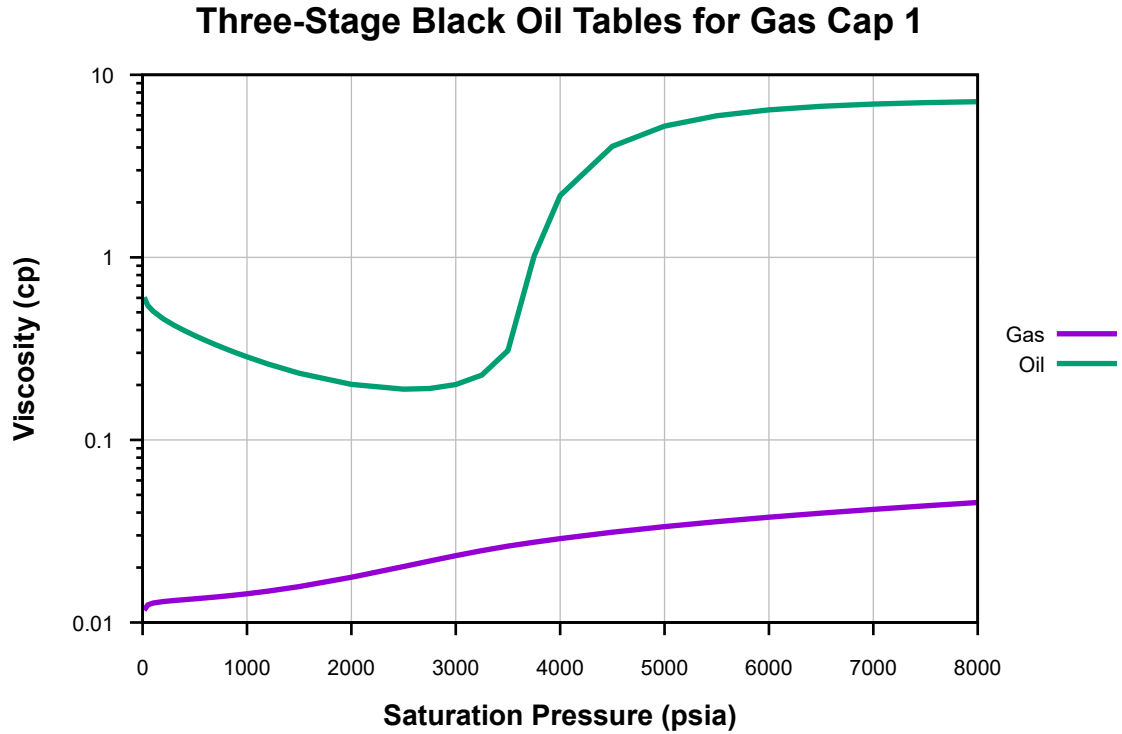


Figure 47: Viscosity vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.

