



October 13, 2020

Office of the Regulator of Oil and Gas Operations

Via Email

Attention: Chief Conservation Officer

Re: Husky Little Bear H-64 (WID2077) (ACW-2018-003, variation #1) Gas Migration Test Deferral and Operations Authorization (OA-2018-002, variation #1) Extension

In June of 2019 the first gas migration (GM) test was conducted on the above listed well. This GM is included in Attachment No. 1 for reference.

Out of an abundance of caution during the COVID-19 situation, Husky was reluctant to enter the Sahtu region to complete the required second gas migration (GM) test on the subject well. Husky attempted to secure a qualified service provider working for another oil industry representative in the Sahtu region but this service provider did not come available prior to freeze up.

Husky Oil Operations Limited (Husky) is therefore formally requesting a variation to the end date for the Operations Authorization (OA-2018-002, variation #1) and the well approval Little Bear H-64 (ACW-2018-003, variation #1) until October 31, 2021.

Husky is hopeful that this request for a variation to the end date for these documents will enable sufficient time for the COVID-19 situation to stabilize and the second GM test for the Little Bear H-64 (ACW-2018-003, variation #1) well to be conducted more safely.

A review of pictures taken of the wellsite in June of 2020 (Attachment No. 2) did not suggest any major issues with well site.

Husky therefore believes deferring the previously schedule gas migration test until frost free conditions in 2021 does not pose a high risk to the environment and requests a variation to the end dated for the Operations Authorization (OA-2018-002, variation #1) and the well approval (ACW-2018-003, variation #1) until October 31, 2021 so that these documents remain in effect until GM testing can be safely completed.

I trust that you will find the enclosed information satisfactory. [REDACTED]

Sincerely,
HUSKY OIL OPERATIONS LIMITED
[REDACTED]
[REDACTED]
[REDACTED]

Attachment No. 1
Husky Little Bear H-64 Well Doull Gas Migration Inspection



DSA JOB REPORT

Husky Oil Operations Ltd. 117641

Warren Watson (403) 298-7094 Warren.Watson@huskyenergy.com

Husky Little Bear H-64 HUSKY OIL OPERATIONS LTD. Unknown 2019-06-27



JOB AND SITE INFORMATION

Job Information

Husky Oil Operations Ltd.	Husky Little Bear H-64	Unknown	2019-06-27
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HUSKY LITTLE BEAR H-64

Brian Gonda	(403) 740-6967	20190627 BG
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Logan Marr	lmarr@doullsite.com	(780) 875-5522
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Work Performed
 • Gas Migration

Site Information

2.0 ppm 40 m West of Well Head

In green/forested area	Single well site	Vertical
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Truck	Clear/Dry and Firm
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Buried & cut/capped casing is located within a forested area.



Toll Free: 1-855-500-VENT
E-mail: support@doullsite.com **Office:** 780-875-5522
Web: www.doullsite.com **Fax:** 780-875-5533

