

# MAR 19680104: BEAR RIVER

Received date: Dec 31, 1968

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ECONOMIC MINERALS

FILE REPORT No.

S-AF-115 (2)  
S-AF-159 (1)


RE: Bear River Sulphur Project - Permits 115 and 159

Three hundred and forty four samples from depths of less than 20 feet in seismic shot holes on Sulphur Permits 115 and 159 were assayed for elemental sulphur by a solvent extraction method. Twenty-five of these samples indicate geochemically anomalous sulphur values in the 2% range. However, a recheck of these higher values by a more expensive but more precise analysis for total sulphur (bromine extraction method) indicated that the anomalous values were due to the extraction of organic material together with the elemental sulphur.

Total sulphur assays for the rechecked samples ranged from 0.02% to 1.36% with a mean value of 0.4%. This is within the normal expected range for the Fort Vermillion area. The mean value of 1.2% elemental sulphur plus unidentified soluble organic material is also typical of results obtained from sampling programs elsewhere in the area.

No further soil sampling is recommended on these permits.

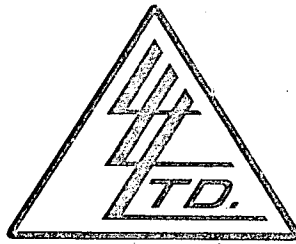
Plans of drill hole locations and tables of assays are attached.



Lee Morrison  
Mining Geologist

cc: Z. D. Grissom  
J. B. Etnyre  
C. E. Biederman (2)

To: SINCLAIR CANADA OIL CO.  
 490 Bentall Bldg.  
 Calgary, Alberta



File No. 1467  
 Date October 22, 1968  
 Samples grab

Certificate of  
 ASSAY of

LORING LABORATORIES LTD.

MAILING ADDRESS - - - - 2506 EXSHAW RD., N.W., CALGARY  
 LAB. LOCATION - - - - 629 BEAVERDAM RD., N.E., CALGARY  
 PHONE 277-6797

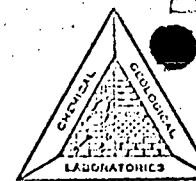
SAMPLE No.	Elemental %S
C1-23 2'	1.85
C1-23 17'	1.26
C1-41 20'	2.00
C1-59 2'	0.92
C1-59 10'	1.14
C2-85 7'	1.62
C2-85 17'	1.17
C2-85 27'	0.39
C2-173 2'	0.63
C2-173 30'	1.08
C2-185 2'	2.01
C2-185 27'	1.03
C2-200 7'	0.81
C2-200 17'	0.63
C2-200 27'	0.28
C2-233 2'	1.30
C2-233 30'	0.69
C2-241 7'	0.76
C2-241 17'	0.64
C2-241 27'	1.11
C2-255 2'	0.96
C2-255 10'	2.00
C3-299 2'	0.39
C3-299 7'	0.34
C3-299 17'	0.73
C3-360 2'	0.48
C3-360 30'	0.57
C3-364 7'	1.90
C3-364 27'	0.82

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE  
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.  
 Pulps Retained one month  
 unless specific arrangements  
 made in advance.

Provincial Assayer of British Columbia

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LTD.