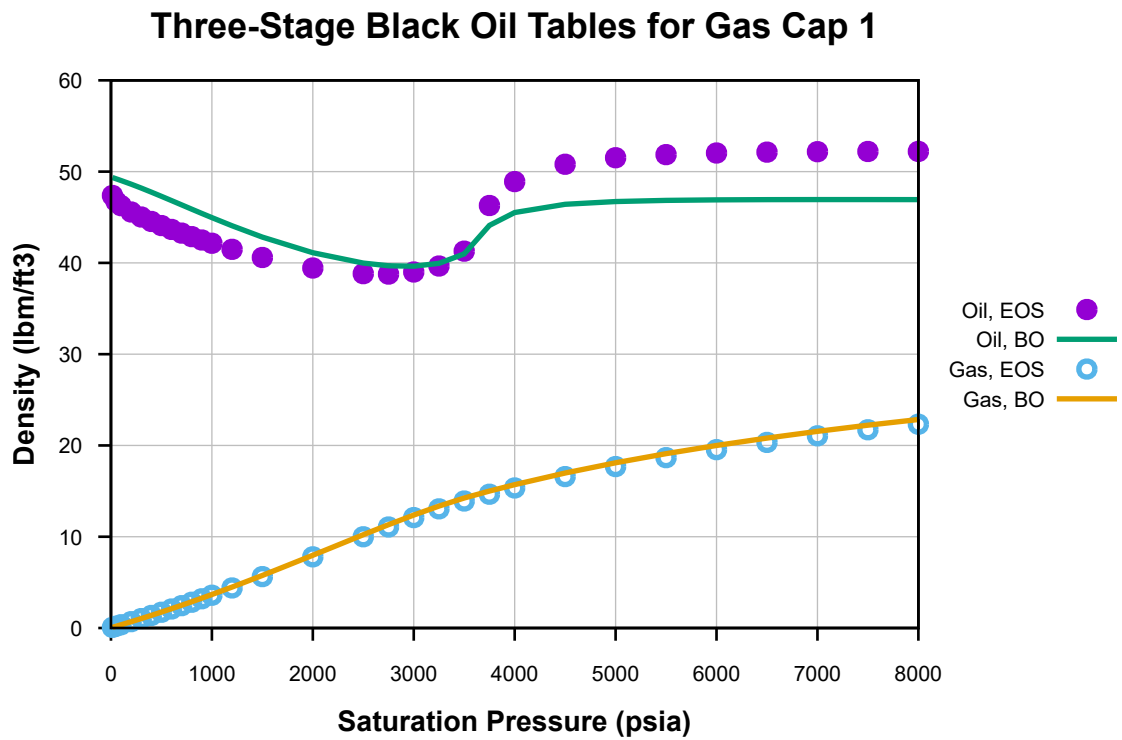


Figure 48: Density vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.