GAS MIGRATION INSPECTION

Husky Oil Operations Ltd.	Husky Little Bear H-64	Unknown	2019-06-27
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Background soil gas methane was 2.0 ppm measured 40 m West of well centre.	Absent
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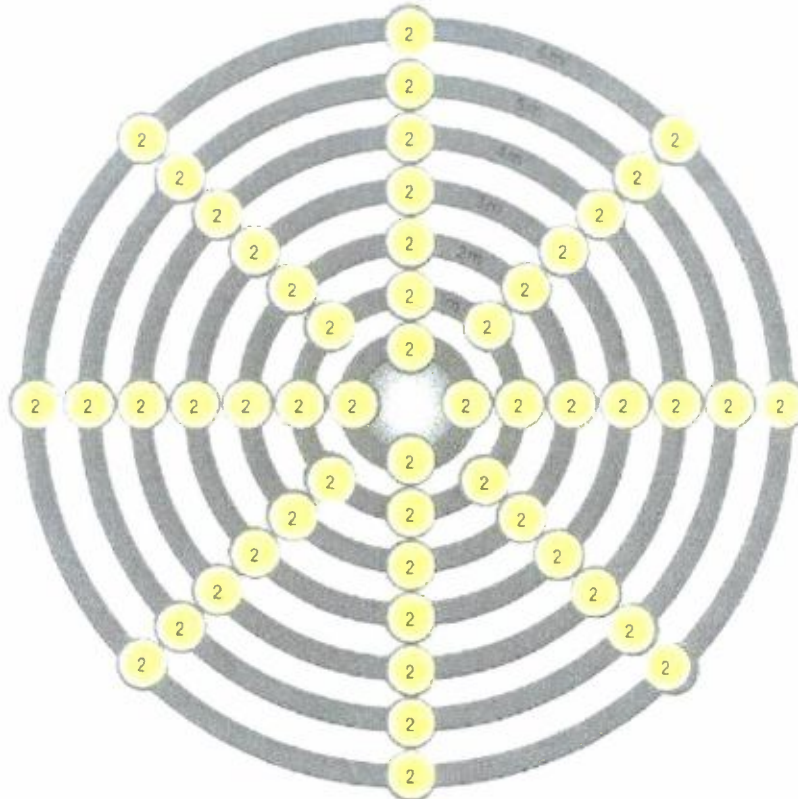
Buried & cut/capped casing was able to be conclusively located at surveyed coordinates using magnetic locator. No elevated methane levels were detected within the soils surrounding the wellbore. No significant elevated soil methane measured. Gas migration is not suspected.

Vegetation is sparse near well centre due to recent work done this winter when well was cut/capped.



GAS MIGRATION INSPECTION

Surface Soil Gas Data



PEAK READING		Legend		PPM Color Key	
2	ppm	Water	Rigmat	10	10 or less
< 0.05	% V	Concrete	Ice	99	11 to 99
< 1	% LEL	Pump Jack	Building	10.0v	100 and up
		Sample			

Surface soil gas data is collected using DSA's patent pending surface contact GM test method. The method is recognized and accepted by regulatory bodies where DSA operates. For more information about our procedures and/or intellectual property, contact legal@doullsite.com.

GAS MIGRATION INSPECTION

SURFACE SOIL GAS DATA

#	Soil Methane			Position	Direction	Obstruction	Sample
1	2 ppm	< 0.05 % V	< 1 % LEL	0 m	North		NO
2	2 ppm	< 0.05 % V	< 1 % LEL	1 m	North		NO
3	2 ppm	< 0.05 % V	< 1 % LEL	2 m	North		NO
4	2 ppm	< 0.05 % V	< 1 % LEL	3 m	North		NO
5	2 ppm	< 0.05 % V	< 1 % LEL	4 m	North		NO
6	2 ppm	< 0.05 % V	< 1 % LEL	5 m	North		NO
7	2 ppm	< 0.05 % V	< 1 % LEL	6 m	North		NO
8	2 ppm	< 0.05 % V	< 1 % LEL	1 m	North-East		NO
9	2 ppm	< 0.05 % V	< 1 % LEL	2 m	North-East		NO
10	2 ppm	< 0.05 % V	< 1 % LEL	3 m	North-East		NO
11	2 ppm	< 0.05 % V	< 1 % LEL	4 m	North-East		NO
12	2 ppm	< 0.05 % V	< 1 % LEL	5 m	North-East		NO
13	2 ppm	< 0.05 % V	< 1 % LEL	6 m	North-East		NO
14	2 ppm	< 0.05 % V	< 1 % LEL	0 m	East		NO
15	2 ppm	< 0.05 % V	< 1 % LEL	1 m	East		NO
16	2 ppm	< 0.05 % V	< 1 % LEL	2 m	East		NO
17	2 ppm	< 0.05 % V	< 1 % LEL	3 m	East		NO
18	2 ppm	< 0.05 % V	< 1 % LEL	4 m	East		NO
19	2 ppm	< 0.05 % V	< 1 % LEL	5 m	East		NO
20	2 ppm	< 0.05 % V	< 1 % LEL	6 m	East		NO
21	2 ppm	< 0.05 % V	< 1 % LEL	1 m	South-East		NO
22	2 ppm	< 0.05 % V	< 1 % LEL	2 m	South-East		NO
23	2 ppm	< 0.05 % V	< 1 % LEL	3 m	South-East		NO
24	2 ppm	< 0.05 % V	< 1 % LEL	4 m	South-East		NO
25	2 ppm	< 0.05 % V	< 1 % LEL	5 m	South-East		NO
26	2 ppm	< 0.05 % V	< 1 % LEL	6 m	South-East		NO
27	2 ppm	< 0.05 % V	< 1 % LEL	0 m	South		NO
28	2 ppm	< 0.05 % V	< 1 % LEL	1 m	South		NO