OPERATOR: SINCLAIR CANADA OIL COMPANY

REPORT NUMBER: C68-3560

Kind of Sample: Soils

DATE RECEIVED April 22, 1968

DATE REPORTED May 8, 1968

SAMPLE NUMBER	DEPTH IN FEET	ELEMENTAL SULFUR (% by weight)	SAMPLE NUMBER	DEPTH IN FEET	ELEMENTAL SULFUR (% by weight)
C1- 1	10-20	0.78	C1-36	7-17	1.72
C1- 2	"	1.05	C1-37	"	1.88
C1- 3	"	1.10	C1-38	"	0.96
C1- 4	7-17	0.81	C1-39	"	1.55
C1- 5	"	1.14	C1-40	"	1.75
C1- 6	"	0.98	C1-41	"	2.42
C1- 7	" "	1.15	C1-42	"	0.64
C1- 8	"	0.95	C1-43	"	Trace
C1- 9	10-20	0.87	C1-44	10-20	1.70
C1-10	"	1.26	C1-45	"	1.71
C1-11	"	0.76	C1-46	7-17	0.79
C1-12	"	0.99	C1-47	10-20	1.66
C1-13	"	0.61	C1-48	7-17	1.09
C1-14	"	0.99	C1-49	"	Trace
C1-15	"	0.08	C1-50	"	0.73
C1-16	"	1.03	C1-51	"	1.54
C1-17	7-17	1.91	C1-52	"	1.33
C1-18	10-20	1.75	C1-53	10-20	0.70
C1-19	"	1.35	C1-54	7-17	2.11
C1-20	7-17	1.76	C1-55	10-20	2.27
C1-21	10-20	1.49	C1-56	7-17	1.66
C1-22	7-27	1.60	C1-57	"	1.51
C1-23	7-17	2.21	C1-58	"	1.97
C1-24	10-20	1.75	C1-59	10-20	2.34
C1-25	"	2.06	C1-60	"	1.13
C1-26	7-17	1.64	C2-61	7-17	1.07
C1-27	10-20	0.78	C2-62	"	1.47
C1-28	7-17	0.96	C2-63	"	0.86
C1-29	"	1.84	C2-64	"	1.85
C1-30	"	1.57	C2-65	"	2.54
C1-31	"	1.79	C2-66	"	2.37
C1-33	"	1.98	C2-67	"	0.82
C1-34	"	1.47	C2-68	"	1.18
C1-35	"	1.49	C2-69	"	1.18
			C2-70	17	1.66

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OPERATOR: SINCLAIR CANADA OIL COMPANY

REPORT NUMBER: C68-3560

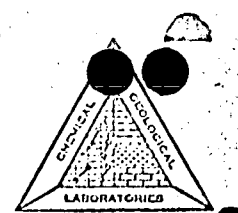
Kind of Sample: Soils

DATE RECEIVED April 22, 1968

DATE REPORTED May 8, 1968

<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by weight)</u>	<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by weight)</u>
C2- 71	7-17	2.50	C2-105	7-17	1.12
C2- 72	"	1.20	C2-106	"	0.99
C2- 73	"	1.51	C2-107	"	1.20
C2- 74	"	2.14	C2-108	"	0.87
C2- 75	10-20	1.53	C2-109	"	1.06
C2- 76	"	1.65	C2-110	"	1.18
C2- 77	7-17	2.31	C2-111	"	1.15
C2- 78	"	1.19	C2-112	"	0.72
C2- 79	10-20	0.63	C2-113	10-20	0.45
C2- 80	7-17	0.77	C2-114	"	0.92
C2- 81	"	1.27	C2-115	"	0.34
C2- 82	10-20	0.58	C2-116	7-17	0.40
C2- 83	"	1.40	C2-117	10-20	0.29
C2- 84	"	1.22	C2-118	7-17	0.67
C2- 85	7-17	2.72	C2-119	10-20	0.41
C2- 86	"	1.61	C2-120	7-17	1.02
C2- 87	10-20	1.23	C2-121	"	0.58
C2- 88	10-20	1.63	C2-122	10-20	0.83
C2- 89	7-17	1.91	C2-123	7-17	0.57
C2- 90	"	1.44	C2-124	"	1.33
C2- 91	10-20	2.97	C2-125	10-20	0.73
C2- 92	"	2.02	C2-126	7-17	0.85
C2- 93	7-17	1.54	C2-127	"	1.07
C2- 94	"	1.03	C2-128	"	1.90
C2- 95	"	0.99	C2-129	10-20	1.07
C2- 96	10-20	0.57	C2-130	7-17	1.22
C2- 97	"	0.96	C2-131	"	1.13
C2- 98	7-17	1.10	C2-132	10-20	2.69
C2- 99	"	1.63	C2-133	7-17	1.03
C2-100	"	1.70	C2-134	10-20	2.00
C2-101	"	1.33	C2-135	7-17	0.91
C2-102	"	1.15	C2-136	10-20	0.79
C2-103	"	0.72	C2-137	7-17	0.97
C2-104	"	1.62	C2-138	10-20	1.75

continued.....