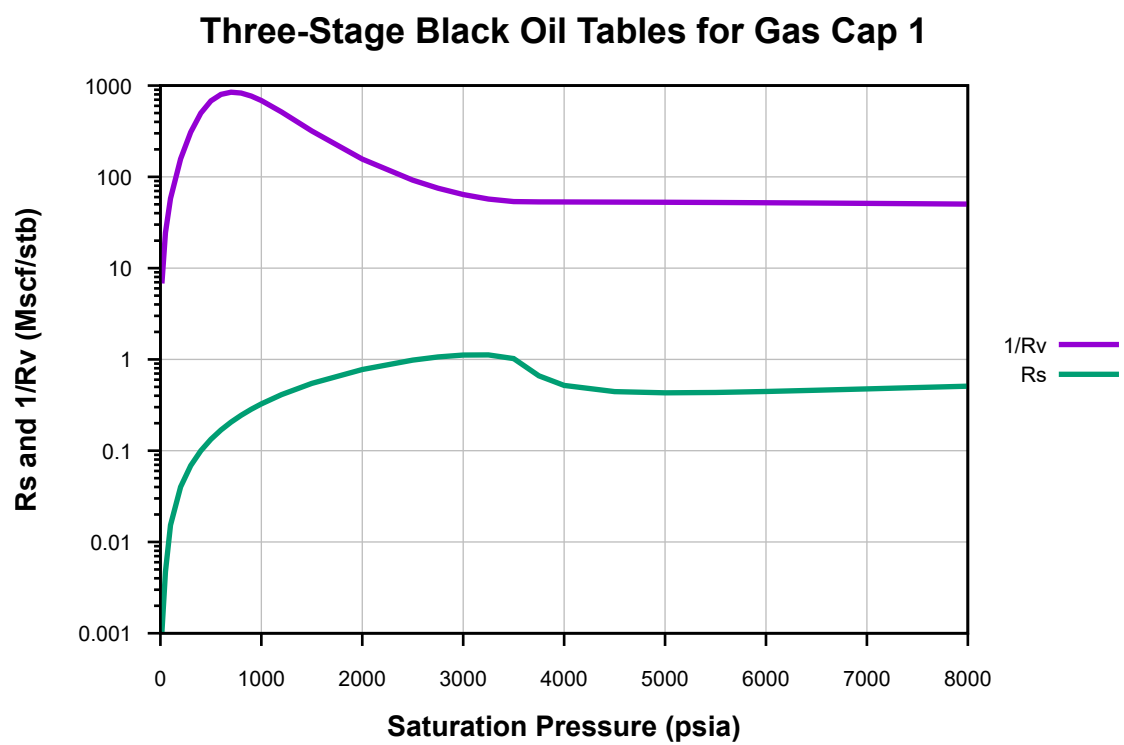


Figure 49: R_s and $1/R_v$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 1.

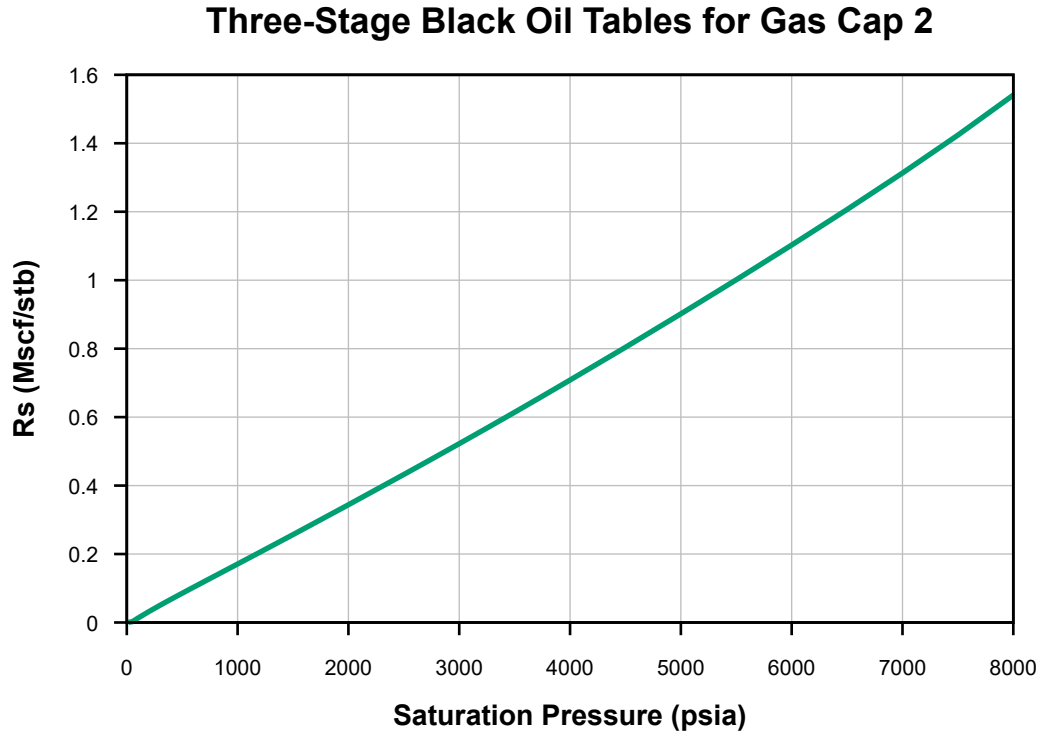


Figure 50: R_s vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.