GAS MIGRATION INSPECTION

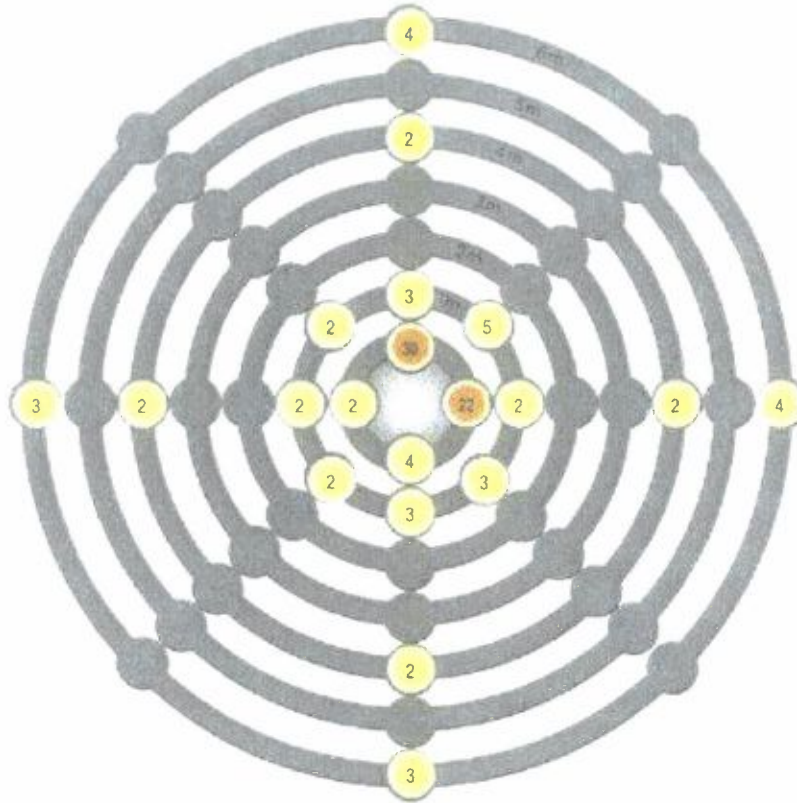
SURFACE SOIL GAS DATA

#	Soil Methane			Position	Direction	Obstruction	Sample
29	2 ppm	< 0.05 % V	< 1 % LEL	2 m	South		NO
30	2 ppm	< 0.05 % V	< 1 % LEL	3 m	South		NO
31	2 ppm	< 0.05 % V	< 1 % LEL	4 m	South		NO
32	2 ppm	< 0.05 % V	< 1 % LEL	5 m	South		NO
33	2 ppm	< 0.05 % V	< 1 % LEL	6 m	South		NO
34	2 ppm	< 0.05 % V	< 1 % LEL	1 m	South-West		NO
35	2 ppm	< 0.05 % V	< 1 % LEL	2 m	South-West		NO
36	2 ppm	< 0.05 % V	< 1 % LEL	3 m	South-West		NO
37	2 ppm	< 0.05 % V	< 1 % LEL	4 m	South-West		NO
38	2 ppm	< 0.05 % V	< 1 % LEL	5 m	South-West		NO
39	2 ppm	< 0.05 % V	< 1 % LEL	6 m	South-West		NO
40	2 ppm	< 0.05 % V	< 1 % LEL	0 m	West		NO
41	2 ppm	< 0.05 % V	< 1 % LEL	1 m	West		NO
42	2 ppm	< 0.05 % V	< 1 % LEL	2 m	West		NO
43	2 ppm	< 0.05 % V	< 1 % LEL	3 m	West		NO
44	2 ppm	< 0.05 % V	< 1 % LEL	4 m	West		NO
45	2 ppm	< 0.05 % V	< 1 % LEL	5 m	West		NO
46	2 ppm	< 0.05 % V	< 1 % LEL	6 m	West		NO
47	2 ppm	< 0.05 % V	< 1 % LEL	1 m	North-West		NO
48	2 ppm	< 0.05 % V	< 1 % LEL	2 m	North-West		NO
49	2 ppm	< 0.05 % V	< 1 % LEL	3 m	North-West		NO
50	2 ppm	< 0.05 % V	< 1 % LEL	4 m	North-West		NO
51	2 ppm	< 0.05 % V	< 1 % LEL	5 m	North-West		NO
52	2 ppm	< 0.05 % V	< 1 % LEL	6 m	North-West		NO



