

OREGON OIL & GAS Co
 ROBERTS No. 1
 TEST II

OREGON STATE SANITARY AUTHORITY
 LABORATORY REPORT

File 046

Location NE 1/4 Sec 25, T10S, R8W
 Collected By V.C. Newton Weather _____
 Date & Time Collected 11/21/59 Date Received (Lab) 11/23/59
 Reason for Sample _____

Lab. No.	Bottle No.	Description	Tests
—	Jar	TEST I (1100) TEST II	Cl ⁻

Results of Analysis

Lab. No.	pH	S.S.	Cl ⁻			
—			5030	$\frac{5030}{17.118} = 295$	grains per gallon	

Remarks

Standard Methods used except when here noted
 Sample probably diluted with mud filtrate total
 salinity ± 350 grains per gallon

Date Completed 11/23/59 Robert C. Barnes
 WPC-28 Chemist

Oregon Oil & Gas Company
 Roberts No. 1 OREGON STATE SANITARY AUTHORITY
 Tests Nos 1 and 2 LABORATORY REPORT

File 046

Location NE 1/4 Sec 25, T10S, R8W, Lincoln County
 Collected By V.C. Newton Weather _____
 Date & Time Collected 11/18/59 & 11/19/59 Date Received (Lab) 11/19/59
 Reason for Sample _____

Lab. No.	Bottle No.	Description	Tests
1		Test # I	Cl ⁻
2		Test # II	"

Results of Analysis

Lab. No.	pH	S.S.	Cl ⁻ ppm			
1			9150	$\frac{9150}{17.118} = 535$	grains per gallon	
2			13,100	$\frac{13,100}{17.118} = 765$	grains per gallon	

Remarks

Standard Methods used except when here noted
 (1) allowing for dilution by mud filtrate, salinity = ± 600 ppt
 (2) " " " " " " " " = ± 800 ppt

Date Completed 11/20/59 Robert C. Barnes
 WPC-28 Chemist



Well Date 22 Jul 64
 Field Laboratory Number #1 Roberts Name Schlicher
 General Laboratory Number _____ Address _____
 Spectrographic Laboratory Number _____ City _____

QUALITATIVE SPECTROGRAPHIC ANALYSIS
 (Quantities estimated to nearest power of ten)

1. Elements present in concentrations over 10%.

Si Zn

2. Elements present in concentrations 10% to 1%.

Al Fe Ca Ba

3. Elements present concentrations 1% to 0.1%.

Mg Ti Pb Mg Pb

4. Elements present in concentrations 0.1% to .01%.

Mn As

5. Elements present in concentrations .01% to .001%.

Zn Mo Cu Ag Sr Ni

6. Elements present in concentrations below .001%.

Co

Radioactivity _____.

Mercury _____.

Thomas C. Matthews, Spectroscopist

NORTHWEST NATURAL GAS COMPANY
 Public Service Building
 Portland 4, Oregon

December 11, 1959

Below are the analyses requested on the samples obtained through the offices of the State Department of Geology and Mineral Industries.

Sample Component	Test No. 2 (2158-2178) Vol. %	Oregon Oil & Gas Roberts #1 Test (1152-1232) Vol. %
Methane CH ₄	56.50	55.89
Nitrogen N ₂	42.99	43.71
Oxygen O ₂	0.43	0.40
Carbon Dioxide CO ₂	0.08	
Air (oxygen and associated nitrogen)	2.15	2.00
Free Nitrogen	41.27	42.11
Heat Value (B.t.u.'s dry per cu. ft.)	573	567
Sp. Gr. @ 10° F. (dry)	0.7352	0.7373

Note: Gas sampled from head of drill pipe.
 Taken by V. C. Newton 11/18/59

(Signed) L. Johnson
 Test Engineer