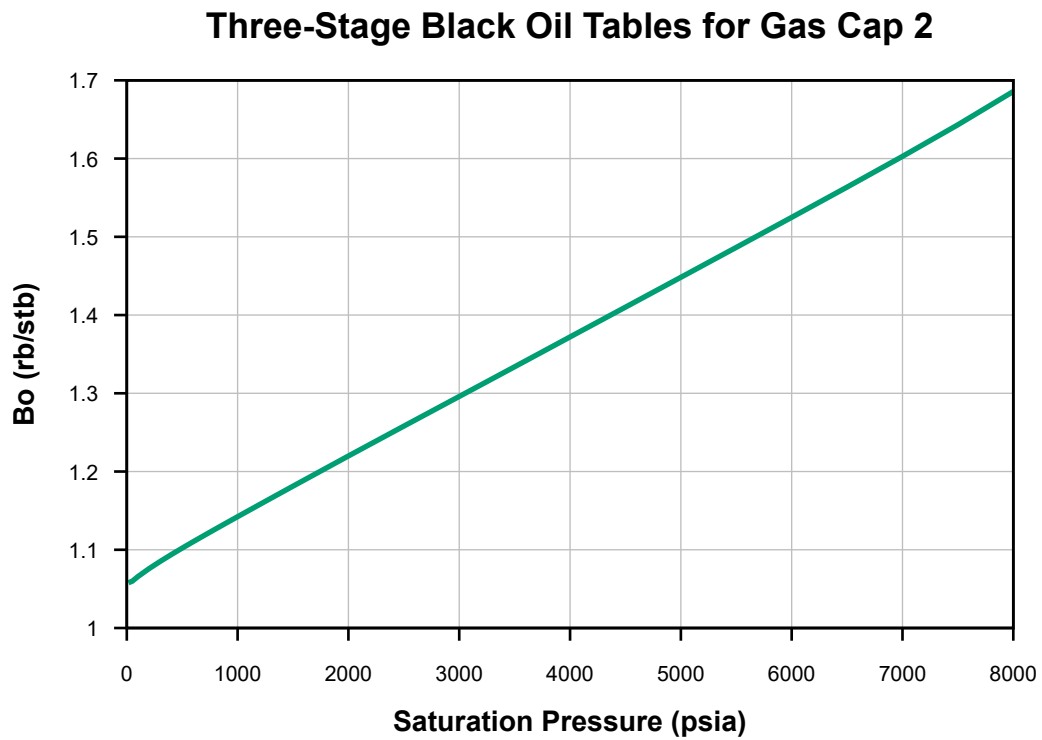


Figure 51: B_o vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.