GAS MIGRATION INSPECTION

Subsurface Soil Gas Data



PEAK READING		Legend		PPM Color Key	
30	ppm	Water	Rigmat	10	10 or less
< 0.05	% V	Concrete	Ice	30	11 to 99
< 1	% LEL	Pump Jack	Building	10.0v	100 and up
		Sample			

Subsurface soil gas data is collected by DSA's subsurface GM test method. The method is recognized and accepted by regulatory bodies where DSA operates. For more information about our procedures and/or intellectual property, contact legal@doullsite.com.

GAS MIGRATION INSPECTION

SUBSURFACE SOIL GAS DATA

#	Soil Methane			Position	Direction	Obstruction	Sample
1	30 ppm	< 0.05 % V	< 1 % LEL	0 m	North		NO
2	3 ppm	< 0.05 % V	< 1 % LEL	1 m	North		NO
3	2 ppm	< 0.05 % V	< 1 % LEL	4 m	North		NO
4	4 ppm	< 0.05 % V	< 1 % LEL	6 m	North		NO
5	5 ppm	< 0.05 % V	< 1 % LEL	1 m	North-East		NO
6	22 ppm	< 0.05 % V	< 1 % LEL	0 m	East		NO
7	2 ppm	< 0.05 % V	< 1 % LEL	1 m	East		NO
8	2 ppm	< 0.05 % V	< 1 % LEL	4 m	East		NO
9	4 ppm	< 0.05 % V	< 1 % LEL	6 m	East		NO
10	3 ppm	< 0.05 % V	< 1 % LEL	1 m	South-East		NO
11	4 ppm	< 0.05 % V	< 1 % LEL	0 m	South		NO
12	3 ppm	< 0.05 % V	< 1 % LEL	1 m	South		NO
13	2 ppm	< 0.05 % V	< 1 % LEL	4 m	South		NO
14	3 ppm	< 0.05 % V	< 1 % LEL	6 m	South		NO
15	2 ppm	< 0.05 % V	< 1 % LEL	1 m	South-West		NO
16	2 ppm	< 0.05 % V	< 1 % LEL	0 m	West		NO
17	2 ppm	< 0.05 % V	< 1 % LEL	1 m	West		NO
18	2 ppm	< 0.05 % V	< 1 % LEL	4 m	West		NO
19	3 ppm	< 0.05 % V	< 1 % LEL	6 m	West		NO
20	2 ppm	< 0.05 % V	< 1 % LEL	1 m	North-West		NO



INSPECTION PHOTOS AND WELL INFO

Husky Oil Operations Ltd.

Husky Little Bear H-64

Unknown

2019-06-27

Well Information

N 64.89124700, W 126.18897800



INSPECTION PHOTOS AND WELL INFO





INSPECTION PHOTOS AND WELL INFO



Well centre facing west.



Well centre facing north.



Well centre facing east.

INSPECTION PHOTOS AND WELL INFO



Well centre facing south.

Attachment No. 2
Husky Little Bear H-64 Well Photos

