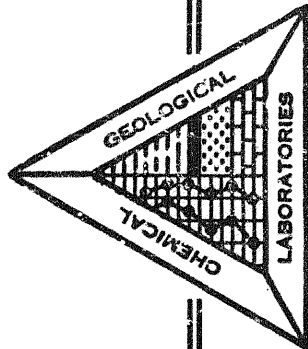


CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON — CALGARY — FORT ST. JOHN



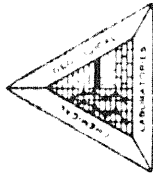
January 23, 1963

Laboratory Report Number: E20903

SOBC Blackstone YT #D-77

Ordovician Core #6 (10,840' - 10,900')
Core #7 (12,798' - 12,812')

CHEMICAL & GEOLOGICAL LABORATORIES LTD.



Operator The California Standard Company

Core #6 10,840' to 10,900'
 Core #7 12,798' To 12,812'

Interval Cored

Well No SOBC Blackstone YT #D-77

Coring Fluid ---

Lab No. E20903

Elevation K.B. Formation Ordovician
 estimated 1716'

Comments Prior to analysis, the test samples were cleaned in a soxhlet-type solvent extractor for 12 hours and oven-dried to a constant weight at 225°F.

The fracture network may or may not exist in the reservoir in the magnitude indicated by this analysis, since it may have been induced and/or increased by the coring process.

10568 - 114 St.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON, ALBERTA

FULL DIAMETER CORE STUDY

(Wildcat)

OPERATOR The California Standard Company FIELD
 Latitude 65° 46 min. 10.77 Sec. North
 LOCATION Longitude 137° 14 min. 54.78 Sec. West
 FORMATION

WELL NO. SOBC Blackstone YT #D-77

Core #6 Core #10,840' - 10,900' DATE Received: LAB NO. E20903
 DEPTHs 12,798' - 12,812' Core #7 January 16, 1963

PHONE 25624
 4553

Footage of Ordovician formation cored	74.0'	No. of representative samples selected for analysis	39.
<u>FEET OF CORE:</u>			
Received at laboratory for analysis	69.2'	Compared (to tested samples)	---
Missing	4.8'	Dense sections not represented	---
Represented by samples	69.2'	Badly fractured sections not represented	---

SUMMARY OF REPRESENTED SECTIONS:

Weighted average porosity	1.9 %	Maximum porosity	4.7 %
Weighted average K _H permeability on 62.2'	40. md.	Minimum porosity	0.7 %
Weighted average K' permeability on 60.7'	21. md.	Maximum K _H permeability	262. md.
Weighted average vertical permeability on 60.7'	0.77 md.	Minimum K _H permeability	1.2 md.
Weighter average maximum permeability on 62.2'	40. md.	Maximum vertical permeability	2.3 md.
Porosity Feet	133.17	Minimum vertical permeability	0.01 md.

CORE WITH MAXIMUM PERMEABILITY:

Footage	40.8	21.4	---
Weighted average porosity	1.7 %	2.0 %	---
Weighted average K _H permeability	59. md.	5.0 md.	---
Weighted average vertical permeability	on 39.3'	0.64 md.	---
Porosity feet	70.75	42.52	---

10.0 md. or greater between 1.0 and 9.9 md. inclusive less than 1.0 md.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

The California Standard Company Well No SOBC Blackstone YT #D-77 Lab. No. E20903 Date Received: January 16, 1963.