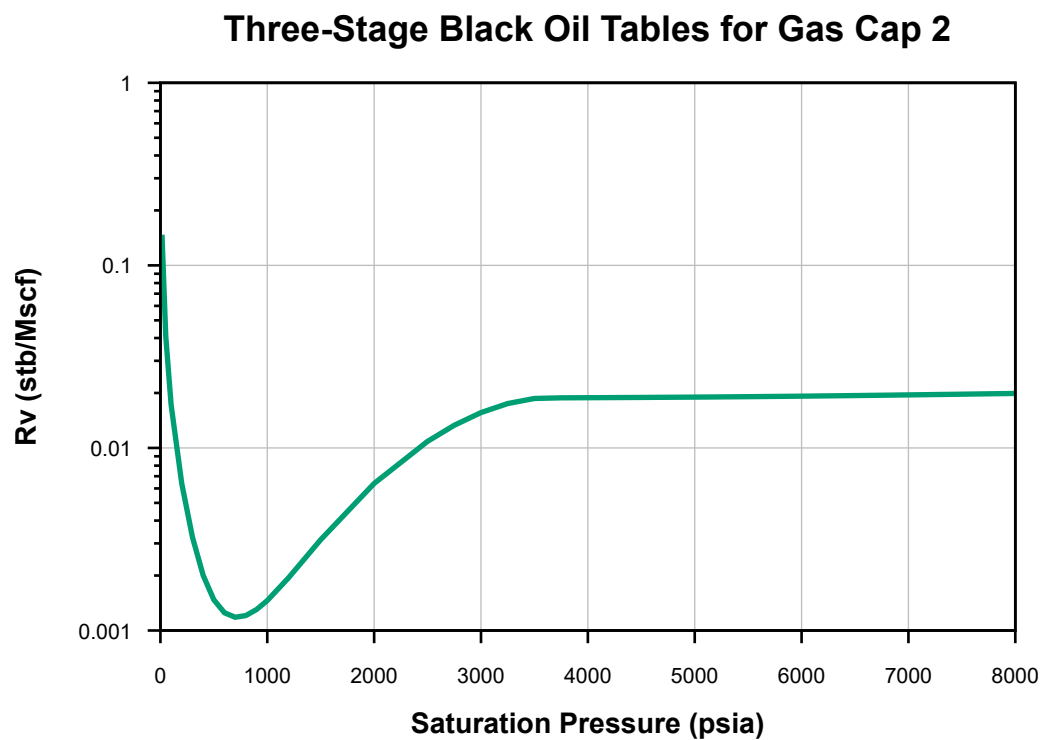


Figure 52: R_v vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.

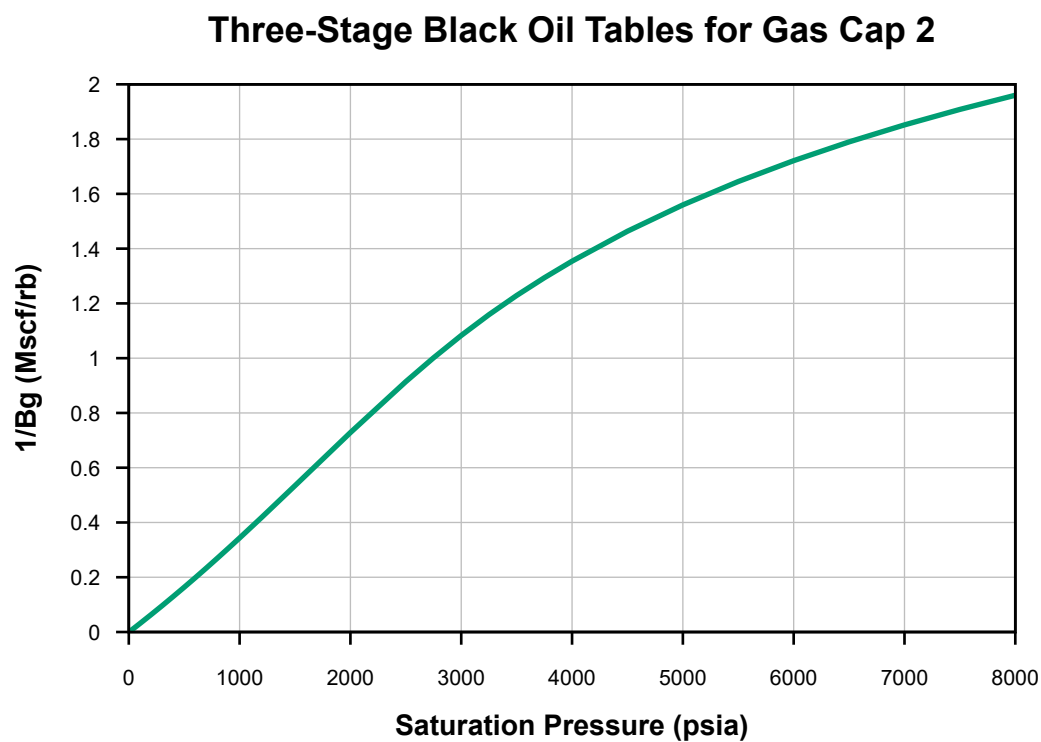


Figure 53: $1/B_g$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.