OPERATOR: SINCLAIR CANADA OIL COMPANY

REPORT NUMBER: C68-3560

Kind of Sample: Soils

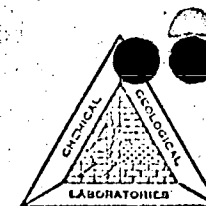
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<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by weight)</u>	<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by weight)</u>
C2-139	10-20	2.20	C2-181	10-20	2.66
C2-140	"	1.26	C2-183	7-17	2.14
C2-141	"	1.96	C2-184	"	1.99
C2-142	7-17	1.17	C2-185	"	2.48
C2-148	"	1.49	C2-187	"	1.93
C2-149	"	0.67	C2-188	10-20	2.16
C2-150	"	0.67	C2-189	7-17	0.51
C2-151	"	1.18	C2-190	"	1.35
C2-152	10-20	1.04	C2-192	"	1.11
C2-153	7-17	1.92	C2-193	"	1.09
C2-154	"	1.08	C2-194	"	0.96
C2-155	"	1.37	C2-195	10-20	0.97
C2-156	10-20	1.34	C2-196	"	0.87
C2-157	7-17	0.67	C2-197	"	1.26
C2-158	10-20	0.99	C2-198	"	0.36
C2-159	"	1.29	C2-199	7-17	1.18
C2-160	7-17	1.32	C2-200	"	2.47
C2-161	"	1.05	C2-201	"	1.62
C2-162	10-20	0.43	C2-202	"	1.93
C2-163	7-17	1.13	C2-203	"	1.95
C2-164	"	1.80	C2-204	"	1.93
C2-165	"	1.33	C2-205	10-20	1.36
C2-166	"	0.63	C2-206	7-17	1.68
C2-167	"	1.33	C2-207	"	0.82
C2-168	10-20	2.38	C2-208	"	1.09
C2-169	7-17	0.94	C2-209	"	1.26
C2-170	10-20	1.11	C2-210	"	1.67
C2-171	"	1.09	C2-211	"	1.18
C2-172	7-17	1.89	C2-212	"	1.49
C2-173	10-20	3.16	C2-213	7	1.38
C2-174	7-17	0.86	C2-214	7	Trace
C2-176	"	1.18	C2-215	7-17	Trace
C2-177	10-20	1.69	C2-216	"	Trace
C2-178	7-17	0.79	C2-217	"	Trace

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## CHEMICAL &amp; GEOLOGICAL LABORATORIES LTD.



OPERATOR: SINCLAIR CANADA OIL COMPANY

REPORT NUMBER: C68-3560

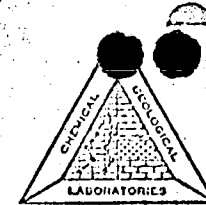
Kind of Sample: Soils

DATE RECEIVED April 22, 1968

DATE REPORTED May 8, 1968

SAMPLE NUMBER	DEPTH IN FEET	ELEMENTAL SULFUR (% by weight)	SAMPLE NUMBER	DEPTH IN FEET	ELEMENTAL SULFUR (% by weight)
C2-218	7-17	Trace	C2-255	10-17	2.64
C2-219	"	0.20	C2-256	7-17	2.04
C2-220	"	Trace	C2-257	"	1.42
C2-221	"	Trace	C2-258	10-20	1.42
C2-222	"	Trace	C2-259	7-17	0.49
C2-223	"	Trace	C2-260	17	1.29
C2-224	"	Trace	C2-261	7-17	0.60
C2-225	"	0.12	C2-262	"	2.04
C2-226	"	Trace	C2-263	"	1.73
C2-227	"	Trace	C2-264	"	1.85
C2-228	"	2.18	C2-265	"	2.38
C2-229	"	2.89	C2-266	"	1.45
C2-230	"	3.00	C2-274	7	2.41
C2-231	10-20	2.52	C2-275	10-20	1.77
C2-232	"	1.80	C2-276	7-17	1.77
C2-233	"	2.92	C2-277	"	2.55
C2-234	"	2.14	C3-353	"	2.49
C2-235	"	0.57	C3-355	"	Trace
C2-236	"	1.89	C3-356	"	Trace
C2-237	7-17	1.72	C3-357	"	Trace
C2-238	"	1.78	C3-358	10-20	Trace
C2-239	10-20	1.18	C3-359	"	1.79
C2-240	7-17	1.74	C3-360	"	2.94
C2-241	"	2.53	C3-364	7-17	2.62
C2-242	10-20	0.50	C3-365	"	0.66
C2-243	7-17	0.73	C3-366	"	1.08
C2-244	"	1.02	C3-368	"	0.46
C2-245	10-20	0.47	C3-369	"	2.23
C2-246	7-17	1.55	C3-367	"	1.09
C2-248	"	0.96	C3-370	"	1.50
C2-249	10-20	0.83	C3-371	"	1.39
C2-250	17	0.98	C3-372	"	1.88
C2-253	7-17	1.48	C3-373	"	1.56
C2-254	7	1.93	C3-374	"	1.35