Sample Number	Midpoint of Sample in Ft.	Representative of Foot	Footage Rep.	Permeability md.		Vertical	K _v	K _h	% Porosity	Porosity Feet	Description
				K _v	K _h						
1	10,842.0	10,840.0-10,842.4	2.4	0.53	12.	4.7	0.9	2.16	OrD	Ca HF VSI	
2	10,842.7	10,842.4-10,843.4	1.0	0.60	5.0	1.9	2.3	2.30	OrD	Ca RF SV	
3	10,844.0	10,843.4-10,845.5	2.1	1.1	29.	25.	1.9	3.99	OrD	Ca HF SI	
4	10,845.8	10,845.5-10,847.0	1.5	1.2	20.	18.	2.2	3.30	OrD	Ca VC HF SI	
5	10,847.4	10,847.0-10,847.7	0.7	0.20	23.	22.	2.0	1.40	OrD	Ca HF SI	
6	10,848.0	10,847.7-10,848.6	0.9	0.21	20.	13.	3.0	2.70	OrD	HF V	
7	10,848.8	10,848.6-10,849.9	1.3	0.18	4.6	1.7	0.8	1.04	OrD	Ca HC VSI	
8	10,850.2	10,849.9-10,850.6	0.7	0.01	1.3	1.0	3.1	2.17	OrD	Ca V	
9	10,851.5	10,850.6-10,852.0	1.4	0.04	19.	17.	1.3	1.82	OrD	HF VSI	
10	10,852.6	10,852.0-10,853.0	1.0	0.02	5.5	4.8	2.1	2.10	OrD	Ca HF SI	
11	10,853.3	10,853.0-10,854.0	1.0	0.10	12.	1.8	1.0	1.00	OrD	HF VSI	
12	10,855.3	10,854.0-10,855.8	1.8	0.06	6.9	5.6	1.0	1.80	OrD	Ca HC VSI	
13	10,856.1	10,855.8-10,856.5	0.7	0.06	1.2	1.1	1.9	1.33	OrD	Ca HC SI	
14	10,856.7	10,856.5-10,856.9	0.4	0.6+	10.	8.4	3.4	1.36	OrD	Ca V	
15	10,858.6	10,856.9-10,860.0	3.1	0.12	15.	9.2	0.7	2.17	OrD	Ca HF OccV	
16	10,860.9	10,860.0-10,862.0	2.0	0.27	11.	6.6	0.9	1.80	OrD	HF VSI	
17	10,862.7	10,862.0-10,864.0	2.0	(a)	(a)	(a)	1.4	2.80	OrD	FG OHF SI	
18	10,865.3	10,864.0-10,865.5	1.5	(a)	88.	(a)	0.7	1.05	OrD	Ca FG HF VSI	
19	10,865.7	10,865.5-10,866.0	0.5	0.82	241.	110.	1.6	0.80	OrD	Ca OHF SI	
20	10,866.9	10,866.0-10,868.0	2.0	0.97	5.3	3.4	1.7	3.40	OrD	Ca HF SI	
21	10,869.4	10,868.0-10,870.0	2.0	1.8	11.	6.3	2.5	5.00	OrD	Ca HC SV	
22	10,871.9	10,870.0-10,873.5	3.5	2.2	183.	29.	1.4	4.90	OrD	Ca CHF SI	
23	10,874.3	10,873.5-10,874.6	1.1	0.08	23.	7.2	0.7	0.77	OrD	Ca HF OccV	
24	10,874.8	10,874.6-10,876.0	1.4	0.08	8.3	3.7	2.4	3.36	OrD	Ca HF SI	
25	10,876.9	10,876.0-10,878.0	2.0	0.60	83.	76.	2.7	5.40	OrD	Ca OHF OccV	
26	10,878.3	10,878.0-10,880.8	2.8	0.98	26.	21.	1.1	3.08	OrD	Ca HF VSI	
27	10,881.6	10,880.8-10,882.1	1.3	0.21	2.6	2.6	2.9	3.77	OrD	Ca HC V	
28	10,882.5	10,882.1-10,884.0	1.9	0.15	3.9	3.2	1.7	3.23	OrD	Ca HC OccPPV	
29	10,884.9	10,884.0-10,886.2	2.2	2.0	40.	15.	2.9	6.38	OrD	Ca HF OccV	
30	10,886.6	10,886.2-10,887.4	1.2	0.39	262.	246.	3.9	4.68	OrD	Ca OHF OccV	
31	10,888.3	10,887.4-10,890.0	2.6	0.07	4.4	2.9	1.6	4.16	OrD	Ca HC SI	
32	10,891.0	10,890.0-10,892.0	2.0	0.08	225.	125.	1.4	2.80	OrD	Ca HC VSI	
33	10,893.1	10,892.0-10,893.8	1.8	0.56	1.9	1.7	2.5	4.50	OrD	Ca HC OccPPV	
34	10,894.1	10,893.8-10,897.0	3.2	0.41	11.	5.9	1.6	5.12	OrD	Ca HF SI	
35	10,898.6	10,897.0-10,900.9	3.9	2.3	7.1	4.2	2.4	9.36	OrD	Ca HF SI	
		Extra Core	0.9	---	---	---	---	---	---	---	---

Recovered 60.9*

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

The California Standard Company
 Operator
 Well No. SOBC Blackstone YT #D-77
 Lab. No. E20903
 Date Received: January 16, 1963.

Sample Number	Midpoint of Sample in Ft.	Representative of Feet	Footage Rep.	Permeability md.		Porosity	Porosity Feet	Description
				Vertical	K _H / K _V			
		Core #7	12,798' - 12,812'	Recovered	8.3'			
36	12,798.3	12,798.0-12,800.0	2.0	(a)	(a)	3.6	7.20	OrD Ca OHF I
37	12,801.7	12,800.0-12,803.0	3.0	(a)	(a)	3.3	9.90	OrD Fg OHF I
38	12,803.6	12,803.0-12,804.0	1.0	0.50	41.	4.7	4.70	OrD Fg OHF I
39	12,804.5	12,804.0-12,806.3	2.3	1.5	16.	1.9	4.37	OrD Fg HF SI
		Missing	5.7	---	---	---	---	---

CORE DESCRIPTION SYMBOLS

- OrD Ordevician
- Ca Calcite
- HF Horizontal Fracture
- VSI Very Slightly Intergranular
- RF Random Fractures
- SV Slightly Vuggy
- SI Slightly Intergranular
- VC Vertical Crack
- V Vuggy
- HC Horizontal Crack
- OccV Occasional Vugs
- Fg Fragmental
- OHF Open Horizontal Fracture
- OccPFV Occasional Pin Point Vugs
- (a) Unsuitable for test
- K_H Maximum Horizontal Permeability measured
- K_V Taken 900 to K_H
- I Intergranular
- NB. K_H and K_V are transverse permeability measurements on full diameter samples.