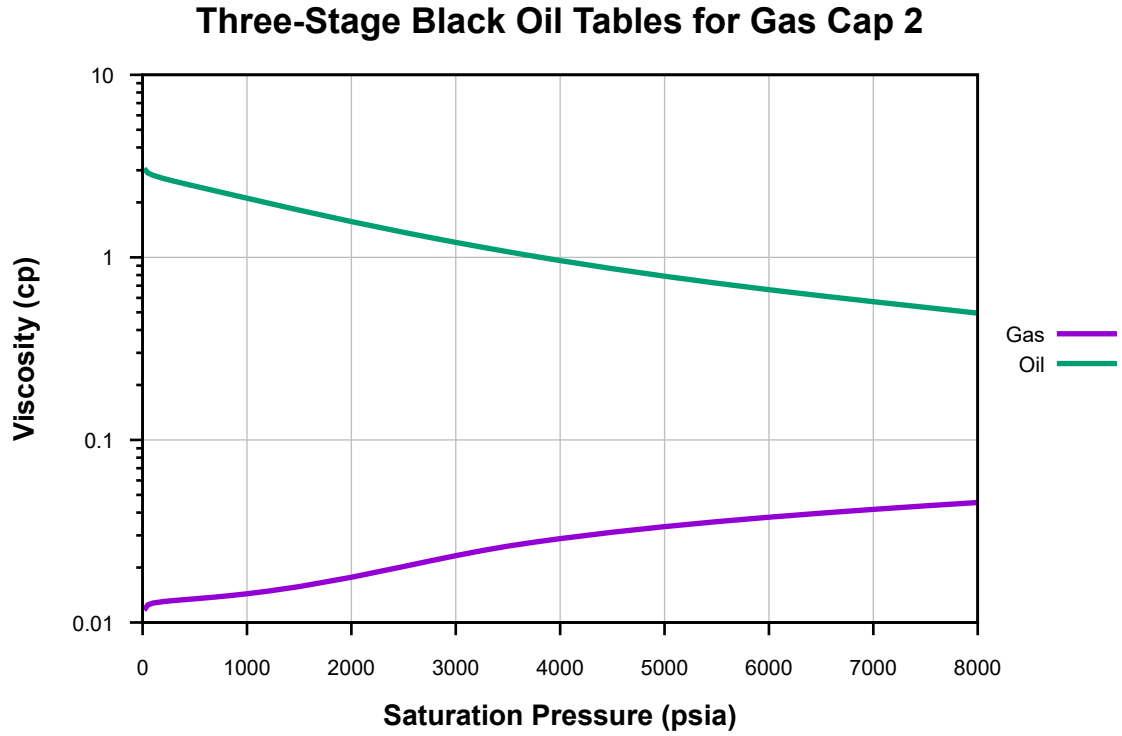


Figure 54: Viscosity vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.