continued.....



OPERATOR: SINCLAIR CANADA OIL COMPANY

REPORT NUMBER: C68-3560

Kind of Sample: Soils

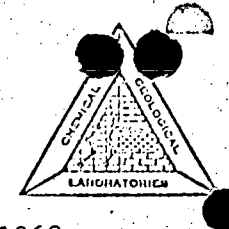
DATE RECEIVED April 22, 1968

DATE REPORTED May 8, 1968

SAMPLE NUMBER	DEPTH IN FEET	ELEMENTAL SULFUR (% by weight)	SAMPLE NUMBER	DEPTH IN FEET	ELEMENTAL SULFUR (% by weight)
C3-375	7-17	0.52	C3-311	10-20	1.54
C3-361	10-20	1.62	C3-312	"	1.77
C3-362	"	1.76	C3-313	"	0.30
C3-363	"	1.41	C3-314	7-17	0.97
C3-388	7-17	1.35	C3-315	"	0.38
C3-389	10-20	0.99	C3-316	"	0.46
C3-390	"	1.69	C3-317	"	1.32
C3-391	7-17	0.44	C3-318	"	0.48
C3-392	"	0.19	C3-319	"	1.65
C3-393	"	0.50	C3-320	"	0.56
C3-394	"	0.99	C3-321	10-20	0.51
C3-395	"	0.98	C3-322	"	0.40
C3-396	"	0.26	C3-323	"	1.63
C3-397	"	0.45	C3-324	"	0.28
C3-398	10-20	0.79	C3-325	"	0.77
C3-399	7-17	0.40	C3-326	"	0.69
C3-292	10-20	2.15	C3-327	7-17	1.00
C3-293	7-17	1.47	C3-328	"	1.11
C3-294	"	1.60	C3-329	10-20	1.14
C3-295	"	1.81	C3-330	7-17	1.78
C3-297	"	0.96	C3-331	"	1.15
C3-298	"	1.28	C3-332	10-20	1.38
C3-299	"	3.04	C3-333	7-17	0.84
C3-300	10-20	0.61	C3-334	"	0.88
C3-301	"	1.35	C3-335	10-20	1.67
C3-302	"	1.07	C3-336	7-17	0.80
C3-303	7-17	0.37	C3-337	"	0.98
C3-304	10-20	1.33	C3-338	10-20	Trace
C3-305	"	Trace	C3-339	7-17	0.17
C3-306	"	0.88	C3-340	"	Trace
C3-307	"	1.64	C3-341	10-20	Trace
C3-308	7-17	1.52	C3-342	7-17	Trace
C3-309	10-20	1.81	C3-343	"	Trace
C3-310	"	0.26	C3-344	10-20	Trace

continued.....





OPERATOR: SINCLAIR CANADA OIL COMPANY

REPORT NUMBER: C68-3560

Kind of Sample: Soils

DATE RECEIVED April 22, 1968

DATE REPORTED May 8, 1968

<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by weight)</u>	<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by weight)</u>
C3-345	7-17	Trace			
C3-346	"	Trace			
C3-347	10-20	Trace			
C3-348	7-17	Trace			



# SULPHUR PROSPECTING PERMIT No. 159

ABIDONNE OILS LTD.,  
1190 GUINNESS HOUSE,  
CALGARY, ALBERTA

DATE OF ISSUE - FEBRUARY 12, 1968  
AREA - 19,840 ACRES

TP.105

845/4

sw

TP.104

R. 11

R.10 W.5 M.