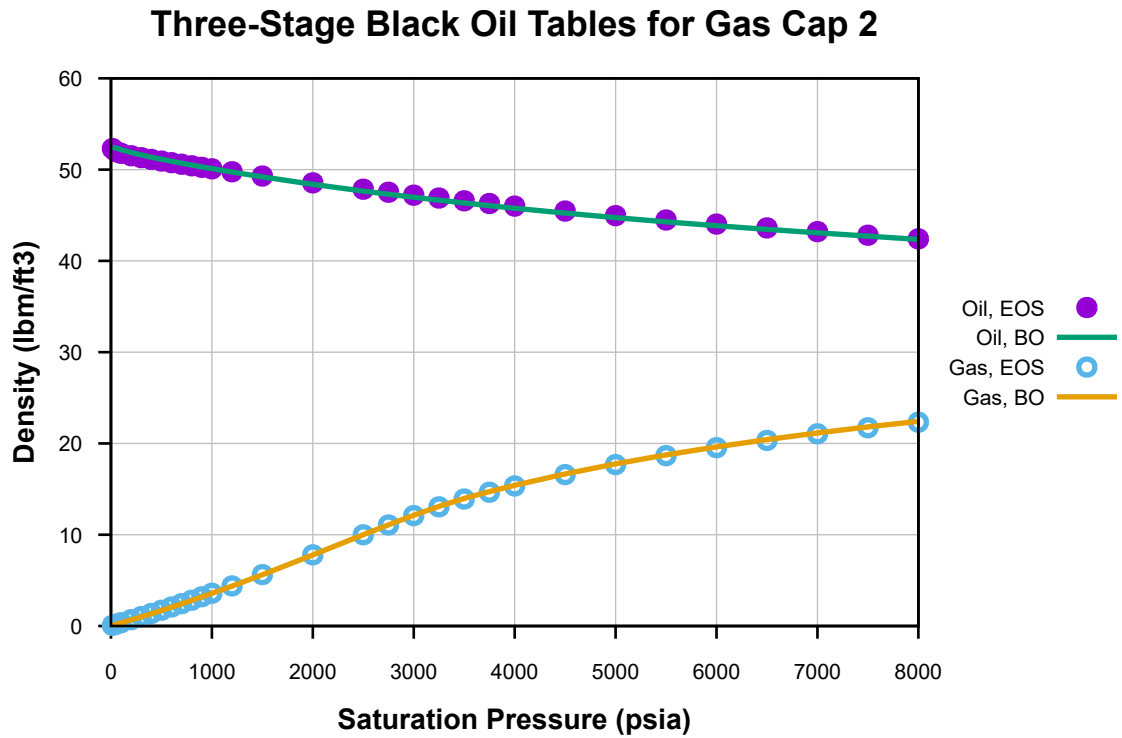


Figure 55: Density vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.

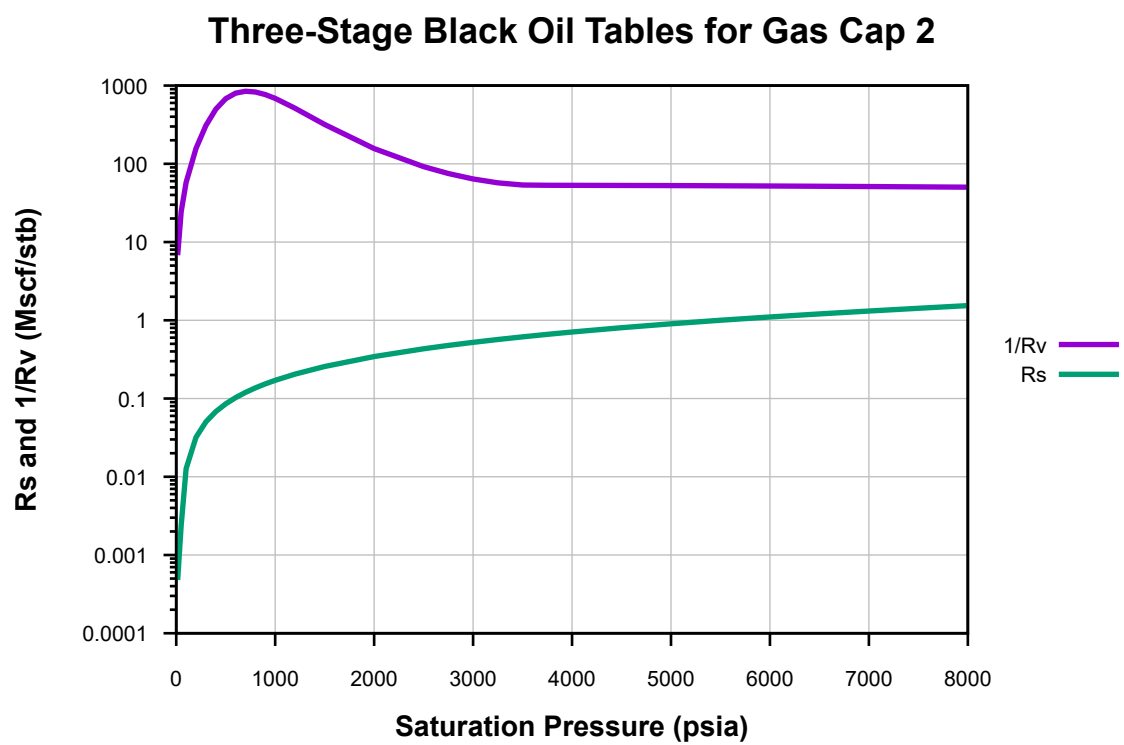


Figure 56: R_s and $1/R_v$ vs. Saturation Pressure, Three-Stage Black Oil Tables for Gas Cap 2.